Airedale by MODINE

SmartCool™ Downflow
Fixed Speed 16 to 60kW
i-Drive Variable Speed 5 to 83kW
Dual Fluid 16 to 60kW
R410A

Technical Manual
Original Instructions

CE

bsi. ISO 9001 Quality Management FM00542

ISO 14001 Environmental Management EMS52086

Customer Services

Warranty, Commissioning & Maintenance

As standard, Airedale guarantees all non consumable parts only for a period of 12 months, variations tailored to suit product and application are also available; please contact Airedale for full terms and details.
To further protect your investment in Airedale products, Airedale can provide full commissioning services, comprehensive maintenance packages and service cover 24 hours a day, 365 days a year (UK mainland).
For a free quotation contact Airedale or your local Sales Engineer.
All Airedale products are designed in accordance with EU Directives regarding prevention of build up of water, associated with the risk of contaminants such as legionella.
For effective prevention of such risk it is necessary that the equipment is maintained in accordance with Airedale recommendations.

SafeCool™

In addition to commissioning, a 24 hour, 7 days a week on-call service is available throughout the year to UK mainland sites. This service will enable customers to contact a duty engineer outside normal working hours and receive assistance over the telephone. The duty engineer can, if necessary, attend site, usually within 24 hours or less.
Full details will be forwarded on acceptance of the maintenance agreement.

CAUTION ⚠	Warranty cover is not a substitute for maintenance. Warranty cover is conditional to maintenance being carried out in accordance with the recommendations provided during the warranty period. Failure to have the maintenance procedures carried out will invalidate the warranty and any liabilities by Airedale International Air Conditioning Ltd.

Spares

A spares list for 1, 3 and 5 years will be supplied with every unit and is also available from our Spares department on request.

Training

As well as our comprehensive range of products, Airedale offers a modular range of Refrigeration and Air Conditioning Training courses, for further information please contact Airedale.

Customer Services

For further assistance, please e-mail: connect@airedale.com or telephone:

UK Sales Enquiries	+ 44 (0) 113 239 1000	connect@airedale.com
International Enquiries	+ 44 (0) 113 239 1000	connect@airedale.com
Spares Hot Line	+ 44 (0) 113 238 7878	spares@airedale.com
Airedale Service	+ 44 (0) 113 239 1000	service@airedale.com
Technical Support	+ 44 (0) 113 239 1000	tech.support@airedale.com
Training Enquiries	+ 44 (0) 113 239 1000	connect@airedale.com

For information, visit us at our web site: www.airedale.com

Health and Safety

IMPORTANT

The information contained in this manual is critical to the correct operation and maintenance of the unit and should be read by all persons responsible for the installation, commissioning and maintenance of this Airedale unit.

Safety

The equipment has been designed and manufactured to meet international safety standards but, like any mechanical/ electrical equipment, care must be taken if you are to obtain the best results.

CAUTION ⚠	When working with any air conditioning units ensure that the electrical isolator is switched off prior to servicing or repair work and that there is no power to any part of the equipment. Also ensure that there are no other power feeds to the unit such as fire alarm circuits, BMS circuits etc. Electrical installation commissioning and maintenance work on this equipment should be undertaken by competent and trained personnel in accordance with local relevant standards and codes of practice.

A full hazard data sheet in accordance with COSHH regulations is available should this be required.

Personal Protective Equipment

Airedale recommends that personal protective equipment is used whilst installing, maintaining and commissioning equipment.

Manual Handling

Some operations when servicing or maintaining the unit may require additional assistance with regard to manual handling. This requirement is down to the discretion of the engineer.
Remember do not perform a lift that exceeds your ability.

Refrigerant Warning

The Airedale unit uses R410A refrigerant which requires careful attention to proper storage and handling procedures. Use only manifold gauge sets designed for use with R410A refrigerant. Use only refrigerant recovery units and cylinders designed for high pressure refrigerants.
R410A must only be charged in the liquid state to ensure correct blend makeup.
The refrigerant must be stored in a clean, dry area away from sunlight. The refrigerant must never be stored above 50°C.

Maximum and Minimum Operation Temperature (TS) and Pressure (PS)

Refrigeration

Allowable Temperature Range (TS) = Min -5°C* to Max 120°C**
Maximum Allowable Pressure (PS) = High Side 40.5 Barg
*Based on the refrigerant temperature in the unit off state in the lowest permitted ambient temperature.
**Based on the refrigerant temperature in the unit off state

Waterside

Allowable Temperature Range (TS) = Min -5°C* to Max 40°C**
Maximum Allowable Pressure (PS) = 10 Barg
*Based on the waterside temperature in the unit off state in the lowest permitted ambient temperature.
**Based on the waterside temperature in the unit off state in the highest permitted ambient temperature.

Pressure System Safety Regulations 2000

Refrigeration assemblies/systems may constitute a Pressure System as defined in the Pressure System Safety Regulations 2000.

Global Warming Potential

The R410A refrigerant has a GWP of 2088 (based on EN378-1:2016, 100 year life)

Dangerous Substances and Explosive Atmospheres Regulations

The completion of a DSEAR (Dangerous Substances and Explosive Atmospheres Regulations) risk assessment must be completed as a legal requirement by the employer of the business where this equipment will be installed. This is not the responsibility of Airedale International Air Conditioning Ltd to undertake as the manufacturer of the equipment.

Environmental Considerations

Units with supply water temperatures below +5°C

- Glycol is recommended when a supply water temperature of +5°C or below is required or when static water can be exposed to freezing temperatures.

Units subject to ambient temperatures lower than 0°C

- Glycol of an appropriate concentration (1) must be used within the system to ensure adequate freeze protection. Please ensure that the concentration is capable of protection to at least 3°C lower than ambient.
- Water / glycol solution should be constantly circulated through all waterside pipework and coils to avoid static water from freezing.
- Ensure that pumps are started and running even during shut down periods, when the ambient is within 3°C of the solution freeze point (1) (i.e. if the solution freezes at 0°C, the pump must be operating at 3°C ambient).
- Additional trace heating is provided for interconnecting pipework.

(1) Refer to your glycol supplier for details.

Environmental Policy

It is our policy to:

- Take a proactive approach to resolve environmental issues and ensure compliance with regulatory requirements.
- Train personnel in sound environmental practices.
- Pursue opportunities to conserve resources, prevent pollution and eliminate waste.
- Manufacture products in a responsible manner with minimum impact on the environment.
- Reduce our use of chemicals and minimise their release to the environment.
- Measure, control and verify environmental performance through internal and external audits.
- Continually improve our environmental performance.

CE Directive

Airedale certify that the equipment detailed in this manual conforms with the following EC Directives:

Electromagnetic Compatibility Directive (EMC)	2014/30/EU
Machinery Directive (MD)	89/392/EEC version 2006/42/EC
Pressure Equipment Directive (PED)	2014/68/EU

To comply with these directives appropriate national & harmonised standards have been applied. These are listed on the Declaration of Conformity, supplied with each product.

Contents

Contents

Specifier's Guide

Nomenclature

Example: SV 18 D 083 - X200 - 0

SC / SV	SmartCool Fixed speed / Inverter
09	Case width in decimetres (900mm)
12	Case width in decimetres (1200mm)
15	Case width in decimetres (1500mm)
18	Case width in decimetres (1800mm)
D	Downflow unit
083	Nominal Cooling Capacity (kW)
-	Separator
X100	DX air-cooled (single circuit - single compressor
X200	DX air-cooled (single circuit - tandem compressor)
X1C0	Dual Fluid (DX air Cooled (single circuit - single compressor) / Chilled water
X2C0	Dual Fluid (DX air Cooled (single circuit - tandem compressor) / Chilled water
XDC0	Dual Fluid (DX air Cooled (Twin circuit - single compressor) / Chilled water
-	Separator
0	400V/3~ & 230V/1~ 50Hz
1	380V/3~ & 220V/1~ 60Hz

Introduction

Designed to provide environmental precision air conditioning for applications such as telecommunication facilities, data centers, computer rooms, clean rooms and laboratories.

Description		Min Capacity kW (1)	Max Capacity kW (1)
SmartCool Fixed Speed			
X1X1	Dual Circuit Direct Expansion Air Cooled	54	60
X200	Single Circuit, Tandem Compressors Direct Expansion	21	47
X100	Single Circuit Single Compressor Direct Expansion	17.5	26

SmartCool Variable Speed			
X200	Single Circuit, Tandem Compressors Direct Expansion	10	83
X100	Single Circuit Single Compressor Direct Expansion	5	48.6

SmartCool Dual Fluid		X*	C0	X*	C0
X1C0	Single Circuit, Single Compressor Direct Expansion / Chilled Water	17.1	26.7	30.4	47.2
X2C0	Single Circuit, Tandem Compressor Direct Expansion / Chilled Water	21.5	28.1	46.3	51.3
XDC0	Triple Circuit, Single Compressor Direct Expansion / Chilled Water	47.5	56.0	49.6	66.1

(1) Based on nominal unit capacities.

Full function units shall provide filtration as well as full control of temperature and humidity.
The modular design of the SmartCool allows grouping of differing model types and capacities to be installed side by side. The flexibility of this type of installation provides for multi-circuit functionality.
A full range of air cooled condensers shall be available with the direct expansion indoor units to provide a matched system with optional performance upgrade, refer to Outdoor Unit.
The SmartCool i-Drive range has been specifically designed to complement the existing range of SmartCool DX units and shall offer high air side efficiency, (up to 100m equivalent length) pipe runs and high return air temperatures.
The range has been designed and optimised for operation with ozone benign refrigerant R410A.

Precision Air Conditioning System

The computer room air conditioning equipment shall be designed specifically for precision temperature and humidity control applications. It shall automatically monitor and control cooling, heating, humidification, de-humidification and filtering functions for the conditioned space. The system shall be built to the highest quality engineering and manufacturing standards, and shall be subject to a functional test prior to leaving the factory.

Construction

The cabinet shall be manufactured using an external aluminium extrusion frame with aluminium corners. Panels shall be completely removable to gain unequalled access during installation as required. The galvanised sheet steel panels and aluminium frame and corners shall be coated with an epoxy baked powder paint to provide a durable finish.
Standard unit colour shall be Black Grey to RAL 7021 or Light Grey to RAL 7035. Cabinets shall be lined internally with 25mm fire resistant foam (BS 476) for thermal and acoustic insulation. The insulation density shall not be less than 75 kg/m³. The cabinet doors shall be full height, hinged and key lock secured. The hinge arrangement shall allow flexible door opening/removal for improved access. A propriety rubberised door seal shall reduce sound breakout and eradicate air leakage. In-seal type foam based door seals shall not be acceptable.
The control panel is mounted on hinges to allow easy removal of filters and access to several electrical components.
The unit design shall incorporate a series of M6 fixings to the top and bottom face to ease customer ductwork connection and reduce installation time.

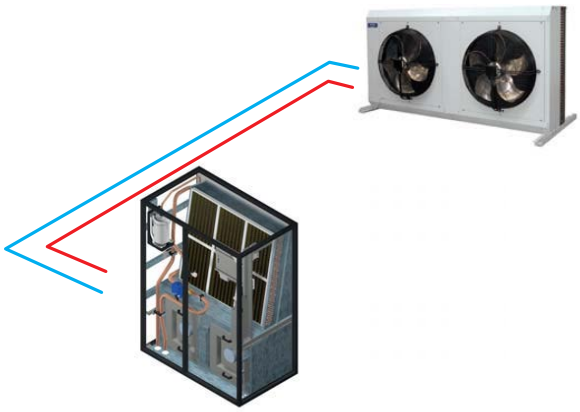
System Configurations

X100

The SmartCool X100 is an air cooled, direct expansion (DX), single circuit system linked to a remotely mounted air cooled condenser. Optimised for heat transfer using energy efficient refrigerant R410A, the X100 system is located within the conditioned space, absorbing room heat and transferring it outside to the condenser. The X100 is similar to the X200 except it has one compressor

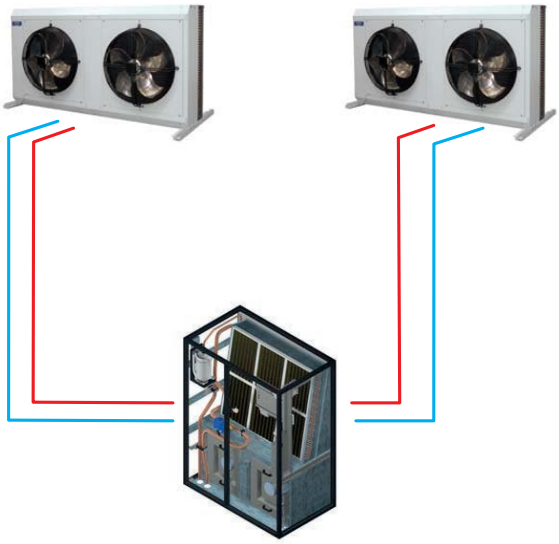
X200

The SmartCool X200 is an air cooled, direct expansion (DX), single circuit system linked to a remotely mounted air cooled condenser. Optimised for heat transfer using energy efficient refrigerant R410A, the X200 system is located within the conditioned space, absorbing room heat and transferring it outside to the condenser. By using two scroll compressors across the X200 single circuit, the unit can maintain high efficiency at high cooling capacities and capacity can be more precisely matched to application.



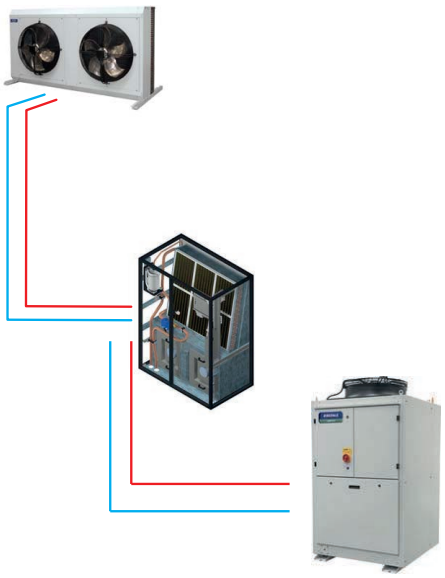
X1X1

The SmartCool X1X1 is an air cooled, direct expansion (DX), double circuit system linked to two separate, remotely mounted air cooled condensers. Optimised for heat transfer using energy efficient refrigerant R410A in each circuit, the X1X1 system is located within the conditioned space, absorbing room heat and transferring it outside to the condensers. By using two scroll compressors across the X1X1 double circuit, part load efficiency can be maximised and capacity more precisely matched to application.



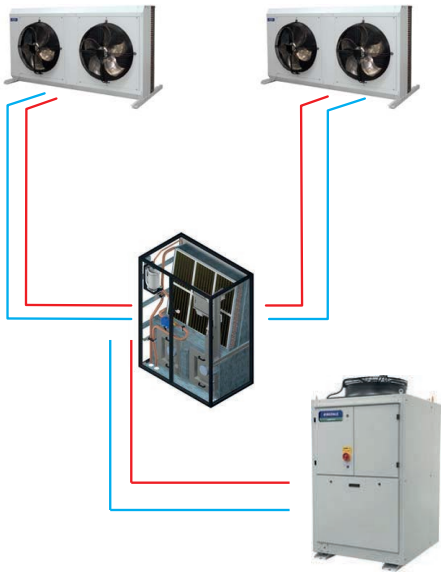
X1C0 / X2C0

For redundancy in critical applications, the SmartCool dual cool X1C0 / X2C0 offers two different cooling mediums, air cooled DX and chilled water, within the same case.
The X1/X2C0 systems are managed by the Airetronix microprocessor to select which medium acts as the primary source of cooling or which acts as back-up, should the primary source fail or is unable to cope with the heat load.



XDC0

For redundancy in critical applications, the SmartCool dual cool XDC0 offers three different cooling circuits, two air cooled DX and one chilled water, within the same case.
The XDC0 system is managed by the Airetronix microprocessor to select which medium acts as the primary source of cooling or which acts as back-up, should the primary source fail or is unable to cope with the heat load



External

Case Size	SC09/SV09	SC12/SV12	SC15/SV15	SC18/SV18
Width (mm)	900	1200	1500	1800

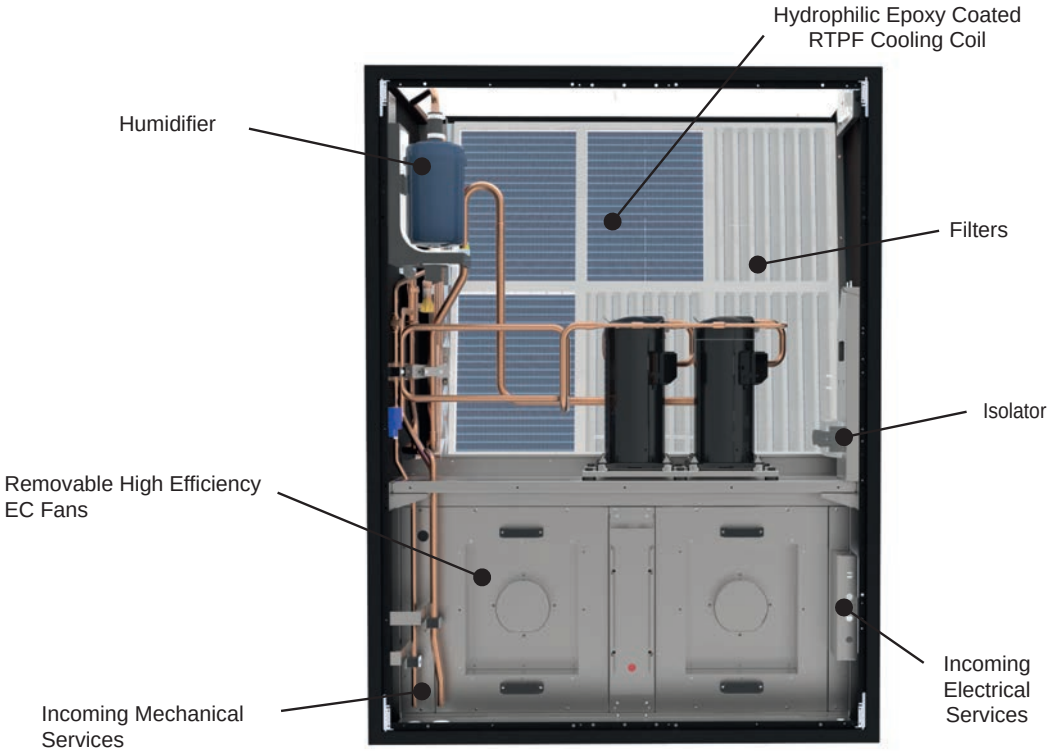
All units are 890mm deep and 1980mm tall

		System Configuration							
		SC Range			SV Range		Dual Fluid		
	Feature	X200	X100	X1X1	X100	X200	X1C0	X2C0	XDC0
External	PGD1 Display	●	●	●	●	●	●	●	●
	pGDx Vu Display	○	○	○	○	○	○	○	○
	Door Interlocked Mains Isolator Switch	●	●	●	●	●	●	●	●
	Aluminium Extruded Frame	●	●	●	●	●	●	●	●
	Open, front and rear discharging floorstands	○	○	○	○	○	○	○	○

● Standard Features ○ Optional Features – Feature Not Available

Refrigeration Components

Fixed Speed

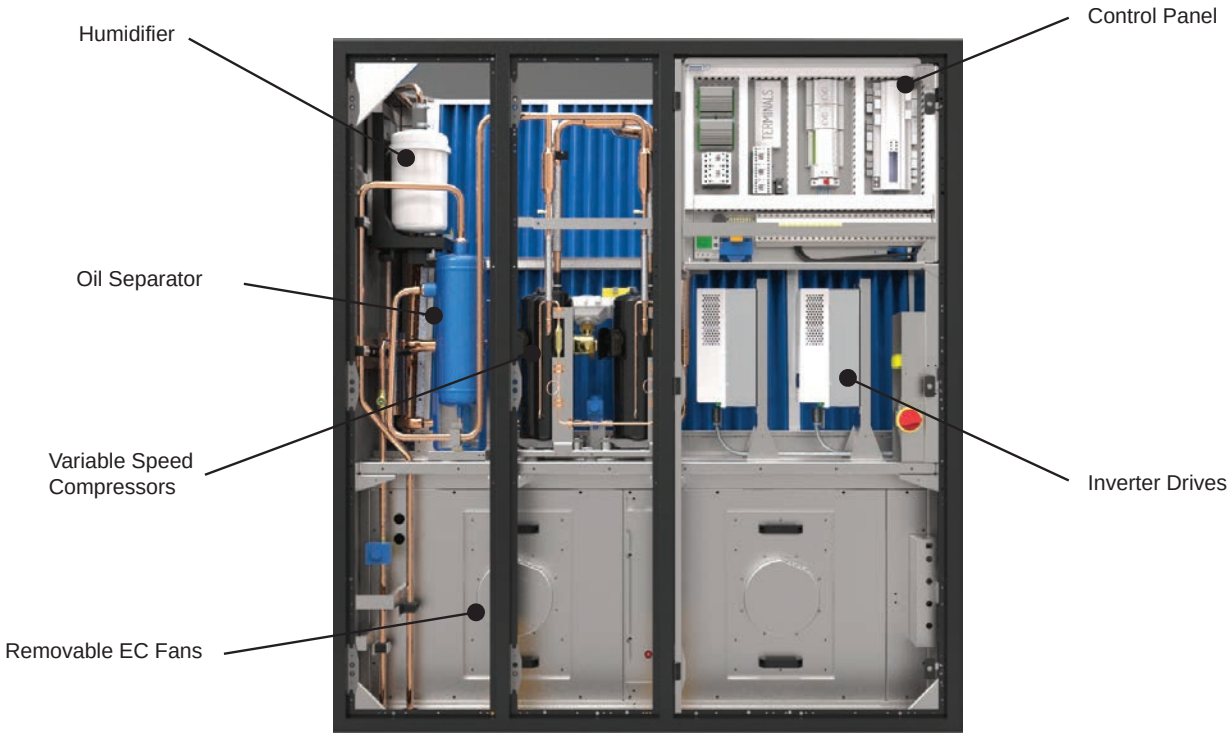


		System Configuration			
	Feature	X200	X100	X1X1	X2C0
Refrigeration	Fixed Speed Scroll Compressor	●	●	●	●
	Electronic Expansion Valves (EEV)	●	●	●	●
	Hydrophilic Epoxy Coated RTPF Cooling Coil	●	●	●	●
	Liquid Line Sight Glass	●	●	●	●
	Liquid Line Solenoid Valves	●	●	●	●
	Discharge Line Non Return Valves	●	●	–	●
	Suction Throttle Valve	○	○	○	○
	Direct Refrigerant Leak Detection	○	○	○	○
	Refrigerant Pump Down	○	○	○	○

● Standard Features ○ Optional Features – Feature Not Available

Refrigeration Components

Variable Speed



		System Configuration	
	Feature	X100	X200
Refrigeration	Fixed Speed Scroll Compressor	–	●
	Variable Speed Compressor	●	●
	Electronic Expansion Valves (EEV)	●	●
	Hydrophilic Epoxy Coated RTPF Cooling Coil	●	●
	Liquid Line Sight Glass	●	●
	Liquid Line Solenoid Valves	●	●
	Oil Separator	●	●
	Liquid Receiver	●	●
	Vibration Eliminators	●	●
	Filter Drier	●	●
	Discharge Line Non Return Valves	●	●
	Direct Refrigerant Leak Detection	○	○
	Refrigerant Pump Down	○	○

● Standard Features ○ Optional Features – Feature Not Available

Refrigeration Components
Dual Fluid

		System Configuration		
	Feature	X1C0	X2C0	XDC0
Refrigeration	Fixed Speed Scroll Compressor	●	●	●
	Variable Speed Compressor	—	●	—
	Electronic Expansion Valves (EEV)	●	●	●
	Hydrophilic Epoxy Coated RTPF Cooling Coil	●	●	●
	Liquid Line Sight Glass	●	●	●
	Liquid Line Solenoid Valves	●	●	●
	Filter Drier	●	●	●
	Discharge Line Non Return Valves	●	●	●
	Direct Refrigerant Leak Detection	○	○	○
	Refrigerant Pump Down	○	○	○

● Standard Features ○ Optional Features — Feature Not Available

Evaporator

A large surface area coil(s) shall be ideally positioned to optimise airflow and heat transfer; it shall be manufactured from refrigeration quality copper tube with mechanically bonded aluminium fins. The copper tube shall be internally rifled for improved heat transfer. Fins shall be coated with a non-stick acrylic (hydrophilic) film to provide additional corrosion protection and efficient surface water removal for improved performance. Plain aluminium shall not be acceptable.
The cooling coil shall be mounted over a full width stainless steel condensate tray.
The factory pressure test shall be not less than 45 barg. Sweated copper pipe for brazed connection shall be standard.

Compressor

The scroll compressors shall be installed with vibration eliminators on the suction and discharge (inverter units only). The compressor(s) shall be mounted on the unit base via the use of vibration isolators. Each compressor shall be designed for use with R410A refrigerant.

		System Configuration							
		SC Range			SV Range		Dual Fluid		
Compressor Configurations		X200	X100	X1X1	X100	X200	X1C0	X2C0	XDC0
Circuit 1 CP	Thermal Protection	●	●	●	●	●	●	●	●
	Single Compressor	—	●	●	●	—	●	—	●
	Tandem Compressors	●	—	—	—	●	—	●	—
Circuit 2 CP	Thermal Protection	—	—	●	—	—	●	—	●
	Single Compressor	—	—	●	—	—	●	—	●
	Tandem Compressors	—	—	—	—	—	—	—	—

● Standard Features ○ Optional Features — Feature Not Available

Liquid Line Solenoid Valve

A liquid line solenoid valve shall be fitted to enable partial/full refrigerant pump down.

Compressor Discharge Line Non Return Valve

Non return valves shall be fitted to ensure liquid refrigerant cannot enter the compressors through the discharge line in the compressor off state. (X1X1 unit the NRV is integral to the compressor. X200 and X100, X1C0, X2C0 and XDC0 units the NRV is fitted to the discharge pipework).

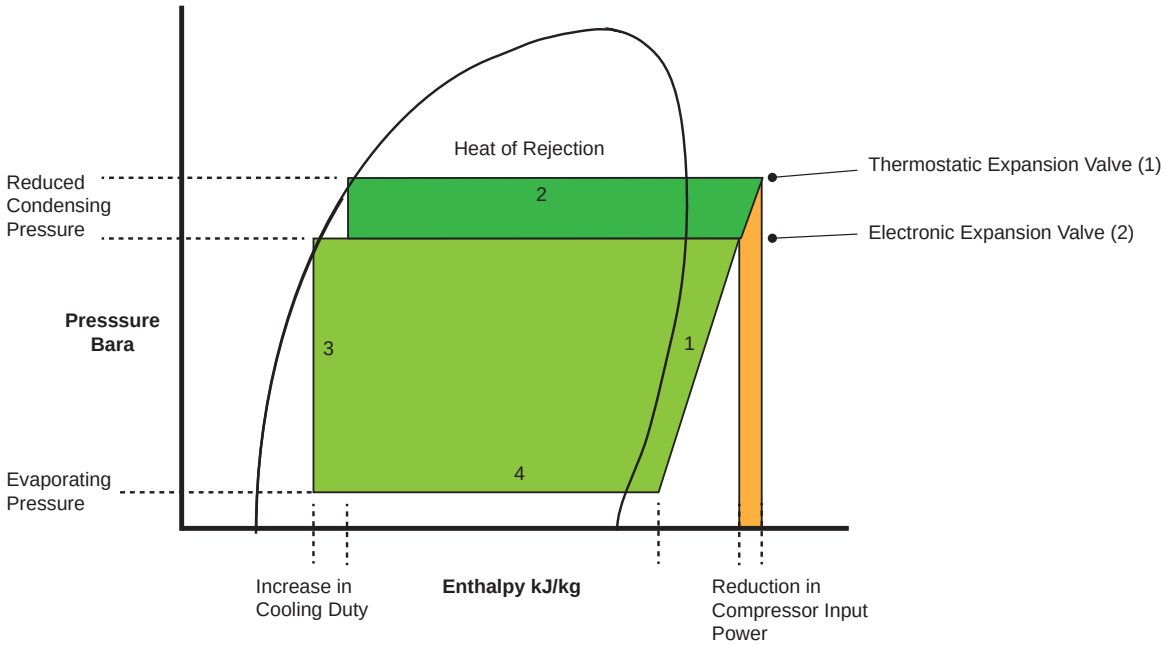
Electronic Expansion Valves (EEV)

Electronic expansion valves differ to the normal thermostatic expansion valves in their ability to maintain control of the suction superheat at reduced head pressures. This can lead to significant energy savings particularly at reduced loading and low ambient temperatures. EEV step position, superheat setpoint, head pressure set point and other features can be viewed and adjusted via the microprocessor display.

Whilst offering versatile control at the full design duty of the unit, Thermostatic Expansion Valve's (TEV) do not automatically optimise themselves to all operating conditions. Therefore, if the refrigeration system is operating at 40% or 50% of full load, especially at a lower ambient temperature than that for which the valve was sized, the conventional TEV must have the design head pressure available to ensure good refrigerant control. Maintaining an artificially high condensing pressure is normal in conventional systems.

Using an EEV allows for good refrigeration control whilst operating at part load and lower ambient conditions with a reduced condensing pressure. By fitting an EEV and adjusting the head pressure control setting an increase in the system EER (Energy Efficiency Ratio) of up to 30% can typically be seen. The Mollier diagram shown below helps to illustrate how this increase in efficiency is achieved.

EEV's differ to normal thermostatic expansion valves in their ability to maintain control of refrigerant flow and the suction superheat at reduced head pressures. The turn-down rate of a typical EEV is superior to that of it's thermostatic equivalent, such that a reduced optimum condensing pressure can be maintained at low compressor load. However low the load is on the compressor, from zero to 100%, there will not be a problem with turn down, even down to 10% of the valve's rated capacity.



(1) Cooling Cycle @ 22°C ambient with a conventional TEV fitted.

(2) Cooling cycle @ 22°C ambient, demonstrating a typical EEV condensing temperature taking full advantage of lower ambient air temperatures (below 35°C).

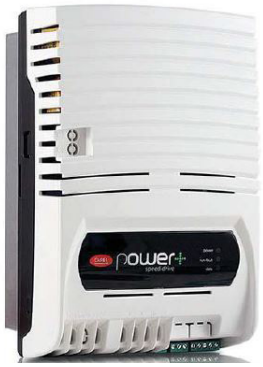
Variable Speed Components
Discharge Check Valves

The unit shall use magnetic valves. This valve uses a magnet to hold the valve closed. As the valve opens, the distance between the magnets becomes larger, so the attractive force trying to close the valve diminishes. As a result, the magnetic non return valves exhibit lower opening pressure differentials than the sprung non return valves as well as lower pressure drops across the valve at high flow rates.

Inverter Drives

The compressors shall be driven by an inverter drive, which has improved envelope management capabilities, a reduced footprint and a fast start sequence.

The inverter drive shall allow the compressors in the SmartCool Inverter range to vary running speed from 100% down to 26% of maximum achievable speed. To ensure efficient inverter control, the load in the room must be above the minimum cooling capacity of the unit. If the room load is lower, the SmartCool will revert back to on/off control at this lower capacity. The inverter drive is BMS compatible. Configuration and programming, as well as the start/stop controls and speed reference, are managed by a CAREL pCO controller or any BMS (Building Management System) via RS485 serial connection using the ModbusR protocol.



Variable Speed Components

Oil Separator

Helical oil separators shall be used to separate a high proportion of oil from discharge gas at all flow rates. At low flow rates, the velocity through the main chamber of the separator is low enough that the oil can sink to the bottom without being dragged through the system. In inverter units, at high flow rates the path of the refrigerant around the helix creates centripetal forces within the fluid mixture, forcing the more dense oil to “sink” towards the outer shell of the separator and drain down to the bottom of the separator.

IMPORTANT ⚠	A scavenge cycle must be initiated once every 24 hours on systems with interconnecting pipework less than 50m equivalent length, and once every 8 hours on systems with interconnecting pipework exceeding 50m equivalent length, or with a vertical rise of 4m or more in inverter units. The scavenge cycle will be handled automatically by SmartCool controls.

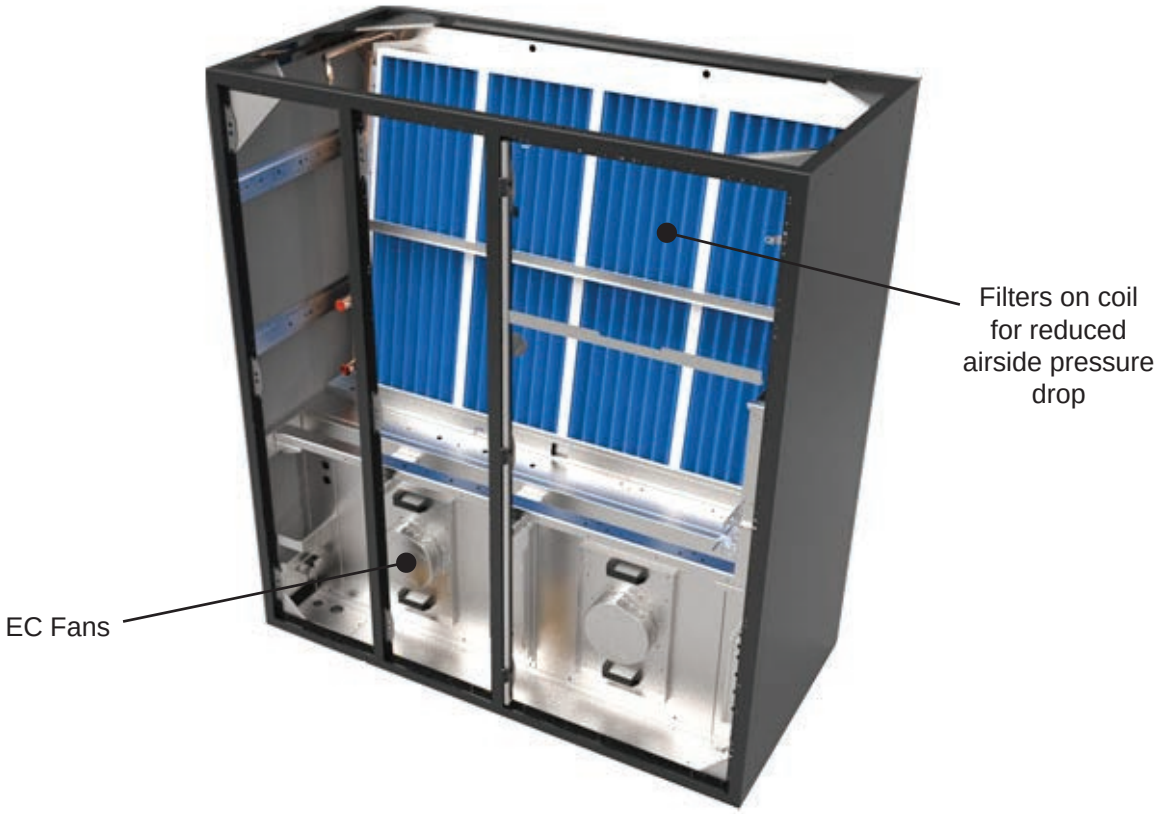
Vibration Eliminators

Vibration eliminators shall be installed on both the suction and the discharge of the compressors. This significantly reduces the compressor vibration from the rest of the unit, reducing stress on pipework as well as noise transmitted through the unit case.

Evaporator Coil (dehumidification)

When the evaporator coil is operating in dehumidification mode, the evaporating temperature is reduced below the dew point of the air enabling precise humidity control in all modes of operation. The use of a variable speed compressor on the i-drive units ensures that the supply air temperature is maintained at set-point during the dehumidification process. This feature is only available on units without constant pressure control.

Airflow Components



		System Configuration							
		SC Range			SV Range		Dual Fluid		
	Features	X200	X100	X1X1	X100	X200	X1C0	X2C0	XDC0
Airflow	EC Backward Curved Centrifugal Fans	●	●	●	●	●	●	●	●
	ISO-C-75 Air Filtration	●	●	●	●	●	●	●	●
	High efficiency Filtration with pre filter ISO-1-60 and ISO-C-65	○	○	○	○	○	○	○	○
	Airflow Monitoring	●	●	●	●	●	●	●	●
	Airflow Switch	●	●	●	●	●	●	●	●

● Standard Features ○ Optional Features – Feature Not Available

Fan & Motor Assembly

Backward curved impellers, direct drive centrifugal fan assemblies shall be used with integral EC motors. They shall be dynamically balanced for quiet operation. Fan speed and air flow shall be controlled by the use of a voltage controller which shall maintain optimised performance and reduce energy consumption. Designed for high corrosion resistance, the impellers shall be composite plastic with a galvanised rotor.

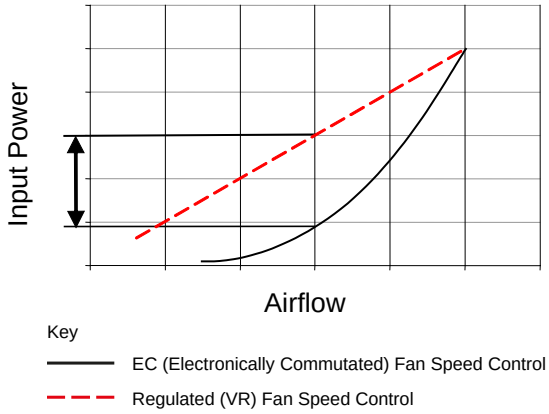
Electronically Commutated (EC) Fan Motor

EC motors incorporate integrated electronics to convert AC power to DC for efficient and accurate speed control and are adjustable via the microprocessor display keypad.

The fans offer maximum air flow performance while keeping sound levels to a minimum.

It gives the flexibility of connecting to AC mains with the efficiency and simple speed control of a DC motor. The EC fan offers significant power reduction in comparison with equivalent AC fan at both full and part load. The inbuilt EC fan control module allows for fan speed modulation from 15-100%. A standard AC fans modulating range is typically 40 -100% of full fan speed.

Standard voltage regulated (VR) fan speed controllers offer a linear response. The illustration to the right shows a comparison of the typical power input required by each motor type.



ISO-C-75 Filtration

Pleated disposable panel filters in a rigid frame. Conform to ISO16890-ISO-C-75. Access and removal from unit front.

As standard the microprocessor provides an alarm following a pre set run time limit being exceeded.

High Efficiency & Pre Filters

30mm, pleated disposable panel filters conforming to ISO16890-ISO-C-95 shall be provided. 15mm, disposable, synthetic type pre filters conforming to ISO16890-ISO-C-65 shall protect the main filter. To maintain design airflow, fan selection may alter with high efficiency filters. Access and removal from unit front.

As standard the microprocessor provides an alarm following a pre set run time limit being exceeded.

Air Flow Switch

An adjustable differential pressure switch shall activate a visual alarm at the status panel and break the power supply in the event of a fan or motor failure.

Distribution system

This system has been designed to be connected to a TN type distribution system. For alternate distribution type systems, contact Airedale.

Electrical Components

		System Configuration							
		SC Range			SV Range		Dual fluid		
	Features	X200	X100	X1X1	X100	X200	X1C0	X2C0	XDC0
Electrical	Door Interlocked Mains Isolator	●	●	●	●	●	●	●	●
	Electrical Switch Gear	●	●	●	●	●	●	●	●
	Hinged Electrical Panel	●	●	●	●	●	●	●	●
	Customer Connection Terminals	●	●	●	●	●	●	●	●
	Power Monitoring	○	○	○	○	○	○	○	○
	Phase Monitoring Relay	○	○	○	○	○	○	○	○
	Phase Rotation Relay	○	○	○	○	○	○	○	○
	Ultra Capacitive Module (Controller Power Backup)	○	○	○	○	○	○	○	○
	Dual Power Supply	○	○	○	○	○	○	○	○
	Variable Humidification	○	○	○	○	○	○	○	○
	Electric Heating	○	○	○	○	○	○	○	○
	Modulating Electric Heating	○	○	○	○	○	○	○	○

● Standard Features ○ Optional Features – Feature Not Available

Electrical

The control panel contains the necessary compressor starter contactors, transformer, sub circuit protection, volt free contacts for a common alarm and mains and interconnecting terminals. The panel is situated within the cabinet and can be opened to allow for essential maintenance of other components within the unit. The electrical control panels are wired to the latest European standards and codes of practice.

Sub Fusing

The electrical mains supply for the system's outdoor unit is supplied via the indoor unit.
MCBs are fitted for cable protection.

Electric Heating

These shall be multi-stage finned electric heating elements complete with auto and manual reset overheat cut-out protection, element shall be phase balanced for increased efficiency.

Electric Heating Thyristor Control

In addition to the electric heat option a 0 – 100% Thyristor shall be provided to deliver accurate heating control.

Dual Power Supply

The SmartCool range shall be designed with dual power supply capability, so that in the event of a power failure the supply can be switched from utility to an alternative power supply (such as second utility or generator).

A dual power supply changeover switch shall be provided to enable continuous power to the SmartCool in order to reduce unit downtime and therefore loss of cooling to a minimum.

For the dual power supply feature to operate effectively the two incoming power supplies must have the same voltage and frequency. During changeover of power there is an interval of ~180ms with no power. For critical applications a power backup module can be added to maintain power to the unit controls, allowing for immediate reinstatement of cooling following changeover. The option as standard offers switch position status and supply priority set, both of which are configurable via the unit's display. Supply priority set is fully configurable via the unit's display and is used to set which of the two power supplies power will be drawn from when both power supplies are active. Switch position status indicates to the end user which position the switch is currently in i.e. A or B and is shown via the unit's display.

Ultracap UPS Controller Power Backup

The ultracap module is an external backup device for the controller. The module guarantees temporary power to the controller in the event of power failures and allows for enough time to keep the controller running with time to change power supplies. The module is made using Ultracap storage capacitors (EDLC = Electric Double Layer Capacitor), which are recharged independently by the module.

These ensure reliability in terms of much longer component life than a module made with lead batteries: the life of the Ultracap module is at least 10 years. When the dual power supply is fitted the Ultracap UPS is fitted as standard.

Energy Manager

Analysis of system energy consumption can be monitored via a dedicated LCD display. Unit parameters can be adjusted via the unit microprocessor control to affect energy usage in line with the system need.

Phase Rotation Protection

A phase sequence relay shall be available for units containing 3 phase scroll compressors, to prevent possible damage by running the compressor in the wrong direction.

Humidification

Control Principles

In a humidifier with electrodes, water vapour shall be produced by passing a current between electrode plates to generate heat. The higher the current being passed between the electrodes, the greater the quantity of water vapour that is produced.

To modulate the rate of water vapour production, this system shall vary the level of water within the cylinder, thereby increasing the immersion level of the electrodes and the current being passed between them. The more conducting area that is available to pass current between the electrodes, the larger the amount of water vapour that shall be produced.

Modulated by the controller, the water level is varied so that the level of water vapour being produced ensures that the room humidity set-point is continually maintained within a tight tolerance.

Optimised Lifetime

The life span of the Airedale humidification system shall be optimised by the inclusion of a water conductivity sensor into the bottle feed. This sensor shall determine the conductivity level of the supply water and by using an algorithm embedded in the software, determines the frequency that the bottle should be drained.

Example: (Optimised Lifetime with High Water Conductivity Supply).

As liquid water is vapourised, mineral deposits are left in solution increasing the conductivity of the water. To counter this, the intelligent software increases the frequency of drain meaning that the replenishing supply water keeps the concentration of minerals diluted. By maintaining an acceptable mineral concentration, the bottle life span is maximised.

De-humidification

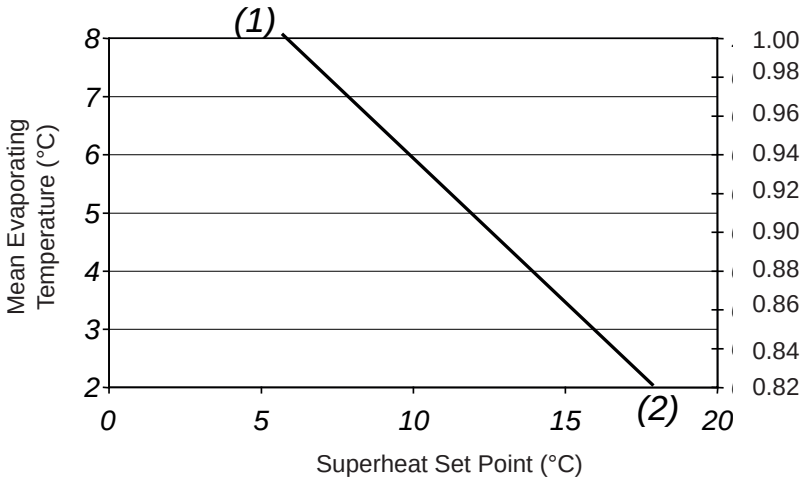
(With Electric Heating and Humidification - SmartCool fixed speed range*)

Controlled by the microprocessor the de-humidification feature reduces fan speeds by 20% (adjustable). The reduction of fan speed increases de-humidification which means that the time taken to reduce the room humidity to the required level is drastically decreased, along with the energy required to do so. The air temperature is monitored during de-humidification to ensure that the temperature does not fall to a critical level. If the temperature reaches the low limit de-humidification is cancelled until the return air temperature increases.

*Electric heating not required for dehumidification on inverter range.

Rapid De-humidification

Controlled by the microprocessor, electronic expansion valves are unlike their conventional thermostatic counterparts in that they can modulate independently of the suction line temperature. This unique feature allows the controller to raise the superheat set-point, in turn dropping the evaporating temperature to a point at which considerable de-humidification takes place.



(1) Normal Operating Conditions
(2) Rapid De-hum Condition

Humidifier - Intelligent Modulation

Humidification shall be provided by an electrode boiler. The sealed humidifier design shall ensure that only clean sterile water vapour is supplied to the conditioned area and corrosive salts and minerals are held in the disposable bottle. The water vapour shall be distributed through a sparge pipe fitted to the coil assembly.

Featuring modulating capacity output control as standard, the system shall provide continuous modulation of water vapour output in response to a proportional control signal. The output control shall range from 20%-100% of the humidifier rated value and be designed to give an approximate water vapour output of +/- 5% at 25°C (at the sensor), thus ensuring precise control of the conditioned space.

The cylinder operating life time shall be automatically optimised via the integrated water conductivity sensor, which combined with the controls shall monitor and regulate the water refill cycle to reduce excessive salt deposits and the progressive wear of the cylinder.

All humidifier parameters and alarms shall be accessible and adjustable via the microprocessor display keypad unit, main features shall include not less than:

- Supply water conductivity (µS/cm)
- Actual steam output (kg/h)
- Required steam output (kg/h)
- Actual current rating (A)
- Required current rating (A)
- Status mode (Start Up, Running, Filling, Draining)

Water Conductivity & Cylinder Type

Three different cylinders shall be available which correspond to the supply water conductivity.

The cylinder type shall be matched with the standard conductivity of the supply water to ensure optimum performance and increases the life span of the cylinder.

1	Low Conductivity (Soft Water)	100 to 350 µS/cm
2	Standard Conductivity (Moderate/Hard Water)	350 to 750 µS/cm
3	High Conductivity (Very Hard Water)	750 to 1250 µS/cm

Conductivity is a measure of the ability of water to pass an electric current, measured in micro Siemens/centimetre (µS/cm). As standard the humidifier shall be fitted with the standard conductivity cylinder which shall cover the majority of water supplies. Where the water conductivity is known, please specify at order. For further details please contact Airedale.

IMPORTANT ⚠	The supply water pressure to the humidifier assembly must be between 1 - 8 barg.

Electric Heating

These shall be multi-stage finned electric heating elements complete with auto and manual reset overheat cut-out protection, element shall be phase balanced for increased efficiency.

The electric heating elements are designed to be located post cooling coil, prior to fans. This enables the unit to effectively re-heat the air and evenly distribute the heat within the floor void. All sizes of electric heating are configurable based upon customer requirements. A maximum bank of 7.5kW is installed on the inlet side of each fan inside the unit. The available heating shall be 7.5kW per fan. The level of configuration is dependent on the number of fans in the unit.

Electric Heating Thyristor Control

In addition to the electric heat option a 0 – 100% Thyristor shall be provided to deliver accurate heating control.

Waterside

		System Configuration		
	Features	X1C0	X2C0	XDC0
Chilled Water	Hydrophilic Epoxy Coated RTPF Chilled Water Coil	●	●	●
	0-10 Volts Chilled Water Regulating Valve (2 Way)	●	●	●
	0-10 Volts Chilled Water Regulating Valve (3 Way) with Bypass	○	○	○
	Bypass Regulating Valve*	○	○	○
	Spool Piece (interconnection pipe work)	●	●	●
	Brazed Connection	●	●	●
	Threaded Connections	○	○	○
	Grooved Connections	○	○	○

● Standard Features ○ Optional Features – Feature Not Available

* included when 3 way Chilled Water Valves are selected.

Chilled Water Coil

Chilled water coils shall be ideally positioned to optimise airflow and heat transfer, they shall be manufactured from plain copper tubes with mechanically bonded aluminium fins. Fins shall be coated with a non-stick acrylic film (hydrophilic) to provide additional corrosion protection and allow efficient surface water removal for improved performance. Plain aluminium shall not be acceptable.

The cooling coil shall be mounted over a full width stainless steel condensate tray.
For control of water flow, various valve options shall be fitted.

The factory test pressure shall not be less than 20 Barg and the maximum operating pressure shall be less than 10 Barg.

Sweat copper pipe for brazed connection shall be standard. Optional threaded and Grooved connections shall be available.

Threaded Water Pipe Connection

As an alternative to brazed water pipe connection, BSP brass male taper threaded connections shall be factory available.

Grooved Water Connections

Grooved water connections shall be available enabling easy pipe work termination.

0-10 Volts DC 2 Port Chilled Water Regulating Valve

For systems with variable speed pumps and water flow, a 2 port control valve can be fitted. The two port valve has a shut off pressure of 13.6 Barg.

0-10 Volts DC Chilled Water 3 Way Valve

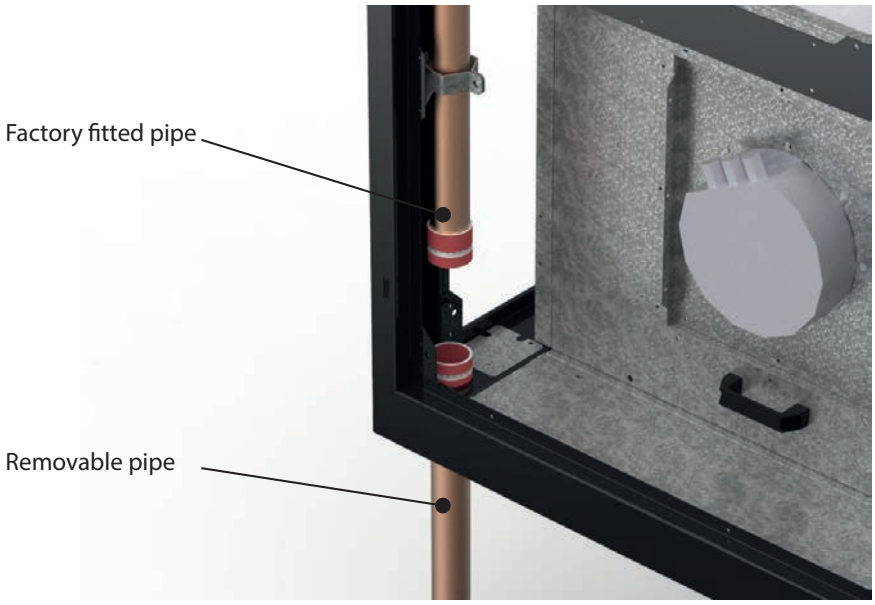
A 0-10 VDC chilled water 3 way regulating valve shall be fitted. This shall be used to govern the chilled water flow to the coil when there is a demand for cooling.

Bypass Regulating Valve (Included with 2 Way Chilled Water Valve.)

A bypass regulating valve shall be fitted in the bypass leg of the system to enable constant flow when there is no cooling demand. This simulates the coil pressure drop ensuring that the water flow rate does not change irrespective of the flow through the chilled water coil.

Water Spool Pieces

The spool piece piping needs to be fitted through the hole in the floor stand. A collar is factory fitted to the pipework. The clamp is fitted with the rubber seal on-site once the unit is mounted on the floorstand.



The customer side of the spool piece has one of the following connections:

- Brazed
- Threaded
- Grooved

Please confirm customer side water connection at time of ordering.

Controls

The units shall be supplied with a European ROHS Directive 2002/95/EC compatible microprocessor controller connected to an 8 x 22 back-lit LCD keypad display. LEDs shall not be acceptable. The microprocessor controller offers powerful analogue and digital control to meet a wide range of monitoring and control features including a real time clock and Industry standard communication port and network connections. All the boards feature a 16 bit microprocessor, and consequently the calculation power and operation processing speed have been significantly increased. Also featured are a visual alarm and the facility to adjust and display control settings by local operator for information and control.

		System Configuration							
		SC Range			SV Range		Dual Fluid		
	Features	X200	X100	X1X1	X100	X200	X1C0	X2C0	XDC0
Controls	PCO5+ Microprocessor	●	●	●	●	●	●	●	●
	Airetronix Controls	●	●	●	●	●	●	●	●
	Vu™ Touch Screen Display	●	●	●	●	●	●	●	●
	PGD1 Display (Door Mounted)	○	○	○	○	○	○	○	○
	PGD1 Display with Audible Alarm	○	○	○	○	○	○	○	○
	PGD Touch Display	○	○	○	○	○	○	○	○
	Constant Air Volume	○	○	○	○	○	○	○	○
	Constant Pressure Control*	—	—	—	○	○	—	—	—
	Return Air Temperature Control	●	●	●	●	●	●	●	●
	Return Air Temperature & Humidity Control	○	○	○	○	○	○	○	○
	Supply Air Temperature Control	—	—	—	○	○	—	—	—
	Standard Head Pressure Control	●	●	●	●	●	●	●	●
	Optimised Head Pressure Control	○	○	○	○	○	○	○	○
	Filter Change Switch	○	○	○	○	○	○	○	○
	BMS and SNMP Compatibility	○	○	○	○	○	○	○	○
	Drip Tray Level Detection	○	○	○	○	○	○	○	○
	Fire Detection	○	○	○	○	○	○	○	○
	Smoke Detection	○	○	○	○	○	○	○	○
	Water Detection	○	○	○	○	○	○	○	○

● Standard Features ○ Optional Features — Feature Not Available

* Constant pressure control on SV units is only available on temperature control. Units required to control based upon temperature and humidity cannot have constant pressure.

Vu™ Touch Screen Display

The units shall be supplied with a European ROHS Directive 2002/95/EC compatible microprocessor controller connected to a 4.3” colour resistive TFT LCD touch screen display. The microprocessor controller offers powerful analogue and digital control to meet a wide range of monitoring and control features including a real time clock and industry standard communication port and network connections. All the SmartCool products feature a 32 bit microprocessor, offering significant calculation power and operation processing speed. Also featured is the facility to adjust and display control settings by local operator, for information and control.

Display / Keypad

The 4.3” touchscreen Vu™ display provides important unit status and allows page navigation with a swipe. The default screen shows the unit status and room condition (°C/RH %). Further screens offer adjustment to parameters, fine-tuning of setpoints (via a rotating control wheel) and scrollable data tables.Trends of system information can be analysed and managed via the Vu™ allowing for easy system optimisation. The operating status of the unit can also be easily be determined “at a glance” with a colour coded LED bar.

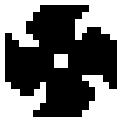
Home		Temperature	
Main Menu		Humidity	
Current Alarms (and no. of alarms)		Setpoint	
Help Screen		Fan	
Unit Status		Cooling	
Network Address		Heating	

Display/Keypad

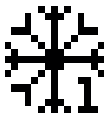
The display keypad features a simple array of keys to navigate through the in built menus.

With an 8 x 22 character (132 x 64 pixel) screen size, back lit in white for improved contrast, the larger screen shall provide for user friendly viewing and easy status recognition by displaying a combination of text and icons.

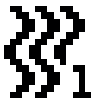
The default screen shall show the unit status and room condition (°C/RH %) without the need for interrogation and an easy to navigate menu structure for further interrogation and adjustment shall be provided.



Fan Operating



Cooling - 2 Stages



Heating - Up to 2 Stages

De-humidification

Humidification - Variable

Password Protection
The control system integrity shall be maintained by restricting access with a password PIN number.

IMPORTANT:
To change the PIN , please contact Airedale at time of order with the preferred 4 digit number.

Remote On/Off
Terminals for interlocking shall be provided to enable or disable the unit remotely.

Fire Shut Down
Terminals for interlocking shall be provided to shut down the unit in the event of fire.

Compressor Anti-Cycle Control
The microprocessor shall be programmed to provide automatic anti-cycling delays of up to 10 starts per hour with a minimum off time of 15 seconds.

Compressor Rotation
On tandem compressor units the controller is programmed to provide automatic compressor rotation to ensure equal compressor running times. In the event of a compressor fault on networked systems the controller shall be programmed to automatically select the next compressor in order of running hours.

Compressor Hours Run Log & Reset
Shall allow the user to monitor the running times of each compressor and reset after maintenance. Hours run log or visual service indicator shall be provided.

Evaporator Fan Hours Run Log & Reset
Shall allow the user to monitor the running times of the evaporator fans and reset after maintenance. Hours run log or visual service indicator shall be provided.

Head Pressure Control and Condenser Fan Speed Controller
Each refrigerant circuit shall be fitted with condenser pressure transducers and a modulating condenser fan speed controller to allow the designed head pressure to be monitored and maintained under varying ambient conditions. Condenser fan speed control settings shall be input via the display keypad.

Evaporator Fan Speed Controller
Evaporator fan speed control shall be easily set via the display keypad and can be incrementally increased or decreased to meet on site airflow and external static pressure requirements.

Filter Change Alarm
Filter change shall be managed by the software, and shall be based on fan(s) hours run with an alarm being generated when the pre-set run time limit has been exceeded. The set-point value shall be adjusted to suit each application and is factory set to 4000 hours. Hours run log or visual service indicator shall be provided.

Standard Network Features
As standard the controller shall be capable of providing a platform for the following and shall be enabled on request for 2 to 8 units, please specify at order.

Networking
A Local Area Network (pLAN) shall be used to connect up to 8 units to offer intercommunication and Duty/Standby control. This also allows the connection of computers, printers and modems on the same communications ring.
For further details, please contact Airedale Controls.

CAUTION ⚠	When adding to an existing network, please consult Airedale to ensure strategy compatibility.

Duty/Standby Operation
The controller shall enable units to operate in run/standby mode, with up to 8 units networked together, without the need for additional hardware or controllers. Standby units shall be configured to start when the run unit has a critical alarm.

Smart Key
A smart key shall be supplied to offer software back-up of the control strategy. The key shall feature simple plug in operation and allow transfer of software programs from the key to the microprocessor and vice versa. The use of a service laptop shall not be necessary.

Audible Alarm
The display keypad shall be upgraded to include audible alerts.

Water Detector
Three methods shall be available:
1. A solid state (probe) sensor shall be supplied loose for remote mounting on site.
2. Tape suitable for sensing water droplets shall be supplied loose for remote mounting on site. Standard tape length 10m.
3. Condensate drain tray level detection.

Water Detection Tape
Monitored by a sensing relay, the water detection tape will provide an alarm when in contact with several drops of conductive liquid. High humidity should normally not cause an alarm unless it results in condensation dripping on the tape surface or condensation present on the surface to which the tape is applied.

Fire Detection
Shall be installed in the return air stream to shut down the unit in the event of an unusually high return air temperature.

R410A Refrigerant Leak Detection System
A factory calibrated and fitted leak detection system shall raise an alarm when refrigerant gas is detected. The detector shall be positioned close to the compressor section.

Smoke Detector
Shall be supplied loose for remote mounting to shut down the unit and activate the alarm upon sensing the presence of smoke.

Return Air Temperature Control
A temperature sensor shall be mounted in the return side of the unit to sense the return dry bulb condition (cooling only variants). A combined temperature and humidity sensor shall be supplied on full function units. The temperature sensor is a NTC type thermistor accurate up to +/- 0.25°C and the humidity sensor accurate to +/- 3% RH at 25°C at the sensor.
The microprocessor shall sense the return air conditions and maintain the return air temperature and humidity by controlling cooling, heating, humidification and dehumidification outputs accordingly.
The microprocessor shall monitor and display the following values as a minimum:
- Return Air Temperature
- Return Air Humidity (Optional on Full Function units)
- Fan run hours
- Condensing Pressure (Optional on DX units only)
- Coil Temperature Sensor (Indoor)
- Compressor run hours

The maintenance of key components such as compressors and air filters shall be monitored via a service indicator which visually demonstrates the status relative to the component service intervals.

Alarm Log
The controller shall log and allow viewing of not less than the last 100 conditions recorded in descending chronological order through the keypad display. The standard display keypad shall visually display operating alarms. However, as an optional extra, a display keypad with audible alarms shall be available.

Duty Rotation

Networked units shall be configured to duty rotate, providing equal hours run of fans and compressors.

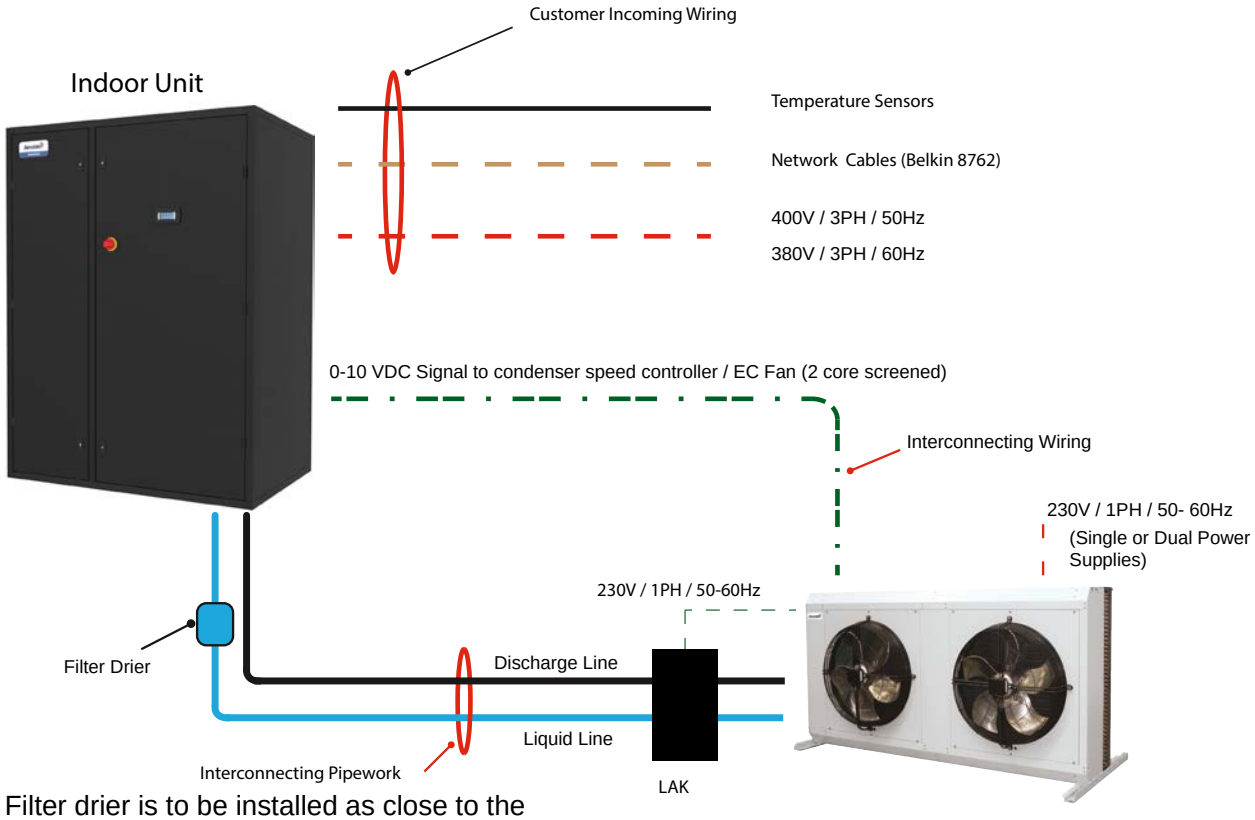
BMS Interface Cards

BMS Interface Card controlled units shall be interfaced with most BMS, factory fitted, please contact Airedale.
A wide range of protocols shall be accommodated through the use of interface devices. Available as a standard option are: ModBus / Jbus, and Carel. For interfaces such as SNMP, LonWorks, Metasys and BACnet, please contact Airedale.
Also available shall be Airedale's own supervisory plug-in BMS card pCOWEB. Based on Ethernet TCP/IP secure technology with SNMP features. It shall require no proprietary cabling or monitoring software and be supplied pre - programmed with an IP address for ease of set up. Cables to the BMS to be supplied by others.

LAK / ELAK

HPCV ELAK Operation

When the outdoor ambient falls, the condensing pressure falls. This causes the discharge pressure to fall as well.
When the discharge pressure falls below the dome pressure, the valve modulates open the discharge port which allows discharge gas to bypass the condenser. The discharge gas then enters the receiver. The mixture of discharge gas and liquid refrigerant creates a high pressure at the condenser outlet, reducing the flow and causing liquid to back up in the condenser.
Flooding the condenser reduces the surface area available for heat rejection. This reduction in effective condenser surface area results in a rise in condensing pressure.
During summer conditions, the discharge pressure is higher than the dome pressure, which closes the discharge port of the head pressure control valve. Hence, there is full liquid flow from the condenser to the receiver.



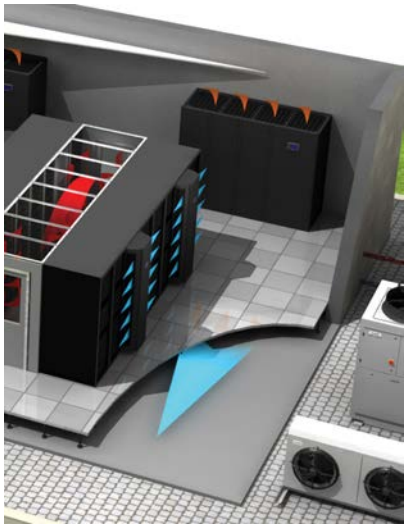
Filter drier is to be installed as close to the Indoor unit as possible. (If not integral)

Supply Air Temperature Control (Inverter Compressors only) - Optional

Modulation of unit capacity to ensure that user defined supply air set points shall be maintained and/or a high/low return air temperature alarm. During peak demand, the standby units shall temperature assist. The temperature sensor shall be mounted in the supply air side of the unit to sense the supply dry bulb condition. A combined temperature and humidity sensor shall be supplied on full function units. The sensor is supplied loose for onsite fitment. The sensor should be located under the floor void (in the centre of the unit, 1.5m away) away from obstructions.

Constant Pressure Control - Optional

Constant pressure control is a method of controlling air pressure within a space, such as a floor void or a duct. The air pressure is controlled using a variable speed fan that is modulated to maintain a given set point. Constant pressure control monitors the air pressure differential between two points. In a typical application (shown below) the pressure under the raised floor is compared to the room pressure. Constant pressure control on SV units is only avaliable on temperature control. Units required to control based upon temperature and humidity cannot have constant pressure. The two pressure points, positive and negative, are routed back to an air differential pressure sensor inside the CRAC unit. The value from the air pressure sensor is compared to the set point and a fan speed demand is generated, to maintain the required pressure differential. It is the responsibility of the installer to fit the air pressure sensor(s). The sensor shall be be located under the false floor with the 6mm flamtronix tubing routed back into the control panel of the unit (the tubing must not be obstructed / damaged to ensure accurate pressure control). The constant pressure system shall be commissioned by Airedale following routing of tubing from the pressure diffuser and the unit. A maximum of 8m/s air velocity is allowed at the diffuser so consideration must be made when locating the diffuser.



Constant Air Volume - Optional

Constant air volume is a method of automatically adjusting the unit fan speed to deliver a specific air volume.
When faced with a change in system resistance, the fan speed modulates to obtain the air volume set point.
Constant air volume monitors the air pressure differential between two points. These two pressure points, positive and negative, are routed back to an air differential pressure sensor inside the unit.

General Features

	Features	System Configuration							
		SC Range			SV Range		Dual Fluid		
		X200	X100	X1X1	X100	X200	X2C0	X2C0	XDC0
General	Condensate Pump (Hot or Cold Water)*	○	○	○	○	○	○	○	○
	Condensate Drain Tray Monitoring	○	○	○	○	○	○	○	○
	Open floorstand	○	○	○	○	○	○	○	○
	Front and Rear Floorstands (enclosed)	○	○	○	○	○	○	○	○
	Sterling Board LAT (Wooden Case) Packing	○	○	○	○	○	○	○	○

● Standard Features ○ Optional Features – Feature Not Available

* Condensate pump type depends if humidification is selected

Open & Enclosed Floorstand

Open or enclosed floor stands shall be available, complete with adjustable feet and floor tile lip. Enclosed floor stands shall incorporate an air turning vane. The height of the floor stand shall be specified at order.
A discharge plenum shall also be available for applications without a false floor.

Discharge Air Configuration

Standard configuration shall be downflow “draw through” design.

Sterling board LAT (Wooden Case) Packing

Units shall be supplied complete with additional LAT corner protection and cross braces to afford extra transit protection. Sterling board heat treated man made material shall be used (including pallet) to comply with phytosanitary import regulations, please contact Airedale for this option).

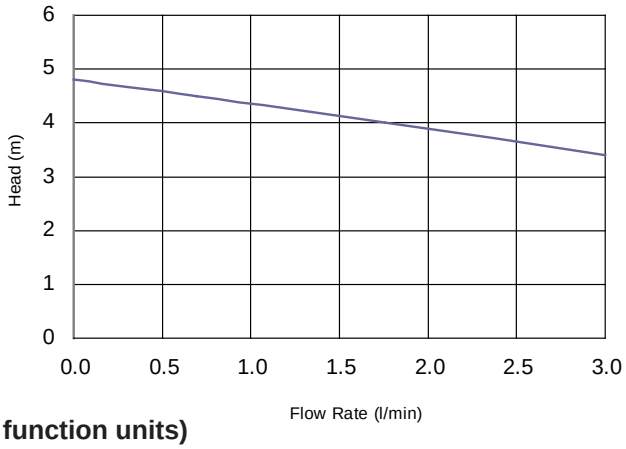
Condensate Pumps (supplied loose)

The SmartCool condensate pump shall be either hot water (full function units when a humidifier is fitted) or cold water type (cooling only).

Performance

The following graphs illustrate the TOTAL static (head) pressure available. The system horizontal pipe losses and vertical lift should be factored in when calculating the condensate pump performance.

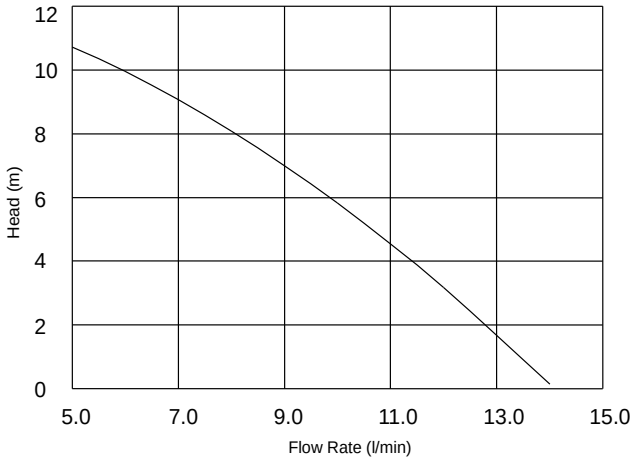
Cold Water (cooling only units)



The cold water condensate pump has 10mm quarter turn plastic “barbed” connection.

The discharge line from the pump should rise no more than 4 metres before being interrupted with a swan neck, air break and tundish.

Hot Water (Full function units)



The hot water condensate pump uses 10mm (3/8”) copper tube when connecting to the discharge stub of the pump.

IMPORTANT ⚠	The discharge line from the pump should rise no more than 6 metres vertically and no more than 8 metres in total length before being interrupted with a swan neck, air break and tundish.

Condensate Drain Tray Monitoring

A float level switch shall be incorporated into the unit drain tray for indication of a high water alarm.

Measurement of Sound Data

All sound data quoted has been measured in the third-octave band limited values, using a Real Time Analyser calibrated sound intensity meter in accordance with BS EN ISO9614 Part 1: 2009. All Sound Power Levels quoted are calculated from measured sound intensity according to BS EN ISO9614 Part 1: 2009.

Semi Hemispherical

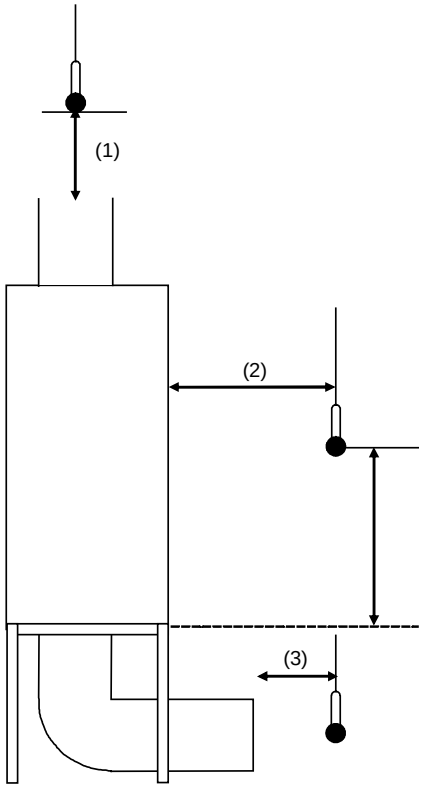
Sound Pressure Levels are calculated from sound power using the semi-hemispherical method where the noise source is in junction with 2 boundaries i.e. the floor and 1 wall.

Free Field

For comparison, the semi hemispherical figures can typically be reduced by 3dB to provide free field conditions.

IMPORTANT

The sound data quoted is based on the unit having a ducted return air and standard backwards curved EC motors fitted, refer to illustration below.



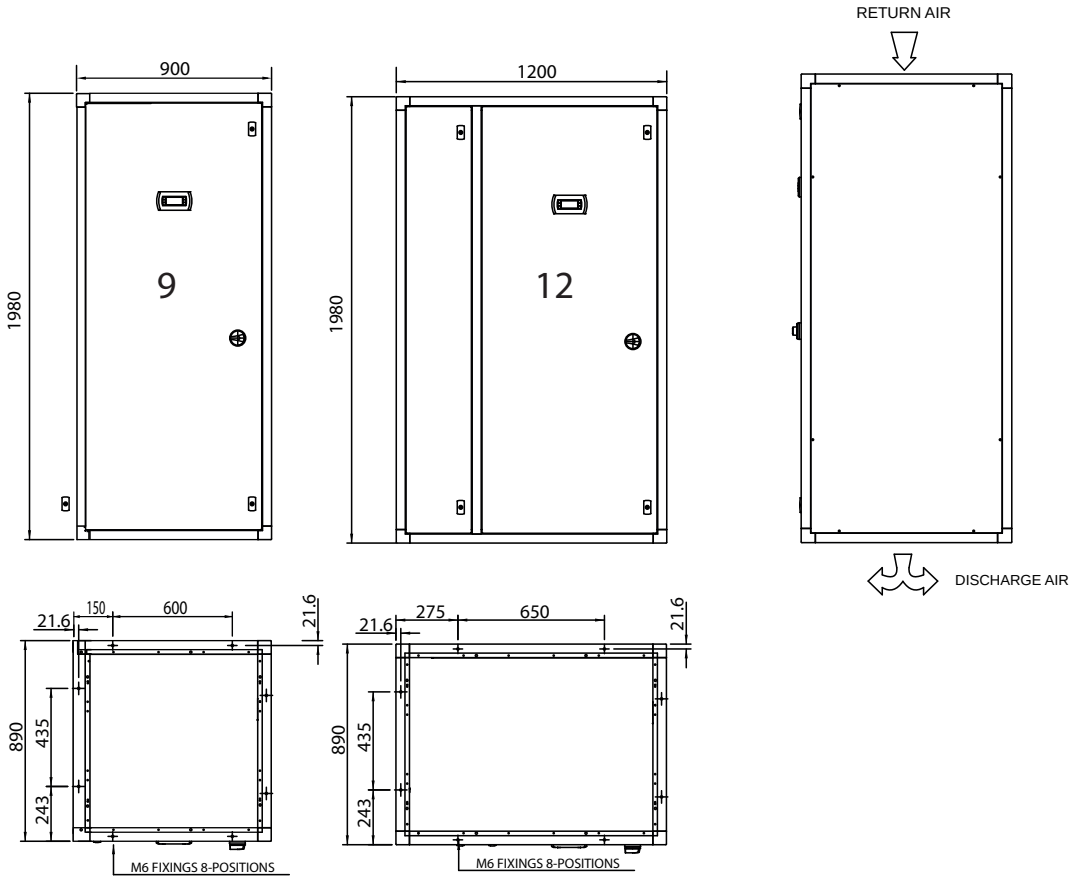
(1) Return Air
(2) Case Breakout
(3) Discharge Air

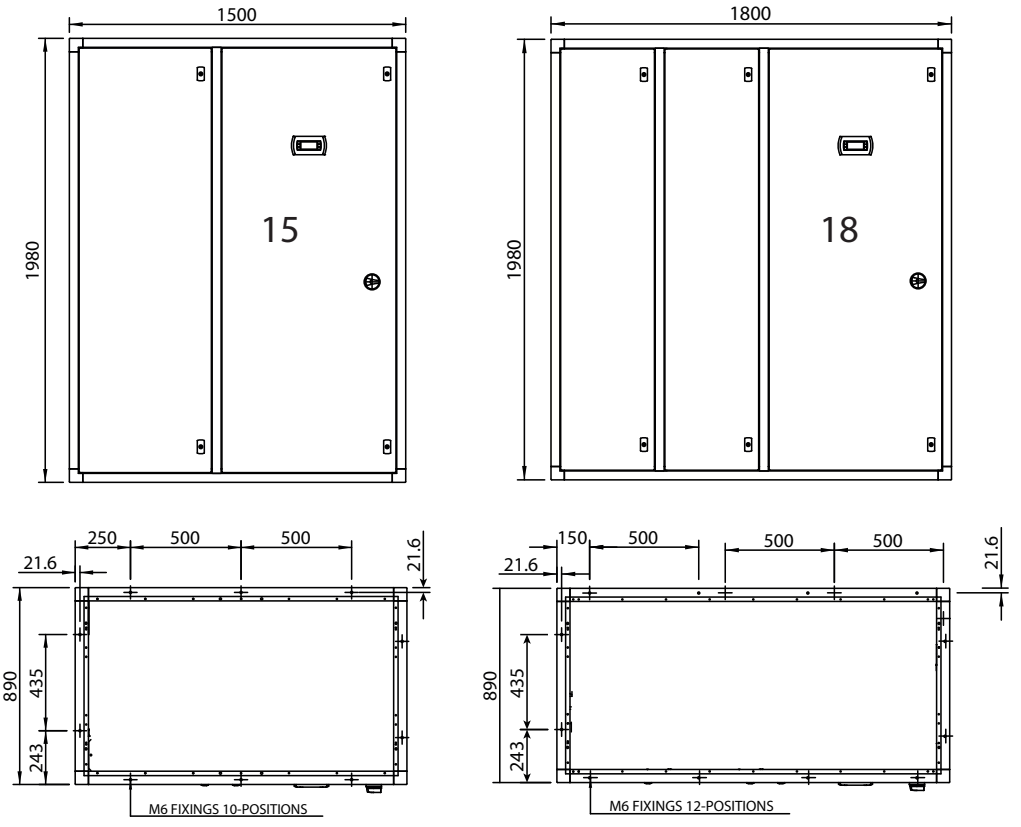
- Case breakout sound data is therefore independent of the discharge air and return air sound data.
- For non-ducted return air applications, the overall case breakout sound levels may increase, due to the return air sound being predominant.
- Within the conditioned space, sound from in-room ducted discharge air grilles and other equipment will contribute to the overall sound level and should therefore be considered as part of sound calculations.

Specialist acoustic advice is recommended for noise critical applications.

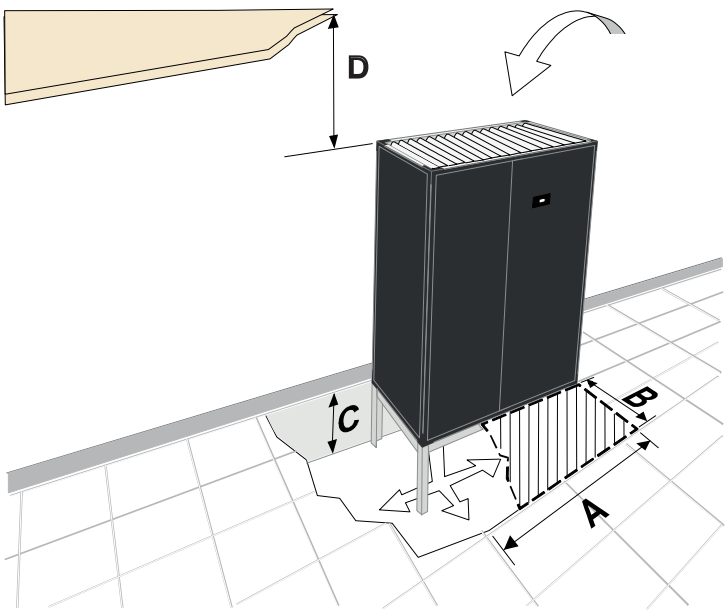
Installation Data

Dimensions





Positioning



Minimum Unit Clearance

Open and Enclosed Floorstand Option

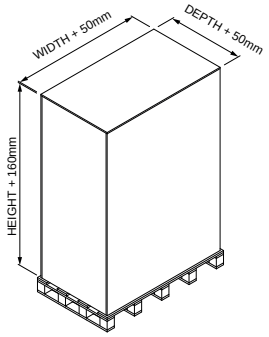
		A	B	C - Floorstand(3)
SC09D	mm	900	890	Min 300 – Max 750 (+ 50mm Feet Adjustable +/-20mm) (4)
SC12D	mm	1200	890	
SC15D	mm	1500	890	
SC18D	mm	1800	890	

		Minimum Ceiling Clearance- (D)			
		Forward Only	Forward and 1 Side	Forward and 2 Sides	All Faces
SC09D	mm	720	500	380	250
SC12D	mm	720	500	380	250
SC15D	mm	740	550	440	280
SC18D	mm	750	590	480	300

(1) Shown with optional open floor stand.
(2) Shaded area indicates minimum service and maintenance requirements. The unit must be installed with allowance for carpet tile clearance.
(3) Dimension C denotes recommended minimum/maximum floor stand height, refer to Airedale for special applications, please specify at order.
(4) Min = Threaded foot at minimum extension (additional to “C” dimension).
Max = Threaded foot at maximum extension (additional to “C” dimension).

Packed Dimensions

For specific markets units shall be shipped, mounted on wooden pallet and covered with polythene. The pallet shall be mechanically fixed to the unit for transportation only (Please contact Airedale for this option). Add 50mm to length and width and 160mm to height.



Lifting

Whenever the unit is lifted, it should be from the base and, where possible, with all packing and protection in position. If any type of slinging is used, due care should be taken to ensure that the slings do not crush the casework.

IMPORTANT

- If the unit is dropped, it should immediately be checked for damage.
- Employ lifting specialists.
- Local codes and regulations relating to the lifting of this type of equipment should be observed.
- Lift the unit slowly and evenly.

Positioning & Levelling

- The unit should be positioned on a stable and even base. With the use of a spirit level the base should be levelled to ensure good condensate removal and prevent door misalignment.
- Positioning the unit should be achieved by the use of rollers or skids. Crowbars must not be used as they impose a point load on the unit frame which may cause damage and distortion.
- Check the unit is as ordered. Discrepancies or transit damage should be reported to Airedale immediately.
- Care should be taken during handling and lifting, that the unit is well supported and properly balanced.
- Observe airflow and maintenance clearances.
- Check all services are present and accessible.

CAUTION ⚠	Airedale will accept no responsibility for mishandling during the positioning of the equipment.

Unpacking

The unit is to be carefully unpacked. Inspected and any damage reported to Airedale immediately. All packaging is to be recycled accordingly.

Weights

Fixed Speed Units

	Unit	Shipped Weight (kg)	Installed Weight (kg)
X100/X200/X1X1	SC09D016-X100-0	310	320
	SC09D019-X100-0	310	320
	SC09D023-X100-0	310	320
	SC09D026-X100-0	330	340
	SC12D020-X200-0	390	400
	SC12D023-X200-0	400	400
	SC12D029-X200-0	410	420
	SC12D033-X200-0	410	420
	SC12D036-X200-0	410	420
	SC15D027-X200-0	460	460
	SC15D030-X200-0	470	470
	SC15D035-X200-0	470	470
	SC15D040-X200-0	470	470
	SC15D044-X200-0	470	480
	SC18D037-X200-0	520	530
	SC18D040-X200-0	520	530
	SC18D044-X200-0	530	530
	SC18D048-X1X1-0	560	570
	SC18D055-X1X1-0	570	580

Variable Speed Units

	Unit	Shipped Weight (kg)	Installed Weight (kg)
X100 / X200	SV09D023-X100-0	340	340
	SV09D023-X100-1	340	340
	SV09D047-X100-0	360	360
	SV09D047-X100-1	360	360
	SV12D026-X100-0	420	420
	SV12D026-X100-1	420	420
	SV12D034-X100-0	440	440
	SV12D034-X100-1	440	440
	SV12D055-X100-0	440	440
	SV12D055-X100-1	440	440
	SV15D036-X100-0	500	510
	SV15D036-X100-1	500	510
	SV15D040-X100-0	510	520
	SV15D040-X100-1	510	520
	SV15D063-X200-0	570	580
	SV15D063-X200-1	570	580
	SV18D042-X100-0	560	560
	SV18D042-X100-1	560	560
	SV18D049-X100-0	560	560
	SV18D049-X100-1	560	560
	SV18D083-X200-0	640	650
	SV18D083-X200-1	640	650

Weights

Dual Fluid

	Unit	Shipped Weight (kg)	Installed Weight (kg)
X1C0/X2C0/XDC0	SC09D016-X1C0-0	339	355
	SC09D019-X1C0-0	342	359
	SC09D023-X1C0-0	342	359
	SC09D026-X1C0-0	362	379
	SC12D021-X2C0-0	430	453
	SC12D027-X2C0-0	440	463
	SC12D030-X2C0-0	450	473
	SC12D035-X2C0-0	450	473
	SC12D037-X2C0-0	450	473
	SC15D027-X2C0-0	509	536
	SC15D032-X2C0-0	519	546
	SC15D036-X2C0-0	519	547
	SC15D040-X2C0-0	519	547
	SC15D043-X2C0-0	519	547
	SC18D037-X2C0-0	577	611
	SC18D040-X200-0	577	611
	SC18D044-X2C0-0	577	611
	SC18D048-XDC0-0	618	657
	SC18D055-XDC0-0	627	667

Refrigerant Pipe Sizing Guide

The refrigerant pipe sizing information below is for a guide only. Pipe sizes based on 100% load.

Fixed Speed

		Indoor Unit Connection Size		Equivalent Pipe Lengths with R410A					
				0-15m	Discharge		15-40m	Discharge	
Indoor Unit	Outdoor Unit	Liquid	Discharge	Liquid	Horizontal	Vertical	Liquid	Horizontal	Vertical
				(3)	(1)	(2)	(3)	(1)	(2)
SC09D016-X100	CR30M	1/2	5/8	1/2	3/4	1/2	1/2	3/4	1/2
SC09D019-X100	CR30M	1/2	5/8	1/2	3/4	5/8	1/2	3/4	5/8
SC09D023-X100	CR50M	1/2	3/4	5/8	7/8	5/8	5/8	7/8	5/8
SC09D026-X100	CR50M	1/2	3/4	5/8	7/8	3/4	5/8	7/8	3/4
SC12D020-X200	CR30M	1/2	5/8	1/2	3/4	5/8	5/8	7/8	5/8
SC12D023-X200	CR50M	1/2	5/8	1/2	3/4	3/4	5/8	7/8	3/4
SC12D029-X200	CR50M	1/2	7/8	5/8	7/8	3/4	5/8	1 1/8	3/4
SC12D033-X200	CR65M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC12D036-X200	CR65M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC15D027-X200	CR30M	1/2	5/8	1/2	3/4	3/4	5/8	7/8	3/4
SC15D030-X200	CR50M	1/2	7/8	5/8	7/8	3/4	5/8	1 1/8	3/4
SC15D035-X200	CR50M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC15D040-X200	CR65M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC15D044-X200	CR80M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC18D037-X200	CR50M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC18D040-X200	CR50M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC18D044-X200	CR65M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC18D048-X1X1	CR50M	5/8	7/8	5/8	7/8	3/4	5/8	7/8	3/4
SC18D055-X1X1	CR50M	5/8	7/8	5/8	1 1/8	3/4	5/8	1 1/8	3/4

(1) For interconnecting pipework with a predominantly horizontal layout.
(2) For interconnecting pipework with a predominantly vertical layout.
(3) Careful pipework selection must be done if the liquid line rises. Additional system sub cooling may be required to overcome friction losses.

IMPORTANT ⚠	Pipe sizes are based on maintaining sufficient velocity in pipes for oil return to the compressor.

Refrigerant Pipe Sizing Guide

IMPORTANT ⚠	The refrigerant pipe sizing information below is for **guidance only.**

Variable Speed <30m Proposed Pipe Sizing

Unit	Indoor Unit Connection Size		Interconnecting Line Sizes									
			Horizontal (<30m)			Vertical (<20m) Condenser Below Indoor Unit		Vertical (<4m) Condenser Above Indoor Unit		Vertical (4-20m) Condenser Above Indoor Unit		
Indoor Unit	Liquid	Discharge	Liquid	Discharge	PD Total	Liquid	Discharge Fall	Liquid Fall	Single Discharge Riser	Liquid	Dual Discharge Riser A	Dual Discharge Riser B
SV09D023-X100	1/2	5/8	1/2"	3/4	8.0	1/2	3/4	1/2	1/2	1/2	1/2	1 1/8
SV09D047-X100	5/8	7/8	5/8"	7/8	7.7	5/8	7/8	5/8	5/8	5/8	5/8	1 3/8
SV12D026-X100	1/2	3/4	1/2"	3/4	8.0	1/2	3/4	1/2	1/2	1/2	1/2	1 1/8
SV12D034-X100	5/8	7/8	5/8"	7/8	5.6	5/8	7/8	5/8	5/8	5/8	5/8	1 3/8
SV12D055-X100	5/8	7/8	5/8"	7/8	7.7	5/8	7/8	5/8	5/8	5/8	5/8"	1 3/8
SV15D036-X100	5/8	7/8	5/8"	7/8	3.7	5/8	7/8	5/8	5/8	5/8	5/8"	1 1/8
SV15D040-X100	5/8	1 1/8	5/8"	7/8	7.7	5/8	7/8	5/8	5/8	5/8	5/8"	1 3/8
SV15D063-X200	3/4	1 1/8	5/8"	1 1/8	6.8	5/8	1 1/8	3/4	3/4	3/4	3/4"	1 5/8
SV18D042-X100	5/8	7/8	5/8"	7/8	5.6	5/8	7/8	5/8	5/8	5/8	5/8"	1 3/8
SV18D049-X100	5/8	1 1/8	5/8"	7/8	7.7	5/8	7/8	5/8	5/8	5/8	5/8"	1 3/8
SV18D083-X200	3/4	1 3/8	3/4"	1 1/8	7.1	3/4	1 1/8	3/4	3/4	3/4	3/4"	1 5/8

Variable Speed 30-60m Proposed Pipe Sizing

Unit	Indoor Unit Connection Size		Interconnecting Line Sizes									
			Horizontal (30-60m)			Vertical (<20m) Condenser Below Indoor Unit		Vertical (<4m) Condenser Above Indoor Unit		Vertical (4-20m) Condenser Above Indoor Unit		
Indoor Unit	Liquid	Discharge	Liquid	Discharge	PD Total	Liquid	Discharge Fall	Liquid Fall	Single Discharge Riser	Liquid	Dual Discharge Riser A	Dual Discharge Riser B
SV09D023-X100	1/2	5/8	5/8	7/8	5.5	5/8	7/8	1/2	1/2	1/2	1/2	1 1/8
SV09D047-X100	5/8	7/8	5/8	1 1/8	7.8	5/8	1 1/8	5/8	5/8	5/8	5/8	1 3/8
SV12D026-X100	1/2	3/4	5/8	7/8	5.5	5/8	7/8	1/2	1/2	1/2	1/2	1 1/8
SV12D034-X100	5/8	7/8	5/8	1 1/8	5.7	5/8	1 1/8	5/8	5/8	5/8	5/8	1 3/8
SV12D055-X100	5/8	7/8	5/8	1 1/8	7.8	5/8	1 1/8	5/8	5/8	5/8	5/8	1 3/8
SV15D036-X100	5/8	7/8	5/8	7/8	7.4	5/8	7/8	5/8	5/8	5/8	5/8	1 1/8
SV15D040-X100	5/8	1 1/8	5/8	1 1/8	7.8	5/8	1 1/8	5/8	5/8	5/8	5/8	1 3/8
SV15D063-X200	3/4	1 1/8	3/4	1 1/8	8.6	3/4	1 1/8	3/4	3/4	3/4	3/4	1 5/8
SV18D042-X100	5/8	7/8	5/8	1 1/8	5.7	5/8	1 1/8	5/8	5/8	5/8	5/8	1 3/8
SV18D049-X100	5/8	1 1/8	5/8	1 1/8	7.8	5/8	1 1/8	5/8	5/8	5/8	5/8	1 3/8
SV18D083-X200	3/4	1 3/8	3/4	1 3/8	8.5	3/4	1 3/8	3/4	3/4	3/4	3/4	1 5/8

Further information is continued overleaf.

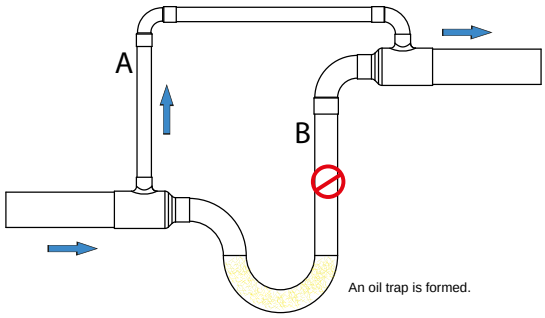
Refrigerant Pipe Sizing Guide

Line sizes have been chosen to allow for reliability over the full capacity range of each unit. For applications that will not exceed a certain capacity, line sizes may be further optimised for performance.
When a vertical discharge riser is required between the length of 4m and 20m, Airedale recommends using a double riser manifold where two discharge lines run in parallel (Riser A and Riser B).

IMPORTANT ⚠	Pipe sizes are based on maintaining sufficient velocity in pipes for oil return to minimise the number of oil scavenge sequences required during part load operation.

IMPORTANT ⚠	Tandem Compressor: In part load, gas velocity should be taken into account when selecting and commissioning pipework to ensure full oil return. Excessive pressure loss in interconnecting pipework will impair system performance; this should be factored in during the design of the system and where necessary oil separators employed. Excessive pressure drop in liquid lines can cause poor refrigerant distribution to expansion devices and can cause malfunction of the system (especially where the condensers are positioned lower than the evaporator).

Dual Riser Diagram



The arrows show the direction of flow of discharge vapour at low flow rates.(Riser A). When the velocity increases both A and B risers are used.

Refrigerant Pipe Sizing Guide

The refrigerant pipe sizing information below is for a guide only. Pipe sizes based on 100% load.

Dual Fluid

		Indoor Unit Connection Size		Equivalent Pipe Lengths with R410A					
				0-15m	Discharge		15-40m	Discharge	
Indoor Unit	Outdoor Unit	Liquid	Discharge	Liquid	Horizontal	Vertical	Liquid	Horizontal	Vertical
				(3)	(1)	(2)	(3)	(1)	(2)
SC09D016-X1C0-0	CR30M	1/2	5/8	1/2	3/4	1/2	1/2	3/4	1/2
SC09D019-X1C0-0	CR30M	1/2	5/8	1/2	3/4	5/8	1/2	3/4	5/8
SC09D023-X1C0-0	CR50M	1/2	3/4	5/8	7/8	5/8	5/8	7/8	5/8
SC09D026-X1C0-0	CR50M	1/2	3/4	5/8	7/8	3/4	5/8	7/8	3/4
SC12D021-X2C0-0	CR30M	1/2	5/8	1/2	3/4	5/8	5/8	7/8	5/8
SC12D027-X2C0-0	CR50M	1/2	5/8	1/2	3/4	3/4	5/8	7/8	3/4
SC12D030-X2C0-0	CR50M	1/2	7/8	5/8	7/8	3/4	5/8	1 1/8	3/4
SC12D035-X2C0-0	CR65M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC12D037-X2C0-0	CR65M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC15D027-X2C0-0	CR30M	1/2	5/8	1/2	3/4	3/4	5/8	7/8	3/4
SC15D032-X2C0-0	CR50M	1/2	7/8	5/8	7/8	3/4	5/8	1 1/8	3/4
SC15D036-X2C0-0	CR50M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC15D040-X2C0-0	CR65M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC15D043-X2C0-0	CR80M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC18D037-X2C0-0	CR50M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC18D040-X200-0	CR50M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC18D044-X2C0-0	CR65M	5/8	7/8	5/8	1 1/8	7/8	3/4	1 1/8	7/8
SC18D048-XDC0-0	CR50M	5/8	7/8	5/8	7/8	3/4	5/8	7/8	3/4
SC18D055-XDC0-0	CR50M	5/8	7/8	5/8	1 1/8	3/4	5/8	1 1/8	3/4

(1) For interconnecting pipework with a predominantly horizontal layout.
(2) For interconnecting pipework with a predominantly vertical layout.
(3) Careful pipework selection must be done if the liquid line rises. Additional system sub cooling may be required to overcome friction losses.

IMPORTANT ⚠	Pipe sizes are based on maintaining sufficient velocity in pipes for oil return to the compressor.

Lines passing through walls

Refrigerant lines that rub against solid objects wear holes in the copper pipework and cause leaks, the lines must pass through sleeved openings in such a manner that the lines do not touch.

Oil Traps

For long vertical rises in both liquid and discharge lines, it is essential that oil traps are located every 4m to ensure proper oil movement / entrapment. In addition there should be an oil trap at the exit of the air handling unit before a vertical riser is applied (refer to example below).

Pipe Supports

The following table identifies the maximum distance between pipe supports on vertical and horizontal pipe runs.

Pipe O/D (inches)	Support distance (m)
3/8 - 7/8”	1.0
1 1/8 - 2 1/8”	2.0

IMPORTANT ⚠	For long pipe runs, the pipe work **must** be well grounded to minimise any electrical characteristics. Longer pipe runs may require ground straps in multiple sections to ensure a good earth connection.

Liquid Line

If the system is configured with the SmartCool higher than the condenser unit it may be required to increase the degree of sub cooling to prevent flashing gas occurring in the liquid line. This flashing is due to excess pressure drop caused by the static head of liquid refrigerant and can result in poor operation of the evaporator and expansion device.
Careful pipe sizing is recommended to ensure that the liquid line does not have excessive pressure drop.
Increasing the liquid line tube size can minimse pipe pressure drop. However, as a fail safe it is recommended that the condenser is installed above the indoor unit to allow for correct liquid drain.

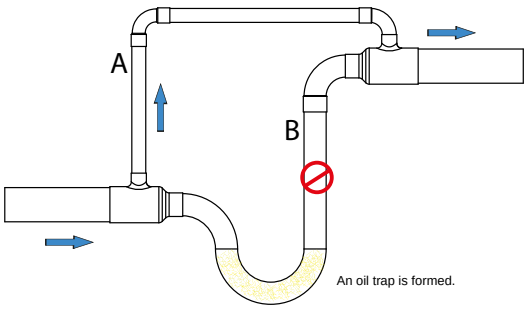
Pipe Insulation

The liquid line of the system must be insulated if passing through extremely warm places (boiler houses etc) to ensure that the refrigerant does not become flash gas. Insulating the discharge line can also reduce any potential noise.

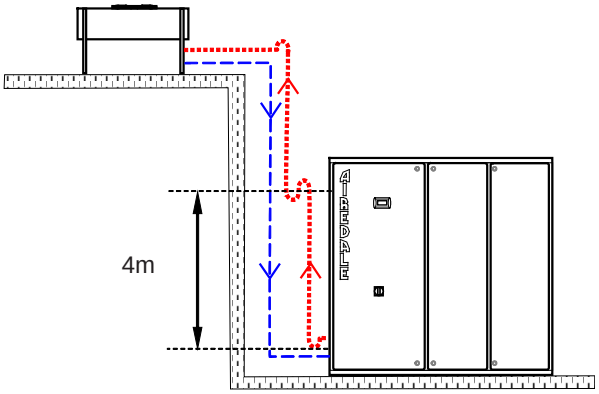
Double Discharge Risers

If required, double risers must be designed into the system. For systems with long vertical rises Airedale recommends a double riser system. Pipework must be sized based upon a reduction in unit capacity as low as 26% of maximum unit capacity. The double riser must be sized so that the refrigerant still maintains adequate velocity for the oil to travel around the system. The use of double risers allows the refrigerant flow rate through a system to reduce without compromising oil return. It does this by reducing the effective cross sectional area of pipe at low flow rates (Riser A). Consideration must be taken when designing vertical risers. Refrigerant velocity must be ensured in vertical risers at a minimum of 8m/s. When the flow rate increases, the oil is forced through the oil trap and escapes the double riser (Riser B). This leaves both discharge risers (A and B) to share the refrigerant flow between them, allowing lower refrigerant velocities (hence lower pressure drops) at high flow rates.

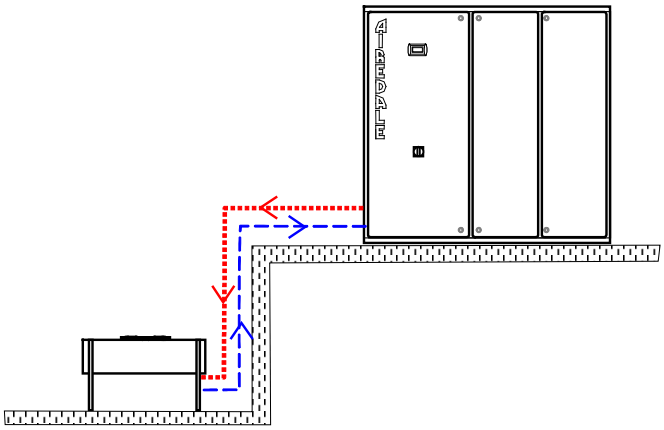
CAUTION ⚠	Care must be taken in sizing double riser systems.



Condenser above Air Handling Unit



Condenser below Air Handling Unit



Discharge Line Liquid Line

Maximum Equivalent Lengths

System Type	Range	Max Horizontal Equivalent Pipe Length to Condenser (m)	Max Vertical Equivalent Pipe Length to Condenser (m)	Oil Seperator Fitted to Indoor Unit as Standard?	Compressor Type	Additional Oil Charge Required?
Fixed Speed	SC	50	20	No	Cold Shell - Suction Gas cooled	See Oil charging guide
Inverter	SV	60	20	Yes	Hot Shell - discharge gas cooled	Not required - factory oil charge is sufficient

For applications with equivalent horizontal line lengths exceeding 60m, contact Airedale's Customer Services department for more guidance.

Refrigerant Charging Guide

The following information can be used to estimate the refrigerant quantity required in a typical split system installation.

Liquid Line Refrigerant Charge (kg/m)

The following table shows the refrigerant charge / metre for the liquid line, using R410A and assuming a liquid line temperature of 40°C.

Liquid Line (m)	kg/m
3/8”	0.05
1/2”	0.09
5/8”	0.15
3/4”	0.21
7/8”	0.30
1 1/8”	0.53

IMPORTANT ⚠	The pipe sizes/refrigerant charges quoted are for guidance only. It is the responsibility of the installing contractor/site engineer to check the pipe sizes/refrigerant charges are correct for each system installation and application. Split systems may require additional oil which should be added to the low side of each compressor. Design should be in accordance with accepted refrigeration practice to ensure good oil return to the compressor(s) under all normal operating conditions.

Refrigerant Charging Guide

Fixed Speed

Indoor Unit		Standard Condenser		Larger Condenser	
(Indoor Unit)	kg/Circuit	(Outdoor Unit)	kg/Circuit	(Outdoor Unit)	kg/Circuit
SC09D016-X100-0	2.3	CR30M	4.3	CR50M	4.9
SC09D019-X100-0	2.3	CR30M	4.3	CR50M	4.9
SC09D023-X100-0	2.3	CR50M	**4.9**	CR65M	9.8
SC09D026-X100-0	2.4	CR50M	4.9	CR65M	9.8
SC12D020-X200-0	2.9	CR30M	4.3	CR80M	8.4
SC12D023-X200-0	2.9	CR50M	4.9	CR80M	8.4
SC12D029-X200-0	3.0	CR50M	4.9	CR80M	8.4
SC12D033-X200-0	3.2	CR65M	9.8	CR80M	8.4
SC12D036-X200-0	3.2	CR65M	9.8	CR80M	8.4
SC15D027-X200-0	3.7	CR30M	4.3	CR80M	8.4
SC15D030-X200-0	3.8	CR50M	4.9	CR80M	8.4
SC15D035-X200-0	4.0	CR50M	4.9	CR80M	8.4
SC15D040-X200-0	4.0	CR65M	9.8	CR80M	8.4
SC15D044-X200-0	4.0	CR80M	8.4	CR80M	8.4
SC18D037-X200-0	4.8	CR50M	4.9	CR80M	8.4
SC18D040-X200-0	4.8	CR50M	4.9	CR80M	8.4
SC18D044-X200-0	4.8	CR65M	9.8	CR80M	8.4
SC18D048-X1X1-0	4.8	CR50M	4.9	CR65M	9.8
SC18D055-X1X1-0	4.8	CR50M	4.9	CR65M	9.8

Inverter

Indoor Unit		Standard Condenser		Larger Condenser	
(Indoor Unit)	kg/Circuit	(Outdoor Unit)	kg/Circuit	(Outdoor Unit)	kg/Circuit
SV09D023-X100-0	3.9	CR30M	4.3	CR50M	4.9
SV09D023-X100-1	3.9	CR30M	4.3	CR50M	4.9
SV09D047-X100-0	4.3	CR50M	4.9	CR65M	9.8
SV09D047-X100-1	4.3	CR50M	4.9	CR65M	9.8
SV12D026-X100-0	4.5	CR30M	4.3	CR50M	4.9
SV12D026-X100-1	4.5	CR30M	4.3	CR50M	4.9
SV12D034-X100-0	4.7	CR50M	4.9	CR65M	9.8
SV12D034-X100-1	4.7	CR50M	4.9	CR65M	9.8
SV12D055-X100-0	5.0	CR65M	9.8	CR80M	8.4
SV12D055-X100-1	5.0	CR65M	9.8	CR80M	8.4
SV15D036-X100-0	5.3	CR50M	4.9	CR65M	9.8
SV15D036-X100-1	5.3	CR50M	4.9	CR65M	9.8
SV15D040-X100-0	5.5	CR50M	4.9	CR65M	9.8
SV15D040-X100-1	5.5	CR50M	4.9	CR65M	9.8
SV15D063-X200-0	6.7	CR80M	8.4	CR105M	16.7
SV15D063-X200-1	6.7	CR80M	8.4	CR105M	16.7
SV18D042-X100-0	5.9	CR50M	4.9	CR65M	9.8
SV18D042-X100-1	5.9	CR50M	4.9	CR65M	9.8
SV18D049-X100-0	6.1	CR65M	9.8	CR80M	8.4
SV18D049-X100-1	6.1	CR65M	9.8	CR80M	8.4
SV18D083-X200-0	7.6	CR80M	8.4	CR105M	16.7
SV18D083-X200-1	7.6	CR80M	8.4	CR105M	16.7

Refrigerant Charging Guide

Dual fluids

Indoor Unit		Standard Condenser		Larger Condenser	
(Indoor Unit)	kg/Circuit	(Outdoor Unit)	kg/Circuit	(Outdoor Unit)	kg/Circuit
SC09D016-X1C0-0	2.3	CR30M	4.3	CR50M	4.9
SC09D019-X1C0-0	2.3	CR30M	4.3	CR50M	4.9
SC09D023-X1C0-0	2.3	CR50M	4.9	CR65M	9.8
SC09D026-X1C0-0	2.4	CR50M	4.9	CR65M	9.8
SC12D021-X2C0-0	3.0	CR30M	4.3	CR80M	8.4
SC12D027-X2C0-0	3.2	CR50M	4.9	CR80M	8.4
SC12D030-X2C0-0	3.2	CR50M	4.9	CR65M	9.8
SC12D035-X2C0-0	3.2	CR65M	9.8	CR80M	8.4
SC12D037-X2C0-0	3.2	CR65M	9.8	CR80M	8.4
SC15D027-X2C0-0	3.7	CR30M	4.3	CR80M	8.4
SC15D032-X2C0-0	3.8	CR50M	4.9	CR80M	8.4
SC15D036-X2C0-0	4.0	CR50M	4.9	CR80M	8.4
SC15D040-X2C0-0	4.0	CR65M	9.8	CR80M	8.4
SC15D043-X2C0-0	4.0	CR80M	8.4	CR105M	16.7
SC18D037-X2C0-0	4.8	CR50M	4.9	CR80M	8.4
SC18D040-X2C0-0	4.8	CR50M	4.9	CR80M	8.4
SC18D044-X2C0-0	4.8	CR65M	9.8	CR80M	8.4
SC18D048-XDC0-0	4.8	CR50M	4.9	CR65M	9.8
SC18D055-XDC0-0	4.8	CR50M	4.9	CR65M	9.8

Installation

Calculation of System Refrigerant Charge (kg)

The system refrigerant charge can be calculated using the following equation:

SR = LR + IR + OR

Where:

SR	=	Total System Refrigerant Charge (kg)
LR	=	Total Liquid Line Refrigerant Charge. (As calculated from above)
IR	=	Indoor Unit Refrigerant Charge.
OR	=	Outdoor Unit Refrigerant Charge.

Example

Indoor Unit Model Ref. = SC12D023-X200-0

Outdoor Unit Model Ref = CR50 Condenser

Interconnecting Pipework = 10 metres

From the Refrigerant Pipe Sizing Guide, the liquid line size given for pipework length of 10 metres is:0.09kg/m

LR = L x m

Where:

L	=	10 metres
m	=	0.09 kg/m (Liquid Line Size = 1/2”)
LR	=	10 x 0.09 = 0.9kg

System Refrigerant Charge

SR = LR + IR + OR

Where:

LR = 0.9 kg. (As calculated from above)

IR = 2.9 kg

OR = 4.9 kg

SR = 0.9+ 2.9 + 4.9

Therefore

System Refrigerant Charge

= 8.7kg / Circuit

Calculation of Liquid Line Refrigerant Charge (kg)

The liquid line refrigerant charge can be calculated using the following equation:

LR = L x m

Where:

LR	=	Total Liquid Line Refrigerant charge (kg)
L	=	Length of Interconnecting pipework (metres)
m	=	Liquid Line Refrigerant charge / metre. Refer to Liquid Line Refrigerant Charge (kg/m), above.

Installation

Liquid Sub Cooling

The degree of liquid sub cooling required to prevent flashing of liquid refrigerant can be calculated by the following method.

Subcooling = Condensing temperature — Saturation temperature (Nett pressure at expansion valve)

Given the following as an example:

- Refrigerant R410A
- Condensing temperature (54.4°C) equivalent condensing pressure at 54.4°C = 34 Bar
- Liquid lift 20m
- Piping friction loss 0.21 bar
- Losses through valves and fittings 0.5 Bar

Pressure Loss due to Liquid Lift

Lift = H x spl

Where
H = Height (m)
spl = Static pressure loss
Lift = 20 x 0.115 = 2.3 bar

Total Pressure Loss in Liquid Line

TPL Liquid = Lift + PFL + Valves

Where
PFL = Pipe friction loss (0.21Bar)
Valves = Losses through Valves and fittings
= 0.21 +0.5 + 2.3
Total pressure loss in liquid line = 3.01 Bar

Nett Pressure at Expansion Valve

= Condensing pressure - Total pressure loss in liquid line

= 34 - 3.01 = 30.99 bar

Saturation temperature at the nett pressure at expansion valve (30.99 bar) = 52°C
(from refrigerant tables)

Sub Cooling Required

= Condensing temperature - Saturation temperature
= 54.4 - 52 = 2.4 °C
Therefore liquid sub cooling required to prevent liquid flashing = 2.4 °C

Oil Charging Guide

In order to determine if a system requires additional oil to accommodate for long interconnecting pipe lines and oil traps, a simple calculation can be used to approximate the volume of oil required as follows:

OT = (RC / 200) - (OC x 0.09)

Where

OT = Additional Oil Charge / Circuit (kg)

RC = Total Refrigerant Charge / Circuit (kg)

OC = Total Compressor Oil Charge / Circuit (l)

This calculation is based on the following assumptions:

1) 10% of the total compressor oil charge enters the system
2) A specific gravity of 0.09 between oil and water
3) Oil is added at a rate of 5 grams per kilogram of refrigerant

Example:

What is the additional oil charge required per circuit for an SC12D023-X200-0 matched with a CR50 and a 1/2” 80m interconnecting liquid line?

Refrigerant charge of a SC12D023-X200-0 = 2.9 kg

Refrigerant charge of a CR50 = 4.9 kg

Interconnecting pipe line = 80 x 0.09 = 7.2 kg

Total system refrigerant charge = 2.9 + 4.9 + 7.2 = 15 kg

Compressor oil charge(s) = 1.2 + 1.2 = 2.4 litre

So,

OT = (RC / 200) - (OC x 0.09)

OT = (15 / 200) - (2.4 x 0.09)

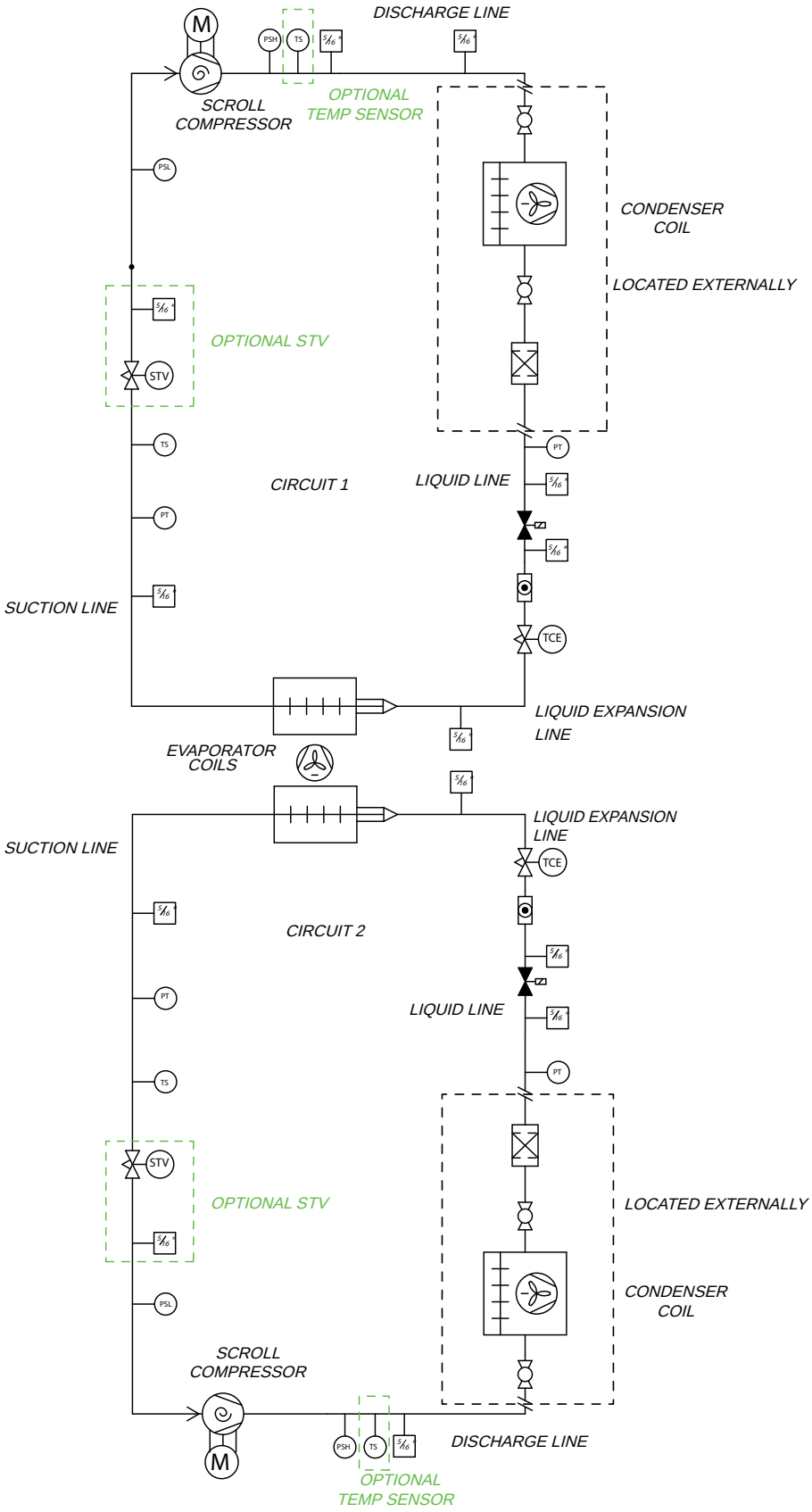
OT = -0.141litre

A negative value (as above) suggests that there is already sufficient oil in the system. You can calculate the maximum refrigerant charge for this system when additional oil charge is required as follows:

OT = (RC / 200) - (OC x 0.09)
RC = (OT + OC x 0.09) x 200
RC = (0 + 2.4 x 0.09) x 200
RC = 43.2 kg

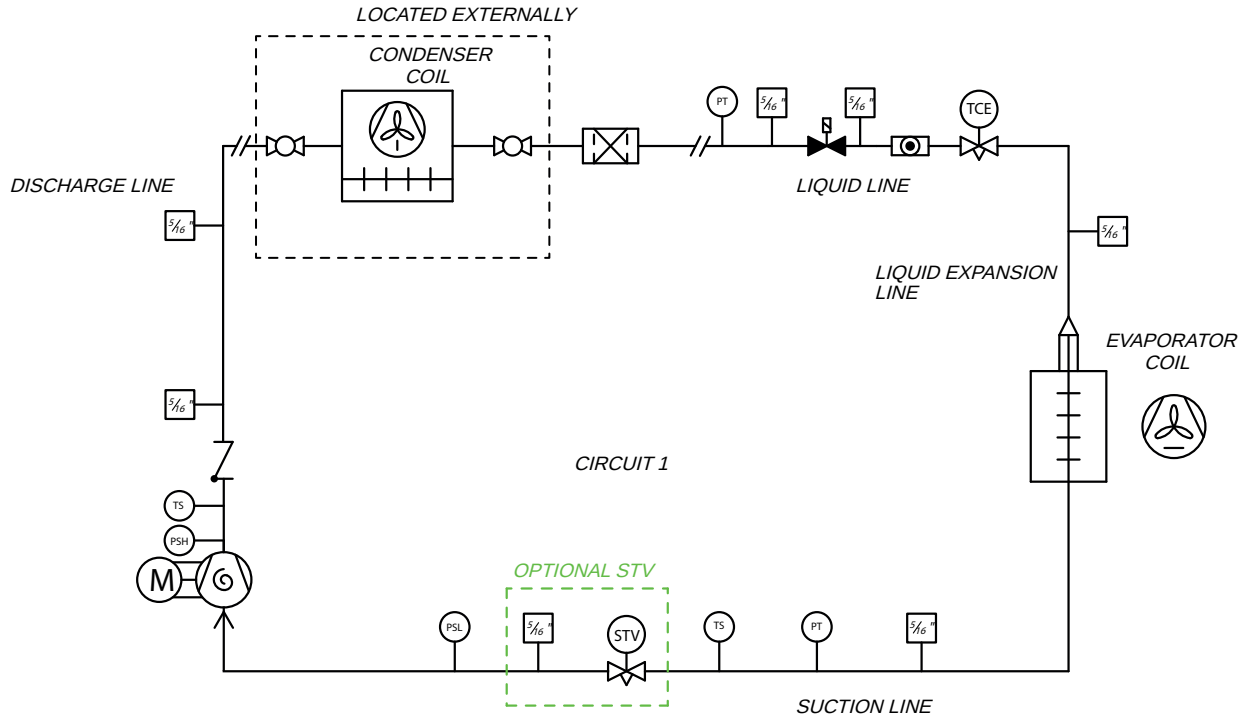
Pipework Schematics

X1X1 Fixed Speed Pipework Schematics



Pipework Schematics

X100 Fixed Speed Pipework Schematics

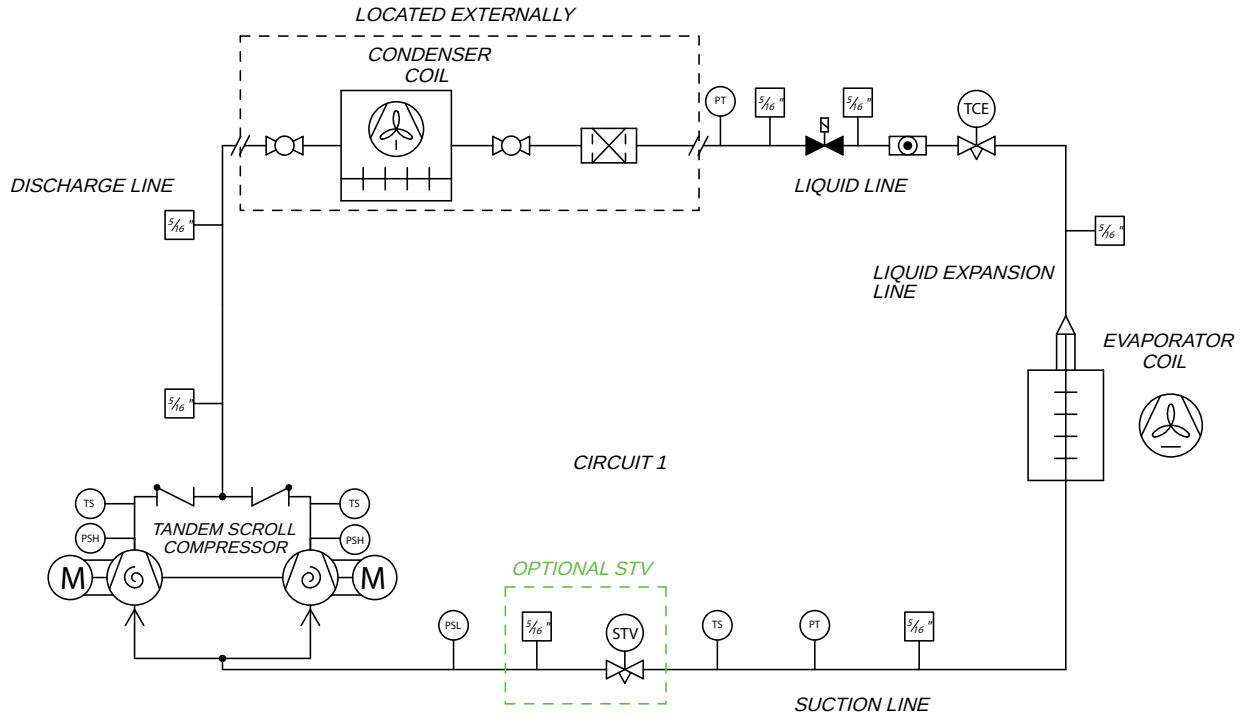


KEY: ALL ITEMS

- CENTRIFUGAL FAN
- AXIAL FAN
- SCROLL COMPRESSOR
- LOW PRESSURE SWITCH
- HIGH PRESSURE SWITCH
- R410A 5/16 SCHRADER VALVE
- NORMALLY CLOSED SOLENOID VALVE
- SHUT OFF VALVE (OPTIONAL - SUPPLIED LOOSE)
- ELECTRONIC EXPANSION VALVE
- SUCTION THROTTLE VALVE (OPTIONAL)
- CHECK VALVE (OPTIONAL WITH HGRH)
- FILTER DRIER (SUPPLIED LOOSE)
- PRESSURE TRANSDUCER
- TEMPERATURE SENSOR
- SIGHT GLASS
- 3-WAY SOLENOID VALVE

Pipework Schematics

X200 Fixed Speed Pipework Schematics



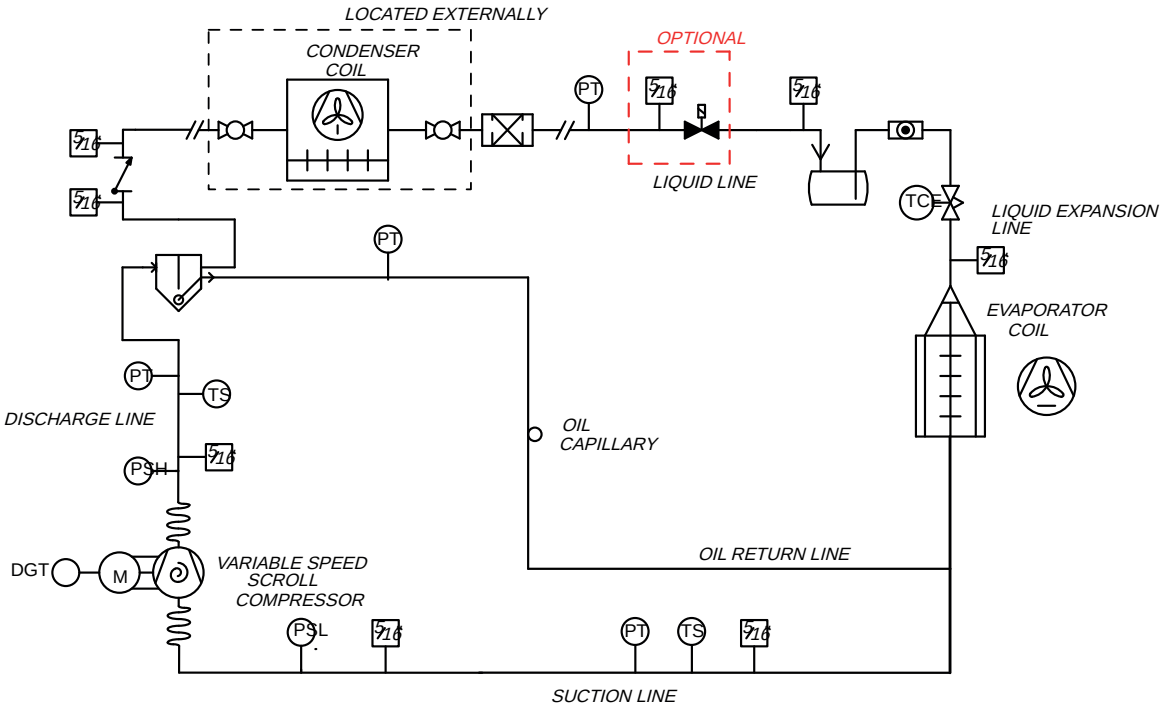
KEY: ALL ITEMS

- CENTRIFUGAL FAN
- AXIAL FAN
- SCROLL COMPRESSOR
- ELECTRONIC EXPANSION VALVE
- SUCTION THROTTLE VALVE (OPTIONAL)
- (OPTIONAL - SUPPLIED LOOSE) SHUT OFF VALVE
- CHECK VALVE (OPTIONAL WITH HGRH)
- NORMALLY CLOSED SOLENOID VALVE
- SIGHT GLASS
- FILTER DRIER (SUPPLIED LOOSE)
- PRESSURE TRANSDUCER
- TEMPERATURE SENSOR
- LOW PRESSURE SWITCH
- HIGH PRESSURE SWITCH
- R410A 5/16" SCHRADER VALVE
- 3-WAY SOLENOID VALVE

Pipework Schematics

X100 Inverter Pipework Schematics

SV15 AND SV18 X100 PIPEWORK SCHEMATIC AIR-COOLED DX



KEY: ALL ITEMS

- *CENTRIFUGAL FAN*
- *AXIAL FAN*
- *SCROLL COMPRESSOR*
- *ELECTRONIC EXPANSION VALVE*
- *NORMALLY OPEN SOLENOID VALVE*
- *NORMALLY CLOSED SOLENOID VALVE*
- *FILTER DRIER (SUPPLIED LOOSE)*
- *SIGHT GLASS*
- *LIQUID RECEIVER*

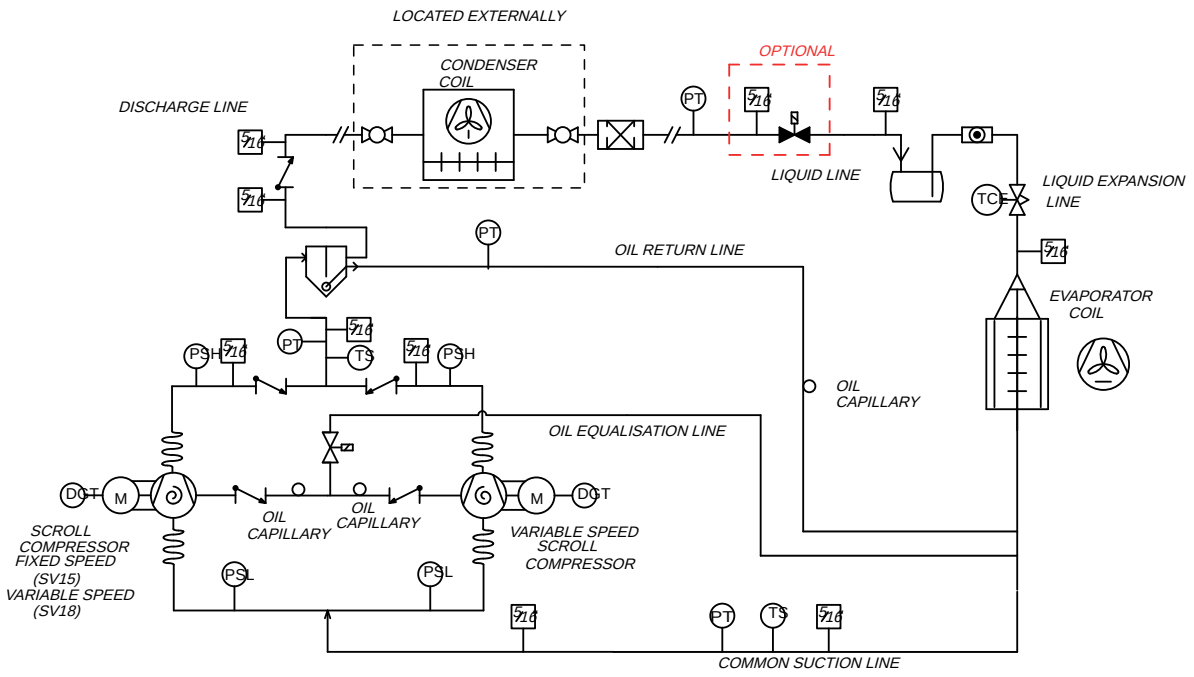
THE FILTER DRIER MUST BE FITTED AS CLOSE TO THE INDOOR UNIT AS POSSIBLE

- *DISCHARGE GAS THERMOSTAT*
- *PRESSURE TRANSDUCER*
- *TEMPERATURE SENSOR*
- *CHECK VALVE*
- *LOW PRESSURE SWITCH*
- *HIGH PRESSURE SWITCH*
- *SCHRADER VALVE*
- *SHUT OFF VALVE (OPTIONAL - SUPPLIED LOOSE)*
- *OIL SEPARATOR*
- *VIBRATION ELIMINATOR*

Pipework Schematics

X200 Inverter Pipework Schematics

SV15D063/SV18D083 -X200 PIPEWORK SCHEMATIC



THE FILTER DRIER MUST BE FITTED AS CLOSE TO THE INDOOR UNIT AS POSSIBLE

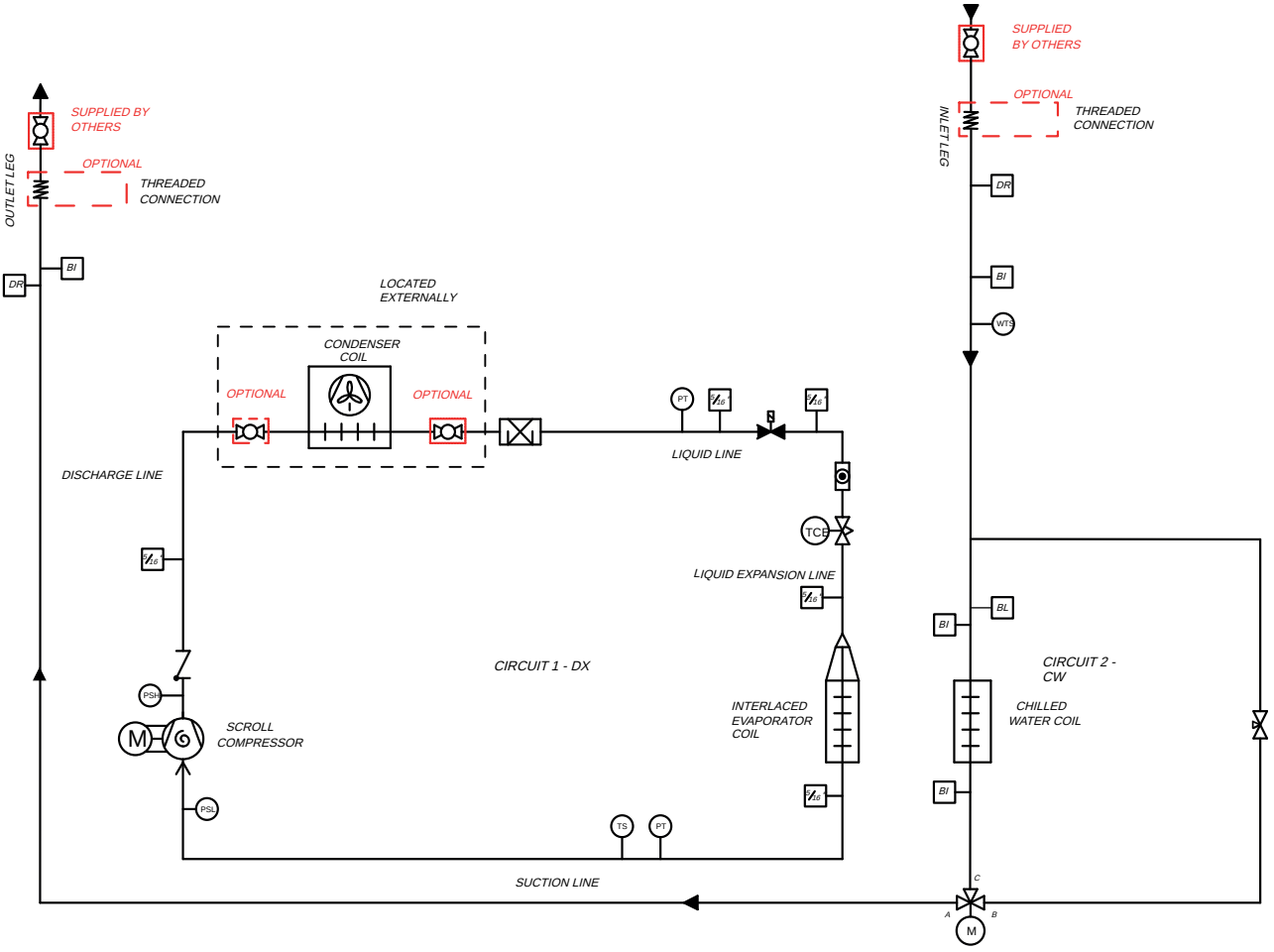
KEY: ALL ITEMS

- CENTRIFUGAL FAN
- AXIAL FAN
- SCROLL COMPRESSOR
- ELECTRONIC EXPANSION VALVE
- NORMALLY OPEN SOLENOID VALVE
- NORMALLY CLOSED SOLENOID VALVE
- FILTER DRIER (SUPPLIED LOOSE)
- SIGHT GLASS
- LIQUID RECEIVER
- OIL SEPARATOR
- DISCHARGE GAS THERMOSTAT
- PRESSURE TRANSDUCER
- TEMPERATURE SENSOR
- CHECK VALVE
- LOW PRESSURE SWITCH
- HIGH PRESSURE SWITCH
- SCHRADER VALVE
- SHUT OFF VALVE (OPTIONAL - SUPPLIED LOOSE)
- VIBRATION ELIMINATOR

Pipework Schematics

SC09 X1C0 Dual Fluid Pipework Schematics

3 Way Valve



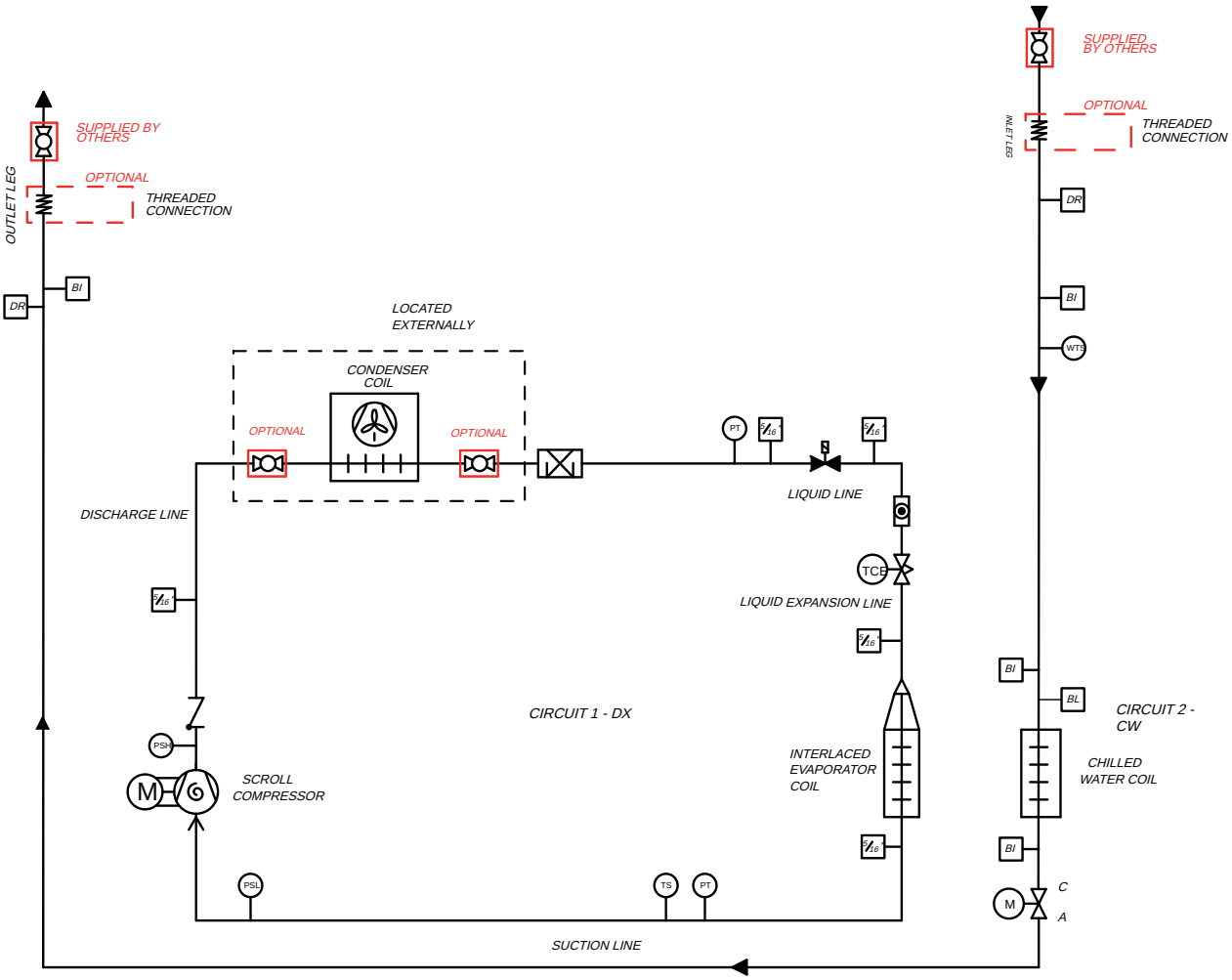
KEY: ALL ITEMS

- SCROLL COMPRESSOR
- ELECTRONIC EXPANSION VALVE
- SIGHT GLASS
- FILTER DRIER
- BLEED POINT (HIGHEST POINT)
- DRAIN POINT (LOWEST POINT)
- NORMALLY CLOSED SOLENOID VALVE
- PRESSURE TRANSDUCER
- R410A 5/16" SCHRADER VALVE
- LOW PRESSURE SWITCH
- HIGH PRESSURE SWITCH
- SUCTION LINE TEMPERATURE SENSOR
- WATER TEMPERATURE SENSOR
- BINDER POINT
- 3-WAY MODULATING VALVE (MOTOR DRIVEN ACTUATOR CONTROLLED)
- 2-WAY BALANCING VALVE
- THREADED CONNECTIONS
- CHECK VALVE
- SHUT OFF VALVE (OPTIONAL - SUPPLIED LOOSE)

Pipework Schematics

SC09 X1C0 Dual Fluid Pipework Schematics

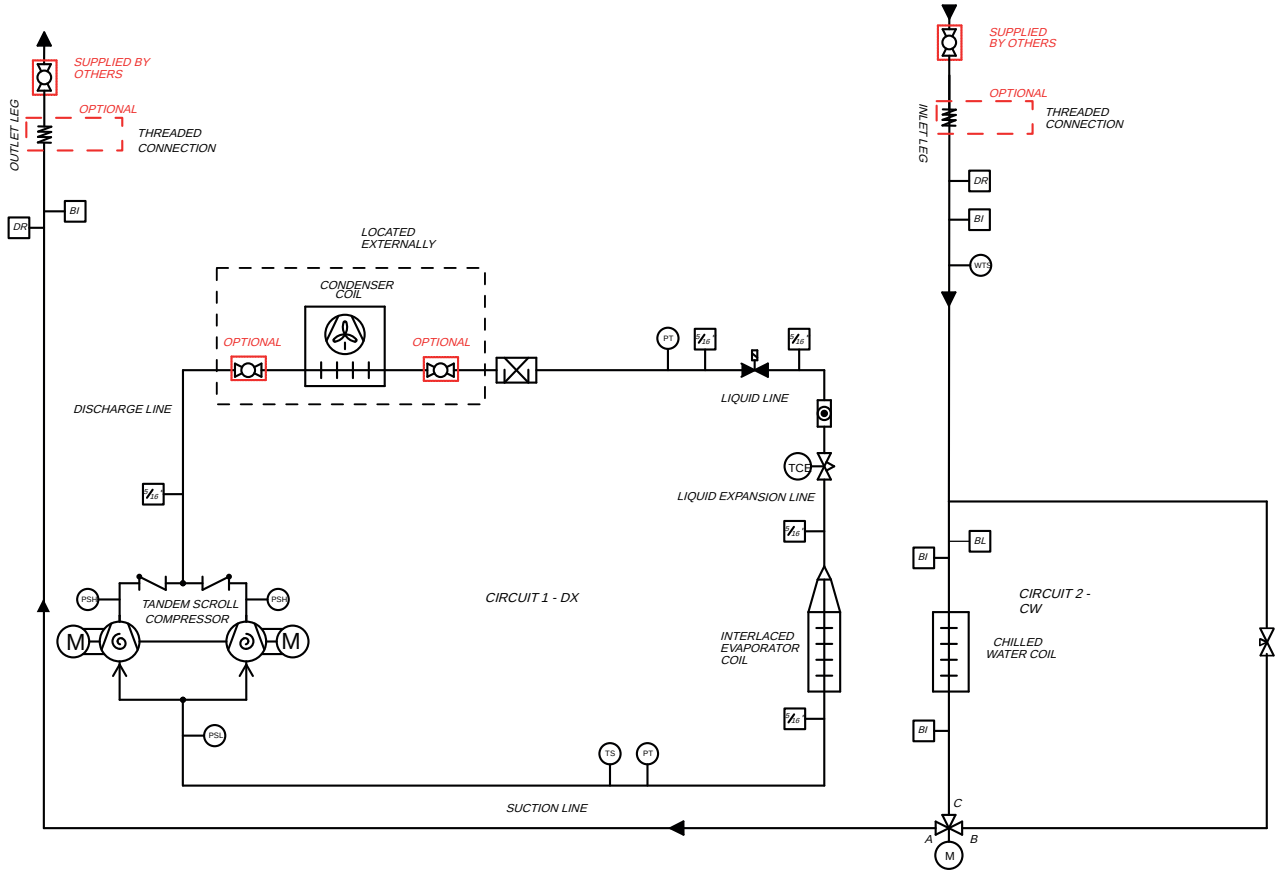
2 Way Valve



KEY: ALL ITEMS

- SCROLL COMPRESSOR
- ELECTRONIC EXPANSION VALVE
- SIGHT GLASS
- FILTER DRIER
- BLEED POINT(HIGHEST POINT)
- DRAIN POINT (LOWEST POINT)
- NORMALLY CLOSED SOLENOID VALVE
- PRESSURE TRANSDUCER
- R410A 5/16" SCHRADER VALVE
- LOW PRESSURE SWITCH
- HIGH PRESSURE SWITCH
- SUCTION LINE TEMPERATURE SENSOR
- WATER TEMPERATURE SENSOR
- BINDER POINT
- 2-WAY MODULATING VALVE (MOTOR DRIVEN ACTUATOR CONTROLLED)
- THREADED CONNECTIONS
- CHECK VALVE
- SHUT OFF VALVE (OPTIONAL - SUPPLIED LOOSE)

Pipework Schematics
SC12 / SC15 / SC18 X2C0
Dual Fluid Pipework Schematics
3 Way Valve



KEY: ALL ITEMS

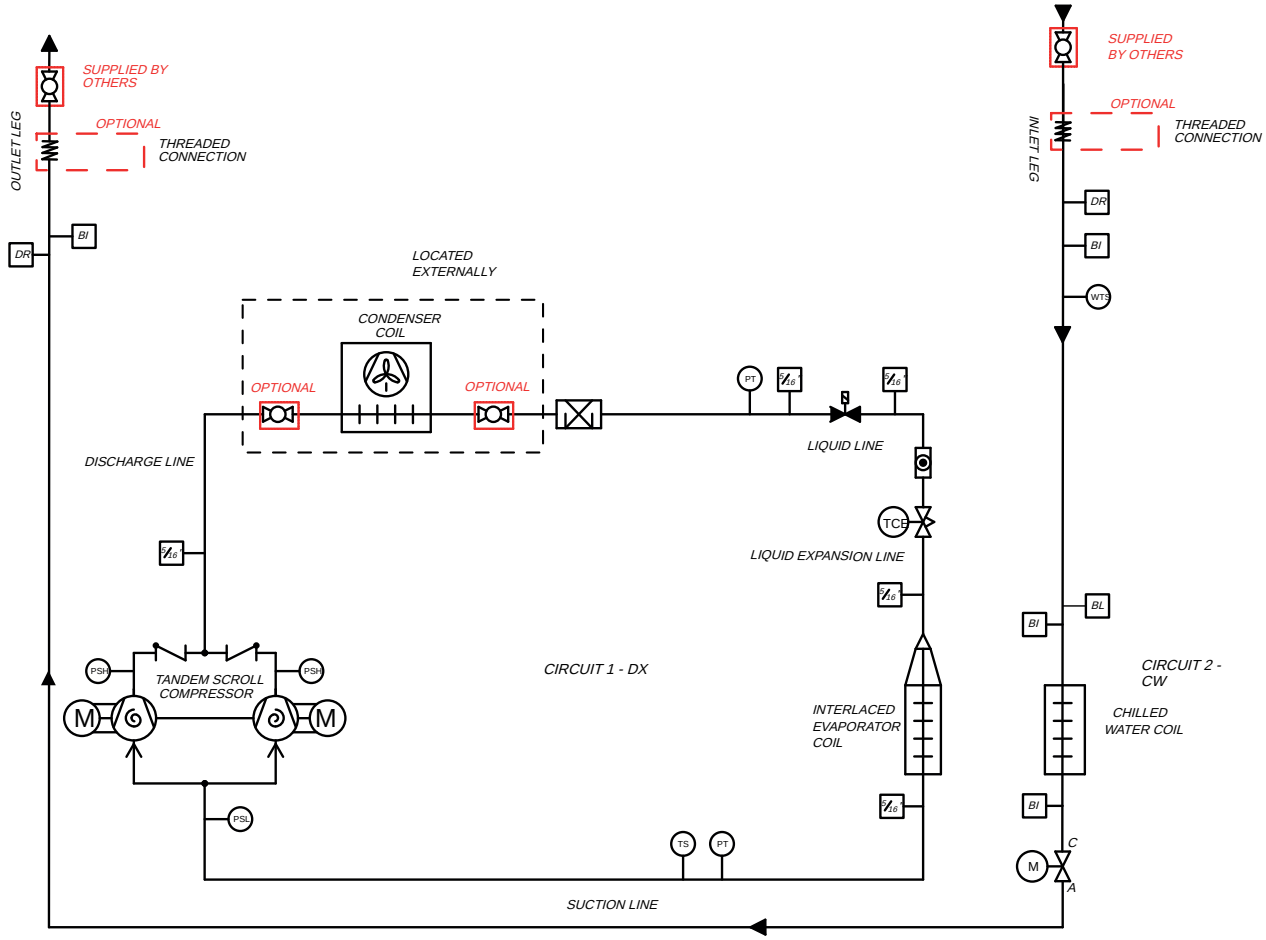
- SCROLL COMPRESSOR
- ELECTRONIC EXPANSION VALVE
- SIGHT GLASS
- FILTER DRIER
- BLEED POINT (HIGHEST POINT)
- DRAIN POINT (LOWEST POINT)
- NORMALLY CLOSED SOLENOID VALVE
- PRESSURE TRANSDUCER
- R410A 5/16" SCHRADER VALVE
- LOW PRESSURE SWITCH
- HIGH PRESSURE SWITCH
- SUCTION LINE TEMPERATURE SENSOR
- WATER TEMPERATURE SENSOR
- BINDER POINT
- 3-WAY MODULATING VALVE (MOTOR DRIVEN ACTUATOR CONTROLLED)
- 2-WAY BALANCING VALVE
- THREADED CONNECTIONS
- CHECK VALVE
- SHUT OFF VALVE (OPTIONAL - SUPPLIED LOOSE)

Pipework Schematics

SC12 / SC15 / SC18

X2C0 Dual Fluid Pipework Schematics

2 Way Valve



KEY: ALL ITEMS

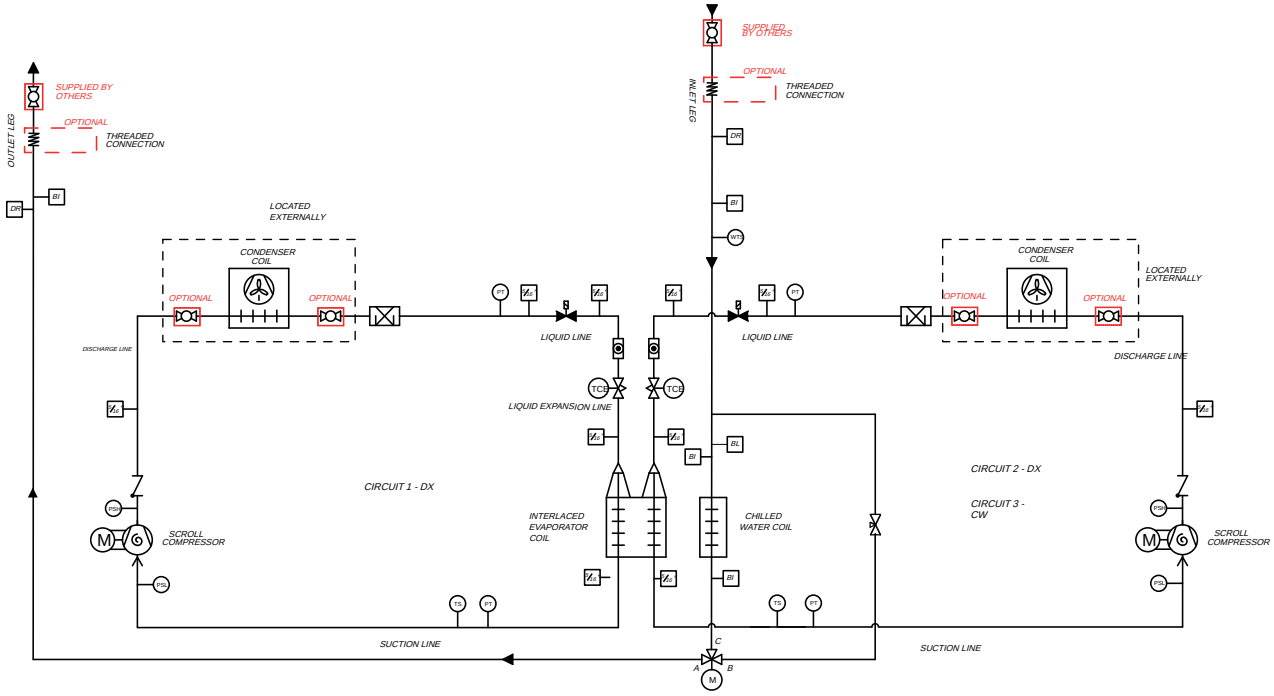
- SCROLL COMPRESSOR
- ELECTRONIC EXPANSION VALVE
- SIGHT GLASS
- FILTER DRIER
- BLEED POINT (HIGHEST POINT)
- DRAIN POINT (LOWEST POINT)
- NORMALLY CLOSED SOLENOID VALVE
- PRESSURE TRANSDUCER
- R410A 5/16" SCHRADER VALVE
- LOW PRESSURE SWITCH
- HIGH PRESSURE SWITCH
- SUCTION LINE TEMPERATURE SENSOR
- WATER TEMPERATURE SENSOR
- BINDER POINT
- 2-WAY MODULATING VALVE (MOTOR DRIVEN ACTUATOR CONTROLLED)
- THREADED CONNECTIONS
- CHECK VALVE
- SHUT OFF VALVE (OPTIONAL - SUPPLIED LOOSE)

Pipework Schematics

SC18

XDC0 Dual Fluid Pipework Schematics

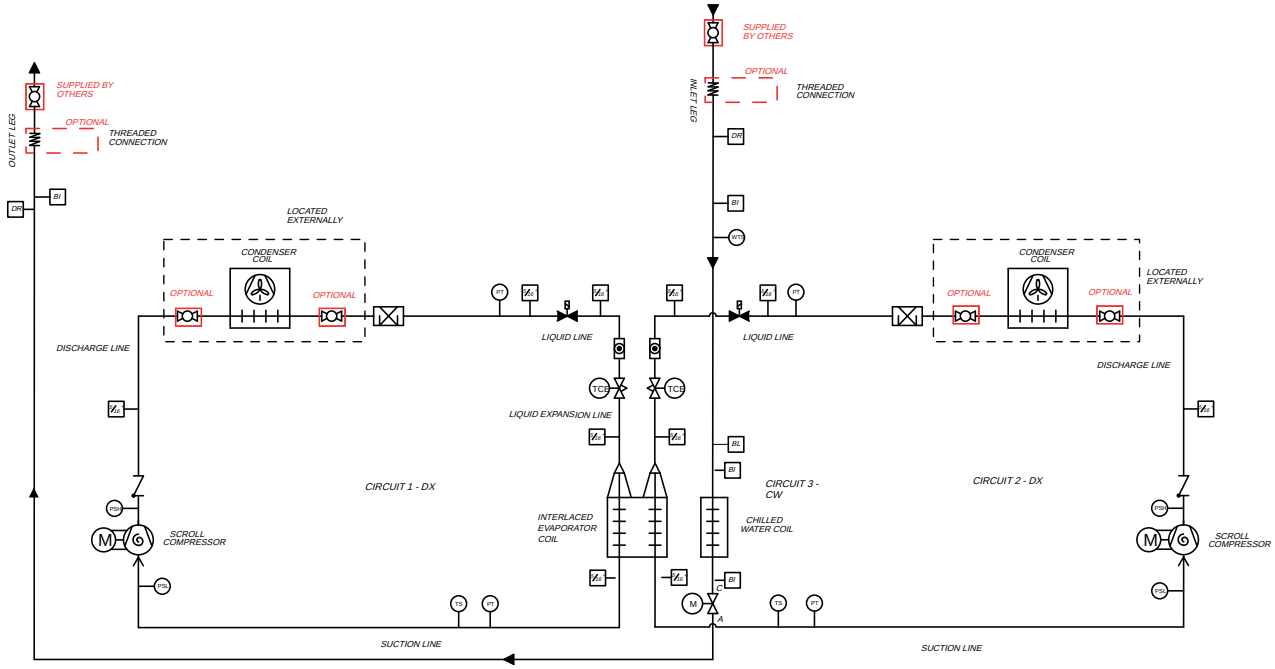
3 Way Valve



KEY: ALL ITEMS

- SCROLL COMPRESSOR
- ELECTRONIC EXPANSION VALVE
- SIGHT GLASS
- FILTER DRIER
- BLEED POINT (HIGHEST POINT)
- DRAIN POINT(LOWEST POINT)
- NORMALLY CLOSED SOLENOID VALVE
- PRESSURE TRANSDUCER
- R410A 5/16" SCHRADER VALVE
- LOW PRESSURE SWITCH
- HIGH PRESSURE SWITCH
- SUCTION LINE TEMPERATURE SENSOR
- WATER TEMPERATURE SENSOR
- BINDER POINT
- 3-WAY MODULATING VALVE (MOTOR DRIVEN ACTUATOR CONTROLLED)
- 2-WAY BALANCING VALVE
- THREADED CONNECTIONS
- CHECK VALVE
- SHUT OFF VALVE

Pipework Schematics
SC18 XDC0
Dual Fluid Pipework Schematics
2 Way Valve

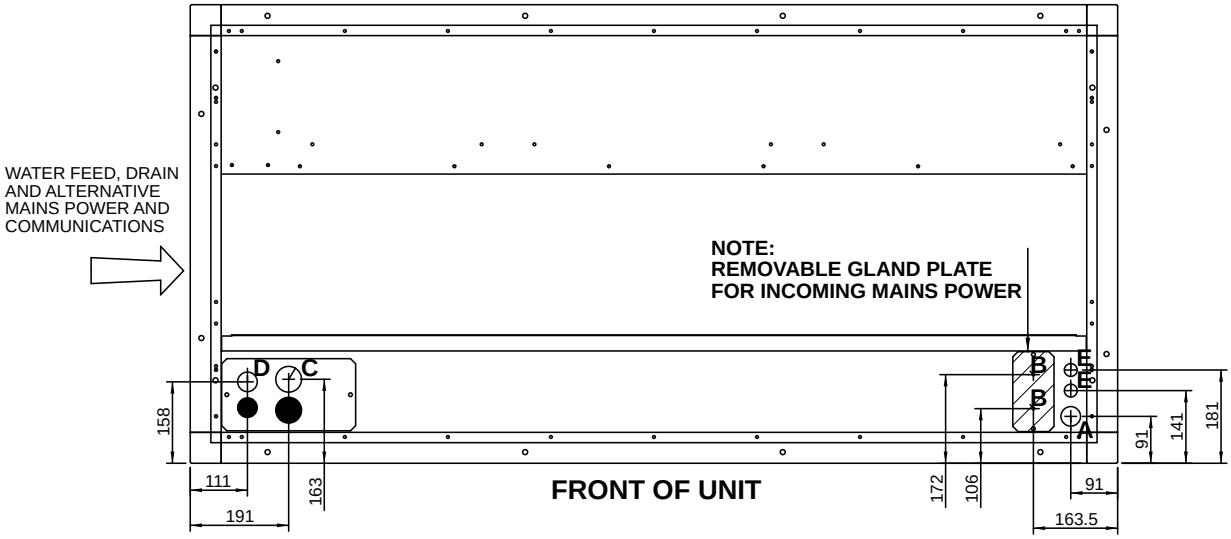


KEY: ALL ITEMS

- SCROLL COMPRESSOR
- ELECTRONIC EXPANSION VALVE
- SIGHT GLASS
- FILTER DRIER
- BLEED POINT (HIGHEST POINT)
- DRAIN POINT (LOWEST POINT)
- NORMALLY CLOSED SOLENOID VALVE
- PRESSURE TRANSDUCER
- R410A 5/16" SCHRADER VALVE
- LOW PRESSURE SWITCH
- HIGH PRESSURE SWITCH
- SUCTION LINE TEMPERATURE SENSOR
- WATER TEMPERATURE SENSOR
- BINDER POINT
- 2-WAY MODULATING VALVE (MOTOR DRIVEN ACTUATOR CONTROLLED)
- THREADED CONNECTIONS
- CHECK VALVE
- SHUT OFF VALVE
- DIFFERENTIAL PRESSURE TRANSDUCER

Incoming Services

Fixed Speed X200 / X100

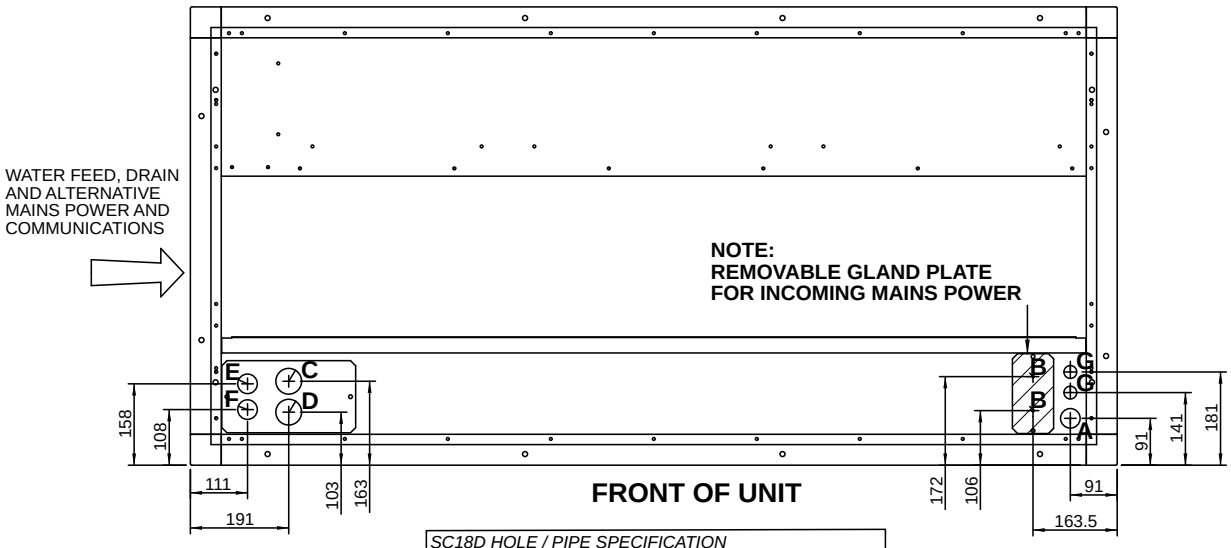


SC12D HOLE / PIPE SPECIFICATION	
HOLE 'A' Ø38MM	*COMMUNICATIONS*
HOLE 'B' Ø5MM	*MAINS POWER*
HOLE 'C' Ø50MM	*Ø5/8" - 7/8" DISCHARGE LINE*
HOLE 'D' Ø38MM	*Ø1/2"-5/8" LIQUID LINE*
HOLE 'E' Ø25MM	*OUT GOING CR/DR POWER*

SC15D HOLE / PIPE SPECIFICATION	
HOLE 'A' Ø38MM	*COMMUNICATIONS*
HOLE 'B' Ø5MM	*MAINS POWER*
HOLE 'C' Ø50MM	*Ø7/8" DISCHARGE LINE*
HOLE 'D' Ø38MM	*Ø1/2"-5/8" LIQUID LINE*
HOLE 'E' Ø25MM	*OUT GOING CR/DR POWER*

SC18D HOLE / PIPE SPECIFICATION	
HOLE 'A' Ø38MM	*COMMUNICATIONS*
HOLE 'B' Ø5MM	*MAINS POWER*
HOLE 'C' Ø50MM	*Ø7/8" DISCHARGE LINE*
HOLE 'D' Ø38MM	*Ø5/8" LIQUID LINE*
HOLE 'E' Ø25MM	*OUT GOING CR/DR POWER*

X1X1

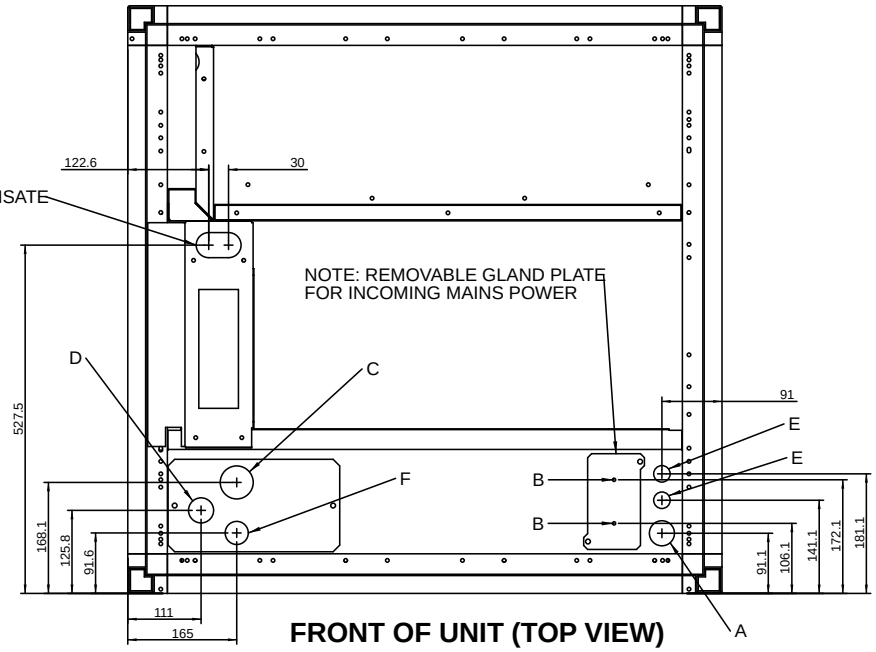


SC18D HOLE / PIPE SPECIFICATION	
HOLE 'A' Ø38MM	*COMMUNICATIONS*
HOLE 'B' Ø5MM	*MAINS POWER*
HOLE 'C' Ø50MM	*Ø7/8" DISCHARGE LINE (CIRCUIT 1)*
HOLE 'D' Ø50MM	*Ø7/8" DISCHARGE LINE (CIRCUIT 2)*
HOLE 'E' Ø38MM	*Ø5/8" LIQUID LINE (CIRCUIT 1)*
HOLE 'F' Ø38MM	*Ø5/8" LIQUID LINE (CIRCUIT 2)*
HOLE 'G' Ø25MM	*OUT GOING CR/DR POWER*

Incoming Services

SV9 X100

SV09 X100 INCOMING SERVICES DRAWING



SV09D023-X100 HOLE / PIPE SPECIFICATION

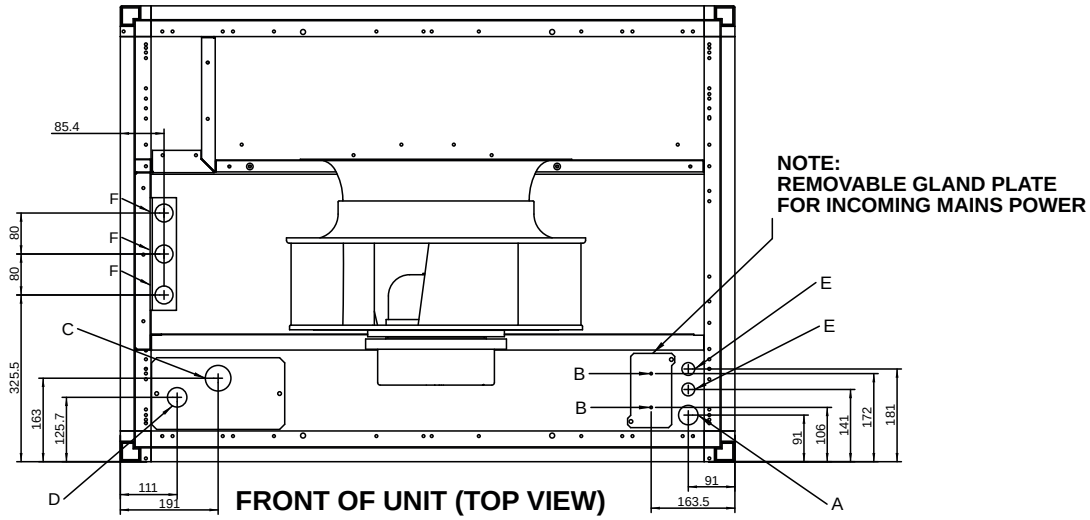
HOLE 'A' Ø38MM COMMUNICATIONS
HOLE 'B' Ø5MM MAINS POWER
HOLE 'C' Ø50MM 5/8" DISCHARGE LINE
HOLE 'D' Ø38MM 1/2" LIQUID LINE
HOLE 'E' Ø25MM OUT GOING CR/DR POWER
HOLE 'F' Ø35MM HUMIDIFIER WATER FEED

SV09D047-X100 HOLE / PIPE SPECIFICATION

HOLE 'A' Ø38MM COMMUNICATIONS
HOLE 'B' Ø5MM MAINS POWER
HOLE 'C' Ø50MM 7/8" DISCHARGE LINE
HOLE 'D' Ø38MM 5/8" LIQUID LINE
HOLE 'E' Ø25MM OUT GOING CR/DR POWER
HOLE 'F' Ø35MM HUMIDIFIER WATER FEED

SV12 X100

SV12 INCOMING SERVICES DRAWING



SV12D026-X100-0 HOLE / PIPE SPECIFICATION

HOLE 'A' Ø38MM COMMUNICATIONS
HOLE 'B' Ø5MM MAINS POWER
HOLE 'C' Ø50MM Ø3/4" DISCHARGE LINE
HOLE 'D' Ø38MM Ø1/2" LIQUID LINE
HOLE 'E' Ø25MM OUT GOING CR/DR POWER
HOLE 'F' Ø35MM WATER FEED AND DRAIN

SV12D034-X100-0 HOLE / PIPE SPECIFICATION

HOLE 'A' Ø38MM COMMUNICATIONS
HOLE 'B' Ø5MM MAINS POWER
HOLE 'C' Ø50MM Ø7/8" DISCHARGE LINE
HOLE 'D' Ø38MM Ø5/8" LIQUID LINE
HOLE 'E' Ø25MM OUT GOING CR/DR POWER
HOLE 'F' Ø35MM WATER FEED AND DRAIN

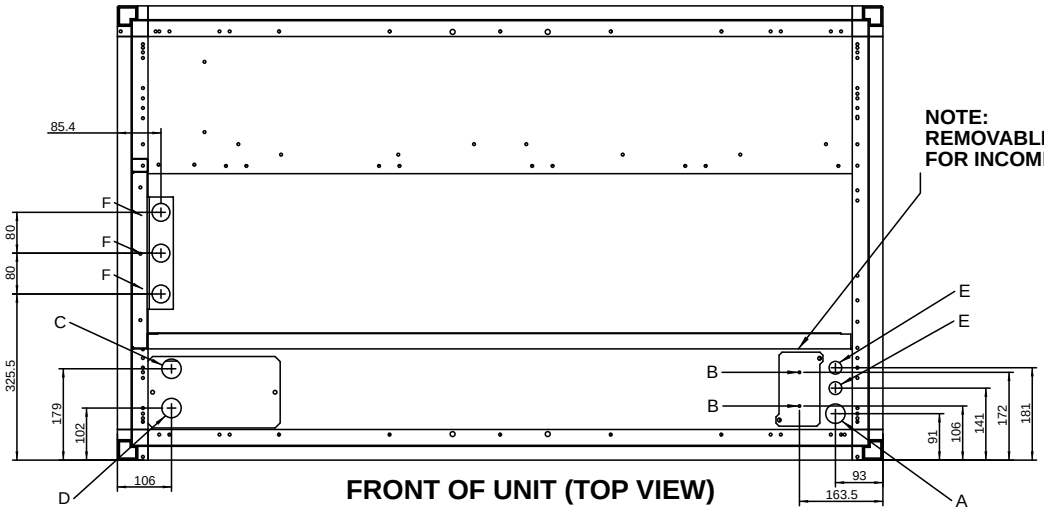
SV12D055-X100-0 HOLE / PIPE SPECIFICATION

HOLE 'A' Ø38MM COMMUNICATIONS
HOLE 'B' Ø5MM MAINS POWER
HOLE 'C' Ø50MM Ø3/4" DISCHARGE LINE
HOLE 'D' Ø38MM Ø5/8" LIQUID LINE
HOLE 'E' Ø25MM OUT GOING CR/DR POWER
HOLE 'F' Ø35MM WATER FEED AND DRAIN

Incoming Services

SV15 X100

SV15 INCOMING SERVICES DRAWING



NOTE:
REMOVABLE GLAND PLATE
FOR INCOMING MAINS POWER

FRONT OF UNIT (TOP VIEW)

SV15D036-X100 HOLE / PIPE SPECIFICATION

HOLE 'A' Ø38MM	*COMMUNICATIONS*
HOLE 'B' Ø5MM	*MAINS POWER*
HOLE 'C' Ø38MM	*Ø7/8" DISCHARGE LINE*
HOLE 'D' Ø38MM	*Ø5/8" LIQUID LINE*
HOLE 'E' Ø25MM	*OUT GOING CR/DR POWER*
HOLE 'F' Ø35MM	*WATER FEED AND DRAIN*

SV15D040-X100 HOLE / PIPE SPECIFICATION

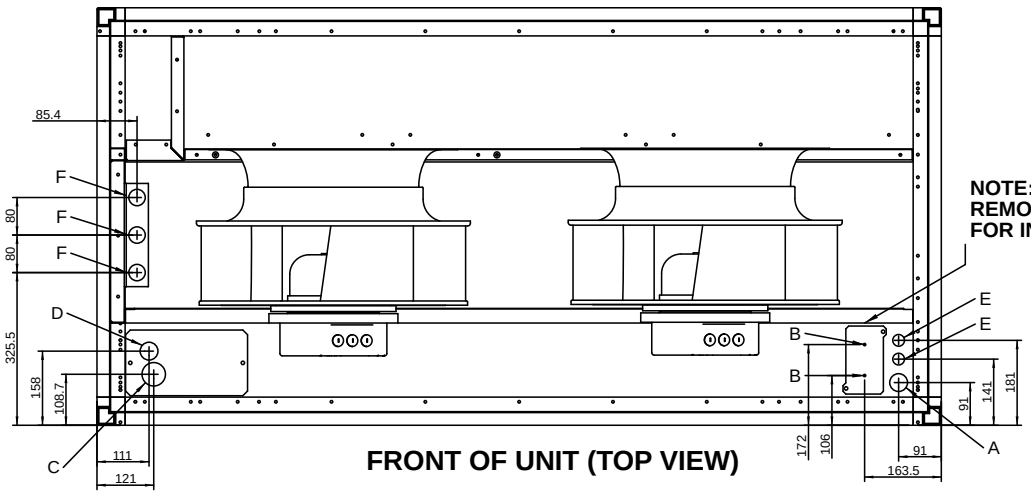
HOLE 'A' Ø38MM	*COMMUNICATIONS*
HOLE 'B' Ø5MM	*MAINS POWER*
HOLE 'C' Ø38MM	*Ø1 1/8" DISCHARGE LINE*
HOLE 'D' Ø38MM	*Ø5/8" LIQUID LINE*
HOLE 'E' Ø25MM	*OUT GOING CR/DR POWER*
HOLE 'F' Ø35MM	*WATER FEED AND DRAIN*

SV15D063-X200 HOLE / PIPE SPECIFICATION

HOLE 'A' Ø38MM	*COMMUNICATIONS*
HOLE 'B' Ø5MM	*MAINS POWER*
HOLE 'C' Ø38MM	*Ø1 1/8" DISCHARGE LINE*
HOLE 'D' Ø38MM	*Ø3/4" LIQUID LINE*
HOLE 'E' Ø25MM	*OUT GOING CR/DR POWER*
HOLE 'F' Ø35MM	*WATER FEED AND DRAIN*

SV18 X100 , X200

SV18 INCOMING SERVICES DRAWING



NOTE:
REMOVABLE GLAND PLATE
FOR INCOMING MAINS POWEI

FRONT OF UNIT (TOP VIEW)

SV18D042-X100 HOLE / PIPE SPECIFICATION

HOLE 'A' Ø38MM	*COMMUNICATIONS*
HOLE 'B' Ø5MM	*MAINS POWER*
HOLE 'C' Ø50MM	*Ø7/8" DISCHARGE LINE*
HOLE 'D' Ø38MM	*Ø3/4" LIQUID LINE*
HOLE 'E' Ø25MM	*OUT GOING CR/DR POWER*
HOLE 'F' Ø35MM	*WATER FEED AND DRAIN*

SV18D049-X100 HOLE / PIPE SPECIFICATION

HOLE 'A' Ø38MM	*COMMUNICATIONS*
HOLE 'B' Ø5MM	*MAINS POWER*
HOLE 'C' Ø50MM	*Ø1 1/8" DISCHARGE LINE*
HOLE 'D' Ø38MM	*Ø3/4" LIQUID LINE*
HOLE 'E' Ø25MM	*OUT GOING CR/DR POWER*
HOLE 'F' Ø35MM	*WATER FEED AND DRAIN*

SV18D083-X200 HOLE / PIPE SPECIFICATION

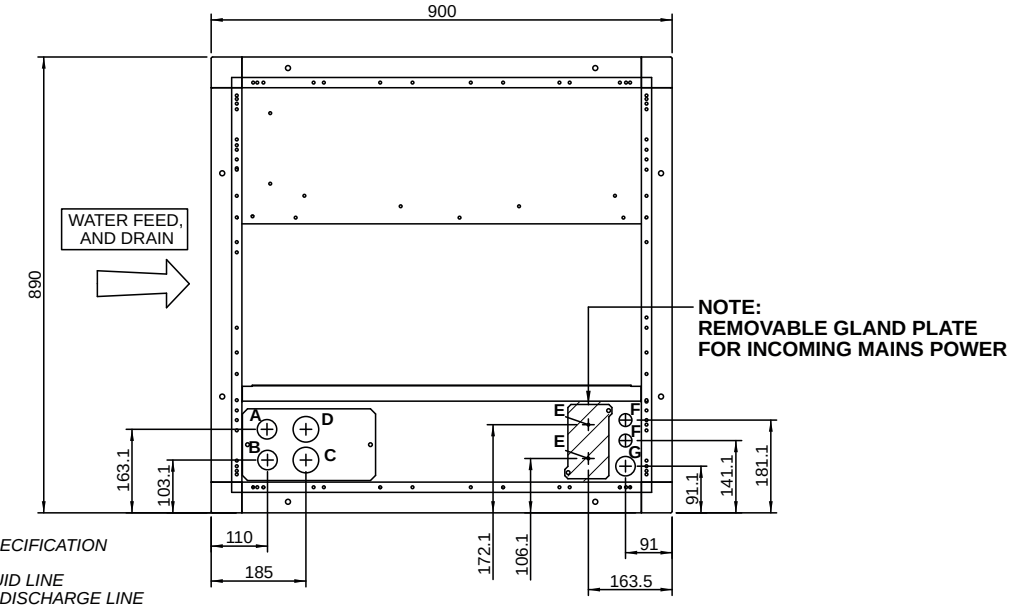
HOLE 'A' Ø38MM	*COMMUNICATIONS*
HOLE 'B' Ø5MM	*MAINS POWER*
HOLE 'C' Ø50MM	*Ø1 3/8" DISCHARGE LINE*
HOLE 'D' Ø38MM	*Ø3/4" LIQUID LINE*
HOLE 'E' Ø25MM	*OUT GOING CR/DR POWER*
HOLE 'F' Ø35MM	*WATER FEED AND DRAIN*

***NOTE; FOR WATER FEED AND DRAIN POSITIONS REFER TO FLOORSTAND DRAWING.**

Incoming Services

SC09 X1C0 Dual fluid

SC09D X1C0 INCOMING SERVICE DETAIL 6P-08-1167-A



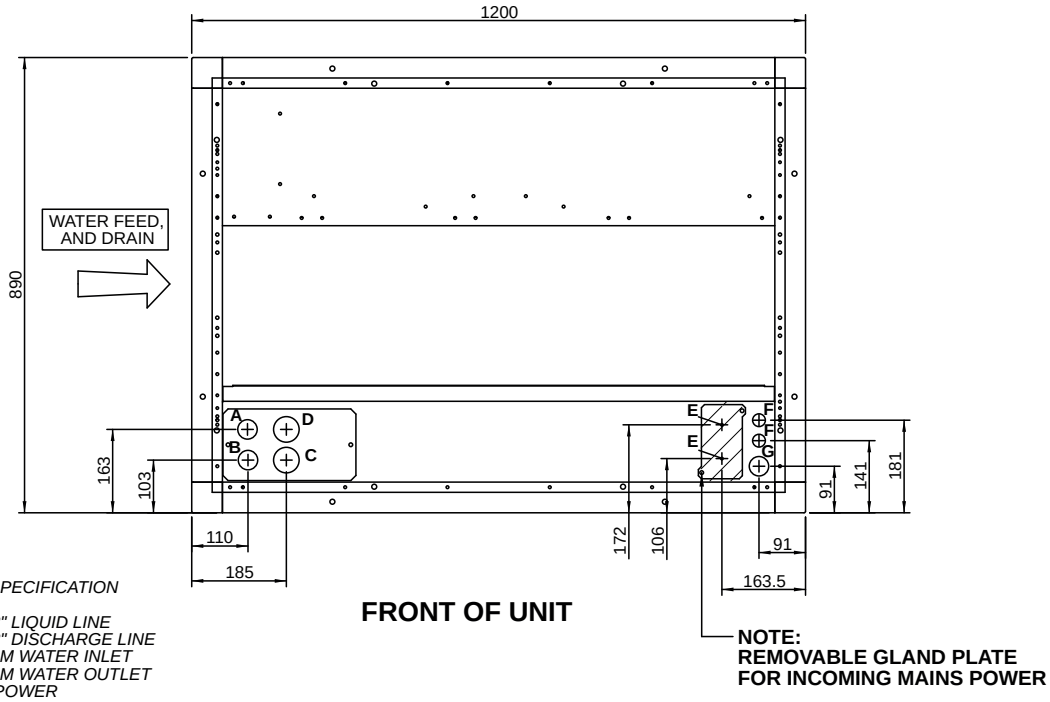
SC09D-X1C0 HOLE / PIPE SPECIFICATION

HOLE 'A' Ø38MM ϕ1/2" LIQUID LINE
HOLE 'B' Ø38MM ϕ5/8"-3/4" DISCHARGE LINE
HOLE 'C' Ø50MM ϕ28-35MM WATER INLET
HOLE 'D' Ø50MM ϕ28-35MM WATER OUTLET
HOLE 'E' Ø5MM MAINS POWER
HOLE 'F' Ø25MM OUT GOING CR/DR POWER
HOLE 'G' Ø38MM COMMUNICATIONS

***NOTE; FOR WATER FEED AND DRAIN POSITIONS REFER TO FLOORSTAND DRAWING.**

SC12 X2C0 Dual Fluid

SC12D X2C0 INCOMING SERVICE DETAIL 6P-08-1168-A



SC12D-X2C0 HOLE / PIPE SPECIFICATION

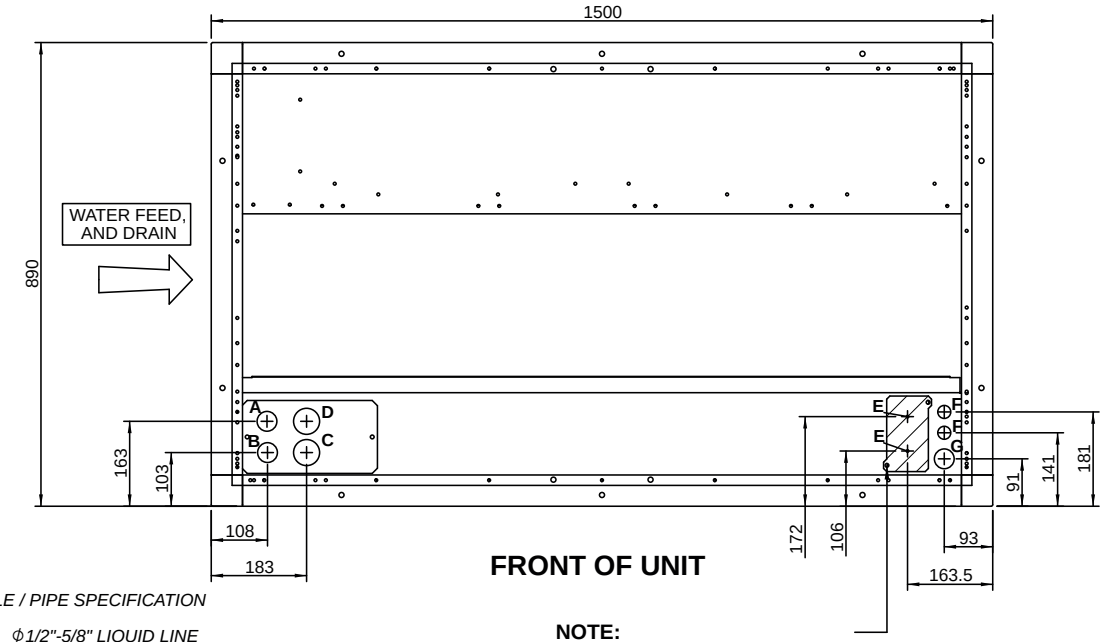
HOLE 'A' Ø38MM ϕ1/2"-5/8" LIQUID LINE
HOLE 'B' Ø38MM ϕ5/8"-7/8" DISCHARGE LINE
HOLE 'C' Ø50MM ϕ28-42MM WATER INLET
HOLE 'D' Ø50MM ϕ28-42MM WATER OUTLET
HOLE 'E' Ø5MM MAINS POWER
HOLE 'F' Ø25MM OUT GOING CR/DR POWER
HOLE 'G' Ø38MM COMMUNICATIONS

***NOTE; FOR WATER FEED AND DRAIN POSITIONS REFER TO FLOORSTAND DRAWING.**

Incoming Services

SC15 X2C0 Dual Fluid

SC15D X2C0 INCOMING SERVICE DETAIL 6P-08-1169-A



SC15D-X2C0 HOLE / PIPE SPECIFICATION

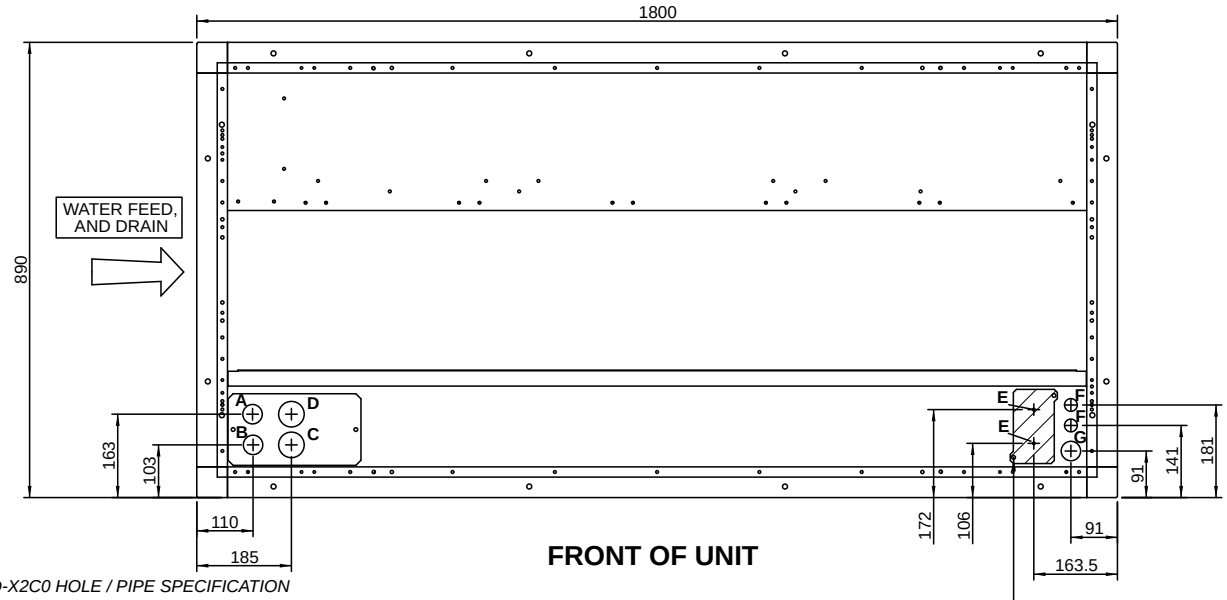
HOLE 'A' Ø38MM ϕ1/2"-5/8" LIQUID LINE
HOLE 'B' Ø38MM ϕ5/8"-7/8" DISCHARGE LINE
HOLE 'C' Ø50MM ϕ35-42MM WATER INLET
HOLE 'D' Ø50MM ϕ35-42MM WATER OUTLET
HOLE 'E' Ø5MM MAINS POWER
HOLE 'F' Ø25MM OUT GOING CR/DR POWER
HOLE 'G' Ø38MM COMMUNICATIONS

NOTE:
REMOVABLE GLAND PLATE
FOR INCOMING MAINS POWER

***NOTE; FOR WATER FEED AND DRAIN POSITIONS REFER TO FLOORSTAND DRAWING.**

SC18 X2C0

SC18D X2C0 INCOMING SERVICE DETAIL 6P-08-1170-A



SC18D-X2C0 HOLE / PIPE SPECIFICATION

HOLE 'A' Ø38MM ϕ5/8" LIQUID LINE
HOLE 'B' Ø38MM ϕ7/8" DISCHARGE LINE
HOLE 'C' Ø50MM ϕ42MM WATER INLET
HOLE 'D' Ø50MM ϕ42MM WATER OUTLET
HOLE 'E' Ø5MM MAINS POWER
HOLE 'F' Ø25MM OUT GOING CR/DR POWER
HOLE 'G' Ø38MM COMMUNICATIONS

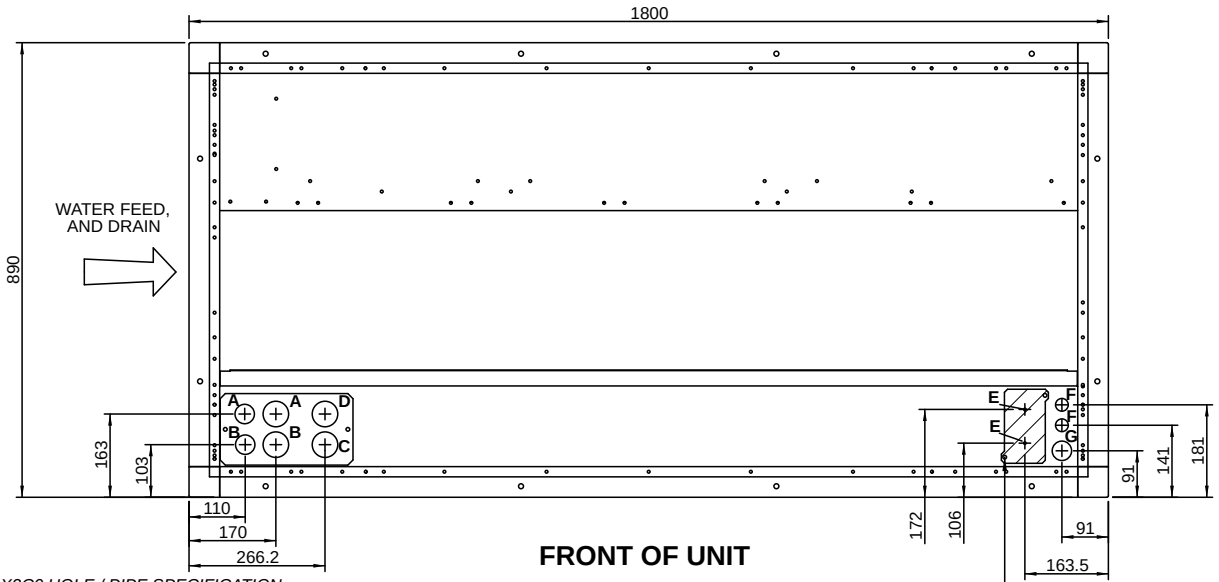
NOTE:
REMOVABLE GLAND PLATE
FOR INCOMING MAINS POWER

***NOTE; FOR WATER FEED AND DRAIN POSITIONS REFER TO FLOORSTAND DRAWING.**

Incoming Services

SC18 XDC0

6P-08-1171-A



FRONT OF UNIT

SC18D-X2C0 HOLE / PIPE SPECIFICATION

HOLE 'A' Ø38MM ϕ5/8" LIQUID LINE
HOLE 'B' Ø38MM ϕ7/8" DISCHARGE LINE
HOLE 'C' Ø50MM ϕ42MM WATER INLET
HOLE 'D' Ø50MM ϕ42MM WATER OUTLET
HOLE 'E' Ø5MM MAINS POWER
HOLE 'F' Ø25MM OUT GOING CR/DR POWER
HOLE 'G' Ø38MM COMMUNICATIONS

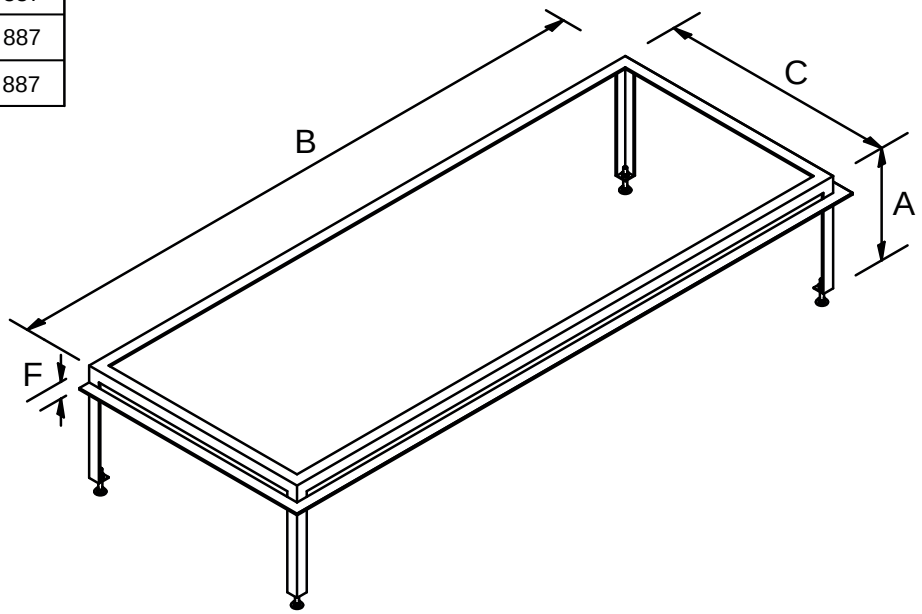
NOTE:
REMOVABLE GLAND PLATE
FOR INCOMING MAINS POWER

***NOTE; FOR WATER FEED AND DRAIN POSITIONS REFER TO FLOORSTAND DRAWING.**

Floorstands

Open

			DIMENSIONS	
			B	C
MODEL	SC/SV09		897	887
	SC/SV12		1197	887
	SC/SV15		1497	887
	SC/SV18		1797	887

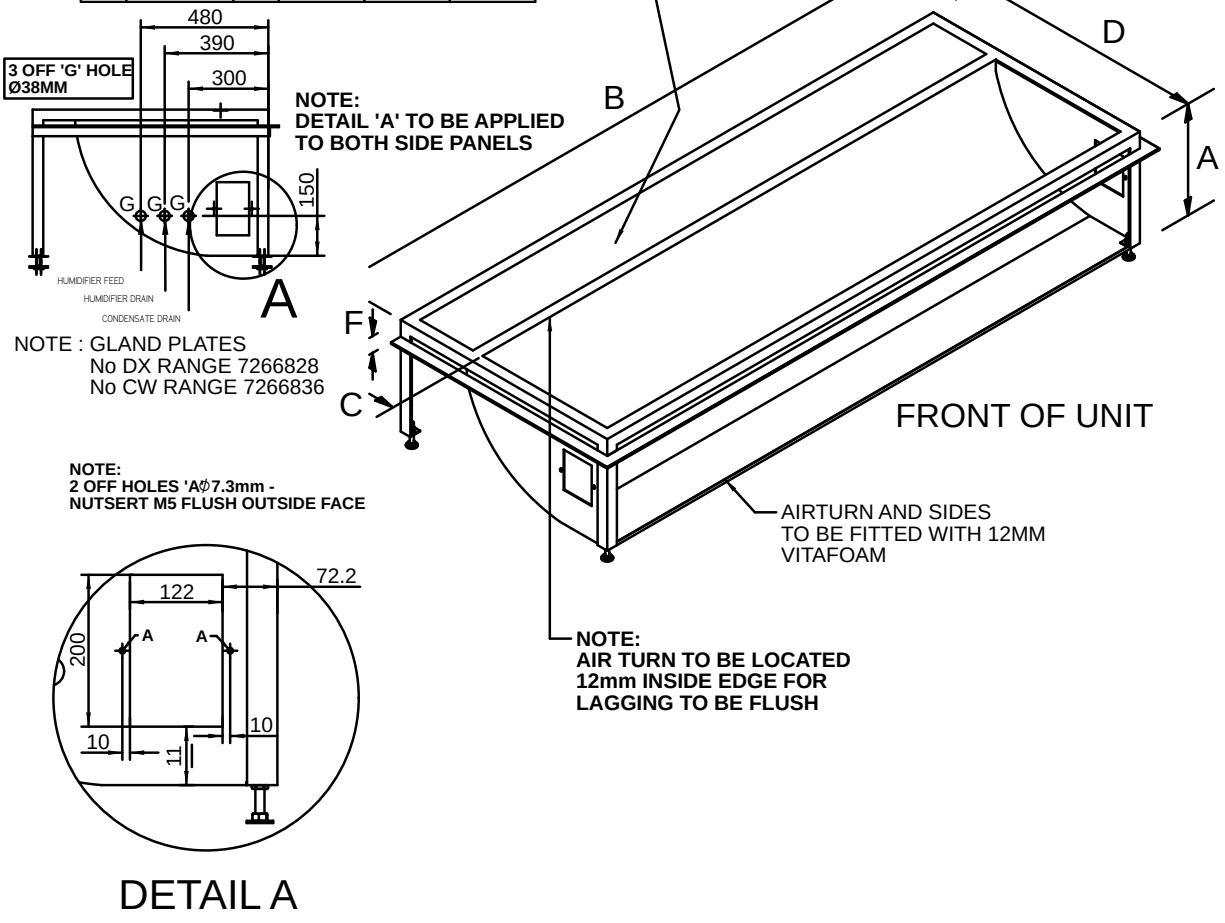


Dimension “A and F” are specified by customer at time of order

Floorstands

Front Discharge - Enclosed

MODEL		DIMENSIONS B	C	D
SC/SV09		897	302	887
SC/SV12		1197	302	887
SC/SV15		1497	302	887
SC/SV18		1797	302	887

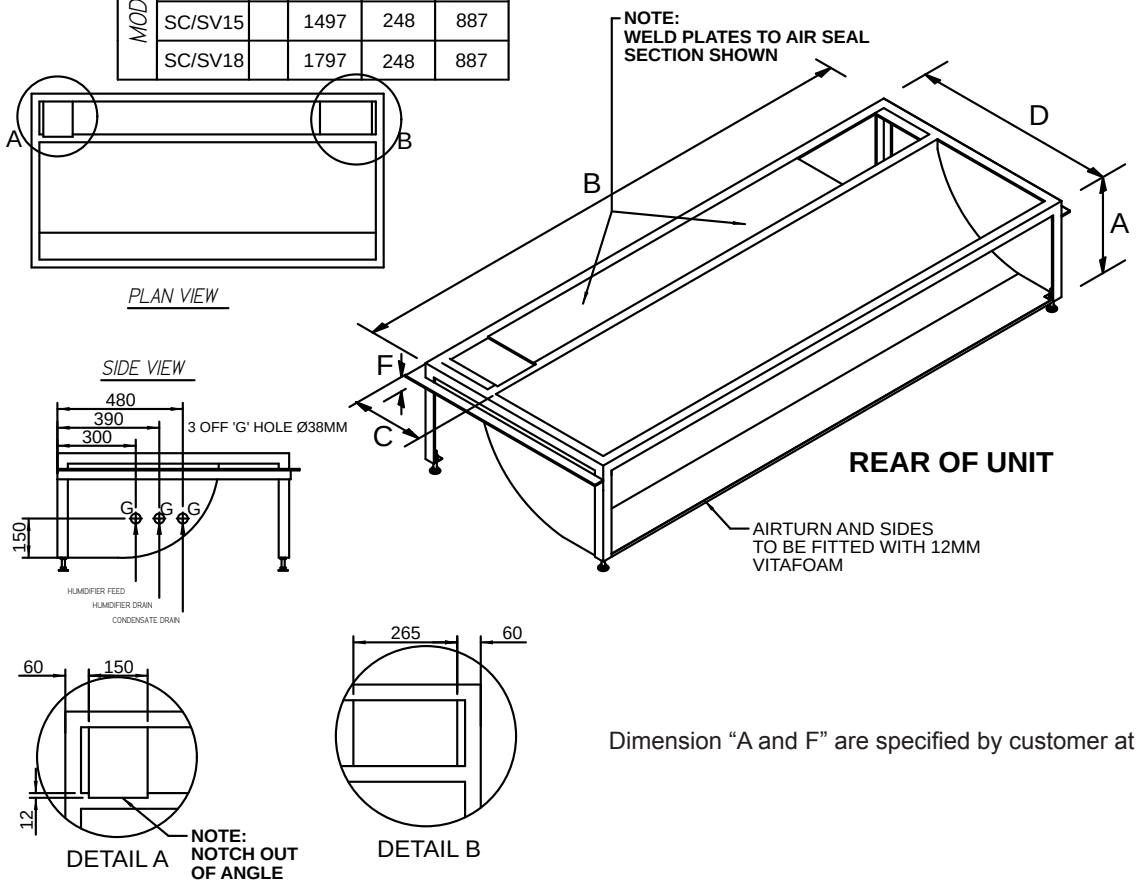


Dimension “A and F” are specified by customer at time of order

Floorstands

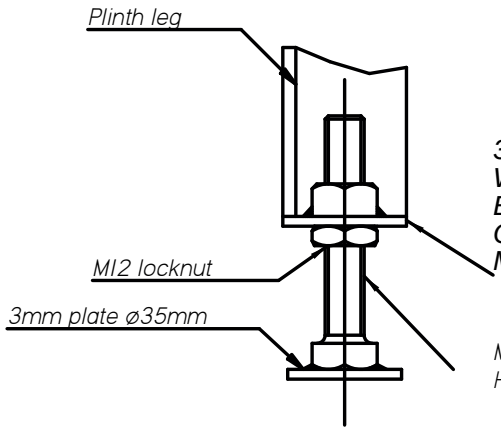
Rear Discharge - Enclosed

MODEL	DIMENSIONS B	C	D
SC/SV09	897	248	887
SC/SV12	1197	248	887
SC/SV15	1497	248	887
SC/SV18	1797	248	887



Dimension “A and F” are specified by customer at time of order

Adustable Foot



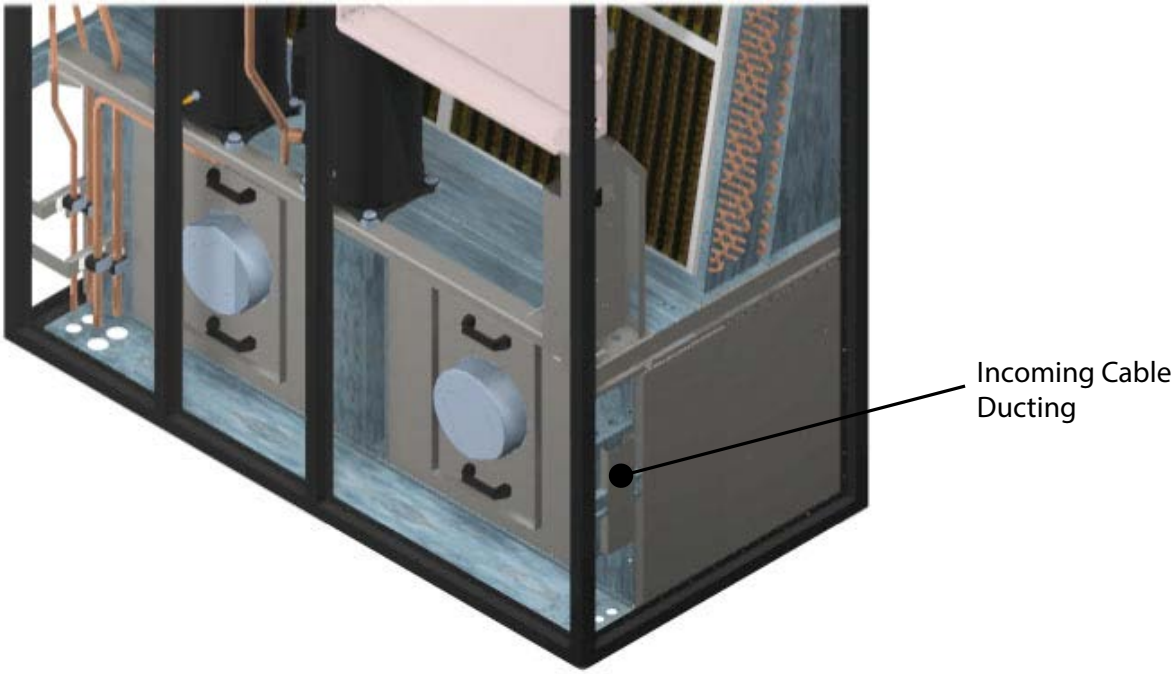
3mm mild steel 38mm square shown
Welded in position on end of plinth leg
Before welding in position, drill
One ø15mm hole through plate and weld
M12 nut centrally on one side

MI2 x 70mm long
Hex head screw

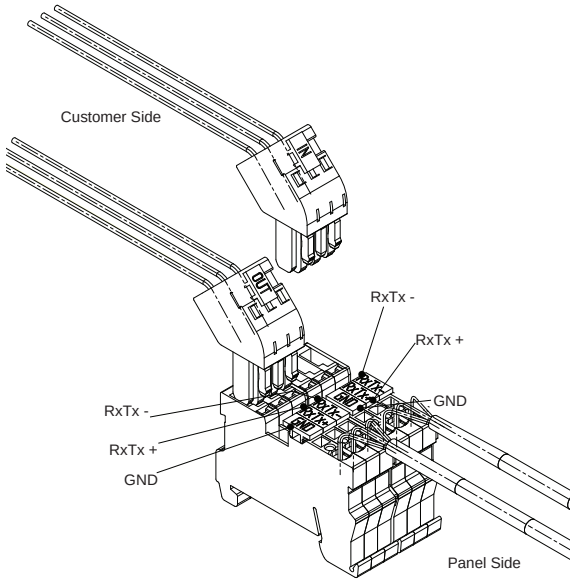
Assembly of adjustable foot - giving *+45mm/-20mm* *For Leveling*

Note : overall floorstand height is dimension 'a' + 50mm for foot

Electrical Incoming Services



pLAN Termination



CAUTION ⚠	The plugged termination ensures that the connections are made simultaniously. Failure to attached the cables this this way may cause damage to the controller.

Water Detector Tape Installation

Monitored by a sensing relay, the water detection tape will provide an alarm when in contact with several drops of conductive liquid. High humidity should normally not cause an alarm unless it results in condensation dripping on the tape surface or condensation present on the surface to which the tape is applied.
The recommended installation process is as follows:

- When applying to a surface such as concrete, the most popular method is to press the tape firmly onto a continuous film of approved adhesive or glue. When properly glued to the floor the tape lies flat on the floor avoiding “bridging” (where the detector lifts off the floor allowing water to run under the detector without detection) and avoids damage to the detector
- When applying the tape directly to the piping, the tape is simply strapped to the pipe
- Care should be taken to prevent the wire detectors in the tape from coming into contact with any electrically conductive material causing a “fault” condition. Anything used in applying the tape which interferes with the capability of the fleece substrate may adversely affect the detector’s function
- The tape should not be installed under piping or equipment that can condense liquid as the condensation could drip on the tape causing an alarm
- The tape should not be installed directly under an air handling unit, but around the unit
- In the sub-floor of a computer room the tape should be installed after the raised floor, conduit and piping are installed and the sub-floor cleaned and sealed

CAUTION ⚠	Any adhesive which alters the chemical composition of the tape must be avoided and any use thereof voids any warranty, expressed or implied. **3M Scotch-Weld™ 77 adhesive** is strongly recommended to ensure the warranty will be maintained. When adhesive is used, adhesive with an oily or greasy base MUST be avoided as this will affect the tape’s ability to detect moisture. When the use of an adhesive is not desirable or practical, staples, clips or other devices may be used. When applying the tape to piping a combination of glue and plastic or nylon straps or wire ties may be used. The straps or ties help to cut down installation time and secures the tape to the pipe while the adhesive cures and dries.

CAUTION ⚠	Any electrically conductive attachment devices used must not touch the wires that are within the tape fabric. The maximum length of a detector loop, including wire and detector tape is 50 metres. However, this tape length is not practical for most applications. Where the tape is concealed or not easily accessible, tape runs should be limited to no more than 30 metres, and 10 to 15 metres per zone is generally used. If the water detector tape is to be attached to or covered by a metallic or conductive surface, care should be taken not to short the conductors. When installing tape to any surface, be careful not to short circuit or ground out the conductors (such as over/under conduit or sharp edges of cable trays etc.). This also applies to any covering which may be applied over the tape. Before installing the tape, be sure to inspect areas where the tape is to be applied for presence of chemical materials that could create problems. If in doubt, it is recommended to clean the floor with a mild detergent.

For further information, please refer to Airedale’s Technical Bulletin and Loose Part Instruction Manual.

Operating Limits

Indoor Air Temperature	+18°C to +40°C
Indoor RH%	+40% to +55% (Based upon 24°C Dry Bulb)
Outdoor Temperature	-20°C to +46°C

Downflow Fixed Speed

Performance Data

X100 / X200 / X1X1 Model	Air On Temp. (°C) / %RH	Ambient Temperature (°C) 25 TC (kW)	25 SC (kW)	30 TC (kW)	30 SC (kW)	35 TC (kW)	35 SC (kW)	40 TC (kW)	40 SC (kW)	46 TC (kW)	46 SC (kW)
SC09D016-X100-0	22 / 50	18.32	18.32	17.61	17.61	16.78	16.78	15.91	15.91	14.82	14.82
1 x CR30M	24 / 45	19.08	19.08	18.30	18.30	17.47	17.47	16.59	16.59	15.48	15.48
	26 / 40	19.86	19.86	19.06	19.06	18.21	18.21	17.30	17.30	16.17	16.17
SC09D019-X100-0	22 / 50	20.44	20.44	19.58	19.58	18.66	18.66	17.68	17.68	16.47	16.47
1 x CR30M	24 / 45	21.19	21.19	20.33	20.33	19.40	19.40	18.40	18.40	17.17	17.17
	26 / 40	22.02	22.02	21.14	21.14	20.19	20.19	19.17	19.17	17.92	17.92
SC09D023-X100-0	22 / 50	24.56	22.76	24.49	22.73	23.45	23.45	22.38	22.38	21.03	21.03
1 x CR50M	24 / 45	25.34	25.34	25.23	25.23	24.23	24.23	23.19	23.19	21.86	21.86
	26 / 40	26.35	26.35	26.19	26.19	25.20	25.20	24.16	24.16	22.80	22.80
SC09D026-X100-0	22 / 50	27.47	23.75	27.17	23.64	26.01	23.25	24.80	22.84	23.27	23.27
1 x CR50M	24 / 45	28.10	27.12	27.77	26.99	26.65	26.46	25.48	25.48	24.01	24.01
	26 / 40	28.94	28.94	28.59	28.59	27.50	27.50	26.37	26.37	24.95	24.95
SC12D020-X200-0	22 / 50	22.84	20.38	21.71	21.71	20.51	20.51	19.26	19.26	17.76	17.76
1 x CR30M	24 / 45	23.54	23.54	22.43	22.43	21.25	21.25	20.01	20.01	18.53	18.53
	26 / 40	24.30	24.30	23.20	23.20	22.03	22.03	20.82	20.82	19.39	19.39
SC12D023-X200-0	22 / 50	29.72	25.99	29.21	25.77	27.79	25.01	26.31	26.31	24.40	24.40
1 x CR50M	24 / 45	30.66	29.22	30.08	30.08	28.68	28.68	27.21	27.21	25.33	25.33
	26 / 40	31.67	31.67	31.04	31.04	29.67	29.67	28.21	28.21	26.33	26.33
SC12D029-X200-0	22 / 50	33.75	28.88	32.77	28.48	31.21	27.81	29.56	29.56	27.46	27.46
1 x CR50M	24 / 45	34.75	32.91	33.70	32.16	32.16	32.16	30.53	30.53	28.47	28.47
	26 / 40	35.83	35.83	34.73	34.73	33.23	33.23	31.63	31.63	29.60	29.60
SC12D033-X200-0	22 / 50	38.18	31.92	36.78	31.35	35.05	30.65	33.23	29.87	30.97	30.97
1 x CR65M	24 / 45	39.18	36.50	37.72	35.78	36.01	36.01	34.22	34.22	32.01	32.01
	26 / 40	40.16	40.16	38.67	38.67	37.03	37.03	35.31	35.31	33.17	33.17
SC12D036-X200-0	22 / 50	42.39	33.62	40.65	32.91	38.76	32.15	36.75	31.34	34.16	30.30
1 x CR65M	24 / 45	43.25	38.23	41.51	37.49	39.67	36.71	37.71	35.76	35.19	35.19
	26 / 40	44.02	44.02	42.33	42.33	40.55	40.55	38.66	38.66	36.28	36.28
SC15D027-X200-0	22 / 50	28.65	28.65	27.17	27.17	25.62	25.62	24.05	24.05	0.00	0.00
1 x CR30M	24 / 45	29.54	29.54	28.06	28.06	26.53	26.53	25.01	25.01	0.00	0.00
	26 / 40	30.62	30.62	29.13	29.13	27.58	27.58	26.02	26.02	0.00	0.00
SC15D030-X200-0	22 / 50	35.49	35.49	34.36	34.36	32.76	32.76	31.07	31.07	28.91	28.91
1 x CR50M	24 / 45	36.73	36.73	35.51	35.51	33.92	33.92	32.24	32.24	30.11	30.11
	26 / 40	38.21	38.21	36.88	36.88	35.29	35.29	33.60	33.60	31.43	31.43
SC15D035-X200-0	22 / 50	40.40	40.40	38.71	38.71	36.90	36.90	34.96	34.96	32.47	32.47
1 x CR50M	24 / 45	41.75	41.75	40.06	40.06	38.25	38.25	36.31	36.31	33.81	33.81
	26 / 40	43.30	43.30	41.61	41.61	39.79	39.79	37.81	37.81	35.25	35.25
SC15D040-X200-0	22 / 50	44.58	39.89	42.79	42.79	40.90	40.90	38.89	38.89	36.33	36.33
1 x CR65M	24 / 45	45.84	45.84	44.10	44.10	42.26	42.26	40.29	40.29	37.75	37.75
	26 / 40	47.33	47.33	45.65	45.65	43.83	43.83	41.88	41.88	39.33	39.33
SC15D044-X200-0	22 / 50	48.21	41.36	47.29	40.99	45.16	40.12	42.97	42.97	40.33	40.33
1 x CR80M	24 / 45	49.48	47.23	48.50	46.57	46.41	46.41	44.26	44.26	41.69	41.69
	26 / 40	50.88	50.88	49.84	49.84	47.84	47.84	45.77	45.77	43.26	43.26
SC18D037-X200-0	22 / 50	40.77	40.77	39.02	39.02	37.17	37.17	35.18	35.18	32.63	32.63
1 x CR50M	24 / 45	42.08	42.08	40.34	40.34	38.49	38.49	36.51	36.51	33.99	33.99
	26 / 40	43.66	43.66	41.93	41.93	40.06	40.06	38.05	38.05	35.44	35.44
SC18D040-X200-0	22 / 50	45.44	45.44	43.56	43.56	41.54	41.54	39.36	39.36	36.53	36.53
1 x CR50M	24 / 45	46.87	46.87	45.01	45.01	43.00	43.00	40.84	40.84	38.06	38.06
	26 / 40	48.55	48.55	46.71	46.71	44.71	44.71	42.53	42.53	39.70	39.70
SC18D044-X200-0	22 / 50	49.13	49.13	46.98	46.98	44.77	44.77	42.50	42.50	39.67	39.67
1 x CR65M	24 / 45	50.73	50.73	48.59	48.59	46.39	46.39	44.12	44.12	41.28	41.28
	26 / 40	52.56	52.56	50.43	50.43	48.21	48.21	45.90	45.90	42.99	42.99
SC18D048-X1X1-0	22 / 50	50.81	50.81	50.65	50.65	48.46	48.46	46.20	46.20	43.33	43.33
2 x CR50M	24 / 45	52.45	52.45	52.19	52.19	50.03	50.03	47.80	47.80	45.00	45.00
	26 / 40	54.25	54.25	53.90	53.90	51.82	51.82	49.66	49.66	46.91	46.91
SC18D055-X1X1-0	22 / 50	57.44	50.19	56.81	49.91	54.45	48.86	51.82	51.82	48.24	48.24
2 x CR50M	24 / 45	59.00	59.00	58.27	58.27	55.93	55.93	53.34	53.34	49.85	49.85
	26 / 40	60.44	60.44	59.67	59.67	57.42	57.42	54.94	54.94	51.64	51.64

IMPORTANT ⚠	Performance data provided is representative of a system with a 5m interconnecting pipe length tested to EN14511.

Downflow Fixed Speed

Sound Data

Sound Measurement		Overall dB(A)	Frequency (Hz) dB							
			63	125	250	500	1000	2000	4000	8000
SC09D016-X100	Discharge Air	85	88	89	88	82	79	73	73	68
	Return Air	83	95	89	88	81	76	68	71	62
	Case Breakout	66	66	69	64	57	56	57	61	60
	Sound Pressure @ 3m	55	55	58	53	46	45	46	50	49
SC09D019-X100	Discharge Air	87	91	88	91	85	81	75	73	72
	Return Air	86	96	89	91	84	74	69	71	67
	Case Breakout	68	69	68	67	60	58	59	61	64
	Sound Pressure @ 3m	57	58	57	56	49	47	48	50	53
SC09D023-X100	Discharge Air	89	91	88	91	87	83	77	73	74
	Return Air	87	96	89	91	86	76	71	72	67
	Case Breakout	69	69	68	68	62	61	61	61	66
	Sound Pressure @ 3m	58	58	57	57	51	50	50	50	55
SC09D026-X100	Discharge Air	89	91	88	91	87	83	78	73	74
	Return Air	87	96	89	91	86	77	73	73	67
	Case Breakout	70	69	68	68	62	61	62	61	66
	Sound Pressure @ 3m	59	58	57	57	51	50	51	50	55
SC12D020-X200	Discharge Air	79	87	87	83	76	71	65	60	63
	Return Air	80	94	91	85	73	68	60	61	60
	Case Breakout	59	64	67	59	51	48	49	48	55
	Sound Pressure @ 3m	48	53	56	48	40	37	38	37	44
SC12D023-X200	Discharge Air	91	100	82	94	80	77	86	83	81
	Return Air	91	103	86	85	92	72	82	82	79
	Case Breakout	77	78	62	70	55	55	71	71	73
	Sound Pressure @ 3m	66	67	51	59	44	44	60	60	62
SC12D029-X200	Discharge Air	92	100	97	94	82	81	86	82	80
	Return Air	95	104	100	100	92	79	82	82	79
	Case Breakout	77	78	77	70	57	58	71	70	72
	Sound Pressure @ 3m	66	67	66	59	46	47	60	59	61
SC12D033-X2X2	Discharge Air	94	100	96	101	84	82	85	81	81
	Return Air	93	103	91	100	83	77	81	81	79
	Case Breakout	76	78	76	77	59	59	69	69	72
	Sound Pressure @ 3m	65	67	65	66	48	48	58	58	61
SC12D036-X200	Discharge Air	94	100	96	101	84	82	85	81	80
	Return Air	93	103	91	100	84	80	82	81	79
	Case Breakout	76	78	76	77	59	60	70	69	72
	Sound Pressure @ 3m	65	67	65	66	48	49	59	58	61

(1) dB(A) is the overall sound level, measured on the A scale

(2) All sound data measured at nominal conditions, Discharge Air, Return air and case breakout is sound power.

Downflow Fixed Speed

Sound Data

Sound Measurement		Overall dB(A)	Frequency (Hz) dB							
			63	125	250	500	1000	2000	4000	8000
SC15D027-X200	Discharge Air	80	86	86	82	77	74	70	68	60
	Return Air	79	94	87	85	75	69	62	65	55
	Case Breakout	61	64	66	58	52	52	54	56	52
	Sound Pressure @ 3m	50	53	55	47	41	41	43	45	41
SC15D030-X200	Discharge Air	85	89	90	86	81	80	74	72	67
	Return Air	85	96	90	89	82	78	69	71	63
	Case Breakout	66	66	70	62	56	57	58	60	59
	Sound Pressure @ 3m	55	55	59	51	45	46	47	49	48
SC15D035-X200	Discharge Air	89	92	90	92	86	82	77	75	73
	Return Air	87	98	90	92	85	77	71	74	68
	Case Breakout	70	70	70	68	61	60	61	63	65
	Sound Pressure @ 3m	59	59	59	57	50	49	50	52	54
SC15D040-X200	Discharge Air	89	92	90	92	86	83	77	75	72
	Return Air	88	98	90	93	86	79	72	74	66
	Case Breakout	70	70	70	68	61	60	62	63	64
	Sound Pressure @ 3m	59	59	59	57	50	49	50	52	53
SC15D044-X200	Discharge Air	89	93	90	92	86	83	78	76	71
	Return Air	88	98	90	93	86	78	72	74	66
	Case Breakout	70	70	70	68	61	60	62	64	63
	Sound Pressure @ 3m	59	59	59	57	50	49	51	53	52
SC18D037-X200	Discharge Air	84	91	91	87	80	76	72	70	69
	Return Air	85	98	95	89	77	75	68	71	66
	Case Breakout	65	69	71	63	55	53	56	58	61
	Sound Pressure @ 3m	54	58	60	52	44	42	45	47	50
SC18D040-X200	Discharge Air	85	92	91	89	83	79	73	70	66
	Return Air	86	99	95	91	81	79	70	71	63
	Case Breakout	65	70	71	65	58	56	57	58	58
	Sound Pressure @ 3m	54	59	60	54	47	45	46	47	47
SC18D044-X200	Discharge Air	93	103	86	83	83	82	90	86	84
	Return Air	95	91	89	89	95	79	85	86	83
	Case Breakout	80	80	66	59	58	59	74	74	76
	Sound Pressure @ 3m	69	69	55	48	47	48	63	63	65
SC18D048-X1X1	Discharge Air	93	103	86	84	84	82	90	86	84
	Return Air	95	93	90	90	95	79	85	85	82
	Case Breakout	80	80	66	60	59	59	74	74	76
	Sound Pressure @ 3m	69	69	55	49	48	48	63	63	65
SC18D055-X1X1	Discharge Air	93	103	86	84	84	82	90	86	84
	Return Air	95	93	90	89	95	80	85	85	82
	Case Breakout	80	80	66	60	59	60	74	74	76
	Sound Pressure @ 3m	69	69	55	49	48	49	63	63	65

(1) dB(A) is the overall sound level, measured on the A scale

(2) All sound data measured at nominal conditions, Discharge Air, Return air and case breakout is sound power.

Downflow Fixed Speed

SC09D016-X100-0 , SC09D019-X100-0

Mechanical Data

			SC09D016-X100	SC09D019-X100
Standard Condenser Match			1 x CR30M	1 x CR30M
Capacity				
Nom Cooling (Gross) –	(1)	kW	17.39	19.62
Capacity Steps			1	1
Dimensions – W x D x H		mm	900 x 890 x 1980	900 x 890 x 1980
Weight – Machine / Operating	(3)	kg	310 / 320	310 / 320
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Material/Colour			Frame: Anodised Aluminium Frame with aluminium corners, Epoxy baked Powder Coated Paint - Black Grey (RAL 7021).	
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins	
Cooling/Dehum Stages			1 / 1	1 / 1
Fan Motor			Backwards Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	1 x 1.7	1 x 1.7
Speed @25Pa / Maximum ESP		rpm	1440 / 1800	1575 / 1800
Maximum ESP		Pa	412	286
Nominal Airflow		m³/s	1.6	1.8
Fan Gain	(2)	kW	0.75	0.98
Compressor – Scroll				
Configuration – X100			Single Circuit – Single Compressors	
Quantity – X100			1	1
Oil Charge Volume – X100		l	1 x 1.7	1 x 1.8
Oil Type			Polyol Ester	
Refrigeration			Single Circuit	
Refrigerant Control and Type			Electronic Expansion Valve	
Refrigerant type			R410A	
GWP			2088	
Holding Charge			Inert Gas	
Charge (per circuit)	(5)	kg	2.3	2.3
CO2 Tonnes Equivalent			48.0	48.0
Connections				
Liquid (sweat)		in	1/2	1/2
Discharge (sweat)		in	5/8	5/8
Condensate Drain Hose		mm	22	22
Filtration			Disposable to ISO-C-75	
Quantity			4	4
Electric Heating (Total)		kW	7.5	7.5
Humidifier				
Capacity		kg/hr	3	3
Drain pump flow rate		l/m	7	7
Feed/Drain			3/4” BSPF Braided Flexible Hose / 19mm Hose Connection	
Hot Water Condensate Pump				
Head		m	10.8	10.8
Flow		l/m	5	5
Drain			10mm Stainless Steel Stub Connection	
Cold Water Condensate Pump				
Head		m	4	4
Flow		l/m	1.7	1.7
Drain			10mm Quarter Turn Plastic ‘Barb’ Connection	
Upgrade Fan Motor - EC Motor			Backwards Curved, Centrifugal Direct Drive	
Quantity x Motor Size	(4)	kW	1 x 3.6	1 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1444 / 2300	1577 / 2300
Maximum ESP		Pa	930	835
Fan Gain	(2)	kW	0.82	1.05

(1) Entering air 24°C /45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, these values may change with different ESP.
(3) Machine weight excludes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to Unit Refrigerant Charge (kg/circuit).

Downflow Fixed Speed

SC09D016-X100-0 , SC09D019-X100-0

Electrical Data

			SC09D016-X100-0	SC09D019-X100-0
Unit Data Full Function - X				
Nominal Run Amps	(1)	A	25.6	27.1
Maximum Start Amps		A	81.4	92.4
Recommended Mains Fuse Size		A	32	32
Unit Data Cooling Only - X				
Nominal Run Amps	(2)	A	14.8	16.2
Maximum Start Amps		A	70.5	81.5
Recommended Mains Fuse Size		A	20	20
Max Mains Incoming Cable Size		mm^2	16	16
Mains Supply		V	400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24
Evaporator Fan - Motor Per Fan				
Motor Type			EC	EC
Quantity x Motor Size	(3)	kW	1 x 1.7	1 x 1.7
Full Load Amps			2.9	2.9
Locked Rotor Amps			2.9	2.9
Compressor - Per Compressor				
Quantity x Motor Size	(3)	kW	1 x 4.75	1 x 5.65
Nominal Run Amps		A	8.3	9.7
Locked Rotor Amps		A	64	75
Type of Start			Direct On Line	
Standard Condenser Match - AC Motor - Per Fan				
Quantity x Motor Size		kW	1 x 0.6	1 x 0.6
Full Load Amps		A	2.62	2.62
OPTIONAL EXTRAS				
Electric Heating				
Stage of Reheat			1	1
Number of Elements			3	3
Rating		kW	7.5	7.5
Current per Phase		A	10.83	10.83
Humidifier				
Capacity		kg/hr	3	3
Rating		kW	2.25	2.25
Full Load Amps		A	3.3	3.3
First upgrade EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	1 x 3.6	1 x 3.6
Full Load Amps		A	5.8	5.8
Locked Rotor Amps		A	5.8	5.8
Standard Condenser Motor - EC Motor - Per Fan				
Quantity x Motor Size		kW	1 x 0.73	1 x 0.73
Full Load Amps		A	3.3	3.3

(1) Values given for function units with standard selections for heating, humidification, supply air fans
(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Fixed Speed

SC09D023 -X100-0, SC09D026-X100-0

Mechanical Data

			SC09D023-X100	SC09D026-X100
Standard Condenser Match			1 x CR50M	1 x CR50M
Capacity				
Nom Cooling (Gross) –	(1)	kW	23.72	26.24
Capacity Steps			1	1
Dimensions – W x D x H		mm	900 x 890 x 1980	900 x 890 x 1980
Weight – Machine / Operating	(3)	kg	310 / 320	330 / 340
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Material/Colour			Frame: Anodised Aluminium Frame with aluminium corners, Epoxy baked Powder Coated Paint - Black Grey (RAL 7021).	
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins	
Cooling/Dehum Stages			1 / 1	1 / 1
Fan Motor			Backwards Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size	(4)	kW	1 x 1.7	1 x 1.7
Speed @25Pa / Maximum ESP		rpm	1632 / 1800	1632 / 1800
Maximum ESP		Pa	226	226
Nominal Airflow		m³/s	1.9	1.9
Fan Gain	(2)	kW	1.09	1.09
Compressor – Scroll				
Configuration – X100			Single Circuit – Single Compressors	
Quantity – X100			1	1
Oil Charge Volume – X100		l	1 x 1.8	1 x 1.8
Oil Type			Polyol Ester	
Refrigeration			Single Circuit	
Refrigerant Control and Type			Electronic Expansion Valve	
Refrigerant Type			R410A	
GWP			2088	
Holding Charge			Inert Gas	
Charge (per circuit)	(5)	kg	2.34	2.35
CO2 Tonnes Equivalent			48.9	49.1
Connections				
Liquid (sweat)		in	1/2	1/2
Discharge (sweat)		in	3/4	3/4
Condensate Drain Hose		mm	22	22
Filtration			Disposable to ISO-C-75	
Quantity			4	4
Electric Heating (Total)		kW	7.5	7.5
Humidifier				
Capacity		kg/hr	3	3
Drain pump flow rate		l/m	7	7
Feed/Drain			3/4" BSPF Braided Flexible Hose / 19mm Hose Connection	
Hot Water Condensate Pump				
Head		m	10.8	10.8
Flow		l/m	5	5
Drain			10mm Stainless steel Stub Connection	
Cold Water Condensate Pump				
Head		m	4	4
Flow		l/m	1.7	1.7
Drain			10mm Quarter Turn Plastic 'Barb' Connection	
Upgrade Fan Motor - EC Motor			Backwards Curved, Centrifugal Direct Drive	
Quantity x Motor Size	(4)	kW	1 x 3.6	1 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1634 / 2300	1634 / 2300
Maximum ESP		Pa	792	792
Fan Gain	(2)	kW	1.15	1.15

(1) Entering air 24°C /45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, these values may change with different ESP.
(3) Machine weight excludes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to Unit Refrigerant Charge (kg/circuit).

Downflow Fixed Speed

SC09D023-X100-0, SC09D026-X100-0

Electrical Data

			SC09D023-X100-0	SC09D026-X100-0
Unit Data Full Function - X				
Nominal Run Amps	(1)	A	32.3	34.3
Maximum Start Amps		A	121	131
Recommended Mains Fuse Size		A	40	40
Unit Data Cooling Only - X				
Nominal Run Amps	(2)	A	21.5	23.5
Maximum Start Amps		A	110.1	120
Recommended Mains Fuse Size		A	25	32
Max Mains Incoming Cable Size		mm²	35	35
Mains Supply		V	400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24
Evaporator Fan - Motor Per Fan				
Motor Type			EC	EC
Quantity x Motor Size	(3)	kW	1 x 1.7	1 x 1.7
Full Load Amps			2.9	2.9
Locked Rotor Amps			2.9	2.9
Compressor - Per Compressor				
Quantity x Motor Size	(3)	kW	1 x 12.3	1 x 7.8
Nominal Run Amps		A	6.8	14.4
Locked Rotor Amps		A	101	111
Type of Start			Direct On Line	
Standard Condenser Match - AC Motor - Per Fan				
Quantity x Motor Size		kW	2 x 0.6	2 x 0.6
Full Load Amps		A	2.62	2.62
OPTIONAL EXTRAS				
Electric Heating				
Stage of Reheat			1	1
Number of Elements			3	3
Rating		kW	7.5	7.5
Current per Phase		A	10.83	10.83
Humidifier				
Capacity		kg/hr	3	3
Rating		kW	2.25	2.25
Full Load Amps		A	3.3	3.3
First upgrade EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	1 x 3.6	1 x 3.6
Full Load Amps		A	5.8	5.8
Locked Rotor Amps		A	5.8	5.8
Standard Condenser Motor - EC Motor - Per Fan				
Quantity x Motor Size		kW	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3

(1) Values given for function units with standard selections for heating, humidification, supply air fans
(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Fixed Speed

SC12D020-X200-0, SC12D023-X200-0, SC12D029-X200-0

Mechanical Data

			SC12D020-X200-0	SC12D023-X200-0	SC12D029-X200-0
Standard Condenser Match			1 x CR30M	1 x CR50M	1 x CR50M
Capacity					
Nom Cooling (Gross)	(1)	kW	21.74	27.82	30.82
Capacity Steps			2	2	2
Dimensions – W x D x H		mm	1200 x 890 x 1980	1200 x 890 x 1980	1200 x 890 x 1980
Weight – Machine / Operating	(3)	kg	390 / 400	400 / 400	410 / 420
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)		
Material/Colour			Frame: Anodised Aluminium Frame with aluminium corners, Epoxy baked Powder Coated Paint - Black Grey (RAL 7021).		
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins		
Cooling/Dehum Stages			2 / 2	2 / 2	2 / 2
Fan Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 1.5	1 x 3.1	1 x 3.1
Speed @25Pa / Maximum ESP		rpm	940 / 1230	1120 / 1560	1210 / 1560
Maximum ESP		Pa	290	540	460
Nominal Airflow		m³/s	1.7	2.1	2.3
Fan Power Input (Fan Gain)	(2)	kW	0.58	0.98	1.23
Compressor – Scroll					
Configuration			Single Circuit – Tandem Compressors		
Quantity			2	2	2
Oil Charge Volume		l	2 x 1.2	2 x 1.2	2 x 1.7
Oil Type			Polyol Ester		
Refrigeration			Single Circuit		
Refrigerant Control and Type			Electronic Expansion Valve		
Refrigerant Type			R410A		
GWP			2088		
Holding Charge			Inert Gas		
Charge (per circuit)	(5)	kg	2.92	2.92	3.00
CO2 Tonnes Equivalent			61.0	61.0	62.64
Connections					
Liquid (sweat)		in	1/2	1/2	1/2
Discharge (sweat)		in	5/8	5/8	7/8
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to ISO-C-75		
Quantity			6	6	6
Electric Heating (Total)		kW	7.5	7.5	**7.5**
Humidifier					
Capacity		kg/hr	3	3	8
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 19mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	10.8	10.8	10.8
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	4	4	4
Flow		l/m	1.7	1.7	1.7
Drain			10mm Quarter Turn Plastic 'Barb' Connection		
Upgrade Fan Motor - EC Motor			Backwards Curved, Centrifugal Direct Drive		
Quantity x Motor Size	(4)	kW	1 x 3.1	1 x 3.5	1 x 3.5
Speed @ 25Pa / Maximum ESP		rpm	940/ 1560	1130 / 1620	1220 / 1620
Maximum ESP		Pa	670	630	550
Fan Power Input (Fan Gain)	(2)	kW	0.59	1.04	1.31

(1) Entering air 24°C /45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, these values may change with different ESP.
(3) Machine weight excludes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to Unit Refrigerant Charge (kg/circuit).

Downflow Fixed Speed

SC12D020-X200-0, SC12D023-X200-0, SC12D029-X200-0

Electrical Data

			SC12D020-X200-0	SC12D023-X200-0	SC12D029-X200-0
Unit Data Full Function - X					
Nominal Run Amps	(1)	A	22.7	29.2	36.5
Maximum Start Amps		A	60.1	74.1	92.2
Recommended Mains Fuse Size		A	32	40	50
Unit Data Cooling Only - X					
Nominal Run Amps	(2)	A	17.4	25.4	27.8
Maximum Start Amps		A	54.8	70.3	83.5
Recommended Mains Fuse Size		A	20	32	32
Max Mains Incoming Cable Size		mm^2	16	35	35
Mains Supply		V	400V / 3PH + N / 50HZ		
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(3)	kW	1 x 1.5	1 x 3.1	1 x 3.1
Full Load Amps			2.6	5	5
Locked Rotor Amps			2.6	5	5
Compressor - Per Compressor					
Quantity x Motor Size	(3)	kW	2 x 3.31	2 x 4.21	2 x 4.75
Nominal Run Amps		A	5.6	7.09	8.29
Locked Rotor Amps		A	43	52	64
Type of Start			Direct On Line		
Standard Condenser Match - AC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 0.6	2 x 0.6	2 x 0.6
Full Load Amps		A	2.62	2.62	2.62
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			1	1	1
Number of Elements			3	3	3
Rating		kW	7.5	7.5	7.5
Current per Phase		A	10.83	10.83	10.83
Humidifier					
Capacity		kg/hr	3	3	8
Rating		kW	2.25	2.25	6
Full Load Amps		A	3.3	3.3	8.7
First upgrade EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	1 x 3.1	1 x 3.5	1 x 3.5
Full Load Amps		A	5.0	5.7	5.7
Locked Rotor Amps		A	5.0	5.7	5.7
Standard Condenser Motor - EC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 0.73	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3	3.3

(1) Values given for function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Fixed Speed

SC12D033-X200-0, SC12D036-X200-0

Mechanical Data

			SC12D033-X200-0	SC12D036-X200-0
Standard Condenser Match			1 x CR65M	1 x CR65M
Capacity				
Nom Cooling (Gross)	(1)	kW	36.04	39.88
Capacity Steps			2	2
Dimensions – W x D x H		mm	1200 x 890 x 1980	1200 x 890 x 1980
Weight – Machine / Operating	(3)	kg	410 / 420	410 / 420
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Material / Colour			Frame: Anodised Aluminium Frame with aluminium corners, Epoxy baked Powder Coated Paint - Black Grey (RAL 7021).	
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins	
Cooling/Dehum Stages			2 / 2	2 / 2
Fan Motor			Backwards Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size	(4)	kW	1 x 3.1	1 x 3.1
Speed @25Pa / Maximum ESP		rpm	1300 / 1560	1300 / 1560
Maximum ESP		Pa	360	360
Nominal Airflow		m^3/s	2.5	2.5
Fan Power Input (Fan Gain)	(2)	kW	1.53	1.53
Compressor – Scroll				
Configuration			Single Circuit – Tandem Compressors	
Quantity			2	2
Oil Charge Volume		l	2 x 1.8	2 x 1.8
Oil Type			Polyol Ester	
Refrigeration			Single Circuit	
Refrigerant Control and Type			Electronic Expansion Valve	
Refrigerant Type			R410A	
GWP			2088	
Holding Charge			Inert Gas	
Charge (per circuit)	(5)	kg	3.16	3.17
C)2 Tonnes Equivalent			66.0	66.2
Connections				
Liquid (sweat)		in	5/8	5/8
Discharge (sweat)		in	7/8	7/8
Condensate Drain Hose		mm	22	22
Filtration			Disposable to ISO-C-75	
Quantity			6	6
Electric Heating (Total)		kW	7.5	7.5
Humidifier				
Capacity		kg/hr	8	8
Drain Pump Flow Rate		l/m	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 19mm Hose Connection	
Hot Water Condensate Pump				
Head		m	5	5
Flow		l/m	10.8	10.8
Drain			10mm Stainless Steel Stub Connection	
Cold Water Condensate Pump				
Head		m	4	4
Flow		l/m	1.7	1.7
Drain			10mm Quarter Turn Plastic 'Barb' Connection	
Upgrade Fan Motor - EC Motor			Backwards Curved, Centrifugal Direct Drive	
Quantity x Motor Size	(4)	kW	1 x 3.5	1 x 3.5
Speed @ 25Pa / Maximum ESP		rpm	1320 / 1620	1320 / 1620
Maximum ESP		Pa	450	450
Fan Power Input (Fan Gain)	(2)	kW	1.61	1.61

(1) Entering air 24°C /45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, these values may change with different ESP.
(3) Machine weight excludes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to Unit Refrigerant Charge (kg/circuit).

Downflow Fixed Speed

SC12D033-X200-0, SC12D036-X200-0

Electrical Data

			SC12D033-X200-0	SC12D036-X200-0
Unit Data Full Function - X				
Nominal Run Amps	(1)	A	39.4	43.4
Maximum Start Amps		A	104.7	132.7
Recommended Mains Fuse Size		A	50	50
Unit Data Cooling Only - X				
Nominal Run Amps	(2)	A	30.7	34.7
Maximum Start Amps		A	96	124
Recommended Mains Fuse Size		A	40	40
Max Mains Incoming Cable Size		mm²	35	35
Mains Supply		V	400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24
Evaporator Fan - Motor Per Fan				
Motor Type			EC	EC
Quantity x Motor Size	(3)	kW	1 x 3.1	1 x 3.1
Full Load Amps			5	5
Locked Rotor Amps			5	5
Compressor - Per Compressor				
Quantity x Motor Size		kW	2 x 5.65	2 x 6.42
Nominal Run Amps		A	9.72	11.74
Locked Rotor Amps		A	75	101
Type of Start			Direct On Line	
Standard Condenser Match - AC Motor - Per Fan				
Quantity x Motor Size		kW	2 x 0.6	2 x 0.6
Full Load Amps		A	2.62	2.62
OPTIONAL EXTRAS				
Electric Heating				
Stage of Reheat			1	1
Number of Elements			3	3
Rating		kW	7.5	7.5
Current per Phase		A	10.83	10.83
Humidifier				
Capacity		kg/hr	8	8
Rating		kW	6	6
Full Load Amps		A	8.7	8.7
First upgrade EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	1 x 3.5	1 x 3.5
Full Load Amps		A	5.7	5.7
Locked Rotor Amps		A	5.7	5.7
Standard Condenser Motor - EC Motor - Per Fan				
Quantity x Motor Size		kW	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3

(1) Values given for function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Fixed Speed

SC15D027-X200-0, SC15D030-X200-0, SC15D035-X200-0

Mechanical Data

			SC15D027-X200-0	SC15D030-X200-0	SC15D035-X200-0
Standard Condenser Match			1 x CR30M	1 x CR50M	1 x CR50M
Capacity					
Nom Cooling (Gross)	(1)	kW	27.53	32.84	37.47
Capacity Steps			2	2	2
Dimensions – W x D x H		mm	1500 x 890 x 1980	1500 x 890 x 1980	1500 x 890 x 1980
Weight – Machine / Operating	(3)	kg	460 / 460	470 / 470	470 / 470
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)		
Material/Colour			Frame: Anodised Aluminium Frame with aluminium corners, Epoxy baked Powder Coated Paint - Black Grey (RAL 7021).		
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins		
Cooling/Dehum Stages			2 / 2	2 / 2	2 / 2
Fan Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 1.7	2 x 1.7	2 x 1.7
Speed @25Pa / Maximum ESP		rpm	1160 / 1770	1330 / 1770	1540 / 1770
Maximum ESP		Pa	610	500	320
Nominal Airflow		m³/s	2.4	2.8	3.3
Fan Power Input (Fan Gain)	(2)	kW	0.88	1.28	1.97
Compressor – Scroll					
Configuration			Single Circuit – Tandem Compressors		
Quantity			2	2	2
Oil Charge Volume		l	2 x 1.2	2 x 1.7	2 x 1.8
Oil Type			Polyol Ester		
Refrigeration			Single Circuit		
Refrigerant Control and Type			Electronic Expansion Valve		
Refrigerant Type			R410A		
GWP			2088		
Holding Charge			Inert Gas		
Charge (per circuit)	(5)	kg	3.72	3.79	3.96
CO2 Tonnes Equivalent			77.7	79.1	82.7
Connections					
Liquid (sweat)		in	1/2	1/2	5/8
Discharge (sweat)		in	5/8	7/8	7/8
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to ISO-C-75		
Quantity			6	6	6
Electric Heating (Total)		kW	15	15	15
Humidifier					
Capacity		kg/hr	3	3	3
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4” BSPF Braided Flexible Hose / 19mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	10.8	10.8	10.8
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	4	4	4
Flow		l/m	1.7	1.7	1.7
Drain			10mm Quarter Turn Plastic ‘Barb’ Connection		
Upgrade Fan Motor - EC Motor			Backwards Curved, Centrifugal Direct Drive		
Quantity x Motor Size	(4)	kW	2 x 3.6	2 x 3.6	2 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1170 / 2300	1340 / 2300	1550 / 2300
Maximum ESP		Pa	1070	970	820
Fan Power Input (Fan Gain)	(2)	kW	1.00	1.41	2.12

(1) Entering air 24°C /45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, these values may change with different ESP.
(3) Machine weight excludes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to Unit Refrigerant Charge (kg/circuit).

Downflow Fixed Speed

SC15D027-X200-0, SC15D030-X200-0, SC15D035-X200-0

Electrical Data

			SC15D027-X200-0	SC15D030-X200-0	SC15D035-X200-0
Unit Data Full Function - X					
Nominal Run Amps	(1)	A	38.2	42	43.4
Maximum Start Amps		A	83.1	97.7	108.7
Recommended Mains Fuse Size		A	50	50	50
Unit Data Cooling Only - X					
Nominal Run Amps	(2)	A	23.6	28.6	31.5
Maximum Start Amps		A	68.5	84.3	96.8
Recommended Mains Fuse Size		A	32	32	40
Max Mains Incoming Cable Size		mm²	35	35	35
Mains Supply		V		400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(3)	kW	2 x 1.7	2 x 1.7	2 x 1.7
Full Load Amps			2.9	2.9	2.9
Locked Rotor Amps			2.9	2.9	2.9
Compressor - Per Compressor					
Quantity x Motor Size		kW	2 x 4.21	2 x 4.75	2 x 5.65
Nominal Run Amps		A	7.09	8.29	9.72
Locked Rotor Amps		A	52	64	75
Type of Start				Direct On Line	
Standard Condenser Match - AC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 0.6	2 x 0.6	2 x 0.6
Full Load Amps		A	2.62	2.62	2.62
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15	15	15
Current per Phase		A	21.65	21.65	21.65
Humidifier					
Capacity		kg/hr	3	3	3
Rating		kW	2.25	2.25	2.25
Full Load Amps		A	3.3	3.3	3.3
First upgrade EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	2 x 3.6	2 x 3.6	2 x 3.6
Full Load Amps		A	5.8	5.8	5.8
Locked Rotor Amps		A	5.8	5.8	5.8
Standard Condenser Motor - EC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 0.73	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3	3.3

(1) Values given for function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Fixed Speed

SC15D040-X200-0, SC15D044-X200-0

Mechanical Data

			SC15D040-X200-0	SC15D044-X200-0
Standard Condenser Match			1 x CR65M	1 x CR80M
Capacity				
Nom Cooling (Gross)	(1)	kW	42.30	45.39
Capacity Steps			2	2
Dimensions – W x D x H		mm	1500 x 890 x 1980	1500 x 890 x 1980
Weight – Machine / Operating	(3)	kg	470 / 470	470 / 480
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Material/Colour			Frame: Anodised Aluminium Frame with aluminium corners, Epoxy baked Powder Coated Paint - Black Grey (RAL 7021).	
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins	
Cooling/Dehum Stages			2 / 2	2 / 2
Fan Motor			Backwards Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size	(4)	kW	2 x 1.7	2 x 1.7
Speed @25Pa / Maximum ESP		rpm	1550 / 1770	1550 / 1770
Maximum ESP		Pa	300	300
Nominal Airflow		m³/s	3.3	3.3
Fan Power Input (Fan Gain)	(2)	kW	1.97	1.97
Compressor – Scroll				
Configuration			Twin Circuit – Single Compressors	
Quantity			2	2
Oil Charge Volume		l	2 x 1.8	2 x 1.8
Oil Type			Polyol Ester	
Refrigeration			Twin Circuit	
Refrigerant Control and Type			Electronic Expansion Valve	
Refrigerant Type			R410A	
GWP			2088	
Holding Charge			Inert Gas	
Charge (per circuit)	(5)	kg	3.96	4.02
CO2 Tonnes Equivalent			82.7	83.9
Connections				
Liquid (sweat)		in	5/8	5/8
Discharge (sweat)		in	7/8	7/8
Condensate Drain Hose		mm	22	22
Filtration			Disposable to ISO-C-75	
Quantity			6	6
Electric Heating (Total)		kW	15	15
Humidifier				
Capacity		kg/hr	8	8
Drain Pump Flow Rate		l/m	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 19mm Hose Connection	
Hot Water Condensate Pump				
Head		m	5	5
Flow		l/m	10.8	10.8
Drain			10mm Stainless Steel Stub Connection	
Cold Water Condensate Pump				
Head		m	4	4
Flow		l/m	1.7	1.7
Drain			10mm Quarter Turn Plastic 'Barb' Connection	
Upgrade Fan Motor - EC Motor			Backwards Curved, Centrifugal Direct Drive	
Quantity x Motor Size	(4)	kW	2 x 3.6	2 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1550 / 2300	1550 / 2300
Maximum ESP		Pa	820	820
Fan Power Input (Fan Gain)	(2)	kW	2.12	2.12

(1) Entering air 24°C /45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, these values may change with different ESP.
(3) Machine weight excludes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to Unit Refrigerant Charge (kg/circuit).

Downflow Fixed Speed

SC15D040-X200-0, SC15D044-X200-0

Electrical Data

			SC15D040-X200-0	SC15D044-X200-0
Unit Data Full Function - X				
Nominal Run Amps	(1)	A	45.4	54.4
Maximum Start Amps		A	134.7	143.1
Recommended Mains Fuse Size		A	63	63
Unit Data Cooling Only - X				
Nominal Run Amps	(2)	A	35.5	45.1
Maximum Start Amps		A	124.8	133.8
Recommended Mains Fuse Size		A	40	63
Max Mains Incoming Cable Size		mm²	35	35
Mains Supply		V	400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24
Evaporator Fan - Motor Per Fan				
Motor Type			EC	EC
Quantity x Motor Size	(3)	kW	2 x 1.7	2 x 3.6
Full Load Amps			2.9	5.8
Locked Rotor Amps			2.9	5.8
Compressor - Per Compressor				
Quantity x Motor Size		kW	2 x 6.42	2 x 6.79
Nominal Run Amps		A	11.74	12.33
Locked Rotor Amps		A	101	101
Type of Start			Direct On Line	
Standard Condenser Match - AC Motor - Per Fan				
Quantity x Motor Size		kW	2 x 0.6	3 x 0.6
Full Load Amps		A	2.62	2.62
OPTIONAL EXTRAS				
Electric Heating				
Stage of Reheat			2	2
Number of Elements			6	6
Rating		kW	15	15
Current per Phase		A	21.65	21.65
Humidifier				
Capacity		kg/hr	8	8
Rating		kW	6	6
Full Load Amps		A	8.7	8.7
First upgrade EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	2 x 3.6	N/A
Full Load Amps		A	5.8	N/A
Locked Rotor Amps		A	5.8	N/A
Standard Condenser Motor - EC Motor - Per Fan				
Quantity x Motor Size		kW	2 x 0.73	3 x 0.73
Full Load Amps		A	3.3	3.3

(1) Values given for function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Fixed Speed

SC18D037-X200-0, SC18D040-X200-0, SC18D044-X200-0

Mechanical Data

			SC18D037-X200-0	SC18D040-X200-0	SC18D044-X200-0
Standard Condenser Match			1 x CR50M	1 x CR50M	1 x CR65M
Capacity					
Nom Cooling (Gross)	(1)	kW	37.77	42.17	47.02
Capacity Steps			2	2	2
Dimensions – W x D x H		mm	1800 x 890 x 1980	1800 x 890 x 1980	1800 x 890 x 1980
Weight – Machine / Operating	(3)	kg	520 / 530	520 / 530	530 / 530
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)		
Material/Colour			Frame: Anodised Aluminium Frame with aluminium corners, Epoxy baked Powder Coated Paint - Black Grey (RAL 7021).		
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins		
Cooling/Dehum Stages			2 / 2	2 / 2	2 / 2
Fan Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 1.5	2 x 1.5	2 x 3.1
Speed @25Pa / Maximum ESP		rpm	1020 / 1230	1100 / 1230	1210 / 1560
Maximum ESP		Pa	220	150	440
Nominal Airflow		m³/s	3.3	3.6	4
Fan Power Input (Fan Gain)	(2)	kW	1.53	1.90	2.53
Compressor – Scroll					
Configuration			Single Circuit – Tandem Compressors		
Quantity			2	2	2
Oil Charge Volume		l	2 x 1.8	2 x 1.8	2 x 1.8
Oil Type			Polyol Ester		
Refrigeration			Single Circuit		
Refrigerant Control and Type			Electronic Expansion Valve		
Refrigerant Type			R410A		
GWP			2088		
Holding Charge			Inert Gas		
Charge (per circuit)	(5)	kg	4.75	4.76	4.81
CO2 Tonnes Equivalent			99.2	99.4	100.4
Connections					
Liquid (sweat)		in	5/8	5/8	5/8
Discharge (sweat)		in	7/8	7/8	7/8
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to ISO-C-75		
Quantity			8	8	8
Electric Heating (Total)		kW	15	15	15
Humidifier					
Capacity		kg/hr	8	8	8
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4” BSPF Braided Flexible Hose / 19mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	10.8	10.8	10.8
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	4	4	4
Flow		l/m	1.7	1.7	1.7
Drain			10mm Quarter Turn Plastic ‘Barb’ Connection		
Upgrade Fan Motor - EC Motor			Backwards Curved, Centrifugal Direct Drive		
Quantity x Motor Size	(4)	kW	2 x 3.1	2 x 3.1	2 x 3.5
Speed @ 25Pa / Maximum ESP		rpm	1020 / 1560	1100 / 1560	1210 / 1620
Maximum ESP		Pa	590	530	530
Fan Power Input (Fan Gain)	(2)	kW	1.53	1.92	2.64

(1) Entering air 24°C /45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, these values may change with different ESP.
(3) Machine weight excludes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to Unit Refrigerant Charge (kg/circuit).

Downflow Fixed Speed

SC18D037-X200-0, SC18D040-X200-0, SC18D044-X200-0

Electrical Data

			SC18D037-X200-0	SC18D040-X200-0	SC18D044-X200-0
Unit Data Full Function - X					
Nominal Run Amps	(1)	A	42.8	44.8	45.4
Maximum Start Amps		A	108.1	134.1	134.1
Recommended Mains Fuse Size		A	50	50	63
Unit Data Cooling Only - X					
Nominal Run Amps	(2)	A	30.9	34.9	36.1
Maximum Start Amps		A	96.2	124.2	124.8
Recommended Mains Fuse Size		A	40	40	50
Max Mains Incoming Cable Size		mm²	35	35	35
Mains Supply		V	400V / 3PH + N / 50HZ		
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(3)	kW	2 x 1.5	2 x 1.5	2 x 1.5
Full Load Amps			2.6	2.6	2.6
Locked Rotor Amps			2.6	2.6	2.6
Compressor - Per Compressor					
Quantity x Motor Size		kW	2 x 5.65	2 x 6.42	2 x 6.79
Nominal Run Amps		A	9.72	11.74	12.33
Locked Rotor Amps		A	75	101	101
Type of Start			Direct On Line		
Standard Condenser Match - AC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 0.6	2 x 0.6	2 x 0.6
Full Load Amps		A	2.62	2.62	2.62
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15	15	15
Current per Phase		A	21.65	21.65	21.65
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	8.7	8.7
First upgrade EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	2 x 3.1	2 x 3.1	2 x 3.1
Full Load Amps		A	5.0	5.0	5.0
Locked Rotor Amps		A	5.0	5.0	5.0
Standard Condenser Motor - EC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 0.73	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3	3.3

(1) Values given for function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Fixed Speed

SC18D048-X1X1-0, SC18D055-X1X1-0

Mechanical Data

			SC18D048-X1X1-0	SC18D055-X1X1-0
Standard Condenser Match			2 x CR50M	2 x CR50M
Capacity				
Nom Cooling (Gross)	(1)	kW	53.67	60.04
Capacity Steps			2	2
Dimensions – W x D x H		mm	1800 x 890 x 1980	1800 x 890 x 1980
Weight – Machine / Operating	(3)	kg	560 / 570	570 / 580
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Material/Colour			Frame: Anodised Aluminium Frame with aluminium corners, Epoxy baked Powder Coated Paint - Black Grey (RAL 7021).	
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins	
Cooling/Dehum Stages			2 / 2	2 / 2
Fan Motor			Backwards Curved, Centrifugal direct drive	
Motor Type			EC	EC
Quantity x Motor Size	(4)	kW	2 x 3.1	2 x 3.1
Speed @25Pa / Maximum ESP		rpm	1230 / 1560	1320 / 1560
Maximum ESP		Pa	410	410
Nominal Airflow		m³/s	4.1	4.1
Fan Power Input (Fan Gain)	(2)	kW	2.70	2.70
Compressor – Scroll				
Configuration			Twin Circuit – Single Compressors	
Quantity			2	2
Oil Charge Volume		l	2 x 3.2	2 x 3.2
Oil Type			Polyol Ester	
Refrigeration			Twin Circuit	
Refrigerant Control and Type			Electronic Expansion Valve	
Refrigerant Type			R410A	
GWP			2088	
Holding Charge			Inert Gas	
Charge (per circuit)	(5)	kg	4.75	4.8
CO2 Tonnes Equivalent			99.2	99.2
Connections				
Liquid (sweat)		in	5/8	5/8
Discharge (sweat)		in	7/8	7/8
Condensate Drain Hose		mm	22	22
Filtration			Disposable to ISO-C-75	
Quantity			8	8
Electric Heating (Total)		kW	15	15
Humidifier				
Capacity		kg/hr	8	8
Drain Pump Flow Rate		l/m	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 19mm Hose Connection	
Hot Water Condensate Pump				
Head		m	5	5
Flow		l/m	10.8	10.8
Drain			10mm Stainless Steel Stub Connection	
Cold Water Condensate Pump				
Head		m	4	4
Flow		l/m	1.7	1.7
Drain			10mm Quarter Turn Plastic 'Barb' Connection	
Upgrade Fan Motor - EC Motor			Backwards Curved, Centrifugal Direct Drive	
Quantity x Motor Size	(4)	kW	2 x 3.5	2 x 3.5
Speed @ 25Pa / Maximum ESP		rpm	1240 / 1620	1240 / 1620
Maximum ESP		Pa	500	500
Fan Power Input (Fan Gain)	(2)	kW	2.82	2.82

(1) Entering air 24°C /45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, these values may change with different ESP.
(3) Machine weight excludes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to Unit Refrigerant Charge (kg/circuit).

Downflow Fixed Speed

SC18D048-X1X1-0, SC15D055-X1X1-0

Electrical Data

			SC18D048-X1X1-0	SC18D055-X1X1-0
Unit Data Full Function - X				
Nominal Run Amps	(1)	A	53.7	58.1
Maximum Start Amps		A	150.3	159.5
Recommended Mains Fuse Size		A	63	80
Unit Data Cooling Only - X				
Nominal Run Amps	(2)	A	45	49.4
Maximum Start Amps		A	141.6	150.8
Recommended Mains Fuse Size		A	50	63
Max Mains Incoming Cable Size		mm²	35	35
Mains Supply		V	400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24
Evaporator Fan - Motor Per Fan				
Motor Type	(3)	kW	EC	EC
Quantity x Motor Size			2 x 3.1	2 x 3.1
Full Load Amps			5	5
Locked Rotor Amps			5	5
Compressor - Per Compressor				
Quantity x Motor Size		kW	2 x 7.82	2 x 9.11
Nominal Run Amps		A	14.37	16.58
Locked Rotor Amps		A	118	118
Type of Start			Direct On Line	
Standard Condenser Match - AC Motor - Per Fan				
Quantity x Motor Size		kW	2 x 0.6	2 x 0.6
Full Load Amps		A	2.62	2.62
OPTIONAL EXTRAS				
Electric Heating				
Stage of Reheat			2	2
Number of Elements			6	6
Rating		kW	15	15
Current per Phase		A	21.65	21.65
Humidifier				
Capacity		kg/hr	8	8
Rating		kW	6	6
Full Load Amps		A	8.7	8.7
First upgrade EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	2 x 3.5	2 x 3.5
Full Load Amps		A	5.7	5.7
Locked Rotor Amps		A	5.7	5.7
Standard Condenser Motor - EC Motor - Per Fan				
Quantity x Motor Size		kW	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3

(1) Values given for function units with standard selections for heating, humidification, supply air fans
(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Interconnecting Wiring X1X1

Single Phase AC Condensers CR12, 16, 22, 30, 50 and 65 Models

Fan Speed Control fitted to indoor unit (With sub-fusing supplied)

INDOOR UNIT		L4	O	←	L1	Mains Incoming Supply - Primary 400V / 3PH + N / 50Hz							
		L5	O	←	L2								
		L6	O	←	L3								
		N1	O	←	N								
		PE	O	←	PE								
		L7	O	←	L1	Mains Incoming Supply - Secondary 400V / 3PH + N / 50Hz (Only applicable for Dual Power Supply Option)							
		L8	O	←	L2								
		L9	O	←	L3								
		N2	O	←	N								
		PE	O	←	PE								
CIRCUIT 1		220	O	→		Mains Supply to Outdoor Unit 1			→	O	200	**OUTDOOR UNIT 1**	
		N3	O	→					→	O	N		
		PE	O	→					→	O	PE		
CIRCUIT 2		223	O	→		Mains Supply to Outdoor Unit 2			→	O	200	**OUTDOOR UNIT 2**	
		N4	O	→					→	O	N		
		PE	O	→					→	O	PE		

Single Phase EC Condensers CR12, 16, 22, 30 50 and 65 Models

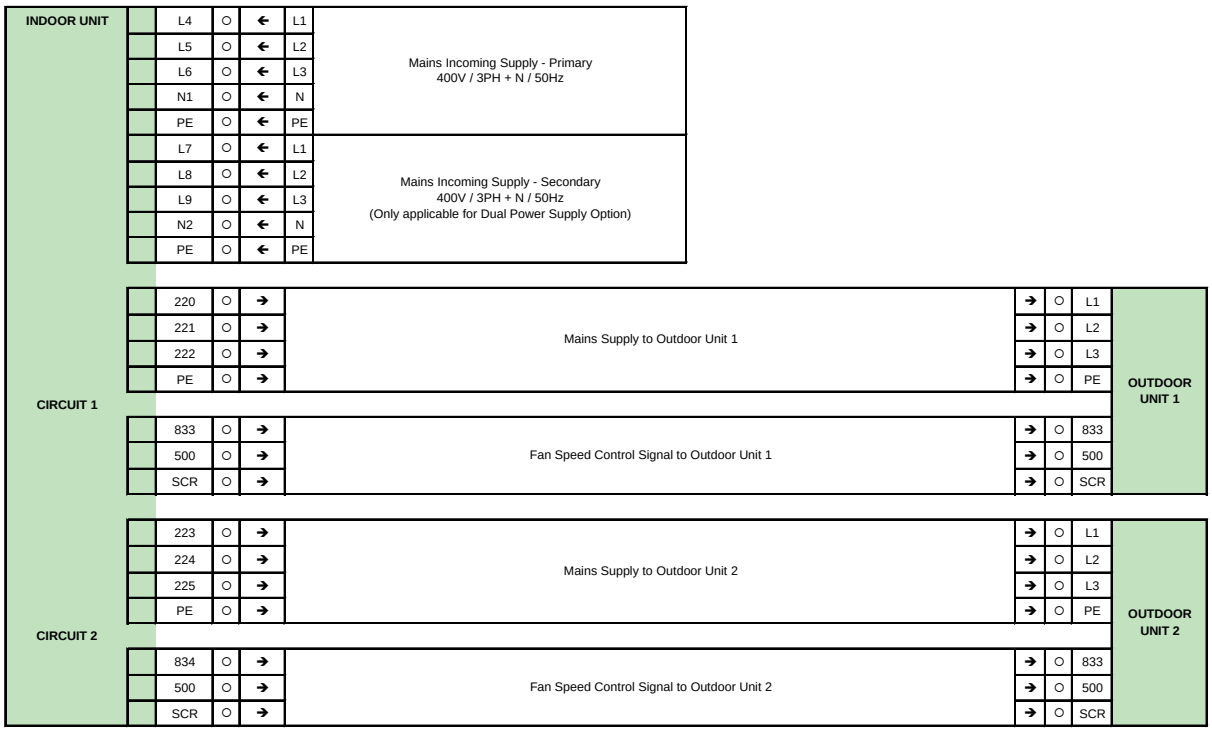
Fan speed control fitted to outdoor unit (With Sub-fusing supplied)

INDOOR UNIT		L4	O	←	L1	Mains Incoming Supply - Primary 400V / 3PH + N / 50Hz							
		L5	O	←	L2								
		L6	O	←	L3								
		N1	O	←	N								
		PE	O	←	PE								
		L7	O	←	L1	Mains Incoming Supply - Secondary 400V / 3PH + N / 50Hz (Only applicable for Dual Power Supply Option)							
		L8	O	←	L2								
		L9	O	←	L3								
		N2	O	←	N								
		PE	O	←	PE								
CIRCUIT 1		220	O	→		Mains Supply to Outdoor Unit 1			→	O	200	**OUTDOOR UNIT 1**	
		N3	O	→					→	O	N		
		PE	O	→					→	O	PE		
		833	O	→		Fan Speed Control Signal to Outdoor Unit 1			→	O	833		
		500	O	→					→	O	500		
		SCR	O	→					→	O	SCR		
CIRCUIT 2		223	O	→		Mains Supply to Outdoor Unit 2			→	O	200	**OUTDOOR UNIT 2**	
		N4	O	→					→	O	N		
		PE	O	→					→	O	PE		
		834	O	→		Fan Speed Control Signal to Outdoor Unit 2			→	O	833		
		500	O	→					→	O	500		
		SCR	O	→					→	O	SCR		

Interconnecting Wiring X1X1

Three phase AC and EC Condensers CR 26, 35 and 60 Models

Fan speed control fitted to outdoor unit (With sub-fusing supplied)



Interconnecting Wiring X100 / X200

Single phase AC Condenser CR12, 16, 22, 30, 50, 65 and 80 Models

Fan speed control fitted to indoor unit (With sub-fusing supplied)

INDOOR UNIT		L4	○	←	L1	Mains Incoming Supply - Primary 400V / 3PH + N / 50Hz					
		L5	○	←	L2						
		L6	○	←	L3						
		N1	○	←	N						
		PE	○	←	PE						
		L7	○	←	L1	Mains Incoming Supply - Secondary 400V / 3PH + N / 50Hz (Only applicable for Dual Power Supply Option)					
		L8	○	←	L2						
		L9	○	←	L3						
		N2	○	←	N						
		PE	○	←	PE						
CIRCUIT 1		220	○	→		Mains Supply to Outdoor Unit 1	→	○	200	OUTDOOR UNIT 1	
		N3	○	→			→	○	N		
		PE	○	→			→	○	PE		

Single phase EC Condensers CR12, 16, 22, 30, 50, 65 and 80 models

Fan speed control fitted to outdoor unit (with sub-fusing supplied)

INDOOR UNIT		L4	○	←	L1	Mains Incoming Supply - Primary 400V / 3PH + N / 50Hz					
		L5	○	←	L2						
		L6	○	←	L3						
		N1	○	←	N						
		PE	○	←	PE						
		L7	○	←	L1	Mains Incoming Supply - Secondary 400V / 3PH + N / 50Hz (Only applicable for Dual Power Supply Option)					
		L8	○	←	L2						
		L9	○	←	L3						
		N2	○	←	N						
		PE	○	←	PE						
CIRCUIT 1		220	○	→		Mains Supply to Outdoor Unit 1	→	○	200	OUTDOOR UNIT 1	
		N3	○	→			→	○	N		
		PE	○	→			→	○	PE		
		833	○	→		Fan Speed Control Signal to Outdoor Unit 1	→	○	833		
		500	○	→			→	○	500		
		SCR	○	→			→	○	SCR		

Interconnecting Wiring X100 / X200

Three phase AC and EC Condenser CR26, 35, 60 and 75 Models

Fan speed control fitted to indoor unit (With sub-fusing supplied)

INDOOR UNIT		L4	○	←	L1	Mains Incoming Supply - Primary 400V / 3PH + N / 50Hz					
		L5	○	←	L2						
		L6	○	←	L3						
		N1	○	←	N						
		PE	○	←	PE						
		L7	○	←	L1	Mains Incoming Supply - Secondary 400V / 3PH + N / 50Hz (Only applicable for Dual Power Supply Option)					
		L8	○	←	L2						
		L9	○	←	L3						
		N2	○	←	N						
		PE	○	←	PE						
CIRCUIT 1		220	○	→		Mains Supply to Outdoor Unit 1	→	○	L1	OUTDOOR UNIT 1	
		221	○	→			→	○	L2		
		222	○	→			→	○	L3		
		PE	○	→			→	○	PE		
		833	○	→		Fan Speed Control Signal to Outdoor Unit 1	→	○	833		
		500	○	→			→	○	500		
		SCR	○	→			→	○	SCR		

Interconnecting Wiring **X100 / X200**

Fan speed control fitted to Outdoor unit (No sub-fusing supplied)

INDOOR UNIT						
	L4	O	←	L1	Mains Incoming Supply - Primary 400V / 3PH + N / 50Hz	
	L5	O	←	L2		
	L6	O	←	L3		
	N1	O	←	N		
	PE	O	←	PE		
	L7	O	←	L1	Mains Incoming Supply - Secondary 400V / 3PH + N / 50Hz (Only applicable for Dual Power Supply Option)	
	L8	O	←	L2		
	L9	O	←	L3		
	N2	O	←	N		
	PE	O	←	PE		
CIRCUIT 1					Separate Mains Incoming Supply 4000V / 3PH / 50Hz	→ O L1 / → O L2 / → O L3 / → O PE — OUTDOOR UNIT 1
	833	O	→		Fan Speed Control Signal to Outdoor Unit 1	→ O 833
	500	O	→			→ O 500
	SCR	O	→			→ O SCR

Remote On/Off	INDOOR UNIT	522	O	←	Remote On/Off
		502	O	→	24Vac
Fire Shutdown		583	O	←	Fire Detection
		502	O	→	24Vac
Alarm Volt Free Contacts		560	O	→	Non-Critical Alarm Normally Open
		561	O	←	Common
		563	O	→	Critical Alarm Normally Open
		564	O	←	Common
		565	O	→	Critical alarm Normally Closed
Run/Standby Network	INDOOR UNIT	Rx-Tx-	O	←	Network Connections (Inward connection)
		Rx+Tx+	O	←	
		GND	O	←	
		Rx-Tx-	O	→	Network Connections (Outward connection)
		Rx+Tx+	O	→	
		GND	O	→	
BMS Connections	INDOOR UNIT	891	O	←→	Wired BMS Connection (ModBUS, BACNet, LON, RS485)
		892	O	←→	
		893	O	←→	
BMS Connections	INDOOR UNIT	N/A	O	←→	BMS Network Connections (pCOWEB Ethernet)

Downflow Fixed Speed

Performance Data

X100 / X200 Model	Air On Temp. (°C) / %RH	Ambient Temperature (°C) 25 TC (kW)	25 SC (kW)	30 TC (kW)	30 SC (kW)	35 TC (kW)	35 SC (kW)	40 TC (kW)	40 SC (kW)
SV09D023-X100-0	22 / 50	26.77	25.00	25.39	24.30	23.90	23.57	22.34	22.34
1 x CR30M	24 / 45	27.39	27.11	25.99	25.99	24.50	24.50	22.94	22.94
	26 / 40	27.94	27.94	26.59	26.59	25.15	25.15	23.65	23.65
SV09D047-X100-0	22 / 50	36.72	33.41	36.72	33.41	-	-	-	-
1 x CR50M	24 / 45	39.10	36.03	38.23	35.03	37.15	33.95	35.86	32.80
	26 / 40	40.03	37.61	38.98	36.75	37.80	35.83	36.47	33.84
SV12D026-X100-0	22 / 50	28.65	28.65	27.11	27.11	25.48	25.48	23.80	23.80
1 x CR30M	24 / 45	29.43	29.43	27.92	27.92	26.34	26.34	24.76	24.76
	26 / 40	30.40	30.40	28.92	28.92	27.38	27.38	25.84	25.84
SV12D034-X100-0	22 / 50	40.50	36.04	39.19	35.34	37.69	34.54	36.00	33.68
1 x CR50M	24 / 45	41.51	38.92	40.17	38.21	38.63	37.44	36.89	36.56
	26 / 40	42.34	42.08	40.99	40.99	39.44	39.44	37.70	37.70
SV12D055-X100-0	22 / 50	44.13	38.00	42.89	37.32	41.46	36.56	39.88	35.70
1 x CR65M	24 / 45	45.29	40.92	43.94	40.20	42.45	39.41	40.82	38.56
	26 / 40	46.13	44.06	44.78	43.34	43.29	42.57	41.65	41.65
SV15D036-X100-0	22 / 50	38.78	38.78	37.27	37.27	35.66	35.66	33.93	33.93
1 x CR50M	24 / 45	39.83	39.83	38.36	38.36	36.80	36.80	35.13	35.13
	26 / 40	41.26	41.26	39.85	39.85	38.31	38.31	36.65	36.65
SV15D040-X100-0	22 / 50	49.37	45.32	47.52	44.34	45.45	43.29	43.16	42.15
1 x CR50M	24 / 45	50.55	49.06	48.65	48.10	46.52	46.52	44.17	44.17
	26 / 40	51.53	51.53	49.65	49.65	47.56	47.56	45.25	45.25
SV15D063-X200-0	22 / 50	59.87	50.97	58.21	50.10	56.27	48.97	54.06	47.82
1 x CR80M	24 / 45	61.52	56.90	59.61	53.80	57.51	52.69	55.23	51.47
	26 / 40	62.64	58.84	60.71	57.91	58.60	56.81	56.31	55.61
SV18D042-X100-0	22 / 50	46.80	46.80	44.93	44.93	42.91	42.91	40.70	40.70
1 x CR50M	24 / 45	48.11	48.11	46.30	46.30	44.34	44.34	42.23	42.23
	26 / 40	49.88	49.88	48.11	48.11	46.15	46.15	44.01	44.01
SV18D049-X100-0	22 / 50	52.76	51.95	50.68	50.68	48.42	48.42	45.98	45.98
1 x CR65M	24 / 45	53.96	53.96	51.91	51.91	49.70	49.70	47.33	47.33
	26 / 40	55.32	55.32	53.36	53.36	51.25	51.25	49.01	49.01
SV18D083-X200-0	22 / 50	72.15	62.12	69.99	60.89	67.49	59.59	64.66	58.02
1 x CR80M	24 / 45	74.04	66.84	71.71	65.60	69.10	64.20	66.21	62.69
	26 / 40	75.39	71.94	73.05	70.73	70.44	69.35	67.56	67.56

IMPORTANT ⚠	Performance data provided is representative of a system with a 5m interconnecting pipe length tested to EN14511.

Operating Limits

Indoor Air Temperature	+18°C to +36°C
Indoor RH%	+40% to +55% (Based upon 24°C Dry Bulb)
Outdoor Temperature	-20°C to +46°C

Downflow Variable Speed

Sound Data

Sound Measurement		Overall dB(A)	Frequency (Hz) dB 63	125	250	500	1000	2000	4000	8000
SV09D023-X100	Discharge Air	89	92	88	91	87	83	78	74	79
	Return Air	87	97	89	91	85	76	74	74	75
	Case Breakout	70	72	72	71	65	63	62	59	66
	Sound Pressure @ 3m	59	61	61	60	54	52	51	48	54
SV09D047-X100	Discharge Air	91	93	88	92	87	85	83	78	81
	Return Air	90	99	89	92	86	83	81	79	78
	Case Breakout	73	73	72	71	65	64	67	64	68
	Sound Pressure @ 3m	62	62	61	60	54	53	56	53	57
SV12D026-X100	Discharge Air	95	100	96	100	84	82	86	82	88
	Return Air	98	104	91	106	84	77	82	81	80
	Case Breakout	77	81	79	80	62	62	69	67	74
	Sound Pressure @ 3m	66	70	68	69	51	51	58	56	63
SV12D034-X100	Discharge Air	95	100	96	100	84	83	86	82	88
	Return Air	98	104	91	106	84	81	83	82	82
	Case Breakout	78	81	79	80	62	63	70	68	74
	Sound Pressure @ 3m	67	70	68	69	51	52	59	57	63
SV12D055-X100	Discharge Air	95	101	96	100	85	84	87	83	88
	Return Air	98	104	91	106	85	83	84	83	81
	Case Breakout	78	81	79	80	63	64	71	68	74
	Sound Pressure @ 3m	67	70	68	69	52	53	60	57	63
SV15D036-X200	Discharge Air	89	93	90	92	86	83	78	75	78
	Return Air	88	98	90	93	86	77	74	73	75
	Case Breakout	70	73	73	71	64	62	62	60	65
	Sound Pressure @ 3m	59	62	62	60	53	51	51	49	54
SV15D040-X200	Discharge Air	91	94	90	92	87	84	84	79	81
	Return Air	90	100	90	93	86	83	81	80	78
	Case Breakout	73	74	73	71	65	64	67	64	67
	Sound Pressure @ 3m	62	63	62	60	54	53	56	53	56
SV15D063-X200	Discharge Air	91	94	90	92	87	84	84	79	81
	Return Air	90	100	90	93	87	83	82	80	78
	Case Breakout	74	74	73	71	65	64	68	65	67
	Sound Pressure @ 3m	62	63	62	60	54	53	57	54	56
SV18D042-X200	Discharge Air	94	103	86	84	83	83	90	86	86
	Return Air	95	106	90	90	95	81	86	86	84
	Case Breakout	78	83	70	63	61	62	74	71	72
	Sound Pressure @ 3m	67	72	59	52	50	51	63	60	61
SV18D049-X200	Discharge Air	94	103	86	85	84	84	90	86	85
	Return Air	95	106	90	90	95	83	86	86	83
	Case Breakout	78	83	70	64	62	63	74	72	72
	Sound Pressure @ 3m	67	72	59	53	51	52	63	61	61
SV18D083-X200	Discharge Air	94	103	86	84	84	84	90	86	87
	Return Air	95	106	90	90	95	83	87	86	85
	Case Breakout	79	83	70	64	62	63	74	72	73
	Sound Pressure @ 3m	68	72	59	53	51	52	63	61	62

(1) dB(A) is the overall sound level, measured on the A scale
(2) All sound data measured at nominal conditions, Discharge Air, Return air and case breakout is sound power.
Sound measurements taken at design air volume, 25Pa ESP and with the compressor(s) running at 60rps

Downflow Variable Speed

SV09D023-X100-0 - SV09D047-X100-0

Mechanical Data

			SV09D023-X100-0	SV09D047-X100-0
Standard Condenser Match			1 x CR30M	1 x CR50M
Capacity				
Max Cooling (Gross) - X	(1)	kW	25.6	37.7
Min Cooling (Gross) - X	(1) (5)	kW	9.5	15.8
Capacity Steps	(5)	%	26-100	26-100
Dimensions – W x D x H		mm	900 x 890 x 1980	900 x 890 x 1980
Weight – Machine / Operating	(2)	kg	336 / 340	358 / 362
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Material/Colour			Frame:Anodised Aluminium Frame with Painted Aluminium Corners	
Evaporator				
Cooling/Dehum Stages		%	26-100	26-100
Standard Fan			Backwards Curved, Centrifugal direct drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	1 x 1.7	1 x 1.7
Speed @25Pa / Maximum ESP		rpm	1636 / 1800	1636 / 1800
Maximum ESP		Pa	226	226
Nominal Airflow		m³/s	1.8	1.8
Fan Gain	(4)	kW	1.1	1.1
Compressor – Scroll				
Configuration – X100			Single Circuit - Single Compressors	
Quantity – X100			1	1
Oil Charge Volume – X100		l	1 x 1.9	1 x 2.3
Oil Type			PVE - FV50S	PVE - FVC68D
Refrigeration			Single Circuit	
Refrigerant control and type			Electronic Expansion Valve	
Refrigerant type			R410A	
GWP			2088	
Holding Charge			Inert Gas	
Charge (per circuit)		kg	3.9	4.3
CO2 Tonnes Equivalent			81.4	89.8
Connections				
Liquid (sweat)		in	1/2	5/8
Discharge (sweat)		in	5/8	7/8
Condensate Drain Hose		mm	22	22
Filtration			**Disposable to ISO-C-75**	
Quantity			8	8
Electric Heating (Total)		kW	7.5	7.5
Humidifier				
Capacity		kg/hr	3	3
Drain pump flow rate		l/m	7	7
Feed/Drain			3/4" BSPF Braided Flexible Hose / 19mm Hose Connection	
Hot Water Condensate Pump				
Head		m	5	5
Flow		l/m	9.5	9.5
Drain			10mm Stainless steel Stub Connection	
Cold Water Condensate Pump				
Head		m	5	5
Flow		l/m	0.5	0.5
Drain			10mm quarter turn plastic 'barb' connection	
Upgraded Fan			Backwards Curved, Centrifugal direct drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	1 x 3.6	1 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1646/ 2300	1646 / 2300
Maximum ESP		Pa	792	792
Fan Gain	(4)	kW	1.2	1.2

(1) Entering air 24°C /45% RH ambient 35°C
(2) Machine weight excludes a refrigerant charge
(3) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit).***
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) Based on a pipe length of <30m.

Downflow Variable Speed

SV09D023-X100-0 - SV09D047-X100-0

Electrical Data

			SV09D023-X100-0	**SV09D047-X100-0**
Unit Data Full Function - X				
Nominal Run Amps	(1)	A	37.1	57.2
Maximum Start Amps		A	39.3	62.8
Recommended Mains Fuse Size		A	50	80
Unit Data Cooling Only - X				
Nominal Run Amps	(2)	A	26.2	46.3
Maximum Start Amps		A	28.4	51.9
Recommended Mains Fuse Size		A	40	63
Max Mains Incoming Cable Size		mm²	35	35
Mains Supply		V	400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	
Evaporator Fan - Motor Per Fan			EC	EC
Motor Type			1 x 1.7	1 x 1.7
Quantity x Motor Size	(3)	kW	2.9	2.9
Full Load Amps			2.9	2.9
Locked Rotor Amps			2.9	2.9
Compressor - Per Compressor				
Quantity x Motor Size	(4)	kW	1 x 9.52	1 x 17.96
Nominal Run Amps		A	17.78	33.47
Locked Rotor Amps		A	19.68	38.54
Inverter Amps	(5)	A	21.9	42.8
Type of Start			Variable	
Standard Condenser Match - AC Motor - Per Fan				
Quantity x Motor Size		kW	1 x 0.6	2 x 0.6
Full Load Amps		A	2.62	2.62
OPTIONAL EXTRAS				
Electric Heating				
Stage of Reheat			1	1
Number of Elements			3	3
Rating		kW	7.5	7.5
Current per Phase		A	10.83	10.83
Humidifier				
Capacity		kg/hr	3	3
Rating		kW	2.25	2.25
Full Load Amps		A	3.3	3.3
First upgrade EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	1 x 3.6	1 x 3.6
Full Load Amps		A	5.8	5.8
Locked Rotor Amps		A	5.8	5.8
Standard Condenser Motor - EC Motor - Per Fan				
Quantity x Motor Size		kW	1 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3

(1) Values given for full function units with standard selections for heating, humidification, supply air fans
(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables
(4) Compressor load data relates to the electrical power utilised by the compressor.
(5) Inverter load data defines Current draw as can be observed at the compressor supply MCB

Downflow Variable Speed

SV12D026-X100-0, SV12D034-X100-0, SV12D055-X100-0

Mechanical Data

			SV12D026-X100-0	SV12D034-X100-0	SV12D055-X100-0
Standard Condenser Match			1 x CR30M	1 x CR50M	1 x CR65M
Capacity					
Max Cooling (Gross) - X	(1)	kW	27.7	38.6	42.4
Min Cooling (Gross) - X	(1)	kW	9.9	14.7	17.1
Capacity Steps		%	26-100	26-100	26-100
Dimensions – W x D x H		mm	1200 x 890 x 1980	1200 x 890 x 1980	1200 x 890 x 1980
Weight – Machine / Operating	(2)	kg	415 / 420	436 / 441	436 / 441
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)		
Material/Colour			Frame:Anodised Aluminium Frame with Painted Aluminium Corners		
Evaporator					
Cooling/Dehum Stages		%	26-100	26-100	26-100
Standard Fan			Backwards Curved, Centrifugal direct drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	1 x 3.1	1 x 3.1	1 x 3.1
Speed @25Pa / Maximum ESP		rpm	1324 / 1560	1324 / 1560	1324 / 1560
Maximum ESP		Pa	350	350	350
Nominal Airflow		m³/s	2.5	2.5	2.5
Fan Gain	(4)	kW	1.6	1.6	1.6
Compressor – Scroll					
Configuration – X100			Single Circuit - Single Compressors		
Quantity – X100			1	1	1
Oil Charge Volume – X100		l	1 x 1.9	1 x 2.3	1 x 2.3
Oil Type			PVE - FV50S	PVE - FVC68D	
Refrigeration			Single Circuit		
Refrigerant control and type			Electronic Expansion Valve		
Refrigerant type			R410A		
GWP			2088		
Holding Charge			Inert Gas		
Charge (per circuit)		kg	4.5	4.7	5.0
CO2 Tonnes Equivalent			94.0	98.1	104.4
Connections					
Liquid (sweat)		in	1/2	5/8	5/8
Discharge (sweat)		in	3/4	7/8	7/8
Condensate Drain Hose		mm	22	22	22
Filtration			**Disposable to ISO-C-75**		
Quantity			6	6	6
Electric Heating (Total)		kW	7.5	7.5	7.5
Humidifier					
Capacity		kg/hr	8	8	8
Drain pump flow rate		l/m	7	7	7
Feed/Drain			3/4" BSPF Braided Flexible Hose / 19mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.5	9.5	9.5
Drain			10mm Stainless steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	0.5	0.5	0.5
Drain			10mm quarter turn plastic 'barb' connection		
Upgraded Fan			Backwards Curved, Centrifugal direct drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	1 x 3.5	1 x 3.5	1 x 3.5
Speed @ 25Pa / Maximum ESP		rpm	1334 / 1620	1334 / 1620	1334 / 1620
Maximum ESP		Pa	439	439	439
Fan Gain	(4)	kW	1.7	1.7	1.7

(1) Entering air 24°C /45% RH ambient 35°C
(2) Machine weight excludes a refrigerant charge
(3) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit).***
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.

Downflow Variable Speed

SV12D026-X100-0, SV12D034-X100-0, SV12D055-X100-0

Electrical Data

			SV12D026-X100-0	SV12D034-X100-0	**SV12D055-X100-0**
Unit Data Full Function - X					
Nominal Run Amps	(1)	A	38.6	51.5	58.7
Maximum Start Amps		A	40.8	55.8	64.3
Recommended Mains Fuse Size		A	50	63	80
Unit Data Cooling Only - X					
Nominal Run Amps	(2)	A	27.7	40.6	47.8
Maximum Start Amps		A	29.9	44.9	53.4
Recommended Mains Fuse Size		A	40	50	63
Max Mains Incoming Cable Size		mm²	35	35	70
Mains Supply		V	400V / 3PH + N / 50HZ		
Control Circuit		VAC	24		
Evaporator Fan - Motor Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(3)	kW	1 x 3.1	1 x 3.1	1 x 3.1
Full Load Amps			5	5	5
Locked Rotor Amps			5	5	5
Compressor - Per Compressor					
Quantity x Motor Size	(4)	kW	1 x 9.52	1 x 14.42	1 x 17.96
Nominal Run Amps		A	17.78	27.05	33.47
Locked Rotor Amps		A	19.68	30.93	38.54
Inverter Amps	(5)	A	21.9	34.3	42.8
Type of Start				Variable	
Standard Condenser Match - AC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 0.6	2 x 0.6	2 x 0.6
Full Load Amps		A	2.62	2.62	2.62
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			1	1	1
Number of Elements			3	3	3
Rating		kW	7.5	7.5	7.5
Current per Phase		A	10.83	10.83	10.83
Humidifier					
Capacity		kg/hr	3	3	3
Rating		kW	2.25	2.25	2.25
Full Load Amps		A	3.3	3.3	3.3
First upgrade EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	1 x 3.5	1 x 3.5	1 x 3.5
Full Load Amps		A	5.7	5.7	5.7
Locked Rotor Amps		A	5.7	5.7	5.7
Standard Condenser Motor - EC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 0.73	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3	3.3

(1) Values given for full function units with standard selections for heating, humidification, supply air fans
(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables
(4) Compressor load data relates to the electrical power utilised by the compressor.
(5) Inverter load data defines Current draw as can be observed at the compressor supply MCB

Downflow Variable Speed

SV15D036-X100-0, SV15D040-X100-0, SV15D063-X200-0

Mechanical Data

			SV15D036-X100-0	SV15D040-X100-0	SV15D063-X200-0
Standard Condenser Match			1 x CR50M	1 x CR50M	1 x CR80M
Capacity					
Max Cooling (Gross) - X	(1)	kW	36.8	46.9	58.2
Min Cooling (Gross) - X	(1)	kW	13.1	17.6	17.9
Capacity Steps		%	26-100	26-100	26-100
Dimensions – W x D x H		mm	1500 x 890 x 1980	1500 x 890 x 1980	1500 x 890 x 1980
Weight – Machine / Operating	(2)	kg	501 / 506	510 / 516	572 / 579
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)		
Material/Colour			Frame:Anodised Aluminium Frame with Painted Aluminium Corners		
Evaporator					
Cooling/Dehum Stages		%	26-100	26-100	26-100
Standard Fan			Backwards Curved, Centrifugal direct drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	2 x 1.7	2 x 1.7	2 x 1.7
Speed @25Pa / Maximum ESP		rpm	1559 / 1770	1559 / 1770	1559 / 1770
Maximum ESP		Pa	298	298	610
Nominal Airflow		m³/s	3.3	3.3	3.3
Fan Gain	(4)	kW	2.0	2.0	2.0
Compressor – Scroll					
Configuration – X100/X200			Single Circuit - Single Compressors		Single Circuit - Tandem Compressors
Quantity – X100/X200			1	1	2
Oil Charge Volume – X100/X200		l	1 x 2.3	1 x 2.3	(1 x 2.3) + (1 x 1.7)
Oil Type			PVE - FVC68D		
Refrigeration			Single Circuit		
Refrigerant control and type			Electronic Expansion Valve		
Refrigerant type			R410A		
GWP			2088		
Holding Charge			Inert Gas		
Charge (per circuit)		kg	5.3	5.5	6.7
CO2 Tonnes Equivalent			110.7	114.8	140.0
Connections					
Liquid (sweat)		in	5/8	5/8	3/4
Discharge (sweat)		in	7/8	1 1/8	1 1/8
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to ISO-C-75		
Quantity			6	6	6
Electric Heating (Total)		kW	15	15	15
Humidifier					
Capacity		kg/hr	8	8	8
Drain pump flow rate		l/m	7	7	7
Feed/Drain			3/4" BSPF Braided Flexible Hose / 19mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.5	9.5	9.5
Drain			10mm Stainless steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	0.5	0.5	0.5
Drain			10mm quarter turn plastic 'barb' connection		
Upgraded Fan			Backwards Curved, Centrifugal direct drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	2 x 3.6	2 x 3.6	2 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1562 / 2300	1562 / 2300	1562 / 2300
Maximum ESP		Pa	820	820	820
Fan Gain	(4)	kW	2.1	2.1	2.1

(1) Entering air 24°C /45% RH ambient 35°C
(2) Machine weight excludes a refrigerant charge
(3) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit).***
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.

Downflow Variable Speed

SV15D036-X100-0, SV15D040-X100-0, SV15D063-X200-0

Electrical Data

			SV15D036-X100-0	SV15D040-X100-0	SV15D063-X200-0
Unit Data Full Function - X					
Nominal Run Amps	(1)	A	58.5	70.9	73.5
Maximum Start Amps		A	61.8	76.5	119.6
Recommended Mains Fuse Size		A	80	100	100
Unit Data Cooling Only - X					
Nominal Run Amps	(2)	A	36.8	49.2	61.2
Maximum Start Amps		A	40.1	54.8	110.9
Recommended Mains Fuse Size		A	50	63	80
Max Mains Incoming Cable Size		mm^2	35	70	70
Mains Supply		V	400V / 3PH + N / 50HZ		
Control Circuit		VAC	24		
Evaporator Fan - Motor Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(3)	kW	2 x 1.7	2 x 1.7	2 x 1.7
Full Load Amps			2.9	2.9	2.9
Locked Rotor Amps			2.9	2.9	2.9
Compressor - Per Compressor (compressor 1)					
Quantity x Motor Size	(4)	kW	1 x 11.6	1 x 17.96	1 x 17.96
Nominal Run Amps		A	22.35	33.47	33.47
Locked Rotor Amps		A	25.33	38.54	38.54
Inverter Amps	(5)	A	28.1	42.8	42.8
Type of Start				Variable	
Compressor - Per Compressor (compressor 2)					
Quantity x Motor Size	(4)	kW	n/a	n/a	1 x 5.46
Nominal Run Amps		A	n/a	n/a	9.3
Locked Rotor Amps		A	n/a	n/a	59
Inverter Amps	(5)	A	n/a	n/a	n/a
Type of Start			n/a	n/a	Fixed Speed
Standard Condenser Match - AC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 0.6	2 x 0.6	3 x 0.6
Full Load Amps		A	2.62	2.62	2.62
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15	15	15
Current per Phase		A	21.65	21.65	21.65
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	8.7	8.7
First upgrade EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	2 x 3.6	2 x 3.6	2 x 3.6
Full Load Amps		A	5.8	5.8	5.8
Locked Rotor Amps		A	5.8	5.8	5.8
Standard Condenser Motor - EC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 0.73	2 x 0.73	3 x 0.73
Full Load Amps		A	3.3	3.3	3.3

(1) Values given for full function units with standard selections for heating, humidification, supply air fans
(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables
(4) Compressor load data relates to the electrical power utilised by the compressor.
(5) Inverter load data defines Current draw as can be observed at the compressor supply MCB

Downflow Variable Speed

SV18D042-X100-0, SV18D049-X100-0, SV18D083-X200-0

Mechanical Data

			SV18D042-X100-0	SV18D049-X100-0	SV18D083-X200-0
Standard Condenser Match			1 x CR50M	1 x CR65M	1 x CR80M
Capacity					
Max Cooling (Gross) - X	(1)	kW	43.8	51.3	70.9
Min Cooling (Gross) - X	(1)	kW	15.7	18.4	28.3
Capacity Steps		%	26-100	26-100	26-100
Dimensions – W x D x H		mm	1800 x 890 x 1980	1800 x 890 x 1980	1800 x 890 x 1980
Weight – Machine / Operating	(2)	kg	556 / 562	556 / 562	638 / 646
Construction Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021) Frame:Anodised Aluminium Frame with Painted Aluminium Corners		
Evaporator					
Cooling/Dehum Stages		%	26-100	26-100	26-100
Standard Fan			Backwards Curved, Centrifugal direct drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	2 x 3.1	2 x 3.1	2 x 3.1
Speed @25Pa / Maximum ESP		rpm	1247 / 1560	1247 / 1560	1247 / 1560
Maximum ESP		Pa	411	411	411
Nominal Airflow		m³/s	4.1	4.1	4.1
Fan Gain	(4)	kW	2.7	2.7	2.7
Compressor – Scroll					
Configuration – X100			Single Circuit - Single Compressors		
Quantity – X100			1	1	2
Oil Charge Volume – X100		l	1 x 2.3	1 x 2.3	2 x 2.3
Oil Type			PVE - FVC68D		
Refrigeration			Single Circuit		
Refrigerant control and type			Electronic Expansion Valve		
Refrigerant type			R410A		
GWP			2088		
Holding Charge			Inert Gas		
Charge (per circuit)		kg	5.9	6.1	7.6
CO2 Tonnes Equivalent			123.2	127.4	159.0
Connections					
Liquid (sweat)		in	5/8	5/8	3/4
Discharge (sweat)		in	7/8	1 1/8	1 3/8
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to ISO-C-75		
Quantity			8	8	8
Electric Heating (Total)		kW	15	15	15
Humidifier					
Capacity		kg/hr	8	8	8
Drain pump flow rate		l/m	7	7	7
Feed/Drain			3/4" BSPF Braided Flexible Hose / 19mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.5	9.5	9.5
Drain			10mm Stainless steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	0.5	0.5	0.5
Drain			10mm quarter turn plastic 'barb' connection		
Upgraded Fan			Backwards Curved, Centrifugal direct drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	2 x 3.5	2 x 3.5	2 x 3.5
Speed @ 25Pa / Maximum ESP		rpm	1251 / 1620	1251 / 1620	1251 / 1620
Maximum ESP		Pa	500	500	500
Fan Gain	(4)	kW	2.8	2.8	2.8

(1) Entering air 24°C /45% RH ambient 35°C

(2) Machine weight excludes a refrigerant charge

(3) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit).***

(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.

Downflow Variable Speed

SV18D042-X100-0, SV18D049-X100-0, V18D083-X200-0

Electrical Data

			SV18D042-X100-0	SV18D049-X100-0	SV18D083-X200-0
Unit Data Full Function - X					
Nominal Run Amps	(1)	A	66.7	73.9	86.4
Maximum Start Amps		A	71.0	79.5	90.7
Recommended Mains Fuse Size		A	80	100	100
Unit Data Cooling Only - X					
Nominal Run Amps	(2)	A	45.0	52.2	77.7
Maximum Start Amps		A	49.3	57.8	82.0
Recommended Mains Fuse Size		A	63	63	100
Max Mains Incoming Cable Size		mm²	70	70	70
Mains Supply		V	400V / 3PH + N / 50HZ		
Control Circuit		VAC	24		
Evaporator Fan - Motor Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(3)	kW	2 x 3.1	2 x 3.1	2 x 3.1
Full Load Amps			5	5	5
Locked Rotor Amps			5	5	5
Compressor - Per Compressor (compressor 1)					
Quantity x Motor Size		kW	1 x 14.42	1 x 17.96	1 x 14.42
Nominal Run Amps		A	27.05	33.47	27.05
Locked Rotor Amps		A	30.93	38.54	30.93
Inverter Amps		A	34.3	42.8	34.3
Type of Start				Variable	
Compressor - Per Compressor (compressor 2)					
Quantity x Motor Size	(4)	kW	n/a	n/a	1 x 14.42
Nominal Run Amps		A	n/a	n/a	27.05
Locked Rotor Amps		A	n/a	n/a	30.93
Inverter Amps	(5)	A	n/a	n/a	34.3
Type of Start			n/a	n/a	Variable
Standard Condenser Match - AC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 0.6	2 x 0.6	3 x 0.6
Full Load Amps		A	2.62	2.62	2.62
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15	15	15
Current per Phase		A	21.65	21.65	21.65
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	8.7	8.7
First upgrade EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	2 x 3.5	2 x 3.5	2 x 3.5
Full Load Amps		A	5.7	5.7	5.7
Locked Rotor Amps		A	5.7	5.7	5.7
Standard Condenser Motor - EC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 0.73	2 x 0.73	3 x 0.73
Full Load Amps		A	3.3	3.3	3.3

(1) Values given for full function units with standard selections for heating, humidification, supply air fans
(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables
(4) Compressor load data relates to the electrical power utilised by the compressor.
(5) Inverter load data defines Current draw as can be observed at the compressor supply MCB

Downflow Variable Speed

SV09D023-X100-1, SV09D047-X100-1

Mechanical Data

			SV09D023-X100-1	SV09D047-X100-1
Standard Condenser Match			1 x CR30M	1 x CR50M
Capacity				
Max Cooling (Gross) - X	(1)	kW	25.6	37.7
Min Cooling (Gross) - X	(1)	kW	9.5	15.8
Capacity Steps		%	26-100	26-100
Dimensions – W x D x H	**(2)**	mm	900 x 890 x 1980	900 x 890 x 1980
Weight – Machine / Operating		kg	336 / 340	358 / 362
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Material/Colour			Frame:Anodised Aluminium Frame with Painted Aluminium Corners	
Evaporator				
Cooling/Dehum Stages		%	26-100	26-100
Standard Fan			Backwards Curved, Centrifugal direct drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	1 x 1.7	1 x 1.7
Speed @25Pa / Maximum ESP		rpm	1636 / 1800	1636 / 1800
Maximum ESP		Pa	226	226
Nominal Airflow		m^3/s	1.8	1.8
Fan Gain	(4)	kW	1.1	1.1
Compressor – Scroll				
Configuration – X100			Single Circuit - Single Compressors	
Quantity – X100			1	1
Oil Charge Volume – X100		l	1 X 1.9	1 x 2.3
Oil Type			PVE - FV50S	PVE - FVC68D
Refrigeration			Single Circuit	
Refrigerant control and type			Electronic Expansion Valve	
Refrigerant type			R410A	
GWP			2088	
Holding Charge			Inert Gas	
Charge (per circuit)		kg	3.9	4.3
CO2 Tonnes Equivalent			81.4	89.8
Connections				
Liquid (sweat)		in	1/2	5/8
Discharge (sweat)		in	5/8	7/8
Condensate Drain Hose		mm	22	22
Filtration			**Disposable to ISO-C-75**	
Quantity			8	8
Electric Heating (Total)		kW	7.5	7.5
Humidifier				
Capacity		kg/hr	3	3
Drain pump flow rate		l/m	7	7
Feed/Drain			3/4" BSPF Braided Flexible Hose / 19mm Hose Connection	
Hot Water Condensate Pump				
Head		m	5	5
Flow		l/m	9.5	9.5
Drain			10mm Stainless steel Stub Connection	
Cold Water Condensate Pump				
Head		m	5	5
Flow		l/m	0.5	0.5
Drain			10mm quarter turn plastic 'barb' connection	
Upgraded Fan			Backwards Curved, Centrifugal direct drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	1 x 3.6	1 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1646 / 2300	1646 / 2300
Maximum ESP		Pa	792	792
Fan Gain	(4)	kW	1.2	1.2

(1) Entering air 24°C /45% RH ambient 35°C
(2) Machine weight excludes a refrigerant charge
(3) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit).***
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.

Downflow Variable Speed

SV09D023-X100-1 ,SV09D047-X100-1

Electrical Data

			SV09D023-X100-1	SV09D047-X100-1
Unit Data Full Function - X				
Nominal Run Amps	(1)	A	36.9	57.4
Maximum Start Amps		A	39.1	63.0
Recommended Mains Fuse Size		A	50	80
Unit Data Cooling Only - X				
Nominal Run Amps	(2)	A	26.6	47.1
Maximum Start Amps		A	28.8	52.7
Recommended Mains Fuse Size		A	32	63
Max Mains Incoming Cable Size		mm^2	35	35
Mains Supply		V	380V / 3PH + N / 60HZ	
Control Circuit		VAC	24	
Evaporator Fan - Motor Per Fan				
Motor Type			EC	EC
Quantity x Motor Size	(3)	kW	1 x 1.7	1 x 1.7
Full Load Amps			2.9	2.9
Locked Rotor Amps			2.9	2.9
Compressor - Per Compressor				
Quantity x Motor Size	(4)	kW	1 x 9.52	1 x 17.96
Nominal Run Amps		A	17.78	33.47
Locked Rotor Amps		A	19.68	38.54
Inverter Amps	(5)	A	21.9	42.8
Type of Start			Variable	
Standard Condenser Match - AC Motor - Per Fan				
Quantity x Motor Size		kW	1 x 0.69	2 x 0.69
Full Load Amps		A	3.02	3.02
OPTIONAL EXTRAS				
Electric Heating				
Stage of Reheat			1	1
Number of Elements			3	3
Rating		kW	6.77	6.77
Current per Phase		A	10.3	10.3
Humidifier				
Capacity		kg/hr	3	3
Rating		kW	2.25	2.25
Full Load Amps		A	3.5	3.5
First upgrade EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	1 x 3.6	1 x 3.6
Full Load Amps		A	5.8	5.8
Locked Rotor Amps		A	5.8	5.8
Standard Condenser Motor - EC Motor - Per Fan				
Quantity x Motor Size		kW	1 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3

(1) Values given for full function units with standard selections for heating, humidification, supply air fans
(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables
(4) Compressor load data relates to the electrical power utilised by the compressor.
(5) Inverter load data defines Current draw as can be observed at the compressor supply MCB

Downflow Variable Speed

SV12D026-X100-1, SV12D034-X100-1, SV12D055-X100-1

Mechanical Data

			SV12D026-X100-1	SV12D034-X100-1	SV12D055-X100-1
Standard Condenser Match			1 x CR30M	1 x CR50M	1 x CR65M
Capacity					
Max Cooling (Gross) - X	(1)	kW	27.7	38.6	42.4
Min Cooling (Gross) - X	(1)	kW	9.9	14.7	17.1
Capacity Steps		%	26-100	26-100	26-100
Dimensions – W x D x H		mm	1200 x 890 x 1980	1200 x 890 x 1980	1200 x 890 x 1980
Weight – Machine / Operating	(2)	kg	415 / 420	436 / 441	436 / 441
Construction Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021) Frame:Anodised Aluminium Frame with Painted Aluminium Corners		
Evaporator					
Cooling/Dehum Stages		%	26-100	26-100	26-100
Standard Fan			Backwards Curved, Centrifugal direct drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	1 x 3.1	1 x 3.1	1 x 3.1
Speed @25Pa / Maximum ESP		rpm	1324 / 1560	1324 / 1560	1324 / 1560
Maximum ESP		Pa	350	350	350
Nominal Airflow		m³/s	2.5	2.5	2.5
Fan Gain	(4)	kW	1.6	1.6	1.6
Compressor – Scroll					
Configuration – X100			Single Circuit - Single Compressors		
Quantity – X100			1	1	1
Oil Charge Volume – X100		l	1 x 2.3	1 x 2.3	1 x 2.3
Oil Type			PVE - FV50S	PVE - FVC68D	
Refrigeration			Single Circuit		
Refrigerant control and type			Electronic Expansion Valve		
Refrigerant type			R410A		
GWP			2088		
Holding Charge			Inert Gas		
Charge (per circuit)		kg	4.5	4.7	5.0
Charge (per circuit)			94.0	98.1	104.4
Connections					
Liquid (sweat)		in	1/2	5/8	5/8
Discharge (sweat)		in	3/4	7/8	7/8
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to ISO-C-75		
Quantity			6	6	6
Electric Heating (Total)		kW	7.5	7.5	7.5
Humidifier					
Capacity		kg/hr	8	8	8
Drain pump flow rate		l/m	7	7	7
Feed/Drain			3/4" BSPF Braided Flexible Hose / 19mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.5	9.5	9.5
Drain			10mm Stainless steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	0.5	0.5	0.5
Drain			10mm quarter turn plastic 'barb' connection		
Upgraded Fan			Backwards Curved, Centrifugal direct drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	1 x 3.5	1 x 3.5	1 x 3.5
Speed @ 25Pa / Maximum ESP		rpm	1334 / 1620	1334 / 1620	1334 / 1620
Maximum ESP		Pa	439	439	439
Fan Gain	(4)	kW	1.7	1.7	1.7

(1) Entering air 24°C /45% RH ambient 35°C
(2) Machine weight excludes a refrigerant charge
(3) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit).***
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.

Downflow Variable Speed

SV12D026-X100-1, SV12D034-X100-1, SV12D055-X100-1

Electrical Data

			SV12D026-X100-1	SV12D034-X100-1	SV12D055-X100-1
Unit Data Full Function - X					
Nominal Run Amps	(1)	A	39.0	52.3	59.5
Maximum Start Amps		A	41.2	56.6	65.1
Recommended Mains Fuse Size		A	50	63	80
Unit Data Cooling Only - X					
Nominal Run Amps	(2)	A	28.7	42.0	49.2
Maximum Start Amps		A	30.9	46.3	54.8
Recommended Mains Fuse Size		A	40	50	63
Max Mains Incoming Cable Size		mm^2	35	35	70
Mains Supply		V	380V / 3PH + N / 60HZ		
Control Circuit		VAC	24		
Evaporator Fan - Motor Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(3)	kW	1 x 3.1	1 x 3.1	1 x 3.1
Full Load Amps			5	5	5
Locked Rotor Amps			5	5	5
Compressor - Per Compressor					
Quantity x Motor Size	(4)	kW	1 x 9.52	1 x 14.42	1 x 17.96
Nominal Run Amps		A	17.78	27.05	33.47
Locked Rotor Amps		A	19.68	30.93	38.54
Inverter Amps	(5)	A	21.9	34.3	42.8
Type of Start				Variable	
Standard Condenser Match - AC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 0.69	2 x 0.69	2 x 0.69
Full Load Amps		A	3.02	3.02	3.02
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			1	1	1
Number of Elements			3	3	3
Rating		kW	6.77	6.77	6.77
Current per Phase		A	10.3	10.3	10.3
Humidifier					
Capacity		kg/hr	3	3	3
Rating		kW	2.25	2.25	2.25
Full Load Amps		A	3.3	3.3	3.3
First upgrade EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	1 x 3.5	1 x 3.5	1 x 3.5
Full Load Amps		A	5.7	5.7	5.7
Locked Rotor Amps		A	5.7	5.7	5.7
Standard Condenser Motor - EC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 0.73	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3	3.3

(1) Values given for full function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

(4) Compressor load data relates to the electrical power utilised by the compressor.

(5) Inverter load data defines Current draw as can be observed at the compressor supply MCB

Downflow Variable Speed

SV15D036-X100-1, SV15D040-X100-1, SV15D063-X200-1

Mechanical Data

			SV15D036-X100-1	SV15D040-X100-1	SV15D063-X200-1
Standard Condenser Match			1 x CR50M	1 x CR50M	1 x CR80M
Capacity					
Max Cooling (Gross) - X	(1)	kW	36.8	46.9	58.2
Min Cooling (Gross) - X	(1)	kW	13.1	17.6	17.9
Capacity Steps		%	26-100	26-100	26-100
Dimensions – W x D x H		mm	1500 x 890 x 1980	1500 x 890 x 1980	1500 x 890 x 1980
Weight – Machine / Operating	(2)	kg	501 / 506	510 / 516	572 / 579
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)		
Material/Colour			Frame:Anodised Aluminium Frame with Painted Aluminium Corners		
Evaporator					
Cooling/Dehum Stages		%	26-100	26-100	26-100
Standard Fan			Backwards Curved, Centrifugal direct drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	2 x 1.7	2 x 1.7	2 x 1.7
Speed @25Pa / Maximum ESP		rpm	1559 / 1770	1559 / 1770	1559 / 1770
Maximum ESP		Pa	298	298	610
Nominal Airflow		m^3/s	3.3	3.3	3.3
Fan Gain	(4)	kW	2.0	2.0	2.0
Compressor – Scroll					
Configuration – X100/X200			Single Circuit - Single Compressors		Single Circuit - Tandem Compressors
Quantity – X100/X200			1	1	2
Oil Charge Volume – X100/X200		l	1 x 2.3	1 x 2.3	(1 x 2.3) + (1 x 1.7)
Oil Type			PVE - FVC68D		
Refrigeration			Single Circuit		
Refrigerant control and type			Electronic Expansion Valve		
Refrigerant type			R410A		
GWP			2088		
Holding Charge			Inert Gas		
Charge (per circuit)		kg	5.3	5.5	6.7
CO2 Tonnes Equivalent			110.7	115.0	140.0
Connections					
Liquid (sweat)		in	5/8	5/8	3/4
Discharge (sweat)		in	7/8	1 1/8	1 1/8
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to ISO-C-75		
Quantity			6	6	6
Electric Heating (Total)		kW	15	15	15
Humidifier					
Capacity		kg/hr	8	8	8
Drain pump flow rate		l/m	7	7	7
Feed/Drain			3/4" BSPF Braided Flexible Hose / 19mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.5	9.5	9.5
Drain			10mm Stainless steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	0.5	0.5	0.5
Drain			10mm quarter turn plastic 'barb' connection		
Upgraded Fan			Backwards Curved, Centrifugal direct drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	2 x 3.6	2 x 3.6	2 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1562 / 2300	1562 / 2300	1562 / 2300
Maximum ESP		Pa	820	820	820
Fan Gain	(4)	kW	2.1	2.1	2.1

(1) Entering air 24°C /45% RH ambient 35°C
(2) Machine weight excludes a refrigerant charge
(3) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit).***
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.

Downflow Variable Speed

SV15D036-X100-1, SV15D040-X100-1, SV15D063-X200-1

Electrical Data

			SV15D036-X100-1	SV15D040-X100-1	SV15D063-X200-1
Unit Data Full Function - X					
Nominal Run Amps	(1)	A	58.2	70.6	73.7
Maximum Start Amps		A	61.5	76.2	121.3
Recommended Mains Fuse Size		A	80	80	100
Unit Data Cooling Only - X					
Nominal Run Amps	(2)	A	37.6	50.0	62.5
Maximum Start Amps		A	40.9	55.6	112.1
Recommended Mains Fuse Size		A	50	63	80
Max Mains Incoming Cable Size		mm²	35	70	70
Mains Supply		V	380V / 3PH + N / 60HZ		
Control Circuit		VAC	24		
Evaporator Fan - Motor Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(3)	kW	2 x 1.7	2 x 1.7	2 x 1.7
Full Load Amps			2.9	2.9	2.9
Locked Rotor Amps			2.9	2.9	2.9
Compressor - Per Compressor (compressor 1)					
Quantity x Motor Size	(4)	kW	1 x 11.6	1 x 17.96	1 x 17.96
Nominal Run Amps		A	22.35	33.47	33.47
Locked Rotor Amps		A	25.33	38.54	38.54
Inverter Amps	(5)	A	28.1	42.8	42.8
Type of Start			Variable	Variable	Variable
Compressor - Per Compressor (compressor 2)					
Quantity x Motor Size	(4)	kW	n/a	n/a	1 x 5.93
Nominal Run Amps		A	n/a	n/a	9.4
Locked Rotor Amps		A	n/a	n/a	59
Inverter Amps	(5)	A	n/a	n/a	n/a
Type of Start			n/a	n/a	Fixed Speed
Standard Condenser Match - AC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 0.69	2 x 0.69	3 x 0.69
Full Load Amps		A	3.02	3.02	3.02
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	13.54	13.54	13.54
Current per Phase		A	20.6	20.6	20.6
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	9.2	9.2	9.2
First upgrade EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	2 x 3.6	2 x 3.6	2 x 3.6
Full Load Amps		A	5.8	5.8	5.8
Locked Rotor Amps		A	5.8	5.8	5.8
Standard Condenser Motor - EC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 0.73	2 x 0.73	3 x 0.73
Full Load Amps		A	3.3	3.3	3.3

(1) Values given for full function units with standard selections for heating, humidification, supply air fans
(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables
(4) Compressor load data relates to the electrical power utilised by the compressor.
(5) Inverter load data defines Current draw as can be observed at the compressor supply MCB

Downflow Variable Speed

SV18D042-X100-1, SV18D049-X100-1, SV18D083-X200-1

Mechanical Data

			SV18D042-X100-1	SV18D049-X100-1	SV18D083-X200-1
Standard Condenser Match			1 x CR50M	1 x CR65M	1 x CR80M
Capacity					
Max Cooling (Gross) - X	(1)	kW	43.8	51.3	70.9
Min Cooling (Gross) - X	(1)	kW	15.7	18.4	28.3
Capacity Steps		%	26-100	26-100	26-100
Dimensions – W x D x H		mm	1800 x 890 x 1980	1800 x 890 x 1980	1800 x 890 x 1980
Weight – Machine / Operating	(2)	kg	556 / 562	556 / 562	638 / 646
Construction Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021) Frame:Anodised Aluminium Frame with Painted Aluminium Corners		
Evaporator					
Cooling/Dehum Stages		%	26-100	26-100	26-100
Standard Fan			Backwards Curved, Centrifugal direct drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	2 x 3.1	2 x 3.1	2 x 3.1
Speed @25Pa / Maximum ESP		rpm	1247 / 1560	1247 / 1560	1247 / 1560
Maximum ESP		Pa	411	411	411
Nominal Airflow		m³/s	4.1	4.1	4.1
Fan Gain	(4)	kW	2.7	2.7	2.7
Compressor – Scroll					
Configuration – X100/X200			Single Circuit - Single Compressors		Single Circuit - Tandem Compressors
Quantity – X100/X200			1	1	2
Oil Charge Volume – X100/X200		l	1 x 2.3	1 x 2.3	2 x 2.3
Oil Type			PVE - FVC68D		
Refrigeration			Single Circuit		
Refrigerant control and type			Electronic Expansion Valve		
Refrigerant type			R410A		
GWP			2088		
Holding Charge			Inert Gas		
Charge (per circuit)		kg	5.9	6.1	7.6
CO2 Tonnes Equivalent			123.2	127.4	158.7
Connections					
Liquid (sweat)		in	5/8	5/8	3/4
Discharge (sweat)		in	7/8	1 1/8	1 3/8
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to ISO-C-75		
Quantity			8	8	8
Electric Heating (Total)		kW	15	15	15
Humidifier					
Capacity		kg/hr	8	8	8
Drain pump flow rate		l/m	7	7	7
Feed/Drain			3/4" BSPF Braided Flexible Hose / 19mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.5	9.5	9.5
Drain			10mm Stainless steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	0.5	0.5	0.5
Drain			10mm quarter turn plastic 'barb' connection		
Upgraded Fan			Backwards Curved, Centrifugal direct drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	2 x 3.5	2 x 3.5	2 x 3.5
Speed @ 25Pa / Maximum ESP		rpm	1251 / 1620	1251 / 1620	1251 / 1620
Maximum ESP		Pa	500	500	500
Fan Gain	(4)	kW	2.8	2.8	2.8

(1) Entering air 24°C /45% RH ambient 35°C
(2) Machine weight excludes a refrigerant charge
(3) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit).***
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.

Downflow Variable Speed

SV18D042-X100-1, SV18D049-X100-1, SV18D083-X200-1

Electrical Data

			SV18D042-X100-1	SV18D049-X100-1	SV18D083-X200-1
Unit Data Full Function - X					
Nominal Run Amps	(1)	A	67.6	74.8	89.3
Maximum Start Amps		A	71.9	80.4	93.6
Recommended Mains Fuse Size		A	80	100	100
Unit Data Cooling Only - X					
Nominal Run Amps	(2)	A	47.0	54.2	80.1
Maximum Start Amps		A	51.3	59.8	84.4
Recommended Mains Fuse Size		A	63	80	100
Max Mains Incoming Cable Size		mm²	70	70	70
Mains Supply		V	380V / 3PH + N / 60HZ		
Control Circuit		VAC	24		
Evaporator Fan - Motor Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(3)	kW	2 x 3.1	2 x 3.1	2 x 3.1
Full Load Amps			5	5	5
Locked Rotor Amps			5	5	5
Compressor - Per Compressor (compressor 1)					
Quantity x Motor Size	(4)	kW	1 x 14.42	1 x 17.96	1 x 14.42
Nominal Run Amps		A	27.05	33.47	27.05
Locked Rotor Amps		A	30.93	38.54	30.93
Inverter Amps	(5)	A	34.3	42.8	34.3
Type of Start				Variable	
Compressor - Per Compressor (compressor 2)					
Quantity x Motor Size	(4)	kW	n/a	n/a	1 x 14.42
Nominal Run Amps		A	n/a	n/a	27.05
Locked Rotor Amps		A	n/a	n/a	30.93
Inverter Amps	(5)	A	n/a	n/a	34.3
Type of Start			n/a	n/a	Variable
Standard Condenser Match - AC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 0.69	2 x 0.69	3 x 0.69
Full Load Amps		A	3.02	3.02	3.02
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	13.54	13.54	13.54
Current per Phase		A	20.6	20.6	20.6
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	9.2	9.2	9.2
First upgrade EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	2 x 3.5	2 x 3.5	2 x 3.5
Full Load Amps		A	5.7	5.7	5.7
Locked Rotor Amps		A	5.7	5.7	5.7
Standard Condenser Motor - EC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 0.73	2 x 0.73	3 x 0.73
Full Load Amps		A	3.3	3.3	3.3

(1) Values given for full function units with standard selections for heating, humidification, supply air fans
(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables
(4) Compressor load data relates to the electrical power utilised by the compressor.
(5) Inverter load data defines Current draw as can be observed at the compressor supply MCB

Interconnecting Wiring SV09-18D (50Hz)

INDOOR UNIT		L1	O	←	L1	Mains Incoming Supply - Primary 400V / 3PH + N / 50Hz (Only applicable to units without Dual Power Supply option)					
		L2	O	←	L2						
		L3	O	←	L3						
		N	O	←	N						
		L4	O	←	L1	Mains Incoming Supply - Primary 400V / 3PH + N / 50Hz (Only applicable for units with Dual Power Supply Option)					
		L5	O	←	L2						
		L6	O	←	L3						
		N1	O	←	N						
		L7	O	←	L1	Mains Incoming Supply - Secondary 400V / 3PH + N / 50Hz (Only applicable for units with Dual Power Supply Option)					
		L8	O	←	L2						
		L9	O	←	L3						
		N2	O	←	N						
		PE	O	←	PE	Protective Earth Connection (always fitted)					
CIRCUIT 1		220	O	→		Mains Supply to Outdoor Unit 1 (CR12, 16, 22, 30, 50, 65, 80, 105) - AC / EC Subfused, Fan speed controller indoors (AC)	→	O	200	**OUTDOOR UNIT 1**	
		N3	O	→			→	O	N		
		PE	O	→			→	O	PE		
		833	O	→		Fan Speed Control Signal to Outdoor Unit 1 (CR12, 16, 22, 30, 50, 65, 80, 105) - EC	→	O	833		
		500	O	→			→	O	500		
		SCR	O	→			→	O	SCR		
CIRCUIT 1		220	O	→		Mains Supply to Outdoor Unit 1 (CR26, 35, 60, 75) - AC / EC Subfused, Fan speed controller outdoors (AC)	→	O	L1	**OUTDOOR UNIT 1**	
		221	O	→			→	O	L2		
		222	O	→			→	O	L3		
		PE	O	→			→	O	PE		
		833	O	→		Fan Speed Control Signal to Outdoor Unit 1 (CR26, 35, 60, 75) - AC / EC	→	O	833		
		500	O	→			→	O	500		
		SCR	O	→			→	O	SCR		
CIRCUIT 1						Separate Mains Incoming Supply 230V / 1PH +N / 50Hz CR12, 16, 22, 30, 50 ,65, 80, 105	→	O	200	**OUTDOOR UNIT 1**	
							→	O	N		
							→	O	PE		
		833	O	→		Fan Speed Control Signal to Outdoor Unit 1 CR12, 16, 22, 30, 50 ,65, 80, 105	→	O	833		
		500	O	→			→	O	500		
		SCR	O	→			→	O	SCR		
CIRCUIT 1						Separate Mains Incoming Supply 400V / 3PH / 50Hz CR26, 35, 60, 75	→	O	L1	**OUTDOOR UNIT 1**	
							→	O	L2		
							→	O	L3		
							→	O	PE		
		833	O	→		Fan Speed Control Signal to Outdoor Unit 1 CR26, 35, 60, 75	→	O	833		
		500	O	→			→	O	500		
		SCR	O	→			→	O	SCR		

Interconnecting Wiring **SV09-18D (50Hz)**

Remote On/Off	INDOOR UNIT		522	O	←	Remote On/Off
			502	O	→	24Vac
Fire Shutdown			583	O	←	Fire Detection
			502	O	→	24Vac
Alarm Volt Free Contacts			560	O	→	Non-Critical alarm Normally Open
			561	O	←	Common
			563	O	→	Critical alarm Normally Open
			564	O	←	Common
			565	O	→	Critical alarm Normally Closed
Run/Standby Network	INDOOR UNIT		RxTx-	O	←	Network Connections (Inward connection)
			RxTx+	O	←	
			GND	O	←	
	INDOOR UNIT		RxTx-	O	→	Network Connections (Outward connection)
			RxTx+	O	→	
			GND	O	→	
BMS Connections	INDOOR UNIT		891	O	↔	Wired BMS connection (ModBUS, BACNet, LON, RS485)
			892	O	↔	
			893	O	↔	
BMS Connections	INDOOR UNIT		N/A	O	↔	BMS Network Connections (pCOWEB Ethernet)

Downflow Dual Fluid

Performance Data

Model	Air On Temp. / RH (°C) / (%)	Ambient Temperature (°C) 25 TC (kW)	25 SC (kW)	30 TC (kW)	30 SC (kW)	35 TC (kW)	35 SC (kW)	40 TC (kW)	40 SC (kW)	46 TC (kW)	46 SC (kW)
SC09D016-X1C0-0	22 / 50	18.0	18.0	17.3	17.3	16.5	16.5	15.6	15.6	14.6	14.6
	24 / 45	18.8	18.8	18.0	18.0	17.2	17.2	16.3	16.3	15.2	15.2
	26 / 40	19.5	19.5	18.7	18.7	17.9	17.9	17.0	17.0	15.9	15.9
	28 / 35	20.4	20.4	19.5	19.5	18.7	18.7	17.8	17.8	16.6	16.6
SC09D019-X1C0-0	22 / 50	20.1	20.1	19.3	19.3	18.4	18.4	17.4	17.4	16.2	16.2
	24 / 45	20.9	20.9	20.0	20.0	19.1	19.1	18.1	18.1	16.9	16.9
	26 / 40	21.7	21.7	20.8	20.8	19.9	19.9	18.8	18.8	17.6	17.6
	28 / 35	22.6	22.6	21.7	21.7	20.7	20.7	19.7	19.7	18.4	18.4
SC09D023-X1C0-0	22 / 50	24.2	22.3	24.2	22.3	23.1	23.1	22.1	22.1	20.7	20.7
	24 / 45	25.0	25.0	24.9	24.9	23.9	23.9	22.9	22.9	21.5	21.5
	26 / 40	26.0	26.0	25.9	25.9	24.9	24.9	23.8	23.8	22.4	22.4
	28 / 35	27.1	27.1	26.9	26.9	25.9	25.9	24.8	24.8	23.4	23.4
SC09D026-X1C0-0	22 / 50	27.2	24.2	26.9	24.0	25.7	23.2	24.5	22.5	22.9	22.9
	24 / 45	27.9	26.9	27.6	26.7	26.4	26.0	25.2	25.2	23.7	23.7
	26 / 40	28.7	28.7	28.4	28.4	27.3	27.3	26.1	26.1	24.6	24.6
	28 / 35	29.9	29.9	29.4	29.4	28.3	28.3	27.2	27.2	25.7	25.7
SC12D021-X2C0-0	22 / 50	22.5	21.0	21.5	21.5	20.3	20.3	19.1	19.1	17.7	17.7
	24 / 45	23.2	23.2	22.2	22.2	21.1	21.1	19.9	19.9	18.5	18.5
	26 / 40	24.1	24.1	23.1	23.1	21.9	21.9	20.8	20.8	19.3	19.3
	28 / 35	25.1	25.1	24.0	24.0	22.9	22.9	21.7	21.7	20.2	20.2
SC12D027-X2C0-0	22 / 50	29.3	26.6	28.8	26.3	27.4	25.4	26.0	26.0	24.2	24.2
	24 / 45	30.1	29.8	29.6	29.4	28.2	28.2	26.8	26.8	25.1	25.1
	26 / 40	31.2	31.2	30.6	30.6	29.3	29.3	27.9	27.9	26.1	26.1
	28 / 35	32.5	32.5	31.9	31.9	30.5	30.5	29.1	29.1	27.3	27.3
SC12D030-X2C0-0	22 / 50	33.2	29.6	32.3	29.1	30.7	28.1	29.2	29.2	27.1	27.1
	24 / 45	34.0	33.1	33.1	32.6	31.6	31.6	30.1	30.1	28.1	28.1
	26 / 40	35.2	35.2	34.2	34.2	32.7	32.7	31.2	31.2	29.3	29.3
	28 / 35	36.6	36.6	35.5	35.5	34.1	34.1	32.6	32.6	30.6	30.6
SC12D035-X2C0-0	22 / 50	37.4	32.9	36.1	32.1	34.5	31.1	32.7	30.0	30.6	30.6
	24 / 45	38.3	36.6	37.0	35.8	35.4	34.9	33.7	33.7	31.6	31.6
	26 / 40	39.4	39.4	38.1	38.1	36.5	36.5	34.8	34.8	32.8	32.8
	28 / 35	40.9	40.9	39.5	39.5	37.9	37.9	36.3	36.3	34.1	34.1
SC12D037-X2C0-0	22 / 50	41.4	34.7	39.8	34.2	38.0	33.3	36.0	32.1	33.6	30.6
	24 / 45	42.2	38.8	40.6	37.9	38.8	36.9	37.0	35.8	34.6	34.6
	26 / 40	43.1	43.1	41.5	41.5	39.8	39.8	38.0	38.0	35.8	35.8
	28 / 35	44.3	44.3	42.8	42.8	41.2	41.2	39.5	39.5	37.2	37.2

IMPORTANT ⚠	Performance data provided is representative of a system with a 5m interconnecting pipe length tested to EN14511.

Downflow Dual Fluid

Performance Data

Model	Air On Temp. / RH (°C) / (%)	Ambient Temperature (°C) 25 TC (kW)	25 SC (kW)	30 TC (kW)	30 SC (kW)	35 TC (kW)	35 SC (kW)	40 TC (kW)	40 SC (kW)	46 TC (kW)	46 SC (kW)
SC15D027-X2C0-0	22 / 50	28.2	28.2	26.8	26.8	25.3	25.3	23.8	23.8	22.0	22.0
	24 / 45	29.2	29.2	27.8	27.8	26.3	26.3	24.8	24.8	22.9	22.9
	26 / 40	30.3	30.3	28.8	28.8	27.3	27.3	25.7	25.7	24.8	24.8
	28 / 35	31.5	31.5	30.0	30.0	28.4	28.4	26.8	26.8	28.1	28.1
SC15D032-X2C0-0	22 / 50	34.8	34.8	33.7	33.7	32.2	32.2	30.6	30.6	28.5	28.5
	24 / 45	36.1	36.1	35.0	35.0	33.5	33.5	31.8	31.8	29.7	29.7
	26 / 40	37.6	37.6	36.4	36.4	34.8	34.8	33.2	33.2	31.0	31.0
	28 / 35	39.3	39.3	37.9	37.9	36.3	36.3	34.6	34.6	32.4	32.4
SC15D036-X2C0-0	22 / 50	39.7	39.7	38.1	38.1	36.3	36.3	34.4	34.4	32.0	32.0
	24 / 45	41.1	41.1	39.5	39.5	37.7	37.7	35.8	35.8	33.4	33.4
	26 / 40	42.7	42.7	41.0	41.0	39.2	39.2	37.3	37.3	34.8	34.8
	28 / 35	44.4	44.4	42.7	42.7	40.9	40.9	38.9	38.9	36.3	36.3
SC15D040-X2C0-0	22 / 50	43.8	39.9	42.0	42.0	40.2	40.2	38.3	38.3	35.8	35.8
	24 / 45	45.0	45.0	43.3	43.3	41.5	41.5	39.6	39.6	37.2	37.2
	26 / 40	46.6	46.6	45.0	45.0	43.2	43.2	41.3	41.3	38.8	38.8
	28 / 35	48.4	48.4	46.8	46.8	45.0	45.0	43.0	43.0	40.4	40.4
SC15D043-X2C0-0	22 / 50	47.2	41.8	46.4	41.3	44.3	40.2	42.2	42.2	39.7	39.7
	24 / 45	48.5	47.0	47.6	46.5	45.6	45.6	43.5	43.5	41.0	41.0
	26 / 40	50.1	50.1	49.1	49.1	47.1	47.1	45.1	45.1	42.6	42.6
	28 / 35	52.1	52.1	51.0	51.0	49.0	49.0	47.0	47.0	44.4	44.4
SC18D037-X2C0-0	22 / 50	40.1	40.1	38.4	38.4	36.6	36.6	34.7	34.7	32.3	32.3
	24 / 45	41.5	41.5	39.9	39.9	38.1	38.1	36.2	36.2	33.7	33.7
	26 / 40	43.1	43.1	41.4	41.4	39.6	39.6	37.6	37.6	35.1	35.1
	28 / 35	44.9	44.9	43.1	43.1	41.2	41.2	39.2	39.2	36.6	36.6
SC18D040-X2C0-0	22 / 50	44.6	44.6	42.8	42.8	40.9	40.9	38.8	38.8	36.1	36.1
	24 / 45	46.2	46.2	44.4	44.4	42.5	42.5	40.4	40.4	37.6	37.6
	26 / 40	47.9	47.9	46.1	46.1	44.2	44.2	42.0	42.0	39.2	39.2
	28 / 35	49.9	49.9	48.0	48.0	46.0	46.0	43.8	43.8	41.0	41.0
SC18D044-X2C0-0	22 / 50	48.3	48.3	46.2	46.2	44.1	44.1	41.9	41.9	39.2	39.2
	24 / 45	50.0	50.0	47.9	47.9	45.8	45.8	43.6	43.6	40.8	40.8
	26 / 40	51.9	51.9	49.8	49.8	47.6	47.6	45.3	45.3	42.5	42.5
	28 / 35	53.9	53.9	51.8	51.8	49.5	49.5	47.2	47.2	44.2	44.2
SC18D048-XDC0-0	22 / 50	43.7	43.7	43.7	43.7	42.8	42.8	41.7	41.7	40.2	40.2
	24 / 45	45.5	45.5	45.5	45.5	44.5	44.5	43.3	43.3	41.5	41.5
	26 / 40	47.4	47.4	47.4	47.4	46.5	46.5	45.3	45.3	43.7	43.7
	28 / 35	49.2	49.2	49.2	49.2	48.2	48.2	47.1	47.1	45.6	45.6
SC18D055-XDC0-0	22 / 50	46.7	46.7	46.7	46.7	45.5	45.5	44.2	44.2	42.3	42.3
	24 / 45	48.0	48.0	47.9	47.9	46.9	46.9	45.7	45.7	44.0	44.0
	26 / 40	49.5	49.5	49.4	49.4	48.6	48.6	47.6	47.6	46.3	46.3
	28 / 35	51.7	51.7	51.5	51.5	50.7	50.7	49.7	49.7	48.2	48.2

IMPORTANT ⚠	Performance data provided is representative of a system with a 5m interconnecting pipe length tested to EN14511.

Downflow Dual Fluid

Performance Data C0

Model	Air On Temp. (°C) / %RH	Chilled Water Temperatures (°C) 5 / 10 °C TC (kW)	5 / 10 °C SC (kW)	7 / 12 °C TC (kW)	7 / 12 °C SC (kW)	8 / 14 °C TC (kW)	8 / 14 °C SC (kW)	10 / 16 °C TC (kW)	10 / 16 °C SC (kW)	5.5 / 14.5°C TC (kW)	5.5 / 14.5°C SC (kW)
SC09D016-X1C0-0	22 / 50	25.00	21.12	18.53	18.18	15.27	15.27	11.52	11.52	6.50	6.50
1 x CR30M	24 / 45	28.48	24.22	21.78	21.37	18.82	18.82	15.46	15.46	11.83	11.83
	26 / 40	31.45	27.29	24.94	24.47	22.14	22.14	18.92	18.92	15.61	15.61
SC09D019-X1C0-0	22 / 50	26.68	22.92	20.10	19.72	16.61	16.61	12.63	12.63	6.78	6.78
1 x CR30M	24 / 45	30.39	26.29	23.62	23.17	20.42	20.42	16.79	16.79	12.91	12.91
	26 / 40	33.56	29.64	27.05	26.54	24.00	24.00	20.52	20.52	16.94	16.94
SC09D023-X1C0-0	22 / 50	26.68	22.92	20.10	19.72	16.61	16.61	12.63	12.63	6.78	6.78
1 x CR50M	24 / 45	30.39	26.29	23.62	23.17	20.42	20.42	16.79	16.79	12.91	12.91
	26 / 40	33.56	29.64	27.05	26.54	24.00	24.00	20.52	20.52	16.94	16.94
SC09D026-X1C0-0	22 / 50	27.31	23.66	20.73	20.33	17.14	17.14	13.07	13.07	6.89	6.89
1 x CR50M	24 / 45	31.12	27.14	24.36	23.90	21.06	21.06	17.32	17.32	13.35	13.35
	26 / 40	34.39	30.59	27.90	27.37	24.75	24.75	21.16	21.16	17.47	17.47
SC12D021-X2C0-0	22 / 50	30.27	23.86	23.07	20.76	18.19	18.19	14.41	14.41	10.11	10.11
1 x CR30M	24 / 45	34.05	27.15	26.96	24.10	21.83	21.83	18.26	18.26	14.54	14.54
	26 / 40	37.28	30.42	30.25	27.40	25.30	25.30	21.85	21.85	18.32	18.32
SC12D027-X2C0-0	22 / 50	35.25	28.45	26.04	23.86	21.67	21.67	17.21	17.21	12.31	12.31
1 x CR50M	24 / 45	39.81	32.40	30.46	27.41	25.98	25.98	21.73	21.73	17.32	17.32
	26 / 40	43.70	36.33	34.44	31.39	30.14	30.14	26.01	26.01	21.79	21.79
SC12D030-X2C0-0	22 / 50	37.66	30.65	27.83	25.99	23.32	23.32	18.53	18.53	13.32	13.32
1 x CR50M	24 / 45	42.55	34.92	32.62	29.87	27.97	27.97	23.39	23.39	18.65	18.65
	26 / 40	46.72	39.18	36.89	34.23	32.46	32.46	27.99	27.99	23.44	23.44
SC12D035-X2C0-0	22 / 50	39.94	32.80	29.12	28.57	24.93	24.93	19.81	19.81	14.28	14.28
1 x CR65M	24 / 45	45.16	37.39	34.66	32.31	29.90	29.90	25.00	25.00	19.93	19.93
	26 / 40	49.59	41.96	39.21	37.04	34.71	34.71	29.93	29.93	25.05	25.05
SC12D037-X2C0-0	23 / 50	39.94	32.80	29.12	28.57	24.93	24.93	19.81	19.81	14.28	14.28
	25 / 45	45.16	37.39	34.66	32.31	29.90	29.90	25.00	25.00	19.93	19.93
	27 / 40	49.59	41.96	39.21	37.04	34.71	34.71	29.93	29.93	25.05	25.05
SC15D027-X2C0-0	23 / 50	38.30	31.60	27.80	27.27	23.63	23.63	18.62	18.62	12.85	12.85
1 x CR30M	25 / 45	43.36	36.02	32.96	31.24	28.49	28.49	23.74	23.74	18.80	18.80
	27 / 40	47.62	40.41	36.87	36.18	33.13	33.13	28.53	28.53	23.83	23.83

IMPORTANT ⚠	Performance data provided is representative of a system with a 5m interconnecting pipe length tested to EN14511.

Downflow Dual Fluid

Performance Data C0

Model	Air On Temp. (°C) / %RH	Chilled Water Temperatures (°C) 5 / 10 °C TC (kW)	5 / 10 °C SC (kW)	7 / 12 °C TC (kW)	7 / 12 °C SC (kW)	8 / 14 °C TC (kW)	8 / 14 °C SC (kW)	10 / 16 °C TC (kW)	10 / 16 °C SC (kW)	5.5 / 14.5°C TC (kW)	5.5 / 14.5°C SC (kW)
SC15D032-X2C0-0	23 / 50	42.64	35.81	31.46	30.87	26.76	26.76	21.13	21.13	14.88	14.88
	25 / 45	48.32	40.85	36.67	35.98	32.24	32.24	26.87	26.87	21.30	21.30
	27 / 40	53.11	45.85	41.78	40.99	37.50	37.50	32.28	32.28	26.95	26.95
SC15D036-X2C0-0	23 / 50	47.64	40.84	35.81	35.13	30.45	30.45	24.07	24.07	17.15	17.15
1 x CR50M	25 / 45	54.06	46.59	41.77	40.98	36.69	36.69	30.57	30.57	24.25	24.25
	27 / 40	59.43	52.33	47.60	46.70	42.69	42.69	36.72	36.72	30.65	30.65
SC15D040-X2C0-0	23 / 50	47.64	40.84	35.81	35.13	30.45	30.45	24.07	24.07	17.15	17.15
	25 / 45	54.06	46.59	41.77	40.98	36.69	36.69	30.57	30.57	24.25	24.25
	27 / 40	59.43	52.33	47.60	46.70	42.69	42.69	36.72	36.72	30.65	30.65
SC15D043-X2C0-0	23 / 50	47.64	40.84	35.81	35.13	30.45	30.45	24.07	24.07	17.15	17.15
1 x CR80M	25 / 45	54.06	46.59	41.77	40.98	36.69	36.69	30.57	30.57	24.25	24.25
	27 / 40	59.43	52.33	47.60	46.70	42.69	42.69	36.72	36.72	30.65	30.65
SC18D037-X2C0-0	23 / 50	47.83	41.57	36.19	35.51	29.99	29.99	22.81	22.81	11.51	11.51
	25 / 45	54.46	47.65	42.51	41.71	36.82	36.82	30.31	30.31	23.33	23.33
	27 / 40	60.13	53.63	48.64	47.72	43.24	43.24	36.99	36.99	30.57	30.57
SC18D040-X2C0-0	23 / 50	50.43	44.63	38.81	38.08	32.23	32.23	24.67	24.67	11.91	11.91
1 x CR50M	25 / 45	57.63	51.14	45.59	44.73	39.49	39.49	32.55	32.55	25.16	25.16
	27 / 40	63.75	57.60	52.17	51.18	46.36	46.36	39.67	39.67	32.80	32.80
SC18D044-X2C0-0	24 / 50	53.78	48.62	42.20	41.40	35.11	35.11	27.02	27.02	16.19	16.19
	26 / 45	61.76	55.65	49.56	48.63	42.94	42.94	35.42	35.42	27.48	27.48
	28 / 40	68.35	62.65	56.72	55.65	50.40	50.40	43.13	43.13	35.68	35.68
SC18D048-XDC0-0	24 / 50	61.47	52.52	46.22	45.35	38.77	38.77	30.13	30.13	19.88	19.88
2 x CR50M	26 / 45	69.89	60.15	54.14	53.11	47.16	47.16	39.05	39.05	30.53	30.53
	28 / 40	77.25	67.65	61.84	60.67	55.17	55.17	47.31	47.31	39.27	39.27
SC18D055-XDC0-0	24 / 50	61.47	52.52	46.22	45.35	38.77	38.77	30.13	30.13	19.88	19.88
2 x CR50M	26 / 45	69.89	60.15	54.14	53.11	47.16	47.16	39.05	39.05	30.53	30.53
	28 / 40	77.25	67.65	61.84	60.67	55.17	55.17	47.31	47.31	39.27	39.27

IMPORTANT ⚠	Performance data provided is representative of a system with a 5m interconnecting pipe length tested to EN14511.

Downflow Dual Fluid
Sound Data

Sound Measurement		Overall dB(A)	Frequency (Hz) dB							
			63	125	250	500	1000	2000	4000	8000
SC09D016-X1C0	Discharge Air	85	89	88	88	82	79	74	72	69
	Return Air	84	95	88	89	82	76	68	70	63
	Case Breakout	66	66	68	64	57	57	58	60	60
	Sound Pressure @ 3m	55	55	57	53	46	46	47	49	49
SC09D019-X1C0	Discharge Air	88	91	87	92	86	82	76	72	72
	Return Air	86	95	88	91	85	75	69	70	67
	Case Breakout	68	68	67	68	61	59	60	60	64
	Sound Pressure @ 3m	57	57	56	57	50	48	49	49	53
SC09D023-X1C0	Discharge Air	89	90	87	92	88	84	77	72	74
	Return Air	87	96	88	92	87	77	71	72	66
	Case Breakout	70	68	67	68	62	61	61	60	66
	Sound Pressure @ 3m	59	57	56	57	51	50	50	49	55
SC09D026-X1C0	Discharge Air	89	91	87	92	88	84	78	72	74
	Return Air	87	96	88	92	87	77	73	73	66
	Case Breakout	70	68	67	68	62	61	62	60	66
	Sound Pressure @ 3m	59	57	56	57	51	50	51	49	55
SC12D021-X2C0	Discharge Air	79	87	87	83	77	71	65	60	62
	Return Air	81	94	92	86	73	69	60	60	60
	Case Breakout	59	64	68	60	52	48	49	48	54
	Sound Pressure @ 3m	48	53	57	49	41	37	38	37	43
SC12D027-X2C0	Discharge Air	91	100	83	94	80	78	86	83	81
	Return Air	91	103	86	85	92	73	82	82	79
	Case Breakout	77	78	63	70	55	55	71	71	73
	Sound Pressure @ 3m	66	67	52	59	44	44	60	60	62
SC12D030-X2C0	Discharge Air	92	100	97	94	82	81	86	82	80
	Return Air	95	104	100	100	92	79	82	82	79
	Case Breakout	77	78	77	70	57	58	71	70	72
	Sound Pressure @ 3m	66	67	66	59	46	47	59	59	61
SC12D035-X2C0	Discharge Air	93	100	96	98	84	82	86	82	81
	Return Air	93	103	91	100	83	77	82	81	79
	Case Breakout	76	78	76	74	59	59	70	70	72
	Sound Pressure @ 3m	65	67	65	63	48	48	59	59	61
SC12D037-X2C0	Discharge Air	93	100	96	98	84	83	86	82	80
	Return Air	93	103	91	100	84	80	82	81	79
	Case Breakout	76	78	76	74	59	60	70	70	72
	Sound Pressure @ 3m	65	67	65	63	48	49	59	59	61
SC15D027-X2C0	Discharge Air	81	86	87	82	78	76	71	68	61
	Return Air	80	93	88	85	76	69	63	65	55
	Case Breakout	62	64	67	59	53	53	55	56	53
	Sound Pressure @ 3m	51	53	56	48	42	42	44	45	42

(1) dB(A) is the overall sound level, measured on the A scale
(2) All sound data measured at nominal conditions, Discharge Air, Return air and case breakout is sound power.

Downflow Dual Fluid

Sound Data

Sound Measurement		Overall dB(A)	Frequency (Hz) dB							
			63	125	250	500	1000	2000	4000	8000
SC15D032-X2C0	Discharge Air	85	89	90	87	82	80	75	72	68
	Return Air	85	96	90	89	82	78	70	71	63
	Case Breakout	66	67	70	63	57	58	59	60	60
	Sound Pressure @ 3m	55	55	59	52	46	47	48	49	49
SC15D036-X2C0	Discharge Air	89	94	87	92	87	83	78	75	73
	Return Air	89	99	89	95	87	78	70	73	68
	Case Breakout	70	72	67	68	62	61	62	63	65
	Sound Pressure @ 3m	59	61	56	57	51	50	51	52	54
SC15D040-X2C0	Discharge Air	89	94	87	92	87	84	78	75	72
	Return Air	89	99	89	95	88	80	71	73	66
	Case Breakout	70	72	67	68	62	61	62	63	64
	Sound Pressure @ 3m	59	61	56	57	51	50	51	52	53
SC15D043-X2C0	Discharge Air	89	94	87	92	88	84	78	75	72
	Return Air	89	99	89	95	88	80	72	73	66
	Case Breakout	70	72	67	68	62	61	63	63	64
	Sound Pressure @ 3m	59	61	56	57	51	50	52	52	53
SC18D037-X2C0	Discharge Air	85	94	91	89	82	77	72	70	69
	Return Air	85	101	94	91	79	76	68	71	66
	Case Breakout	65	71	71	65	56	54	56	58	61
	Sound Pressure @ 3m	54	60	60	54	45	43	45	47	50
SC18D040-X2C0	Discharge Air	93	87	86	83	82	81	90	86	85
	Return Air	92	102	89	89	82	79	86	86	84
	Case Breakout	80	64	66	59	57	59	74	74	77
	Sound Pressure @ 3m	69	53	55	48	46	48	63	63	66
SC18D044-X2C0	Discharge Air	94	103	87	85	84	83	90	86	84
	Return Air	95	94	91	91	95	79	85	86	83
	Case Breakout	80	80	68	61	59	60	74	74	76
	Sound Pressure @ 3m	69	69	57	50	48	49	63	63	65
SC18D048-XDC0	Discharge Air	94	103	88	86	85	83	90	86	84
	Return Air	95	95	91	92	95	80	86	85	82
	Case Breakout	80	80	68	62	60	60	74	74	76
	Sound Pressure @ 3m	69	69	57	51	49	49	63	63	65
SC18D055-XDC0	Discharge Air	94	103	88	86	85	83	90	86	84
	Return Air	95	95	91	92	95	81	86	85	82
	Case Breakout	80	80	68	62	60	61	74	74	76
	Sound Pressure @ 3m	69	69	57	51	49	50	63	63	65

(1) dB(A) is the overall sound level, measured on the A scale

(2) All sound data measured at nominal conditions, Discharge Air, Return air and case breakout is sound power.

Downflow Dual Fluid

SC09D016-X1C0-0, SC09D019-X1C0-0

Mechanical Data

			SC09D016-X1C0-0	SC09D019-X1C0-0
Standard Condenser Match			1 x CR30M	1 x CR30M
Capacity				
Nom Cooling (Gross) - X	(1)	kW	17.1	19.3
Nom Cooling (Gross) - C	(2)	kW	22.6	24.5
Capacity Steps			1	1
Dimensions – W x D x H		mm	900 x 890 x 1980	900 x 890 x 1980
Weight – Machine / Operating	(3)	kg	339 / 355	342 / 359
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Material/Colour			Welded Frame: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins	
Cooling/Dehum Stages			1/1	1/1
Cooling Coil - C			Copper Tube/Turbulated Hydrophilic Coated Aluminium fins	
Water Volume		l	11.3	11.3
Water Flow		l/s	1.08	1.17
Pressure Drop		kPa	17.9	20.2
Unit				
Water Volume		l	13.6	14.7
Water Flow		l/s	1.08	1.17
Pressure Drop	(4)	kPa	46.0	32.9
Standard Fan			Backward Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	1 x 1.7	1 x 1.7
Speed @25Pa / Maximum ESP		rpm	1498 / 1800	1642 / 1800
Maximum ESP		Pa	351	208
Nominal Airflow		m^3/s	1.63	1.80
Fan Gain	(5)	kW	0.88	1.16
Compressor – Scroll				
Configuration – X1C0			Single Circuit – Single Compressors	
Quantity – X1C0			1	1
Oil Charge Volume – X1C0		l	1.7	1.8
Oil Type			Polyol Ester	
Refrigeration			Single Circuit	
Refrigerant control and type			Electronic Expansion Valve	
Refrigerant type			R410A	
GWP			2088	
Holding Charge			Inert Gas	
Charge (per circuit)		kg	2.3	2.3
CO2 Tonnes Equivalent			4.8	4.8
Connections				
Liquid (sweat)		in	1/2	1/2
Discharge (sweat)		in	5/8	5/8
Water Inlet / Outlet		mm	28 / 28	35 / 35
Condensate Drain Hose		mm	22	22
Filtration			Disposable to ISO-C-75	
Quantity			4	4
Electric Heating (Total)		kW	7.5	7.5
Humidifier				
Capacity		kg/hr	3	3
Drain pump flow rate		l/m	7	7
Feed/Drain			3/4” BSPF Braided flexible hose / 19mm hose connection	
Hot Water condensate Pump				
Flow / Head		l / m	10.8 / 5	10.8 / 5
Drain			3/4” BSPF Braided flexible hose / 19mm hose connection	
Cold Water condensate Pump				
Flow / Head		m	1.7 / 4	1.7 / 4
Drain			10mm Quarter Turn Plastic ‘Barb’ Connection	
Upgraded Fan			Backward Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	1 x 3.6	1 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1501 / 2300	1643 / 2300
Maximum ESP		Pa	868	757
Fan Gain	(5)	kW	0.96	1.22

(1) Entering air 24°C /45°C RH 35°C Ambient
(2) Entering air 24°C /45°C RH water 7/12°C
(3) Machine weight excludes operating charge
(4) Pressure drop through heat exchanger, control valve and unit pipe work
(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Downflow Dual Fluid

SC09D016-X1C0-0, SC09D019-X1C0-0

Electrical Data

			SC09D016-X1C0-0	SC09D019-X1C0-0
Unit Data Full Function - X	(1)			
Nominal Run Amps		A	25.6	27.1
Maximum Start Amps		A	81.4	92.4
Recommended Mains Fuse Size		A	32	32
Unit Data Cooling Only - X	(2)			
Nominal Run Amps		A	14.8	16.2
Maximum Start Amps		A	70.5	81.5
Recommended Mains Fuse Size		A	20	20
Max Mains Incoming Cable Size		mm^2	16	16
Mains Supply		V	400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24
Evaporator Fan - Motor Per Fan				
Motor Type			EC	EC
Quantity x Motor Size	(3)	kW	1 x 1.7	1 x 1.7
Full Load Amps		A	2.9	2.9
Locked Rotor Amps		A	2.9	2.9
Compressor - Per Compressor				
Quantity x Motor Size		kW	1 x 4.75	1 x 5.65
Nominal Run Amps		A	8.3	9.7
Locked Rotor Amps		A	64	75
Type of Start			Direct On Line	
Standard Condenser Match - AC Motor - Per Fan				
Quantity x Motor Size		kW	1 x 0.6	1 x 0.6
Full Load Amps		A	2.6	2.6
OPTIONAL EXTRAS				
Electric Heating				
Stage of Reheat			1	1
Number of Elements			3	3
Rating		kW	7.5	7.5
Current per Phase		A	10.83	10.83
Humidifier				
Capacity		kg/hr	3	3
Rating		kW	2.3	2.3
Full Load Amps		A	3.3	3.3
First upgrade EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	1 x 3.6	1 x 3.6
Full Load Amps		A	5.8	5.8
Locked Rotor Amps		A	5.8	5.8
Standard Condenser Motor - EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	1 x 0.73	1 x 0.73
Full Load Amps		A	3.3	3.3

Mechanical

(1) Entering air 24°C /45% RH 35°C Ambient

(2) Entering air 24°C /45% RH water 7/12°C

(3) Machine weight excludes refrigerant charge

(4) Pressure drop through heat exchanger, control valve and unit pipe work

(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Electrical

(1) Values given for full function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Dual Fluid

SC09D023-X1C0-0, SC09D026-X1C0-0

Mechanical Data

			SC09D023-X1C0-0	SC09D026-X1C0-0
Standard Condenser Match			1 x CR50M	1 x CR50M
Capacity				
Nom Cooling (Gross) - X	(1)	kW	23.3	25.9
Nom Cooling (Gross) - C	(2)	kW	25.3	25.3
Capacity Steps			1	1
Dimensions – W x D x H		mm	900 x 890 x 1980	900 x 890 x 1980
Weight – Machine / Operating	(3)	kg	342 / 359	362 / 379
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Material/Colour			Welded Frame: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins	
Cooling/Dehum Stages			1/1	1/1
Cooling Coil - C			Copper Tube/Turbulated Hydrophilic Coated Aluminium fins	
Water Volume		l	11.3	11.3
Water Flow		l/s	1.21	1.21
Pressure Drop		kPa	21.1	21.1
Unit				
Water Volume		l	14.7	14.7
Water Flow		l/s	1.21	1.21
Pressure Drop	(4)	kPa	34.6	34.6
Fan Motor			Backward Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	1 x 1.7	1 x 1.7
Speed @25Pa / Maximum ESP		rpm	1703 / 1800	1703 / 1800
Maximum ESP		Pa	141	141
Nominal Airflow		m³/s	1.87	1.87
Fan Gain	(5)	kW	1.30	1.30
Compressor – Scroll				
Configuration – X1C0			Single Circuit – Single Compressors	
Quantity – X1C0			1	1
Oil Charge Volume – X1C0		l	1.8	3.2
Oil Type			Polyol Ester	
Refrigeration			Single Circuit	
Refrigerant control and type			Electronic Expansion Valve	
Refrigerant type			R410A	
GWP			2088	
Holding Charge			Inert Gas	
Charge (per circuit)		kg	2.3	2.4
CO2 Tonnes Equivalent			4.8	5.0
Connections				
Liquid (sweat)		in	1/2	1/2
Discharge (sweat)		in	3/4	3/4
Water Inlet / Outlet		mm	35 / 35	35 / 35
Condensate Drain Hose		mm	22	22
Filtration			Disposable to ISO-C-75	
Quantity			4	4
Electric Heating (Total)		kW	7.5	7.5
Humidifier				
Capacity		kg/hr	3	3
Drain pump flow rate		l/m	7	7
Feed/Drain			3/4” BSPF Braided flexible hose / 19mm hose connection	
Hot Water Condensate Pump				
Flow / Head		m	10.8 / 5	10.8 / 5
Drain			10mm Stainless steel Stub connection	
Cold Water Condensate Pump				
Flow / Head		m	1.7 / 4	1.7 / 4
Drain			10mm Quarter Turn Plastic ‘Barb’ Connection	
Upgraded Fan			Backward Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	1 x 3.6	1 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1704 / 2300	1704 / 2300
Maximum ESP		Pa	706	706
Fan Gain	(5)	kW	1.34	1.34

(1) Entering air 24°C /45°C RH 35°C Ambient
(2) Entering air 24°C /45°C RH water 7/12°C
(3) Machine weight excludes operating charge
(4) Pressure drop through heat exchanger, control valve and unit pipe work
(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Downflow Dual Fluid

SC09D023-X1C0-0, SC09D026-X1C0-0

Electrical Data

			SC09D023-X1C0-0	SC09D026-X1C0-0
Unit Data Full Function - X	(1)			
Nominal Run Amps		A	32.3	34.3
Maximum Start Amps		A	121.0	131.0
Recommended Mains Fuse Size		A	40	40
Unit Data Cooling Only - X	(2)			
Nominal Run Amps		A	21.5	23.5
Maximum Start Amps		A	110.1	120.0
Recommended Mains Fuse Size		A	25	32
Max Mains Incoming Cable Size		mm^2	35	35
Mains Supply		V	400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24
Evaporator Fan - Motor Per Fan				
Motor Type			EC	EC
Quantity x Motor Size	(3)	kW	1 x 1.7	1 x 1.7
Full Load Amps		A	2.9	2.9
Locked Rotor Amps		A	2.9	2.9
Compressor - Per Compressor				
Quantity x Motor Size		kW	1 x 12.3	1 x 7.8
Nominal Run Amps		A	6.8	14.4
Locked Rotor Amps		A	101	111
Type of Start			Direct On Line	
Standard Condenser Match - AC Motor - Per Fan				
Quantity x Motor Size		kW	2 x 0.6	2 x 0.6
Full Load Amps		A	2.6	2.6
OPTIONAL EXTRAS				
Electric Heating				
Stage of Reheat			1	1
Number of Elements			3	3
Rating		kW	7.5	7.5
Current per Phase		A	10.83	10.83
Humidifier				
Capacity		kg/hr	3	3
Rating		kW	2.25	2.25
Full Load Amps		A	3.3	3.3
First upgrade EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	1 x 3.6	1 x 3.6
Full Load Amps		A	5.8	5.8
Locked Rotor Amps		A	5.8	5.8
Standard Condenser Motor - EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3

Mechanical

(1) Entering air 24°C /45% RH 35°C Ambient

(2) Entering air 24°C /45% RH water 7/12°C

(3) Machine weight excludes refrigerant charge

(4) Pressure drop through heat exchanger, control valve and unit pipe work

(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Electrical

(1) Values given for full function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Dual Fluid

SC012D021-X2C0-0, SC12D027-X2C0-0, SC12D030-X2C0-0

Mechanical Data

			SC12D021-X2C0-0	SC12D027-X2C0-0	SC12D030-X2C0-0
Standard Condenser Match			1 x CR30M	1 x CR50M	1 x CR50M
Capacity					
Nom Cooling (Gross) - X	(1)	kW	21.5	27.6	30.6
Nom Cooling (Gross) - C	(2)	kW	28.1	32.7	34
Capacity Steps			2	2	2
Dimensions – W x D x H		mm	1200 x 890 x 1980	1200 x 890 x 1980	1200 x 890 x 1980
Weight – Machine / Operating	(3)	kg	430 / 453	440 / 463	450 / 473
Construction Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021) Welded Frame: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)		
Evaporator					
Cooling/Dehum Stages			2/2	2/2	2/2
Cooling Coil - C			Copper Tube/Turbulated Hydrophilic Coated Aluminium fins		
Water Volume		l	15.1	15.1	15.1
Water Flow		l/s	1.34	1.56	1.62
Pressure Drop		kPa	23.4	29.8	32.1
Unit					
Water Volume		l	20.2	20.2	20.2
Water Flow		l/s	1.34	1.56	1.62
Pressure Drop	(4)	kPa	36.4	47	50.8
Fan Motor			Backward Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	1 x 1.5	1 x 3.1	1 x 3.1
Speed @25Pa / Maximum ESP		rpm	977 / 1230	1171 / 1560	1274 / 1560
Maximum ESP		Pa	258	486	391
Nominal Airflow		m^3/s	1.70	2.10	2.30
Fan Gain	(5)	kW	0.67	1.15	1.45
Compressor – Scroll					
Configuration – X2C0			Single Circuit - Dual Compressors		
Quantity – X2C0			2	2	2
Oil Charge Volume – X2C0		l	1.2	1.2	1.7
Oil Type			Polyol Ester		
Refrigeration			Single Circuit		
Refrigerant control and type			Electronic Expansion Valve		
Refrigerant type			R410A		
GWP			2088		
Holding Charge			Inert Gas		
Charge (per circuit)		kg	3.0	3.2	3.2
CO2 Tonnes Equivalent			6.3	6.7	6.7
Connections					
Liquid (sweat)		in	1/2	1/2	1/2
Discharge (sweat)		in	5/8	5/8	7/8
Water Inlet / Outlet		mm	42 / 42	42 / 42	42 /42
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to ISO-C-75		
Quantity			6	6	6
Electric Heating (Total)		kW	7.5	7.5	7.5
Humidifier					
Capacity		kg/hr	3	3	8
Drain pump flow rate		l/m	7	7	7
Feed/Drain			3/4” BSPF Braided flexible hose / 19mm hose connection		
Hot Water Condensate Pump					
Flow / Head		m	10.8 / 5	10.8 / 5	10.8 / 5
Drain			10mm Stainless steel Stub connection		
Cold Water Condensate Pump					
Flow / Head		m	1.7 / 4	1.7 / 4	1.7 / 4
Drain			10mm Quarter Turn Plastic ‘Barb’ Connection		
Upgraded Fan			Backward Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	1 x 3.1	1 x 3.5	1 x 3.5
Speed @ 25Pa / Maximum ESP		rpm	977 / 1560	1177 / 1620	1279 / 1620
Maximum ESP		Pa	663	575	481
Fan Gain	(5)	kW	0.68	1.2	1.52

(1) Entering air 24°C /45°C RH 35°C Ambient
(2) Entering air 24°C /45°C RH water 7/12°C
(3) Machine weight excludes operating charge
(4) Pressure drop through heat exchanger, control valve and unit pipe work
(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Downflow Dual Fluid SC12D021-X2C0-0, SC12D027-X2C0-0, SC12D030-X2C0-0

Electrical Data

			SC12D021-X2C0-0	SC12D027-X2C0-0	SC12D030-X2C0-0
Unit Data Full Function - X	(1)				
Nominal Run Amps		A	22.7	29.2	36.5
Maximum Start Amps		A	60.1	74.1	92.2
Recommended Mains Fuse Size		A	32	40	50
Unit Data Cooling Only - X	(2)				
Nominal Run Amps		A	17.4	25.4	27.8
Maximum Start Amps		A	54.8	70.3	83.5
Recommended Mains Fuse Size		A	20	32	32
Max Mains Incoming Cable Size		mm²	16	35	35
Mains Supply		V		400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(3)	kW	1 x 1.5	1 x 3.1	1 x 3.1
Full Load Amps		A	2.6	5.0	5
Locked Rotor Amps		A	2.6	5.0	5
Compressor - Per Compressor					
Quantity x Motor Size		kW	2 x 3.31	2 x 4.21	2 x 4.75
Nominal Run Amps		A	5.6	7.09	8.29
Locked Rotor Amps		A	43	52	64
Type of Start				Direct On Line	
Standard Condenser Match - AC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 0.6	2 x 0.6	2 x 0.6
Full Load Amps		A	2.6	2.6	2.6
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			1	1	1
Number of Elements			3	3	3
Rating		kW	7.5	7.5	7.5
Current per Phase		A	10.83	10.83	10.83
Humidifier					
Capacity		kg/hr	3	3	8
Rating		kW	2.25	2.25	6
Full Load Amps		A	3.3	3.3	8.7
First upgrade EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	1 x 3.1	1 x 3.5	1 x 3.5
Full Load Amps		A	5	5.7	5.7
Locked Rotor Amps		A	5	5.7	5.7
Standard Condenser Motor - EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	1 x 0.73	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3	3.3

Mechanical

(1) Entering air 24°C /45% RH 35°C Ambient

(2) Entering air 24°C /45% RH water 7/12°C

(3) Machine weight excludes refrigerant charge

(4) Pressure drop through heat exchanger, control valve and unit pipe work

(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Electrical

(1) Values given for full function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Dual Fluid

SC12D035-X2C0-0, SC12D037-X2C0-0

Mechanical Data			SC12D035-X2C0-0	SC12D037-X2C0-0
Standard Condenser Match			1 x CR65M	1 x CR65M
Capacity				
Nom Cooling (Gross) - X	(1)	kW	35.5	39.1
Nom Cooling (Gross) - C	(2)	kW	36.2	36.2
Capacity Steps			2	2
Dimensions – W x D x H		mm	1200 x 890 x 1980	1200 x 890 x 1980
Weight – Machine / Operating	(3)	kg	450 / 473	450 / 473
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Material/Colour			Welded Frame: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins	
Cooling/Dehum Stages			2/2	2/2
Cooling Coil - C			Copper Tube/Turbulated Hydrophilic Coated Aluminium fins	
Water Volume		l	15.1	15.1
Water Flow		l/s	1.73	1.73
Pressure Drop		kPa	35.4	35.4
Unit				
Water Volume		l	20.2	20.2
Water Flow		l/s	1.73	1.73
Pressure Drop	(4)	kPa	56.4	56.4
Fan Motor			Backward Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	1 x 3.1	1 x 3.1
Speed @25Pa / Maximum ESP		rpm	1373 / 1560	1373 / 1560
Maximum ESP		Pa	275	275
Nominal Airflow		m³/s	2.50	2.50
Fan Gain	(5)	kW	1.82	1.82
Compressor – Scroll				
Configuration – X2C0			Single Circuit - Dual Compressors	
Quantity – X2C0			2	2
Oil Charge Volume – X2C0		l	1.8	1.8
Oil Type			Polyol Ester	
Refrigeration			Single Circuit	
Refrigerant control and type			Electronic Expansion Valve	
Refrigerant type			R410A	
GWP			2088	
Holding Charge			Inert Gas	
Charge (per circuit)		kg	3.2	3.2
CO2 Tonnes Equivalent			6.7	6.7
Connections				
Liquid (sweat)		in	5/8	5/8
Discharge (sweat)		in	7/8	7/8
Water Inlet / Outlet		mm	42 / 42	42 / 42
Condensate Drain Hose		mm	22	22
Filtration			Disposable to ISO-C-75	
Quantity			6	6
Electric Heating (Total)		kW	7.5	7.5
Humidifier				
Capacity		kg/hr	8	8
Drain pump flow rate		l/m	7	7
Feed/Drain			3/4” BSPF Braided flexible hose / 19mm hose connection	
Hot Water Condensate Pump				
Flow / Head		m	10.8 / 5	10.8 / 5
Flow		l/m	10.8	10.8
Drain			10mm Stainless steel Stub connection	
Cold Water Condensate Pump				
Flow / Head		m	1.7 / 4	1.7 / 4
Drain			10mm Quarter Turn Plastic ‘Barb’ Connection	
Upgraded Fan			Backward Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	1 x 3.5	1 x 3.5
Speed @ 25Pa / Maximum ESP		rpm	1380 / 1620	1380 / 1620
Maximum ESP	(5)	Pa	364	364
Fan Gain	(4)	kW	1.91	1.91

(1) Entering air 24°C /45°C RH 35°C Ambient
(2) Entering air 24°C /45°C RH water 7/12°C
(3) Machine weight excludes operating charge
(4) Pressure drop through heat exchanger, control valve and unit pipe work
(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Downflow Dual Fluid

SC12D035-X2C0-0, SC12D037-X2C0-0

Electrical Data

			SC12D035-X2C0-0	SC12D037-X2C0-0
Unit Data Full Function - X	(1)			
Nominal Run Amps		A	39.4	43.4
Maximum Start Amps		A	104.7	132.7
Recommended Mains Fuse Size		A	50	50
Unit Data Cooling Only - X	(2)			
Nominal Run Amps		A	30.7	34.7
Maximum Start Amps		A	96.0	124.0
Recommended Mains Fuse Size		A	40	40
Max Mains Incoming Cable Size		mm^2	35	35
Mains Supply		V	400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24
Evaporator Fan - Motor Per Fan				
Motor Type			EC	EC
Quantity x Motor Size	(3)	kW	1 x 3.1	1 x 3.1
Full Load Amps		A	5	5
Locked Rotor Amps		A	5	5
Compressor - Per Compressor				
Quantity x Motor Size		kW	2 x 5.65	2 x 6.42
Nominal Run Amps		A	9.72	11.74
Locked Rotor Amps		A	75	101
Type of Start			Direct On Line	
Standard Condenser Match - AC Motor - Per Fan				
Quantity x Motor Size		kW	2 x 0.6	2 x 0.6
Full Load Amps		A	2.6	2.6
OPTIONAL EXTRAS				
Electric Heating				
Stage of Reheat			1	1
Number of Elements			3	3
Rating		kW	7.5	7.5
Current per Phase		A	10.83	10.83
Humidifier				
Capacity		kg/hr	8	8
Rating		kW	6	6
Full Load Amps		A	8.7	8.7
First upgrade EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	1 x 3.5	1 x 3.5
Full Load Amps		A	5.7	5.7
Locked Rotor Amps		A	5.7	5.7
Standard Condenser Motor - EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3

Mechanical

(1) Entering air 24°C /45% RH 35°C Ambient

(2) Entering air 24°C /45% RH water 7/12°C

(3) Machine weight excludes refrigerant charge

(4) Pressure drop through heat exchanger, control valve and unit pipe work

(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Electrical

(1) Values given for full function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Dual Fluid

SC15D027-X2C0-0, SC15D032-X2C0-0, SC15D036-X2C0-0

Mechanical Data

			SC15D027-X2C0-0	SC15D032-X2C0-0	SC15D036-X2C0-0
Standard Condenser Match			1 x CR30M	1 x CR50M	1 x CR50M
Capacity					
Nom Cooling (Gross) - X	(1)	kW	27.3	32.4	36.9
Nom Cooling (Gross) - C	(2)	kW	34.4	37.9	44.4
Capacity Steps			2	2	2
Dimensions – W x D x H		mm	1500 x 890 x 1980	1500 x 890 x 1980	1500 x 890 x 1980
Weight – Machine / Operating	(3)	kg	509 / 536	519 / 546	519 / 547
Construction Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021) Welded Frame: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)		
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins		
Cooling/Dehum Stages			2/2	2/2	2/2
Cooling Coil - C			Copper Tube/Turbulated Hydrophilic Coated Aluminium fins		
Water Volume		l	18.7	18.7	18.7
Water Flow		l/s	1.64	1.81	2.12
Pressure Drop		kPa	23.4	27.1	34.7
Unit					
Water Volume		l	23.9	23.9	23.9
Water Flow		l/s	1.64	1.81	2.12
Pressure Drop	(4)	kPa	42.6	50.2	66
Fan Motor			Backward Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	2 x 1.7	2 x 1.7	2 x 1.7
Speed @25Pa / Maximum ESP		rpm	1226 / 1800	1405 / 1800	1638 / 1800
Maximum ESP		Pa	545	418	204
Nominal Airflow		m^3/s	2.40	2.80	3.30
Fan Gain	(5)	kW	1.02	1.52	2.40
Compressor – Scroll					
Configuration – X2C0			Single Circuit - Dual Compressors		
Quantity – X2C0			2	2	2
Oil Charge Volume – X2C0		l	1.2	1.7	1.8
Oil Type			Polyol Ester		
Refrigeration			Single Circuit		
Refrigerant control and type			Electronic Expansion Valve		
Refrigerant type			R410A		
GWP			2088		
Holding Charge			Inert Gas		
Charge (per circuit)		kg	3.7	3.8	4
CO2 Tonnes Equivalent			7.7	7.9	8.4
Connections					
Liquid (sweat)		in	1/2	1/2	5/8
Discharge (sweat)		in	5/8	7/8	7/8
Water Inlet / Outlet		mm	42 / 42	42 /42	42 /42
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to ISO-C-75		
Quantity			6	6	6
Electric Heating (Total)		kW	15	15	15
Humidifier					
Capacity		kg/hr	3	3	3
Drain pump flow rate		l/m	7	7	7
Feed/Drain			3/4" BSPF Braided flexible hose / 19mm hose connection		
Hot Water Condensate Pump					
Flow / Head		m	10.8 / 5	10.8 / 5	10.8 / 5
Drain			10mm Stainless steel Stub connection		
Cold Water Condensate Pump					
Flow / Head		m	1.7 / 4	1.7 / 4	1.7 / 4
Drain			10mm Quarter Turn Plastic 'Barb' Connection		
Upgraded Fan			Backward Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	2 x 3.6	2 x 3.6	2 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1230 / 2300	1407 / 2300	1638 / 2300
Maximum ESP		Pa	1025	908	725
Fan Gain	(5)	kW	1.18	1.63	2.55

(1) Entering air 24°C /45°C RH 35°C Ambient
(2) Entering air 24°C /45°C RH water 7/12°C
(3) Machine weight excludes operating charge
(4) Pressure drop through heat exchanger, control valve and unit pipe work
(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Downflow Dual Fluid SC15D027-X2C0-0, SC15D032-X2C0-0, SC15D036-X2C0-0

Electrical Data

			SC15D027-X2C0-0	SC15D032-X2C0-0	SC15D036-X2C0-0
Unit Data Full Function - X	(1)				
Nominal Run Amps		A	38.2	42.0	43.4
Maximum Start Amps		A	83.1	97.7	108.7
Recommended Mains Fuse Size		A	50	50	50
Unit Data Cooling Only - X	(2)				
Nominal Run Amps		A	23.6	28.6	31.5
Maximum Start Amps		A	68.5	84.3	96.8
Recommended Mains Fuse Size		A	32	32	40
Max Mains Incoming Cable Size		mm^2	35	35	35
Mains Supply		V		400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(3)	kW	2 x 1.7	2 x 1.7	2 x 1.7
Full Load Amps		A	2.9	2.9	2.9
Locked Rotor Amps		A	2.9	2.9	2.9
Compressor - Per Compressor					
Quantity x Motor Size		kW	2 x 4.21	2 x 4.75	2 x 5.65
Nominal Run Amps		A	7.1	8.3	9.7
Locked Rotor Amps		A	52	64	75
Type of Start				Direct On Line	
Standard Condenser Match - AC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 0.6	2 x 0.6	2 x 0.6
Full Load Amps		A	2.6	2.6	2.6
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15	15	15
Current per Phase		A	21.65	21.65	21.65
Humidifier					
Capacity		kg/hr	3	3	3
Rating		kW	2.25	2.25	2.25
Full Load Amps		A	3.3	3.3	3.3
First upgrade EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	2 x 3.6	2 x 3.6	2 x 3.6
Full Load Amps		A	5.8	5.8	5.8
Locked Rotor Amps		A	5.8	5.8	5.8
Standard Condenser Motor - EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	1 x 0.73	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3	3.3

Mechanical

(1) Entering air 24°C /45% RH 35°C Ambient

(2) Entering air 24°C /45% RH water 7/12°C

(3) Machine weight excludes refrigerant charge

(4) Pressure drop through heat exchanger, control valve and unit pipe work

(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Electrical

(1) Values given for full function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Dual Fluid SC15D040-X2C0-0, SC15D043-X2C0-0

Mechanical Data

			SC15D040-X2C0-0	SC15D043-X2C0-0
Standard Condenser Match			1 x CR65M	1 x CR80M
Capacity				
Nom Cooling (Gross) - X	(1)	kW	41.6	44.8
Nom Cooling (Gross) - C	(2)	kW	44.4	44.4
Capacity Steps			2	2
Dimensions – W x D x H		mm	1500 x 890 x 1980	1500 x 890 x 1980
Weight – Machine / Operating	(3)	kg	519 / 547	519 / 547
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Material/Colour			Welded Frame: Galvanised Sheet Steel Epoxy Baked Powder Paint – Black Grey	
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins	
Cooling/Dehum Stages			2/2	2/2
Cooling Coil - C			Copper Tube/Turbulated Hydrophilic Coated Aluminium fins	
Water Volume		l	18.7	18.7
Water Flow		l/s	2.12	2.12
Pressure Drop		kPa	34.7	34.7
Unit				
Water Volume		l	23.9	23.9
Water Flow		l/s	2.12	2.12
Pressure Drop	(4)	kPa	52.6	52.6
Fan Motor			Backward Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	2 x 1.7	2 x 1.7
Speed @25Pa / Maximum ESP		rpm	1638 / 1800	1638 / 2300
Maximum ESP		Pa	204	204
Nominal Airflow		m³/s	3.30	3.30
Fan Gain	(5)	kW	2.40	2.40
Compressor – Scroll				
Configuration – X2C0			Single Circuit – Dual Compressors	
Quantity – X2C0			2	2
Oil Charge Volume – X2C0		l	1.8	1.8
Oil Type			Polyol Ester	
Refrigeration			Single Circuit	
Refrigerant control and type			Electronic Expansion Valve	
Refrigerant type			R410A	
GWP			2088	
Holding Charge			Inert Gas	
Charge (per circuit)		kg	4	4
CO2 Tonnes Equivalent			8.4	8.4
Connections				
Liquid (sweat)		in	5/8	5/8
Discharge (sweat)		in	7/8	7/8
Water Inlet / Outlet		mm	42 /42	42 / 42
Condensate Drain Hose		mm	22	22
Filtration			Disposable to ISO-C-75	
Quantity			6	6
Electric Heating (Total)		kW	15	15
Humidifier				
Capacity		kg/hr	8	8
Drain pump flow rate		l/m	7	7
Feed/Drain			3/4” BSPF Braided flexible hose / 19mm hose connection	
Hot Water Condensate Pump				
Flow / Head		m	10.8 / 5	10.8 / 5
Drain			10mm Stainless steel Stub connection	
Cold Water Condensate Pump				
Flow / Head		m	1.7 / 4	1.7 / 4
Drain			10mm Quarter Turn Plastic ‘Barb’ Connection	
Upgraded Fan			Backward Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	2 x 3.6	2 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1638 / 2300	1638 / 2300
Maximum ESP		Pa	725	725
Fan Gain	(5)	kW	2.55	2.55

(1) Entering air 24°C /45°C RH 35°C Ambient
(2) Entering air 24°C /45°C RH water 7/12°C
(3) Machine weight excludes operating charge
(4) Pressure drop through heat exchanger, control valve and unit pipe work
(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Downflow Dual Fluid SC15D040-X2C0-0, SC15D043-X2C0-0

Electrical Data

			SC15D040-X2C0-0	SC15D043-X2C0-0
Unit Data Full Function - X	(1)			
Nominal Run Amps		A	45.4	54.4
Maximum Start Amps		A	134.7	143.1
Recommended Mains Fuse Size		A	63	63
Unit Data Cooling Only - X	(2)			
Nominal Run Amps		A	35.5	45.1
Maximum Start Amps		A	124.8	133.8
Recommended Mains Fuse Size		A	40	63
Max Mains Incoming Cable Size		mm^2	35	35
Mains Supply		V	400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24
Evaporator Fan - Motor Per Fan				
Motor Type			EC	EC
Quantity x Motor Size	(3)	kW	2 x 1.7	2 x 3.6
Full Load Amps		A	2.9	5.8
Locked Rotor Amps		A	2.9	5.8
Compressor - Per Compressor				
Quantity x Motor Size		kW	2 x 6.42	2 x 6.79
Nominal Run Amps		A	11.7	12.3
Locked Rotor Amps		A	101	101
Type of Start			Direct On Line	
Standard Condenser Match - AC Motor - Per Fan				
Quantity x Motor Size		kW	2 x 0.6	3 x 0.6
Full Load Amps		A	2.6	2.6
OPTIONAL EXTRAS				
Electric Heating				
Stage of Reheat			2	2
Number of Elements			6	6
Rating		kW	15	15
Current per Phase		A	21.7	21.7
Humidifier				
Capacity		kg/hr	8	8
Rating		kW	6	6.0
Full Load Amps		A	8.7	8.7
First upgrade EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	2 x 3.6	N/A
Full Load Amps		A	5.8	N/A
Locked Rotor Amps		A	5.8	N/A
Standard Condenser Motor - EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	2 x 0.73	3 x 0.73
Full Load Amps		A	3.3	3.3

Mechanical

(1) Entering air 24°C /45% RH 35°C Ambient

(2) Entering air 24°C /45% RH water 7/12°C

(3) Machine weight excludes refrigerant charge

(4) Pressure drop through heat exchanger, control valve and unit pipe work

(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Electrical

(1) Values given for full function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Dual Fluid SC18D037-X2C0-0, SC18D040-X2C0-0, SC18D044-X2C0-0

Mechanical Data

			SC18D037-X2C0-0	SC18D040-X2C0-0	SC18D044-X2C0-0
Standard Condenser Match			1 x CR50M	1 x CR50M	1 x CR65M
Capacity					
Nom Cooling (Gross) - X	(1)	kW	37.3	41.6	46.3
Nom Cooling (Gross) - C	(2)	kW	44	47.2	51.3
Capacity Steps			2	2	2
Dimensions – W x D x H		mm	1800 x 890 x 1980	1800 x 890 x 1980	1800 x 890 x 1980
Weight – Machine / Operating	(3)	kg	577 / 611	577 / 611	577 / 611
Construction Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021) Welded Frame: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)		
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins		
Cooling/Dehum Stages			2/2	2/2	2/2
Cooling Coil - C			Copper Tube/Turbulated Hydrophilic Coated Aluminium fins		
Water Volume		l	24.2	24.2	24.2
Water Flow		l/s	2.1	2.25	2.45
Pressure Drop		kPa	15.5	17.2	19.4
Unit					
Water Volume		l	29.3	29.3	29.3
Water Flow		l/s	2.1	2.25	2.45
Pressure Drop	(4)	kPa	33.1	37.3	43.1
Fan Motor			Backward Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	2 x 1.5	2 x 1.5	2 x 3.1
Speed @25Pa / Maximum ESP		rpm	1091 / 1230	1179 / 1230	1295 / 1560
Maximum ESP		Pa	156	74	337
Nominal Airflow		m^3/s	3.30	3.60	4.00
Fan Gain	(5)	kW	1.88	2.42	3.17
Compressor – Scroll					
Configuration – X2C0			Single Circuit – Dual Compressors		
Quantity – X2C0			2	2	2
Oil Charge Volume – X2C0		l	1.8	1.8	1.8
Oil Type			Polyol Ester		
Refrigeration			Single Circuit		
Refrigerant control and type			Electronic Expansion Valve		
Refrigerant type			R410A		
GWP			2088		
Holding Charge			Inert Gas		
Charge (per circuit)		kg	4.8	4.8	4.8
CO2 Tonnes Equivalent			10.0	10.0	10.0
Connections					
Liquid (sweat)		in	5/8	5/8	5/8
Discharge (sweat)		in	7/8	7/8	7/8
Water Inlet / Outlet		mm	42 / 42	42 / 42	42 / 42
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to ISO-C-75		
Quantity			8	8	8
Electric Heating (Total)		kW	15	15	15
Humidifier					
Capacity		kg/hr	8	8	8
Drain pump flow rate		l/m	7	7	7
Feed/Drain			3/4" BSPF Braided flexible hose / 19mm hose connection		
Hot Water Condensate Pump					
Flow / Head		m	10.8 / 5	10.8 / 5	10.8 / 5
Drain			10mm Stainless steel Stub connection		
Cold Water Condensate Pump					
Flow / Head		m	1.7 / 4	1.7 / 4	1.7 / 4
Drain			10mm Quarter Turn Plastic 'Barb' Connection		
Upgraded Fan			Backward Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size		kW	2 x 3.1	2 x 3.1	2 x 3.5
Speed @ 25Pa / Maximum ESP		rpm	1086 / 1560	1172 / 1560	1296 / 1620
Maximum ESP		Pa	529	452	427
Fan Gain	(5)	kW	1.87	2.37	3.22

(1) Entering air 24°C /45°C RH 35°C Ambient
(2) Entering air 24°C /45°C RH water 7/12°C
(3) Machine weight excludes operating charge
(4) Pressure drop through heat exchanger, control valve and unit pipe work
(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Downflow Dual Fluid SC18D037-X2C0-0, SC18D040-X2C0-0, SC18D044-X2C0-0

Electrical Data

			SC18D037-X2C0-0	SC18D040-X2C0-0	SC18D044-X2C0-0
Unit Data Full Function - X	(1)				
Nominal Run Amps		A	42.8	44.8	45.4
Maximum Start Amps		A	108.1	134.1	134.1
Recommended Mains Fuse Size		A	50	50	63
Unit Data Cooling Only - X	(2)				
Nominal Run Amps		A	30.9	34.9	36.1
Maximum Start Amps		A	96.2	124.2	124.8
Recommended Mains Fuse Size		A	40	40	50
Max Mains Incoming Cable Size		mm^2	35	35	35
Mains Supply		V		400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(3)	kW	2 x 1.5	2 x 1.5	2 x 1.5
Full Load Amps		A	2.6	2.6	2.6
Locked Rotor Amps		A	2.6	2.6	2.6
Compressor - Per Compressor					
Quantity x Motor Size		kW	2 x 5.65	2 x 6.42	2 x 6.79
Nominal Run Amps		A	9.7	11.7	12.3
Locked Rotor Amps		A	75	101	101
Type of Start				Direct On Line	
Standard Condenser Match - AC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 0.6	2 x 0.6	2 x 0.6
Full Load Amps		A	2.6	2.6	2.6
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15	15	15
Current per Phase		A	21.7	21.7	21.7
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	8.7	8.7
First upgrade EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	2 x 3.1	2 x 3.1	2 x 3.1
Full Load Amps		A	5	5	5
Locked Rotor Amps		A	5	5	5
Standard Condenser Motor - EC Motor - Per Fan					
Quantity x Motor Size	(3)	kW	2 x 0.73	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3	3.3

Mechanical

(1) Entering air 24°C /45% RH 35°C Ambient

(2) Entering air 24°C /45% RH water 7/12°C

(3) Machine weight excludes refrigerant charge

(4) Pressure drop through heat exchanger, control valve and unit pipe work

(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Electrical

(1) Values given for full function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Dual Fluid SC18D048-XDC0-0, SC18D055-XDC0-0

Mechanical Data

			SC18D048-XDC0-0	SC18D055-XDC0-0
Standard Condenser Match			2 x CR50M	2 x CR50M
Capacity				
Nom Cooling (Gross) - X	(1)	kW	47.5	49.6
Nom Cooling (Gross) - C	(2)	kW	56.0	56
Capacity Steps			2	2
Dimensions – W x D x H		mm	1800 x 890 x 1980	1800 x 890 x 1980
Weight – Machine / Operating	(3)	kg	618 / 657	627 / 667
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Material/Colour			Welded Frame: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Black Grey (RAL 7021)	
Evaporator			Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins	
Cooling/Dehum Stages			2/2	2/2
Cooling Coil - C			Copper Tube/Turbulated Hydrophilic Coated Aluminium fins	
Water Volume		l	24.2	24.2
Water Flow		l/s	2.67	2.67
Pressure Drop		kPa	30.8	30.8
Unit				
Water Volume		l	29.5	29.5
Water Flow		l/s	2.67	2.67
Pressure Drop	(4)	kPa	58.9	49.9
Fan Motor			Backward Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	2 x 3.1	2 x 3.1
Speed @25Pa / Maximum ESP		rpm	1326 / 1560	1326 / 1560
Maximum ESP		Pa	306	306
Nominal Airflow		m^3/s	4.10	4.10
Fan Gain	(5)	kW	3.40	3.40
Compressor - Scroll				
Configuration - XDC0			Dual Circuit - Single Compressor	
Quantity - XDC0			2	2
Oil Charge Volume - XDC0		l	3.2	3.2
Oil Type			Polyol Ester	
Refrigeration			Dual Circuit	
Refrigerant control and type			Electronic Expansion Valve	
Refrigerant type			R410A	
GWP			2088	
Holding Charge			Inert Gas	
Charge (per circuit)		kg	4.8	4.8
CO2 Tonnes Equivalent			10.0	10.0
Connections				
Liquid (sweat)		in	5/8	5/8
Discharge (sweat)		in	7/8	7/8
Water Inlet / Outlet		mm	42 / 42	42 / 42
Condensate Drain Hose		mm	22	22
Filtration			Disposable to ISO-C-75	
Quantity			8	8
Electric Heating (Total)		kW	15	15
Humidifier				
Capacity		kg/hr	8	8
Drain pump flow rate		l/m	7	7
Feed/Drain			3/4” BSPF Braided flexible hose / 19mm hose connection	
Hot Water Condensate Pump				
Flow / Head		m	10.8 / 5	10.8 / 5
Drain			10mm Stainless steel Stub connection	
Cold Water Condensate Pump				
Flow / Head		m	1.7 / 4	1.7 / 4
Drain			10mm Quarter Turn Plastic ‘Barb’ Connection	
Upgraded Fan			Backward Curved, Centrifugal Direct Drive	
Motor Type			EC	EC
Quantity x Motor Size		kW	2 x 3.5	2 x 3.5
Speed @ 25Pa / Maximum ESP		rpm	1327 / 1620	1327 / 1620
Maximum ESP		Pa	395	395
Fan Gain	(5)	kW	3.47	3.47

(1) Entering air 24°C /45°C RH 35°C Ambient
(2) Entering air 24°C /45°C RH water 7/12°C
(3) Machine weight excludes operating charge
(4) Pressure drop through heat exchanger, control valve and unit pipe work
(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Downflow Dual Fluid SC18D048-XDC0-0, SC18D055-XDC0-0

Electrical Data

			SC18D048-XDC0-0	SC18D055-XDC0-0
Unit Data Full Function - X	(1)			
Nominal Run Amps		A	53.7	58.1
Maximum Start Amps		A	150.3	159.5
Recommended Mains Fuse Size		A	63	80
Unit Data Cooling Only - X	(2)			
Nominal Run Amps		A	45.0	49.4
Maximum Start Amps		A	141.6	150.8
Recommended Mains Fuse Size		A	50	63
Max Mains Incoming Cable Size		mm^2	35	35
Mains Supply		V	400V / 3PH + N / 50HZ	
Control Circuit		VAC	24	24
Evaporator Fan - Motor Per Fan				
Motor Type			EC	EC
Quantity x Motor Size	(3)	kW	2 x 3.1	2 x 3.1
Full Load Amps		A	5	5
Locked Rotor Amps		A	5	5
Compressor - Per Compressor				
Quantity x Motor Size		kW	2 x 7.82	2 x 9.11
Nominal Run Amps		A	14.4	16.6
Locked Rotor Amps		A	118	118
Type of Start			Direct On Line	
Standard Condenser Match - AC Motor - Per Fan				
Quantity x Motor Size		kW	2 x 0.6	2 x 0.6
Full Load Amps		A	2.62	2.62
OPTIONAL EXTRAS				
Electric Heating				
Stage of Reheat			2	2
Number of Elements			6	6
Rating		kW	15	15
Current per Phase		A	21.65	21.65
Humidifier				
Capacity		kg/hr	8	8
Rating		kW	6	6
Full Load Amps		A	8.7	8.7
First upgrade EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	2 x 3.5	2 x 3.5
Full Load Amps		A	5.7	5.7
Locked Rotor Amps		A	5.7	5.7
Standard Condenser Motor - EC Motor - Per Fan				
Quantity x Motor Size	(3)	kW	2 x 0.73	2 x 0.73
Full Load Amps		A	3.3	3.3

Mechanical

(1) Entering air 24°C /45% RH 35°C Ambient

(2) Entering air 24°C /45% RH water 7/12°C

(3) Machine weight excludes refrigerant charge

(4) Pressure drop through heat exchanger, control valve and unit pipe work

(5) Fan gain based on 25Pa ESP @ Nominal air volume. Fan gain figure will change as airflow and ESP change

Electrical

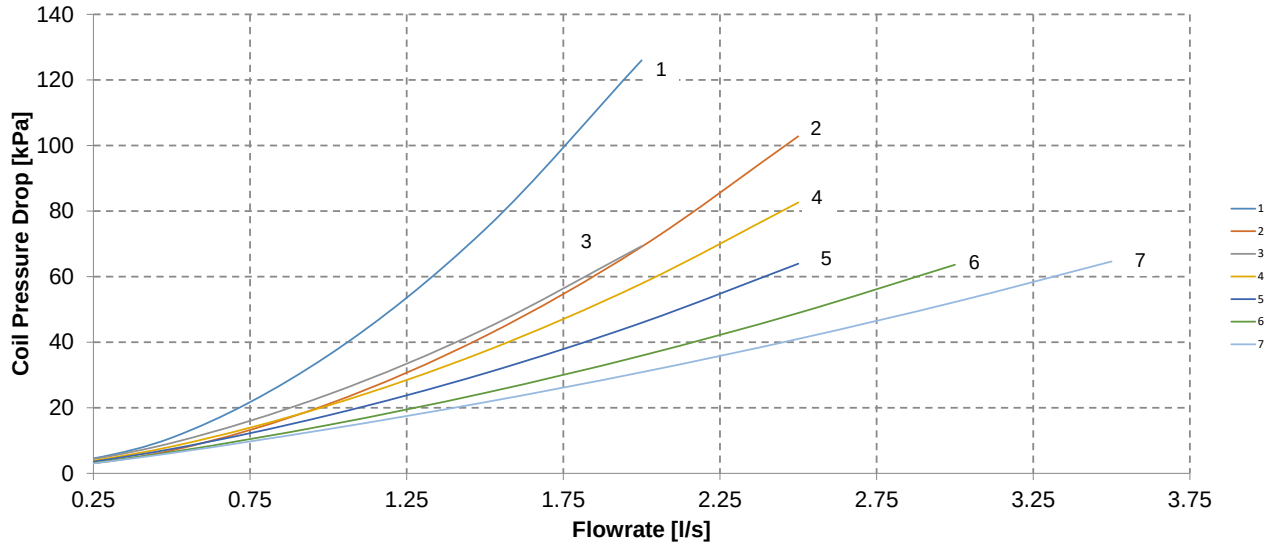
(1) Values given for full function units with standard selections for heating, humidification, supply air fans

(2) Values given for Cooling only units incl. evaporator fan for optional data, please contact Airedale.

(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables

Downflow Dual Fluid

Waterside Pressure Drop (Coil Only)



- Waterside pressure drop based on water.
- Coil Only.

To calculate 2 port valve pressure drop
ΔP valve = $(Q/M)^2$
ΔP = pressure Drop in kPa
Q = Water flowrate in l/s and M= (Kv/36)

Unit	Pipe size(mm)	Curve	Kv	M
SC09D016-X1C0-0	28	1	10	0.28
SC09D019-X1C0-0	35	2	16	0.44
SC09D023-X1C0-0	35	2	16	0.44
SC09D026-X1C0-0	35	2	16	0.44
SC12D021-X2C0-0	42	3	16	0.44
SC12D027-X2C0-0	42	3	16	0.44
SC12D030-X2C0-0	42	3	16	0.44
SC12D035-X2C0-0	42	3	16	0.44
SC12D037-X2C0-0	42	3	16	0.44
SC15D027-X2C0-0	42	4	16	0.44
SC15D032-X2C0-0	42	4	16	0.44
SC15D036-X2C0-0	42	4	16	0.44
SC15D040-X2C0-0	42	5	25	0.69
SC15D043-X2C0-0	42	5	25	0.69
SC18D037-X2C0-0	42	6	25	0.69
SC18D040-X2C0-0	42	6	25	0.69
SC18D044-X2C0-0	42	6	25	0.69
SC18D048-XDC0-0	42	6	25	0.69
SC18D055-XDC0-0	42	7	40	1.11

Interconnecting Wiring X1C0 / X2C0

Single phase AC Condenser CR12, 16, 22, 30, 50, 65 and 80 Models

Fan speed control fitted to indoor unit (With sub-fusing supplied)

INDOOR UNIT		L4	○ ←	L1	Mains Incoming Supply - Primary 400V / 3PH + N / 50Hz					
		L5	○ ←	L2						
		L6	○ ←	L3						
		N1	○ ←	N						
		PE	○ ←	PE						
		L7	○ ←	L1	Mains Incoming Supply - Secondary 400V / 3PH + N / 50Hz (Only applicable for Dual Power Supply Option)					
		L8	○ ←	L2						
		L9	○ ←	L3						
		N2	○ ←	N						
		PE	○ ←	PE						
CIRCUIT 1		220	○ →		Mains Supply to Outdoor Unit 1	→	○	200	OUTDOOR UNIT 1	
		N3	○ →			→	○	N		
		PE	○ →			→	○	PE		

Single phase EC Condensers CR12, 16, 22, 30, 50, 65 and 80 models

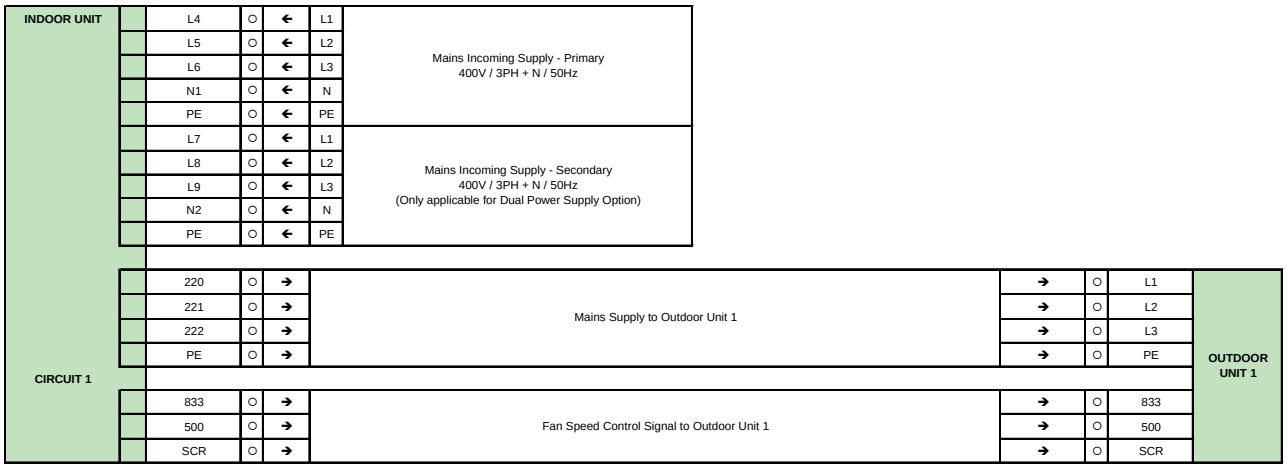
Fan speed control fitted to outdoor unit (with sub-fusing supplied)

INDOOR UNIT		L4	○ ←	L1	Mains Incoming Supply - Primary 400V / 3PH + N / 50Hz					
		L5	○ ←	L2						
		L6	○ ←	L3						
		N1	○ ←	N						
		PE	○ ←	PE						
		L7	○ ←	L1	Mains Incoming Supply - Secondary 400V / 3PH + N / 50Hz (Only applicable for Dual Power Supply Option)					
		L8	○ ←	L2						
		L9	○ ←	L3						
		N2	○ ←	N						
		PE	○ ←	PE						
		220	○ →		Mains Supply to Outdoor Unit 1	→	○	200	OUTDOOR UNIT 1	
		N3	○ →			→	○	N		
		PE	○ →			→	○	PE		
CIRCUIT 1										
		833	○ →		Fan Speed Control Signal to Outdoor Unit 1	→	○	833		
		500	○ →			→	○	500		
		SCR	○ →			→	○	SCR		

Interconnecting Wiring **X1C0 / X2C0**

Three phase AC and EC Condenser CR26, 35, 60 and 75 Models

Fan speed control fitted to indoor unit (With sub-fusing supplied)



Interconnecting Wiring **X1C0 / X2C0**

Fan speed control fitted to Outdoor unit (No sub-fusing supplied)

INDOOR UNIT		L4	O	←	L1	Mains Incoming Supply - Primary 400V / 3PH + N / 50Hz				
		L5	O	←	L2					
		L6	O	←	L3					
		N1	O	←	N					
		PE	O	←	PE					
		L7	O	←	L1	Mains Incoming Supply - Secondary 400V / 3PH + N / 50Hz (Only applicable for Dual Power Supply Option)				
		L8	O	←	L2					
		L9	O	←	L3					
		N2	O	←	N					
		PE	O	←	PE					
						Separate Mains Incoming Supply 4000V / 3PH / 50Hz	→	O	L1	OUTDOOR UNIT 1
							→	O	L2	
							→	O	L3	
							→	O	PE	
CIRCUIT 1										
		833	O	→		Fan Speed Control Signal to Outdoor Unit 1	→	O	833	
		500	O	→			→	O	500	
		SCR	O	→			→	O	SCR	

Remote On/Off	INDOOR UNIT	522	O	←	Remote On/Off
		502	O	→	24Vac
Fire Shutdown		583	O	←	Fire Detection
		502	O	→	24Vac
Alarm Volt Free Contacts		560	O	→	Non-Critical Alarm Normally Open
		561	O	←	Common
		563	O	→	Critical Alarm Normally Open
		564	O	←	Common
		565	O	→	Critical alarm Normally Closed
Run/Standby Network	INDOOR UNIT	Rx-Tx-	O	←	Network Connections (Inward connection)
		Rx+Tx+	O	←	
		GND	O	←	
		Rx-Tx-	O	→	Network Connections (Outward connection)
		Rx+Tx+	O	→	
		GND	O	→	
BMS Connections	INDOOR UNIT	891	O	←→	Wired BMS Connection (ModBUS, BACNet, LON, RS485)
		892	O	←→	
		893	O	←→	
BMS Connections	INDOOR UNIT	N/A	O	←→	BMS Network Connections (pCOWEB Ethernet)

After Sales

Warranty

All Airedale products or parts (non consumable) supplied for installation within the UK mainland and commissioned by an Airedale engineer, carry a full Parts & Labour warranty for a period of 12 months from the date of commissioning or 18 months from the date of despatch, whichever is the sooner.

Parts or Equipment supplied by Airedale for installation within the UK or for Export that are properly commissioned in accordance with Airedale standards and specification, not commissioned by an Airedale engineer; carry a 12 month warranty on non consumable Parts only from the date of commissioning or 18 months from the date of despatch, whichever is the sooner.

Parts or equipment installed or commissioned not to acceptable Airedale standards or specification invalidate all warranty.

Warranty is only valid in the event that

In the period between delivery and commissioning the equipment:

- is properly protected & serviced as per the Airedale installation & maintenance manual provided
- where applicable the glycol content is maintained to the correct level

In the event of a problem being reported and once warranty is confirmed* as valid under the given installation and operating conditions, the company will provide the appropriate warranty coverage (as detailed above) attributable to the rectification of any affected Airedale equipment supplied (excluding costs for any specialist access or lifting equipment that must be ordered by the customer).

*Once warranty is confirmed, maintenance must be continued to validate the warranty period.

Any spare part supplied by Airedale under warranty shall be warranted for the unexpired period of the warranty or 3 months from delivery, whichever period is the longer.

To be read in conjunction with the Airedale Conditions of Sale - Warranty and Warranty Procedure, available upon request.

Procedure

When a component part fails, a replacement part should be obtained through our Spares department. If the part is considered to be under warranty, the following details are required to process this requirement. Full description of part required, including Airedale's part number, if known. The original equipment serial number. An appropriate purchase order number.

A spares order will be raised under our warranty system and the replacement part will be despatched, usually within 24 hours should they be in stock. When replaced, the faulty part must be returned to Airedale with a suitably completed and securely attached "Faulty Component Return" (FCR) tag. FCR tags are available from Airedale and supplied with each Warranty order.

On receipt of the faulty part, suitably tagged, Airedale will pass to its Warranty department, where it will be fully inspected and tested in order to identify the reason for failure, identifying at the same time whether warranty is justified or not.

On completion of the investigation of the returned part, a full "Report on Goods Returned" will be issued. On occasion the release of this complete report may be delayed as component manufacturers become involved in the investigation.

When warranty is allowed, a credit against the Warranty invoice will be raised. Should warranty be refused the Warranty invoice becomes payable on normal terms.

Exclusions

Warranty may be refused for the following reasons.

- Misapplication of product or component
- Incorrect site installation
- Incomplete commissioning documentation
- Inadequate site installation
- Inadequate site maintenance
- Damage caused by mishandling
- Replaced part being returned damaged without explanation
- Unnecessary delays incurred in return of defective component

Returns analysis

All faulty components returned under warranty are analysed on a monthly basis as a means of verifying component and product reliability as well as supplier performance. It is important that all component failures are reported correctly.

Head Office
Airedale International Air Conditioning Ltd
Leeds Road
Rawdon
Leeds LS19 6JY
Tel: +44 (0) 113 2391000
Fax:+44 (0) 113 2507219
E-mail connect@airedale.com
Web www.airedale.com