

Product Information

Zwick/ZHU250 - Universal Hardness Tester up to 250 kg



Zwick/ZHU250 Universal Hardness Tester

Advantages/Characteristics

- Robust and supreme-precision machine for many applications
- Intuitive operation via large colored display and function keys
- Closed loop load application up to 250 kg
- Large standard working area (250 x 300 mm)
- Automatic testing cycle
- Easy, fast and precise handling
- Supreme reproducibility of test results
- Motorized change between objective lens and indenter
- Ergonomic and precise digital measurement system, constructed in a robust way
- Large, non-reflecting and highly tempered frosted glass screen (diameter 150 mm)
- Comprehensive program of objective lenses with magnifications from 15x to 520x
- Online display of the force-time or indentation depth-time diagrams
- Automated display of indentation measurement values (diagonal / indentation depth)
- Automatically focussed indentation when swivelling to the objective lens
- Direct printer port (LPT1)
- Individual accessories directly related to the particular testing standards and application demands
- Reassessment of the hardness values according to DIN 18265 standard
- testXpert III: data communication for documentation or export to e.g. QS systems

Range of application

The universal hardness tester Zwick/ZHU250 is applicable for the following methods of hardness testing:

Metals:

- Vickers (HV) to DIN EN ISO 6507, ASTM E 92
- Knoop (HK) to ISO 4545, 4546
- Brinell (HB) to DIN EN ISO 6506, ASTM E 10
- Rockwell (HR) to DIN EN ISO 6508, ASTM E 18
- Vickers depth method HVT to VDI/VDE 2616-1
- Brinell depth method HBT to VDI/VDE 2616-1

Plastics:

- Ball-indentation (H) to ISO 2039-1

Intelligent testing with testXpert III



Transfer and documentation of the results is made via an integrated RS232 C interface by testXpert III.

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Zwick/ZHU250 - Universal Hardness Tester up to 250 kg

Item number	024484
Zwick/ZHU250 Universal Hardness Tester 1 ... 250 kg, with frosted glass screen for Vickers-, Brinell-, Rockwell- and Ball indentation hardness testings, including specimen clamp	
Test methods	
Vickers	HV1, HV2, HV3, HV5, HV10, HV20, HV30, HV50, HV60, HV100 and HVT
Knoop	HK1
Brinell	HBW 1/1 ... 1/30 - HBW 2.5/6.25 ... 2.5/187.5 - HBW 5/25 ... 5/250 - HBW 10/100 ... 10/250 and HBT
Rockwell	HR-scales A, B, C, D, E, F, G, H, K, 15N, 30N, 45N, 15T, 30T, 45T
Ball indentation	H - 49.03 N / 132.39 N / 357.9 N / 961.0 N
Weight	approx. 320 kg
Dimensions (H x W x D)	1200 x 270 x 870 mm
Electr. connection	adjustable, 100 V - 250 V

Objective lenses

Description		Item number
Objective lenses for 15 times magnification	Field of view approx. 10.0 mm	369404
Objective lenses for 45 times magnification	Field of view approx. 3.3 mm	369405
Objective lenses for 90 times magnification	Field of view approx. 1.7 mm	369406
Objective lenses for 185 times magnification	Field of view approx. 0.8 mm	369407
Objective lenses for 360 times magnification	Field of view approx. 0.42 mm	1037407
Objective lenses for 520 times magnification	Field of view approx. 0.29 mm	369409

Indentors

Description		Item number
Indentor, diamond pyramid 136° to Vickers	incl. official test certificate	318061
Indentor, diamond pyramid to Knoop	incl. official test certificate	318845
Indentor, hard metall ball 1/16"	incl. official test certificate	320859
Indentor, hard metall ball 1/8"	incl. official test certificate	320861
Indentor, hard metall ball 1/4"	incl. official test certificate	368896
Indentor, hard metall ball 1/2"	incl. official test certificate	368897
Indentor, hard metall ball 10 mm	incl. official test certificate	368898
Indentor, hard metall ball 5 mm	incl. official test certificate	320894
Indentor, hard metall ball 2.5 mm	incl. official test certificate	320896
Indentor, hard metall ball 1 mm	incl. official test certificate	320900
Indentor, Rockwell diamond 120°	incl. official test certificate	368899

Test anvils, floor unit (table)

Description	Item number
Flat anvil 90 mm diameter	369427
Flat anvil 10 mm diameter	369429
Flat anvil 150 mm diameter	369425
Flat anvil 250 mm diameter	369426
Vee anvil for diameter 15 ... 55 mm	369432
Vee anvil for diameter 22 ... 220 mm	369433
Floor unit (table) (H x W x D: 610 x 750 x 800 mm)	369423