

# Material Testers

## PCE-CT 24

### Car body tester to test metal coatings

The car body tester is a pocket size device for testing the condition of car bodies and determining the thickness of the varnish layer as well as checking whether the car was repaired after an accident. This car body tester allows the user to locate areas where filler has been used and to determine how thick it is.

- Pocket size tester
- Easy to clean and with integrated sensor
- Easy to use (even for non qualified people)
- LCD with backlight
- Auto shut-off



#### Technical specifications

Range	0 to 1000 µm
Resolution	1 µm
Accuracy	±7 digits <200 µm ±3 % ±4 digits >200 µm
Indicator	LCD with backlight
Operating temperature	0 to +50 °C
Power	9 V battery pack
Dimensions	148 x 105 x 42 mm
Weight	120 g



#### Contents

PCE-CT 24 car body tester and user's manual

#### Model No. Description

PCE-CT 24 Car body tester PCE-CT 24

## PCE-CT 26

### Waterproofing thickness gauge for metal coatings

This thickness gauge has been developed to measure non-magnetic coatings on ferrous surfaces in the automobile industry. Professionals in the sale and purchase of automobiles value this unit because they can identify areas of damage that a vehicle has potentially suffered in an accident. This thickness gauge is used to measure layers of varnish, isolating coatings or determining thickness of plastic foil laid on steel. The external probe makes it possible to take internal measurements. It's very easy to use, just switch it on, place the probe on the area to inspect and read the thickness of the paint on the LCD

- Easy to clean, with external probe (1.2 m cable)
- Easy to use (even for non qualified people)
- Digital LCD
- Zero reset on metals without paintwork
- Auto shut-off to protect battery life
- Memory containing 3 characteristics of user's calibration
- ISO Certificate (optional)



#### Technical specifications

Measurement range	0 to 2000 µm
Resolution	0.1 µm in the range 0.0 to 99.9 µm 1 µm in the range 100 to 2000 µm
Accuracy	±2 % or ±2.5 µm
Indicator	4 digit LCD
Operating temperature	0 to +50 °C
Power	4 AAA batteries 1.5 V (incl.)
Dimensions	126 x 65 x 27 mm
Weight	130 g incl. batteries



#### Contents

PCE-CT 26 coating thickness gauge, calibration plate, carrying case, batteries and user's manual

#### Model No. Description

PCE-CT 26 Coating thickness gauge PCE-CT 26

#### Optional accessories

CAL-DFT ISO Certificate

## PCE-CT 28

### Easy to use coating thickness meter to measure steel and non-ferrous metal surfaces.

The PCE-CT 28 coating thickness meter is an economical device for taking measurements without damaging steel and non ferrous metal surfaces. One significant advantage of the device is that it automatically detects the surface type, eliminating the need to select the surface type manually. The coating thickness meter with its integrated measurement sensor can be operated by pressing a single button, making it a very accurate device to use. It's ideal for measuring the surfaces of vehicles, making it very effective for steel or aluminium bodywork.

- Measurement range up to 1250 µm
- Automatic surface detection (F or FN)
- Wear resistant measurement head
- The V slot in the measurement head simplifies measuring rounded surfaces
- Easy and comfortable to use with only one hand
- Units interchangeable from µm to mils
- Auto shut-off to preserve battery power
- ISO Certificate (optional)



#### Technical specifications

Measurement range	0 to 1250 µm
Resolution	0.1 µm in the range 0.0 to 99.9 µm 1 µm in the range 100 to 1250 µm
Accuracy	±2 % or ±2.5 µm
Minimum object size	6 x 6 mm
Minimum substrate thickness	typ F: 0.3 mm typ N: 0.1 mm
Indicator	4 digit LCD
Operating temperature	0 ... +50 °C
Power	4 AAA batteries 1.5 V (incl.)
Dimensions	126 x 65 x 27 mm
Weight	120 g incl. batteries



#### Contents

PCE-CT 28 coating thickness gauge, calibration plate, carrying case, batteries and user's manual

#### Model No. Description

PCE-CT 28 Coating thickness gauge PCE-CT 28

#### Optional accessories

CAL-DFT ISO Certificate

## PCE-TG100, PCE-TG110, PCE-TG120 & PCE-TG130

Ultrasonic thickness gauge for several materials (metal, plastic, glass, and other consistent materials)

The PCE-TG100 Series is a handheld thickness gauge specifically designed for measuring the thickness of metallic and non-metallic materials from one side where it is not possible to gain access to the other side. It can measure materials as aluminium, glass, ceramics, plastics and other ultrasonic wave-conducting materials. The measurement range for steel is from 0.8 to 225 mm. This unit can perform precise measurements on various types of raw materials, component parts, and assembled machinery. It can be used to monitor all types of pipes and pressure vessels for loss of thickness due to corrosion. Various probe configurations serve a wide range of applications.

- Pulse echo with dual probe
- High accuracy even in residual thickness
- Large LCD with backlight
- Low battery indicator on LCD
- 250 hours continuous operation, 30 hours with backlight
- Hermetically sealed probe with 1.60m cable
- You can replace the probe quickly and easily
- Carrying case which includes probe, ultrasonic couplant and batteries
- ISO calibration certificate (optional)

Choose one of our models that suits your needs:

PCE-TG100: Material thickness gauge for standard applications

PCE-TG110: Material thickness gauge for high temperature

PCE-TG120: Material thickness gauge for tubes with small diameters

PCE-TG130: Material thickness for high dampening measurements



## PT-TG 200

Material thickness gauge with adjustable ultrasonic velocity, memory and interface

The PCE-TG 200 material thickness gauge is ideal for measuring wall thickness and the effects of corrosion or erosion on tanks, pipes or any structure where access is limited to one side. This ultrasonic thickness gauge measures wall thickness of materials such as steel, cast iron, plastic and more.

- Ideal for measuring wall thickness and materials such as steel, cast iron, plastic...
- Internal memory which stores up to 4000 values
- LCD with backlight
- mm / inch switchable
- RS-232 interface for data transfer to a PC
- ISO calibration certificate (optional)



### Technical specifications

	PCE-TG100	PCE-TG110	PCE-TG120	PCE-TG130
Use range	probe for standard measurements such as steel, non-ferrous metals, aluminium, ceramics, plastic, glass...	probe for high temp. such as steel, non-ferrous metals, aluminium, plastics, ceramics, glass...	mini probe for measure steel, non-ferrous metals, aluminium, plastics, ceramics, glass, edges, ratios, small surfaces...	probe for high dampening measurements such as ferrous, plastics...
Measure. range (steel)	0.8 to 225 mm	2.5 to 200 mm	1 to 30 mm	3 to 225 mm
Resolution	0.1 mm	0.1 mm	0.1 mm	0.1 mm
Accuracy	±0.1 mm	±0.1 mm	±0.1 mm	±0.1 mm
Frequency	5 MHz	5 MHz	5 MHz	2.5 MHz
Surface temperature	-10 to +50°C	-10 to +400°C	0 to +50°C	-10 to +50°C
Surface diameter	10 mm	12 mm	7 mm	12 mm
Probe connection	right	right	right angle	right angle
Sound speed		500 to 9999 m/s, adjustable in readings of 1 m/s		
Indicator		4 digit LCD with backlight		
Auto power off		after 5 min. without activity		
Low battery		BAT displayed in the screen		
Operating temperature		-10 to +50 °C		
Operating humidity		20 to 90 % r.h.		
Dimensions		124 x 67 x 30 mm		
Weight		240 g		

### Contents

PCE-TG material thickness gauge, probe, battery, ultrasonic couplant, carrying case and user's manual

### Model No. Description

PCE-TG100	Material thickness gauge for standard applications
PCE-TG110	Material thickness gauge for high temperature
PCE-TG120	Material thickness gauge for tubes with small diameters
PCE-TG130	Material thickness gauge for high dampening measurements

### Optional accessories

PCE-TG-ST	Standard probe
PCE-TG-HT	Probe for high temperatures
PCE-TG-MT	Mini probe
PCE-TG-HD	Probe for high dampening measurements
TT-GEL	Ultrasonic couplant, 120 ml
CAL-TG	ISO Certificate

### Technical specifications

Measurement range	0.8 to 220.00 mm
Probe	5 MHz
Resolution	0.01 mm
Surface temperature	-20 to +60 °C
Calibration	internal calibration test block
Accuracy	±0.04 mm (<100 mm) ±0.3 % (>100 mm)
Units	mm / inch (switchable)
Measurement time	4 readings / sec
Sound speed	1000 to 9999 m/s
Sound speed resolution	1 m/s
Indicator	LCD
Memory	stores up to 4000 values
Data output	RS-232 interface
Power	2 AAA batteries (1.5 V)
Battery life	250 h (without backlight)
Dimensions	108 x 61 x 28 mm
Weight	230 g batteries included

### Contents

PCE-TG 200 material thickness gauge, 5 MHz probe, software, RS-232 data cable, batteries, ultrasonic coupling, carrying case and user's manual

### Model No. Description

PCE-TG 200	Thickness gauge PCE-TG 200
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### Optional accessories

CAI-TG	ISO Certificate
TT-GEL	Ultrasonic coupling
RS232-USB	RS-232 to USB adaptor

# Material Testers

## PCE-TG 250

Thickness meter with adjustable sound velocity and compensation for surface coatings

The PCE-TG 250 thickness meter is an easy to use device that allows for the measurement of material thickness under coated surfaces. Due to its adjustable sound velocity, this thickness meter is ideal for measuring various materials such as steel, aluminium, glass and homogenous plastics. This allows for the device to be used on tanks, tubes and other coated objects.

- Measures through coatings
- Memory for 500 readings, divisible into 5 files and can be displayed on screen
- Measures between two adjustable limits with acoustic alarm
- Sound velocity can be adjusted (for measuring different materials)
- Measures thicknesses from 1 to 250.00mm
- Calibration of one or two points
- Steel plate integrated for recalibration of the device
- Backlit display
- Includes test block



### Technical specifications

Measurement range	1.00 to 250.00 mm (steel) 2.50 to 20.00 mm (surface coating)
Resolution	0.01 mm (<100 mm) 0.1 mm (>100 mm)
Accuracy	±0.01 mm
Probe	5 MHz
Surface temperature	-20 to +60 °C
Calibration	integrated steel plate
Units	mm / inch (selectable)
Sound speed	1000 ... 9999 m/s
Sound speed resolution	1 m/s
Indicator	128 x 64 graphic LCD
Memory	500 (5 x 100) readings
Power	2 AA batteries
Dimensions	149 x 73 x 32 mm
Weight	350g with batteries



### Contents

PCE-TG 250 material thickness meter, 5MHz sensor head, calibration standards, batteries, tube of coupling gel, carrying case and user's manual

Model No.	Description
PCE-TG 250	Thickness meter

### Optional accessories

CAL-TG	ISO calibration certificate
TT-GEL	Ultrasonic coupling gel

## PCE-1000

Portable hardness tester for ferrous materials

This portable hardness tester utilizes state-of-the-art micro-electronic technology, follows the Leeb's rebound principle. This uniquely designed pocket-sized instrument incorporates a hardness impact probe, microprocessor and data display in a single, compact unit. It's capable of displaying hardness measurements in Rockwell B & C, Vickers HV, Brinell HB, Shore HS and Leeb HL. With the digital indicator, you avoid any error in your measurements.

- Pocket-sized meter
- Measures the hardness of most materials
- Impact and rebound speed of a small body
- Large measurement range
- High accuracy
- Tests at any position, even up-side-down
- Auto shut-off
- Rechargeable battery and charger included
- You can connect several adaptors
- ISO calibration certificate (optional)



### Technical specifications

Unit	HRC	HRB	HB	HV	HSD
steel / casting	20 to 68	60 to 100	80 to 647	80 to 940	32 to 99
cold-work tool steel	20 to 67	---	---	80 to 898	---
stainless steel	20 to 62	46 to 101	85 to 655	85 to 802	---
grey cast iron	---	---	93 to 334	---	---
spheroidal iron	---	---	131 to 387	---	---
aluminium alloy	---	---	30 to 159	---	---
brass	---	14 to 95	40 to 173	---	---
bronze	---	---	60 to 290	---	---
copper	---	---	45 to 315	---	---

Hardness values HL, HRC, HRB, HB, HV, HSD  
Material (adjustable)



STEEL  
CWT. STEEL  
STAIN. STEEL  
GC. IRON  
NC. IRON  
C. ALUMIN  
BRASS  
BRONZE  
COPPER

Accuracy	±6 HL for HL = 800 (0.8 %)
Impact device	type D (integrated)
Maximum hardness	940 HV
Radius of object (convex / concave)	Rmin = 30 mm (with element 10 mm)
Minimum object weight	5 kg without basement, 2 to 5 kg with basement 50 g to 2 kg with basement and coupling liquid
Minimum object size	3 mm with coupling liquid
Minimum penetration	0.8 mm
Interface	---
Memory	---
Power	9 V rechargeable battery
Max. object temperature	+120 °C
Dimensions	100 x 60 x 33 mm
Weight	150 g

### Contents

PCE-1000 portable hardness tester, hardness test block, battery charger, rechargeable batteries, cleaning brush, carrying case and user's manual

Model No.	Description
PCE-1000	Portable hardness tester PCE-1000

### Optional accessories

CAL-IMPACT	ISO Certificate
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## PCE-2000 & PCE-2000DL

Portable hardness tester for metal with external impact device and RS-232 interface

The PCE-2000 (with D impact device) and the PCE-2000 (with DL impact device) portable hardness tester allows the user to attach various Leeb impact probes and perform rebound hardness measurements with convenient conversion to every popular Rockwell B & C, Vickers HV, Brinell HB, Shore HS and Leeb HL. The external digital indicator of all functions and measurement values avoid errors. They have a statistical function and a RS-232 interface to transfer data to computer (software and cable optional).

- Automatic conversions
- External impact device
- PCE-2000 DL with Leeb impact probes for narrow surfaces
- RS-232 interface
- Tests in any position, even up-side-down
- High accuracy
- Internal memory
- Software and optional cables
- ISO calibration certificate (optional)



PCE-2000  
type D

PCE-2000DL  
type DL

### Technical specifications

Unit	HRC	HRB	HB	HV	HSD
steel / casting *	20 to 68	60 to 100	80 to 647	80 to 940	32 to 99
cold-work toll steel *	20 to 67	---	---	80 to 898	---
stainless steel	20 to 62	46 to 101	85 to 655	85 to 802	---
grey cast iron	---	---	93 to 334	---	---
spheroidal iron	---	---	131 to 387	---	---
aluminium alloy	---	---	30 to 159	---	---
brass	---	14 to 95	40 to 173	---	---
bronze	---	---	60 to 290	---	---
copper	---	---	45 to 315	---	---
Hardness values	HL, HRC, HRB, HB, HV, HSD				
Materials (adjustable)	STEEL *				
* PCE-2000DL only for STEEL & CWT.STEEL	CWT. STEEL *				
	STAIN. STEEL				
	GC. IRON				
	NC. IRON				
	C. ALUMIN				
	BRASS				
	BRONZE				
	COPPER				
Accuracy	±4 HL for HL = 800 (±1.0 %)				
Impact device	PCE-2000: type D, PCE-2000DL: type DL				
Maximum hardness	940 HV				
Radius of object (convex / concave)	Rmin = 30 mm (with element 10 mm)				
Minimum object weight	5 kg without basement, 2 to 5 kg with basement 50 g to 2 kg with basement and coupling liquid				
Minimum object size	3 mm with adhesive liquid				
Minimum penetration	0.8 mm				
Interface	RS-232				
Memory	1250 groups (value, data..)				
Power	2 AAA batteries (1.5 V)				
Max. object temperature	+120 °C				
Dimensions	108 x 62 x 25 mm				
Weight	180 g				

### Contents

PCE-2000 or PCE-2000DL portable hardness tester, impact device with 1.5m cable, cleaning brush, adhesive liquid, hardness test block, carrying case and user's manual

Model No.	Description
PCE-2000	Portable hardness tester PCE-2000
PCE-2000DL	Portable hardness tester PCE-2000 DL

### Optional accessories

PCE-2000-Soft	Software with RS-232 interface
PCE-2000-SKD	Spare impact device type D
PCE-2000-SKDL	Spare impact device type DL
CAL-IMPACT	ISO Certificate

## PCE-2500

Hardness tester for metals, with memory, USB port, software and USB cable

The PCE-2500 hardness tester for metals is portable, easy to use and is the same size as a pen, allowing it to be carried in a pocket. It is attractive due to its innovative design in the shape of a pen, with a sophisticated load and trigger mechanism. For this reason, it is ideal for testing regular metals where it is necessary to quickly and accurately see the hardness reading. It also allows for the device to have the mechanism correctly positioned upon the material. The hardness tester for metals has memory for storing up to 1250 values and using the USB port, this data can be transferred to a computer.

- Measures in typical hardness units
- Highly accurate
- Automatically shows readings on the LCD
- Measurements can be taken with the device in any position
- Internal memory for up to 1250 readings
- Software and data cable
- Shows all functions and parameters on the display
- Lithium-ion rechargeable battery
- USB port for data transfer



### Technical specifications

Unit	HRC	HRB	HB	HV	HSD
steel / casting	20 to 68	38 to 100	80 to 647	80 to 940	32 to 100
cold-work toll steel	20 to 67	46 to 101	---	80 to 898	---
stainless steel	20 to 62	---	85 to 655	85 to 802	---
grey cast iron	---	---	131 to 387	---	---
spheroidal iron	---	---	90 to 334	---	---
aluminium alloy	---	---	30 to 160	---	---
brass	---	20 to 95	40 to 173	---	---
bronze	---	---	60 to 290	---	---
copper	---	---	45 to 315	---	---
Hardness values	HL, HRC, HRB, HB, HV, HSD				
Materials (adjustable)	STEEL				
	CWT. STEEL				
	STAIN. STEEL				
	GC. IRON				
	NC. IRON				
	C. ALUMIN				
	BRASS				
	BRONZE				
	COPPER				
Accuracy	±0,5 % for HL = 800				
Impact device	type D				
Maximum hardness	940 HV				
Radius of object (convex / concave)	Rmin = 30 mm (with element 10 mm)				
Minimum object weight	5 kg without basement, 2 to 5 kg with basement 50 g to 2 kg with basement and coupling liquid				
Minimum object size	3 mm with adhesive liquid				
Minimum penetration	0.8 mm				
Interface	USB				
Memory	1250 groups				
Power	Li-ion batteries				
Max. object temperature	+120 °C				
Dimensions	158 x 41 x 26 mm				
Weight	120 g				

### Contents

PCE-2500 hardness tester, software, USB cable, test block, charger and user's manual

Model No.	Description
PCE-2500	Portable hardness tester PCE-2500

### Optional accessories

CAL-IMPACT	ISO Certificate
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# Material Testers

## PCE-DX Series

Mechanical durometers to test durability of soft glue, hard glue, rubber, elastomer and thermal plastic

These models of durometers are to measure durability in Shore A or Shore D. It comes with a measuring component that has a measuring head and a 360° antiglare dial with pressure readings of 0.5 hardness units. Meets the standards DIN 53505, ISO 868, ISO 7619 y ASTM D 2240.

- Shore A models: with/without memory pointer
- Large indicator
- Hardness units (scale's graduation)
- Pointer sweep of 360°
- High accuracy
- Ergonomic design
- Optional ISO calibration certificate



### Technical specifications

Model	PCE-DX-A / -AS	PCE-DX-DS
Unit	Shore A	Shore D
Scale range	0 ... 100	0 ... 100
Measurement ranges	10 ... 90	30 ... 90
Accuracy	±0,5	±0,5
Scale division	1	1
Drag needs	only PCE-DX-AS	yes
Press power	12,5 N	50,0 N
Indenter	35° ball	30° point
Minimum hardness	> 6 mm	> 6 mm
Testing standards	DIN 53505	DIN 53505
Display body diameter	57 mm	57 mm
Overall length	107 mm	107 mm
Weight	240 g	240 g
Materials applications	soft gum, rubber, elastomers	hard gum, thermoplastics

### Contents

Durometer (various models), case and user's manual

### Model No. Description

PCE-DX-A	Durometer for Shore A
PCE-DX-AS	Durometer for Shore A with drag needle
PCE-DX-DS	Durometer for Shore D with drag needle

### Optional accessories

CAL-DX	Certificate of calibration
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## PCE-HT 200

Shore A Hardness tester with RS-232 interface

This digital durometer for Shore hardness testing is a handheld unit with integrated probe which measures in place on the job, as well as in a laboratory. It has a digital display with a result resolution of 0.1 hardness units. This hardness tester conforms to standards DIN 53505, ISO 7619 and ASTM D 2240. You can use it as a handheld instrument in production or with the optional test stand for serial tests without subjective influences. It has a PC interface allowing for data transfer to a computer. With the RS-232 interface and software you will be able to carry out detailed analysis of the data and serial measurements.

- Pocket size unit with integrated probe
- Peak Hold function
- Auto shut-off after 5 min (protects battery life)
- Low battery indicator
- Serial or isolated measurements
- Data transfer to a PC or portable computer through an optional interface
- ISO calibration certificate (optional)



### Technical specifications

Measurement range	0 to 100 (Shore A)
Resolution	0.1 hardness degree
Accuracy	±1 hardness degree
Result display	hardness result, max value, average value (peak value lock)
Interface for PC	RS-232
Others functions	auto shut-off, low battery indicator
Power	3 batteries 1.25 V (V357)
Battery life	approx. 300 h
Operating temperature	0 to +40 °C
Dimensions	168 x 31 x 30 mm
Weight	145 g
Approvals	DIN 53505, ISO 7619, ASTM D 2240

### Contents

PCE-HT 200 durometer, batteries, carrying case and user's manual

### Model No. Description

PCE-HT 200	Durometer for Shore A
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### Optional accessories

PCE-HT200FJ	Test stand for the PCE-HT 200
SOFT-HT-200	Software and RS-232 cable
RS232-USB	RS-232 to USB adaptor
CAL-HT-2	ISO Certificate

Test stand PCE-HT200FJ (optional)



## PCE-HT 210

Shore D Hardness tester with RS-232 interface

This durometer is used as a handheld unit to measure on the job as well as in a laboratory. It has a solid enclosure with built-in digital display and is accurate to within 0.2 hardness units. It conforms these standards: DIN 53505, ISO 7619, JKS K 6253 and ASTM D 2240. You can use it in production or with an optional test stand for serial tests without subjective influences. It has an RS-232 interface allowing for data transfer to a PC. With the RS-232 interface and software you will be able to evaluate and analyse the serial measurements. If your PC only has an USB interface, you can order an optional RS-232 to USB adaptor.

- Bright and clear LCD
- Peak Hold function
- Universal use
- Auto shut-off
- Low battery indicator
- Serial or isolated measurements
- Data transfer to a PC or portable computer through an optional interface
- ISO calibration certificate (optional)



### Technical specifications

Measurement range	0 to 100 (Shore D)
Resolution	0.2 hardness degree
Accuracy	±1 hardness degree
Result display	hardness result, max. and average values (peak value freezed)
Interface for PC	RS-232
Others functions	auto shut-off, low battery indication
Power	3 batteries 1.25 V (V357)
Battery life	approx. 300 h
Operating life	0 to +40 °C
Dimensions	173 x 56 x 42 mm
Weight	233 g
Approvals	DIN 53505, ISO 7619, ASTM D 2240, JKS K 6253

### Contents

PCE-HT 210 durometer, batteries, carrying case and user's manual

### Model No. Description

PCE-HT 210	Durometer for Shore D
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### Optional accessories

PCE-HT210FJ	Test stand for PCE-HT 210
SOFT-HT-200	Software and RS-232 cable
RS232-USB	RS-232 to USB adaptor
NET-300	Net adaptor 230V / 50Hz
CAL-HT-2	ISO Certificate

Test stand PCE-HT210FJ (optional)



## PCE-HT-225A

### Portable concrete tester

This hardness tester is based on the Schmidt principle of measurement and is in the form of a hammer. The durometer is used primarily in the construction sector and other industrial sectors (hardness of wound products). The durometer comes calibrated from the factory, but an optional ISO certification can also be ordered.

- Extremely robust design
- Special rebounding body to take numerous measurements of concrete
- Easy to use
- Conversion table on the back
- Correct usage explained in the user's manual
- ISO calibration certificate (optional)



#### Technical specifications

Measurement range	100 to 600 kg/cm <sup>2</sup> (~9.81 to 58.9 N/mm <sup>2</sup> )
Accuracy	18 kg/cm <sup>2</sup> (~±1.8 N/cm <sup>2</sup> )
Normal kinetic energy	2207 J
Impact scale indication	0 to 100 (without dimensions)
Pressure resistance table (rear part)	conversion to kg/cm <sup>2</sup> (with angular correction)
Angular correction table	included in the user's manual
Minimum concrete thickness	70 cm
Dimensions	Ø 66 x 280 mm
Weight	1 kg

20	125	115		
21	135	125		
22	145	135	110	IMPACT ANGLE α
23	160	145	120	
24	170	160	130	
25	180	170	140	
26	190	180	150	
27	210	200	165	
28	220	210	180	
29	230	220	190	
30	250	230	210	
31	260	250	220	
32	280	265	235	
33	290	280	250	

Conversion table on the back

#### Contents

PCE-HT-225A portable concrete test hammer, grinding stone, wooden carrying case and user's manual

Model No.	Description
PCE-HT-225A	Portable concrete test hammer

#### Optional accessories

CAL-225A	ISO Certificate
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## PCE-RT 1200

### Surface roughness tester for Ra, Rz, Rq and Rt with interface for connection to a computer

The PCE-RT 1200 meets almost all standards for the detection of roughness. It can test the surface of many different surfaces and can detect many different parameters. The device comes with a mechanism to level off surface irregularities. It's especially useful for a series of measurements, such as testing the parts shipments or to check internal quality.

- Detects Ra, Rz, Rq y Rt
- Measures the inside of spaces from 6mm of diameter and with a depth of 15mm
- Easy to use menu
- Large LCD with backlight
- Memory for 7 series of measurements
- RS-232 interface
- Rechargeable ion-litium battery (for 3000 measurements)
- ISO calibration certificate (optional)



#### Technical specifications

Parameters	Ra, Rz, Rq, Rt
Units	µm and pinch
Measurement ranges	Ra: 0.005 to 16 µm Rz: 0.02 to 160 µm
Resolution	0.001 µm <10 µm 0.01 µm <100 µm 0.1 µm >100 µm
Accuracy	class 2 according to DIN 4772
Indicator	LCD 128 x 64 and illumination
Cut off length	0.25 mm / 0.8 mm / 2.5 mm
Measurement distance In In	1 to 5 wave length limit
Measurement distance In It	(1 to 5) +2 wave length limit
Stylus tip	diamond, radius 5 µm
Interface	RS-232
Operating conditions	0 to +50 °C, <80 % r.h.
Power	rechargeable ion-litium battery
Dimensions	140 x 52 x 48 mm (device without feeler)
Weight	420 g

#### Contents

PCE-RT 1200 surface roughness tester, microprobe, rechargeable battery, charger, roughness standard, case and user's manual

Model No.	Description
PCE-RT 1200	PCE-RT 1200 surface roughness tester

#### Optional accessories

RT-1200-SW	Software and RS-232 cable
RS232-USB	RS-232 to USB adaptor
CAL-RT 1200	ISO Certificate for the PCE-RT 1200