

Material Thickness Meter



The thickness of walls and materials such as metal, glass and plastics play an important role in production and material testing.

The process of measuring thickness can be performed with material thickness gauges, which measure the thickness of materials by means of ultrasonic technology. Devices that are used for the supervision of wall thicknesses of smoke pipelines or for incoming goods inspection, cover a measurement range of 1.0 ... 225 mm material thickness.

The ultrasonic velocity of some of the material thickness gauges is adjustable from 1000 to 9999 m/s and is frequently used for measuring materials such as steel, glass, and homogeneous plastics.

The measuring principle of material thickness gauges is based on the transit time of a reflected ultrasonic pulse. This ensures that the data on the thickness of materials and walls are reliable and accurate.

Material Thickness Meter

PCE-TG 100-Series

Material Thickness Gauge for Metal, Plastics, Glass, ... Homogeneous Materials

- determines speed of sound of materials / measurement frequency 5 MHz
- high measurement accuracy - also for thickness of wall remains
- large LC display which lights up for every measurement
- battery level indication
- operating hours 250 h or 30 h with backlight
- heads are wear-resistant / quick head change
- test heads with connection cable of 1.60 m



TECHNICAL SPECIFICATIONS

Model	PCE-TG100	PCE-TG110	PCE-TG120
Meas. range in steel	0.8 ... 225 mm	2.5 ... 200 mm	1 ... 30 mm
Resolution / accuracy	0.1 mm / ±0.1 mm	0.1 mm / ±0.1 mm	0.1 mm / ±0.1 mm
Field of application	standard head for steel, non-iron metals, alu, plastics, ceramics, glass	high-temperature head for steel, nFe metals, alu, plastics, ceramics, glass	mini head for steel, nFe metals, alu, plastics, ceramics, glass
Surface temp.	-10 ... +50 °C	-10 ... +400 °C	0 ... +50 °C
Cont. surface diameter	10 mm / straight sensor	12 mm / straight sensor	7 mm / rectangular sensor
Speed of sound	500 ... 9999 m/s, adjustable in steps of 1 m/s		
Display	LCD, 4 digits with backlight		
Functions	Automatic Power Off for battery saving		
Power supply	2 x 1.5 V AA batteries		
Battery level indication	low battery voltage is displayed		
Battery life	approx. 250 h		
Operating conditions	-10 ... +50 °C / 20 ... 90 % RH		
Dimensions	124 x 67 x 30 mm		
Weight	240 g		

INCLUDES

Material thickness gauge (one of the models), standard test head, battery, coupling gel, case, instruction manual

ITEM NO.	ITEM
K-PCE-TG100	material thickness gauge with standard test head, 0.8 ... 225 mm
K-PCE-TG110	material thickness gauge with high-temperature test head, 2.5 ... 200 mm
K-PCE-TG120	material thickness gauge with miniature test head for small radii, 1 ... 30 mm

OPTIONAL ACCESSORIES

K-TT-GEL	coupling gel, 120 ml
K-CAL-MT	ISO calibration certificate
K-PCE-TG-ST	standard test head
K-PCE-TG-HTE	high-temperature test head
K-PCE-TG-MT	miniature test head



PCE-TG 50

Thickness Gauge for 1.0 ... 200 mm

- speed of sound adjustable (for different types of materials)
- measures wall thickness of 1.0 ... 200.00 mm
- long battery life of approx. 250 h
- steel block for calibration integrated
- carrying case included
- software and interface cable optionally available



TECHNICAL SPECIFICATIONS

Meas. range steel	1.0 ... 200.00 mm (steel)
Resolution	0.1 mm
Accuracy	±0.5 % ±0.1 mm
Test head	5 MHz
Surface temp.	-20 ... +45 °C
Calibration	5.0 mm steel block integrated
Sampling rate	2 measurements/s
Speed of sound	500 ... 9000 m/s
Display	LCD
Interface / software	RS-232 interface / optional
Power supply	4 x 1.5 V AAA batteries
Dimensions / weight	120 x 61 x 30 mm / 165 g

INCLUDES

Material thickness gauge, test head (5 MHz), batteries, case, instruction manual

ITEM NO.	ITEM
K-PCE-TG 50	material thickness gauge

OPTIONAL ACCESSORIES

K-PCE-SOFT-TG 50	software + RS-232 cable
K-CAL-MT	calibration certificate
K-TT-GEL	coupling gel, 120 ml
K-PCE-TG-HTE	high-temperature test head

PCE-TG 200

Thickness Gauge 0.80 ... 220.00 mm

- suitable for metals, glass and homogenous plastics
- memory capacity for 4000 values
- LC display with backlight
- mm or inch selectable
- RS-232 interface for transfer of recorded values to PC
- includes software kit



TECHNICAL SPECIFICATIONS

Meas. range steel	0.80 ... 220.00 mm
Resolution	0.01 mm
Accuracy	±0.04 mm (<100 mm>) ±0.3 %
Test head	5 MHz
Surface temp.	-20 ... +60 °C
Calibration	steel block integrated
Sampling rate	4 measurements/s
Speed of sound	1000 ... 9999 m/s
Display	LC display
Memory / interface	4000 values / RS-232
Power supply	2 x 1.5 V AAA batteries
Dimensions / weight	108 x 61 x 28 mm / 230 g

INCLUDES

Thickness gauge, test head (5MHz), software, RS-232 cable, batteries, coupling gel, instruction manual

ITEM NO.	ITEM
K-PCE-TG 200	thickness gauge

OPTIONAL Accessories

K-CAL-MT	ISO calibration certificate
K-TT-GEL	Replacement coupling gel
K-RS232-USB	RS-232 adaptor to USB

PCE-TG 250

Thickness Gauge 1.00 ... 250.00 mm

- measures through coatings
- internal memory for 500 values, can separate in up to 5 files, on-screen consultation
- measures between two freely definable limit values
- speed of sound adjustable
- measures wall thicknesses of 1 ... 250.00 mm
- one or two-point calibration



TECHNICAL SPECIFICATIONS

Meas. range	1.00 ... 250.00 mm (steel)
	2.50 ... 20.00 mm (coated surface)
Resolution	0.01 mm (<100 mm>) 0.1 mm
Accuracy	±0.01 mm
Test head	5 MHz
Surface temp.	-20 ... +60 °C
Calibration	4.0 mm steel block integrated
Speed of sound	1000 ... 9999 m/s
Display	graphical display, 128 x 64 pixels
Memory	500 (5 x 100) values
Power supply	2 x 1.5 V AAA batteries
Dimens. / weight	149 x 73 x 32 mm / 350 g

INCLUDES

Thickness gauge, test head (5 MHz), coupling gel, calibration block, batteries, case, instruction manual

ITEM NO.	ITEM
K-PCE-TG 250	thickness gauge

OPTIONAL ACCESSORIES

K-CAL-TG	ISO calibration certificate
K-TT-GEL	replacement coupling gel

PT-UTGM Series

Material Thickness Gauge with Multiple Echo

- automatic self-calibration (steel block in steps: 2.5 / 5 / 7.5 / 10 / 12.5 mm)
- audio / visual alarms (adjustable upper or lower limit values)
- zero point mean value for coarse surfaces
- direct indication of statistical values in the display
- USB data output / infrared



TECHNICAL SPECIFICATIONS

Model	PT-UTGM1-E (Standard)	PT-UTGM3-E (Advanced)
Measurement range	2.5 ... 125.00 mm	2.5 ... 60.00 mm
Resolution / accuracy	0.01 mm / ±0.03 mm	
Memory	250 values	100,000 values
Display	monochrome	LCD colour
Interface	USB	USB / Bluetooth
Sensor mode	multiple echo	multiple echo
Test head (incl.)	5 MHz, probe diameter approx. 13 mm	
Speed of sound	1250 ... 9999 m/s (in 2 modes)	
Surface temperature	-10 ... +50 °C	
Power supply	3 x 1.5 V AA batteries	
Dimensions / weight	146 x 61 x 28 mm / 165 g incl. batteries	

INCLUDES

Material thickness gauge, external probe, test head with cable of 1.2 m, batteries, coupling gel, USB cable, bag, protective holster, instruction manual

ITEM NO.	ITEM
K-PT-UTGM1-E	thickness gauge, up to 125 mm
K-PT-UTGM3-E	thickness gauge, up to 60 mm

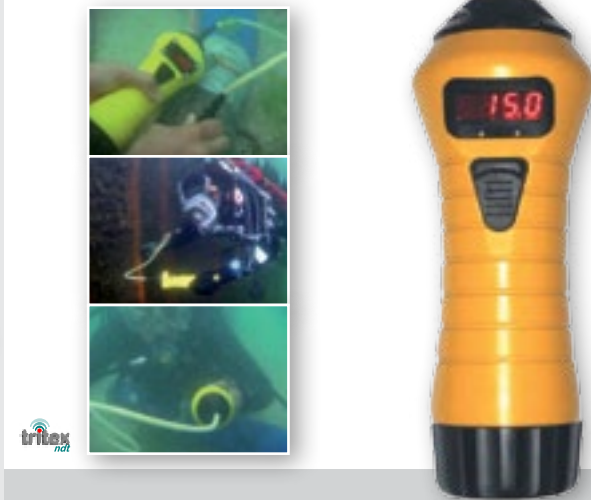
OPTIONAL ACCESSORIES

K-PT-UTG-SW	PosiSoft software
K-PT-UTG-TB	calibration block
K-TT-GEL	coupling gel, 120 ml

Multigauge 3000

Material Thickness Gauge - Submersible up to 500 m

- bright 10 mm LED display for poor visibility
- multiple echo gets through coatings
- can be used in depths of up to 500 m
- integrated battery with a life of up to 55 h
- intelligent probe recognition (IPR)
- does not need zero reset



TECHNICAL SPECIFICATIONS#

Ultrasonic range	1000 ... 8000 m/s
Sensor range	3 ... 250 mm
Sensor	2.25 MHz (single-crystal protective probe)
Sensor size	13 mm
Resolution	0.1 mm or 0.05 mm
Accuracy	±0.1 mm or ±0.05 mm
Display	red LED display of 4 digits with 7 segments
Underwater pressure	up to 500 m depth
Power supply	rechargeable battery 7.2 V 2.3 Ah NiMH
Battery life	55 hours with continuous use
Operating conditions	-10 ... +50 °C
Dimensions / weight	235 x 80 mm / 1.110 g

INCLUDES

Ultrasonic submersible thickness gauge, battery, standard 2.25 MHz probe, replacement membranes, membrane oil, membrane key, calibration block, replacem. O-ring, charger, calibration cert., nose cone release bar, case, software, manual

ITEM NO.	ITEM
K-Multigauge 3000	ultrasonic submersible thickness gauge

OPTIONAL ACCESSORIES

K-30-0851	surface display
K-40-0700	software