

Celestis NOVA surface roughness tester

TECHNICAL SPECIFICATIONS

- Measurement range** Ra, Rq: 0,025-16 µm/1.000-629.9 uinch
Rz, Rt: 0,020 – 160.0 µm/0.780-6299 uinch
- Accuracy** < ± 10% (DIN 4772 Class 2.)
- Fluctuation of display value** < ± 6%
- Max. contact peak radius** 10 µm
- Cutoff length** 0,25 mm; 0,8 mm; 2,5 mm
- Greatest resolution** 0,001 µm
- Data output** RS-232 port
- Display** LCD display
- Power** Li-ion battery
- Overall dimensions** 140x57x48 mm
- Weight** ~420 g



! When measuring surface roughness, a sensor is placed on the surface and then uniformly slides along the surface by driving the mechanism inside the tester. The sensor gets the surface roughness by the sharp built-in probe. This roughness causes the displacement of the probe which results in change of inductive amount of induction coils so as to generate analogue signal, which is in proportion to the surface roughness at output end of phase-sensitive rectifier. The digital signal processor processes and calculates then outputs the measurement results on LCD.

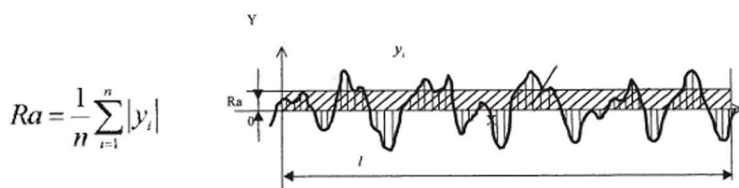
ATTRIBUTIONS

- Well-readable, large LCD display
- Easy-to-operate
- In accordance with ISO, DIN, JIN and ANSI standards
- RS-232 output (optional data cable and software)

ROUGHNESS PARAMETERS

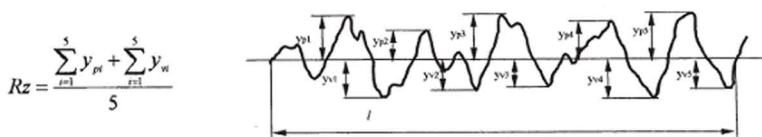
Ra – average roughness

The average distance measured between the points of the surface and its midline along the cutoff length.



Rz – maximal roughness

Rz is the mean of the five highest and lowest value of the roughness function along the length of measurement.



RECOMMENDED CUTOFF LENGTHS

Ra (µ m)	Rz (µ m)	Cutoff length (mm)
>5~10	>20~40	2.5
>2.5~5	>10~20	
>1.25~2.5	>6.3~10	0.8
>0.63~1.25	>3.2~6.3	
>0.32~0.63	>1.6~3.2	0.25
>0.25~0.32	>1.25~1.6	
>0.20~0.25	>1.0~1.25	
>0.16~0.20	>0.8~1.0	
>0.125~0.16	>0.63~0.8	
>0.1~0.125	>0.5~0.63	
>0.08~0.1	>0.4~0.5	
>0.063~0.08	>0.32~0.4	
>0.05~0.063	>0.25~0.32	
>0.04~0.05	>0.2~0.25	
>0.032~0.04	>0.16~0.2	
>0.025~0.032	>0.125~0.16	
>0.02~0.025	>0.1~0.125	

ACCESSORIES

- Surface roughness tester - 1 pc.
- Standard probe - 1 pc.
- Testing block - 1 pc.
- Adapter - 1 pc.
- Carrying case- 1 pc.
- User's Manual