Cyclic Tests

Varying Climatic Conditions

Automotive Standards

Corrosion Testing Instruments

Model 608 Basic

Operation

via

Siemens touch screen

„dry heat“ as option

Fig.: Model 608 Basic with test chamber 1000 l and storage tank

testing equipment for quality management

ERICHSEN since 1910

Technical Description

Tests in accordance with international standards

Purpose and application

Ferrous and non-ferrous metals are attacked continuously by humidity, acids, solutions, gases etc. It is therefore vitally important to choose the correct surface protection. There are many materials and qualities on the market and their properties must be properly assessed. Materials intended to prevent corrosion must be tested if failures are to be avoided. Furthermore the comparative quality control during production is of increasing importance.
The best known processes employ spray vapour tests using various salt solutions as well as condensation water climates.

Test principle

Aggressive solutions are turned into a vapour mist in accordance with the tests that are listed below. These vapours surround the specimens in the test chamber either continuously or in a cyclic manner. The corrosion resistance of the individual specimens is established on the basis of the difference in time before the first corrosive effects become apparent.

Design

The ERICHSEN Corrosion Testing Instrument, Model 608 Basic, take full advantage of our wide experience in the construction of all kinds of testing equipment as well as of the information and worldwide feedback received from users. Made of impact resistant, eco-friendly polypropylene material each instrument forms a closed unit.

The **Corrosion Test Apparatus, Model 608-Basic**, consists of a test chamber, available either of 400 l, 1000 l or 2000 l capacity, and a built-in control unit as well as an external storage tank for the spray solution.
The external storage tank for approx. 200 l salt solution allows continuous testing without attention over a period of up to a week.
A dosing pump serves for an infinitely variable adjustment to achieve optimum consumption of spray solution.

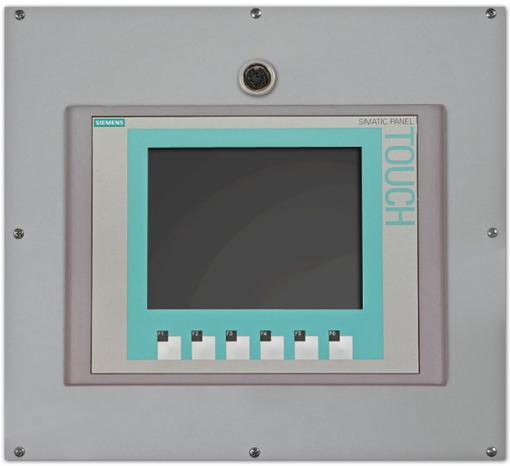
The scope of supply includes 3 specimen holder for weathering panels (per test chamber), with test capabilities of 18 test panels per specimen holder as well as condensate receptacles with U-stands made of acrylic glass.

Specimen holder for weathering panels

Condensate receptacles

The **control cabinet 608 Basic** is equipped with a ***PLC (programme logic control) SIEMENS D7 200.*** The test cycles as well as the test parameters are entered using the **SIMATIC touch screen**. Cyclic corrosion tests executed e.g. in accordance with the specification of VDA, VW or SWAAT, can be started in a user-friendly manner. By default, five programs for standard test sequences are provided. Program number 6 is available for customized programming.
However, programs 1 to 5 can also be customized by the user to meet their specifications.

After placing the specimens and the condensation receptacles in the test chamber, the test takes place fully automatically.

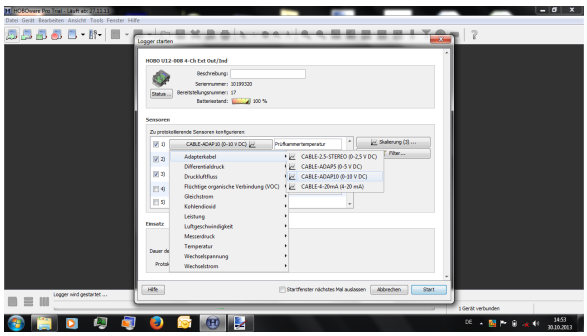


The top of the test chamber dome is pneumatically opened and closed so that both hands can be used to lodge the specimens.

Accessories (optional)

- Additional Function “dry heat”
  Extension of a test chamber in rectangular design with the function “dry heat” up to +70 °C

- Multi-channel Data Acquisition and Recording System HOBO UX120
  including the required analogue signals for recording the test chamber temperature, humidifier temperature and spray pressure, data logger with 16-bit-resolution, USB interface port, memory for 1.9 million readings; including software for recording, monitoring and analysing of data, compatible with mit Windows 7, 8, 10 and 11.



For further details and accessories please refer to our price list no. 608 Basic

Technical Data

Power supply	
400 l or 1000 l	230 V / 1~, N, PE 50 Hz
with function „dry heat“	400 V / 3~, N, PE 50 Hz
2000 l	400 V / 3~, N, PE 50 Hz
with function „dry heat“	400 V / 3~, N, PE 50 Hz
Consumption	max. 4.5 kVA
Compressed air connection	
Air pressure	5 - 7 bar
Air consumption during ventilation	15 l/min at 6 bar
(VE)Water connection	
Pressure	2 - 6 bar
Test temperature range	from ambient temperature up to +50 °C
Floor load of the test chamber	max. approx. 300 kg (special versions on request)
Capacity of the test chamber	
400 l test chamber	approx. 100 test panels
1000 l test chamber	approx. 180 test panels
2000 l test chamber	approx. 400 test panels

International Standards and Specifications

Continuous Salt Spray Tests			Condensation Water Tests	Varying Climatic Tests
DIN 40 046	ISO 1456	BS 3900/ F4	DIN EN ISO 6270-2	DIN EN ISO 11997-1 Zyklus B (based on VDA 621-415)
DIN EN ISO 9227	ISO 3768	NF X 41-002	DIN 50 958	
DIN 50 907	ISO 3769	JIS Z 2371	DIN 55 991	P-VW 1210
DIN 53 167	ISO 3770		ISO 3231	
	ISO 7253	SIS 184 190	ISO 11503	SWAAT
ASTM B 117	ECCA T 8		ASTM D 2247	
ASTM B 287				
ASTM B 368	DEF 1053 Meth. 24			
ASTM D 1735	DEF 1053 Meth. 36			
MIL STD 202 D	MIL STD 810 C			

Order Information		
Figure	**Ord.-No.**	**Description**
Control Cabinets		
	29960031	**Corrosion Testing Apparatus, Model 608/400-Basic,** **400 l test chamber volume**, with integrated control unit, external storage tank, 3 specimen holder, condensate receptacles and operating manual Dimensions: approx. 1700 x 1000 x 1300 mm (W x D x H) Test chamber opened approx. 1840 mm (H) Dimensions (inside): approx. 780 x 770 x 670 mm (W x D x H) Net weight: approx. 270 kg External storage tank: approx. 900 x 615 x 870 mm (W x D x H)
	29970031	**Corrosion Testing Apparatus, Model 608/1000-Basic,** **1000 l test chamber volume**, with integrated control unit, external storage tank, 3 specimen holder, condensate receptacles and operating manual Dimensions: approx. 2500 x 1000 x 1300 mm (W x D x H) Test chamber opened approx. 1840 mm (H) Dimensions (inside): approx. 1500 x 770 x 670 mm (W x D x H) Net weight: approx. 300 kg External storage tank: approx. 900 x 615 x 870 mm (W x D x H)
	29980031	**Corrosion Testing Apparatus, Model 608/2000-Basic,** **2000 l test chamber volume**, with integrated control unit, external storage tank, 3 specimen holder, condensate receptacles and operating manual Dimensions: approx. 3700 x 1000 x 1300 mm (W x D x H) Test chamber opened approx. 1900 mm (H) Dimensions (inside): approx. 2700 x 770 x 670 mm (W x D x H) Net weight: approx. 340 kg External storage tank: approx. 900 x 615 x 870 mm (W x D x H)

Accessories		
	04640017	Specimen Holder for Test Panels to supplement the three holders supplied as standard with the basic apparatus (18 test panels/holder)
	02300132	Specimen Holder for Bulky Parts for holding lager finished parts, consisting of 4 upright tubes with holes and 8 support rails

Accessories		
Figure	**Ord.-No.**	**Description**
	21700132	Sample Holder Rack (height-adjustable) for test chamber in rectangular design; without sample rods and S-hooks (chamber volume 400 l = 1 rack / chamber volume 1000 l = 2 racks / Chamber volume 2000 l = 3 racks possible) Dimensions: approx. 740 x 670 x 650 mm (W x D x H)
	21740132	Sample Rods (Ø 25 mm) Set per 5 pieces suitable for sample holder rack (Ord.-No. 21700132)
	21740232	Sample Rods (Ø 12 mm) Set per 5 pieces suitable for sample holder rack (Ord.-No. 21700132)
	21730132	Specimen Holder (horizontally) suitable for sample holder rack (Ord.-No. 21700132) (23 test panels /holder)
	780103541	S-Hooks suitable for sample rods (Ø 12 mm) (per 100 pieces)
	21990132	Samples Grid floor grid made of fiberglass with 4 feet, mesh spacing 40 x 40 mm, suitable for test chambers in rectangular design (chamber volume 400 l = 1 grid / chamber volume 1000 l = 2 grid / chamber volume 2000 l = 3 grid possible) Dimensions: (W x D) 689 x 765 mm

Accessories		
Figure	**Ord.-No.**	**Description**
	09940132	Wastewater Pumpout Unit for use in wastewater disposal below the flood level, if there is no floor drain available
	01590132 01590232	Water deionizer behropur® B10dN max. flow rate 300 l/h Water deionizer behropur® B22dN max. flow rate 500 l/h

For further accessories please refer to our price list no. 608 Basic

Further <u>Corrosion Test Instruments</u> supplied by ERICHSEN:

Humidity Cabinet HYGROTHERM 519 / 519 Smart / 529

for humidity tests in accordance with international standards,
with a semi-automatic control system or in fully automatic version (519/519 Smart)
or consisting of a control unit with a separate test chamber (529)

Accelerated Weathering Instrument BANDOL WHEEL® 532

in a compact design for acceleration of natural weathering,
optional for „dry“ or „wet/dry“ weathering cycles

Corrosions Testing Apparatus for Salt Spray and Condensation Water Tests , Model 606

cylindrical or rectangular version, with 400 l, 1000 l or 2000 l test chamber capacity

Corrosions Testing Apparatus (compact design) for Salt Spray and Condensation Water Tests, Model 606-Basic

rectangular version, with 400 l, 1000 l or 2000 l test chamber capacity and
300 l capacity (cabinet unit)

Corrosions Testing Apparatus for Alternating Tests, Model 608

e.g. in accordance with VDA 621-415 or VW Specification
with 400 l, 1000 l or 2000 l test chamber capacity

Corrosion Test Instrument CORROTHERM 610

simple, inexpensive test instrument, approx. 400 l or 1000 l volume

Corrosion Test Instrument CORROTHERM 610e PLUS

semi automatic version with programmable Micro Controller and LCD,
with 400 l or 1000 l test chamber capacity

Corrosion Testing Instrument to carry out Tests in Altering Climates as well as various Salt Spray and Condensation Water Tests, Model 618

incl. interface for connecting an Air Conditioning Unit
with 400 l, 1000 l or 2000 l test chamber capacity

SOLARBOX, Model 522

Light exposure test apparatus, with optional microprocessor controls
and programmable flooding system as well as interface RS232C

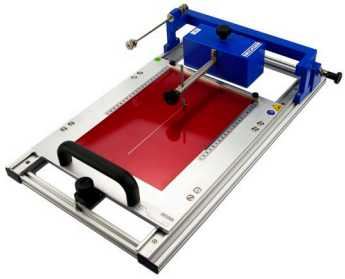
For the specimen preparation we recommend the following instruments/tools:

Scratching Tool acc. to van Laar, Model 426

SCRATCHMARKER 427

Automatic Milling Machine CORROCUTTER Smart 638

Test Panel Scratcher CORROCUTTER 639



Scratch Stylus acc. to Sikkens, Model 463 // Model 463-Pro

Multi-Cross Cutter, Model 295/III

Please ask for our detailed leaflets and price lists.

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