

BaRotation IV

EN

ASTM
D1415

DIN
ISO
48

NFT
46-003

Hybrid IRHD M hardness test system

An automatic O-ring hardness test system with machine vision for OD, ID, CD measurements.



Bareiss has a proven history of engineering dedication to the IRHD (International Rubber Hardness Degree) testing technology. It is the most widely used method for measuring elastomers with thickness less than 1 mm.

BaRotation IV is built on the concept of multiple and hybrid tests in one go with almost no human operation required throughout the entire testing process. The large rotational table can accommodate from 1 to 100 O-ring specimens depending on the sizes of O-rings. A complete test cycle starts from a laser scanning of the specimen for its highest or mid-point, followed by an IRHD M or Micro Shore A hardness test and finally an image capture for OD and ID measurements.

TEST METHODS

IRHD Micro

Micro Shore A

BaRotation IV

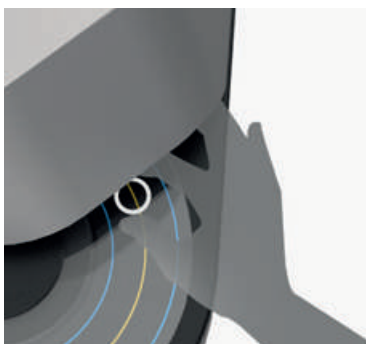
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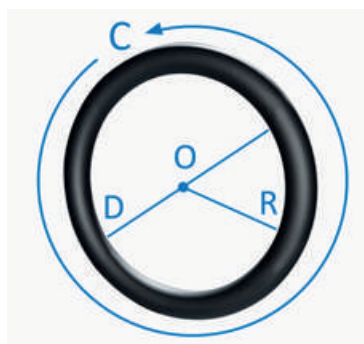
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MAIN FEATURES



The Bareissone software provides graphical tutorials for quick learnings of the system.



The algorithm is using the circumference to determine the ID and OD of the O-rings.



The Basler acA2440-35um USB 3.0 camera with the Sony IMX264 CMOS sensor delivers 35 frames per second at 5.0 MP Resolution.

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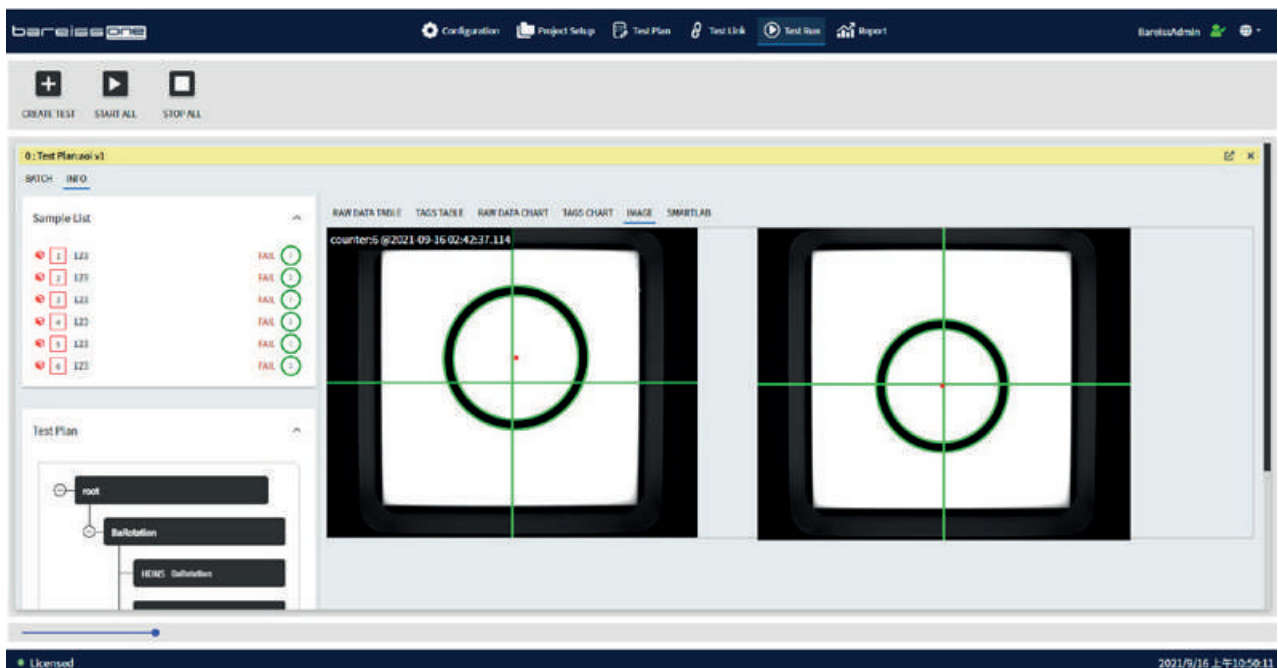
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BareissOne is a modularized software that is aimed to provide a common platform with integration of different test categories.

Whether it is a standard test for one single measurement or a series of tests that requires a complex test sequence editing, BareissOne is designed to offer all levels of user's demands.

Features such as user authorization, system log, project management, version control and custom report are all at your fingertips.

BareissOne has made software use easier than it ever was before.



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SPECIFICATIONS

IRHD M hardness system

Standard:	DIN ISO 48, ASTM D 1415
Initial load:	8.3 mN
Primary load:	153.3 mN
Force on presser foot:	235 mN
Presser foot size:	Ø 3.35 mm
Indenter:	Ø 0.4 mm
Penetration:	0.3 mm

Micro Shore A hardness system (Optional)

Standard:	Bareiss standard
Spring force:	8.3 mN
Force on presser foot:	235 mN
Presser foot size:	Ø 6mm
Indenter:	30°
Penetration:	1.0 mm

Camera

Resolution (HxV):	2448 px x 2048 px
Resolution:	5 MP
Pixel size (HxV):	3.45 µm x 3.45 µm
Frame rate:	35 fps
Mono/Color:	Mono

Lens

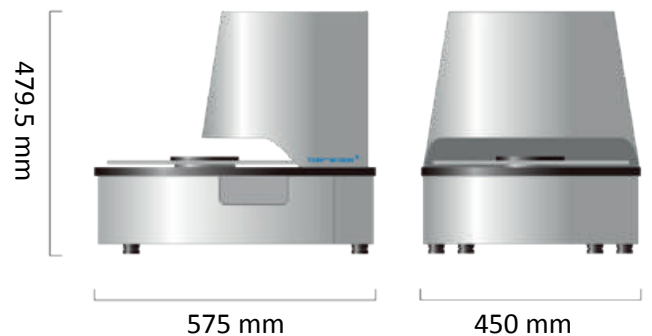
Max image size:	1"
Resolution:	12 MP
Focal length:	16 mm
Max. Aperture:	f/1.4
M.O.D.:	300 mm
Distortion:	-0.85%@1"

Electrical and interface

Voltage:	100- 240 VAC; 50/60 Hz; 10 A
USB:	3.0 (2 ports)

Specimen

Type:	O-rings
Color:	Non-transparent
OD (Outer diam.):	≤ 33 mm
CD (Cross diam.):	≥ 1.5 mm (Optional)
Resolution:	0.027 mm



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ACCESSORIES



Micro Shore A device
Shore A comparable results for specimens with thickness less than 1 mm. Plug-n-play design for easy installation.



Myutron machine vision lens
Premium quality fixed focal lens for 4- 12 Mega pixel. Focal length 16mm, M.O.D 0.3m.



Standard block
Choices of 1, 3 and 6pcs set premium quality standard blocks with DAkKS certificates.



Basler camera
A USB 3.0 camera with Sony IMX264 CMOS sensor delivers 35 frames per second at 5.0 MP resolution.



DAkKS calibration certificate
Bareiss offers the most prestigious certificate for your quality assurance.



BareissCare Service
The BareissCare service package provides extended calibration and maintenance services.



BareissOne software
A modular software that provides ease of use for all levels of user demands. It includes many key features that are essential for effective testing process and accurate results.



Indenter - IRHD M
Spare indenter for your IRHD M measuring device.

REFERENCE

Bareiss offers a comprehensive range of consumables and accessories for you to conduct your tests. All these products are proven to be premium quality.



MADE IN GERMANY SINCE 1954.

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Deutsche
Akkreditierungsstelle
D-K-15206-01-00

The accreditation is valid for the scope listed in certificate D-K-15206-01-00 (mechanical measurands in the range of hardness).