Durometer

PCE-A / S

Hardness Tester Shore A (Rubber)
• models with and without drag indicator
• readings in units of hardness
• complete 360° clock
• ergonomic handle design
• for single or serial measurements
• delivered with calibration (incl. factory certificate)
• includes storage box

PCE-D / S

Hardness Tester Shore D (Hard Rubber)
• models with and without drag indicator
• large display
• readings in units of hardness
• complete 360° clock
• high accuracy
• ergonomic handle design
• for single or serial measurements
• delivered with calibration (incl. factory certificate)
• includes storage box

PCE-O / O

Hardness Tester Shore O (Soft Rubber)
• models with and without drag indicator
• large display
• readings in units of hardness
• complete 360° clock
• high accuracy
• complex with all norms
• for single or serial measurements
• delivered with calibration (incl. factory certificate)
• includes storage box
• ergonomic handle design

TECHNICAL SPECIFICATIONS

| Measurement range | 30 ... 90 |
| Scale division | 1 |
| Pressure force | 50.0 N |
| Indenter | 30° |
| Norm | DIN 53505 |
| Clock diameter | 57 mm |
| Total length | 123 mm |
| Clock range | 0 ... 100 |
| Drag indicator | depending on model |
| Weight | 158 g |

INCLUDES

Hardness tester (one of the models) Shore-A, box, calibration certificate, instruction manual

OPTIONAL ACCESSORIES

K-PS-A testing samples
K-CAL-PCE-DX recalibration
K-CAL-DAX5S-PCE-A/D DAkkS certificate

www.pce-instruments.com/us

www.pce-instruments.com/english
PCE-OO
Durometer Shore OO (Foam Rub.)
• complies with ASTM
• for moss, cellular rubber and human skin
• large display / complete 360° clock
• accuracy: 0.5 units of hardness
• ergonomic handle design

TECHNICAL SPECIFICATIONS
Measurement range 10 ... 90
Scale division 1
Accuracy ±0.5 units of hardness
Penetration depth 0 ... 2.5 mm
Function Hold
Pressure force 1 kg
Indenter 30° truncated cone
Min. mat. thickness >6 mm
Correction table in the instructions
Min. display 70 cm
Materials moss, cellular rubber, skin
Drag indicator depending on model
Weight 240 g

INCLUDES
Hardness tester (one of the models) Shore-O, box, calibration certificate, instruction manual

ITEM NO. ITEM
K-PCE-OO hardness tester

OPTIONAL ACCESSORIES
K-CAL-PCE-DX recalibration

PCE-DD-Serie
Durometer for Shore A, D
• digital display / easy to read
• range of application Shore A Shore D
• shore A/D hardness

TECHNICAL SPECIFICATIONS
Model K-PCE-DD-A K-PCE-DD-D
Measurement range 0 ... 100
Scale division 0.5
Accuracy Shore A Shore D
Unit Shore A Shore D
Penetration depth 0 ... 2.5 mm 0 ... 2.5 mm
Function Hold Hold
Pressure force 1 kg 5 kg
Indenter 35° truncated cone 30° tip
Min. mat. thickness >6 mm
Correction table in the instructions
Materials Shore A/Shore D
Drag indicator depending on model
Weight 240 g

INCLUDES
Hardness tester (one of the models), battery, box, instruction manual

ITEM NO. ITEM
K-PCE-DD-A hardness tester Shore A
K-PCE-DD-D hardness tester Shore D

OPTIONAL ACCESSORIES
K-CAL-PCE-DX recalibration

PCE-HT-225A
Concr. Test Hammer (Schmidt Meth.)
• conversion table on rear side
• value correction help in instructions
• allows conclusions on: strength of the cement stone, composition and density of the concrete, age and storage conditions, type and duration of load

TECHNICAL SPECIFICATIONS
Measurem. range 10 ... 60 MPa
Impact energy 2207 J ±0.3 J
Hardness scale to convert the values without dimensions in MPa in the instructions (with angle indication)
Minimum thickness 70 cm
Interface USB 2.0
Display 16 bit True Color, resol. 176 x 220
Adjustable backlight
Memory 200 sets of data, 99 values per set
Power supply 4 x AA batteries
Dimensions Ø 54 x 280 mm
Weight approx.1 kg

INCLUDES
Concrete test hammer, emery stick for preparing the surface, wooden case, instruction manual

ITEM NO. ITEM
K-PCE-HT-225A concrete test hammer

OPTIONAL ACCESSORIES
K-CAL-HT-2 ISO calibration certificate

PCE-HT 225E
Digital Test Hammer (Schmidt Meth.)
• when the testing parameters are entered, the device automatically calculates all values
• real-time data and time function
• Schmidt measurement method
• Automatic Power Off

TECHNICAL SPECIFICATIONS
Measurem. range 10 ... 90 MPa
Impact energy 2207 J ±0.3 J
Hardness scale to convert the values without dimensions into MPa in the instructions (with angle indication)
Minimum thickness 70 cm
Interface USB 2.0
Display 16 bit True Color, resol. 176 x 220
Adjustable backlight
Memory 200 sets of data, 99 values per set
Power supply 4 x AAA batteries
Dimensions Ø 54 x 280 mm
Weight approx.1 kg

INCLUDES
Concrete test hammer, USB cable, software, carrying case, instruction manual

ITEM NO. ITEM
K-PCE-HT-225E digital concrete test hammer

OPTIONAL ACCESSORIES
K-CAL-HT-2 ISO calibration certificate

Timber Grader MTG 920
Hardness Tester for Classifying Timber for Load-Bearing Applications
• complies with EN 14081-4:2009 norm
• includes software for transfer and analysis
• transfers data via Bluetooth
• to measure coniferous and deciduous timber

TECHNICAL SPECIFICATIONS
Measurement range coniferous: up to C45 dense: up to D70
Display LCD
Software incl. in delivery only for Windows
Interface USB, Bluetooth
Types of wood can be extended to up to 30
Meas. time <2 seconds
Norm EN 14081-4:2009

INCLUDES
Timber grader, USB cable, Bluetooth communication tool, software, calibration kit, installation instructions, CE license for spruce, instruction manual

ITEM NO. ITEM
K-Timber Grader MTG hardness meter

TECHNICAL SPECIFICATIONS
Measurement range 10 ... 90 MPa
Display LCD
Software incl. in delivery only for Windows
Interface USB, Bluetooth
Types of wood can be extended to up to 30
Meas. time <2 seconds
Norm EN 14081-4:2009

INCLUDES
Concrete test hammer, USB cable, software, carrying case, instruction manual

ITEM NO. ITEM
K-PCE-HT-225E digital concrete test hammer

OPTIONAL ACCESSORIES
K-CAL-HT-2 ISO calibration certificate

www.pce-instruments.com/us
www.pce-instruments.com/english
### PCE-1000
- **Unit**: HRC, HRB, HB, HV, HSD
- **Technological Specifications**:
  - **Steel / cast iron**: 20 ... 68, 60 ... 100, 80 ... 940, 32 ... 99
  - **Stainless steel**: 20 ... 62, 46 ... 101, 85 ... 655, 85 ... 802
  - **Nodular cast iron**: - - - - - - 131 ... 387
  - **Brass**: - - - 14 ... 95, 40 ... 173
  - **Bronze**: - - - - - - 60 ... 290
  - **Copper**: - - - - - - 45 ... 315
- **Weight**: 150 g
- **Dimensions**: 100 x 60 x 33 mm
- **Temperature max.**: +120 °C
- **Power supply**: 9 V block battery
- **Interface**: - - -
- **Hardness depth**: 0.8 mm
- **Min. thickness with coupling gel**: 3 mm
- **Impact device Type D (integrated)**
- **Radius Rmin (convex / concave)**: 30 mm (with accessories 10 mm)
- **Weight of part**: 5 kg without base, 2 ... 5 kg with base, 50 g ... 2 kg with base with gel
- **Hardness scales**: HL, HRC, HRB, HB, HV, HSD
- **Accuracy**: ±0.5 % (at HL = 800)
- **Max. hardness**: 940 HV
- **Hardness testers**
  - **Hardness testers**: Hardness tester, spring pin, calibration block, case, changer, rechargeable battery, brush, instruction manual
- **ITEM NO.**: K-PCE-1000
- **ITEM**: Hardness tester

### PCE-2500
- **Unit**: HRC, HRB, HB, HV, HSD
- **Technological Specifications**:
  - **Steel / cast iron**: 20 ... 67
  - **Stainless steel**: 20 ... 62, 46 ... 101, 85 ... 655, 85 ... 802
  - **Nodular cast iron**: - - - - - - 131 ... 387
  - **Brass**: - - - 14 ... 95, 40 ... 173
  - **Bronze**: - - - - - - 60 ... 290
  - **Copper**: - - - - - - 45 ... 315
- **Weight**: 245 g
- **Dimensions**: 150 x 74 x 32 mm
- **Power supply**: 2 x 1.5 V AA batteries
- **Memory / interface**: 100 groups / RS-232
- **Accuracy**: ±1 % (at HL = 800)
- **Hardness depth**: 0.8 mm
- **Min. thickness with coupling gel**: 3 mm
- **Radius Rmin (convex / concave)**: 30 mm (with accessories 10 mm)
- **Weight work piece**: 2 kg (on stable surface / 0.05 kg with coupling gel)
- **Operating conditions**: -10 ... +50 °C
- **Memory / interface**: 100 sets of data / USB
- **Hardness testers**
  - **Hardness testers**: Hardness tester, sensor cable 1.5 m, software, RS-232 cable, brush, calibration block, carrying case, manual
- **ITEM NO.**: K-PCE-2500
- **ITEM**: Hardness tester

### PCE-2800
- **Unit**: HRC, HRB, HB, HV, HSD
- **Technological Specifications**:
  - **Steel / cast iron**: 20 ... 67
  - **Stainless steel**: 20 ... 62, 46 ... 101, 85 ... 655, 85 ... 802
  - **Nodular cast iron**: - - - - - - 131 ... 387
  - **Brass**: - - - 14 ... 95, 40 ... 173
  - **Bronze**: - - - - - - 60 ... 290
  - **Copper**: - - - - - - 45 ... 315
- **Weight**: 245 g
- **Dimensions**: 150 x 74 x 32 mm
- **Weight**: 245 g
- **Power supply**: 2 x 1.5 V AA batteries
- **Dimensions**: 150 x 74 x 32 mm
- **Weight**: 245 g
- **Hardness testers**
  - **Hardness testers**: Hardness tester, sensor cable 1.5 m, software, RS-232 cable, brush, calibration block, carrying case, manual
- **ITEM NO.**: K-PCE-2800
- **ITEM**: Hardness tester

### PCE-2000
- **Unit**: HRC, HRB, HB, HV, HSD
- **Interface**: - - -
- **Accuracy**: ±6 (at HL)
- **Hardness depth**: 0.8 mm
- **Min. thickness**: 3 mm with coupling gel
- **Radius Rmin**: 30 mm
- **Tensile strength**: 374 ... 2652 N/mm² (dep. on mat.)
- **Impact device**: D-type (external)
- **Max. hardness**: 976 HV
- **Hardness testers**
  - **Hardness testers**: Hardness tester, USB charging cable, calibration block, instruction manual
- **ITEM NO.**: K-PCE-2000
- **ITEM**: Hardness tester

### PCE-2000
- **Unit**: HRC, HRB, HB, HV, HSD
- **Interface**: - - -
- **Accuracy**: ±6 (at HL)
- **Hardness depth**: 0.8 mm
- **Min. thickness**: 3 mm with coupling gel
- **Radius Rmin**: 30 mm
- **Tensile strength**: 374 ... 2652 N/mm² (dep. on mat.)
- **Impact device**: D-type (external)
- **Max. hardness**: 976 HV
- **Hardness testers**
  - **Hardness testers**: Hardness tester, USB charging cable, calibration block, instruction manual
- **ITEM NO.**: K-PCE-2000
- **ITEM**: Hardness tester

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**Includes**:
- Hardness tester, sensor cable 1.5 m, software, RS-232 cable, brush, calibration block, carrying case, manual
- Item NO.: K-PCE-2000
- Hardness tester

**Optional accessories**:
- K-RS232-USB RS-232 to USB adaptor
- K-CAL-PCE-2000 hardness calibration certificate

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**Includes**:
- Hardness tester, sensor cable 1.5 m, software, RS-232 cable, brush, calibration block, carrying case, manual
- Item NO.: K-PCE-2000
- Hardness tester

**Optional accessories**:
- K-RS232-USB RS-232 to USB adaptor
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- Hardness tester, sensor cable 1.5 m, software, RS-232 cable, brush, calibration block, carrying case, manual
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- Hardness tester, sensor cable 1.5 m, software, RS-232 cable, brush, calibration block, carrying case, manual
- Item NO.: K-PCE-2000
- Hardness tester

**Optional accessories**:
- K-RS232-USB RS-232 to USB adaptor
- K-CAL-PCE-2000 hardness calibration certificate
**PCE-3500**

**Portable Ultrasonic Hardness Tester with SD Card Memory**

- **measurement using Ultrasonic Contact Impedance (UCI)** method
- **hardness measured in HV, HRC, HB, HRA, MPa**
- **graphical colour LCD with backlight**
- **supports SD cards**
- **USB cable and software for PC included**
- **adapted sensor is displayed**
- **splash proof case**

**UCI (Ultrasonic Contact Impedance)**: A measuring method that is the basis for the probe's electrical length. This means that the diamond cone on the lower end of the probe is pressed against the surface of the workpiece at an angle of about 10° or 30°. The probe is then forced into the workpiece at the angler of 90°. The force is chosen by the user. The probe blade hits the probe surface and takes the test load and calibration values into account to calculate the hardness.

**TECHNICAL SPECIFICATIONS**

<table>
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<tr>
<th>Measurement range (HV)</th>
<th>Accuracy: ±1.5, ±2.0 %</th>
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<tr>
<td>HRC 230 ... 1740 N/mm²</td>
<td>±3 %</td>
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<td>HB 60 ... 1599 MPa</td>
<td>±3 %</td>
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<td>HRA 20.3 ... 68.0</td>
<td>±3 %</td>
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</table>

- **Probes**: 10 N, 20 N, 50 N, 100 N, 200 N, 500 N, 1000 N
- **Power supply**: 6 V dc or 3 x AA batteries
- **Battery life**: approx. 10 h
- **Dimensions**: 160 x 75 x 30 mm
- **Weight**: 0.3 kg (without probe)
- **Operating cond.**: -20 ... +40 °C; 30 ... 80 % RH
- **Power supply**: 6 V dc or 3 x AA batteries
- **Battery life**: approx. 10 h
- **Dimensions**: 160 x 75 x 30 mm
- **Weight**: 0.3 kg (without probe)

**K-PCE-3500 ultrasonic hardness tester**

**OPTIONAL ACCESSORIES**

- **K-PCE-MSS98 probe 98 N**
- **K-PCE-MSS50 probe 50 N**
- **K-PCE-HSS hardness test stand**
- **K-PCE-SRZG cylindrical support ring (large)**
- **K-PCE-SRZK cylindrical support ring (small)**
- **K-PCE-SRF flat support ring**
- **K-PCE-SRZK cylindrical support ring (small)**
- **K-PCE-SRZG cylindrical support ring (large)**
- **K-PCE-CB30 calibration block 300 ... 500 HV**
- **K-PCE-HSS hardness test stand**

**MEMORY**

- **SD card**
- **USB card**
- **graphical colour LCD with backlight**

**DISPLAY**

- **Statistics**: single value, MIN / MAX, MEAN
- **Cable length**: 1.5 m

**TECHNICAL SPECIFICATIONS**

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**PCE-5000**

**Ultrasonic Hardness Tester (UCI) f. Serial Measurements (Optional Test Stand)**

- **measurement using Ultrasonic Contact Impedance (UCI)** method
- **hardness measured in HV, HRC, HB, HRA, MPa**
- **graphical colour LCD with backlight**
- **supports SD cards**
- **USB cable and software for PC included**
- **adapted sensor is displayed**
- **splash proof case**

**UCI (Ultrasonic Contact Impedance)**: A measuring method that is the basis for the probe's electrical length. This means that the diamond cone on the lower end of the probe is pressed against the surface of the workpiece at an angle of about 10° or 30°. The probe is then forced into the workpiece at the angler of 90°. The force is chosen by the user. The probe blade hits the probe surface and takes the test load and calibration values into account to calculate the hardness.

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- **Probes**: 10 N, 20 N, 50 N, 100 N, 200 N, 500 N, 1000 N
- **Power supply**: 6 V dc or 3 x AA batteries
- **Battery life**: approx. 10 h
- **Dimensions**: 160 x 75 x 30 mm
- **Weight**: 0.3 kg (without probe)
- **Operating cond.**: -20 ... +40 °C; 30 ... 80 % RH
- **Power supply**: 6 V dc or 3 x AA batteries
- **Battery life**: approx. 10 h
- **Dimensions**: 160 x 75 x 30 mm
- **Weight**: 0.3 kg (without probe)

**K-PCE-5000 ultrasonic hardness tester**

**OPTIONAL ACCESSORIES**

- **K-PCE-MSS98 probe 98 N**
- **K-PCE-MSS50 probe 50 N**
- **K-PCE-SRZG cylindrical support ring (large)**
- **K-PCE-SRZK cylindrical support ring (small)**
- **K-PCE-SRF flat support ring**
- **K-PCE-SRZK cylindrical support ring (small)**
- **K-PCE-SRZG cylindrical support ring (large)**
- **K-PCE-CB30 calibration block 300 ... 500 HV**
- **K-PCE-HSS hardness test stand**

**MEMORY**

- **SD card**
- **USB card**
- **graphical colour LCD with backlight**

**DISPLAY**

- **Statistics**: single value, MIN / MAX, MEAN
- **Cable length**: 1.5 m

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