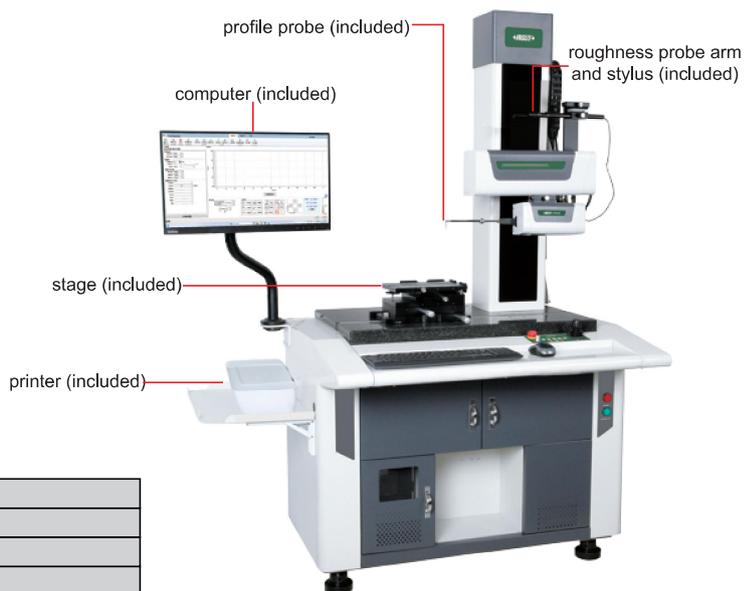


ROUGHNESS AND PROFILE MEASURING MACHINE (TWO PROBES TYPE) PART NO. SPM-2000-U

ATTENTION: PROFILE AND ROUGHNESS PROBES ARE USED SEPARATELY

- High precision grating sensor, large measuring range, strong stability
- Three point magnetic suction positioning module, switch measuring rod only need one second
- Wide range roughness sensor without skid
- Intelligent measurement analysis system, automatic programming measurement
- CAD profile comparison



PROFILE MEASUREMENT SPECIFICATION

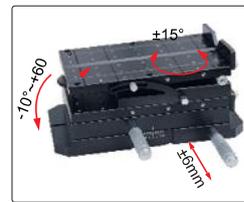
X axis measuring range	150mm
X axis resolution	0.1μm
X axis traverse speed	(0.1~20)mm/s
Z axis measuring range	±20mm
Z axis resolution	0.02μm
Z axis traverse speed	(0.5~30)mm/s
Straightness	0.5μm/100mm
Linear accuracy	±(0.6+ 0.02H)μm, H is measuring height in mm
Angular measuring accuracy	±1'
Arc measuring accuracy	±(1.5+R/12)μm, R is 2~10mm standard ball
Measuring unit	μm/μin
Measuring speed	(0.1~1)mm/s
Traceable angle	72° (upward), 88° (downward)
Travel of Z axis	420mm
Power supply	110±5%V, 50Hz
Dimension (L×W×H)	52.32"×36.61"×71.06"
Net weight	771.62lb

ROUGHNESS MEASUREMENT SPECIFICATION

Roughness parameters	Ra, Ramax, Ramin, Rasd, Rp, Rpmax, Rpmin, Rpsd, Rv, Rvmax, Rvmin, Rvsd, Rz, Rzmax, Rzmin, Rzs, R3z, Rmax, Rc, Rcmax, Rcmin, Rcsd, Rt, Rq, Rqmax, Rqmin, Rqsd, Rsk, Rskmax, Rskmin, Rsksd, Rku, Rkumax, Rkumin, Rkugd, Rsm, Rsmmax, Rsmmin, Rsmgd, 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, CR, CF, CL
Waviness parameters	Wa, Wamax, Wamin, Wasd, Wsa, Wca, Wa08, Wc, Wcmax, Wcmin, Wcsd, Wt, Wz, Wzmax, Wzmin, Wzsd, Wp, Wpmax, Wpmin, Wpsd, Wv, Wvmax, Wvmin, Wvsd, Wq, Wqmax, Wqmin, Wqsd, Wsm, Wsmmax, Wsmmin, Wsmgd, Wsk, Wskmax, Wskmin, Wksd, Wku, Wkumax, Wkumin, Wkugd, WΔq, WΔqmax, WΔqmin, WΔqsd, Wδc, Wmr
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
Measuring range	±420μm
Resolution	0.0001μm
Linear accuracy	≤±(8nm+3.5%)
Probe radius/angle	5μm/90°
Cut off	0.025/0.08/0.25/0.8/2.5/8mm
Measuring unit	μm
Measuring speed	(0.1~1)mm/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



stage (included)



vise (included)



roughness standard block (included)



standard blocks (included)

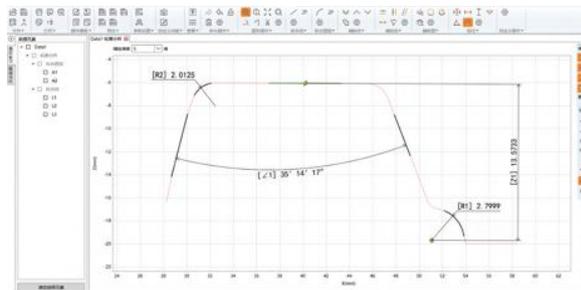


standard balls (included)

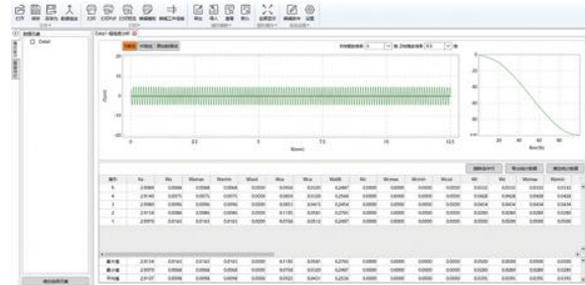
OPTIONAL ACCESSORY

Probe	refer to details
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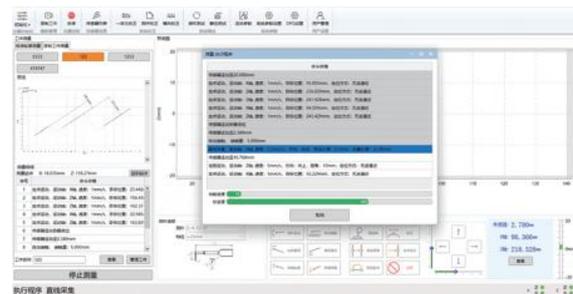
SOFTWARE (included)



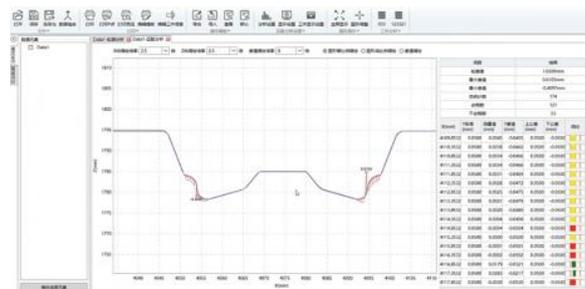
profile measurement



roughness measurement



automatic measurement

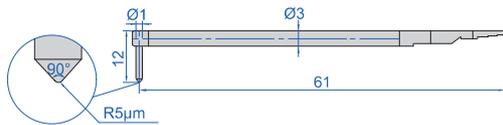


CAD profile comparison

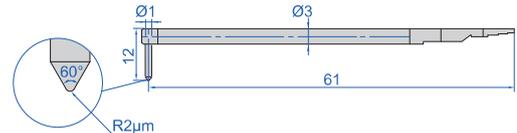
SPECIFICATION OF ROUGHNESS PROBE

unit: mm

standard probe, part No. **SPM-2000-P** (included), stylus is included



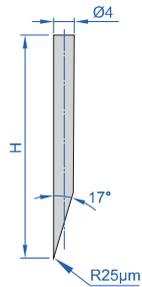
small roughness probe, part No. **SPM-2000-P1** (optional), stylus is included



SPECIFICATION OF PROFILE PROBES

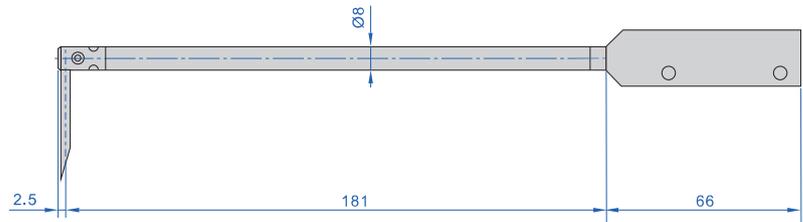
unit: mm

chisel stylus

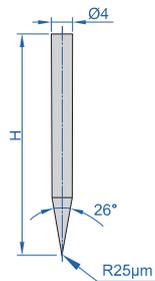


part No. **SPM-1000-T01** (H=32mm, included)
 part No. **SPM-1000-T02** (H=48mm, optional)
 part No. **SPM-1000-T03** (H=68mm, optional)

standard arm, part No. **SPM-1000-SP** (included), stylus is not included

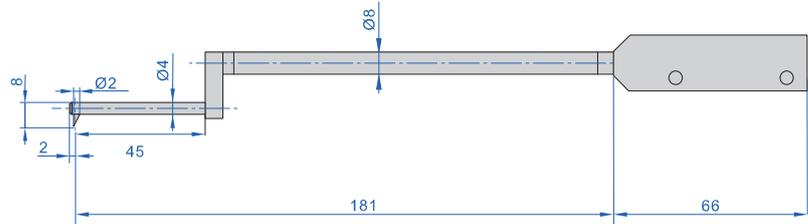


cone stylus



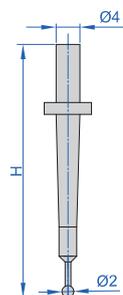
part No. **SPM-1000-Z01** (H=32mm, optional)
 part No. **SPM-1000-Z02** (H=48mm, optional)
 part No. **SPM-1000-Z03** (H=68mm, optional)

probe for small holes, part No. **SPM-1000-SBP** (optional), stylus is included



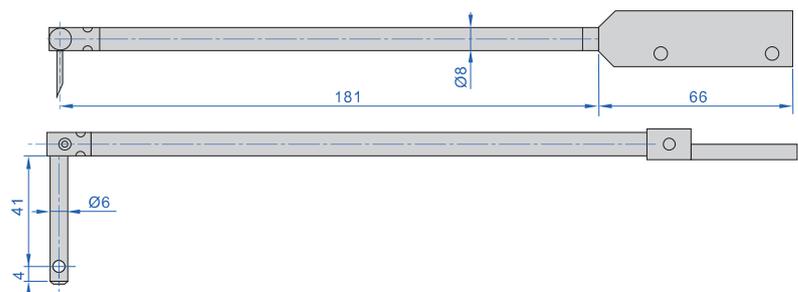
measure the contour of holes with diameter >Ø8mm

ball stylus



part No. **SPM-1000-R01** (H=32mm, optional)
 part No. **SPM-1000-R02** (H=48mm, optional)
 part No. **SPM-1000-R03** (H=68mm, optional)

transverse probe, part No. **SPM-1000-LP** (optional), stylus is not included



measure the contour of holes in radial direction