

Elcometer 1120 Salt Spray Tester - BS1



Elcometer 1120 Salt Spray Tester - BS1

At a glance

- Quality instrument to perform highly reproducible tests.
- Can be used to carry out salt spray, copper acetic salt spray (CASS), prohesion, humidity and cyclic DIN tests.
- Three models available.

Elcometer 1120 Salt Spray Tester - BS1

The quality and reproducibility of the salt spray tests depend directly on a stringent respect of testing parameters, prescribed particularly by ISO 9227 and other international standards.

The Elcometer 1120 BS1 Salt Spray Tester is designed to perform, with high reproducibility, a large number of standardised or conventional tests in order to determine the resistance to corrosion for a wide range of coatings. These include salt spray, copper acetic salt spray (CASS), prohesion, humidity and cyclic DIN. The Elcometer 1120 can also be adapted to a humidity chamber.

The Elcometer 1120 is available in 3 capacities;

- 400 litres (105 US gallons).
- 1000 litres (264 US gallons).
- 2000 litres (528 US gallons).

Corrosion

One of the many tests described in International Standards for evaluating the corrosion performance of a material is the long-established salt spray test.

Developed several decades ago with the aim of simulating a corrosive marine environment, the procedure has, over the years, become a key tool for predicting the performance of a coating and is now one of the standard references used by industry today.

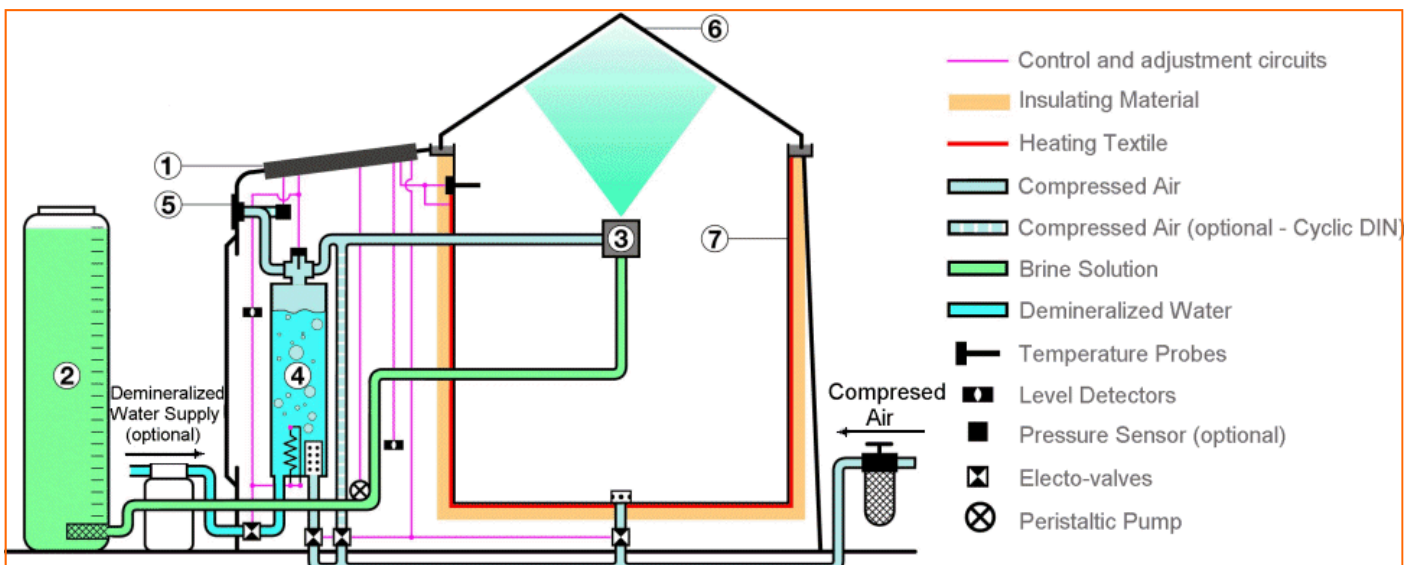
Modern quality demands and new research have shown that the results of these tests can be optimised when the salt spray is combined with other methods, which may be of a cyclical nature or more aggressive.

Can be used in accordance with:	
ASTM B 117	ASTM B 287
ASTM B 368	ASTM G 85
BS 5466	BS 3900 F4
BS 7479	DIN 50907
DIN 53167	DIN 50021
ECCA T 8	EN 4.4.9 175
ISO 1456	ISO 3768
ISO 7253	ISO 9227
JIS Z 2371	NF DIN EN ISO 4623
NF X 41-002	SIS 184190
RENAULT D17/1058	

RATIONAL AND ROBUST CONSTRUCTION (see diagram below)

1. **Control Panel** – all operations (instructions, adjustments, checks and safeguards) are brought together and displayed on this microprocessor controlled digital panel. As a result the user can instantly check the status of the chamber.
2. **Solution Tank** – with a capacity of 200 litres (53 US Gallons), the unit can operate continuously for over 500 hours (400 litre/ 105 US Gallon model), without attention. An electronic sensor warns when the solution has reached the minimum level. An optional air mixer can be incorporated into the unit if required
3. **Central Dispersion** – The filtered solution is carried to a spray nozzle by an adjustable flow peristaltic pump. Central, orientable dispersion ensures that the spray is of optimal homogeneity.
4. **Saturator** – After filtering, the compressed air is humidified and heated to the preset temperature by the saturator, which is topped up automatically with demineralized water. The level is constantly adjusted, should there be a major drop in the level, or an accidental loss in water, a safety device cuts off the resistance, preventing overheating.
5. **Manometer** – The pressure of the compressed air in the saturator is permanently indicated on the gauge. An electronic gauge – with built in alarm – is an optional accessory, and the pressure is displayed on the control panel.
6. **Cover** – All models are supplied with a translucent cover.
7. **Exposure Chamber** – Made of smoothly finished reinforced glass fibre polyester, the chamber does not corrode and can withstand repeated thermal and hygrometric variations. It is heated directly from the outside by a sleeve of thermal textile. A thick layer of insulating material prevents heat loss and thus increases energy efficiency. The cover fits into grooves moulded into the upper edge of the chamber, which are then filled with water in order to create a perfect hydraulic seal.

Internal lateral partitions are provided so that bars for fastening large pieces into position and sample racks can easily be installed.



Standard Equipment	
Exposure Chamber	Reinforced glass fibre polyester – cover in translucent plexiglass
Brine Tank	Contents 200 litre (53 US Gallons) – integrated filter – level indicator in the cabinet
Saturator	Insulated, with safety valve and level indicator. Demineralized water supply
Supply Systems	Brine: Adjustable flow peristaltic pump, low level control with alarm. Automatic Stop after 72 hours without refilling Saturator: Electronic level regulator and electromagnetic valve.
Control Panel	Microprocessor control. Automatic control of all essential functions and run of the tests
Heating Systems	Chamber: Heating textile fixed to the exterior. PID temperature control from ambient to 50° C (122° F). Safety device and alarm. Independent thermal switch. Saturator: Resistance heater in stainless steel. PID temperature control from ambient to 70° C (158° F). Safety device and alarm, refilling-dependent.
Pneumatic System	Compressed air distribution cock with filter, pressure regulator and manometer. Pressure supplied to the spray nozzle by electromagnetic valve.
Operating Pressures	Saturator demineralised water supply - Min: 2 bar (29 PSI); Max: 5 bar (72.5 PSI) Compressed air supply – Min: 2 bar (29 PSI); Max: 8 bar (116 PSI)

Dimensions							
Capacity	Chamber			Overall			Sample Capacity (Sample Size 10 x 15cm / 4 x 6")
	Length	Width	Height	Length	Width	Height	
400 litre 105 US Gallon	75 cm 29.5"	75 cm 29.5"	75 cm 29.5"	150 cm 59.0"	110 cm 43.3"	140 cm 55.1"	120
1,000 litre 264 US Gallon	120 cm 47.2"	120 cm 47.2"	75 cm 29.5"	200 cm 78.7"	160 cm 63.0"	140 cm 55.1"	
2,000 litre 528 US Gallon	193 cm 76.0"	105 cm 41.3"	100 cm 39.3"	275 cm 108.2"	135 cm 53.1"	165 cm 65.0"	440

Model	Description	Part Number		
		UK 240V	EUR 220V	US 110V
Elcometer 1120/1	Elcometer 1120 Salt Spray Tester – 400 Litre (105 US Gallon)	K0UK1120M001	K0001120M001	K0US1120M001
Elcometer 1120/2	Elcometer 1120 Salt Spray Tester – 1000 Litre (264 US Gallon)	K0UK1120M002	K0001120M002	K0US1120M002
Elcometer 1120/3	Elcometer 1120 Salt Spray Tester – 2000 Litre (528 US Gallon)	K0UK1120M003	K0001120M003	K0US1120M003

Options – please specify when ordering	
Programmer for automatic operation	KT001150P015
Cyclic Test – DIN 50907 and DEF 1053 Method 36	KT001120N005
Adaptation for ASTM B 368 and ISO 9227 CASS Test	KT001120N001
Cyclic Device for Prohesion Test	KT001120N007
Adaptation for ASTM G 85 SWAAT	KT001120N011
Adaptation for VALEO SWAAT	KT001120N012
Condensed water accessory for DIN 50 017 (manual programming)	KT001120P165
Automatic Stop when compressed air cuts off	KT001120N010
Traceability Kit - RS232 Output, printer, connecting cable and electronic pressure sensor	KT001120N013
Compressed Air Mixer – for stirring Brine Salt Solution	KT001120N012

Accessories	
PVC Test Panel Support Rack Support can place up to 22 test panels (100 x 200mm / 39 x 79"), 5 supports can be placed in the Elcometer 1120/1, more can be placed in the Elcometer 1120/2 and Elcometer 1120/3	KT001150P012
Assembly of 10 PVC Test Panel Support Rack with central holder for spray nozzle. Each rack can place up to 20 test panels (100 x 200mm / 39 x 79"), between 15° and 20°	KT001150P012
P6 Demineralizer for tap water, plus 2 resin cartridges	KT001120N014
100 ml Rain Gauge	KT001120N002
Sodium Chloride Refractometer – for condensate analysis.	KT001120N006

Related products



Elcometer 1120/4

Thanks to the built-in programming module of the Elcometer 1120/4 cyclic salt spray test, specific test procedures can be created by alternating and repeating different exposure phases. Besides this operating flexibility, the Elcometer 1120/4 offers effective versatility by also including pre-programmed tests - including salt spray, copper acetic salt spray (CASS), prohesion, and cyclic DIN.



Elcometer 1250

The Kesternich chamber is a bench instrument which is designed to test the resistance to corrosive gases such as sulphur dioxide or carbon dioxide. Housed in reinforced polyester for corrosion resistance, samples can be placed into the chamber from a side opening door.



Elcometer 1535

During the development of a coating not only do a wide range of physical properties need to be measured, but also a large number of tests need to be carried out in order to establish the most appropriate coating for the specific requirement. Many of the tests can be done using this automated tester, including: St Andrews Cross, Cross Hatch Adhesion, Scratch Test & Coin Test.



Elcometer 1537

A scratching tool for preparing samples for Salt Spray and Cyclical Tests. The Elcometer 1537 has a tungsten carbide blade which is set to give a 90° cutting angle with a 75° cutting edge.



Elcometer 1538

The Elcometer 1538 has interchangeable carbide cutters for the preparation of specimens to be used for Salt Spray and CASS Corrosion Tests. Supplied complete with a 1mm or 0.5mm cutter. A Renault-version of the tool, with optional blade adjustment device, is also available.



Elcometer 1542

Simple but effective method for determining the adhesion of a large variety of coatings. The instrument is ideal for testing the adhesion of thin coatings on flat surfaces using the cross cut method, available with three different spacings 1, 2, and 3mm, corresponding to the thickness of layer to be tested.

ENGLAND

Elcometer Instruments Ltd
Edge Lane
Manchester M43 6BU

Tel: +44 (0) 161 371 6000
Fax: +44 (0) 161 371 6010
e-mail: sales@elcometer.com
www.elcometer.com

USA

Elcometer Instruments Inc
1893 Rochester Industrial Drive
Rochester Hills Michigan 48309

Tel: +1 248 650 0500
Toll free: 800 521 0635
Fax: +1 248 650 0501
e-mail: inc@elcometer.com
www.elcometer.com

CANADA

Elcometer Canada Ltd
PO Box 622, 401 Ouelette Avenue
Windsor, Ontario N9A 6N4

Tel: +1 248 650 0500
Toll Free: 800 521 0635
Fax: +1 248 650 0501
e-mail: ca_info@elcometer.com
www.elcometer.com

ASIA & THE FAR EAST

Elcometer (Asia) Pte Ltd
896 Dunearn Rd
Sime Darby Centre #3-09
Singapore 589472,
Republic of Singapore

Tel: +65 6462 2822
Fax: +65 6462 2860
e-mail: asia@elcometer.com
www.elcometer.com

BELGIUM

Elcometer SPRL
Rue Vallée 13
B-4681 Hermalle /s Ardenteau

Tel: +32 (0)4 379 96 10
Fax: +32 (0)4 374 06 03
e-mail: be_info@elcometer.be
www.elcometer.be

FRANCE

Elcometer SARL
BP 8-Bou
60 Rue de la Petite Levée
45430 Chécy

Tel: +33 (0)2 38 86 33 44
Fax: +33 (0)2 38 91 37 66
e-mail: fr_info@elcometer.fr
www.elcometer.fr

GERMANY

Elcometer Instruments GmbH
Himmlingstraße 18
D-73434 Aalen

Tel: +49 (0) 7366 91 92 83
Fax: +49 (0) 7366 91 92 86
e-mail: de_info@elcometer.de
www.elcometer.de