Productivity Reliability Repeatability Traceability

H14 Macro IRHD Hardness Tester

Wallace
www.wallaceinstruments.com

The Wallace H14 Macro IRHD Hardness Tester allows accurate and repeatable measurements of larger samples in International Rubber Hardness Degrees (IRHD).

Principle of Operation

The Wallace H14 is a digital benchtop hardness tester designed for measuring the hardness of standard rubber samples in IRHD.

The robust 'C' frame design allows the operator easy access from front and sides to safely load and remove samples. The indenter mounting is essentially frictionless and its position sensed by a linear variable differential transformer, providing the instrument with outstanding sensitivity. The adjustable anti-vibration feet reduce the effect of external vibration.

By simply pressing the start button, the instrument functions automatically, giving accurate and repeatable results.

As minimal training is required, new operators soon become confident with the H14, achieving consistent readings from the outset.

Test Procedure

Buttons on the front panel easily adjust the measuring head up and down to suit the sample height. Once the start button is pressed, the foot descends to secure the sample, followed by the indenter, which lowers through the centre of the foot with a primary load of 0.3N to find its datum position. After 5 seconds, in line with the Standards, the indenting force of 5.4N is added, giving a total force of 5.7N and applied for a further 30 seconds. At this point the instrument identifies the indenter position and the hardness value is automatically frozen and displayed clearly on the LCD screen. Two LEDs on the instrument's front panel monitor all stages of the test cycle. Data is easily captured in our traceability software.

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Specifications

H14 Macro IRHD Hardness Tester			
	WAH14 (Normal)	**WAH14 (High)**	**WAH14 (Low)**
Part Number	WAH14/1	WAH14H	WAH14L
Dimensions (mm)	300 (h) x 215 (w) x 255 (d)	300 (h) x 215 (w) x 255 (d)	300 (h) x 215 (w) x 255 (d)
Weight	8kg	8kg	8kg
Resolution	Selectable rounding to 0.1, 0.2, 0.5 or 1	Selectable rounding to 0.1, 0.2, 0.5 or 1	Selectable rounding to 0.1, 0.2, 0.5 or 1
Indenter Shape	Ball	Ball	Ball
Indenter Diameter	2.50mm ±0.01	1.00mm ±0.01	5.00mm ±0.01
Maximum Indention Depth	1.80mm	0.44mm	3.18mm
Measurement Range	30 - 85 IRHD	85 - 100 IRHD	10 - 35 IRHD
Force Method	Weight		
Foot Force	8.3N ±1.5		
Contact Force	0.3N ±0.02		
Indenting Force	5.4N ±0.01		
Force Duration	5 + 30 seconds		
Sample Thickness (as per standard)	8 to 10mm		
Operating Temperature	5 to 40°C; Altitude 2000m maximum		
Humidity Range	10 to 80% RH non-condensing		
Output of Test Results to PC/Printer/ Datalogger	USB connection (RS232 protocol)		

Standards

ISO 48-2, ASTM D1414, ASTM D1415