

# LabCal

Expert in environmental  
simulation

CREATOR  
OF EXTREME

LABORATORY TESTING CHAMBER

- ▶ FROM -70 ° C TO +180 ° C
- ▶ FROM 34 TO 100 LITERS



# LabCal

## LABORATORY TESTING CHAMBER

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### TEST WHATEVER YOU LIKE.

From motherboards to lipsticks – in research, development and quality control, you won't want to take any chances. We'll support you.



#### Temperature and climate tests in a very small space.

In research and development laboratories, the functionality and practicality of a product is ensured at a very early stage. Limited laboratory space and the necessity of testing smaller test specimens directly at the workstation make compact and low-noise devices necessary. Our Laboratory Test Chambers LabCal make it possible to test the functionality of test specimens under the influence of both temperature and humidity. This can lead to component malfunction being recognised and dealt with in good time.

#### Lots to test? No problem!

When testing your products, you must adhere to numerous test standards and carry out long-term tests. Our test chambers are designed for these situations. The models cover a wide range of applications and satisfy every need. For specific requirements, you can upgrade every system with many options based on your individual needs.

## PERFECTION IN PERFORMANCE, EQUIPMENT AND DESIGN.

### Laboratory Test Chambers LabCal.

#### Precisely engineered.

We know what matters for your tests: reliable, precise and reproducible results. That's why we design our test chambers to meet exactly these demands. Because incorrect results lead to incorrect conclusions. With your needs in mind, we already eliminate any interference factors during the design phase, relying on our comprehensive expertise and years of experience.



#### Perfectly manufactured.

For us, quality is our daily business. We use only high-quality materials and manufacture many of the components for our test chambers in-house. In addition, we have regular quality checks in place throughout the entire production process.



#### Absolutely low maintenance.

Set up, plug in, start the operation. The intelligent, compatible control elements and intuitive user interface guarantee easy operation. Easily accessible maintenance elements ensure minimal service times. Diagnostics and inspection systems in every machine additionally shorten downtimes and optimise maintenance periods.

#### Our highlights

- ▶ New, eco-friendly refrigerant R449A
- ▶ WEBSeason® – web-based user interface
- ▶ Space-saving thanks to compact design
- ▶ Large choice of standardised options

# MORE EQUIPMENT, RIGHT FROM THE START.

Basic equipment setting standards.

## Exterior

### ▶ Future-proof – refrigerant R449A

The new refrigerant R449A is used in all temperature and climate test chambers of the LabCal type. The GWP value of just 1397 ensures safe usage even after 2030 and the refrigerant does not have to be replaced. As a result, we are already surpassing the future statutory standards today, thus future-proofing your tests, making the equipment easier to maintain and more environmentally friendly.

### ▶ Compact – on your table

The technology is installed in the equipment in such a way that the footprint is minimised. Every test chamber requires less than 1 m<sup>2</sup> space – standardised as benchtop device.



## Interior

### ▶ Clever – automated processes

Water feeding of demineralised water for long-term tests and to avoid manual refilling.

### ▶ Clean – no chance for dirt

The test space is made of corrosion-resistant stainless steel 1.4301. Thanks to special welding and smooth surfaces, the test space is easy to clean.

### ▶ Precise – reliable reproducibility

The humidity of the test space air is measured according to the internationally valid psychrometric measuring principle. The life time of the psychrometer wick is considerably increased due to a self-cleaning mechanism.

## Regulation and control



### ▶ Intuitive – Interface WEBSeason®

You can use the innovative User Interface WEBSeason to program, control and monitor your tests at any time and anywhere, even from your tablet or smartphone. Language and units can be set to suit the user and the settings can be saved. In this way, WEBSeason creates a new dimension of flexibility and efficiency.

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## LABORATORY TESTING CHAMBER

### TAILOR-MADE TESTING.

Optional equipment for individual solutions.



#### OPTIONS

##### Exterior

▶ **Dry – through compressed air**

The optional compressed air dryer to avoid condensation on the test specimen is available as a supplement.

▶ **Reaching high – saving space**

A custom-built tool offers the possibility to stack the Laboratory Test Chambers.

▶ **Mobile – and flexible**

Two fixed and two swivel castors allow for sufficient flexibility in the mobile version.

#### OPTIONS

##### Interior

▶ **Chilled – cooling with water**

Water cooling to increase the permissible operating temperature from 27 to 35 °C.

▶ **Functional – everything under control**

Determine the position, size and number of access ports according to your individual test requirements. Access ports in the test space floor are also possible.

▶ **Efficient – simple distribution of test specimens**

Test specimen of up to 75 kg can be placed on a maximum of five to seven shelves.

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## LABORATORY TESTING CHAMBER

Type	Exterior dimensions <sup>1</sup> , W x D x H	Exterior dimensions, incl. optional mobile design, W x D x H	Test space dimensions, W x D x H	Min. temperature <sup>2</sup>	Max. temperature	Temperature change rate, cooling <sup>3</sup>	Temperature change rate, heating <sup>3</sup>
	mm	mm	mm	°C	°C	K/min.	K/min.
<b>DIMENSIONAL CHARACTERISTICS</b>				<b>TEMPERATURE CHARACTERISTICS</b>			
LabCal T 31	661x791x1000	661x791x1684	350x290x310	-40	+180	4,5	4,0
LabCal T 32	661x791x1684	Standard <sup>8</sup>	350x290x310	-70	+180	5,0	4,0
LabCal T 61	781x843x1090	781x843x1774	470x340x400	-40	+180	4,0	4,0
LabCal T 62	781x843x1090	781x843x1774	470x340x400	-70	+180	4,0	4,0
LabCal T 101	801x995x1191	801x995x1872	490x405x500	-40	+180	4,5	3,0
LabCal T 102	801x995x1191	801x995x1872	490x405x500	-70	+180	4,0	3,0
LabCal H 30	661x926x1000	661x926x1684	350x290x310	+10	+180	6,5	4,0
LabCal H 31	661x926x1000	661x926x1684	350x290x310	-40	+180	4,5	4,0
LabCal H 32	661x791x1684	Standard <sup>8</sup>	350x290x310	-70	+180	5,0	4,0
LabCal H 60	781x978x1090	781x978x1774	470x340x400	+10	+180	5,5	4,0
LabCal H 61	781x978x1090	781x978x1774	470x340x400	-40	+180	4,0	4,0
LabCal H 62	781x978x1090	781x978x1774	470x340x400	-70	+180	4,0	4,0
LabCal H 100	801x1130x1191	801x1130x1872	490x405x500	+10	+180	6,5	3,0
LabCal H 101	801x1130x1191	801x1130x1872	490x405x500	-40	+180	4,5	3,0
LabCal H 102	801x1130x1191	801x1130x1872	490x405x500	-70	+180	4,0	3,0
<b>Calibration values (factory calibration):</b>				+23 °C to			

<sup>1</sup> The required clearances can be reduced by dismantling components.

<sup>2</sup> Temperatures > +5 °C can be run in continuous operation, < +5 °C discontinuously or with additional compressed air dryer.

<sup>3</sup> In accordance with IEC 60068-3-5, on average, measured in the test space centre.

<sup>4</sup> In the middle of the test space when it is empty and in steady state, without specimen, without heat radiation and without additional equipment, depending on temperature.

<sup>5</sup> Relative to the selected set point in the temperature range from the minimum temperature up to +150 °C and/or at humidity >20 % RH.

<sup>6</sup> Is reached at different temperatures depending on the device type. eut être réduit en démontant certains composants.

# CONVINCING TECHNOLOGY. RELIABLE RESULTS.

The performance data at a glance.

Temperature deviation, in time <sup>4</sup>	Temperature homogeneity, in space <sup>5</sup>	Heat compensation <sup>6</sup> , max.	Heat compensation at -20 °C	Temperature range	Humidity range	Dew point temperature range	Humidity deviation, in time <sup>7</sup>	Temperature deviation, in time <sup>4</sup>	Temperature homogeneity in space <sup>5</sup>
K	K	W	W	°C	% h.r.	°C	% h.r.	K	K
<b>CLIMATIC CHARACTERISTICS</b>									
±0,3 to ±1,0	±0,5 to ±2,0	600	100	+10 to +95	+10 to +95	+4,8 to +93,6	±1,0 to ±3,0	±0,3 to ±0,5	±0,5 to ±1,5
		350	300						
		750	150						
		670	280						
		2300	1000						
		2100	870						
		600	-						
		600	100						
		350	300						
		750	-						
		750	150						
		670	280						
		2300	-						
		2300	1000						
2100	870								
+80 °C				+23 °C/50 % RH and +80 °C/50 % RH					

<sup>7</sup> In the middle of the test space when it is empty and in steady state, without specimen, without heat radiation and without additional equipment, depending on climate value.

<sup>8</sup> Base is included as standard and cannot be deselected.

All specifications are average values for standard devices and apply at +25 °C ambient temperature and +18 °C cooling water supply temperature and 230 V/50 Hz nominal voltage (except 100/70/10 and 150/70/10: 400 V/50 Hz), without specimen, without heat radiation and without optional equipment. The product needs fluorinated gases for functioning. Depending on the type, it contains refrigerants R449A and R23.

Europe  
Asie  
Amérique  
Afrique



## An international presence

At the core of the Climats development strategy,  
Export relies on a wide-ranging network of intercontinental distributors.  
Our partners market and service Climats equipment all over the world;  
they are fully skilled in our technology and fully committed to a long-term relationship.



# Climats

a schunk company

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