

PHB-3000

HYDRAULIC BRINELL HARDNESS TESTER

TX TESTING INSTRUMENTS

INSTRUMENT FEATURES

- **Test principle.** Apply hydraulic principle permitting loading 3,000 kgf manually.
- **On-site Testing.** It could be applied in workshop, simple operation, easy carrying, and testing body hardness of large parts piece by piece.
- **Permanent Indentation.** By 3,000 kgf and 10mm test ball, the indentation is permanent for re-inspecting.
- **High Reliability.** It follows Brinell hardness test method completely, the same as desk testers, reflecting the actual mechanical property of material or parts.
- **High Accuracy.** Indication error, repeatability error and test force accuracy comply with ISO, and ASTM standards, the same as desk testers.
- **Wide Application Range.** As long as clamped to the parts, it could test parts in any shape and size.
- **Wide Test Range.** It could test various common metal materials by its combination of different test force and test head, that is, wide test range.



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APPLICATION

- On-site test of steel products, nonferrous metal, castings, forgings, and semi-finished heat treatment parts.
- Applied to too large parts for desk testers to test. Replace Leeb testers which are in low accuracy and reliability.
- Indentation could be read by Brinell indentation measurement system and hardness values displayed directly.

TECHNICAL PARAMETERS

Test Force:	3000 kgf (1000 kgf, 750 kgf, 500 kgf optional)
Test Ball:	10mm Carbide alloy ball (5mm optional)
Test Range:	32-650 HBW
Opening Dimension:	350 mm (Height) x 100 mm (Throat depth)
Indicator Error:	complies with ISO 6506, and ASTM E10.
Repeatability Error:	complies with ISO 6506, and ASTM E10.
Test Force Error:	complies with ISO 6506, and ASTM E10.
Weight:	13.8 kg

STANDARD ASSEMBLY

Tester
Handle
Brinell hardness block
Anvil (flat, V-type, spot-type)
20X Reading Microscope
10mm Carbide alloy ball

OPTIONAL ACCESSORIES

Brinell Hardness Block (high or low value)
Carbide alloy ball (5 mm, 10 mm)
Spare Parts (Hydraulic oil capsule, Hydraulic oil, O-ring etc.)
Maintaining Tools
Brinell Indentation Measurement System
Rechargeable Angle Grinder

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CHAIN HYDRAULIC BRINELL HARDNESS TESTER

TX TESTING INSTRUMENTS

WORKING PRINCIPLE

Fix the test head of Brinell hardness tester to the test frame. When testing, fix the measuring frame onto the surface of the test piece firmly, load force by operating the handle.

The test head is a mini hydraulic system which contains a control valve for controlling force. When force loading to 3,000 kgf, the control valve opens, pressure releasing. According to ASTM standard, force loading should be repeated 3 to 4 times, keeping the pin of the pressure gauge reaching the point of 3,000 kgf 3 to 4 times. In this way, it equals the test regulation of test force 3,000 kgf, 10mm test ball, force maintaining time 10 to 15 seconds.



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INSTRUMENT FEATURES

- **On-site testing.** It could be operated in workshop for its simple operation, easy to carry, used in testing large cylinder workpiece on site.
- **Permanent Indentation.** Permanent indentation after test is for rechecking.
- **High reliability.** It completely follows Brinell hardness test principle, reflecting the mechanical property of the test material or parts, the same as desk testers.
- **High accuracy.** The test force accuracy complies with relevant regulations home and abroad, the same accuracy as desk tester, complying with ISO6506, and ASTM E10 standards.

APPLICATION

- On-site testing of Steel Pipes, Bearings, Gas Cylinders
- Replace inaccurate and unreliable Leeb hardness tester
- Read value of Brinell hardness directly after test with Brinell Indentation Measurement System

TECHNICAL PARAMETERS

Test Force:	3000 kgf (1000 kgf, 750 kgf, 500 kgf optional)
Test Ball:	10 mm Carbide alloy ball (5 mm optional)
Test Range:	32-650 HBW
Test Diameter:	≤500 mm
Indicator Error:	complying with ISO,ASTM standards
Repeatability Error:	complying with ISO,ASTM standards
Test Force Error:	≤ ± 1%,complying with ISO, ASTM standards
Weight:	14.5 kg

STANDARD ASSEMBLY

Tester
Load Handle
Brinell Hardness Block
20X Reading Microscope
10mm Spare Carbide Alloy Ball
Chain Measuring Frame
1.3m Chain

OPTIONAL ACCESSORIES

Brinell Hardness Block (Medium Value, Low Value)
Carbide Alloy Ball (5 mm,10 mm)
Maintaining Spare Parts (Hydraulic Oil Capsule, Hydraulic Oil, O-Ring etc.)
Maintaining Tools
Other Specification Chains
Brinell Indentation Measurement System