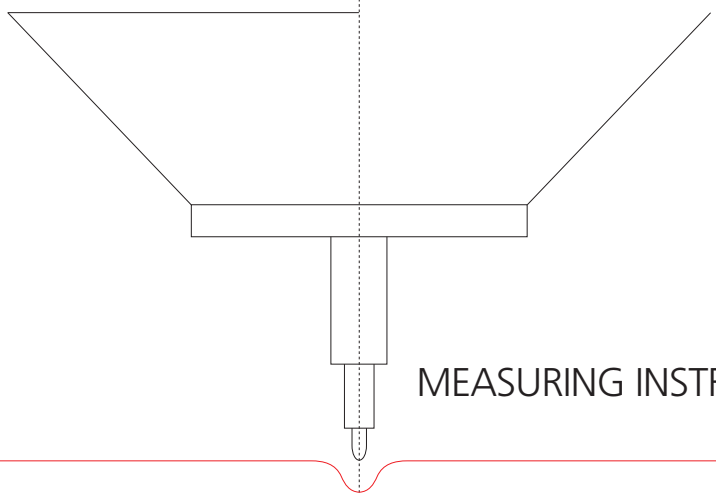
FAZER TEC
BUILD WITH PRECISION



MEASURING INSTRUMENTS FOR THE FOLLOWING INDUSTRIES

RUBBER AND PLASTIC PROCESSING INDUSTRY

AUTOMOTIVE INDUSTRY

MEDICAL TECHNOLOGY

LABORATORIES | INSTITUTES

AVIATION INDUSTRY

FOOD INDUSTRY

OPTICAL

CHEMISTRY

PHARMACEUTICAL

COSMETICS INDUSTRY

AND MORE …

MEASURABLE SUCCESS - QUALITY HAS A NAME

BAREISS · MADE IN GERMANY · SINCE 1954

QUALITY HAS A NAME – BAREISS

AS A MANUFACTURER FOR INNOVATIVE AND CERTIFIED MEASURING INSTRUMENTS, WE BEAR THE RESPONSIBILITY FOR QUALITY ASSURANCE.

In order to meet the expectations for high quality, usability and sustainability of Bareiss products from our customers worldwide, we are constantly striving to optimize our production processes with precise planning, controlling and monitoring.

The Bareiss management system DIN EN ISO 9001:2008 and the Bareiss environmental management DIN EN ISO 14001:2004 are based on a functional and comprehensive organization.
We are pursuing continuous improvement, market and customer orientation, uncompromising quality of products, employee satisfaction and environment protection and all of which are the key elements of our success.

What requires additionally to succeeding in this competitive market today are the right focus and meeting customer demands in a timely manner.

Since 1954 Heinrich Bareiss Prüfgerätebau GmbH has always been the technology leader for elastomer hardness test engineering. As his family members, we carry on the philosophy and vision of the founder Mr. Heinrich Bareiss and reflect them on our products and solutions which are successfully implemented worldwide today.

Our goal is to maintain the leading position on the market with high reliability of our products. It is a continuous challenge in the future for being the market leader and your reliable partner as we always have been.

Yours Brigitte Wirth
Commercial Manager

WHY CALIBRATION?

As technology is becoming more complex today, the verification and documentation of quality are becoming more demanded as well. The quality of measuring instruments has always been asked for high standard and it therefore provides a good reason why calibration is a must in certain cases.

- ISO serves as a common guideline to unify quality assurance procedure. For a company to be certified for DIN EN ISO 9001, it is obliged to strictly monitor their testing procedure and the instruments used should be calibrated, maintained and documented periodically. It is then this company can prove that all the required standards are completely compliant.

- As part of the quality assurance procedure, it is important that all measuring instruments are properly calibrated and maintained so that they can be used to ensure the liability of your products. This is a way to eliminate the possible cause of your measuring instruments should there be any incorrect measuring results or damage of your products.

BAREISS –
German accreditation body

DAkkS Deutsche Akkreditierungsstelle D-K-15206-01-00

DKD

WHAT IS CALIBRATION?

When a measuring instrument is being calibrated, the given deviation is determined by various measurements versus standard references. A calibration certificate is then issued indicating the measuring results and the corresponding measurement uncertainties and the instrument is marked as calibrated. All documents together with the calibration certificate provide traceability of national standards.

WHO CAN DO CALIBRATION?

The DAkkS/DKD-calibration laboratories are among industrial companies, research institutes, technical authorities and inspection and testing institutes and all of which are accredited and monitored by the German accreditation body. These laboratories are authorized to perform calibration services on measuring instruments and material measures according to the officially defined procedures and measuring ranges. The DAkkS/DKD-calibration certificates are issued by these laboratories as a proof of traceability of national standards as required by DIN EN ISO 9001 and
DIN EN ISO/IEC 17025.

Bareiss as an official DAkkS/DKD-calibration laboratory can perform calibration services on a wide range of material testing instruments on-premises and in the field and issue the official calibration certificates for them.

Yours Peter Strobel,
Technical Manager, head of the quality laboratory

OUR SERVICES

CALIBRATION – REMINDER SERVICE

WE ARE OFFICIALLY LISTED UNDER THE RANGE OF MATERIAL TESTING MACHINES AT THE GERMAN ACCREDITATION BODY.

INSTRUMENTS ON LOAN

- Substitution while your instruments are being serviced at Bareiss
- A temporary solution when your testing facility is fully occupied

MAINTENANCE

We encourage a periodic calibration and maintenance services on your instruments to ensure the best condition of your quality control equipment.

MEASURING SERVICES AVAILABLE

PROVIDE MEASURING SERVICE ON YOUR SPECIMEN WITH A TEST PROTOCOL.

It is a quick and simple solution if you don't require frequent measuring or don't have the right equipment.
Your specimens will be returned to you with a test protocol.

TRAINING COURSE

TRAINING
For the topic of hardness testing on rubber and plastic materials

TARGET GROUP
Development engineers and quality control technicians

PURPOSE
To demonstrate correct hardness testing procedure and understanding of the standards which prescribe different hardness testing methods

TAILOR-MADE TRAINING COURSE
If you need a training course which is made to suit your areas of interest, please let us know and we will try to arrange a tailor-made course for you.

CALIBRATION SERVICE

DAKKS / DKD CALIBRATION CERTIFICATE

bareiss

Heinrich Bareiss Prüfgerätebau GmbH
Breiteweg 1
D-89610 Oberdischingen

akkreditiert durch die / accredited by the

Deutsche Akkreditierungsstelle GmbH

als Kalibrierlaboratorium im / as calibration laboratory in the

Deutschen Kalibrierdienst DKD

DAkkS Deutsche Akkreditierungsstelle D-K-15206-01-00

Kalibrierschein
Calibration Certificate

Kalibrierzeichen
Calibration label

D-K-15206-01-00
2012 - 03

Gegenstand Object	**Digital hardness tester acc. to Shore A**
Hersteller Manufacturer	**Heinrich Bareiss Prüfgerätebau GmbH**
Typ Type	**HPE - Shore A**
Fabrikat-/Serien-Nr. Serial number	**60876** **Inv.-Nr.: 411 1603**
Auftraggeber Customer	**Eagleburgmann Germany GmbH & Co. KG** **Burgmannstr. 1** **D-82547 Eurasburg**
Auftragsnummer Order No.	**20120695**
Anzahl der Seiten des Kalibrierscheines Number of pages of the certificate	**3**

Dieser Kalibrierschein dokumentiert die Rückführung auf nationale Normale zur Darstellung der Einheiten in Übereinstimmung mit dem Internationalen Einheitensystem (SI).
Die DAKKS ist Unterzeichner der multilateralen Übereinkommen der European co-operation for Accreditation (EA) und der International Laboratory Accreditation Cooperation (ILAC) zur gegenseitigen Anerkennung der Kalibrierscheine.
Für die Einhaltung einer angemessenen Frist zur Wiederholung der Kalibrierung ist der Benutzer verantwortlich.
This calibration certificate documents the traceability to national standards, which realize the units of measurement according to Inthenternational System of Units (SI).
The DAKKS is signatory to the multilateral agreements of the European co-operation for Accreditation (EA) and of the International Laboratory Accreditation Cooperation (ILAC) for the mutual recognition of calibration certificates.
The user is obliged to have the object recali-

SAMPLE

The calibration is carried out acc. to DIN ISO 7619, DIN EN ISO 868

Pressure plate and indenter

Measure	Set value	Actual value	Uncertainty of Measurement
Angle α acc. to picture 1	35° ± 0,25°	35,058°	± 0,07°
Measure b acc. to pic. 1	Ø (1,25 ± 0,15) mm	Ø 1,250 mm	± 2,0 µm
Measure d acc. to pic. 1	Ø (0,79 ± 0,01) mm	Ø 0,793 mm	± 2,0 µm
Measure a acc. to pic. 1	Ø (3,00 ± 0,10) mm	Ø 3,010 mm	± 0,01 mm
Measure f acc. to pic. 1	Ø (18,00 ± 0,50) mm	Ø 17,960 mm	± 0,05 mm
Measure c acc. to pic. 1	(2,50 ± 0,02) mm	2,504 mm	±3,0 µm

Measuring distance of the indenter

Shore-Hardness-degrees	Set value [mm] ± 0,02	Actual value [mm]	Uncertainty of Measurement [µm]
0	2,500	2,504	±3,0
10	2,250	2,248	±3,0
20	2,000	1,997	±3,0
30	1,750	1,747	±3,0
40	1,500	1,497	±3,0
50	1,250	1,247	±3,0
60	1,000	0,994	±3,0
70	0,750	0,748	±3,0
80	0,500	0,490	±3,0
90	0,250	0,250	±3,0
100	0,000	0,000	±3,0

SAMPLE

Spring force

Shore-Hardness-degrees	Set value [mN] ± 37,5	Actual value [mN]	Uncertainty of Measurement [mN]
0	550	530,5	± 3,0
10	1300	1279,8	± 3,0
20	2050	2023,1	± 3,0
30	2800	2792,0	± 3,0
40	3550	3530,4	± 3,0
50	4300	4281,6	± 3,0
60	5050	5055,3	± 3,0
70	5800	5785,9	± 3,0
80	6550	6561,6	± 3,0
90	7300	7297,1	± 3,0
100	8050	8037,5	± 3,0

Remark:
The indication of the measured values is in compliance with DIN ISO 7619, DIN EN ISO 868 acc. to Shore A and DIN ISO 18898.
The indicated values are valid for the measuring technical characteristics of the hardness tester at the moment of calibration. The mentioned tolerance limit of 1 Shore-hardness degree is kept. Indicated is the expanded uncertainty of measurement,which results from the standard uncertainty of measurement through multiplication with the expansion factor k = 2 (double standard deviation). It has been determined according to document DAkkS-DKD-3. The value of the measurement quantity is within the classed interval of values with a probability of 95 %.
Measured values, which are outside the allowed tolerances or which are special measures outside the standards,should be indicated by (*).

ON-PREMISES / FIELD CALIBRATION SERVICE

WHAT WE CALIBRATE	WHAT IS BEING CALIBRATED
Analog and digital durometers A, D, AM, M, A0, 00,000, E in Shore scales and L, L/c, Barcol in non-Shore scales	Measuring distance and spring force
Indenter Shore A	Diameter of indenter shaft, measurements and angles of indenter tip
Presser foot, Shore A, D, AM, M, A0, 00, 000 IRHD M, N, L, H, hardness L, L/c, VLRH	Outer diameter and drilling diameter
Indenter Shore D, AM, M	Diameter of indenter shaft, measurements and angles of indenter tip
Hardness tester IRHD N, L, M, H, VLRH	Measuring distance, Pre-force and main force, total force, contact pressure
Indenter: IRHD N, L, M, H, Shore A0, 00, E, hardness L, L/c, Pusey & Jones, VLRH	Diameter of indenter shaft, measurements and angles of indenter tip
Control rings for measuring distance: Shore 20, 40, 60, 80	Measuring distance
Check device: Shore A and D	Spring force
Indenter: Shore 000	Ball radius
Indenter: Barcol	Diameter of indenter shaft, measurements and angles of indenter tip
Presser foot: Shore E	Surface of presser foot and drilling diameter
Pusey & Jones	Measuring distance and total force
Standard rubber block	Shore A, D, AM, M, A0, 00, 000, E, hardness L, L/c, IRHD N, L, H, M, VLRH, Pusey & Jone
Standard block metal	Barcol
Calibration: procedure	Brinell, Vickers
Calibration: procedure	Rockwell
Hardness testing machines Brinell and Vickers	Measuring distance
Hardness testing machines Rockwell and Ball indentation	Measuring distance
Hardness testing machines and force measuring device	Force

Download under www.bareiss.de/service. For the complete calibration options

PRODUCT- / APPLICATION TABLE

HARDNESS TESTING

MEASURING METHOD	STANDARDS	RANGES OF APPLICATION	MATERIAL THICKNESS mm	PAGE
Shore A	DIN EN ISO 868, DIN ISO 7619 ASTM D 2240	Soft rubber, Elastomers, Natural rubber products, Neoprene, Cast resin, Polyester, Soft-PVC, Leather	4, 6	8, 9, 14, 15
Shore A0, E, L + L/c	DIN ISO 7619, ASTM D 2240	Foam, Soft elastic materials, Upholstery, Steering wheels	6	8, 9
Micro Shore A		Bareiss standard as Shore A	0,5	14, 15
Shore D	DIN EN ISO 868, DIN ISO 7619 ASTM D 2240	Hard rubber, Plastics, Acryl glass, Polystyrene, Rigid thermoplastic, Laminated Plastic, Print rollers, Vinyl-plates, Cellulose-acetate	4, 6	8, 9, 14, 15
Micro Shore D		Bareiss standard as Shore D	0,5	14, 15
Shore B	ASTM D 2240	Medium hard rubber	6	8, 9, 14, 15
Shore C	ASTM D 2240	Plastics and medium hard rubber	6	8, 9, 14, 15
Shore D0	ASTM D 2240	Plastics and medium hard rubber	6	8, 9, 14, 15
Shore 0	ASTM D 2240	Soft elastic materials, Medium hard print rollers, Textile fabrics, Nylon, Orlon, Perlon, Rayon	6	8, 9, 14, 15
Shore 00|000	ASTM D 2240	Cellular rubber, Foam rubber	6	8, 9, 14, 15
Shore 000S	ASTM D 2240	Silicone, Gel-like materials	6	8, 9, 14, 15
Shore AM, M	DIN ISO 7619, ASTM D 2240	Soft rubber, Elastomers, Natural rubber products	1,25, 1,50	11, 14, 15
Asker C	SRIS 0101	as Shore A	6	8, 9
Asker CS	SRIS 0101	as Shore D	6	8, 9
Asker F	Manufacturer standard	Foam		8, 9

MEASURING METHOD	STANDARDS	RANGES OF APPLICATION	MATERIAL THICKNESS mm	PAGE
VLRH	DIN ISO 27588	Cellular rubber, Foam rubber, Silicone, Gel-like materials	2	13, 14
IRHD M	DIN ISO 48	Soft rubber, Highly flexible materials, Soft deformable materials	0,6 – 5,0	12, 13, 14
IRHD N	DIN ISO 48	Soft rubber, Highly flexible materials, Soft deformable materials	6 – 10	12, 13, 14
IRHD L	DIN ISO 48	Cellular rubber, Foam rubber, Silicone, Gel-like materials	10 – 12	13, 14
IRHD H	DIN ISO 48	Hard materials as Shore D	6 – 10	13, 14
Pusey & Jones	ISO 7267-3, ASTM D 531	Rubber or rubber-like materials, rubber rollers of paper industry	13	10
Barcol	DIN EN 59, ASTM D 2583	Fiberglass reinforced plastics, duroplastics, hard thermoplastics, aluminum etc.	1,5	10
Newton	Bareiss Norm	Gelatin, Gelatin capsules, Plasticine		22
Asphalt 3106	DIN 1996-13	Asphalt		21
Building plaster 3106	DIN EN 13279	Building plaster		21
Ball indentation 3106	DIN EN ISO 2039-1	Plastic materials		21
Rockwell 3106	DIN 51917, DIN EN ICE 413	Carbon materials		21
Rockwell 3106	DIN EN 10109-1, ASTM E 18, ASTM D 785	Metal		21
Vickers	DIN ISO 6507, CHD – DIN EN 2639 CDD (EHT), DIN 10328, DS (RHT), DIN 50190, part 3 (NHT)	Low-load force HV 0,1 to HV 10 Micro-load force HV 0,01 to HV 2		24, 25
Abrasion test	DIN ISO 4649, ASTM D 5963	Measuring the resistance of elastomers against abrasion on rubber products like tires, conveyor belts, tubes, shoes, floor coatings		20
Elasticity test Ball rebound	DIN EN ISO 8307, ASTM D 3574	Elasticity test on polymer foams	50	16
Elasticity test Rebound	DIN 53512, DIN 53573, ISO 4662, ASTM D 1054	Measuring the elastic characteristics of elastomers Specimen thickness >12 mm	12	17
kal-rock	DIN 53512, DIN 53573, ISO 4662, ASTM D 1054	Calibration device for the depth measuring of hardness test machines		21

OTHER PRODUCTS

SPECIMEN PREPARATION	STANDARDS RANGES	APPLICATION	
Cutting press Cutting dies Circular cutting die	Diverse standards	Manual cutting of ring-shaped, bar-shaped and other shapes of elastomer specimens, cutting of specimen Ø 16,2 mm	18, 19
Centering devices Positioning device		Precise centering of tubes and O-rings, Optical and Automatic centering, Two-point hardness and thickness measuring	13
Check device	DIN ISO 7619, DIN EN ISO 868, ASTM D 2240	Control of spring characteristics	23
Control ring		Control of measuring distance	23
Standard rubber blocks	DIN ISO 7619, DIN ISO 48, DIN EN 59, ASTM D 2583	Control of Shore, IRHD and Barcol hardness values	23
Software		Data processing	26
Calibration service	DAkkS / DKD	German accreditation body On-premises and field calibration services Official calibration certificates Volume of accreditation	4
Technical data Ranges of application			27

BAREISS PRODUCT RANGE

HP / HPE II

MEASURING METHOD

SHORE A / A0 / B / 0 / C / D / D0 / 00 / 000 / 000S / E / L/C / ASKER C / CS / F
HPE II CAR INTERIORS
Options of indenter: ball 10 or 15 mm

STANDARDS

DIN ISO 7619 / DIN EN ISO 868 / NF EN ISO 868 / ASTM D 2240 / SRIS 0101

RANGES OF APPLICATION

These models are for the hardness measuring on composite materials, soft elastic materials, elastomers and plastics.

Suitable for hardness measuring on flat and even surfaced specimens with diameter ≥35 mm and thickness ≥6 mm prescribed under standards.

ACCESSORIES

- DAkkS/DKD-calibration certificate for the instrument
- Test stand BS 61 II according to measuring method
- Loading weight of 4,0 kg for Shore D in combination with BS 61 II
- Prisms 120° / 150° for HPE II
- Check device for control of spring force Shore A and D
- Control of measuring distance with control ring 20, 40, 60, 80 for Shore A / B / 0 / 00 / C / D0 / A0 / E / Asker C / Asker CS
- DAkkS/DKD-calibration certificates for control rings
- Software for data transfer and analysis
- Standard rubber block in set of 1/ 3/ 6 pcs with DAkkS/DKD-calibration certificate

HPE II

POWER SUPPLY:
Lithium-battery
BATTERY DURATION:
approx. 2000 hours
IP CODE
IP 30
RESOLUTION:
0.1 for Shore and car interiors – ball 15
0.01 for car interiors – ball 10
MEASURING RANGES
Shore / Asker / Car interiors
DATA OUTPUT:
RS 232 - 9600 baud, 1 start bit,
8 data bits, 1 stop bit
MEMORY:
300 measurements
DIMENSIONS (LxWxH)
HP: 75 x 65 x 25 mm
HPE II: 160 x 70 x 40 mm
Product Case: 240 x 210 x 55 mm
BS 61 II: 160 x 200 x 360 mm
WEIGHT
HP: 0.23 kg
HPE II: 0.4 – 0.6 kg
Product Case: 0.50 kg
BS 61 II: 6.0 kg

HP

HP II KFZ Interior

Test stand BS 61 II with HPE II and loading weight

HPE II L

HPE II

Control Ring 40 Shore with base plate

Prisms

HPE II BARCOL / PUSEY & JONES

STANDARDS

BARCOL
DIN EN 59 / ASTM D 2583

PUSEY & JONES
ISO 7267-3 / ASTM D 531

RANGES OF APPLICATION

BARCOL
This hardness method is for the hardness measuring on fiberglass reinforced plastics, thermoset, hard thermo plastics, aluminum and etc.

PUSEY & JONES
This hardness method is for the hardness measuring on rubber or rubber-like materials and rubber rollers in the paper industry.

ACCESSORIES

- DAkkS/DKD-calibration certificate for the instrument
- Test stand for HPE II Barcol
- Software for data transfer and analysis
- Standard test block with DAkkS/DKD-calibration certificate

POWER SUPPLY:
Lithium-battery 3.6 v, size ½ AA
BATTERY DURATION:
approx. 2000 hours
IP CODE:
IP 30
RESOLUTION
± 1 BARCOL
1 Pusey & Jones
MEASURING RANGES:
BARCOL / Pusey & Jones
DISPLAY RANGE:
Barcol: 0 - 100
Pusey & Jones: 0 - 300
DATA OUTPUT:
RS 232 - 9600 baud, 1 start bit,
8 data bits, 1 stop bit
MEMORY:
300 measurements
DIMENSIONS (LxWxH)
HPE II Barcol: 160 x 70 x 40 mm
HPE II Pusey & Jones: 250 x 90 x 130 mm
Product Case: 240 x 210 x 55 mm
WEIGHT
HPE II Barcol: 0.37 kg
HPE II Pusey & Jones: 3.30 kg
Product Case: 0.50 kg

HPE II Barcol

HPE II Pusey & Jones

HPE II SHORE AM / M

STANDARDS

DIN ISO 7619 / ASTM D 2240

RANGES OF APPLICATION

Hardness measuring on soft and elastic elastomers and natural rubber products
Minimum specimen thickness for Shore AM = 1.25 mm
Minimum specimen thickness for Shore M = 1.50 mm

BASIC CONFIGURATION

- Test stand with automatic lowering speed of max. 3.2 mm/s ; automatic force loading
- Measuring device HPE II Shore AM or HPE II Shore M

ACCESSORIES

- DAkkS/DKD-calibration certificate for the instrument
- Barofix – O-ring centering device with clamps and large support surface
- Centrofix – Tubes and hoses centering device
- Software for data transfer and analysis
- Standard rubber blocks in set of 1/ 3/ 6 pcs with DAkkS/DKD-calibration certificate

IP CODE:
IP 30
RESOLUTION:
0.1 Shore
MEASURING RANGES:
Shore
DATA OUTPUT:
RS 232 / 100 – 240 VAC; 50 / 60 Hz
MEMORY:
300 measurements
DIMENSIONS (LxWxH)
Test stand: 160 x 200 x 360 mm
Measuring device: 160 x 80 x 140 mm
WEIGHT
Test stand: 3.5 kg
Measuring device: 0.7 kg

HPE II Shore AM/M

IRHD COMPACT III

STANDARDS

DIN ISO 48 / NFT 46-003 / JIS K 6253 / BS 903 PART A26

RANGES OF APPLICATION

Both IRHD M and IRHD N are for the hardness measuring of soft rubber, rubber-like materials and soft deformable materials.

ACCESSORIES

- DAkkS/DKD-calibration certificate for the instrument
- Integrated magnifier with a magnification of 2.5 times
- DAkkS/DKD-calibration certificate for IRHD M and IRHD N indenters
- Barofix - O-ring centering device with clamps and large support surface
- Centrofix - Tubes and hoses centering device
- Software for data transfer and analysis
- Standard rubber blocks in set of 1/ 3/ 6 pcs with DAkkS/DKD-calibration certificate

IRHD Compact III

POWER SUPPLY:
Power adapter
Input: 100 – 240 VAC ; 50 / 60 Hz
Output: 3.3 VDC

IP CODE
IP 30

RESOLUTION:
0.1 IRHD

MEASURING RANGES:
IRHD M / IRHD N

MEASURING TIME
1 – 99 s

DATA OUTPUT:
V24 RS 232 - 9600 baud, 1 start bit, 8 data bits, 1 stop bit

DIMENSIONS (LxWxH)
Test stand: 200 x 250 x 570 mm
IRHD M measuring device: 160 x 100 x 140 mm
IRHD N measuring device: 100 x 100 x 150 mm

WEIGHT
Test stand: 9.0 kg
Loading device for IRHD N: 0.7 kg
IRHD M measuring device: 1.4 kg
IRHD N measuring device: 1.3 kg

QUICK CENTERING- / POSITIONING DEVICES

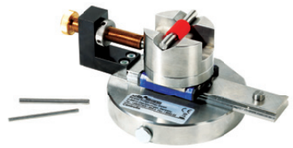
RANGES OF APPLICATION

Multiple options of positioning device for quick and precise positioning of specimens. Tailor-made solutions are available too.

CENTROFIX
Tubes and hoses centering device

BAROFIX
O-ring centering device with clamps and large support surface for O-ring with cord diameter of 3 ranges, 0.6 – 5.0 mm, 0.6 – 8.0 mm and 4.0 – 20.0 mm

BAROFIX II
Fully automatic positioning device for various shapes of specimens. Additional features for double-point and thickness measurement on O-rings



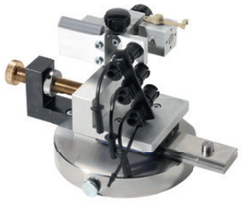
Centrofix

Barofix

Barofix

Barofix II

Customized version



Customized version

Customized version

DIGI TEST II

MEASURING METHODS

Shore A / A0 / B / 0 / C / D / D0 / 00 / 000 / 000S / E / M Shore A / M
Shore D / Shore AM / Shore M /
IRHD L / IRHD N / IRHD M / IRHD H / VLRH

STANDARDS

DIN ISO 7619 / DIN EN ISO 868 / ASTM D 2240 / DIN ISO 48 /
DIN ISO 27588 / NFT 46-003 / JIS K 6253

RANGES OF APPLICATION

Mainly used in QA department for hardness measuring on finished products and standard specimens in the rubber and plastics industries.

The digi test II is a fully automatic system which is free from operator influence. The system can perform hardness measuring on all types of elastomeric material, polymer and plastics.

BASIC CONFIGURATION

The basic digi test II configuration consists of a test stand, a loading unit, a measuring unit and an electronic unit.

The measuring units are interchangeable with plug-and-play feature. The system can automatically detect the type of the plugged in measuring unit and be ready to work instantly.

The measuring units are available in the following options:
SHORE A / B / 0, SHORE D / C / D0, SHORE 00, MICRO SHORE A, MICRO SHORE D, SHORE AM / M, IRHD L, IRHD N, IRHD M, IRHD H, VLRH

POWER SUPPLY:
100 – 240 VAC; 50/60 Hz
IP CODE:
IP 30
RESOLUTION:
0.1
MEASURING RANGES:
The complete range of Shore and IRHD scales
MEASURING TIME
1 – 99 s
DATA OUTPUT:
USB
V24 RS 232 - 9600 baud, 1 start bit, 8 data bits, 1 stop bit
DISPLAY:
LCD-graphic display (240x128 pixel) with brightness selectable LED illumination
DIMENSIONS (LxWxH)
Test stand: 200 x 250 x 570 mm
Loading unit: 165 x 135 x 60 mm
Measuring unit: 150 x 70 x 60 mm
Electronic unit: 260 x 260 x 110 MM
WEIGHT
Test stand: 9.0 kg
Loading unit: 3.0 kg
Measuring unit: 0.4 – 1.8 kg
Electronic Unit: 2.0 kg

digi test II Basic configuration

ACCESSORIES

- DAkkS/DKD-calibration certificate for the instrument
- Magnifier with magnification of 2.5 times
- Indenters for the complete ranges of IRHD and Shore scales with DAkkS/DKD-calibration certificate
- Barofix - O-ring centering device with clamps and large support surface
- Barofix II - fully automatic positioning device for various shapes of specimens. Additional features for double-point and thickness measurement on O-rings.
- Centrofix - tubes and hoses centering device
- Software for data transfer and analysis
- Standard rubber blocks in set of 1/ 3/ 6 pcs with DAkkS/DKD-calibration certificate

M Shore A

Cutting device

digiChamber

digi test II with IRHD M and Barofix

BALL REBOUND TESTER

STANDARDS

DIN EN ISO 8307 / ASTM D 3574

RANGES OF APPLICATION

For measuring the rebound resilience of polymer foams

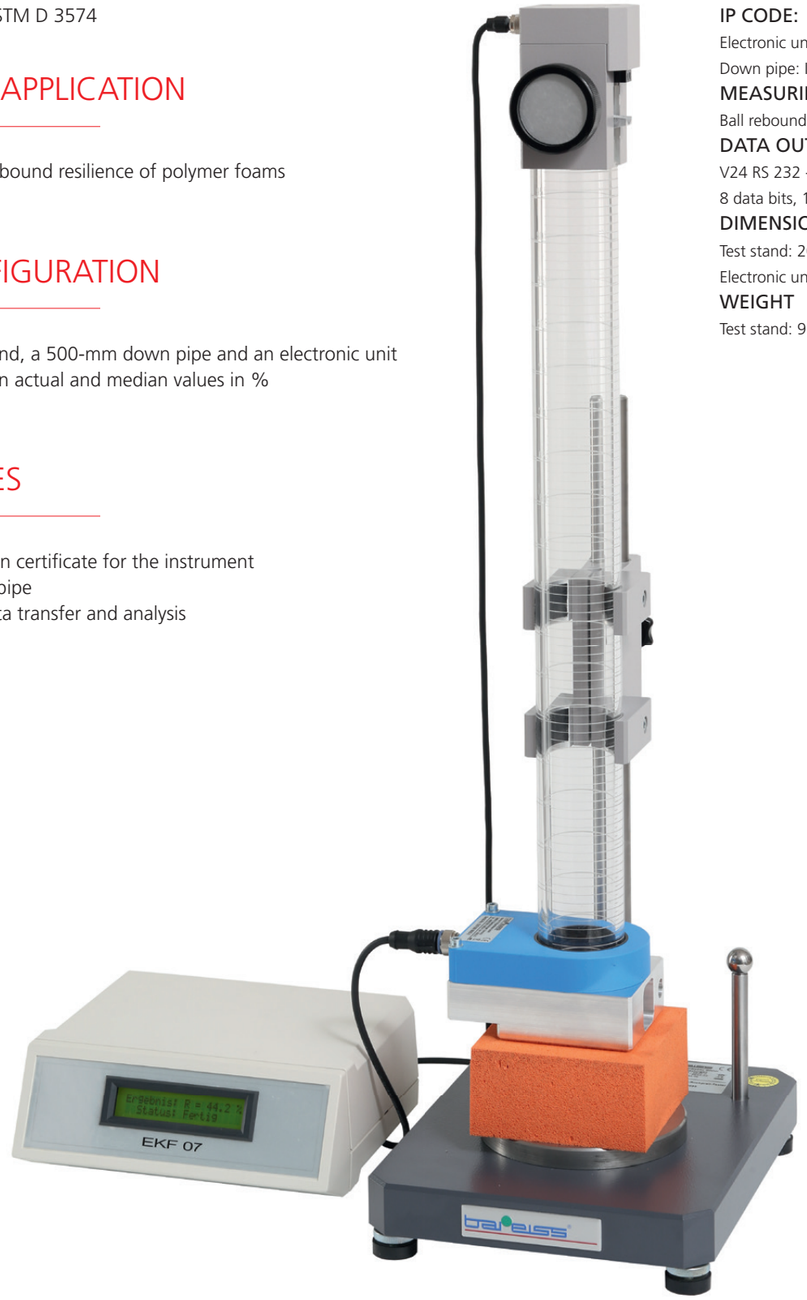
BASIC CONFIGURATION

Consists of a test stand, a 500-mm down pipe and an electronic unit
The results are read in actual and median values in %

ACCESSORIES

- Works calibration certificate for the instrument
- 460-mm down pipe
- Software for data transfer and analysis

POWER SUPPLY:
Power adapter
Input: 100 – 240 VAC ; 50 / 60 Hz
IP CODE:
Electronic unit: IP 30
Down pipe: IP 20
MEASURING RANGES:
Ball rebound elasticity
DATA OUTPUT:
V24 RS 232 - 9600 baud, 1 start bit,
8 data bits, 1 stop bit
DIMENSIONS (LxWxH)
Test stand: 200 x 250 x 600 mm
Electronic unit: 200 x 171 x 90 mm
WEIGHT
Test stand: 9.0 kg



Ball Rebound-Tester

REBOUND ELASTICITY TESTER II

WITH AUTOMATION / HEATING MODULE

STANDARDS

DIN 53512 / DIN 53573 / ISO 4662 / ASTM D 1054 / NF ISO 4662

RANGES OF APPLICATION

For measuring the resilience characteristics of elastomers with hardness ranges from 30 to 85 Shore A or IRHD N.

BASIC CONFIGURATION

The main instrument with 1 option of anvil and the electronic unit

ACCESSORIES

- Manufacturer calibration certificate for the instrument
- Anvil plate
- Heating module

Selectable temperature ranges from 10 °C to max. 100 °C on the contact surface of the specimen.
A second specimen can be preconditioned at the same time.
Diameter of specimens 29 – 53 mm, thickness of specimens 12 mm

POWER SUPPLY:
Input: 100 – 240 VAC ; 50 / 60 Hz
IP CODE:
IP 30
RESOLUTION:
0.1 %
MEASURING RANGES:
Rubber resilience
DATA OUTPUT:
V24 RS 232 - 9600 baud, 1 start bit,
8 data bits, 1 stop bit
LENGTH OF PENDULUM:
200 mm
ANGLE OF INCIDENCE:
90°
IMPACT VELOCITY:
2 m/s
ADJUSTMENT FOR SPECIMEN THICKNESS
0 ... 60 mm
SCALE VALUE
1 mm
DIMENSIONS (LxWxH)
Main instrument:
200 x 250 x 570 mm
Electronic unit:
200 x 171 x 90 mm
WEIGHT
Main instrument: 33 kg
Electronic unit: 2 kg
Heating module: 3 kg

Rebound elasticity tester with heating module

Rebond elasticity tester II

PUNCHING PRESSES SP 1000 II / SP 4000 II

RANGES OF APPLICATION

Manual cutting of ring shaped, bar shaped and other shapes of elastomer specimens.

CUTTING DIES

SHAPE	STANDARDS
	ISO 37 / DIN 53504 / ASTM D 412
	ISO 37 / DIN 53504 / ASTM D 412
	ISO 34-1
	ISO 34-1 / ASTM D 624
	ISO 34-1 / ASTM D 624
	ASTM D 624
	ISO 34-2 / 816

And many more – Please send us your enquiry for specific standards

ACCESSORIES

- hard carton cutting pad
- cutting die with holder and ejector

SP 1000 II

CUTTING PRESSURE:
SP 4000 II: 5 KN
SP 1000 II: 5 KN

CUTTING DEPTH:
SP 4000 II: max. 24 mm
SP 1000 II: max. 24 mm

THROAT DEPTH:
SP 4000 II: max. 60 mm
SP 1000 II: max. 60 mm

SUPPORTING TABLE:
SP 4000 II: max. 120 x 330 mm
SP 1000 II: max. 175 x 270 mm

DIMENSIONS (LxWxH)
SP 4000 II: 300 x 300 x 450 mm
SP 1000 II: 270 x 270 x 600 mm

WEIGHT
SP 4000 II: 50 kg
SP 1000 II: 20 kg

Cutring die
with holder and ejector

SP 4000 II

ABRASION TESTER

STANDARDS

DIN ISO 4649 / NF ISO 4649 / ASTM D 5963

RANGES OF APPLICATION

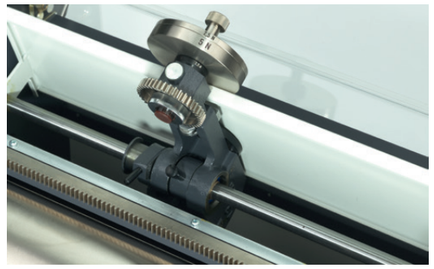
Determination of the resistance of elastomers against abrasion for rubber products such as tire, conveyor belt, tube, shoes, floor coatings and etc.

ACCESSORIES

- Additional 10 N contact pressure on specimen
- Abrading steel
- Ø 16.2 mm circular cutting device with Morse taper shaft MK2 and holder
- Dust cover for abrasion tester
- Standard reference elastomer for abrasion tester acc. to ISO 4649, ASTM D 5963 (DIN 53516), Dimensions: 181 x 181 x 8 mm, 365 g
- Unconditioned abrasion sheet of 474 x 402 mm, consisting of 5 sheets, including one roll of double sided tape
- Cleaning device with 10 sets of brushes and a mounting kit
- Vacuum cleaner with adapter for cleaning device
- Electronic scale

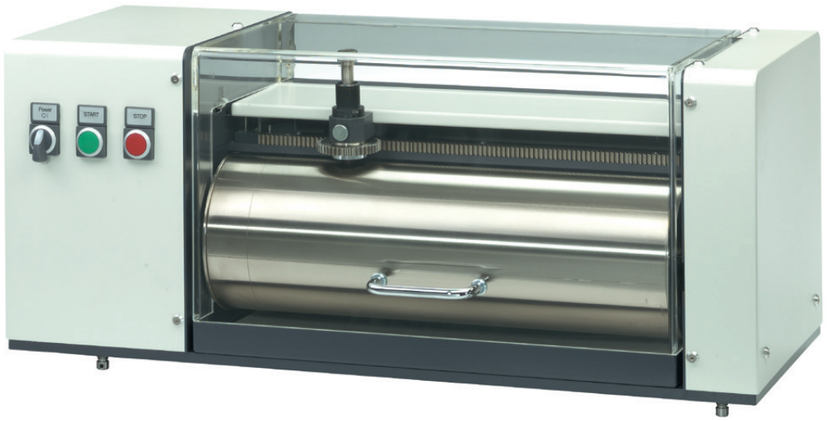
POWER SUPPLY:
100-240 V - 50 / 60 Hz - 100 VA
MEASURING RANGES:
ABRASION
ABRASION DISTANCE:
40 / 20 m
DIMENSIONS (LxWxH)
760 x 360 x 320 mm
WEIGHT
50,0 kg

Circular cutting device



Including loading device
Clamping device for specimen

Scale



Abrasion Tester

3106

RANGES OF APPLICATION

Hardness tester for the determination of the ball indentation hardness Modules selectable –

- HPU - 1 basic equipment, evaluation of ball indentation hardness following a table of standards, hardness test on asphalt acc. to DIN 1996-13; Determination of the compression and recovery acc. to ASTM F 36-99; loading level 49 N and pre-force 9.81 N
- HPU - 2 module ball indentation hardness acc. to DIN EN ISO 2039-1
- HPE - 3 module Rockwell hardness on metal acc. to DIN EN ISO 6508-2 / ASTM E 18 / ASTM D 785
- HPE - 4 module Rockwell hardness on carbon materials acc. to DIN 51917 / DIN EN IEC 413DIN 51917 / DIN EN IEC 413
- HPE - 5 module hardness on building plasters acc. to DIN EN 13279

3106

POWER SUPPLY:
Power supply input: 100 – 240 VAC; 50 / 60 HZ, output: 3.3 VDC
IP CODE:
IP 50
RESOLUTION:
0.001 mm
READING:
LC-Display, dot matrix, format 2 x 16
DATA OUTPUT:
V24 RS 232 - 9600 baud, 1 start bit, 8 data bits, 1 stop bit
MEASURING TIME:
1 - 99 s
WEIGHT
70 kg

KAL-ROCK

RANGES OF APPLICATION

Calibration device for the penetration depth of Rockwell-hardness testing machines (patented) with DAkkS / DKD-calibration certificate

kal-rock

POWER SUPPLY:
100 – 240 VAC; 50 / 60 Hz
IP CODE:
IP 30
RESOLUTION:
0.1 µm
MEASURING RANGES:
Measurement of penetration depth
DATA OUTPUT:
USB V 24 RS 232 - 9600 baud, 1 start bit, 8 data bits, 1 stop bit
FINE ADJUSTMENT OF LENGTH:
Measuring device: ± 0.4 mm
READING ACCURACY:
Measuring device: ± 0.2 µm
DIMENSIONS (LxWxH)
Electronic unit: 290 x 260 x 210 mm
Measuring device: Ø 90 mm, Length 125 mm
WEIGHT
Electronic unit: 2.5 kg
Measuring device: 3.2 kg

GELOMAT II

RANGES OF APPLICATION

Modular and digital hardness testing system for hardness determination on soft elastic materials e.g. gelatin, gelatin capsules, plasticine and etc.

ACCESSORIES

- Centrofix for precise centering of gelatin capsules
- Rotatable template for different dimensions of gelatin capsules
- Manufacturer calibration certificate for measuring device 0-2 N / 0-20 N
- Reference block for 0-20 N

Gelomat

Centrofix

POWER SUPPLY:
100 – 240 VAC ; 50 / 60 Hz
FUSE:
2 pieces of fuse 3.15 A
(3.15 AT)
POWER CONSUMPTION:
max. 20 VA
IP CODE:
IP 30
READING:
LCD-graphic display (240x128 pixel) with brightness selectable LED illumination
RESOLUTION:
0.1
MEASURING METHODS:
0-20 N / 0-2 N
DATA OUTPUT:
USB / RS 232 - 9600 baud, 1 start bit, 8 data bits, 1 stop bit
DIMENSIONS (LxWxH))
Test stand: 200 x 250 x 570 mm
Electronic unit: 200 x 171 x 90 mm
WEIGHT
Test stand: 9 kg
Electronic unit: 2kg

Rotation

CHECK DEVICE

FOR ANALOGUE AND DIGITAL DUROMETERS

RANGES OF APPLICATION

To control the spring characteristics of HP and HPE II in Shore A and D scales.

ACCESSOIRES

- Sliding and balance weights for Shore D
- DAkkS/DKD-calibration certificate for spring force
- Weight 7 kg

Check device

CONTROL RINGS

WITH DAKKS/DKD-CALIBRATION CERTIFICATE

RANGES OF APPLICATION

To control the measuring distance of HP and HPE II in Shore scales of 20, 40, 60, and 80
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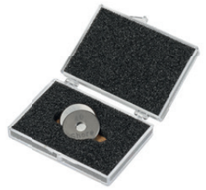


Control rings

STANDARD RUBBER BLOCKS

WITH DAKKS/DKD-CALIBRATION CERTIFICATE

RANGES OF APPLICATION

Standard rubber blocks provide reference measurements for instruments of Shore / IRHD / Gelomat / Pusey & Jones. The Bareiss standard rubber blocks are embedded in a metal base providing better stability.

Volume of delivery:
In a set of 1, 3 and 6 pcs including DAkkS/DKD-calibration certificate.

RB - IRHD

RB - Shore

V-TEST II BASIC

MEASURING METHOD

Vickers

STANDARDS

DIN EN ISO 6507

RANGES OF APPLICATION

For hardness determination on metals and ceramics.

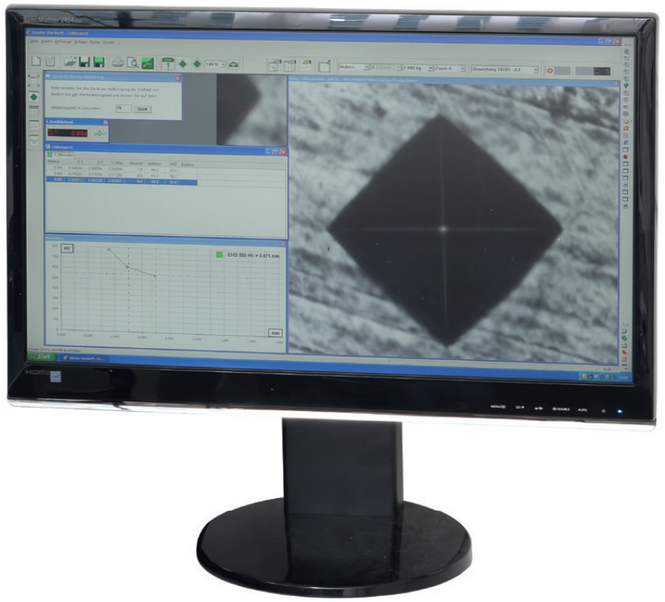
BASIC CONFIGURATION

Manually positioned Z-axis on test stand
Manually positioned X-axis table
Magnetic supporting table Ø 100 mm
Camera ½“ in black and white, digital optics with zoom
Micro objective 20 times magnification including illumination – other options of objectives are available

ACCESSORIES

- Table X-Y manual, 25 x 25 closed, up to 10 kg load
  Can be equipped with one analog and one digital micro meter or both digital micro meters
  » analog micro meter – range 0-25 mm, reading 0.01
  » digital micro meter - range 0-25 mm, resolution 0.001 for hardness profile
- Pick up device for specimen for round shaped specimens between Ø30 and Ø50 mm, extra dimensions on demand
- Centrally clamping vice – equipped with 1 set of chucks
- Evaluation software Hardsoft with dongle – hardness test under WIN XP / Vista / WIN 7
- Standard test blocks on demand
- DAkkS/DKD-calibration certificate for low force / Micro hardness – test load levels HV
- Indenter Vickers 136° incl. DAkkS/DKD-calibration certificate

POWER SUPPLY:
INPUT: 100 – 240 VAC; 50 / 60 Hz
OUTPUT: 12 VDC 2,5 A
IP CODE:
IP 50
MEASURING METHODS:
Vickers - Low Force
Vickers - Micro Hardness
TEST LOAD LEVELS
Low Force: Loading bracket
HV 0,1/0,2/0,3/0,5/1,0/2,0/3,0/5,0/10,0
Micro Hardness: Loading bracket
HV 0,01/0,02/0,05/ 0,1/0,2/0,3/1,0/2,0
THROAT:
200 mm
DATA OUTPUT:
V24 RS 232 - 9600 baud, 1 start bit, 8 date bits, 1 stop bit
DIMENSIONS (LxBxH)
450 x 490 x 570 mm
WEIGHT
ca. 35 kg



V-Test II Basic

HVWA 06 - PORTABLE

BASIC CONFIGURATION

Loading range HV 0.025 to HV 0.1
Analogue hardness measuring microscope with motorized height adjustment Automatic load control
Level of focus to meet the ideal distance of diamond sample
Integrated bubble level for levelling adjustment
Free movable feet for better stability on different degrees of curvature

DIMENSIONS (LxBxH)
500 x 400 x 400 mm
WEIGHT
ca. 12 kg

Portable Vickers HVWA 06 for hardness determination on curved surfaces

SOFTWARE HARDTEST

THE TEST- AND EVALUATION SOFTWARE HARDTEST V 2.1
FOR THE HARDNESS- / HYSTERESIS MEASUREMENT WITH BAREISS HARDNESS TESTERS

RANGES OF APPLICATION

Applicable for Bareiss-hardness testers with USB interface and serial interface.

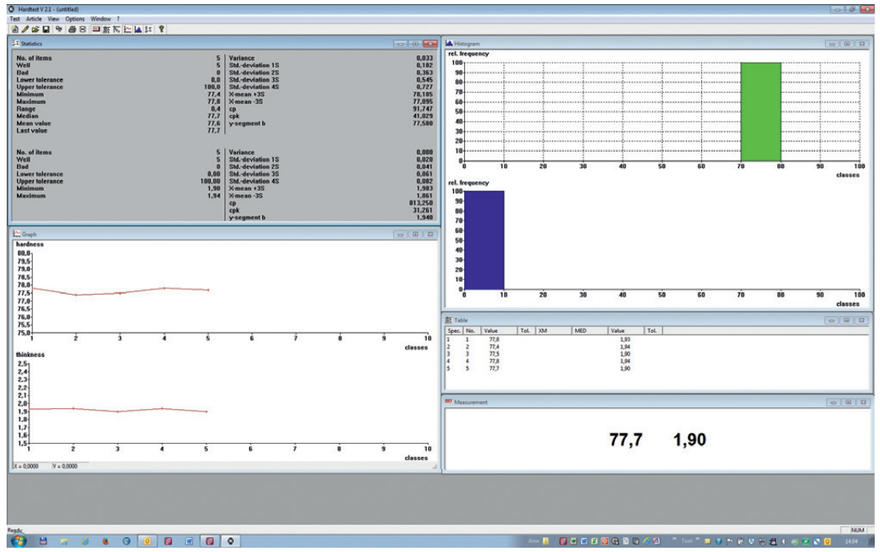
FUNCTIONS

The software contains the following functions for the documentation of the measured values:

- Reading of the actual hardness value.
- Reading of all hardness values of a series of measurements.
- Marking of the measured values which are out of the tolerance limits (<, >).
- Viewing of all the activated values at one glance.
- Calculation of the average- and median value.
- Display of a series of measurements in diagram and histogram.
- Display of the recovery characteristics of materials in a hysteresis curve.

FURTHER FUNCTIONS:

- 32-Bit Program, compatible with Windows 7 and on.
- Tool bar for quick access to the menu.
- Detailed help information.
- The languages are available in German, English and French. Other options of language can be inserted by request.
- Measuring can be interrupted and resumed later.
- Measuring values can be exported to external programs.



TECHNICAL DATA

MEASURING METHOD	SPRING FORCE	CONTACT FORCE	INDENTER	PRESSER FOOT	MEASURING DISTANCE	MEASURING RANGE
Shore A / DIN ISO 7619 / EN ISO 868	8050 mN	1 kg	35°	Ø 18 mm	2,5 mm	0 – 100
S. AM/M / DIN ISO 7619 / ASTM D 2240	764 mN	250 g	30°	Ø 9 mm	1,25 mm	0 – 100
Shore E / ASTM D 2240	8050 mN	1 kg	Ø 5 mm	≥ 500 mm²	2,5 mm	0 – 100
Shore A0 / DIN ISO 7619	8050 mN	1 kg	Ø 5 mm	≥ 500 mm²	2,5 mm	0 – 100
L / L/c	8050 mN	1 kg	Ø 5 mm	Ø 18 mm	2,5 mm	0 – 100
Shore D / DIN ISO 7619 / EN ISO 868	44450 mN	5 kg	30°	Ø 18 mm	2,5 mm	0 – 100
Shore B / ASTM D 2240	8050 mN	1 kg	30°	Ø 18 mm	2,5 mm	0 – 100
Shore C / ASTM D 2240	44450 mN	5 kg	35°	Ø 18 mm	2,5 mm	0 – 100
Shore D0 / ASTM D 2240	44450 mN	5 kg	3 / 32"	Ø 18 mm	2,5 mm	0 – 100
Shore 0 / ASTM D 2240	8050 mN	1 kg	3 / 32"	Ø 18 mm	2,5 mm	0 – 100
Shore 00 / ASTM D 2240	1111 mN	400 g	3 / 32"	≥ 500 mm²	2,5 mm	0 – 100
Shore 000 / ASTM D 2240	1111 mN	400 g	r = 6,35	≥ 500 mm²	2,5 mm	0 – 100
Shore 000 S / ASTM D 2240	1.932 mN	400 g	r = 10,70	≥ 500 mm²	5,0 mm	0 – 100
M Shore A / Bareiss Norm	108 mN	235 mN	30°	Ø 6 mm	1 mm	0 – 100
M Shore D / Bareiss Norm	9213 mN	–	30°	–	0,5 mm	0 – 100
Asker C / SRIS 0101	8385 mN	1 kg	Ø 5,08 mm	Ø 5,4 mm	2,5 mm	0 – 100
Asker F / Werksnorm	4295 mN	0,5 kg	Ø 25,2 mm	Ø 80 mm	2,5 mm	0 – 100
Barcol / DIN EN 59 / ASTM D 2583	71,3 N	10 kg	26°	Ø 2 mm	0,76 mm	0 – 100

MEASURING METHOD	SPRING FORCE	CONTACT FORCE	INDENTER	PRESSER FOOT	MEASURING DISTANCE	MEASURING RANGE
IRHD M / DIN ISO 48	153,3 mN	235 mN	Ø 0,4 mm	Ø 3,35 mm	0,3 mm	30 - 100
IRHD N / DIN ISO 48	5,7 N	8,3 N	Ø 2,5 mm	Ø 20 mm	1,8 mm	30 - 100
IRHD H / DIN ISO 48	5,7 N	8,3 N	Ø 1,0 mm	Ø 20 mm	0,44 mm	85 - 100
IRHD L / DIN ISO 48	5,7 N	8,3 N	Ø 5,0 mm	Ø 22 mm	2,1 mm	9,9 - 34,9
VLRH / DIN ISO 27588	100,0 mN	235 mN	Ø 2,5 mm	Ø 6,0 mm	1,0 mm	0 - 100
Pusey & Jones	1000 g	–	Ø 3,175 mm	–	–	0 - 300

« SOFT — MEDIUM — HARD »