

**Humidity Cabinet  
for humidity  
tests with  
international  
standards**

**Humidity Cabinet  
HYGROTHERM  
519-529**

**HYGROTHERM  
also available as  
fully-automatic version  
(Mod. 519-Smart)**

**HYGROTHERM  
also available with  
separate test chamber  
with capacity of  
1000 l or 2000 l  
(Model 529)**



**HYGROTHERM 519 Smart**

testing equipment for quality management

**ERICHSEN**  
since 1910

**Technical Description**

**DIN EN ISO 6270-2  
DIN EN ISO 6988  
DIN 50 958  
DIN 55 991**

**NFT 30-055  
ISO 3231  
ISO 4541  
ISO 11 503  
ASTM D 2247**

## HYGROTHERM 519

### Purpose and Application

Corrosion protection systems and materials are tested in the humidity cabinet **HYGROTHERM 519** in accordance with international standards and specifications. Examples are the reaction of protection-treated carrier media in the condensed water climate (constant humidity climates CH in accordance with DIN EN ISO 6270-2).

The humidity cabinet **HYGROTHERM 519** corresponds to the latest standards of technology. Setting-up and monitoring functions are kept to a minimum, or are undertaken automatically.

The 300 l standardised test chamber made of acidproof and thermoresistant plastic material ensures that the **HYGROTHERM 519** is ideally suited to large-scale batch testing. The large, transparent access door allows easy mounting of specimens, which are hung from seven free-standing cross rails, to be exposed over a certain period aggressive climates or media.



The temperature is set on an electronic temperature regulator and the set value and actual value are shown on LED displays. According to the standards the test temperatures are between 20 °C and 40 °C (max. temperature 50 °C).



## HYGROTHERM 519 Smart

### Purpose and Application

**HYGROTHERM 519 Smart** condensation tester for testing the behavior of corrosion protection systems when exposed to condensation in accordance with DIN EN ISO 6270-2.

Suitable for conducting condensed water constant (CH) and alternating climate (AHT, AT) tests and also for carrying out tests in an atmosphere containing sulfur dioxide according to DIN EN ISO 6988.

The **HYGROTHERM 519 Smart** model is equipped with a PLC control unit.

The necessary test parameters are entered via a touch screen display with user-friendly menu navigation, which ensures a **fully automatic or manual process** for temperature control, bottom-water filling, bottom-water drainage and ventilation.



A flow meter ensures that the preset amount of water is filled exactly.

The **HYGROTHERM 519 Smart** is equipped with a chamber illumination.

**Optionally**, the test device can be equipped with a data acquisition and recording system HOBO U12, including software, for recording the test chamber temperature.

# HYGROTHERM 529

## Purpose and Application

With the option "**Electronic gas dosing device for sulfur dioxide**" (order no. 20440132) tests can be carried out in an atmosphere containing SO<sub>2</sub>.

With automatic ventilation and automatic acid drainage damage to health can be avoided.

Corrosion protection systems and materials are tested in the humidity cabinet **HYGROTHERM 529** (as described under Model 519) in accordance with international standards and specifications. Examples are the reaction of protection-treated carrier media in the condensed water climate (constant humidity climates CH in accordance with DIN EN ISO 6270-2).

As an alternative to the model 519 with 300 l test volume the **HYGROTHERM 529** is available for the testing of **large-volume functional parts** in the condensation-water climate (without addition of gas) with a **test chamber volume of 1000 liters or 2000 liters**.

The instrument consists of a control unit (incl. test duration counter and temperature regulator) for wall mounting as well as a separate double-walled test chamber in rectangular design with pneumatically dome opening



Gas dosing unit with remote controller

The electronic gas dosing unit works with a data storage via an included terminal program (RS 232- or USB port); calibrated dosing range 0.2 dm<sup>3</sup> and 2.0 dm<sup>3</sup> SO<sub>2</sub> at 20°C and 1013 hPa (accuracy: +/-3% max. relative error).

Together with the electronic gas dosing device, corrosion tests can be carried out fully automatically, among others according to DIN EN ISO 6988 (formerly DIN 50018). The gas dosing unit can also be operated using a remote control (with USB interface for connection to a PC).



Control Unit



Test chamber

## Technical Data

### **HYGROTHERM 519**

Dimensions	
(W x D x H) approx.	760 x 620 x 1070 mm
inside: approx.	700 x 475 x 680 mm
Net weight	approx. 40 kg
Power supply	230 V 1~, 50 Hz/700 VA
Test chamber volume	300 l
Capacity for test panels	12 – 100 pcs. (depending on size)
Test chamber temperature	max. 50 °C

### **HYGROTHERM 519 Smart**

Dimensions	
(W x D x H) approx.	760 x 620 x 1070 mm
inside: approx.	700 x 475 x 680 mm
Net weight	approx. 55 kg
Power supply	230 V 1~, 50 Hz/700 VA
Test chamber volume	300 l
Capacity for test panels	12 – 100 pcs. (depending on size)
Test chamber temperature	max. 50 °C
Air consumption	6 m <sup>3</sup> /h
Air pressure	6 bar

### **Electric gas dosing unit**

Dimensions	
(W x D x H) approx.	180 x 110 x 250 mm)
Net weight	approx. 3 kg

### **HYGROTHERM 529**

#### Control Unit

Dimensions	
(W x D x H) approx.	425 x 200 x 530 mm
Net weight	approx. 20 kg
Power supply	400 V, 50 Hz, 3~ (other voltage on request)
Power consumption	120 VA
Compressed air connection	6 – 8 bar

#### Test chamber (1000 l)

Dimensions (W x D x H)	
approx..	1800 x 1000 x 1350 mm
inside approx.	1500 x 810 x 670 mm
Net weight	approx. 150 kg
Power consumption	2120 VA

#### Test chamber (2000 l)

Dimensions (W x D x H)	
approx.	3000 x 1000 x 1350 mm
inside approx.	2700 x 810 x 670 mm
Net weight	approx. 260 kg
Power consumption	3120 VA

Please refer to our Price Lists 519 and 529 for further details and accessories.

The right of technical modifications is reserved.  
Group 21 - TBE 519/529 – VI/2020

## Order Information

Figure	Ord.-No.	Description
<b>Humidity Cabinets</b>		
	01240131	<p><b><u>Humidity Cabinet HYGROTHERM 519</u></b> for testing the reaction of corrosion protection systems to condensation exposure for condensation water and constant humidity climates (CH) in accordance with DIN EN ISO 6270-2.</p> <p>Impact resisting and non-polluting PP construction with <b>300 l test chamber</b>, ready for operation, incl. 7 specimen carriers and 100 S-hooks.</p>
	03290131	<p><b><u>Humidity Cabinet HYGROTHERM 519 Smart</u></b> for testing the reaction of corrosion protection systems to condensation exposure for condensation water and constant humidity climates (CH) in accordance with DIN EN ISO 6270-2. Suitable for carrying out condensed water constant (CH) – and alternating climate (AHT, AT) tests.</p> <p>Impact resisting and non-polluting PP construction with <b>300 l test chamber</b>; ready for operation.</p> <p><b>Comfortable operation via touch screen with</b> user-friendly menu guidance for fully automatic or manual process, with chamber illumination, incl. 7 specimen carriers and 100 S-hooks.</p> <p>To carry out tests in an atmosphere containing sulphur dioxide according to DIN EN ISO 6988, the "electronic gas dosing unit" (order no. 20440132) is optionally required.</p>
	01880131	<p><b><u>Humidity Cabinet HYGROTHERM 529/1000 I</u></b> for condensed water tests (constant humidity) in accordance with DIN EN ISO 6270-2-CH; consisting of: <u>Test chamber</u> (rectangular) with <b>1000 l test chamber volume</b> and separate <u>control unit</u>.</p> <p>The test chamber in impact resisting and non-polluting PP, with a pneumatically actuated mechanism for the dome top; incl. 13 specimen carriers and 100 S-hooks.</p>

## Order Information

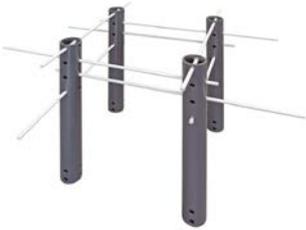
Figure	Ord.-No.	Description
	01880231	<p><b><u>Humidity Cabinet HYGROTHERM 529/2000 I</u></b> for condensed water tests (constant humidity) in accordance with DIN EN ISO 6270-2-CH; consisting of:</p> <p><u>Test chamber</u> (rectangular) with <b>2000 l test chamber volume</b> and separate <u>control unit</u>.</p> <p>The test chamber in impact resisting and non-polluting PP, with a pneumatically actuated mechanism for the dome top; incl. 15 specimen carriers and 100 S-hooks.</p>
<p><b>Accessories</b></p> <p><b><u>For Model 519 Smart</u></b></p>		
	20440132	<p><u>Electronic Gas Dosing Unit for sulphur dioxide</u> for tests in SO<sub>2</sub>-containing atmospheres, in accordance with DIN EN ISO 6988, data storage via an included terminal program (RS 232- or USB port); calibrated dosing range 0.2 dm<sup>3</sup> and 2.0 dm<sup>3</sup> SO<sub>2</sub> at 20°C and 1013 hPa (accuracy: +/-3% max. relative error)</p>
<p><b>Accessories</b></p> <p><b><u>For Model 519 / 519 Smart</u></b></p>		
	620003141	<p><u>Specimen Carrier Rods</u> Set per 7 pcs.</p>
	780103541	<p><u>S-Hooks</u> (per 100 pcs.)</p>

## Order Information

Figure	Ord.-No.	Description
	23520232	<u>Specimen Holder (horizontally)</u> (for 12 test panels / holder)
	27210132	<u>Samples Grid</u> (for 300 l version) Dimensions: (WxD) approx. 600 x 400 mm

## Accessories

### For Model 529

	04640017	<u>Specimen Holder for Test Panels</u> for holding 19 test panels at an angel of 20° to the vertical
	02300132	<u>Specimen Holder for Bulky Parts</u> for holding lager finished parts, consisting of 4 upright tubes with holes and 8 support rails
	21700132	<u>Sample Holder Rack (height-adjustable)</u> for test chamber in rectangular design, <u>without</u> sample rods and S-hooks (chamber volume 1000 l = 2 racks / chamber volume 2000 l = 3 racks possible) Dimensions: (WxDxH) approx. 740 x 670 x 650 mm

Order Information		
Figure	Ord.-No.	Description
<b>Accessories</b> <i>For Model 529</i>		
	21740132	<u>Sample Rods (Ø 25 mm)</u> Set per 5 pieces suitable for sample holder rack (Ord.-No. 21700132)
	21740232	<u>Sample Rods (Ø 12 mm)</u> Set per 5 pieces suitable for sample holder rack (Ord.-No. 21700132)
	21730132	<u>Specimen Holder (horizontally)</u> suitable for sample holder rack (Ord.-No. 21700132)  (for 23 test panels / holder)
	780103541	<u>S-Hooks</u> suitable for <u>Sample Rod (Ø 12 mm)</u> (per 100 pcs.)
	21990132	<u>Sample Grid</u> floor grid made of fiberglass with 4 feet, mesh spacing 40 x 40 mm, suitable for test chambers in <u>rectangular</u> design (chamber volume 1000 l = 2 grid / chamber volume 2000 l = 3 grid possible)  Dimensions: (W x D) 680 x 760 mm

**Please visit our website [www.erichsen.de](http://www.erichsen.de); there you will find further corrosion and weathering testing instruments.**

**Please ask for our detailed description and price lists.**