

**NEW R410A!**



# BluCube™ Cooling Only and Heat Pump Condensing Unit



## Technical Manual



ISO 14001  
EM552086

ISO 9001  
FM00542

About Airedale Products & Customer Services

Warranty, Commissioning & Maintenance

As standard, Airedale guarantees all non consumable **parts only** for a period of **12 months**, variations tailored to suit product and application are also available; please contact Airedale for full terms and details.

To further protect your investment in Airedale products, Airedale Service can provide full commissioning services, comprehensive maintenance packages and service cover 24 hours a day, 365 days a year (UK mainland). For a free quotation contact Airedale Service or your local Sales Engineer.

All Airedale products are designed in accordance with EU Directives regarding prevention of build up of water, associated with the risk of contaminants such as Legionella.

Where applicable, effective removal of condensate is achieved by gradient drainage to outlets and where used, humidification systems produce sterile, non-toxic steam during normal operation.

For effective prevention of such risk it is necessary that the equipment is maintained in accordance with Airedale recommendations.

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](mailto:enquiries@airedale.com) or telephone:

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## Health and Safety

### IMPORTANT

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

### Safety

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

### CAUTION



1 Installation, service and maintenance of Airedale equipment should only be carried out by technically trained competent personnel.

### CAUTION



2 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.

3 Also ensure that there are no other power feeds to the unit such as fire alarm circuits, BMS circuits etc.

4 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.

5 The refrigerant used in this range of products is classified under the COSHH regulations as an irritant, with set Workplace Exposure Levels (WEL) for consideration if this plant is installed in confined or poorly ventilated areas.

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

### Protective Personal Equipment

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

### Refrigerant Warning

The Airedale BluCube uses R410A refrigerant which is a high pressure refrigerant. It requires careful attention to proper storage and handling procedures.

Use only manifold gauge sets designed for use with R410A refrigerant. Use only refrigerant recovery units and cylinders designed for high pressure refrigerants.

R410A must only be charged in the liquid state to ensure correct blend makeup.

The refrigerant must be stored in a clean, dry area away from sunlight. The refrigerant must never be stored above 50°C.

### Manual Handling

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

## Environmental Considerations

### 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)	<b>2004/108/EC</b>
Low Voltage Directive (LVD)	<b>2006/95/EC</b>
Machinery Directive (MD)	<b>89/392/EEC version 2006/42/EC</b>
Pressure Equipment Directive (PED)	<b>97/23/EC</b>

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

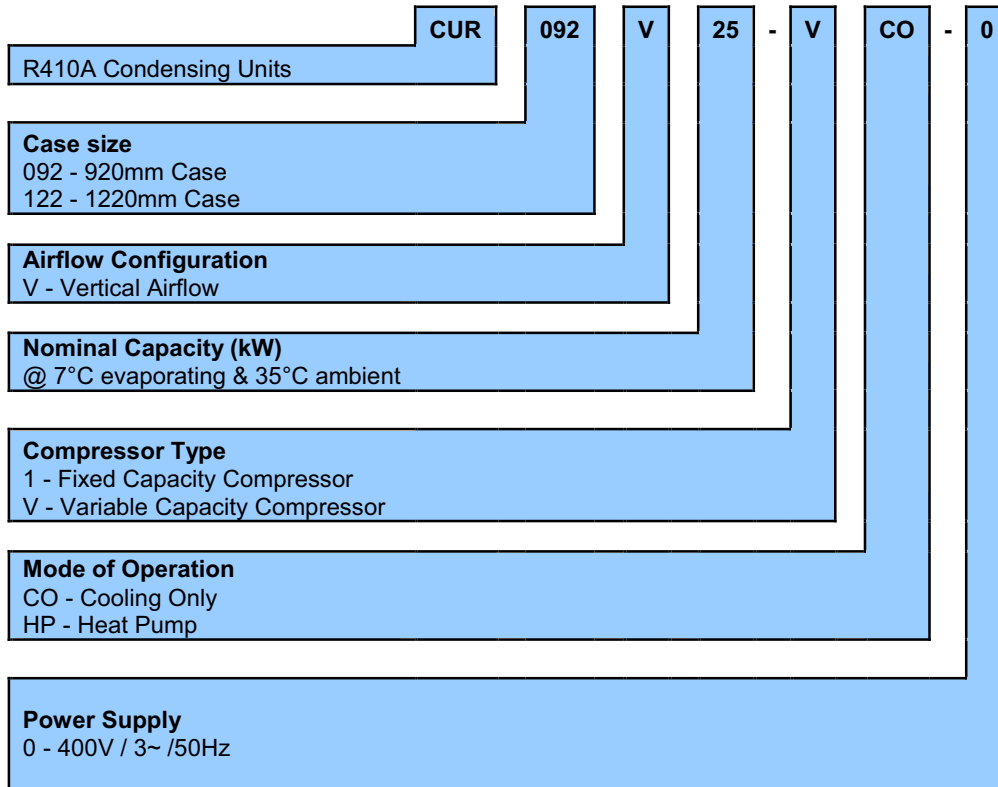
### TS and PS Values

Maximum and Minimum Operation Temperature (TS) and Pressure (PS)	
Operating Temperature (TS),	TS = Min -35°C to Max 120°C *
Maximum Operating Pressure (PS)	PS = High Side 40.7 Barg

\*Based upon the maximum machine running temperatures.

General Specification

Nomenclature



Introduction

The BluCube is Airedale’s high efficiency R410A condensing unit with heat pump variant that can be universally matched with a variety of industry standard air handling units.

Its latest technology features include EC fans, variable capacity control and modulating head pressure control.

Benefiting from an extremely compact and modular design, the BluCube will fit into a standard lift.

The BluCube’s small footprint ensures minimal space claim on rooftops or in plant rooms.

Capacity range from

Cooling Only Unit  
14 to 43kW (EER 2.9 to 3.4)

Heat Pump units  
Cooling Mode  
14 to 44kW (EER 2.6 to 3.4)

Heating Mode  
14 to 40kW (EER 2.5 to 2.7)

## Capacity Range Cooling Only Unit

Model No.	Nominal Cooling Capacity (kW)	Nominal Unit Input Power (kW)	EER	Dimensions (H x W x L) mm
CUR092V16-1CO-0	13.8	4.1	3.37	1750 x 764 x 922
CUR092V20-1CO-0	20.3	6.2	3.26	1750 x 764 x 922
CUR092V25-1CO-0	26.0	8.4	3.10	1750 x 764 x 922
CUR092V29-1CO-0	28.6	9.5	3.01	1750 x 764 x 922
CUR122V35-1CO-0	38.8	12.5	3.10	1750 x 764 x 1222
CUR122V40-1CO-0	43.4	14.5	3.00	1750 x 764 x 1222

CUR092V16-VCO-0	15.6	4.5	3.48	1750 x 764 x 922
CUR092V20-VCO-0	20.3	6.2	3.27	1750 x 764 x 922
CUR092V25-VCO-0	24.8	7.6	3.26	1750 x 764 x 922
CUR092V29-VCO-0	28.4	9.2	3.08	1750 x 764 x 922
CUR122V35-VCO-0	37.1	12.0	3.09	1750 x 764 x 1222
CUR122V40-VCO-0	42.6	14.3	2.98	1750 x 764 x 1222

## Capacity Range Heat Pump Unit

Model No.	Nominal Cooling Capacity (kW)	Nominal Unit Input Power (kW)	EER	Nominal Heating Capacity (kW)	Nominal Unit Input Power (kW)	EER	Dimensions (H x W x L) mm
CUR092V16-1HP-0	14.6	4.4	3.32	13.7	5.1	2.69	1750 x 764 x 922
CUR092V20-1HP-0	21.1	6.7	3.15	19.4	7.2	2.69	1750 x 764 x 922
CUR092V25-1HP-0	26.5	9.3	2.85	24.2	9.1	2.66	1750 x 764 x 922
CUR092V29-1HP-0	28.7	10.6	2.71	26.4	10.2	2.59	1750 x 764 x 922
CUR122V35-1HP-0	39.7	13.7	2.90	35.5	14.3	2.48	1750 x 764 x 1222
CUR122V40-1HP-0	44.1	15.9	2.77	39.2	15.6	2.51	1750 x 764 x 1222

CUR092V16-VHP-0	16.4	4.9	3.35	15.0	5.5	2.73	1750 x 764 x 922
CUR092V20-VHP-0	21.0	6.8	3.09	19.4	7.2	2.69	1750 x 764 x 922
CUR092V25-VHP-0	25.3	8.4	3.01	23.2	8.8	2.64	1750 x 764 x 922
CUR092V29-VHP-0	28.4	10.4	2.73	26.5	10.3	2.57	1750 x 764 x 922
CUR122V35-VHP-0	38.1	13.1	2.91	34.4	13.6	2.53	1750 x 764 x 1222
CUR122V40-VHP-0	43.5	15.7	2.77	40.0	15.7	2.55	1750 x 764 x 1222

In cooling, 7°C evaporating, 35°C ambient (standard AC axial fan at maximum speed)  
 In heating, 50°C condensing, 5°C ambient (standard AC axial fan at maximum speed)  
 Input power includes compressor and fan

Standard Features

	CUR092_---1CO-0	CUR092_---VCO-0	CUR122_---1CO-0	CUR122_---VCO-0	CUR092_---1HP-0	CUR092_---VHP-0	CUR122_---1HP-0	CUR122_---VHP-0
Hydrophilic Epoxy Coated Coil	●	●	●	●	●	●	●	●
Fixed Capacity Compressor	●		●		●		●	
Variable Capacity Compressor		●		●		●		●
AC 1~ Axial Fan	●	●			●	●		
AC 3~ Axial Fan (Model dependant)			●	●			●	●
pCO5 Microprocessor (with built-in display)	●	●	●	●	●	●	●	●
Electronic Expansion Valves / Expansion Valve Drivers						●		●
Thermostatic Expansion Valves					●		●	
Variable Head Pressure Control	●	●	●	●	●	●	●	●
Suction Accumulator					●	●	●	●
4-Way Reversing Valve					●	●	●	●
Filter Drier (supplied loose)	●	●	●	●				
Filter Drier					●	●	●	●
Liquid Receiver					●	●	●	●
Non-Return Valve (Expansion by-pass)					●	●	●	●
Compressor Crankcase Heater	●	●	●	●	●	●	●	●
High Pressure Switch	●	●	●	●	●	●	●	●
Low Pressure Switch	●	●	●	●	●	●	●	●
Discharge Gas Temperature Monitoring	●	●	●	●	●	●	●	●
Panel Heater	●	●	●	●	●	●	●	●
Mains Isolator	●	●	●	●	●	●	●	●

● Standard features available

Construction

The case shall be manufactured with galvanised sheet steel to provide a smooth aesthetically pleasing finish. The galvanised sheet steel panels shall be coated with an epoxy baked powder paint to provide a durable finish.

Standard unit colour shall be Light Grey to RAL 7035.



- Hydrophilic Epoxy Coated Coil** Fins shall be coated with a non-stick acrylic (hydrophilic) film to provide additional corrosion protection and efficient surface water removal for improved performance. Plain aluminium shall not be acceptable.
  
- Fixed Capacity Compressor** Can operate up to pressures of 40Bar. The compressor is fitted with a crankcase heater which ensures reliable operation particularly during low ambient start-up. The compressor is also fitted with a high and low pressure switch which ensures that the compressor only operates within the acceptable envelope reducing the chance of a compressor failure.
  
- Variable Capacity Digital Scroll Compressor** Digital scroll compressor technology offers compressor capacity modulation from 16% to 100%. Achieved by the use of an externally, integrated, long life electronically controlled solenoid valve which loads and unloads the compressor scroll based on a 12 second cycle.
 

The solenoid valve uses suction and discharge pressures through a modulation chamber to cause a spring loaded piston attached to the top scroll to fall down at high pressure and move up at low. The moving of the piston separates the scrolls and results in no compression of refrigerant.

As the digital compressor is always operating at either 100% or 0% the mass flow of refrigerant through the system is always high, simplifying component selection and pipe work design to guarantee oil return.

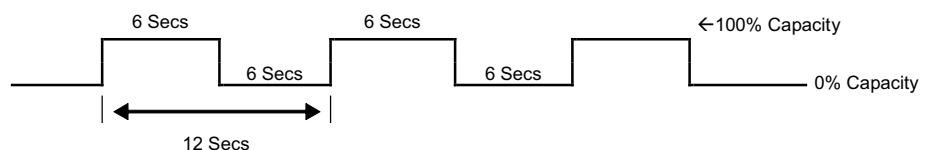
**Energy Efficiency** The digitally modulated solenoid achieves capacity modulation of 16% to 100% by varying the loaded or unloaded compressor cycle time and averaging the sum of the loaded and unloaded state. The digital scroll compressor operates in an unloaded state for a proportion of the 12 second cycle time; as a result, the load on the compressor is greatly reduced as refrigerant is not drawn. Consequently the energy consumed at partial load condition is only a percentage of that consumed during full load condition, ie:

$$\frac{(\text{Loaded Time} \times 100\%) + (\text{Unloaded Time} \times 16\%)}{(\text{Loaded Time} + \text{Unloaded Time})} = \text{Averaged Power}$$

**Operation** The following examples illustrate the flexibility of the digital compressor loading stages within the 12 second cycle time:

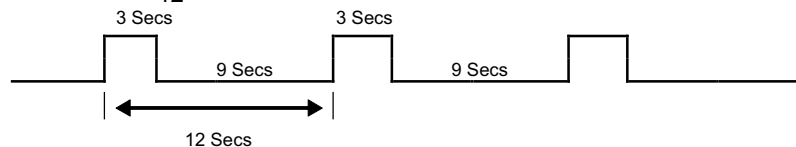
**Example A** Where: Solenoid Energised = 6 seconds Loaded Time  
Solenoid De-energised = 6 seconds Unloaded Time

$$\frac{(6 \times 100\%) + (6 \times 16\%)}{12} = 58\%$$



**Example B** Where: Solenoid Energised = 3 seconds Loaded Time  
Solenoid De-energised = 9 seconds Unloaded Time

$$\frac{(3 \times 100\%) + (9 \times 16\%)}{12} = 37\%$$



**Control & Monitoring** The systems superheat is controlled by a dedicated microprocessor and digital compressor performance is monitored via the AireTronix controller display.

**CAUTION** **The digital scroll compressor is always operating at either 100% or 0% mass flow. When inspecting the refrigerant system with gauges, this is evident by pulsing of the system pressures. Therefore, all pressure measurements MUST be taken when the digital scroll compressor is compressing refrigerant (solenoid de-energised).**

<b>Condenser Fan (AC)</b>	Axial fan assemblies with finger proof grille and incorporating external rotor motor technology, to provide highly accurate discreet speed control, discharge air vertically. The fans offer maximum performance while keeping sound levels to a minimum.
<b>pCO5 Microprocessor (without built-in display)</b>	32 bit 44MHz controller with built-in PGD1 (132 x 64 pixels) with backlit keypad
<b>Electronic Expansion Valves (EEV) (Heat Pump Variable Capacity)</b>	<p>Electronic expansion valves differ from the normal thermostatic expansion valves in their ability to maintain control of the suction superheat at reduced head pressures. This can lead to significant energy savings particularly at reduced loading and low ambient temperatures.</p> <p>EEV step position, superheat, head pressure set points and other features can be viewed and adjusted via the microprocessor display.</p>
<b>Thermostatic Expansion Valve (Heat Pump Fixed Capacity Only)</b>	A thermostatic expansion valve shall be fitted to control the superheat within the system in heating mode.
<b>Variable Head Pressure Control</b>	Electronic head pressure controllers are fitted which modulate the fan speed to maintain a constant condensing pressure, allowing the system to operate satisfactorily in ambient temperatures as low as -20°C.
<b>Refrigeration Components</b>	<p>The following refrigeration components are fitted within the system to ensure correct unit operation:</p> <ul style="list-style-type: none"> <li>• Suction Accumulator (Heat Pump)</li> <li>• 4 Way Reversing Valve (Heat Pump)</li> <li>• Liquid Receiver (Heat Pump)</li> <li>• Non Return Valve (Heat Pump)</li> <li>• Filter Drier (supplied loose – Cooling only units)</li> </ul>
<b>Compressor Crankcase Heater</b>	A compressor crankcase heater is fitted to ensure that refrigerant does not condense within the compressor. The crankcase heater must be turned on 8 hours prior to operation of the unit.
<b>High Pressure Switch</b>	A high pressure switch shall be fitted to protect against adverse high system pressures.
<b>Low Pressure Switch</b>	A low pressure switch shall be fitted to protect against adverse low system pressures.
<b>Discharge Gas Temperature Monitoring (Fixed capacity units only)</b>	A discharge gas thermostat shall be fitted to monitor and deactivate cooling / heating if the compressor shows sign of overheating.
<b>Panel Heater</b>	A panel heater shall be provided ensuring that the control panel does not encounter low operating temperatures in adverse weather conditions. The panel heater (thermostatically controlled) ensures that no condensation can form on components.
<b>Mains Isolator</b>	A mains isolator shall be provided to enable local isolation of the power supply.

## Optional Features

The BluCube comes with a series of optional features.

	CUR092__--1CO-0	CUR092__--VCO-0	CUR122__--1CO-0	CUR122__--VCO-0	CUR092__--1HP-0	CUR092__--VHP-0	CUR122__--1HP-0	CUR122__--VHP-0
EC 1~ Axial Fan	•	•			•	•		
EC 3~ Axial Fan			•	•			•	•
Short Case Axial Fans 1~ 560 Fan	•	•			•	•		
pCO5 Microprocessor (without built-in display)	•	•	•	•	•	•	•	•
Remote Display PGD1	•	•	•	•	•	•	•	•
EEV / EVD					•		•	
Compressor Soft Start	•	•	•	•	•	•	•	•
Power Monitoring	•	•	•	•	•	•	•	•
Phase Monitoring Relay	•	•	•	•	•	•	•	•
Phase Rotation Relay	•	•	•	•	•	•	•	•
Power Factor Correction	•		•		•		•	
BMS (Lon, Echelon, Carel...etc)	•	•	•	•	•	•	•	•
Coil Guards	•	•	•	•				
Compressor Attenuation	•	•	•		•	•	•	
Refrigerant Leak Detection	•	•	•	•	•	•	•	•
Pump Down	•	•	•	•	•	•	•	•
Remote Electronic Expansion Valve	•	•	•	•	•	•	•	•
Condensate Drip Tray					•	•	•	•

• Features Available

**Electronically Commutated (EC) Fan Motor**

Backward curved impellers, direct drive fan assemblies with integral hub mounted motor which is statically and dynamically balanced for quiet operation.

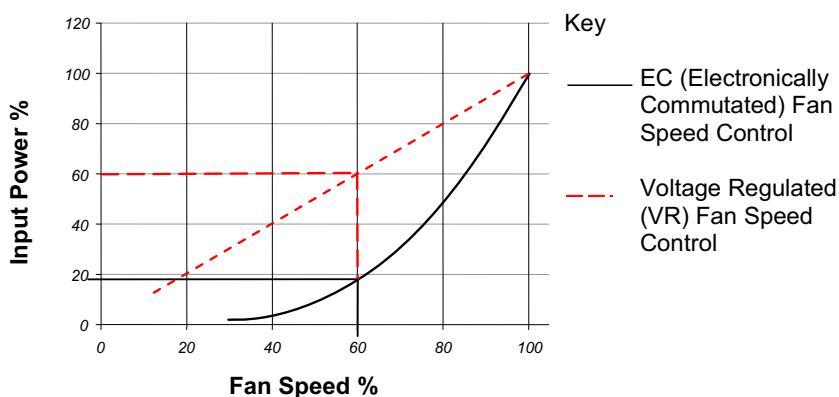
Designed for high corrosion resistance, the impellers are laser welded aluminium with a galvanised rotor and die cast aluminium EC power module.

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

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

It gives the flexibility of connecting to AC mains with the efficiency and simple speed control of a DC motor. The EC fan offers significant power reduction in comparison with equivalent AC fan at both full and modulated fan speeds. The inbuilt EC fan control module allows for fan speed modulation from 15-100%, 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 following illustration shows a comparison of the typical power input required by each method.



**Example:** Fan speed of 60%  
 VR input power required 60%  
 EC input power required 18%

**Short Case Axial Fans**

SCAF fans are available for the 092 models only. They can achieve a external static pressure of 75Pa.

<b>pCO5 Microprocessor (without built-in display)</b>	32 bit 44MHz controller.
<b>Modbus / Carel BMS Connection</b>	<p>The Airedale controllers shall be able to communicate directly using the Modbus® protocol.</p> <p>The Modbus® is inbuilt within the PCO5 controller</p> <ul style="list-style-type: none"><li>• Modbus® - JBus slave.</li><li>• RTU mode (Remote Terminal Unit) with 8 bit encoding and error handling using 16 bit CRC.</li><li>• Communication standard connection options of RS485 (multipoint) or RS232 (point-point).</li><li>• Maximum Baud Rate of 19200.</li></ul> <p>The data communication shall be asynchronous serial, 8 data bits, 2 stop bits and no parity (in total 11 bits/datum).</p> <p>The data/parameters from the controller shall be represented within Modbus® registers, each register containing information pertaining to temperatures, pressures, setpoint, status, etc and is available to the site integration company in a spreadsheet format</p>
<b>Lon BMS Connection</b>	<p>The Airedale controllers, using special serial cards, shall be integrated into LonWorks® networks. The RS485 and the FTT10 standards shall be supported by the LonWorks® serial cards.</p> <p>The two types of LonWorks® serial cards shall differ by the type of interface on the LonWorks® network side:</p> <p>FTT-10A 78 kbs (TP/FT-10) RS485 39 kbs (TP/485-39)</p>
<b>BacNet Protocol</b>	The BACnet protocol option shall be supplied either with a pCOWeb (Ethernet) or pCONet (RS485) interface card.
<b>Compressor Soft Start</b>	The electronic soft start enables the unit's compressor motor to be ramped to speed with the minimum full load current. Further benefits include removal of nuisance tripping, supply voltage dips and motor overheating.
<b>Power Factor Correction</b>	When applied to the motors of each compressor, the compressor power factor is controlled to a minimum operating value of 0.95 at the full operating capacity. This satisfies many supply authorities that may impose surcharges on equipment with power factor less than 0.95.
<b>Phase Monitoring Relay</b>	A phase sequence relay is available for units containing 3 phase scroll compressors, to prevent possible damage by running the compressor in the wrong direction.
<b>Phase Rotation Relay</b>	A phase sequence relay shall be available for units containing 3 phase scroll compressors, to prevent possible damage by running the compressor in the wrong direction.
<b>Coil Guards</b>	Guards can be fitted to each of the outer coils to protect against damage. (Cooling only units).
<b>Compressor Attenuation</b>	Compressor attenuation shall be provided if required in low noise applications.

**Refrigerant Leak Detection**

The refrigerant leak detection is located below the condenser fan to ensure correct operation. The leak detector has three factory settings of 100, 1000 and 2000 parts per million. The default is 1000 parts per million.

The leak detector has relay outputs allowing for alarm monitoring via the Airedale controller.

This relay output can provide facilities for refrigerant pump down (Airedale unit model dependant) for refrigerant containment.

The detector module is IP rated for outdoor applications.

**Pump Down**

Refrigerant pump down shall automatically occur in the event of a refrigerant leak.

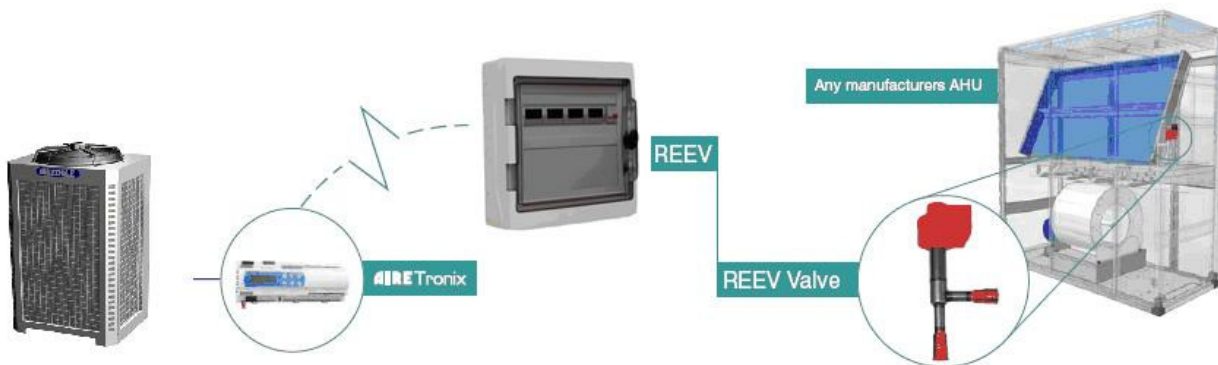
**Remote Electronic Expansion valve**

The new EVD Evolution REEV has been developed in conjunction and for sale primarily with the new BluCube condensing unit; however the REEV can be applied to applications using other manufacturer's equipment with capacities up to 2050kW

The REEV product has been designed for applications where an Outdoor Condensing Unit is to be matched with an indoor Air Handling Unit. It is provided in situations where it is unsuitable to have an expansion valve driver local to the outdoor unit due to the maximum wire lengths between the valve driver and the valve itself being exceeded. This is down to the valve driver's manufacturer's recommendations.

The REEV will provide a versatile solution that is capable of dealing with various refrigerants, multiple network options and multiple numbers of refrigeration circuits.

Further information can be found in the REEV technical Manual.



## Remote Display

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.



## Standard Icons



Fan operating



Cooling - up to 6 stages



Heating - up to 3 stages

## Installation Data

### Lifting

Whenever a condensing unit is lifted, it should be from the base and, where possible, with all packing and protection in position. If slings are used care should be taken to ensure that the slings do not crush the casework or coil. The slings are to be located into the recess within the unit frame to ensure safe lifting.

Due note should also be made of the fact that the compressor is at one end of the unit, and therefore the centre of gravity will also be towards that end.

If the unit is dropped, it should immediately be checked for damage.

Employ lifting specialists.

Local codes and regulations relating to the lifting of this type of equipment should be observed.

Use the appropriate spreader bars/lifting slings with the holes/lugs provided.

Chains/slugs **MUST NOT** interfere with the casing of fan assembly to avoid damage.

Lift the unit slowly and evenly.

### IMPORTANT



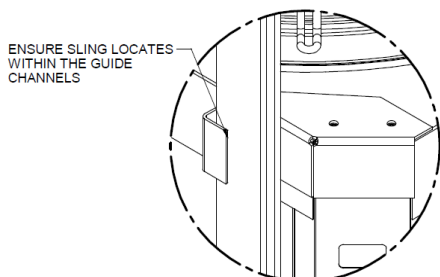
**If the unit is dropped, it should immediately be checked for damage and reported to Airedale.**

### CAUTION



**Only use lifting points provided.**

**Ensure drip tray is removed before lifting (Heat Pump units only)**



Minimum lifting chain length of 1500mm

Sling Length 4500mm



## Positioning

The installation position should be selected with the following points in mind:

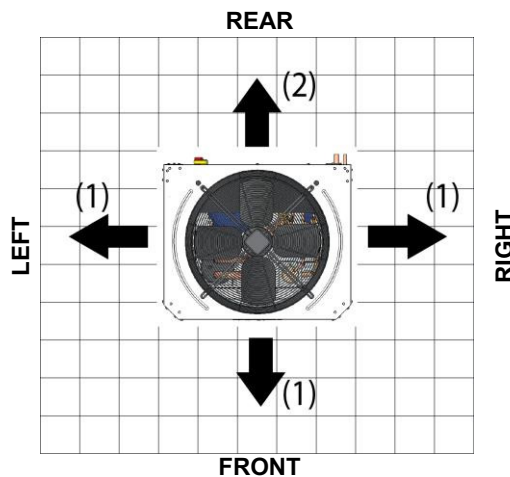
- Position on a stable and even base, levelled to ensure that the compressor operates correctly.
- Levelling should be to +/- 5mm.
- Where vibration transmission to the building structure is possible, fit pad anti-vibration mounts.
- Observe airflow and maintenance clearances.
- Pipework and electrical connections are readily accessible.
- Where multiple units are installed, due care should be taken to avoid the discharge air from each unit adversely affecting other units in the vicinity.
- Within a side enclosed installation, the fan MUST be higher than the enclosing structure.
- Ensure there are no obstructions directly above the fans.
- Allow free space above the fans to prevent air recirculation.

## CAUTION



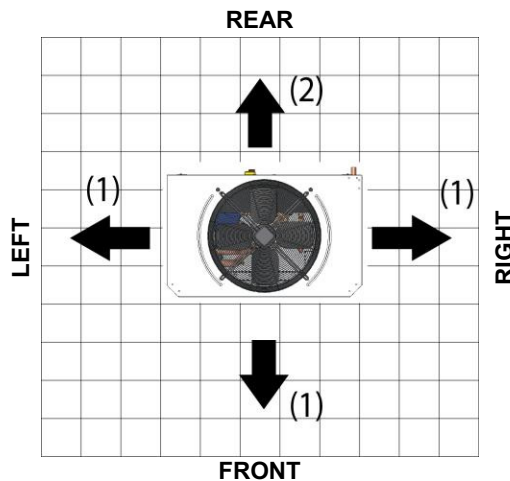
**Prior to connecting services, ensure that the equipment is installed and completely level.**

092 Models



- (1) Airflow clearance minimum 300 (mm),  
 (2) Maintenance clearance minimum:  
 Single unit minimum 750mm

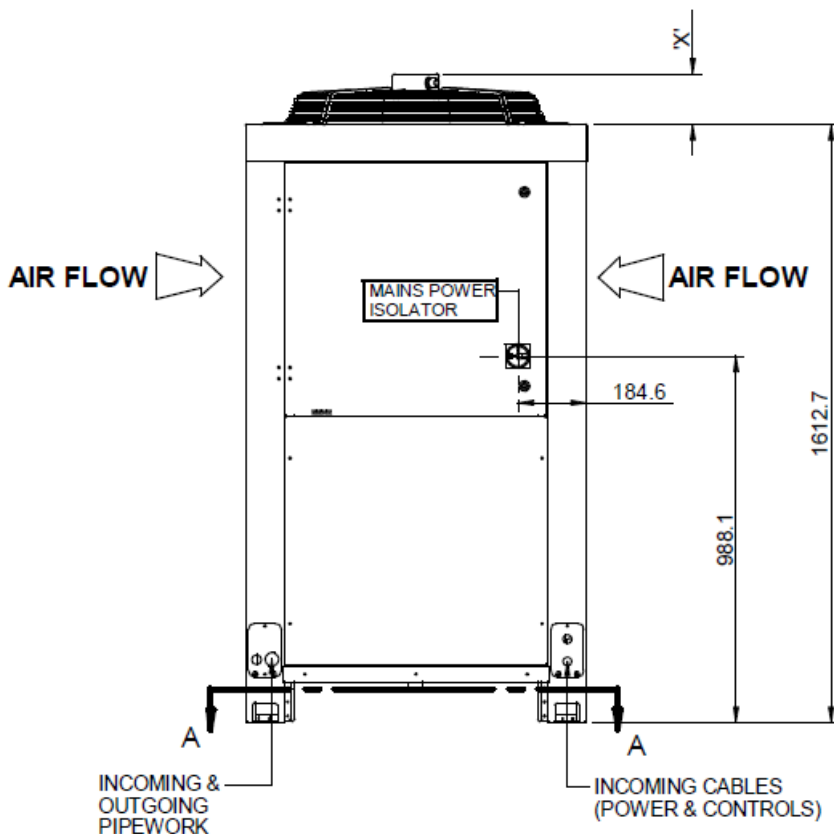
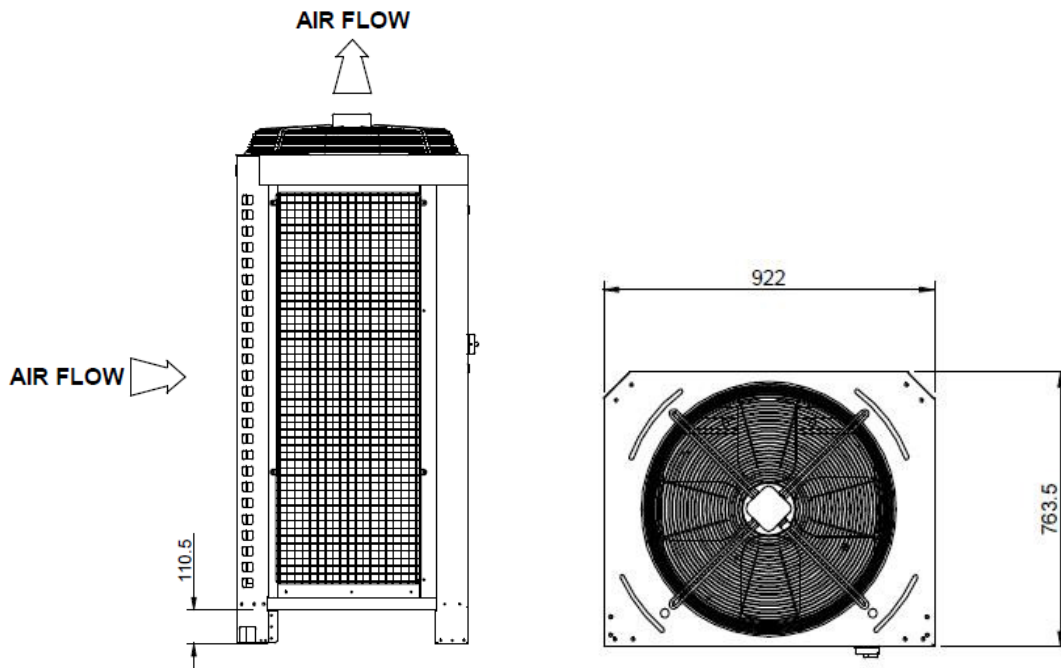
122 Models



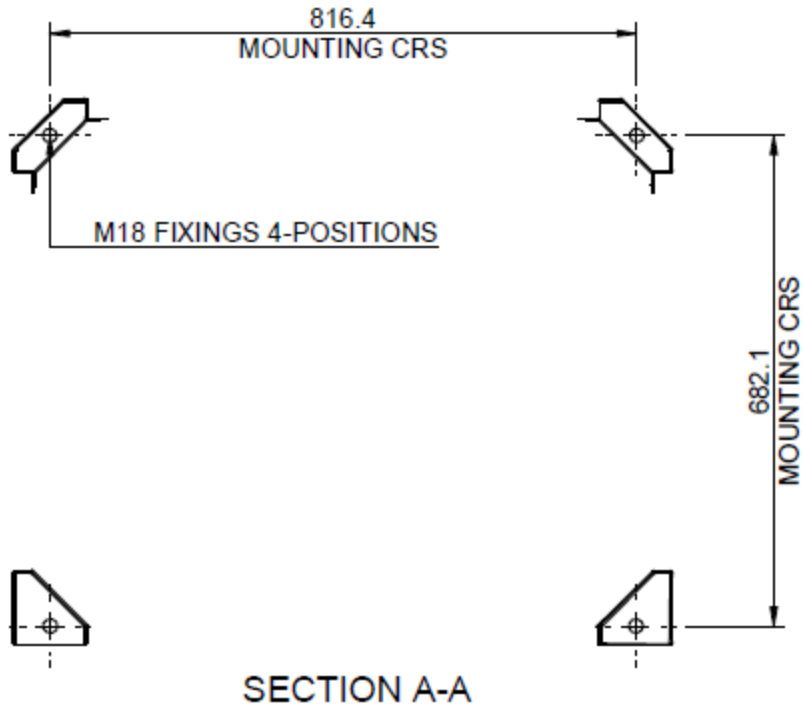
- (1) Airflow clearance minimum 300 (mm),  
 (2) Maintenance clearance minimum:  
 Single unit minimum 750mm

## Dimensional Data

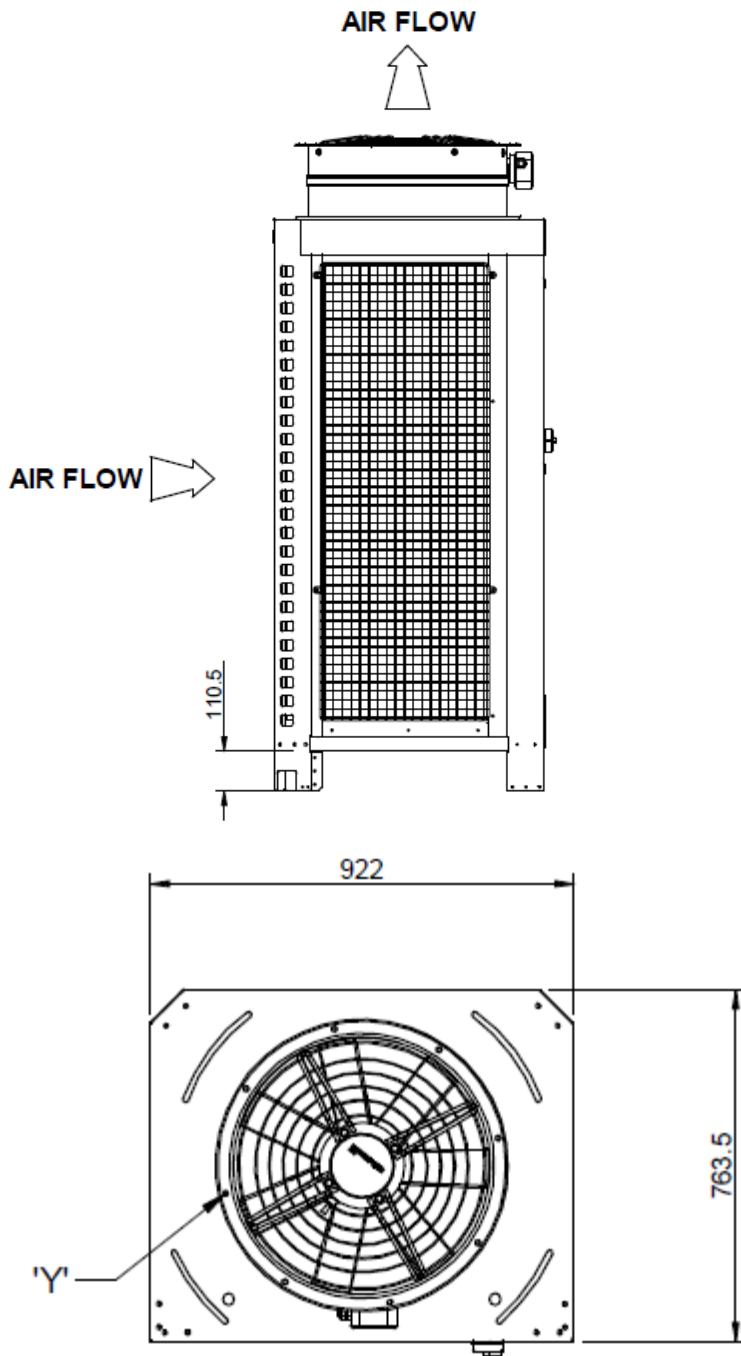
092 Models

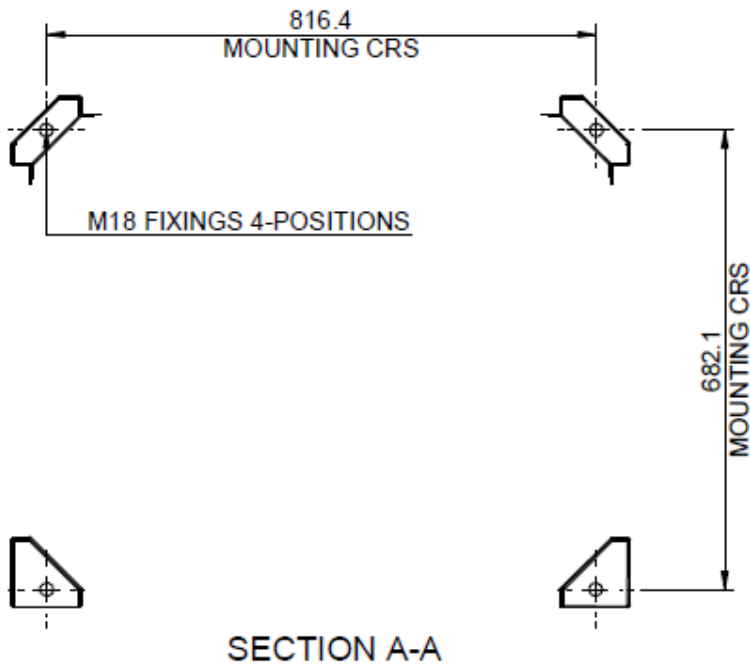
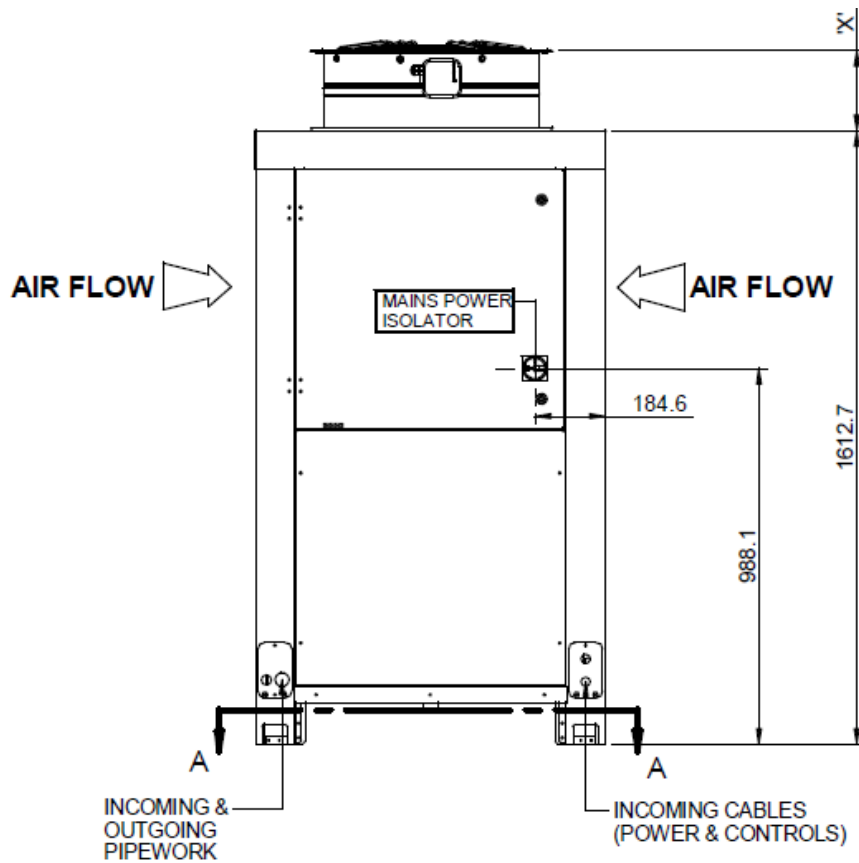


		AC Fans	EC Fans
X	mm	123.5	137.2



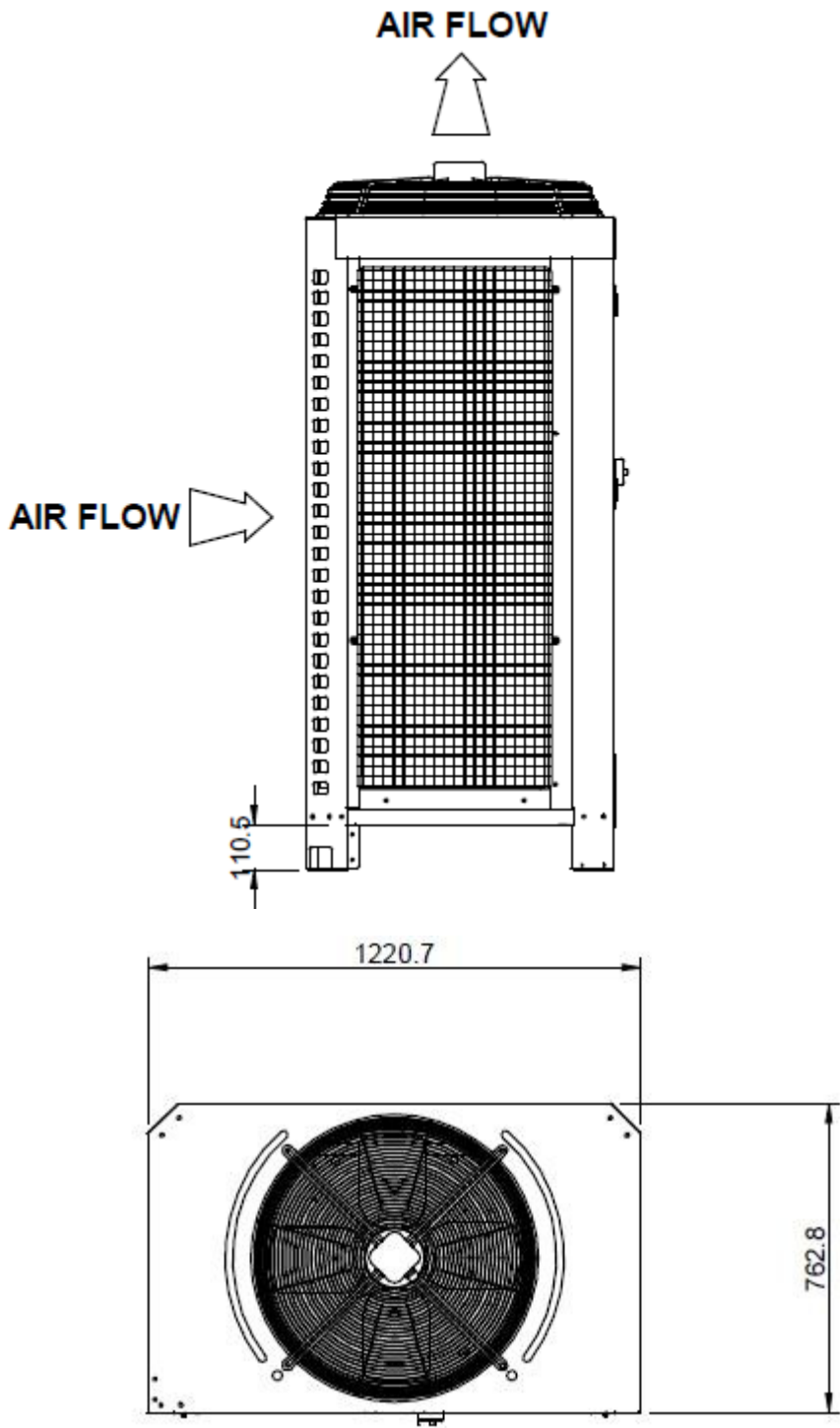
092 Short Case Axial Fan

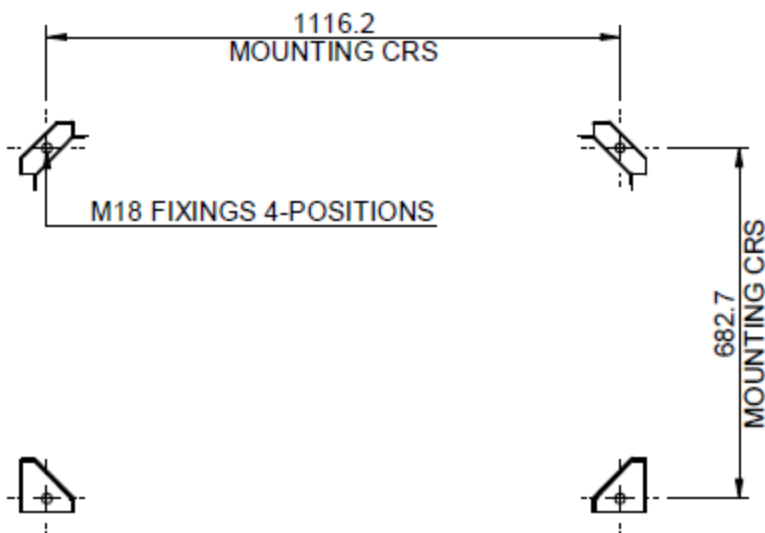
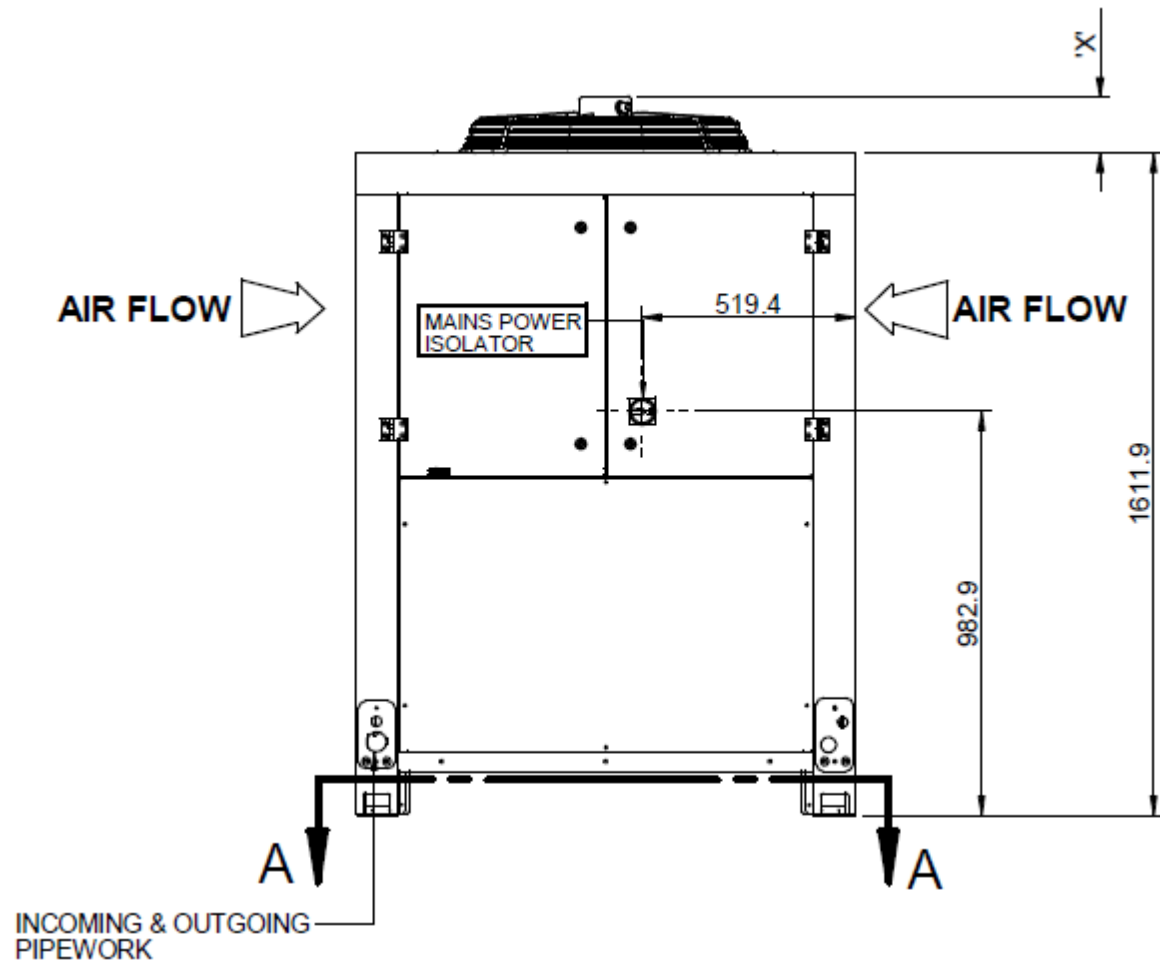




SCAF Fans		
X	mm	140.2
Y	mm	8 Hole 11.5mm diameter 605mm PCD

122 Models

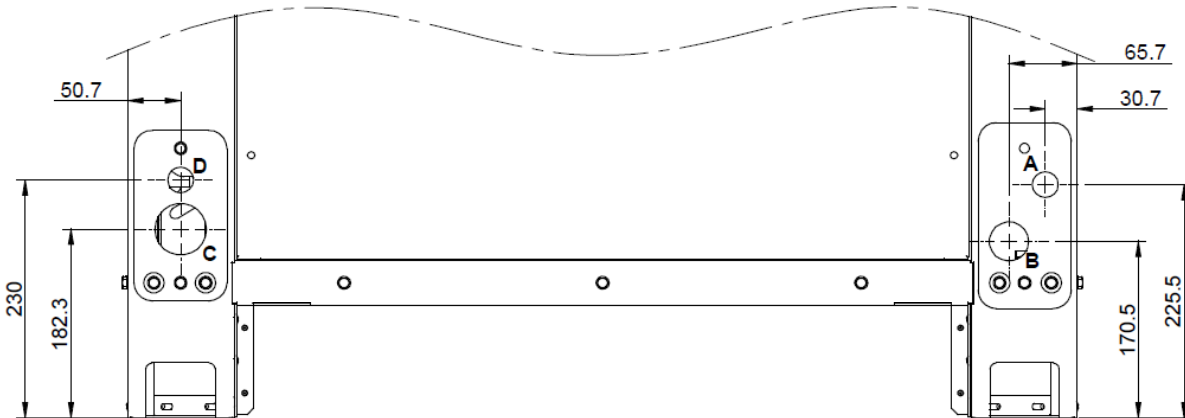




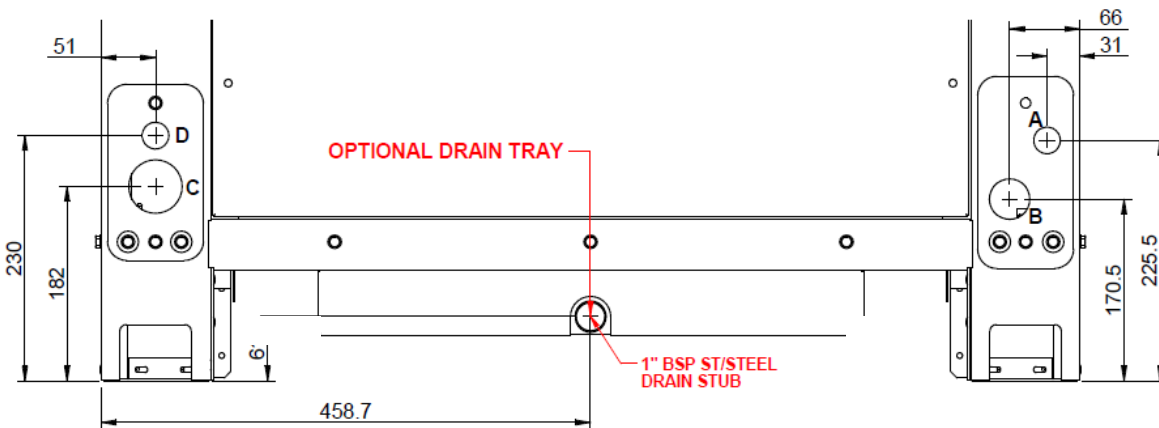
SECTION A-A

		AC Fans	EC Fans
X	mm	123.5	137.2

**Incoming Services**  
Cooling only 092



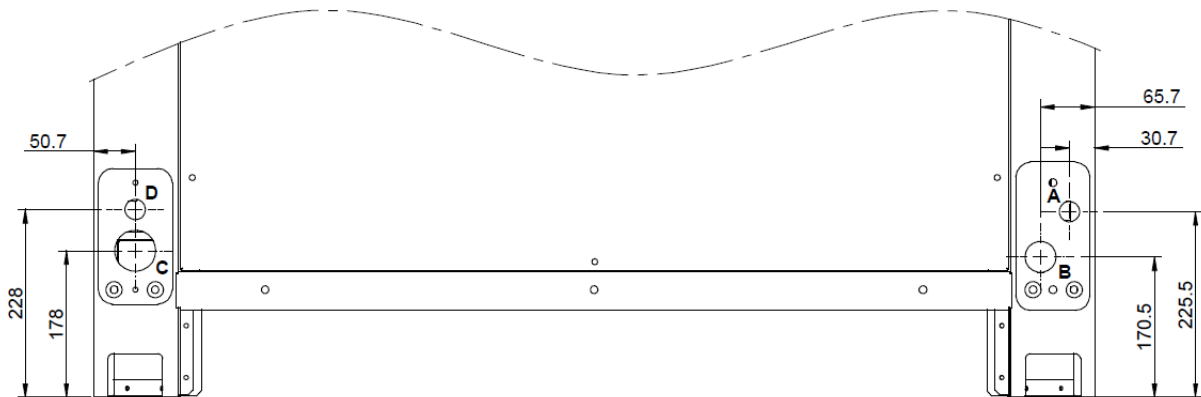
Heat Pump 092



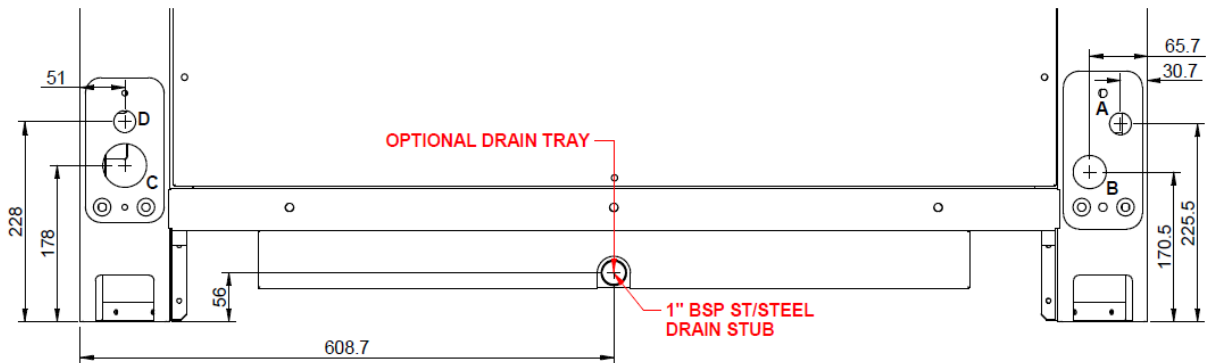
	Wiring Access Holes (mm)		Pipe Work Hole Sizes (mm)	
	A	B	C	D
Cooling Only				
CUR092V16	25	38	50	25
CUR092V20	25	38	50	25
CUR092V25	25	38	50	25
CUR092V29	25	38	50	25
Heat Pump				
CUR092V16	25	38	38	25
CUR092V20	25	38	38	25
CUR092V25	25	38	38	25
CUR092V29	25	38	38	25



## Cooling Only 122



## Heat Pump 122



	Wiring Access Holes (mm)		Pipe Work Hole Sizes (mm)	
	A	B	C	D
Cooling Only				
CUR122V35	25	38	50	25
CUR122V40	25	38	50	25
Heat Pump				
CUR122V35	25	38	50	25
CUR122V40	25	38	50	25

## Refrigeration Information

### Pipework Installation

#### General

Special consideration should be given to vertical pipe runs and heat pump installation.

When insulating refrigerant lines, cut approximately 30 – 50mm longer than the distance between the units to ensure the insulation goes right up to the unit. Leave connections uncovered for leak testing.

Remove burrs to the ends of the copper tube, holding the tube downward to avoid allowing dirt to contaminate the tube.

The installation of a sight glass close to the indoor unit is recommended.

#### Pressure Testing

When installation is complete, the system should be pressure tested.

Fill the system with dry nitrogen to a pressure of between 45 bar/250 psig and 45 bar/500 psig.

**NOTE: The LP switch must be disconnected for pressures above 17 bar/250 psig.**

Record the pressure over a minimum of 60 minutes to detect major leaks (a 24 hour period should preferably be allowed).

If a reduction in pressure is detected, trace the leak and repair before conducting a further pressure test and charging.

#### Evacuation

Evacuation for systems operating with R410A refrigerant to be carried out as follows.

Use a high vacuum pump and connect to the high and low pressure sides of the system via a gauge manifold fitted with compound gauges. A high vacuum gauge should be fitted to the system at the furthest point from the vacuum pump.

Triple evacuation should be used to ensure that all contaminants are removed.

Operate the vacuum pump until a pressure of 1.5 torr (200 Pa) absolute pressure is reached, then stop the vacuum pump. To break the vacuum using Nitrogen (Oxygen free) until the pressure rises above zero.

The above operation should be repeated a second time.

The system should then be evacuated a third time but this time to 0.5 torr absolute pressure.

Break with the correct refrigerant, until pressures equalise between the charging bottle and the system.

#### IMPORTANT

**Ensure all valves within the system are open during pressure testing / evacuation.**

## Installation Data

### Refrigeration Pipework Installation - Good Practices

#### Oil Traps

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

#### Pipe Supports

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

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

#### CAUTION



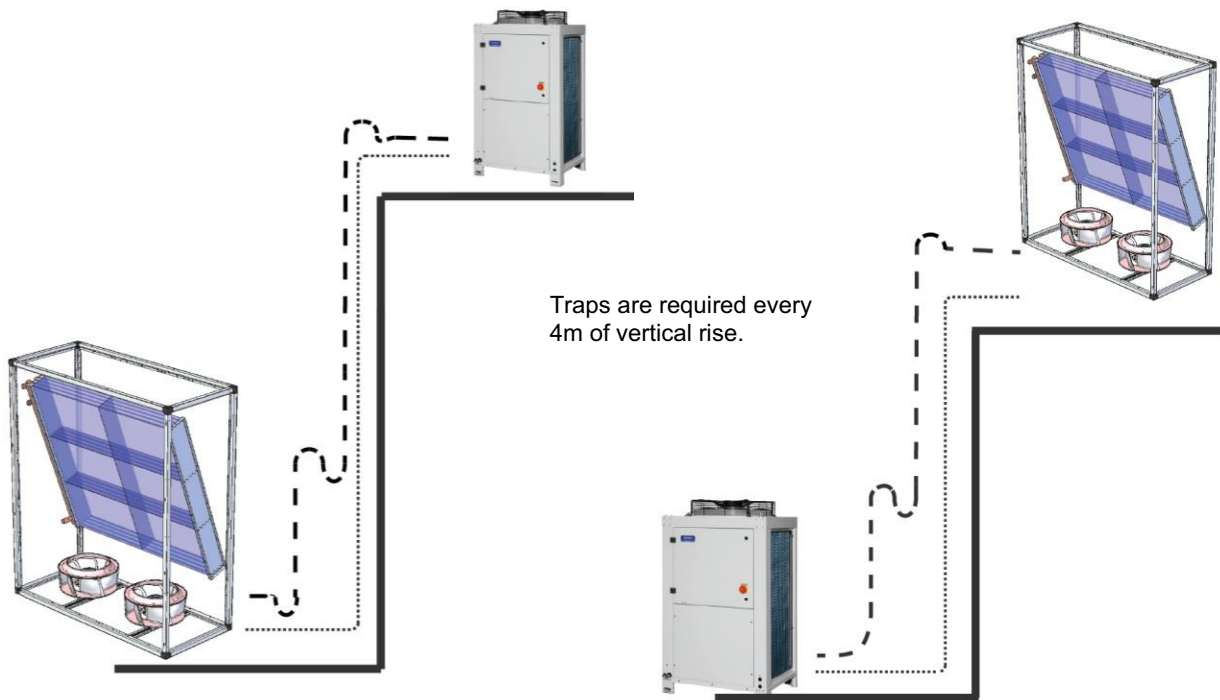
**All pipework should be clamped prior to insulation being applied (Suction Line). Clamping over insulation is not acceptable.**

#### Horizontal Sections

It is good practice to ensure a slight gradient toward the compressor in the direction of the refrigerant flow for suction lines running horizontal. This assists oil return to the compressor. A gradient of approximately 1:200 (0.5%) shall be used.

#### Condensing Unit Above Air Handling Unit

#### Condensing Unit Below Air Handling Unit



- - - - -Suction Line ..... Liquid

Note the diagram above is for illustration only.

#### IMPORTANT



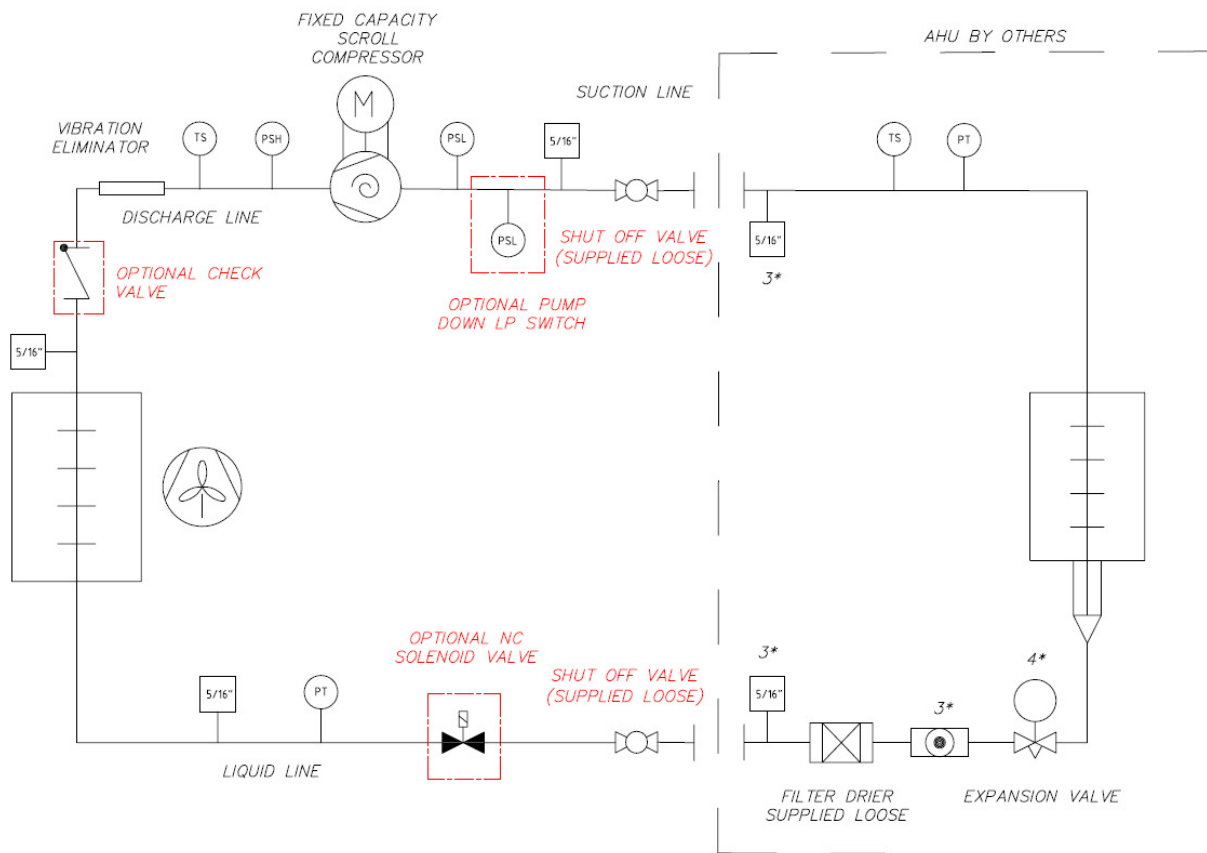
The pipe sizes and refrigerant charges quoted are for guidance only. It is the responsibility of the installing contractor/site engineer to check the pipe size/refrigerant charge is correct for each system installation and application.

Split systems may require additional oil which should be added to the low pressure side of each compressor.

Design should be in accordance with accepted refrigeration practice to ensure good oil return to the compressor(s) under all normal operating conditions.

**REMEMBER** excessive pressure loss in interconnecting pipework will impair system performance; this should be factored in during the design of the system and where necessary oil traps employed.

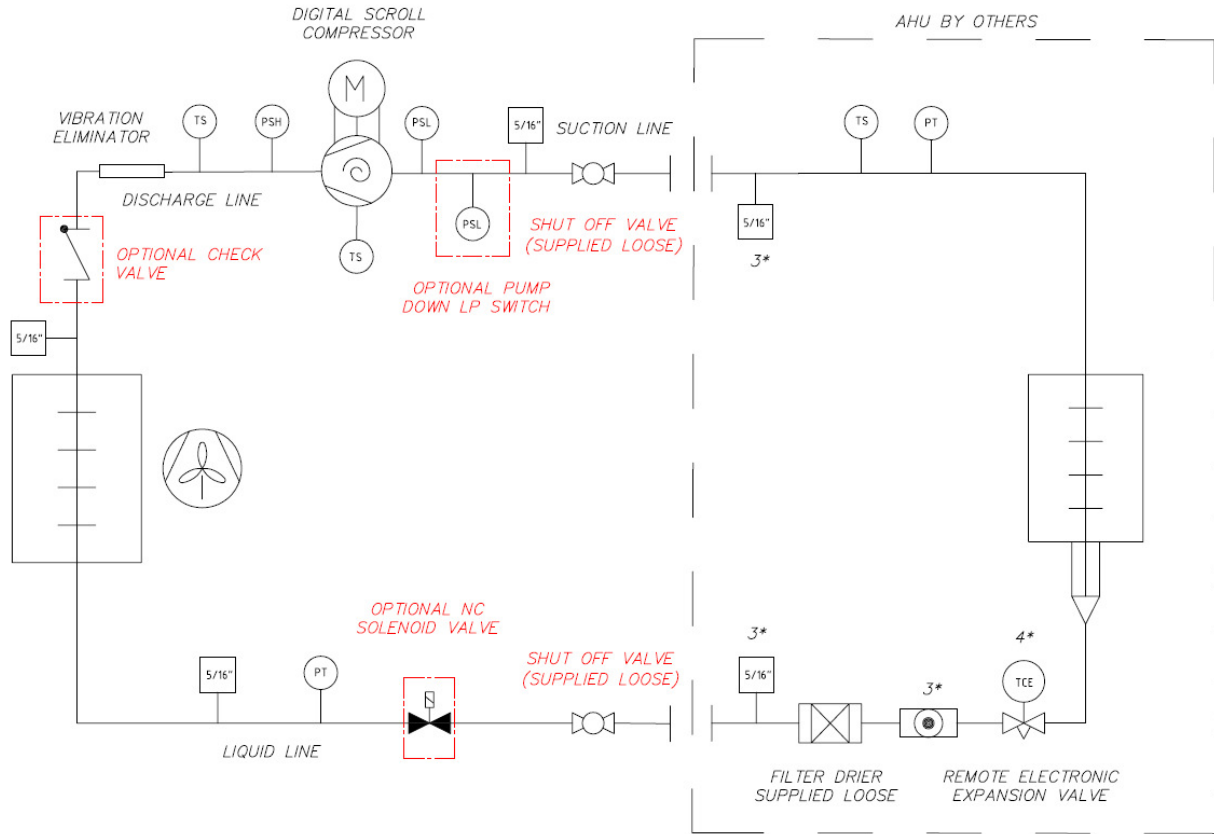
## Pipework Schematics Cooling Only – Fixed Capacity



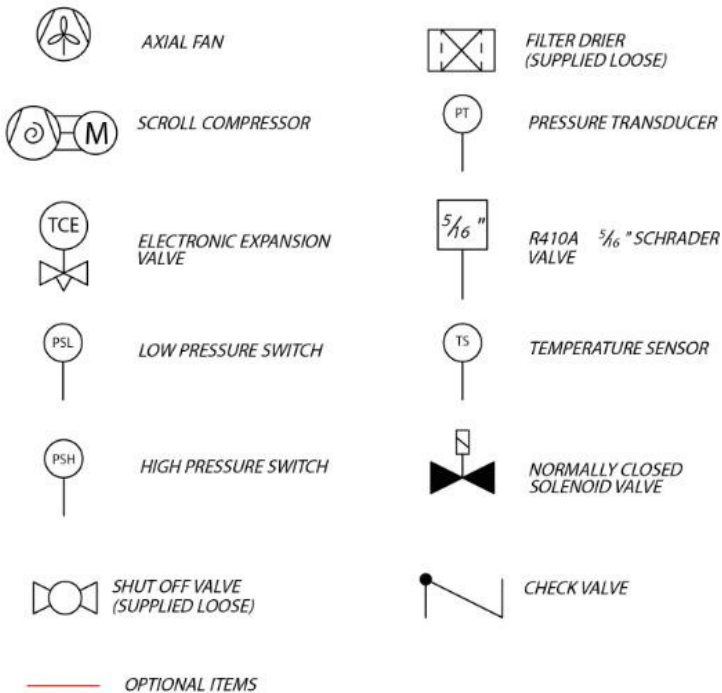
### KEY: ALL ITEMS

- |  |                                 |  |                                |
|--|---------------------------------|--|--------------------------------|
|  | AXIAL FAN                       |  | FILTER DRIER (SUPPLIED LOOSE)  |
|  | SCROLL COMPRESSOR               |  | PRESSURE TRANSDUCER            |
|  | EXPANSION VALVE                 |  | R410A 5/16" SCHRADER VALVE     |
|  | LOW PRESSURE SWITCH             |  | TEMPERATURE SENSOR             |
|  | HIGH PRESSURE SWITCH            |  | NORMALLY CLOSED SOLENOID VALVE |
|  | SHUT OFF VALVE (SUPPLIED LOOSE) |  | CHECK VALVE                    |
|  | OPTIONAL ITEMS                  |  |                                |

## Pipework Schematics Cooling Only – Digital Scroll

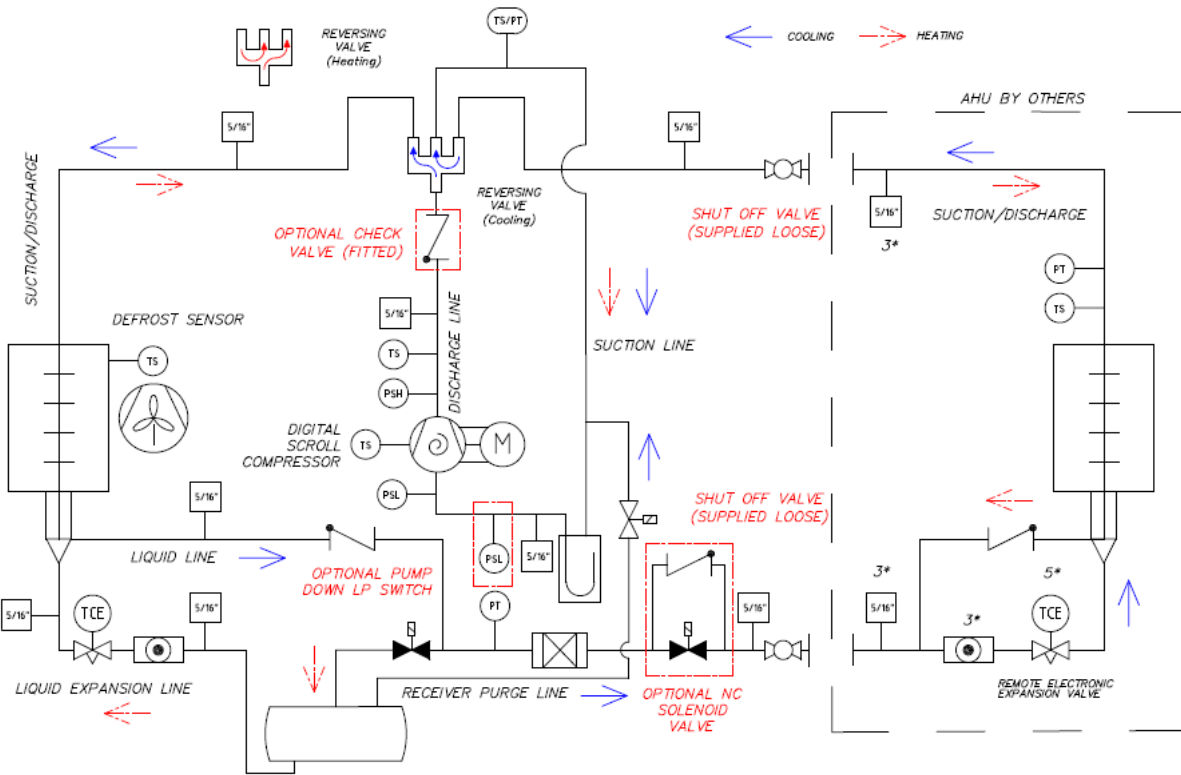


### KEY: ALL ITEMS



Pipework Schematics  
Heat Pump- Digital Scroll

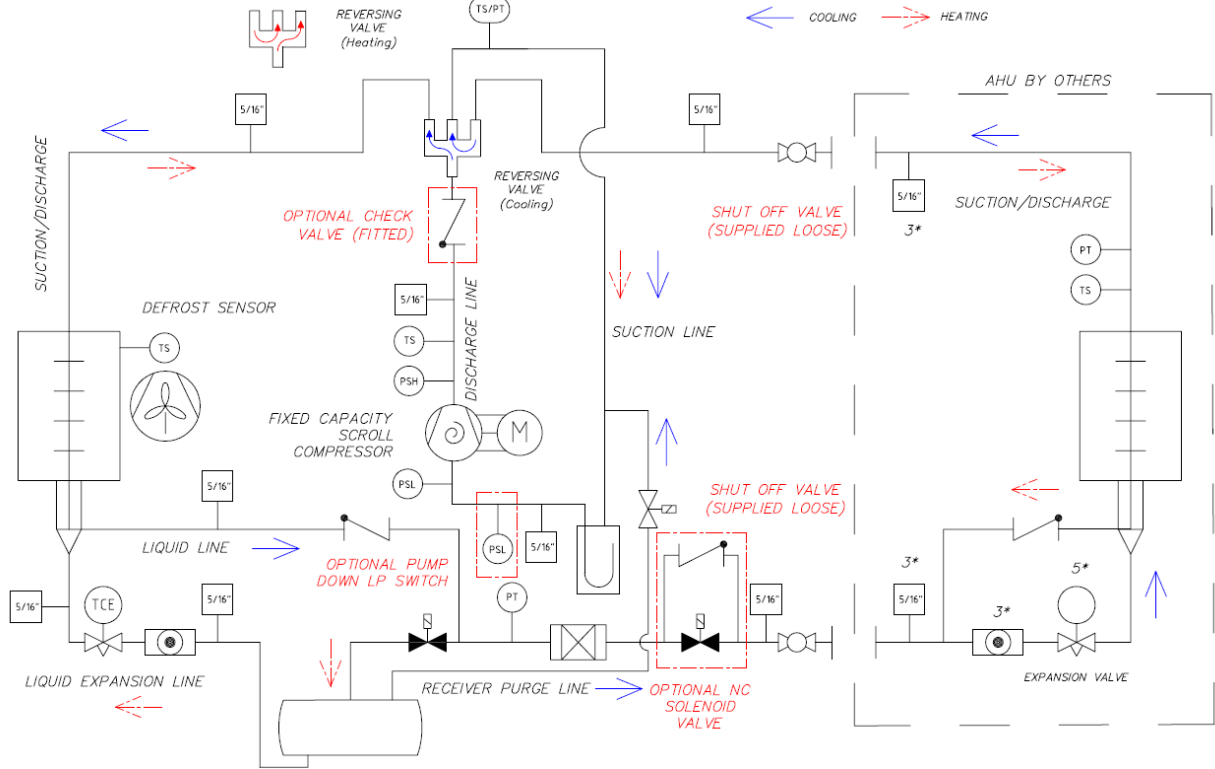
Modulated Capacity, EEV



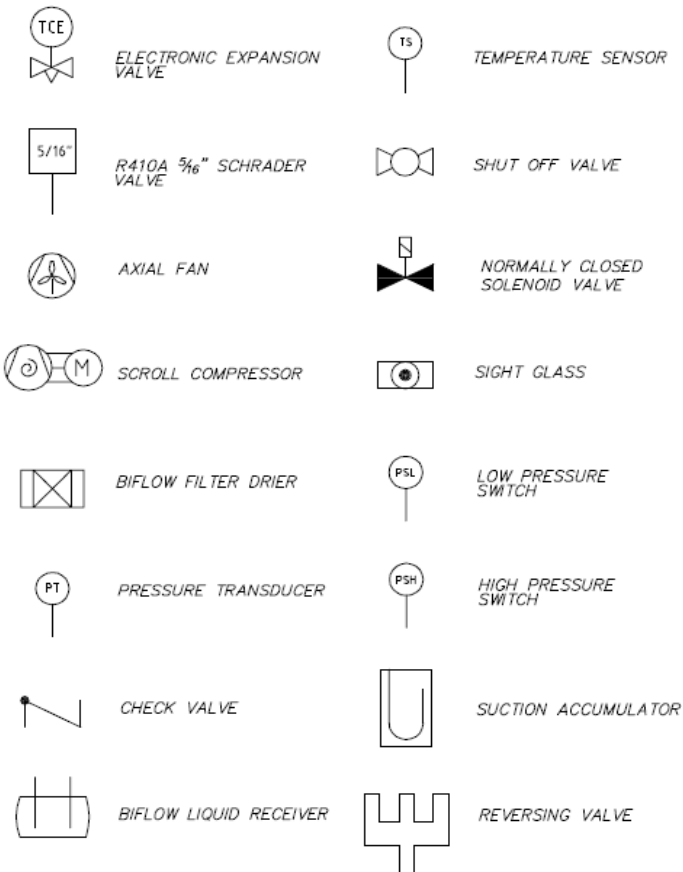
KEY: ALL ITEMS

- |  |                            |  |                                |
|--|----------------------------|--|--------------------------------|
|  | ELECTRONIC EXPANSION VALVE |  | TEMPERATURE SENSOR             |
|  | R410A 5/16" SCHRADER VALVE |  | SHUT OFF VALVE                 |
|  | AXIAL FAN                  |  | NORMALLY CLOSED SOLENOID VALVE |
|  | SCROLL COMPRESSOR          |  | SIGHT GLASS                    |
|  | BIFLOW FILTER DRIER        |  | LOW PRESSURE SWITCH            |
|  | PRESSURE TRANSDUCER        |  | HIGH PRESSURE SWITCH           |
|  | CHECK VALVE                |  | SUCTION ACCUMULATOR            |
|  | BIFLOW LIQUID RECEIVER     |  | REVERSING VALVE                |

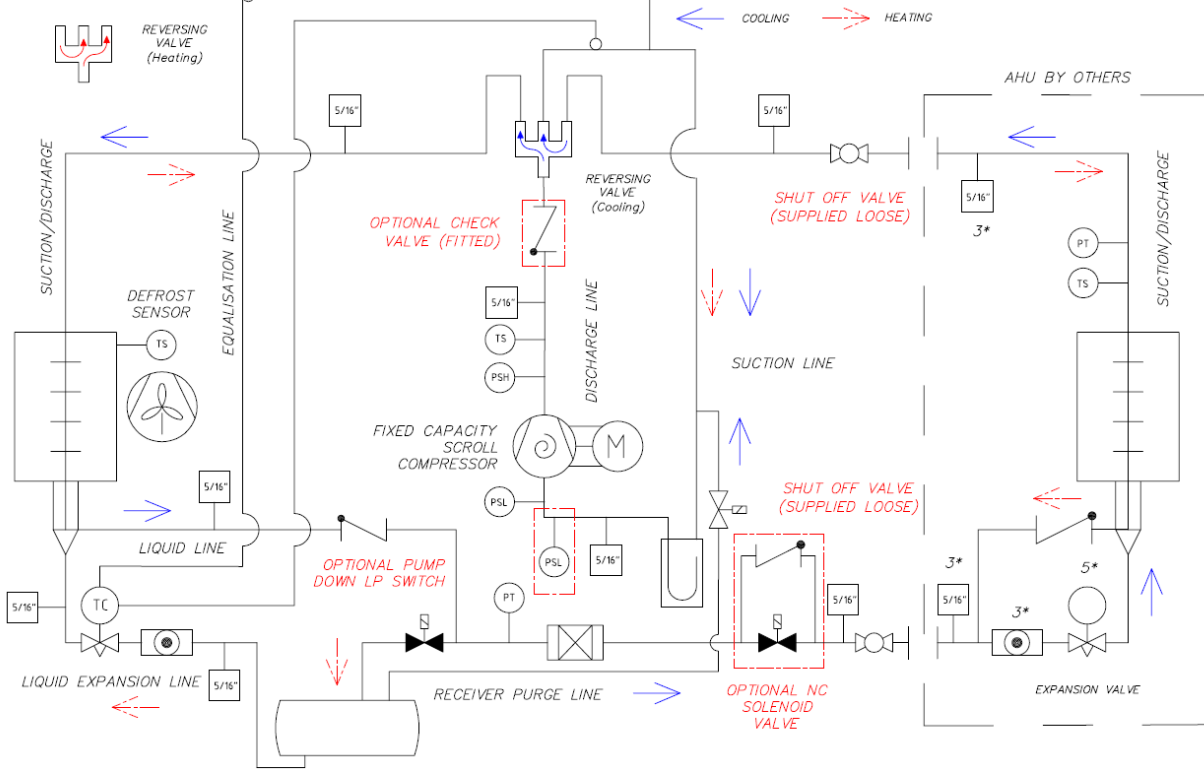
## Pipework Schematics Heat Pump – Fixed Capacity – Electronic Expansion Valve



### KEY: ALL ITEMS



**Pipework Schematics Fixed Capacity, EEV**  
**Heat Pump- Fixed Capacity- Thermostatic Expansion Valve**



**KEY: ALL ITEMS**

- |  |                            |  |                                |
|--|----------------------------|--|--------------------------------|
|  | ELECTRONIC EXPANSION VALVE |  | TEMPERATURE SENSOR             |
|  | R410A 5/16" SCHRADER VALVE |  | SHUT OFF VALVE                 |
|  | AXIAL FAN                  |  | NORMALLY CLOSED SOLENOID VALVE |
|  | SCROLL COMPRESSOR          |  | SIGHT GLASS                    |
|  | BIFLOW FILTER DRIER        |  | LOW PRESSURE SWITCH            |
|  | PRESSURE TRANSDUCER        |  | HIGH PRESSURE SWITCH           |
|  | CHECK VALVE                |  | SUCTION ACCUMULATOR            |
|  | BIFLOW LIQUID RECEIVER     |  | REVERSING VALVE                |



## Refrigeration Pipe Sizing Guide Cooling Only

Outdoor Unit	Connection Size		Equivalent Pipe Lengths with R410A											
			0-20m			20-40m			40-60m			60-80m		
			Liquid	Suction		Liquid	Suction		Liquid	Suction		Liquid	Suction	
			(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)
CUR092V16-1CO-0	3/8	7/8	1/2	1 1/8	7/8	1/2	1 1/8	7/8	1/2	1 1/8	7/8	1/2	1 1/8	7/8
CUR092V20-1CO-0	1/2	1 1/8	1/2	1 3/8	7/8	5/8	1 3/8	1 1/8	5/8	1 3/8	1 1/8	5/8	1 3/8	1 1/8
CUR092V25-1CO-0	1/2	1 3/8	1/2	1 3/8	1 1/8	5/8	1 3/8	1 1/8	5/8	1 3/8	1 1/8	5/8	1 3/8	1 1/8
CUR092V29-1CO-0	1/2	1 3/8	5/8	1 5/8	1 3/8	5/8	1 5/8	1 3/8	3/4	1 5/8	1 3/8	3/4	1 5/8	1 3/8
CUR122V35-1CO-0	5/8	1 3/8	3/4	1 5/8	1 3/8	3/4	1 5/8	1 3/8	3/4	1 5/8	1 3/8	3/4	1 5/8	1 3/8
CUR122V40-1CO-0	5/8	1 5/8	3/4	1 5/8	1 5/8	3/4	1 5/8	1 5/8	3/4	1 5/8	1 5/8	3/4	1 5/8	1 5/8
CUR092V16-VCO-0	3/8	7/8	1/2	1 1/8	7/8	1/2	1 1/8	7/8	1/2	1 1/8	7/8	1/2	1 1/8	7/8
CUR092V20-VCO-0	1/2	1 1/8	1/2	1 3/8	1 1/8	1/2	1 3/8	1 1/8	5/8	1 3/8	1 1/8	5/8	1 3/8	1 1/8
CUR092V25-VCO-0	1/2	1 3/8	1/2	1 3/8	1 1/8	5/8	1 3/8	1 1/8	5/8	1 3/8	1 1/8	5/8	1 3/8	1 1/8
CUR092V29-VCO-0	1/2	1 3/8	5/8	1 5/8	1 3/8	5/8	1 5/8	1 3/8	5/8	1 5/8	1 3/8	5/8	1 5/8	1 3/8
CUR122V35-VCO-0	5/8	1 3/8	3/4	1 5/8	1 3/8	3/4	1 5/8	1 3/8	3/4	1 5/8	1 3/8	3/4	1 5/8	1 3/8
CUR122V40-VCO-0	5/8	1 5/8	3/4	1 5/8	1 5/8	3/4	1 5/8	1 5/8	3/4	1 5/8	1 5/8	7/8	1 5/8	1 5/8

## Heat Pump

Outdoor Unit	Connection Size		Equivalent Pipe Lengths with R410A											
			0-20m			20-40m			40-60m			60-80m		
			Liquid	Suction	Disch	Liquid	Suction	Disch	Liquid	Suction	Disch	Liquid	Suction	Disch
			(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)
CUR092V16-1HP-0	3/8	1/2	1/2	3/4	1/2	1/2	3/4	5/8	1/2	3/4	5/8	1/2	3/4	5/8
CUR092V20-1HP-0	3/8	5/8	1/2	7/8	5/8	5/8	7/8	5/8	5/8	7/8	5/8	5/8	7/8	5/8
CUR092V25-1HP-0	1/2	7/8	1/2	1 1/8	5/8	5/8	1 1/8	3/4	5/8	1 1/8	3/4	5/8	1 1/8	3/4
CUR092V29-1HP-0	1/2	7/8	5/8	1 1/8	3/4	5/8	1 1/8	3/4	3/4	1 1/8	3/4	3/4	1 1/8	3/4
CUR122V35-1HP-0	1/2	7/8	3/4	1 3/8	7/8	3/4	1 3/8	7/8	3/4	1 3/8	7/8	3/4	1 3/8	7/8
CUR122V40-1HP-0	5/8	1 1/8	3/4	1 3/8	7/8	3/4	1 3/8	7/8	3/4	1 3/8	7/8	3/4	1 3/8	7/8
CUR092V16-VHP-0	3/8	1/2	1/2	7/8	1/2	1/2	7/8	1/2	1/2	7/8	1/2	1/2	7/8	1/2
CUR092V20-VHP-0	3/8	5/8	1/2	7/8	5/8	1/2	7/8	5/8	5/8	7/8	5/8	5/8	7/8	5/8
CUR092V25-VHP-0	1/2	7/8	1/2	1 1/8	5/8	5/8	1 1/8	5/8	5/8	1 1/8	5/8	5/8	1 1/8	5/8
CUR092V29-VHP-0	1/2	7/8	5/8	1 1/8	3/4	5/8	1 1/8	3/4	5/8	1 1/8	3/4	5/8	1 1/8	3/4
CUR122V35-VHP-0	1/2	7/8	3/4	1 3/8	3/4	3/4	1 3/8	3/4	3/4	1 3/8	3/4	3/4	1 3/8	3/4
CUR122V40-VHP-0	5/8	1 1/8	3/4	1 3/8	7/8	3/4	1 3/8	7/8	3/4	1 3/8	7/8	7/8	1 3/8	7/8

(1) For interconnecting pipework with a predominantly horizontal layout.

(2) For interconnecting pipework with a predominantly vertical layout.

(3) Careful pipework selection must be done if the liquid line rises. Additional system sub cooling may be required to overcome friction losses.

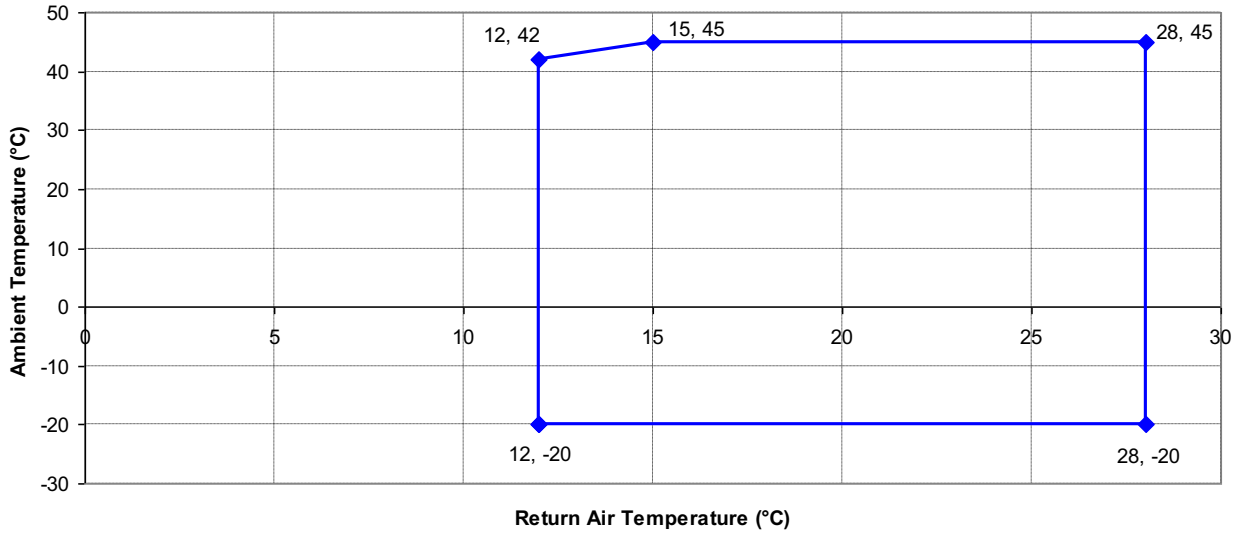
All pipe sizes have been calculated based on a nominal condition 7°C evaporating and 50°C condensing temperatures.

Suction and discharge double risers may be required during part load operation.

**Technical Data Cooling Only**

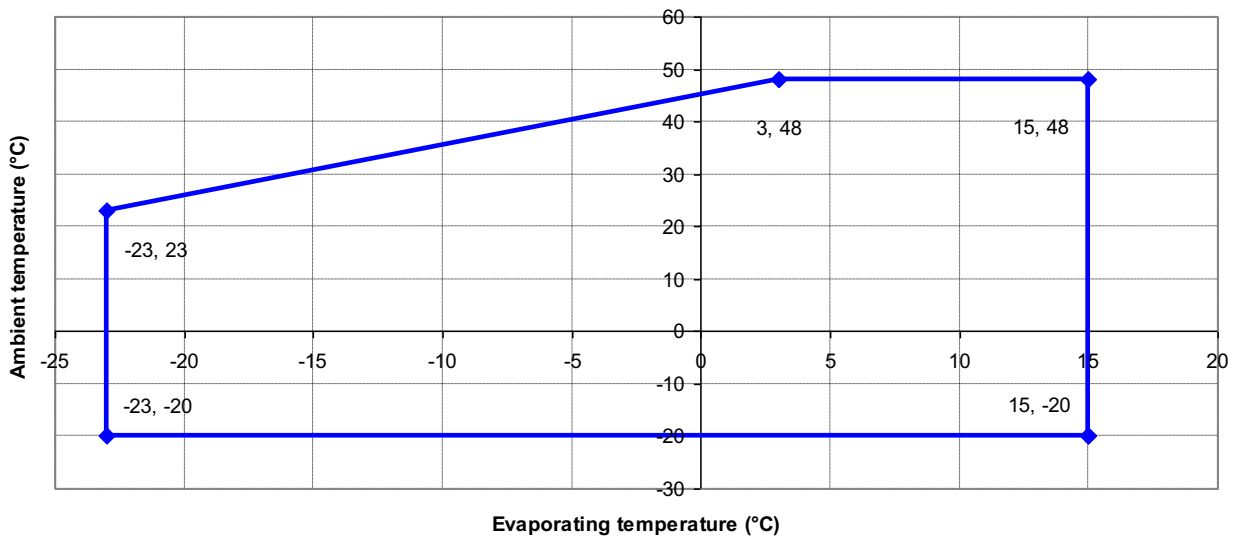
**Operational Limits**

**Typical Cooling Application Envelope**



Data based upon a 12°C ΔT across the indoor heat exchanger.

**Operating Limits - Cooling Only**



## Cooling Only Fixed Capacities

Unit	TEvap (°C)	Ambient (°C)									
		25		30		35		40		45	
		Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)
<b>CUR092V16-1CO-0</b>	-5	9.6	3.8	9.6	3.8	9.2	4.0	8.6	4.4	8.0	4.8
	0	11.5	3.8	11.5	3.8	11.0	4.0	10.3	4.4	9.6	4.9
	5	13.8	3.8	13.7	3.7	13.0	4.1	12.2	4.5	11.5	4.9
	7	14.8	3.8	14.7	3.7	13.8	4.1	13.0	4.5	12.2	4.9
	10	16.4	3.8	16.2	3.7	15.2	4.1	14.3	4.5	13.5	5.0
<b>CUR092V20-1CO-0</b>	-5	14.7	5.5	14.5	5.5	13.7	5.9	12.7	6.4	11.7	6.9
	0	17.6	5.4	17.2	5.6	16.2	6.0	15.2	6.5	14.1	7.0
	5	21.1	5.3	20.2	5.6	19.1	6.1	17.9	6.6	16.8	7.2
	7	22.6	5.3	21.5	5.7	20.3	6.2	19.1	6.7	17.9	7.2
	10	25.0	5.3	23.6	5.7	22.2	6.2	20.9	6.7	19.6	7.3
<b>CUR092V25-1CO-0</b>	-5	19.2	6.8	18.6	7.1	17.5	7.7	16.4	8.4	N/A	N/A
	0	23.2	6.9	22.1	7.4	20.9	8.0	19.5	8.7	18.0	9.5
	5	27.6	7.1	26.1	7.7	24.5	8.3	22.8	9.0	21.0	9.8
	7	29.4	7.2	27.7	7.8	26.0	8.4	24.2	9.1	22.3	9.9
	10	32.1	7.5	30.3	8.0	28.4	8.7	26.5	9.3	24.3	10.1
<b>CUR092V29-1CO-0</b>	-5	21.8	7.5	20.7	8.0	19.3	8.7	17.9	9.5	N/A	N/A
	0	26.1	7.6	24.5	8.3	22.9	9.0	21.2	9.9	19.4	10.8
	5	30.6	8.0	28.8	8.6	26.9	9.4	24.9	10.2	22.8	11.1
	7	32.5	8.1	30.6	8.8	28.6	9.5	26.5	10.4	24.3	11.3
	10	35.4	8.3	33.4	9.0	31.2	9.8	28.9	10.6	26.5	11.5
<b>CUR122V35-1CO-0</b>	-5	28.5	9.4	27.9	12.0	26.1	13.0	24.2	14.1	22.2	15.3
	0	34.3	9.8	33.1	12.3	31.0	13.3	28.8	14.4	26.4	15.6
	5	41.0	11.2	38.9	12.7	36.5	13.6	33.9	14.7	31.1	15.9
	7	43.7	11.9	41.3	12.8	38.8	13.8	36.1	14.8	33.1	16.1
	10	47.8	12.2	45.2	13.0	42.4	14.0	39.5	15.1	36.3	16.3
<b>CUR122V40-1CO-0</b>	-5	32.7	11.0	31.6	13.6	29.6	14.5	27.6	15.6	N/A	N/A
	0	39.3	12.5	37.3	14.0	35.0	15.0	32.6	16.1	30.0	17.3
	5	46.2	13.6	43.6	14.5	40.9	15.5	38.1	16.6	35.0	17.9
	7	49.0	13.8	46.3	14.8	43.4	15.7	40.4	16.9	37.2	18.1
	10	53.5	14.2	50.5	15.1	47.4	16.1	44.1	17.2	40.6	18.5

Notes:

- 1 Output kW refers to the compressor duty.
  - 2 Input kW refers to the compressor and fan input power only.
- All performance data is supplied in accordance with BS EN 14511-1:2013

Cooling Only Modulating Capacities

Unit	TEvap (°C)	Ambient (°C)									
		25		30		35		40		45	
		Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)
CUR092V16-VCO-0	-5	10.9	4.0	10.9	4.1	10.4	4.2	9.7	4.7	9.0	5.1
	0	13.1	4.1	13.1	4.1	12.4	4.4	11.6	4.8	10.7	5.2
	5	15.7	4.2	15.6	4.1	14.7	4.5	13.7	4.9	12.7	5.4
	7	16.8	4.2	16.6	4.1	15.6	4.5	14.6	5.0	13.5	5.5
	10	18.6	4.2	18.3	4.2	17.2	4.6	16.0	5.1	14.8	5.6
CUR092V20-VCO-0	-5	14.9	5.3	14.8	5.2	13.9	5.8	12.9	6.3	12.0	6.9
	0	17.8	5.4	17.4	5.4	16.4	5.9	15.3	6.5	14.1	7.1
	5	21.1	5.4	20.3	5.6	19.1	6.1	17.8	6.7	16.5	7.4
	7	22.5	5.4	21.6	5.7	20.3	6.2	18.9	6.8	17.5	7.5
	10	24.7	5.4	23.5	5.8	22.1	6.4	20.6	7.0	19.1	7.6
CUR092V25-VCO-0	-5	18.5	6.2	18.0	6.4	16.9	7.1	15.6	7.9	N/A	N/A
	0	22.2	6.2	21.3	6.6	20.0	7.2	18.6	8.0	17.1	8.9
	5	26.3	6.2	24.9	6.8	23.4	7.5	21.8	8.2	20.0	9.1
	7	28.0	6.3	26.4	6.9	24.8	7.6	23.1	8.3	21.3	9.1
	10	30.5	6.5	28.7	7.1	27.0	7.7	25.1	8.5	23.2	9.3
CUR092V29-VCO-0	-5	21.9	7.2	20.8	7.7	19.4	8.6	17.8	9.6	N/A	N/A
	0	26.1	7.2	24.6	8.0	22.9	8.8	21.1	9.8	19.2	10.9
	5	30.4	7.5	28.7	8.2	26.8	9.1	24.7	10.0	22.5	11.1
	7	32.3	7.6	30.4	8.3	28.4	9.2	26.2	10.1	23.9	11.2
	10	35.1	7.8	33.1	8.5	30.9	9.4	28.5	10.3	26.0	11.4
CUR122V35-VCO-0	-5	27.5	9.0	27.0	11.5	25.5	12.4	23.8	13.4	21.9	14.6
	0	32.8	9.2	31.9	11.8	30.0	12.7	28.0	13.7	25.8	14.9
	5	39.0	10.2	37.2	12.2	35.0	13.1	32.6	14.1	30.0	15.2
	7	41.7	11.1	39.5	12.3	37.1	13.2	34.5	14.2	31.8	15.4
	10	45.7	11.7	43.1	12.6	40.5	13.5	37.6	14.5	34.6	15.6
CUR122V40-VCO-0	-5	32.9	10.9	31.9	13.5	30.2	14.5	28.3	15.7	N/A	N/A
	0	38.8	12.1	37.1	13.9	35.0	14.9	32.8	16.1	30.4	17.4
	5	45.2	13.4	42.8	14.3	40.3	15.4	37.7	16.5	34.8	17.8
	7	47.9	13.5	45.3	14.5	42.6	15.5	39.8	16.7	36.7	18.0
	10	52.1	13.8	49.2	14.8	46.2	15.8	43.0	17.0	39.7	18.3

Notes:

- 1 Output kW refers to the compressor duty.
  - 2 Input kW refers to the compressor and fan input power only.
- All performance data is supplied in accordance with BS EN 14511-1:2013

## Mechanical Data Cooling Only Fixed Capacities

		CUR092V16-1CO-0	CUR092V20-1CO-0	CUR092V25-1CO-0
<b>Capacity</b>				
Nominal Cooling Capacity	(1) kW	13.8	20.3	26.0
Capacity Steps		1	1	1
<b>Dimensions – W x D x H</b>				
	(2) mm	922 x 764 x 1736	922 x 764 x 1736	922 x 764 x 1736
<b>Masses – Machine / Operating</b>				
	(3) kg	212	213	241
<b>Construction</b>				
Material/Colour		Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Light Grey (RAL 7035)		
Condenser		Rifled Copper Tube/Louvered Hydrophilic Coated Aluminium Fins		
<b>Fan Motor</b>				
Motor Type		AC 1ph	Axial AC 1ph	AC 1ph
Quantity x Motor Size	kW	1 x 0.6	1 x 0.6	1 x 0.6
Diameter	mm	630	630	630
Maximum Fan Speed	RPM	895	895	895
Maximum Airflow	m³/s	2.0	2.0	2.0
<b>Compressor</b>				
Compressor Type		Fixed Capacity Scroll		
Quantity		1	1	1
Oil Charge Volume	l	1.57	1.57	3.3
Oil Type		Polyolester		
<b>Refrigeration</b>				
Refrigerant control and type		Single Circuit - 2 pipe configuration		
Refrigerant type		Optional REEV package		
Holding Charge		R410A		
Coil Volume	l	Inert Gas		
Refrigerant Charge	(4) kg	18.59	18.59	18.59
		6.81	6.81	6.81
<b>Connections</b>				
Liquid (sweat)	in	3/8	1/2	1/2
Suction (sweat)	in	7/8	1 1/8	1 3/8
<b>Optional Extras</b>				
<b>EC Fan</b>				
Quantity x Motor Size	kW	1 x 0.72	1 x 0.72	1 x 0.72
Diameter	mm	630	630	630
Maximum Fan Speed	RPM	1000	1000	1000
Maximum Airflow	m³/s	2.3	2.3	2.3
Dimensions – W x D x H	(2) mm	922 x 764 x 1750	922 x 764 x 1750	922 x 764 x 1750
Masses – Machine / Operating	(3) kg	204	205	232
<b>Short Case Axial Fan</b>				
Quantity x Motor Size	kW	1 x 1.4	Designed to 75Pa ESP	
Diameter	mm	560	560	560
Maximum Fan Speed	RPM	1330	1330	1330
Maximum Airflow	m³/s	2.8	2.8	2.8
Dimensions – W x D x H	(2) mm	922 x 764 x 1753	922 x 764 x 1753	922 x 764 x 1753
Masses – Machine / Operating	(3) kg	218	219	247
REEV Selection		E²V -24	E²V - 35	E²V - 35

(1) Evaporating temperature 7°C, Ambient 35°C with an AC fan matched with a REEV package

All performance data is supplied in accordance with BS EN 14511-1:2013

(2) Overall dimensions for clearance

(3) Unit mass excludes a refrigerant charge

(4) For guidance only

**Mechanical Data Cooling Only Fixed Capacities Continued**

		CUR092V29-1CO-0	CUR122V35-1CO-0	CUR122V40-1CO-0
<b>Capacity</b>				
Nominal Cooling Capacity	(1) kW	28.6	38.8	43.4
Capacity Steps		1	1	1
<b>Dimensions – W x D x H</b>				
	(2) mm	922 x 764 x 1736	1222 x 764 x 1736	1222 x 764 x 1736
<b>Masses – Machine / Operating</b>				
	(3) kg	241	292	296
<b>Construction</b>				
Material/Colour		Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Light Grey (RAL 7035)		
Condenser		Rifled Copper Tube/Louvered Hydrophilic Coated Aluminium Fins		
<b>Fan Motor</b>				
Motor Type		AC 1ph	Axial AC 3ph	AC 3ph
Quantity x Motor Size	kW	1 x 0.6	1 x 1.97	1 x 1.97
Diameter	mm	630	630	630
Maximum Fan Speed	RPM	895	1330	1330
Maximum Airflow	m³/s	2.0	3.5	3.5
<b>Compressor</b>				
Compressor Type			Fixed Capacity Scroll	
Quantity		1	1	1
Oil Charge Volume	l	3.2	3.2	3.2
Oil Type			Polyolester	
<b>Refrigeration</b>				
Refrigerant control and type		Single Circuit - 2 pipe configuration Optional REEV package		
Refrigerant type		R410A		
Holding Charge		Inert Gas		
Coil Volume	l	18.59	21.57	21.57
Refrigerant Charge	(4) kg	6.81	6.98	6.98
<b>Connections</b>				
Liquid (sweat)	in	1/2	5/8	5/8
Suction (sweat)	in	1 3/8	1 3/8	1 5/8
<b>Optional Extras</b>				
<b>EC Fan</b>				
Quantity x Motor Size	kW	1 x 0.72	1 x 1.85	1 x 1.85
Diameter	mm	630	630	630
Maximum Fan Speed	RPM	1000	1230	1230
Maximum Airflow	m³/s	2.3	3.5	3.5
Dimensions – W x D x H	(2) mm	922 x 764 x 1750	1222 x 764 x 1750	1222 x 764 x 1750
Masses – Machine / Operating	(3) kg	233	284	287
<b>Short Case Axial Fan</b>				
Quantity x Motor Size	kW	1 x 1.4	Designed to 75Pa ESP N/A	N/A
Diameter	mm	560	N/A	N/A
Maximum Fan Speed	RPM	1330	N/A	N/A
Maximum Airflow	m³/s	2.8	N/A	N/A
Dimensions – W x D x H	(2) mm	922 x 764 x 1753	N/A	N/A
Masses – Machine / Operating	(3) kg	247	N/A	N/A
REEV Selection		E²V – 35	E²V – 45	E²V – 45

(1) Evaporating temperature 7°C, Ambient 35°C with an AC fan matched with a REEV package

All performance data is supplied in accordance with BS EN 14511-1:2013

(2) Overall dimensions for clearance

(3) Unit mass excludes a refrigerant charge

(4) For guidance only

## Mechanical Data Cooling Only Modulating Capacities

	CUR092V16-VCO-0	CUR092V20-VCO-0	CUR092V25-VCO-0
<b>Capacity</b>			
Nominal Cooling Capacity (1) kW	15.6	20.3	24.8
Capacity Steps	16-100%	16-100%	16-100%
<b>Dimensions – W x D x H (2) mm</b>	922 x 764 x 1736	922 x 764 x 1736	922 x 764 x 1736
<b>Masses – Machine / Operating (3) kg</b>	219	220	241
<b>Construction</b>	Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Light Grey (RAL 7035)		
<b>Condenser</b>	Rifled Copper Tube/Louvered Hydrophilic Coated Aluminium Fins		
<b>Fan Motor</b>		Axial	
Motor Type	AC 1ph	AC 1ph	AC 1ph
Quantity x Motor Size kW	1 x 0.6	1 x 0.6	1 x 0.6
Diameter mm	630	630	630
Maximum Fan Speed RPM	895	895	895
Maximum Airflow m³/s	2.0	2.0	2.0
<b>Compressor</b>		Modulating Capacity Scroll	
Compressor Type			
Quantity	1	1	1
Oil Charge Volume l	1.9	1.9	3.2
Oil Type		Polyolester	
<b>Refrigeration</b>	Single Circuit - 2 pipe configuration Optional REEV package R410A Inert Gas		
Refrigerant control and type			
Refrigerant type			
Holding Charge			
Coil Volume l	18.59	18.59	18.59
Refrigerant Charge (4) kg	6.81	6.81	6.81
<b>Connections</b>			
Liquid (sweat) in	3/8	1/2	1/2
Suction (sweat) in	7/8	1 1/8	1 3/8
<b>Optional Extras</b>			
<b>EC Fan</b>			
Quantity x Motor Size kW	1 x 0.72	1 x 0.72	1 x 0.72
Diameter mm	630	630	630
Maximum Fan Speed RPM	1000	1000	1000
Maximum Airflow m³/s	2.3	2.3	2.3
Dimensions – W x D x H (2) mm	922 x 764 x 1750	922 x 764 x 1750	922 x 764 x 1750
Masses – Machine / Operating (3) kg	211	212	233
<b>Short Case Axial Fan</b>		Designed to 75Pa ESP	
Quantity x Motor Size kW	1 x 1.4	1 x 1.4	1 x 1.4
Diameter mm	560	560	560
Maximum Fan Speed RPM	1330	1330	1330
Maximum Airflow m³/s	2.8	2.8	2.8
Dimensions – W x D x H (2) mm	922 x 764 x 1753	922 x 764 x 1753	922 x 764 x 1753
Masses – Machine / Operating (3) kg	218	219	247
<b>REEV Selection</b>	E <sup>2</sup> V – 24	E <sup>2</sup> V - 35	E <sup>2</sup> V - 35

(1) Evaporating temperature 7°C, Ambient 35°C with an AC fan matched with a REEV package

All performance data is supplied in accordance with BS EN 14511-1:2013

(2) Overall dimensions for clearance

(3) Unit mass excludes a refrigerant charge

(4) For guidance only

Mechanical Data Cooling Only Variable Capacities Continued

	CUR092V29-VCO-0	CUR122V35-VCO-0	CUR122V40-VCO-0
<b>Capacity</b>			
Nominal Cooling Capacity (1) kW	28.4	37.1	42.6
Capacity Steps	16-100%	16-100%	16-100%
<b>Dimensions – W x D x H (2) mm</b>			
	922 x 764 x 1736	1222 x 764 x 1736	1222 x 764 x 1736
<b>Masses – Machine / Operating (3) kg</b>			
	243	293	295
<b>Construction</b>			
Material/Colour	Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Light Grey (RAL 7035)		
<b>Condenser</b>			
	Rifled Copper Tube/Louvered Hydrophilic Coated Aluminium Fins		
<b>Fan Motor</b>			
Motor Type	AC 1ph	Axial AC 3ph	AC 3ph
Quantity x Motor Size kW	1 x 0.6	1 x 1.97	1 x 1.97
Diameter mm	630	630	630
Maximum Fan Speed RPM	895	1330	1330
Maximum Airflow m³/s	2.0	3.5	3.5
<b>Compressor</b>			
Compressor Type	Modulating Capacity Scroll		
Quantity	1	1	1
Oil Charge Volume l	3.2	3.2	3.2
Oil Type	Polyolester		
<b>Refrigeration</b>			
Refrigerant control and type	Single Circuit - 2 pipe configuration		
Refrigerant type	Optional REEV package R410A		
Holding Charge	Inert Gas		
Coil Volume l	18.59	21.57	21.57
Refrigerant Charge (4) kg	6.81	6.98	6.98
<b>Connections</b>			
Liquid (sweat) in	1/2	5/8	5/8
Suction (sweat) in	1 3/8	1 3/8	1 5/8
<b>Optional Extras</b>			
<b>EC Fan</b>			
Quantity x Motor Size kW	1 x 0.72	1 x 1.85	1 x 1.85
Diameter mm	630	630	630
Maximum Fan Speed RPM	1000	1230	1230
Maximum Airflow m³/s	2.3	3.5	3.5
Dimensions – W x D x H (2) mm	922 x 764 x 1750	1222 x 764 x 1750	1222 x 764 x 1750
Masses – Machine / Operating (3) kg	234	285	287
<b>Short Case Axial Fan</b>			
Quantity x Motor Size kW	1 x 1.4	Designed to 75Pa ESP	
Diameter mm	560	N/A	N/A
Maximum Fan Speed RPM	1330	N/A	N/A
Maximum Airflow m³/s	2.8	N/A	N/A
Dimensions – W x D x H (2) mm	922 x 764 x 1753	N/A	N/A
Masses – Machine / Operating (3) kg	247	N/A	N/A
<b>REEV Selection</b>			
	E²V – 35	E²V – 45	E²V – 45

(1) Evaporating temperature 7°C, Ambient 35°C with an AC fan matched with a REEV package

All performance data is supplied in accordance with BS EN 14511-1:2013

(2) Overall dimensions for clearance

(3) Unit mass excludes a refrigerant charge

(4) For guidance only



## Electrical Data – Cooling Only

		CUR092V16-1CO-0	CUR092V20-1CO-0	CUR092V25-1CO-0
<b>Unit Data</b> (1)				
Nominal Run Amps	A	11.5	16.9	19.4
Maximum Start Amps	A	73.7	103.7	145.7
Recommended Mains Fuse Size	A	20	32	32
Max Mains Incoming Cable Size	mm <sup>2</sup>	35	35	35
Mains Supply	V		400V / 3PH + N / 50Hz	
Control circuit	VAC	24	24	24
<b>Condenser Fan - Motor</b>				
Motor Type		AC	AC	AC
Quantity x Motor Size	kW	1~	1~	1~
Full Load Amps	A	1 x 0.6	1 x 0.6	1 x 0.6
Locked Rotor Amps	A	2.7	2.7	2.7
		9.2	9.2	9.2
<b>Compressor</b>				
Motor Size	kW	4.6	6.4	8.5
Nominal Run Amps	A	7.9	13.3	15.8
Locked Rotor Amps	A	70	100	142
Type of Start			Direct On Line	
<b>OPTIONAL EXTRAS</b>				
<b>Electronic Soft-start</b>				
Nominal Run Amps	A	11.5	16.9	19.4
Maximum Start Amps	A	45.7	63.7	88.9
Recommended Mains Fuse Size	A	16	25	32
<b>Power Factor Correction</b>				
Nominal Run Amps	A	11.2	16.5	18.6
Maximum Start Amps	A	73.7	103.7	145.7
Recommended Mains Fuse Size	A	20	32	32
Compressor Nominal Run Amps	A	7.5	12.8	14.9
<b>First upgrade EC Motor</b>				
Quantity x Motor Size	kW	1~	1~	1~
Full Load Amps	A	1 x 0.72	1 x 0.72	1 x 0.72
Locked Rotor Amps	A	3.3	3.3	3.3
		N/A	N/A	N/A
<b>Second upgrade SCAF</b>				
Quantity x Motor Size	kW	1~	1~	1~
Full Load Amps	A	1 x 1.4	1 x 1.4	1 x 1.4
Locked Rotor Amps	A	6	6	6
		18	18	18

(1) Based upon ARI conditions, Evaporating at 7°C, Condensing at 54.4°C.

Electrical Data – Cooling Only Continued

		CUR092V29-1CO-0	CUR122V35-1CO-0	CUR122V40-1CO-0
<b>Unit Data</b> (1)				
Nominal Run Amps	A	20.6	25.1	29
Maximum Start Amps	A	145.7	162.4	201.4
Recommended Mains Fuse Size	A	32	40	50
Max Mains Incoming Cable Size	mm <sup>2</sup>	35	35	35
Mains Supply	V		400V / 3PH + N / 50Hz	
Control circuit	VAC	24	24	24
<b>Condenser Fan - Motor</b>				
Motor Type		AC	AC	AC
		1~	3~	3~
Quantity x Motor Size	kW	1 x 0.6	1 x 1.97	1 x 1.97
Full Load Amps	A	2.7	3.4	3.4
Locked Rotor Amps	A	9.2	11.9	11.9
<b>Compressor</b>				
Motor Size	kW	9.5	12.2	13.8
Nominal Run Amps	A	17	20.7	24.6
Locked Rotor Amps	A	142	158	197
Type of Start			Direct On Line	
<b>OPTIONAL EXTRAS</b>				
<b>Electronic Soft-start</b>				
Nominal Run Amps	A	20.6	23.8	27.5
Maximum Start Amps	A	88.9	99.2	122.6
Recommended Mains Fuse Size	A	32	40	50
<b>Power Factor Correction</b>				
Nominal Run Amps	A	19.8	23.8	29
Maximum Start Amps	A	145.7	162.4	201.4
Recommended Mains Fuse Size	A	32	40	50
Compressor Nominal Run Amps	A	16.2	19.4	23.1
<b>First upgrade EC Motor</b>				
		1~	3~	3~
Quantity x Motor Size	kW	1 x 0.72	1 x 1.85	1 x 1.85
Full Load Amps	A	3.3	2.9	2.9
Locked Rotor Amps	A	N/A	N/A	N/A
<b>Second upgrade SCAF</b>				
		1~	N/A	N/A
Quantity x Motor Size	kW	1 x 1.4	N/A	N/A
Full Load Amps	A	6	N/A	N/A
Locked Rotor Amps	A	18	N/A	N/A

(1) Based upon ARI conditions, Evaporating at 7°C, Condensing at 54.4°C.

## Electrical Data – Cooling Only Continued

		CUR092V16-VCO-0	CUR092V20-VCO-0	CUR092V25-VCO-0
<b>Unit Data</b> (1)				
Nominal Run Amps	A	12.2	15.7	18.2
Maximum Start Amps	A	67.7	104.7	114.7
Recommended Mains Fuse Size	A	20	25	25
Max Mains Incoming Cable Size	mm <sup>2</sup>	35	35	35
Mains Supply	V		400V / 3PH + N / 50Hz	
Control circuit	VAC	24	24	24
<b>Condenser Fan - Motor</b>				
Motor Type		AC	AC	AC
Quantity x Motor Size	kW	1~	1~	1~
Full Load Amps	A	1 x 0.6	1 x 0.6	1 x 0.6
Locked Rotor Amps	A	2.7	2.7	2.7
		9.2	9.2	9.2
<b>Compressor</b>				
Motor Size	kW	5	7	8
Nominal Run Amps	A	8.6	12.1	14.5
Locked Rotor Amps	A	64	101	111
Type of Start			Direct On Line	
<b>OPTIONAL EXTRAS</b>				
<b>Electronic Soft-start</b>				
Nominal Run Amps	A	12.2	15.7	18.2
Maximum Start Amps	A	42.1	64.3	70.3
Recommended Mains Fuse Size	A	20	25	32
<b>Power Factor Correction</b>				
Nominal Run Amps	A	N/A	N/A	N/A
Maximum Start Amps	A	N/A	N/A	N/A
Recommended Mains Fuse Size	A	N/A	N/A	N/A
Compressor Nominal Run Amps	A	N/A	N/A	N/A
<b>First upgrade EC Motor</b>				
Quantity x Motor Size	kW	1~	1~	1~
Full Load Amps	A	1 x 0.72	1 x 0.72	1 x 0.72
Locked Rotor Amps	A	3.3	3.3	3.3
		N/A	N/A	N/A
<b>Second upgrade SCAF</b>				
Quantity x Motor Size	kW	1~	1~	1~
Full Load Amps	A	1 x 1.4	1 x 1.4	1 x 1.4
Locked Rotor Amps	A	6	6	6
		18	18	18

(1) Based upon ARI conditions, Evaporating at 7°C, Condensing at 54.4°C.

Electrical Data – Cooling Only Continued

		CUR092V29-VCO-0	CUR122V35-VCO-0	CUR122V40-VCO-0
<b>Unit Data</b> (1)				
Nominal Run Amps	A	20.4	25.5	30.8
Maximum Start Amps	A	121.7	144.4	177.4
Recommended Mains Fuse Size	A	32	40	50
Max Mains Incoming Cable Size	mm <sup>2</sup>	35	35	35
Mains Supply	V		400V / 3PH + N / 50Hz	
Control circuit	VAC	24	24	24
<b>Condenser Fan - Motor</b>				
Motor Type		AC	AC	AC
		1~	3~	3~
Quantity x Motor Size	kW	1 x 0.6	1 x 1.97	1 x 1.97
Full Load Amps	A	2.7	3.4	3.4
Locked Rotor Amps	A	9.2	11.9	11.9
<b>Compressor</b>				
Motor Size	kW	9.4	11.8	13.9
Nominal Run Amps	A	16.8	21.1	26.4
Locked Rotor Amps	A	118	140	173
Type of Start			Direct On Line	
<b>OPTIONAL EXTRAS</b>				
<b>Electronic Soft-start</b>				
Nominal Run Amps	A	20.4	25.5	30.8
Maximum Start Amps	A	74.5	88.4	108.2
Recommended Mains Fuse Size	A	32	40	50
<b>Power Factor Correction</b>				
Nominal Run Amps	A	N/A	N/A	N/A
Maximum Start Amps		N/A	N/A	N/A
Recommended Mains Fuse Size	A	N/A	N/A	N/A
Compressor Nominal Run Amps	A	N/A	N/A	N/A
<b>First upgrade EC Motor</b>				
		1~	3~	3~
Quantity x Motor Size	kW	1 x 0.72	1 x 1.85	1 x 1.85
Full Load Amps	A	3.3	2.9	2.9
Locked Rotor Amps	A	N/A	N/A	N/A
<b>Second upgrade SCAF</b>				
		1~	N/A	N/A
Quantity x Motor Size	kW	1 x 1.4	N/A	N/A
Full Load Amps	A	6.0	N/A	N/A
Locked Rotor Amps	A	18	N/A	N/A

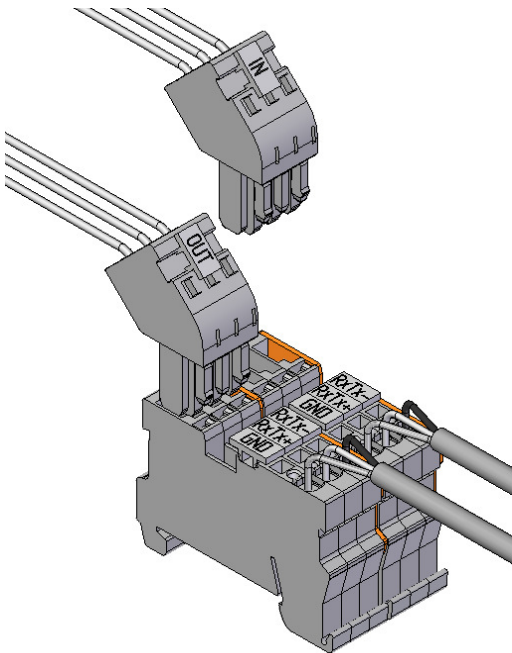
(1) Based upon ARI conditions, Evaporating at 7°C, Condensing at 54.4°C.

## Interconnecting Wiring

BluCube	L1	○	←	Mains incoming supply 400V/3PH/50Hz	
	L2	○	←		
	L3	○	←		
	N	○	←		
	PE	○	←		
	502	○	→	24 Volts AC	
	551	○	←	Cooling Signal	
	845	○	←	Variable Capacity Compressor Only	0-10Volts Compressor demand
	800	○	→		0 Volts
	561	○	→	NO	Critical alarm Normally Open
562	○	→	Common	GND	
563	○	→	NC	Critical alarm Normally Closed	

	Rx-Tx-	○	←	Use Awg20/22 twisted pair (with overall shield) cable, Belden ref. 8762 (Airedale ref: 6110316), or equivalent, for <b>AIRELan</b> network	<b>AIRELan</b> Network Connections (Inward connection)
	Rx+Tx+	○	←		
	GND	○	←		
	Rx-Tx-	○	→	Use Awg20/22 twisted pair (with overall shield) cable, Belden ref. 8762 (Airedale ref: 6110316), or equivalent, for <b>AIRELan</b> network	<b>AIRELan</b> Network Connections (Outward connection)
	Rx+Tx+	○	→		
	GND	○	→		

## pLAN Termination



Noise Data Cooling Only

	Sound Measurement	dBa	Frequency (Hz)							
			63	125	250	500	1000	2000	4000	8000
CUR092V16-1CO-0	Power dB	86.4	81.2	84.9	79.5	84.6	83.9	73.6	63.4	57.1
	Pressure @ 1m	78.4	73.2	76.9	71.5	76.6	75.9	65.6	55.4	49.1
	Pressure @ 10m	58.4	53.2	56.9	51.5	56.6	55.9	45.6	35.4	29.1
CUR092V20-1CO-0	Power dB	86.6	81.5	84.9	79.5	84.6	84.1	74.2	64.4	57.9
	Pressure @ 1m	78.6	73.5	76.9	71.5	76.6	76.1	66.2	56.4	49.9
	Pressure @ 10m	58.6	53.5	56.9	51.5	56.6	56.1	46.2	36.4	29.9
CUR092V25-1CO-0	Power dB	86.6	81.0	85.0	79.5	84.6	84.1	73.9	64.4	58.3
	Pressure @ 1m	78.6	73.0	77.0	71.5	76.6	76.1	65.9	56.4	50.3
	Pressure @ 10m	58.6	53.0	57.0	51.5	56.6	56.1	45.9	36.4	30.3
CUR092V29-1CO-0	Power dB	86.6	81.5	84.9	79.5	84.6	84.1	74.2	64.4	57.9
	Pressure @ 1m	78.6	73.5	76.9	71.5	76.6	76.1	66.2	56.4	49.9
	Pressure @ 10m	58.6	53.5	56.9	51.5	56.6	56.1	46.2	36.4	29.9
CUR122V35-1CO-0	Power dB	86.9	96.5	95.4	87.2	85.0	80.5	75.2	68.3	68.2
	Pressure @ 1m	78.9	88.5	87.4	79.2	77.0	72.5	67.2	60.3	60.2
	Pressure @ 10m	58.9	68.5	67.4	59.2	57.0	52.5	47.2	40.3	40.2
CUR122V40-1CO-0	Power dB	87.3	96.5	95.4	87.3	85.0	81.4	76.3	69.5	68.5
	Pressure @ 1m	79.3	88.5	87.4	79.3	77.0	73.4	68.3	61.5	60.5
	Pressure @ 10m	59.3	68.5	67.4	59.3	57.0	53.4	48.3	41.5	40.5
CUR092V16-VCO-0	Power dB	86.7	80.9	84.9	79.6	84.8	84.2	73.4	64.4	60.8
	Pressure @ 1m	78.7	72.9	76.9	71.6	76.8	76.2	65.4	56.4	52.8
	Pressure @ 10m	58.7	52.9	56.9	51.6	56.8	56.2	45.4	36.4	32.8
CUR092V20-VCO-0	Power dB	86.7	80.9	84.9	79.6	84.9	84.2	73.7	66.1	59.8
	Pressure @ 1m	78.7	72.9	76.9	71.6	76.9	76.2	65.7	58.1	51.8
	Pressure @ 10m	58.7	52.9	56.9	51.6	56.9	56.2	45.7	38.1	31.8
CUR092V25-VCO-0	Power dB	87.0	80.9	84.9	79.8	85.4	84.1	74.9	67.1	60.2
	Pressure @ 1m	79.0	72.9	76.9	71.8	77.4	76.1	66.9	59.1	52.2
	Pressure @ 10m	59.0	52.9	56.9	51.8	57.4	56.1	46.9	39.1	32.2
CUR092V29-VCO-0	Power dB	87.0	80.9	84.9	79.7	85.5	84.3	74.6	66.4	59.9
	Pressure @ 1m	79.0	72.9	76.9	71.7	77.5	76.3	66.6	58.4	51.9
	Pressure @ 10m	59.0	52.9	56.9	51.7	57.5	56.3	46.6	38.4	31.9
CUR122V35-VCO-0	Power dB	87.5	96.4	95.4	87.3	85.8	81.2	76.5	70.5	68.8
	Pressure @ 1m	79.5	88.4	87.4	79.3	77.8	73.2	68.5	62.5	60.8
	Pressure @ 10m	59.5	68.4	67.4	59.3	57.8	53.2	48.5	42.5	40.8
CUR122V40-VCO-0	Power dB	87.6	96.4	95.4	87.3	85.7	81.4	77.2	70.9	69.0
	Pressure @ 1m	79.6	88.4	87.4	79.3	77.7	73.4	69.2	62.9	61.0
	Pressure @ 10m	59.6	68.4	67.4	59.3	57.7	53.4	49.2	42.9	41.0

\*sound data is for AC fan at full speed and modulating compressor at 100%

\*\*sound pressure calculated using hemi-spherical propagation

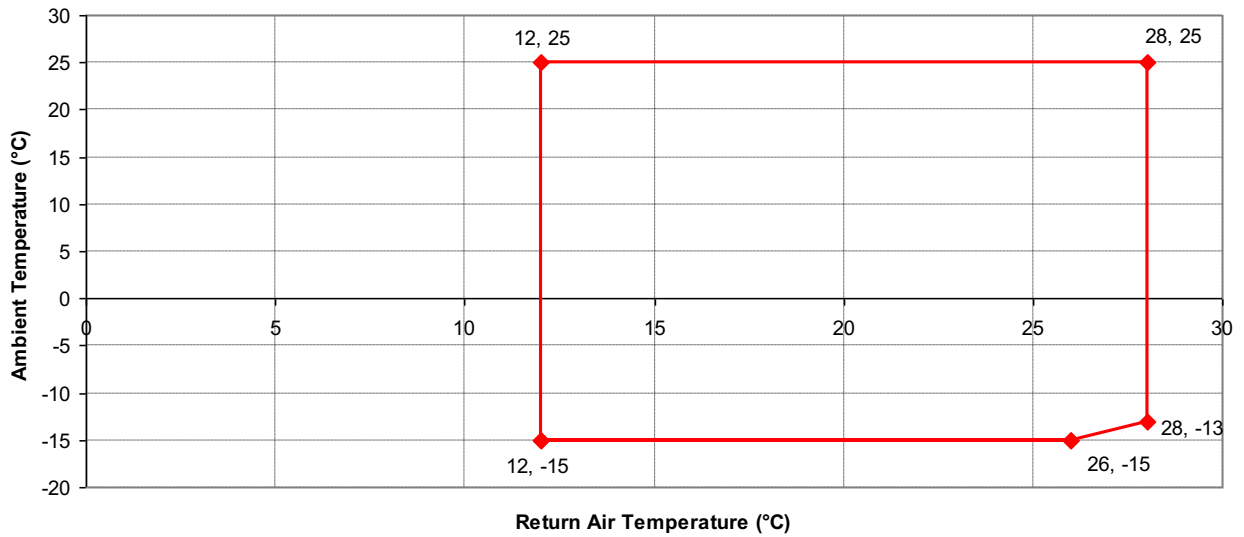
Notes:

- 1 Sound Power Reference Power =  $10^{-12}$  Watts.
- 2 Sound Pressure Reference Pressure =  $2 \times 10^{-5}$  N/m<sup>2</sup>.
- 3 dBA is the overall noise level, measured on the A scale.
- 4 Sound Pressure data is only valid in free field conditions, where a reflective surface, such as a roof is found.

## Technical Data Heat Pump

### Operational Limits

Typical Heating Application Envelope



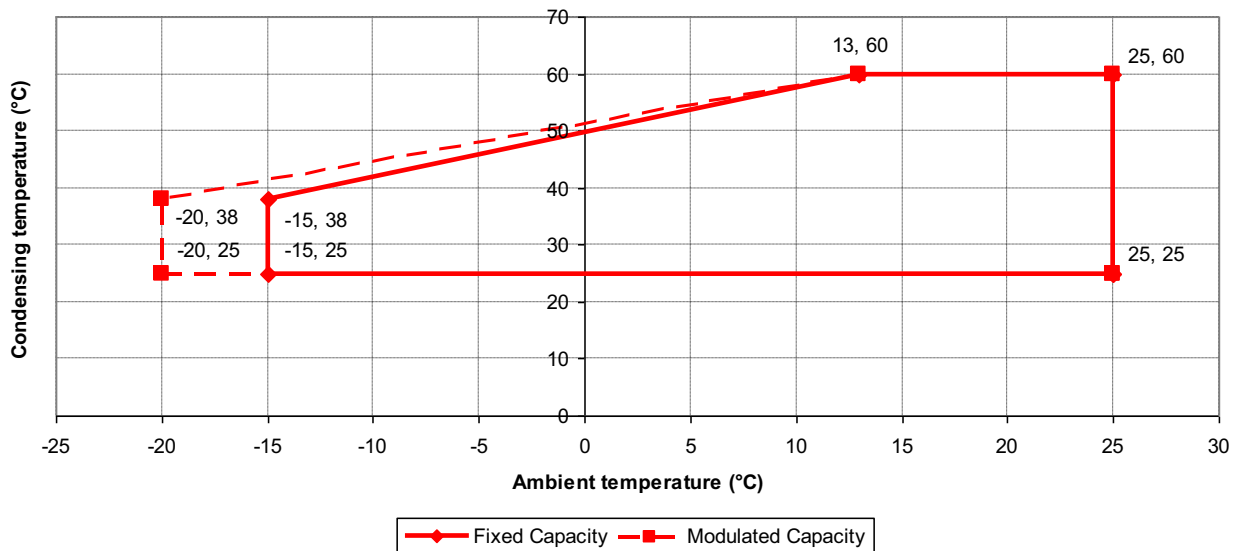
**CAUTION**



A minimum air on temperature limit of 12°C must be adhered to ensure correct unit operation.

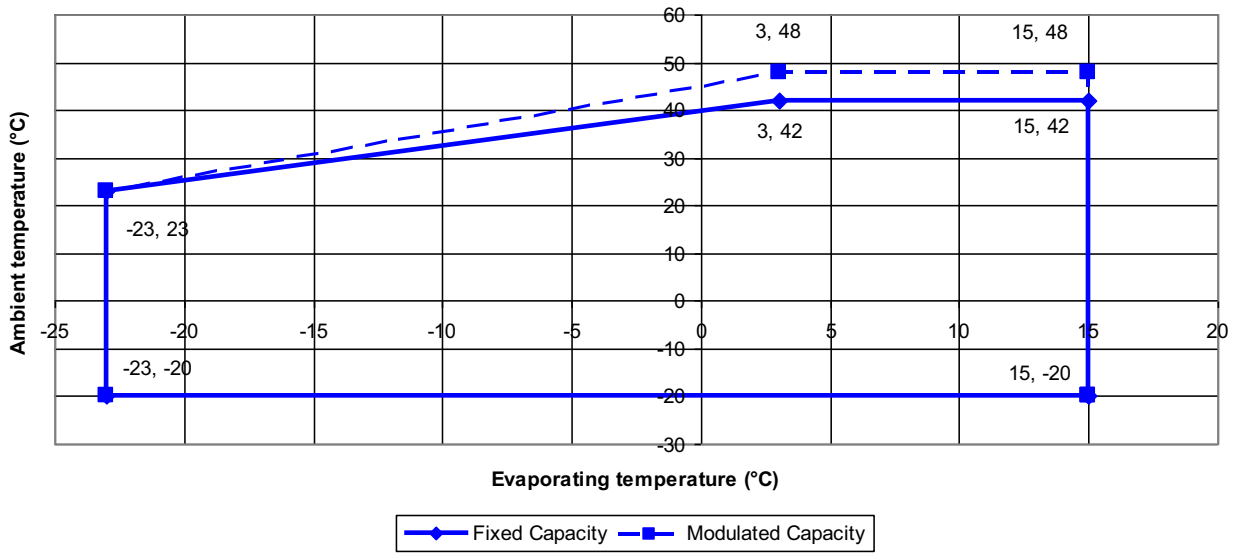
Any fresh air introduced to the unit must have pre-heaters to maintain this minimum temperature.

Operating Limits - Heat Pump Heating Cycle



Data Based on a 12°C ΔT across coil.

Operating Limits - Heat Pump Cooling Cycle





## Heat Pump Cooling Fixed Capacities

Unit	Evap Temp (°C)	Summer Ambient (°C)									
		25		30		35		40		45	
		Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)
CUR092V16-1HP-0	-5	10.3	3.9	10.3	3.8	9.8	4.2	9.2	4.6	8.5	5.0
	0	12.4	3.9	12.2	3.9	11.6	4.3	11.0	4.7	10.3	5.2
	5	14.8	3.9	14.4	4.0	13.7	4.4	13.0	4.8	12.2	5.3
	7	15.9	3.8	15.4	4.0	14.6	4.4	13.8	4.8	13.0	5.3
	10	17.6	3.7	16.9	4.0	16.0	4.4	15.2	4.9	14.3	5.3
CUR092V20-1HP-0	-5	15.8	5.5	15.1	5.8	14.3	6.3	13.3	6.8	N/A	N/A
	0	18.7	5.5	17.9	6.0	17.0	6.5	15.9	7.0	14.8	7.6
	5	21.9	5.7	20.9	6.1	19.8	6.6	18.7	7.2	17.5	7.7
	7	23.3	5.7	22.2	6.2	21.1	6.7	19.9	7.2	18.7	7.8
	10	25.4	5.8	24.2	6.3	23.0	6.8	21.8	7.3	21.1	6.7
CUR092V25-1HP-0	-5	20.3	7.0	19.3	7.7	18.3	8.4	17.1	9.1	N/A	N/A
	0	24.0	7.4	22.8	8.0	21.5	8.7	20.1	9.5	N/A	N/A
	5	28.1	7.8	26.6	8.4	25.0	9.1	23.3	9.9	N/A	N/A
	7	29.8	8.0	28.2	8.6	26.5	9.3	24.6	10.1	N/A	N/A
	10	32.4	8.2	30.6	8.9	28.8	9.6	26.7	10.3	N/A	N/A
CUR092V29-1HP-0	-5	22.5	8.0	21.2	8.7	19.9	9.5	28.7	10.6	N/A	N/A
	0	26.5	8.4	25.0	9.1	23.4	10.0	21.6	10.9	N/A	N/A
	5	30.8	8.9	29.0	9.6	27.1	10.4	25.1	11.4	N/A	N/A
	7	32.6	9.0	30.7	9.8	28.7	10.6	26.6	11.6	N/A	N/A
	10	35.4	9.3	33.3	10.1	31.1	11.0	28.7	10.6	N/A	N/A
CUR122V35-1HP-0	-5	30.5	11.8	29.0	12.9	27.2	13.9	25.3	15.1	N/A	N/A
	0	36.1	12.3	34.2	13.2	32.1	14.3	29.8	15.5	N/A	N/A
	5	42.1	12.7	39.9	13.7	37.4	14.8	34.8	15.9	31.9	17.3
	7	44.6	12.9	42.3	13.9	39.7	14.9	36.9	16.1	33.9	17.5
	10	48.6	13.2	46.0	14.2	43.2	15.3	40.2	16.4	39.7	14.9
CUR122V40-1HP-0	-5	34.5	13.5	32.7	14.5	30.7	15.6	28.6	16.8	N/A	N/A
	0	40.4	14.1	38.3	15.1	36.0	16.2	33.5	17.4	N/A	N/A
	5	46.9	14.8	44.4	15.7	41.7	16.8	38.8	18.1	N/A	N/A
	7	49.6	15.0	47.0	16.0	44.1	17.1	41.0	18.4	N/A	N/A
	10	53.9	15.4	51.0	16.5	47.8	17.6	44.5	18.8	N/A	N/A

Notes:

- 1 Output kW refers to the compressor duty.  
All performance data is supplied in accordance with BS EN 14511-1:2013
- 2 Input kW refers to the compressor and fan input power only.

Heat Pump Cooling Modulating Capacities

Unit	Evap Temp (°C)	Summer Ambient (°C)									
		25		30		35		40		45	
		Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)
CUR092V16-VHP-0	-5	11.7	4.2	11.7	4.1	11.1	4.5	10.4	4.9	9.7	5.4
	0	14.1	4.2	13.9	4.2	13.1	4.7	12.3	5.1	11.5	5.6
	5	16.9	4.2	16.3	4.4	15.4	4.8	14.5	5.3	13.4	5.8
	7	18.1	4.2	17.4	4.5	16.4	4.9	15.4	5.3	14.3	5.9
	10	20.0	4.2	19.0	4.6	18.0	5.0	16.8	5.5	15.6	6.0
CUR092V20-VHP-0	-5	16.0	5.4	15.4	5.6	14.6	6.2	13.7	6.7	N/A	N/A
	0	19.1	5.3	18.1	5.9	17.1	6.4	16.0	7.0	14.9	7.7
	5	22.2	5.6	21.0	6.1	19.8	6.7	18.6	7.3	17.2	8.0
	7	23.5	5.7	22.3	6.2	21.0	6.8	19.7	7.4	18.2	8.1
	10	25.5	5.8	24.2	6.4	22.8	7.0	21.4	7.6	19.8	8.4
CUR092V25-VHP-0	-5	19.7	6.3	18.7	7.0	17.5	7.8	16.2	8.6	N/A	N/A
	0	23.2	6.6	22.0	7.2	20.6	8.0	19.2	8.8	N/A	N/A
	5	26.9	6.9	25.5	7.5	24.0	8.3	22.3	9.1	N/A	N/A
	7	28.4	7.0	26.9	7.7	25.3	8.4	23.6	9.2	N/A	N/A
	10	30.8	7.2	29.2	7.9	27.4	8.6	25.6	9.5	N/A	N/A
CUR092V29-VHP-0	-5	22.7	7.7	21.3	8.6	19.8	9.5	28.4	10.4	N/A	N/A
	0	26.5	8.0	25.0	8.9	23.3	9.9	21.4	10.9	N/A	N/A
	5	30.7	8.4	28.9	9.3	26.9	10.2	24.8	11.3	N/A	N/A
	7	32.4	8.6	30.5	9.4	28.4	10.4	26.2	11.5	N/A	N/A
	10	35.1	8.8	33.0	9.7	30.8	10.6	28.3	11.7	N/A	N/A
CUR122V35-VHP-0	-5	29.5	10.6	28.2	12.2	26.7	13.2	24.9	14.3	N/A	N/A
	0	34.8	11.7	33.1	12.6	31.2	13.7	29.2	14.8	26.9	16.0
	5	40.4	12.2	38.3	13.1	36.1	14.1	33.6	15.2	31.0	16.4
	7	42.8	12.4	40.5	13.3	38.1	14.3	35.5	15.4	32.7	16.6
	10	46.5	12.7	44.0	13.6	41.3	14.6	38.5	15.7	35.3	16.9
CUR122V40-VHP-0	-5	34.7	13.5	33.1	14.5	31.4	15.7	29.5	17.0	N/A	N/A
	0	40.1	14.0	38.3	15.0	36.2	16.2	33.9	17.5	N/A	N/A
	5	46.1	14.5	43.8	15.6	41.3	16.7	38.6	18.0	N/A	N/A
	7	48.6	14.7	46.1	15.8	43.5	17.0	40.5	18.3	N/A	N/A
	10	52.6	15.1	49.8	16.2	46.8	17.3	43.6	18.6	N/A	N/A

Notes:

- 1 Output kW refers to the compressor duty.  
All performance data is supplied in accordance with BS EN 14511-1:2013
- 2 Input kW refers to the compressor and fan input power only.

## Heat Pump Heating Fixed Capacities

Unit	Cond Temp (°C)	Winter Ambient (°C)									
		-5		0		5		10		15	
		Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)
CUR092V16-1HP-0	40	11.2	4.2	12.5	4.2	13.9	4.2	15.4	4.2	17.1	4.2
	45	11.1	4.6	12.4	4.6	13.8	4.6	15.3	4.6	16.9	4.6
	50	N/A	N/A	12.3	5.1	13.7	5.1	15.2	5.1	16.7	5.1
	55	N/A	N/A	N/A	N/A	13.6	5.7	15.1	5.7	16.6	5.6
CUR092V20-1HP-0	40	16.0	6.0	17.8	6.0	19.7	6.0	21.7	6.0	23.9	6.0
	45	15.8	6.5	17.7	6.6	19.6	6.6	21.5	6.6	23.7	6.6
	50	N/A	N/A	17.4	7.1	19.4	7.2	21.3	7.2	23.4	7.2
	55	N/A	N/A	N/A	N/A	N/A	N/A	21.1	7.8	23.1	7.8
CUR092V25-1HP-0	40	19.7	7.5	21.8	7.5	24.2	7.6	26.7	7.6	29.4	7.7
	45	19.9	8.2	22.0	8.3	24.2	8.3	26.6	8.4	29.3	8.4
	50	N/A	N/A	N/A	N/A	24.2	9.1	26.6	9.2	29.1	9.3
	55	N/A	N/A	N/A	N/A	N/A	N/A	26.5	10.2	28.9	10.2
CUR092V29-1HP-0	40	21.6	8.2	24.0	8.3	26.5	8.3	29.2	8.4	32.0	8.5
	45	21.7	9.0	24.0	9.1	26.4	9.2	29.0	9.3	31.8	9.3
	50	N/A	N/A	N/A	N/A	26.4	10.2	28.9	10.2	31.6	10.3
	55	N/A	N/A	N/A	N/A	N/A	N/A	28.8	11.3	31.4	11.4
CUR122V35-1HP-0	40	28.9	13.0	32.0	13.0	35.6	13.0	39.2	13.0	43.2	13.1
	45	29.1	14.2	32.1	14.2	35.5	14.2	39.0	14.2	42.9	14.2
	50	N/A	N/A	N/A	N/A	35.5	15.5	38.8	15.5	42.6	15.5
	55	N/A	N/A	N/A	N/A	N/A	N/A	38.6	17.0	42.2	17.0
CUR122V40-1HP-0	40	32.0	14.0	35.4	14.2	39.4	14.3	43.3	14.4	47.8	14.6
	45	32.2	15.2	35.5	15.3	39.3	15.5	43.1	15.6	47.5	15.7
	50	N/A	N/A	N/A	N/A	39.2	16.8	42.9	16.9	47.1	17.0
	55	N/A	N/A	N/A	N/A	N/A	N/A	42.7	18.4	46.7	18.5

Notes:

- 1 Output kW refers to the compressor duty.  
All performance data is supplied in accordance with BS EN 14511-1:2013
- 2 Input kW refers to the compressor and fan input power only.

Heat Pump Heating Modulating Capacities

Unit	Cond Temp (°C)	Winter Ambient (°C)									
		-5		0		5		10		15	
		Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)	Output (kW)	Input (kW)
CUR092V16-VHP-0	40	12.1	4.4	13.6	4.4	15.2	4.5	17.0	4.5	18.9	4.6
	45	12.1	4.8	13.6	4.9	15.1	5.0	16.8	5.0	18.6	5.1
	50	N/A	N/A	13.5	5.4	15.0	5.5	16.6	5.5	18.3	5.6
	55	N/A	N/A	N/A	N/A	14.8	6.0	16.4	6.1	18.0	6.2
CUR092V20-VHP-0	40	15.9	5.7	17.7	5.8	19.6	5.9	21.7	5.9	23.9	6.0
	45	15.9	6.2	17.7	6.4	19.5	6.5	21.5	6.5	23.7	6.6
	50	N/A	N/A	17.6	7.0	19.4	7.1	21.4	7.2	23.4	7.3
	55	N/A	N/A	N/A	N/A	N/A	N/A	21.2	8.0	23.2	8.1
CUR092V25-VHP-0	40	19.0	7.0	21.0	7.0	23.2	7.0	25.5	7.0	28.0	7.0
	45	19.1	7.9	21.1	7.8	23.2	7.8	25.4	7.7	27.8	7.7
	50	N/A	N/A	21.1	8.8	23.2	8.7	25.3	8.6	27.7	8.6
	55	N/A	N/A	N/A	N/A	N/A	N/A	25.3	9.7	27.5	9.6
CUR092V29-VHP-0	40	21.6	8.2	23.9	8.2	26.4	8.1	29.0	8.1	31.7	8.1
	45	21.7	9.2	24.0	9.2	26.4	9.1	28.9	9.1	31.6	9.1
	50	N/A	N/A	N/A	N/A	26.5	10.2	28.9	10.2	31.4	10.1
	55	N/A	N/A	N/A	N/A	N/A	N/A	28.9	11.5	31.3	11.4
CUR122V35-VHP-0	40	27.9	12.3	31.0	12.4	34.5	12.4	37.9	12.5	41.8	12.6
	45	28.1	13.4	31.1	13.5	34.5	13.5	37.8	13.6	41.6	13.7
	50	N/A	N/A	N/A	N/A	34.4	14.8	37.7	14.8	41.3	14.9
	55	N/A	N/A	N/A	N/A	N/A	N/A	37.5	16.2	40.9	16.3
CUR122V40-VHP-0	40	32.7	14.1	36.0	14.2	39.8	14.3	43.4	14.3	47.6	14.4
	45	33.0	15.4	36.3	15.4	39.9	15.5	43.5	15.6	47.4	15.7
	50	N/A	N/A	N/A	N/A	40.0	16.9	43.5	17.0	47.3	17.0
	55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	47.0	18.6

Notes:

- 1 Output kW refers to the compressor duty.  
All performance data is supplied in accordance with BS EN 14511-1:2013
- 2 Input kW refers to the compressor and fan input power only.

## Mechanical Data - Heat Pump Fixed Capacities

		CUR092V16-1HP-0	CUR092V20-1HP-0	CUR092V25-1HP-0
<b>Capacity</b>				
Nominal Cooling Capacity	(1) kW	14.6	21.1	26.5
Nominal Heating Capacity	(2) kW	13.7	19.4	24.2
Capacity Steps		1	1	1
<b>Dimensions – W x D x H</b>	(3) mm	922 x 764 x 1736	922 x 764 x 1736	922 x 764 x 1736
<b>Masses – Machine / Operating</b>	(4) kg	229	229	261
<b>Construction</b>				
Material/Colour		Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Light Grey (RAL 7035)		
<b>Heat Pump Evaporator / Condenser</b>		Rifled Copper Tube/Louvered Hydrophilic Coated Aluminium Fins		
<b>Fan Motor</b>				
Motor Type		AC 1ph	Axial AC 1ph	AC 1ph
Quantity x Motor Size	kW	1 x 0.6	1 x 0.6	1 x 0.6
Diameter	mm	630	630	630
Maximum Fan Speed	RPM	895	895	895
Maximum Airflow	m³/s	2.0	2.0	2.0
<b>Compressor</b>				
Compressor Type		Fixed Capacity Scroll		
Quantity		1	1	1
Oil Charge Volume		1.57	1.57	3.3
Oil Type		Polyolester		
<b>Refrigeration</b>				
Refrigerant control and type		Single Circuit - 2 pipe configuration		
Refrigerant type		Optional REEV package		
Holding Charge		R410A		
Coil Volume	l	18.67	18.67	18.67
Refrigerant Charge	(5) kg	6.82	6.82	6.82
<b>Connections</b>				
Liquid (sweat)	in	3/8	3/8	1/2
Suction / Discharge (sweat)	in	1/2	5/8	7/8
<b>Optional Extras</b>				
<b>EC Fan</b>				
Quantity x Motor Size	kW	1 x 0.72	1 x 0.72	1 x 0.72
Diameter	mm	630	630	630
Maximum Fan Speed	RPM	1000	1000	1000
Maximum Airflow	m³/s	2.3	2.3	2.3
Dimensions – W x D x H	(2) mm	922 x 764 x 1750	922 x 764 x 1750	922 x 764 x 1750
Masses – Machine / Operating	(3) kg	221	221	253
<b>Short Case Axial Fan</b>				
Quantity x Motor Size	kW	1 x 1.4	Designed to 75Pa ESP 1 x 1.4	1 x 1.4
Diameter	mm	560	560	560
Maximum Fan Speed	RPM	1330	1330	1330
Maximum Airflow	m³/s	2.8	2.8	2.8
Dimensions – W x D x H	(2) mm	922 x 764 x 1753	922 x 764 x 1753	922 x 764 x 1753
Masses – Machine / Operating	(3) kg	235	235	267
REEV Selection		E²V - 24	E²V - 35	E²V - 35

(1) Evaporating temperature 7°C, Ambient 35°C with an AC fan matched with a REEV package  
All performance data is supplied in accordance with BS EN 14511-1:2013

(2) Condensing temperature 50°C, Ambient 5°C with an AC fan matched with a REEV package

(3) Overall dimensions for clearance

(4) Unit mass excludes a refrigerant charge

(5) For guidance only

Mechanical Data - Heat Pump Fixed Capacities Continued

		CUR092V29-1HP-0	CUR122V35-1HP-0	CUR122V40-1HP-0
<b>Capacity</b>				
Nominal Cooling Capacity	(1) kW	28.7	39.7	44.1
Nominal Heating Capacity	(2) kW	26.4	35.5	39.2
Capacity Steps		1	1	1
<b>Dimensions – W x D x H</b>	(3) mm	922 x 764 x 1736	1222 x 764 x 1736	1222 x 764 x 1736
<b>Masses – Machine / Operating</b>	(4) kg	262	316	324
<b>Construction</b>				
Material/Colour		Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Light Grey (RAL 7035)		
Heat Pump Evaporator / Condenser		Rifled Copper Tube/Louvered Hydrophilic Coated Aluminium Fins		
<b>Fan Motor</b>				
Motor Type		AC 1ph	Axial AC 3ph	AC 3ph
Quantity x Motor Size	kW	1 x 0.6	1 x 1.97	1 x 1.97
Diameter	mm	630	630	630
Maximum Fan Speed	RPM	895	1330	1330
Maximum Airflow	m³/s	2.0	3.5	3.5
<b>Compressor</b>				
Compressor Type			Fixed Capacity Scroll	
Quantity		1	1	1
Oil Charge Volume	l	3.3	3.3	3.6
Oil Type			Polyolester	
<b>Refrigeration</b>				
Refrigerant control and type		Single Circuit - 2 pipe configuration Optional REEV package		
Refrigerant type		R410A		
Holding Charge		Inert Gas		
Coil Volume	l	18.67	21.65	21.65
Refrigerant Charge	(5) kg	6.82	7.15	7.15
<b>Connections</b>				
Liquid (sweat)	in	1/2	1/2	5/8
Suction / Discharge (sweat)	in	7/8	7/8	1 1/8
<b>Optional Extras</b>				
<b>EC Fan</b>				
Quantity x Motor Size	kW	1 x 0.72	1 x 1.85	1 x 1.85
Diameter	mm	630	630	630
Maximum Fan Speed	RPM	1000	1230	1230
Maximum Airflow	m³/s	2.3	3.5	3.5
Dimensions – W x D x H	(2) mm	922 x 764 x 1750	1222 x 764 x 1750	1222 x 764 x 1750
Masses – Machine / Operating	(3) kg	254	308	316
<b>Short Case Axial Fan</b>				
Quantity x Motor Size	kW	1 x 1.4	Designed to 75Pa ESP	
Diameter	mm	560	N/A	N/A
Maximum Fan Speed	RPM	1330	N/A	N/A
Maximum Airflow	m³/s	2.8	N/A	N/A
Dimensions – W x D x H	(2) mm	922 x 764 x 1753	N/A	N/A
Masses – Machine / Operating	(3) kg	268	N/A	N/A
REEV Selection		E²V - 35	E²V - 45	E²V - 45

- (1) Evaporating temperature 7°C, Ambient 35°C with an AC fan matched with a REEV package  
All performance data is supplied in accordance with BS EN 14511-1:2013
- (2) Condensing temperature 50°C, Ambient 5°C with an AC fan matched with a REEV package
- (3) Overall dimensions for clearance
- (4) Unit mass excludes a refrigerant charge
- (5) For guidance only

## Mechanical Data - Heat Pump Modulating Capacities

		CUR092V16-VHP-0	CUR092V20-VHP-0	CUR092V25-VHP-0
<b>Capacity</b>				
Nominal Cooling Capacity	(1) kW	16.4	21.0	25.3
Nominal Heating Capacity	(2) kW	15.0	19.4	23.2
Capacity Steps		16-100%	16-100%	16-100%
<b>Dimensions – W x D x H</b>				
	(3) mm	922 x 764 x 1736	922 x 764 x 1736	922 x 764 x 1736
<b>Masses – Machine / Operating</b>				
	(4) kg	236	236	262
<b>Construction</b>				
Material/Colour		Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Light Grey (RAL 7035)		
<b>Heat Pump Evaporator / Condenser</b>				
Rifled Copper Tube/Louvered Hydrophilic Coated Aluminium Fins				
<b>Fan Motor</b>				
Motor Type		AC 1ph	Axial AC 1ph	AC 1ph
Quantity x Motor Size	kW	1 x 0.6	1 x 0.6	1 x 0.6
Diameter	mm	630	630	630
Maximum Fan Speed	RPM	860	860	860
Maximum Airflow	m³/s	2.0	2.0	2.0
<b>Compressor</b>				
Compressor Type		Modulating Capacity Scroll		
Quantity		1	1	1
Oil Charge Volume		1.9	1.9	3.2
Oil Type		Polyolester		
<b>Refrigeration</b>				
Single Circuit - 2 pipe configuration REEV package				
Refrigerant control and type		R410A		
Refrigerant type		Inert Gas		
Holding Charge		18.67		
Coil Volume	l	18.67	18.67	18.67
Refrigerant Charge	(5) kg	6.82	6.82	6.82
<b>Connections</b>				
Liquid (sweat)	in	3/8	3/8	1/2
Suction / Discharge (sweat)	in	1/2	5/8	7/8
<b>Optional Extras</b>				
<b>EC Fan</b>				
Quantity x Motor Size	kW	1 x 0.72	1 x 0.72	1 x 0.72
Diameter	mm	630	630	630
Maximum Fan Speed	RPM	1000	1000	1000
Maximum Airflow	m³/s	2.3	2.3	2.3
Dimensions – W x D x H	(2) mm	922 x 764 x 1750	922 x 764 x 1750	922 x 764 x 1750
Masses – Machine / Operating	(3) kg	228	228	254
<b>Short Case Axial Fan</b>				
Designed to 75Pa ESP				
Quantity x Motor Size	kW	1 x 1.4	1 x 1.4	1 x 1.4
Diameter	mm	560	560	560
Maximum Fan Speed	RPM	1330	1330	1330
Maximum Airflow	m³/s	2.8	2.8	2.8
Dimensions – W x D x H	(2) mm	922 x 764 x 1753	922 x 764 x 1753	922 x 764 x 1753
Masses – Machine / Operating	(3) kg	242	242	268
<b>REEV Selection</b>				
		E²V - 24	E²V - 35	E²V - 35

- (1) Evaporating temperature 7°C, Ambient 35°C with an AC fan matched with a REEV package  
All performance data is supplied in accordance with BS EN 14511-1:2013  
(2) Condensing temperature 50°C, Ambient 5°C with an AC fan matched with a REEV package  
(3) Overall dimensions for clearance  
(4) Unit mass excludes a refrigerant charge  
(5) For guidance only

Mechanical Data - Heat Pump Variable Capacities Continued

		CUR092V29-VHP-0	CUR122V35-VHP-0	CUR122V40-VHP-0
<b>Capacity</b>				
Nominal Cooling Capacity	(1) kW	28.4	38.1	43.5
Nominal Heating Capacity	(2) kW	26.5	34.4	40.0
Capacity Steps		16-100%	16-100%	16-100%
<b>Dimensions – W x D x H</b>				
	(3) mm	922 x 764 x 1736	1222 x 764 x 1736	1222 x 764 x 1736
<b>Masses – Machine / Operating</b>				
	(4) kg	264	317	323
<b>Construction</b>				
Material/Colour		Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint – Light Grey (RAL 7035)		
<b>Heat Pump Evaporator / Condenser</b>				
Rifled Copper Tube/Louvered Hydrophilic Coated Aluminium Fins				
<b>Fan Motor</b>				
Motor Type		AC 1ph	Axial AC 3ph	AC 3ph
Quantity x Motor Size	kW	1 x 0.6	1 x 1.97	1 x 1.97
Diameter	mm	630	630	630
Maximum Fan Speed	RPM	860	1330	1330
Maximum Airflow	m³/s	2.0	3.5	3.5
<b>Compressor</b>				
Compressor Type		Modulating Capacity Scroll		
Quantity		1	1	1
Oil Charge Volume	l	3.2	3.2	3.2
Oil Type		Polyolester		
<b>Refrigeration</b>				
Refrigerant control and type		Single Circuit - 2 pipe configuration REEV package		
Refrigerant type		R410A		
Holding Charge		Inert Gas		
Coil Volume	l	18.67	21.65	21.65
Refrigerant Charge	(5) kg	6.82	7.15	7.15
<b>Connections</b>				
Liquid (sweat)	in	1/2	1/2	5/8
Suction / Discharge (sweat)	in	7/8	7/8	1 1/8
<b>EC Fan</b>				
Quantity x Motor Size	kW	1 x 0.72	1 x 1.85	1 x 1.85
Diameter	mm	630	630	630
Maximum Fan Speed	RPM	1000	1230	1230
Maximum Airflow	m³/s	2.3	3.5	3.5
Dimensions – W x D x H	(2) mm	922 x 764 x 1750	1222 x 764 x 1750	1222 x 764 x 1750
Masses – Machine / Operating	(3) kg	256	309	315
<b>Short Case Axial Fan</b>				
Quantity x Motor Size	kW	1 x 1.4	Designed to 75Pa ESP	
Diameter	mm	560	N/A	N/A
Maximum Fan Speed	RPM	1330	N/A	N/A
Maximum Airflow	m³/s	2.8	N/A	N/A
Dimensions – W x D x H	(2) mm	922 x 764 x 1753	N/A	N/A
Masses – Machine / Operating	(3) kg	270	N/A	N/A
REEV Selection		E²V - 35	E²V - 45	E²V - 45

- (1) Evaporating temperature 7°C, Ambient 35°C with an AC fan matched with a REEV package  
All performance data is supplied in accordance with BS EN 14511-1:2013
- (2) Condensing temperature 50°C, Ambient 5°C with an AC fan matched with a REEV package
- (3) Overall dimensions for clearance
- (4) Unit mass excludes a refrigerant charge
- (5) For guidance only



## Electrical Data – Heat Pump

Unit Data (1)		CUR092V16-1HP-0	CUR092V20-1HP-0	CUR092V25-1HP-0
Nominal Run Amps	A	11.5	16.9	19.4
Maximum Start Amps	A	73.7	103.7	145.7
Recommended Mains Fuse Size	A	20	32	32
Max Mains Incoming Cable Size	mm <sup>2</sup>	35	35	35
Mains Supply	V		400V / 3PH + N / 50Hz	
Control circuit	VAC	24	24	24
<b>Condenser Fan - Motor</b>				
Motor Type		AC	AC	AC
Quantity x Motor Size (2)	kW	1 x 0.6	1 x 0.6	1 x 0.6
Full Load Amps	A	2.7	2.7	2.7
Locked Rotor Amps	A	9.2	9.2	9.2
<b>Compressor</b>				
Motor Size	kW	4.6	6.4	8.5
Nominal Run Amps	A	7.9	13.3	15.8
Locked Rotor Amps	A	70	100	142
Type of Start			Direct On Line	
<b>OPTIONAL EXTRAS</b>				
<b>Electronic Soft-start</b>				
Nominal Run Amps	A	11.5	16.9	19.4
Maximum Start Amps	A	45.7	63.7	88.9
Recommended Mains Fuse Size	A	20	32	32
<b>Power Factor Correction</b>				
Nominal Run Amps	A	11.2	16.5	18.6
Maximum Start Amps	A	73.7	103.7	145.7
Recommended Mains Fuse Size	A	20	32	32
Compressor Nominal Run Amps	A	7.5	12.9	15
<b>First upgrade EC Motor</b>				
Quantity x Motor Size	kW	1~	1~	1~
Full Load Amps	A	1 x 0.72	1 x 0.72	1 x 0.72
Locked Rotor Amps	A	3.3	3.3	3.3
	A	N/A	N/A	N/A
<b>Second upgrade SCAF</b>				
Quantity x Motor Size	kW	1~	1~	1~
Full Load Amps	A	1 x 1.4	1 x 1.4	1 x 1.4
Locked Rotor Amps	A	6	6	6
	A	18	18	18

(1) Based upon ARI conditions, Evaporating at 7°C, Condensing at 54.4°C.

Electrical Data – Heat Pump Continued

Unit Data		CUR092V29-1HP-0	CUR122V35-1HP-0	CUR122V40-1HP-0
Nominal Run Amps	(1) A	20.6	25.1	29
Maximum Start Amps	A	145.7	162.4	201.4
Recommended Mains Fuse Size	A	32	40	50
Max Mains Incoming Cable Size	mm <sup>2</sup>	35	35	35
Mains Supply	V		400V / 3PH + N / 50Hz	
Control circuit	VAC	24	24	24
<b>Condenser Fan - Motor</b>				
Motor Type		AC	AC	AC
Quantity x Motor Size	(2) kW	1~	3~	3~
Full Load Amps	A	1 x 0.6	1 x 1.97	1 x 1.97
Locked Rotor Amps	A	2.7	3.4	3.4
		9.2	11.9	11.9
<b>Compressor</b>				
Motor Size	kW	9.5	12.2	13.8
Nominal Run Amps	A	17	20.7	24.6
Locked Rotor Amps	A	142	158	197
Type of Start			Direct On Line	
<b>OPTIONAL EXTRAS</b>				
<b>Electronic Soft-start</b>				
Nominal Run Amps	A	20.6	25.1	29
Maximum Start Amps	A	88.9	99.2	122.6
Recommended Mains Fuse Size	A	32	40	50
<b>Power Factor Correction</b>				
Nominal Run Amps	A	19.8	23.8	27.5
Maximum Start Amps	A	145.7	162.4	201.4
Recommended Mains Fuse Size	A	32	40	50
Compressor Nominal Run Amps	A	16.2	19.4	23.1
<b>First upgrade EC Motor</b>				
Quantity x Motor Size	kW	1~	3~	3~
Full Load Amps	A	1 x 0.72	1 x 1.85	1 x 1.85
Locked Rotor Amps	A	3.3	2.9	2.9
		N/A	N/A	N/A
<b>Second upgrade SCAF</b>				
Quantity x Motor Size	kW	1~	3~	3~
Full Load Amps	A	1 x 1.4	1 x 1.94	1 x 1.94
Locked Rotor Amps	A	6	3.4	3.4
		18	11.9	11.9

(1) Based upon ARI conditions, Evaporating at 7°C, Condensing at 54.4°C.

## Electrical Data – Heat Pump Continued

Unit Data (1)		CUR092V16-VHP-0	CUR092V20-VHP-0	CUR092V25-VHP-0
Nominal Run Amps	A	12.2	15.7	18.2
Maximum Start Amps	A	67.7	104.7	114.7
Recommended Mains Fuse Size	A	20	25	32
Max Mains Incoming Cable Size	mm <sup>2</sup>	35	35	35
Mains Supply	V		400V / 3PH + N / 50Hz	
Control circuit	VAC	24	24	24
<b>Condenser Fan - Motor</b>				
Motor Type		AC	AC	AC
Quantity x Motor Size (2)	kW	1 x 0.6	1 x 0.6	1 x 0.6
Full Load Amps	A	2.7	2.7	2.7
Locked Rotor Amps	A	9.2	9.2	9.2
<b>Compressor</b>				
Motor Size	kW	5	6.8	8
Nominal Run Amps	A	8.6	12.1	14.5
Locked Rotor Amps	A	64	101	111
Type of Start			Direct On Line	
<b>OPTIONAL EXTRAS</b>				
<b>Electronic Soft-start</b>				
Nominal Run Amps	A	12.2	15.7	18.2
Maximum Start Amps	A	42.1	64.3	70.3
Recommended Mains Fuse Size	A	20	25	32
<b>Power Factor Correction</b>				
Nominal Run Amps	A	N/A	N/A	N/A
Maximum Start Amps	A	N/A	N/A	N/A
Recommended Mains Fuse Size	A	N/A	N/A	N/A
Compressor Nominal Run Amps	A	N/A	N/A	N/A
<b>First upgrade EC Motor</b>				
Quantity x Motor Size	kW	1~	1~	1~
Full Load Amps	A	1 x 0.72	1 x 0.72	1 x 0.72
Locked Rotor Amps	A	3.3	3.3	3.3
	A	N/A	N/A	N/A
<b>Second upgrade SCAF</b>				
Quantity x Motor Size	kW	1~	1~	1~
Full Load Amps	A	1 x 1.4	1 x 1.4	1 x 1.4
Locked Rotor Amps	A	6	6	6
	A	18	18	18

(1) Based upon ARI conditions, Evaporating at 7°C, Condensing at 54.4°C.

Electrical Data – Heat Pump Continued

Unit Data		CUR092V29-VHP-0	CUR122V35-VHP-0	CUR122V40-VHP-0
(1)				
Nominal Run Amps	A	20.4	25.5	30.8
Maximum Start Amps	A	121.7	144.4	177.4
Recommended Mains Fuse Size	A	32	40	50
Max Mains Incoming Cable Size	mm <sup>2</sup>	35	35	35
Mains Supply	V		400V / 3PH + N / 50Hz	
Control circuit	VAC	24	24	24
<b>Condenser Fan - Motor</b>				
Motor Type		AC	AC	AC
Quantity x Motor Size		1~	3~	3~
(2)	kW	1 x 0.6	1 x 1.97	1 x 1.97
Full Load Amps	A	2.7	3.4	3.4
Locked Rotor Amps	A	9.2	11.9	11.9
<b>Compressor</b>				
Motor Size	kW	9.4	11.8	13.9
Nominal Run Amps	A	16.8	21.1	26.4
Locked Rotor Amps	A	118	140	173
Type of Start			Direct On Line	
<b>OPTIONAL EXTRAS</b>				
<b>Electronic Soft-start</b>				
Nominal Run Amps	A	20.4	25.5	30.8
Maximum Start Amps	A	74.5	88.4	108.2
Recommended Mains Fuse Size	A	32	40	50
<b>Power Factor Correction</b>				
Nominal Run Amps	A	N/A	N/A	N/A
Maximum Start Amps	A	N/A	N/A	N/A
Recommended Mains Fuse Size	A	N/A	N/A	N/A
Compressor Nominal Run Amps	A	N/A	N/A	N/A
<b>First upgrade EC Motor</b>				
Quantity x Motor Size		1~	3~	3~
	kW	1 x 0.72	1 x 1.85	1 x 1.85
Full Load Amps	A	3.3	2.9	2.9
Locked Rotor Amps	A	N/A	N/A	N/A
<b>Second upgrade SCAF</b>				
Quantity x Motor Size		1~	3~	3~
	kW	1 x 1.4	1 x 1.94	1 x 1.94
Full Load Amps	A	6	3.4	3.4
Locked Rotor Amps	A	18	11.9	11.9

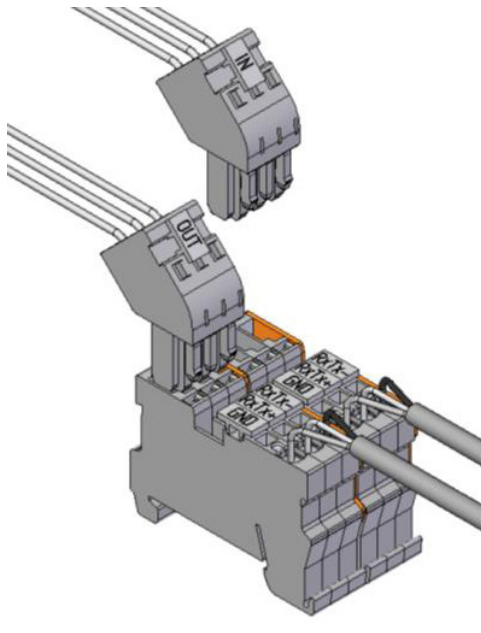
(1) Based upon ARI conditions, Evaporating at 7°C, Condensing at 54.4°C.

## Interconnecting Wiring – Heat Pump

BluCube	L1	○	←		Mains incoming supply 400V/3PH/50Hz
	L2	○	←		
	L3	○	←		
	N	○	←		
	PE	○	←		
	502	○	→		24 Volts AC
	551	○	←		Cooling Signal
	552	○	←		Heating Signal
	500	○	→		0 Volts
	845	○	←	Variable Capacity Compressor Only	0-10Volts Compressor demand
	500	○	→		0 Volts
	567	○	→		Defrost Status Normally Open
	568	○	→		Defrost Status Normally Closed
	569	○	→		Common
	561	○	→	NO	Critical alarm Normally Open
562	○	→	Common	GND	
563	○	→	NC	Critical alarm Normally Closed	

	Rx-Tx-	○	←	Use Awg20/22 twisted pair (with overall shield) cable, Belden ref. 8762 (Airedale ref: 6110316), or equivalent, for <b>AIRELan</b> network	<b>AIRELan</b> Network Connections (Inward connection)
	Rx+Tx+	○	←		
	GND	○	←		
	Rx-Tx-	○	→	Use Awg20/22 twisted pair (with overall shield) cable, Belden ref. 8762 (Airedale ref: 6110316), or equivalent, for <b>AIRELan</b> network	<b>AIRELan</b> Network Connections (Outward connection)
	Rx+Tx+	○	→		
	GND	○	→		

## pLAN Termination



Noise Data Heat Pump

	Sound Measurement	Frequency (Hz)								
		dBa	63	125	250	500	1000	2000	4000	8000
CUR092V16-1HP-0	Power dB	86.4	81.2	84.9	79.5	84.6	83.9	73.6	63.4	57.1
	Pressure @ 1m	78.4	73.2	76.9	71.5	76.6	75.9	65.6	55.4	49.1
	Pressure @ 10m	58.4	53.2	56.9	51.5	56.6	55.9	45.6	35.4	29.1
CUR092V20-1HP-0	Power dB	86.6	81.5	84.9	79.5	84.6	84.1	74.2	64.4	57.9
	Pressure @ 1m	78.6	73.5	76.9	71.5	76.6	76.1	66.2	56.4	49.9
	Pressure @ 10m	58.6	53.5	56.9	51.5	56.6	56.1	46.2	36.4	29.9
CUR092V25-1HP-0	Power dB	86.6	81.0	85.0	79.5	84.6	84.1	73.9	64.4	58.3
	Pressure @ 1m	78.6	73.0	77.0	71.5	76.6	76.1	65.9	56.4	50.3
	Pressure @ 10m	58.6	53.0	57.0	51.5	56.6	56.1	45.9	36.4	30.3
CUR092V29-1HP-0	Power dB	86.6	81.5	84.9	79.5	84.6	84.1	74.2	64.4	57.9
	Pressure @ 1m	78.6	73.5	76.9	71.5	76.6	76.1	66.2	56.4	49.9
	Pressure @ 10m	58.6	53.5	56.9	51.5	56.6	56.1	46.2	36.4	29.9
CUR0122V35-1HP-0	Power dB	86.9	96.5	95.4	87.2	85.0	80.5	75.2	68.3	68.2
	Pressure @ 1m	78.9	88.5	87.4	79.2	77.0	72.5	67.2	60.3	60.2
	Pressure @ 10m	58.9	68.5	67.4	59.2	57.0	52.5	47.2	40.3	40.2
CUR0122V40-1HP-0	Power dB	87.3	96.5	95.4	87.3	85.0	81.4	76.3	69.5	68.5
	Pressure @ 1m	79.3	88.5	87.4	79.3	77.0	73.4	68.3	61.5	60.5
	Pressure @ 10m	59.3	68.5	67.4	59.3	57.0	53.4	48.3	41.5	40.5
CUR092V16-VHP-0	Power dB	86.7	80.9	84.9	79.6	84.8	84.2	73.4	64.4	60.8
	Pressure @ 1m	78.7	72.9	76.9	71.6	76.8	76.2	65.4	56.4	52.8
	Pressure @ 10m	58.7	52.9	56.9	51.6	56.8	56.2	45.4	36.4	32.8
CUR092V20-VHP-0	Power dB	86.7	80.9	84.9	79.6	84.9	84.2	73.7	66.1	59.8
	Pressure @ 1m	78.7	72.9	76.9	71.6	76.9	76.2	65.7	58.1	51.8
	Pressure @ 10m	58.7	52.9	56.9	51.6	56.9	56.2	45.7	38.1	31.8
CUR092V25-VHP-0	Power dB	87.0	80.9	84.9	79.8	85.4	84.1	74.9	67.1	60.2
	Pressure @ 1m	79.0	72.9	76.9	71.8	77.4	76.1	66.9	59.1	52.2
	Pressure @ 10m	59.0	52.9	56.9	51.8	57.4	56.1	46.9	39.1	32.2
CUR092V29-VHP-0	Power dB	87.0	80.9	84.9	79.7	85.5	84.3	74.6	66.4	59.9
	Pressure @ 1m	79.0	72.9	76.9	71.7	77.5	76.3	66.6	58.4	51.9
	Pressure @ 10m	59.0	52.9	56.9	51.7	57.5	56.3	46.6	38.4	31.9
CUR122V35-VHP-0	Power dB	87.5	96.4	95.4	87.3	85.8	81.2	76.5	70.5	68.8
	Pressure @ 1m	79.5	88.4	87.4	79.3	77.8	73.2	68.5	62.5	60.8
	Pressure @ 10m	59.5	68.4	67.4	59.3	57.8	53.2	48.5	42.5	40.8
CUR122V40-VHP-0	Power dB	87.6	96.4	95.4	87.3	85.7	81.4	77.2	70.9	69.0
	Pressure @ 1m	79.6	88.4	87.4	79.3	77.7	73.4	69.2	62.9	61.0
	Pressure @ 10m	59.6	68.4	67.4	59.3	57.7	53.4	49.2	42.9	41.0

Notes:

- 1 Sound Power Reference Power =  $10^{-12}$  Watts.
- 2 Sound Pressure Reference Pressure =  $2 \times 10^{-5}$  N/m<sup>2</sup>.
- 3 dBA is the overall noise level, measured on the A scale.
- 4 Sound Pressure data is only valid in free field conditions, where a reflective surface, such as a roof is found.





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