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Precise Coating Thickness Gauge

According to the actual application requirements, Biuged offers three different types of thickness gauges which combine the Hall effect and Eddy current principles to measure the thickness of non-ferromagnetic coatings on ferromagnetic metal substrates (iron, cobalt, nickel and gadolinium) and the thickness of non-conductive coatings on non-magnetic metal substrates (copper, aluminum, magnesium, zinc, chromium, etc). The instrument is widely used in metal processing, coating, hardware, shipbuilding, aerospace and other fields.

◆ Iron and aluminum dual use. Identify substrate automatically, and fast automatic conversion. (BGD 545&BGD 546)

◆ Sensitive response, and the data can be measured in 0.5 seconds.

◆ With simple design and small size, it is easy to carry and operate.

◆ Ruby probe has abrasion and corrosion resistance, which ensures long service life and can avoid errors caused by wear.

◆ Two units of μm/mil can be selected.

◆ The advanced digital probe is used to keep the zero position stable for a long time without drifting. The test data is stable after testing the same position for multiple times.

◆ The thickness gauge adopts unique algorithm to solve the linearity of the instrument and ensure measurement accuracy. It doesn't need to be calibrated, only need zero adjustment.

◆ The good repeatability to ensure that it passes the inspection of Chinese national metrological testing.

◆ Available in three different modes: Fe mode, NFe mode and Fe/NFe mode (BGD 545&BGD 546)

◆ Conform to standards: ISO 2178, ISO 2360, DIN/EN/ISO 2808, ASTM D1186, ASTM D1400, ASTM D7091, DIN 50981, DIN 50984 etc.

◆ BGD 547 is specially designed for measuring the thickness of ultra-thin coatings or platings below 10μm, and it adopts ultra-thin probe design, which is especially suitable for measuring coatings on small workpieces such as screws and bolts. The probe adopts digital oscillation technology and high-speed ADC acquisition, which ensure that the instrument has ultra-high measurement accuracy and repeatability. In addition, BGD 547 also has the function of data statistics, which can store up to 9 measurement values and automatically calculate the maximum, minimum, average and standard deviation of the measured data.

BGD 545   BGD 546   BGD 547

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Ordering Information → Technical Parameters ↓	BGD 545	BGD 546	BGD 547
Probe	Integrated probe	External cable probe	
Substrate	Metal materials		Magnetic metal
Measuring Range	0.0−2000μm		0.0−500μm
Resolution	0.1μm（＜100μm）；1μm（100μm～999μm）；10μm（＞1000μm）		
Accuracy	≤ ±（3% reading+2μm）		≤ ±（2% reading+0.3μm）
Minimum Curvature	Convex: 5mm / Concave: 25mm		Convex: 1.5mm / Concave: 10mm
Minimum Measuring Area	6mm^2		Diameter: 7mm
Minimum Substrate Thickness	Fe:0.2mm / NFe: 0.05mm		0.1mm
Display	128 × 48 dot matrix LCD		240 × 160 dot matrix LCD
Power Supply	2pcs of 1.5V AAA alkaline battery		4pcs of 1.5V AAA alkaline battery
Dimension	101mm × 62mm × 28mm		148mm × 76mm × 26mm
Weight	79g (with battery)		194g (with battery)
Optional Accessories	--------		Hand test fixture