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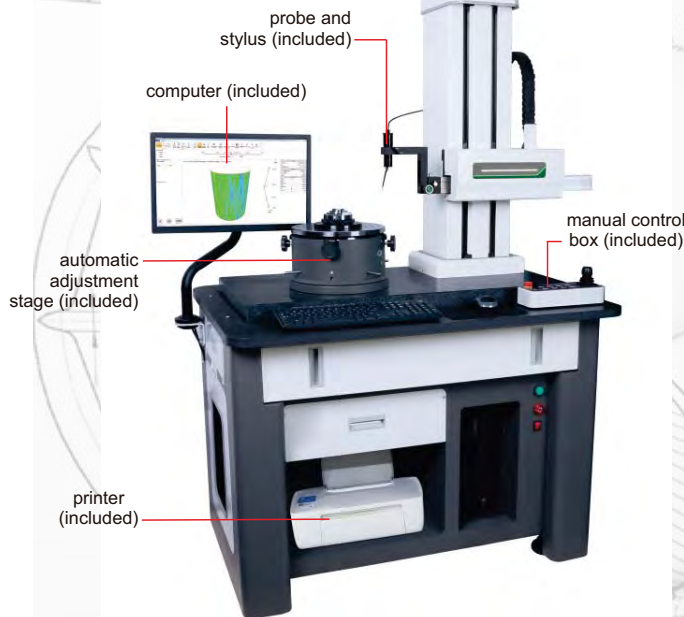
Surface Roughness Specimens
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**Surface Roughness Reference
Specimens**
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ROUNDNESS/CYLINDRICITY TESTER CODE RCT-300



- Automatic centering and leveling
- Evaluation items
 - Cylindricity module: cylindricity, radial full run, coaxiality, taper, radius
 - Roundness module: roundness, concentricity, radial single jump, wall thickness difference
 - Straightness module: straightness, parallelism, squareness
 - Single section flatness module: single section flatness, axial single hop, perpendicularity, parallelism
 - Multi-section flatness module: multi-section flatness, parallelism, axial full runout, perpendicularity
 - Commutator module: monolithic bounce, immediate bounce, interval difference
- Analytical ability
 - Cylindricity function: 2-10 sections, 3 evaluation methods
 - Reference benchmarks for cylindricity evaluation: LSCY, MZCY, MICY, MCCY, OSCY
 - Reference circle for roundness evaluation: LSC, MZC, MIC, MCC
 - Measurement band: 1-15upr, 1-50upr, 1-150upr, 1-250upr, 1-500upr, 15-100upr, 15-500upr, 2-15upr, 1-1500upr, custom
 - Notched measurement

SPECIFICATION

Probe	measuring range	±500µm
	resolution	1:262144
	linear accuracy	0.1%
Ruby stylus	size	Ø2x10mm
	direction	two directions
	adjustable angle	±45°
X axis	travel	165mm
	excess range	25mm
	drive mode	motor
Z axis	measuring range	480mm
	straightness	0.3µm/100mm
	movement speed	0.1~10mm/s
	movement mode	motor
Detector	acquisition device	circular grating
	circumferential sampling points	14400
Granite stage		900×500mm
Rotary stage	rotation accuracy	(0.025+6H/10000)µm, H is the measuring height in mm
	rotation speed	6rpm, 8rpm, 10rpm
	max. measuring diameter	300mm
	max. workpiece diameter (rotation diameter)	450mm
Automatic adjustment stage	workbench diameter	280mm
	adjustment range of center	±3mm
	adjustment range of level	±1°
	weight capacity	30kg
Precision chuck	external grip diameter	Ø1~Ø81mm
	internal grip diameter	Ø31~Ø70mm
Air filter	pressure range	0~0.8MPa
	oil mist removal accuracy	0.01µm
	export oil mist concentration	0.5mg/m ³
Dimension (LxWxH)		1680×862×1685mm
Power supply		220±10%V, 50Hz
Power		500W
Weight		350kg

To be continued

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air filter (included)



standard block (included)



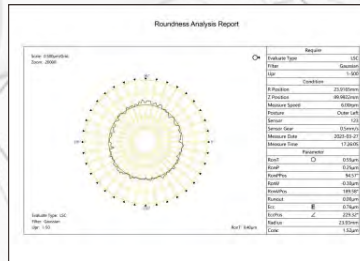
column adjusting rod (included)



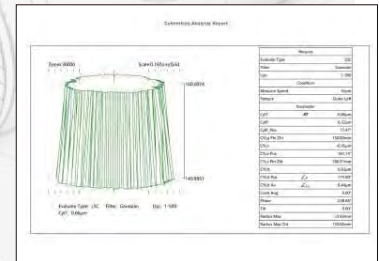
precision chuck (included)

STANDARD DELIVERY

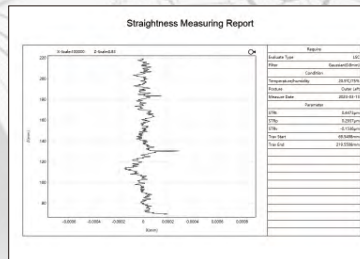
Main unit	1 pc
Probe (with ruby stylus)	1 pc each
Standard block	1 pc
Column adjusting rod	1 set
Precision chuck	1 pc
Automatic adjustment stage	1 pc
Roundness cylindricity acquisition and analysis system	1 set
Air filter	1 set
Computer	1 pc
Printer	1 pc
Installation tools	1 set



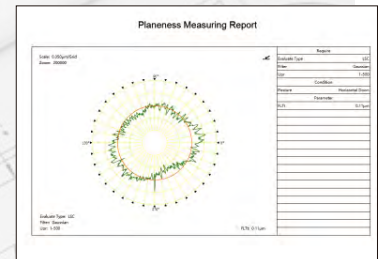
roundness analysis



cylindricity analysis



straightness analysis

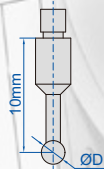


planeness analysis

OPTIONAL ACCESSORY

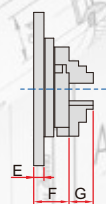
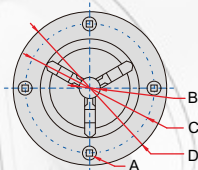
Probes	see below details
Precision chucks	see below details
Dryer	ISC-DRY

SPECIFICATION OF PROBES



Code	Diameter (ØD)	Remark
RCT-RA260-T1	2mm	included
RCT-RA260-T2	0.5mm	optional
RCT-RA260-T3	1mm	optional
RCT-RA260-T4	4mm	optional
RCT-RA260-T5	8mm	optional

SPECIFICATION OF PRECISION CHUCKS



(mm)

Code	A	B	C	D	E	F	G	Clamping range		Remark
								external grip dia.	internal grip dia.	
RCT-RA260-C1	M5x0.8	16	100	118	8	28	13	Ø0.8~63	Ø23~58	optional
RCT-RA260-C2	M6x1.0	20	116	143	10.5	37	15	Ø1~81	Ø31~70	included
RCT-RA260-C3	M6x1.0	26	140	168	10	39	19	Ø1~100	Ø36~90	optional

ROUNDNESS MEASURING MACHINE CODE RCT-RA260



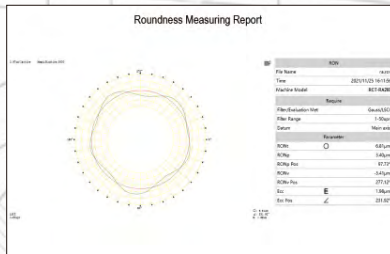
- Air-floating spindle
- Can measure roundness, coaxiality, concentricity, flatness, radial runout, axial runout, parallelism and perpendicularity
- Spectrum analysis, automatic gap/burr removal, waveform analysis
- 4 roundness evaluation methods: smallest area method, least square method, smallest circumscribed circle method, largest inscribed circle method
- Measuring filter: 1-15 μ r, 1-50 μ r, 1-150 μ r, 1-250 μ r, 1-500 μ r, 15-100 μ r, 15-500 μ r, 2-15 μ r
- Filter form: gauss (ISO standard)
- Software is included, for measurement, analysis, data output, etc.

SPECIFICATION

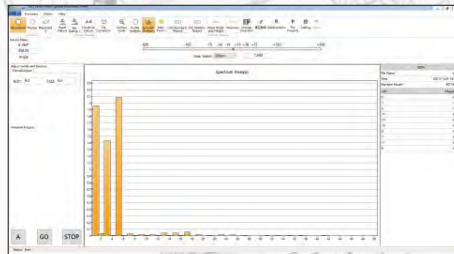
Probe	measuring range	$\pm 300\mu\text{m}$
	resolution	$0.001\mu\text{m}$
	linear accuracy	0.25%
Ruby stylus	size	$\text{Ø}2 \times 10\text{mm}$
	direction	two directions
	adjustable angle	$\pm 45^\circ$
X axis	travel	165mm
	excess range	25mm
	drive mode	by hand
Z axis	drive mode	motor
	travel	320mm
	movement speed	0.5~10mm/s
Rotary stage	rotation accuracy	$(0.025+6H/10000)\mu\text{m}$ for $H \leq 20\text{mm}$, H is the measuring height in mm
	rotation speed	6rpm
	max. measuring diameter	260mm
	max. workpiece diameter (rotation diameter)	400mm
Rotary axis	radial rotation accuracy	$\pm 0.0125\mu\text{m}$
	axial runout accuracy	$\pm 0.05\mu\text{m}$
	diameter	180mm
Adjustable 3D stage	adjustment range of center	$\pm 3\text{mm}$
	adjustment range of level	$\pm 2^\circ$
	weight capacity	20kg
	Granite stage	700×500mm
Precision chuck	external grip diameter	$\text{Ø}1 \sim \text{Ø}81\text{mm}$
	internal grip diameter	$\text{Ø}31 \sim \text{Ø}70\text{mm}$
Air filter	pressure range	0~0.8MPa
	oil mist removal accuracy	0.01 μm
	export oil mist concentration	0.5mg/m ³
	Dimension (LxWxH)	1300×795×1715mm
Power supply	220±10%V, 50Hz	
Power	500W	
Weight	320kg	

To be continued

Continued from previous page



measurement



spectrum analysis

STANDARD DELIVERY

Main unit	1 pc
Probe (with ruby stylus)	1 pc each
Standard block	1 pc
Precision chuck	1 pc
Adjustable 3D stage	1 pc
Rotary stage	1 pc
Computer	1 pc
Software	1 set
Printer	1 pc
Air filter	1 set
Installation tools	1 set

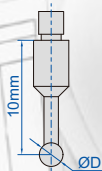


standard block (included)

OPTIONAL ACCESSORY

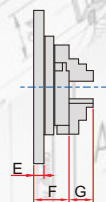
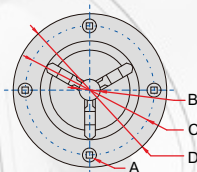
Probes	refer to details
Precision chucks	refer to details
Dryer	ISC-DRY

SPECIFICATION OF PROBES



Code	Diameter (ØD)	Remark
RCT-RA260-T1	2mm	included
RCT-RA260-T2	0.5mm	optional
RCT-RA260-T3	1mm	optional
RCT-RA260-T4	4mm	optional
RCT-RA260-T5	8mm	optional

SPECIFICATION OF PRECISION CHUCKS



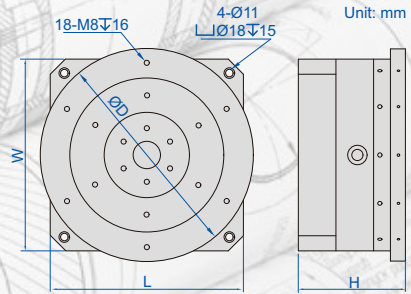
(mm)

Code	A	B	C	D	E	F	G	Clamping range		Remark
								external grip dia.	internal grip dia.	
RCT-RA260-C1	M5x0.8	16	100	118	8	28	13	Ø0.8~63	Ø23~58	optional
RCT-RA260-C2	M6x1.0	20	116	143	10.5	37	15	Ø1~81	Ø31~70	included
RCT-RA260-C3	M6x1.0	26	140	168	10	39	19	Ø1~100	Ø36~90	optional

PRECISION AIR FLOATING ROTARY TABLES



6875-320



- Manual rotation
- Optional accessory:
high precision digital indicators (code 2133 series),
hydraulic universal magnetic stands (code 6274 series)

air filter (included)



Code	Stage size ØD	Max. RPM	Air supply pressure	Max. load	Radial stiffness	Axial stiffness	Radial runout	Axial runout	L×W×H
6875-320	320mm	500rpm	5-6bar	100kg	250N/µm	500N/µm	<0.3µm	<0.3µm	272x272x161mm
6875-400	400mm	500rpm	5-6bar	100kg	250N/µm	500N/µm	<0.3µm	<0.3µm	272x272x161mm
6875-500	500mm	500rpm	5-6bar	100kg	250N/µm	500N/µm	<0.3µm	<0.3µm	272x272x191mm

Standard glass hemisphere (optional)

Code	Roundness
6875-BALL*	0.05µm

*To check the accuracy of rotary table



6875-BALL

Clamp for glass hemisphere (optional)

Code
6875-CLAMP



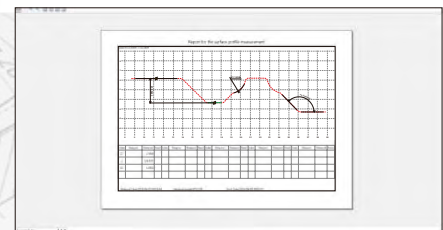
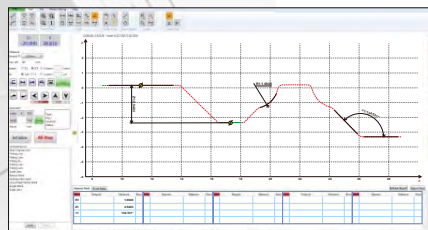
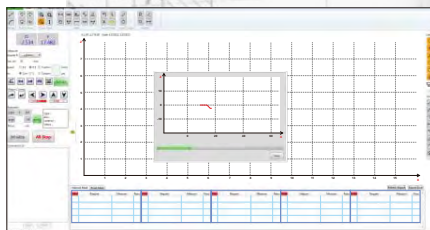
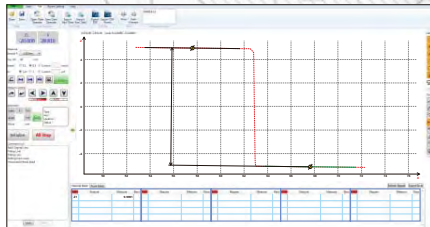
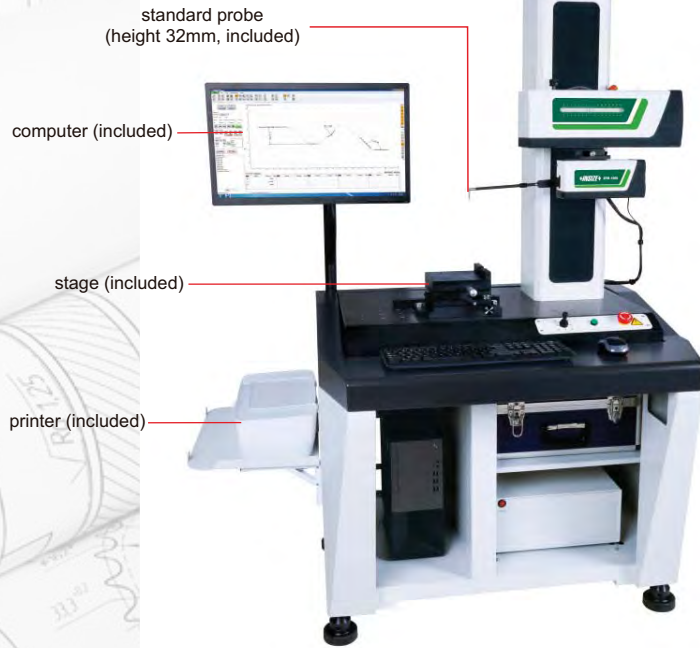
6875-CLAMP

application



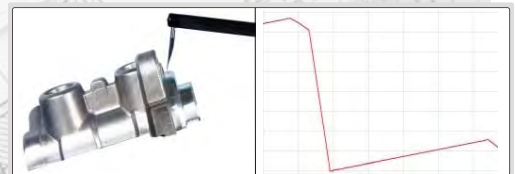
SURFACE PROFILE MEASURING MACHINE CODE SPM-1000

- Software is included, for surface profile measurement and data output
- Probe compensation
- Output as format txt, csv, etc.
- Large range design, the leverage ratio is 1:2.2, maintain the original accuracy of the sensor
- The overall structure of the Z-axis sensor does not have any elastic components, ensuring the measuring force is constant regardless the position of probe



SPECIFICATION

X axis measuring range	140mm
X axis resolution	0.2μm
X axis straightness	0.8μm/100mm
X axis moving speed	0.1~10mm/s
Z axis measuring range	±20mm
Z axis resolution	0.05μm
Z axis moving speed	0.5~10mm/s
Linear accuracy	±(1.5+ 0.2H)μm, H is measuring height in mm
Angular measuring accuracy	±2'
Arc measuring accuracy	±(2+R/8)μm, R is 2~10mm standard ball
Radius of probe tip	25μm
Moving direction	backward
Measuring force	6.86~9.8mN
Measuring unit	mm/inch
Traceable angle	72° (upward), 87° (downward)
Drive mode	motor
Travel of Z axis	430mm
Dimension (L×W×H)	1200×700×1780mm
Power supply	220±5%V, 50Hz
Weight	320kg

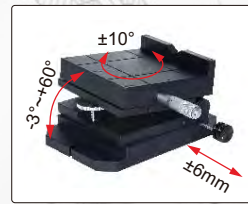


To be continued

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STANDARD DELIVERY

Main unit	1 pc
Standard probe and arm	1 pc of each
Standard block	2 pcs
Standard ball	2 pcs
Standard shaft	1 pc
Stage	1 pc
Vise	1 pc
Measuring arm	1 pc
Computer	1 pc
Measurement software	1 pc
Printer	1 pc
Installation tools	1 set



stage (included)



vise (included)

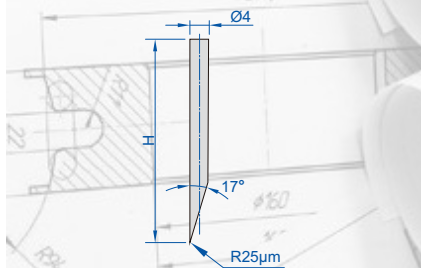
OPTIONAL ACCESSORY

Probe	refer to details
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SPECIFICATION OF PROFILE PROBES

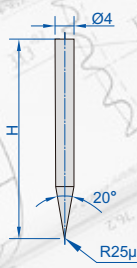
Unit: mm

chisel stylus



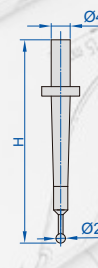
code **SPM-1000-T01** (H=32mm, included)
 code **SPM-1000-T02** (H=48mm, optional)
 code **SPM-1000-T03** (H=68mm, optional)

cone stylus



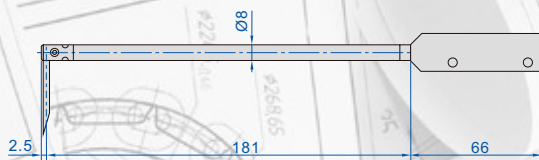
code **SPM-1000-Z01** (H=32mm, optional)
 code **SPM-1000-Z02** (H=48mm, optional)
 code **SPM-1000-Z03** (H=68mm, optional)

ball stylus

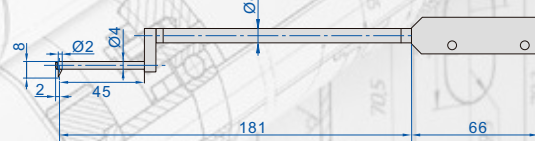


code **SPM-1000-R01** (H=32mm, optional)
 code **SPM-1000-R02** (H=48mm, optional)
 code **SPM-1000-R03** (H=68mm, optional)

standard arm, code SPM-1000-SP (included), stylus is not included

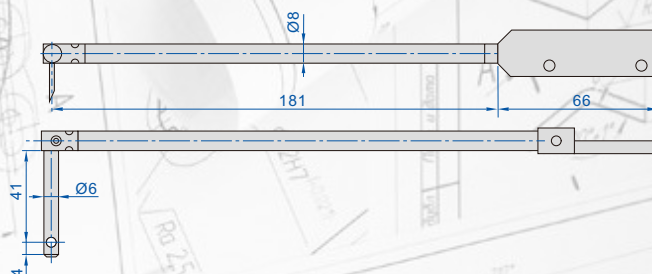


probe for small holes, code SPM-1000-SBP (optional), stylus is included



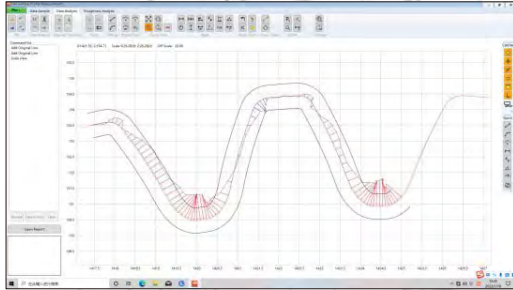
measure the contour of holes with diameter > Ø8mm

transverse probe, code SPM-1000-LP (optional), stylus is included

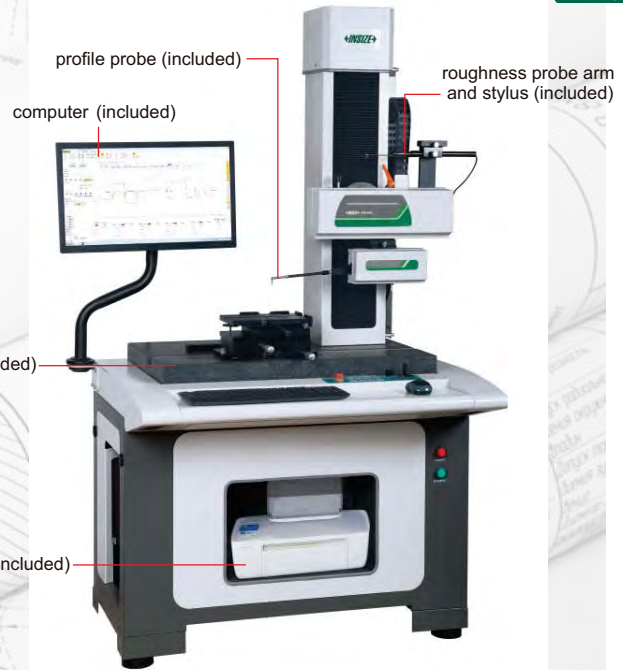


measure the contour of holes in radial direction

ROUGHNESS AND PROFILE MEASURING MACHINE CODE SPM-2000



CAD profile comparison

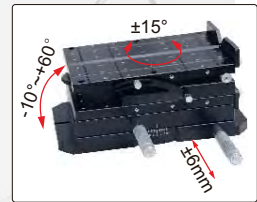


31

- Software is included, for measurement and data output
- Profile sensor with low noise
- Wide range roughness sensor without skid
- Meet ISO1997, ISO1984, BS1988, DIN1990, ASME1995, JIS1982, JIS1994 standards
- 65 roughness parameters

PROFILE MEASUREMENT SPECIFICATION

X axis measuring range	140mm
X axis resolution	0.2µm
X axis traverse speed	0.05~15mm/s
Z axis measuring range	50mm
Z axis resolution	0.05µm
Z axis traverse speed	0.2~15mm/s
Straightness	0.5µm/100mm
Linear accuracy	±(0.8+ 0.15H)µm, H is measuring height in mm
Angular measuring accuracy	±1'
Arc measuring accuracy	±(1.5+R/12)µm, R is 2~10mm standard ball
Measuring unit	µm/µin
Measuring speed	0.05~1mm/s
Traceable angle	72° (upward), 88° (downward)
Travel of Z axis	430mm
Power supply	220±5%V, 50Hz
Dimension (L×W×H)	1400×850×1780mm
Weight	350kg



stage (included)



vise (included)



standard shaft (included)



standard blocks (included)



standard balls (included)

ROUGHNESS MEASUREMENT SPECIFICATION

Roughness parameters	Ra, Rp, Rv, Rz, Rz (JIS), R3z, Rz (DIN), Rzj, Rmax, Rc, Rt, Rq, Rsk, Rku, Rsm, Rs, PΔq, Rk, Rpk, Rvk, Mr1, Mr2, Rmr
Waviness parameters	Wa, Wt, Wp, Wv, Wz, Wq, Wsm, Wsk, Wku, Wmr
Primary profile parameters	Pa, Pt, Pp, Pv, Pz, Pq, Psm, Psk, Pku, Pmr
Measuring range	±420µm
Resolution	0.001µm
Linear accuracy	≤±(5nm+2.8%)
Probe radius/angle	5µm/90°
Cut off	0.025/0.08/0.25/0.8/2.5/8mm
Number of cut-offs	2~7
Measuring unit	µm
Measuring speed	0.05~0.25mm/s

To be continued

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STANDARD DELIVERY

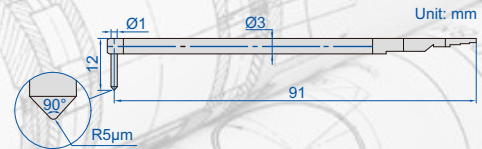
Main unit	1 pc
Calibration block	1 set
Roughness probe arm	1 pc
Roughness stylus	1 pc
Profile probe arm	1 pc
Profile chisel stylus	1 pc
Stage	1 set
Vise	1 set
Computer	1 pc
Software	1 set
Printer	1 pc
Installation tools	1 set

OPTIONAL ACCESSORY

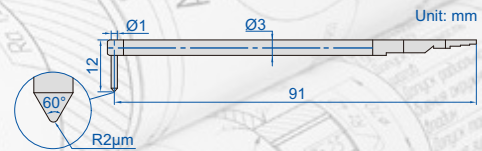
Probe	refer to details
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SPECIFICATION OF ROUGHNESS PROBE

standard probe, code SPM-2000-P (included), stylus is included



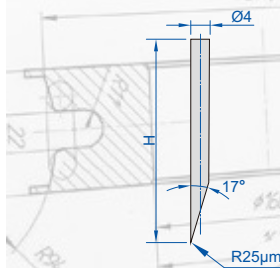
small roughness probe, code SPM-2000-P1 (optional), stylus is included



SPECIFICATION OF PROFILE PROBES

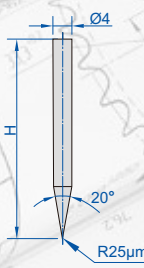
Unit: mm

chisel stylus



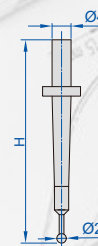
code SPM-1000-T01 (H=32mm, included)
code SPM-1000-T02 (H=48mm, optional)
code SPM-1000-T03 (H=68mm, optional)

cone stylus



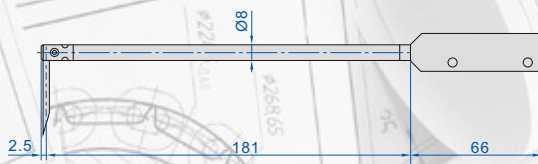
code SPM-1000-Z01 (H=32mm, optional)
code SPM-1000-Z02 (H=48mm, optional)
code SPM-1000-Z03 (H=68mm, optional)

ball stylus

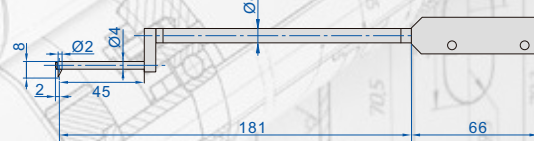


code SPM-1000-R01 (H=32mm, optional)
code SPM-1000-R02 (H=48mm, optional)
code SPM-1000-R03 (H=68mm, optional)

standard arm, code SPM-1000-SP (included), stylus is not included

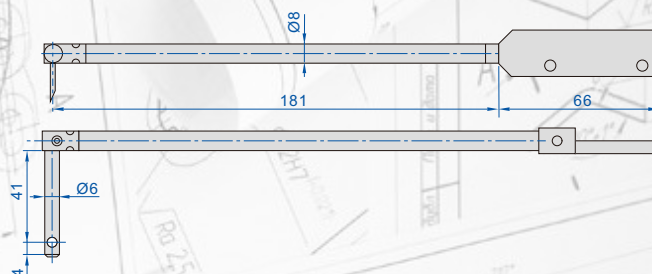


probe for small holes, code SPM-1000-SBP (optional), stylus is included



measure the contour of holes with diameter > Ø8mm

transverse probe, code SPM-1000-LP (optional), stylus is included



measure the contour of holes in radial direction

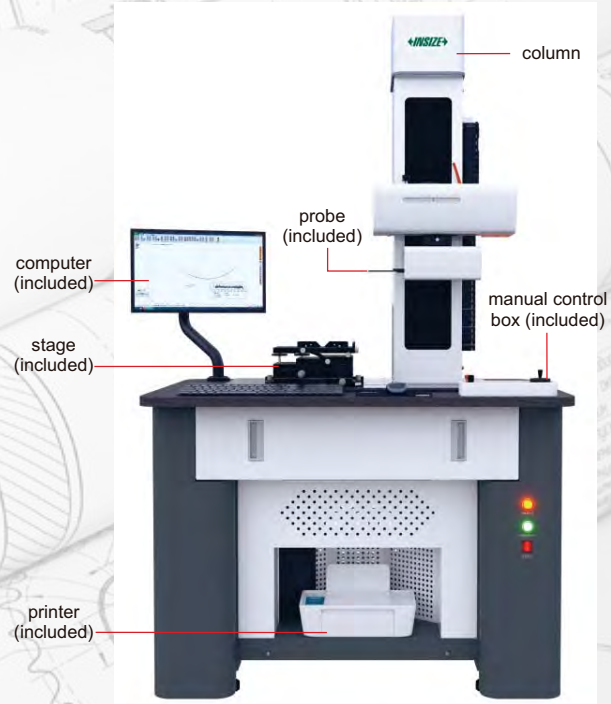
ROUGHNESS AND PROFILE MEASURING MACHINE (ONE PROBE TYPE) CODE SPM-5000



- Roughness, waviness, and profile analysis can be achieved with just one measurement
- Can measure all roughness and waviness parameters
- Can be used for automatic measurement system
- Air flotation and shockproof system to reduce measurement deviation
- Free to edit measurement reports

PROFILE MEASUREMENT SPECIFICATION

X axis measuring range	100mm
X axis resolution	0.2μm
X axis traverse speed	0.05~50mm/s
X axis linear accuracy	±(0.8+ 0.015L)μm, L is measuring length in mm
Z axis measuring range	±10mm
Z axis resolution	0.01μm
Z axis traverse speed	0.2~50mm/s
Z axis linear accuracy	±(0.5+ 0.08H)μm, H is measuring height in mm
Angular measuring accuracy	±1'
Arc measuring accuracy	±(1+R/12)μm, R is 2~10mm standard ball
Straightness	0.3μm/100mm,
Measuring unit	mm/inch
Travel of Z axis	320mm
Power supply	220±5%V, 50Hz
Dimension (L×W×H)	1700×820×1900mm
Weight	500kg



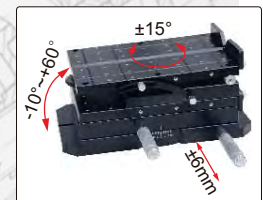
standard balls (included)



standard shaft (included)

ROUGHNESS MEASUREMENT SPECIFICATION

Roughness parameters	Ra, Ramax, Ramin, Rasd, Rp, Rpmax, Rpmin, Rpsd, Rv, Rvmax, Rvmin, Rvsd, Rz, Rzmax, Rzmin, Rzs, R3z, Rc, Rcm, Rcsd, Rt, Rq, Rqmax, Rqmin, Rdsd, Rsk, Rskmax, Rskmin, Rksd, Rku, Rkumax, Rkumin, Rkdsd, Rsm, Rsmmax, Rsmmin, Rsm, Rsa, Rsamax, Rsam, Rdsd, Rdq, Rdqmax, Rdqmin, Rdqsd, Rk, Rpk, Rvk, Mr1, Mr2, Rla, Rlamax, Rlamin, Rlasd, Rlq, Rlqmax, Rlqmin, Rlqsd, Rdc, Rpc, Rmr
Waviness parameters	Wa, Wamax, Wamin, Wasd, Wsa, Wca, Wa08, Wc, Wcmax, Wcmin, Wcsd, Wt, Wz, Wzmax, Wzmin, Wzsd, Wp, Wpmax, Wv, Wvmax, Wvmin, Wvsd, Wq, Wqmax, Wqmin, Wqsd, Wsm, Wsmmax, Wsmmin, Wmsd, Wsk, Wskmax, Wskmin, Wksd, Wku, Wkumax, Wkumin, Wksd, WΔq, WΔqmax, WΔqmin, WΔqsd, Wdc, Wmr, Wpsd, Wpmin
Original profile parameters	Pa, Pt, Pp, Pc, Pv, Pz, Pq, Psm, Psk, Pku, RzJ, Rpq, Rvq, Rmq, Pmr, PΔq, Avh, Hmax, Hmin, Area, Pdc, Tilt
Motif parameters	Ncrx, R, Rx, AR, Nr, Cpm, Sr, Sar, W, Wx, Aw, Wte, Nw, Sw, Saw
Measuring range	±10mm
Resolution	0.01μm
Linear accuracy	±(4nm+2.5%)
Probe radius/angle	5μm/90°
Cut off	0.025/0.08/0.25/0.8/2.5/8mm
Number of cut-offs	2~7
Measuring unit	μm
Measuring speed	0.1~2mm/s



stage (included)



vise (included)



standard blocks (included)

To be continued

Continued from previous page

STANDARD DELIVERY

Main unit (including workbench, controller, driver, sensor)	1 pc
Calibration block	1 set
Probe arm	1 pc
Stylus	1 pc
Air flotation and shockproof system	1 set
Stage	1 set
Vise	1 set
Computer	1 pc
Software	1 set
Printer	1 pc
Installation tools	1 set

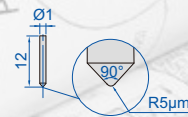
OPTIONAL ACCESSORY

Probe	refer to details
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SPECIFICATION OF STANDARD PROBE

Unit: mm

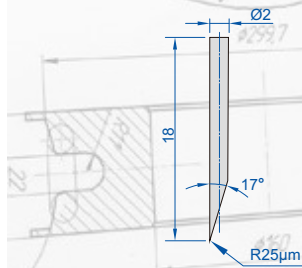
standard stylus , code SPM-5000-R1 (included)



SPECIFICATION OF PROFILE PROBES

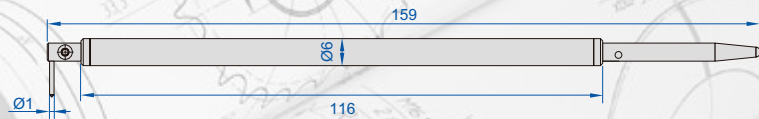
Unit: mm

chisel stylus

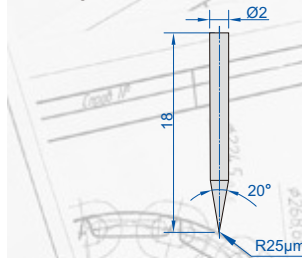


code SPM-5000-T01 (optional)

standard arm, code SPM-5000-P1 (included), stylus is not included

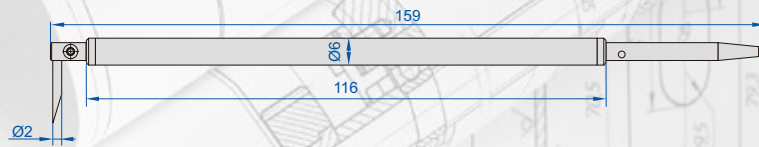


cone stylus

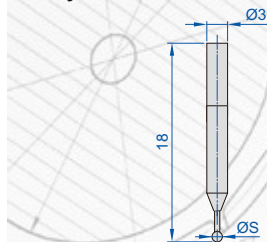


code SPM-5000-Z01 (optional)

profile arm, code SPM-5000-P2 (optional), stylus is not included

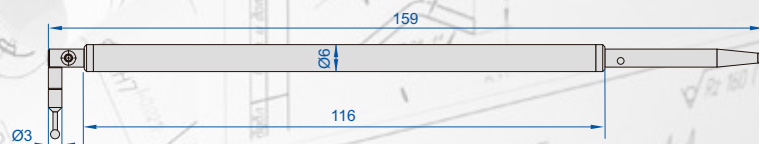


ball stylus



code SPM-5000-S01 (ØS=1mm, optional)
code SPM-5000-S02 (ØS=2mm, optional)

profile arm, code SPM-5000-P3 (optional), stylus is not included



BIDIRECTIONAL ROUGHNESS AND PROFILE MEASURING MACHINE CODE SPM-6000



- Intelligent tracking control system, real-time scanning measurement
- Bidirectional probe measurement
- Constant measuring force
- Can be used to measure absolute diameters
- Real time variable speed measurement, high-speed measurement can also ensure accuracy
- The trajectory of the probe is vertical, with more realistic Z-axis coordinate point and large range
- The profile data point cloud spacing is consistent, enabling high accuracy measurement



PROFILE MEASUREMENT SPECIFICATION

X axis measuring range	325mm
X axis resolution	0.01μm
X axis traverse speed	0.1~10mm/s
X axis straightness	0.5μm/100mm
X axis linear accuracy	±(1.5+ 0.15L)μm, L is measuring length in mm
X axis measuring speed	0.1~2mm/s
Z axis measuring range	325mm
Z axis resolution	0.05μm
Z axis traverse speed	0.1~10mm/s
Z axis straightness	0.5μm/100mm
Z axis linear accuracy	±(1.5+ 0.15H)μm, H is measuring height in mm
Z axis measuring speed	0.1~2mm/s
Angular measuring accuracy	±2'
Arc measuring accuracy	±(2+R/8)μm
Measuring unit	mm/inch
Traceable angle	72° (upward), 89° (downward)
Power supply	220±5%V, 50Hz
Dimension (L×W×H)	1700×820×1900mm
Weight	500kg

ROUGHNESS MEASUREMENT SPECIFICATION

Roughness parameters	Ra, Ramax, Ramin, Rasd, Rp, Rpmax, Rpmin, Rpsd, Rv, Rvmax, Rvmin, Rvsd, Rz, Rzmax, Rzmin, Rzsd, R3z, Rc, Rcmax, Rcmin, Rcsd, Rt, Rq, Rqmax, Rqmin, Rdsd, Rsk, Rskmax, Rskmin, Rsksd, Rku, Rkumax, Rkumin, Rkusd, Rsm, Rsmmax, Rsmmin, Rmsd, Rs, RΔa, RΔamax, RΔamin, RΔasd, RΔq, RΔqmax, RΔqmin, RΔqsd, Rk, Rpk, Rvk, Mr1, Mr2, RLa, Rlamax, Rlamin, Rlasd, Rlq, Rlqmax, Rlqmin, Rlqsd, Rδc, Rpc, Rmr
Waviness parameters	Wa, Wamax, Wamin, Wasd, Wsa, Wca, Wa08, Wc, Wcmax, Wcmin, Wcsd, Wt, Wz, Wzmax, Wzmin, Wzsd, Wp, Wpmax, Wv, Wvmax, Wvmin, Wvsd, Wq, Wqmax, Wqmin, Wqsd, Wsm, Wsmmax, Wsmmin, Wmsd, Wsk, Wskmax, Wskmin, Wksd, Wku, Wkumax, Wkumin, Wkusd, WΔq, WΔqmax, WΔqmin, WΔqsd, Wδc, Wmr, Wpsd, Wpmin
Original profile parameters	Pa, Pt, Pp, Pc, Pv, Pz, Pq, Psm, Psk, Pku, RzJ, Rpq, Rvq, Rmq, Pmr, PΔq, Avh, Hmax, Hmin, Area, Pδc, Tiltα
Motif parameters	Ncrx, R, Rx, AR, Nr, Cpm, Sr, Sar, W, Wx, Aw, Wte, Nw, Sw, Saw
Resolution	0.01μm
Linear accuracy	±(20nm+5%)
Probe radius/angle	5μm/90°
Cut off	0.025/0.08/0.25/0.8/2.5/8mm
Number of cut-offs	2~7
Measuring unit	μm
Measuring speed	0.1~2mm/s

To be continued

Continued from previous page



standard balls (included)



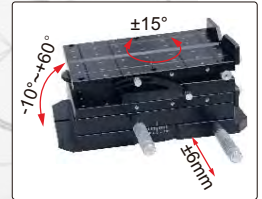
standard shaft (included)

STANDARD DELIVERY

Main unit (including workbench, controller, driver, sensor)	1 set
Calibration block	1 set
Profile arm	1 pc
Bidirectional profile stylus	1 pc
Roughness arm	1 pc
Unidirectional roughness stylus	1 pc
Stage	1 pc
Vise	1 pc
Computer	1 pc
Software	1 set
Printer	1 pc
Installation tools	1 set



vise (included)

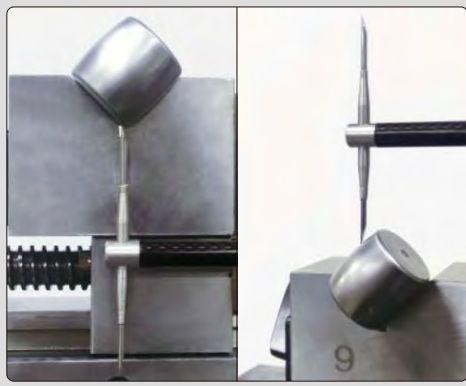


stage (included)

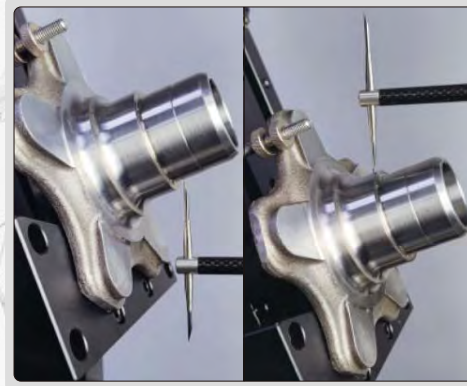


standard blocks (included)

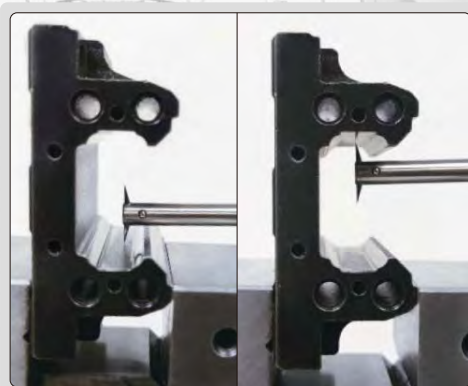
APPLICATION EXAMPLES



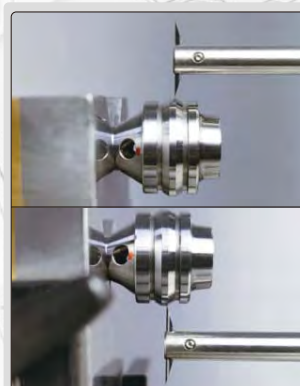
roller bearing



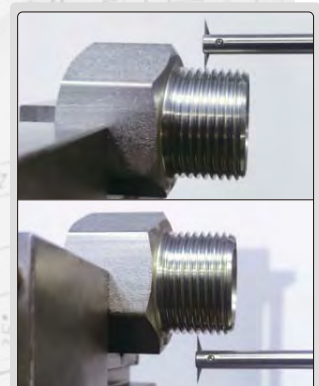
hub bearing



slider



valve spool



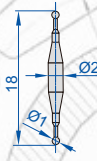
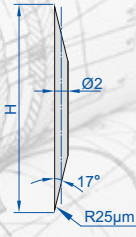
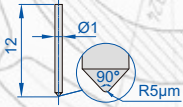
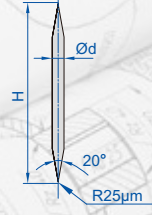
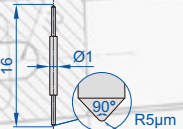
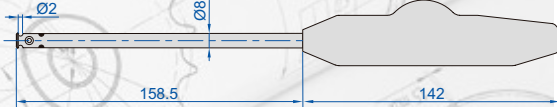
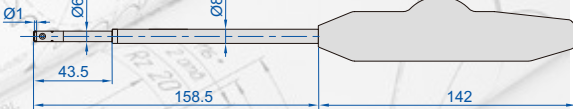
thread

To be continued

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SPECIFICATION OF PROBES

Unit: mm

<p>bidirectional spherical stylus code SPM-6000-R01 (optional)</p> 	<p>bidirectional chisel stylus code SPM-6000-T01 (H=16mm, included) code SPM-6000-T02 (H=24mm, optional) code SPM-6000-T03 (H=30mm, optional)</p> 
<p>unidirectional roughness stylus code SPM-6000-S01 (included)</p> 	<p>bidirectional cone stylus code SPM-6000-Z01 (H=12mm, Ød=2mm, optional) code SPM-6000-Z02 (H=24mm, Ød=2mm, optional) code SPM-6000-Z03 (H=10mm, Ød=1mm, optional)</p> 
<p>bidirectional roughness stylus code SPM-6000-S02 (optional)</p> 	<p>profile arm, code SPM-6000-ARM1 (included)</p> 
	<p>roughness arm, code SPM-6000-ARM2 (included)</p> 

31

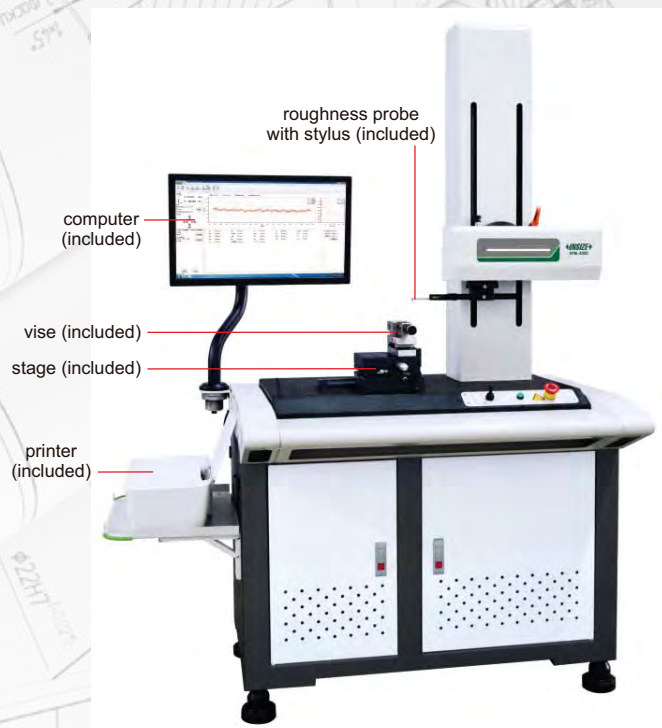
**ROUGHNESS MEASURING MACHINE
CODE SPM-4000**



- Skidless probe
- Hundreds of parameters can be evaluated, such as roughness profile, waviness profile, primary profile, etc.
- Software is included, for measurement and data output

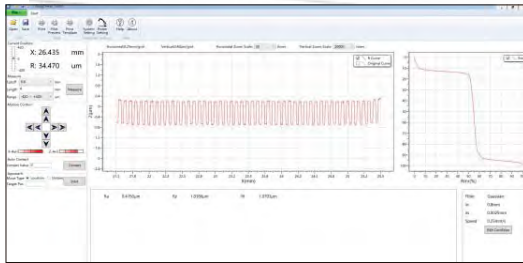
STANDARD DELIVERY

Main unit	1 pc
Roughness probe (with stylus)	1 pc
Calibration block	1 pc
Stage	1 pc
Vise	1 pc
Computer	1 pc
Software	1 set
Printer	1 pc
Installation tools	1 set



To be continued

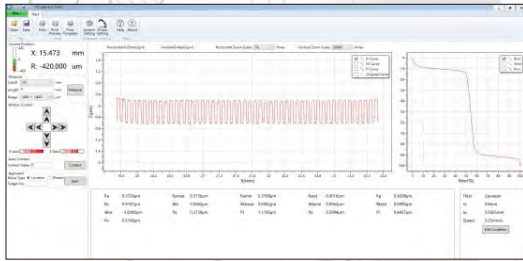
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calibration



measurement



parameter measurement



data output

SPECIFICATION

Roughness parameters	Ra, Rp, Rv, Rz, Rz (JIS), R3z, Rz (DIN), Rzj, Rmax, Rc, Rt, Rq, Rsk, Rku, Rsm, Rs, RΔq, Rk, Rpk, Rvk, Mr1, Mr2, Rmr
Waviness parameters	Wa, Wt, Wp, Wv, Wz, Wq, Wsm, Wsk, Wku, Wmr
Primary profile parameters	Pa, Pt, Pp, Pv, Pz, Pq, Psm, Psk, Pku, Pmr
X axis measuring range	100mm
X axis resolution	0.2μm
X axis straightness	0.5μm/100mm
X axis moving speed	0.1~10mm/s
Z axis measuring range	±420μm
Z axis resolution	0.001μm
Z axis linear accuracy	±(7nm+3.5%)
Z axis moving speed	0.5~10mm/s
Z axis repeatability	1σ≤2nm
Radius/angle of stylus	5μm/90°
Cut off length	0.025/0.08/0.25/0.8/2.5/8mm
Number of cut-offs	2~7
Measuring unit	μm
Drive mode	motor
Travel of Z axis	320mm
Dimension (LxWxH)	1200×700×1780mm
Power supply	220±5%V, 50Hz
Weight	320kg



calibration block (included)



visé (included)



stage (included)

OPTIONAL ACCESSORY

Small roughness probe	refer to details
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SPECIFICATION OF ROUGHNESS PROBE

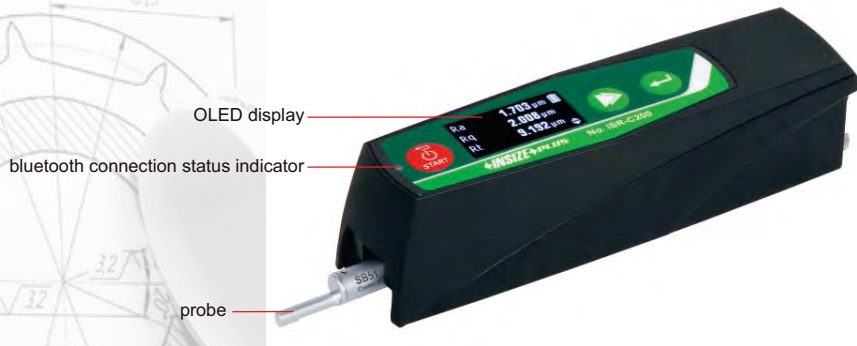
Unit: mm



ROUGHNESS TESTER (COMPACT TYPE) CODE ISR-C200

BLUETOOTH DATA OUTPUT PROBE CAN BE CHANGED

INSIZE PLUS
MADE IN EUROPE



- The product is light, reliable and durable
- 13 roughness parameters
- Can be operated by mobile phones (only Android system) or computers
- Measurement results can be exported in Excel and PDF format
- Memory of 18000 measurements with only parameters or 30 measurements with graph
- Automatic power off

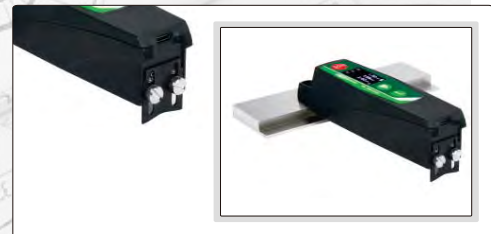
31



probe can be set at 90°, for transverse measurement



probe cover (included)



adjustable stand (included)

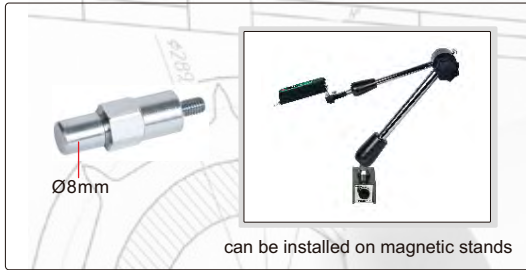
Parameter	Value	Tol.
Ra	3.423 µm	
Rq	3.932 µm	
Rt	13.277 µm	
Rz	13.090 µm	
Rc	12.463 µm	
Rmax	13.277 µm	
RSm	95.4 µm	
RPx (mm)	105 /cm	

measuring software (included), connect to mobile phones via bluetooth (only Android system) to control roughness tester, or connect to computers via USB cable or bluetooth to control roughness tester, display roughness values and curve, results can be exported in Excel and PDF format

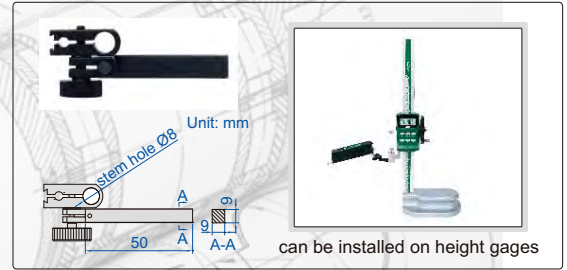
To be continued

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magnetic stand adapter (included)



dial test indicator holder (optional)



SPECIFICATION

Parameters		Ra, Rq, Rt, Rz, Rc, Rmax, RSm, Rpc, Pt, R, AR, Rx, Ppc
Range	X axis	17.5mm
	Z axis	250µm
Accuracy		±(5%+0.025)µm
Resolution (Ra)		0.001µm
Probe	type	inductive
	stylus radius/angle	2µm/90°
	stylus material	diamond
Measuring unit		µm/µin
Cut off		0.25/0.8/2.5mm
Number of cut-off		1~5
Moving speed		0.5mm/s, 1mm/s
Memory		18000 measurements with only parameters, 30 measurements with graph
Power		built-in rechargeable battery
Dimension (L×W×H)		160×34×33.5mm
Weight		200g

STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block	1 pc
Adjustable stand	1 pc
Probe cover	1 pc
Magnetic stand adapter	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Dial test indicator holder	6293-6
Groove probe	ISR-C200-SB21
Small hole probe	ISR-C200-SB31
Deep groove probe	ISR-C200-SB121
Extension rod	ISR-C200-ER50
Extension rod	ISR-C200-ER100

SPECIFICATION OF PROBES

Unit: mm

<p>standard probe (included)</p> <p>transverse measurement</p> <p>transverse measurement</p> <p>measurement for plane surfaces, also transverse measurement for plane surfaces, cylinders and grooves</p>	<p>groove probe (optional), code ISR-C200-SB21</p> <p>width>4</p> <p>depth≤5</p> <p>measure plane surfaces and grooves</p>
<p>small hole probe (optional), code ISR-C200-SB31</p> <p>hole diameter>Ø4, depth<20</p> <p>measure holes with diameter>Ø4mm and depth<20mm</p>	<p>deep groove probe (optional), code ISR-C200-SB121</p> <p>depth<20</p> <p>measure grooves with depth<20mm</p>
<p>extension rod (optional), code ISR-C200-ER50</p> <p>50</p> <p>for long holes</p>	<p>extension rod (optional), code ISR-C200-ER100</p> <p>100</p> <p>for long holes</p>

**ROUGHNESS TESTER
CODE ISR-C002**

BLUETOOTH

DATA
OUTPUT

CAN BE OPERATED BY
MOBILE PHONES OR COMPUTERS



- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Support bluetooth printer
- 21 roughness parameters
- Display roughness value, profile and curve
- Memory of maximum 100 results
- Automatic power off



software flash disk (included)

probe cover (included)

adjustable stand (included)

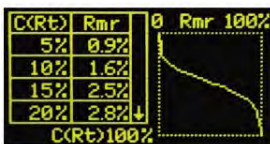
screen display



measurement result



roughness profile



Rmr analysis



put the small workpieces directly under the probe for measurement



operate roughness tester by mobile phones



connect to mobile phones via bluetooth (only Android system), display roughness values, profile and curve

operate roughness tester by computers



connect to computers via USB cable (software is included), display roughness values, profile and curve

data can be sent to Excel by connecting to computer via bluetooth or SPC cable

via bluetooth

receiver (optional)



SPC cable (optional)



receiver (optional)



via SPC cable



bluetooth printer (optional)



To be continued

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Unit: mm

light duty test stand (optional)



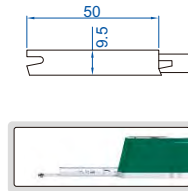
the maximum workpiece height is 220mm

heavy duty test stand (optional)



the maximum workpiece height is 310mm

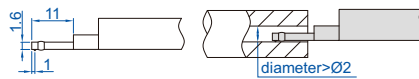
extension rod (optional), code ISR-C002-ER



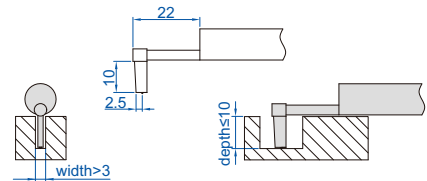
transverse rod (optional), code ISR-C002-TR



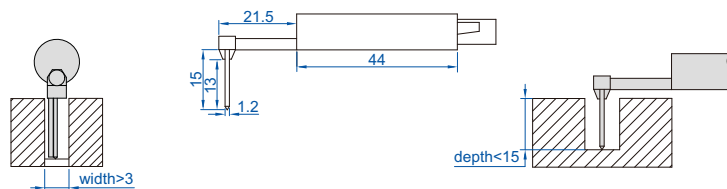
tiny hole probe (optional), code ISR-C002-SBP



deep groove probe (optional), code ISR-C002-DGP



deep groove probe (optional), code ISR-C002-DGP1



SPECIFICATION

Parameters		Ra, Rz, Rq, Rv, Rp, RS, R3z, R3y, Rt, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry (JIS), Rmax
Range		320µm (-160µm~160µm)
Accuracy		±10%
Resolution (Ra)		0.001µm
Probe	type	inductive
	stylus radius/angle	5µm/90°
	stylus material	diamond
Measuring force		4mN
Measuring unit		µm/µin
Cut off		0.25/0.8/2.5mm
Number of cut-off		1 to 5
Moving speed		0.5mm/s, 1mm/s
Memory		100 measurement results
Output		bluetooth and USB
Power		built-in rechargeable battery
Dimension (L×W×H)		141×55×40mm
Weight		400g

STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block and support	1 pc of each
Adjustable stand	1 pc
Probe cover	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Extension rod	ISR-C002-ER
Transverse rod	ISR-C002-TR
Tiny hole probe	ISR-C002-SBP
Deep groove probe	ISR-C002-DGP
Deep groove probe	ISR-C002-DGP1*
Light duty test stand	ISR-C002-STAND1
Heavy duty test stand	ISR-C002-STAND
Bluetooth printer	ISR-C002-PRINTER
Receiver	ISR-C300-RECEIVER
SPC cable	ISR-C300-SPC

*Need to be delivered with roughness tester ISR-C002

**ROUGHNESS TESTER (SEPARABLE TYPE)
CODE ISR-C300**

BLUETOOTH

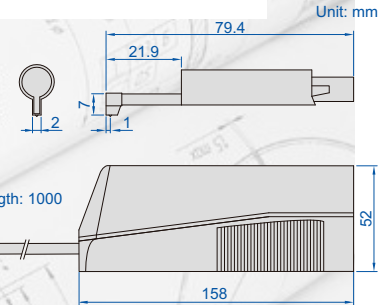
TOUCH SCREEN

CAN BE OPERATED BY
COMPUTERS OR MOBILE PHONES

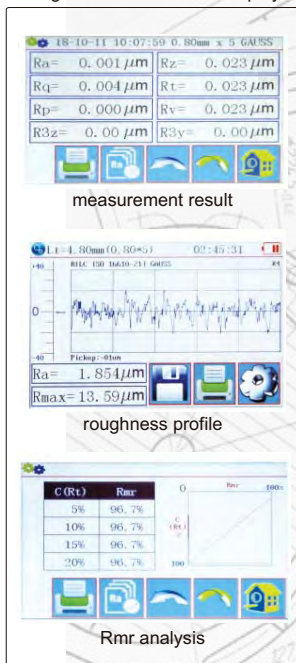
DATA
OUTPUT

POPULAR
MODEL

- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Support bluetooth printer
- 22 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards
- Display roughness values, profile and curve
- Memory of maximum 100 data and waveform
- Built-in lithium battery, working time more than 50 hours
- Touch screen
- Automatic power off



roughness tester screen display



probe and main unit can be combined together

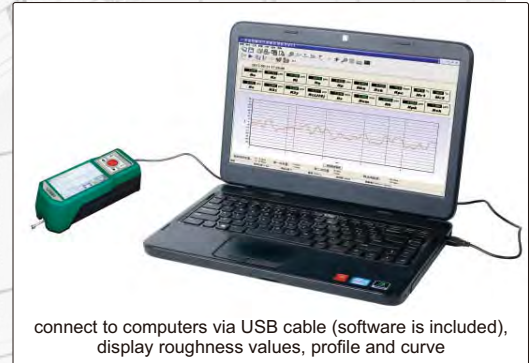


software flash disk
(included)

operate roughness tester by mobile phones



operate roughness tester by computers



To be continued

Continued from previous page

data can be sent to Excel by connecting to computer via bluetooth or SPC cable

<p>via bluetooth</p> <p>receiver (optional)</p>	<p>via SPC cable</p> <p>SPC cable (optional)</p> <p>receiver (optional)</p>	<p>bluetooth printer (optional)</p>
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<p>probe support (optional)</p> <p>support for flat surface</p>	<p>support for cylindrical surface</p>	<p>adjustable stand (included)</p> <p>height is adjustable (40mm)</p>
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magnetic stand adapter (included)

Ø8mm

can be installed on magnetic stands

height gage adapter (optional)

9×9mm

can be installed on height gages

NOTE: Please check whether the adapter can fit your height gages. When using **INSIZE** height gages, please use the dial test indicator holder of height gages

light duty test stand (optional)

the maximum workpiece height is 220mm

heavy duty test stand (optional)

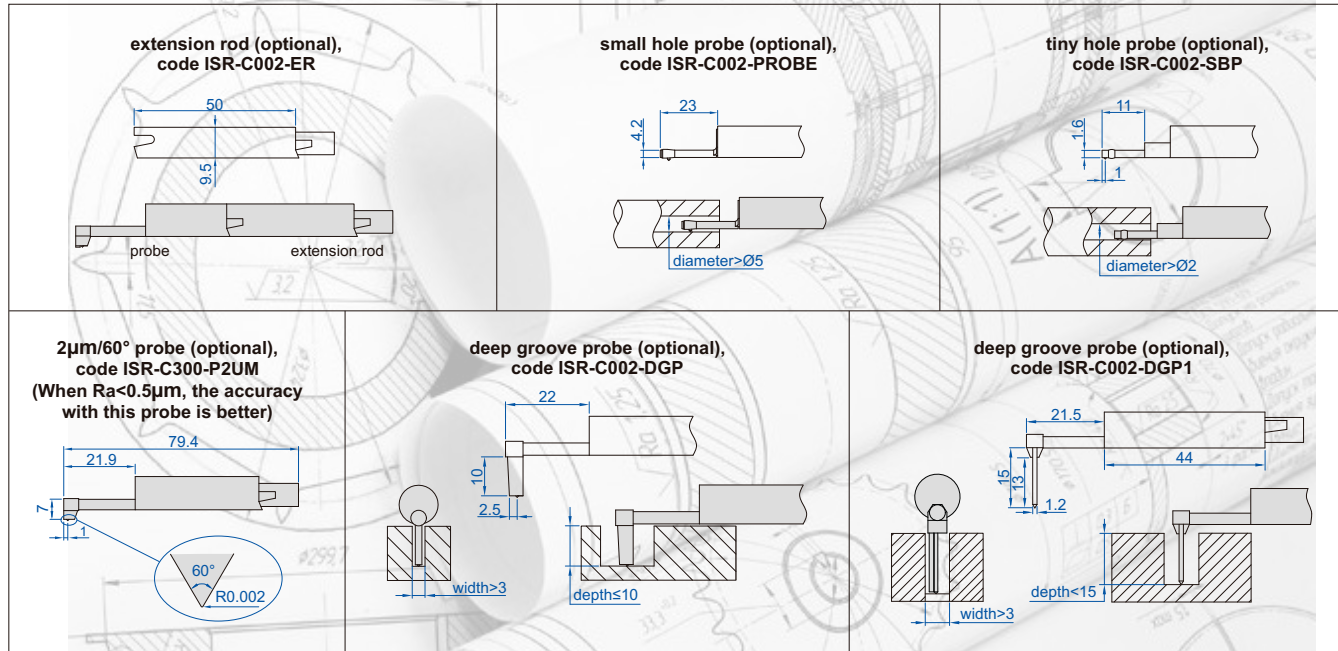
the maximum workpiece height is 310mm

To be continued

Continued from previous page

optional probes

Unit: mm



SPECIFICATION

Parameters		Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax
Range	X axis	17.5mm
	Z axis	320µm (-160µm~160µm)
Accuracy		±10%
Resolution (Ra)		0.001µm
Probe	type	inductive
	stylus radius/angle	5µm/90°
	stylus material	diamond
Measuring force		4mN
Measuring unit		µm/µin
Cut off		0.25/0.8/2.5mm
Number of cut-offs		1~5
Moving speed		0.135mm/s, 0.5mm/s, 1mm/s
Memory		100 measurement results
Output		USB and bluetooth
Power		built-in rechargeable battery
Dimension (L×W×H)		158×64×52mm
Weight		400g

STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block and support	1 pc of each
Connecting cable (long and short)	1 pc of each
Magnetic stand adapter	1 pc
Adjustable stand	1 pc
Touch pen	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Extension rod	ISR-C002-ER
Small hole probe	ISR-C002-PROBE
Tiny hole probe	ISR-C002-SBP
Deep groove probe	ISR-C002-DGP
Deep groove probe	ISR-C002-DGP1*
2µm/60° probe	ISR-C300-P2UM
Bluetooth printer	ISR-C002-PRINTER
Height gage adapter	ISR-C300-LB1
Receiver	ISR-C300-RECEIVER
SPC cable	ISR-C300-SPC
Support for flat surface	ISR-C300-COVER1
Support for cylindrical surface	ISR-C300-COVER2
Light duty test stand	ISR-C002-STAND1
Heavy duty test stand	ISR-C002-STAND

*Need to be delivered with roughness tester ISR-C300

DATA OUTPUT

BLUETOOTH

TOUCH SCREEN

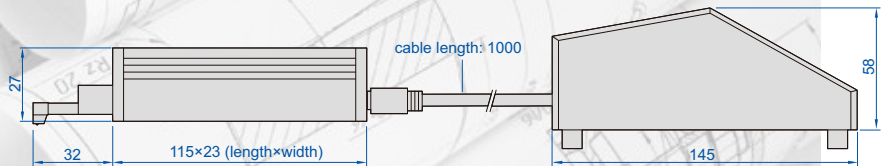
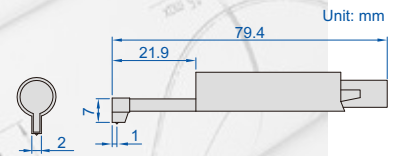
CAN BE OPERATED BY MOBILE PHONES OR COMPUTERS

ROUGHNESS TESTER CODE ISR-T120

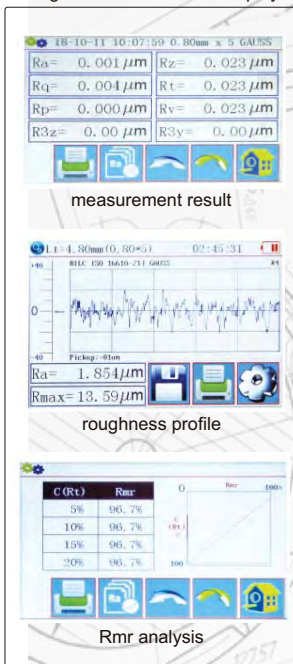


31

- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Built-in printer can print measurement results and graphics
- 22 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards
- Display roughness values, profile and curve
- Memory of maximum 100 data and waveform
- Built-in lithium battery, working time more than 50 hours
- Automatic power off



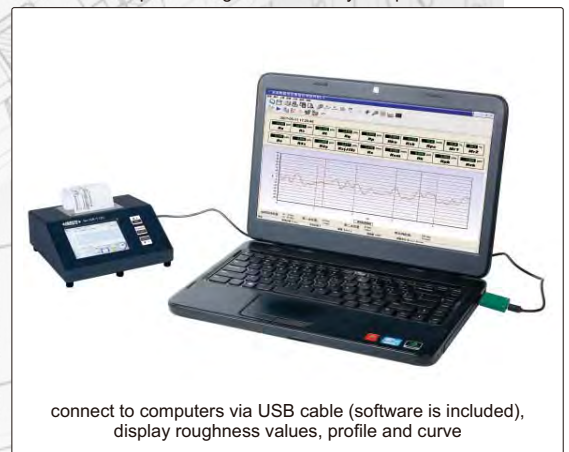
roughness tester screen display



operate roughness tester by mobile phones






operate roughness tester by computers



To be continued

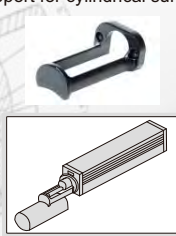
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data can be sent to Excel by connecting to computer via bluetooth or SPC cable


<p>via bluetooth</p> <p>receiver (optional)</p> 	<p>via SPC cable</p> <p>SPC cable (optional)</p>  <p>receiver (optional)</p> 
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probe support (optional)


support for cylindrical surface




support for flat surface



height gage adapter (optional)



9x9mm



can be installed on height gages

magnetic stand adapter (included)



Ø8mm

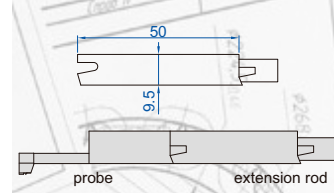
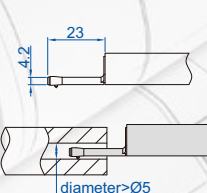
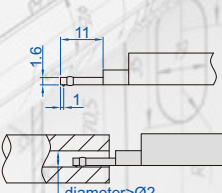
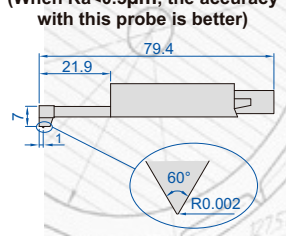
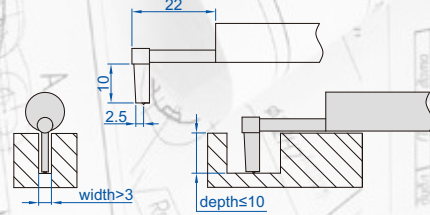
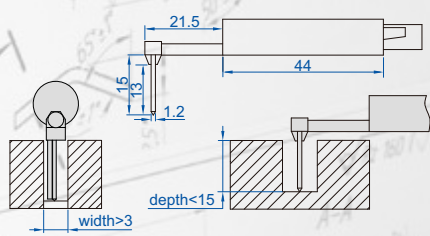


can be installed on magnetic stands

NOTE: Please check whether the adapter can fit your height gages. When using **INSIZE** height gages, please use the dial test indicator holder of height gages

optional probes

Unit: mm

<p>extension rod (optional), code ISR-C002-ER</p>  <p>50 9.15</p> <p>probe extension rod</p>	<p>small hole probe (optional), code ISR-C002-PROBE</p>  <p>23 4.2</p> <p>diameter > Ø5</p>	<p>tiny hole probe (optional), code ISR-C002-SBP</p>  <p>11 1.6 1</p> <p>diameter > Ø2</p>
<p>2µm/60° probe (optional), code ISR-C300-P2UM (When Ra < 0.5µm, the accuracy with this probe is better)</p>  <p>21.9 79.4 1 60° R0.002</p>	<p>deep groove probe (optional), code ISR-C002-DGP</p>  <p>22 10 2.5 width > 3 depth ≤ 10</p>	<p>deep groove probe (optional), code ISR-C002-DGP1</p>  <p>21.5 44 1.6 1.2 width > 3 depth < 15</p>

To be continued

Continued from previous page

light duty test stand (optional)



heavy duty test stand (optional)



SPECIFICATION

Parameters		Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax
Range	X axis	17.5mm
	Z axis	640µm (-320µm~320µm)
Accuracy		±10%
Resolution (Ra)		0.001µm
Probe	type	inductive
	stylus radius/angle	5µm/90°
	stylus material	diamond
Measuring force		4mN
Measuring unit		µm/µin
Cut off		0.25/0.8/2.5mm
Number of cut-offs		1~5
Traverse speed		0.135mm/s, 0.5mm/s, 1mm/s
Memory		100 measurement results
Output		bluetooth and USB
Power		built-in rechargeable battery
Dimension (L×W×H)		155×145×58mm
Weight		1000g

STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block and support	1 pc of each
Magnetic stand adapter	1 pc
Adjustable stand	1 pc
Touch pen	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Extension rod	ISR-C002-ER
Small hole probe	ISR-C002-PROBE
Tiny hole probe	ISR-C002-SBP
2µm/60° probe	ISR-C300-P2UM
Deep groove probe	ISR-C002-DGP
Deep groove probe	ISR-C002-DGP1*
Height gage adapter	ISR-C300-LB1
Receiver	ISR-C300-RECEIVER
SPC cable	ISR-C300-SPC
Support for flat surface	ISR-C300-COVER1
Support for cylindrical surface	ISR-C300-COVER2
Light duty test stand	ISR-C002-STAND1
Heavy duty test stand	ISR-C002-STAND

*Need to be delivered with roughness tester ISR-T120

ROUGHNESS TESTER (BASIC TYPE) CODE ISR-C003

ATTENTION: THIS ROUGHNESS TESTER IS NOT SUITABLE FOR ROUGH TURNING, MILLING AND PLANING WORKPIECES

- Unit: μm , μin
- Automatic power off

SPECIFICATION

Parameters		Ra, Rz, Rq, Rt
Range		Ra, Rq: 0.05~15 μm Rz, Rt: 0.1~50 μm
Accuracy		$\pm 10\%$
Resolution (Ra)		0.01 μm
Probe	type	piezoelectric
	stylus radius/angle	10 $\mu\text{m}/90^\circ$
	stylus material	diamond
Measuring force		5mN
Measuring unit		$\mu\text{m}/\mu\text{in}$
Cut off		0.25/0.8/2.5mm
Evaluation length		1.25mm for cut off 0.25mm 4mm for cut off 0.8mm 5mm for cut off 2.5mm
Moving speed		0.75mm/s
Power		built-in rechargeable battery
Dimension (L×W×H)		106×70×24mm
Weight		200g



fixture for small shafts (optional)



application



calibration block (included)

STANDARD DELIVERY

Main unit	1 pc
Calibration block	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Fixture for small shafts

ISR-C003-FIXTURE

SURFACE ROUGHNESS SPECIMEN SET CODE ISR-CS130-W

INSIZE PLUS
MADE IN EUROPE

- For checking, identifying and specifying the roughness by symbol
- Rust-proof, made of pure Nickel



Machining method	Roughness (Ra) *	Roughness (Rz) *	Quantity
Flat lapping	0.05, 0.1, 0.2 μm	0.55, 1, 1.6 μm	3 pcs
	2, 4, 8 μin		
Reaming	0.4, 0.8, 1.6 μm	3, 6, 10 μm	3 pcs
	16, 32, 63 μin		
Plain grinding	0.05, 0.1, 0.2, 0.4, 0.8, 1.6 μm	0.55, 1, 1.6, 3, 6, 10 μm	6 pcs
	2, 4, 8, 16, 32, 63 μin		
Horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 μm	2.5, 4, 8, 16, 32, 50 μm	6 pcs
	16, 32, 63, 125, 250, 500 μin		
Vertical milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 μm	2.5, 4, 8, 16, 32, 50 μm	6 pcs
	16, 32, 63, 125, 250, 500 μin		
Turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 μm	2.5, 4, 8, 16, 32, 50 μm	6 pcs
	16, 32, 63, 125, 250, 500 μin		

* The actual value is the value to be calibrated

SURFACE ROUGHNESS SPECIMENS

INSIZE PLUS
MADE IN EUROPE



ISR-CS315

- For checking, identifying and specifying the roughness by symbol
- Rust-proof, made of pure Nickel

Code	Machining method	Roughness (Ra) *	Roughness (Rz) *	Quantity
ISR-CS315	surface grinding	0.025, 0.05, 0.1, 0.2, 0.4, 0.8, 1.6, 3.2µm	0.29, 0.55, 0.91, 1.74, 2.6, 4.65, 7.87, 15.6µm	8 pcs
ISR-CS316	cylindrical grinding	0.025, 0.05, 0.1, 0.2, 0.4, 0.8, 1.6, 3.2µm	0.3, 0.53, 0.88, 1.56, 2.64, 4.4, 7.71, 15.3µm	8 pcs
ISR-CS317	flat lapping	criss-cross	0.025, 0.05, 0.1, 0.2µm	0.4, 0.6, 0.74, 1.26µm
		parallel	0.025, 0.05, 0.1, 0.2µm	0.34, 0.56, 1.12, 1.5µm
ISR-CS318	cylindrical lapping	0.025, 0.05, 0.1, 0.2µm	0.46, 0.54, 0.63, 1.23µm	4 pcs
	superfinishing	0.025, 0.05, 0.1, 0.2µm	0.36, 0.7, 1, 1.4µm	4 pcs
ISR-CS319	face turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	1.92, 3.2, 6.15, 12.5, 23.7, 48.7, 102, 185µm	8 pcs
ISR-CS320	cylindrical turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	1.7, 3.2, 6.1, 12.2, 23.7, 47.5, 95, 190µm	8 pcs
ISR-CS321	end milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	1.92, 3.82, 6.45, 12.2, 25.2, 49.8, 92.6, 191µm	8 pcs
ISR-CS322	reaming	0.4, 0.8, 1.6, 3.2µm	1.7, 3.2, 6.4, 12.8µm	4 pcs
	drilling	1.6, 3.2, 6.3, 12.5µm	7.5, 15.5, 31, 60µm	4 pcs
ISR-CS323	horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	1.8, 3.68, 6.63, 12.8, 25.6, 53, 97.5, 197µm	8 pcs
ISR-CS325	shaping (planing)	0.8, 1.6, 3.2, 6.3, 12.5, 25, 50, 100µm	3.84, 6.7, 12.2, 25.2, 48.7, 99.9, 190, 361µm	8 pcs
ISR-CS326	linishing (belt sanding)	0.1, 0.2, 0.4, 0.8, 1.6, 3.2µm	0.9, 1.55, 3.37, 7.42, 18.5, 31µm	6 pcs
ISR-CS328	vertical grinding	0.2, 0.4, 0.8, 1.6, 3.2, 6.3µm	1.1, 3.5, 6.15, 8.78, 22.19, 40.8µm	6 pcs
ISR-CS329	grit blasting	3.2, 10.5, 18, 25µm	19.2, 63, 108, 150µm	4 pcs
	shot blasting	3.2, 8, 13, 18µm	19.2, 48, 78, 108µm	4 pcs
ISR-CS331	spark erosion (EDM)	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	2.5, 4.5, 7.2, 14.2, 24.7, 51.2, 105, 196µm	8 pcs
ISR-CS333	hand filing	0.4, 0.8, 1.6, 3.2, 6.3µm	3, 5.6, 12.4, 22.5, 61µm	5 pcs
ISR-CS334	castings	0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	3.2, 8, 16, 32, 56, 112, 225µm	7 pcs
ISR-CS335	honoring	0.05, 0.1, 0.2, 0.4, 0.8, 1.6µm	0.31, 0.56, 1, 2, 4.2, 9µm	6 pcs
ISR-CS336	polishing	0.0125, 0.025, 0.05, 0.1, 0.2µm	0.29, 0.35, 0.67, 0.72, 1.52µm	5 pcs

* The actual value is the value to be calibrated

SHOT AND GRIT BLASTING SURFACE ROUGHNESS SPECIMENS

INSIZE PLUS
MADE IN EUROPE



ISR-CS017

- To check the roughness of steel surfaces which have been blast cleaned before painting
- Meets ISO 8503/1
- Rust-proof, made of pure Nickel
- Each piece contains 4 parts

Code	Machining method	Roughness (Ra) *	Roughness (Rz) *
ISR-CS017	shot blasting	3.2, 8, 13, 18µm	19.2, 48, 78, 108µm
ISR-CS018	grit blasting	3.2, 10.5, 18, 25µm	19.2, 63, 108, 150µm

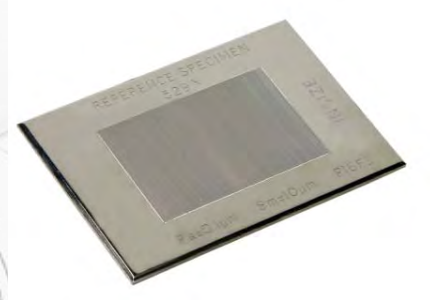
* The actual value is the value to be calibrated

SURFACE ROUGHNESS REFERENCE SPECIMENS

INSIZE PLUS
MADE IN EUROPE

MEASURING ACCURACY OF ROUGHNESS TESTERS CAN BE IMPROVED, IF THE CALIBRATION IS MADE ON A REFERENCE SPECIMEN WITH THE ROUGHNESS VALUE CLOSE TO THE WORKPIECE TO BE MEASURED

- To calibrate roughness testers
- Meets ISO 5436-1: 2000
- Rust proof, made of pure Nickel



ISR-RS529X

Code	Roughness (Ra)
ISR-RS525X	6.25µm *
ISR-RS526X	3.15µm *
ISR-RS527X	3.0µm *
ISR-RS528X	0.5µm *
ISR-RS529X	0.1µm *
ISR-RS530X	1.0µm *
ISR-RS531X	0.3µm *

*The actual value may be slightly different

SURFACE ROUGHNESS REFERENCE SPECIMENS

MEASURING ACCURACY OF ROUGHNESS TESTERS CAN BE IMPROVED, IF THE CALIBRATION IS MADE ON A REFERENCE SPECIMEN WITH THE ROUGHNESS VALUE CLOSE TO THE WORKPIECE TO BE MEASURED

- To calibrate roughness testers
- Made of glass



ISR-LS603

Code	Roughness (Ra)	Deviation *	Uniformity
ISR-LS601	0.1µm	-20% ~ +10%	3%
ISR-LS602	0.2µm	±10%	3%
ISR-LS603	0.4µm	±10%	3%
ISR-LS604	0.8µm	±10%	3%
ISR-LS605	1.6µm	±10%	3%
ISR-LS606	3.2µm	±10%	2%
ISR-LS607	6.4µm	±10%	2%

*Deviation between the actual value when supply and the nominal value