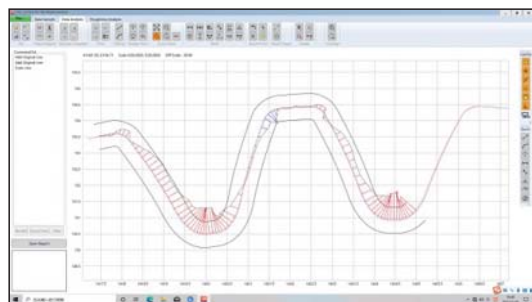


# ROUGHNESS AND PROFILE MEASURING MACHINE (TWO PROBES)

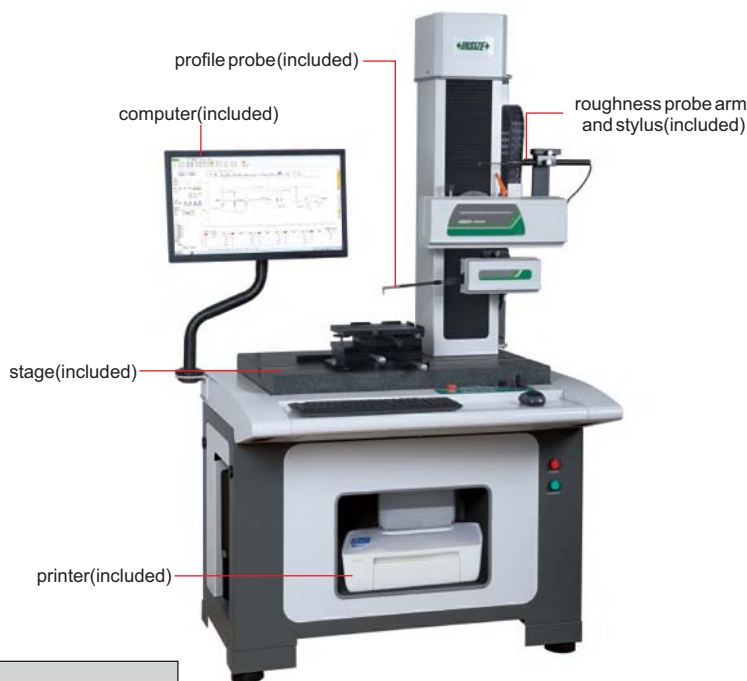
## CODE SPM-2000

- 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



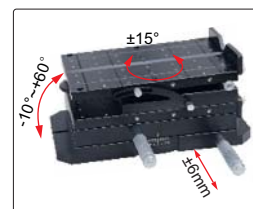
CAD profile comparison

**ATTENTION: PROFILE AND ROUGHNESS PROBES ARE USED SEPARATELY**



### PROFILE MEASUREMENT SPECIFICATION

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



stage (included)



vise (included)

### ROUGHNESS MEASUREMENT SPECIFICATION

<b>Roughness parameters</b>	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
<b>Waviness parameters</b>	Wa, Wt, Wp, Wv, Wz, Wq, Wsm, Wsk, Wku, Wmr
<b>Original profile parameters</b>	Pa, Pt, Pp, Pv, Pz, Pq, Psm, Psk, Pku, Pmr
<b>Measuring range</b>	±420μm
<b>Resolution</b>	0.001μm
<b>Linear accuracy</b>	≤±(5nm+2.8%)
<b>Probe radius/angle</b>	5μm/90°
<b>Cut off</b>	0.025/0.08/0.25/0.8/2.5/8mm
<b>Number of cut-offs</b>	2~7
<b>Measuring unit</b>	μm
<b>Measuring speed</b>	0.05~0.25mm/s

### STANDARD DELIVERY

<b>Main unit</b>	1 pc
<b>Calibration block</b>	1 set
<b>Roughness arm</b>	1 pc
<b>Roughness stylus</b>	1 pc
<b>Profile arm</b>	1 pc
<b>Profile chisel stylus</b>	1 pc
<b>Stage</b>	1 set
<b>Vise</b>	1 set
<b>Computer</b>	1 pc
<b>Software</b>	1 set
<b>Printer</b>	1 pc
<b>Installation tools</b>	1 set

### OPTIONAL ACCESSORY

<b>Probe</b>	see details
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**SPECIFICATION OF ROUGHNESS PROBE**

Unit: mm



standard balls (included)

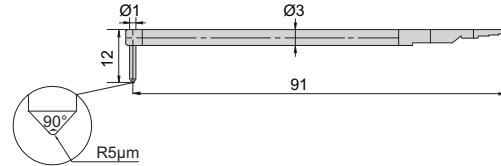


standard blocks (included)

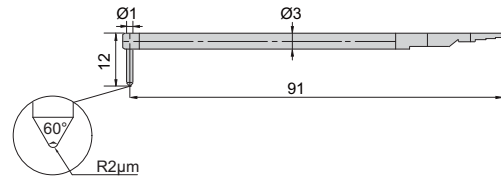


standard shaft (included)

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



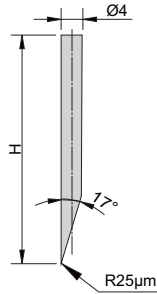
small roughness probe, code **SPM-2000-P1** (optional), stylus is included



**SPECIFICATION OF PROFILE PROBES**

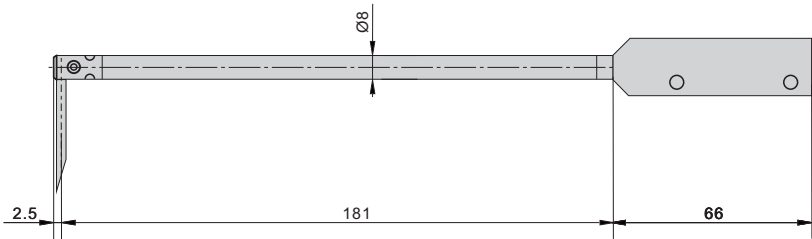
Unit: mm

chisel stylus

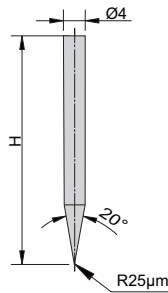


- code **SPM-1000-T01** (H=32mm, included)
- code **SPM-1000-T02** (H=48mm, optional)
- code **SPM-1000-T03** (H=68mm, optional)

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

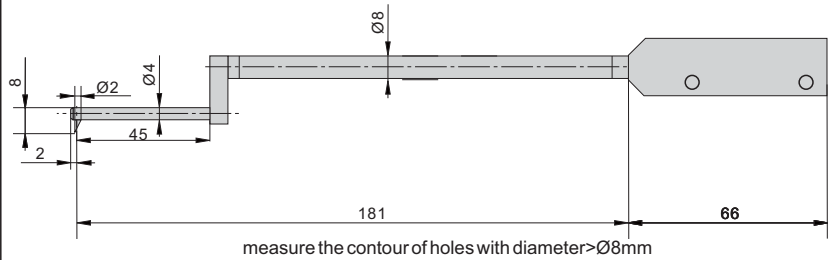


cone stylus

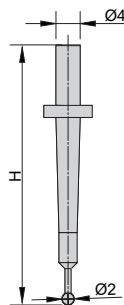


- code **SPM-1000-Z01** (H=32mm, optional)
- code **SPM-1000-Z02** (H=48mm, optional)
- code **SPM-1000-Z03** (H=68mm, optional)

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

