



# Atmosfär Premium

Fully automatic laboratory-accelerated atmospheric corrosion testing to;

- FORD CEPT 00.00-L-467
- Renault D17 2028 (ECC-1)
- RNES – G -00005 / 0006 / 0007
- Toyota 1555G (Method C)
- Volvo VCS 1027,149 (ACT-1)
- Volvo VCS 1027,1449 (ACT-2)
- TP-JLR-52.265
- SCANIA STD4319
- VDA 233-102
- Honda 5100Z
- Hyundai/Kia CCT-B
- VW PV 1200
- VW PV 1209



Plus all standards achieved by Ascott standard CCT chambers. For a full listing, please see page 4.

From the moment Ascott first introduced its ground-breaking Atmosfär chamber in 2013, it has become synonymous with meeting the most demanding of corrosion tests, particularly as used in the automotive industry, where the testing standards are very high indeed. Over the intervening years, the Atmosfär chamber range has evolved as the corrosion test standards themselves have evolved and become ever more demanding.

The breadth of climates that can be created within an Atmosfär chamber is matched only by the precision with which these different climates can be controlled. An Atmosfär chamber is truly without equal in the world of corrosion testing, in terms of its flexibility and the wide range of corrosion test standards that can be accomplished.

The latest generation of Atmosfär chamber, which we call the Atmosfär Premium model range, continues this tradition, and includes the most comprehensive specification, multiple test standard compliance, accuracy and repeatability of test results.

There are two sizes of Atmosfär chamber each offered with various choices of refrigeration system and the choice of air cooled or water cooled sub-zero units, making a ten model line-up in total.

**Atmosfär Premium Lite**  
AT1300IP/10 and AT2600IP/10.

**Atmosfär Premium -20°C**  
AT1300IP/8, AT1300IP/11, AT2600IP/8 and AT2600IP/11.

**Atmosfär Premium -40°C**  
AT1300IP/9, AT1300IP/12, AT2600IP/9 and AT2600IP/12.

# ascott

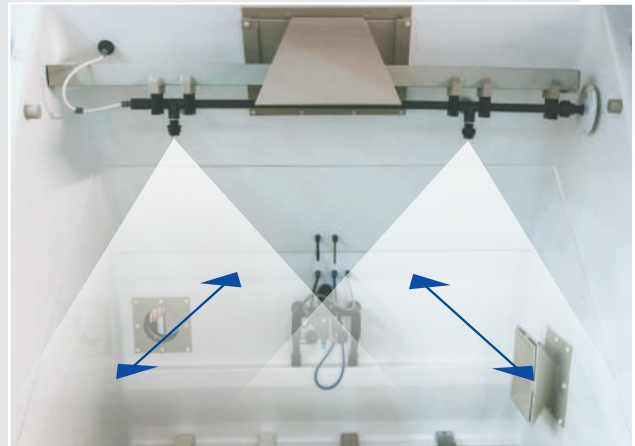
Corrosion Test Chambers

Testing climate resistance **to the limit**

# Atmosfär Premium key features

## Swaying spray bar with magnetically coupled drive system **MAG-DRIVE**<sup>®</sup>

- Set high up in the center of the chamber, above the test samples.
- Multiple spray nozzles deliver the salt solution spray directly and uniformly on to the test samples beneath.
- Spray bar nozzles fitted with integral filters, rotate backwards and forwards inside the chamber at a user defined speed to optimise pluviometry for specific test protocols.
- Innovative design, the oscillating spray bar and air delivery system are quickly and easily removed to enable the chamber to comply with other Cyclic Corrosion Test Standards.



### Other features include:

- RJ45 Communications port coupled with Chamber data logging software for remote logging / programming.
- 110mm Entry Port.
- Automatic air purge function with canopy interlock.
- Graphical display on chamber for temperature and relative humidity.
- Interior viewing window (Lite model only).
- Refrigeration unit available with water cooled option (dependant on model ordered).
- Water spray jet nozzles to automatically wash the internal walls of the chamber with water.
- Salt solution consumption sensor.

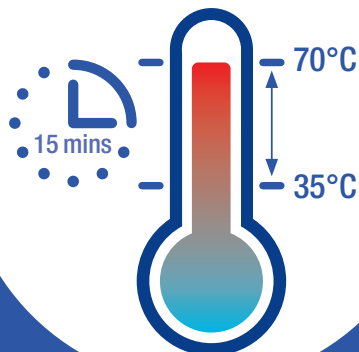
### Typical achieved modes and transitions:

- 35°C Salt Spray (100%RH) to 70°C Air Drying < **30 mins** ~ (Hyundai CCT B).
- 70°C Air drying to 50°C >95% RH < **20mins** ~ (Hyundai CCT B).
- 50°C >95% RH to Salt Spray 35°C (100%RH) < **30 mins** ~ (Hyundai CCT B, CCT 1, CCT 2, JASO 609, JASO 610).
- 60°C Air Drying to -20°C < **60 mins** ~ (Honda 5100Z- structure mode).  
*Subzero models only.*



## Separate air conditioning unit

- Combines refrigeration, dehumidification and post heating to extend the range of temperature and humidity control under programmable control, to achieve demanding humidity and temperature combinations.
- Coupled to the chamber by insulated, rigid piping.
- Ensures precisely controlled temperature and humidity conditioned air during the climate controlled phase of testing.
- Mechanical refrigeration enables rapid rates of change of temperature and humidity inside the chamber.



## Ultra-rapid ramping heater system

- Enables ultra-rapid transition time from 35°C salt spray to 70°C drying within 15 minutes. This is required for Hyundai CCT-A.
- Also allows for maximum temperature and relative humidity of 80°C and 80% RH to be achieved.

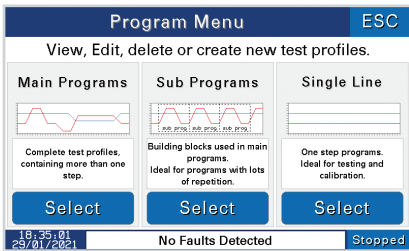


## Dual atomiser salt spray system



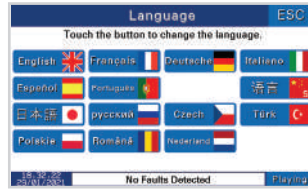
- Adjustable from ambient to 60°C with a wide fallout range of 0.5 – 5.5ml per 80cm<sup>2</sup> per hour.
- Required for tests such as VDA 233-102, Renault D17 2028 (ECC1), SAEJ 2334 and RNES-G-0005.

## Advanced Control System

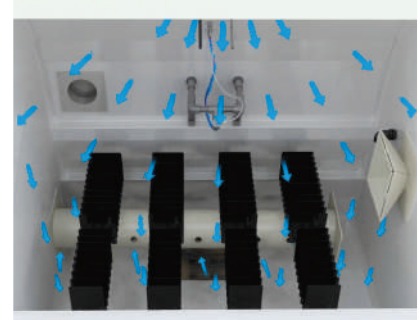


- True colour, 7" wide screen WVGA Screen user control interface, using the latest version of our highly intuitive operating software.
- 480p (0.38 megapixel) high resolution icon based interface available in multiple languages for ease of understanding and use.

- Large capacity memory, allowing for extensive customer programs to be stored, 254 main programs of up to 200 steps, and 254 single line programs.
- Temperature and Humidity monitoring in SCADA using OPC-UA.
- Chamber logging software included for logging and remote chamber programming via a computer connected via LAN.



## High velocity vertical air-flow

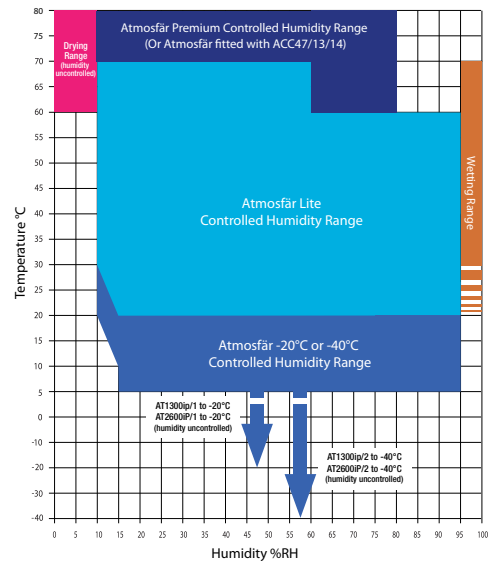


- Pre-conditioned air from the separate air conditioning unit, is delivered to the chamber and passes vertically and evenly through the test samples, evenly though the test samples, evenly from top to bottom during the climate controlled testing phase.
- Air flow and uniform distribution, ensures homogeneous distribution of temperature and humidity controlled air throughout the chamber and test samples.

## Test chamber performance

	Temperature Range	Humidity Range	Salt Spray Fallout rates
<b>Wetting Mode</b>	Adjustable from Ambient to +70°C / +158°F	Fixed at 95% - 100% RH	N/A
<b>Oscillating Salt Spray Mode</b>	Adjustable from Ambient to +60°C / +140°F	N/A	Adjustable from 5 to 10 Ltrs/m <sup>2</sup> per hour
<b>Dual Atomiser Salt Spray Mode</b>	Adjustable from Ambient to +60°C / +140°F	N/A	Adjustable from 0.5 to 5.5ml per 80cm <sup>2</sup> per hour
<b>Drying Mode</b>	Adjustable from Ambient to +80°C / +176°F	Uncontrolled	N/A
<b>Climatic Mode</b>	See adjacent graph	See adjacent graph	N/A
<b>Ambient Air Drying Mode</b>	Alters to laboratory ambient conditions	Alters to laboratory ambient conditions	N/A

Operating range graph



# Automotive/OEM Test Standards

Below, the most popular Automotive/OEM test standards have been grouped (by the refrigeration capacity required) so that the most appropriate model of AtmosfärPremium chamber can be selected for compliance:

AtmosfärPremium Lite	AtmosfärPremium -20°C	AtmosfärPremium -40°C
<ul style="list-style-type: none"> <li>• AT1300IP/10</li> <li>• AT2600IP/10</li> </ul>	<ul style="list-style-type: none"> <li>• AT1300IP/8</li> <li>• AT2600IP/8</li> <li>• AT1300IP/11</li> <li>• AT2600IP/11</li> </ul>	<ul style="list-style-type: none"> <li>• AT1300IP/9</li> <li>• AT2600IP/9</li> <li>• AT1300IP/12</li> <li>• AT2600IP/12</li> </ul>
CCT-1	CCT-1	CCT-1
CCT-2	CCT-2	CCT-2
CCT-4	CCT-4	CCT-4
JASO M-609 / M-610	JASO M-609 / M-610	JASO M-609 / M-610
FORD CEPT 00.00-L-467	FORD CEPT 00.00-L-467	FORD CEPT 00.00-L-467
IEC 60068-2-52 (All methods)	IEC 60068-2-52 (All methods)	IEC 60068-2-52 (All methods)
Renault D17 2028 (ECC-1)	Renault D17 2028 (ECC-1)	Renault D17 2028 (ECC-1)
RNES – G -00005 / 0006 / 0007	RNES – G -00005 / 0006 / 0007	RNES – G -00005 / 0006 / 0007
SAE J 2334 (Method C)	SAE J 2334 (Method C)	SAE J 2334 (Method C)
Toyota 1555G (Method C)	Toyota 1555G (Method C)	Toyota 1555G (Method C)
Volvo VCS 1027,149 (ACT-1)	Volvo VCS 1027,149 (ACT-1)	Volvo VCS 1027,149 (ACT-1)
Volvo VCS 1027,1449 (ACT-2)	Volvo VCS 1027,1449 (ACT-2)	Volvo VCS 1027,1449 (ACT-2)
TP-JLR-52.265	TP-JLR-52.265	TP-JLR-52.265
GMW14872	GMW14872	GMW14872
SCANIA STD4319	SCANIA STD4319	SCANIA STD4319
VW PV 1210	VW PV 1210	VW PV 1210
Hyundai/Kia CCT-A	Hyundai/Kia CCT-A	Hyundai/Kia CCT-A
Honda 5100Z Simple Mode	Honda 5100Z Simple Mode	Honda 5100Z Simple Mode
ISO 6270-2	ISO 6270-2	ISO 6270-2
ISO 11997 Cycle A, B & D	ISO 11997 Cycle A, B & D	ISO 11997 Cycle A, B & D
	VDA 233-102	VDA 233-102
	Honda 5100Z Basic Mode	Honda 5100Z Basic Mode
	Hyundai/Kia CCT-B	Hyundai/Kia CCT-B
		VW PV 1200
		VW PV 1209

## Test Chamber Optional Accessories

### Optional facilities required for some CCT test standards

Facility	Product code	Description	Notes
For tests requiring water fog humidity	ACC32 <input type="checkbox"/> F <input checked="" type="checkbox"/>	Provides high humidity conditions (95 -100% RH) by spraying water as a fog. Includes an additional reservoir for the water to be sprayed, fog atomizer(s) and associated equipment	
Interface for ACC34	ACC34/INT <input type="checkbox"/> F <input checked="" type="checkbox"/>	Pre-equips the chamber for connection to an ACC34 liquid immersion facility (available separately).	Not suitable for use with option ACC46.
For tests requiring liquid immersion	ACC34 <input type="checkbox"/> A <input checked="" type="checkbox"/>	For automatically immersing test samples held at low level inside the chamber with salt water heated to a user adjustable temperature up to +50°C/+122°F.	Requires the chamber to be preequipped with option: ACC34/INT.
For tests requiring different salt spray solutions	ACC86 <input type="checkbox"/> F <input checked="" type="checkbox"/>	Enables 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 Factory fitted only.

A Available separately.

Available in a variety of sizes/ configurations – further details available on request.

Accessories separate to the chamber, require their own space and require connection to the chamber and/or other external services. Details available upon request.



## Optional accessories providing data measurement and recording

Accessory	Ascott ref	Description	Notes
Hand held pH meter	ACC11 A	Digital pH meter, for measuring the pH of salt solution fallout over range 0-14 pH with a resolution of 0.01 pH.	
Hand held temperature and humidity probe	ACC28 A	A hand-held thermo-hygrometer for checking the chamber temperature and humidity. Range: -40 to +85°C & 0 to 100% RH.	Requires any size entry port (see ACC10).
Re-transmission of temperature and humidity signals	ACC36 F	Re-transmission of chamber temperature & humidity as 2 x 0-10VDC signals via external socket. For remote data logging.	
Sikkens® Scratch Tool	ACC49 A	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; <ul style="list-style-type: none"> <li>• 1 blade @ 0.5mm thick, the Daimler Chrysler version</li> <li>• 1 blade @ 1mm thick, the original Sikkens® version</li> <li>• 1 blade @ 2mm thick, requirement for 2018 update of ISO 12944-6.</li> </ul>	
Temperature data logger	ACC50 F	A battery powered, chamber mounted temperature data logger. Continuously records chamber air temperature. Logs can be downloaded to a computer with appropriate software (provided).	
Hand-held salinity refractometer	ACC100 A	A drop of the salt solution is placed on the viewing window, and its salinity read against a scale, graduated in % sodium chloride, to give an accurate reading in the range 0 to 28%.	
Fallout measuring kit	ACC108 A	Comprises of 4 x 100ml measuring cylinders and 4 x 100mm funnels, for manually collecting and measuring salt spray fall-out inside the chamber, during salt spray testing.	
SIM card connectivity	ACC114 F	A SIM card reader, integrated into the chamber. Can be configured to send SMS messages to user nominated cellular phones, when specified alarm conditions arise.	Excludes SIM card which user must procure and fit locally.



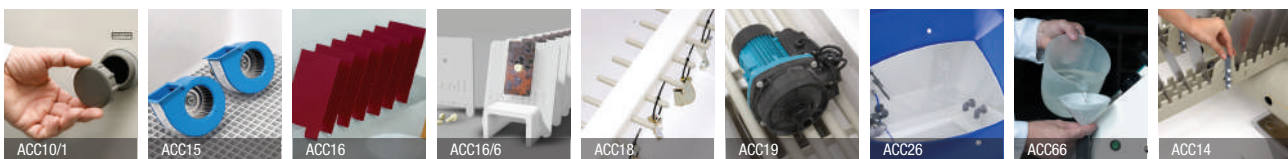
## Optional accessories providing external services

Accessory	Product code	Description	Notes
Chamber installation kit	ACC58	3M drain / 9.8 ft / exhaust tubing with a selection of couplers, and 3M / 9.8 ft / compressed air hose with hose clips.	Exact part number dependant on chamber size.
Deluxe Salt Solution Reservoir (Medium)	ACC59/5 A ♦  ACC59/6 ACC59/7 ACC59/8	A 115 Litre / 30 US gal capacity salt solution reservoir, with a graduated scale in litres, a hinging lid for ease of filling and cleaning and mounted on wheels for mobility. 115 Litres / 30.3 US Gal. As ACC59/5, but with air agitation. As ACC59/5, but with low level alarm. As ACC59/5, but with low level alarm and air agitation.	
Deluxe Salt Solution Reservoir (Large)	ACC59/9  ACC59/10 ACC59/11 ACC59/12	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 wheels for mobility. 160 Litres / 42.2 US Gal. As ACC59/9, but with air agitation. As ACC59/9, but with low level alarm. As ACC59/9, but with low level alarm and air agitation.	
Air compressor	ACC04 A ♦	Provides continuous supply of oil free compressed air to enable functioning without connection to a local compressed air supply.	
Deionizer	ACC06/ see below A ♦ ACC06/1 ACC06/2 ACC06/3	Provides high purity water for topping up chamber air saturator, humidity system and for making up salt solution. For small model. For medium model. For large model.	Must be regenerated or replaced when exhausted.
Waste water trough	ACC20 F ♦	Where a local floor level drain is unavailable ACC20 provides a tank into which the chamber drain outlet is terminated. When full, waste water is automatically pumped to a remote drain located up to 10m/32ft horizontally and 3m/10ft vertically.	Not suitable for use with option ACC46.
Exhaust salt scrubber	ACC92/ see below A ♦ ACC92/1 ACC92/2 ACC92/3  ACC92/4	Removes the majority of highly corrosive salt fog from the chamber exhaust where it is not possible to vent this outside the building. <u>Non-recirculating</u> - total loss of water used to condense the salt fog - for salt spray chambers. <u>Non-recirculating</u> - total loss of water used to condense the salt fog - for CCT chambers. <u>Recirculating</u> - reuses some of the water used to condense the salt fog, to minimize waste - for salt spray chambers. <u>Recirculating</u> - reuses some of the water used to condense the salt fog, to minimize waste - for CCT chambers.	Not suitable for use with option ACC46.



## Optional accessories that are additional chamber fittings

Accessory	Product code	Description	Notes
Guardian Angel System - Standard LED Version	ACC05/1 F	Modular traffic light alarm system fitted to the top of chambers, to provide visual notification of chamber status.	
Guardian Angel System - LED Version, with USB Connectivity	ACC05/2 F	Modular traffic light alarm system fitted to the top of chambers, to provide visual notification of chamber status, with USB connectivity for remote monitoring.	
Guardian Angel System - LED Version, with Ethernet Connectivity	ACC05/3 F	Modular traffic light alarm system fitted to the top of chambers, to provide visual notification of chamber status, with Ethernet connectivity for remote monitoring.	
Guardian Angel System - USB add on only	ACC05/4 A	Retrofit add on for Guardian Angel, allows addition of USB connectivity for remote monitoring.	
Guardian Angel System - Ethernet add on only	ACC05/5 A	Retrofit add on for Guardian Angel, allows addition of Ethernet connectivity for remote monitoring.	
Entry ports	ACC10/ see below F ACC10/1 ACC10/2	Sealable entry port through the chamber's left hand wall to enable the connection of external equipment. 35mm/1.37" diameter 110mm/4.33" diameter	Not suitable for use with option ACC46.
Variable angle slotted sample racks	ACC14 □ A	Accommodates variable thickness test panels up to 6mm/0.25" thick. Adjustable angles from vertical to 20° from vertical dependant on panel thickness).	
Mesh type racking	ACC15 □ A	Removable mesh type racking for testing small components. Locates on the shelf supports inside the chamber.	
Fixed angle slotted sample racks	ACC16 □ A	Each slot is 3mm/1/8" wide and a fixed angle of 15 degrees from vertical. Typically used for testing standard panels/coupons.	
General Motors Test Plate Kit	ACC16/6 □ A	10 specially designed Polycarbonate test plate holders and nylon fixings, for mounting General Motors test plates in accordance with the requirements of GMW14872 - in an existing Ascott slotted sample rack, ref ACC16.	The slotted sample rack is not included.
Rod type sample racks	ACC17 □ A	For suspending small test samples hung beneath, or supporting larger test samples placed on top.	
Spiked type sample racks	ACC18 □ A	For suspending test samples from the 10mm/0.4" dia x 55mm/2" long spikes, equally spaced on both sides of the rack.	
Adjustable sample racks	ACC14 □ A	Accommodates variable thickness test panels up to 6mm/0.25" thick. Angle adjustment from vertical to up to 20° from vertical depending on test panel thickness. Design minimizes standing moisture accumulation.	
Reinforced false floor	ACC19 □ A	Removable reinforced false floor, providing a horizontal platform over the chamber base for supporting large/heavy test samples.	Note: only fits Atmosfär <i>Lite</i> chambers if air collection duct is removed.
Interior illumination	ACC26 □ F	Illuminates the chamber interior when a control panel push-button is pressed.	
Manual filling air saturator	ACC66 F	Enables 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.	Note: adds 75mm/3" to chamber external width.
Insulated window cover	ACC82 □ A	Removable insulated cover shaped to match the window aperture. Reduces condensation on the inside of the window during testing and improves thermal efficiency.	Note: Atmosfär <i>Premium Lite</i> only.
Compressed air coupling	ACC94 F	A control panel mounted, quick release coupling for connection of an air pressure gauge (not supplied) for checking/calibrating the chamber's air pressure gauge.	
Vertically operating canopy	ACC110 □ F	Special design of canopy opens to a vertical position enabling access from above (e.g. by hoist) for large and/or heavy test samples.	

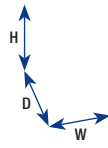


## Optional service and spares kit

Accessory	Product code	Description	Notes
1 year consumables spares kit	ACC57/2 A	A kit of consumables sufficient for up to 1 year.	
3 year chamber service and spares kit	ACC12/2 A	Initial kit of spare parts for servicing and maintaining the chamber for up to 3 years from its first use, or its last service.	
6 year chamber service and spares kit	ACC12/3 A	A comprehensive kit for servicing and maintaining the chamber for up to 6 years from its first use, or its last service.	



# Atmosfär Premium Test Chamber Specifications



Atmosfär Premium Test Chambers		1300Ltrs/45.9 cu.ft	2600Ltrs/91.8 cu.ft
Chamber capacity		1300 Ltrs/45.9 cu.ft	2600 Ltrs/91.8 cu.ft
Chamber weight		340 kgs / 749 lbs	440 kgs / 970 lbs
Mounting format		Floor standing	Floor standing
Loading threshold		800mm/31.5"	800mm/31.5"
Chamber external dimensions, max	W D H	2025mm/80.0" 1316mm/51.8" 1965mm/77.4"	2885mm/113.6" 1316mm/51.8" 1965mm/77.4"
Chamber internal dimensions, max	W D H	1300mm/51.2" 980mm/38.5" 1500mm/59.0"	2160mm/85.0" 980mm/38.5" 1500mm/59.0"
Refrigeration unit <small>Separate unit, one supplied to be located on the left hand side of the Atmosfär Premium Lite chamber</small>	W D H	650mm/25.6" 870mm/34.3" 1100mm/43.3"	650mm/25.6" 870mm/34.3" 1100mm/43.3"
Refrigeration unit <small>Separate unit, one supplied to be located on the left hand side of the Atmosfär Premium chamber</small>	W D H	1125mm / 44.3" 1354mm / 53.3" 1624mm / 63.9"	1125mm / 44.3" 1354mm / 53.3" 1624mm / 63.9"
Salt solution reservoir 90Ltrs/23 US Gal <small>Separate unit, one supplied to deliver salt water to the conventional salt spray atomiser</small>	W D H	540mm / 21.2" 540mm / 21.2" 635mm / 25"	540mm / 21.2" 540mm / 21.2" 635mm / 25"
Salt solution reservoir 160 Ltrs/42.2 US gal <small>Separate unit, one supplied to deliver salt water to the spray bar</small>	W D H	840mm/34.0" 500mm/19.7" 790mm/31.1"	840mm/34.0" 500mm/19.7" 790mm/31.1"
Chamber construction		Glass reinforced plastic, Polypropylene and ABS parts.	
Colour		9 standard colours to choose from, others available on request.	
Electricity supply		Voltage (VAC) and frequency (Hz) dependant on country/region of installation.	
Water		Deionized/distilled for topping up air saturator and making salt solution. The continuous water supply must be pressurized 4.0 – 5.0 bar (58-72 psi). If air saturator is intended to be topped up manually option ACC66 must be ordered.	
Air		Clean dry and oil free compressed air, 4.0 to 6.0 bar (58-87psi) with 440 Ltrs (15.5cu.ft) per minute flow. Two separate supplies are required, one for the chamber and one for the separate refrigeration unit.	
Exhaust		3m (10ft) exhaust pipe is provided which should be terminated outside building (see accessory ACC58).	
Drain		3m (10ft) drain pipe is provided which should be terminated into floor level drain (see accessory ACC58).	
Operating environmental conditions		Indoors, with ambient maintained at +18 to 23°C (+64 to 73°F). 85% max RH (non-condensing).	



### Ascott Worldwide

Ascott are represented worldwide by a network of authorized distributors/agents, who have been fully trained in all aspects of our products, including technical support and maintenance. Please contact us for further details.

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