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Airedale
APPLIED THERMAL INNOVATION

Ultima Compact

Air Cooled Liquid Chiller

30kW - 450kW

TECHNICAL MANUAL

BSI UKAS ENVIRONMENTAL MANAGEMENT 003

ISO 14001
EMS52086

BSI UKAS QUALITY MANAGEMENT 003

ISO 9001
FM00542

About Airedale Products & Customer Services

WARRANTY, COMMISSIONING & MAINTENANCE

The equipment carries Airedale's standard **Parts** (non consumable) **& Labour** warranty for a period of **12 months** from the date of commissioning or **18 months** from the date of despatch, which ever is the sooner. (Excludes the cost of any specialist access or lifting equipment.) Commissioning will be carried out by Airedale International Air Conditioning Ltd or an approved Airedale commissioning company.

To further protect your investment in Airedale products, we have introduced Airedale Service, who 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*** or telephone:

UK Sales Enquiries	+ 44 (0) 113 238 7789	***uk.sales@airedale.com***
International Enquiries	+ 44 (0) 113 239 1000	***enquiries@airedale.com***
Spares Hot Line	+ 44 (0) 113 238 7878	***spares@airedale.com***
Airedale Service	+ 44 (0) 113 239 1000	***service@airedale.com***
Technical Support	+ 44 (0) 113 239 1000	***tech.support@airedale.com***
Training Enquiries	+ 44 (0) 113 239 1000	***marketing@airedale.com***

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

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The development of Airedale products and services is continuous and the information in this document may not be up to date. It is important to check the current position with AIAC Ltd at the address stated. This document is not part of a contract or licence unless expressly agreed.

Contents

General Description

UNIT IDENTIFICATION

AIR COOLED LIQUID CHILLER	
UCC	**Ultima Compact Chiller - Cooling Only**
30 - 450	Model Size (Expressed as Nominal Cooling in kW)
SQ-	Single Circuit - **Q**uiet Chiller (Models 30-80 (Except 75) Only)
SSQ-	Single Circuit - **S**uper **Q**uiet Chiller (Models 30-80 (Except 75) Only)
D-	Double Circuit - Standard Chiller
DQ-	Double Circuit - **Q**uiet Chiller
DSQ-	Double Circuit - **S**uper Quiet Chiller
2-16	Number of Fans
/1 or /2	Single or Double Row of Fans
Example	**UCC250DQ-8/2**

INTRODUCTION

The Airedale range of Ultima Compact air cooled liquid chillers covers the nominal capacity range 30kW to 450kW in 23 model sizes. The range is available with many optional variations including **Q**uiet and **S**uper **Q**uiet sound level variants.

Attention has been placed on maximising the unit's performance while keeping the sound and vibration levels and footprint to an absolute minimum.

CE DIRECTIVE CE

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

Electromagnetic Compatibility Directive (EMC)	**89/336/EEC**
Low Voltage Directive (LVD)	**73/23/EEC**
Machinery Directive (MD)	**89/392/EEC in the version 98/37/EC**
Pressure Equipment Directive (PED)	**97/23/EC**

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

REFRIGERANTS

The range has been designed and optimised for operation with the ozone benign R407C refrigerant.

CONSTRUCTION

The base is fabricated from galvanised steel to ensure a tough, durable, weatherproof construction.

The superstructure is manufactured from galvanised sheet steel coated with epoxy baked powder paint to provide a durable and weatherproof finish. Standard unit colour is Light Grey (RAL 7035).

Compressors and evaporator are mounted on a rigid galvanised heavy-duty sub frame. Fully weatherproofed electrical panels are situated at one end of the unit. Access to the compressors is via end panels adjacent to the electrical control panel.

Other features include:

- Dedicated Compressor Enclosure
- Condenser Fan Discharge Plenum

FEATURES	UCC30, UCC40, UCC50, UCC60, UCC70 & UCC80	UCC75, UCC100, UCC125 & UCC150	UCC110, UCC130, UCC160 & UCC180	UCC200, UCC225 & UCC250	UCC275, UCC300, UCC330, UCC360, UCC400 & UCC450
Construction					
4 x eye bolts to BS4278 or Integrated lugs/Mounting feet	Integrated lugs	Lifting Eye Bolts	Lifting Eye Bolts	Lifting Eye Bolts	Lifting Eye Bolts
Acoustically lined compressor enclosure	SSQ/DSQ Models	DSQ Models	DSQ Models	DSQ Models	DSQ Models
Refrigeration					
Full Operating Charge of R407C	Std	Std	Std	Std	Std
Number of Independent Refrigeration Circuits	1 or 2	2	2	2	2
Scroll Compressor Arrangement	1 x Tandem Set *or* 2 x Single	2 x Tandem Sets	2 x Tandem Sets	2 x Tandem Sets	2 x Tandem Sets (UCC275-300) 2 x Trio Sets (UCC330-450)
Plate Evaporator	Std	Std	Std	Std	Std
Enhanced Refrigeration Condenser Coils	SSQ/DSQ Models	DSQ Models	DSQ Models	DSQ Models	DSQ Models
Sickle Bladed Fans	-	Long Bellmouth	Long Bellmouth	Long Bellmouth	Long Bellmouth
Low speed condenser fan	SQ/DQ Models	DQ Models	DQ Models	DQ Models	DQ Models
Extra Low speed condenser fan	SSQ/DSQ Models	DSQ Models	DSQ Models	DSQ Models	DSQ Models
Thermostatic Expansion valve & Liquid line solenoid valve	Std	Std	Std	Std	-
Electronic Expansion Valve	Opt (SQ/DQ Models) Opt (SSQ/DSQ Models)	DQ/DSQ Models Opt (D Models)	DQ/DSQ Models Opt (D Models)	DQ/DSQ Models Opt (D Models)	Std
Water Inlet/Outlet	Threaded BSP female	Flanged PN16	Flanged PN16	Flanged PN16	Flanged PN16
Liquid line sight glass	Std	Std	Std	Std	Std
Liquid and Discharge line ball valve	Opt	Std	Std	Std	Std
Large capacity filter drier	Fixed Cores	Replaceable Cores	Replaceable Cores	Replaceable Cores	Replaceable Cores
Manual reset HP/LP Switch (LP via microprocessor)	Std	Std	Std	Std	Std
Suction and liquid pressure transducers	Std	Std	Std	Std	Std
Compressor minimum differential pressure protection	Std	Std	Std	Std	Std
Pressure relief valve, integral rupture disc & gauge	Std	Std	Std	Std	Std
Electrical					
AireTronix Microprocessor Controller	Std	Std	Std	Std	Std
Modulating Head Pressure Control	Std	Std	Std	Std	Std
Emergency stop	-	Std	Std	Std	Std
Individual door isolated mains power compartments for each refrigeration CCT, fans & pump option	-	-	Std	Std	Std
Dedicated bus-bar chamber for incoming 3-phase & earth mains power supply (no neutral required)	-	-	Std	Std	Std
Evaporator Pad Heater	Std	Std	Std	Std	Std
Trace Heating to Internal Pipework	Std	Std	Std	Std	Std
Connections for External Trace Heating	Std	Std	Std	Std	Std
Phase Rotation Protection	Opt	Opt	Opt	Std	Opt
Power Factor Correction	-	Opt	Opt	Opt	Opt

General Description

STANDARD FEATURES

Evaporator

Stainless steel high efficiency brazed plate heat exchanger(s) will allow optimum heat transfer between media. Each heat exchanger is insulated with closed cell polyurethane foam to Class 1 fire rating.

A pad heater is fitted to the single evaporator and will protect against freeze up in ambient temperatures as low as -20°C.

Internal water pipework is trace heated.

Connections for External Trace Heating (240V/500W available).

Condenser

Large surface area coil(s) ideally positioned to optimise airflow and heat transfer, manufactured from refrigeration quality copper tubes with mechanically bonded aluminium fins.

Condenser Fan

Axial fan assemblies with fingerproof 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.

Electrical supply dependent upon model size, refer to ***Electrical Data***.

Head Pressure Control

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.

Head pressure can be set, monitored and values viewed at the microprocessor display.

Compressor

Scroll compressors comprising:

- Internal motor protection
- Internal pressure relief
- Non return valve
- External discharge temperature protection
- Oil sight glass
- Sump heater

Each Tandem / Trio set has an oil equalisation line.

The compressors are mounted to the rigid galvanised heavy duty sub-frame with the use of vibration reducing isolation.

Controls

As standard, the AIRETronix microprocessor controller can provide 2, 4 or 6 stages of capacity control, dependent upon model type.

Optionally, the controller is designed to provide capabilities for;

- Building Management Systems
- Networking
- Sequencing (Master/Slave and Run/Standby)

to meet all your system requirements, please confirm at time of order.

For further details, refer to ***Controls***.

Electrical

Dedicated weatherproof electrical power and controls panels are situated at the end of the unit and contain:

- Separate, fully accessible, controls compartment, allowing adjustment of control set points whilst the unit is operational
- Circuit breakers for protection of all major unit components
- Separate, permanent supply for controls/trace heating, 230V/50Hz/1ph

The electrical power and control panel is wired to the latest European standards and codes of practice.

UCC75, 100-450

Mains supply is 3 phase and a neutral is not required. Refer to ***Interconnecting Wiring***.

General Description

OPTIONAL EXTRAS - ENERGY SAVING

Power Factor Correction

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.

Electronic Expansion Valves

Electronic expansion valves differ to the normal thermostatic expansion valves in their ability to maintain control of the suction superheat at reduced head pressures. This can lead to significant energy savings particularly at minimum loading and low ambient temperatures. Factory fitted, for full details refer to the ***Design Features & Information*** - ***Electronic Expansion Valves*** section.

OPTIONAL EXTRAS - GENERAL - ALL MODELS

Epoxy Coated Condenser Coils

In atmospheres where high corrosion is anticipated epoxy coated aluminium finned coils can be fitted.

Coil Guards

Guards can be fitted to each of the outer coils to protect against damage.

Anti Vibration Mounts (Spring Type)

Spring vibration isolators can be supplied loose for on site fitting to the base frame of each chiller unit.

The isolators are suitable for fitting to a concrete slab or structural steelwork providing the surface is level and of sufficient strength where a high level of vibration elimination is required.

For further details, please refer to ***Anti Vibration Mounting*** section.

Anti Vibration Mounts (Pad Type)

Pad vibration isolators can be supplied loose for on site fitting to the base frame of each chiller unit.

The isolators are suitable for fitting to structural steelwork providing the surface is level and of sufficient strength where a moderate degree of vibration elimination is required.

For further details, please refer to ***Anti Vibration Mounting*** section.

Sequence Control

For the efficient temperature and capacity operation of multiple units on a single site, the sequence controller will permit interlinked operation of the complete system thereby providing optimum temperature control and minimum power consumption.

Included within this package is a site visit by Airedale Control Specialists to set up multiple unit sequence control.

BMS Interface Card

Enables AIRETronix Controlled chillers to be interfaced with most BMS, factory fitted, please contact Airedale.

Dual Pressure Relief Valve

A 3-way dual shut-off valve that incorporates 2 relief valves and rupture disc assemblies per circuit. The valve allows the maintenance of individual pressure relief valves and rupture discs without the need for refrigerant evacuation.

Electronic Soft Start

The electronic soft start enables the chiller 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.

Leak Detection Kit

A factory calibrated and fitted leak detection kit, will raise an alarm when refrigerant gas is detected.

Condenser Fan Discharge Air Plenum Extension

Constructed from galvanised sheet steel coated with epoxy baked powder paint, this plenum directs discharge air vertically, thus limiting air re-circulation and provides a degree of acoustic reduction in the horizontal plane, factory fitted. For details please contact Airedale.

Standard unit colour is Light Grey (RAL 7035).

For further details refer to ***Dimensions***.

Flow Switch

The factory fitted flow switch will protect the chiller against low water flow.

General Description

OPTIONAL EXTRAS - GENERAL - ALL MODELS

Water Filter

A 20 mesh water filter can be factory fitted on the inlet water pipework to protect the evaporator from clogging by sediment.

Differential Pressure Switch

Facilitates low flow limiting and pressure drop monitoring via the microprocessor.

Remote Setpoint Adjust

Allows the chilled water setpoint to be adjusted via an external 0-10V signal.

Flushing Bypass Kit (Standard)

Comprises:

- Shut off valves

Factory fitted to protect the evaporator from clogging by sediment and to enable the water system to be purged before running.

Flushing Bypass Kit (Regulating)

Comprises:

- Shut off valves
- Double regulating valve

Factory fitted to protect the evaporator from clogging by sediment and to enable the water system to be purged before running.

The regulating Flushing Bypass Kit additionally allows the chiller to run with a lower ΔT (typically for chilled beam and/or high water temperature applications).

Internal Pumps Packages

Integral pumps may be fitted, **standard or larger sizes** selected to suit installed system requirements. The following configurations are available:

Single Head Pump	Factory fitted with electrical switchgear and isolating valve.
Twin Head Pump	Factory fitted with common inlet and outlet connections and twin motor and pump impellers. Featuring automatic changeover via a paddle switch, electrical switchgear and isolating valve.
Single Head Run/Standby Pumps	Factory fitted Dual pumps with shut off valves on the inlet and outlet and non-return valves on the outlet in automatic changeover configuration. Supplied with electrical switchgear and isolating valve. The microprocessor can be programmed to automatically rotate usage of the run/standby pumps to a set period.

For further details, refer to ***Optional Flow Schemes***.

Mini Pressurisation Package

Integral package automatically monitors and adjusts operation of a separate make-up pump to ensure a constant minimum system water pressure (typically 2.5 Barg), factory fitted.

Buffer Tank & Expansion Vessel

An integral water buffer vessel and expansion vessel can be factory fitted on systems where low water volume may be a problem.

All vessels and pipework are trace heated.

Commissioning Station & DRV

A commissioning valve set which includes a double regulating valve and a metering station can be factory fitted.

Alternative Refrigerant

For applications outside the EU, units can be supplied for use with R22, please specify at time of order.

Commissioning

Airedale Service provides a full commissioning service carried out by professionally trained, industry experienced engineers. For a competitive quotation, please contact Airedale Customer Services.

Chillerguard®

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

Design Features & Information

ELECTRONIC EXPANSION VALVES

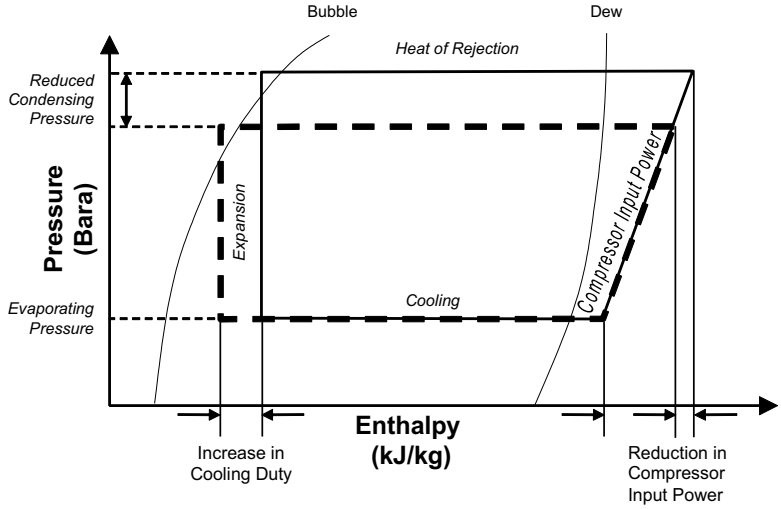
Thermostatic Expansion Valves

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

Electronic Expansion Valves

Using an EEV allows for good refrigeration control with the chiller operating at part load and lower ambient conditions with a reduced condensing pressure. By fitting an EEV and adjusting the head pressure control setting, **reduction in energy running values of up to 27% can be achieved**. The Mollier diagram shown below helps to illustrate how this increase in efficiency is achieved.

EEV's differ to normal thermostatic expansion valves in their ability to maintain control of refrigerant flow and the suction superheat at reduced head pressures. The turn-down rate of a typical EEV is superior to that of it's thermostatic equivalent, such that a reduced optimum condensing pressure can be maintained at low compressor load. However low the load is on the compressor, from zero to 100%, there will not be a problem with turn down, even below 30% rated capacity.



Key

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

Cooling cycle @ 22°C ambient, demonstrating a typical EEV condensing temperature taking full advantage of lower ambient air temperatures (below 30°C).

Design Features & Information

MINIMUM SYSTEM WATER VOLUME CALCULATIONS

METHOD 1

Where the system permanent heat load is known:

Vm = Water Flow Rate (litres/minute) x Minimum Compressor Run Time (mins) x Chiller Loading Factor

Where Vm is the minimum water volume in litres
Minimum Compressor Run Time is 2 minutes

$$\text{Chiller Loading Factor} = \frac{\text{Minimum Turndown (kW) x 1.2}}{\text{Permanent Heat Load}}$$

The Chiller Loading Factor limits:
Max 1.00
Min 0.25

Example 250 kW Chiller, 7/12°C Water, Model UCC250DQ-8/2 with a permanent load of 95 kW

$$Vm = \frac{250 \times 60}{4.19 \times 5} \times 2 \times \frac{60 \times 1.2}{95} = 1085 \text{ Litres}$$

METHOD 2

Where the system permanent heat load is unknown:

Vm = Water Flow Rate (litres/hour) x Minimum Turndown Ratio x 1.2 / Maximum Compressor Starts per Hour

Where Minimum Turndown Ratio = Minimum Stage Capacity (kW) / Chiller Full Capacity (kW)

Example 250 kW Chiller, 7/12°C Water, Model UCC250DQ-8/2 permanent load unknown

$$Vm = \frac{250 \times 3600}{4.19 \times 5} \times \left(\frac{60}{250} \times 1.2 \right) \times \frac{1}{12} = 1031 \text{ Litres}$$

Method 1 is always preferred.

Design Features & Information

CONTROLS

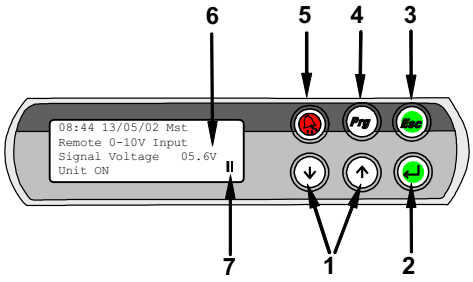
General Description

The AIRETronix microprocessor controller offers powerful analogue and digital control to meet a wide range of monitoring and control features including a real time clock and Industry standard communication port and network connections.

The controller's inbuilt display is used for viewing the unit operating status and making adjustments to control parameters by allowing the operator access to a series of display pages.

Also featured are a visual alarm and the facility to adjust and display control settings by local operator for information and control.

Display/Keypad



1 **UP/DOWN KEYS**
To change **Adjustable Fields & Scrolls** up & down available **Menus**

2 **ENTER**
Selects Menus & Moves Cursor to **Adjustable Fields** Green LED

3 **ESC**
Green LED lit when **Operating Page** displayed, Returns to **Operating Page** Screen when pressed

4 **PROGRAM**
Opens the Available **Menus**

5 **ALARM**
Red LED Indicates Alarm Present

6 **4 ROW LCD DISPLAY**

7 **CURSOR (FLASHING)**: Top Left Position = **"HOME"** Indicates adjustable Fields

FEATURES

Unit Remote ON/OFF

Disables/Enables the chiller remotely.

Compressor Anti Cycle Control

Automatic via the Microprocessor.

Compressor Load Limit

Limits the condensing pressure by unloading above 24Barg.

Limits the evaporating pressure by unloading at the minimum pressure setpoint, which is, adjustable depending on system glycol content.

Pump(s) Remote ON/OFF

Disables/Enables the pump(s) remotely.

Remote Setback Temperature Setpoint Switch

A setback setpoint for supply water temperature can be selected to suit summer/winter conditions or night setback.

Compressor Hours Run

Displays hours run of each compressor.

Pumps Hours Run

Displays hours run of each pump.

Password Protection

The control system integrity can be maintained by restricting access with a password PIN number.

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

Design Features & Information

FEATURES

Temperature

The microprocessor maintains the set supply Chilled Water temperature by sensing the return and supply water temperatures and manages the compressor loading.

The microprocessor also monitors and displays the following measured parameters:

- Supply Water Temperature
- Return Water Temperature
- Suction Pressure of each circuit
- Liquid Pressure of each circuit
- Suction Temperature at each circuit (when the EEV option is fitted)
- Superheat for each circuit (when the EEV option is fitted)

Alarms

The following conditions will be detected, triggering a visual display:
Common for both circuits (Dual Circuit units):

- Low Supply Temperature
- Emergency Stop
- Water Flow
- Pump(s) status
- Pump(s) remote start

Individual for each circuit:
Individual alarms will isolate the affected circuit only.

- Compressor Trip
- Low Suction Pressure for each circuit
- High Liquid Pressure for each circuit
- Volt Free Contact Alarm Indication
- Low Pressure Switch
- Compressor Overload
- High Compressor Discharge Temperature

Networking

A Local Area Network (AIRELan) can be used to connect a number of chiller controllers to offer intercommunication and sequence control. There is also the facility to allow the connection of either a computer or modem for local or remote monitoring. For further details, please contact Airedale.

Design Features & Information

CONTROL SCHEME FEATURES

Airedale recognises that all chiller applications are different but fall mainly into 2 application categories; Variable Supply Temperature and Constant Supply Temperature.

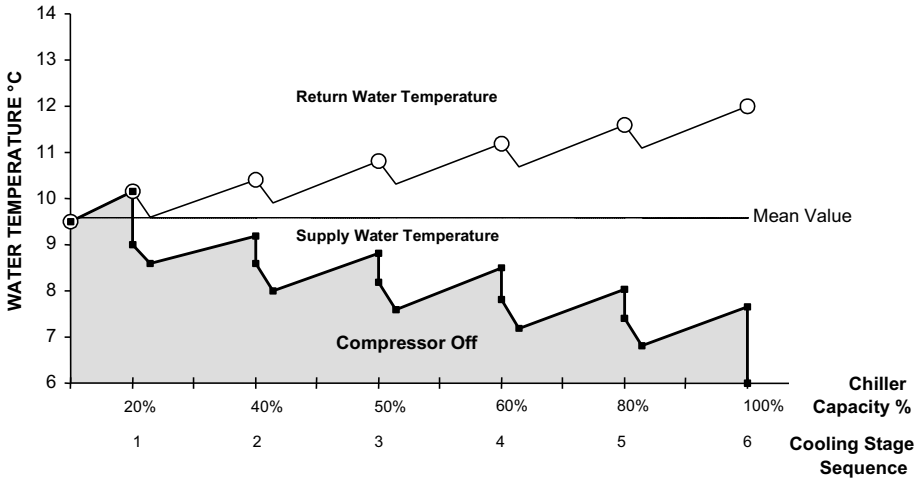
The onboard microprocessor has the capability of satisfying either control requirement as illustrated below. Using the Airedale Variable Supply Temperature control scheme, energy savings are available when compared with previous schemes and that of the Constant Supply Temperature application.

Variable Supply Temperature control schemes offer energy savings where the supply water temperature is not critical to its operation.

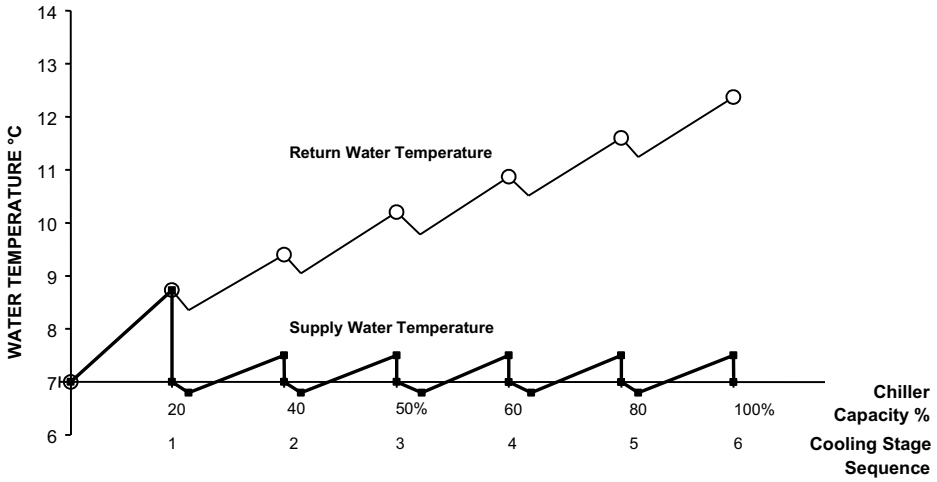
Selection of the best application control scheme can be made via a soft switch in the microprocessor during initial commissioning.

Examples based on Models UCC200D-6/2 having 6 Stages of Cooling

Variable Supply Temperature Control



Constant Supply Temperature Control



CAUTION **Factory set to Variable Supply Temperature Control unless otherwise stated at order.**

Only when the mode selection has been set can the unit be enabled.

Performance Data

CAPACITY DATA - STANDARD - D MODELS

Standard - D Models	Leaving Water Temperature °C	Ambient 25°C Output kW	25°C Input kW	30°C Output kW	30°C Input kW	35°C Output kW	35°C Input kW	40°C Output kW	40°C Input kW
	5	NOT APPLICABLE							
	6								
	7								
	10								
	5								
	6								
	7								
	10								
	5								
	6								
	7								
	10								
	5								
	6								
	7								
	10								
UCC75D-2/1	5	80.0	19.8	75.9	22.3	71.7	24.8	67.6	27.2
	6	82.7	20.0	78.5	22.4	74.2	24.9	70.0	27.4
	7	85.3	20.2	81.0	22.6	76.6	25.1	72.3	27.5
	10	93.7	20.7	89.1	23.2	84.4	25.6	79.8	28.0
	5	NOT APPLICABLE							
	6								
	7								
	10								
UCC100D-2/1	5	103.2	27.3	97.7	30.7	92.3	34.0	87.0	37.1
	6	106.8	27.6	101.3	30.9	95.7	34.2	90.3	37.4
	7	110.0	27.8	104.3	31.1	98.6	34.4	93.0	37.6
	10	120.5	28.6	114.5	31.8	108.4	35.1	102.5	38.2
UCC110D-4/2	5	112.5	24.1	106.7	27.5	100.8	30.9	94.8	34.3
	6	116.2	24.3	110.3	27.6	104.3	31.0	98.2	34.5
	7	120.0	24.6	113.9	27.9	107.7	31.2	101.6	34.7
	10	131.9	25.2	125.4	28.4	118.8	31.8	112.2	35.1
UCC125D-3/1	5	134.6	33.7	127.7	37.8	120.6	41.9	113.5	46.2
	6	139.0	34.0	131.8	38.0	124.5	42.2	117.2	46.5
	7	143.3	34.5	136.0	38.5	128.6	42.6	121.3	46.7
	10	157.0	35.5	149.2	39.5	141.4	43.6	133.6	47.6
UCC130D-4/2	5	136.3	32.7	129.4	36.8	122.3	40.9	115.2	45.2
	6	140.8	33.0	133.6	37.0	126.3	41.2	119.0	45.4
	7	145.2	33.4	137.9	37.4	130.5	41.6	123.1	45.7
	10	159.2	34.4	151.4	38.4	143.5	42.5	135.7	46.5
UCC150D-3/1	5	160.3	42.4	152.2	47.2	144.1	52.0	136.2	56.7
	6	165.2	42.6	156.7	47.4	148.1	52.3	139.7	57.2
	7	170.3	43.1	161.7	47.8	152.9	52.7	144.3	57.6
	10	186.2	44.6	177.0	49.3	167.8	54.1	158.7	58.9

Standard - D Models	Leaving Water Temperature °C	Ambient 25°C Output kW	25°C Input kW	30°C Output kW	30°C Input kW	35°C Output kW	35°C Input kW	40°C Output kW	40°C Input kW
UCC160D-4/2	5	161.7	42.2	153.3	47.0	144.7	51.9	136.1	56.9
	6	166.8	42.7	158.2	47.5	149.4	52.4	140.8	57.3
	7	172.1	43.2	163.3	47.9	154.3	52.8	145.4	57.8
	10	188.3	44.6	179.0	49.3	169.4	54.1	159.9	59.1
UCC180D-6/2	5	197.7	46.3	187.9	51.8	177.7	57.4	167.6	63.2
	6	204.3	46.8	194.1	52.2	183.7	57.9	173.4	63.6
	7	210.9	47.2	200.5	52.6	189.9	58.3	179.2	64.1
	10	231.5	48.5	220.4	54.0	209.0	59.7	197.4	65.7
UCC200D-6/2	5	218.7	53.3	208.4	59.7	197.6	66.4	186.9	73.3
	6	225.7	53.9	215.1	60.3	204.2	67.0	193.1	74.0
	7	232.8	54.6	222.0	60.9	210.8	67.7	199.5	74.7
	10	255.0	56.3	243.4	62.8	231.3	69.7	219.1	76.9
UCC225D-6/2	5	241.6	63.6	230.2	70.6	218.5	77.8	206.8	85.2
	6	249.3	64.4	237.6	71.4	225.6	78.7	213.7	86.0
	7	257.3	65.0	245.3	72.1	233.0	79.5	220.6	87.0
	10	281.3	68.0	268.5	74.9	255.5	82.1	242.5	89.2
UCC250D-6/2	5	264.8	69.4	252.8	77.4	240.6	85.6	228.5	93.8
	6	273.2	70.3	260.9	78.3	248.4	86.5	236.0	94.8
	7	281.7	71.2	269.2	79.2	256.4	87.5	243.6	95.8
	10	308.0	74.4	294.6	82.3	281.1	90.4	267.6	98.5
UCC275D-8/2	5	289.5	87.3	276.2	91.2	262.8	95.0	249.7	98.8
	6	298.7	88.0	285.1	91.8	271.3	95.6	257.9	99.3
	7	308.0	88.6	294.0	92.4	280.0	96.2	266.3	99.9
	10	336.8	90.5	321.9	94.2	306.9	98.0	292.3	101.7
UCC300D-8/2	5	315.7	97.7	300.7	102.0	285.6	106.3	270.8	110.5
	6	325.5	98.5	310.2	102.7	294.7	107.0	279.5	111.2
	7	335.4	99.2	319.7	103.5	303.9	107.7	288.3	111.9
	10	366.0	101.5	349.3	105.7	332.5	109.8	315.8	113.9
UCC330D-10/2	5	352.9	91.6	336.2	102.0	319.4	112.4	302.9	122.7
	6	364.4	92.7	347.3	103.1	330.0	113.5	313.0	123.8
	7	376.1	93.8	358.5	104.2	340.8	114.6	323.4	124.9
	10	412.1	97.3	393.3	107.7	374.4	118.0	355.7	128.3
UCC360D-10/2	5	385.7	101.0	368.1	112.8	350.5	124.7	333.1	136.4
	6	398.1	102.3	380.1	114.1	361.9	126.0	344.1	137.7
	7	410.7	103.7	392.2	115.5	373.6	127.3	355.3	139.0
	10	449.4	107.8	429.8	119.5	410.0	131.3	390.3	143.0
UCC400D-12/2	5	432.9	112.2	412.4	124.9	391.7	137.7	371.3	150.4
	6	446.8	113.6	425.7	126.3	404.5	139.0	383.4	151.7
	7	460.7	115.0	439.1	127.6	417.4	140.4	395.8	153.0
	10	503.7	119.2	480.7	131.8	457.5	144.5	434.4	157.1
UCC450D-12/2	5	481.3	127.3	457.5	140.7	433.5	154.1	409.7	167.5
	6	496.4	128.9	471.9	142.2	447.3	155.6	422.9	168.9
	7	511.6	130.4	486.5	143.7	461.3	157.1	436.3	170.3
	10	558.4	135.2	531.8	148.3	505.0	161.6	478.2	174.9

1 Output kW refers to the chilled water duty.
2 Input kW refers to the compressor input power.
3 Duties applicable for chilled water ΔT between 4 and 8°C.
4 Interpolate for water temperatures between those quoted, do not extrapolate.

5 Water flow rate (l/s) = Output ÷ (4.19 x ΔT) Except Glycol use, refer to ***Glycol Data***.
6 For conditions outside those quoted, please refer to Airedale.
7 For operation in the shaded area, please refer to Airedale.

Performance Data

CAPACITY DATA - QUIET - SQ/DQ MODELS

Quiet – SQ/DQ Models		Ambient							
	Leaving Water	25°C		30°C		35°C		40°C	
	Temperature °C	Output kW	Input kW	Output kW	Input kW	Output kW	Input kW	Output kW	Input kW
UCC30SQ-1/1 UCC30DQ-1/1	5	33.6	9.5	31.8	10.6	30.0	11.7	28.3	12.8
	6	34.7	9.6	32.9	10.7	31.1	11.8	29.2	12.9
	7	35.8	9.7	34.0	10.8	32.1	11.9	30.3	13.0
	10	39.3	10.1	37.3	11.2	35.4	12.2	33.4	13.3
UCC40SQ-1/1 UCC40DQ-1/1	5	37.8	11.0	36.0	12.1	34.1	13.2	32.2	14.4
	6	39.1	11.1	37.2	12.2	35.3	13.3	33.3	14.5
	7	40.4	11.2	38.4	12.3	36.4	13.4	34.4	14.6
	10	44.3	11.5	42.2	12.6	40.1	13.7	38.0	14.8
UCC50SQ-2/1 UCC50DQ-2/1	5	51.4	13.2	49.0	14.7	46.5	16.3	44.1	17.9
	6	53.2	13.3	50.7	14.8	48.2	16.4	45.6	18.0
	7	55.0	13.4	52.4	14.9	49.8	16.5	47.2	18.1
	10	60.4	13.7	57.6	15.3	54.9	16.8	52.1	18.4
UCC60SQ-2/1 UCC60DQ-2/1	5	58.6	16.0	55.8	17.8	53.1	19.6	50.4	21.4
	6	60.6	16.1	57.8	17.9	55.0	19.7	52.1	21.6
	7	62.6	16.3	59.7	18.0	56.8	19.9	53.9	21.7
	10	68.6	16.8	65.5	18.5	62.4	20.3	59.4	22.0
UCC70SQ-2/1 UCC70DQ-2/1	5	66.0	19.2	62.9	21.2	59.8	23.2	56.6	25.3
	6	68.2	19.4	65.0	21.4	61.8	23.4	58.5	25.4
	7	70.4	19.6	67.1	21.5	63.8	23.6	60.4	25.6
	10	77.1	20.2	73.6	22.1	70.0	24.1	66.5	26.1
UCC75DQ-2/1	5	79.4	20.2	75.2	22.7	71.0	25.2	66.9	27.6
	6	82.0	20.4	77.7	22.8	73.5	25.3	69.3	27.8
	7	84.6	20.6	80.2	23.1	75.8	25.5	71.6	27.9
	10	92.7	21.2	88.1	23.7	83.5	26.1	79.0	28.4
UCC80SQ-2/1 UCC80DQ-2/1	5	75.5	21.7	71.8	24.0	68.2	26.3	64.5	28.6
	6	78.0	21.9	74.2	24.2	70.5	26.5	66.6	28.8
	7	80.5	22.1	76.6	24.4	72.8	26.7	68.8	29.0
	10	88.1	22.8	84.0	25.1	79.9	27.3	75.7	29.6
UCC100DQ-3/1	5	105.5	25.9	99.9	29.3	94.4	32.7	88.9	36.0
	6	109.2	26.1	103.6	29.5	97.9	32.9	92.4	36.2
	7	112.5	26.4	106.7	29.7	100.9	33.1	95.2	36.3
	10	123.4	27.1	117.2	30.4	111.0	33.7	105.0	36.9
UCC110DQ-4/2	5	110.3	25.3	104.6	28.7	98.7	32.1	92.8	35.5
	6	114.0	25.6	108.1	28.9	102.1	32.3	96.1	35.7
	7	117.6	25.8	111.6	29.1	105.4	32.5	99.4	35.9
	10	129.1	26.5	122.7	29.8	116.1	33.1	109.7	36.4
UCC125DQ-3/1	5	132.9	34.7	126.0	38.7	119.0	42.9	112.0	47.1
	6	137.1	35.0	130.0	39.1	122.8	43.2	115.6	47.4
	7	141.4	35.5	134.1	39.5	126.8	43.6	119.6	47.7
	10	154.6	36.7	147.0	40.7	139.2	44.7	131.6	48.7
UCC130DQ-4/2	5	133.2	34.5	126.3	38.6	119.2	42.8	112.2	47.0
	6	137.5	34.9	130.3	38.9	123.1	43.1	115.8	47.3
	7	141.7	35.3	134.5	39.3	127.1	43.5	119.9	47.6
	10	155.2	36.4	147.5	40.4	139.7	44.5	131.9	48.5
UCC150DQ-4/1	5	161.9	41.5	153.6	46.4	145.3	51.3	137.1	56.1
	6	166.8	41.7	158.3	46.5	149.5	51.5	140.7	56.6
	7	172.1	42.1	163.3	46.9	154.4	51.9	145.4	57.0
	10	188.4	43.5	179.1	48.2	169.5	53.2	160.0	58.2

Quiet – SQ/DQ Models		Ambient							
	Leaving Water	25°C		30°C		35°C		40°C	
	Temperature °C	Output kW	Input kW	Output kW	Input kW	Output kW	Input kW	Output kW	Input kW
UCC160DQ-6/2	5	167.7	38.9	159.1	43.7	150.3	48.7	141.5	53.8
	6	173.0	39.3	164.3	44.1	155.3	49.1	146.4	54.1
	7	178.7	39.7	169.7	44.5	160.5	49.4	151.3	54.5
	10	195.9	40.8	186.3	45.6	176.5	50.5	166.7	55.5
UCC180DQ-6/2	5	193.4	48.7	183.6	54.1	173.5	59.8	163.5	65.5
	6	199.7	49.2	189.7	54.6	179.3	60.3	169.0	66.1
	7	206.1	49.7	195.8	55.2	185.2	60.9	174.7	66.6
	10	226.0	51.2	215.0	56.7	203.5	62.5	192.0	68.6
UCC200DQ-6/2	5	213.7	56.4	203.3	62.8	192.6	69.6	181.8	76.6
	6	220.4	57.1	209.9	63.5	198.9	70.3	187.8	77.4
	7	227.3	57.8	216.5	64.3	205.3	71.1	193.9	78.1
	10	248.6	59.9	237.0	66.4	225.0	73.4	212.6	80.8
UCC225DQ-8/2	5	246.2	60.8	234.6	67.9	222.7	75.2	210.8	82.6
	6	254.2	61.5	242.3	68.6	230.1	76.0	217.9	83.4
	7	262.3	62.1	250.2	69.2	237.7	76.6	225.1	84.2
	10	287.2	64.8	274.1	71.9	260.8	79.1	247.6	86.4
UCC250DQ-8/2	5	266.3	68.4	254.2	76.4	241.9	84.7	229.6	93.1
	6	274.8	69.3	262.4	77.3	249.8	85.6	237.2	94.0
	7	283.4	70.1	270.8	78.2	257.8	86.5	244.8	95.0
	10	310.0	73.2	296.4	81.2	282.7	89.4	269.0	97.6
UCC275DQ-8/2	5	285.4	88.5	272.3	92.3	259.1	96.1	246.2	99.8
	6	294.4	89.1	280.9	92.9	267.4	96.7	254.2	100.4
	7	303.4	89.8	289.7	93.5	275.9	97.3	262.3	101.0
	10	331.5	91.8	316.9	95.5	302.2	99.2	287.7	102.8
UCC300DQ-10/2	5	314.5	98.1	299.5	102.4	284.4	106.7	269.6	110.9
	6	324.3	98.8	308.9	103.1	293.5	107.3	278.2	111.6
	7	334.2	99.6	318.5	103.8	302.6	108.0	287.0	112.2
	10	364.6	101.9	347.9	106.0	331.1	110.2	314.3	114.3
UCC330DQ-10/2	5	350.5	93.1	333.7	103.5	316.9	114.0	300.4	124.2
	6	361.8	94.3	344.6	104.7	327.4	115.1	310.4	125.4
	7	373.3	95.5	355.7	105.9	338.0	116.3	320.6	126.5
	10	408.8	99.2	390.0	109.5	371.1	119.8	352.4	130.1
UCC360DQ-12/2	5	385.6	101.1	368.0	113.0	350.1	124.9	332.5	136.8
	6	398.1	102.4	379.9	114.2	361.6	126.2	343.5	138.1
	7	410.7	103.7	392.1	115.5	373.4	127.5	354.8	139.4
	10	449.6	107.7	429.8	119.5	409.8	131.4	389.7	143.4
UCC400DQ-12/2	5	426.8	116.0	406.4	128.6	385.9	141.3	365.6	153.9
	6	440.3	117.5	419.4	130.0	398.4	142.7	377.4	155.3
	7	453.9	118.9	432.5	131.5	411.0	144.1	389.5	156.7
	10	495.9	123.5	473.1	135.9	450.2	148.5	427.0	161.1
UCC450DQ-14/2	5	480.1	128.0	456.4	141.3	432.5	154.7	409.0	167.9
	6	495.1	129.6	470.7	142.8	446.2	156.2	422.1	169.3
	7	510.1	131.2	485.2	144.4	460.1	157.7	435.5	170.8
	10	556.6	136.1	530.1	149.2	503.5	162.4	477.1	175.4

1 Output kW refers to the chilled water duty.
2 Input kW refers to the compressor input power.
3 Duties applicable for chilled water ΔT between 4 and 8°C.
4 Interpolate for water temperatures between those quoted, do not extrapolate.

5 Water flow rate (l/s) = Output ÷ (4.19 x ΔT) Except Glycol use, refer to ***Glycol Data***.
6 For conditions outside those quoted, please refer to Airedale.
7 For operation in the shaded area, please refer to Airedale.

Performance Data

CAPACITY DATA - SUPER QUIET SSQ/DSQ MODELS

Super Quiet – SSQ/DSQ		Ambient							
	Leaving Water	25°C		30°C		35°C		40°C	
	Temperature °C	Output kW	Input kW	Output kW	Input kW	Output kW	Input kW	Output kW	Input kW
UCC30SSQ-1/1 UCC30DSQ-1/1	5	34.0	9.2	32.3	10.3	30.5	11.4	28.7	12.6
	6	35.2	9.3	33.4	10.4	31.6	11.5	29.7	12.6
	7	36.4	9.4	34.5	10.5	32.7	11.6	30.8	12.7
	10	39.9	9.8	37.9	10.8	36.0	11.9	34.0	13.0
UCC40SSQ-1/1 UCC40DSQ-1/1	5	37.9	10.9	36.0	12.1	34.1	13.2	32.3	14.4
	6	39.1	11.0	37.2	12.2	35.3	13.3	33.3	14.5
	7	40.4	11.1	38.5	12.3	36.5	13.4	34.5	14.6
	10	44.3	11.5	42.2	12.6	40.1	13.7	38.0	14.8
UCC50SSQ-2/1 UCC50DSQ-2/1	5	51.4	13.2	49.0	14.8	46.5	16.3	44.0	18.0
	6	53.2	13.3	50.7	14.8	48.2	16.4	45.6	18.0
	7	55.0	13.4	52.4	14.9	49.8	16.5	47.2	18.1
	10	60.3	13.8	57.6	15.3	54.8	16.8	52.1	18.4
UCC60SSQ-2/1 UCC60DSQ-2/1	5	58.5	16.0	55.8	17.8	53.1	19.6	50.3	21.5
	6	60.6	16.1	57.8	17.9	54.9	19.7	52.1	21.6
	7	62.6	16.3	59.7	18.1	56.8	19.9	53.9	21.7
	10	68.6	16.8	65.5	18.5	62.4	20.3	59.3	22.1
UCC70SSQ-2/1 UCC70DSQ-2/1	5	66.0	19.2	62.9	21.2	59.8	23.2	56.6	25.3
	6	68.2	19.4	65.0	21.4	61.7	23.4	58.5	25.5
	7	70.4	19.6	67.1	21.6	63.8	23.5	60.4	25.6
	10	77.0	20.2	73.5	22.2	70.0	24.1	66.4	26.1
UCC75DSQ-2/1	5	77.3	21.5	73.2	23.9	69.1	26.3	65.1	28.7
	6	79.8	21.6	75.7	24.1	71.4	26.5	67.2	29.0
	7	82.3	21.9	78.0	24.3	73.7	26.7	69.5	29.1
	10	90.1	22.6	85.6	25.0	81.0	27.4	76.5	29.7
UCC80SSQ-2/1 UCC80DSQ-2/1	5	75.6	21.7	72.0	23.9	68.3	26.2	64.6	28.5
	6	78.1	21.9	74.4	24.1	70.6	26.4	66.8	28.7
	7	80.6	22.1	76.7	24.3	72.9	26.6	69.0	28.9
	10	88.2	22.8	84.1	25.0	80.0	27.2	75.9	29.5
UCC100DSQ-3/1	5	103.6	27.1	98.1	30.4	92.6	33.8	87.2	37.0
	6	107.2	27.3	101.7	30.6	96.0	34.0	90.6	37.2
	7	110.5	27.6	104.7	30.9	98.9	34.2	93.3	37.4
	10	121.0	28.4	114.9	31.6	108.8	34.8	102.8	38.1
UCC110DSQ-4/2	5	109.6	25.7	103.9	29.1	98.0	32.5	92.1	35.9
	6	113.3	26.0	107.4	29.3	101.3	32.7	95.4	36.1
	7	116.9	26.3	110.8	29.6	104.7	32.9	98.6	36.3
	10	128.2	27.0	121.8	30.2	115.2	33.6	108.8	36.9
UCC125DSQ-4/1	5	135.1	33.4	128.1	37.5	120.9	41.8	113.7	46.1
	6	139.5	33.7	132.3	37.8	124.8	42.0	117.4	46.4
	7	143.8	34.2	136.5	38.2	129.0	42.4	121.5	46.6
	10	157.6	35.2	149.8	39.2	141.8	43.4	133.8	47.5
UCC130DSQ-6/2	5	139.8	30.7	132.7	34.8	125.5	39.1	118.2	43.4
	6	144.4	31.0	137.1	35.0	129.7	39.3	122.2	43.6
	7	149.0	31.3	141.5	35.4	134.0	39.6	126.4	43.9
	10	163.6	32.2	155.6	36.2	147.5	40.4	139.4	44.6
UCC150DSQ-4/1	5	158.7	43.4	150.6	48.1	142.4	53.0	134.4	57.7
	6	163.5	43.6	155.0	48.3	146.4	53.3	137.7	58.3
	7	168.5	44.1	159.9	48.9	151.0	53.8	142.2	58.8
	10	184.1	45.7	174.9	50.4	165.6	55.2	156.1	60.2

Super Quiet – SSQ/DSQ		Ambient							
	Leaving Water	25°C		30°C		35°C		40°C	
	Temperature °C	Output kW	Input kW	Output kW	Input kW	Output kW	Input kW	Output kW	Input kW
UCC160DSQ-6/2	5	166.6	39.5	158.0	44.3	149.2	49.3	140.5	54.4
	6	171.9	39.9	163.1	44.8	154.1	49.7	145.3	54.7
	7	177.5	40.3	168.5	45.1	159.3	50.1	150.2	55.1
	10	194.5	41.5	184.9	46.3	175.1	51.3	165.4	56.2
UCC180DSQ-6/2	5	191.9	49.5	182.1	55.0	172.0	60.6	162.1	66.3
	6	198.1	50.1	188.1	55.5	177.8	61.2	167.5	66.9
	7	204.5	50.6	194.2	56.0	183.6	61.7	173.1	67.5
	10	224.0	52.2	213.0	57.7	201.6	63.5	190.1	69.6
UCC200DSQ-6/2	5	211.9	57.5	201.6	64.0	190.9	70.7	180.1	77.7
	6	218.6	58.2	208.0	64.7	197.0	71.5	185.9	78.6
	7	225.3	59.0	214.5	65.5	203.3	72.3	191.9	79.4
	10	246.3	61.2	234.7	67.8	222.7	74.8	210.2	82.2
UCC225DSQ-8/2	5	244.4	61.9	232.8	69.0	220.9	76.3	209.2	83.7
	6	252.2	62.6	240.4	69.7	228.2	77.1	216.1	84.5
	7	260.3	63.2	248.2	70.4	235.7	77.8	223.2	85.4
	10	284.8	66.1	271.8	73.1	258.6	80.4	245.5	87.6
UCC250DSQ-8/2	5	264.2	69.8	252.2	77.8	239.9	86.1	227.6	94.4
	6	272.6	70.7	260.2	78.8	247.6	87.0	235.1	95.3
	7	281.1	71.6	268.5	79.7	255.6	88.0	242.7	96.4
	10	307.2	74.8	293.8	82.8	280.2	90.9	266.6	99.1
UCC275DSQ-10/2	5	281.8	89.5	268.8	93.2	255.8	97.0	243.0	100.7
	6	290.7	90.2	277.3	93.9	263.9	97.7	250.8	101.3
	7	299.5	90.8	285.9	94.6	272.2	98.3	258.8	102.0
	10	327.0	92.9	312.5	96.6	298.0	100.2	283.6	103.9
UCC300DSQ-12/2	5	311.6	98.9	296.6	103.2	281.5	107.5	266.4	111.8
	6	321.3	99.7	305.9	103.9	290.4	108.2	274.8	112.5
	7	331.0	100.4	315.3	104.6	299.5	108.9	283.4	113.2
	10	361.1	102.7	344.4	106.9	327.6	111.0	310.3	115.3
UCC330DSQ-14/2	5	347.7	94.9	330.9	105.3	314.1	115.7	297.4	126.1
	6	358.9	96.1	341.7	106.5	324.5	116.9	307.3	127.3
	7	370.3	97.3	352.7	107.7	335.0	118.1	317.3	128.5
	10	405.4	101.0	386.6	111.4	367.7	121.7	348.6	132.2
UCC360DSQ-14/2	5	381.7	103.7	364.2	115.5	346.6	127.3	329.4	138.9
	6	393.9	105.1	375.9	116.9	357.8	128.7	340.1	140.3
	7	406.1	106.6	387.7	118.3	369.3	130.1	351.2	141.7
	10	444.0	111.0	424.4	122.7	404.8	134.4	385.4	146.0
UCC400DSQ-16/2	5	425.3	116.9	405.0	129.5	384.7	142.0	364.8	154.3
	6	438.6	118.5	417.8	131.0	397.0	143.5	376.6	155.8
	7	452.0	120.0	430.7	132.5	409.4	145.0	388.5	157.2
	10	493.3	124.8	470.7	137.2	448.2	149.5	425.7	161.8
UCC450DSQ-16/2	5	466.6	135.6	443.4	148.6	420.1	161.7	397.1	174.5
	6	480.8	137.4	457.0	150.3	433.1	163.3	409.6	176.1
	7	495.0	139.2	470.7	152.1	446.4	165.0	422.3	177.8
	10	539.1	144.7	513.4	157.5	487.7	170.2	461.7	183.0

1 Output kW refers to the chilled water duty.
2 Input kW refers to the compressor input power.
3 Duties applicable for chilled water ΔT between 4 and 8°C.
4 Interpolate for water temperatures between those quoted, do not extrapolate.

5 Water flow rate (l/s) = Output ÷ (4.19 x ΔT) Except Glycol use, refer to ***Glycol Data***.
6 For conditions outside those quoted, please refer to Airedale.
7 For operation in the shaded area, please refer to Airedale.

Performance Data

OPERATING LIMITS
(For 100% Water)

Standard Unit	
Minimum Ambient Air DB °C	-5°C
Maximum Ambient Air DB °C	Refer to ***Performance Data - Capacity Data***
Minimum Leaving Water Temperature °C	+6°C
Maximum Return Water Temperature °C	+20°C

Unit with Electronic Fan Speed HP Control (-20°C)	
Minimum Ambient Air DB °C	-20°C
Maximum Ambient Air DB °C	Refer to ***Performance Data - Capacity Data***
Minimum Leaving Water Temperature °C	+6°C
Maximum Return Water Temperature °C	+20°C

1 Temperatures lower than those stated can be obtained with the addition of glycol.
2 For conditions outside those quoted, please refer to Airedale.

GLYCOL DATA

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

Ethylene Glycol Nominal Correction Factors

Glycol in System / Freezing Point ºC		10% / -4°C	20% / -9°C	30% / -15°C	40% / -23°C
Cooling Duty	Catalogue Data x by:	0.98	0.97	0.95	0.93
Input Power		0.99	0.98	0.96	0.95
Water Flow		0.99	1.02	1.04	1.07
Pressure Drop		1.05	1.20	1.38	1.57

Propylene Glycol Nominal Correction Factors

Glycol in System / Freezing Point ºC		10% / -2°C	20% / -6°C	30% / -12°C	40% / -20°C
Cooling Duty	Catalogue Data x by:	0.97	0.95	0.91	0.88
Input Power		0.99	0.98	0.96	0.95
Water Flow		0.98	0.97	0.95	0.95
Pressure Drop		1.08	1.17	1.31	1.45

Example **UCC250D-6/2 operating at 7/12, 30°C Ambient, 20% Ethylene Glycol**

		Catalogue Figure	Multiplier		Corrected Figure
Cooling kW	(refer to ***Performance Data - Capacity Data***)	269.2	x 0.97	20% Ethylene Glycol =	261.1 kW
Input kW	(refer to ***Performance Data - Capacity Data***)	79.2	x 0.98		77.6 kW
Flow l/s	$\left(\text{calculated } \frac{\text{(DX (Mechanical Cooling kW)}}{\Delta T \times 4.19}\right)$	12.8	x 1.02		13.1 l/s
Pressure Drop kPa	(refer to ***Waterside Pressure Drops***)	50.0	x 1.20		60.0 kPa

Performance Data

WATERSIDE PRESSURE DROPS (1)

CAUTION **Constant water flow MUST be maintained. Variable water volume is NOT recommended and may invalidate warranty.**

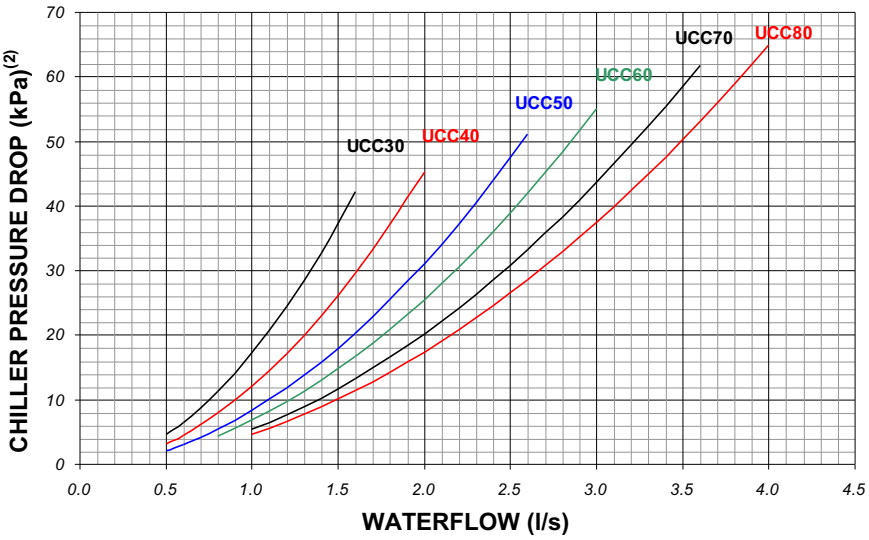
Use the formula below to calculate the External Head Available:

Total Pump Head Available	-	Chiller Pressure Drop	=	**External Head Available**

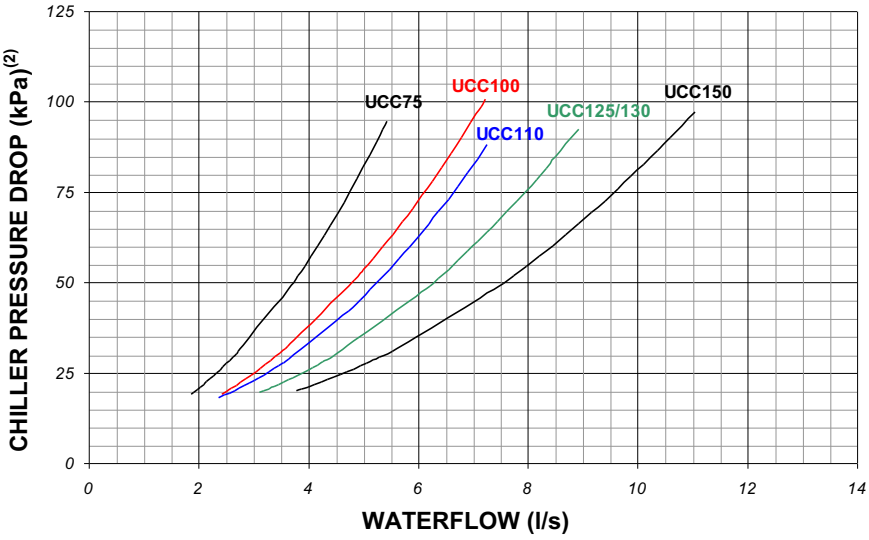
Example: UCC200D-6/2 9.54 l/s, standard single pump:

145 kPa	-	42 kPa	=	**103 kPa**

UCC30 - UCC80
(Except UCC75)



UCC75 - UCC150
(Except UCC80)



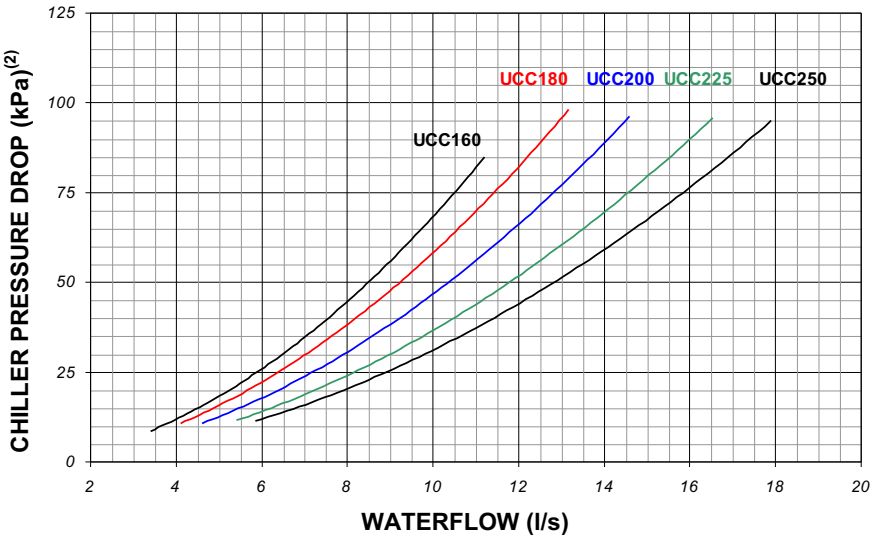
(1) For glycol solutions, please refer to ***Glycol Data***.
(2) Chiller pressure drop refers to standard unit without optional pumps and/or pipework.

Performance Data

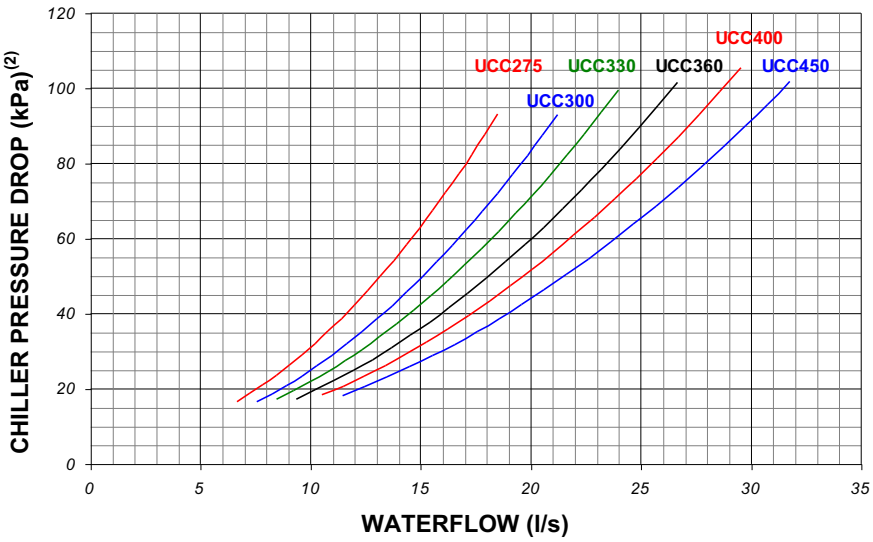
WATERSIDE PRESSURE DROPS (1)

CAUTION **Constant water flow MUST be maintained. Variable water volume is NOT recommended and may invalidate warranty.**

UCC160 - UCC250



UCC275 - UCC450 (Except UCC250)

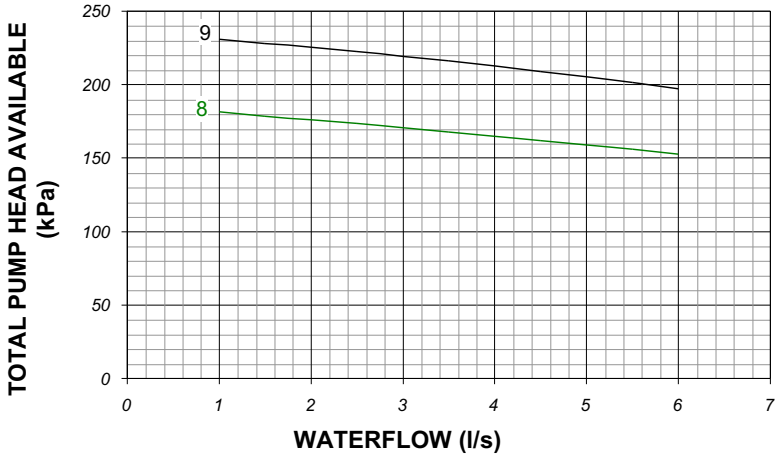


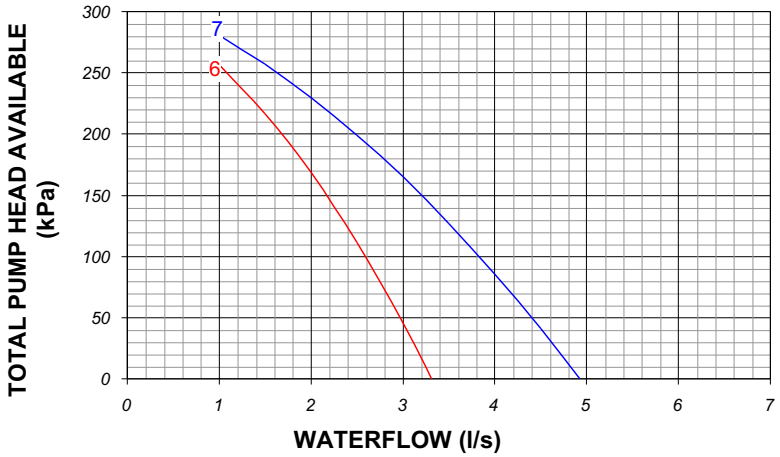
(1) For glycol solutions, please refer to ***Glycol Data***.
(2) Chiller pressure drop refers to standard unit without optional pumps and/or pipework.

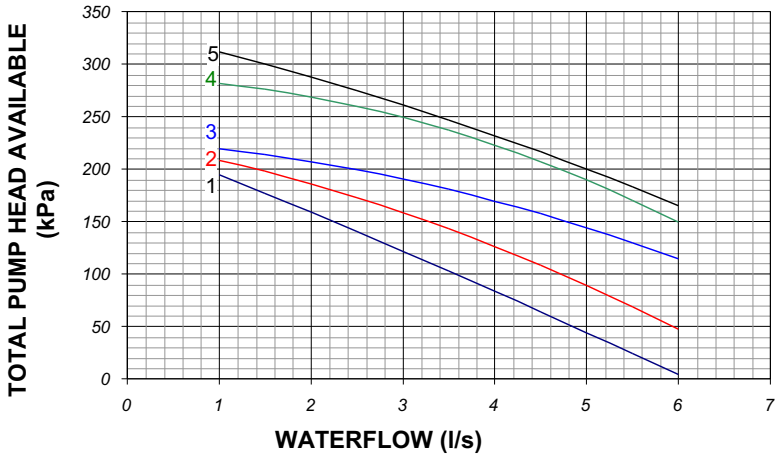
Performance Data

PUMP PACKAGES

UCC30 - UCC80 (EXCEPT UCC75)







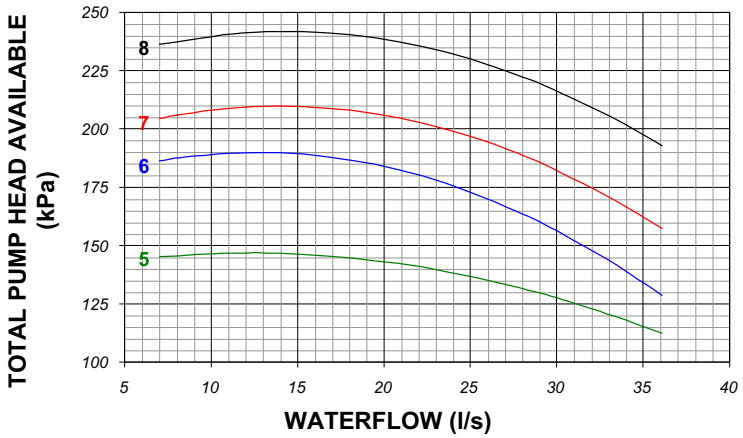
		Single Head Pump or Run / Standby Pump	
		Standard	Larger
UCC30	Curve	1	6
UCC40		1	7
UCC50 - UCC60		2	5
UCC70 - UCC80		3	4
		Twin Head Pump	
		Standard	Larger
UCC30 - UCC80	Curve	8	9

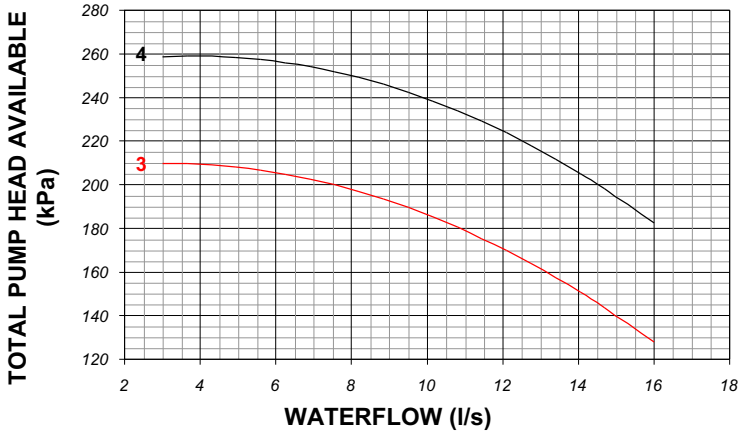
Performance Data

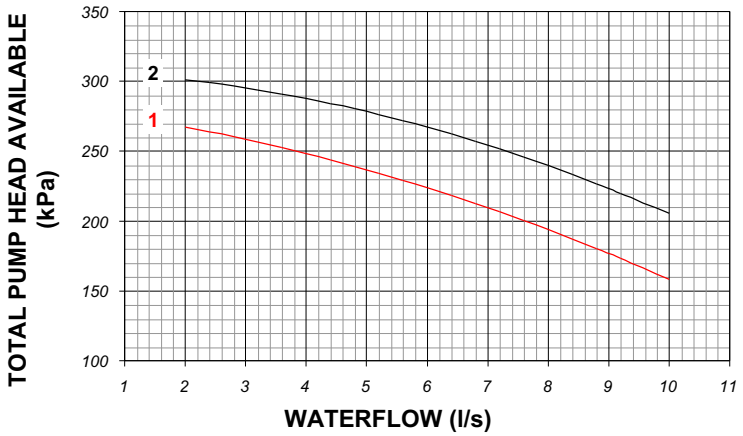
PUMP PACKAGES

UCC75 - UCC450 (EXCEPT UCC80)

Single Head Pump or Run/Standby





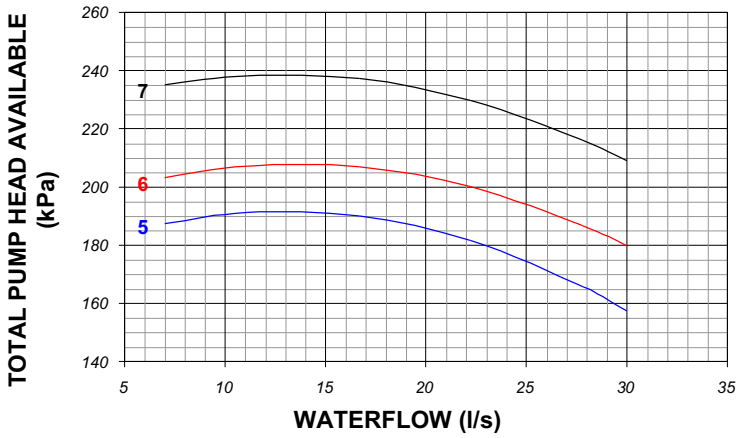


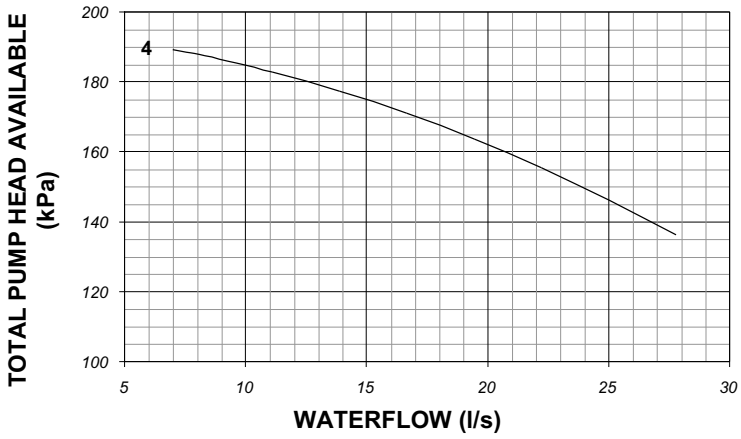
		Single Head Pump or Run / Standby Pump	
		Standard	Larger
UCC75 - 150 (Ex 80)		1	2
UCC110 - 250		3	4
UCC275 - 300	Curve	5	7
UCC330 - 400		6	7
UCC450		6	8

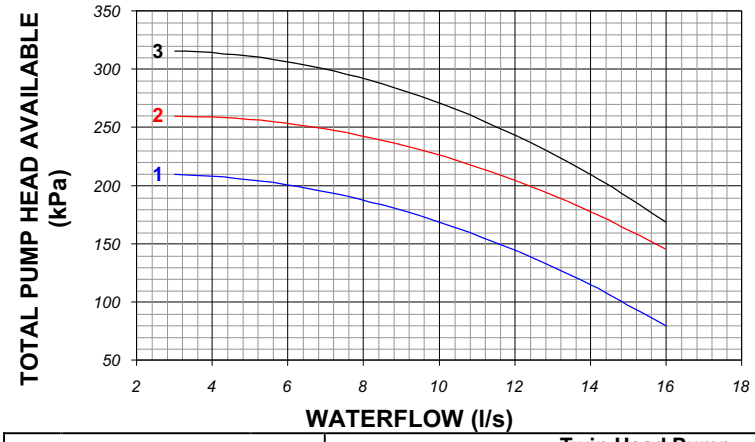
Performance Data

PUMP PACKAGES **UCC75 - UCC450 (EXCEPT UCC80)**

Twin Head Pump







	Twin Head Pump	
	Standard	Larger
UCC75 - 130 (Ex 80)	1	2
UCC160 - 250	2	3
UCC275 Curve	4	5
UCC300 - 400	4	6
UCC450	5	7

Performance Data

SOUND DATA

Measurement of Sound Data

All sound data quoted has been measured in the third-octave band limited values, using a Real Time Analyser calibrated sound intensity meter in accordance with BS EN ISO9614 Part 1 : 1995. **The Global sound data quoted is valid for noise emitted in the horizontal plane in all directions**

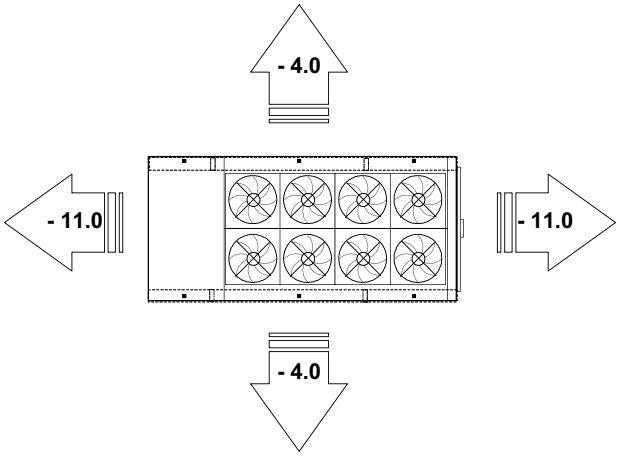
All Sound Power Levels quoted are calculated from measured sound intensity according to BS EN ISO9614 Part 1 : 1995.

Sound Pressure Levels are calculated from sound power using the expanded parallelepiped method according to BS EN ISO11203 : 1996.

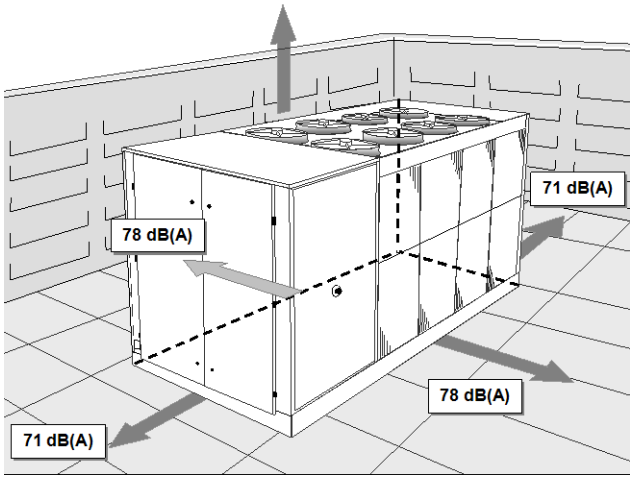
Sound Directivity

The ***Global*** sound measurements quoted in the following tables **do not** incorporate any directivity or denote any sound level heard at any given position surrounding the chiller, rather they represent the total sound level radiating from the chiller in **all directions in the horizontal plane** from source.

Using the adjustment factors from the map below, specific directional sound power levels can be derived from the global sound power data.



Example - UCC250DSQ-8/2, Sound Power of 82 dB(A) =



Performance Data

SOUND DATA

Global Chiller Sound Level

Standard - D Models

	Sound Measurement		Overall dB(A)	Frequency (Hz) dB						
				63	125	250	500	1000	2000	4000
	Power			NOT APPLICABLE						
	Pressure	@ 10m								
	Power									
	Pressure	@ 10m								
	Power									
	Pressure	@ 10m								
	Power									
	Pressure	@ 10m								
	Power									
	Pressure	@ 10m								
UCC75D-2/1	Power		81	74	80	77	79	78	72	63
	Pressure	@ 10m	49	42	48	45	47	46	40	31
	Power			NOT APPLICABLE						
	Pressure	@ 10m								
UCC100D-2/1	Power		81	80	84	78	79	78	72	63
	Pressure	@ 10m	49	48	52	46	47	46	40	31
UCC110D-4/2	Power		88	82	89	82	82	84	82	77
	Pressure	@ 10m	56	50	57	50	50	52	50	45
UCC125D-3/1	Power		84	74	84	83	81	80	74	65
	Pressure	@ 10m	52	42	52	51	49	48	42	33
UCC130D-4/2	Power		88	79	89	84	82	84	82	77
	Pressure	@ 10m	56	47	57	52	50	52	50	45
UCC150D-3/1	Power		84	74	84	83	81	80	74	65
	Pressure	@ 10m	52	42	52	51	49	48	42	33
UCC160D-4/2	Power		88	79	89	84	82	84	82	77
	Pressure	@ 10m	56	47	57	52	50	52	50	45
UCC180D-6/2	Power		90	83	92	86	84	86	84	79
	Pressure	@ 10m	58	51	60	54	52	54	52	47
UCC200D-6/2	Power		90	81	91	87	84	86	84	79
	Pressure	@ 10m	58	49	59	55	52	54	52	47
UCC225D-6/2	Power		90	81	91	87	84	86	84	79
	Pressure	@ 10m	58	49	59	55	52	54	52	47
UCC250D-6/2	Power		90	81	91	87	84	86	84	79
	Pressure	@ 10m	58	49	59	55	52	54	52	47
UCC275D-8/2	Power		89	78	85	83	88	85	81	75
	Pressure	@ 10m	57	46	53	51	56	53	49	43
UCC300D-8/2	Power		89	78	85	83	88	85	81	75
	Pressure	@ 10m	57	46	53	51	56	53	49	43
UCC330D-10/2	Power		90	77	86	84	88	86	80	73
	Pressure	@ 10m	58	45	54	52	56	54	48	41
UCC360D-10/2	Power		90	75	86	84	89	86	80	73
	Pressure	@ 10m	58	43	54	52	57	54	48	41
UCC400D-12/2	Power		91	78	87	85	89	87	82	75
	Pressure	@ 10m	59	46	55	53	57	55	50	43
UCC450D-12/2	Power		91	80	87	85	89	87	83	77
	Pressure	@ 10m	59	48	55	53	57	55	51	45

1 dB(A) is the overall sound level, measured on the A scale.
2 All sound data measured at nominal conditions: Water in/out 12/7°C at 30°C ambient.
3 Figures based on standard unit, for units fitted with optional pump packages, please contact Airedale.

The Sound Pressure data quoted is only valid in free field conditions, where the unit is installed on a reflective base. If the equipment is placed adjacent to a reflective wall, values may vary to those stated, typically increasing by 3dB for each side added.

Performance Data

SOUND DATA

Global Chiller Sound Level

Quiet - SQ & DQ Models

	Sound Measurement		Overall	Frequency (Hz) dB						
			dB(A)	63	125	250	500	1000	2000	4000
UCC30SQ-1/1	Power		78	70	75	74	74	75	71	67
UCC30DQ-1/1	Pressure	@ 10m	46	38	43	42	42	43	39	35
UCC40SQ-1/1	Power		78	70	75	74	74	75	71	67
UCC40DQ-1/1	Pressure	@ 10m	46	38	43	42	42	43	39	35
UCC50SQ-2/1	Power		80	82	82	78	76	77	73	66
UCC50DQ-2/1	Pressure	@ 10m	48	50	50	46	44	45	41	34
UCC60SQ-2/1	Power		80	82	82	78	76	77	73	66
UCC60DQ-2/1	Pressure	@ 10m	48	50	50	46	44	45	41	34
UCC70SQ-2/1	Power		80	82	82	78	76	77	73	66
UCC70DQ-2/1	Pressure	@ 10m	48	50	50	46	44	45	41	34
UCC75DQ-2/1	Power		77	75	80	73	75	74	68	61
	Pressure	@ 10m	45	43	48	41	43	42	36	29
UCC80SQ-2/1	Power		80	82	82	78	76	77	73	66
UCC80DQ-2/1	Pressure	@ 10m	48	50	50	46	44	45	41	34
UCC100DQ-3/1	Power		78	80	84	74	75	74	68	62
	Pressure	@ 10m	46	48	52	42	43	42	36	30
UCC110DQ-4/2	Power		83	86	85	80	78	80	76	70
	Pressure	@ 10m	51	54	53	48	46	48	44	38
UCC125DQ-3/1	Power		80	75	84	82	77	76	70	64
	Pressure	@ 10m	48	43	52	50	45	44	38	32
UCC130DQ-4/2	Power		83	85	85	83	78	80	76	70
	Pressure	@ 10m	51	53	53	51	46	48	44	38
UCC150DQ-4/1	Power		81	76	85	82	79	77	71	65
	Pressure	@ 10m	49	44	53	50	47	45	39	33
UCC160DQ-6/2	Power		85	87	86	84	80	81	77	71
	Pressure	@ 10m	53	55	54	52	48	49	45	39
UCC180DQ -6/2	Power		85	87	89	84	80	82	77	72
	Pressure	@ 10m	53	55	57	52	48	50	45	40
UCC200DQ-6/2	Power		86	87	88	86	81	82	77	71
	Pressure	@ 10m	54	55	56	54	49	50	45	39
UCC225DQ-8/2	Power		87	88	89	87	82	83	79	73
	Pressure	@ 10m	55	56	57	55	50	51	47	41
UCC250DQ-8/2	Power		87	88	89	87	82	83	79	73
	Pressure	@ 10m	55	56	57	55	50	51	47	41
UCC275DQ-8/2	Power		86	78	85	78	84	81	78	72
	Pressure	@ 10m	54	46	53	46	52	49	46	40
UCC300DQ-10/2	Power		86	79	86	79	85	82	78	72
	Pressure	@ 10m	54	47	54	47	53	50	46	40
UCC330DQ-10/2	Power		86	79	86	79	85	82	76	71
	Pressure	@ 10m	54	47	54	47	53	50	44	39
UCC360DQ-12/2	Power		87	79	87	80	86	82	77	71
	Pressure	@ 10m	55	47	55	48	54	50	45	39
UCC400DQ-12/2	Power		87	80	87	80	86	82	78	73
	Pressure	@ 10m	55	48	55	48	54	50	46	41
UCC450DQ-14/2	Power		88	81	88	81	86	83	80	74
	Pressure	@ 10m	55	48	55	48	53	50	47	41

1 dB(A) is the overall sound level, measured on the A scale.
2 All sound data measured at nominal conditions: Water in/out 12/7°C at 30°C ambient.
3 Figures based on standard unit, for units fitted with optional pump packages, please contact Airedale.

The Sound Pressure data quoted is only valid in free field conditions, where the unit is installed on a reflective base. If the equipment is placed adjacent to a reflective wall, values may vary to those stated, typically increasing by 3dB for each side added.

Performance Data

SOUND DATA

Global Chiller Sound Level

Super Quiet - SSQ & DSQ Models

	Sound Measurement		Overall		Frequency (Hz) dB						
			dB(A)		63	125	250	500	1000	2000	4000
UCC30SSQ-1/1	Power		73		76	70	69	69	69	66	58
UCC30DSQ-1/1	Pressure	@ 10m	41		44	38	37	37	37	34	26
UCC40SSQ-1/1	Power		73		76	70	69	69	69	66	58
UCC40DSQ-1/1	Pressure	@ 10m	41		44	38	37	37	37	34	26
UCC50SSQ-2/1	Power		74		80	76	72	72	70	64	58
UCC50DSQ-2/1	Pressure	@ 10m	42		48	44	40	40	38	32	26
UCC60SSQ-2/1	Power		74		80	76	72	72	70	64	58
UCC60DSQ-2/1	Pressure	@ 10m	42		48	44	40	40	38	32	26
UCC70SSQ-2/1	Power		74		80	76	72	72	70	64	58
UCC70DSQ-2/1	Pressure	@ 10m	42		48	44	40	40	38	32	26
UCC75DSQ-2/1	Power		73		76	80	76	67	68	62	53
	Pressure	@ 10m	41		44	48	44	35	36	30	21
UCC80SSQ-2/1	Power		75		74	73	73	72	71	68	61
UCC80DSQ-2/1	Pressure	@ 10m	43		42	41	41	40	39	36	29
UCC100DSQ-3/1	Power		75		81	84	78	69	70	64	56
	Pressure	@ 10m	43		49	52	46	37	38	32	24
UCC110DSQ-4/2	Power		77		82	84	76	74	73	67	61
	Pressure	@ 10m	45		50	52	44	42	41	35	29
UCC125DSQ-4/1	Power		77		76	84	83	71	70	65	58
	Pressure	@ 10m	45		44	52	51	39	38	33	26
UCC130DSQ-6/2	Power		80		80	84	82	76	75	69	63
	Pressure	@ 10m	47		48	52	50	44	43	37	31
UCC150DSQ-4/1	Power		78		77	85	83	72	71	66	58
	Pressure	@ 10m	46		45	53	51	40	39	34	26
UCC160DSQ-6/2	Power		80		80	84	82	76	75	69	63
	Pressure	@ 10m	47		48	52	50	44	43	37	31
UCC180DSQ-6/2	Power		80		83	88	82	77	75	69	64
	Pressure	@ 10m	48		51	56	50	45	43	37	32
UCC200DSQ-6/2	Power		81		81	87	85	78	75	69	64
	Pressure	@ 10m	49		49	55	53	46	43	37	32
UCC225DSQ-8/2	Power		82		82	88	85	78	76	70	64
	Pressure	@ 10m	50		50	56	53	46	44	38	32
UCC250DSQ-8/2	Power		82		82	88	85	78	76	70	64
	Pressure	@ 10m	50		50	56	53	46	44	38	32
UCC275DSQ-10/2	Power		83		79	85	82	81	77	75	70
	Pressure	@ 10m	51		47	53	50	49	45	43	38
UCC300DSQ-12/2	Power		83		80	85	83	81	77	75	70
	Pressure	@ 10m	51		48	53	51	49	45	43	38
UCC330DSQ-14/2	Power		84		81	87	84	82	78	74	68
	Pressure	@ 10m	51		48	54	51	49	45	41	35
UCC360DSQ-14/2	Power		84		81	87	84	83	79	74	67
	Pressure	@ 10m	51		48	54	51	50	46	41	34
UCC400DSQ-16/2	Power		85		82	88	85	83	79	76	71
	Pressure	@ 10m	52		49	55	52	50	46	43	38
UCC450DSQ-16/2	Power		86		82	88	85	84	80	78	72
	Pressure	@ 10m	53		49	55	52	51	47	45	39

1 dB(A) is the overall sound level, measured on the A scale.
2 All sound data measured at nominal conditions: Water in/out 12/7°C at 30°C ambient.
3 Figures based on standard unit, for units fitted with optional pump packages, please contact Airedale.

The Sound Pressure data quoted is only valid in free field conditions, where the unit is installed on a reflective base. If the equipment is placed adjacent to a reflective wall, values may vary to those stated, typically increasing by 3dB for each side added.

General Specification

MECHANICAL DATA			UCC30SQ-1/1 UCC30DQ-1/1	UCC40SQ-1/1 UCC40DQ-1/1	UCC50SQ-2/1 UCC50DQ-2/1	UCC60SQ-2/1 UCC60DQ-2/1	UCC70SQ-2/1 UCC70DQ-2/1	UCC80SQ-2/1 UCC80DQ-2/1
Duty - Cooling								
Cooling Only	(1)	kW	34.0	38.4	52.4	59.7	67.1	76.6
Nominal Input	(1)	kW	10.8	12.3	14.9	18.0	21.5	24.4
EER	(2)		3.15	3.12	3.52	3.32	3.12	3.13
Capacity Steps		%	0-50-100	0-50-100	0-50-100	0-40-60-100	0-50-100	0-50-100
Dimensions - H x L x W	(6)	mm	1450 x 1650 x 1310	1450 x 1650 x 1310	1450 x 2500 x 1310	1450 x 2500 x 1310	1450 x 2500 x 1310	1450 x 2500 x 1310
Weight - Machine	(3)	kg	480	560	710	750	770	850
Weight - Operating	(3)	kg	500	580	730	780	800	890
Construction - Material / Colour			Plain Galvanised Steel Base with Galvanised Sheet Steel, Epoxy Baked Powder Paint Superstructure- Light Grey (RAL 7035)					
Evaporator			Brazed Plate					
Insulation			Class 1					
Water Volume (Total Internal)		l	2.7	3.4	4.3	5.0	5.9	6.6
Total Max. Water Flow		l/s	3.6	3.6	3.6	6.2	6.2	6.2
Condenser			Copper Tube/ Aluminium Fins - Air Cooled					
Face Area (Total)		m²	1.7	1.7	3.4	3.4	3.4	3.4
Nominal Airflow		m³/s	2.8	2.8	5.6	5.6	5.6	5.6
Fan & Motor			Axial Fan					
Quantity			1	1	2	2	2	2
Diameter		mm	630	630	630	630	630	630
Maximum Speed		rpm	1000	1000	1000	1000	1000	1000
Compressor			Single Circuit - Tandem Scroll / Double Circuit - 2 Single Scroll					
Quantity			2	2	2	2	2	2
Oil Charge Volume (Total)		l	1.5 + 1.5	1.6 + 1.6	1.9 + 1.9	3.0 + 1.9	3.0 + 3.0	3.6 + 3.6
Oil Type			Polyol Ester					
Refrigeration			Single Circuit / Double Circuit					
Refrigerant Control			Thermostatic Expansion Valve					
Refrigerant Precharged			R407C					
Charge (Total)		kg	5 + 5	6 + 6	6 + 6	8 + 8	8 + 8	10 + 10
Connections								
Water Inlet / Outlet Female BSP		in	1 1/2	1 1/2	2	2	2	2
Water Drain/Bleed		in	1/2	1/2	1/2	1/2	1/2	1/2
Water System								
Min. System Water Volume	(4)	l	308	411	514	493	719	822
Max. System Press		Bar	10	10	10	10	10	10
SUPER QUIET SSQ			**UCC30SSQ-1/1 UCC30DSQ-1/1**	**UCC40SSQ-1/1 UCC40DSQ-1/1**	**UCC50SSQ-2/1 UCC50DSQ-2/1**	**UCC60SSQ-2/1 UCC60DSQ-2/1**	**UCC70SSQ-2/1 UCC70DSQ-2/1**	**UCC80SSQ-2/1 UCC80DSQ-2/1**
			All data as 'Quiet' Model except:					
Cooling Duty	(1)	kW	34.5	38.5	52.4	59.7	67.1	76.7
Nominal Input	(1)	kW	10.5	12.3	14.9	18.1	21.6	24.3
EER	(2)		3.29	3.13	3.52	3.30	3.11	3.16
Dimensions - H x L x W	(6)	mm	1450 x 1650 x 1310	1450 x 1650 x 1310	1450 x 2500 x 1310	1450 x 2500 x 1310	1450 x 2500 x 1310	1450 x 2500 x 1310
Weight - Machine	(3)	kg	480	580	720	760	780	890
Weight - Operating	(3)	kg	500	600	740	790	810	930
Condenser Face Area (Total)		m²	1.7	1.7	3.4	3.4	3.4	3.4
Nominal Airflow		m³/s	2.5	2.5	5.0	5.0	5.0	5.0
Condenser Fans, number			1	1	2	2	2	2
Fan Diameter		mm	710	710	630	630	630	710
Maximum Fan Speed		rpm	750	750	750	750	750	750
Refrigerant Charge (Total)		kg	5 + 5	6 + 6	6 + 6	8 + 8	8 + 8	10 + 10
Refrigeration Control			Thermostatic Expansion Valve					
OPTIONAL EXTRAS - ALL MODELS								
Water Pump	(1)		In Line Pump					
Nom External Head Std Single / R&S		kPa	145	121	133	113	131	115
Nom External Head Larger Single/R&S		kPa	189	147	235	215	188	169
Nom External Head Standard Twin		kPa	145	135	131	121	116	107
Nom External Head Larger Twin		kPa	195	185	180	170	164	155
Expansion Tank	(5)							
Water Capacity		l	35	35	35	35	35	35
Buffer Tank								
Max. Water Capacity	(6)	l	250	250	250	250	250	250
Pressurisation Unit								
Water Inlet Connection		in	1/2	1/2	1/2	1/2	1/2	1/2

(1) Nominal Cooling Duties based on 12/7°C water temperature and 30°C ambient, where output is the chilled water duty and input is the compressor input power.
(2) EER is the Cooling duty ÷ compressor input power.
(3) Based on standard unit, for units fitted with pump, tank and expansion vessel options, please contact Airedale.
(4) For minimum system volume, refer to ***Design Features & Information - Minimum System Water Volume Calculations***.
(5) Expansion vessel may require reselecting for glycol and system volume, please refer to Airedale.
(6) UCC30 and UCC40 dimensions change to 1450 x 2500 x 1310 when Buffer Tank fitted.

General Specification

MECHANICAL DATA			UCC75D-2/1	UCC100D-2/1	UCC110D-4/2	UCC125D-3/1	UCC130D-4/2	UCC150D-3/1
Duty - Cooling								
Cooling Only	(1)	kW	81.0	104.3	113.9	136.0	137.9	161.7
Nominal Input	(1)	kW	22.6	31.1	27.9	38.5	37.4	47.8
EER	(2)		3.58	3.35	4.09	3.54	3.68	3.38
Capacity Steps		%	0-25-50-75-100	0-25-50-75-100	0-25-50-75-100	0-20-40-50-60-80-100	0-20-40-50-60-80-100	0-25-50-75-100
Dimensions - H x L x W		mm	2000 x 2820 x 1300	2000 x 2820 x 1300	2100 x 2435 x 1850	2000 x 3670 x 1300	2100 x 2435 x 1850	2000 x 3670 x 1300
Weight - Machine	(3)	kg	950	1030	1280	1240	1340	1360
Weight - Operating	(3)	kg	960	1040	1300	1260	1360	1380
Construction - Material / Colour			Plain Galvanised Steel Base with Galvanised Sheet Steel, Epoxy Baked Powder Paint Superstructure- Light Grey (RAL 7035)					
Evaporator			Brazed Plate					
Insulation			Class 1					
Water Volume (Total Internal)		l	3.28	4.56	6.72	8.16	8.16	10.08
Total Max. Water Flow		l/s	6.90	6.90	10.60	10.60	10.60	10.60
Condenser			Copper Tube/ Aluminium Fins - Air Cooled					
Face Area (Total)		m²	5.10	5.10	5.15	7.65	5.15	7.65
Nominal Airflow		m³/s	7.88	7.88	13.50	11.82	13.50	11.82
Fan & Motor			Sickle Bladed Fan					
Quantity			2	2	4	3	4	3
Diameter		mm	710	710	630	710	630	710
Maximum Speed		rpm	1000	1000	1000	1000	1000	1000
Compressor			Tandem Scroll					
Quantity			4	4	4	4	4	4
Oil Charge Volume (Total)		l	4 x 3.25	4 x 3.80	4 x 3.80	2 x 6.20+2 x 3.80	2 x 6.20+2 x 3.80	4 x 6.20
Oil Type			Polyol Ester					
Refrigeration			Dual Circuit					
Refrigerant Control			Thermostatic Expansion Valve					
Refrigerant Precharged			R407C					
Charge (Total)		kg	20 + 20	22 + 22	22 + 22	25 + 25	22 + 22	30 + 30
Connections								
Water Inlet / Outlet	(4)		DN65	DN65	DN80	DN65	DN80	DN65
Water Drain/Bleed		In	1/2	1/2	1/2	1/2	1/2	1/2
Water System								
Min. System Water Volume	(5)	l	399	519	533	453	460	800
Max. System Press		Bar	10	10	10	10	10	10
QUIET DQ			**UCC75DQ-2/1**	**UCC100DQ-3/1**	**UCC110DQ-4/2**	**UCC125DQ-3/1**	**UCC130DQ-4/2**	**UCC150DQ-4/1**
			All data as D Model except:					
Cooling Duty	(1)	kW	80.2	106.7	111.6	134.1	134.5	163.3
Nominal Input	(1)	kW	23.1	29.7	29.1	39.5	39.3	46.9
EER	(2)		3.48	3.59	3.83	3.39	3.42	3.48
Dimensions, H x L x W		mm	2000 x 2820 x 1300	2000 x 3670 x 1300	2100 x 2435 x 1850	2000 x 3670 x 1300	2100 x 2435 x 1850	2000 x 4520 x 1300
Weight - Machine	(3)	kg	990	1180	1280	1300	1340	1550
Weight - Operating	(3)	kg	1000	1190	1300	1320	1360	1570
Condenser Face Area (Total)		m²	5.10	7.65	5.15	7.65	5.15	10.20
Nominal Airflow		m³/s	6.44	9.66	10.48	9.66	10.48	12.88
Condenser Fans, number			2	3	4	3	4	4
Maximum Fan Speed		rpm	750	750	900	750	900	750
Refrigerant Charge (Total)		kg	20 + 20	25 + 25	22 + 22	30 + 30	22 + 22	40 + 40
Refrigeration Control			Electronic Expansion Valve					
SUPER QUIET DSQ			**UCC75DSQ-2/1**	**UCC100DSQ-3/1**	**UCC110DSQ-4/2**	**UCC125DSQ-4/1**	**UCC130DSQ-6/2**	**UCC150DSQ-4/1**
			All data as D Model except:					
Cooling Duty	(1)	kW	78.0	104.7	110.8	136.5	141.5	159.9
Nominal Input	(1)	kW	24.3	30.9	29.6	38.2	35.4	48.9
EER	(2)		3.21	3.39	3.75	3.57	4.00	3.27
Dimensions, H x L x W		mm	2000x2820x1300	2000x3670x1300	2100x2435x1850	2000x4520x1300	2100x3240x1850	2000x4520x1300
Weight - Machine	(3)	kg	1010	1200	1280	1520	1800	1660
Weight - Operating	(3)	kg	1020	1210	1300	1540	1830	1680
Condenser Face Area (Total)		m²	5.10	7.65	5.15	10.20	5.15	10.20
Nominal Airflow		m³/s	6.44	9.66	8.20	12.88	12.30	12.88
Condenser Fans, number			2	3	4	4	6	4
Maximum Fan Speed		rpm	570	570	680	570	680	570
Refrigerant Charge (Total)		kg	20 + 20	23 + 23	22 + 22	40 + 40	30 + 30	40 + 40
Refrigeration Control			Electronic Expansion Valve					
OPTIONAL EXTRAS - ALL MODELS								
Water Pump	(1)		In Line Pump					
Nom External Head Std Single / R&S		kPa	125	115	110	100	100	155
Nom External Head Larger Single/R&S		kPa	200	190	160	170	150	200
Nom External Head Standard Twin		kPa	105	155	115	150	100	140
Nom External Head Larger Twin		kPa	135	130	165	205	150	200
Expansion Tank	(6)							
Water Capacity		l	50	50	50	50	50	50
Buffer Tank								
Max. Water Capacity - D		l	250	250	250	420	250	420
Max. Water Capacity - SQ/DQ		l	250	420	250	420	250	420
Max. Water Capacity - SSQ/DSQ		l	250	420	250	420	250	420
Pressurisation Unit								
Water Inlet Connection		in	1/2	1/2	1/2	1/2	1/2	1/2

(1) Nominal Cooling Duties based on 12/7°C water temperature and 30°C ambient, where output is the chilled water duty and input is the compressor input power.
(2) EER is the Cooling duty ÷ compressor input power.
(3) Based on standard unit, for units fitted with pump, tank and expansion vessel options, please contact Airedale.
(4) Flanged to PN16.
(5) For minimum system volume, refer to ***Design Features & Information - Minimum System Water Volume Calculations***.
(6) Expansion vessel may require reselecting for glycol and system volume, please refer to Airedale

General Specification

MECHANICAL DATA			UCC160D-4/2	UCC180D-6/2	UCC200D-6/2	UCC225D-6/2	UCC250D-6/2	UCC275D-8/2
Duty - Cooling								
Cooling Only	(1)	kW	163.3	200.5	222.0	245.3	269.2	294.0
Nominal Input	(1)	kW	47.9	52.6	60.9	72.1	79.2	92.4
EER	(2)		3.41	3.81	3.64	3.40	3.40	3.18
Capacity Steps		%	0-25-50-75-100	0-20-40-50-60-80-100	0-20-40-50-60-80-100	0-20-40-50-60-80-100	0-25-50-75-100	0-20-40-50-60-80-100
Dimensions - H x L x W		mm	2100 x 2435 x 1850	2100 x 3240 x 1850	2100 x 3240 x 1850	2100 x 3240 x 1850	2100 x 3240 x 1850	2180 x 4720 x 2200
Weight - Machine	(3)	kg	1390	1695	1725	1895	1905	2630
Weight - Operating	(3)	kg	1430	1745	1775	1945	1955	2680
Construction - Material / Colour			Plain Galvanised Steel Base with Galvanised Sheet Steel, Epoxy Baked Powder Paint Superstructure- Light Grey (RAL 7035)					
Evaporator - Type/Insulation			Brazed Plate / Class 1					
Water Volume (Total Internal)		l	38.0	42.0	47.0	55.0	60.0	51.0
Total Max. Water Flow		l/s	17.5	17.5	17.5	17.5	17.5	19.1
Condenser			Copper Tube/ Aluminium Fins - Air Cooled					
Face Area (Total)		m²	5.15	7.73	7.73	7.73	7.73	11.0
Nominal Airflow		m³/s	13.50	20.30	20.30	20.30	20.30	24.8
Fan & Motor			Sickle Bladed Fan					
Quantity			4	6	6	6	6	8
Diameter		mm	630	630	630	630	630	710
Maximum Speed		rpm	1100	1100	1100	1100	1100	1000
Compressor			Tandem Scroll					
Quantity			4	4	4	4	4	4
Oil Charge Volume (Total)		l	4 x 6.2	2 x 8.0 + 2 x 6.2	2 x 8.0 + 2 x 6.2	4 x 8.0	4 x 8.0	4 x 8.0
Oil Type			Polyol Ester					
Refrigeration			Dual Circuit					
Refrigerant Control			Thermostatic Expansion Valve (TEV)				Thermostatic (TEV)	Electronic Expansion Valve (EEV)
Refrigerant Precharged Charge (Total)		kg	R407C 20 + 20	R407C 30 + 30	R407C 30 + 30	R407C 30 + 30	R407C 30 + 30	R407C 41 + 41
Connections								
Water Inlet / Outlet	(4)		DN 80	DN 80	DN 80	DN 80	DN 80	DN 100
Water Drain/Bleed		in	1/2	1/2	1/2	1/2	1/2	1/2
Water System								
Min. System Water Volume	(5)	l	802	669	736	820	1304	877
Max. System Press		Bar	10	10	10	10	10	10
QUIET DQ			**UCC160DQ-6/2**	**UCC180DQ-6/2**	**UCC200DQ-6/2**	**UCC225DQ-8/2**	**UCC250DQ-8/2**	**UCC275DQ-8/2**
			All data as D Model except:					
Cooling Duty	(1)	kW	169.7	195.8	216.5	250.2	270.8	289.7
Nominal Input	(1)	kW	44.5	55.2	64.3	69.2	78.2	93.5
EER	(2)		3.82	3.55	3.37	3.62	3.46	3.10
Dimensions, H x L x W		mm	2100 x 3240 x 1850	2100 x 3240 x 1850	2100 x 3240 x 1850	2100 x 4045 x 1850	2100 x 4045 x 1850	2180 x 4740 x 2200
Weight - Machine	(3)	kg	1610	1725	1765	2055	2130	2680
Weight - Operating	(3)	kg	1660	1775	1815	2115	2190	2730
Evaporator - Water Volume (Total Internal)		l	38.0	42.0	47.0	55.0	60.0	51.0
Condenser Face Area (Total)		m^2	7.73	7.73	7.73	10.30	10.30	11.0
Nominal Airflow		m³/s	15.70	15.70	15.70	20.90	20.90	19.6
Condenser Fans, number			6	6	6	8	8	8
Maximum Fan Speed		rpm	900	900	900	900	900	750
Refrigerant Charge (Total)		kg	30 + 30	30 + 30	30 + 30	40 + 40	40 + 40	41 + 41
Refrigeration Control			Electronic Expansion Valve					
SUPER QUIET DSQ			**UCC160DSQ-6/2**	**UCC180DSQ-6/2**	**UCC200DSQ-6/2**	**UCC225DSQ-8/2**	**UCC250DSQ-8/2**	**UCC275DSQ-10/2**
			All data as D Model except:					
Cooling Duty	(1)	kW	168.5	194.2	214.5	248.2	268.5	285.9
Nominal Input	(1)	kW	45.1	56.0	65.5	70.4	79.7	94.6
EER	(2)		3.73	3.46	3.28	3.53	3.37	3.02
Dimensions, H x L x W		mm	2100 x 3240 x 1850	2100 x 3240 x 1850	2100 x 3240 x 1850	2100 x 4045 x 1850	2100 x 4045 x 1850	2180 x 5570 x 2200
Weight - Machine	(3)	kg	1610	1725	1765	2055	2130	3000
Weight - Operating	(3)	kg	1660	1775	1815	2115	2190	3060
Condenser Face Area (Total)		m^2	7.73	7.73	7.73	10.30	10.30	13.80
Nominal Airflow		m³/s	12.30	12.30	12.30	16.40	16.40	17.00
Condenser Fans, number			6	6	6	8	8	10
Maximum Fan Speed		rpm	680	680	680	680	680	570
Refrigerant Charge (Total)		kg	30 + 30	30 + 30	30 + 30	40 + 40	40 + 40	50 + 50
Refrigeration Control			Electronic Expansion Valve					
OPTIONAL EXTRAS - ALL MODELS								
Water Pump	(1)		In Line Pump					
Nom External Head Std Single / R&S		kPa	115	100	100	100	95	97
Nom External Head Larger Single/R&S		kPa	170	156	155	150	149	160
Nom External Head Standard Twin		kPa	115	100	99	93	87	95
Nom External Head Larger Twin		kPa	167	150	148	142	137	158
Expansion Tank	(6)							
Water Capacity		l	50	50	50	50	50	50
Buffer Tank	(7)							
Max. Water Capacity - D		l	250	250	250	250	250	420
Max. Water Capacity - SQ/DQ		l	250	250	250	420	420	420
Max. Water Capacity - SSQ/DSQ		l	250	420	420	420	420	420
Pressurisation Unit								
Water Inlet Connection		in	1/2	1/2	1/2	1/2	1/2	1/2

(1) Nominal Cooling Duties based on 12/7°C water temperature and 30°C ambient, where output is the chilled water duty and input is the compressor input power.
(2) EER is the Cooling duty ÷ compressor input power.
(3) Based on standard unit, for units fitted with pump, tank and expansion vessel options, please contact Airedale.
(4) Flanged to PN16.
(5) For minimum system volume, refer to ***Design Features & Information - Minimum System Water Volume Calculations***.
(6) Expansion vessel may require reselecting for glycol and system volume, please refer to Airedale
(7) 8 Fan units only: Maximum Water Capacity becomes 250 litres when the pump option is also selected.

General Specification

MECHANICAL DATA

			UCC300D-8/2	UCC330D-10/2	UCC360D-10/2	UCC400D-12/2	UCC450D-12/2
Duty - Cooling							
Cooling Only	(1)	kW	319.7	358.5	392.2	439.1	486.5
Nominal Input	(1)	kW	103.5	104.2	115.5	127.6	143.7
EER	(2)		3.09	3.44	3.40	3.44	3.39
Capacity Steps		%	0-25-50-75-100	0-19-33-52-67-85-100	0-17-33-50-67-83-100	0-18-33-51-67-85-100	0-17-33-50-67-83-100
Dimensions - H x L x W		mm	2180 x 4720 x 2200	2180 x 5570 x 2200	2180 x 5570 x 2200	2180 x 6420 x 2200	2180 x 6420 x 2200
Weight - Machine	(3)	kg	2760	2950	3170	3560	3680
Weight - Operating	(3)	kg	2820	3020	3240	3640	3770
Construction - Material / Colour			Plain Galvanised Steel Base with Galvanised Sheet Steel, Epoxy Baked Powder Paint Superstructure- Light Grey (RAL 7035)				
Evaporator Type/Insulation			Brazed Plate / Class 1				
Water Volume (Total Internal)		l	55.5	65.8	70.3	82.4	89.6
Total Max. Water Flow		l/s	21.5	24.4	27.1	30.3	33.0
Condenser			Copper Tube/ Aluminium Fins - Air Cooled				
Face Area (Total)		m²	11.0	13.8	13.8	16.5	16.5
Nominal Airflow		m³/s	24.8	31.0	31.0	37.2	37.2
Fan & Motor			Sickle Bladed Fan				
Quantity			8	10	10	12	12
Diameter		mm	710	710	710	710	710
Maximum Speed		rpm	1000	1000	1000	1000	1000
Compressor			Tandem Scroll		Trio Scroll		
Quantity			4	6	6	6	6
Oil Charge Volume (Total)		l	4 x 8.0	6 x 8.0	6 x 8.0	6 x 8.0	6 x 8.0
Oil Type			Polyol Ester				
Refrigeration			Dual Circuit				
Refrigerant Control			Electronic Expansion Valve (EEV)				
Refrigerant Precharged			R407C	R407C	R407C	R407C	R407C
Charge (Total)		kg	42 + 42	43 + 39	53 + 53	65 + 60	63 + 63
Connections							
Water Inlet / Outlet	(4)		DN 100	DN 100	DN 100	DN 100	DN 100
Water Drain/Bleed		in	1/2	1/2	1/2	1/2	1/2
Water System							
Min. System Water Volume	(5)	l	897	1130	1122	1322	1348
Max. System Press		Bar	10	10	10	10	10
QUIET DQ			**UCC300DQ-10/2**	**UCC330DQ-10/2**	**UCC360DQ-12/2**	**UCC400DQ-12/2**	**UCC450DQ-14/2**
			All data as D Model except:				
Cooling Duty	(1)	kW	318.5	355.7	392.1	432.5	485.2
Nominal Input	(1)	kW	103.8	105.9	115.5	131.5	144.4
EER	(2)		3.07	3.36	3.39	3.29	3.36
Dimensions, H x L x W		mm	2180 x 5570 x 2200	2180 x 5570 x 2200	2180 x 6420 x 2200	2180 x 6420 x 2200	2180 x 7270 x 2200
Weight - Machine	(3)	kg	2930	3150	3330	3610	3990
Weight - Operating	(3)	kg	2990	3220	3410	3690	4090
Evaporator - Water Volume (Total Internal)		l	62.2	65.8	77.0	82.4	96.2
Condenser Face Area (Total)		m^2	13.8	13.8	16.5	16.5	19.3
Nominal Airflow		m³/s	24.5	24.5	29.4	29.4	34.3
Condenser Fans, number			10	10	12	12	14
Maximum Fan Speed		rpm	750	750	750	750	750
Refrigerant Charge (Total)		kg	40 + 40	54 + 49	49 + 49	65 + 60	72 + 72
Refrigeration Control			Electronic Expansion Valve				
SUPER QUIET DSQ			**UCC300DSQ-12/2**	**UCC330DSQ-14/2**	**UCC360DSQ-14/2**	**UCC400DSQ-16/2**	**UCC450DSQ-16/2**
			All data as D Model except:				
Cooling Duty	(1)	kW	315.3	352.7	387.7	430.7	470.7
Nominal Input	(1)	kW	104.6	107.7	118.3	132.5	157.1
EER	(2)		3.01	3.28	3.28	3.25	3.10
Dimensions, H x L x W		mm	2180 x 6420 x 2200	2180 x 7270 x 2200	2180 x 7270 x 2200	2180 x 8120 x 2200	2180 x 8120 x 2200
Weight - Machine	(3)	kg	3240	3550	3800	4190	4310
Weight - Operating	(3)	kg	3310	3630	3880	4290	4410
Condenser Face Area (Total)		m^2	16.5	19.3	19.3	22.0	22.0
Nominal Airflow		m³/s	20.4	23.8	23.8	27.2	27.2
Condenser Fans, number			12	14	14	16	16
Maximum Fan Speed		rpm	570	570	570	570	570
Refrigerant Charge (Total)		kg	46 + 46	56 + 51	70 + 70	82 + 76	80 + 80
Refrigeration Control			Electronic Expansion Valve				
OPTIONAL EXTRAS - ALL MODELS							
Water Pump	(1)		In Line Pump				
Nom External Head Std Single / R&S		kPa	98	137	135	128	125
Nom External Head Larger Single/R&S		kPa	162	158	156	151	181
Nom External Head Standard Twin		kPa	127	119	115	105	127
Nom External Head Larger Twin		kPa	160	156	154	148	175
Expansion Tank	(6)						
Water Capacity		l	50	50	50	50	50
Buffer Tank	(7)						
Max. Water Capacity - D		l	420	420	420	420	420
Max. Water Capacity - SQ/DQ		l	420	420	420	420	420
Max. Water Capacity - SSQ/DSQ		l	420	420	420	420	420
Pressurisation Unit							
Water Inlet Connection		in	1/2	1/2	1/2	1/2	1/2

(1) Nominal Cooling Duties based on 12/7°C water temperature and 30°C ambient, where output is the chilled water duty and input is the compressor input power.
(2) EER is the Cooling duty ÷ compressor input power.
(3) Based on standard unit, for units fitted with pump, tank and expansion vessel options, please contact Airedale.
(4) Flanged to PN16.
(5) For minimum system volume, refer to ***Design Features & Information - Minimum System Water Volume Calculations***.
(6) Expansion vessel may require reselecting for glycol and system volume, please refer to Airedale
(7) 8 Fan units only: Maximum Water Capacity becomes 250 litres when the pump option is also selected.

General Specification

ELECTRICAL DATA			UCC30SQ-1/1 UCC30DQ-1/1	UCC40SQ-1/1 UCC40DQ-1/1	UCC50SQ-2/1 UCC50DQ-2/1	UCC60SQ-2/1 UCC60DQ-2/1	UCC70SQ-2/1 UCC70DQ-2/1	UCC80SQ-2/1 UCC80DQ-2/1
Unit Data								
Nominal Run Amps	(1)	A	22	27	35	38	41	51
Maximum Start Amps	(2)	A	109	113	141	156	159	204
Permanent Supply		VAC			230 V 1 PH 50 Hz			
Mains Supply		VAC			400 V 3 PH 50 Hz			
Rec Permanent Fuse Size		A	16	16	16	16	16	16
Rec Mains Fuse Size		A	32	40	50	50	63	80
Max Permanent Incoming Cable Size		mm²			4 mm² terminals			
Max Mains Incoming Cable Size		mm²			35 (Direct to Isolator)			
Control Circuit		VAC			24V/230VAC			
Evaporator								
Pad Heater Rating		W	40	40	40	40	40	40
External Trace Heating								
Available (fitted by others)		W	500	500	500	500	500	500
Condenser Fan - Per Fan								
Quantity			1	1	2	2	2	2
Full Load Amps		A	3.0	3.5	3.0	3.0	3.0	3.5
Locked Rotor Amps		A	7.0	7.5	7.0	7.0	7.0	7.5
Motor Rating		kW	0.63	0.78	0.63	0.63	0.63	0.78
Compressor - Per Compressor								
Quantity			2	2	2	2	2	2
Motor Rating		kW	4.7	6.2	8.1	9.5 / 8.1	9.5	11.7
Nominal Run Amps	(1)	A	9.3	11.7	14.6	17.6 / 14.6	17.6	22.0
Sump Heater Rating		W	70.0	65.0	65.0	65.0 / 75.0	65.0	70.0
Start Amps	(2)		101.0	98.0	120.0	135.0/120.0	135.0	175.0
Type Of Start					Direct on line			
SUPER QUIET SQ			**UCC30SSQ-1/1 UCC30DSQ-1/1**	**UCC40SSQ-1/1 UCC40DSQ-1/1**	**UCC50SSQ-2/1 UCC50DSQ-2/1**	**UCC60SSQ-2/1 UCC60DSQ-2/1**	**UCC70SSQ-2/1 UCC70DSQ-2/1**	**UCC80SSQ-2/1 UCC80DSQ-2/1**
			All data as above except:					
Condenser Fan - Per Fan								
Full Load Amps		A	1.15	1.15	3.50	3.50	3.50	1.15
Locked Rotor Amps		A	2.10	2.10	7.50	7.50	7.50	2.10
Motor Rating		kW	0.70	0.70	0.78	0.78	0.78	0.70
OPTIONAL EXTRAS								
Power Factor Correction								
Nominal Run Amps	(1)	A	N/A	N/A	N/A	N/A	N/A	N/A
Maximum Start Amps	(2)	A	N/A	N/A	N/A	N/A	N/A	N/A
Recommended Mains Fuse		A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor Nominal Run Amps - Per Compressor		A	N/A	N/A	N/A	N/A	N/A	N/A
Electronic Soft-start								
Nominal Run Amps	(1)	A	22	27	35	38	41	51
Maximum Start Amps	(2)	A	73	74	93	102	105	112
Recommended Mains Fuse		A	32	40	50	50	63	80
Single Head Pump (or Run/Standby)								
Unit Nominal Run Amps	(1)	A	24	29	38	41	44	54
Recommended Mains Fuse		A	40	50	63	63	63	80
Motor Rating		kW	0.55	0.55	0.90	0.90	1.10	1.10
Full Load Amps		A	1.9	1.9	2.7	2.7	2.9	2.9
Larger Single Head Pump (or Run/Standby)								
Unit Nominal Run Amps	(1)	A	24	30	39	42	45	54
Recommended Mains Fuse		A	40	50	63	63	63	80
Motor Rating		kW	0.75	0.90	1.50	1.50	1.50	1.50
Full Load Amps		A	2.3	3.0	4.0	4.0	3.4	3.4
Twin Head Pump								
Unit Nominal Run Amps	(1)	A	25	30	38	41	44	54
Recommended Mains Fuse		A	40	50	63	63	63	80
Motor Rating		kW	1.5	1.5	1.5	1.5	1.5	1.5
Full Load Amps		A	3.2	3.2	3.2	3.2	3.2	3.2
Larger Twin Head Pump								
Unit Nominal Run Amps	(1)	A	26	32	40	43	46	56
Recommended Mains Fuse		A	40	50	63	63	63	80
Motor Rating		kW	2.2	2.2	2.2	2.2	2.2	2.2
Full Load Amps		A	4.6	4.6	4.6	4.6	4.6	4.6

(1) Based at 12/7°C water and 30°C ambient
(2) Starting amps refers to the direct on line connections.

General Specification

ELECTRICAL DATA			UCC75D-2/1	UCC100D-2/1	UCC110D-4/2	UCC125D-3/1	UCC130D-4/2	UCC150D-3/1
Unit Data								
Nominal Run Amps	(1)	A	50	62	69	79	84	93
Maximum Start Amps	(2)	A	140	167	175	217	222	246
Permanent Supply		VAC			230 V 1 PH 50 Hz			
Mains Supply		VAC			400 V 3 PH 50 Hz			
Rec Permanent Fuse Size		A	16	16	16	16	16	16
Rec Mains Fuse Size		A	63	80	100	125	125	125
Max Permanent Incoming Cable Size		mm²			4 mm² terminals			
Max Mains Incoming Cable Size		mm²	70 (Direct to MCCB)	70 (Direct to MCCB)	Direct to Bus Bar	70 (Direct to MCCB)	Direct to Bus Bar	70 (Direct to MCCB)
Control Circuit		VAC			24V/230V AC			
Evaporator								
Pad Heater Rating		W	40	40	80	80	80	80
External Trace Heating								
Available (fitted by others)		W	500	500	500	500	500	500
Condenser Fan - Per Fan								
Quantity			2	2	4	3	4	3
Full Load Amps		A	1.75	1.75	2.70	1.75	2.70	1.75
Locked Rotor Amps		A	6.20	6.20	7.00	6.20	7.00	6.20
Motor Rating		kW	0.98	0.98	1.75	0.98	1.75	0.98
Compressor - Per Compressor								
Quantity			4	4	4	2 + 2	2 + 2	4
Motor Rating		kW	6.2	8.1	8.1	8.1 / 11.7	8.1 / 11.7	11.7
Nominal Run Amps	(1)	A	11.7	14.6	14.6	14.6 / 22.0	14.6 / 22.0	22.0
Sump Heater Rating		W	65.0	65.0	65.0	65.0 / 75.0	65.0 / 75.0	75.0
Start Amps	(2)		98.0	120.0	120.0	120.0/ 175.0	120.0/ 175.0	175.0
Type Of Start					Direct on line			
QUIET DQ			**UCC75DQ-2/1**	**UCC100DQ-3/1**	**UCC110DQ-4/2**	**UCC125DQ-3/1**	**UCC130DQ-4/2**	**UCC150DQ-4/1**
			All data as above except:					
Condenser Fan - Per Fan								
Quantity			2	3	4	3	4	4
Full Load Amps		A	1.15	1.15	1.25	1.15	1.25	1.15
Locked Rotor Amps		A	2.10	2.10	4.50	2.10	4.50	2.10
Motor Rating		kW	0.68	0.68	0.69	0.68	0.69	0.68
SUPER QUIET DSQ			**UCC75DSQ-2/1**	**UCC100DSQ-3/1**	**UCC110DSQ-4/2**	**UCC125DSQ-4/1**	**UCC130DSQ-6/2**	**UCC150DSQ-4/1**
			All data as above except:					
Condenser Fan - Per Fan								
Quantity			2	3	4	4	6	4
Full Load Amps		A	0.83	0.83	0.78	0.83	0.78	0.83
Locked Rotor Amps		A	1.50	1.50	1.50	1.50	1.50	1.50
Motor Rating		kW	0.32	0.32	0.48	0.32	0.48	0.32
OPTIONAL EXTRAS								
Power Factor Correction								
Nominal Run Amps	(1)	A	48	56	63	71	77	85
Maximum Start Amps	(2)	A	140	167	175	217	222	246
Recommended Mains Fuse		A	63	80	100	125	125	125
Compressor Nominal Run Amps - Per Compressor		A	4 x 11	4 x 13	4 x 13	2 x 20 / 2 x 13	2 x 20 / 2 x 13	4 x 20
Electronic Soft-start								
Nominal Run Amps	(1)	A	50	62	69	79	84	93
Maximum Start Amps	(2)	A	97	119	132	147	152	176
Recommended Mains Fuse		A	63	80	100	125	125	125
Single Head Pump (or Run/Standby)								
Unit Nominal Run Amps	(1)	A	55	67	75	83	90	98
Recommended Mains Fuse		A	80	100	100	125	125	160
Motor Rating		kW	2.2	2.2	3.0	2.2	3.0	2.2
Full Load Amps		A	4.8	4.8	6.1	4.8	6.1	4.8
Larger Single Head Pump (or Run/Standby)								
Unit Nominal Run Amps	(1)	A	57	69	77	85	92	100
Recommended Mains Fuse		A	80	100	100	125	125	160
Motor Rating		kW	3.0	3.0	4.0	3.0	4.0	3.0
Full Load Amps		A	6.8	6.8	7.7	6.8	7.7	6.8
Twin Head Pump								
Unit Nominal Run Amps	(1)	A	56	65	75	85	90	99
Recommended Mains Fuse		A	80	100	100	125	125	160
Motor Rating		kW	3.0	3.0	3.0	3.0	3.0	3.0
Full Load Amps		A	6.1	6.1	6.1	6.1	6.1	6.1
Larger Twin Head Pump								
Unit Nominal Run Amps	(1)	A	58	70	77	86	92	101
Recommended Mains Fuse		A	80	100	100	125	125	160
Motor Rating		kW	4.0	4.0	4.0	4.0	4.0	4.0
Full Load Amps		A	7.7	7.7	7.7	7.7	7.7	7.7

(1) Based at 12/7°C water and 30°C ambient
(2) Starting amps refers to the direct on line connections.

General Specification

ELECTRICAL DATA			UCC160D-4/2	UCC180D-6/2	UCC200D-6/2	UCC225D-6/2	UCC250D-6/2	UCC275D-8/2
Unit Data								
Nominal Run Amps	(1)	A	99	115	127	137	149	160
Maximum Start Amps	(2)	A	252	281	342	373	386	440
Permanent Supply		VAC			230 V 1 PH 50 Hz			
Mains Supply		VAC			400 V 3 PH 50 Hz			
Rec Permanent Fuse Size		A	16	16	16	16	16	16
Rec Mains Fuse Size		A	125	160	160	200	200	200
Max Permanent Incoming Cable Size		mm²			4 mm² terminals			
Max Mains Incoming Cable Size		mm²			Direct to Bus Bar			
Control Circuit		VAC			24V/230V AC			
Evaporator								
Pad Heater Rating		W	100	100	100	100	100	100
External Trace Heating								
Available (fitted by others)		W	500	500	500	500	500	500
Condenser Fan - Per Fan								
Quantity			4	6	6	6	6	8
Full Load Amps		A	2.70	2.70	2.70	2.70	2.70	1.75
Locked Rotor Amps		A	7.00	7.00	7.00	7.00	7.00	6.20
Motor Rating		kW	1.75	1.75	1.75	1.75	1.75	1.75
Compressor - Per Compressor								
Quantity			4	2 + 2	2 + 2	2 + 2	4	2 + 2
Motor Rating		kW	11.7	15.0 / 11.7	18.2 / 11.7	18.2 / 15.0	18.2	22.8 / 18.2
Nominal Run Amps	(1)	A	22.0	27.0 / 22.0	33.0 / 22.0	33.0 / 27.0	33.0	40.0 / 33.0
Sump Heater Rating		W	75.0	130.0 / 75.0	130.0 / 75.0	130.0 / 130.0	130.0	130.0 / 130.0
Start Amps	(2)		175.0	215.0 / 175.0	270.0 / 175.0	270.0 / 215.0	270.0	320.0 / 270.0
Type Of Start					Direct on line			
QUIET DQ			**UCC160DQ-6/2**	**UCC180DQ-6/2**	**UCC200DQ-6/2**	**UCC225DQ-8/2**	**UCC250DQ-8/2**	**UCC275DQ-8/2**
			All data as above except:					
Condenser Fan - Per Fan								
Quantity			6	6	6	8	8	8
Full Load Amps		A	1.25	1.25	1.25	1.25	1.25	1.15
Locked Rotor Amps		A	4.50	4.50	4.50	4.50	4.50	2.10
Motor Rating		kW	0.69	0.69	0.69	0.69	0.69	0.70
SUPER QUIET DSQ			**UCC160DSQ-6/2**	**UCC180DSQ-6/2**	**UCC200DSQ-6/2**	**UCC225DSQ-8/2**	**UCC250DSQ-8/2**	**UCC275DSQ-10/2**
			All data as above except:					
Condenser Fan - Per Fan								
Quantity			6	6	6	8	8	10
Full Load Amps		A	0.78	0.78	0.78	0.78	0.78	0.83
Locked Rotor Amps		A	1.50	1.50	1.50	1.50	1.50	1.50
Motor Rating		kW	0.48	0.48	0.48	0.48	0.48	0.32
OPTIONAL EXTRAS								
Power Factor Correction								
Nominal Run Amps	(1)	A	91	105	117	125	137	146
Maximum Start Amps	(2)	A	252	281	342	373	386	430
Recommended Mains Fuse		A	125	125	160	160	200	200
Compressor Nominal Run Amps - Per Compressor		A	4 x 20	2 x 24/2 x 20	2 x 30/2 x 20	2 x 30/2 x 24	4 x 30	2 x 36 / 2 x 30
Electronic Soft-start								
Nominal Run Amps	(1)	A	99	115	127	137	149	160
Maximum Start Amps	(2)	A	182	198	234	239	278	302
Recommended Mains Fuse		A	125	160	160	200	200	200
Single Head Pump (or Run/Standby)								
Unit Nominal Run Amps	(1)	A	105	120	132	141	154	173
Recommended Mains Fuse		A	125	160	160	200	200	200
Motor Rating		kW	3.0	3.0	3.0	3.0	3.0	5.5
Full Load Amps		A	6.1	6.1	6.1	6.1	6.1	11.7
Larger Single Head Pump (or Run/Standby)								
Unit Nominal Run Amps	(1)	A	107	122	134	144	156	183
Recommended Mains Fuse		A	125	160	160	200	200	250
Motor Rating		kW	4.0	4.0	4.0	4.0	4.0	11.0
Full Load Amps		A	7.7	7.7	7.7	7.7	7.7	21.5
Twin Head Pump								
Unit Nominal Run Amps	(1)	A	107	122	134	144	156	171
Recommended Mains Fuse		A	125	160	160	200	200	200
Motor Rating		kW	4.0	4.0	4.0	4.0	4.0	5.5
Full Load Amps		A	7.7	7.7	7.7	7.7	7.7	11.7
Larger Twin Head Pump								
Unit Nominal Run Amps	(1)	A	110	125	137	147	159	183
Recommended Mains Fuse		A	125	160	160	200	200	250
Motor Rating		kW	5.5	5.5	5.5	5.5	5.5	11.0
Full Load Amps		A	11.1	11.1	11.1	11.1	11.1	21.5

(1) Based at 12/7°C water and 30°C ambient
(2) Starting amps refers to the direct on line connections.

General Specification

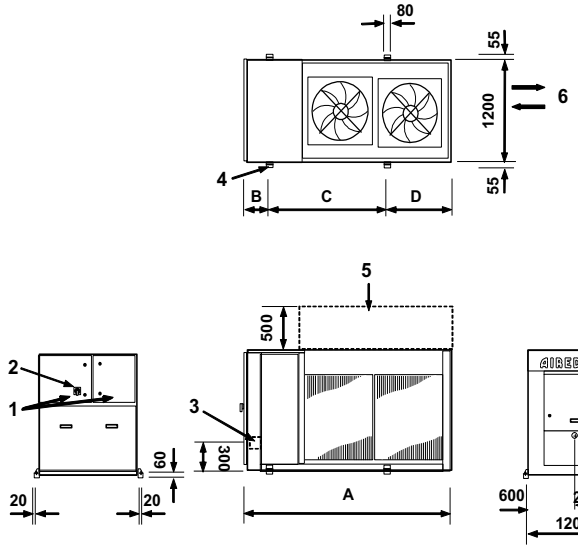
ELECTRICAL DATA			UCC300D-8/2	UCC330D-10/2	UCC360D-10/2	UCC400D-12/2	UCC450D-12/2
Unit Data							
Nominal Run Amps	(1)	A	173	198	216	240	260
Maximum Start Amps	(2)	A	454	435	453	520	540
Permanent Supply		VAC			230 V 1 PH 50 Hz		
Mains Supply		VAC			400 V 3 PH 50 Hz		
Rec Permanent Fuse Size		A	16	16	16	16	16
Rec Mains Fuse Size		A	200	250	315	315	355
Max Permanent Incoming Cable Size		mm²			4 mm² terminals		
Max Mains Incoming Cable Size		mm²			Direct to Bus Bar		
Control Circuit		VAC			24V/230V AC		
Evaporator							
Pad Heater Rating		W	100	100	100	100	100
External Trace Heating							
Available (fitted by others)		W	500	500	500	500	500
Condenser Fan - Per Fan							
Quantity			8	10	10	12	12
Full Load Amps		A	1.75	1.75	1.75	1.75	1.75
Locked Rotor Amps		A	6.20	6.20	6.20	6.20	6.20
Motor Rating		kW	0.98	0.98	0.98	0.98	0.98
Compressor - Per Compressor							
Quantity			4	3 + 3	6	3 + 3	6
Motor Rating		kW	22.8	18.2 / 15.0	18.2	22.8 / 18.2	22.8
Nominal Run Amps	(1)	A	40.0	33.0 / 27.0	33.0	40.0 / 33.0	40.0
Sump Heater Rating		W	130.0	130.0 / 130.0	130.0	130.0 / 130.0	130.0
Start Amps	(2)		320.0	270.0 / 215.0	270.0	320.0 / 270.0	320.0
Type Of Start					Direct on line		
QUIET DQ			**UCC300DQ-10/2**	**UCC330DQ-10/2**	**UCC360DQ-12/2**	**UCC400DQ-12/2**	**UCC450DQ-14/2**
			All data as above except:				
Condenser Fan - Per Fan							
Quantity			10	10	12	12	14
Full Load Amps		A	1.15	1.15	1.15	1.15	1.15
Locked Rotor Amps		A	2.10	2.10	2.10	2.10	2.10
Motor Rating		kW	0.70	0.70	0.70	0.70	0.70
SUPER QUIET DSQ			**UCC300DSQ-12/2**	**UCC330DSQ-14/2**	**UCC360DSQ-14/2**	**UCC400DSQ-16/2**	**UCC450DSQ-16/2**
			All data as above except:				
Condenser Fan - Per Fan							
Quantity			12	14	14	16	16
Full Load Amps		A	0.83	0.83	0.83	0.83	0.83
Locked Rotor Amps		A	1.50	1.50	1.50	1.50	1.50
Motor Rating		kW	0.32	0.32	0.32	0.32	0.32
OPTIONAL EXTRAS							
Power Factor Correction							
Nominal Run Amps	(1)	A	158	180	198	219	237
Maximum Start Amps	(2)	A	442	435	453	520	540
Recommended Mains Fuse		A	200	250	250	250	315
Compressor Nominal Run Amps - Per Compressor		A	4 x 36	3 x 30 / 3 x 24	6 x 30	3 x 36 / 3 x 30	6 x 36
Electronic Soft-start							
Nominal Run Amps	(1)	A	173	198	216	240	260
Maximum Start Amps	(2)	A	314	327	345	392	412
Recommended Mains Fuse		A	200	250	315	315	355
Single Head Pump (or Run/Standby)							
Unit Nominal Run Amps	(1)	A	189	210	228	252	272
Recommended Mains Fuse		A	250	250	315	315	355
Motor Rating		kW	5.5	7.5	7.5	7.5	7.5
Full Load Amps		A	11.7	15.2	15.2	15.2	15.2
Larger Single Head Pump (or Run/Standby)							
Unit Nominal Run Amps	(1)	A	197	220	238	261	282
Recommended Mains Fuse		A	250	315	315	315	355
Motor Rating		kW	11.0	11.0	11.0	11.0	11.0
Full Load Amps		A	21.5	21.5	21.5	21.5	21.5
Twin Head Pump							
Unit Nominal Run Amps	(1)	A	185	209	227	251	275
Recommended Mains Fuse		A	250	250	315	315	355
Motor Rating		kW	5.5	5.5	5.5	5.5	7.5
Full Load Amps		A	11.7	11.7	11.7	11.7	15.2
Larger Twin Head Pump							
Unit Nominal Run Amps	(1)	A	198	220	238	262	282
Recommended Mains Fuse		A	250	315	315	315	355
Motor Rating		kW	11.0	11.0	11.0	11.0	11.0
Full Load Amps		A	21.5	21.5	21.5	21.5	21.5

(1) Based at 12/7°C water and 30°C ambient
(2) Starting amps refers to the direct on line connections.

General Specification

DIMENSIONS **SINGLE ROW FANS - /1**

UCC30 - UCC80
(Except UCC75)



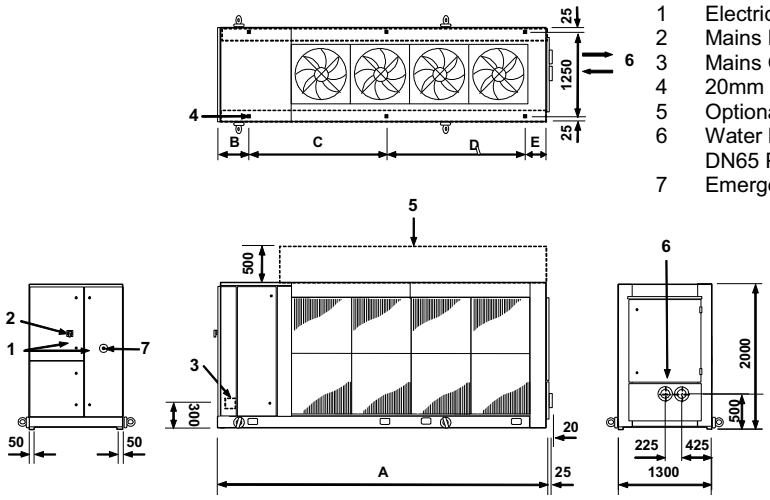
1 Electric Control Panels
2 Mains Electric Isolators
3 Mains Cable Entry
4 20mm Ø Mounting Holes
5 Optional Plenum Extension
6 Water Connections:
UCC30-40 - 1 1/2”
UCC50-80 (Ex 75)- 2”
7 Emergency Stop

Model SQ/DQ		A[1]	B	C	D
UCC30 – UCC40 SQ/DQ	mm	1650 (2500)	300	1050	300
UCC50 – UCC70 SQ/DQ	mm	2500	300	1450	750
UCC80 SQ/DQ	mm	2500	300	1450	750

Model SSQ/DSQ		A[1]	B	C	D
UCC30 - UCC40 SSQ/DSQ	mm	1650 (2500)	300	1050	300
UCC50 - UCC70 SSQ/DSQ	mm	2500	300	1450	750
UCC80 SSQ/DSQ	mm	2500	300	1450	750

(1) Figures in brackets apply when optional Buffer Tank option fitted.

UCC75 - UCC150
(Except UCC80)



1 Electric Control Panels
2 Mains Electric Isolators
3 Mains Cable Entry
4 20mm Ø Mounting Holes
5 Optional Plenum Extension
6 Water Flange Connections:
DN65 PN16
7 Emergency Stop

Model D		A	B	C	D	E
UCC75D	mm	2775	390	1900	(2)	485
UCC100D	mm	2775	390	1900	(2)	485
UCC125 - UCC150D	mm	3625	390	1825	1135	275

Model DQ		A	B	C	D	E
UCC75DQ	mm	2775	390	1900	(2)	485
UCC100 - UCC125DQ	mm	3625	390	1825	1135	275
UCC150DQ	mm	4475	390	1900	1900	285

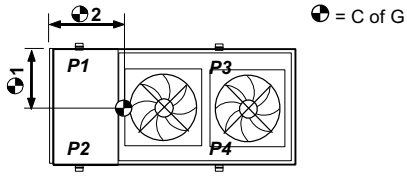
Model DSQ		A	B	C	D	E
UCC75DSQ	mm	2775	390	1900	(2)	485
UCC100DSQ	mm	3625	390	1825	1135	275
UCC125- UCC150DSQ	mm	4475	390	1900	1900	285

General Specification

POINT LOADINGS, WEIGHTS & CENTRE OF GRAVITY (C OF G)

SINGLE ROW FANS - /1

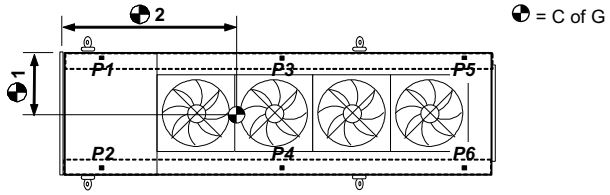
UCC30 - UCC80 (Except UCC75)



Model SQ/DQ		P1	P2	P3	P4	(1)	(1)	Operating Weight	C of G1 (mm)	C of G2 (mm)
UCC30 SQ/DQ-1/1	kg	125	125	125	125			500	600	825
UCC40 SQ/DQ-1/1	kg	150	150	140	140			580	600	800
UCC50 SQ/DQ-2/1	kg	180	180	185	185			730	600	1040
UCC60 SQ/DQ-2/1	kg	190	190	200	200			780	600	1040
UCC70 SQ/DQ-2/1	kg	195	195	205	205			800	600	1040
UCC80 SQ/DQ-2/1	kg	215	215	230	230			890	600	1040

Model SSQ/DSQ		P1	P2	P3	P4	(1)	(1)	Operating Weight	C of G1 (mm)	C of G2 (mm)
UCC30 SSQ/DSQ-1/1	kg	125	125	125	125			500	600	825
UCC40 SSQ/DSQ-1/1	kg	155	155	145	145			600	600	800
UCC50 SSQ/DSQ-2/1	kg	185	185	185	185			740	600	1040
UCC60 SSQ/DSQ-2/1	kg	195	195	200	200			790	600	1040
UCC70 SSQ/DSQ-2/1	kg	195	195	210	210			810	600	1040
UCC80 SSQ/DSQ-2/1	kg	225	225	240	240			930	600	1040

UCC75 - UCC150 (Except UCC80)



Model D		P1	P2	P3	P4	P5	P6	Operating Weight	C of G1 (mm)	C of G2 (mm)
UCC75D-2/1	kg	320	320	(1)	(1)	160	160	960	665	845
UCC100D-2/1	kg	345	345	(1)	(1)	175	175	1040	665	860
UCC125D-3/1	kg	315	295	140	130	190	190	1260	665	1380
UCC150D-3/1	kg	330	330	155	155	205	205	1380	665	1370

Model DQ		P1	P2	P3	P4	P5	P6	Operating Weight	C of G1 (mm)	C of G2 (mm)
UCC75DQ-2/1	kg	330	330	(1)	(1)	170	170	1000	665	845
UCC100DQ-3/1	kg	285	285	135	135	175	175	1190	665	1365
UCC125DQ-3/1	kg	320	300	155	145	200	200	1320	665	1385
UCC150DQ-4/1	kg	340	340	195	195	250	250	1570	665	1590

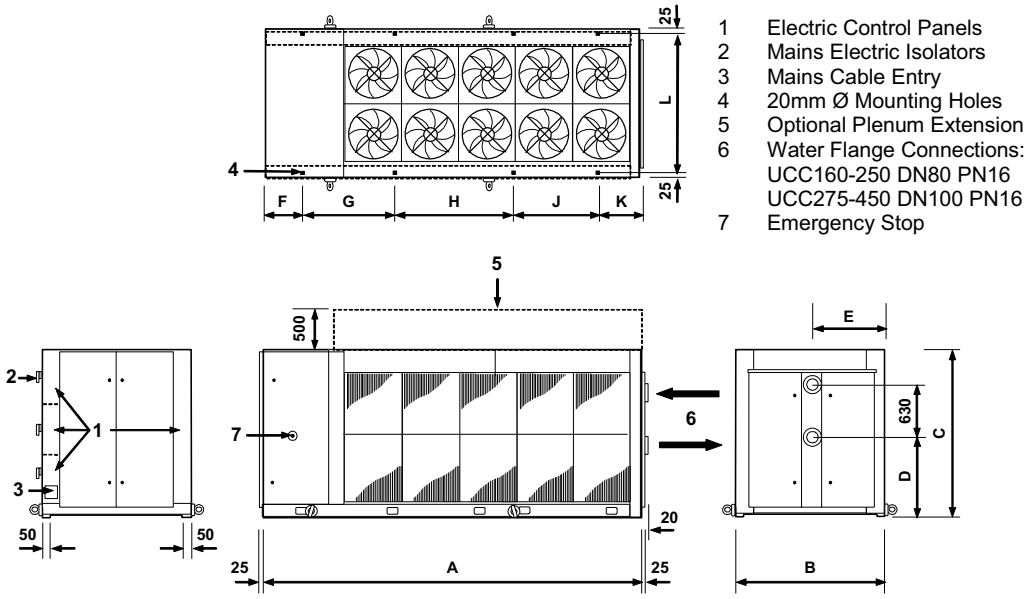
Model DSQ		P1	P2	P3	P4	P5	P6	Operating Weight	C of G1 (mm)	C of G2 (mm)
UCC75DSQ-2/1	kg	345	345	(1)	(1)	165	165	1020	665	845
UCC100DSQ-3/1	kg	300	300	130	130	175	175	1210	665	1365
UCC125DSQ-4/1	kg	340	320	200	190	250	240	1540	665	1575
UCC150DSQ-4/1	kg	355	355	215	215	270	270	1680	665	1590

(1) Have only 4 fixing and 4 point loadings.
(2) Calculation based on standard unit, for units fitted with pump, tank and expansion vessel options, please contact Airedale.

General Specification

DIMENSIONS **DOUBLE ROW FANS - /2**

UCC110 - UCC450 (Except UCC125 & UCC150)



1 Electric Control Panels
2 Mains Electric Isolators
3 Mains Cable Entry
4 20mm Ø Mounting Holes
5 Optional Plenum Extension
6 Water Flange Connections:
UCC160-250 DN80 PN16
UCC275-450 DN100 PN16
7 Emergency Stop

Model D		A	B	C	D	E	F	G	H	J	K	L
UCC110D - UCC160D	mm	2365	1850	2100	955	925	275	1600	(1)	-	490	1800
UCC180D - UCC250D	mm	3170	1850	2100	955	925	480	1100	1100	(2)	490	1800
UCC275D - UCC300D	mm	4650	2200	2180	975	1100	350	1750	1925	(2)	625	2150
UCC330D - UCC360D	mm	5500	2200	2180	975	1100	350	1350	1350	1925	525	2150
UCC400D - UCC450D	mm	6350	2200	2180	975	1100	350	1700	1925	1925	450	2150

Model DQ		A	B	C	D	E	F	G	H	J	K	L
UCC110DQ - UCC130DQ	mm	2365	1850	2100	955	925	275	1600	(1)	-	490	1800
UCC160DQ - UCC200DQ	mm	3170	1850	2100	955	925	480	1100	1100	-	490	1800
UCC225DQ - UCC250DQ	mm	3975	1850	2100	955	925	480	1500	1500	(2)	495	1800
UCC275DQ	mm	4650	2200	2180	975	1100	350	1750	1925	(2)	625	2150
UCC300DQ - UCC330DQ	mm	5500	2200	2180	975	1100	350	1350	1350	1925	525	2150
UCC360DQ - UCC400DQ	mm	6350	2200	2180	975	1100	350	1700	1925	1925	450	2150
UCC450DQ	mm	7200	2200	2180	975	1100	350	1700	2700	2000	450	2150

Model DSQ		A	B	C	D	E	F	G	H	J	K	L
UCC110DSQ	mm	2365	1850	2100	955	925	275	1600	(1)	-	490	1800
UCC130DSQ - UCC200DSQ	mm	3170	1850	2100	955	925	480	1100	1100	(2)	490	1800
UCC225DSQ - UCC250DSQ	mm	3975	1850	2100	955	925	480	1500	1500	(2)	495	1800
UCC275DSQ	mm	5500	2200	2180	975	1100	350	1350	1350	1925	525	2150
UCC300DSQ	mm	6350	2200	2180	975	1100	350	1700	1925	1925	450	2150
UCC330DSQ - UCC360DSQ	mm	7200	2200	2180	975	1100	350	1700	2700	2000	450	2150
UCC400DSQ - UCC450DSQ	mm	8050	2200	2180	975	1100	350	1700	2800	2725	525	2150

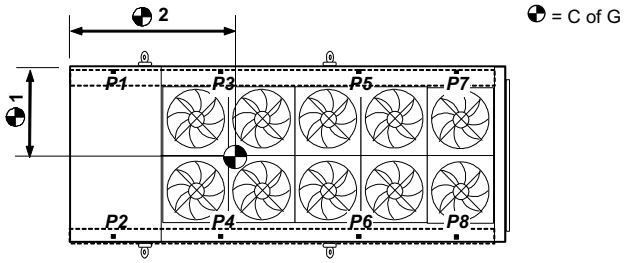
(1) Have only 4 fixing and 4 point loadings.
(2) Have only 6 fixing and 6 point loadings.

General Specification

POINT LOADINGS, WEIGHTS & CENTRE OF GRAVITY (C OF G)

DOUBLE ROW FANS - /2

UCC110 - UCC450 (Except UCC125 & UCC150)



Model D		P1	P2	P3	P4	P5	P6	P7	P8	Operating Weight	C of G1 (mm)	C of G2 (mm)
UCC110D-4/2	kg	380	380	(1)	(1)	(1)	(1)	270	270	1300	915	825
UCC130D-4/2	kg	405	405	(1)	(1)	(1)	(1)	275	275	1360	915	810
UCC160D-4/2	kg	475	475	(1)	(1)	(1)	(1)	240	240	1430	925	810
UCC180D-6/2	kg	630	560	140	125	(2)	(2)	140	150	1745	890	1020
UCC200D-6/2	kg	640	570	145	130	(2)	(2)	140	150	1775	890	1030
UCC225D-6/2	kg	660	660	155	155	(2)	(2)	155	160	1945	925	1015
UCC250D-6/2	kg	665	665	155	155	(2)	(2)	155	160	1955	925	1010
UCC275D-8/2	kg	705	705	400	400	(2)	(2)	235	235	2680	1100	1515
UCC300D-8/2	kg	735	735	420	420	(2)	(2)	255	255	2820	1100	1535
UCC330D-10/2	kg	715	715	405	405	200	200	190	190	3020	1100	1650
UCC360D-10/2	kg	730	730	420	420	240	240	230	230	3240	1100	1755
UCC400D-12/2	kg	770	770	480	480	290	290	280	280	3640	1100	2230
UCC450D-12/2	kg	805	805	500	500	300	300	280	280	3770	1100	2200

Model DQ		P1	P2	P3	P4	P5	P6	P7	P8	Operating Weight	C of G1 (mm)	C of G2 (mm)
UCC110DQ-4/2	kg	380	380	(1)	(1)	(1)	(1)	270	270	1300	915	825
UCC130DQ-4/2	kg	405	405	(1)	(1)	(1)	(1)	275	275	1360	915	810
UCC160DQ-6/2	kg	570	570	115	115	(2)	(2)	115	175	1660	955	1015
UCC180DQ-6/2	kg	645	570	130	120	(2)	(2)	130	180	1775	910	1010
UCC200DQ-6/2	kg	655	580	135	125	(2)	(2)	135	185	1815	910	1025
UCC225DQ-8/2	kg	700	700	165	165	(2)	(2)	165	220	2115	950	1260
UCC250DQ-8/2	kg	710	710	165	165	(2)	(2)	220	220	2190	925	1310
UCC275DQ-8/2	kg	735	735	395	395	(2)	(2)	235	235	2730	1100	1490
UCC300DQ-10/2	kg	700	700	375	375	215	215	205	205	2990	1100	1710
UCC330DQ-10/2	kg	715	715	405	405	250	250	240	240	3220	1100	1800
UCC360DQ-12/2	kg	735	735	440	440	270	270	260	260	3410	1100	2210
UCC400DQ-12/2	kg	770	770	485	485	300	300	290	290	3690	1100	2260
UCC450DQ-14/2	kg	810	810	535	535	360	360	340	340	4090	1100	2635

Model DSQ		P1	P2	P3	P4	P5	P6	P7	P8	Operating Weight	C of G1 (mm)	C of G2 (mm)
UCC110DSQ-4/2	kg	380	380	(1)	(1)	(1)	(1)	270	270	1300	915	825
UCC130DSQ-6/2	kg	430	430	280	280	(2)	(2)	205	205	1830	915	1055
UCC160DSQ-6/2	kg	570	570	115	115	(2)	(2)	115	175	1660	955	1015
UCC180DSQ-6/2	kg	645	570	130	120	(2)	(2)	130	180	1775	910	1010
UCC200DSQ-6/2	kg	655	580	135	125	(2)	(2)	135	185	1815	910	1025
UCC225DSQ-8/2	kg	700	700	165	165	(2)	(2)	165	220	2115	950	1260
UCC250DSQ-8/2	kg	710	710	165	165	(2)	(2)	220	220	2190	925	1310
UCC275DSQ-10/2	kg	680	680	350	350	255	255	245	245	3060	1100	1850
UCC300DSQ-12/2	kg	715	715	390	390	280	280	270	270	3310	1100	2270
UCC330DSQ-14/2	kg	740	740	445	445	320	320	310	310	3630	1100	2635
UCC360DSQ-14/2	kg	780	780	490	490	340	340	330	330	3880	1100	2640
UCC400DSQ-16/2	kg	810	810	525	525	460	460	350	350	4290	1100	2895
UCC450DSQ-16/2	kg	840	840	545	545	470	470	350	350	4410	1100	2860

(1) Have only 4 fixing and 4 point loadings.
(2) Have only 6 fixing and 6 point loadings.
(3) Calculation based on standard unit, for units fitted with pump, tank and expansion vessel options, please contact Airedale.

Installation Data

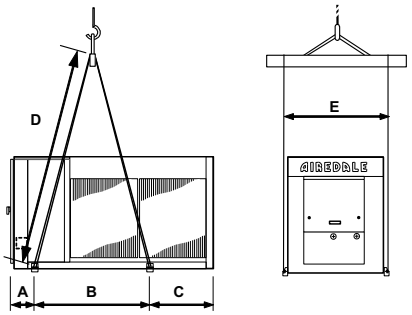
UNIT LIFTING

- Employ lifting specialists.
- Local codes and regulations relating to the lifting of this type of equipment should be observed.
- Use the lifting eye bolts/lifting lugs provided.
- Attach lifting chains to the 4 lifting eye bolts/lifting lugs provided, each chain and eye bolt must be capable of lifting the whole chiller.
- Use the appropriate spreader bars/lifting slings with the holes/lugs provided.
- Lift the unit slowly and evenly.
- If the unit is dropped, it should immediately be checked for damage and reported to Airedale Service.

CAUTION **Only use lifting points provided.**

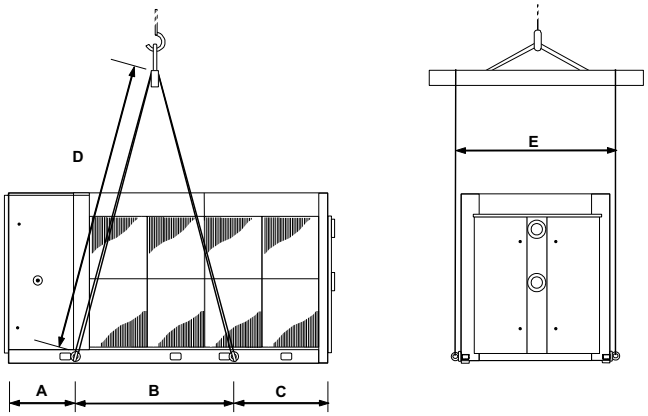
The unit should be lifted from the base and where possible, with all packing and protection in position. If any other type of slinging is used, due care should be taken to ensure that the slings do not crush the casework or coil.

LIFTING DIMENSIONS



UCC30 - 80 (Except UCC75)		A	B(1)	C(1)	D(1)	E
1 FAN /1	mm	300	1050 (1450)	300 (300)	1900 (2200)	1270
2 FANS /1	mm	300	1450	750	2200	1270

(1) Dimensions in brackets refer to the optional buffer tank when fitted.



UCC75 - UCC450 (Except UCC80)			A	B	C	D	E
75, 100, 125 & 150	..-2/1	mm	290	1900	585	2500	1450
	..-3/1	mm	290	2015	1320	2500	1450
	..-4/1	mm	290	2870	1315	3000	1450
110, 130 ,160 ,180, 200, 225 & 250	..-4/2	mm	180	1580	605	2500	2000
	..-6/2	mm	595	1650	925	2500	2000
	..-8/2	mm	595	2050	1330	2500	2350
275, 300, 330, 360, 400 & 450	..-8/2	mm	465	2560	1625	3000	2350
	..-10/2	mm	465	3135	1900	3500	2350
	..-12/2	mm	465	3610	2275	3500	2350
	..-14/2	mm	465	4385	2350	4000	2350
	..-16/2	mm	465	5035	2550	5000	2350

Installation Data

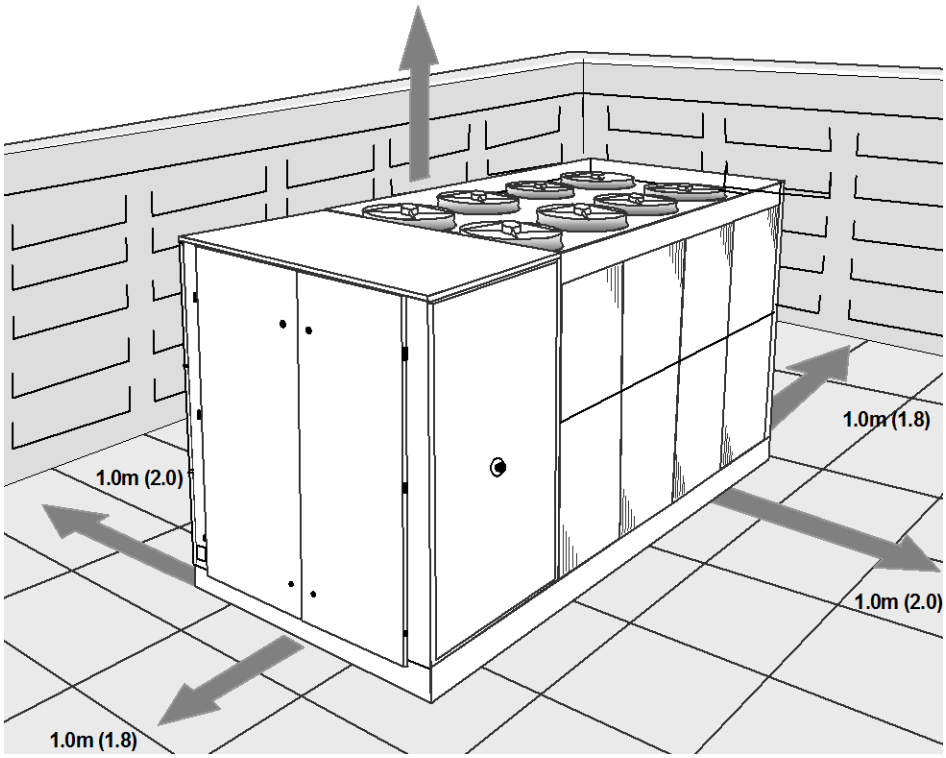
POSITIONING

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 spring anti-vibration mounts and flexible water connections.
- 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.
- Figures in brackets indicate airflow and maintenance clearances for side-enclosed or multiple chiller applications.
- 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.**

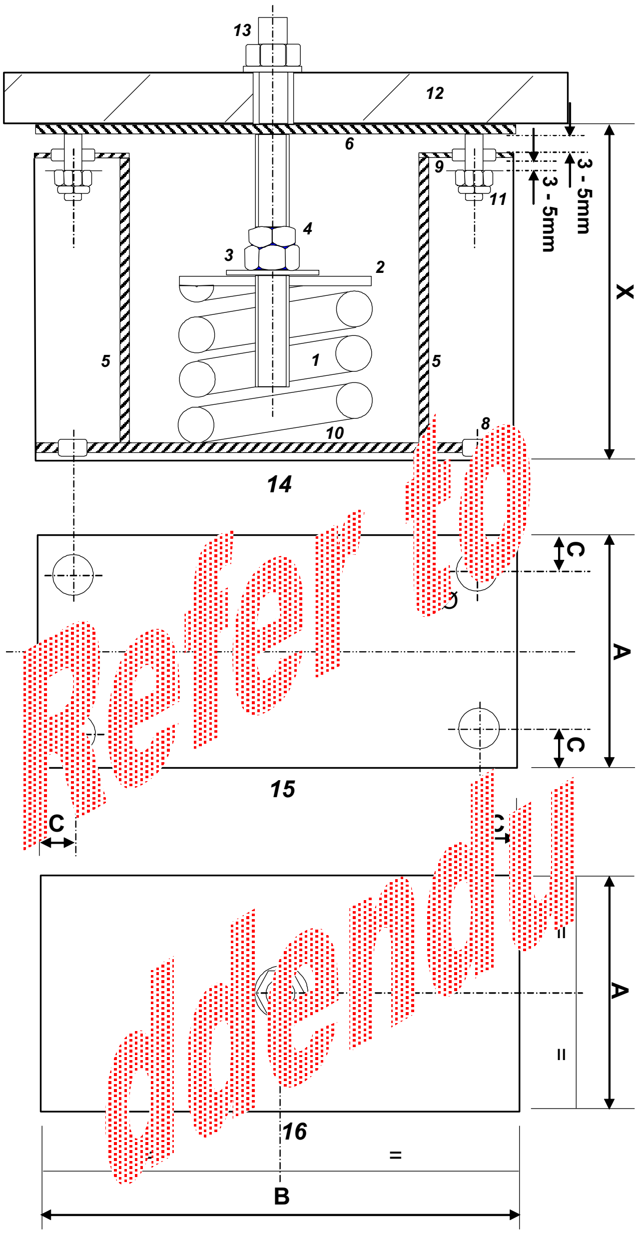
The Sound Pressure data quoted (refer to ***Sound Data***) is only valid in free field conditions, where the unit is installed on a reflective base. If the equipment is placed adjacent to a reflective wall, values may vary to those stated in our Performance Data section, typically increasing by 3dB(A) for each side added.



Installation Data

ANTI VIBRATION MOUNTING - OPTIONAL

Spring Type (CLS)



1 High deflection steel spring
2 Spring pressure plate
3 Height adjusting nut
4 Locking nut
5 Load bearing supports
6 Load bearing top plate
7 High frequency isola[illegible]
8 10 dia holding dow[illegible]
9 High frequency iso[illegible]
10 Steel spring locati[illegible]
11 Transportation/res[illegible]ing bolts
12 Machine frame
13 Machine holding M16 stud/nuts
14 ELEVATION
15 BASE PLATE
16 TOP PLATE

Selection:

Model Size		A	B	C	D	[illegible], X
30 - 80 (ex 75)	mm	[illegible]	[illegible]	15	[illegible]	120 - 150
75 - 450 (ex 80)	mm	[illegible]	[illegible]	[illegible]	[illegible]	180 - 210

Installation:

1 Loca[illegible] and [illegible] using bolting down holes pro[illegible]d in [illegible] plate
2 En[illegible] mo[illegible]nts are located in line with the chille[illegible]as[illegible]
3 Positi[illegible] the machine using the centrally located stud, [illegible]hich allows the machine to be bolted down securely.
4 Loosen transit bolts and turn nut 3 clockwise until top plate 6 lifts clear of support posts. Tighten lock nut 4 when machine is at desired height and level.
5 Adjust and lock nuts on transit bolts such that a small (3-5mm) gap is left between washer and grommet. Refer to diagram.

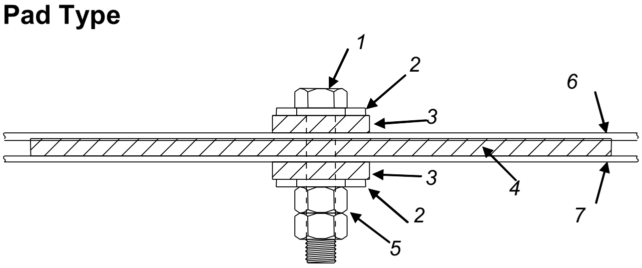
CAUTION

Mountings must be adjusted in increments of no more than 1mm in turn. Do not adjust 1 mount completely at a time as this may overload and damage springs.

Do not connect any services until all anti vibration mounts have been fully adjusted.

FINALLY, recheck/adjust mounts following unit connection to services and system is filled.

Pad Type



1 M16 Bolt (Not Supplied)
2 Washer (Not Supplied)
3 Fixing Pad 506-063
4 A V Pad 506-062
5 2 x M16 Nut (Not Supplied)
6 Unit Base
7 Unit Mounting Plinth

Installation Data

WATER SYSTEM

Chilled water pipework and ancillary components must be installed in accordance with:

- National and Local Water supply company standards.
- The manufacturer's instructions are followed when fitting ancillary components.
- The system water is treated to prevent corrosion and algae forming.
- In ambients of 0°C and below, where static water can be expected, or when water supply temperatures of +5°C or below is required, the necessary concentration of Glycol or use of an electrical trace heater must be included.
- The schematic is referred to as a guide to ancillary recommendations.

CAUTION **The unit water connections are NOT designed to support external pipework, pipework should be supported during installation.**

The water flow commissioning valve set is not shown in the diagram, as the valve can be fitted elsewhere within the chilled water circuit.

Component Recommended Requirements

The recommended requirements to allow commissioning to be carried out correctly are:

- The inclusion of Binder Points adjacent to the flow and return connections, to allow temperature and pressure readings.
- A flow switch or equivalent, fitted adjacent to the water outlet side of the Chiller.

CAUTION **Constant water flow MUST be maintained. Variable water volume is NOT recommended and may invalidate warranty.**

CAUTION **The correct operation of the flow switch is critical if the chiller warranty is to be valid.**

- A 20 mesh strainer fitted prior to the evaporator inlet.
- A water-flow commissioning valve set fitted to the system.
- In multiple chiller installations, 1 commissioning valve set is required per chiller.
- Air vents are to be installed at all high points and where air is likely to be trapped at intermediate points.
- Drain points are to be installed at all low points in the system and in particular adjacent to the unit for maintenance to be carried out.
- Isolating valves should be installed adjacent to all major items of equipment for ease of maintenance.
- Balancing valves can be installed if required to aid correct system balancing.
- All chilled water pipework must be insulated and vapour sealed to avoid condensation.
- If several units are installed in parallel adjacent to each other, reverse return should be applied to avoid unnecessary balancing valves.

Pump Statement

When installing circulating water pumps or equipment containing them, the following rules should be applied:

- Ensure the system is filled with water then vented and the pump primed with water before running the pump. This is required because the pumped liquid cools the pump bearings and mechanical seal faces.
- To avoid cavitation the NPSH (Net Positive Suction Head) incorporating a safety margin of 0.5m head must be available at the pump inlet during operation.

Interlocks & Protection

Always electrically interlock the operation of the chiller with the pump controls **and** water flow switch for safety reasons. **Failure to do this will invalidate the chiller warranty.**

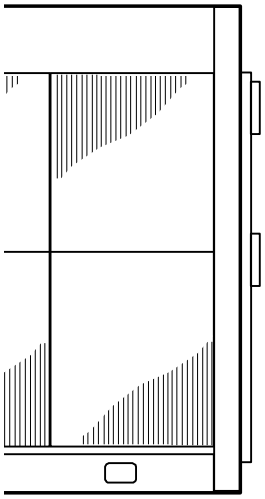
Do not rely solely on the BMS to protect the chiller against low flow conditions.

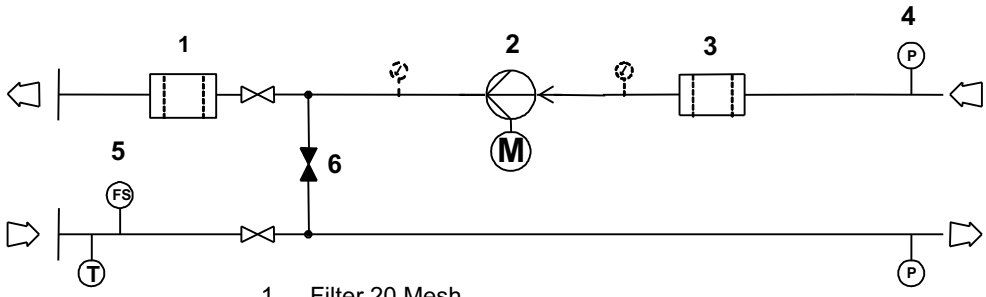
An evaporator pump interlock and flow switch MUST be directly wired to the chiller, refer to *Interconnecting Wiring* diagram.

Installation Data

WATER SYSTEM

Standard Recommended Installation (Parts Supplied By Others)



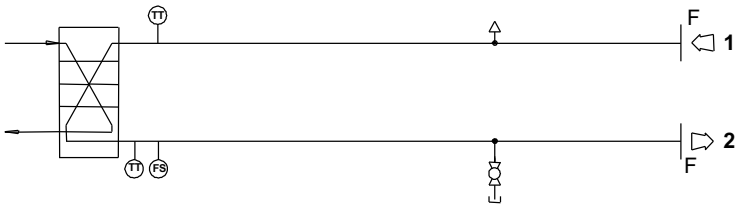


1 Filter 20 Mesh
2 Pump
3 Filter 1/16”
4 Pressure Sensor
5 Flow Switch
6 Flushing By Pass Leg
7 Pressure Sensor

FLOW SCHEMES

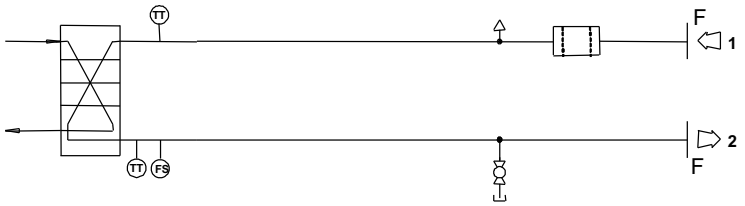
Key: 1 Water In
2 Water Out

Basic Supplied Water Schematic
(Includes Flow Switch Optional Extra)

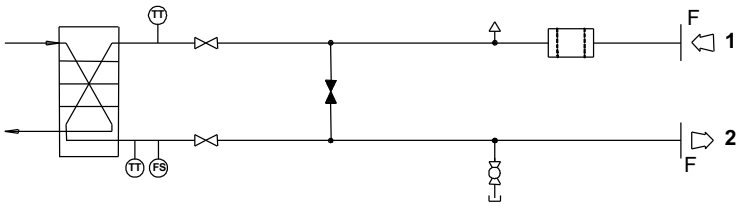


OPTIONAL FLOW SCHEMES

Filter Only Scheme - Comprises: Standard Circuit plus:
Optional Extras:
- Flow Switch
- 20 Mesh Water Filter



Filter - Flushing Bypass Scheme - Comprises: Standard Circuit plus:
Optional Extras:
- Flow Switch
- 20 Mesh Water Filter
- Flushing Bypass Circuit

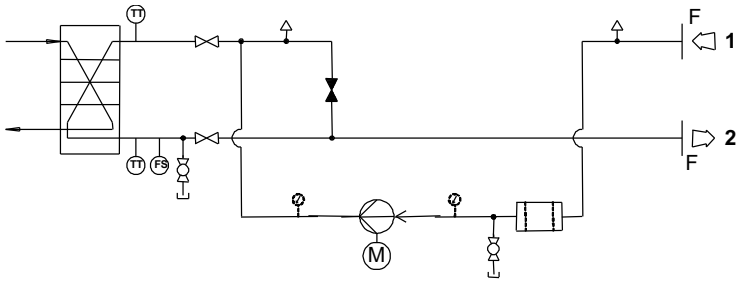


Installation Data

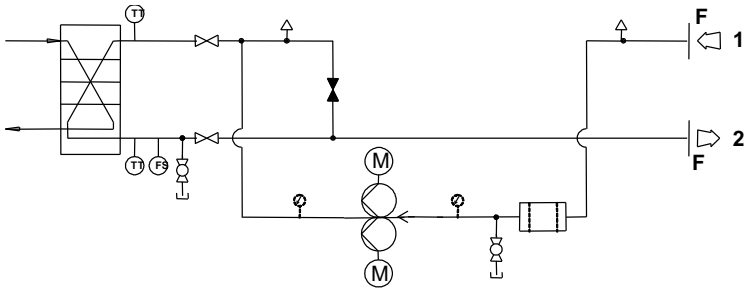
PUMP OPTIONS - FLOW SCHEMES

Key: 1 Water In
2 Water Out

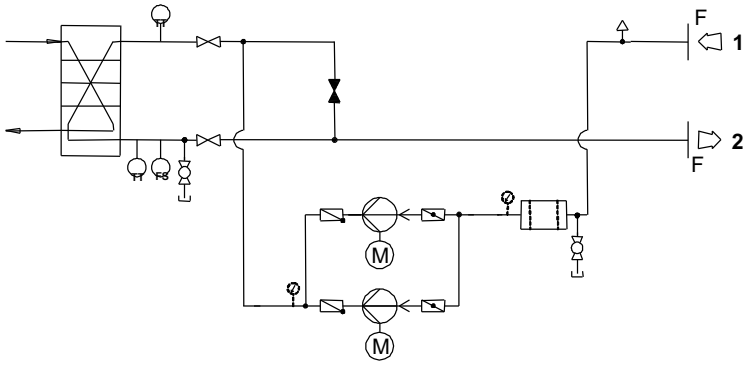
Single Head Pump Scheme - Comprises:
Standard Circuit plus:
Optional Extras:
- Flow Switch
- 20 Mesh Water Filter
- Flushing Bypass Circuit
- Single Head Pump



Twin Head Pump Scheme - Comprises:
Standard Circuit plus:
Optional Extras:
- Flow Switch
- 20 Mesh Water Filter
- Flushing Bypass Circuit
- Twin Head Pump



Single Head Run/Standby Pump Scheme - Comprises:
Standard Circuit plus:
Optional Extras:
- Flow Switch
- 20 Mesh Water Filter
- Flushing Bypass Circuit
- Single Head Run/Standby Pump



Installation Data

ELECTRICAL

General

- As standard the equipment is designed for 400V, 3 phase, 3 wire 50Hz and a separate permanent 230V, 1 phase, 50Hz supply, to all relevant IEE regulations, British standards and IEC requirements.
- A fused and isolated electrical supply of the appropriate phase, frequency and voltage should be installed.
- The control voltage to the interlocks is 24V. Always size the low voltage interlock and protection cabling for a maximum voltage drop of 2V.

CAUTION **Wires should be capable of carrying the maximum load current under non-fault conditions at the stipulated voltage.**

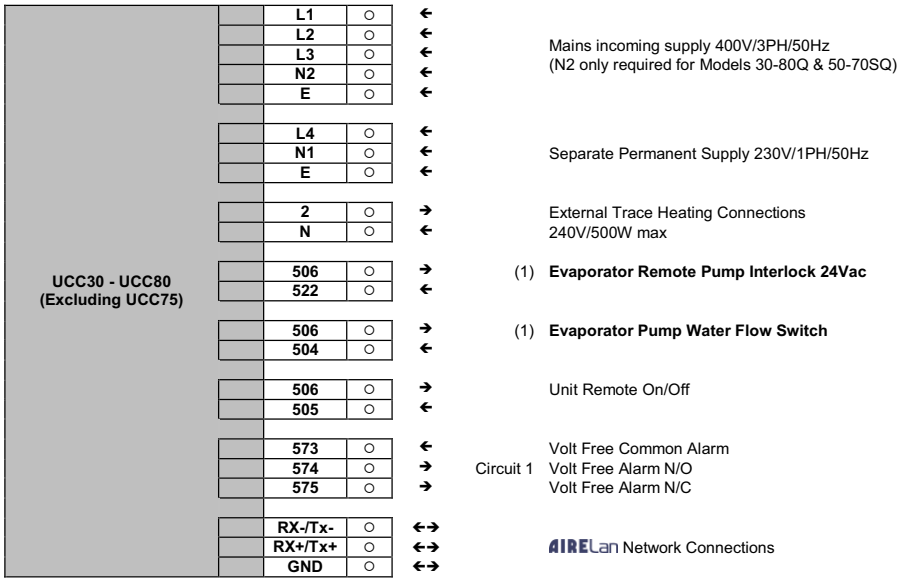
- Avoid large voltage drops on cable runs, particularly low voltage wiring.

CAUTION **A separately fused, locally isolated, permanent single phase and neutral supply MUST BE FITTED for the compressor sump heater, evaporator trace heating and control circuits, FAILURE to do so could INVALIDATE WARRANTY.**

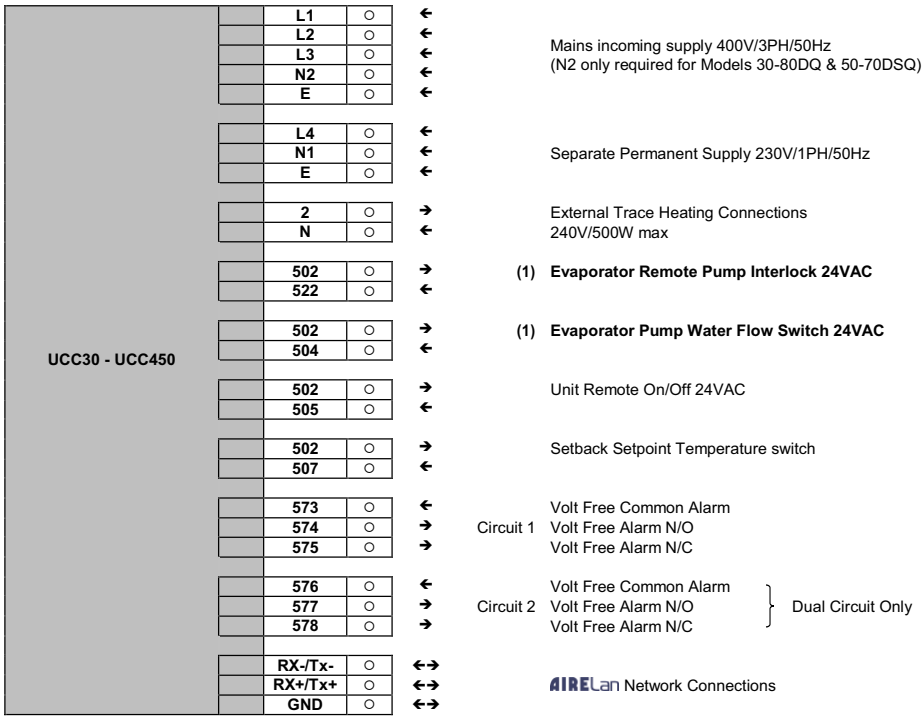
Installation Data

INTERCONNECTING WIRING

No Pumps
Single Circuit
(not including: leak detector, remote setpoint adjust and differential pressure switch)



Double Circuit

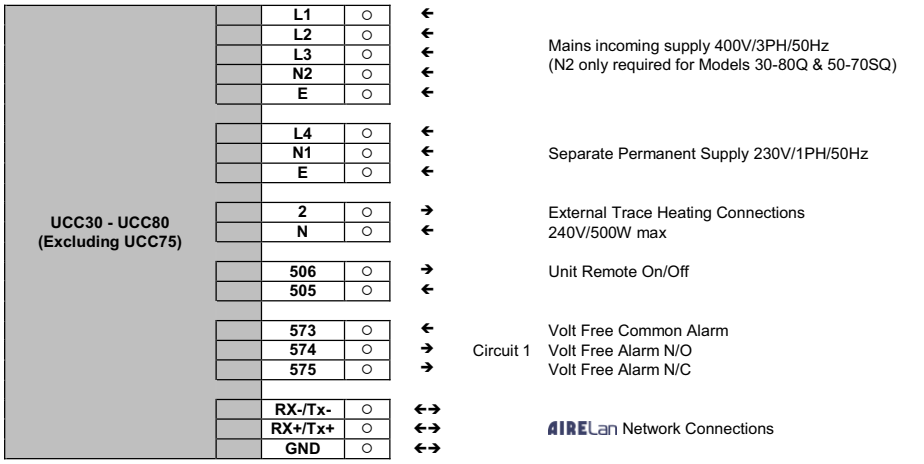


CAUTION **(1) MUST be directly wired to the chiller to validate warranty.**

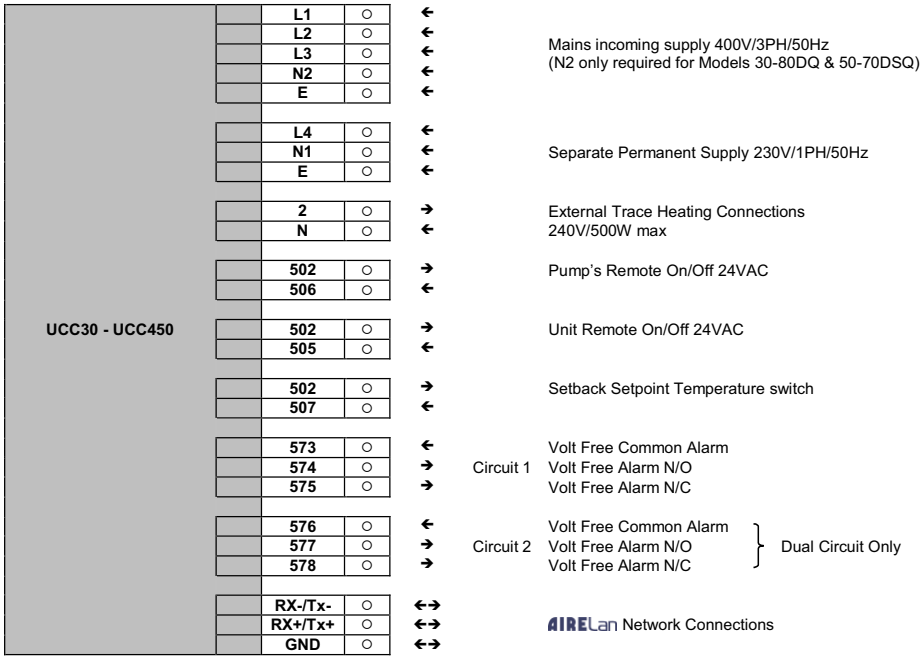
Installation Data

INTERCONNECTING WIRING

With Pumps
Single Circuit
(not including: leak detector, remote setpoint adjust and differential pressure switch)



Double Circuit



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PART NO:	ISSUE	DATE
903-128 TM E	~~A~~	~~01/08/04~~
	~~B~~	~~01/02/05~~
	C	01/08/05
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