

1
часть

2023
2024



MEASURING INSTRUMENTS

CATALOGUE NO. 106



**Официальный дистрибьютор
в России – ООО «СиЭнСиЭм Групп»**

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The products with this mark are supplied with manufacturer inspection certificate.

INSIZE		Inspection Certificate					
Product name	Digital Caliper	Traceable to	USA NIST No.821/279484-10				
Code No.	1108-150		Germany DKD No.D-K-15190-01-00				
Measuring range	0-150mm / 0-6"	Inspector	<i>Jose</i>				
Resolution	0.01mm / 0.0005"	Judgement	Passed				
Serial No.	0910120004						
Standard temperature	20°C / 68°F						
		Unit: inch			Unit: mm		
Measuring Length	Permissible Error	Error		Measuring Length	Permissible Error	Error	
		External	Internal			External	Internal
0.4 DIA	+0.0005 -0.0010	/	0.0005	Φ10	+0.01 -0.02	/	0.01
2	±0.0010	-0.0005	/	50	±0.02	-0.01	/
4		-0.0005	/	100		-0.01	/
6		-0.0010	/	150		-0.02	/
8		/	/	200		/	/
10	±0.0015	/	/	250	±0.03	/	/
12		/	/	300		/	/



Please scan QR code to watch the videos of products.



How to search:

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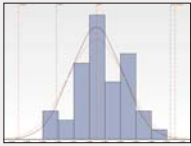
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OUTSIDE DIAMETER MEASURING INSTRUMENTS



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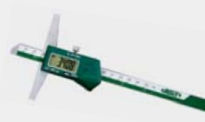


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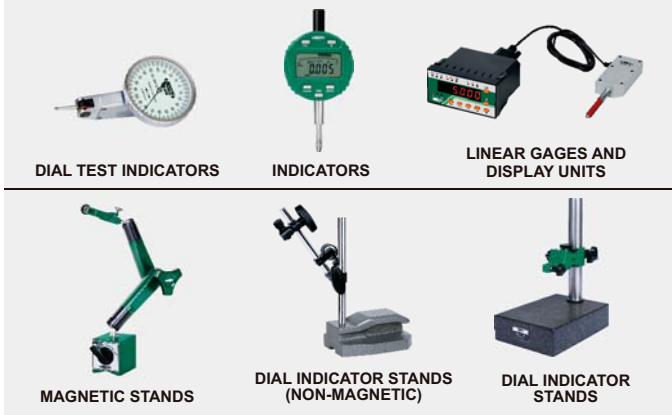
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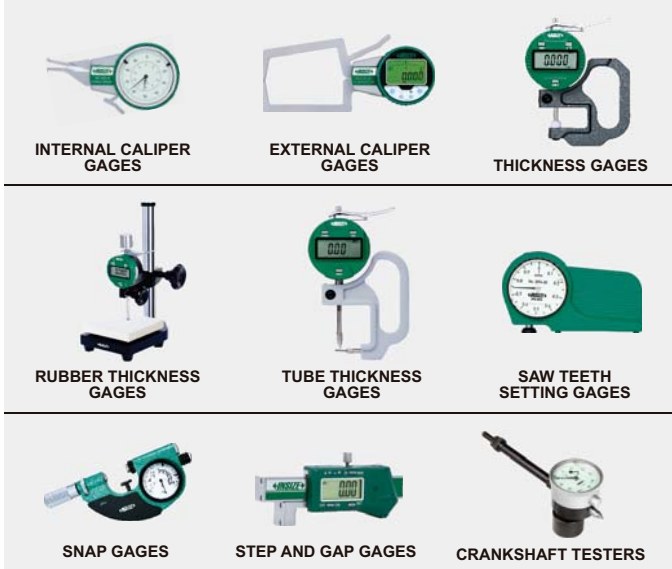
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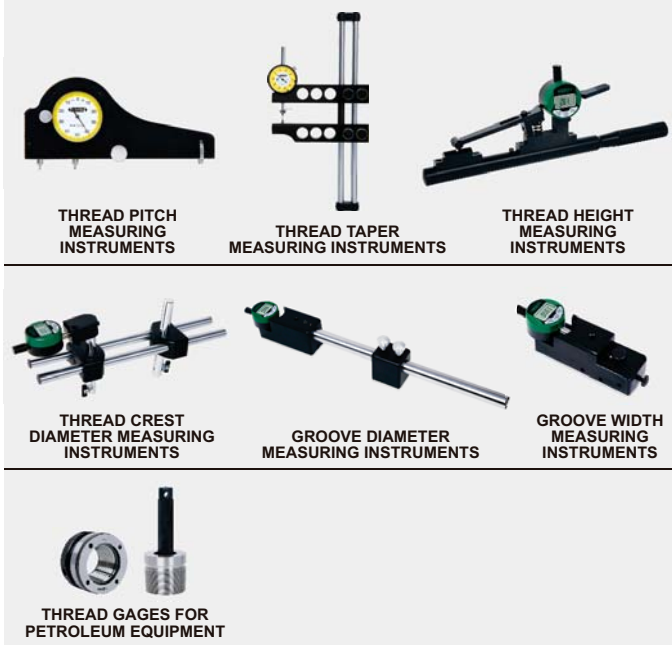
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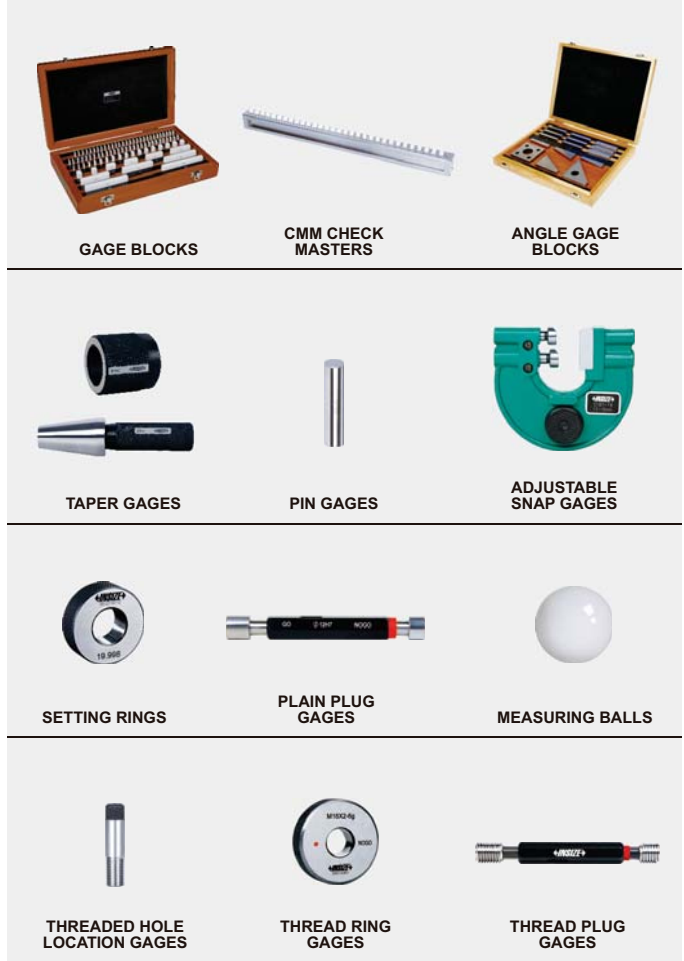
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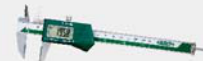
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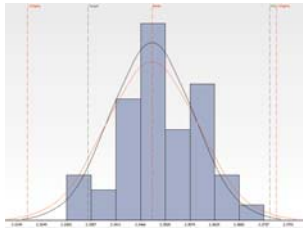
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MEASURING TOOL SETS

01

DATA OUTPUT AND SOFTWARE



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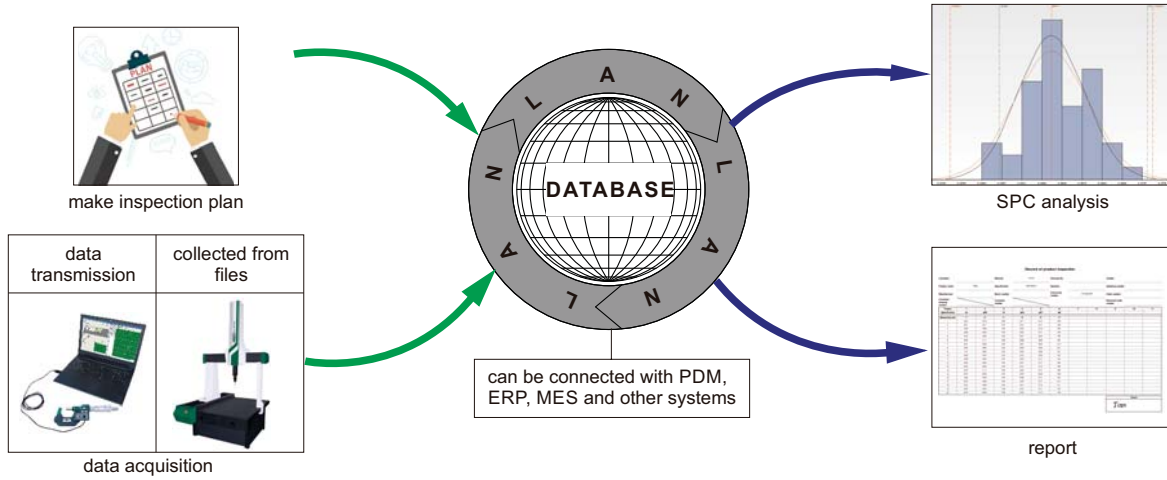


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MEASUREMENT DATA MANAGEMENT AND ANALYSIS SOFTWARE CODE 7317



Make inspection plan

- Define the dimensions, tolerances, control range and other parameters of workpieces

define the drawing of workpieces

define association items of data

define the measured dimension and tolerance

Seq	Data Member Code	Data Member Name	Measuring Tool	1	2	3	4	5	6
1	DC04070001	Check type		2022-06-08 11:16:27	2022-06-08 11:16:27	2022-06-08 11:16:27	2022-06-08 11:16:27	2022-06-08 11:16:27	2022-06-08 11:16:27
2	DC04070002	Serial number							
3	DC04070003	Furnace No.							
4	DC02070001	Flatness0.008	CMH						
5	DC02070002	2.39±0.01/-0.03	Vernier caliper						
6	DC02070003	Verticality0.008	CMH						
7	DC02070004	2.335±0.004	Vernier caliper						
8	DC02070005	Outside diameterφ=45±0.002	Micrometer						
9	DC02070006	Inner diameterφ=45±0.002	Micrometer						
10	DC02070007	Wall thickness							
		Input User		Administrator	Administrator	Administrator	Administrator	Administrator	Administrator

Data acquisition

manual input

data transmission

collected from files

screen capture

Seq	Data Member Code	Data Member Name	Measuring Tool	1	2	3	4	5
1	DC04070001	Check Type		2022-06-08 10:58:07	2022-06-08 10:58:07	2022-06-08 10:58:07	2022-06-08 11:03:40	2022-06-08 11:03:40
2	DC04070002	Serial number		20220608001	20220608001	20220608001	20220608002	20220608002
3	DC04070003	Furnace No.		F00120	F00120	F00120	F00120	F00120
4	DC02070001	Flatness0.008	CMH	0.0080	0.0080	0.0080	0.0082	
5	DC02070002	2.39±0.01/-0.03	Vernier caliper	2.391	0.0080	2.391	2.391	2.430
6	DC02070003	Verticality0.008	CMH	0.0080	0.0080	0.0080	0.0080	
7	DC02070004	2.335±0.004	Vernier caliper	2.3360	2.3360	2.3360	2.3360	
8	DC02070005	Outside diameterφ=45±0.002	Micrometer	45.0020	45.0030	45.0020	45.0021	
9	DC02070006	Inner diameterφ=45±0.002	Micrometer	45.0010	45.0010	45.0010	45.0010	
10	DC02070007	Wall thickness		0.0010	0.0020	0.0010	-0.0033	
		Input User		Administrator	Administrator	Administrator	Administrator	Admin

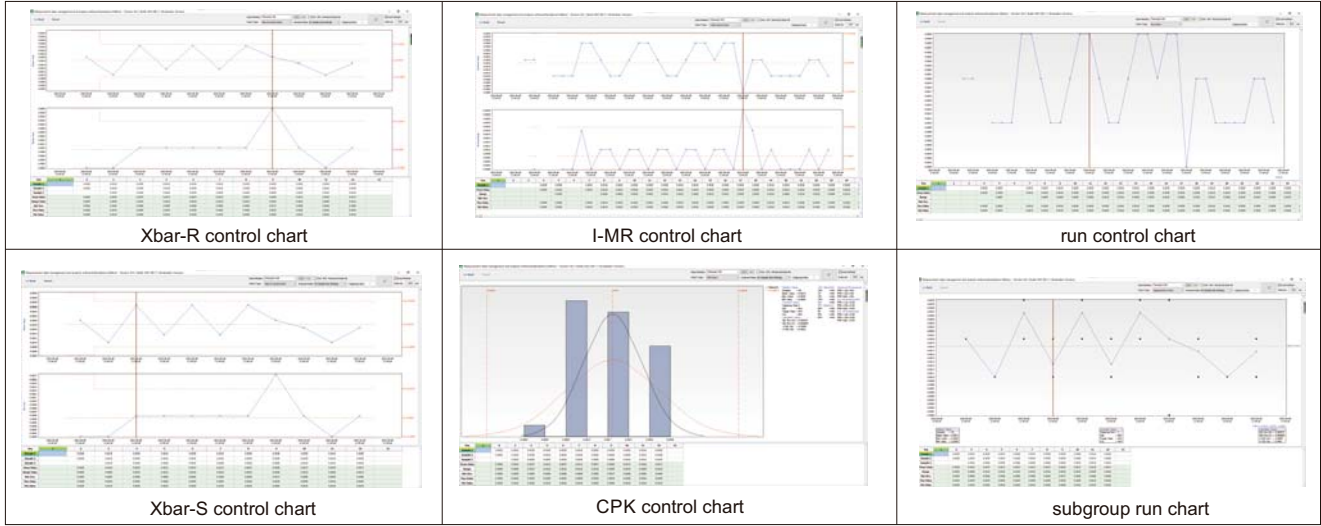
measurement interface

To be continued

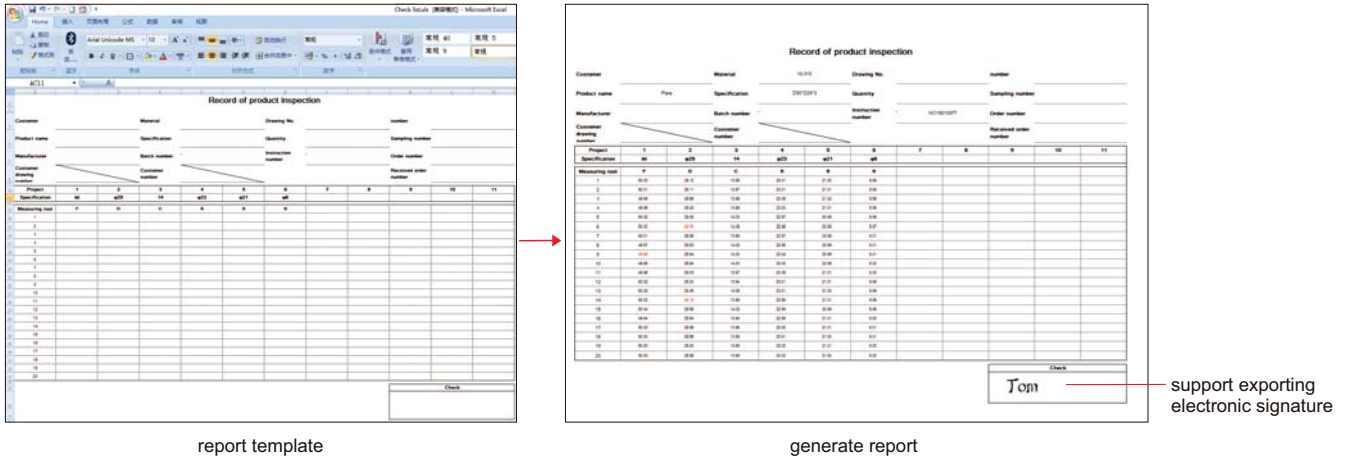
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SPC

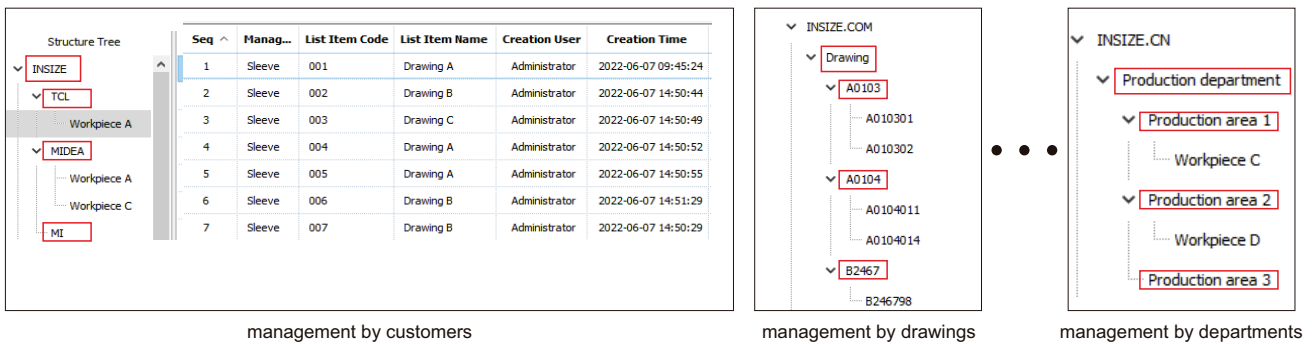
- Provide variety of quality analysis control charts



Report

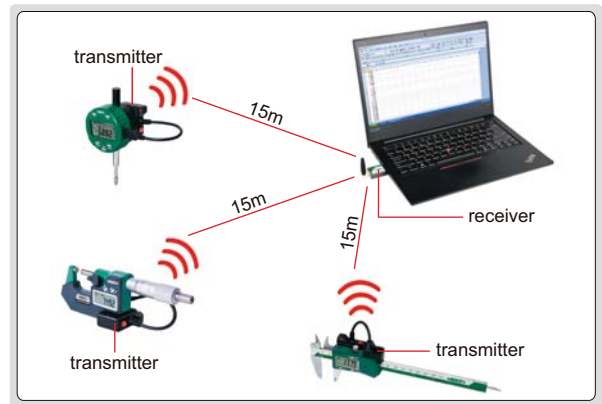


Management of inspection plan



WIRELESS DATA TRANSMISSION SYSTEM

- Through wireless transmission, the measurement data can be transmitted to computers or mobile phones
- Wireless zigbee protocol, conforming to IEEE802, 2.4GHz band
- Transmission distance is 15 meter (under the condition of no obstruction and no electromagnetic interference)



Transmitter

- Connecting to digital measuring tools such as calipers, micrometers and indicators
- CR2032 battery

Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-21	transmitter for digital calipers			<ul style="list-style-type: none"> Press the transmit button on the plug of cable, can also press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-22	transmitter for large digital calipers			<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-30	transmitter for digital micrometers			<ul style="list-style-type: none"> Press the "data" button of digital micrometer, can also press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once, at the same time, the signal light on the digital micrometer flashes once
7315-31	transmitter for digital micrometers		 	<ul style="list-style-type: none"> Press the "data" button of digital micrometer Data is transmitted once, the signal light on the digital micrometer flashes once

To be continued

Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-50M	transmitter for digital indicators		<p>for 2108, 2138, 2139 series digital indicators</p>	<ul style="list-style-type: none"> Press the "DATA" button of digital indicator, can also press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once, at the same time, the signal light on digital indicator flashes once
			<p>for other digital indicators</p>	<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-50	transmitter for digital protractor			<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-60	transmitter for high precision digital indicators			<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-3350	transmitter for digital micrometers			<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once

To be continued

Continued from previous page

Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-1150	transmitter for digital height gages			<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-1151	transmitter for digital height gages			<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-2771	transmitter for digital protractor			<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once

Receiver (keyboard signal)

- For computers and mobile phones
- Recognized as HID keyboard device, the transmitted data is recognized by computers or mobile phones as keyboard input data and press enter, such as 12.34√.
- No need to install drivers and softwares
- Data can be transmitted to excel, word, txt etc.
- For any softwares which can receive keyboard signal

Code	Product	Description	Remark
7315-3		single channel receiver	connected with 1 transmitter only
7315-6		multichannel receiver	connected with 6 transmitters, each channel has status indicator
7315-7			
7315-8			
7315-9			

To be continued

Continued from previous page

Receiver (text format, virtual com port)

- For computers with windows system
- Text format virtual com port, converted to keyboard format with supplied software
- Supplied with Excel directional input software
- Measurement data can be transmitted to excel, word, txt etc. and any software which receives keyboard signal

Code	Product	Description	Remark
7315-2		multichannel receiver	connected with maximum 16 transmitters, each of them has unique identification code

Excel directional input software

- Supplied with 7315-2 receiver
- The measurement data of multiple measuring tools can be transmitted to the designated area of excel, which facilitates data management and improves efficiency

Excel directional input software (included in 7315-2), application example 1

Set the display area of caliper at B4-B9, the readings of caliper are displayed at B4, B5...B9. Set the display area of micrometer at C4-C9, the readings of micrometer are displayed at C4, C5... C9. Set the display area of height gage at D4-D9, the readings of height gage are displayed at D4, D5... D9.

	A	B	C	D
1	Project	Length	Width	Height
2	Dimension and Tolerance	50±0.05	24±0.01	10+0.05/-0.06
3	Measuring tool	Caliper	Micrometer	Height gage
4	1	50.02	24.004	9.98
5	2	50.01	24.010	10.01
6	3	49.99	23.990	10.02
7	4	50.00	23.996	9.99
8	5	50.04	24.000	10.01
9		Channel 1	Channel 2	Channel 3

serial of workpieces the next data display area is indicated in green

Excel directional input software (included in 7315-2), application example 2

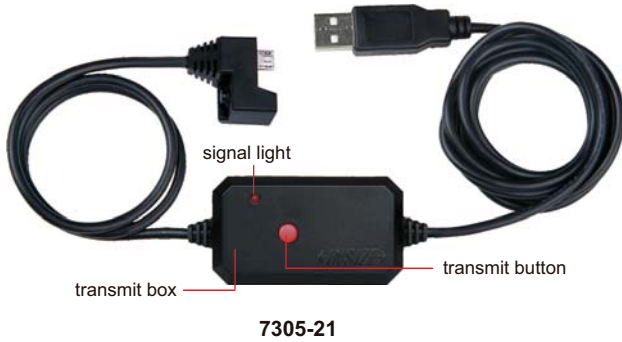
Set the display area of micrometer at B4-C9, data input is from the left to the right, the readings of micrometer are displayed at B4, C4, B5, C5... B9, C9. Set the display area of caliper at D4-D9, the readings of caliper are displayed at D4, D5... D9. Set the display area of depth gage at E4-E9, the readings of depth gage are displayed at E4, E5... E9.

	A	B	C	D	E
1	Project	External diameter1	External diameter2	Length	Depth
2	Dimension and Tolerance	Φ23+0.01/-0.02	Φ21+0.01/-0.02	50±0.04	28±0.05
3	Measuring tool	Micrometer	Micrometer	Caliper	Depth gage
4	1	23.010	21.008	49.98	28.01
5	2	23.010	21.000	49.98	27.98
6	3	22.999	21.000	50	28
7	4	23.007	20.998	50	28
8	5	23.000	20.985	50.01	28.01
9	6	23.008	Channel 1	Channel 2	Channel 3

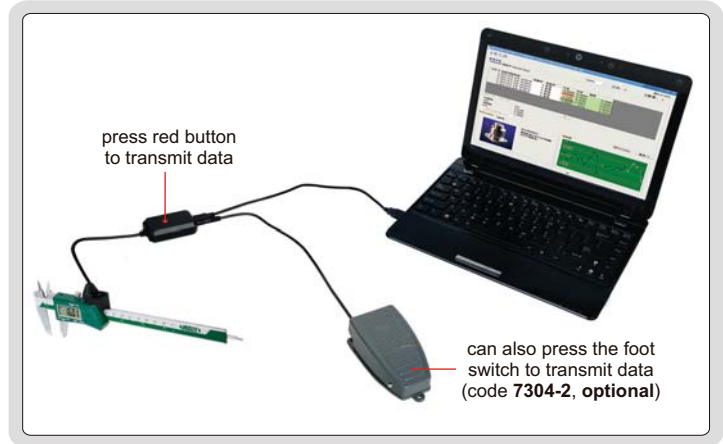
serial of workpieces the next data display area is indicated in green

DATA OUTPUT CABLES (TEXT FORMAT, VIRTUAL COM PORT)

1) Data output cables with transmit box



application











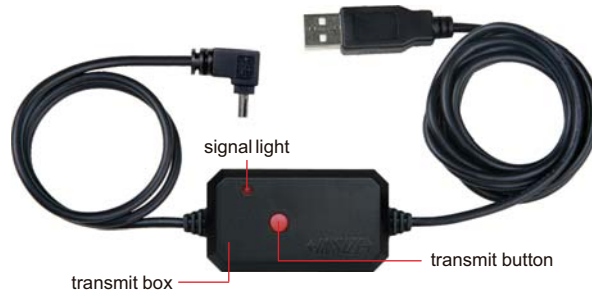
Single transmit (can be switched to continuous transmit)

Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-21	cable for digital calipers (length 3m)				<ul style="list-style-type: none"> Press the transmit button on the plug of cable, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7305-R21					
7305-22	cable for large digital calipers (length 2.5m)				<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7305-R22					
7305-30	cable for digital micrometers (length 2.5m)			 	<ul style="list-style-type: none"> Press the "data" button of digital micrometer, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on the digital micrometer flashes once
7305-R30					

To be continued





Continued from previous page

Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-50M	cable for digital gages (length 2.5m)				<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7305-R50M					
7305-1150	cable for digital height gages (length 2.5m)				<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7305-R1150					



7305-40M

Continuous transmit (can be switched to single transmit)

Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-40M	cable for digital indicators (length 2.5m)			 <p>for 2108, 2138, 2139 series digital indicators</p>	<p>Continuous transmit is controlled in software</p> <p>Single transmit:</p> <ul style="list-style-type: none"> Press the "DATA" button of digital indicator, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on digital indicator flashes once <p>Note: long press transmit button to zero the digital indicators; software of data transmit is included</p>
				 <p>for other digital indicators</p>	<p>Continuous transmit is controlled in software</p> <p>Single transmit:</p> <ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once <p>Note: long press transmit button to zero the digital indicators; software of data transmit is included</p>

To be continued

Continued from previous page

Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-R40M	cable for digital indicators (length 2.5m)			<p>for 2108, 2138, 2139 series digital indicators</p>	<p>Continuous transmit is controlled in software</p> <p>Single transmit:</p> <ul style="list-style-type: none"> Press the "DATA" button of digital indicator, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on digital indicator flashes once <p>Note: long press transmit button to zero the digital indicators; software of data transmit is included</p>
				<p>for other digital indicators</p>	<p>Continuous transmit is controlled in software</p> <p>Single transmit:</p> <ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once <p>Note: long press transmit button to zero the digital indicators; software of data transmit is included</p>

Software (included in 7305-40M and 7305-R40M)

- Real-time display
- Tolerance setting, automatic judgment, out-of-tolerance alarm
- Real time statistics: max, min, average, Go/No-Go number
- Can save results as Excel

The screenshot shows the software interface with several key features highlighted:

- export Excel:** A red box highlights the 'Save' button in the top control bar.
- real-time display:** A red box highlights the large digital display showing '12.000 mm'.
- setting zero of digital indicators:** A red box highlights the 'Zero' button in the 'Real-time measurement' section.
- measurement results and judgment:** A red box highlights the 'Data collection' table, which contains the following data:

No	Value	Error	Result	Time
000001	11.756	-0.244	OK	2020-10-12 09:28:46
000002	11.730	-0.270	OK	2020-10-12 09:28:47
000003	10.940	-1.060	NG	2020-10-12 09:28:48
000004	10.120	-1.880	NG	2020-10-12 09:28:50
000005	12.000	0.000	OK	2020-10-12 09:28:52
000006	12.000	0.000	OK	2020-10-12 09:28:53
000007	11.490	-0.510	OK	2020-10-12 09:28:54
000008	10.784	-1.216	NG	2020-10-12 09:28:55
000009	10.030	-1.970	NG	2020-10-12 09:28:56
000010	10.600	-1.400	NG	2020-10-12 09:28:58

- setting tolerance and sampling period:** A red box highlights the 'Parameters' section, which includes settings for STD (12), USL (2), LSL (-1), Beep (off), Unit (mm), and Auto Sampling period (200 Ms).

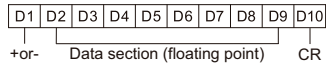
To be continued

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communication protocol

- Baud: 9600bps
Data bit: 8
Stop bit 1
Check bit: None
No flow control

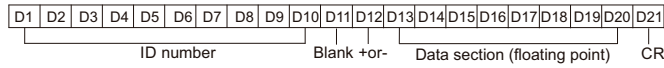
▪ Data output format



Data format example

Display	Output
1.234	+0001.234 ✓
-1.234	-0001.234 ✓

▪ Data output format with ID number

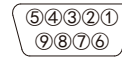


Data format example

Display	Output
1.234	4109210605 +0001.234 ✓
-1.234	4109210605 -0001.234 ✓

- The data transmission mode can be switched: single or continuous;
The data output format can be switched: with ID number or without ID number;
Data of digital indicators can be transmitted by instruction;
The digital indicators can be zeroed by instruction

▪ Pin definition of RS232 plug:



Pin No.	Symbol	Description
2	TXD	Data OUT
3	RXD	Data IN
4	VDD	+5V Power
5	GND	Ground

2) Data output cables without transmit box

application



7305-G3350



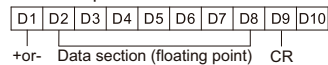
Single transmit

Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-G60	cable for high precision digital indicators (length 3m)				<ul style="list-style-type: none"> ▪ Press the "DATA" button of high precision digital indicator
7305-G3350	cable for digital micrometers (length 3m)				<ul style="list-style-type: none"> ▪ Press the "DATA" button of digital micrometer

communication protocol

- Baud: 9600bps
Data bit: 8
Stop bit 1
Check bit: None
No flow control

▪ Data output format



Data format example

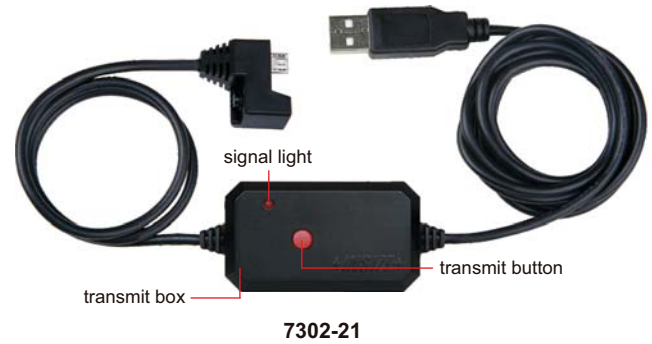
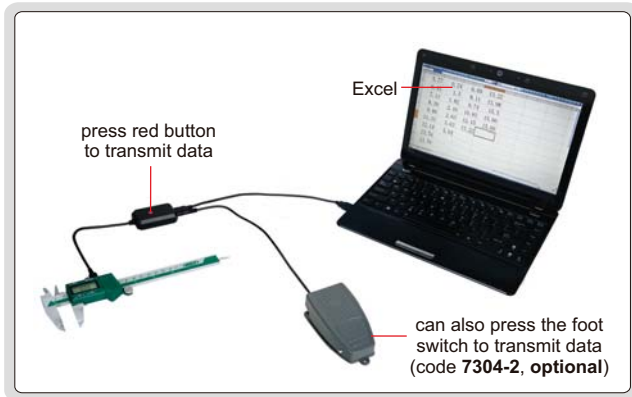
Display	Output
1.234	+0001.234 ✓
-1.234	-0001.234 ✓

- Data of high precision digital indicators can be transmitted by instruction;
The high precision digital indicators can be zeroed by instruction

DATA OUTPUT CABLES (KEYBOARD FORMAT)

1

application
















- Recognized as HID keyboard device by computer, no need to install drivers and softwares
- Data can be transmitted to Excel, Word, txt and other files (press transmit button, which is recognized by the computer as keyboard input data and press enter, such as 12.34 €)
- For any softwares which can receive keyboard signal
- Optional accessory: foot switch (code: **7304-2**), hub (code: **7324-HUB4**, **7324-HUB7**), extension cables (code: **7325-ADD5**, **7325-ADD10**)

Code	Description	Plug	Connecting with measuring tool	Transmit data
7302-21	cable for digital calipers (length 3m)			<ul style="list-style-type: none"> ▪ Press the transmit button on the plug of cable, can also press the transmit button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once
7302-22	cable for large digital calipers (length 2.5m)			<ul style="list-style-type: none"> ▪ Press the transmit button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once
7302-30	cable for digital micrometers (length 2.5m)			<ul style="list-style-type: none"> ▪ Press the "data" button of digital micrometer, can also press the transmit button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on the digital micrometer flashes once
7302-50M	cable for digital gages (length 2.5m)			<ul style="list-style-type: none"> ▪ Press the transmit button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once

To be continued

Continued from the previous page

Code	Description	Plug	Connecting with measuring tool	Transmit data
7302-40M	cable for digital indicators (length 2.5m)		 <p>“DATA” button signal light</p> <p>for 2108, 2138, 2139 series digital indicators</p>	<ul style="list-style-type: none"> Press the “DATA” button of digital indicator, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on digital indicator flashes once <p>Note: long press transmit button to zero the digital indicators</p>
			 <p>for other digital indicators</p>	<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once <p>Note: long press transmit button to zero the digital indicators</p>
7302-60	cable for high precision digital indicators (length 2.5m)		 <p>“DATA” button</p>	<ul style="list-style-type: none"> Press the “DATA” button of high precision digital indicator, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7302-3350	cable for digital micrometers (length 2.5m)		 <p>“DATA” button</p>	<ul style="list-style-type: none"> Press the “DATA” button of digital micrometer, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7302-1151	cable for digital height gages (length 2.5m)			<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7302-SPC7	cable for digital height gages (length 2.5m)			<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7302-SPC3B	cable for digital protractor (length 2.5m)			<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once

INTERFACE BOX AND DATA OUTPUT CABLES



**8-channel interface box
7210-2**



**data output cable
7305-R40M**

- The interface box can be connected to digital measuring tools, such as calipers, micrometers, indicators (7305-R series data output cables are needed)
- The interface box is supplied with Excel directional input software
- The interface box can be connected with 8 data output cables, each of them has unique identification code

application



INTERFACE BOX SPECIFICATION

Code	7210-2
Quantity of digital measuring tools to be connected	8 pcs
Output port	USB (virtual serial signal)

Excel directional input software

- Supplied with 7210-2 interface box
- The measurement data of multiple measuring tools can be transmitted to the designated area of Excel, which is convenient for data management and improves efficiency

Excel directional input software
application example 1

Set the display area of caliper at B4-B9, the readings of caliper are displayed at B4, B5...B9.
Set the display area of micrometer at C4-C9, the readings of micrometer are displayed at C4, C5... C9.
Set the display area of height gage at D4-D9, the readings of height gage are displayed at D4, D5... D9.

	A	B	C	D
1	Project	Length	Width	Height
2	Dimension and Tolerance	50±0.05	24±0.01	10+0.05/-0.06
3	Measuring tool	Caliper	Micrometer	Height gage
4	1	50.02	24.004	9.98
5	2	50.01	24.010	10.01
6	3	49.99	23.990	10.02
7	4	50.00	23.996	9.99
8	5	50.04	24.000	10.01
9	6	Channel 1	Channel 2	Channel 3

serial of workpieces the next data display area is indicated in green

Excel directional input software
application example 2

Set the display area of micrometer at B4-C9, data input is from the left to the right, the readings of micrometer are displayed at B4, C4, B5, C5... B9, C9.
Set the display area of caliper at D4-D9, the readings of caliper are displayed at D4, D5... D9.
Set the display area of depth gage at E4-E9, the readings of depth gage are displayed at E4, E5... E9.









	A	B	C	D	E
1	Project	External diameter1	External diameter2	Length	Depth
2	Dimension and Tolerance	Φ23+0.01/-0.02	Φ21+0.01/-0.02	50±0.04	28±0.05
3	Measuring tool	Micrometer	Micrometer	Caliper	Depth gage
4	1	23.010	21.008	49.98	28.01
5	2	23.010	21.000	49.98	27.98
6	3	22.999	21.000	50	28
7	4	23.007	20.998	50	28
8	5	23.000	20.985	50.01	28.01
9	6	23.008	Channel 1	Channel 2	Channel 3

serial of workpieces the next data display area is indicated in green

To be continued

Continued from previous page

DATA OUTPUT CABLE SPECIFICATION

Code	Description	Plug to measuring tool	Connecting with measuring tool	Transmit data
7305-R21	cable for digital calipers (length 3m)		 transmit button	<ul style="list-style-type: none"> Press the transmit button on the plug of cable, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7305-R22	cable for large digital calipers (length 2.5m)			<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7305-R30	cable for digital micrometers (length 2.5m)		 "data" button signal light  back	<ul style="list-style-type: none"> Press the "data" button of digital micrometer, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on the digital micrometer flashes once
7305-R40M	cable for digital indicators (length 2.5m)		 "DATA" button signal light for 2108, 2138, 2139 series digital indicators	<ul style="list-style-type: none"> Press the "DATA" button of digital indicator, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on digital indicator flashes once
			 for other digital indicators	<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7305-R50M	cable for digital gages (length 2.5m)			<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7305-R1150	cable for digital height gages (length 2.5m)			<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once

REFER TO PAGE 234 FOR DETAILS

DISPLAY UNIT CODE 7106-1A

1



connected with digital indicator



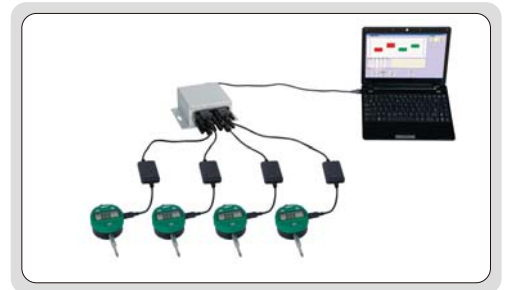
REFER TO PAGE 235 FOR DETAILS

MULTICHANNEL INTERFACE BOXES



7107-1

connected with digital indicators



HUBS



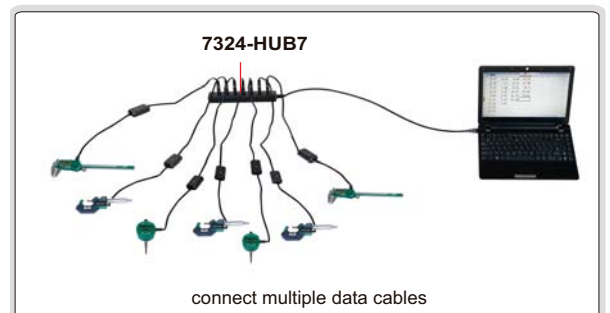
7324-HUB4



7324-HUB7

■ For USB plug data cable

application



Code	Description	Applicable products
7324-HUB4	4-channel hub (length 0.2m, USB computer plug)	7302 series data cables
7324-HUB7	7-channel hub (length 1m, USB computer plug)	7305 series data cables (USB plug)

EXTENSION CABLES



7325-ADD5

application



Code	Description	Applicable products
7325-ADD5	data extension cable (length 5m, USB plug)	7302 series data cables
7325-ADD10	data extension cable (length 10m, USB plug)	7305 series data cables (USB plug)

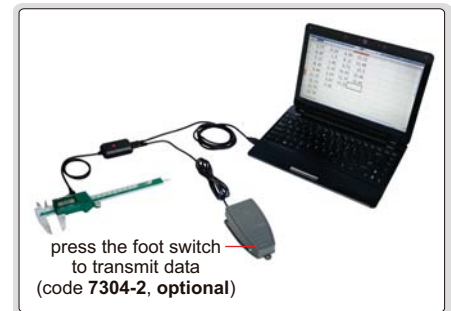
FOOT SWITCH

- For data transmission



7304-2

application



Code	Description	Applicable products
7304-2	data transmission foot switch with cable (length 2m)	7302 series data cables 7305 series data cables

OK/NG INPUT SWITCHES



7327-FS



7327-SW

- Used with 7317 software, output OK or NG
- USB plug, length 1.5m

Code	Description
7327-FS	foot switch for OK/NG input
7327-SW	hand switch for OK/NG input

application





Digital Calipers
Page 19-26



Dial Calipers
Page 26



Vernier Calipers
Page 26-29



Depth Base Attachments
Page 29



Caliper Gage Checkers
Page 30



Caliper End Grinding Machines
Page 30



Accessory Sets For Digital Calipers
Page 31-32



Large Digital Calipers
Page 32-35



Large Vernier Calipers
Page 35-37

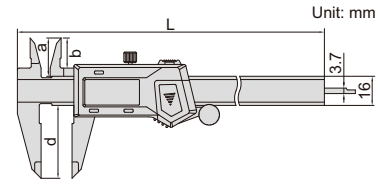
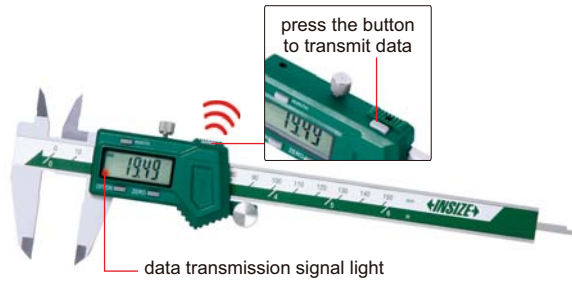


Special Purpose Calipers
Page 38-62

WIRELESS DIGITAL CALIPERS

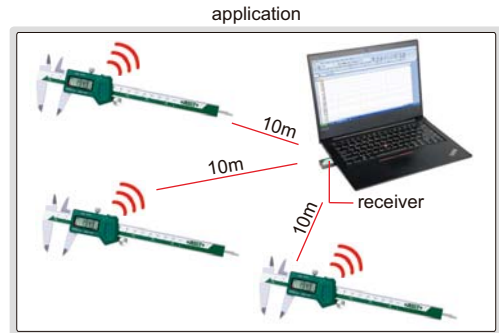


ATTENTION: THE WORKING LIFE OF A BATTERY IS ABOUT 3-5 MONTHS



1113-150

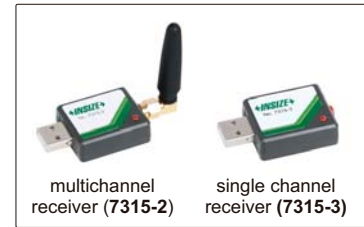
- Non waterproof
- Built-in wireless data transmission module, Zigbee signal
- Transmission distance is 10 meter (under the condition of no obstruction and no electromagnetic interference)
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, data transmission
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: receiver (code 7315-2/3/6/7/8/9)



Code	Range	Accuracy	L	a	b	d	(mm)
1113-150 *	0-150mm/0-6"	±0.03mm	236	21	16	40	
1113-200 *	0-200mm/0-8"	±0.03mm	286	24	19	50	
1113-300 *	0-300mm/0-12"	±0.03mm	400	25	20.5	60	

*Supplied with manufacturer inspection certificate

receiver (optional)



IP67 WATERPROOF DIGITAL CALIPERS



ATTENTION: NO DATA OUTPUT

IP67 WATERPROOF

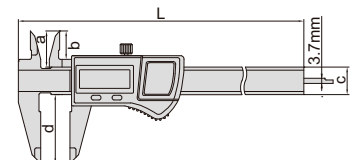
- IP67 dust/waterproof
- Resolution: 0.01mm/0.0005"
- Button function: zero, on/off, mm/inch
- Battery CR2032
- Automatic power off
- Meet DIN862
- Made of stainless steel



1115-150

Code	Range	Accuracy	L	a	b	c	d
1115-150 *	0-150mm/0-6"	±0.03mm	235mm	20mm	15mm	16mm	40mm
1115-200 *	0-200mm/0-8"	±0.03mm	287mm	24mm	19mm	16mm	50mm
1115-300 *	0-300mm/0-12"	±0.03mm	388mm	26mm	21mm	16mm	60mm

*Supplied with manufacturer inspection certificate



ATTENTION: IT IS NECESSARY TO SET ZERO AFTER POWER ON EACH TIME

ATTENTION: NO DATA OUTPUT

IP67
WATERPROOF

IP67 WATERPROOF DIGITAL CALIPERS



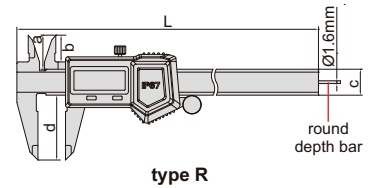
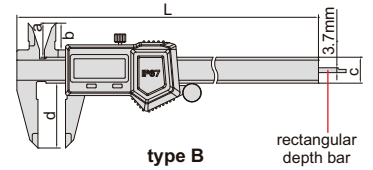
- IP67 dust/waterproof
- Resolution: 0.01mm/0.0005"
- Button function: zero, on/off, mm/inch, ABS/REL, hold
- Battery CR2032
- Meet DIN862
- Made of stainless steel



1118-150B



1118-150R



Code	Range	Accuracy	Type	L	a	b	c	d
1118-150B *	0-150mm/0-6"	±0.03mm	B	236mm	21mm	16mm	16mm	40mm
1118-200B *	0-200mm/0-8"	±0.03mm	B	286mm	24mm	19mm	16mm	50mm
1118-300B *	0-300mm/0-12"	±0.03mm	B	400mm	25mm	20.5mm	16mm	60mm
1118-150R *	0-150mm/0-6"	±0.03mm	R	236mm	21mm	16mm	16mm	40mm

* Supplied with manufacturer inspection certificate

DATA OUTPUT



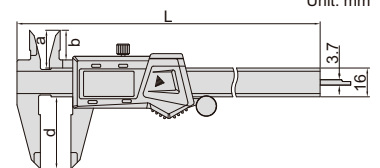
DIGITAL CALIPERS (ABSOLUTE SYSTEM)

- Non waterproof
- Absolute system, low power consumption, long battery life
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, mm/inch, ORIGIN, ZERO/ABS
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: wireless transmitter, code 7315-22 page 4, data output cable (keyboard format), code 7302-22 page 12



1103-150

Unit: mm



Code	Range	Accuracy	L	a	b	d
1103-150 *	0-150mm/0-6"	±0.03mm	236mm	21mm	16.5mm	40mm
1103-200 *	0-200mm/0-8"	±0.03mm	286mm	24mm	19.5mm	50mm
1103-300 *	0-300mm/0-12"	±0.03mm	400mm	26mm	21.5mm	60mm

* Supplied with manufacturer inspection certificate



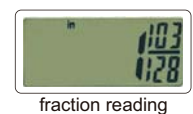
ATTENTION: NO DATA OUTPUT

DIGITAL CALIPERS (FRACTION READING)

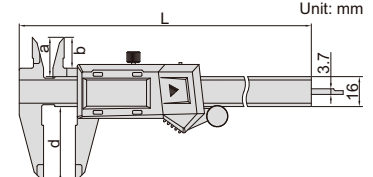
- Non waterproof
- Resolution: 0.01mm, 0.0005", 1/128"
- Buttons: unit (mm/in/fraction), ABS, on/off, zero
- Absolute and incremental measurement
- Battery CR2032, automatic power off
- Meet DIN862
- Made of stainless steel



1102-150



Unit: mm



Code	Range	Accuracy	L	a	b	d
1102-150 *	0-150mm/0-6"	±0.03mm	234mm	20mm	15mm	40mm
1102-200 *	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	50mm
1102-300 *	0-300mm/0-12"	±0.03mm	390mm	26mm	21.5mm	60mm

* Supplied with manufacturer inspection certificate

DIGITAL CALIPERS



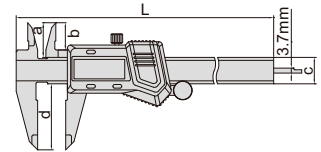
ATTENTION:
NO DATA OUTPUT

- Non waterproof
- Zinc alloy housing for digital unit
- Resolution: 0.01mm/0.0005"
- Buttons: zero, on/off, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Meet DIN862
- Made of stainless steel



1114-150A

Code	Range	Accuracy	L	a	b	c	d
1114-150A *	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm
1114-200A *	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	16mm	50mm
1114-300A *	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	17mm	60mm



*Supplied with manufacturer inspection certificate

DIGITAL CALIPERS (STANDARD TYPE)



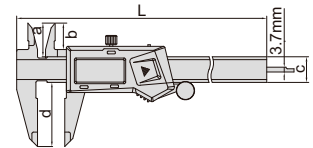
DATA
OUTPUT

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable
(code 7315-21 page 4, 7302-21 page 12)



1108-150

Code	Range	Accuracy	L	a	b	c	d
1108-150 *	0-150mm/0-6"	±0.02mm	236mm	21mm	16mm	16mm	40mm
1108-200 *	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	16mm	50mm
1108-250 *	0-250mm/0-10"	±0.03mm	350mm	25mm	20.5mm	16mm	60mm
1108-300 *	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	16mm	60mm



*Supplied with manufacturer inspection certificate

HEAVY DUTY 300mm DIGITAL CALIPER

DATA
OUTPUT



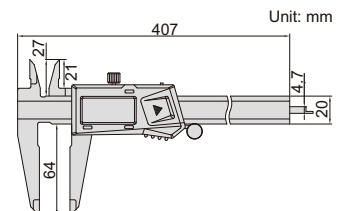
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable
(code 7315-22 page 4, 7302-22 page 12)



1196-300

Code	Range	Accuracy
1196-300 *	0-300mm/0-12"	±0.03mm

*Supplied with manufacturer inspection certificate



LOCK READING WITH
"HOLD" BUTTON

DATA
OUTPUT

INSPECTION
CERTIFICATE

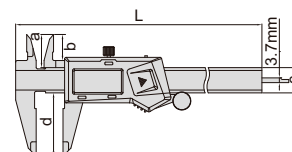
METRIC DIGITAL CALIPERS

2



1109-150

- Non waterproof
- Resolution: 0.01mm
- Buttons: on/off, zero, hold
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable
(code 7315-21 page 4, 7302-21 page 12)



Code	Range	Accuracy	L	a	b	c	d
1109-150*	0-150mm	±0.03mm	236mm	21mm	16mm	16mm	40mm
1109-200*	0-200mm	±0.03mm	286mm	24mm	19mm	16mm	50mm
1109-300*	0-300mm	±0.03mm	400mm	25mm	20.5mm	16mm	60mm

* Supplied with manufacturer inspection certificate

DATA
OUTPUT

INSPECTION
CERTIFICATE

DIGITAL CALIPERS WITH ROUND DEPTH BAR

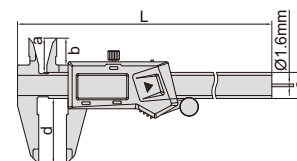


1119-150



round depth
bar Ø1.6mm

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Meet DIN862
- Made of stainless steel



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy	L	a	b	c	d
1119-150*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	L	a	b	c	d
1119-150WL*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm

* Supplied with manufacturer inspection certificate

LEFT HAND DIGITAL CALIPERS

INSPECTION
CERTIFICATE

DATA
OUTPUT

2

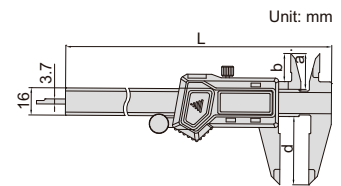
- Non waterproof
- Designed for left handed users
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable
(code 7315-22 page 4, 7302-22 page 12)



1130-150

Code	Range	Accuracy	L	a	b	d
1130-150*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	40mm
1130-200*	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	50mm
1130-300*	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	60mm

*Supplied with manufacturer inspection certificate



Unit: mm

DIGITAL CALIPERS WITH CERAMIC TIPPED JAWS

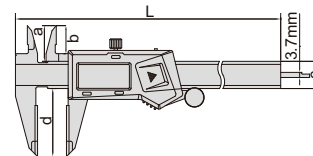
INSPECTION
CERTIFICATE

DATA
OUTPUT



1193-150

- Non waterproof
- Ceramic tipped jaws for outside measurement, extremely wear-resistant, non-magnetic and non electric conductive
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, made of stainless steel
- Meet DIN862



ceramic
tipped jaws



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy	L	a	b	c	d
1193-150*	0-150mm/0-6"	±0.03mm	235mm	21mm	16.5mm	16mm	40mm
1193-200*	0-200mm/0-8"	±0.03mm	287mm	24mm	20mm	16mm	50mm
1193-300*	0-300mm/0-12"	±0.03mm	390mm	26mm	21.5mm	16mm	60mm

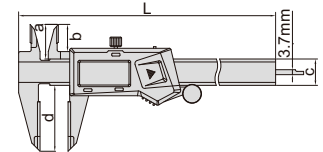
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	L	a	b	c	d
1193-150WL*	0-150mm/0-6"	±0.03mm	235mm	21mm	16.5mm	16mm	40mm
1193-200WL*	0-200mm/0-8"	±0.03mm	287mm	24mm	20mm	16mm	50mm
1193-300WL*	0-300mm/0-12"	±0.03mm	390mm	26mm	21.5mm	16mm	60mm

*Supplied with manufacturer inspection certificate



- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Meet DIN862
- Made of stainless steel



Non waterproof, with data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy	L	a	b	c	d	Remark
1110-150A*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm	carbide tipped upper and lower jaws
1110-200A*	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	16mm	50mm	carbide tipped upper and lower jaws
1110-300A*	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	16mm	60mm	carbide tipped upper and lower jaws
1110-150B*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm	carbide tipped lower jaws
1110-200B*	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	16mm	50mm	carbide tipped lower jaws
1110-300B*	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	16mm	60mm	carbide tipped lower jaws

Non waterproof, built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	L	a	b	c	d	Remark
1110-150AWL*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm	carbide tipped upper and lower jaws
1110-200AWL*	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	16mm	50mm	carbide tipped upper and lower jaws
1110-300AWL*	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	16mm	60mm	carbide tipped upper and lower jaws
1110-150BWL*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm	carbide tipped lower jaws
1110-200BWL*	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	16mm	50mm	carbide tipped lower jaws
1110-300BWL*	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	16mm	60mm	carbide tipped lower jaws

IP67 dust/waterproof, without data interface

Code	Range	Accuracy	L	a	b	c	d	Remark
1110-150C*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm	carbide tipped upper and lower jaws
1110-150D*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm	carbide tipped lower jaws

* Supplied with manufacturer inspection certificate

DIGITAL CALIPERS

DATA OUTPUT

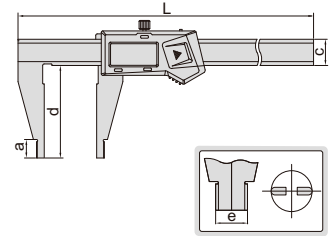
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1170-300

With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy	a	c	d	e	L
1170-200	0-200mm/0-8"	±0.03mm	12mm	17mm	60mm	10mm	314mm
1170-306	0-300mm/0-12"	±0.04mm	12mm	17mm	60mm	10mm	420mm
1170-300	0-300mm/0-12"	±0.06mm	12mm	17mm	90mm	10mm	420mm



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	a	c	d	e	L
1170-200WL	0-200mm/0-8"	±0.03mm	12mm	17mm	60mm	10mm	314mm
1170-306WL	0-300mm/0-12"	±0.04mm	12mm	17mm	60mm	10mm	420mm
1170-300WL	0-300mm/0-12"	±0.06mm	12mm	17mm	90mm	10mm	420mm

DIGITAL CALIPERS

DATA OUTPUT

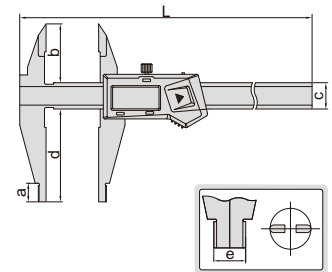
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1171-300

With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy	a	b	c	d	e	L
1171-200	0-200mm/0-8"	±0.03mm	12mm	38mm	17mm	60mm	10mm	320mm
1171-250	0-250mm/0-10"	±0.03mm	12mm	38mm	17mm	60mm	10mm	365mm
1171-306	0-300mm/0-12"	±0.04mm	12mm	38mm	17mm	60mm	10mm	420mm
1171-300	0-300mm/0-12"	±0.06mm	12mm	38mm	17mm	90mm	10mm	420mm



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	a	b	c	d	e	L
1171-200WL	0-200mm/0-8"	±0.03mm	12mm	38mm	17mm	60mm	10mm	320mm
1171-250WL	0-250mm/0-10"	±0.03mm	12mm	38mm	17mm	60mm	10mm	365mm
1171-306WL	0-300mm/0-12"	±0.04mm	12mm	38mm	17mm	60mm	10mm	420mm
1171-300WL	0-300mm/0-12"	±0.06mm	12mm	38mm	17mm	90mm	10mm	420mm

MINI DIGITAL CALIPERS

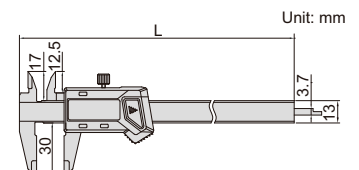
ATTENTION:
NO DATA OUTPUT

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: zero, mm/inch, on/off
- Automatic power off, move the digital unit to turn on power
- Battery LR44
- Meet DIN862
- Made of stainless steel



1111-100A

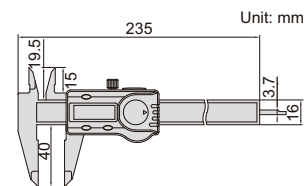
Code	Range	Accuracy	L
1111-75A	0-75mm/0-3"	±0.02mm	144mm
1111-100A	0-100mm/0-4"	±0.02mm	170mm



- Non waterproof
- Made of hard plastic, non-magnetic and non electric conductive
- Prevent workpieces from scratching by calipers
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off

**ATTENTION:
NO DATA OUTPUT**

PLASTIC DIGITAL CALIPER



1139-150

Code	Range	Accuracy
1139-150	0-150mm/0-6"	±0.1mm

**SHOCK
PROOF**

**INSPECTION
CERTIFICATE**

- Shockproof dial indicator
- Made of stainless steel

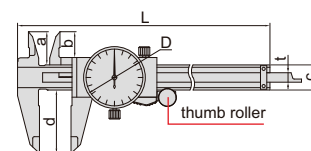


1312-150A

DIAL CALIPERS

Dial indicator graduation: **0.02mm**

Code	Range	Accuracy	Thumb roller	L	a	b	c	d	D	t	(mm)
1312-150A *	0-150mm	±0.03mm	with	235	21	16.5	16	40	Ø39	6.5	
1312-200A *	0-200mm	±0.03mm	with	288	24	19	16	48	Ø39	6.5	
1312-300A *	0-300mm	±0.03mm	with	410	28	22	20	62	Ø44.5	7.5	
1312-100AW *	0-100mm	±0.02mm	without	165	18	13	13	30	Ø32	6	



Dial indicator graduation: **0.01mm**

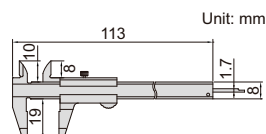
Code	Range	Accuracy	Thumb roller	L	a	b	c	d	D	t	(mm)
1311-150A *	0-150mm	±0.03mm	with	235	21	16.5	16	40	Ø39	6.5	
1311-200A *	0-200mm	±0.03mm	with	288	24	19	16	48	Ø39	6.5	
1311-300A *	0-300mm	±0.03mm	with	410	28	22	20	62	Ø44.5	7.5	

* Supplied with manufacturer inspection certificate

MINI VERNIER CALIPERS

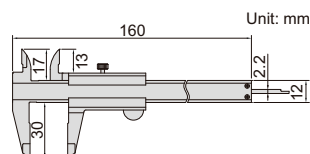
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

Code	Range	Graduation	Accuracy
1204-70	0-70mm	0.05mm	±0.05mm



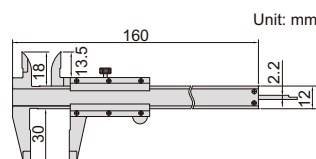
1204-70

Code	Range	Graduation	Accuracy
1203-1003	0-100mm	0.05mm	±0.05mm



1203-1003

Code	Range	Graduation	Accuracy
1201-1003	0-100mm	0.05mm	±0.05mm



1201-1003

VERNIER CALIPERS

2

Graduation 0.05mm/1/128" (mm)

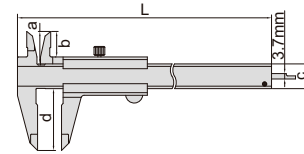
Code	Range	Accuracy	L	a	b	c	d
1205-150S	0-150mm/0-6"	±0.05mm	235	20.5	15.5	16	40
1205-200S	0-200mm/0-8"	±0.05mm	290	23.5	19	17	50
1205-250S	0-250mm/0-10"	±0.05mm	364	27.5	22	20	64
1205-300S	0-300mm/0-12"	±0.05mm	414	27.5	22	20	64



1205-150S

Graduation 0.05mm (mm)

Code	Range	Accuracy	L	a	b	c	d
1205-1503S	0-150mm	±0.05mm	235	20.5	15.5	16	40
1205-2003S	0-200mm	±0.05mm	290	23.5	19	17	50
1205-2503S	0-250mm	±0.05mm	350	26	21.5	16	60
1205-3003S	0-300mm	±0.05mm	414	27.5	22	20	64



Graduation 0.02mm/0.001" (mm)

Code	Range	Accuracy	L	a	b	c	d
1205-1502S	0-150mm/0-6"	±0.03mm	235	20.5	15.5	16	40
1205-2002S	0-200mm/0-8"	±0.03mm	290	23.5	19	17	50
1205-2502S	0-250mm/0-10"	±0.03mm	364	27.5	22	20	64
1205-3002S	0-300mm/0-12"	±0.03mm	414	27.5	22	20	64

Graduation 0.02mm (mm)

Code	Range	Accuracy	L	a	b	c	d
1205-1501S	0-150mm	±0.03mm	235	20.5	15.5	16	40
1205-2001S	0-200mm	±0.03mm	290	23.5	19	17	50
1205-2501S	0-250mm	±0.03mm	350	26	21.5	16	60
1205-3001S	0-300mm	±0.03mm	414	27.5	22	20	64

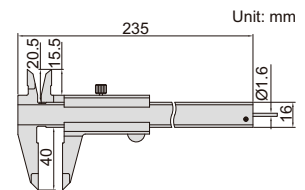
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

VERNIER CALIPER WITH ROUND DEPTH BAR

- Graduation 0.05mm/1/128"
- Round depth bar
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface



1202-150



Code	Range	Accuracy
1202-150	0-150mm/0-6"	±0.05mm

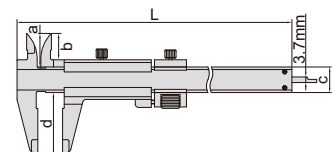
VERNIER CALIPERS WITH FINE ADJUSTMENT

- Graduation 0.02mm/0.001"
- With fine adjustment
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface



1233-130

Code	Range	Accuracy	L	a	b	c	d
1233-130	0-130mm/0-5"	±0.03mm	230	20.5	16.5	16	40
1233-180	0-180mm/0-7"	±0.03mm	295	23.5	19	16	50
1233-280	0-280mm/0-11"	±0.03mm	410	26	20	20	60



VERNIER CALIPERS WITH THUMB CLAMP

- Meet DIN862
- With thumb clamp
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.05mm/1/128" (mm)

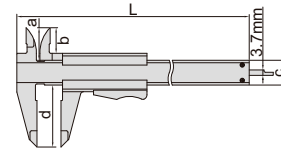
Code	Range	Accuracy	L	a	b	c	d
1223-150	0-150mm/0-6"	±0.05mm	230	20.5	16.5	16	40
1223-200	0-200mm/0-8"	±0.05mm	295	23.5	19	16	50

Graduation 0.02mm/0.001" (mm)

Code	Range	Accuracy	L	a	b	c	d
1223-1502	0-150mm/0-6"	±0.03mm	230	20.5	16.5	16	40
1223-2002	0-200mm/0-8"	±0.03mm	295	23.5	19	16	50



1223-150



VERNIER CALIPERS WITH CARBIDE TIPPED JAWS

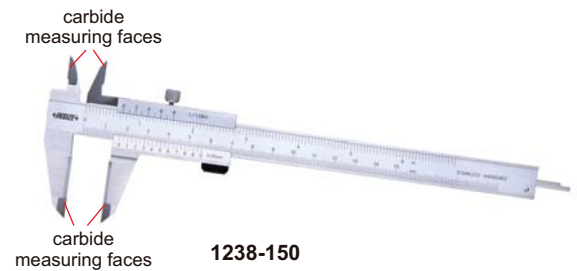
- Carbide tipped jaws for inside and outside measurements
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.05mm/1/128" (mm)

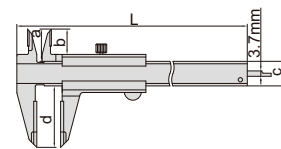
Code	Range	Accuracy	L	a	b	c	d
1238-150	0-150mm/0-6"	±0.05mm	230	21	16.5	16	40
1238-200	0-200mm/0-8"	±0.05mm	295	24	19	16	50
1238-300	0-300mm/0-12"	±0.05mm	410	25	20	17	60

Graduation 0.02mm/0.001" (mm)

Code	Range	Accuracy	L	a	b	c	d
1238-1502	0-150mm/0-6"	±0.03mm	230	21	16.5	16	40
1238-2002	0-200mm/0-8"	±0.03mm	295	24	19	16	50
1238-3002	0-300mm/0-12"	±0.03mm	410	25	20	17	60



1238-150



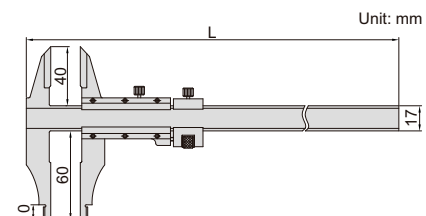
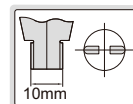
VERNIER CALIPERS



1217-3001

- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

Code	Range	Graduation	Accuracy	L
1217-2503	0-250mm	0.05mm	±0.05mm	360mm
1217-3001	0-300mm	0.02mm	±0.03mm	410mm



VERNIER CALIPERS (ANTI MAGNETIC)

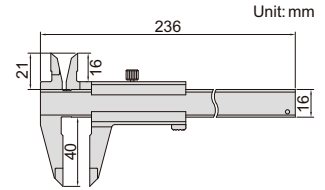
ATTENTION:
NOT HARDENED

PURE COPPER

- Suitable for magnetic parts
- Made of pure copper



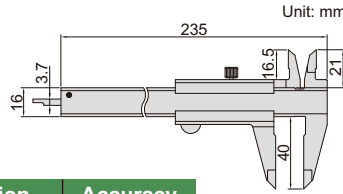
1224-150A



Code	Range	Graduation	Accuracy
1224-150A	0-150mm	0.02mm	±0.05mm
1224-1501A	0-150mm	0.05mm	±0.05mm

LEFT HAND VERNIER CALIPERS

- Designed for left handed users
- Made of stainless steel
- Satin chrome plated reading surface



1239-1502

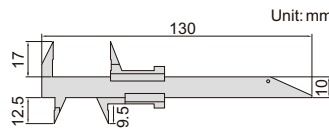
Code	Range	Graduation	Accuracy
1239-150	0-150mm/0-6"	0.05mm/1/128"	±0.05mm
1239-1503	0-150mm	0.05mm	±0.05mm
1239-1502	0-150mm/0-6"	0.02mm/0.001"	±0.03mm
1239-1501	0-150mm	0.02mm	±0.03mm

TEETH VERNIER CALIPER

- Used for teeth
- Made of stainless steel



1226-70

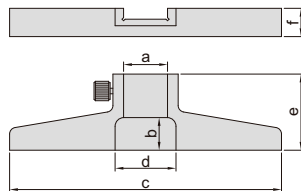


scale on the back



Code	Range	Graduation	Accuracy
1226-70	0-70mm	0.1mm	±0.1mm

DEPTH BASE ATTACHMENTS



6140



6140-16B

- To increase the stability of depth measurement
- Suitable for digital calipers and dial calipers
- Made of stainless steel

Code	a	b	c	d	e	f	Type	Application
6140	16.5	9	75	18	30	6	narrow base (f=6)	suitable for calipers with beam width (w) 16mm
6140-300A	20	15	125	22	34	9	narrow base (f=9)	suitable for calipers with beam width (w) 20mm
6140-16B	16	12.5	75	24.5	30	11	wide base (f=11), high stability	suitable for calipers with beam width (w) 16mm
6140-300B	20	15	125	28	35	13	wide base (f=13), high stability	suitable for calipers with beam width (w) 20mm

(mm)

REFER TO PAGE 294 FOR DETAILS

CALIPER INSPECTION GAGE BLOCK AND RING GAGE SETS

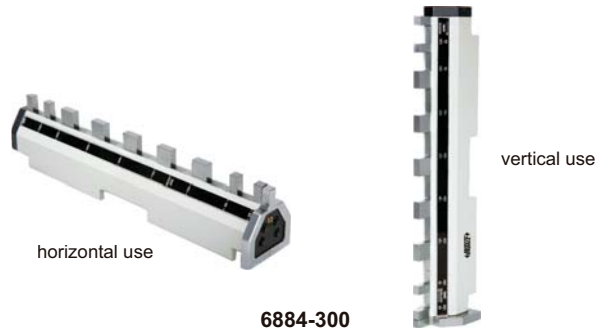
2



4176-30

REFER TO PAGE 299 FOR DETAILS

CALIPER GAGE CHECKERS



6884-300



CALIPER END GRINDING MACHINE CODE 6309

- Used for grinding the depth measuring surface of the end of calipers



application



SPECIFICATION

Power supply	220V, 50/60Hz
Dimension (L×W×H)	370×200×160mm
Weight	15kg

REFER TO PAGE 148 FOR DETAILS

CALIPER/MICROMETER LAPPING MACHINE CODE 6318

- For lapping measuring surfaces of caliper lower jaws



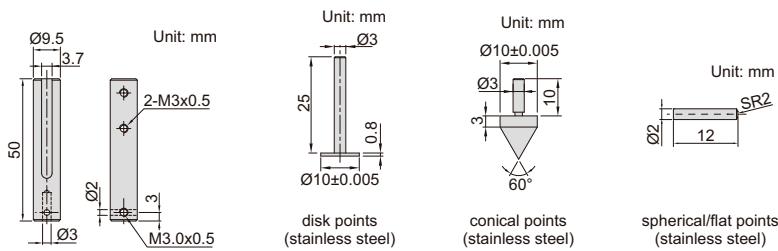
lapping measuring surfaces of caliper lower jaws



**ACCESSORY SET FOR DIGITAL CALIPERS
CODE 6144**



6144



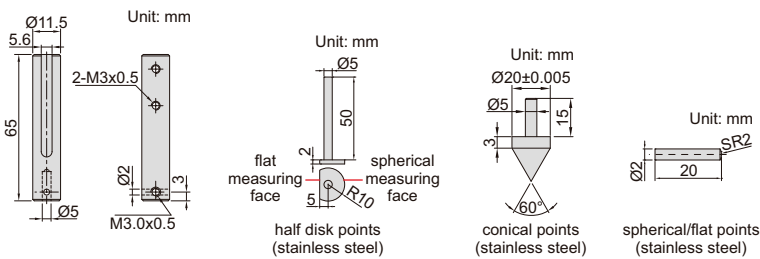
■ Suitable for 0-150mm/0-6" and 0-200mm/0-8" digital calipers (thickness of lower jaws ≤ 3.7mm)

Code
6144

**ACCESSORY SET FOR LARGE DIGITAL CALIPERS
CODE 6145-500**



6145-500

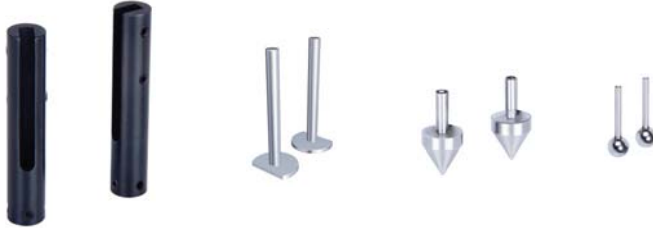


■ Suitable for 0-500mm/0-20" and 0-600mm/0-24" digital calipers (thickness of lower jaws ≤ 5.6mm)

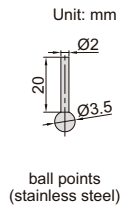
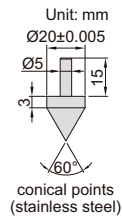
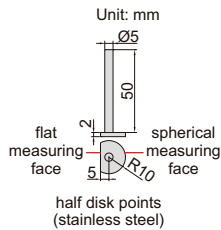
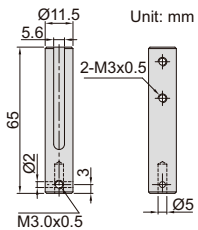
Code
6145-500



ACCESSORY SET FOR LARGE DIGITAL CALIPERS (WITH SIDE POINTS)
CODE 6146-500B

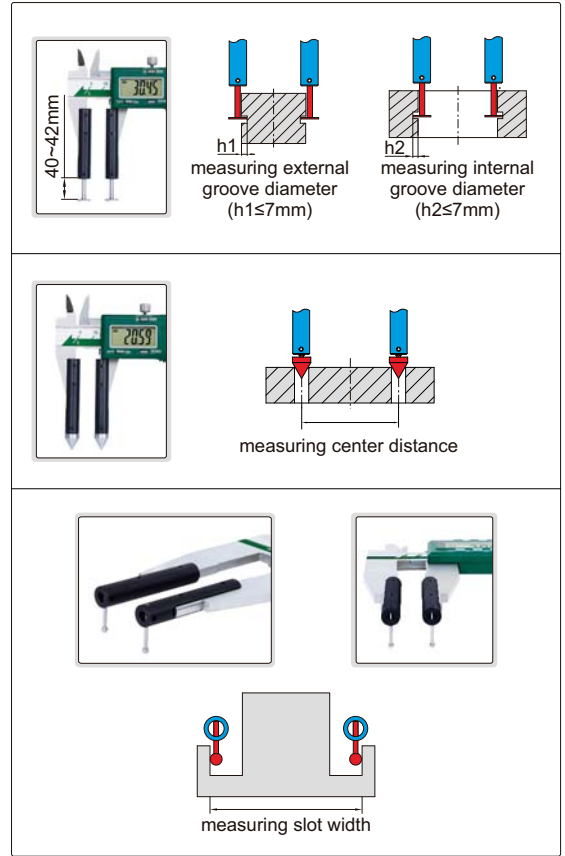


6146-500B



- Suitable for 0-500mm/0-20" and 0-600mm/0-24" digital calipers (thickness of lower jaws ≤ 5.6mm)

Code
6146-500B



IP65 WATERPROOF DATA OUTPUT

IP65 WATERPROOF DIGITAL CALIPERS

- IP65 dust/waterproof
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Automatic power off
- Made of stainless steel



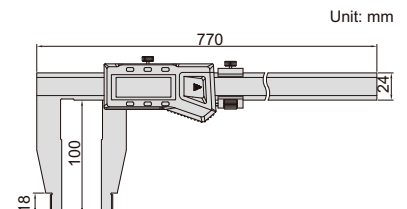
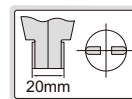
1173-601

With data interface (data output cable code 7302-1104, wireless transmitter code 7315-1104, optional)

Code	Range	Accuracy
1173-601	0-600mm/0-24"	±0.05mm

Built in bluetooth

Code	Range	Accuracy
1173-601WL	0-600mm/0-24"	±0.05mm



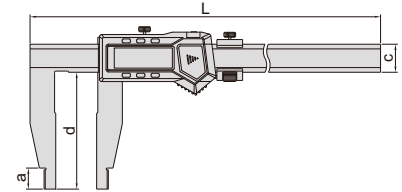
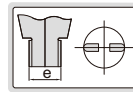
DIGITAL CALIPERS

DATA
OUTPUT



1106-501

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Made of stainless steel



With data interface
(data output cable code 7315-22 page 4, 7302-22 page 12, optional, for calipers with c=24mm or 31mm)

Code	Range	Accuracy	a	c	d	e	L
1106-301	0-300mm/0-12"	±0.05mm	18mm	24mm	100mm	20mm	420mm
1106-302	0-300mm/0-12"	±0.05mm	18mm	24mm	150mm	20mm	420mm
1106-451	0-450mm/0-18"	±0.05mm	18mm	24mm	100mm	20mm	625mm
1106-501	0-500mm/0-20"	±0.05mm	18mm	24mm	100mm	20mm	675mm
1106-502	0-500mm/0-20"	±0.06mm	18mm	24mm	150mm	20mm	675mm
1106-503	0-500mm/0-20"	±0.06mm	24mm	31mm	200mm	20mm	675mm
1106-505	0-500mm/0-20"	±0.08mm	24mm	42mm	300mm	20mm	675mm
1106-601	0-600mm/0-24"	±0.05mm	18mm	24mm	100mm	20mm	770mm
1106-602	0-600mm/0-24"	±0.06mm	18mm	24mm	150mm	20mm	770mm
1106-603	0-600mm/0-24"	±0.06mm	24mm	31mm	200mm	20mm	770mm
1106-802	0-800mm/0-32"	±0.07mm	24mm	31mm	150mm	20mm	1025mm
1106-1002	0-1000mm/0-40"	±0.08mm	24mm	31mm	150mm	20mm	1220mm
1106-1003	0-1000mm/0-40"	±0.08mm	24mm	31mm	200mm	20mm	1220mm
1106-1005	0-1000mm/0-40"	±0.10mm	24mm	42mm	300mm	20mm	1220mm
1106-1502	0-1500mm/0-60"	±0.11mm	24mm	42mm	150mm	20mm	1780mm
1106-1503	0-1500mm/0-60"	±0.12mm	24mm	42mm	200mm	20mm	1780mm
1106-2002	0-2000mm/0-80"	±0.14mm	24mm	42mm	150mm	20mm	2290mm
1106-2003	0-2000mm/0-80"	±0.14mm	24mm	42mm	200mm	20mm	2290mm
1106-2502	0-2500mm/0-100"	±0.22mm	24mm	42mm	150mm	20mm	2800mm
1106-3002	0-3000mm/0-120"	±0.26mm	24mm	42mm	150mm	20mm	3300mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	a	c	d	e	L
1106-301WL	0-300mm/0-12"	±0.05mm	18mm	24mm	100mm	20mm	420mm
1106-302WL	0-300mm/0-12"	±0.05mm	18mm	24mm	150mm	20mm	420mm
1106-451WL	0-450mm/0-18"	±0.05mm	18mm	24mm	100mm	20mm	625mm
1106-501WL	0-500mm/0-20"	±0.05mm	18mm	24mm	100mm	20mm	675mm
1106-502WL	0-500mm/0-20"	±0.06mm	18mm	24mm	150mm	20mm	675mm
1106-601WL	0-600mm/0-24"	±0.05mm	18mm	24mm	100mm	20mm	770mm
1106-602WL	0-600mm/0-24"	±0.06mm	18mm	24mm	150mm	20mm	770mm

DATA
OUTPUT

DIGITAL CALIPERS

2

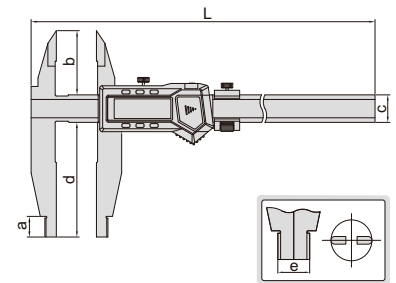
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Made of stainless steel



1117-501

With data interface (data output cable code 7315-22 page 4, 7302-22 page 12, optional)

Code	Range	Accuracy	a	b	c	d	e	L
1117-301	0-300mm/0-12"	±0.05mm	18mm	56mm	24mm	100mm	20mm	420mm
1117-501	0-500mm/0-20"	±0.05mm	18mm	56mm	24mm	100mm	20mm	675mm
1117-502	0-500mm/0-20"	±0.06mm	18mm	56mm	24mm	150mm	20mm	675mm
1117-601	0-600mm/0-24"	±0.05mm	18mm	56mm	24mm	100mm	20mm	770mm
1117-802	0-800mm/0-32"	±0.07mm	24mm	67mm	31mm	150mm	20mm	1025mm
1117-1002	0-1000mm/0-40"	±0.08mm	24mm	67mm	31mm	150mm	20mm	1220mm



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	a	b	c	d	e	L
1117-301WL	0-300mm/0-12"	±0.05mm	18mm	56mm	24mm	100mm	20mm	420mm
1117-501WL	0-500mm/0-20"	±0.05mm	18mm	56mm	24mm	100mm	20mm	675mm
1117-502WL	0-500mm/0-20"	±0.06mm	18mm	56mm	24mm	150mm	20mm	675mm
1117-601WL	0-600mm/0-24"	±0.05mm	18mm	56mm	24mm	100mm	20mm	770mm

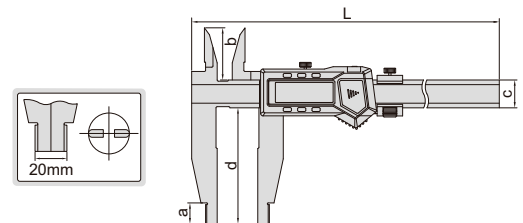
DATA
OUTPUT

DIGITAL CALIPERS

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Made of stainless steel



1136-501



With data interface
(data output cable code 7315-22 page 4, 7302-22 page 12, optional, for calipers with c=24mm or 31mm)

Code	Range	Accuracy	a	b	c	d	L
1136-301	0-300mm/0-12"	±0.05mm	18	45	24	100	420
1136-451	0-450mm/0-18"	±0.05mm	18	45	24	100	625
1136-501	0-500mm/0-20"	±0.05mm	18	45	24	100	675
1136-502	0-500mm/0-20"	±0.06mm	18	45	24	150	675
1136-503	0-500mm/0-20"	±0.06mm	24	60	31	200	675
1136-601	0-600mm/0-24"	±0.05mm	18	45	24	100	770
1136-1002	0-1000mm/0-40"	±0.08mm	24	60	31	150	1220
1136-1502	0-1500mm/0-60"	±0.11mm	24	60	42	150	1780
1136-2002	0-2000mm/0-80"	±0.14mm	24	60	42	150	2290

Built-in wireless

(receiver code 7315-2/3/6/7/8/9 is required)

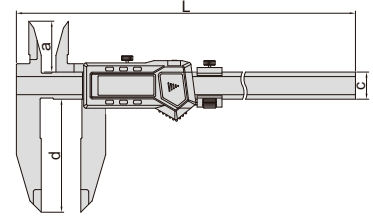
Code	Range	Accuracy	a	b	c	d	L
1136-301WL	0-300mm/0-12"	±0.05mm	18	45	24	100	420
1136-451WL	0-450mm/0-18"	±0.05mm	18	45	24	100	625
1136-501WL	0-500mm/0-20"	±0.05mm	18	45	24	100	675
1136-502WL	0-500mm/0-20"	±0.06mm	18	45	24	150	675
1136-601WL	0-600mm/0-24"	±0.05mm	18	45	24	100	770

DIGITAL CALIPERS

DATA OUTPUT



1135-601



- Non waterproof
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Made of stainless steel

With data interface (data output cable code 7315-22 page 4, 7302-22 page 12, optional) (mm)

Code	Range	Accuracy	a	c	d	L
1135-451	0-450mm/0-18"	±0.05mm	45	24	100	625
1135-601	0-600mm/0-24"	±0.05mm	45	24	100	770
1135-1002	0-1000mm/0-40"	±0.08mm	60	31	150	1220

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required) (mm)

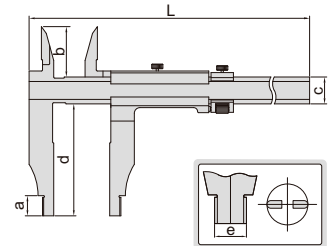
Code	Range	Accuracy	a	c	d	L
1135-451WL	0-450mm/0-18"	±0.05mm	45	24	100	625
1135-601WL	0-600mm/0-24"	±0.05mm	45	24	100	770

VERNIER CALIPERS (SOLID TYPE)

- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



1236-521



solid type (without screw)



Graduation 0.05mm/1/128" (mm)

Code	Range	Accuracy	a	b	c	d	e	L
1236-394	0-300mm/0-12"	±0.07mm	12	38	20	90	10	450
1236-514	0-500mm/0-20"	±0.07mm	18	45	24	100	20	670
1236-524	0-500mm/0-20"	±0.08mm	18	45	24	150	20	670
1236-614	0-600mm/0-24"	±0.08mm	18	45	24	100	20	770
1236-824	0-800mm/0-32"	±0.09mm	24	60	31	150	20	1030
1236-1024	0-1000mm/0-40"	±0.12mm	24	60	31	150	20	1230

Graduation 0.02mm (mm)

Code	Range	Accuracy	a	b	c	d	e	L
1236-511	0-500mm	±0.05mm	18	45	24	100	20	670
1236-521	0-500mm	±0.06mm	18	45	24	150	20	670
1236-1021	0-1000mm	±0.08mm	24	60	31	150	20	1230

VERNIER CALIPERS (SOLID TYPE)

- Graduation 0.05mm/1/128"
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

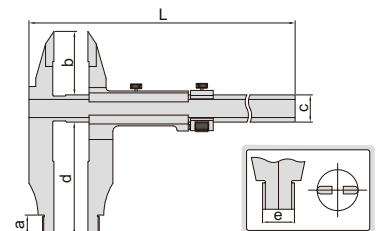
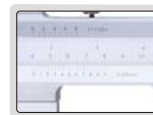


1207-514

(mm)

Code	Range	Accuracy	a	b	c	d	e	L
1207-394	0-300mm/0-12"	±0.07mm	12	40	20	90	10	440
1207-514	0-500mm/0-20"	±0.07mm	18	56	24	100	20	670
1207-524	0-500mm/0-20"	±0.08mm	18	56	24	150	20	670
1207-824	0-800mm/0-32"	±0.09mm	24	67	31	150	20	930
1207-1024	0-1000mm/0-40"	±0.12mm	24	67	31	150	20	1230

solid type (without screw)



VERNIER CALIPERS (SOLID TYPE)

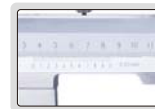
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



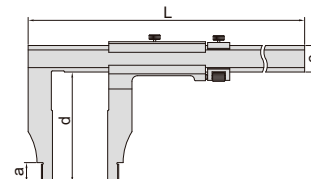
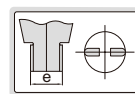
1208-511

Graduation 0.05mm/1/128" (mm)

Code	Range	Accuracy	a	c	d	e	L
1208-214	0-200mm/0-8"	±0.06mm	10	20	100	10	330
1208-394	0-300mm/0-12"	±0.07mm	10	20	90	10	410
1208-324	0-300mm/0-12"	±0.07mm	18	24	150	20	410
1208-524	0-500mm/0-20"	±0.08mm	18	24	150	20	670
1208-614	0-600mm/0-24"	±0.08mm	18	24	100	20	770
1208-624	0-600mm/0-24"	±0.09mm	18	24	150	20	770
1208-824	0-800mm/0-32"	±0.09mm	24	31	150	20	1030
1208-1024	0-1000mm/0-40"	±0.12mm	24	31	150	20	1230
1208-1524	0-1500mm/0-60"	±0.16mm	24	42	150	20	1820
1208-2024	0-2000mm/0-80"	±0.20mm	24	42	150	20	2330

 solid type
(without screw)

Graduation 0.02mm (mm)

Code	Range	Accuracy	a	c	d	e	L
1208-511	0-500mm	±0.05mm	18	24	100	20	670
1208-521	0-500mm	±0.06mm	18	24	150	20	670
1208-1021	0-1000mm	±0.08mm	24	31	150	20	1230
1208-1521	0-1500mm	±0.11mm	24	42	150	20	1820


VERNIER CALIPERS (SOLID TYPE)

- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



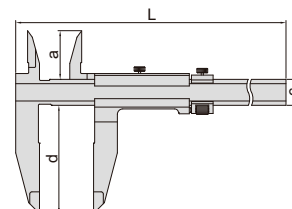
1210-611

Graduation 0.05mm/1/128" (mm)

Code	Range	Accuracy	a	c	d	L
1210-614	0-600mm/0-24"	±0.08mm	45	24	100	770
1210-1024	0-1000mm/0-40"	±0.12mm	60	31	150	1230

Graduation 0.02mm (mm)

Code	Range	Accuracy	a	c	d	L
1210-611	0-600mm	±0.05mm	45	24	100	770
1210-1021	0-1000mm	±0.08mm	60	31	150	1230

 solid type
(without screw)


VERNIER CALIPERS (SEPARATE TYPE)

2

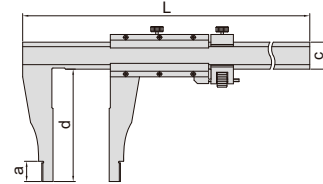
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



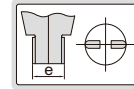
1214-500

Graduation 0.02mm/0.001" (mm)

Code	Range	Accuracy	a	c	d	e	L
1214-300	0-300mm/0-12"	±0.05mm	10	20	75	10	410
1214-450	0-450mm/0-18"	±0.05mm	18	24	100	20	620
1214-500	0-500mm/0-20"	±0.05mm	18	24	100	20	670
1214-600	0-600mm/0-24"	±0.05mm	18	24	100	20	770
1214-1000	0-1000mm/0-40"	±0.08mm	24	32	140	20	1216
1214-1500	0-1500mm/0-60"	±0.12mm	24	42	200	20	1830
1214-2000	0-2000mm/0-80"	±0.14mm	24	42	200	20	2320



separate type
(with screws)



Graduation 0.05mm/1/128" (mm)

Code	Range	Accuracy	a	c	d	e	L
1214-6004	0-600mm/0-24"	±0.08mm	18	24	100	20	770
1214-1004	0-1000mm/0-40"	±0.12mm	24	32	140	20	1216

LONG JAW VERNIER CALIPERS (SEPARATE TYPE)

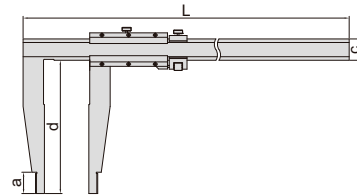
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



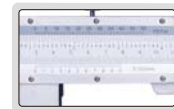
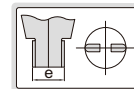
1215-1032

Graduation 0.02mm/0.001" (mm)

Code	Range	Accuracy	a	c	d	e	L
1215-392	0-300mm/0-12"	±0.05mm	10	17	90	10	410
1215-322	0-300mm/0-12"	±0.05mm	18	24	150	20	470
1215-522	0-500mm/0-20"	±0.06mm	18	24	150	20	670
1215-532	0-500mm/0-20"	±0.06mm	18	24	200	20	670
1215-622	0-600mm/0-24"	±0.06mm	18	24	150	20	770
1215-642	0-600mm/0-24"	±0.08mm	24	32	250	20	870
1215-822	0-800mm/0-32"	±0.07mm	24	32	150	20	1020
1215-832	0-800mm/0-32"	±0.07mm	24	32	200	20	1020
1215-1032	0-1000mm/0-40"	±0.08mm	24	32	200	20	1220
1215-1052	0-1000mm/0-40"	±0.11mm	24	42	300	20	1330
1215-3052	0-3000mm/0-120"	±0.26mm	24	50	300	20	3360



separate type
(with screws)



Graduation 0.05mm/1/128" (mm)

Code	Range	Accuracy	a	c	d	e	L
1215-524	0-500mm/0-20"	±0.08mm	18	24	150	20	670
1215-1034	0-1000mm/0-40"	±0.12mm	24	32	200	20	1330

UNIVERSAL CALIPERS

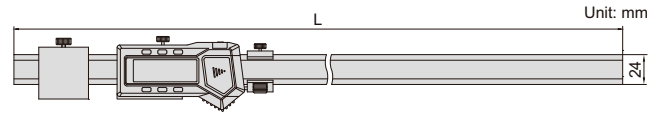


DATA OUTPUT



1125-600

- Non waterproof
- Buttons: on/off, set, mm/inch, ABS, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



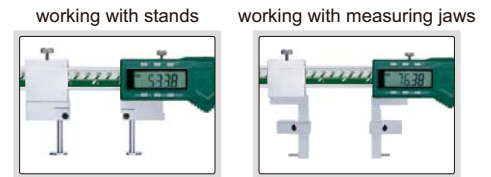
With data interface
(data output cable code 7315-22 page 4, 7302-22 page 12, optional)

Code	Range *	Resolution	Accuracy	L
1125-600	0-600mm/0-24"	0.01mm/0.0005"	±0.05mm	778mm
1125-1000	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1205mm

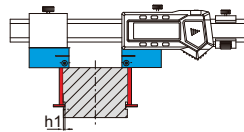
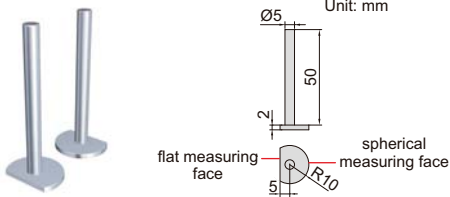
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range *	Resolution	Accuracy	L
1125-600WL	0-600mm/0-24"	0.01mm/0.0005"	±0.05mm	778mm
1125-1000WL	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1205mm

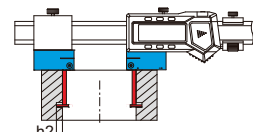
*The range changes according to different points



Half disk points (included)

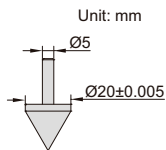


measuring external groove diameter with flat measuring face (depth $h_1 \leq 2.5\text{mm}$)

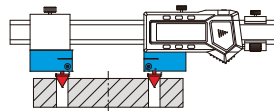


measuring internal groove diameter with spherical measuring face (depth $h_2 \leq 7.5\text{mm}$)

Conical points (optional)

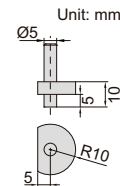


Code
1125-T101

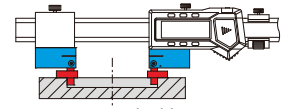


measuring center distance

Round shoulder points (optional)

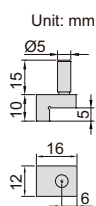


Code
1125-T102

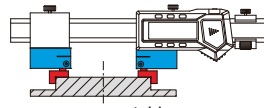


measure inside diameter of shallow hole

Flat shoulder points (optional)

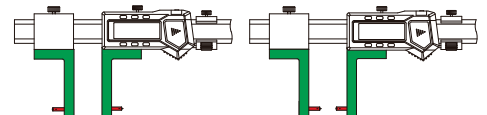
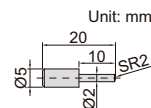


Code
1125-T103

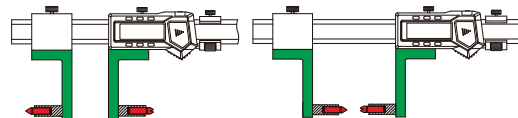


measure outside diameter of low boss

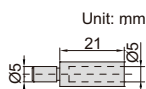
Spherical points (included)



Point sleeve (optional)

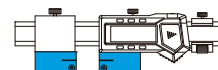
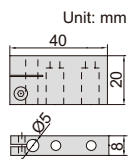


working with multifunctional points, ball points and screw thread points



Code
1125-T104

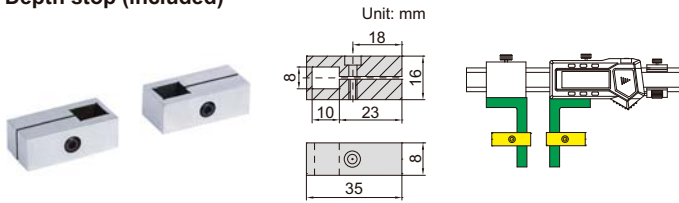
Stands (included)



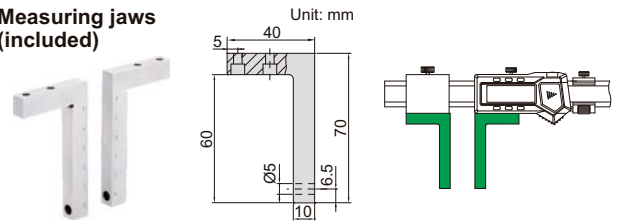
To be continued

Continued from previous page

Depth stop (included)



Measuring jaws (included)



Multifunctional points 7392* (optional, page 40)



* It is necessary to use point sleeve (code 1125-T104) for these points

Ball points 7391* (optional, page 40)



Screw thread points 7381*, 7321* (optional, page 40)



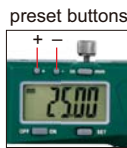
DIGITAL CALIPERS WITH INTERCHANGEABLE POINTS

DATA OUTPUT



1526-200

- Non waterproof
- Supplied with 3 pairs of points and zero setting block for external measurement
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: points



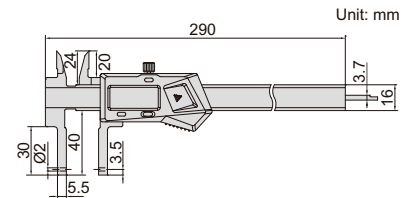
short spherical points (included) Unit: mm



long spherical/flat points (included) Unit: mm



spherical blade points (included) Unit: mm



With data interface

Code	Data output cable (optional)
1526-200	code 7315-21 page 4, 7302-21 page 12

Built-in wireless

Code	Receiver (optional)
1526-200WL	code 7315-2/3/6/7/8/9

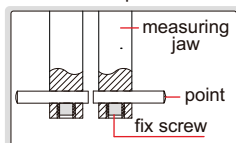
Point	Range	Accuracy	Application
short spherical points	12-212mm/0.5-8.5" (internal)	±0.03mm	for grooves inside small hole
long spherical/flat points	24-224mm/1-8.8" (internal) 0-187mm/0-7.5" (external)	±0.03mm	spherical points for grooves inside hole flat points for external grooves
spherical blade points	24-224mm/1-8.8" (internal) 0-187mm/0-7.5" (external)	±0.03mm	for narrow grooves inside hole



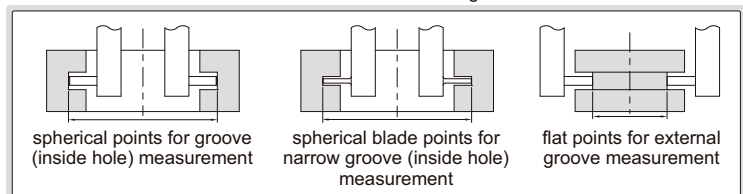
zero setting block for external measurement (included)



install points



measure internal and external grooves



To be continued

Continued from previous page

Depth stop (optional)

Code
6143

Unit: mm

for external groove measurement

for internal groove measurement

Point sleeve (optional)

1526-T101

Unit: mm

installation

Code
1526-T101

Ball points (optional)

7391-T5

Unit: mm

Code	Ball dia. (D)	Range**
7391-T3*	SØ2.0mm	75-275mm/3.0-10.8" (internal) 0-146mm/0-5.7" (external)
7391-T4*	SØ2.5mm	76-276mm/3.0-10.8" (internal) 0-145mm/0-5.7" (external)
7391-T5*	SØ3.0mm	77-277mm/3.0-10.9" (internal) 0-144mm/0-5.6" (external)
7391-T6*	SØ3.5mm	78-278mm/3.1-10.9" (internal) 0-143mm/0-5.6" (external)
7391-T7*	SØ4.0mm	79-279mm/3.1-10.9" (internal) 0-142mm/0-5.6" (external)
7391-T8*	SØ4.5mm	80-280mm/3.2-11.0" (internal) 0-141mm/0-5.5" (external)
7391-T9*	SØ5.0mm	81-281mm/3.2-11.0" (internal) 0-140mm/0-5.5" (external)
7391-T10*	SØ6.0mm	83-283mm/3.3-11.1" (internal) 0-138mm/0-5.4" (external)

* It is necessary to use point sleeve (code **1526-T101**) for these points

** Range of **1526-200** and **1526-200WL** after installing the points and point sleeve

Multifunctional points (optional)

7392-T1

7392-T4

7392-T7

7392-T2

7392-T5

7392-T8

7392-T3

7392-T6

7392-T9

Code	Type
7392-T1*	flat
7392-T2*	spherical
7392-T3*	spline
7392-T4*	disk
7392-T5*	blade
7392-T6*	knife-edge point
7392-T7*	point
7392-T8*	knife-edge
7392-T9*	point

Range**
66-266mm/2.6-10.5" (internal), 0-155mm/0-6.1" (external)

* It is necessary to use point sleeve (code **1526-T101**) for these points

Screw thread points (optional)

7321-T16

7381-T11

Internal thread (60° thread angle)

Code	Pitch
7321-T11*	0.4-0.5mm/64-48TPI
7321-T12*	0.6-0.9mm/44-28TPI
7321-T13*	1-1.75mm/24-14TPI
7321-T14*	2-3mm/13-9TPI
7321-T15*	3.5-5mm/8-5TPI
7321-T16*	5.5-7mm/4.5-3.5TPI
7321-T1S*	6 pairs/set, including all above points

External thread (60° thread angle)

Code	Pitch
7381-T11*	0.4-0.5mm/64-48TPI
7381-T12*	0.6-0.9mm/44-28TPI
7381-T13*	1-1.75mm/24-14TPI
7381-T14*	2-3mm/13-9TPI
7381-T15*	3.5-5mm/8-5TPI
7381-T16*	5.5-7mm/4.5-3.5TPI
7381-TS*	6 pairs/set, including all above points

Range**
66-266mm/2.6-10.5" (internal)
0-155mm/0-6.1" (external)

** Range of **1526-200** and **1526-200WL** after installing the points and point sleeve

* It is necessary to use point sleeve (code **1526-T101**) for these points

DIGITAL CALIPERS WITH INTERCHANGEABLE POINTS

DATA
OUTPUT

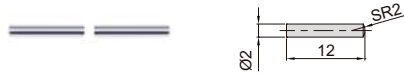


2



1124-300A

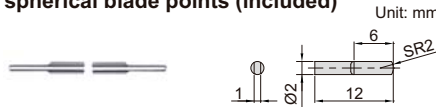
short spherical/flat points (included) Unit: mm



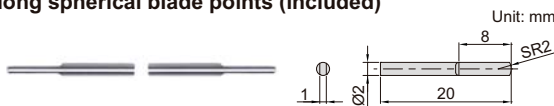
long spherical/flat points (included) Unit: mm



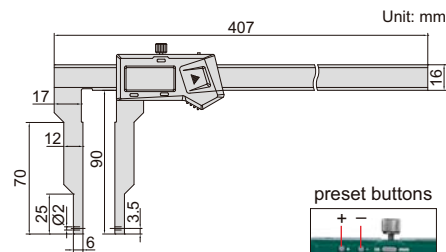
short spherical blade points (included) Unit: mm



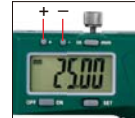
long spherical blade points (included) Unit: mm



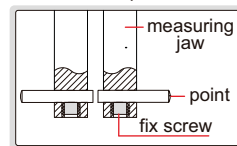
- Non waterproof
- Supplied with 4 pairs of points and zero setting block for external measurement
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: points (code 1526-T101, 7392, 7391, 7381, 7321), depth stop (code 6143)



preset buttons



install points



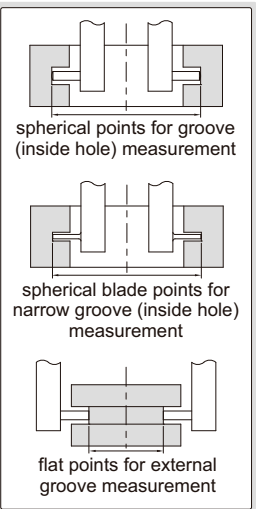
depth stop 6143 (optional)



zero setting block for external measurement (included)



measure internal and external grooves



With data interface

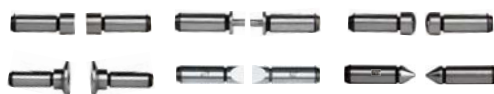
Code	Data output cable (optional)
1124-300A	code 7315-21 page 4, 7302-21 page 12

Built-in wireless

Code	Receiver (optional)
1124-300AWL	code 7315-2/3/6/7/8/9

Point	Range	Accuracy	Application
short spherical/flat points	24-324mm/1-12.7" (internal) 0-288mm/0-11.3" (external)	±0.04mm	spherical points for grooves inside hole (small hole) flat points for external grooves
long spherical/flat points	40-340mm/1.5-13.3" (internal) 0-272mm/0-10.7" (external)	±0.04mm	spherical points for grooves inside hole (large hole) flat points for external grooves
short spherical blade points	24-324mm/1-12.7" (internal) 0-288mm/0-11.3" (external)	±0.04mm	for narrow grooves inside hole (small hole)
long spherical blade points	40-340mm/1.5-13.3" (internal) 0-272mm/0-10.7" (external)	±0.04mm	for narrow grooves inside hole (large hole)

Multifunctional points 7392* (optional, page 40)



Ball points 7391* (optional, page 40)



Screw thread points 7381*, 7321* (optional, page 40)



* It is necessary to use point sleeve (code 1526-T101) for these points

DATA OUTPUT

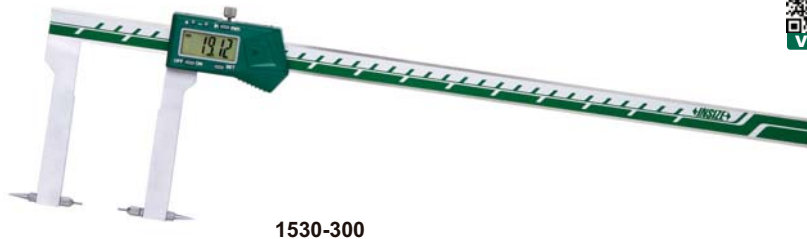
VARIOUS POINTS ARE AVAILABLE (PAGE 224-226)

DIGITAL CALIPERS WITH INTERCHANGEABLE POINTS



2

- Non waterproof
- Supplied with 4 pairs of points and zero setting block for external measurement
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: points (page 224-226), depth stop (code 6143)



1530-300

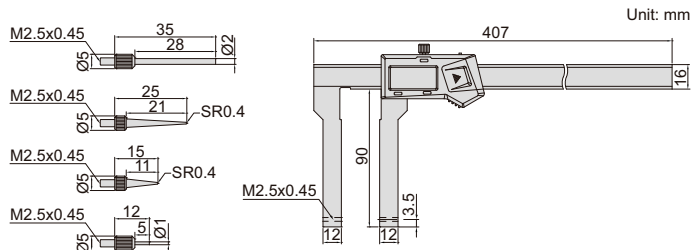
zero setting block for external measurement (included)



depth stop 6143 (optional)



preset buttons



Unit: mm

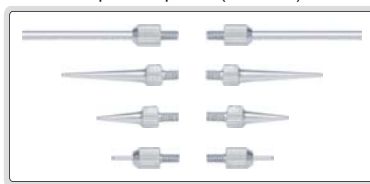
With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range*	Accuracy
1530-300	0-300mm/0-12"	±0.04mm

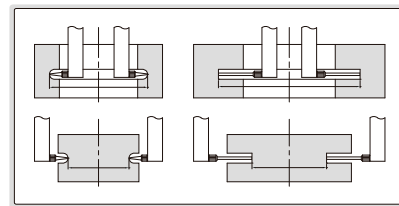
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range*	Accuracy
1530-300WL	0-300mm/0-12"	±0.04mm

4 pairs of points (included)



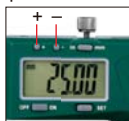
measure internal and external grooves



*For different points, the measuring range changes accordingly

DIGITAL INSIDE GROOVE CALIPERS

preset buttons

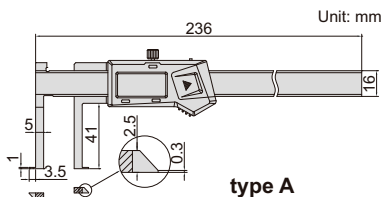


1520-150

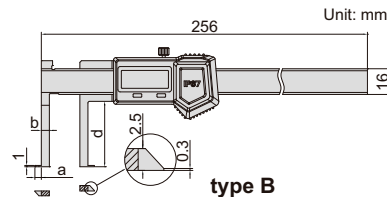
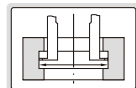


1520-150P

depth stop 6143 (optional)



type A



type B

- Measure diameter of grooves inside small bores
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -), type B: on/off, zero, mm/inch, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code 6143)

Non waterproof, with data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Type	Accuracy
1520-150	11-150mm/0.43-6"	A	±0.04mm

Non waterproof, built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Type	Accuracy
1520-150WL	11-150mm/0.43-6"	A	±0.04mm

IP67 dust/waterproof, no automatic power off, set zero after power on each time, without data interface

Code	Range	Type	Accuracy	a	b	d
1520-150P	14-150mm/0.56-6"	B	±0.04mm	5mm	7mm	30mm
1520-1501P	8-150mm/0.31-6"	B	±0.04mm	2mm	4mm	40mm

DIGITAL INSIDE POINT CALIPERS

DATA
OUTPUT

2

depth stop **6143**
(optional)

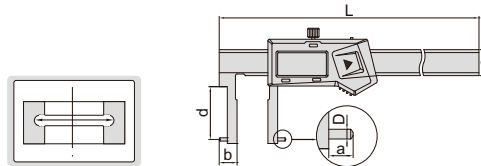


1121-150A
type A



1121-150B
type B

- Non waterproof
- Measure groove diameter
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -)
type B: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop
(code **6143**, for calipers with c=16mm)



Preset (no need to add the width of the jaws on the reading), with data interface

(mm)

Code	Range	Type	Accuracy	L	a	b	c	d	D	Data output cable (optional)
1121-150A	24-150mm/0.94-6"	A	±0.04mm	250	5	12	16	28	∅2	7315-21 page 4, 7302-21 page 12
1121-1501	35-150mm/1.38-6"	A	±0.05mm	250	6	17.5	16	60	∅2	7315-21 page 4, 7302-21 page 12
1121-200A	25-200mm/0.98-8"	A	±0.04mm	310	5	12.5	16	37	∅2	7315-21 page 4, 7302-21 page 12
1121-2001	40-200mm/1.57-8"	A	±0.05mm	310	7	20	16	70	∅3	7315-21 page 4, 7302-21 page 12
1121-300A	30-300mm/1.18-12"	A	±0.07mm	410	5	15	16	50	∅2	7315-21 page 4, 7302-21 page 12
1121-3001A	50-300mm/1.97-12"	A	±0.07mm	410	8	25	16	77	∅3	7315-21 page 4, 7302-21 page 12
1121-500A	40-500mm/1.57-20"	A	±0.07mm	680	5	20	24	90	∅3	7315-22 page 4, 7302-22 page 12
1121-5001	60-500mm/2.36-20"	A	±0.08mm	680	10	30	24	120	∅3	7315-22 page 4, 7302-22 page 12
1121-5002	80-500mm/3.15-20"	A	±0.08mm	680	16	40	24	150	∅3	7315-22 page 4, 7302-22 page 12

Preset (no need to add the width of the jaws on the reading), built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Type	Accuracy	L	a	b	c	d	D
1121-150AWL	24-150mm/0.94-6"	A	±0.04mm	250mm	5mm	12mm	16mm	28mm	∅2mm
1121-1501WL	35-150mm/1.38-6"	A	±0.05mm	250mm	6mm	17.5mm	16mm	60mm	∅2mm
1121-200AWL	25-200mm/0.98-8"	A	±0.04mm	310mm	5mm	12.5mm	16mm	37mm	∅2mm
1121-2001WL	40-200mm/1.57-8"	A	±0.05mm	310mm	7mm	20mm	16mm	70mm	∅3mm
1121-300AWL	30-300mm/1.18-12"	A	±0.07mm	410mm	5mm	15mm	16mm	50mm	∅2mm
1121-3001AWL	50-300mm/1.97-12"	A	±0.07mm	410mm	8mm	25mm	16mm	77mm	∅3mm
1121-500AWL	40-500mm/1.57-20"	A	±0.07mm	680mm	5mm	20mm	24mm	90mm	∅3mm
1121-5001WL	60-500mm/2.36-20"	A	±0.08mm	680mm	10mm	30mm	24mm	120mm	∅3mm
1121-5002WL	80-500mm/3.15-20"	A	±0.08mm	680mm	16mm	40mm	24mm	150mm	∅3mm

No preset (need to add the width of the jaws on the reading)

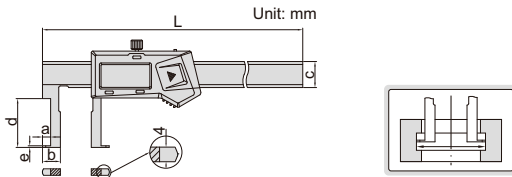
Code	Range	Type	Accuracy	L	a	b	c	d	D
1121-150B	50-150mm/1.97-6"	B	±0.06mm	270mm	8mm	25mm	20mm	90mm	∅3mm
1121-200B	60-200mm/2.36-8"	B	±0.06mm	320mm	10mm	30mm	20mm	100mm	∅3mm
1121-300B	60-300mm/2.36-12"	B	±0.07mm	420mm	10mm	30mm	20mm	110mm	∅3mm

DIGITAL INSIDE GROOVE CALIPERS

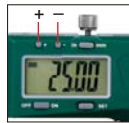
depth stop **6143**
(optional)



- Measure groove diameter
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -)
type B: on/off, zero, mm/inch
type C: on/off, zero, mm/inch, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop
(code **6143**, for calipers with c=16mm)



preset buttons



1120-150A
type A



1120-150B
type B



1120-150P
type C

Non waterproof, preset (no need to add the width of the jaws on the reading), with data interface

(mm)

Code	Range	Type	Accuracy	L	a	b	c	d	e	Data output cable (optional)
1120-150A	22-150mm/0.87-6"	A	±0.04mm	250	5	11	16	30	1	7315-21 page 4, 7302-21 page 12
1120-1501	35-150mm/1.38-6"	A	±0.06mm	250	6	17.5	16	60	1.5	7315-21 page 4, 7302-21 page 12
1120-200A	25-200mm/0.98-8"	A	±0.04mm	310	5	12.5	16	40	1	7315-21 page 4, 7302-21 page 12
1120-2001	40-200mm/1.57-8"	A	±0.06mm	310	7	20	16	70	2.5	7315-21 page 4, 7302-21 page 12
1120-300A	30-300mm/1.18-12"	A	±0.05mm	410	5	15	16	50	1.5	7315-21 page 4, 7302-21 page 12
1120-3001	50-300mm/1.97-12"	A	±0.07mm	410	8	25	16	80	2.5	7315-21 page 4, 7302-21 page 12
1120-500	40-500mm/1.57-20"	A	±0.07mm	680	5	20	24	90	2.2	7315-22 page 4, 7302-22 page 12
1120-5001	60-500mm/2.36-20"	A	±0.08mm	680	10	30	24	120	3.4	7315-22 page 4, 7302-22 page 12
1120-5002	80-500mm/3.15-20"	A	±0.08mm	680	16	40	24	150	5.2	7315-22 page 4, 7302-22 page 12

Non waterproof, preset (no need to add the width of the jaws on the reading),
built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Type	Accuracy	L	a	b	c	d	e
1120-150AWL	22-150mm/0.87-6"	A	±0.04mm	250mm	5mm	11mm	16mm	30mm	1mm
1120-1501WL	35-150mm/1.38-6"	A	±0.06mm	250mm	6mm	17.5mm	16mm	60mm	1.5mm
1120-200AWL	25-200mm/0.98-8"	A	±0.04mm	310mm	5mm	12.5mm	16mm	40mm	1mm
1120-2001WL	40-200mm/1.57-8"	A	±0.06mm	310mm	7mm	20mm	16mm	70mm	2.5mm
1120-300AWL	30-300mm/1.18-12"	A	±0.05mm	410mm	5mm	15mm	16mm	50mm	1.5mm
1120-3001WL	50-300mm/1.97-12"	A	±0.07mm	410mm	8mm	25mm	16mm	80mm	2.5mm
1120-500WL	40-500mm/1.57-20"	A	±0.07mm	680mm	5mm	20mm	24mm	90mm	2.2mm
1120-5001WL	60-500mm/2.36-20"	A	±0.08mm	680mm	10mm	30mm	24mm	120mm	3.4mm
1120-5002WL	80-500mm/3.15-20"	A	±0.08mm	680mm	16mm	40mm	24mm	150mm	5.2mm

Non waterproof, no preset (need to add the width of the jaws on the reading)

Code	Range	Type	Accuracy	L	a	b	c	d	e
1120-150B	50-150mm/1.97-6"	B	±0.06mm	270mm	8mm	25mm	20mm	90mm	3.4mm
1120-200B	60-200mm/2.36-8"	B	±0.06mm	320mm	10mm	30mm	20mm	100mm	3.4mm
1120-300B	60-300mm/2.36-12"	B	±0.07mm	420mm	10mm	30mm	20mm	110mm	3.4mm

IP67 dust/waterproof, no automatic power off, set zero after power on each time,
no preset (need to add the width of the jaws on the reading), without data interface

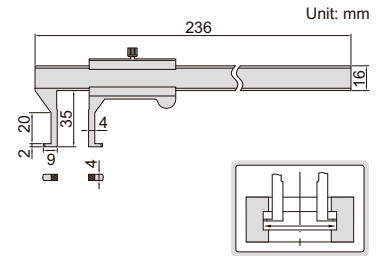
Code	Range	Type	Accuracy	L	a	b	c	d	e
1120-150P	22-150mm/0.87-6"	C	±0.04mm	250mm	5mm	11mm	16mm	30mm	1mm

INSIDE GROOVE VERNIER CALIPER

- Measure diameter of grooves inside bores
- Made of stainless steel
- Satin chrome plated reading surface

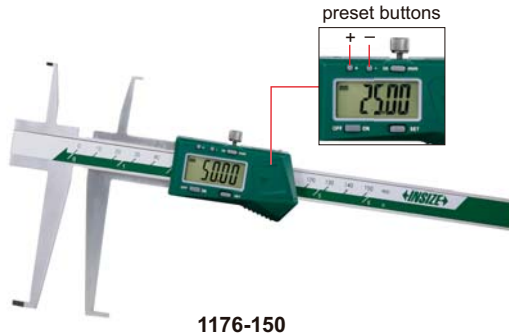


1262-150A



Code	Range	Graduation	Accuracy
1262-150A	18-150mm	0.02mm	±0.04mm

DIGITAL INSIDE GROOVE CALIPERS



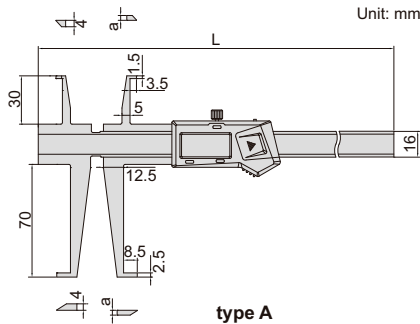
1176-150



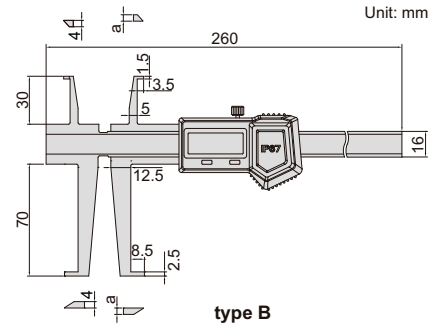
1176-150P



depth stop 6143 (optional)



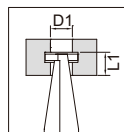
type A



type B

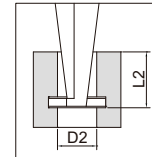
- Measure diameter of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -)
type B: on/off, zero, mm/inch, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code 6143)

sizes to be measured (use upper jaws)



(mm)	
D1	L1
Ø9	<8
Ø10	<15
Ø11~200	<30

sizes to be measured (use lower jaws)



(mm)	
D2	L2
Ø17	<16
Ø18	<28
Ø19	<40
Ø20	<50
Ø21	<58
Ø22~200	<70

Non waterproof, with data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range of upper jaw	Range of lower jaw	Type	Accuracy	L	a
1176-150	9-150mm/0.35-6"	17-150mm/0.70-6"	A	±0.04mm	260mm	3mm
1176-200	9-200mm/0.35-8"	17-200mm/0.70-8"	A	±0.05mm	320mm	3.5mm

Non waterproof, built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range of upper jaw	Range of lower jaw	Type	Accuracy	L	a
1176-150WL	9-150mm/0.35-6"	17-150mm/0.70-6"	A	±0.04mm	260mm	3mm
1176-200WL	9-200mm/0.35-8"	17-200mm/0.70-8"	A	±0.05mm	320mm	3.5mm

IP67 dust/waterproof, without data interface, no automatic power off, set zero after power on each time

Code	Range of upper jaw	Range of lower jaw	Type	Accuracy	a
1176-150P	9-150mm/0.35-6"	17-150mm/0.70-6"	B	±0.04mm	4mm

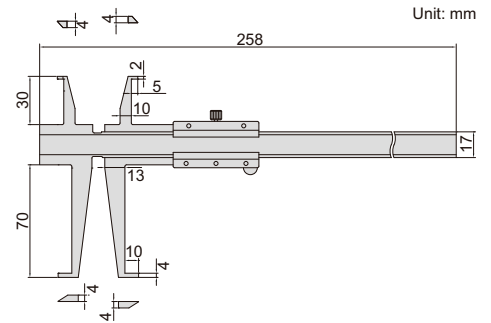
INSIDE GROOVE CALIPER

2



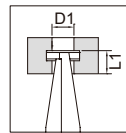
1199-150

depth stop **6143**
(optional)



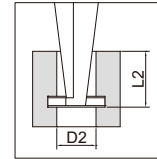
- Measure diameter of grooves inside bores
- Graduation: 0.02mm
- Made of stainless steel
- Optional accessory: depth stop (code **6143**)

sizes to be measured
(use upper jaws)



D1 (mm)	
Ø11	<8
Ø12	<10
Ø13	<15
Ø14	<20
Ø15~150	<30

sizes to be measured
(use lower jaws)



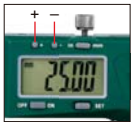
D2 (mm)		L2 (mm)	
Ø18	<20		
Ø19	<28		
Ø20	<35		
Ø21	<40		
Ø22	<50		
Ø23~150	<70		

Code	Range of upper jaw	Range of lower jaw	Accuracy
1199-150	11-150mm	18-150mm	±0.03mm

DATA
OUTPUT

DIGITAL DEEP HOLE INSIDE GROOVE CALIPERS

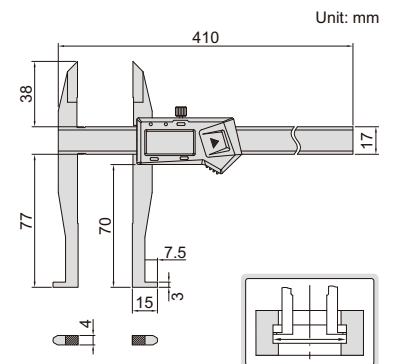
preset buttons



1129-300

- Non waterproof
- Measure diameter of grooves inside deep holes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code **6143**)

depth stop **6143** (optional)



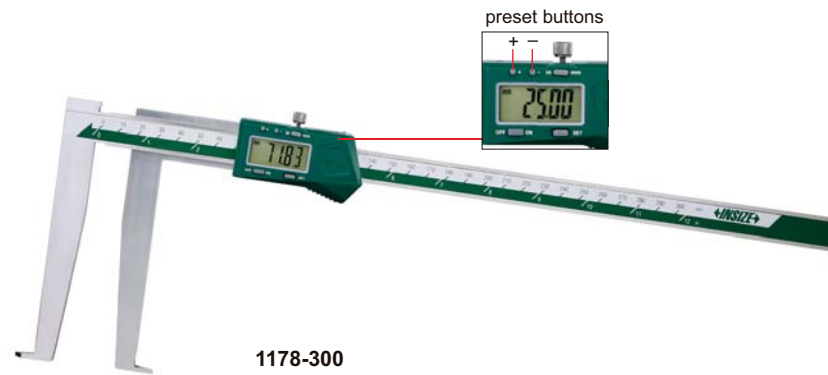
With data interface (data output cable
code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range of upper jaw	Range of lower jaw	Accuracy
1129-300	0-300mm/0-12"	30-300mm/1.2-12"	±0.04mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range of upper jaw	Range of lower jaw	Accuracy
1129-300WL	0-300mm/0-12"	30-300mm/1.2-12"	±0.04mm

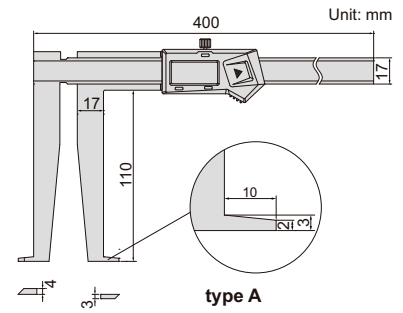
DIGITAL INSIDE GROOVE CALIPERS



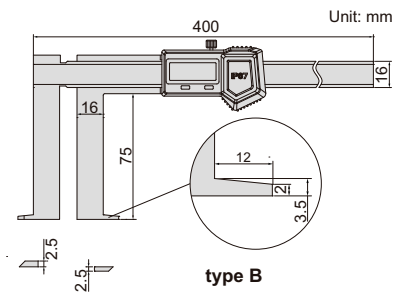
1178-300



1178-300P



type A



type B

- Measure diameter of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -)
type B: on/off, zero, mm/inch, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code 6143)

depth stop 6143 (optional)



Non waterproof, with data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Type	Accuracy
1178-300	25-300mm/1.18-12"	A	±0.05mm

Non waterproof, built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Type	Accuracy
1178-300WL	25-300mm/1.18-12"	A	±0.05mm

IP67 dust/waterproof, no automatic power off, set zero after power on each time, without data interface

Code	Range	Type	Accuracy
1178-300P	33-300mm/1.30-12"	B	±0.05mm

DIGITAL INSIDE GROOVE CALIPERS

DATA OUTPUT

- Non waterproof
- Measure diameter or distance of grooves
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



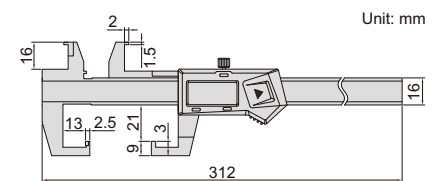
1128-200

With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

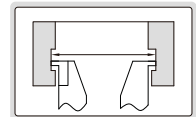
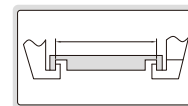
Code	Range of upper jaw	Range of lower jaw	Accuracy
1128-200	10-200mm/0.39-8"	3-200mm/0.12-8"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

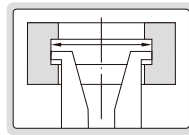
Code	Range of upper jaw	Range of lower jaw	Accuracy
1128-200WL	10-200mm/0.39-8"	3-200mm/0.12-8"	±0.03mm



preset buttons



- Non waterproof
- Upper jaws for measuring diameter of grooves
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

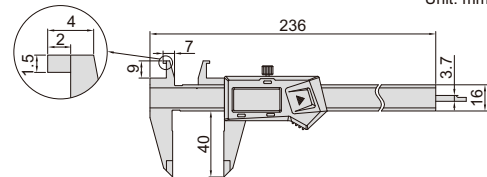


DIGITAL INSIDE GROOVE CALIPERS

DATA OUTPUT

1191-150

Unit: mm


With data interface

(data output cable code 7315-21 page 4, 7302-21 page 12, optional)

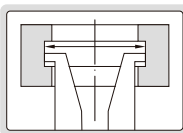
Code	Range of upper jaw	Range of lower jaw	Accuracy
1191-150	8-150mm/0.3-6"	0-150mm/0-6"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

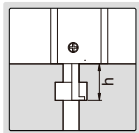
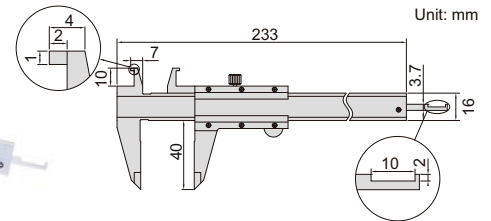
Code	Range of upper jaw	Range of lower jaw	Accuracy
1191-150WL	8-150mm/0.3-6"	0-150mm/0-6"	±0.03mm

INSIDE GROOVE VERNIER CALIPER

measure diameter of grooves 8-150mm



measure depth of grooves (h<10mm)


1291-150


Unit: mm

Code	Range of upper jaw	Range of lower jaw	Accuracy
1291-150	8-150mm	0-150mm	±0.03mm

- Graduation: 0.02mm
- Made of stainless steel
- Satin chrome plated reading surface

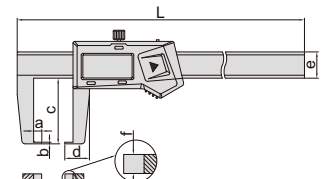
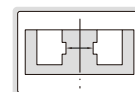
DATA OUTPUT

DIGITAL OUTSIDE NECK CALIPERS

- Non waterproof
- Measure grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code 6143, for calipers with e=16mm)


1187-150A

depth stop 6143 (optional)


With data interface

(mm)

Code	Range	Accuracy	L	a	b	c	d	e	f	Data output cable (optional)
1187-150A	0-150mm/0-6"	±0.04mm	250	5	1	40	15	16	4	7315-21 page 4, 7302-21 page 12
1187-200A	0-200mm/0-8"	±0.05mm	310	9	1.5	80	23	16	4	7315-21 page 4, 7302-21 page 12
1187-300A	0-300mm/0-12"	±0.06mm	490	12	2	150	36	24	4	7315-22 page 4, 7302-22 page 12
1187-500A	0-500mm/0-20"	±0.07mm	690	12	2	150	36	24	5.5	7315-22 page 4, 7302-22 page 12

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	L	a	b	c	d	e	f
1187-150AWL	0-150mm/0-6"	±0.04mm	250mm	5mm	1mm	40mm	15mm	16mm	4mm
1187-200AWL	0-200mm/0-8"	±0.05mm	310mm	9mm	1.5mm	80mm	23mm	16mm	4mm
1187-300AWL	0-300mm/0-12"	±0.06mm	490mm	12mm	2mm	150mm	36mm	24mm	4mm
1187-500AWL	0-500mm/0-20"	±0.07mm	690mm	12mm	2mm	150mm	36mm	24mm	5.5mm

DIGITAL OUTSIDE POINT CALIPERS

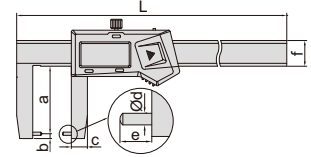
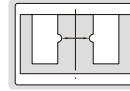
DATA OUTPUT

- Non waterproof
- Measure wall thickness inside bores and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code 6143)



1185-150A

depth stop 6143 (optional)



With data interface

Code	Range	Accuracy	L	a	b	c	Ød	e	f	Data output cable (optional)
1185-150A	0-150mm/0-6"	±0.04mm	250	40	3	10	2	5	16	7315-21 page 4, 7302-21 page 12
1185-200A	0-200mm/0-8"	±0.05mm	310	80	3	14	3	9	16	7315-21 page 4, 7302-21 page 12
1185-300A	0-300mm/0-12"	±0.06mm	490	150	3	20	3	12	24	7315-22 page 4, 7302-22 page 12

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	L	a	b	c	Ød	e	f
1185-150AWL	0-150mm/0-6"	±0.04mm	250	40	3	10	2	5	16
1185-200AWL	0-200mm/0-8"	±0.05mm	310	80	3	14	3	9	16
1185-300AWL	0-300mm/0-12"	±0.06mm	490	150	3	20	3	12	24

DIGITAL OUTSIDE GROOVE CALIPERS

DATA OUTPUT

- Non waterproof
- Measure grooves and recesses in small spaces
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1535-100

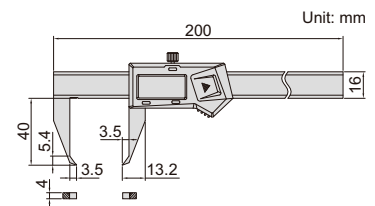
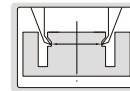


With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1535-100	0-100mm/0-4"	±0.03mm

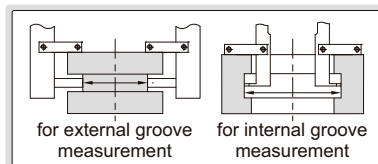
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1535-100WL	0-100mm/0-4"	±0.03mm



DEPTH STOP FOR CALIPERS

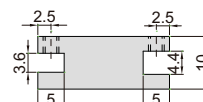
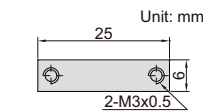
application



6143

- Supplied in pair
- Made of stainless steel
- Suitable for caliper series 1124, 1526, 1530, 1199, 1520, 1176, 1178, 1120, 1121, 1187, 1129 and 1185

Code
6143



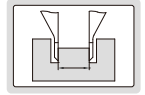
DATA OUTPUT

DIGITAL SMALL POINT CALIPERS

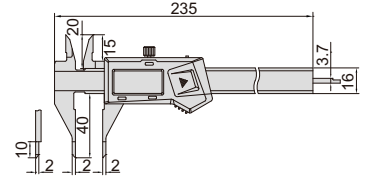
- Non waterproof
- Small pointed jaws fit into small grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1169-150



Unit: mm



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1169-150	0-150mm/0-6"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1169-150WL	0-150mm/0-6"	±0.03mm

DIGITAL POINT CALIPERS

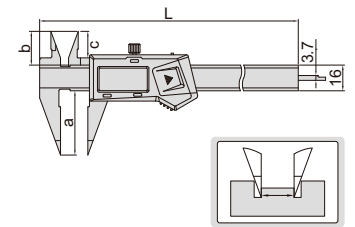
- Non waterproof
- Pointed jaws fit into small grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1183-150A

DATA OUTPUT

Unit: mm



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy	L	a	b	c
1183-150A	0-150mm/0-6"	±0.03mm	236mm	40mm	21mm	16.5mm
1183-200A	0-200mm/0-8"	±0.03mm	286mm	50mm	24mm	19.5mm
1183-300A	0-300mm/0-12"	±0.03mm	400mm	60mm	25mm	21.5mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	L	a	b	c
1183-150AWL	0-150mm/0-6"	±0.03mm	236mm	40mm	21mm	16.5mm
1183-200AWL	0-200mm/0-8"	±0.03mm	286mm	50mm	24mm	19.5mm
1183-300AWL	0-300mm/0-12"	±0.03mm	400mm	60mm	25mm	21.5mm

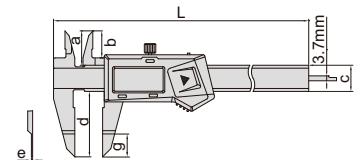
DATA OUTPUT

DIGITAL BLADE CALIPERS

- Non waterproof
- The blade jaws fit into small grooves
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

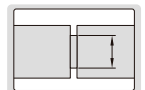


1188-150A



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy	L	a	b	c	d	e	g
1188-150A	0-150mm/0-6"	±0.03mm	235mm	21mm	16.5mm	16mm	40mm	0.85mm	17mm
1188-200A	0-200mm/0-8"	±0.03mm	297mm	24mm	20mm	16mm	50mm	0.85mm	17mm
1188-300A	0-300mm/0-12"	±0.04mm	390mm	26mm	21.5mm	16mm	60mm	1.00mm	17mm



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	L	a	b	c	d	e	g
1188-150AWL	0-150mm/0-6"	±0.03mm	235mm	21mm	16.5mm	16mm	40mm	0.85mm	17mm
1188-200AWL	0-200mm/0-8"	±0.03mm	297mm	24mm	20mm	16mm	50mm	0.85mm	17mm
1188-300AWL	0-300mm/0-12"	±0.04mm	390mm	26mm	21.5mm	16mm	60mm	1.00mm	17mm

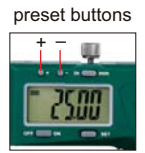
DIGITAL CALIPERS WITH POSITIONING SURFACES

DATA OUTPUT

- Non waterproof
- Lower jaws with positioning surfaces, for measuring inside diameters quickly
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1534-200

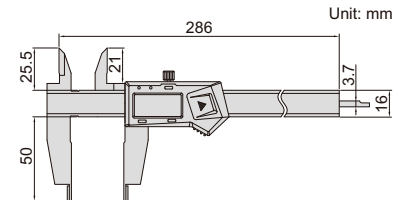
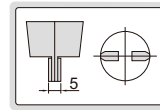
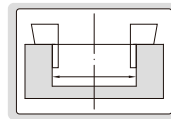


With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1534-200	0-200mm/0-8"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1534-200WL	0-200mm/0-8"	±0.03mm



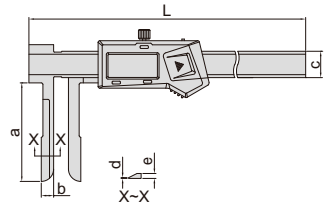
DIGITAL INSIDE KNIFE-EDGE CALIPERS

DATA OUTPUT

- Non waterproof
- Measure diameter of deep step holes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



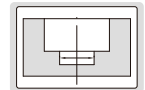
1123-150A



With data interface

Code	Range	Accuracy	L	a	b	c	d	e	Data output cable (optional)
1123-150A	15-150mm/0.6-6"	±0.05mm	250	60	12	16	0.3	3.5	7315-21 page 4, 7302-21 page 12
1123-200A	20-200mm/0.8-8"	±0.06mm	305	100	17	16	0.3	3.5	7315-21 page 4, 7302-21 page 12
1123-300A	24-300mm/0.9-12"	±0.06mm	500	150	22	24	0.5	3.5	7315-22 page 4, 7302-22 page 12

(mm)



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

(mm)

Code	Range	Accuracy	L	a	b	c	d	e
1123-150AWL	15-150mm/0.6-6"	±0.05mm	250	60	12	16	0.3	3.5
1123-200AWL	20-200mm/0.8-8"	±0.06mm	305	100	17	16	0.3	3.5

DIGITAL CALIPERS WITH KNIFE-EDGE LOWER JAWS

DATA OUTPUT

- Non waterproof
- Measure diameter of narrow grooves
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



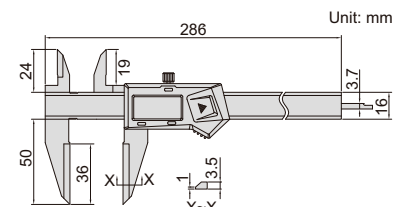
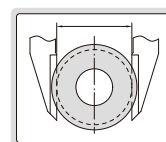
1532-200

With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1532-200	0-200mm/0-8"	±0.03mm

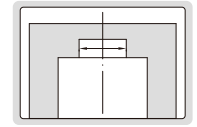
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1532-200WL	0-200mm/0-8"	±0.03mm



DATA OUTPUT
DIGITAL CALIPERS WITH LONG UPPER JAWS

- Non waterproof
- Long upper jaws for measuring diameter of deep holes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

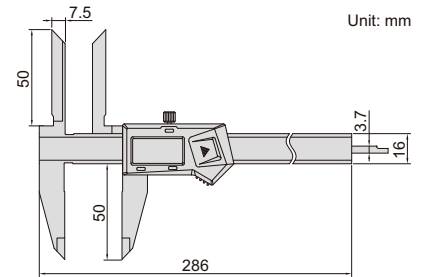
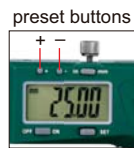

1138-200


With data interface (data output cable code 7315-21 page 4, 7302-21 page 12 optional)

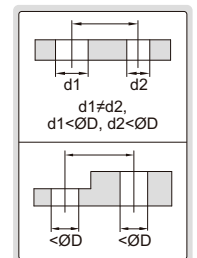
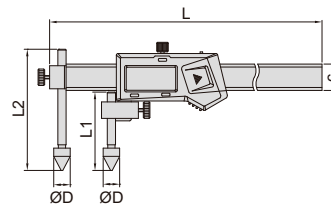
Code	Range	Accuracy
1138-200	0-200mm/0-8"	±0.04mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1138-200WL	0-200mm/0-8"	±0.04mm


DATA OUTPUT
DIGITAL OFFSET CENTERLINE CALIPERS

1192-150A

- Non waterproof
- Measure hole center distance in the same or offset planes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



With data interface

Code	Range	Accuracy	c	ØD	L1	L2	L	Data output cable (optional)
1192-150A	10-150mm/0.4-6"	±0.05mm	16	10	46	79	236	7315-21 page 4, 7302-21 page 12
1192-200A	10-200mm/0.4-8"	±0.07mm	16	10	46	79	286	7315-21 page 4, 7302-21 page 12
1192-300A	10-300mm/0.4-12"	±0.09mm	16	10	46	79	396	7315-21 page 4, 7302-21 page 12
1192-500A	20-500mm/0.8-20"	±0.09mm	24	20	52	112	725	7315-22 page 4, 7302-22 page 12
1192-1000A	30-1000mm/1.2-40"	±0.12mm	31	30	52	112	1255	7315-22 page 4, 7302-22 page 12
1192-1500A	30-1500mm/1.2-60"	±0.15mm	31	30	75	120	1760	7315-22 page 4, 7302-22 page 12

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	c	ØD	L1	L2	L
1192-150AWL	10-150mm/0.4-6"	±0.05mm	16	10	46	79	236
1192-200AWL	10-200mm/0.4-8"	±0.07mm	16	10	46	79	286
1192-300AWL	10-300mm/0.4-12"	±0.09mm	16	10	46	79	396
1192-500AWL	20-500mm/0.8-20"	±0.09mm	24	20	52	112	725

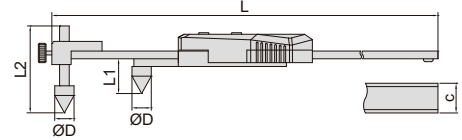
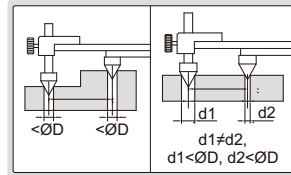
DIGITAL BACK-JAW CENTERLINE CALIPERS

DATA OUTPUT

- Non waterproof
- Measure hole center distance in the same or offset planes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1177-200



With data interface

Code	Range	Accuracy	ØD	c	L1	L2	L	Data output cable (optional)
1177-200	10-200mm/0.4-8"	±0.10mm	10	16	18	45	310	7315-21 page 4, 7302-21 page 12
1177-300	10-300mm/0.4-12"	±0.10mm	10	16	18	45	410	7315-21 page 4, 7302-21 page 12
1177-500	20-500mm/0.8-20"	±0.10mm	20	24	26	70	692	7315-22 page 4, 7302-22 page 12
1177-1000	30-1000mm/1.2-40"	±0.12mm	30	31	39	70	1242	7315-22 page 4, 7302-22 page 12
1177-1500	30-1500mm/1.2-60"	±0.15mm	30	31	39	70	1745	7315-22 page 4, 7302-22 page 12

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	ØD	c	L1	L2	L
1177-200WL	10-200mm/0.4-8"	±0.10mm	10	16	18	45	310
1177-300WL	10-300mm/0.4-12"	±0.10mm	10	16	18	45	410
1177-500WL	20-500mm/0.8-20"	±0.10mm	20	24	26	70	692

DIGITAL BACK-JAW EDGE TO CENTER CALIPERS

DATA OUTPUT

- Non waterproof
- Measure edge to hole center distance
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1524-200



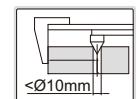
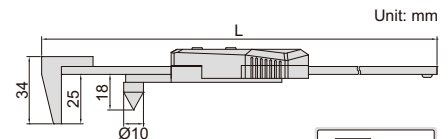
With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy	L
1524-200	5-200mm/0.2-8"	±0.1mm	310mm
1524-300	5-300mm/0.2-12"	±0.1mm	410mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	L
1524-200WL	5-200mm/0.2-8"	±0.1mm	310mm
1524-300WL	5-300mm/0.2-12"	±0.1mm	410mm

preset buttons

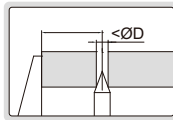
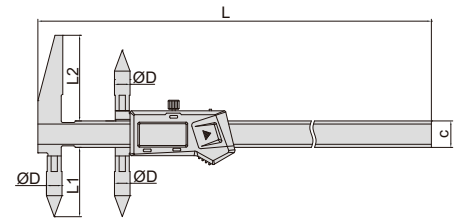
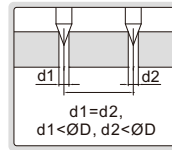


DATA
OUTPUT

DIGITAL CENTERLINE AND EDGE TO CENTER CALIPERS


1525-300

- Non waterproof
- Measure hole center distance or edge to hole center distance
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

 measure edge to
hole center distance

 measure hole
center distance


With data interface

(mm)

Code	Range of upper jaw (edge to center)	Range of lower jaw (center to center)	Accuracy	$\varnothing D$	L1	L2	c	L	Data output cable (optional)
1525-300	5-300mm/0.2-12"	10-300mm/0.4-12"	$\pm 0.08\text{mm}$	10	44.5	55	17	410	7315-21 page 4, 7302-21 page 12
1525-3001	10-300mm/0.4-12"	20-300mm/0.8-12"	$\pm 0.08\text{mm}$	20	48	60	17	410	7315-21 page 4, 7302-21 page 12
1525-500	10-500mm/0.4-20"	20-500mm/0.8-20"	$\pm 0.09\text{mm}$	20	50	60	24	690	7315-22 page 4, 7302-22 page 12
1525-1000	15-1000mm/0.6-40"	30-1000mm/1.2-40"	$\pm 0.12\text{mm}$	30	70	81	31	1255	7315-22 page 4, 7302-22 page 12
1525-1500	15-1500mm/0.6-60"	30-1500mm/1.2-60"	$\pm 0.15\text{mm}$	30	70	81	31	1760	7315-22 page 4, 7302-22 page 12

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

(mm)

Code	Range of upper jaw (edge to center)	Range of lower jaw (center to center)	Accuracy	$\varnothing D$	L1	L2	c	L
1525-300WL	5-300mm/0.2-12"	10-300mm/0.4-12"	$\pm 0.08\text{mm}$	10	44.5	55	17	410
1525-3001WL	10-300mm/0.4-12"	20-300mm/0.8-12"	$\pm 0.08\text{mm}$	20	48	60	17	410
1525-500WL	10-500mm/0.4-20"	20-500mm/0.8-20"	$\pm 0.09\text{mm}$	20	50	60	24	690

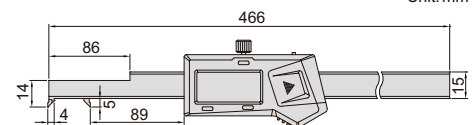
 DATA
OUTPUT

DIGITAL HOOK CALIPERS


1122-300

- Non waterproof
- Measure width and distance of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

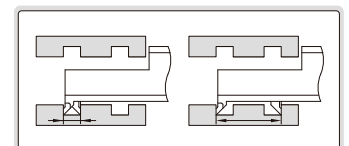
Unit: mm


 With data interface (data output cable
code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1122-300	4-300mm/0.16-12"	$\pm 0.04\text{mm}$

 Built-in wireless
(receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1122-300WL	4-300mm/0.16-12"	$\pm 0.04\text{mm}$



DIGITAL CALIPERS WITH ONE DIRECTION UPPER JAWS

DATA
OUTPUT

2

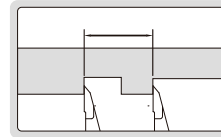
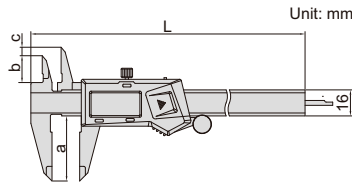


1184-200

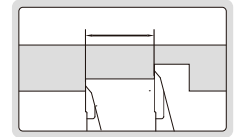


1184-150A

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: zero, power on/off, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7315-21 page 4, 7302-21 page 12)



jaws with same height used for measuring the distance in same level



jaws with different height used for measuring the distance in different level

Jaws with same height (mm)

Code	Range	Accuracy	L	a	b	c
1184-150	0-150mm/0-6"	±0.03mm	236	40	17	0
1184-200	0-200mm/0-8"	±0.03mm	286	50	20	0
1184-300	0-300mm/0-12"	±0.03mm	400	60	22	0

Jaws with different height (mm)

Code	Range	Accuracy	L	a	b	c
1184-150A	0-150mm/0-6"	±0.03mm	236	40	17	5
1184-200A	0-200mm/0-8"	±0.03mm	286	50	20	8
1184-300A	0-300mm/0-12"	±0.03mm	400	60	22	10

DIGITAL OFFSET CALIPERS

DATA
OUTPUT



1186-150A

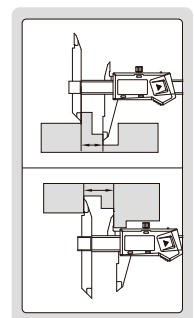
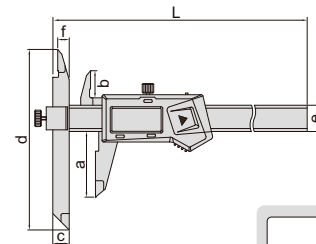
- Non waterproof
- The left jaw can slide up and down to facilitate measurement of stepped sections
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional) (mm)

Code	Range	Accuracy	L	a	b	c	d	e	f
1186-150A	0-150mm/0-6"	±0.04mm	249	40	16.5	10	110	17	7
1186-200A	0-200mm/0-8"	±0.04mm	299	50	19.5	10	120	17	7
1186-300A	0-300mm/0-12"	±0.05mm	399	60	20.5	10	130	17	7

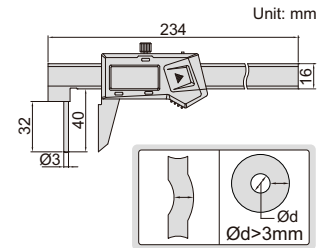
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required) (mm)

Code	Range	Accuracy	L	a	b	c	d	e	f
1186-150AWL	0-150mm/0-6"	±0.04mm	249	40	16.5	10	110	17	7
1186-200AWL	0-200mm/0-8"	±0.04mm	299	50	19.5	10	120	17	7
1186-300AWL	0-300mm/0-12"	±0.05mm	399	60	20.5	10	130	17	7



DATA OUTPUT
DIGITAL TUBE THICKNESS CALIPERS

- Non waterproof
- Measure wall thickness of tubes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel


1161-150A


With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

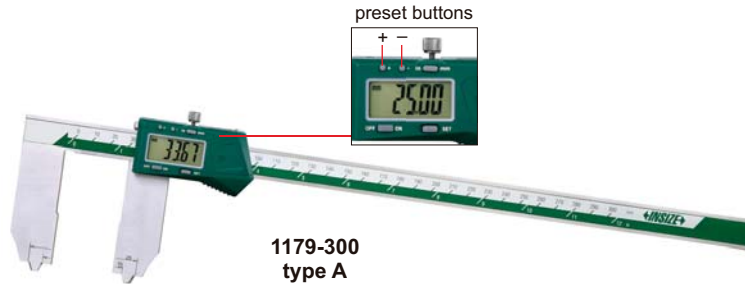
Code	Range	Accuracy
1161-150A	0-150mm/0-6"	±0.05mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1161-150AWL	0-150mm/0-6"	±0.05mm

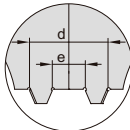
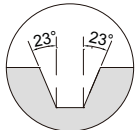
DATA OUTPUT
DIGITAL RTJ RING GROOVE CALIPERS

- Non waterproof
- Angle of RTJ ring groove: 23°
- Measure ring grooves of flange
- Resolution: 0.01mm/0.0005"
- Button function: on/off, set, zero, mm/inch, data preset
- Battery CR2032
- Made of stainless steel

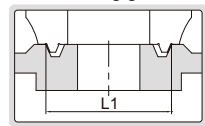

1179-300 type A

applicable for RTJ ring grooves with angle 23°

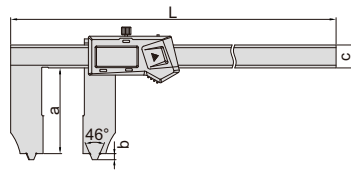
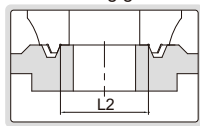
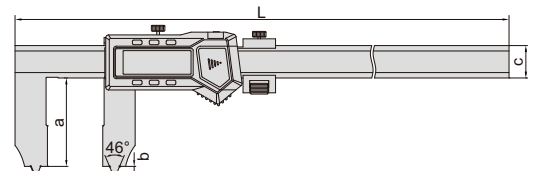
d and e need to be added on the reading


1179-600 type B

measure outside diameter of RTJ ring groove



measure inside diameter of RTJ ring groove


type A

type B

With data interface

(mm)

Code	Range (inside diameter of RTJ ring groove)	Range (outside diameter of RTJ ring groove)	Accuracy	Type	L	a	b	c	d	e	Data output cable (optional)
1179-300	10-300mm/0.4-12"	25-300mm/1-12"	±0.06mm	A	410	63.5	4.5	17	25	10	7315-21 page 4, 7302-21 page 12
1179-600	10-600mm/0.4-24"	25-600mm/1-24"	±0.07mm	B	770	65.5	4.5	24	25	10	7315-22 page 4, 7302-22 page 12
1179-1000	15-1000mm/0.6-40"	30-1000mm/1.2-40"	±0.09mm	B	1220	90	5	31	30	15	7315-22 page 4, 7302-22 page 12

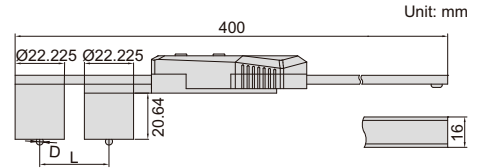
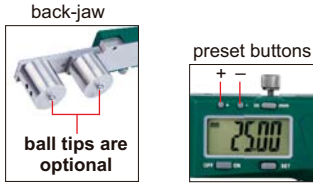
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

(mm)

Code	Range (inside diameter of RTJ ring groove)	Range (outside diameter of RTJ ring groove)	Accuracy	Type	L	a	b	c	d	e
1179-300WL	10-300mm/0.4-12"	25-300mm/1-12"	±0.06mm	A	410	63.5	4.5	17	25	10
1179-600WL	10-600mm/0.4-24"	25-600mm/1-24"	±0.07mm	B	770	65.5	4.5	24	25	10

DIGITAL CALIPERS WITH INTERCHANGEABLE BALL TIPS

DATA OUTPUT



1527-3001

- Non waterproof
- Resolution 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: ball tips

With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1527-3001	(22.22+D)~300mm*	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1527-3001WL	(22.22+D)~300mm*	±0.03mm

*"D" is the diameter of ball tips.

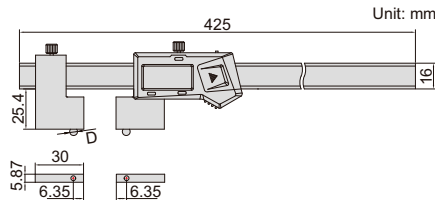
Ball tips (optional, supplied in pair)



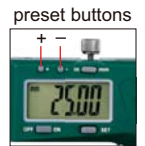
Code	Diameter (D)	Accuracy of diameter	Type	Material
1527-T101	1/16" (Ø1.5875mm)	±0.005mm	A	ruby
1527-T102	1/8" (Ø3.175mm)	±0.005mm	B	stainless steel
1527-T103	3/16" (Ø4.7625mm)	±0.005mm	B	stainless steel
1527-T104	1/4" (Ø6.35mm)	±0.005mm	B	stainless steel
1527-T105	3/8" (Ø9.525mm)	±0.005mm	B	stainless steel
1527-T106	1/2" (Ø12.7mm)	±0.005mm	B	stainless steel

DIGITAL CALIPERS WITH INTERCHANGEABLE BALL TIPS

DATA OUTPUT



ball tips are optional 1528-3001



- Non waterproof
- Resolution 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: ball tips

With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1528-3001	(12.7+D)~300mm*	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1528-3001WL	(12.7+D)~300mm*	±0.03mm

*"D" is the diameter of ball tips.

Ball tips (optional, supplied in pair)



Code	Diameter (D)	Accuracy of diameter	Type	Material
1527-T101	1/16" (Ø1.5875mm)	±0.005mm	A	ruby
1527-T102	1/8" (Ø3.175mm)	±0.005mm	B	stainless steel
1527-T103	3/16" (Ø4.7625mm)	±0.005mm	B	stainless steel
1527-T104	1/4" (Ø6.35mm)	±0.005mm	B	stainless steel
1527-T105	3/8" (Ø9.525mm)	±0.005mm	B	stainless steel
1527-T106	1/2" (Ø12.7mm)	±0.005mm	B	stainless steel

RELATIVE PRODUCT: CRIMP HEIGHT MICROMETER (CODE 3266-25BA, 3566-25BA)

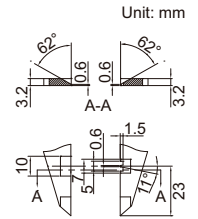
DATA OUTPUT

DIGITAL CRIMP HEIGHT CALIPERS

- Non waterproof
- Measure crimp height
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, meet DIN862
- Made of stainless steel



1165-150A



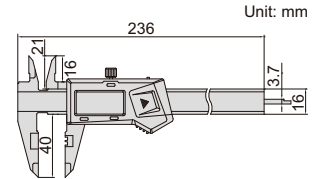
Unit: mm

With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1165-150A	0-150mm/0-6"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1165-150AWL	0-150mm/0-6"	±0.03mm



Unit: mm

DIGITAL CALIPERS WITH LARGE MEASURING FACES

- Non waterproof
- Measure diameter of wire ropes, and thickness of soft materials like rubber, sponge, etc.
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

DATA OUTPUT



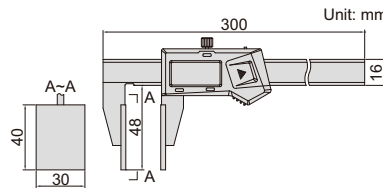
1172-200

With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1172-200	0-200mm/0-8"	±0.07mm

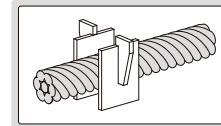
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1172-200WL	0-200mm/0-8"	±0.07mm

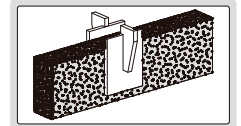


Unit: mm

measure diameter of wire ropes



measure thickness of rubber, sponge, etc.



DIGITAL CALIPERS WITH DISK FACES

- Non waterproof
- Measure thickness of soft sheets
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

DATA OUTPUT



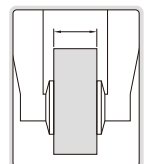
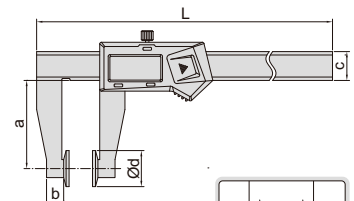
1533-150

With data interface

Code	Range	Accuracy	L	a	b	c	Ød	Data output cable (optional)
1533-150	0-150mm/0-6"	±0.04mm	245	50	11	16	20	7315-21 page 4, 7302-21 page 12
1533-200	0-200mm/0-8"	±0.05mm	310	80	11	16	30	7315-21 page 4, 7302-21 page 12
1533-500	0-500mm/0-20"	±0.07mm	680	150	12.5	24	50	7315-22 page 4, 7302-22 page 12

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

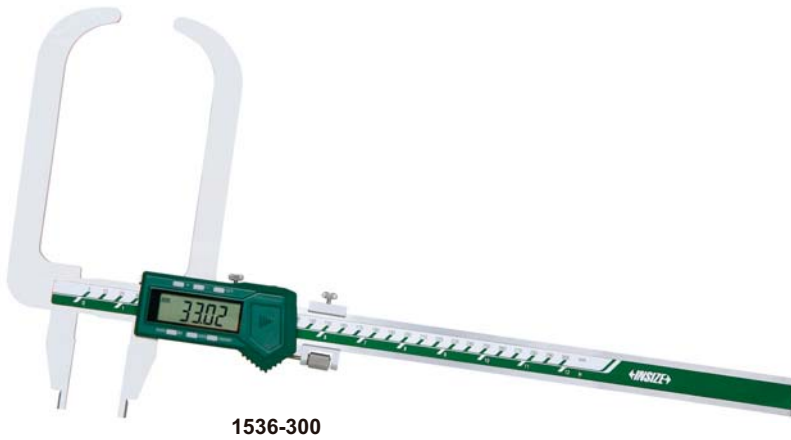
Code	Range	Accuracy	L	a	b	c	Ød
1533-150WL	0-150mm/0-6"	±0.04mm	245	50	11	16	20
1533-200WL	0-200mm/0-8"	±0.05mm	310	80	11	16	30
1533-500WL	0-500mm/0-20"	±0.07mm	680	150	12.5	24	50



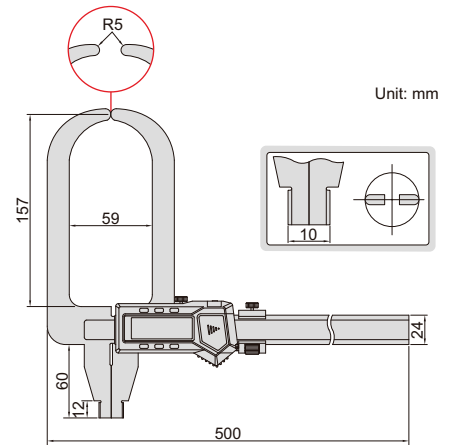
DIGITAL WALL THICKNESS CALIPERS

DATA OUTPUT

2



1536-300



Unit: mm

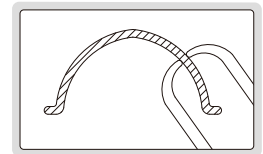
With data interface (data output cable code 7315-22 page 4, 7302-22 page 12, optional)

Code	Range	Accuracy
1536-300	0-300mm/0-12"	±0.05mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1536-300WL	0-300mm/0-12"	±0.05mm

- Non waterproof
- Measure wall thickness of helmets, domes and curved pots
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS, data preset
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



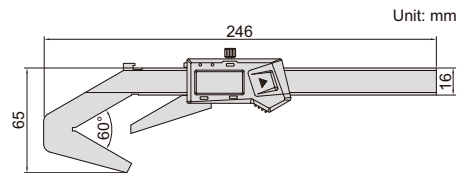
DIGITAL V SHAPE CALIPER

ATTENTION: ACTUAL DIAMETER IS 2/3 OF THE READING

- Non waterproof
- Measure outside diameter of three number of flutes (such as taps, reamers, end mills and gears)
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Battery CR2032
- Automatic power off, move the digital unit to turn on power
- Data output
- Made of stainless steel



1539-3



Unit: mm

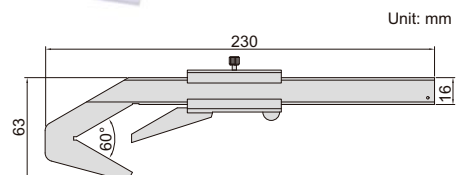
Code	Range	Accuracy
1539-3	Ø4-Ø40mm/0.16"-1.58" DIA	±0.03mm

V SHAPE VERNIER CALIPER

- Measure outside diameter of three number of flutes (such as taps, reamers, end mills and gears)
- Made of stainless steel
- Satin chrome plated reading surface



1273-403



Unit: mm

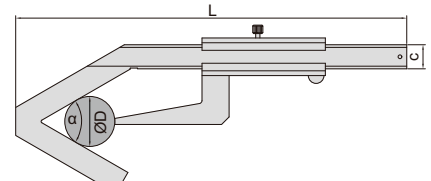
Code	Range	Graduation	Accuracy
1273-403	Ø4-40mm	0.05mm	±0.05mm

V SHAPE VERNIER CALIPERS

- Measure outside diameter of odd number of flutes (such as taps, reamers, end mills and gears)
- Made of stainless steel
- Satin chrome plated reading surface
- Optional accessory: 4mm pin gage (code 4110-4D00), Ø50mm calibration cylinder (code 6316-50)



1229-3



Code	Range (ØD)	Graduation	Accuracy	Flutes	Angle α	L	c
1229-3	Ø4-60mm	0.02mm	±0.04mm	3	60°	260mm	16mm
1229-35	Ø50-200mm	0.02mm	±0.06mm	3	60°	516mm	20mm
1229-5	Ø4-60mm	0.02mm	±0.04mm	5	108°	210mm	16mm
1229-55	Ø50-200mm	0.02mm	±0.06mm	5	108°	360mm	20mm

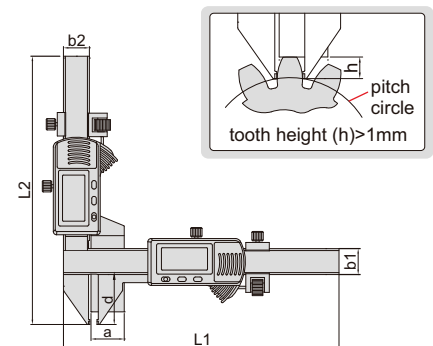
ATTENTION:
NO DATA OUTPUT

DIGITAL GEAR TOOTH CALIPERS

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Carbide tips
- Measure the tooth thickness by positioning the tooth height (for tooth height > 1mm)
- Buttons: zero, on/off, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

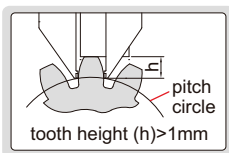


1181-M25A

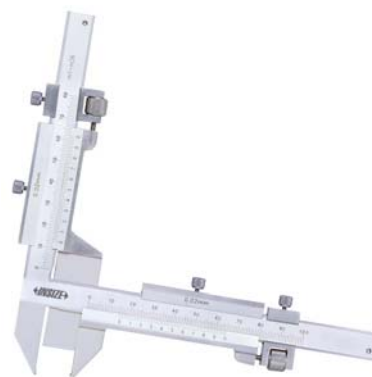


Code	Range	Accuracy of height measurement	Accuracy of thickness measurement	Total accuracy	L1	L2	a	b1	b2	d
1181-M25A	M1-25mm	±0.03mm	±0.03mm	±0.04mm	170mm	165.5mm	21mm	16mm	16mm	30.5mm
1181-M50A	M5-50mm	±0.03mm	±0.03mm	±0.04mm	220mm	190mm	50.5mm	16mm	16mm	55mm

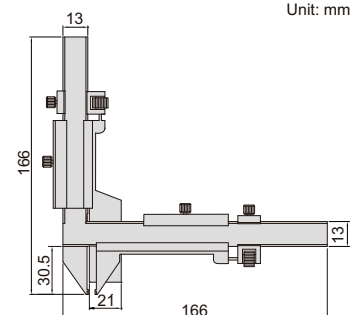
GEAR TOOTH VERNIER CALIPER



- Carbide tips
- Measure the tooth thickness by positioning the tooth height (for tooth height > 1mm)
- Made of stainless steel
- Satin chrome plated reading surface



1281-M26A



Code	Range	Graduation	Accuracy of height measurement	Accuracy of thickness measurement	Total accuracy
1281-M26A	M1-26mm	0.02mm	±0.03mm	±0.03mm	±0.04mm

DIGITAL ARC RADIUS CALIPERS



1189-150B

REFER TO PAGE 191 FOR DETAILS

DIGITAL SCRIBING CALIPERS



1166-150A

REFER TO PAGE 392 FOR DETAILS

DIGITAL DISK BRAKE CALIPERS

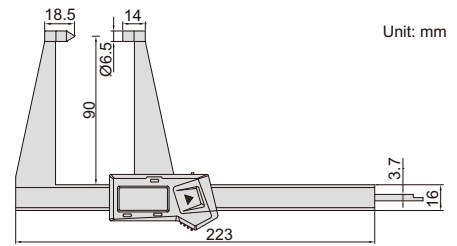
RELATIVE PRODUCT: DISK BRAKE MICROMETER (CODE 3288-, 3588-)

DATA OUTPUT

- Non waterproof
- Measure thickness of disk brakes
- Resolution 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1162-125A



Unit: mm



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1162-125A	0-125mm/0-5"	±0.05mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1162-125AWL	0-125mm/0-5"	±0.05mm

DIGITAL DISK BRAKE AND PAD CALIPERS

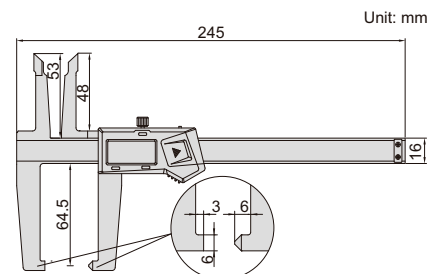
DATA OUTPUT

RELATIVE PRODUCT: DISK BRAKE MICROMETER (CODE 3288-, 3588-)

- Non waterproof
- Measure thickness of disk brakes and pad wear
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1167-150A



Unit: mm

With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1167-150A	0-150mm/0-6"	±0.07mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1167-150AWL	0-150mm/0-6"	±0.07mm



RELATIVE PRODUCT: DISK BRAKE MICROMETER (CODE 3288-, 3588-)

DIGITAL DRUM BRAKE CALIPERS

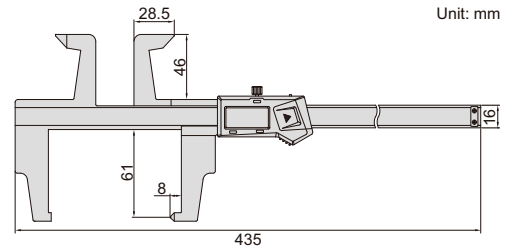
DATA OUTPUT

2



1168-300A

- Non waterproof
- Measure internal and external diameter of drum brakes
- Resolution 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1168-300A	0-300mm/0-12"	±0.07mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1168-300AWL	0-300mm/0-12"	±0.07mm



DATA OUTPUT

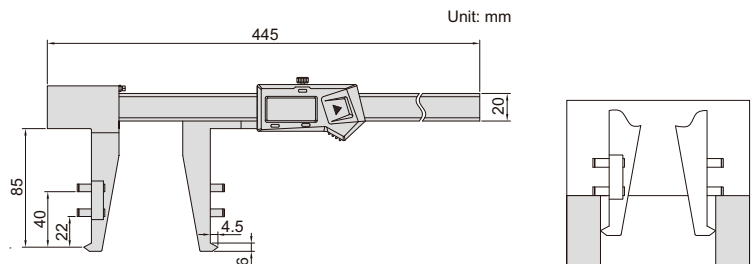
DIGITAL DRUM BRAKE CALIPER

calibration block (included)



1538-300

- Non waterproof
- Measure internal diameter of drum brakes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7315-22 page 4, 7302-22 page 12)



Code	Range	Accuracy
1538-300	30-300mm/1.2-12"	±0.05mm

03

DEPTH MEASURING INSTRUMENTS

←INSIZE→



Digital Depth Gages
Page 64-68



Dial Depth Gages
Page 68



Vernier Depth Gages
Page 68-70



Extension Bases
Page 70



Mini Depth Gages
Page 70-71



Depth Gages
Page 72-75



Depth Micrometers
Page 76-77



Depth Micrometer Checkers
Page 77

IP67
WATERPROOF

ATTENTION: NO DATA OUTPUT

ATTENTION: IT IS NECESSARY TO SET ZERO AFTER POWER ON EACH TIME

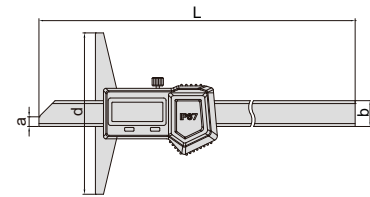
IP67 WATERPROOF DIGITAL DEPTH GAGES

3

- IP67 dust/waterproof
- Resolution: 0.01mm/0.0005"
- Button function: zero, on/off, mm/inch, ABS/REL, hold
- Meet DIN862
- Battery CR2032
- Made of stainless steel



1149-150



Code	Range	Accuracy	L	a	b	d
1149-150	0-150mm/0-6"	±0.03mm	240mm	6mm	16mm	100mm
1149-200	0-200mm/0-8"	±0.03mm	290mm	6mm	16mm	100mm
1149-300	0-300mm/0-12"	±0.03mm	390mm	6mm	16mm	150mm

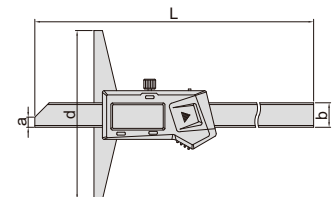
DATA OUTPUT

DIGITAL DEPTH GAGES (STANDARD TYPE)

- Non waterproof
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862 (except 0-500mm/0-20", 0-1000mm/0-40", 0-1500mm/0-60")
- Battery CR2032
- Made of stainless steel



1141-150A



With data interface

Code	Range	Resolution	Accuracy	L	a	b	d	Data output cable (optional)
1141-150A	0-150mm/0-6"	0.01mm/0.0005"	±0.03mm	230mm	6mm	14.5mm	100mm	7315-21 page 4, 7302-21 page 12
1141-200A	0-200mm/0-8"	0.01mm/0.0005"	±0.03mm	280mm	6mm	14.5mm	100mm	7315-21 page 4, 7302-21 page 12
1141-300A	0-300mm/0-12"	0.01mm/0.0005"	±0.03mm	380mm	6mm	14.5mm	150mm	7315-21 page 4, 7302-21 page 12
1141-500A	0-500mm/0-20"	0.01mm/0.0005"	±0.05mm	585mm	7mm	15mm	150mm	7315-22 page 4, 7302-22 page 12
1141-5001A	0-500mm/0-20"	0.01mm/0.0005"	±0.05mm	585mm	7mm	15mm	200mm	7315-22 page 4, 7302-22 page 12
1141-1000A	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1188mm	7mm	18mm	150mm	7315-22 page 4, 7302-22 page 12
1141-10001A	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1188mm	7mm	18mm	200mm	7315-22 page 4, 7302-22 page 12
1141-10002A	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1188mm	7mm	18mm	250mm	7315-22 page 4, 7302-22 page 12
1141-10003A	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1188mm	7mm	18mm	300mm	7315-22 page 4, 7302-22 page 12
1141-1500A	0-1500mm/0-60"	0.01mm/0.0005"	±0.11mm	1695mm	7mm	18mm	200mm	7315-22 page 4, 7302-22 page 12

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Resolution	Accuracy	L	a	b	d
1141-150AWL	0-150mm/0-6"	0.01mm/0.0005"	±0.03mm	230mm	6mm	14.5mm	100mm
1141-200AWL	0-200mm/0-8"	0.01mm/0.0005"	±0.03mm	280mm	6mm	14.5mm	100mm
1141-300AWL	0-300mm/0-12"	0.01mm/0.0005"	±0.03mm	380mm	6mm	14.5mm	150mm
1141-500AWL	0-500mm/0-20"	0.01mm/0.0005"	±0.05mm	585mm	7mm	15mm	150mm
1141-5001AWL	0-500mm/0-20"	0.01mm/0.0005"	±0.05mm	585mm	7mm	15mm	200mm

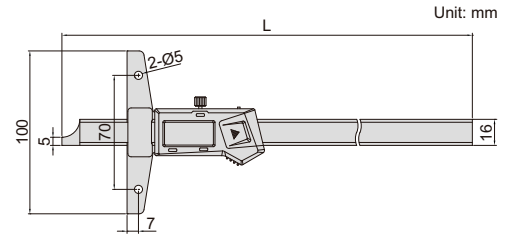
DIGITAL DEPTH GAGES WITH MOUNTING HOLES FOR EXTENSION BASE

DATA OUTPUT



1147-300

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862
- Battery CR2032
- Made of stainless steel
- Optional accessory: extension base (code 6141)



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy	L
1147-150	0-150mm/0-6"	±0.03mm	237mm
1147-200	0-200mm/0-8"	±0.03mm	287mm
1147-300	0-300mm/0-12"	±0.03mm	403mm
1147-500	0-500mm/0-20"	±0.05mm	605mm
1147-700	0-700mm/0-28"	±0.06mm	805mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	L
1147-150WL	0-150mm/0-6"	±0.03mm	237mm
1147-200WL	0-200mm/0-8"	±0.03mm	287mm
1147-300WL	0-300mm/0-12"	±0.03mm	403mm
1147-500WL	0-500mm/0-20"	±0.05mm	605mm
1147-700WL	0-700mm/0-28"	±0.06mm	805mm

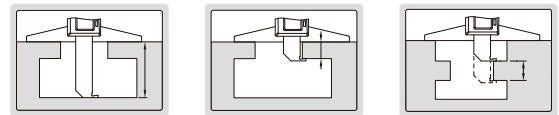
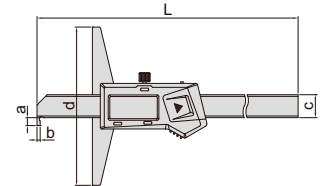
DIGITAL HOOK DEPTH GAGES

DATA OUTPUT



1142-150A

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



With data interface

Code	Range	Accuracy	L	d	a	b	c	Data output cable (optional)
1142-150A	0-150mm/0-6"	±0.03mm	230mm	100mm	5mm	2mm	14.5mm	7315-21 page 4, 7302-21 page 12
1142-200A	0-200mm/0-8"	±0.03mm	280mm	100mm	5mm	2mm	14.5mm	7315-21 page 4, 7302-21 page 12
1142-300A	0-300mm/0-12"	±0.04mm	380mm	150mm	5mm	2mm	14.5mm	7315-21 page 4, 7302-21 page 12
1142-500A	0-500mm/0-20"	±0.05mm	585mm	150mm	8mm	3mm	15mm	7315-22 page 4, 7302-22 page 12
1142-5001A	0-500mm/0-20"	±0.05mm	585mm	200mm	8mm	3mm	15mm	7315-22 page 4, 7302-22 page 12
1142-1000A	0-1000mm/0-40"	±0.07mm	1188mm	150mm	10mm	4mm	18mm	7315-22 page 4, 7302-22 page 12
1142-10001A	0-1000mm/0-40"	±0.07	1188mm	200mm	10mm	4mm	18mm	7315-22 page 4, 7302-22 page 12
1142-10002A	0-1000mm/0-40"	±0.07	1188mm	250mm	10mm	4mm	18mm	7315-22 page 4, 7302-22 page 12

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	L	d	a	b	c
1142-150AWL	0-150mm/0-6"	±0.03mm	230mm	100mm	5mm	2mm	14.5mm
1142-200AWL	0-200mm/0-8"	±0.03mm	280mm	100mm	5mm	2mm	14.5mm
1142-300AWL	0-300mm/0-12"	±0.04mm	380mm	150mm	5mm	2mm	14.5mm
1142-500AWL	0-500mm/0-20"	±0.05mm	585mm	150mm	8mm	3mm	15mm
1142-5001AWL	0-500mm/0-20"	±0.05mm	585mm	200mm	8mm	3mm	15mm

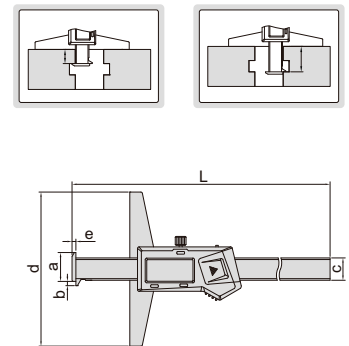
DATA OUTPUT

DIGITAL DOUBLE HOOK DEPTH GAGES

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862
- Battery CR2032
- Made of stainless steel



1144-150A



With data interface

Code	Range	Accuracy	L	d	a	b	c	e	Data output cable (optional)
1144-150A	0-150mm/0-6"	±0.03mm	233mm	100mm	21.5mm	3.5mm	14.5mm	2.5mm	7315-21 page 4, 7302-21 page 12
1144-200A	0-200mm/0-8"	±0.03mm	283mm	100mm	21.5mm	3.5mm	14.5mm	2.5mm	7315-21 page 4, 7302-21 page 12
1144-300A	0-300mm/0-12"	±0.03mm	383mm	150mm	21.5mm	3.5mm	14.5mm	2.5mm	7315-21 page 4, 7302-21 page 12
1144-500A	0-500mm/0-20"	±0.05mm	585mm	150mm	25mm	5mm	15mm	3mm	7315-22 page 4, 7302-22 page 12
1144-5001A	0-500mm/0-20"	±0.05mm	585mm	200mm	25mm	5mm	15mm	3mm	7315-22 page 4, 7302-22 page 12
1144-1000A	0-1000mm/0-40"	±0.07mm	1188mm	150mm	32mm	7mm	18mm	4mm	7315-22 page 4, 7302-22 page 12
1144-10001A	0-1000mm/0-40"	±0.07mm	1188mm	200mm	32mm	7mm	18mm	4mm	7315-22 page 4, 7302-22 page 12
1144-10002A	0-1000mm/0-40"	±0.07mm	1188mm	250mm	32mm	7mm	18mm	4mm	7315-22 page 4, 7302-22 page 12

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	L	d	a	b	c	e
1144-150AWL	0-150mm/0-6"	±0.03mm	233mm	100mm	21.5mm	3.5mm	14.5mm	2.5mm
1144-200AWL	0-200mm/0-8"	±0.03mm	283mm	100mm	21.5mm	3.5mm	14.5mm	2.5mm
1144-300AWL	0-300mm/0-12"	±0.03mm	383mm	150mm	21.5mm	3.5mm	14.5mm	2.5mm
1144-500AWL	0-500mm/0-20"	±0.05mm	585mm	150mm	25mm	5mm	15mm	3mm
1144-5001AWL	0-500mm/0-20"	±0.05mm	585mm	200mm	25mm	5mm	15mm	3mm

DATA OUTPUT

DIGITAL DOUBLE HOOK DEPTH GAGE

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS/INC, data hold, TOL, set
- ABS/INC is for absolute and incremental measurement
- TOL is for tolerance measurement
- Made of stainless steel
- LR44 battery, data output
- Supplied with gage block for zero setting
- Optional accessory: extension base, wireless transmitter (code 7315-1150 page 6), data output cable (code 7302-SPC7 page 13, keyboard format)

Code	Range	Accuracy
1540-300	0-300mm/0-12"	±0.04mm

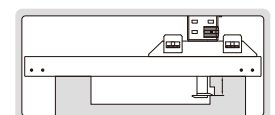
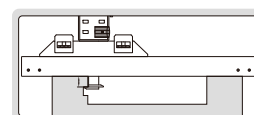
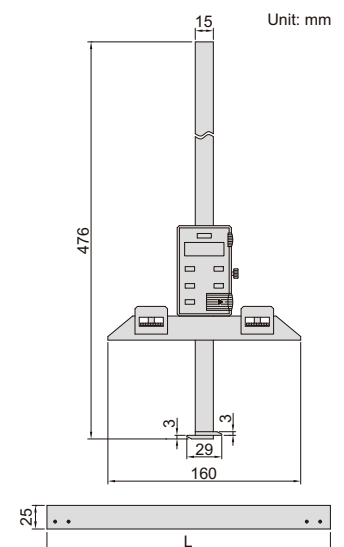
Extension base (optional)

Code	L
1540-L300	300mm
1540-L400	400mm
1540-L500	500mm
1540-L600	600mm
1540-L800	800mm

gage block for zero setting (included)



1540-300



DIGITAL DEPTH GAGES WITH ROUND DEPTH BAR

MEASURE WIDTH AND DEPTH OF GROOVES INSIDE BORE

MEASURE DEPTH OF SMALL HOLES (>Ø4mm)

DATA OUTPUT

3

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Supplied with three interchangeable points (flat, spherical, disk)
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: extension base (code 6141, for 1148-120, 1148-120WL, 1148-200, 1148-200WL, 1148-300 and 1148-300WL)

preset buttons



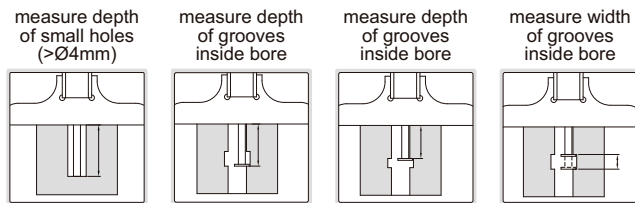
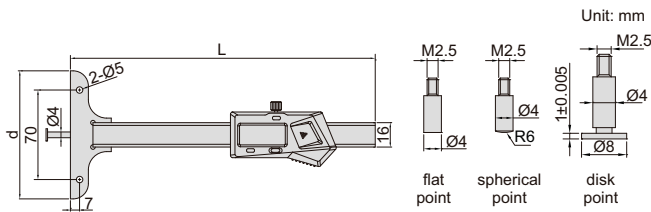
1148-100S



1148-120



1148-200



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range *	Accuracy	L	d	Remark
1148-100S	0-100mm/0-4"	±0.02mm	200mm	45mm	
1148-100	0-100mm/0-4"	±0.02mm	200mm	85mm	
1148-120	0-120mm/0-4.7"	±0.03mm	300mm	101mm	one-hand use, with mounting holes for extension base
1148-200	0-200mm/0-8"	±0.03mm	300mm	101mm	with mounting holes for extension base
1148-300	0-300mm/0-12"	±0.04mm	400mm	101mm	with mounting holes for extension base

one-hand use of 1148-120 and 1148-120WL



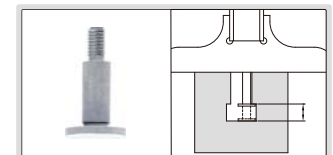
extension base for 1148-120, 1148-120WL, 1148-200, 1148-200WL, 1148-300 and 1148-300WL (optional)



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range *	Accuracy	L	d	Remark
1148-100SWL	0-100mm/0-4"	±0.02mm	200mm	45mm	
1148-100WL	0-100mm/0-4"	±0.02mm	200mm	85mm	
1148-120WL	0-120mm/0-4.7"	±0.03mm	300mm	101mm	one-hand use, with mounting holes for extension base
1148-200WL	0-200mm/0-8"	±0.03mm	300mm	101mm	with mounting holes for extension base
1148-300WL	0-300mm/0-12"	±0.04mm	400mm	101mm	with mounting holes for extension base

1148-P103 (optional), measure width of bottom grooves inside blind hole

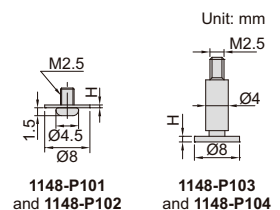


*When disk points are used, the range is reduced by 10mm

OPTIONAL DISK POINTS

Code	Description	H	Remark
1148-P101	0.5mm disk point	0.5±0.005mm	for narrow grooves
1148-P102	0.7mm disk point	0.7±0.005mm	for narrow grooves
1148-P103	1mm disk point	1±0.005mm	for grooves inside blind hole
1148-P104	0.5mm disk point	0.5±0.005mm	for grooves inside blind hole

1148-P101 (optional)

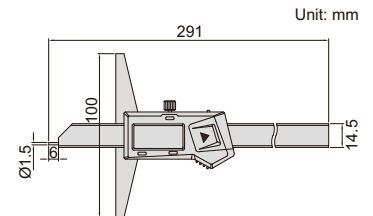


1148-P101 and 1148-P102

1148-P103 and 1148-P104

DATA OUTPUT
DIGITAL POINT DEPTH GAGES

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862
- Battery CR2032
- Made of stainless steel

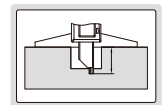

1143-200A


With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

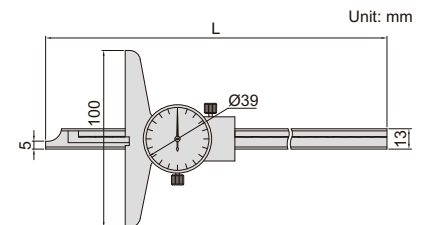
Code	Range	Accuracy
1143-200A	0-200mm/0-8"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1143-200AWL	0-200mm/0-8"	±0.03mm


SHOCK PROOF
DIAL DEPTH GAGES

- Shockproof dial indicator
- Made of stainless steel


1340-150


Code	Range	Graduation	Accuracy	L
1340-150	0-150mm	0.02mm	±0.03mm	232mm
1340-200	0-200mm	0.02mm	±0.03mm	282mm
1340-300	0-300mm	0.02mm	±0.04mm	382mm

VERNIER DEPTH GAGES (STANDARD TYPE)

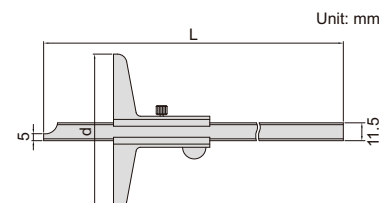
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.05mm

Code	Range	Accuracy	L	d
1240-150	0-150mm	±0.05mm	245mm	100mm
1240-200	0-200mm	±0.05mm	282mm	100mm
1240-300	0-300mm	±0.08mm	382mm	100mm
1240-500	0-500mm	±0.09mm	585mm	150mm

Graduation 0.02mm

Code	Range	Accuracy	L	d
1240-1501	0-150mm	±0.03mm	245mm	100mm
1240-2001	0-200mm	±0.03mm	282mm	100mm
1240-3001	0-300mm	±0.04mm	382mm	100mm
1240-5001	0-500mm	±0.05mm	585mm	150mm


1240-2001


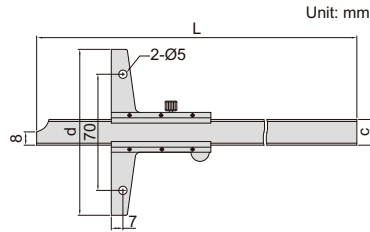
VERNIER DEPTH GAGES

WITH MOUNTING HOLES FOR EXTENSION BASE

extension base (optional)



- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code 6141)



1247-2001

Graduation 0.05mm

Code	Range	Accuracy
1247-150	0-150mm	±0.05mm
1247-200	0-200mm	±0.05mm
1247-300	0-300mm	±0.08mm
1247-600	0-600mm	±0.10mm
1247-1000	0-1000mm	±0.15mm

Graduation 0.02mm

Code	Range	Accuracy
1247-1501	0-150mm	±0.03mm
1247-2001	0-200mm	±0.03mm
1247-3001	0-300mm	±0.04mm
1247-6001	0-600mm	±0.05mm
1247-1001	0-1000mm	±0.07mm

Range	L	c	d
0-150mm	240mm	16mm	100mm
0-200mm	290mm	16mm	100mm
0-300mm	390mm	16mm	100mm
0-600mm	704mm	16mm	150mm
0-1000mm	1124mm	16mm	200mm

VERNIER DEPTH GAGES WITH FINE ADJUSTMENT

WITH MOUNTING HOLES FOR EXTENSION BASE

- With fine adjustment
- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code 6141)

Graduation 0.05mm

Code	Range	Accuracy
1249-150	0-150mm	±0.05mm
1249-200	0-200mm	±0.05mm
1249-300	0-300mm	±0.08mm

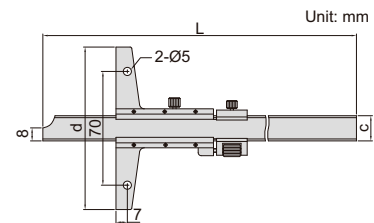
Graduation 0.02mm

Code	Range	Accuracy
1249-1501	0-150mm	±0.03mm
1249-2001	0-200mm	±0.03mm
1249-3001	0-300mm	±0.04mm

Range	L	c	d
0-150mm	256mm	16mm	100mm
0-200mm	306mm	16mm	100mm
0-300mm	406mm	16mm	100mm



1249-1501



VERNIER HOOK DEPTH GAGES

WITH MOUNTING HOLES FOR EXTENSION BASE

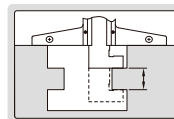
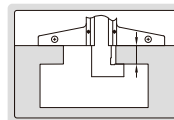
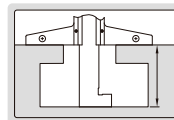
- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code 6141)

Graduation 0.05mm

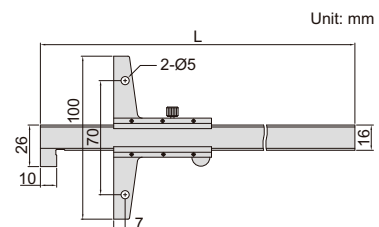
Code	Range	Accuracy	L
1248-150	0-150mm	±0.05mm	266mm
1248-200	0-200mm	±0.05mm	316mm
1248-300	0-300mm	±0.08mm	416mm

Graduation 0.02mm

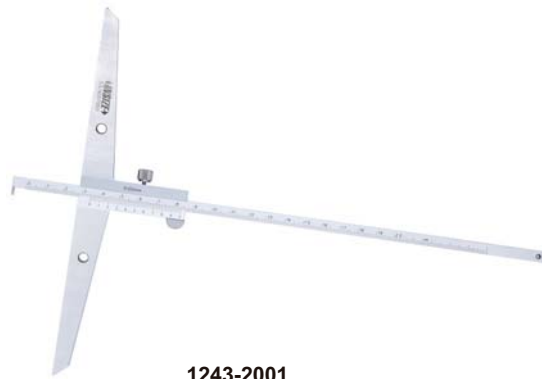
Code	Range	Accuracy	L
1248-1501	0-150mm	±0.03mm	266mm
1248-2001	0-200mm	±0.03mm	316mm
1248-3001	0-300mm	±0.04mm	416mm



1248-1501



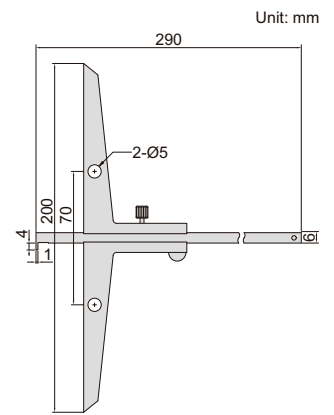
VERNIER HOOK DEPTH GAGE



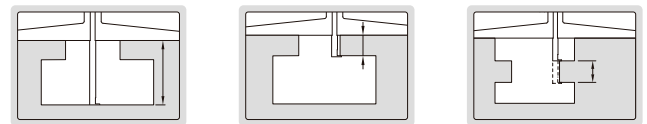
1243-2001

- Graduation 0.02mm
- Made of stainless steel
- Satin chrome plating finish on reading surface

Code	Range	Accuracy
1243-2001	0-200mm	±0.04mm



Unit: mm



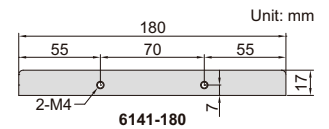
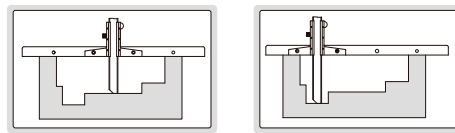
EXTENSION BASES



6141-260

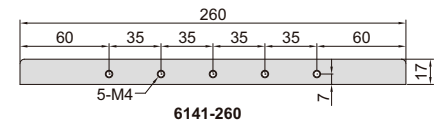
- Supplied with two screws
- Made of stainless steel
- Suitable for depth gages series 1147, 1148, 1247, 1248 and 1249

Code	Length
6141-180	180mm
6141-260	260mm
6141-320	320mm
6141-600	600mm

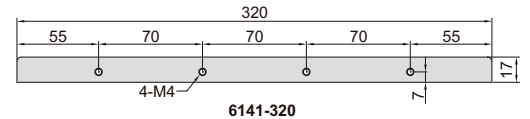


6141-180

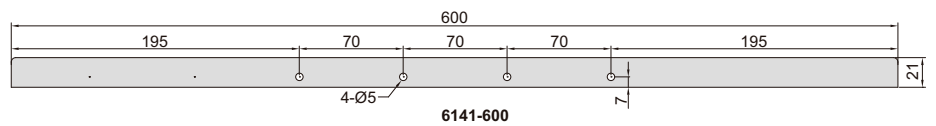
Unit: mm



6141-260



6141-320



6141-600

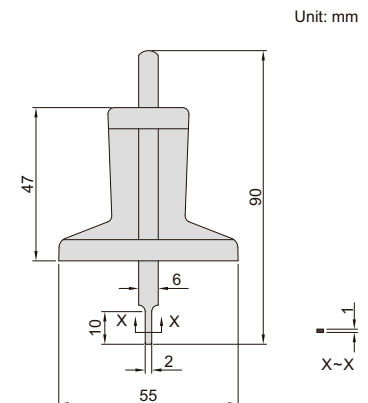
MINI VERNIER DEPTH GAGE (ECONOMIC TYPE)

- Graduation: 0.1mm
- Made of stainless steel

Code	Range	Accuracy
1244-30	0-30mm	±0.10mm



1244-30



Unit: mm

MINI DIGITAL DEPTH GAGES WITH ROUND BAR

DATA
OUTPUT

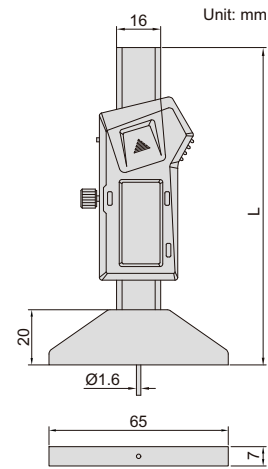
3



- Non waterproof
- Measure depth of small groove and hole
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+,-)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1140-25



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy	L
1140-25	0-25mm/0-1"	±0.02mm	114mm
1140-50	0-50mm/0-2"	±0.02mm	140mm
1140-100	0-100mm/0-4"	±0.02mm	190mm
1140-150	0-150mm/0-6"	±0.03mm	236mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	L
1140-25WL	0-25mm/0-1"	±0.02mm	114mm
1140-50WL	0-50mm/0-2"	±0.02mm	140mm
1140-100WL	0-100mm/0-4"	±0.02mm	190mm
1140-150WL	0-150mm/0-6"	±0.03mm	236mm

MINI DIGITAL DEPTH GAGES

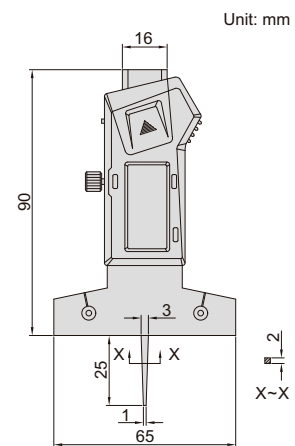
DATA
OUTPUT



- Non waterproof
- Measure depth of small groove and hole, also measure depth of tire tread
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Supplied with zero set surface
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1145-25A



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1145-25A	0-25mm/0-1"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1145-25AWL	0-25mm/0-1"	±0.03mm

DIAL DEPTH GAGES

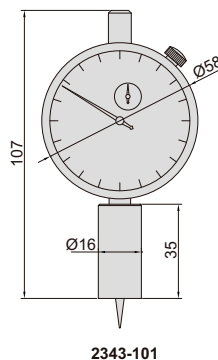
Unit: mm

3

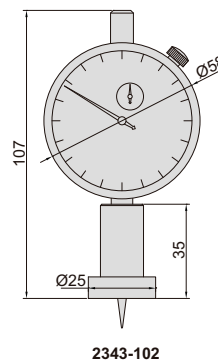
- Accuracy: $\pm 0.017\text{mm}$
- Stainless steel base
- Pointed tip



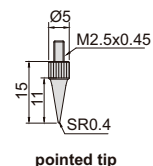
2343-102



2343-101



2343-102



pointed tip

Code	Range	Dial indicator stroke	Dial indicator graduation	Base
2343-101	0-10mm	10mm	0.01mm	Ø16mm
2343-102	0-10mm	10mm	0.01mm	Ø25mm

DATA OUTPUT

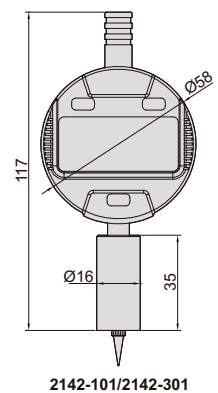
DIGITAL DEPTH GAGES

Unit: mm

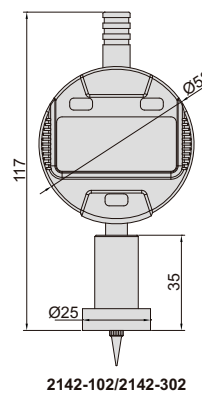
- Button function: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Pointed tip
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13)



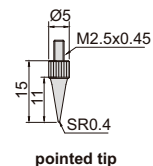
2142-102



2142-101/2142-301



2142-102/2142-302



pointed tip

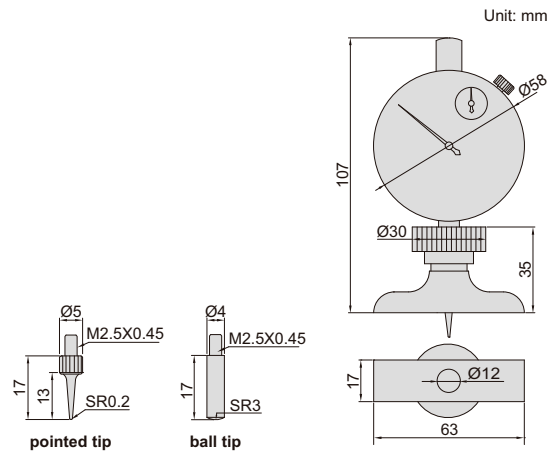
Code	Range	Digital indicator stroke	Digital indicator resolution	Accuracy	Base
2142-101	0-12.7mm/0-0.5"	12.7mm/0.5"	0.01mm/0.0005"	$\pm 20\mu\text{m}$	Ø16mm
2142-102	0-12.7mm/0-0.5"	12.7mm/0.5"	0.01mm/0.0005"	$\pm 20\mu\text{m}$	Ø25mm
2142-301	0-12.7mm/0-0.5"	12.7mm/0.5"	0.001mm/0.00005"	$\pm 5\mu\text{m}$	Ø16mm
2142-302	0-12.7mm/0-0.5"	12.7mm/0.5"	0.001mm/0.00005"	$\pm 5\mu\text{m}$	Ø25mm

DIAL DEPTH GAGE

- Accuracy: $\pm 0.017\text{mm}$
- Stainless steel base
- Supplied with pointed tip and ball tip



2341-101A

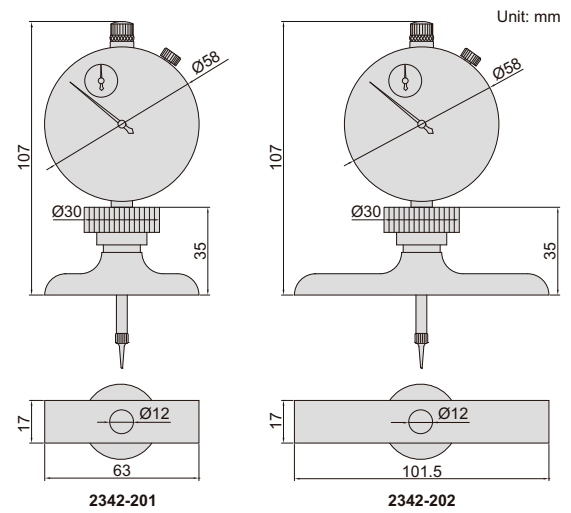


Code	Range	Dial indicator stroke	Dial indicator graduation
2341-101A	0-10mm	10mm	0.01mm

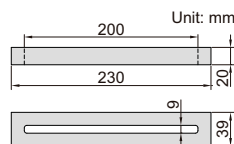
DIAL DEPTH GAGES



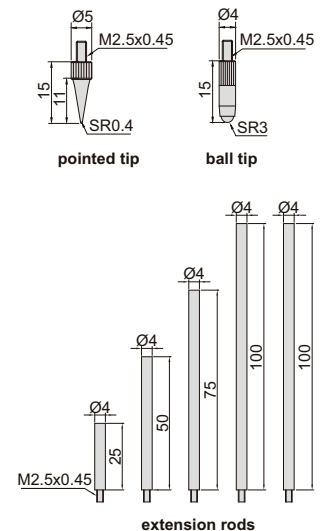
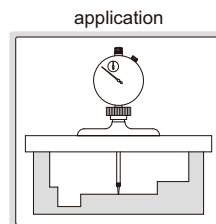
2342-202



2141-10 (optional), can be customized according to workpieces



- Dial indicator graduation: 0.01mm
- Accuracy: $\pm 0.03\text{mm}$
- Stainless steel base
- Extension rods: 25mm (1 pc), 50mm (1 pc), 75mm (1 pc), 100mm (2 pcs)
- Supplied with pointed tip and ball tip
- Optional accessory: granite extension holder (code **2141-10**)



Code	Range	Dial indicator stroke	Base
2342-201	0-300mm	30mm	63x17mm
2342-202	0-300mm	30mm	101.5x17mm

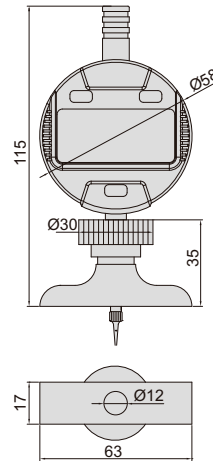
DATA
OUTPUT

DIGITAL DEPTH GAGES

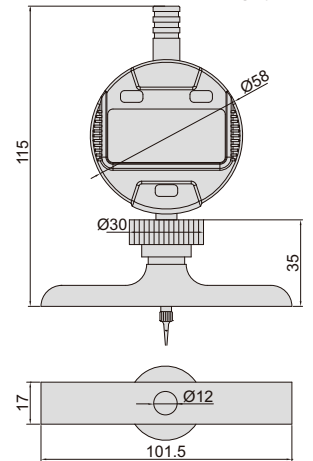
3



2141-202A

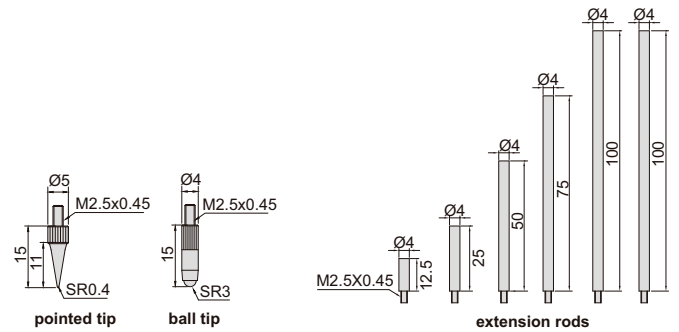


2141-201A/2141-301



2141-202A/2141-302

Unit: mm



pointed tip

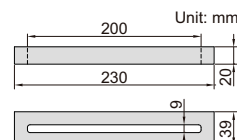
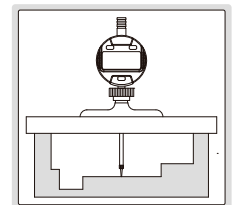
ball tip

extension rods



2141-10 (optional),
can be customized
according to workpieces

application



- Button function: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Extension rods: 12.5mm (1 pc), 25mm (1 pc), 50mm (1 pc), 75mm (1 pc), 100mm (2 pcs)
- Supplied with pointed tip and ball tip
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13), granite extension holder (code 2141-10)

Code	Range	Digital indicator stroke	Digital indicator resolution	Accuracy	Base
2141-201A	0-300mm/0-12"	12.7mm/0.5"	0.01mm/0.0005"	±20µm	63x17mm
2141-202A	0-300mm/0-12"	12.7mm/0.5"	0.01mm/0.0005"	±20µm	101.5x17mm
2141-301	0-300mm/0-12"	12.7mm/0.5"	0.001mm/0.00005"	±5µm	63x17mm
2141-302	0-300mm/0-12"	12.7mm/0.5"	0.001mm/0.00005"	±5µm	101.5x17mm

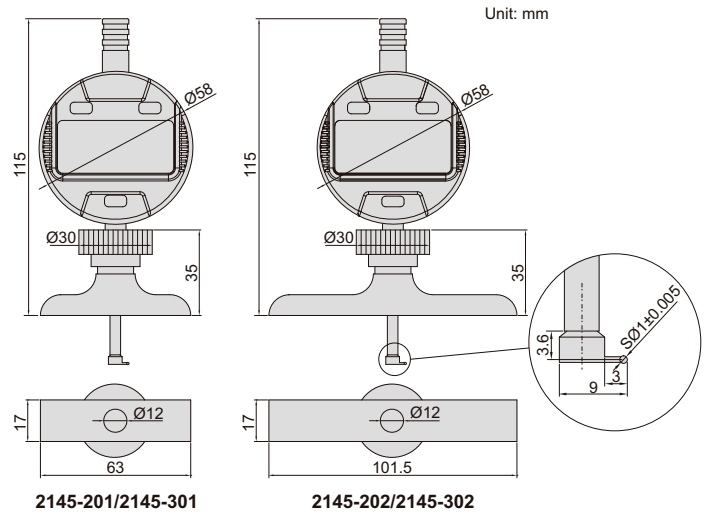
DIGITAL GROOVE GAGES

DATA OUTPUT

3

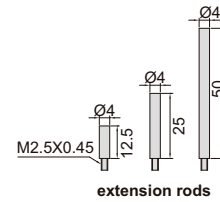


2145-202



2145-201/2145-301

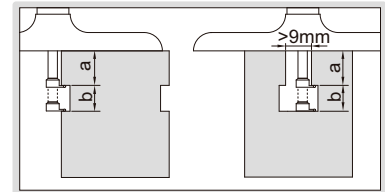
2145-202/2145-302



extension rods

- Button function: on/off, zero, mm/inch, absolute/incremental measurement, data preset, change measuring direction
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Supplied with extension rods: 12.5mm (1 pc), 25mm (1 pc), 50mm (1 pc)
- Supplied with groove point
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13)

measure width (b) and depth (a) of groove



Code	Range (a)	Digital indicator stroke (b)	Digital indicator resolution	Accuracy	Base
2145-201	0-85mm/0-3.35"	12.7mm/0.5"	0.01mm/0.0005"	±20µm	63x17mm
2145-202	0-85mm/0-3.35"	12.7mm/0.5"	0.01mm/0.0005"	±20µm	101.5x17mm
2145-301	0-85mm/0-3.35"	12.7mm/0.5"	0.001mm/0.00005"	±5µm	63x17mm
2145-302	0-85mm/0-3.35"	12.7mm/0.5"	0.001mm/0.00005"	±5µm	101.5x17mm

DIGITAL DEPTH GAGE (60° KNIFE EDGE BASE)

DATA OUTPUT

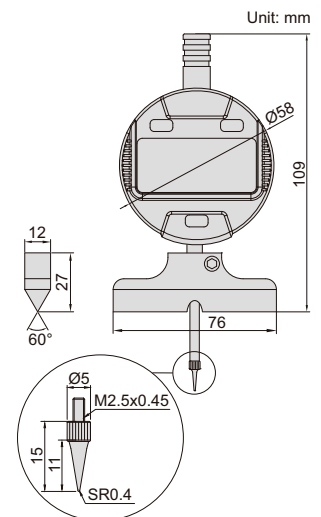
- Button function: on/off, zero, inch/mm, ABS, data preset, change measuring direction
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base with 60° knife edge
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13)



front view

side view

2143-101



Code	Range	Digital indicator stroke	Digital indicator resolution	Accuracy
2143-101	0-12.7mm/0-0.5"	12.7mm/0.5"	0.01mm/0.0005"	±20µm

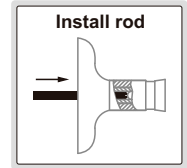
IP65
WATERPROOF

DATA
OUTPUT

DIGITAL DEPTH MICROMETERS

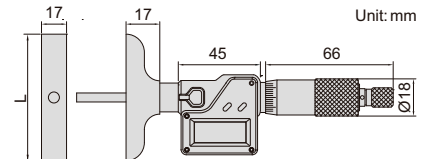
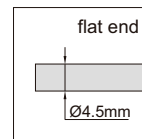
3

- Resolution: 0.001mm/0.00005"
- Micrometer head accuracy: $\pm 3\mu\text{m}$
- Rod accuracy: $\pm (2+L/75)\mu\text{m}$, L is the measuring range in mm
- Button function: on/off, set, mm/inch, data transmit
- IP65 dust/waterproof
- Data output
- Automatic power off
- Rods with flat end
- Ratchet stop
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)

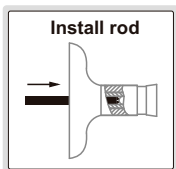


3540-50

Code	Range	Rods	L
3540-25	0-25mm/0-1"	1 pc	101.5mm
3540-50	0-50mm/0-2"	2 pcs	101.5mm
3540-100	0-100mm/0-4"	4 pcs	101.5mm
3540-150	0-150mm/0-6"	6 pcs	101.5mm
3540-300	0-300mm/0-12"	12 pcs	101.5mm
3540-B25	0-25mm/0-1"	1 pc	63mm
3540-B50	0-50mm/0-2"	2 pcs	63mm
3540-B100	0-100mm/0-4"	4 pcs	63mm
3540-B150	0-150mm/0-6"	6 pcs	63mm
3540-B300	0-300mm/0-12"	12 pcs	63mm

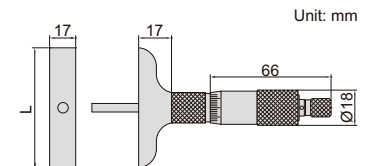


DEPTH MICROMETERS



- Meet DIN863-2
- Graduation: 0.01mm
- Micrometer head accuracy: $\pm 3\mu\text{m}$
- Rod accuracy: $\pm (2+L/75)\mu\text{m}$, L is the measuring range in mm
- Rods with flat or spherical end
- Ratchet stop

3240-100



Flat end

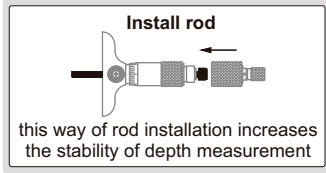
Code	Range	Rods	L
3240-25	0-25mm	1 pc	101.5mm
3240-50	0-50mm	2 pcs	101.5mm
3240-75	0-75mm	3 pcs	101.5mm
3240-100	0-100mm	4 pcs	101.5mm
3240-150	0-150mm	6 pcs	101.5mm
3240-200	0-200mm	8 pcs	101.5mm
3240-300	0-300mm	12 pcs	101.5mm
3240-B25	0-25mm	1 pc	63mm
3240-B50	0-50mm	2 pcs	63mm
3240-B100	0-100mm	4 pcs	63mm
3240-B150	0-150mm	6 pcs	63mm
3240-B300	0-300mm	12 pcs	63mm

Spherical end

Code	Range	Rods	L
3240-25S	0-25mm	1 pc	101.5mm
3240-50S	0-50mm	2 pcs	101.5mm
3240-100S	0-100mm	4 pcs	101.5mm
3240-150S	0-150mm	6 pcs	101.5mm
3240-300S	0-300mm	12 pcs	101.5mm
3240-B25S	0-25mm	1 pc	63mm
3240-B50S	0-50mm	2 pcs	63mm
3240-B100S	0-100mm	4 pcs	63mm
3240-B150S	0-150mm	6 pcs	63mm
3240-B300S	0-300mm	12 pcs	63mm

DEPTH MICROMETERS

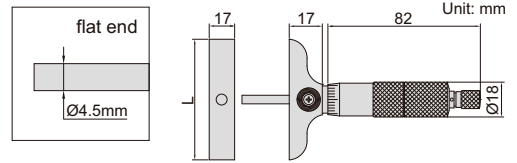
3



- Meet DIN863-2
- Graduation: 0.01mm
- Micrometer head accuracy: $\pm 3\mu\text{m}$
- Rod accuracy: $\pm (2+L/75)\mu\text{m}$, L is the measuring range in mm
- Rods with flat end
- Ratchet stop



3241-100



Code	Range	Rods	L
3241-25	0-25mm	1 pc	101.5mm
3241-50	0-50mm	2 pcs	101.5mm
3241-75	0-75mm	3 pcs	101.5mm
3241-100	0-100mm	4 pcs	101.5mm
3241-150	0-150mm	6 pcs	101.5mm
3241-200	0-200mm	8 pcs	101.5mm
3241-300	0-300mm	12 pcs	101.5mm
3241-B25	0-25mm	1 pc	63mm
3241-B50	0-50mm	2 pcs	63mm
3241-B100	0-100mm	4 pcs	63mm
3241-B150	0-150mm	6 pcs	63mm
3241-B300	0-300mm	12 pcs	63mm

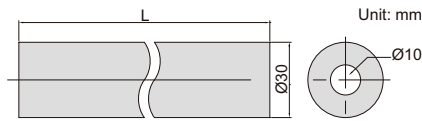
CYLINDER GAGE BLOCKS FOR DEPTH MICROMETERS

Code	Length (L)
4179-25*	25mm
4179-50*	50mm
4179-75*	75mm
4179-100*	100mm
4179-125*	125mm
4179-150*	150mm
4179-175*	175mm
4179-200*	200mm
4179-225*	225mm
4179-250*	250mm
4179-275*	275mm

* Supplied with manufacturer inspection certificate



4179-25



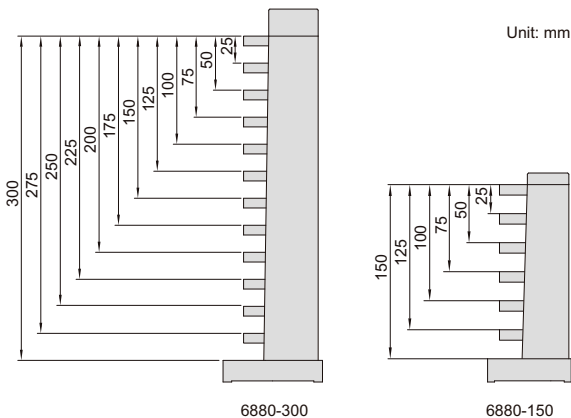
- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Meet ISO3650 grade 1



application

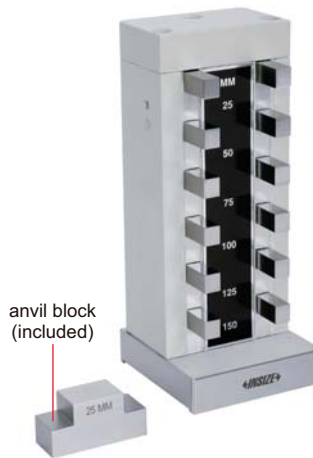


DEPTH MICROMETER CHECKERS



6880-300

6880-150



6880-150



application



Code	Size	Range (mm)	Accuracy
6880-150*	0-150mm	25, 50, 75, 100, 125, 150	$\pm 2\mu\text{m}$
6880-300*	0-300mm	25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300	$\pm 3\mu\text{m}$

* Supplied with manufacturer inspection certificate

- To check depth micrometers and set zero
- Constructed with steel gage blocks
- Supplied with anvil block



Digital Height Gages
Page 79-81



Dial Indicator Stands
Page 81



Height Gages
Page 82-86



Height Gage Checkers
Page 87



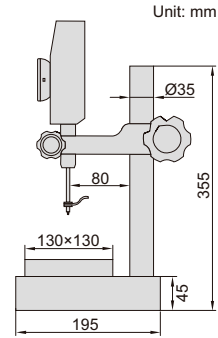
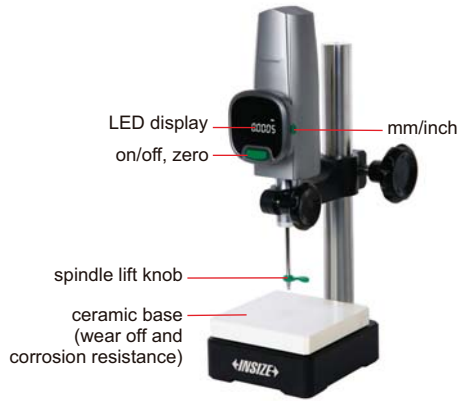
Mini Digital Height Gages
Page 87

HIGH PRECISION DIGITAL HEIGHT GAGES

DATA
OUTPUT



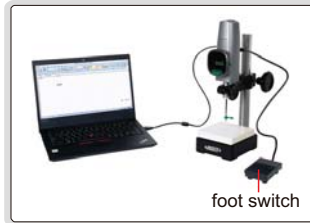
4



1155-505



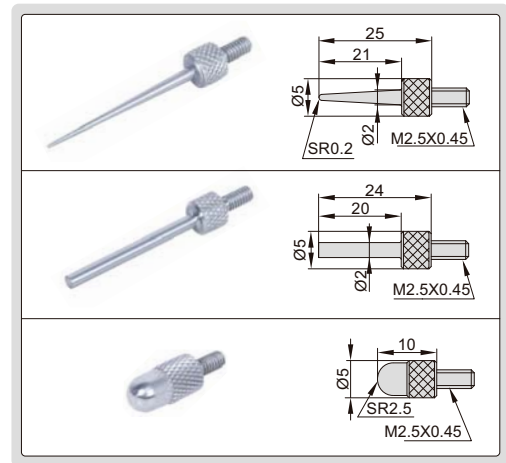
power supplied by charge pal



data transmitted to Excel without software; short press the foot switch to transmit data, long press to zero

measuring tips (included)

unit: mm



- High stability, high precision, high response speed (5000mm/s)
- High brightness LED display
- Ceramic base flatness: 1µm

Code	Range	Resolution	Accuracy (20°C)	Measuring force	Output	Power supply
1155-505	0~50mm	0.5µm/0.00002" (can switch to: 1µm/0.00005")	1.5µm	0.8~1.2N	USB	5V/1A (adapter or charge pal)
1155-510	0~50mm	0.1µm/0.000005" (can switch to: 1µm/0.00005")	1µm	0.8~1.2N	USB	5V/1A (adapter or charge pal)

OPTIONAL ACCESSORY

Contact point	code 6282
Charge pal	1155-5-POB
Data output cable (including foot switch)	1155-5-FOS

STANDARD DELIVERY

Main unit	1 pc
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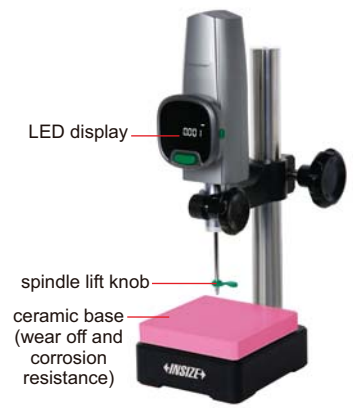
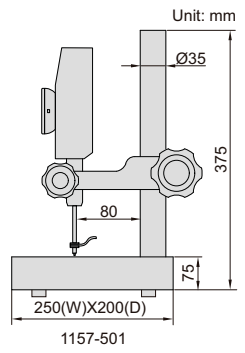
DATA OUTPUT

DIGITAL HEIGHT GAGES

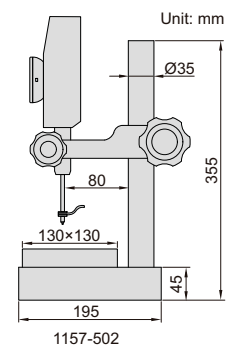
4



1157-501



1157-502



- Buttons: on/off, zero, mm/inch, mix/min/mix-min
- High response speed (5000mm/s)
- High brightness LED display

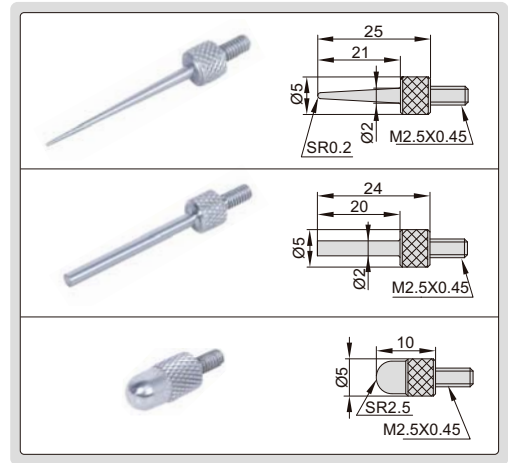


power supplied by charge pal



data transmitted to Excel without software; short press the foot switch to transmit data, long press to zero

measuring tips (included) unit: mm



Code	Range	Resolution	Accuracy (20°C)	Measuring force	Output	Power supply	Base
1157-501	0~50mm	1µm/0.00005"	3µm	0.8~1.2N	USB	5V/1A (adapter or charge pal)	granite (flatness: 2µm)
1157-502	0~50mm	1µm/0.00005"	3µm	0.8~1.2N	USB	5V/1A (adapter or charge pal)	ceramic (flatness: 1µm)

OPTIONAL ACCESSORY

Contact point	code 6282
Charge pal	1155-5-POB
Data output cable (including foot switch)	1155-5-FOS

STANDARD DELIVERY

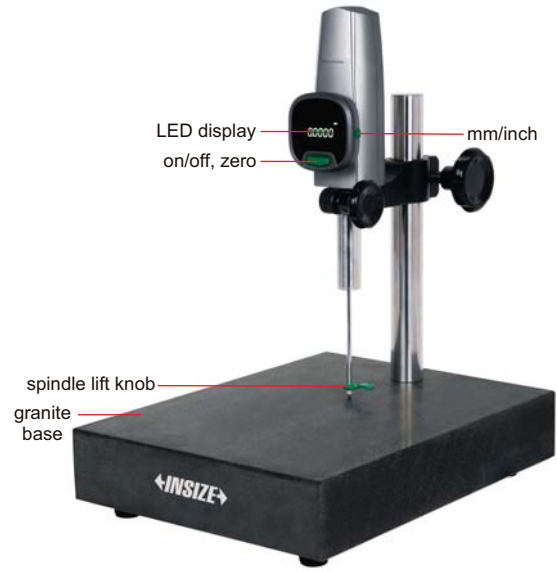
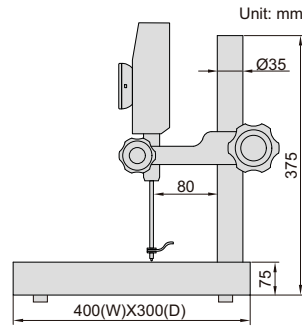
Main unit	1 pc
-----------	------

LARGE RANGE DIGITAL HEIGHT GAGE

DATA OUTPUT

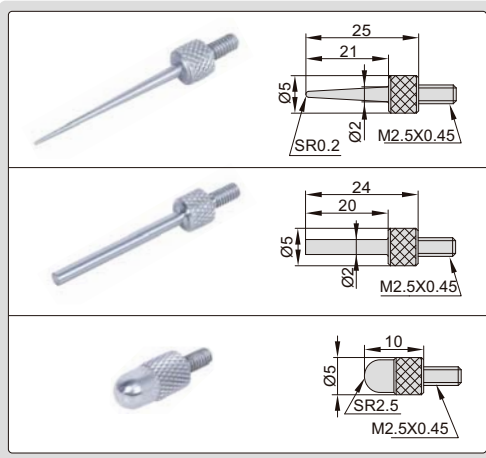
4

- High stability, high precision, high response speed (5000mm/s)
- High brightness LED display
- Granite base flatness: 3µm

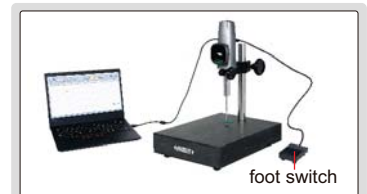


1158-100

measuring tips (included) unit: mm



power supplied by charge pal



data transmitted to Excel without software; short press the foot switch to transmit data, long press to zero

Code	Range	Resolution	Accuracy (20°C)	Measuring force	Output	Power supply
1158-100	0~100mm	0.1µm/0.000005" (can switch to: 1µm/0.00005")	3µm	0.8~1.2N	USB	5V/1A (adapter or charge pal)

STANDARD DELIVERY

Main unit	1 pc
-----------	------

OPTIONAL ACCESSORY

Contact point	code 6282
Charge pal	1155-5-POB
Data output cable (including foot switch)	1155-5-FOS

DIAL INDICATOR STANDS

REFER TO PAGE 246-248 FOR DETAILS



6862-1001



6864-250T



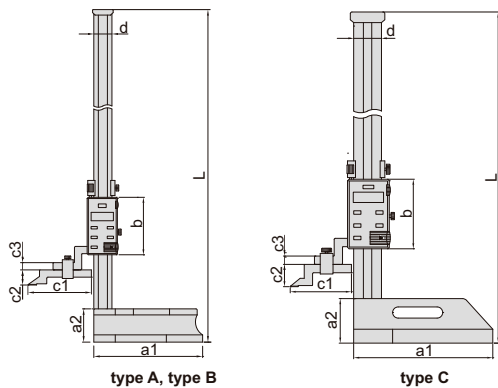
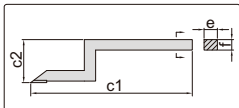
6867-250

DATA OUTPUT

DIGITAL HEIGHT GAGES

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS/INC, data hold, TOL, set
- ABS/INC is for absolute and incremental measurement
- TOL is for tolerance measurement
- Carbide tipped scriber
- Made of stainless steel (except the base)
- LR44 battery, data output
- Supplied with dial test indicator holder
- Supplied with dust cover (except 1150-1500/2000)
- Optional accessory: wireless transmitter (code 7315-1150 page 6), data output cable (code 7302-SPC7 page 13, keyboard format), clamp for protractors (code 2372-CLAMP, for 1150-300)

scriber (included)

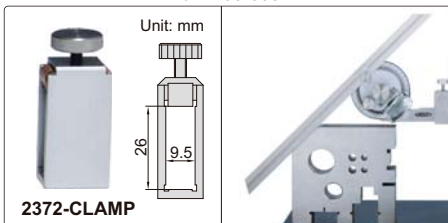


1150-1000

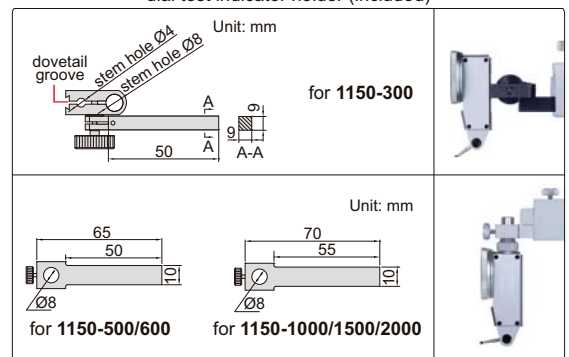
1150-500

1150-300

clamp for protractors (optional)
for 1150-300



dial test indicator holder (included)



Code	Range	Type	Accuracy	L	a1	a2	b	c1	c2	c3	d	e	f
1150-300	0-300mm/0-12"	A	±0.04mm	485mm	138mm	45mm	95mm	80mm	30mm	10mm	28mm	9mm	9mm
1150-500	0-500mm/0-20"	B	±0.06mm	720mm	180mm	55mm	95mm	103mm	25mm	12mm	30mm	10mm	12mm
1150-600	0-600mm/0-24"	B	±0.06mm	820mm	180mm	55mm	95mm	103mm	25mm	12mm	30mm	10mm	12mm
1150-1000	0-1000mm/0-40"	C	±0.08mm	1275mm	250mm	80mm	125mm	110mm	39mm	15mm	50mm	10mm	15mm
1150-1500	0-1500mm/0-60"	C	±0.12mm	1790mm	280mm	80mm	125mm	110mm	39mm	15mm	50mm	10mm	15mm
1150-2000	0-2000mm/0-80"	C	±0.16mm	2290mm	280mm	80mm	125mm	110mm	39mm	15mm	50mm	10mm	15mm

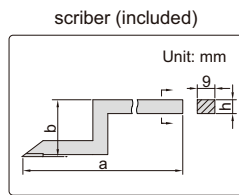
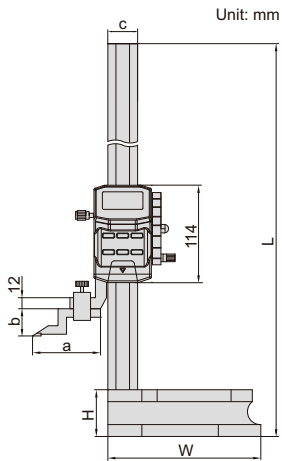
DIGITAL HEIGHT GAGES WITH DRIVING WHEEL

DATA OUTPUT

INSPECTION CERTIFICATE

4

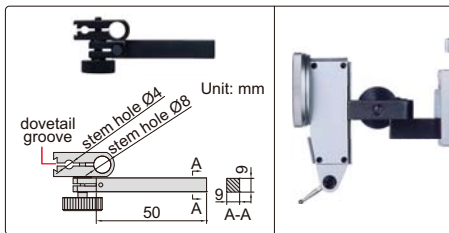
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, preset +, preset -, ABS/INC
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- Made of stainless steel
- Battery CR2032
- Data output
- Supplied with dust cover
- With dial test indicator holder
- Optional accessory: data output cable (code 7315-22 page 4, 7302-22 page 12), clamp for protractors (code 2372-CLAMP)



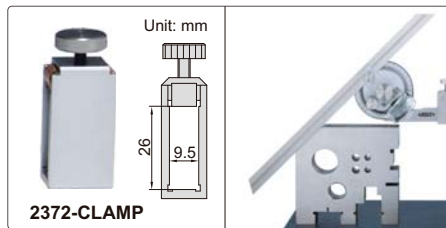
1156-300

1156-1000

dial test indicator holder (included)



clamp for protractors (optional)



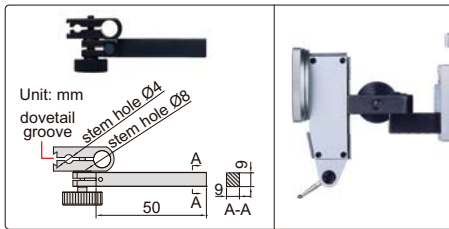
Code	Range	Accuracy	L	W	H	a	b	c	h
1156-300*	0-300mm/0-12"	±0.03mm	515mm	180mm	55mm	80mm	30mm	35mm	9mm
1156-600*	0-600mm/0-24"	±0.05mm	815mm	180mm	55mm	80mm	30mm	35mm	9mm
1156-1000*	0-1000mm/0-40"	±0.07mm	1220mm	265mm	70mm	92mm	48mm	40mm	12mm

*Supplied with manufacturer inspection certificate

DATA OUTPUT

DIGITAL HEIGHT GAGES

dial test indicator holder (included)

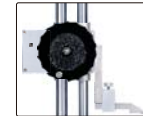
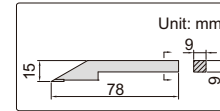


- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, data hold, ABS/INC, preset
- ABS/INC is for absolute and incremental measurement
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- Made of stainless steel
- Battery CR2032, data output
- With driving wheel
- With dial test indicator holder
- Supplied with dust cover
- Optional accessory: clamp for protractors (code **2372-CLAMP**), wireless transmitter (code **7315-1151 page 6**), data output cable (code **7302-1151 page 13**, keyboard format)

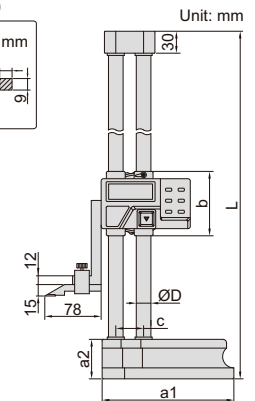


1151-300A

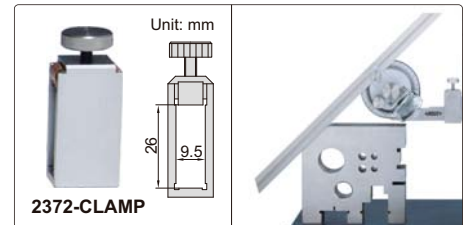
scriber (included)



driving wheel on the back



clamp for protractors (optional)

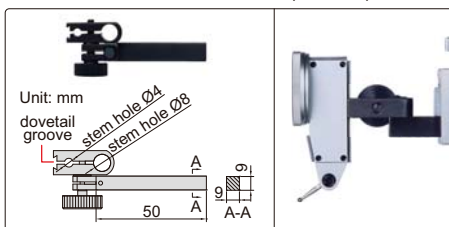


(mm)

Code	Range	Accuracy	L	a1	a2	b	c	ØD
1151-300A	0-300mm/0-12"	±0.04mm	475	135	43	84	33	15
1151-450A	0-450mm/0-18"	±0.05mm	660	180	54	88	38	20
1151-600A	0-600mm/0-24"	±0.05mm	810	180	54	88	38	20

DIAL HEIGHT GAGES

dial test indicator holder (included)

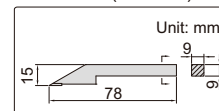


- Dial indicator graduation: 0.01mm
- One counter reads in the plus direction and another in the minus direction, so incremental measurement can be made in either direction
- Carbide tipped scriber
- Made of stainless steel (except the base)
- With driving wheel
- With dial test indicator holder
- Supplied with dust cover
- Optional accessory: clamp for protractors (code **2372-CLAMP**)

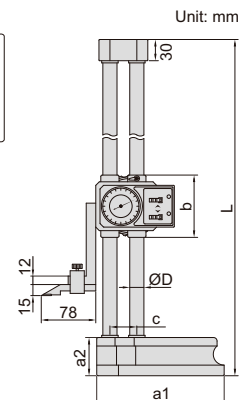


1351-300

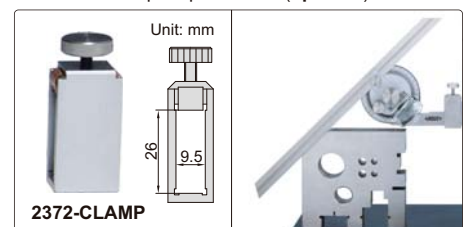
scriber (included)



driving wheel on the back



clamp for protractors (optional)



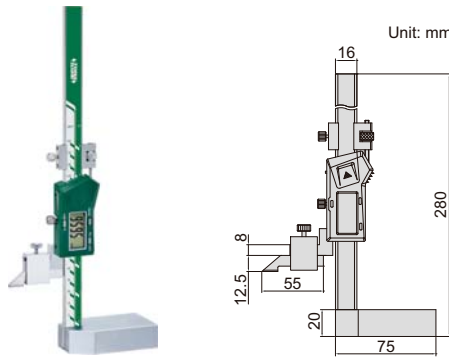
(mm)

Code	Range	Accuracy	L	a1	a2	b	c	ØD
1351-300	0-300mm	±0.04mm	475	135	43	84	33	15
1351-450	0-450mm	±0.05mm	660	180	54	88	38	20
1351-600	0-600mm	±0.05mm	810	180	54	88	38	20

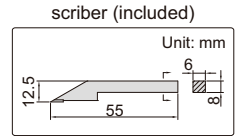
MINI DIGITAL HEIGHT GAGES

DATA OUTPUT

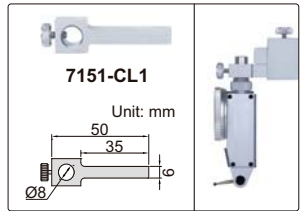
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- With fine adjustment
- Made of stainless steel
- Battery CR2032
- Optional accessory: dial test indicator holder (code 7151-CL1)



1154-150



dial test indicator holder (optional)



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

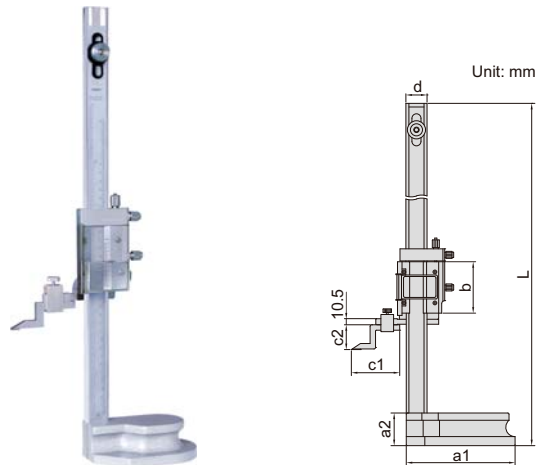
Code	Range	Accuracy
1154-150	0-150mm/0-6"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1154-150WL	0-150mm/0-6"	±0.03mm

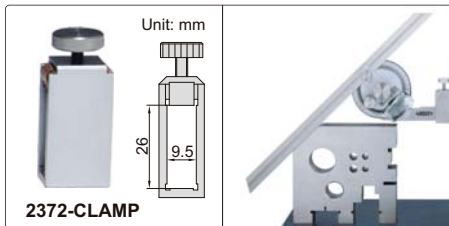
VERNIER HEIGHT GAGES

- Graduation: 0.02mm/0.001"
- Adjustable main scale to set zero
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Supplied with magnifier
- With fine adjustment
- Supplied with dust cover
- Optional accessory: dial test indicator holder (code 6293-6), clamp for protractors (code 2372-CLAMP)

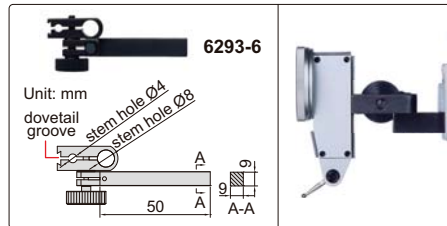


1250-300

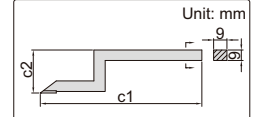
clamp for protractors (optional)



dial test indicator holder (optional)



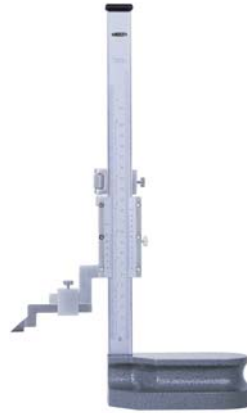
scriber (included)



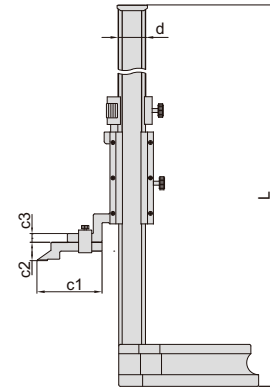
Code	Range	Accuracy	L	a1	a2	b	c1	c2	d
1250-300	0-300mm/0-12"	±0.04mm	545	135	43	75	80	30	28
1250-450	0-450mm/0-18"	±0.05mm	720	180	54	85	80	41	35
1250-600	0-600mm/0-24"	±0.05mm	870	180	54	85	80	41	35

VERNIER HEIGHT GAGES (BASIC TYPE)

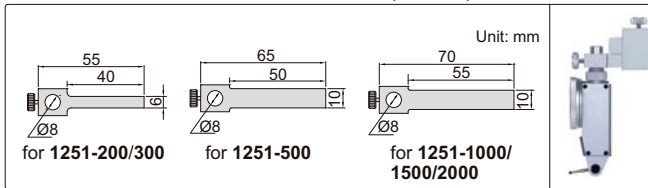
- Graduation: 0.02mm/0.001"
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- With dial test indicator holder
- Supplied with dust cover



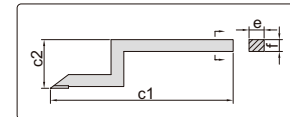
1251-200



dial test indicator holder (included)



scriber (included)

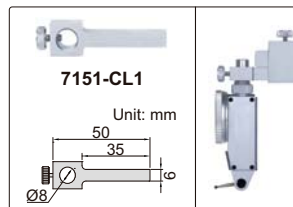


Code	Range	Accuracy	L	c1	c2	c3	d	e	f
1251-200	0-200mm/0-8"	±0.03mm	370	76	25	10	23	6	8
1251-300	0-300mm/0-12"	±0.04mm	470	76	25	10	23	6	8
1251-500	0-500mm/0-20"	±0.05mm	720	105	25	12	30	10	12
1251-1000	0-1000mm/0-40"	±0.07mm	1275	110	39	15	50	10	15
1251-1500	0-1500mm/0-60"	±0.11mm	1790	110	39	15	50	10	15
1251-2000	0-2000mm/0-80"	±0.14mm	2290	110	39	15	50	10	15

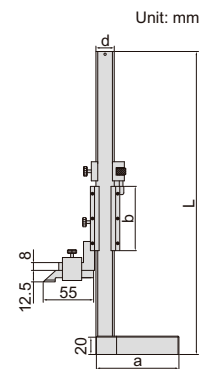
MINI VERNIER HEIGHT GAGES

- Graduation: 0.02mm/0.001"
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Optional accessory: dial test indicator holder (code 7151-CL1)

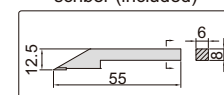
dial test indicator holder (optional)



1253-200



scriber (included)



Code	Range	Accuracy	L	a	b	d
1253-150	0-150mm/0-6"	±0.03mm	265	75	57	16
1253-200	0-200mm/0-8"	±0.03mm	325	90	70	20

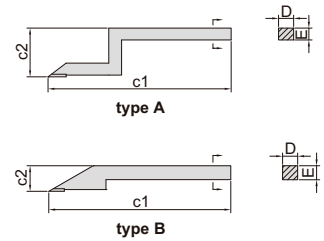
SCRIBERS FOR HEIGHT GAGES

- Carbide tipped



Code	For height gages	Type	c1	c2	D	E
7150-SC1	1150-300	A	76mm	25mm	6mm	8mm
7150-SC2	1150-500, 1150-600	A	103mm	25mm	10mm	12mm
7150-SC3	1150-1000, 1150-1500, 1150-2000	A	110mm	39mm	10mm	15mm
7150-SC4	1351-300, 1351-450, 1351-600, 1151-300A, 1151-450A, 1151-600A	B	78mm	15mm	9mm	9mm
7150-SC6	1250-300, 1156-300, 1156-600	A	80mm	30mm	9mm	9mm
7150-SC7	1250-450, 1250-600	A	80mm	41mm	9mm	9mm
7150-SC9	1253-150, 1253-200, 1154-150	B	55mm	12.5mm	6mm	8mm
7150-SC10	1156-1000	A	92mm	48mm	9mm	12mm

7150-SC1



CALIPER/HEIGHT GAGE CHECKERS

REFER TO PAGE 299 FOR DETAILS

horizontal use



vertical use



6884-300

MINI DIGITAL HEIGHT GAGES

DATA OUTPUT

- Non waterproof
- Measure height difference of two surfaces (1146-20B, 1146-20BWL suitable for surfaces with barrier, such as rivet)
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy
1146-20A	0~±20mm/0~±0.8"	±0.02mm
1146-20B	0~±20mm/0~±0.8"	±0.02mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

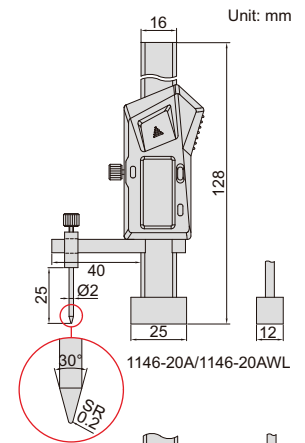
Code	Range	Accuracy
1146-20AWL	0~±20mm/0~±0.8"	±0.02mm
1146-20BWL	0~±20mm/0~±0.8"	±0.02mm



1146-20A

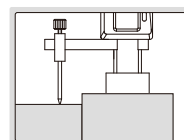


1146-20B

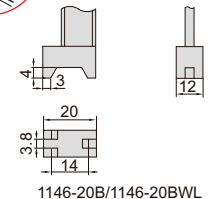
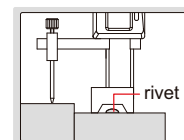


1146-20A/1146-20AWL

application of 1146-20A/1146-20AWL



application of 1146-20B/1146-20BWL



1146-20B/1146-20BWL



Carbon Fiber Comparison Gages
Page 89



Internal And External Diameter
Comparison Instruments
Page 90-91

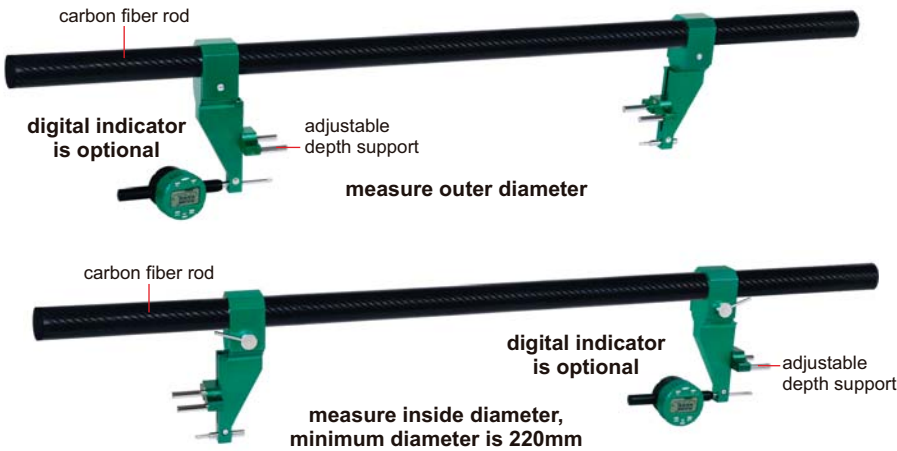


Outside Diameter Measuring Stands
Page 92

CARBON FIBER COMPARISON GAGES

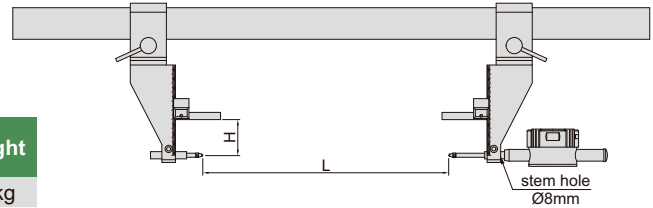
CARBON FIBER RODS, LIGHT WEIGHT, NOT EASY TO DEFORM, NO TEMPERATURE EXPAND, SUITABLE FOR THIN-WALL WORKPIECES AND LARGE-SIZE WORKPIECES

5

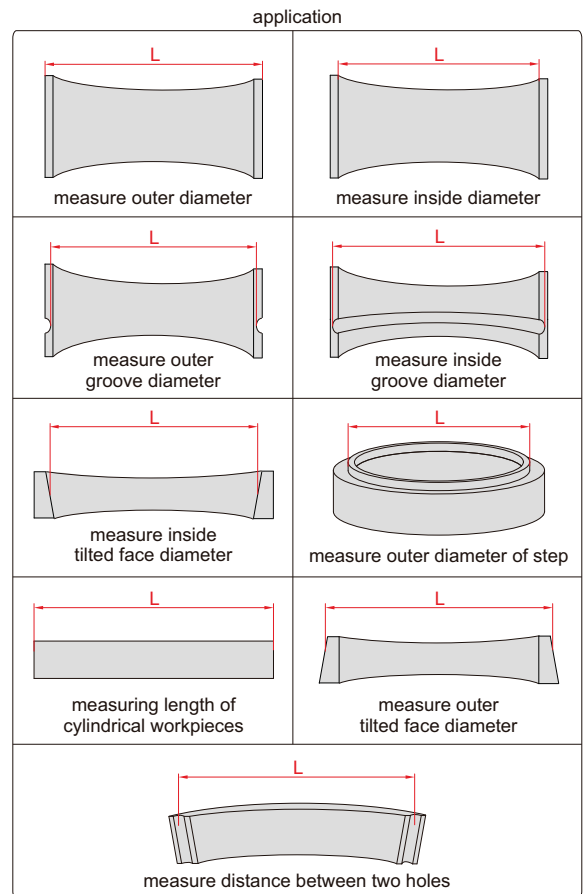


2931-D1000A

- Measure outer diameter, inside diameter, holes distance and cylindrical workpiece length
- Carbon fiber rods, light weight, not easy to deform, no temperature expand
- Optional accessory: cylinder gage blocks (code 4001), digital indicators (code 2138-25SP/2139-25SP/2103-25SP/2104-25SP)

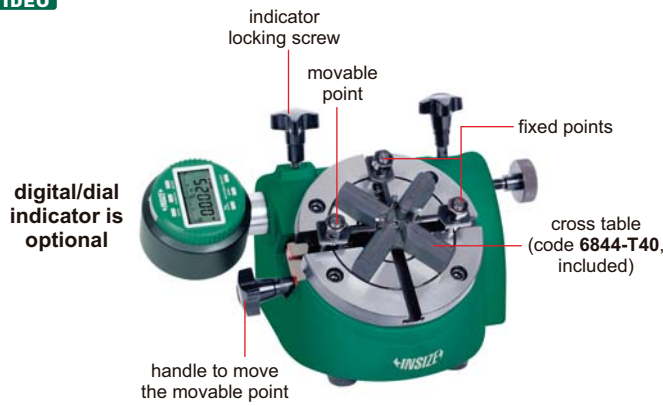


Code	Maximum measuring range (L)	Measuring depth (H)	Repeatability	Weight
2931-D1000A	1000mm	0-100mm	5µm	2.0kg
2931-D1000B	1000mm	0-200mm	10µm	2.3kg
2931-D1000C	1000mm	0-300mm	25µm	2.6kg
2931-D1500A	1500mm	0-100mm	8µm	2.3kg
2931-D1500B	1500mm	0-200mm	15µm	2.6kg
2931-D1500C	1500mm	0-300mm	30µm	2.9kg
2931-D2000A	2000mm	0-100mm	10µm	2.6kg
2931-D2000B	2000mm	0-200mm	20µm	2.9kg
2931-D2000C	2000mm	0-300mm	35µm	3.2kg
2931-D2500A	2500mm	0-100mm	12µm	2.9kg
2931-D2500B	2500mm	0-200mm	25µm	3.2kg
2931-D2500C	2500mm	0-300mm	50µm	3.5kg
2931-D3000A	3000mm	0-100mm	14µm	3.2kg
2931-D3000B	3000mm	0-200mm	30µm	3.5kg
2931-D3000C	3000mm	0-300mm	60µm	3.8kg
2931-D4000A	4000mm	0-100mm	16µm	3.8kg
2931-D4000B	4000mm	0-200mm	35µm	4.1kg
2931-D4000C	4000mm	0-300mm	65µm	4.4kg
2931-D5000A	5000mm	0-100mm	25µm	4.4kg
2931-D5000B	5000mm	0-200mm	40µm	4.7kg
2931-D5000C	5000mm	0-300mm	70µm	5.0kg
2931-D6000A	6000mm	0-100mm	28µm	8.4kg
2931-D6000B	6000mm	0-200mm	50µm	8.8kg
2931-D6000C	6000mm	0-300mm	80µm	9.2kg
2931-D7000A	7000mm	0-100mm	30µm	9.2kg
2931-D7000B	7000mm	0-200mm	55µm	9.6kg
2931-D7000C	7000mm	0-300mm	100µm	10kg
2931-D8000A	8000mm	0-100mm	32µm	10kg
2931-D8000B	8000mm	0-200mm	60µm	10.4kg
2931-D8000C	8000mm	0-300mm	110µm	10.8kg
2931-D9000A	9000mm	0-100mm	35µm	10.7kg
2931-D9000B	9000mm	0-200mm	70µm	11.1kg
2931-D9000C	9000mm	0-300mm	120µm	11.5kg

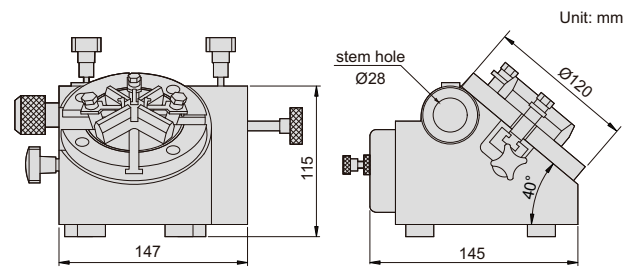




INTERNAL AND EXTERNAL DIAMETER COMPARISON INSTRUMENT

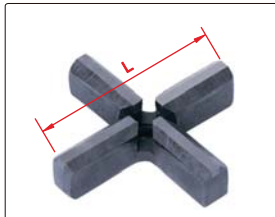


- Measure internal/external diameter, variation and taper
- Total range of movable point: 2mm, effective range of movable point: ± 0.1 mm
- Groove probes and disc probes are included
- Optional accessory: $\varnothing 28$ mm/ $\varnothing 8$ mm bush (code 6843-B8), cross table, 0.001mm digital/dial indicators, high precision digital indicators (code 2140-6, 2140-6WL)



Code	Applicable holding stem	Range of internal diameter	Range of external diameter	Accuracy	Repeatability
6844-100	$\varnothing 28$ mm	20-100mm/0.8-3.9"	15-80mm/0.6-3.1"	± 0.001 mm	0.001mm

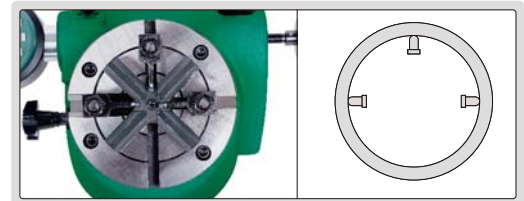
cross table (included, working with groove probes)



disc probes (included)



groove probes to measure small internal diameter and internal groove diameter



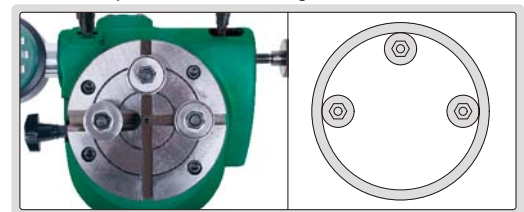
Cross table

Code	L	Remark
6844-T40	40mm	included
6844-T80	80mm	optional
6844-T100	100mm	optional

groove probe (included)



disc probes to measure large internal diameter



$\varnothing 28$ mm/ $\varnothing 8$ mm bush (optional)

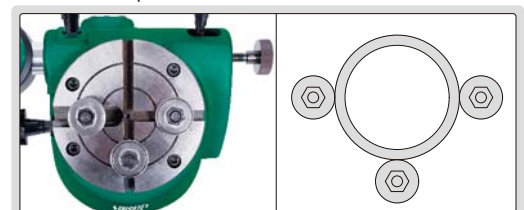


Code
6843-B8

application



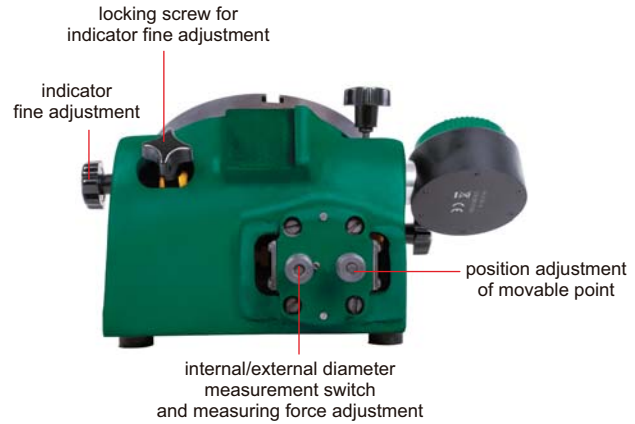
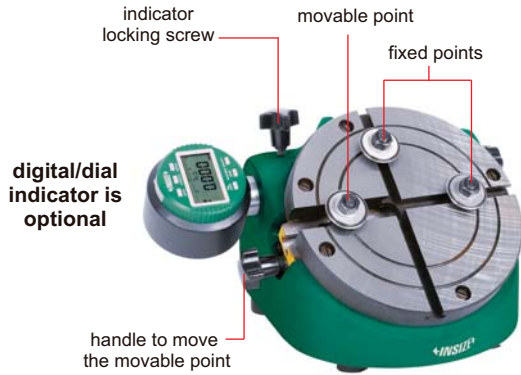
disc probes to measure external diameter



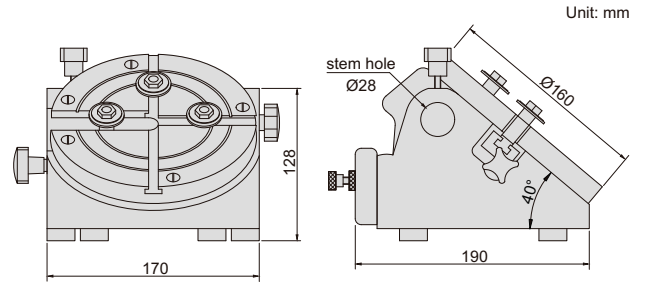
INTERNAL AND EXTERNAL DIAMETER COMPARISON INSTRUMENT



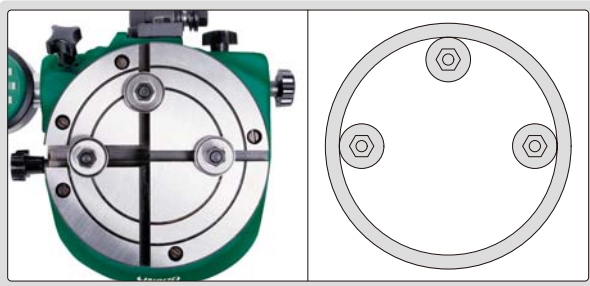
5



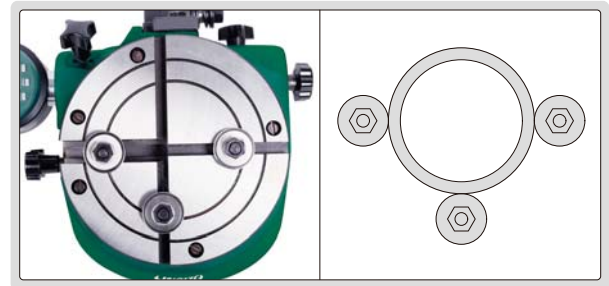
- Measure internal/external diameter, variation and taper
- Total range of movable point: 2mm, effective range of movable point: ±0.1mm
- Optional accessory: Ø28mm/Ø8mm bush (code 6843-B8), 0.001mm digital/dial indicators, high precision digital indicators (code 2140-6, 2140-6WL)



internal diameter measurement



external diameter measurement



Code	Applicable holding stem	Range of internal diameter	Range of external diameter	Accuracy	Repeatability
6843-140	Ø28mm	50-140mm/2-5.5"	30-120mm/1.2-4.7"	±0.001mm	0.001mm

Ø28mm/Ø8mm bush (optional)



Code
6843-B8

application





OUTSIDE DIAMETER MEASURING STAND

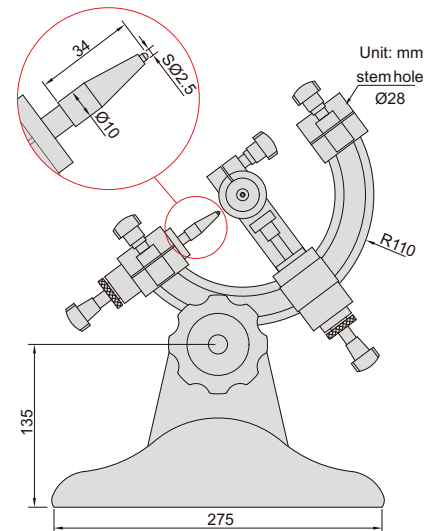
5



digital/dial indicator is optional

measuring base
(code **6847-A100**, included)

6847-50



Unit: mm
stem hole
Ø28

- To measure diameter and roundness of cylinders and steel balls
- Supplied with measuring base (code **6847-A100**)
- Optional accessory: Ø28mm/Ø8mm bush (code **6843-B8**), 0.001mm digital/dial indicators, high precision digital indicators (code **2140-6**, **2140-6WL**), gage blocks (**4101** series, for zero setting of cylinders), custom plug gages (for zero setting of cylinders), ceramic standard balls (**4190** series, for zero setting of steel balls)

Measuring base

Code	Diameter	Remark
6847-A10	10mm	optional
6847-A20	20mm	optional
6847-A30	30mm	optional
6847-A40	40mm	optional
6847-A50	50mm	optional
6847-A60	60mm	optional
6847-A70	70mm	optional
6847-A75	75mm	optional
6847-A80	80mm	optional
6847-A90	90mm	optional
6847-A100	100mm	included

Code	Range of outside diameter	Accuracy	Repeatability
6847-50	1.5-50mm/0.06-2"	±0.001mm	0.0005mm

Ø28mm/Ø8mm bush (optional)



Code
6843-B8

application



06

MICROMETERS



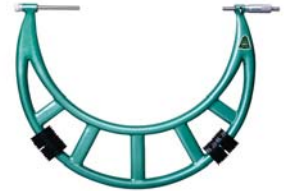
Digital Micrometers/Snap Gages
Page 95-97



Digital Micrometers
Page 98-102



Outside Micrometers
Page 103-107



Large Outside Micrometers
Page 108-109



Limit Micrometers
Page 110



Indicating Micrometers
Page 110



Micrometers With Dial Indicator
Page 110-112



Groove Micrometers
Page 113



3-wires
Page 113-114



Screw Thread Micrometers
Page 114-117



Gear Tooth Micrometers
Page 118-120



Point Micrometers
Page 121-122



Gear Root Diameter Micrometers
Page 123



Blade Micrometers
Page 124-126



Crimp Height Micrometers
Page 127



Spline Micrometers
Page 127-129



Tube Micrometers
Page 130-132



Disk Brake Micrometers
Page 133



Sheet Metal Micrometers
Page 133-134



Interchangeable Anvil Micrometers
Page 134-135



Large Anvil Micrometers
Page 135



V-anvil Micrometers
Page 136



Universal Micrometers
Page 137



Caliper Type Micrometers
Page 138




Jaw Type Micrometers
Page 139



Disk Micrometers
Page 140-142



Sheet Metal Micrometers
Page 143



Micrometers For Hot Plate
Page 143



Hub Micrometers
Page 143



Wire Micrometers
Page 144



Can Seam Micrometers
Page 144



Optical Parallels
Page 144



Micrometer Measuring Force Detectors
Page 145



Micrometer Inspection Gage Block Sets
Page 145



Micrometer Stands
Page 145-146



Micrometer Setting Standards
Page 147



Micrometer Lapping Machines
Page 148-149



Micrometer Heads
Page 149-152

DIGITAL MICROMETERS/SNAP GAGES

ONE TURN OF SLEEVE MAKES 10MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

IP65 WATERPROOF

DATA OUTPUT

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

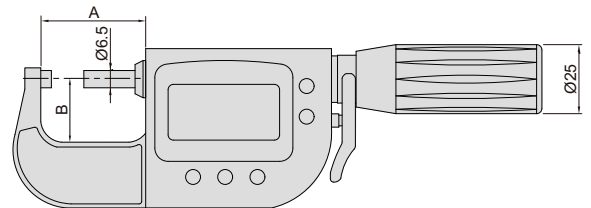
NON-ROTATING SPINDLE



6



3358-25

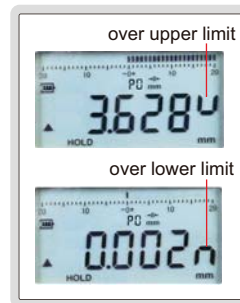


Unit: mm

- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.001mm/0.00005"
- One turn of sleeve makes 10mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Carbide spindle and anvil
- Measuring force 5-10N
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch
- Power: rechargeable battery, for 24 hours continuous working



warning when over tolerance



wireless receiver 2134-R1, 2134-R2 (optional)



With data interface

Optional accessory:

wireless transmitter, code 7315-3350 page 5

data output cable (keyboard format), code 7302-3350 page 13

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3358-25 *	0-25mm/0-1"	2µm	1µm	0.5µm	1.2µm	38mm	24mm

Built-in wireless

Optional accessory:

wireless receiver (keyboard format, connect up to 15 digital indicators), code 2134-R1

wireless receiver (serial port format, connect up to 15 digital indicators), code 2134-R2

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3358-25WL *	0-25mm/0-1"	2µm	1µm	0.5µm	1.2µm	38mm	24mm

* Supplied with manufacturer inspection certificate

HIGH PRECISION DIGITAL MICROMETERS/SNAP GAGES (ADVANCED TYPE)

ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

IP65 WATERPROOF

DATA OUTPUT

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

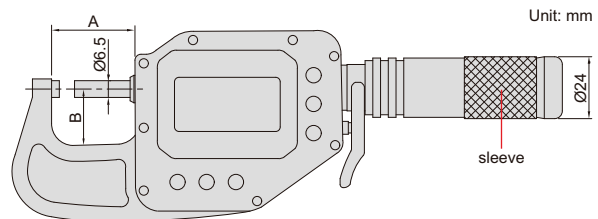
NON-ROTATING SPINDLE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF



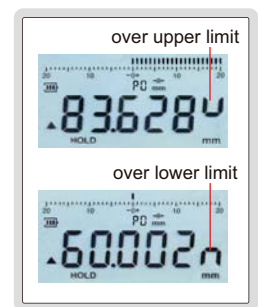
3350-25

- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
0.001mm/0.00005"
0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N
Customizable measuring force range 2-12N
Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gage blocks for zero setting (except 0-25mm/0-1")
- Power: rechargeable battery, for 24 hours continuous working



Unit: mm

warning when over tolerance



With data interface

Optional accessory:
wireless transmitter, code 7315-3350 page 5
data output cable (keyboard format), code 7302-3350 page 13

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3350-25 *	0-25mm/0-1"	1.4μm	0.6μm	0.5μm	1μm	38mm	24mm
3350-50 *	25-50mm/1-2"	1.6μm	1μm	0.5μm	1μm	63mm	28mm
3350-75 *	50-75mm/2-3"	1.8μm	1μm	0.5μm	1μm	88mm	45mm
3350-100 *	75-100mm/3-3.95"	2μm	1μm	0.5μm	1μm	113mm	57mm

Built-in wireless

Optional accessory:
wireless receiver (keyboard format, connect up to 15 digital indicators), code 2134-R1
wireless receiver (serial port format, connect up to 15 digital indicators), code 2134-R2

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3350-25WL *	0-25mm/0-1"	1.4μm	0.6μm	0.5μm	1μm	38mm	24mm
3350-50WL *	25-50mm/1-2"	1.6μm	1μm	0.5μm	1μm	63mm	28mm
3350-75WL *	50-75mm/2-3"	1.8μm	1μm	0.5μm	1μm	88mm	45mm
3350-100WL *	75-100mm/3-3.95"	2μm	1μm	0.5μm	1μm	113mm	57mm

wireless receiver 2134-R1, 2134-R2 (optional)



* Supplied with manufacturer inspection certificate

HIGH PRECISION DIGITAL MICROMETERS/SNAP GAGES

NON-ROTATING SPINDLE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

IP65 WATERPROOF

DATA OUTPUT



ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

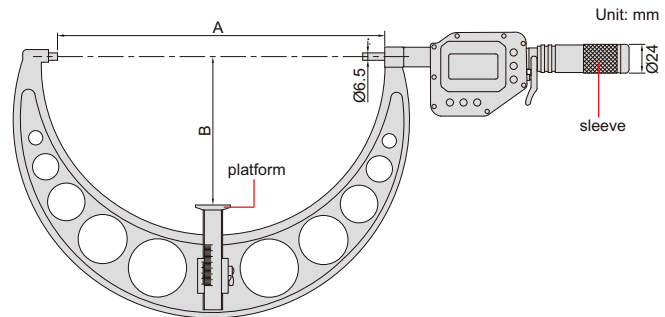
ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

setting standard (included)



- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001" (when the reading exceeds 100mm, the resolution is automatically switched to 0.001mm) 0.001mm/0.00005" 0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 5-8N
Customizable measuring force range 2-12N
Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with setting standards
- Power: rechargeable battery, for 24 hours continuous working



With data interface

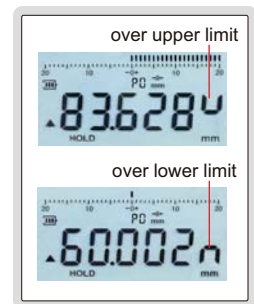
Optional accessory:

wireless transmitter, code 7315-3350 page 5

data output cable (keyboard format), code 7302-3350 page 13

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3351-125 *	100-125mm/4-5"	3µm	1µm	0.5µm	2µm	128mm	62.5mm
3351-150 *	125-150mm/5-6"	3µm	1µm	0.5µm	2µm	153mm	75mm
3351-175 *	150-175mm/6-7"	4µm	1µm	0.5µm	2.5µm	178mm	87.5mm
3351-200 *	175-200mm/7-8"	4µm	1µm	0.5µm	2.5µm	203mm	100mm
3351-225 *	200-225mm/8-9"	5µm	1µm	0.5µm	3µm	228mm	112.5mm
3351-250 *	225-250mm/9-10"	5µm	1µm	0.5µm	3µm	253mm	125mm
3351-275 *	250-275mm/10-11"	6µm	1µm	0.5µm	3.5µm	278mm	137.5mm
3351-300 *	275-300mm/11-12"	6µm	1µm	0.5µm	3.5µm	303mm	150mm

warning when over tolerance



Built-in wireless

Optional accessory:

wireless receiver (keyboard format, connect up to 15 digital indicators), code 2134-R1

wireless receiver (serial port format, connect up to 15 digital indicators), code 2134-R2

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3351-125WL *	100-125mm/4-5"	3µm	1µm	0.5µm	2µm	128mm	62.5mm
3351-150WL *	125-150mm/5-6"	3µm	1µm	0.5µm	2µm	153mm	75mm
3351-175WL *	150-175mm/6-7"	4µm	1µm	0.5µm	2.5µm	178mm	87.5mm
3351-200WL *	175-200mm/7-8"	4µm	1µm	0.5µm	2.5µm	203mm	100mm
3351-225WL *	200-225mm/8-9"	5µm	1µm	0.5µm	3µm	228mm	112.5mm
3351-250WL *	225-250mm/9-10"	5µm	1µm	0.5µm	3µm	253mm	125mm
3351-275WL *	250-275mm/10-11"	6µm	1µm	0.5µm	3.5µm	278mm	137.5mm
3351-300WL *	275-300mm/11-12"	6µm	1µm	0.5µm	3.5µm	303mm	150mm

wireless receiver 2134-R1, 2134-R2 (optional)



* Supplied with manufacturer inspection certificate

HIGH PRECISION NON-ROTATING SPINDLE DIGITAL MICROMETERS

INSIZE PLUS
MADE IN EUROPE

QUICK MEASUREMENT
ONE TURN OF SLEEVE OR RATCHET
STOP MAKES 2MM SPINDLE FEED

ATTENTION: SETTING
STANDARDS ARE NOT INCLUDED

IP65
WATERPROOF

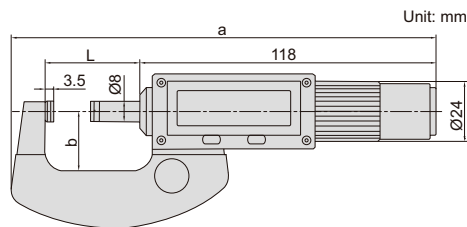
NON-ROTATING
SPINDLE

DATA
OUTPUT

STROKE
30mm



3661-30



- Resolution: 0.01mm/0.0005", 0.001mm/0.00005", 0.0005mm/0.00002"
- Repeatability: 0.5µm
- Measuring force: 5-10N
- Flatness of measuring faces: 0.3µm
- Parallelism of measuring faces: 0.5µm
- Ratchet stop
- Non-rotating spindle, suitable for cylinders
- Quick measurement: one turn of sleeve or ratchet stop makes 2mm spindle feed
- Carbide measuring faces
- Data output
- Button function: mm/inch, max./min. value tracking, preset value, hold, on/off, zero
- CR2032 battery
- Automatic power off, turn the sleeve to turn on
- Optional accessory: setting standards (code **7386**), data output cable (code **7315-80, 7302-80**)

(mm)

Code	Range	Accuracy		L	a	b
		stroke ≤25mm	stroke >25mm			
3661-30	0-30mm/0-1.18"	±2µm	±3µm	38	169	24
3661-55	25-55mm/0.98-2.17"	±2µm	±3µm	63	195	30.5
3661-80	50-80mm/1.97-3.15"	±3µm	±4µm	88	228	44
3661-105	75-105mm/2.95-4.13"	±3µm	±4µm	113	257	57
3661-130	100-130mm/3.94-5.12"	±3µm	±5µm	138	289	70
3661-155	125-155mm/4.92-6.1"	±3µm	±5µm	163	315	83
3661-180	150-180mm/5.91-7.09"	±4µm	±6µm	188	340	96
3661-205	175-205mm/6.89-8.07"	±4µm	±6µm	213	363	109
3661-230	200-230mm/7.87-9.06"	±4µm	±6µm	238	388	122
3661-255	225-255mm/8.86-10.04"	±4µm	±6µm	268	429	135
3661-280	250-280mm/9.84-11.02"	±5µm	±7µm	293	454	147.5
3661-305	275-305mm/10.83-12.01"	±5µm	±7µm	318	479	160

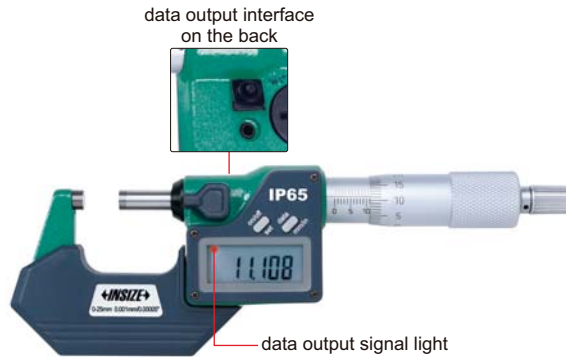
WATERPROOF DIGITAL OUTSIDE MICROMETERS (WITH DATA OUTPUT INTERFACE)

DATA
OUTPUT

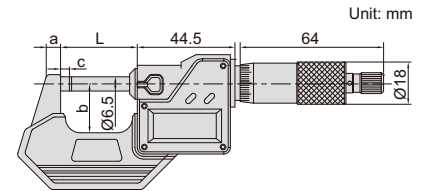
IP65
WATERPROOF

INSPECTION
CERTIFICATE

6



3101-25A



- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)

Metric/Inch type (ratchet stop)

(mm)

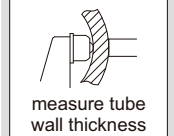
Code	Range	Resolution	Accuracy	L	a	b	c
3101-25A*	0-25mm/0-1"	0.001mm/0.00005"	±2µm	34.5	6	25	3
3101-50A*	25-50mm/1-2"	0.001mm/0.00005"	±2µm	59.5	8	32	3
3101-75A*	50-75mm/2-3"	0.001mm/0.00005"	±3µm	84.5	8	44.5	3
3101-100A*	75-100mm/3-4"	0.001mm/0.00005"	±3µm	109.5	8	57	3
3101-125A	100-125mm/4-5"	0.001mm/0.00005"	±3µm	135	10	70	3
3101-150A	125-150mm/5-6"	0.001mm/0.00005"	±3µm	160.5	10	82	3
3101-175A	150-175mm/6-7"	0.001mm/0.00005"	±4µm	186	12	94.5	5.5
3101-200A	175-200mm/7-8"	0.001mm/0.00005"	±4µm	211.5	12	107	5.5
3101-225A	200-225mm/8-9"	0.001mm/0.00005"	±4µm	236	23	129.5	5.5
3101-250A	225-250mm/9-10"	0.001mm/0.00005"	±4µm	261.5	23	142.5	5.5
3101-275A	250-275mm/10-11"	0.001mm/0.0001"	±5µm	287	23	155	5.5
3101-300A	275-300mm/11-12"	0.001mm/0.0001"	±5µm	312.5	23	167.5	5.5



Metric/Inch type (friction thimble)

(mm)

Code	Range	Resolution	Accuracy	L	a	b	c
3101-25FA*	0-25mm/0-1"	0.001mm/0.00005"	±2µm	34.5	6	25	3



Metric type (ratchet stop)

(mm)

Code	Range	Resolution	Accuracy	L	a	b	c
3101-25AJ*	0-25mm	0.001mm	±2µm	34.5	6	25	3
3101-50AJ*	25-50mm	0.001mm	±2µm	59.5	8	32	3
3101-75AJ*	50-75mm	0.001mm	±3µm	84.5	8	44.5	3
3101-100AJ*	75-100mm	0.001mm	±3µm	109.5	8	57	3

Set (ratchet stop type)

Code	Range	Micrometers included	Packaging
3101-753A*	0-75mm/0-3"	3101-25A, 3101-50A, 3101-75A	blow mould case
3101-1004A*	0-100mm/0-4"	3101-25A, 3101-50A, 3101-75A, 3101-100A	blow mould case
3101-1506A	0-150mm/0-6"	3101-25A, 3101-50A, 3101-75A, 3101-100A, 3101-125A, 3101-150A	aluminum box



3101-753A

3101-1506A

*Supplied with manufacturer inspection certificate

IP65
WATERPROOF

WATERPROOF DIGITAL OUTSIDE MICROMETERS (WITHOUT DATA OUTPUT)

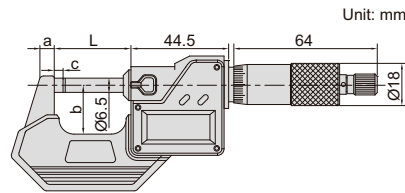
ATTENTION: NO
DATA OUTPUT

**INSPECTION
CERTIFICATE**



3108-25A

- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- No data output
- Automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")



Ratchet stop type (mm)

Code	Range	Accuracy	L	a	b	c
3108-25A*	0-25mm/0-1"	±2µm	34.5	6	25	3
3108-50A*	25-50mm/1-2"	±2µm	59.5	8	32	3
3108-75A*	50-75mm/2-3"	±3µm	84.5	8	44.5	3
3108-100A*	75-100mm/3-4"	±3µm	109.5	8	57	3
3108-125A	100-125mm/4-5"	±3µm	135	10	70	3
3108-150A	125-150mm/5-6"	±3µm	160.5	10	82	3
3108-175A	150-175mm/6-7"	±4µm	186	12	94.5	5.5
3108-200A	175-200mm/7-8"	±4µm	211.5	12	107	5.5



Friction thimble type (mm)

Code	Range	Accuracy	L	a	b	c
3108-25FA*	0-25mm/0-1"	±2µm	34.5	6	25	3



3108-753A



3108-1506A

Set

Code	Range	Micrometers included	Packaging
3108-753A*	0-75mm/0-3"	3108-25A, 3108-50A, 3108-75A	blow mould case
3108-1004A*	0-100mm/0-4"	3108-25A, 3108-50A, 3108-75A, 3108-100A	blow mould case
3108-1506A	0-150mm/0-6"	3108-25A, 3108-50A, 3108-75A, 3108-100A, 3108-125A, 3108-150A	aluminum box

*Supplied with manufacturer inspection certificate

DIGITAL OUTSIDE MICROMETERS (BASIC TYPE, WITH DATA OUTPUT)



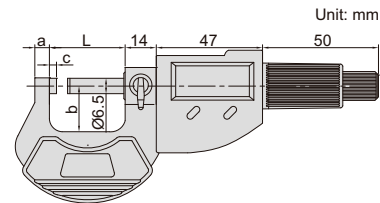
DATA
OUTPUT

6

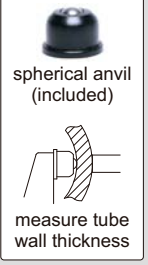


3102-25

- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, data transmit
- Automatic power off
- Carbide measuring faces
- Friction thimble
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-30 page 4, 7302-30 page 12)



Individual Code	Range	Accuracy	L	a	b	c	(mm)
3102-25 *	0-25mm/0-1"	±2µm	32	6	24	3	
3102-50 *	25-50mm/1-2"	±2µm	57	8	32	3	
3102-75 *	50-75mm/2-3"	±3µm	82	8	45	3	
3102-100 *	75-100mm/3-4"	±3µm	107	10	57	3	
3102-125	100-125mm/4-5"	±3µm	133	10	70	3	
3102-150	125-150mm/5-6"	±3µm	158	10	82	3	
3102-175	150-175mm/6-7"	±4µm	183	12	95	5.5	
3102-200	175-200mm/7-8"	±4µm	209	12	107	5.5	



3102-753A



3102-1506A

Set

Code	Range	Micrometers included	Packaging
3102-753A *	0-75mm/0-3"	3102-25, 3102-50, 3102-75	blow mould case
3102-1004A *	0-100mm/0-4"	3102-25, 3102-50, 3102-75, 3102-100	blow mould case
3102-1506A	0-150mm/0-6"	3102-25, 3102-50, 3102-75, 3102-100, 3102-125, 3102-150	aluminum box

* Supplied with manufacturer inspection certificate

ATTENTION: NO DATA OUTPUT

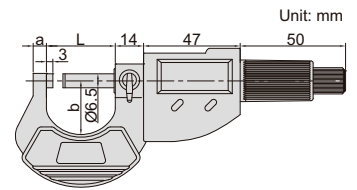
DIGITAL OUTSIDE MICROMETERS (BASIC TYPE, WITHOUT DATA OUTPUT)



- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC
- No data output
- Automatic power off
- Carbide measuring faces
- Friction thimble
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")



3109-25A

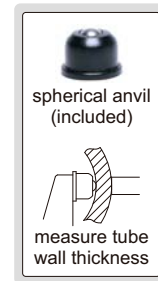


Individual

Code	Range	Accuracy	L	a	b
3109-25A*	0-25mm/0-1"	±2µm	32mm	6mm	27.5mm
3109-50A*	25-50mm/1-2"	±2µm	57mm	8mm	37mm
3109-75A*	50-75mm/2-3"	±3µm	82mm	8mm	50mm
3109-100A*	75-100mm/3-4"	±3µm	107mm	10mm	61mm
3109-125A	100-125mm/4-5"	±3µm	132mm	10mm	73mm
3109-150A	125-150mm/5-6"	±3µm	157mm	10mm	85mm
3109-175A	150-175mm/6-7"	±4µm	182mm	21mm	104mm
3109-200A	175-200mm/7-8"	±4µm	207mm	21mm	117mm

Set

Code	Range	Micrometers included	Packaging
3109-753A*	0-75mm/0-3"	3109-25A, 3109-50A, 3109-75A	blow mould case
3109-1004A*	0-100mm/0-4"	3109-25A, 3109-50A, 3109-75A, 3109-100A	blow mould case
3109-1506A	0-150mm/0-6"	3109-25A, 3109-50A, 3109-75A, 3109-100A, 3109-125A, 3109-150A	aluminum box



3109-753A



3109-1506A

*Supplied with manufacturer inspection certificate

DATA OUTPUT

IP65 WATERPROOF

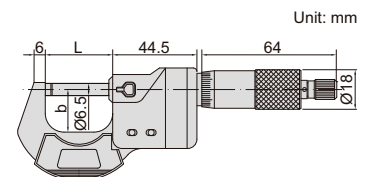


DIGITAL VERTICAL MICROMETERS

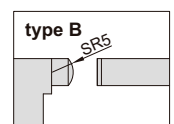
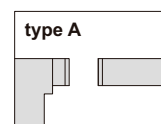
- Measure the thickness of plates for easy reading
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- Data output
- Automatic power off
- Carbide spindle tip
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-30 page 4, 7302-30 page 12)



3565-25A



Code	Range	Type	Accuracy	L	b
3565-25A*	0-25mm/0-1"	A	±2µm	34.5mm	25mm
3565-50A*	25-50mm/1-2"	A	±2µm	59.5mm	32mm
3565-25BA*	0-25mm/0-1"	B	±2µm	34.5mm	25mm
3565-50BA*	25-50mm/1-2"	B	±2µm	59.5mm	32mm



*Supplied with manufacturer inspection certificate

OUTSIDE MICROMETERS

INSIZE PLUS
MADE IN EUROPE

- Carbide measuring faces
- Graduation: 0.01mm
- Meet DIN863-1
- Friction thimble
- Optional accessory: setting standards (code 7386)

**INSPECTION
CERTIFICATE**

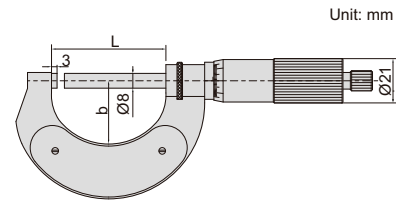
ATTENTION: SETTING
STANDARDS ARE NOT INCLUDED



3701-25A

Code	Range	Accuracy	L	b
3701-25A *	0-25mm	4μm	37mm	24mm
3701-50A *	25-50mm	4μm	62mm	34mm
3701-75A *	50-75mm	5μm	87mm	46mm
3701-100A *	75-100mm	5μm	112mm	60mm
3701-125A *	100-125mm	6μm	139mm	72mm
3701-150A *	125-150mm	6μm	164mm	85mm
3701-175A *	150-175mm	7μm	190mm	97mm
3701-200A *	175-200mm	7μm	215mm	110mm
3701-225A *	200-225mm	8μm	240mm	122mm
3701-250A *	225-250mm	8μm	264mm	135mm
3701-275A *	250-275mm	9μm	290mm	148mm
3701-300A *	275-300mm	9μm	315mm	160mm

*Supplied with manufacturer inspection certificate



OUTSIDE MICROMETERS WITH 50mm RANGE

INSIZE PLUS
MADE IN EUROPE

- Graduation 0.01mm
- Ratchet stop
- One turn of sleeve makes 1mm spindle feed
- Carbide measuring faces
- Optional accessory: setting standards (code 7386)

ATTENTION: SETTING
STANDARDS ARE NOT INCLUDED

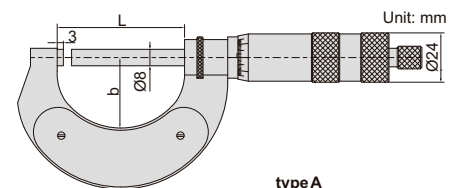
LIGHT
WEIGHT



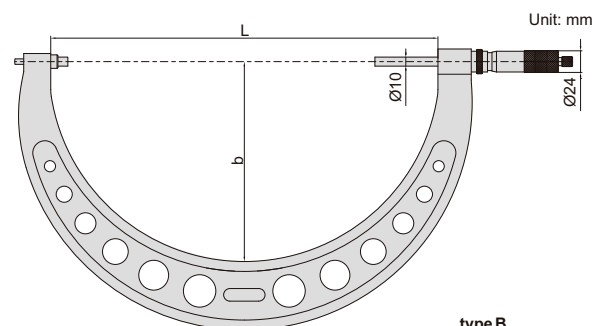
3682-50

Code	Range	Type	Accuracy	L	b	Weight
3682-50	0-50mm	A	4μm	62	34	0.46kg
3682-100	50-100mm	A	5μm	112	60	0.62kg
3682-150	100-150mm	A	6μm	164	85	0.78kg
3682-200	150-200mm	A	7μm	215	110	1.03kg
3682-250	200-250mm	A	8μm	264	135	1.25kg
3682-300	250-300mm	A	9μm	315	160	1.45kg
3682-350	300-350mm	B	10μm	370	190	1.50kg
3682-400	350-400mm	B	11μm	430	220	1.80kg
3682-450	400-450mm	B	12μm	475	250	2.15kg
3682-500	450-500mm	B	13μm	530	273	2.30kg
3682-550	500-550mm	B	14μm	570	291	2.40kg
3682-600	550-600mm	B	14μm	630	323	3.00kg
3682-650	600-650mm	B	16μm	675	351	3.30kg
3682-700	650-700mm	B	16μm	730	378	3.70kg
3682-750	700-750mm	B	18μm	785	401	3.90kg
3682-800	750-800mm	B	18μm	830	423	4.10kg
3682-850	800-850mm	B	20μm	885	440	4.30kg
3682-900	850-900mm	B	20μm	930	473	4.90kg
3682-950	900-950mm	B	22μm	980	503	5.80kg
3682-1000	950-1000mm	B	22μm	1030	520	6.10kg

(mm)



type A



type B

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

OUTSIDE MICROMETERS (GRADUATION 0.005mm)

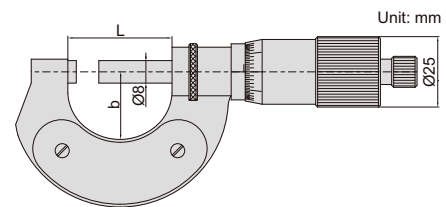
INSIZE PLUS
MADE IN EUROPE

- Graduation 0.005mm
- Friction thimble
- One turn of sleeve makes 0.5mm spindle feed
- Carbide measuring faces
- Optional accessory: setting standards (code 7386)



3681-25

Code	Range	Accuracy	L	b	(mm)
3681-25	0-25mm	4μm	37	24	
3681-50	25-50mm	4μm	62	34	
3681-75	50-75mm	5μm	87	46	
3681-100	75-100mm	5μm	112	60	
3681-125	100-125mm	6μm	139	72	
3681-150	125-150mm	6μm	164	85	
3681-175	150-175mm	7μm	190	97	
3681-200	175-200mm	7μm	215	110	
3681-225	200-225mm	8μm	240	122	
3681-250	225-250mm	8μm	264	135	
3681-275	250-275mm	9μm	290	148	
3681-300	275-300mm	9μm	315	160	



INSPECTION CERTIFICATE

- Graduation 0.01mm
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)

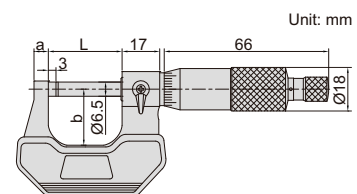
OUTSIDE MICROMETERS

Individual

Code	Range	Accuracy	L	a	b
3202-25A *	0-25mm	4μm	32mm	6mm	24mm
3202-50A *	25-50mm	4μm	57mm	8mm	32mm
3202-75A *	50-75mm	5μm	82mm	8mm	45mm
3202-100A *	75-100mm	5μm	107mm	8mm	57mm
3202-125A	100-125mm	6μm	133mm	8mm	70mm
3202-150A	125-150mm	6μm	125mm	8mm	82mm
3202-175A	150-175mm	7μm	183mm	8mm	95mm
3202-200A	175-200mm	7μm	209mm	8mm	107mm



3202-25A



Set

Code	Range	Micrometers included
3202-753A *	0-75mm	3202-25A, 3202-50A, 3202-75A
3202-1004A *	0-100mm	3202-25A, 3202-50A, 3202-75A, 3202-100A
3202-1506A	0-150mm	3202-25A, 3202-50A, 3202-75A, 3202-100A, 3202-125A, 3202-150A

* Supplied with manufacturer inspection certificate

OUTSIDE MICROMETERS



6



3203-25A



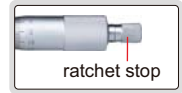
3203-50A



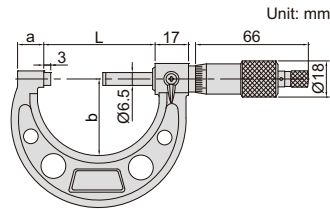
3203-1004A



3203-3006A



- Graduation: metric 0.01mm
inch 0.0001"
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm and 0-1")



Metric (ratchet stop type)

Code	Range	Accuracy	L	a	b
3203-25A*	0-25mm	±2µm	32mm	9mm	28mm
3203-50A*	25-50mm	±2µm	57mm	14mm	38mm
3203-75A*	50-75mm	±2µm	82mm	15mm	49mm
3203-100A*	75-100mm	±3µm	107mm	15mm	60mm
3203-125A	100-125mm	±3µm	133mm	16.5mm	73mm
3203-150A	125-150mm	±3µm	158mm	16.5mm	85mm
3203-175A	150-175mm	±4µm	183mm	19.4mm	104mm
3203-200A	175-200mm	±4µm	209mm	19.4mm	117mm
3203-225A	200-225mm	±4µm	234mm	19.4mm	130mm
3203-250A	225-250mm	±5µm	260mm	19.4mm	142mm
3203-275A	250-275mm	±5µm	285mm	19.4mm	155mm
3203-300A	275-300mm	±5µm	310mm	19.4mm	168mm

Inch (ratchet stop type)

Code	Range	Accuracy	L	a	b
3203-1A*	0-1"	±0.0001"	1.260"	0.354"	1.102"
3203-2A*	1-2"	±0.0001"	2.244"	0.551"	1.496"
3203-3A*	2-3"	±0.0001"	3.228"	0.591"	1.929"
3203-4A*	3-4"	±0.00015"	4.213"	0.591"	2.362"
3203-5A*	4-5"	±0.00015"	5.236"	0.650"	2.874"
3203-6A*	5-6"	±0.00015"	6.220"	0.650"	3.346"
3203-7A	6-7"	±0.0002"	7.205"	0.764"	4.094"
3203-8A	7-8"	±0.0002"	8.228"	0.764"	4.606"
3203-9A	8-9"	±0.0002"	9.213"	0.764"	5.118"
3203-10A	9-10"	±0.00025"	10.236"	0.764"	5.591"
3203-11A	10-11"	±0.00025"	11.220"	0.764"	6.102"
3203-12A	11-12"	±0.00025"	12.205"	0.764"	6.614"

Metric micrometer set (ratchet stop type)

Code	Range	Micrometers Included	Packaging
3203-753A*	0-75mm	3203-25A, 3203-50A, 3203-75A	blow mould case
3203-1004A*	0-100mm	3203-25A, 3203-50A, 3203-75A, 3203-100A	blow mould case
3203-1506A	0-150mm	3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A	blow mould case
3203-3006A	150-300mm	3203-175A, 3203-200A, 3203-225A, 3203-250A, 3203-275A, 3203-300A	aluminum box
3203-3012A	0-300mm	3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A, 3203-175A, 3203-200A, 3203-225A, 3203-250A, 3203-275A, 3203-300A	aluminum box

Inch micrometer set (ratchet stop type)

Code	Range	Micrometers included	Packaging
3203-33A*	0-3"	3203-1A, 3203-2A, 3203-3A	blow mould case
3203-44A*	0-4"	3203-1A, 3203-2A, 3203-3A, 3203-4A	blow mould case
3203-66A*	0-6"	3203-1A, 3203-2A, 3203-3A, 3203-4A, 3203-5A, 3203-6A	blow mould case
3203-126A	6-12"	3203-7A, 3203-8A, 3203-9A, 3203-10A, 3203-11A, 3203-12A	aluminum box
3203-1212A	0-12"	3203-1A, 3203-2A, 3203-3A, 3203-4A, 3203-5A, 3203-6A, 3203-7A, 3203-8A, 3203-9A, 3203-10A, 3203-11A, 3203-12A	aluminum box

Inch (friction thimble type)

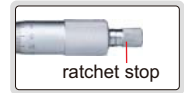
Code	Range	Accuracy	L	a	b
3203-1FA*	0-1"	±0.0001"	1.260"	0.354"	1.102"
3203-2FA*	1-2"	±0.0001"	2.244"	0.551"	1.496"
3203-3FA*	2-3"	±0.0001"	2.244"	0.591"	1.929"

*Supplied with manufacturer inspection certificate

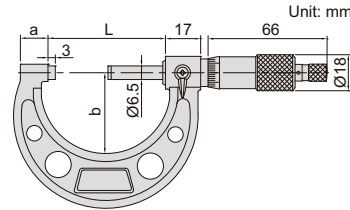


- Graduation 0.001mm
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)

1µm GRADUATION OUTSIDE MICROMETERS



3210-25A



Ratchet stop type (mm)

Code	Range	Accuracy	L	a	b
3210-25A*	0-25mm	4µm	32	9	28
3210-50A*	25-50mm	4µm	57	14	38
3210-75A*	50-75mm	5µm	82	15	49
3210-100A*	75-100mm	5µm	107	15	60
3210-125A	100-125mm	6µm	133	16.5	73
3210-150A	125-150mm	6µm	158	16.5	85
3210-175A	150-175mm	7µm	183	19.4	104
3210-200A	175-200mm	7µm	209	19.4	117

Friction thimble type (mm)

Code	Range	Accuracy	L	a	b
3210-25FA*	0-25mm	4µm	32	9	28
3210-50FA*	25-50mm	4µm	57	14	38

Micrometer set (ratchet stop type)

Code	Range	Micrometers included
3210-753A*	0-75mm	3210-25A, 3210-50A, 3210-75A
3210-1004A*	0-100mm	3210-25A, 3210-50A, 3210-75A, 3210-100A
3210-1506A	0-150mm	3210-25A, 3210-50A, 3210-75A, 3210-100A, 3210-125A, 3210-150A

*Supplied with manufacturer inspection certificate



OUTSIDE MICROMETERS WITH COUNTER

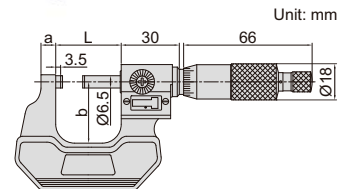
- Counter resolution: 0.01mm
- Thimble graduation: 0.01mm
- Carbide measuring faces
- Meet DIN863-1
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

Code	Range	Accuracy	L	a	b
3400-25*	0-25mm	4µm	32mm	6mm	26mm
3400-50*	25-50mm	4µm	57mm	8mm	32mm
3400-75*	50-75mm	5µm	82mm	8mm	44.5mm
3400-100*	75-100mm	5µm	107mm	8mm	57mm

*Supplied with manufacturer inspection certificate



3400-25



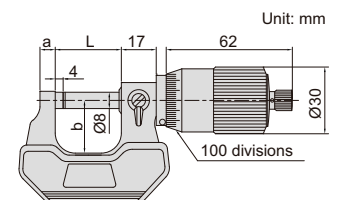
QUICK FEEDING OUTSIDE MICROMETERS

- Graduation 0.01mm
- 1mm feeding of each turn
- Friction thimble
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)

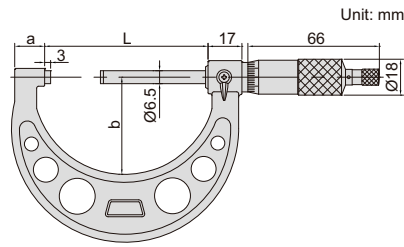
Code	Range	Accuracy	L	a	b
3208-25B	0-25mm	4µm	32mm	6mm	24mm
3208-50B	25-50mm	4µm	57mm	8mm	32mm
3208-75B	50-75mm	5µm	82mm	8mm	45mm
3208-100B	75-100mm	5µm	107mm	8mm	57mm
3208-125B	100-125mm	6µm	133mm	8mm	70mm
3208-150B	125-150mm	6µm	158mm	8mm	82mm
3208-175B	150-175mm	7µm	183mm	8mm	95mm
3208-200B	175-200mm	7µm	209mm	8mm	107mm



3208-25B



LONG SPINDLE OUTSIDE MICROMETERS

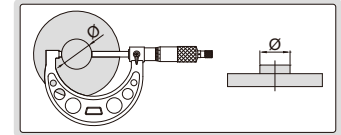
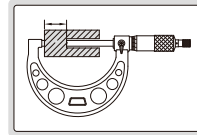


- Graduation 0.01mm
- Carbide measuring faces
- Meet DIN863-1
- Ratchet stop
- Supplied with setting standards (except 0-25mm)



3209-25

Code	Range	Accuracy	L	a	b
3209-25	0-25mm	4µm	57mm	14mm	38mm
3209-50	25-50mm	4µm	82mm	15mm	49mm
3209-75	50-75mm	5µm	107mm	15mm	60mm
3209-100	75-100mm	5µm	133mm	16.5mm	73mm



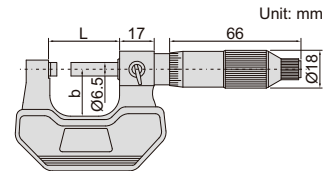
NON MAGNETIC MICROMETERS

- Suitable for magnetic materials
- Graduation: 0.01mm
- Non magnetic carbide measuring faces
- Ratchet stop



3231-25A

Code	Range	Accuracy	L	b
3231-25A	0-25mm	4µm	32mm	24mm
3231-50A	25-50mm	4µm	57mm	32mm
3231-75A	50-75mm	5µm	82mm	45mm
3231-100A	75-100mm	5µm	105mm	57mm



OUTSIDE MICROMETERS FOR LEFT OR RIGHT HANDERS

- Graduation 0.01mm
- Graduations on two sides
- Ratchet stop
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)



front

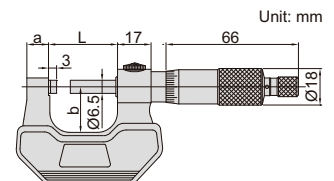


back

Code	Range	Accuracy	L	a	b
3236-25B	0-25mm	4µm	32	6	24
3236-50B	25-50mm	4µm	57	8	32
3236-75B	50-75mm	5µm	82	8	45
3236-100B	75-100mm	5µm	107	8	57
3236-125B	100-125mm	6µm	133	8	70
3236-150B	125-150mm	6µm	158	8	82
3236-175B	150-175mm	7µm	183	8	95
3236-200B	175-200mm	7µm	209	8	107

(mm)

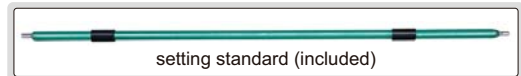
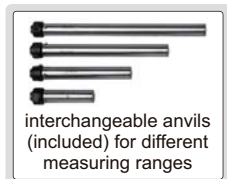
3236-25B



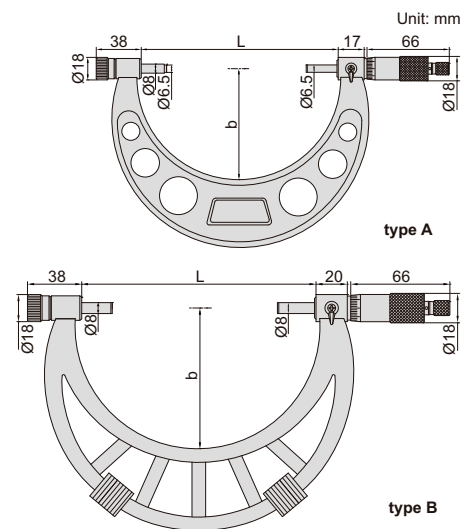
OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS



- Graduation 0.01mm
- Ratchet stop
- Meet DIN863-3
- Carbide measuring faces
- Supplied with setting standards



Code	Range	Type	Accuracy	L	b	Setting standard (included)
3206-50A	0-50mm	A	4µm	58	35	25
3206-100A	0-100mm	A	5µm	108	57	25, 50, 75
3206-150A	0-150mm	A	6µm	158	82	25, 50, 75, 100, 125
3206-151A	50-150mm	A	6µm	158	82	50, 75, 100, 125
3206-200A	100-200mm	A	7µm	208	114	100, 125, 150, 175
3206-300A	150-300mm	A	9µm	308	165	150, 175, 200, 225, 250, 275
3206-301A	200-300mm	A	9µm	308	165	200, 225, 250, 275
3206-400	300-400mm	B	11µm	409	224	325, 375
3206-500	400-500mm	B	13µm	509	275	425, 475
3206-600	500-600mm	B	14µm	609	321	525, 575
3206-700	600-700mm	B	16µm	709	371	625, 675
3206-800	700-800mm	B	18µm	809	426	725, 775
3206-900	800-900mm	B	20µm	909	476	825, 875
3206-1000	900-1000mm	B	22µm	1009	576	925, 975

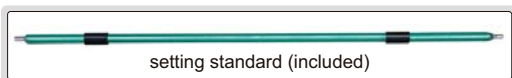
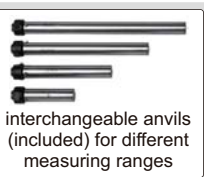
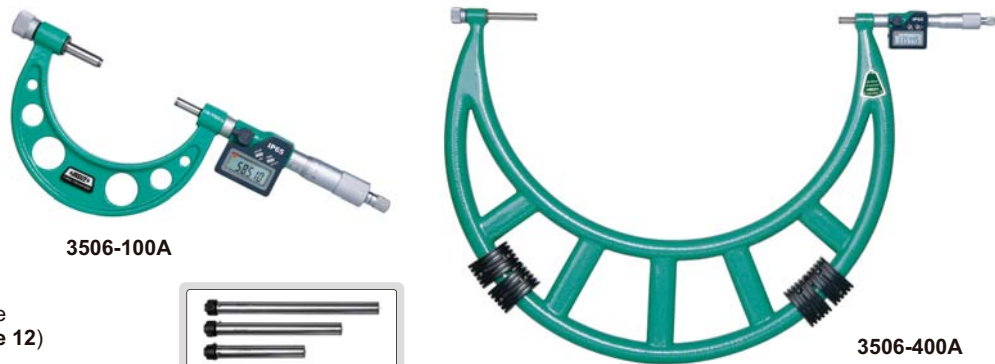


IP65
WATERPROOF

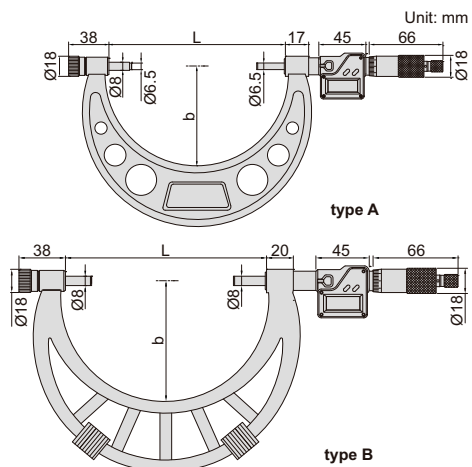
DATA
OUTPUT

DIGITAL OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

- Resolution 0.001mm/0.0001" (resolution of 3506-100A and 3506-150A is 0.001mm/0.0005")
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)



Code	Range	Type	Accuracy	L	b	Setting standard (included)
3506-100A	0-100mm/0-4"	A	±5µm	105	57	25, 50, 75
3506-150A	0-150mm/0-6"	A	±6µm	155	82	25, 50, 75, 100, 125
3506-300A	150-300mm/6-12"	A	±8µm	305	165	150, 175, 200, 225, 250, 275
3506-301A	200-300mm/8-12"	A	±8µm	305	165	200, 225, 250, 275
3506-400A	300-400mm/12-16"	B	±9µm	405	224	325, 375
3506-500A	400-500mm/16-20"	B	±11µm	505	275	425, 475
3506-600A	500-600mm/20-24"	B	±12µm	605	321	525, 575
3506-700A	600-700mm/24-28"	B	±13µm	705	371	625, 675
3506-800A	700-800mm/28-32"	B	±15µm	805	426	725, 775
3506-900A	800-900mm/32-36"	B	±16µm	905	476	825, 875
3506-1000A	900-1000mm/36-40"	B	±17µm	1005	576	925, 975



OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

INSIZE PLUS
MADE IN EUROPE

ATTENTION: SETTING
STANDARDS ARE NOT INCLUDED

LIGHT
WEIGHT

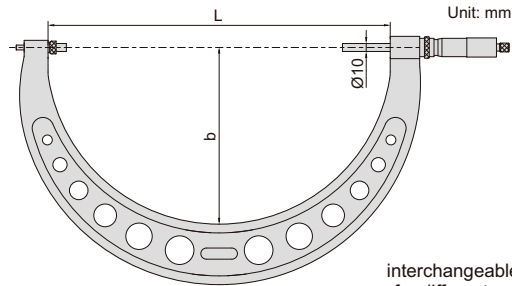
QUICK MEASUREMENT
ONE TURN OF SLEEVE OR RATCHET
STOP MAKES 1MM SPINDLE FEED

(mm)

Code	Range	Accuracy	L	b	Weight
3675-200	100-200mm	6µm	240	122	1.2kg
3675-300	200-300mm	6µm	325	165	1.5kg
3675-400	300-400mm	7µm	430	220	1.9kg
3675-500	400-500mm	8µm	530	273	2.4kg
3675-600	500-600mm	9µm	630	323	3.1kg
3675-700	600-700mm	9µm	730	378	3.8kg
3675-800	700-800mm	9µm	830	423	4.2kg
3675-900	800-900mm	10µm	930	473	5kg
3675-1000	900-1000mm	10µm	1030	520	6.2kg
3675-1100	1000-1100mm	11µm	1135	585	7.6kg
3675-1200	1100-1200mm	11µm	1230	635	8.6kg
3675-1300	1200-1300mm	12µm	1335	685	9.7kg
3675-1400	1300-1400mm	12µm	1430	735	11.3kg
3675-1500	1400-1500mm	13µm	1530	780	12.5kg
3675-1600	1500-1600mm	18µm	1660	840	13.6kg
3675-1700	1600-1700mm	19µm	1765	890	14.9kg
3675-1800	1700-1800mm	20µm	1870	940	16.2kg
3675-1900	1800-1900mm	21µm	1970	1000	17.5kg
3675-2000	1900-2000mm	22µm	2075	1055	18.8kg



3675-300



interchangeable anvil (included)
for different measuring ranges

- Graduation 0.01mm
- Ratchet stop
- Meet DIN863-3
- Carbide measuring faces
- Light weight
- Optional accessory:
setting standards (code 7386)

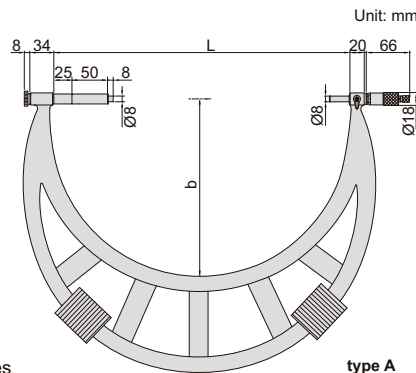


OUTSIDE MICROMETERS WITH EXTENSION ANVIL COLLAR

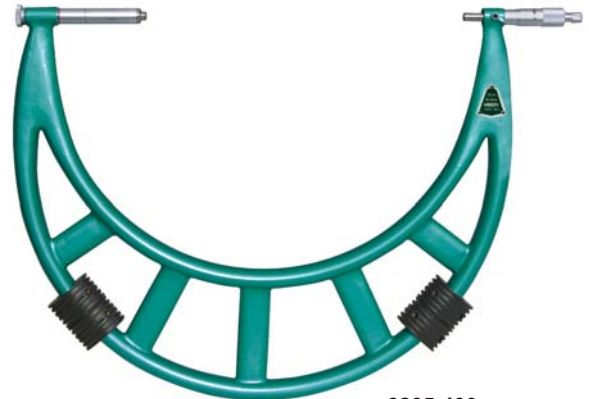
- Graduation 0.01mm
- Adjust collars for different measuring ranges
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards



adjust collars for different measuring ranges



type A



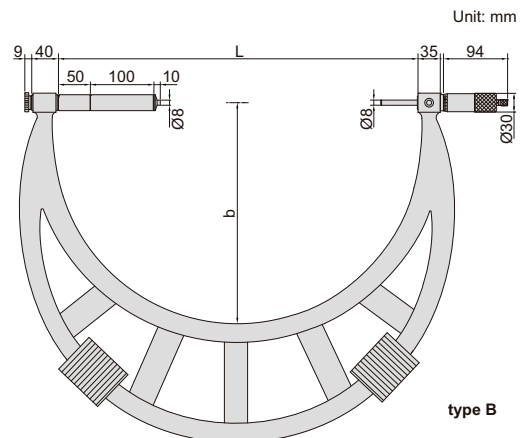
3205-400



setting standard (included)

(mm)

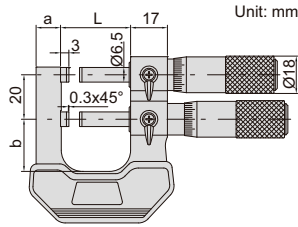
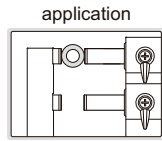
Code	Range	Type	Accuracy	L	b	Setting standard (included)
3205-400	300-400mm	A	11µm	410	250	325, 375
3205-500	400-500mm	A	13µm	510	295	425, 475
3205-600	500-600mm	A	14µm	610	345	525, 575
3205-700	600-700mm	A	16µm	710	395	625, 675
3205-800	700-800mm	A	18µm	810	445	725, 775
3205-900	800-900mm	A	20µm	910	495	825, 875
3205-1000	900-1000mm	A	22µm	1010	545	925, 975
3205-1200	1000-1200mm	B	22µm	1210	645	1050, 1150
3205-1400	1200-1400mm	B	24µm	1410	745	1250, 1350
3205-1600	1400-1600mm	B	28µm	1610	845	1450, 1550
3205-1800	1600-1800mm	B	31µm	1810	945	1650, 1750
3205-2000	1800-2000mm	B	34µm	2010	1045	1850, 1950



type B

LIMIT MICROMETERS

- Used as Go/No-Go gage by setting upper and lower limits
- Graduation 0.002mm
- Carbide measuring faces
- Supplied with setting standard (except 0-25mm)



3235-25A

Code	Range	Accuracy	L	a	b
3235-25A	0-25mm	4µm	32mm	12mm	24mm
3235-50A	25-50mm	4µm	57mm	15mm	32mm

INDICATING MICROMETERS



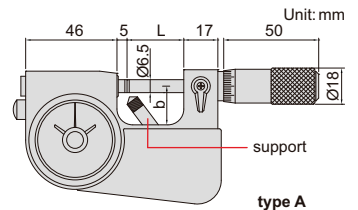
3332-25



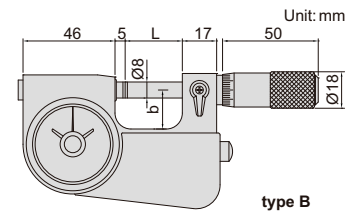
3332-25B

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

- Meet DIN863-3
- Micrometer head graduation: 0.002mm
- Dial indicator: range ±0.04mm, graduation 0.001mm, accuracy 0.001mm
- Carbide measuring faces
- Optional accessory: gage blocks grade 0 (4101-A series), for zero setting



type A



type B

Code	Micrometer head range	Micrometer head accuracy	Type	L	b	Remark
3332-25	0-25mm	4µm	A	28.5	19	with support
3332-50	25-50mm	4µm	A	53.5	30	with support
3332-75	50-75mm	5µm	A	78.5	45	without support
3332-100	75-100mm	5µm	A	103.5	57	without support
3332-25B	0-25mm	4µm	B	28.5	19	without support

digital indicator is optional



3346-25

MICROMETERS WITH DIAL INDICATOR

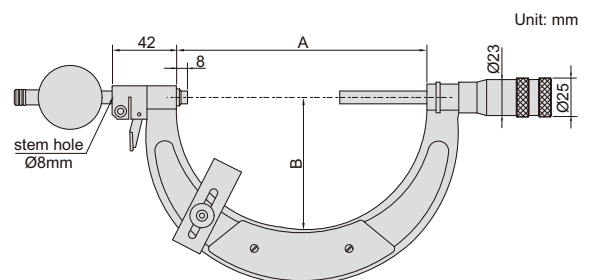
INSIZE PLUS
MADE IN EUROPE

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

INSPECTION CERTIFICATE

- Anvil retracting range: 2.5mm
- Carbide measuring faces
- Parallelism of measuring faces: 1µm
- Optional accessory: dial indicator (code 2890-1F), digital indicator, gage blocks grade 1 (4101-B series), for zero setting

Code	Micrometer head range	Micrometer head graduation	Micrometer head accuracy	A	B
3346-25*	0-25mm	5µm	4µm	37	24
3346-50*	25-50mm	5µm	4µm	62	34
3346-75*	50-75mm	5µm	5µm	87	46
3346-100*	75-100mm	5µm	5µm	112	60
3346-150*	100-150mm	5µm	6µm	164	85
3346-200*	150-200mm	5µm	7µm	215	110
3346-250*	200-250mm	5µm	8µm	264	135
3346-300*	250-300mm	5µm	9µm	315	160



* Supplied with manufacturer inspection certificate

MICROMETERS WITH DIAL INDICATOR

INSIZE PLUS
MADE IN EUROPE

ATTENTION: SETTING
STANDARDS ARE NOT INCLUDED

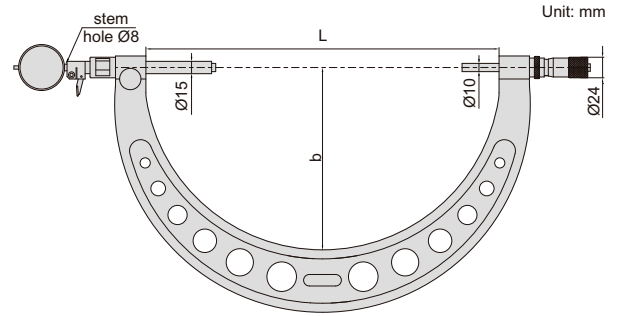
LIGHT
WEIGHT

digital indicator
is optional



spindle
retract fork

3685-300



anvil with vernier graduation,
can be adjusted for different measuring ranges



- Graduation 0.01mm
- Anvil with vernier graduation, convenient adjustment for different measuring ranges
- Meet DIN863-3
- Carbide measuring faces
- Anvil retracting range: 2.5mm
- Optional accessory: dial/digital indicators, setting standards (code 7386)

Range 100mm

(mm)

Code	Range	Micrometer head accuracy	L	b	Weight
3685-300	200-300mm	6µm	320	165	1.7kg
3685-400	300-400mm	7µm	430	220	2.1kg
3685-500	400-500mm	8µm	530	273	2.6kg
3685-600	500-600mm	9µm	630	323	3.3kg
3685-700	600-700mm	9µm	730	378	4.0kg
3685-800	700-800mm	9µm	830	423	4.4kg
3685-900	800-900mm	10µm	930	473	5.2kg
3685-1000	900-1000mm	10µm	1030	520	6.4kg

Range 200mm

(mm)

Code	Range	Micrometer head accuracy	L	b	Weight
3685-402	200-400mm	7µm	430	220	2.2kg
3685-602	400-600mm	9µm	630	323	3.4kg
3685-802	600-800mm	9µm	830	423	4.5kg
3685-1002	800-1000mm	10µm	1030	520	6.5kg
3685-1202	1000-1200mm	11µm	1230	635	8.9kg
3685-1402	1200-1400mm	12µm	1430	735	11.6kg
3685-1602	1400-1600mm	18µm	1660	840	13.9kg
3685-1802	1600-1800mm	20µm	1870	940	16.5kg
3685-2002	1800-2000mm	22µm	2075	1055	19.1kg

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

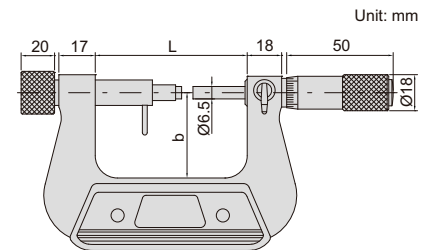
MICROMETERS WITH DIAL INDICATOR

- Meet DIN863-3
- Micrometer head graduation 0.01mm
- Anvil retracting range: 8mm
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)
- Optional accessory: dial indicators (graduation 0.01mm), digital indicators (resolution 0.01mm/0.0005")



3331-25A

Code	Micrometer head range	Micrometer head accuracy	L	b
3331-25A	0-25mm	4μm	67mm	38mm
3331-50A	25-50mm	4μm	92.4mm	50mm
3331-75A	50-75mm	5μm	117.6mm	62mm
3331-100A	75-100mm	5μm	143mm	70mm
3331-125A	100-125mm	6μm	168.2mm	82mm
3331-150A	125-150mm	6μm	192mm	94.5mm
3331-175A	150-175mm	7μm	217mm	107mm

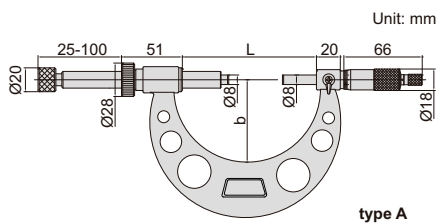


ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

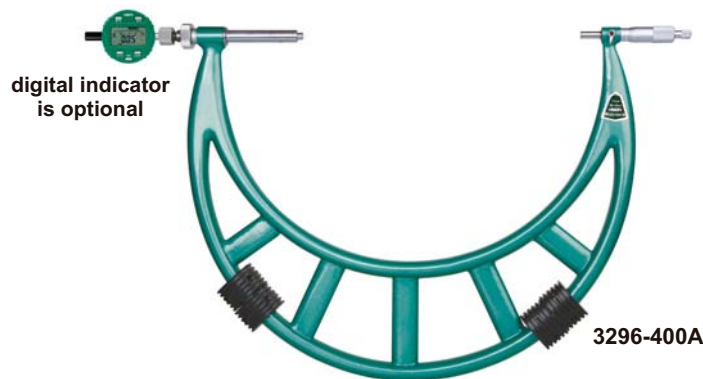
MICROMETERS WITH DIAL INDICATOR



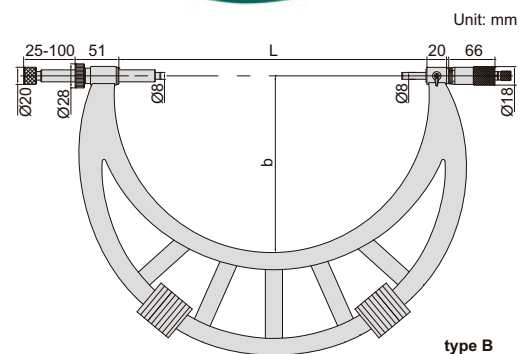
3296-100A



type A



3296-400A



type B

Code	Range	Type	Accuracy	L	b
3296-100A	0-100mm	A	6μm	115	68
3296-200A	100-200mm	A	7μm	215	120
3296-300A	200-300mm	A	8μm	315	170
3296-400A	300-400mm	B	9μm	415	225
3296-500A	400-500mm	B	10μm	515	275
3296-600A	500-600mm	B	11μm	615	325
3296-700A	600-700mm	B	12μm	715	375
3296-800A	700-800mm	B	13μm	815	430
3296-900A	800-900mm	B	14μm	915	480
3296-1000A	900-1000mm	B	15μm	1015	530

- Meet DIN863-3
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: dial indicators (graduation 0.01mm), digital indicators (resolution 0.01mm/0.0005")

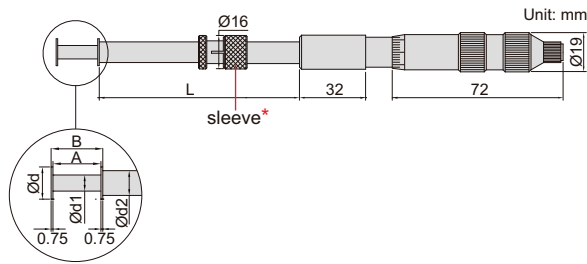
GROOVE MICROMETERS

6



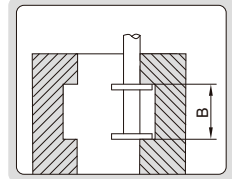
3287-50B

- Measure width of grooves inside bores
- Graduation 0.01mm
- Two graduations for inside and outside measurements
- Non-rotating spindle
- Two-directional ratchet stop

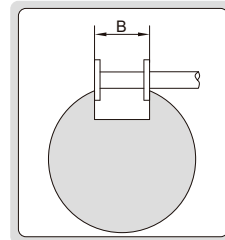


Unit: mm

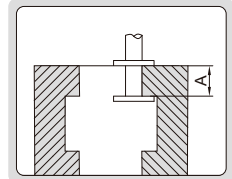
measure width of groove



measure width of keyway



measure position of groove



Code	Range (outside A)	Range (inside B)	Accuracy	L	Ød	Ød1	Ød2
3287-25B	0-25mm	1.6-26.5mm	10µm	120	13	6.5	10
3287-50B	25-50mm	26.5-51.5mm	10µm	120	13	6.5	10
3287-75B	50-75mm	51.5-76.5mm	10µm	120	13	6.5	10
3287-100B	75-100mm	76.5-101.5mm	10µm	120	13	6.5	10
3287-251B*	0-25mm	1.6-26.5mm	10µm	90	6.5	3	5

*3287-251B does not have sleeve

3-WIRES

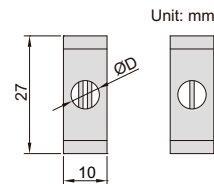
INSPECTION CERTIFICATE



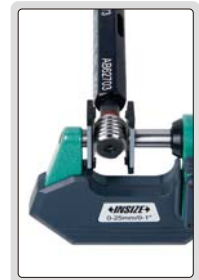
- Used with standard outside micrometers to measure pitch diameter of screw threads
- Diameter accuracy: $\pm 0.5\mu\text{m}$
- Cylindricity: $1\mu\text{m}$
- Hardness: HRC60
- Supplied with manufacturer inspection certificate



7382-19



application



For outside micrometers with spindle $\text{Ø}6.35\text{mm}$ (ØD)

Code	Pin gage diameter	Applicable pitch
7382-11	Ø0.170mm	0.2mm, 0.25mm, 0.3mm
7382-12	Ø0.195mm	0.35mm
7382-13	Ø0.220mm	0.4mm
7382-14	Ø0.250mm	0.45mm
7382-15	Ø0.290mm	0.5mm
7382-16	Ø0.335mm	0.6mm
7382-17	Ø0.390mm	0.7mm
7382-18	Ø0.455mm	0.75mm, 0.8mm
7382-19	Ø0.530mm	0.9mm
7382-110	Ø0.620mm	1.0mm
7382-111	Ø0.725mm	1.25mm
7382-112	Ø0.895mm	1.5mm
7382-113	Ø1.100mm	1.75mm, 2.0mm
7382-114	Ø1.350mm	2.5mm
7382-115	Ø1.650mm	3.0mm
7382-116	Ø2.050mm	3.5mm
7382-117	Ø2.550mm	4mm, 4.5mm
7382-118	Ø3.200mm	5mm, 5.5mm, 6mm
7382-1S	18 pairs/set, including all above 3-wires	

For outside micrometers with spindle $\text{Ø}6.50\text{mm}$ (ØD)

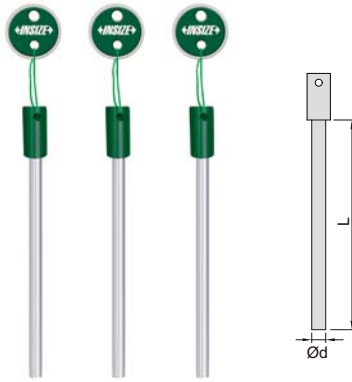
Code	Pin gage diameter	Applicable pitch
7382-21	Ø0.170mm	0.2mm, 0.25mm, 0.3mm
7382-22	Ø0.195mm	0.35mm
7382-23	Ø0.220mm	0.4mm
7382-24	Ø0.250mm	0.45mm
7382-25	Ø0.290mm	0.5mm
7382-26	Ø0.335mm	0.6mm
7382-27	Ø0.390mm	0.7mm
7382-28	Ø0.455mm	0.75mm, 0.8mm
7382-29	Ø0.530mm	0.9mm
7382-210	Ø0.620mm	1.0mm
7382-211	Ø0.725mm	1.25mm
7382-212	Ø0.895mm	1.5mm
7382-213	Ø1.100mm	1.75mm, 2.0mm
7382-214	Ø1.350mm	2.5mm
7382-215	Ø1.650mm	3.0mm
7382-216	Ø2.050mm	3.5mm
7382-217	Ø2.550mm	4mm, 4.5mm
7382-218	Ø3.200mm	5mm, 5.5mm, 6mm
7382-2S	18 pairs/set, including all above 3-wires	

CARBIDE 3-WIRES



CUSTOMIZABLE DIAMETER Ød

Code	Diameter (Ød)	Applicable pitch
7394-60A	0.170mm	0.2mm, 0.25mm, 0.3mm
7394-61A	0.195mm	0.35mm
7394-62A	0.220mm	0.4mm
7394-63A	0.250mm	0.45mm
7394-64A	0.290mm	0.5mm
7394-65A	0.335mm	0.6mm
7394-66A	0.390mm	0.7mm
7394-67A	0.455mm	0.75mm, 0.8mm
7394-68A	0.530mm	0.9mm
7394-69A	0.620mm	1.0mm
7394-70A	0.725mm	1.25mm
7394-71A	0.895mm	1.5mm
7394-72A	1.100mm	1.75mm, 2.0mm
7394-73A	1.350mm	2.5mm
7394-74A	1.650mm	3.0mm
7394-75A	2.050mm	3.5mm
7394-76A	2.550mm	4mm, 4.5mm
7394-77A	3.200mm	5mm, 5.5mm, 6mm



7394-76A

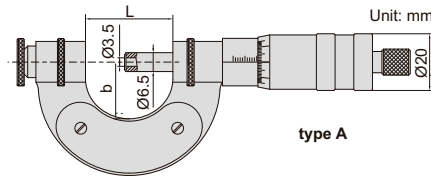
- When Ød ≤ 0.3mm, length L = 25mm; When Ød > 0.3mm, length L = 45mm
- Made of carbide
- Hardness HRA90
- Diameter accuracy: ±0.5µm
- Roundness: 0.5µm
- Cylindricity: 1µm
- Supplied with manufacturer inspection certificate



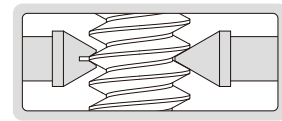
EXTERNAL SCREW THREAD MICROMETERS



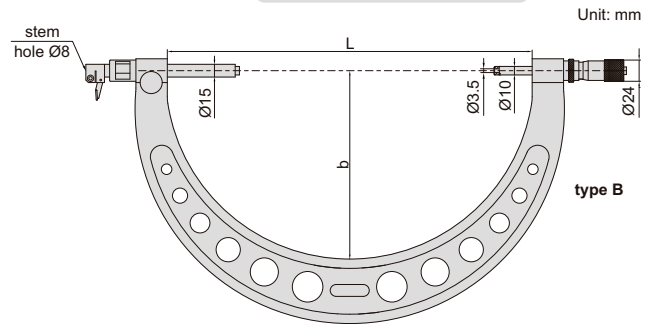
3680-50



type A



3680-4001



type B

Type B (without ratchet stop)

(mm)

Code	Range	Left anvil retracting stroke	Micrometer head accuracy	L	b
3680-3001 *	200-300mm	2.5mm	6µm	320	165
3680-4001 *	300-400mm	2.5mm	7µm	430	220
3680-5001 *	400-500mm	2.5mm	8µm	530	273
3680-6001 *	500-600mm	2.5mm	9µm	630	323
3680-7001 *	600-700mm	2.5mm	9µm	730	378
3680-8001 *	700-800mm	2.5mm	9µm	830	423
3680-9001 *	800-900mm	2.5mm	10µm	930	473
3680-10001 *	900-1000mm	2.5mm	10µm	1030	520
3680-4002 *	200-400mm	2.5mm	7µm	430	220
3680-6002 *	400-600mm	2.5mm	9µm	630	323
3680-8002 *	600-800mm	2.5mm	9µm	830	423
3680-10002 *	800-1000mm	2.5mm	10µm	1030	520
3680-12002 *	1000-1200mm	2.5mm	11µm	1230	635
3680-14002 *	1200-1400mm	2.5mm	12µm	1430	735
3680-16002 *	1400-1600mm	2.5mm	18µm	1660	840
3680-18002 *	1600-1800mm	2.5mm	20µm	1870	940
3680-20002 *	1800-2000mm	2.5mm	22µm	2075	1055

- Measure pitch diameter of screw threads
- Graduation 0.01mm
- Optional accessory: setting standards (code 7384), external tread tips (code 7390), dial/digital indicators (only for type B)

Type A (ratchet stop) (mm)

Code	Range	Accuracy	L	b
3680-25 *	0-25mm	4µm	37	24
3680-50 *	25-50mm	4µm	62	34
3680-75 *	50-75mm	4µm	87	46
3680-100 *	75-100mm	4µm	112	60
3680-125 *	100-125mm	5µm	139	72
3680-150 *	125-150mm	5µm	164	85
3680-200 *	150-200mm	7µm	215	110
3680-250 *	200-250mm	7µm	264	135
3680-300 *	250-300mm	7µm	315	160

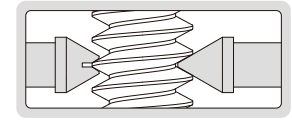
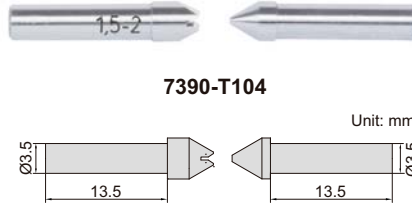
* Supplied with manufacturer inspection certificate

MEASURING TIPS FOR EXTERNAL SCREW THREAD MICROMETERS

INSIZE PLUS
MADE IN EUROPE

6

- Supplied in pair
- Made of hardened steel
- Suitable for 3680 series micrometers



60° thread angle

Code	Pitch
7390-T101	0.35-0.5mm/ 72-48TPI
7390-T102	0.6-0.8mm/ 44-32TPI
7390-T103	0.9-1.25mm/ 28-18TPI
7390-T104	1.5-2mm/ 16-11TPI
7390-T105	2.5-3.5mm/ 10-7TPI
7390-T106	4-6mm/ 6-4TPI

55° thread angle

Code	Pitch
7390-T201	60-48TPI
7390-T202	40-32TPI
7390-T203	28-22TPI
7390-T204	20-16TPI
7390-T205	14-11TPI
7390-T206	10-7TPI
7390-T207	6-4TPI

30° thread angle

Code	Pitch
7390-T301	1.5mm
7390-T302	2mm
7390-T303	3mm
7390-T304	4mm
7390-T305	5-6mm
7390-T306	7-8mm
7390-T307	9-10mm
7390-T308	12-14mm

SETTING STANDARDS FOR EXTERNAL SCREW THREAD MICROMETERS

INSIZE PLUS
MADE IN EUROPE

ATTENTION: WHEN PITCH <0.4MM OR >63.5 TPI, SETTING STANDARDS CANNOT BE USED TO SET ZERO, A CALIBRATED WORK PIECE CAN BE USED INSTEAD

TIPS FOR TRAPEZOIDAL, ACME THREAD ARE ALSO AVAILABLE



7384-A100

- Made of hardened steel
- Deviation (difference between the ordered size and the size marked on the setting standard when supplied): $\pm 20\mu\text{m}$
For example, the ordered size is 25mm, the size marked on the setting standard when supplied may be 25.015mm

60° thread angle

Code	L	Ød	Accuracy
7384-A25	25	7.8	$\pm 2.5\mu\text{m}$
7384-A50	50	7.8	$\pm 3\mu\text{m}$
7384-A75	75	7.8	$\pm 3.5\mu\text{m}$
7384-A100	100	7.8	$\pm 4\mu\text{m}$
7384-A125	125	7.8	$\pm 4.5\mu\text{m}$
7384-A150	150	7.8	$\pm 5\mu\text{m}$
7384-A175	175	7.8	$\pm 5.5\mu\text{m}$
7384-A200	200	7.8	$\pm 6\mu\text{m}$
7384-A225	225	10	$\pm 6.5\mu\text{m}$
7384-A250	250	10	$\pm 7\mu\text{m}$
7384-A275	275	10	$\pm 7.5\mu\text{m}$
7384-A300	300	10	$\pm 8\mu\text{m}$

55° thread angle

Code	L	Ød	Accuracy
7384-B25	25	7.8	$\pm 2.5\mu\text{m}$
7384-B50	50	7.8	$\pm 3\mu\text{m}$
7384-B75	75	7.8	$\pm 3.5\mu\text{m}$
7384-B100	100	7.8	$\pm 4\mu\text{m}$
7384-B125	125	7.8	$\pm 4.5\mu\text{m}$
7384-B150	150	7.8	$\pm 5\mu\text{m}$
7384-B175	175	7.8	$\pm 5.5\mu\text{m}$
7384-B200	200	7.8	$\pm 6\mu\text{m}$
7384-B225	225	10	$\pm 6.5\mu\text{m}$
7384-B250	250	10	$\pm 7\mu\text{m}$
7384-B275	275	10	$\pm 7.5\mu\text{m}$
7384-B300	300	10	$\pm 8\mu\text{m}$

NON-ROTATING SPINDLE

SCREW THREAD MICROMETERS

6



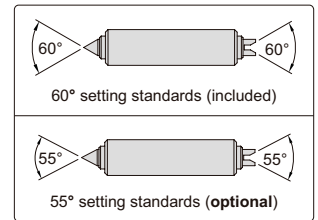
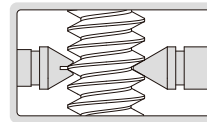
3281-25A
(measuring tips are optional)



3281-S25
(measuring tips are included)



- Measure pitch diameter of screw threads
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards (except 0-25mm)
- Optional accessory: 55° setting standards



Measuring tips are optional (mm)

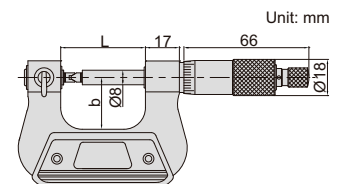
Code	Range	L	b	55° setting standard (optional)
3281-25A	0-25mm	42	26	-
3281-50A	25-50mm	67	38	3281-SP1
3281-75A	50-75mm	92	50	3281-SP2
3281-100A	75-100mm	117.6	62	3281-SP3
3281-125A	100-125mm	143	70	3281-SP4
3281-150A	125-150mm	168.2	82	3281-SP5
3281-175A	150-175mm	192	94.5	3281-SP6
3281-200A	175-200mm	217	107	3281-SP7
3281-225A	200-225mm	242	130	3281-SP8
3281-250A	225-250mm	267	142	3281-SP9
3281-275A	250-275mm	291	155	3281-SP10
3281-300A	275-300mm	317	167	3281-SP11

Measuring tips are included (mm)

Code	Range	L	b	Measuring tips (included)	55° setting standard (optional)
3281-S25	0-25mm	42	26	6 pairs of measuring tips: metric and unified thread (60° thread angle) 0.4-0.5mm/64-48TPI, 0.6-0.9mm/44-28TPI, 1-1.75mm/24-14TPI, 2-3mm/13-9TPI, 3.5-5mm/8-5TPI, 5.5-7mm/4.5-3.5TPI	-
3281-S50	25-50mm	67	38		3281-SP1
3281-S75	50-75mm	92	50		3281-SP2
3281-S100	75-100mm	117.6	62		3281-SP3
3281-S125	100-125mm	143	70		3281-SP4
3281-S150	125-150mm	168.2	82		3281-SP5
3281-S175	150-175mm	192	94.5		3281-SP6
3281-S200	175-200mm	217	107		3281-SP7
3281-S225	200-225mm	242	130		3281-SP8
3281-S250	225-250mm	267	142		3281-SP9
3281-S275	250-275mm	291	155		3281-SP10
3281-S300	275-300mm	317	167	3281-SP11	

accuracy of micrometers with tips (mm)

Pitch	Range							
	0-25	25-50	50-75	75-100	100-125	125-200	200-225	225-300
0.4~0.5	±0.01	-	-	-	-	-	-	-
0.6~0.8	±0.01	±0.013	-	-	-	-	-	-
1~1.25	±0.012	±0.015	±0.017	±0.017	-	-	-	-
1.5~2.0	±0.014	±0.017	±0.019	±0.019	±0.020	±0.023	±0.025	±0.028
2.5~3.5	±0.016	±0.019	±0.021	±0.021	±0.023	±0.025	±0.028	±0.031
4.0~7.0	-	±0.021	±0.023	±0.023	±0.025	±0.028	±0.031	±0.033



DIGITAL SCREW THREAD MICROMETERS

DATA
OUTPUT

NON-ROTATING
SPINDLE

6



3581-25A
(measuring tips are optional)

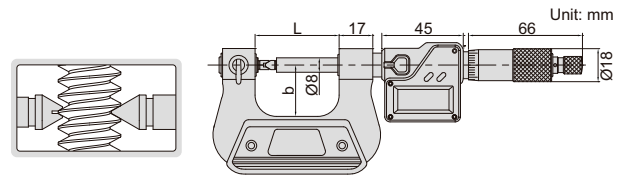


3581-S25
(measuring tips are included)

Measuring tips are optional

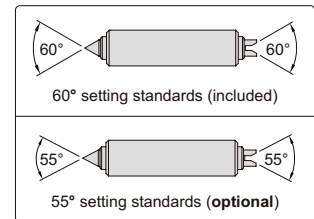
Code	Range	L	b	55° setting standard (optional)
3581-25A	0-25mm/0-1"	42	26	—
3581-50A	25-50mm/1-2"	67	38	3281-SP1
3581-75A	50-75mm/2-3"	92	50	3281-SP2
3581-100A	75-100mm/3-4"	117.6	62	3281-SP3
3581-125A	100-125mm/4-5"	143	70	3281-SP4
3581-150A	125-150mm/5-6"	168.2	82	3281-SP5
3581-175A	150-175mm/6-7"	192	94.5	3281-SP6
3581-200A	175-200mm/7-8"	217	107	3281-SP7
3581-225A	200-225mm/8-9"	242	130	3281-SP8
3581-250A	225-250mm/9-10"	267	142	3281-SP9
3581-275A	250-275mm/10-11"	291	155	3281-SP10
3581-300A	275-300mm/11-12"	317	167	3281-SP11

- Measure pitch diameter of screw threads
- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards (except 0-25mm/0-1")
- Optional accessory: 55° setting standards, data output cable (code 7315-31 page 4, 7302-30 page 12)



Measuring tips are included

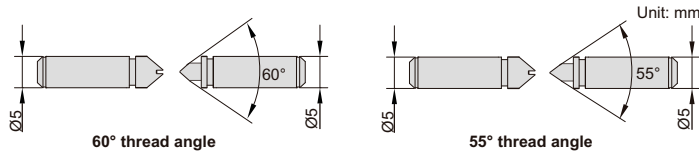
Code	Range	L	b	Measuring tips (included)	55° setting standard (optional)
3581-S25	0-25mm/0-1"	42	26	6 pairs of measuring tips: metric and unified thread (60° thread angle) 0.4-0.5mm/64-48TPI, 0.6-0.9mm/44-28TPI, 1-1.75mm/24-14TPI, 2-3mm/13-9TPI, 3.5-5mm/8-5TPI, 5.5-7mm/4.5-3.5TPI	—
3581-S50	25-50mm/1-2"	67	38		3281-SP1
3581-S75	50-75mm/2-3"	92	50		3281-SP2
3581-S100	75-100mm/3-4"	117.6	62		3281-SP3
3581-S125	100-125mm/4-5"	143	70		3281-SP4
3581-S150	125-150mm/5-6"	168.2	82		3281-SP5
3581-S175	150-175mm/6-7"	192	94.5		3281-SP6
3581-S200	175-200mm/7-8"	217	107		3281-SP7
3581-S225	200-225mm/8-9"	242	130		3281-SP8
3581-S250	225-250mm/9-10"	267	142		3281-SP9
3581-S275	250-275mm/10-11"	291	155		3281-SP10
3581-S300	275-300mm/11-12"	317	167	3281-SP11	



accuracy of micrometers with tips

Pitch	Range							
	0-25	25-50	50-75	75-100	100-125	125-200	200-225	225-300
0.4~0.5	±0.01	-	-	-	-	-	-	-
0.6~0.8	±0.01	±0.013	-	-	-	-	-	-
1~1.25	±0.012	±0.015	±0.017	±0.017	-	-	-	-
1.5~2.0	±0.014	±0.017	±0.019	±0.019	±0.020	±0.023	±0.025	±0.028
2.5~3.5	±0.016	±0.019	±0.021	±0.021	±0.023	±0.025	±0.028	±0.031
4.0~7.0	-	±0.021	±0.023	±0.023	±0.025	±0.028	±0.031	±0.033

MEASURING TIPS FOR SCREW THREAD MICROMETERS



7381-T13

- Supplied in pair
- Suitable for **3281**, **3581** series micrometers

Metric and unified thread (60° thread angle)

Code	Pitch
7381-T11	0.4-0.5mm/ 64-48TPI
7381-T12	0.6-0.9mm/ 44-28TPI
7381-T13	1-1.75mm/ 24-14TPI
7381-T14	2-3mm/ 13-9TPI
7381-T15	3.5-5mm/ 8-5TPI
7381-T16	5.5-7mm/ 4.5-3.5TPI
7381-TS	6 pairs/set, including all above tips

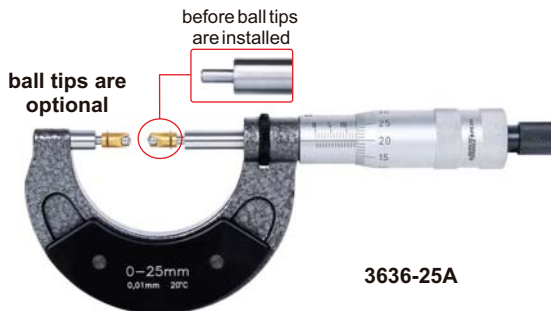
Whitworth thread (55° thread angle)

Code	Pitch
7381-T21	60-48TPI
7381-T22	48-40TPI
7381-T23	40-32TPI
7381-T24	32-24TPI
7381-T25	24-18TPI
7381-T26	18-14TPI
7381-T27	14-10TPI
7381-T28	10-7TPI
7381-T29	7-4.5TPI
7381-T210	4.5-3.5TPI
7381-T2S	10 pairs/set, including all above tips

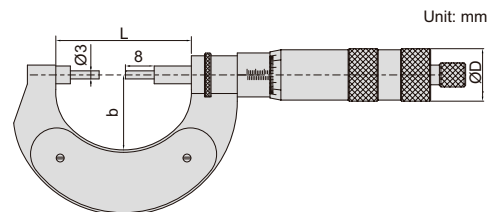
ATTENTION: SETTING STANDARDS ARE NOT INCLUDED



EXTERNAL GEAR TOOTH MICROMETERS

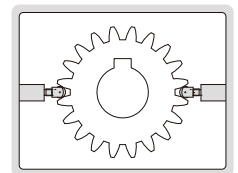


3636-25A



- Meet DIN863-3
- Measure over-pin diameter of gears
- Graduation 0.01mm
- Ratchet stop
- Optional accessory: ball tips (code **7389**), cylindrical tips (code **7393**), setting standards (code **7388**)

cylindrical tips (optional)



Code	Range	Accuracy	L	b	ØD
3636-25A*	0-25mm	3µm	62	34	20
3636-50A*	25-50mm	3µm	87	46	20
3636-75A*	50-75mm	4µm	112	60	20
3636-100A*	75-100mm	4µm	139	72	20
3636-125A*	100-125mm	5µm	164	85	20
3636-150A*	125-150mm	5µm	190	97	20
3636-175A*	150-175mm	5µm	215	110	20
3636-200A*	175-200mm	5µm	240	122	20

* Supplied with manufacturer inspection certificate

Code	Range	Accuracy	L	b	ØD
3636-225A*	200-225mm	6µm	264	135	20
3636-250A*	225-250mm	6µm	290	148	20
3636-300A*	250-300mm	6µm	325	165	24
3636-350A*	300-350mm	7µm	370	190	24
3636-400A*	350-400mm	7µm	430	220	24
3636-450A*	400-450mm	8µm	475	250	24
3636-500A*	450-500mm	8µm	530	273	24
3636-550A*	500-550mm	9µm	570	291	24
3636-600A*	550-600mm	9µm	630	323	24

CYLINDRICAL TIPS FOR GEAR TOOTH MICROMETERS

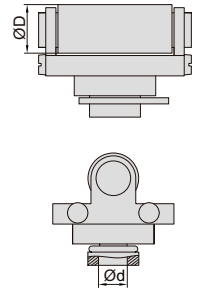
INSIZE PLUS
MADE IN EUROPE

CYLINDRICAL DIAMETER
ØD CAN BE CUSTOMIZED

- Supplied in pair
- Made of hardened steel
- Self-positioning
- Suitable for 3636, 3638, 3678, series micrometers



7393-T5



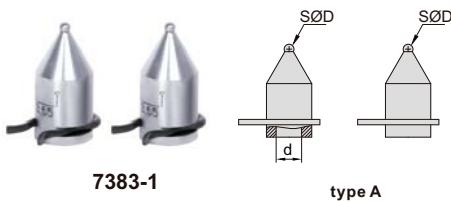
Code	Diameter of shaft (ØD)	Ød	Accuracy
7393-T1	1mm	3mm	±1µm
7393-T2	2mm	3mm	±1µm
7393-T3	3mm	3mm	±1µm
7393-T3D5	3.5mm	3mm	±1µm
7393-T4	4mm	3mm	±1µm
7393-T5	5mm	3mm	±1µm
7393-T6	6mm	3mm	±1µm
7393-T7	7mm	3mm	±1µm
7393-T8	8mm	3mm	±1µm

6

BALL TIPS FOR GEAR TOOTH MICROMETERS

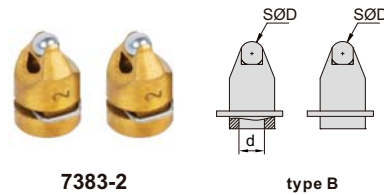
INSIZE PLUS
MADE IN EUROPE

BALL TIPS DIAMETER
SØD CAN BE CUSTOMIZED



7383-1

type A



7383-2

type B

- Supplied in pair
- Made of hardened steel
- Suitable for 3636, 3638, 3678 series micrometers

Code	Ball dia. (SØD)	d	Accuracy	Type
7383-1	SØ1mm	Ø3mm	±1µm	A
7383-1D5	SØ1.5mm	Ø3mm	±1µm	B
7383-1D75	SØ1.75mm	Ø3mm	±1µm	B
7383-2	SØ2mm	Ø3mm	±1µm	B
7383-2D25	SØ2.25mm	Ø3mm	±1µm	B
7383-2D5	SØ2.5mm	Ø3mm	±1µm	B
7383-3	SØ3mm	Ø3mm	±1µm	B
7383-3D5	SØ3.5mm	Ø3mm	±1µm	B
7383-4	SØ4mm	Ø3mm	±1µm	B
7383-4D5	SØ4.5mm	Ø3mm	±1µm	B
7383-5	SØ5mm	Ø3mm	±1µm	B
7383-5D5	SØ5.5mm	Ø3mm	±1µm	B
7383-6	SØ6mm	Ø3mm	±1µm	B

Code	Ball dia. (SØD)	d	Accuracy	Type
7383-6D5	SØ6.5mm	Ø3mm	±1µm	B
7383-7	SØ7mm	Ø3mm	±1µm	B
7383-7D5	SØ7.5mm	Ø3mm	±1µm	B
7383-8	SØ8mm	Ø3mm	±1µm	B
7383-9	SØ9mm	Ø3mm	±1µm	B
7383-10	SØ10mm	Ø3mm	±1µm	B
7383-10D5	SØ10.5mm	Ø3mm	±1.5µm	B
7383-11	SØ11mm	Ø3mm	±1.5µm	B
7383-12	SØ12mm	Ø3mm	±1.5µm	B
7383-13	SØ13mm	Ø3mm	±1.5µm	B
7383-14	SØ14mm	Ø3mm	±1.5µm	B
7383-15	SØ15mm	Ø3mm	±1.5µm	B
7383-16	SØ16mm	Ø3mm	±1.5µm	B

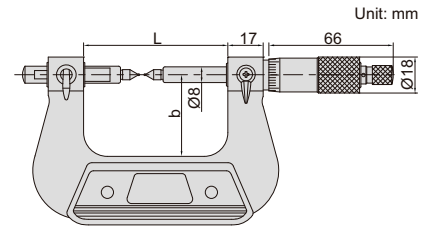
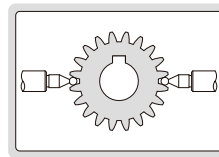
GEAR TOOTH MICROMETERS

- Meet DIN863-3
- Measure over-pin diameter of gears
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards (except 0-25mm)
- Optional accessory: ball tips (code 7391)

Code	Range	Accuracy	L	b
3291-25	0-25mm	4μm	67	38
3291-50	25-50mm	4μm	92.4	50
3291-75	50-75mm	5μm	117.6	62
3291-100	75-100mm	5μm	143	70
3291-125	100-125mm	6μm	168.2	82
3291-150	125-150mm	6μm	192	94.5
3291-175	150-175mm	7μm	217	107



3291-25

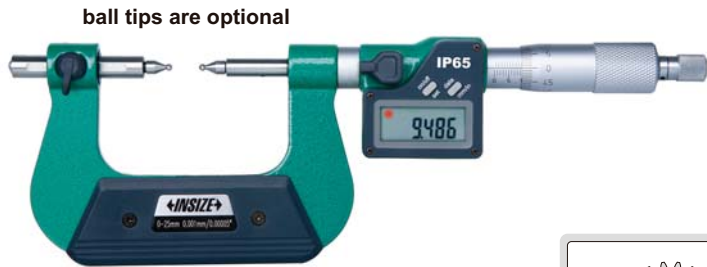


IP65
WATERPROOF

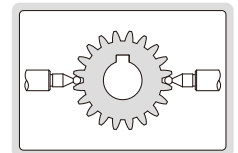
DATA
OUTPUT

DIGITAL GEAR TOOTH MICROMETERS

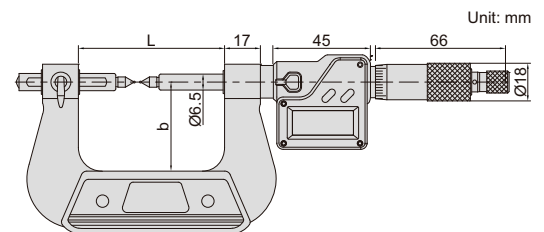
- Measure over-pin diameter of gears
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: ball tips (code 7391), data output cable (code 7315-31 page 4, 7302-30 page 12)



3591-25A



Code	Range	Accuracy	L	b
3591-25A	0-25mm/0-1"	±4μm	67	38
3591-50A	25-50mm/1-2"	±4μm	92.4	50
3591-75A	50-75mm/2-3"	±5μm	117.6	62
3591-100A	75-100mm/3-4"	±5μm	143	70
3591-125A	100-125mm/4-5"	±6μm	168.2	82
3591-150A	125-150mm/5-6"	±6μm	192	94.5
3591-175A	150-175mm/6-7"	±7μm	217	107



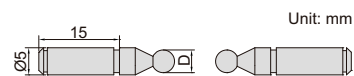
BALL TIPS FOR GEAR TOOTH MICROMETERS

- Supplied in pair
- Suitable for 3291, 3591 series micrometers

Code	Ball dia. (D)	Code	Ball dia. (D)
7391-T2	SØ1.5mm	7391-T7	SØ4.0mm
7391-T3	SØ2.0mm	7391-T8	SØ4.5mm
7391-T4	SØ2.5mm	7391-T9	SØ5.0mm
7391-T5	SØ3.0mm	7391-T10	SØ6.0mm
7391-T6	SØ3.5mm		



7391-T5



POINT MICROMETERS

INSIZE PLUS
MADE IN EUROPE

INSIZE
INSPECTION
CERTIFICATE

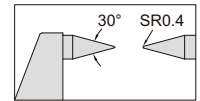
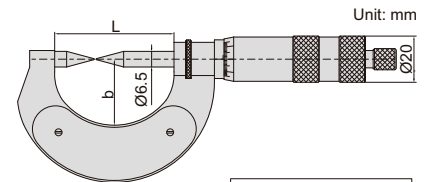
ATTENTION: SETTING
STANDARDS ARE NOT INCLUDED

Code	Range	Accuracy	L	b
3659-25A*	0-25mm	4µm	62	34
3659-50A*	25-50mm	4µm	87	46
3659-75A*	50-75mm	5µm	112	60
3659-100A*	75-100mm	5µm	139	72
3659-125A*	100-125mm	6µm	164	85
3659-150A*	125-150mm	6µm	190	97
3659-175A*	150-175mm	7µm	215	110
3659-200A*	175-200mm	7µm	240	122
3659-225A*	200-225mm	8µm	264	135
3659-250A*	225-250mm	8µm	290	148

*Supplied with manufacturer inspection certificate



3659-25A



- Measure the web thickness of drills, small grooves and keyways
- Graduation: 0.01mm
- Ratchet stop
- Carbide tips
- Optional accessory: setting standards (code 7386)

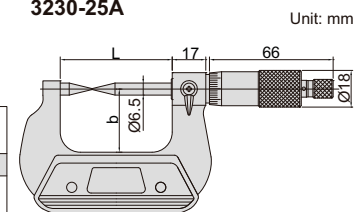
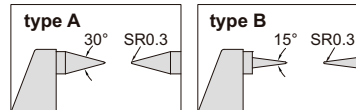
POINT MICROMETERS

- Measure the web thickness of drills, small grooves and keyways
- Graduation 0.01mm
- Ratchet stop
- Carbide tips
- Supplied with setting standards (except 0-25mm)

Code	Range	Type	Accuracy	L	b
3230-25A	0-25mm	A	4µm	57	32
3230-50A	25-50mm	A	4µm	82	44.5
3230-75A	50-75mm	A	5µm	107	57
3230-100A	75-100mm	A	5µm	132.6	69.5
3230-25BA	0-25mm	B	4µm	57	32
3230-50BA	25-50mm	B	4µm	82	44.5
3230-75BA	50-75mm	B	5µm	107	57
3230-100BA	75-100mm	B	5µm	132.6	69.5



3230-25A



DIGITAL POINT MICROMETERS

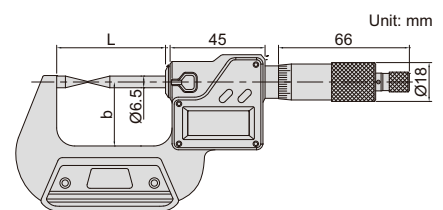
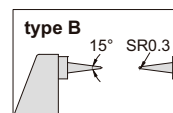
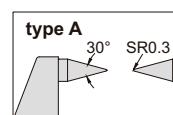
- Measure the web thickness of drills, small grooves and keyways
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide tips
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)

DATA
OUTPUT

IP65
WATERPROOF



3530-25A



Code	Range	Type	Accuracy	L	b
3530-25A	0-25mm/0-1"	A	±4µm	57	32
3530-50A	25-50mm/1-2"	A	±4µm	82	44.5
3530-75A	50-75mm/2-3"	A	±5µm	107	57
3530-100A	75-100mm/3-4"	A	±5µm	132.6	69.5
3530-25BA	0-25mm/0-1"	B	±4µm	57	32
3530-50BA	25-50mm/1-2"	B	±4µm	82	44.5
3530-75BA	50-75mm/2-3"	B	±5µm	107	57
3530-100BA	75-100mm/3-4"	B	±5µm	132.6	69.5

HIGH PRECISION DIGITAL POINT MICROMETERS/SNAP GAGES

ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

NON-ROTATING SPINDLE

DATA OUTPUT

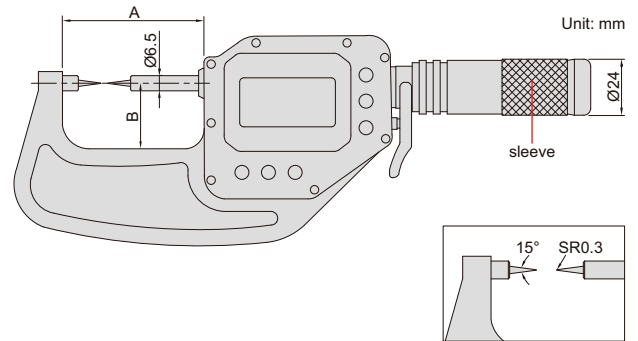
ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

IP65 WATERPROOF

INSPECTION CERTIFICATE



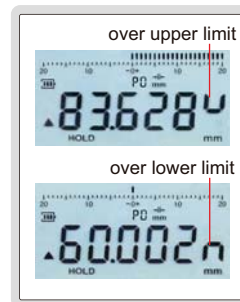
3354-25



Unit: mm

- Measure the web thickness of drills, small grooves and keyways
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
0.001mm/0.00005"
0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N
Customizable measuring force range 2-12N
Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gage blocks for zero setting (except 0-25mm/0-1")
- Power: rechargeable battery, for 24 hours continuous working

warning when over tolerance



wireless receiver
2134-R1, 2134-R2 (optional)



With data interface

Optional accessory:

wireless transmitter, code 7315-3350 page 5

data output cable (keyboard format), code 7302-3350 page 13

Code	Range	Accuracy	Repeatability	A	B
3354-25 *	0-25mm/0-1"	2µm	1µm	63mm	25mm
3354-50 *	25-50mm/1-2"	2µm	1µm	88mm	42mm
3354-75 *	50-75mm/2-3"	2µm	1µm	113mm	56mm

Built-in wireless

Optional accessory:

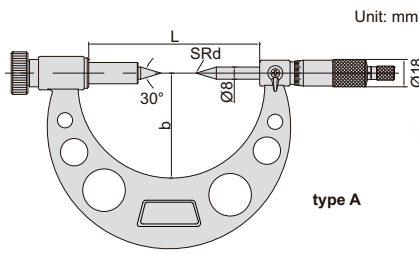
wireless receiver (keyboard format, connect up to 15 digital indicators), code 2134-R1

wireless receiver (serial port format, connect up to 15 digital indicators), code 2134-R2

Code	Range	Accuracy	Repeatability	A	B
3354-25WL *	0-25mm/0-1"	2µm	1µm	63mm	25mm
3354-50WL *	25-50mm/1-2"	2µm	1µm	88mm	42mm
3354-75WL *	50-75mm/2-3"	2µm	1µm	113mm	56mm

* Supplied with manufacturer inspection certificate

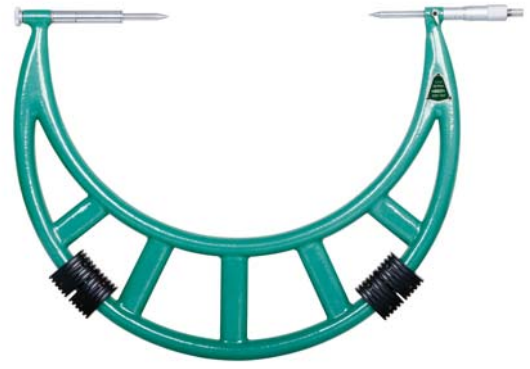
GEAR ROOT DIAMETER MICROMETERS



type A



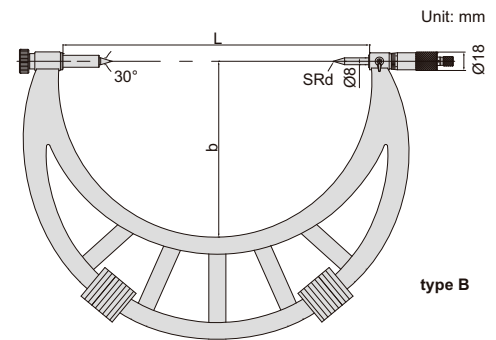
3297-100



3297-300

- Measure diameter of gear root circle
- Graduation 0.01mm
- Ratchet stop
- Meet DIN863-3
- Carbide measuring faces
- Supplied with setting standards

Code	Range	Type	Accuracy	L	b	SRd
3297-100	5-100mm	A	5 μ m	137	72	0.4
3297-200	100-200mm	A	7 μ m	237	129	0.5
3297-300	200-300mm	B	9 μ m	414	225	0.7
3297-400	300-400mm	B	11 μ m	514	275	0.7
3297-500	400-500mm	B	13 μ m	614	325	0.7
3297-600	500-600mm	B	15 μ m	714	375	0.7
3297-700	600-700mm	B	16 μ m	814	425	0.7
3297-800	700-800mm	B	18 μ m	914	475	0.7
3297-900	800-900mm	B	20 μ m	1014	525	0.7

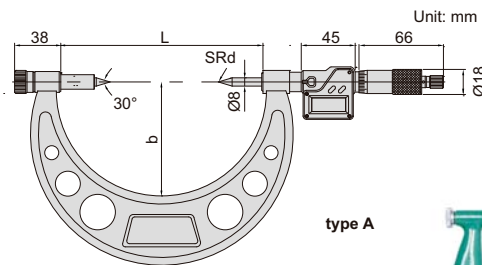


type B

DIGITAL GEAR ROOT DIAMETER MICROMETERS

IP65
WATERPROOF

DATA
OUTPUT



type A

- Measure diameter of gear root circle
- Resolution 0.001mm/0.0001" (resolution of 3597-100 and 3597-200 is 0.001mm/0.00005")
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)

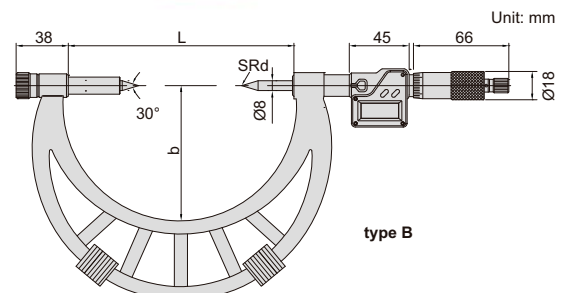
Code	Range	Type	Accuracy	L	b	SRd
3597-100	5-100mm	A	3 μ m	137	72	0.4
3597-200	100-200mm	A	4 μ m	237	129	0.5
3597-300	200-300mm	B	5 μ m	414	225	0.7
3597-400	300-400mm	B	6 μ m	514	275	0.7
3597-500	400-500mm	B	7 μ m	614	325	0.7
3597-600	500-600mm	B	8 μ m	714	375	0.7
3597-700	600-700mm	B	8 μ m	814	425	0.7
3597-800	700-800mm	B	9 μ m	914	475	0.7
3597-900	800-900mm	B	10 μ m	1014	525	0.7



3597-100



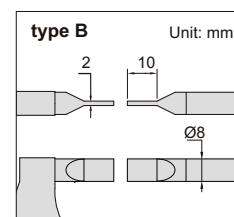
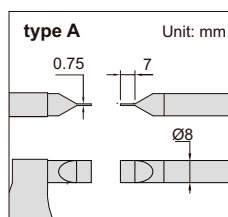
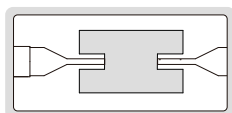
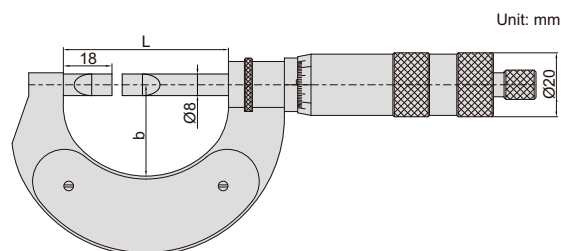
3597-300



type B



3650-25A



- Meet DIN863-3
- Graduation 0.01mm
- Force: 5-10N
- Optional accessory: setting standards (code 7388)

(mm)

Code	Range	Type	Accuracy	L	b
3650-25A*	0-25mm	A	4µm	62	34
3650-50A*	25-50mm	A	4µm	87	46
3650-75A*	50-75mm	B	5µm	112	60
3650-100A*	75-100mm	B	5µm	139	72
3650-125A*	100-125mm	B	6µm	164	85
3650-150A*	125-150mm	B	6µm	190	97
3650-175A*	150-175mm	B	7µm	215	110
3650-200A*	175-200mm	B	7µm	240	122
3650-225A*	200-225mm	B	8µm	264	135
3650-250A*	225-250mm	B	8µm	290	148
3650-275A*	250-275mm	B	9µm	315	160
3650-300A*	275-300mm	B	9µm	340	174

* Supplied with manufacturer inspection certificate

BLADE MICROMETERS

NON-ROTATING SPINDLE

- Meet DIN863-3
- Measure the groove diameter of shafts and keyways
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

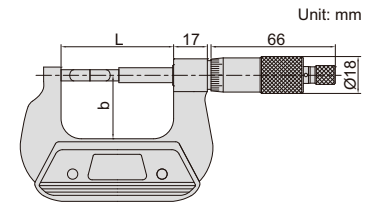
6



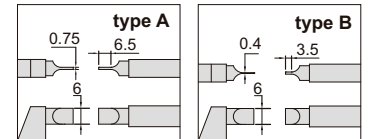
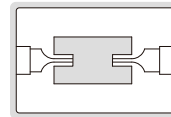
3232-25A

Code	Range	Type	Accuracy	L	b
3232-25A	0-25mm	A	4μm	57	32
3232-50A	25-50mm	A	4μm	82	44.5
3232-75A	50-75mm	A	5μm	107	57
3232-100A	75-100mm	A	5μm	132.6	69.5
3232-125A	100-125mm	A	6μm	158	82
3232-150A	125-150mm	A	6μm	183.4	94.5
3232-175A	150-175mm	A	7μm	208.8	107
3232-25BA	0-25mm	B	4μm	57	32
3232-50BA	25-50mm	B	4μm	82	44.5
3232-75BA	50-75mm	B	5μm	107	57
3232-100BA	75-100mm	B	5μm	132.6	69.5
3232-125BA	100-125mm	B	6μm	158	82
3232-150BA	125-150mm	B	6μm	183.4	94.5
3232-175BA	150-175mm	B	7μm	208.8	107

(mm)



Unit: mm



DIGITAL BLADE MICROMETERS

DATA OUTPUT

NON-ROTATING SPINDLE

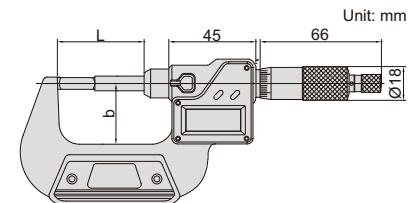
- Measure the groove diameter of shafts and keyways
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)



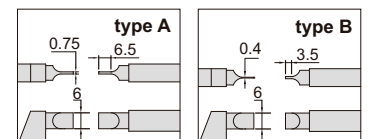
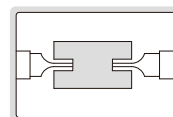
3532-25A

Code	Range	Type	Accuracy	L	b
3532-25A	0-25mm/0-1"	A	±4μm	57	32
3532-50A	25-50mm/1-2"	A	±4μm	82	44.5
3532-75A	50-75mm/2-3"	A	±5μm	107	57
3532-100A	75-100mm/3-4"	A	±5μm	132.6	69.5
3532-125A	100-125mm/4-5"	A	±6μm	158	82
3532-150A	125-150mm/5-6"	A	±6μm	183.4	94.5
3532-175A	150-175mm/6-7"	A	±7μm	208.8	107
3532-25BA	0-25mm/0-1"	B	±4μm	57	32
3532-50BA	25-50mm/1-2"	B	±4μm	82	44.5
3532-75BA	50-75mm/2-3"	B	±5μm	107	57
3532-100BA	75-100mm/3-4"	B	±5μm	132.6	69.5
3532-125BA	100-125mm/4-5"	B	±6μm	158	82
3532-150BA	125-150mm/5-6"	B	±6μm	183.4	94.5
3532-175BA	150-175mm/6-7"	B	±7μm	208.8	107

(mm)



Unit: mm



MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

IP65
WATERPROOF

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

NON-ROTATING SPINDLE

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

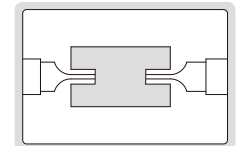
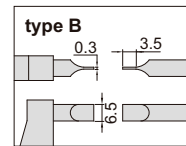
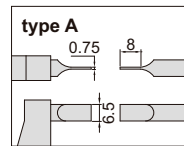
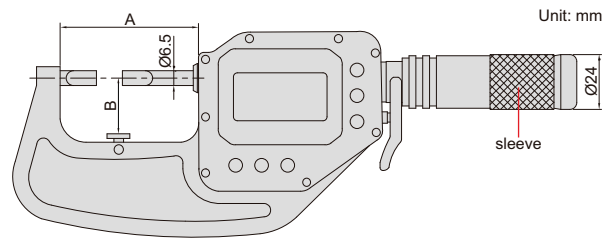
DATA OUTPUT



3352-25A



- Measure the groove diameter of shafts and keyways
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
0.001mm/0.00005"
0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N
Customizable measuring force range 2-12N
Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gage blocks for zero setting (except 0-25mm/0-1")
- Power: rechargeable battery, for 24 hours continuous working



With data interface

Optional accessory:
wireless transmitter, code **7315-3350** page 5
data output cable (keyboard format), code **7302-3350** page 13

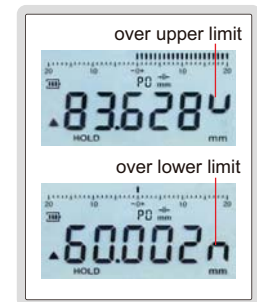
Code	Range	Type	Accuracy	Repeatability	A	B
3352-25A*	0-25mm/0-1"	A	2µm	1µm	63mm	25mm
3352-50A*	25-50mm/1-2"	A	2µm	1µm	88mm	42mm
3352-75A*	50-75mm/2-3"	A	2µm	1µm	113mm	56mm
3352-25B*	0-25mm/0-1"	B	2µm	1µm	63mm	25mm
3352-50B*	25-50mm/1-2"	B	2µm	1µm	88mm	42mm
3352-75B*	50-75mm/2-3"	B	2µm	1µm	113mm	56mm

Built-in wireless

Optional accessory:
wireless receiver (keyboard format, connect up to 15 digital indicators), code **2134-R1**
wireless receiver (serial port format, connect up to 15 digital indicators), code **2134-R2**

Code	Range	Type	Accuracy	Repeatability	A	B
3352-25AWL*	0-25mm/0-1"	A	2µm	1µm	63mm	25mm
3352-50AWL*	25-50mm/1-2"	A	2µm	1µm	88mm	42mm
3352-75AWL*	50-75mm/2-3"	A	2µm	1µm	113mm	56mm
3352-25BWL*	0-25mm/0-1"	B	2µm	1µm	63mm	25mm
3352-50BWL*	25-50mm/1-2"	B	2µm	1µm	88mm	42mm
3352-75BWL*	50-75mm/2-3"	B	2µm	1µm	113mm	56mm

warning when over tolerance



wireless receiver
2134-R1, 2134-R2 (optional)



* Supplied with manufacturer inspection certificate

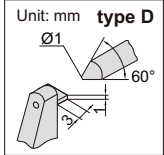
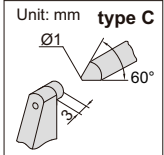
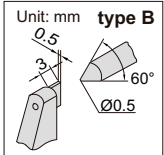
CRIMP HEIGHT MICROMETERS

RELATIVE PRODUCT: DIGITAL CRIMP HEIGHT CALIPER (CODE 1165-150A)

- Measure the height of crimp contact
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

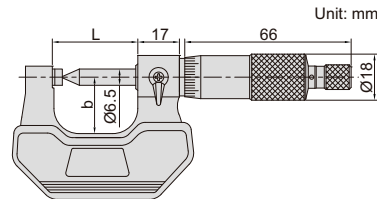


3266-25BA



(mm)

Code	Range	Type	Accuracy	L	b
3266-25BA	0-25mm	B	4µm	34	24
3266-25CA	0-25mm	C	4µm	34	24
3266-50CA	25-50mm	C	4µm	59	32
3266-75CA	50-75mm	C	5µm	85	45
3266-100CA	75-100mm	C	5µm	110	57
3266-25DA	0-25mm	D	4µm	34	24



6

DIGITAL CRIMP HEIGHT MICROMETERS

IP65
WATERPROOF

DATA
OUTPUT

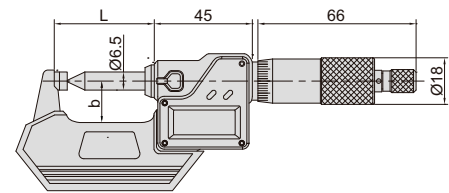
RELATIVE PRODUCT: DIGITAL CRIMP HEIGHT CALIPER (CODE 1165-150A)

- Measure the height of crimp contact
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)



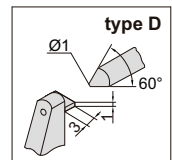
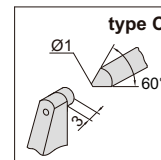
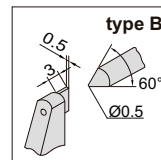
3566-25BA

Unit: mm



(mm)

Code	Range	Type	Accuracy	L	b
3566-25BA	0-25mm/0-1"	B	±4µm	34.5	25
3566-25CA	0-25mm/0-1"	C	±4µm	34.5	25
3566-50CA	25-50mm/0-1"	C	±4µm	59.5	32
3566-75CA	50-75mm/0-1"	C	±5µm	84.5	44.5
3566-100CA	75-100mm/0-1"	C	±5µm	109.5	57
3566-25DA	0-25mm/0-1"	D	±4µm	34.5	25



SPLINE MICROMETERS

INSIZE PLUS
MADE IN EUROPE

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

(mm)

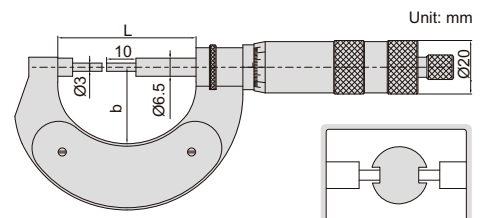
Code	Range	Accuracy	L	b
3658-25*	0-25mm	4µm	62	34
3658-50*	25-50mm	4µm	87	46
3658-75*	50-75mm	5µm	112	60
3658-100*	75-100mm	5µm	139	72
3658-125*	100-125mm	6µm	164	85
3658-150*	125-150mm	6µm	190	97
3658-175*	150-175mm	7µm	215	110
3658-200*	175-200mm	7µm	240	122
3658-225*	200-225mm	8µm	264	135
3658-250*	225-250mm	8µm	290	148

INSPECTION
CERTIFICATE



3658-25

- Meet DIN863-3
- Measure splined shafts, slots and keyways
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Optional accessory: setting standards (code 7388)

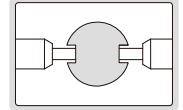


Unit: mm

*Supplied with manufacturer inspection certificate

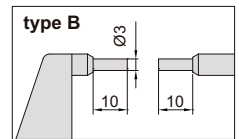
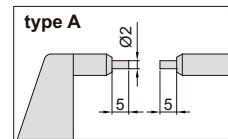
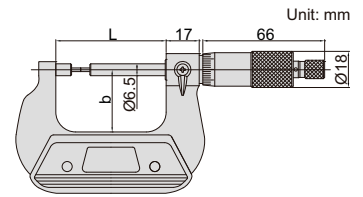
SPLINE MICROMETERS

- Meet DIN863-3
- Measure splined shafts, slots and keyways
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)



3233-25BA

Code	Range	Type	Accuracy	L	b
3233-25A	0-25mm	A	4μm	57	32
3233-50A	25-50mm	A	4μm	82	44.5
3233-75A	50-75mm	A	5μm	107	57
3233-100A	75-100mm	A	5μm	132.6	69.5
3233-125A	100-125mm	A	6μm	158	82
3233-150A	125-150mm	A	6μm	183.4	94.5
3233-175A	150-175mm	A	7μm	208.8	107
3233-25BA	0-25mm	B	4μm	57	32
3233-50BA	25-50mm	B	4μm	82	44.5
3233-75BA	50-75mm	B	5μm	107	57
3233-100BA	75-100mm	B	5μm	132.6	69.5
3233-125BA	100-125mm	B	6μm	158	82
3233-150BA	125-150mm	B	6μm	183.4	94.5
3233-175BA	150-175mm	B	7μm	208.8	107

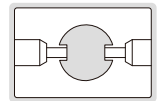


IP65
WATERPROOF

DATA
OUTPUT

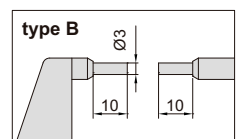
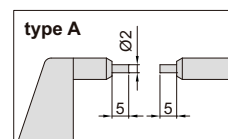
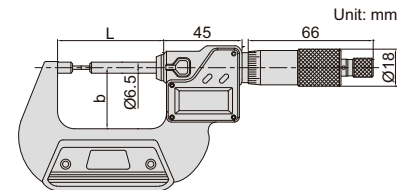
DIGITAL SPLINE MICROMETERS

- Measure splined shafts, slots and keyways
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)



3533-25BA

Code	Range	Type	Accuracy	L	b
3533-25A	0-25mm/0-1"	A	±4μm	57	32
3533-50A	25-50mm/1-2"	A	±4μm	82	44.5
3533-75A	50-75mm/2-3"	A	±5μm	107	57
3533-100A	75-100mm/3-4"	A	±5μm	132.6	69.5
3533-125A	100-125mm/4-5"	A	±6μm	158	82
3533-150A	125-150mm/5-6"	A	±6μm	183.4	94.5
3533-175A	150-175mm/6-7"	A	±7μm	208.8	107
3533-25BA	0-25mm/0-1"	B	±4μm	57	32
3533-50BA	25-50mm/1-2"	B	±4μm	82	44.5
3533-75BA	50-75mm/2-3"	B	±5μm	107	57
3533-100BA	75-100mm/3-4"	B	±5μm	132.6	69.5
3533-125BA	100-125mm/4-5"	B	±6μm	158	82
3533-150BA	125-150mm/5-6"	B	±6μm	183.4	94.5
3533-175BA	150-175mm/6-7"	B	±7μm	208.8	107



HIGH PRECISION DIGITAL SPLINE MICROMETERS/SNAP GAGES

ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

NON-ROTATING SPINDLE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

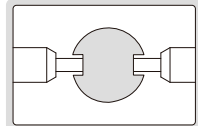
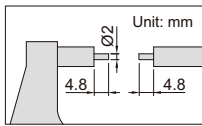
IP65 WATERPROOF

INSPECTION CERTIFICATE

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

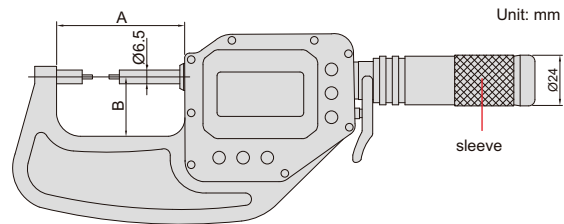
DATA OUTPUT

6



3356-25

- Measure splined shafts, slots and keyways
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
 - 0.001mm/0.00005"
 - 0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N
 - Customizable measuring force range 2-12N
 - Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gage blocks for zero setting (except 0-25mm/0-1")
- Power: rechargeable battery, for 24 hours continuous working



With data interface

Optional accessory:
 wireless transmitter, code 7315-3350 page 5
 data output cable (keyboard format), code 7302-3350 page 13

Code	Range	Accuracy	Repeatability	A	B
3356-25*	0-25mm/0-1"	2µm	1µm	63mm	25mm
3356-50*	25-50mm/1-2"	2µm	1µm	88mm	42mm
3356-75*	50-75mm/2-3"	2µm	1µm	113mm	56mm

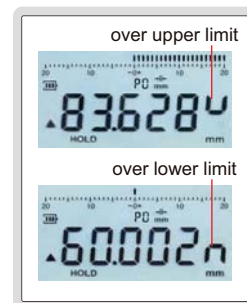
Built-in wireless

Optional accessory:
 wireless receiver (keyboard format, connect up to 15 digital indicators), code 2134-R1
 wireless receiver (serial port format, connect up to 15 digital indicators), code 2134-R2

Code	Range	Accuracy	Repeatability	A	B
3356-25WL*	0-25mm/0-1"	2µm	1µm	63mm	25mm
3356-50WL*	25-50mm/1-2"	2µm	1µm	88mm	42mm
3356-75WL*	50-75mm/2-3"	2µm	1µm	113mm	56mm

*Supplied with manufacturer inspection certificate

warning when over tolerance



wireless receiver 2134-R1, 2134-R2 (optional)

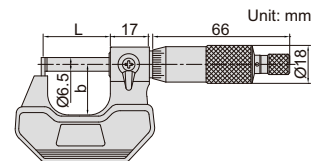
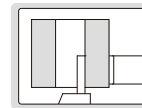


CYLINDRICAL ANVIL TUBE MICROMETERS

- Measure wall thickness of tubes
- Graduation 0.01mm
- Ratchet stop
- Carbide spindle tip
- Supplied with setting standards (except 0-25mm)

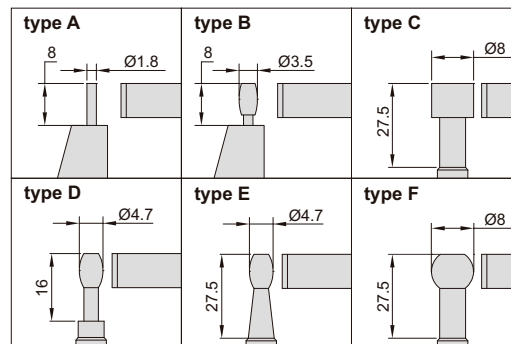


3261-25A



6

(mm)					
Code	Range	Type	Accuracy	L	b
3261-25A	0-25mm	A	6µm	36	25
3261-50A	25-50mm	A	6µm	61	32
3261-25BA	0-25mm	B	6µm	36	25
3261-50BA	25-50mm	B	6µm	61	32
3261-25CA	0-25mm	C	6µm	36	25
3261-50CA	25-50mm	C	6µm	61	32
3261-25DA	0-25mm	D	6µm	36	25
3261-50DA	25-50mm	D	6µm	61	32
3261-25EA	0-25mm	E	6µm	36	25
3261-50EA	25-50mm	E	6µm	61	32
3261-25FA	0-25mm	F	6µm	36	25
3261-50FA	25-50mm	F	6µm	61	32



IP65
WATERPROOF

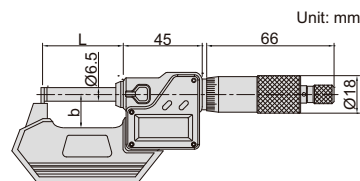
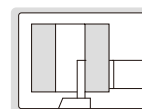
DATA
OUTPUT

DIGITAL CYLINDRICAL ANVIL TUBE MICROMETERS

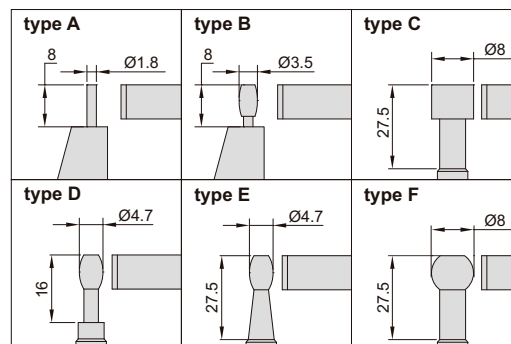
- Measure wall thickness of tubes
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide spindle tip
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)



3561-25A



(mm)					
Code	Range	Type	Accuracy	L	b
3561-25A	0-25mm/0-1"	A	±6µm	36	25
3561-50A	25-50mm/1-2"	A	±6µm	61	32
3561-25BA	0-25mm/0-1"	B	±6µm	36	25
3561-50BA	25-50mm/1-2"	B	±6µm	61	32
3561-25CA	0-25mm/0-1"	C	±6µm	36	25
3561-50CA	25-50mm/1-2"	C	±6µm	61	32
3561-25DA	0-25mm/0-1"	D	±6µm	36	25
3561-50DA	25-50mm/1-2"	D	±6µm	61	32
3561-25EA	0-25mm/0-1"	E	±6µm	36	25
3561-50EA	25-50mm/1-2"	E	±6µm	61	32
3561-25FA	0-25mm/0-1"	F	±6µm	36	25
3561-50FA	25-50mm/1-2"	F	±6µm	61	32



SPHERICAL ANVIL TUBE MICROMETERS

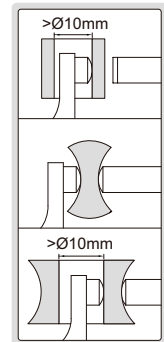
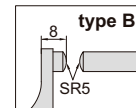
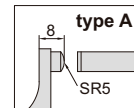
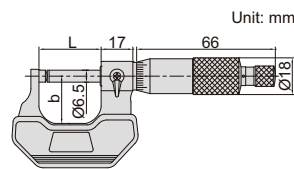
6

- Meet DIN863-3
- Measure wall thickness of tubes
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)



3260-25A

Code	Range	Type	Accuracy	(mm)	
				L	b
3260-25A	0-25mm	A	4μm	32	24
3260-50A	25-50mm	A	4μm	57	32
3260-75A	50-75mm	A	5μm	82	44.5
3260-100A	75-100mm	A	5μm	107	57
3260-25SA	0-25mm	B	4μm	32	24
3260-50SA	25-50mm	B	4μm	57	32
3260-75SA	50-75mm	B	5μm	82	44.5
3260-100SA	75-100mm	B	5μm	107	57



DIGITAL SPHERICAL ANVIL TUBE MICROMETERS

IP65
WATERPROOF

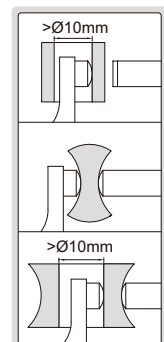
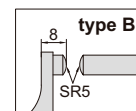
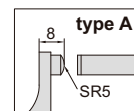
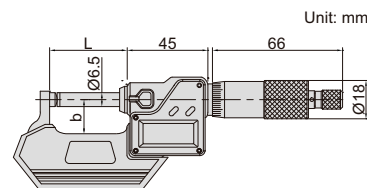
DATA
OUTPUT

- Measure wall thickness of tubes
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)



3560-25A

Code	Range	Type	Accuracy	(mm)	
				L	b
3560-25A	0-25mm/0-1"	A	±4μm	32	24
3560-50A	25-50mm/1-2"	A	±4μm	57	32
3560-75A	50-75mm/2-3"	A	±5μm	82	44.5
3560-100A	75-100mm/3-4"	A	±5μm	107	57
3560-25SA	0-25mm/0-1"	B	±4μm	32	24
3560-50SA	25-50mm/1-2"	B	±4μm	57	32
3560-75SA	50-75mm/2-3"	B	±5μm	82	44.5
3560-100SA	75-100mm/3-4"	B	±5μm	107	57



HIGH PRECISION DIGITAL SPHERICAL ANVIL TUBE MICROMETERS/SNAP GAGES

IP65
WATERPROOF

NON-ROTATING
SPINDLE

ABSOLUTE ENCODER, THE ORIGINAL
DATA REMAINS AFTER POWER OFF

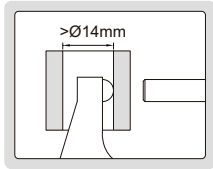
ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED,
PRESS THE FORK, THE SPINDLE RETRACTS 3MM

MEASUREMENT ACCURACY IS NOT
AFFECTED BY THE USE OF SLEEVE

INSPECTION
CERTIFICATE

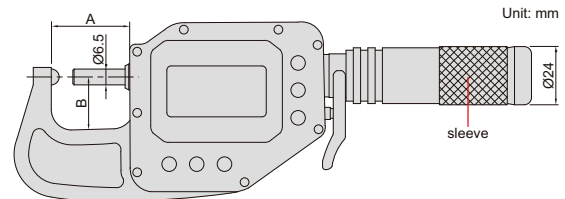
ATTENTION: RECHARGEABLE BATTERY,
FOR 24 HOURS CONTINUOUS WORKING

DATA
OUTPUT

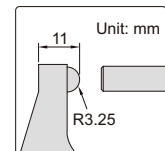


3355-25

- Measure wall thickness of tubes
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
0.001mm/0.00005"
0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N
Customizable measuring force range 2-12N
Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gage blocks for zero setting (except 0-25mm/0-1")
- Power: rechargeable battery, for 24 hours continuous working



Unit: mm



Unit: mm

With data interface

Optional accessory:
wireless transmitter, code **7315-3350** page 5
data output cable (keyboard format), code **7302-3350** page 13

Code	Range	Accuracy	Repeatability	A	B
3355-25 *	0-25mm/0-1"	2µm	1µm	38mm	24mm
3355-50 *	25-50mm/1-2"	2µm	1µm	63mm	25mm
3355-75 *	50-75mm/2-3"	2µm	1µm	88mm	42mm
3355-100 *	75-100mm/3-3.95"	2µm	1µm	113mm	56mm

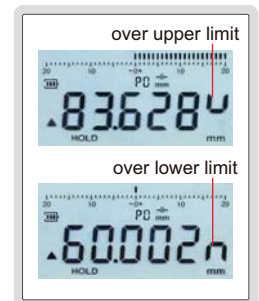
Built-in wireless

Optional accessory:
wireless receiver (keyboard format, connect up to 15 digital indicators), code **2134-R1**
wireless receiver (serial port format, connect up to 15 digital indicators), code **2134-R2**

Code	Range	Accuracy	Repeatability	A	B
3355-25WL *	0-25mm/0-1"	2µm	1µm	38mm	24mm
3355-50WL *	25-50mm/1-2"	2µm	1µm	63mm	25mm
3355-75WL *	50-75mm/2-3"	2µm	1µm	88mm	42mm
3355-100WL *	75-100mm/3-3.95"	2µm	1µm	113mm	56mm

* Supplied with manufacturer inspection certificate

warning when
over tolerance



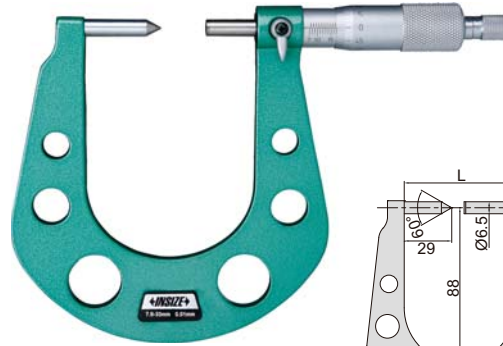
wireless receiver
2134-R1, 2134-R2 (optional)



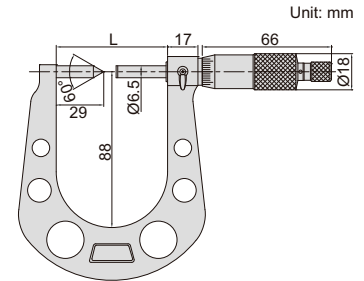
DISK BRAKE MICROMETERS

RELATIVE PRODUCT: DIGITAL DISK BRAKE AND PAD CALIPER
DIGITAL DRUM BRAKE CALIPER (CODE 1162-125A, 1167-150A, 1168-300A)

- Measure thickness of disk brakes
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards



3288-33A



Code	Range	Accuracy	L
3288-33A	7.6-33mm	5µm	64.5mm
3288-50A	25-50mm	5µm	82mm

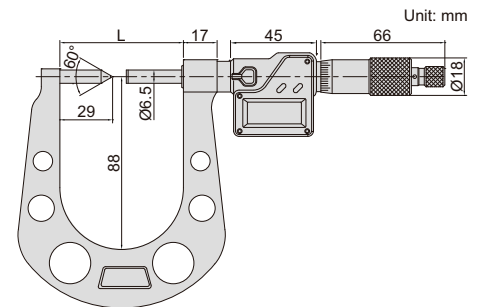
DIGITAL DISK BRAKE MICROMETERS

RELATIVE PRODUCT: DIGITAL DISK BRAKE AND PAD CALIPER
DIGITAL DRUM BRAKE CALIPER (CODE 1162-125A, 1167-150A, 1168-300A)

- Measure thickness of disk brakes
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)



3588-33A



IP65
WATERPROOF

DATA
OUTPUT

Code	Range	Accuracy	L
3588-33A	7.6-33mm/0.3-1.3"	±5µm	64.5mm
3588-50A	25-50mm/1-2"	±5µm	82mm

SHEET METAL MICROMETERS

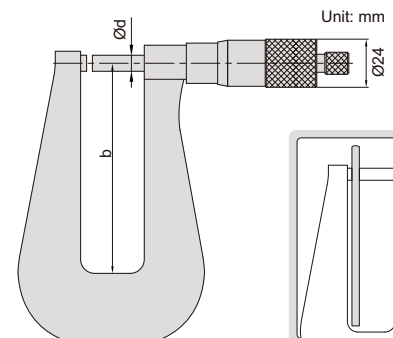
INSIZE PLUS
MADE IN EUROPE

- Deep frame suitable for sheet metal, paper and plastic
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Optional accessory: setting standards (code 7388)

**ATTENTION: SETTING
STANDARDS ARE NOT INCLUDED**



3653-252A



Code	Range	Accuracy	b	Ød
3653-251A	0-25mm	4µm	50	6.5
3653-252A	0-25mm	5µm	100	8
3653-253A	0-25mm	6µm	150	6.5
3653-254A	0-25mm	8µm	250	6.5
3653-501A	25-50mm	4µm	50	8
3653-502A	0-50mm	4µm	50	8
3653-503A	0-50mm	5µm	100	8
3653-100A	50-100mm	5µm	100	8

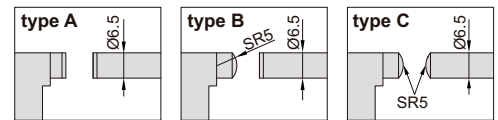
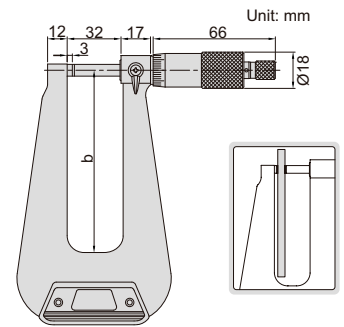
SHEET METAL MICROMETERS

- Deep frame suitable for sheet metal, paper and plastic
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces

Code	Range	Type	Accuracy	b
3239-253	0-25mm	A	7µm	155mm
3239-253F	0-25mm	B	7µm	155mm
3239-254F	0-25mm	B	10µm	310mm
3239-253S	0-25mm	C	7µm	155mm



3239-253



DATA
OUTPUT

IP65
WATERPROOF

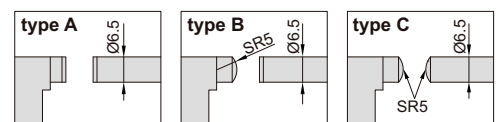
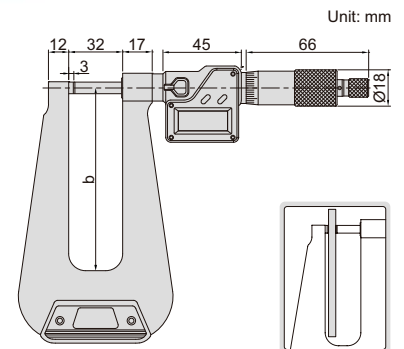
DIGITAL SHEET METAL MICROMETERS

- Deep frame suitable for sheet metal, paper and plastic
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)

Code	Range	Type	Accuracy	b
3539-253A	0-25mm/0-1"	A	±7µm	155mm
3539-253FA	0-25mm/0-1"	B	±7µm	155mm
3539-254FA	0-25mm/0-1"	B	±10µm	310mm
3539-253SA	0-25mm/0-1"	C	±7µm	155mm



3539-253A

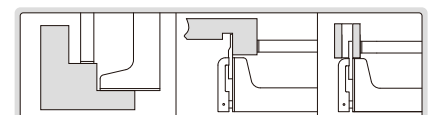
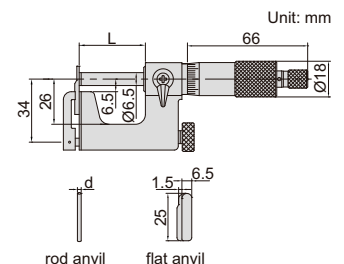


INTERCHANGEABLE ANVIL MICROMETERS

- Measure tube thickness, shoulder edge distance, rivet head height, etc.
- Supplied with flat anvil and rod anvil
- Graduation 0.01mm
- Ratchet stop
- Carbide spindle tip
- Setting standards are included (except 0-25mm)



3262-25A



Code	Range	Accuracy	L	d
3262-25A	0-25mm	4µm	28.5mm	Ø3mm
3262-50A	25-50mm	4µm	53.5mm	Ø5mm

DIGITAL INTERCHANGEABLE ANVIL MICROMETERS

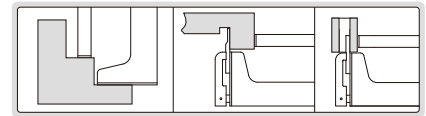
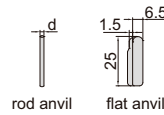
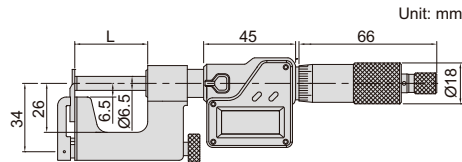
IP65
WATERPROOF

DATA
OUTPUT

- Measure tube thickness, shoulder edge distance, rivet head height, etc.
- Supplied with flat anvil and rod anvil
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide spindle tip
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)

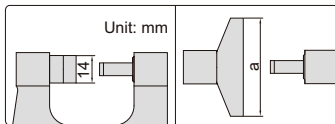


3562-25A

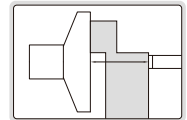


Code	Range	Accuracy	L	d
3562-25A	0-25mm/0-1"	±4µm	28.5mm	Ø3mm
3562-50A	25-50mm/1-2"	±4µm	53.5mm	Ø5mm

LARGE ANVIL MICROMETERS

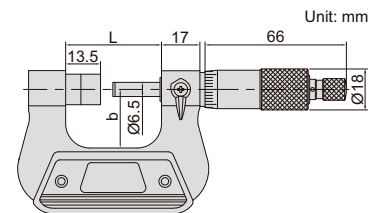


3234-25A



- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

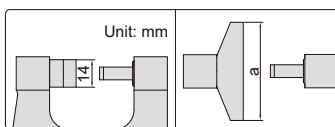
Code	Range	Accuracy	L	a	b
3234-25A	0-25mm	4µm	42mm	50mm	26mm
3234-50A	25-50mm	4µm	67mm	60mm	38mm



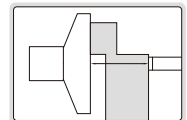
DIGITAL LARGE ANVIL MICROMETERS

DATA
OUTPUT

IP65
WATERPROOF

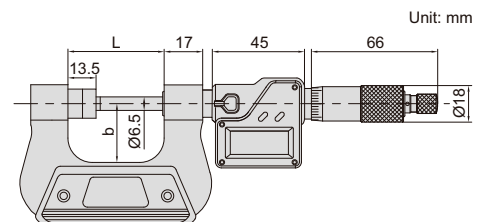


3534-25A



- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)

Code	Range	Accuracy	L	a	b
3534-25A	0-25mm/0-1"	±4µm	42mm	50mm	26mm
3534-50A	25-50mm/1-2"	±4µm	67mm	60mm	38mm

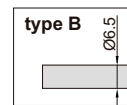
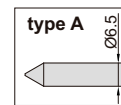
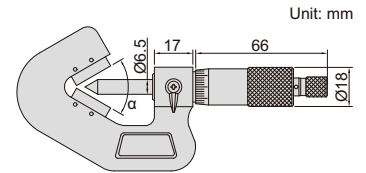


V-ANVIL MICROMETERS



3290-153A

- Measure the diameter of parts or cutting tools with odd grooves, such as taps, reamers and end mills
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards



Code	Range	Flutes	Accuracy	α	Type
3290-153A	1-15mm	3	4μm	60°	A
3290-203A	5-20mm	3	4μm	60°	B
3290-353A	20-35mm	3	5μm	60°	B
3290-503A	35-50mm	3	5μm	60°	B
3290-653A	50-65mm	3	6μm	60°	B
3290-803A	65-80mm	3	6μm	60°	B
3290-953A	80-95mm	3	7μm	60°	B
3290-255A	5-25mm	5	4μm	108°	B

Code	Range	Flutes	Accuracy	α	Type
3290-455A	25-45mm	5	5μm	108°	B
3290-655A	45-65mm	5	6μm	108°	B
3290-855A	65-85mm	5	7μm	108°	B
3290-1055A	85-105mm	5	8μm	108°	B
3290-257A	5-25mm	7	4μm	128°34'17"	B
3290-457A	25-45mm	7	5μm	128°34'17"	B
3290-657A	45-65mm	7	6μm	128°34'17"	B
3290-857A	65-85mm	7	7μm	128°34'17"	B

IP65
WATERPROOF

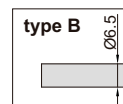
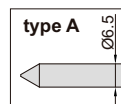
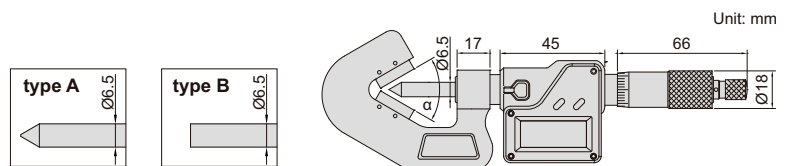
DATA
OUTPUT

DIGITAL V-ANVIL MICROMETERS



3590-153A

- Measure the diameter of parts or cutting tools with odd grooves, such as taps, reamers and end mills
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)



Code	Range	Flutes	Accuracy	α	Type
3590-153A	1-15mm/0.04-0.6"	3	±4μm	60°	A
3590-203A	5-20mm/0.2-0.8"	3	±4μm	60°	B
3590-353A	20-35mm/0.8-1.4"	3	±5μm	60°	B
3590-503A	35-50mm/1.4-2.0"	3	±5μm	60°	B
3590-653A	50-65mm/2.0-2.6"	3	±6μm	60°	B
3590-803A	65-80mm/2.6-3.2"	3	±6μm	60°	B
3590-953A	80-95mm/3.2-3.6"	3	±6μm	60°	B
3590-255A	5-25mm/0.2-1.0"	5	±4μm	108°	B

Code	Range	Flutes	Accuracy	α	Type
3590-455A	25-45mm/1.0-1.8"	5	±5μm	108°	B
3590-655A	45-65mm/1.8-2.6"	5	±6μm	108°	B
3590-855A	65-85mm/2.6-3.4"	5	±6μm	108°	B
3590-1055A	85-105mm/3.4-4.2"	5	±6μm	108°	B
3590-257A	5-25mm/0.2-1.0"	7	±4μm	128°34'17"	B
3590-457A	25-45mm/1.0-1.8"	7	±4μm	128°34'17"	B
3590-657A	45-65mm/1.8-2.6"	7	±5μm	128°34'17"	B
3590-857A	65-85mm/2.6-3.4"	7	±5μm	128°34'17"	B

NON-ROTATING SPINDLE UNIVERSAL MICROMETERS

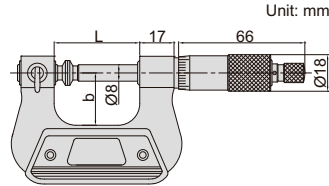
6



3280-25A

NON-ROTATING SPINDLE

- Meet DIN863-3
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with 7 pairs of anvil/spindle tip
- Setting standards are included (except 0-25mm)
- Optional accessory: 55° anvil/spindle tip (code 3280-SP1 and 3280-SP2)



Code	Range	Accuracy	L	b
3280-25A	0-25mm	4µm	42mm	26mm
3280-50A	25-50mm	4µm	67mm	38mm
3280-75A	50-75mm	5µm	92mm	50mm
3280-100A	75-100mm	5µm	118mm	62mm
3280-125A	100-125mm	6µm	143mm	70mm
3280-150A	125-150mm	6µm	168mm	82mm
3280-175A	150-175mm	7µm	192mm	95mm
3280-200A	175-200mm	7µm	217mm	107mm

Anvil/spindle tip (included) Unit: mm

Flat		
Spherical		
Spline		
Disk		
Blade		
Knife-edge		
Point		

55° anvil/spindle tip (optional) Unit: mm

Code 3280-SP1 Knife-edge		
Code 3280-SP2 Point		

DIGITAL UNIVERSAL MICROMETERS

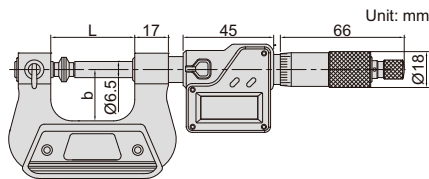
DATA OUTPUT

NON-ROTATING SPINDLE



3580-25A

- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with 7 pairs of anvil/spindle tip
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: 55° anvil/spindle tip code 3280-SP1 and 3280-SP2, data output cable (code 7315-31 page 4, 7302-30 page 12)



Code	Range	Accuracy	L	b
3580-25A	0-25mm/0-1"	±4µm	42	26
3580-50A	25-50mm/1-2"	±4µm	67	38
3580-75A	50-75mm/2-3"	±5µm	92	50
3580-100A	75-100mm/3-4"	±5µm	118	62
3580-125A	100-125mm/4-5"	±6µm	143	70
3580-150A	125-150mm/5-6"	±6µm	168	82
3580-175A	150-175mm/6-7"	±7µm	192	95
3580-200A	175-200mm/7-8"	±7µm	217	107

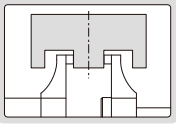
Anvil/spindle tip (included) Unit: mm

Flat		
Spherical		
Spline		
Disk		
Blade		
Knife-edge		
Point		

55° anvil/spindle tip (optional) Unit: mm

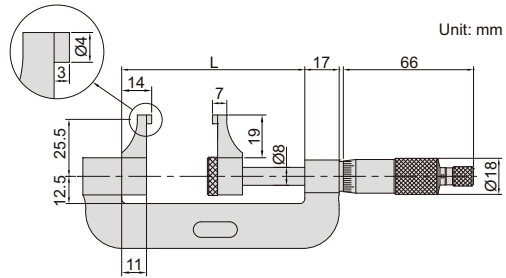
Code 3280-SP1 Knife-edge		
Code 3280-SP2 Point		

CALIPER TYPE MICROMETERS



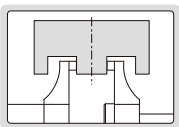
3238-25

- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)



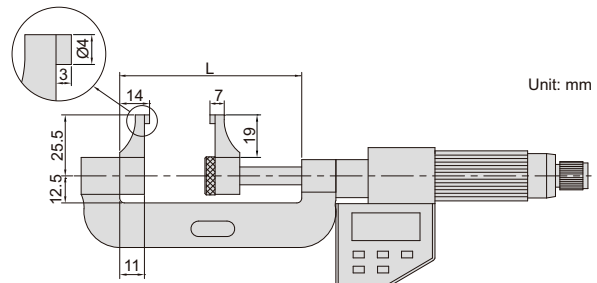
Code	Range	Accuracy	L
3238-25	0-25mm	10µm	56mm
3238-50	25-50mm	10µm	81mm
3238-75	50-75mm	11µm	106mm
3238-100	75-100mm	11µm	131mm

DIGITAL CALIPER TYPE MICROMETERS



3538-25

- Resolution: 0.001mm/0.00005"
- Non-rotating spindle
- Buttons: on/off, data set, mm/in, ABS/INC
- Data output
- Automatic power off
- Ratchet friction thimble
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm/0-1")



Code	Range	Accuracy	L
3538-25	0-25mm/0-1"	±10µm	56mm
3538-50	25-50mm/1-2"	±10µm	81mm
3538-75	50-75mm/2-3"	±11µm	106mm
3538-100	75-100mm/3-4"	±11µm	131mm

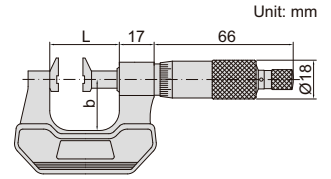
JAW TYPE MICROMETERS

NON-ROTATING SPINDLE

- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

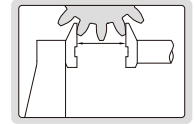
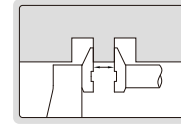
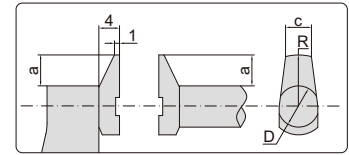


3283-25A



6

Code	Range	Accuracy	L	a	b	c	R	D
3283-25A	0-25mm	4µm	34	6	24	5	10	8
3283-50A	25-50mm	4µm	59	6	32	5	10	8
3283-75A	50-75mm	5µm	85	6	45	5	10	8
3283-100A	75-100mm	5µm	110	6	57	5	10	8
3283-125A	100-125mm	6µm	138	9	70	8	15	12
3283-150A	125-150mm	6µm	163	9	82	8	15	12
3283-175A	150-175mm	7µm	188	9	95	8	15	12
3283-200A	175-200mm	7µm	214	9	107	8	15	12



DIGITAL JAW TYPE MICROMETERS

DATA OUTPUT

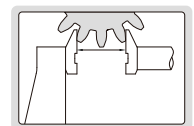
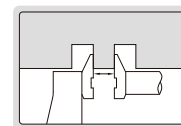
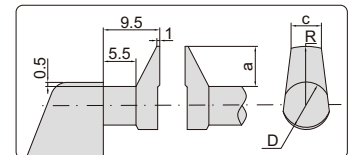
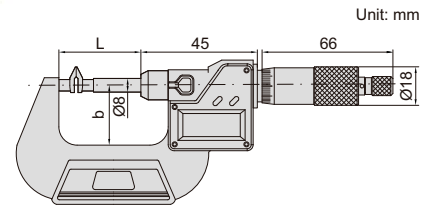
NON-ROTATING SPINDLE



3583-25A

- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)

Code	Range	Accuracy	L	a	b	c	R	D
3583-25A	0-25mm/0-1"	±4µm	43	6.5	32	5	10	8
3583-50A	25-50mm/1-2"	±4µm	85	6.5	44.5	5	10	8
3583-75A	50-75mm/2-3"	±5µm	110	6.5	57	5	10	8
3583-100A	75-100mm/3-4"	±5µm	135	6.5	70	5	10	8
3583-125A	100-125mm/4-5"	±6µm	160	11.5	86	8	15	12
3583-150A	125-150mm/5-6"	±6µm	186	11.5	94.5	8	15	12
3583-175A	150-175mm/6-7"	±7µm	211	11.5	107	8	15	12
3583-200A	175-200mm/7-8"	±7µm	236	11.5	120	8	15	12



ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

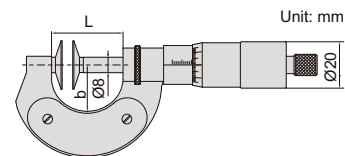
DISK MICROMETERS

INSIZE PLUS
MADE IN EUROPE

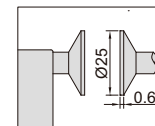
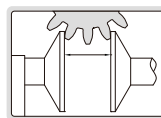
- Graduation: 0.01mm
- Ratchet stop
- One turn of sleeve makes 0.5mm spindle feed
- Optional accessory: setting standards (code **7386**)



3676-25



Unit: mm



(mm)

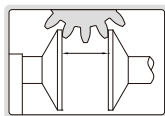
Code	Range	Accuracy	L	b
3676-25	0-25mm	4µm	37	24
3676-50	25-50mm	4µm	62	34
3676-75	50-75mm	5µm	87	46
3676-100	75-100mm	5µm	112	60
3676-125	100-125mm	6µm	139	72
3676-150	125-150mm	6µm	164	85
3676-175	150-175mm	7µm	190	97
3676-200	175-200mm	7µm	215	110
3676-225	200-225mm	8µm	240	122
3676-250	225-250mm	8µm	264	135
3676-275	250-275mm	9µm	290	148
3676-300	275-300mm	9µm	315	160

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

LIGHT WEIGHT

LARGE RANGE DISK MICROMETERS

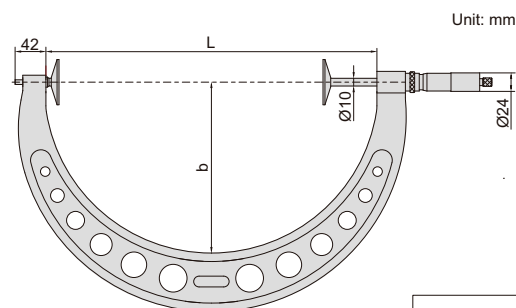
INSIZE PLUS
MADE IN EUROPE



- Graduation: 0.01mm
- Ratchet stop
- Quick measurement, one turn of sleeve makes 1mm spindle feed
- Light weight
- Optional accessory: setting standards (code **7386**)



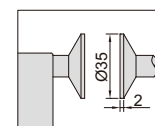
3677-350



Unit: mm

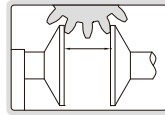
(mm)

Code	Range	Accuracy	L	b	Weight
3677-350	300-350mm	8µm	370	190	1.65kg
3677-400	350-400mm	8µm	430	220	1.95kg
3677-450	400-450mm	9µm	475	250	2.30kg
3677-500	450-500mm	9µm	530	273	2.45kg
3677-550	500-550mm	10µm	570	291	2.55kg
3677-600	550-600mm	10µm	630	323	3.15kg
3677-650	600-650mm	10µm	675	351	3.45kg
3677-700	650-700mm	10µm	730	378	3.85kg
3677-750	700-750mm	10µm	785	401	4.05kg
3677-800	750-800mm	10µm	830	423	4.25kg
3677-850	800-850mm	11µm	885	440	4.45kg
3677-900	850-900mm	11µm	930	473	5.05kg
3677-950	900-950mm	11µm	980	503	5.95kg
3677-1000	950-1000mm	11µm	1030	520	6.25kg



DISK MICROMETERS

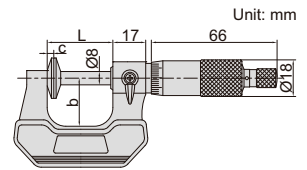
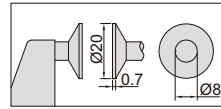
- Measure root tangent length of gear
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards



3282-25

Code	Range	Accuracy	Parallelism	L	b	c
3282-25	0-25mm	4μm	5μm	34	24	3.3
3282-50	25-50mm	4μm	5μm	59	32	3.3
3282-75	50-75mm	5μm	5μm	85	45	3.3
3282-100	75-100mm	5μm	5μm	110	57	3.3

(mm)

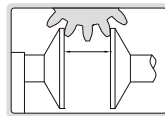


Unit: mm

NON-ROTATING SPINDLE DISK MICROMETERS

NON-ROTATING SPINDLE

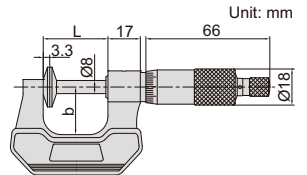
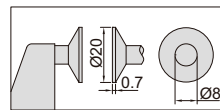
- Measure root tangent length of gear
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards



3294-25

Code	Range	Accuracy	Parallelism	L	b
3294-25	0-25mm	4μm	5μm	34	24
3294-50	25-50mm	4μm	5μm	59	32
3294-75	50-75mm	5μm	5μm	85	45
3294-100	75-100mm	5μm	5μm	110	57

(mm)



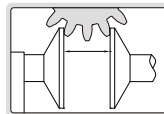
Unit: mm

DIGITAL NON-ROTATING SPINDLE DISK MICROMETERS

DATA OUTPUT

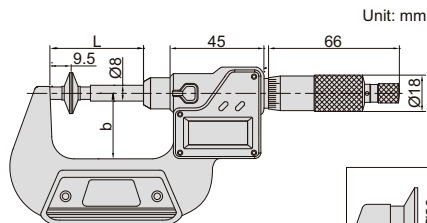
NON-ROTATING SPINDLE

- Measure root tangent length of gear
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)

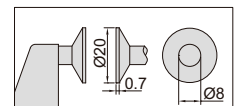


3594-25A

Code	Range	Accuracy	Parallelism	L	b
3594-25A	0-25mm/0-1"	±4μm	5μm	43mm	32mm
3594-50A	25-50mm/1-2"	±4μm	5μm	68mm	44.5mm
3594-75A	50-75mm/2-3"	±5μm	5μm	93mm	57mm
3594-100A	75-100mm/3-4"	±5μm	5μm	118.5mm	70mm



Unit: mm



HIGH PRECISION DIGITAL DISK MICROMETERS/SNAP GAGES

DATA
OUTPUT

NON-ROTATING
SPINDLE

ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED,
PRESS THE FORK, THE SPINDLE RETRACTS 3MM

ABSOLUTE ENCODER, THE ORIGINAL
DATA REMAINS AFTER POWER OFF

MEASUREMENT ACCURACY IS NOT
AFFECTED BY THE USE OF SLEEVE

ATTENTION: RECHARGEABLE BATTERY,
FOR 24 HOURS CONTINUOUS WORKING

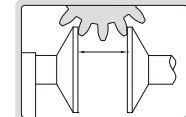
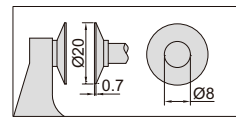
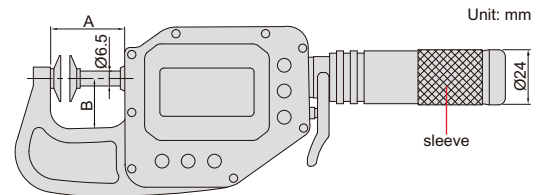
IP65
WATERPROOF

INSPECTION
CERTIFICATE



3353-25

- Measure root tangent length of gear
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
0.001mm/0.00005"
0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N
Customizable measuring force range 2-12N
Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gage blocks for zero setting
- Power: rechargeable battery, for 24 hours continuous working



With data interface

Optional accessory:
wireless transmitter, code **7315-3350** page 5
data output cable (keyboard format), code **7302-3350** page 13

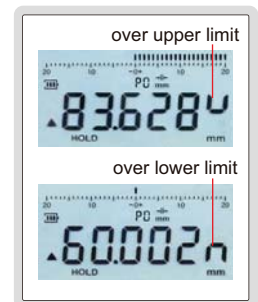
Code	Range	Accuracy	Repeatability	Parallelism	A	B
3353-25 *	0-25mm/0-1"	4µm	1µm	4µm	38mm	24mm
3353-50 *	25-50mm/1-2"	4µm	1µm	4µm	63mm	25mm
3353-75 *	50-75mm/2-3"	5µm	1µm	5µm	88mm	42mm
3353-100 *	75-100mm/3-3.95"	5µm	1µm	5µm	113mm	56mm
3353-125 *	100-125mm/4-5"	6µm	2µm	6µm	128mm	62.5mm
3353-150 *	125-150mm/5-6"	6µm	2µm	6µm	153mm	75mm

Built-in wireless

Optional accessory:
wireless receiver (keyboard format, connect up to 15 digital indicators), code **2134-R1**
wireless receiver (serial port format, connect up to 15 digital indicators), code **2134-R2**

Code	Range	Accuracy	Repeatability	Parallelism	A	B
3353-25WL *	0-25mm/0-1"	4µm	1µm	4µm	38mm	24mm
3353-50WL *	25-50mm/1-2"	4µm	1µm	4µm	63mm	25mm
3353-75WL *	50-75mm/2-3"	5µm	1µm	5µm	88mm	42mm
3353-100WL *	75-100mm/3-3.95"	5µm	1µm	5µm	113mm	56mm
3353-125WL *	100-125mm/4-5"	6µm	2µm	6µm	128mm	62.5mm
3353-150WL *	125-150mm/5-6"	6µm	2µm	6µm	153mm	75mm

warning when
over tolerance



wireless receiver
2134-R1, 2134-R2 (optional)



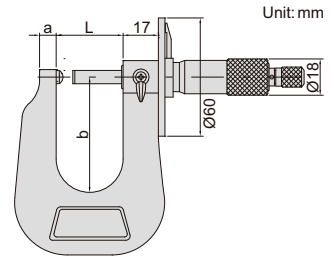
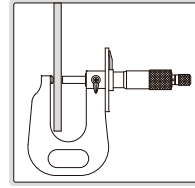
* Supplied with manufacturer inspection certificate

SHEET METAL MICROMETERS

- Meet DIN863-3
- Measure thickness of sheet metal, paper, plastic and rubber parts
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces



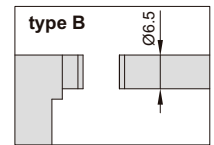
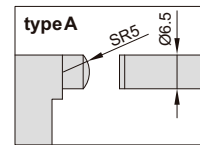
3263-25A



Unit: mm

(mm)

Code	Range	Type	Accuracy	L	a	b
3263-15A	0-15mm	A	4µm	22	8	50
3263-25A	0-25mm	A	4µm	32	8	50
3263-50A	0-50mm	A	5µm	57	12	100
3263-15B	0-15mm	B	4µm	22	8	50
3263-25B	0-25mm	B	4µm	32	8	50
3263-50B	0-50mm	B	5µm	57	12	100



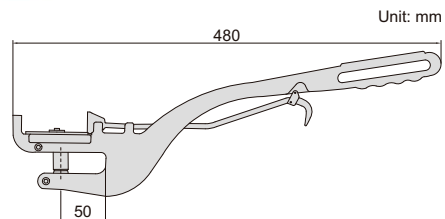
MICROMETERS FOR HOT PLATE

- Measure thickness of hot rolling sheet metal
- Carbide measuring faces
- Supplied with setting standard (except 0-15mm)



3264-15

Code	Range	Graduation	Accuracy
3264-15	0-15mm	0.05mm	0.05mm
3264-30	15-30mm	0.05mm	0.05mm
3264-45	30-45mm	0.05mm	0.05mm
3264-60	45-60mm	0.05mm	0.05mm
3264-75	60-75mm	0.05mm	0.05mm
3264-90	75-90mm	0.05mm	0.05mm
3264-105	90-105mm	0.05mm	0.05mm



HUB MICROMETERS

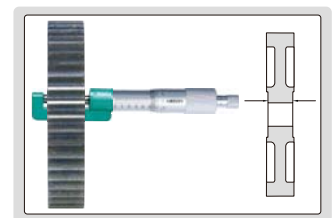
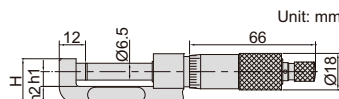
- Meet DIN863-3
- Measure hub thickness and shoulder inside a bore
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)



3292-25

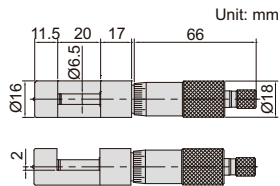
(mm)

Code	Range	Accuracy	h1	h2	H
3292-25	0-25mm	4µm	6	9	18.7
3292-50	25-50mm	4µm	6.5	11	21.2
3292-75	50-75mm	5µm	6.5	11	21.2
3292-100	75-100mm	5µm	6.5	11	21.2

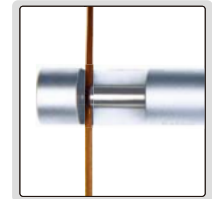


WIRE MICROMETER

- Meet DIN863-3
- Measure diameter of wires and small balls
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces



3285-10



Code	Range	Accuracy
3285-10	0-10mm	4µm

CAN SEAM MICROMETERS



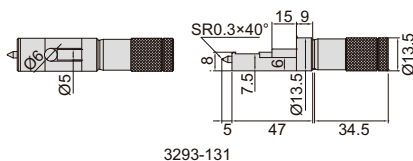
3293-131



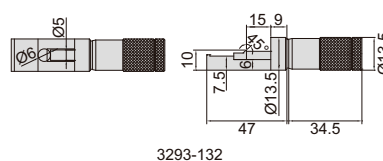
3293-132



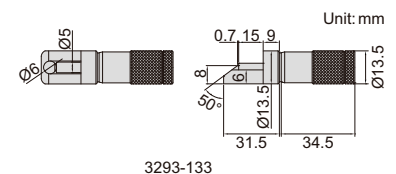
3293-133



3293-131



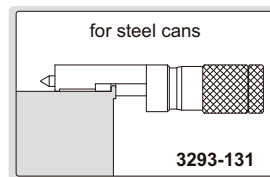
3293-132



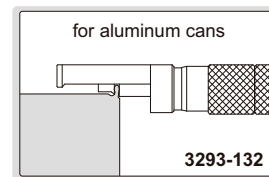
3293-133

- Measure the width, height and depth of can seams
- Graduation 0.01mm

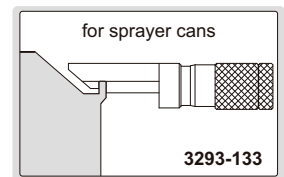
Code	Range	Accuracy
3293-131	0-13mm	4µm
3293-132	0-13mm	4µm
3293-133	0-13mm	4µm



3293-131



3293-132



3293-133

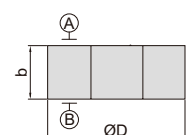
OPTICAL PARALLELS

- Check the flatness and parallelism of measuring faces of micrometer
- Flatness of A and B: 0.1µm
- Parallelism between A and B: 0.6µm



4184-41A

Code	Parallels included (b)	ØD	Applicable micrometer
4184-41A	15.62mm, 15.75mm, 15.87mm, 16.00mm	30mm	0-25mm
4184-42A	40.62mm, 40.75mm, 40.87mm, 41.00mm	30mm	25-50mm
4184-43B	65.62mm, 65.75mm, 65.87mm, 66.00mm	40mm	50-75mm
4184-44B	90.62mm, 90.75mm, 90.87mm, 91.00mm	50mm	75-100mm

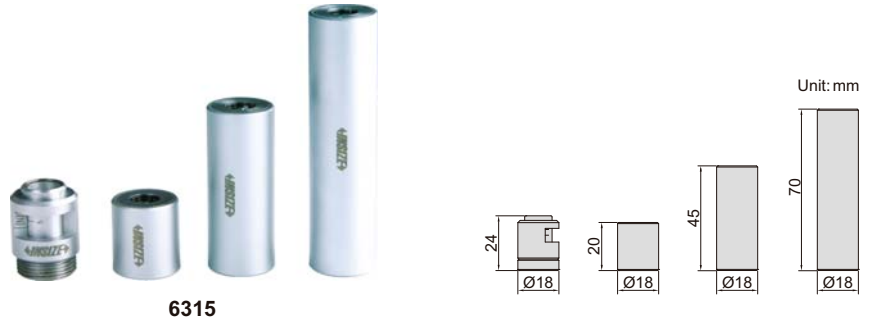


MICROMETER MEASURING FORCE DETECTOR

- For outside micrometers
0-25mm/0-1", 25-50mm/1-2",
50-75mm/2-3" and 75-100mm/3-4"

6

Code	Measuring force
6315	5-12N



6315

MICROMETER INSPECTION GAGE BLOCK SETS

REFER TO PAGE
294-295 FOR DETAILS



4107-10

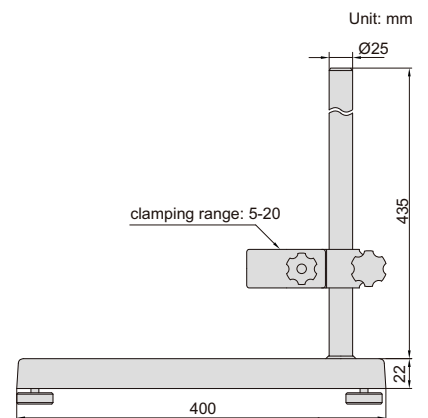


4160-10

MICROMETER STAND



6302



Code
6302

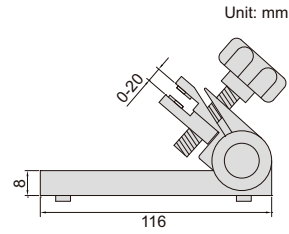
- Suitable for 100-300mm outside micrometers
(except 3675 series)

MICROMETER STAND

- Suitable for outside micrometers up to 100mm



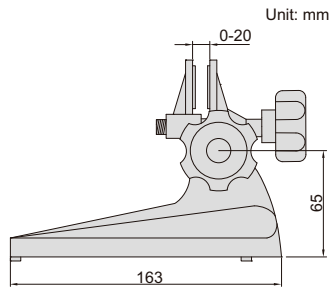
6300



Code
6300

MICROMETER STAND

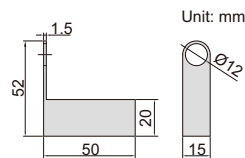
- Suitable for outside micrometers up to 100mm



6301

Code
6301

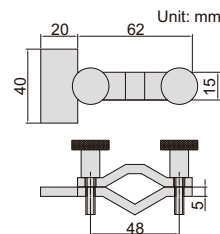
- Suitable for inside micrometers



6301-1

Code	Description	Applicable products
6301-1	clamp for inside micrometers	all sizes of 3220 series

- Suitable for three points internal micrometers



6301-2

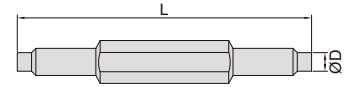
Code	Description	Applicable products
6301-2	clamp for three points internal micrometers	up to 100mm of 3127 and 3227 series

MICROMETER SETTING STANDARDS

INSIZE PLUS
MADE IN EUROPE



7386-100



■ Suitable for outside micrometers

6

Code	Length (L)	Accuracy	ØD
7386-25	25mm	±1.25µm	6.5mm
7386-50	50mm	±1.25µm	6.5mm
7386-75	75mm	±1.5µm	6.5mm
7386-100	100mm	±2µm	6.5mm
7386-125	125mm	±2.5µm	6.5mm
7386-150	150mm	±2.5µm	6.5mm
7386-175	175mm	±2.5µm	6.5mm
7386-200	200mm	±3µm	6.5mm
7386-225	225mm	±3µm	6.5mm
7386-250	250mm	±3µm	6.5mm
7386-275	275mm	±3µm	6.5mm
7386-300	300mm	±3µm	10mm
7386-325	325mm	±3.5µm	10mm
7386-350	350mm	±3.5µm	10mm
7386-375	375mm	±3.5µm	10mm
7386-400	400mm	±3.5µm	10mm

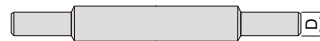
Code	Length (L)	Accuracy	ØD
7386-425	425mm	±3.5µm	10mm
7386-450	450mm	±3.5µm	10mm
7386-475	475mm	±3.5µm	10mm
7386-500	500mm	±3.5µm	10mm
7386-525	525mm	±3.5µm	10mm
7386-550	550mm	±3.5µm	10mm
7386-575	575mm	±3.5µm	10mm
7386-600	600mm	±3.5µm	10mm
7386-625	625mm	±4µm	10mm
7386-650	650mm	±4µm	10mm
7386-675	675mm	±4µm	10mm
7386-700	700mm	±4µm	10mm
7386-725	725mm	±4µm	10mm
7386-750	750mm	±4µm	10mm
7386-775	775mm	±4µm	10mm
7386-800	800mm	±4µm	10mm
7386-825	825mm	±4µm	10mm

Code	Length (L)	Accuracy	ØD
7386-850	850mm	±4µm	10mm
7386-875	875mm	±4µm	10mm
7386-900	900mm	±5µm	10mm
7386-925	925mm	±5µm	10mm
7386-950	950mm	±5µm	10mm
7386-975	975mm	±5µm	10mm
7386-1000	1000mm	±5µm	10mm
7386-1050	1050mm	±5µm	10mm
7386-1150	1150mm	±6µm	10mm
7386-1250	1250mm	±7µm	10mm
7386-1350	1350mm	±7µm	10mm
7386-1450	1450mm	±7µm	10mm
7386-1550	1550mm	±9µm	10mm
7386-1650	1650mm	±10µm	10mm
7386-1750	1750mm	±10µm	10mm
7386-1850	1850mm	±11µm	10mm
7386-1950	1950mm	±12µm	10mm

MICROMETER SETTING STANDARDS



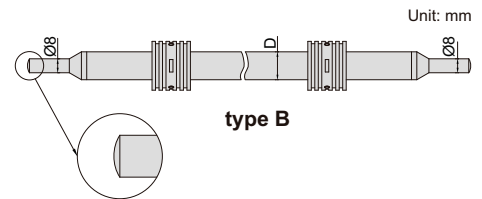
6310-100



type A



6310-300



type B

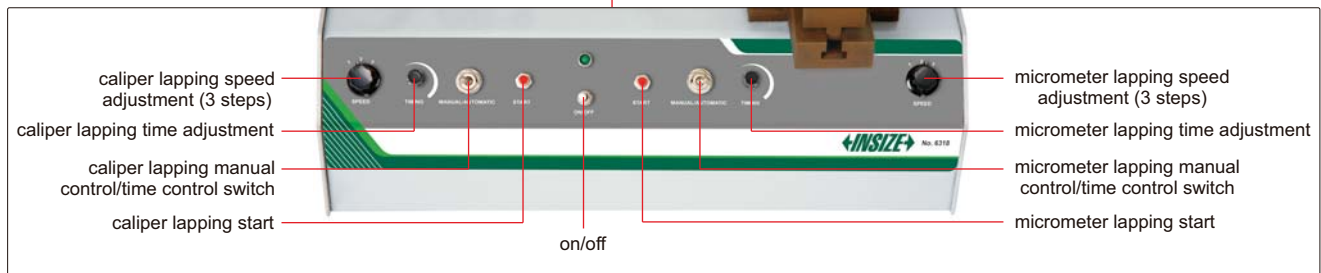
Code	Length	Type	Accuracy	D
6310-25	25	A	±1.5µm	Ø7
6310-50	50	A	±2µm	Ø7
6310-75	75	A	±2.5µm	Ø7
6310-100	100	A	±3µm	Ø8
6310-125	125	A	±3.5µm	Ø8
6310-150	150	A	±4µm	Ø8
6310-175	175	A	±4.5µm	Ø8
6310-200	200	A	±5µm	Ø8
6310-225	225	A	±5.5µm	Ø8
6310-250	250	A	±6µm	Ø8
6310-275	275	A	±6.5µm	Ø8
6310-300	300	B	±7µm	Ø16
6310-325	325	B	±7.5µm	Ø16
6310-350	350	B	±8µm	Ø16
6310-375	375	B	±8.5µm	Ø16

Code	Length	Type	Accuracy	D
6310-400	400	B	±9µm	Ø16
6310-425	425	B	±9.5µm	Ø16
6310-450	450	B	±10µm	Ø16
6310-475	475	B	±10.5µm	Ø16
6310-500	500	B	±11µm	Ø16
6310-525	525	B	±11.5µm	Ø16
6310-575	575	B	±12.5µm	Ø16
6310-625	625	B	±13.5µm	Ø16
6310-675	675	B	±14.5µm	Ø16
6310-725	725	B	±15.5µm	Ø16
6310-775	775	B	±16.5µm	Ø16
6310-825	825	B	±17.5µm	Ø16
6310-875	875	B	±18.5µm	Ø16
6310-925	925	B	±19.5µm	Ø16
6310-975	975	B	±20.5µm	Ø16

Code	Length	Type	Accuracy	D
6310-1050	1050	B	±22µm	Ø23
6310-1150	1150	B	±24µm	Ø23
6310-1250	1250	B	±26µm	Ø23
6310-1350	1350	B	±28µm	Ø23
6310-1450	1450	B	±30µm	Ø23
6310-1550	1550	B	±32µm	Ø23
6310-1650	1650	B	±34µm	Ø23
6310-1750	1750	B	±36µm	Ø23
6310-1850	1850	B	±38µm	Ø23
6310-1950	1950	B	±40µm	Ø23



CALIPER/MICROMETER LAPPING MACHINE CODE 6318



lapping measuring surfaces of caliper lower jaws



lapping measuring surfaces of outside micrometer



- For lapping measuring surfaces of caliper lower jaws and outside micrometer
- Suitable for 0-300mm range calipers and 0-100mm range outside micrometers
- Supplied with W5 and W14 diamond paste

caliper lapping block (included)



micrometer lapping blocks (code: 6307-1, optional)



SPECIFICATION

Power supply	220V, 50/60Hz
Dimension (L×W×H)	430×400×210mm
Weight	28kg

MICROMETER LAPPING BLOCKS (optional)

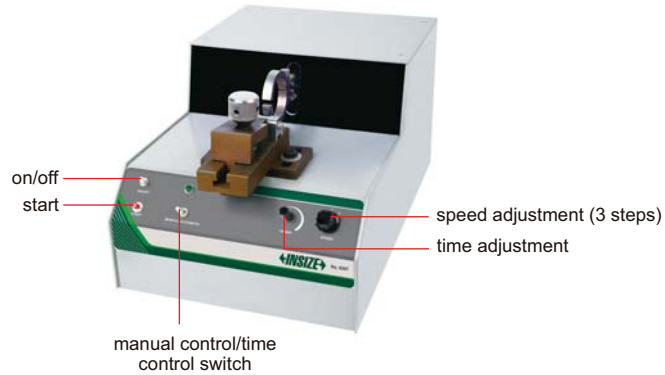
Code	For micrometer	Remark
6307-1	0~25mm	includes 4 lapping blocks
6307-2	25~50mm	includes 4 lapping blocks
6307-3	50~75mm	includes 4 lapping blocks
6307-4	75~100mm	includes 4 lapping blocks

MICROMETER LAPPING MACHINE CODE 6307



- Used for lapping micrometer measuring surfaces
- Suitable for 0~100mm outside micrometers
- Supplied with W5 and W14 diamond paste

6



SPECIFICATION

Power supply	220V, 50/60HZ
Dimension (L×W×H)	450×260×220mm
Weight	30kg

MICROMETER LAPPING BLOCKS (optional)

Code	For micrometer	Remark
6307-1	0~25mm	includes 4 lapping blocks
6307-2	25~50mm	includes 4 lapping blocks
6307-3	50~75mm	includes 4 lapping blocks
6307-4	75~100mm	includes 4 lapping blocks

micrometer lapping blocks (code: 6307-1, optional)



DIGITAL MICROMETER HEADS

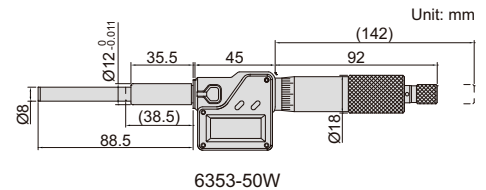
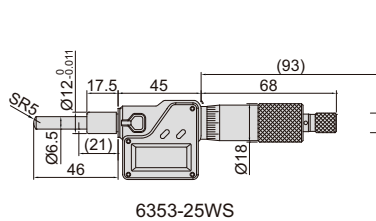
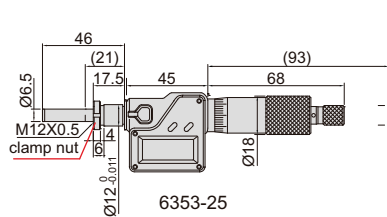
IP65
WATERPROOF

DATA
OUTPUT

- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output, automatic power off
- Ratchet stop
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)

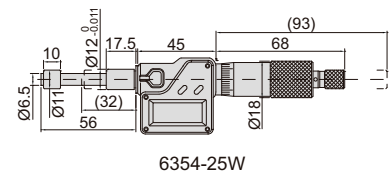


6353-25W



Rotating spindle

Code	Range	Stem	Spindle tip	Accuracy
6353-25	0-25mm/0-1"	with clamp nut	flat (carbide)	±2µm
6353-25W	0-25mm/0-1"	plain	flat (carbide)	±2µm
6353-25S	0-25mm/0-1"	with clamp nut	spherical (SR5)	±2µm
6353-25WS	0-25mm/0-1"	plain	spherical (SR5)	±2µm
6353-50W	0-50mm/0-2"	plain	flat (carbide)	±4µm



Non-rotating spindle

Code	Range	Stem	Spindle tip	Accuracy
6354-25W	0-25mm/0-1"	plain	flat	±2µm

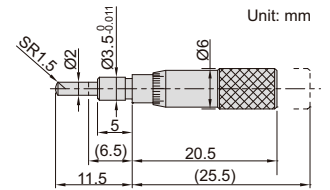
SMALL MICROMETER HEAD

- Graduation 0.02mm

Code	Range	Stem	Spindle tip	Accuracy
6372-5WS	0-5mm	plain	spherical (SR1.5)	5µm



6372-5WS



SMALL MICROMETER HEADS

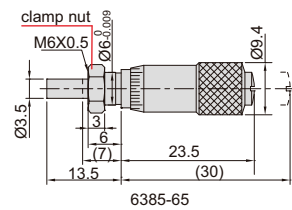
6

- Range 0-6.5mm
- Graduation 0.01mm
- Accuracy 5µm

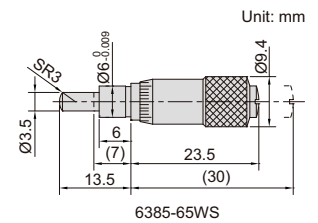


6385-65W

Code	Stem	Spindle tip
6385-65	with clamp nut	flat
6385-65W	plain	flat
6385-65S	with clamp nut	spherical (SR3)
6385-65WS	plain	spherical (SR3)



6385-65

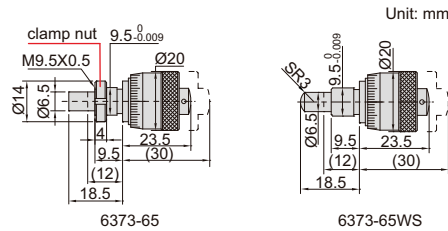


6385-65WS

LARGE THIMBLE MICROMETER HEADS

- Meet DIN863-2
- Large thimble diameter for easy reading
- Graduation 0.01mm
- Accuracy 3µm

Code	Range	Stem	Spindle tip
6373-65	0-6.5mm	with clamp nut	flat
6373-65W	0-6.5mm	plain	flat
6373-65S	0-6.5mm	with clamp nut	spherical (SR3)
6373-65WS	0-6.5mm	plain	spherical (SR3)
6373-13	0-13mm	with clamp nut	flat
6373-13W	0-13mm	plain	flat

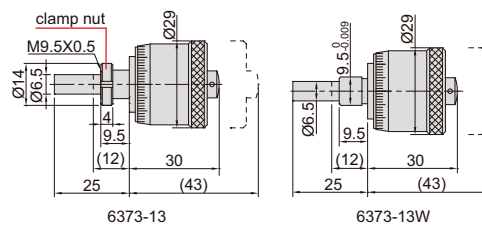


6373-65

6373-65WS



6373-65



6373-13

6373-13W

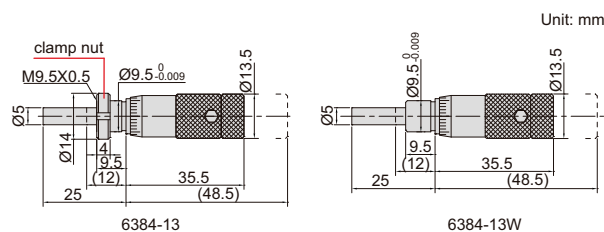


6373-13

MICROMETER HEADS WITH ZERO ADJUSTABLE THIMBLE

- Meet DIN863-2
- Range 0-13mm
- Graduation 0.01mm
- Accuracy 3µm
- The thimble can be set to zero at any position

Code	Stem	Spindle tip
6384-13	with clamp nut	flat
6384-13W	plain	flat



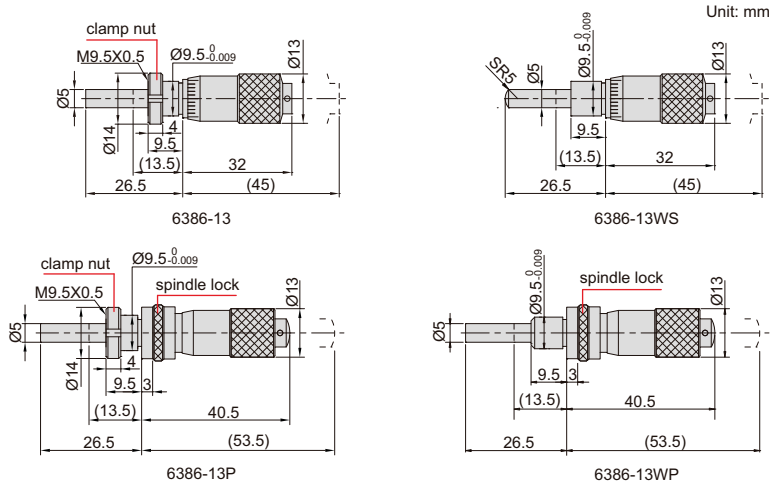
6384-13

6384-13W



6384-13W

MICROMETER HEADS



6386-13W



6386-13P

Code	Range	Stem	Spindle tip	Remark	Accuracy
6386-13	0-13mm	with clamp nut	flat		3µm
6386-13W	0-13mm	plain	flat		3µm
6386-13S	0-13mm	with clamp nut	spherical (SR5)		3µm
6386-13WS	0-13mm	plain	spherical (SR5)		3µm
6386-13P	0-13mm	with clamp nut	flat	with spindle lock	3µm
6386-13WP	0-13mm	plain	flat	with spindle lock	3µm

- Meet DIN863-2
- Graduation 0.01mm

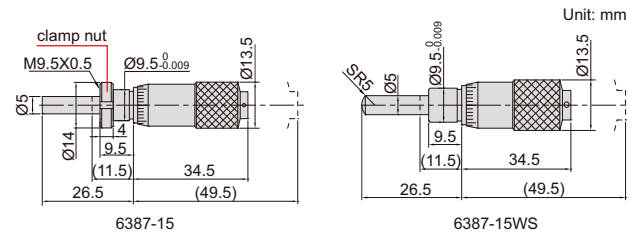
MICROMETER HEADS

- Meet DIN863-2
- Graduation 0.01mm
- Accuracy 3µm



6387-15WS

Code	Range	Stem	Spindle tip
6387-15	0-15mm	with clamp nut	flat
6387-15W	0-15mm	plain	flat
6387-15S	0-15mm	with clamp nut	spherical (SR5)
6387-15WS	0-15mm	plain	spherical (SR5)



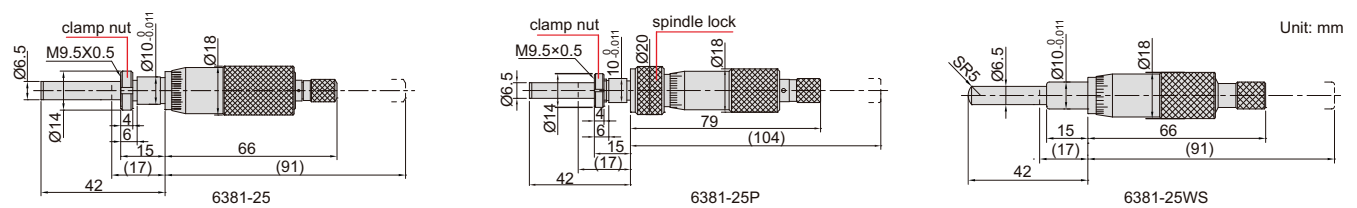
MICROMETER HEADS

- Meet DIN863-2
- Graduation 0.01mm
- Ratchet stop



6381-25

6381-25P



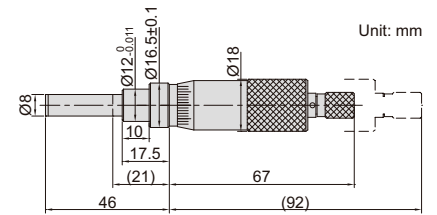
Code	Range	Stem	Spindle tip	Remark	Accuracy
6381-25	0-25mm	with clamp nut	flat (carbide)		3µm
6381-25W	0-25mm	plain	flat (carbide)		3µm
6381-25S	0-25mm	with clamp nut	spherical (SR5)		3µm
6381-25WS	0-25mm	plain	spherical (SR5)		3µm
6381-25P	0-25mm	with clamp nut	flat (carbide)	with spindle lock	3µm
6381-25WP	0-25mm	plain	flat (carbide)	with spindle lock	3µm

NON-ROTATING SPINDLE MICROMETER HEAD

- Meet DIN863-2
- Graduation 0.01mm
- Ratchet stop
- Non-rotating spindle



6377-25W

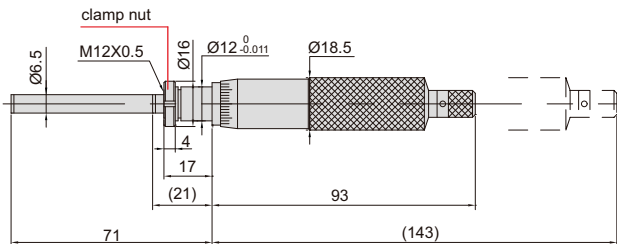


Code	Range	Stem	Spindle tip	Accuracy
6377-25W	0-25mm	plain	flat (carbide)	3µm

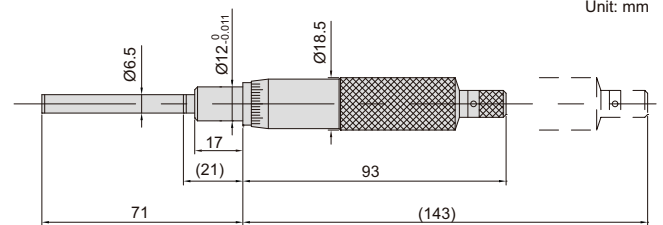
LARGE MICROMETER HEADS



6388-50AW



6388-50A



6388-50AW

Code	Range	Stem	Spindle tip	Accuracy
6388-50A	0-50mm	with clamp nut	flat (carbide)	5µm
6388-50AW	0-50mm	plain	flat (carbide)	5µm

- Graduation 0.01mm
- Ratchet stop

QUICK SPINDLE FEEDING MICROMETER HEADS



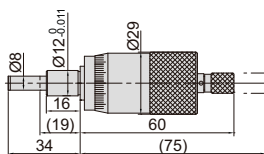
6375-15W



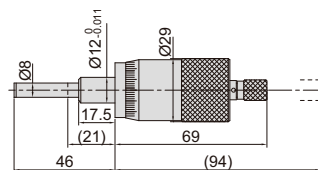
6375-25W



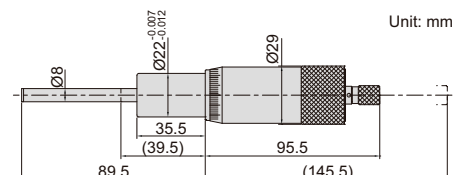
6375-50W



6375-15W



6375-25W



6375-50W

Code	Range	Stem	Spindle tip	Accuracy
6375-15W	0-15mm	plain	flat (carbide)	3µm
6375-25W	0-25mm	plain	flat (carbide)	3µm
6375-50W	0-50mm	plain	flat (carbide)	5µm

- Micrometers up to 25mm meet DIN863-2
- Graduation 0.01mm
- Quick spindle feed of 1mm/rev.
- Ratchet stop

07

BORE DIAMETER, CIRCUMFERENCE MEASUREMENT



Inside Micrometers
Page 154-155



Inside Micrometers
Page 155-162



**Three Points Internal
Micrometers**
Page 163-166



**Pistol Grip Three Points
Bore Gages**
Page 167



Split Type Dial Bore Gages
Page 168-169



Bore Gages
Page 170-176/180



Gear Bore Gages
Page 177



Bore Plug Gages
Page 178-179



Bore Gage Setters
Page 181-182



Internal Chamfer Gages
Page 182



Telescoping Gage Sets
Page 183



Tape Bore Gages
Page 184



Circumference Tapes
Page 184-185



INSIDE MICROMETERS

INSIZE PLUS
MADE IN EUROPE

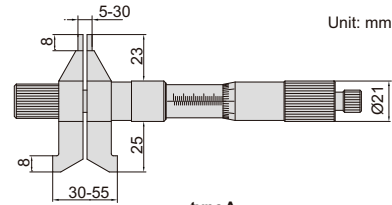


3679-55



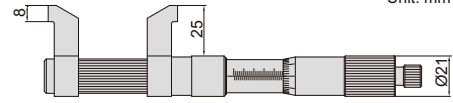
3679-75

- Graduation: 0.01mm
- Carbide measuring faces
- Ratchet stop
- Optional accessory: setting ring (code **6312**), caliper/height gage checker (code **6884**)



Unit: mm

type A



Unit: mm

type B

for type A, the upper jaws and lower jaws can be set zero separately



Code	Range	Type	Accuracy
3679-55 *	5-55mm	A	4µm
3679-75 *	50-75mm	B	5µm
3679-100 *	75-100mm	B	6µm
3679-125 *	100-125mm	B	7µm
3679-150 *	125-150mm	B	8µm
3679-175 *	150-175mm	B	9µm
3679-200 *	175-200mm	B	9µm
3679-225 *	200-225mm	B	10µm
3679-250 *	225-250mm	B	10µm
3679-275 *	250-275mm	B	12µm
3679-300 *	275-300mm	B	12µm

* Supplied with manufacturer inspection certificate

Code	Range	Type	Accuracy
3679-325 *	300-325mm	B	15µm
3679-350 *	325-350mm	B	15µm
3679-375 *	350-375mm	B	16µm
3679-400 *	375-400mm	B	16µm
3679-425 *	400-425mm	B	17µm
3679-450 *	425-450mm	B	17µm
3679-475 *	450-475mm	B	18µm
3679-500 *	475-500mm	B	18µm
3679-525 *	500-525mm	B	19µm
3679-550 *	525-550mm	B	19µm
3679-575 *	550-575mm	B	20µm
3679-600 *	575-600mm	B	20µm

ATTENTION: LOW PARALLELISM OF TWO MEASURING FACES

micrometer stand with clamp (optional)

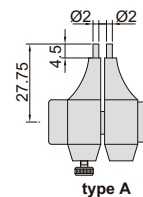


- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Optional accessory: setting ring (code **6312**), micrometer stand and clamp (code **6301** and **6301-1**)

Code	Range	Type	Setting ring	Accuracy
3220-30	5-30mm	A	5mm (included)	7µm
3220-50	25-50mm	B	25mm (included)	8µm
3220-75	50-75mm	B	50mm (optional)	9µm
3220-100	75-100mm	C	75mm (optional)	10µm

INSIDE MICROMETERS (ECONOMIC TYPE)

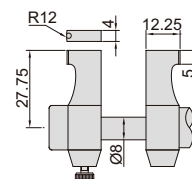
Unit: mm



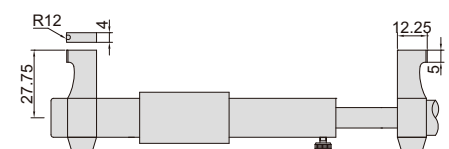
type A



3220-50



type B



type C

DIGITAL INSIDE MICROMETERS (ECONOMIC TYPE)

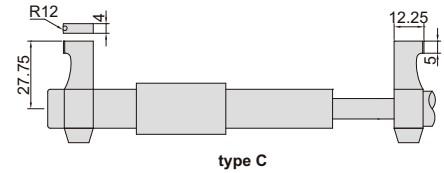
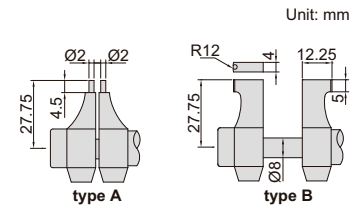
DATA
OUTPUT

ATTENTION: LOW PARALLELISM
OF TWO MEASURING FACES

- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12), setting ring (code 6312)



3520-30



Code	Range	Type	Setting ring	Accuracy
3520-30	5-30mm/0.2-1.2"	A	5mm (included)	$\pm 5\mu\text{m}$
3520-50	25-50mm/1-2"	B	25mm (included)	$\pm 6\mu\text{m}$
3520-75	50-75mm/2-3"	B	50mm (optional)	$\pm 7\mu\text{m}$
3520-100	75-100mm/3-4"	C	75mm (optional)	$\pm 8\mu\text{m}$

INTERNAL GEAR TOOTH MICROMETERS

INSIZE PLUS
MADE IN EUROPE

INSPECTION
CERTIFICATE

- Measure over-pin diameter of gears
- Graduation: 0.01mm
- Ratchet stop
- Optional accessory: ball tips (code 7383), cylindrical tips (code 7393, only for micrometers with L=8mm)

before ball tips
are installed ball tips are optional



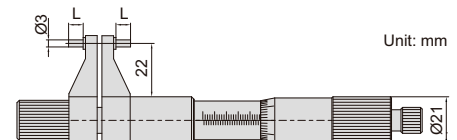
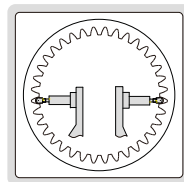
3678-50

cylindrical tips (optional)
(only for micrometers
with L=8mm)



Code	Range	Accuracy	L
3678-50*	25-50mm	4 μm	6mm
3678-75*	50-75mm	5 μm	8mm

*Supplied with manufacturer inspection certificate



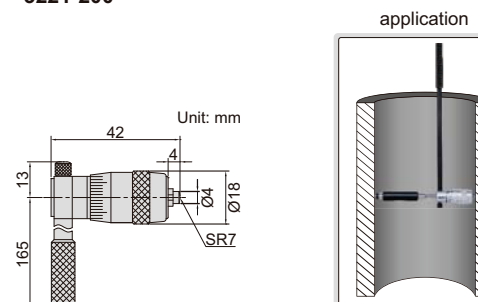
TUBULAR INSIDE MICROMETERS

- Graduation 0.01mm
- Accuracy: $(6+L/50)\mu\text{m}$
L=maximum measuring length (mm)
- Optional accessory: setting ring (code 6312), gage block accessory (code 6881), cylinder gage block (code 4001), caliper/height gage checker (code 6884)



3221-200

Code	Range	Travel of micrometer head	Extension rods
3221-32	25-32mm	7mm	—
3221-50	25-50mm	7mm	2 pcs
3221-63	50-63mm	13mm	—
3221-200	50-200mm	13mm	6 pcs
3221-300	50-300mm	13mm	10 pcs
3221-225	200-225mm	25mm	—
3221-500	200-500mm	25mm	3 pcs
3221-1000	200-1000mm	25mm	8 pcs



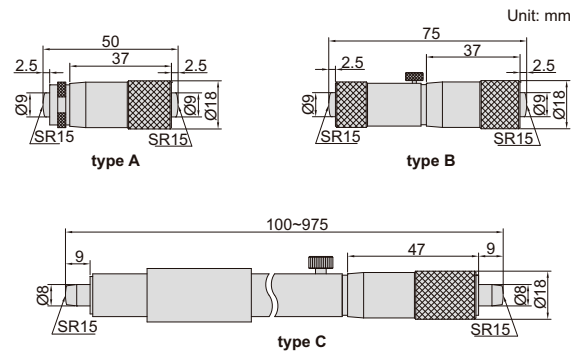
TUBULAR INSIDE MICROMETERS

- Micrometers up to 500mm meet DIN863-4
- Graduation 0.01mm
- Carbide measuring faces
- Optional accessory: gage block accessory (code **6881**), cylinder gage block (code **4001**), caliper/height gage checker (code **6884**)



3229-225

Code	Range	Type	Accuracy
3229-75	50-75mm	A	5μm
3229-100	75-100mm	B	5μm
3229-125	100-125mm	C	6μm
3229-150	125-150mm	C	6μm
3229-175	150-175mm	C	7μm
3229-200	175-200mm	C	7μm
3229-225	200-225mm	C	8μm
3229-250	225-250mm	C	8μm
3229-275	250-275mm	C	9μm
3229-300	275-300mm	C	9μm
3229-325	300-325mm	C	9μm
3229-350	325-350mm	C	9μm
3229-375	350-375mm	C	10μm
3229-400	375-400mm	C	10μm
3229-425	400-425mm	C	10μm
3229-450	425-450mm	C	10μm
3229-475	450-475mm	C	11μm
3229-500	475-500mm	C	11μm
3229-525	500-525mm	C	11μm
3229-550	525-550mm	C	11μm
3229-575	550-575mm	C	11μm
3229-600	575-600mm	C	12μm
3229-625	600-625mm	C	12μm
3229-650	625-650mm	C	12μm
3229-675	650-675mm	C	13μm
3229-700	675-700mm	C	13μm

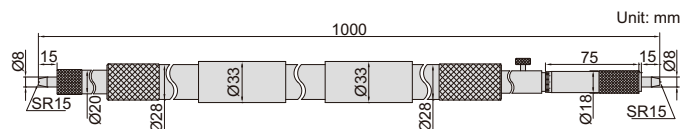


Code	Range	Type	Accuracy
3229-725	700-725mm	C	13μm
3229-750	725-750mm	C	14μm
3229-775	750-775mm	C	14μm
3229-800	775-800mm	C	14μm
3229-825	800-825mm	C	15μm
3229-850	825-850mm	C	15μm
3229-875	850-875mm	C	15μm
3229-900	875-900mm	C	16μm
3229-925	900-925mm	C	16μm
3229-950	925-950mm	C	16μm
3229-975	950-975mm	C	17μm
3229-1000	975-1000mm	C	17μm

TUBULAR INSIDE MICROMETERS



3224-2000



Code	Range	Extension rods
3224-2000	1000-2000mm	50mm, 100mm (2 pcs), 200mm, 500mm
3224-3000	1000-3000mm	50mm, 100mm (2 pcs), 200mm, 500mm, 1000mm
3224-4000	1000-4000mm	50mm, 100mm (2 pcs), 200mm, 500mm, 1000mm (2 pcs)
3224-5000	1000-5000mm	50mm, 100mm (2 pcs), 200mm, 500mm, 1000mm (3 pcs)

- Micrometer head: 1000-1050mm
- Graduation 0.01mm
- Accuracy: $(7+n+L/50)\mu\text{m}$
n=number of rods
L=maximum measuring length (mm)
- Travel of micrometer head 50mm
- Carbide measuring faces

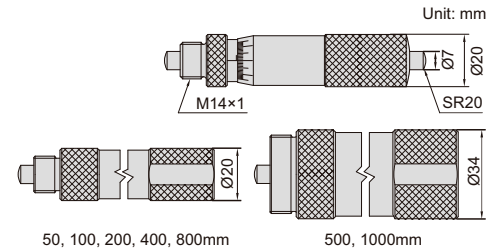
TUBULAR INSIDE MICROMETERS

INSIZE PLUS
MADE IN EUROPE



3683-200

- Micrometer head: 100-150mm
- Graduation: 0.01mm
- Carbide measuring faces
- Heat insulation extension rods



Code	Range	Accuracy	Travel of micrometer head	Heat insulation extension rods
3683-150	100-150mm	6µm	50mm	—
3683-200	100-200mm	7µm	50mm	50mm
3683-300	100-300mm	9µm	50mm	50mm, 100mm
3683-500	100-500mm	13µm	50mm	50mm, 100mm, 200mm
3683-900	100-900mm	16µm	50mm	50mm, 100mm, 200mm, 400mm
3683-1300	100-1300mm	22µm	50mm	50mm, 100mm, 200mm, 400mm (2 pcs)
3683-1700	100-1700mm	27µm	50mm	50mm, 100mm, 200mm, 400mm, 800mm
3683-2000	100-2000mm	32µm	50mm	50mm, 100mm, 200mm (2 pcs), 500mm, 1000mm
3683-2100	100-2100mm	32µm	50mm	50mm, 100mm, 200mm, 400mm (2 pcs), 800mm
3683-2500	100-2500mm	40µm	50mm	50mm, 100mm, 200mm, 400mm, 800mm (2 pcs)
3683-3000	100-3000mm	50µm	50mm	50mm, 100mm, 200mm (2 pcs), 500mm, 1000mm (2 pcs)
3683-4000	100-4000mm	60µm	50mm	50mm, 100mm, 200mm (2 pcs), 500mm, 1000mm (3 pcs)
3683-5000	100-5000mm	72µm	50mm	50mm, 100mm, 200mm (2 pcs), 500mm, 1000mm (4 pcs)
3683-6000	100-6000mm	90µm	50mm	50mm, 100mm, 200mm (2 pcs), 500mm, 1000mm (5 pcs)

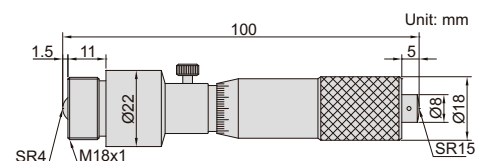
TUBULAR INSIDE MICROMETERS

- Micrometer head: 100-125mm
- Graduation 0.01mm
- Accuracy: $(3+n+L/50)\mu\text{m}$
n=number of rods
L=maximum measuring length (mm)
- Travel of micrometer head 25mm
- Supplied with setting standards
- Carbide measuring faces



3225-500

Code	Range	Extension rods
3225-125	100-125mm	—
3225-500	100-500mm	25mm, 50mm, 100mm, 200mm
3225-900	100-900mm	25mm, 50mm, 100mm, 200mm, 400mm
3225-1300	100-1300mm	25mm, 50mm, 100mm, 200mm, 400mm (2 pcs)
3225-1700	100-1700mm	25mm, 50mm, 100mm, 200mm, 400mm (3 pcs)
3225-2100	100-2100mm	25mm, 50mm, 100mm, 200mm, 400mm (4 pcs)



DIGITAL TUBULAR INSIDE MICROMETERS

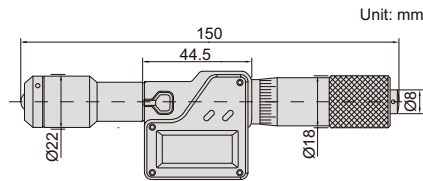
IP65
WATERPROOF

DATA
OUTPUT

- Micrometer head: 150-175mm
- Graduation: 0.001mm/0.00005"
- Accuracy: $(3+n+L/50)\mu\text{m}$
n=number of rods
L=maximum measuring length (mm)
- Carbide measuring faces
- The diameter of extension rods is 22mm
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Supplied with setting standards
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12)



3521-1000



Code	Range	Travel of micrometer head	Extension rods
3521-175	150-175mm	25mm	—
3521-1000	150-1000mm	25mm	25mm, 50mm (2 pcs), 100mm, 200mm, 400mm
3521-1500	150-1500mm	25mm	25mm, 50mm (2 pcs), 100mm (2 pcs), 200mm, 400mm (2 pcs)
3521-2000	150-2000mm	25mm	25mm, 50mm (2 pcs), 100mm, 200mm (2 pcs), 400mm (3 pcs)

TUBULAR INSIDE MICROMETERS

INSIZE PLUS
MADE IN EUROPE

- Carbide measuring faces for micrometer head and extension rods
- Points of extension rods are spring loaded
- Optional accessory:
gage block accessory (code 6881),
cylinder gage block (code 4001),
caliper/height gage checker (code 6884)



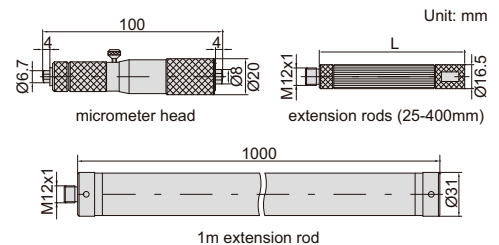
3634-1300

Micrometer head

Range	Graduation	Accuracy	Weight
100-125mm	0.01mm	$\pm 4\mu\text{m}$	154g

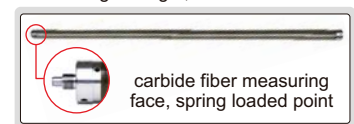
Extension rods

Length (L)	Accuracy	Weight	Material
25mm	$\pm 1.25\mu\text{m}$	37g	steel
50mm	$\pm 1.25\mu\text{m}$	65g	steel
100mm	$\pm 2\mu\text{m}$	113g	steel
200mm	$\pm 3.5\mu\text{m}$	208g	steel
400mm	$\pm 4.5\mu\text{m}$	402g	steel
1000mm	$\pm 7.5\mu\text{m}$	909g	carbon fiber



Code	Range	Extension rods
3634-350	100-350mm	25mm, 200mm
3634-500	100-500mm	25mm, 50mm, 100mm, 200mm
3634-1300	100-1300mm	25mm, 50mm, 100mm, 200mm, 400mm (2 pcs)
3634-1500	100-1500mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm (2 pcs)
3634-2100	100-2100mm	25mm, 50mm, 100mm, 200mm, 400mm (4 pcs)
3634-3100	100-3100mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (2 pcs)
3634-4100	100-4100mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (3 pcs)
3634-5100	100-5100mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (4 pcs)
3634-6100	100-6100mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (5 pcs)

1m carbon fiber extension rod,
light weight, no deform



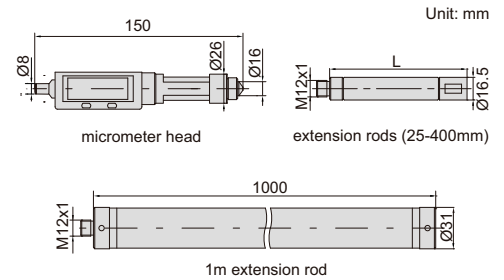
DATA
OUTPUT

SPRING LOADED
MEASURING POINT

DIGITAL NON-ROTATING SPINDLE TUBULAR INSIDE MICROMETERS

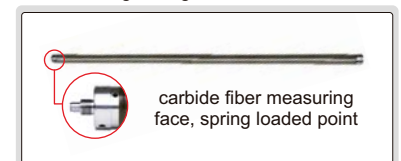
INSIZE PLUS
MADE IN EUROPE

NON-ROTATING
SPINDLE

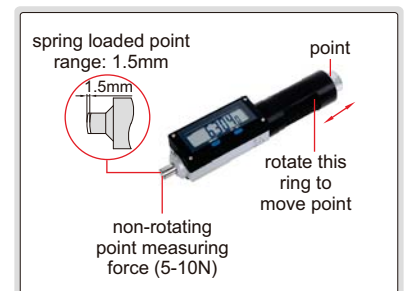


- Carbide measuring faces for micrometer head and extension rods
- Points of extension rods are spring loaded
- Data output
- Button function: mm/inch, max./min. value tracking, preset value, hold, on/off, zero
- CR2032 battery, automatic power off, turn the sleeve to turn on
- Optional accessory: data output cable (code **7315-80**, **7302-80**), gage block accessory (code **6881**), cylinder gage block (code **4001**), caliper/height gage checker (code **6884**)

1m carbon fiber extension rod,
light weight, no deform



non-rotating spindle, spring loaded point
and max./min. value tracking make it
easy to find the right measuring position



Extension rods

Length (L)	Accuracy	Weight	Material
25mm	±1.25µm	37g	steel
50mm	±1.25µm	65g	steel
100mm	±2µm	113g	steel
200mm	±3.5µm	208g	steel
400mm	±4.5µm	402g	steel
1000mm	±7.5µm	909g	carbon fiber

Micrometer head

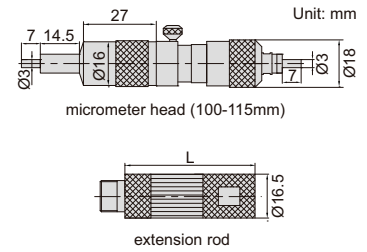
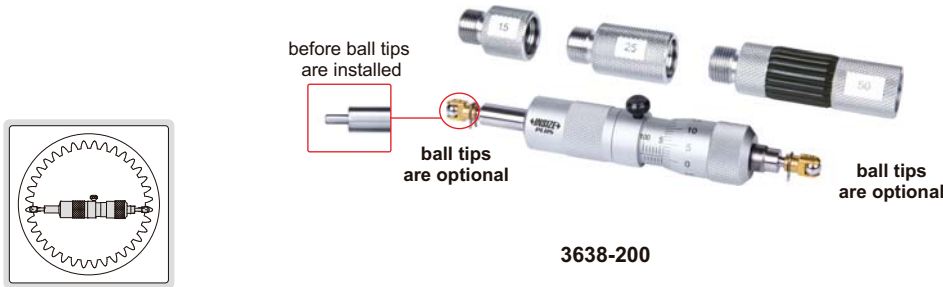
Range	Resolution	Accuracy	Repeatability	Measuring force	Weight
150-180mm	0.001mm/0.00005" 0.01mm/0.0005" 0.0005mm/0.00002" (switchable)	±4µm	1µm	5-10N	275g

Code	Range	Extension rods
3635-350	150-350mm	25mm, 50mm, 100mm
3635-550	150-550mm	25mm, 50mm, 100mm, 200mm
3635-950	150-950mm	25mm, 50mm, 100mm, 200mm, 400mm
3635-1550	150-1550mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm (2 pcs)
3635-2150	150-2150mm	25mm, 50mm, 100mm, 200mm, 400mm (4 pcs)
3635-3150	150-3150mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (2 pcs)
3635-4150	150-4150mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (3 pcs)
3635-5150	150-5150mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (4 pcs)
3635-6150	150-6150mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (5 pcs)

INTERNAL GEAR TOOTH MICROMETERS

INSIZE PLUS
MADE IN EUROPE

RELATIVE PRODUCT:
GEAR BORE GAGE (CODE 2428)



3638-200

- Measure over-pin diameter of gears
- Points of extension rods are spring loaded
- Optional accessory: ball tips (code 7383)

Micrometer head

Range	Graduation	Accuracy
100-115mm	0.01mm	±4µm
150-175mm	0.01mm	±4µm

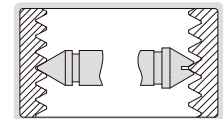
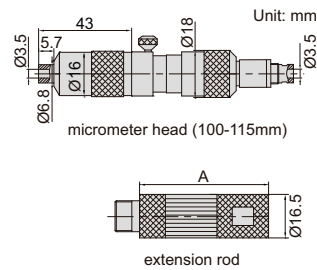
Extension rod

Length (L)	Accuracy
15mm	±1µm
25mm	±1.25µm
30mm	±1.25µm
50mm	±1.25µm
100mm	±2µm
200mm	±3.5µm
400mm	±4.5µm

Code	Range	Micrometer head	Extension rod (L)
3638-200	100-205mm	100-115mm	15mm, 25mm, 50mm
3638-500	100-505mm	100-115mm	15mm, 25mm, 50mm, 100mm, 200mm
3638-900	100-905mm	100-115mm	15mm, 25mm, 50mm, 100mm, 200mm, 400mm
3638-1100	150-1150mm	150-175mm	25mm, 50mm, 100mm, 200mm, 200mm, 400mm

INTERNAL SCREW THREAD MICROMETERS

INSIZE PLUS
MADE IN EUROPE



- Measure pitch diameter of screw thread
- Points of extension rods are spring loaded
- Optional accessory: measuring tips for internal screw thread micrometer (code 7385, L=13.5mm)

Micrometer head

Range	Graduation	Accuracy
100-115mm	0.01mm	±4µm
150-175mm	0.01mm	±4µm

Extension rod

Length (A)	Accuracy
15mm	±1µm
25mm	±1.25µm
50mm	±1.25µm
100mm	±2µm
200mm	±3.5µm
400mm	±4.5µm

Code	Range	Micrometer head	Extension rod (A)	Applicable tips
3641-200	100-205mm	100-115mm	15mm, 25mm, 50mm	stem length L=13.5mm
3641-500	100-505mm	100-115mm	15mm, 25mm, 50mm, 100mm, 200mm	stem length L=13.5mm
3641-900	100-905mm	100-115mm	15mm, 25mm, 50mm, 100mm, 200mm, 400mm	stem length L=13.5mm
3641-1100	150-1150mm	150-175mm	25mm, 50mm, 100mm, 200mm, 200mm, 400mm	stem length L=13.5mm

TIPS FOR TRAPEZOIDAL, ACME
THREAD ARE ALSO AVAILABLE

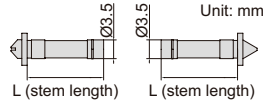
MEASURING TIPS FOR INTERNAL SCREW THREAD MICROMETERS

INSIZE PLUS
MADE IN EUROPE

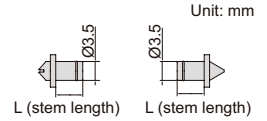
- Supplied in pair
- Made of hardened steel
- Suitable for **3641** series micrometers



7385-T106A



7385-T106B



60° thread angle

Code		Applicable pitch (mm)
L=13.5mm	L=5mm	
7385-T101A	7385-T101B	0.35
7385-T102A	7385-T102B	0.4/0.45
7385-T103A	7385-T103B	0.5/0.6
7385-T104A	7385-T104B	0.7/0.75/0.8
7385-T105A	7385-T105B	1/1.25
7385-T106A	7385-T106B	1.5/1.75
7385-T107A	7385-T107B	2.0/2.5
7385-T108A	7385-T108B	3.0/3.5
7385-T109A	7385-T109B	4.0/4.5/5.0
7385-T110A	7385-T110B	5.5/6.0

55° thread angle

Code		Applicable pitch (TPI)
L=13.5mm	L=5mm	
7385-T201A	7385-T201B	60/48
7385-T202A	7385-T202B	40/32
7385-T203A	7385-T203B	28/26/24/22
7385-T204A	7385-T204B	20/19/18/16
7385-T205A	7385-T205B	14/12/11
7385-T206A	7385-T206B	10/9/8
7385-T207A	7385-T207B	7/6
7385-T208A	7385-T208B	5/4.5/4
7385-T209A	7385-T209B	3.5/3.25/3/2.875/2.75
7385-T210A	7385-T210B	2.625/2.5/2

INTERNAL SCREW THREAD MICROMETERS

- Graduation: 0.01mm
- Optional accessory: measuring tips for internal screw thread micrometer (code 7321)

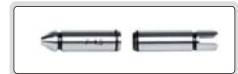


measuring tips for screw thread (optional)

measuring tips for screw thread (optional)

3226-1001

measuring tips for internal screw thread micrometer (optional)



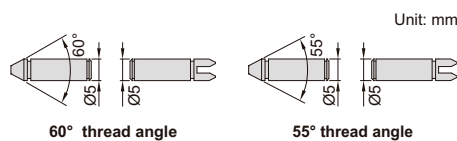
Code	Range	Code	Range
3226-1001	75-100mm	3226-2251	200-225mm
3226-1251	100-125mm	3226-2501	225-250mm
3226-1501	125-150mm	3226-2751	250-275mm
3226-1751	150-175mm	3226-3001	275-300mm
3226-2001	175-200mm		

MEASURING TIPS FOR INTERNAL SCREW THREAD MICROMETERS

- Supplied in pair
- Suitable for **3226** series micrometers



7321-T1S



Metric and unified screw (60° thread angle)

Code	Pitch
7321-T11	0.4-0.5mm/64-48TPI
7321-T12	0.6-0.9mm/44-28TPI
7321-T13	1-1.75mm/24-14TPI
7321-T14	2-3mm/13-9TPI
7321-T15	3.5-5mm/8-5TPI
7321-T16	5.5-7mm/4.5-3.5TPI
7321-T1S	6 pairs/set, including all above tips

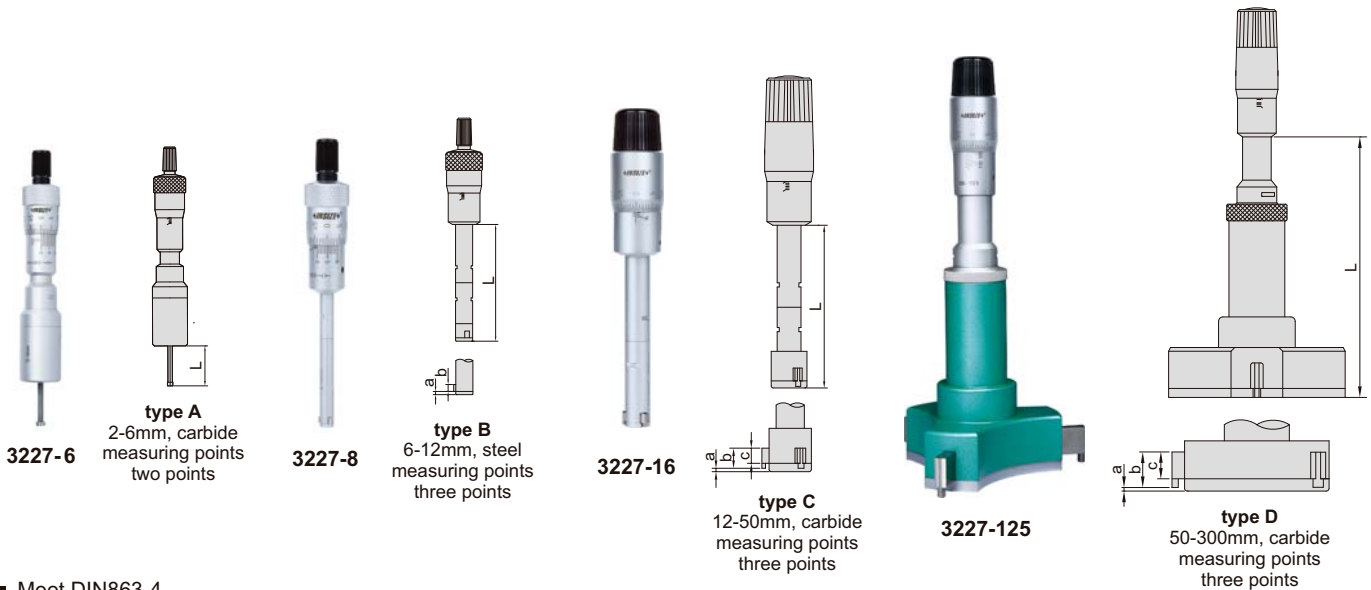
Whitworth screw (55° thread angle)

Code	Pitch
7321-T21	60-48TPI
7321-T22	48-40TPI
7321-T23	40-32TPI
7321-T24	32-24TPI
7321-T25	24-18TPI
7321-T26	18-14TPI
7321-T27	14-10TPI
7321-T28	10-7TPI
7321-T29	7-4.5TPI
7321-T210	4.5-3.5TPI
7321-T2S	10 pairs/set, including all above tips

TWO POINTS/THREE POINTS INTERNAL MICROMETERS



7



- Meet DIN863-4
- 2-12mm: graduation 0.001mm
12-300mm: graduation 0.005mm
- Ratchet stop
- Optional accessory: setting rings (code **6312**),
micrometer stand and clamp (code **6301** and **6301-2**)

Individual

(mm)

Code	Range	Type	Accuracy	Setting ring	Extension rod (included)	L	a	b	c
3227-2 *	2-2.5mm	A (two points)	6µm	Ø2.5 (included)	—	12	—	—	—
3227-3 *	2.5-3mm	A (two points)	6µm	Ø2.5 (included)	—	12	—	—	—
3227-4 *	3-4mm	A (two points)	6µm	Ø4 (included)	—	22	—	—	—
3227-5 *	4-5mm	A (two points)	6µm	Ø5 (included)	—	22	—	—	—
3227-6 *	5-6mm	A (two points)	6µm	Ø6 (included)	—	22	—	—	—
3227-8 *	6-8mm	B (three points)	4µm	Ø6 (included)	100	54.5	1.5	2.5	—
3227-10 *	8-10mm	B (three points)	4µm	Ø8 (included)	100	54.5	1.5	2.5	—
3227-12 *	10-12mm	B (three points)	4µm	Ø10 (included)	100	54.5	1.5	2.5	—
3227-16 *	12-16mm	C (three points)	4µm	Ø16 (included)	150	80	0.5	6	4.5
3227-20 *	16-20mm	C (three points)	4µm	Ø16 (included)	150	80	0.5	6	4.5
3227-25 *	20-25mm	C (three points)	4µm	Ø25 (included)	150	90	0.5	8	6
3227-30 *	25-30mm	C (three points)	4µm	Ø25 (included)	150	90	0.5	8	6
3227-40 *	30-40mm	C (three points)	4µm	Ø40 (included)	150	97	0.5	14	12
3227-50 *	40-50mm	C (three points)	5µm	Ø40 (included)	150	97	0.5	14	12
3227-63 *	50-63mm	D (three points)	5µm	Ø62 (included)	150	114	0.5	17.5	14.5
3227-75 *	62-75mm	D (three points)	5µm	Ø62 (included)	150	114	0.5	17.5	14.5
3227-88 *	75-88mm	D (three points)	5µm	Ø87 (included)	150	114	0.5	17.5	14.5
3227-100 *	87-100mm	D (three points)	5µm	Ø87 (included)	150	114	0.5	17.5	14.5
3227-125 *	100-125mm	D (three points)	6µm	optional	150	140	0.9	29	25
3227-150 *	125-150mm	D (three points)	6µm	optional	150	140	0.9	29	25
3227-175 *	150-175mm	D (three points)	7µm	optional	150	140	0.9	29	25
3227-200 *	175-200mm	D (three points)	7µm	optional	150	140	0.9	29	25
3227-225	200-225mm	D (three points)	8µm	optional	150	140	0.9	29	25
3227-250	225-250mm	D (three points)	8µm	optional	150	140	0.9	29	25
3227-275	250-275mm	D (three points)	9µm	optional	150	140	0.9	29	25
3227-300	275-300mm	D (three points)	9µm	optional	150	140	0.9	29	25

To be continued

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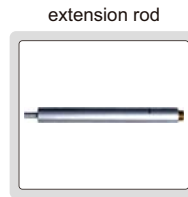


micrometer stand with clamp (optional)



setting ring

2-100mm: included
100-300mm: optional



extension rod

included



3227-504

Set

Code	Range	Micrometers included	Setting ring (included)	Extension rod (included)
3227-232 *	2-3mm	2-2.5mm, 2.5-3mm	Ø2.5mm	—
3227-363 *	3-6mm	3-4mm, 4-5mm, 5-6mm	Ø4mm, Ø5mm, Ø6mm	—
3227-123 *	6-12mm	6-8mm, 8-10mm, 10-12mm	Ø6mm, Ø8mm, Ø10mm	100mm
3227-202 *	12-20mm	12-16mm, 16-20mm	Ø16mm	150mm
3227-504 *	20-50mm	20-25mm, 25-30mm, 30-40mm, 40-50mm	Ø25mm, Ø40mm	150mm
3227-1004 *	50-100mm	50-63mm, 62-75mm, 75-88mm, 87-100mm	Ø62mm, Ø87mm	150mm

* Supplied with manufacturer inspection certificate

IP65
WATERPROOF

DATA
OUTPUT

DIGITAL TWO POINTS/THREE POINTS INTERNAL MICROMETERS

INSPECTION
CERTIFICATE



3127-5

type A
2-6mm, carbide
measuring points
two points



3127-12

type B
6-12mm, steel
measuring points
three points

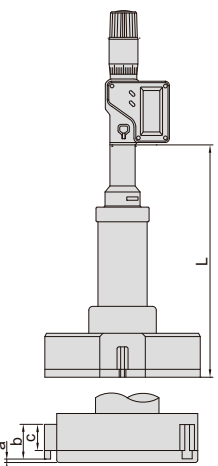


3127-40

type C
12-50mm, carbide
measuring points
three points



3127-125



type D
50-300mm, carbide
measuring points
three points

- Resolution 0.001mm/0.00005" (resolution of 3127-275 and 3127-300 is 0.001mm/0.0001")
- IP65 dust/waterproof
- Buttons: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Optional accessory: data output cable (code 7315-31 page 4, 7302-30 page 12), setting ring (code 6312), micrometer stand and clamp (code 6301 and 6301-2)

To be continued

Continued from previous page

micrometer stand with clamp (optional)

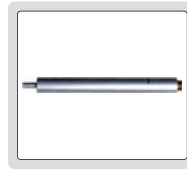


setting ring



2-100mm: included
100-300mm: optional

extension rod



included



3127-202

Individual

(mm)

Code	Range	Type	Accuracy	Setting ring	Extension rod (included)	L	a	b	c
3127-2*	2-2.5mm/0.08-0.10"	A (two points)	6µm	Ø2.5 (included)	—	12	—	—	—
3127-3*	2.5-3mm/0.10-0.12"	A (two points)	6µm	Ø2.5 (included)	—	12	—	—	—
3127-4*	3-4mm/0.12-0.16"	A (two points)	6µm	Ø4 (included)	—	22	—	—	—
3127-5*	4-5mm/0.16-0.20"	A (two points)	6µm	Ø5 (included)	—	22	—	—	—
3127-6*	5-6mm/0.20-0.24"	A (two points)	6µm	Ø6 (included)	—	22	—	—	—
3127-8*	6-8mm/0.24-0.31"	B (three points)	4µm	Ø6 (included)	100	57	1.5	2.5	—
3127-10*	8-10mm/0.31-0.39"	B (three points)	4µm	Ø8 (included)	100	57	1.5	2.5	—
3127-12*	10-12mm/0.39-0.47"	B (three points)	4µm	Ø10 (included)	100	57	1.5	2.5	—
3127-16*	12-16mm/0.47-0.63"	C (three points)	4µm	Ø16 (included)	150	99	0.5	6	4.5
3127-20*	16-20mm/0.63-0.79"	C (three points)	4µm	Ø16 (included)	150	99	0.5	6	4.5
3127-25*	20-25mm/0.79-0.98"	C (three points)	4µm	Ø25 (included)	150	105	0.5	8	6
3127-30*	25-30mm/0.98-1.18"	C (three points)	4µm	Ø25 (included)	150	105	0.5	8	6
3127-40*	30-40mm/1.18-1.57"	C (three points)	4µm	Ø40 (included)	150	110	0.5	14	12
3127-50*	40-50mm/1.57-1.97"	C (three points)	5µm	Ø40 (included)	150	110	0.5	14	12
3127-63*	50-63mm/1.97-2.48"	D (three points)	5µm	Ø62 (included)	150	127	0.5	17.5	14.5
3127-75*	62-75mm/2.44-2.95"	D (three points)	5µm	Ø62 (included)	150	127	0.5	17.5	14.5
3127-88*	75-88mm/2.95-3.46"	D (three points)	5µm	Ø87 (included)	150	127	0.5	17.5	14.5
3127-100*	87-100mm/3.43-3.94"	D (three points)	5µm	Ø87 (included)	150	127	0.5	17.5	14.5
3127-125*	100-125mm/3.94-4.92"	D (three points)	6µm	optional	150	175	0.9	29	25
3127-150*	125-150mm/4.92-5.91"	D (three points)	6µm	optional	150	175	0.9	29	25
3127-175*	150-175mm/5.91-6.89"	D (three points)	7µm	optional	150	175	0.9	29	25
3127-200*	175-200mm/6.89-7.87"	D (three points)	7µm	optional	150	175	0.9	29	25
3127-225	200-225mm/7.87-8.86"	D (three points)	8µm	optional	150	175	0.9	29	25
3127-250	225-250mm/8.86-9.84"	D (three points)	8µm	optional	150	175	0.9	29	25
3127-275	250-275mm/9.84-10.83"	D (three points)	9µm	optional	150	175	0.9	29	25
3127-300	275-300mm/10.83-11.81"	D (three points)	9µm	optional	150	175	0.9	29	25

Set

Code	Range	Micrometers included	Setting ring (included)	Extension rod (included)
3127-232*	2-3mm/0.08-0.12"	2-2.5mm, 2.5-3mm	Ø2.5mm	—
3127-363*	3-6mm/0.12-0.24"	3-4mm, 4-5mm, 5-6mm	Ø4mm, Ø5mm, Ø6mm	—
3127-123*	6-12mm/0.24-0.47"	6-8mm, 8-10mm, 10-12mm	Ø6mm, Ø8mm, Ø10mm	100mm
3127-202*	12-20mm/0.47-0.79"	12-16mm, 16-20mm	Ø16mm	150mm
3127-504*	20-50mm/0.79-1.97"	20-25mm, 25-30mm, 30-40mm, 40-50mm	Ø25mm, Ø40mm	150mm
3127-1004*	50-100mm/1.97-3.94"	50-63mm, 62-75mm, 75-88mm, 87-100mm	Ø62mm, Ø87mm	150mm

*Supplied with manufacturer inspection certificate



WIDE RANGE THREE POINTS INTERNAL MICROMETERS

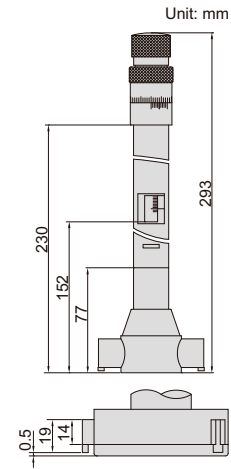
- Meet DIN863-4
- Graduation 0.001mm
- Carbide measuring faces
- Ratchet stop
- Setting rings are included (except 200-300mm)

Code	Range	Accuracy	Setting ring
3228-70*	50-70mm	5µm	Ø50mm (included)
3228-100*	70-100mm	5µm	Ø70mm (included)
3228-150*	100-150mm	6µm	Ø100mm (included)
3228-250*	150-250mm	8µm	Ø150mm (included)
3228-300*	200-300mm	9µm	Ø200mm (optional)

* Supplied with manufacturer inspection certificate



3228-70



setting ring

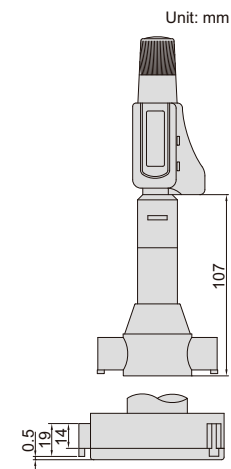
DIGITAL WIDE RANGE THREE POINTS INTERNAL MICROMETERS



- Meet DIN863-4
- Resolution 0.001mm/0.00005" (resolution of **3128-300** is 0.001mm/0.0001")
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- Data output
- Automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with extension rods
- Setting rings are included (except 200-300mm)
- Optional accessory: data output cable (code **7315-30** page 4, **7302-30** page 12)



3128-70



setting ring

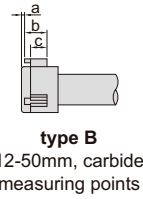
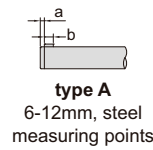
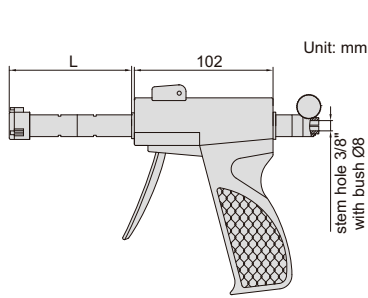


extension rod (included)

Code	Range	Accuracy	Setting ring	Extension rod (included)
3128-70*	50-70mm/1.97-2.76"	5µm	Ø50mm (included)	150mm
3128-100*	70-100mm/2.76-3.94"	5µm	Ø70mm (included)	150mm
3128-150*	100-150mm/3.94-5.91"	6µm	Ø100mm (included)	150mm
3128-250*	150-250mm/5.91-9.84"	8µm	Ø150mm (included)	150mm
3128-300*	200-300mm/7.87-11.81"	9µm	Ø200mm (optional)	150mm

* Supplied with manufacturer inspection certificate

PISTOL GRIP THREE POINTS BORE GAGES

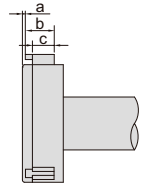


- Optional accessory: digital indicators (code **2108-101F**, resolution 0.001mm/0.00005"), setting rings (code **6312**)



6-100mm: included
100-300mm: optional

included



Individual

Code	Range	Type	Accuracy (without digital indicator)	Setting ring	Extension rod (included)	L	a	b	c
2124-8 *	6-8mm	A	4µm	Ø6mm (included)	100mm	50	1.5	2.5	—
2124-10 *	8-10mm	A	4µm	Ø8mm (included)	100mm	50	1.5	2.5	—
2124-12 *	10-12mm	A	4µm	Ø10mm (included)	100mm	50	1.5	2.5	—
2124-16 *	12-16mm	B	4µm	Ø16mm (included)	150mm	65	0.5	6	4.5
2124-20 *	16-20mm	B	4µm	Ø16mm (included)	150mm	65	0.5	6	4.5
2124-25 *	20-25mm	B	4µm	Ø25mm (included)	150mm	91	0.5	8	6
2124-30 *	25-30mm	B	4µm	Ø25mm (included)	150mm	91	0.5	8	6
2124-40 *	30-40mm	B	4µm	Ø40mm (included)	150mm	97	0.5	14	12
2124-50 *	40-50mm	B	5µm	Ø40mm (included)	150mm	97	0.5	14	12
2124-63 *	50-63mm	C	5µm	Ø62mm (included)	150mm	112	0.5	17.5	14.5
2124-75 *	62-75mm	C	5µm	Ø62mm (included)	150mm	112	0.5	17.5	14.5
2124-88 *	75-88mm	C	5µm	Ø87mm (included)	150mm	112	0.5	17.5	14.5
2124-100 *	87-100mm	C	5µm	Ø87mm (included)	150mm	112	0.5	17.5	14.5
2124-125 *	100-125mm	C	6µm	optional	150mm	140	0.9	29	25
2124-150 *	125-150mm	C	6µm	optional	150mm	140	0.9	29	25
2124-175 *	150-175mm	C	7µm	optional	150mm	140	0.9	29	25
2124-200 *	175-200mm	C	7µm	optional	150mm	140	0.9	29	25
2124-225	200-225mm	C	8µm	optional	150mm	140	0.9	29	25
2124-250	225-250mm	C	8µm	optional	150mm	140	0.9	29	25
2124-275	250-275mm	C	9µm	optional	150mm	140	0.9	29	25
2124-300	275-300mm	C	9µm	optional	150mm	140	0.9	29	25

Set

Code	Range	Probes included	Setting ring (included)	Extension rod (included)
2124-S123 *	6-12mm	6-8mm, 8-10mm, 10-12mm	Ø6mm, Ø8mm, Ø10mm	100mm
2124-S202 *	12-20mm	12-16mm, 16-20mm	Ø16mm	150mm
2124-S504 *	20-50mm	20-25mm, 25-30mm, 30-40mm, 40-50mm	Ø25mm, Ø40mm	150mm
2124-S1004 *	50-100mm	50-63mm, 62-75mm, 75-88mm, 87-100mm	Ø62mm, Ø87mm	150mm



2124-S504

* Supplied with manufacturer inspection certificate

SPLIT TYPE DIAL BORE GAGES

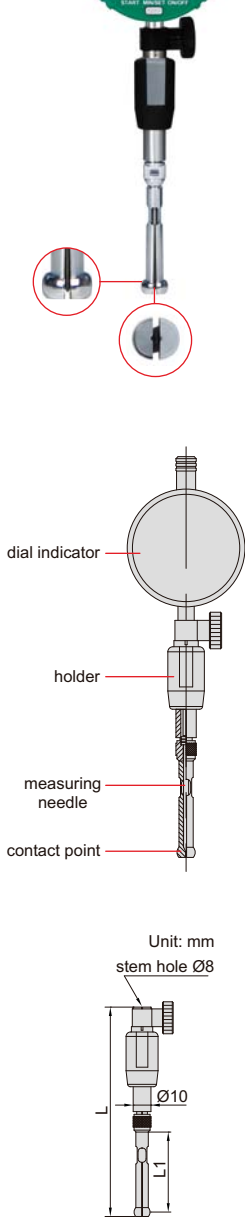
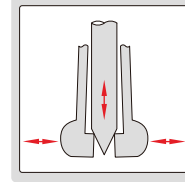
INSIZE PLUS
MADE IN EUROPE

digital indicator
is optional



- Split type contact points
- Accuracy (without indicator):
3µm (measuring range 0.95~10mm),
4µm (measuring range 10~20.6mm)
- Repeatability (without indicator): 1µm
- Optional accessory:
digital/dial indicators or dial comparator

principle of measurement



Code	Contact point				Measuring needle	Setting ring	
	Measuring range	Measuring depth (L1)	Total length (L)	Material of points		Code	Code
2426-1	0.95-1.15	13	89	carbide	2426-N1D4	6312-1	1
2426-1D1	1.07-1.25	13	89	carbide		6312-1D1	1.1
2426-1D2	1.17-1.35	13	89	carbide		6312-1D2	1.2
2426-1D3	1.27-1.45	13	89	carbide		6312-1D3	1.3
2426-1D4	1.37-1.55	13	89	carbide	2426-N2D25	6312-1D4	1.4
2426-1D75	1.5-1.9	17	93	carbide		6312-1D75	1.75
2426-2	1.8-2.2	17	93	carbide	2426-N4	6312-2	2
2426-2D25	2.05-2.45	17	93	carbide		6312-2D25	2.25
2426-2D5	2.3-2.7	25	101	carbide	2426-N9	6312-2D5	2.5
2426-2D75	2.55-2.95	25	101	carbide		6312-2D75	2.75
2426-3	2.8-3.2	25	101	carbide		6312-3	3
2426-3D25	3.05-3.45	25	101	carbide		6312-3D25	3.25
2426-3D5	3.3-3.7	25	101	carbide	2426-N20	6312-3D5	3.5
2426-3D75	3.55-3.95	25	101	carbide		6312-3D75	3.75
2426-4	3.8-4.2	25	101	carbide		6312-4	4
2426-4D5	4.15-4.8	41	118	hard chromed		6312-4D5	4.5
2426-5	4.7-5.3	41	118	hard chromed	2426-N9	6312-5	5
2426-5D5	5.2-5.8	41	118	hard chromed		6312-5D5	5.5
2426-6	5.7-6.3	41	118	hard chromed		6312-6	6
2426-6D5	6.2-6.8	41	118	hard chromed		6312-6D5	6.5
2426-7	6.7-7.3	41	118	hard chromed	2426-N20	6312-7	7
2426-7D5	7.2-7.8	45	118	hard chromed		6312-7D5	7.5
2426-8	7.7-8.3	45	118	hard chromed		6312-8	8
2426-8D5	8.2-8.8	45	118	hard chromed		6312-8D5	8.5
2426-9	8.7-9.3	45	118	hard chromed	2426-N20	6312-9	9
2426-10	9.2-10.5	45	118	hard chromed		6312-10	10
2426-11	10.2-11.5	45	118	hard chromed		6312-11	11
2426-12	11.2-12.5	45	118	hard chromed		6312-12	12
2426-13	12.2-13.5	45	118	hard chromed	2426-N20	6312-13	13
2426-14	13.4-14.6	45	118	hard chromed		6312-14	14
2426-15	14.4-15.6	45	118	hard chromed		6312-15	15
2426-16	15.4-16.6	45	118	hard chromed		6312-16	16
2426-17	16.4-17.6	45	118	hard chromed	2426-N20	6312-17	17
2426-18	17.4-18.6	45	118	hard chromed		6312-18	18
2426-19	18.4-19.6	45	118	hard chromed		6312-19	19
2426-20	19.4-20.6	45	118	hard chromed		6312-20	20



2426-HOLDER1



2426-HOLDER2

HOLDER

Code	Retraction	Applicable points
2426-HOLDER1	without	all
2426-HOLDER2	with	all

SPLIT TYPE DIAL BORE GAGE SETS

INSIZE PLUS
MADE IN EUROPE

- Split type contact points
- Accuracy (without indicator): 3µm (measuring range 0.95~10mm), 4µm (measuring range 10~20.6mm)
- Repeatability (without indicator): 1µm
- Setting rings and dial indicators are optional

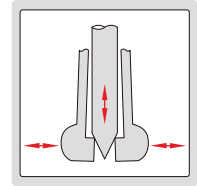


2421-121

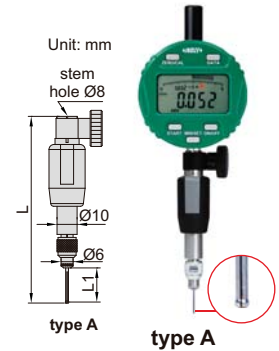
(mm)

Code	Range	Quantity of points	Measuring range of point	Measuring depth (L1)	Total length (L)	Material of points	Type of point	Setting ring (optional)	
								Code	Diameter
2421-1D4	0.95-1.55	5	0.95-1.15	13	89	carbide	A	6312-1	1
			1.07-1.25	13	89	carbide	A	6312-1D1	1.1
			1.17-1.35	13	89	carbide	A	6312-1D2	1.2
			1.27-1.45	13	89	carbide	A	6312-1D3	1.3
			1.37-1.55	13	89	carbide	A	6312-1D4	1.4
2421-4	1.5-4.2	10	1.5-1.9	17	93	carbide	A	6312-1D75	1.75
			1.8-2.2	17	93	carbide	A	6312-2	2
			2.05-2.45	17	93	carbide	A	6312-2D25	2.25
			2.3-2.7	25	101	carbide	A	6312-2D5	2.5
			2.55-2.95	25	101	carbide	A	6312-2D75	2.75
			2.8-3.2	25	101	carbide	A	6312-3	3
			3.05-3.45	25	101	carbide	A	6312-3D25	3.25
			3.3-3.7	25	101	carbide	A	6312-3D5	3.5
			3.55-3.95	25	101	carbide	A	6312-3D75	3.75
			3.8-4.2	25	101	carbide	A	6312-4	4
2421-7D5	4.15-7.8	7	4.15-4.8	41	118	hard chromed	B	6312-4D5	4.5
			4.7-5.3	41	118	hard chromed	B	6312-5	5
			5.2-5.8	41	118	hard chromed	B	6312-5D5	5.5
			5.7-6.3	41	118	hard chromed	B	6312-6	6
			6.2-6.8	41	118	hard chromed	B	6312-6D5	6.5
			6.7-7.3	41	118	hard chromed	B	6312-7	7
			7.2-7.8	45	118	hard chromed	C	6312-7D5	7.5
2421-12	7.7-12.5	6	7.7-8.3	45	118	hard chromed	C	6312-8	8
			8.2-8.8	45	118	hard chromed	C	6312-8D5	8.5
			8.7-9.3	45	118	hard chromed	C	6312-9	9
			9.2-10.5	45	118	hard chromed	C	6312-10	10
			10.2-11.5	45	118	hard chromed	C	6312-11	11
			11.2-12.5	45	118	hard chromed	C	6312-12	12
2421-20	12.2-20.6	8	12.2-13.5	45	118	hard chromed	C	6312-13	13
			13.4-14.6	45	118	hard chromed	C	6312-14	14
			14.4-15.6	45	118	hard chromed	C	6312-15	15
			15.4-16.6	45	118	hard chromed	C	6312-16	16
			16.4-17.6	45	118	hard chromed	C	6312-17	17
			17.4-18.6	45	118	hard chromed	C	6312-18	18
			18.4-19.6	45	118	hard chromed	C	6312-19	19
			19.4-20.6	45	118	hard chromed	C	6312-20	20
2421-121	4.15-12.5	13	4.15-4.8	41	118	hard chromed	B	6312-4D5	4.5
			4.7-5.3	41	118	hard chromed	B	6312-5	5
			5.2-5.8	41	118	hard chromed	B	6312-5D5	5.5
			5.7-6.3	41	118	hard chromed	B	6312-6	6
			6.2-6.8	41	118	hard chromed	B	6312-6D5	6.5
			6.7-7.3	41	118	hard chromed	B	6312-7	7
			7.2-7.8	45	118	hard chromed	C	6312-7D5	7.5
			7.7-8.3	45	118	hard chromed	C	6312-8	8
			8.2-8.8	45	118	hard chromed	C	6312-8D5	8.5
			8.7-9.3	45	118	hard chromed	C	6312-9	9
			9.2-10.5	45	118	hard chromed	C	6312-10	10
			10.2-11.5	45	118	hard chromed	C	6312-11	11
			11.2-12.5	45	118	hard chromed	C	6312-12	12

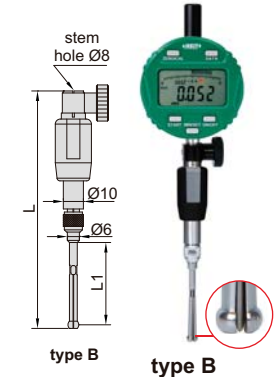
principle of measurement



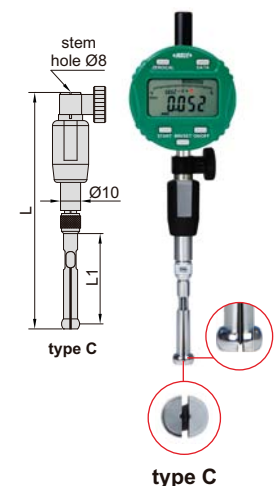
digital indicator is optional



digital indicator is optional



digital indicator is optional



BORE GAGES FOR SMALL HOLES

INSIZE PLUS
MADE IN EUROPE

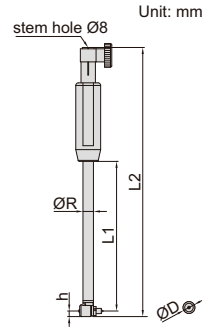
- Applicable for 0.01mm or 0.001mm, graduation dial indicators
- Carbide contact point and anvil
- Optional accessory: dial indicator or dial comparator, setting ring (code 6312)

Code	Range	Accuracy (without dial comparator)	Repeatability (without dial comparator)	L1	L2	ØR	ØD	h
2425-6	4.5-6mm	2µm	0.5µm	80	147	4	4	2
2425-8	6-8mm	2µm	0.5µm	100	165	5	5.2	2.6
2425-12	8-12mm	2µm	0.5µm	100	166	5	6.5	3.25
2425-20	12-20mm	2µm	0.5µm	110	204	8	9	4.5

digital indicator is optional



2425-6



BORE GAGES

INSIZE PLUS
MADE IN EUROPE

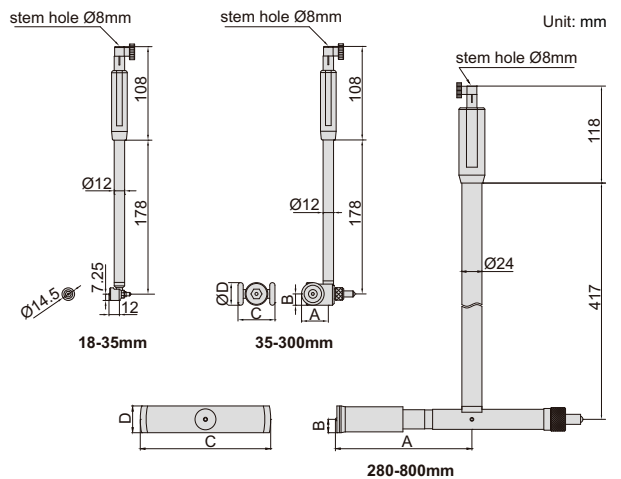
digital indicator is optional



- Applicable for 0.01mm or 0.001mm graduation dial indicators
- Optional accessory:
 - Dial indicator or dial comparator
 - Setting ring (code 6312)
 - Long handle (code 7352)
 - Bore gage setter



2422-150



Code	Range	Accuracy (without dial comparator)	Repeatability (without dial comparator)
2422-35	18-35mm	4µm	2µm
2422-60	35-60mm	4µm	2µm
2422-150	50-150mm	4µm	2µm
2422-300	150-300mm	4µm	2µm
2422-510	280-510mm	3µm	1.5µm
2422-800	400-800mm	3µm	1.5µm


Code	A	B	C	D
2422-60	19.5mm	10.5mm	28mm	21mm
2422-150	30.8mm	13mm	42.5mm	26mm
2422-300	30.8mm	13mm	76.5mm	26mm
2422-510	164mm	16mm	156mm	32mm
2422-800	305mm	18mm	300mm	36mm

PRECISION BORE GAGES FOR SMALL HOLES

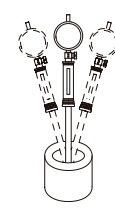
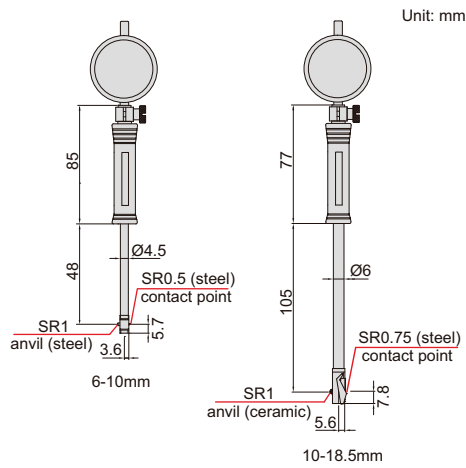
7

with digital indicator

read the diameter directly, after inputting the size of setting ring.



the minimum value tracking function can find the diameter automatically.

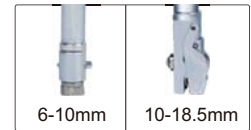
- Optional accessory: setting ring (code 6312), bore gage setter

With dial indicator

Code	Range	Indicator	Accuracy	Repeatability
2853-10	6-10mm	dial indicator, range 1mm, graduation 0.001mm (code 2313-1FA)	±0.007mm	0.0015mm
2853-18	10-18.5mm		±0.007mm	0.0015mm

With digital indicator (data output cable code 7315-50M page 5, 7302-40M page 13, optional)

Code	Range	Indicator	Accuracy	Repeatability
2153-10	6-10mm	digital indicator, code 2108-101F, range 12.7mm/0.5", resolution 0.001mm/0.00005"	±0.007mm	0.002mm
2153-18	10-18.5mm		±0.007mm	0.002mm




BORE GAGES FOR SMALL HOLES

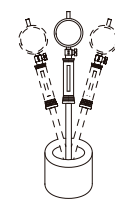
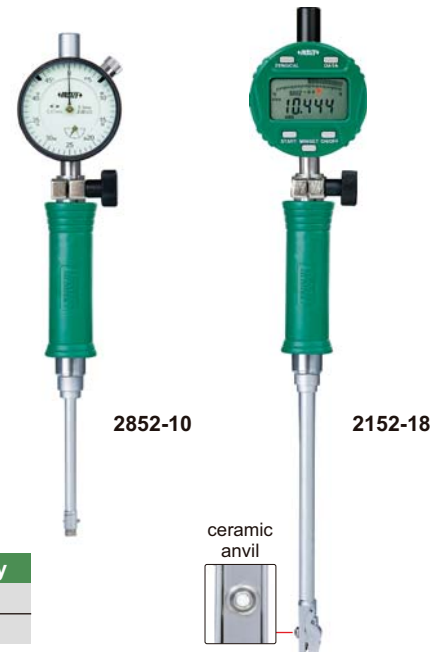
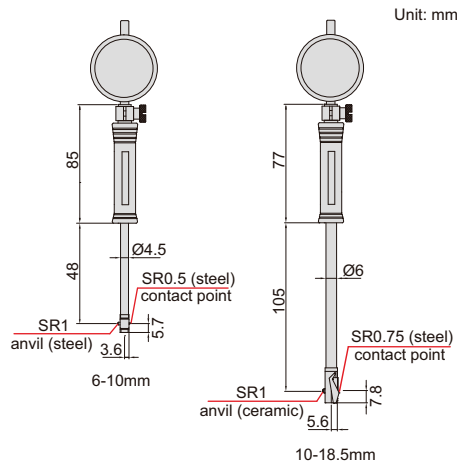
ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

with digital indicator

read the diameter directly, after inputting the size of setting ring.



the minimum value tracking function can find the diameter automatically.

- Optional accessory: setting ring (code 6312), bore gage setter

With dial indicator

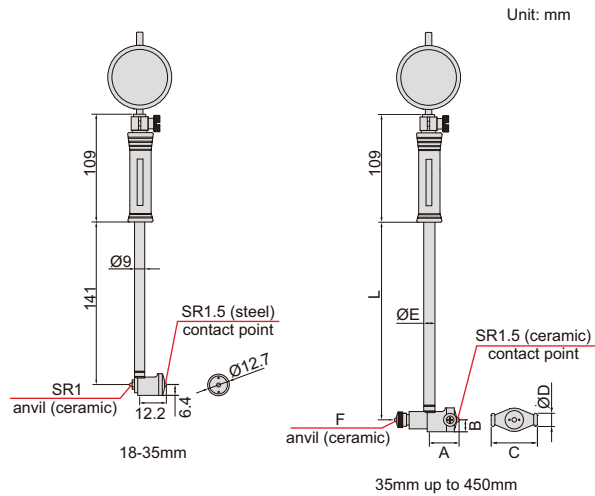
Code	Range	Indicator	Accuracy	Repeatability
2852-10	6-10mm	dial indicator, range 3mm, graduation 0.01mm (code 2311-3F)	±0.012mm	0.003mm
2852-18	10-18.5mm		±0.012mm	0.003mm

With digital indicator (data output cable code 7315-50M page 5, 7302-40M page 13, optional)

Code	Range	Indicator	Accuracy	Repeatability
2152-10	6-10mm	digital indicator, code 2108-10F, range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to: 0.01mm/0.0005")	±0.012mm	0.003mm
2152-18	10-18.5mm		±0.012mm	0.003mm



PRECISION BORE GAGES



2825-160

2126-35

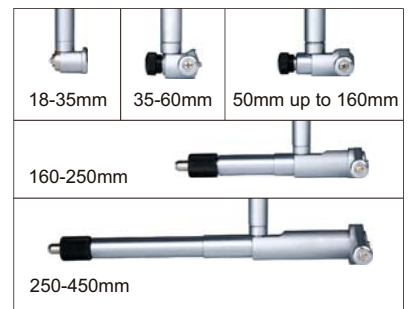
- Optional accessory: setting ring (code 6312), bore gage setter

(mm)

Range	A	B	C	ØD	ØE	F	L
35-60mm	22	9	27	13	12.8	SR2	141
50-100mm	26	9	35	13	12.8	SR2	141
50-160mm	26	9	35	13	12.8	SR2	141
100-160mm	26	9	35	13	12.8	SR2	141
160-250mm	56.5	13	74.5	15	12.8	SR2	241
250-450mm	86.5	15	101.5	15	14.5	SR2.5	241

With dial indicator

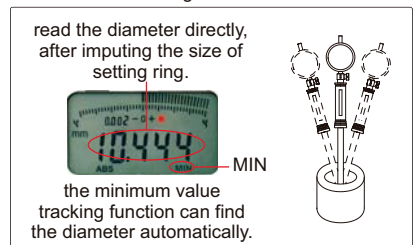
Code	Range	Indicator	Accuracy	Repeatability
2825-35	18-35mm	dial indicator, range 1mm, graduation 0.001mm (code 2313-1FA)	±0.007mm	0.0015mm
2825-60	35-60mm		±0.007mm	0.0015mm
2825-100	50-100mm		±0.007mm	0.0015mm
2825-160	50-160mm		±0.007mm	0.0015mm
2825-161	100-160mm		±0.007mm	0.0015mm
2825-250	160-250mm		±0.007mm	0.0015mm
2825-450	250-450mm		±0.007mm	0.0015mm



With digital indicator (data output cable code 7315-50M page 5, 7302-40M page 13, optional)

Code	Range	Indicator	Accuracy	Repeatability
2126-35	18-35mm	digital indicator, code 2108-101F, range 12.7mm/0.5", resolution 0.001mm/0.00005"	±0.007mm	0.002mm
2126-60	35-60mm		±0.007mm	0.002mm
2126-100	50-100mm		±0.007mm	0.002mm
2126-160	50-160mm		±0.007mm	0.002mm
2126-161	100-160mm		±0.007mm	0.002mm
2126-250	160-250mm		±0.007mm	0.002mm
2126-450	250-450mm		±0.007mm	0.002mm

with digital indicator

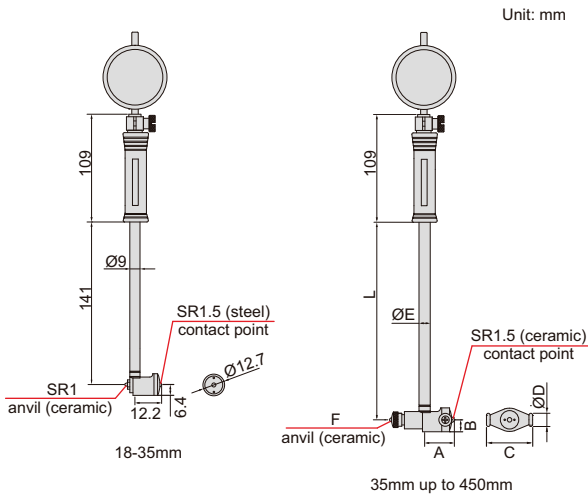


BORE GAGES

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS



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2322-160A

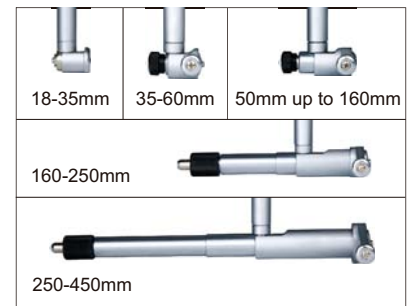
2122-35A

- Optional accessory: setting ring (code 6312), long handle (code 7351), bore gage setter

Range	A	B	C	ØD	ØE	F	L
35-60mm	22	9	27	13	12.8	SR2	141
50-100mm	26	9	35	13	12.8	SR2	141
50-160mm	26	9	35	13	12.8	SR2	141
100-160mm	26	9	35	13	12.8	SR2	141
160-250mm	56.5	13	74.5	15	12.8	SR2	241
250-450mm	86.5	15	101.5	15	14.5	SR2.5	241

With dial indicator

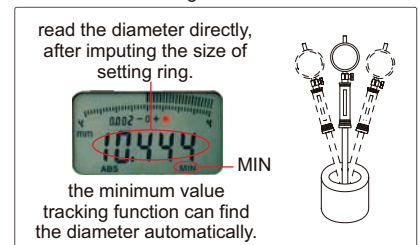
Code	Range	Indicator	Accuracy	Repeatability
2322-35A	18-35mm	dial indicator, range 10mm, graduation 0.01mm (code 2308-10FA)	±0.015mm	0.003mm
2322-60A	35-60mm		±0.018mm	0.003mm
2322-100A	50-100mm		±0.018mm	0.003mm
2322-160A	50-160mm		±0.018mm	0.003mm
2322-161A	100-160mm		±0.018mm	0.003mm
2322-250A	160-250mm		±0.018mm	0.003mm
2322-450A	250-450mm		±0.018mm	0.003mm



With digital indicator (data output cable code 7315-50M page 5, 7302-40M page 13, optional)

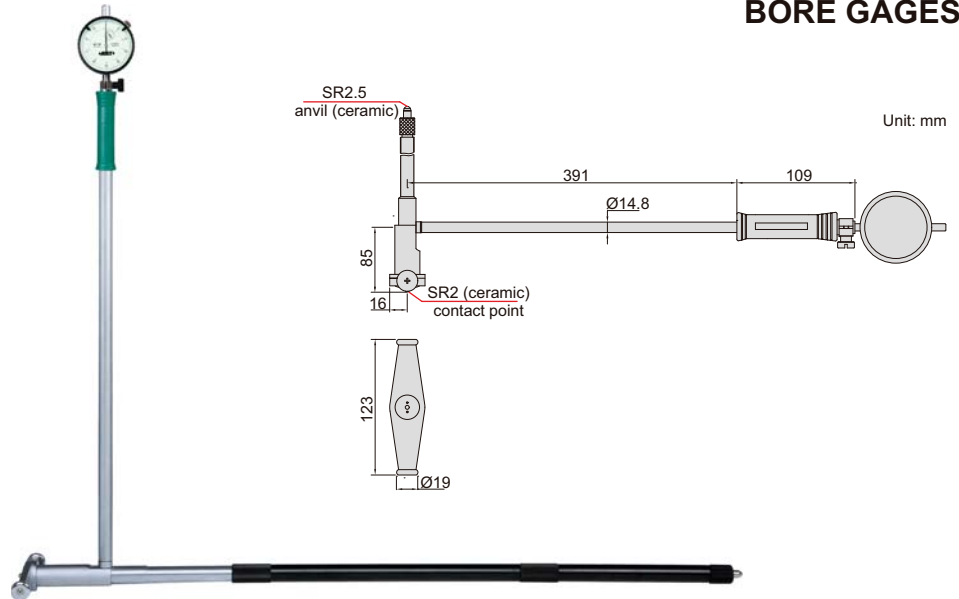
Code	Range	Indicator	Accuracy	Repeatability
2122-35A	18-35mm	digital indicator, code 2108-10F, range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to: 0.01mm/0.0005")	±0.015mm	0.003mm
2122-60A	35-60mm		±0.018mm	0.003mm
2122-100A	50-100mm		±0.018mm	0.003mm
2122-160A	50-160mm		±0.018mm	0.003mm
2122-161A	100-160mm		±0.018mm	0.003mm
2122-250A	160-250mm		±0.018mm	0.003mm
2122-450A	250-450mm		±0.018mm	0.003mm

with digital indicator



ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

BORE GAGES



2828-800A

With dial indicator

Code	Range	Indicator	Accuracy	Repeatability
2828-800A	400-800mm	dial indicator, code 2308-10FA, range 10mm, graduation 0.01mm	±0.025mm	0.003mm

With digital indicator (data output cable code 7315-50M page 5, 7302-40M page 13, optional)

Code	Range	Indicator	Accuracy	Repeatability
2128-800A	400-800mm	digital indicator, code 2108-10F, range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to: 0.01mm/0.0005")	±0.025mm	0.003mm

BORE GAGE SET

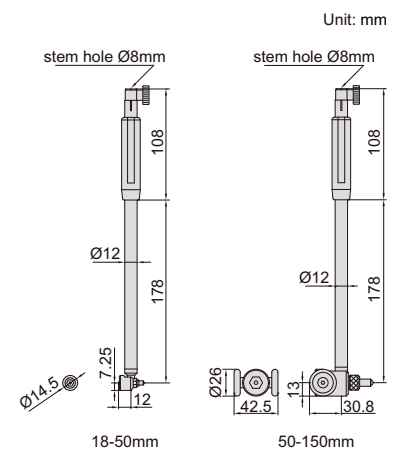
INSIZE PLUS
MADE IN EUROPE

digital indicator is optional



2423-S2

- Includes bore gages 18-50mm and 50-150mm
- Optional accessory:
 - 0.01mm or 0.001mm graduation dial indicator or dial comparator
 - Setting ring (code 6312)
 - Long handle (code 7352)
 - Bore gage setter



Code	Range	Accuracy (without dial comparator)	Repeatability (without dial comparator)
2423-S2	18-150mm	4µm	2µm

BORE GAGE SETS

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

7



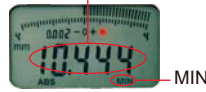
2824-S160

2724-S3

- Optional accessory: setting ring (code 6312), long handle (code 7351), bore gage setter

with digital indicator

read the diameter directly, after inputting the size of setting ring.



the minimum value tracking function can find the diameter automatically.



packaging (code 2824-S3)



With dial indicator

Code	Range	Indicator	Bore gages included	Accuracy	Repeatability
2824-S160	35-160mm	dial indicator, code 2308-10FA, range 10mm, graduation 0.01mm	① 35-50mm (dial indicator and handle are not included) ② 50-160mm	35-50mm ±0.018mm 50-160mm ±0.018mm	0.003mm
2824-S3	18-160mm	dial indicator, code 2308-10FA, range 10mm, graduation 0.01mm	① 18-35mm ② 35-60mm (dial indicator is not included) ③ 50-160mm (dial indicator is not included)	18-35mm ±0.015mm 35-60mm ±0.018mm 50-160mm ±0.018mm	0.003mm

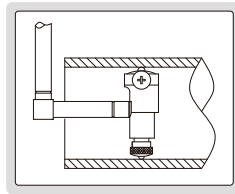
With digital indicator (data output cable code 7315-50M page 5, 7302-40M page 13, optional)

Code	Range	Indicator	Bore gages included	Accuracy	Repeatability
2724-S160	35-160mm	digital indicator, code 2108-10F range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to: 0.01mm/0.0005")	① 35-50mm (digital indicator and handle are not included) ② 50-160mm	35-50mm ±0.018mm 50-160mm ±0.018mm	0.003mm
2724-S3	18-160mm	digital indicator, code 2108-10F range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to: 0.01mm/0.0005")	① 18-35mm ② 35-60mm (digital indicator is not included) ③ 50-160mm (digital indicator is not included)	18-35mm ±0.015mm 35-60mm ±0.018mm 50-160mm ±0.018mm	0.003mm

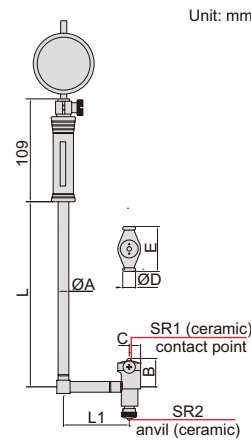
ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

BORE GAGES

- Optional accessory: setting ring (code **6312**), long handle (code **7351**), bore gage setter



Range	ØA	B	C	ØD	E	L	L1
35-60mm	12.8	22	9	13	27	141	75
50-160mm	12.8	28.5	9.2	13	35	141	76.2
160-250mm	14.5	62.0	12.7	15	74.5	391	100
250-450mm	14.5	91.5	15.0	15	101.5	391	100



2827-160A

With dial indicator

Code	Range	Indicator	Accuracy	Repeatability
2827-60A	35-60mm	dial indicator, code 2308-10FA , range 10mm, graduation 0.01mm	±0.018mm	0.003mm
2827-160A	50-160mm		±0.018mm	0.003mm
2827-250A	160-250mm		±0.018mm	0.003mm
2827-450A	250-450mm		±0.018mm	0.003mm

With digital indicator

(data output cable code **7315-50M** page 5, **7302-40M** page 13, optional)

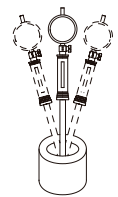
Code	Range	Indicator	Accuracy	Repeatability
2127-60	35-60mm	digital indicator, code 2108-10F , range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to: 0.01mm/0.0005")	±0.018mm	0.003mm
2127-160	50-160mm		±0.018mm	0.003mm
2127-250	160-250mm		±0.018mm	0.003mm
2127-450	250-450mm		±0.018mm	0.003mm

with digital indicator

read the diameter directly, after inputting the size of setting ring.



the minimum value tracking function can find the diameter automatically.



BORE GAGES FOR BLIND HOLES

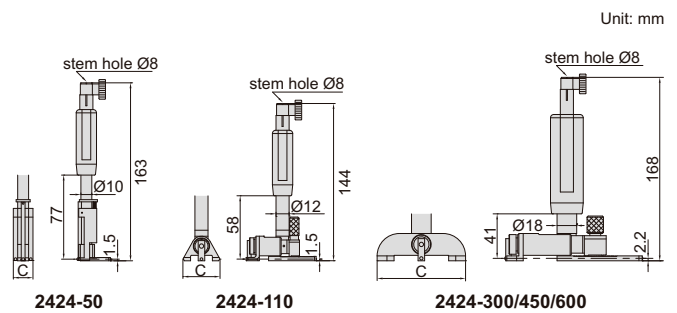
INSIZE PLUS
MADE IN EUROPE

- To measure diameter of shallow and blind holes
- Optional accessory:
 - 0.01mm or 0.001mm graduation dial indicators
 - Setting ring (code **6312**)
 - Long handle (code **7352**)
 - Bore gage setter



digital indicator is optional

2424-300



Code	Range	Accuracy (without dial indicator)	Repeatability (without dial indicator)	C
2424-50	20-50mm	4µm	1µm	18mm
2424-110	50-110mm	4µm	1µm	34mm
2424-300	110-300mm	4µm	1µm	81mm
2424-450	200-450mm	4µm	1µm	81mm
2424-600	300-600mm	4µm	1µm	140mm



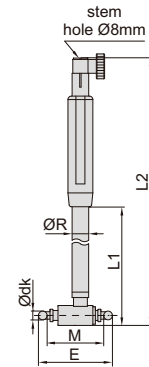
GEAR BORE GAGES

INSIZE PLUS
MADE IN EUROPE

RELATIVE PRODUCT: INTERNAL GEAR TOOTH MICROMETER (CODE 3638)

7

- Tungsten carbide ball points, diameter accuracy 2µm
- Optional accessory:
 - Dial indicator or dial comparator
 - Ball points
 - Thread adaptor
 - Long handle (code 7352)



(mm)

Code	Range (E)	Accuracy (without dial comparator)	Repeatability (without dial comparator)	ØR	L1	L2	Thread for ball points
2428-12	8-12mm	2µm	0.5µm	5	100	165	M1.6
2428-22	12-22mm	2µm	0.5µm	5	102	168	M1.6
2428-55	22-55mm	2µm	0.5µm	8	110	204	M2.5
2428-250	55-250mm	2µm	0.5µm	12	177	290	M4
2428-510	100-510mm	2µm	0.5µm	18	235	363	M4

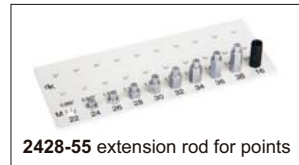
Ball points (optional)

Ball point diameter Ødk	2428-12	2428-22	2428-55	2428-250	2428-510
	point thread M1.6	point thread M1.6	point thread M2.5	point thread M4	point thread M4
	point code	point code	point code	point code	point code
1mm	2428-A1	2428-E1	2428-B1	2428-C1	2428-C1
1.5mm	2428-A1D5	2428-E1D5	2428-B1D5	2428-C1D5	2428-C1D5
2mm	2428-A2	2428-E2	2428-B2	2428-C2	2428-C2
2.5mm	—	2428-E2D5	2428-B2D5	2428-C2D5	2428-C2D5
3mm	—	2428-E3	2428-B3	2428-C3	2428-C3
3.5mm	—	2428-E3D5	2428-B3D5	2428-C3D5	2428-C3D5
4mm	—	2428-E4	2428-B4	2428-C4	2428-C4
4.5mm	—	—	2428-B4D5	2428-C4D5	2428-C4D5
5mm	—	—	2428-B5	2428-C5	2428-C5
5.5mm	—	—	2428-B5D5	2428-C5D5	2428-C5D5
6mm	—	—	2428-B6	2428-C6	2428-C6
6.5mm	—	—	2428-B6D5	2428-C6D5	2428-C6D5
7mm	—	—	2428-B7	2428-C7	2428-C7
7.5mm	—	—	2428-B7D5	2428-C7D5	2428-C7D5
8mm	—	—	2428-B8	2428-C8	2428-C8
8.5mm	—	—	2428-B8D5	2428-C8D5	2428-C8D5
9mm	—	—	2428-B9	2428-C9	2428-C9
9.5mm	—	—	2428-B9D5	2428-C9D5	2428-C9D5
10mm	—	—	2428-B10	2428-C10	2428-C10

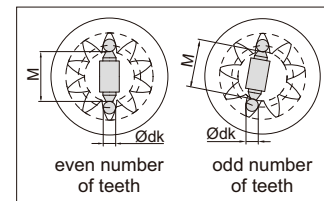
Thread adaptor (optional)

Code	Thread	Remark
2428-D1	M1.6/M2.5	For example, use 2428-E1 with 2428-D1 to replace 2428-B1
2428-D2	M2.5/M4	For example, use 2428-B1 with 2428-D2 to replace 2428-C1

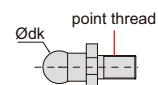
extension rod for points (included)

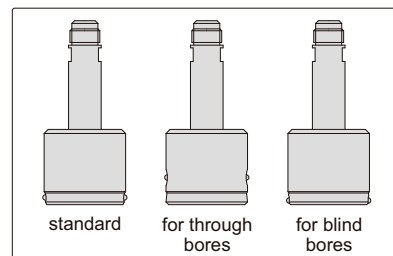
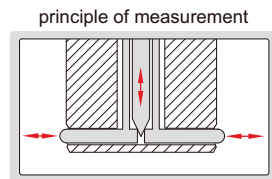
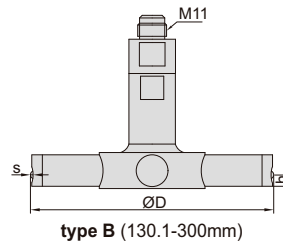
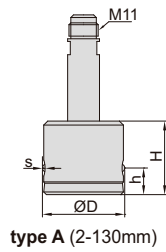
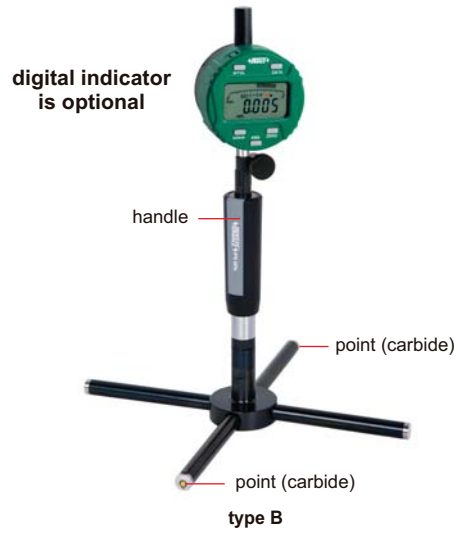


method of measurement



ball points (optional), in pair





SPECIFICATION OF PROBE

(mm)

Range (ØD)	2-3	3.1-4	4.1-6	6.1-9	9.1-12	12.1-20	20.1-40	40.1-60	60.1-130	130.1-300
Type	A	A	A	A	A	A	A	A	A	B
Travel of point (s)	0.15	0.15	0.15	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Height of point (h)	standard	1	1.5	1.5	2.5	2.5	2.5	3.5	3.5	6
	for through bores	—	6	6	6	10	10	10	10	—
	for blind bores	0.7	1	1	1	1	1	1.2	1.2	3
Height of probe (H)	17.5	26	10	15	15	15	20	28	33	—
Repeatability	0.001	0.001	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.002

To be continued

Continued from previous page



PROBE

Code	Type
4653-A□□□□□	standard
4653-B□□□□□	for through bores
4653-C□□□□□	for blind bores

SETTING RING

Code
6312-□□□□□

Ordering examples:

Code	Type	Range
4653-A30D6H7	standard	30.6H7

Attention: "D" stands for "."



4653-G



4653-J



set measuring depth

DEPTH STOP

Code	Applicable for probe
4653-G□□□□□	3.0~60mm
4653-J□□□□□	30~130mm

Ordering examples:

Code	Applicable for probe
4653-G22H7	22H7



set measuring depth



HANDLE FOR INDUCTIVE PROBE

Code
4653-F110



application

BASE

Code	Applicable holding stem
4663-STAND	Ø12mm
4663-STAND1	Ø18mm



retraction button

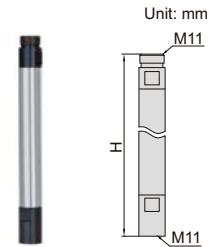
HANDLE

Code	Length (L)	Diameter (ØD)	Retraction
4653-150	45mm	12mm	without
4653-1105	105mm	12mm	without
4653-1235	235mm	12mm	without
4653-2145	145mm	18mm *	without
4653-2235	235mm	18mm *	without
4653-H70	70mm	12mm	with

* When measuring range is larger than 60mm, we suggest to use the 18mm handle

EXTENSION ROD FOR HANDLE

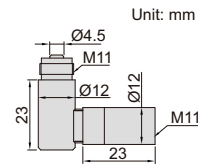
Code	Length (H)
4653-R50	50mm
4653-R100	100mm
4653-R250	250mm
4653-R500	500mm



Unit: mm

90° ADAPTER

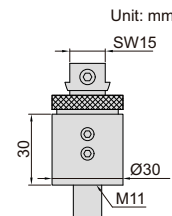
Code
4653-K1



Unit: mm



application



Unit: mm

FLOATING CLAMP HANDLE

Code
4653-M30

Suitable for automatic measurement



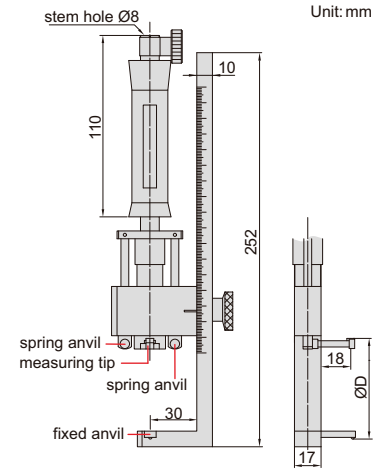
application

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

MEASURE DIAMETER OF BORES WITH BARRIER INSIDE

BORE GAGE FOR BARRIER INSIDE BORE

digital indicator is optional



2348-210

- Measure diameter of bores with barrier inside
- Optional accessory:
 - 0.01mm graduation dial indicators
 - Setting ring (code 6312)

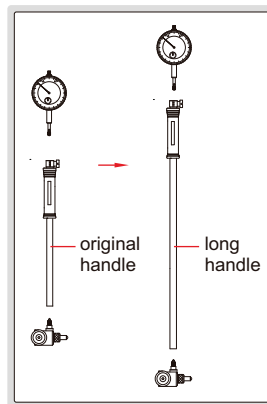
Code	Range ØD	Diameter of barrier Ød	Travel of measuring tip	Accuracy (without dial indicator)	Measuring force
2348-210*	40-210mm	<D-14 (less than 50mm)*	1.6	0.018	2N

*For example:

When measuring size ØD is 40mm, D-14=26mm, so the diameter of barrier should be less than 26mm.
 When measuring size ØD is 70mm, D-14=56mm, however it should be less than 50mm, so the diameter of barrier should be less than 50mm.

LONG HANDLES

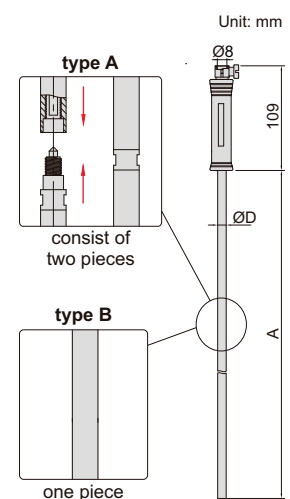
method of use (replace the original handle with long handle)



- To assist deep-hole measurement
- Can be used for bore gages 2122, 2322, 2824, 2724, 2127 and 2827



7351-EX11



Code	Applicable bore gages	A	ØD	Type
7351-EX11	35-60mm, 50-100mm, 50-160mm, 100-160mm	475mm	13mm	B
7351-EX12		980mm	13mm	
7351-EX13		1480mm	14.5mm	A
7351-EX14		1980mm	14.5mm	
7351-EX21	160-250mm, 250-450mm	480mm	14.5mm	B
7351-EX22		980mm	14.5mm	A
7351-EX23		1480mm	14.5mm	
7351-EX24		1980mm	14.5mm	

ANVILS FOR BORE GAGES



7350-160

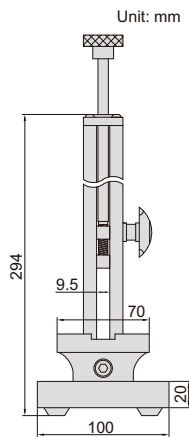
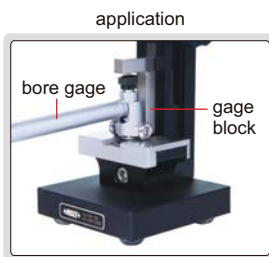
- For bore gages 2852, 2152, 2322, 2122, 2127, 2724, 2825, 2126, 2824, 2853, 2153 and 2827

7

Code	Applicable bore gages	Material of measuring face	Quantity per set	Measuring range of anvil (mm)
7350-10	6-10mm	steel	9 pcs	6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10
7350-18	10-18.5mm	ceramic	9 pcs	10, 11, 12, 13, 14, 15, 16, 17, 18
7350-35	18-35mm	ceramic	9 pcs	18, 20, 22, 24, 26, 28, 30, 32, 34
7350-60	35-60mm	ceramic	6 pcs	35, 40, 45, 50, 55, 60
7350-100	50-100mm	ceramic	11 pcs	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100
7350-160	50-160mm	ceramic	12 pcs	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105
7350-161	100-160mm	ceramic	12 pcs	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105
7350-250	160-250mm	ceramic	5 pcs	160, 170, 180, 190, 200
7350-450	250-450mm	ceramic	5 pcs	250, 260, 270, 280, 290

BORE GAGE SETTERS

- Vertical and horizontal use
- To be used with gage blocks



7353-160



Gage block set for 7353-160

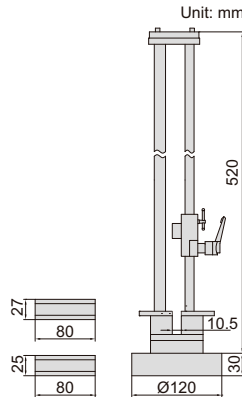
Code	Range	Repeatability	Remark
7353-160	0-160mm	1.2µm	with gage block set
7353-160W	0-160mm	1.2µm	without gage block set

Blocks per set	Size (mm)	Step (mm)	Quantity	Remark
33	1.005		1 pc	grade 2 (ISO3650)
	1.01-1.09	0.01	9 pcs	
	1.1-1.9	0.1	9 pcs	
	1-9	1	9 pcs	
	10-30	10	3 pcs	
	50		1 pc	
	100		1 pc	

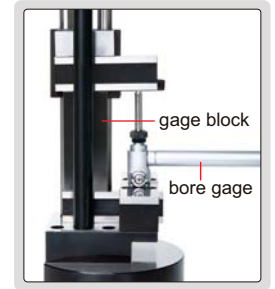


- Used together with gage blocks to set bore gages

Code	Setting range
2395-400	18-400mm



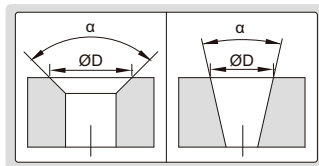
BORE GAGE SETTER



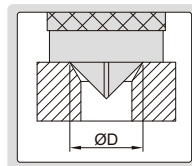
5mm setting ring for 2941-20 and 2941-203



measure end diameter of chamfer or taper holes



measurement principle



- Measure end diameter of chamfer or taper holes
- With limit pointers
- 2941-20 and 2941-203 are supplied with 5mm setting ring

Code	Range ØD	Applicable angle α	Graduation	Accuracy	Ød
2941-20*	0.5-20.1mm	0-90°	0.01mm	±0.02mm	28.3mm
2941-40*	20-40mm	0-90°	0.01mm	±0.02mm	50mm
2941-203*	0.5-20.1mm	90-127°	0.02mm	±0.04mm	28.3mm
2941-403*	20-40mm	90-127°	0.02mm	±0.04mm	50mm

*Supplied with manufacturer inspection certificate

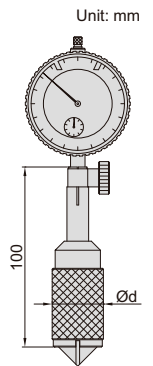
INTERNAL CHAMFER GAGES

INSIZE PLUS
MADE IN EUROPE

INSPECTION
CERTIFICATE



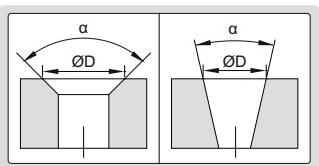
2941-20



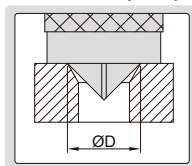
5mm setting ring for 2942-20 and 2942-203



measure end diameter of chamfer or taper holes



measurement principle



- Measure end diameter of chamfer or taper holes
- 2942-20 and 2942-203 are supplied with 5mm setting ring
- Resolution: 0.01mm/0.0005"
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13)

Code	Range ØD	Applicable angle α	Accuracy	Ød
2942-20*	0.5-20.1mm	0-90°	±0.02mm	28.3mm
2942-40*	20-40mm	0-90°	±0.02mm	50mm
2942-203*	0.5-20.1mm	90-127°	±0.04mm	28.3mm
2942-403*	20-40mm	90-127°	±0.04mm	50mm

*Supplied with manufacturer inspection certificate

DATA
OUTPUT

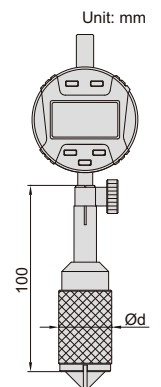
DIGITAL INTERNAL CHAMFER GAGES

INSIZE PLUS
MADE IN EUROPE

INSPECTION
CERTIFICATE

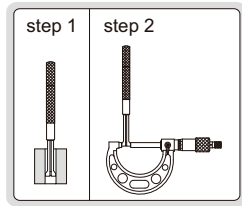


2942-20

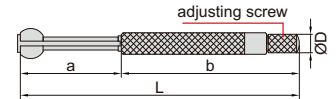


SMALL HOLE GAGE SET

- 4 gages per set
- For small holes, slots and grooves, etc.
- Satin chrome finish



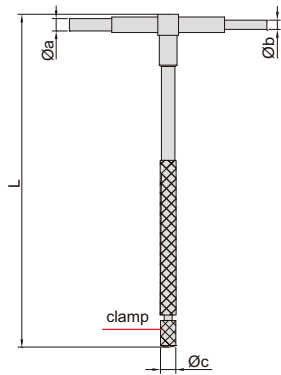
4208-1



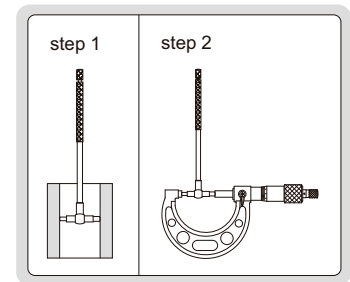
(mm)				
Range	L	a	b	ØD
3-5mm	76	24	52	5
5-7.5mm	79	27	52	5
7.5-10mm	88	30	58	6
10-13mm	91	34	58	6

Code	Total range	Gages included
4208-1	3-13mm	3-5mm, 5-7.5mm, 7.5-10mm, 10-13mm

TELESCOPING GAGE SET



4206-1



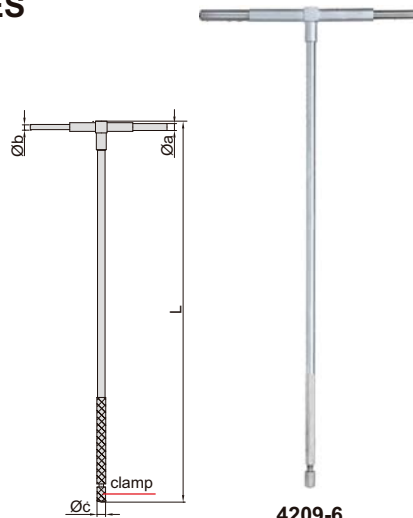
- 6 gages per set
- For quick measurement of inside diameter of holes and width of slots
- Satin chrome finish

(mm)				
Range	L	Øa	Øb	Øc
8-12.7mm	115	3.9	2.9	6.2
12.7-19mm	115	5.3	3.8	6.2
19-32mm	115	5.3	3.8	6.2
32-54mm	137	7.6	6.1	7.2
54-90mm	137	7.6	6.1	7.2
90-150mm	137	7.6	6.1	7.2

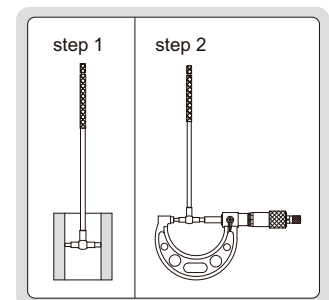
Code	Total range	Gages included
4206-1	8-150mm	8-12.7mm, 12.7-19mm, 19-32mm, 32-54mm, 54-90mm, 90-150mm

LONG HANDLE TELESCOPING GAGES

- For quick measurement of inside diameter of deep holes and width of slots
- Satin chrome finish



4209-6

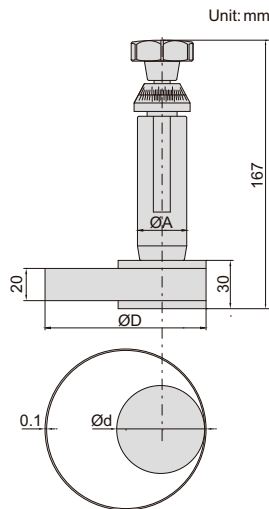


(mm)					
Code	Range	L	Øa	Øb	Øc
4209-1	8-12.7mm	300	3.9	2.9	6.2
4209-2	12.7-19mm	300	5.3	3.8	6.2
4209-3	19-32mm	300	5.3	3.8	6.2
4209-4	32-54mm	300	7.6	6.1	7.2
4209-5	54-90mm	300	7.6	6.1	7.2
4209-6	90-150mm	300	7.6	6.1	7.2



- Measure internal diameter and circumference of soft materials like tubes, belts, etc.
- Graduation: 0.1mm
- Accuracy: 0.2mm

Code	Range ØD	Ød	ØA	Measuring depth (mm)
2430-24	14-24mm	13.5	13	15-60
2430-40	22-40mm	21.5	21	15-60
2430-60	35-60mm	34.5	30.5	15-96
2430-100	55-100mm	54.5	30.5	15-106
2430-180	95-180mm	94.5	30.5	15-106
2430-255	170-255mm	94.5	30.5	15-106
2430-330	245-330mm	94.5	30.5	15-106



TAPE BORE GAGES

INSIZE PLUS
MADE IN EUROPE



2430-100

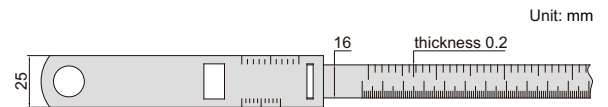
CAN SUPPLY TAPE WIDTH
6MM, 35MM, 60MM



7115-3460

CIRCUMFERENCE TAPES

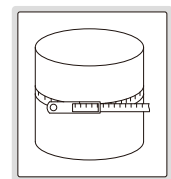
INSIZE PLUS
MADE IN EUROPE



Code	Circumference range	Diameter range	Accuracy	
			circumference	diameter
7115-950 *	150-950mm	Ø50-300mm	±0.60mm	±0.20mm
7115-2200	940-2200mm	Ø300-700mm	±0.60mm	±0.20mm
7115-3460	2190-3460mm	Ø700-1100mm	±0.60mm	±0.20mm
7115-4720	3450-4720mm	Ø1100-1500mm	±0.90mm	±0.30mm
7115-5980	4710-5980mm	Ø1500-1900mm	±0.90mm	±0.30mm
7115-7230	5970-7230mm	Ø1900-2300mm	±1.05mm	±0.35mm
7115-8500	7220-8500mm	Ø2300-2700mm	±1.20mm	±0.40mm
7115-9760	8490-9760mm	Ø2700-3100mm	±1.35mm	±0.45mm
7115-11010	9730-11010mm	Ø3100-3500mm	±1.50mm	±0.50mm

*When diameter range is Ø50-100mm, the accuracy of circumference is ±0.90mm, diameter is ±0.30mm

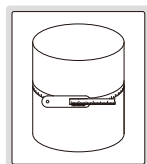
- Measure diameter and circumference of pipes, trees, tires, etc.
- Graduation: 0.1mm
- Laser engraved scale
- Made of stainless steel



CIRCUMFERENCE TAPES

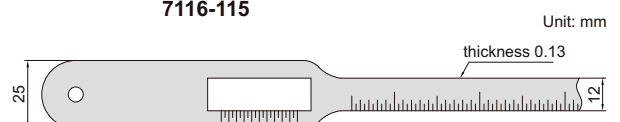
INSIZE PLUS
MADE IN EUROPE

- Measure diameter of cables, thin plastic pipes, etc., which may deform
- Laser engraved scale
- Made of stainless steel



7116-115

Code	Diameter range	Graduation	Accuracy
7116-115	Ø20-115mm	0.05mm	±0.10mm
7116-230	Ø100-230mm	0.05mm	±0.10mm
7116-330	Ø200-330mm	0.05mm	±0.15mm
7116-620	Ø300-620mm	0.05mm	±0.20mm

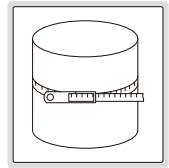


CIRCUMFERENCE TAPES

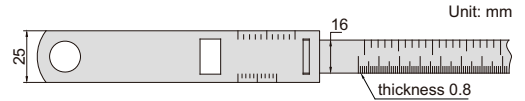
- Measure diameter and circumference of soft materials like pipes, trees, tires, etc.
- Graduation: 0.1mm
- Laser engraved scale
- Made of stainless steel



7114-950



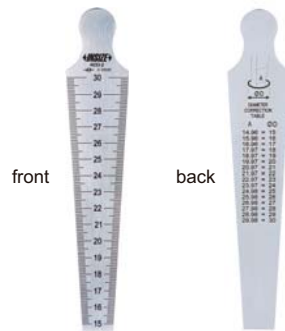
Code	Circumference range	Diameter range	Accuracy	
			circumference	diameter
7114-950	150-950mm	Ø50-300mm	±3mm	±1mm
7114-2200	940-2200mm	Ø300-700mm	±3mm	±1mm
7114-3460	2190-3460mm	Ø700-1100mm	±3mm	±1mm



7

TAPER GAGES

REFER TO PAGE 373 FOR DETAILS



4833-2



front back

TAPER GAGE SET
4837-1

TAPER BORE GAGES

REFER TO PAGE 374 FOR DETAILS



4852-15

SMALL TAPER BORE GAGE

REFER TO PAGE 374 FOR DETAILS



4855-5

INSIDE SPRING CALIPERS

REFER TO PAGE 382 FOR DETAILS



7261-150



Large Diameter Gages
Page 187



Outside Diameter Variation Measuring
Instruments
Page 188



Outside Diameter Measuring
Instruments
Page 189



Digital Radius Gages
Page 190



Digital Radius Gages
Page 191



Digital Arc Radius Calipers
Page 191



Digital Radius Calipers
Page 192



Radius Gages
Page 192

LARGE DIAMETER GAGE CODE ISQ-RA600

INSIZE PLUS
MADE IN EUROPE

DATA
OUTPUT

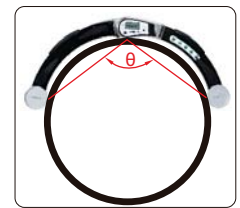


8

- To measure large external or internal diameters
- Automatic judgment and display external or internal diameter
- Backlight LCD display, can rotate 180° for easy reading
- Memory of 12 readings and average calculation
- With minimum and maximum measurement mode
- Angle can be displayed



software flash disk
(included)



display of angle



external diameter measurement



internal diameter measurement



software (included),
data output, save and print

SPECIFICATION

Range	external	Ø500~6000mm/19.69~236.22"
	internal	Ø1100~6000mm/43.31~236.22"
Resolution	0.01mm/0.001"	
Accuracy	±(0.01+D ² /30)mm (D is the diameter to be measured, in meter)	
Power supply	rechargeable battery (for 8 hours working)	
Weight	3.8kg	

Accuracy sample by diameters

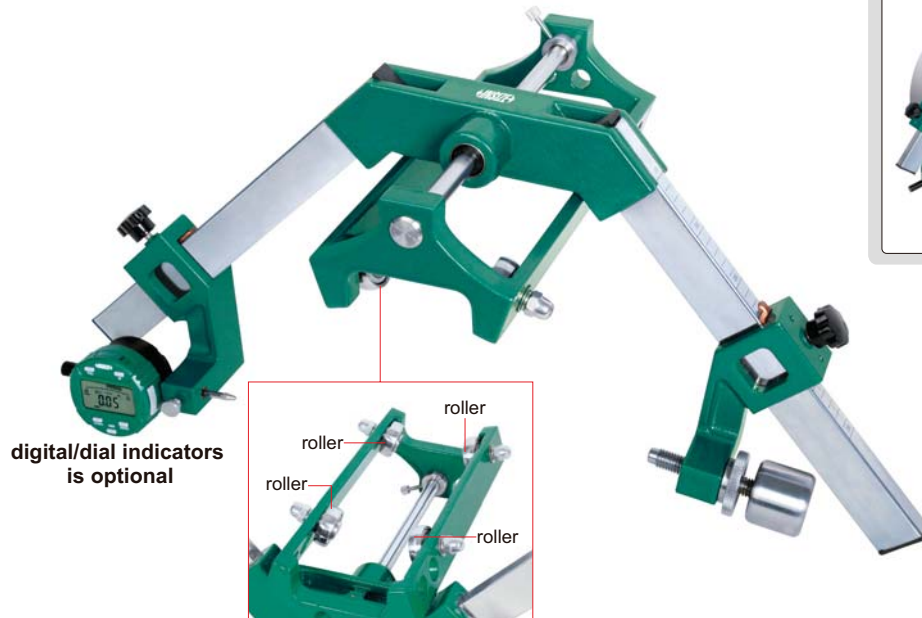
Diameter	Accuracy
500mm	±0.018mm
1000mm	±0.043mm
1500mm	±0.085mm
2000mm	±0.143mm
2500mm	±0.218mm
3000mm	±0.310mm
4000mm	±0.543mm
5000mm	±0.843mm
6000mm	±1.210mm

STANDARD DELIVERY

Main unit	1 pc
AC/DC adapter	1 pc
Software and USB cable	1 pc

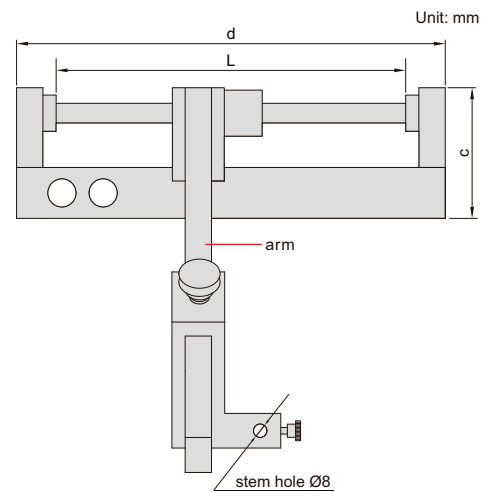
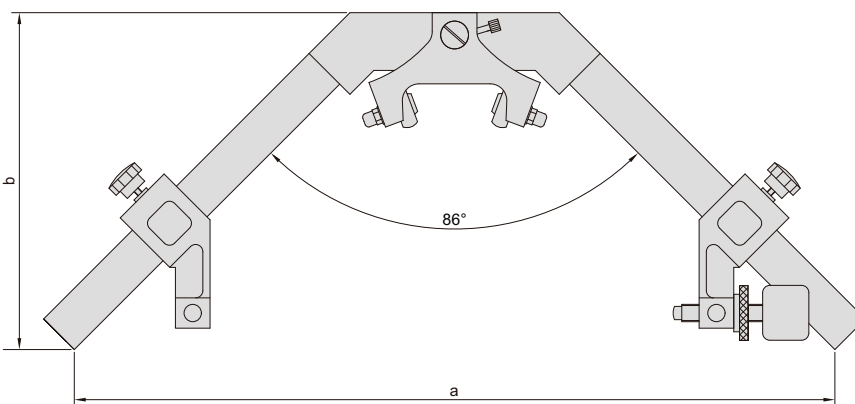
CAN BE
CUSTOM-MADE

OUTSIDE DIAMETER VARIATION MEASURING INSTRUMENTS



2715-350

application



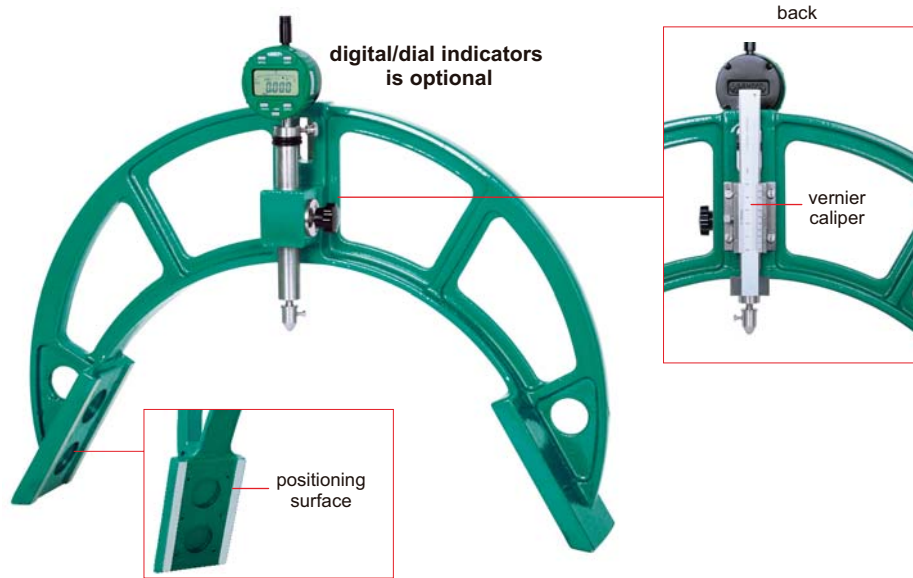
Unit: mm

- Measurement of diameter variation, convexity, concavity, taper and other parameters
- Continuous measurement in the axis direction
- Four rollers are included
- Optional accessory: 0.01mm or 0.001mm graduation digital/dial indicators

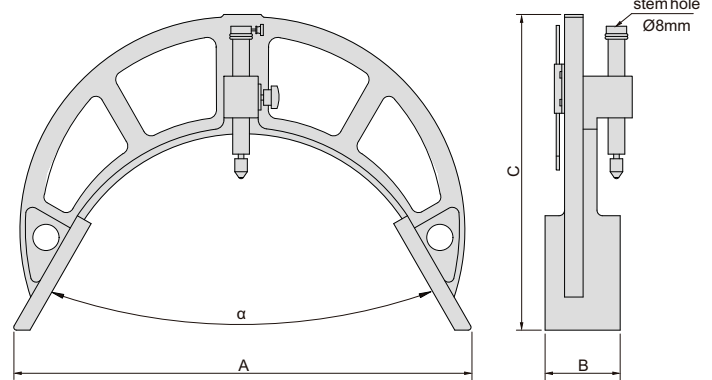
(mm)

Code	Range (diameter)	Accuracy	Repeatability	Arm moving range (L)	a	b	c	d
2715-350	100-350mm/4-14"	0.01mm	3µm	200mm	500	230	80	260
2715-500	200-500mm/8-20"	0.01mm	3µm	151mm	630	260	95	260
2715-700	300-700mm/12-28"	0.01mm	3µm	197mm	910	372	112	320
2715-1000	500-1000mm/20-40"	0.01mm	3µm	190mm	1170	460	120	320
2715-1600	800-1600mm/32-64"	0.02mm	6µm	202mm	1860	690	180	320
2715-2000	1400-2000mm/56-80"	0.02mm	6µm	232mm	2156	860	210	350

OUTSIDE DIAMETER MEASURING INSTRUMENTS



2716-500

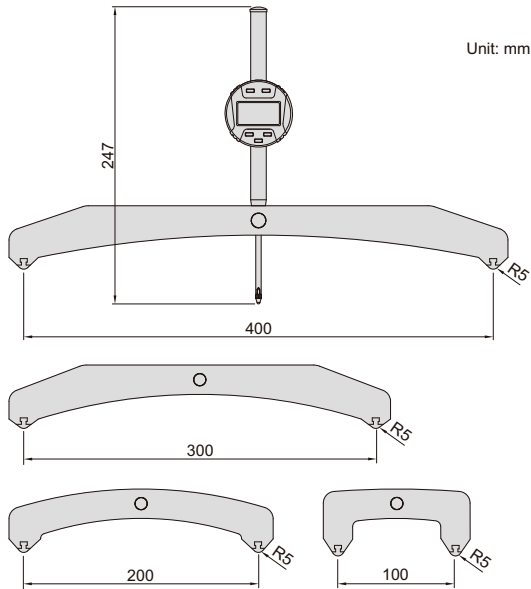


- Comparison measurement by digital/dial indicators. Need standard workpieces to set zero. Measure diameter/convex /concave/taper/roundness and other parameters, can also measure the wear and surface scratch of the workpieces
- Diameter measurement by vernier caliper, graduation: 0.02mm
- The frame is made of aluminum magnesium alloy with light weight and high strength
- Optional accessory: 0.01mm or 0.001mm digital/dial indicators

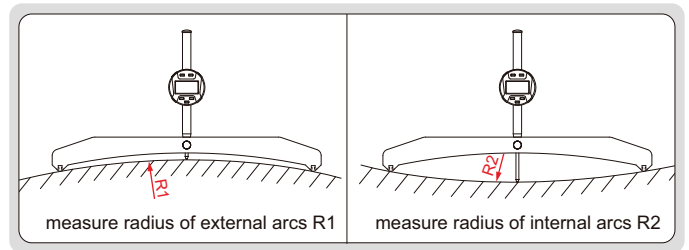
(mm)							
Code	Range (diameter)	Repeatability (by digital/dial indicators)	Accuracy (by vernier caliper)	α	A	B	C
2716-60	18-60	0.01mm	0.04mm	60°	140	60	160
2716-120	60-120	0.01mm	0.04mm	60°	160	65	192
2716-200	120-200	0.01mm	0.04mm	60°	225	70	228
2716-300	200-300	0.01mm	0.04mm	60°	330	80	262
2716-400	300-400	0.01mm	0.04mm	60°	405	80	303
2716-500	400-500	0.01mm	0.04mm	60°	494	80	340
2716-600	500-600	0.01mm	0.04mm	60°	594	80	398
2716-700	600-700	0.01mm	0.04mm	60°	685	80	446
2716-800	700-800	0.01mm	0.04mm	60°	772	80	479
2716-900	800-900	0.01mm	0.04mm	60°	860	80	520
2716-1000	900-1000	0.01mm	0.04mm	60°	950	80	560
2716-1100	1000-1100	0.01mm	0.04mm	60°	1035	90	575
2716-1200	1000-1200	0.01mm	0.08mm	83.62°	960	100	460
2716-1300	1100-1300	0.01mm	0.08mm	83.62°	1000	100	485
2716-1400	1200-1400	0.01mm	0.08mm	83.62°	1100	100	512
2716-1600	1400-1600	0.01mm	0.08mm	83.62°	1260	100	540
2716-1800	1600-1800	0.01mm	0.08mm	83.62°	1460	100	570
2716-2000	1800-2000	0.01mm	0.08mm	83.62°	1645	100	605

LARGE RANGE DIGITAL RADIUS GAGE

ATTENTION: NO DATA OUTPUT



2197



- Measure radius of internal or external arcs
- Resolution: 0.01mm/0.001"
- Buttons: on/off, hold, mm/inch, s (select jaws), zero
- Display can be rotated by 320°
- Supplied with 4 jaws for different sizes of arc
- Battery CR2032, automatic power off (time is adjustable)

Code	Range of external radius (R1)	Range of internal radius (R2)	Accuracy (mm)
2197	100-15000mm/4-590"	100-15000mm/4-590"	±0.005R*

*R is the radius to be measured. For example, radius is 100mm, the accuracy is ±0.005x100=±0.5mm

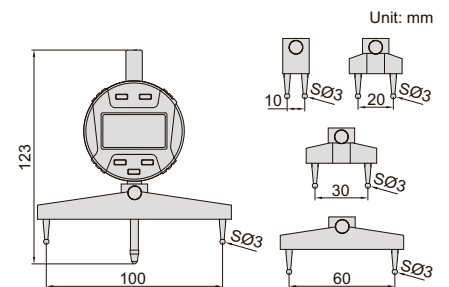


ATTENTION: NO DATA OUTPUT

DIGITAL RADIUS GAGE (LOW ACCURACY)



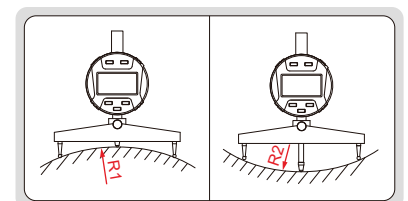
2183



- Resolution: 0.01mm/0.001"
- Buttons: on/off, hold, mm/inch, s (select jaws), zero
- Measure radius of internal or external arcs
- Display can be rotated by 320°
- Supplied with 5 jaws for different sizes of arc
- Battery CR2032, automatic power off (time is adjustable)

Code	Range of external radius (R1)	Range of internal radius (R2)	Accuracy (mm)
2183	5-910mm/0.2-35.83"	7-910mm/0.3-35.83"	±0.01R*

*R is the radius to be measured. For example, radius is 100mm, the accuracy is ±0.01x100=±1mm



DIGITAL RADIUS GAGE

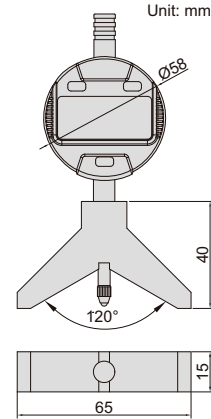
DATA
OUTPUT



- Measure radius of external arc, arc angle of measured surface should be larger than 60°
- Display radius value, no need to calculate
- Button function: on/off, zero, data preset, inch/mm
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Supplied with pin gage for zero setting
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13)



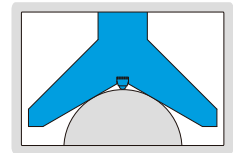
2188-55



pin gage
(included)



application



Code	Range (radius)	Resolution	Accuracy
2188-55	4-53mm/0.16-2.09"	0.01mm/0.0005"	±0.02mm

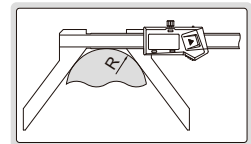
DIGITAL ARC RADIUS CALIPERS

DATA
OUTPUT

- Non waterproof
- Measure the radius of arc less than half round
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1189-200B

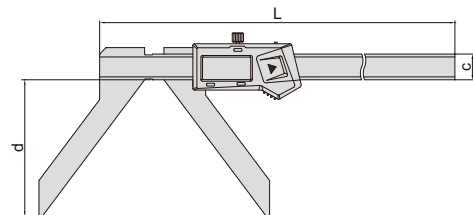


With data interface
(data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range (R)	Accuracy	L	c	d
1189-150B	5-150mm/0.2-6"	±0.05mm	263mm	16mm	65mm
1189-200B	5-200mm/0.2-8"	±0.07mm	313mm	16mm	85mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range (R)	Accuracy	L	c	d
1189-150BWL	5-150mm/0.2-6"	±0.05mm	263mm	16mm	65mm
1189-200BWL	5-200mm/0.2-8"	±0.07mm	313mm	16mm	85mm



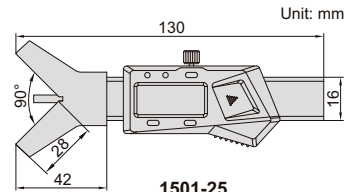
ATTENTION: THE ACTUAL RADIUS IS 2.414 TIMES OF THE READING

DATA OUTPUT

DIGITAL RADIUS CALIPERS



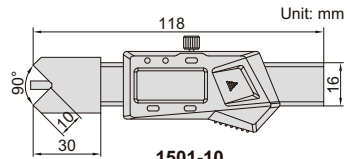
1501-25



1501-25



1501-10



1501-10

- Non waterproof
- Measure radius of external arc, arc angle of measured surface should be larger than 90°
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with pin gage for zero setting

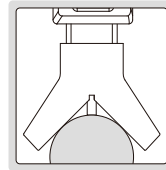
Code	Range (radius)	Accuracy
1501-25	2-25mm/0.079-1"	±0.05mm
1501-10	2-10mm/0.079-0.394"	±0.05mm



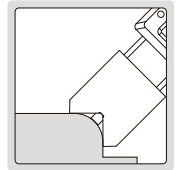
pin gage (included)



application



1501-10 can measure small workpieces or workpieces with steps



REFER TO PAGE 369 FOR DETAILS

RADIUS GAGES



4801-17



4802-31



RADIUS GAGE SET
4804-26



Chamfer Gages
Page 194



Digital Chamfer Gages
Page 194

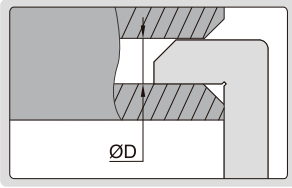


Digital Chamfer Gages
Page 195



Chamfer Height Gages
Page 195

for internal chamfer measurement, diameter should be larger than $\varnothing D$



- To measure internal and external chamfers
- Made of stainless steel

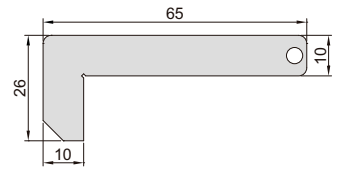
Code	Graduation	Accuracy	$\varnothing D$
4844-1	0.5mm	$\pm 0.25\text{mm}$	11mm



4844-1

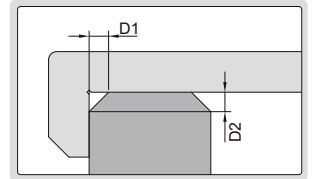
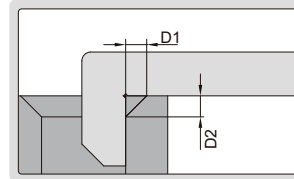
CHAMFER GAGE

Unit: mm



internal chamfer

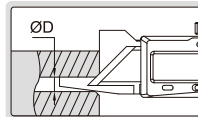
external chamfer



DATA OUTPUT

- Non waterproof
- Measure 15°/20°/30°/45°/60° chamfer dimension
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

for internal chamfer measurement, diameter should be larger than $\varnothing D$

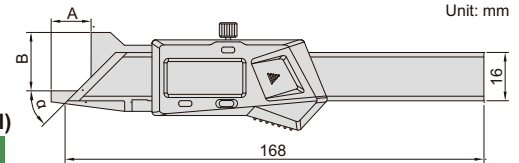


DIGITAL CHAMFER GAGES



1180-6

Unit: mm

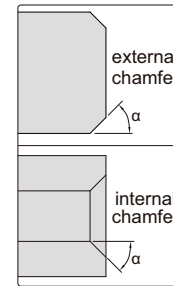


With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

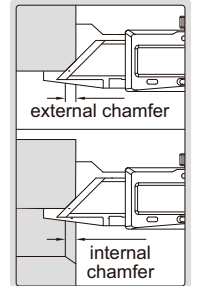
Code	Range	Accuracy	Chamfer (α)	A	B	$\varnothing D$
1180-6	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	45°	15mm	22mm	7mm
1180-61	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	15°	33mm	20mm	11mm
1180-62	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	20°	33mm	20mm	11mm
1180-63	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	30°	15mm	22mm	8mm
1180-66	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	60°	14mm	21mm	7mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	Chamfer (α)	A	B	$\varnothing D$
1180-6WL	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	45°	15mm	22mm	7mm
1180-61WL	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	15°	33mm	20mm	11mm
1180-62WL	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	20°	33mm	20mm	11mm
1180-63WL	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	30°	15mm	22mm	8mm
1180-66WL	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	60°	14mm	21mm	7mm



measure chamfer dimension

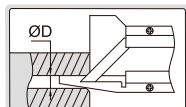


measure chamfer dimension

CHAMFER GAGES

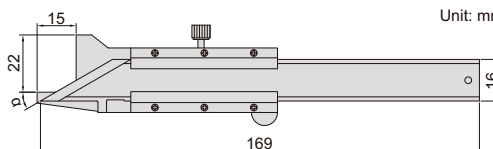
- Measure 30°/45°/60° chamfer dimension
- Graduation: 0.02mm
- Made of stainless steel
- Satin chrome plated reading surface

for internal chamfer measurement, diameter should be larger than $\varnothing D$

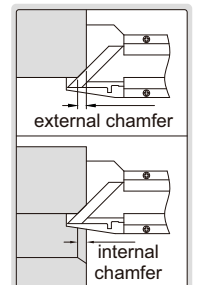


1267-6

Unit: mm



measure chamfer dimension



measure chamfer dimension

Code	Range	Accuracy	Chamfer (α)	$\varnothing D$
1267-6	0-10mm	$\pm 0.06\text{mm}$	45°	7mm
1267-63	0-10mm	$\pm 0.06\text{mm}$	30°	8mm
1267-66	0-10mm	$\pm 0.06\text{mm}$	60°	7mm

DIGITAL CHAMFER GAGES

ATTENTION: CHAMFER OF HOLES CANNOT BE MEASURED

DATA OUTPUT

ATTENTION: THE ACTUAL LENGTH IS 1.414 TIMES OF THE READING

- Non waterproof
- Measure 45° chamfer length
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with pin gage for zero setting

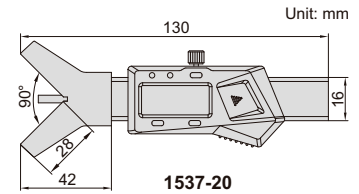
Code	Range	Accuracy
1537-20	0-20mm/0-0.787"	±0.05mm
1537-8	0-8mm/0-0.315"	±0.05mm



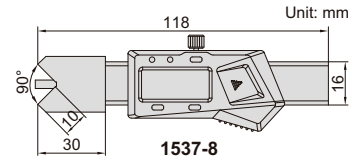
1537-20



1537-8



1537-20

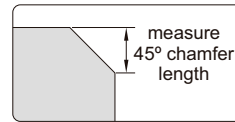
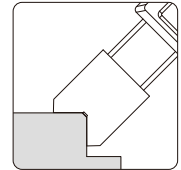


1537-8

pin gage (included)



1537-8 can measure small workpieces or workpieces with steps



CHAMFER HEIGHT GAGE

INSIZE PLUS
MADE IN EUROPE

setting gage (included)

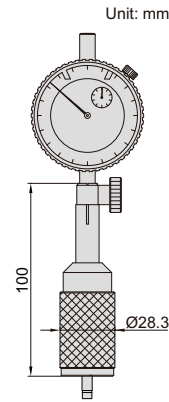


- Measure outside or inside chamfer height
- Suitable for diameter of bores ≥ 6mm, chamfer angle α ≥ 30°
- Setting gage is included

Code	Range (L)	Graduation	Accuracy
2943-1	0.2-5mm	0.01mm	±0.02mm

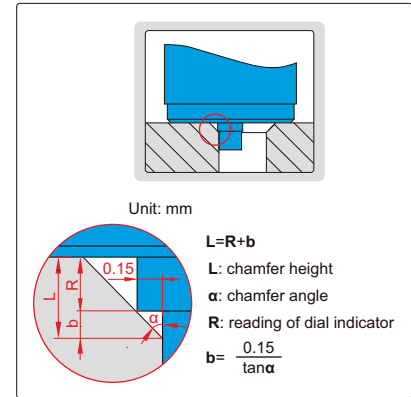


2943-1



Unit: mm

principle of measurement



DIGITAL CHAMFER HEIGHT GAGE

INSIZE PLUS
MADE IN EUROPE

setting gage (included)

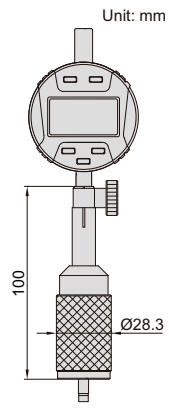


- Measure outside or inside chamfer height
- Suitable for diameter of bores ≥ 6mm, chamfer angle α ≥ 30°
- Resolution: 0.01mm/0.0005"
- Setting gage is included
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13)

Code	Range (L)	Accuracy
2944-1	0.2-5mm/0.008-0.197"	±0.02mm

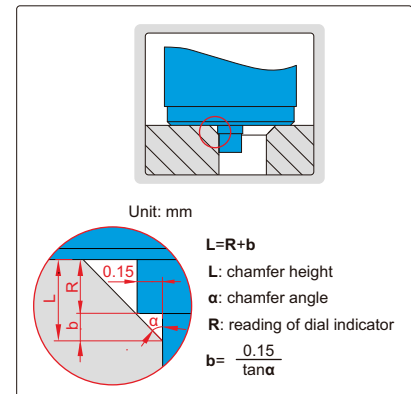



2944-1



Unit: mm

principle of measurement





Dial Test Indicators
Page 197-201




Styli For Dial Test Indicators
Page 201



Digital Indicators
Page 202-213




Zeroing Foot Switches
Page 210



High Precision Digital Indicators
Page 214



Dial Comparators
Page 214



Dial Indicators
Page 215-224



Points
Page 224-226



Spindle Lift Knobs
Page 227



Shaft Sleeves
Page 227



Backs
Page 227-228




Dial Indicator Testers
Page 229-231



Optical Grating Linear Gages And Display Units
Page 232



Capacitance Type Linear Gages And Display Units
Page 233-235



Dial Test Indicator Holders
Page 236-237



Magnetic Stands
Page 238-242



Dial Indicator Stands (non-magnetic)
Page 243-244



Dial Indicator Stands
Page 245-251



Digital Height Gages
Page 251

PRECISION DIAL TEST INDICATOR

INSIZE PLUS
MADE IN EUROPE

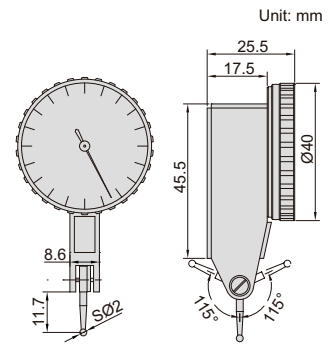
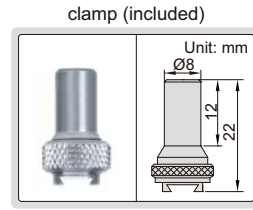
INSPECTION CERTIFICATE

ANTI MAGNETIC
CARBIDE CONTACT POINT



2897-02

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 201)



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2897-02 *	0.2mm	0.001mm	4µm	2µm	0-100-0

*Supplied with manufacturer inspection certificate

10

PRECISION DIAL TEST INDICATORS

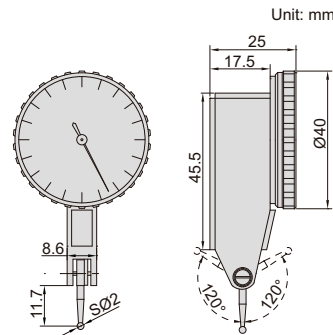
INSIZE PLUS
MADE IN EUROPE

INSPECTION CERTIFICATE

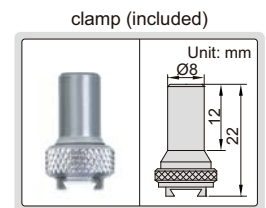
- Meet DIN2270
- Ceramic bearing
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 201)



2880-02



ruby contact
point of 2880-02R



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	Remark
2880-02 *	0.2mm	0.002mm	4µm	2µm	0-100-0	anti magnetic carbide contact point
2880-02R *	0.2mm	0.002mm	4µm	2µm	0-100-0	ruby contact point

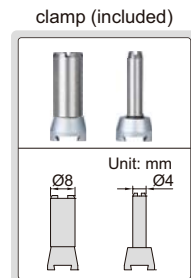
*Supplied with manufacturer inspection certificate

DIAL TEST INDICATORS

JEWELLED
BEARING

INSPECTION CERTIFICATE

- Meet DIN2270 (except 2380-02, 2381-02, 2381-021)
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 201)

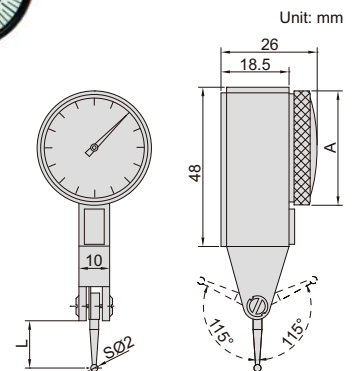


2380-08

(mm)

Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	A	L
2380-08 *	0.8mm	0.01mm	13µm	3µm	0-40-0	Ø30	13.5
2381-08 *	0.8mm	0.01mm	13µm	3µm	0-40-0	Ø37	13.5
2380-02 *	0.2mm	0.002mm	6µm	2µm	0-100-0	Ø30	12.5
2381-02 *	0.2mm	0.002mm	6µm	2µm	0-100-0	Ø37	12.5
2381-021 *	0.2mm	0.001mm	6µm	2µm	0-100-0	Ø37	12.5

*Supplied with manufacturer inspection certificate



INCH DIAL TEST INDICATORS

- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: 5/32" DIA and 3/8" DIA



2380-31

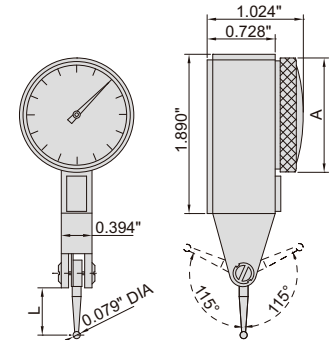
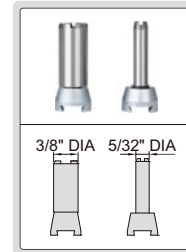
INSIZE
CERTIFICATE

JEWELLED BEARING

Code	Range	Graduation	Accuracy	Dial reading	A	L
2380-31 *	0.03"	0.001"	±0.001"	0-15-0	1.181" DIA	0.50"
2380-35 *	0.03"	0.0005"	±0.0005"	0-15-0	1.181" DIA	0.50"
2380-301 *	0.008"	0.0001"	±0.0001"	0-40-0	1.181" DIA	0.563"
2381-31 *	0.03"	0.001"	±0.001"	0-15-0	1.457" DIA	0.50"
2381-35 *	0.03"	0.0005"	±0.0005"	0-15-0	1.457" DIA	0.50"
2381-301 *	0.008"	0.0001"	±0.0001"	0-40-0	1.457" DIA	0.563"

* Supplied with manufacturer inspection certificate

clamp (included)



10

ANTI MAGNETIC
CARBIDE CONTACT POINT

INSIZE
CERTIFICATE

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 201)



2895-08

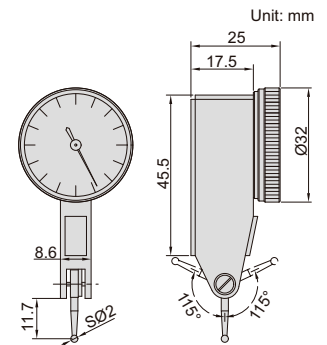
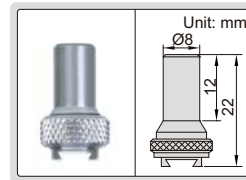
DIAL TEST INDICATOR

INSIZE PLUS
MADE IN EUROPE

Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2895-08 *	0.8mm	0.01mm	13µm	3µm	0-40-0

* Supplied with manufacturer inspection certificate

clamp (included)



ANTI MAGNETIC
CARBIDE CONTACT POINT

INSIZE
CERTIFICATE

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 201)



2896-05

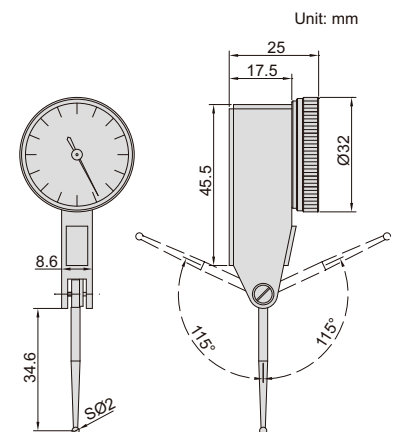
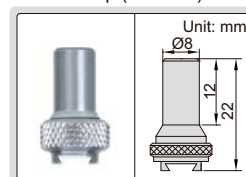
LONG STYLUS DIAL TEST INDICATOR

INSIZE PLUS
MADE IN EUROPE

Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2896-05 *	0.5mm	0.01mm	13µm	3µm	0-25-0

* Supplied with manufacturer inspection certificate

clamp (included)



LONG STYLUS DIAL TEST INDICATOR

JEWELLED BEARING

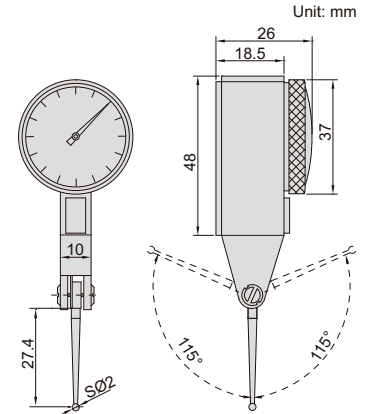
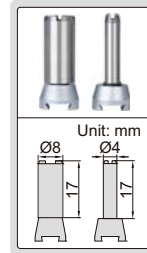
INSPECTION CERTIFICATE

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 201)



2383-08A

clamp (included)



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2383-08A*	0.8mm	0.01mm	13µm	3µm	0-40-0

*Supplied with manufacturer inspection certificate

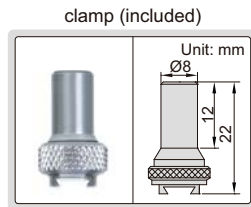
VERTICAL TYPE LONG STYLUS DIAL TEST INDICATOR

INSIZE PLUS
MADE IN EUROPE

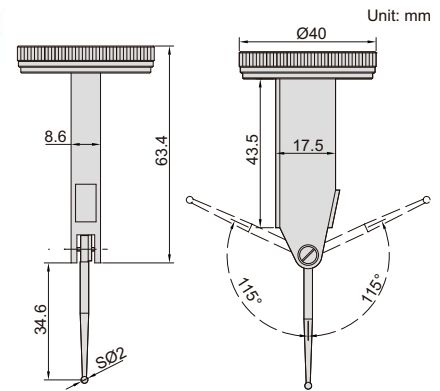
ANTI MAGNETIC CARBIDE CONTACT POINT

INSPECTION CERTIFICATE

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 201)



2899-05



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2899-05*	0.5mm	0.01mm	13µm	3µm	0-25-0

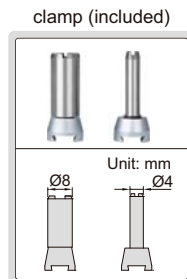
*Supplied with manufacturer inspection certificate

VERTICAL TYPE DIAL TEST INDICATOR

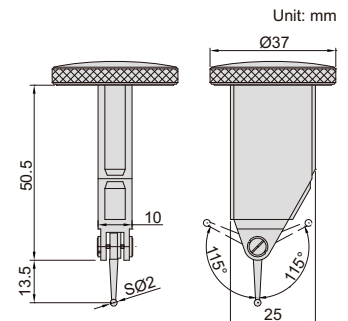
JEWELLED BEARING

INSPECTION CERTIFICATE

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 201)



2398-08



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2398-08*	0.8mm	0.01mm	13µm	3µm	0-40-0

*Supplied with manufacturer inspection certificate

ANTI MAGNETIC
CARBIDE CONTACT POINT

INSPECTION
CERTIFICATE

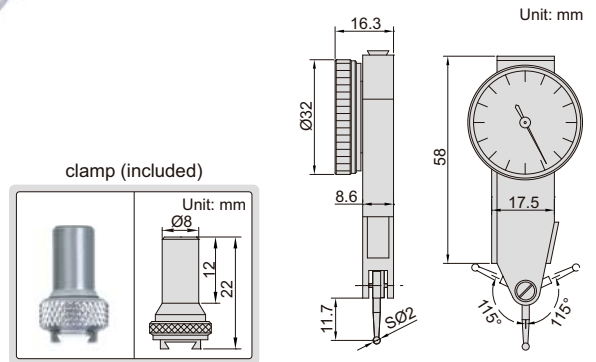
SIDE TYPE DIAL TEST INDICATOR

INSIZE PLUS
MADE IN EUROPE

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp:
diameter Ø8mm
- Optional accessory: styli (page 201)



2898-08



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2898-08*	0.8mm	0.01mm	13µm	3µm	0-40-0

*Supplied with manufacturer inspection certificate

10

JEWELLED
BEARING

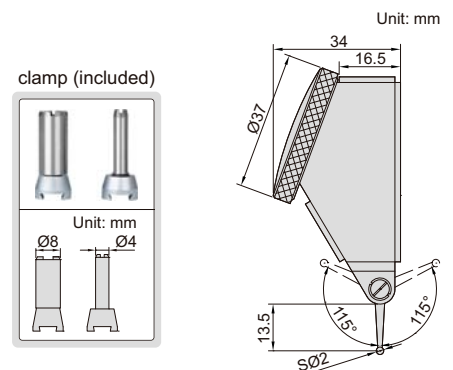
INSPECTION
CERTIFICATE

TILTED FACE TYPE DIAL TEST INDICATOR

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps:
diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 201)



2399-08



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2399-08*	0.8mm	0.01mm	13µm	3µm	0-40-0

*Supplied with manufacturer inspection certificate

JEWELLED
BEARING

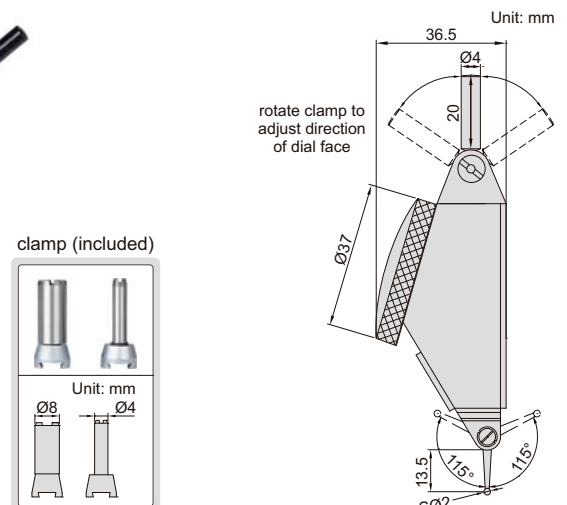
INSPECTION
CERTIFICATE

LARGE RANGE DIAL TEST INDICATOR

- Dial reading: 0-40-0
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps:
diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 201)



2386-16A



Code	Range	Graduation	Accuracy	Hysteresis
2386-16A*	1.6mm	0.01mm	25µm	8µm

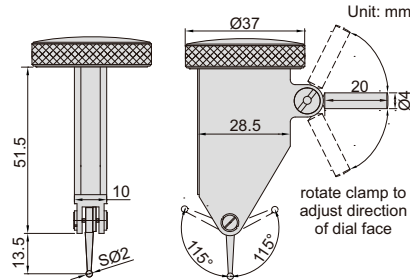
*Supplied with manufacturer inspection certificate

LARGE RANGE VERTICAL TYPE DIAL TEST INDICATOR

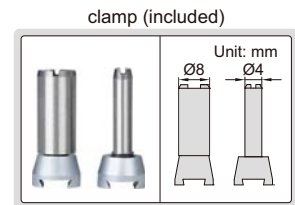
JEWELLED BEARING

INSPECTION CERTIFICATE

- Dial Reading: 0-40-0
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 201)



2480-16



Code	Range	Graduation	Accuracy	Hysteresis
2480-16*	1.6mm	0.01mm	18µm	3µm

* Supplied with manufacturer inspection certificate

CLAMPS FOR DIAL TEST INDICATORS

Code	ØD
6298-1	Ø4mm
6298-2	Ø8mm



6298-1



6298-2

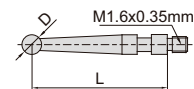


STYLI FOR DIAL TEST INDICATORS

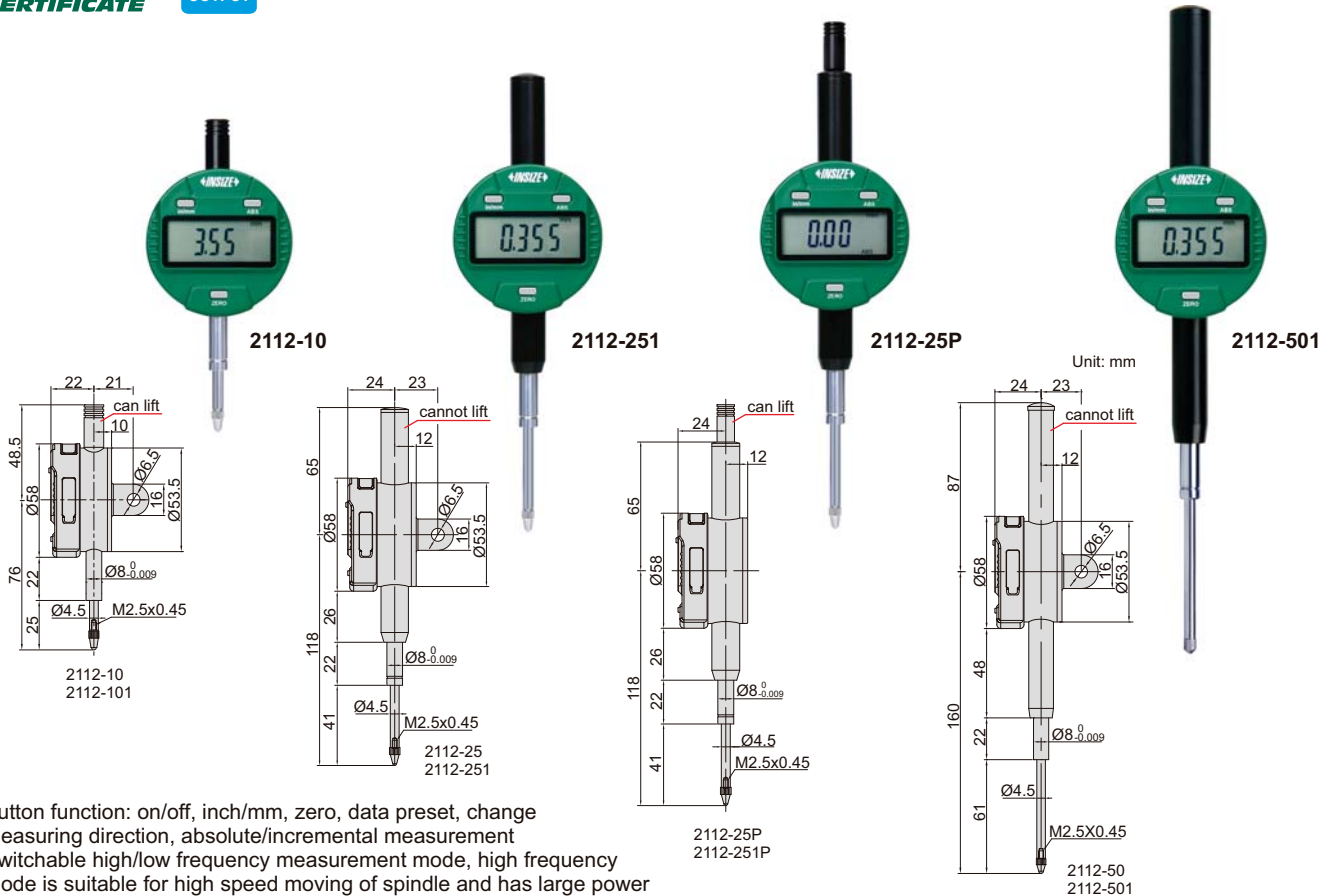
Code	For dial test indicator	Material of contact point	L	D
6284-1	2380-08	steel	13.5mm	SØ1mm
6284-31		ruby	13.5mm	SØ1mm
6284-3	2398-08	carbide	13.5mm	SØ2mm
6284-4	2381-08	ruby	13.5mm	SØ2mm
6284-8	2399-08	carbide	13.5mm	SØ3mm
6284-21	2380-02	steel	12.5mm	SØ1mm
6284-22		carbide	12.5mm	SØ2mm
6284-24		ruby	12.5mm	SØ2mm
6284-23		carbide	12.5mm	SØ3mm
6284-61	2386-16A	steel	13.5mm	SØ1mm
6284-62		carbide	13.5mm	SØ2mm
6284-63		ruby	13.5mm	SØ2mm
6284-64		carbide	13.5mm	SØ3mm
6284-81	2480-16	steel	13.5mm	SØ1mm
6284-82		carbide	13.5mm	SØ2mm
6284-83		ruby	13.5mm	SØ2mm
6284-84		carbide	13.5mm	SØ3mm
6284-81	2383-08A	steel	27.4mm	SØ1mm
6284-82		carbide	27.4mm	SØ2mm
6284-83		ruby	27.4mm	SØ2mm
6284-84		carbide	27.4mm	SØ3mm



6284-3



DIGITAL INDICATORS (STANDARD TYPE)



- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Switchable high/low frequency measurement mode, high frequency mode is suitable for high speed moving of spindle and has large power consumption, low power consumption in low frequency mode
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13, 7305-40M page 9), backs (page 227~228), contact points (page 224~226)

Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2112-101F*	12.7mm/0.5"	5µm	2µm	1.5N	flat back
2112-251F*	25.4mm/1"	5µm	3µm	2.2N	flat back
2112-501F*	50.8mm/2"	6µm	3µm	2.5N	flat back
2112-101*	12.7mm/0.5"	5µm	2µm	1.5N	lug back
2112-251*	25.4mm/1"	5µm	3µm	2.2N	lug back
2112-501*	50.8mm/2"	6µm	3µm	2.5N	lug back
2112-251P*	25.4mm/1"	5µm	3µm	2.2N	flat back, with lift cap
2112-501P*	50.8mm/2"	6µm	3µm	2.5N	flat back, with lift cap

Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2112-10F*	12.7mm/0.5"	20µm	10µm	1.5N	flat back
2112-25F*	25.4mm/1"	20µm	10µm	2.2N	flat back
2112-50F*	50.8mm/2"	30µm	10µm	2.5N	flat back
2112-10*	12.7mm/0.5"	20µm	10µm	1.5N	lug back
2112-25*	25.4mm/1"	20µm	10µm	2.2N	lug back
2112-50*	50.8mm/2"	30µm	10µm	2.5N	lug back
2112-25P*	25.4mm/1"	20µm	10µm	2.2N	flat back, with lift cap
2112-50P*	50.8mm/2"	30µm	10µm	2.5N	flat back, with lift cap

2112-251P/501P/25P/50P



spindle lift knob is included



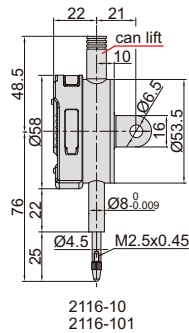
* Supplied with manufacturer inspection certificate

METRIC DIGITAL INDICATORS

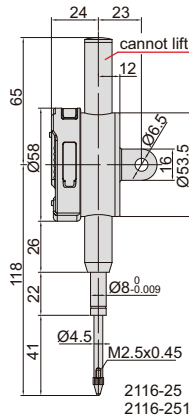
DATA OUTPUT



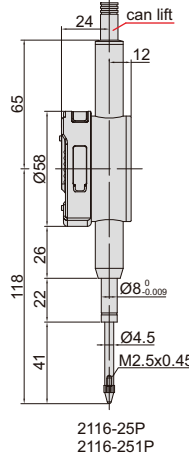
2116-10



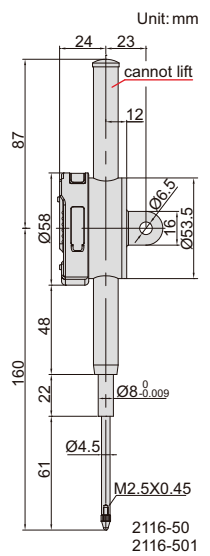
2116-251



2116-251P



2116-501



Unit: mm

- Button function: on/off, zero, data preset, change measuring direction, absolute/incremental measurement
- Switchable high/low frequency measurement mode, high frequency mode is suitable for high speed moving of spindle and has large power consumption, low power consumption in low frequency mode
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13, 7305-40M page 9), backs (page 227~228), contact points (page 224~226)

Resolution 0.001mm

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2116-101F*	12.7mm	5µm	2µm	1.5N	flat back
2116-251F*	25.4mm	5µm	3µm	2.2N	flat back
2116-501F*	50.8mm	6µm	3µm	2.5N	flat back
2116-101*	12.7mm	5µm	2µm	1.5N	lug back
2116-251*	25.4mm	5µm	3µm	2.2N	lug back
2116-501*	50.8mm	6µm	3µm	2.5N	lug back
2116-251P*	25.4mm	5µm	3µm	2.2N	flat back, with lift cap
2116-501P*	50.8mm	6µm	3µm	2.5N	flat back, with lift cap

Resolution 0.01mm

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2116-10F*	12.7mm	20µm	10µm	1.5N	flat back
2116-25F*	25.4mm	20µm	10µm	2.2N	flat back
2116-50F*	50.8mm	30µm	10µm	2.5N	flat back
2116-10*	12.7mm	20µm	10µm	1.5N	lug back
2116-25*	25.4mm	20µm	10µm	2.2N	lug back
2116-50*	50.8mm	30µm	10µm	2.5N	lug back
2116-25P*	25.4mm	20µm	10µm	2.2N	flat back, with lift cap
2116-50P*	50.8mm	30µm	10µm	2.5N	flat back, with lift cap

*Supplied with manufacturer inspection certificate

2116-251P/501P/25P/50P



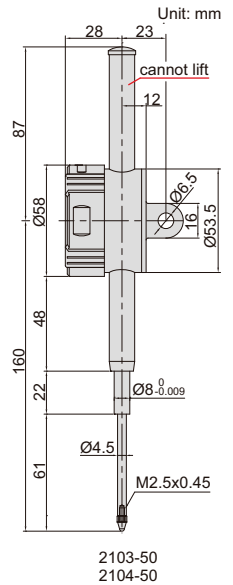
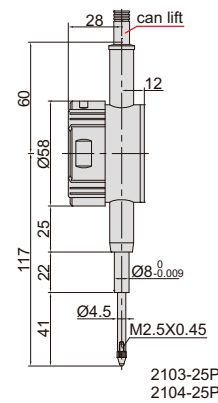
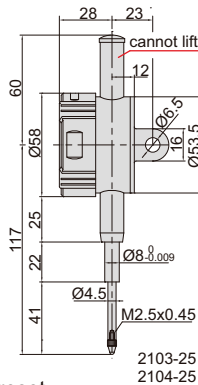
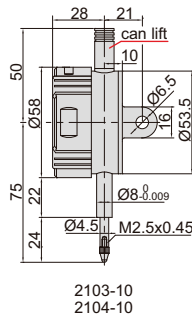
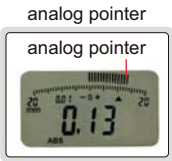
spindle lift knob is included



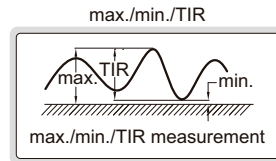
DATA
OUTPUT

**INSPECTION
CERTIFICATE**

DIGITAL INDICATORS (ADVANCED TYPE)



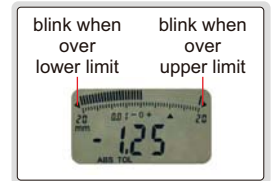
- Reading in digital and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable), data output
- Optional accessory: data output cable (code **7315-50M page 5**, **7302-40M page 13**, **7305-40M page 9**), backs (page 227~228), contact points (page 224~226)



Resolution 0.001mm/0.0005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2103-10F *	12.7mm/0.5"	5µm	2µm	1.5N	flat back
2103-25F *	25.4mm/1"	5µm	3µm	2.2N	flat back
2103-50F *	50.8mm/2"	6µm	3µm	2.5N	flat back
2103-10 *	12.7mm/0.5"	5µm	2µm	1.5N	lug back
2103-25 *	25.4mm/1"	5µm	3µm	2.2N	lug back
2103-50 *	50.8mm/2"	6µm	3µm	2.5N	lug back
2103-25P *	25.4mm/1"	5µm	3µm	2.2N	flat back, with lift cap
2103-50P *	50.8mm/2"	6µm	3µm	2.5N	flat back, with lift cap

warning when over tolerance



Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2104-10F *	12.7mm/0.5"	20µm	10µm	1.5N	flat back
2104-25F *	25.4mm/1"	20µm	10µm	2.2N	flat back
2104-50F *	50.8mm/2"	30µm	10µm	2.5N	flat back
2104-10 *	12.7mm/0.5"	20µm	10µm	1.5N	lug back
2104-25 *	25.4mm/1"	20µm	10µm	2.2N	lug back
2104-50 *	50.8mm/2"	30µm	10µm	2.5N	lug back
2104-25P *	25.4mm/1"	20µm	10µm	2.2N	flat back, with lift cap
2104-50P *	50.8mm/2"	30µm	10µm	2.5N	flat back, with lift cap

2103-25P/50P
2104-25P/50P



* Supplied with manufacturer inspection certificate

DIGITAL INDICATORS (WITH TRANSMISSION BUTTON AND SIGNAL LIGHT)

DATA OUTPUT

INSPECTION CERTIFICATE



2138-10

press the button to transmit data
data transmission signal light



2139-25

press the button to transmit data
data transmission signal light



2139-25P

press the button to transmit data
data transmission signal light

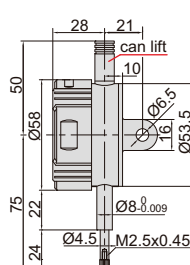


2138-50

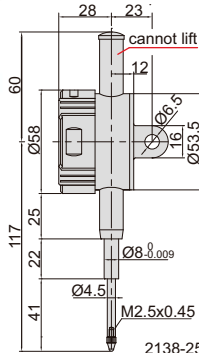
press the button to transmit data
data transmission signal light



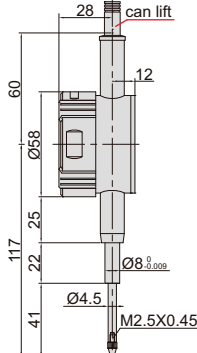
display can be rotated by 320°



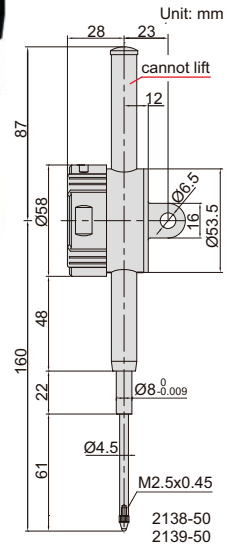
2138-10
2139-10



2138-25
2139-25



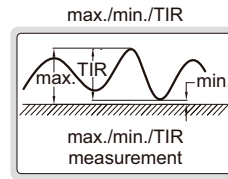
2138-25P
2139-25P



Unit: mm

2138-50
2139-50

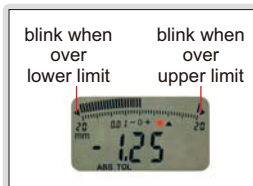
- Reading in digital and analog
- Display can be rotated by 320°
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement, data output
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13, 7305-40M page 9), backs (page 227~228), contact points (page 224~226)



Resolution 0.001mm/0.0005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2138-10F*	12.7mm/0.5"	5µm	2µm	1.5N	flat back
2138-25F*	25.4mm/1"	5µm	3µm	2.2N	flat back
2138-50F*	50.8mm/2"	6µm	3µm	2.5N	flat back
2138-10*	12.7mm/0.5"	5µm	2µm	1.5N	lug back
2138-25*	25.4mm/1"	5µm	3µm	2.2N	lug back
2138-50*	50.8mm/2"	6µm	3µm	2.5N	lug back
2138-25P*	25.4mm/1"	5µm	3µm	2.2N	flat back, with lift cap
2138-50P*	50.8mm/2"	6µm	3µm	2.5N	flat back, with lift cap

warning when over tolerance



Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2139-10F*	12.7mm/0.5"	20µm	10µm	1.5N	flat back
2139-25F*	25.4mm/1"	20µm	10µm	2.2N	flat back
2139-50F*	50.8mm/2"	30µm	10µm	2.5N	flat back
2139-10*	12.7mm/0.5"	20µm	10µm	1.5N	lug back
2139-25*	25.4mm/1"	20µm	10µm	2.2N	lug back
2139-50*	50.8mm/2"	30µm	10µm	2.5N	lug back
2139-25P*	25.4mm/1"	20µm	10µm	2.2N	flat back, with lift cap
2139-50P*	50.8mm/2"	30µm	10µm	2.5N	flat back, with lift cap

analog pointer



spindle lift knob is included

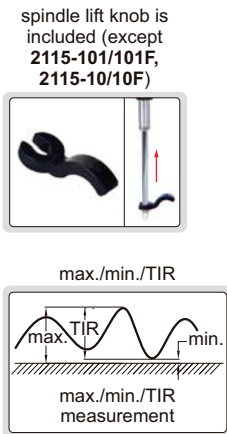


2138-25P/50P
2129-25P/50P

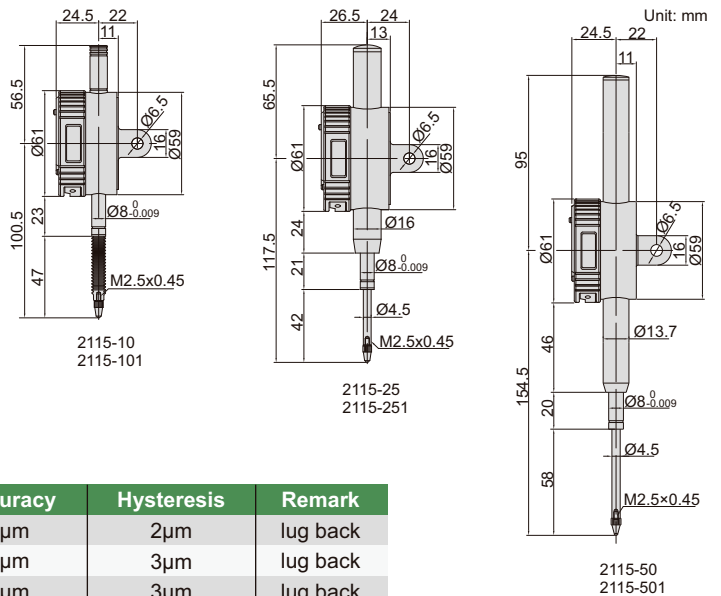
pull lift cap to lift point



*Supplied with manufacturer inspection certificate



- Dust/waterproof
- Button function: on/off, zero, mm/inch, data preset, tolerance, change measuring direction, max./min./TIR measurement, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13, 7305-40M page 9), backs (page 227~228), contact points (page 224~226)



Resolution 0.001mm/0.00005"

Code	Range	Dust/waterproof	Accuracy	Hysteresis	Remark
2115-101 *	12.7mm/0.5"	IP65	5µm	2µm	lug back
2115-251 *	25.4mm/1"	IP54	5µm	3µm	lug back
2115-501 *	50.8mm/2"	IP54	6µm	3µm	lug back
2115-101F *	12.7mm/0.5"	IP65	5µm	2µm	flat back
2115-251F *	25.4mm/1"	IP54	5µm	3µm	flat back
2115-501F *	50.8mm/2"	IP54	6µm	3µm	flat back

Resolution 0.01mm/0.0005"

Code	Range	Dust/waterproof	Accuracy	Hysteresis	Remark
2115-10 *	12.7mm/0.5"	IP65	20µm	10µm	lug back
2115-25 *	25.4mm/1"	IP54	20µm	10µm	lug back
2115-50 *	50.8mm/2"	IP54	30µm	10µm	lug back
2115-10F *	12.7mm/0.5"	IP65	20µm	10µm	flat back
2115-25F *	25.4mm/1"	IP54	20µm	10µm	flat back
2115-50F *	50.8mm/2"	IP54	30µm	10µm	flat back

* Supplied with manufacturer inspection certificate

ADJUSTABLE COEFFICIENT DIGITAL INDICATORS

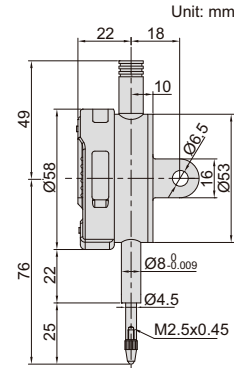


DATA OUTPUT

- DISPLAY READING = COEFFICIENT X SPINDLE MOVEMENT.
The coefficient can be adjusted from 0 to 9.9999.
For example, coefficient is 4.5562, spindle moves 3.60mm, display reading is $4.5562 \times 3.60 = 16.40\text{mm}$
- Button function: on/off, zero, data preset, inch/mm, coefficient set, measuring direction change
- Switchable high/low frequency measurement mode, high frequency mode is suitable for high speed moving of spindle and has large power consumption, low power consumption in low frequency mode
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13, 7305-40M page 9), backs (page 227~228), contact points (page 224~226)



2501-10



spindle lift knob is included



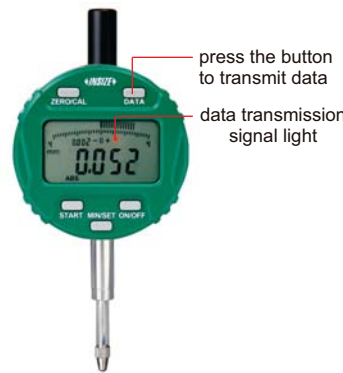
Code	Range	Resolution	Accuracy	Hysteresis	Remark
2501-10*	12.7mm/0.5"	0.01mm/0.0005"	20µm	10µm	lug back
2501-10F*	12.7mm/0.5"	0.01mm/0.0005"	20µm	10µm	flat back

*Supplied with manufacturer inspection certificate

DIGITAL INDICATORS FOR BORE GAGES (WITH TRANSMISSION BUTTON AND SIGNAL LIGHT)

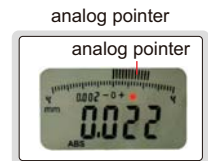
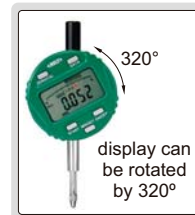
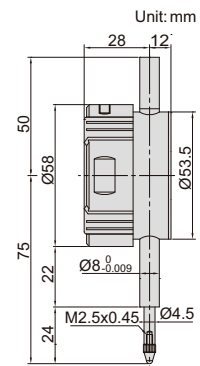
DATA OUTPUT

THE ORIGINAL DATA REMAINS AFTER POWER OFF



2108-10F

- Specially designed for bore gages
- The minimum value tracking function can find the diameter automatically
- Read the diameter directly, after inputting the size of setting ring
- Reading in digital and analog
- Display can be rotated by 320°
- Button function: on/off, minimum value tracking, calibration, data preset, inch/metric conversion
- Data remains after power off, no need to recalibrate after power on
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13, 7305-40M page 9), backs (page 227~228), contact points (page 224~226), spindle lift knob (code 7332)



Code	Range	Resolution	Accuracy	Hysteresis	Remark
2108-10F*	12.7mm/0.5"	0.002mm/0.0001" (can switch to: 0.01mm/0.0005")	20µm	10µm	flat back
2108-101F*	12.7mm/0.5"	0.001mm/0.00005"	5µm	2µm	flat back

*Supplied with manufacturer inspection certificate

read the diameter directly, after inputting the size of setting ring.



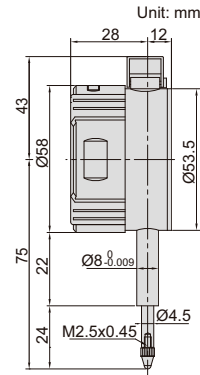
the minimum value tracking function can find the diameter automatically.



DIGITAL INDICATORS WITH LIFTING LEVER



2109-10

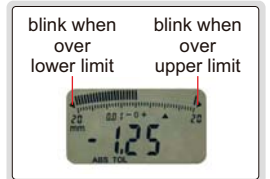


- Reading in digital and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13, 7305-40M page 9), backs (page 227~228), contact points (page 224~226)

analog pointer



warning when over tolerance



Code	Range	Resolution	Accuracy	Hysteresis	Remark
2109-10 *	10mm/0.4"	0.01mm/0.0005"	20µm	10µm	flat back
2109-101 *	10mm/0.4"	0.001mm/0.00005"	5µm	2µm	flat back

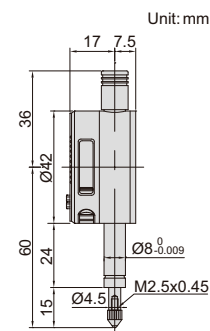
* Supplied with manufacturer inspection certificate

COMPACT DIGITAL INDICATORS

- Button function:
 - in/mm: short press for inch/metric conversion
 - long press to change measuring direction
 - ABS: short press for absolute/incremental measurement
 - long press to preset data
 - 0/ON: short press to turn on when power is off
 - short press to set zero when power is on
 - long press to turn off
- Keep preset data in memory after restart
- CR1632 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13, 7305-40M page 9), contact points (page 224~226)



2114-51F



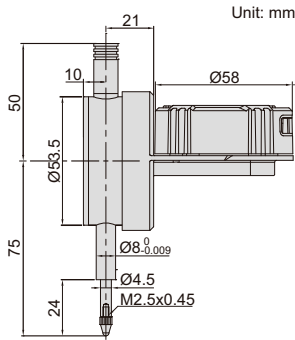
Code	Range	Resolution	Accuracy	Hysteresis	Remark
2114-5F *	5mm/0.2"	0.01mm/0.0005"	20µm	10µm	flat back
2114-51F *	5mm/0.2"	0.001mm/0.00005"	5µm	2µm	flat back

* Supplied with manufacturer inspection certificate

BACK PLUNGER TYPE DIGITAL INDICATORS

DATA
OUTPUT

INSPECTION
CERTIFICATE

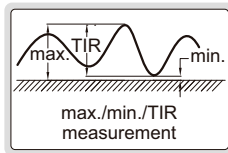


2118-10

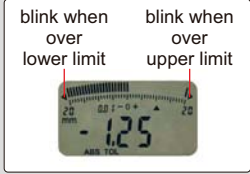
spindle lift knob
is included



max./min./TIR



warning when over tolerance

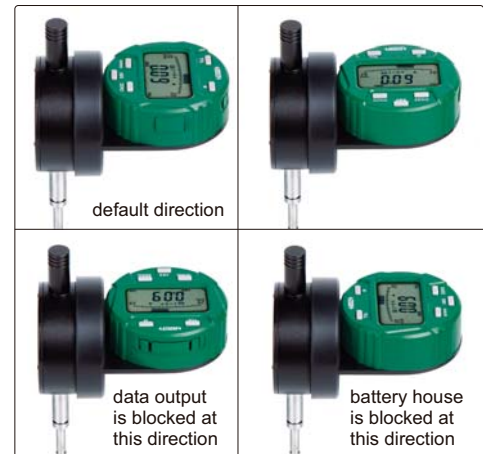


analog pointer

analog pointer



display direction is changeable



remark: to change above direction, 4 fixing screws on the back of display need to be removed first.

display can rotate 320°



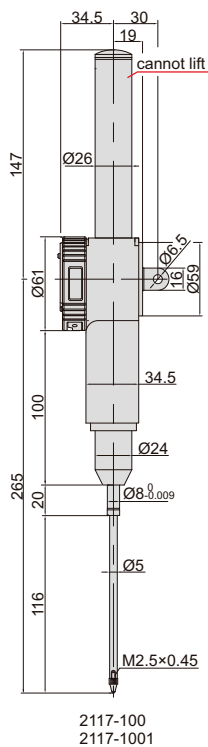
- Display can rotate 320°, and display direction is changeable
- Reading in digital and analog
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13, 7305-40M page 9), backs (page 227~228), contact points (page 224~226)

Code	Range	Resolution	Accuracy	Hysteresis	Remark
2118-10 *	12.7mm/0.5"	0.01mm/0.0005"	20µm	10µm	flat back
2118-101 *	12.7mm/0.5"	0.001mm/0.00005"	5µm	2µm	flat back

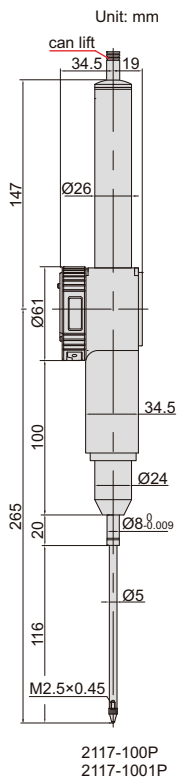
* Supplied with manufacturer inspection certificate

LARGE STROKE DIGITAL INDICATORS

DATA OUTPUT



2117-100



2117-100P

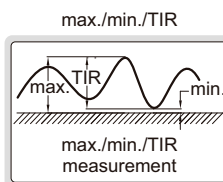
Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	Remark
2117-100	100mm/4"	30µm	10µm	lug back
2117-100P	100mm/4"	30µm	10µm	flat back, with lift cap

Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis	Remark
2117-1001	100mm/4"	9µm	3µm	lug back
2117-1001P	100mm/4"	9µm	3µm	flat back, with lift cap

- Button function: on/off, zero, mm/inch, data preset, tolerance, change measuring direction, max./min./TIR measurement, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off
- Maximum measuring force: 3.2N
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13, 7305-40M page 9), backs (page 227~228), contact points (page 224~226)



warning when over tolerance



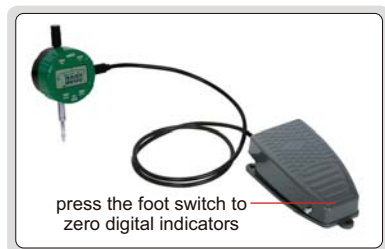
spindle lift knob is included



2117-100P/1001P



application



7360-1M

ZEROING FOOT SWITCH

- For zeroing of digital indicators

Code	Description	Interface of digital indicators	Applicable products
7360-1M	zeroing foot switch with cable (length 2.5m)		for digital indicators

INDUCTIVE DIGITAL COMPARATOR

ATTENTION: RECHARGEABLE BATTERY,
FOR 12 HOURS CONTINUOUS WORKING

IP54
WATERPROOF

DATA
OUTPUT



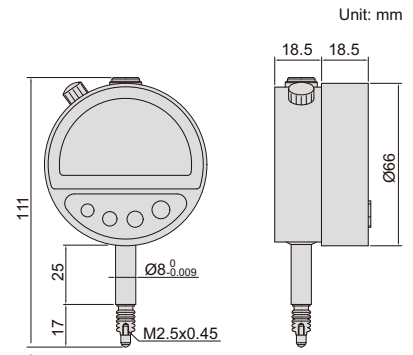
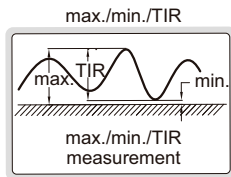
2149-2

data interface
(with protective cover)



touch sensor
to transmit data
signal light

10



- Built-in wireless transmission
- IP54 dust/waterproof
- Reading in digital and analog
- Display can be rotated by 320°
- Can store 10 set parameters, and the parameter can be searched and recalled
- 999 groups value can be stored
- Touch sensor: use the sensor to transmit data, avoiding press the button to cause deformation of the dial indicator stand and affect the zero position
- Button function: on/off, zero, data hold, measuring direction change, inch/metric conversion, data preset, absolute/incremental measurement, max./min./TIR measurement, tolerance Go and No-Go display, data output, analog pointer resolution and range change, print data
- Power: rechargeable battery, for 12 hours continuous working
- Ruby probe
- Data output
- Optional accessory: wireless receiver (code **2149-RE**, transmission distance is 2 meters), printer (code **ISF-DF-PRINTER**)

Code	Range	Resolution	Accuracy	Hysteresis	Repeatability	Measuring force
2149-2	2mm/0.08"	0.1µm/0.000005"	0.5µm	0.2µm	0.3µm	0.8-1N

CONTINUOUS DATA COLLECTION CAN BE CUSTOMIZED (PRESS "DATA" BUTTON TO START CONTINUOUS COLLECTION, PRESS AGAIN TO STOP; COLLECTION FREQUENCY CAN BE CUSTOMIZED, THE FASTEST DATA COLLECTION IS 10PCS PER SECOND)

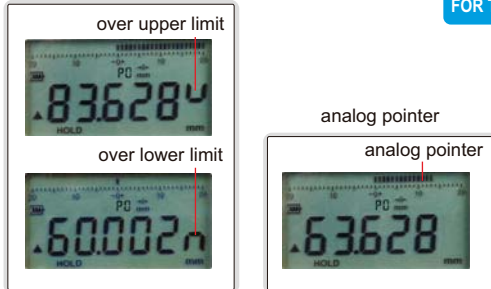


WIRELESS HIGH PRECISION DIGITAL INDICATORS

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

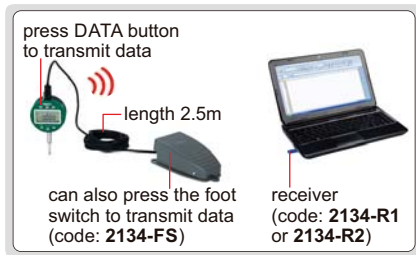
ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

warning when over tolerance



LINEAR BALL BEARINGS FOR TEN MILLION TIMES USE

transmit data



- Built-in wireless transmission, Zigbee single
- Linear ball bearings for ten million times use
- Absolute encoder, the original data remains after power off
- Reading in digital and analog
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, mm/inch, adjust resolution
- Power: rechargeable battery, for 24 hours continuous working
- Optional accessory: contact points (page 224~226), foot switch, code: **2134-FS** wireless receiver, code: **2134-R1** (keyboard format) **2134-R2** (serial port format)

Standard precision

Carbide probe

Adjustable resolution: 0.0005mm/0.00002"
0.001mm/0.00005"
0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	A	B	C	ØD	Remark
2134-10*	12.7mm/0.5"	3µm	1.5µm	75.4mm	20.6mm	24.8mm	5mm	flat back
2134-10L*	12.7mm/0.5"	3µm	1.5µm	75.4mm	20.6mm	24.8mm	5mm	lug back
2134-25*	25.4mm/1"	3µm	1.5µm	109.5mm	38.5mm	41mm	5mm	flat back
2134-50*	50.8mm/2"	3µm	1.5µm	201mm	32mm	72mm	4.5mm	flat back

High precision

Ruby probe

Adjustable resolution: 0.0002mm/0.00001"
0.001mm/0.00005"
0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	A	B	C	ØD	Remark
2134-101*	12.7mm/0.5"	1.5µm	1µm	77.4	26	21.4	4	flat back
2134-101L*	12.7mm/0.5"	1.5µm	1µm	77.4	26	21.4	4	lug back
2134-251*	25.4mm/1"	1.8µm	1µm	116.1	42.5	44	4	flat back

*Supplied with manufacturer inspection certificate



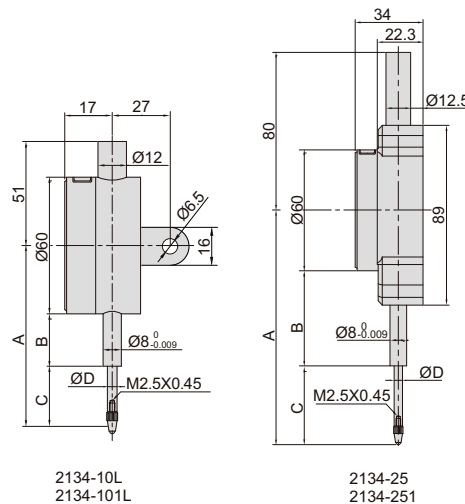
2134-10



2134-25

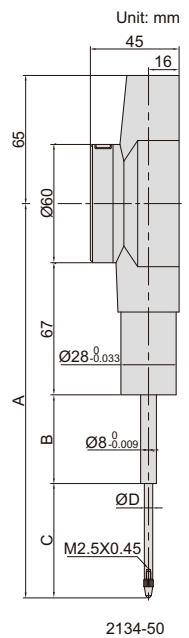


2134-50



2134-10L
2134-101L

2134-25
2134-251

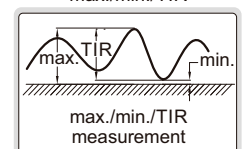


2134-50

spindle lift knob is included



max./min./TIR



HIGH PRECISION DIGITAL INDICATORS

LINEAR BALL BEARINGS
FOR TEN MILLION TIMES USE

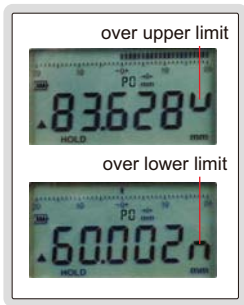
ABSOLUTE ENCODER, THE ORIGINAL
DATA REMAINS AFTER POWER OFF

DATA
OUTPUT

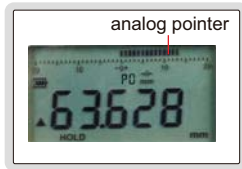
ATTENTION: RECHARGEABLE BATTERY,
FOR 24 HOURS CONTINUOUS WORKING



warning when
over tolerance



analog pointer



2133-10

2133-25

2133-50

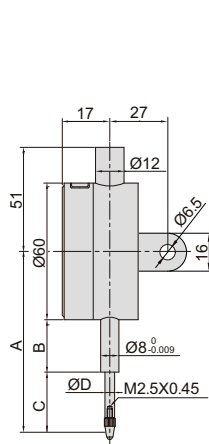
- Linear ball bearings for ten million times use
- Absolute encoder, the original data remains after power off
- Reading in digital and analog
- Data output
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, mm/inch, adjust resolution
- Power: rechargeable battery, for 24 hours continuous working
- Optional accessory: contact points (page 224~226), wireless transmitter, code **7315-60** page 5 data output cable (keyboard format), code **7302-60** page 13 data output cable (serial port format), code **7305-G60** page 11 (cable length 3m, optional cable length maximum 15m; RS232 protocol, optional RS485 protocol)

Standard precision

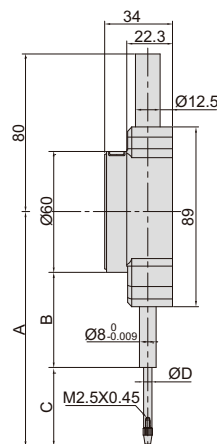
Carbide probe

Adjustable resolution: 0.0005mm/0.00002"
0.001mm/0.00005"
0.01mm/0.0005"

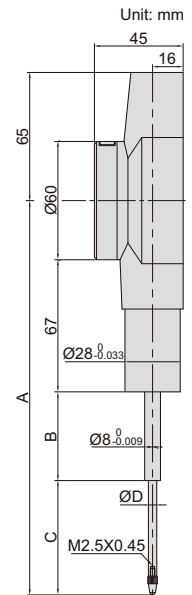
Code	Range	Accuracy	Hysteresis	A	B	C	ØD	Remark
2133-10*	12.7mm/0.5"	3µm	1.5µm	75.4mm	20.6mm	24.8mm	5mm	flat back
2133-10L*	12.7mm/0.5"	3µm	1.5µm	75.4mm	20.6mm	24.8mm	5mm	lug back
2133-25*	25.4mm/1"	3µm	1.5µm	109.5mm	38.5mm	41mm	5mm	flat back
2133-50*	50.8mm/2"	3µm	1.5µm	201mm	32mm	72mm	4.5mm	flat back



2133-10L
2133-101L



2133-25
2133-251



2133-50

High precision

Ruby probe

Adjustable resolution: 0.0002mm/0.00001"
0.001mm/0.00005"
0.01mm/0.0005"

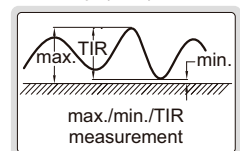
Code	Range	Accuracy	Hysteresis	A	B	C	ØD	Remark
2133-101*	12.7mm/0.5"	1.5µm	1µm	77.4mm	26mm	21.4mm	4mm	flat back
2133-101L*	12.7mm/0.5"	1.5µm	1µm	77.4mm	26mm	21.4mm	4mm	lug back
2133-251*	25.4mm/1"	1.8µm	1µm	116.1mm	42.5mm	44mm	4mm	flat back

*Supplied with manufacturer inspection certificate

spindle lift knob is included



max./min./TIR



DATA OUTPUT

Ø28MM STEM SUITABLE FOR REINFORCED CLAMPING

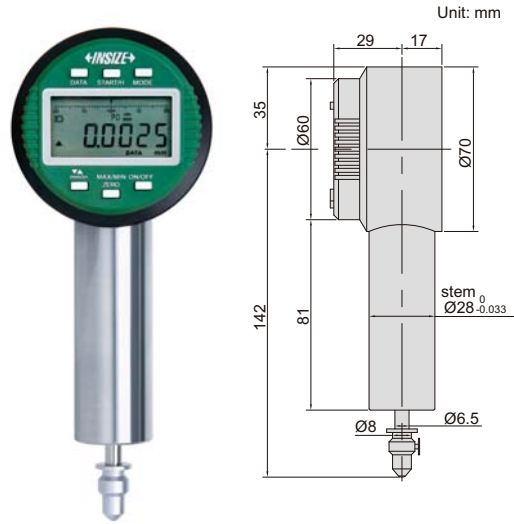
ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

HIGH PRECISION DIGITAL INDICATORS

LINEAR BALL BEARINGS FOR TEN MILLION TIMES USE

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

- Linear ball bearings for ten million times use
- Ø28mm stem suitable for reinforced clamping
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
0.001mm/0.00005"
0.01mm/0.0005"
- Reading in digital and analog
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, mm/inch, adjust resolution
- Power: rechargeable battery, for 24 hours continuous working
- Ruby probe



2140-6

warning when over tolerance

over upper limit

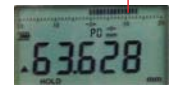


over lower limit



analog pointer

analog pointer

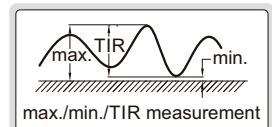


With data interface

Optional accessory:
wireless transmitter, code **7315-60** page 5
data output cable (keyboard format), code **7302-60** page 13
data output cable (serial port format), code **7305-G60** page 11
(cable length 3m, optional cable length maximum 15m; RS232 protocol, optional RS485 protocol)

Code	Range	Accuracy	Hysteresis	Remark
2140-6	0-6mm/0-0.24"	1.6µm	0.8µm	flat back

max./min./TIR



Built-in wireless

Optional accessory:
wireless receiver (keyboard format, connect up to 15 digital indicators), code **2134-R1**
wireless receiver (serial port format, connect up to 15 digital indicators), code **2134-R2**

Code	Range	Accuracy	Hysteresis	Remark
2140-6WL*	0-6mm/0-0.24"	1.6µm	0.8µm	flat back

*Continuous data collection can be customized (press "DATA" button to start continuous collection, press again to stop; collection frequency can be customized, the fastest data collection is 10 pcs per second)

wireless receiver
2134-R1, 2134-R2 (optional)



JEWELLED BEARING

SHOCK PROOF

INSPECTION CERTIFICATE

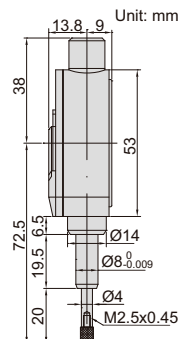
DIAL COMPARATOR

INSIZE PLUS
MADE IN EUROPE

- Meet DIN879-1
- Shockproof
- Jeweled bearing
- Overtravel: 3mm
- Shadow free dial face cover
- Supplied with limit pointers
- Initial measuring force 1.2N
- Optional accessory:
lifting lever (code **6289-150**)



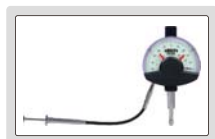
2881-01



set zero



lifting lever (optional)



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	Remark
2881-01*	0.1mm	0.001mm	1.2µm	0.5µm	50-0-50	flat back

*Supplied with manufacturer inspection certificate

PRECISION DIAL INDICATORS

INSIZE PLUS
MADE IN EUROPE

INSPECTION
CERTIFICATE

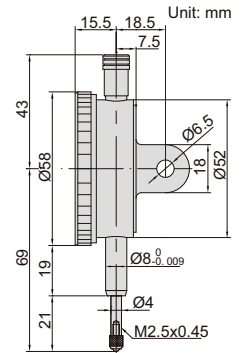
SHOCK
PROOF

JEWELLED
BEARING

- Shockproof
- Jeweled bearing
- With limit pointers
- Optional accessory:
backs (page 227~228),
contact points (page 224~226)



2830-1



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2830-1*	1mm	0.001mm	5µm	2µm	0.2mm	0-100-0	lug back
2830-1F*	1mm	0.001mm	5µm	2µm	0.2mm	0-100-0	flat back

*Supplied with manufacturer inspection certificate

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HIGH PRECISION DIAL INDICATORS

INSIZE PLUS
MADE IN EUROPE

INSPECTION
CERTIFICATE

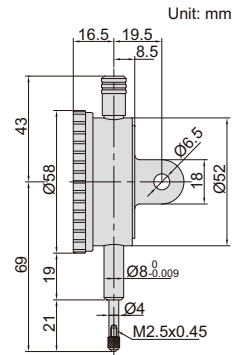
SHOCK
PROOF

- Shockproof
- Jeweled bearing
- With limit pointers
- Optional accessory:
backs (page 227~228),
contact points (page 224~226),
lifting lever (code 6289-150)

lifting lever (optional)



2891-1



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2891-1*	1mm	0.001mm	3µm	1.5µm	0.1mm	0-100	lug back
2891-1F*	1mm	0.001mm	3µm	1.5µm	0.1mm	0-100	flat back

*Supplied with manufacturer inspection certificate

HIGH PRECISION COMPACT DIAL INDICATORS

INSIZE PLUS
MADE IN EUROPE

INSPECTION
CERTIFICATE

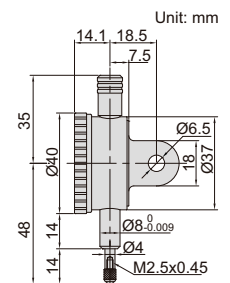
SHOCK
PROOF

- Shockproof
- Jeweled bearing
- With limit pointers
- Optional accessory:
backs (page 227~228),
contact points (page 224~226),
lifting lever (code 6289-150)

lifting lever (optional)



2890-1



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2890-1*	1mm	0.001mm	3µm	1.5µm	0.1mm	0-100	lug back
2890-1F*	1mm	0.001mm	3µm	1.5µm	0.1mm	0-100	flat back

*Supplied with manufacturer inspection certificate

JEWELLED BEARING

INSPECTION CERTIFICATE

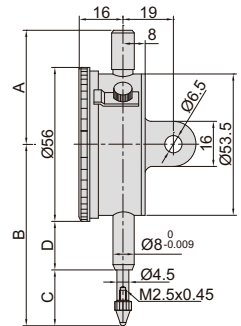
PRECISION DIAL INDICATORS



Unit: mm

- Graduation: 0.001mm
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 227~228), contact points (page 224~226)

2313-1A



(mm)

Code	Range	Accuracy	Hysteresis	Range/rev	Dial reading	Remark	A	B	C	D
2313-1FA *	1mm	5µm	2µm	0.2mm	0-100-0	flat back	45	62.5	19.5	15
2313-2FA *	2mm	6µm	2.5µm	0.2mm	0-100-0	flat back	45	62.5	19.5	15
2313-1A *	1mm	5µm	2µm	0.2mm	0-100-0	lug back	45	62.5	19.5	15
2313-2A *	2mm	6µm	2.5µm	0.2mm	0-100-0	lug back	45	62.5	19.5	15

* Supplied with manufacturer inspection certificate

INSPECTION CERTIFICATE

COMPACT DIAL INDICATOR

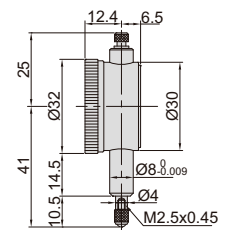
INSIZE PLUS
MADE IN EUROPE



Unit: mm

- Meet DIN878
- With limit pointers
- Optional accessory: backs (page 227~228), contact points (page 224~226)

2886-3F



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2886-3F *	3mm	0.01mm	12µm	3µm	0.5mm	0-50	flat back

* Supplied with manufacturer inspection certificate

INSPECTION CERTIFICATE

COMPACT DIAL INDICATORS

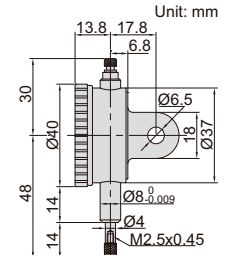
INSIZE PLUS
MADE IN EUROPE



Unit: mm

- Meet DIN878
- With limit pointers
- Optional accessory: backs (page 227~228), contact points (page 224~226)

2887-5



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2887-5 *	5mm	0.01mm	14µm	3µm	0.5mm	0-50	lug back
2887-5F *	5mm	0.01mm	14µm	3µm	0.5mm	0-50	flat back

* Supplied with manufacturer inspection certificate

COMPACT DIAL INDICATORS

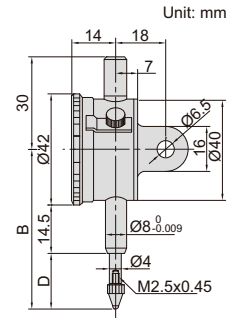
JEWELLED BEARING

INSPECTION CERTIFICATE

- Meet DIN878
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 227~228), contact points (page 224~226)



2311-5



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark	B	D
2311-3F *	3mm	0.01mm	12μm	3μm	0.5mm	0-50	flat back	46	10.5
2311-5F *	5mm	0.01mm	14μm	3μm	0.5mm	0-50	flat back	48	12.5
2311-3 *	3mm	0.01mm	12μm	3μm	0.5mm	0-50	lug back	46	10.5
2311-5 *	5mm	0.01mm	14μm	3μm	0.5mm	0-50	lug back	48	12.5

*Supplied with manufacturer inspection certificate

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DIAL INDICATORS

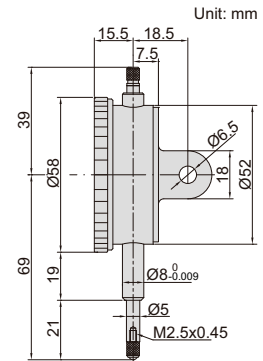
INSIZE PLUS
MADE IN EUROPE

INSPECTION CERTIFICATE

- Meet DIN878
- With limit pointers
- Optional accessory: backs (page 227~228), contact points (page 224~226)



2892-10



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2892-10 *	10mm	0.01mm	17μm	3μm	1mm	0-100	lug back
2892-10F *	10mm	0.01mm	17μm	3μm	1mm	0-100	flat back

*Supplied with manufacturer inspection certificate

DIAL INDICATORS (STANDARD TYPE)

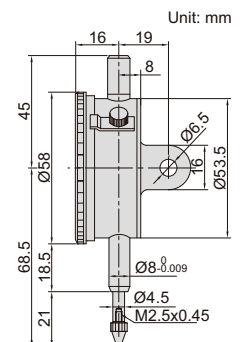
JEWELLED BEARING

INSPECTION CERTIFICATE

- Meet DIN878
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 227~228), contact points (page 224~226)



2308-10A



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2308-3FA *	3mm	0.01mm	12μm	3μm	1mm	0-100	flat back
2308-5FA *	5mm	0.01mm	14μm	3μm	1mm	0-100	flat back
2308-10FA *	10mm	0.01mm	17μm	3μm	1mm	0-100	flat back
2308-3A *	3mm	0.01mm	12μm	3μm	1mm	0-100	lug back
2308-5A *	5mm	0.01mm	14μm	3μm	1mm	0-100	lug back
2308-10A *	10mm	0.01mm	17μm	3μm	1mm	0-100	lug back

*Supplied with manufacturer inspection certificate

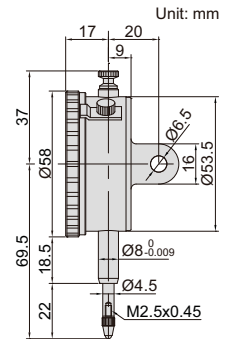


DIAL INDICATORS (BASIC TYPE)

- Meet DIN878
- Jeweled bearing
- Supplied with limit hands and bezel clamp
- Packed in carton box
- Optional accessory: backs (page 227~228), contact points (page 224~226)



2301-10



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2301-10F *	10mm	0.01mm	17µm	3µm	1mm	0-100	flat back
2301-10 *	10mm	0.01mm	17µm	3µm	1mm	0-100	lug back with spare flat back

* Supplied with manufacturer inspection certificate

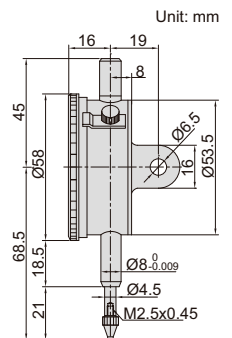


REVERSE READING DIAL INDICATORS

- Meet DIN878
- Suitable for depth and step measurements
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 227~228), contact points (page 224~226)



2801-10



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2801-10F *	10mm	0.01mm	17µm	3µm	1mm	100-0	flat back
2801-10 *	10mm	0.01mm	17µm	3µm	1mm	100-0	lug back

* Supplied with manufacturer inspection certificate



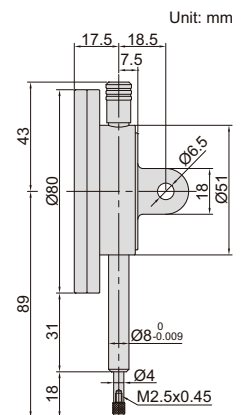
LARGE DIAL FACE DIAL INDICATOR



- Large, easy-to-read dial face
- With limit pointers
- Optional accessory: backs (page 227~228), contact points (page 224~226)



2888-10



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2888-10 *	10mm	0.01mm	17µm	5µm	1mm	0-100	flat back, with spare lug back

* Supplied with manufacturer inspection certificate

SHOCKPROOF DIAL INDICATORS



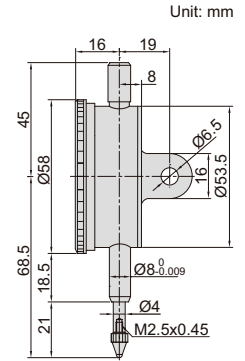
SHOCK PROOF

JEWELLED BEARING

- Meet DIN878
- Shockproof
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 227~228), contact points (page 224~226)



2314-10A



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2314-3FA *	3mm	0.01mm	12µm	3µm	1mm	0-100	flat back
2314-5FA *	5mm	0.01mm	14µm	3µm	1mm	0-100	flat back
2314-10FA *	10mm	0.01mm	17µm	3µm	1mm	0-100	flat back
2314-3A *	3mm	0.01mm	12µm	3µm	1mm	0-100	lug back
2314-5A *	5mm	0.01mm	14µm	3µm	1mm	0-100	lug back
2314-10A *	10mm	0.01mm	17µm	3µm	1mm	0-100	lug back

*Supplied with manufacturer inspection certificate

BACK PLUNGER DIAL INDICATOR

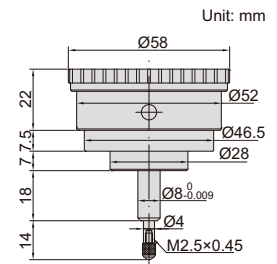
INSIZE PLUS
MADE IN EUROPE



- With limit pointers
- Optional accessory: contact points (page 224~226)



2893-3



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading
2893-3 *	3mm	0.01mm	15µm	5µm	1mm	0-100

*Supplied with manufacturer inspection certificate

WATERPROOF DIAL INDICATOR

INSIZE PLUS
MADE IN EUROPE



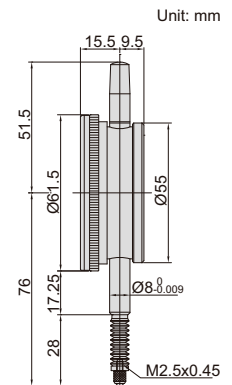
SHOCK PROOF

IP67 WATERPROOF

- Meet DIN878
- Shockproof
- IP67 dust/waterproof
- With limit pointers
- Optional accessory: contact points (page 224~226)



2894-10F



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2894-10F *	10mm	0.01mm	17µm	3µm	1mm	0-100	flat back

*Supplied with manufacturer inspection certificate

IP54
WATERPROOF

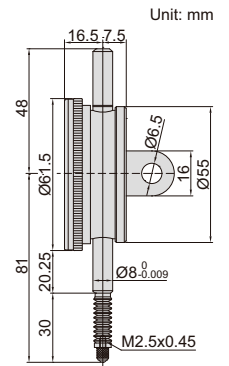
INSPECTION
CERTIFICATE

WATERPROOF DIAL INDICATORS

- Meet DIN878
- IP54 dust/waterproof
- With limit pointers
- Optional accessory: backs (page 227~228), contact points (page 224~226)



2324-10A



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2324-10FA *	10mm	0.01mm	17µm	3µm	1mm	0-100	flat back
2324-10A *	10mm	0.01mm	17µm	3µm	1mm	0-100	lug back

* Supplied with manufacturer inspection certificate

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INSPECTION
CERTIFICATE

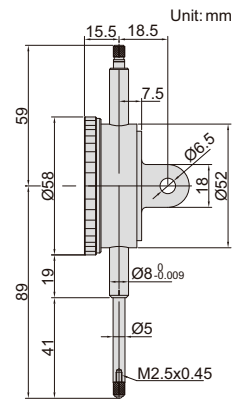
DIAL INDICATORS (LONG STROKE)

INSIZE PLUS
MADE IN EUROPE

- With limit pointers
- Optional accessory: backs (page 227~228), contact points (page 224~226)



2889-30



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2889-30 *	30mm	0.01mm	35µm	7µm	1mm	0-100	lug back
2889-30F *	30mm	0.01mm	35µm	7µm	1mm	0-100	flat back

* Supplied with manufacturer inspection certificate

INSPECTION
CERTIFICATE

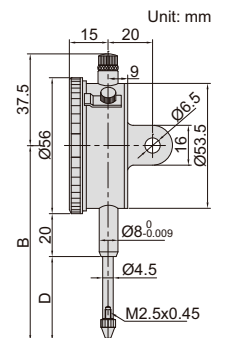
DIAL INDICATORS (LONG STROKE)

- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 227~228), contact points (page 224~226)



2310-30A

(mm)



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark	B	D
2310-20FA *	20mm	0.01mm	25µm	5µm	1mm	0-100	flat back	83	35
2310-30FA *	30mm	0.01mm	35µm	7µm	1mm	0-100	flat back	88	40
2310-20A *	20mm	0.01mm	25µm	5µm	1mm	0-100	lug back	83	35
2310-30A *	30mm	0.01mm	35µm	7µm	1mm	0-100	lug back	88	40

* Supplied with manufacturer inspection certificate

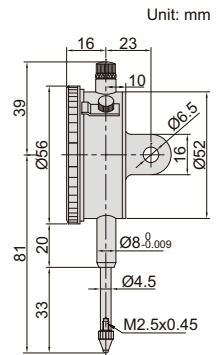
DIAL INDICATORS (LONG STROKE, BASIC TYPE)



- Supplied with limit pointers and bezel clamp
- Packed in carton box
- Optional accessory: backs (page 227~228), contact points (page 224~226)



2302-25



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2302-25F *	25mm	0.01mm	35µm	7µm	1mm	0-100	flat back
2302-25 *	25mm	0.01mm	35µm	7µm	1mm	0-100	lug back with spare flat back

*Supplied with manufacturer inspection certificate

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DOUBLE FACE DIAL INDICATOR



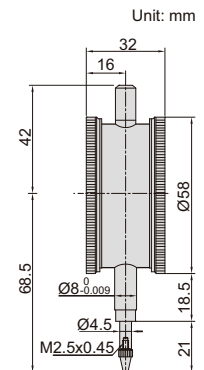
- Meet DIN878
- Read from both sides
- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: contact points (page 224~226)



front

2328-10

back



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading
2328-10 *	10mm	0.01mm	17µm	3µm	1mm	0-100

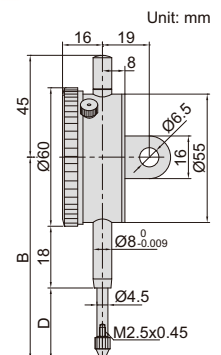
*Supplied with manufacturer inspection certificate

DIAL INDICATORS (GRADUATION 0.1mm)

- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 227~228), contact points (page 224~226)



2318-30



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark	B (mm)	D (mm)
2318-10F	10mm	0.1mm	40µm	20µm	10mm	0-10	flat back	70	20
2318-20F	20mm	0.1mm	50µm	20µm	10mm	0-10	flat back	85	35
2318-25F	25mm	0.1mm	60µm	20µm	10mm	0-10	flat back	85	35
2318-30F	30mm	0.1mm	60µm	20µm	10mm	0-10	flat back	90	40
2318-10	10mm	0.1mm	40µm	20µm	10mm	0-10	lug back	70	20
2318-20	20mm	0.1mm	50µm	20µm	10mm	0-10	lug back	85	35
2318-25	25mm	0.1mm	60µm	20µm	10mm	0-10	lug back	85	35
2318-30	30mm	0.1mm	60µm	20µm	10mm	0-10	lug back	90	40



JEWELLED BEARING

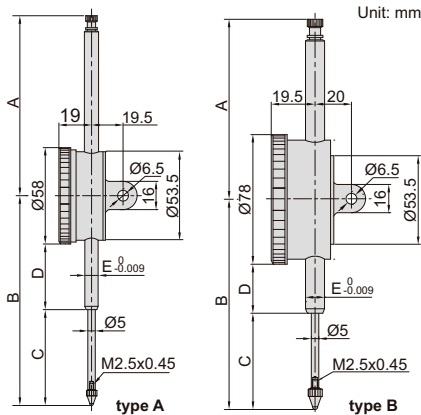
SHOCK PROOF

DIAL INDICATORS (LONG STROKE)

- Shockproof
- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: backs (page 227~228), contact points (page 224~226)



2309-50



stem clamp Ø10mm for 2309-100D



back of type B



Code	Type	A	B	C	D	E	(mm)
2309-30F	A	37.5	89.5	40.9	19.5	Ø8	
2309-30	A	37.5	89.5	40.9	19.5	Ø8	
2309-50	A	108.3	126.2	57.7	39.5	Ø8	
2309-50D	B	108.3	126.2	57.7	29.5	Ø8	
2309-80	A	138.4	168.4	88	51.3	Ø8	
2309-80D	B	138.4	168.4	88	41.3	Ø8	
2309-100D	B	167.6	207.8	108	60.8	Ø10	

Code	Range	Graduation	Type	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2309-30F *	30mm	0.01mm	A	35µm	7µm	1mm	0-100	flat back
2309-30 *	30mm	0.01mm	A	35µm	7µm	1mm	0-100	lug back
2309-50 *	50mm	0.01mm	A	40µm	8µm	1mm	0-100	flat back with spare lug back
2309-50D *	50mm	0.01mm	B	40µm	8µm	1mm	0-100	flat back with spare lug back
2309-80	80mm	0.01mm	A	50µm	9µm	1mm	0-100	flat back with spare lug back
2309-80D	80mm	0.01mm	B	50µm	9µm	1mm	0-100	flat back with spare lug back
2309-100D	100mm	0.01mm	B	50µm	9µm	1mm	0-100	flat back with spare lug back

Note: 1) 2309-80, 2309-80D and 2309-100D can only be used vertically
 2) 2309-100D is supplied with stem clamp Ø10mm for magnetic stands (code 6200-60, 6201-60, 6202-80, 6202-100)
 3) 2309-30 and 2309-30F can not accept optional backs (page 227~228)

* Supplied with manufacturer inspection certificate

SHOCK PROOF



ONE REVOLUTION PRECISION DIAL INDICATORS

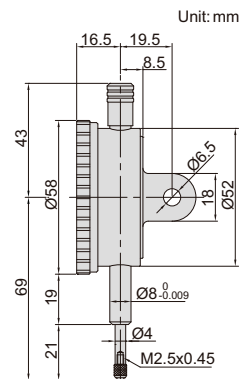


- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- Jeweled bearing
- Free stroke: 4.5mm
- With limit pointers
- Optional accessory: backs (page 227~228), contact points (page 224~226), lifting lever (code 6289-150)



2885-008

lifting lever (optional)



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	Remark
2885-008 *	0.08mm	0.001mm	3µm	1.5µm	40-0-40	lug back
2885-008F *	0.08mm	0.001mm	3µm	1.5µm	40-0-40	flat back

* Supplied with manufacturer inspection certificate

ONE REVOLUTION DIAL INDICATORS

INSIZE PLUS
MADE IN EUROPE

- Meet DIN878
- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- Free stroke: 7mm
- With limit pointers
- Optional accessory: backs (page 227~228), contact points (page 224~226)

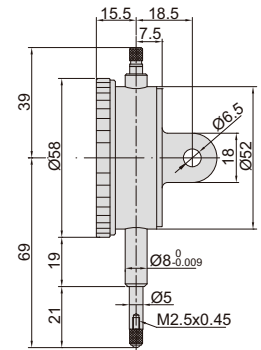


2882-08

SHOCK PROOF

INSPECTION CERTIFICATE

Unit: mm



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	Remark
2882-08 *	0.8mm	0.01mm	9µm	3µm	40-0-40	lug back
2882-08F *	0.8mm	0.01mm	9µm	3µm	40-0-40	flat back

*Supplied with manufacturer inspection certificate

ONE REVOLUTION DIAL INDICATORS

- Meet DIN878
- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- Supplied with limit pointers
- Optional accessory: backs (page 227~228), contact points (page 224~226)

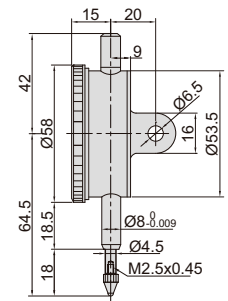


2316-05

SHOCK PROOF

INSPECTION CERTIFICATE

Unit: mm



Code	Range	Dial indicator stroke	Graduation	Accuracy	Hysteresis	Dial reading	Remark
2316-05F *	0.5mm	5mm	0.01mm	9µm	3µm	25-0-25	flat back
2316-1F *	1mm	5mm	0.01mm	9µm	3µm	50-0-50	flat back
2316-05 *	0.5mm	5mm	0.01mm	9µm	3µm	25-0-25	lug back
2316-1 *	1mm	5mm	0.01mm	9µm	3µm	50-0-50	lug back

*Supplied with manufacturer inspection certificate

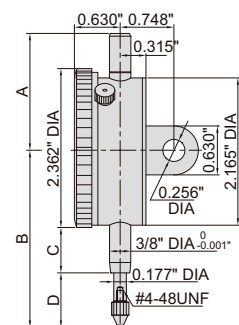
INCH DIAL INDICATORS

- Meet ASME B89.1.10M-2001
- With lug back
- Supplied with limit pointers and bezel clamp



2307-1

INSPECTION CERTIFICATE



Code	Range	Graduation	Accuracy		Range/rev	Dial reading
			First 2.5 rev	Overall		
2307-025 *	0.25"	0.001"	±0.001"	±0.001"	0.1"	0-100
2307-05 *	0.5"	0.001"	±0.001"	±0.002"	0.1"	0-100
2307-1 *	1"	0.001"	±0.001"	±0.002"	0.1"	0-100
2307-2 *	2"	0.001"	±0.001"	±0.004"	0.1"	0-100
2307-0255 *	0.25"	0.0005"	±0.0005"	±0.0015"	0.05"	0-50
2307-055 *	0.5"	0.0005"	±0.0005"	±0.0015"	0.05"	0-50
2307-105 *	1"	0.0005"	±0.0005"	±0.002"	0.05"	0-50
2307-205 *	2"	0.0005"	±0.0005"	±0.002"	0.05"	0-50

*Supplied with manufacturer inspection certificate

Range	A	B	C	D
0.25"	1.811"	2.953"	0.787"	0.984"
0.5"	1.811"	2.953"	0.787"	0.984"
1"	1.811"	3.346"	0.787"	1.378"
2"	4.370"	5.472"	1.969"	2.323"

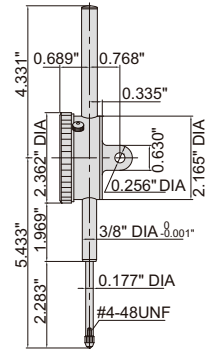


INCH LONG STROKE DIAL INDICATOR



2326-2

- Graduation 0.001"
- With lug back
- Supplied with limit pointers and bezel clamp



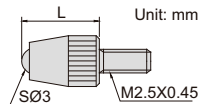
Code	Range	Accuracy		Range/rev	Dial reading
		first 2.5 rev	overall		
2326-2*	2"	±0.001"	±0.004"	0.1"	0-100

*Supplied with manufacturer inspection certificate

BALL POINTS



6282-0101

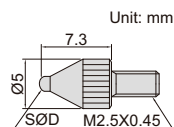


Code	Material of measuring face	L (mm)
6282-0101	carbide	7.3
6282-0103	ceramic	7.3
6282-0104	carbide	8.3
6282-0106	carbide	12.1
6282-0107	carbide	14
6282-0108	carbide	15
6282-0109	ceramic	15
6282-0110	carbide	17

Code	Material of measuring face	L (mm)
6282-0111	carbide	19.3
6282-0112	carbide	20
6282-0113	ceramic	20
6282-0114	carbide	22
6282-0115	carbide	25
6282-0116	ceramic	25
6282-0117	carbide	30
6282-0118	ceramic	30



6282-0301



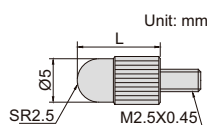
Code	Material of measuring face	SØD (mm)
6282-0301	steel	1
6282-0302	carbide	1.5
6282-0303	carbide	1.8

Code	Material of measuring face	SØD (mm)
6282-0304	carbide	2.5
6282-0305	carbide	4

SHELL TYPE POINTS



6282-0202



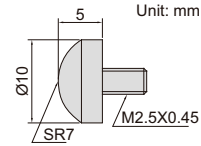
Code	Material of measuring face	L (mm)
6282-0202	steel	5
6282-0203	steel	10
6282-0205	steel	15

Code	Material of measuring face	L (mm)
6282-0207	steel	20
6282-0208	steel	25
6282-0210	steel	30

SPHERICAL POINT

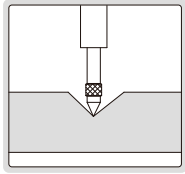


6282-0401



Code	Material of measuring face
6282-0401	steel

CONICAL POINTS



6282-0601



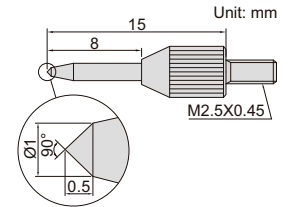
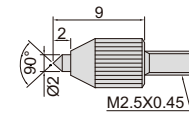
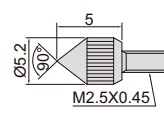
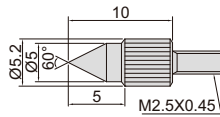
6282-0701



6282-0801



6282-0901

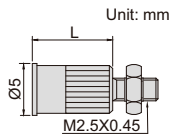


Code	Material of measuring face
6282-0601	steel
6282-0701	steel
6282-0801	steel
6282-0901	steel

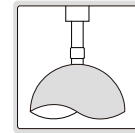
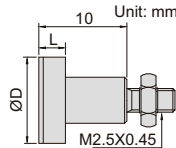
FLAT POINTS



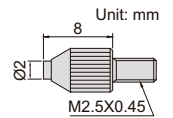
6282-1101



6282-1201



6282-1301



Code	Material of measuring face	L (mm)
6282-1101	steel	8
6282-1102	steel	10

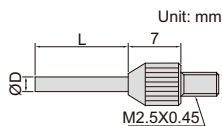
Code	Material of measuring face	ØD	L
6282-1201	steel	10mm	3mm
6282-1202	steel	15mm	4mm
6282-1203	steel	20mm	3mm
6282-1204	steel	25mm	4mm
6282-1205	steel	30mm	4mm

Code	Material of measuring face
6282-1301	carbide

NEEDLE POINTS



6282-1711

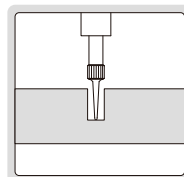
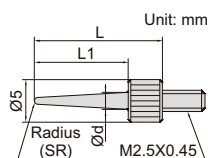


Code	Material of measuring face	ØD	L
6282-1701	steel	0.45	3
6282-1702	steel	0.45	5
6282-1703	carbide	1	3
6282-1704	carbide	1	5
6282-1705	carbide	1	8
6282-1706	carbide	1	10
6282-1707	carbide	1	20
6282-1708	carbide	1	40
6282-1709	carbide	1.5	5

Code	Material of measuring face	ØD	L
6282-1710	carbide	1.5	10
6282-1711	carbide	1.5	13
6282-1712	carbide	1.5	20
6282-1713	carbide	1.5	40
6282-1714	carbide	2	8
6282-1715	carbide	2	18
6282-1716	carbide	2	28
6282-1717	carbide	2	40



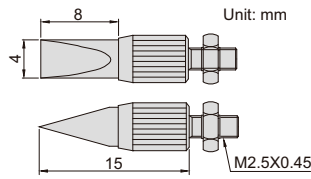
6282-1601



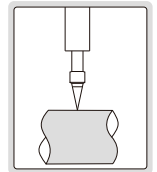
Code	Material of measuring face	L1	L	SR	Ød
6282-1601	steel	11	15	0.4	2
6282-1602	steel	13	17	0.2	2
6282-1603	steel	21	25	0.4	3
6282-1604	steel	31	35	0.4	3

KNIFE EDGE POINT

Code	Material of measuring face
6282-1001	steel

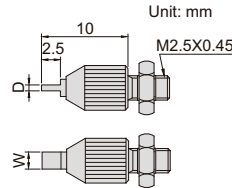


6282-1001

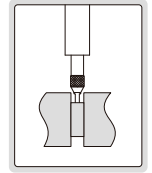


BLADE POINTS

Code	Material of measuring face	D	W
6282-1801	steel	0.4mm	2mm
6282-1802	steel	0.6mm	2mm
6282-1803	steel	1mm	4mm



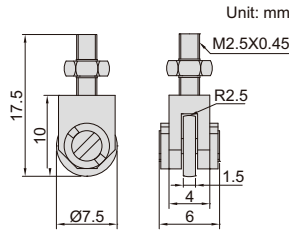
6282-1801



10

ROLLER POINT

Code	Material of measuring face
6282-1901	steel



6282-1901

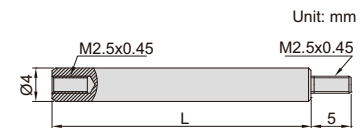
EXTENSION RODS

Code	Material	L (mm)
6282-2001	steel	10
6282-2002	steel	15
6282-2003	steel	20
6282-2004	steel	25
6282-2005	steel	30
6282-2006	steel	35
6282-2007	steel	40
6282-2008	steel	45
6282-2009	steel	50

Code	Material	L (mm)
6282-2010	steel	55
6282-2011	steel	60
6282-2012	steel	65
6282-2013	steel	70
6282-2014	steel	75
6282-2015	steel	80
6282-2016	steel	90
6282-2017	steel	100



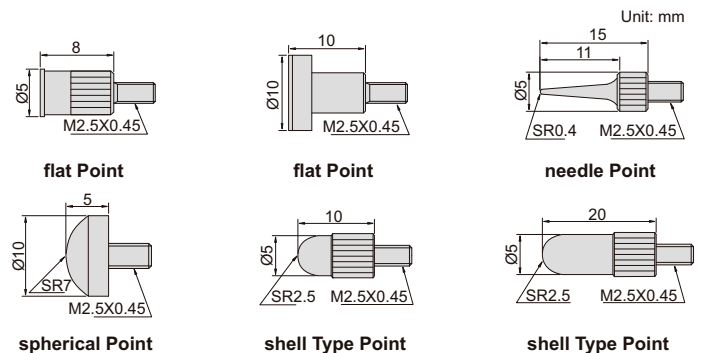
6282-2010



6282-S6

Code	Material of measuring face
6282-S6	steel

POINT SET



Unit: mm

needle Point

flat Point

flat Point

spherical Point

shell Type Point

shell Type Point

SPINDLE LIFT KNOB

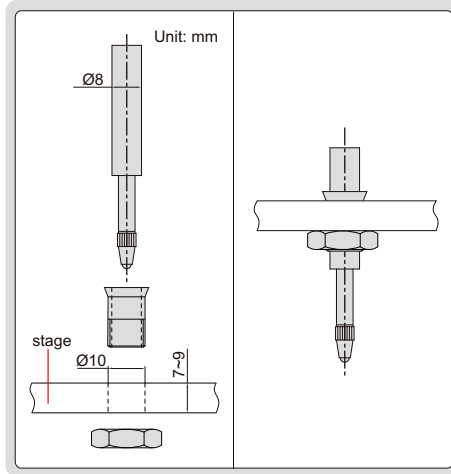
- For dial/digital indicators with spindle diameter $\varnothing 4.5\text{mm}$ or $\varnothing 5\text{mm}$

Code
7332

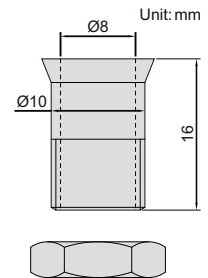


7332

SHAFT SLEEVE



7333



- For dial indicators and probes with shaft diameter $\varnothing 8\text{mm}$

Code
7333

MAGNETIC BACKS

Code	ØD	For digital/dial indicators
7331-M1	51.5mm	2103
		2104
		2108
		2109
		2112
		2115
		2116
		2117
		2118
		2138
		2139
		2501
		2301
		2302
		2308
		2309 (except 2309-30, 2309-30F)
		2313
		2314
2316		
2324		
2801		
7331-M2	54mm	2318

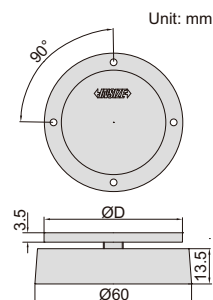


front



back

7331-M2



FLAT BACKS



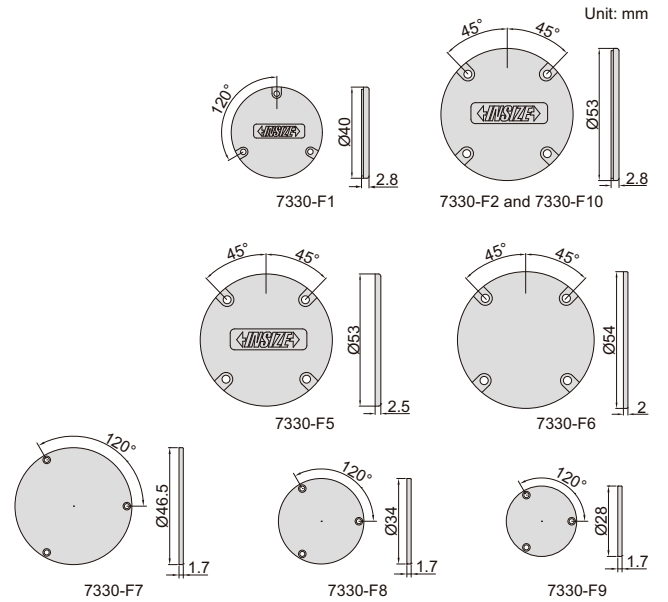
7330-F2



7330-F8

Code	For digital/dial indicators
7330-F1	2311
7330-F2	2301
	2302
	2308
	2309 (except 2309-30, 2309-30F)
	2313
	2314
	2316
	2324
2801	
7330-F5	2103
	2104
	2108
	2109
	2112
	2115

Code	For digital/dial indicators
7330-F5	2116
	2117
	2118
	2138
	2139
	2501
7330-F6	2318
7330-F7	2830
	2882
	2885
	2888
7330-F8	2889
	2891
	2892
7330-F8	2890
7330-F9	2887
7330-F9	2886
7330-F10	2310



10

LUG BACKS



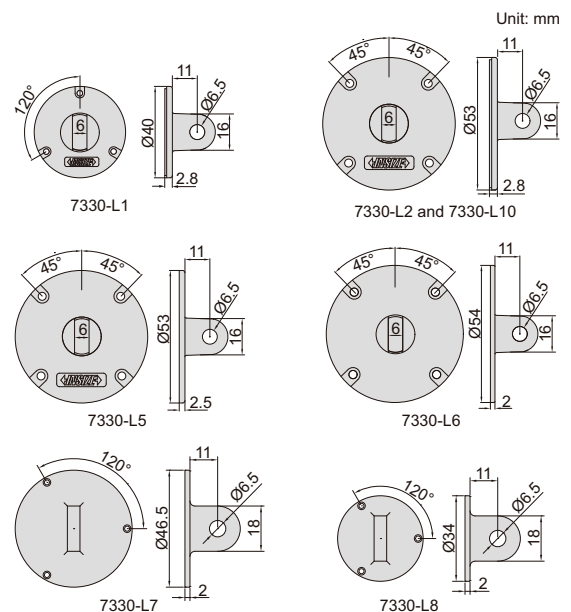
7330-L2



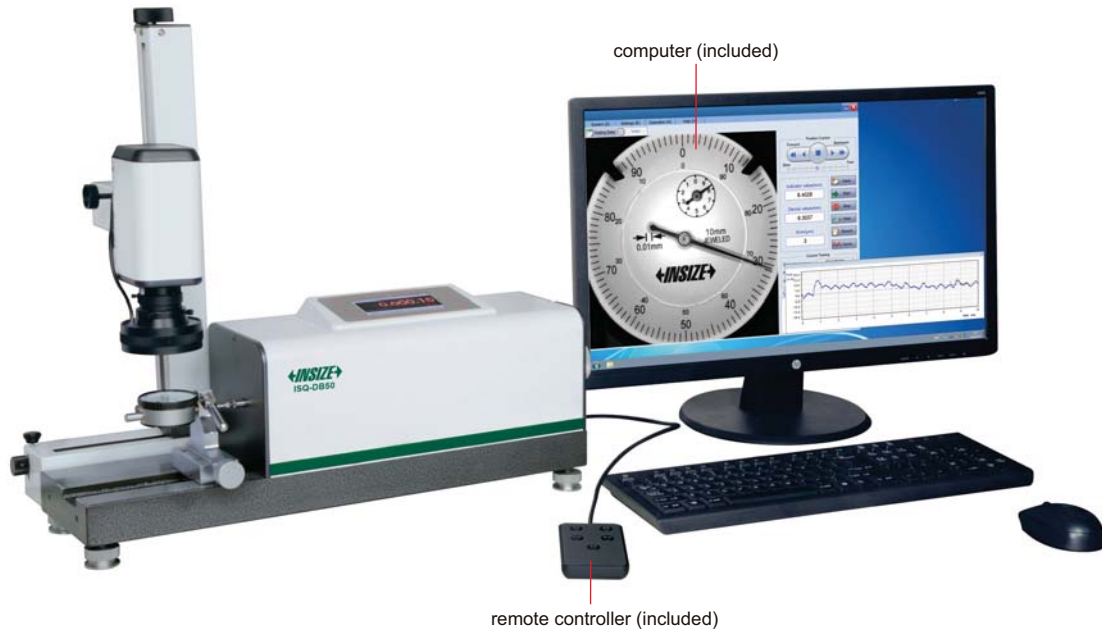
7330-L8

Code	For digital/dial indicators
7330-L1	2311
7330-L2	2301
	2302
	2308
	2309 (except 2309-30, 2309-30F)
	2313
	2314
	2316
	2324
2801	
7330-L5	2103
	2104
	2108
	2109
	2112
	2115

Code	For digital/dial indicators
7330-L5	2116
	2117
	2118
	2138
	2139
	2501
7330-L6	2318
7330-L7	2830
	2882
	2885
	2888
7330-L8	2889
	2891
	2892
7330-L8	2890
7330-L8	2887
7330-L10	2310



AUTOMATIC DIAL INDICATOR TESTER CODE ISQ-DB50



10

- Automatic measurement
- Semi-automatic measurement is possible, operate by hand and find graduation lines by eyes, for indicators with stains on dial faces
- Automatic zero setting
- Detection accuracy of graduation lines:
 - 1/15 graduation for 0.001mm dial indicators or dial test indicators,
 - 1/30 graduation for 0.01mm dial indicators or dial test indicators
- Suitable for dial indicators or dial test indicators with plain and convex crystals

SPECIFICATION

Applicable products	dial indicators, digital indicators, dial test indicators and bore gages
Standard	DIN878, DIN2270, ASME B89.1.10M, BS907, BS2795, JIS B7503, JIS B7533 and so on. customized standard: customers can set the range, interval, accuracy and hysteresis
Measuring range	0-50mm
Resolution	0.1μm
Repeatability	0.1μm
Speed	average 0.6s/point (adjustable) It takes 3 minutes to calibrate a 10mm dial indicator (100 points forward and 100 points backward)
Accuracy	any 1mm: 0.8μm
	any 2mm: 1.0μm
	any 10mm: 1.3μm
	any 30mm: 1.5μm
	50mm: 2.0μm
Hysteresis	0.5μm
Output	RS232
Power supply	220V, 50Hz
Operation temperature	20±5°C
Operation humidity	(50~70)%RH
Dimension (L×W×H)	640×240×530mm
Weight	35kg

STANDARD DELIVERY

Main unit	1 pc
Holder for dial indicators and digital indicators (Ø8mm, 3/8")	1 pc
Holder for dial test indicators (Ø4mm, Ø6mm, Ø8mm)	3 pcs
Holder for bore gages (Ø4-28mm)	1 pc
Computer	1 pc
Remote controller	1 pc
Software	1 pc

OPTIONAL ACCESSORY

Holder for split type bore gages	ISQ-DB501
Cable for INSIZE digital indicators	ISQ-DB502

To be continued

Continued from previous page



Ø8mm and 3/8" holder for dial indicators or digital indicators (included)



Ø4-28mm holder for bore gages (included)



holder for split type bore gages (optional)



Ø4mm, Ø6mm and Ø8mm holder for dial test indicators (included)



cable for INSIZE digital indicators (optional)



check dial indicators



check dial test indicators



check digital indicators (detect digits on screen)



check INSIZE digital indicators (connection with cable)



check bore gages

report

Dial Indicator Calibration Data Sheet

Measuring Range (Ø) (mm)	Resolution	0 Error
0-25mm	0.01	0.00
0-50mm	0.01	0.00
0-75mm	0.01	0.00
0-100mm	0.01	0.00

Dial Indicator Calibration Certificate

table form

graph form

Calibration certificate

Measuring Range (mm)	Resolution (mm)	0 Error (mm)	Resolution (mm)	Resolution (mm)	Resolution (mm)	Resolution (mm)	Resolution (mm)
0-25	0.01	0.00	0.01	0.01	0.01	0.01	0.01

certificate form

customized standard

Verification Setting

Work Range

Work Range 1: 0 - 3 mm Inspection Interval 1: 0.1 mm

Work Range 2: - - - mm Inspection Interval 2: - - - mm

Work Range 3: - - - mm Inspection Interval 3: - - - mm

Forward Distance from the last test point: 0.1 mm

Error item

- Any 0.1mm error Tolerance: 5 µm
- Any 1mm error Tolerance: 10 µm
- The measuring range Tolerance: 14 µm
- Hysteresis Error Tolerance: 3 µm
- Repeatability Tolerance: 3 µm
- / Tolerance: µm
- / Tolerance: µm

Repeatability

Position Number: 3

Testing times: 5

Testing position: 0.0 0.5 1.0 Range proportion

Movement distance: -10 Div

Additional test

Maximum Error Point Additional test range: ± 0.1 mm

Inspection Interval: 0.01 mm

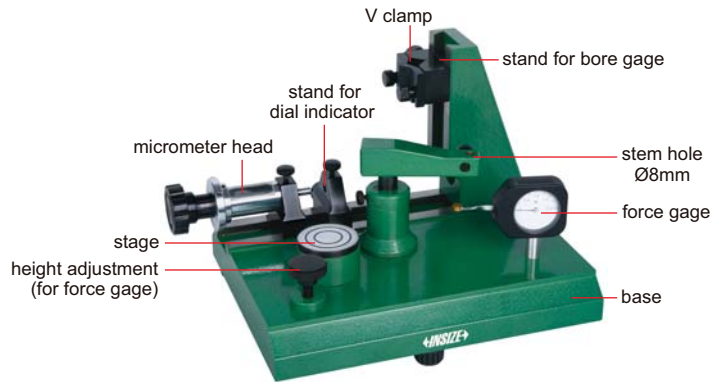
OK Cancel

DIAL INDICATOR TESTER CODE 2396-25A

ATTENTION: NOT SUITABLE FOR DIAL INDICATORS WITH GRADUATION 0.001MM



- To calibrate dial indicators, test indicators and dial bore gages
- Dimension: 270x210x205mm
- Weight: 11kg



2396-25A

10

Micrometer head

Range	Sampling interval	Accuracy	Hysteresis
0-25mm	0.1mm	4µm (0-25mm), 3µm (0-10mm), 2µm (0-1mm)	1µm

Force gage

Range	Graduation	Accuracy
0-1.6N	0.05N	±5% (of load capacity)

Stage

Diameter	Flatness	Roughness
50mm	1µm	0.05µm



inspect accuracy of dial indicators (range 0-25mm)



inspect accuracy of dial bore gages (range 6-450mm)



inspect accuracy of test indicators



check force of dial indicators



check repeatability of dial indicators



check the effect of lateral force on accuracy of dial indicators (half round gage block is required)



check the effect of lateral force on accuracy of test indicators (half round gage block is required)

Half round gage block (optional)

Code	Parallelism
2396-block	1µm

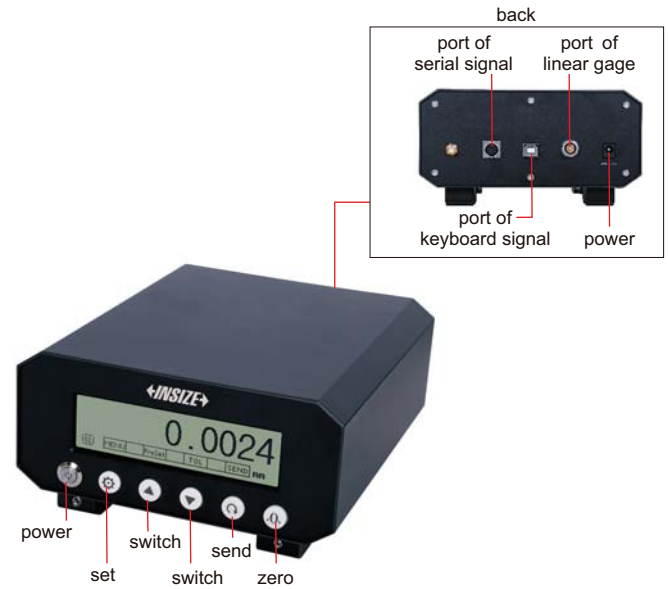
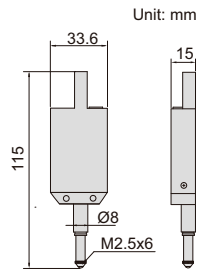




LINEAR GAGE AND DISPLAY UNIT

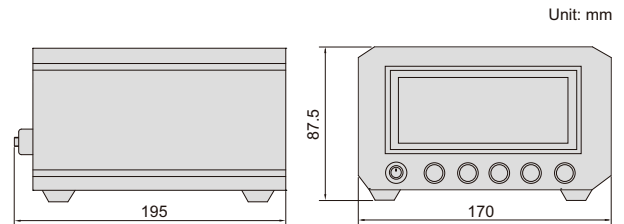


linear gage
7131-01



display unit
7131-1A

- Linear gage type: optical grating
- Display unit: display displacement data in real time, data preset, set tolerance and make judgment (out of upper tolerance, within tolerance, out of lower tolerance), set zero, change measuring direction, unit switch ($\mu\text{m}/\text{mm}/\text{inch}$)
- Two data transmission methods: can output keyboard signal and data can be transmitted to excel, word, txt etc, can also output serial signal and transmit data to serial communication software



LINEAR GAGE SPECIFICATION

Code	7131-01
Range	12.5mm
Resolution	0.1 μm
Accuracy (19~20°C)	1 μm
Repeatability	0.2 μm
Linear gage type	optical grating
Working life	ten million times
Dust/waterproof	IP50
Measuring force	0.7 \pm 0.2N
Cable length	900mm
Operation environment	0~40°C, 20~80%RH
Power supply	5~24V
Dimension (L×W×H)	33.6×15×115mm
Weight	133g



DISPLAY UNIT SPECIFICATION

Code	7131-1A
Display	4" LCD screen
Unit	μm , mm, inch
Quantity of linear gage to be connected	1 pc
Dimension (L×W×H)	170×195×87.5mm
Weight	1.45kg

DIGITAL LINEAR GAGES

**INSPECTION
CERTIFICATE**

**IP43
WATERPROOF**

**ABSOLUTE ENCODER, THE ORIGINAL
DATA REMAINS AFTER POWER OFF**

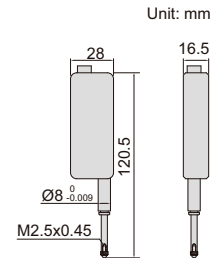
- Scale type: optical grating
- Absolute encoder, the original data remains after power off
- Digital signal output, amplifier is not required
- Repeatability: 0.5µm
- Measuring force: 1.5N
- Dust/waterproof: IP43
- Baud rate: 9600 (can be customized)
- Cable length: 3m (can be customized)



7130-10



7130-10L



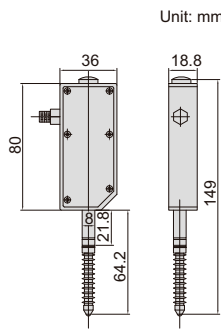
Code	Range	Resolution	Accuracy	Outgoing cable direction	Output signal	Output interface
7130-10	0-12.7mm	0.1µm	1.6µm	horizontal	RS232, TTL level	
7130-10L	0-12.7mm	0.1µm	1.6µm	vertical	RS232, TTL level	
7130-11	0-12.7mm	0.1µm	1.6µm	horizontal	RS232, 232 level	
7130-11L	0-12.7mm	0.1µm	1.6µm	vertical	RS232, 232 level	
7130-12	0-12.7mm	0.1µm	1.6µm	horizontal	RS485	
7130-12L	0-12.7mm	0.1µm	1.6µm	vertical	RS485	
7130-13	0-12.7mm	0.1µm	1.6µm	horizontal	RS232, TTL level	
7130-13L	0-12.7mm	0.1µm	1.6µm	vertical	RS232, TTL level	
7130-14	0-12.7mm	0.1µm	1.6µm	horizontal	RS232, 232 level	
7130-14L	0-12.7mm	0.1µm	1.6µm	vertical	RS232, 232 level	

LINEAR GAGES

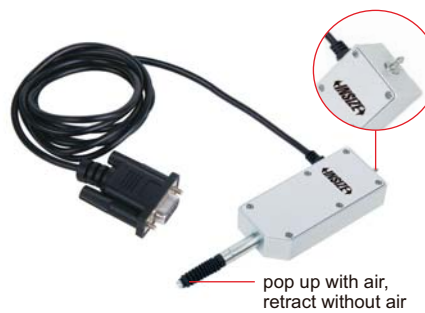
**LINEAR GAGE
IP65
WATERPROOF**



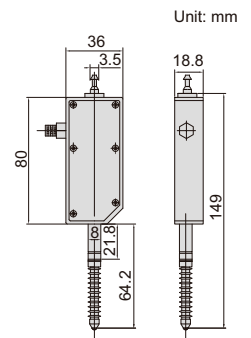
7107-12



7107-11
7107-12



7107-12V



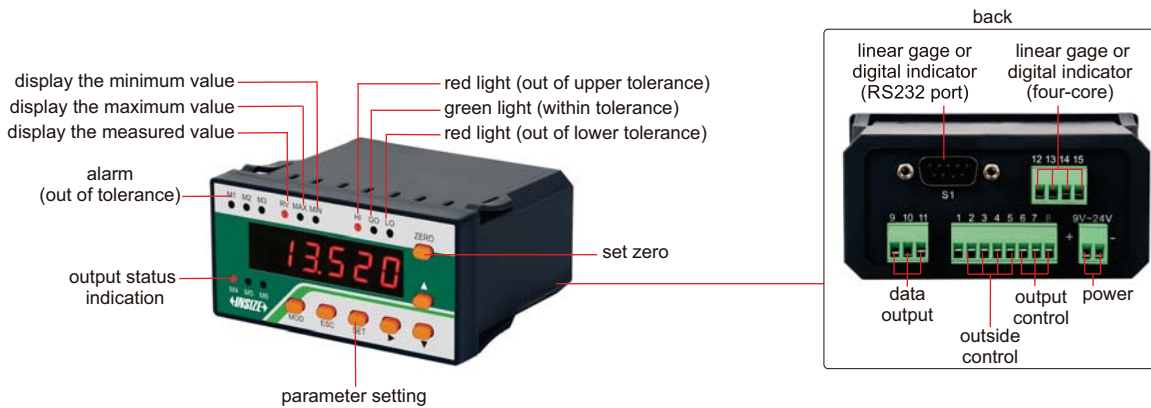
7107-11V
7107-12V

SPECIFICATION

Code	7107-11	7107-12	7107-11V	7107-12V
Measuring range	12mm/0.47"	12mm/0.47"	12mm/0.47"	12mm/0.47"
Resolution	0.01mm/0.0004"	0.001mm/0.00004"	0.01mm/0.0004"	0.001mm/0.00004"
Accuracy	20µm	5µm	20µm	5µm
Hysteresis	10µm	2µm	10µm	2µm
Driving type	spring		pneumatic	
Measuring force	1.5N		adjusted by air pressure	
Measuring principle	capacitance type linear encoder			
Voltage	5V			
Sampling frequency	100 times/sec			
Working life	ten million times			
Dust/waterproof	IP65			
Cable length	2m			
Data output	RS232			

- Capacitance type linear encoder
- Shock-proof, water proof, dust proof, suitable for high speed movement, long working life
- Optional: display unit **7106-1A**, multichannel interface box **7107-1** or **7107-2**

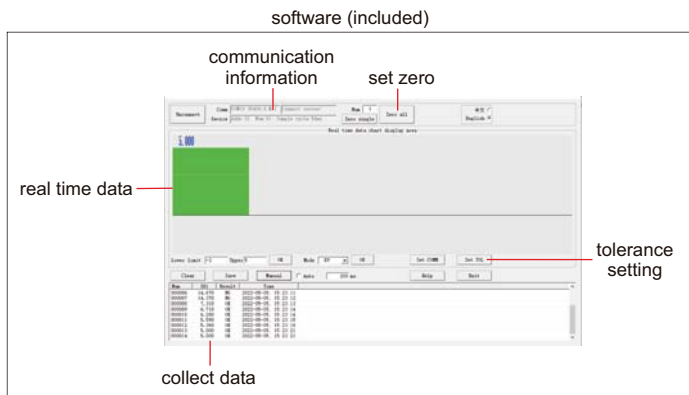
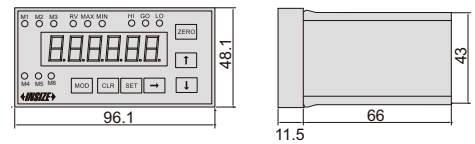
DISPLAY UNIT FOR CAPACITANCE LINEAR GAGES CODE 7106-1A



7106-1A

- Can be connected with 7107-11, 7107-12, 7107-11V or 7107-12V linear gage, can also be connected with digital indicator (data cable 7309-C01M is needed)
- Set tolerance and make judgment (out of upper tolerance, within tolerance, out of lower tolerance), output the judgment to control outside devices, control from outside (set zero, hold reading and collect data)
- Software of display unit (included): in the software, it is possible to set tolerance and show judgment (red when out of tolerance, green when within tolerance), set zero, collect data manually or automatically (time is adjustable), output data to Excel, print report

Unit: mm



connected with 7107-11, 7107-12, 7107-11V or 7107-12V linear gage



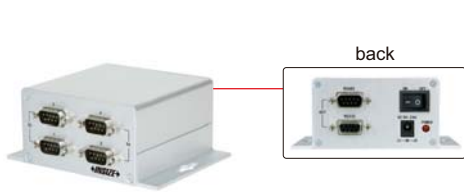
connected with digital indicator (data cable 7309-C01M is needed)



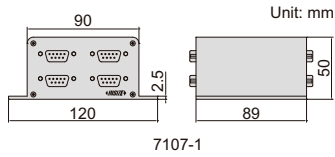
SPECIFICATION

Code	7106-1A
Display	6 digits
Quantity of linear gage or digital indicator to be connected	1 pc
Tolerance	set tolerance and make judgment with alarm and lights (out of upper tolerance, within tolerance, out of lower tolerance)
Output control	output the tolerance judgment (out of upper tolerance, within tolerance, out of lower tolerance) to control outside devices
Outside control	control the display units from outside (set zero, hold reading and collect data)
Data output	connect to computer software and serial communication
Power supply	DC 9~24V

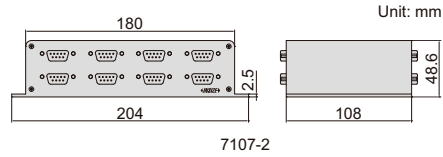
MULTICHANNEL INTERFACE BOXES FOR CAPACITANCE LINEAR GAGES



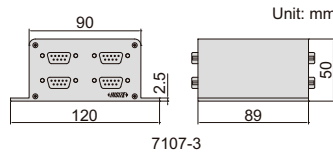
7107-1



7107-2

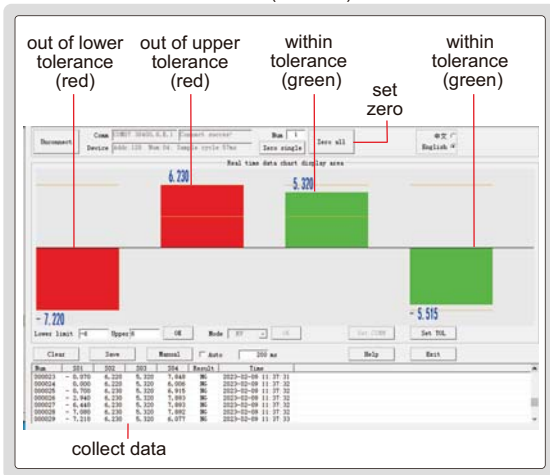


7107-3

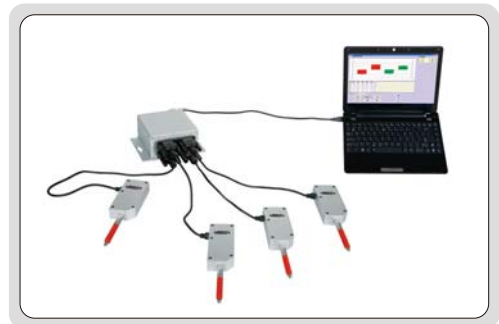


- Can be connected with 7107-11, 7107-12, 7107-11V or 7107-12V linear gages, can also be connected with digital indicators (data cable 7309-C01M is needed)
- Connection box (code: 7107-3) is needed to connect interface boxes, when two or more interface boxes are used. Maximum 4 interface boxes can be connected.
- Software of interface boxes (included): in the software, it is possible to set tolerance of each channel and show judgment (red when out of tolerance, green when within tolerance), set zero, collect data manually or automatically (time is adjustable), output data to Excel, print report.

software (included)



connected with 7107-11, 7107-12, 7107-11V or 7107-12V linear gages



INTERFACE BOX SPECIFICATION

Code	7107-1	7107-2
Quantity of linear gages or digital indicators to be connected	4 pcs	8 pcs
Data output	RS232 and RS485	
Power supply	DC 9~24V	

CONNECTION BOX (OPTIONAL) SPECIFICATION

Code	7107-3
Quantity of interface boxes to be connected	4 pcs (maximum 4 interface boxes can be connected)
Data output	RS232 and RS485
Power supply	DC 9~24V

connected with digital indicators (data cable 7309-C01M is needed)

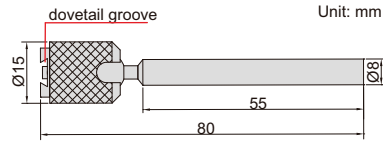


suitable for 2112, 2114, 2115, 2116, 2501, 2103 and 2104 series digital indicators

DIAL TEST INDICATOR UNIVERSAL HOLDER



6297-1



- Set the indicators at the desired attitude to the workpiece

Code

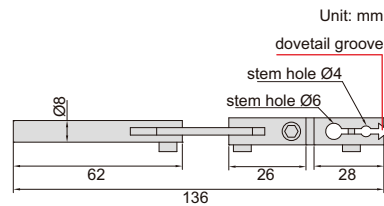
6297-1

DIAL TEST INDICATOR HOLDER

10



6296-1



- Supplied with hex key

Code

6296-1

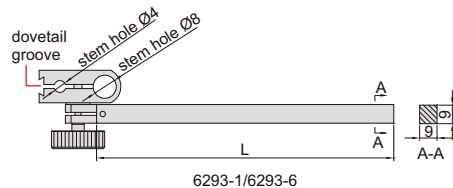
DIAL TEST INDICATOR HOLDERS



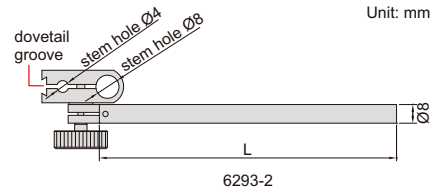
6293-1



6293-2



6293-1/6293-6



6293-2

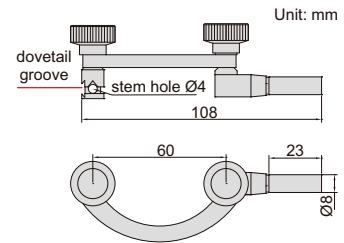
Code	Stem section	Stem length (L)
6293-1	9x9mm	100mm
6293-6	9x9mm	50mm
6293-2	Ø8mm	115mm

DIAL TEST INDICATOR HOLDER

- Can be used with dial test indicators



6291-1



Code
6291-1

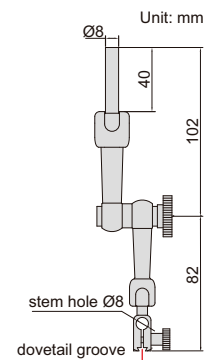
DIAL TEST INDICATOR HOLDER

10

- Can be used with dial test indicators



6295-1A



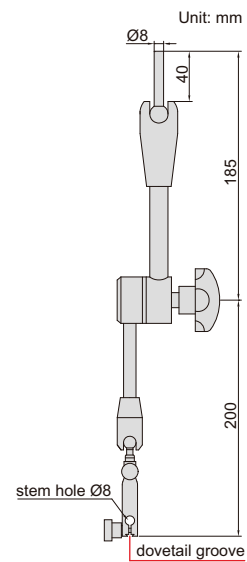
Code
6295-1A

DIAL INDICATOR HOLDER

- Can be used with dial test indicators or dial indicators

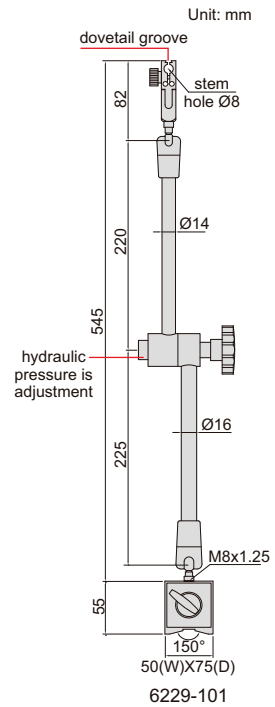
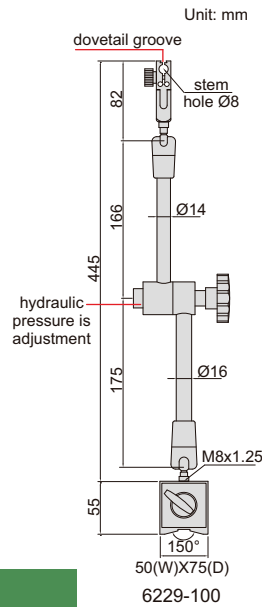
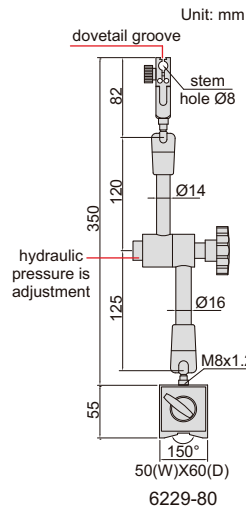
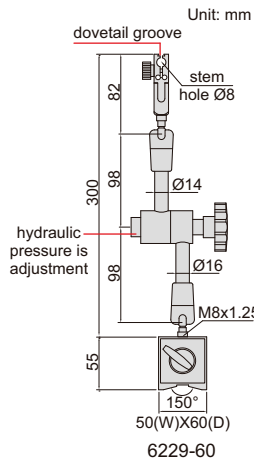


6294-1A



Code
6294-1A

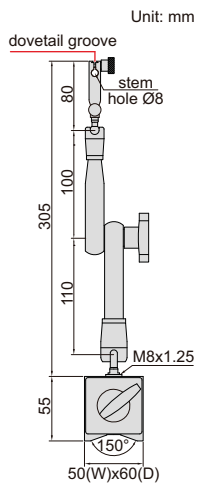
HYDRAULIC UNIVERSAL MAGNETIC STANDS



- Hydraulic pressure is adjustment
- For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6229-60	60kgf	Ø8mm	with fine adjustment and dovetail groove
6229-80	80kgf	Ø8mm	with fine adjustment and dovetail groove
6229-100	100kgf	Ø8mm	with fine adjustment and dovetail groove
6229-101	100kgf	Ø8mm	with fine adjustment and dovetail groove

LARGE LOCKING FORCE MAGNETIC STAND



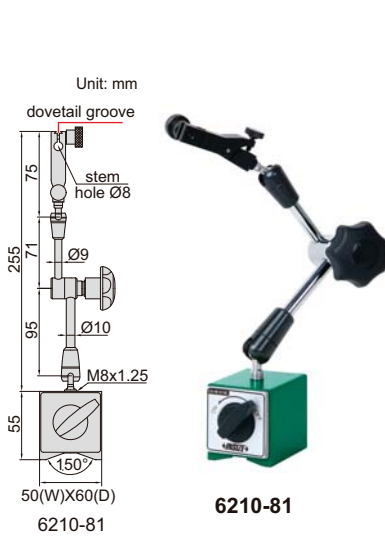
6219-80

- For digital/dial indicators and dial test indicators

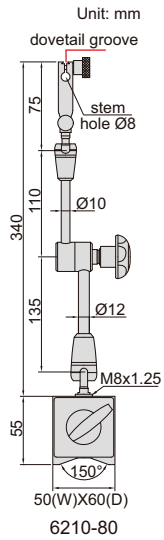
Code	Magnetic force	Applicable holding stem	Remark
6219-80	80kgf	Ø8mm	with fine adjustment and dovetail groove

UNIVERSAL MAGNETIC STANDS

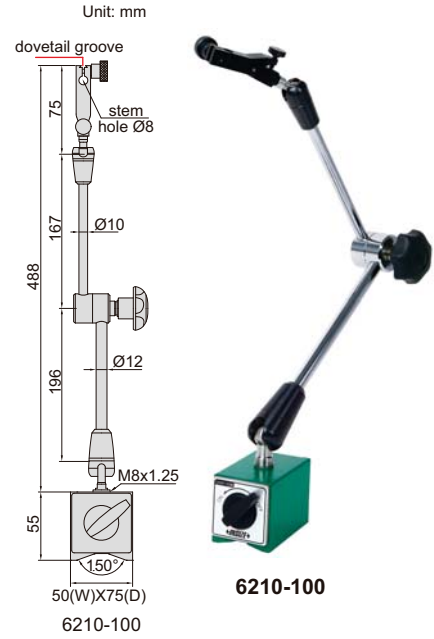
10



6210-81



6210-80



6210-100

- For digital/dial indicators and dial test indicators

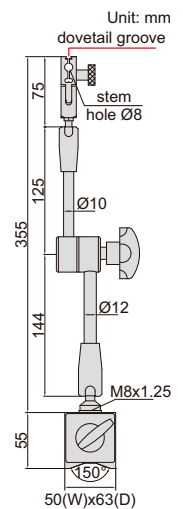
Code	Magnetic force	Applicable holding stem	Remark
6210-81	80kgf	Ø8mm	with fine adjustment and dovetail groove
6210-80	80kgf	Ø8mm	with fine adjustment and dovetail groove
6210-100	100kgf	Ø8mm	with fine adjustment and dovetail groove

UNIVERSAL MAGNETIC STAND (ECONOMIC TYPE)

ATTENTION: LOW LOCKING FORCE

- For digital/dial indicators and dial test indicators

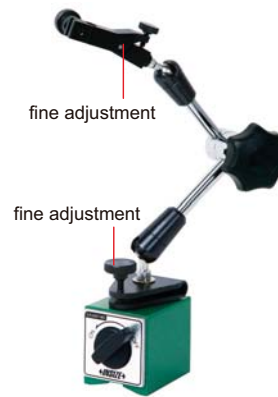
Code	Magnetic force	Applicable holding stem	Remark
6208-80A	80kgf	Ø8mm	with fine adjustment and dovetail groove



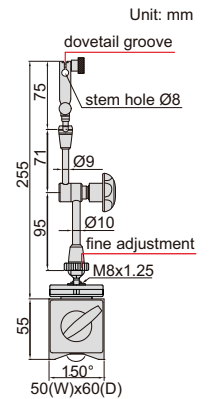
MAGNETIC STAND WITH TWO FINE ADJUSTMENTS

- With two fine adjustments on the head and on the base
- For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6272-80	80kgf	Ø8mm	with two fine adjustments and dovetail groove



6272-80



ATTENTION: FOR DIAL TEST INDICATORS ONLY

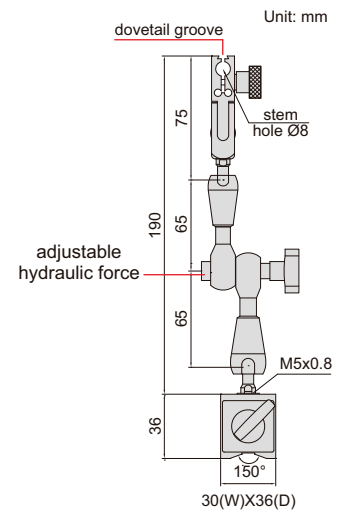
HYDRAULIC MINI MAGNETIC STAND

- For dial test indicators
- With fine adjustment and dovetail groove
- Adjustable hydraulic force

Code	Magnetic force	Applicable holding stem
6228-40	40kgf	Ø8mm



6228-40



ATTENTION: FOR DIAL TEST INDICATORS ONLY

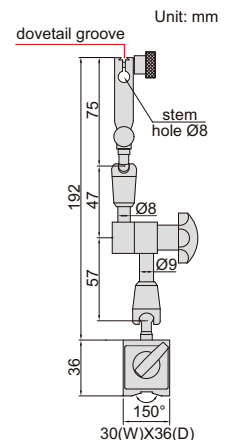
MINI MAGNETIC STAND

- For dial test indicators
- With fine adjustment and dovetail groove

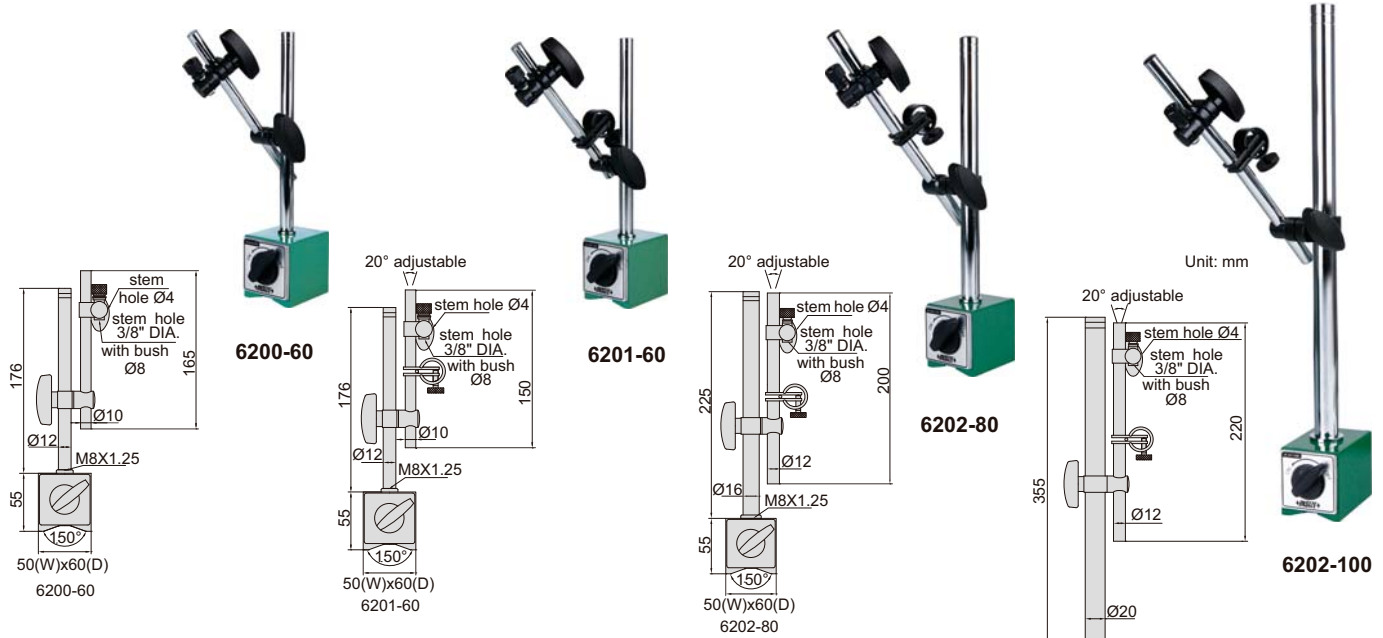
Code	Magnetic force	Applicable holding stem
6224-40	40kgf	Ø8mm



6224-40



MAGNETIC STANDS



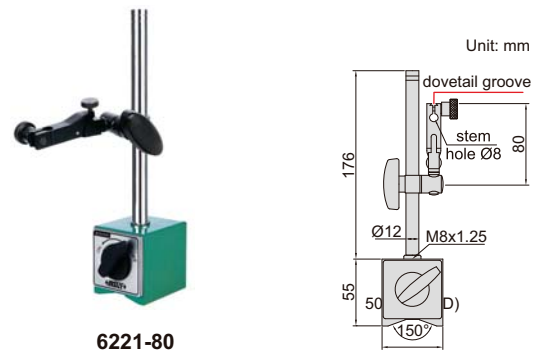
■ For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6200-60	60kgf	Ø8mm, Ø4mm, 3/8" DIA.	without fine adjustment
6201-60	60kgf	Ø8mm, Ø4mm, 3/8" DIA.	with fine adjustment
6202-80	80kgf	Ø8mm, Ø4mm, 3/8" DIA.	with fine adjustment
6202-100	100kgf	Ø8mm, Ø4mm, 3/8" DIA.	with fine adjustment

MAGNETIC STAND (FOR 0.001MM DIAL AND DIAL TEST INDICATORS)

■ For 0.001mm and 0.01mm dial and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6221-80	80kgf	Ø8mm	with fine adjustment and dovetail groove



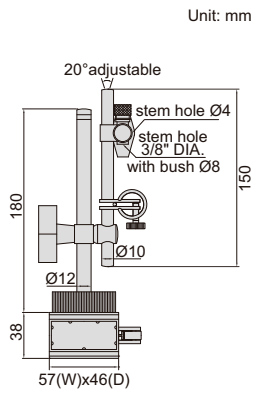
MAGNETIC STAND

■ For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6216-80	80kgf	Ø8mm	with fine adjustment and dovetail groove

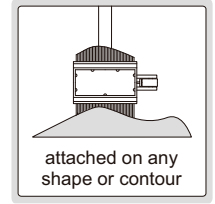


MAGNETIC STAND FOR UNEVEN SURFACE



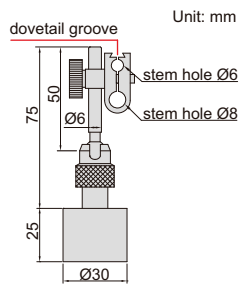
6215-60

- For digital/dial indicators and dial test indicators
- With fine adjustment



Code	Magnetic force	Applicable holding stem
6215-60	60kgf	Ø8mm, Ø4mm, 3/8" DIA.

MINI MAGNETIC STAND



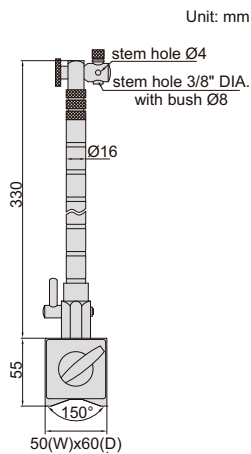
6211-10

- For dial test indicators
- With dovetail groove

ATTENTION: FOR DIAL TEST INDICATORS ONLY

Code	Magnetic force	Applicable holding stem
6211-10	10kgf	Ø6mm, Ø8mm

FLEX ARM MAGNETIC STAND



6207-80A

- For dial test indicators

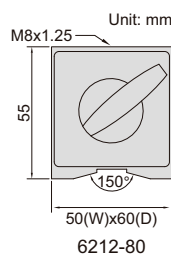
ATTENTION: FOR DIAL TEST INDICATORS ONLY

Code	Magnetic force	Applicable holding stem
6207-80A	80kgf	Ø8mm, Ø4mm, 3/8" DIA.

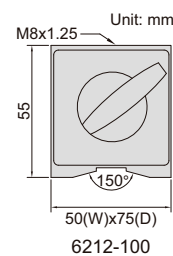
MAGNETIC BASES



6212-80



6212-100



Code	Magnetic force
6212-80	80kgf
6212-100	100kgf

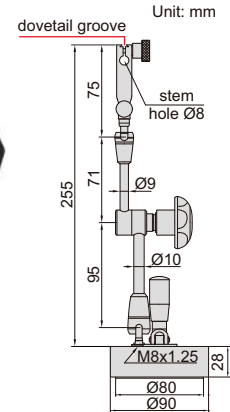
VACUUM STAND

- Suitable for granite surface plates or cast iron surface plates
- For digital/dial indicators and dial test indicators

Code	Diameter of vacuum disc	Vacuum force	Applicable holding stem	Remark
6217-B	Ø80mm	80kgf	Ø8mm	with fine adjustment and dovetail groove



6217-B



UNIVERSAL STAND

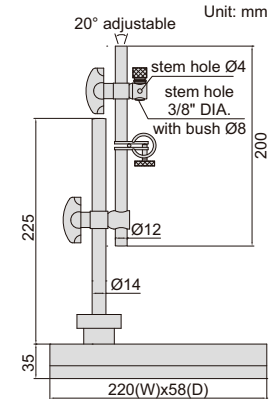
10

- For digital/dial indicators and dial test indicators
- With fine adjustment

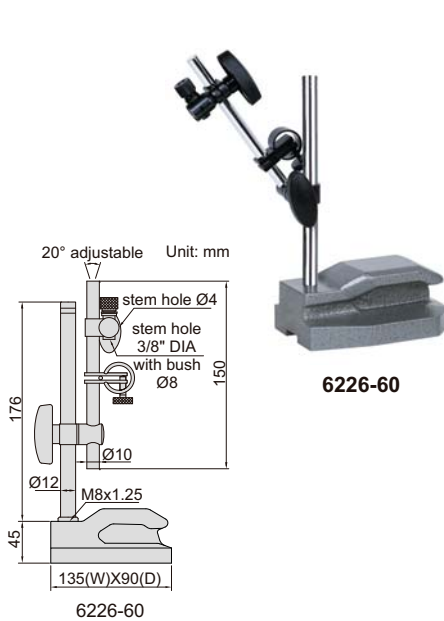
Code	Applicable holding stem
6214-A	Ø8mm, Ø4mm, 3/8" DIA.



6214-A

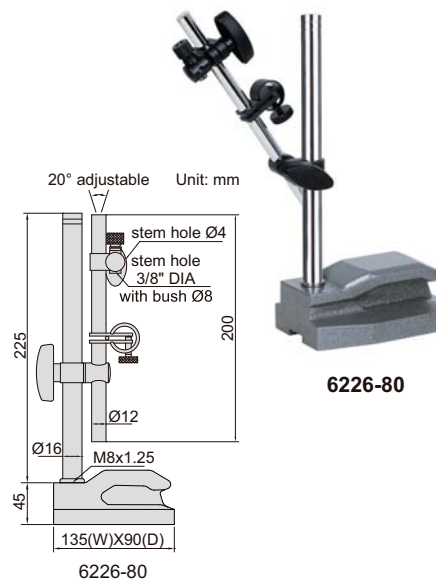


DIAL INDICATOR STANDS (NON-MAGNETIC)



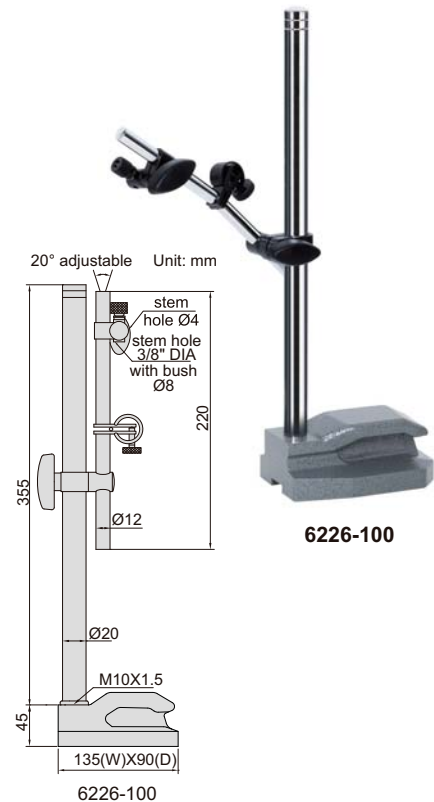
6226-60

6226-60



6226-80

6226-80



6226-100

6226-100

Code	Applicable holding stem	Remark
6226-60	Ø8mm, Ø4mm, 3/8" DIA	with fine adjustment
6226-80	Ø8mm, Ø4mm, 3/8" DIA	with fine adjustment
6226-100	Ø8mm, Ø4mm, 3/8" DIA	with fine adjustment

- Hardened base
- Suitable for granite surface plates and cast iron surface plates
- For digital/dial indicators and dial test indicators

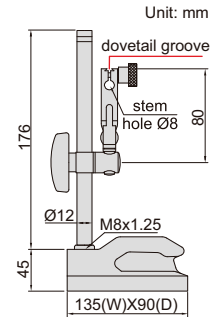
DIAL INDICATOR STAND (FOR 0.001MM DIAL AND DIAL TEST INDICATORS)

- Non-magnetic and hardened base
- Suitable for granite surface plates or cast iron surface plates
- For 0.001mm and 0.01mm dial and dial test indicators

Code	Applicable holding stem	Remark
6230-60	Ø8mm	with fine adjustment and dovetail groove



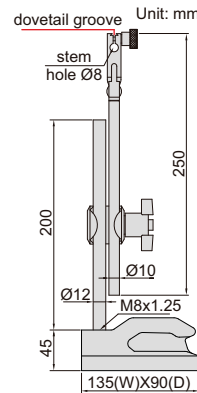
6230-60



DIAL INDICATOR STAND (NON-MAGNETIC)

- Hardened base
- Suitable for granite surface plates and cast iron surface plates
- For digital/dial indicators and dial test indicators

Code	Applicable holding stem	Remark
6227-80	Ø8mm	with fine adjustment and dovetail groove



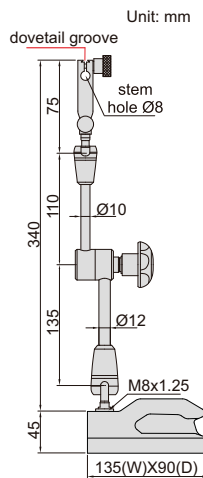
6227-80

UNIVERSAL DIAL INDICATOR STANDS (NON-MAGNETIC)

- Hardened base
- Suitable for granite surface plates and cast iron surface plates
- For digital/dial indicators and dial test indicators



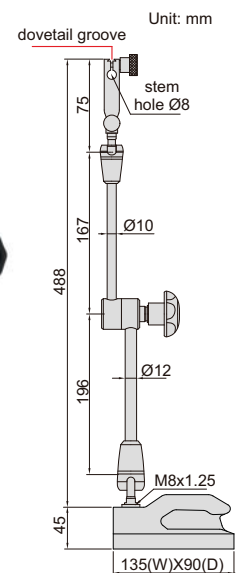
6225-80



6225-80



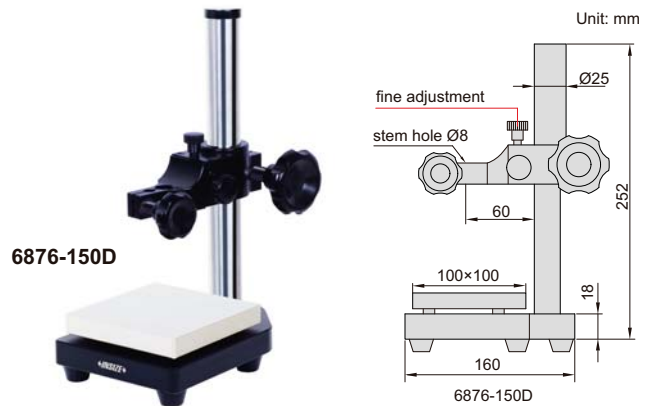
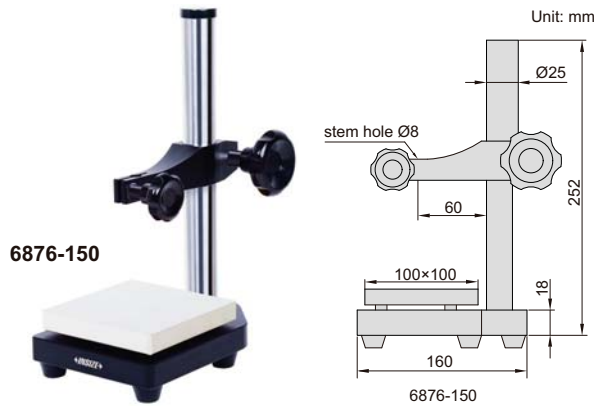
6225-100



6225-100

Code	Applicable holding stem	Remark
6225-80	Ø8mm	with fine adjustment and dovetail groove
6225-100	Ø8mm	with fine adjustment and dovetail groove

DIAL INDICATOR STANDS

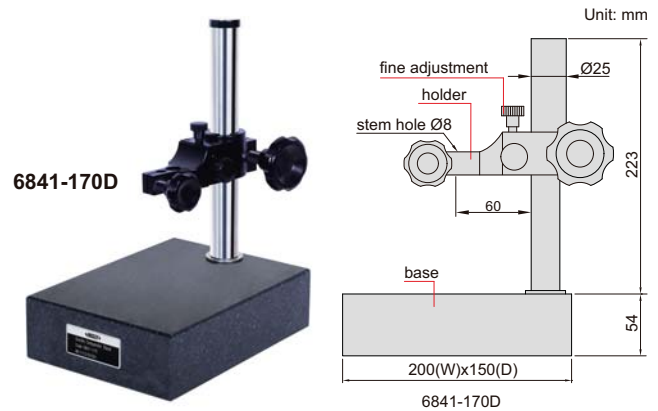
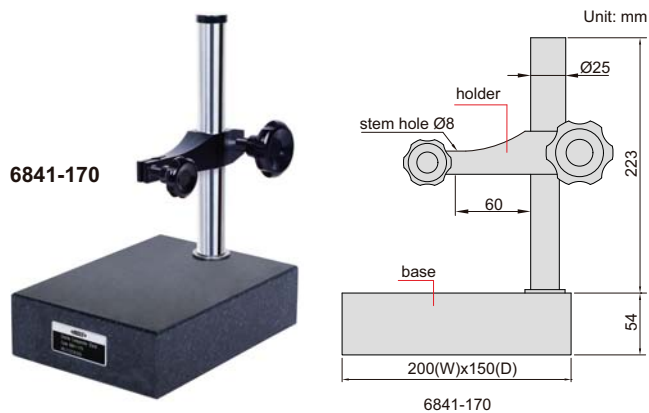


10

Code	Applicable holding stem	Anvil	Remark
6876-150	Ø8mm	ceramic, plain, flatness 1.5µm	without fine adjustment
6876-150D	Ø8mm	ceramic, plain, flatness 1.5µm	with fine adjustment, fine adjustment range 3mm

- Vertical travel of holder: 150mm
- Ceramic anvil
- Supplied with dust cover

GRANITE DIAL INDICATOR STANDS (BASIC TYPE)



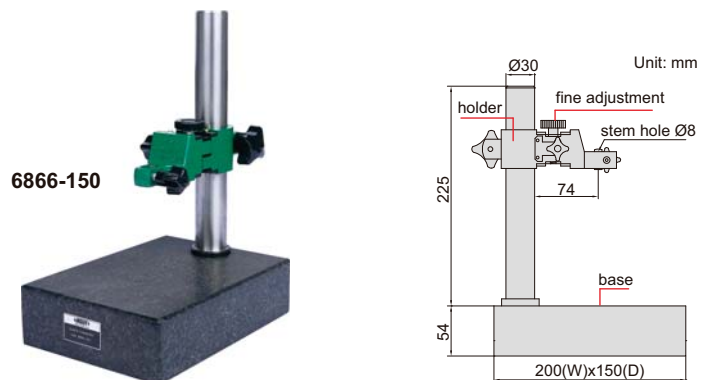
Code	Applicable holding stem	Base	Remark
6841-170	Ø8mm	flatness 2.5µm	without fine adjustment
6841-170D	Ø8mm	flatness 2.5µm	with fine adjustment, fine adjustment range 3mm

- Vertical travel of holder: 170mm
- Supplied with dust cover

GRANITE DIAL INDICATOR STAND

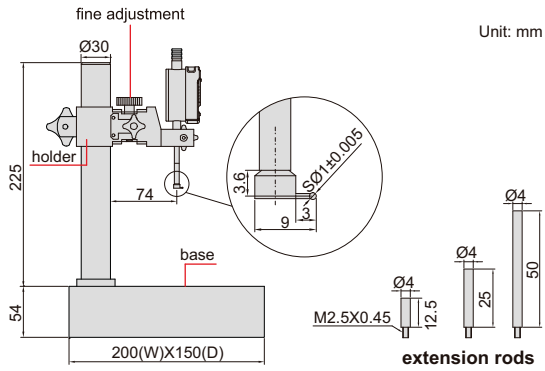
- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm
- Supplied with dust cover

Code	Applicable holding stem	Base
6866-150	Ø8mm	flatness 2.5µm



DATA
OUTPUT

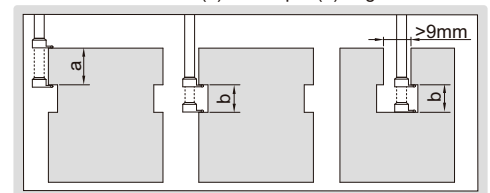
DIGITAL GROOVE MEASUREMENT STANDS



6870-150

- Button function: on/off, zero, mm/inch, measuring direction change, data preset, absolute/incremental measurement
- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Supplied with extension rods: 12.5mm (1 pc), 25mm (1 pc), 50mm (1 pc)
- Supplied with groove point and dust cover
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13)

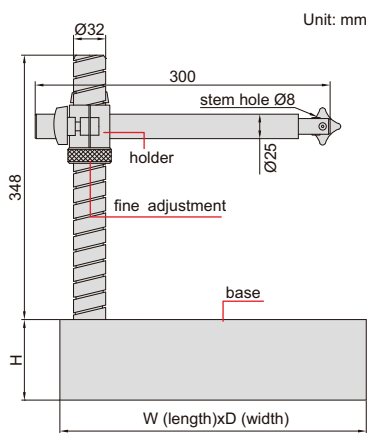
measure width (b) and depth (a) of groove



10

Code	Digital indicator stroke	Digital indicator resolution	Accuracy	Applicable holding stem	Base
6870-150	12.7mm/0.5"	0.01mm/0.0005"	$\pm 20\mu\text{m}$	$\varnothing 8\text{mm}$	flatness $2.5\mu\text{m}$
6870-1501	12.7mm/0.5"	0.001mm/0.00005"	$\pm 5\mu\text{m}$	$\varnothing 8\text{mm}$	flatness $2.5\mu\text{m}$

GRANITE DIAL INDICATOR STANDS



6867-250

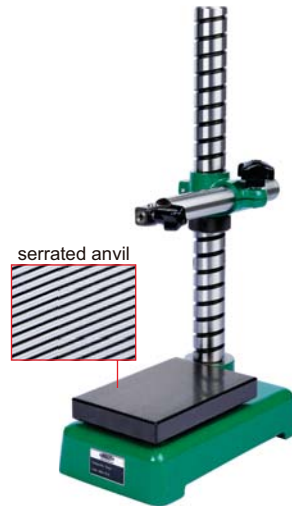
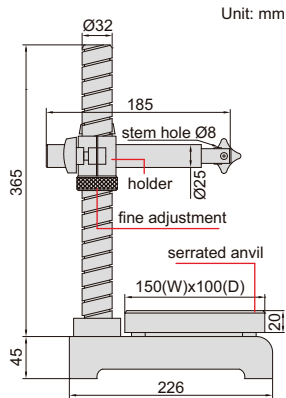


6867-400

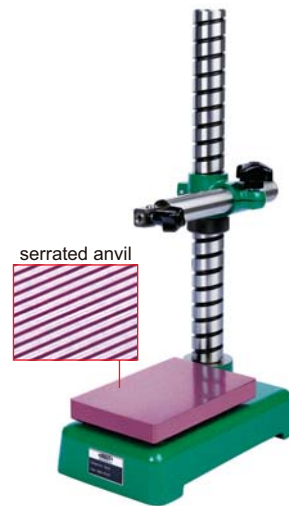
- Vertical travel of holder: 250mm
- Fine adjustment range: entire stroke
- Supplied with dust cover

Code	Applicable holding stem	W	D	H	Base
6867-250	$\varnothing 8\text{mm}$	300mm	300mm	75mm	flatness $2.8\mu\text{m}$
6867-400	$\varnothing 8\text{mm}$	400mm	300mm	100mm	flatness $3\mu\text{m}$

DIAL INDICATOR STANDS



6864-250

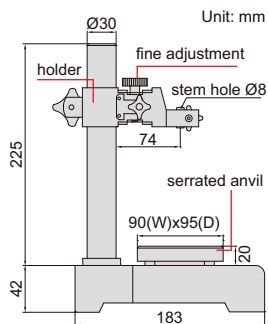


6864-250T

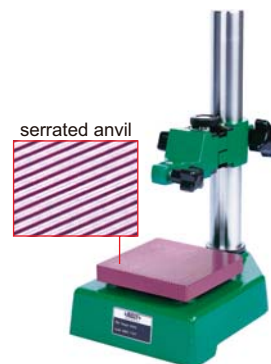
- Vertical travel of holder: 250mm
- Fine adjustment range: entire stroke
- Supplied with dust cover

Code	Applicable holding stem	Anvil
6864-250	Ø8mm	steel (hardness HRC60±2), serrated, flatness 1.5µm
6864-250T	Ø8mm	ceramic, serrated, flatness 1.5µm

DIAL INDICATOR STANDS



6863-150



6863-150T

- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm
- Supplied with dust cover

Code	Applicable holding stem	Anvil
6863-150	Ø8mm	steel (hardness HRC60±2), serrated, flatness 1.5µm
6863-150T	Ø8mm	ceramic, serrated, flatness 1.5µm

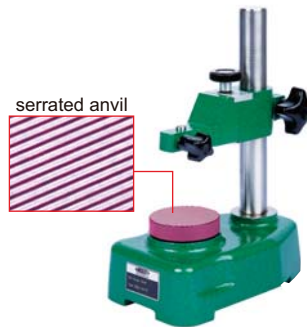
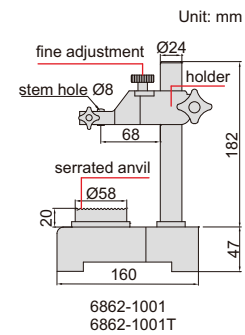
DIAL INDICATOR STANDS



6862-1001



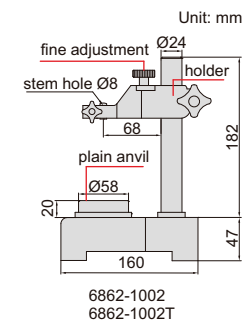
6862-1002



6862-1001T



6862-1002T

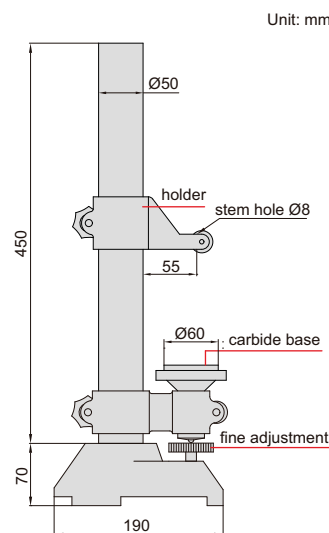


Code	Applicable holding stem	Anvil
6862-1001	Ø8mm	steel (hardness HRC60±2), serrated, flatness 1.5µm
6862-1002	Ø8mm	steel (hardness HRC60±2), plain, flatness 1.5µm
6862-1001T	Ø8mm	ceramic, serrated, flatness 1.5µm
6862-1002T	Ø8mm	ceramic, plain, flatness 1.5µm

- Vertical travel of holder: 100mm
- Fine adjustment range: 2mm
- Supplied with dust cover

HEAVY DUTY DIAL INDICATOR STAND

- Vertical travel of holder: 300mm
- Fine adjustment range: 5mm
- Carbide base
- Supplied with dust cover
- Optional accessory:
holder with stem hole Ø28 (code **6869-D28**)



6869-300

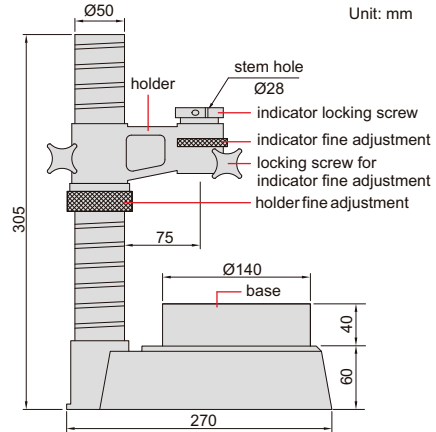
Code	Applicable holding stem	Base
6869-300	Ø8mm	plain, flatness 1µm, carbide

DIAL INDICATOR STAND

GAGE BLOCKS ARE NEEDED FOR ZERO SETTING



digital/dial indicator is optional



6842-150

10



locating fork for workpiece (included)



rotary lever probe (included)

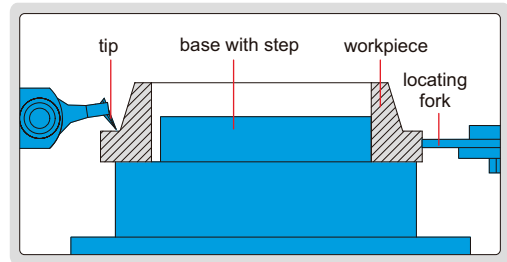


base with step (included)



- Vertical travel of holder: 180mm
- Holder fine adjustment range: entire stroke
- Indicator fine adjustment range: 10mm
- Optional accessory: Ø28mm/Ø8mm bush (code 6843-B8), 0.001mm digital/dial indicators, high precision digital indicators (code 2140-6, 2140-6WL), gage blocks (4101 series, for zero setting)

the tip of rotary lever probe can reach narrow areas



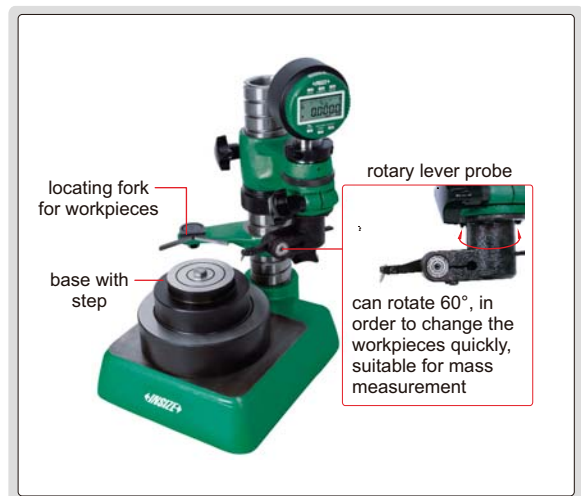
Code	Applicable holding stem	Base
6842-150	Ø28mm	flatness 2µm

Ø28mm/Ø8mm bush (optional)



Code
6843-B8

application



GAGE BLOCKS ARE NEEDED FOR ZERO SETTING

locating fork for workpieces (included)

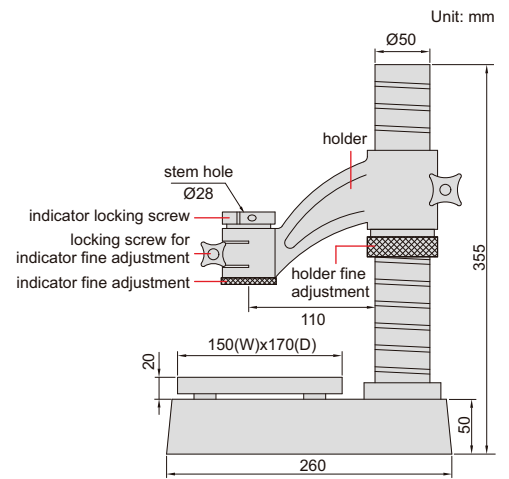


digital/dial indicator is optional



6846-140

DIAL INDICATOR STAND



- Vertical travel of holder: 140mm
- Holder fine adjustment range: entire stroke
- Indicator fine adjustment range: 3mm
- Optional accessory: Ø28mm/Ø8mm bush (code 6843-B8), 0.001mm digital/dial indicators, high precision digital indicators (code 2140-6, 2140-6WL), gage blocks (4101 series, for zero setting)

Code	Applicable holding stem	Anvil
6846-140	Ø28mm	grid, flatness 1µm

Ø28mm/Ø8mm bush (optional)



Code 6843-B8

application



GAGE BLOCKS ARE NEEDED FOR ZERO SETTING

locating fork for workpieces (included)

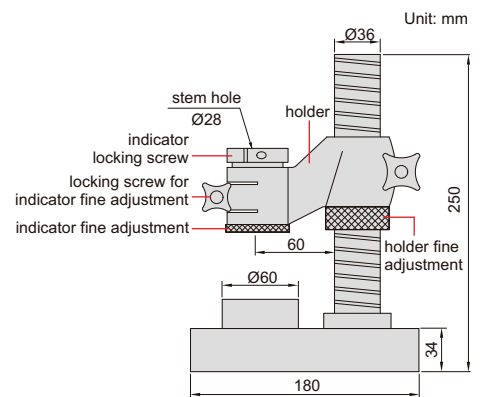


digital/dial indicator is optional



6845-100

DIAL INDICATOR STAND



- Vertical travel of holder: 100mm
- Holder fine adjustment range: entire stroke
- Indicator fine adjustment range: 3mm
- Optional accessory: Ø28mm/Ø8mm bush (code 6843-B8), 0.001mm digital/dial indicators, high precision digital indicators (code 2140-6, 2140-6WL), gage blocks (4101 series, for zero setting)

Code	Applicable holding stem	Anvil
6845-100	Ø28mm	serrated, flatness 1µm

Ø28mm/Ø8mm bush (optional)



Code 6843-B8

application



TRANSFER STANDS

application



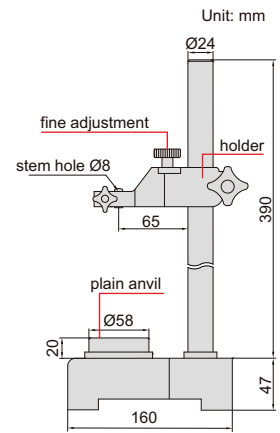
rigid construction, designed to make comparison height measurement (set zero with gage block then measure height of workpiece) with dial indicators or digital indicators (variation of measuring force is high)



6865-300



6865-300T



- Vertical travel of holder: 335mm
- Fine adjustment range: 2mm
- Supplied with dust cover

Code	Applicable holding stem	Anvil
6865-300	Ø8mm	steel (hardness HRC60±2), plain, flatness 1.5µm
6865-300T	Ø8mm	ceramic, plain, flatness 1.5µm

DIGITAL HEIGHT GAGES

REFER TO PAGE 79-81 FOR DETAILS



1155-505



1157-501



1158-100



Internal Caliper Gages
Page 253-256



External Caliper Gages
Page 257-258



Thickness Gages
Page 259-263



Rubber Thickness Gages
Page 264



Tube Thickness Gages
Page 265



Saw Teeth Setting Gages
Page 266



Snap Gages
Page 266-269



Step And Gap Gages
Page 269



Crankshaft Testers
Page 270



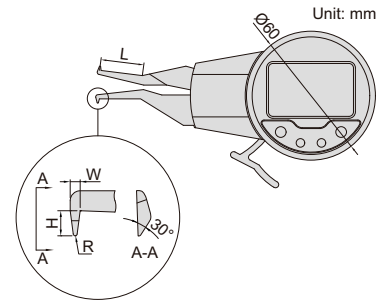
Keyway Gages
Page 270-271

DIGITAL INTERNAL CALIPER GAGES

DATA
OUTPUT

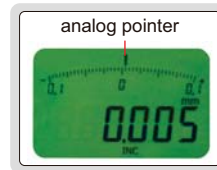


2121-15

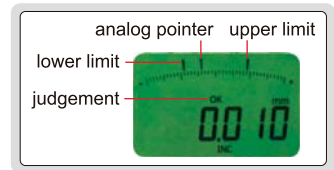


- Resolution: 0.005mm/0.0002"
- Reading in digit and analog
- Display can be rotated by 170°
- Button function: tolerance Go and No-Go display, data preset, max./min. measurement, data holding, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7315-30 page 4, 7302-30 page 12)

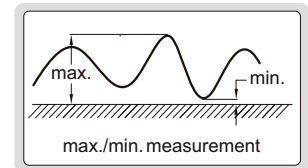
analog pointer



tolerance display



max./min.

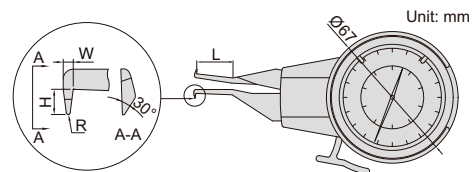


Code	Range	Accuracy	Repeatability	L	H	W	R
2121-15	5-15mm/0.2-0.6"	±0.03mm	0.01mm	20	2	1.5	R0.3
2121-25	5-25mm/0.2-1.0"	±0.03mm	0.01mm	35	1.5	1.0	R0.3
2121-31	10-30mm/0.4-1.2"	±0.03mm	0.01mm	55	5.5	2.5	R0.5
2121-41	20-40mm/0.8-1.6"	±0.03mm	0.01mm	80	6.0	3.0	R0.5
2121-51	30-50mm/1.2-2.0"	±0.03mm	0.01mm	80	8.0	3.0	R0.5
2121-61	40-60mm/1.6-2.4"	±0.03mm	0.01mm	80	8.0	3.0	R0.5

INTERNAL DIAL CALIPER GAGES



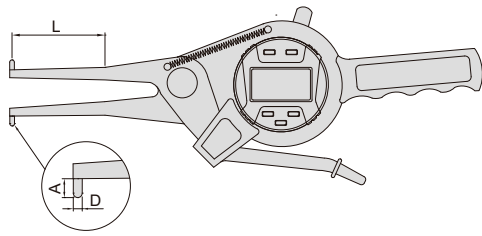
2222-15



Code	Range	Graduation	Accuracy	L	H	W	R
2222-15	5-15mm	0.01mm	±0.03mm	20	2	1.5	R0.3
2222-25	5-25mm	0.01mm	±0.03mm	35	1.5	1.0	R0.3
2222-301	10-30mm	0.01mm	±0.03mm	55	5.5	2.5	R0.5
2222-401	20-40mm	0.01mm	±0.03mm	80	6.0	3.0	R0.5
2222-501	30-50mm	0.01mm	±0.03mm	80	8.0	3.0	R0.5
2222-60	40-60mm	0.01mm	±0.03mm	80	8.0	3.0	R0.5

DATA OUTPUT

DIGITAL INTERNAL CALIPER GAGES

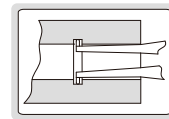


2151-35

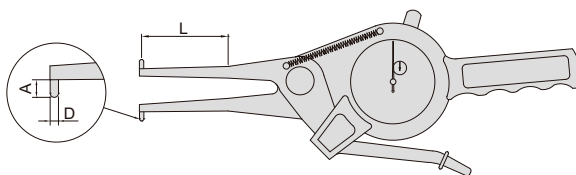
- Carbide measuring tips
- Reading in digit and analog
- With transmission button and signal light
- Display can be rotated by 320°
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, data output, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-50M page 12)

(mm)

Code	Range	Resolution	Accuracy	L	A	D
2151-35	15-35mm/0.6-1.4"	0.01mm/0.0005"	±0.04mm	50	3	Ø3
2151-AL35	15-35mm/0.6-1.4"	0.01mm/0.0005"	±0.04mm	200	3	Ø3
2151-55	35-55mm/1.4-2.2"	0.01mm/0.0005"	±0.04mm	80	6	Ø3
2151-AL55	35-55mm/1.4-2.2"	0.01mm/0.0005"	±0.04mm	250	8	Ø3
2151-75	55-75mm/2.2-3"	0.01mm/0.0005"	±0.04mm	90	8	Ø3
2151-AL75	55-75mm/2.2-3"	0.01mm/0.0005"	±0.04mm	250	8	Ø3
2151-95	75-95mm/3-3.8"	0.01mm/0.0005"	±0.04mm	100	8	Ø3
2151-115	95-115mm/3.8-4.6"	0.01mm/0.0005"	±0.04mm	120	10	Ø3.2
2151-135	115-135mm/4.6-5.4"	0.01mm/0.0005"	±0.04mm	120	10	Ø3.2



INTERNAL DIAL CALIPER GAGES

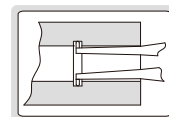


2321-35

- Carbide measuring tips

(mm)

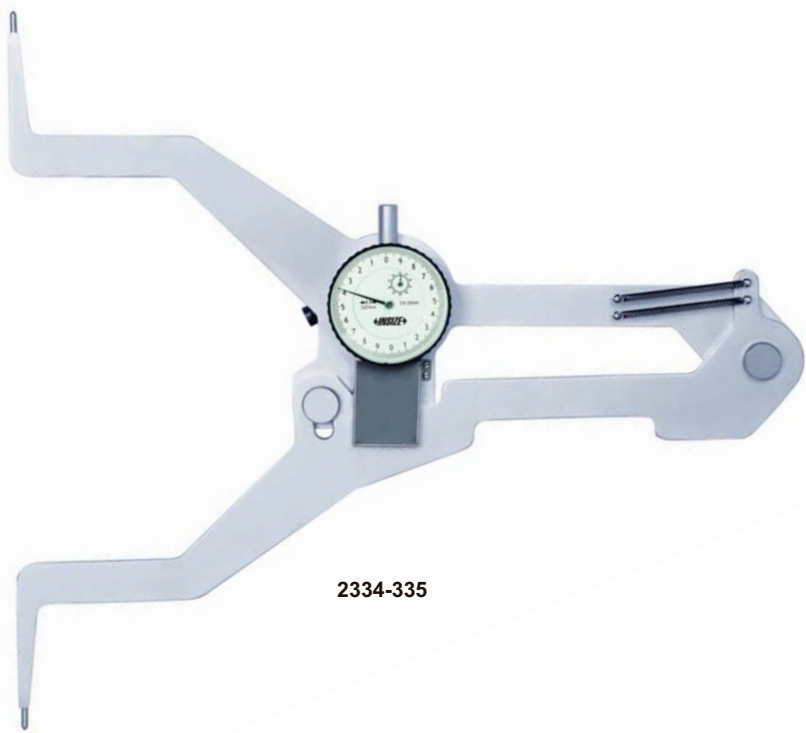
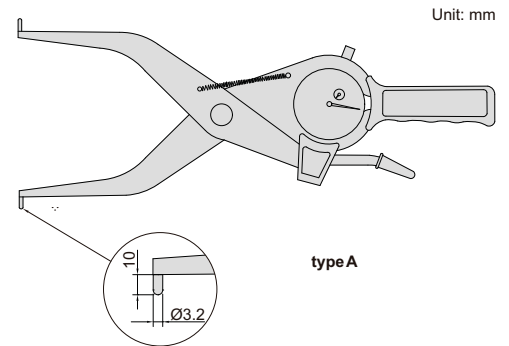
Code	Range	Graduation	Accuracy	L	A	D
2321-35	15-35mm	0.01mm	±0.04mm	50	3	Ø3
2321-AL35	15-35mm	0.01mm	±0.04mm	200	3	Ø3
2321-55	35-55mm	0.01mm	±0.04mm	80	6	Ø3
2321-AL55	35-55mm	0.01mm	±0.04mm	250	8	Ø3
2321-75	55-75mm	0.01mm	±0.04mm	90	8	Ø3
2321-AL75	55-75mm	0.01mm	±0.04mm	250	8	Ø3
2321-95	75-95mm	0.01mm	±0.04mm	100	8	Ø3
2321-115	95-115mm	0.01mm	±0.04mm	120	10	Ø3.2
2321-135	115-135mm	0.01mm	±0.04mm	120	10	Ø3.2



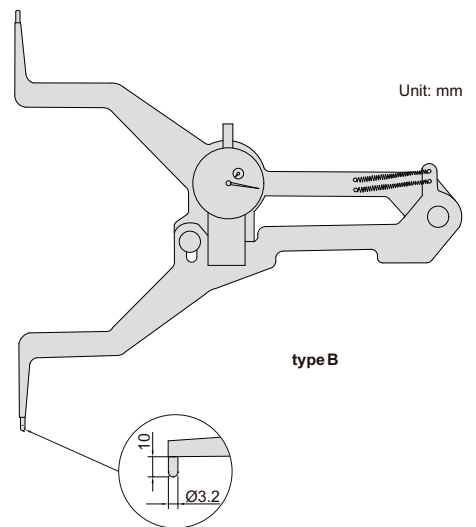
LARGE RANGE INTERNAL DIAL CALIPER GAGES



2334-155

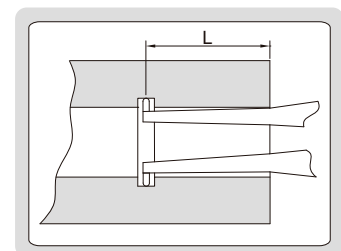


2334-335



■ Carbide measuring tips

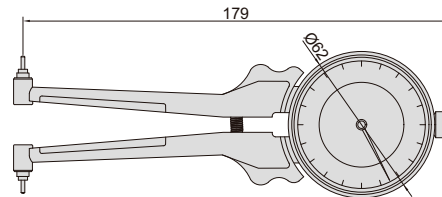
Code	Range	Graduation	Accuracy	Type	(mm) L
2334-155	135-155mm	0.01mm	±0.04mm	A	<200
2334-175	155-175mm	0.01mm	±0.04mm	A	<200
2334-195	175-195mm	0.01mm	±0.04mm	A	<200
2334-215	195-215mm	0.01mm	±0.04mm	A	<200
2334-235	215-235mm	0.01mm	±0.04mm	A	<200
2334-255	235-255mm	0.01mm	±0.04mm	A	<200
2334-275	255-275mm	0.01mm	±0.04mm	A	<200
2334-295	275-295mm	0.01mm	±0.04mm	A	<200
2334-315	295-315mm	0.01mm	±0.04mm	A	<200
2334-335	315-335mm	0.01mm	±0.04mm	B	<200
2334-355	335-355mm	0.01mm	±0.04mm	B	<200
2334-375	355-375mm	0.01mm	±0.04mm	B	<200



INTERNAL DIAL CALIPER GAGE WITH INTERCHANGEABLE POINTS

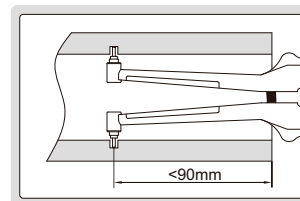
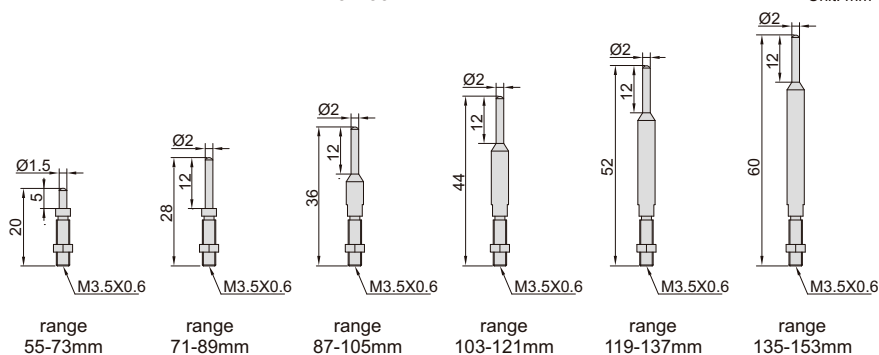


Unit: mm



2223-153

Unit: mm



6 pair of points (included)



- Supplied with 6 pairs of points

Code	Range	Dial indicator range	Graduation	Accuracy
2223-153	55-153mm	2mm	0.01mm	±0.02mm

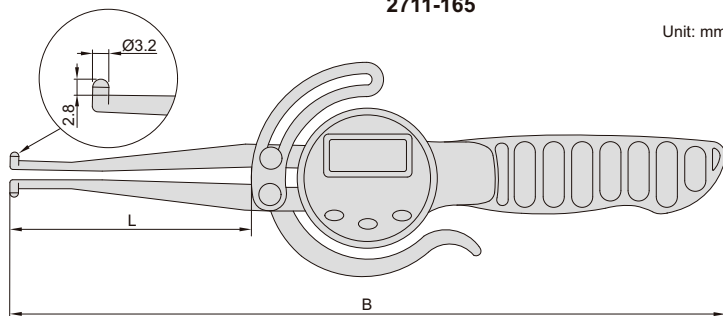
11

DIGITAL INTERNAL CALIPER GAGES (ECONOMIC TYPE)

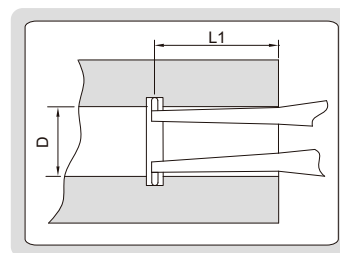


2711-165

Unit: mm



sizes to be measured



- Button function: on/off, zero, mm/inch, data hold
- Battery CR2032, automatic power off

Code	Range	Resolution	Accuracy	Repeatability	L	B
2711-165	12.7-165mm/0.5-6.5"	0.1mm/0.01"	±0.3mm	0.2mm	85	252
2711-216	12.7-216mm/0.5-8.5"	0.1mm/0.01"	±0.3mm	0.2mm	160	327

(mm)		(mm)	
Code 2711-165	Code 2711-216	D	L1
Ø13	Ø13	<42	<50
Ø15	Ø15	<45	<55
Ø17	Ø17	<50	<60
Ø20	Ø20	<60	<65
Ø25	Ø25	<75	<75
Ø27	Ø30	<80	<95
Ø29~165	Ø35~216	<85	<160

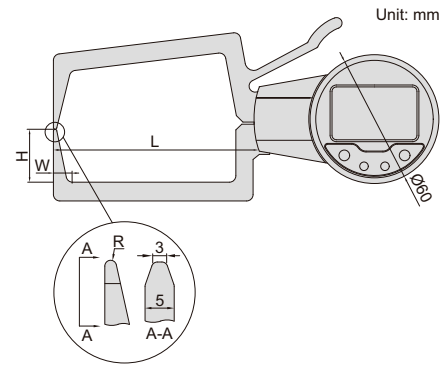
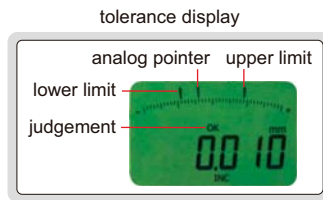
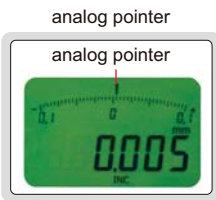
DIGITAL EXTERNAL CALIPER GAGES

DATA
OUTPUT

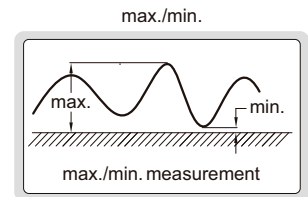
- Resolution: 0.005mm/0.0002"
- Reading in digit and analog
- Display can be rotated by 170°
- Button function: tolerance Go and No-Go display, data preset, max./min. measurement, data holding, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7315-30 page 4, 7302-30 page 12)



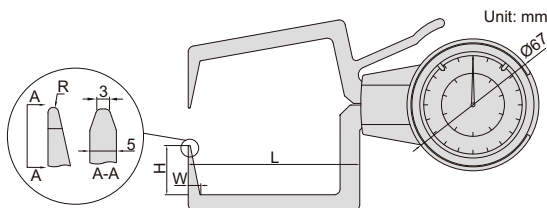
2131-21



Code	Range	Accuracy	Repeatability	L	H	W	R
2131-21	0-20mm/0-0.8"	±0.03mm	0.01mm	80mm	25mm	6.5mm	R0.5mm
2131-31	10-30mm/0.4-1.2"	±0.03mm	0.01mm	80mm	25mm	6.5mm	R0.5mm
2131-41	20-40mm/0.8-1.6"	±0.03mm	0.01mm	80mm	25mm	6.5mm	R0.5mm
2131-51	30-50mm/1.2-2.0"	±0.03mm	0.01mm	80mm	25mm	6.5mm	R0.5mm
2131-61	40-60mm/1.6-2.4"	±0.03mm	0.01mm	80mm	25mm	6.5mm	R0.5mm



EXTERNAL DIAL CALIPER GAGES



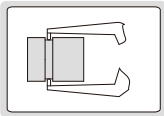
(mm)

Code	Range	Graduation	Accuracy	L	H	W	R
2333-201	0-20mm	0.01mm	±0.03mm	80	25	6.5	R0.5
2333-301	10-30mm	0.01mm	±0.03mm	80	25	6.5	R0.5
2333-401	20-40mm	0.01mm	±0.03mm	80	25	6.5	R0.5
2333-501	30-50mm	0.01mm	±0.03mm	80	25	6.5	R0.5
2333-601	40-60mm	0.01mm	±0.03mm	80	25	6.5	R0.5



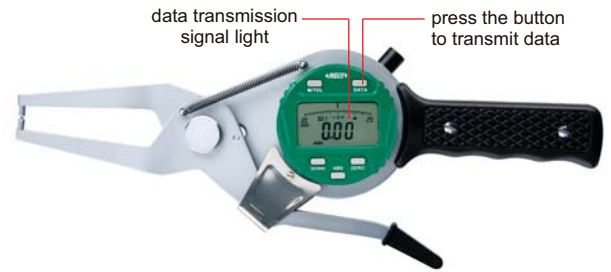
2333-201

DATA OUTPUT



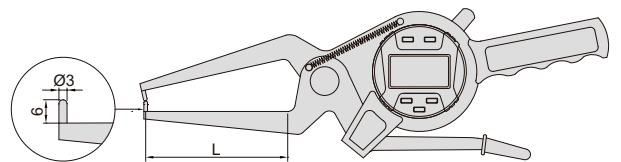
- Carbide measuring tips
- Reading in digit and analog
- With transmission button and signal light
- Display can be rotated by 320°
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement, data output
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-50M page 12)

DIGITAL EXTERNAL CALIPER GAGES



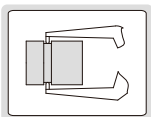
2132-20

Unit: mm



Code	Range	Resolution	Accuracy	L (mm)
2132-20	0-20mm/0-0.8"	0.01mm/0.0005"	±0.04mm	60
2132-40	20-40mm/0.8-1.6"	0.01mm/0.0005"	±0.04mm	60
2132-60	40-60mm/1.6-2.4"	0.01mm/0.0005"	±0.04mm	55
2132-80	60-80mm/2.4-3.2"	0.01mm/0.0005"	±0.04mm	55
2132-100	80-100mm/3.2-4"	0.01mm/0.0005"	±0.04mm	55

EXTERNAL DIAL CALIPER GAGES

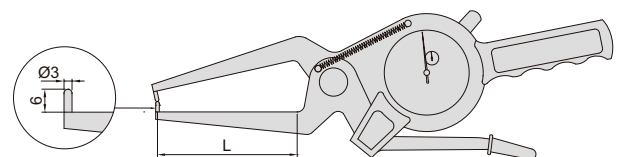


- Carbide measuring tips



2332-20

Unit: mm



Code	Range	Graduation	Accuracy	L (mm)
2332-20	0-20mm	0.01mm	±0.04mm	60
2332-40	20-40mm	0.01mm	±0.04mm	60
2332-60	40-60mm	0.01mm	±0.04mm	55
2332-80	60-80mm	0.01mm	±0.04mm	55
2332-100	80-100mm	0.01mm	±0.04mm	55

DIGITAL THICKNESS GAGES

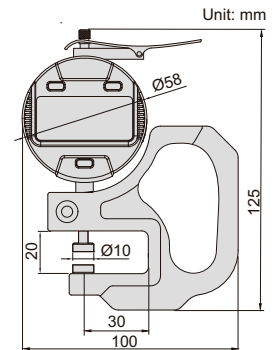
DATA
OUTPUT

- Ceramic spindle tip and anvil
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-50M page 12)

Code	Range	Resolution	Accuracy
2871-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm
2871-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.005mm

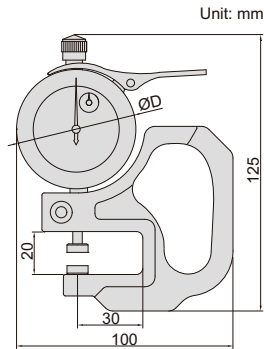
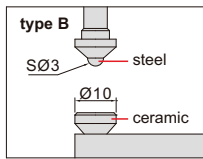
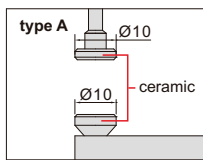


2871-101



11

THICKNESS GAGES



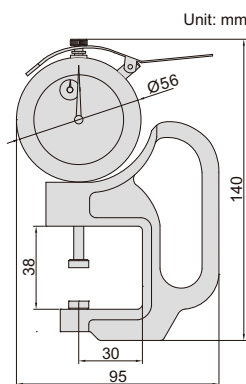
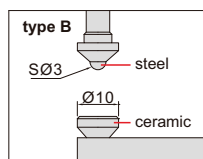
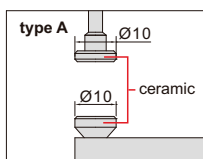
2364-10



2364-1

Code	Range	Graduation	Accuracy	Type	ØD
2364-10	0-10mm	0.01mm	±0.02mm	A	58mm
2364-10B	0-10mm	0.01mm	±0.02mm	B	58mm
2364-1	0-1mm	0.001mm	±0.005mm	A	56mm

THICKNESS GAGES

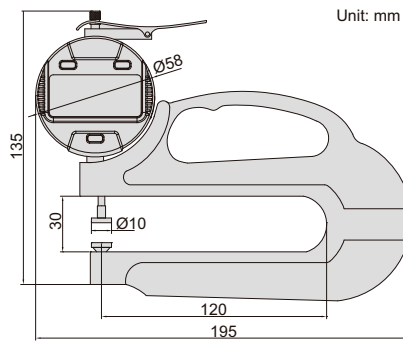


2366-30

Code	Range	Graduation	Accuracy	Type
2366-30	0-30mm	0.01mm	±0.035mm	A
2366-30B	0-30mm	0.01mm	±0.035mm	B

DATA OUTPUT

measuring tips and anvils can be custom-made



- Ceramic spindle tip and anvil
- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-50M page 12)

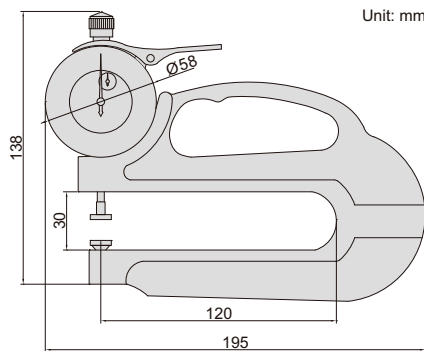
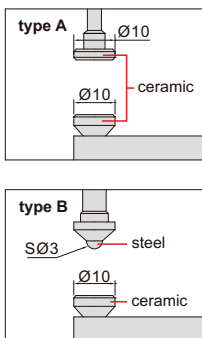
DIGITAL THICKNESS GAGES



2872-10

Code	Range	Resolution	Accuracy
2872-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm
2872-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.01mm

THICKNESS GAGES



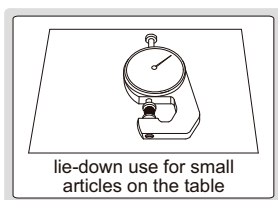
2365-10

measuring tips and anvils can be custom-made

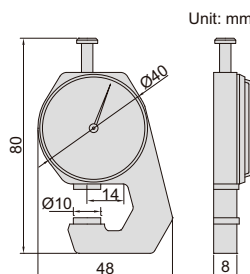


Code	Range	Graduation	Accuracy	Type
2365-10	0-10mm	0.01mm	±0.02mm	A
2365-20	0-20mm	0.01mm	±0.03mm	A
2365-10B	0-10mm	0.01mm	±0.02mm	B
2365-20B	0-20mm	0.01mm	±0.03mm	B

SUITABLE FOR JEWELLERY

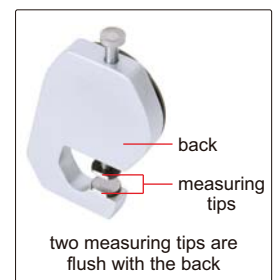


lie-down use for small articles on the table



2361-10

THICKNESS GAGE



two measuring tips are flush with the back

Code	Range	Graduation	Accuracy
2361-10	0-10mm	0.1mm	±0.05mm

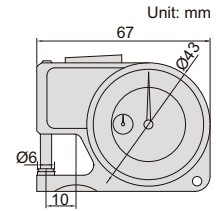
THICKNESS GAGE

- Stainless steel spindle tip and anvil

Code	Range	Graduation	Accuracy
2363-10	0-10mm	0.01mm	±0.03mm



2363-10



DIGITAL ROLLER THICKNESS GAGES

DATA OUTPUT

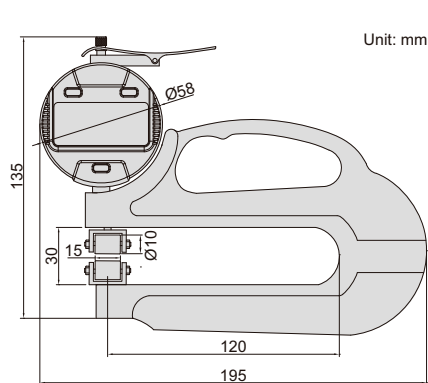
11



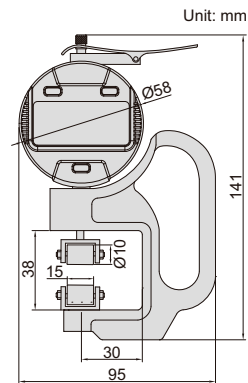
2877-4



2877-10



2877-4
2877-41



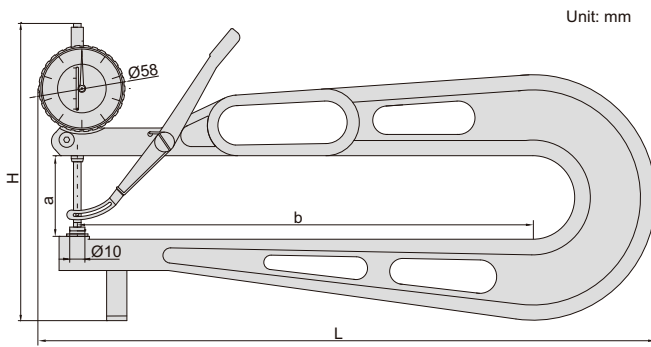
2877-10
2877-101

Code	Range	Resolution	Accuracy
2877-4	0-4.5mm/0-0.18"	0.01mm/0.0005"	±0.02mm
2877-41	0-4.5mm/0-0.18"	0.001mm/0.00005"	±0.01mm
2877-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm
2877-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.01mm

- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-50M page 12)

THICKNESS GAGES

INSIZE PLUS
MADE IN EUROPE

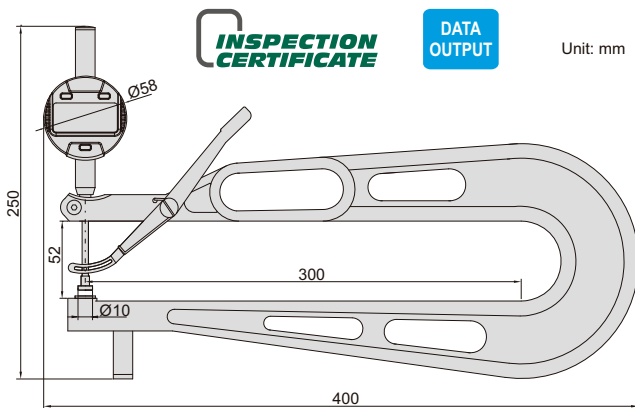


Unit: mm



2875-30

Code	Range	Graduation	Accuracy	L	H	a	b
2875-30	0-30mm	0.1mm	±0.05mm	400mm	195mm	55mm	300mm
2875-50	0-50mm	0.1mm	±0.05mm	700mm	295mm	75mm	600mm



Unit: mm

DIGITAL THICKNESS GAGE

INSIZE PLUS
MADE IN EUROPE



2860-25

- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13)

Code	Range	Resolution	Accuracy
2860-25*	0-25.4mm/0-1"	0.01mm/0.0005"	±0.05mm

* Supplied with manufacturer inspection certificate

11

MEASURING TIPS AND ANVILS CAN BE CUSTOM-MADE

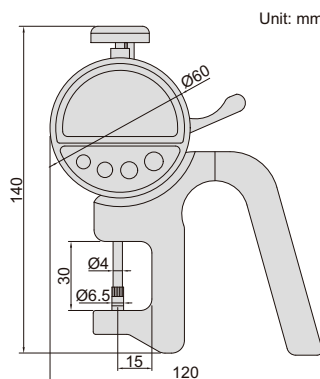
ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

ATTENTION: RECHARGEABLE BATTERY, FOR 12 HOURS CONTINUOUS WORKING

DATA OUTPUT

- Absolute encoder, the original data remains after power off
- Button function: on/off, zero, tolerance, absolute/incremental measurement, max./min./TIR, data preset, mm/inch, data output, data hold
- Measuring force: 0.5-1N
- Reading in digital and analog
- Power: rechargeable battery, for 12 hours continuous working
- Data output
- Supplied with data output cable (keyboard format)

HIGH PRECISION DIGITAL THICKNESS GAGES



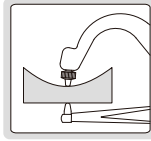
Unit: mm



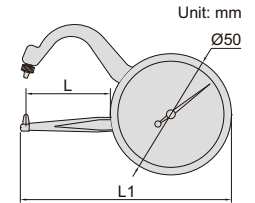
2879-10

Code	Range	Resolution	Accuracy	Repeatability
2879-10	0-10mm/0-0.4"	0.001mm/0.00005"	±0.002mm	0.001mm
2879-101	0-10mm/0-0.4"	0.0005mm/0.00002"	±0.0015mm	0.0005mm

THICKNESS GAGES

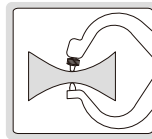


2862-101

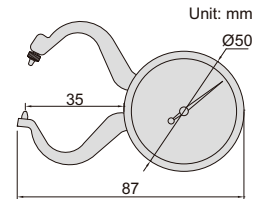


Code	Range	Graduation	Accuracy	L	L1
2862-101	0-10mm	0.05mm	±0.1mm	35mm	85mm
2862-102	0-10mm	0.05mm	±0.1mm	60mm	110mm

THICKNESS GAGE



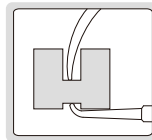
2863-10



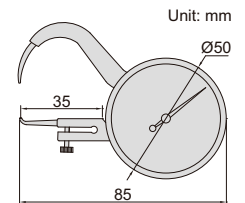
Code	Range	Graduation	Accuracy
2863-10	0-10mm	0.05mm	±0.1mm

THICKNESS GAGE WITH POINTED TIPS

- Pointed tips fit into small grooves and recesses



2866-10



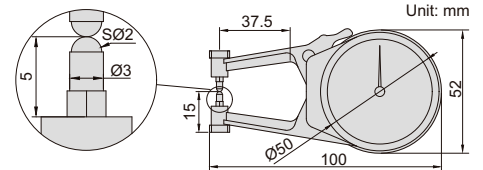
Code	Range	Graduation	Accuracy
2866-10	0-10mm	0.05mm	±0.1mm

THICKNESS GAGE

- Main body is made of hard plastic



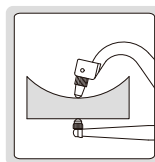
2870-10



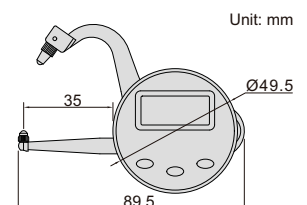
Code	Range	Graduation	Accuracy
2870-10	0-10mm	0.1mm	±0.1mm

DIGITAL THICKNESS GAGE

- Resolution: 0.01mm, 0.001", 1/64"
- Buttons: on/off, zero, unit (mm/in/fraction), data hold
- Battery CR2032, automatic power off



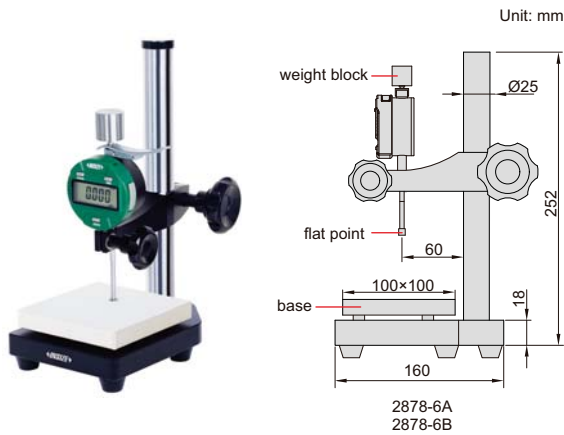
2710-25



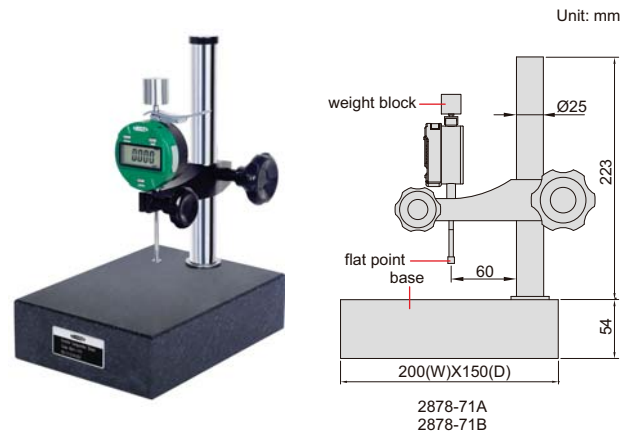
Code	Range	Accuracy	Repeatability
2710-25	0-25.4mm/0-1"	0.05mm	0.02mm

DATA
OUTPUT

DIGITAL RUBBER THICKNESS GAGES



2878-6B



2878-71B

- Measure thickness of vulcanized rubber and plastic products
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Supplied with dust cover
- Optional accessory: data output cable (code 7315-50M page 5, 7302-50M page 12), flat points, weight blocks

Code	Range	Resolution	Accuracy	Flat point diameter	Pressure	Base
2878-6A	12.7mm/0.5"	0.01mm/0.0005"	20µm	6mm	22KPa±5KPa	ceramic, plain, flatness 1.5µm
2878-6B	12.7mm/0.5"	0.001mm/0.00005"	5µm	6mm	22KPa±5KPa	ceramic, plain, flatness 1.5µm
2878-71A	12.7mm/0.5"	0.01mm/0.0005"	20µm	6mm	22KPa±5KPa	granite, plain, flatness 2.5µm
2878-71B	12.7mm/0.5"	0.001mm/0.00005"	5µm	6mm	22KPa±5KPa	granite, plain, flatness 2.5µm

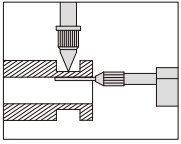
Flat points and weight blocks (optional)

Flat point	Flat point code	Pressure				
		10KPa±2KPa weight block code	22KPa±5KPa weight block code	20KPa±3KPa weight block code	70KPa±5KPa weight block code	1.6KPa±0.1KPa weight block code
Ø4mm	2878-P4	—	2878-W4B	—	—	—
Ø5mm	2878-P5	2878-W5A	2878-W5B	2878-W5C	2878-W5D	—
Ø6mm	2878-P6	2878-W6A	2878-W6B	—	—	—
Ø8mm	2878-P8	2878-W8A	2878-W8B	—	—	—
Ø10mm	2878-P10	2878-W10A	2878-W10B	2878-W10C	—	—
Ø25mm	2878-P25	—	—	—	—	2878-W25E
1x4mm (rectangle)	2878-P14	—	—	—	2878-W14D	—

DIGITAL TUBE THICKNESS GAGES

DATA OUTPUT

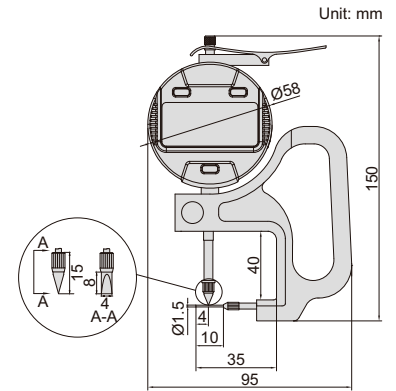
measure wall thickness of grooves



- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-50M page 12)



2873-10

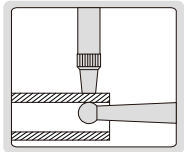


Code	Range	Resolution	Accuracy
2873-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm
2873-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.005mm

11

DIGITAL TUBE THICKNESS GAGES

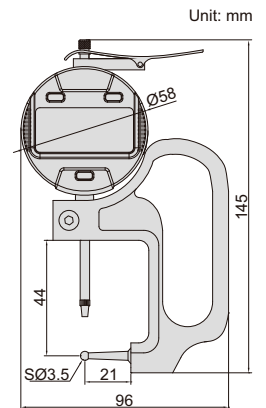
DATA OUTPUT



- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M page 5, 7302-50M page 12)

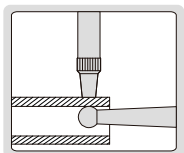


2876-10



Code	Range	Resolution	Accuracy
2876-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm
2876-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.005mm

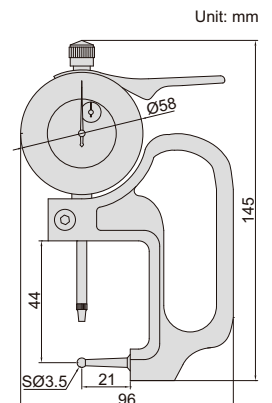
TUBE THICKNESS GAGE



- Measure tube wall thickness



2367-10A



Code	Range	Graduation	Accuracy
2367-10A	0-10mm	0.01mm	±0.02mm

SAW TEETH SETTING GAGE

INSIZE PLUS
MADE IN EUROPE



front

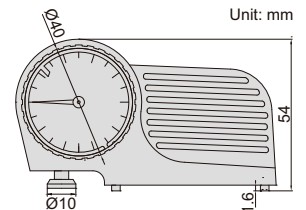
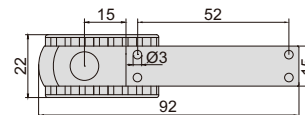


back

2874-02

- Supplied with limit pointer
- Read from both sides

Code	Range	Graduation	Accuracy
2874-02	0-2mm	0.05mm	±0.05mm



IP54
WATERPROOF

DIAL SNAP GAGES

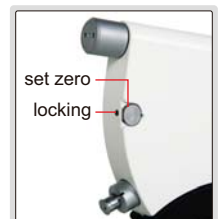
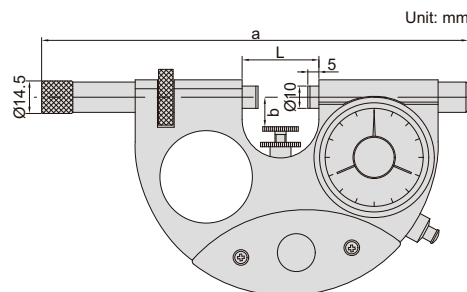
INSIZE PLUS
MADE IN EUROPE

11

- Quick Go/No-Go measurement for mass production
- Anvil retracting stroke: 2.5mm
- Dial indicator: measuring range ±0.07mm, graduation 1µm, accuracy ±1µm
- Constant measuring force over the whole range: 8.5N
- Carbide measuring faces
- IP54 dust/waterproof
- Zero position of dial indicator is adjustable and can be locked (supplied with locking wrench)
- Adjustable platform height



3335-25



Code	Range	L	a	b
3335-25	0-25mm	35mm	191mm	<15mm
3335-50	25-50mm	60mm	215mm	<25mm
3335-75	50-75mm	84mm	239mm	<37.5mm
3335-100	75-100mm	110mm	265mm	<50mm

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

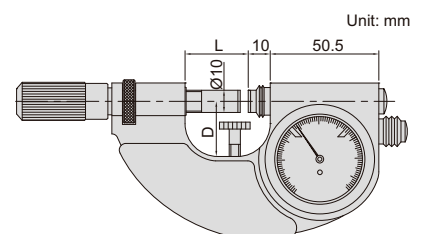
IP54
WATERPROOF

DIAL SNAP GAGES

- Quick measurement for mass production
- Dial indicator: range ±0.04mm, graduation 0.001mm, accuracy 0.001mm
- IP54 dust/waterproof
- Measuring force: 5-10N
- Carbide measuring faces
- Optional accessory: gage blocks grade 0 (4101-A series), for zero setting



3334-25



Code	Range	L	D
3334-25	0-25mm	28.5mm	25mm
3334-50	25-50mm	53.5mm	35mm
3334-75	50-75mm	78.5mm	47.5mm
3334-100	75-100mm	103.5mm	60mm

DIAL SNAP GAGES

- Left anvil retracting stroke: 2mm
- Measuring force: 6-8N
- Flatness of anvil: 1.5µm
- Repeatability: 1µm
- Carbide measuring faces for anvils
- Front edges of anvils are chamfered for easy workpiece insertion
- Optional accessory: dial indicators and digital indicators (reading 0.001mm or 0.01mm)



INSPECTION
CERTIFICATE

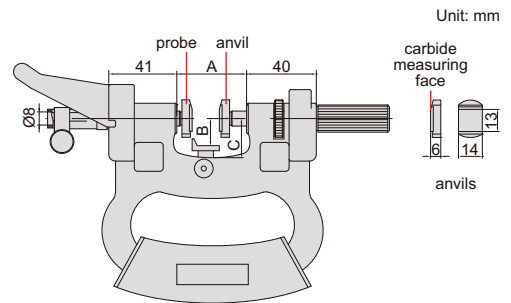
QUICK AND ACCURATE MEASUREMENT
OF CYLINDRICAL WORKPIECES



2186-25

Code	Range	Parallelism of measuring faces	A	B	C
2186-25*	0-25mm	4µm	42	11-18	20
2186-50*	25-50mm	4µm	69	11-32	41
2186-75*	50-75mm	5µm	94	17-41	51
2186-100*	75-100mm	6µm	119	31-55	65
2186-125*	100-125mm	6µm	144	42-70	75
2186-150*	125-150mm	8µm	169	55-82	90
2186-175*	150-175mm	8µm	194	68-95	100
2186-200*	175-200mm	10µm	219	85-110	115
2186-225*	200-225mm	10µm	244	95-120	130
2186-250*	225-250mm	10µm	269	110-135	145
2186-275*	250-275mm	12µm	294	120-150	160
2186-300*	275-300mm	12µm	319	128-160	170

*Supplied with manufacturer inspection certificate



DIAL SNAP GAGES

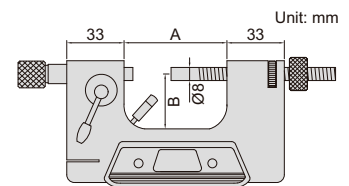
- Quick measurement for mass production
- Anvil retracting stroke: 3mm
- Measuring force: 6-9N
- Carbide measuring faces
- Optional accessory: dial indicators (graduation 0.01mm), digital indicators (resolution 0.01mm/0.0005")



2184-50W

Code	Range	A	B
2184-25W	0-25mm	34mm	18mm
2184-50W	0-50mm	62mm	32mm
2184-100W	50-100mm	112mm	62mm
2184-150W	100-150mm	162mm	85mm
2184-200W	150-200mm	212mm	110mm

ATTENTION: NOT SUITABLE
FOR 0.001MM DIAL INDICATORS



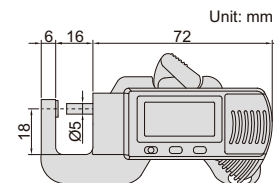
DIGITAL SNAP GAGE

ATTENTION: NO
DATA OUTPUT



2166-12

Code	Range	Resolution	Accuracy
2166-12	0-12mm/0-0.5"	0.01mm/0.0005"	±0.03mm

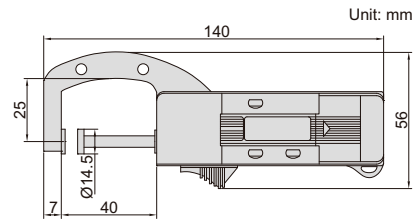


ATTENTION: NO DATA OUTPUT

DIGITAL SNAP GAGE



2167-25



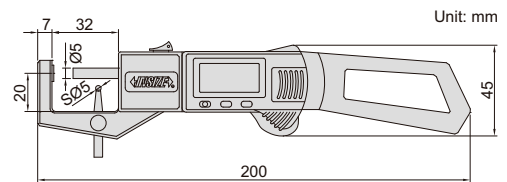
Code	Range	Resolution	Accuracy
2167-25	0-25mm/0-1"	0.01mm/0.0005"	±0.03mm

ATTENTION: NO DATA OUTPUT

DIGITAL SNAP GAGE

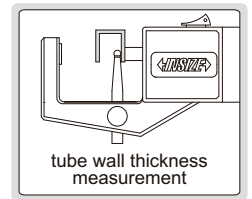
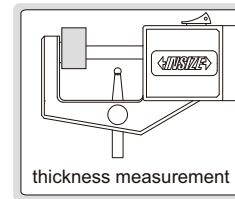


2163-25



- Resolution: 0.01mm/0.0005"
- Accuracy: ±0.04mm
- For thickness and tube wall thickness measurement

Code	Thickness range	Tube wall thickness range
2163-25	0-25mm/0-1"	0-2mm/0.08"

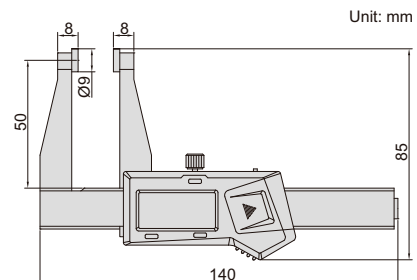


DATA OUTPUT

DIGITAL SNAP GAGES



1163-50A



- Non waterproof
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Resolution	Accuracy
1163-50A	0-50mm/0-2"	0.01mm/0.0005"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Resolution	Accuracy
1163-50AWL	0-50mm/0-2"	0.01mm/0.0005"	±0.03mm

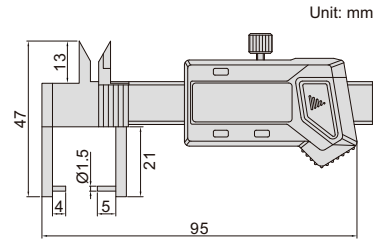
DIGITAL 3-PURPOSE SNAP GAGE

ATTENTION: NO DATA OUTPUT

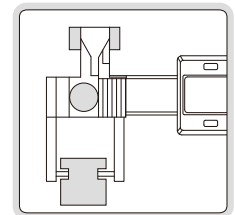
SUITABLE FOR JEWELLERY



2164-25A



- Non waterproof
- Buttons: zero, mm/inch, on/off
- Battery LR44
- Made of stainless steel



Code	Range	Resolution	Accuracy
2164-25A	0-25mm/0-1"	0.01mm/0.0005"	±0.03mm

11

STEP AND GAP GAGES

DATA OUTPUT

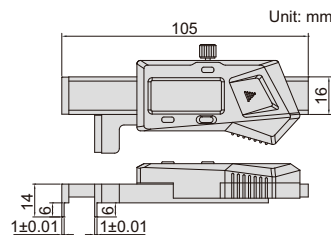


front

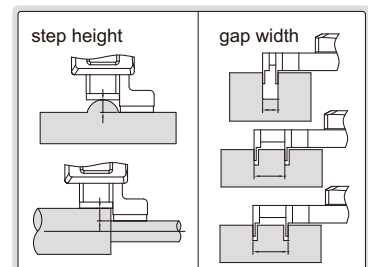
2168-12

back

- Non waterproof
- Measure step height and gap width
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Supplied with zero setting block



zero setting block (included)



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

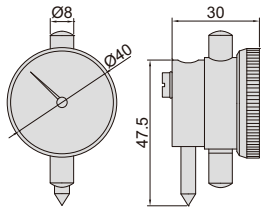
Code	Range	Accuracy
2168-12	0-12.7mm/0-0.5"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

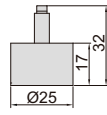
Code	Range	Accuracy
2168-12WL	0-12.7mm/0-0.5"	±0.03mm

CRANKSHAFT TESTERS

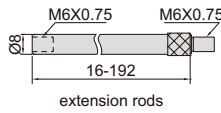
Unit: mm



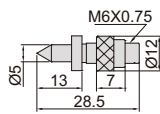
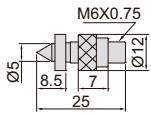
dial indicator



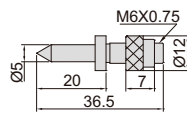
balance block



extension rods

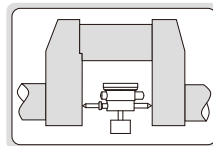


anvils



2841-500

- To test crankshaft deflection
- The balance block is mounted on the back of dial indicator to keep the dial indicator facing up



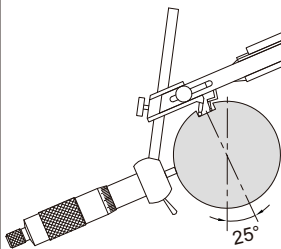
Code	Range	Dial indicator range	Graduation	Extension rods	Accuracy
2841-300	60-300mm	3mm	0.01mm	16mm, 32mm, 64mm, 128mm	±0.016mm
2841-500	60-500mm	3mm	0.01mm	16mm, 32mm, 64mm, 96mm, 128mm, 192mm	±0.016mm



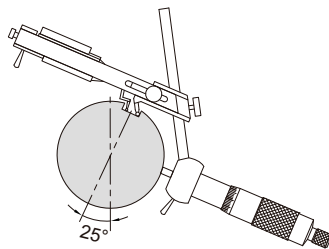
KEYWAY SYMMETRY GAGE

application

step 1: measure



step 2: turn around the workpiece 180° and measure

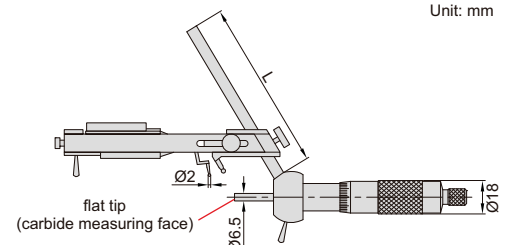


4865-14

Unit: mm

- Used to measure the symmetry of shaft keyways

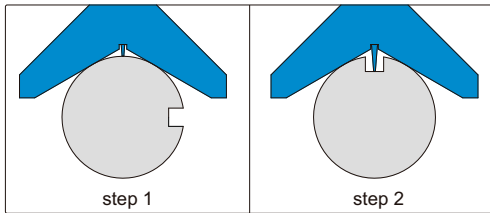
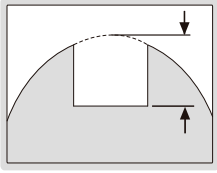
Code	Range		Graduation	Accuracy	L
	diameter of shaft	width of keyway			
4865-14	14-110mm	5-28mm	0.01mm	0.02mm	100mm



DIGITAL KEYWAY DEPTH GAGE

DATA
OUTPUT

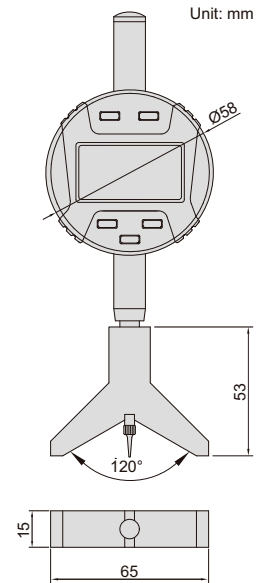
measure depth of keyway



- Measure keyway depth of cylindrical workpieces with diameter $\varnothing 10-100\text{mm}$
- Button function: on/off, zero, inch/metric conversion absolute/incremental measurement, data preset, measuring direction change
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Pointed tip
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13)



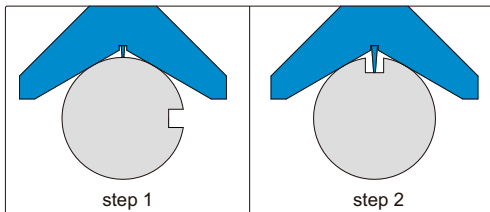
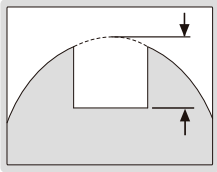
2182-25



Code	Range	Resolution	Accuracy
2182-25	0-25.4mm/0-1"	0.01mm/0.0005"	$\pm 0.02\text{mm}$

DIAL KEYWAY DEPTH GAGE

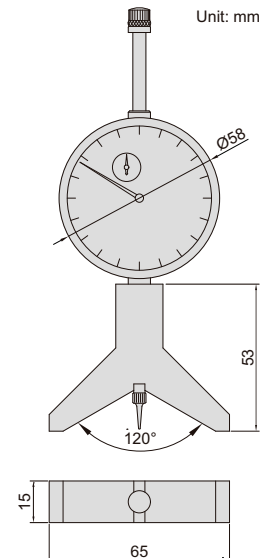
measure depth of keyway



- Measure keyway depth of cylindrical workpieces with diameter $\varnothing 10-100\text{mm}$
- Stainless steel base
- Pointed tip



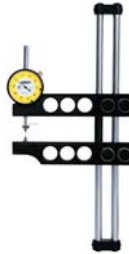
2189-30



Code	Range	Graduation	Accuracy
2189-30	0-30mm	0.01mm	$\pm 0.03\text{mm}$



Thread Pitch Measuring Instruments
Page 273-274



Thread Taper Measuring Instruments
Page 275-277



Thread Height Measuring Instruments
Page 278-279



Thread Crest Diameter Measuring Instruments
Page 280-283



Groove Diameter Measuring Instruments
Page 284



Groove Width Measuring Instruments
Page 285



Calipers With Interchangeable Ball Tips
Page 286



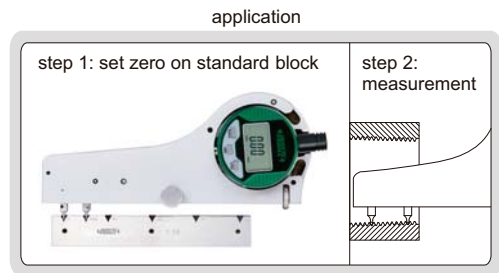
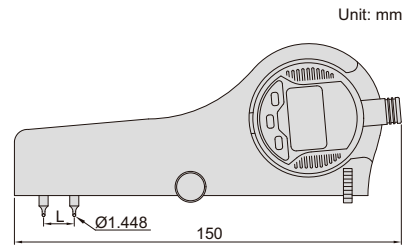
RTJ Ring Groove Calipers
Page 286



Thread Gages For Petroleum Equipment
Page 286

DIGITAL THREAD PITCH MEASURING INSTRUMENT

MEET INTERNATIONAL STANDARD API5B



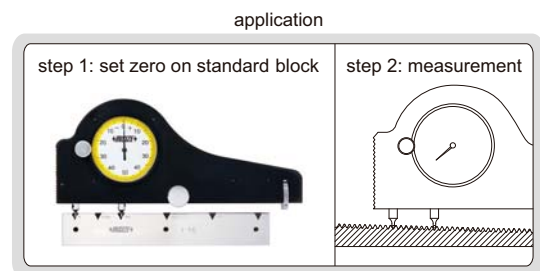
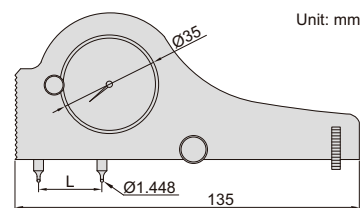
12

- Measure the pitch of external thread and internal thread with nominal diameter larger than 5 1/2" (139.7mm)
- Optional accessory: data output cable (code 7315-50M page 5, 7302-50M page 12), ball points (code 6252 series), standard pitch blocks (code 6251 series)

Code	Range (L)	Digital indicator stroke	Resolution	Accuracy
2245-4	0.5-4"/12.7-101.6mm	0.2"/5mm	0.0005"/0.01mm	0.02mm

THREAD PITCH MEASURING INSTRUMENTS

MEET INTERNATIONAL STANDARD API5B



- Measure the pitch of external thread and internal thread with nominal diameter larger than 5 1/2" (139.7mm)
- Optional accessory: ball points (code 6252 series), standard pitch blocks (code 6251 series)

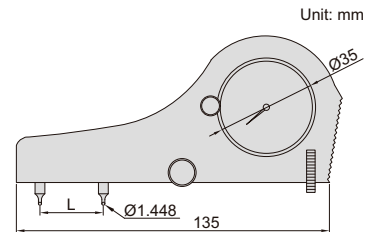
Code	Range (L)	Dial indicator stroke	Dial indicator graduation	Accuracy
2234-4	0.5-4"/12.7-101.6mm	0.5mm	0.01mm	0.02mm
2234-4E	0.5-4"/12.7-101.6mm	0.025"	0.0005"	0.0008"

MEET INTERNATIONAL
STANDARD API5B

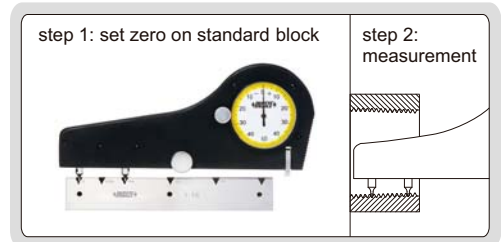
INTERNAL THREAD PITCH MEASURING INSTRUMENTS



2235-4



application



- Measure the pitch of internal thread with nominal diameter larger than 1 1/2" (38.1mm) and less than 5 1/2" (139.7mm)
- Optional accessory: ball points (code 6252 series), standard pitch blocks (code 6251 series)

12

Code	Range (L)	Dial indicator stroke	Dial indicator graduation	Accuracy
2235-4	0.5-4"/12.7-101.6mm	0.5mm	0.01mm	0.02mm
2235-4E	0.5-4"/12.7-101.6mm	0.025"	0.0005"	0.0008"

CAN BE CUSTOMIZED
ACCORDING TO WORKPIECES

STANDARD PITCH BLOCKS



6251-S8

- Set zero of internal and external pitch measuring instruments (code 2234, 2235, 2245)

Code	Taper	Threads per inch
6251-S8	1:16	8, 10
6251-S5	1:16	5
6251-S4	1:6	4

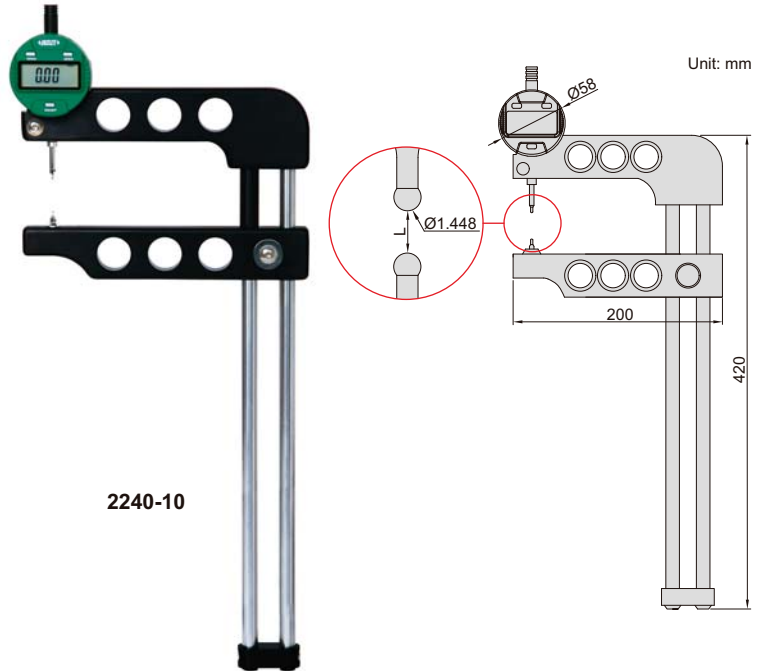
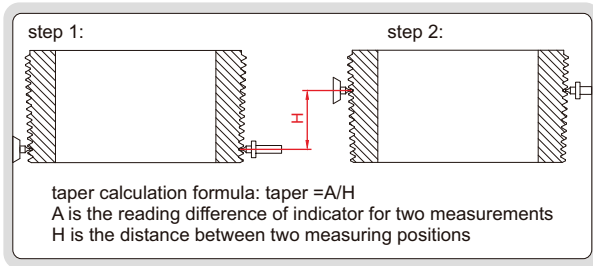


DIGITAL EXTERNAL THREAD TAPER MEASURING INSTRUMENT

MEET INTERNATIONAL STANDARD API5B

- Measure the taper of external thread
- Digital indicator stroke: 12.7mm/0.5"
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13), ball points (code 6252 series)

principle of measurement



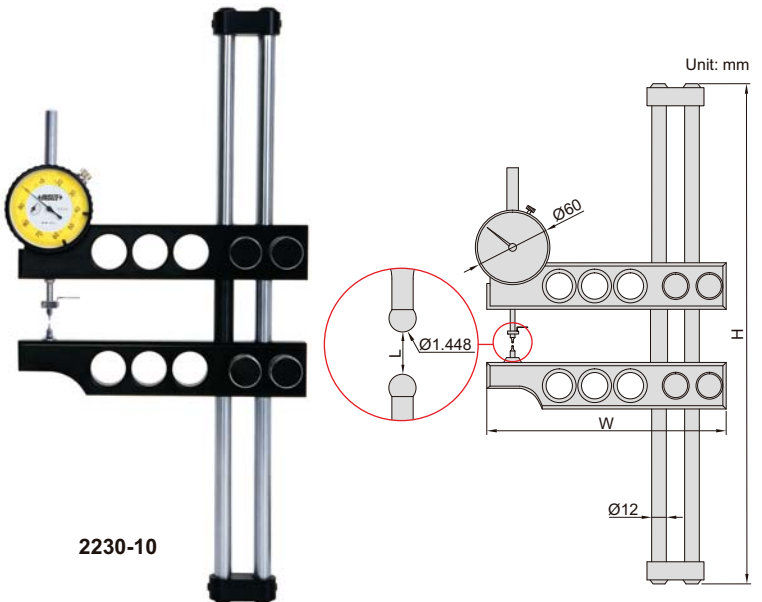
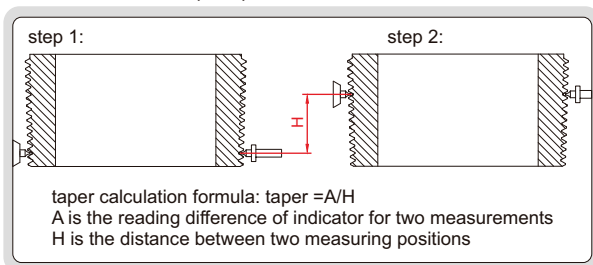
Code	Range (L)	Resolution	Accuracy
2240-10	0-10"/0-254mm	0.0005"/0.01mm	0.03mm

EXTERNAL THREAD TAPER MEASURING INSTRUMENTS

MEET INTERNATIONAL STANDARD API5B

- Measure the taper of external thread
- Dial indicator stroke: 0.5"
- Dial indicator graduation: 0.001"
- Optional accessory: ball points (code 6252 series)

principle of measurement



Code	Range (L)	Accuracy	H	W
2230-10	0-10"/0-254mm	0.0015"	400mm	200mm
2230-45	1-4 1/2"/25.4-114.3mm	0.0015"	278mm	178mm
2230-16	8-16"/203.2-406.4mm	0.0015"	600mm	260mm
2230-20	8-20"/203.2-508mm	0.0015"	680mm	260mm

MEET INTERNATIONAL
STANDARD API5B

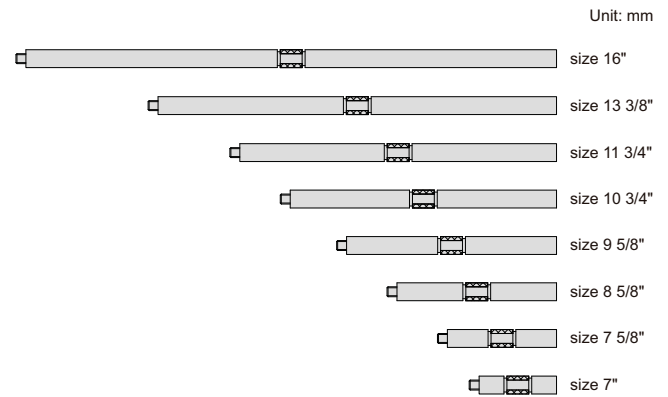
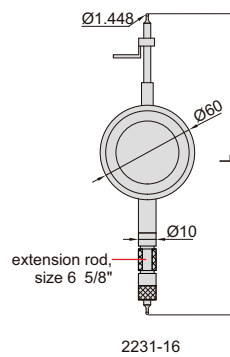
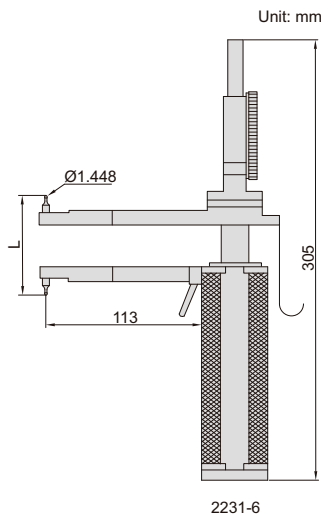
INTERNAL THREAD TAPER MEASURING INSTRUMENTS



2231-6

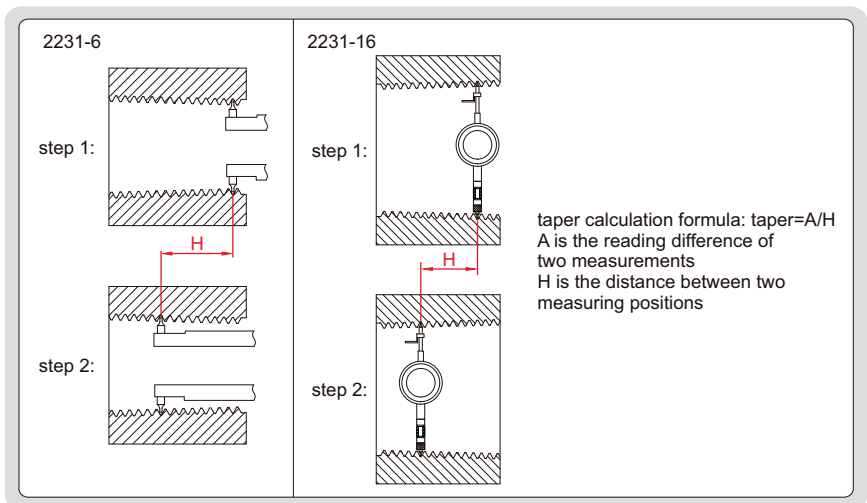


2231-16



12

principle of measurement



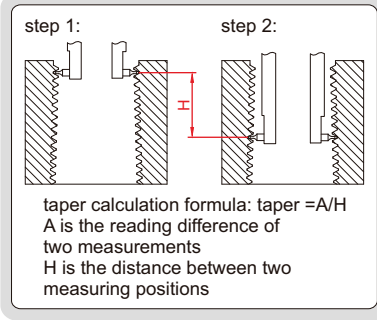
- Measure the taper of internal thread
- Optional accessory: ball points (code 6252 series)

Code	Range (L)	Dial indicator stroke	Dial indicator graduation	Accuracy	Remark
2231-6	1.5-6"/38.1-152.4mm	1"	0.001"	0.0015"	—
2231-16	5 1/2-16"/139.7-406.4mm	0.5"	0.001"	0.0015"	with 9 extension rods

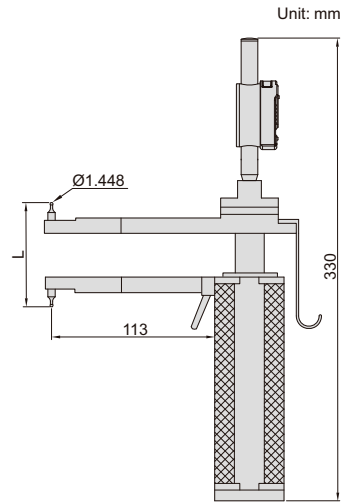
DIGITAL INTERNAL THREAD TAPER MEASURING INSTRUMENT

MEET INTERNATIONAL STANDARD API5B

principle of measurement



2241-6



12

- Measure the taper of internal thread
- Digital indicator stroke: 25.4mm/1"
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13), ball points (code 6252 series)

Code	Range (L)	Resolution	Accuracy
2241-6	1.5-6"/38.1-152.4mm	0.0005"/0.01mm	0.04mm

BALL POINTS

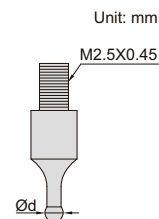
- Supplied in pair
- For taper measuring instruments (code 2230, 2231, 2240, 2241) and pitch measuring instruments (code 2234, 2235, 2245)



6252-B10

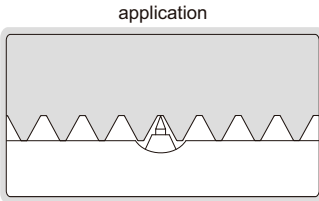
Code	Thread type	Threads per inch	Ball dia. (Ød)	
			taper	pitch
6252-B8	round thread, line pipe	8	1.829mm	1.829mm
6252-B10	round thread, line pipe	10	1.448mm	1.448mm
6252-B115	line pipe	11.5	1.27mm	1.27mm
6252-B14	line pipe	14	1.041mm	1.041mm
6252-B18	line pipe	18	0.813mm	0.813mm
6252-B27	line pipe	27	0.533mm	0.533mm
6252-B5	buttress thread	5	2.286mm	—
6252-B51	buttress thread	5	—	1.575mm
6252-B52	extreme line thread	5,6	1.524mm	—
6252-B53	extreme line thread	5	—	2.667mm*
6252-B6	extreme line thread	6	—	2.210mm*

*0.58mm off the top of ball



MEET INTERNATIONAL
STANDARD API5B

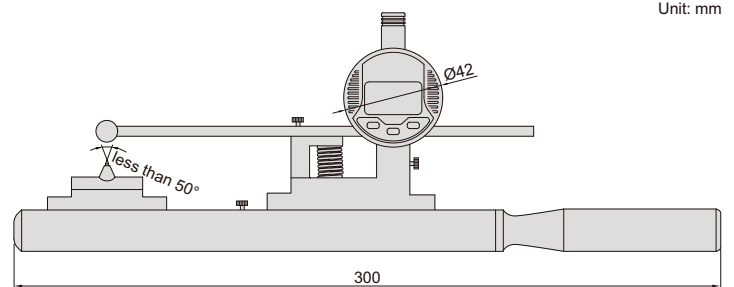
DIGITAL INTERNAL THREAD HEIGHT MEASURING INSTRUMENT



2243-35

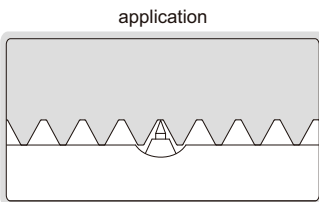
- Measure the height of internal thread with nominal diameter less than 5 1/2" (139.7mm)
- Optional accessory: data output cable (code 7315-50M page 5, 7302-50M page 12), thread height standard blocks (code 6250)

Code	Range	Resolution	Accuracy
2243-35	0-0.135"/0-3.5mm	0.005"/0.01mm	0.02mm



MEET INTERNATIONAL
STANDARD API5B

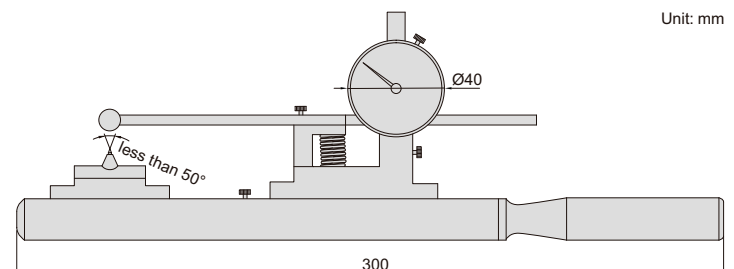
INTERNAL THREAD HEIGHT MEASURING INSTRUMENTS



2233-35

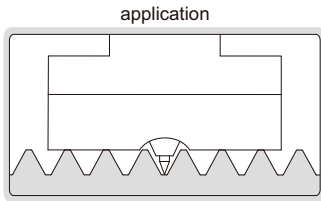
- Measure the height of internal thread with nominal diameter less than 5 1/2" (139.7mm)
- Optional accessory: thread height standard blocks (code 6250)

Code	Range	Dial indicator graduation	Accuracy
2233-35	0-3.5mm	0.01mm	0.02mm
2233-35E	0-1/4"	0.0005"	0.0008"



DIGITAL THREAD HEIGHT MEASURING INSTRUMENT

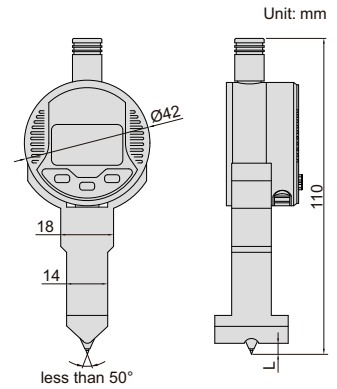
MEET INTERNATIONAL STANDARD API5B



- Measure the height of external thread and internal thread with nominal diameter larger than 5 1/2" (139.7mm)
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13), thread height standard blocks (code 6250)



2242-35

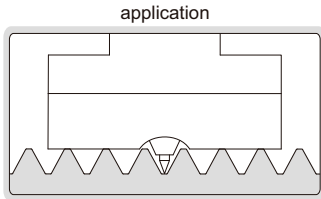


Code	Range (L)	Resolution	Accuracy
2242-35	0-0.135"/0-3.5mm	0.0005"/0.01mm	0.02mm

12

THREAD HEIGHT MEASURING INSTRUMENTS

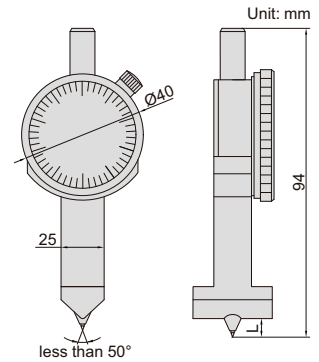
MEET INTERNATIONAL STANDARD API5B



- Measure the height of external thread and internal thread with nominal diameter larger than 5 1/2" (139.7mm)
- Optional accessory: thread height standard blocks (code 6250)



2232-35



Code	Range (L)	Dial indicator graduation	Accuracy
2232-35	0-3.5mm	0.01mm	0.02mm
2232-35E	0-1/4"	0.0005"	0.0008"

THREAD HEIGHT STANDARD BLOCKS

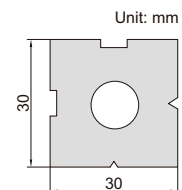
CAN BE CUSTOMIZED ACCORDING TO WORKPIECES

- Set zero of internal and external thread height measuring instruments (code 2232, 2233, 2242, 2243)

Code	Taper	Number of thread per inch
6250-4	1:4	4
6250-5	1:4	5
6250-8	1:16	8, 10
6250-51	1:16	5



6250-8



REFER TO PAGE 75 FOR DETAILS

DIGITAL DEPTH GAGE (60° KNIFE EDGE BASE)



front view

side view

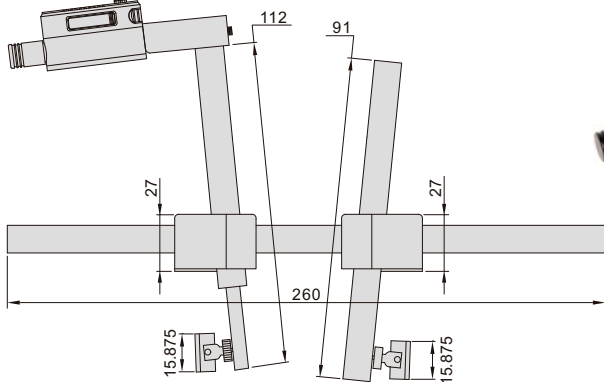
2143-101

DIGITAL INTERNAL THREAD CREST DIAMETER MEASURING INSTRUMENT

MEET INTERNATIONAL STANDARD API5B

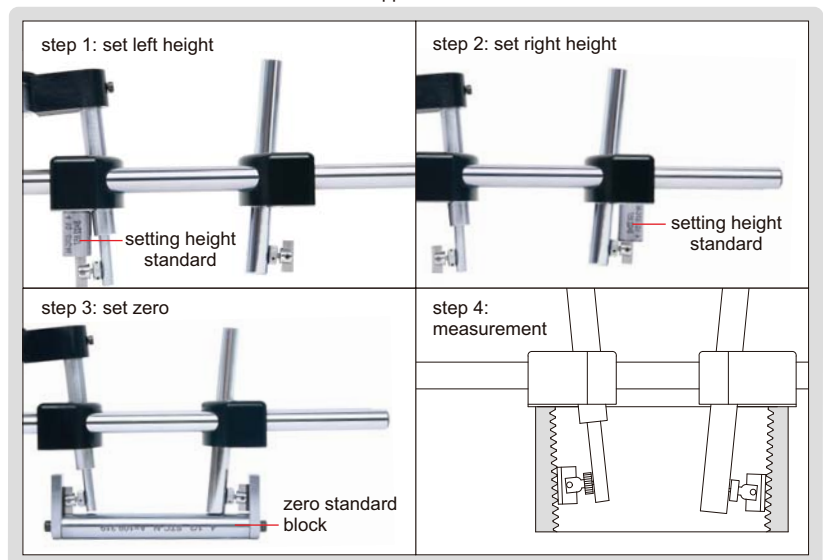
12

Unit: mm



2247-5

application



- Measure the crest diameter of internal thread with nominal diameter larger than 2 3/8" (60.325mm) and less than 5 1/2" (139.7mm)
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13), height standard and zero standard block (code 2237-G□□□, 2237-K□□□)

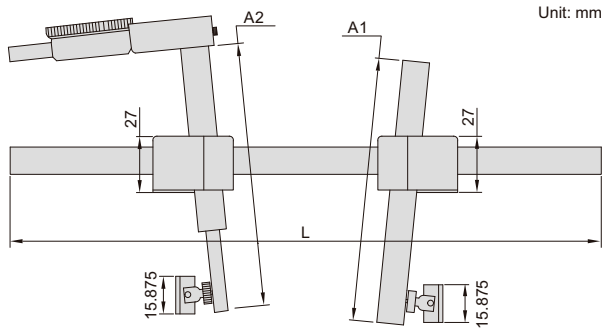
Code	Range	Digital indicator stroke	Resolution	Accuracy
2247-5	2 3/8-5 1/2"/60.325-139.7mm	0.2"/5mm	0.0005"/0.01mm	0.02mm

INTERNAL THREAD CREST DIAMETER MEASURING INSTRUMENTS

MEET INTERNATIONAL STANDARD API5B



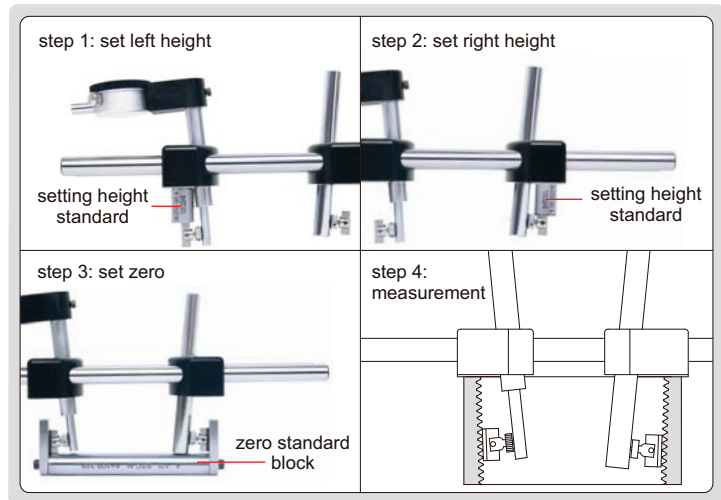
2237-5



12

- Measure the crest diameter of internal thread with nominal diameter larger than 2 3/8" (60.325mm) and less than 20" (508mm)
- Optional accessory: height standard and zero standard block

application



Code	Range	Dial indicator stroke	Dial indicator graduation	Accuracy	L	A1	A2
2237-5	2 3/8-5 1/2"/60.325-139.7mm	5mm	0.01mm	0.02mm	260mm	112mm	91mm
2237-5E	2 3/8-5 1/2"/60.325-139.7mm	0.25"	0.0005"	0.0008"	260mm	112mm	91mm
2237-20	4 1/2-20"/114.3-508mm	0.50"	0.0005"	0.002"	12", 18" or 24" *	177mm	182mm

* Select suitable length of arm according to workpieces



HEIGHT STANDARD AND ZERO STANDARD BLOCK (optional)

Code	Remark
2237-G□□□ *	including height standard and zero standard block A (without taper)
2237-K□□□ *	including height standard and zero standard block B (with taper)

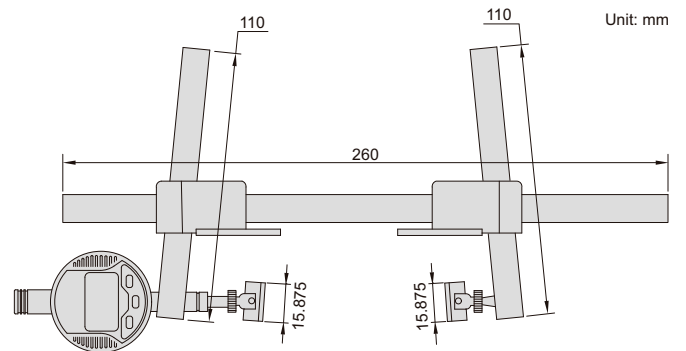
* Can be customized according to workpieces

DIGITAL EXTERNAL THREAD CREST DIAMETER MEASURING INSTRUMENT

MEET INTERNATIONAL
STANDARD API5B

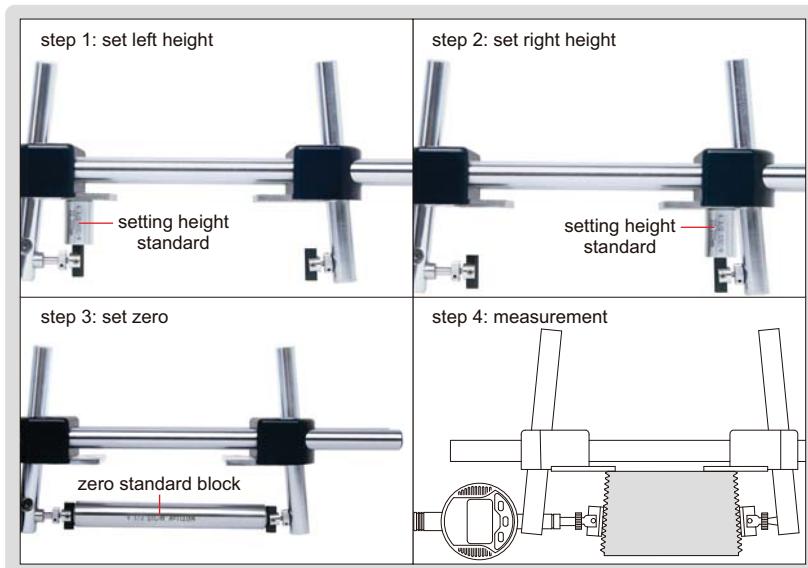


2246-5



- Measure the crest diameter of external thread with nominal diameter larger than 2 3/8" (60.325mm) and less than 5 1/2" (139.7mm)
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13), height standard and zero standard block (code 2236-G□□□, 2236-K□□□)

application



Code	Range	Digital indicator stroke	Resolution	Accuracy
2246-5	2 3/8-5 1/2"/60.325-139.7mm	0.2"/5mm	0.0005"/0.01mm	0.02mm

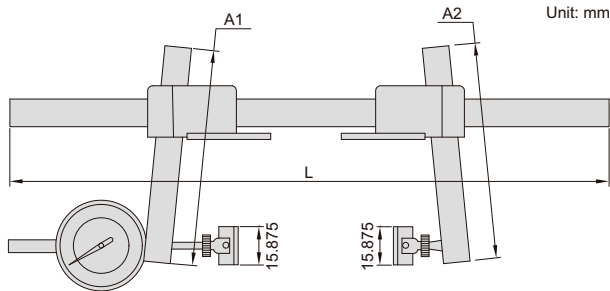
EXTERNAL THREAD CREST DIAMETER MEASURING INSTRUMENTS

MEET INTERNATIONAL STANDARD API5B



2236-5

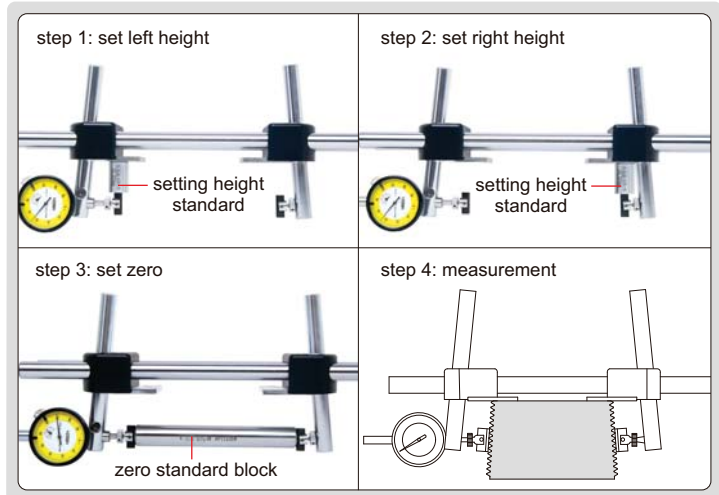
12



Unit: mm

- Measure the crest diameter of external thread with nominal diameter larger than 2 3/8" (60.325mm) and less than 20" (508mm)
- Optional accessory: height standard and zero standard block

application



Code	Range	Dial indicator stroke	Dial indicator graduation	Accuracy	L	A1	A2
2236-5	2 3/8-5 1/2"/60.325-139.7mm	5mm	0.01mm	0.02mm	260mm	110mm	110mm
2236-5E	2 3/8-5 1/2"/60.325-139.7mm	0.25"	0.0005"	0.0008"	260mm	110mm	110mm
2236-20	2 3/8-20"/60.325-508mm	0.50"	0.0005"	0.002"	12", 18" or 24" *	177mm	160mm

* Select suitable length of arm according to workpieces



HEIGHT STANDARD AND ZERO STANDARD BLOCK (optional)

Code	Remark
2236-G□□□ *	including height standard and zero standard block A (without taper)
2236-K□□□ *	including height standard and zero standard block B (with taper)

* Can be customized according to workpieces

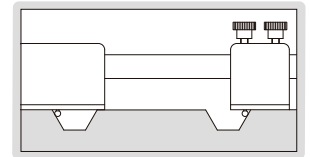
DIGITAL GROOVE DIAMETER MEASURING INSTRUMENT

POINT DIAMETER CAN BE CUSTOM-MADE

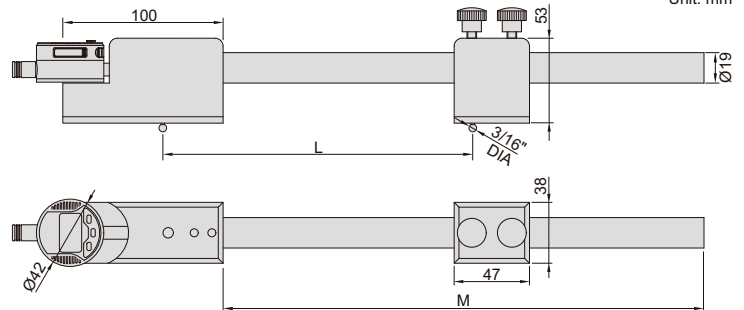


2261-5

application



Unit: mm



- Measure the groove diameter of flange ring groove
- Point height is adjustable
- Optional: data output cable (code 7315-50M page 5, 7302-40M page 13), groove standard block (code 6254)

Code	Range (L)	Movable point stroke	Resolution	Repeatability	M
2261-5	2.6-13"/66-330mm	0.2"/5mm	0.00005"/0.001mm	0.002mm	12"/300mm

Stem (optional)

Code	M
2261-M24	24"/600mm
2261-M30	30"/750mm
2261-M36	36"/900mm

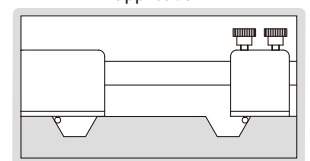
GROOVE DIAMETER MEASURING INSTRUMENTS

POINT DIAMETER CAN BE CUSTOM-MADE

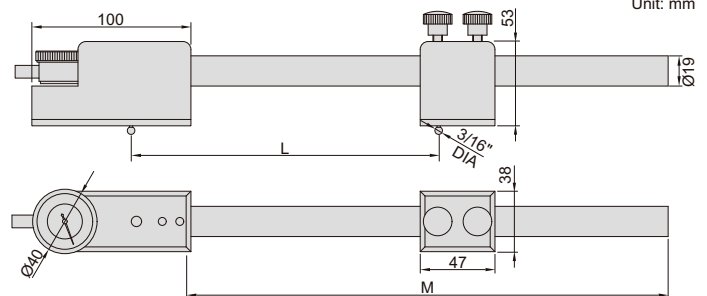


2251-5

application



Unit: mm



- Measure the groove diameter of flange ring groove
- Point height is adjustable
- Optional: groove standard block (code 6254)

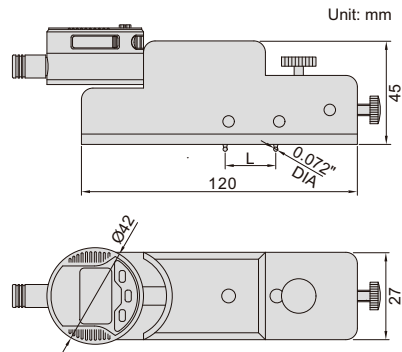
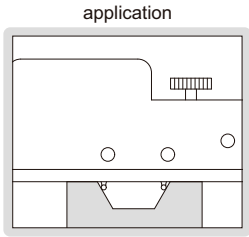
Code	Range (L)	Movable point stroke	Resolution	Repeatability	M
2251-5	2.6-13"/66-330mm	0.2"/5mm	0.01mm	0.005mm	12"/300mm
2251-5E	2.6-13"/66-330mm	0.2"/5mm	0.0005"	0.0002"	12"/300mm

Stem (optional)

Code	M
2261-M24	24"/600mm
2261-M30	30"/750mm
2261-M36	36"/900mm

DIGITAL GROOVE WIDTH MEASURING INSTRUMENT

POINT DIAMETER CAN BE CUSTOM-MADE



2260-4

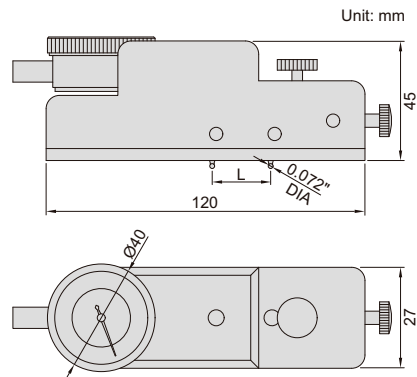
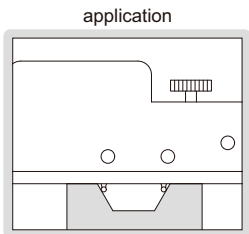
- Measure the groove width of flange ring groove
- Point height is adjustable
- Optional: data output cable (code 7315-50M page 5, 7302-40M page 13), groove standard block (code 6254)

Code	Range (L)	Movable point stroke	Resolution	Repeatability
2260-4	0.55-1.4"/14-35.5mm	0.16"/4mm	0.00005"/0.001mm	0.002mm

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GROOVE WIDTH MEASURING INSTRUMENTS

POINT DIAMETER CAN BE CUSTOM-MADE



2250-4

- Measure the groove width of flange ring groove
- Point height is adjustable
- Optional: groove standard block (code 6254)

Code	Range (L)	Movable point stroke	Resolution	Repeatability
2250-4	0.55-1.4"/14-35.5mm	0.16"/4mm	0.01mm	0.005mm
2250-4E	0.55-1.4"/14-35.5mm	0.16"/4mm	0.0005"	0.0002"

STANDARD GROOVE BLOCK CODE 6254

CUSTOM-MADE



- Set zero of groove width and groove diameter measuring instruments (code 2250, 2251, 2260, 2261)

REFER TO PAGE 57 FOR DETAILS

DIGITAL CALIPERS WITH INTERCHANGEABLE BALL TIPS



1527-3001



1528-3001

REFER TO PAGE 56 FOR DETAILS

DIGITAL RTJ RING GROOVE CALIPERS



1179-300



1179-600

REFER TO PAGE 331 FOR DETAILS

THREAD GAGES FOR ROTARY SHOULDERED CONNECTIONS OF PETROLEUM EQUIPMENT



4177-23

REFER TO PAGE 332-333 FOR DETAILS

CASING, TUBING AND LINE PIPE THREAD GAGES OF PETROLEUM AND GAS EQUIPMENT



4178-21T

13

STANDARDS AND GAGE BLOCKS



Gage Blocks
Page 288-293



Caliper Inspection Gage Block Sets
Page 293-294



Micrometer Inspection Gage Block Sets
Page 295



Gage Block Holders
Page 295



Gage Block Accessories
Page 296



Cylinder Gage Blocks
Page 297



CMM Check Masters
Page 298



Caliper/Height Gage Checkers
Page 299



Angle Gage Blocks
Page 300



Taper Gages
Page 300



Pin Gages
Page 301-304



Pin Gage Handles
Page 304-306



Adjustable Snap Gages
Page 307



Setting Rings
Page 308



Plain Plug Gages
Page 309



Measuring Balls
Page 310-311



Threaded Hole Location Gages
Page 311-312



Thread Ring/Plug Gages
Page 313-333

GAGE BLOCKS

Accuracy according to ISO3650

Nominal length (mm)	Grade 0		Grade 1		Grade 2	
	Limit deviation of length	Tolerance for the variation in length	Limit deviation of length	Tolerance for the variation in length	Limit deviation of length	Tolerance for the variation in length
over 0.5 to 10	±0.12µm	0.10µm	±0.20µm	0.16µm	±0.45µm	0.30µm
over 10 to 25	±0.14µm	0.10µm	±0.30µm	0.16µm	±0.60µm	0.30µm
over 25 to 50	±0.20µm	0.10µm	±0.40µm	0.18µm	±0.80µm	0.30µm
over 50 to 75	±0.25µm	0.12µm	±0.50µm	0.18µm	±1.00µm	0.35µm
over 75 to 100	±0.30µm	0.12µm	±0.60µm	0.20µm	±1.20µm	0.35µm
over 100 to 150	±0.40µm	0.14µm	±0.80µm	0.20µm	±1.60µm	0.40µm
over 150 to 200	±0.50µm	0.16µm	±1.00µm	0.25µm	±2.00µm	0.40µm
over 200 to 250	±0.60µm	0.16µm	±1.20µm	0.25µm	±2.40µm	0.45µm
over 250 to 300	±0.70µm	0.18µm	±1.40µm	0.25µm	±2.80µm	0.50µm
over 300 to 400	±0.90µm	0.20µm	±1.80µm	0.30µm	±3.60µm	0.50µm
over 400 to 500	±1.10µm	0.25µm	±2.20µm	0.35µm	±4.40µm	0.60µm
over 500 to 600	±1.30µm	0.25µm	±2.60µm	0.40µm	±5.00µm	0.70µm
over 600 to 700	±1.50µm	0.30µm	±3.00µm	0.45µm	±6.00µm	0.70µm
over 700 to 800	±1.70µm	0.30µm	±3.40µm	0.50µm	±6.50µm	0.80µm
over 800 to 900	±1.90µm	0.35µm	±3.80µm	0.50µm	±7.50µm	0.90µm
over 900 to 1000	±2.00µm	0.40µm	±4.20µm	0.60µm	±8.00µm	1.00µm

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Grade and application

Grade	Application
0	To be used as basic standards in calibration laboratories by skilled inspection staff, to calibrate or set high accuracy measuring instruments, to calibrate gage blocks of grade 1 and 2.
1	To be used in inspection rooms, to check gages, inspect high accuracy parts and set measuring instruments.
2	To be used in workshops, to check production gages, set measuring instruments and mount tools.



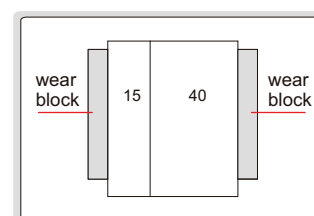
WEAR BLOCK SETS

- Protect the measuring surfaces of gage blocks from excessive wear
- Meet ISO3650
- Supplied with manufacturer inspection certificate

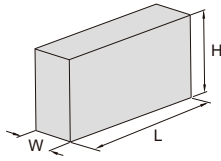


4111-2

Blocks per set	Size	Material	Code	
			Grade 0	Grade 1
2	1.0mm	ceramic	4111-1	4111-11
2	1.0mm	alloy steel	4111-1A	4111-11A
2	2.0mm	ceramic	4111-2	4111-12
2	2.0mm	alloy steel	4111-2A	4111-12A



CERAMIC GAGE BLOCK SETS



Dimension:

Size (L)	W	H
0.5 ≤ L ≤ 10mm	9mm	30mm
L > 10mm	9mm	35mm



4105-87

13

- Made of ceramic, extremely wear resistance and corrosion resistance, excellent dimension stability
- Meet ISO3650
- Supplied with manufacturer inspection certificate

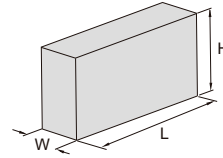
Blocks per set	Gage blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1
112	1.0005		1	4105-112	4105-1112
	1.001-1.009	0.001	9		
	1.01-1.49	0.01	49		
	0.5-24.5	0.5	49		
	25-100	25	4		
103	1.005		1	4105-103	4105-1103
	1.01-1.49	0.01	49		
	0.5-24.5	0.5	49		
	25-100	25	4		
88	1.0005		1	4105-88	4105-188
	1.001-1.009	0.001	9		
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-100	10	10		
87	1.001-1.009	0.001	9	4105-87	4105-187
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-100	10	10		
76	1.005		1	4105-76	4105-176
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-40	10	4		
	50-100	25	3		
56	0.5		1	4105-56	4105-156
	1.001-1.009	0.001	9		
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-24	1	24		
	25-100	25	4		

Blocks per set	Gage blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1
47	1.005		1	4105-47A	4105-147A
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-24	1	24		
	25-100	25	4		
47	1.005		1	4105-47	4105-147
	1.01-1.19	0.01	19		
	1.2-1.9	0.1	8		
	1-9	1	9		
	10-100	10	10		
46	1.001-1.009	0.001	9	4105-46	4105-146
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-9	1	9		
	10-100	10	10		
34	1.0005		1	4105-34	4105-134
	1.001-1.009	0.001	9		
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-5	1	5		
32	10		1	4105-32	4105-132
	1.005		1		
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-9	1	9		
	10-30	10	3		
	50		1		

INDIVIDUAL CERAMIC GAGE BLOCKS



4106-A80



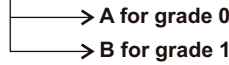
Dimension:

Size (L)	W	H
0.5 ≤ L ≤ 10mm	9mm	30mm
L > 10mm	9mm	35mm

- Grade 0 and 1 gage blocks are available
- Made of ceramic, extremely wear resistance and corrosion resistance
- Meet ISO3650
- Supplied with manufacturer inspection certificate

Code explanation:

4106-X□□□□□

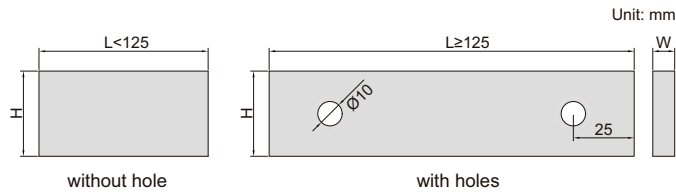


Code examples:

Size (L)	Grade	Code
0.5mm	0	4106-AD5
10mm	1	4106-B10

Size	Code	Size	Code	Size	Code	Size	Code
0.5mm	4106-XD5	1.23mm	4106-X1D23	3mm	4106-X3	17.6mm	4106-X17D6
1mm	4106-X1	1.24mm	4106-X1D24	3.5mm	4106-X3D5	18mm	4106-X18
1.0005mm	4106-X1D0005	1.25mm	4106-X1D25	4mm	4106-X4	18.5mm	4106-X18D5
1.001mm	4106-X1D001	1.26mm	4106-X1D26	4.5mm	4106-X4D5	19mm	4106-X19
1.002mm	4106-X1D002	1.27mm	4106-X1D27	5mm	4106-X5	19.5mm	4106-X19D5
1.003mm	4106-X1D003	1.28mm	4106-X1D28	5.1mm	4106-X5D1	20mm	4106-X20
1.004mm	4106-X1D004	1.29mm	4106-X1D29	5.5mm	4106-X5D5	20.2mm	4106-X20D2
1.005mm	4106-X1D005	1.3mm	4106-X1D3	6mm	4106-X6	20.5mm	4106-X20D5
1.006mm	4106-X1D006	1.31mm	4106-X1D31	6.5mm	4106-X6D5	21mm	4106-X21
1.007mm	4106-X1D007	1.32mm	4106-X1D32	7mm	4106-X7	21.5mm	4106-X21D5
1.008mm	4106-X1D008	1.33mm	4106-X1D33	7.5mm	4106-X7D5	22mm	4106-X22
1.009mm	4106-X1D009	1.34mm	4106-X1D34	7.7mm	4106-X7D7	22.5mm	4106-X22D5
1.01mm	4106-X1D01	1.35mm	4106-X1D35	8mm	4106-X8	22.8mm	4106-X22D8
1.02mm	4106-X1D02	1.36mm	4106-X1D36	8.5mm	4106-X8D5	23mm	4106-X23
1.03mm	4106-X1D03	1.37mm	4106-X1D37	9mm	4106-X9	23.5mm	4106-X23D5
1.04mm	4106-X1D04	1.38mm	4106-X1D38	9.5mm	4106-X9D5	24mm	4106-X24
1.05mm	4106-X1D05	1.39mm	4106-X1D39	10mm	4106-X10	24.5mm	4106-X24D5
1.06mm	4106-X1D06	1.4mm	4106-X1D4	10.3mm	4106-X10D3	25mm	4106-X25
1.07mm	4106-X1D07	1.41mm	4106-X1D41	10.5mm	4106-X10D5	30mm	4106-X30
1.08mm	4106-X1D08	1.42mm	4106-X1D42	11mm	4106-X11	40mm	4106-X40
1.09mm	4106-X1D09	1.43mm	4106-X1D43	11.5mm	4106-X11D5	41.3mm	4106-X41D3
1.1mm	4106-X1D1	1.44mm	4106-X1D44	12mm	4106-X12	50mm	4106-X50
1.11mm	4106-X1D11	1.45mm	4106-X1D45	12.5mm	4106-X12D5	60mm	4106-X60
1.12mm	4106-X1D12	1.46mm	4106-X1D46	12.9mm	4106-X12D9	70mm	4106-X70
1.13mm	4106-X1D13	1.47mm	4106-X1D47	13mm	4106-X13	75mm	4106-X75
1.14mm	4106-X1D14	1.48mm	4106-X1D48	13.5mm	4106-X13D5	80mm	4106-X80
1.15mm	4106-X1D15	1.49mm	4106-X1D49	14mm	4106-X14	90mm	4106-X90
1.16mm	4106-X1D16	1.5mm	4106-X1D5	14.5mm	4106-X14D5	100mm	4106-X100
1.17mm	4106-X1D17	1.6mm	4106-X1D6	15mm	4106-X15	125mm	4106-X125
1.18mm	4106-X1D18	1.7mm	4106-X1D7	15.5mm	4106-X15D5	131.4mm	4106-X131D4
1.19mm	4106-X1D19	1.8mm	4106-X1D8	16mm	4106-X16	150mm	4106-X150
1.2mm	4106-X1D2	1.9mm	4106-X1D9	16.5mm	4106-X16D5		
1.21mm	4106-X1D21	2mm	4106-X2	17mm	4106-X17		
1.22mm	4106-X1D22	2.5mm	4106-X2D5	17.5mm	4106-X17D5		

STEEL GAGE BLOCK SETS



Dimension:

Size (L)	W	H
0.5 ≤ L ≤ 10mm	9mm	30mm
L > 10mm	9mm	35mm

Code example:
"-122" stands for "4100-122"



4100-87

- Made of alloy steel
- Meet ISO3650
- Gage blocks ≥ 125mm have clamping holes
- Supplied with manufacturer inspection certificate

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Blocks per set	Gage blocks included in set			Code (4100)		
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1	Grade 2
122	1.0005		1			
	1.001-1.009	0.001	9			
	1.01-1.49	0.01	49			
	1.6-1.9	0.1	4	-122	-1122	-2122
	0.5-24.5	0.5	49			
	30-100	10	8			
	25-75	50	2			
	112	1.0005		1		
1.001-1.009		0.001	9			
1.01-1.49		0.01	49	-112	-1112	-2112
0.5-24.5		0.5	49			
25-100		25	4			
103	1.005		1			
	1.01-1.49	0.01	49	-103	-1103	-2103
	0.5-24.5	0.5	49			
	25-100	25	4			
88	1.0005		1			
	1.001-1.009	0.001	9			
	1.01-1.49	0.01	49	-88	-188	-288
	0.5-9.5	0.5	19			
	10-100	10	10			
87	1.001-1.009	0.001	9			
	1.01-1.49	0.01	49	-87	-187	-287
	0.5-9.5	0.5	19			
	10-100	10	10			
83	0.5		1			
	1		1			
	1.005		1			
	1.01-1.49	0.01	49	-83	-183	-283
	1.5-1.9	0.1	5			
	2-9.5	0.5	16			
10-100	10	10				
76	1.005		1			
	1.01-1.49	0.01	49			
	0.5-9.5	0.5	19	-76	-176	-276
	10-40	10	4			
	50-100	25	3			

Blocks per set	Gage blocks included in set			Code (4100)		
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1	Grade 2
56	0.5		1			
	1.001-1.009	0.001	9			
	1.01-1.09	0.01	9	-56	-156	-256
	1.1-1.9	0.1	9			
	1-24	1	24			
	25-100	25	4			
	1.005		1			
47	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9	-47A	-147A	-247A
	1-24	1	24			
	25-100	25	4			
47	1.005		1			
	1.01-1.19	0.01	19			
	1.2-1.9	0.1	8	-47	-147	-247
	1-9	1	9			
	10-100	10	10			
46	1.001-1.009	0.001	9			
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9	-46	-146	-246
	1-9	1	9			
	10-100	10	10			
	1.0005		1			
34	1.001-1.009	0.001	9			
	1.01-1.09	0.01	9	-34	-134	-234
	1.1-1.9	0.1	9			
	1-5	1	5			
	10		1			
32	1.005		1			
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-9	1	9	-32	-132	-232
	10-30	10	3			
	50		1			
9	1.001-1.009	0.001	9	-9	-19	-29
9	0.991-0.999	0.001	9	-9A	-19A	-29A
8	125-175	25	3			
	200-250	50	2	-8	-18	-28
	300-500	100	3			

CUSTOM-MADE
CAN SUPPLY ANY SIZES FROM
0.5 TO 1000MM, SUCH AS 72.672MM



INDIVIDUAL STEEL GAGE BLOCKS

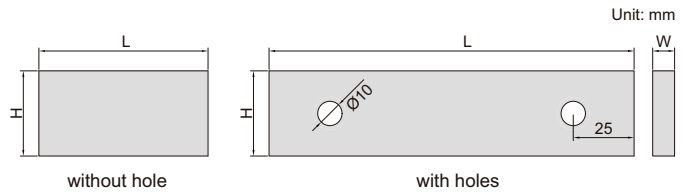
- Grade 0, 1 and 2 gage blocks are available
- Made of alloy steel
- Meet ISO3650
- Gage blocks with clamping holes: 125, 150, 175, 200, 250, 300, 400, 500, 600, 700, 800, 900, 1000mm
- Supplied with manufacturer inspection certificate



4101-A70



4101-A200



Code explanation:

4101-X□□□□□
 → A for grade 0
 → B for grade 1
 → C for grade 2

Code examples:

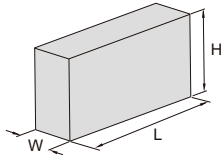
Size (L)	Grade	Code
0.5mm	0	4101-AD5
1mm	1	4101-B1
10.5mm	2	4101-C10D5

Dimension:

Size (L)	W	H
0.5 ≤ L ≤ 10mm	9mm	30mm
L > 10mm	9mm	35mm

Size	Code	Size	Code	Size	Code	Size	Code
0.5mm	4101-XD5	1.19mm	4101-X1D19	3.5mm	4101-X3D5	20.2mm	4101-X20D2
0.991mm	4101-XD991	1.2mm	4101-X1D2	4mm	4101-X4	20.5mm	4101-X20D5
0.992mm	4101-XD992	1.21mm	4101-X1D21	4.5mm	4101-X4D5	21mm	4101-X21
0.993mm	4101-XD993	1.22mm	4101-X1D22	5mm	4101-X5	21.5mm	4101-X21D5
0.994mm	4101-XD994	1.23mm	4101-X1D23	5.1mm	4101-X5D1	22mm	4101-X22
0.995mm	4101-XD995	1.24mm	4101-X1D24	5.5mm	4101-X5D5	22.5mm	4101-X22D5
0.996mm	4101-XD996	1.25mm	4101-X1D25	6mm	4101-X6	22.8mm	4101-X22D8
0.997mm	4101-XD997	1.26mm	4101-X1D26	6.5mm	4101-X6D5	23mm	4101-X23
0.998mm	4101-XD998	1.27mm	4101-X1D27	7mm	4101-X7	23.5mm	4101-X23D5
0.999mm	4101-XD999	1.28mm	4101-X1D28	7.5mm	4101-X7D5	24mm	4101-X24
1mm	4101-X1	1.29mm	4101-X1D29	7.7mm	4101-X7D7	24.5mm	4101-X24D5
1.0005mm	4101-X1D0005	1.3mm	4101-X1D3	8mm	4101-X8	25mm	4101-X25
1.001mm	4101-X1D001	1.31mm	4101-X1D31	8.5mm	4101-X8D5	30mm	4101-X30
1.002mm	4101-X1D002	1.32mm	4101-X1D32	9mm	4101-X9	35mm	4101-X35
1.003mm	4101-X1D003	1.33mm	4101-X1D33	9.5mm	4101-X9D5	40mm	4101-X40
1.004mm	4101-X1D004	1.34mm	4101-X1D34	10mm	4101-X10	41.3mm	4101-X41D3
1.005mm	4101-X1D005	1.35mm	4101-X1D35	10.3mm	4101-X10D3	45mm	4101-X45
1.006mm	4101-X1D006	1.36mm	4101-X1D36	10.5mm	4101-X10D5	50mm	4101-X50
1.007mm	4101-X1D007	1.37mm	4101-X1D37	11mm	4101-X11	60mm	4101-X60
1.008mm	4101-X1D008	1.38mm	4101-X1D38	11.5mm	4101-X11D5	70mm	4101-X70
1.009mm	4101-X1D009	1.39mm	4101-X1D39	12mm	4101-X12	75mm	4101-X75
1.01mm	4101-X1D01	1.4mm	4101-X1D4	12.5mm	4101-X12D5	80mm	4101-X80
1.02mm	4101-X1D02	1.41mm	4101-X1D41	12.9mm	4101-X12D9	90mm	4101-X90
1.03mm	4101-X1D03	1.42mm	4101-X1D42	13mm	4101-X13	100mm	4101-X100
1.04mm	4101-X1D04	1.43mm	4101-X1D43	13.5mm	4101-X13D5	125mm	4101-X125
1.05mm	4101-X1D05	1.44mm	4101-X1D44	14mm	4101-X14	131.4mm	4101-X131D4
1.06mm	4101-X1D06	1.45mm	4101-X1D45	14.5mm	4101-X14D5	150mm	4101-X150
1.07mm	4101-X1D07	1.46mm	4101-X1D46	15mm	4101-X15	175mm	4101-X175
1.08mm	4101-X1D08	1.47mm	4101-X1D47	15.5mm	4101-X15D5	200mm	4101-X200
1.09mm	4101-X1D09	1.48mm	4101-X1D48	16mm	4101-X16	250mm	4101-X250
1.1mm	4101-X1D1	1.49mm	4101-X1D49	16.5mm	4101-X16D5	300mm	4101-X300
1.11mm	4101-X1D11	1.5mm	4101-X1D5	17mm	4101-X17	400mm	4101-X400
1.12mm	4101-X1D12	1.6mm	4101-X1D6	17.5mm	4101-X17D5	500mm	4101-X500
1.13mm	4101-X1D13	1.7mm	4101-X1D7	17.6mm	4101-X17D6	600mm	4101-X600
1.14mm	4101-X1D14	1.8mm	4101-X1D8	18mm	4101-X18	700mm	4101-X700
1.15mm	4101-X1D15	1.9mm	4101-X1D9	18.5mm	4101-X18D5	750mm	4101-X750
1.16mm	4101-X1D16	2mm	4101-X2	19mm	4101-X19	800mm	4101-X800
1.17mm	4101-X1D17	2.5mm	4101-X2D5	19.5mm	4101-X19D5	900mm	4101-X900
1.18mm	4101-X1D18	3mm	4101-X3	20mm	4101-X20	1000mm	4101-X1000

CARBIDE GAGE BLOCK SETS



Dimension:

Size (L)	W	H
0.5 ≤ L ≤ 10mm	9mm	30mm
L > 10mm	9mm	35mm

- Made of carbide, extremely wear resistance and corrosion resistance, excellent dimension stability
- Meet ISO3650
- Supplied with manufacturer inspection certificate



4164-32

Blocks per set	Gage blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1
122	1.0005		1	4164-122	4164-1122
	1.001-1.009	0.001	9		
	1.01-1.49	0.01	49		
	1.6-1.9	0.1	4		
	0.5-24.5	0.5	49		
	30-100	10	8		
	25-75	50	2		
112	1.0005		1	4164-112	4164-1112
	1.001-1.009	0.001	9		
	1.01-1.49	0.01	49		
	0.5-24.5	0.5	49		
	25-100	25	4		
103	1.005		1	4164-103	4164-1103
	1.01-1.49	0.01	49		
	0.5-24.5	0.5	49		
	25-100	25	4		
87	1.001-1.009	0.001	9	4164-87	4164-187
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-100	10	10		
83	0.5		1	4164-83	4164-183
	1		1		
	1.005		1		
	1.01-1.49	0.01	49		
	1.5-1.9	0.1	5		
	2-9.5	0.5	16		
	10-100	10	10		

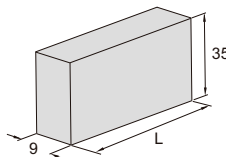
Blocks per set	Gage blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1
76	1.005		1	4164-76	4164-176
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-40	10	4		
	50-100	25	3		
47	1.005		1	4164-47A	4164-147A
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-24	1	24		
47	25-100	25	4	4164-47	4164-147
	1.005		1		
	1.01-1.19	0.01	19		
	1.2-1.9	0.1	8		
46	1-9	1	9	4164-46	4164-146
	10-100	10	10		
	1.001-1.009	0.001	9		
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
32	1-9	1	9	4164-32	4164-132
	10-30	10	3		
	1.005		1		
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	50	10	1		

13

CALIPER INSPECTION GAGE BLOCK SET



Unit: mm



- Meet ISO3650/grade 2
- Supplied with manufacturer inspection certificate

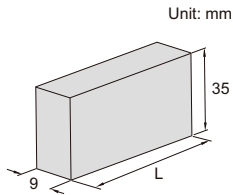


4108-3005

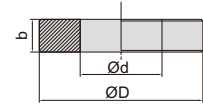
Code	Material	Gage blocks included in set (L)	Applicable calipers
4108-3005	alloy steel	30, 41.3, 131.4, 243.5, 281.2	0-150, 0-200, 0-300



CALIPER INSPECTION GAGE BLOCK AND RING GAGE SETS



4176-30



Ring gage sizes:

diameter (Ød)*	b	ØD
Ø4mm	5mm	22mm
Ø25mm	14mm	53mm

* The size of the ring gage when supplied may have deviation. For example, the size Ø25mm may be 24.996mm

- Gage blocks meet ISO3650
Ring gages meet DIN2250-1:2008
- Supplied with manufacturer inspection certificate

Grade of gage blocks: 2

(mm)

Code	Material	Gage blocks included in set (L)	Ring gages included in set (Ød)	Applicable calipers
4176-30	alloy steel	30, 41.3, 131.4	4, 25	0-150

Grade of gage blocks: 1

(mm)

Code	Material	Gage blocks included in set (L)	Ring gages included in set (Ød)	Applicable calipers
4176-301	alloy steel	30, 41.3, 131.4	4, 25	0-150

13

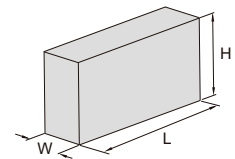


MICROMETER INSPECTION GAGE BLOCK SETS

- One piece of optical flat is included in 4107-10 and 4107-101
- Meet ISO3650/grade 0
- Supplied with manufacturer inspection certificate



4107-10



Dimension:

Size (L)	W	H
0.5 ≤ L ≤ 10mm	9mm	30mm
L > 10mm	9mm	35mm

Code	Material	Gage blocks included in set (mm)	Applicable micrometer	Optical flat
4107-10	ceramic	2.5, 5.1, 7.7, 10.3, 12.9, 15, 17.6, 20.2, 22.8, 25, optical flat	0-25mm	included
4107-101	alloy steel	2.5, 5.1, 7.7, 10.3, 12.9, 15, 17.6, 20.2, 22.8, 25, optical flat	0-25mm	included
4107-112	alloy steel	25, 27.5, 30.1, 32.7, 35.3, 37.9, 40, 42.6, 45.2, 47.8, 50	25-50mm	not included
4107-113	alloy steel	50, 52.5, 55.1, 57.7, 60.3, 62.9, 65, 67.6, 70.2, 72.8, 75	50-75mm	not included
4107-114	alloy steel	75, 77.5, 80.1, 82.7, 85.3, 87.9, 90, 92.6, 95.2, 97.8, 100	75-100mm	not included
4107-115	alloy steel	5.12, 10.24, 15.36, 21.5, 25, 30.12, 35.24, 40.36, 46.5, 50, 55.12, 60.24, 65.36, 71.5, 75, 80.12, 85.24, 90.36, 96.5, 100	0-100mm	not included

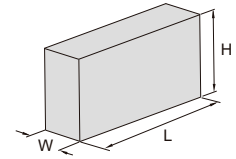
MICROMETER INSPECTION GAGE BLOCK SET



application



4160-10



Dimension:

Size (L)	W	H
0.5 ≤ L ≤ 10mm	9mm	30mm
L > 10mm	9mm	35mm

- Meet ISO3650/grade 0
- One piece of optical flat is included (size Ø30x12mm)
- Supplied with manufacturer inspection certificate

optical flat (included)



Code	Material	Gage blocks included in set	Applicable micrometer
4160-10	alloy steel	2.5mm, 5.1mm, 7.7mm, 10.3mm, 12.9mm, 15mm, 17.6mm, 20.2mm, 22.8mm, 25mm	0-25mm

13

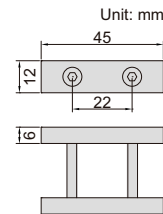
GAGE BLOCK HOLDERS

- Made of aluminum
- To be used with individual steel gage blocks (code 4101) as Go and No-Go gage

Code	Applicable gage block size
6883-1	1.5-5mm
6883-2	5-10mm
6883-3	10-15mm
6883-4	15-20mm
6883-5	20-25mm



6883-4



to be used as Go and No-Go gage



GAGE BLOCK HOLDER

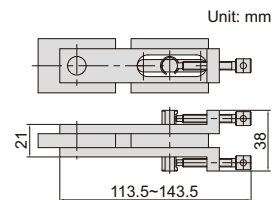


- For gage blocks over 125mm with clamping holes
- Optional accessory: gage block holder accessory, gage block accessory (code 6881)

Code
6886-1



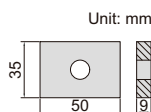
6886-1



GAGE BLOCK HOLDER ACCESSORY

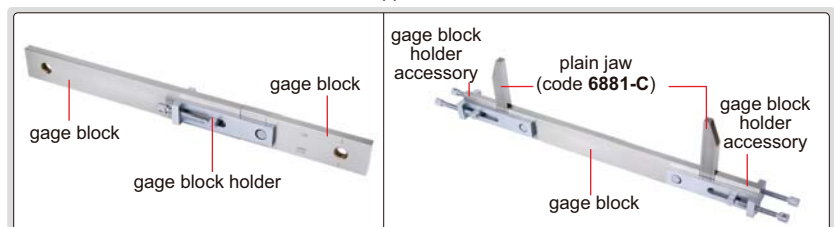


6886-A

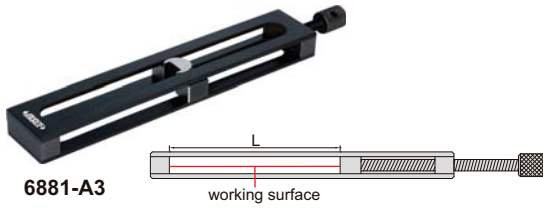


Code
6886-A

application



GAGE BLOCK ACCESSORIES

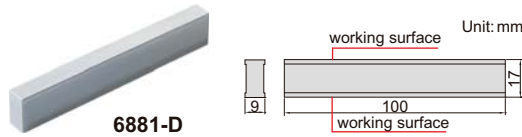


6881-A3

Code	Name	Clamping range* (L)
6881-A1	holder	0-25mm
6881-A2	holder	25-50mm
6881-A3	holder	50-100mm
6881-A4	holder	100-200mm
6881-A5	holder	200-300mm
6881-A6**	holder	300-500mm
6881-A7**	holder	500-750mm
6881-A8**	holder	750-1000mm

*The actual clamping range should deduct the width of jaws

**Not suitable for base 6881-B



6881-D

Code	Name	Remark
6881-D	parallel jaw	made of carbide



6881-S17

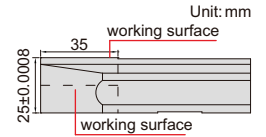
GAGE BLOCK ACCESSORY SET

Code	Remark
6881-S17	17 pcs (including below items)

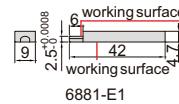
holder, 0-25mm (code 6881-A1)	1 pc
holder, 25-50mm (code 6881-A2)	1 pc
holder, 50-100mm (code 6881-A3)	1 pc
holder, 100-200mm (code 6881-A4)	1 pc
holder, 200-300mm (code 6881-A5)	1 pc
base (code 6881-B)	1 pc
plain jaw (code 6881-C)	1 pair
parallel jaw (code 6881-D)	1 pc
half round jaw, 2.5mm (code 6881-E1)	1 pair
half round jaw, 5.0mm (code 6881-E2)	1 pair
half round jaw, 6.0mm (code 6881-E3)	1 pair
scraper (code 6881-F)	1 pc
centre point (code 6881-G)	1 pc



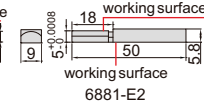
6881-B



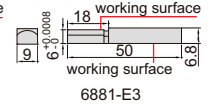
6881-E2



6881-E1



6881-E2

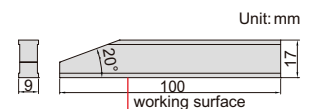


6881-E3

Code	Name	Size	Remark
6881-E1	half round jaw	2.5mm	made of carbide, supplied in pair
6881-E2	half round jaw	5.0mm	made of carbide, supplied in pair
6881-E3	half round jaw	6.0mm	made of carbide, supplied in pair



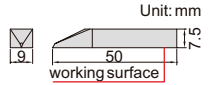
6881-C



Code	Name	Remark
6881-C	plain jaw	made of carbide, supplied in pair



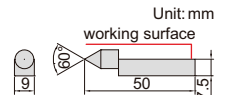
6881-F



Code	Name	Remark
6881-F	scraper	made of carbide



6881-G



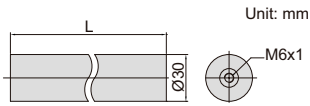
Code	Name	Remark
6881-G	centre point	the tip is made of carbide

application

<p>(plain jaw+holder) set zero for bore gage and inside micrometers</p>	<p>(base+holder+scraper) measure height or scribe</p>	<p>(half round jaw+holder) measure inside diameter</p>
<p>(scraper+centre point+holder) scribe circle</p>	<p>(plain jaw+parallel jaw+holder) Go and No Go inspection</p>	

CYLINDER GAGE BLOCKS

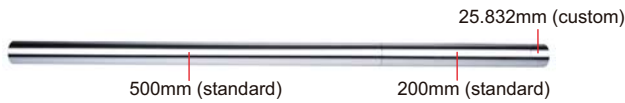
CUSTOM-MADE
CAN SUPPLY ANY LENGTH, SUCH AS 80.672MM



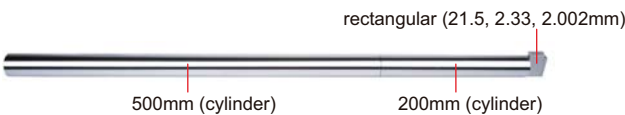
- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Meet ISO3650 grade 1
- Can be connected with M6x1 screw and combined to any sizes up to 4m

can be combined to any sizes up to 4m

Combination 1: combined by several standard size cylinder gage blocks and one custom size cylinder gage block
For example: 500 (standard) + 200 (standard) + 25.832 (custom)=725.832mm
Note: in order to reduce cost, custom size should be within 100mm



Combination 2: combined by standard size cylinder gage blocks and rectangular gage blocks
For example: 500 (cylinder) + 200 (cylinder) + 21.5 (rectangular) + 2.33 (rectangular) + 2.002 (rectangular)=725.832mm



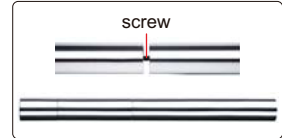
Code	Length (L)
4001-25 *	25mm
4001-50 *	50mm
4001-75 *	75mm
4001-100 *	100mm
4001-200 *	200mm
4001-300 *	300mm
4001-400 *	400mm
4001-500 *	500mm

* Supplied with manufacturer inspection certificate

high stability in vertical position,
suitable for checking height gages

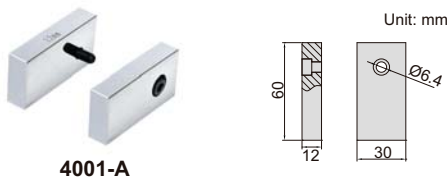


connected with M6x1mm screw



13

INTERNAL BLOCKS

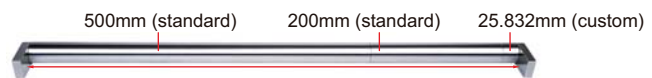


4001-A

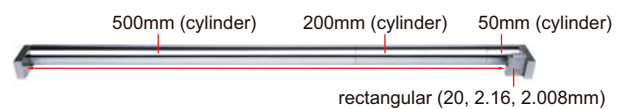
- Can be attached to cylinder and rectangular gage blocks
- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Supplied in a matched pair

Code	Size	Flatness
4001-A	12mm	0.2µm

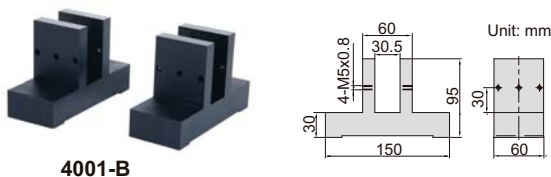
Combination 1: combined by several standard size cylinder gage blocks and one custom size cylinder gage block
For example: 500 (standard) + 200 (standard) + 25.832 (custom)=725.832mm
Note: in order to reduce cost, custom size should be within 100mm



Combination 2: combined by standard size cylinder gage blocks and rectangular gage blocks
For example: 500 (cylinder) + 200 (cylinder) + 50 (rectangular) - 20 (rectangular) - 2.16 (rectangular) - 2.008 (rectangular)=725.832mm



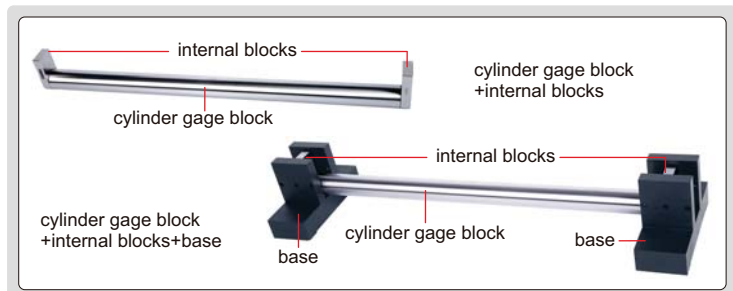
BASE



4001-B

Code	Remark
4001-B	supplied in pair

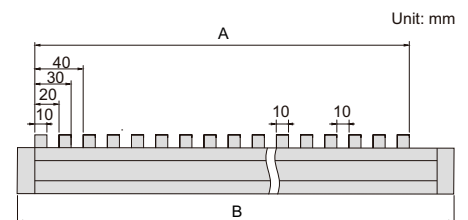
working with base





6882-600A

- To check the accuracy of table movements of machine tools and calibrate CMM
- Horizontal use and vertical use
- Constructed with ceramic gage blocks
- Can be used with stand
- Optional accessory: stand (code 6877)



Standard accuracy

Code	Size	Step	A	B
6882-300A *	0-300mm	10mm	310mm	350mm
6882-400A *	0-400mm	10mm	410mm	450mm
6882-500A *	0-500mm	10mm	510mm	550mm
6882-600A *	0-600mm	10mm	610mm	650mm
6882-1000A *	0-1000mm	10mm	1010mm	1050mm

High accuracy

Code	Size	Step	A	B
6882-300H *	0-300mm	10mm	310mm	350mm
6882-400H *	0-400mm	10mm	410mm	450mm
6882-500H *	0-500mm	10mm	510mm	550mm
6882-600H *	0-600mm	10mm	610mm	650mm
6882-1000H *	0-1000mm	10mm	1010mm	1050mm

Accuracy

Range (mm)	Standard accuracy	High accuracy
≤300	±1.3µm	±0.8µm
>300, ≤400	±1.6µm	±1.0µm
>400, ≤500	±2.0µm	±1.0µm
>500, ≤600	±2.5µm	±1.0µm
>600, ≤800	±3.0µm	±2.5µm
>800, ≤1000	±4.0µm	±2.5µm

* Supplied with manufacturer inspection certificate

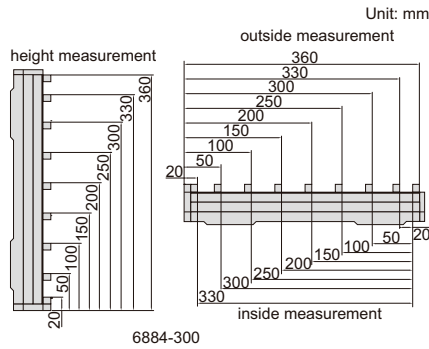


horizontal use



can be used with stand

CALIPER/HEIGHT GAGE CHECKERS

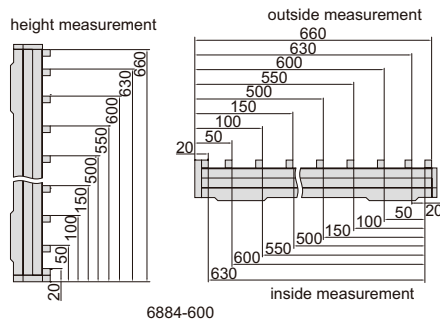


horizontal use

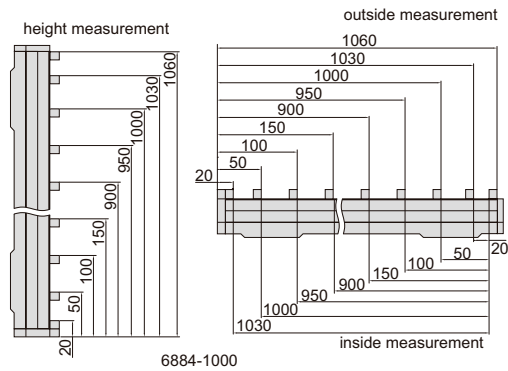


vertical use

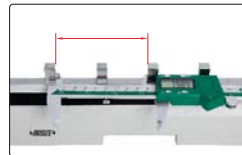
6884-300



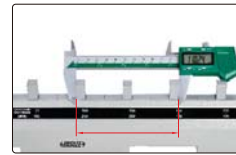
- To check calipers and height gages
- Constructed with steel gage blocks



check upper jaws of calipers



check lower jaws of calipers



check height gages



Code	Size	Range of inside measurement	Range of outside measurement	Range of height measurement	Accuracy (mm)
6884-300*	0-300mm	20, 50, 100, 150, 200, 250, 300, 330	20, 50, 100, 150, 200, 250, 300, 330, 360	20, 50, 100, 150, 200, 250, 300, 330, 360	±3µm
6884-600*	0-600mm	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 630	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 630, 660	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 630, 660	±5µm
6884-1000*	0-1000mm	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1030	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1030, 1060	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1030, 1060	±7µm

*Supplied with manufacturer inspection certificate

INSIDE MICROMETER ACCESSORY

- Supplied with a pair of 5mm carbide gage blocks

Code

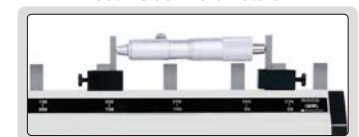
6884-A10*

*Supplied with manufacturer inspection certificate



6884-A10

set inside micrometers

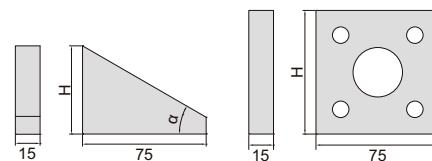




4002-15

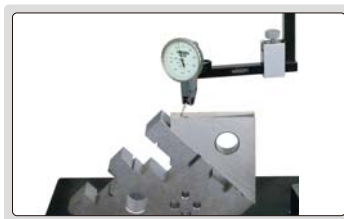
ANGLE GAGE BLOCKS

Unit: mm

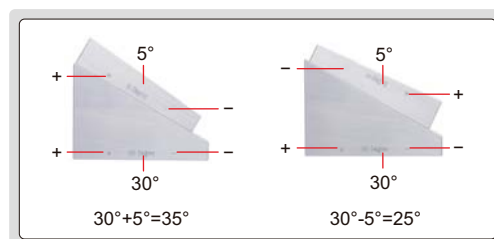


inspect angle

set angle of plate



combination



Individual

Code	Angle (α)	H (mm)
4002-A1 *	1°	11.5
4002-A3 *	3°	14.0
4002-A5 *	5°	16.5
4002-A9 *	9°	22.0
4002-A15 *	15°	30.5
4002-A27 *	27°	48.0
4002-A30 *	30°	53.5
4002-A41 *	41°	75.0
4002-A45 *	45°	84.0
4002-B1 *	1'	10.0
4002-B3 *	3'	10.0
4002-B5 *	5'	10.0
4002-B9 *	9'	10.0
4002-B20 *	20'	10.0
4002-B27 *	27'	10.0
4002-B30 *	30'	10.0
4002-C6 *	6"	10.0
4002-C12 *	12"	10.0
4002-C18 *	18"	10.0
4002-C30 *	30"	10.0
4002-D *	90°/90°/90°/90°	75.0

- Accuracy: $\pm 2''$
- To inspect protractor, taper gage, index plate, index head and goniometer, can also be used to set angle
- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Can be combined to any angle with interval 6 seconds after combination (6", 12", 18", ... , 360°)

Set

Code	Angle (α)	Total quantity
4002-13 *	1°, 3°, 9°, 27°, 41°, 1', 3', 9', 27', 6", 18", 30", 90°/90°/90°/90°	13
4002-15 *	1°, 3°, 5°, 15°, 30°, 45°, 1', 3', 5', 20', 30', 6", 12", 30", 90°/90°/90°/90°	15

* Supplied with manufacturer inspection certificate

Code	Taper
6328-BT30	BT30
6328-BT40	BT40
6328-BT45	BT45
6328-BT50	BT50
6328-BT55	BT55

Code	Taper
6328-BT60	BT60
6328-BT65	BT65
6328-BT70	BT70
6328-BT75	BT75
6328-BT80	BT80



6328-BT40

TAPER RING GAGES

Code	Taper
6329-BT30	BT30
6329-BT40	BT40
6329-BT45	BT45
6329-BT50	BT50
6329-BT55	BT55

Code	Taper
6329-BT60	BT60
6329-BT65	BT65
6329-BT70	BT70
6329-BT75	BT75
6329-BT80	BT80



6329-BT40

TAPER PLUG GAGES

CARBIDE PIN GAGE SETS

- Meet DIN2269, grade 1
- Made of carbide
- Hardness HRA90-90.5
- Diameter accuracy: $\pm 1\mu\text{m}$



4194-10D

Code	Diameter $\varnothing d$ (mm)	Step	Pin gages per set
4194-1S	0.30, 0.31, 0.32, ..., 1.00	0.01mm	71
4194-2S	1.00, 1.01, 1.02, ..., 2.00	0.01mm	101
4194-3S	2.00, 2.01, 2.02, ..., 3.00	0.01mm	101
4194-4S	3.00, 3.01, 3.02, ..., 4.00	0.01mm	101
4194-5S	4.00, 4.01, 4.02, ..., 5.00	0.01mm	101
4194-6S	5.00, 5.01, 5.02, ..., 6.00	0.01mm	101
4194-7S	6.00, 6.01, 6.02, ..., 7.00	0.01mm	101
4194-8S	7.00, 7.01, 7.02, ..., 8.00	0.01mm	101
4194-9S	8.00, 8.01, 8.02, ..., 9.00	0.01mm	101
4194-10S	9.00, 9.01, 9.02, ..., 10.00	0.01mm	101
4194-10D	10.00, 10.01, 10.02, ..., 10.50	0.01mm	51
4194-11	10.50, 10.51, 10.52, ..., 11.00	0.01mm	51
4194-11D	11.00, 11.01, 11.02, ..., 11.50	0.01mm	51
4194-12	11.50, 11.51, 11.52, ..., 12.00	0.01mm	51
4194-12D	12.00, 12.01, 12.02, ..., 12.50	0.01mm	51
4194-13	12.50, 12.51, 12.52, ..., 13.00	0.01mm	51
4194-13D	13.00, 13.01, 13.02, ..., 13.50	0.01mm	51
4194-14	13.50, 13.51, 13.52, ..., 14.00	0.01mm	51
4194-14D	14.00, 14.01, 14.02, ..., 14.50	0.01mm	51
4194-15	14.50, 14.51, 14.52, ..., 15.00	0.01mm	51

Unit: mm



13

INDIVIDUAL CARBIDE PIN GAGES

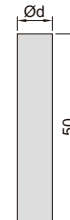


- Meet DIN2269, grade 1
- Diameter range: $\varnothing 0.300\text{--}\varnothing 30.000\text{mm}$ with three decimal, for example 0.311mm, 5.562mm, 16.298mm
- Diameter accuracy: $\pm 1\mu\text{m}$
- Made of carbide
- Hardness HRA90-90.5
- Optional accessory: wooden box (code 7340)



4193-8D015

Unit: mm



Ordering examples:

Diameter	Code
0.311mm	4193-0D311
5.562mm	4193-5D562
16.298mm	4193-16D298

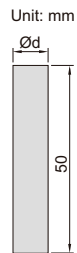
Note: "D" stands for "."

Code	Diameter range $\varnothing d$ (mm)
4193-□□□□*	0.300~30.000

*Supplied with manufacturer inspection certificate

STEEL PIN GAGE SETS

- Meet DIN2269, grade 1
- Made of alloy steel
- Hardness HRC62-65
- Diameter accuracy: $\pm 1\mu\text{m}$



4166-10

Code	Diameter Ød (mm)	Step	Pin gages per set
4166-2S	1.00, 1.01, 1.02, ..., 2.00	0.01mm	101
4166-3S	2.00, 2.01, 2.02, ..., 3.00	0.01mm	101
4166-4S	3.00, 3.01, 3.02, ..., 4.00	0.01mm	101
4166-5S	4.00, 4.01, 4.02, ..., 5.00	0.01mm	101
4166-6S	5.00, 5.01, 5.02, ..., 6.00	0.01mm	101
4166-7S	6.00, 6.01, 6.02, ..., 7.00	0.01mm	101
4166-8S	7.00, 7.01, 7.02, ..., 8.00	0.01mm	101
4166-9S	8.00, 8.01, 8.02, ..., 9.00	0.01mm	101
4166-10S	9.00, 9.01, 9.02, ..., 10.00	0.01mm	101

Code	Diameter Ød (mm)	Step	Pin gages per set
4166-411	1.0, 1.1, 1.2, ..., 5.0	0.1mm	41
4166-511	5.0, 5.1, 5.2, ..., 10.0	0.1mm	51
4166-512	10.0, 10.1, 10.2, ..., 15.0	0.1mm	51
4166-513	15.0, 15.1, 15.2, ..., 20.0	0.1mm	51

Code	Diameter Ød (mm)	Step	Pin gages per set
4166-0D	0.20, 0.21, 0.22, ..., 0.50	0.01mm	31
4166-1	0.50, 0.51, 0.52, ..., 1.00	0.01mm	51
4166-1D	1.00, 1.01, 1.02, ..., 1.50	0.01mm	51
4166-2	1.50, 1.51, 1.52, ..., 2.00	0.01mm	51
4166-2D	2.00, 2.01, 2.02, ..., 2.50	0.01mm	51
4166-3	2.50, 2.51, 2.52, ..., 3.00	0.01mm	51
4166-3D	3.00, 3.01, 3.02, ..., 3.50	0.01mm	51
4166-4	3.50, 3.51, 3.52, ..., 4.00	0.01mm	51
4166-4D	4.00, 4.01, 4.02, ..., 4.50	0.01mm	51
4166-5	4.50, 4.51, 4.52, ..., 5.00	0.01mm	51
4166-5D	5.00, 5.01, 5.02, ..., 5.50	0.01mm	51
4166-6	5.50, 5.51, 5.52, ..., 6.00	0.01mm	51
4166-6D	6.00, 6.01, 6.02, ..., 6.50	0.01mm	51
4166-7	6.50, 6.51, 6.52, ..., 7.00	0.01mm	51
4166-7D	7.00, 7.01, 7.02, ..., 7.50	0.01mm	51
4166-8	7.50, 7.51, 7.52, ..., 8.00	0.01mm	51
4166-8D	8.00, 8.01, 8.02, ..., 8.50	0.01mm	51
4166-9	8.50, 8.51, 8.52, ..., 9.00	0.01mm	51
4166-9D	9.00, 9.01, 9.02, ..., 9.50	0.01mm	51
4166-10	9.50, 9.51, 9.52, ..., 10.00	0.01mm	51

Code	Diameter Ød (mm)	Step	Pin gages per set
4166-10D	10.00, 10.01, 10.02, ..., 10.50	0.01mm	51
4166-11	10.50, 10.51, 10.52, ..., 11.00	0.01mm	51
4166-11D	11.00, 11.01, 11.02, ..., 11.50	0.01mm	51
4166-12	11.50, 11.51, 11.52, ..., 12.00	0.01mm	51
4166-12D	12.00, 12.01, 12.02, ..., 12.50	0.01mm	51
4166-13	12.50, 12.51, 12.52, ..., 13.00	0.01mm	51
4166-13D	13.00, 13.01, 13.02, ..., 13.50	0.01mm	51
4166-14	13.50, 13.51, 13.52, ..., 14.00	0.01mm	51
4166-14D	14.00, 14.01, 14.02, ..., 14.50	0.01mm	51
4166-15	14.50, 14.51, 14.52, ..., 15.00	0.01mm	51
4166-15D	15.00, 15.01, 15.02, ..., 15.50	0.01mm	51
4166-16	15.50, 15.51, 15.52, ..., 16.00	0.01mm	51
4166-16D	16.00, 16.01, 16.02, ..., 16.50	0.01mm	51
4166-17	16.50, 16.51, 16.52, ..., 17.00	0.01mm	51
4166-17D	17.00, 17.01, 17.02, ..., 17.50	0.01mm	51
4166-18	17.50, 17.51, 17.52, ..., 18.00	0.01mm	51
4166-18D	18.00, 18.01, 18.02, ..., 18.50	0.01mm	51
4166-19	18.50, 18.51, 18.52, ..., 19.00	0.01mm	51
4166-19D	19.00, 19.01, 19.02, ..., 19.50	0.01mm	51
4166-20	19.50, 19.51, 19.52, ..., 20.00	0.01mm	51

INDIVIDUAL STEEL PIN GAGES WITH TWO DECIMAL PLACES (0.01MM STEP)

- Meet DIN2269, grade 1
- Diameter range: $\varnothing 0.20\text{--}\varnothing 20.00\text{mm}$
- Diameter accuracy: $\pm 1\mu\text{m}$
- Made of alloy steel
- Hardness HRC62-65
- Optional accessory: wooden box (code 7340)



4110-9D98

Unit: mm



Ordering examples:

Diameter	Code
0.21mm	4110-0D21
5.56mm	4110-5D56
16.00mm	4110-16D00

Note : "D" stands for "."

Diameter $\varnothing d$ (mm)
0.20, 0.21, 0.22, 0.23, … 1.00
1.01, 1.02, 1.03, 1.04, … 2.00
2.01, 2.02, 2.03, 2.04, … 3.00
3.01, 3.02, 3.03, 3.04, … 4.00
4.01, 4.02, 4.03, 4.04, … 5.00
5.01, 5.02, 5.03, 5.04, … 6.00
6.01, 6.02, 6.03, 6.04, … 7.00
7.01, 7.02, 7.03, 7.04, … 8.00
8.01, 8.02, 8.03, 8.04, … 9.00
9.01, 9.02, 9.03, 9.04, … 10.00

Diameter $\varnothing d$ (mm)
10.01, 10.02, 10.03, 10.04, … 11.00
11.01, 11.02, 11.03, 11.04, … 12.00
12.01, 12.02, 12.03, 12.04, … 13.00
13.01, 13.02, 13.03, 13.04, … 14.00
14.01, 14.02, 14.03, 14.04, … 15.00
15.01, 15.02, 15.03, 15.04, … 16.00
16.01, 16.02, 16.03, 16.04, … 17.00
17.01, 17.02, 17.03, 17.04, … 18.00
18.01, 18.02, 18.03, 18.04, … 19.00
19.01, 19.02, 19.03, 19.04, … 20.00

Code

4110-□□□□

INDIVIDUAL STEEL PIN GAGES WITH THREE DECIMAL PLACES (0.001MM STEP)

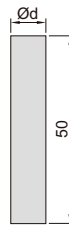


- Meet DIN2269, grade 1
- Diameter range: $\varnothing 0.200\text{--}\varnothing 30.000\text{mm}$ with three decimal, for example 0.211mm, 5.562mm, 16.298mm
- Diameter accuracy: $\pm 1\mu\text{m}$
- Made of alloy steel
- Hardness HRC62-65
- Optional accessory: wooden box (code 7340)



4118-8D015

Unit: mm



Ordering examples:

Diameter	Code
0.211mm	4118-0D211
5.562mm	4118-5D562
16.298mm	4118-16D298

Note : "D" stands for "."

Code

4118-□□□□*

Diameter range $\varnothing d$ (mm)

0.200~30.000

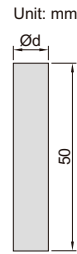
* Supplied with manufacturer inspection certificate

INDIVIDUAL CERAMIC PIN GAGES

- Meet DIN2269, grade 1
- Diameter range: \varnothing 1.000~ \varnothing 15.000mm
- With three decimal, for example 1.211mm, 5.562mm, 14.955mm
- Diameter accuracy: $\pm 1\mu$ m
- Made of ceramic, extremely wear resistance, corrosion resistance and dimensional stability
- Optional accessory: wooden box (code **7340**)



4192-10D000



Ordering examples:

Diameter	Code
1.211mm	4192-1D211
5.562mm	4192-5D562
14.955mm	4192-14D955

Note : "D" stands for "."

Code	Diameter range \varnothing d (mm)
4192-□□□□	1.000-15.000

BOXES FOR PIN GAGES

- For individual pin gages (4110, 4118, 4192 and 4193 series)



7340

Code	Applicable pin gage diameter \varnothing d	Quantity of pin gages
7340	0.20-10.00mm	51 pcs
7340-101	0.20-10.00mm	101 pcs
7340-201	10.00-15.00mm	51 pcs
7340-202	15.00-20.00mm	51 pcs

PIN GAGE HANDLES (OPERATED WITHOUT WRENCH)

- Operated without wrench
- Made of aluminum
- Pin gages can be installed



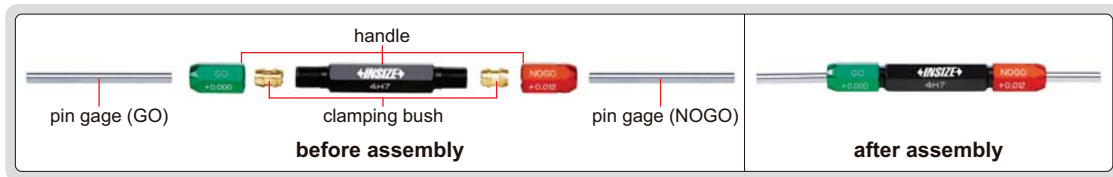
7342-M1

Code	Applicable pin gage diameter
7342-M0	0.30-1.50mm/0.011-0.060"
7342-M1	1.51-6.35mm/0.061-0.250"
7342-M2	6.36-12.70mm/0.251-0.500"
7342-M3	12.71-15.88mm/0.501-0.625"
7342-M4	15.89-19.00mm/0.626-0.750"
7342-M5	19.01-21.13mm/0.751-0.832"
7342-M6	21.14-23.27mm/0.833-0.916"
7342-M7	23.28-25.40mm/0.917-1.000"

application



PIN GAGE HANDLES (OPERATED WITH WRENCH)



Handle



brass clamping bush
(0.2~7.14mm)



aluminum clamping bush
(7.14~24.80mm)

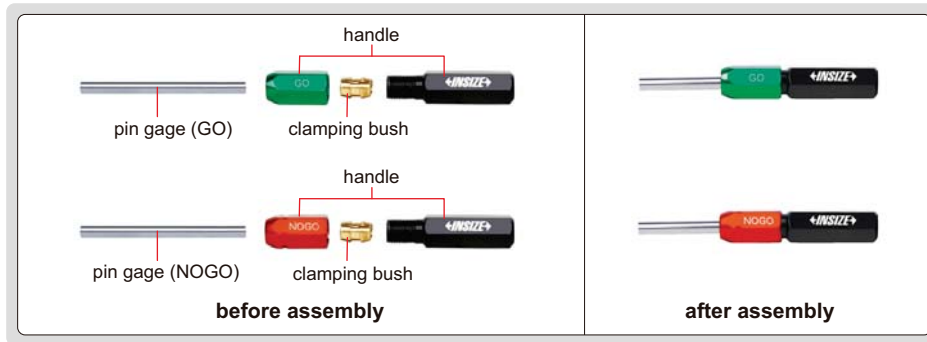
- Wrench is needed to install pins
- Clamping bushes (0.2~7.14mm) are made of brass, clamping bushes (7.14~24.80mm) are made of aluminum

13

Code	Applicable pin gage diameter	Including	
		handle	clamping bush (mm)
7341-0S	0.2-1.02mm	1 pc	6 pairs (the clamping range are 0.2-0.38, 0.38-0.51, 0.51-0.64, 0.64-0.76, 0.76-0.89, 0.89-1.02)
7341-1S	1.02-1.91mm	1 pc	7 pairs (the clamping range are 1.02-1.14, 1.14-1.27, 1.27-1.40, 1.40-1.52, 1.52-1.65, 1.65-1.78, 1.78-1.91)
7341-2S	1.91-3.33mm	1 pc	8 pairs (the clamping range are 1.91-2.08, 2.08-2.26, 2.26-2.44, 2.44-2.62, 2.62-2.79, 2.79-2.97, 2.97-3.15, 3.15-3.33)
7341-3S	3.33-4.57mm	1 pc	7 pairs (the clamping range are 3.33-3.51, 3.51-3.68, 3.68-3.86, 3.86-4.04, 4.04-4.22, 4.22-4.39, 4.39-4.57)
7341-4S	4.57-5.79mm	1 pc	6 pairs (the clamping range are 4.57-4.78, 4.78-4.98, 4.98-5.18, 5.18-5.38, 5.38-5.59, 5.59-5.79)
7341-5S	5.79-7.14mm	1 pc	6 pairs (the clamping range are 5.79-5.99, 5.99-6.20, 6.20-6.40, 6.40-6.63, 6.63-6.88, 6.88-7.14)

Code	Applicable pin gage diameter	Including	
		handle	clamping bush (mm)
7341-6S	7.14-8.66mm	1 pc	6 pairs (the clamping range are 7.14-7.39, 7.39-7.65, 7.65-7.90, 7.90-8.15, 8.15-8.41, 8.41-8.66)
7341-7S	8.66-10.31mm	1 pc	6 pairs (the clamping range are 8.66-8.92, 8.9-9.17, 9.17-9.42, 9.42-9.70, 9.70-10.01, 10.01-10.31)
7341-8S	10.31-11.81mm	1 pc	4 pairs (the clamping range are 10.31-10.67, 10.67-11.05, 11.05-11.43, 11.43-11.81)
7341-9S	11.81-12.95mm	1 pc	3 pairs (the clamping range are 11.81-12.19, 12.19-12.57, 12.57-12.95)
7341-10S	12.95-14.71mm	1 pc	4 pairs (the clamping range are 12.95-13.51, 13.51-13.89, 13.89-14.30, 14.30-14.71)
7341-11S	14.71-16.13mm	1 pc	4 pairs (the clamping range are 14.71-15.09, 15.09-15.49, 15.49-15.88, 15.88-16.13)
7341-12S	16.13-17.88mm	1 pc	4 pairs (the clamping range are 16.13-16.66, 16.66-17.07, 17.07-17.48, 17.48-17.88)
7341-13S	17.88-19.30mm	1 pc	4 pairs (the clamping range are 17.88-18.26, 18.26-18.67, 18.67-19.05, 19.05-19.30)
7341-15S	19.30-24.80mm	1 pc	8 pairs (the clamping range are 19.30-19.84, 19.84-20.62, 20.62-21.41, 21.41-22.23, 22.23-23.03, 23.03-23.80, 23.80-24.59, 24.59-24.80)

SINGLE END PIN GAGE HANDLES (OPERATED WITH WRENCH)



7344-4G
green (GO)



7344-4R
red (NOGO)



brass clamping bush
(0.2~7.14mm)



aluminum clamping bush
(7.14~24.80mm)

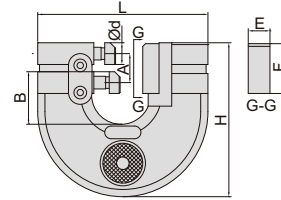
- Wrench is needed to install pins
- Clamping bushes (0.2~7.14mm) are made of brass, clamping bushes (7.14~24.80mm) are made of aluminum

Code		handle	Including clamping bush (mm)	Applicable pin gage diameter
green (GO)	red (NOGO)			
7344-0G	7344-0R	1 pc	6 pcs (the clamping range are 0.2-0.38, 0.38-0.51, 0.51-0.64, 0.64-0.76, 0.76-0.89, 0.89-1.02)	0.2-1.02mm
7344-1G	7344-1R	1 pc	7 pcs (the clamping range are 1.02-1.14, 1.14-1.27, 1.27-1.40, 1.40-1.52, 1.52-1.65, 1.65-1.78, 1.78-1.91)	1.02-1.91mm
7344-2G	7344-2R	1 pc	8 pcs (the clamping range are 1.91-2.08, 2.08-2.26, 2.26-2.44, 2.44-2.62, 2.62-2.79, 2.79-2.97, 2.97-3.15, 3.15-3.33)	1.91-3.33mm
7344-3G	7344-3R	1 pc	7 pcs (the clamping range are 3.33-3.51, 3.51-3.68, 3.68-3.86, 3.86-4.04, 4.04-4.22, 4.22-4.39, 4.39-4.57)	3.33-4.57mm
7344-4G	7344-4R	1 pc	6 pcs (the clamping range are 4.57-4.78, 4.78-4.98, 4.98-5.18, 5.18-5.38, 5.38-5.59, 5.59-5.79)	4.57-5.79mm
7344-5G	7344-5R	1 pc	6 pcs (the clamping range are 5.79-5.99, 5.99-6.20, 6.20-6.40, 6.40-6.63, 6.63-6.88, 6.88-7.14)	5.79-7.14mm
7344-6G	7344-6R	1 pc	6 pcs (the clamping range are 7.14-7.39, 7.39-7.65, 7.65-7.90, 7.90-8.15, 8.15-8.41, 8.41-8.66)	7.14-8.66mm
7344-7G	7344-7R	1 pc	6 pcs (the clamping range are 8.66-8.92, 8.92-9.17, 9.17-9.42, 9.42-9.70, 9.70-10.01, 10.01-10.31)	8.66-10.31mm
7344-8G	7344-8R	1 pc	4 pcs (the clamping range are 10.31-10.67, 10.67-11.05, 11.05-11.43, 11.43-11.81)	10.31-11.81mm
7344-9G	7344-9R	1 pc	3 pcs (the clamping range are 11.81-12.19, 12.19-12.57, 12.57-12.95)	11.81-12.95mm
7344-10G	7344-10R	1 pc	4 pcs (the clamping range are 12.95-13.51, 13.51-13.89, 13.89-14.30, 14.30-14.71)	12.95-14.71mm
7344-11G	7344-11R	1 pc	4 pcs (the clamping range are 14.71-15.09, 15.09-15.49, 15.49-15.88, 15.88-16.13)	14.71-16.13mm
7344-12G	7344-12R	1 pc	4 pcs (the clamping range are 16.13-16.66, 16.66-17.07, 17.07-17.48, 17.48-17.88)	16.13-17.88mm
7344-13G	7344-13R	1 pc	4 pcs (the clamping range are 17.88-18.26, 18.26-18.67, 18.67-19.05, 19.05-19.30)	17.88-19.30mm
7344-15G	7344-15R	1 pc	8 pcs (the clamping range are 19.30-19.84, 19.84-20.62, 20.62-21.41, 21.41-22.23, 22.23-23.03, 23.03-23.80, 23.80-24.59, 24.59-24.80)	19.30-24.80mm

ADJUSTABLE SNAP GAGES

FAST AND ACCURATE
MEASUREMENT OF CYLINDERS

- Used as Go/No-Go gage by setting upper and lower limits
- Flatness of anvil: 1.5µm
- Parallelism of measuring faces:
range 0-32mm: 3µm
range 32-89mm: 4µm
range 89-300mm: 5µm



2187-19

(mm)

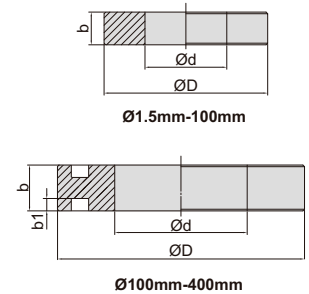
Code	Range	L	A	B	E	F	H	Ød
2187-6	0-6mm	74	15	17.5	12.2	27.2	71.5	7
2187-13	6-13mm	85	15	26	12.2	27.2	79.5	12.3
2187-19	13-19mm	93	15	27	12.2	27.2	83	12.3
2187-25	19-25mm	100	15	33.5	12.2	27.2	89.5	12.3
2187-32	25-32mm	111	18	38.5	15.2	35.2	104	15.3
2187-38	32-38mm	117	18	41.5	15.2	35.2	105	15.3
2187-44	38-44mm	123	18	44.5	15.2	35.2	109	15.3
2187-51	44-51mm	130	18	48	15.2	35.2	117	15.3
2187-57	51-57mm	136	18	45	15.2	35.2	119	15.3
2187-63	57-63mm	143	18	50	15.2	35.2	122	15.3
2187-70	63-70mm	156	20	58	15.2	35.2	132	15.3
2187-76	70-76mm	163	20	60.5	15.2	35.2	137	15.3
2187-82	76-82mm	169	20	64.5	15.2	35.2	140	15.3
2187-89	82-89mm	175	20	66.5	15.2	35.2	146	15.3
2187-95	89-95mm	181	20	69.5	15.2	35.2	149	15.3
2187-101	95-101mm	188	20	70	15.2	35.2	154	15.3
2187-108	101-108mm	198	24	79	15.2	39.2	166	15.3
2187-114	108-114mm	204	24	81	15.2	39.2	172	15.3
2187-120	114-120mm	210	24	86	15.2	39.2	179	15.3
2187-127	120-127mm	217	24	89.5	15.2	39.2	186	15.3
2187-133	127-133mm	223	24	92.5	15.2	39.2	192	15.3
2187-139	133-139mm	229	24	95.5	15.2	39.2	197	15.3
2187-146	139-146mm	235	24	98.5	15.2	39.2	201	15.3
2187-152	146-152mm	242	24	102	15.2	39.2	205	15.3
2187-163	152-163mm	273	21.4	106.7	18.2	39.2	211	18.3
2187-175	163-175mm	273	21.4	106.7	18.2	39.2	211	18.3
2187-188	175-188mm	298.5	21.4	119.7	18.2	39.2	227	18.3
2187-200	188-200mm	298.5	21.4	119.7	18.2	39.2	227	18.3
2187-213	200-213mm	324	21.4	131.7	18.2	39.2	242	18.3
2187-225	213-225mm	324	21.4	131.7	18.2	39.2	242	18.3
2187-238	225-238mm	349.5	21.4	144.7	18.2	39.2	250	18.3
2187-250	238-250mm	349.5	21.4	149	18.2	39.2	250	18.3
2187-263	250-263mm	375.5	21.4	157.7	18.2	39.2	278	18.3
2187-275	263-275mm	375.5	21.4	157.7	18.2	39.2	278	18.3
2187-288	275-288mm	400	21.4	170.7	18.2	39.2	291	18.3
2187-300	288-300mm	400	21.4	170.7	18.2	39.2	291	18.3

CAN SUPPLY CUSTOM SETTING RINGS FROM Ø1.500MM TO Ø400.000MM, FOR EXAMPLE, Ø17.085MM



SETTING RINGS

- For zero setting of inside micrometers, three points internal micrometers and bore gages
- The size marked on the setting ring is checked at the direction of the marking line
- Deviation (difference between the ordered size and the size marked on the setting ring when supplied): For example, the ordered size is Ø10.125mm, the size marked on the setting ring when supplied may be Ø10.135mm
- Meet DIN2250-1:2008



(mm)

Diameter d **	b	ØD	Deviation	Roundness and cylindricity
Ø1.5-2.5	4	22	±10.0µm	0.3µm
Ø2.5-3	5	22	±10.0µm	0.3µm
Ø3-5	5	22	±10.0µm	0.4µm
Ø5-10	8	32	±10.0µm	0.4µm
Ø10-15	10	38	±10.0µm	0.5µm
Ø15-18	12	45	±10.0µm	0.5µm
Ø18-20	12	45	±10.0µm	0.6µm
Ø20-25	14	53	±10.0µm	0.6µm
Ø25-30	16	63	±10.0µm	0.6µm
Ø30-32	16	63	±10.0µm	0.7µm
Ø32-40	18	71	±10.0µm	0.7µm
Ø40-50	20	85	±10.0µm	0.7µm
Ø50-60	20	100	±10.0µm	0.8µm
Ø60-70	24	112	±10.0µm	0.8µm
Ø70-80	24	125	±10.0µm	0.8µm
Ø80-90	24	140	±10.0µm	1.0µm
Ø90-100	24	160	±10.0µm	1.0µm

** For example Ø3-5mm means Ø3mm< diameter d ≤ Ø5mm

(mm)

Diameter d **	b	b1	ØD	Deviation	Roundness and cylindricity
Ø100-110	30	8	164	±10.0µm	1.0µm
Ø110-130	34	10	192	±10.0µm	1.0µm
Ø130-150	34	10	220	±10.0µm	1.2µm
Ø150-170	36	10	248	±10.0µm	1.5µm
Ø170-190	36	10	276	±10.0µm	1.5µm
Ø190-210	38	10	300	±10.0µm	1.5µm
Ø210-230	38	10	324	±10.0µm	2.5µm
Ø230-250	40	12	350	±10.0µm	2.5µm
Ø250-270	40	12	375	±10.0µm	3.0µm
Ø270-290	42	12	400	±10.0µm	3.0µm
Ø290-300	42	12	425	±10.0µm	3.0µm
Ø300-320	42	12	430	±10.0µm	4.0µm
Ø320-330	42	12	440	±10.0µm	4.0µm
Ø330-340	42	12	450	±10.0µm	4.0µm
Ø340-350	42	12	460	±10.0µm	4.0µm
Ø350-360	42	12	470	±10.0µm	4.0µm
Ø360-370	42	12	480	±10.0µm	4.0µm
Ø370-380	42	12	490	±10.0µm	4.0µm
Ø380-390	42	12	500	±10.0µm	4.0µm
Ø390-400	42	12	510	±10.0µm	4.0µm

13

(mm)

Code	Size
6312-1D5 *	Ø1.5
6312-2 *	Ø2
6312-2D5 *	Ø2.5
6312-3 *	Ø3
6312-3D5 *	Ø3.5
6312-4 *	Ø4
6312-4D5 *	Ø4.5
6312-5 *	Ø5
6312-5D5 *	Ø5.5
6312-6 *	Ø6
6312-6D5 *	Ø6.5
6312-7 *	Ø7
6312-7D5 *	Ø7.5
6312-8 *	Ø8
6312-8D5 *	Ø8.5
6312-9 *	Ø9
6312-9D5 *	Ø9.5
6312-10 *	Ø10
6312-10D5 *	Ø10.5
6312-11 *	Ø11
6312-11D5 *	Ø11.5
6312-12 *	Ø12

(mm)

Code	Size
6312-12D5 *	Ø12.5
6312-13 *	Ø13
6312-13D5 *	Ø13.5
6312-14 *	Ø14
6312-14D5 *	Ø14.5
6312-15 *	Ø15
6312-15D5 *	Ø15.5
6312-16 *	Ø16
6312-16D5 *	Ø16.5
6312-17 *	Ø17
6312-17D5 *	Ø17.5
6312-18 *	Ø18
6312-18D5 *	Ø18.5
6312-19 *	Ø19
6312-19D5 *	Ø19.5
6312-20 *	Ø20
6312-20D5 *	Ø20.5
6312-21 *	Ø21
6312-21D5 *	Ø21.5
6312-22 *	Ø22
6312-22D5 *	Ø22.5
6312-23 *	Ø23

(mm)

Code	Size
6312-23D5 *	Ø23.5
6312-24 *	Ø24
6312-24D5 *	Ø24.5
6312-25 *	Ø25
6312-25D5 *	Ø25.5
6312-26 *	Ø26
6312-26D5 *	Ø26.5
6312-27 *	Ø27
6312-27D5 *	Ø27.5
6312-28 *	Ø28
6312-28D5 *	Ø28.5
6312-29 *	Ø29
6312-29D5 *	Ø29.5
6312-30 *	Ø30
6312-31 *	Ø31
6312-32 *	Ø32
6312-33 *	Ø33
6312-34 *	Ø34
6312-35 *	Ø35
6312-36 *	Ø36
6312-37 *	Ø37
6312-38 *	Ø38

(mm)

Code	Size
6312-39 *	Ø39
6312-40 *	Ø40
6312-41 *	Ø41
6312-42 *	Ø42
6312-43 *	Ø43
6312-44 *	Ø44
6312-45 *	Ø45
6312-46 *	Ø46
6312-47 *	Ø47
6312-48 *	Ø48
6312-49 *	Ø49
6312-50 *	Ø50
6312-55 *	Ø55
6312-60 *	Ø60
6312-62 *	Ø62
6312-65 *	Ø65
6312-70 *	Ø70
6312-75 *	Ø75
6312-80 *	Ø80
6312-85 *	Ø85
6312-87 *	Ø87
6312-90 *	Ø90

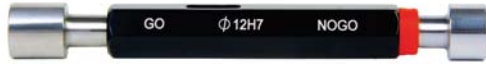
(mm)

Code	Size
6312-95 *	Ø95
6312-100 *	Ø100
6312-112D5 *	Ø112.5
6312-125 *	Ø125
6312-137D5 *	Ø137.5
6312-150 *	Ø150
6312-162D5 *	Ø162.5
6312-175 *	Ø175
6312-187D5 *	Ø187.5
6312-200 *	Ø200
6312-212D5 *	Ø212.5
6312-225 *	Ø225
6312-237D5 *	Ø237.5
6312-250 *	Ø250
6312-262D5 *	Ø262.5
6312-275 *	Ø275
6312-287D5 *	Ø287.5
6312-300 *	Ø300
6312-350 *	Ø350
6312-400 *	Ø400

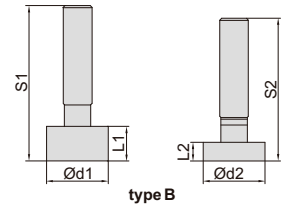
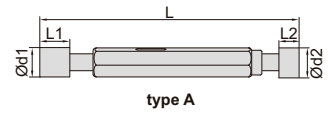
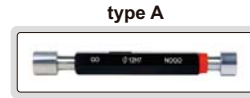
* Supplied with manufacturer inspection certificate

PLAIN PLUG GAGES

CUSTOM-MADE
 OTHER CLASSES ARE AVAILABLE, SUCH AS H8, H9
 OTHER DIAMETERS ARE AVAILABLE, SUCH AS 19.003mm
 OTHER LENGTHS ARE AVAILABLE, SUCH AS 70mm



4124-12



- Supplied with Go and No-Go gages together
- Class H7
- Hardness HRC 60±2
- Standard DIN7150-2

Size tolerance of H7

(mm)

Diameter ϕd	Type	Size tolerance of Go gage (µm)	Size tolerance of No-Go gage (µm)	L1	L2	L	S1, S2
≥2, ≤3	A	+0.5 / +2.5	+9 / +11	6.5	4.5	62	–
>3, ≤6	A	+0.75 / +3.25	+10.75 / +13.25	8	6	74	–
>6, ≤10	A	+0.75 / +3.25	+13.75 / +16.25	10	7	87	–
>10, ≤14	A	+1 / +4	+16.5 / +19.5	12	8	99	–
>14, ≤18	A	+1 / +4	+16.5 / +19.5	14	10	114	–
>18, ≤24	A	+1 / +5	+19 / +23	16	12	132	–
>24, ≤30	A	+1 / +5	+19 / +23	18	14	136	–
>30, ≤40	A	+1.5 / +5.5	+23 / +27	20	15	155	–
>40, ≤50	A	+1.5 / +5.5	+23 / +27	25	18	169	–
>50, ≤65	B	+1.5 / +6.5	+27.5 / +32.5	30	18	–	164, 152
>65, ≤80	B	+1.5 / +6.5	+27.5 / +32.5	35	25	–	169, 159
>80, ≤100	B	+2 / +8	+32 / +38	35	25	–	169, 159

Code	Diameter	Type	Code	Diameter	Type	Code	Diameter	Type	Code	Diameter	Type
4124-2	2mm	A	4124-17	17mm	A	4124-32	32mm	A	4124-47	47mm	A
4124-3	3mm	A	4124-18	18mm	A	4124-33	33mm	A	4124-48	48mm	A
4124-4	4mm	A	4124-19	19mm	A	4124-34	34mm	A	4124-49	49mm	A
4124-5	5mm	A	4124-20	20mm	A	4124-35	35mm	A	4124-50	50mm	A
4124-6	6mm	A	4124-21	21mm	A	4124-36	36mm	A	4124-52	52mm	B
4124-7	7mm	A	4124-22	22mm	A	4124-37	37mm	A	4124-55	55mm	B
4124-8	8mm	A	4124-23	23mm	A	4124-38	38mm	A	4124-60	60mm	B
4124-9	9mm	A	4124-24	24mm	A	4124-39	39mm	A	4124-65	65mm	B
4124-10	10mm	A	4124-25	25mm	A	4124-40	40mm	A	4124-70	70mm	B
4124-11	11mm	A	4124-26	26mm	A	4124-41	41mm	A	4124-75	75mm	B
4124-12	12mm	A	4124-27	27mm	A	4124-42	42mm	A	4124-80	80mm	B
4124-13	13mm	A	4124-28	28mm	A	4124-43	43mm	A	4124-85	85mm	B
4124-14	14mm	A	4124-29	29mm	A	4124-44	44mm	A	4124-90	90mm	B
4124-15	15mm	A	4124-30	30mm	A	4124-45	45mm	A	4124-95	95mm	B
4124-16	16mm	A	4124-31	31mm	A	4124-46	46mm	A	4124-100	100mm	B



4190-40D000

- Zirconia material, high strength and hardness, extremely wear resistance and corrosion resistance, good insulation, antistatic and magnetic resistance
- Mirror surface without holes
- Supplied with manufacturer inspection certificate

Individual

Code	Diameter	Accuracy	Roundness
4190-1D000	1.000mm	±2µm	0.5µm
4190-1D200	1.200mm	±2µm	0.5µm
4190-1D300	1.300mm	±2µm	0.5µm
4190-1D340	1.340mm	±2µm	0.5µm
4190-1D500	1.500mm	±2µm	0.5µm
4190-1D588	1.588mm (1/16")	±2µm	0.5µm
4190-1D750	1.750mm	±2µm	0.5µm
4190-2D000	2.000mm	±2µm	0.5µm
4190-2D381	2.381mm (3/32")	±2µm	0.5µm
4190-2D500	2.500mm	±2µm	0.5µm
4190-2D778	2.778mm (7/64")	±2µm	0.5µm
4190-3D000	3.000mm	±2µm	0.5µm
4190-3D175	3.175mm (1/8")	±2µm	0.5µm
4190-3D500	3.500mm	±2µm	0.5µm
4190-3D969	3.969mm (5/32")	±2µm	0.5µm
4190-4D000	4.000mm	±2µm	0.5µm
4190-4D500	4.500mm	±2µm	0.5µm
4190-4D763	4.763mm (3/16")	±2µm	0.5µm
4190-5D000	5.000mm	±2µm	0.5µm
4190-5D556	5.556mm (7/32")	±2µm	0.5µm
4190-5D953	5.953mm (15/64")	±2µm	0.5µm
4190-6D000	6.000mm	±2µm	0.5µm
4190-6D350	6.350mm (1/4")	±2µm	0.5µm
4190-6D500	6.500mm	±2µm	0.5µm
4190-6D747	6.747mm (17/64")	±2µm	0.5µm
4190-7D000	7.000mm	±2µm	0.5µm
4190-7D144	7.144mm (9/32")	±2µm	0.5µm
4190-7D500	7.500mm	±2µm	0.5µm
4190-7D938	7.938mm (5/16")	±2µm	0.5µm
4190-8D000	8.000mm	±2µm	0.5µm
4190-8D731	8.731mm (11/32")	±2µm	0.5µm

Individual

Code	Diameter	Accuracy	Roundness
4190-9D525	9.525mm (3/8")	±2µm	0.5µm
4190-10D000	10.000mm	±2µm	0.5µm
4190-10D318	10.318mm (13/32")	±2µm	0.5µm
4190-11D000	11.000mm	±2µm	0.5µm
4190-11D113	11.113mm (7/16")	±2µm	0.5µm
4190-11D509	11.509mm (29/64")	±2µm	0.5µm
4190-11D906	11.906mm (15/32")	±2µm	0.5µm
4190-12D000	12.000mm	±2µm	0.5µm
4190-12D303	12.303mm (31/64")	±2µm	0.5µm
4190-12D700	12.700mm (1/2")	±2µm	0.5µm
4190-13D000	13.000mm	±2µm	0.6µm
4190-13D494	13.494mm (17/32")	±2µm	0.6µm
4190-14D000	14.000mm	±2µm	0.6µm
4190-14D288	14.288mm (9/16")	±2µm	0.6µm
4190-15D000	15.000mm	±2µm	0.6µm
4190-15D081	15.081mm (19/32")	±2.5µm	0.6µm
4190-15D875	15.875mm (5/8")	±2.5µm	0.6µm
4190-16D000	16.000mm	±2.5µm	0.6µm
4190-16D669	16.669mm (21/32")	±2.5µm	0.6µm
4190-17D462	17.462mm (11/16")	±2.5µm	0.6µm
4190-18D000	18.000mm	±2.5µm	0.6µm
4190-18D256	18.256mm (23/32")	±2.5µm	0.6µm
4190-19D050	19.050mm (3/4")	±2.5µm	0.6µm
4190-19D844	19.844mm (25/32")	±2.5µm	0.6µm
4190-20D000	20.000mm	±2.5µm	0.6µm
4190-22D000	22.000mm	±2.5µm	1µm
4190-22D225	22.225mm (7/8")	±2.5µm	1µm
4190-23D812	23.812mm (15/16")	±2.5µm	1µm
4190-25D000	25.000mm	±2.5µm	1µm
4190-40D000	40.000mm	±2.5µm	1.5µm

Set (25 pairs)

Code	Ceramic balls included (one pair per size)
4190-S25	1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 6, 6.5, 7, 7.5, 8, 10, 11, 12, 13, 14, 15, 16, 18, 20, 22, 25mm

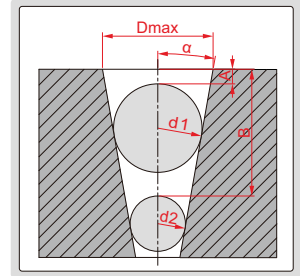
STEEL MEASURING BALLS

- To measure angle and diameter of taper holes
- Material: tool steel
- Hardness: HRC63
- Diameter accuracy: $\pm 3\mu\text{m}$
- Roundness: $1\mu\text{m}$
- Supplied with manufacturer inspection certificate



4168-S25

calculate angle (α) and diameter (D_{max}) according to the ball diameter (d_1 , d_2), height (A) and depth (B)



Individual

Code	Diameter
4168-01	1mm
4168-02	2mm
4168-03	3mm
4168-04	4mm
4168-05	5mm
4168-06	6mm
4168-07	7mm
4168-08	8mm
4168-09	9mm
4168-10	10mm
4168-11	11mm
4168-12	12mm
4168-13	13mm

Code	Diameter
4168-14	14mm
4168-15	15mm
4168-16	16mm
4168-17	17mm
4168-18	18mm
4168-19	19mm
4168-20	20mm
4168-21	21mm
4168-22	22mm
4168-23	23mm
4168-24	24mm
4168-25	25mm

Set (25 pairs)

Code	Steel balls included (one pair per size)
4168-S25	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25mm

13

THREADED HOLE LOCATION GAGES

INSIZE PLUS
MADE IN EUROPE

ANY SIZE WITHIN THE RANGE OF M3-M150MM CAN BE CUSTOMIZED

ACCURACY CLASS CAN BE CUSTOMIZED

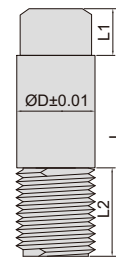


4662-12R



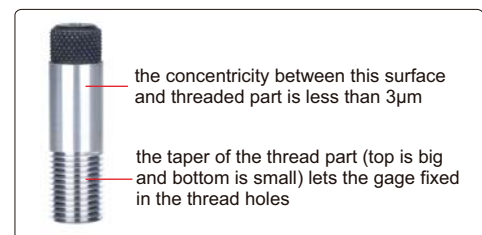
4662-3

Unit: mm

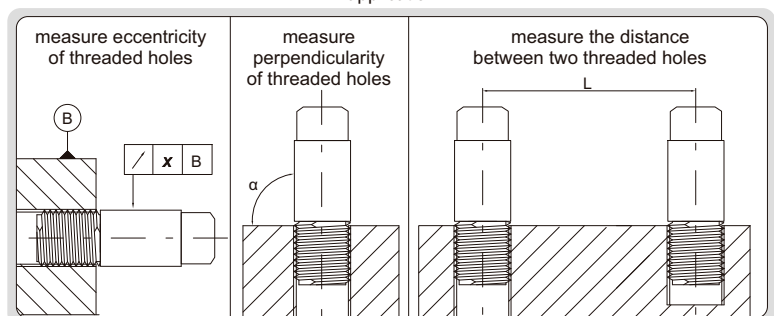


(mm)						
Code	Size	L	L1	L2	ØD	
4662-3	M3×0.5-6H	29	8	6	3	
4662-4	M4×0.7-6H	31.4	8	8.4	4	
4662-5	M5×0.8-6H	32.6	8	9.6	5	
4662-6	M6×1-6H	47	10	12	6	
4662-8	M8×1.25-6H	50	10	15	8	
4662-8P	M8×1-6H	47	10	12	8	
4662-10	M10×1.5-6H	53	10	18	10	
4662-10P	M10×1-6H	47	10	12	10	
4662-12	M12×1.75-6H	56	10	21	12	
4662-12P	M12×1-6H	47	10	12	12	
4662-12R	M12×1.5-6H	53	10	18	12	
4662-14	M14×2-6H	59	10	24	14	
4662-14P	M14×1-6H	47	10	12	14	
4662-14R	M14×1.5-6H	53	10	18	14	
4662-16	M16×2-6H	59	10	24	16	
4662-16P	M16×1-6H	47	10	12	16	
4662-16R	M16×1.5-6H	53	10	18	16	
4662-20	M20×2.5-6H	65	10	30	20	
4662-20P	M20×1-6H	47	10	12	20	
4662-20R	M20×1.5-6H	53	10	18	20	

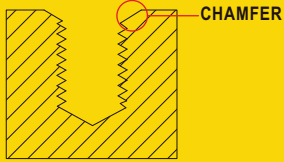
- Hardness: HRC60-63



application



ATTENTION: ONLY FOR THE WORKPIECES THAT THE CHAMFER IS CONCENTRIC WITH THE SCREW PART

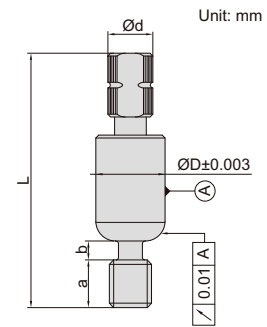


THREADED HOLE LOCATION GAGES

INSIZE PLUS
MADE IN EUROPE

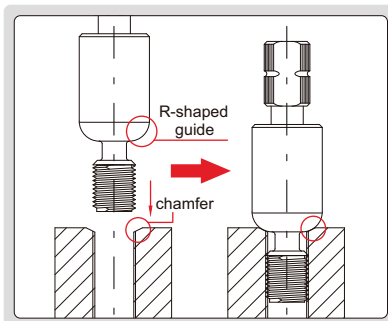


4676-12

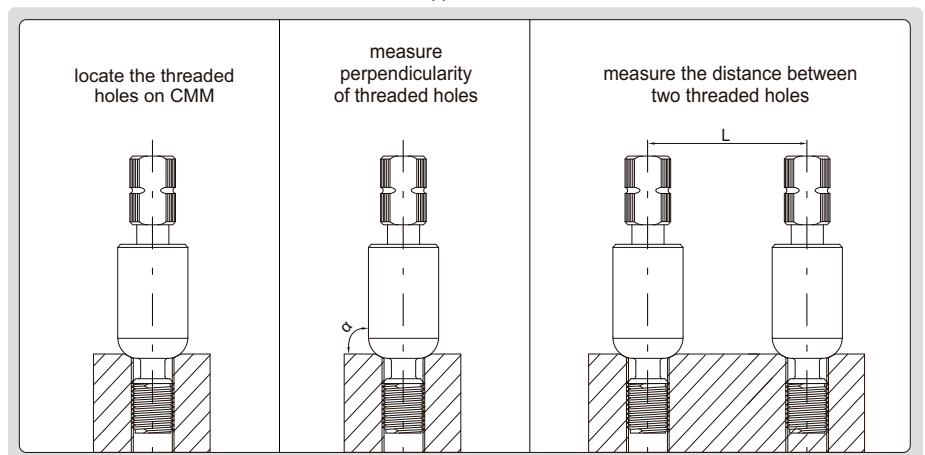


- Only for the workpieces that the chamfer is concentric with the screw part

there is a R-shaped guide, which leads the gage to the center of the threaded holes by fitting the R-shaped guide on the chamfer of the threaded holes



application



(mm)

Code	Size	Ød	ØD	a	b	L
4676-3	M3×0.5	4	7	4	2	26
4676-4	M4×0.7	4	7	4	2	26
4676-5	M5×0.8	5.5	9	6	2	33
4676-6	M6×1.0	5.5	9	6	2	33
4676-8	M8×1.25	8.5	13	9	3.5	48
4676-10	M10×1.5	8.5	13	9	3.5	48
4676-12	M12×1.75	12	17	10	3.5	55

METRIC THREAD PLUG GAGES

WARNING: LIFE TIME IS LIMITED,
CAN BE USED ABOUT 2000 TIMES



4130-10

- Supplied with Go and No-Go gages together
- Standard ISO1502
- Supplied with manufacturer inspection certificate

13

Individual

Size (mm)		Code		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M0.8	0.2	4130-D8	4130-D8G	4130-D8H
M0.9	0.225	4130-D9	4130-D9G	4130-D9H
M1	0.25	4130-1	4130-1G	4130-1H
M1.1	0.25	4130-1D1	4130-1D1G	4130-1D1H
M1.2	0.25	4130-1D2	4130-1D2G	4130-1D2H
M1.4	0.3	4130-1D4	4130-1D4G	4130-1D4H
M1.6	0.35	4130-1D6	4130-1D6G	4130-1D6H
M1.7	0.35	4130-1D7	4130-1D7G	4130-1D7H
M1.8	0.35	4130-1D8	4130-1D8G	4130-1D8H
M2	0.4	4130-2	4130-2G	4130-2H
M2.2	0.45	4130-2D2	4130-2D2G	4130-2D2H
M2.3	0.4	4130-2D3	4130-2D3G	4130-2D3H
M2.5	0.45	4130-2D5	4130-2D5G	4130-2D5H
M2.6	0.45	4130-2D6	4130-2D6G	4130-2D6H
M3	0.5	4130-3	4130-3G	4130-3H
M3.5	0.6	4130-3D5	4130-3D5G	4130-3D5H
M4	0.7	4130-4	4130-4G	4130-4H
M4.5	0.75	4130-4D5	4130-4D5G	4130-4D5H
M5	0.8	4130-5	4130-5G	4130-5H
M6	1	4130-6	4130-6G	4130-6H
M7	1	4130-7	4130-7G	4130-7H
M8	1.25	4130-8	4130-8G	4130-8H

Individual

Size (mm)		Code		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M9	1.25	4130-9	4130-9G	4130-9H
M10	1.5	4130-10	4130-10G	4130-10H
M11	1.5	4130-11	4130-11G	4130-11H
M12	1.75	4130-12	4130-12G	4130-12H
M14	2	4130-14	4130-14G	4130-14H
M16	2	4130-16	4130-16G	4130-16H
M18	2.5	4130-18	4130-18G	4130-18H
M20	2.5	4130-20	4130-20G	4130-20H
M22	2.5	4130-22	4130-22G	4130-22H
M24	3	4130-24	4130-24G	4130-24H
M27	3	4130-27	4130-27G	4130-27H
M30	3.5	4130-30	4130-30G	4130-30H
M33	3.5	4130-33	4130-33G	4130-33H
M36	4	4130-36	4130-36G	4130-36H
M39	4	4130-39	4130-39G	4130-39H
M42	4.5	4130-42	4130-42G	4130-42H
M45	4.5	4130-45	4130-45G	4130-45H
M48	5	4130-48	4130-48G	4130-48H
M52	5	4130-52	4130-52G	4130-52H
M56	5.5	4130-56	4130-56G	4130-56H
M60	5.5	4130-60	4130-60G	4130-60H
M64	6	4130-64	4130-64G	4130-64H
M68	6	4130-68	4130-68G	4130-68H

Set (class 6H)

Code	Thread plug gages included (mm)
4130-S7	M3x0.5 (4130-3), M4x0.7 (4130-4), M5x0.8 (4130-5), M6x1 (4130-6), M8x1.25 (4130-8), M10x1.5 (4130-10), M12x1.75 (4130-12)

**WARNING: LIFE TIME IS LIMITED,
CAN BE USED ABOUT 2000 TIMES**



METRIC FINE THREAD PLUG GAGES



4139-20G

- Supplied with Go and No-Go gages together
- Standard ISO1502
- Supplied with manufacturer inspection certificate

Code example:
"-1A" stands for "4139-1A"

Size (mm)		Code (4139)		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M1	0.2	-1A	-1AG	-1AH
M1.2	0.2	-1D2A	-1D2AG	-1D2AH
M1.4	0.2	-1D4A	-1D4AG	-1D4AH
M1.6	0.2	-1D6A	-1D6AG	-1D6AH
M1.8	0.2	-1D8A	-1D8AG	-1D8AH
M2	0.2	-2A	-2AG	-2AH
	0.25	-2B	-2BG	-2BH
M2.5	0.2	-2D5A	-2D5AG	-2D5AH
	0.25	-2D5B	-2D5BG	-2D5BH
	0.35	-2D5D	-2D5DG	-2D5DH
M3	0.25	-3B	-3BG	-3BH
	0.35	-3D	-3DG	-3DH
M3.5	0.25	-3D5B	-3D5BG	-3D5BH
	0.35	-3D5D	-3D5DG	-3D5DH
	0.5	-3D5G	-3D5GG	-3D5GH
M4	0.25	-4B	-4BG	-4BH
	0.35	-4D	-4DG	-4DH
	0.5	-4G	-4GG	-4GH
M4.5	0.35	-4D5D	-4D5DG	-4D5DH
	0.5	-4D5G	-4D5GG	-4D5GH
M5	0.25	-5B	-5BG	-5BH
	0.35	-5D	-5DG	-5DH
	0.5	-5G	-5GG	-5GH
M5.5	0.5	-5D5G	-5D5GG	-5D5GH
M6	0.25	-6B	-6BG	-6BH
	0.35	-6D	-6DG	-6DH
M6.5	0.5	-6G	-6GG	-6GH
	0.5	-6D5G	-6D5GG	-6D5GH
M7	0.35	-7D	-7DG	-7DH
	0.5	-7G	-7GG	-7GH
M7.5	0.5	-7D5G	-7D5GG	-7D5GH
M8	0.35	-8D	-8DG	-8DH
	0.5	-8G	-8GG	-8GH

Size (mm)		Code (4139)		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M8	1	-8P	-8PG	-8PH
M8.5	0.5	-8D5G	-8D5GG	-8D5GH
	0.35	-9D	-9DG	-9DH
M9	0.5	-9G	-9GG	-9GH
	0.75	-9L	-9LG	-9LH
	1	-9P	-9PG	-9PH
M10	0.35	-10D	-10DG	-10DH
	0.5	-10G	-10GG	-10GH
	1	-10P	-10PG	-10PH
	1.25	-10Q	-10QG	-10QH
M11	0.5	-11G	-11GG	-11GH
	1	-11P	-11PG	-11PH
M12	0.5	-12G	-12GG	-12GH
	1	-12P	-12PG	-12PH
	1.25	-12Q	-12QG	-12QH
	1.5	-12R	-12RG	-12RH
M13	0.5	-13G	-13GG	-13GH
	1	-13P	-13PG	-13PH
M14	1.5	-13R	-13RG	-13RH
	0.5	-14G	-14GG	-14GH
M15	1	-14P	-14PG	-14PH
	1.25	-14Q	-14QG	-14QH
	1.5	-14R	-14RG	-14RH
M16	0.5	-15G	-15GG	-15GH
	1	-15P	-15PG	-15PH
	1.5	-15R	-15RG	-15RH
	0.5	-16G	-16GG	-16GH
M17	1	-16P	-16PG	-16PH
	1.25	-16Q	-16QG	-16QH
	1.5	-16R	-16RG	-16RH
M17	0.5	-17G	-17GG	-17GH
	1	-17P	-17PG	-17PH
1.5	-17R	-17RG	-17RH	

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Size (mm)		Code (4139)		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M18	0.5	-18G	-18GG	-18GH
	1	-18P	-18PG	-18PH
	1.25	-18Q	-18QG	-18QH
	1.5	-18R	-18RG	-18RH
	2	-18T	-18TG	-18TH
M19	0.5	-19G	-19GG	-19GH
	1	-19P	-19PG	-19PH
	1.5	-19R	-19RG	-19RH
M20	0.5	-20G	-20GG	-20GH
	1	-20P	-20PG	-20PH
	1.25	-20Q	-20QG	-20QH
	1.5	-20R	-20RG	-20RH
	2	-20T	-20TG	-20TH
M21	0.5	-21G	-21GG	-21GH
	1	-21P	-21PG	-21PH
	1.5	-21R	-21RG	-21RH
M22	0.5	-22G	-22GG	-22GH
	1	-22P	-22PG	-22PH
	1.25	-22Q	-22QG	-22QH
	1.5	-22R	-22RG	-22RH
M23	0.5	-23G	-23GG	-23GH
	1	-23P	-23PG	-23PH
	M24	0.5	-24G	-24GG
1		-24P	-24PG	-24PH
1.25		-24Q	-24QG	-24QH
1.5		-24R	-24RG	-24RH
M25	2	-24T	-24TG	-24TH
	0.5	-25G	-25GG	-25GH
	1	-25P	-25PG	-25PH
	1.5	-25R	-25RG	-25RH
M26	2	-25T	-25TG	-25TH
	0.5	-26G	-26GG	-26GH
	1	-26P	-26PG	-26PH
	1.5	-26R	-26RG	-26RH
M27	2	-26T	-26TG	-26TH
	0.5	-27G	-27GG	-27GH
	1	-27P	-27PG	-27PH
	1.5	-27R	-27RG	-27RH
M28	2	-27T	-27TG	-27TH
	0.5	-28G	-28GG	-28GH
	1	-28P	-28PG	-28PH
	1.5	-28R	-28RG	-28RH
M29	2	-28T	-28TG	-28TH
	0.5	-29G	-29GG	-29GH
	0.75	-29L	-29LG	-29LH
M30	1	-29P	-29PG	-29PH
	0.5	-30G	-30GG	-30GH
	0.75	-30L	-30LG	-30LH
	1	-30P	-30PG	-30PH
	1.5	-30R	-30RG	-30RH
M31	2	-30T	-30TG	-30TH
	3	-30V	-30VG	-30VH

Size (mm)		Code (4139)		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M31	0.5	-31G	-31GG	-31GH
	0.75	-31L	-31LG	-31LH
M32	0.5	-32G	-32GG	-32GH
	0.75	-32L	-32LG	-32LH
	1	-32P	-32PG	-32PH
	1.5	-32R	-32RG	-32RH
	2	-32T	-32TG	-32TH
M33	0.5	-33G	-33GG	-33GH
	0.75	-33L	-33LG	-33LH
	1	-33P	-33PG	-33PH
	1.5	-33R	-33RG	-33RH
	2	-33T	-33TG	-33TH
	3	-33V	-33VG	-33VH
M34	0.75	-34L	-34LG	-34LH
	1	-34P	-34PG	-34PH
	1.5	-34R	-34RG	-34RH
	2	-34T	-34TG	-34TH
M35	0.75	-35L	-35LG	-35LH
	1	-35P	-35PG	-35PH
	1.5	-35R	-35RG	-35RH
M36	2	-35T	-35TG	-35TH
	0.75	-36L	-36LG	-36LH
	1	-36P	-36PG	-36PH
	1.5	-36R	-36RG	-36RH
M37	2	-36T	-36TG	-36TH
	3	-36V	-36VG	-36VH
	0.75	-37L	-37LG	-37LH
M38	0.75	-38L	-38LG	-38LH
	1	-38P	-38PG	-38PH
	1.5	-38R	-38RG	-38RH
M39	2	-38T	-38TG	-38TH
	0.75	-39L	-39LG	-39LH
	1	-39P	-39PG	-39PH
	1.5	-39R	-39RG	-39RH
M40	2	-39T	-39TG	-39TH
	3	-39V	-39VG	-39VH
	0.75	-40L	-40LG	-40LH
	1	-40P	-40PG	-40PH
M42	1.5	-40R	-40RG	-40RH
	2	-40T	-40TG	-40TH
	3	-40V	-40VG	-40VH
M45	1	-42P	-42PG	-42PH
	1.5	-42R	-42RG	-42RH
	2	-42T	-42TG	-42TH
M48	3	-42V	-42VG	-42VH
	1	-45P	-45PG	-45PH
	1.5	-45R	-45RG	-45RH
M30	2	-45T	-45TG	-45TH
	3	-45V	-45VG	-45VH
	1	-48P	-48PG	-48PH
M31	1.5	-48R	-48RG	-48RH
	2	-48T	-48TG	-48TH
	3	-48V	-48VG	-48VH

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Size (mm)		Code (4139)		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M50	1	-50P	-50PG	-50PH
	1.5	-50R	-50RG	-50RH
	2	-50T	-50TG	-50TH
	3	-50V	-50VG	-50VH
M52	1	-52P	-52PG	-52PH
	1.5	-52R	-52RG	-52RH
	2	-52T	-52TG	-52TH
	3	-52V	-52VG	-52VH
	4	-52X	-52XG	-52XH
M55	1	-55P	-55PG	-55PH
	1.5	-55R	-55RG	-55RH
	2	-55T	-55TG	-55TH
	3	-55V	-55VG	-55VH
	4	-55X	-55XG	-55XH
M56	1	-56P	-56PG	-56PH
	1.5	-56R	-56RG	-56RH
	2	-56T	-56TG	-56TH
	3	-56V	-56VG	-56VH
	4	-56X	-56XG	-56XH
M58	1	-58P	-58PG	-58PH
	1.5	-58R	-58RG	-58RH
	2	-58T	-58TG	-58TH
	3	-58V	-58VG	-58VH
	4	-58X	-58XG	-58XH
M60	1	-60P	-60PG	-60PH
	1.5	-60R	-60RG	-60RH
	2	-60T	-60TG	-60TH
	3	-60V	-60VG	-60VH
	4	-60X	-60XG	-60XH
M62	1.5	-62R	-62RG	-62RH
	2	-62T	-62TG	-62TH
	3	-62V	-62VG	-62VH
	4	-62X	-62XG	-62XH
M64	1.5	-64R	-64RG	-64RH
	2	-64T	-64TG	-64TH
	3	-64V	-64VG	-64VH
	4	-64X	-64XG	-64XH
M65	1.5	-65R	-65RG	-65RH
	2	-65T	-65TG	-65TH
	3	-65V	-65VG	-65VH
	4	-65X	-65XG	-65XH
M68	1.5	-68R	-68RG	-68RH
	2	-68T	-68TG	-68TH
	3	-68V	-68VG	-68VH
	4	-68X	-68XG	-68XH
M70	1.5	-70R	-70RG	-70RH
	2	-70T	-70TG	-70TH
	3	-70V	-70VG	-70VH
	4	-70X	-70XG	-70XH
M72	6	-70O	-70OG	-70OH
	1.5	-72R	-72RG	-72RH

Size (mm)		Code (4139)		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M72	2	-72T	-72TG	-72TH
	3	-72V	-72VG	-72VH
	4	-72X	-72XG	-72XH
	6	-72O	-72OG	-72OH
M75	1.5	-75R	-75RG	-75RH
	2	-75T	-75TG	-75TH
	3	-75V	-75VG	-75VH
	4	-75X	-75XG	-75XH
M76	1.5	-76R	-76RG	-76RH
	2	-76T	-76TG	-76TH
	3	-76V	-76VG	-76VH
	4	-76X	-76XG	-76XH
M78	6	-76O	-76OG	-76OH
	2	-78T	-78TG	-78TH
M80	1.5	-80R	-80RG	-80RH
	2	-80T	-80TG	-80TH
	3	-80V	-80VG	-80VH
	4	-80X	-80XG	-80XH
M82	6	-80O	-80OG	-80OH
	2	-82T	-82TG	-82TH
M85	2	-85T	-85TG	-85TH
	3	-85V	-85VG	-85VH
	4	-85X	-85XG	-85XH
	6	-85O	-85OG	-85OH
M90	2	-90T	-90TG	-90TH
	3	-90V	-90VG	-90VH
	4	-90X	-90XG	-90XH
	6	-90O	-90OG	-90OH
M95	2	-95T	-95TG	-95TH
	3	-95V	-95VG	-95VH
	4	-95X	-95XG	-95XH
	6	-95O	-95OG	-95OH
M100	2	-100T	-100TG	-100TH
	3	-100V	-100VG	-100VH
	4	-100X	-100XG	-100XH
	6	-100O	-100OG	-100OH
M105	2	-105T	-105TG	-105TH
	3	-105V	-105VG	-105VH
	4	-105X	-105XG	-105XH
	6	-105O	-105OG	-105OH
M110	2	-110T	-110TG	-110TH
	3	-110V	-110VG	-110VH
	4	-110X	-110XG	-110XH
	6	-110O	-110OG	-110OH
M115	2	-115T	-115TG	-115TH
	3	-115V	-115VG	-115VH
	4	-115X	-115XG	-115XH
	6	-115O	-115OG	-115OH
M120	2	-120T	-120TG	-120TH
	3	-120V	-120VG	-120VH
	4	-120X	-120XG	-120XH
	6	-120O	-120OG	-120OH

METRIC THREAD RING GAGES

WARNING: LIFE TIME IS LIMITED, CAN BE USED ABOUT 2000 TIMES



- Standard ISO1502
- Supplied with manufacturer inspection certificate



4120-16



4120-16N

Code example:
"-2" stands for "4120-2"

Individual

Size (mm)		Code (4120)					
Nominal diameter	Pitch	Class 6g		Class 6e		Class 6h	
		GO	NOGO	GO	NOGO	GO	NOGO
M2	0.4	-2	-2N	-2E	-2EN	-2H	-2HN
M2.2	0.45	-2D2	-2D2N	-2D2E	-2D2EN	-2D2H	-2D2HN
M2.3	0.4	-2D3	-2D3N	-2D3E	-2D3EN	-2D3H	-2D3HN
M2.5	0.45	-2D5	-2D5N	-2D5E	-2D5EN	-2D5H	-2D5HN
M2.6	0.45	-2D6	-2D6N	-2D6E	-2D6EN	-2D6H	-2D6HN
M3	0.5	-3	-3N	-3E	-3EN	-3H	-3HN
M3.5	0.6	-3D5	-3D5N	-3D5E	-3D5EN	-3D5H	-3D5HN
M4	0.7	-4	-4N	-4E	-4EN	-4H	-4HN
M4.5	0.75	-4D5	-4D5N	-4D5E	-4D5EN	-4D5H	-4D5HN
M5	0.8	-5	-5N	-5E	-5EN	-5H	-5HN
M6	1	-6	-6N	-6E	-6EN	-6H	-6HN
M7	1	-7	-7N	-7E	-7EN	-7H	-7HN
M8	1.25	-8	-8N	-8E	-8EN	-8H	-8HN
M9	1.25	-9	-9N	-9E	-9EN	-9H	-9HN
M10	1.5	-10	-10N	-10E	-10EN	-10H	-10HN
M11	1.5	-11	-11N	-11E	-11EN	-11H	-11HN
M12	1.75	-12	-12N	-12E	-12EN	-12H	-12HN
M14	2	-14	-14N	-14E	-14EN	-14H	-14HN
M16	2	-16	-16N	-16E	-16EN	-16H	-16HN
M18	2.5	-18	-18N	-18E	-18EN	-18H	-18HN
M20	2.5	-20	-20N	-20E	-20EN	-20H	-20HN
M22	2.5	-22	-22N	-22E	-22EN	-22H	-22HN
M24	3	-24	-24N	-24E	-24EN	-24H	-24HN
M27	3	-27	-27N	-27E	-27EN	-27H	-27HN
M30	3.5	-30	-30N	-30E	-30EN	-30H	-30HN
M33	3.5	-33	-33N	-33E	-33EN	-33H	-33HN
M36	4	-36	-36N	-36E	-36EN	-36H	-36HN
M39	4	-39	-39N	-39E	-39EN	-39H	-39HN
M42	4.5	-42	-42N	-42E	-42EN	-42H	-42HN
M45	4.5	-45	-45N	-45E	-45EN	-45H	-45HN
M48	5	-48	-48N	-48E	-48EN	-48H	-48HN
M52	5	-52	-52N	-52E	-52EN	-52H	-52HN
M56	5.5	-56	-56N	-56E	-56EN	-56H	-56HN
M60	5.5	-60	-60N	-60E	-60EN	-60H	-60HN
M64	6	-64	-64N	-64E	-64EN	-64H	-64HN
M68	6	-68	-68N	-68E	-68EN	-68H	-68HN

Go ring gage set (Class 6g)

Code	Thread ring gages included (mm)
4120-S7	M3x0.5 (4120-3), M4x0.7 (4120-4), M5x0.8 (4120-5), M6x1 (4120-6), M8x1.25 (4120-8), M10x1.5 (4120-10), M12x1.75 (4120-12)

No Go ring gage set (Class 6g)

Code	Thread ring gages included (mm)
4120-S7N	M3x0.5 (4120-3N), M4x0.7 (4120-4N), M5x0.8 (4120-5N), M6x1 (4120-6N), M8x1.25 (4120-8N), M10x1.5 (4120-10N), M12x1.75 (4120-12N)

METRIC FINE THREAD RING GAGES

- Standard ISO1502
- Supplied with manufacturer inspection certificate (except gages larger than M100)



4129-10P



4129-10PN

Code example:
"-3D5G" stands for "4129-3D5G"

Size (mm)		Code (4129)					
Nominal diameter	Pitch	Class 6g		Class 6e		Class 6h	
		GO	NOGO	GO	NOGO	GO	NOGO
M3.5	0.5	-3D5G	-3D5GN	-3D5GE	-3D5GEN	-3D5GH	-3D5GHN
M4	0.5	-4G	-4GN	-4GE	-4GEN	-4GH	-4GHN
M4.5	0.5	-4D5G	-4D5GN	-4D5GE	-4D5GEN	-4D5GH	-4D5GHN
M5	0.5	-5G	-5GN	-5GE	-5GEN	-5GH	-5GHN
M5.5	0.5	-5D5G	-5D5GN	-5D5GE	-5D5GEN	-5D5GH	-5D5GHN
M6	0.5	-6G	-6GN	-6GE	-6GEN	-6GH	-6GHN
	0.75	-6L	-6LN	-6LE	-6LEN	-6LH	-6LHN
M6.5	0.5	-6D5G	-6D5GN	-6D5GE	-6D5GEN	-6D5GH	-6D5GHN
M7	0.5	-7G	-7GN	-7GE	-7GEN	-7GH	-7GHN
	0.75	-7L	-7LN	-7LE	-7LEN	-7LH	-7LHN
M7.5	0.5	-7D5G	-7D5GN	-7D5GE	-7D5GEN	-7D5GH	-7D5GHN
M8	0.5	-8G	-8GN	-8GE	-8GEN	-8GH	-8GHN
	0.75	-8L	-8LN	-8LE	-8LEN	-8LH	-8LHN
	1	-8P	-8PN	-8PE	-8PEN	-8PH	-8PHN
M8.5	0.5	-8D5G	-8D5GN	-8D5GE	-8D5GEN	-8D5GH	-8D5GHN
M9	0.5	-9G	-9GN	-9GE	-9GEN	-9GH	-9GHN
	0.75	-9L	-9LN	-9LE	-9LEN	-9LH	-9LHN
	1	-9P	-9PN	-9PE	-9PEN	-9PH	-9PHN
M10	0.5	-10G	-10GN	-10GE	-10GEN	-10GH	-10GHN
	0.75	-10L	-10LN	-10LE	-10LEN	-10LH	-10LHN
	1	-10P	-10PN	-10PE	-10PEN	-10PH	-10PHN
	1.25	-10Q	-10QN	-10QE	-10QEN	-10QH	-10QHN
M11	0.5	-11G	-11GN	-11GE	-11GEN	-11GH	-11GHN
	0.75	-11L	-11LN	-11LE	-11LEN	-11LH	-11LHN
	1	-11P	-11PN	-11PE	-11PEN	-11PH	-11PHN
M12	0.5	-12G	-12GN	-12GE	-12GEN	-12GH	-12GHN
	0.75	-12L	-12LN	-12LE	-12LEN	-12LH	-12LHN
	1	-12P	-12PN	-12PE	-12PEN	-12PH	-12PHN
	1.25	-12Q	-12QN	-12QE	-12QEN	-12QH	-12QHN
M13	1.5	-12R	-12RN	-12RE	-12REN	-12RH	-12RHN
	0.5	-13G	-13GN	-13GE	-13GEN	-13GH	-13GHN
	0.75	-13L	-13LN	-13LE	-13LEN	-13LH	-13LHN
M14	1	-13P	-13PN	-13PE	-13PEN	-13PH	-13PHN
	1.5	-13R	-13RN	-13RE	-13REN	-13RH	-13RHN
	0.5	-14G	-14GN	-14GE	-14GEN	-14GH	-14GHN
M14	0.75	-14L	-14LN	-14LE	-14LEN	-14LH	-14LHN
	1	-14P	-14PN	-14PE	-14PEN	-14PH	-14PHN
	1.25	-14Q	-14QN	-14QE	-14QEN	-14QH	-14QHN
	1.5	-14R	-14RN	-14RE	-14REN	-14RH	-14RHN

To be continued

Continued from previous page

Size (mm)		Code (4129)					
Nominal diameter	Pitch	Class 6g		Class 6e		Class 6h	
		GO	NOGO	GO	NOGO	GO	NOGO
M15	0.5	-15G	-15GN	-15GE	-15GEN	-15GH	-15GHN
	0.75	-15L	-15LN	-15LE	-15LEN	-15LH	-15LHN
	1	-15P	-15PN	-15PE	-15PEN	-15PH	-15PHN
	1.25	-15R	-15RN	-15RE	-15REN	-15RH	-15RHN
M16	1.5	-16G	-16GN	-16GE	-16GEN	-16GH	-16GHN
	0.5	-16L	-16LN	-16LE	-16LEN	-16LH	-16LHN
	0.75	-16P	-16PN	-16PE	-16PEN	-16PH	-16PHN
	1	-16Q	-16QN	-16QE	-16QEN	-16QH	-16QHN
M17	1.5	-16R	-16RN	-16RE	-16REN	-16RH	-16RHN
	0.5	-17G	-17GN	-17GE	-17GEN	-17GH	-17GHN
	0.75	-17L	-17LN	-17LE	-17LEN	-17LH	-17LHN
	1	-17P	-17PN	-17PE	-17PEN	-17PH	-17PHN
M18	1.5	-17R	-17RN	-17RE	-17REN	-17RH	-17RHN
	0.5	-18G	-18GN	-18GE	-18GEN	-18GH	-18GHN
	0.75	-18L	-18LN	-18LE	-18LEN	-18LH	-18LHN
	1	-18P	-18PN	-18PE	-18PEN	-18PH	-18PHN
M19	1.25	-18Q	-18QN	-18QE	-18QEN	-18QH	-18QHN
	1.5	-18R	-18RN	-18RE	-18REN	-18RH	-18RHN
	2	-18T	-18TN	-18TE	-18TEN	-18TH	-18THN
	0.5	-19G	-19GN	-19GE	-19GEN	-19GH	-19GHN
M20	0.75	-19L	-19LN	-19LE	-19LEN	-19LH	-19LHN
	1	-19P	-19PN	-19PE	-19PEN	-19PH	-19PHN
	1.5	-19R	-19RN	-19RE	-19REN	-19RH	-19RHN
	0.5	-20G	-20GN	-20GE	-20GEN	-20GH	-20GHN
M21	0.75	-20L	-20LN	-20LE	-20LEN	-20LH	-20LHN
	1	-20P	-20PN	-20PE	-20PEN	-20PH	-20PHN
	1.25	-20Q	-20QN	-20QE	-20QEN	-20QH	-20QHN
	1.5	-20R	-20RN	-20RE	-20REN	-20RH	-20RHN
M22	2	-20T	-20TN	-20TE	-20TEN	-20TH	-20THN
	0.75	-21L	-21LN	-21LE	-21LEN	-21LH	-21LHN
	1	-21P	-21PN	-21PE	-21PEN	-21PH	-21PHN
	1.5	-21R	-21RN	-21RE	-21REN	-21RH	-21RHN
M23	0.75	-22L	-22LN	-22LE	-22LEN	-22LH	-22LHN
	1	-22P	-22PN	-22PE	-22PEN	-22PH	-22PHN
	1.25	-22Q	-22QN	-22QE	-22QEN	-22QH	-22QHN
	1.5	-22R	-22RN	-22RE	-22REN	-22RH	-22RHN
M24	2	-22T	-22TN	-22TE	-22TEN	-22TH	-22THN
	0.75	-23L	-23LN	-23LE	-23LEN	-23LH	-23LHN
	1	-23P	-23PN	-23PE	-23PEN	-23PH	-23PHN
	0.75	-24L	-24LN	-24LE	-24LEN	-24LH	-24LHN
M25	1	-24P	-24PN	-24PE	-24PEN	-24PH	-24PHN
	1.25	-24Q	-24QN	-24QE	-24QEN	-24QH	-24QHN
	1.5	-24R	-24RN	-24RE	-24REN	-24RH	-24RHN
	2	-24T	-24TN	-24TE	-24TEN	-24TH	-24THN
M26	0.75	-25L	-25LN	-25LE	-25LEN	-25LH	-25LHN
	1	-25P	-25PN	-25PE	-25PEN	-25PH	-25PHN
	1.5	-25R	-25RN	-25RE	-25REN	-25RH	-25RHN
	2	-25T	-25TN	-25TE	-25TEN	-25TH	-25THN
M26	0.75	-26L	-26LN	-26LE	-26LEN	-26LH	-26LHN
	1	-26P	-26PN	-26PE	-26PEN	-26PH	-26PHN
	1.5	-26R	-26RN	-26RE	-26REN	-26RH	-26RHN
	2	-26T	-26TN	-26TE	-26TEN	-26TH	-26THN

To be continued



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Size (mm)		Code (4129)					
Nominal diameter	Pitch	Class 6g		Class 6e		Class 6h	
		GO	NOGO	GO	NOGO	GO	NOGO
M27	0.75	-27L	-27LN	-27LE	-27LEN	-27LH	-27LHN
	1	-27P	-27PN	-27PE	-27PEN	-27PH	-27PHN
	1.5	-27R	-27RN	-27RE	-27REN	-27RH	-27RHN
	2	-27T	-27TN	-27TE	-27TEN	-27TH	-27THN
M28	0.75	-28L	-28LN	-28LE	-28LEN	-28LH	-28LHN
	1	-28P	-28PN	-28PE	-28PEN	-28PH	-28PHN
	1.5	-28R	-28RN	-28RE	-28REN	-28RH	-28RHN
	2	-28T	-28TN	-28TE	-28TEN	-28TH	-28THN
M29	0.75	-29L	-29LN	-29LE	-29LEN	-29LH	-29LHN
	1	-29P	-29PN	-29PE	-29PEN	-29PH	-29PHN
M30	0.75	-30L	-30LN	-30LE	-30LEN	-30LH	-30LHN
	1	-30P	-30PN	-30PE	-30PEN	-30PH	-30PHN
	1.5	-30R	-30RN	-30RE	-30REN	-30RH	-30RHN
	2	-30T	-30TN	-30TE	-30TEN	-30TH	-30THN
M31	3	-30V	-30VN	-30VE	-30VEN	-30VH	-30VHN
	0.75	-31L	-31LN	-31LE	-31LEN	-31LH	-31LHN
M32	0.75	-32L	-32LN	-32LE	-32LEN	-32LH	-32LHN
	1	-32P	-32PN	-32PE	-32PEN	-32PH	-32PHN
	1.5	-32R	-32RN	-32RE	-32REN	-32RH	-32RHN
M33	2	-32T	-32TN	-32TE	-32TEN	-32TH	-32THN
	0.75	-33L	-33LN	-33LE	-33LEN	-33LH	-33LHN
	1	-33P	-33PN	-33PE	-33PEN	-33PH	-33PHN
	1.5	-33R	-33RN	-33RE	-33REN	-33RH	-33RHN
M34	2	-33T	-33TN	-33TE	-33TEN	-33TH	-33THN
	3	-33V	-33VN	-33VE	-33VEN	-33VH	-33VHN
	1	-34P	-34PN	-34PE	-34PEN	-34PH	-34PHN
	1.5	-34R	-34RN	-34RE	-34REN	-34RH	-34RHN
M35	2	-34T	-34TN	-34TE	-34TEN	-34TH	-34THN
	1	-35P	-35PN	-35PE	-35PEN	-35PH	-35PHN
	1.5	-35R	-35RN	-35RE	-35REN	-35RH	-35RHN
M36	2	-35T	-35TN	-35TE	-35TEN	-35TH	-35THN
	1	-36P	-36PN	-36PE	-36PEN	-36PH	-36PHN
	1.5	-36R	-36RN	-36RE	-36REN	-36RH	-36RHN
	2	-36T	-36TN	-36TE	-36TEN	-36TH	-36THN
M38	3	-36V	-36VN	-36VE	-36VEN	-36VH	-36VHN
	1	-38P	-38PN	-38PE	-38PEN	-38PH	-38PHN
	1.5	-38R	-38RN	-38RE	-38REN	-38RH	-38RHN
M39	2	-38T	-38TN	-38TE	-38TEN	-38TH	-38THN
	1	-39P	-39PN	-39PE	-39PEN	-39PH	-39PHN
M40	1.5	-39R	-39RN	-39RE	-39REN	-39RH	-39RHN
	2	-39T	-39TN	-39TE	-39TEN	-39TH	-39THN
	3	-39V	-39VN	-39VE	-39VEN	-39VH	-39VHN
	1.5	-40R	-40RN	-40RE	-40REN	-40RH	-40RHN
M42	2	-40T	-40TN	-40TE	-40TEN	-40TH	-40THN
	3	-40V	-40VN	-40VE	-40VEN	-40VH	-40VHN
	1.5	-42R	-42RN	-42RE	-42REN	-42RH	-42RHN
M45	2	-42T	-42TN	-42TE	-42TEN	-42TH	-42THN
	3	-42V	-42VN	-42VE	-42VEN	-42VH	-42VHN
	1.5	-45R	-45RN	-45RE	-45REN	-45RH	-45RHN
M45	2	-45T	-45TN	-45TE	-45TEN	-45TH	-45THN
	3	-45V	-45VN	-45VE	-45VEN	-45VH	-45VHN

To be continued

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Size (mm)		Code (4129)					
Nominal diameter	Pitch	Class 6g		Class 6e		Class 6h	
		GO	NOGO	GO	NOGO	GO	NOGO
M48	1.5	-48R	-48RN	-48RE	-48REN	-48RH	-48RHN
	2	-48T	-48TN	-48TE	-48TEN	-48TH	-48THN
	3	-48V	-48VN	-48VE	-48VEN	-48VH	-48VHN
M50	1.5	-50R	-50RN	-50RE	-50REN	-50RH	-50RHN
	2	-50T	-50TN	-50TE	-50TEN	-50TH	-50THN
	3	-50V	-50VN	-50VE	-50VEN	-50VH	-50VHN
M52	1.5	-52R	-52RN	-52RE	-52REN	-52RH	-52RHN
	2	-52T	-52TN	-52TE	-52TEN	-52TH	-52THN
	3	-52V	-52VN	-52VE	-52VEN	-52VH	-52VHN
	4	-52X	-52XN	-52XE	-52XEN	-52XH	-52XHN
M55	1.5	-55R	-55RN	-55RE	-55REN	-55RH	-55RHN
	2	-55T	-55TN	-55TE	-55TEN	-55TH	-55THN
	3	-55V	-55VN	-55VE	-55VEN	-55VH	-55VHN
	4	-55X	-55XN	-55XE	-55XEN	-55XH	-55XHN
M56	1.5	-56R	-56RN	-56RE	-56REN	-56RH	-56RHN
	2	-56T	-56TN	-56TE	-56TEN	-56TH	-56THN
	3	-56V	-56VN	-56VE	-56VEN	-56VH	-56VHN
	4	-56X	-56XN	-56XE	-56XEN	-56XH	-56XHN
M58	1.5	-58R	-58RN	-58RE	-58REN	-58RH	-58RHN
	2	-58T	-58TN	-58TE	-58TEN	-58TH	-58THN
	3	-58V	-58VN	-58VE	-58VEN	-58VH	-58VHN
	4	-58X	-58XN	-58XE	-58XEN	-58XH	-58XHN
M60	1.5	-60R	-60RN	-60RE	-60REN	-60RH	-60RHN
	2	-60T	-60TN	-60TE	-60TEN	-60TH	-60THN
	3	-60V	-60VN	-60VE	-60VEN	-60VH	-60VHN
	4	-60X	-60XN	-60XE	-60XEN	-60XH	-60XHN
M62	1.5	-62R	-62RN	-62RE	-62REN	-62RH	-62RHN
	2	-62T	-62TN	-62TE	-62TEN	-62TH	-62THN
	3	-62V	-62VN	-62VE	-62VEN	-62VH	-62VHN
	4	-62X	-62XN	-62XE	-62XEN	-62XH	-62XHN
M64	1.5	-64R	-64RN	-64RE	-64REN	-64RH	-64RHN
	2	-64T	-64TN	-64TE	-64TEN	-64TH	-64THN
	3	-64V	-64VN	-64VE	-64VEN	-64VH	-64VHN
	4	-64X	-64XN	-64XE	-64XEN	-64XH	-64XHN
M65	1.5	-65R	-65RN	-65RE	-65REN	-65RH	-65RHN
	2	-65T	-65TN	-65TE	-65TEN	-65TH	-65THN
	3	-65V	-65VN	-65VE	-65VEN	-65VH	-65VHN
	4	-65X	-65XN	-65XE	-65XEN	-65XH	-65XHN
M68	1.5	-68R	-68RN	-68RE	-68REN	-68RH	-68RHN
	2	-68T	-68TN	-68TE	-68TEN	-68TH	-68THN
	3	-68V	-68VN	-68VE	-68VEN	-68VH	-68VHN
	4	-68X	-68XN	-68XE	-68XEN	-68XH	-68XHN
M70	1.5	-70R	-70RN	-70RE	-70REN	-70RH	-70RHN
	2	-70T	-70TN	-70TE	-70TEN	-70TH	-70THN
	3	-70V	-70VN	-70VE	-70VEN	-70VH	-70VHN
	4	-70X	-70XN	-70XE	-70XEN	-70XH	-70XHN
	6	-70O	-70ON	-70OE	-70OEN	-70OH	-70OHN
M72	1.5	-72R	-72RN	-72RE	-72REN	-72RH	-72RHN
	2	-72T	-72TN	-72TE	-72TEN	-72TH	-72THN

To be continued



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Size (mm)		Code (4129)					
Nominal diameter	Pitch	Class 6g		Class 6e		Class 6h	
		GO	NOGO	GO	NOGO	GO	NOGO
M72	3	-72V	-72VN	-72VE	-72VEN	-72VH	-72VHN
	4	-72X	-72XN	-72XE	-72XEN	-72XH	-72XHN
	6	-72O	-72ON	-72OE	-72OEN	-72OH	-72OHN
M75	1.5	-75R	-75RN	-75RE	-75REN	-75RH	-75RHN
	2	-75T	-75TN	-75TE	-75TEN	-75TH	-75THN
	3	-75V	-75VN	-75VE	-75VEN	-75VH	-75VHN
	4	-75X	-75XN	-75XE	-75XEN	-75XH	-75XHN
M76	1.5	-76R	-76RN	-76RE	-76REN	-76RH	-76RHN
	2	-76T	-76TN	-76TE	-76TEN	-76TH	-76THN
	3	-76V	-76VN	-76VE	-76VEN	-76VH	-76VHN
	4	-76X	-76XN	-76XE	-76XEN	-76XH	-76XHN
M78	6	-76O	-76ON	-76OE	-76OEN	-76OH	-76OHN
	2	-78T	-78TN	-78TE	-78TEN	-78TH	-78THN
	M80	1.5	-80R	-80RN	-80RE	-80REN	-80RH
2		-80T	-80TN	-80TE	-80TEN	-80TH	-80THN
3		-80V	-80VN	-80VE	-80VEN	-80VH	-80VHN
4		-80X	-80XN	-80XE	-80XEN	-80XH	-80XHN
M82	6	-80O	-80ON	-80OE	-80OEN	-80OH	-80OHN
	2	-82T	-82TN	-82TE	-82TEN	-82TH	-82THN
	M85	2	-85T	-85TN	-85TE	-85TEN	-85TH
3		-85V	-85VN	-85VE	-85VEN	-85VH	-85VHN
4		-85X	-85XN	-85XE	-85XEN	-85XH	-85XHN
6		-85O	-85ON	-85OE	-85OEN	-85OH	-85OHN
M90	2	-90T	-90TN	-90TE	-90TEN	-90TH	-90THN
	3	-90V	-90VN	-90VE	-90VEN	-90VH	-90VHN
	4	-90X	-90XN	-90XE	-90XEN	-90XH	-90XHN
	6	-90O	-90ON	-90OE	-90OEN	-90OH	-90OHN
M95	2	-95T	-95TN	-95TE	-95TEN	-95TH	-95THN
	3	-95V	-95VN	-95VE	-95VEN	-95VH	-95VHN
	4	-95X	-95XN	-95XE	-95XEN	-95XH	-95XHN
	6	-95O	-95ON	-95OE	-95OEN	-95OH	-95OHN
M100	2	-100T	-100TN	-100TE	-100TEN	-100TH	-100THN
	3	-100V	-100VN	-100VE	-100VEN	-100VH	-100VHN
	4	-100X	-100XN	-100XE	-100XEN	-100XH	-100XHN
	6	-100O	-100ON	-100OE	-100OEN	-100OH	-100OHN
M105	2	-105T	-105TN	-105TE	-105TEN	-105TH	-105THN
	3	-105V	-105VN	-105VE	-105VEN	-105VH	-105VHN
	4	-105X	-105XN	-105XE	-105XEN	-105XH	-105XHN
	6	-105O	-105ON	-105OE	-105OEN	-105OH	-105OHN
M110	2	-110T	-110TN	-110TE	-110TEN	-110TH	-110THN
	3	-110V	-110VN	-110VE	-110VEN	-110VH	-110VHN
	4	-110X	-110XN	-110XE	-110XEN	-110XH	-110XHN
	6	-110O	-110ON	-110OE	-110OEN	-110OH	-110OHN
M115	2	-115T	-115TN	-115TE	-115TEN	-115TH	-115THN
	3	-115V	-115VN	-115VE	-115VEN	-115VH	-115VHN
	4	-115X	-115XN	-115XE	-115XEN	-115XH	-115XHN
	6	-115O	-115ON	-115OE	-115OEN	-115OH	-115OHN
M120	2	-120T	-120TN	-120TE	-120TEN	-120TH	-120THN
	3	-120V	-120VN	-120VE	-120VEN	-120VH	-120VHN
	4	-120X	-120XN	-120XE	-120XEN	-120XH	-120XHN
	6	-120O	-120ON	-120OE	-120OEN	-120OH	-120OHN

AMERICAN STANDARD THREAD PLUG GAGES

WARNING: LIFE TIME IS LIMITED,
CAN BE USED ABOUT 2000 TIMES



4131-102

- Supplied with Go and No-Go gages together
- Standard ANSI/ASME B1.2
- Supplied with manufacturer inspection certificate

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Size	Code	
	Class 2B	Class 3B
No. 0-80UNF	4131-02	4131-02B
No. 1-64UNC	4131-11	4131-11B
No. 1-72UNF	4131-12	4131-12B
No. 2-56UNC	4131-21	4131-21B
No. 2-64UNF	4131-22	4131-22B
No. 3-48UNC	4131-31	4131-31B
No. 3-56UNF	4131-32	4131-32B
No. 4-40UNC	4131-41	4131-41B
No. 4-48UNF	4131-42	4131-42B
No. 5-40UNC	4131-51	4131-51B
No. 5-44UNF	4131-52	4131-52B
No. 6-32UNC	4131-61	4131-61B
No. 6-40UNF	4131-62	4131-62B
No. 8-32UNC	4131-81	4131-81B
No. 8-36UNF	4131-82	4131-82B
No. 10-24UNC	4131-101	4131-101B
No. 10-32UNF	4131-102	4131-102B
No. 12-24UNC	4131-121	4131-121B
No. 12-28UNF	4131-122	4131-122B
No. 12-32UNEF	4131-123	4131-123B
1/4-20UNC	4131-1B1	4131-1B1B
1/4-28UNF	4131-1B2	4131-1B2B
1/4-32UNEF	4131-1B3	4131-1B3B
1/4-36UNS	4131-1B4	4131-1B4B
5/16-18UNC	4131-5D1	4131-5D1B
5/16-24UNF	4131-5D2	4131-5D2B
5/16-32UNEF	4131-5D3	4131-5D3B
3/8-16UNC	4131-3C1	4131-3C1B
3/8-24UNF	4131-3C2	4131-3C2B
3/8-32UNEF	4131-3C3	4131-3C3B
7/16-14UNC	4131-7D1	4131-7D1B
7/16-20UNF	4131-7D2	4131-7D2B
7/16-28UNEF	4131-7D3	4131-7D3B
1/2-13UNC	4131-1A1	4131-1A1B
1/2-20UNF	4131-1A2	4131-1A2B
1/2-28UNEF	4131-1A3	4131-1A3B

Size	Code	
	Class 2B	Class 3B
9/16-12UNC	4131-9D1	4131-9D1B
9/16-18UNF	4131-9D2	4131-9D2B
9/16-24UNEF	4131-9D3	4131-9D3B
5/8-11UNC	4131-5C1	4131-5C1B
5/8-18UNF	4131-5C2	4131-5C2B
5/8-24UNEF	4131-5C3	4131-5C3B
11/16-16UN	4131-11D516	4131-11D516B
11/16-24UNEF	4131-11D3	4131-11D3B
3/4-10UNC	4131-3B1	4131-3B1B
3/4-16UNF	4131-3B2	4131-3B2B
3/4-20UNEF	4131-3B3	4131-3B3B
13/16-16UN	4131-13D516	4131-13D516B
13/16-20UNEF	4131-13D3	4131-13D3B
7/8-9UNC	4131-7C1	4131-7C1B
7/8-14UNF	4131-7C2	4131-7C2B
7/8-16UN	4131-7C516	4131-7C516B
7/8-20UNEF	4131-7C3	4131-7C3B
15/16-20UNEF	4131-15D3	4131-15D3B
1-8UNC	4131-2A1	4131-2A1B
1-12UNF	4131-2A2	4131-2A2B
1-14UNS	4131-2A514	4131-2A514B
1-20UNEF	4131-2A3	4131-2A3B
1-32UN	4131-2A532	4131-2A532B
1 1/16-12UN	4131-1E512	4131-1E512B
1 1/16-18UNEF	4131-1E3	4131-1E3B
1 1/8-7UNC	4131-1F1	4131-1F1B
1 1/8-8UN	4131-1F58	4131-1F58B
1 1/8-12UNF	4131-1F2	4131-1F2B
1 1/8-18UNEF	4131-1F3	4131-1F3B
1 3/16-12UN	4131-3E512	4131-3E512B
1 3/16-18UNEF	4131-3E3	4131-3E3B
1 1/4-7UNC	4131-1G1	4131-1G1B
1 1/4-8UN	4131-1G58	4131-1G58B
1 1/4-12UNF	4131-1G2	4131-1G2B
1 1/4-18UNEF	4131-1G3	4131-1G3B
1 5/16-12UN	4131-5E512	4131-5E512B



WARNING: LIFE TIME IS LIMITED,
CAN BE USED ABOUT 2000 TIMES

AMERICAN STANDARD THREAD RING GAGES



- Standard ANSI/ASME B1.2
- Class 2A
- Supplied with manufacturer inspection certificate

Size	Code	
	GO	NOGO
No. 4-40UNC	4121-41	4121-41N
No. 4-48UNF	4121-42	4121-42N
No. 5-40UNC	4121-51	4121-51N
No. 5-44UNF	4121-52	4121-52N
No. 6-32UNC	4121-61	4121-61N
No. 6-40UNF	4121-62	4121-62N
No. 8-32UNC	4121-81	4121-81N
No. 8-36UNF	4121-82	4121-82N
No. 10-24UNC	4121-101	4121-101N
No. 10-32UNF	4121-102	4121-102N
No. 12-24UNC	4121-121	4121-121N
No. 12-28UNF	4121-122	4121-122N
No. 12-32UNEF	4121-123	4121-123N
1/4-20UNC	4121-1B1	4121-1B1N
1/4-28UNF	4121-1B2	4121-1B2N
1/4-32UNEF	4121-1B3	4121-1B3N
1/4-36UNS	4121-1B4	4121-1B4N
5/16-18UNC	4121-5D1	4121-5D1N
5/16-24UNF	4121-5D2	4121-5D2N
5/16-32UNEF	4121-5D3	4121-5D3N
3/8-16UNC	4121-3C1	4121-3C1N
3/8-24UNF	4121-3C2	4121-3C2N
3/8-32UNEF	4121-3C3	4121-3C3N
7/16-14UNC	4121-7D1	4121-7D1N
7/16-20UNF	4121-7D2	4121-7D2N
7/16-28UNEF	4121-7D3	4121-7D3N
1/2-13UNC	4121-1A1	4121-1A1N
1/2-20UNF	4121-1A2	4121-1A2N
1/2-28UNEF	4121-1A3	4121-1A3N
9/16-12UNC	4121-9D1	4121-9D1N
9/16-18UNF	4121-9D2	4121-9D2N
9/16-24UNEF	4121-9D3	4121-9D3N

Size	Code	
	GO	NOGO
5/8-11UNC	4121-5C1	4121-5C1N
5/8-18UNF	4121-5C2	4121-5C2N
5/8-24UNEF	4121-5C3	4121-5C3N
11/16-16UN	4121-11D516	4121-11D516N
11/16-24UNEF	4121-11D3	4121-11D3N
3/4-10UNC	4121-3B1	4121-3B1N
3/4-16UNF	4121-3B2	4121-3B2N
3/4-20UNEF	4121-3B3	4121-3B3N
13/16-16UN	4121-13D516	4121-13D516N
13/16-20UNEF	4121-13D3	4121-13D3N
7/8-9UNC	4121-7C1	4121-7C1N
7/8-14UNF	4121-7C2	4121-7C2N
7/8-16UN	4121-7C516	4121-7C516N
7/8-20UNEF	4121-7C3	4121-7C3N
15/16-20UNEF	4121-15D3	4121-15D3N
1-8UNC	4121-2A1	4121-2A1N
1-12UNF	4121-2A2	4121-2A2N
1-14UNS	4121-2A514	4121-2A514N
1-20UNEF	4121-2A3	4121-2A3N
1-32UN	4121-2A532	4121-2A532N
1 1/16-12UN	4121-1E512	4121-1E512N
1 1/16-18UNEF	4121-1E3	4121-1E3N
1 1/8-7UNC	4121-1F1	4121-1F1N
1 1/8-8UN	4121-1F58	4121-1F58N
1 1/8-12UNF	4121-1F2	4121-1F2N
1 1/8-18UNEF	4121-1F3	4121-1F3N
1 3/16-12UN	4121-3E512	4121-3E512N
1 3/16-18UNEF	4121-3E3	4121-3E3N
1 1/4-7UNC	4121-1G1	4121-1G1N
1 1/4-8UN	4121-1G58	4121-1G58N
1 1/4-12UNF	4121-1G2	4121-1G2N
1 1/4-18UNEF	4121-1G3	4121-1G3N
1 5/16-12UN	4121-5E512	4121-5E512N

CHECK PLUGS FOR METRIC THREAD RING GAGES

WARNING: LIFE TIME IS LIMITED,
CAN BE USED ABOUT 2000 TIMES



4647-10



4647-10N

- Standard ISO1502
- Check thread ring gages
- Supplied with manufacturer inspection certificate

Code example:
"-2" stands for "4647-2"

Size (mm)		Code (4647)					
Nominal diameter	Pitch	Class 6g		Class 6e		Class 6h	
		GO	NOGO	GO	NOGO	GO	NOGO
M2	0.4	-2	-2N	-2E	-2EN	-2H	-2HN
M2.2	0.45	-2D2	-2D2N	-2D2E	-2D2EN	-2D2H	-2D2HN
M2.3	0.4	-2D3	-2D3N	-2D3E	-2D3EN	-2D3H	-2D3HN
M2.5	0.45	-2D5	-2D5N	-2D5E	-2D5EN	-2D5H	-2D5HN
M2.6	0.45	-2D6	-2D6N	-2D6E	-2D6EN	-2D6H	-2D6HN
M3	0.5	-3	-3N	-3E	-3EN	-3H	-3HN
M3.5	0.6	-3D5	-3D5N	-3D5E	-3D5EN	-3D5H	-3D5HN
M4	0.7	-4	-4N	-4E	-4EN	-4H	-4HN
M4.5	0.75	-4D5	-4D5N	-4D5E	-4D5EN	-4D5H	-4D5HN
M5	0.8	-5	-5N	-5E	-5EN	-5H	-5HN
M6	1	-6	-6N	-6E	-6EN	-6H	-6HN
M7	1	-7	-7N	-7E	-7EN	-7H	-7HN
M8	1.25	-8	-8N	-8E	-8EN	-8H	-8HN
M9	1.25	-9	-9N	-9E	-9EN	-9H	-9HN
M10	1.5	-10	-10N	-10E	-10EN	-10H	-10HN
M11	1.5	-11	-11N	-11E	-11EN	-11H	-11HN
M12	1.75	-12	-12N	-12E	-12EN	-12H	-12HN
M14	2	-14	-14N	-14E	-14EN	-14H	-14HN
M16	2	-16	-16N	-16E	-16EN	-16H	-16HN
M18	2.5	-18	-18N	-18E	-18EN	-18H	-18HN
M20	2.5	-20	-20N	-20E	-20EN	-20H	-20HN
M22	2.5	-22	-22N	-22E	-22EN	-22H	-22HN
M24	3	-24	-24N	-24E	-24EN	-24H	-24HN
M27	3	-27	-27N	-27E	-27EN	-27H	-27HN
M30	3.5	-30	-30N	-30E	-30EN	-30H	-30HN
M33	3.5	-33	-33N	-33E	-33EN	-33H	-33HN
M36	4	-36	-36N	-36E	-36EN	-36H	-36HN
M39	4	-39	-39N	-39E	-39EN	-39H	-39HN
M42	4.5	-42	-42N	-42E	-42EN	-42H	-42HN
M45	4.5	-45	-45N	-45E	-45EN	-45H	-45HN
M48	5	-48	-48N	-48E	-48EN	-48H	-48HN
M52	5	-52	-52N	-52E	-52EN	-52H	-52HN
M56	5.5	-56	-56N	-56E	-56EN	-56H	-56HN
M60	5.5	-60	-60N	-60E	-60EN	-60H	-60HN
M64	6	-64	-64N	-64E	-64EN	-64H	-64HN
M68	6	-68	-68N	-68E	-68EN	-68H	-68HN

**WARNING: LIFE TIME IS LIMITED,
CAN BE USED ABOUT 2000 TIMES**

CHECK PLUGS FOR METRIC FINE THREAD RING GAGES



4677-10P



4677-10PN

- Standard ISO1502
- Check thread ring gages
- Supplied with manufacturer inspection certificate

Code example:
"-3D5G" stands for "4677-3D5G"

Size (mm)		Code (4677)					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M3.5	0.5	-3D5G	-3D5GN	-3D5GE	-3D5GEN	-3D5GH	-3D5GHN
M4	0.5	-4G	-4GN	-4GE	-4GEN	-4GH	-4GHN
M4.5	0.5	-4D5G	-4D5GN	-4D5GE	-4D5GEN	-4D5GH	-4D5GHN
M5	0.5	-5G	-5GN	-5GE	-5GEN	-5GH	-5GHN
M5.5	0.5	-5D5G	-5D5GN	-5D5GE	-5D5GEN	-5D5GH	-5D5GHN
M6	0.5	-6G	-6GN	-6GE	-6GEN	-6GH	-6GHN
	0.75	-6L	-6LN	-6LE	-6LEN	-6LH	-6LHN
M6.5	0.5	-6D5G	-6D5GN	-6D5GE	-6D5GEN	-6D5GH	-6D5GHN
M7	0.5	-7G	-7GN	-7GE	-7GEN	-7GH	-7GHN
	0.75	-7L	-7LN	-7LE	-7LEN	-7LH	-7LHN
M7.5	0.5	-7D5G	-7D5GN	-7D5GE	-7D5GEN	-7D5GH	-7D5GHN
M8	0.5	-8G	-8GN	-8GE	-8GEN	-8GH	-8GHN
	0.75	-8L	-8LN	-8LE	-8LEN	-8LH	-8LHN
M8.5	1	-8P	-8PN	-8PE	-8PEN	-8PH	-8PHN
	0.5	-8D5G	-8D5GN	-8D5GE	-8D5GEN	-8D5GH	-8D5GHN
M9	0.5	-9G	-9GN	-9GE	-9GEN	-9GH	-9GHN
	0.75	-9L	-9LN	-9LE	-9LEN	-9LH	-9LHN
	1	-9P	-9PN	-9PE	-9PEN	-9PH	-9PHN
M10	0.5	-10G	-10GN	-10GE	-10GEN	-10GH	-10GHN
	0.75	-10L	-10LN	-10LE	-10LEN	-10LH	-10LHN
	1	-10P	-10PN	-10PE	-10PEN	-10PH	-10PHN
	1.25	-10Q	-10QN	-10QE	-10QEN	-10QH	-10QHN
M11	0.5	-11G	-11GN	-11GE	-11GEN	-11GH	-11GHN
	0.75	-11L	-11LN	-11LE	-11LEN	-11LH	-11LHN
	1	-11P	-11PN	-11PE	-11PEN	-11PH	-11PHN
M12	0.5	-12G	-12GN	-12GE	-12GEN	-12GH	-12GHN
	0.75	-12L	-12LN	-12LE	-12LEN	-12LH	-12LHN
	1	-12P	-12PN	-12PE	-12PEN	-12PH	-12PHN
	1.25	-12Q	-12QN	-12QE	-12QEN	-12QH	-12QHN
	1.5	-12R	-12RN	-12RE	-12REN	-12RH	-12RHN
M13	0.5	-13G	-13GN	-13GE	-13GEN	-13GH	-13GHN
	0.75	-13L	-13LN	-13LE	-13LEN	-13LH	-13LHN
	1	-13P	-13PN	-13PE	-13PEN	-13PH	-13PHN
	1.5	-13R	-13RN	-13RE	-13REN	-13RH	-13RHN
M14	0.5	-14G	-14GN	-14GE	-14GEN	-14GH	-14GHN
	0.75	-14L	-14LN	-14LE	-14LEN	-14LH	-14LHN
	1	-14P	-14PN	-14PE	-14PEN	-14PH	-14PHN
	1.25	-14Q	-14QN	-14QE	-14QEN	-14QH	-14QHN
	1.5	-14R	-14RN	-14RE	-14REN	-14RH	-14RHN

To be continued

Continued from previous page

Size (mm)		Code (4677)					
Nominal diameter	Pitch	Class 6g		Class 6e		Class 6h	
		GO	NOGO	GO	NOGO	GO	NOGO
M15	0.5	-15G	-15GN	-15GE	-15GEN	-15GH	-15GHN
	0.75	-15L	-15LN	-15LE	-15LEN	-15LH	-15LHN
	1	-15P	-15PN	-15PE	-15PEN	-15PH	-15PHN
	1.5	-15R	-15RN	-15RE	-15REN	-15RH	-15RHN
M16	0.5	-16G	-16GN	-16GE	-16GEN	-16GH	-16GHN
	0.75	-16L	-16LN	-16LE	-16LEN	-16LH	-16LHN
	1	-16P	-16PN	-16PE	-16PEN	-16PH	-16PHN
	1.25	-16Q	-16QN	-16QE	-16QEN	-16QH	-16QHN
	1.5	-16R	-16RN	-16RE	-16REN	-16RH	-16RHN
M17	0.5	-17G	-17GN	-17GE	-17GEN	-17GH	-17GHN
	0.75	-17L	-17LN	-17LE	-17LEN	-17LH	-17LHN
	1	-17P	-17PN	-17PE	-17PEN	-17PH	-17PHN
	1.5	-17R	-17RN	-17RE	-17REN	-17RH	-17RHN
M18	0.5	-18G	-18GN	-18GE	-18GEN	-18GH	-18GHN
	0.75	-18L	-18LN	-18LE	-18LEN	-18LH	-18LHN
	1	-18P	-18PN	-18PE	-18PEN	-18PH	-18PHN
	1.25	-18Q	-18QN	-18QE	-18QEN	-18QH	-18QHN
	1.5	-18R	-18RN	-18RE	-18REN	-18RH	-18RHN
	2	-18T	-18TN	-18TE	-18TEN	-18TH	-18THN
M19	0.5	-19G	-19GN	-19GE	-19GEN	-19GH	-19GHN
	0.75	-19L	-19LN	-19LE	-19LEN	-19LH	-19LHN
	1	-19P	-19PN	-19PE	-19PEN	-19PH	-19PHN
	1.5	-19R	-19RN	-19RE	-19REN	-19RH	-19RHN
M20	0.5	-20G	-20GN	-20GE	-20GEN	-20GH	-20GHN
	0.75	-20L	-20LN	-20LE	-20LEN	-20LH	-20LHN
	1	-20P	-20PN	-20PE	-20PEN	-20PH	-20PHN
	1.25	-20Q	-20QN	-20QE	-20QEN	-20QH	-20QHN
	1.5	-20R	-20RN	-20RE	-20REN	-20RH	-20RHN
	2	-20T	-20TN	-20TE	-20TEN	-20TH	-20THN
M21	0.75	-21L	-21LN	-21LE	-21LEN	-21LH	-21LHN
	1	-21P	-21PN	-21PE	-21PEN	-21PH	-21PHN
	1.5	-21R	-21RN	-21RE	-21REN	-21RH	-21RHN
M22	0.75	-22L	-22LN	-22LE	-22LEN	-22LH	-22LHN
	1	-22P	-22PN	-22PE	-22PEN	-22PH	-22PHN
	1.25	-22Q	-22QN	-22QE	-22QEN	-22QH	-22QHN
	1.5	-22R	-22RN	-22RE	-22REN	-22RH	-22RHN
	2	-22T	-22TN	-22TE	-22TEN	-22TH	-22THN
M23	0.75	-23L	-23LN	-23LE	-23LEN	-23LH	-23LHN
	1	-23P	-23PN	-23PE	-23PEN	-23PH	-23PHN
M24	0.75	-24L	-24LN	-24LE	-24LEN	-24LH	-24LHN
	1	-24P	-24PN	-24PE	-24PEN	-24PH	-24PHN
	1.25	-24Q	-24QN	-24QE	-24QEN	-24QH	-24QHN
	1.5	-24R	-24RN	-24RE	-24REN	-24RH	-24RHN
	2	-24T	-24TN	-24TE	-24TEN	-24TH	-24THN
M25	0.75	-25L	-25LN	-25LE	-25LEN	-25LH	-25LHN
	1	-25P	-25PN	-25PE	-25PEN	-25PH	-25PHN
	1.5	-25R	-25RN	-25RE	-25REN	-25RH	-25RHN
	2	-25T	-25TN	-25TE	-25TEN	-25TH	-25THN
M26	0.75	-26L	-26LN	-26LE	-26LEN	-26LH	-26LHN
	1	-26P	-26PN	-26PE	-26PEN	-26PH	-26PHN
	1.5	-26R	-26RN	-26RE	-26REN	-26RH	-26RHN
	2	-26T	-26TN	-26TE	-26TEN	-26TH	-26THN

To be continued



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Size (mm)		Code (4677)					
Nominal diameter	Pitch	Class 6g		Class 6e		Class 6h	
		GO	NOGO	GO	NOGO	GO	NOGO
M27	0.75	-27L	-27LN	-27LE	-27LEN	-27LH	-27LHN
	1	-27P	-27PN	-27PE	-27PEN	-27PH	-27PHN
	1.5	-27R	-27RN	-27RE	-27REN	-27RH	-27RHN
	2	-27T	-27TN	-27TE	-27TEN	-27TH	-27THN
M28	0.75	-28L	-28LN	-28LE	-28LEN	-28LH	-28LHN
	1	-28P	-28PN	-28PE	-28PEN	-28PH	-28PHN
	1.5	-28R	-28RN	-28RE	-28REN	-28RH	-28RHN
M29	0.75	-29L	-29LN	-29LE	-29LEN	-29LH	-29LHN
	1	-29P	-29PN	-29PE	-29PEN	-29PH	-29PHN
M30	0.75	-30L	-30LN	-30LE	-30LEN	-30LH	-30LHN
	1	-30P	-30PN	-30PE	-30PEN	-30PH	-30PHN
	1.5	-30R	-30RN	-30RE	-30REN	-30RH	-30RHN
	2	-30T	-30TN	-30TE	-30TEN	-30TH	-30THN
M31	3	-30V	-30VN	-30VE	-30VEN	-30VH	-30VHN
	0.75	-31L	-31LN	-31LE	-31LEN	-31LH	-31LHN
M32	0.75	-32L	-32LN	-32LE	-32LEN	-32LH	-32LHN
	1	-32P	-32PN	-32PE	-32PEN	-32PH	-32PHN
	1.5	-32R	-32RN	-32RE	-32REN	-32RH	-32RHN
M33	2	-32T	-32TN	-32TE	-32TEN	-32TH	-32THN
	0.75	-33L	-33LN	-33LE	-33LEN	-33LH	-33LHN
	1	-33P	-33PN	-33PE	-33PEN	-33PH	-33PHN
	1.5	-33R	-33RN	-33RE	-33REN	-33RH	-33RHN
M34	2	-33T	-33TN	-33TE	-33TEN	-33TH	-33THN
	3	-33V	-33VN	-33VE	-33VEN	-33VH	-33VHN
	1	-34P	-34PN	-34PE	-34PEN	-34PH	-34PHN
M35	1.5	-34R	-34RN	-34RE	-34REN	-34RH	-34RHN
	2	-34T	-34TN	-34TE	-34TEN	-34TH	-34THN
M36	1	-35P	-35PN	-35PE	-35PEN	-35PH	-35PHN
	1.5	-35R	-35RN	-35RE	-35REN	-35RH	-35RHN
M38	2	-35T	-35TN	-35TE	-35TEN	-35TH	-35THN
	1	-36P	-36PN	-36PE	-36PEN	-36PH	-36PHN
	1.5	-36R	-36RN	-36RE	-36REN	-36RH	-36RHN
M39	2	-36T	-36TN	-36TE	-36TEN	-36TH	-36THN
	3	-36V	-36VN	-36VE	-36VEN	-36VH	-36VHN
	1	-38P	-38PN	-38PE	-38PEN	-38PH	-38PHN
M40	1.5	-38R	-38RN	-38RE	-38REN	-38RH	-38RHN
	2	-38T	-38TN	-38TE	-38TEN	-38TH	-38THN
M42	1	-39P	-39PN	-39PE	-39PEN	-39PH	-39PHN
	1.5	-39R	-39RN	-39RE	-39REN	-39RH	-39RHN
	2	-39T	-39TN	-39TE	-39TEN	-39TH	-39THN
M45	3	-39V	-39VN	-39VE	-39VEN	-39VH	-39VHN
	1.5	-40R	-40RN	-40RE	-40REN	-40RH	-40RHN
	2	-40T	-40TN	-40TE	-40TEN	-40TH	-40THN
M45	3	-40V	-40VN	-40VE	-40VEN	-40VH	-40VHN
	1.5	-42R	-42RN	-42RE	-42REN	-42RH	-42RHN
M45	2	-42T	-42TN	-42TE	-42TEN	-42TH	-42THN
	3	-42V	-42VN	-42VE	-42VEN	-42VH	-42VHN
M45	1.5	-45R	-45RN	-45RE	-45REN	-45RH	-45RHN
	2	-45T	-45TN	-45TE	-45TEN	-45TH	-45THN
M45	3	-45V	-45VN	-45VE	-45VEN	-45VH	-45VHN

To be continued

Continued from previous page

Size (mm)		Code (4677)					
Nominal diameter	Pitch	Class 6g		Class 6e		Class 6h	
		GO	NOGO	GO	NOGO	GO	NOGO
M48	1.5	-48R	-48RN	-48RE	-48REN	-48RH	-48RHN
	2	-48T	-48TN	-48TE	-48TEN	-48TH	-48THN
	3	-48V	-48VN	-48VE	-48VEN	-48VH	-48VHN
M50	1.5	-50R	-50RN	-50RE	-50REN	-50RH	-50RHN
	2	-50T	-50TN	-50TE	-50TEN	-50TH	-50THN
	3	-50V	-50VN	-50VE	-50VEN	-50VH	-50VHN
M52	1.5	-52R	-52RN	-52RE	-52REN	-52RH	-52RHN
	2	-52T	-52TN	-52TE	-52TEN	-52TH	-52THN
	3	-52V	-52VN	-52VE	-52VEN	-52VH	-52VHN
	4	-52X	-52XN	-52XE	-52XEN	-52XH	-52XHN
M55	1.5	-55R	-55RN	-55RE	-55REN	-55RH	-55RHN
	2	-55T	-55TN	-55TE	-55TEN	-55TH	-55THN
	3	-55V	-55VN	-55VE	-55VEN	-55VH	-55VHN
	4	-55X	-55XN	-55XE	-55XEN	-55XH	-55XHN
M56	1.5	-56R	-56RN	-56RE	-56REN	-56RH	-56RHN
	2	-56T	-56TN	-56TE	-56TEN	-56TH	-56THN
	3	-56V	-56VN	-56VE	-56VEN	-56VH	-56VHN
	4	-56X	-56XN	-56XE	-56XEN	-56XH	-56XHN
M58	1.5	-58R	-58RN	-58RE	-58REN	-58RH	-58RHN
	2	-58T	-58TN	-58TE	-58TEN	-58TH	-58THN
	3	-58V	-58VN	-58VE	-58VEN	-58VH	-58VHN
	4	-58X	-58XN	-58XE	-58XEN	-58XH	-58XHN
M60	1.5	-60R	-60RN	-60RE	-60REN	-60RH	-60RHN
	2	-60T	-60TN	-60TE	-60TEN	-60TH	-60THN
	3	-60V	-60VN	-60VE	-60VEN	-60VH	-60VHN
	4	-60X	-60XN	-60XE	-60XEN	-60XH	-60XHN
M62	1.5	-62R	-62RN	-62RE	-62REN	-62RH	-62RHN
	2	-62T	-62TN	-62TE	-62TEN	-62TH	-62THN
	3	-62V	-62VN	-62VE	-62VEN	-62VH	-62VHN
	4	-62X	-62XN	-62XE	-62XEN	-62XH	-62XHN
M64	1.5	-64R	-64RN	-64RE	-64REN	-64RH	-64RHN
	2	-64T	-64TN	-64TE	-64TEN	-64TH	-64THN
	3	-64V	-64VN	-64VE	-64VEN	-64VH	-64VHN
	4	-64X	-64XN	-64XE	-64XEN	-64XH	-64XHN
M65	1.5	-65R	-65RN	-65RE	-65REN	-65RH	-65RHN
	2	-65T	-65TN	-65TE	-65TEN	-65TH	-65THN
	3	-65V	-65VN	-65VE	-65VEN	-65VH	-65VHN
	4	-65X	-65XN	-65XE	-65XEN	-65XH	-65XHN
M68	1.5	-68R	-68RN	-68RE	-68REN	-68RH	-68RHN
	2	-68T	-68TN	-68TE	-68TEN	-68TH	-68THN
	3	-68V	-68VN	-68VE	-68VEN	-68VH	-68VHN
	4	-68X	-68XN	-68XE	-68XEN	-68XH	-68XHN
M70	1.5	-70R	-70RN	-70RE	-70REN	-70RH	-70RHN
	2	-70T	-70TN	-70TE	-70TEN	-70TH	-70THN
	3	-70V	-70VN	-70VE	-70VEN	-70VH	-70VHN
	4	-70X	-70XN	-70XE	-70XEN	-70XH	-70XHN
	6	-70O	-70ON	-70OE	-70OEN	-70OH	-70OHN
M72	1.5	-72R	-72RN	-72RE	-72REN	-72RH	-72RHN
	2	-72T	-72TN	-72TE	-72TEN	-72TH	-72THN
	3	-72V	-72VN	-72VE	-72VEN	-72VH	-72VHN

To be continued



Continued from previous page

Size (mm)		Code (4677)					
Nominal diameter	Pitch	Class 6g		Class 6e		Class 6h	
		GO	NOGO	GO	NOGO	GO	NOGO
M72	4	-72X	-72XN	-72XE	-72XEN	-72XH	-72XHN
	6	-72O	-72ON	-72OE	-72OEN	-72OH	-72OHN
M75	1.5	-75R	-75RN	-75RE	-75REN	-75RH	-75RHN
	2	-75T	-75TN	-75TE	-75TEN	-75TH	-75THN
	3	-75V	-75VN	-75VE	-75VEN	-75VH	-75VHN
	4	-75X	-75XN	-75XE	-75XEN	-75XH	-75XHN
M76	1.5	-76R	-76RN	-76RE	-76REN	-76RH	-76RHN
	2	-76T	-76TN	-76TE	-76TEN	-76TH	-76THN
	3	-76V	-76VN	-76VE	-76VEN	-76VH	-76VHN
	4	-76X	-76XN	-76XE	-76XEN	-76XH	-76XHN
M78	6	-76O	-76ON	-76OE	-76OEN	-76OH	-76OHN
	2	-78T	-78TN	-78TE	-78TEN	-78TH	-78THN
	1.5	-80R	-80RN	-80RE	-80REN	-80RH	-80RHN
M80	2	-80T	-80TN	-80TE	-80TEN	-80TH	-80THN
	3	-80V	-80VN	-80VE	-80VEN	-80VH	-80VHN
	4	-80X	-80XN	-80XE	-80XEN	-80XH	-80XHN
	6	-80O	-80ON	-80OE	-80OEN	-80OH	-80OHN
M82	2	-82T	-82TN	-82TE	-82TEN	-82TH	-82THN
M85	2	-85T	-85TN	-85TE	-85TEN	-85TH	-85THN
	3	-85V	-85VN	-85VE	-85VEN	-85VH	-85VHN
	4	-85X	-85XN	-85XE	-85XEN	-85XH	-85XHN
	6	-85O	-85ON	-85OE	-85OEN	-85OH	-85OHN
M90	2	-90T	-90TN	-90TE	-90TEN	-90TH	-90THN
	3	-90V	-90VN	-90VE	-90VEN	-90VH	-90VHN
	4	-90X	-90XN	-90XE	-90XEN	-90XH	-90XHN
	6	-90O	-90ON	-90OE	-90OEN	-90OH	-90OHN
M95	2	-95T	-95TN	-95TE	-95TEN	-95TH	-95THN
	3	-95V	-95VN	-95VE	-95VEN	-95VH	-95VHN
	4	-95X	-95XN	-95XE	-95XEN	-95XH	-95XHN
	6	-95O	-95ON	-95OE	-95OEN	-95OH	-95OHN
M100	2	-100T	-100TN	-100TE	-100TEN	-100TH	-100THN
	3	-100V	-100VN	-100VE	-100VEN	-100VH	-100VHN
	4	-100X	-100XN	-100XE	-100XEN	-100XH	-100XHN
	6	-100O	-100ON	-100OE	-100OEN	-100OH	-100OHN
M105	2	-105T	-105TN	-105TE	-105TEN	-105TH	-105THN
	3	-105V	-105VN	-105VE	-105VEN	-105VH	-105VHN
	4	-105X	-105XN	-105XE	-105XEN	-105XH	-105XHN
	6	-105O	-105ON	-105OE	-105OEN	-105OH	-105OHN
M110	2	-110T	-110TN	-110TE	-110TEN	-110TH	-110THN
	3	-110V	-110VN	-110VE	-110VEN	-110VH	-110VHN
	4	-110X	-110XN	-110XE	-110XEN	-110XH	-110XHN
	6	-110O	-110ON	-110OE	-110OEN	-110OH	-110OHN
M115	2	-115T	-115TN	-115TE	-115TEN	-115TH	-115THN
	3	-115V	-115VN	-115VE	-115VEN	-115VH	-115VHN
	4	-115X	-115XN	-115XE	-115XEN	-115XH	-115XHN
	6	-115O	-115ON	-115OE	-115OEN	-115OH	-115OHN
M120	2	-120T	-120TN	-120TE	-120TEN	-120TH	-120THN
	3	-120V	-120VN	-120VE	-120VEN	-120VH	-120VHN
	4	-120X	-120XN	-120XE	-120XEN	-120XH	-120XHN
	6	-120O	-120ON	-120OE	-120OEN	-120OH	-120OHN

THREAD GAGES FOR ROTARY SHOULDERED CONNECTIONS OF PETROLEUM EQUIPMENT

API PRODUCTION LICENSE



- Measure the thread of rotary shouldered connections

4177-23

Number style gages

Code	Gage code	Form of thread to be inspected	Number of thread per inch	Taper	Angle of thread	Basic pitch dia
4177-10	NC10	V-0.055	6	1:8	60°	27.000mm
4177-12	NC12	V-0.055	6	1:8	60°	32.121mm
4177-13	NC13	V-0.055	6	1:8	60°	35.331mm
4177-16	NC16	V-0.055	6	1:8	60°	40.869mm
4177-23	NC23	V-0.038R	4	1:6	60°	59.817mm
4177-26	NC26	V-0.038R	4	1:6	60°	67.767mm
4177-31	NC31	V-0.038R	4	1:6	60°	80.848mm
4177-35	NC35	V-0.038R	4	1:6	60°	89.687mm
4177-38	NC38	V-0.038R	4	1:6	60°	96.723mm
4177-40	NC40	V-0.038R	4	1:6	60°	103.429mm
4177-44	NC44	V-0.038R	4	1:6	60°	112.192mm
4177-46	NC46	V-0.038R	4	1:6	60°	117.500mm
4177-50	NC50	V-0.038R	4	1:6	60°	128.059mm
4177-56	NC56	V-0.038R	4	1:4	60°	142.646mm
4177-61	NC61	V-0.038R	4	1:4	60°	156.921mm
4177-70	NC70	V-0.038R	4	1:4	60°	179.146mm
4177-77	NC77	V-0.038R	4	1:4	60°	196.621mm

Regular style gages

Code	Gage code	Form of thread to be inspected	Number of thread per inch	Taper	Angle of thread	Basic pitch dia
4177-2R	2 3/8 REG	V-0.040	5	1:4	60°	60.080mm
4177-21R	2 7/8 REG	V-0.040	5	1:4	60°	69.605mm
4177-3R	3 1/2 REG	V-0.040	5	1:4	60°	82.293mm
4177-4R	4 1/2 REG	V-0.040	5	1:4	60°	110.868mm
4177-5R	5 1/2 REG	V-0.050	4	1:4	60°	132.944mm
4177-6R	6 5/8 REG	V-0.050	4	1:6	60°	146.248mm
4177-7R	7 5/8 REG	V-0.050	4	1:4	60°	170.549mm
4177-8R	8 5/8 REG	V-0.050	4	1:4	60°	194.731mm

Full-hole style gages

Code	Gage code	Form of thread to be inspected	Number of thread per inch	Taper	Angle of thread	Basic pitch dia
4177-3H	3 1/2 FH	V-0.040	5	1:4	60°	94.844mm
4177-4H	4 1/2 FH	V-0.040	5	1:4	60°	115.113mm
4177-5H	5 1/2 FH	V-0.050	4	1:6	60°	142.011mm
4177-6H	6 5/8 FH	V-0.050	4	1:6	60°	165.598mm

Internal-flush style gage

Code	Gage code	Form of thread to be inspected	Number of thread per inch	Taper	Angle of thread	Basic pitch dia
4177-5F	5 1/2 IF	V-0.065	4	1:6	60°	157.201mm

CASING, TUBING AND LINE PIPE THREAD GAGES OF PETROLEUM AND GAS EQUIPMENT



- Measure the casing, tubing and line pipe threads

4178-21T

Casing round thread gages

Code	Gage code	Outer dia	Number of thread per inch	Taper	Angle of thread
4178-4	4 1/2 CSG	114.30mm	8	1:16	60°
4178-4L	4 1/2 LCSG				
4178-5	5 CSG	127.00mm	8	1:16	60°
4178-5L	5 LCSG				
4178-51	5 1/2 CSG	139.70mm	8	1:16	60°
4178-51L	5 1/2 LCSG				
4178-6	6 5/8 CSG	168.28mm	8	1:16	60°
4178-6L	6 5/8 LCSG				
4178-7	7 CSG	177.80mm	8	1:16	60°
4178-7L	7 LCSG				
4178-71	7 5/8 CSG	193.68mm	8	1:16	60°
4178-71L	7 5/8 LCSG				
4178-8	8 5/8 CSG	219.08mm	8	1:16	60°
4178-8L	8 5/8 LCSG				
4178-9	9 5/8 CSG	244.48mm	8	1:16	60°
4178-9L	9 5/8 LCSG				
4178-10	10 3/4 CSG	273.05mm	8	1:16	60°
4178-10L	10 3/4 LCSG				
4178-11	11 3/4 CSG	298.45mm	8	1:16	60°
4178-11L	11 3/4 LCSG				
4178-13	13 3/8 CSG	339.73mm	8	1:16	60°
4178-13L	13 3/8 LCSG				
4178-16	16 CSG	406.40mm	8	1:16	60°
4178-16L	16 LCSG				

Non-upset tubing thread gages

Code	Gage code	Outer dia	Number of thread per inch	Taper	Angle of thread
4178-11T	1.050 TBG	26.67mm	10	1:16	60°
4178-13T	1.315 TBG	33.40mm	10	1:16	60°
4178-16T	1.660 TBG	42.16mm	10	1:16	60°
4178-19T	1.900 TBG	48.26mm	10	1:16	60°
4178-2T	2 3/8 TBG	60.33mm	10	1:16	60°
4178-21T	2 7/8 TBG	73.03mm	10	1:16	60°
4178-3T	3 1/2 TBG	88.90mm	10	1:16	60°
4178-4T	4 TBG	101.60mm	8	1:16	60°
4178-41T	4 1/2 TBG	114.30mm	8	1:16	60°

To be continued

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External-upset tubing thread gages

Code	Gage code	Outer dia	Number of thread per inch	Taper	Angle of thread
4178-11U	1.050 UP TBG	26.67mm	10	1:16	60°
4178-13U	1.315 UP TBG	33.40mm	10	1:16	60°
4178-16U	1.660 UP TBG	42.16mm	10	1:16	60°
4178-19U	1.900 UP TBG	48.26mm	10	1:16	60°
4178-2U	2 3/8 UP TBG	60.33mm	8	1:16	60°
4178-21U	2 7/8 UP TBG	73.03mm	8	1:16	60°
4178-3U	3 1/2 UP TBG	88.90mm	8	1:16	60°
4178-4U	4 UP TBG	101.60mm	8	1:16	60°
4178-41U	4 1/2 UP TBG	114.30mm	8	1:16	60°

Buttress casing thread gages

Code	Gage code	Outer dia	Number of thread per inch	Taper	Angle of thread
4178-4B	4 1/2 BCSG	114.30mm	5	1:16	3°, 10°
4178-5B	5 BCSG	127.00mm	5	1:16	3°, 10°
4178-51B	5 1/2 BCSG	139.70mm	5	1:16	3°, 10°
4178-6B	6 5/8 BCSG	168.28mm	5	1:16	3°, 10°
4178-7B	7 BCSG	177.80mm	5	1:16	3°, 10°
4178-71B	7 5/8 BCSG	193.68mm	5	1:16	3°, 10°
4178-8B	8 5/8 BCSG	219.08mm	5	1:16	3°, 10°
4178-9B	9 5/8 BCSG	244.48mm	5	1:16	3°, 10°
4178-10B	10 3/4 BCSG	273.05mm	5	1:16	3°, 10°
4178-11B	11 3/4 BCSG	298.45mm	5	1:16	3°, 10°
4178-13B	13 3/8 BCSG	339.73mm	5	1:16	3°, 10°
4178-16B	16 BCSG	406.40mm	5	1:12	3°, 10°

Line pipe thread gages

Code	Gage code	Outer dia	Number of thread per inch	Taper	Angle of thread
4178-01P	1/8 LP	3.18mm	27	1:16	60°
4178-02P	1/4 LP	6.35mm	18	1:16	60°
4178-03P	3/8 LP	9.53mm	18	1:16	60°
4178-05P	1/2 LP	12.70mm	14	1:16	60°
4178-07P	3/4 LP	19.05mm	14	1:16	60°
4178-10P	1 LP	25.40mm	11 1/2	1:16	60°
4178-12P	1 1/4 LP	31.75mm	11 1/2	1:16	60°
4178-15P	1 1/2 LP	38.10mm	11 1/2	1:16	60°
4178-20P	2 LP	50.80mm	11 1/2	1:16	60°
4178-25P	2 1/2 LP	63.50mm	8	1:16	60°
4178-30P	3 LP	76.20mm	8	1:16	60°
4178-35P	3 1/2 LP	88.90mm	8	1:16	60°
4178-40P	4 LP	101.60mm	8	1:16	60°
4178-50P	5 LP	127.00mm	8	1:16	60°
4178-60P	6 LP	152.40mm	8	1:16	60°
4178-80P	8 LP	203.20mm	8	1:16	60°
4178-100P	10 LP	254.00mm	8	1:16	60°

ANGLE, STRAIGHTNESS, FLAT MEASURING INSTRUMENTS

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Angle Meters
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Cylinder Squares
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Straight Edges
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Optical Flats
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Straightness/Flatness Gages
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DIGITAL ANGLE METER CODE 2177-121

INSPECTION
CERTIFICATE



- Clockwise and counter-clockwise operation
- 9 target torque values can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when torque value is 80%~99.5% of target torque
 - Both green and red LED light on and buzzer sounds when torque value is over 99.5% of target torque
- Memory of 250 results, can upload to the computer
- Back with magnet
- Power off in 2 minutes automatically

SPECIFICATION

Display range	0~999°
Setting range	1~360° (increment 1°)
Resolution	0.1°
Accuracy	±2° for 90° rotation @30°/sec
Power supply	2×1.5V AAA batteries
Dimension	58×58×41mm
Weight	70g



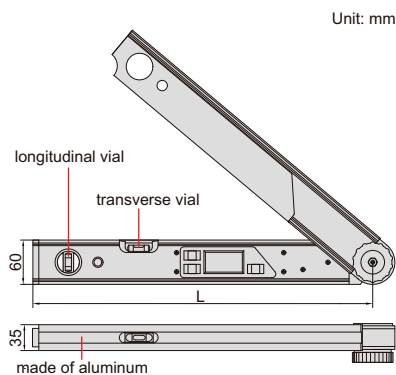
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WATERPROOF DIGITAL PROTRACTOR (HEAVY DUTY)

AUTOMATIC
BACKLIGHT

ABSOLUTE
LEVEL

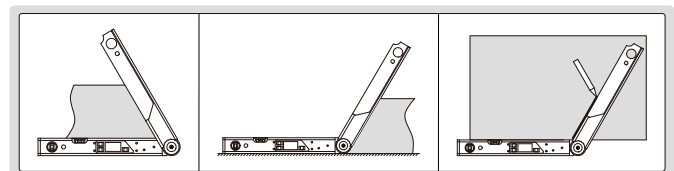
IP54
WATERPROOF



2174-225

- Suitable for setting horizontal and vertical mitre angles of cutting machines
- Buttons: ON/OFF, HOLD/SUP, SPR/CNR/MTR/BVL
- IP54 dust/waterproof
- With transverse and longitudinal vials
- 2xAAA batteries
- Absolute level, zero setting is not needed when batteries are replaced
- Backlight turns off in one minute after reading is stable, automatic power off in 5 minutes

Code	Size (L)	Range	Resolution	Accuracy
2174-225	460mm	0-225°	0.05°	±0.10°

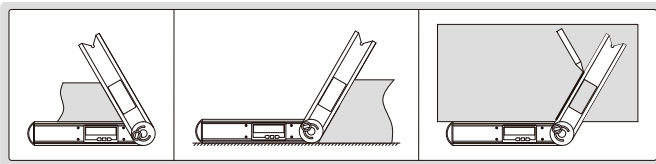
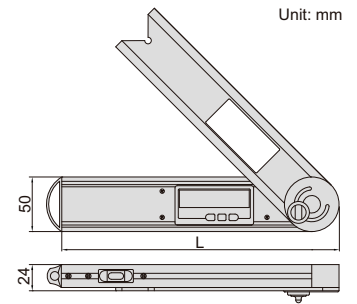


DIGITAL PROTRACTOR

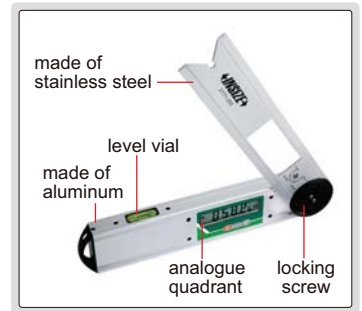
- Buttons: on/off, hold (keep the reading), zero, ABS (absolute and incremental measurement)
- Fix the locking screw at 4 positions for different measuring ranges: 0°~225°, -225°~0°, -45°~180°, -180°~45°
- Remove the locking screw for 360° range
- With level vial
- Battery CR2032, automatic power off



2171-250



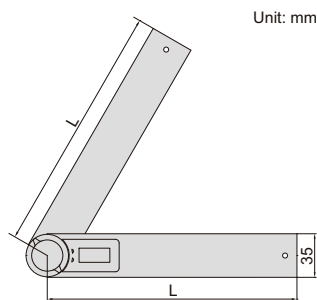
Code	Size (L)	Range	Resolution	Accuracy
2171-250	250mm	0-360°	0.05°	±0.15°



DIGITAL PROTRACTORS



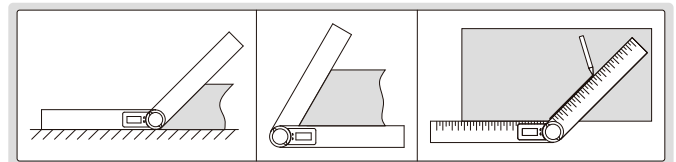
2176-200



Unit: mm

- Buttons: on/off, zero
- With clamping screw to lock the blades
- Graduation of blade: 1mm and 1/32"
- Made of stainless steel
- CR2032 battery
- Automatic power off

Code	Size (L)	Range	Resolution	Accuracy
2176-200	200mm	0-360°	0.1°	±0.3°
2176-300	300mm	0-360°	0.1°	±0.3°



REFER TO PAGE
436-437 FOR DETAILS

DIGITAL LEVELS AND SLOPE METERS



2179-360



2175-360



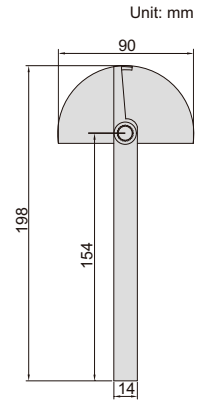
2170-1

PROTRACTOR (ECONOMIC TYPE)

- Graduation: 1°
- Made of stainless steel
- With clamping screw

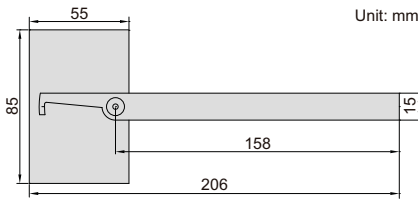


4780-85A



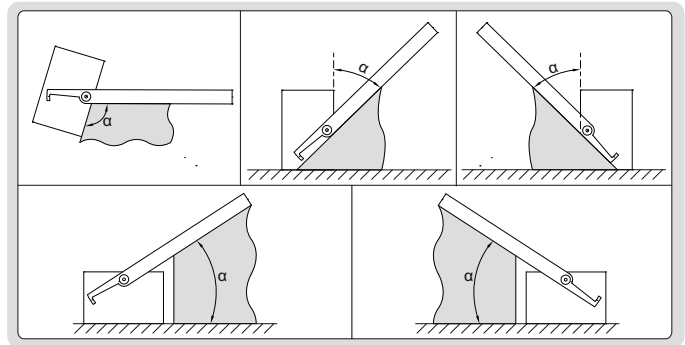
Code	Size	Range	Accuracy
4780-85A	90x154mm	0-180°	±0.5°

PROTRACTOR



4781-85A

- Made of stainless steel
- Satin chrome plated scale
- With clamping screw



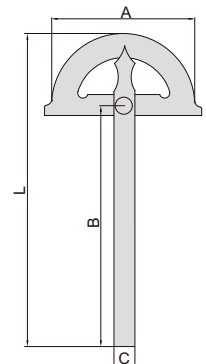
Code	Size	Range	Graduation	Accuracy
4781-85A	85x158mm	0-180°	1°	±0.3°

PROTRACTORS

- Graduation: 1°
- Made of stainless steel
(4799-1300 is made of carbon steel)
- Satin chrome plated scale
- With clamping screw



4799-180



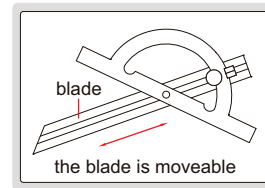
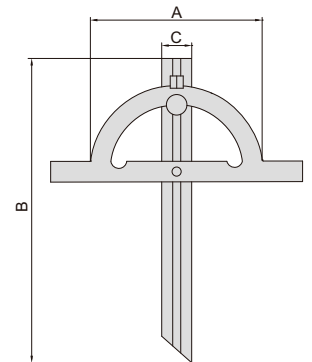
Code	Size (AxB)	Range	Accuracy	L	C
4799-180	80x120mm	0-180°	±0.3°	168mm	11mm
4799-1120	120x150mm	0-180°	±0.3°	220mm	14mm
4799-1150	150x200mm	0-180°	±0.3°	285mm	16mm
4799-1200	200x300mm	0-180°	±0.3°	413mm	20mm
4799-1300	300x500mm	0-180°	±0.3°	675mm	30mm

PROTRACTORS

- Graduation: 1°
- Made of carbon steel
- Satin chrome plated
- With clamping screw
- The blade is moveable



4797-100

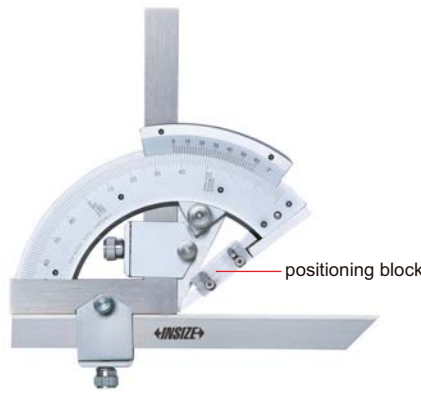


Code	Size (AxB)	Range	Accuracy	C
4797-100	100x150mm	10-170°	±0.3°	18mm
4797-150	150x300mm	10-170°	±0.3°	22mm
4797-200	200x400mm	10-170°	±0.3°	24mm
4797-250	250x500mm	10-170°	±0.3°	28mm
4797-300	300x600mm	10-170°	±0.3°	32mm

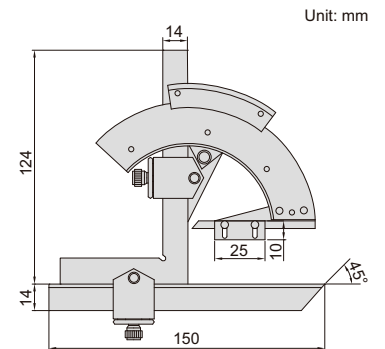
PROTRACTORS



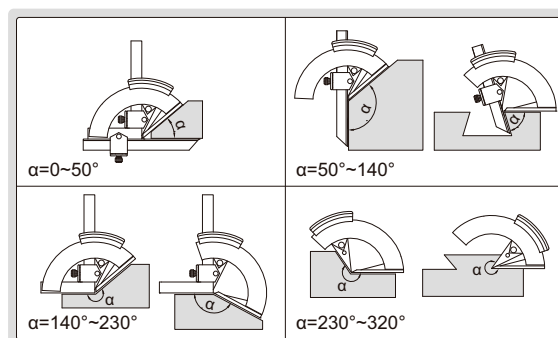
2374-320



2374-320D



Unit: mm



- Made of stainless steel
- Satin chrome plated scale

application of 2374-320D

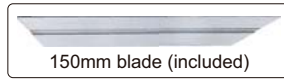
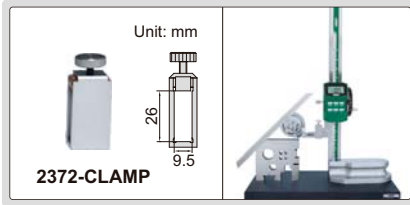


the positioning block can be moved down for positioning, and moved up when not in use

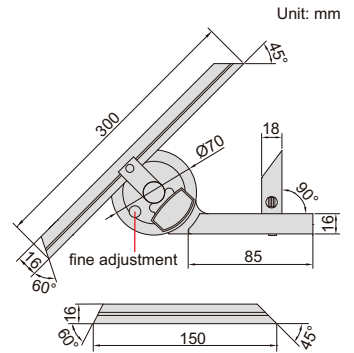
Code	Range	Graduation	Accuracy	Remark
2374-320	0-320°	2'	±2'	without positioning block
2374-320D	0-320°	2'	±2'	with positioning block

UNIVERSAL PROTRACTOR

clamp for height gages (optional)



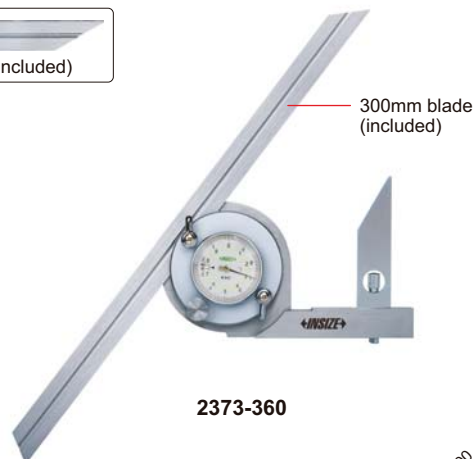
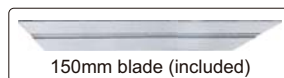
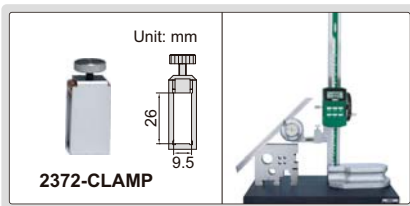
- Parallax-free reading
- Made of stainless steel
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gages **1156, 1150-300, 1351, 1250** and **1151**



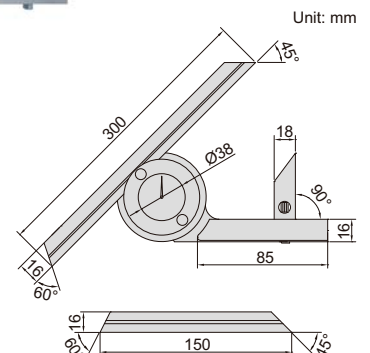
Code	Range	Graduation	Accuracy
2372-360	0-360°	5'	±5'

DIAL PROTRACTOR

clamp for height gages (optional)



- Made of stainless steel
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gages **1156, 1150-300, 1351, 1250** and **1151**



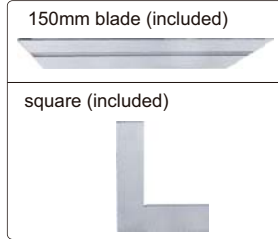
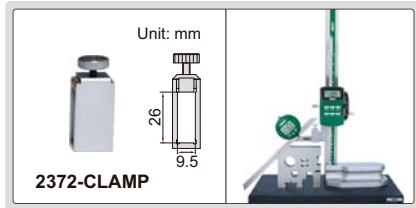
Code	Range	Graduation	Accuracy
2373-360	0-360°	5'	±5'



DATA OUTPUT

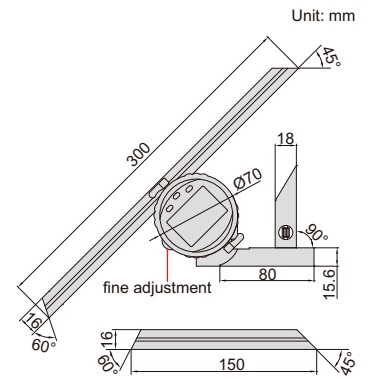
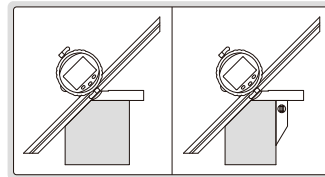
DIGITAL PROTRACTOR

clamp for height gages (optional)



- Display in degree (for example 32.655°) and degree/minute/second (for example 32°39'30")
- SET button: preset the reading, change measuring direction
- MODE button: choose 0~90°, 0~180° or 0~360° display
- ZERO/ON/OFF button: zero and power on/off
- Battery CR2032, automatic power off
- Data output
- Supplied with square to set 90°
- Made of stainless steel
- Optional accessory: data output cable (code 7315-50 page 5, 7302-SPC3B page 13), clamp (code 2372-CLAMP), suitable for height gages 1156, 1150-300, 1351, 1250 and 1151

Code	Range	Resolution	Accuracy
2172-360A	0-360°	10"/0.005°	±5'

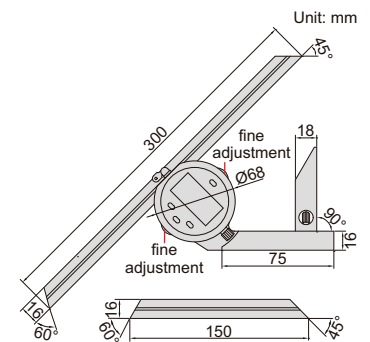
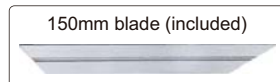
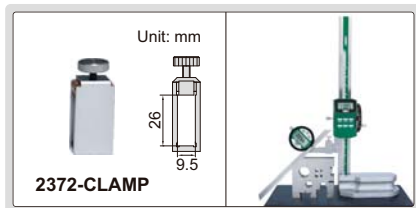


DATA OUTPUT

ABSOLUTE ZERO

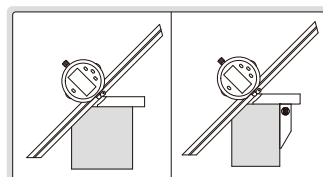
DIGITAL PROTRACTOR (BASIC TYPE)

clamp for height gages (optional)



- Absolute zero, zero setting is not needed when batteries are replaced
- Button function: choose 0~90°, 0~180° or 0~360° display, change resolution, display flips over, data hold, zero, on/off supplementary angle measurement
- Battery CR2032, automatic power off, data output
- Made of stainless steel
- Optional square for zero setting
- Optional accessory: clamp (code 2372-CLAMP), suitable for height gages 1156, 1150-300, 1351, 1250 and 1151, data output cable (code 7315-2771 page 6, 7302-50M page 12)

Code	Range	Resolution	Accuracy
2771-360	0-360°	1'/0.01°	±5'



square (optional)



Square (for zero setting, optional)

Code
2771-S90

GRANITE SQUARES

CUSTOM-MADE
SUPPLY SPECIAL SIZES ACCORDING
TO CUSTOMER'S REQUEST



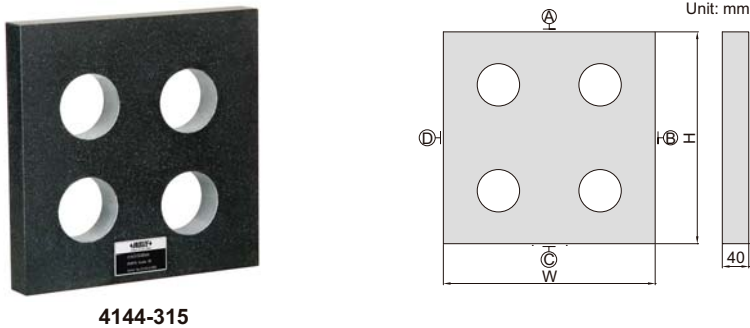
4141-400B

Code	Size (HxW)	Type	Flatness of A	Flatness of B	Squareness of A to B	D
4141-250	250x160mm	A	1µm	1µm	2µm	25mm
4141-400	400x250mm	A	1.5µm	1µm	3µm	40mm
4141-630	630x400mm	A	2µm	1.5µm	4µm	63mm
4141-400B	400x250mm	B	1.5µm	1µm	3µm	40mm

14

GRANITE SQUARE

CUSTOM-MADE
SUPPLY SPECIAL SIZES ACCORDING
TO CUSTOMER'S REQUEST



4144-315

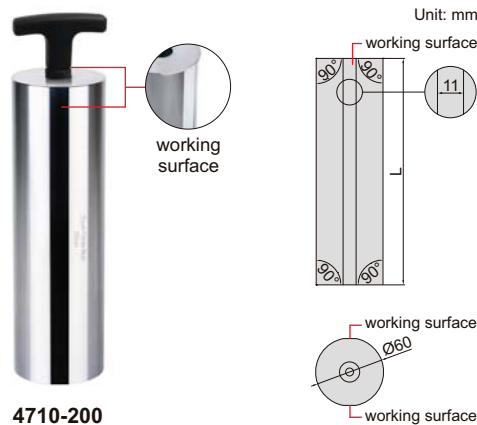
Code	Size (HxW)	Flatness of A, B, C and D	Squareness and parallelism between A, B, C and D
4144-315	315x315mm	1.1µm	2.6µm

CYLINDER SQUARES

- Made of special alloy steel, hardness HRC58~60
- The handle can be removed

Code	Length (L)	Squareness
4710-200*	200mm	1µm
4710-300*	300mm	2µm

* Supplied with manufacturer inspection certificate



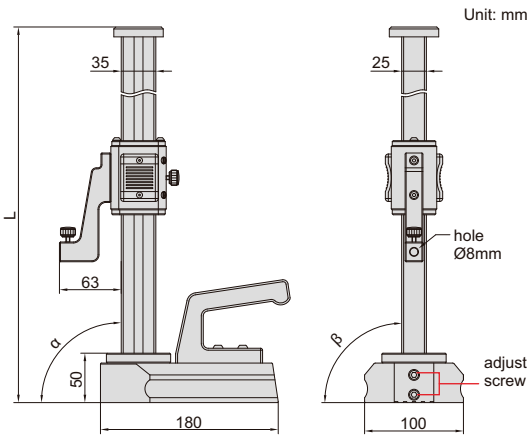
4710-200

INSPECTION
CERTIFICATE

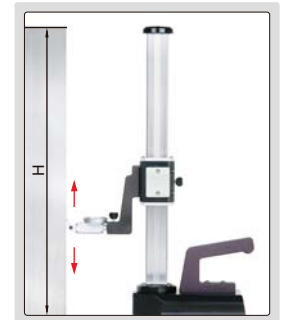
inspect 90° internal and external angles



PERPENDICULARITY TESTERS



4770-300



- Optional accessory: dial test indicators (graduation: 1µm or 2µm)

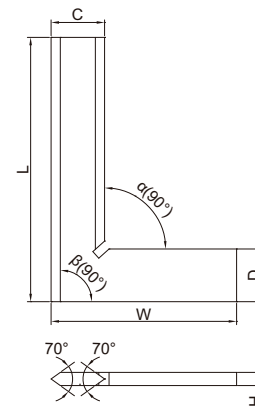
Code	Range (H)	Perpendicularity (α)	Side perpendicularity (β)	L
4770-300	0-300mm	3µm	10µm	460mm
4770-600	0-600mm	5µm	20µm	760mm

90° BEVELED EDGE SQUARES

- Satin chrome plating
- Beveled edges for inside and outside measurements
- Made of hardened stainless steel



4790-0100



Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-050	50x40mm	2.4µm	2.5µm	13	13	4
4790-075	75x50mm	2.6µm	2.8µm	15	15	4
4790-0100	100x70mm	2.8µm	3.0µm	20	20	5
4790-0150	150x100mm	3.2µm	3.5µm	30	30	6
4790-0200	200x130mm	3.7µm	4.0µm	34	34	7
4790-0250	250x165mm	4.2µm	4.5µm	35	35	7
4790-0300	300x200mm	4.6µm	5.0µm	40	40	8

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-500	50x40mm	6µm	6µm	13	13	4
4790-750	75x50mm	6µm	7µm	15	15	4
4790-1000	100x70mm	7µm	7µm	20	20	5
4790-1500	150x100mm	7µm	8µm	30	30	6
4790-2000	200x130mm	8µm	9µm	34	34	7
4790-2500	250x165mm	9µm	10µm	35	35	7
4790-3000	300x200mm	10µm	11µm	40	40	8

90° TOOL MAKER SQUARES

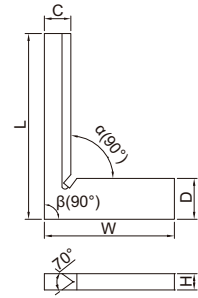
- DIN875 grade 00
- Beveled edge for inside measurement
- Made of hardened stainless steel

(mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4794-025	25x20mm	2.2 μ m	2.3 μ m	4	6.5	3.5
4794-040	40x28mm	2.3 μ m	2.4 μ m	5.5	8.5	3.5



4794-040



90° FLAT EDGE SQUARES

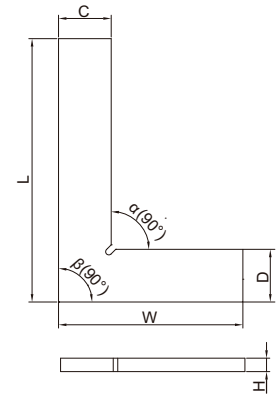
- Made of hardened stainless steel

DIN875 grade 0 (mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4791-50	50x40mm	6 μ m	6 μ m	15	15	4
4791-75	75x50mm	6 μ m	7 μ m	15	15	4
4791-100	100x70mm	7 μ m	7 μ m	20	20	5
4791-150	150x100mm	7 μ m	8 μ m	30	30	6
4791-200	200x130mm	8 μ m	9 μ m	30	30	7
4791-250	250x165mm	9 μ m	10 μ m	35	35	7
4791-300	300x200mm	10 μ m	11 μ m	40	40	8



4791-100



DIN875 grade 1 (mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4791-501	50x40mm	12 μ m	13 μ m	15	15	4
4791-751	75x50mm	13 μ m	14 μ m	15	15	4
4791-1001	100x70mm	14 μ m	15 μ m	20	20	5
4791-1501	150x100mm	16 μ m	18 μ m	30	30	6
4791-2001	200x130mm	19 μ m	20 μ m	30	30	6

90° FLAT EDGE SQUARES WITH WIDE BASE

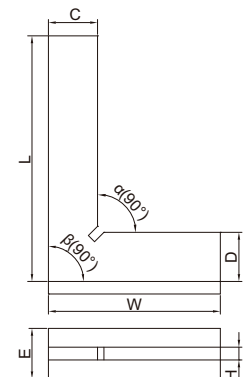
- DIN875 grade 0
- Made of hardened stainless steel

(mm)

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4793-50	50x40mm	6 μ m	6 μ m	13	13	4	13
4793-75	75x50mm	6 μ m	7 μ m	15	15	4	15
4793-100	100x70mm	7 μ m	7 μ m	20	20	5	20
4793-150	150x100mm	7 μ m	8 μ m	30	30	6	30
4793-200	200x130mm	8 μ m	9 μ m	30	30	7	30
4793-250	250x165mm	9 μ m	10 μ m	35	35	7	35
4793-300	300x200mm	10 μ m	11 μ m	40	40	8	40



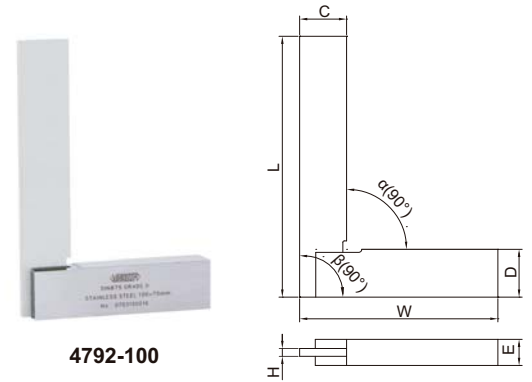
4793-100



90° FLAT EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Made of hardened stainless steel

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4792-50	50x40mm	6 μ m	6 μ m	12	12	3	10
4792-75	75x50mm	6 μ m	7 μ m	14	14	3	10
4792-100	100x70mm	7 μ m	7 μ m	18	18	3	10
4792-150	150x100mm	8 μ m	8 μ m	22	22	4	12
4792-200	200x130mm	9 μ m	9 μ m	25	25	4	12



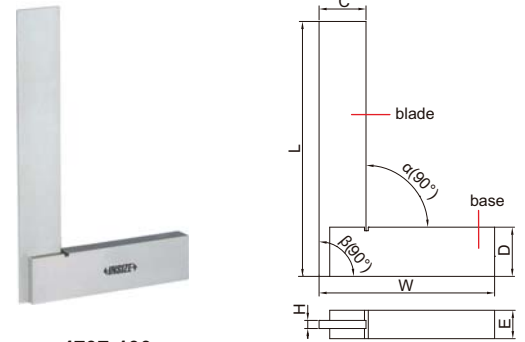
4792-100

ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDEND

MACHINIST SQUARES WITH WIDE BASE (ECONOMIC TYPE)

- DIN875 grade 2
- Made of carbon steel, no anti-rust treatment, not hardend

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4707-50	50x40mm	24 μ m	25 μ m	16	12	3	9
4707-75	75x50mm	26 μ m	28 μ m	16	16	3	9
4707-100	100x70mm	28 μ m	30 μ m	19	19	3	12
4707-150	150x100mm	33 μ m	35 μ m	25	25	3	16
4707-200	200x130mm	37 μ m	40 μ m	30	32	4	16
4707-250	250x165mm	42 μ m	45 μ m	30	32	4	19
4707-300	300x200mm	47 μ m	50 μ m	32	32	4	19
4707-400	400x250mm	56 μ m	60 μ m	38	38	5	22
4707-500	500x300mm	65 μ m	70 μ m	45	50	6	25
4707-600	600x350mm	75 μ m	80 μ m	50	50	6	30
4707-750	750x400mm	90 μ m	95 μ m	55	55	6	50
4707-900	900x500mm	103 μ m	110 μ m	65	75	9	50
4707-1000	1000x550mm	113 μ m	120 μ m	65	75	9	50

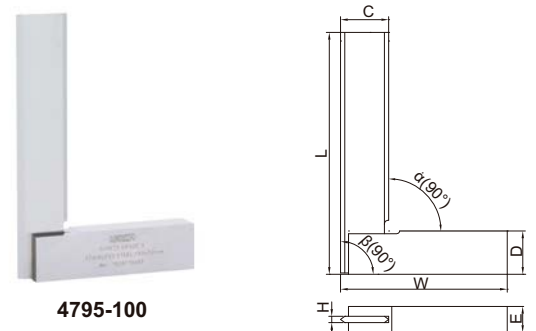


4707-100

90° BEVELED EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Beveled edges for inside and outside measurements
- Made of hardened stainless steel

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4795-50	50x40mm	6 μ m	6 μ m	12	12	3	10
4795-75	75x50mm	6 μ m	7 μ m	14	14	3	10
4795-100	100x70mm	7 μ m	7 μ m	18	18	3	10
4795-150	150x100mm	8 μ m	8 μ m	22	22	4	12
4795-200	200x130mm	9 μ m	9 μ m	25	25	4	12



4795-100

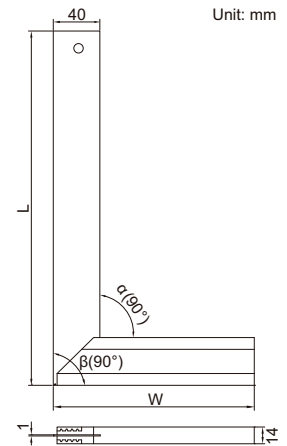
TRY SQUARE

- Graduation: 1mm
- Stainless steel blade, aluminum base

Code	Size (LxW)	Squareness	
		Inside (α)	Outside (β)
2275-300	300x170mm	0.5mm	0.5mm



2275-300

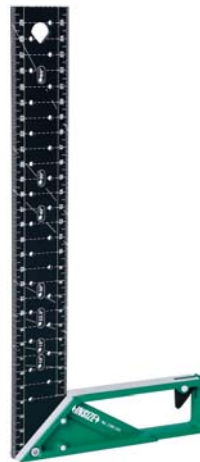


TRY SQUARE

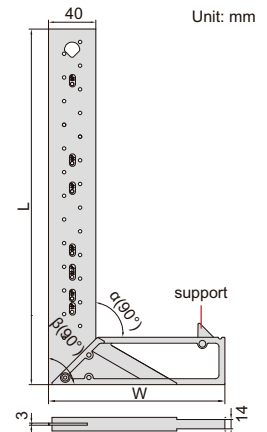
14

- Graduation: 1mm
- Aluminum blade and base
- 4 milled surfaces
- Retractable metal ledge support
- Etchings and holes for beveling and framing: 10°, 15°, 22.5°, 30°, 45°, 50° and 60°
- Etchings and holes every cm for fluid pencil marking

Code	Size (LxW)	Squareness	
		Inside (α)	Outside (β)
2280-300	300x150mm	0.5mm	0.5mm

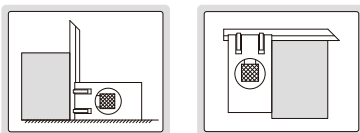


2280-300

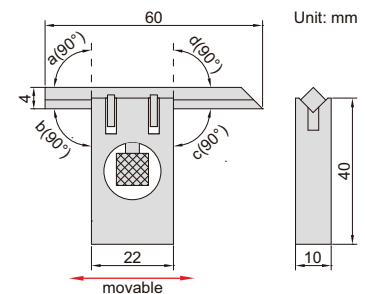


ADJUSTABLE SQUARE

- The straight edge can move and can be locked by the clamping screw
- Made of hardened stainless steel



4701-1



Code	Squareness (a, b, c, d)
4701-1	7 μ m

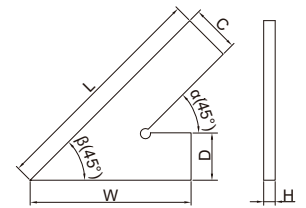
45° SQUARES

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H
		Inside (α)	Outside (β)			
4745-1120	120x80mm	29 μ m	32 μ m	20	20	5
4745-1150	150x100mm	32 μ m	35 μ m	20	20	5
4745-1200	200x130mm	36 μ m	40 μ m	25	25	5



4745-1120



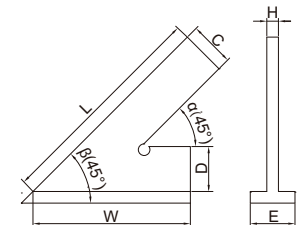
45° SQUARES WITH WIDE BASE

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H	E
		Inside (α)	Outside (β)				
4747-120	120x80mm	29 μ m	33 μ m	20	20	5	20
4747-150	150x100mm	32 μ m	36 μ m	20	20	5	20
4747-200	200x130mm	36 μ m	41 μ m	25	25	5	25



4747-120



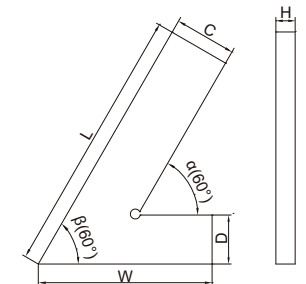
60° SQUARES

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H
		Inside (α)	Outside (β)			
4760-1120	120x80mm	30 μ m	32 μ m	20	20	5
4760-1150	150x100mm	32 μ m	35 μ m	20	20	5
4760-1200	200x130mm	37 μ m	40 μ m	25	25	5



4760-1120



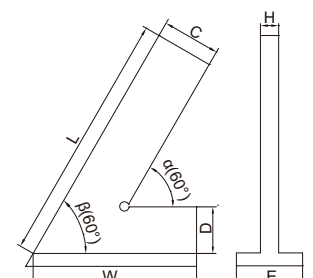
60° SQUARES WITH WIDE BASE

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H	E
		Inside (α)	Outside (β)				
4762-120	120x80mm	30 μ m	33 μ m	20	20	5	20
4762-150	150x100mm	33 μ m	36 μ m	20	20	5	20
4762-200	200x130mm	37 μ m	41 μ m	25	25	5	25

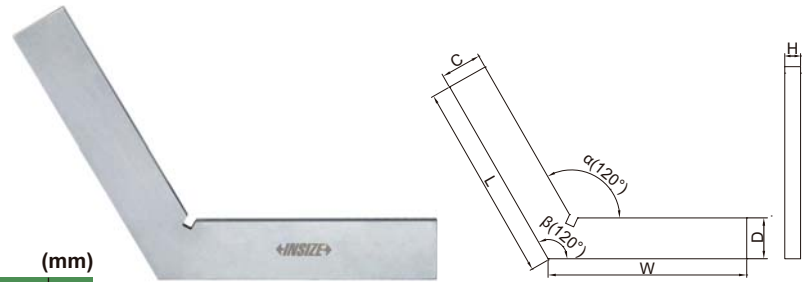


4762-120



120° SQUARES

- Made of hardened stainless steel

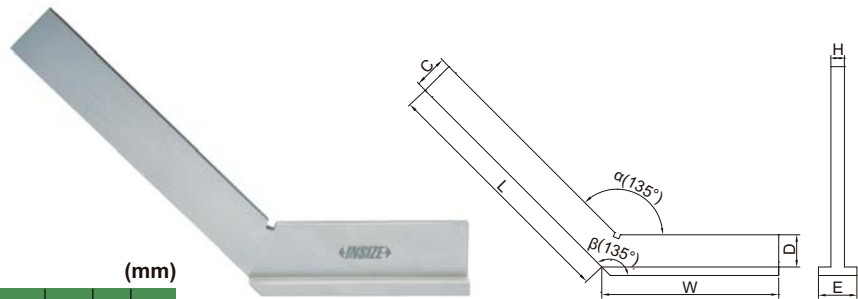


4706-1100

Code	Size (LxW)	Accuracy		C	D	H
		Inside (α)	Outside (β)			
4706-150	50x50mm	24 μ m	25 μ m	15	15	5
4706-175	75x75mm	26 μ m	28 μ m	20	20	5
4706-1100	100x100mm	29 μ m	30 μ m	20	20	5
4706-1150	150x150mm	34 μ m	35 μ m	25	25	5
4706-1200	200x200mm	38 μ m	40 μ m	30	30	7

135° SQUARES WITH WIDE BASE

- Made of hardened stainless steel

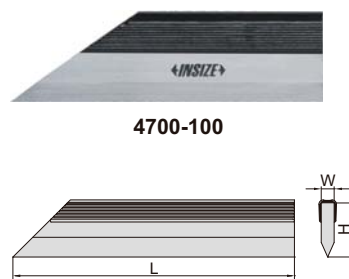


4754-3120

Code	Size (LxW)	Accuracy		C	D	H	E
		Inside (α)	Outside (β)				
4754-3120	120x80mm	31 μ m	33 μ m	20	20	5	20
4754-3150	150x100mm	34 μ m	36 μ m	20	20	5	20
4754-3200	200x130mm	39 μ m	41 μ m	30	30	7	30

STRAIGHT EDGES

- DIN874
- Beveled edge
- Made of hardened stainless steel
- Satin chrome plating

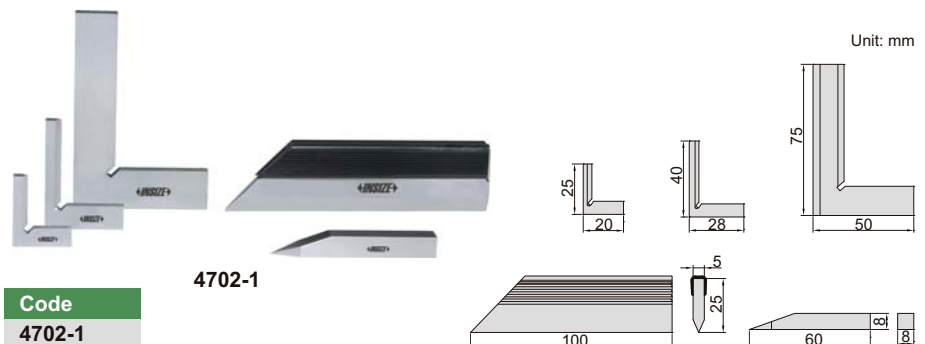


4700-100

Code	Size (L)	Straightness	W	H
4700-50	50mm	2.2 μ m	5mm	20mm
4700-75	75mm	2.3 μ m	5mm	25mm
4700-100	100mm	2.4 μ m	5mm	25mm
4700-125	125mm	2.5 μ m	6mm	30mm
4700-150	150mm	2.6 μ m	6mm	30mm
4700-200	200mm	2.8 μ m	6mm	30mm
4700-250	250mm	3.0 μ m	8mm	40mm
4700-300	300mm	3.2 μ m	8mm	40mm
4700-400	400mm	3.6 μ m	10mm	50mm
4700-500	500mm	4.0 μ m	10mm	50mm

SQUARE SET

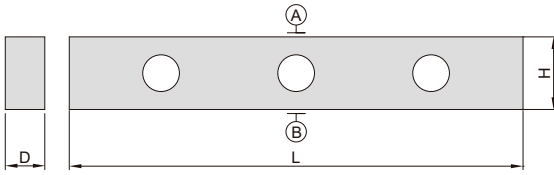
- Includes:
 - 90° tool maker square 25x20mm DIN875 grade 00 (code 4794-025)
 - 90° tool maker square 40x28mm DIN875 grade 00 (code 4794-040)
 - 90° beveled edge square 75x50mm DIN875 grade 00 (code 4790-075)
 - straight edge 100mm DIN874 (code 4700-100)
 - scriber
- Made of hardened stainless steel



4702-1

Code
4702-1

GRANITE STRAIGHT EDGES



4147-500A

Code	Length (L)	Flatness of A and B	Parallelism between A and B	D	H
4147-500A	500mm	2.1µm	3.2µm	50mm	80mm
4147-1000A	1000mm	3.0µm	4.5µm	60mm	120mm

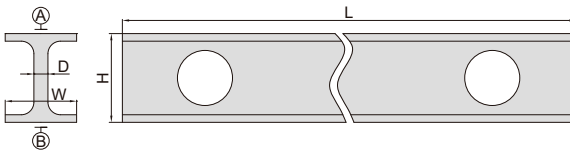
LIGHT WEIGHT

MAGNALIUM STRAIGHT EDGES

- Made of magnalium, light weight, non-deform, no rusty



4180-1500

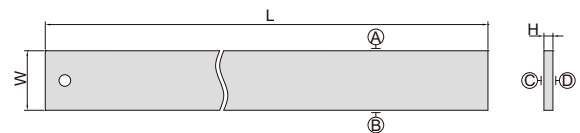


Code	Length (L)	Flatness of A and B	Parallelism between A and B	H	W	D	Weight
4180-500	500mm	3µm	4µm	60mm	30mm	5mm	1kg
4180-1000	1000mm	5µm	8µm	60mm	30mm	5mm	1.5kg
4180-1500	1500mm	15µm	22µm	100mm	40mm	7mm	4.5kg
4180-2000	2000mm	18µm	27µm	100mm	40mm	7mm	6kg
4180-2500	2500mm	22µm	33µm	100mm	40mm	7mm	7.5kg
4180-3000	3000mm	48µm	72µm	150mm	80mm	8mm	21kg

PRECISION STRAIGHT EDGES

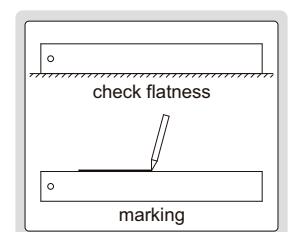


7117-300



- Check flatness and for marking
- Made of tool steel

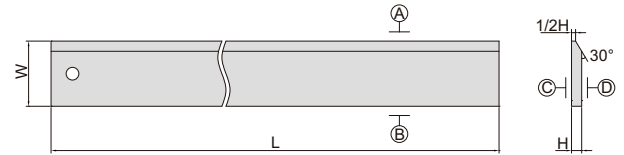
Code	Range (L)	Flatness of A and B	Flatness of C and D	W	H
7117-300	305mm	0.005mm	0.05mm	41mm	6.3mm
7117-600	610mm	0.006mm	0.06mm	51mm	7.9mm
7117-900	914mm	0.007mm	0.06mm	64mm	9.5mm



PRECISION STRAIGHT EDGES WITH BEVELED EDGE

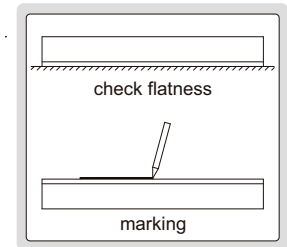


7118-300



- Check flatness and for marking
- Made of tool steel

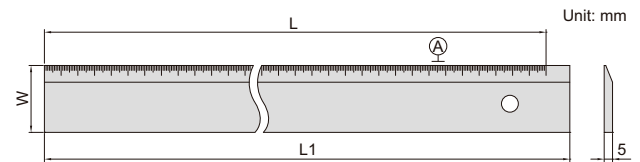
Code	Range (L)	Flatness of A and B	Flatness of C and D	W	H
7118-300	305mm	0.005mm	0.05mm	41mm	6.3mm
7118-600	610mm	0.006mm	0.06mm	51mm	7.9mm
7118-900	914mm	0.007mm	0.06mm	64mm	9.5mm



STRAIGHT EDGES

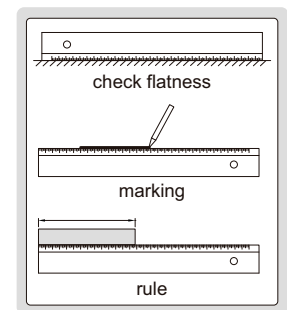


7111-300A



- Check flatness and straightness, as well as for marking
- Graduation on the beveled edge
- Made of hardened tool steel
- Chrome plated

Code	Range (L)	Straightness of A	L1	W
7111-300A	300mm	0.02mm	310mm	40mm
7111-500A	500mm	0.03mm	510mm	40mm
7111-1000A	1000mm	0.04mm	1010mm	50mm

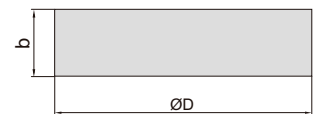


OPTICAL FLATS

- Check flatness
- Single working face, the arrow indicates the working face



4191-45B



Code	b	ØD	Flatness
4191-45A	12mm	45mm	0.03µm
4191-60A	15mm	60mm	0.03µm

Code	b	ØD	Flatness
4191-45B	12mm	45mm	0.1µm
4191-60B	15mm	60mm	0.1µm

GRANITE HOLDER CAN BE CUSTOMIZED ACCORDING TO WORKPIECES

DATA OUTPUT

STRAIGHTNESS/FLATNESS GAGE

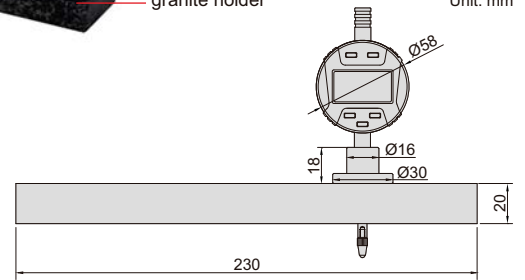


- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13)

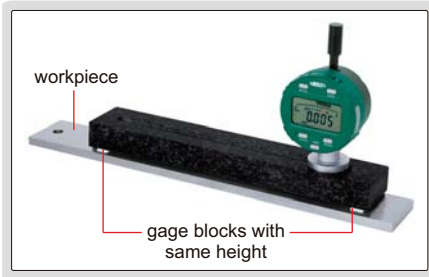


2144-200

Unit: mm



application



Code	Range	Digital indicator resolution	Straightness measurement accuracy	Parallelism of top and bottom surfaces of granite holder	Flatness of top and bottom surfaces of granite holder
2144-200	200mm	0.001mm/0.00005"	3µm	2µm	1.5µm

GRANITE PLATE CAN BE CUSTOMIZED ACCORDING TO WORKPIECES

DATA OUTPUT

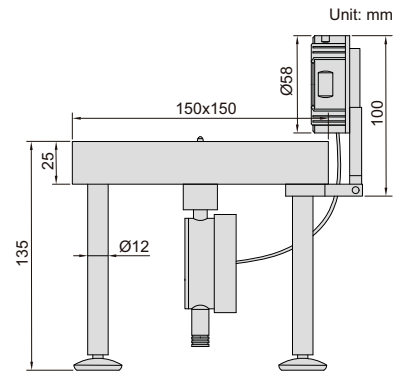


FLATNESS MEASUREMENT STAND



6852-150

Unit: mm



application



- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13, 7305-40M page 9)

Code	Digital indicator resolution	Flatness measurement accuracy	Flatness of granite plate
6852-150	0.001mm/0.00005"	2µm	2µm

15

CONCENTRICITY AND RUNOUT TESTERS

←INSIZE→



Concentricity Gages
Page 352-354



Bench Centers
Page 354-358

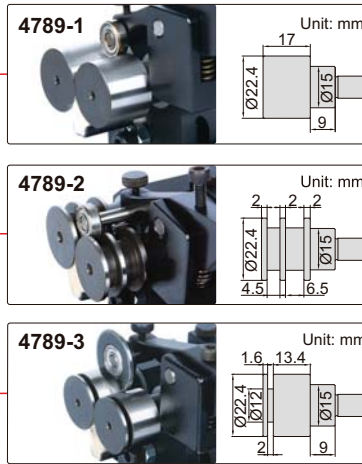


V-blocks
Page 359

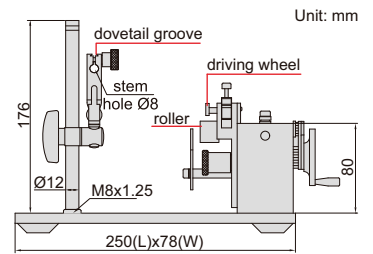
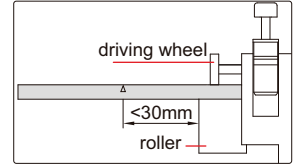


Shank Runout Testers
Page 359

CONCENTRICITY GAGES



to ensure the accuracy 2µm, the distance between measuring point and roller should be <30mm



Code	Applicable diameter
4789-1	Ø3.5mm-25mm
4789-2	Ø1mm-25mm
4789-3	Ø1mm-25mm

- Accuracy 2µm
- Optional accessory: dial test indicator

HIGH STABILITY,
LONG WORKING LIFE

CONCENTRICITY GAGES

dial test indicator is optional



4725-45

dial test indicator is optional



4725-60

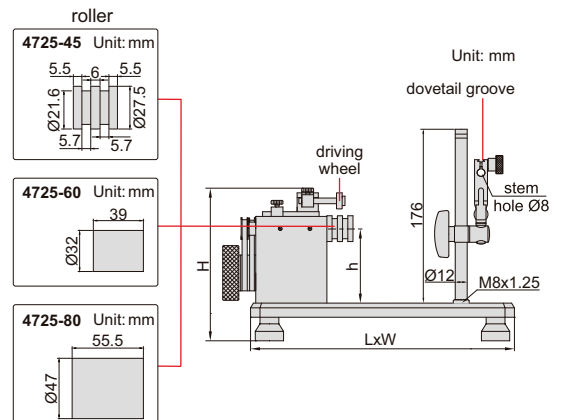
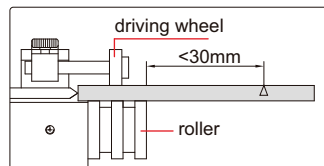
dial test indicator is optional



4725-80



to ensure the accuracy 2µm, the distance between measuring point and roller should be <30mm



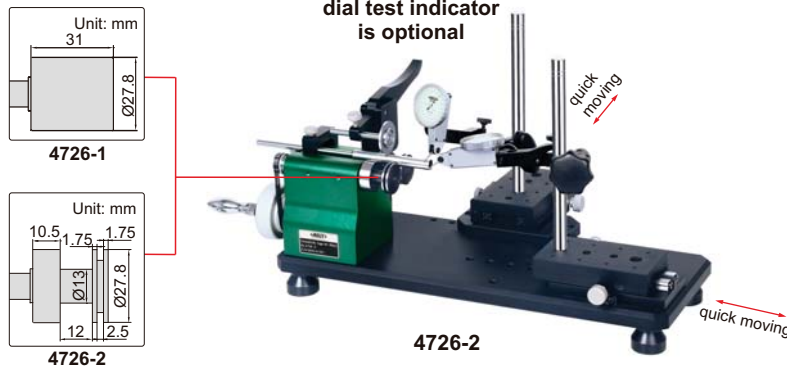
Code	Diameter range	Center height (h)	LxWxH	Weight
4725-45	3-45mm	80mm	280x130x170mm	6kg
4725-60	8-60mm	90mm	350x160x190mm	15.6kg
4725-80	8-80mm	130mm	400x200x250mm	25kg

- With ball bearing, high stability, long working life
- Accuracy 2µm
- Optional accessory: dial test indicator

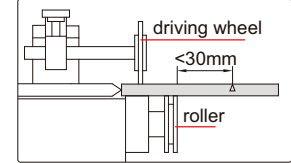
CONCENTRICITY GAGES



QUICK-POSITIONING, SUITABLE FOR MASS MEASUREMENT

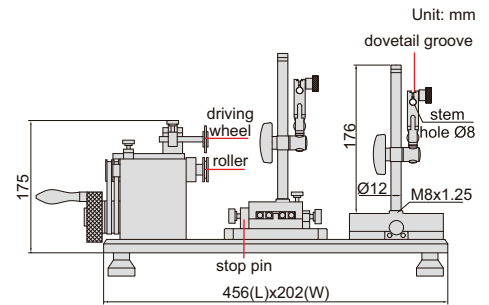


to ensure the accuracy 2 μ m, the distance between measuring point and roller should be <30mm



- With ball bearing, high stability, long working life
- Accuracy: 2 μ m
- Optional accessory: dial test indicator

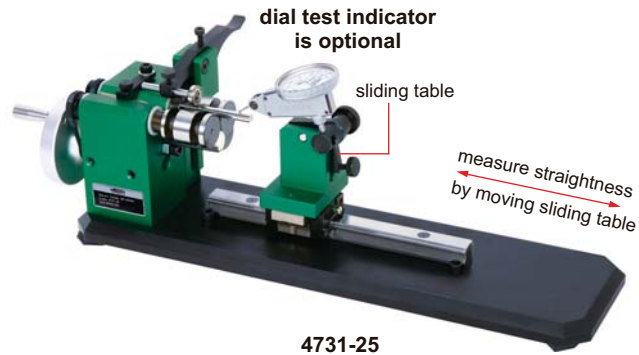
Code	Applicable diameter
4726-1	Ø4-40mm
4726-2	Ø2-40mm



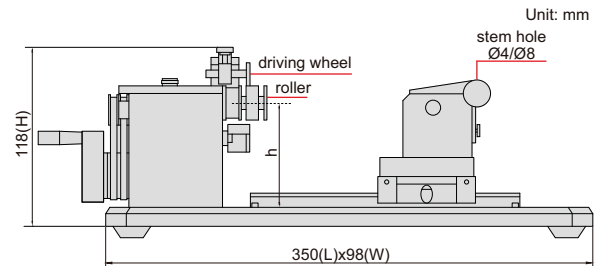
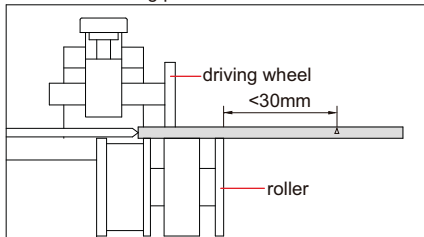
CONCENTRICITY GAGE WITH STRAIGHTNESS MEASUREMENT



- Maximum moving range of sliding table: 120mm
- Optional accessory: dial test indicators



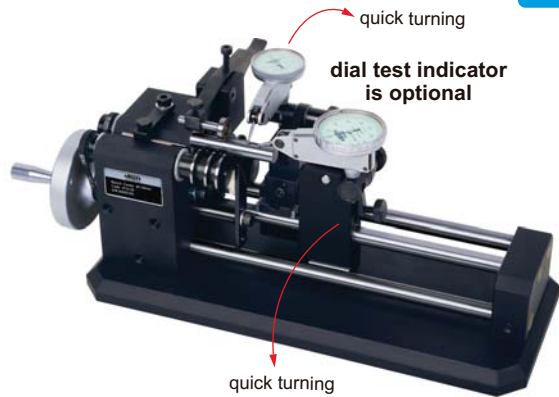
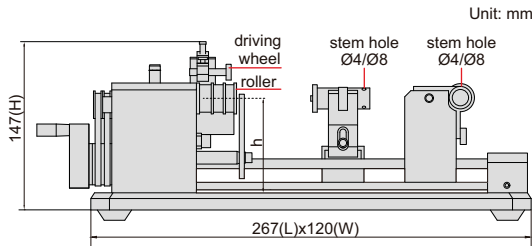
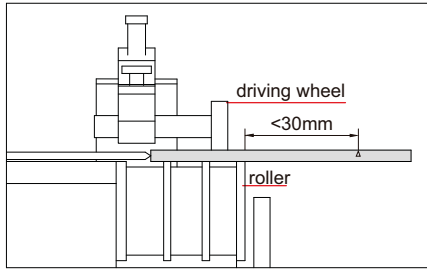
to ensure the accuracy 2 μ m, the distance between measuring point and roller should be <30mm



Code	Diameter range	Workpiece length	Roller concentricity accuracy	Straightness measurement accuracy	Center height (h)	L×W×H	Weight
4731-25	Ø1-25mm	15-80mm	2 μ m	0.01mm	70mm	350×98×118mm	5.3kg

QUICK POSITIONING CONCENTRICITY GAGE

to ensure the accuracy 2 μ m, the distance between measuring point and roller should be <30mm



4732-25

- Quick positioning, suitable for mass measurement
- Optional accessory: dial test indicators



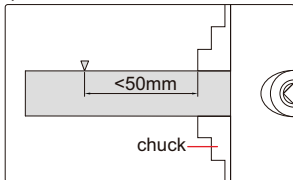
QUICK-POSITIONING, SUITABLE FOR MASS MEASUREMENT

Code	Diameter range	Workpiece length	Accuracy	Center height (h)	L×W×H	Weight
4732-25	Ø0.5-25mm	15-100mm	2 μ m	70mm	267×120×147mm	5.5kg

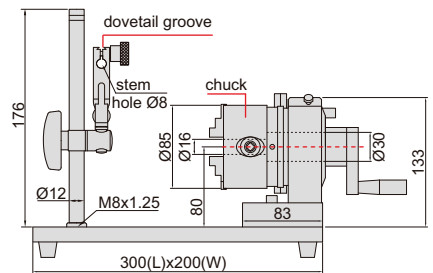
CONCENTRICITY GAGE

Unit: mm

to ensure the accuracy 3 μ m, the distance between measuring point and roller should be <50mm



4786-1



- Accuracy: 3 μ m
- Ø50mm setting ring and Ø55mm calibration cylinder are included
- Optional accessory: dial test indicator

for cylinder

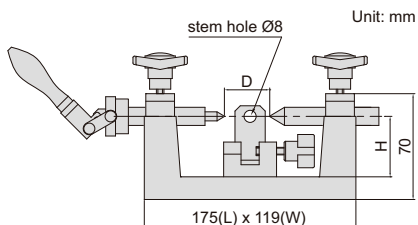


for tube



Code	Applicable inside diameter	Applicable outside diameter
4786-1	Ø24-64mm	Ø2-70mm

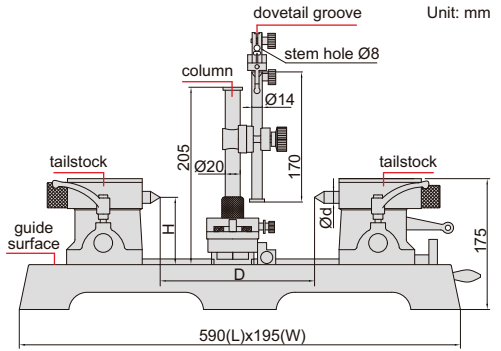
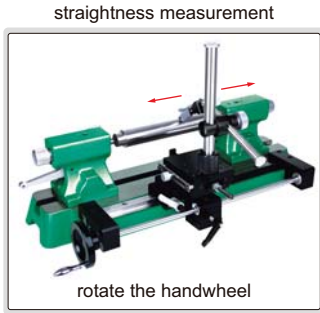
MINI BENCH CENTER



4721-75A

Code	Runout accuracy	Center height (H)	Distance between two centers (D)	Diameter of center (Ød)	Taper of center	Weight	Load
4721-75A	2 μ m	40mm	35-100mm	6mm	MT1	4.5kg	4kg

BENCH CENTER WITH STRAIGHTNESS MEASUREMENT

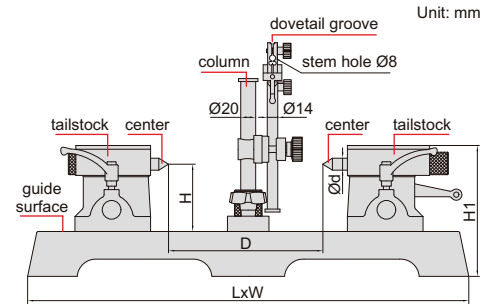


Code	Parallelism*	Runout accuracy	Accuracy of straightness measurement	Center height (H)	Distance between two centers (D)	Diameter of center (Ød)	Taper of center	Weight	Load
4723-300	4µm	2µm	0.02mm	90mm	300mm	18mm	MT2	38kg	25kg

*Parallelism of two centers to the guide surface

BENCH CENTERS

15



- Movable column
- Optional accessory: umbrella centers, rotary centers

High accuracy

Code	Parallelism*	Runout accuracy	Center height (H)	Distance between two centers(D)	L	W	H1	Diameter of center (Ød)	Taper of center	Weight	Load
4788-300	0.010mm	2µm	90	300	590	192	175	18.0	MT2	34kg	25kg
4788-400	0.010mm	2µm	130	400	770	206	241	24.1	MT3	66kg	60kg
4788-600	0.010mm	2µm	130	600	930	220	250	24.1	MT3	90kg	60kg
4788-600H2	0.010mm	2µm	200	600	930	220	325	24.1	MT3	105kg	60kg
4788-1000	0.010mm	3µm	130	1000	1330	220	262	24.1	MT3	112kg	60kg
4788-1000H2	0.010mm	3µm	200	1000	1330	220	337	24.1	MT3	125kg	85kg
4788-1000H3	0.010mm	3µm	300	1000	1330	220	442	31.6	MT4	165kg	85kg

Standard accuracy

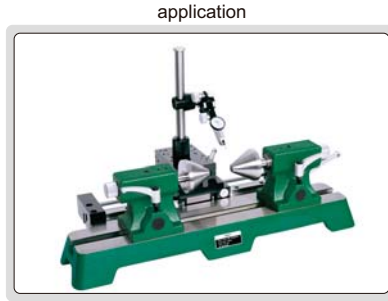
Code	Parallelism*	Runout accuracy	Center height (H)	Distance between two centers(D)	L	W	H1	Diameter of center (Ød)	Taper of center	Weight	Load
4788-D2	0.010mm	3µm	90	200	490	180	175	20.0	MT2	27kg	25kg
4788-D3	0.010mm	3µm	90	300	590	195	175	20.0	MT2	36kg	25kg
4788-D4	0.012mm	3µm	130	400	730	205	241	28.0	MT3	68kg	60kg
4788-D6	0.015mm	3µm	130	600	930	220	250	28.0	MT3	91kg	60kg
4788-D8	0.015mm	3µm	130	800	1130	220	250	28.0	MT3	99kg	60kg
4788-D10	0.015mm	3µm	130	1000	1330	220	262	28.0	MT3	116kg	60kg

*Parallelism of two centers to the guide surface

BULL NOSE CENTERS

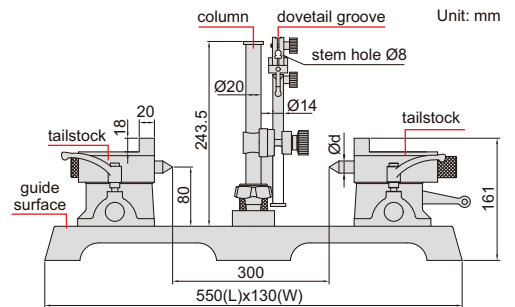
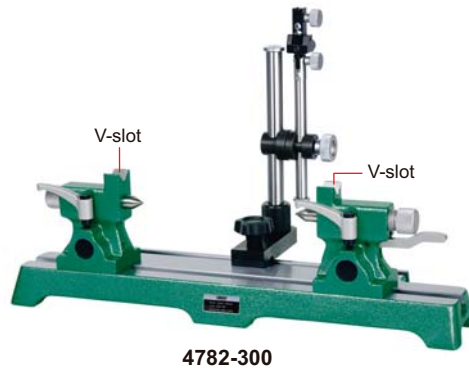
- Supplied in pair
- Suitable for 4723 and 4788 series bench centers

Code	Taper of handle
6391-MT2	MT2
6391-MT3	MT3



BENCH CENTER (BASIC TYPE)

- Hardened cast-iron guide surface
- Movable column
- V-slot for cylinder $\varnothing 4\sim\varnothing 22\text{mm}$

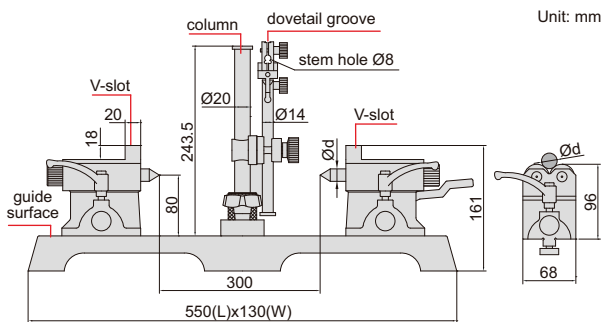


Code	Parallelism*	Runout accuracy	Center height	Distance between two centers	Taper of center	Diameter of center ($\varnothing d$)	Load
4782-300	0.01mm	2 μm	80mm	300mm	MT1	$\varnothing 16\text{mm}$	25kg

*Parallelism of two centers to the guide surface

15

BENCH CENTER WITH ROLLER TAILSTOCKS



roller tailstocks (included)



- Hardened cast-iron guide surface
- Supplied with V-slot/center tailstocks and roller tailstocks
- V-slot for cylinder $\varnothing 4\sim 22\text{mm}$
- Roller for cylinder $\varnothing 5\sim 100\text{mm}$

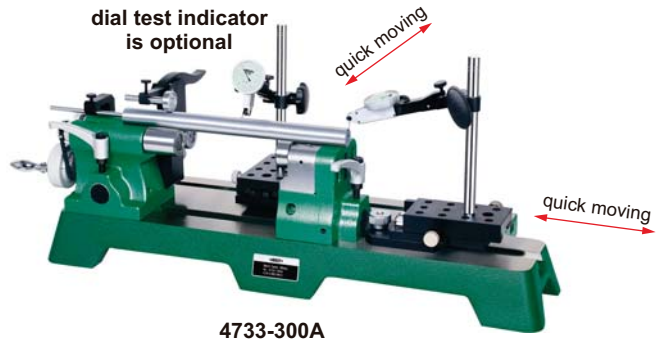
Code	Parallelism*	Runout accuracy	Center height	Distance between two centers	Diameter of center ($\varnothing d$)	Taper of center	Load
4720-300	0.01mm	2 μm	80mm	300mm	16mm	MT1	25kg (40kg for roller tailstocks)

*Parallelism of two centers to the guide surface

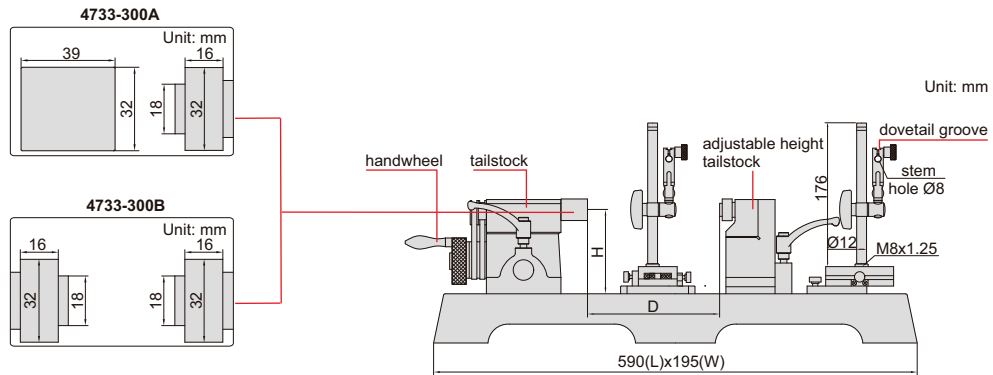
BENCH CENTERS



- Hardened cast-iron guide surface
- Quick moving is suitable for mass production inspection
- Adjustable height tailstock: 0-15mm, suitable for inspecting workpieces with different diameters
- Optional accessory: dial test indicator



4733-300A



Code	Runout accuracy	Center height (H)	Distance between two centers (D)	Applicable diameter	Adjustable height	Remarks
4733-300A	2µm	90mm	300mm	Ø8-60mm	0-15mm	with handwheel
4733-300B	2µm	90mm	300mm	Ø8-60mm	0-15mm	without handwheel

VERTICAL AND HORIZONTAL BENCH CENTER



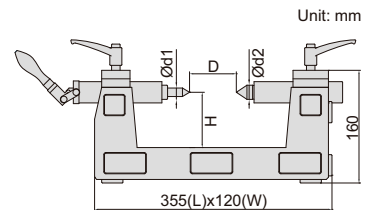
vertical use



horizontal use



side use

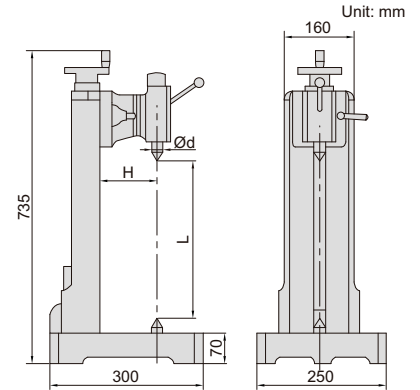
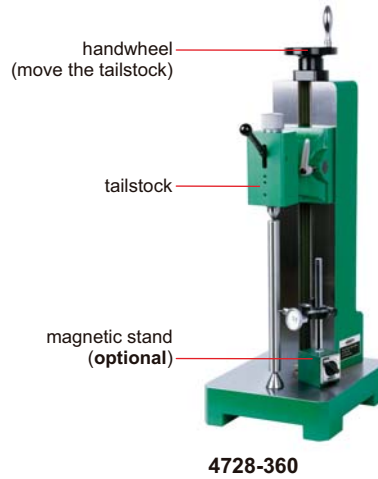


- For vertical, side and horizontal use

Code	Runout accuracy	Center height (H)	Distance between two centers (D)	Diameter of center (Ød1/Ød2)	Weight	Load
4722-200	2µm	80mm	200mm	16mm/20.2mm	22kg	25kg

VERTICAL BENCH CENTER

- Distance between two centers (L): 360mm
- Hardened cast-iron guide surface
- Use handwheel to move the tailstock
- Optional accessory:
magnetic stands, dial test indicators



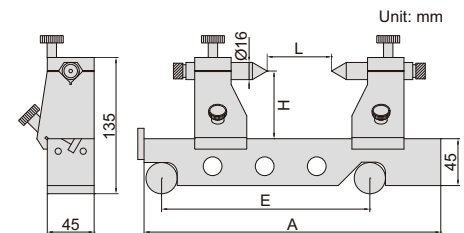
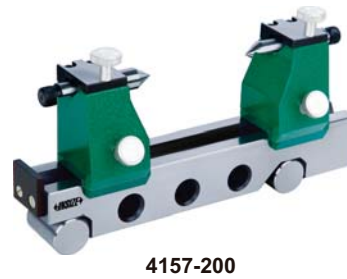
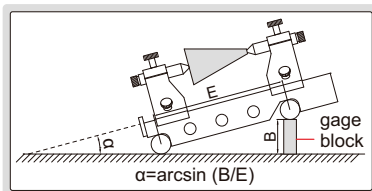
Code	Parallelism *	Runout accuracy	Center height (H)	Diameter of center (Ød)	Taper of center	Weight	Load
4728-360	0.01mm	2µm	130mm	24.1mm	MT3	85kg	80kg

* Parallelism of two centers to the guide surface

TAPER INSPECTION INSTRUMENTS

CAN BE CUSTOMIZED

15



- Check the taper angle of taper bar/taper plug gages /Morse taper/ISO taper etc. The run out can be checked as well

Code	Center height (H)	Center distance (L)	Sine bar accuracy (when $\alpha=30^\circ$)	E	A
4157-200	65mm	200mm	±5 seconds	200mm	285mm
4157-300	65mm	300mm	±8 seconds	300mm	385mm

REFER TO PAGE 409 FOR DETAILS

MAGNETIC SQUARE WITH V GROOVE



6539-100

V-BLOCKS

REFER TO PAGE 403-408 FOR DETAILS



6896-11



6887-3



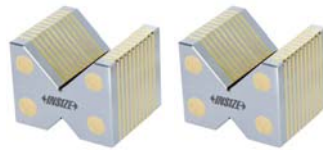
6897-1



6890-702



6888-1



6878-1

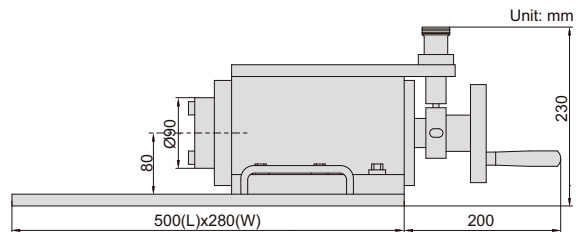


6891-1

SHANK RUNOUT TESTERS

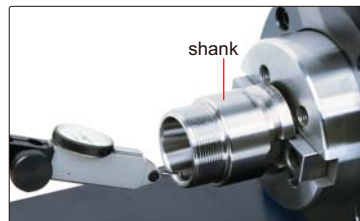


4771-30

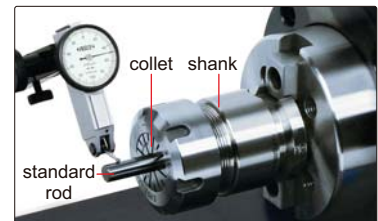


- Measure the radial runout of shanks, collets and cutting tools
- Optional accessory: dial test indicators, magnetic stands

measure radial runout of shank



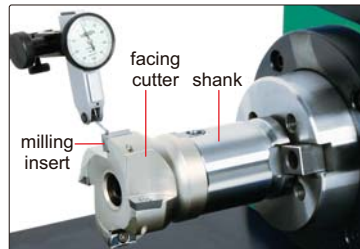
measure radial runout of collet



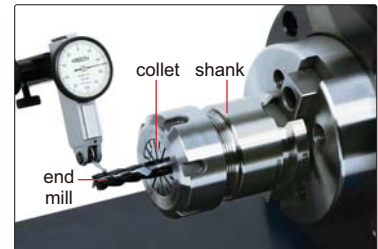
standard shank (included)



measure radial runout of cutter



measure radial runout of end mill



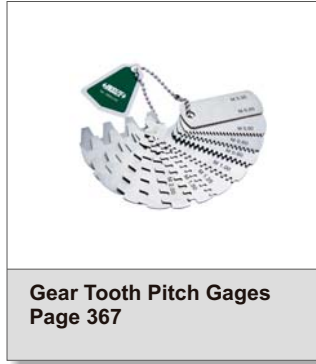
Code	Taper	Accuracy
4771-30	BT30	1µm
4771-40	BT40	1µm
4771-50	BT50	1µm



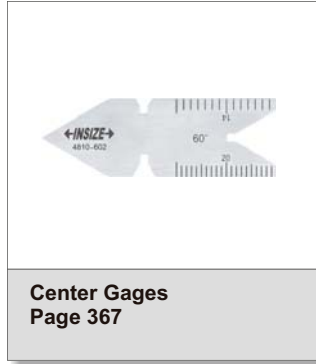
Feeler Gages
Page 363-365



Pitch Gages
Page 366-367



Gear Tooth Pitch Gages
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Center Gages
Page 367



Thread Gages
Page 368



Angle Gages
Page 368



Radius Gages
Page 369



Drill Gages
Page 370



Angle Gages
Page 370



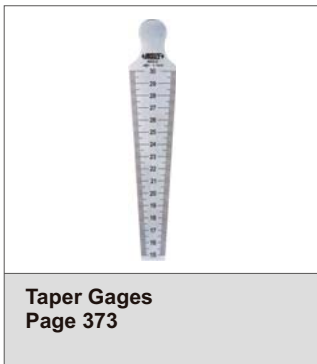
Wire Gages
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Thickness Gages
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Taper Slot Gages
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Taper Gages
Page 373



Taper Bore Gages
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Welding Gages
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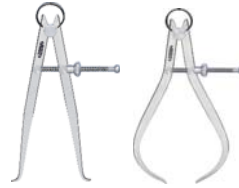
Fillet Welding Gages
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Welding Gages
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Pipe Welding Gages
Page 380



Inside/Outside Calipers
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Dividers
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Length Tapes
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Measuring Tapes
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Long Measuring Tapes
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Measuring Wheels
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Digital Measuring Wheels
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Steel Rules
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Combination Squares
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T-bevels
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Plastic Angle Squares
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Marking Gages
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Center Marking Gages
Page 391



Locators
Page 391



Scribing Calipers
Page 392



Height Scribes
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Scribers
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Precision Screwdriver Sets
Page 393



LED Flashlights
Page 393



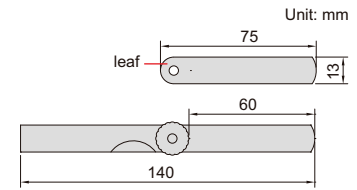
Measuring Tool Sets
Page 394-398

FEELER GAGE

- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy: $\pm(3+T/80)$ μm ,
'T' is the thickness of leaves in μm



4601-25



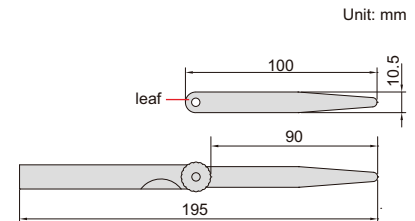
Code	Range	Thickness of leaves included (mm)	Quantity of leaves
4601-25	0.04-1.00mm	0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	25

FEELER GAGES

- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy: $\pm(3+T/80)$ μm ,
'T' is the thickness of leaves in μm



4602-20



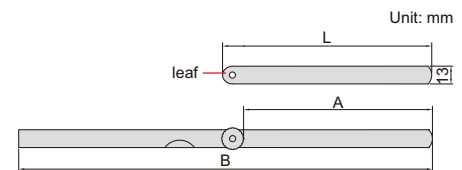
Code	Range	Thickness of leaves included (mm)	Quantity of leaves
4602-13A	0.03-0.50mm	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50	13
4602-13	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	13
4602-17	0.02-1.00mm	0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.75, 1.00	17
4602-20	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	20
4602-28	0.05-1.00mm	0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.11, 0.12, 0.13, 0.14, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	28
4602-32	0.03-1.00mm	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.13, 0.15, 0.18, 0.20, 0.23, 0.25, 0.28, 0.30, 0.33, 0.35, 0.38, 0.40, 0.45, 0.50, 0.55, 0.60, 0.63, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 1.00	32

LONG FEELER GAGES

- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy: $\pm(3+T/80)$ μm ,
'T' is the thickness of leaves in μm



4605-20

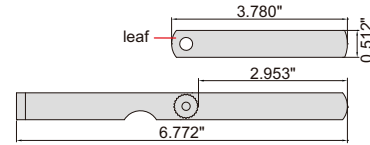


Code	Range	Thickness of leaves included (mm)	Quantity of leaves	L	A	B
4605-13	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	13	150mm	135mm	295mm
4605-131	0.05-1.00mm		13	200mm	185mm	395mm
4605-132	0.05-1.00mm		13	300mm	285mm	590mm
4605-20	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	20	150mm	135mm	295mm
4605-201	0.05-1.00mm		20	200mm	185mm	395mm
4605-202	0.05-1.00mm		20	300mm	285mm	590mm

INCH FEELER GAGE



4608-31



- 0.010" is made of brass, others are made of hardened alloy steel
- Each blade is marked with inch/metric size

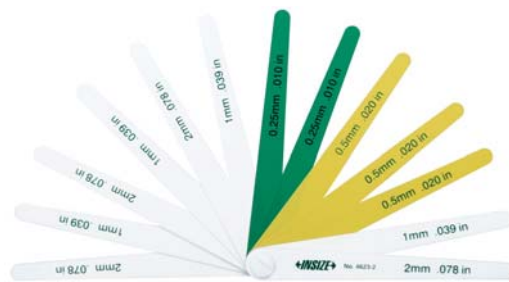
Thickness of leaves included	Accuracy
0.010" (brass)	±0.00039"
0.0015", 0.002"	±0.0002"
0.0025", 0.003", 0.004", 0.005", 0.006", 0.007"	±0.00028"
0.008", 0.009"	±0.00035"
0.010", 0.011"	±0.00039"
0.012", 0.013"	±0.00047"
0.014", 0.015"	±0.00051"

Thickness of leaves included	Accuracy
0.016", 0.017"	±0.00055"
0.018", 0.019"	±0.00059"
0.020", 0.021"	±0.00067"
0.022", 0.023"	±0.00071"
0.024", 0.025", 0.026"	±0.00075"
0.028"	±0.00091"
0.030"	±0.00094"
0.032", 0.035"	±0.00102"

Code	Range	Quantity of Leaves
4608-31	0.0015"~0.035"	32

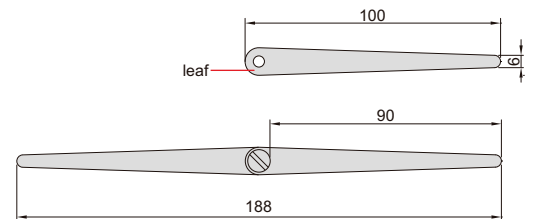
PLASTIC FEELER GAGES

16



4623-2

Unit: mm



- Accuracy: ±0.04mm (thickness of leaves: 0.25mm)
- ±0.05mm (thickness of leaves: 0.5mm)
- ±0.08mm (thickness of leaves: ≥1mm)

Code	Range	Thickness of leaves included	Quantity of leaves
4623-2	0.25-2.00mm	2.00mm (0.078"), 1.00mm (0.039"), 0.50mm (0.020"), 0.50mm (0.020"), 0.50mm (0.020"), 0.25mm (0.010"), 0.25mm (0.010"), 1.00mm (0.039"), 2.00mm (0.078"), 1.00mm (0.039"), 2.00mm (0.078"), 1.00mm (0.039"), 2.00mm (0.078")	13
4623-5	0.25-5.00mm	1.00mm (0.039"), 0.25mm (0.010"), 0.50mm (0.020"), 1.50mm (0.059"), 2.00mm (0.078"), 2.50mm (0.098"), 3.00mm (0.118"), 3.50mm (0.138"), 4.00mm (0.157"), 4.50mm (0.177"), 5.00mm (0.196")	11

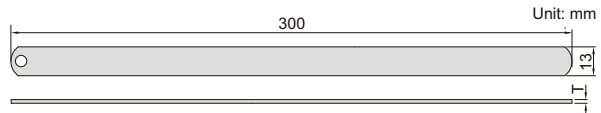
FEELER GAGE STOCKS



- Used as shims to accurately set spacing
- Made of hardened alloy steel
- Length 300mm
- Width 13mm
- 10 pcs per package



4622-10



Code	Thickness (T)	Accuracy
4622-02	0.02mm	±3μm
4622-03	0.03mm	±3μm
4622-04	0.04mm	±3μm
4622-05	0.05mm	±3μm
4622-06	0.06mm	±3μm
4622-07	0.07mm	±4μm
4622-08	0.08mm	±4μm
4622-09	0.09mm	±4μm
4622-10	0.10mm	±4μm
4622-12	0.12mm	±5μm

Code	Thickness (T)	Accuracy
4622-15	0.15mm	±5μm
4622-18	0.18mm	±6μm
4622-20	0.20mm	±6μm
4622-25	0.25mm	±6μm
4622-30	0.30mm	±7μm
4622-35	0.35mm	±7μm
4622-40	0.40mm	±8μm
4622-45	0.45mm	±8μm
4622-50	0.50mm	±9μm
4622-55	0.55mm	±9μm

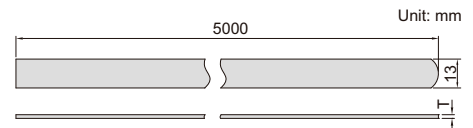
Code	Thickness (T)	Accuracy
4622-60	0.60mm	±9μm
4622-65	0.65mm	±9μm
4622-70	0.70mm	±12μm
4622-75	0.75mm	±12μm
4622-80	0.80mm	±13μm
4622-85	0.85mm	±13μm
4622-90	0.90mm	±14μm
4622-95	0.95mm	±14μm
4622-100	1.00mm	±16μm

16

FEELER GAGE TAPES



4621-30



Code	Thickness (T)	Accuracy
4621-02	0.02mm	±4μm
4621-03	0.03mm	±4μm
4621-04	0.04mm	±4μm
4621-05	0.05mm	±4μm
4621-06	0.06mm	±4μm
4621-07	0.07mm	±5μm
4621-08	0.08mm	±5μm
4621-09	0.09mm	±5μm
4621-10	0.10mm	±5μm
4621-12	0.12mm	±5μm
4621-15	0.15mm	±6μm
4621-18	0.18mm	±7μm
4621-20	0.20mm	±8μm
4621-25	0.25mm	±9μm

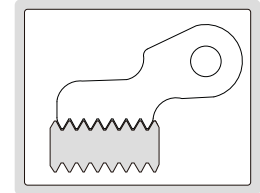
Code	Thickness (T)	Accuracy
4621-30	0.30mm	±9μm
4621-35	0.35mm	±11μm
4621-40	0.40mm	±12μm
4621-45	0.45mm	±12μm
4621-50	0.50mm	±14μm
4621-55	0.55mm	±14μm
4621-60	0.60mm	±14μm
4621-65	0.65mm	±14μm
4621-70	0.70mm	±17μm
4621-75	0.75mm	±17μm
4621-80	0.80mm	±19μm
4621-85	0.85mm	±19μm
4621-90	0.90mm	±22μm
4621-95	0.95mm	±22μm
4621-100	1.00mm	±24μm

- Used as shims to accurately set spacing
- Made of hardened alloy steel
- Length 5m
- Width 13mm

PITCH GAGES



4820-122



- Identify the pitch of screw thread
- Made of medium carbon steel

Metric 60° screw

Code	Range	Pitch of leaves included (mm)	Quantity of leaves
4820-122	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	22
4820-124	0.25-7.0mm	0.25, 0.3, 0.35, 0.4, 0.5, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	24
4820-1241	0.25-6.0mm	0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6	24

Unified 60° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-230	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	30

Whitworth 55° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-330	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	30
4820-328	4-62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	28

Metric 60° and Whitworth 55° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-452	0.25-6.0mm	0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6mm	52
	4-62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	
4820-450	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	50
	4-62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	

Metric 60° and Unified 60° screw

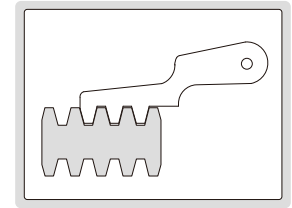
Code	Range	Pitch of leaves included	Quantity of leaves
4820-552	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	52
	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	

PITCH GAGES

- Check the pitch of screw thread
- Accuracy: $\pm 0.07\text{mm}$
- Made of medium carbon steel



4824-12



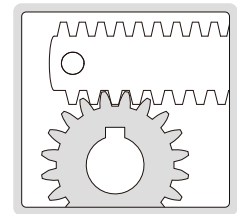
Code	Range	Thread type	Pitch of leaves included	Quantity of leaves
4824-12	2-20mm	Tr30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm	12
4824-16	1-12TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 3-1/2, 4, 5, 6, 7, 8, 9, 10, 12TPI	16

GEAR TOOTH PITCH GAGES

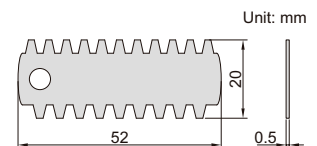
- Check the module pitch of gear tooth
- Accuracy: $\pm 0.05\text{mm}$
- Made of hardened stainless steel



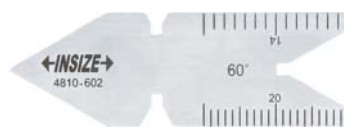
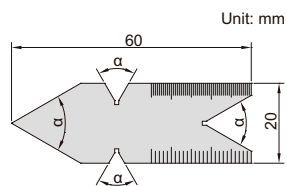
4860-245



Code	Range	Pressure angle	Quantity of leaves
4860-145	0.35-4.5mm	14.5°	15
4860-245	0.35-4.5mm	20°	15
4860-112	5-12mm	14.5°	8
4860-212	5-12mm	20°	8

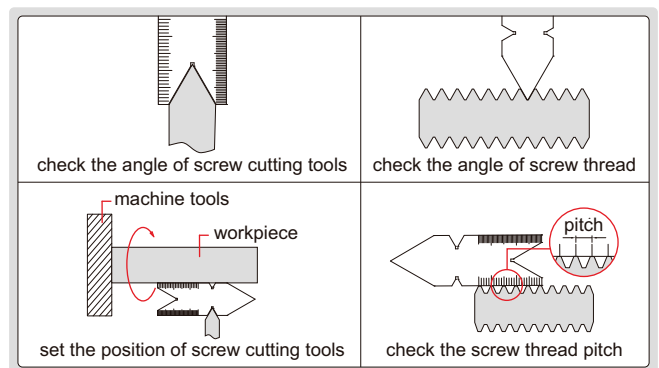


CENTER GAGES



4810-602

- To check and set screw cutting tools, and check the angle and pitch of screw thread
- Angle accuracy: $\pm 30\text{min}$.
- Made of stainless steel



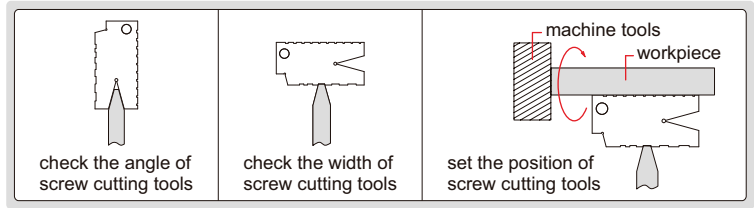
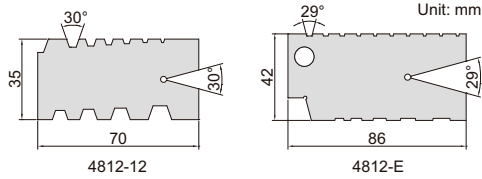
Code	Thread type	Angle (α)	Graduation
4810-601	METRIC 60°	60°	0.5mm and 1mm
4810-602	UNIFIED 60°	60°	14ths and 20ths on front side, 24ths and 32ths on back side
4810-55	WHITWORTH 55°	55°	14ths and 20ths on front side, 24ths and 32ths on back side

THREAD GAGES

- To check and set screw cutting tools
- Made of medium carbon steel



4812-E



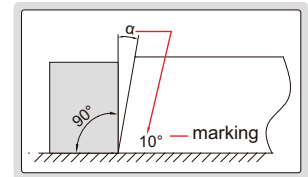
Code	Range	Thread type	Pitch
4812-12	2-12mm	Tr 30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12mm
4812-E	1-10TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9, 10TPI

ANGLE GAGE

- To check complementary angles
- Made of stainless steel

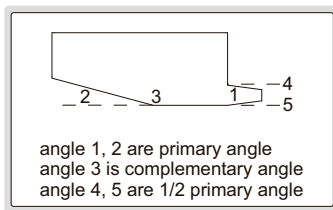


4806-20

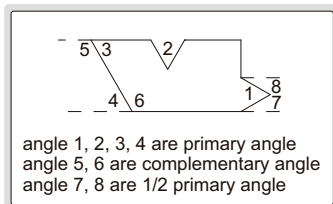


Code	Range (α)	Angle of leaves included	Quantity of leaves	Accuracy
4806-20	1°-45°	1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 12°, 14°, 16°, 18°, 20°, 25°, 30°, 35°, 40°, 45°	20	±30'

ANGLE GAGE SET



type A



type B



4807

- Each blade checks primary, 1/2 primary and complementary angles
- Made of medium carbon steel

Code	Quantity of leaves	Accuracy
4807	18	±10'

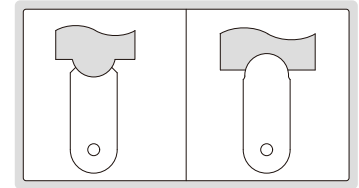
Primary angle	1/2 primary angle	Complementary angle	Type
5°	2°30'	175°	A
10°	5°	170°	A
15°	7°30'	165°	A
20°	10°	160°	B
25°	12°30'	155°	B
30°	15°	150°	B
35°	17°30'	145°	B
40°	20°	140°	B
45°	22°30'	135°	B
50°	25°	130°	B
55°	27°30'	125°	B
60°	30°	120°	B
65°	32°30'	115°	B
70°	35°	110°	B
75°	37°30'	105°	B
80°	40°	100°	B
85°	42°30'	95°	B
90°	45°	90°	B

RADIUS GAGES

- Made of medium carbon steel



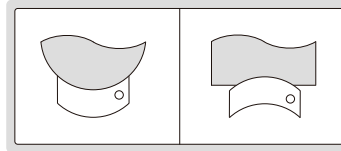
4801-17



Code	Range	Radius of leaves included (mm)	Quantity of leaves (internal + external)
4801-17	1-7mm	1, 1.25, 1.5, 1.75, 2, 2.25, 2.5, 2.75, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	17+17
4801-16	7.5-15mm	7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15	16+16
4801-15	15.5-25mm	15.5, 16, 16.5, 17, 17.5, 18, 18.5, 19, 19.5, 20, 21, 22, 23, 24, 25	15+15

RADIUS GAGE

- Made of stainless steel

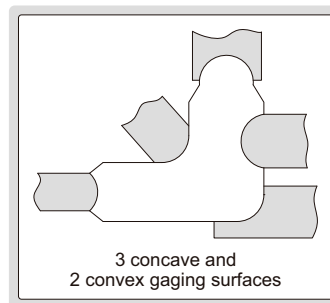


4802-31

Code	Range	Radius of leaves included (mm)	Quantity of leaves
4802-31	25-40mm	25, 25.5, 26, 26.5, 27, 27.5, 28, 28.5, 29, 29.5, 30, 30.5, 31, 31.5, 32, 32.5, 33, 33.5, 34, 34.5, 35, 35.5, 36, 36.5, 37, 37.5, 38, 38.5, 39, 39.5, 40	31 pcs

RADIUS GAGE SET

- Each piece has 3 concave and 2 convex gauging surfaces
- Supplied with handle
- Made of medium carbon steel



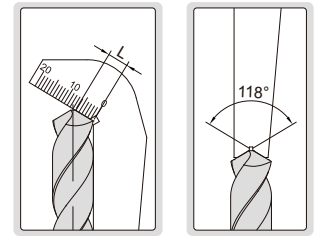
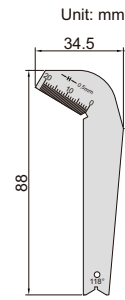
Code	Range	Radius of leaves included (mm)	Quantity of leaves
4804-26	0.5-13mm	0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13	26



4804-26

DRILL POINT GAGE

- For twist drills with 118° angle, to check if the center of tip is concentric with the drill body
- Made of stainless steel

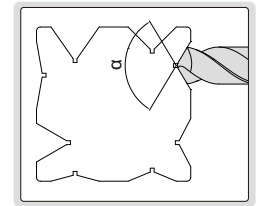
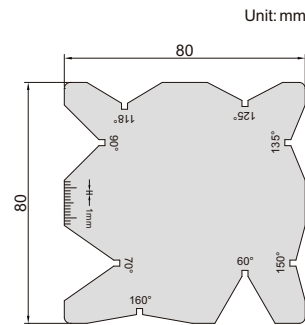


4843-1

Code	Accuracy	
	Angle	Length
4843-1	±0.5°	±0.5mm

DRILL ANGLE GAGE

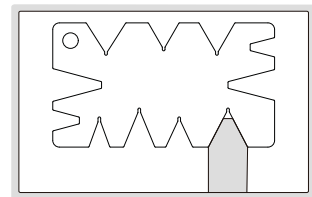
- Check drills with angle 60°, 70°, 90°, 118°, 125°, 135°, 150° or 160°
- Made of stainless steel



4842-1

Code	Accuracy
4842-1	±0.5°

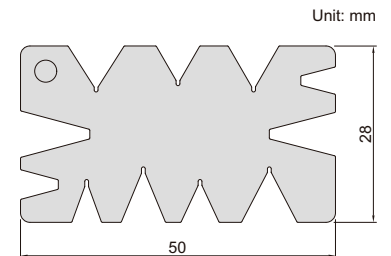
ANGLE GAGE



check the angle of screw cutting tools



4854-1



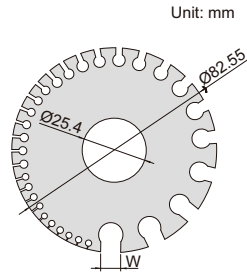
- Made of stainless steel

Code	Range	Accuracy
4854-1	29°, 30°, 40°, 45°, 50°, 55°, 60°	±10'

AMERICAN STANDARD WIRE GAGE



4808



Code	Range
4808	0-36 (8.250-0.127mm/0.3249-0.0050")

- For gaging non-ferrous wire and metals such as copper, brass and aluminum
- Hardened to HRC50-57

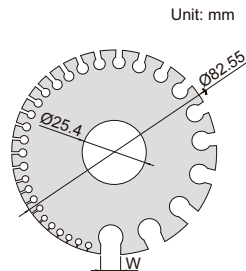
No.	W
0	8.250mm/0.3249"
1	7.350mm/0.2893"
2	6.540mm/0.2576"
3	5.830mm/0.2294"
4	5.190mm/0.2043"
5	4.620mm/0.1819"
6	4.110mm/0.1620"
7	3.670mm/0.1443"
8	3.260mm/0.1285"
9	2.910mm/0.1144"
10	2.590mm/0.1019"
11	2.300mm/0.0907"
12	2.050mm/0.0808"
13	1.820mm/0.0720"
14	1.630mm/0.0641"
15	1.450mm/0.0571"
16	1.290mm/0.0508"
17	1.150mm/0.0453"

No.	W
18	1.020mm/0.0403"
19	0.912mm/0.0359"
20	0.813mm/0.0320"
21	0.724mm/0.0285"
22	0.643mm/0.0253"
23	0.574mm/0.0226"
24	0.511mm/0.0201"
25	0.440mm/0.0179"
26	0.404mm/0.0159"
27	0.361mm/0.0142"
28	0.320mm/0.0126"
29	0.287mm/0.0113"
30	0.254mm/0.0100"
31	0.226mm/0.0089"
32	0.203mm/0.0080"
33	0.180mm/0.0071"
34	0.160mm/0.0063"
35	0.142mm/0.0056"
36	0.127mm/0.0050"

U.S. STANDARD SHEET METAL GAGE



4809



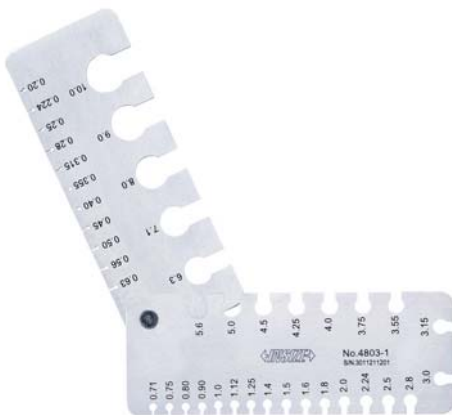
Code	Range
4809	0-36 (7.938-0.179mm/0.3125-0.0070")

- For gaging sheet metal, plate iron and steel
- Hardened to HRC50-57

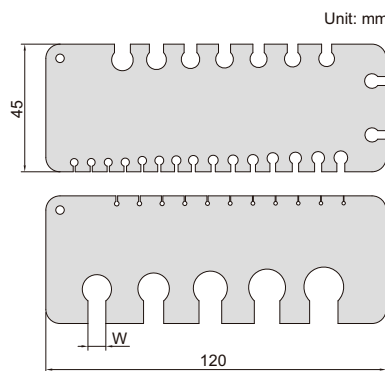
No.	W
0	7.938mm/0.3125"
1	7.144mm/0.2813"
2	6.747mm/0.2656"
3	6.350mm/0.2500"
4	5.953mm/0.2344"
5	5.556mm/0.2188"
6	5.159mm/0.2031"
7	4.763mm/0.1875"
8	4.366mm/0.1719"
9	3.969mm/0.1563"
10	3.572mm/0.1406"
11	3.175mm/0.1250"
12	2.778mm/0.1094"
13	2.381mm/0.0938"
14	1.984mm/0.0781"
15	1.786mm/0.0703"
16	1.588mm/0.0625"
17	1.429mm/0.0563"

No.	W
18	1.270mm/0.0500"
19	1.111mm/0.0438"
20	0.953mm/0.0375"
21	0.873mm/0.0344"
22	0.794mm/0.0313"
23	0.714mm/0.0281"
24	0.635mm/0.0250"
25	0.556mm/0.0219"
26	0.476mm/0.0188"
27	0.437mm/0.0172"
28	0.397mm/0.0156"
29	0.357mm/0.0141"
30	0.318mm/0.0125"
31	0.278mm/0.0109"
32	0.258mm/0.0102"
33	0.238mm/0.0094"
34	0.218mm/0.0086"
35	0.198mm/0.0078"
36	0.179mm/0.0070"

WIRE GAGE



4803-1



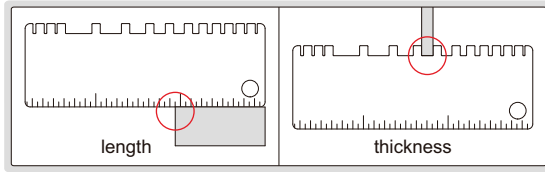
Code	Range
4803-1	0.2-10mm

- For gaging non-ferrous wire and metals such as copper, brass and aluminum
- Hardened to HRC51-53
- Including 2 pcs wire gages

wire diameter (W)
0.200mm
0.224mm
0.250mm
0.280mm
0.315mm
0.355mm
0.400mm
0.450mm
0.500mm
0.560mm
0.630mm
0.710mm
0.750mm
0.800mm
0.900mm
1.000mm
1.120mm
1.250mm
1.400mm
1.500mm

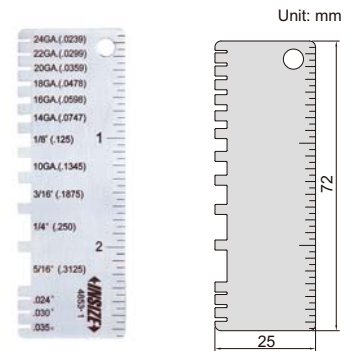
wire diameter (W)
1.60mm
1.80mm
2.00mm
2.24mm
2.50mm
2.80mm
3.00mm
3.15mm
3.55mm
3.75mm
4.00mm
4.25mm
4.50mm
5.00mm
5.60mm
6.30mm
7.10mm
8.00mm
9.00mm
10.00mm

THICKNESS GAGE



- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4853-1	length	0-2 3/4"	1/16"	1/32"
	thickness	24GA. (0.0239"), 22GA. (0.0299"), 20GA. (0.0359")	—	±0.002"
		18GA. (0.0478"), 16GA. (0.0598"), 14GA. (0.0747"), 1/8" (0.125"), 10GA. (0.1345"), 3/16" (0.1875"), 1/4" (0.250"), 5/16" (0.3125")		±0.004"
		0.024", 0.030", 0.035"		±0.002"



4853-1

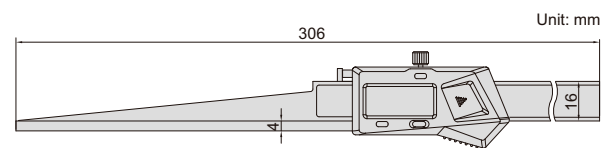
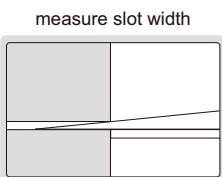
DATA OUTPUT

ATTENTION: ACTUAL SLOT WIDTH IS 1/10 OF THE READING

DIGITAL TAPER SLOT GAGES

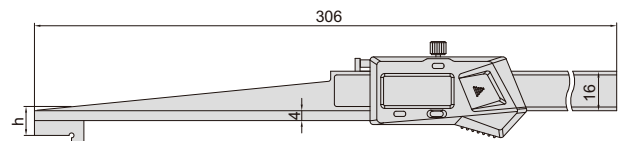


1160-10



1160-10 and 1106-10WL

- Non waterproof
- Measuring opening, slot width
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1160-20, 1160-20WL, 1160-30, 1160-30WL, 1160-40 and 1106-40WL

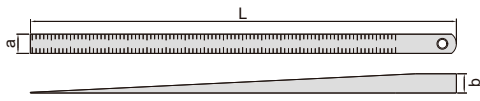
With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

Code	Range	Accuracy	h
1160-10	0.2-10mm/0.01-0.39"	±0.03mm	—
1160-20	10-20mm/0.39-0.79"	±0.05mm	10mm
1160-30	20-30mm/0.79-1.18"	±0.05mm	20mm
1160-40	30-40mm/1.18-1.58"	±0.05mm	30mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy	h
1160-10WL	0.2-10mm/0.01-0.39"	±0.03mm	—
1160-20WL	10-20mm/0.39-0.79"	±0.05mm	10mm
1160-30WL	20-30mm/0.79-1.18"	±0.05mm	20mm
1160-40WL	30-40mm/1.18-1.58"	±0.05mm	30mm

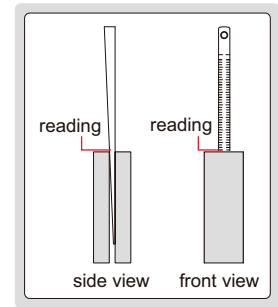
TAPER SLOT GAGES



4630-1

- For quick measurement of slot width
- Satin chrome plated reading surface
- Made of stainless steel

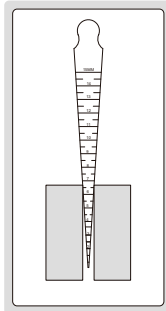
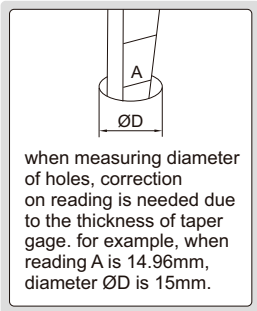
Code	Range	Graduation	Accuracy	L	a	b
4630-3	0.4-6mm	0.05mm	±0.04mm	164mm	12.5mm	6.5mm
4630-1	0.5-10mm	0.05mm	±0.07mm	220mm	10mm	10.5mm
4630-2	0.5-15mm	0.1mm	±0.08mm	184mm	12.5mm	16.5mm



TAPER GAGES

measure diameter of hole

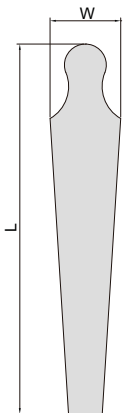
measure slot width



front



back



4833-2

- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back (only for 4833-1, 4833-2)
- Made of stainless steel

Code	Range	Graduation	Accuracy	L	W
4833-1	0.8-15mm	0.1mm	±0.05mm	146mm	17mm
4833-2	15-30mm	0.1mm	±0.05mm	159mm	30.4mm
4833-3	30-45mm	0.1mm	±0.05mm	166mm	45.4mm
4833-4	45-60mm	0.1mm	±0.05mm	170mm	60.5mm

TAPER GAGE SET



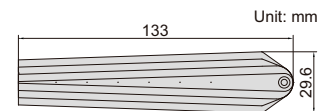
front

back

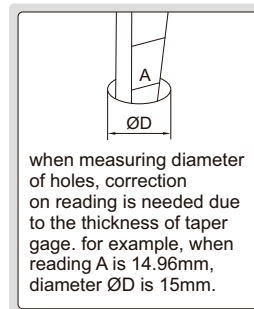
4837-1

- Include 4 pcs (1~8mm, 8~15mm, 15~22mm, 22~29mm)
- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back
- Made of stainless steel

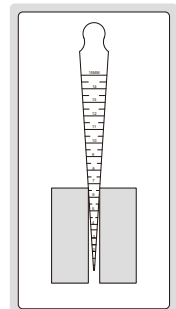
Code	Range	Graduation	Accuracy
4837-1	1-29mm	0.05mm	±0.05mm



measure diameter of hole



measure slot width



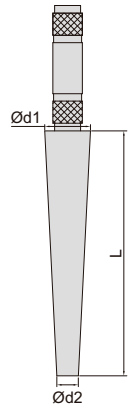
TAPER BORE GAGES

- Quick measurement of bore diameter
- Hardened steel, HRC50-58
- Satin chrome plated surface
- Aluminium oxidized handle

Code	Range	Graduation	Accuracy	L	Ød1	Ød2
4852-1	1-6.5mm	0.1mm	±0.05mm	62.5	7	0.8
4852-3	3-16mm	0.1mm	±0.05mm	143	17	2.8
4852-15	15-30mm	0.1mm	±0.05mm	165	31	14.7
4852-30	30-45mm	0.1mm	±0.05mm	165	46	29.6
4852-45	45-60mm	0.1mm	±0.05mm	167	61	44.3



4852-15



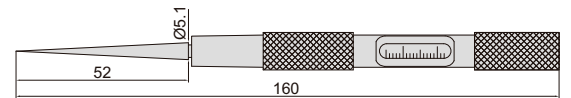
SMALL TAPER BORE GAGE

- Quick measurement of small bore diameter
- Hardened working face
- Supplied with protection cap

Code	Range	Graduation	Accuracy
4855-5	0.1-5mm	0.01mm	±0.03mm



4855-5



Unit: mm



supplied with protection cap

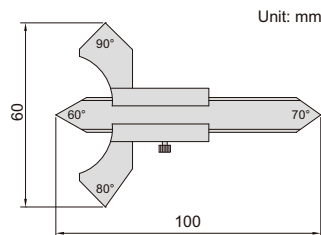
WELDING GAGE

- Made of stainless steel
- Satin chrome plated reading surface

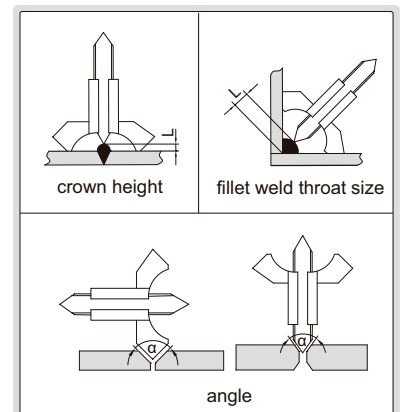
Code	Measurement	Range	Graduation	Accuracy
4830	crown height	0-8mm	0.1mm	±0.1mm
	fillet weld throat size	0-20mm	0.1mm	±0.3mm
	angle	60°, 70°, 80°, 90°	—	±1°



4830



Unit: mm



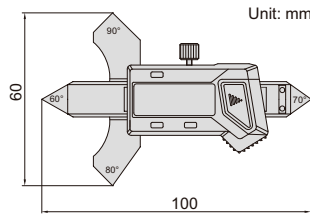
DIGITAL WELDING GAGE

ATTENTION:
NO DATA OUTPUT

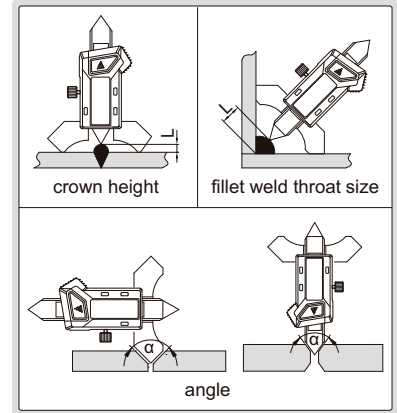


4831-20A

- Non waterproof
- Buttons: zero, mm/inch, on/off
- Battery LR44
- Made of stainless steel

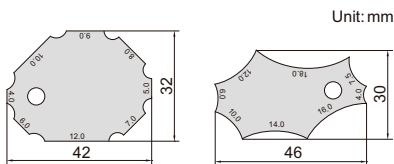


Unit: mm



Code	Measurement	Range	Resolution	Accuracy
4831-20A	crown height	0-7mm	0.01mm/0.0005"	±0.03mm
	fillet weld throat size	0-20mm	0.01mm/0.0005"	±0.1mm
	angle	60°, 70°, 80°, 90°	—	±1°

FILLET WELDING GAGE

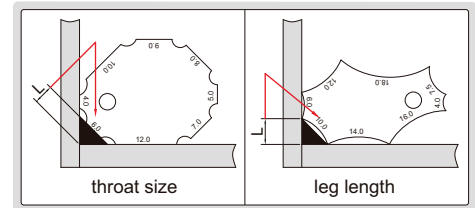


Unit: mm



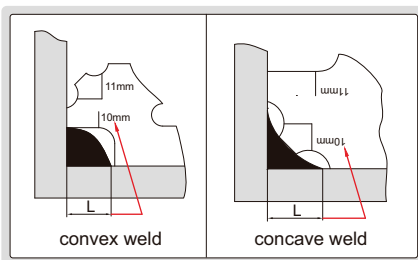
4832-1

- Made of stainless steel
- Sizes marked on both faces



Code	Throat size	Leg length	Accuracy
4832-1	4, 5, 6, 7, 8, 9, 10, 12mm	4, 6, 7.5, 10, 12, 14, 16, 18mm	±0.5mm

FILLET WELDING GAGES



4836-1

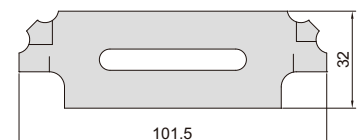


4836-2

- Measure concave and convex weld sizes
- 7 blades are included
- Made of stainless steel

Code	Size	Accuracy
4836-1	3mm, 4mm, 5mm, 6mm, 8mm, 9mm, 10mm, 11mm, 12mm, 14mm, 16mm, 19mm, 22mm, 25mm	±0.5mm
4836-2	1/8" (3.2mm), 3/16" (4.8mm), 1/4" (6.4mm), 5/16" (7.9mm), 3/8" (9.5mm), 7/16" (11.1mm), 1/2" (12.7mm), 5/8" (15.9mm), 3/4" (19.1mm), 7/8" (22.2mm), 1" (25.4mm)	±0.02" (0.5mm)

Unit: mm



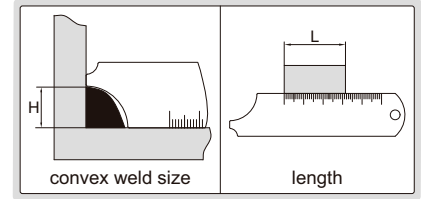
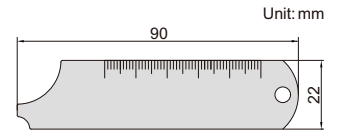
FILLET WELDING GAGE

- Measure convex weld sizes
- 3 blades are included
- Made of stainless steel

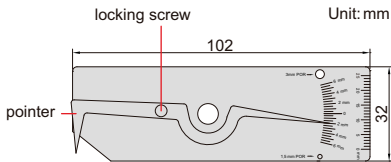


4847-1

Code	Measurement	Range	Graduation	Accuracy
4847-1	convex weld size	4, 6, 8, 10, 12, 14mm	—	±0.5mm
	length	0-50mm	1mm	±0.5mm



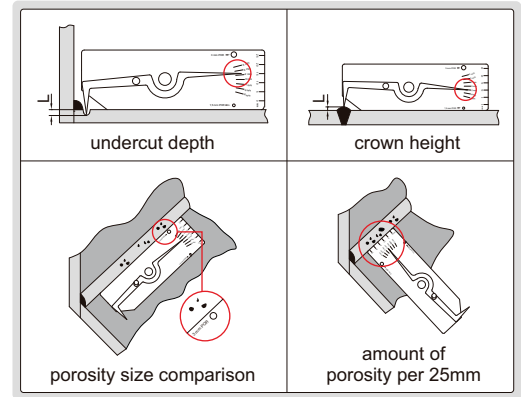
WELDING GAGE



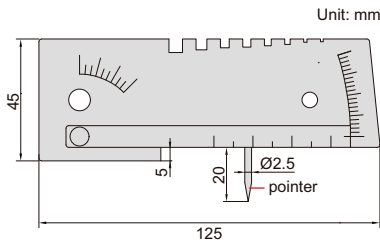
4834-1

- Pointer can be locked for later reference
- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4834-1	undercut depth	0-6mm	0.5mm	±0.5mm
	crown height	0-6mm	0.5mm	±0.5mm
	porosity size comparison	1.5mm, 3mm	—	±0.2mm
	amount of porosity per 25mm	25mm	1mm	—



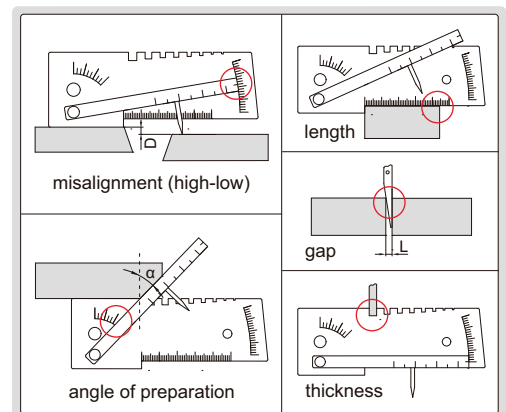
WELDING GAGE



4848-1

- Made of stainless steel

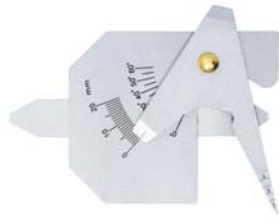
Code	Measurement	Range	Graduation	Accuracy
4848-1	misalignment (high-low)	-5mm~+15mm	1mm	±0.5mm
	angle of preparation	0°-45°	5°	±2.5°
	length	0-50mm	1mm	±0.5mm
	gap	1-4mm	0.5mm	±0.25mm
	thickness	1, 1.2, 2.0, 2.5, 3.0, 3.25, 4.0, 5.0mm	—	—



WELDING GAGE

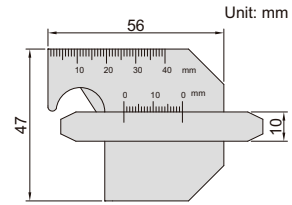


front



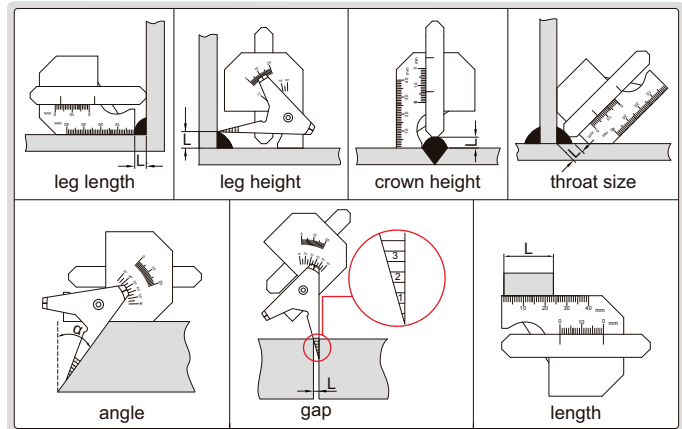
back

6832-1



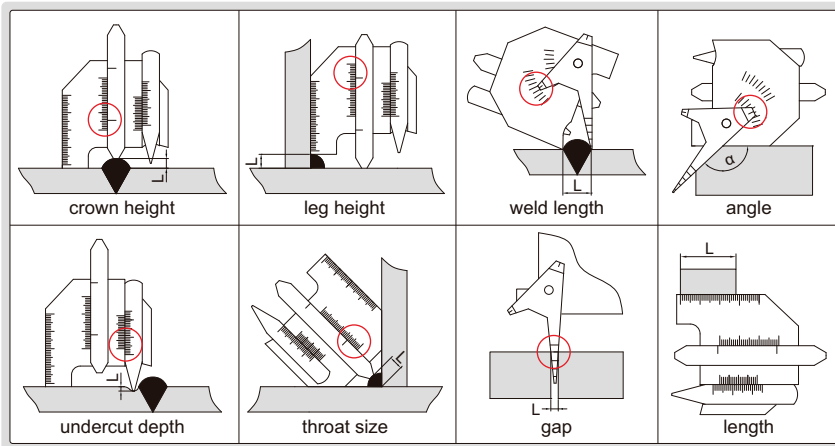
- Made of stainless steel
- Satin chrome plated surface

Code	Measurement	Range	Graduation	Accuracy
6832-1	leg length	0-20mm	1mm	±0.3mm
	leg height	0-20mm	1mm	±0.3mm
	crown height	0-20mm	1mm	±0.3mm
	throat size	0-10mm	1mm	±0.3mm
	angle	0°-60°	5°	±1°
	gap	1-3.5mm	0.5mm	±0.2mm
	length	0-40mm	1mm	±0.3mm



WELDING GAGES

16



- Made of stainless steel

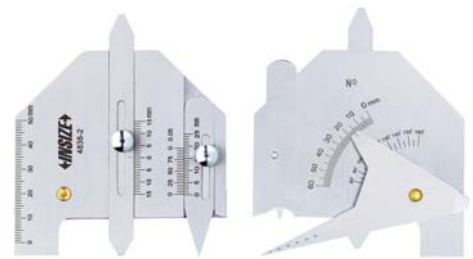
Measurement	Code 4838-1			Code 4838-2		
	Range	Graduation	Accuracy	Range	Graduation	Accuracy
crown height	0-10mm	1mm	±0.5mm	0-15mm	1mm	±0.5mm
leg height	0-14mm	1mm	±0.5mm	0-15mm	1mm	±0.5mm
undercut depth	0-5mm	0.05mm	±0.05mm	0-5mm	0.05mm	±0.05mm
throat size	0-13mm	1mm	±0.5mm	0-13mm	1mm	±0.5mm
weld length	0-40mm	1mm	±1mm	0-60mm	1mm	±1mm
angle	90°-150°	5°	±1°	80°-160°	5°	±1°
gap	0.5-5mm	1mm	±0.5mm	1-6mm	1mm	±0.5mm
length	0-40mm	1mm	±0.5mm	0-50mm	1mm	±0.5mm
LxW	62x77mm			99x84mm		



front

4838-1

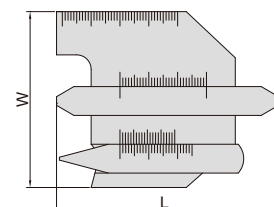
back



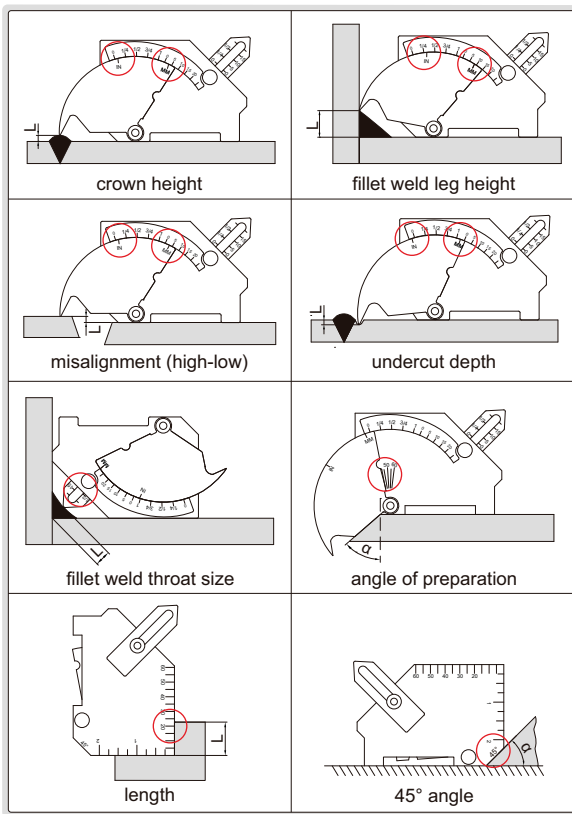
front

4838-2

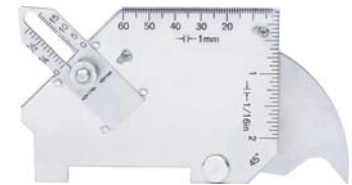
back



WELDING GAGE

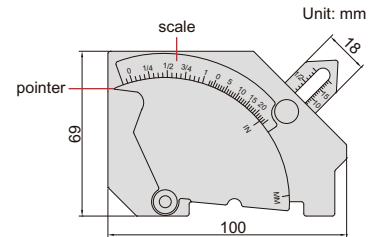


front



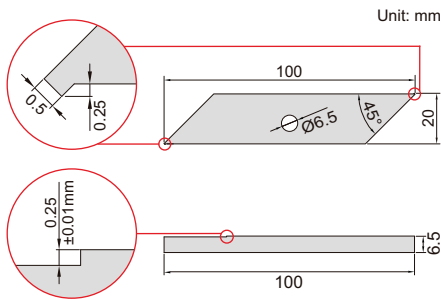
back

4835-1



- Adjustable scale to compensate pointer wear
- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4835-1	crown height	0-25mm (0-1")	1mm (1/16")	±0.5mm
	fillet weld leg height	0-25mm (0-1")	1mm (1/16")	±0.5mm
	misalignment (high-low)	0-25mm (0-1")	1mm (1/16")	±0.5mm
	undercut depth	0-2mm (0-1/8")	1mm (1/16")	±0.5mm
	fillet weld throat size	0-20mm (0-3/4")	1mm (1/16")	±0.5mm
	angle of preparation	0-60°	5°	±1°
	length	0-60mm (0-2")	1mm (1/16")	±0.5mm
	45° angle	—	—	±1°



Unit: mm

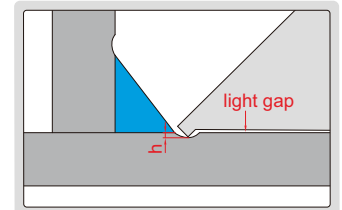


4849-1

calibration block (included)



application



when there is a light gap, $h < 0.25\text{mm}$;
when there is no light gap, $h \geq 0.25\text{mm}$

Code
4849-1

- Measure undercut
- Calibration block is included
- Made of stainless steel

WELDING UNDERCUT GAGE

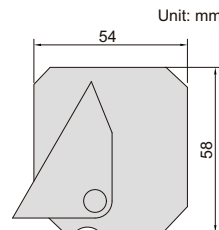
16

WELDING GAGE

- Made of stainless steel

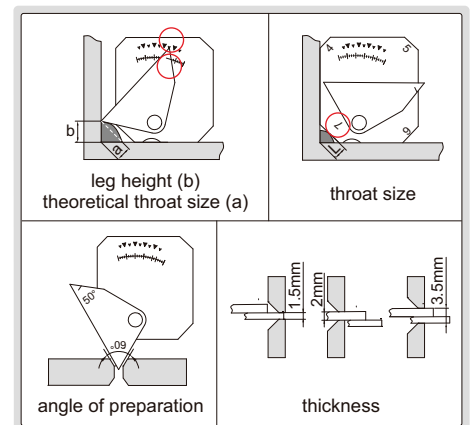


4850-1

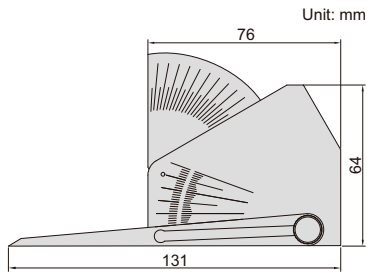


Unit: mm

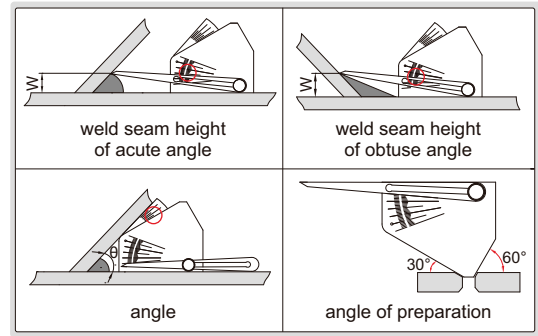
Code	Measurement	Range	Graduation	Accuracy
4850-1	leg height (b)	0-18mm	1mm	±0.5mm
	theoretical throat size (a)	2-12mm	1mm	±0.5mm
	throat size	4, 5, 6, 7mm	—	±0.5mm
	angle of preparation	50°, 60°	—	±1°
	thickness	1.5, 2, 3.5mm	—	±0.2mm



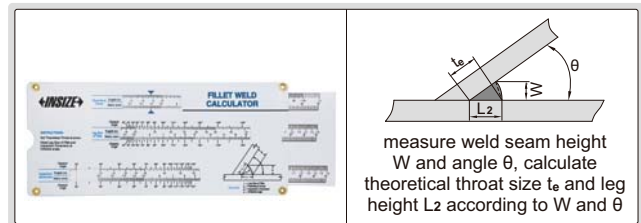
FILLET WELDING GAGE



4846-1



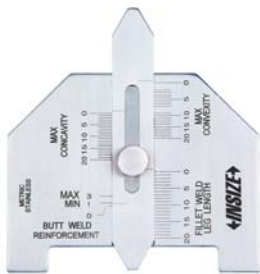
calculating card (included)



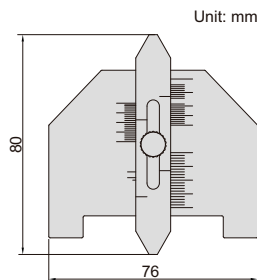
- Calculating card is included
- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4846-1	weld seam height W	0-50mm/0-2"	2mm/0.05"	±1mm
	angle θ	30°-90°	2.5°	±1°
	60° angle	—	—	±0.5°

WELDING GAGE

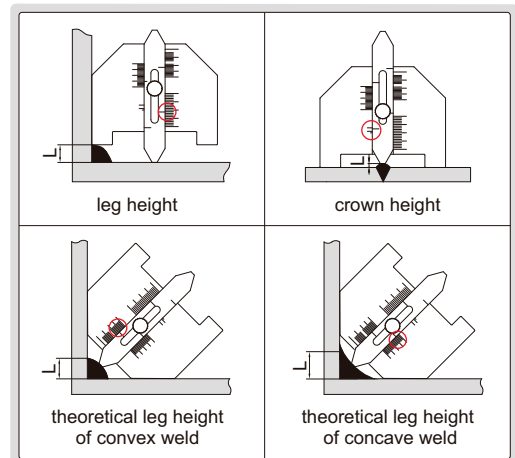


4851-1

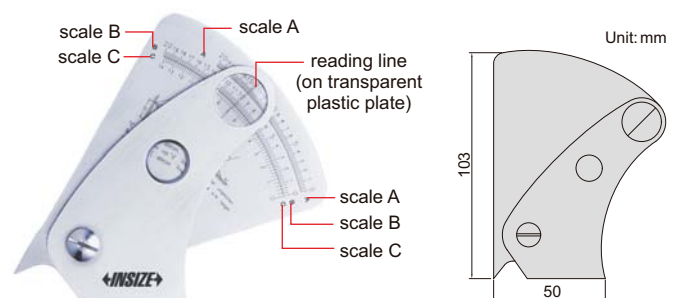
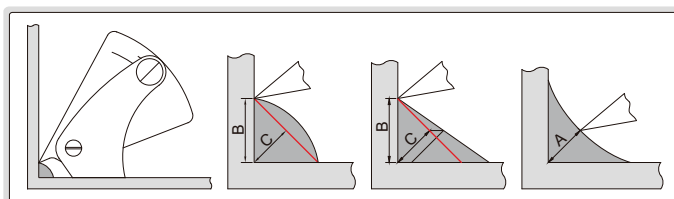


- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4851-1	leg height	0-20mm	1mm	±0.5mm
	crown height	0-3mm	—	±0.5mm
	theoretical leg height of convex weld	0-20mm	1mm	±0.5mm
	theoretical leg height of concave weld	0-20mm	1mm	±0.5mm



WELDING GAGE



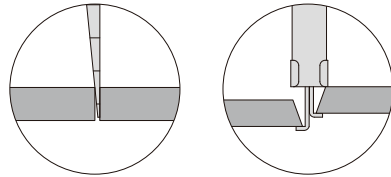
4840-1

Code	Graduation	Accuracy
4840-1	0.2mm	±0.3mm

- Made of stainless steel

PIPE WELDING GAGE

- Made of stainless steel



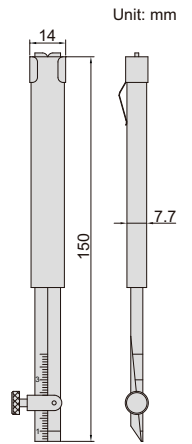
fit-up gap

internal misalignment

Code	Measurement	Range	Graduation	Accuracy
4841-1	internal misalignment	0-30mm	1mm	±0.5mm
	fit-up gap	0.7-4mm	0.1mm	±0.1mm

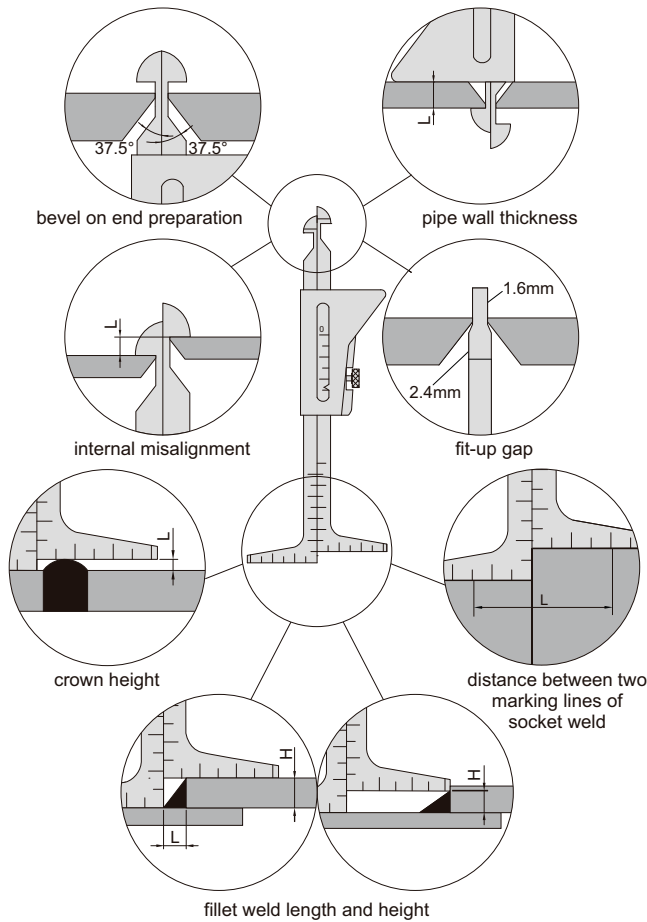


4841-1

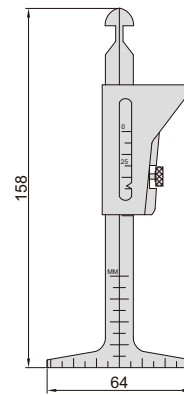


Unit: mm

PIPE WELDING GAGE



Unit: mm



front

back

4839-1

Code	Measurement	Range	Graduation	Accuracy
4839-1	bevel on end preparation	37.5°	—	±1°
	pipe wall thickness	0-45mm (0~1-3/4")	1mm (1/16")	±0.5mm
	internal misalignment	0-35mm (0~1-3/8")	1mm (1/32")	±0.5mm
	fit-up gap	1.6mm, 2.4mm	—	±0.1mm
	crown height	0-35mm (0~1-3/8")	1mm (1/32")	±0.5mm
	distance between two marking lines of socket weld	0-60mm (0~2-3/8")	1mm (1/16")	±0.5mm
	fillet weld length	0-30mm (0~1-1/4")	1mm (1/16")	±0.5mm
	fillet weld height	0-35mm (0~1-3/8")	1mm (1/32")	±0.5mm

- Made of stainless steel

6-PIECE WELDING GAGE SET

■ Includes:

- 1) Welding gage (code **4834-1**)
- 2) Fillet welding gage, size 3~25mm, 7 blades (code **4836-1**)
- 3) Pipe welding gage (code **4841-1**)
- 4) Telescoping inspection mirror, size of mirror $\varnothing 32\text{mm}$, length 178~505mm (code **7160-1**)
- 5) Pocket rule with sliding clip, range 150mm/6", graduation 1mm, 1/64" (code **7119-150**)
- 6) LED flashlight (code **ISGF-0501**)



5064

Code

5064

7-PIECE WELDING GAGE SET

■ Includes:

- 1) Welding gage (code **4834-1**)
- 2) Welding gage (code **4851-1**)
- 3) Pipe welding gage (code **4839-1**)
- 4) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
- 5) Telescoping inspection mirror, size of mirror $\varnothing 32\text{mm}$, length 178~505mm (code **7160-1**)
- 6) Magnifier with illumination, magnification 4X (code **7513-4**)
- 7) Steel rule, range 150mm/6", graduation 0.5mm, 1mm, 1/64", 1/32", 1/16" (code **7110-150**)



5071

Code

5071

7-PIECE WELDING GAGE SET

■ Includes:

- 1) Welding gage (code **4834-1**)
- 2) Welding gage (code **4851-1**)
- 3) Fillet welding gage, size 3~25mm, 7 blades (code **4836-1**)
- 4) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
- 5) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.005" (code **1108-150**)
- 6) Pocket rule with sliding clip, range 150mm/6", graduation 1mm, 1/64" (code **7119-150**)
- 7) Magnifier with illumination, magnification 4X (code **7513-4**)

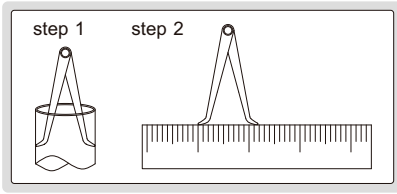


5072

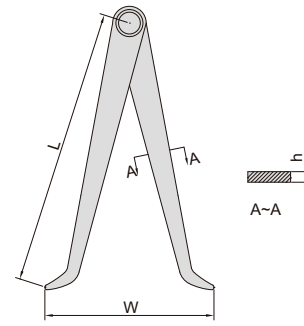
Code

5072

INSIDE CALIPERS



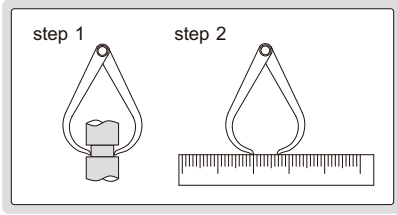
7240-150



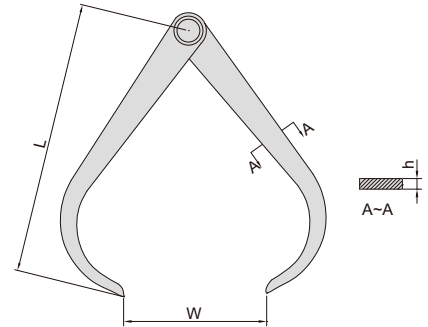
Made of carbon steel

Code	Size (L)	Range (W)	h
7240-150	150mm	17-150mm	2mm
7240-200	200mm	17-200mm	3mm
7240-300	300mm	18-300mm	3mm

OUTSIDE CALIPERS



7241-150

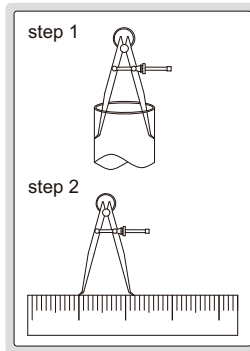


Made of carbon steel

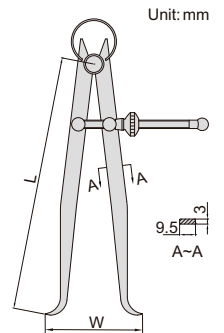
Code	Size (L)	Range (W)	h
7241-150	150mm	0-150mm	2mm
7241-200	200mm	0-200mm	3mm
7241-300	300mm	0-300mm	3mm

INSIDE SPRING CALIPERS

Made of carbon steel



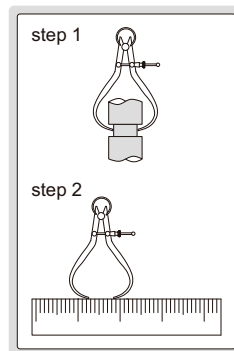
7261-150



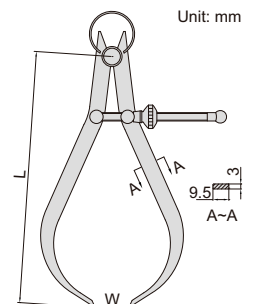
Code	Size (L)	Range (W)
7261-150	150mm	20-170mm
7261-200	200mm	22-220mm
7261-250	245mm	30-270mm
7261-300	300mm	30-320mm

OUTSIDE SPRING CALIPERS

Made of carbon steel



7262-150

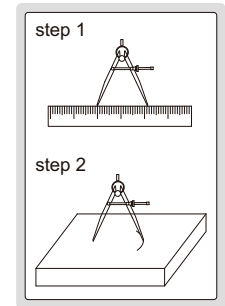
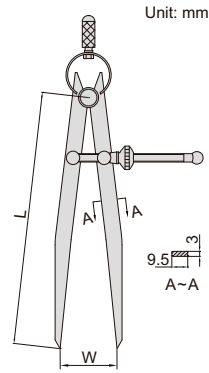


Code	Size (L)	Range (W)
7262-150	155mm	0-140mm
7262-200	210mm	0-210mm
7262-250	265mm	0-270mm
7262-300	310mm	0-320mm

SPRING DIVIDERS

- Made of carbon steel
- Hardened points

7260-150

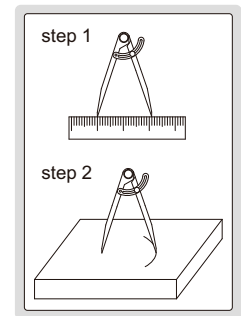
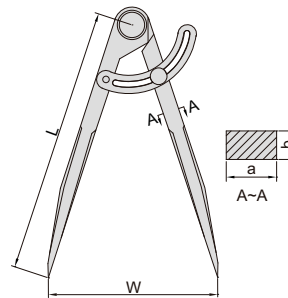


Code	Size (L)	Range (W)
7260-150	150mm	0-150mm
7260-200	200mm	0-210mm
7260-250	245mm	0-260mm
7260-300	300mm	0-320mm

DIVIDERS

- Made of carbon steel
- Hardened points

7247-150



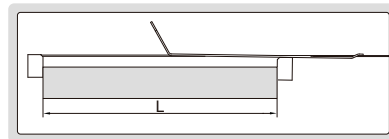
Code	Size (L)	Range (W)	a	b
7247-150	150mm	0-140mm	8.5	7
7247-200	200mm	0-190mm	10	7
7247-300	300mm	0-290mm	12	7

16

LENGTH TAPES

INSIZE PLUS
MADE IN EUROPE

- Measure the distance between two parallel surfaces
- Laser engraved scale
- Made of stainless steel



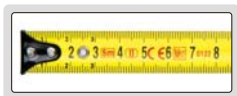
7141-2200

Code	Range (L)	Graduation	Accuracy
7141-950	60-950mm	0.1mm	±0.15mm
7141-2200	900-2200mm	0.1mm	±0.20mm
7141-3460	2200-3460mm	0.1mm	±0.20mm
7141-4780	3400-4780mm	0.1mm	±0.25mm
7141-6000	4700-6000mm	0.1mm	±0.30mm



MEASURING TAPES

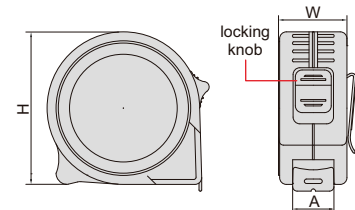
graduation



EG II

- Non-glare nylon surface for wear resistance

7140-5



Individual (1 pc per package)

Code	Range	Graduation	Width of tape A	W	H
7140-3	0-3m	1mm	16mm	28mm	62mm
7140-5	0-5m	1mm	19mm	30mm	68mm
7140-8	0-8m	1mm	25mm	38mm	78mm

Set (12 pcs per package)

Code	Range	Graduation	Width of tape A	W	H
7140-3A	0-3m	1mm	16mm	28mm	62mm
7140-5A	0-5m	1mm	19mm	30mm	68mm
7140-8A	0-8m	1mm	25mm	38mm	78mm

EG II

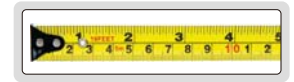
MEASURING TAPES (BASIC TYPE)

- Non-glare nylon coating tape, wear resistance



7142-5

graduation

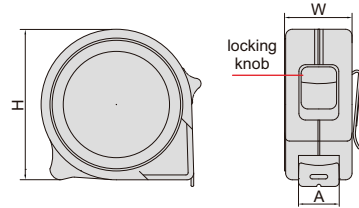


Individual (1 pc per package)

Code	Range	Graduation	Width of tape A	W	H
7142-5	0-5m/0-16ft	1mm, 1/16"	19mm	31mm	64mm

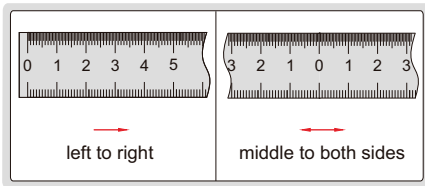
Set (12 pcs per package)

Code	Range	Graduation	Width of tape A	W	H
7142-5A	0-5m/0-16ft	1mm, 1/16"	19mm	31mm	64mm



SELF ADHESIVE MEASURING TAPES

type of reading



7139-50

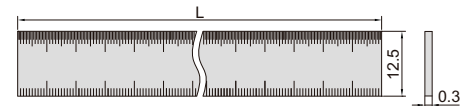
self adhesive back



- Self adhesive back
- Steel tape, non-glare coating, wear resistance

Code	Range (L)	Graduation	Accuracy	Type of reading
7139-50	50-0-50cm	1mm	±0.2mm	middle to both sides
7139-100	0-100cm	1mm	±0.4mm	left to right

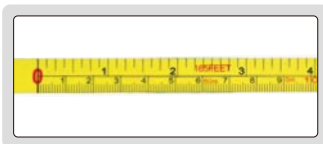
Unit: mm



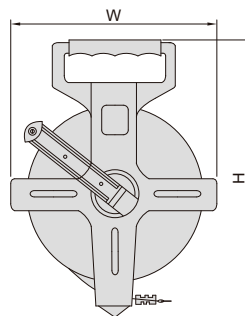
EG II

LONG MEASURING TAPE

graduation



- High tensile strength fibreglass tape
- Nylon coating tape, wear resistance

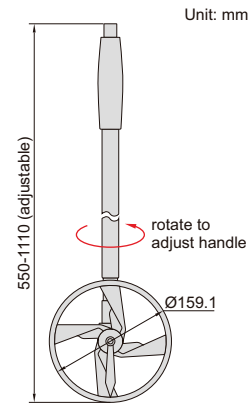
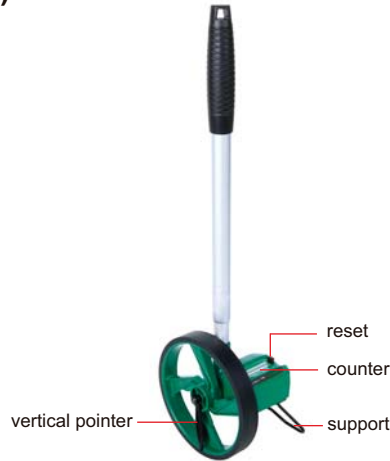


7143-50

Code	Range	Graduation	Width of tape	W	H
7143-50	0-50m/0-165ft	1mm, 1/8"	13mm	220mm	320mm

MEASURING WHEEL (BASIC TYPE)

- ABS plastic frame, wear-resistant PU tire
- Three-section adjustable handle



Code	Range	Resolution
7144-1	0.1-9999.9m	0.1m

7144-1

MEASURING WHEEL

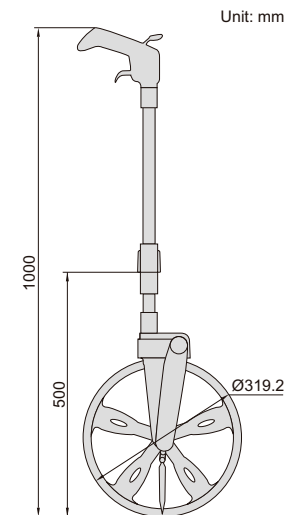
- ABS plastic frame, wear-resistant PU tire
- Two-section foldable handle



after folding



backpack (included)



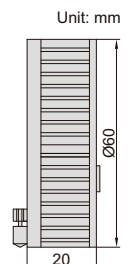
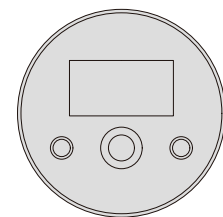
Code	Range	Resolution
7145-1	0.1-9999.9m	0.1m

7145-1

DIGITAL MEASURING WHEEL



7146-10



- IP40 dust/waterproof
- Measuring length of curve
- Four measurement modes: length, rectangle area, diameter of circle, cube
- Resolution: 0.001m/0.01ft
- Button function: on/off, mm/inch, one or two sides set, measurement mode conversion, measurement
- Battery CR2032, automatic power off

IP40
WATERPROOF

Code	Range	Accuracy
7146-10	0-10m/0-32.8ft	±0.3%L (L is the measured length)

RIGID RULES

INSIZE PLUS

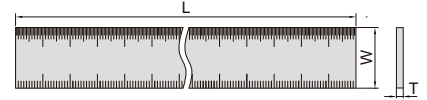
MADE IN USA

- Rigid rules
- Graduation on front and back sides
- Made of special steel
- Satin chrome plated



7122-300

Code	Range (L)	Graduation	Accuracy	W	T
7122-150	150mm	0.5mm/1mm	+0.10/-0.09mm	18.50mm	1mm
7122-300	300mm	0.5mm/1mm	+0.13/-0.09mm	24.50mm	1mm
7122-600	600mm	0.5mm/1mm	+0.18/-0.09mm	29.50mm	1mm

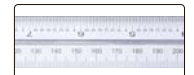


RIGID RULE

- Rigid rules
- With groove on the back, suitable for combination square set (2278 series)
- Satin chrome plated

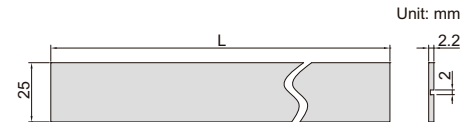


7113-300A



groove on the back

Code	Range	Graduation		Accuracy	L
		front	back		
7113-300A	300mm/12"	0.5mm and 1/32"	1mm and 1/64"	±0.15mm	300mm



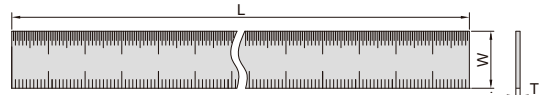
FLEXIBLE RULES

INSIZE PLUS

MADE IN USA



7121-150



- Can be used in the way of bending
- Graduation on front and back sides
- Made of special steel
- Satin chrome plated

can be used in the way of bending

Code	Range (L)	Graduation	Accuracy	W	T
7121-150	150mm	0.5mm/1mm	+0.10/-0.09mm	12.50mm	0.40mm
7121-300	300mm	0.5mm/1mm	+0.13/-0.09mm	12.50mm	0.40mm
7121-600	600mm	0.5mm/1mm	+0.18/-0.09mm	19.50mm	0.50mm



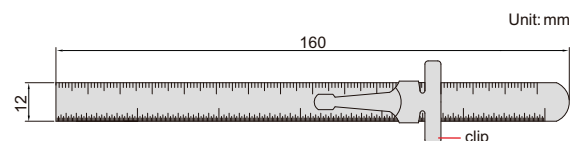
POCKET RULE WITH SLIDING CLIP

- With sliding clip, clip can be inserted in the pocket, also can be used as depth gage base
- Inch/metric conversion table on the back
- Made of stainless steel



7119-150

Code	Range	Graduation	Accuracy
7119-150	150mm/6"	1mm, 1/64"	±0.15mm



STEEL RULES



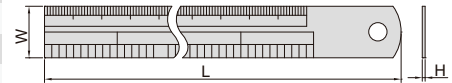
7110-300

Individual (1 pc per package)

(mm)

Code	Range	Accuracy	L	W	H	Remark
7110-150	150mm/6"	±0.18mm	170	18	1.0	graduation on front and back
7110-200	200mm/8"	±0.18mm	220	18	1.0	graduation on front and back
7110-300	300mm/12"	±0.27mm	330	25	1.0	graduation on front and back
7110-3001	300mm/12"	±0.27mm	325	30	1.0	graduation on front and back
7110-500	500mm/20"	±0.27mm	530	30	1.2	graduation on front and back
7110-600	600mm/24"	±0.45mm	630	30	1.2	graduation on front and back
7110-1000	1000mm/40"	±0.45mm	1040	32	1.5	graduation on front and back
7110-1200	1200mm/48"	±0.63mm	1240	35	1.8	graduation on front
7110-1500	1500mm/60"	±0.63mm	1550	38	1.8	graduation on front
7110-2000	2000mm/80"	±0.80mm	2065	40	2.0	graduation on front

- Graduation: 0.5mm, 1mm, 1/64", 1/32", 1/16"
- Rigid rules
- Made of stainless steel
- Non-glare surface



Set

(mm)

Code	Range	Accuracy	L	W	H	Remark	Quantity per package
7110-150A	150mm/6"	±0.18mm	170	18	1.0	graduation on front and back	10 pcs
7110-200A	200mm/8"	±0.18mm	220	18	1.0	graduation on front and back	10 pcs
7110-300A	300mm/12"	±0.27mm	330	25	1.0	graduation on front and back	5 pcs
7110-3001A	300mm/12"	±0.27mm	325	30	1.0	graduation on front and back	5 pcs
7110-500A	500mm/20"	±0.27mm	530	30	1.2	graduation on front and back	5 pcs
7110-600A	600mm/24"	±0.45mm	630	30	1.2	graduation on front and back	5 pcs
7110-1000A	1000mm/40"	±0.45mm	1040	32	1.5	graduation on front and back	5 pcs
7110-1200A	1200mm/48"	±0.63mm	1240	35	1.8	graduation on front	5 pcs
7110-1500A	1500mm/60"	±0.63mm	1550	38	1.8	graduation on front	5 pcs
7110-2000A	2000mm/80"	±0.80mm	2065	40	2.0	graduation on front	5 pcs

TAPER GAGE AND STEEL RULER SET

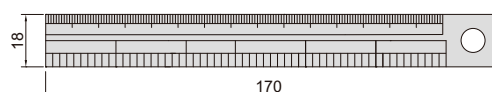
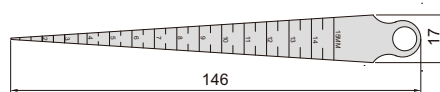
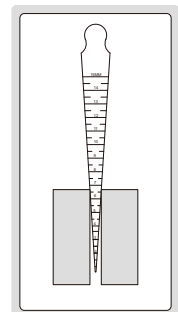


front

4829-1

back

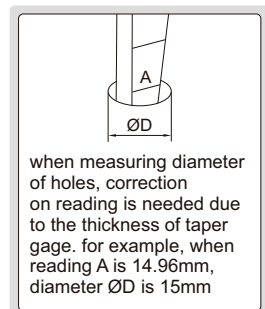
use the taper gage to measure slot width



Unit: mm



use the taper gage to measure diameter of hole



Code	Tool	Range	Graduation	Accuracy
4829-1	taper gage	0.8-15mm	0.1mm	±0.05mm
	steel ruler	150mm/6"	1.0mm	±0.18mm

- Diameter correction table on the taper gage back
- Made of stainless steel

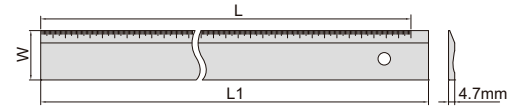
ALUMINUM RULES

- Made of aluminum, oxidized surface

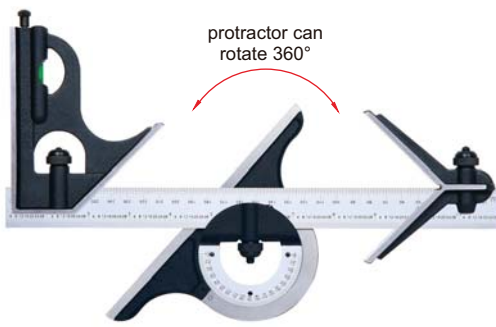


7123-300

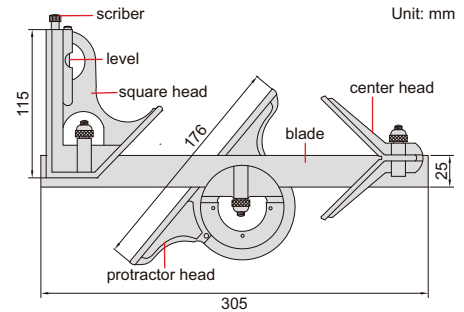
Code	Range (L)	Graduation	Accuracy	L1	W
7123-300	300mm	1mm	±0.5mm	321mm	50mm
7123-600	600mm	1mm	±0.9mm	624mm	50mm
7123-1000	1000mm	1mm	±0.9mm	1024mm	50mm



COMBINATION SQUARE SET

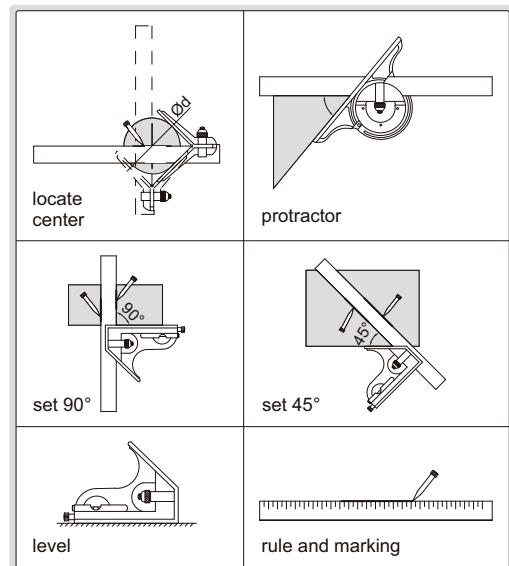


2274-4



- Center head (made of cast iron): to locate center of cylinders with diameter (\varnothing): 30-100mm accuracy: ± 0.15 mm
- Protractor head (made of cast iron): set the blade at desired angle to an edge of a workpiece, and can be used to measure angles range: 0-180° accuracy: ± 20 min
- Square head (made of cast iron): set the blade at 90° or 45° to an edge of a workpiece accuracy: ± 8 min for 90° square, ± 10 min for 45° square
- Blade (made of stainless steel): range: 300mm/12", graduation: 0.5mm and 1/32" on front face, 1mm and 1/64" on back face
- Optional accessory: rigid rule (code 7113)

Code	Remark
2274-4	4-piece set



COMBINATION SQUARE SETS



2278-2

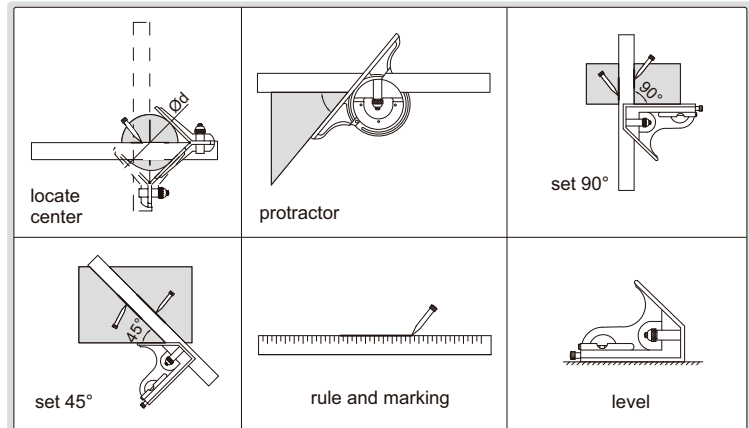
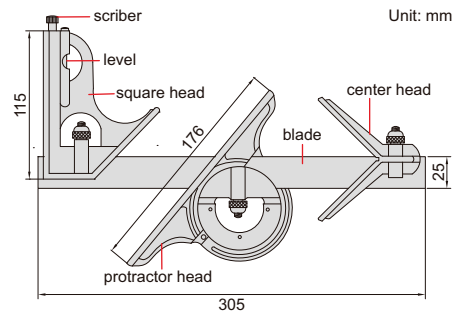


2278-3



2278-180

- Center head (made of cast iron):
to locate center of cylinders with diameter (Ød): 30-100mm
accuracy: ±0.15mm
- Protractor head (made of cast iron):
set the blade at desired angle to an edge of a workpiece, and can be used to measure angles
range: 0-180°
accuracy: ±20min.
- Square head (made of cast iron):
set the blade at 90° or 45° to an edge of a workpiece
accuracy: ±8min for 90° square,
±10min for 45° square
- Blade (made of stainless steel):
range: 300mm/12",
graduation: 0.5mm and 1/32" on front face, 1mm and 1/64" on back face
- Optional accessory: rigid rule (code 7113)



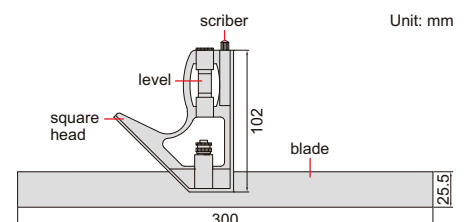
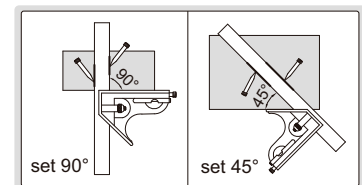
Code	Remark
2278-2	2-piece set
2278-3	3-piece set
2278-180	4-piece set

COMBINATION SQUARE (ECONOMIC TYPE)

- Square head (made of zinc):
set the blade at 90° or 45° to an edge of a workpiece
accuracy: ±0.5°
- Blade (made of stainless steel):
range: 300mm/12",
graduation: 1mm and 1/32" on front face, 1mm and 1/16" on back face



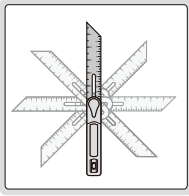
2276-300



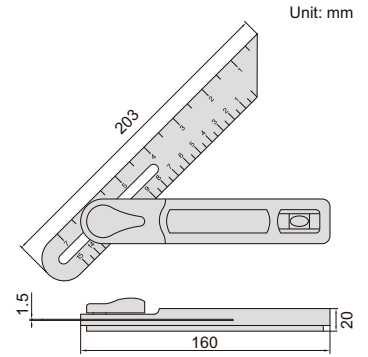
Code
2276-300

T-BEVEL

blade can rotate 360°

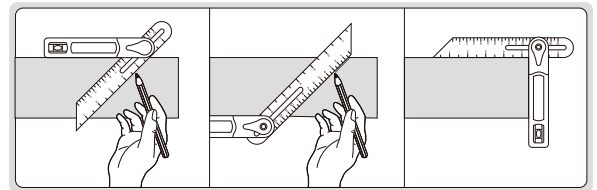


2281-360



Unit: mm

- Easy-to-read vial
- The blade can move and can be locked by the clamping screw
- Stainless steel blade
- Tough rubber handle
- Centimeter/inch graduations



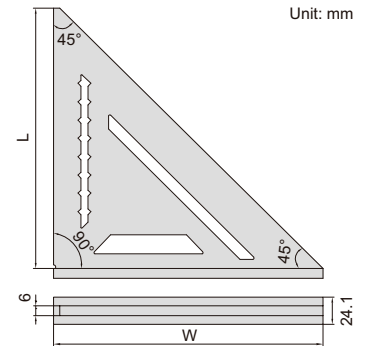
Code	Angle mark	Accuracy of angle
2281-360	15°, 30°, 45°, 60°, 90°	±1°

PLASTIC ANGLE SQUARE

- Length range: 0-7", graduation: 1/8"
- Angel range: 0-90°, graduation: 1°



2282-180



Unit: mm

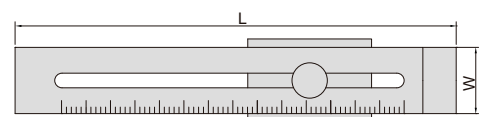
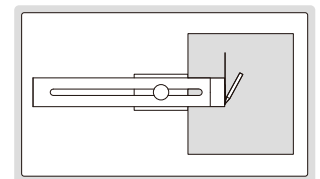
Code	Size (L×W)	Accuracy of angle
2282-180	180×185mm	±0.3°

MARKING GAGES



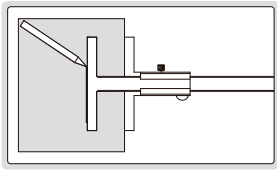
7120-200A

- Made of carbon steel
- Satin chrome plated

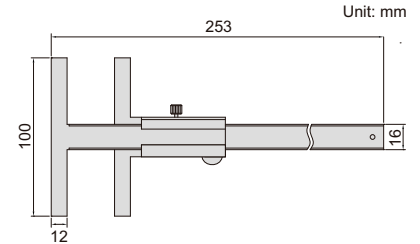


Code	Range	Graduation	Accuracy	L	W
7120-200A	0-200mm	0.1mm	±0.1mm	250mm	40mm
7120-250A	0-250mm	0.1mm	±0.1mm	300mm	40mm
7120-300A	0-300mm	0.1mm	±0.1mm	350mm	40mm

T-SHAPE MARKING GAGE



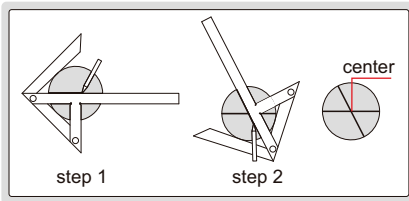
1275-150B



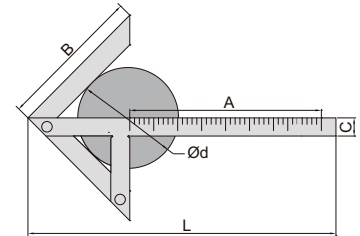
- Made of stainless steel
- Satin chrome plated reading surface

Code	Range	Graduation	Accuracy
1275-150B	0-150mm	0.02mm	±0.04mm

CENTER MARKING GAGES



7205-100



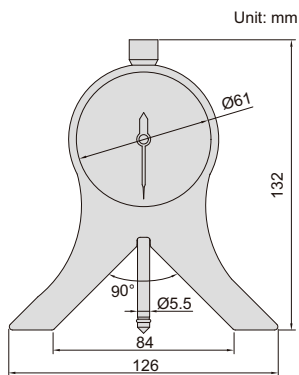
Code	Size (AxB)	Diameter of shafts (Ød)	Accuracy	C	L
7205-100	100x70mm	4-90mm	±0.15mm	12mm	153mm
7205-150	150x130mm	4-190mm	±0.15mm	15mm	245mm
7205-200	200x150mm	6-220mm	±0.15mm	15mm	310mm
7205-300	300x180mm	6-270mm	±0.15mm	20mm	435mm

- Marking the center of round plates and shafts
- Made of stainless steel
- Satin chrome plated

16

LOCATOR

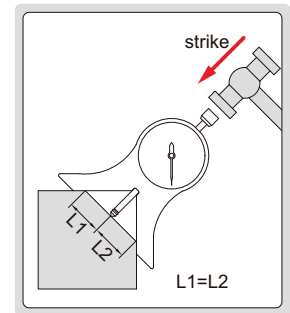
INSIZE PLUS
MADE IN USA



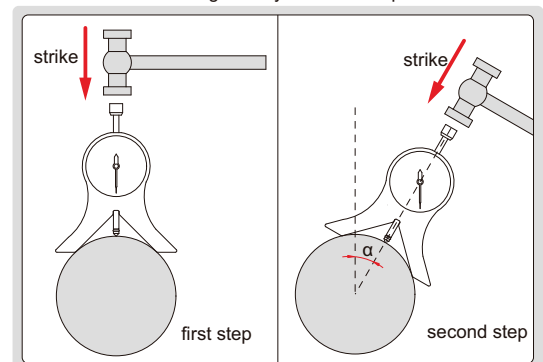
2849-90



mark the center position



mark the angle on cylindrical workpieces



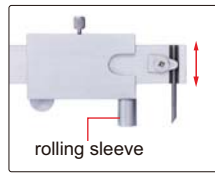
- Mark the position when drilling, milling or welding, suitable for cylindrical and rectangular workpieces
- The punch hardness is HRC59-63
- Optional accessory: punch (code 2849-P1)

Code	Range	Graduation	Accuracy	Dial reading
2849-90	4×90°	1°	±1°	0-90-0-90-0

SCRIBING CALIPER

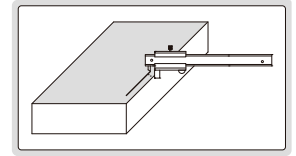
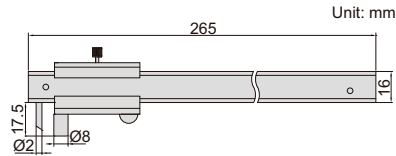
- Made of stainless steel
- Satin chrome plated reading surface
- Carbide scriber tip
- Optional accessory: carbide scriber tip (code **SP-SCRIBER-7202**)

the position of scriber tip can be adjusted



7202-200A

Code	Range	Graduation	Accuracy
7202-200A	0-200mm/0-8"	0.1mm, 1/128"	±0.1mm



DIGITAL SCRIBING CALIPERS

- Non waterproof
- The carbide-tipped jaws facilitate scribing on workpieces
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

DATA OUTPUT



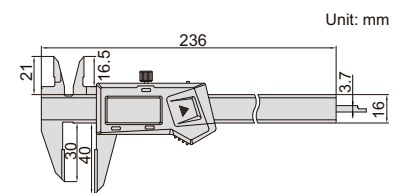
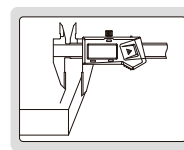
1166-150A

With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, optional)

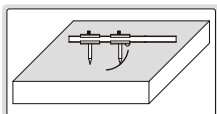
Code	Range	Accuracy
1166-150A	0-150mm/0-6"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is required)

Code	Range	Accuracy
1166-150AWL	0-150mm/0-6"	±0.03mm



SCRIBING CALIPER

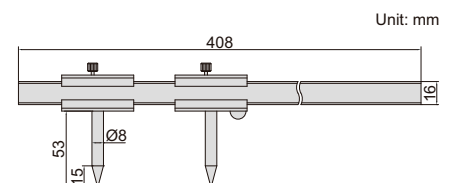


- Made of stainless steel
- Satin chrome plated reading surface
- Hardened scriber tips

Code	Range	Graduation	Accuracy
7203-300A	51-300mm	0.1mm	±0.1mm



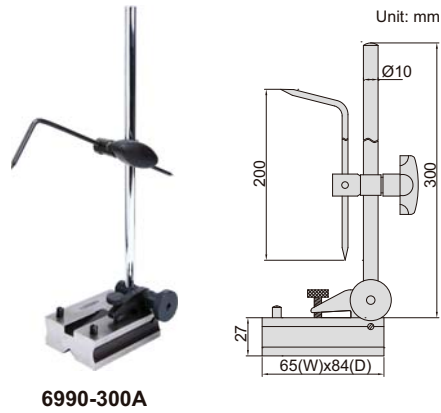
7203-300A



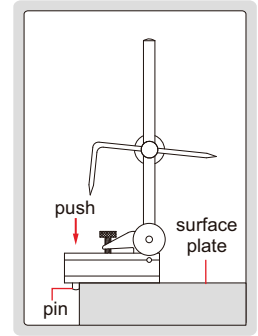
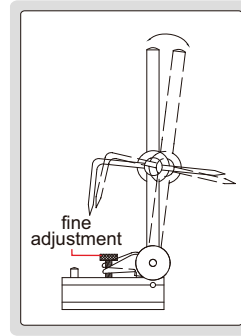
HEIGHT SCRIBER

- Grooved bottom for cylinders
- Two pins to be set against the edge of surface plate

Code
6990-300A



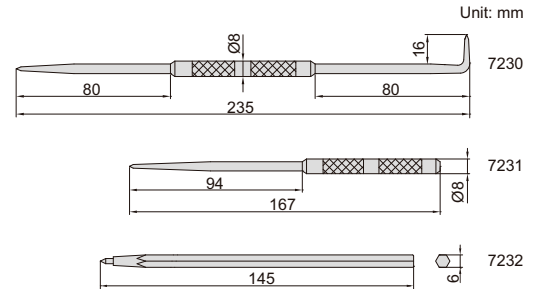
6990-300A



SCRIBERS

- 7230 and 7231 are nickel plated, 7232 is zinc-plated

Code	Tip
7230	hardened tips
7231	hardened tip
7232	carbide tip



7230

7231

7232

clip

Unit: mm

7230

7231

7232

PRECISION SCREWDRIVER SET CODE ISGF-0901

- Includes:
 - 4 pcs "-": 1.4mm, 2.0mm, 2.4mm, 3.0mm
 - 2 pcs "+": 0#, 1#
- Rotating cap
- Material: CRV, hardness: HRC52-56



ISGF-0901

packaging



LED FLASHLIGHT CODE ISGF-0501

- Toshiba high performance LED
- Powered by 3x AAA batteries (batteries are not included)
- Max output: 120 lumens
- Battery life: 4 hours
- Beam distance: 70 meters
- IP54 dust/waterproof



ISGF-0501

packaging



2-PIECE MEASURING TOOL SETS

- Includes:
 - 1) Vernier caliper, range 0-150mm/0-6", graduation 0.05mm/1/128" (code **1205-150S**) for **5021**, graduation 0.02mm/0.001" (code **1205-1502S**) for **5021-2**
 - 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)

Code	Remark
5021	vernier caliper, graduation 0.05mm/1/128" (code 1205-150S)
5021-2	vernier caliper, graduation 0.02mm/0.001" (code 1205-1502S)



5021

2-PIECE MEASURING TOOL SET

- Includes:
 - 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
 - 2) Digital outside micrometer, range 0-25mm/0-1", resolution 0.001mm/0.00005" (code **3109-25A**)

Code
5022



5022

2-PIECE MEASURING TOOL SET

- Includes:
 - 1) Dial test indicator, range 0.8mm, graduation 0.01mm (code **2380-08**)
 - 2) Magnetic stand

Code
5023



5023

2-PIECE MEASURING TOOL SET

- Includes:
 - 1) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
 - 2) Magnetic stand (code **6201-60**)

Code
5024



5024

3-PIECE MEASURING TOOL SET

- Includes:
 - 1) Digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005" (code **2112-10**)
 - 2) Flex arm
 - 3) Locking pliers, adjustable jaw opening from 0 to 25mm



5031

Code
5031

3-PIECE MEASURING TOOL SET

dust free gloves and dust free cloth



- Includes:
 - 1) Vernier caliper, range 0-150mm graduation 0.02mm (code **1205-1501S**)
 - 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
 - 3) Steel rule, range 150mm/6", graduation 0.5mm, 1mm, 1/64", 1/32", 1/16" (code **7110-150**)
 - 4) Dust free gloves and dust free cloth

Code
5032



5032

4-PIECE MEASURING TOOL SETS

- Includes:
 - 1) Vernier caliper, range 0-150mm/0-6", graduation 0.05mm/1/128" (code **1205-150S**) for **5041**, graduation 0.02mm/0.001" (code **1205-1502S**) for **5041-2**
 - 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
 - 3) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
 - 4) Steel rule, 150mm/6" (code **7110-150**)

Code	Remark
5041	vernier caliper, graduation 0.05mm/1/128" (code 1205-150S)
5041-2	vernier caliper, graduation 0.02mm/0.001" (code 1205-1502S)



5041

4-PIECE MEASURING TOOL SET

- Includes:
 - 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
 - 2) Outside micrometer, range 0-25mm, graduation 0.01mm, (code **3202-25A**)
 - 3) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
 - 4) Steel rule, 150mm/6" (code **7110-150**)

Code
5042



5042

5-PIECE MEASURING TOOL SET

- Includes:
 - 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005", (code **1108-150**)
 - 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
 - 3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
 - 4) Magnetic stand (code **6201-60**)
 - 5) Micrometer stand (code **6300**)

Code
5051



5051

5-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Digital outside micrometer, range 0-25mm/0-1", resolution 0.001mm/0.00005" (code **3109-25A**)
- 3) Digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005" (code **2112-10**)
- 4) Magnetic stand (code **6201-60**)
- 5) Micrometer stand (code **6300**)

Code

5052



5052

6-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
- 3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10FA**)
- 4) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 5) Scriber (code **7230**)
- 6) Steel rule, 150mm/6" (code **7110-150**)

Code

5061



5061

6-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6" resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Outside micrometer, range 0-25mm graduation 0.01mm (code **3202-25A**)
- 3) 90° beveled edge square, 100x70mm grade 00 (code **4790-0100**)
- 4) Straight edge, 100mm (code **4700-100**)
- 5) Spring divider, 150mm (code **7260-150**)
- 6) Steel rule, 200mm/8" (code **7110-200**)

Code

5062



5062

6-PIECE MEASURING TOOL SETS

- Includes:
 - 1) Vernier caliper, range 0-150mm/0-6", graduation 0.05mm/1/128" (code **1205-150S**) for **5063**, graduation 0.02mm/0.001" (code **1205-1502S**) for **5063-2**
 - 2) Outside micrometer, range 0-25mm graduation 0.01mm (code **3202-25A**)
 - 3) 90° beveled edge square, 100x70mm grade 00 (code **4790-0100**)
 - 4) Straight edge, 100mm (code **4700-100**)
 - 5) Spring divider, 150mm (code **7260-150**)
 - 6) Steel rule, 200mm/8" (code **7110-200**)

Code	Remark
5063	vernier caliper, graduation 0.05mm/1/128" (code 1205-150S)
5063-2	vernier caliper, graduation 0.02mm/0.001" (code 1205-1502S)



5063

9-PIECE MEASURING TOOL SET

- Includes:
 - 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
 - 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
 - 3) Protractor, range 0-180°, graduation 1° (code **4799-180**)
 - 4) Pitch gauge, range 0.25-7mm, 24 pcs, metric 60° thread (code **4820-124**)
 - 5) Radius gauge, range 1-7mm (code **4801-17**)
 - 6) Feeler gauge, range 0.05-1.00mm, 20 pcs (code **4602-20**)
 - 7) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
 - 8) Scriber (code **7230**)
 - 9) Steel rule, 150mm/6" (code **7110-150**)

Code
5091



5091

13-PIECE MEASURING TOOL SET

- Includes:
 - 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005", (code **1108-150**)
 - 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
 - 3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
 - 4) Magnetic stand (code **6201-60**)
 - 5) Protractor, range 0-180°, graduation 1° (code **4799-180**)
 - 6) Pitch gauge, range 0.25-7mm, 24 pcs, metric 60° thread (code **4820-124**)
 - 7) Radius gauge, range 1-7mm (code **4801-17**)
 - 8) Feeler gauge, range 0.05-1.00mm, 20 pcs (code **4602-20**)
 - 9) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
 - 10) Scriber (code **7230**)
 - 11) Steel rule, 150mm/6" (code **7110-150**)
 - 12) Depth base attachment (code **6140**)
 - 13) Zero setting bar for depth base attachment

Code
5013



5013

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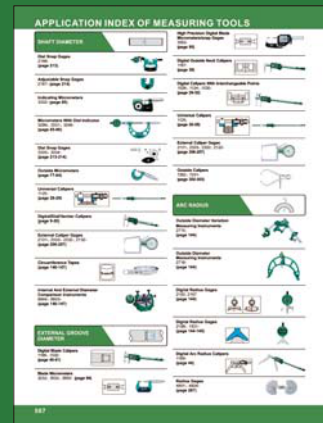
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