











- Established in 1989
- Global leader in the field of corrosion test equipment
- All chambers manufactured in the United Kingdom
- Creator of the 'original' low load corrosion test chamber
- Multi award winning business
- Innovative patented technology magnetically driven spray bar received patent in 2018
- Thousands of Ascott chambers in daily use all over the World
- New factory and training facility opened in 2018, doubling factory capacity

#### Find the best solution for your test requirements

Visit www.ascott-analytical.com, where you'll find a full list of test standards with a suggested Ascott chamber for each test and also a chamber selector.



## At the forefront of chamber design

Ascott have been at the forefront of test chamber design for many years, and our latest product range embodies customer led innovation, blending performance with technical excellence.

The creation and control of corrosive climates has never been more demanding. The development of new materials and surface coatings, plus increasing user expectations gives rise to ever more rigorous testing. This is our forte. Let our expertise be your reassurance that choosing an Ascott chamber will ensure your testing is precise, compliant and repeatable.

#### **Salt Spray Corrosion Test Chambers**

The salt spray test (also known as salt fog or salt mist) has been the bench-mark corrosion test in many industries for decades. With such a long history, so much test data and many international test standards written around it, it remains a very popular choice as a relatively quick comparative test, to check whether or not test samples corrode in accordance with expectations. It's main application is therefore to audit the effectiveness of a production process.

#### Cyclic Corrosion Test (CCT) Chambers

Cyclic Corrosion Testing is a means of recreating/accelerating a variety of corrosive climates, within the convenience of a test chamber. It is a useful test for predicting the life expectancy of materials and components under simulated service life conditions. It has gained wide acceptance, particularly in the automotive industry, where many manufacturers have developed their own CCT standards.

#### **Atmosfär Corrosion Test Chambers**

Based on the Ascott CCT chamber, the Atmosfar is equipped with additional features to enable it to comply with the specific automotive test requirements for Ford, Volvo and Scania. Most notably this includes the application of salt spray from a high-level 'swaying' spray bar, vertical high velocity air drying, refrigerated dehumidification, and a Psychrometric humidity measurement system.

#### **Corrosion Test Rooms**

In addition to our wide range of corrosion test chambers for salt spray and cyclic test standards, to accommodate the increasing demand for testing large components and assemblies, Ascott now offers a range of corrosion test rooms.

#### Free choice of canopy colour

All Ascott chambers are offered with a choice of canopy colour at no extra charge. Some of our standard colours are shown below, a full range of options is available on request.













## Salt Spray Corrosion Test Chambers

#### Ascott salt spray test chambers are offered in two model ranges: Standard & Premium.

#### **STANDARD**

Standard models are designed for continuous salt spray tests, conducted at a single user-adjustable temperature, such as ASTM B117, ISO 9227, JIS Z 2371 etc. They may be used with pH neutral salt solutions (NSS) or test solutions acidified by the addition of Acetic Acid (ASS) or Cupric Acid (CASS).

#### **PREMIUM**

Premium models can perform the same basic salt spray tests as Standard models, but in addition are equipped with extra features which enable them to undertake 'modified' tests such as ASTM G85.

Here conventional salt spray is usually combined with one other climate, in a two-part cycle. For example: salt spray and condensation humidity (SWAAT) or salt spray and drying (PROHESION).









Premium 120 Ltr salt spray chamber

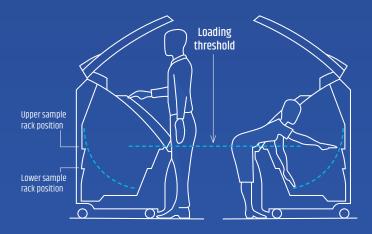
#### **PERFORMANCE**

- Temperature range\*
   Adjustable from ambient to +50°C/+122°F.
- Salt spray fall-out rates

  Adjustable from 0.5 to 2.5 ml per 80 cm² per hour.
- Wetting mode (Premium chambers only) Adjustable from ambient to +50°C/+122°F.
- Drying mode (Premium chambers only)
   Adjustable from ambient to +50°C/+122°F.

<sup>\*</sup>Option ACCO3 increases temperature range up to 60°C/140°F





#### **FEATURES - Standard Models**

- 'Easy Open' pneumatically operated canopy.
- Touch-screen monochrome operator control interface.
- Dry seal gasket prevents wetting operator's clothes.
- Low loading threshold for loading and unloading.
- Canopy colour choice.
- Interior viewing window.
- Purge of the cabinet interior with compressed air after testing and before the chamber is opened.
- Large capacity separate salt solution reservoir mounted on wheels for mobility.
- Set of sample racks.

#### **FEATURES - Premium Models**

Premium models have the same features as Standard models plus:

- Touch-screen, full color user control interface, using intuitive icons for ease of programming and use.
- RJ45 communications port for connection to a local area network (LAN) for logging and remote programming via a computer running optional Ascott software (ACC120).
- A real-time, user configurable 'clock' to enable different test samples to have their exposure time monitored separately, with alarms to warn when preset test times have been completed.
- Immersion heater housed in the base of chamber enables high humidity condensation conditions to be created, if required.



## **Cyclic Corrosion** Test Chambers (CCT)

Ascott CCT chambers are designed to be flexible enough to comply with as many different CCT specifications as possible.

As standard they come with the ability to create 4 distinct climates:

- Salt spray
- Condensation humidity (wetting)
- Air drying
- · Controlled humidity

These may be programmed to occur in any sequence and be repeated automatically. A wide range of optional accessories enable additional climates to be added to further extend the number of climates and conditions that can be created.







#### **PERFORMANCE**

#### Wetting Mode

**Temperature range** - Adjustable from ambient to +60°C/+140°F.

Humidity range - Fixed at 95% - 100% RH.

#### Salt Spray Mode

**Temperature range** - Adjustable from ambient to +50°C/+122°F.

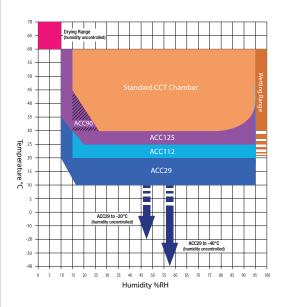
**Salt spray fall-out rates** - Adjustable from 0.5 to 2.5 ml per 80 cm<sup>2</sup> per hour.\*

#### Drying Mode

**Temperature range** - Adjustable from ambient to +70°C/+158°F.

#### • Controlled Humidity Mode

**Temperature/humidity range** - See graph below.



Graph showing standard range of temperature/humidity control for a CCT chamber and how this may be extended by the addition of optional accessories.

Ascott chambers require ambient conditions of 18°C to 23°C to perform in line with standards requirements.

#### **FEATURES**

- 'Easy Open' pneumatically operated canopy.
- Dry seal gasket prevents wetting operator's clothes, etc.
- Low loading threshold for loading and unloading.
- Canopy colour choice.
- Interior viewing window (unless refrigeration option is supplied).
- Purge of the cabinet interior with fresh air after testing and before the chamber is opened.
- Set of sample racks
- Large capacity separate salt solution reservoir mounted on wheels for mobility.
- Touch-screen, full color user control interface, using intuitive icons for ease of programming and use.
- RJ45 communications port for connection to a local area network (LAN) for logging and remote programming via a computer running optional Ascott software (ACC120).
- A real-time, user configurable 'clock' to enable different test samples to have their exposure time monitored separately, with alarms to warn when preset test times have been completed.
- A large capacity memory for complex multi-step test programmes to be programmed and stored, so that a wide range of different test profiles can be undertaken.





 $<sup>^\</sup>star$  Option ACCO1 increases fallout rate up to 5.5 ml per 80 cm2 per hour.

### **Atmosfär** Test Chambers

Atmosfär chambers have been specifically designed for fully automatic testing in accordance with highly demanding laboratory-accelerated corrosion tests which have become increasingly popular in some sectors of the automotive industry.

These tests are cyclic in nature and comprise of exposure under controlled and varying conditions of temperature and humidity, with intermittent spraying of a salt solution directly on to the samples under test, from a high level swaying spray bar.







#### Two model sizes:

- 1300 Ltr (45.9 cu ft)
- 2600 Ltr (91.8 cu ft)

#### Extensive optional testing facilities:

Extensive range optional testing facilities, such as SO2 gas dosing and liquid immersion.

Fully automatic laboratory-accelerated atmospheric corrosion testing to;

- ISO 16701
- Ford CETP 00.00-L-467
- Volvo VCS 1027,149 (ACT-1)
- Volvo VCS 1027,1449 (ACT-2)
- Volvo STD 423-0014
- Volvo STD 1027,1375
- GMW14872
- CCT1 & CCT2
- VDA621-415
- Scania STD4319
- VDA 233-102

### All Ascott Atmosfär Corrosion Test chambers feature:

- Patented oscillating spray bar with magnetically coupled drive system, for compliance with the most demanding automotive test standards.
- Integrated air conditioning unit, to achieve demanding temperature and humidity combinations.
- Psychrometric humidity control module, for more exacting control of humidity. especially at levels around 95% RH.



**Atmosfär Innovative design** - the oscillating spray bar and air delivery system are quickly and easily removed to enable the chamber to comply with other CCT test standards.







#### **PERFORMANCE**

#### Wetting Mode

**Temperature range** - Adjustable from ambient to +60°C/+158°F.

Humidity range - Fixed at 95% - 100% RH.

#### Oscillating Salt Spray Mode

**Temperature range** - Adjustable from ambient to +60°C/+140°F.

**Salt spray fall-out rates** - Adjustable from 5 to 10 Ltrs/m² per hour.\*

#### • Conventional Salt Spray Mode

**Temperature range** - Adjustable from ambient to +60°C/+140°F.

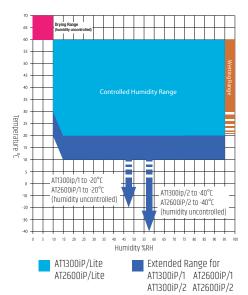
**Salt spray fall-out rates** - Adjustable from 0.5 to 2.5 ml per 80 cm² per hour.\*

#### Drying Mode

**Temperature range** - Adjustable from ambient to +70°C/+158°F.

#### Climatic Mode

Temperature/humidity range - See graph below.



Ascott chambers require ambient conditions of 18°C to 23°C to perform in line with standards requirements.

#### \* Option ACCO1 increases fallout rate up to 5.5 ml per 80 cm² per hour.

#### **FEATURES**

- Ergonomic design low loading threshold for easy loading and unloading.
- 'Easy Open' pneumatically operated canopy.
- Dry seal gasket prevents wetting operator's clothes.
- Large capacity separate salt solution reservoir mounted on wheels for mobility.
- · Calibration certificate.
- Canopy colour choice.
- · Set of sample racks.
- Interior viewing window.
- Consumables spares kit.
- Easily accessible salt spray atomizer(s) in transparent hard-wearing acrylic.
- Purge of the cabinet interior with compressed air after testing and before the chamber is opened.
- Touch-screen, full color user control interface, employing the latest version of our highly intuitive operating software, for ease of programming and use.
- The operating software has a very large capacity for the creation of complex multi-step test programmes, so that the widest possible range of test profiles can be accommodated.
- The icon based control interface offers a variety of languages built-in for ease of understanding and use.
- RJ45 communications port for connection to a local area network (LAN) for logging and remote programming via a computer running optional Ascott software (ACC120).
- A real-time, user configurable 'clock' to enable different test samples to be batched and have their exposure time monitored separately, with alarms to warn when a pre-set test period has been completed.





## **Salt Spray & Cyclic Corrosion**

### Test Chamber Specifications

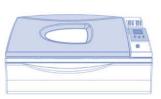


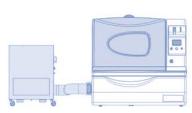
<b>Standard</b> salt spray chambers	S120iS	S450iS	S1000iS	S1300iS	S2000iS	S2600iS
<b>Premium</b> salt spray chambers	S120iP	S450iP	S1000iP	S1300iP	S2000iP	S2600iP
<b>Cyclic corrosion</b> test chambers	-	CC450iP	CC1000iP	CC1300iP	CC2000iP	CC2600iP
Chamber Capacity	120 Ltrs / 4.2 cu.ft	450 Ltrs / 15.8 cu.ft	1000 Ltrs / 35.3 cu.ft	1300 Ltrs / 45.9 cu.ft	2000 Ltrs / 70.6 cu.ft	2600 Ltrs / 91.8 cu.ft
Chamber Weight (estimated, without optional accessories)	76 kg	190 kg	255 kg	285 kg	330 kg	355 kg
Mounting format	Bench top	Floor standing	Floor standing	Floor standing	Floor standing	Floor standing
Loading threshold	280mm/11"	800mm / 31.5"	800mm / 31.5"	800mm / 31.5"	800mm / 31.5"	800mm / 31.5"
Chamber external dimensions W D H	1315mm / 51.8" 680mm / 26.8" 800mm / 31.5"	1660mm / 65.4" 840mm / 33.1" 1510mm / 59.5"	2025mm / 80.0" 1145mm / 45.0" 1720mm / 67.5"	2025mm / 80.0" 1156mm / 45.5" 1906mm / 75.0"	2885mm / 113.6" 1145mm / 45.0" 1720mm / 67.5"	2885mm / 113.6" 1156mm / 45.5" 1906mm / 75.0"
Chamber internal dimensions W D H	715mm / 28.2" 490mm / 19.3" 490mm / 19.3"	1010mm / 39.5" 640mm / 25.0" 1140mm / 45.0"	1300mm / 51.2" 980mm / 38.5" 1320mm / 52.0"	1300mm / 51.2" 980mm / 38.5" 1528mm / 60.2"	2160mm / 85.0" 980mm / 38.5" 1320mm / 52.0"	2160mm / 85.0" 980mm / 38.5" 1528mm / 60.2"
Salt solution reservoir W (external dimensions) D H	integral integral integral	460mm / 18.1" 620mm / 24.5" 675mm / 26.6"	560mm / 22.0" 620mm / 24.5" 675mm / 26.6"	560mm / 22.0" 620mm / 24.5" 675mm / 26.6"	560mm / 22.0" 620mm / 24.5" 675mm / 26.6"	560mm / 22.0" 620mm / 24.5" 675mm / 26.6"
Salt solution reservoir capacity (for extra capacity, see optional accessory ACCO2)	40 Ltrs/10.5 US gal	80 Ltrs/21 US gal	115 Ltrs/30.4 US gal	115 Ltrs/30.4 US gal	115 Ltrs/30.4 US gal	115 Ltrs/30.4 US gal
Removable slotted sample racks to suit upper mounting position	4 racks each with 23 angled slots	6 racks each with 28 angled slots	8 racks each with 46 angled slots	8 racks each with 46 angled slots	16 racks each with 46 angled slots	16 racks each with 46 angled slots
	Each with 3mm (1/8"	) wide slots, angled at 15	degrees from vertical			
Chamber construction	Glass reinforced plas	tic, Polypropylene & PVC	parts			
Color	9 standard colors to	choose from				
Electricity supply - Standard salt spray models - Premium salt spray models - CCT models	1 phase 1 phase –	1 phase 1 phase 3 phase	1 phase 1 phase 3 phase	1 phase 1 phase 3 phase	1 phase 3 phase 3 phase	1 phase 3 phase 3 phase
Water		nidity generator and sal y of 1.5 to 5 bar (21-73 ps	lt solution reservoir all r i)	equire separate connec	tions to a continuous, p	ressurized deionized/
Air	Clean dry & oil free, 4	.0 to 6.0 bar (58-87psi) v	vith 240 Ltrs (8.5cu.ft) pe	er minute flow		
Exhaust	3m (10ft) exhaust pip	e is provided which sho	uld be terminated outsi	de building		
Drain	3m (10ft) drain pipe p	provided which should b	e terminated into floor	level drain		
Operating environment conditions	Indoors, with ambien	t maintained at +18 to +	-23°C (+64 to 73°F), 85%	max RH (non-condensin	g)	









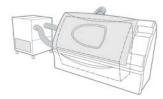


## Atmosfär

### Test Chamber Specifications







<b>Atmosfar</b> test chambers		AT1300iP/Lite	AT1300iP/1	AT1300iP/2	AT2600iP/Lite	AT2600iP/1	AT2600iP/2		
Minimum controlled temperature		20°C/68°F	-20°C / -4°F	-40°C / -40°F	20°C/68°F	-20°C / -4°F	-40°C / -40°F		
Chamber capacity		1300 Ltrs / 45.9 cu.ft	1300 Ltrs / 45.9 cu.ft	1300 Ltrs / 45.9 cu.ft	2600 Ltrs / 91.8 cu.ft	2600 Ltrs / 91.8 cu.ft	2600 Ltrs / 91.8 cu.ft		
Chamber weight		340 kg	340 kg	340 kg	440 kg	440 kg	440 kg		
Mounting format		Floor standing	Floor standing	Floor standing	Floor standing	Floor standing	Floor standing		
Loading threshold		800mm / 31.5"	800mm / 31.5"	800mm / 31.5"	800mm / 31.5"	800mm / 31.5"	800mm / 31.5"		
Chamber external dimensions	W D H	2025mm / 80.0" 1316mm / 51.8" 1965mm / 77.4"	2025mm / 80.0" 1316mm / 51.8" 1965mm / 77.4"	2025mm / 80.0" 1316mm / 51.8" 1965mm / 77.4"	2885mm / 113.6" 1316mm / 51.8" 1965mm / 77.4"	2885mm / 113.6" 1316mm / 51.8" 1965mm / 77.4"	2885mm / 113.6" 1316mm / 51.8" 1965mm / 77.4"		
Chamber internal dimensions	W D H	1300mm / 51.2" 980mm / 38.5" 1500mm / 59.0"	1300mm / 51.2" 980mm / 38.5" 1500mm / 59.0"	1300mm / 51.2" 980mm / 38.5" 1500mm / 59.0"	2160mm / 85.0" 980mm / 38.5" 1500mm / 59.0"	2160mm / 85.0" 980mm / 38.5" 1500mm / 59.0"	2160mm / 85.0" 980mm / 38.5" 1500mm / 59.0"		
Refrigeration unit	W D H	621mm / 24.5" 1420mm / 55.9" 1070mm / 42.1"	1125mm / 44.3" 1354mm / 53.3" 1624mm / 63.9"	1125mm / 44.3" 1354mm / 53.3" 1624mm / 63.9"	621mm / 24.5" 1420mm / 55.9" 1070mm / 42.1"	1125mm / 44.3" 1354mm / 53.3" 1624mm / 63.9"	1125mm / 44.3" 1354mm / 53.3" 1624mm / 63.9"		
Salt solution reservoir 115 Ltrs/30.4 US gal	W D H	560mm / 22.0" 620mm / 24.5" 675mm / 26.6"	560mm / 22.0" 620mm / 24.5" 675mm / 26.6"	560mm / 22.0" 620mm / 24.5" 675mm / 26.6"	560mm / 22.0" 620mm / 24.5" 675mm / 26.6"	560mm / 22.0" 620mm / 24.5" 675mm / 26.6"	560mm / 22.0" 620mm / 24.5" 675mm / 26.6"		
		Separate unit, one sup	oplied to deliver salt wa	ter to the conventional	salt spray atomizer				
Salt solution reservoir 160 Ltrs/42.2 US gal	W D H	840mm / 34.0" 500mm / 19.7" 790mm / 31.1"	840mm / 34.0" 500mm / 19.7" 790mm / 31.1"	840mm / 34.0" 500mm / 19.7" 790mm / 31.1"	840mm / 34.0" 500mm / 19.7" 790mm / 31.1"	840mm / 34.0" 500mm / 19.7" 790mm / 31.1"	840mm / 34.0" 500mm / 19.7" 790mm / 31.1"		
		Separate unit, one sup	oplied to deliver salt wa	ter to the spray bar					
Removable slotted sample racks to upper rack mounting position	) Suit	8 racks each with 46 angled slots	8 racks each with 46 angled slots	8 racks each with 46 angled slots	16 racks each with 46 angled slots	16 racks each with 46 angled slots	16 racks each with 46 angled slots		
		Each with 3mm (1/8")	wide slots, angled at 15	degrees from vertical					
Chamber construction		Glass reinforced plast	ic, Polypropylene & PVC	parts					
Color		9 standard colors to c	hoose from						
Electricity supply		1 phase	1 phase	air conditioning unit).	I supplies are required ( The voltage (VAC) and f (to be confirmed at the	requency (Hz) are depe			
Water		The air saturator, hum water supply of 1.5 to		chrometric module all r	equire separate connec	tions to a continuous, p	ressurized/distilled		
Air			mpressed air, 4.0 to 6.0 and one for the separati	bar (58-87psi) with 240 e refrigeration unit	Ltrs (8.5cu.ft) per minut	e flow. Two separate su	pplies are required,		
Exhaust		3m (10ft) exhaust pipe	e is provided which shou	uld be terminated outsi	de building				
Drain		3m (10ft) drain pipe provided which should be terminated into floor level drain							
Operating environment conditions	5	Indoors, with ambient	maintained at +18 to +	23°C (+64 to 73°F), 85% I	max RH (non-condensin	g)			

### Selecting the right accessories

Selecting the right accessories is just as important as selecting the right chamber, just some of the things you should think about.

#### Consider what external services you have access to;

- Do you have a compressed air supply or do you require a compressor?
- Do you have a pressurised de-ionised water source?
- Do you have the ability to vent the chamber directly to the outside atmosphere, or do you need an exhaust scrubbing system?
- Do you have access to an external drain, or do you need a waste water pumping system?

#### Have you considered what standards you might need to test to in the future;

• Sometimes very popular standards might require specific accessories for example additional atomisers for VDA 233-102 (ACC25), not all accessories can be fitted later.

#### Are you ordering the right solution for holding your samples during the test?

• Are they small or large samples, light or heavy samples, solid shapes or cylindrical?

Do you wish to be able to control and monitor your chamber from a computer in another office?

### Accessories required for CCT tests



ACC29 Ref & Hum Control Unit



ACC30 Salt Spray (Vertically Down)



ACC34 Liquid Immersion

			Factory Fitt Available Se	Salt Spray	Salt Spray (	Cyclic Cham	Atmosfar Cl
Optional Facility	Code	Description	Fact	Saft	Saft	Ę,	Atmo
Kit for Renault D17 2028 (ECC-1) compliance	ACCO1*	A comprehensive kit of all necessary accessories to equip an Ascott chamber for compliance with ECC-1. Different versions of this kit are offered, featuring choices of climate control unit.  Note: Only approved by Renault for use with 1000 and 2600 Litre chambers, not suitable for use with ACC46.	F			-	-
Extra Heater Mats	ACCO3*	Additional heater mats to enable chambers to be able to achieve 60 Degrees Celcius during the salt spray phase.	F	•	•		
Additional Atomisers	ACC25*	Additional atomisers to allow compliance with VDA 233-102.	F				
Refrigeration & Humidity Control Unit	ACC29*	A separate free standing air temperature and humidity conditioning unit, capable of refrigerating a cyclic chamber, two versions available for refrigerating to -20°C or -40°C.	A			-	
Air Conditioner Interface	ACC29/ INT*	Pre-equips a CCT chamber with everything needed to connect it to an ACC29 air conditioning unit (available separately). The fitting of this interface enables the air conditioning unit to be procured at the same time as the chamber, or later if required.  Note: Not suitable for use with option ACC46.	F			-	
Salt Spray (Vertically Down)	ACC30*	High level, multiple spray nozzles which spray salt water directly down onto the samples under test. Spray time and duration are both user programmable. A separate holding tank holds salt water at ambient temperature. Required by SAEJ2334 and some GM tests.	F			•	
Water Fog Humidity Generation	ACC32*	Provides high humidity conditions (95 -100% RH) by spraying water as a fog. Includes an additional reservoir for water, fog atomizer(s) and associated pumping equipment.	F			-	
Liquid Immersion	ACC34*	Under programmed control, heated immersion liquid (usually salt water heated to a user adjustable temperature up to +50°C/+122°F) is automatically pumped from the holding tank into the chamber, immersing the test samples. The liquid is automatically returned to the holding tank at the end of the immersion period.  Note: All versions of ACC34 require the chamber to be pre-equipped with option: ACC34/INT/****	Ā				•

<sup>\*</sup>Exact part number dependent on chamber size

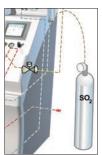




ACC42 Wall Wash

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ACC90 Dehumidifier



ACC46 Gas Dosing



ACC125 Ford / Volvo / Scania Upgrade kit for CC Chambers

Optional Facility	Code	Description	Factory Fi Available	Salt Spra	Salt Spra	Cyclic Cha	Atmosfaı
Liquid Immersion Interface	ACC34/INT	Pre-equips a CCT chamber with everything needed to connect it to an ACC34 liquid immersion facility (available separately). The fitting of this interface enables the liquid immersion facility to be procured at the same time as the chamber, or later if required.  Note: Not suitable for use with option ACC46 or ACC10/2.	F			-	-
Wall wash	ACC42*	A water spray system to automatically wash the internal walls of the chamber with water. Both wash time and duration are user programmable. Requires the chamber to be connected to a continuous pressurized water supply of suitable quality and temperature.	F			-	•
SO2 Gas Dosing	ACC46*	Designed to meet the requirements of ASTM G85 annex A4, this optional accessory comprises of a chamber mounted dispersion tube, through which S02 gas is introduced, at a user adjustable rate and for a programmable duration.  Note: The provision of the S02 gas cylinder and connector are the users responsibility and are not included as part of this option. The ACC46 is not suitable for use with options: ACC01, ACC10, ACC20, ACC34/INTERFACE, ACC92.	F		•	-	•
Blower Add on Accessory	ACC39*	Addition of a blower fan assembly to assist with quick transitions of temperature/ humidity process values from a high to a lower level, such as GMW 14872. This is achieved by introducing ambient air from the local area in which the equipment is located by mans of forced air blower and ball valve, no heat is provided by ACC39.  Note: Not suitable for use with ACC112 or ACC29.	F			-	
Blower Heater Add on Accessory	ACC47*	Optional accessory to assist quick transitions of increasing and decreasing temperature and also decreasing humidity process values, such as Hyundai CCT-A/B. This is achieved by introducing ambient air from the local area in which the equipment is located by means of a forced air blower and ball valve.  An air inlet heater is also fitted and automatically controlled if the chamber temperature needs to be increased, this enables enable a rapid transition from salt spray at 35C to drying at 70C within 30 minutes.	F				•
Interface for ACC90	ACC80*	Pre-equips a CCT chamber with everything needed to connect it to an ACC90 dehumidifier (available separately) The fitting of this interface enables the dehumidifier to be procured at the same time as the chamber, or later if required.	F			-	
Multi-solution salt spray	ACC86*	Enables up to three different salt spray climates to be created which can be individually programmed to occur within any test program. Additional salt solution reservoirs, atomizers etc, are included.	F			-	•
Dehumidifier	ACC90*	To deliver dehumidified air to CCT chambers where humidity control at, or just below ambient conditions, is required. See graph on page 7 for range of operation.  Note: All versions of ACC90 require the chamber to be pre-equipped with option ACC80/INT/****.	A			-	
Midi Dehumidification Unit	ACC112*	A mid-size, air conditioning unit, to enable controlled 'ambient' climates to be created within a CCT chamber. <b>Note</b> : All versions of ACC112 require the chamber to be pre-equipped with option ACC112/INT/*****	A				
Interface for ACC112	ACC112/ INT*	Pre-equips a CCT chamber with everything needed to connect it to an ACC112 midi dehumidification unit (available separately). The fitting of this interface enables the midi dehumidification unit to be procured at the same time as the chamber, or later if required.  Note: Not suitable for use with option ACC46.	F			-	
Ford / Volvo / Scania Upgrade kit for CCT chambers	ACC125*	A factory factory fitted upgrade kit for 450, 1000 and 2000 Litre cyclic (CCT) chambers to enable testing to automotive standards; ISO 16701, Ford CETP 00.00-L-467, Volvo VCS 1027,149 (ACT-1), Volvo VCS 1027,1449 (ACT-2), Volvo STD 423-0014, Scania STD4319.	F			-	

<sup>\*</sup>Exact part number dependent on chamber size.

### External Service Utilities



ACCO2/1 Salt Solution Reservoir (80L)



ACCO4/2 Air Compressor (Large)



System (Small)

			Factory Fitted (I	salt Spray (iS)	Salt Spray (iP)	clic Chambers	Atmosfar Cham
Optional Facility	Code	Description	Fact Avai	ة	Salt		Atm
Salt Solution Resevoir (80 Litres)	ACC02/1	An 80 Litre (21 US gal) capacity salt solution reservoir, with a graduated scale in litres, a hinging lid for ease of filling and cleaning and mounted on castors for mobility.  External Dimensions: 460mm (w) x 620 mm (d) x 675mm (h)	A	-	-	-	-
Salt Solution Resevoir (115 Litres)	ACCO2/2	A 115 Litre (30US gal) capacity salt solution reservoir, with a graduated scale in litres, a hinging lid for ease of filling and cleaning and mounted on castors for mobility.  External Dimensions: 560mm (w) x 620 mm (d) x 675mm (h)	Ā	-	-	-	-
Salt Solution Resevoir (160 Litres)	ACC02/3	A 160 Litre (42.2 US Gal) capacity salt solution reservoir, with a graduated scale in litres, a hinging lid for ease of filling and cleaning and mounted on castors for mobility.  External Dimensions: 840mm (w) x 500mm (d) x 790mm (h)	A	•	-	-	-
Air Compressor (Large, 300 Litre per minute output)	ACCO4/2	A large free standing compressor, to provide a continuous supply of clean, dry and oil free compressed air, to enable the chamber to function without requiring connection to a local compressed air supply.  - Electrical supply: 220-240VAC single phase, 50Hz - Output: 300 I/min displaced - Free Air Delivery (FAD) @ 6 Bar: 179 I/min - Max pressure: 8 Bar - Air receiver: 59 litres - Noise output: 74dB (A) measured at a distance of 1m	A	-	•	-	•
Water Deioniser System (Small, life expectancy approx. 1500 Litres)	ACCO6/1	To provide water of suitable purity for topping up a salt spray/cyclic corrosion chamber air saturator, and for making up salt solution to be sprayed. Requires connection to a continuous mains water supply of maximum pressure 5.0 bar.  This system comprises of a regenerable cylinder deioniser and an electronic conductivity indicator. Must be regenerated or replaced when exhausted.	A	•	•		•
Water Deioniser System (Medium, life expectancy approx. 2250 Litres)	ACCO6/2	To provide water of suitable purity for topping up a salt spray/cyclic corrosion chamber air saturator, and for making up salt solution to be sprayed. Requires connection to a continuous mains water supply of maximum pressure 5.0 bar.  This system comprises of a regenerable cylinder deioniser and an electronic conductivity indicator. Must be regenerated or replaced when exhausted.	A	•	•		•
Water Deioniser System (Large, life expectancy approx. 4400 Litres)	ACCO6/3	To provide water of suitable purity for topping up a salt spray/cyclic corrosion chamber air saturator, and for making up salt solution to be sprayed. Requires connection to a continuous mains water supply of maximum pressure 5.0 bar.  This system comprises of a regenerable cylinder deioniser and an electronic conductivity indicator. Must be regenerated or replaced when exhausted.	A	•	•		•

### External Service Utilities



ACC20 Waste Water Trough & Pump



ACC92/3 Exhaust Salt Scrubber (without circulation pump)

Optional Facility	Code	Description	Factory Fi Available	Salt Spray	Salt Spra	Cyclic Cha	Atmosfar
Waste Water Trough & Pump	ACC20	Where a floor level drain connection is unavailable this option provides a holding tank into which the chamber drain outlet is terminated. When full, waste water is automatically pumped to an existing remote drain/effluent tank, up to 10m/32ft horizontally 6 3m/10ft vertically from the chamber.  Note: Not suitable for use with option ACC46.	F	•	•		•
Trolley	ACC24	Converts the bench standing 120 Ltr size chamber to floor standing. Mounted on lockable castors. There is space underneath for one additional reservoir (separate option ref: ACCO2/1).	A	•	•		
Exhaust salt scrubber (without circulation Pump)	ACC92/1	Removes highly corrosive salt fog from the chamber exhaust where it is not convenient or possible to vent to the outside of the building. Removes salt through condensation and by spraying with water.  Note: Not suitable for use with option ACC46.	A	•	•		
Exhaust salt scrubber (without circulation Pump)	ACC92/2	Removes highly corrosive salt fog from the chamber exhaust where it is not convenient or possible to vent to the outside of the building. Removes salt through condensation and by spraying with water.  Note: Not suitable for use with option ACC46.	A			-	•
Exhaust salt scrubber (with circulation Pump)	ACC92/3	Removes highly corrosive salt fog from the chamber exhaust where it is not convenient or possible to vent to the outside of the building. Removes salt through condensation and by spraying with water.  Note: Not suitable for use with option ACC46.	A	•	•		
Exhaust salt scrubber (with circulation Pump)	ACC92/4	Removes highly corrosive salt fog from the chamber exhaust where it is not convenient or possible to vent to the outside of the building. Removes salt through condensation and by spraying with water.  Note: Not suitable for use with option ACC46.	A			-	•
Air agitation of salt solution reservoir	ACC96	Designed to assist dissolving salt within a salt solution reservoir to create a thoroughly mixed salt solution. Regulated compressed air supplies a bubbling device that rests in the bottom of the reservoir. Not available for 120 Ltr models.  Note: Requires connection to a compressed air supply.	A	•	•	-	•



### Sample preparation and measurement



ACC49 Sikkens Scratch Tool



ACC100 Hand-held Salinity Refractometer



ACC108 Fallout Measuring Kit

	1		Factory Fitte Available Se	Salt Spray (i	Salt Spray (i	ic Cham	osfar Ch
Optional Facility	Code	Description	Fact Avai	붎	;		Atm
Hand held pH meter	ACC11	Digital pH meter, for measuring the pH of salt solution fallout over range 0-14 pH with a resolution of 0.01 pH. Supplied complete with buffers for calibration.	A	-	•	-	•
Hand Held Temperature & Humidity Probe	ACC28	Precision hand-held thermo-hygrometer for independently checking the chamber temperature and humidity. Includes a special salt resistant measuring probe mounted on an extension cable. Range: -40 to +85°C 6 0 to 100%RH.  Note: Requires any size entry port (see option ACC10) to access the chamber interior	A	•	•	•	•
Re-transmission of Temperature & Humidity	ACC36	Re-transmission of chamber temp & humidity as 2 x 0-10VDC signals via externally mounted socket. For remote data logging.	F		•	-	-
Sikkens® Scratch Tool	ACC49	This scratching tool is specially designed to perform scribes on coated steel panels or test substrates prior to salt spray testing for example as described in ISO 9227. As standard, the scratch tool is supplied with 3 tungsten carbide cutting blades;  -1 blade @ 0.5mm thick, the Daimler Chrysler version -1 blade @ 1mm thick, the original Sikkens® version -1 blade @ 2mm thick, requirement for 2018 update of ISO 12944-6	A	•	•		•
Salt solution reservoir low level alarm	ACC70	Operates if the salt solution level falls below requirement for approximately 18 hours testing low level alarm at 1-2ml/hour fall-out rates. Sounds audible alarm and displays warning message. If reservoir is not refilied within 18 hours the running chamber program will automatically pause/stop.	F	-	-	-	•
Hand-held salinity refractometer	ACC100	A salinity refractometer optimized to give a direct reading of percentage sodium chloride in the range 0 to 28%, with automatic temperature compensation.	A	•	•	-	•
Salt Solution Consumption Sensor	ACC102	Electronic liquid flow sensor mounted inside the chamber and sensor situated in-line between the salt solution reservoir and the salt spray atomizer. The sensor measures the flow of salt solution from the reservoir to the atomizer. The output from the is displayed digitally at the chamber display as instantaneous consumption in ml per min and total consumption in ml.	F	•	•	•	-
Fallout Measuring Kit	ACC108	Comprises of 4 x 100ml measuring cylinders and 4 x 100mm funnels, for manually collecting and measuring salt spray fall-out inside a chamber, during salt spray testing.  Note: Not suitable for 120 Litre chambers.	A	•	•	•	•

### Automation and data logging



ACC50 Temperature Data Logger



ACC114 SIM Card Connectivity



ACC120 Data Logging

Optional Facility	Code	Description	Factory Fitt	Salt Spray (	Salt Spray (	Cyclic Cham	Atmosfar Cl
Temperature data logger	ACC50	A battery powered, chamber mounted data logger and temperature sensor. Continuously records the chamber air temperature (°C). Logs can be downloaded to a computer running appropriate software (provided).	E A	<b>.</b>	<b>.</b>	<u></u>	At
Temperature & humidity data logger	ACC52	As ACC50, but also records humidity (%RH) levels using a combined temperature and humidity sensor. Requires any size entry port (see option ACC10) to access the chamber interior.  Note: Not suitable for AASS tests.	A	•	•		-
SIM Card Connectivity	ACC114*	Equips the chamber with a SIM card reader, the user can then program the chamber, via the front panel controller, to use the SIM card reader to send preset text messages to phone numbers of the users choice, should predetermined conditions arise in the chamber.  Note: Excludes SIM card which user must procure and fit locally. Only available for Premium chambers (iP designations).	F		•	-	•
Data Logging Software	ACC120	This software allows remote logging of chamber variables and editing of chamber programs. The software communicates via an Ethernet network adaptor from chamber to PC / Laptop. The Workstation / Laptop also requires a USB port to load the software and to accommodate the Dongle that is needed to run this software.	A		•		•



### Additional chamber fittings



ACCO5/1 Guardian Angel System - Standard LED Version



ACC10/1 35mm Entry Port



ACC14 Variable Sample Racks





ACC18 Spiked Sample Racks



ACC16/6 General Motors

Optional Facility	Code	Description	Factory Fitted (F) Or Available Separate (A	Salt Spray (iS)	Salt Spray (iP)	yclic Chambers (CCT	Atmosfar Chambers (
Guardian Angel System - Standard LED Version	ACC05/1	Modular traffic light alarm system fitted to the top of chambers, to provide visual notification of chamber status.	F	S			
Guardian Angel System - LED Version, with USB Connectivity	ACCO5/2	Modular traffic light alarm system fitted to the top of chambers, to provide visual notification of chamber status, with USB connectivity for remote monitoring.	F		•		•
Guardian Angel System - LED Version, with Ethernet Connectivity	ACCO5/3	Modular traffic light alarm system fitted to the top of chambers, to provide visual notification of chamber status, with Ethernet connectivity for remote monitoring.	F		•	•	•
Guardian Angel System - USB add on only	ACC05/4	Retrofit add on for Guardian Angel, allows addition of USB connectivity for remote monitoring.	A		•	•	-
Guardian Angel System - Ethernet add on only	ACC05/5	Retrofit add on for Guardian Angel, allows addition of Ethernet connectivity for remote monitoring.	A		•	•	-
35mm Entry Port	ACC10/1	Sealable chamber entry port of 35mm (1.27") through the chamber's left hand wall to enable the connection of external monitoring/driving equipment.  Note: Not suitable for ACC46, 120 Litre chambers, or ACC34/INT.	F	•	•	-	-
110mm Entry Port	ACC10/2	Sealable chamber entry port of 110mm (4.33") through the chamber's left hand wall to enable the connection of external monitoring/driving equipment.  Note: Not suitable for ACC46, 120 Litre chambers, or ACC34/INT.	F	•	•	-	-
Variable Sample Racks	ACC14*	Slotted sample racks for testing coupons on which the slot width and slot angle can be varied. Not suitable for 120 Litre chambers.	A	-	•		
Mesh Racking	ACC15*	Mesh type racking for testing small components. Locates on the high level shelf supports provided as standard inside the chamber, and removable if required.	A	•	•		•
Slotted Sample Racks	ACC16*	Removable slotted type sample rack for testing panels/coupons. Each slot is 3mm/1/8" wide and angled at 15 degrees from vertical. Such racks are supplied as standard, unless otherwise specified. Wider slots and/or different angles are available on request.	A	•	•	-	-
General Motors Test Plate Kit	ACC16/6	A kit of 10 specially designed Polycarbonate test plate holders and nylon fixings, as pictured, for mounting General Motors test plates in accordance with the requirements of GMW14872 - in an existing Ascott slotted sample rack, ref ACC16.	A	•	•	-	-
Rod Sample Racks	ACC17*	Removable rod type sample rack for suspending small test samples hung beneath, or for supporting larger test samples placed on top of these racks.	A	•	•	-	•
Spiked Sample Racks	ACC18*	Removable spiked type sample rack for suspending test samples from the 10mm/0.4" diameter x 55mm/2" long spikes, equally spaced, and protruding from opposite sides.	A	-	•	•	-
Reinforced False Floor	ACC19*	Removable reinforced false floor, providing a horizontal platform over the chamber base for supporting large/heavy test samples. Only fits Atmosfar chambers if air collection duct is removed.	A	•	•	-	•
Interior Lighting	ACC26*	Illuminates the chamber interior when a control panel push-button is pressed.  Note: Not suitable for use with ACC29/INT.	F	•	•	•	•
Oscillating Spray Bar	ACC31*	Overhead oscillating spray bar with magnetic drive mechanism.  Note: Can only be fitted to CC1300iP and CC2600iP Chambers.	F			•	
110V Transformer	ACC33*	Transformer to convert chambers to 110 Volts. <b>Note:</b> Only needed for SIS chambers.	F	•			

<sup>\*</sup>Exact part number dependent on chamber size.

### Additional chamber fittings



ACC56 Chamber Raising Kit



ACC82 Window insulating



ACC130 Psychrometric Humidity Measurement & Control System

Optional Facility	Code	Description	Factory F Available	Salt Spra	Salt Spra	Cyclic Ct	Atmosfa
Chamber Raising Kit	ACC56	Set of 4 adjustable height legs that allow the chamber to be raised to operate with high level drains. Raises the chamber by a maximum of 140mm.	A	•	•	•	
Manual filling air saturator	ACC66	Enables the air saturator to be manually filled and periodically topped up with water by hand as an alternative to the automatic fill and top up provided as standard. Adds 75mm/3" to external chamber width.	F	•	•	•	-
Window insulated cover	ACC82*	Comprises of an insulated cover, which is specially shaped to match the window aperture. This will reduce the amount of condensation that can form on the inside of the window during testing and will also improve thermal efficiency.  Note: Not suitable for chambers equipped with the refrigeration and humidity control unit (ACC29).	A	•	-		-
Compressed air coupling	ACC94	A control panel mounted, quick release coupling to facilitate the connection of a third-party air pressure gauge (not supplied) for checking/calibrating the chamber's own air pressure gauge.	F	•	•	•	-
Atomiser Airflow Optimiser	ACC106	An anemometer for measuring airflow and a mounting for this which positions it at a fixed distance from the end of the salt spray atomiser. This allows the airflow to be measured and if necessary adjusted. Consistent airflow at the atomiser can be a significant factor in obtaining good salt spray fall-out homogeneity, which is particularly important for some salt spray tests such as Renault ECC-1.	A	•	-		-
Vertically Operating Canopy	ACC110*	Vertical opening canopy.	F	•	•		
Increased Load Capacity Kit	ACC119*	Mesh racking kit combined with strengthened fibreglass chamber interior to allow greater loads to be tested in the chamber.	F	•	•	-	-
Psychrometric Humidity Measurement & Control System	ACC130	Upgrade to chamber humidity measurement and control system to allow greater control of chamber at high levels of humidity.	F			•	

<sup>\*</sup>Exact part number dependent on chamber size.

### Service and Spares

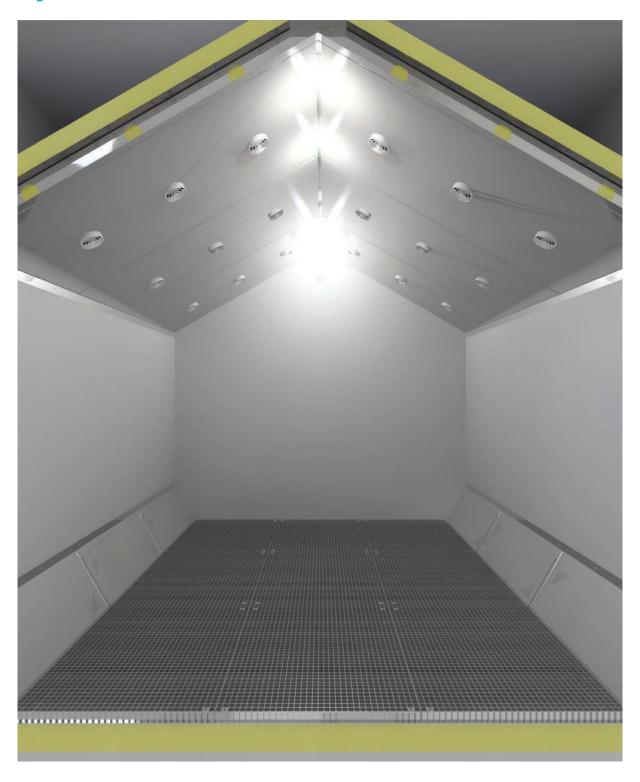


ACC12/1 12 Month Consumable Spares Kit

			돌	pray	pray	흡	Star
Optional Facility	Code	Description	Factory F Available	Salt Spray	Salt Spray	Cyclic Cha	Atmosfar
12 Month Consumables Kit	ACC12/1	A kit of consumables sufficient for operating an Ascott chamber for up to 1 year. <b>Note:</b> a consumables spares kit is supplied as standard with every new chamber.	A		•	-	-
12 Month Consumables Kit	ACC12/4	A kit of consumables sufficient for operating an Ascott chamber for up to 1 year. <b>Note:</b> a consumables spares kit is supplied as standard with every new chamber.	A	•			
36 Month Service & Spares Kit	ACC12/2	An initial kit of spare parts for servicing and maintaining a chamber for up to 3 years from its first use.	A		•	-	
72 Month Service & Spares Kit	ACC12/3	A comprehensive kit for servicing and maintaining a chamber for up to 6 years from its first use, or its last service.	A	•	•	-	•

## Walk-in/Drive-in Corrosion Test Rooms

In addition to our wide range of corrosion test chambers for salt spray and cyclic test standards, to accommodate the increasing demand for testing large components and assemblies, Ascott now offers a range of corrosion test rooms.

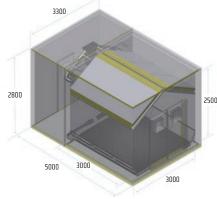


#### **EXAMPLE DIMENSIONS**

Dimensions: 5m x 3.3m x 2.8m Internal Dimensions: 3m x 3m x 2.5m

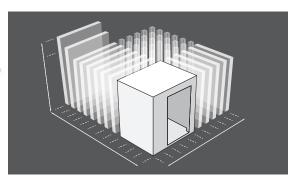
Test Space Volume: 23 Cubic Metres

External



#### **MODULAR CONSTRUCTION**

Customised sizes are not a problem with the Ascott Walk-In Chambers, as the length, width and height can be increased in 0.5m increments.



#### **Key Features**

- Manufactured from a technical laminate with a resilient glass reinforced plastic (GRP) to the wetted surfaces, providing a high quality, durable and corrosion resistant shell.
- Automatically purges before the doors open to minimise the risk of highly corrosive salt fog escaping into the laboratory.
- Large access doors for easy access with large and heavy test samples.
- PU insulated wall cavities with structural reinforcement for increased strength and thermal efficiency.
- 2 x 110mm entry ports as standard.
- Large capacity salt solution reservoir with transparent front, enabling continuous unattended salt fogging for periods to be confirmed.
- Full colour touch screen control, externally mounted.
   Menu driven programming and control.
- Interior lighting operated from the touch screen control.
- Easy maintenance atomisers with integral filter systems.
- Salt water delivery from a precise peristaltic pumping system.
- Can be connected to a network through the integrated RJ45 port, for remote programming, control and monitoring.
- Modular system for assembly on site.
- · Anti slip floor.

#### Supplied with a wide range of Options/ Accessories

- Single or double doors
- · Interior viewing windows
- Access ramps
- Refrigeration systems
- · Controlled humidity for cyclic test capability
- ATEX capability ideal for electric vehicle battery tests

#### **Example Dimensions**

External Dimensions: 5m x 3.3m x 2.8m Internal Dimensions: 3m x 3m x 2.5m Test Space Volume: 23 Cubic Metres

**NOTE:** Modular construction - length and width can be increased in 0.5m increments.

#### Example Weight & Load Capacity

Total Weight: 3000Kg Maximum Floor Load: 1500Kg

#### Available to test to a wide range of Corrosion Test Standards

Salt Spray model for Salt spray tests including; ASTMB117, ISO9227, ASTM G85

#### Performance in Salt Spray Mode:

- Chamber Temperature range; Adjustable from ambient to +60°C.
- Salt fog fallout rates: Adjustable from 0.5 to 2.5ml per 80cm² per hour.
- Air saturator temperature range: Adjustable from ambient to +69°C.

#### Performance in Condensate Wetting Mode:

- Chamber Temperature Range; Adjustable from ambient to +60°C.
- Humidity Range; Fixed at 90% 100% (Dependant on chamber temperature set value).
- With controlled humidity option for cyclic corrosion tests including; CCT-1, JASO 609, IEC 60068-2-52, ISO 11997 Cycle B.

Performance available on enquiry and dependant on the required specification.



# Corrosalt

### Salt for salt spray testing

- · Highest purity salt for fully compliant testing
- For all salt spray testing including the stringent ASTM B117
- · Available in 25Kg (55lb) drums or bags

 Drums are with a scoop to maintain purity when handling

Despite the fact that salt is a commonly occurring compound, pure sodium chloride (NaCl) is much more difficult to come by. Because of its hygroscopic nature, which tends to make salt coagulate and solidify, most granulated salt has anti-caking agents added. However, the addition of these agents is prohibited by most salt spray test standards.

For example, the world's most popular salt spray test standard; ASTM B117, prohibits the addition of anticaking agents, and also limits other impurities, as follows: total impurities < 0.3%, halides excluding chloride < 0.1%, copper < 0.3ppm – so the salt must be very pure indeed, with the limit for copper in particular set at an extremely low level. Other national and international test standards for corrosion testing are similarly demanding in their specifications. To ensure compliance with the highest standards, Ascott has had Corro-Salt independently analysed by an UKAS\* accredited laboratory.



#### **Specification - Typical analysis**

Total impurities	< 0.1 %
Bromide	< 0.01 %
Fluoride	< 0.01 %
lodide	< 0.01 %
Copper	< 0.3 ppm

Code	Description
SALA530	25 kg drum of salt with scoop
SALA500	25 kg bag of salt
(Bulk quantities available upon request.)	

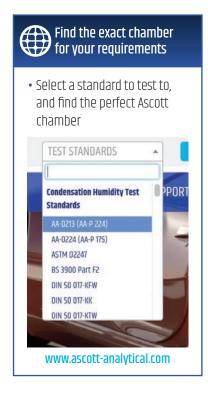
Order now at www.ascottshop.com | E: sales@ascott-analytical.com | T: +44 (0) 1827 318040

<sup>\*</sup>UKAS = United Kingdom Accreditation Service.

## For everything you need to know

visit www.ascott-analytical.com







- Summary details of well over a 100 key corrosion test standards
- Visit www.ascott-analytical.com/ ...and select the standard from the drop down menu



- Chamber key features
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Local representative/supplier:

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