

Product Information

Rockwell hardness tester ZHR8150CLK for metals and plastics



Hardness tester ZHR8150CLK



Range of applications

- **Rockwell Metals (ISO 6508, ASTM E 18)**
Test loads: 15, 30, 45, 60, 100, 150 kg
Scales: A B C D E F G H K L M N P R S T V W X Y
- **Rockwell Plastics (HR α (Alpha), ISO 2039-2, ASTM D785)**
Test loads: 60, 100 kg. Scales: E L M R
- **Rockwell Carbonaceous Materials (DIN 51917)**
Test loads: 7, 20, 40, 60, 100, 150 kg
- **Ball Indentation Plastics (ISO 2039-1)**
Test loads: 49, 132, 358, 961 N
- **Rockwell Ball HR2.5**
Balls: 2.5 mm. Test loads: 62.5, 187.5 kg
- **Brinell (Depth Method) HBT**
Balls: 2.5, 5 mm. Test loads: 62.5, 187.5, 250 kg
- **Brinell (ISO 6506, ASTM E 10)**
Balls: 1, 2.5, 5, 10 mm. Test loads: 6.25 to 250 kg
(Indentation only. Requires microscope for measurement)
- **Vickers (Depth Method) HVT**
Test loads: 10, 20, 30, 50, 100 kg

Special characteristics

- Closed loop force application for test forces upto 250 kg
- Colour touchscreen user interface for simple selection of test methods, test configuration and result output
- User defined automatic cyclic testing function, define number of tests, interval between tests, then Start
- Nose mounted indenter for access to and visibility of awkward test points
- High level of test point repeatability and reproducibility
- Robust construction with pre-tensioned leadscrew
- Standard 250 mm vertical test space, extended test space is available
- Extensive range of support anvils for testing of different materials
- Special purpose component fixtures are available

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Indenter fixturing enables hardness tests on locations which are difficult to access:



Measuring the inner contact surface



Measuring bearing ring with 23 mm diameter



Measuring a high-strength bolt



Preparation to measure inside of a gear box part

| Type | Item number |
|------------|-------------|
| ZHR8150CLK | 2112414 |

| Features and technical data | |
|-----------------------------------------------------|------------------------------------------------|
| Loading technology | closed loop force control |
| Loading control (application, holding, and removal) | automatic |
| Resolution | 0.1 (e. g. 62.1 HRC) |
| Pre-load setting | with optical and acoustic indication |
| Starting test action | automatic |
| Test area (height x depth) | standard: 250 x 150 mm; extended: 379 x 150 mm |
| Dimensions (height x width x depth) | 800 x 260 x 670 mm (extended h = 950 mm) |
| Weight | approx. 60 kg |
| Power supply | 120 or 240 V (50 - 60 Hz) |
| Accreditation / Quality / Traceability | UKAS lab # 0232 / ISO 17025 / UKAS and ILAC |

Test setup



1) Select method



2) Define test



3) Define sequence



4) Results

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Accessories for all Zwick ZHR hardness testers



Indenter



Support tables



Support tables for round specimens



Hardness comparison plate with certificate

| Standard accessories | Item Number |
|---------------------------------------------------------|----------------|
| 1 70 mm diameter flat anvil | 2111157 |
| 1 User manual | |
| 1 UKAS calibration certificate to ISO 6508 and ASTM E18 | |

| Optional accessories | Item Number |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Diamond indenter (UKAS certified) | 2111128 |
| Ball indenter 1/16" Ø (UKAS certified) | tungsten carbide / steel 2111137 (tungsten carbide) / 2112343 (steel) |
| 1/16" Ø ball (UKAS certified) | tungsten carbide / steel 2111136 (tungsten carbide) / 2112342 (steel) |
| Ball indenter 1/8" Ø (UKAS certified) | tungsten carbide / steel 2111141 (tungsten carbide) / 2112345 (steel) |
| 1/8" Ø ball (UKAS certified) | tungsten carbide / steel 2111140 (tungsten carbide) / 2112344 (steel) |
| Ball indenter 1/4" Ø (UKAS certified) | tungsten carbide / steel 2111144 (tungsten carbide) / 2112347 (steel) |
| 1/4" Ø ball (UKAS certified) | tungsten carbide / steel 2111143 (tungsten carbide) / 2112346 (steel) |
| Ball indenter 1/2" Ø (UKAS certified) | tungsten carbide / steel 2111146 (tungsten carbide) / 2112349 (steel) |
| 1/2" Ø ball (UKAS certified) | tungsten carbide / steel 2111145 (tungsten carbide) / 2112348 (steel) |
| Ball indenter 1 mm Ø (UKAS certified) | tungsten carbide 2112311 |
| 1 mm Ø ball (UKAS certified) | tungsten carbide 2111470 |
| Ball indenter 2.5 mm Ø (UKAS certified) | tungsten carbide / steel 2112310 (tungsten carbide) / 2112350 (steel) |
| 2.5 mm Ø ball (UKAS certified) | tungsten carbide / steel 2111472 (tungsten carbide) / 2112351 (steel) |
| Ball indenter 5 mm Ø (UKAS certified) | tungsten carbide / steel 2112309 (tungsten carbide) / 2112352 (steel) |
| 5 mm Ø ball (UKAS certified) | tungsten carbide / steel 2111474 (tungsten carbide) / 2112353 (steel) |
| Ball indenter 10 mm Ø (UKAS certified) | tungsten carbide / steel 2112307 (tungsten carbide) / 2112354 (steel) |
| 10 mm Ø ball (UKAS certified) | tungsten carbide / steel 2112308 (tungsten carbide) / 2112355 (steel) |
| High resolution Brinell microscope | 2112437 |
| Hardness test blocks can be supplied to order (ISO, ASTM, UKAS) | various |

A full range of optional accessories is available, please see our brochure.

Test software testXpert® III Measurement value logging

| Description | Item number |
|------------------------------------------|----------------|
| testXpert III - Standard Test Program | 9035143 |
| - Data Communication for Hardness tester | |
| - Via RS232 interface | |
| testXpert III - Master Test Program | 9035512 |
| - Data Communication for Hardness tester | |
| - Via RS232 interface | |

Measured values determined on the hardness tester are transferred to testXpert III via the serial port for logging, data archiving and processing.

