

ZwickRoell 3105 combi test



ZwickRoell 3105 combi test Hardness Tester

Applications

The **ZwickRoell 3105 combi test** is a microcomputer-controlled hardness tester for the following measurement ranges:

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

It is compliant according to: ISO 48-4, ISO 7619-1 (withdrawn), ISO 868, ASTM D2240, ASTM D1415, NFT 51 123, NF 46 003.

This hardness tester delivers fast, fully automatic measurement in all Shore and IRHD ranges. Operator influence is eliminated, while digital measuring systems enable high measurement accuracy.

The tester can perform hardness tests on moldings and sheet materials, for example, using an automatic approach system.



Rapid centering device for O-rings

This ensures reliable measurements on moldings with concave or convex surfaces.

VLRH hardness testing is also possible. With this method the hardness of very soft elastomers, particularly silicon and foam rubber, can be determined with material thicknesses from 2 mm.

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, e.g. hardness tests on prefabricated parts
- Modular construction with automatic identification of the measurement system and the adjustment of the measurement distance
- Intuitive display with easy operation
- Wide range of accessories, e.g. for quick centering of O-rings and hoses



ZwickRoell 3105 combi test

Technical data ZwickRoell 3105 combi test - digital IRHD/Shore hardness tester (all 3 components required)

| Description | ArticleNumber |
|---|---------------|
| ZwickRoell 3105 combi test test stand, consisting of aluminum base with height-adjustable support table for specimens, column for attachment of measuring unit, spacer ring and dustproof cover | 324632 |
| ZwickRoell 3105 combi test - electronics unit, RS232 C serial port, hysteresis function for IRHD, function keys, automatic measurement range recognition, power supply 100 - 240 VAC, 50/60 Hz | 324633 |
| ZwickRoell 3105 combi test - mounting arm with loading unit and automatic lowering device for mounting Shore and IRHD measuring devices | 324634 |



ZwickRoell 3105 combi test

Accessories required

Measuring device (minimum of 1x required)

| Description | ArticleNumber |
|--|---------------|
| Measuring device for 3105 combi test for Shore A/B/0 for moldings and sheet materials to ISO 48-4, ISO 7619-1 (withdrawn), ISO 868, ASTM D2240, with removable 12.5 N weight, interchangeable Shore A indenter and mounting-pin system | 324635 |
| Measuring device for 3105 combi test for Shore D/C/D0 for moldings and sheet materials to ISO 48-4, ISO 7619-1 (withdrawn), ISO 868, ASTM D2240, with interchangeable Shore D indenter and mounting-pin system (Required for this: Attachable load weight) | 324636 |
| Measuring device for 3105 combi test for Shore A for sheet materials to ISO 48-4, ISO 7619-1 (withdrawn), ISO 868, ASTM D2240, with permanently installed Shore A indenter and mounting- pin system | 371002 |
| Measuring device for 3105 combi test for Shore D for sheet materials to ISO 48-4, ISO 7619-1 (withdrawn), ISO 868, ASTM D2240, with permanently installed Shore D indenter and mounting- pin system (Required for this: Attachable load weight) | 371003 |
| Measuring device for 3105 combi test for Shore 00 for sheet materials to ASTM D2240, with permanently installed Shore 00 indenter and mounting-pin system | 371018 |
| Measuring device for 3105 combi test for Shore 000 for sheet materials to ASTM D2240, with permanently installed Shore 000 indenter and mounting-pin system | 023043 |
| Measuring device for 3105 combi test for micro Shore A for moldings and sheet materials; measurement travel 0.5 mm, with removable 5.0 N weight, interchangeable Shore A indenter and mounting-pin system | 324638 |
| Measuring device for 3105 combi test for micro Shore D/C/D0 for moldings and sheet materi- als; measurement travel 0.5 mm, with removable 5.0 N weight, interchangeable Shore D indenter and mounting-pin system | 324639 |
| Measuring device for 3105 combi test IRHD micro for moldings and sheet materials to ISO 48, ASTM D1415, with interchangeable indenter (ball, \emptyset 0.4 mm) compression platen (\emptyset 3.35 mm), weight to ISO 48 and mounting-pin system | 324640 |
| Measuring device for 3105 combi test IRHD normal for moldings and sheet materials to ISO 48, ASTM D1415, with interchangeable indenter (ball, Ø 2.5 mm) compression platen (Ø 20 mm), weight to ISO 48 and mounting-pin system | 324641 |
| Measuring device for 3105 combi test IRHD soft for moldings and sheet materials to ISO 48, ASTM D1415, with interchangeable indenter (ball, Ø 5.0 mm) compression platen (Ø 22 mm), weight to ISO 48 and mounting-pin system | 324642 |
| Measuring device for 3105 combi test IRHD H for moldings and sheet materials to ISO 48, with interchangeable indenter (ball, \emptyset 1.0 mm) compression platen (\emptyset 20 mm), weight to ISO 48 and mounting-pin system | 324643 |
| Measuring device for 3105 combi test VLRH (IRHD supersoft) for moldings and sheet materi- als, with interchangeable indenter (ball, Ø 2.5 mm), weight to IRHD and mounting-pin system | 324644 |

Optional accessories Supplementary units

| Description | ArticleNumber |
|---|---------------|
| Rapid centering device for O-rings (material diameter 0.6 to 5 mm) | 890247 |
| Movable retaining block with prism for exact centering of hoses; can be attached to the test table | 890246 |
| Magnifying lens with swivel arm, 2.5x magnification | 890245 |
| Rapid centering device for O-rings (material diameter 0.6 to 8 mm; outside \emptyset up to 200 mm) With holding-down clamp, Plexiglas panel (200 x 200 mm), centering aid and carrying case | 017557 |



ZwickRoell 3105 combi test

Official DAkkS/DKD calibration certificates, Shore measurement range

| Description | ArticleNumber |
|--|---------------|
| Official DAkkS/DKD calibration certificate for Shore A (check performed in accordance with PTB guidelines) Contact surface and indenters, indenter travel and spring force to ISO 48-4, ISO 7619-1 (with- drawn) | 307751 |
| Official DAkkS/DKD calibration certificate for Shore D (check performed in accordance with PTB guidelines) Contact surface, indenters, indenter travel and spring force to ISO 48-4, ISO 7619-1 (withdrawn) | 307752 |
| Official DAkkS/DKD calibration certificate for Shore 00/000 (check performed in accordance with PTB guidelines) Contact surface, indenters, indenter travel and spring force to ISO 48-4, ISO 7619-1 (withdrawn) | 076482 |
| Official DAkkS/DKD calibration certificate for Shore A0 (check performed in accordance with PTB guidelines) Contact surface and indenters, indenter travel and spring force to ISO 48-4, ISO 7619-1 (with- drawn) | 081989 |

Official DAkkS/DKD calibration certificates, IRHD measurement range

| Description | ArticleNumber |
|--|---------------|
| Official DAkkS/DKD calibration certificate for IRHD micro (check performed in accordance with PTB guidelines) Compression platen, indenter, indenter travel, forces on ball, force on compression platen as per ISO 48 | 307666 |
| Official DAkkS/DKD calibration certificate for IRHD normal (check performed in accordance with PTB guidelines) Compression platen, indenter, indenter travel, forces on ball, force on compression platen as per ISO 48 | 307667 |
| Official DAkkS/DKD calibration certificate for IRHD soft (check performed in accordance with PTB guidelines) Compression platen, indenter, indenter travel, forces on ball, force on compression platen as per ISO 48 | 307668 |
| Official DAkkS/DKD calibration certificate for IRHD H (check performed in accordance with PTB guidelines) Compression platen, indenter, indenter travel, forces on ball, force on compression platen as per ISO 48 Method H | 324649 |
| Official DAkkS/DKD calibration certificate for VLRH (check performed in accordance with PTB guidelines) Compression platen, indenter, indenter travel, forces on ball, force on compression platen; as per ISO 27588 | 1027356 |

testXpert[®] III testing software

| Description | ArticleNumber |
|---|---------------|
| testXpert III Standard Test Program data connection via serial port | 1035143 |
| testXpert III Master Test Program data connection via serial port (3rd license) | 1035512 |