

## Corrosion Testing Instruments

### **Model 606**

Salt Spray Test  
Intermittent Testing  
Condensation Water Tests

### **Model 608**

Cyclic Tests  
Varying Climatic Conditions  
Automotive Standards



testing equipment for quality management

**ERICHSEN**

Tests in accordance  
with international  
standards

Versatile  
Instruments

## 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 Instruments, Models 606 and 608, take full advantage of our wide experience in the construction of all kinds of testing equipment as well as of the information and world wide feedback received from users. Made of impact resistant, eco-friendly polypropylene material each instrument forms a closed unit.

It consists of a test chamber, available either of 400 l, 1000 l or 2000 l capacity, and a control unit. The control unit is equipped with a storage tank for the spray solution, the necessary control instruments for the temperature sensor, air humidifier, spray pressure and the test duration .

The test chambers of the standard version (400 l or 1000 l capacity) are designed with rotational symmetry.

This layout provides even distribution of the salt solution vapour over the entire test zone. 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.

All instruments may be equipped with a second test chamber.

The scope of supply of each test chamber includes three specimen holders for weathering panels.



When tests are required on larger working parts, it is often not possible to employ a test chamber of rotational 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.

Corrosion testing instrument for varying climatic conditions Model 608/2000

## International Standards and Specifications

Continuous Salt Spray Tests			Intermittent Tests	Condensation Water Tests	Varying Climatic Tests
DIN 40 046	ISO 1456	BS 3900/ F4	DIN 50 907	DIN EN ISO 6270-2	VDA 621-415
DIN 50 021	ISO 3768	NF X 41-002		DIN 50 958	P-VW 1210
DIN 50 907	ISO 3769	JIS Z 2371	DEF 1053 Meth. 24	DIN 55 991	SWAAT
DIN 53 167	ISO 3770		DEF 1053 Meth. 36		
	ISO 7253	SIS 184 190		ISO 3231	
ASTM B 117	ECCA T 8			ISO 11503	
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				

## ERICHSEN Corrosion Test Instrument for varying climatic conditions, Model 608

Generally designed in the same way as the manually operated Model 606, this testing instrument is additionally equipped with a PLC control unit, including the necessary control instruments for preselection of test sequence e. g. in accordance with the specifications of VDA, VW or SWAAT. After placing the specimens and the condensation receptacles in the test chamber and programming the desired number of test cycles the test takes place fully automatically.

A circulation pump for mixing the salt solution in the storage tank is permanently installed in the lower part of the control unit.

The Models 608/400 I and 608/1000 I are available either in rotational symmetric or rectangular shape, whereas the version 608/2000 I can only be supplied as a rectangular apparatus.



Control Panel of Model 608

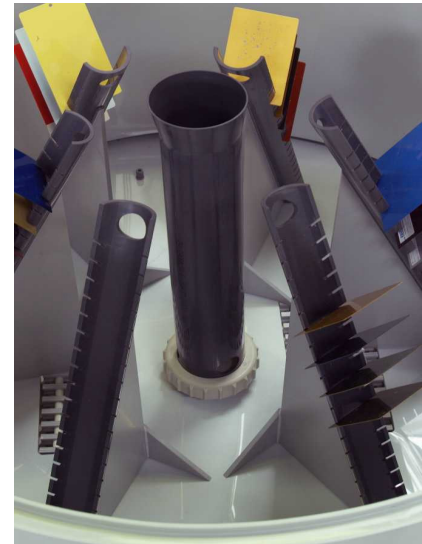
## Accessories

(for Models 606 and 608)

- Specimen holders for bulky parts
- Compressed air cleaning unit
- Analogue and digital outputs as well as digital displays for
  - ⇒ the test parameters
  - ⇒ the air humidifier temperature
  - ⇒ the spray pressure

Special facilities, e. g. recorders without or with direct transfer to a PC.

For further details (ordering numbers etc.) and accessories please refer to our price lists nos 606 and 608.



Specimen holders for weathering panels

## Technical Data

### Corrosion Test Instruments, Models 606/608

(for dimensions see sketches page 4)  
request)

Capacity of the test chamber / test panels

Specimen holders for weathering panels  
(18 panels / holder)

Floor load of the test chamber

Test temperature range

Following connections have to be provided by the user::

Power supply (AC)

Consumption

Compressed air connection / pressure

Air consumption

Water connection / pressure

**400 I**

**1000 I**

**2000 I**

(Mod. 606 on

approx. 100

approx. 180  
(depending on the shape)

approx. 400

3

3

3

up to approx. 300 kg (special versions on request)

from ambient temperature up to +50 °C

230 V / 400 V, 50 Hz (other voltages on request)

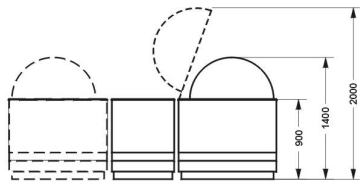
approx. 2000 VA approx. 3000 VA approx.. 4000 VA

4 - 10 bar

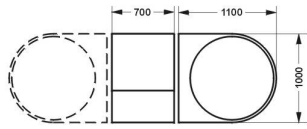
6 Nm<sup>3</sup> /h

2 - 8 bar

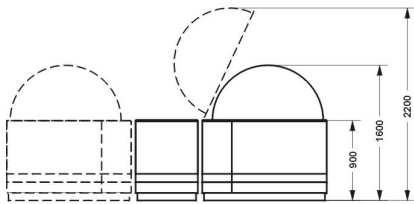
## Dimensions of the Test Chambers and the Control Unit



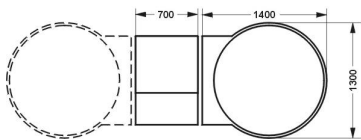
Round test chamber 2 x 400 l



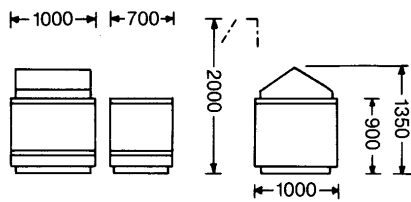
Plan draw



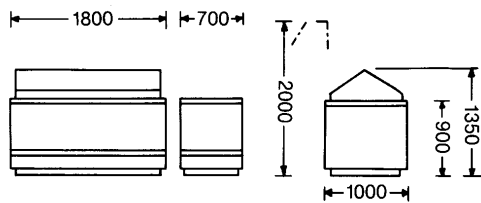
Round test chamber 2 x 1000 l



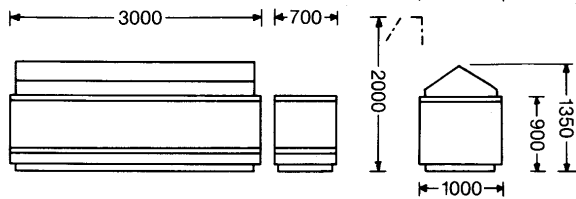
Plan draw



Rectangular test chamber 400 l capacity



Rectangular test chamber 1000 l capacity



Rectangular test chamber 2000 l capacity

(Depth of the control unit 1000 mm)

Subject to technical modifications.  
TBE 606/608 – XI/2005