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Instruction Manual
HB / TH

MANUAL SHORE DUROMETER

Shore A
Shore C/ Shore 0
Shore D

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1. Features

The hardness of plastics is most commonly measured by the Shore Durometer, using either the **Shore A** or **Shore D** scale. It is the preferred method for measuring rubbers/ elastomers and it's also used for "softer" plastics such as polyolefins, fluoropolymers and vinyls.
Shore A scale is used for "softer" rubbers, while **Shore D** scale is used for "harder" ones.
Shore C/ Shore 0 scale is commonly used for tests with foam rubbers, sponges or microporous plastics.

Designed in regard to these standards:

- **DIN 53505**
- **ASTM D2240**
- **ISO 868**

2. Specifications

	Shore A	Shore C/ 0	Shore D
Model	HBA 100-0	HBC100-0	HBD100-0
Indenter	Konus 35° Durchm.1,3		Konus 30°
Tip dimension		SR2,5mm	
Depth of in dentation	0 – 2,5 mm	0 – 2,5 mm	0 – 2,5 mm
Test pressure	ca.12,5 N	12,5 N	50 N
Measuring spring force	0,55–8,065N	0,55–8,065N	0,55-44,5N
Display range	Skala von 0 – 100	Skala von 0 – 100	Skala von 0 – 100
Scale Diameter	55 mm	55 mm	55 mm
Weight.net (gross)	250g (300g)	230g (350g)	250g (300g)
Dimen-sions	26x62x115 (LxBxH) mm	26x62x115 (LxBxH) mm	26x62x115 (LxBxH) mm
Thread	M7 x 0.5	M7 x 0.5	M7 x 0.5

3. Method of measurement

Shore Durometer, like many other hardness testers, measures the depth of indentation in the material created by a given force on a standardized presser foot. The depth is dependant on the hardness of the material, its viscoelastic properties, the shape of the presser foot as well as the duration of the test. Shore durometers allow the measurement of the initial hardness or the indentation hardness after a given period of time.
The basic test requires applying the force in a constant manner without shocks, measuring the hardness (depth of the indentation). If a timed hardness is desired, force is applied for the required time and then the measurement result is to be read.
The tested material should have a thickness of minimum 6.4 mm (0.25 inch).

4. Maintenance

After testing the instrument is to be put back in its packing box. It should not be stored in following environmental conditions: wet or dusty area, oil or chemicals.

5. Calibration

First the test plate is to be put on a hard and flat base.
The hardness tester is to be located on the test plate by placing the measurement tip into the hole of the test plate.

The instrument is to be adjusted by turning the external ring of the round Display to the setpoint of the test plate.

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TH DUROMETER TEST STAND

Models: **TH-AC** for Shore A and C hardness testers
TH-D for Shore D hardness testers

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1. Features

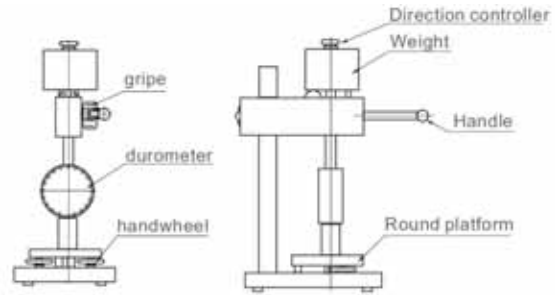
TH-AC Durometer test stand is a new generation of accessory unit specially created for Shore A and Shore D hardness testers. TH-D test stand was specially created for Shore D hardness testers.
The test stand is stable, reasonable, scientific and makes the measuring result more accurate.
Hard metal is used instead of the conventional grass testing table. With this a breakage of the grass testing table can be avoided when testing hardness objects.

2. Specifications

Dimensions: 150 x 110 x 250mm (L x W x H)

Weight: 8.5 kg

3. Operation



Installation setup
1. The test stand is to be put onto a smooth table.
A suitable height, about 110mm, is to be fixed.
2. The cap of the Durometer is to be removed and then it is to be mounted onto the test stand.
3. The height between the Durometer and the testing table (about 10mm) is to be checked. It is fixed with the help of the handle under the testing table. The bottom of the pin touch of the testing table surface is to be checked completely.
4. In order to get more accurate measurement results it can be tested for several times and then the average value is to be taken.

4. State of the test object

The sample should be smooth and the thickness should be 6 mm or more.

5. Storage and maintenance

Dirt and dust is to be cleaned with a soft cloth from the test stand. After testing a little lubricant is to be added avoiding wet and rust.