



## digichamber – Temperature Controlled Hardness Testing

**Standards:** [DIN ISO 48](#), [ASTM D2240](#)



**ULTIMATE USER-FRIENDLINESS**



**LEADING DEPENDABILITY AND RELIABILITY**



**STRICT COMPLIANCE WITH INDUSTRY STANDARDS**



**STOCKED CONSUMABLES AND SPARES**



**TRUSTED AFTER SALES TECHNICAL SUPPORT**



**LIFETIME PRODUCT SUPPORT ADVANTAGE**

### Description

Designed and developed by Bareiss, [digichamber](#) is the most advanced environmental chamber rubber-hardness tester in the market. This automatic testing device has been designed to analyze the hardness of rubber under extreme conditions using Shore hardness A or IRHD N testing methods. The device plays a critical role in the automotive and tire industries, where rubber parts need to withstand harsh temperature variations.

digichamber is a multifeatured temperature-controlled hardness tester that can carry out multiple tests simultaneously, providing accurate and reproducible results. The device features a 7" touch screen panel, user-friendly interface, and digiCenter software, making it more convenient to operate and function efficiently. Users can easily manage the testing sequence, criteria, and generate customized test reports.



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## **digiChamber Features and Benefits**

1. Large display: DigiChamber has a 7" display and a touch screen panel that supports many languages.
2. User Friendly: DigiChamber - Advanced Environmental Chamber Rubber-Hardness Tester has a user-friendly interface that minimizes the training time.
3. Consists of an air-cooled refrigeration unit with SIMPAC's continuously variable power adjustment and a chloride-free refrigeration cycle.
4. A spacious 200-liter test volume with polished stainless-steel walls for a test load of up to 125 kgs.
5. Controlling the hardness system is simple with an electronic display and digital I/O.
6. Special Feature: The automatic tray can hold up to 25 samples, and the user can choose a test sequence by selecting several measurements on a sample as well as the appropriate temperature.
7. Temperature: Rubber hardens in extreme cold temperatures, and this may be simulated in an environment as cold as -40 0C with digiChamber. Rubber may be analyzed using our automatic digiChamber under very high heat conditions of up to +180 0C.
8. DigiCenter includes a user-friendly GUI (Graphic User Interface) for all data logging and analysis, allowing users to effortlessly navigate through the software and quickly become familiar with it.



## digichamber Technical Data and Specifications

Shore A Hardness System	
Standards	<a href="#">DIN ISO 48-4</a> , <a href="#">ASTM D 2240</a>
Spring force	8050 mN
Force on the presser foot	1kg
Presser foot size	Ø 18mm
Indenter	35"
Penetration	2.5 mm

IRHD N hardness system (optional)	
Standards	<a href="#">DIN ISO 48-2</a> , <a href="#">ASTM D 1415</a>
Initial load	0.3 N
Primary load	5.7 N
Force on the presser foot	8.3 N
Presser foot size	Ø 20 mm
Indenter	Ø 2.5 mm
Penetration	1.8mm

Temperature Chamber	
Temperature range	-700 C to 1800 C



## Temperature Chamber

<b>Recommended max temperature</b>	1500 C
<b>Temperature rate of change</b>	±0.2 K to ±0.5 K
<b>Temperature homogeneity</b>	±0.5 K to ±1.5 K
<b>Test volume</b>	Approximate 200 liters
<b>Heat compensation</b>	800 W
<b>Noise level</b>	56 dB(A)
<b>Refrigerant</b>	Chloride-free R449A

## Electrical and interfaces

<b>Voltage</b>	100-240 VAC, 50/60 Hz; 12 A
<b>Power</b>	Approx. 1.8 kW
<b>Protection Class</b>	IP 54
<b>USB</b>	3.0 (1 port)
<b>Ethernet</b>	100/10 megabit

## Compressed air

<b>Pressure</b>	4- 12 bar
<b>Consumption</b>	max. 6m <sup>3</sup> /h
<b>Coupling type</b>	DN 7.2



**Sample Geometry: O-rings; Sheet material Shaped; Parts and thin specimens**

**Type**

Plate shape samples

**Standard**

Ø 38 mm / 50 mm others on request

## Watch Video



Watch the digiChamber – Temperature Controlled Hardness Testing product video.

[WATCH ON YOUTUBE](#)



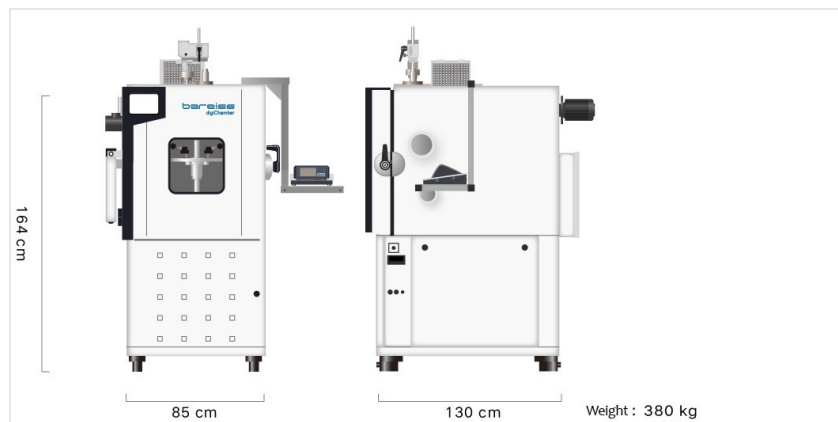
## digichamber Basic Equipment

Hardness scales interchangeable between Shore A and IRHD N, 7" touch screen, electronic console, a large testing chamber having a capacity up to 200 liters, air-cooled refrigeration unit.

This state-of-the-art testing device consists of an air-cooled refrigeration unit with continuously variable power adjustment by SIMPAC and a chloride-free refrigeration cycle. The large test volume of 200 liters with polished stainless-steel walls can handle a test load of up to 125 kgs. The automatic tray can carry up to 25 pcs of samples and the user can select a test sequence by choosing multiple measurements on a sample along with the desired temperature.

With digichamber, you can simulate extreme cold temperatures as low as -40 0C and analyze rubber under extreme heat conditions of up to +180 0C temperature. The device comes with digiCenter software, a user-friendly GUI (Graphic User Interface) for data logging and analysis.

## digichamber Weight & Dimensions



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