

## **TIME Precision Measuring Instrument**

# Leeb Hardness Tester HLN-11A



## Features:

- Wide measuring range, for all metallic materials.
- Direct display of hardness scales HRB, HRC, HV, HB, HS, HL
- Conversion to tensile strength (U.T.S.)
- Test at any angle, even upside down.
- Removable printer included.
- Six impact Devices are available for special applications.
- Large LC display showing all functions and parameters.
- Battery low indication
- power charging indication on the keyboard by LED.
- Fault indication in details. (E1-E5)

#### **Technical Specification:-**

Hardness scales	HL, HRC, HRB, HV, HB, HS		
Measuring range	– See table in page 7		
Tolerance			
Tensile strength U.T.S range	374 ~ 1999 MPa		

Орионал шираст Device	DC/D + 13/O/C/DL (see page o)				
Min. Radius of workpiece (concave / convex)	Rmin = 50mm (with support ring $Rmin = 10mm$ )				
Impact Device	D/DC/DL	<b>D</b> + 5	С	G	
Max. Workpiece Hardness	940/940/950HV	940HV	1000HV	650HV	
Min. workpiece weight					
Min. workpiece thickness	5mm	5mm	1mm	10mm	
Min. Thickness of hardened layers	0.8mm	0.8mm	0.2mm	1.2mm	
Power	Rechargeable NiMH batteries $5 \times 1.2V$ 600mAh				
Charging time	3 hours				
Continuous working time	About 50h (without printing and backlight)				
Operating temperature	$0 \sim 40^{\circ} \mathrm{C}$				
Humidity	90%				
Dimensions	$268 \times 86 \times 50$ mm				
Weight	615g (including impact device and printer)				

## Standard Delivery

- Main unit •
- Impact Device type D •
- Test block HLD •
- Charger •
- Brush •
- Table support for main unit 1 • 1
- TIME certificate •
- Instruction manual •
- Warranty card •

### **Optional Accessory**

- Printing paper •
- Special Impact Devices ask for details. •

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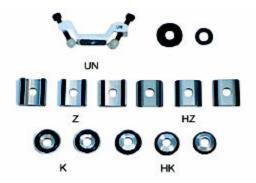
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Support rings •

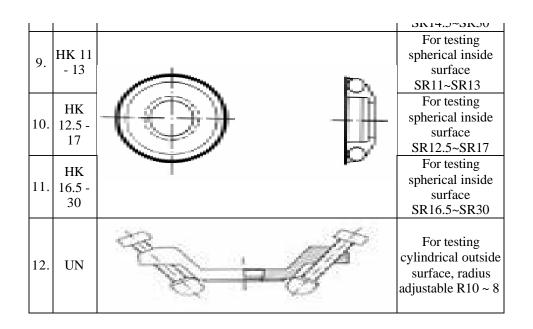
Optional Support Rings: They are used for tested surface whose curvature radius is less than 30mm (D, DC, D + 15, C impact devices) or less than 50mm (G impact device)





Support Rings

No.	Type	Sketch of non-conventional supporting ring	Remarks
1.	Z10 - 15		For testing cylindrical outside surface R10 ~ R15
2.	Z14.5 - 30		For testing cylindrical out- side surface R14.5~R30
3.	Z25 - 50		For testing cylindrical outside surface R25~R50
4.	HZ11 - 13		For testing cylindrical outside surface R25~R13
5.	HZ12.5 - 17	$+ \oplus + \blacksquare$	For testing cylindrical in- side surface R12.5~17
6.	HZ16.5 - 30		For testing cylindrical in- side surface R16.5~R30
7.	K10- 15		For testing spherical out- side surface SR10~SR15
8.	K14.5 - 30		For testing spherical outside



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