

Product Information

3105 digi test – Digital IRHD/Shore hardness tester



Range of application

The Zwick 3105 digi test is a microcomputer controlled hardness tester with an extremely high measurement accuracy in the measurement ranges:

IRHD-M (micro)	IRHD-SS (supersoft)
IRHD-N (normal)	IRHD-H, IRHD-L (soft)
Shore A/B/0	Shore D/C/D0
Shore 00/000	Micro Shore

The device complies with the standards: DIN 53505, DIN 53519, pages 1 and 2, ISO 868, ISO 48, ASTM D 2240, ASTM D 1415, NFT 51 123, NFT 46 003, BS 903 part A 26.

The hardness tester offers quick and fully automatic measurement without operating influences in all Shore and IRHD ranges. The digital measurement systems enable a high measurement accuracy to be achieved. It can be put to use, for example, in conjunction with an automatic test sequence for hardness tests on shaped parts and on laminates.

The indenter touches the specimen's surface before the spring force is applied for Shore tests, or before the main load is applied for IRHD tests.

Thus this patented procedure guarantees reliable measurements on shaped parts with concave or convex surfaces.

The typical application area of the Zwick 3105 digi test are hardness tests on rubber, plastic and silicone parts.

In addition, the Zwick 3105 digi test offers the possibility of hardness tests to the method IRHD-SS (supersoft). This method enables determination of hardness on soft elastomers, especially on silicone and sponge from a thickness of 2 mm on.

Advantages and features

- Extremely high measurement accuracy; automatic measurement procedures
- Reliable measurements on shaped parts with concave or convex surfaces
- Modular construction with automatic identification of the measurement system and the adjustment of the measurement distance
- Fulfills the demands of all German, European and international standards (IRHD/Shore)
- Huge range of accessories, e.g. for quick centering of O-rings and hoses

Dimensions, weight, measuring time, power

Test stand:	330 x 200 x 600 mm, 9.5 kg
Electronic:	290 x 260 x 110 mm, 2.5 kg
Pick-up bracket:	60 x 165 x 125 mm, 2.5 kg
Measuring time:	1 ... 99 s
Power supply:	100-240 VAC, 50/60Hz

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Description	Order item
Zwick 3105 digi test-test stand: consisting of an aluminium casting with vertically movable supporting table for the test objects, column for the pick-up bracket, distance ring, dust-cover	H04.3105.600
Zwick 3105 digi test-electronic unit: serial interface RS232 C, hysteresis function with IRHD, keys for different functions, automatic identification of the measuring range, power supply on choice: 230 VAC, 50/60 Hz or 115 VAC 60 Hz	H04.3105.610
Zwick 3105 digi test-pick-up bracket: with loading device and automatic lowerator for the pick-up of the measuring devices Shore and IRHD	H04.3105.620

Supplementary units

Description	Order item
Rapid centring device for O-rings (materials diameter 0,5 ... 6 mm)	H04.3104.011
Shiftable mounting block with prism for exact centring of hoses, can be placed on the test anvil	H04.3104.010
Magnifying glass with swivel arm	H04.3104.009

Measuring devices

Description	Order item
Measuring device for 3105 digi test for Shore A/B/O for moulded parts and plates according to DIN 53505, ISO 868, ASTM D 2240 with removable weight of 12.5 N, exchangeable indenter Shore A and plug-in system	H04.3105.630
Measuring device for 3105 digi test for Shore D/C/DO for moulded parts and plates according to DIN 53505, ISO 868, ASTM D 2240 with exchangeable indenter Shore D and plug-in system	H04.3105.631
Detachable loading weight for Shore D / C / DO for 3105 digi test	H04.3105.632
Measuring device for 3105 digi test for micro Shore A/B/O for moulded parts and plates; measuring distance 0.5 mm, with removable weight of 5.0 N, exchangeable indenter Shore A and plug-in system	H04.3105.633
Measuring device for 3105 digi test for micro Shore D/C/DO for moulded parts and plates; measuring distance 0.5 mm, with removable weight of 5.0 N, exchangeable indenter Shore D and plug-in system	H04.3105.634
Measuring device for 3105 digi test for IRHD-M micro for moulded parts and plates according to DIN 53519 sheet 2, ISO 48, ASTM D 1415 with exchangeable indenter ball dia. 0.4 mm, pressure plate dia. 3.35 mm, weight according to DIN 53519 and plug-in system	H04.3105.640
Measuring device for 3105 digi test for IRHD-N normal for moulded parts and plates according to DIN 53519 sheet 1, ISO 48, ASTM D 1415 with exchangeable indenter ball dia. 2.5 mm, pressure plate dia. 20 mm, weight according to DIN 53519 and plug-in system	H04.3105.641
Measuring device for 3105 digi test for IRHD-L soft for moulded parts and plates according to DIN 53519 sheet 1, ISO 48, ASTM D 1415 with exchangeable indenter ball dia. 5.0 mm, pressure plate dia. 22 mm, weight according to DIN 53519 and plug-in system	H04.3105.642
Measuring device for 3105 digi test for IRHD-H for moulded parts and plates according to ISO 48 with exchangeable indenter ball dia. 1.0 mm, pressure plate dia. 20 mm, weight according to ISO 48 and plug-in system	H04.3105.643
Measuring device for 3105 digi test for IRHD-SS supersoft for moulded parts and plates with exchangeable indenter ball dia. 2.5 mm, weight according to IRHD supersoft and plug-in system	H04.3105.644

Official DKD calibration certificates and software *testXpert*® programs on request