

TR-200



TR-200
Surface roughness tester



Features

- High performance instrument
- Easy to operate menu software
- Graphical display on large LCD
- 13 different roughness parameters
- Pick-up stylus position indicator
- Auto-off after 5 minutes, with auto-store
- Selectable language English, German, French, Italian, Spanish and Dutch
- Data output RS-232 to printer TA-230 or PC
- Advanced software available
- Excellent battery power with Li-ion technology
- Optional pick-up for grooves/bores and holes
- Conform to ISO standard, compatible with DIN, ANSI and JIS standard

Technical specifications

Roughness parameter	Ra, Rz, Ry, Rq, Rt, Rp, Rmax, Rv, R3z, RS, RSm, RSk, Rmr, P
Assessed profiles	Primary profile (P), Roughness profile (R), Tp curve (material ratio Mr)
Profile recording magnification	Vv: 200x ~ 20000x Vh: 20x, 50x, 200x
Standard	Conforms to ISO / DIN / JIS / ANSI (menu selectable)
Measuring system	Metric mm, imperial inch
Display resolution	0.001 μ m / 0.04 μ inch
Display	LCD 128 x 64 dot-matrix, with backlight
Dimensions LCD	50mm x 30mm screen
Display features	Detector stylus position indicator, Battery level indicator, Direct display of parameters and profiles, Direct printing, LCD brightness adjustment, Auto-off after 5 minutes with auto-store, Calibration through software (each cut-off)
Display languages	English, German, French, Italian, Spanish, Dutch
Data output	RS-232; direct to printer TA-230 or PC
Range	Ra, Rq : 0.005 μ m - 16 μ m Rz, Ry, Rp, Rt, R3z : 0.02 μ m - 160 μ m RSm, RS : 2 μ m - 4000 μ m Tp : 1-100% (% Ry)
Pick-up measuring range	\pm 20 μ m, \pm 40 μ m, \pm 80 μ m
Cut-off length	0.25mm / 0.8mm / 2.5mm/Auto
Evaluation length Ln	1~5 cut-off (selectable)
Tracing length Lt	(1~5 cut off) + 2 cut-off (selectable)
Digital filter	RC, PC-RC, GAUSS, D-P
Detector	Standard model TS-100, Inductive, Diamond tip radius 5 μ m, Angle of stylus 90°
Bores from diameter	6.0mm, depth 15mm (TS-100)
Power	Li-ion battery rechargeable
Battery capacity	1000mAh (>3000 measurements)
Charger	220V, 50Hz
Operating temperature	0°C ~ 40°C
Dimensions unit	141mm x 56mm x 48mm
Weight	480gr

TR-200
Surface roughness tester



Standard delivery

- Instrument
- Pick-up TS-100
- Roughness test plate Ra
- Protection nose
- Steel support for stand alone use
- Charger 220V, 50Hz
- Screwdriver
- Carrying case
- Data cable
- Manual
- INNOVATEST® certificate

Optional accessories

- Special detectors for grooves/small bores; detector TS-110, detector TS-120
- Extension TSE-A
- Extension TSE-B 90°
- UKAS certified reference standards
- TA-610 test platform
- Steel adapter (ø 8mm)
- Steel adapter for connection to platform TA-610 (L-attachment)
- TA-230 printer
- Dataview software with cable

TSE-A



TS-100/TS-110/TS-120



TSE-B



TA-230 MICRO PRINTER



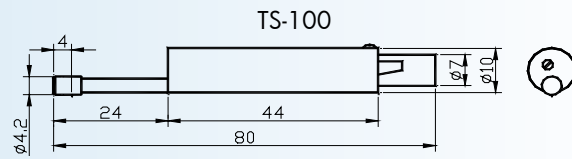
Order details

TR-200 Surface roughness tester with 13 parameters

Pick-ups for TR-200/210/220/300

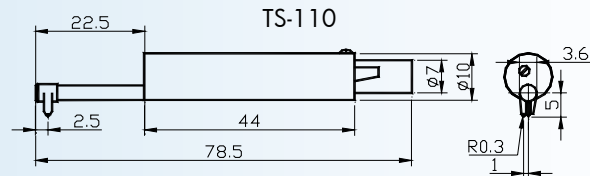
TS100 standard pick-up

Standard pick-up. General use.
With skid for plane surfaces, Shafts and
in bores from $\varnothing 5\text{mm}$.
Maximum depth 22mm.



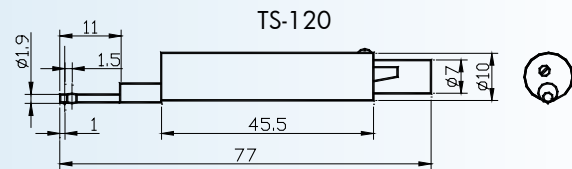
TS110 for curved surface

Pick-up with side skid. For measuring on
convex and concave surfaces. Minimum
curvature radius 3mm. To be used with
measuring stand/platform



TS120 for small holes

Pick-up with mini skid. for measuring in
bores from $\varnothing 2\text{mm}$. maximum bore depth
20mm.



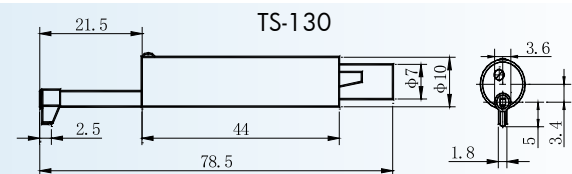
TS140 right-angled pick-up

Comprising right-angled pick-up and
right-angled transmit rod, used for roughness
testing of groove and crank with min. width
7.5~mm20mm and of steps with max.
height 2.5mm, working with TA-610/620

TS-140

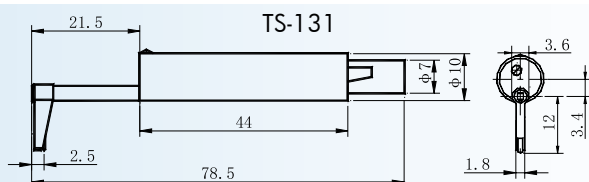
TS130 for deep groove

Pick-up for measuring grooves or steps
below 3mm. Maximum width 2mm. To be
used with measuring stand/platform.



TS131 for deep groove

Pick-up for measuring deep grooves or
steps below 10mm.
Maximum width 2mm. To be used with
measuring stand/platform.



TSE-A extension

Extension rod for all pick-ups.
Length 50mm. Diameter 10mm.

TSE-A



TSE-B extension 90°

Extension rod with angle 90°, to cre-
ate a configuration for finish test on for
instance crankshafts.
Length 70mm x 25mm, diameter 10mm.

TSE-B



Measuring platforms

TA-610 Measuring platform

Features: Lifting the table through rack and the column can be rotate, it is suitable for testing the workpiece which is not convenient to place for improve accuracy.

Specifications: Surface dimensions: 400×250×70mm
Y-axial range: 270mm

TA-620 Measuring platform

Elevating the table through screw, and V shape groove is available, it is suitable for testing tiny workpiece to improve the accuracy.

Specifications: Dimensions: 400×250×70mm
Y-axial range: 300mm±1mm

TA-650 Measuring platform (for TR-300)

Specifications: Dimensions: 600×420×80
Total Height: 695mm
Y-axial range: 300mm±1mm

TA-610
Granite stand



Holder for
attachment of
TR-200/210/220
unit to platform



Measuring supports

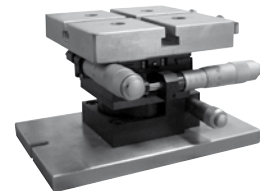
TA-630 Micro measuring support

Specifications: X-axial range: ±12.5mm
Y-axial range: ±12.5mm
Rotate range: coarse adjustment 360, fine adjustment ±5

TA-631 Micro measuring support

Specifications: X-axial range: ±12.5mm
Y-axial range: ±12.5mm
Rotate range: coarse adjustment 360, fine adjustment ±5

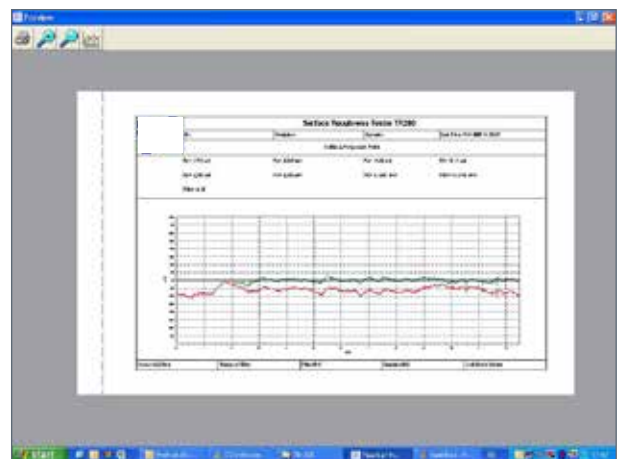
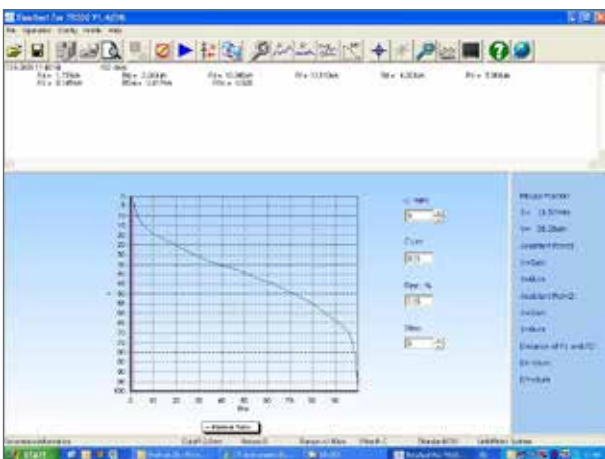
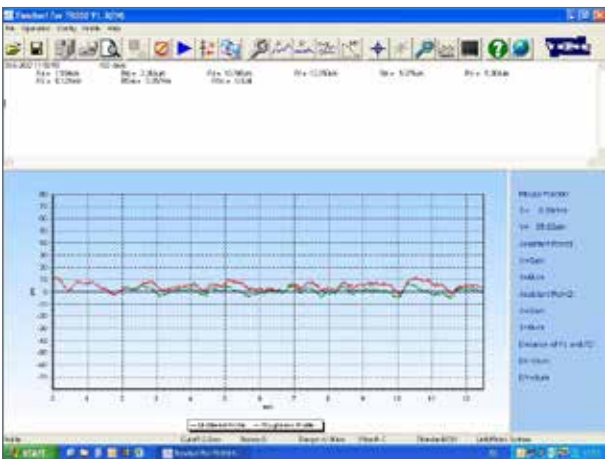
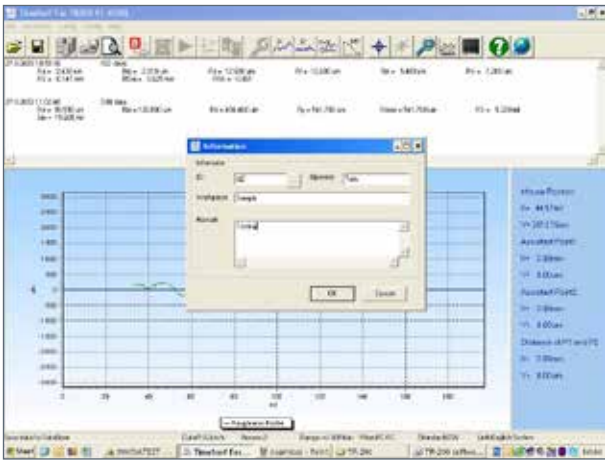
TA-630



TA-631



DataView software TR-200/220



DataView software for TR200/220 works with surface roughness tester TR-200 and TR-220 for managing, analyzing, printing and searching measured data and graphs. This software is designed to complete all the operation without touch any key of TR-200/220. With the software you can see the profile graph more clearly and expediently and store data of many measurement onto your PC.

TA-230 Printer



Features

- Latest model using dot-matrix method, with better reliability and printing quality
- Fast printing and compact size
- Can be used with the following instruments: TH-150/TH-152/TH-154, TR-200/TR-210/TR-220/TR-300, TT-300/TT-300A, TT-210/TT-220/TT-230, TV-300/TV-310/TV-320

Technical specifications

Print method	Dot-matrix
Serial interface	RS-232 (19200, 9600, 4800, 2400, 1200, 600, 300, 150BPS selectable)
Parallel interface	ERC-22 / ERC-09
Ribbon life	1000.000 characters / 250.000 characters
Dimensions	170mm x 110mm x 50mm
Weight	350gr

Represented by:

IN10-209 130215

CORPORATE HEAD OFFICE

INNOVATEST Europe BV **MANUFACTURING, DISTRIBUTION & SERVICE**

Borgharenweg 140
6222 AA Maastricht (The Netherlands)
Phone: +31 43 3520060
Fax: +31 43 3631168
E-mail: info@innovatest-europe.com
Website: www.innovatest-europe.com

BRANCHE OFFICES

INNOVATEST Benelux BVBA **SALES & SERVICE**

Phone: +32 12 779002
Fax: +32 12 779003
E-mail: info@innovatest-benelux.com
Website: www.innovatest-europe.com

INNOVATEST Shanghai Co., Ltd. **ASIA & CHINA SALES & SERVICE**

Building 2, No.123, 1165 Nong Jindu Road,
South Metropolis Industrial Park
Minhang District, Shanghai, P.R. China
Zip code: 201108
E-mail: info@innovatest-shanghai.com
Website: www.innovatest-shanghai.com

Changes in products and/or product specifications can emerge due to new technologies and continuous development.

We reserve the right to change or modify specifications of products without prior notice.

We recommend you to contact our sales office for up-to-date information.

© All rights reserved