

SURFACE ROUGHNESS TESTER TR200/210/220

Features

- ◆ Applicable in production site, laboratory and workshop in factory.
- ◆ Easy operation menu and large LCD display with backlight.
- ◆ Li rechargeable battery.
- ◆ Pickup position indicator.
- ◆ Conform to ISO standard, compatible with DIN, ANSI and JIS standard.
- ◆ Advanced software for TR200 and TR220 is available.
- ◆ Lots of delicate optional accessories are supplied making user's measurement more efficient and much easier.



Technical Specifications

Model No.	TR200	TR210	TR220
Roughness parameters	Ra, Rz, Ry, Rq, Rt, Rp, Rmax, Rv, R3z, RS, RSm, RSk, Rmr,	Ra, Rz, Ry, Rq	Ra, Rz, Ry, Rq, Rt, Rp, Rmax, Rv, R3z, RS, RSm, RSk, Rmr, Rpc, Rk, Rpk, Rvk, Mr1, Mr2
Assessed profiles	Roughness profile (R)		
	Primary profile (P)		Primary profile (P)
Measuring system	Metric, imperial		
Display resolution	0.01 μ m		
Data output	RS232		
Measuring Range	Ra: 0.025~12.5 μ m		
Cutoff length (L)	0.25mm / 0.8mm / 2.5mm/Auto		
Evaluation length	1~5L (selectable)	5L (selectable)	1~5L (selectable)
Tracing length	(1~5)L + 2L (selectable)	5L + 2 L	(1~5)L + 2 L (selectable)
Digital filter	RC, PC-RC, Gauss, D-P		
Max. driving length	17.5mm/0.71inch		
Min. driving length	1.3mm/0.051inch	1.8mm/0.071	1.3mm/0.051inch
Pick-up	Standard pickup TS100, inductive, Diamond stylus radius 5 μ m, angle of stylus 90°		
Accuracy	$\leq \pm 10\%$		
Repeapility	<6%		
Power	Li-ion battery rechargeable		
Dimensions	141mm×56mm ×48mm		
Weight	480g		440g

Standard delivery

- Main unit 1
- TS100 standard pickup 1
- Roughness test plate Ra 1
- Charger 1
- Protection nose 1
- Steel support 1
- Screwdriver 1
- Communication cable 1
- Instruction Manual 1
- TIME Certificate 1
- Warranty card 1

Optional accessories

- TS110 pickup for curved surface
- TS120 pickup for small holes
- TS130 pickup for deep grooves
- TS140 right-angled pickup
- Measuring platform TA610/TA620
- Leveling table TA630/TA631
- Magnetic stand
- Steel adapter ($\Phi 8$)
- Steel adapter (L-attachment)
- Software for TR200/TR220
- Printer TA220S

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System Diagram



TS130/131 pickup for deep grooves
 TS130: Used for roughness testing of deep groove with min. width 2mm, max. depth 3mm or of step with max. height 3mm,
 TS131: Used for roughness testing of deep groove with min. width 3mm, max. depth 10mm or of step with max. height 10mm, working with measuring platform TA610/620.

Optional Pickups



TS100 standard pickup
 With skid for roughness test on plane surface, shaft and inner surface of holes with min. diameter of 22mm.



TS110 pickup for curved surface
 Used for roughness testing of curved surface with min curvature radius 3mm, working with measuring platform TA610/620



TS120 pickup for small holes
 Used for roughness testing of small holes with min. 2mm diameter of inner surface, max. depth 9mm.



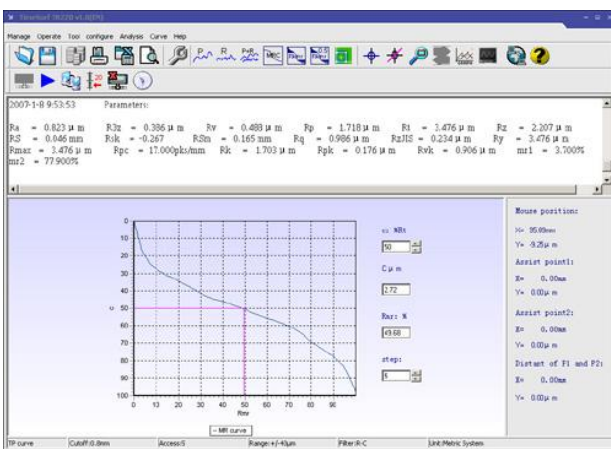
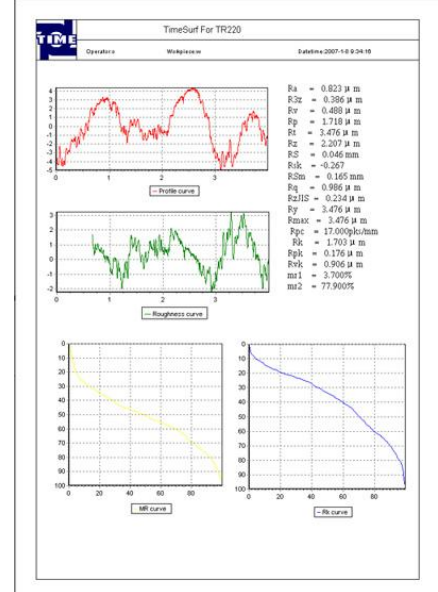
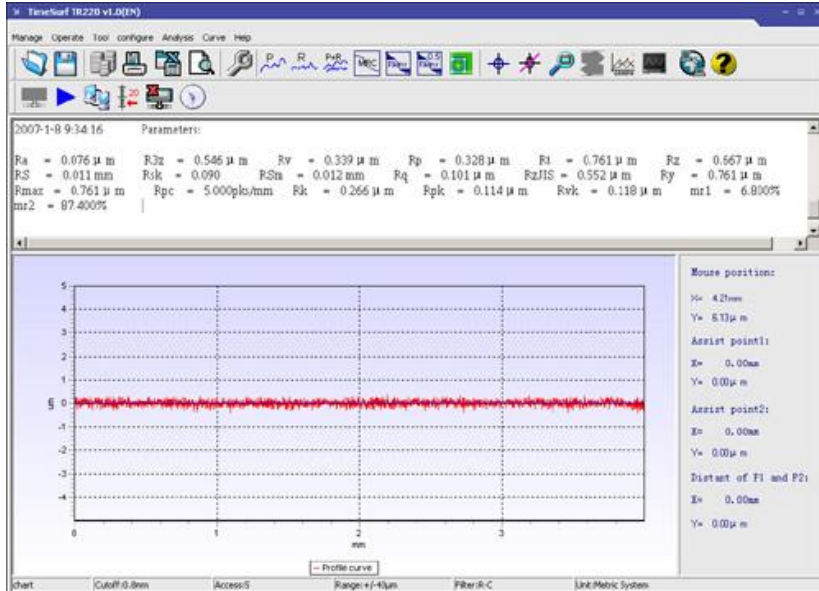
TS140 right-angled pickup
 Comprising right-angled pickup and right-angled transmit rod, used for roughness testing of groove and crank with min. width 7.5mm~20mm, and of steps with max. height 2.5mm, working with TA610/620.



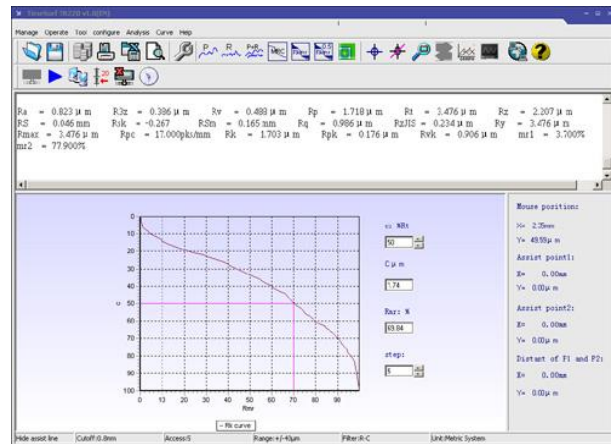
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TIMESurf for TR200/TR220

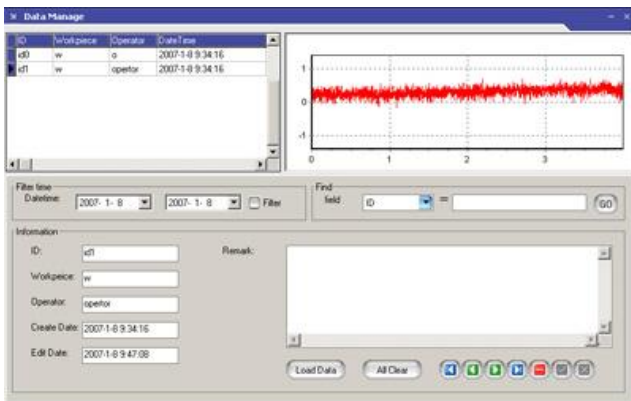
TIMESurf for TR200 and TR220 software works for TIME advanced surface roughness tester TR300 managing, analyzing, printing and searching measured data and graphs



MR Curve



RK Curve



Database management

Online measurement form:

Sample interval time: min

Operator:

Workpiece:

Sample times: times

State:

Start Cancel

Online measurement