

# Universal Angle Hardness Tester

## 2000 D&DL™

**H**ARTIP2000 is an innovative portable Leeb hardness tester with our new patent technology, which makes HARTIP 2000 a universal angle (UA) impact direction hardness tester. It is no need to set up impact direction when taking measurement by any angle. Therefore, HARTIP 2000 offers a linear accuracy comparing to the angle compensating method. HARTIP 2000 is also a cost saving hardness tester and has many other features.

HARTIP2000 D&DL is equipped with SADT unique D and DL 2-in-1 probe, which probe can convert between D and DL simply by changing impact body. This 2-in-1 probe is equivalent to two individual probes. At present in China, only SADT can supply such kind of product with this new technology. Therefore it is possible to give customer an economic way to have one probe with two functions. That means our product would become more competitive in the market.



### Standard package

#### 2000/2000 D&DL

2000 main unit	1
Probe D(for HARTIP2000)	1
Test block D	1
Small support ring	1
Cleaning brush	1
Operation manual	1
Test certificate	1
Carrying case	1

### Optional accessories

Universal probe C/DC/D+15/G/DL/E
Bluetooth module (made-to-order)
Bluetooth micro printer (powered by rechargeable battery, made-to-order)
Special support rings
Standard big support ring for probe
Small support ring for probe
Impact body D
Carbide ball tip D
Test block D with certificate
Test block D w/o certificate

## Advantages

Universal impact direction mode, it does not need to setup different impact direction, it will be recognized automatically

- ✦ High accuracy:  $\pm 2HL(0.3\% @ HL800)$
- ✦ Linear accuracy for any angles
- ✦ No compensation for impact direction
- ✦ Dual values (Leeb value and one conversion value) can be displayed at the same screen

Big LCD display with backlight

- ✦ Ten testing materials including forged steel,
- ✦ It has strength conversion value
- ✦ 300 data for memory
- ✦ Customer re-calibration allowed
- ✦ Power off automatically
- ✦ More economic and more convenient to use

## Specifications

SADT HARTIP 2000/HARTIP2000 D&DL	
Principle	Leeb hardness measurement
Accuracy	$\pm 0.3\% @ HL=800$ , Repeatability: $\pm 2HL$
Display	Digital LCD with backlight
Hardness scale	HL/HRC/HRB/HB/HV/HS/ $\sigma_b$
Measuring range	HL100-960 / HRC0.9-83.2 / HRB1-140 / HB1-1878 / HV1-1698 / HS0.5-1370 / $\sigma_b(\text{rm})1-6599\text{N/mm}^2$
Probe	D(External)/D-DL2-in-1*DL, D+15, G, C, E (optional)
Impact direction	Universal angle (UA) type
Materials	10 common metal materials
Memory	300 data can be stored and re-readable
Statistics	Calculated automatically
Re-calibration	Allowed by user
Indicator	Low battery
Communication interface	Bluetooth (integrated with main unit, made-to-order) to bluetooth micro-printer
Auto power off	Auto
Power supply	1.5V AA alkaline battery x 2
Working environment	$-10^{\circ}\sim +45^{\circ}\text{C}$
Dimension (mm)	127x66x29
Net weight (g)	240
Standards	Conforming to ASTM A956, DIN 50156, GB/T 17394-1998

\*: D-DL 2-in-1 probe is only available for HARTIP2000 D&DL.