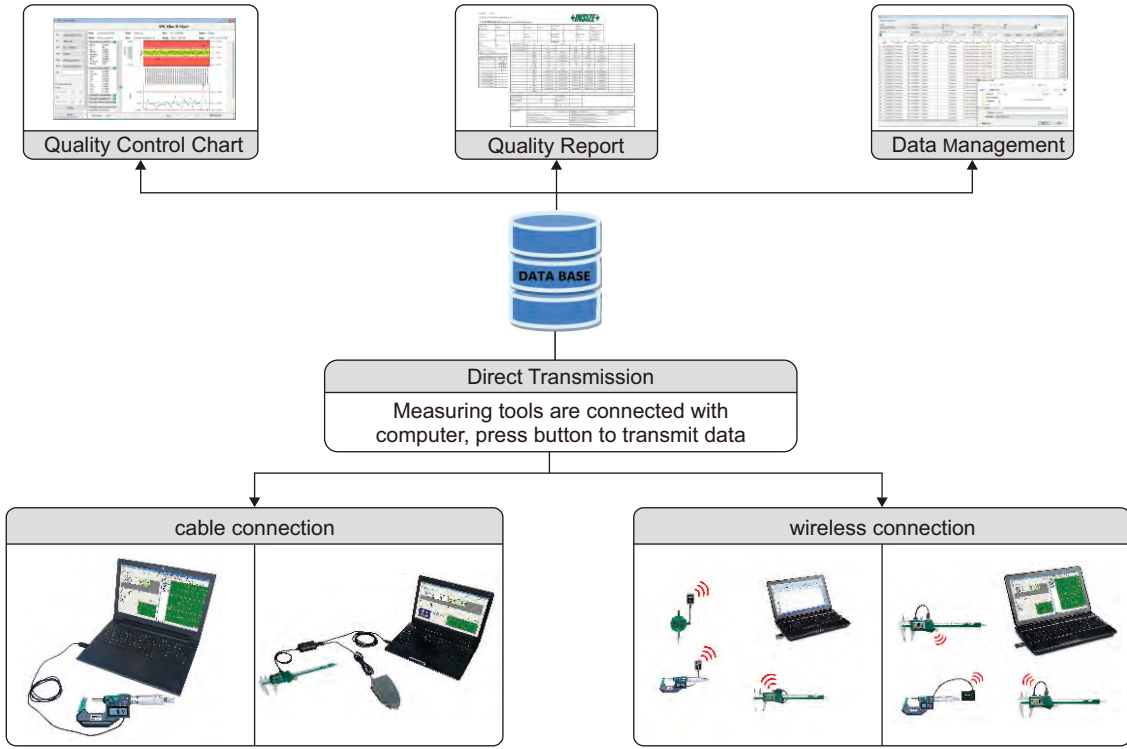
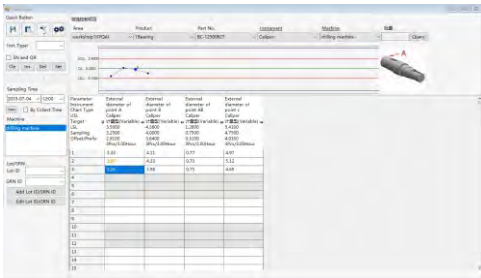


1 MEASURING DATA MANAGEMENT SOFTWARE CODE 7316-10



Direct Transmission

- Transmit data through cables or wireless systems



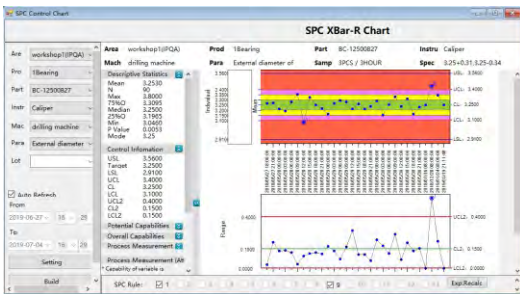
Data Management

- Measuring data are stored in database

The screenshot shows a data management table with columns for AREA, PRODUCT, PARTNO, INSTRUMENT, USER, and DATA. The table lists multiple rows of data for different samples and users.

Quality Control Chart

- Analyze the tendency of data, make production adjustment in advance



Quality Report

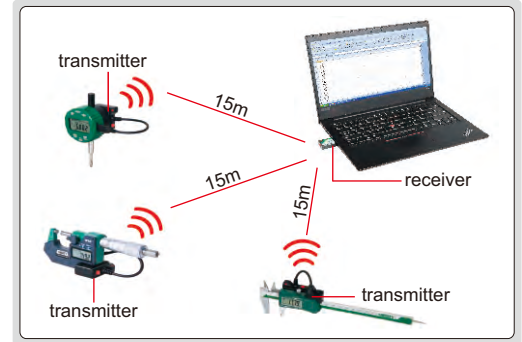
- Generate different EXCEL report formats according to requirements

The screenshot shows a quality report table with columns for Product, Part No., Instrument, and Data. The table lists multiple rows of data for different samples and users. The report is generated in an Excel format.



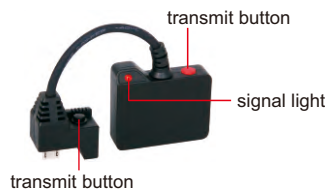
WIRELESS DATA TRANSMISSION SYSTEM

- Through wireless transmission, the measurement data can be transmitted to computers or mobile phones
- For windows and android systems
- Wireless zigbee protocol, conforming to IEEE802, 2.4GHz band
- Transmission distance is 15 meter (Under the condition of no obstruction and no electromagnetic interference. The transmission distance of built-in wireless measuring tools can be found in their respective introduction.)

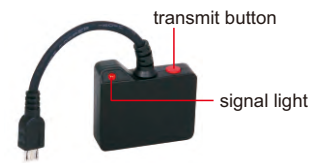


Transmitter

- Connecting to digital measuring tools such as calipers, micrometers and indicators
- Press the transmit button to send data
- CR2032 battery



7315-21



7315-22

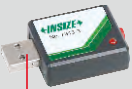



Code	Description	Plug to product	Remark
7315-21	transmitter for digital calipers		 digital calipers and digital depth gages
7315-22	transmitter for large digital calipers		 large digital calipers (range≤1000mm) and digital height gages
7315-30	transmitter for digital micrometers		 digital micrometers
7315-50M	transmitter for digital indicators		 digital indicators, digital thickness gages and digital internal/external caliper gages
7315-60	transmitter for high precision digital indicators		 2140-6 and 2133 series high precision digital indicators

To be continued

Continued from previous page


Receiver (keyboard signal)

- For computers and mobile phones with windows and android systems
- Recognized as HID keyboard device, press transmit button of transmitter, which 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.
- Suitable for any softwares which can receive keyboard signal

Code	Product	Description	Remark
7315-3	 USB port	single channel receiver	connected with 1 transmitter only
7315-6	 USB port	multichannel receiver	connected with 6 transmitter, each channel has a transmitter status indicator
7315-7	 Type-C port		
7315-8	 Micro USB port		

Receiver (text format, virtual com port)

- Suitable for computers with windows system
- Text format virtual com port, converted to keyboard format with supplied software
- Supplied with EXCEL directional input software (please refer to the next page for details)
- Measurement data can be transmitted to excel, word, txt etc. and any software which receives keyboard signal

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

To be continued

EXCEL directional input software

- Included in **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	6	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.

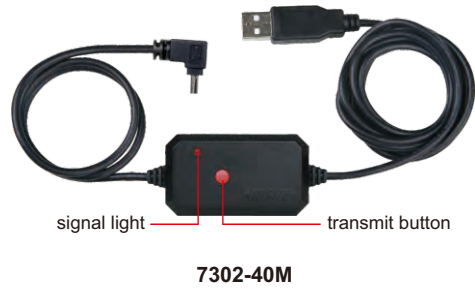
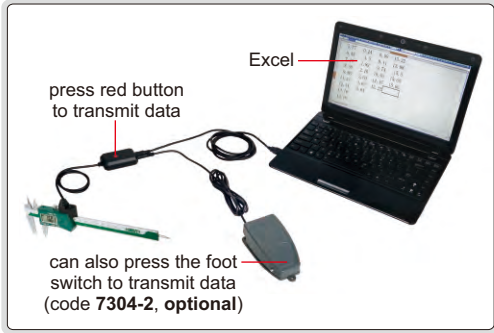
	A	B	C	D	E
1	Project	External diameter1	External diameter2	Length	Depth
2	Dimension and Tolerance	Φ23+0.01/-0.02	Φ21+0.01/-0.02	50±0.04	28±0.05
3	Measuring tool	Micrometer	Micrometer	Caliper	Depth gage
4	1	23.010	21.008	49.98	28,01
5	2	23.010	21.000	49.98	27,98
6	3	22.999	21.000	50	28
7	4	23.007	20.998	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

1 DATA OUTPUT CABLES (KEYBOARD FORMAT)














application



7302-40M

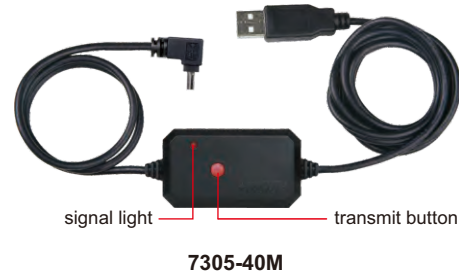
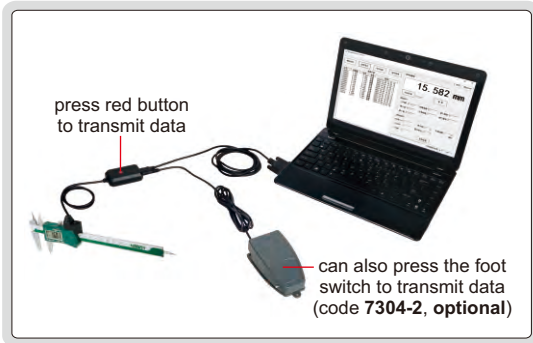
- Recognized as HID keyboard device by computer, no need to install drivers and softwares
- Data can be transmitted to Excel, Word, txt and other files (press transmit button, which is recognized by the computer as keyboard input data and press enter, such as 12.34↵)
- Suitable for any softwares which 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 to product	Plug to computer	Applicable products
7302-21	cable for digital calipers (length 3m)	 transmit button		 digital calipers and digital depth gages
7302-22	cable for large digital calipers (length 2.5m)			 large digital calipers (range≤1000mm) and digital height gages
7302-30	cable for digital micrometers (length 2.5m)			 digital micrometers
7302-40M	cable for digital indicators (length 2.5m)			 digital indicators
7302-50M	cable for digital gages (length 2.5m)			 digital thickness gages and digital internal/external caliper gages
7302-60	cable for high precision digital indicators (length 2.5m)			 2140-6 and 2133 series high precision digital indicators

DATA OUTPUT CABLES (TEXT FORMAT, VIRTUAL COM PORT)

application



- Optional accessory: foot switch (code: **7304-2**), hub (code: **7324-HUB4**, **7324-HUB7**)





Single transmission (can be switched to continuous transmission)

Code	Description	Plug to product	Plug to computer	Applicable products
7305-21	cable for digital calipers (length 3m)			<p>digital calipers and digital depth gages</p>
7305-R21				
7305-22	cable for large digital calipers (length 2.5m)			<p>large digital calipers (range ≤ 1000mm) and digital height gages</p>
7305-R22				
7305-30	cable for digital micrometers (length 2.5m)			<p>digital micrometers</p>
7305-R30				
7305-50M	cable for digital gages (length 2.5m)			<p>digital thickness gages and digital internal/external caliper gages</p>
7305-R50M				

To be continued

Continued from previous page

Continuous transmission (can be switched to single transmission)

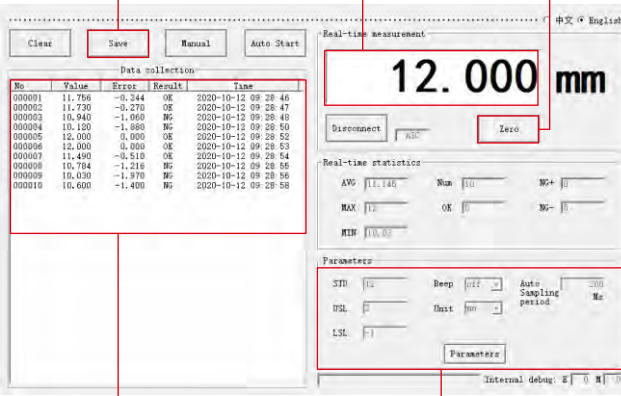
Code	Description	Plug to product	Plug to computer	Applicable products
7305-40M*	cable for digital indicators (length 2.5m)			 <p>digital indicators</p>
7305-R40M*				

* Long press transmission button or foot switch to zero the digital indicators

* Supplied with software

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
- Data transmission: single transmission with button on cable/foot switch, single transmission operated on computer, continuous transmission operated on computer
- Can save results as EXCEL



export Excel real-time display setting zero of measuring tools

measurement results and judgment setting tolerance and sampling period

Communication protocol

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

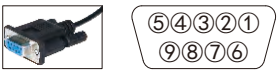
Data output format

D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
----	----	----	----	----	----	----	----	----	-----

+or- Data section (floating point) CR

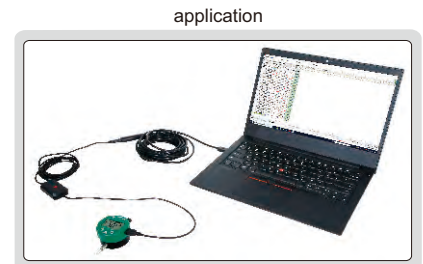
Data format example
 Display Output
 1.234 ➔ +0001.234 ✓
 -1.234 ➔ -0001.234 ✓

Pin definition of RS232 plug:



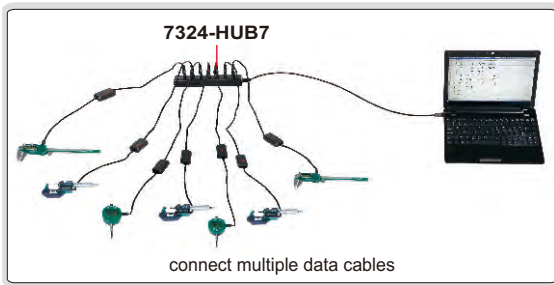
Pin No.	Symbol	Description
2	TXD	Data OUT
3	RXD	Data IN
4	VDD	+5V Power
5	GND	Ground

EXTENSION CABLES



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)

application



7324-HUB4



7324-HUB7

- Suitable for USB plug data cable

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)

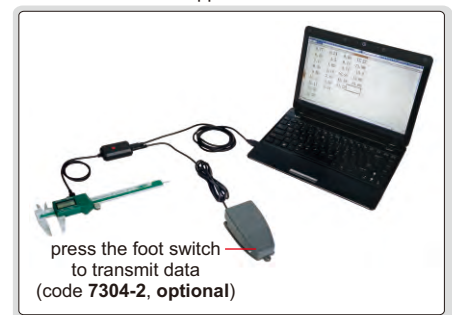
FOOT SWITCH

- 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

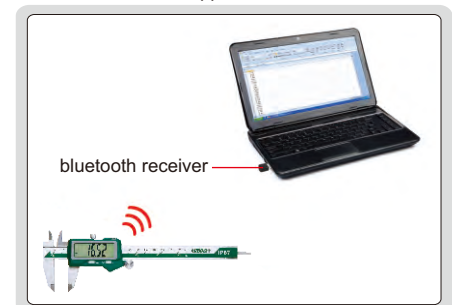
BLUETOOTH RECEIVER

- Connect to computer USB interface
- Transmission distance is 10 meter



7322-01

application



Code	Applicable products	
7322-01	<p>1127 series built-in bluetooth digital calipers</p>	<p>1542 series built-in bluetooth digital depth gages</p>

**ATTENTION:
NOT HARDENED**

PURE COPPER

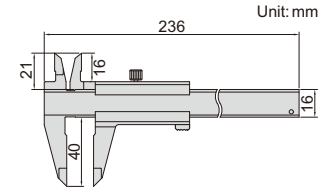
VERNIER CALIPERS (ANTI MAGNETIC)

2

- Suitable for magnetic parts
- Made of pure copper



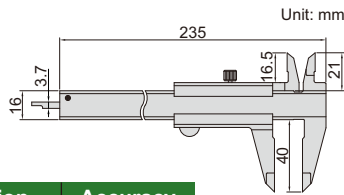
1224-150A



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

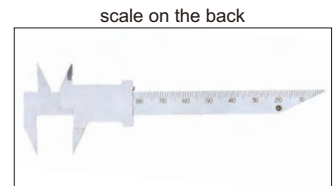
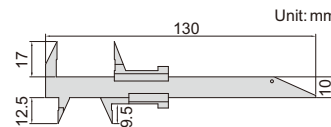
Code	Range	Graduation	Accuracy
1239-150	0-150mm/0-6"	0.05mm/1/128"	±0.05mm
1239-1503	0-150mm	0.05mm	±0.05mm
1239-1502	0-150mm/0-6"	0.02mm/0.001"	±0.03mm
1239-1501	0-150mm	0.02mm	±0.03mm

TEETH VERNIER CALIPER

- Used for teeth
- Made of stainless steel

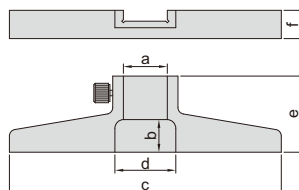


1226-70



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

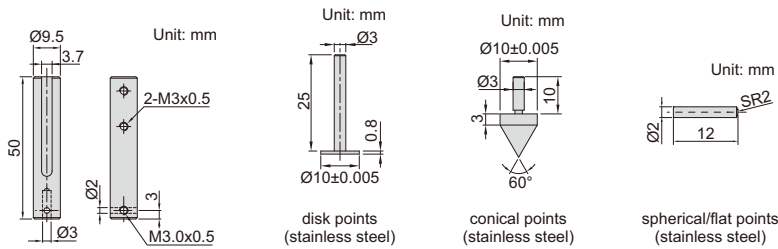
(mm)

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

**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)

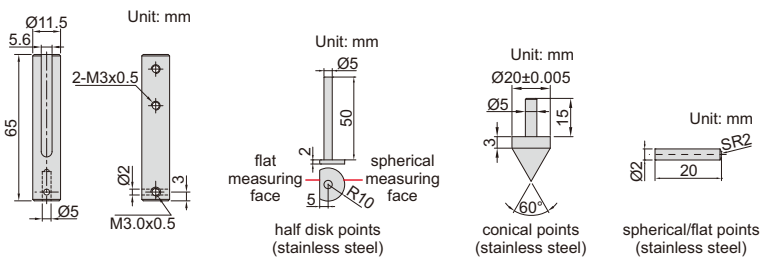
Code
6144

	measuring internal groove diameter (h ≤ 3.5mm)
	measuring center distance
	spherical points for groove diameter (inside hole) measurement
	flat points for external groove diameter measurement

**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

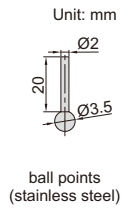
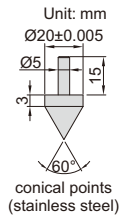
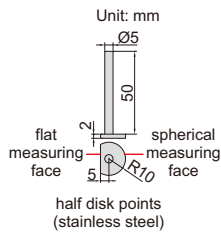
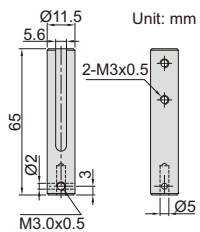
	measuring external groove diameter (h1 ≤ 7mm)	measuring internal groove diameter (h2 ≤ 7mm)
	measuring center distance	
	spherical points for groove diameter (inside hole) measurement	
	flat points for external groove diameter measurement	



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

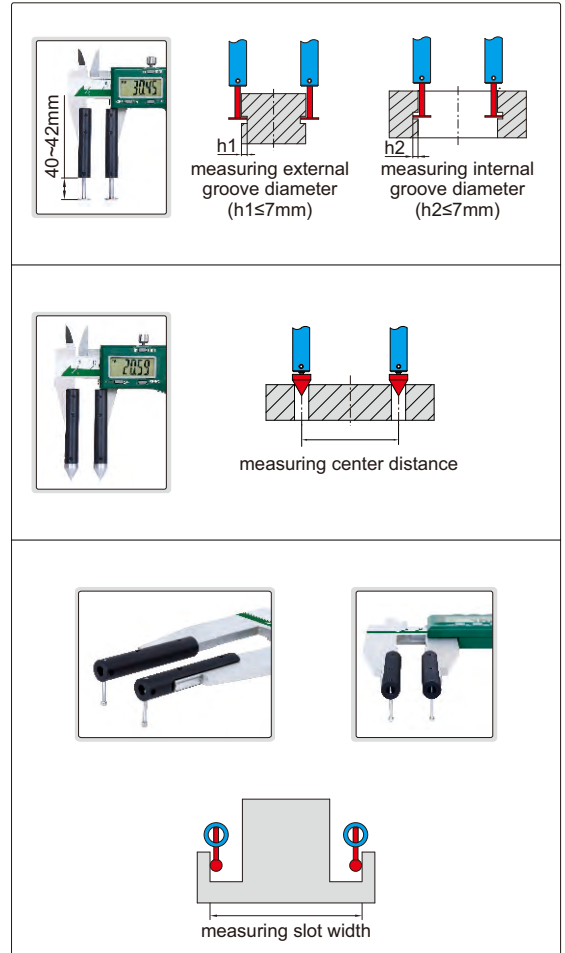


6146-500B



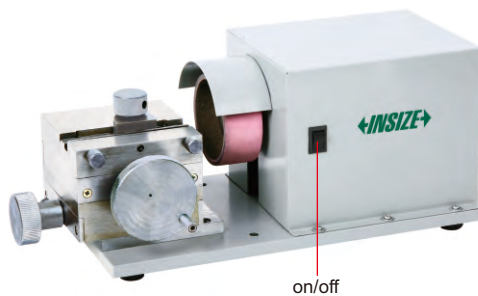
- Suitable for 0-500mm/0-20" and 0-600mm/0-24" digital calipers (thickness of lower jaws ≤ 5.6mm)

Code
6146-500B

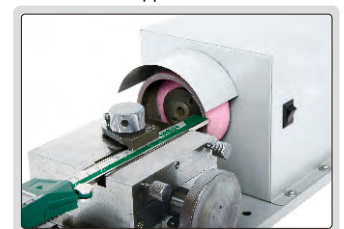


**CALIPER END GRINDING MACHINE
CODE 6309**

- 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