

Surface Roughness Tester KR-220



MAIN FEATURE

- ❖ Stylish design with plastic shell, inspired by “TRANSFORMERS”;
- ❖ Using the simple and clear buttons to operate;
- ❖ Using DSP chip to control and data processing, high speed, low power consumption;
- ❖ 160µm Large measurement range;
- ❖ Compatible with ISO, DIN, ANSI, JIS national standards;
- ❖ 4 Profile Filter: Gauss RC PC-RC DP
- ❖ 128 × 64 dot matrix display, Bright OLED , no viewing angle;
- ❖ Intuitive and rich display information, can display all of the parameters and graphics, device states, battery indicator;
- ❖ Large capacity data storage, can store 100 item of raw data and wave forms;
- ❖ Built-in lithium-ion rechargeable battery and control circuit, high capacity, no memory effect;
- ❖ more than 20 hours continuous working time ;
- ❖ Real-time clock settings and display, convenient data recording and storage;
- ❖ With automatic sleep, automatic shutdown power-saving features;
- ❖ Include PC software, can be connected to a computer and printer;
- ❖ All parameters can be printed or print any of the parameters which set by the user;

RANGE

Parameter	Range
Ra Rq	0.005µm -16µm
Rz R3z Ry Rt Rp RV	0.02µm -160µm
Rsk	0 -100%

Rs Rsm	0.02-1000μm
Rmr (tp)	0 -100%

TECHNICAL DATA

Name		Content
Measureme nt Range	The Z axis (vertical)	160μm
	The X axis (horizontal)	17.5mm/ 0.69"
Resolution ratio	The Z axis (vertical)	0.002μm/±20μm
		0.004μm/±40μm
		0.008μm/±80μm
Measureme nt item	22 roughness parameters	Ra Rz Rq Rt Rp Rv R3z R3y Rz(JIS) Rs Rsk Rsm Rku Rmr Ry Rmax Rpc Rk Rpk Rvk Mr1 Mr2
	Standard	ISO4287, ANSI b46.1, DIN4768, JISb601
	Graphic	Material ratio curve of the profile
Filter		RC,PC-RC,Gauss,D-P
The sampling length(/r)		0.25, 0.8, 2.5mm
Assessment length (/n)		Ln= /r×n n=1~5
Sensor	Principle	Differential Inductance
	Stylus	Natural Diamond, 90°cone angle, 5μm tip radius
	Force	<4mN
	Skid	hard alloy , Longitudinal radius 40mm
	Traversing speed	/r=0.25, Vt=0.135mm/s
		/r=0.8, Vt=0. 5mm/s
		/r=2. 5, Vt=1mm/s
		Return Vt=1mm/s
Accuracy		±(5nm+0.1A) A: Ra of calibration test block
Repeatability		Not greater than 3%
Residual profile		Not greater than 0.010μm
Power supply		Built-in 3.7V 850mAh Lithium ion, Charger :Input AC100-240_50/60Hz Output: DC5V, 1000mA/3hour
Working Time		More than 20 hours
Outline dimension L×W×H		158×63.5×46mm
Weight		About 300g
working Environment		Temperature: - 20℃ ~ 40℃ Humidity: < 90% RH
Store and Transportation		Temperature: - 40℃ ~ 60℃ Humidity: < 90% RH

STANDARD SENSOR

The standard sensor for this instrument is the small hole sensor, it can directly measure roughness for flat surface when this flat surface size is greater than the main unit with sensor, otherwise we recommend combination with KA520 or KA620 platform or any other suitable height adaptor. Also note leveling is important.

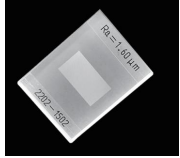
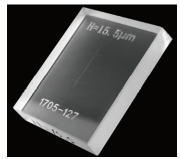
STANDARD DELIVERY

ITEM	QTY
Host	1 PC
Small Hole Sensor KS100	1 PC
Standard Calibration Block	1 PC
Bracket for Calibration Block	1 PC
Adjustable Support	1 PC
Power Charger	1 PC
USB Cable	1 PC
PC Software	1 PC
User manual	1 PC
Instrument case	1 PC
Warranty	2 Years

RELATED OPTIONAL ITEMS

Image	Description
	KS55 - Extending Rod , Extending the length of sensor (extending 50mm) , can add 3 pieces in maximum.
	KS90 - Right Angle Rod , change the direction of sensor to make it move in transverse , mostly for surface of particular groove such as crankshaft etc.
	KS100 - Small Hole Sensor , for most of the plane, inclined plane, cone work piece, and measures in holes of a diameter $>5\text{mm}$ and a depth $<15\text{mm}$. Except for flat surface, the other measuring we recommend KA520, KA620.
	KS110 - Curved Surface Sensor , for convex or concave surfaces with a curvature radius of 3 mm or more. Need platform or other height adaptor
	KS120 -very small hole Sensor , in holes of a diameter $>2\text{mm}$ and a depth $<9\text{mm}$. Need platform or other height adaptor

	KS130 - Groove sensor , measuring in grooves with a width greater than 3 mm and a depth less than 3.2mm, the distance from the stylus tip to the front edge is 3mm. Need platform or other height adaptor
	KS160 - Axe type Sensor , measuring in grooves with a width greater than 3 mm and a depth less than 3.2mm, the distance from the stylus tip to the front edge is 1.6mm. Need platform or other height adaptor
	KS131 - Deep Groove Sensor , in grooves with a width greater than 3 mm and a depth less than 10 mm. and measures steps less than 10mm in height. Need platform or other height adaptor
	KS131P - Narrow Stylus Curved Surface Sensor , in grooves with a width > 1.5 mm and a depth < 7 mm. and measures steps less than 10mm in height. Need platform or other height adaptor
	KS132- 15mm Groove & Curved Surface Sensor , in grooves with a width > 3 mm and a depth < 15 mm. Need platform or other height adaptor
	KA520 -Metal Substrate Working platform , elevating, convenient and stable for test process. 1. Height Adjustable: 200 ± 1 mm 2. Return error: $\leq 1/6$ round of lifting wheel 3. Base Size: 330mm $\times$ 295mm $\times$ 12mm 4. Rotation angle: 80degrees Packing Size & weight: 42*21*15cm 5KG
	KA620 -Marble Substrate Working Platform , elevating, convenient and stable for test process. With V block 1.Height Adjustable: 300 ± 1 mm, 2.Return error: $\leq 1/6$ round of lifting wheel 3. Marble Size: 400mm $\times$ 250mm $\times$ 70mm, 4.Rotation angle: 80 degrees Packing Size & weight: column 54*24*15cm, 4.5kg; marble base 43.5*28.5*10cm ,23kg
	Height Gauge , adjust testing height and angle. Especially suit for split type surface roughness tester, allows more flexible and firm measurement, Adjustable maximum height: 300mm.
	Magnetic Stand , arm length: about 200mm including joint. The column: about 200mm in height including base. Adjustable maximum height: 150mm Adaptor rod(the part attached to the tester) around $\phi 8$ mm

	Roughness Calibration Block Multi-engraved lines (Square Wave) Made by optical glass, with high hardness, high accuracy standard roughness value, anti-scratch, has longer life than metal roughness block. Meet standard GB/T19067.1-2003 and ISO5436-1:2000 Approximation: Ra=0.1 μ m, 0.4 μ m, 0.8 μ m, 1.6 μ m, 3.2 μ m; 6.3 μ m Customized Value and Sine Wave available, welcome to inquire.
	Roughness Calibration Block Single engraved lines Meet standard GB/T19067.1-2003 and ISO5436-1:2000 Approximation: H10-20μm (roughness tester use filter D-P, test RT value) Customized Value available, welcome to inquire.
	Roughness Comparator (30 pcs/set) This set contains standards of the six most important machining methods in the prevalent "AA" values. These surface roughness is used to compare and determine the degree of the surface finish by comparison method and eye estimation or magnifying glass.The surface rough contrast blocks is made of 45 super carbon steel except the GCr15 which is using to plat lapping the sample block. All 30 specimen are calibrated in u"AA (Arithmetical Average) and in the metric equivalents um Ra.
	Mini thermal printer External printer, connect by USB interface, the Baud rate will be set accordingly for connecting tester before delivery. suitable for our surface roughness tester, hardness tester, thickness gauge. Paper Roll length: 57mm(56.18mm)Roll Diameter : $\varnothing$ = 30 mm