RT120 RUGO-PROFILOMETER

Best performance in a single instrument

USB connection

The RT120 arises from the need to characterize the roughness and micro profiles present on even the most complex parts with a single machine, thanks to an "all-in-one" logic and the Profile Studio analysis software.

The Profile Studio software is developed to be extremely intuitive and easy to use for the operator; all the functions necessary for the characterization of the profile and roughness are grouped in the tool-bar on the right and are divided into families, each of which has a different color.

Geometrical dimensions and roughness analysis can be entered on the same acquired profile, which coexist in the same screen, guaranteeing the operator the complete analysis of the detail with a single measurement.
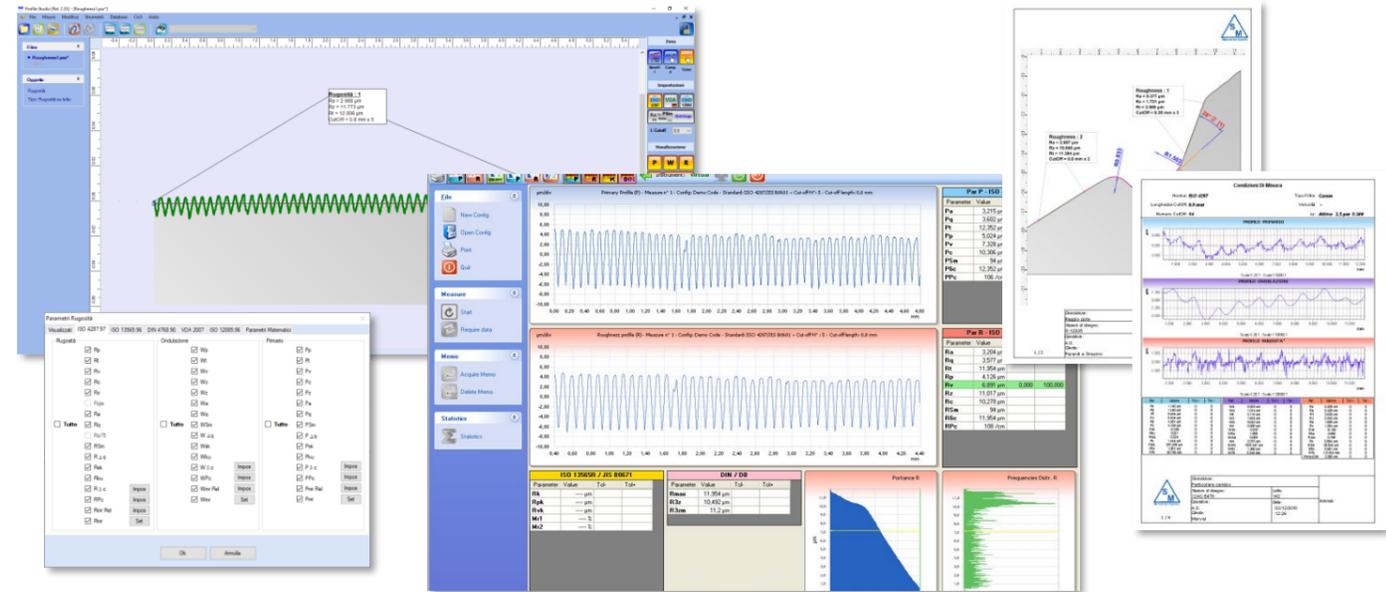
Thanks to the self-comparison function, it is possible to reconstruct all the entities and dimensional tolerances present on a reference profile on a new profile, saving considerable time for the series check.

The roughness parameters are processed according to the most modern standards such as ISO 4287, ISO 13565-1 and -2, ISO 12085, VDA 2007 for a total of more than 70 calculated parameters.

The database integrated in the Profile Studio allows to archive the measurements in an orderly way, guaranteeing the traceability of the single part through the code and the production lot. It is also possible to perform statistical analyzes on the data loaded into the archive, calculating statistical parameters such as standard deviation, mean value, maximum and minimum value, not that display the graph of the distribution and trend of values.

The roughness parameters are processed according to the most current regulations, such as ISO 4287, ISO 13565, ISO 12085, VDA 2007 for a total of more than 70 calculated parameters.

Vice - code: 3.403

The ground vice for clamping the pieces has a useful opening of 48mm and is the perfect accessory to complete the 3 or 4 axis positioner essential for a precise and reliable measurement.

3-axis positioner - code: 2.400

The 3-axis positioner, equipped with sliding on bearings and coupling with "T" slot, allows rapid positioning of the pieces to be measured and thanks to the positioning micrometers, finding the MAX or MIN point of your parts will be very simple thanks to the guided function via software.

4 axis positioner - code: 2.401

The 4-axis positioner, in addition to all the features of the 3-axis, offers the possibility of tilting the work surface by +/- 30°, making it possible to measure grooves or o-ring seats through the dedicated function of joining the profiles.

Calibration standards

The standard equipment includes the one area roughness calibration specimen (code: 6.103). The profile kit, instead, includes the probe and the specimen dedicated to measuring and calibrating the profiles (codes: 2.503 + 6.302).

Probes
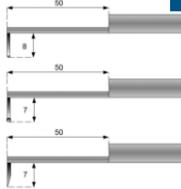
Roughness SB3000Y - code: 2.506 (diamond tip)

Profile SB3000B1 - code: 2.508 (ball tip)

Profile SB3000S - code: 2.503 (chisel tip)

Granite with "T" slot - code: 2.404

The work surface can be enriched with granite with a "T" slot specifically designed to use 3 or 4 axis positioners.
Alternatively, the fixed reference blade for standard granite (code: 2.402) is also available as an accessory.

Profile Studio software for the advanced analysis of profiles and roughness - code: 1.407

Technical data and dimensions

Product code:	RT120 (code: 2.100)
Calculated parameters:	
ISO 4287:09	Rp, Rt, Rv, Rc, Rz, Rzjis, Ra, Ra75, RSm, RΔq, Rsk, Rku, Rδc, RPc, RmrRel Wp, Wt, Wv, Wc, Wz, Wa, Wq, WSm, WΔq, Wsk, Wku, Wδc, WPc, WmrRel Pp, Pt, Pv, Pc, Pz, Pa, Pq, PΔSm, Pq, Psk, Pku, Pδc, PPc, PmeRel
ISO 13565:96	Rk, Rpk, Rvk, Mr1, Mr2, A1, A2
DIN 4768:90	Ry5, Rmax, R3z, R3zMax, PtDIN
ISO12085:98	Pt, R, AR, Rx, Wte, W, AW, Wx, Rke, Rpke, Rvke
VDA 2007	WD, WDc, WDt, WDSm
Accuracy class:	1° ISO/DIN
Measuring range in X:	120 mm (4,72 in)
Measuring range in Z:	3 mm (0,12 in) o 5 mm (0,39 in)
Resolution in X:	0,1 μm (0,02 μin)
Resolution in Z:	0,1 nm (0,004 μin)
Measuring speed:	0,25 – 0,5 – 1 – 2 mm/s (0,01 – 0,02 – 0,04 – 0,08 in/s)
Tip size:	Diamond cone angle 60 ° closing radius 2 μm (78 μin)
Column stroke:	320 mm (12.6 in) positioning column
CNC functions:	Automatic CNC measuring and positioning cycles with self-comparison
Connection:	USB interface to Windows PC ©
Software:	Profile Studio
Languages:	Italian, French, English, German, Spanish, Portuguese and Slovenian
Dimensions:	946 x 568 x 681 mm (L x P x H)
Total weight:	50 kg (92 lbs)
Power supply:	110-240 V ; 50-60 Hz