



Features

- Separated design, mini driver easy and convenient to use
- Multi measurement parameters: Ra, Rp, Rv, Rt, Rz, Rq, Rsk, Rku, Rc, RPc, RSm, Rmr(c), tp, Rmr, Rpm, Rz1max, RzJIS, Rmax, Htp, Rδc, RΔq, RΔa, Pa, Pp, Pv, Pt, Pz, Pq, Psk, Pku, Pc, PSm, Pmr(c), Pmr, Pz1max, PzJIS, Pδc, PΔq, Rk, Rpk, Rvk, Mr1, Mr2, A1, A2
- Touch screen with TFT LCD showing all important parameters and graphs
- High accuracy inductive pickup
- Filtering methods of 2RC, GAUSS
- Compatible with standards of ISO1997, ANSI and JIS2001
- Connected to the printer to print all parameters and graphs
- RS232 interface and USB interface meeting more needs
- Auto switch off

TIME® 3221

SURFACE ROUGHNESS TESTER

Standard Delivery

- Main unit 1
- Standard pickup 1
- Ra specimen 1
- Power adapter 1
- Connection cable 1
- Driver 1
- Power Adapter 1
- Magnetic base 1
- TIME certificate 1
- Warranty card 1
- Instruction manual 1

Technical specification

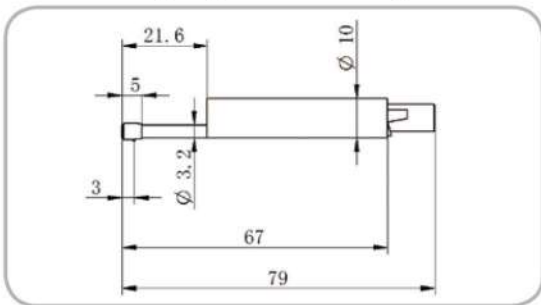
Pickup		
Test principle	Inductance type	
Measurement range	400μm(±200μm), 50μm(±25μm)	
Stylus tip radius	5μm/2μm optional	
Stylus tip material	Diamond	
Measuring force	4mN/0.75 mN	
Stylus tip angle	90°/60°	
Radius of skid curvature	45mm	
Maximum drive range	19mm/0.748inch	
Traversing speed	Measuring: Cut off length = 0.08 mm Vt=0.25 mm/s Cut off length = 0.25 mm Vt=0.25mm/s Cut off length = 0.8 mm Vt=0.5 mm/s Cut off length = 2.5mm Vt=1mm/s Returning V=1mm/s	
Accuracy	Less than or equal to ±10%	
Repeatability	≤6%	
Cut-off length	0.08mm,0.25mm,0.8mm,2.5mm, selectable	
Evaluation length	(1~5)L selectable	
Measuring rang and resolution	Measuring range	Resolution
	Automatic	0.001μm,0.008μm
	±50μm	0.001μm
	±200μm	0.008μm
Power	Built-in Li battery	
Power adapter	Input: 100 V~240VAC,50/60Hz Output: 9V,3A	
Working environment	Temperature: 0°C~40°C Humidity: < 90% RH	
Dimensions (mm)	155.4×75×53	
Weight (g)	580	



Pickup for TIME[®] 322X

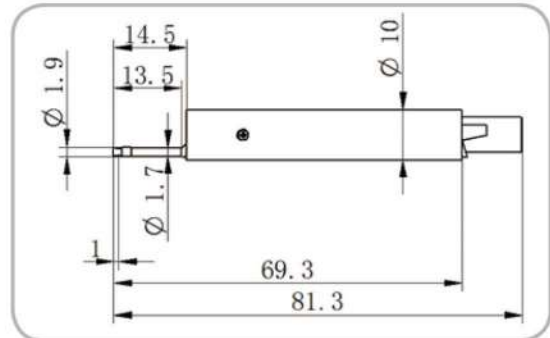
TIME S201 (standard)

Radius for needle point: 5µm
 Angle for needle: 90°
 Force for needle: 4mN
 Measuring range: 400µm



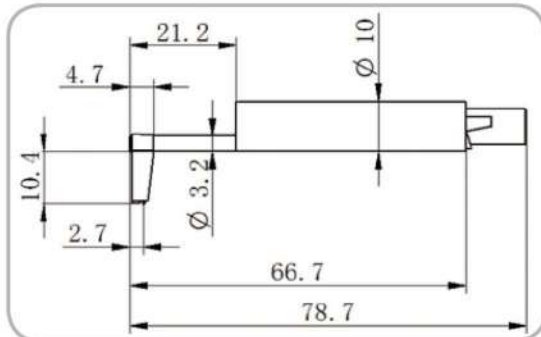
TIME S211 for small hole

Radius for needle point: 5µm
 Angle for needle: 90°
 Force for needle: 4mN
 Measuring range: 100µm
 Min. diameter of hole: ø2mm
 Max. depth of hole: 13.5mm



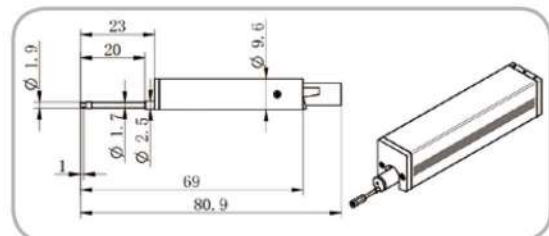
TIME S212 for deep groove

Radius for needle point: 5µm
 Angle for needle: 90°
 Force for needle: 4mN
 Measuring range: 400µm
 Min. width of groove: 2.5mm
 Max. depth of groove: 10mm



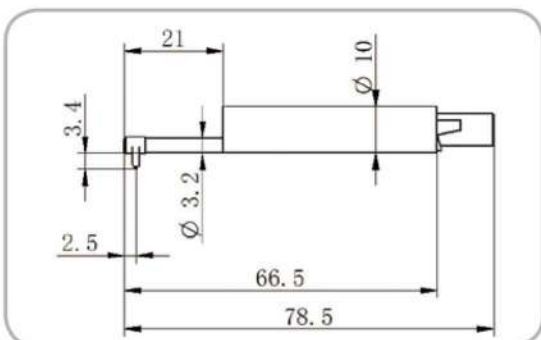
TIME S213 pick up for deep hole

Radius for needle point: 5µm
 Angle for needle: 90°
 Force for needle: 4mN
 Measuring range: 400µm
 Min. width of hole: ø2mm
 Max. depth of hole: 20mm



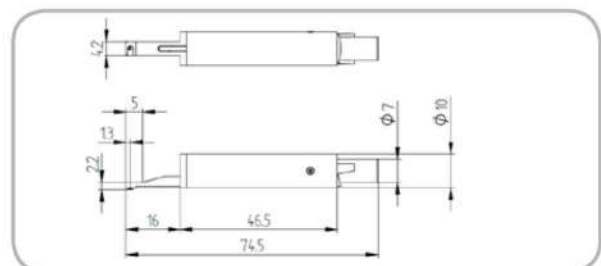
TIME S214 for curved surface

Radius for needle point: 5µm
 Angle for needle: 90°
 Force for needle: 4mN
 Measuring range: 200µm



TIME S215 for tooth surface

Radius for needle point: 5µm
 Angle for needle: 90°
 Force for needle: 4mN
 Measuring range: 400µm

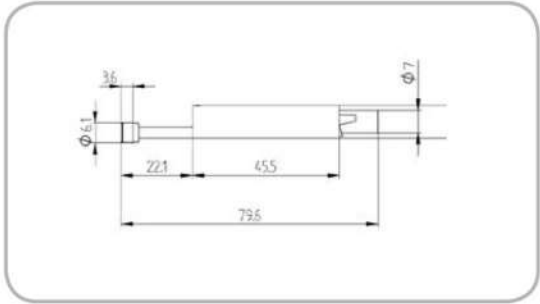




Pickup for TIME[®] 322X

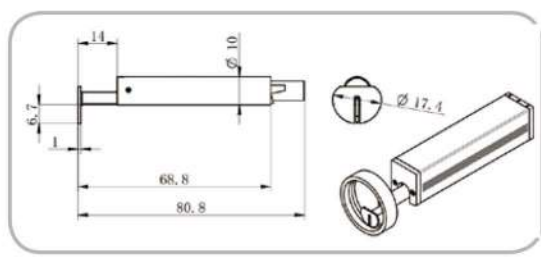
TIME S216 for Pipe

- Radius for needle point: 5µm
- Angle for needle: 90°
- Force for needle: 4mN
- Measuring range: 400µm



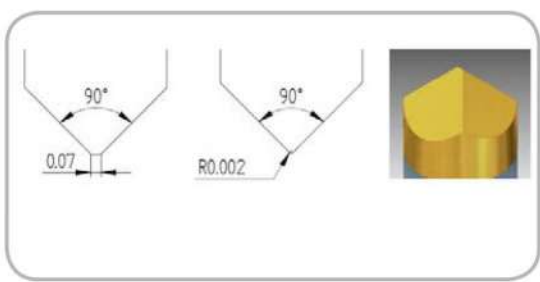
TIME S220 "O" type pickup

- Radius for needle point: 5µm
- Angle for needle: 90°
- Force for needle: 4mN
- Measuring range: 200µm
- Thickness of lead head: 1mm



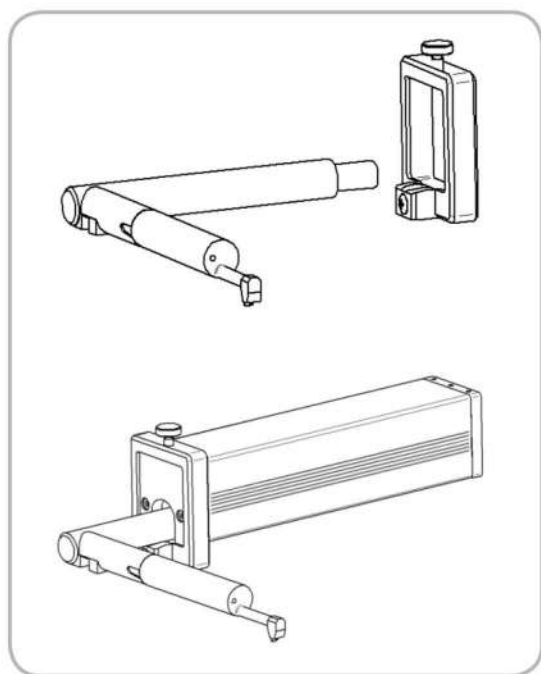
TIME S217 for powder metallurgy

- Radius for needle point: 2µm
- Width of needle point: 70µm
- Angle for needle: 90°
- Force for needle: 22.4mN



TIME S219 right-angle measuring tool

TIMES219 right-angle measuring tool works with transmit rod and right-angle pickup. It is mainly used to measure the surface roughness of crankshafts and parts that can only be measured when the pickup is right-angled.



TIME S218 axe blade pickup

- Radius for needle point: 5µm
- Width of needle point: 1.3mm
- Angle for needle: 90°
- Force for needle: 22.4mN

