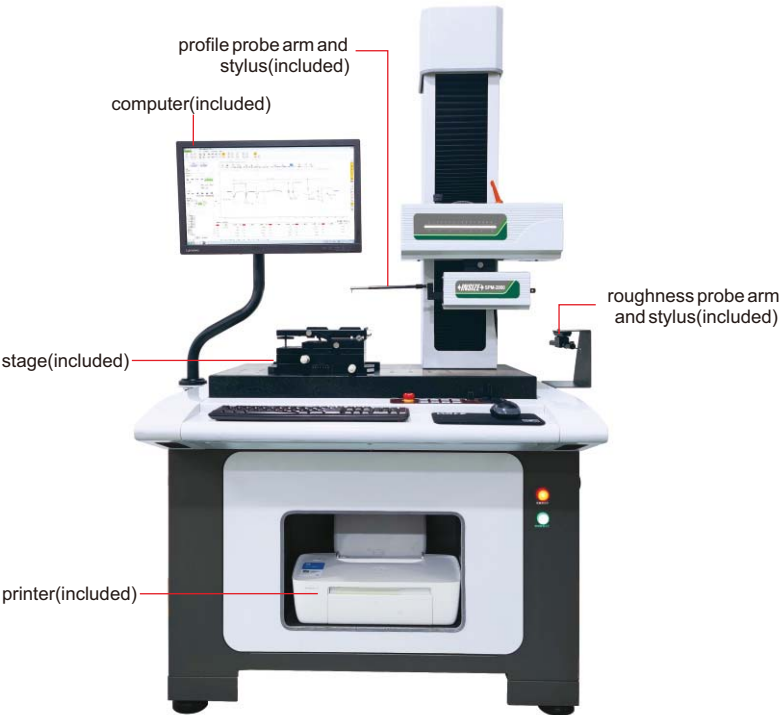


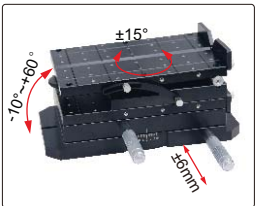
ROUGHNESS AND PROFILE MEASURING MACHINE
CODE SPM-2000

- Software is included, for measurement and data output
- Profile sensor with low noise
- Wide range roughness sensor without skid



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
Diameter of probe tip	25μm
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)

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
Original profile parameters	Pa, Pt, Pp, Pv, Pz, Pq, Psm, Psk, Pku, Pmr
Measuring range	±620μm
Resolution	262144:1
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/μin
Measuring speed	0.05~0.25mm/s

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 and arm	see details
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standard balls (included)



standard blocks (included)

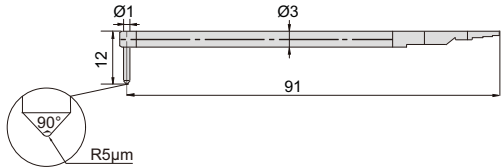


standard shaft (included)

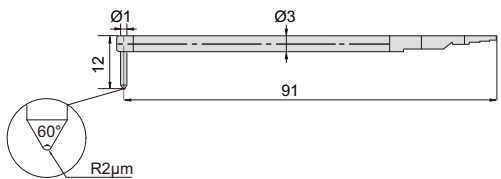
SPECIFICATION OF ROUGHNESS PROBE

Unit: mm

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



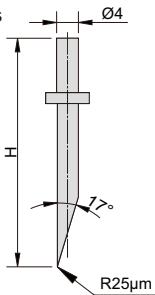
small roughness arm, code SPM-2000-P1 (optional), probe is included



SPECIFICATION OF PROFILE PROBES AND ARMS

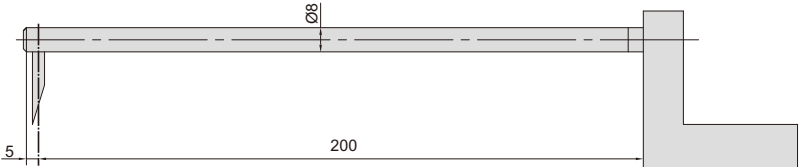
Unit: mm

chisel probes

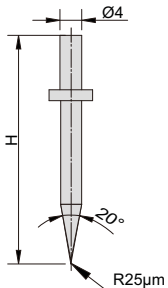


code SPM-1000-T01 (H=32mm, included)
code SPM-1000-T02 (H=48mm, optional)
code SPM-1000-T03 (H=68mm, optional)

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

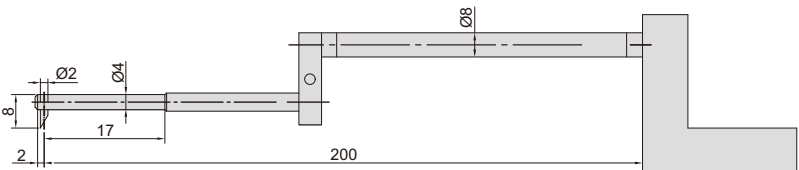


cone probes



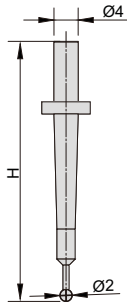
code SPM-1000-Z01 (H=32mm, optional)
code SPM-1000-Z02 (H=48mm, optional)
code SPM-1000-Z03 (H=68mm, optional)

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



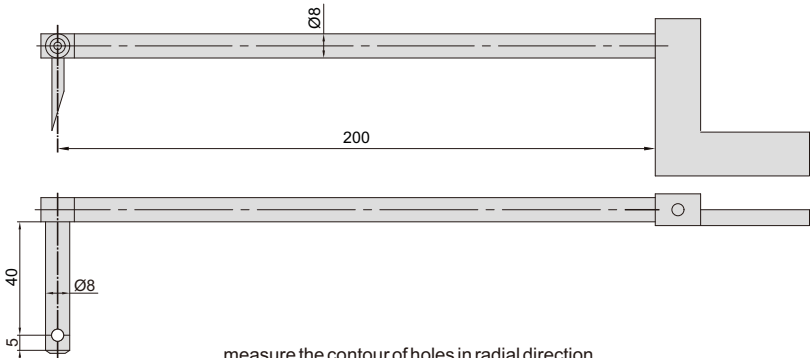
measure the contour of holes with diameter > Ø8mm

ball probes



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

transverse arm, code SPM-1000-LP (optional), probe is not included



measure the contour of holes in radial direction