

CW SALT SPRAY

CYCLIC CORROSION TEST CABINETS



CW SPECIALIST
EQUIPMENT
LIMITED



SALT SPRAY & CYCLIC CORROSION

Pioneering designs have made **CW** the UK leader in the manufacture of accelerated corrosion and environmental test cabinets. The **CW** Salt Spray ranges maintain this tradition being designed to deliver the precise environmental test conditions demanded by modern industry. Through their reliability, ease of operation and robust construction, **CW** Salt Spray Cabinets have gained world wide acceptance with applications in all major sectors of automotive manufacture as well as the paint, surface coatings, chemical, electronics, aerospace, military and offshore industries.

CABINET VARIANTS

CW manufactures a wide range of corrosion cabinets including conventional Salt Spray Cabinets, Cyclic Prohesion® Cabinets, CASS Cabinets, Combination Salt Spray/Humidity Cabinets and Combination Salt Spray/Prohesion®- Humidity Cabinets. All are available in 100, 200, 450, 750, 1000 and 2000 litre capacities.

* Note - Some standards require a minimum internal cubic capacity - please check standard being used.

SALT SPRAY CABINETS SF RANGE

CW Cabinets are widely used to test both components and coated test panels across the whole spectrum of industry. Their design ensures that they meet or exceed the requirements laid down in all major national, international and corporate standards.

STANDARDS AND ACCREDITATION

BRITISH STANDARDS

BS 1224, BS 2011, BS 3900 F4, BS 3900 F12,
BS 5466 Part 1, BS 7479 Part 1
AU 148 Part 2, DEF-STAN 133/14 (0755)
DEF STAN 1053 Method 24 & 36

AMERICAN STANDARDS

ASTM B117, ASTM B287
ASTM D1735, ASTM G85 Annex 1, 2 & 3
MIL STD 202F, B10E, 883C, 1344A
FED STD 151 A/811

ISO STANDARDS

ISO 7253, ISO 3678, ISO 9227

GERMAN STANDARDS

DIN 50 021, VG 95332/4, VG 95210/2

FRENCH STANDARDS

NFX 41 002, CT U01 01A, NFA 91-101, PNX 14 002

AUSTRALIAN STANDARD

AS 21331 Section 3.1

SWEDISH STANDARD

SIS 1841190

JAPANESE STANDARDS

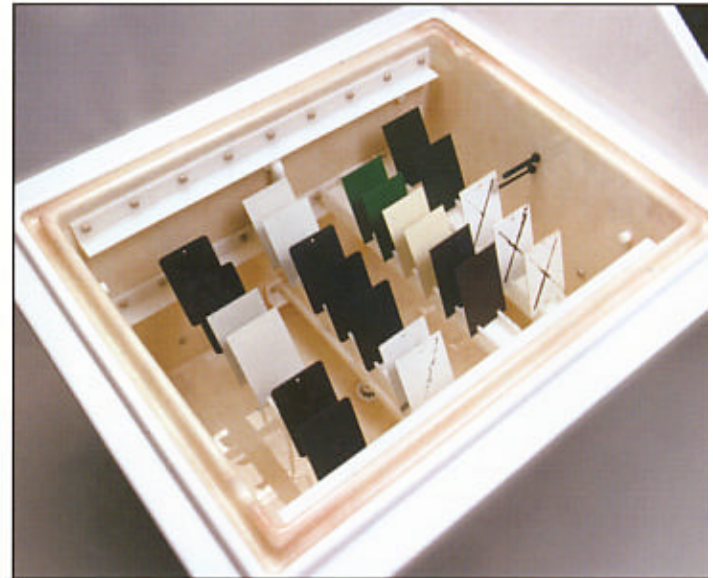
JIS Z 2371, JIS H 8502, JASCO M 6009

CORPORATE STANDARDS INCLUDE

FORD, GENERAL MOTORS, HONDA, TOYOTA, JAGUAR,
NISSAN, ROVER, BMW, AUDI/VW, GM44

CASS STANDARDS

Including BS 7479 ASS, BS 7479 CASS,
BS 5466 Parts 2 & 3
ISO 9227 Parts 2 & 3, ASTM B368 CASS,
DIN 50.021 ASS, DIN 50.021 CASS



COMBINATION SALT SPRAY/CYCLIC PROHESION® CABINETS SF/MP RANGE

These cabinets perform both standard salt spray and cyclic Prohesion functions independently - an ideal solution when space is at a premium and test requirements do not justify separate test cabinets for each function.

STANDARDS

The SF/MP range meets all cyclic and salt spray standards including:
BS 3900 F2, ASTM G85 Part A5, DIN 50.907

CASS CABINETS SF/CASS RANGE

Developed to carry out all standard salt spray and high temperature CASS tests typically employed when corrosion testing chrome plating on steel and plastic.

Special features include a double insulated apex roof and a raised heat exchanger capability both necessary for the close control of collection rates, pH and salt solution concentration.

STANDARDS

These cabinets meet all major salt spray standards as well as those for constant salt spray and CASS tests.

PROHESION® CABINETS MP RANGE

Prohesion® Cabinets, originally developed by **CW**, simulate natural weathering and provide a realistic method of accelerated corrosion testing for heavy duty industrial, marine and structural steel coatings. Test regimes include cyclic wetting and drying using a dilute solution of ammonium sulphate and sodium chloride. During drying cycles, at elevated temperatures, large volumes of air are introduced to create a vortex to ensure complete drying of test specimens. Tests show a close correlation with long term outdoor exposure and produce excellent filiform corrosion results and realistic tests of water based coatings. *Supporting technical paper available on request.*

STANDARDS

These cabinets operate to the established Prohesion® test methods ASTM G-85 Part A5, DIN 50.907 and BS 3900 F2.

COMBINATION SALT SPRAY/HUMIDITY CABINETS SF/AB RANGE

This variant operates as a standard Salt Spray Cabinet but with the added benefit that it can be switched to operate as a Humidity Cabinet. When in the salt spray mode all given standards can be achieved. In humidity mode the cabinet will operate between 30°C and 80°C with a constant RH of 100% saturation.

STANDARDS

All salt spray standards plus humidity standards BS 3900 F2, ISO 6270 : 1997, ASTM D2247.



TEST CABINETS

COMBINATION SALT SPRAY/PROHESION® HUMIDITY CABINETS SF/MP-AB RANGE

s model operates as a standard Salt Spray/Humidity Cabinet but will also w cyclic Prohesion® tests to be performed.

STANDARDS

salt spray, constant/cyclic standards and humidity test standards, 3900 F2, ISO 6270, ASTM D2247.

DESIGN BENEFITS

CW cabinets with their clean, functional design are manufactured from quality materials selected specifically for this application:

Specially formulated fire retardant Glass Reinforced Polyester (GRP) with high chemical and temperature tolerance

Corrosion resistant construction throughout

Low maintenance units

Apex lids are formed in a range of composite materials depending on test requirements and supported by gas springs to ensure smooth operation and an effective seal when closed. Fully insulated

Ergonomically designed control panel

Over-temperature protection - factory set

Transportation in areas of restricted access is made easier due to the compact design aided by removable lids and base frames

OPTIMUM OPERATION

Active corrosion testing requires close operational control and total accuracy. In **CW**'s Salt Spray Cabinets these criteria are assured by:

MOBILE, EXTERNAL SALT SOLUTION RESERVOIR with integral filter system. 114 litres capacity giving, depending on model size, up to 14 days continuous operation. Optional low level alarm system available. Easy access for filling and sterilisation to prevent excessive growth of algae

ACCURATE SALT SOLUTION FLOW CONTROL via a variable speed, heavy duty peristaltic pump and flowmeter. This ensures precise collection rates and eliminates atomiser blockage

FLOWMETER to accurately monitor salt solution flow

SOPHISTICATED LUCITE ATOMISER for baffle free mist generation ensuring precise fallout readings throughout the chamber

AIR REGULATOR and **GAUGE** to control and monitor the air pressure required for precise salt spray distribution

SAMPLE RACKS are supplied as standard to accept panels or suspend samples

PRECISE CONTROL

TEMPERATURE CONTROL. Microprocessor controller with digital display and user friendly tactile key pads. Full PID control ensuring calibration accuracy via a resin coated Pt100 temperature sensor.

Temperature range - Ambient to 55°C ± 1°C

INTERMITTENT

CYCLE TIMER

regulates salt spray cycle/dry cycle testing as well as continuous salt spray tests.

Fully adjustable salt spray/dry cycles

Programme run HOUR

COUNTER

AUTOMATIC SELF

FILLING HUMIDIFIER

SYSTEM

for compressed air

saturation. Overheating

and low water

protection. Fully adjustable water temperature control with digital display.

DRY/HUMID AIR CONTROL. Simple switch-over device to select air type as specified by the test standard being used

AIR PURGE to remove corrosive air borne salt fog prior to sample inspection



CW

PRODUCT RANGE

In addition to the SALT SPRAY ranges **CW** also supplies:

CCT CABINETS

Cyclic corrosion cabinets designed to meet Ford, GM, Honda, Nissan, Rover and Toyota test standards incorporating Salt Spray, Humidity, Air Drying and Dry Heat.

HUMIDITY CABINETS

For high humidity conditions with constant or cyclic temperatures.

HUMIDITY CONDITIONING CABINETS

These provide 10% to 98% variable RH, plus variable temperatures between 20°C and 65°C.

CONDENSATION CABINETS

This range operates to BS 3900 F2, ISO 6270 and the Cleveland Condensation Test.

SALINE SOAK CABINETS

Units can be used as either Saline or Water Soak cabinets. Suitable for testing large samples.

SULPHUR DIOXIDE CABINETS

The Kesternich SO₂ corrosion test cabinets are bench mounted, with a 300 litre capacity.

SPECIAL PURPOSE

To meet specified customer requirements.

WORLDWIDE REPRESENTATION

CW cabinets are installed worldwide and the company is represented in:

Australia	India	Poland
Belgium	Indonesia	Singapore
China	Italy	South Africa
Denmark	Iran	Spain
France	Israel	Taiwan
Germany	Japan	Thailand
Greece	Korea	Turkey
Hong Kong	Malaysia	USA
Hungary	Netherlands	

QUALITY ASSURED

All **CW** cabinets are manufactured to BS EN ISO 9002. Subject to agreed maintenance procedures a two year warranty is available - generally UK only. The standard warranty is one year.

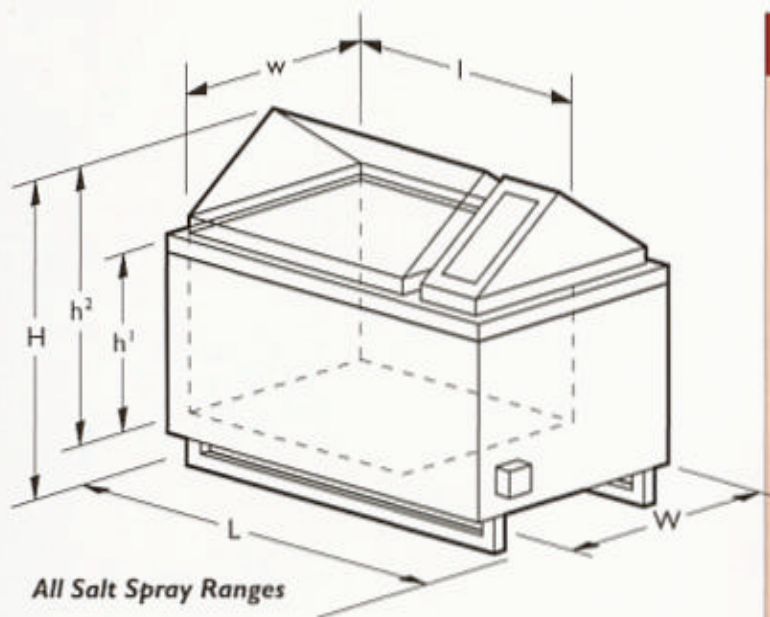
All cabinets are **CE** marked and have calibration traceable to NAMAS (UKAS). Certificates of conformance are supplied.

TECHNICAL SPECIFICATIONS

THE FOLLOWING DATA IS COMMON TO ALL MODELS

Salt Spray Cabinets	SF
CASS Cabinets	SF/CASS
Combination Salt Spray/Cyclic PROHESION®	SF/MP
PROHESION® Cabinets - Cyclic Corrosion Tests	MP
Salt Spray/Humidity Cabinets	SF/AB
Combination Salt Spray/Cyclic PROHESION® - Humidity	SF/MP-AB

		ALL MODELS - SF SF/CASS SF/MP MP SF/AB SF/MP-AB					
CAPACITY (litres)		100	200	450	750	1000	2000
SIZE EXTERNAL MAXIMUM (mm)	L	1000	1030	1370	1600	1960	2400
	W	600	700	930	1050	1335	1200
	H	645	1050	1130	1250	1410	1645
SIZE INTERNAL MAXIMUM (mm)	l	600	610	840	1100	1465	2000
	w	450	510	645	850	1040	1000
	h ¹	375	455	620	650	720	850
	h ²	565	660	840	1000	1065	1175
SAMPLE RACKS	RACKS QTY	4	4	6	6	8	12
	PANELS QTY 150 X100mm	72	80	132	214	344	516
SERVICES REQUIRED		POWER SUPPLY: 230 VOLTS 50/60 Hz SINGLE PHASE OTHER VOLTAGES AVAILABLE ON REQUEST.					380 VOLTS 50/60 Hz. 3PHASE
ELECTRICAL		13 AMP	13 AMP	13 AMP	13 AMP	16 AMP	16 AMP per PHASE
COMPRESSED AIR		TYPE Clean, dry and oil free FLOW 3.5 cfm at 15 psi PRESSURE 30 to 60 psi (2 to 4 BAR) CONNECTION 10mm ID Plastic pipe					90 to 120 psi 6 to 8 BAR
WATER		TYPE De-ionised or mains water below 50mg/litre TDS PRESSURE 30 to 60 psi (2 to 4 BAR) CONNECTION 10mm ID Plastic pipe					
DRAIN		36mm OD Plastic pipe to liquid waste. Air breather / vent pipe connected to drain to atmosphere					



OPTIONAL ACCESSORIES

- LOW RESERVOIR ALARM
- EXTERNAL SALT FOG COLLECTION VESSELS
- SALT FOG CONDENSER VENTING SYSTEM
- TRANSPARENT ROOF
- COMPRESSOR - available for continuous use or stand-by function; high specification, oil free.
- COMPRESSOR SWITCH - for automatic switch-over to stand-by or regular air supply.
- DE-IONISER & WATER FILTERS - recommended for areas with hard water or high total dissolved solids (over 50mg/litre TDS).
- ENTRY PORTS - for cable access to monitoring equipment or power introduction.
- SPECIAL RACKING - to support components/samples in test area as required.
- CHART RECORDER - continuous paper.