

## Digital thickness gauges

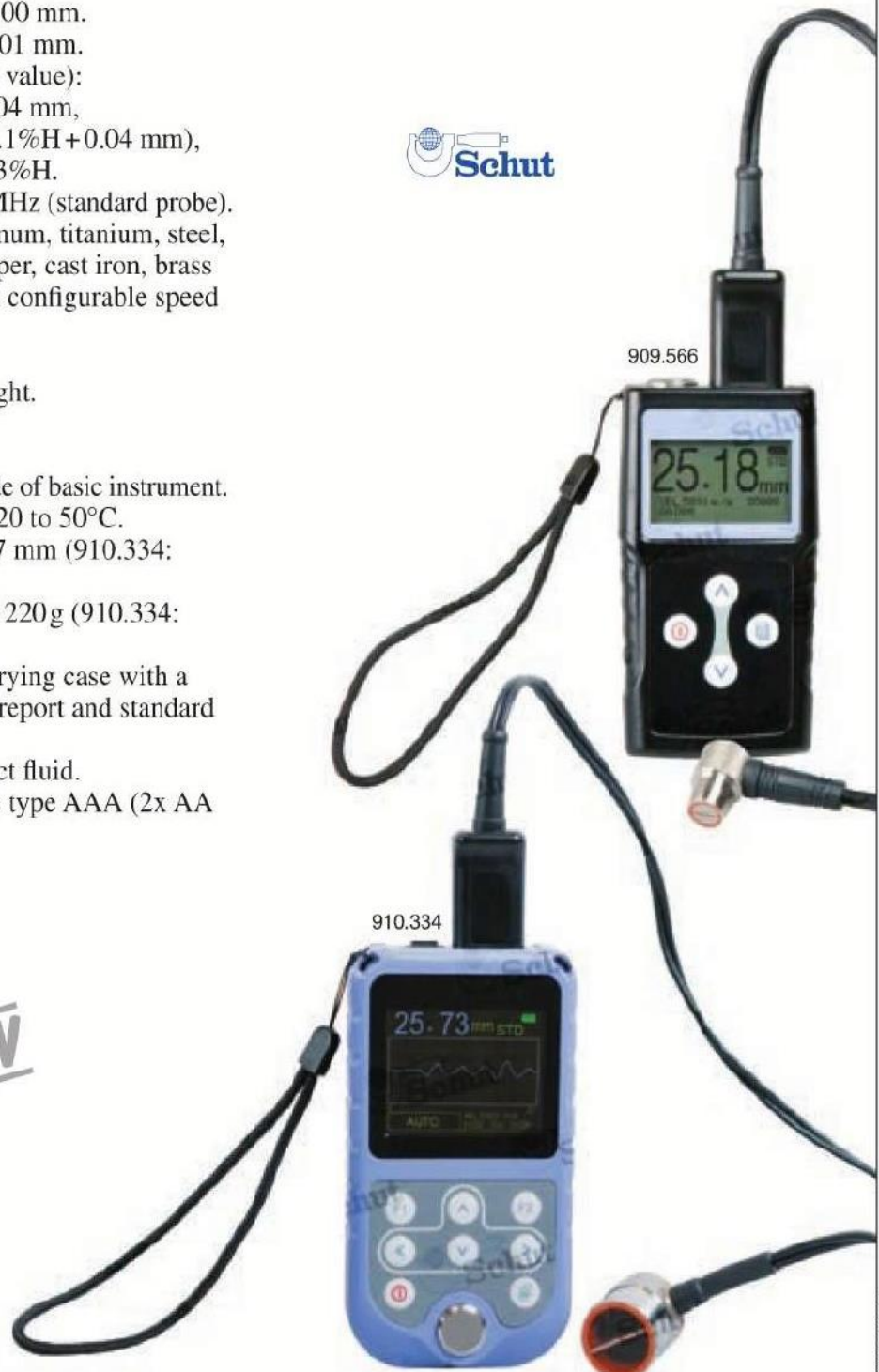
This thickness gauge measures in a non-destructive way the thickness and speed of sound from several materials according to the ultrasonic measuring principle. The Echo-Echo model is capable of measuring the material thickness even through coatings.

A thickness gauge with glass fiber / composite probe is available for measuring glass fiber parts. For example thicknesses of parts of cars, boats, airplanes and medical devices can be measured ultrasonically.

- Measuring range: 0.65 - 300 mm.
- Resolution: 0.1 mm or 0.01 mm.
- Accuracy (H = measured value):
  - 0.65 - 9.99 mm:  $\pm 0.04$  mm,
  - 10.00 - 99.99 mm:  $\pm (0.1\%H + 0.04$  mm),
  - 100.0 - 400.0 mm:  $\pm 0.3\%H$ .
- Measuring frequency: 5 MHz (standard probe).
- 9 preset materials (aluminum, titanium, steel, stainless steel, glass, copper, cast iron, brass and polystyrene) and one configurable speed of sound.
- mm/inch conversion.
- LCD display with backlight.
- On/off/reset switch.
- Automatic switch-off.
- Calibration standard on side of basic instrument.
- Operating temperature: -20 to 50°C.
- Dimensions: 116 x 64 x 27 mm (910.334:  
133 x 75 x 29 mm).
- Weight basic instrument: 220 g (910.334:  
260 g).
- Delivered in a plastic carrying case with a manufacturer measuring report and standard probe.
- Delivery including contact fluid.
- Power supply: 2 batteries type AAA (2x AA for 910.334).



**NEW**



## Digital thickness gauges (continued)

### Standard model

- Measuring range: 0.8-300 mm (standard probe).
- Delivery including standard probe (909.570).

### Echo-Echo model

Echo-Echo mode is only available with the standard probe, 909.575.

- Measuring range:  
normal mode: 1.44-200 mm (standard probe),  
Echo-Echo mode: 3-25 mm (standard probe).
- Maximum coating thickness: 1 mm.
- Delivery including standard probe (909.575).

### Models with USB output only

- Tolerance settings with alarm function.
- Memory for 5000 measurements.
- Delivery including USB cable.

### Glass fiber/composite model

- Measuring range: 3-200 mm,  
glass fiber/composite: 5-40 mm (standard probe).
- Delivery including standard probe (910.335).

Item No.	Description
<b>Thickness gauges:</b>	
909.566	Without USB data output
909.567	With USB data output
<b>Echo-Echo model:</b>	
909.568	Without USB data output
909.569	With USB data output
<b>Glass fiber/composite model:</b>	
910.334	With USB data output
<b>Options:</b>	
497.914	Spare battery type AAA (2 needed)
495.111	Spare battery type AA (2 needed)
909.576	Contact fluid (approx. 75 ml)
909.398	Test block for calibration



**NEW**

### Test block for calibration (909.398)

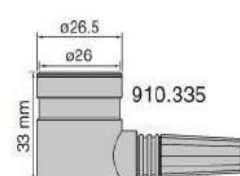
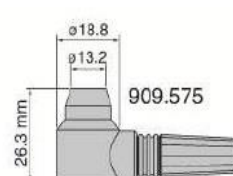
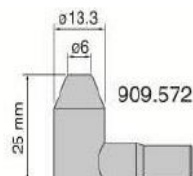
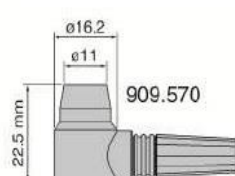
For the inspection and calibration of digital thickness gauges.

- Heights: 2.5-25 mm, incr. 2.5 mm.
- Tolerance: 0.1 mm (flatness:  $\pm 0.05$  mm).
- Material: steel.



### Optional probes

Item No.	Mode	Measuring range/mm	Measuring frequency MHz	Minimum tube diameter/mm
909.570	Normal	0.8 - 300	5	$\phi 20 \times 1.2$
909.572	Normal	0.65- 20	10	$\phi 10 \times 4.0$
<b>For Echo-Echo model and glass fiber/composite model:</b>				
909.575	Normal	1.44- 200	5	$\phi 25 \times 3$
	Echo-Echo	3.0 - 25	5	
<b>For glass fiber/composite model only:</b>				
910.335	Normal	3 - 200	1	
	Glass fiber	5 - 40	1	



## Digital thickness gauge

This thickness gauge measures non-destructively the thickness and speed of sound from several materials according to the ultrasonic measuring principle (as illustrated).

- Measuring principle: ultrasonic.
- Measuring range for steel: 1.2 - 200 mm.
- Resolution: 0.1 mm.
- Accuracy:  $\pm(0.5\%H+0.1 \text{ mm})$   
(H = measured value).
- Measuring frequency: 5 MHz.
- Speed of sound: 1000 - 9000 m/s.
- mm/inch conversion.
- RS232C data output.
- On/off switch.
- Automatic switch-off.
- 11 presets for the speed of sound of various materials (cd01 - cd11) and one configurable speed of sound (cd12).

- Calibration standard on side of basic instrument.
- Operating temperature: 0 to 50°C.
- Admissible relative humidity: < 80%.
- Dimensions: 120 x 60 x 30 mm.
- Weight basic instrument: 260 g.
- Power supply: 4 batteries type AAA.

### Test block for calibration (909.398)

For the inspection and calibration of digital thickness gauges.

- Heights: 2.5 - 25 mm, incr. 2.5 mm.
- Tolerance: 0.1 mm (flatness:  $\pm 0.05 \text{ mm}$ ).
- Material: steel.



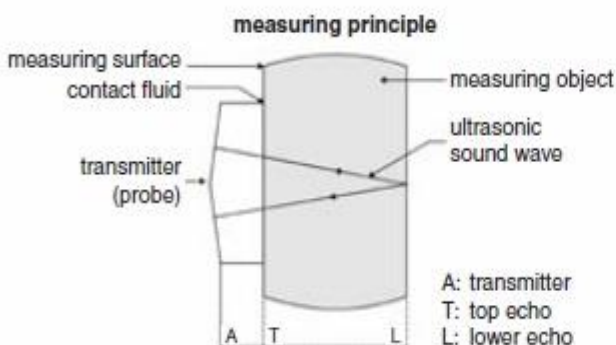
Preset code	Material
cd01	steel
cd02	cast iron
cd03	aluminum
cd04	copper (red copper)
cd05	brass
cd06	zinc
cd07	quartz glass
cd08	polyethylene
cd09	PVC
cd10	gray cast iron
cd11	nodular/ductile cast iron

### Delivery including:

- small, rectangular probe (measuring face  $\phi 10 \text{ mm}$ ),
- contact fluid,
- manual,
- 4 batteries.



Item No.	Description	Price
909.139	Thickness gauge	
<b>Options:</b>		
497.914	Spare battery (4 needed)	
909.075	RS232C cable and software	
906.805	Contact fluid	
909.398	Test block for calibration	



909.398



## Digital coating thickness gauges

Measurements of coating thickness of paint, coating, foil etc. (non-magnetic layers) on a magnetic (ferro) and/or non-magnetic (non-ferro) metal substrate. Available with integrated or external sensor, in single or combined (automatically selecting magnetic/non-magnetic) model. Furthermore there is a one-button model, specifically designed for the automobile industry.

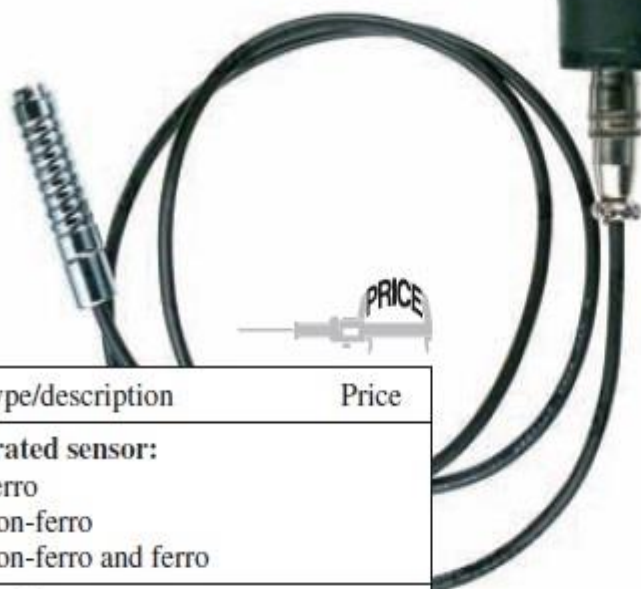
- Measuring principles: magnetic induction (ferro) and eddy current (non-ferro).
- Measuring range: 0- 1250  $\mu\text{m}$ .
- Resolution: 0.1  $\mu\text{m}$  (< 100  $\mu\text{m}$ ),  
1  $\mu\text{m}$  ( $\geq$  100  $\mu\text{m}$ ).
- Accuracy:  $\pm 3\%H$  or 3  $\mu\text{m}$  (H = measured value).
- $\mu\text{m}/\text{mil}$  conversion.
- RS232C data output.
- Automatic switch-off.
- Minimum measuring area: 6 x 6 mm.
- Minimum substrate thickness: 0.3 mm.
- Minimum object radius:  
ferro: 1.5 mm (convex), 25 mm (concave),  
non-ferro: 3 mm (convex), 50 mm (concave).
- Dimensions: 131 x 65 x 28 mm.
- Delivery in a case with reference standards.
- Power supply: 4 batteries type AAA.



909.070



909.072



909.062

Item No.	Type/description	Price
<b>With integrated sensor:</b>		
909.060	Ferro	
909.069	Non-ferro	
909.070	Non-ferro and ferro	
<b>With external sensor:</b>		
909.061	Ferro	
909.071	Non-ferro	
909.072	Non-ferro and ferro	
<b>One-button model:</b>		
909.062	Non-ferro and ferro	
<b>Options:</b>		
497.914	Spare battery (4 needed)	
909.073	RS232C cable and software	

## Digital coating thickness gauge

Measurements of coating thickness of paint, coating, foil etc. (non-magnetic layers) on a magnetic (ferro) and non-magnetic (non-ferro) metal substrate.

- Measuring principles: magnetic induction (ferro) and eddy current (non-ferro).
- Measuring range: 0 - 1300  $\mu\text{m}$ .
- Resolution: 1  $\mu\text{m}$  ( 0 - 999  $\mu\text{m}$ ), 0.01 mm (1000 - 1300  $\mu\text{m}$ ).
- Accuracy:  $\pm(3\% + 2 \mu\text{m})$ .
- Statistics: number of measurements, mean, minimum, maximum and standard deviation.
- $\mu\text{m}/\text{mil}/\text{mm}$  conversion.
- USB data output.
- Illuminated LED display.
- On/off switch.
- Automatic switch-off.
- Minimum measuring area:  $\varnothing 6 \text{ mm}$ .
- Minimum substrate thickness:  
ferro: 0.5 mm, non-ferro: 0.3 mm.
- Minimum object radius:  
1.5 mm (convex), 25 mm (concave).
- Maximum measuring frequency: 2 times per second.
- Adjustable tolerance limits (alarm signal on display and acoustic).
- Operating temperature: 0 to 40°C.
- Admissible relative humidity: 20 - 90%.
- Dimensions: 110 x 53 x 24 mm.
- Weight: 92 g.
- Delivery in a case with USB cable, software, ferro and non-ferro base plate, reference standards and an inspection report.
- Power supply: 2 batteries type AAA.

**NEW**



Item No.	Description	Price EUR
909.116	Coating thickness gauge	
<b>Option:</b>		
497.914	Spare battery (2 needed)	