Precision is our business.

Product Range

ROUGHNESS MEASURING
CONTOUR MEASURING
OPTICAL SHAFT MEASURING
FORM MEASURING
GEAR MEASURING
CRANKSHAFT AND CAMSHAFT MEASURING
OPTICAL SURFACE INSPECTION
DIMENSIONAL MEASURING MACHINES
STANDARD COMPONENTS
MEASURING SOLUTIONS
DKD CALIBRATION SERVICE
CONSULTATION, TRAINING AND SERVICE

Precision – worldwide

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JENOPTIK-Group.

GRUPPE DREI® 0405

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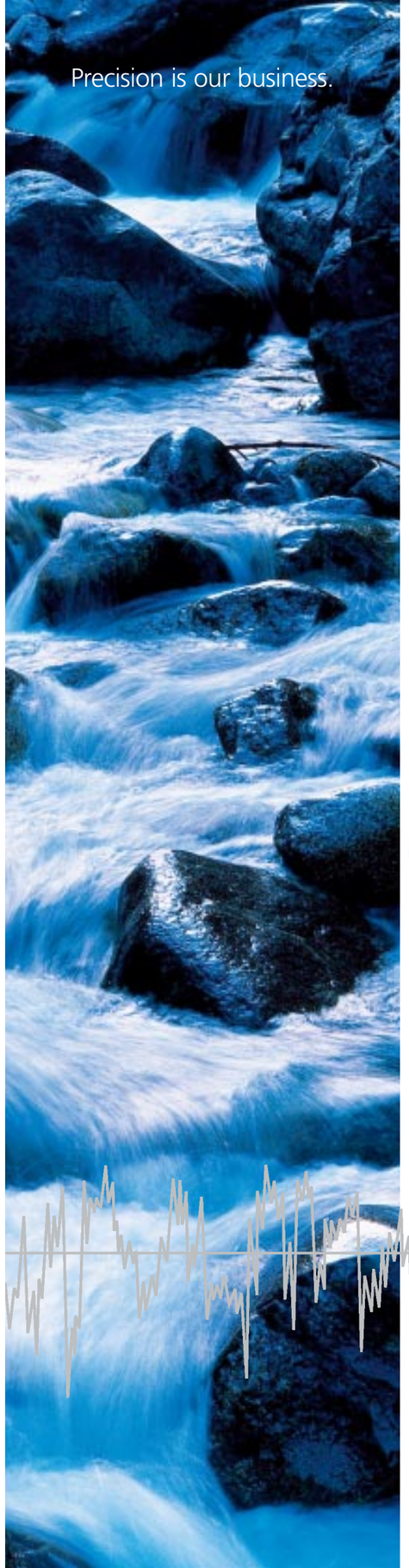
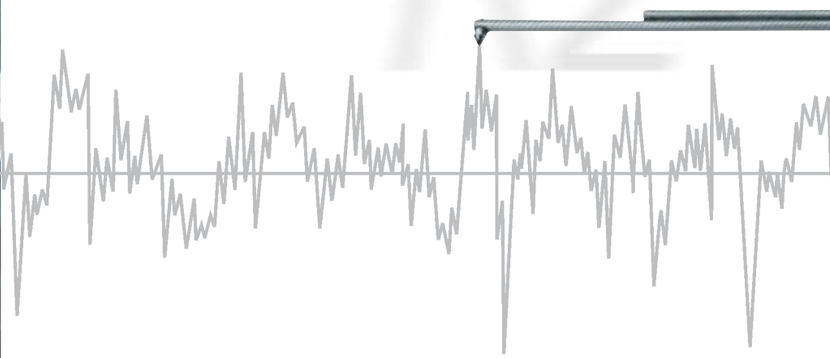


Highly efficient and fit for
the rugged workshop operation

Roughness measurement with the
HOMMEL TESTER W55



JENOPTIK-Group.

Competence in roughness measurement

One step ahead in production and technology

Precision in roughness measurement has a very long tradition at Hommelwerke GmbH. The products of the company's founder Hermann Hommel set standards and revolutionised measuring technology. It is this force of innovation perfected over more than 125 years that continually makes Hommelwerke a standard in precision and quality. The many awards received for quality, performance and innovation speak for themselves.

HOMMELWERKE work to their own competitive advantage because the precision of the measurements and thus the perfection of their products has become a central factor of their success.

Precision is our business – in development, in quality, in uncompromising precision and in our service and training.

HOMMELWERKE is the leading system provider for tactile and non-contact measuring technology. With the HOMMEL TESTER W55 we integrate state-of-the-art technology into your quality assurance.

In workshops, production lines and laboratories. Start up and be in the know – the HOMMEL TESTER W55 supplies precise measuring results quickly and easily. The HOMMEL TESTER W55 also meets the requirements of the latest quality management systems because in addition to being displayed, measurements can also be archived centrally, or printed both locally or via the LAN interface.

Operation is based on true workshop practice. The 10" TFT colour display represents parameters, profile views and measurement conditions clearly in one view. Robust function keys are used for operation and detailed information can be accessed as required with the touch screen.

Professional workshop performance

Performance features

- Compact, efficient evaluation unit for use in the workshop and in production
- Calculation of all common roughness, profile and waviness parameters
- Tolerance monitoring for all parameters
- Representation of P, R and W profiles as well as Abbott curve
- Measuring Programs created by touchscreen
- Management of up to 30 measuring programs
- Integrated statistic functions
- Electronic archiving of measuring results
- Comfortable use for operators by function keys
- Data export in ASCII format
- wavesystem™ – compatible and therefore adaptable with various traverse units, roughness probes and measuring columns

The operation

All the important functions of the HOMMEL TESTER W55 can be operated with the simple menu structure. The instrument is easy to understand, even for operators who only use it occasionally.

The clarity

The large 10" TFT colour display shows all the information in one view. Further information can be accessed with the touch screen as required.

The functionality

The efficient electronics guarantee precise measuring results and also handles difficult measuring problems with considerable ease of operation. Measuring conditions and all common parameters can be set individually.

The design

The robust, enclosed aluminium housing and ergonomic design ensure the HOMMEL TESTER W55 "performs well" in both the workshop and the laboratory.

The data management

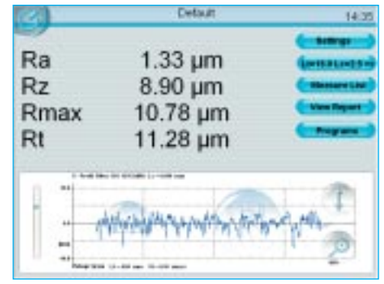
The measuring results are saved in the instrument. The data is transferred to a USB-Memory-Stick or archived directly on a server via the LAN. The data can also be exported to qs-STAT® as an option. Printing is in DIN A4 format through Windows™ printers, either locally or centrally.

The compatibility

The standard interfaces USB, LAN, WLAN, RS232 and CAN-bus allow individual system configuration and make the HOMMEL TESTER W55 compatible with present day and future peripheral devices.

The future

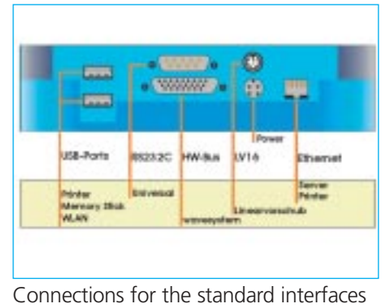
Calculation and display of all common profile, roughness and waviness parameters are all part of the scope of delivery. New, function-oriented parameters such as the dominant waviness in accordance with VDA 2007 are optionally available.



Clear menu structure

Robust aluminium housing

Data export to USB-Memory-Stick



Connections for the standard interfaces

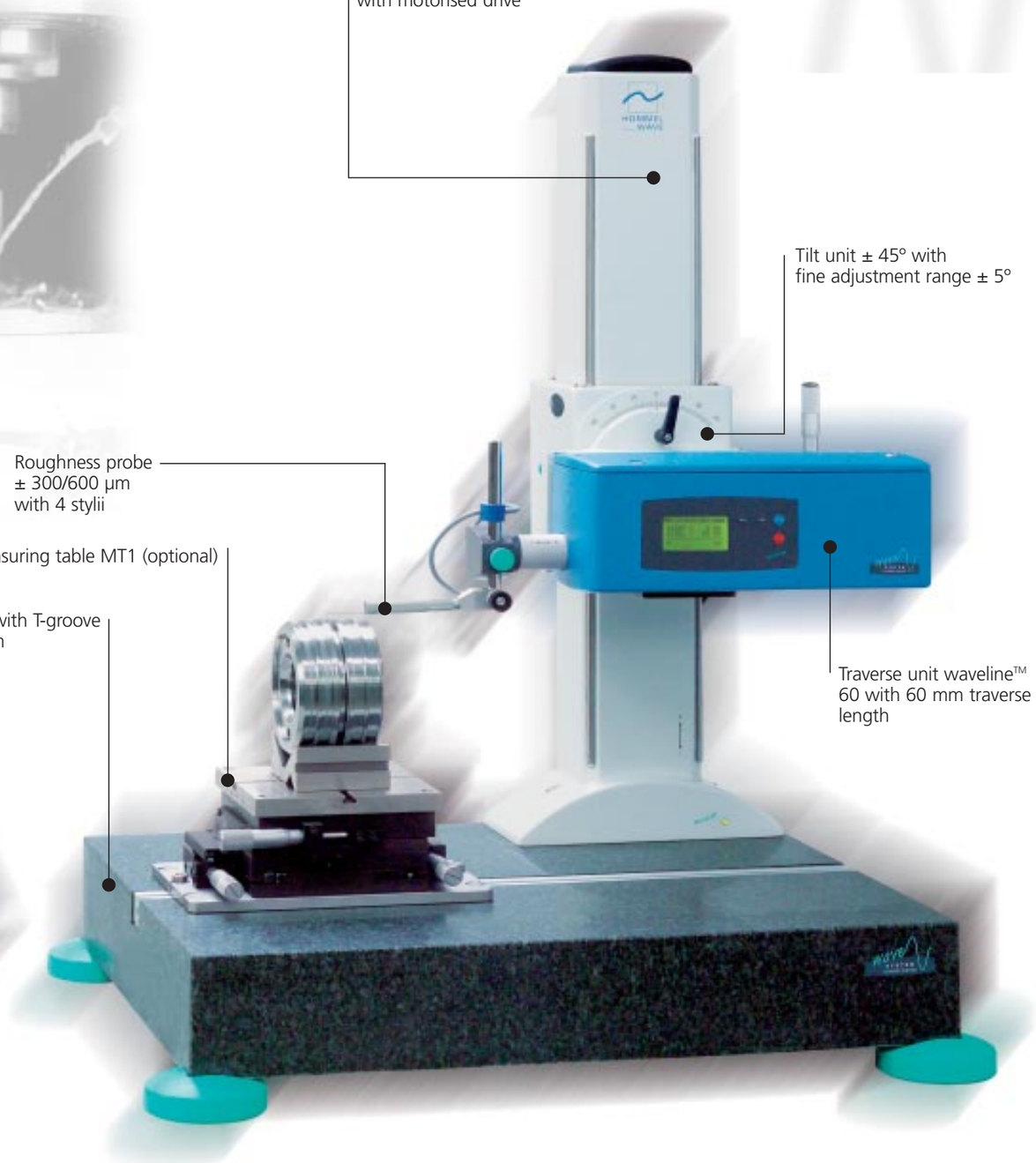
Roughness measuring station HOMMEL TESTER W55 R60-400

Art. 10017077

Universal, measuring station with motorised measuring column for roughness, profile and waviness measurements.

Scope of delivery

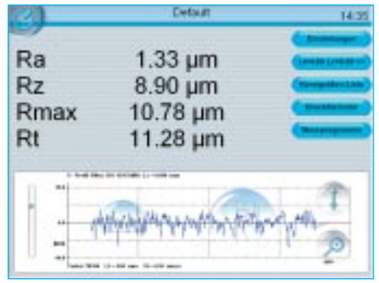
- Evaluation unit HOMMEL TESTER W55
- Granite base with T-groove Dimensions 630 x 500 mm
- Measuring column wavelift™ 400
  - 400 mm motorised travel
  - Optional travel speeds
  - Autostop-function
- Tilting and holding unit for waveline™ 60
  - Coarse adjustment range ± 45°
  - Fine adjustment range ± 5°
- waveline™ 60-traverse unit
  - Traverse length: 60 mm
  - Guide accuracy 0,8 µm/60 mm
  - Traverse speed 0.01 – 3 mm/s
- Roughness standard RNDH 2
- Pick-up set TKU 300/600
  - Measuring range ± 300 µm (with TS2 ± 600 µm)
  - incl. 4 exchangeable probe arms
  - incl. skid and scanner guard



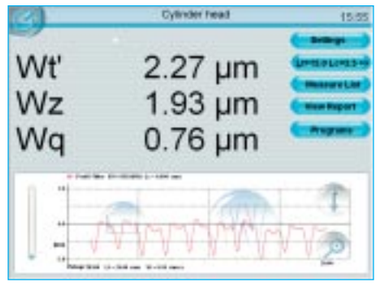
Pick-up set

Evaluation unit HOMMEL TESTER W55

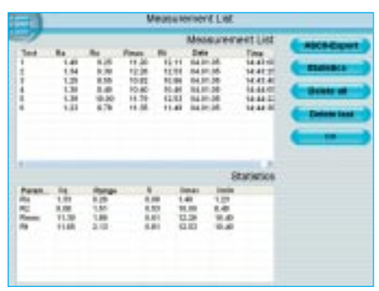
Measuring program selection
Fast selection by icons



Result display
Roughness parameters and profile log



Result display
Waviness parameters and waviness trace



Parameter list and statistics
Data export in Excel

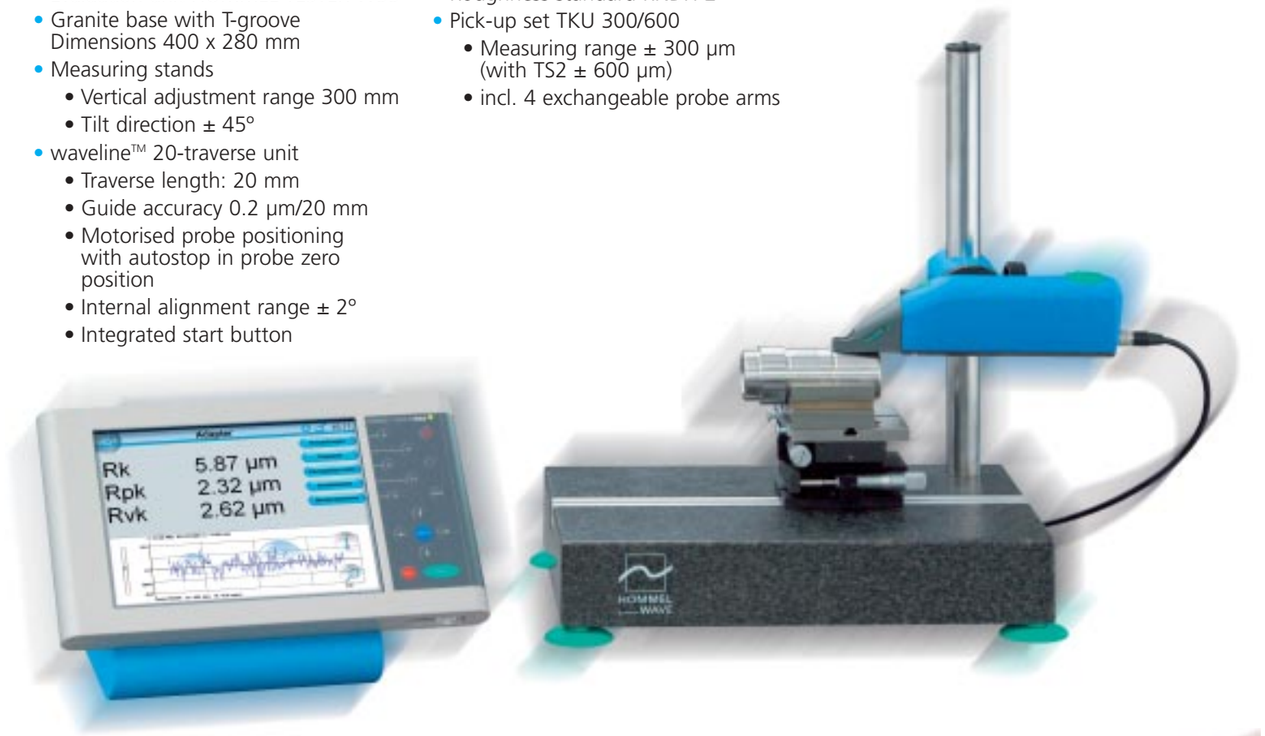
Roughness measuring station HOMMEL TESTER W55 R20-300

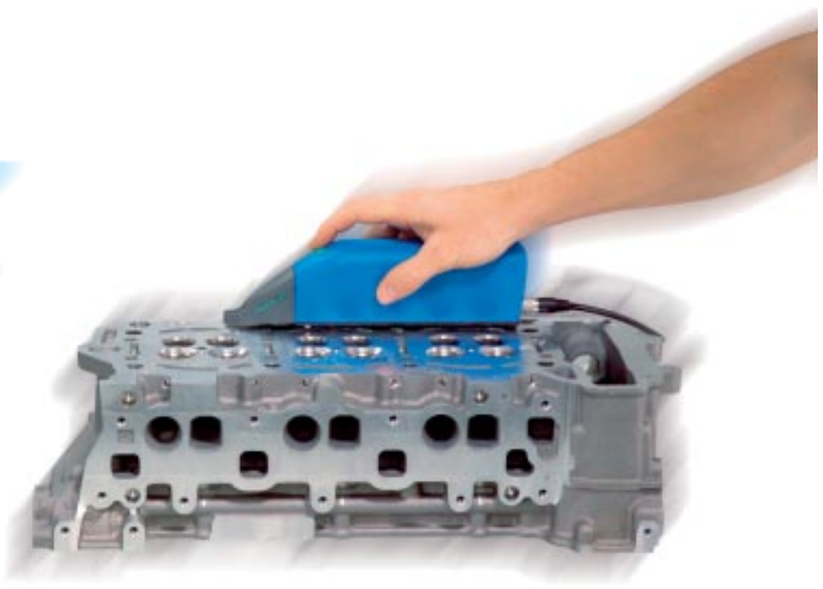
Art. 10017076

Compact measuring station configuration for small to medium-sized workpieces for roughness, profile and waviness measurements.

Scope of delivery

- Evaluation unit HOMMEL TESTER W55
- Granite base with T-groove Dimensions 400 x 280 mm
- Measuring stands
  - Vertical adjustment range 300 mm
  - Tilt direction ± 45°
- waveline™ 20-traverse unit
  - Traverse length: 20 mm
  - Guide accuracy 0.2 µm/20 mm
  - Motorised probe positioning with autostop in probe zero position
  - Internal alignment range ± 2°
  - Integrated start button
- Roughness standard RNDH 2
- Pick-up set TKU 300/600
  - Measuring range ± 300 µm (with TS2 ± 600 µm)
  - incl. 4 exchangeable probe arms



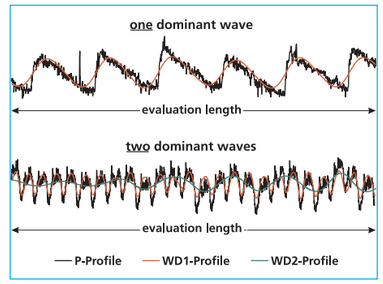


The HOMMEL TESTER W55 compact dimensions allow it to be used for a range of measurement tasks. In connection with the waveline™ 20-traverse unit measurement tasks in production can be performed quickly and easily. A start button integrated in the traverse unit and the ergonomic design ensure safe and easy handling.

Options & technical data

W55 software option Dominant Waviness
Art. 10012251

According to VDA 2007, evaluation of form deviations (wavinesses) on surfaces. Calculated parameters:
WD1t; WD1p; WD1z; WD1a; WD1q; WD1sk; WD1Sm; WS1dq; WD1lw; WD1ku; WD1Pc; WD2t; WD2p; WD2z; WD2a; WD2q; WD2sk; WD2Sm; WD2dq; WD2lw; WD2ku; WD2Pc



W55 software option qs-STAT®-interface
Art. 10012252

Q-DAS ASCII transfer format for local or central storage of results and data in .DFQ-format.

W55 option WLAN Adapter-Set Server
Art. 10012250

Wireless LAN Adapter-Set for wireless connection of the HOMMEL TESTER W55 to a central server, consisting of a USB adapter and an access point.

W55 option WLAN Adapter-Set Printer
Art. 10018677

Wireless LAN Adapter-Set for wireless connection of the HOMMEL TESTER W55 to a printer, consisting of a USB adapter and a wireless printer server.

Technical data HOMMEL TESTER W55

Measurement principle	Tracing method calibrated
Total deviation acc. to DIN 4772	Class 1
Measuring ranges/resolution	± 8 µm/1 nm; ± 80 µm/10 nm; ± 400 µm/50 nm; ± 800 µm/100 nm; ± 8000 µm/1000 nm
Filter: cut-off lengths	0.025; 0.08; 0.25; 0.8; 2.5; 8 (mm); selectable in -2 to +1 cut-off steps; variable from 0.001 to 80 in steps of 0.001
DIN 4768	RC, digitally calculated [mm], cut-off lengths 0.025; 0.08; 0.25; 0.8; 2.5; 8
DIN EN ISO 11562, Part 1, (50 % Gauss)	Gauss (M1) digital cut-off lengths 0.025; 0.08; 0.25; 0.8; 2.5; 8
DIN EN ISO 13565-1	2x Gauss (M2) Rk-parameter, cut-off lengths 0,025; 0,08; 0,25; 0,8; 2,5; 8
ISO 3274/11562	Short-wave cut-off length λs; selectable in steps λc / λs 30; 100; 300
ISO 3274/11562	Form filter λf
Traverse speed vt	lt – assigned 0.05; 0.15; 0.5 mm/s; variable 0.01 - 2.0 mm/s in 0.01 steps
Scan distances lt	0.48; 1.5; 4.8; 15; 48 mm or variable from 0.1 – 120 mm
Traverse lengths lm	0.40; 1.25; 4.0; 12.5; 40 mm or variable cut-off lengths
Cut-off λ [mm]	0.08; 0.25; 0.8; 2.5; 8.0
Roughness parameters: DIN EN ISO 4287	Ra; Rz; Rmax; Rt; Rq; Rsk; lmo; lo; Rdq; da; ln; La; Lq; Rz-ISO; R3z; Rpm; Rp3z; R3zm; Rp; D; RPc; RSm; Rpm/R3z; lr; Rku; tpif; tpia; tpip; tpic; Rt/Ra; Rz1; Rz2; Rz3; Rz4; Rz5; Rmr; Rmr%; Api
Core roughness parameters: DIN EN ISO 13565	Rpk*; Rpk; Rk; Rvk*; Rvk; Mr1; Mr 2; A1; A2; Vo(70%)0.01* Rv/Rk
Profile parameters: DIN EN ISO 4287	Pt´; Pp; Pz; Pa; Pq; Psk; PSm; Pdq; lp; Pku; tpaf; tpaa; tpab; tpac; Pmr0; APa; APa%; Pmr; Pmr%
Waviness parameters: DIN EN ISO 4287	Wt´; Wp; Wz; Wa; Wq; Wsk; WSm; Wdq; lw; Wku
Motif parameters: DIN EN ISO 12085	R; Rx; AR; Nr; W; Wx; AW; Nw; Wte; Tpaf(CR, CL, CF)
Roughness parameters: JIS B – 0601	Rz-JIS; Rmax-JIS
Statistics	(n, x, S, R, max, min) per measuring program from 1 to 999 measurements
Screen and print outputs	Surface characteristic values; statistics; profile position; P-, R-, W-, K-profile; material ratio; measuring conditions; tolerances
Peripheral connections	Linear traverse unit: waveline™ 20; 60; 120; LV16; Measuring columns: wavelift™ 400; 2 x USB on the front, 2 x USB on the rear, LAN 10/100 (RJ45); RS232 (9-PIN-D-Sub)
Power supply	100 V – 240 Volt, 50-60 Hz, 160 VA
Operating temperature without condensation	+10°C to + 45°C, relative humidity max. 85%; ΔT 2°C/h
Storage temperature	-20°C to + 50°C