



Compact device
+
Easy handling
+
9 predefined
speeds of sound

DC-3000C

**Wall thickness gauge with
dual element probe and color display**

The ultrasonic wall thickness gauge DC-3000C from PHYNIX is a new, improved measuring device, equipped with dual-element probe, color display, automatic probe detection and automatic zero calibration. It is a multi mode thickness gauge that measures wall-thickness also through lacquered or coated surfaces.

In the echo-echo mode and by using the included double element probe the thickness of paint is ignored for painted surfaces. Measurements in transmit-echo mode are also possible. In this mode wall thicknesses of up to 400 mm can be determined.

The high accuracy, combined with the high resolution of 0.01mm allows the precise thickness measurement of metallic and non-metallic materials such as steel, aluminium, titanium, plastic, ceramics, glass and many other. The speeds of sound of the most common materials are stored in the device and can be called up easily via the operating menu. The speed of sound can also be entered numerically or determined with the help of a test piece.

Basically, ultrasonic thickness gauges measure the thickness of materials which are only accessible from one side, e.g. in pipelines or in the shipbuilding. An ultrasonic transducer creates a high-frequency ultrasonic pulse which is sent through the material to be measured. On the back side of the material, the

impulse is reflected and returns back to the transducer. Because the material and therefore the respective speed of sound are known, the measured transit time of the pulse is used to calculate the wall thickness of the material. The DC-3000C offers two measurement modes: in transmit-echo mode the runtime measurement starts with the transmission of the ultrasonic pulse. In echo-echo mode the measurement does not start until the device receives a first, weak echo after the transition of the impulse from the paint into the material. With this procedure the wall thickness measurement of painted or coated components is possible.

Different probes can be connected to the DC-3000C. In addition to the already mentioned double probe (D5301), probes with higher measuring frequency (7.5 MHz, 10 MHz) for thin components, with lower measuring frequency (2 MHz) for cast material and for rough surfaces or high temperature probes for measurements on hot surfaces up to 350 °C are available. For the last measurement task, the DC-3000C has a scan mode for fast measurements at high surface temperature to minimize contact time.

The wall thickness gauge DC-3000C is calibrated and comes with a certificate.

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Advantages at a glance

- + Large color display for easy reading of the measured values
- + Measurement through the paintwork (echo-echo mode)
- + Measuring range transmit-echo 0.65 mm-400.0 mm (depending on probe)
- + Measuring range echo-echo 3.0 mm-25.0 mm (dual element probe D5301)
- + Resolution 0.01 mm / 0.001 inch
- + Automatic probe detection
- + Automatic zero calibration
- + Various test methods: standard, minimum, scan
- + Multilingual menu guidance

Technical data	DC-3000C
Measuring range	Transmit-Echo T-E: 0.65 mm - 400.00 mm (depending on the probe) Echo-Echo E-E: 3.00 mm - 25.00 mm
Resolution	0,1 mm / 0,01 mm 0,01 inch / 0,001 inch
Accuracy	0.65 mm - 9.99 mm: ± 0.04 mm 10.00 mm - 99.99 mm: $\pm (0.04$ mm + 0.1% of measurement value) 100.0 mm - 400.0 mm: $\pm (0.3\%$ of measurement value)
Zero calibration	Auto
Speed of sound	1000 m/s – 9999 m/s 9 pre-defined sound velocities for different materials 4 user-defined sound velocities manual input of sound velocity
Measurement rate	4 per second
Display	320x240 TFT color display
Batteries	2 x AA batteries
Operating temperature	-20 °C to + 50 °C
Surface temperature	-20 °C to + 350 °C (depending on probe)
Dimensions (HxWxD)	133 mm x 75 mm x 29 mm
Weight	260 g incl. batteries

Scope of delivery

- DC-3000C gauge
- Dual-element probe 5 MHz D5301
- Built-in test block 4 mm
- Protective rubber cover
- Couplant 75 ml
- Calibration certificate
- Instruction manual
- Carrying case

