

Hardness

Handheld Durometers

Wallace offers both analogue and digital Handheld Durometers (including Shore A, Shore D and Shore OO). These durometers enable accurate and repeatable results in accordance with the relevant standards. All models are designed for handheld applications or in conjunction with the Wallace Handheld Durometer Stand (WAH18).

Features

- Accurate and repeatable results
- Non-reflective, full 360° dial face
- Excellent 1/2 point accuracy
- Digital model connects directly to your PC for data transfer
- Digital model has resolution 0.1 and auto-off function
- Conforms to various ISO, ASTM standards



Digital Durometer

Accessories

A range of feet attachments for hard to reach and narrow areas or irregular shapes.

Principle of Operation

The Wallace Handheld Durometers are designed for measuring the hardness of various materials. Simply pressing the unit vertically onto the sample will cause the indenter to penetrate the sample under a specific spring force. The indentation is converted to a hardness value.

To increase repeatability and accuracy, use the handheld unit in conjunction with the WAH18 stand. This will ensure that repeatable force and perpendicularity are maintained, thus increasing the repeatability and accuracy of each test.



Analogue Durometer A

Handheld Durometers

Specifications

SHORE TYPE	Standard	Foot Force	Spring Force	Indenter Shape & Diameter	Max. Indentation Depth	Sample Thickness	Measurement Range	Application Material
A	ASTM D2240 ISO 48-4 ISO 868	1kg	8.05N	35° Truncated Cone (Frustrum)	2.50mm	>6mm	10 - 90 A Below 20 D	Soft vulcanized rubber, natural rubber, nitriles, thermoplastic elastomers, flexible polyacrylics and thermosets, wax, felt and leathers.
B	ASTM D2240 ISO 48-4	1kg	8.05N	30° Cone	2.50mm	>6mm	Above 90 A Below 20 D	Moderately hard rubber, thermoplastic elastomers, paper products and fibrous materials.
C	ASTM D2240 ISO 48-4	5kg	44.45N	35° Truncated Cone (Frustrum)	2.50mm	>6mm	Above 90 B Below 20 D	Medium hard rubber, thermoplastic elastomers, medium hard plastics and thermoplastics.
D	ASTM D2240 ISO 48-4 ISO 868	5kg	44.50N	30° Cone	2.50mm	>6mm	Above 90 A	Hard rubber, thermoplastic elastomers, harder plastics and rigid thermoplastics.
DO	ASTM D2240 ISO 48-4	5kg	44.45N	Ø 2.38mm ½ Ball	2.50mm	>6mm	Above 90 C Below 20 D	Moderately hard rubber, thermoplastic elastomers, and very dense windings.
O	ASTM D2240 ISO 48-4	1kg	8.05N	Ø 2.38mm ½ Ball	2.50mm	>6mm	Below 20 DO	Soft rubber, thermoplastic elastomers, very soft plastics and thermoplastics, medium-dense textile windings.
OO	ASTM D2240 ISO 48-4	0.4kg	1.111N	Ø 2.38mm ½ Ball	2.50mm	>6mm	Below 20 O	Extremely soft rubber, thermoplastic elastomers, sponge, extremely soft plastics and thermoplastics, foams, low density textile windings, human and animal tissue.

Standards

ISO 48-4, ISO 868, ASTM D2240



Hardness

Handheld Durometer Stand

The Wallace Handheld Durometer Stand provides a lower cost alternative for accurate and repeatable results in accordance with the relevant standards. The easy height and weight adjustment make it simple to measure non-standard products.

The stand easily adapts to support a range of durometers, both analogue and digital (including Shore A, Shore D and Shore OO).

Features

- Accurate and repeatable results
- Constant and perpendicular foot pressure
- Adjustable feet and level gauge
- Easy height adjustment using quick release lever
- Adapts easily to various ISO standards
- Durometer easily fitted to stand

Accessories

A range of digital and analogue handheld durometers as well as Shore A and Shore D weights.

Weights		
Standard	Weight: WAH18-120	Weight: WAH18-53
Shore OO	X	X
Shore A	✓	X
Shore D	✓	✓



Digital Durometer on Stand

Principle of Operation

Adjust the height of the durometer to allow the samples to be placed easily under the indenter. There is a safety stop on the shaft that should be set to avoid the instrument being able to drop accidentally into the sample or table.

Place the sample on the stand and operate the lever slowly to deploy the durometer. Allow the durometer to move gently onto the sample and display the reading.

Specifications

Handheld Durometer Stand	
Part Number	WAH18
Dimensions (mm)	450 (h) x 200(w) x 200(d)
Stand Weight	11kg
Indicator Travel	25mm
Adjustment Range	250mm
Operating Temperature	10 to 40°C; Altitude 2000m maximum
Humidity Range	10 to 80% RH non-condensing

Standards

ISO 48-4, ISO 868, ASTM D2240

