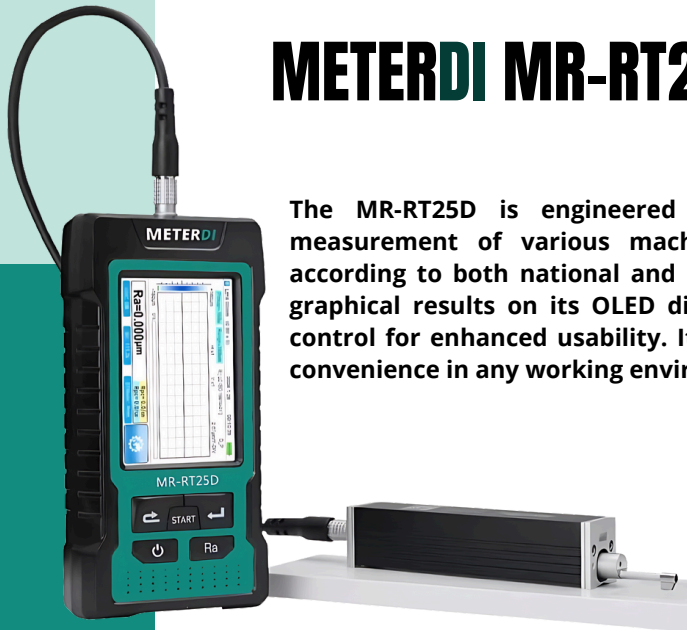


# ROUGHNESS TESTER

## METERDI MR-RT25D / MR-RT25D WITH NABL



The MR-RT25D is engineered for industrial settings, allowing precise roughness measurement of various machinery-processed parts. It evaluates surface textures according to both national and international standards. The tester provides digital and graphical results on its OLED display and supports Bluetooth printing and mobile app control for enhanced usability. Its small size, light weight, and ergonomic design ensure convenience in any working environment.

### FEATURES

- **Electromechanical Integration:** Combines display, driver unit, and sensor in one, ensuring compact size and portability.
- **Multiple Parameters Supported:** Measures Ra, Rz, Rq, Rt, Rp, Rv, R3z, R3y, Rz(JIS), Rs, Rsk, Rsm, Rku, Rc, Ry, Rmax, Rmr, R<sub>PC</sub>, Rk, Rpk, Rvk, Mr1, and Mr2.
- **Graphical Profiles Display:** Shows primary profiles, assessed roughness profiles, and load curves for detailed analysis.
- **Wide Measurement Range:** Supports a large measurement range of up to 320 $\mu$ m, covering multiple industrial applications.
- **3.5-Inch Color OLED Display:** The 480\*320 dot matrix display offers adjustable backlight and excellent readability, even in dark environments.
- **4 Profile Filters Supported:** Provides Gauss, RC, PC-RC, and D-P filters for enhanced measurement precision.
- **DSP Chip for Data Processing:** High-speed data processing with low power consumption, thanks to the advanced DSP chip.
- **Battery Life:** Equipped with a 3000mAh lithium-ion rechargeable battery, offering over 50 hours of continuous operation.
- **Battery Indicator:** Graphically displays battery level and charging progress to keep the user informed.
- **Data Storage:** Stores up to 100 items of raw data and measured profiles for future reference.
- **Real-Time Clock:** Allows for real-time clock settings and display, ensuring easy data recording and organization.
- **Energy Efficiency:** Comes with automatic sleep and shutdown features for power conservation.
- **Motor Stuck Prevention:** Reliable circuit and software design to prevent motor malfunction during operation.
- **Intuitive Interface:** Displays a wide range of tips, measurement results, menu prompts, and error messages for ease of use.
- **Standards Compliance:** Adheres to ISO4287, ANSI B46.1, DIN4768, and JIS B601 standards, ensuring accurate and reliable results.
- **Computer and Printer Connectivity:** Connects to computers and printers for data transfer and report printing.
- **Customizable Printing:** Print all or selected parameters based on user preferences.
- **Optional Accessories:** Supports additional accessories like curved surface pickup sensors, hole sensors, minute hole sensors, extension rods, printers, and analysis software for expanded functionality.



# ROUGHNESS TESTER

## METERDI MR-RT25D / MR-RT25D WITH NABL

- **Compact Design:** Small, lightweight, and easy to use for mobile and on-site roughness measurements.
- **Electromechanical Integration:** Combines the main display, driver unit, and sensor in a composite structure.
- **Graphical & Digital Display:** Results shown digitally and graphically on a 3.5-inch color OLED screen.
- **Wide Measurement Range:** Capable of measuring up to 320µm, suitable for a wide variety of parts.
- **Bluetooth & Mobile App Support:** Wireless operation with Bluetooth printing and app control.
- **Weight:** 2.5 kg, **Dimensions:** 41 × 35 × 15 cm

<b>Measurement Range</b>	The Z axis (vertical)	320µm (-160µm~160µm) / 12600µin (-6300µin~+6300µin)	
	The X axis (horizontal)	17.5mm/0.69"	
<b>Resolution ratio</b>	The Z axis (vertical)	0.002µm/±20µm	0.004µm/±40µm
		0.008µm/±80µm	0.02µm/±160µm
Measurement item	Parameter	Ra Rz Rq Rt Rc Rp Rv R3z R3y Rz(JIS) RyRs Rsk Rku Rmax Rsm Rmr Rpc Rk Rpk RvkMr1 Mr2	
	Standard	ISO4287,ANSI b46.1,DIN4768,JISb601	
	Graphic	Primary profile, Roughness profile, load curves	
Filter	RC,PC-RC,Gauss,D-P		
LCD dimensions	3.5-inch 480*320		
The sampling length(lr)	0.25,0.8,2.5mm		
Assessment length(ln)	Ln= lr×n n=1~5		
Sensor	Principle	The displacement differential inductance	
	Stylus	Natural Diamond, 90B cone angle, 5µm tip radius	
	Force	<4mN	
	Skid	Ruby,Longitudinal radius 40mm	
		Traversing speed	lr=0.25, Vt=0.135mm/s
	lr=0.8, Vt=0.5mm/s		
	lr=2.5, Vt=1mm/s		
	Return, Vt=1mm/s		
Accuracy	±(5nm+0.1A) A: Ra of calibration test block		
Repeatability	No more than 3%		
Power supply	Built-in3.7VLithium ion battery,Charger :DC5V,800mA/3hour		
Working Time	More than 50 hours		
Size( L*W*H)	Display Unit	158*55*52mm	
	Drive Unit	115*23*27mm	
Weight	About 400g		
Working Environment	Temperature:- 20°C ~ 40°CHumidity:< 90% RH		
Store and Transportation	Temperature:- 40°C ~60°CHumidity:< 90% RH		

S P E C I F I C A T I O N S



# ROUGHNESS TESTER

## METERDI MR-RT25D / MR-RT25D WITH NABL

### DELIVERY SCOPE

- 1 x Surface Roughness Tester MR-RT25D
- 1 x Sensors
- 1 x Adjustable height support feet
- 1 x Calibration block
- 1 x Block bracket
- 1 x Extension cable
- 1 x Touch pen
- 1 x Charger
- 1 x USB charging cable
- 1 x Operating manual
- 1 x Certificate
- 1 x Guarantee card
- 1 x Box
- 1 x Calibration Certificate (at additional cost)



### OPTIONAL CONFIGURATION

MR-55	Extension rod. Used to extend length of sensor when testing deep hole (55mm)
MR-90	Right angle measuring mechanism.
MR-100	Standard sensor, plane & shaft & inner surface of hole >6mm, depth <22mm
MR-120	Small hole sensor, cylindrical & plane & inner surface of hole >2 mm, depth <9mm
MR-110	Sensor for curved surface & plane, cylindrical, curvature radius >3 mm
MR-131	Sensor for deep groove, cylindrical & plane & groove width >3 mm, depth <10mm
MR-520	Metal(Al) working platform, elevating, convenient and stable for test process.
MR-620	Marble substrate working platform, elevating, V groove, high accuracy to test tiny work piece.
Order ID • MR-RT25D • MR-RT25D with NABL	Roughness comparison block High quality comparison block of surface roughness Strict anti-rust treatment process 27 comparison block/set
Mini Pinter	External printer

Order ID  
• MR-RT25D  
• MR-RT25D  
with NABL

