Cyclic Tests

Varying Climatic Conditions

Automotive Standards

Corrosion Testing Instruments

Model 608

Operation

via

Siemens touch screen

Model 608-2 with 2 test chambers

Fig.: Control Cabinet 608-1 with test chamber 400 l circular

testing equipment for quality management

ERICHSEN since 1910

Technical Description

Versatile Instruments

2 test chambers operatable with 1 control cabinet

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, 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.

Our corrosion testing instruments can be compiled individually by the user.

For this purpose, two control cabinets are available, either for the equipment with **one test chamber (Model 608-1) or as double chamber device (Model 608-2).**

Various test chamber sizes with test volume of 400 l, 1000 l or 2000 l can be selected regarding the requirements.
The test chambers (400 l and 1000 l) are available in circular and rectangular design.
The circular design provides even distribution of the salt solution vapour over the entire test zone.
When tests are required on larger working parts, it is often not possible to employ a test chamber of circular symmetry. For this reason, as an alternative, rectangular test chambers with a capacity of up to 2000 l (special dimensions upon request) can be supplied.

The scope of supply includes 3 specimen holder for weathering panels (per test chamber), with test capabilities of 18 test panels per specimen holder.

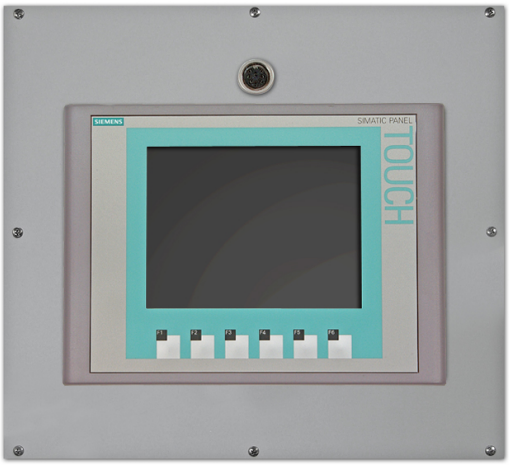
Specimen holder for weathering panels

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
DIN EN ISO 9227	ISO 3768	NF X 41-002	DIN 50 958	P-VW 1210
DIN 50 907	ISO 3769	JIS Z 2371	DIN 55 991	
DIN 53 167	ISO 3770			SWAAT
	ISO 7253	SIS 184 190	ISO 3231	
			ISO 11503	
ASTM B 117	ECCA T 8			
ASTM B 287			ASTM D 2247	
ASTM B 368	DEF 1053 Meth. 24			
ASTM D 1735	DEF 1053 Meth. 36			
MIL STD 202 D	MIL STD 810 C			

The **control cabinet 608-1** 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. A dosing pump serves for an infinitely variable adjustment to achieve optimum consumption of spray solution. The large storage tank for approx. 200 l salt solution allows continuous testing without attention over a period of up to a week.
A circulation pump for mixing the salt solution in the storage tank is permanently installed in the lower part of the control unit.

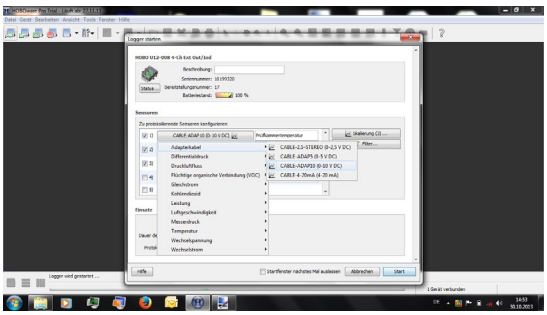
Constructed similarly to the control cabinet 608-1, the **control cabinet 608-2 is equipped completely** for connection of two test chambers.
There are two integrated storage reservoirs for spraying liquid (each 150 l). The package includes four condensate receptacles with U-stands made of acrylic glass.

Condensate receptacles

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 Windows 7, 8 und 10.



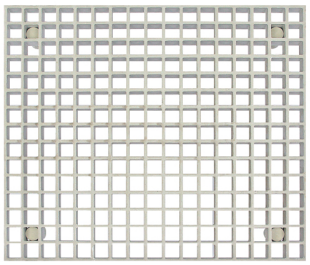
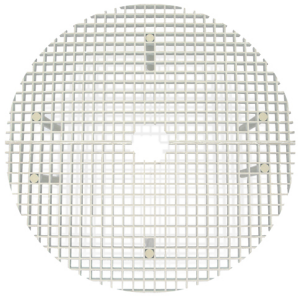
For further details and accessories please refer to the next pages and to our price list no. 608.

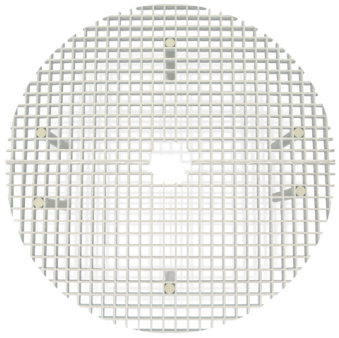
Technical Data

Power supply	400 V / 3AC, N, PE 50 Hz (other voltages on request)
Consumption	
Single chamber	max. 4.5 kVA
Double chamber	max. 8.5 kVA (depending of the equipment)
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 *(depending on the shape)*

Order Information		
Figure	**Ord.-No.**	**Description**
Control Cabinets		
	20540031	Control cabinet 608-1, equipped with Siemens touch screen, for connection of an optional ordered test chamber *(a subsequent installation of a second test chamber is not possible!)* Dimensions: approx. 1000 x 800 x 975 mm (W x D x H) Net weight: approx. 110 kg
	20550031	Control cabinet 608-2, equipped with Siemens touch, screen, for connection of two optional ordered test chambers Dimensions: approx. 1430 x 800 x 975 mm (W x D x H) Net weight: approx. 140 kg
Test Chambers		
	19400032	Test chamber, circular design, 400 l test chamber volume Dimensions: approx. 1000 x 1100 x 2000 mm (W x D x H - open) Dimensions (inside): approx. 900 mm Ø x 650 mm Net weight: approx. 85 kg
	19420032	Test chamber, rectangular design, 400 l test chamber volume Dimensions: approx. 1000 x 1020 x 1800 mm (W x D x H - open) Dimensions (inside): approx. 780 x 770 x 670 mm (W x D x H) Net weight: approx. 100 kg
	19060032	Test chamber, circular design, 1000 l test chamber volume Dimensions: approx. 1300 x 1400 x 2250 mm (W x D x H - open) Dimensions (inside): approx. 1200 mm Ø x 700 mm Net weight: approx. 110 kg

Test Chambers		
Figure	**Ord.-No.**	**Description**
	19360032	Test chamber, rectangular design, 1000 l test chamber volume Dimensions: approx. 1820 x 1000 x 1900 mm (W x D x H - open) Dimensions (inside): approx. 1500 x 770 x 670 mm (W x D x H) Net weight: approx. 150 kg
	20460032	Test chamber, rectangular design, 2000 l test chamber volume Dimensions: approx. 3000 x 1000 x 1900 mm (W x D x H - open) Dimensions (inside): approx. 2700 x 770 x 670 mm (W x D x H) Net weight: approx. 280 kg
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
	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)

Accessories		
Figure	**Ord.-No.**	**Description**
	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) 680 x 760 mm
	21990232	Sample Grid (Ø 84 cm) 2-piece floor grid made of fiberglass for receiving samples, with 6 feet, suitable for test chambers in circular design with 400 l test volume (1 grid possible)

Accessories		
Figure	**Ord.-No.**	**Description**
	21990332	Sample Grid (Ø 115 cm) 2-piece floor grid made of fiberglass for receiving samples, with 6 feet, suitable for test chambers in circular design with 1000 l test volume (1 grid possible)
	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.

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Further Corrosion Test Instruments supplied by ERICHSEN:

Humidity Cabinet HYGROTHERM 519 / 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;
300 l test chamber capacity (cabinet unit)

Corrosions Testing Apparatus (compact design) for Alternating Tests, Model 608-Basic
rectangular version, 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
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
Multi-Cross Cutter, Model 295/III

Please ask for our detailed leaflets and price lists.