

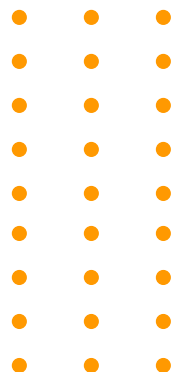
BT-T Series Through Coating Ultrasonic Thickness Gauge Technical Solutions



BRK provides professional non-destructive testing solutions. Since its founding, the company has been dedicated to delivering high-quality instruments and expert services to meet customer demands in scientific research, industrial production, quality control, and related fields.

BRK's core strength lies in its continuous technological innovation and superior product quality. The BRK team comprises experienced and highly skilled professionals focused on advancing research and development in non-destructive testing. Combining technical expertise with a commitment to innovation, BRK serves clients worldwide with cutting-edge products and solutions.

BRK specializes in solving complex challenges by offering customized non-destructive testing solutions. As an industry pioneer, the company stays ahead of trends and technological developments. Its product portfolio includes ultrasonic flaw detectors, eddy current flaw detectors, coating thickness gauges, ultrasonic thickness gauges, Leeb hardness testers, surface roughness testers, gloss meters, industrial borescopes, and more. With a strong global reputation, BRK maintains an outstanding customer satisfaction rate of 95.7%.





One-Stop Supplier of Non-Destructive Testing Solutions

The factory under the BRK brand possesses complete production processes, sophisticated testing methods, and strong R&D capabilities. As a high-tech enterprise specializing in the development, production, sales, and service of non-destructive testing instruments, all products from portable NDT equipment to large-scale automated systems feature independent intellectual property rights. The company has applied for dozens of invention patents, utility model patents, and software copyrights, obtained the Intellectual Property Management System Certification, and was honored as a National High-Tech Enterprise in 2024.

Quality Testing

We collaborate with authoritative quality supervision institutions and utilize the most advanced high-performance testing equipment. All products undergo rigorous testing procedures to ensure stability and compatibility. Our scientific and meticulous quality inspection processes comply with national industry standards.

Quality Assurance

For any quality-related inquiries, we provide product origin certification. For specific customer requirements, we offer comprehensive laboratory testing services.

Quality Commitment

We guarantee top-tier product quality. Every product we provide is manufactured at our original facility, delivered in original packaging, and strictly adheres to professional quality standards. Our standardized, precise, and scientific management and monitoring processes ensure authenticity and premium quality at every stage.



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BRK Website

Part 1: Product Introduction



**BT-T7A Through Coating
Ultrasonic Thickness Gauge**

**High Precision
& Wide Applicability**

**Portable Design &
Intuitive Operation**



**BT-T7 Through Coating
Ultrasonic Thickness Gauge**

Sealed Metal Housing

**Non-destructive coating
thickness measurement**

The BT-T7 series through coating thickness gauge utilizes the principle of ultrasonic thickness measurement to achieve portable, non-destructive, fast, and accurate measurement of various material thicknesses and sound velocities with high precision. Suitable for measuring the thickness of various materials, such as metals (steel, aluminum, copper, etc.), glass, plastic, etc., that can use ultrasonic waves to propagate at a constant speed inside and obtain reflection from their back.

Part 2: Product Advantages

The BT-T Series, with its high precision,through-coating measurement capability, efficient operation, and durability, is an ideal tool in industrial inspection, especially suited for users requiring fast, non-destructive, and multi-scenario testing.

Key Features:

- ✓ Measures the thickness of substrate metal layers (e.g., steel, cast iron, aluminum, copper) through coatings without damaging the coating.
- ✓ Suitable for metals (steel, cast iron, aluminum, copper, etc.), plastics, ceramics, glass, fiberglass, and any ultrasonic-conductive materials.
- ✓ Calculate sound velocity based on known thickness values to improve measurement accuracy.
- ✓ Real-time prompts to ensure proper probe coupling during measurement.
- ✓ EL Backlight Display.
- ✓ Auto-sleep and auto-shutdown functions to conserve battery life.
- ✓ The aluminum-magnesium alloy casing is sturdier, more compact, portable, and offers high reliability and durability, making it suitable for harsh operating environments with resistance to vibration, shock, and electromagnetic interference.

Part 3: Application

The working principle of the coating thickness gauge is primarily based on ultrasonic pulses emitted by the probe of an ultrasonic thickness gauge, which travel through the tested object, reflect back to the probe upon reaching material interfaces, and determine the thickness of the material by measuring the propagation time of ultrasonic waves, enabling it to address the majority of challenging measurement requirements.



**Post-Painting
Stainless Steel
Measurement**



**Post-Fireproof
Coating Pipelines
Measurement**



**Film-Coated glass
Measurement**



**Vehicle Paint-Penetrating
Steel Measurement**

Application Fields

Metal Processing Industry: The through-coating thickness gauge can penetrate various coated metal plates, pipes, and rods to accurately measure substrate thickness, analyze thickness distribution and uniformity, and provide quality control support for metal processing.

Petrochemical Industry: It can measure the wall thickness of storage tanks, pipelines, and other coated equipment to assess safety and service life. Additionally, it monitors corrosion-induced thinning during operation, offering critical data for maintenance and preservation.

Shipbuilding Industry: In ship manufacturing and repair, the gauge penetrates coatings on hulls and plates to measure structural thickness, evaluating vessel strength and durability.

Power Industry: For electrical facilities, it penetrates coatings to measure the thickness of transformers, generators, and other equipment, ensuring operational safety and reliability.

Core Value of Through-Coating Thickness Gauges:

Across industries, the device delivers non-destructive, efficient, and high-precision solutions, overcoming limitations of traditional methods such as coating damage, inefficiency, and data management challenges. It has become an indispensable tool for industrial quality control and safety assurance.

Part 4: Technical Specification

BT-T Series Through-Coating Ultrasonic Thickness Gauge		
Model	BT-T7A Plastic Housing	BT-T7 Metal Housing
Measurement Range	0.65~350mm(standard mode,steel) 0.65~25mm(crossing mode,steel)	0.65-500mm (standard mode,steel) 0.65-50mm (crossing mode,steel)
Penetration Range	Up to 3mm coating thickness	Up to 5mm coating thickness
Sound Speed Range	500~18000m/s	
Resolution	0.1mm	0.01mm
Indication Accuracy	$\pm(0.6\%H+0.1)\text{mm}$ H is actual thickness of the measured object	$\pm(0.6\%H+0.05)\text{mm}$ H is the actual thickness of the measured object
Working Mode	Standard and cross thickness measurement modes	
Unit System	Metric or Imperial(Optional)	
Working Power Supply	AA battery	Lithium battery
Continuous Working Time	Continuous operation for more than 50 hours(without backlight)	Continuous operation for more than 160 hours(without backlight)
External Dimensions	170*80*38mm(L*W*H)	145*70*32mm(L*W*H)

Part 5: BT-T Series Through-Coating Ultrasonic Thickness Gauge Accessories

Packing List:

S/N	Item Name		Qty	Remark
1	BT-T7A Host	BT-T7 Host	1	
2	Standard Probe		1	
3	Couplant		1	
5	AA Battery	Charger and charging cable	1	
6	Packaging box		1	
7	Operating Manual		1	
8	Certificate		1	
9	Warranty Card		1	
10	USB cable		1	optional

* This table is for reference only. Final contents are subject to the actual packing list.

Part 6: Instrument Maintenance

1. Electromagnetic Interference Prevention

Install the instrument in environments free from strong electromagnetic interference. When necessary, install certified grounding devices and enhance shielding facilities to suppress signal interference and ensure stable operation.

2. Power Connection Requirements

Connect only to specified power supplies with peripheral devices. Prohibit opening the housing or inserting hands/tools during operation to prevent personal injury or equipment damage.

3. Post-Operation Maintenance

Cover with dust-proof cover after use.

During humid seasons, power on for 1-2 hours weekly to dissipate internal moisture. In the event of abnormal instrument operation, users should first thoroughly review the user manual to verify correct operating procedures, and may consult experienced personnel or the manufacturer for guidance. Under no circumstances should unauthorized disassembly or repair attempts be made, as this may lead to unnecessary complications. Should any inquiries or assistance requirements arise during usage, please contact us via written correspondence or telephone communication. We guarantee prompt response to all service requests.

Part 7: Quality Assurance

1. Quality Assurance

The quality assurance period is one (1) year from the date of final acceptance and signing.

2. After-Sales Service

- (1) Under normal circumstances, the seller guarantees to respond within 24 hours upon receiving the user's after-sales service request (including a fault description) via phone, fax, or email, providing troubleshooting and fault resolution.
- (2) During the warranty period, the manufacturer shall provide free after-sales service and respond to user notifications within 8 hours.

Part 8: Supplementary Provisions

The seller warrants that the buyer shall not face any third-party claims of patent, trademark, or industrial design infringement while using the purchased testing equipment

or any part thereof. If any third party raises an infringement claim, the seller shall handle the dispute and bear all legal liabilities and costs.

This agreement is an integral part of the sales contract. In case of any conflict, the terms of the sales contract shall prevail.

Matters not covered herein shall be resolved through amicable negotiation between both parties.

This agreement becomes effective upon signing by both parties. It is executed in duplicate, with each party holding one copy of equal legal validity. Faxed or scanned copies are equally binding.

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