



# Physical Test Solutions

Innovative Solutions in Material Test Equipment

Hardness Testing Instrument



# Analogue Shore Durometer

## LX-AT/CT/DT



LX-AT (#842-215)



LX-CT (#842-225)



LX-DT (#842-235)

### Applications:

- Shore durometer are designed to determine the indentation hardness of material ranging from cellular products from to rigid plastics.
- LX-AT Shore Durometer, designed for testing the hardness of vulcanized rubber and plastic products, has simple structure, easy operation and reading, facility and high resolution. It complies with the standard of GB/T531-1999 and other relevant standard.
- LX-CT Shore Durometer, designed for testing the hardness of foam, sponge, shoe micropore material, etc. It is in accordance with HG/T2489-93.
- LX-DT Shore Durometer is designed for testing the hardness of hard rubber, resin, glass, printed board, fiber and so on. It is in accordance with GB/T531-1999.
- The Durometer test stand is R&D for Shore A, C, and D Durometer. The test stand construction includes operating handle, adjusted glass stage, die poise, clip beam of durometer and carrick column. The shore hardness testing will be more accurate with the stand.

### Specifications:

| Product Name       | Twin-index Analogue Shore Durometer               |             |             |
|--------------------|---------------------------------------------------|-------------|-------------|
| Model              | LX-AT                                             | LX-CT       | LX-DT       |
| Code#              | 842-215                                           | 842-225     | 842-235     |
| Measuring Range    | 0-100 HA                                          | 0-100 HW    | 0-100 HD    |
|                    | 10-90 HA Available Measuring Range                | 10-90 HW    | 10-90 HD    |
| Resolution         | 2.5 mm                                            | 2.5 mm      | 0~2.5 mm    |
| Tip Dimension      | 0.79mm                                            | SR2.5mm     | SR0.1mm     |
| Dimension (LxWxH)  | 115x60x25mm                                       | 115x60x25mm | 115x60x25mm |
| Net Weight         | 100g                                              | 100g        | 100g        |
| Execution Standard | GB/T 531, DIN53505, ASTM D2240, ISO7619, JISK7215 |             |             |

### Shore Durometer and Test Stand:

| Product Name     | Testing Stand  |                |                |
|------------------|----------------|----------------|----------------|
| Model            | LX-AS          | LX-CS          | LX-DS          |
| Code#            | 842-515        | 842-525        | 842-535        |
| Dimension(LxWxH) | 116 x161x340mm | 116 x161x340mm | 116 x161x340mm |
| Weight of Stand  | 5.5kg          | 5.5kg          | 7.0kg          |



LX-DS (#842-535)



## SI-100 series

### Applications:

Shore Hardness Tester SI-100 Series include (A, B, C, D, E, O, DO, OO) type, model complete, with different probe size, use for different measured objects and hardness value, to meet different request for kinds of material hardness measurement. Shore hardness tester are widely used in rubber plastic hardness measurement has and the features of simple structure easy to use type of light weight small reading intuitive etc can carry hand held measurement also can device in supporting the production of the constant load shelf fixed load measurement.

### Features:

- Public and imperial units converted, with the average computing power.
- Integrated design, small volume, light weight, simple structure, easy to use, intuitive readings and automatic shutdown function.
- Use USB data output and RS-232 data output with connection PC.
- Broid "Bluetooth" data output choice.

### Specifications:

| Mode                  | SI-100                                 |
|-----------------------|----------------------------------------|
| Display               | LCD Display                            |
| Measuring Range       | 10~90 HA/HD(B/C/E/O/DO/OO)             |
| Statistics            | Avtshr value, min-max                  |
| Resolution            | 1um(0.1mils)                           |
| Accuracy              | ≤1H                                    |
| Operating temperature | 0~40°C                                 |
| Power Supply          | 2x1.5v AAA (UM-4) battery              |
| Dimension             | 176x63x25 mm                           |
| Weight                | 310g                                   |
| Execution Standard    | DIN53505/ASTM D2240/ISO 7689/JIS K7215 |

### Durometer Selection:

| Soft | Middle                       | Hard |
|------|------------------------------|------|
|      | Type A(20-90A)               |      |
|      | Type B(Above 90A Below 20D)  |      |
|      | Type C(Above 90B Below 20D)  |      |
|      | Type D(Above 90A)            |      |
|      | Type DO(Above 90C Below 20D) |      |
|      | Type O(Below 20DO)           |      |
|      | Type E(Above 90DO Below 20A) |      |
|      | Type OO(Below 20O)           |      |

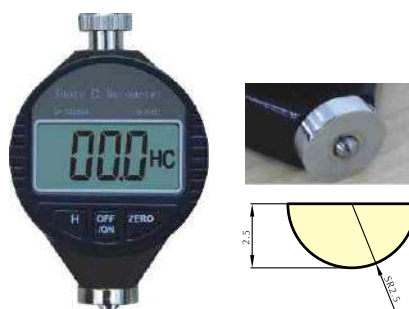
### SI-100 Series Model Information:

| Model    | Code#   | Indenter                      | Typical Examples Of Materials Tested                                                                                                      | Haardness Valus      |
|----------|---------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| SI-100A  | 842-311 | 0.79 Truncated (Frustum) cone | Soft vulcanized rubber, natural rubber natriles, thermoplastic elastomers, flexible polyacrylics and thermosets, wax, felt, and leathers. | 20~90A               |
| SI-100B  | 842-321 | R0.1 Cone                     | Moderately hard rubber, thermoplastic elastomers, paper products, and fibrous materials.                                                  | Above 90A Below 20D  |
| SI-100C  | 842-331 | 0.79 Truncated (Frustum) cone | Medium-hard rubber, thermoplastic elastomers, medium-hard plastics and thermoplastics.                                                    | Above 90B Below 20D  |
| SI-100D  | 842-341 | R0.1 Cone                     | Hard Rubber, thermoplastic elastomers, harder plastics, and rigid thermoplastics.                                                         | Above 90A            |
| SI-100DO | 842-351 | R1.2 Spherical radius         | Moderately hard rubber, thermoplastic elastomers, and very dense textile windings.                                                        | Above 90C below 20D  |
| SI-100O  | 842-361 | R1.2 Spherical radius         | Soft rubber, thermoplastic elastomers, very soft plastics and thermoplastics, medium-density textile windings.                            | Below 20DO           |
| SI-100E  | 842-371 | R2.5 Spherical radius         | Hrad sponge, EVA                                                                                                                          | Above 90DO Below 20A |
| SI-100OO | 842-381 | R1.2 Spherical radius         | Extremely soft rubber, thermoplastic elastomers, sponge, extremely soft plastics and thermoplastics, foams, low-density textile windings. | Below 20O            |

## SI-200 series



SI-200A(842-312)



SI-200C(842-332)



SI-200D(842-342)

### Applications:

- SHORE A DUROMETER: It is designed for testing the hardness of soft rubber, printer roller and other elastomer material.
- SHORE D DUROMETER: It is designed for testing the hardness of hard rubber, such as thermoplastic plastics, bowling plastic floor and so on.
- SHORE C DUROMETER: It is designed for measuring Foam, Sponge, Shoes with incorporates material. etc.



### Specifications:

| Product Name              | Digital Shore Durometer                   |                                  |                                               |
|---------------------------|-------------------------------------------|----------------------------------|-----------------------------------------------|
| Model                     | SI-200A                                   | SI-200C                          | SI-200D                                       |
| Code#                     | 842-312                                   | 842-332                          | 842-342                                       |
| Measuring Range           | 0-100HA                                   | 0-100HC                          | 0-100HD                                       |
| Available Measuring Range | 10-90HA                                   | 10-90HC                          | 10-90HD                                       |
| Resolution                | 0.1HA                                     | 0.1HC                            | 0.1HD                                         |
| Indenter Shape            | Flat cone point(0.79mm)35° Included Angle | 2.5mm Spherical                  | Sharp cone point (SR0.1mm) 30° Included Angle |
| Power Supply              | Runs on by one 1.5V cell battery          | Runs on by one 1.5V cell battery | Runs on by one 1.5V cell battery              |

- Thickness of specimen > 6mm, no more than 3 layers; Test area > feet area (diameter 18mm)
- Test 3 times and calculate the average as test result.
- Usually, use A/D. When the hardness of A > 90, use D.

## PHR-1 series



PHR-1(#812-113)  
PHR-1S(#812-313)  
Opening Size:25X25mm



PHR-4-4(#812-143)  
Opening Size:100X100mm



PHR-4-2(#812-143)  
PHR-4-2S(#812-333)  
Opening Size:100X50mm



PHR-2(#812-143)  
PHR-2S(#812-333)  
Opening Size:50X50mm



PHR-8-4(#812-163)  
Opening Size:200X100mm



PHR-4-3(#812-153)  
Opening Size:100X75mm



PHR-20-12(#812-183)  
Opening Size:500X300mm



PHR-8-10(#812-173)  
Opening Size:200X250mm

### Specifications:

|                        |                                                                                                         |
|------------------------|---------------------------------------------------------------------------------------------------------|
| Preliminary Test Force | 10Kgf(98.07N)                                                                                           |
| Test Force             | 60kgf(558.4N), 100kgf(980.7N), 150kgf(1471.3N)                                                          |
| Indenter               | 120° Cone Diamond Indenter    Φ1.588mm Ball indenter                                                    |
| Indication error       | Meets the requirements of ISO6508                                                                       |
| Repeatability error    | Meets the requirements of ISO6508                                                                       |
| Resolution             | 0.5HR                                                                                                   |
| Measuring Range        | 15 scales, such as HRA, HRB, HRC, and so on.                                                            |
| Application            | All common metal, including steel, copper, aluminum, nickel, lead, tin, cemented steel, hard alloy, etc |



Φ1.588 Carbide ball indenter



Φ3.175mm Carbide ball indenter



Φ6.35mm Steel ball indenter



Φ12.7mm Steel ball indenter



Diamond Cone indenter



Extensions



Anvil for testing ball



Convex cylindrical anvil



Concave cylindrical anvil



Flat anvil



Rockwell Test block



Bench stand

# Portable Rockwell Durometer

## PHR-100 series

### Applications:

PHR series is a precisely portable hardness testing instrument for the measurement of metal and plastic material, it is not only suitable to measure the small parts, but also measure large parts, it not only offset the problem that bench top hardness tester can not move to test the large and fixed parts, but also offset the problem that the rebound hardness tester can not make a accurate testing for small parts.

### Features:

- This Rockwell hardness tester is small, portable, accurate, light weight only 0.8kg, and can be easily operated like micrometer.
- Our Rockwell portable hardness tester works on practical hardness testing principle, having the same high testing precision as that of a bench type device. It has high testing accuracy complies with the ISO6508 standard, with an error of no more than 1.5HRC, tested by the National Institute of Metrology.
- The Rockwell portable hardness tester can be adopted for testing fine, long, small and irregular parts, instead of the bench hardness tester.
- Comprising the main unit and holder, the hardness tester can either be used on the table or easily carried to workshops.
- It is fast, only 10 seconds to finish a test.
- Rockwell hardness value can be conveniently read out.
- The internal and external surface hardness of steel tubes can be tested by the Rockwell portable hardness tester.
- This testing device suits parts with small bearing surface, in particular.
- It is designed with traceable standard hardness block, and penetrator passing the inspection by standard Rockwell hardness tester.
- The load cell used to calibrate load can be traced to national secondary standard.



PHR-100(#812-213)  
PHR-100X(#812-223)



PHR-16(#812-413)  
PHR-32(#812-423)  
PHR-64(#812-433)

### Standard Delivery:

| Product Name               | Code#   |
|----------------------------|---------|
| Instrument Main Body       | PHR     |
| 120° Cone Diamond Indenter | 812-403 |
| Flat-anvil                 | 812-503 |
| V-shape Anvil              | 812-523 |
| Rockwell Test Blocks       | /       |
| Φ1.588mm Ball Indenter     | 812-463 |
| Accessory Box              | 812-901 |
| Operation Manual           | 1       |

### Optional Accessories

| Product Name                    | Code#       |
|---------------------------------|-------------|
| Φ3.175mm Carbide ball Indenter  | 812-473     |
| Φ6.35mm ball Indenter           | 812-483     |
| Φ12.7mm ball Indenter           | 812-493     |
| Rockwell test blocks HRC-High   | 812-631-060 |
| Rockwell test blocks HRC-Medium | 812-631-040 |
| Rockwell test blocks HRC-Low    | 812-631-030 |
| Rockwell test blocks HRA        | 812-611     |
| Rockwell test blocks HRB        | 812-621     |
| Customized adapter              | 812-733     |

## PHB-150



PHB-150(#832-123)



Shear Pins (#832-723)      Test Head (#832-933)      Support Handle (#832-913)

### Standard Delivery:

| Product Name           |
|------------------------|
| Instrument Main Body   |
| Test Head              |
| Φ7.26mm Steel Indenter |
| Flat Anvil             |
| V-shape Anvil          |
| Support Handle         |
| Indenter Head Holder   |
| Shear Pins (250 pcs)   |
| Brinell Test Tool      |
| Rubber Protective Caps |
| 20x Reading Microscope |
| Accessories Box        |

### Applications:

- If the workpiece can be placed into the C clamp, PHB-150 static type is recommended for a more accurate test result.

### Features:

- Accurate and consistent test force, controlled by precision shear pin. Works in static type and hammer impact type and follows Brinell hardness test method.
- According to the similarity principle of Brinell hardness test, this tester has 1580kg test force, Φ7.26mm spherical indenter,  $F/D^2 = 30$ . The test condition is equivalent to the commonly used 3000kg test force, Φ10mm ball condition.
- High accuracy and repeatability; tested by National Institute of Metrology with tolerance less than  $\pm 3\%$ . The accuracy meets the requirements of ISO 6506 and is no lower than that of the bench Brinell hardness tester.
- Easy, quick and simple operation. Static type for testing medium and small size work-pieces; hammer impact type for testing large work-pieces.
- Only one inexpensive shear pin is consumed in each test.
- Good choice to replace Leeb hardness tester and Poldi type hammer impact hardness tester with lower accuracy.

### Specifications:

| Product Name            | Dual-use Brinell Durometer                                                                                                               |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Model                   | PHB-150                                                                                                                                  |
| Code#                   | 832-123                                                                                                                                  |
| Test Force              | 1580kg                                                                                                                                   |
| Tolerance of Test Force | < 0.5%                                                                                                                                   |
| Indenter                | Φ7.26mm steel spherical surface indenter, (test range: 100-400HB);<br>Φ4.0mm carbide spherical surface indenter, (test range: 400-650HB) |
| Measuring Range         | 100-650HB                                                                                                                                |
| Application             | Casting, forging and steel raw materials etc                                                                                             |
| Accuracy                | Meets the requirements of ISO6506<br>Error of static type: $< \pm 3\%HB$<br>Error of hammer impact type: $< \pm 5\%HB$                   |
| Package Dimensions      | 705×375×205 mm                                                                                                                           |
| Gross/Net Weight        | 11.6Kg/4.2kg                                                                                                                             |

### Optional Brinell Measurement Software

- Friendly Operation Interface
- Auto Identification Measurement
- High Definition Indentation
- Magnetic Touch
- Auto-save Data and Generate Report
- Powerful Compatibility



Brinell Measurement Software BrinScan

# Hammer Impact Brinell Durometer

## PHB-1

### Applications:

- PHB-1 hammer impact type tester should be compared periodically with a bench Brinell hardness tester or static type tester.

### Features:

- Accurate and consistent test force, controlled by precision shear pin. Works in static type and hammer impact type and follows Brinell hardness test method.
- According to the similarity principle of Brinell hardness test, this tester has 1580kg test force,  $\Phi 7.26\text{mm}$  spherical indenter,  $F/D^2=30$ . The test condition is equivalent to the commonly used 3000kg test force,  $\Phi 10\text{mm}$  ball condition.
- High accuracy and repeatability; tested by National Institute of Metrology with tolerance less than  $\pm 3\%$ . The accuracy meets the requirements of ISO 6506 and is no lower than that of the bench Brinell hardness tester.
- Easy, quick and simple operation. Static type for testing medium and small size work-pieces; hammer impact type for testing large work-pieces.
- Only one inexpensive shear pin is consumed in each test.
- Good choice to replace Leeb hardness tester and Poldi type hammer impact hardness tester with lower accuracy.

### Specifications:

| Product Name            | Hammer Impact Brinell Durometer                                                                                                                                    |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                   | PHB-1                                                                                                                                                              |
| Code#                   | 832-143                                                                                                                                                            |
| Test Force              | 1580kg                                                                                                                                                             |
| Tolerance of Test Force | < 0.5%                                                                                                                                                             |
| Indenter                | $\Phi 7.26\text{mm}$ steel spherical surface indenter, (test range: 100-400HB);<br>$\Phi 4.0\text{mm}$ carbide spherical surface indenter, (test range: 400-650HB) |
| Measuring Range         | 100-650HB                                                                                                                                                          |
| Application             | Casting, forging and steel raw materials etc                                                                                                                       |
| Accuracy                | Meets the requirements of ISO6506<br>Error of static type: $< \pm 3\% \text{HB}$<br>Error of hammer impact type: $< \pm 5\% \text{HB}$                             |
| Package Dimensions      | 510×375×177 mm                                                                                                                                                     |
| Gross/Net Weight        | 3.8Kg/0.8kg                                                                                                                                                        |

### Optional Brinell Measurement Software

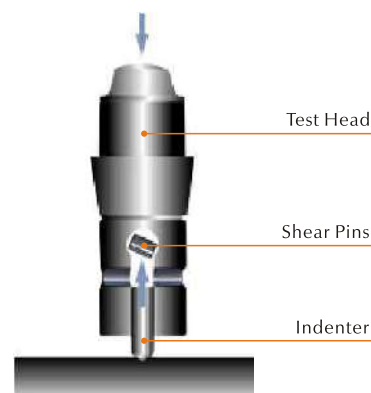
- Friendly Operation Interface
- Auto Identification Measurement
- High Definition Indentation
- Magnetic Touch
- Auto-save Data and Generate Report
- Powerful Compatibility



Brinell Measurement Software BrinScan



PHB-1 (#832-145)



### Standard Delivery:

| Product Name                        |
|-------------------------------------|
| Instrument Main Body                |
| $\Phi 7.26\text{mm}$ Steel Indenter |
| Pin Removal Tool                    |
| Brinell Test Tool                   |
| 20x Reading Microscope              |
| Shear Pins (250 pcs)                |
| Support Handle                      |
| Indenter Head Holder                |
| Accessories Box                     |

## Hammer Impact Brinell hardness tester >>>



### Introduction:

- Hammer Impact Brinell hardness tester HBC is applied at workshops and large workpiece and the measurement departments for determining the Brinell hardness tester of the ferrous and non-ferrous metals and tensile strength of steel.
- The test condition meets the requirement of JJG411.

### Specifications:

|                     |        |            |             |
|---------------------|--------|------------|-------------|
| Measuring Range     | 450HBS | Dimensions | Φ25 x 110mm |
| Steel Ball Diameter | Φ10mm  | Net Weight | 0.5kg       |

### Optional Accessories:

| Product Name           | Quantity | Product Name            | Quantity |
|------------------------|----------|-------------------------|----------|
| Brinell Hardness Block | 2        | 20x Mechanic Microscope | 1        |

## Portable Brinell Durometer >>>



### Introduction:

- It can test the Brinell hardness value of ferrous and non-ferrous metals, whose modulus of elasticity is approximately equal to 2x100000MP. Accuracy is in accordance with GB/P231.2, ISO6506-2, United States ASTM10.
- It is suitable for industries such as metallurgy, machinery factories of various sizes of metal parts and metal materials.

### Specifications:

|                 |            |            |             |
|-----------------|------------|------------|-------------|
| Measuring Range | 100-400HBS | Dimensions | Φ55 x 370mm |
| Impact Energy   | 4.9J       | Net Weight | 3.3kg       |

### Standard Delivery:

| Product Name               | Quantity | Product Name            | Quantity |
|----------------------------|----------|-------------------------|----------|
| Portable Brinell Durometer | 1        | Φ10mm Steel Ball        | 1        |
| Φ10mm Indenter             | 1        | 20x Mechanic Microscope | 1        |

## Brinell Analogue Measuring Microscope >>>



### Applications:

- Accurately measure the diameter of indentation in Brinell hardness testing.
- Reading microscope can measure the width and length of grooves, slots, keyslot, dents, etc.
- It can test metal surface quality, density, specimens of the wild, and so on.

### Specifications:

| Specifications<br>Model | Magnification | Effective field of view<br>(mm) | Dimension      | Weight |
|-------------------------|---------------|---------------------------------|----------------|--------|
| JC10                    | 20X           | Φ6                              | 70 x 50x 155mm | 0.5kg  |
| JC5                     | 40X           | Φ3                              | 70 x 50x 187mm | 0.6kg  |

## W series

### Introduction:

- A portable instrument which can perform on-site hardness test on aluminum alloys. The test result can be got with only a simple clamp. It is convenient, efficient and reliable.
- Webster hardness tester is the preferred instrument for testing aluminum alloys mechanical performance in accordance with American standard ASTM B647.
- Used for quick test the hardness of aluminium profiles, tubings, sheets, accessories and other soft metal. Especially suitable for quick, non-destructive on-site 100% final products qualification test.
- Webster hardness tester can be also used for testing hardness of copper, brass and soft steel.

### Features:

- **Indenter:** Re-engineered with advanced material and new production technology manufactured, higher hardness, long service life, good interchangeability.
- **Indicator Hand:** high strength indicator hand, less likely to be bent by long-term using or mis-operation.
- **Dial Glass:** High strength, high toughness, uneasy to be broken or scratched.
- **Handle:** Forged aluminum alloy handle with fine anodized finishing, high resistance to abrasion and stain.
- **Hardness Blocks:** Tested by standard rockwell hardness tester, the hardness block are attached with test report.
- **Stability:** Stable full scale point, stable calibration point, indicator never glides.
- **Conversion:** Results can be converted to Vickers, Rockwell and Brinell.

### Applications:

- W-20: the most popular model, used to test normal aluminum profiles.
- W-20a: used to test aluminum profiles with thickness within 13mm.
- W-20b: used to test aluminum tubings with inner diameter over 6mm.
- W-B75: used to test brass tubings and brass sheets.
- W-BB75: used to test copper tubings and copper sheets.
- W-B92: used to test soft stainless steel sheets, cold-rolled steel, etc.



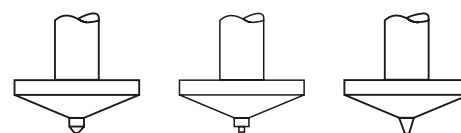
W-20(#862-113)



W-20a(#862-123)



W-20b(#862-133)



W-20

W-B75/W-BB75

W-B92

### Specifications:

| Model               | W-20                 | W-20A   | W-20B   | W-B75     | W-B75B  | W-BB75    | W-BB75B | W-B92                 |
|---------------------|----------------------|---------|---------|-----------|---------|-----------|---------|-----------------------|
| Code#               | 862-113              | 862-123 | 862-133 | 862-143   | 862-153 | 862-163   | 862-173 | 862-183               |
| Measuring Scope     | 0~20HW               |         |         |           |         |           |         |                       |
| Indication Error    | 0.5HW(5~17HW)        |         |         |           |         |           |         |                       |
| Repeatability Error | 0.5HW(5~17HW)        |         |         |           |         |           |         |                       |
| Hardness Range      | 25~110HRE; 58~131HRV |         |         | 63~105HRF |         | 18~100HRE |         | 50~92HRB              |
| Application         | Aluminum alloy       |         |         | Brass     |         | Copper    |         | Stainless Steel Trips |

## BD series



BD-935(#872-113)

BD-936(#872-123)



### Applications:

- BD-1 Barcol Impressor is mainly applied to test aluminum and aluminum alloys, It is suitable to test pure aluminum, aluminum alloys ,thick pieces of aluminum sheets, thick pieces, bars and assembled aluminum alloys parts(e.g.aluminum alloy doors, windows and ladders).
- BD-1 Barcol Impressor is also used to test fiber reinforced plastics and hard plastics.
- BD-1 Barcol Impressor complies with ASTM B648 test Method for Indentation Hardness of Aluminum Alloys by means of a Barcol Impressor.
- BD-1 Barcol Impressor is used to test soft plastics, lead, tin and other soft metals.

### Features:

- **Easy to Use:** Single hand operation; easy to use; high efficiency; able to make test at any site.
- **High sensitivity:** Barcol Impressor has 100 graduations. Its sensitivity is much higher than the webster hardness tester.
- **Wide Testing Range:** Used to test from very soft pure aluminum to very hard aluminum alloys.
- **Less Thickness Requirement :**It can test on any workpieces with thickness greater than 0.8mm.
- **No Supporting Required:** It can test from only one side of the workpiece. It is unnecessary to move or support the workpiece. It is used to test very large and thick workpieces and assembly parts.
- **Easy Conversion:**The test results can be converted to HB,HRC,HV and HBW easily through the conversion table.
- **High Quality Indenter:**The indenter has very high hardness ,long service life and good interchangeability.

### Specifications:

| Product Name        | Portable Barcol Durometer                                       |         |         |
|---------------------|-----------------------------------------------------------------|---------|---------|
| Model               | BD-934                                                          | BD-935  | BD-936  |
| Code#               | 872-113                                                         | 872-123 | 872-133 |
| Indenter            | 26°panhead cone, head face diameter 0.176mm                     |         |         |
| Measuring Range     | 0~100HBa(equivalent to 25~145HBW)                               |         |         |
| Resolution          | 0.5HBa                                                          |         |         |
| Indication Error    | hardness range 42~48HBa, ±2HBa<br>hardness range 81~88HBa ±1HBa |         |         |
| Repeatability Error | hardness range 42~48HBa, ±2HBa<br>hardness range 81~88HBa ±1HBa |         |         |
| Net Weight          | 0.5kg                                                           |         |         |

## Standard Hardness Testing Block



- The hardness blocks are mainly applicable to test the accuracy and calibrate the different hardness testers.
- Conform to standard: ASTM & ISO & JB/T.
- Calibration certificate from Chinese Metrology Bureau is optional available.

### Specifications:

| Product Name                        | Specification           | Code #   | Uniformity | Roughness | Dimension (mm) | Standard          |
|-------------------------------------|-------------------------|----------|------------|-----------|----------------|-------------------|
| HRA Rockwell Hardness Block         | 28-88HRA                | 811-611  | ±0.5HRA    | Ra=0.02um | Φ60x10         | ASTM & ISO & JB/T |
| HRB Rockwell Hardness Block         | 88-100HRB               | 811-621  | ±0.5HRB    | Ra=0.02um | Φ64x10         | ASTM & ISO & JB/T |
| HRC Rockwell Hardness Block         | 25-65HRC                | 811-631  | ±0.5HRC    | Ra=0.02um | Φ60x10         | ASTM & ISO & JB/T |
| Superficial Rockwell Hardness Block | (79-91) HR15N           | 811-661N | ±0.5HR     | Ra=0.02um | Φ60x10         | ASTM & ISO & JB/T |
|                                     | (42-80) HR30N           | 811-671N |            |           |                |                   |
|                                     | (20-70) HR45N           | 811-681N |            |           |                |                   |
|                                     | (88-93) HR15T           | 811-661T | ±0.5HR     | Ra=0.02um | Φ64x10         | ASTM & ISO & JB/T |
|                                     | (70-82) HR30T           | 811-671T |            |           |                |                   |
|                                     | (55-72) HE45T           | 811-681T |            |           |                |                   |
| Brinell Hardness Block              | (150-600) HBW 10/3000   | 831-601  | ±2%HB      | Ra=0.28um | Φ100x15        | ASTM & ISO & JB/T |
|                                     | (150-600) HBW 5/750     | 831-611  |            |           |                |                   |
|                                     | (150-600) HBW 2.5/187.5 | 831-621  | ±2%HB      | Ra=0.28um | Φ90x15         | ASTM & ISO & JB/T |
|                                     | (75-125) HBW 10/1000    | 831-631  |            |           |                |                   |
|                                     | (75-125) HBW 5/250      | 831-641  | ±3%HB      | Ra=0.28um | Φ64x12         | ASTM & ISO & JB/T |
|                                     | (75-125) HBW 2.5/62.5   | 831-651  |            |           |                |                   |
| Vickers Hardness Block              | (150-750)HV1            | 821-601  | ±3%HV      | Ra=0.02um | Φ60x10         | ASTM & ISO & JB/T |
|                                     | (150-750)HV5            | 821-611  |            |           |                |                   |
|                                     | (150-750)HV10           | 821-621  | ±2%HV      | Ra=0.02um | Φ64x10         | ASTM & ISO & JB/T |
|                                     | (150-750)HV30           | 821-631  |            |           |                |                   |
| Micro Vickers Hardness Block        | (200-300)HV0.05         | 823-671  | ±3%HV      | Ra=0.02um | Φ25x5          | ASTM & ISO & JB/T |
|                                     | (200-300)HV0.1          | 823-661  |            |           |                |                   |
|                                     | (400-500)HV0.1          | 823-651  |            |           |                |                   |
|                                     | (400-500)HV 0.2         | 823-641  |            |           |                |                   |
|                                     | (700-800)HV0.2          | 823-631  |            |           |                |                   |
|                                     | (700-800)HV0.5          | 823-621  |            |           |                |                   |
| Leeb Hardness Block                 | (490-830)HLD            | 852-611  | ±5HLD      | Ra=0.03um | Φ90x55         | ASTM & ISO & JB/T |
|                                     | (460-630)HLG            | 852-621  |            |           |                |                   |
| Ultrasonic Hardness Block           | 28-63HRC                | 882-611  | ±5HLC      | Ra=0.03um | Φ120x70        | ASTM & ISO & JB/T |
|                                     | (300-800)HV1            | 882-621  |            |           |                |                   |
|                                     | (180-500)HV5            | 882-631  |            |           |                |                   |
|                                     | (300-800)HV5            | 882-631  |            |           |                |                   |
| Portable Brinell Hardness Block     | (150-500)HBW5/750       | 832-681  | ±2%        | Ra=0.02um | 12X12X150      | ASTM & ISO & JB/T |
|                                     | (150-500)HBW5/3000      | 832-691  | ±2%        | Ra=0.02um | 14X14X150      | ASTM & ISO & JB/T |
| Shore Hardness Block                | Shore A                 | 842-611  | ±1H        | Ra=0.02um | 7PCS           | ASTM & ISO & JB/T |
|                                     | Shore D                 | 842-621  | ±1H        | Ra=0.02um | 3PCS           | ASTM & ISO & JB/T |

## Optional Accessories



Hardness Indenter



Leeb Hardness Tester  
Optional Mini-printer  
(#852-838)



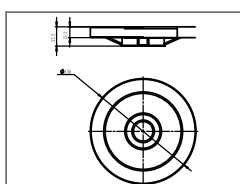
20x Brinell Mechanic Microscope  
(#831-221)



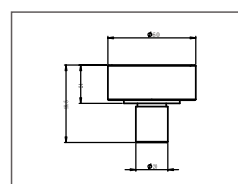
Steel Ball  
(#811-421/441/461/481)



Ø150mm Flat Anvil(#811-541)



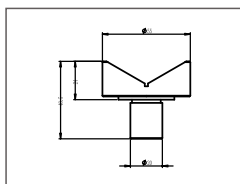
Ø60mm Flat Anvil(#811-521)



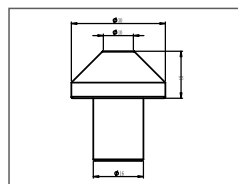
Ø60mm Flat Anvil(#811-521)



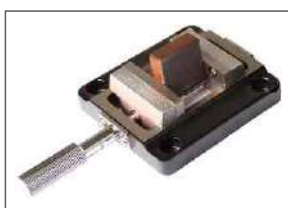
Ø40mm V-shape Anvil(#811-511)



Small Flat Anvil(#811-501)



Mini-Printer(#821-831)



Flat Precision Clamp  
(#823-711)



Thin-Piece Clamp  
(#823-751)



Filament Clamp  
(#823-811)



Filament Clamp  
(#823-811)



16x Digital Eyepiece  
(#823-351)



20x Brinell Digital Microscope  
(#831-221)



Motorized X-Y Platform  
(#823-701)



Vickers Video Measuring System  
(#823-811)



USB CMOS Camera  
(#484-132)



Vickers CCD Adapter  
(#823-361)



Vickers Measuring System  
(#821-834)



Brinell Measuring System BrinScan  
(#838-380)



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