

## Product Information

### Zwick 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 operator 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

- Quick and high measurement accuracy without operator influences via 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   | <b>H04.3105.600</b> |
| 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 | <b>H04.3105.610</b> |
| Zwick 3105 digi test-pick-up bracket: with loading device and automatic lowerator for the pick-up of the measuring devices Shore and IRHD  | <b>H04.3105.620</b> |

#### Supplementary units

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

#### Measuring devices

| Description   | Order item          |
|---|---------------------|
| Measuring device for 3105 digi test for <b>Shore A/B/O</b> 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  | <b>H04.3105.630</b> |
| Measuring device for 3105 digi test for <b>Shore D/C/DO</b> for moulded parts and plates according to DIN 53505, ISO 868, ASTM D 2240 with exchangeable indenter Shore D and plug-in system   | <b>H04.3105.631</b> |
| Detachable loading weight for Shore D / C / DO for 3105 digi test   | <b>H04.3105.632</b> |
| Measuring device for 3105 digi test for <b>micro Shore A/B/O</b> 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  | <b>H04.3105.633</b> |
| Measuring device for 3105 digi test for <b>micro Shore D/C/DO</b> 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   | <b>H04.3105.634</b> |
| Measuring device for 3105 digi test for <b>IRHD-M micro</b> 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 | <b>H04.3105.640</b> |
| Measuring device for 3105 digi test for <b>IRHD-N normal</b> 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  | <b>H04.3105.641</b> |
| Measuring device for 3105 digi test for <b>IRHD-L soft</b> 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    | <b>H04.3105.642</b> |
| Measuring device for 3105 digi test for <b>IRHD-H</b> 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  | <b>H04.3105.643</b> |
| Measuring device for 3105 digi test for <b>IRHD-SS supersoft</b> for moulded parts and plates with exchangeable indenter ball dia. 2.5 mm, weight according to IRHD supersoft and plug-in system  | <b>H04.3105.644</b> |

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