

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

**Humidity Cabinet  
HYGROTHERM  
519-529**

**HYGROTHERM  
also available as  
semi-automatic  
or  
fully-automatic version  
(Mod. 519 SA / 519 FA)**

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



**HYGROTHERM 519 FA**

testing equipment for quality management

**ERICHSEN**  
since 1910

**Technical Description**

**DIN EN ISO 6270-2 CH  
DIN EN ISO 6988  
DIN 50 958  
DIN 53 771  
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 SA

### Purpose and Application

The **HYGROTHERM; Model 519 SA**, is intended exclusively 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 and the reaction of industrial finishes to sulphur dioxide containing atmospheres.

The identically constructed, expanded humidity cabinet HYGROTHERM 519 SA is equipped with a semi-automatic control system and operates time-independent and especially economically.

The operations which need to be undertaken after an 8-hour cycle, such as acid draining, evacuation and replacement of air and the control of the heating system are executed automatically.

For the tests in sulfur dioxide atmosphere, an electronic gas dosing unit is available optionally. The quantity of gas required for corrosion purposes can therefore be easily and accurately adjusted.

A special venting connection also prevents the leakage of SO<sub>2</sub>, which is a well-known and particularly burdensome phenomena.



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).

## HYGROTHERM 519 FA

### Purpose and Application

The **HYGROTHERM; Model 519 FA**, is intended exclusively 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 and the reaction of industrial finishes to sulphur dioxide containing atmospheres (DIN EN ISO 6988).

In execution like Model 519 SA, the version **HYGROTHERM 519 FA** is additionally equipped with a **PLC** (programmable logic control) using for the **fully automatic sequence**, i. e. the control of heating, acid feeding and draining, filling of the bottom trough with water as well as draining, refilling of the trough water tank, and evacuation and replacement of air.

(By evacuation and replacement of air a manual operation is also possible.)

An **electronic gas dosing unit** for tests in sulfur dioxide atmosphere is included in the scope of supply of **Model 519 FA**.



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).

The electronic gas dosing unit can be operated via a remote control (with USB interface for connection to a PC).

## HYGROTHERM 529

### Purpose and Application

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

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. 45 °C

### **HYGROTHERM 519 SA**

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. 45 °C
Air consumption	6 m <sup>3</sup> /h
Air pressure	6 bar

### **HYGROTHERM 519 FA**

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. 45 °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


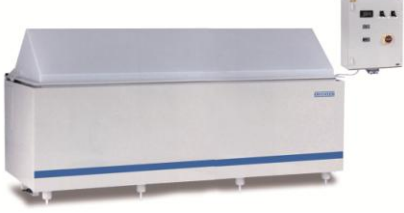
Please refer to our Price Lists 519 and 529 for further details and accessories.

The right of technical modifications is reserved.  
Group 21 - TBE 519/529 – VI/2017

## 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>
	01350131	<p><b><u>Humidity Cabinet HYGROTHERM 519 SA</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>; with control of temperature, acid draining, for condensation water constant (CH) and alternating climates (AHT, AT); suitable for the performance of tests in sulphur dioxide (SO<sub>2</sub>) containing atmosphere in accordance with DIN EN ISO 6988;</p> <p>ready for operation, incl. 7 specimen carriers and 100 S-hooks.</p>
	02130131	<p><b><u>Humidity Cabinet HYGROTHERM 519 FA</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>; with PLC for fully automatic or manual control of heating, acid feeding and draining, filling of the bottom trough with water as well as draining, filling of the trough water tank and filling with and evacuation of air.</p> <p>The fully automatic version is equipped with an <b>electronic gas dosing unit</b> for tests in SO<sub>2</sub> containing atmosphere;</p> <p>incl. 7 specimen carriers and 100 S-hooks.</p>







## Order Information






Figure	Ord.-No.	Description
	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 I test chamber volume</b> and separate <u>control unit</u>. 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>
	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: <u>Test chamber</u> (rectangular) with <b>2000 I test chamber volume</b> and separate <u>control unit</u>. 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>

## Accessories

***For Model 519 SA (optional) / 519 FA (Spare Part)***

	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>
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Order Information		
Figure	Ord.-No.	Description
<b>Accessories</b> <i><u>For Model 519 / 519 SA / 519 FA</u></i>		
	620003141	<u>Specimen Carrier Rods</u> Set per 7 pcs.
	780103541	<u>S-Hooks</u> (per 100 pcs.)
	23520132	<u>Specimen Holder (horizontally)</u>  (for 15 test panels / holder)
<b>Accessories</b> <i><u>For Model 529</u></i>		
	02290132	<u>Specimen Holder for Test Panels</u> to supplement the three holders supplied as standard with the basic apparatus  (for 18 test panels / holder)
	02300132	<u>Specimen Holder for Bulky Parts</u> for holding larger 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><u>For Model 529</u></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 suitable for 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.**