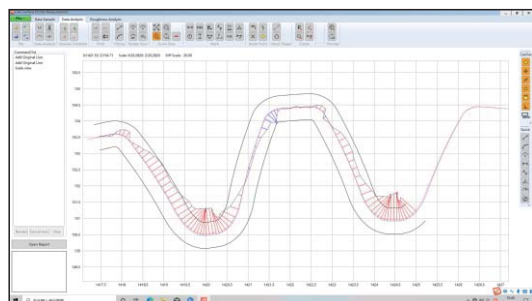


# ROUGHNESS AND PROFILE MEASURING MACHINE CODE SPM-2000

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

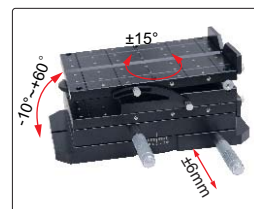


CAD profile comparison



## PROFILE MEASUREMENT SPECIFICATION

X axis measuring range	140mm
X axis resolution	0.2 $\mu$ m
X axis traverse speed	0.05~15mm/s
Z axis measuring range	50mm
Z axis resolution	0.05 $\mu$ m
Z axis traverse speed	0.2~15mm/s
Straightness	0.5 $\mu$ m/100mm
Linear accuracy	$\pm(0.8+ 0.15H )\mu$ m, H is measuring height in mm
Angular measuring accuracy	$\pm 1'$
Arc measuring accuracy	$\pm(1.5+R/12)\mu$ m, R is 2~10mm standard ball
Measuring unit	$\mu$ m/ $\mu$ in
Measuring speed	0.05~1mm/s
Traceable angle	72° (upward), 88° (downward)
Travel of Z axis	430mm
Power supply	220 $\pm$ 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, P $\Delta$ q, 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	$\pm 420\mu$ m
Resolution	0.001 $\mu$ m
Linear accuracy	$\leq \pm (5nm+2.8\%)$
Probe radius/angle	5 $\mu$ m/90°
Cut off	0.025/0.08/0.25/0.8/2.5/8mm
Number of cut-offs	2~7
Measuring unit	$\mu$ m
Measuring speed	0.05~0.25mm/s

## STANDARD DELIVERY

Main unit	1 pc
Calibration block	1 set
Roughness arm	1 pc
Roughness stylus	1 pc
Profile 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	see details
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**SPECIFICATION OF ROUGHNESS PROBE**

Unit: mm



standard balls (included)

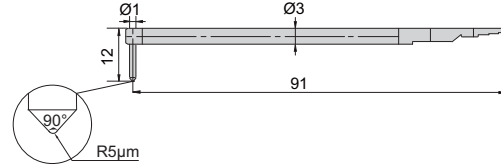


standard blocks (included)

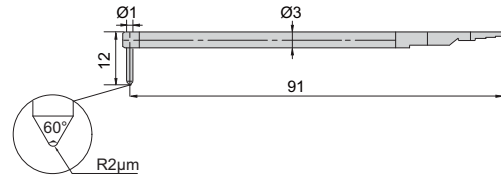


standard shaft (included)

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



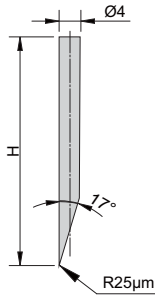
small roughness probe, code **SPM-2000-P1** (optional), stylus is included



**SPECIFICATION OF PROFILE PROBES**

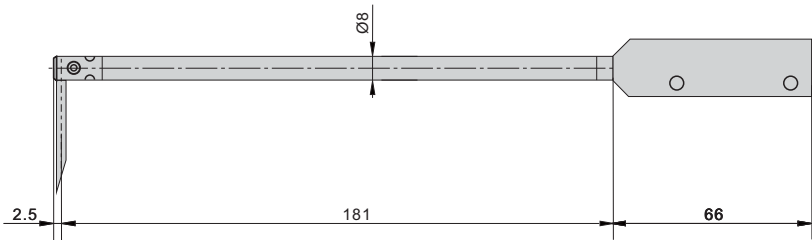
Unit: mm

chisel stylus

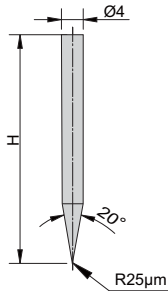


- code **SPM-1000-T01** (H=32mm, included)
- code **SPM-1000-T02** (H=48mm, optional)
- code **SPM-1000-T03** (H=68mm, optional)

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

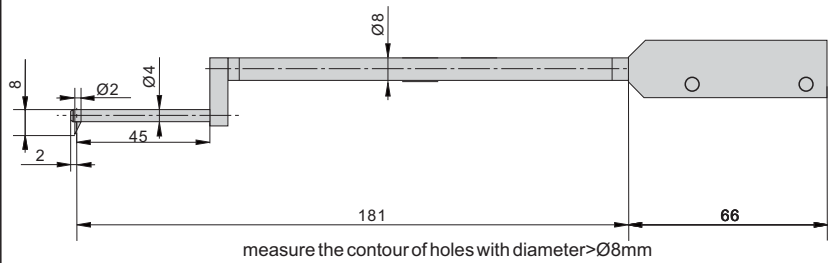


cone stylus

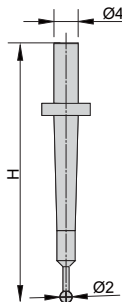


- code **SPM-1000-Z01** (H=32mm, optional)
- code **SPM-1000-Z02** (H=48mm, optional)
- code **SPM-1000-Z03** (H=68mm, optional)

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



ball stylus



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

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

