

## ARW-DPI

For order 220121967

### Impact Hardness tester for metals

Portable Digital hardness tester compact and easy to use, particularly indicated for the measurement of the hardness of solid surfaces also of great sizes that are difficult to reach with other instruments. Using the method of measurement to bounce method (Leeb test) with the use of an impact type sensor (probe) that can detect the hardness of various types of material and to convert the value in the main measurement scales (Rockwell B, Rockwell C, Brinell, Vickers and calculation of the breaking load)



optional ISO calibration certificate

- Measurement system to Rebound (Leeb Test)
- Standard impact probe "D" included
- Accuracy. 1% at 800HLD (+/-6HLD) on the smooth surface
- Selectable measurement scales: Rockwell (B & C), Vickers (HV), Brinell (HB), Shore (HSD) Leeb HLD) and tensile strength (MPa)
- Internal menu language "English"
- Automatic detection of probe type
- Possibility to carry out the measure in any direction, vertical, diagonal, horizontal and upside down ←→↕



#### The instrument is supplied with an IR PORTABLE PRINTER.

Data printout:  
The type of probe used, the material, the direction of impact, the hardness value on the measurement scale leeb "HLD" and the selected scale, the date and time, the average of readings and deviation standard.



#### STANDARD CALIBRATION BLOCK:

The hardness tester ARW-DPI is supplied with a test block for the control and calibration of the instrument



#### LEEB IMPACT SENSOR PROBE:

The method "Leeb Test" rebounding is one of four methods more used to determine the hardness of a metal and the scale of measurement Leeb (HL) is defined as the ratio of the speed of the impact body (dart) contained inside the impact probe before and after the impact with the surface. The dart, typically composed of tungsten carbide (in synthetic diamond in the probes for very hard materials), is loaded by the spring in the probe and "shot" against the test sample, on which bounces losing energy by plastic deformation. The speed of the dart is calculated at 1 mm from the surface of the test sample and, the higher will be the hardness of the material, the higher will be the speed of rebound.... For to calculate the speed is used a coil wrapped at the end of the probe, on which the dart magnetized, produces in its path a voltage directly proportional to its speed. Through appropriate translation tables, dependent on the material on which testing is done, you can convert the measure unit Leeb "HL" in other important hardness scales, such as HV, HRC, HRB, and HB.

#### TECHNICAL FEATURES

■ Range HLD	from 0 up to 999 HLD
■ Accuracy	± 6HL (out of 800 HLD)
■ Display	large backlit LCD
■ Resolution	1 HL, 1 HV, 1 HB, 0.1 HRC, 0.1HRB, 1 HSD, 1 MPa
■ Minimum weight of the sample tested	3Kg (probe type "D")
■ Minimum thickness of the sample tested	30mm (probe type "D")
■ Minimum radius of the sample tested	50mm (concave / convex) 10mm using the adapter (optional)
■ Power supply	dry cell batteries (3x AAA 1.5)
■ Outputs	IR, USB
■ Operating temperature	0°C to 50°C (32 to 122°F)
■ Storage Temperature	-10°C fino a + 60°C (14 fino a 140°F)
■ Humidity	90% max.
■ Size	150mm x 80mm x 24mm (5.9 x 3.1 x 0.9 inches)
■ Weight	approx. 200g



#### SUPPLY KIT

- Instrument
- Standard Impact probe type "D"
- Calibration Block
- IR Printer
- Adapter ring for small diameters
- Sensor cleaning brush
- User Manual
- Carrying Case

#### Optional accessories

- 2 types of probes to impact (D and G)
- Set of support rings for spherical surfaces, concave, convex.

#### MEASURE RANGE

Material:	MIN	MAX	Material:	MIN	MAX			
Steel and steel alloys	HRC	19,8	68,5	Iron	HB	140,0	334,0	
	HRB	59,6	99,6		Ductile iron	HB	140,0	387,0
	HSD	26,4	99,5	Alluminium alloys		HB	30,0	159,0
	HB	140,0	651,0	Brass (copper-zinc alloys)		HB	40,0	173,0
	HV	83,0	976,0		HRB	13,5	95,3	
Cutting Tools	HRC	19,8	68,5	Bronze (copper-alluminium alloys)	HB	60,0	290,0	
	HV	83,0	976,0	Copper alloys	HB	45,0	315,0	
Stainless steel	HRB	59,6	99,6					
	HRC	19,8	68,5					
	HB	140,0	651,0					
	HV	83,0	976,0					

#### Measuring range of tensile strength

375 - 2639 MPa (steel)