400V / 3Ph + N / 50Hz (-0)
380V / 3Ph + N / 60Hz (-1)
220V / 3Ph / 60Hz (-2)

Airedale
APPLIED THERMAL INNOVATION

SmartCool™ Downflow
6 to 200kW

SN, SR and SD
SmartCool Chilled Water

Technical Manual

ISO 14001
EMS52086

ISO 9001
FM00542

Warranty
All Airedale International Air Conditioning 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's standards and specification, not commissioned by an AIAC 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 Airedale's 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).

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.

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: enquiries@airedale.com or telephone:

UK Sales Enquiries	+ 44 (0) 113 239 1000	enquiries@airedale.com
International Enquiries	+ 44 (0) 113 239 1000	enquiries@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	marketing@airedale.com

For information, visit us at our Web Site: www.airedale.com

Contents

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Health and Safety

IMPORTANT
The information contained in this manual is critical to the correct operation of the unit and should be read by all persons responsible for the installation, commissioning and maintenance of the 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
- Installation, service and maintenance of Airedale equipment should only be carried out by technically trained competent personnel.
- 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 commissioning, 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.

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:

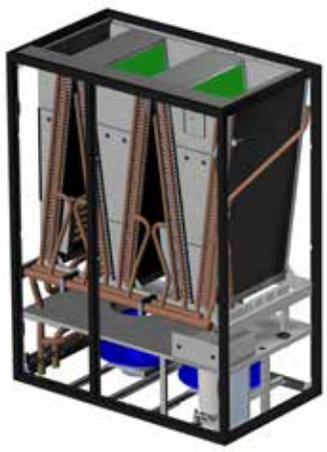
Electromagnetic Compatibility Directive (EMC)	2004/108/EC
Low Voltage Directive (LVD)	2006/95/EC
Machinery Directive (MD)	89/392/EEC in the version 2006/427/EC
Pressure Equipment Directive (PED)	97/23/EC

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

Introduction

Designed to provide environmental precision air conditioning for applications such as telecommunication facilities, data centers, computer rooms, clean rooms and laboratories.
Full function units provide full control of temperature, humidity and filtration.
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.

SN, SR

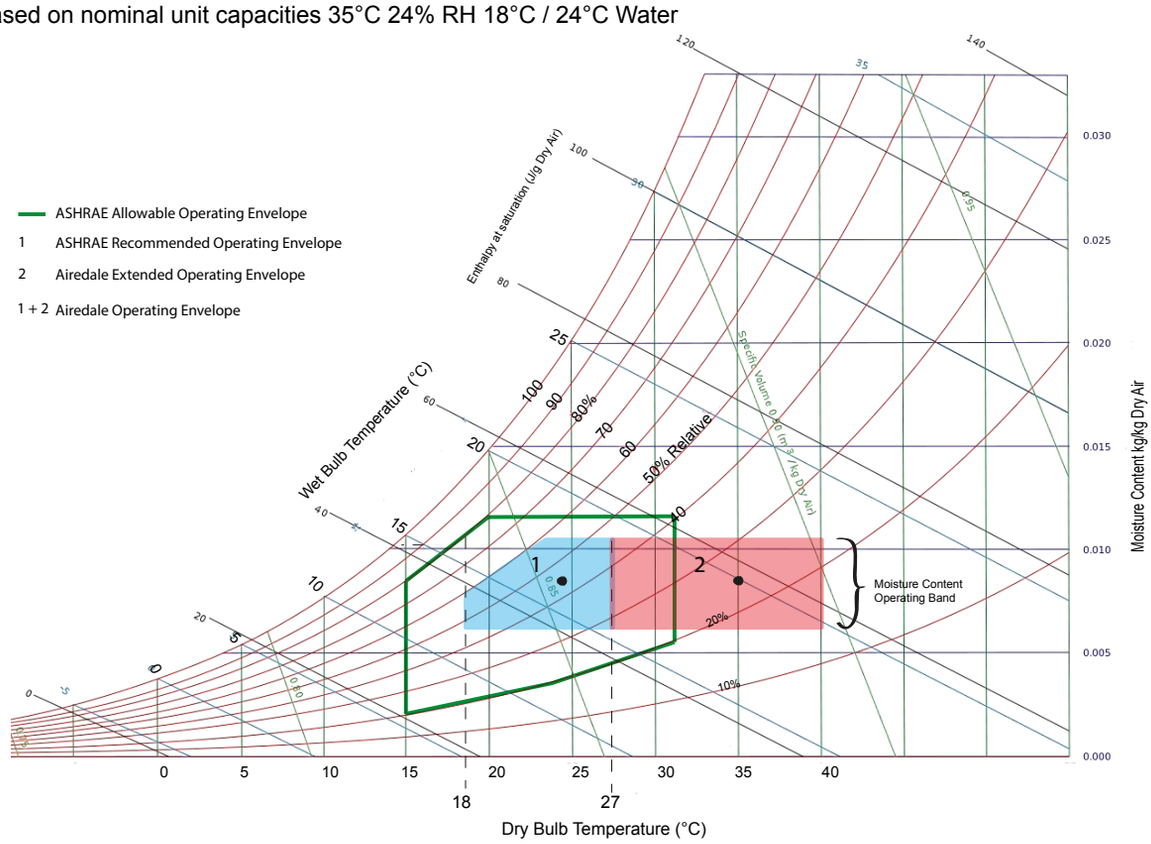


Range	Performance (kW)
SN C000(1)	13 – 36
SR C000(1)	35 – 98
SR C0C0(1)	25 – 70

SD

Range	Performance (kW)
SD CH00(1)	105 – 255
SD CHCH(1)	75 – 184
SD CL00(2)	92 – 215
SD CLCL(2)	75 – 185

(1) Based on nominal unit capacities 24°C 45% RH 7°C /12°C Water
(2) based on nominal unit capacities 35°C 24% RH 18°C / 24°C Water



System Configurations

SN, SR Range

SD Range

The SN and SR range is designed for the following nominal conditions:

SN C000 Units
- Fans located within unit
- Separate floorstand (min 350mm)
- Return air of 24°C 45% RH
- Water temperatures of 7°C / 12°C

SR C000 / C0C0 Units
- Fans located within unit
- Separate floorstand (min 350mm)
- Return air of 24°C 45% RH
- Water temperatures of 7°C / 12°C

The SD range is designed for the following nominal conditions:

SD CL00 / CLCL Units
- Fans located within floorstand
- Floorstand integril to unit (min 600mm)
- Return air of 35°C 24% RH
- Water temnperatures of 18°C / 24°C

SD CH00 / CHCH Units
- Fans located within floorstand
- Floorstand integril to unit (min 600mm)
- Return air of 24°C 45% RH
- Water temperatures 7°C / 12°C

SN, SR Nomenclature

S	R	12	D	055	-	C000	-	0

S	Product Name	SmartCool
R	Variant	Regular Case (890mm deep)
N		Narrow Case (600mm deep)
06	Case Width	684 mm
09		963 mm
12		1242 mm
15		1521 mm
18		1800 mm
D	Flow Configuration	Downflow
010	Nominal Cooling Capacity (kW)	
095		
-	Separator	
C000	Cooling Configuration	Single Circuit CW
C0C0		Dual Circuit CW
-	Separator	
0	Power Supply	400V / 3Ph +N / 50Hz
1		380V / 3Ph +N / 60Hz
2		220V / 3Ph / 60Hz

SN, SR C000

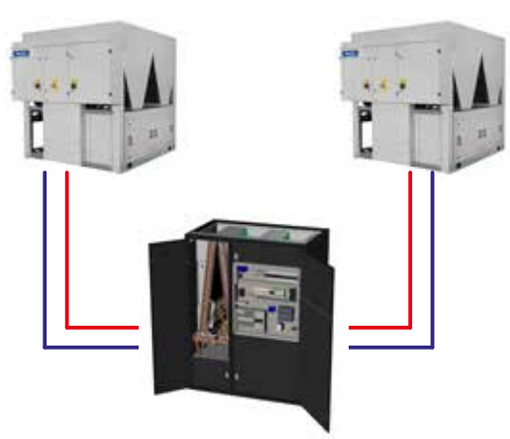
Where a chilled water single circuit system is preferred, warm room air is drawn across the efficient cooling coil of the SmartCool C000 and the heat transferred to a chilled water system such as Airedale's high efficiency chiller.

By controlling the 2 or 3-way water regulating valve, the intelligent Airetronix microprocessor can achieve precise control of temperature and humidity.

SR C0C0

Where a chilled water dual circuit system is preferred, warm room air is drawn across the efficient cooling coil of the SmartCool C0C0 and the heat transferred to a chilled water system such as Airedale's high efficiency chillers.

By controlling the 2 or 3-way water regulating valve, the intelligent Airetronix microprocessor can achieve precise control of temperature and humidity.



SD Nomenclature

S	D	31	D	215	-	C	H	0	0	-	0

S	Product Name	SmartCool
D	Product Variant	Dedicated Chilled Water
18	Case Width	1800 mm
22		2200 mm
25		2500 mm
31		3100 mm
35		3500 mm
D	Flow Configuration	Downflow
085-255	Nominal Cooling Capacity (kW)	
-	Separator	
C	Chilled Water	
H	Coil Type	Coil Streamed For High Flow
L		Coil Streamed For Low Flow
C	Second Circuit	Chilled Water Circuit
0		No Chilled Water Circuit
H	Coil Type Second Circuit	Coil Streamed For High Flow
L		Coil Streamed For Low Flow
-	Separator	
0	Power Supply	400V / 3Ph + N / 50Hz
1		380V / 3Ph +N / 60Hz
2		220V / 3Ph / 60Hz

SD CH00 / SD CL00

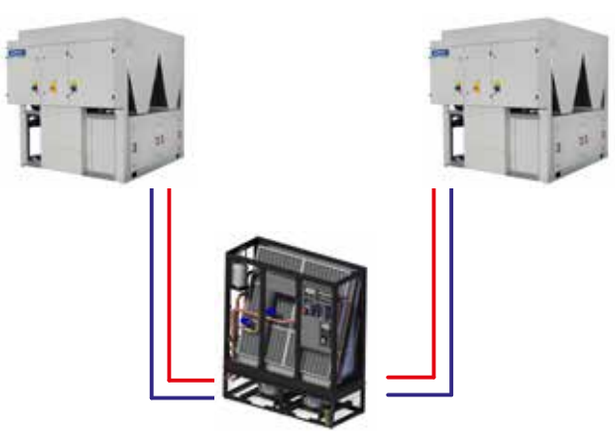
Where a chilled water single circuit system is preferred, warm room air is drawn across the efficient cooling coil of the SmartCool CH00 or CL00 and the heat transferred to a chilled water system such as Airedale's high efficiency chiller.

By controlling the single 2 way water regulating valve, (or additional 2 way bypass) the intelligent Airetronix microprocessor can achieve precise control of temperature and humidity.

The CH00 is designed for high water flowrates; whilst the CL00 is optimised for low flow conditions.

SD CHCH / SD CLCL

Where a chilled water dual circuit system is preferred, warm room air is drawn across the efficient cooling coil of the SmartCool CHCH or CLCL and the heat transferred to a chilled water system such as Airedale's high efficiency chillers.



By controlling the single 2 way water regulating valve, (or additional 2 way bypass) the intelligent Airetronix microprocessor can achieve precise control of temperature and humidity.

The CH00 is designed for high water flowrates; whilst the CL00 is optimised for low flow conditions.

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

SN, SR Units
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.

Cabinets shall be lined internally with various thickness 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.

SD Units
The cabinet shall be manufactured using steel frame.
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.

Cabinets shall be lined internally with various thickness 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.

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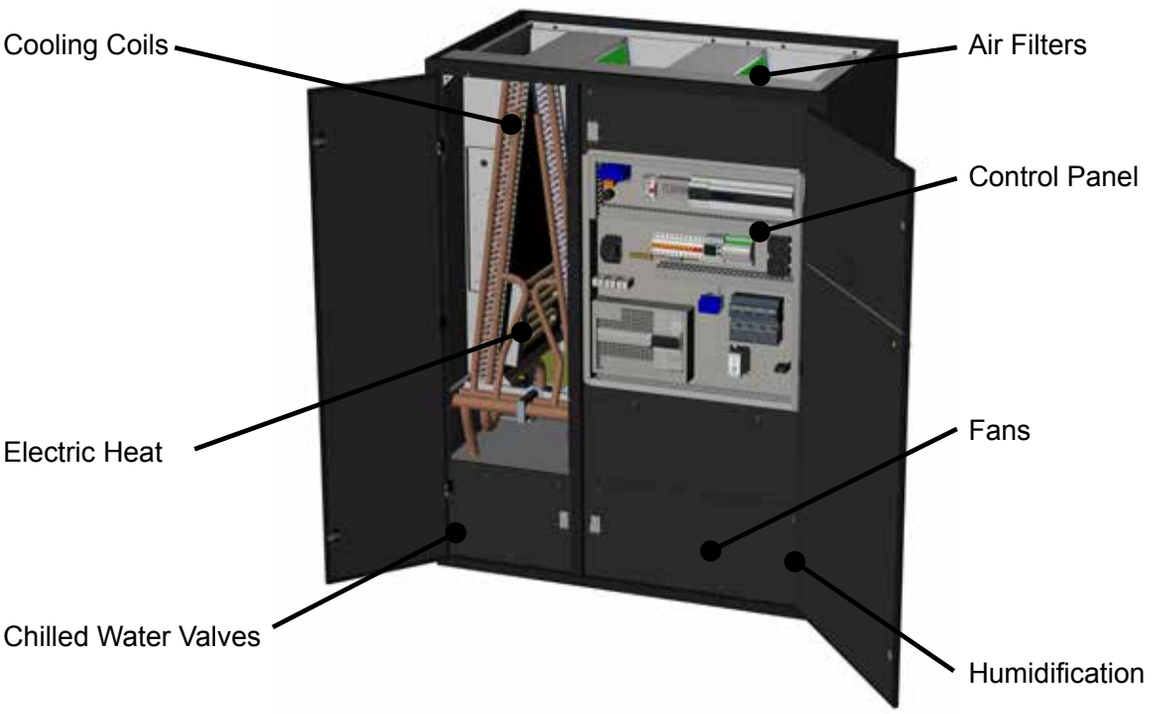
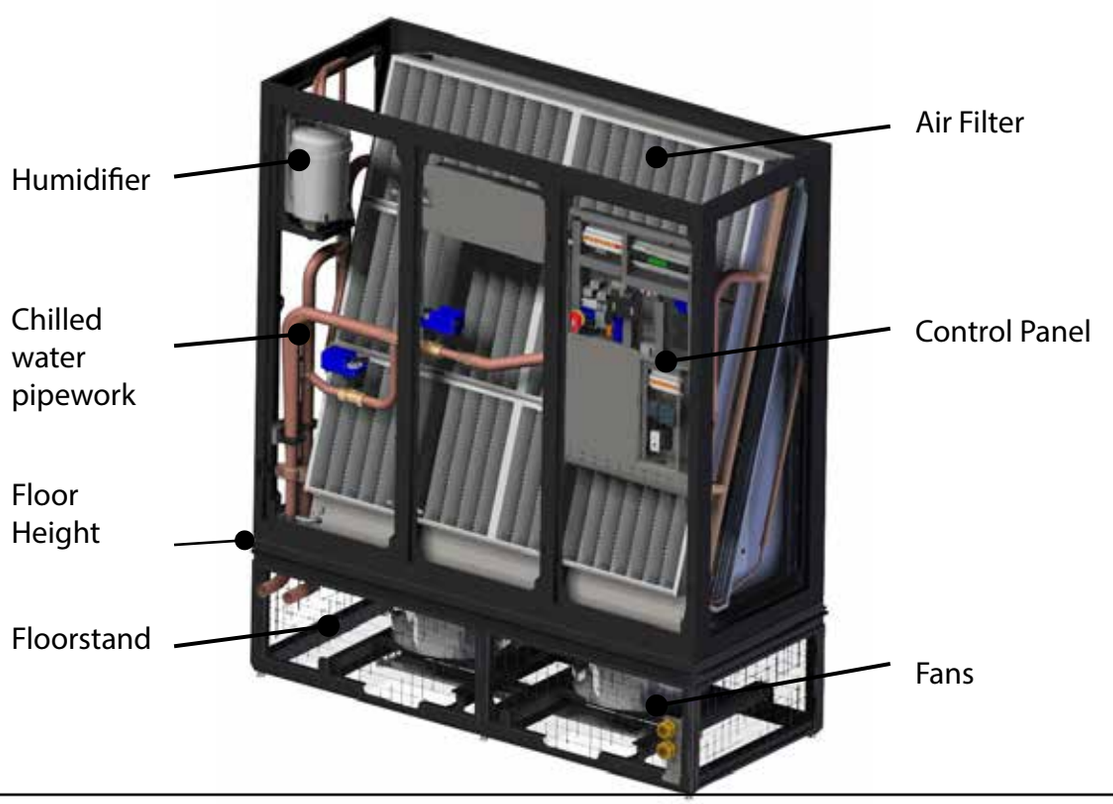
The unit design shall incorporate a series of M6 fixings to the top and bottom face to ease customer ductwork connection and reduce installation time.

Unit Overview

SN, SR Range

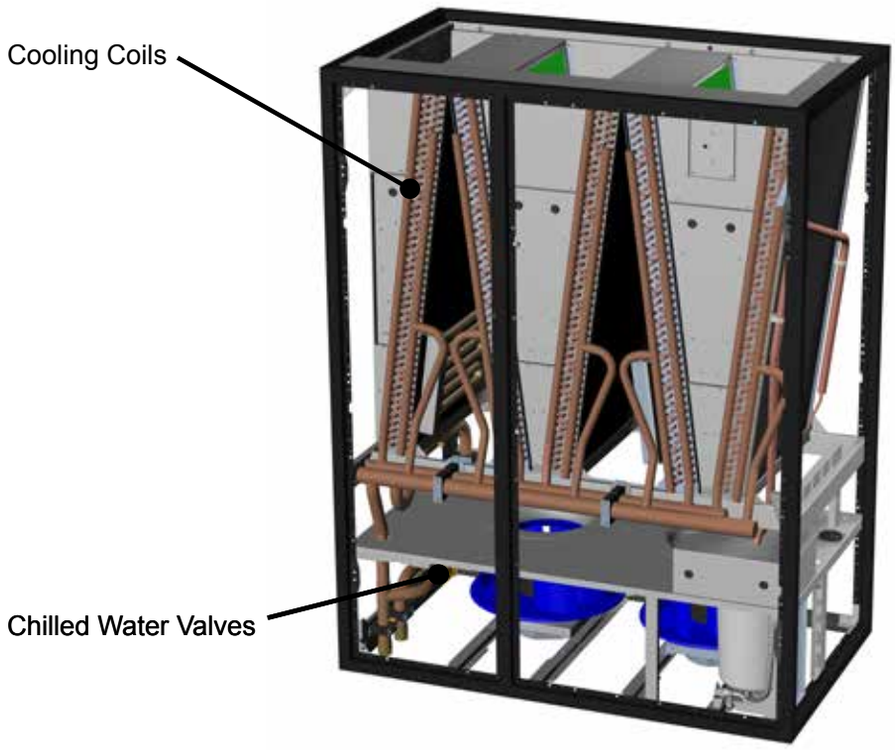


SD Range



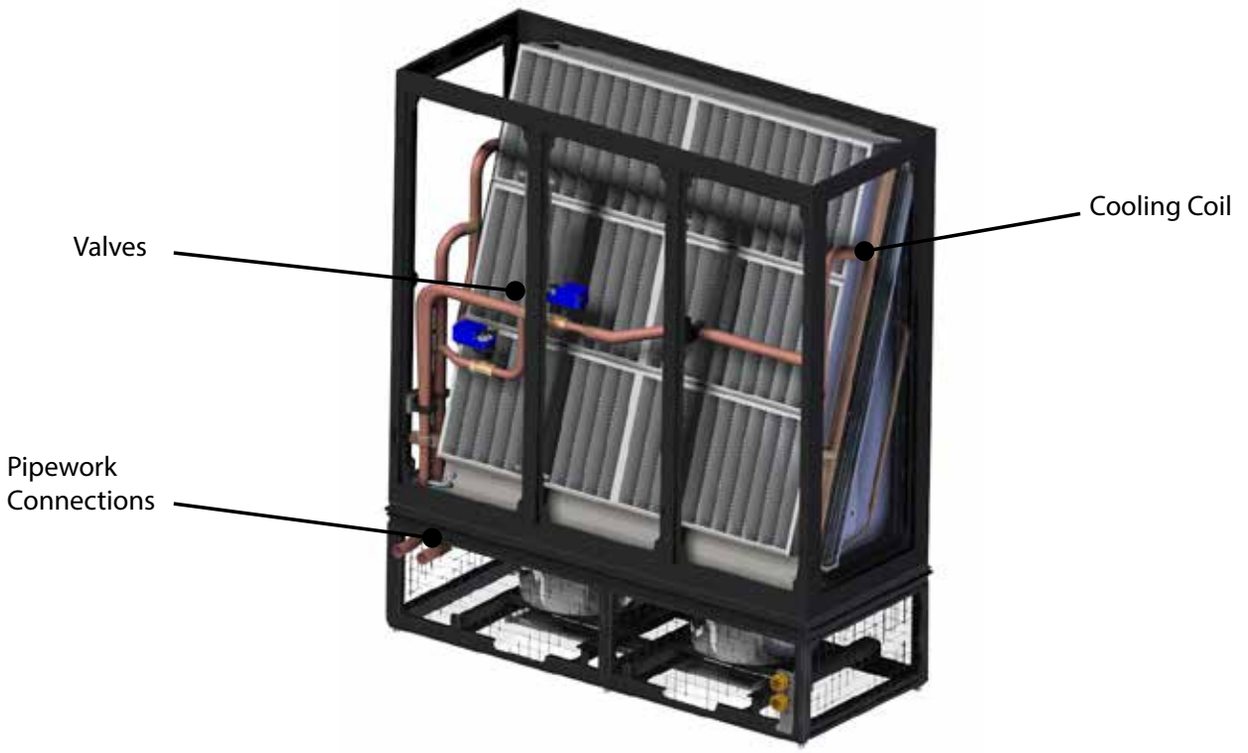
Chilled Water Components

SN, SR Range



Chilled Water Components

SD Range



		System Configuration				
	Range	SN	SR		SD	
	Number of Circuits	Single	Single	Dual	Single	Dual
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)	●	●	●	—	—
	0-10 Volts Chilled Water Regulating Valve (2 x 2-Way) Auto Commission	—	—	—	○	○
	Brazed Connection	●	●	●	●	●
	Threaded Connections	○	○	○	○	○
	Grooved Connections	—	—	—	○	○

● Standard Features ○ Optional Features — Feature Not Available

Chilled Water Coil

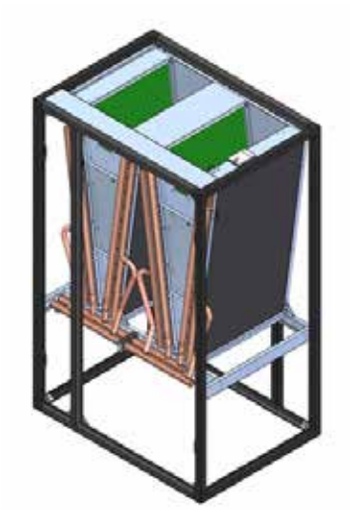
Chilled water coils shall be ideally positioned to optimise airflow and heat transfer, they shall be manufactured from plain copper tubes with mechanically bonded aluminium fins. Fins shall be coated with a non-stick acrylic film (hydrophilic) to provide additional corrosion protection and efficient 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.

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



SN, SR Coils

SD Coil

	SN06	SN09	SN12	SR09	SR12	SR15	SR18	SD18	SD22	SD25	SD31	SD35
Sweat Copper Connection	●	●	●	●	●	●	●	●	●	●	●	●
Threaded Pipe Connection	○	○	○	○	○	○	○	○	○	○	○	○
Grooved Water Connection	—	—	—	—	—	—	—	○	○	○	○	○

● Standard Features ○ Optional Features — Feature Not Available

Threaded Water Pipe Connection

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

Grooved Water Connections

Grooved water connections shall be avaliable enabling easy pipework termination.

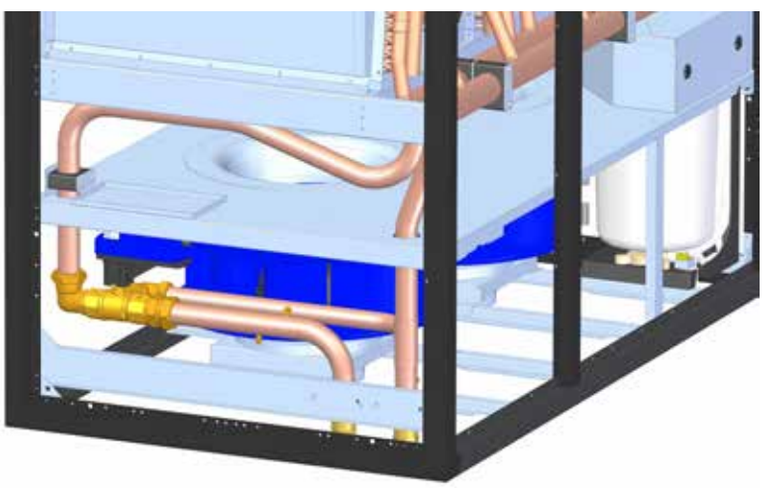
Chilled Water Valves

Chilled Water Valve Options

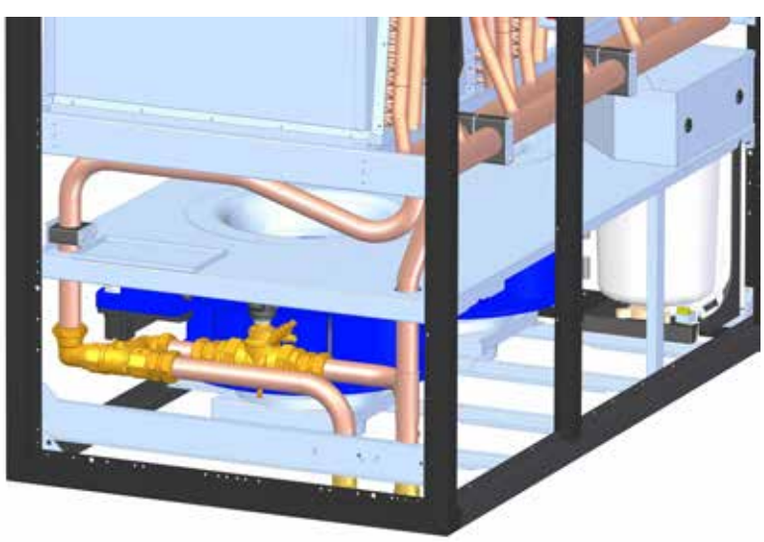
	SN06	SN09	SN12	SR09	SR12	SR15	SR18	SD18	SD22	SD25	SD31	SD35
2 Port Chilled Water Valves	●	●	●	●	●	●	●	●	●	●	●	●
2 Port Chilled Water Valves with 2 Port Commissioning Valve	–	–	–	–	–	–	–	○	○	○	○	○
3 Port Chilled Water Valves	○	○	○	○	○	○	◌	–	–	–	–	–
3 Port Chilled Water Valves with Bypass	○	○	○	○	○	○	◌	–	–	–	–	–

● Standard Features ○ Optional Features – Feature Not Available

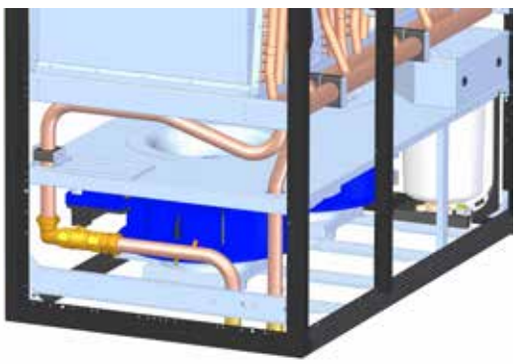
0-10 Volts DC 3 Port Chilled Water Regulating Valve (SN, SR Units)



0-10 Volts DC 3 Port Chilled Water Regulating Valve with Bypass (SN, SR Units)



0-10 Volts DC 2 Port Chilled Water Regulating Valve (SN, SR, SD Units)
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.



SN, SR 2 Port Valve

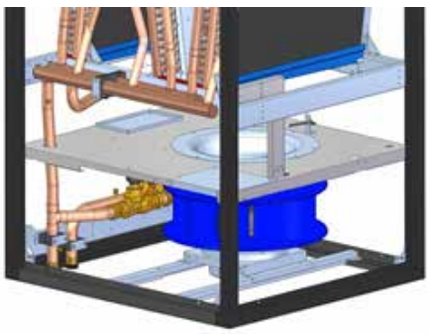
SD 2 Port Valve

0-10 Volts DC 2 Port Chilled Water Regulating Valve with bypass for auto commissioning (SD Units)
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.

A bypass leg fitted with a further 2 port valve enables auto commissioning.
The auto commissioning shall be enabled by using a differential pressure transducer to maintain balanced water flow through the bypass. The controller maintains the same pressure drop through the coil and the bypass. A fixed flowrate is required for this initial commissioning to occure.

SD 2 Port Valve with Bypass

Airflow Components



SR, SN Ranges

SD Range

		System Configuration				
	Range	SN	SR		SD	
	Number of Circuits	Single	Single	Dual	Single	Dual
Chilled Water	EC Backward Curved Centrifugal Fans in Unit	●	●	●	—	—
	EC Backward Curved Centrifugal Fans in Floorstand	—	—	—	●	●
	G4 Air Filtration	●	●	●	●	●
	High Grade F7 Filtration	○	○	○	○	○
	Airflow Monitoring	○	○	○	○	○
	Airflow Switch	●	●	●	●	●
	Constant Air Volume	○	○	○	○	○
	Constant Pressure Control	○	○	○	○	○

● 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, air flow and external static pressure shall be controlled by the use of a voltage controller which shall maintain optimised performance and reduce energy consumption.

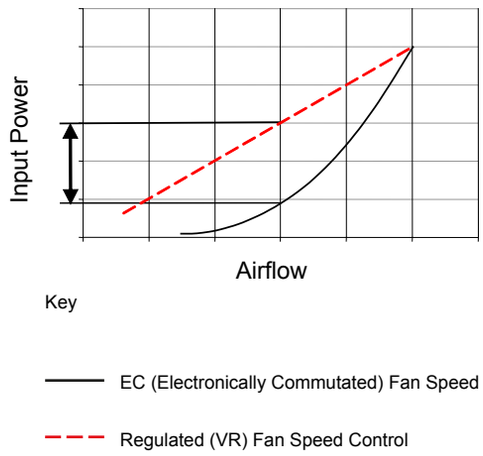
Designed for high corrosion resistance, the impellers shall be composite plastic with a galvanised rotor.

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 an equivalent AC fan at modulated fan speeds. 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 on the right shows a comparison of the typical power input required by each method.



G4 Filtration

Pleated disposable panel filters in a rigid frame. Conform to BS EN 779-G4.

Access and removal from unit front.

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

High Grade F7 Filtration

Pleated disposable panel filters conforming to BS EN 779-F7 shall be provided.

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.

Electrical Components

		System Configuration				
	Range	SN	SR		SD	
	Number of Circuits	Single	Single	Dual	Single	Dual
Electrical	Door Interlocked Mains Isolator	●	●	●	●	●
	Electrical Switch Gear	●	●	●	●	●
	Customer Connection Terminals	●	●	●	●	●
	Power Monitoring	○	○	○	○	○
	Phase Monitoring Relay	○	○	○	○	○
	Ultra Capacitive Module (Controller Power Backup)*	○	○	○	○	○
	Dual Power Supply	○	○	○	○	○
	Variable Humidification	○	○	○	○	○
	Electric Heating	○	○	○	○	○
	Modulating Electric Heating	○	○	○	○	○

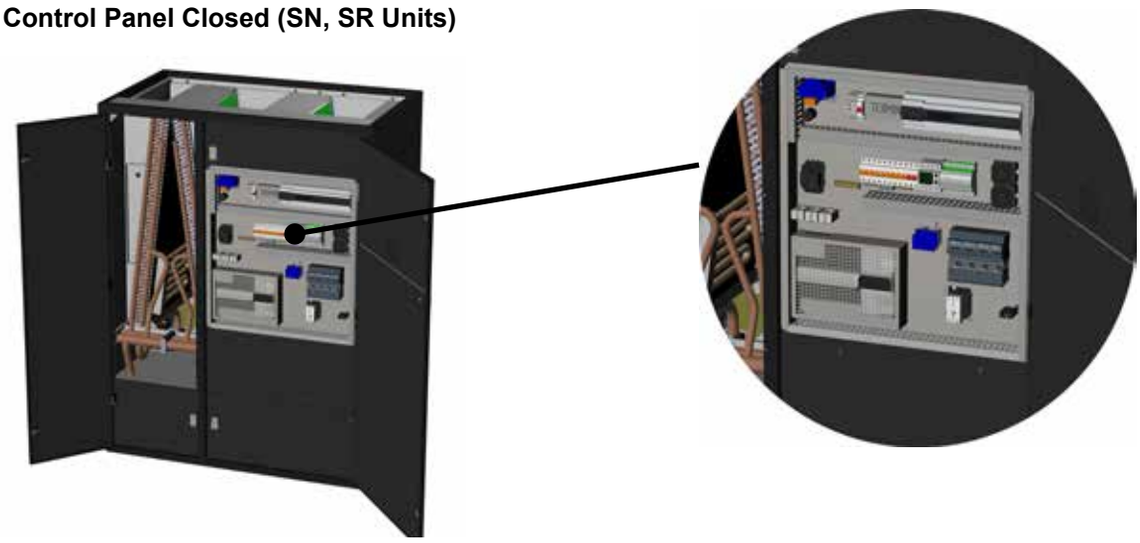
● Standard Features ○ Optional Features ━ Feature Not Available

* Fitted as standard when dual power supply is fitted.

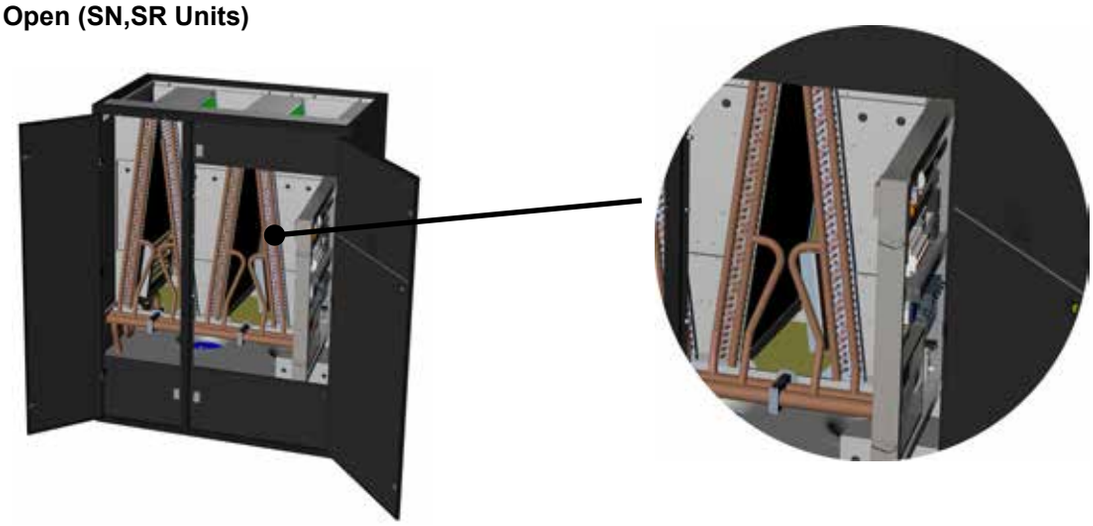
Electrical Panels

The control panel contains the necessary contactors, transformer, sub circuit protection, volt free contacts for a common alarm and mains and inter-connecting terminals. The panel is situated within the cabinet and can be opened to allow for essential maintenance of other components within the unit (SN, SR Units only). The electrical control panels are wired to the latest European standards and codes of practice.

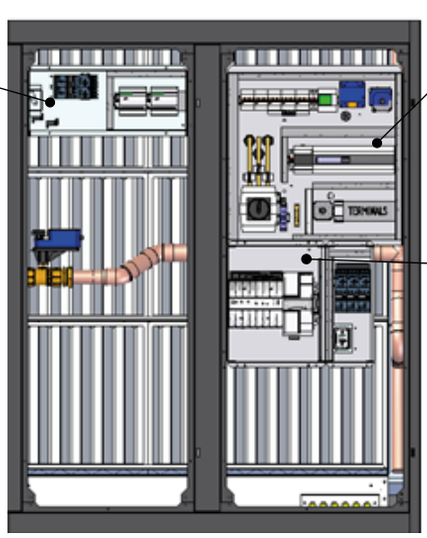
Control Panel Closed (SN, SR Units)



Control Panel Open (SN,SR Units)



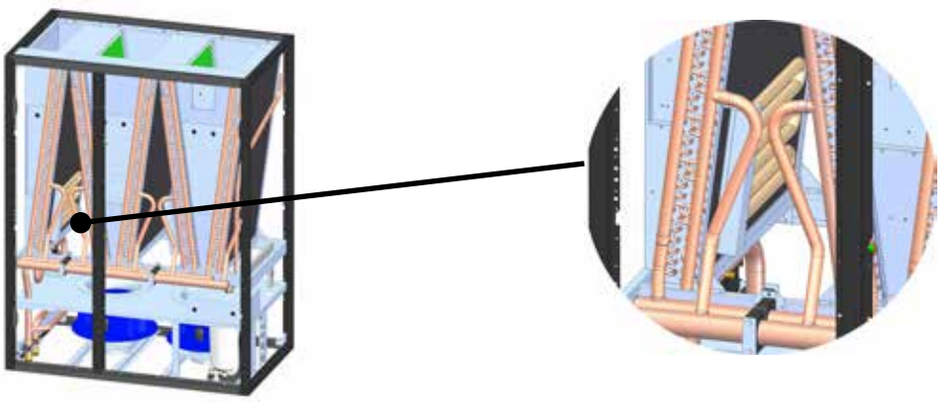
SD Units



Electric Heating

SN, SR Units

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 between coil blocks, prior to fans. This enables the unit to effectively re-heat the air and evenly distribute the temperature within the floor void. All sizes of electric heating are configurable based upon customer requirements.
A maximum bank of 7.5kW is allocated per coil block The avaliable heating shall be 3kW, 6kW or 7.5kW. Consequently the level of configuration is dependent on the number of coils in the unit.



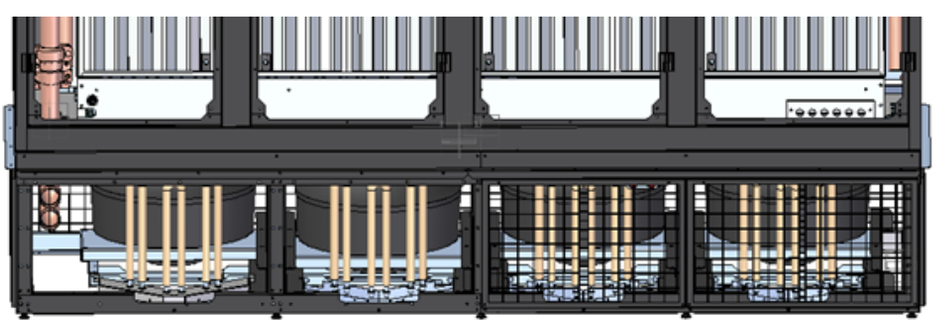
SD Units

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 within the unit's fan module. This enables the unit to effectively re-heat the air and evenly distribute the temperature within the floor void. All sizes of electric heating are configurable based upon customer requirements.
A bank of 7.5kW is allocated per fan and as standard each can be downsized in banks of 7.5kW. Consequently 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.



	SN06	SN09	SN12	SR09	SR12	SR15	SR18	SD18	SD22	SD25	SD31	SD35
3kW Electric Heat	○	○	○	—	—	—	—	—	—	—	—	—
6kW Electric Heat	—	○	○	—	—	—	—	—	—	—	—	—
7.5kW Electric Heat	—	—	—	○	○	○	○	○	○	○	○	○
15kW Electric Heat	—	—	—	—	—	○	—	○	○	○	○	○
22.5kW Electric Heat	—	—	—	—	—	—	—	—	—	○	○	○
30kW Electric Heat	—	—	—	—	—	—	—	—	—	—	○	○

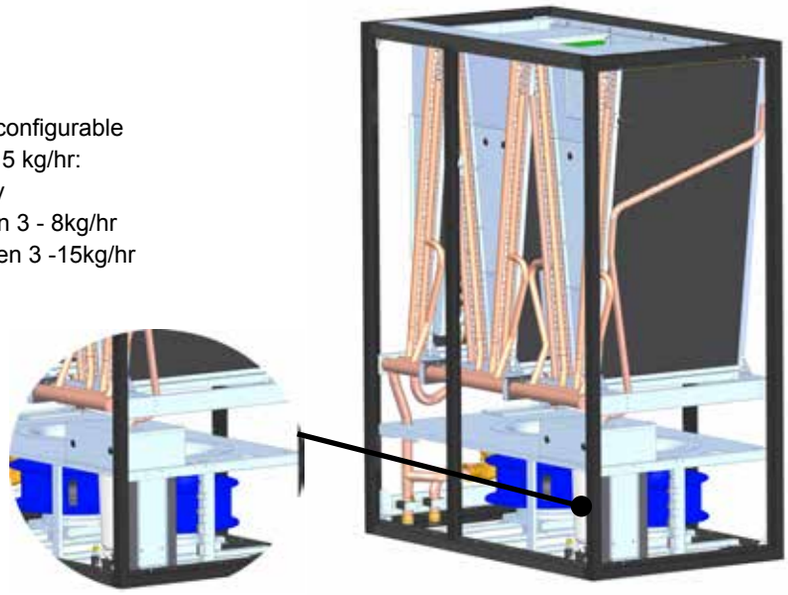
● Standard Features ○ Optional Features — Feature Not Available

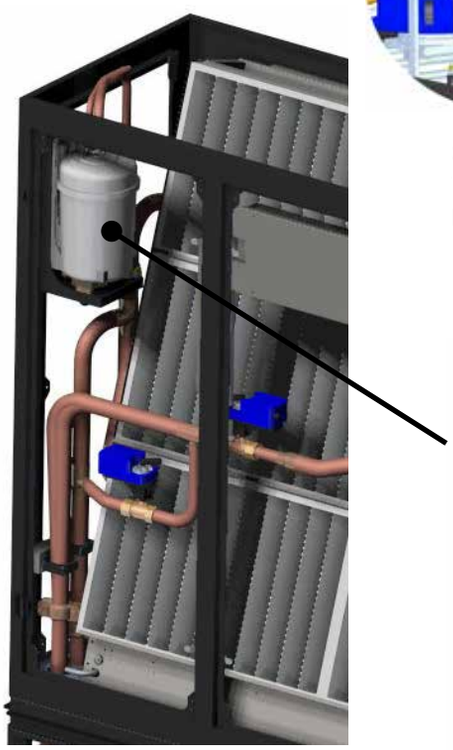
Humidification

SR and SN Ranges

The SmartCool SR and SN range have configurable humidification selections delivering 3, 8,15 kg/hr:

- SN06 configurable with 3kg/hr only
- SN09 - SR15 configurable between 3 - 8kg/hr
- SR15 to SR18 configurable between 3 -15kg/hr





SD Range

The SmartCool SD Range has configurable humidification selections delivering 3,8,15 or 30 kg/hr

- SD18 configurable between 3-8 kg/hr
- SD22-SD35 configurable between 3-30 kg/hr

The flexibility of the humidification options across the SmartCool SD range enables the humidification to be configured to meet the customers design requirements and conditions.

Note: the 30 kg/hr option utilises 2x 15 kg/hr bottles.

Humidification Sizes

	SN06	SN09	SN12	SR09	SR12	SR15	SR18	SD18	SD22	SD25	SD31	SD35
3kg/hr Humidification	○	○	○	○	○	○	○	○	○	○	○	○
8kg/hr Humidification	–	○	○	○	○	○	○	○	○	○	○	○
15kg/hr Humidification	–	–	–	–	–	–	○	–	○	○	○	○
30kg/hr Humidification	–	–	–	–	–	–	–	–	○	○	○	○

● Standard Features ○ Optional Features – Not Avaliable

Humidification

Control Principles

In a humidifier with electrodes, steam 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 steam that is produced.
To modulate the rate of steam 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 steam that shall be produced.

Modulated by the controller, the water level is varied so that the level of steam 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 boiled off into steam, 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 lifespan is maximised.

De-humidification

(With Electric Heating and Humidification only)
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 return 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.

Humidifier - Intelligent Modulation

Humidification shall be provided by an electrode boiler. The sealed humidifier design shall ensure that only clean sterile steam is supplied to the conditioned area and corrosive salts and minerals are held in the disposable bottle. The steam 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 steam 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 steam 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 to increase 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.

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.

When the dual power supply is fitted the UltraCap UPS is fitted as standard.

Ultracap UPS

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.

Controls

Display for illustration only

		System Configuration				
	Range	SN	SR		SD	
	Number of Circuits	Single	Single	Dual	Single	Dual
Controls	PCO5 Microprocessor	●	●	●	●	●
	Airetronix Controls	●	●	●	●	●
	PGD1 Display (Door Mounted)	●	●	●	●	●
	PGD1 Display with Audible Alarm (Door Mounted)	○	○	○	○	○
	PDG Touch Display	○	○	○	○	○
	Constant Air Volume	○	○	○	○	○
	Constant Pressure Control	○	○	○	○	○
	Temperature Control	●	●	●	●	●
	Temperature & Humidity Control	○	○	○	○	○
	Supply Air Temp Control	○	○	○	○	○
	NTC Water Temperature Sensor / Probe	●	●	●	●	●
	Filter Change Switch	○	○	○	○	○
	BMS and SNMP Compatibility	○	○	○	○	○
	Drip Tray Level Detection	○	○	○	○	○
	Fire Detection	○	○	○	○	○
	Smoke Detection	○	○	○	○	○
	Water Detection	○	○	○	○	○

● Standard Features ○ Optional Features ━ Feature Not Available

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.

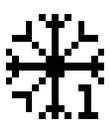
Display / Keypad

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.

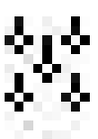
The default screen shall show the unit status and room condition (°C/RH %) without the need for interrogation and an easy to navigate menu structure for further interrogation and adjustment shall be provided.

Fan Operating



Cooling - Up to 6 Stages

Heating - Various Stages
SN - 2 Stages
SR - 3 Stages
SD - 4 Stages



De-humidification

Humidification - Variable

Controls

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.

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.

Evaporator Fan Speed Control
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.

Controls

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 Run / 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.

Run / 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.

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

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

Controls

Temperature Control

A temperature sensor shall be mounted in the return air 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 shall be an NTC type thermistor with an accuracy of not less than +/ - 5% 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
- Coil Temperature Sensor (Indoor)

The maintenance of key components such as 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 is available.

Supply Air Temperature Control

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.

Duty Rotation

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

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.

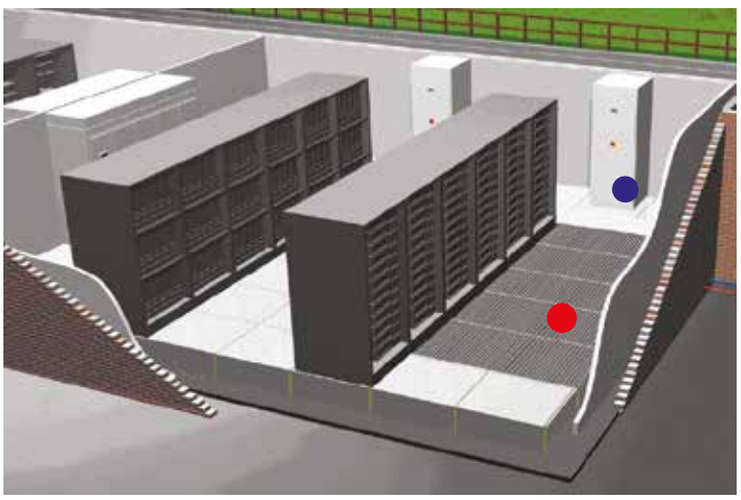
Also available shall be Airedale's own supervisory plug-in BMS card pCOWEB.
Based on Ethernet TCP/IP secure technology with SNMP features.

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.

Constant Pressure Control

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 (red) is compared to the room pressure (blue).



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 contant 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 to its location.

Constant Air Volume

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

		System Configuration				
	Range	SN	SR		SD	
	Circuits	Single	Single	Dual	Single	Dual
General	Condensate Pump (Hot or Cold Water)*	○	○	○	○	○
	Condensate Drain Tray Monitoring	○	○	○	○	○
	Straight and “L” Shaped Ceiling Duct Extensions	○	○	○	○	○
	Open Floorstand	○	○	○	○	○
	Front and Rear Floorstands (enclosed)	○	○	○	○	○
	UPS Floorstand	○	○	○	—	—
	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 (SN,SR only). The height of the floor stand shall be specified at order.

Discharge Air Configuration

Standard configuration shall be downflow “draw through” design.

Straight and L shaped Ceiling Duct Extension

Straight and ‘L’ shaped duct extensions up to a height of 1350mm shall be constructed and finished to match the unit.

For extensions greater than 1350mm, please contact Airedale.

Height shall be specified at order.

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 phytosanity import regulations, please contact Airedale for this option).

Condensate Pumps

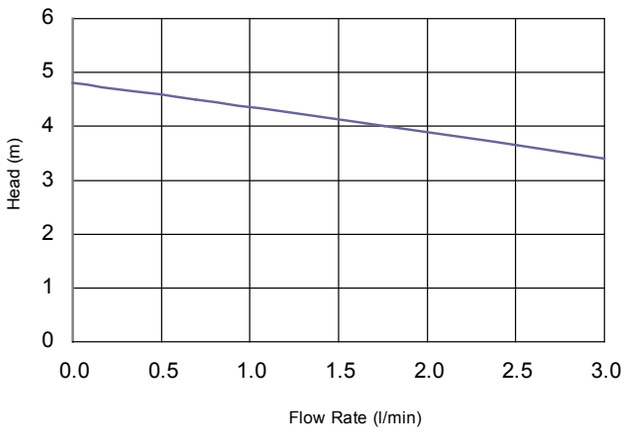
The SmartCool condensate pump shall be either hot water (full function units when a humidifier is fitted) or cold water type (cooling only).

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.

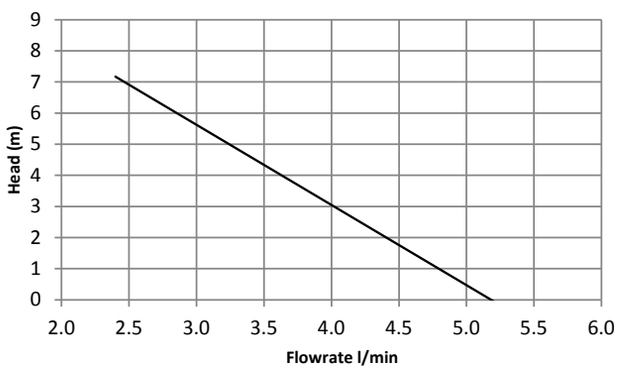
Cold Water (Cooling only units)

SN, SR Units

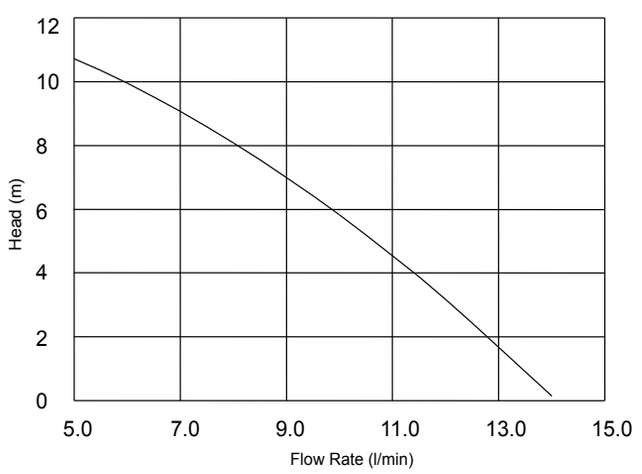


The cold water condensate pump has 10mm quarter turn plastic “barbed” connection.

SD Units



Hot Water (Full function units, SN,SR,SD type 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: 1995.

All Sound Power Levels quoted are calculated from measured sound intensity according to BS EN ISO9614 Part 1: 1995.

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 6dB to provide free field conditions.

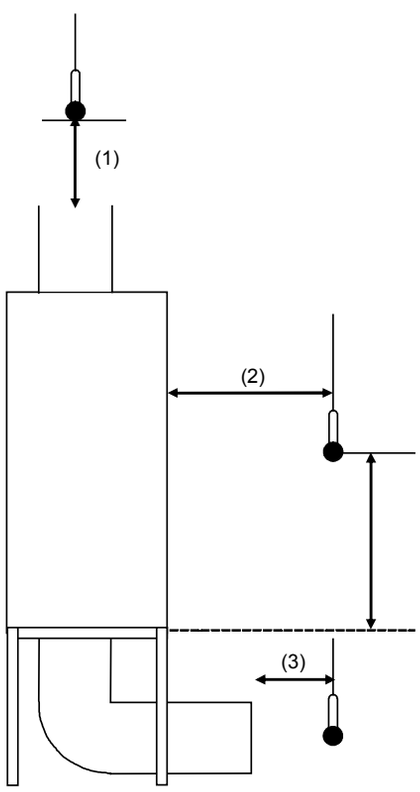
IMPORTANT
The sound data quoted is based on the unit having a ducted return air and standard backwards curved EC motors fitted, refer to illustration below.

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.

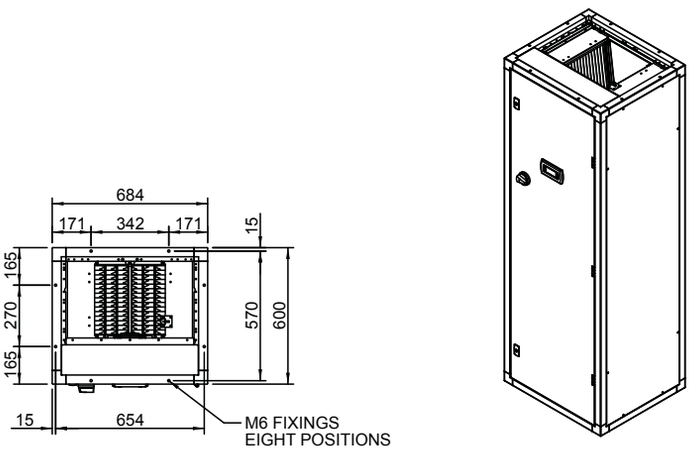


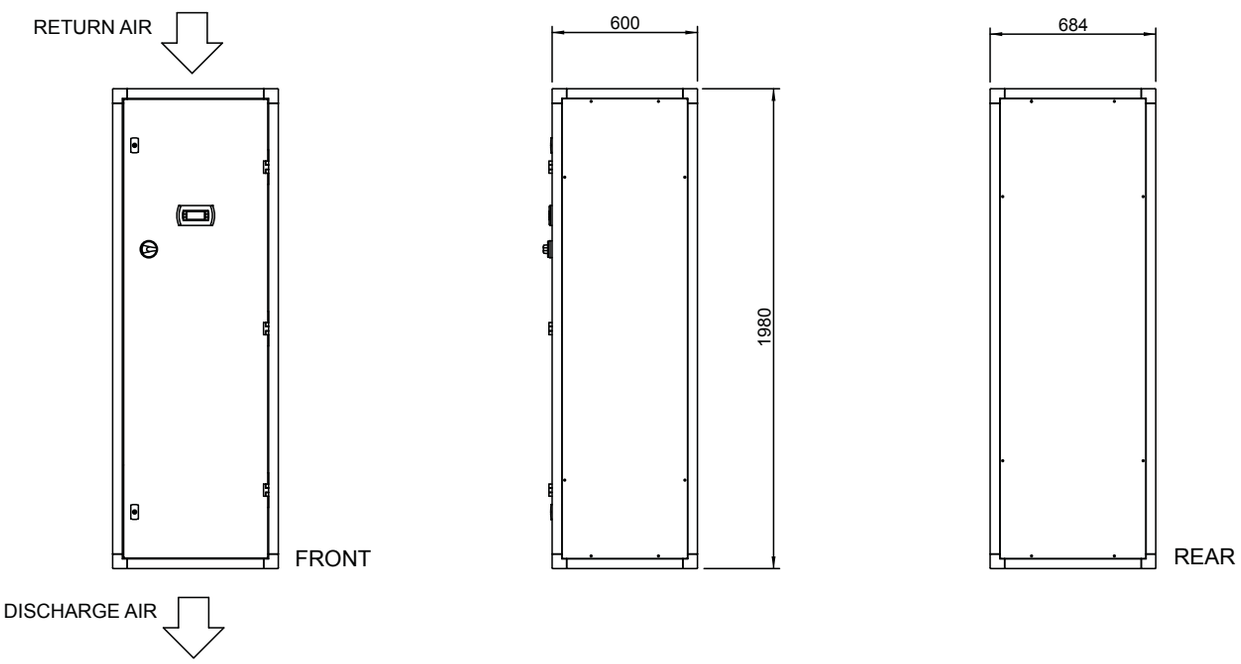
(1) Return Air
(2) Case Breakout
(3) Discharge Air

Installation Data

Dimensions

SN 06D - C000

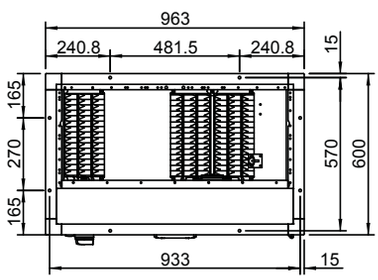


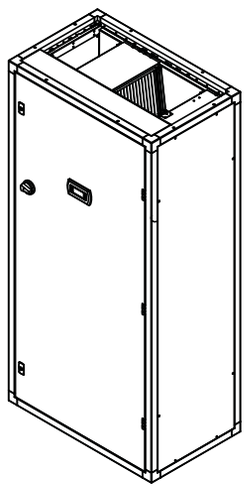


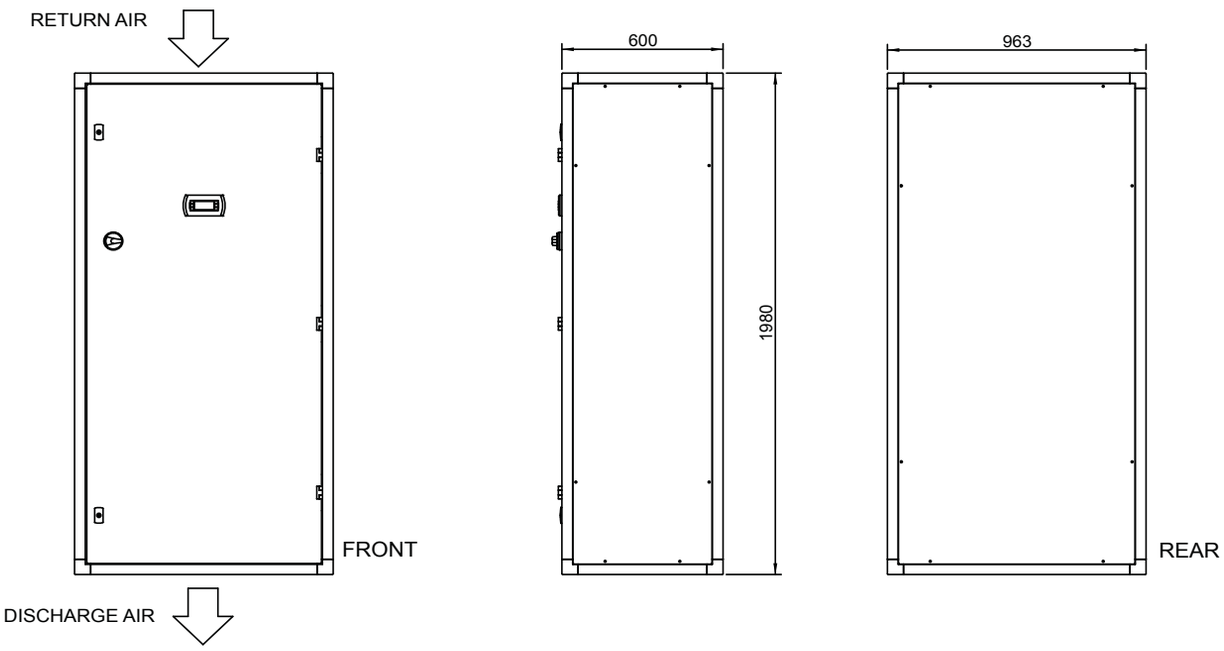
Installation Data

Dimensions

SN 09D - C000



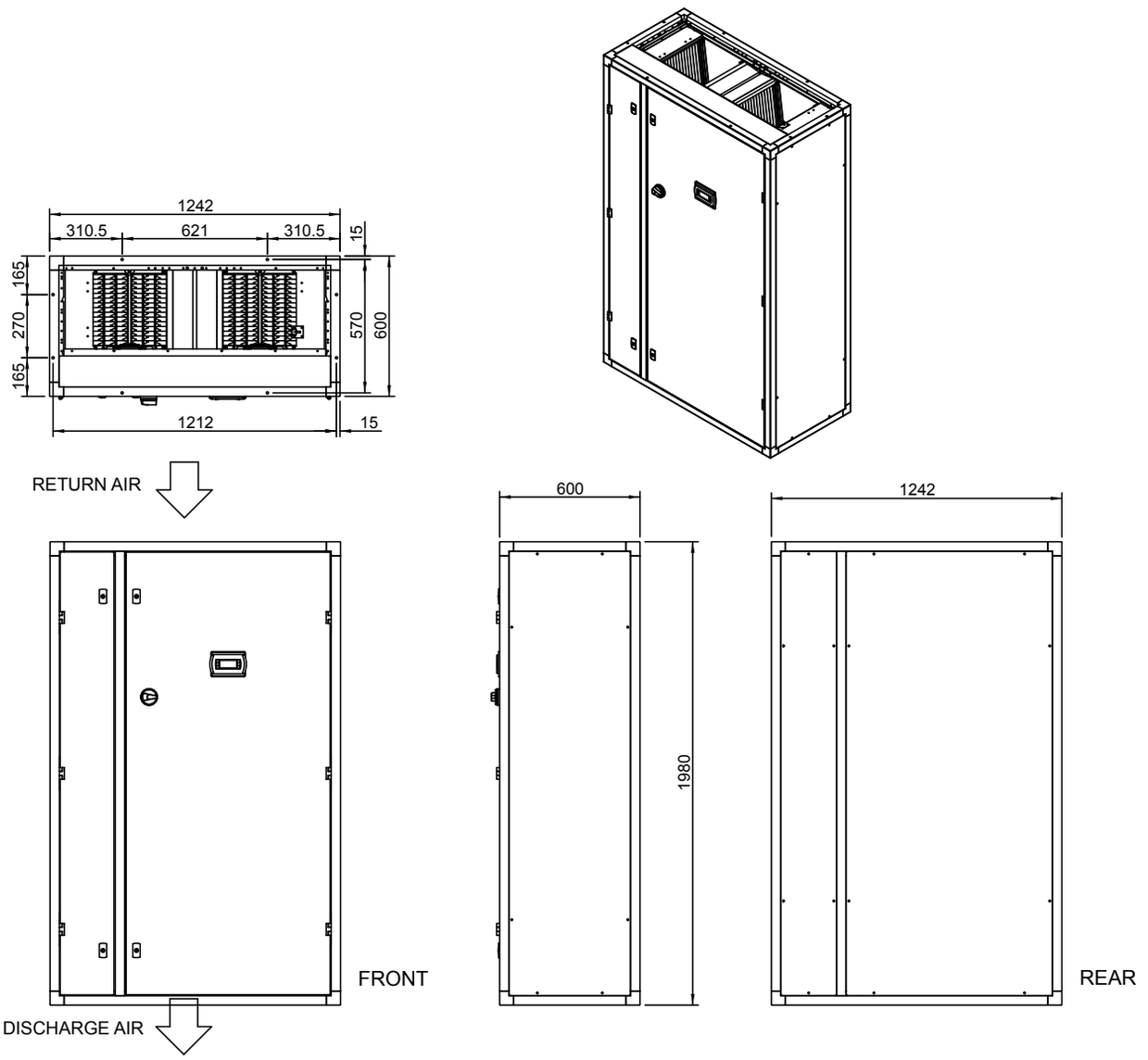




Installation Data

Dimensions

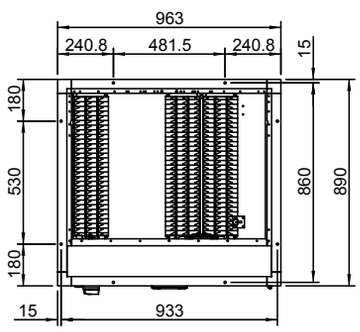
SN 12D - C000

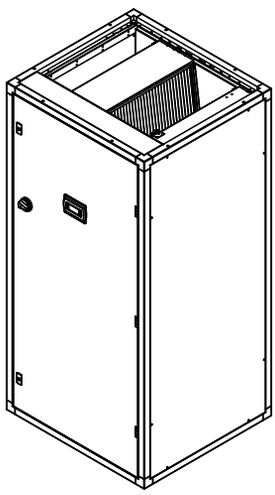


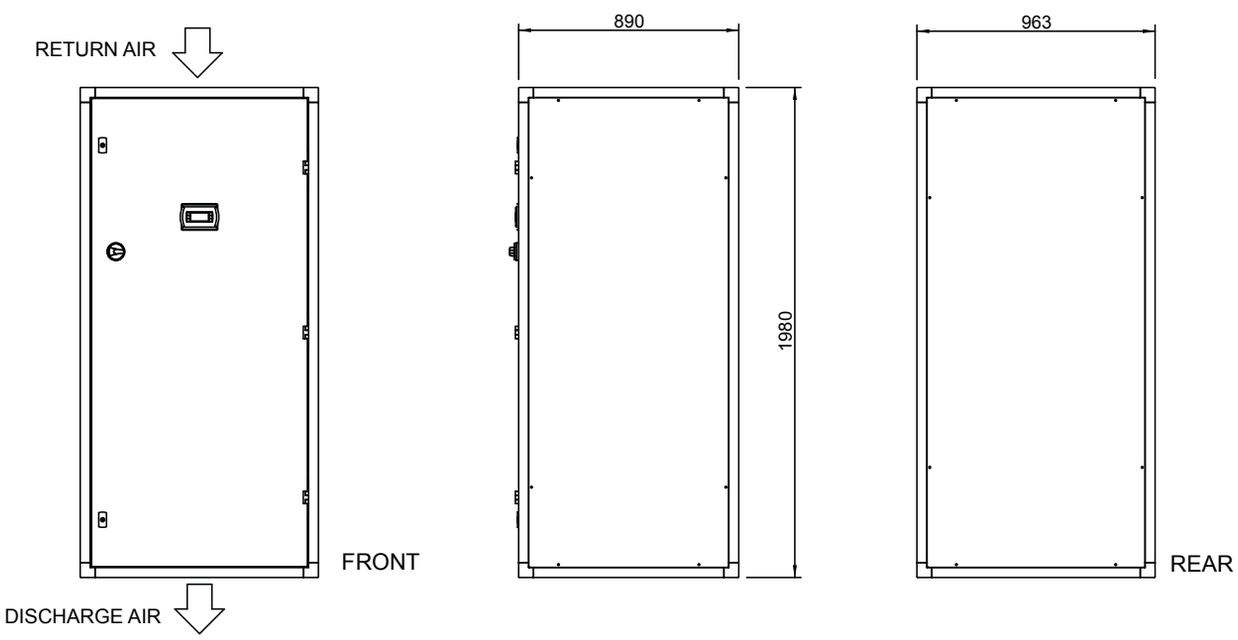
Installation Data

Dimensions

SR 09D - C000 / C0C0



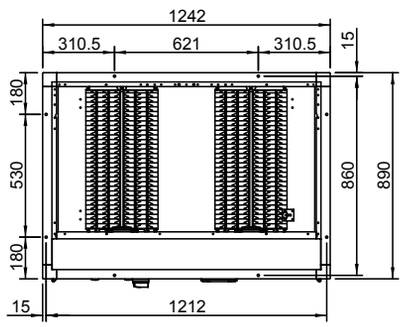


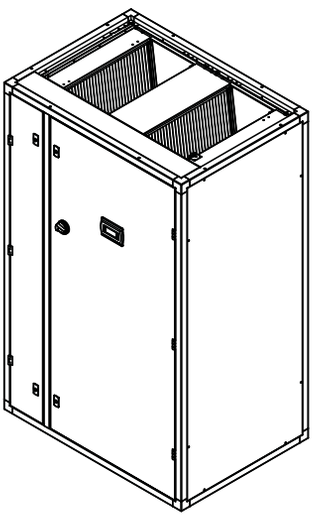


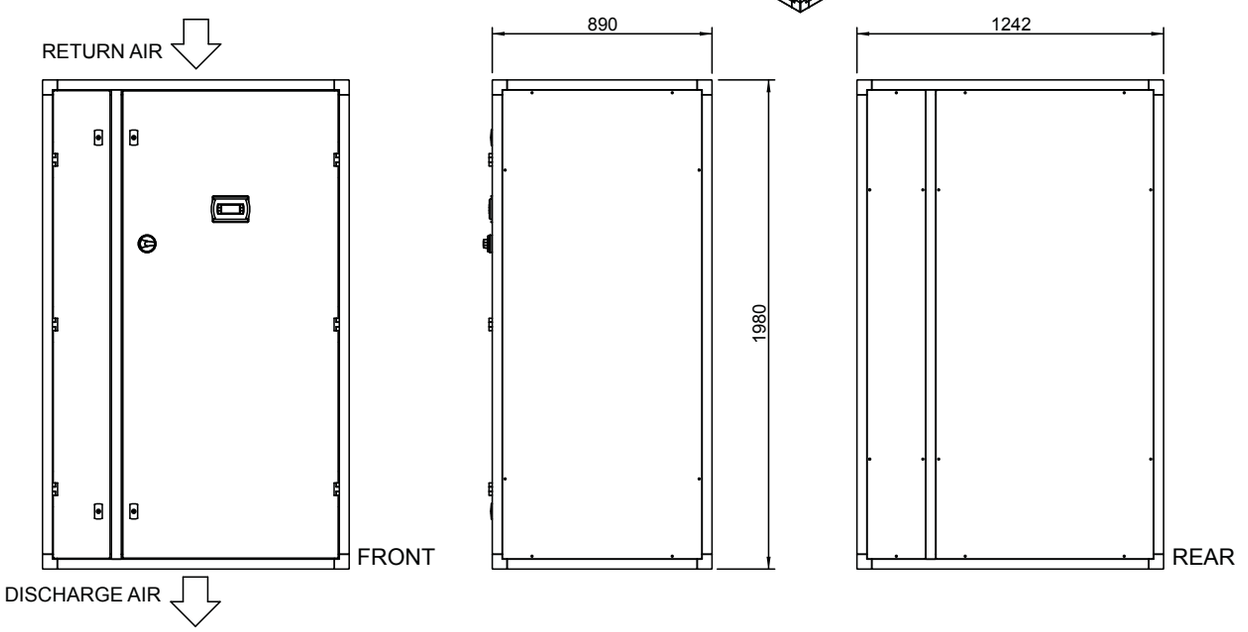
Installation Data

Dimensions

SR 12D C000 / C0C0



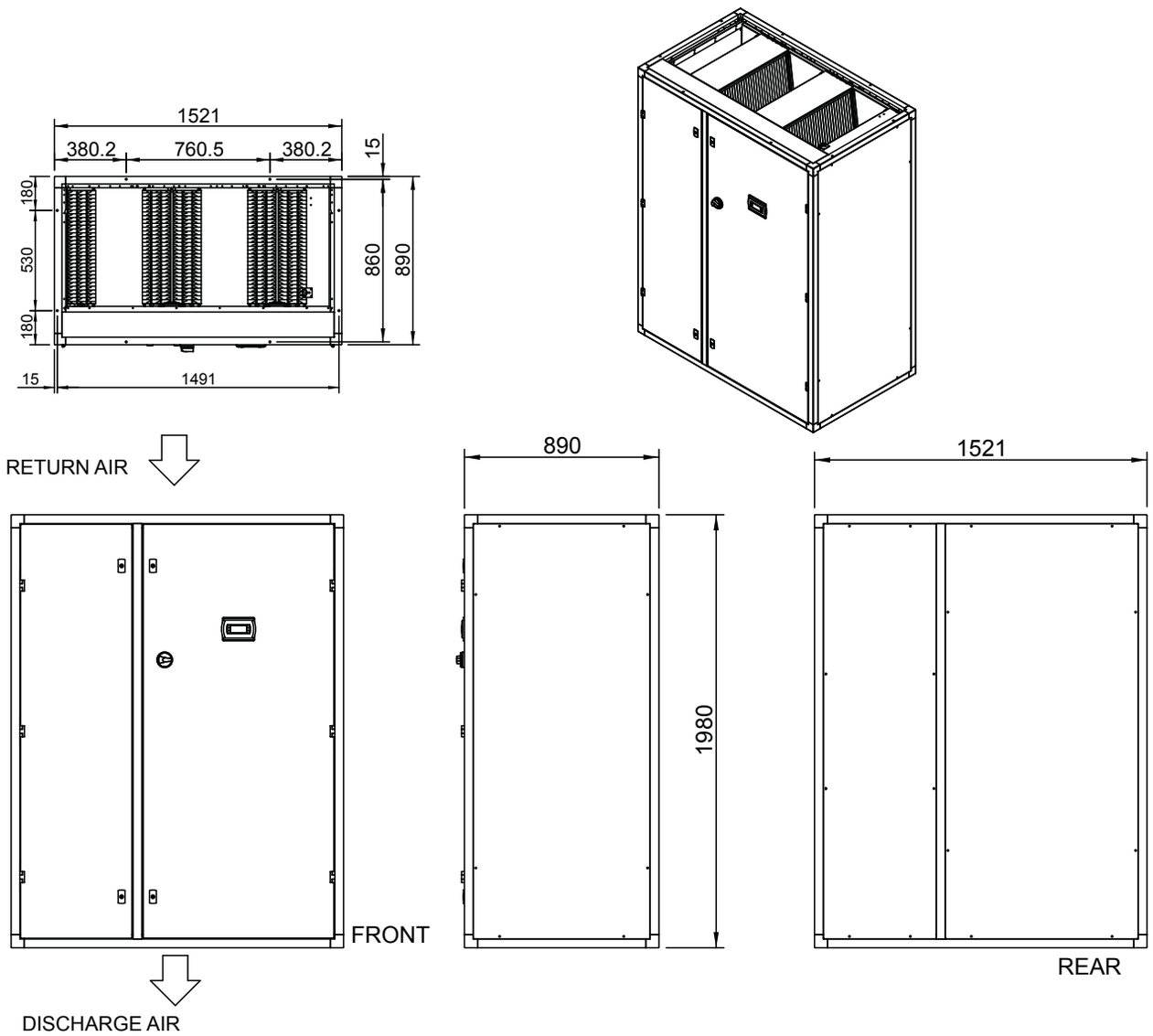




Installation Data

Dimensions

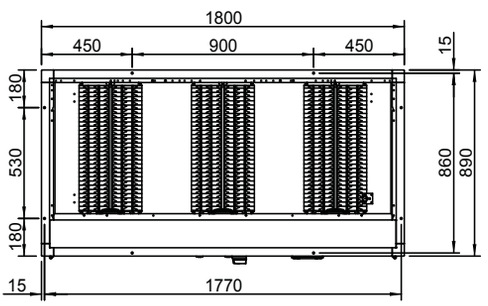
SR 15D - C000 / C0C0

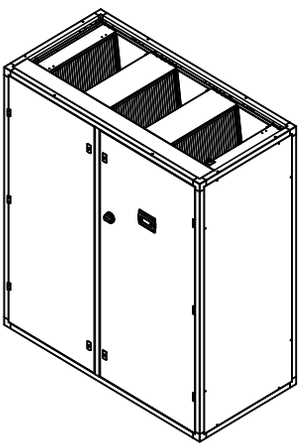


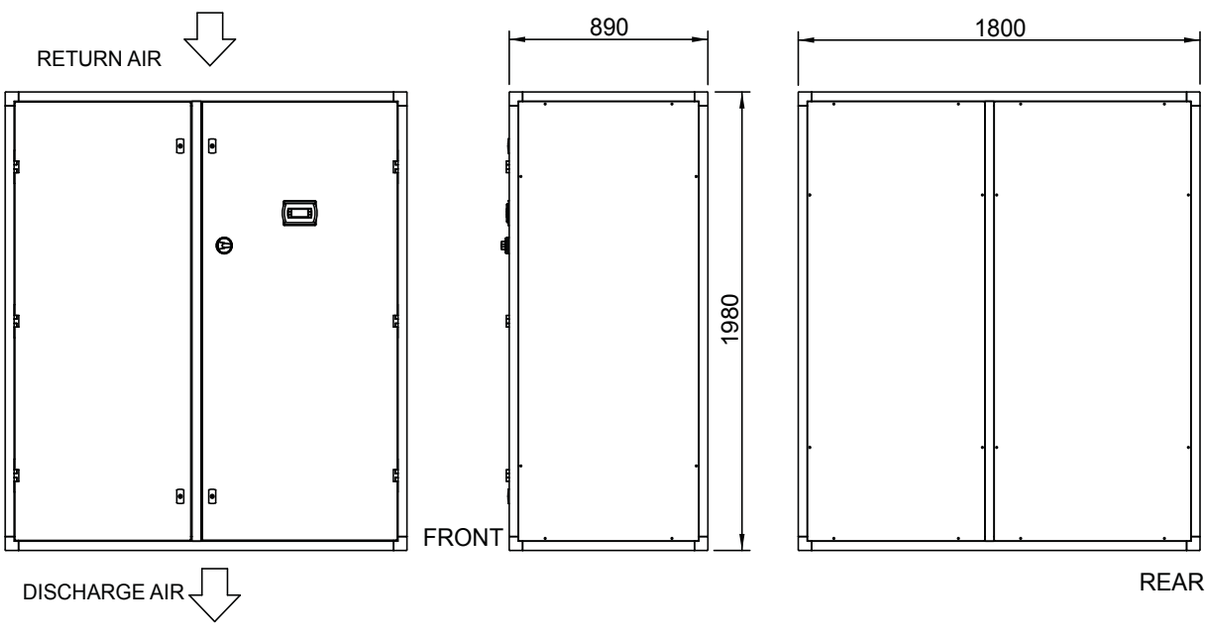
Installation Data

Dimensions

SR 18D C000 / C0C0



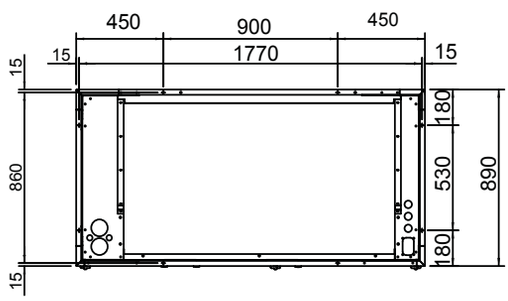


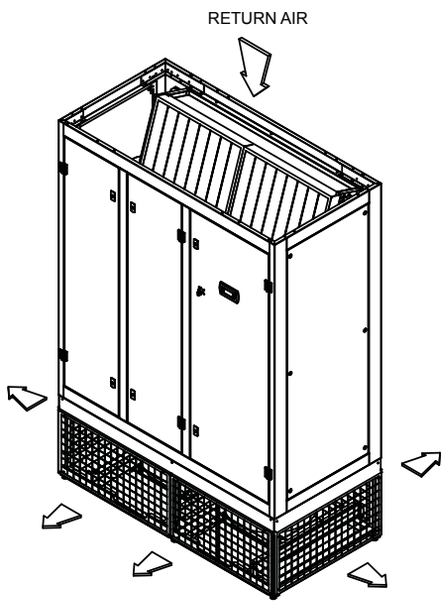


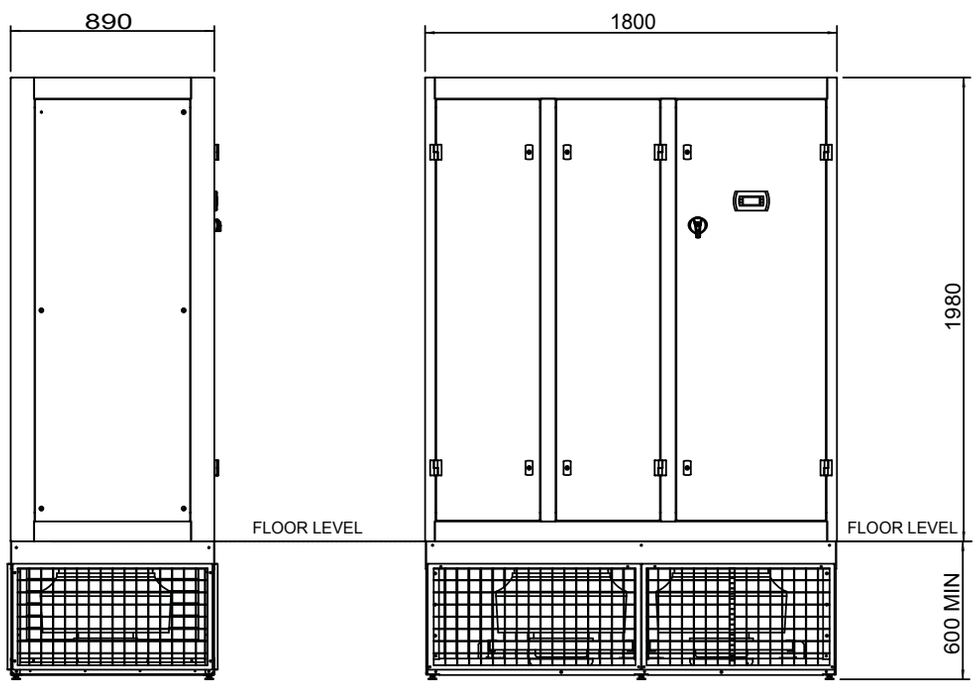
Installation Data

Dimensions

SD 18 Single Circuit



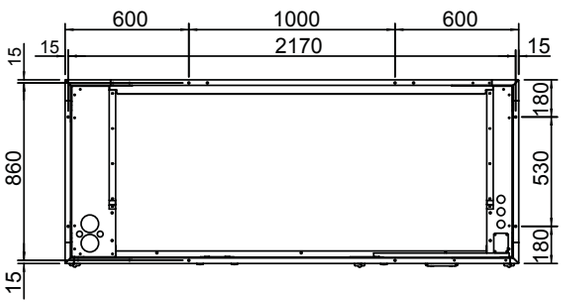


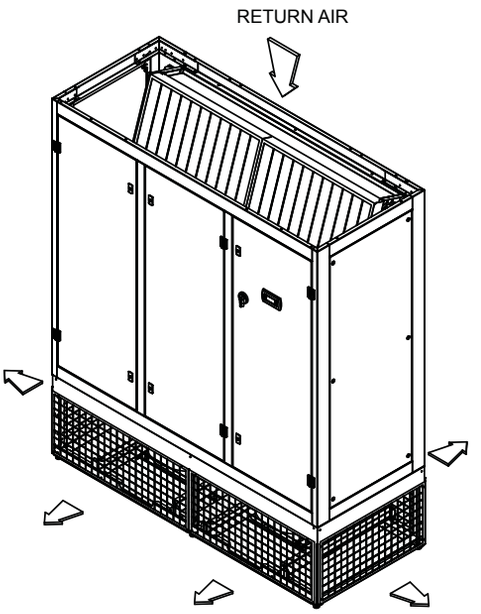


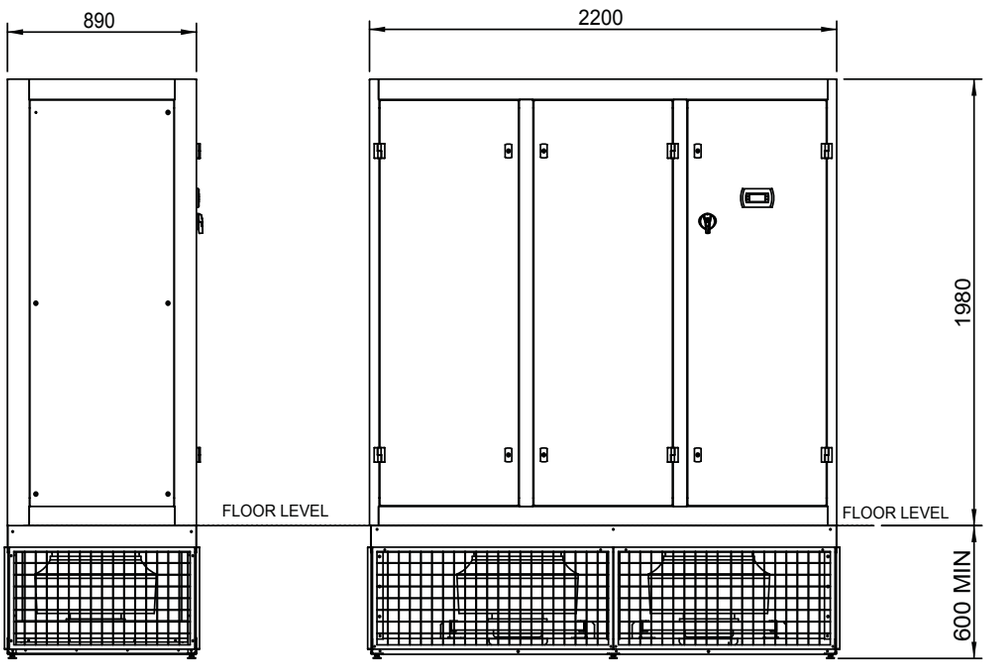
Installation Data

Dimensions

SD 22 Single Circuit



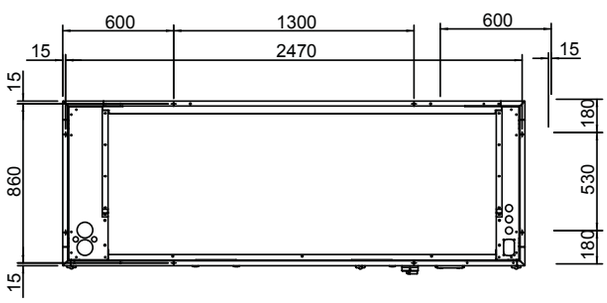


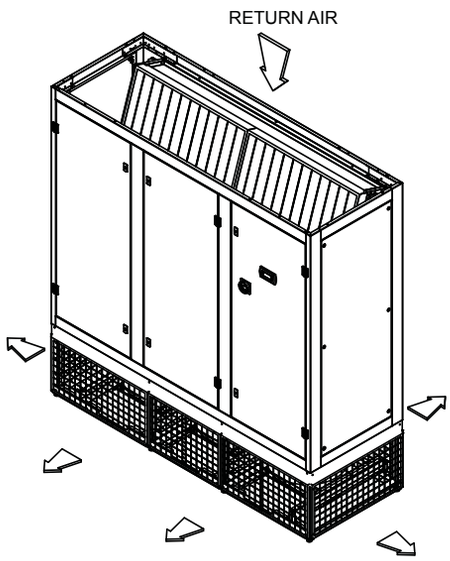


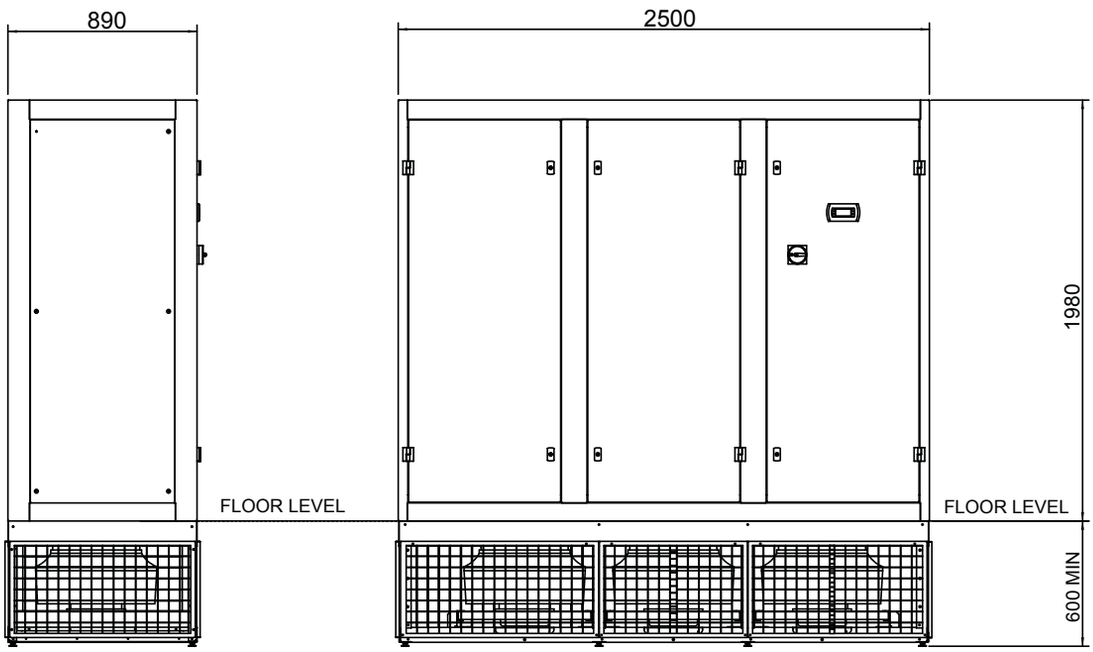
Installation Data

Dimensions

SD 25 Single Circuit



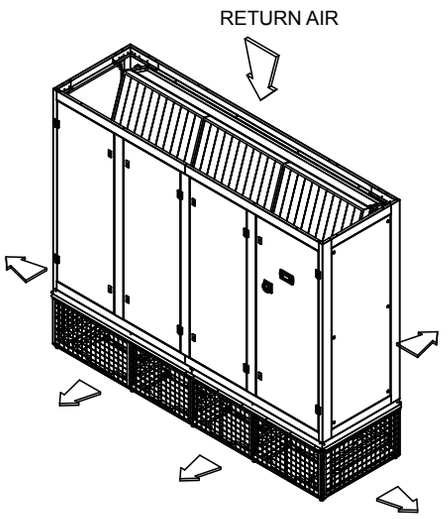


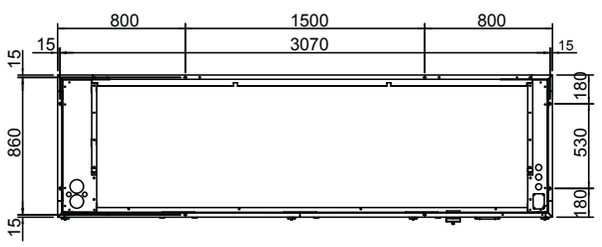


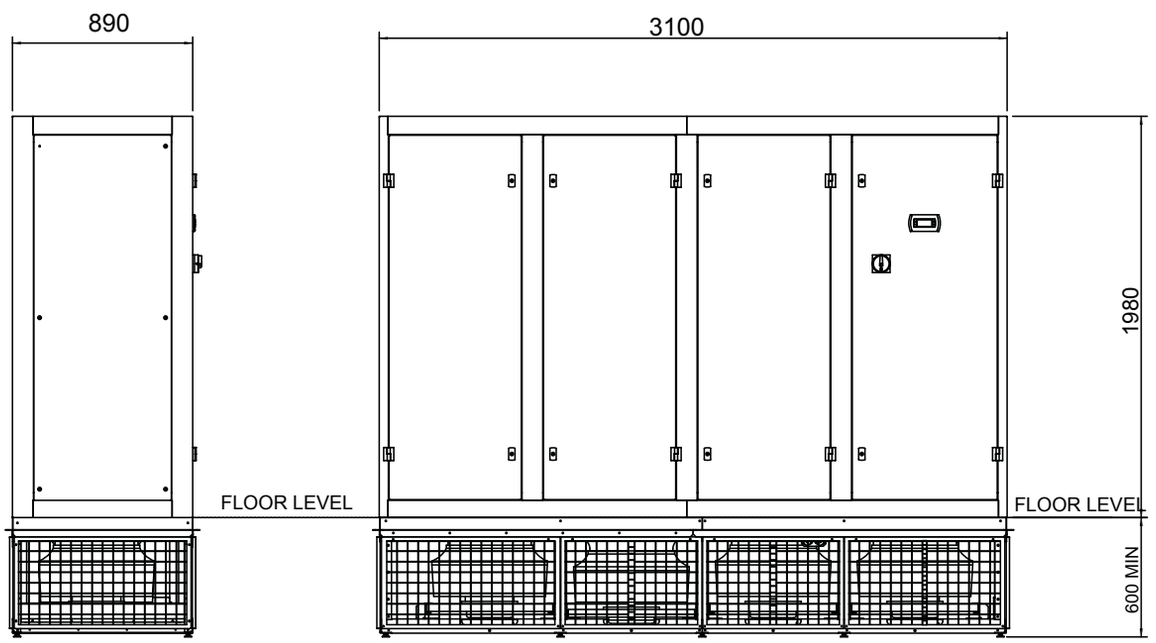
Installation Data

Dimensions

SD 31 Single Circuit



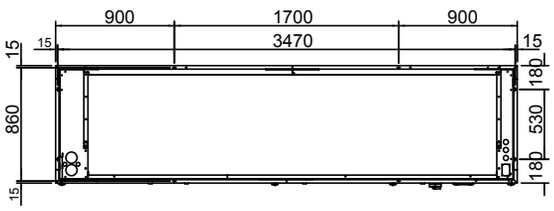


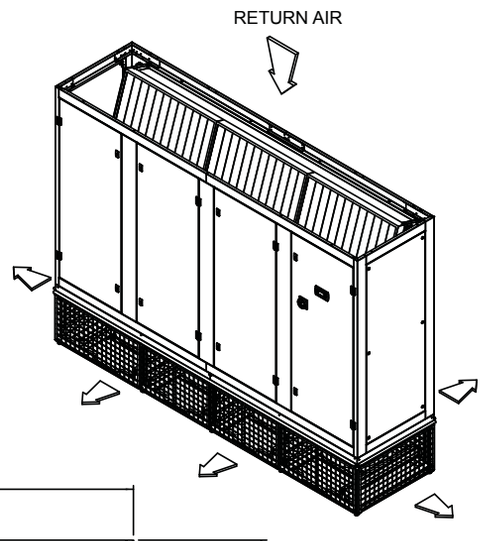


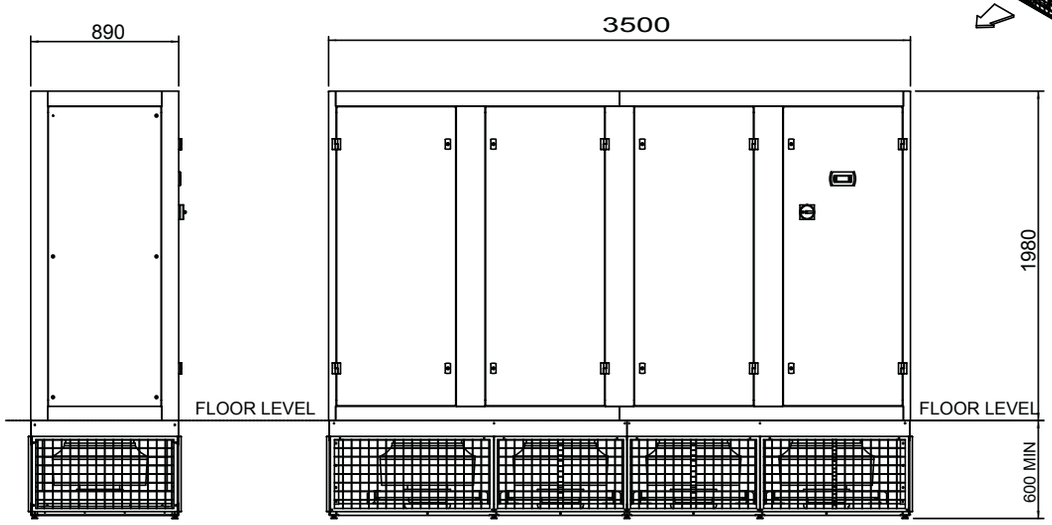
Installation Data

Dimensions

SD 35 Single Circuit



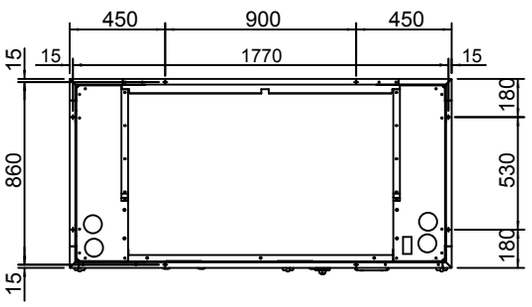


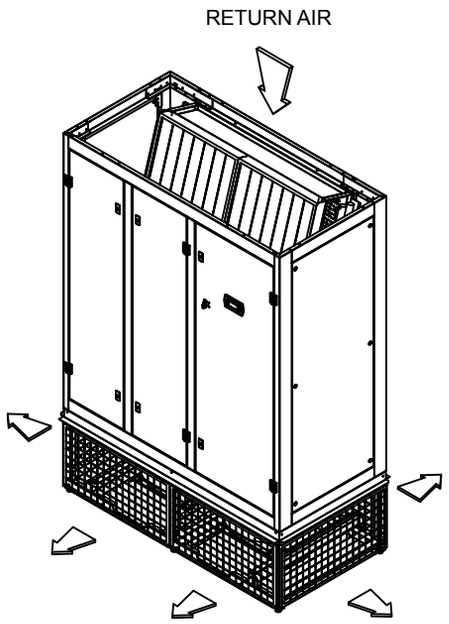


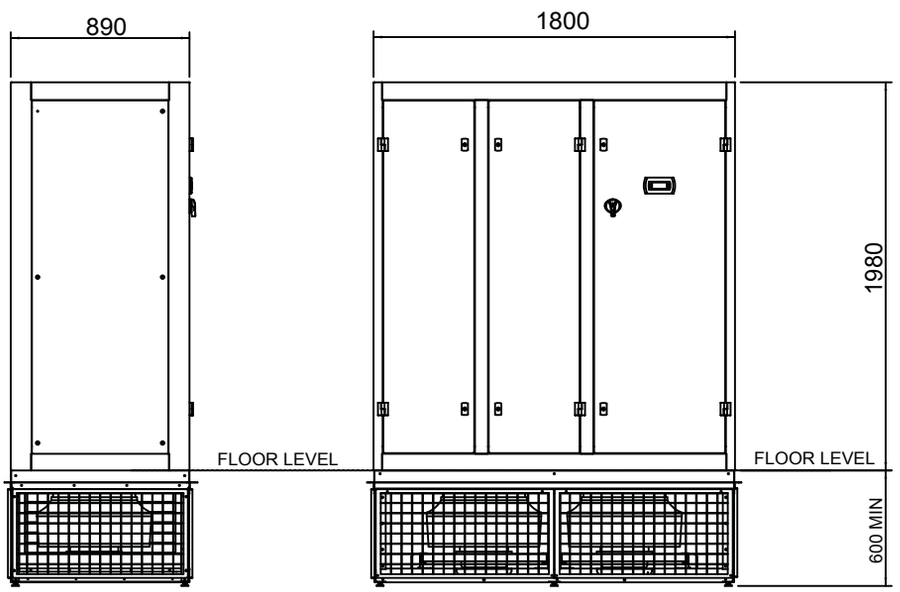
Installation Data

Dimensions

SD 18 Dual Circuit



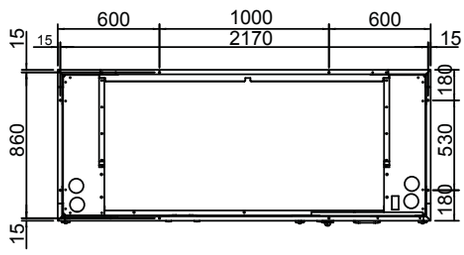


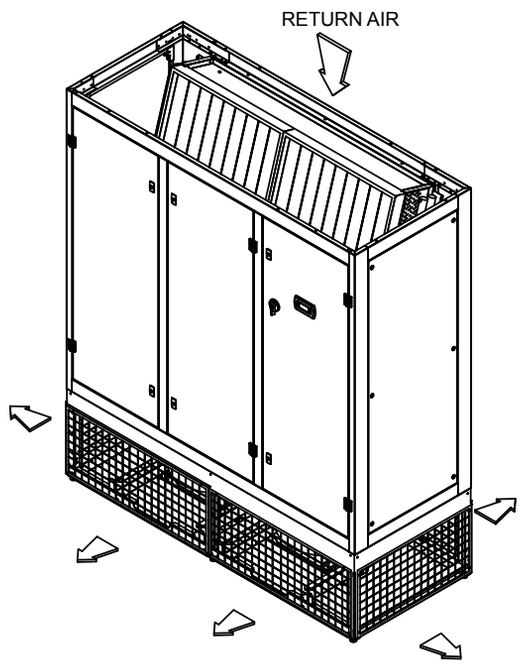


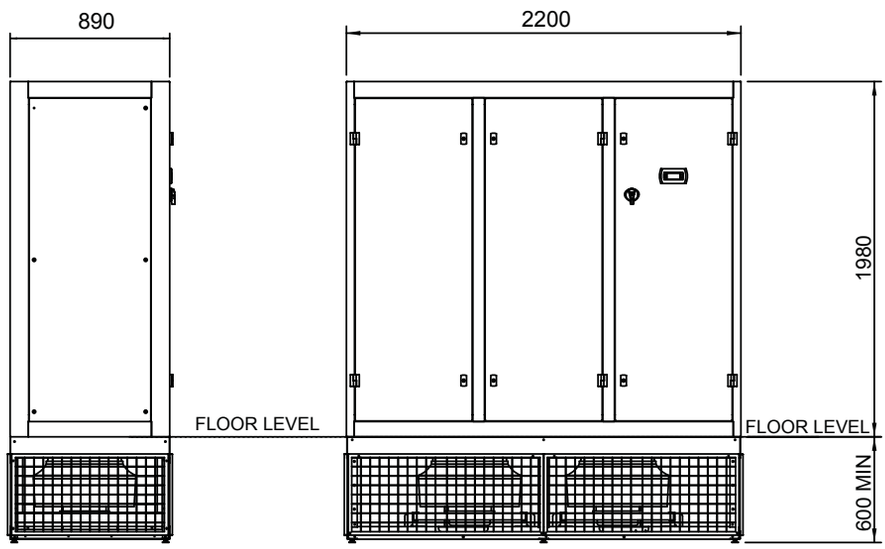
Installation Data

Dimensions

SD 22 Dual Circuit



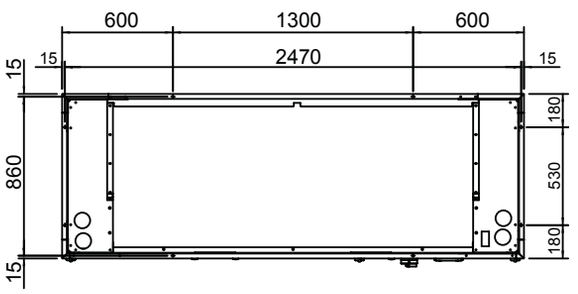


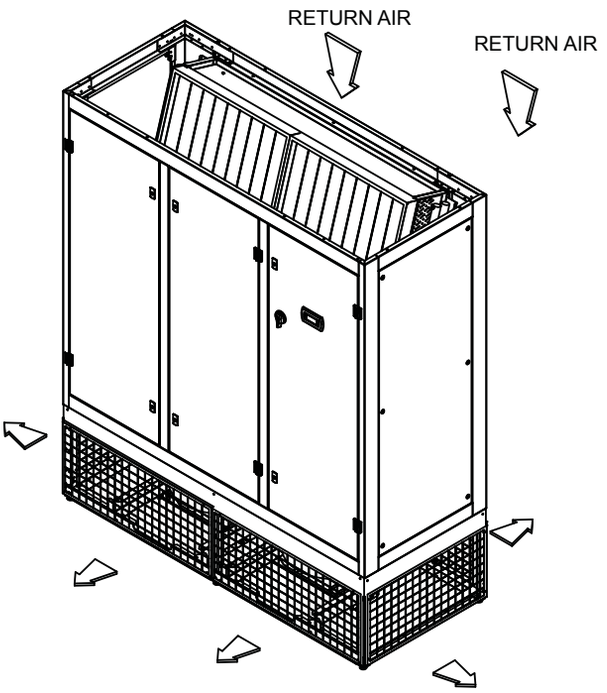


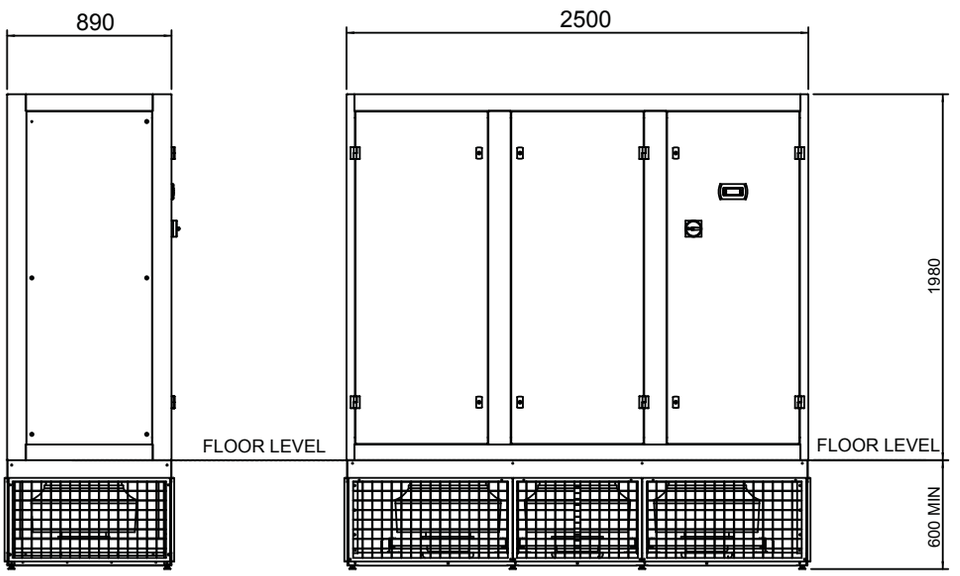
Installation Data

Dimensions

SD 25 Dual Circuit



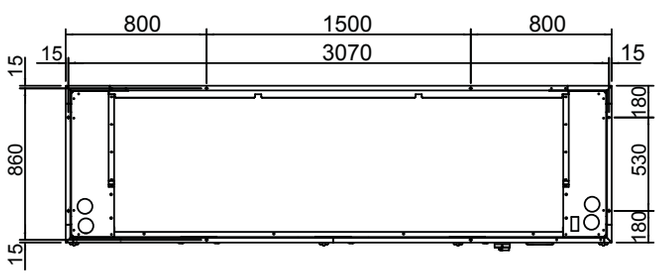


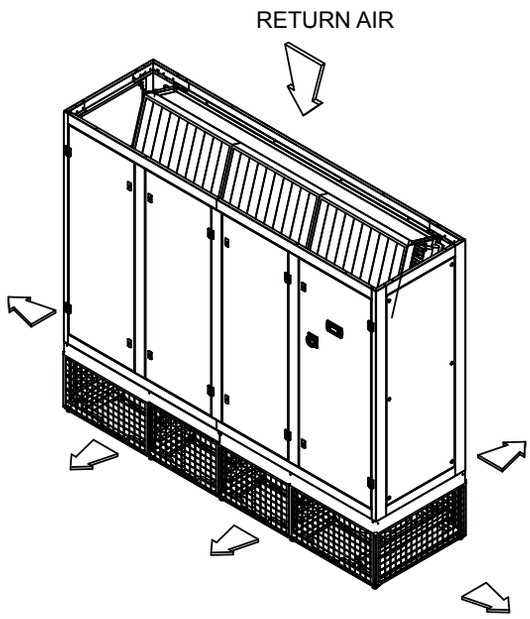


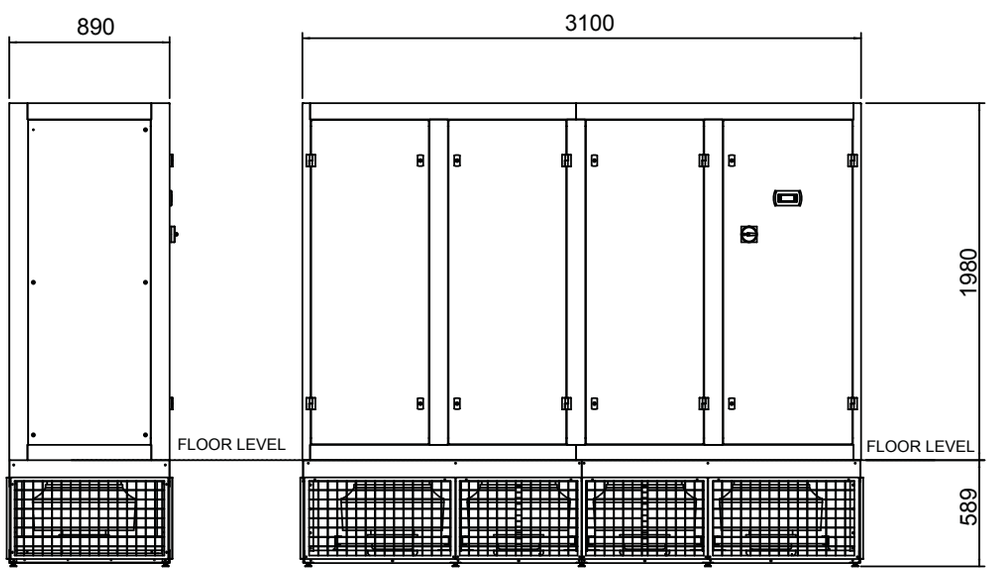
Installation Data

Dimensions

SD 31 Dual Circuit



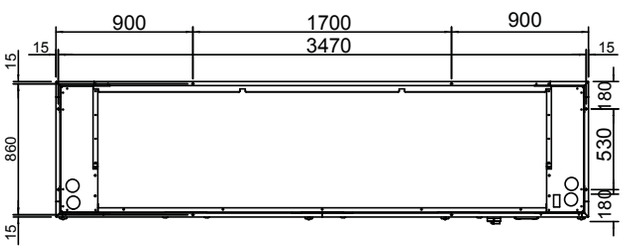


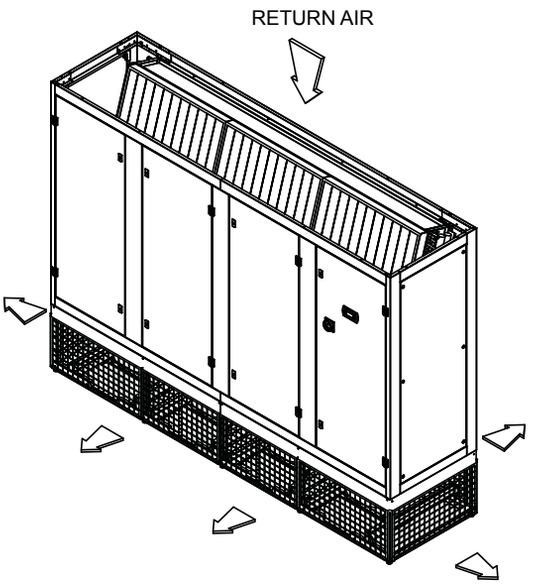


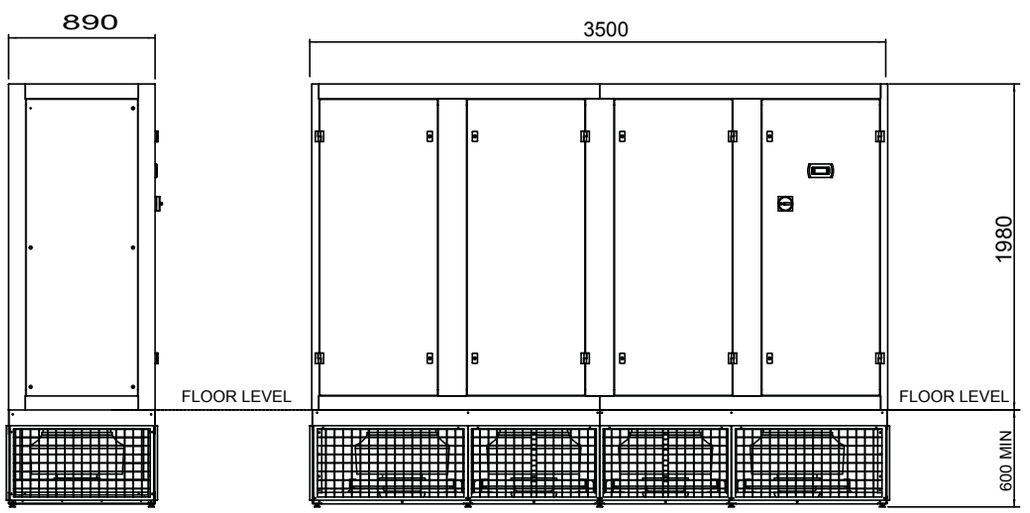
Installation Data

Dimensions

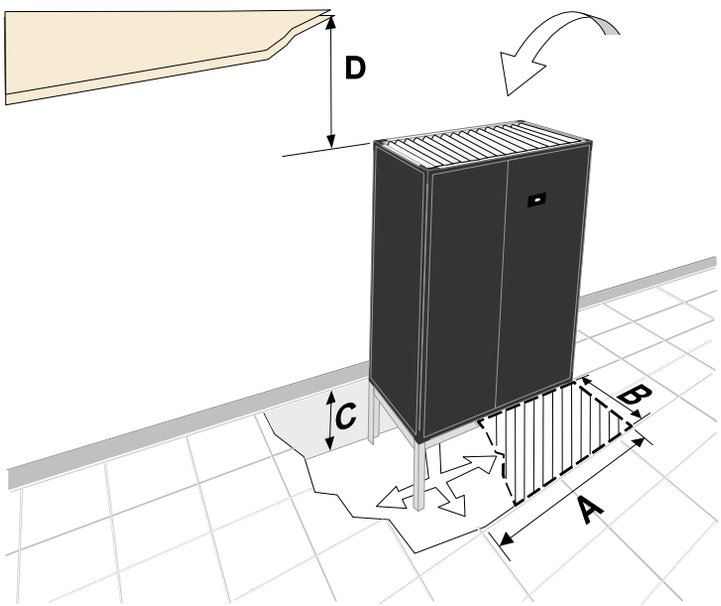
SD 35 Dual Circuit







Positioning



Minimum Unit Clearance SN, SR

Open and Enclosed Floorstand Option

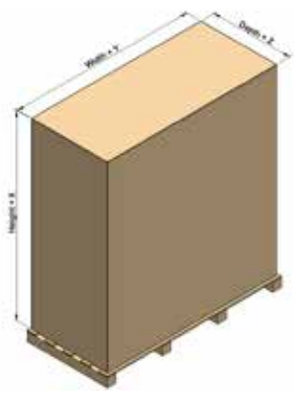
		A	B	C - Floorstand(3)
SN06D	mm	684	600	Min 350 – Max 750 (+ 50mm Feet Adjustable +/-20mm) (4)
SN09D / SR09D	mm	963	880	
SN12D / SR12D	mm	1242	880	
SR15D	mm	1521	880	
SR18D	mm	1800	880	

		Minimum Ceiling Clearance- (D)			
		Forward Only	Forward and 1 Side	Forward and 2 Sides	All Faces
SN06D	mm	720	500	380	250
SN09D / SR09D	mm	720	500	380	250
SN12D / SR12D	mm	720	500	380	250
SR15D	mm	740	550	440	280
SR18D	mm	750	590	480	300

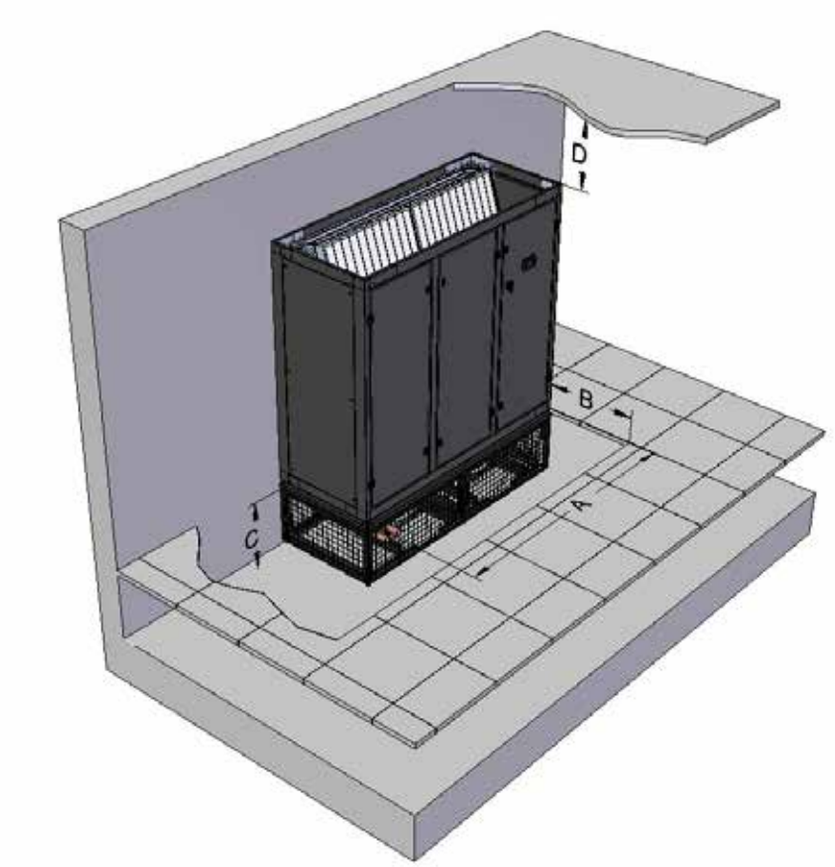
(1) Shown with optional open floor stand.
(2) Shaded area indicates minimum service and maintenance requirements. The unit must be installed with allowance for carpet tile clearance.
(3) Dimension C denotes recommended minimum/maximum floor stand height, refer to Airedale for special applications, please 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, 160mm to height.



Positioning



Minimum Unit Clearance SD

Open and Enclosed Floorstand Option

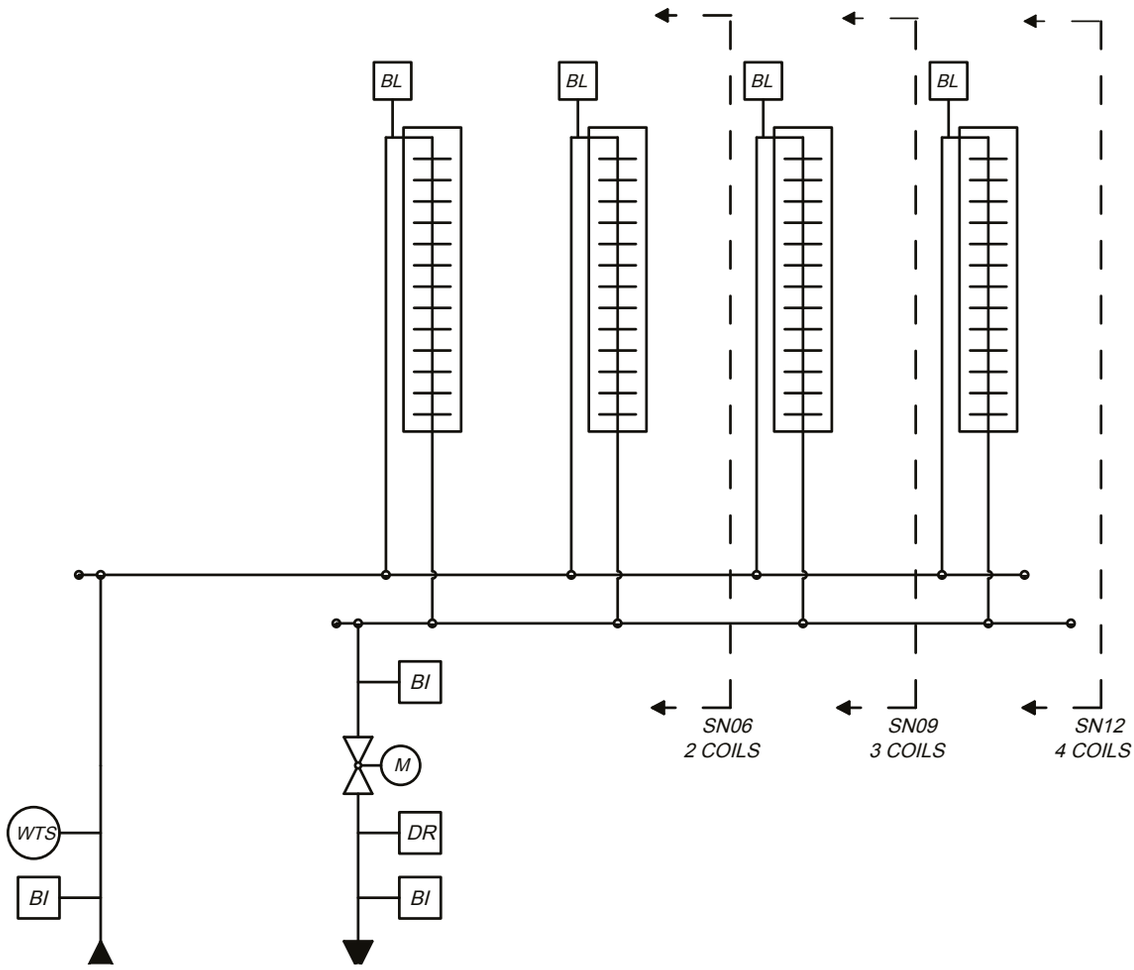
		A	B	C - Floorstand[3]
SD18D	mm	1800	880	Min 600– Max 750 (+ 50mm Feet Adjustable +/-20mm) [4]
SD22D	mm	2200	880	
SD25D	mm	2500	880	
SD31D	mm	3100	880	
SD35D	mm	3500	880	

		Minimum Ceiling Clearance- (D)			
		Forward Only	Forward and 1 Side	Forward and 2 Sides	All Faces
SD18D	mm	720	500	380	250
SD22D	mm	720	500	380	250
SD25D	mm	720	500	380	250
SD31D	mm	740	550	440	280
SD35D	mm	750	590	480	300

(1) Shown with standard 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).

Pipework Schematics

SN Single Circuit



BI — *BINDER POINT*

BL — *BLEED VALVE*

DR — *DRAIN VALVE*

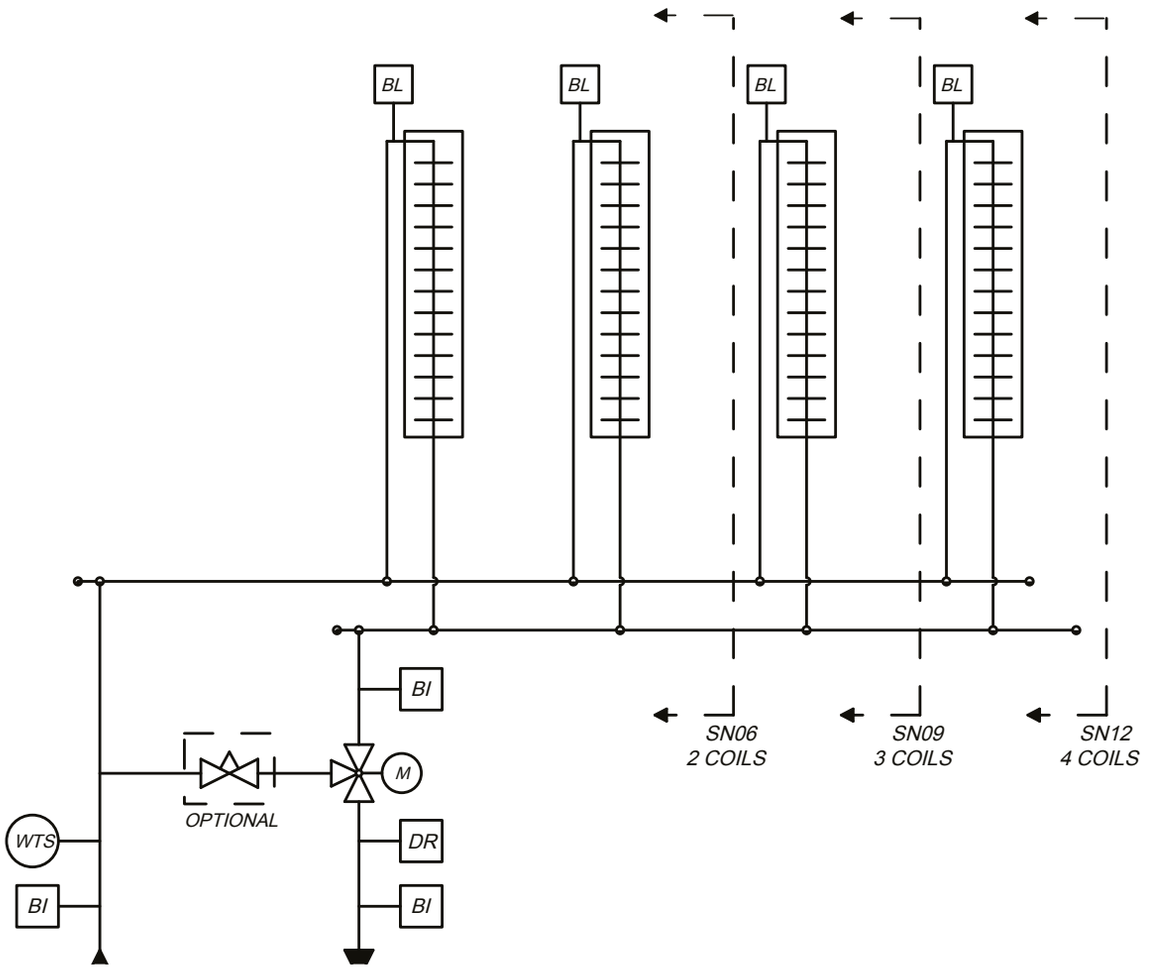
WTS — *WATER TEMPERATURE SENSOR*

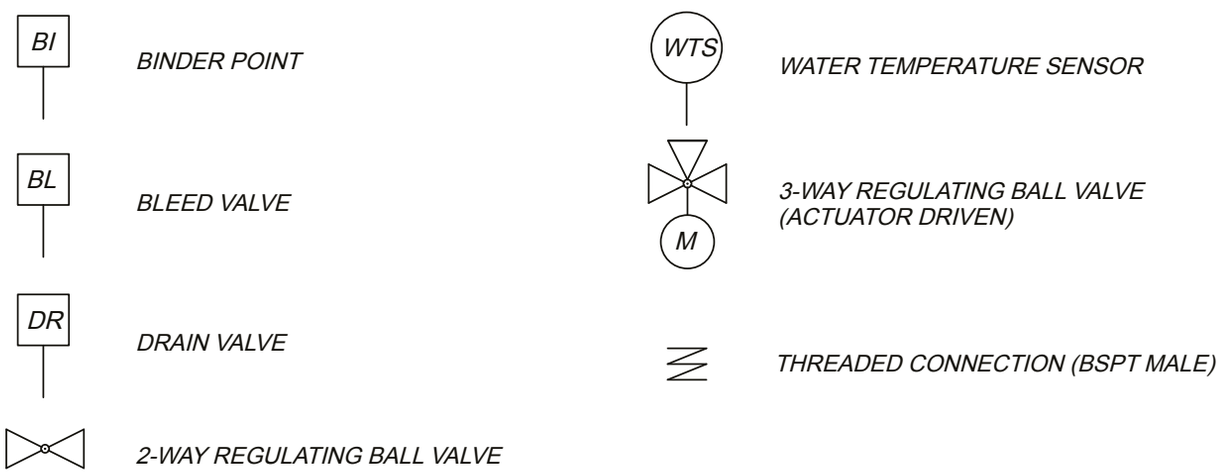
M — *2-WAY REGULATING BALL VALVE (ACTUATOR DRIVEN)*

THREADED CONNECTION (BSPT MALE)

Pipework Schematics

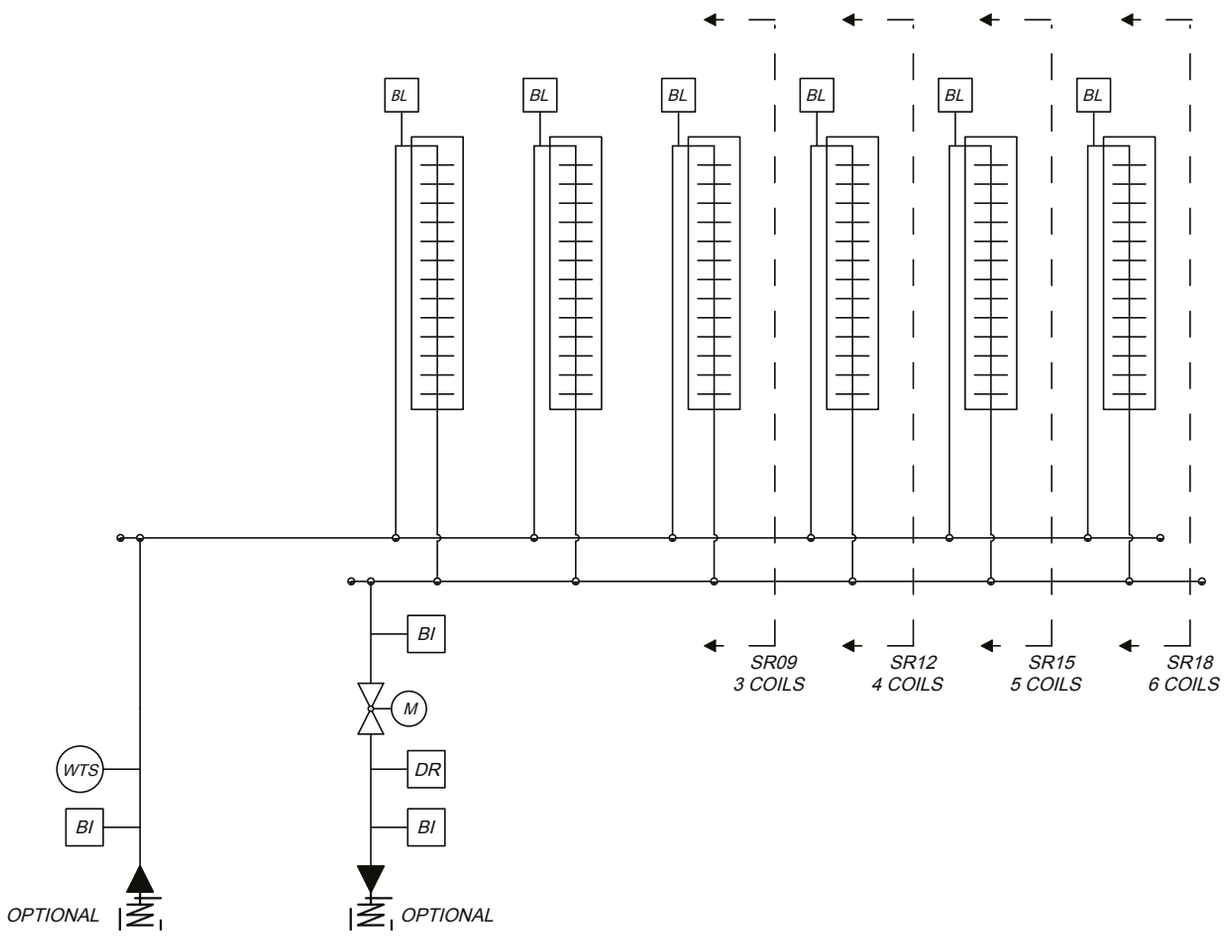
SN Single Circuit

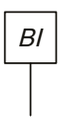




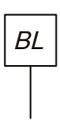
Pipework Schematics

SR Single Circuit





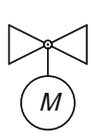
BINDER POINT



BLEED VALVE

DRAIN VALVE

WATER TEMPERATURE SENSOR

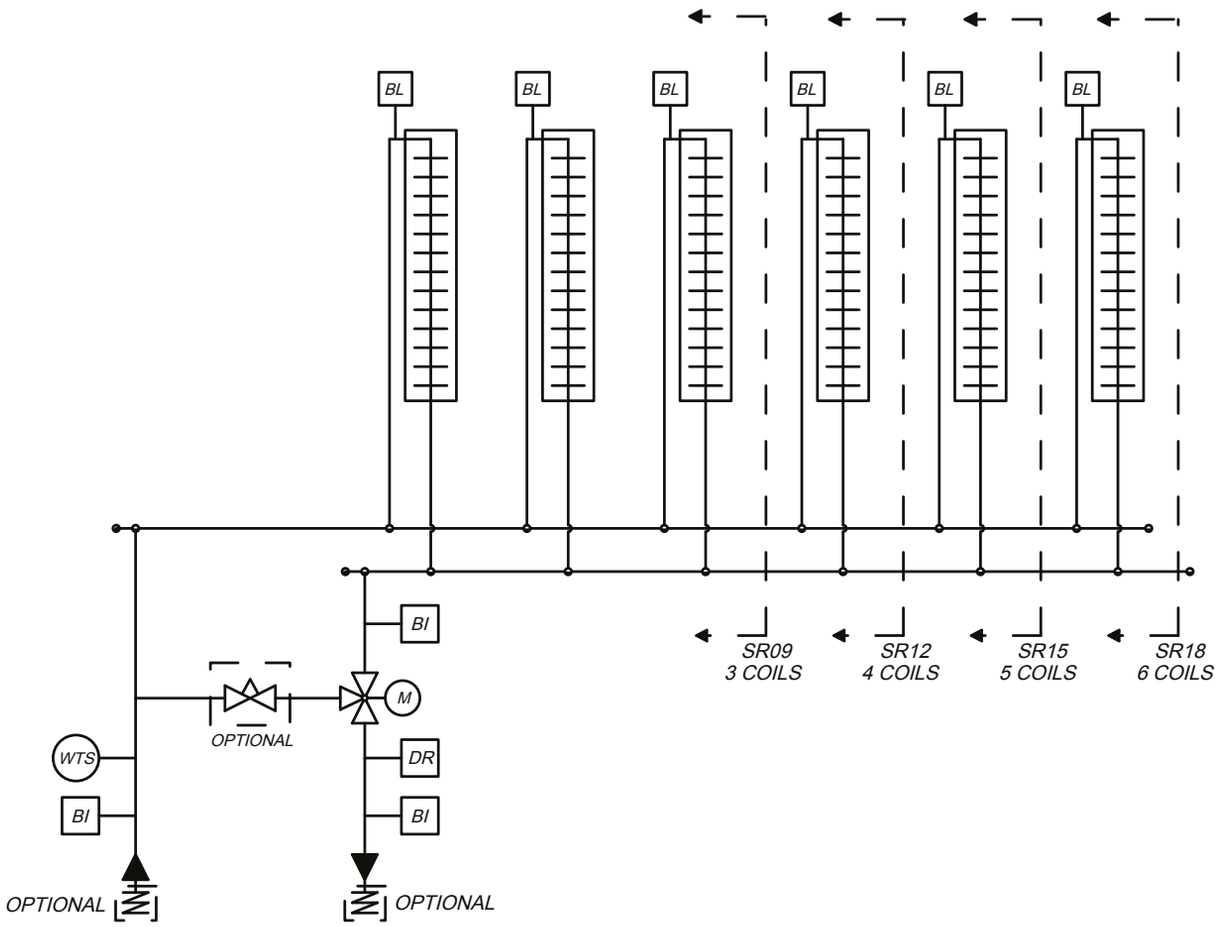


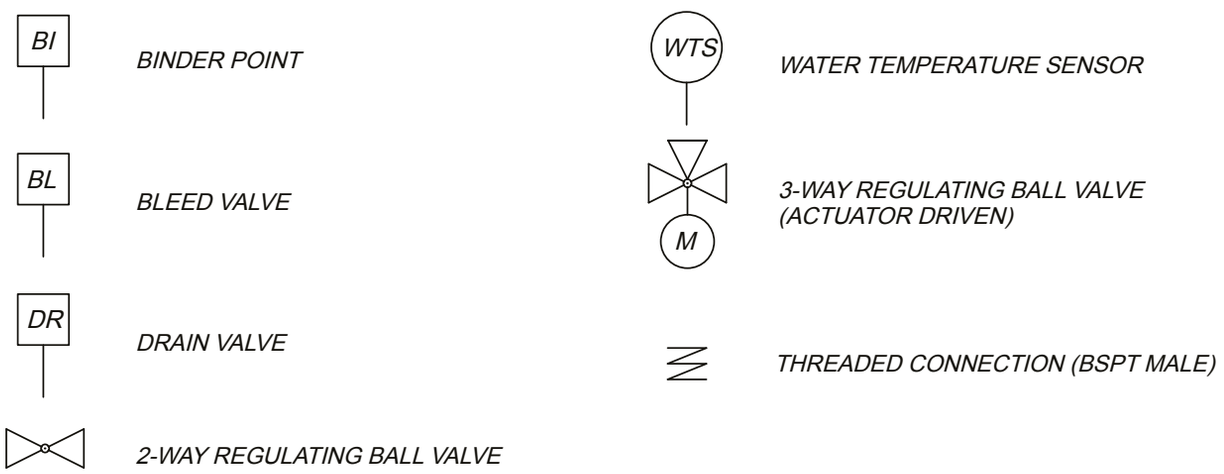
2-WAY REGULATING BALL VALVE (ACTUATOR DRIVEN)

THREADED CONNECTION (BSPT MALE)

Pipework Schematics

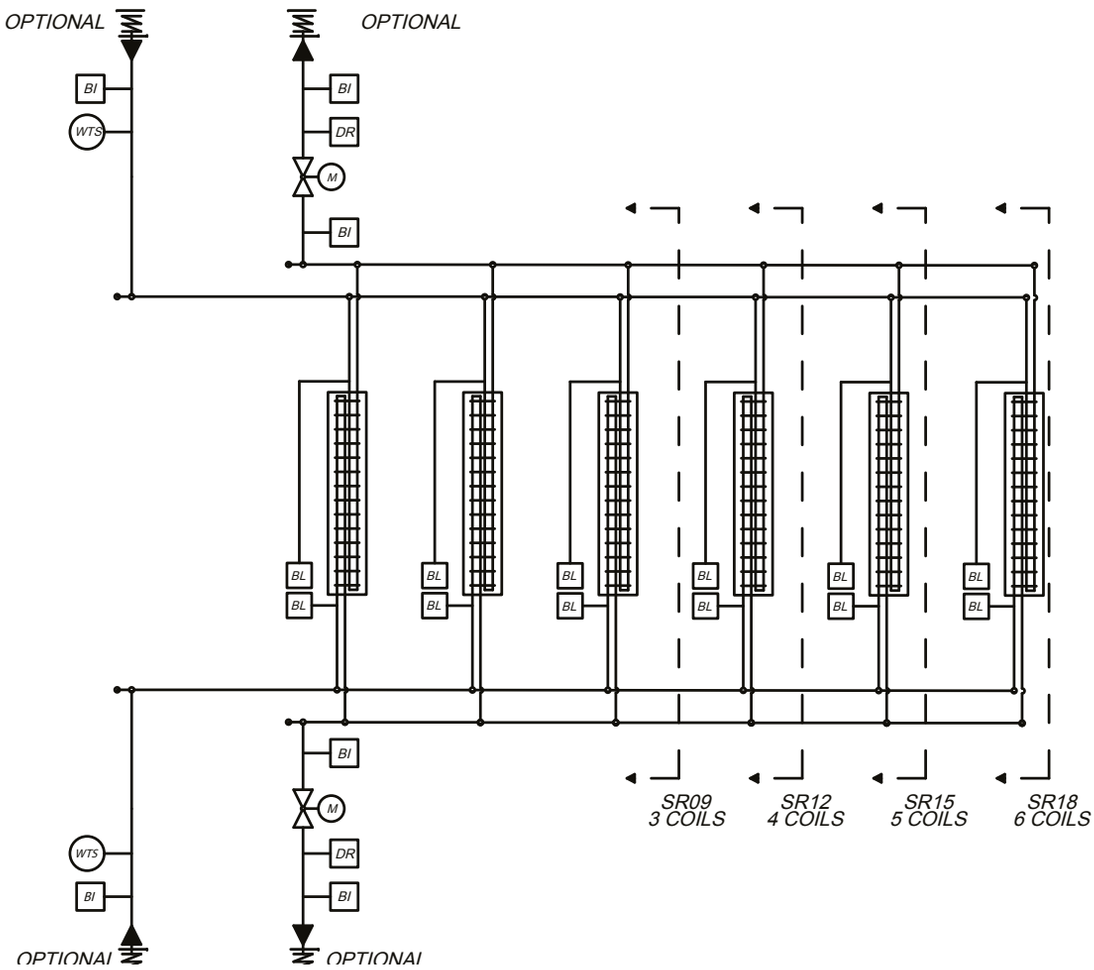
SR Single Circuit





Pipework Schematics

SR Dual Circuit



BI — BINDER POINT

BL — BLEED VALVE

DR — DRAIN VALVE

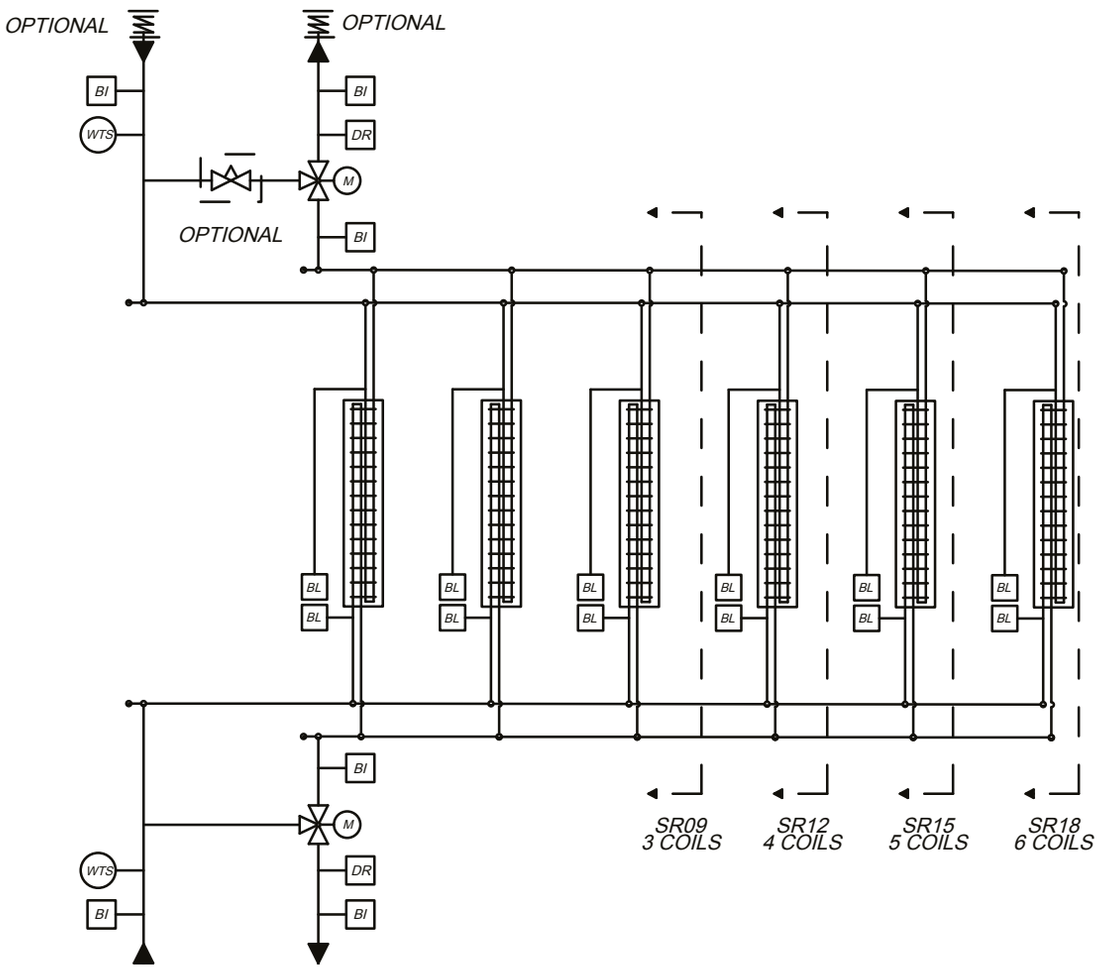
WTS — WATER TEMPERATURE SENSOR

M — 2-WAY REGULATING BALL VALVE (ACTUATOR DRIVEN)

THREADED CONNECTION (BSPT MALE)

Pipework Schematics

SR Dual Circuit



BI — *BINDER POINT*

BL — *BLEED VALVE*

DR — *DRAIN VALVE*

2-WAY REGULATING BALL VALVE

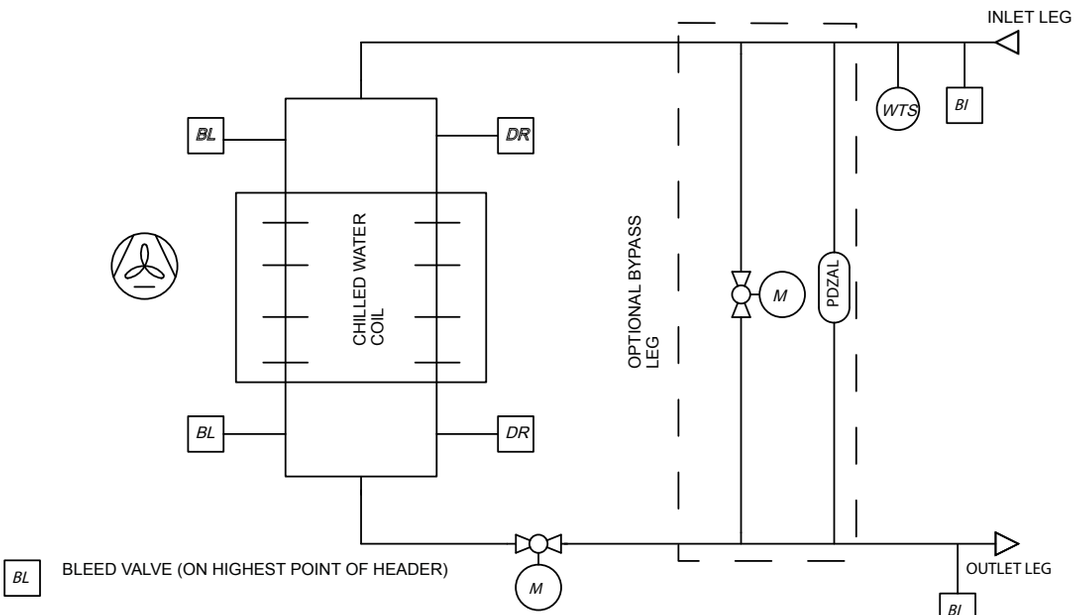
WTS — *WATER TEMPERATURE SENSOR*

3-WAY REGULATING BALL VALVE (ACTUATOR DRIVEN)

THREADED CONNECTION (BSPT MALE)

Pipework Schematics

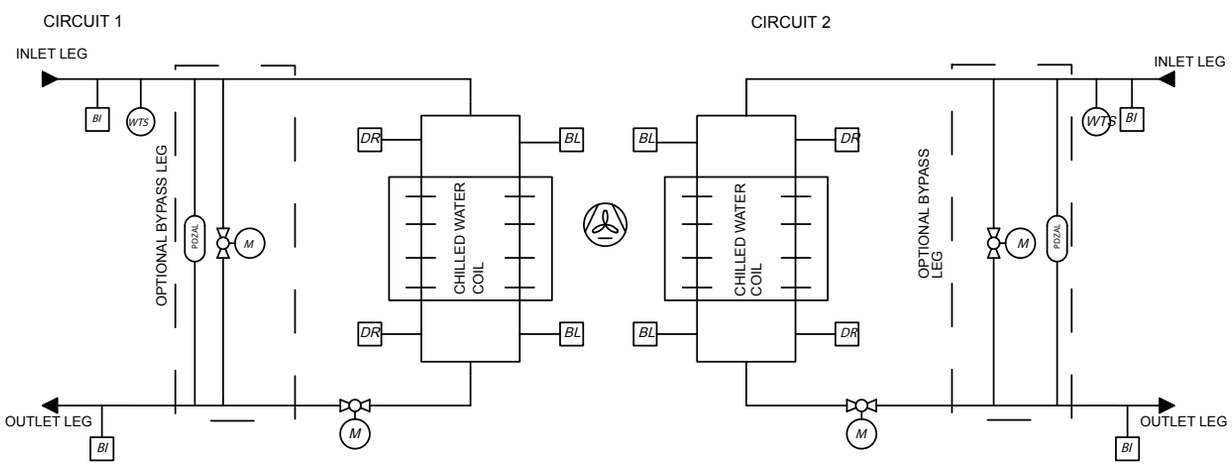
SD Single Circuit



BL BLEED VALVE (ON HIGHEST POINT OF HEADER)

DR DRAIN VALVE (ON LOWEST POINT OF HEADER)

SD Dual Circuit



BL BLEED VALVE (ON HIGHEST POINT OF HEADER)

DR DRAIN VALVE (ON LOWEST POINT OF HEADER)

BI BINDER POINT

DR DRAIN VALVE

M 2 WAY REGULATING BALL VALVE (ACTUATOR DRIVEN)

PDZAL DIFFERENTIAL PRESSURE TRANDUCER

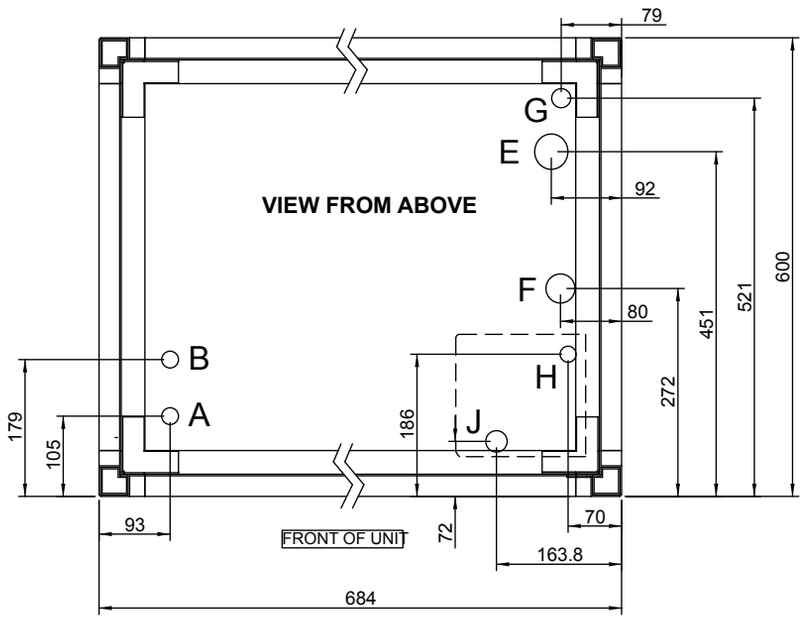
BL BLEED VALVE

WTS WATER TEMPERATURE SENSOR

CENTRIFUGAL FAN

Incoming Services

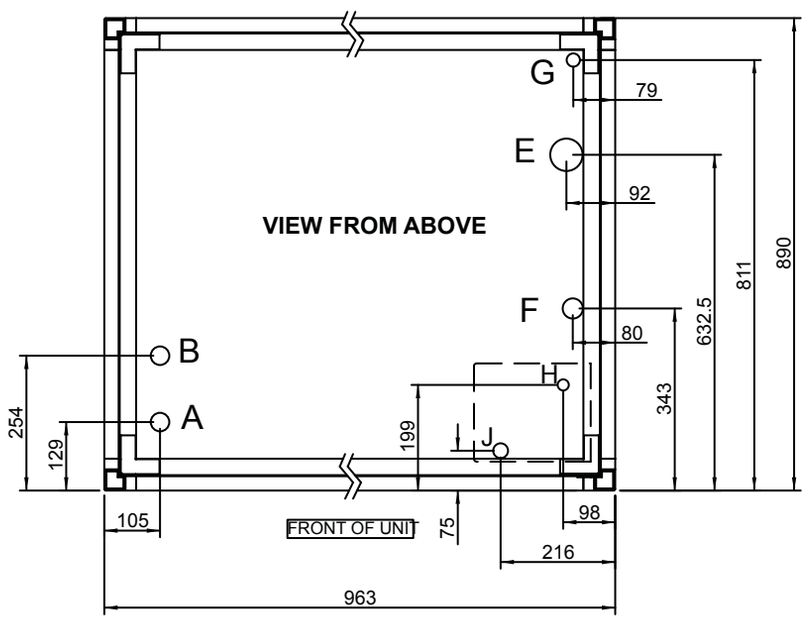
SN Single Circuit



A DIA 22mm WATER INLET
B DIA 22mm WATER OUTLET
E POWER (CONNECT VIA EXTERNAL CONNECTION BOX)
F CONTROLS (CONNECT VIA CONNECTORS)
G CONDENSATE DRAIN (TEE TO HUMIDIFIER DRAIN - IF USED)

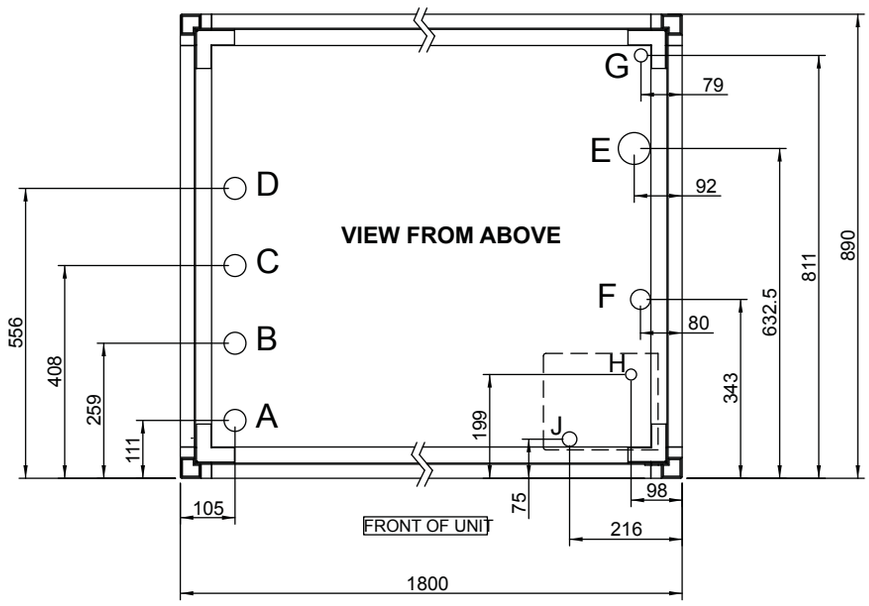
Incoming Services

SR Single Circuit



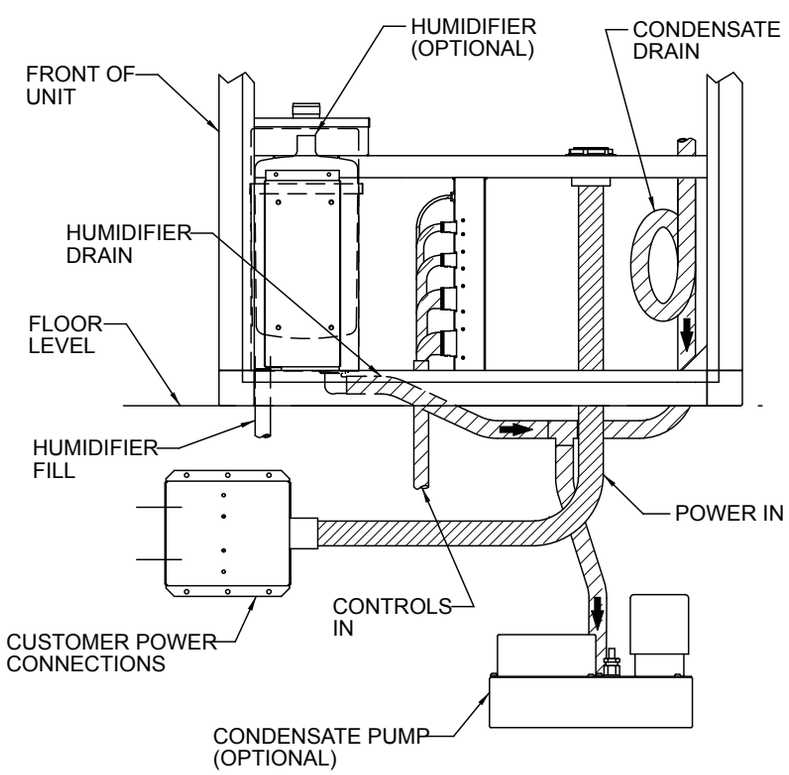
A DIA 35mm WATER INLET
B DIA 35mm WATER OUTLET
E POWER (CONNECT VIA EXTERNAL CONNECTION BOX)
F CONTROLS (CONNECT VIA CONNECTORS)
G CONDENSATE DRAIN (TEE TO HUMIDIFIER DRAIN - IF USED)
H HUMIDIFIER DRAIN (TEE TO CONDENSATE DRAIN)
J HUMIDIFIER FILL

SR Dual Circuit



A DIA 42mm CIRCUIT 1 WATER INLET
B DIA 42mm CIRCUIT 1 WATER OUTLET
C DIA 42mm CIRCUIT 2 WATER INLET
D DIA 42mm CIRCUIT 2 WATER OUTLET
E POWER (CONNECT VIA EXTERNAL CONNECTION BOX)
F CONTROLS (CONNECT VIA CONNECTORS)
G CONDENSATE DRAIN (TEE TO HUMIDIFIER DRAIN - IF USED)
H HUMIDIFIER DRAIN (TEE TO CONDENSATE DRAIN)
J HUMIDIFIER FILL

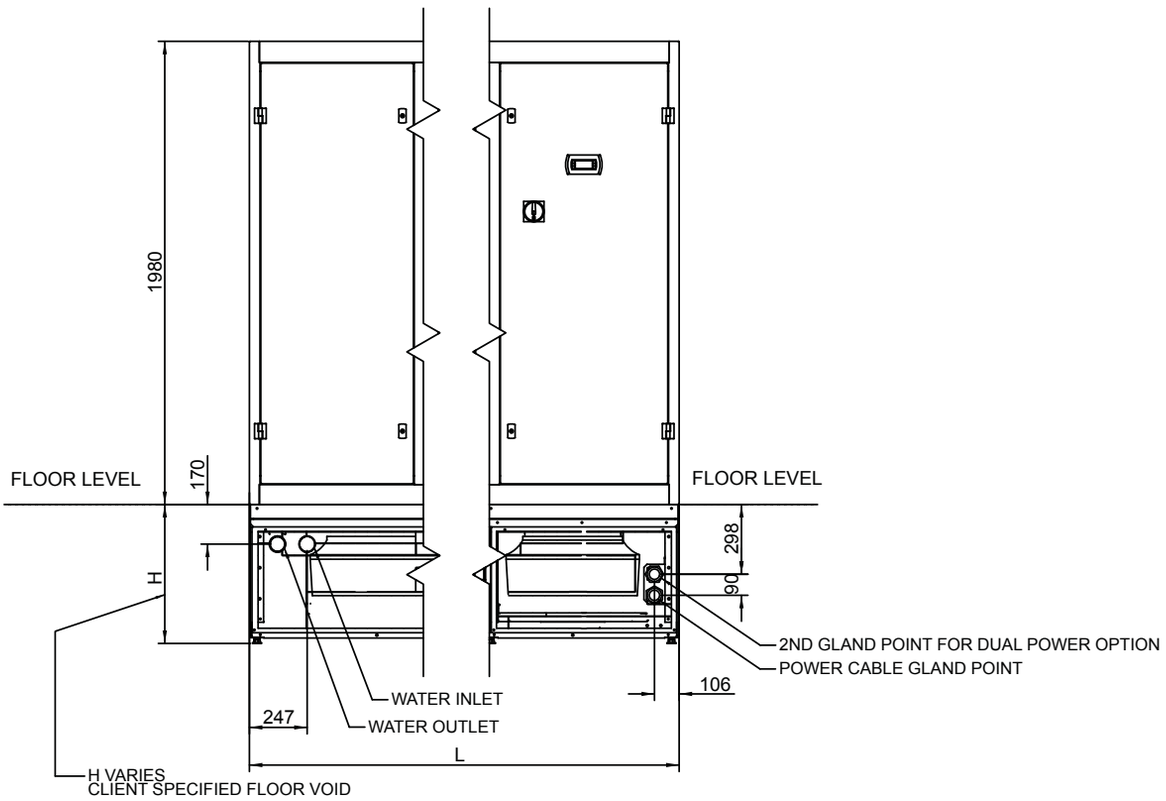
SN, SR Electrical Power Connections



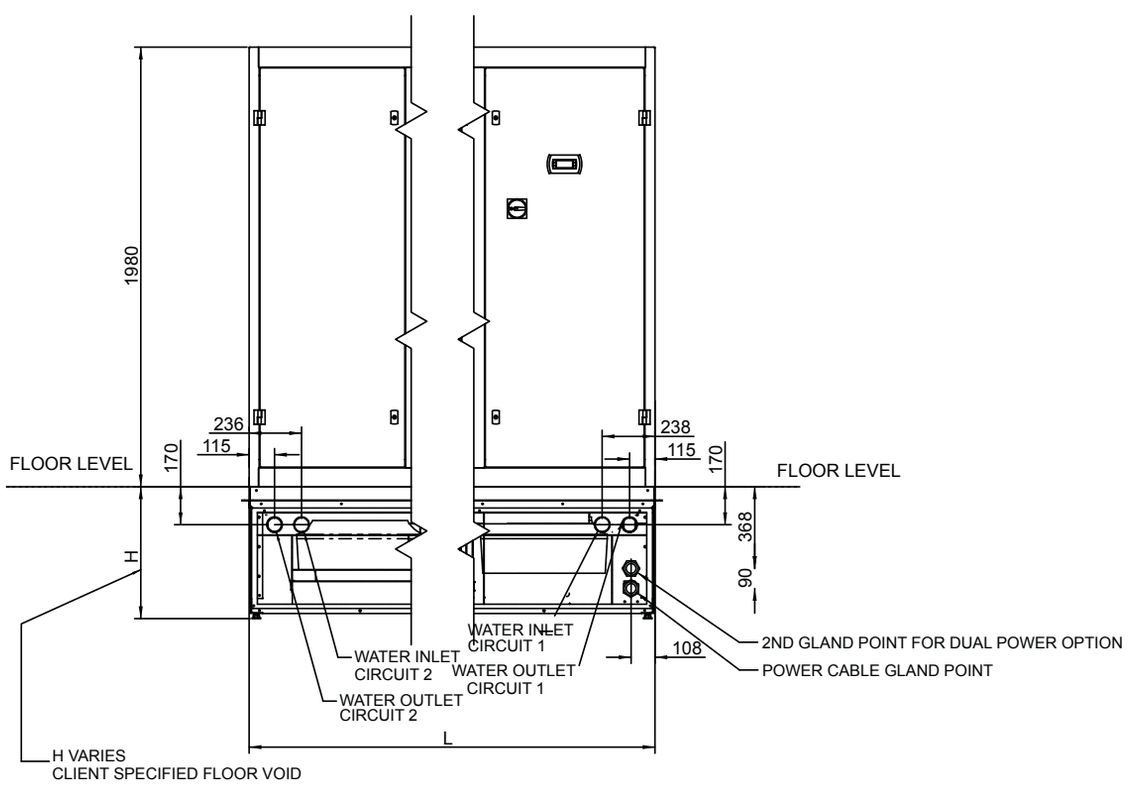
VIEW ON RIGHT HAND SIDE

Incoming Services

SD Single Circuit



SD Dual Circuit



Glycol

Specific Heat Capacity (C_p) (kj/kg K)

Water/Glycol Temperature °C	Ethylene Glycol (Volume) / Freezing Point °C				
	0% / 0°C	10% / -4°C	20% / -9°C	30% / -15°C	40% / -23°C
	Cp	Cp	Cp	Cp	Cp
20	4.183	3.972	3.815	3.645	3.468
25	4.181	3.981	3.826	3.660	3.485
30	4.179	3.989	3.838	3.674	3.502
35	4.178	3.998	3.849	3.688	3.518
40	4.179	4.007	3.861	3.702	3.535
45	4.181	4.015	3.872	3.716	3.552

Density (ρ) (kg/m³)

Water/Glycol Temperature °C	Ethylene Glycol (Volume) / Freezing Point °C				
	0% / 0°C	10% / -4°C	20% / -9°C	30% / -15°C	40% / -23°C
	ρ	ρ	ρ	ρ	ρ
20	998	1013	1030	1045	1060
25	997	1012	1028	1043	1058
30	996	1010	1026	1041	1055
35	994	1008	1024	1039	1053
40	992	1006	1022	1036	1050
45	990	1003	1020	1035	1048

Pressure Drop Correction Factor (P_x)

Water/Glycol Temperature °C	Ethylene Glycol (Volume)				
	0%	10%	20%	30%	40%
	Px	Px	Px	Px	Px
20	0.983	1.0125	1.054	1.0958	1.15

(1) All data based upon ASHRAE fundamentals 2001.

Technical Data SN C000 Units

Performance Data SN C000

		Chilled water inlet and outlet temperatures							
	Air On	7 / 12 °C		10 / 15 °C		8 / 14 °C		10 / 16 °C	
	Temp. (°C)	TC	SC	TC	SC	TC	SC	TC	SC
	/ %RH	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)
SN06D010-C000-0	22 / 50	11.0	9.7	7.1	7.1	8.0	8.0	4.0	4.0
	24 / 45	12.8	11.4	8.7	8.7	9.3	9.2	7.9	7.9
	26 / 40	14.5	13.0	10.3	10.3	10.9	10.6	9.5	9.5
SN06D015-C000-0	22 / 50	14.4	13.1	9.6	9.6	10.9	10.9	8.5	8.5
	24 / 45	16.8	15.3	11.8	11.8	12.7	12.7	10.7	10.7
	26 / 40	18.9	17.5	13.9	13.9	14.7	14.7	12.8	12.8
SN09D020-C000-0	22 / 50	18.6	16.7	12.2	12.2	14.1	14.1	10.7	10.7
	24 / 45	21.7	19.5	15.0	15.0	16.0	16.0	13.6	13.6
	26 / 40	24.5	22.2	17.7	17.7	18.7	18.4	16.3	16.3
SN09D025-C000-0	22 / 50	23.0	21.2	15.5	15.5	17.6	17.6	13.7	13.7
	24 / 45	26.9	24.8	19.1	19.1	21.5	21.5	17.3	17.3
	26 / 40	30.4	28.3	22.5	22.5	24.0	24.0	20.7	20.7
SN12D030-C000-0	22 / 50	26.9	24.3	17.8	17.8	20.4	20.4	15.6	15.6
	24 / 45	31.3	28.3	21.8	21.8	23.4	23.4	19.8	19.8
	26 / 40	35.4	32.3	25.7	25.7	27.1	27.0	23.7	23.7
SN12D035-C000-0	22 / 50	31.1	28.7	21.0	21.0	23.8	23.8	18.5	18.5
	24 / 45	36.3	33.5	25.8	25.8	29.0	29.0	23.4	23.4
	26 / 40	41.0	38.3	30.4	30.4	32.5	32.5	28.0	28.0

Technical Data SN C000 Units

Performance Data SN C000

		Chilled water inlet and outlet temperatures							
	Air On	12 / 17 °C		15 / 20 °C		18 / 24 °C		20 / 26 °C	
	Temp. (°C) / %RH	TC (kW)	SC (kW)	TC (kW)	SC (kW)	TC (kW)	SC (kW)	TC (kW)	SC (kW)
SN06D010-C000-0	33 / 26.7	13.5	13.5	10.9	10.9	7.9	7.9	6.3	6.3
	35 / 23.9	14.8	14.8	12.2	12.2	9.1	9.1	7.6	7.6
	37 / 21.4	16.1	16.1	13.4	13.4	10.3	10.3	8.7	8.7
SN06D015-C000-0	33 / 26.7	18.3	18.3	14.8	14.8	10.6	10.6	8.5	8.5
	35 / 23.9	20.1	20.1	16.5	16.5	12.2	12.2	10.2	10.2
	37 / 21.4	21.8	21.8	18.2	18.2	13.8	13.8	11.8	11.8
SN09D020-C000-0	33 / 26.7	23.3	23.3	18.8	18.8	13.5	13.5	10.9	10.9
	35 / 23.9	25.5	25.5	21.0	21.0	15.6	15.6	13.0	13.0
	37 / 21.4	27.7	27.7	23.1	23.1	17.6	17.6	15.0	15.0
SN09D025-C000-0	33 / 26.7	29.7	29.7	23.9	23.9	17.1	17.1	13.8	13.8
	35 / 23.9	32.6	32.6	26.7	26.7	19.8	19.8	16.5	16.5
	37 / 21.4	35.4	35.4	29.5	29.5	22.4	22.4	19.0	19.0
SN12D030-C000-0	33 / 26.7	33.9	33.9	27.3	27.3	19.6	19.6	15.8	15.8
	35 / 23.9	37.2	37.2	30.5	30.5	22.7	22.7	18.9	18.9
	37 / 21.4	40.3	40.3	33.6	33.6	25.6	25.6	21.8	21.8
SN12D035-C000-0	33 / 26.7	40.1	40.1	32.3	32.3	23.1	23.1	18.6	18.6
	35 / 23.9	44.1	44.1	36.2	36.2	26.8	26.8	22.3	22.3
	37 / 21.4	47.8	47.8	39.8	39.8	30.3	30.3	25.8	25.8

Technical Data SN C000 Units SN06D010-C000

Mechanical Data

			SN06D010-C000-0	SN06D010-C000-1	SN06D010-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	12.8	12.8	12.8
Fan Power Input (Fan Gain)	(2)	kW	0.25	0.25	0.25
Dimensions - W x D x H		mm	684 x 600 x 1980		
Weight - Machine / Operating	(3)	kg	181 / 194		
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy		
Material / Colour			Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	13	13	13
Water flow rate		l/s	0.61	0.61	0.61
Pressure drop		kPa	18.7	18.7	18.7
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 0.78	1 x 0.78	1 x 0.78
Speed @25Pa ESP / Maximum ESP		rpm	1954 / 2680	1954 / 2680	1954 / 2680
Maximum ESP		Pa	552	552	552
Nominal Airflow		m³/s	0.70	0.70	0.70
Connections					
Water Inlet / Outlet -		mm	22	22	22
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			6	6	6
Electric Heating (Total)		kW	3.0	2.7	3.0
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		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SN C000 Units SN06D010-C000

Electrical Data

			SN06D010-C000-0	SN06D010-C000-1	SN06D010-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	10.3	10.3	18.9
Recommended Mains Fuse Size		A	16	16	25
Unit Data - Cooling Only					
Nominal Run Amps		A	2.55	2.55	5.02
Recommended Mains Fuse Size		A	10	10	10
Max Mains Incoming Cable Size		mm^2	16	16	16
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 0.78	1 x 0.78	1 x 0.78
Full Load Amps		A	1.6	1.6	3.1
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			1	1	1
Number of Elements			3	3	3
Rating		kW	3.0	2.7	3.0
Current Per Phase		A	4.4	4.2	7.9
Humidifier					
Capacity		kg/hr	3	3	3
Rating		kW	2.25	2.25	2.25
Full Load Amps		A	3.3	3.5	6
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SN C000 Units SN06D015-C000

Mechanical Data

			SN06D015-C000-0	SN06D015-C000-1	SN06D015-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	16.8	16.8	16.8
Fan Power Input (Fan Gain)	(2)	kW	0.62	0.62	0.62
Dimensions - W x D x H		mm	684 x 600 x 1980		
Weight - Machine / Operating	(3)	kg	181 / 194		
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021)		
			Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy		
Material / Colour			Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	13	13	13
Water flow rate		l/s	0.80	0.80	0.80
Pressure drop		kPa	31.8	31.8	31.8
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 0.78	1 x 0.78	1 x 0.78
Speed @25Pa ESP / Maximum ESP		rpm	2590 / 2680	2590 / 2680	2590 / 2680
Maximum ESP		Pa	87	87	87
Nominal Airflow		m³/s	0.95	0.95	0.95
Connections					
Water Inlet / Outlet -		mm	22	22	22
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			6	6	6
Electric Heating (Total)		kW	3.0	2.7	3.0
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		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SN C000 Units SN06D015-C000

Electrical Data

			SN06D015-C000-0	SN06D015-C000-1	SN06D015-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	10.3	10.3	18.9
Recommended Mains Fuse Size		A	16	16	25
Unit Data - Cooling Only					
Nominal Run Amps		A	2.55	2.55	5.02
Recommended Mains Fuse Size		A	10	10	10
Max Mains Incoming Cable Size		mm^2	16	16	16
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 0.78	1 x 0.78	1 x 0.78
Full Load Amps		A	1.6	1.6	3.1
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			1	1	1
Number of Elements			3	3	3
Rating		kW	3.0	2.7	3.0
Current Per Phase		A	4.4	4.2	7.9
Humidifier					
Capacity		kg/hr	3	3	3
Rating		kW	2.25	2.25	2.25
Full Load Amps		A	3.3	3.5	6
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SN C000 Units SN09D020-C000

Mechanical Data

			SN09D020-C000-0	SN09D020-C000-1	SN09D020-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	21.7	21.7	21.7
Fan Power Input (Fan Gain)	(2)	kW	0.65	0.65	0.59
Dimensions - W x D x H		mm	963 x 600 x 1980		
Weight - Machine / Operating	(3)	kg	242 / 262		
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021)		
			Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy		
Material / Colour			Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	19	19	19
Water flow rate		l/s	1.03	1.03	1.03
Pressure drop		kPa	23.2	23.2	23.2
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 2.5	1 x 2.5	1 x 1.9
Speed @25Pa ESP / Maximum ESP		rpm	2120 / 2970	2120 / 2970	2013 / 2720
Maximum ESP		Pa	1126	1126	831
Nominal Airflow		m³/s	1.20	1.20	1.20
Connections					
Water Inlet / Outlet -		mm	28	28	28
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			9	9	9
Electric Heating (Total)		kW	6.0	5.4	6.0
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		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SN C000 Units SN09D020-C000

Electrical Data

			SN09D020-C000-0	SN09D020-C000-1	SN09D020-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	22.4	22.5	39.4
Recommended Mains Fuse Size		A	32	32	50
Unit Data - Cooling Only					
Nominal Run Amps		A	5	5	7.8
Recommended Mains Fuse Size		A	10	10	10
Max Mains Incoming Cable Size		mm^2	16	16	35
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 1.96	1 x 1.96	1 x 1.96
Full Load Amps		A	4	4	5.8
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	6.0	5.4	6.0
Current Per Phase		A	8.7	8.3	15.8
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	9.2	15.8
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SN C000 Units SN09D025-C000

Mechanical Data

			SN09D025-C000-0	SN09D025-C000-1	SN09D025-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	26.9	26.9	26.5
Fan Power Input (Fan Gain)	(2)	kW	1.32	1.32	1.18
Dimensions - W x D x H		mm	963 x 600 x 1980		
Weight - Machine / Operating	(3)	kg	242 / 262		
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy		
Material / Colour			Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	19	19	19
Water flow rate		l/s	1.28	1.28	1.26
Pressure drop		kPa	35.4	35.4	34.4
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 2.5	1 x 2.5	1 x 1.9
Speed @25Pa ESP / Maximum ESP		rpm	2474 / 2970	2474 / 2970	2515 / 2720
Maximum ESP		Pa	618	618	310
Nominal Airflow		m³/s	1.55	1.55	1.55
Connections					
Water Inlet / Outlet -		mm	28	28	28
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			9	9	9
Electric Heating (Total)		kW	6.0	5.4	6.0
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		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SN C000 Units SN09D025-C000

Electrical Data

			SN09D025-C000-0	SN09D025-C000-1	SN09D025-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	22.4	22.5	39.4
Recommended Mains Fuse Size		A	32	32	50
Unit Data - Cooling Only					
Nominal Run Amps		A	5	5	7.8
Recommended Mains Fuse Size		A	10	10	10
Max Mains Incoming Cable Size		mm^2	16	16	35
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 2.5	1 x 2.5	1 x 1.9
Full Load Amps		A	4	4	5.8
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	6.0	5.4	6.0
Current Per Phase		A	8.7	8.3	15.8
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	9.2	15.8
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SN C000 Units SN12D030-C000

Mechanical Data

			SN12D030-C000-0	SN12D030-C000-1	SN12D030-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	31.3	31.3	29.0
Fan Power Input (Fan Gain)	(2)	kW	0.99	0.99	0.78
Dimensions - W x D x H		mm	1242 x 600 x 1980		
Weight - Machine / Operating	(3)	kg	294 / 319		
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)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	25	25	25
Water flow rate		l/s	1.49	1.49	1.38
Pressure drop		kPa	24.8	24.8	21.4
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 2.4	1 x 2.4	1 x 1.95
Speed @25Pa ESP / Maximum ESP		rpm	1985 / 2400	1985 / 2400	1818 / 2250
Maximum ESP		Pa	589	589	557
Nominal Airflow		m³/s	1.75	1.75	1.60
Connections					
Water Inlet / Outlet -		mm	35	35	35
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			12	12	12
Electric Heating (Total)		kW	6.0	5.4	6.0
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		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SN C000 Units SN12D030-C000

Electrical Data

			SN12D030-C000-0	SN12D030-C000-1	SN12D030-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	22.3	22.4	39.5
Recommended Mains Fuse Size		A	32	32	50
Unit Data - Cooling Only					
Nominal Run Amps		A	4.9	4.9	7.9
Recommended Mains Fuse Size		A	10	10	10
Max Mains Incoming Cable Size		mm²	16	16	35
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 2.4	1 x 2.4	1 x 1.95
Full Load Amps		A	3.9	3.9	5.9
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	6.0	5.4	6.0
Current Per Phase		A	8.7	8.3	15.8
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	9.2	15.8
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SN C000 Units SN12D035-C000

Mechanical Data

			SN12D035-C000-0	SN12D035-C000-1	SN12D035-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	36.3	36.3	33.5
Fan Power Input (Fan Gain)	(2)	kW	1.75	1.75	1.31
Dimensions - W x D x H		mm	1242 x 600 x 1980		
Weight - Machine / Operating	(3)	kg	294 / 319		
Construction			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021)		
			Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy		
Material / Colour			Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	25	25	25
Water flow rate		l/s	1.73	1.73	1.60
Pressure drop		kPa	32.9	32.9	28.2
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 2.4	1 x 2.4	1 x 1.95
Speed @25Pa ESP / Maximum ESP		rpm	2361 / 2400	2361 / 2400	2138 / 2250
Maximum ESP		Pa	85	85	183
Nominal Airflow		m³/s	2.10	2.10	1.90
Connections					
Water Inlet / Outlet -		mm	35	35	35
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			12	12	12
Electric Heating (Total)		kW	6.0	5.4	6.0
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		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SN C000 Units SN12D035-C000

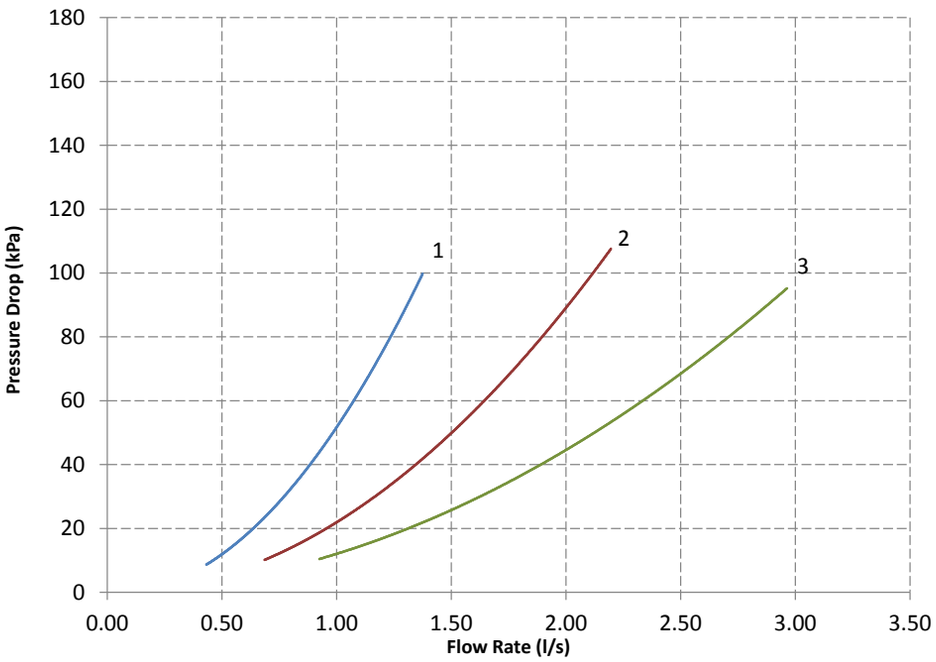
Electrical Data

			SN12D035-C000-0	SN12D035-C000-1	SN12D035-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	22.3	22.4	39.5
Recommended Mains Fuse Size		A	32	32	50
Unit Data - Cooling Only					
Nominal Run Amps		A	4.9	4.9	7.9
Recommended Mains Fuse Size		A	10	10	10
Max Mains Incoming Cable Size		mm²	16	16	35
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 2.4	1 x 2.4	1 x 1.95
Full Load Amps		A	3.9	3.9	5.9
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	6.0	5.4	6.0
Current Per Phase		A	8.7	8.3	15.8
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	9.2	15.8
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SN C000 Units

Waterside Pressure Drop Data



1 SN06D010-C000 / SN06D015-C000
2 SN09D020-C000 / SN09D025-C000
3 SN12D030-C000 / SN12D035-C000

- Includes coil, 2 or 3 port valve and pipework.

To calculate 3 port valve pressure drop:

ΔP valve = $\left(\frac{Q}{M}\right)^2$
where ΔP = Pressure Drop in kPa,

Q = Water Flow Rate in l/s and M = $\left(\frac{Kv}{36}\right)$

- Fluid 100% water.

	Valve Kv	M
SN06 C000	10.0	0.28
SN09 C000	16.0	0.44
SN12 C000	25.0	0.69

Technical Data

Sound Data

	Sound Measurement	Overall dB(A)	Frequency (Hz) dB							
			63	125	250	500	1000	2000	4000	8000
SN06D010-C000	Discharge Air	70	64	66	71	69	64	58	51	27
	Return Air	68	64	66	69	68	63	58	50	26
	Case Breakout	70	68	71	72	69	64	58	51	30
	Sound Pressure @ 3m	56	53	57	58	54	50	44	37	15
SN06D015-C000	Discharge Air	81	75	76	81	80	75	69	62	38
	Return Air	79	75	76	79	79	73	68	61	37
	Case Breakout	81	79	82	83	80	75	69	62	41
	Sound Pressure @ 3m	66	64	67	68	65	61	54	48	26
SN09D020-C000	Discharge Air	69	68	70	74	69	60	57	51	34
	Return Air	68	68	70	72	68	58	56	50	34
	Case Breakout	70	72	75	76	68	60	56	52	37
	Sound Pressure @ 3m	56	57	61	61	54	45	42	37	23
SN09D025-C000	Discharge Air	76	73	72	82	75	67	63	57	40
	Return Air	75	73	72	80	74	65	62	56	39
	Case Breakout	77	77	77	83	74	67	63	57	43
	Sound Pressure @ 3m	62	62	63	69	60	52	48	43	29
SN12D030-C000	Discharge Air	69	65	72	73	67	60	57	56	37
	Return Air	68	65	72	71	66	58	56	55	36
	Case Breakout	70	69	78	75	67	60	57	57	40
	Sound Pressure @ 3m	55	55	63	60	52	45	42	42	26
SN12D035-C000	Discharge Air	73	64	74	78	71	64	62	58	44
	Return Air	72	64	73	76	70	62	61	57	43
	Case Breakout	74	68	79	79	71	64	61	58	47
	Sound Pressure @ 3m	59	53	64	65	56	49	47	44	32

(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.

Technical Data SN C000 Units

Interconnecting Wiring

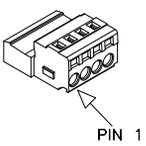
N1	o	←	Neutral (Supply 1)
301	o	←	L1 (Supply 1)
302	o	←	L2 (Supply 1)
303	o	←	L3 (Supply 1)

N2	o	←	Neutral (Supply 2)
304	o	←	L1 (Supply 2)
305	o	←	L2 (Supply 2)
306	o	←	L3 (Supply 2)

PE	o	←	Protective Earth

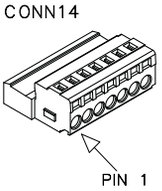
502	o	→	Fire Detector	Conn 17
583	o	←	Fire Detector	
583	o	→	Smoke Detector	
584	o	←	Smoke Detector	
502	o	→	Remote On/Off	Conn 14
522	o	←	Remote On/Off	
2	o	→	Condensate Pump Supply (230V)	Conn 16
N (3*)	o	→	Condensate Pump Supply (230V)	
534	o	→	Condensate Pump High Level Alarm	
535	o	←	Condensate Pump High Level Alarm	
609	o	→	Flood Detection Tape / Probe	
610	o	←	Flood Detection Tape / Probe	
810	o	→	Supply Air Temperature Sensor	
811	o	←	Supply Air Temperature Sensor	
560	o	→	Non-Critical Alarm N/O	Conn 14
561	o	→	Non-Critical Alarm Common	
563	o		Critical Alarm N/O	
564	o		Critical Alarm Common	
565	o		Critical Alarm N/C	
881	o	←	BMS Connection	Conn 15
882	o	←	BMS Connection	
883	o	←	BMS Connection	

CONN17



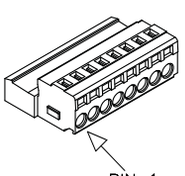
PIN No.	WIRE
1	502
2	583 or 584
3	2
4	N or 3

CONN14



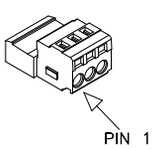
PIN No.	WIRE
1	502
2	522
3	560
4	561
5	563
6	564
7	565

CONN16



PIN No.	WIRE
1	2
2	N or 3
3	534
4	535
5	609
6	610
7	810
8	811

CONN15



PIN No.	WIRE
1	881
2	882
3	883

*For 220V/3PH NO neutral units the Neutral connection is replaced with a live phase.

Intentionally Blank

Technical Data SR C000 Units

Performance Data SR C000

Model	Air On Temp. (°C) / %RH	Chilled water inlet and outlet temperatures: 7 / 12 °C TC (kW)	7 / 12 °C SC (kW)	10 / 15 °C TC (kW)	10 / 15 °C SC (kW)	8 / 14 °C TC (kW)	8 / 14 °C SC (kW)	10 / 16 °C TC (kW)	10 / 16 °C SC (kW)
SR09D030-C000-0	22 / 50	30.0	26.1	19.3	19.3	21.4	20.6	17.3	17.3
	24 / 45	34.7	30.4	23.5	23.5	26.9	26.1	21.6	21.6
	26 / 40	39.0	34.5	27.6	27.6	29.3	27.3	25.6	25.6
SR09D040-C000-0	22 / 50	36.6	32.5	24.0	24.0	26.4	25.9	21.5	21.5
	24 / 45	42.3	37.7	29.2	29.2	31.6	30.1	26.8	26.8
	26 / 40	47.6	43.0	34.3	34.3	36.6	34.7	31.8	31.8
SR12D045-C000-0	22 / 50	43.5	38.2	28.2	28.2	31.2	30.2	25.3	25.3
	24 / 45	50.3	44.4	34.4	34.4	38.9	37.8	31.5	31.5
	26 / 40	56.6	50.5	40.3	40.3	42.9	40.3	37.4	37.4
SR12D055-C000-0	22 / 50	51.9	46.4	34.3	34.3	37.6	37.3	30.8	30.8
	24 / 45	60.1	54.0	41.8	41.8	45.2	43.3	38.3	38.3
	26 / 40	67.6	61.5	49.0	49.0	52.3	50.1	45.5	45.5
SR15D065-C000-0	22 / 50	60.4	53.6	39.7	39.7	43.7	42.8	35.6	35.6
	24 / 45	70.0	62.4	48.3	48.3	52.3	49.7	44.3	44.3
	26 / 40	78.7	71.0	56.6	56.6	60.4	57.4	52.6	52.6
SR15D075-C000-0	22 / 50	65.8	59.0	43.6	43.6	47.8	47.5	39.1	39.1
	24 / 45	76.3	68.6	53.1	53.1	57.4	55.2	48.7	48.7
	26 / 40	85.8	78.2	62.3	62.3	66.4	63.8	57.8	57.8
SR18D080-C000-0	22 / 50	73.1	64.9	48.0	48.0	52.8	51.9	43.1	43.1
	24 / 45	84.6	75.5	58.4	58.4	63.2	60.2	53.6	53.6
	26 / 40	95.2	85.9	68.5	68.5	73.1	69.5	63.7	63.7
SR18D095-C000-0	22 / 50	84.7	76.7	56.6	56.6	62.2	62.2	50.8	50.8
	24 / 45	98.3	89.3	69.0	69.0	74.4	72.4	63.3	63.3
	26 / 40	110.7	101.7	81.1	81.1	86.2	83.7	75.1	75.1

Technical Data SR C000 Units

Performance Data SR C000

		Chilled water inlet and outlet temperatures							
	Air On	12 / 17 °C		15 / 20 °C		18 / 24 °C		20 / 26 °C	
	Temp. (°C) / %RH	TC (kW)	SC (kW)	TC (kW)	SC (kW)	TC (kW)	SC (kW)	TC (kW)	SC (kW)
SR09D030-C000-0	33 / 26.7	36.0	36.0	29.1	29.1	21.1	21.1	17.1	17.1
	35 / 23.9	39.4	39.4	32.5	32.5	24.3	24.3	20.4	20.4
	37 / 21.4	42.7	42.7	35.7	35.7	27.4	27.4	23.4	23.4
SR09D040-C000-0	33 / 26.7	44.9	44.9	36.3	36.3	26.2	26.2	21.2	21.2
	35 / 23.9	49.2	49.2	40.5	40.5	30.2	30.2	25.3	25.3
	37 / 21.4	53.3	53.3	44.5	44.5	34.1	34.1	29.1	29.1
SR12D045-C000-0	33 / 26.7	52.7	52.7	42.6	42.6	30.8	30.8	25.0	25.0
	35 / 23.9	57.7	57.7	47.5	47.5	35.5	35.5	29.7	29.7
	37 / 21.4	62.5	62.5	52.2	52.2	40.0	40.0	34.2	34.2
SR12D055-C000-0	33 / 26.7	64.2	64.2	51.9	51.9	37.4	37.4	30.3	30.3
	35 / 23.9	70.4	70.4	57.9	57.9	43.2	43.2	36.1	36.1
	37 / 21.4	76.4	76.4	63.7	63.7	48.7	48.7	41.5	41.5
SR15D065-C000-0	33 / 26.7	74.2	74.2	59.9	59.9	43.3	43.3	35.1	35.1
	35 / 23.9	81.2	81.2	66.9	66.9	49.9	49.9	41.7	41.7
	37 / 21.4	88.1	88.1	73.5	73.5	56.3	56.3	48.0	48.0
SR15D075-C000-0	33 / 26.7	81.7	81.7	66.0	66.0	47.6	47.6	38.5	38.5
	35 / 23.9	89.5	89.5	73.7	73.7	54.9	54.9	45.9	45.9
	37 / 21.4	97.1	97.1	81.0	81.0	61.9	61.9	52.8	52.8
SR18D080-C000-0	33 / 26.7	89.8	89.8	72.6	72.6	52.4	52.4	42.4	42.4
	35 / 23.9	98.4	98.4	80.9	80.9	60.4	60.4	50.5	50.5
	37 / 21.4	106.6	106.6	89.0	89.0	68.1	68.1	58.1	58.1
SR18D095-C000-0	33 / 26.7	106.3	106.3	85.8	85.8	61.8	61.8	50.0	50.0
	35 / 23.9	116.6	116.6	95.9	95.9	71.4	71.4	59.6	59.6
	37 / 21.4	126.5	126.5	105.5	105.5	80.5	80.5	68.7	68.7

Technical Data SR C000 Units SR09D030-C000

Mechanical Data

			SR09D030-C000-0	SR09D030-C000-1	SR09D030-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	34.7	34.7	34.7
Fan Power Input (Fan Gain)	(2)	kW	0.8	0.8	0.8
Dimensions - W x D x H		mm	963 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	307 / 337		
Construction Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling/Dehum Stages			1 (Modulated) / 1		
Water volume		l	30	30	30
Water flow rate		l/s	1.65	1.65	1.65
Pressure drop		kPa	25.9	25.9	25.9
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 1.96	1 x 1.96	1 x 1.96
Speed @25Pa ESP / Maximum ESP		rpm	1174 / 1560	1174 / 1560	1174 / 1560
Maximum ESP		Pa	463	463	463
Nominal Airflow		m^3/s	1.85	1.85	1.85
Connections					
Water Inlet / Outlet -		mm	35	35	35
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			9	9	9
Electric Heating (Total)		kW	7.5	6.8	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	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		
Upgraded Fan Motor - EC Motor			Backwards Curved, Centrifugal Direct Drive		
Quantity x Motor Size	(4)	kW	1 x 3.6	1 x 3.6	1 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1521 / 2260	1521 / 2260	1527 / 2260
Maximum ESP		Pa	1010	1010	1010

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C000 Units SR09D030-C000

Electrical Data

			SR09D030-C000-0	SR09D030-C000-1	SR09D030-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	26.4	26.3	48.5
Recommended Mains Fuse Size		A	32	32	63
Unit Data - Cooling Only					
Nominal Run Amps		A	4	4	7.9
Recommended Mains Fuse Size		A	10	10	10
Max Mains Incoming Cable Size		mm²	16	16	35
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 1.96	1 x 1.96	1 x 1.96
Full Load Amps		A	3	3	5.9
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			1	1	1
Number of Elements			3	3	3
Rating		kW	7.5	6.77	7.5
Current Per Phase		A	10.9	10.3	19.7
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	9.2	15.8
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 3.6	1 x 3.6	1 x 3.6
Full Load Amps		A	5.8	5.8	11

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C000 Units SR09D040-C000

Mechanical Data

			SR09D040-C000-0	SR09D040-C000-1	SR09D040-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	42.3	42.3	42.3
Fan Power Input (Fan Gain)	(2)	kW	1.45	1.45	1.45
Dimensions - W x D x H		mm	963 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	307 / 337		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	30	30	30
Water flow rate		l/s	2.01	2.01	2.01
Pressure drop		kPa	37.4	37.4	37.4
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 1.96	1 x 1.96	1 x 1.96
Speed @25Pa ESP / Maximum ESP		rpm	1440 / 1560	1440 / 1560	1440 / 1560
Maximum ESP		Pa	202	202	202
Nominal Airflow		m³/s	2.30	2.30	2.30
Connections					
Water Inlet / Outlet -		mm	35	35	35
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			9	9	9
Electric Heating (Total)		kW	7.5	6.8	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	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		
Upgraded Fan Motor - EC Motor			Backwards Curved, Centrifugal Direct Drive		
Quantity x Motor Size	(4)	kW	1 x 3.6	1 x 3.6	1 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1863 / 2260	1863 / 2260	1932 / 2260
Maximum ESP		Pa	678	678	547

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C000 Units SR09D040-C000

Electrical Data

			SR09D040-C000-0	SR09D040-C000-1	SR09D040-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	26.4	26.3	48.5
Recommended Mains Fuse Size		A	32	32	63
Unit Data - Cooling Only					
Nominal Run Amps		A	4	4	7.9
Recommended Mains Fuse Size		A	10	10	10
Max Mains Incoming Cable Size		mm^2	16	16	35
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 1.96	1 x 1.96	1 x 1.96
Full Load Amps		A	3	3	5.9
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			1	1	1
Number of Elements			3	3	3
Rating		kW	7.5	6.77	7.5
Current Per Phase		A	10.9	10.3	19.7
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	9.2	15.8
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 3.6	1 x 3.6	1 x 3.6
Full Load Amps		A	5.8	5.8	11

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C000 Units SR12D045-C000

Mechanical Data

			SR12D045-C000-0	SR12D045-C000-1	SR12D045-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	50.3	50.3	50.3
Fan Power Input (Fan Gain)	(2)	kW	1.25	1.25	1.25
Dimensions - W x D x H		mm	1242 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	380 / 420		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	40	40	40
Water flow rate		l/s	2.4	2.4	2.4
Pressure drop		kPa	30.8	30.8	30.8
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 2.9	1 x 2.9	1 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1313 / 1660	1313 / 1660	1313 / 1660
Maximum ESP		Pa	508	508	508
Nominal Airflow		m^3/s	2.70	2.70	2.70
Connections					
Water Inlet / Outlet -		mm	42	42	42
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			12	12	12
Electric Heating (Total)		kW	15.0	13.5	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	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		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C000 Units SR12D045-C000

Electrical Data

			SR12D045-C000-0	SR12D045-C000-1	SR12D045-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	35.8	35.2	64.7
Recommended Mains Fuse Size		A	50	50	80
Unit Data - Cooling Only					
Nominal Run Amps		A	5.43	5.43	9.5
Recommended Mains Fuse Size		A	10	10	16
Max Mains Incoming Cable Size		mm²	35	35	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 2.9	1 x 2.9	1 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15	13.54	15
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	9.2	15.8
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C000 Units SR12D055-C000

Mechanical Data

			SR12D055-C000-0	SR12D055-C000-1	SR12D055-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	60.1	60.1	60.1
Fan Power Input (Fan Gain)	(2)	kW	2.34	2.34	2.34
Dimensions - W x D x H		mm	1242 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	380 / 420		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	40	40	40
Water flow rate		l/s	2.86	2.86	2.86
Pressure drop		kPa	41.9	41.9	41.9
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 2.9	1 x 2.9	1 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1592 / 1660	1592 / 1660	1592 / 1660
Maximum ESP		Pa	129	129	129
Nominal Airflow		m³/s	3.30	3.30	3.30
Connections					
Water Inlet / Outlet -		mm	42	42	42
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			12	12	12
Electric Heating (Total)		kW	15.0	13.5	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	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		
Upgraded Fan Motor - EC Motor			N/A		
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C000 Units SR12D055-C000

Electrical Data

			SR12D055-C000-0	SR12D055-C000-1	SR12D055-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	35.8	35.2	64.7
Recommended Mains Fuse Size		A	50	50	80
Unit Data - Cooling Only					
Nominal Run Amps		A	5.43	5.43	9.5
Recommended Mains Fuse Size		A	10	10	16
Max Mains Incoming Cable Size		mm²	35	35	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 2.9	1 x 2.9	1 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15	13.54	15
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	9.2	15.8
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C000 Units SR15D065-C000

Mechanical Data

			SR15D065-C000-0	SR15D065-C000-1	SR15D065-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	70.0	70.0	70.0
Fan Power Input (Fan Gain)	(2)	kW	2.12	2.12	2.12
Dimensions - W x D x H		mm	1521 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	461 / 512		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	51	51	51
Water flow rate		l/s	3.33	3.33	3.33
Pressure drop		kPa	46.8	46.8	46.8
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 1.96	2 x 1.96	2 x 1.96
Speed @25Pa ESP / Maximum ESP		rpm	1276 / 1560	1276 / 1560	1276 / 1560
Maximum ESP		Pa	354	354	354
Nominal Airflow		m^3/s	3.80	3.80	3.80
Connections					
Water Inlet / Outlet -		mm	42	42	42
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			15	15	15
Electric Heating (Total)		kW	15.0	13.5	15.0
Humidifier					
Capacity		kg/hr	15	15	15
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		
Upgraded 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	1632 / 2260	1632 / 2260	1701 / 2260
Maximum ESP		Pa	903	903	854

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C000 Units SR15D065-C000

Electrical Data

			SR15D065-C000-0	SR15D065-C000-1	SR15D065-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	50.6	50.3	93
Recommended Mains Fuse Size		A	63	63	125
Unit Data - Cooling Only					
Nominal Run Amps		A	7	7	13.8
Recommended Mains Fuse Size		A	10	10	16
Max Mains Incoming Cable Size		mm²	35	35	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 1.96	2 x 1.96	2 x 1.96
Full Load Amps		A	3	3	5.9
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15	13.54	15
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	15	15	15
Rating		kW	11.25	11.25	11.25
Full Load Amps		A	16.3	17.1	29.6
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 3.6	2 x 3.6	2 x 3.6
Full Load Amps		A	5.8	5.8	11

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C000 Units SR15D075-C000

Mechanical Data

			SR15D075-C000-0	SR15D075-C000-1	SR15D075-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	76.3	76.3	76.3
Fan Power Input (Fan Gain)	(2)	kW	2.79	2.79	2.79
Dimensions - W x D x H		mm	1521 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	461 / 512		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	51	51	51
Water flow rate		l/s	3.63	3.63	3.63
Pressure drop		kPa	54.4	54.4	54.4
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 1.96	2 x 1.96	2 x 1.96
Speed @25Pa ESP / Maximum ESP		rpm	1400 / 1560	1400 / 1560	1400 / 1560
Maximum ESP		Pa	227	227	227
Nominal Airflow		m³/s	4.20	4.20	4.20
Connections					
Water Inlet / Outlet -		mm	42	42	42
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			15	15	15
Electric Heating (Total)		kW	15.0	13.5	15.0
Humidifier					
Capacity		kg/hr	15	15	15
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		
Upgraded 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	1792 / 2260	1792 / 2260	1865 / 2260
Maximum ESP		Pa	753	753	660

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C000 Units SR15D075-C000

Electrical Data

			SR15D075-C000-0	SR15D075-C000-1	SR15D075-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	50.6	50.3	93
Recommended Mains Fuse Size		A	63	63	125
Unit Data - Cooling Only					
Nominal Run Amps		A	7	7	13.8
Recommended Mains Fuse Size		A	10	10	16
Max Mains Incoming Cable Size		mm²	35	35	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 1.96	2 x 1.96	2 x 1.96
Full Load Amps		A	3	3	5.9
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15	13.54	15
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	15	15	15
Rating		kW	11.25	11.25	11.25
Full Load Amps		A	16.3	17.1	29.6
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 3.6	2 x 3.6	2 x 3.6
Full Load Amps		A	5.8	5.8	11

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C000 Units SR18D080-C000

Mechanical Data

			SR18D080-C000-0	SR18D080-C000-1	SR18D080-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	84.6	84.6	84.6
Fan Power Input (Fan Gain)	(2)	kW	2.22	2.22	2.22
Dimensions - W x D x H		mm	1800 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	528 / 593		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	65	65	65
Water flow rate		l/s	4.03	4.03	4.03
Pressure drop		kPa	35.3	35.3	35.3
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1227 / 1660	1227 / 1660	1227 / 1660
Maximum ESP		Pa	557	557	557
Nominal Airflow		m^3/s	4.60	4.60	4.60
Connections					
Water Inlet / Outlet -		mm	54	54	54
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			18	18	18
Electric Heating (Total)		kW	22.5	20.3	22.5
Humidifier					
Capacity		kg/hr	15	15	15
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		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C000 Units SR18D080-C000

Electrical Data

			SR18D080-C000-0	SR18D080-C000-1	SR18D080-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	58.7	57.9	105.7
Recommended Mains Fuse Size		A	80	80	125
Unit Data - Cooling Only					
Nominal Run Amps		A	9.86	9.86	17
Recommended Mains Fuse Size		A	16	16	20
Max Mains Incoming Cable Size		mm²	70	70	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			3	3	3
Number of Elements			9	9	9
Rating		kW	22.5	20.31	22.5
Current Per Phase		A	32.5	30.9	59.1
Humidifier					
Capacity		kg/hr	15	15	15
Rating		kW	11.25	11.25	11.25
Full Load Amps		A	16.3	17.1	29.6
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C000 Units SR18D095-C000

Mechanical Data

			SR18D095-C000-0	SR18D095-C000-1	SR18D095-C000-2
Capacity					
Nom Cooling (Gross)	(1)	kW	98.3	98.3	98.3
Fan Power Input (Fan Gain)	(2)	kW	3.8	3.8	3.8
Dimensions - W x D x H		mm	1800 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	528 / 593		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	65	65	65
Water flow rate		l/s	4.68	4.68	4.68
Pressure drop		kPa	46.3	46.3	46.3
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1455 / 1660	1455 / 1660	1455 / 1660
Maximum ESP		Pa	325	325	325
Nominal Airflow		m^3/s	5.50	5.50	5.50
Connections					
Water Inlet / Outlet -		mm	54	54	54
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			18	18	18
Electric Heating (Total)		kW	22.5	20.3	22.5
Humidifier					
Capacity		kg/hr	15	15	15
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		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C000 Units SR18D095-C000

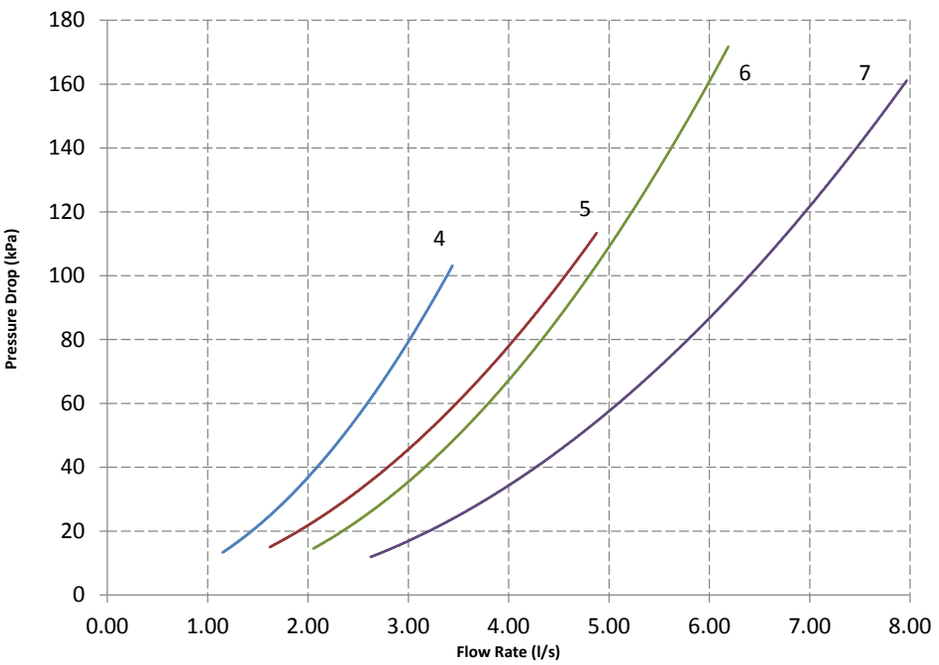
Electrical Data

			SR18D095-C000-0	SR18D095-C000-1	SR18D095-C000-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	58.7	57.9	105.7
Recommended Mains Fuse Size		A	80	80	125
Unit Data - Cooling Only					
Nominal Run Amps		A	9.86	9.86	17
Recommended Mains Fuse Size		A	16	16	20
Max Mains Incoming Cable Size		mm^2	70	70	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			3	3	3
Number of Elements			9	9	9
Rating		kW	22.5	20.31	22.5
Current Per Phase		A	32.5	30.9	59.1
Humidifier					
Capacity		kg/hr	15	15	15
Rating		kW	11.25	11.25	11.25
Full Load Amps		A	16.3	17.1	29.6
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C000 Units

Waterside Pressure Drop Data



4 SR09D030 - C000 / SR09D040 - C000
5 SR12D045 - C000 / SR09D055 - C000
6 SR15D065 - C000 / SR15D075 - C000
7 SR18D080 - C000 / SR18D095 - C000

Includes coil, 2 or 3 port valve and pipework.

To calculate 3 port valve pressure drop:

ΔP valve = $\left(\frac{Q}{M}\right)^2$

where
ΔP = Pressure Drop in kPa,

Q = Water Flow Rate in l/s and M = $\left(\frac{Kv}{36}\right)$

Fluid 100% water.

	Valve Kv	M
SR09 C000	25.0	0.69
SR12 C000	40.0	1.11
SR15 C000	40.0	1.11
SR18 C000	63.0	1.75

Technical Data SR C000 Units

Sound Data

	Sound Measurement	Overall dB(A)	Frequency (Hz) dB							
			63	125	250	500	1000	2000	4000	8000
SR09D030-C000	Discharge Air	74	73	71	72	73	71	65	56	26
	Return Air	73	73	71	71	71	69	64	55	25
	Case Breakout	75	76	76	74	72	71	64	56	29
	Sound Pressure @ 3m	60	62	62	60	58	56	50	42	14
SR09D040-C000	Discharge Air	80	78	77	78	78	76	70	61	31
	Return Air	78	78	77	76	77	74	69	60	31
	Case Breakout	80	82	82	80	78	76	70	62	34
	Sound Pressure @ 3m	65	67	67	65	63	62	55	47	20
SR12D045-C000	Discharge Air	76	73	76	75	74	73	67	61	37
	Return Air	75	73	76	73	73	71	66	60	36
	Case Breakout	77	76	81	77	74	73	66	61	40
	Sound Pressure @ 3m	62	62	67	62	59	58	52	47	25
SR12D055-C000	Discharge Air	82	78	81	80	79	79	73	67	43
	Return Air	81	78	81	79	78	77	72	66	42
	Case Breakout	82	82	87	82	79	79	72	67	46
	Sound Pressure @ 3m	68	67	72	68	64	64	58	53	31
SR15D065-C000	Discharge Air	79	78	76	77	78	76	70	61	31
	Return Air	78	78	76	76	77	74	69	60	30
	Case Breakout	80	81	82	79	77	76	69	61	34
	Sound Pressure @ 3m	65	67	67	65	63	61	55	47	19
SR15D075-C000	Discharge Air	82	80	79	80	80	78	72	63	34
	Return Air	81	80	79	78	79	77	72	62	33
	Case Breakout	82	84	84	82	80	78	72	64	37
	Sound Pressure @ 3m	68	69	70	67	65	64	57	49	22
SR18D080-C000	Discharge Air	78	74	77	76	75	74	68	62	38
	Return Air	76	74	77	74	74	72	67	61	37
	Case Breakout	78	78	82	78	75	74	68	62	41
	Sound Pressure @ 3m	64	63	68	64	60	60	53	48	27
SR18D095-C000	Discharge Air	82	78	82	81	80	79	73	67	43
	Return Air	81	79	82	79	79	77	72	66	42
	Case Breakout	83	82	87	83	79	79	72	67	46
	Sound Pressure @ 3m	68	68	72	68	65	64	58	53	31

(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.

Technical Data SR C000 Units

Interconnecting Wiring

N1	o	←	Neutral (Supply 1)
301	o	←	L1 (Supply 1)
302	o	←	L2 (Supply 1)
303	o	←	L3 (Supply 1)

N2	o	←	Neutral (Supply 2)
304	o	←	L1 (Supply 2)
305	o	←	L2 (Supply 2)
306	o	←	L3 (Supply 2)

PE	o	←	Protective Earth

502	o	→	Fire Detector
583	o	←	Fire Detector

Conn 17

583	o	→	Smoke Detector
584	o	←	Smoke Detector

502	o	→	Remote On/Off
522	o	←	Remote On/Off

Conn 14

2	o	→	Condensate Pump Supply (230V)
N (3*)	o	→	Condensate Pump Supply (230V)
534	o	→	Condensate Pump High Level Alarm
535	o	←	Condensate Pump High Level Alarm

609	o	→	Flood Detection Tape / Probe
610	o	←	Flood Detection Tape / Probe

810	o	→	Supply Air Temperature Sensor
811	o	→	Supply Air Temperature Sensor

Conn 16

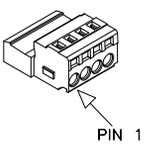
560	o	→	Non-Critical Alarm N/O
561	o	→	Non-Critical Alarm Common
563	o		Critical Alarm N/O
564	o		Critical Alarm Common
565	o		Critical Alarm N/C

Conn 14

881	o	←	BMS Connection
882	o	←	BMS Connection
883	o	←	BMS Connection

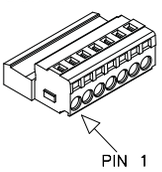
Conn 15

CONN17



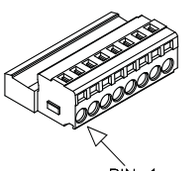
PIN No.	WIRE
1	502
2	583 or 584
3	2
4	N or 3

CONN14



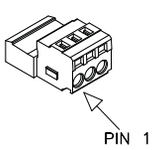
PIN No.	WIRE
1	502
2	522
3	560
4	561
5	563
6	564
7	565

CONN16



PIN No.	WIRE
1	2
2	N or 3
3	534
4	535
5	609
6	610
7	810
8	811

CONN15



PIN No.	WIRE
1	881
2	882
3	883

*For 220V/3PH NO neutral units the Neutral connection is replaced with a live phase.

Intentionally Blank

Technical Data SR C0C0 Units

Performance Data SR C0C0

		Chilled water inlet and outlet temperatures							
	Air On	7 / 12 °C		10 / 15 °C		8 / 14 °C		10 / 16 °C	
	Temp. (°C)	TC	SC	TC	SC	TC	SC	TC	SC
	/ %RH	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)
SR09D020-C0C0-0	22 / 50	21.5	21.5	15.3	15.3	17.2	17.2	13.1	13.1
	24 / 45	25.3	25.3	19.1	19.1	21.0	21.0	17.0	17.0
	26 / 40	29.1	29.1	22.7	22.7	24.7	24.7	20.7	20.7
SR09D025-C0C0-0	22 / 50	25.9	25.9	18.4	18.4	20.8	20.8	15.9	15.9
	24 / 45	30.5	30.5	23.0	23.0	25.3	25.3	20.5	20.5
	26 / 40	35.1	35.1	27.4	27.4	29.8	29.8	24.9	24.9
SR12D030-C0C0-0	22 / 50	31.0	31.0	22.1	22.1	24.9	24.9	19.0	19.0
	24 / 45	36.5	36.5	27.5	27.5	30.4	30.4	24.6	24.6
	26 / 40	42.0	42.0	32.8	32.8	35.7	35.7	29.8	29.8
SR12D035-C0C0-0	22 / 50	36.6	36.6	26.0	26.0	29.3	29.3	22.5	22.5
	24 / 45	43.1	43.1	32.5	32.5	35.8	35.8	29.0	29.0
	26 / 40	49.6	49.6	38.7	38.7	42.1	42.1	35.2	35.2
SR15D040-C0C0-0	22 / 50	42.8	42.8	30.5	30.5	34.4	34.4	26.3	26.3
	24 / 45	50.5	50.5	38.0	38.0	41.9	41.9	33.9	33.9
	26 / 40	58.1	58.1	45.3	45.3	49.2	49.2	41.2	41.2
SR15D045-C0C0-0	22 / 50	46.3	46.3	33.0	33.0	37.2	37.2	28.5	28.5
	24 / 45	54.7	54.7	41.2	41.2	45.4	45.4	36.7	36.7
	26 / 40	62.9	62.9	49.1	49.1	53.4	53.4	44.6	44.6
SR18D050-C0C0-0	22 / 50	51.7	51.7	36.8	36.8	41.5	41.5	31.8	31.8
	24 / 45	61.0	61.0	45.9	45.9	50.7	50.7	41.0	41.0
	26 / 40	70.2	70.2	54.8	54.8	59.5	59.5	49.8	49.8
SR18D060-C0C0-0	22 / 50	59.3	59.3	42.2	42.2	47.6	47.6	36.5	36.5
	24 / 45	70.1	70.1	52.7	52.7	58.1	58.1	47.0	47.0
	26 / 40	80.7	80.7	62.9	62.9	68.3	68.3	57.1	57.1

Technical Data SR C0C0 Units

Performance Data SR C0C0

		Chilled water inlet and outlet temperatures							
	Air On	12 / 17 °C		15 / 20 °C		18 / 24 °C		20 / 26 °C	
	Temp. (°C)	TC	SC	TC	SC	TC	SC	TC	SC
	/ %RH	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)
SR09D020-C0C0-0	33 / 26.7	30.5	30.5	24.5	24.5	17.1	17.1	13.6	13.6
	35 / 23.9	33.7	33.7	27.5	27.5	20.0	20.0	16.5	16.5
	37 / 21.4	36.7	36.7	30.5	30.5	22.8	22.8	19.3	19.3
SR09D025-C0C0-0	33 / 26.7	36.9	36.9	29.5	29.5	20.5	20.5	16.3	16.3
	35 / 23.9	40.7	40.7	33.2	33.2	24.1	24.1	19.9	19.9
	37 / 21.4	44.4	44.4	36.8	36.8	27.5	27.5	23.2	23.2
SR12D030-C0C0-0	33 / 26.7	44.1	44.1	35.3	35.3	24.6	24.6	19.6	19.6
	35 / 23.9	48.7	48.7	39.8	39.8	28.9	28.9	23.8	23.8
	37 / 21.4	53.1	53.1	44.0	44.0	32.9	32.9	27.8	27.8
SR12D035-C0C0-0	33 / 26.7	52.2	52.2	41.8	41.8	29.0	29.0	23.1	23.1
	35 / 23.9	57.7	57.7	47.0	47.0	34.1	34.1	28.1	28.1
	37 / 21.4	62.9	62.9	52.1	52.1	38.9	38.9	32.8	32.8
SR15D040-C0C0-0	33 / 26.7	61.0	61.0	48.8	48.8	34.0	34.0	27.0	27.0
	35 / 23.9	67.4	67.4	55.0	55.0	39.9	39.9	32.9	32.9
	37 / 21.4	73.5	73.5	61.0	61.0	45.5	45.5	38.4	38.4
SR15D045-C0C0-0	33 / 26.7	66.2	66.2	52.9	52.9	36.8	36.8	29.2	29.2
	35 / 23.9	73.1	73.1	59.6	59.6	43.2	43.2	35.6	35.6
	37 / 21.4	79.8	79.8	66.1	66.1	49.3	49.3	41.6	41.6
SR18D050-C0C0-0	33 / 26.7	73.8	73.8	59.0	59.0	41.1	41.1	32.7	32.7
	35 / 23.9	81.5	81.5	66.5	66.5	48.2	48.2	39.7	39.7
	37 / 21.4	88.8	88.8	73.7	73.7	55.0	55.0	46.4	46.4
SR18D060-C0C0-0	33 / 26.7	84.9	84.9	67.9	67.9	47.1	47.1	37.4	37.4
	35 / 23.9	93.8	93.8	76.5	76.5	55.3	55.3	45.6	45.6
	37 / 21.4	102.4	102.4	84.8	84.8	63.2	63.2	53.3	53.3

Technical Data SR C0C0 Units SR09D020-C0C0

Mechanical Data

			SR09D020-C0C0-0	SR09D020-C0C0-1	SR09D020-C0C0-2
Capacity					
Nom Cooling (Gross)	(1)	kW	25.3	25.3	25.3
Fan Power Input (Fan Gain)	(2)	kW	0.81	0.81	0.81
Dimensions - W x D x H		mm	963 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	320 / 351		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	16	16	16
Water flow rate		l/s	1.2	1.2	1.2
Pressure drop		kPa	18.7	18.7	18.7
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 1.96	1 x 1.96	1 x 1.96
Speed @25Pa ESP / Maximum ESP		rpm	1178 / 1560	1178 / 1560	1178 / 1560
Maximum ESP		Pa	459	459	459
Nominal Airflow		m^3/s	1.85	1.85	1.85
Connections					
Water Inlet / Outlet -		mm	35	35	35
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			9	9	9
Electric Heating (Total)		kW	7.5	6.8	7.5
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		
Upgraded Fan Motor - EC Motor			Backwards Curved, Centrifugal Direct Drive		
Quantity x Motor Size	(4)	kW	1 x 3.6	1 x 3.6	1 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1524 / 2260	1524 / 2260	1523 / 2260
Maximum ESP		Pa	1006	1006	1014

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C0C0 Units SR09D020-C0C0

Electrical Data

			SR09D020-C0C0-0	SR09D020-C0C0-1	SR09D020-C0C0-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	21	20.6	38.7
Recommended Mains Fuse Size		A	25	25	50
Unit Data - Cooling Only					
Nominal Run Amps		A	4	4	7.9
Recommended Mains Fuse Size		A	10	10	10
Max Mains Incoming Cable Size		mm²	16	16	35
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 1.96	1 x 1.96	1 x 1.96
Full Load Amps		A	3	3	5.9
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			1	1	1
Number of Elements			3	3	3
Rating		kW	7.5	6.8	7.5
Current Per Phase		A	10.9	10.3	19.7
Humidifier					
Capacity		kg/hr	3	3	3
Rating		kW	2.25	2.25	2.25
Full Load Amps		A	3.3	3.5	6
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 3.6	1 x 3.6	1 x 3.6
Full Load Amps		A	5.8	5.8	11

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C0C0 Units SR09D025-C0C0

Mechanical Data

			SR09D025-C0C0-0	SR09D025-C0C0-1	SR09D025-C0C0-2
Capacity					
Nom Cooling (Gross)	(1)	kW	30.5	30.5	30.5
Fan Power Input (Fan Gain)	(2)	kW	1.47	1.47	1.47
Dimensions - W x D x H		mm	963 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	320 / 351		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	16	16	16
Water flow rate		l/s	1.45	1.45	1.45
Pressure drop		kPa	26.6	26.6	26.6
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 1.96	1 x 1.96	1 x 1.96
Speed @25Pa ESP / Maximum ESP		rpm	1444 / 1560	1444 / 1560	1444 / 1560
Maximum ESP		Pa	197	197	197
Nominal Airflow		m^3/s	2.30	2.30	2.30
Connections					
Water Inlet / Outlet -		mm	35	35	35
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			9	9	9
Electric Heating (Total)		kW	7.5	6.8	7.5
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		
Upgraded Fan Motor - EC Motor			Backwards Curved, Centrifugal Direct Drive		
Quantity x Motor Size	(4)	kW	1 x 3.6	1 x 3.6	1 x 3.6
Speed @ 25Pa / Maximum ESP		rpm	1866 / 2260	1866 / 2260	1936 / 2260
Maximum ESP		Pa	673	673	543

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C0C0 Units SR09D025-C0C0

Electrical Data

			SR09D025-C0C0-0	SR09D025-C0C0-1	SR09D025-C0C0-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	21	20.6	38.7
Recommended Mains Fuse Size		A	25	25	50
Unit Data - Cooling Only					
Nominal Run Amps		A	4	4	7.9
Recommended Mains Fuse Size		A	10	10	10
Max Mains Incoming Cable Size		mm²	16	16	35
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 1.96	1 x 1.96	1 x 1.96
Full Load Amps		A	3	3	5.9
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			1	1	1
Number of Elements			3	3	3
Rating		kW	7.5	6.8	7.5
Current Per Phase		A	10.9	10.3	19.7
Humidifier					
Capacity		kg/hr	3	3	3
Rating		kW	2.25	2.25	2.25
Full Load Amps		A	3.3	3.5	6
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	1 x 3.6	1 x 3.6	1 x 3.6
Full Load Amps		A	5.8	5.8	11

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C0C0 Units SR12D030-C0C0

Mechanical Data

			SR12D030-C0C0-0	SR12D030-C0C0-1	SR12D030-C0C0-2
Capacity					
Nom Cooling (Gross)	(1)	kW	36.5	36.5	36.5
Fan Power Input (Fan Gain)	(2)	kW	1.26	1.26	1.26
Dimensions - W x D x H		mm	1242 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	380 / 424		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	22	22	22
Water flow rate		l/s	1.74	1.74	1.74
Pressure drop		kPa	21.5	21.5	21.5
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 2.9	1 x 2.9	1 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1316 / 1660	1316 / 1660	1316 / 1660
Maximum ESP		Pa	504	504	504
Nominal Airflow		m^3/s	2.70	2.70	2.70
Connections					
Water Inlet / Outlet -		mm	42	42	42
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			12	12	12
Electric Heating (Total)		kW	7.5	6.8	7.5
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		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C0C0 Units SR12D030-C0C0

Electrical Data

			SR12D030-C0C0-0	SR12D030-C0C0-1	SR12D030-C0C0-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	19.6	19.2	35.2
Recommended Mains Fuse Size		A	25	25	50
Unit Data - Cooling Only					
Nominal Run Amps		A	5.43	5.43	9.5
Recommended Mains Fuse Size		A	10	10	16
Max Mains Incoming Cable Size		mm^2	16	16	35
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 2.9	1 x 2.9	1 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			1	1	1
Number of Elements			3	3	3
Rating		kW	7.5	6.8	7.5
Current Per Phase		A	10.9	10.3	19.7
Humidifier					
Capacity		kg/hr	3	3	3
Rating		kW	2.25	2.25	2.25
Full Load Amps		A	3.3	3.5	6
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C0C0 Units SR12D035-C0C0

Mechanical Data

			SR12D035-C0C0-0	SR12D035-C0C0-1	SR12D035-C0C0-2
Capacity					
Nom Cooling (Gross)	(1)	kW	43.1	43.1	43.1
Fan Power Input (Fan Gain)	(2)	kW	2.36	2.36	2.36
Dimensions - W x D x H		mm	1242 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	380 / 424		
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)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	22	22	22
Water flow rate		l/s	2.05	2.05	2.05
Pressure drop		kPa	29	29	29.0
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	1 x 2.9	1 x 2.9	1 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1595 / 1660	1595 / 1660	1595 / 1660
Maximum ESP		Pa	124	124	124
Nominal Airflow		m³/s	3.30	3.30	3.30
Connections					
Water Inlet / Outlet -		mm	42	42	42
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			12	12	12
Electric Heating (Total)		kW	7.5	6.8	7.5
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		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C0C0 Units SR12D035-C0C0

Electrical Data

			SR12D035-C0C0-0	SR12D035-C0C0-1	SR12D035-C0C0-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	19.6	19.2	35.2
Recommended Mains Fuse Size		A	25	25	50
Unit Data - Cooling Only					
Nominal Run Amps		A	5.43	5.43	9.5
Recommended Mains Fuse Size		A	10	10	16
Max Mains Incoming Cable Size		mm^2	16	16	35
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	1 x 2.9	1 x 2.9	1 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			1	1	1
Number of Elements			3	3	3
Rating		kW	7.5	6.8	7.5
Current Per Phase		A	10.9	10.3	19.7
Humidifier					
Capacity		kg/hr	3	3	3
Rating		kW	2.25	2.25	2.25
Full Load Amps		A	3.3	3.5	6
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C0C0 Units SR15D040-C0C0

Mechanical Data

			SR15D040-C0C0-0	SR15D040-C0C0-1	SR15D040-C0C0-2
Capacity					
Nom Cooling (Gross)	(1)	kW	50.5	50.5	50.5
Fan Power Input (Fan Gain)	(2)	kW	2.15	2.15	2.15
Dimensions - W x D x H		mm	1521 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	464 / 518		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	27	27	27
Water flow rate		l/s	2.4	2.4	2.4
Pressure drop		kPa	30.5	30.5	30.5
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 1.96	2 x 1.96	2 x 1.96
Speed @25Pa ESP / Maximum ESP		rpm	1281 / 1560	1281 / 1560	1281 / 1560
Maximum ESP		Pa	349	349	349
Nominal Airflow		m^3/s	3.80	3.80	3.80
Connections					
Water Inlet / Outlet -		mm	42	42	42
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			15	15	15
Electric Heating (Total)		kW	15.0	13.5	15.0
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		
Upgraded 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	1636 / 2260	1636 / 2260	1705 / 2260
Maximum ESP		Pa	898	898	849

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C0C0 Units SR15D040-C0C0

Electrical Data

			SR15D040-C0C0-0	SR15D040-C0C0-1	SR15D040-C0C0-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	43	42.4	79.2
Recommended Mains Fuse Size		A	50	50	100
Unit Data - Cooling Only					
Nominal Run Amps		A	7	7	13.8
Recommended Mains Fuse Size		A	10	10	16
Max Mains Incoming Cable Size		mm²	35	35	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 1.96	2 x 1.96	2 x 1.96
Full Load Amps		A	3	3	5.9
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15.0	13.5	15.0
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	9.2	15.8
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 3.6	2 x 3.6	2 x 3.6
Full Load Amps		A	5.8	5.8	11

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C0C0 Units SR15D045-C0C0

Mechanical Data

			SR15D045-C0C0-0	SR15D045-C0C0-1	SR15D045-C0C0-2
Capacity					
Nom Cooling (Gross)	(1)	kW	54.7	54.7	54.7
Fan Power Input (Fan Gain)	(2)	kW	2.82	2.82	2.82
Dimensions - W x D x H		mm	1521 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	464 / 518		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	27	27	27
Water flow rate		l/s	2.60	2.60	2.60
Pressure drop		kPa	35.3	35.3	35.3
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 1.96	2 x 1.96	2 x 1.96
Speed @25Pa ESP / Maximum ESP		rpm	1404 / 1560	1404 / 1560	1404 / 1560
Maximum ESP		Pa	221	221	221
Nominal Airflow		m^3/s	4.20	4.20	4.20
Connections					
Water Inlet / Outlet -		mm	42	42	42
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			15	15	15
Electric Heating (Total)		kW	15.0	13.5	15.0
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		
Upgraded 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	1796 / 2260	1796 / 2260	1869 / 2260
Maximum ESP		Pa	747	747	655

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C0C0 Units SR15D045-C0C0

Electrical Data

			SR15D045-C0C0-0	SR15D045-C0C0-1	SR15D045-C0C0-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	43	42.4	79.2
Recommended Mains Fuse Size		A	50	50	100
Unit Data - Cooling Only					
Nominal Run Amps		A	7	7	13.8
Recommended Mains Fuse Size		A	10	10	16
Max Mains Incoming Cable Size		mm²	35	35	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 1.96	2 x 1.96	2 x 1.96
Full Load Amps		A	3	3	5.9
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15.0	13.5	15.0
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	9.2	15.8
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	2 x 3.6	2 x 3.6	2 x 3.6
Full Load Amps		A	5.8	5.8	11

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C0C0 Units SR18D050-C0C0

Mechanical Data

			SR18D050-C0C0-0	SR18D050-C0C0-1	SR18D050-C0C0-2
Capacity					
Nom Cooling (Gross)	(1)	kW	61.0	61.0	61.0
Fan Power Input (Fan Gain)	(2)	kW	2.25	2.25	2.25
Dimensions - W x D x H		mm	1800 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	540 / 609		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	35	35	35
Water flow rate		l/s	2.9	2.9	2.9
Pressure drop		kPa	26.2	26.2	26.2
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1231 / 1660	1231 / 1660	1231 / 1660
Maximum ESP		Pa	551	551	551
Nominal Airflow		m^3/s	4.60	4.60	4.60
Connections					
Water Inlet / Outlet -		mm	54	54	54
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			18	18	18
Electric Heating (Total)		kW	15.0	13.5	15.0
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		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C0C0 Units SR18D050-C0C0

Electrical Data

			SR18D050-C0C0-0	SR18D050-C0C0-1	SR18D050-C0C0-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	40.3	39.7	72.2
Recommended Mains Fuse Size		A	50	50	100
Unit Data - Cooling Only					
Nominal Run Amps		A	9.86	9.86	17
Recommended Mains Fuse Size		A	16	16	20
Max Mains Incoming Cable Size		mm²	35	35	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15.0	13.5	15.0
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	9.2	15.8
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C0C0 Units SR18D060-C0C0

Mechanical Data

			SR18D060-C0C0-0	SR18D060-C0C0-1	SR18D060-C0C0-2
Capacity					
Nom Cooling (Gross)	(1)	kW	70.1	70.1	70.1
Fan Power Input (Fan Gain)	(2)	kW	3.86	3.86	3.86
Dimensions - W x D x H		mm	1800 x 890 x 1980		
Weight - Machine / Operating	(3)	kg	540 / 609		
Construction Material / Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black Grey (RAL 7021) Frame: Anodised Aluminium Frame with Aluminium Corners, Epoxy Baked Powder Coated Paint - Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Hydrophilic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water volume		l	35	35	35
Water flow rate		l/s	3.34	3.34	3.34
Pressure drop		kPa	33.1	33.1	33.1
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1460 / 1660	1460 / 1660	1460 / 1660
Maximum ESP		Pa	318	318	318
Nominal Airflow		m^3/s	5.50	5.50	5.50
Connections					
Water Inlet / Outlet -		mm	54	54	54
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN 779-G4		
Quantity			18	18	18
Electric Heating (Total)		kW	15.0	13.5	15.0
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		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 24°C /45% RH water 7°C/ 12°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 water charge.
(4) Backward curved EC fan options quote electrical power.

Technical Data SR C0C0 Units SR18D060-C0C0

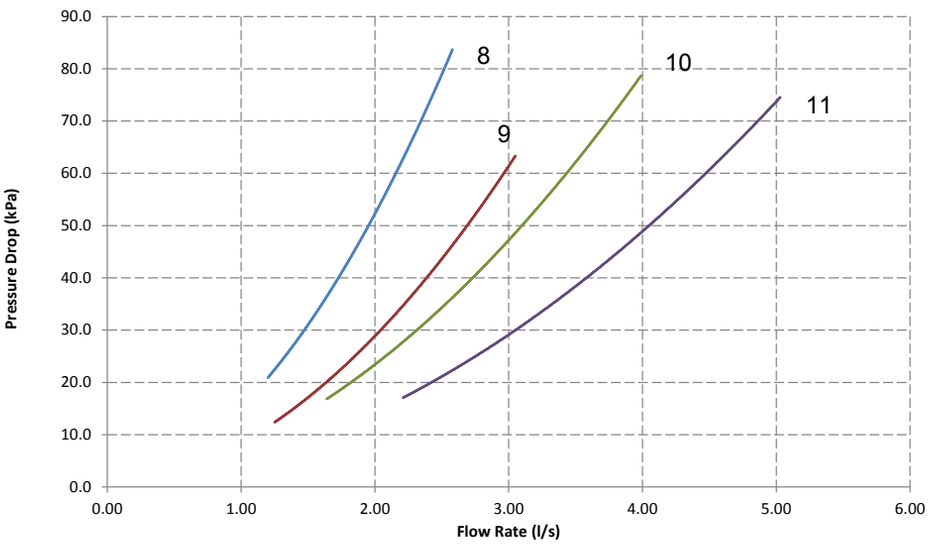
Electrical Data

			SR18D060-C0C0-0	SR18D060-C0C0-1	SR18D060-C0C0-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	40.3	39.7	72.2
Recommended Mains Fuse Size		A	50	50	100
Unit Data - Cooling Only					
Nominal Run Amps		A	9.86	9.86	17
Recommended Mains Fuse Size		A	16	16	20
Max Mains Incoming Cable Size		mm²	35	35	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15.0	13.5	15.0
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6	6	6
Full Load Amps		A	8.7	9.2	15.8
First upgrade EC Motor - Per Fan					
Quantity x Motor Size		kW	N/A	N/A	N/A
Full Load Amps		A	N/A	N/A	N/A

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SR C0C0 Units

Waterside Pressure Drop Data



8 SR09D020 - C0C0 / SR09D025 - C0C0
9 SR12D030 - C0C0 / SR12D035 - C0C0
10 SR15D040 - C0C0 / SR15D045 - C0C0
11 SR18D050 - C0C0 / SR 18D060 - C0C0

Includes coil, 2 or 3 port valve and pipework.

To calculate 3 port valve pressure drop:

ΔP valve = $\left(\frac{Q}{M}\right)^2$

where ΔP = Pressure Drop in kPa,

Q = Water Flow Rate in l/s and M = $\left(\frac{Kv}{36}\right)$

Fluid 100% water.

	Valve Kv	M
SR09 C0C0	16.0	0.44
SR12 C0C0	25.0	0.69
SR15 C0C0	25.0	0.69
SR18 C0C0	40.0	1.11

Technical Data SR C0C0 Units

Sound Data

	Sound Measurement	Overall dB(A)	Frequency (Hz) dB							
			63	125	250	500	1000	2000	4000	8000
SR09D020-C0C0	Discharge Air	74	73	71	72	73	71	65	56	26
	Return Air	73	73	71	71	72	69	64	55	25
	Case Breakout	75	77	77	74	72	71	64	56	29
	Sound Pressure @ 3m	60	62	62	60	58	56	50	42	14
SR09D025-C0C0	Discharge Air	80	78	77	78	78	76	70	61	31
	Return Air	79	78	77	76	77	74	69	60	31
	Case Breakout	80	82	82	80	78	76	70	62	34
	Sound Pressure @ 3m	66	67	67	65	63	62	55	47	20
SR12D030-C0C0	Discharge Air	77	73	76	75	74	73	67	61	37
	Return Air	75	73	76	73	73	71	66	60	36
	Case Breakout	77	76	81	77	74	73	66	61	40
	Sound Pressure @ 3m	62	62	67	62	59	59	52	47	26
SR12D035-C0C0	Discharge Air	82	78	81	81	79	79	73	67	43
	Return Air	81	78	81	79	78	77	72	66	42
	Case Breakout	82	82	87	82	79	79	72	67	46
	Sound Pressure @ 3m	68	68	72	68	64	64	58	53	31
SR15D040-C0C0	Discharge Air	80	78	76	78	78	76	70	61	31
	Return Air	78	78	76	76	77	74	69	60	30
	Case Breakout	80	82	82	79	77	76	70	61	34
	Sound Pressure @ 3m	65	67	67	65	63	61	55	47	20
SR15D045-C0C0	Discharge Air	82	80	79	80	80	78	72	63	34
	Return Air	81	80	79	78	79	77	72	63	33
	Case Breakout	82	84	84	82	80	78	72	64	37
	Sound Pressure @ 3m	68	70	70	67	65	64	58	49	22
SR18D050-C0C0	Discharge Air	78	74	77	76	76	74	68	62	38
	Return Air	76	74	77	75	74	72	67	61	38
	Case Breakout	78	78	82	78	75	74	68	63	41
	Sound Pressure @ 3m	64	63	68	64	60	60	53	48	27
SR18D060-C0C0	Discharge Air	82	79	82	81	80	79	73	67	43
	Return Air	81	79	82	79	79	77	72	66	42
	Case Breakout	83	82	87	83	79	79	72	67	46
	Sound Pressure @ 3m	68	68	72	68	65	64	58	53	32

(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.

Technical Data SR C0C0 Units

Interconnecting Wiring

N1	o	←	Neutral (Supply 1)
301	o	←	L1 (Supply 1)
302	o	←	L2 (Supply 1)
303	o	←	L3 (Supply 1)

N2	o	←	Neutral (Supply 2)
304	o	←	L1 (Supply 2)
305	o	←	L2 (Supply 2)
306	o	←	L3 (Supply 2)

PE	o	←	Protective Earth

502	o	→	Fire Detector
583	o	←	Fire Detector

Conn 17

583	o	←	Smoke Detector
584	o	→	Smoke Detector

502	o	←	Remote On/Off
522	o	→	Remote On/Off

Conn 14

2	o	→	Condensate Pump Supply (230V)
N (3*)	o	→	Condensate Pump Supply (230V)
534	o	→	Condensate Pump High Level Alarm
535	o	←	Condensate Pump High Level Alarm

609	o	→	Flood Detection Tape / Probe
610	o	←	Flood Detection Tape / Probe

810	o	→	Supply Air Temperature Sensor
811	o	→	Supply Air Temperature Sensor

Conn 16

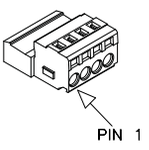
560	o	→	Non-Critical Alarm N/O
561	o	→	Non-Critical Alarm Common
563	o		Critical Alarm N/O
564	o		Critical Alarm Common
565	o		Critical Alarm N/C

Conn 14

881	o	←	BMS Connection
882	o	←	BMS Connection
883	o	←	BMS Connection

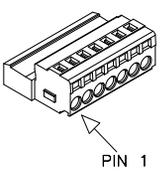
Conn 15

CONN17



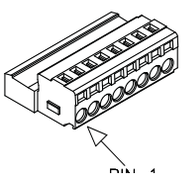
PIN No.	WIRE
1	502
2	583 or 584
3	2
4	N or 3

CONN14



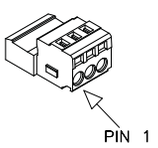
PIN No.	WIRE
1	502
2	522
3	560
4	561
5	563
6	564
7	565

CONN16



PIN No.	WIRE
1	2
2	N or 3
3	534
4	535
5	609
6	610
7	810
8	811

CONN15



PIN No.	WIRE
1	881
2	882
3	883

*For 220V/3PH NO neutral units the Neutral connection is replaced with a live phase.

Intentionally Blank

Technical Data SD CH00 Units

Performance Data SD CH00

		Chilled water inlet and outlet temperatures							
	Air On	5 / 10 °C		7 / 12 °C		8 / 14 °C		10 / 16 °C	
	Temp. (°C)	TC	SC	TC	SC	TC	SC	TC	SC
	/ %RH	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)
SD18D110-CH00-0	22 / 50	117.0	93.8	89.6	81.5	68.6	68.6	54.0	54.0
	24 / 45	132.4	106.7	105.3	94.6	82.9	82.9	69.2	69.2
	26 / 40	145.4	119.6	118.6	107.7	96.5	96.5	83.2	83.2
SD22D140-CH00-0	22 / 50	145.9	113.5	114.2	99.0	85.6	85.6	69.0	69.0
	24 / 45	163.8	128.6	132.4	114.3	104.9	98.8	86.0	86.0
	26 / 40	179.2	143.8	147.9	129.6	120.8	113.8	102.1	102.1
SD25D175-CH00-0	22 / 50	192.3	149.1	151.4	130.3	116.7	111.2	92.2	92.2
	24 / 45	215.4	168.9	174.7	150.2	139.3	128.9	113.9	113.9
	26 / 40	235.3	188.6	194.8	170.1	159.8	148.6	134.6	134.6
SD31D215-CH00-0	22 / 50	239.9	190.2	185.8	165.7	141.5	141.5	113.2	113.2
	24 / 45	270.2	216.0	216.5	191.9	169.3	169.3	142.2	142.2
	26 / 40	296.1	241.8	242.9	217.9	196.1	196.1	169.8	169.8
SD35D255-CH00-0	22 / 50	281.6	220.7	220.2	192.6	166.2	166.2	134.2	134.2
	24 / 45	316.2	250.3	255.2	222.5	202.8	193.8	167.0	167.0
	26 / 40	346.0	279.8	285.2	252.2	233.6	223.4	198.1	198.1

Technical Data SD CH00 Units

Performance Data SD CH00

Model	Air On Temp. (°C) / %RH	Chilled water inlet and outlet temperatures							
		15 / 20 °C		17 / 22 °C		18 / 24°C		20 / 26 °C	
		TC (kW)	SC (kW)	TC (kW)	SC (kW)	TC (kW)	SC (kW)	TC (kW)	SC (kW)
SD18D110-CH00-0	33 / 26	99.5	99.5	86.8	86.8	76.6	76.6	63.3	63.3
	35 / 24	111.1	111.1	98.7	98.7	89.0	89.0	76.1	76.1
	37 / 22	122.0	122.0	109.9	109.9	100.6	100.6	88.2	88.2
SD22D140-CH00-0	33 / 26	119.8	119.8	104.8	104.8	93.6	93.6	77.9	77.9
	35 / 24	133.3	133.3	118.6	118.6	107.9	107.9	92.8	92.8
	37 / 22	146.1	146.1	131.8	131.8	121.4	121.4	106.8	106.8
SD25D175-CH00-0	33 / 26	157.2	157.2	137.5	137.5	123.1	123.1	102.8	102.8
	35 / 24	174.7	174.7	155.5	155.5	141.7	141.7	122.0	122.0
	37 / 22	191.4	191.4	172.6	172.6	159.2	159.2	140.2	140.2
SD31D215-CH00-0	33 / 26	200.8	200.8	175.5	175.5	155.8	155.8	129.3	129.3
	35 / 24	223.9	223.9	198.9	198.9	180.2	180.2	154.6	154.6
	37 / 22	245.8	245.8	221.3	221.3	203.4	203.4	178.4	178.4
SD35D255-CH00-0	33 / 26	232.6	232.6	203.5	203.5	181.5	181.5	151.1	151.1
	35 / 24	258.7	258.7	230.3	230.3	209.2	209.2	180.0	180.0
	37 / 22	283.8	283.8	255.9	255.9	235.6	235.6	207.1	207.1

Technical Data SD CH00 Units SD18D110-CH00

Mechanical Data

			SD18D110-CH00-0	SD18D110-CH00-1	SD18D110-CH00-2
Capacity					
Nom Cooling (Gross)	(1)	kW	105.3	105.3	105.3
Fan Power Input (Fan Gain)	(2)	kW	2.6	2.6	2.6
Dimensions - W x D x H		mm	1800 x 890 x 1980	1800 x 890 x 1980	1800 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	463 / 175 / 699	463 / 175 / 699	463 / 175 / 699
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	62	62	62
Water Flow Rate		l/s	5.0	5.0	5.0
Pressure Drop		kPa	35.7	35.7	35.7
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1334 / 1657	1334 / 1657	1334 / 1657
Maximum ESP		Pa	485	485	485
Nominal Airflow		m^3/s	5.7	5.7	5.7
Connections					
Water Inlet / Outlet -		mm	54	54	54
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			6	6	6
Electric Heating (Total)		kW	15.0	13.5	15.0
Humidifier					
Capacity		kg/hr	8	8	8
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4” BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

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

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CH00 Units SD18D110-CH00

Electrical Data

			SD18D110-CH00-0	SD18D110-CH00-1	SD18D110-CH00-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	40.3	39.7	72.2
Recommended Mains Fuse Size		A	50	50	100
Unit Data - Cooling Only					
Nominal Run Amps		A	9.9	9.9	17.0
Recommended Mains Fuse Size		A	16	16	20
Max Mains Incoming Cable Size		mm²	35	35	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Full Load Amps		A	4.5	4.5	7.5
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15.0	13.5	15.0
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6.0	6.0	6.0
Full Load Amps		A	8.7	9.2	15.8

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CH00 Units SD22D140-CH00

Mechanical Data

			SD22D140-CH00-0	SD22D140-CH00-1	SD22D140-CH00-2
Capacity					
Nom Cooling (Gross)	(1)	kW	132.4	132.4	132.4
Fan Power Input (Fan Gain)	(2)	kW	3.5	3.5	3.5
Dimensions - W x D x H		mm	2200 x 890 x 1980	2200 x 890 x 1980	2200 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	525 / 189 / 787	525 / 189 / 787	525 / 189 / 787
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	73	73	73
Water Flow Rate		l/s	6.3	6.3	6.3
Pressure Drop		kPa	55.6	55.6	55.6
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1503 / 1657	1503 / 1657	1503 / 1657
Maximum ESP		Pa	266	266	266
Nominal Airflow		m^3/s	6.7	6.7	6.7
Connections					
Water Inlet / Outlet -		mm	54	54	54
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			6	6	6
Electric Heating (Total)		kW	15.0	13.5	15.0
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

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

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CH00 Units SD22D140-CH00

Electrical Data

			SD22D140-CH00-0	SD22D140-CH00-1	SD22D140-CH00-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	64.2	64.7	115.6
Recommended Mains Fuse Size		A	80	80	160
Unit Data - Cooling Only					
Nominal Run Amps		A	9.9	9.9	17.0
Recommended Mains Fuse Size		A	16	16	20
Max Mains Incoming Cable Size		mm²	70	70	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Full Load Amps		A	4.5	4.5	7.5
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15.0	13.5	15.0
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CH00 Units SD25D175-CH00

Mechanical Data

			SD25D175-CH00-0	SD25D175-CH00-1	SD25D175-CH00-2
Capacity					
Nom Cooling (Gross)	(1)	kW	174.7	174.7	174.7
Fan Power Input (Fan Gain)	(2)	kW	4.7	4.7	4.7
Dimensions - W x D x H		mm	2500 x 890 x 1980	2500 x 890 x 1980	2500 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	588 / 244 / 919	588 / 244 / 919	588 / 244 / 919
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	88	88	88
Water Flow Rate		l/s	8.3	8.3	8.3
Pressure Drop		kPa	77.2	77.2	77.2
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	3 x 2.9	3 x 2.9	3 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1409 / 1657	1409 / 1657	1409 / 1657
Maximum ESP		Pa	392	392	392
Nominal Airflow		m^3/s	8.8	8.8	8.8
Connections					
Water Inlet / Outlet -		mm	67	67	67
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			6	6	6
Electric Heating (Total)		kW	22.5	20.3	22.5
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

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

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CH00 Units SD25D175-CH00

Electrical Data

			SD25D175-CH00-0	SD25D175-CH00-1	SD25D175-CH00-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	79.4	79.4	142.8
Recommended Mains Fuse Size		A	100	100	200
Unit Data - Cooling Only					
Nominal Run Amps		A	14.3	14.3	24.5
Recommended Mains Fuse Size		A	20	20	32
Max Mains Incoming Cable Size		mm²	70	70	185
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	3 x 2.9	3 x 2.9	3 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			3	3	3
Number of Elements			9	9	9
Rating		kW	22.5	20.3	22.5
Current Per Phase		A	32.5	30.9	59.1
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CH00 Units SD31D215-CH00

Mechanical Data

			SD31D215-CH00-0	SD31D215-CH00-1	SD31D215-CH00-2
Capacity					
Nom Cooling (Gross)	(1)	kW	216.5	216.5	216.5
Fan Power Input (Fan Gain)	(2)	kW	5.9	5.9	5.9
Dimensions - W x D x H		mm	3100 x 890 x 1980	3100 x 890 x 1980	3100 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	690 / 305 / 1101	690 / 305 / 1101	690 / 305 / 1101
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	107	107	107
Water Flow Rate		l/s	10.3	10.3	10.3
Pressure Drop		kPa	76.3	76.3	76.3
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1374 / 1657	1374 / 1657	1374 / 1657
Maximum ESP		Pa	428	428	428
Nominal Airflow		m^3/s	11.3	11.3	11.3
Connections					
Water Inlet / Outlet -		mm	67	67	67
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			9	9	9
Electric Heating (Total)		kW	30.0	27.1	30.0
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

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

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CH00 Units SD31D215-CH00

Electrical Data

			SD31D215-CH00-0	SD31D215-CH00-1	SD31D215-CH00-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	94.7	94.1	170.0
Recommended Mains Fuse Size		A	125	125	200
Unit Data - Cooling Only					
Nominal Run Amps		A	18.7	18.7	32.0
Recommended Mains Fuse Size		A	25	25	40
Max Mains Incoming Cable Size		mm²	70	70	185
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			4	4	4
Number of Elements			12	12	12
Rating		kW	30.0	27.1	30.0
Current Per Phase		A	43.4	41.2	78.8
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CH00 Units SD35D255-CH00

Mechanical Data

			SD35D255-CH00-0	SD35D255-CH00-1	SD35D255-CH00-2
Capacity					
Nom Cooling (Gross)	(1)	kW	255.2	255.2	255.2
Fan Power Input (Fan Gain)	(2)	kW	7.8	7.8	7.8
Dimensions - W x D x H		mm	3500 x 890 x 1980	3500 x 890 x 1980	3500 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	745 / 326 / 1190	745 / 326 / 1190	745 / 326 / 1190
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	120	120	120
Water Flow Rate		l/s	12.1	12.1	12.1
Pressure Drop		kPa	106.5	106.5	106.5
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1532 / 1657	1532 / 1657	1532 / 1657
Maximum ESP		Pa	225	225	225
Nominal Airflow		m^3/s	13.0	13.0	13.0
Connections					
Water Inlet / Outlet -		mm	67	67	67
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			9	9	9
Electric Heating (Total)		kW	30.0	27.1	30.0
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

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

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CH00 Units SD35D255-CH00

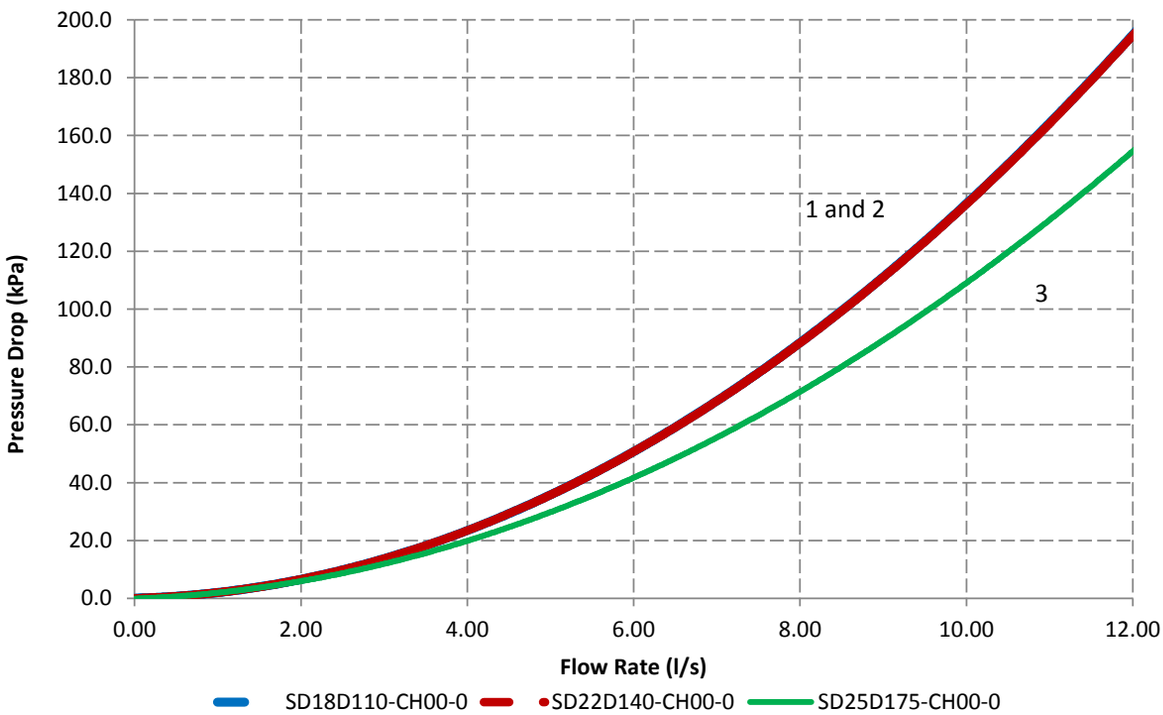
Electrical Data

			SD35D255-CH00-0	SD35D255-CH00-1	SD35D255-CH00-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	94.7	94.1	170.0
Recommended Mains Fuse Size		A	125	125	200
Unit Data - Cooling Only					
Nominal Run Amps		A	18.7	18.7	32.0
Recommended Mains Fuse Size		A	25	25	40
Max Mains Incoming Cable Size		mm²	70	70	185
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			4	4	4
Number of Elements			12	12	12
Rating		kW	30.0	27.1	30.0
Current Per Phase		A	43.4	41.2	78.8
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CH00 Units

Waterside Pressure Drop Data



1 SD18D110 - CH00 - 0
2 SD22D140 - CH00 - 0
3 SD25D175 - CH00 - 0

Includes coil, 2 port valve and pipework.

To calculate 3 port valve pressure drop:

ΔP valve = $\left(\frac{Q}{M}\right)^2$

where ΔP = Pressure Drop in kPa,

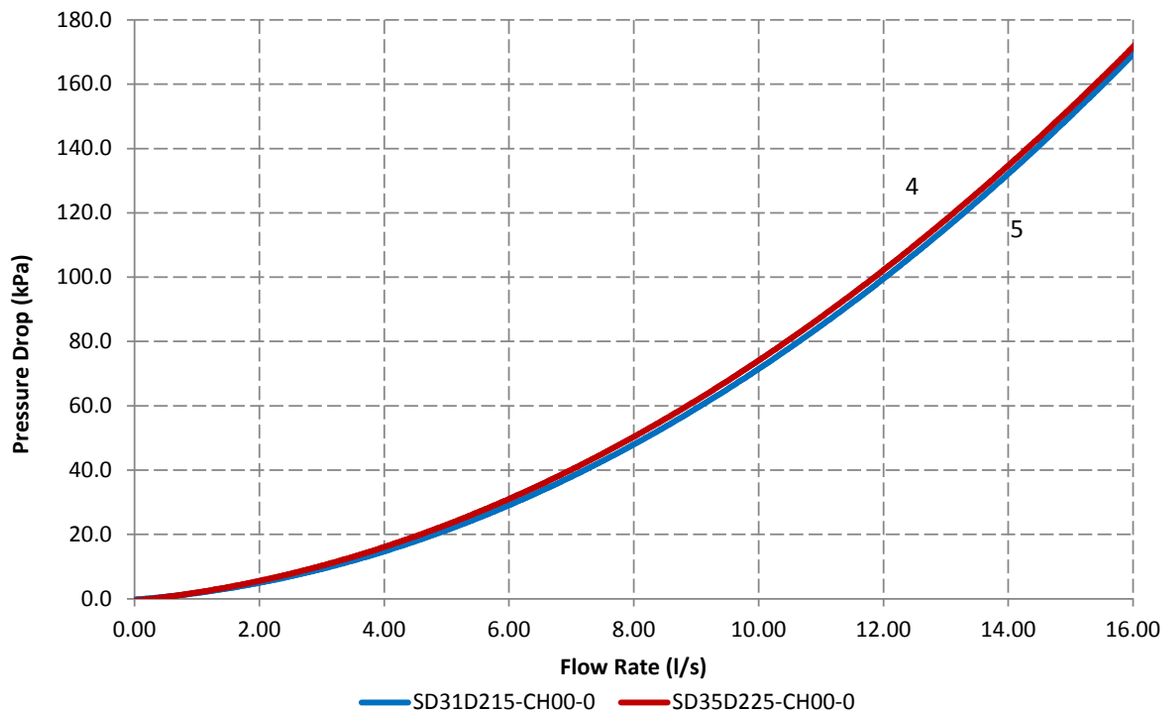
Q = Water Flow Rate in l/s and M = $\left(\frac{Kv}{36}\right)$

Fluid 100% water.

	Kv Cooling	Kv Bypass
SD18D110-CH00	40	40
SD22D140-CH00	63	40
SD25D175-CH00	63	40

Technical Data SD CH00 Units

Waterside Pressure Drop Data



4 SD31D215 - CH00 - 0
5 SD35D225 - CH00 - 0

Includes coil, port valve and pipework.

To calculate 3 port valve pressure drop:

ΔP valve = $\left(\frac{Q}{M}\right)^2$

where ΔP = Pressure Drop in kPa,

Q = Water Flow Rate in l/s and M = $\left(\frac{Kv}{36}\right)$

Fluid 100% water.

	Kv Cooling	Kv Bypass
SD31D215-CH00	63	63
SD35D255-CH00	63	63

Technical Data SD CH00 Units

Sound Data

	Sound Measurement	Overall dB(A)	Frequency (Hz) dB							
			63	125	250	500	1000	2000	4000	8000
SD18D110-CH00-0	Discharge Air	63.0	66.1	77.1	63.9	56.1	49.9	47.3	39.9	32.2
	Return Air	58.3	64.3	71.3	59.2	52.7	46.8	47.1	39.6	32.1
	Case Breakout	64.3	71.6	76.3	66.7	60.4	54.0	50.5	46.5	37.9
	Sound Pressure @ 3m	49.8	57.1	61.8	52.1	45.8	39.4	36.0	31.9	23.3
SD22D140-CH00-0	Discharge Air	66.0	69.2	80.1	66.9	58.9	53.1	50.7	43.4	35.6
	Return Air	61.3	67.5	74.4	62.2	55.5	49.9	50.5	43.1	35.4
	Case Breakout	67.3	74.8	79.4	69.7	63.2	57.2	53.9	50.0	41.2
	Sound Pressure @ 3m	52.8	60.2	64.8	55.1	48.6	42.6	39.4	35.4	26.6
SD25D175-CH00-0	Discharge Air	66.0	69.2	80.1	66.9	59.1	53.0	50.5	43.1	35.4
	Return Air	61.3	67.4	74.4	62.3	55.7	49.9	50.3	42.8	35.2
	Case Breakout	67.4	74.7	79.4	69.7	63.4	57.1	53.7	49.7	41.0
	Sound Pressure @ 3m	52.8	60.2	64.9	55.2	48.8	42.5	39.2	35.1	26.5
SD31D215-CH00-0	Discharge Air	66.7	69.8	80.8	67.6	59.8	53.6	51.1	43.7	36.0
	Return Air	62.0	68.0	75.0	62.9	56.3	50.5	50.9	43.4	35.8
	Case Breakout	68.0	75.3	80.0	70.4	64.0	57.7	54.3	50.2	41.6
	Sound Pressure @ 3m	53.5	60.8	65.5	55.8	49.5	43.2	39.7	35.7	27.0
SD35D225-CH00-0	Discharge Air	69.6	72.8	83.7	70.4	62.4	56.7	54.4	47.1	39.2
	Return Air	64.9	71.1	77.9	65.8	59.0	53.6	54.2	46.8	39.1
	Case Breakout	70.9	78.4	82.9	73.2	66.7	60.8	57.6	53.7	44.8
	Sound Pressure @ 3m	56.4	63.8	68.4	58.7	52.1	46.3	43.1	39.1	30.3

(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.

Technical Data SD CH00 Units

Interconnecting Wiring

N1	O	←	Neutral (Supply 1)
301	O	←	L1 (Supply 1)
302	O	←	L2 (Supply 1)
303	O	←	L3 (Supply 1)

N2	O	←	Neutral (Supply 2)
304	O	←	L1 (Supply 2)
305	O	←	L2 (Supply 2)
306	O	←	L3 (Supply 2)

PE	O	←	Protective Earth

502	O	→	Fire Detector
583	O	←	Fire Detector

583	O	→	Smoke Detector
584	O	←	Smoke Detector

502	O	→	Remote On/Off
522	O	←	Remote On/Off

2	O	→	Condensate Pump Supply (230V)
N (3*)	O	→	Condensate Pump Supply (230V)
534	O	→	Condensate Pump High Level Alarm
535	O	←	Condensate Pump High Level Alarm

609	O	→	Flood Detection Tape / Probe
610	O	←	Flood Detection Tape / Probe

810	O	→	Supply Air Temperature Sensor
811	O	→	Supply Air Temperature Sensor

560	O	→	Non-Critical Alarm N/O
561	O	→	Non-Critical Alarm Common
563	O		Critical Alarm N/O
564	O		Critical Alarm Common
565	O		Critical Alarm N/C

881	O	←	BMS Connection
882	O	←	BMS Connection
883	O	←	BMS Connection

*For 220V/3PH NO neutral units the Neutral connection is replaced with a live phase.

Technical Data SD CL00 Units

Performance Data SD CL00

		Chilled water inlet and outlet temperatures							
	Air On	5 / 10 °C		7 / 12 °C		8 / 14 °C		10 / 16 °C	
	Temp. (°C)	TC	SC	TC	SC	TC	SC	TC	SC
	/ %RH	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)
SD18D115-CL00-0	22 / 50	124.1	96.5	97.5	84.2	74.8	72.3	59.3	59.3
	24 / 45	139.2	109.3	112.7	97.2	89.7	83.7	73.4	73.4
	26 / 40	152.1	122.1	125.8	110.1	103.0	96.4	86.9	86.9
SD22D145-CL00-0	22 / 50	152.0	115.9	120.9	101.3	97.2	90.4	73.0	73.0
	24 / 45	169.8	130.9	138.7	116.5	115.7	106.1	89.4	89.4
	26 / 40	184.9	145.9	154.1	131.6	131.5	121.5	105.2	105.2
SD25D180-CL00-0	22 / 50	199.1	151.8	158.7	132.8	128.6	118.8	96.2	96.2
	24 / 45	222.1	171.4	181.8	152.7	152.4	139.2	117.5	117.5
	26 / 40	241.9	191.1	201.7	172.5	172.9	159.4	137.9	137.9
SD31D235-CL00-0	22 / 50	256.3	196.6	203.8	171.9	164.0	153.5	123.8	123.8
	24 / 45	286.3	222.1	233.9	197.7	195.1	180.0	151.4	151.4
	26 / 40	312.1	247.7	259.8	223.5	221.7	206.3	177.9	177.9
SD35D270-CL00-0	22 / 50	297.7	227.0	237.7	198.7	193.2	177.9	144.1	144.1
	24 / 45	332.2	256.4	272.1	228.3	228.7	208.3	175.7	175.7
	26 / 40	361.6	285.6	301.7	257.8	259.0	238.4	206.1	206.1

Technical Data SD CL00 Units

Performance Data SD CL00

Model	Air On Temp. (°C) / %RH	Chilled water inlet and outlet temperatures: 15 / 20 °C TC (kW)	15 / 20 °C SC (kW)	17 / 22 °C TC (kW)	17 / 22 °C SC (kW)	18 / 24°C TC (kW)	18 / 24°C SC (kW)	20 / 26 °C TC (kW)	20 / 26 °C SC (kW)
SD18D115-CL00-0	33 / 26	101.7	101.7	89.0	89.0	79.6	79.6	66.4	66.4
	35 / 24	113.1	113.1	100.6	100.6	91.6	91.6	78.9	78.9
	37 / 22	123.9	123.9	111.7	111.7	103.0	103.0	90.7	90.7
SD22D145-CL00-0	33 / 26	121.7	121.7	106.8	106.8	96.1	96.1	80.6	80.6
	35 / 24	135.1	135.1	120.4	120.4	110.2	110.2	95.2	95.2
	37 / 22	147.8	147.8	133.4	133.4	123.5	123.5	108.9	108.9
SD25D180-CL00-0	33 / 26	159.2	159.2	139.7	139.7	125.9	125.9	105.7	105.7
	35 / 24	176.8	176.8	157.5	157.5	144.3	144.3	124.7	124.7
	37 / 22	193.5	193.5	174.6	174.6	161.7	161.7	142.6	142.6
SD31D235-CL00-0	33 / 26	206.1	206.1	180.7	180.7	162.6	162.6	136.4	136.4
	35 / 24	228.7	228.7	203.8	203.8	186.4	186.4	161.0	161.0
	37 / 22	250.4	250.4	225.9	225.9	209.1	209.1	184.3	184.3
SD35D270-CL00-0	33 / 26	237.6	237.6	208.5	208.5	188.1	188.1	158.0	158.0
	35 / 24	263.8	263.8	235.1	235.1	215.4	215.4	186.2	186.2
	37 / 22	288.7	288.7	260.6	260.6	241.5	241.5	212.9	212.9

Technical Data SD CL00 Units SD18D115-CL00

Mechanical Data

			SD18D115-CL00-0	SD18D115-CL00-1	SD18D115-CL00-2
Capacity					
Nom Cooling (Gross)	(1)	kW	91.6	91.6	91.6
Fan Power Input (Fan Gain)	(2)	kW	2.6	2.6	2.6
Dimensions - W x D x H		mm	1800 x 890 x 1980	1800 x 890 x 1980	1800 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	463 / 175 / 699	463 / 175 / 699	463 / 175 / 699
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	62	62	62
Water Flow Rate		l/s	3.6	3.6	3.6
Pressure Drop		kPa	25.9	25.9	25.9
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1334 / 1657	1334 / 1657	1334 / 1657
Maximum ESP		Pa	485	485	485
Nominal Airflow		m^3/s	5.7	5.7	5.7
Connections					
Water Inlet / Outlet -		mm	54	54	54
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			6	6	6
Electric Heating (Total)		kW	15.0	13.5	15.0
Humidifier					
Capacity		kg/hr	8	8	8
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 35°C / 24% RH water 18°C / 24°C

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Machine weight excludes water charge.

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

Technical Data SD CL00 Units SD18D115-CL00

Electrical Data

			SD18D115-CL00-0	SD18D115-CL00-1	SD18D115-CL00-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	40.3	39.7	72.2
Recommended Mains Fuse Size		A	50	50	100
Unit Data - Cooling Only					
Nominal Run Amps		A	9.9	9.9	17.0
Recommended Mains Fuse Size		A	16	16	20
Max Mains Incoming Cable Size		mm²	35	35	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15.0	13.5	15.0
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6.0	6.0	6.0
Full Load Amps		A	8.7	9.2	15.8

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CL00 Units SD22D145-CL00

Mechanical Data

			SD22D145-CL00-0	SD22D145-CL00-1	SD22D145-CL00-2
Capacity					
Nom Cooling (Gross)	(1)	kW	110.2	110.2	110.2
Fan Power Input (Fan Gain)	(2)	kW	3.5	3.5	3.5
Dimensions - W x D x H		mm	2200 x 890 x 1980	2200 x 890 x 1980	2200 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	525 / 189 / 787	525 / 189 / 787	525 / 189 / 787
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	73	73	73
Water Flow Rate		l/s	4.4	4.4	4.4
Pressure Drop		kPa	39.5	39.5	39.5
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1503 / 1657	1503 / 1657	1503 / 1657
Maximum ESP		Pa	266	266	266
Nominal Airflow		m^3/s	6.7	6.7	6.7
Connections					
Water Inlet / Outlet -		mm	54	54	54
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			6	6	6
Electric Heating (Total)		kW	15.0	13.5	15.0
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 35°C / 24% RH water 18°C / 24°C

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Machine weight excludes water charge.

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

Technical Data SD CL00 Units SD22D145-CL00

Electrical Data

			SD22D145-CL00-0	SD22D145-CL00-1	SD22D145-CL00-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	64.2	64.7	115.6
Recommended Mains Fuse Size		A	80	80	160
Unit Data - Cooling Only					
Nominal Run Amps		A	9.9	9.9	17.0
Recommended Mains Fuse Size		A	16	16	20
Max Mains Incoming Cable Size		mm²	70	70	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15.0	13.5	15.0
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CL00 Units SD25D180-CL00

Mechanical Data

			SD25D180-CL00-0	SD25D180-CL00-1	SD25D180-CL00-2
Capacity					
Nom Cooling (Gross)	(1)	kW	144.3	144.3	144.3
Fan Power Input (Fan Gain)	(2)	kW	4.7	4.7	4.7
Dimensions - W x D x H		mm	2500 x 890 x 1980	2500 x 890 x 1980	2500 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	588 / 244 / 919	588 / 244 / 919	588 / 244 / 919
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	88	88	88
Water Flow Rate		l/s	5.7	5.7	5.7
Pressure Drop		kPa	62.4	62.4	62.4
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	3 x 2.9	3 x 2.9	3 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1409 / 1657	1409 / 1657	1409 / 1657
Maximum ESP		Pa	392	392	392
Nominal Airflow		m^3/s	8.8	8.8	8.8
Connections					
Water Inlet / Outlet -		mm	67	67	67
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			6	6	6
Electric Heating (Total)		kW	22.5	20.3	22.5
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 35°C / 24% RH water 18°C / 24°C

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Machine weight excludes water charge.

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

Technical Data SD CL00 Units SD25D180-CL00

Electrical Data

			SD25D180-CL00-0	SD25D180-CL00-1	SD25D180-CL00-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	79.4	79.4	142.8
Recommended Mains Fuse Size		A	100	100	200
Unit Data - Cooling Only					
Nominal Run Amps		A	14.3	14.3	24.5
Recommended Mains Fuse Size		A	20	20	32
Max Mains Incoming Cable Size		mm²	70	70	185
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	3 x 2.9	3 x 2.9	3 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			3	3	3
Number of Elements			9	9	9
Rating		kW	22.5	20.3	22.5
Current Per Phase		A	32.5	30.9	59.1
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CL00 Units SD31D235-CL00

Mechanical Data

			SD31D235-CL00-0	SD31D235-CL00-1	SD31D235-CL00-2
Capacity					
Nom Cooling (Gross)	(1)	kW	186.4	186.4	186.4
Fan Power Input (Fan Gain)	(2)	kW	5.9	5.9	5.9
Dimensions - W x D x H		mm	3100 x 890 x 1980	3100 x 890 x 1980	3100 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	690 / 305 / 1101	690 / 305 / 1101	690 / 305 / 1101
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	107	107	107
Water Flow Rate		l/s	7.4	7.4	7.4
Pressure Drop		kPa	67.1	67.1	67.1
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1374 / 1657	1374 / 1657	1374 / 1657
Maximum ESP		Pa	428	428	428
Nominal Airflow		m^3/s	11.3	11.3	11.3
Connections					
Water Inlet / Outlet -		mm	67	67	67
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			9	9	9
Electric Heating (Total)		kW	30.0	27.1	30.0
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 35°C / 24% RH water 18°C / 24°C

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Machine weight excludes water charge.

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

Technical Data SD CL00 Units SD31D235-CL00

Electrical Data

			SD31D235-CL00-0	SD31D235-CL00-1	SD31D235-CL00-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	94.7	94.1	170.0
Recommended Mains Fuse Size		A	125	125	200
Unit Data - Cooling Only					
Nominal Run Amps		A	18.7	18.7	32.0
Recommended Mains Fuse Size		A	25	25	40
Max Mains Incoming Cable Size		mm²	70	70	185
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			4	4	4
Number of Elements			12	12	12
Rating		kW	30.0	27.1	30.0
Current Per Phase		A	43.4	41.2	78.8
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CL00 Units SD35D270-CL00

Mechanical Data

			SD35D270-CL00-0	SD35D270-CL00-1	SD35D270-CL00-2
Capacity					
Nom Cooling (Gross)	(1)	kW	215.4	215.4	215.4
Fan Power Input (Fan Gain)	(2)	kW	7.8	7.8	7.8
Dimensions - W x D x H		mm	3500 x 890 x 1980	3500 x 890 x 1980	3500 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	745 / 326 / 1190	745 / 326 / 1190	745 / 326 / 1190
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	120	120	120
Water Flow Rate		l/s	8.6	8.6	8.6
Pressure Drop		kPa	95.1	95.1	95.1
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1532 / 1657	1532 / 1657	1532 / 1657
Maximum ESP		Pa	225	225	225
Nominal Airflow		m^3/s	13.0	13.0	13.0
Connections					
Water Inlet / Outlet -		mm	67	67	67
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			9	9	9
Electric Heating (Total)		kW	30.0	27.1	30.0
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 35°C / 24% RH water 18°C / 24°C

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Machine weight excludes water charge.

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

Technical Data SD CL00 Units SD35D270-CL00

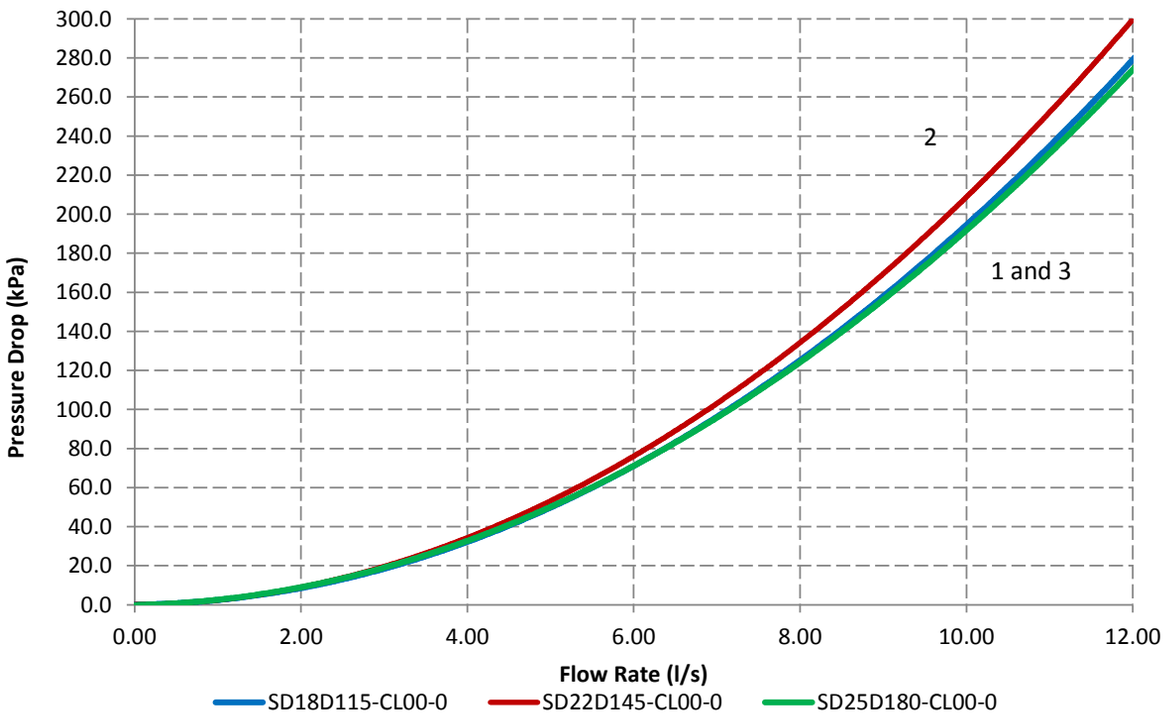
Electrical Data

			SD35D270-CL00-0	SD35D270-CL00-1	SD35D270-CL00-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	94.7	94.1	170.0
Recommended Mains Fuse Size		A	125	125	200
Unit Data - Cooling Only					
Nominal Run Amps		A	18.7	18.7	32.0
Recommended Mains Fuse Size		A	25	25	40
Max Mains Incoming Cable Size		mm²	70	70	185
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			4	4	4
Number of Elements			12	12	12
Rating		kW	30.0	27.1	30.0
Current Per Phase		A	43.4	41.2	78.8
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CL00 Units

Waterside Pressure Drop Data



1 SD18D115 -CL00-0
2 SD22D145-CL00-0
3 SD25D180-CL00-0

Includes coil, 2 port valve and pipework.

To calculate 2 port valve pressure drop:

ΔP valve = $\left(\frac{Q}{M}\right)^2$

where
ΔP = Pressure Drop in kPa,

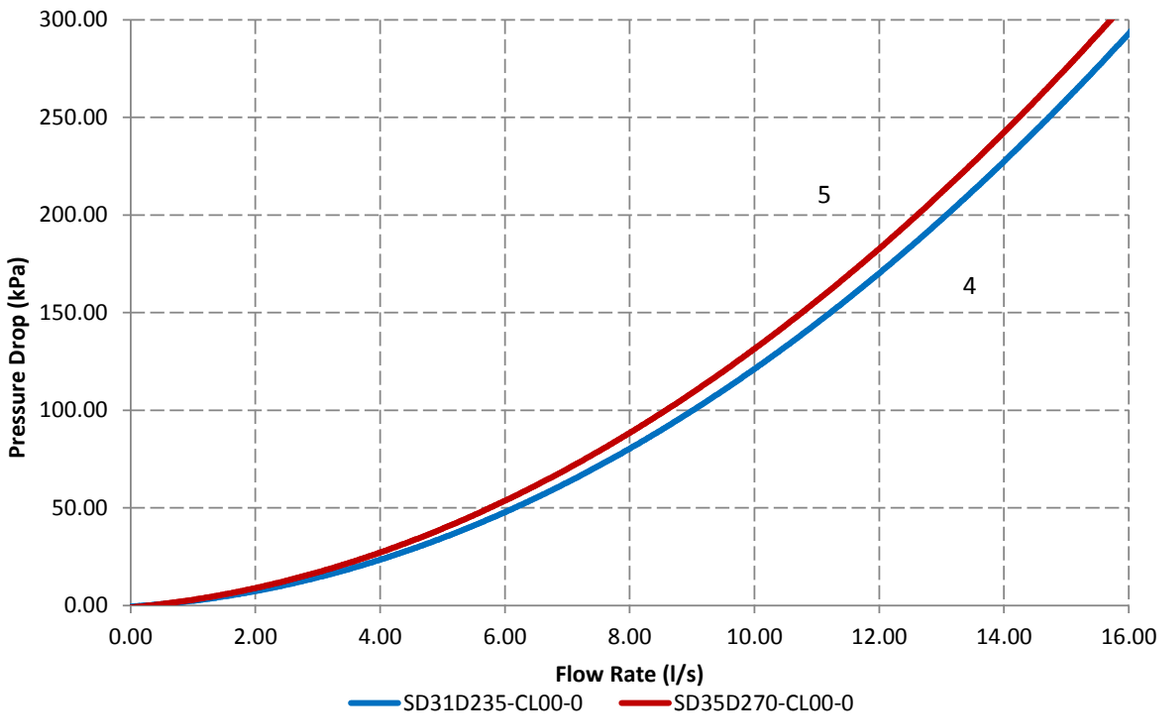
Q = Water Flow Rate in l/s and M = $\left(\frac{Kv}{36}\right)$

Fluid 100% water.

	Kv Cooling	Kv Bypass
SD18D115-CL00	40	40
SD22D145-CL00	63	40
SD25D180-CL00	63	40

Technical Data SD CL00 Units

Waterside Pressure Drop Data



4 SD31D235-CL00-0
5 SD35D270-CL00-0

Includes coil, 2 port valve and pipework.

To calculate 2 port valve pressure drop:

ΔP valve = $\left(\frac{Q}{M}\right)^2$

where ΔP = Pressure Drop in kPa,

Q = Water Flow Rate in l/s and M = $\left(\frac{Kv}{36}\right)$

Fluid 100% water.

	Kv Cooling	Kv Bypass
SD31D235-CL00	63	63
SD35D270-CL00	63	63

Technical Data SD CL00 Units

Sound Data

	Sound Measurement	Overall dB(A)	Frequency (Hz) dB 63	125	250	500	1000	2000	4000	8000
SD18D115-CL00-0	Discharge Air	63.0	66.1	77.1	63.9	56.1	49.9	47.3	39.9	32.2
	Return Air	58.3	64.3	71.3	59.2	52.7	46.8	47.1	39.6	32.1
	Case Breakout	64.3	71.6	76.3	66.7	60.4	54.0	50.5	46.5	37.9
	Sound Pressure @ 3m	49.8	57.1	61.8	52.1	45.8	39.4	36.0	31.9	23.3
SD22D145-CL00-0	Discharge Air	66.0	69.2	80.1	66.9	58.9	53.1	50.7	43.4	35.6
	Return Air	61.3	67.5	74.4	62.2	55.5	49.9	50.5	43.1	35.4
	Case Breakout	67.3	74.8	79.4	69.7	63.2	57.2	53.9	50.0	41.2
	Sound Pressure @ 3m	52.8	60.2	64.8	55.1	48.6	42.6	39.4	35.4	26.6
SD25D180-CL00-0	Discharge Air	66.0	69.2	80.1	66.9	59.1	53.0	50.5	43.1	35.4
	Return Air	61.3	67.4	74.4	62.3	55.7	49.9	50.3	42.8	35.2
	Case Breakout	67.4	74.7	79.4	69.7	63.4	57.1	53.7	49.7	41.0
	Sound Pressure @ 3m	52.8	60.2	64.9	55.2	48.8	42.5	39.2	35.1	26.5
SD31D235-CL00-0	Discharge Air	66.7	69.8	80.8	67.6	59.8	53.6	51.1	43.7	36.0
	Return Air	62.0	68.0	75.0	62.9	56.3	50.5	50.9	43.4	35.8
	Case Breakout	68.0	75.3	80.0	70.4	64.0	57.7	54.3	50.2	41.6
	Sound Pressure @ 3m	53.5	60.8	65.5	55.8	49.5	43.2	39.7	35.7	27.0
SD35D270-CL00-0	Discharge Air	69.6	72.8	83.7	70.4	62.4	56.7	54.4	47.1	39.2
	Return Air	64.9	71.1	77.9	65.8	59.0	53.6	54.2	46.8	39.1
	Case Breakout	70.9	78.4	82.9	73.2	66.7	60.8	57.6	53.7	44.8
	Sound Pressure @ 3m	56.4	63.8	68.4	58.7	52.1	46.3	43.1	39.1	30.3

(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.

Technical Data SD CL00 Units

Interconnecting Wiring

N1	O	←	Neutral (Supply 1)
301	O	←	L1 (Supply 1)
302	O	←	L2 (Supply 1)
303	O	←	L3 (Supply 1)

N2	O	←	Neutral (Supply 2)
304	O	←	L1 (Supply 2)
305	O	←	L2 (Supply 2)
306	O	←	L3 (Supply 2)

PE	O	←	Protective Earth

502	O	→	Fire Detector
583	O	←	Fire Detector

583	O	→	Smoke Detector
584	O	←	Smoke Detector

502	O	→	Remote On/Off
522	O	←	Remote On/Off

2	O	→	Condensate Pump Supply (230V)
N (3*)	O	→	Condensate Pump Supply (230V)
534	O	→	Condensate Pump High Level Alarm
535	O	←	Condensate Pump High Level Alarm

609	O	→	Flood Detection Tape / Probe
610	O	←	Flood Detection Tape / Probe

810	O	→	Supply Air Temperature Sensor
811	O	→	Supply Air Temperature Sensor

560	O	→	Non-Critical Alarm N/O
561	O	→	Non-Critical Alarm Common
563	O		Critical Alarm N/O
564	O		Critical Alarm Common
565	O		Critical Alarm N/C

881	O	←	BMS Connection
882	O	←	BMS Connection
883	O	←	BMS Connection

*For 220V/3PH NO neutral units the Neutral connection is replaced with a live phase.

Technical Data SD CHCH Units

Performance Data SD CHCH

		Chilled water inlet and outlet temperatures							
Model	**Air On**	**5 / 10 °C**		**7 / 12 °C**		**8 / 14 °C**		**10 / 16 °C**	
	Temp. (°C)	TC	SC	TC	SC	TC	SC	TC	SC
	/ %RH	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)
SD18D085-CHCH-0	22 / 50	83.0	75.5	63.4	63.4	51.4	51.4	37.6	37.6
	24 / 45	95.6	86.9	75.2	75.2	64.3	64.3	52.4	52.4
	26 / 40	106.2	98.2	86.6	86.6	76.3	76.3	65.0	65.0
SD22D105-CHCH-0	22 / 50	114.2	98.4	83.9	83.9	71.1	71.1	55.8	55.8
	24 / 45	130.2	112.3	98.3	98.3	86.2	86.2	71.8	71.8
	26 / 40	143.8	126.3	112.3	112.3	100.7	100.7	86.6	86.6
SD25D135-CHCH-0	22 / 50	147.6	124.3	109.4	105.1	91.6	91.6	73.1	73.1
	24 / 45	175.0	151.2	128.4	121.0	110.0	110.0	92.2	92.2
	26 / 40	184.1	159.1	145.4	138.9	127.9	127.9	110.4	110.4
SD31D165-CHCH-0	22 / 50	171.4	155.9	130.7	130.7	106.3	106.3	78.4	78.4
	24 / 45	197.3	179.3	155.0	155.0	132.7	132.7	108.3	108.3
	26 / 40	218.9	202.7	178.5	178.5	157.4	157.4	134.1	134.1
SD35D195-CHCH-0	22 / 50	207.7	184.4	156.0	156.0	130.3	130.3	100.7	100.7
	24 / 45	237.3	211.3	183.6	183.6	159.6	159.6	131.9	131.9
	26 / 40	262.6	238.2	210.5	210.5	187.5	187.5	160.7	160.7

Technical Data SD CHCH Units

Performance Data SD CHCH

Model	Air On Temp. (°C) / %RH	Chilled water inlet and outlet temperatures							
		15 / 20 °C		17 / 22 °C		18 / 24°C		20 / 26 °C	
		TC (kW)	SC (kW)	TC (kW)	SC (kW)	TC (kW)	SC (kW)	TC (kW)	SC (kW)
SD18D085-CHCH-0	33 / 26	81.0	81.0	70.1	70.1	60.3	60.3	48.7	48.7
	35 / 24	91.2	91.2	80.5	80.5	71.2	71.2	60.1	60.1
	37 / 22	100.8	100.8	90.4	90.4	81.4	81.4	70.7	70.7
SD22D105-CHCH-0	33 / 26	104.7	104.7	91.1	91.1	79.7	79.7	65.4	65.4
	35 / 24	117.2	117.2	103.8	103.8	93.0	93.0	79.2	79.2
	37 / 22	129.2	129.2	116.0	116.0	105.6	105.6	92.2	92.2
SD25D135-CHCH-0	33 / 26	131.9	131.9	115.0	115.0	101.2	101.2	83.6	83.6
	35 / 24	147.5	147.5	130.7	130.7	117.6	117.6	100.5	100.5
	37 / 22	162.4	162.4	145.9	145.9	133.2	133.2	116.5	116.5
SD31D165-CHCH-0	33 / 26	167.0	167.0	144.5	144.5	124.4	124.4	100.5	100.5
	35 / 24	187.8	187.8	165.9	165.9	146.7	146.7	123.9	123.9
	37 / 22	207.7	207.7	186.2	186.2	167.7	167.7	145.7	145.7
SD35D195-CHCH-0	33 / 26	196.5	196.5	170.5	170.5	148.1	148.1	121.0	121.0
	35 / 24	220.4	220.4	195.0	195.0	173.6	173.6	147.4	147.4
	37 / 22	243.2	243.2	218.2	218.2	197.8	197.8	172.2	172.2

Technical Data SD CHCH Units SD18D085-CHCH

Mechanical Data

			SD18D085-CHCH-0	SD18D085-CHCH-1	SD18D085-CHCH-2
Capacity					
Nom Cooling (Gross)	(1)	kW	75.2	75.2	75.2
Fan Power Input (Fan Gain)	(2)	kW	2.3	2.3	2.3
Dimensions - W x D x H		mm	1800 x 890 x 1980	1800 x 890 x 1980	1800 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	477 / 175 / 702	477 / 175 / 702	477 / 175 / 702
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	50	50	50
Water Flow Rate		l/s	3.6	3.6	3.6
Pressure Drop		kPa	23.0	23.0	23.0
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1266 / 1657	1266 / 1657	1266 / 1657
Maximum ESP		Pa	538	538	538
Nominal Airflow		m^3/s	5.3	5.3	5.3
Connections					
Water Inlet / Outlet -		mm	54	54	54
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			6	6	6
Electric Heating (Total)		kW	15.0	13.5	15.0
Humidifier					
Capacity		kg/hr	8	8	8
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

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

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CHCH Units SD18D085-CHCH

Electrical Data

			SD18D085-CHCH-0	SD18D085-CHCH-1	SD18D085-CHCH-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	40.3	39.7	72.2
Recommended Mains Fuse Size		A	50	50	100
Unit Data - Cooling Only					
Nominal Run Amps		A	9.9	9.9	17.0
Recommended Mains Fuse Size		A	16	16	20
Max Mains Incoming Cable Size		mm²	35	35	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15.0	13.5	15.0
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6.0	6.0	6.0
Full Load Amps		A	8.7	9.2	15.8

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CHCH Units SD22D105-CHCH

Mechanical Data

			SD22D105-CHCH-0	SD22D105-CHCH-1	SD22D105-CHCH-2
Capacity					
Nom Cooling (Gross)	(1)	kW	98.3	98.3	98.3
Fan Power Input (Fan Gain)	(2)	kW	3.5	3.5	3.5
Dimensions - W x D x H		mm	2200 x 890 x 1980	2200 x 890 x 1980	2200 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	547 / 189 / 798	547 / 189 / 798	547 / 189 / 798
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	62	62	62
Water Flow Rate		l/s	4.7	4.7	4.7
Pressure Drop		kPa	39.5	39.5	39.5
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1491 / 1657	1491 / 1657	1491 / 1657
Maximum ESP		Pa	287	287	287
Nominal Airflow		m^3/s	6.5	6.5	6.5
Connections					
Water Inlet / Outlet -		mm	54	54	54
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			6	6	6
Electric Heating (Total)		kW	15.0	13.5	15.0
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

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

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CHCH Units SD22D105-CHCH

Electrical Data

			SD22D105-CHCH-0	SD22D105-CHCH-1	SD22D105-CHCH-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	64.2	64.7	115.6
Recommended Mains Fuse Size		A	80	80	160
Unit Data - Cooling Only					
Nominal Run Amps		A	9.9	9.9	17.0
Recommended Mains Fuse Size		A	16	16	20
Max Mains Incoming Cable Size		mm²	70	70	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15.0	13.5	15.0
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CHCH Units SD25D135-CHCH

Mechanical Data

			SD25D135-CHCH-0	SD25D135-CHCH-1	SD25D135-CHCH-2
Capacity					
Nom Cooling (Gross)	(1)	kW	128.4	128.4	128.4
Fan Power Input (Fan Gain)	(2)	kW	4.1	4.1	4.1
Dimensions - W x D x H		mm	2500 x 890 x 1980	2500 x 890 x 1980	2500 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	618 / 244 / 940	618 / 244 / 940	618 / 244 / 940
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	79	79	79
Water Flow Rate		l/s	6.1	6.1	6.1
Pressure Drop		kPa	43.5	43.5	43.5
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	3 x 2.9	3 x 2.9	3 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1337 / 1657	1337 / 1657	1337 / 1657
Maximum ESP		Pa	463	463	463
Nominal Airflow		m^3/s	8.2	8.2	8.2
Connections					
Water Inlet / Outlet -		mm	67	67	67
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			6	6	6
Electric Heating (Total)		kW	22.5	20.3	22.5
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

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

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CHCH Units SD25D135-CHCH

Electrical Data

			SD25D135-CHCH-0	SD25D135-CHCH-1	SD25D135-CHCH-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	79.4	79.4	142.8
Recommended Mains Fuse Size		A	100	100	200
Unit Data - Cooling Only					
Nominal Run Amps		A	14.3	14.3	24.5
Recommended Mains Fuse Size		A	20	20	32
Max Mains Incoming Cable Size		mm²	70	70	185
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	3 x 2.9	3 x 2.9	3 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			3	3	3
Number of Elements			9	9	9
Rating		kW	22.5	20.3	22.5
Current Per Phase		A	32.5	30.9	59.1
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CHCH Units SD31D165-CHCH

Mechanical Data

			SD31D165-CHCH-0	SD31D165-CHCH-1	SD31D165-CHCH-2
Capacity					
Nom Cooling (Gross)	(1)	kW	155.0	155.0	155.0
Fan Power Input (Fan Gain)	(2)	kW	5.4	5.4	5.4
Dimensions - W x D x H		mm	3100 x 890 x 1980	3100 x 890 x 1980	3100 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	727 / 305 / 1127	727 / 305 / 1127	727 / 305 / 1127
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	96	96	96
Water Flow Rate		l/s	7.4	7.4	7.4
Pressure Drop		kPa	37.1	37.1	37.1
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1322 / 1657	1322 / 1657	1322 / 1657
Maximum ESP		Pa	473	473	473
Nominal Airflow		m^3/s	10.7	10.7	10.7
Connections					
Water Inlet / Outlet -		mm	67	67	67
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			9	9	9
Electric Heating (Total)		kW	30.0	27.1	30.0
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

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

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CHCH Units SD31D165-CHCH

Electrical Data

			SD31D165-CHCH-0	SD31D165-CHCH-1	SD31D165-CHCH-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	94.7	94.1	170.0
Recommended Mains Fuse Size		A	125	125	200
Unit Data - Cooling Only					
Nominal Run Amps		A	18.7	18.7	32.0
Recommended Mains Fuse Size		A	25	25	40
Max Mains Incoming Cable Size		mm²	70	70	185
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			4	4	4
Number of Elements			12	12	12
Rating		kW	30.0	27.1	30.0
Current Per Phase		A	43.4	41.2	78.8
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CHCH Units SD35D195-CHCH

Mechanical Data

			SD35D195-CHCH-0	SD35D195-CHCH-1	SD35D195-CHCH-2
Capacity					
Nom Cooling (Gross)	(1)	kW	183.6	183.6	183.6
Fan Power Input (Fan Gain)	(2)	kW	7.2	7.2	7.2
Dimensions - W x D x H		mm	3500 x 890 x 1980	3500 x 890 x 1980	3500 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	788 / 326 / 1221	788 / 326 / 1221	788 / 326 / 1221
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	108	108	108
Water Flow Rate		l/s	8.7	8.7	8.7
Pressure Drop		kPa	51.3	51.3	51.3
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1479 / 1657	1479 / 1657	1479 / 1657
Maximum ESP		Pa	302	302	302
Nominal Airflow		m^3/s	12.4	12.4	12.4
Connections					
Water Inlet / Outlet -		mm	67	67	67
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			9	9	9
Electric Heating (Total)		kW	30.0	27.1	30.0
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

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

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CHCH Units SD35D195-CHCH

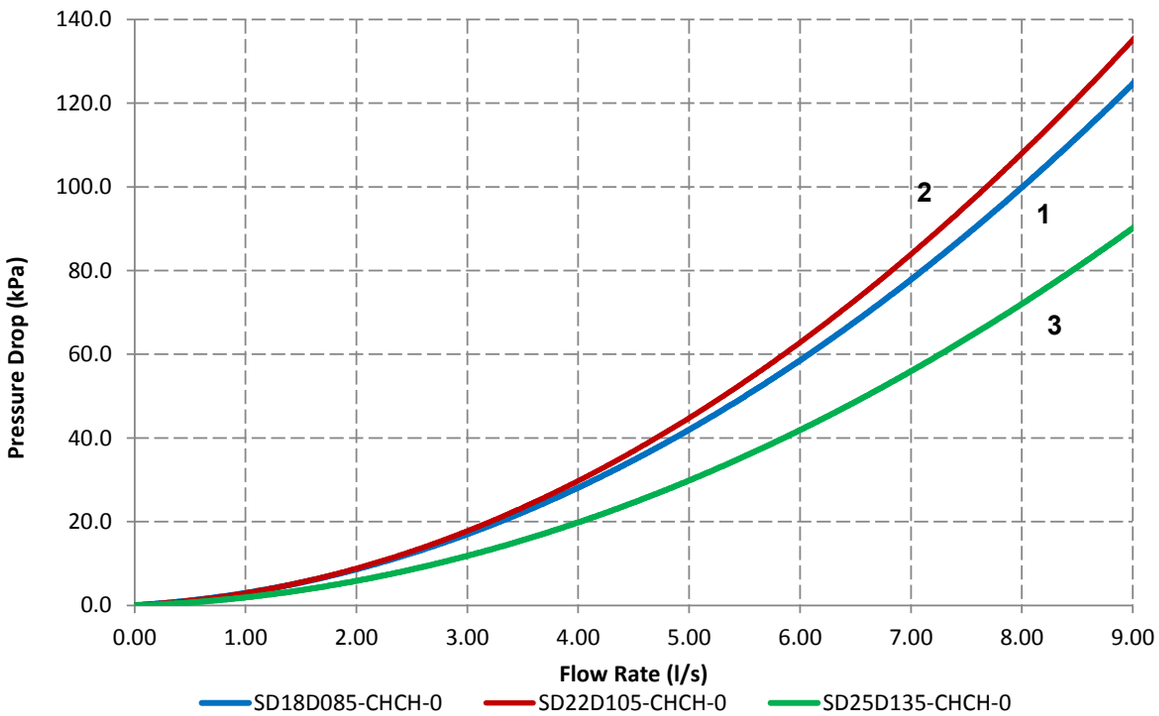
Electrical Data

			SD35D195-CHCH-0	SD35D195-CHCH-1	SD35D195-CHCH-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	94.7	94.1	170.0
Recommended Mains Fuse Size		A	125	125	200
Unit Data - Cooling Only					
Nominal Run Amps		A	18.7	18.7	32.0
Recommended Mains Fuse Size		A	25	25	40
Max Mains Incoming Cable Size		mm²	70	70	185
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			4	4	4
Number of Elements			12	12	12
Rating		kW	30.0	27.1	30.0
Current Per Phase		A	43.4	41.2	78.8
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CHCH Units

Waterside Pressure Drop Data



1 SD18D085-CHCH-0
2 SD22D105-CHCH-0
3 SD25D135-CHCH-0

Includes coil, 2 port valve and pipework.

To calculate 2 port valve pressure drop:

ΔP valve = $\left(\frac{Q}{M}\right)^2$
where

ΔP = Pressure Drop in kPa,

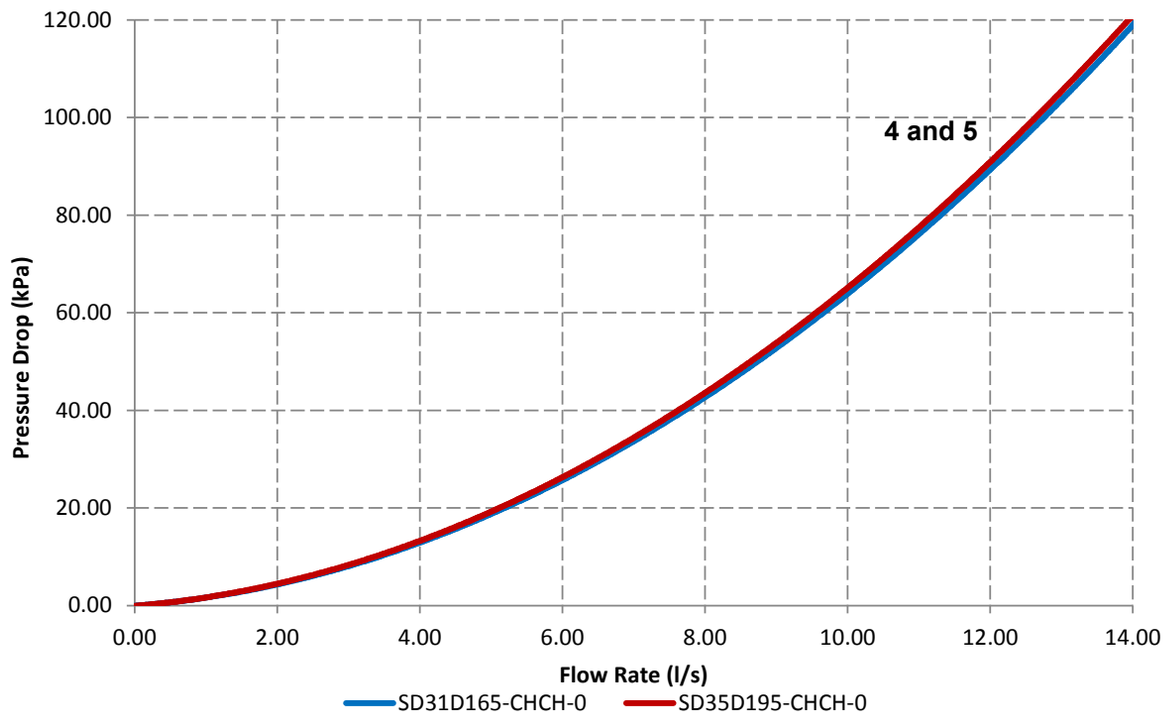
Q = Water Flow Rate in l/s and M = $\left(\frac{Kv}{36}\right)$

Fluid 100% water.

	Kv Cooling	Kv Bypass
SD18D110-CH00	40	40
SD22D140-CH00	63	40
SD25D175-CH00	63	40

Technical Data SD CHCH Units

Waterside Pressure Drop Data



4 SD31D165-CHCH-0
5 SD35D195-CHCH-0

Includes coil, 2 port valve and pipework.

To calculate 2 port valve pressure drop:

ΔP valve = $\left(\frac{Q}{M}\right)^2$

where ΔP = Pressure Drop in kPa,

Q = Water Flow Rate in l/s and M = $\left(\frac{Kv}{36}\right)$

Fluid 100% water.

	Kv Cooling	Kv Bypass
SD31D215-CH00	63	63
SD35D255-CH00	63	63

Technical Data SD CHCH Units

Sound Data

	Sound Measurement	Overall dB(A)	Frequency (Hz) dB							
			63	125	250	500	1000	2000	4000	8000
SD18D085-CHCH-0	Discharge Air	61.8	64.9	75.9	62.7	54.9	48.7	46.2	38.7	31.1
	Return Air	57.1	63.2	70.2	58.1	51.5	45.6	46.0	38.4	30.9
	Case Breakout	63.2	70.4	75.2	65.5	59.2	52.8	49.3	45.3	36.7
	Sound Pressure @ 3m	48.6	55.9	60.6	51.0	44.7	38.3	34.8	30.8	22.1
SD22D105-CHCH-0	Discharge Air	65.8	69.0	79.9	66.6	58.7	52.8	50.5	43.1	35.3
	Return Air	61.1	67.2	74.1	62.0	55.3	49.7	50.3	42.8	35.1
	Case Breakout	67.1	74.5	79.1	69.5	63.0	56.9	53.7	49.7	40.9
	Sound Pressure @ 3m	52.6	60.0	64.6	54.9	48.4	42.4	39.1	35.1	26.4
SD25D135-CHCH-0	Discharge Air	64.8	67.9	78.9	65.7	57.9	51.7	49.2	41.7	34.1
	Return Air	60.1	66.1	73.2	61.0	54.5	48.6	49.0	41.4	33.9
	Case Breakout	66.1	73.4	78.2	68.5	62.2	55.8	52.3	48.3	39.7
	Sound Pressure @ 3m	51.6	58.9	63.6	54.0	47.6	41.3	37.8	33.8	25.1
SD31D165-CHCH-0	Discharge Air	65.8	68.9	79.9	66.7	58.9	52.7	50.1	42.7	35.0
	Return Air	61.1	67.1	74.2	62.0	55.5	49.6	49.9	42.4	34.9
	Case Breakout	67.1	74.4	79.2	69.5	63.2	56.8	53.3	49.3	40.7
	Sound Pressure @ 3m	52.6	59.9	64.6	54.9	48.6	42.2	38.8	34.7	26.1
SD35D195-CHCH-0	Discharge Air	68.5	71.8	82.6	69.4	61.5	55.6	53.2	45.8	38.0
	Return Air	63.9	70.0	76.9	64.8	58.1	52.5	53.0	45.5	37.9
	Case Breakout	69.9	77.3	81.9	72.2	65.8	59.7	56.4	52.4	43.7
	Sound Pressure @ 3m	55.4	62.8	67.4	57.7	51.2	45.1	41.9	37.9	29.1

(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.

Technical Data SD CHCH Units

Interconnecting Wiring

N1	O	←	Neutral (Supply 1)
301	O	←	L1 (Supply 1)
302	O	←	L2 (Supply 1)
303	O	←	L3 (Supply 1)

N2	O	←	Neutral (Supply 2)
304	O	←	L1 (Supply 2)
305	O	←	L2 (Supply 2)
306	O	←	L3 (Supply 2)

PE	O	←	Protective Earth

502	O	→	Fire Detector
583	O	←	Fire Detector

583	O	→	Smoke Detector
584	O	←	Smoke Detector

502	O	→	Remote On/Off
522	O	←	Remote On/Off

2	O	→	Condensate Pump Supply (230V)
N (3*)	O	→	Condensate Pump Supply (230V)
534	O	→	Condensate Pump High Level Alarm
535	O	←	Condensate Pump High Level Alarm

609	O	→	Flood Detection Tape / Probe
610	O	←	Flood Detection Tape / Probe

810	O	→	Supply Air Temperature Sensor
811	O	→	Supply Air Temperature Sensor

560	O	→	Non-Critical Alarm N/O
561	O	→	Non-Critical Alarm Common
563	O		Critical Alarm N/O
564	O		Critical Alarm Common
565	O		Critical Alarm N/C

881	O	←	BMS Connection
882	O	←	BMS Connection
883	O	←	BMS Connection

*For 220V/3PH NO neutral units the Neutral connection is replaced with a live phase.

Technical Data SD CLCL Units

Performance Data SD CLCL

		Chilled water inlet and outlet temperatures							
	Air On	5 / 10 °C		7 / 12 °C		8 / 14 °C		10 / 16 °C	
	Temp. (°C)	TC	SC	TC	SC	TC	SC	TC	SC
	/ %RH	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)
SD18D090-CLCL-0	22 / 50	94.3	79.6	69.8	67.5	58.6	58.6	46.6	46.6
	24 / 45	106.8	90.7	82.0	77.7	70.4	70.4	58.9	58.9
	26 / 40	117.7	101.9	93.0	89.2	81.9	81.9	70.6	70.6
SD22D120-CLCL-0	22 / 50	125.6	101.9	96.9	89.1	76.8	76.8	62.0	62.0
	24 / 45	141.4	115.7	112.7	103.0	91.4	91.4	77.0	77.0
	26 / 40	155.0	129.6	126.1	117.0	105.6	105.6	91.4	91.4
SD25D140-CLCL-0	22 / 50	147.6	124.3	109.4	105.1	91.6	91.6	73.1	73.1
	24 / 45	175.0	151.2	128.4	121.0	110.0	110.0	92.2	92.2
	26 / 40	184.1	159.1	145.4	138.9	127.9	127.9	110.4	110.4
SD31D190-CLCL-0	22 / 50	205.3	167.7	158.0	146.6	126.0	126.0	101.8	101.8
	24 / 45	231.2	190.5	183.8	169.7	150.0	150.0	126.4	126.4
	26 / 40	253.3	213.4	205.9	192.8	173.3	173.3	150.2	150.2
SD35D225-CLCL-0	22 / 50	242.8	195.7	188.4	171.3	148.2	148.2	120.3	120.3
	24 / 45	272.6	222.1	218.3	197.8	175.8	175.8	148.6	148.6
	26 / 40	298.2	248.5	243.9	224.5	202.8	202.8	175.9	175.9

Technical Data SD CLCL Units

Performance Data SD CLCL

		Chilled water inlet and outlet temperatures							
	Air On	15 / 20 °C		17 / 22 °C		18 / 24°C		20 / 26 °C	
	Temp. (°C)	TC	SC	TC	SC	TC	SC	TC	SC
	/ %RH	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)	(kW)
SD18D090-CLCL-0	33 / 26	84.5	84.5	73.6	73.6	64.8	64.8	53.5	53.5
	35 / 24	94.5	94.5	83.7	83.7	75.3	75.3	64.3	64.3
	37 / 22	104.0	104.0	93.5	93.5	85.3	85.3	74.6	74.6
SD22D120-CLCL-0	33 / 26	107.9	107.9	94.2	94.2	83.7	83.7	69.6	69.6
	35 / 24	120.2	120.2	106.8	106.8	96.7	96.7	83.0	83.0
	37 / 22	132.1	132.1	118.8	118.8	109.1	109.1	95.7	95.7
SD25D140-CLCL-0	33 / 26	131.9	131.9	115.0	115.0	101.2	101.2	83.6	83.6
	35 / 24	147.5	147.5	130.7	130.7	117.6	117.6	100.5	100.5
	37 / 22	162.4	162.4	145.9	145.9	133.2	133.2	116.5	116.5
SD31D190-CLCL-0	33 / 26	177.2	177.2	154.7	154.7	137.4	137.4	114.1	114.1
	35 / 24	197.5	197.5	175.5	175.5	158.8	158.8	136.2	136.2
	37 / 22	217.0	217.0	195.3	195.3	179.2	179.2	157.1	157.1
SD35D225-CLCL-0	33 / 26	206.5	206.5	180.4	180.4	160.7	160.7	133.9	133.9
	35 / 24	230.0	230.0	204.5	204.5	185.4	185.4	159.4	159.4
	37 / 22	252.5	252.5	227.3	227.3	209.1	209.1	183.4	183.4

Technical Data SD CLCL Units SD18D090-CLCL

Mechanical Data

			SD18D090-CLCL-0	SD18D090-CLCL-1	SD18D090-CLCL-2
Capacity					
Nom Cooling (Gross)	(1)	kW	75.3	75.3	75.3
Fan Power Input (Fan Gain)	(2)	kW	2.3	2.3	2.3
Dimensions - W x D x H		mm	1800 x 890 x 1980	1800 x 890 x 1980	1800 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	477 / 175 / 702	477 / 175 / 702	477 / 175 / 702
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	50	50	50
Water Flow Rate		l/s	3.0	3.0	3.0
Pressure Drop		kPa	23.1	23.1	23.1
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1266 / 1657	1266 / 1657	1266 / 1657
Maximum ESP		Pa	538	538	538
Nominal Airflow		m^3/s	5.3	5.3	5.3
Connections					
Water Inlet / Outlet -		mm	54	54	54
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			6	6	6
Electric Heating (Total)		kW	15.0	13.5	15.0
Humidifier					
Capacity		kg/hr	8	8	8
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 35°C / 24% RH water 18°C / 24°C

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CLCL Units SD18D090-CLCL

Electrical Data

			SD18D090-CLCL-0	SD18D090-CLCL-1	SD18D090-CLCL-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	40.3	39.7	72.2
Recommended Mains Fuse Size		A	50	50	100
Unit Data - Cooling Only					
Nominal Run Amps		A	9.9	9.9	17.0
Recommended Mains Fuse Size		A	16	16	20
Max Mains Incoming Cable Size		mm²	35	35	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15.0	13.5	15.0
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	8	8	8
Rating		kW	6.0	6.0	6.0
Full Load Amps		A	8.7	9.2	15.8

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CLCL Units SD22D120-CLCL

Mechanical Data

			SD22D120-CLCL-0	SD22D120-CLCL-1	SD22D120-CLCL-2
Capacity					
Nom Cooling (Gross)	(1)	kW	96.7	96.7	96.7
Fan Power Input (Fan Gain)	(2)	kW	3.5	3.5	3.5
Dimensions - W x D x H		mm	2200 x 890 x 1980	2200 x 890 x 1980	2200 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	547 / 189 / 798	547 / 189 / 798	547 / 189 / 798
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	62	62	62
Water Flow Rate		l/s	3.8	3.8	3.8
Pressure Drop		kPa	41.0	41.0	41.0
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1491 / 1657	1491 / 1657	1491 / 1657
Maximum ESP		Pa	287	287	287
Nominal Airflow		m^3/s	6.5	6.5	6.5
Connections					
Water Inlet / Outlet -		mm	54	54	54
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			6	6	6
Electric Heating (Total)		kW	15.0	13.5	15.0
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 35°C / 24% RH water 18°C / 24°C

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CLCL Units SD22D120-CLCL

Electrical Data

			SD22D120-CLCL-0	SD22D120-CLCL-1	SD22D120-CLCL-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	64.2	64.7	115.6
Recommended Mains Fuse Size		A	80	80	160
Unit Data - Cooling Only					
Nominal Run Amps		A	9.9	9.9	17.0
Recommended Mains Fuse Size		A	16	16	20
Max Mains Incoming Cable Size		mm²	70	70	70
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	2 x 2.9	2 x 2.9	2 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			2	2	2
Number of Elements			6	6	6
Rating		kW	15.0	13.5	15.0
Current Per Phase		A	21.7	20.6	39.4
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CLCL Units SD25D140-CLCL

Mechanical Data

			SD25D140-CLCL-0	SD25D140-CLCL-1	SD25D140-CLCL-2
Capacity					
Nom Cooling (Gross)	(1)	kW	117.6	117.6	117.6
Fan Power Input (Fan Gain)	(2)	kW	4.1	4.1	4.1
Dimensions - W x D x H		mm	2500 x 890 x 1980	2500 x 890 x 1980	2500 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	618 / 244 / 940	618 / 244 / 940	618 / 244 / 940
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	79	79	79
Water Flow Rate		l/s	4.7	4.7	4.7
Pressure Drop		kPa	25.5	25.5	25.5
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	3 x 2.9	3 x 2.9	3 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1337 / 1657	1337 / 1657	1337 / 1657
Maximum ESP		Pa	463	463	463
Nominal Airflow		m^3/s	8.2	8.2	8.2
Connections					
Water Inlet / Outlet -		mm	67	67	67
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			6	6	6
Electric Heating (Total)		kW	22.5	20.3	22.5
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 35°C / 24% RH water 18°C / 24°C

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CLCL Units SD25D140-CLCL

Electrical Data

			SD25D140-CLCL-0	SD25D140-CLCL-1	SD25D140-CLCL-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	79.4	79.4	142.8
Recommended Mains Fuse Size		A	100	100	200
Unit Data - Cooling Only					
Nominal Run Amps		A	14.3	14.3	24.5
Recommended Mains Fuse Size		A	20	20	32
Max Mains Incoming Cable Size		mm²	70	70	185
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	3 x 2.9	3 x 2.9	3 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			3	3	3
Number of Elements			9	9	9
Rating		kW	22.5	20.3	22.5
Current Per Phase		A	32.5	30.9	59.1
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CLCL Units SD31D190-CLCL

Mechanical Data

			SD31D190-CLCL-0	SD31D190-CLCL-1	SD31D190-CLCL-2
Capacity					
Nom Cooling (Gross)	(1)	kW	158.8	158.8	158.8
Fan Power Input (Fan Gain)	(2)	kW	5.4	5.4	5.4
Dimensions - W x D x H		mm	3100 x 890 x 1980	3100 x 890 x 1980	3100 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	727 / 305 / 1127	727 / 305 / 1127	727 / 305 / 1127
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	96	96	96
Water Flow Rate		l/s	6.3	6.3	6.3
Pressure Drop		kPa	49.7	49.7	49.7
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1322 / 1657	1322 / 1657	1322 / 1657
Maximum ESP		Pa	473	473	473
Nominal Airflow		m^3/s	10.7	10.7	10.7
Connections					
Water Inlet / Outlet -		mm	67	67	67
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			9	9	9
Electric Heating (Total)		kW	30.0	27.1	30.0
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 35°C / 24% RH water 18°C / 24°C

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CLCL Units SD31D190-CLCL

Electrical Data

			SD31D190-CLCL-0	SD31D190-CLCL-1	SD31D190-CLCL-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	94.7	94.1	170.0
Recommended Mains Fuse Size		A	125	125	200
Unit Data - Cooling Only					
Nominal Run Amps		A	18.7	18.7	32.0
Recommended Mains Fuse Size		A	25	25	40
Max Mains Incoming Cable Size		mm²	70	70	185
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			4	4	4
Number of Elements			12	12	12
Rating		kW	30.0	27.1	30.0
Current Per Phase		A	43.4	41.2	78.8
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CLCL Units SD35D225-CLCL

Mechanical Data

			SD35D225-CLCL-0	SD35D225-CLCL-1	SD35D225-CLCL-2
Capacity					
Nom Cooling (Gross)	(1)	kW	185.4	185.4	185.4
Fan Power Input (Fan Gain)	(2)	kW	7.2	7.2	7.2
Dimensions - W x D x H		mm	3500 x 890 x 1980	3500 x 890 x 1980	3500 x 890 x 1980
Weight - Machine Case / Fan Module / Operating	(3)	kg	788 / 326 / 1221	788 / 326 / 1221	788 / 326 / 1221
Construction			Frame: Sheet Metal Folded Profile, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Material/Colour			Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint / Black Grey (RAL 7021)		
Cooling Coil			Copper Tube / Turbulated Hydrophillic Coated Aluminium Fins		
Cooling / Dehum Stages			1 (Modulated) / 1		
Water Volume		l	108	108	108
Water Flow Rate		l/s	7.4	7.4	7.4
Pressure Drop		kPa	72.1	72.1	72.1
Fan & Motor			Backwards Curved, Centrifugal Direct Drive		
Motor Type			EC	EC	EC
Quantity x Motor Size	(4)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Speed @25Pa ESP / Maximum ESP		rpm	1479 / 1657	1479 / 1657	1479 / 1657
Maximum ESP		Pa	302	302	302
Nominal Airflow		m^3/s	12.4	12.4	12.4
Connections					
Water Inlet / Outlet -		mm	67	67	67
Condensate Drain Hose		mm	22	22	22
Filtration			Disposable to BS EN779:2012 - G4 - 75mm Deep		
Quantity			9	9	9
Electric Heating (Total)		kW	30.0	27.1	30.0
Humidifier					
Capacity		kg/hr	30	30	30
Drain Pump Flow Rate		l/m	7	7	7
Feed / Drain			3/4" BSPF Braided Flexible Hose / 22mm Hose Connection		
Hot Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	9.0	9.0	9.0
Drain			10mm Stainless Steel Stub Connection		
Cold Water Condensate Pump					
Head		m	5	5	5
Flow		l/m	3.1	3.1	3.1
Drain			10mm Plastic Barb Connection		
Upgraded Fan Motor - EC Motor					
Quantity x Motor Size	(4)	kW	N/A	N/A	N/A
Speed @ 25Pa / Maximum ESP		rpm	N/A	N/A	N/A
Maximum ESP		Pa	N/A	N/A	N/A

(1) Entering air 35°C / 24% RH water 18°C / 24°C

(2) Fan gain/ fan power input is shown for a unit delivering nominal air volume with 25Pa ESP. The fan gain / fan power values will change when selected with alternative airflow or ESP values.

(3) Operating weight includes case and fan module.

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

Technical Data SD CLCL Units SD35D225-CLCL

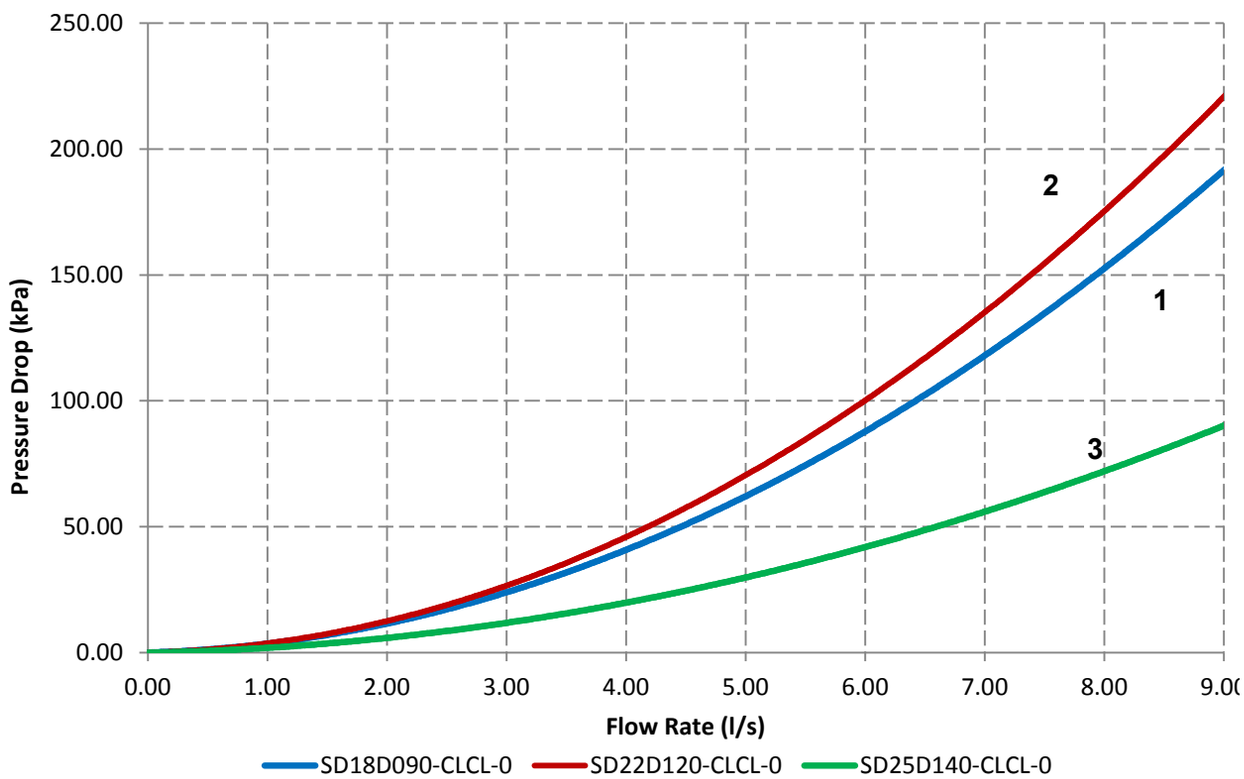
Electrical Data

			SD35D225-CLCL-0	SD35D225-CLCL-1	SD35D225-CLCL-2
Unit Data - Full Function	(1)				
Nominal Run Amps		A	94.7	94.1	170.0
Recommended Mains Fuse Size		A	125	125	200
Unit Data - Cooling Only					
Nominal Run Amps		A	18.7	18.7	32.0
Recommended Mains Fuse Size		A	25	25	40
Max Mains Incoming Cable Size		mm²	70	70	185
Mains Supply		V	400V / 3PH + N / 50Hz	380V / 3PH + N / 60Hz	220V / 3PH / 60Hz
Control Circuit		VAC	24	24	24
Evaporator Fan - Motor - Per Fan					
Motor Type			EC	EC	EC
Quantity x Motor Size	(2)	kW	4 x 2.9	4 x 2.9	4 x 2.9
Full Load Amps		A	4.5	4.5	7.5
OPTIONAL EXTRAS					
Electric Heating					
Stage of Reheat			4	4	4
Number of Elements			12	12	12
Rating		kW	30.0	27.1	30.0
Current Per Phase		A	43.4	41.2	78.8
Humidifier					
Capacity		kg/hr	30	30	30
Rating		kW	22.5	22.5	22.5
Full Load Amps		A	32.6	34.2	59.2

(1) Values given for full function units with standard selections for heating, humidification, supply air fans.
(2) Stated motor power is based on maximum electrical power absorbed

Technical Data SD CLCL Units

Waterside Pressure Drop Data



1 SD18D090 - CLCL-0
2 SD22D120 - CLCL-0
3 SD25D140 - CLCL-0

Includes coil, 2 port valve and pipework.

To calculate 3 port valve pressure drop:

ΔP valve = $\left(\frac{Q}{M}\right)^2$

where ΔP = Pressure Drop in kPa,

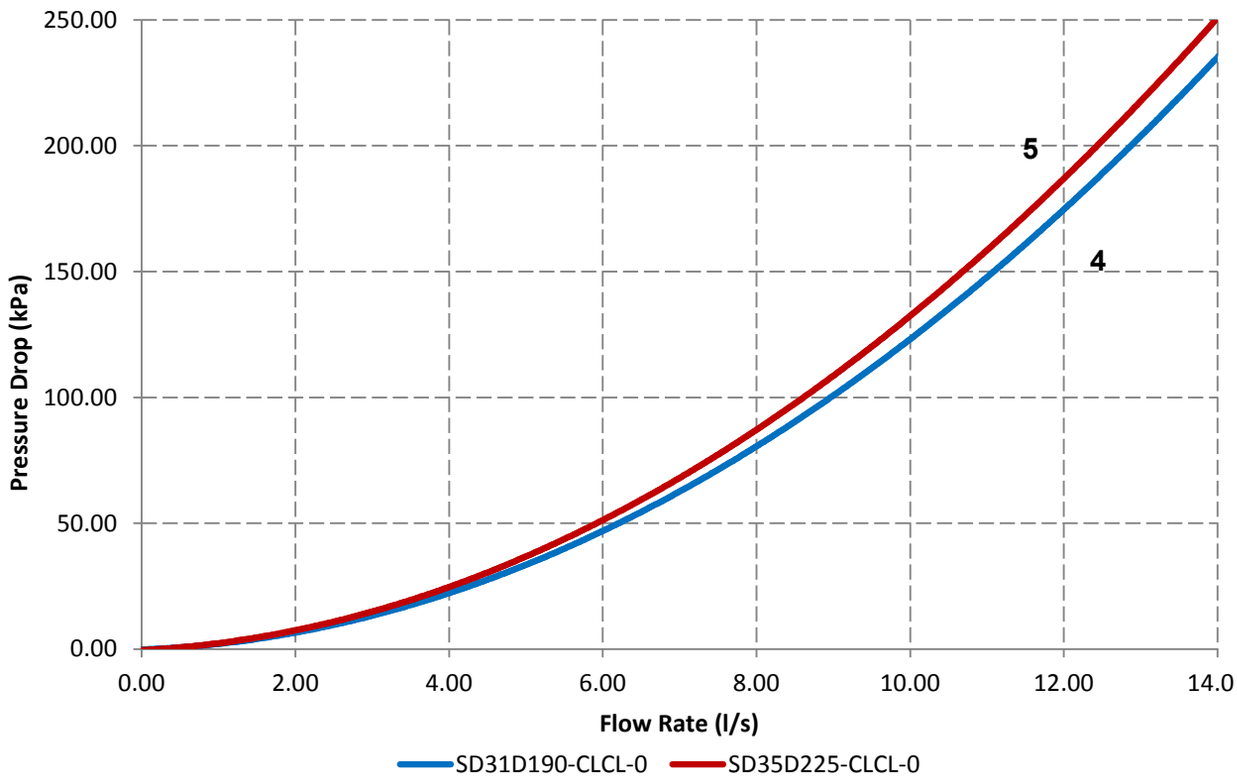
Q = Water Flow Rate in l/s and M = $\left(\frac{Kv}{36}\right)$

Fluid 100% water.

	Kv Cooling	Kv Bypass
SD18D090-CLCL	40	40
SD22D120-CLCL	40	40
SD25D140-CLCL	63	63

Technical Data SD CLCL Units

Waterside Pressure Drop Data



4 SD31D190 - CLCL-0
5 SD35D225 - CLCL-0

Includes coil, 2 port valve and pipework.

To calculate 3 port valve pressure drop:

ΔP valve = $\left(\frac{Q}{M}\right)^2$

where ΔP = Pressure Drop in kPa,

Q = Water Flow Rate in l/s and M = $\left(\frac{Kv}{36}\right)$

Fluid 100% water.

	Kv Cooling	Kv Bypass
SD31D190-CLCL	63	63
SD35D225-CLCL	63	63

Technical Data SD CLCL Units

Sound Data

	Sound Measurement	Overall dB(A)	Frequency (Hz) dB 63	125	250	500	1000	2000	4000	8000
SD18D090-CLCL-0	Discharge Air	61.8	64.9	75.9	62.7	54.9	48.7	46.2	38.7	31.1
	Return Air	57.1	63.2	70.2	58.1	51.5	45.6	46.0	38.4	30.9
	Case Breakout	63.2	70.4	75.2	65.5	59.2	52.8	49.3	45.3	36.7
	Sound Pressure @ 3m	48.6	55.9	60.6	51.0	44.7	38.3	34.8	30.8	22.1
SD22D120-CLCL-0	Discharge Air	65.8	69.0	79.9	66.6	58.7	52.8	50.5	43.1	35.3
	Return Air	61.1	67.2	74.1	62.0	55.3	49.7	50.3	42.8	35.1
	Case Breakout	67.1	74.5	79.1	69.5	63.0	56.9	53.7	49.7	40.9
	Sound Pressure @ 3m	52.6	60.0	64.6	54.9	48.4	42.4	39.1	35.1	26.4
SD25D135-CLCL-0	Discharge Air	64.8	67.9	78.9	65.7	57.9	51.7	49.2	41.7	34.1
	Return Air	60.1	66.1	73.2	61.0	54.5	48.6	49.0	41.4	33.9
	Case Breakout	66.1	73.4	78.2	68.5	62.2	55.8	52.3	48.3	39.7
	Sound Pressure @ 3m	51.6	58.9	63.6	54.0	47.6	41.3	37.8	33.8	25.1
SD31D190-CLCL-0	Discharge Air	65.8	68.9	79.9	66.7	58.9	52.7	50.1	42.7	35.0
	Return Air	61.1	67.1	74.2	62.0	55.5	49.6	49.9	42.4	34.9
	Case Breakout	67.1	74.4	79.2	69.5	63.2	56.8	53.3	49.3	40.7
	Sound Pressure @ 3m	52.6	59.9	64.6	54.9	48.6	42.2	38.8	34.7	26.1
SD35D225-CLCL-0	Discharge Air	68.5	71.8	82.6	69.4	61.5	55.6	53.2	45.8	38.0
	Return Air	63.9	70.0	76.9	64.8	58.1	52.5	53.0	45.5	37.9
	Case Breakout	69.9	77.3	81.9	72.2	65.8	59.7	56.4	52.4	43.7
	Sound Pressure @ 3m	55.4	62.8	67.4	57.7	51.2	45.1	41.9	37.9	29.1

(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.

Technical Data SD CLCL Units

Interconnecting Wiring

N1	O	←	Neutral (Supply 1)
301	O	←	L1 (Supply 1)
302	O	←	L2 (Supply 1)
303	O	←	L3 (Supply 1)

N2	O	←	Neutral (Supply 2)
304	O	←	L1 (Supply 2)
305	O	←	L2 (Supply 2)
306	O	←	L3 (Supply 2)

PE	O	←	Protective Earth

502	O	→	Fire Detector
583	O	←	Fire Detector

583	O	→	Smoke Detector
584	O	←	Smoke Detector

502	O	→	Remote On/Off
522	O	←	Remote On/Off

2	O	→	Condensate Pump Supply (230V)
N (3*)	O	→	Condensate Pump Supply (230V)
534	O	→	Condensate Pump High Level Alarm
535	O	←	Condensate Pump High Level Alarm

609	O	→	Flood Detection Tape / Probe
610	O	←	Flood Detection Tape / Probe

810	O	→	Supply Air Temperature Sensor
811	O	→	Supply Air Temperature Sensor

560	O	→	Non-Critical Alarm N/O
561	O	→	Non-Critical Alarm Common
563	O		Critical Alarm N/O
564	O		Critical Alarm Common
565	O		Critical Alarm N/C

881	O	←	BMS Connection
882	O	←	BMS Connection
883	O	←	BMS Connection

*For 220V/3PH NO neutral units the Neutral connection is replaced with a live phase.

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).

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.

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