

Celestis NOVA surface roughness tester

## TECHNICAL SPECIFICATIONS

- Measurement range** Ra, Rq: 0,025-16 µm/1.000-629.9 µinch  
Rz, Rt: 0,020 – 160.0 µm/0.780-6299 µinch
- Accuracy** < ± 10% (DIN 4772 Class 2.)
- Fluctuation of display value** < ± 6%
- Max. contact peak radius** 5 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 (rechargeable)
- Overall dimensions** 140x57x48 mm
- Weight** ~420 g



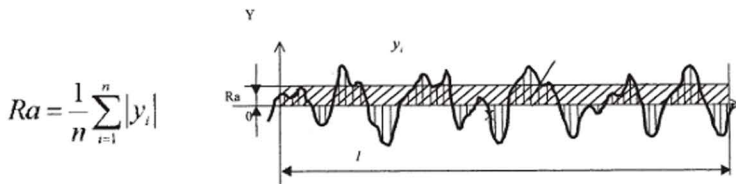
**!** When measuring surface roughness, a sensor is placed on the surface and then uniformly slides along the surface by driving the mechanism inside the tester. The sensor gets the surface roughness by the sharp built-in probe. This roughness causes the displacement of the probe which results in change 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

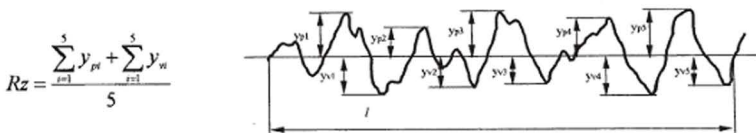
- Well-readable, large LCD display
- Easy-to-operate
- Wave filtering methods: RC, PC-RC, GAUSS and D-P
- In accordance with ISO, DIN, JIN and ANSI standards
- Data memory storing up to 7 memory groups
- RS-232 output (optional data cable and software)

## ROUGHNESS PARAMETERS

**Ra – arithmetical mean deviation of roughness**  
Arithmetic value of mean deviation of profile within sampling length.



**Rz – ten point height of irregularities**  
The average of the sum of five maximum profile peaks and the average of five maximum profile valleys within the sampling length.



## 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.
- Ra testing block - 1 pc.
- Adapter - 1 pc.
- Carrying case- 1 pc.
- User's Manual

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