



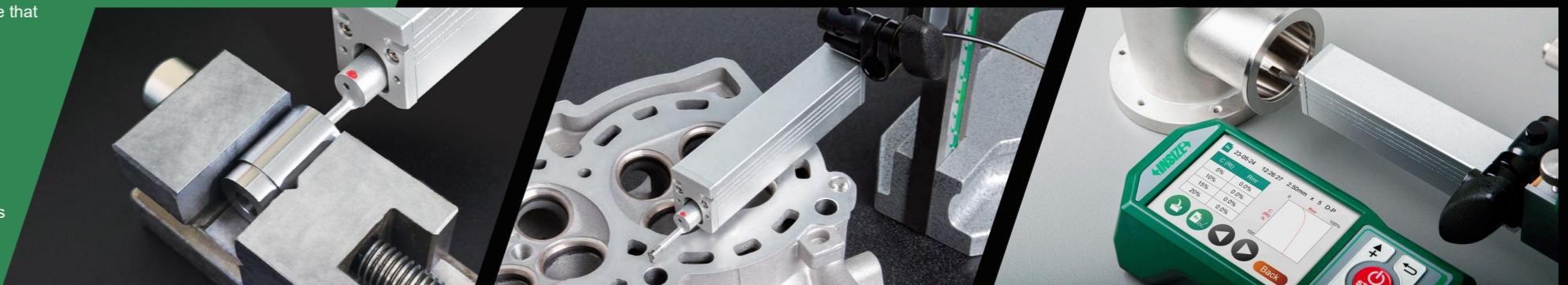
ROUGHNESS TESTERS (SEPARABLE TYPE)

CATALOGUE NO. ISR-E01



In precision-driven industrial environments, surface quality is not abstract, it is the microscopic language that defines performance, lifetime, and reliability. ISR-C300 makes this language clear, accessible, and fully reliable, anytime, anywhere.

Surface roughness defines friction, sealing, wear resistance and quality, serving as a key metric in manufacturing and material research. ISR-C300 roughness tester offers stable, accurate measurements to meet diverse on-site demands, setting a new standard for industrial surface quality.





PRODUCT ADVANTAGES

Decode material surface characteristics and monitor processing quality. The ISR-C300 roughness tester adapts to complex measurement scenarios with efficient on-site operation, accurately capturing surface micro-variations to support quality control and scientific innovation.



Intuitive Control



Data Transmission



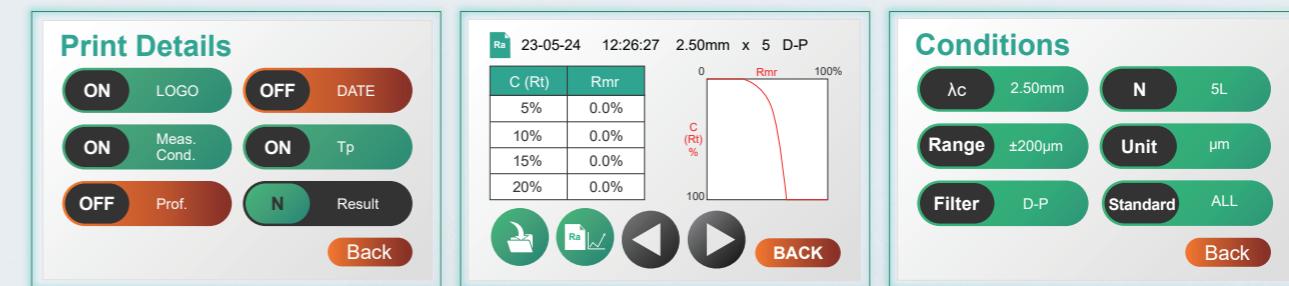
Diverse Measurements



Accurate Measurement

01. Intuitive Control

Roughness tester adopts user-friendly touchscreen design with 480×320 TFT color large screen, wide viewing angle without blind spots. It supports dual display of numerical values and graphics, showing all parameters and measurement data clearly for more intuitive and efficient operation.



02.

Data Transmission

Supports three connection methods: wireless, Bluetooth and USB, enabling measurement data export to computer Excel. It allows device control via mobile and PC, with real-time result viewing, parameter adjustment and historical data tracing. It satisfies diverse operation and data management demands in laboratories, workshops and other scenarios, delivering more convenient, efficient and intelligent detection.



Wireless



USB



Bluetooth



Optional wireless/Bluetooth receiver delivers stable signal and flexible operation for workshop use. Enables paperless data collection & wireless transmission, minimizing errors and improving efficiency. Supports real-time data storage, traceability and management, building a reliable digital quality system.

ISR-C300WL

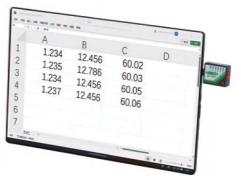
Wireless receiver ensures fast, accurate on-site data collection and seamless transmission to PCs and mobile devices.



Computer



ipad



Mobile phone



ISR-C300/ISR-C301

Bluetooth receiver with wired/wireless dual-mode supports EXCEL export and simultaneous multi-data transmission.



Bluetooth transmission



Wired transmission



03.

Diverse Measurements

Split design with various optional probes ensures flexible measurement, easily handling surface roughness testing for complex workpieces.

It accurately measures flat surfaces, external cylinders, inner holes, grooves and other profiles, overcoming the limitations of traditional integrated instruments.

Flexibly fitting workpieces at multiple angles and positions, it enables on-site in-situ inspection without moving large workpieces.

Featuring easy operation and exceptional stability, the product is widely applied in machining, molds, bearings, automotive components and precision hardware. It realizes true multi-purpose full-range measurement to meet the efficient, reliable and diverse surface roughness inspection demands of industrial applications.

» **Transverse Rod:** Transverse measurement

» **Extension Rod:** Increase the working length of the probe

» **Small Hole Probe:** For flat, shaft & inner hole measurement ($\varnothing > 5\text{mm}$, depth $< 20\text{mm}$)

» **Tiny Small Probe:** For flat, cylindrical workpieces & inner holes ($\varnothing > 2\text{mm}$, depth $< 9\text{mm}$)

» **Deep Groove Probe:** For grooves (width $> 3\text{mm}$, depth $\leq 10\text{mm}$), steps (height $< 10\text{mm}$), or flat & cylindrical surfaces

» **Deep Groove Probe:** For grooves (width $> 3\text{mm}$, depth $\leq 15\text{mm}$), steps (height $< 15\text{mm}$), or flat & cylindrical surfaces



Plane



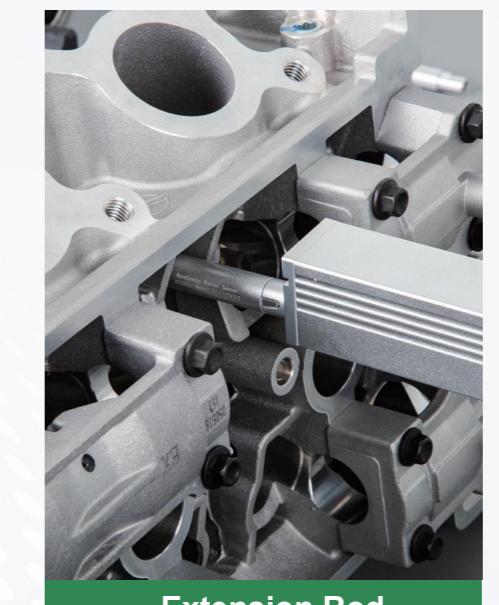
Small Hole



Groove



Cylindrical Surface



Extension Rod



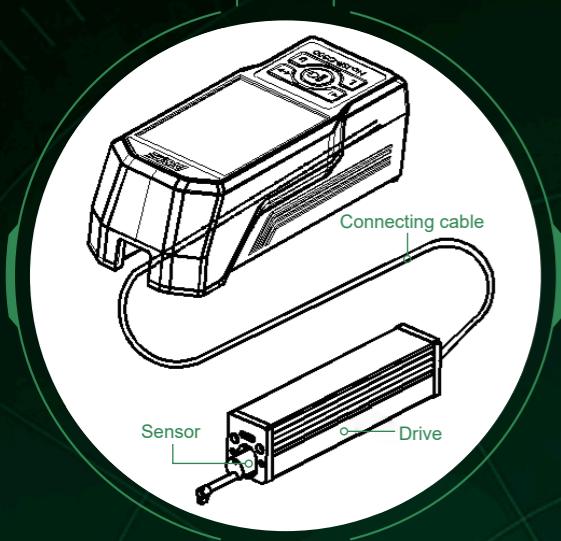
Transverse Rod



04.

Accurate Measurement

With dedicated connecting cable, high-performance drive and high-precision probe, the system ensures stable transmission, precise control and efficient data acquisition for reliable, high-accuracy measurement.

**Full-featured:**

Meet ISO, DIN, ANSI, JIS standards.

Large measuring range & flexible multi-parameter options.

Intuitive display of all parameters and graphics.

DIN

ISO

ANSI

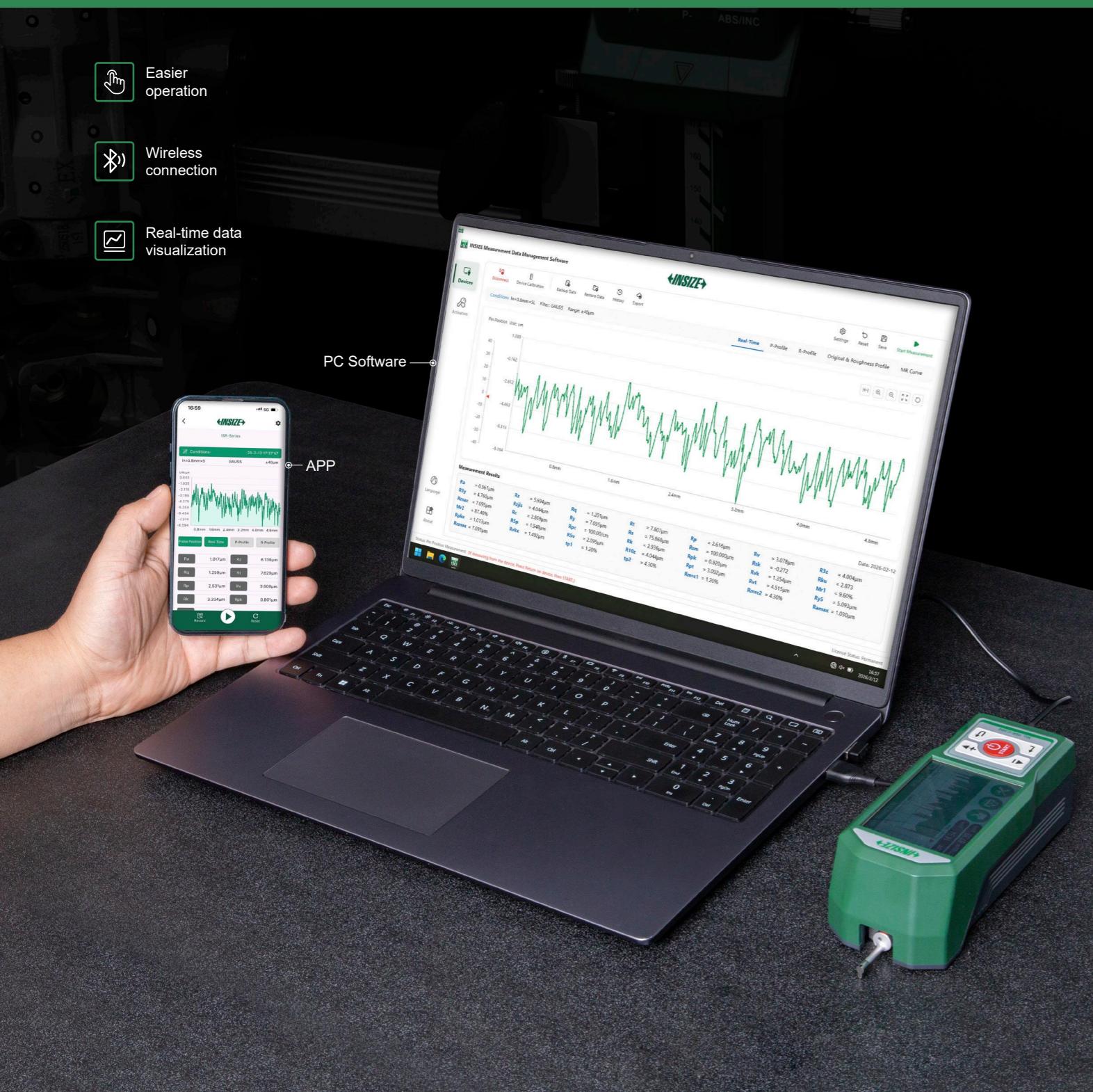
JIS

SOFTWARE INTRODUCTION

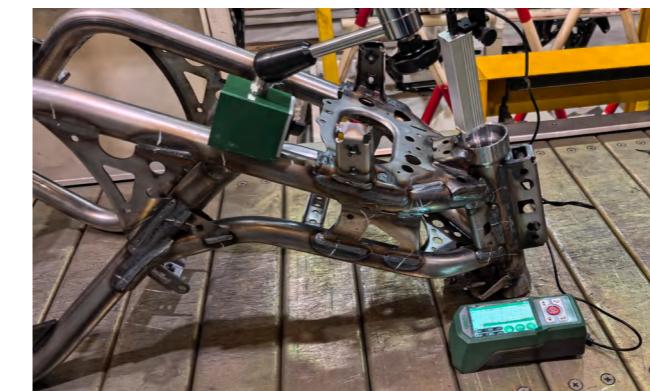
Connect to mobile apps and PC metrology software via USB/Bluetooth.

Retain portability while unlocking data processing, standardized reporting, quality traceability and digital management.

USB delivers industrial-grade stability; Bluetooth enables wireless on-site testing for higher efficiency and accuracy.



APPLICATION SCENARIOS



► Heavy Workpiece

Heavy workpieces cannot be transported to the laboratory, portable design enables on-site measurement without moving the workpiece, avoiding the limitation of benchtop instruments.



► Confined Space

Portable roughness testers are the core equipment for confined-space inspection, widely used in complex working conditions including engine cylinder bores, turbine blades, bearing inner bores and mold cavities.



► Production Workshop

In industrial production, rapid acquisition of measurement results and timely feedback on product surface roughness help adjust production processes promptly and ensure product quality.

TECHNICAL SPECIFICATIONS

SPECIFICATION

Code	ISR-C300	ISR-C301	ISR-C300WL
Measuring force	4mN	0.75mN	4mN
Stylus radius/angle	5µm/90°	2µm/60°	5µm/90°
Parameters			Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz(JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax, R5p, R5v, R10z, Rpt, Rvt, Ry5, tp1, tp2, Rmrc1, Rmrc2, Rpkx, Rvkx, Ramax, Rzmax
Probe type			inductive
Stylus material			diamond
Range	X axis	17.5mm	
	Z axis	400µm (-200µm~200µm)	
Accuracy			
±10%			
Resolution (Ra)			
0.001µm			
Measuring unit			
µm/µin			
Cut off			
0.25/0.8/2.5mm			
Number of cut-offs			
1~5			
Moving speed			
0.135mm/s, 0.5mm/s, 1mm/s			
Memory			
100 measurement results			
Output		USB and bluetooth**	USB and Wireless*
Power			
built-in rechargeable battery			
Dimension (L×W×H)			
158×64×52mm			
Net weight			
400g			

* Wireless Optional Receiver needed: code 7315-2/3/6/7/8/9

** Bluetooth Optional Receiver needed: code ISR-C300-RECEIVER

STANDARD DELIVERY

Main unit	1 pc
Standard probe (included in ISR-C300)	1 pc
Standard probe (included in ISR-C301)	1 pc
Calibration block and support	1 pc of each
Connecting cable	1 pc
Magnetic stand adapter	1 pc
Adjustable stand	1 pc
Support for flat surface	1 pc
Touch pen	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Standard probe	ISR-C300-PROBE
Standard probe	ISR-C301-PROBE
Small hole probe	ISR-C002-PROBE
Tiny hole probe	ISR-C002-SBP
Extension rod	ISR-C002-ER
Extension rod	ISR-C002-ER100
Transverse rod	ISR-C002-TR
Deep groove probe	ISR-C002-DGP
Deep groove probe	ISR-C002-DGP1
Bluetooth printer***	ISR-C002-PRINTER
Height gauge adapter	ISR-C300-LB1
Bluetooth receiver	ISR-C300-RECEIVER
Receiver	7315-2/3/6/7/8/9
SPC cable	ISR-C300-SPC
Support for cylindrical surface	ISR-C300-COVER2
Light duty test stand	ISR-C002-STAND1
Heavy duty test stand	ISR-C002-STAND

***ISR-C300WL supports only wired connections to Bluetooth printer

STANDARD ACCESSORIES

height is adjustable (40mm)	Ø8mm	can be installed on magnetic stands
adjustable stand (included)	magnetic stand adapter (included)	support for flat surfaces (included)

OPTIONAL ACCESSORIES

maximum workpiece height is 310mm	maximum workpiece height is 220mm	9x9mm can be installed on height gauges	support for cylindrical surfaces (optional)
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Optional probes: recommended for use with height gauges or stands

standard probe, 5µm/90° (included in ISR-C300) code ISR-C300-PROBE	standard probe, 2µm/60° (included in ISR-C301) code ISR-C301-PROBE (When Ra<0.5µm, the measurement accuracy with this probe is better)	small hole probe, 5µm/90° (optional), code ISR-C002-PROBE
extension rod (optional), code ISR-C002-ER	extension rod (optional), code ISR-C002-ER100	tiny hole probe, 5µm/90° (optional), code ISR-C002-SBP
probe extension rod	probe extension rod	probe extension rod
transverse rod (optional), code ISR-C002-TR	transverse rod (optional), code ISR-C002-TR	transverse rod (optional), code ISR-C002-TR
9x9mm can be installed on height gauges	9x9mm can be installed on height gauges	9x9mm can be installed on height gauges



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