Airedale
APPLIED THERMAL INNOVATION

# EasiCool™ EZE

## Downflow and Upflow - Precision Air Conditioning

## Direct Expansion

## 6kW - 60kW

# Technical Manual

CE

bsi. ISO 9001 Quality Management FM00542 ISO 14001 Environmental Management EMS52086

### Warranty, Commissioning & Maintenance

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

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

### SafeCool™

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

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

### Spares

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

### Training

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

### Customer Services

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

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

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

### Health and Safety

**IMPORTANT**

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

**Safety**

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

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

The refrigerant used in this range of products is classified under the COSHH regulations as an irritant, with set Workplace Exposure Levels (WEL) for consideration if this plant is installed in confined or poorly ventilated areas.
A full hazard data sheet in accordance with COSHH regulations is available should this be required.

### Protective Personal Equipment

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

### Refrigerant Warning

The Airedale Easicool unit uses R407C refrigerant which requires careful attention to proper storage and handling procedures. Use only manifold gauge sets designed for use with R407C refrigerant. Use only refrigerant recovery units and cylinders designed for high pressure refrigerants. R407C must only be charged in the liquid state to ensure correct blend makeup. The refrigerant must be stored in a clean, dry area away from sunlight and must never be stored above 50°C.

### Global Warming Potential

The R407C refrigerant has a GWP of 1774 (based on EN378-1:2016, 100 year life)

### Pressure Equipment Directive (2014/68/EU)

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

### Refrigeration

Allowable Temperature Range (TS), = Min -5°C* to Max 120°C**

Maximum Allowable Pressure (PS), = High Side 27.6 Barg Low Side N/A Barg

*Based on the refrigerant temperature in the unit off state in the lowest permitted ambient temperature.

**Based on the refrigerant temperature in the unit off state.

### Waterside

Allowable Temperature Range (TS), = Min -5°C* to Max 40°C**

Maximum Allowable Pressure (PS), = 10 Barg

*Based on the waterside temperature in the unit off state.

**Based on the waterside temperature in the unit off state.'

### Ecodesign Directive 2009/125/EC

The EasiCool range is exempt from Ecodesign when applied in process cooling applications (i.e. data centres). When the easiCool range is applied in comfort cooling applications above 12kW they are non-Ecodesign compliant. Please refer to your Airedale account manager for full details

### Manual Handling

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

## Environmental Considerations

### Freeze Protection

Airedale recommends the following actions to help protect the unit during low temperature operation. This also includes the units subject to low ambient temperatures.

### Units with supply water temperatures below +5°C

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

### Units subject to ambient temperatures lower than 0°C

Glycol of an appropriate concentration(1) is used within the system to ensure adequate protection. Please ensure that the concentration is capable of protection at least 3°C lower than ambient. Water/glycol solution is constantly circulated through all waterside pipe work and coils to avoid static water from freezing.

Ensure that pumps are started and running even during shut down periods, when the ambient is within 3°C of the solution freeze point (1) (i.e. if the solution freezes at 0°C, the pump must be operating at 3°C ambient).

(1) Refer to your glycol supplier for details

### Environmental Policy

It is our policy to:

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

### CE Directive

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

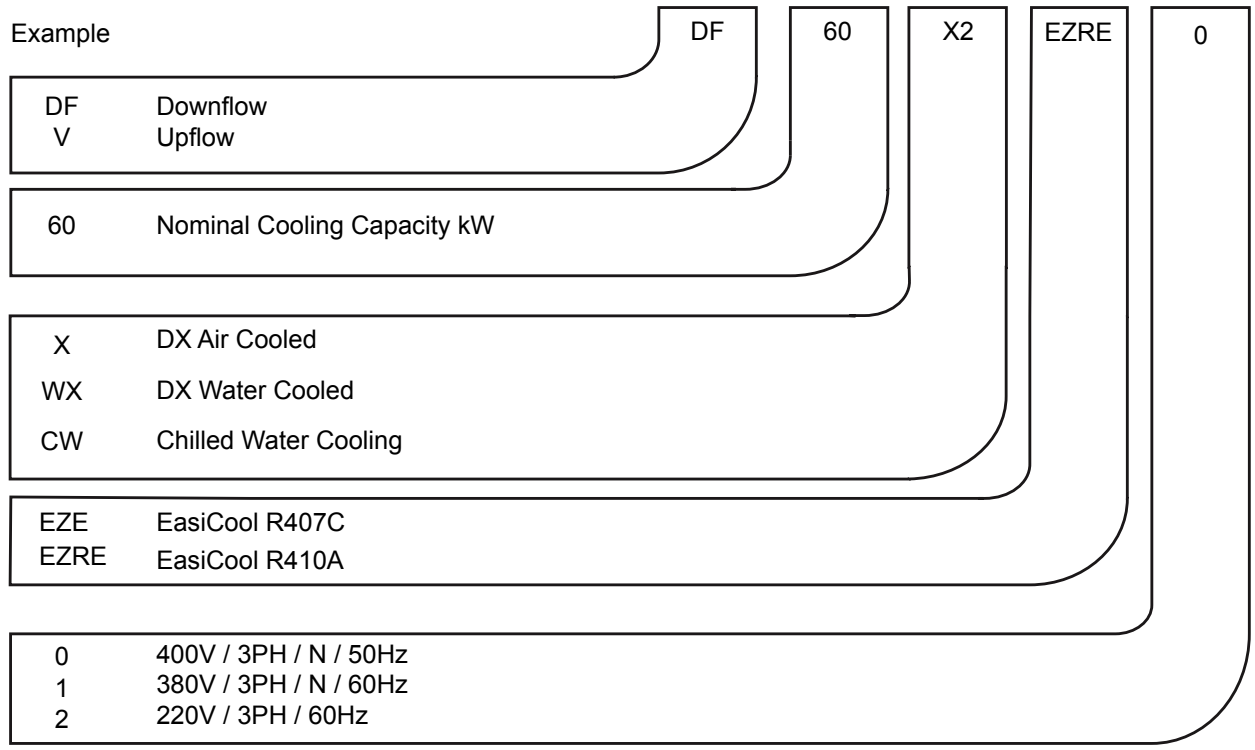
| | |
|---|---|
| Electromagnetic Compatibility Directive (EMC) | 2014/30/EU |
| Machinery Directive (MD) | 89/392/EEC version 2006/42/EC |
| Pressure Equipment Directive (PED) | 2014/68/EU |

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

# Contents

## Specifiers Guide

### Nomenclature




### Introduction

Designed to provide environmental Precision Air Conditioning for applications such as Telecommunication Facilities, Computer Rooms, Data Centres, Clean Rooms and laboratories.

Full function units provide full control of temperature, humidification, de-humidification, heating and filtration.

The modular design of the EasiCool allows grouping of differing model types and capacities to be installed side by side. The flexibility of this type of installation provides for multi-circuit functionality.

A full range of air cooled condensers is available with the direct expansion indoor units to provide a matched system with optional performance upgrade.

Also available is a full range of Airedale water chillers to complement the chilled water indoor units.

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

**Construction**

The cabinet comprises of a black painted aluminium frame with black aluminium corners and removable galvanised sheet steel panels. The unit panels are manufactured from galvanised sheet steel coated with epoxy baked powder paint to provide a durable finish. Standard unit colour is Black Grey (RAL 7021). Optional Light Grey (RAL 7035). Cabinets are lined internally with fire resistant foam (UL94 V0) thermal and acoustic insulation:

- 30mm deep for removable panels
- 12mm deep for remaining internal surfaces

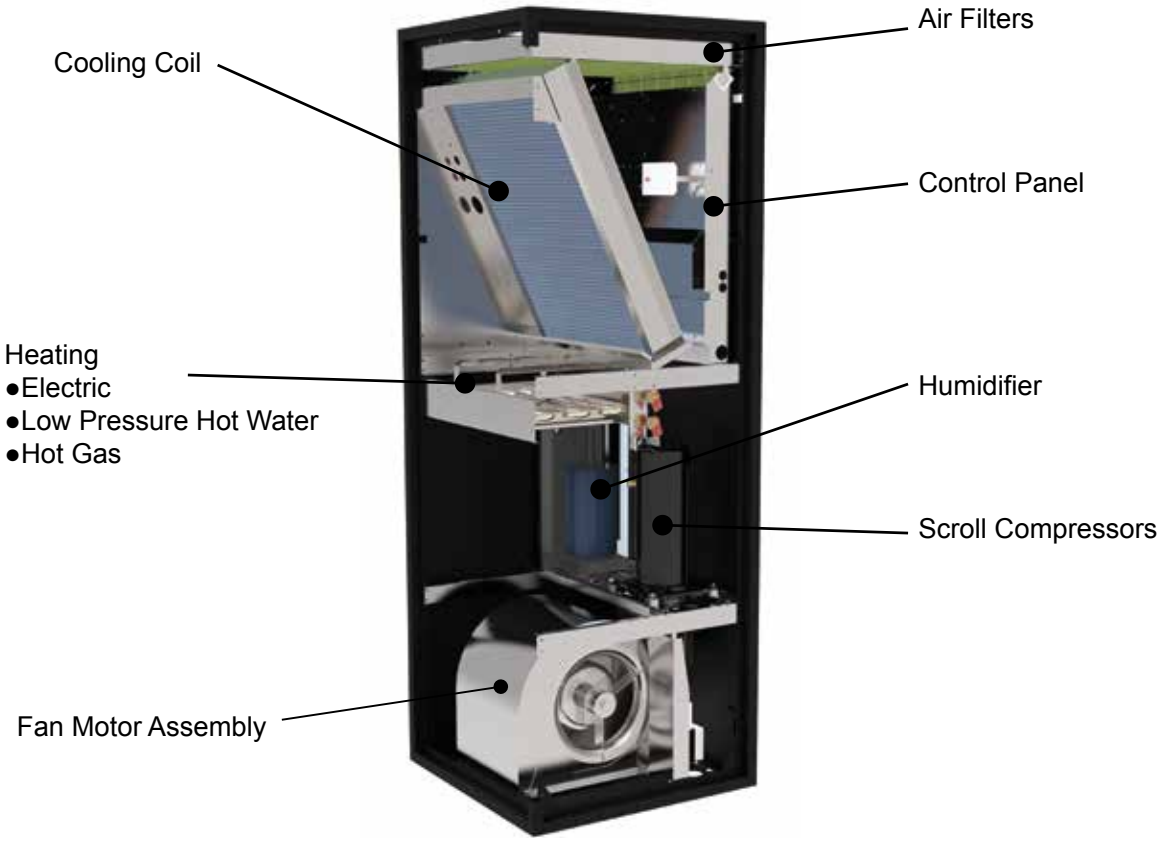
The cabinet doors are full height, hinged and key lock secured. Hinge arrangement allows flexible door opening/removal for improved access. Rubberised door seals reduce sound breakout and eradicate leakage. Simple bolt on type doors are available as a cost effective option. Unit design incorporates a series of M6 fixings to the top and bottom face for connecting to customer ductwork, please contact Airedale for further details.

Sizes 6 - 26

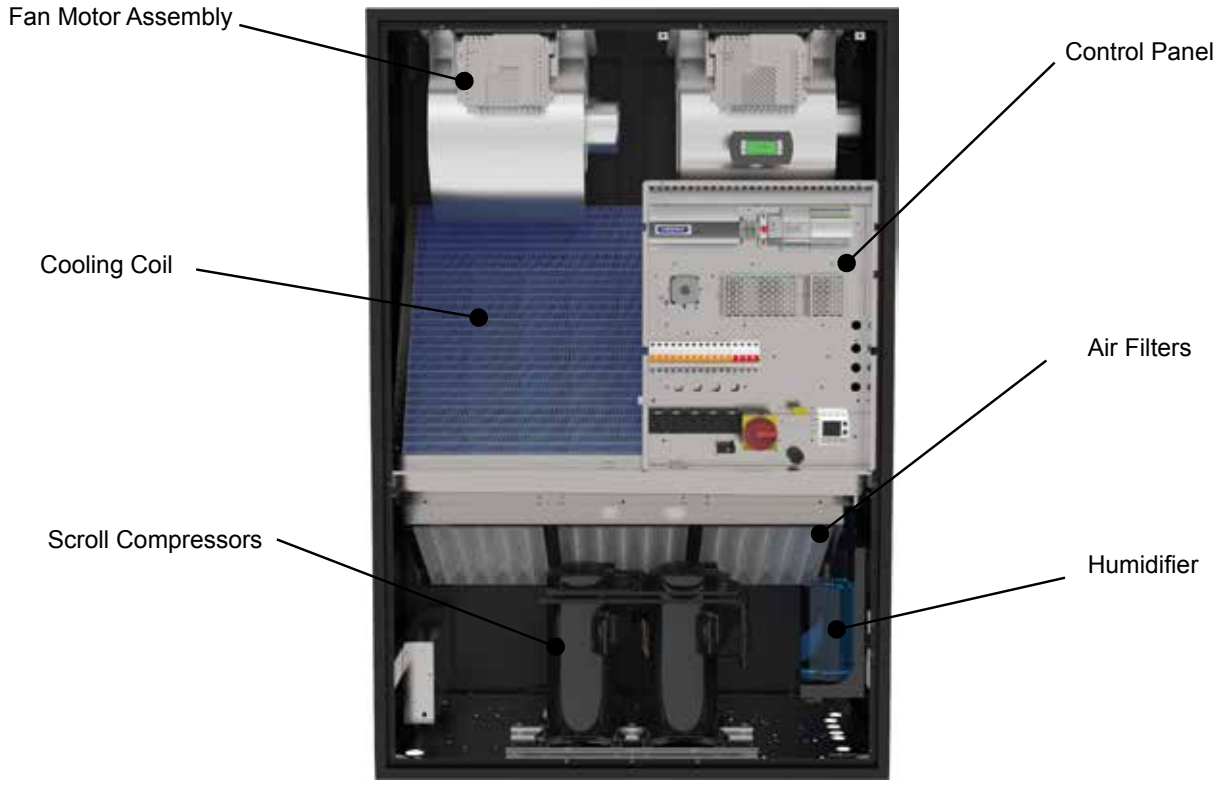
Dependent upon model type, components such as the expansion valve, compressor, humidifier and sight glass are contained within an acoustically lined enclosure to provide both ease of maintenance and to minimise sound emission.

**Unit Overview**

**Downflow**




**Upflow**



**Refrigeration Components**

Electronic Expansion Valve

Scroll Compressor

| | | System Configuration | | | |
|---|---|---|---|---|---|
| | | Downflow | | Upflow | |
| | | X Type | WX Type | X Type | WX Type |
| Refrigeration | Efficient Fixed Speed Scroll Compressor | ● | ● | ● | ● |
| | Evaporator Coil | ● | ● | ● | ● |
| | Refrigeration Sight Glass | ● | ● | ● | ● |
| | Oil Separator | ○ | ○ | ○ | ○ |
| | Liquid Line Solenoid Valve | ○ | ○ | ○ | ○ |
| | Refrigerant Pump down | ○ | ○ | ○ | ○ |
| | Hot Gas Reheat | ○ | – | ○ | – |
| | Suction Throttle Valve | ○ | ○ | ○ | ○ |
| | BPHE Condenser | ○ | ● | ○ | ● |
| | Thermostatic Expansion Valves (TEV) | ● | ● | ● | ● |
| | Electronic expansion Valves (EEV) | ○ | ○ | ○ | ○ |

● Standard Feature ○ Optional Feature – Not Available

**Evaporator**

Large surface area coil(s) ideally positioned to optimise airflow and heat transfer, manufactured from refrigeration quality copper tube with mechanically bonded aluminium fins. The copper tube is internally rifled for improved heat transfer. Fins are coated with a non-stick acrylic film (hydrophilic) which provides additional corrosion protection and efficient surface water removal for improved performance. The cooling coil is mounted over a full width stainless steel condensate tray. Factory pressure tested to 45 Barg.

X Models Only Sweat copper pipe for brazed connection as standard.

### Compressor

Compressor(s) are mounted on the base via the use of vibration isolators. Each compressor is designed for use with R407C refrigerant.

| | X | X2 | WX | WX2 |
|---|---|---|---|---|
| Thermal Protection | ● | ● | ● | ● |
| Single Compressor | ● | — | ● | — |
| Tandem Compressors | — | ● | — | ● |

● Standard Feature ○ Optional Feature – Not Available

### Tandem Compressors

Comprising of 2 scroll type compressors linked together by refrigerant pipework to one common circuit.

Tandem compressors provide variable control of the system performance by activating individual compressors as required. Multiple steps of unloading allow external load demands to be met with greater precision, eliminating unnecessary temperature and humidity variations. Consequently, system efficiency and reliability are much improved by extending major component working hours.

### X and WX Models

Utilise a single hermetic scroll compressor fitted as standard with:

- Thermal motor protection internal or external (dependent upon model size)
- High temperature discharge protection

### X2 and WX2 Models

Utilise a tandem hermetic scroll compressor set, to provide 2 stages of control, fitted as standard with:

- Thermal motor protection internal or external (dependent upon model size)
- High temperature discharge protection
- Sight glass on common equalisation line

### Refrigeration

Each refrigeration circuit features as standard:

### X Type

- Externally Equalised Thermostatic Expansion Valve (TEV)
- Sight Glass
- Head Pressure Control
- Filter Drier
- Low Pressure Switch
- High pressure Switch
- Liquid Line Pressure Transducer
- Holding Charge of Inert Gas

### WX Type

- Externally equalised thermostatic expansion valve (TEV)
- Sight Glass
- Head Pressure Control
- Filter Drier
- Low Pressure Switch
- High Pressure Switch
- Liquid Line Pressure Transducer
- Full operating charge of R407C
- Bleed valve
- Binder points

### Head Pressure Control - Intelligent Modulation

(X Models)

The system is fitted with a voltage regulating fan speed controller which allows set point adjustment and system monitoring via the indoor unit microprocessor controller. A pressure transducer is fitted to the liquid line which in turn feeds back the head pressure to the microprocessor. The condenser fan speed can then modulate via the controller to provide optimum control under varying ambient conditions. The head pressure can be monitored via the display keypad.
Units fitted with thermostatic expansion valves (TEV) have the head pressure factory set to 26 Barg (377 psig). Units fitted with optional electronic expansion valves (EEV) have the head pressure factory set to 22 Barg (319 psig). The head pressure can be monitored via the display keypad.

### Low Noise Feature for Condenser Fan

(X Models)

Specifically designed for night time operation as optimum low noise levels are achieved with reduced ambient temperature and room loads, this feature is also ideal for residential and other outdoor noise critical applications.

Initiated by setting the microprocessor programmable time clock, the head pressure set point changes from the standard 26 barg (377 psig) (TEV) or 22 barg (319 psig) (optional EEV) to 34 barg (493 psig), reducing the outdoor unit fan speed and corresponding operating sound levels.
This feature is enabled by the inclusion of an optional clock card within the microprocessor.

### Head Pressure Control -Intelligent Modulation

(WX Models)

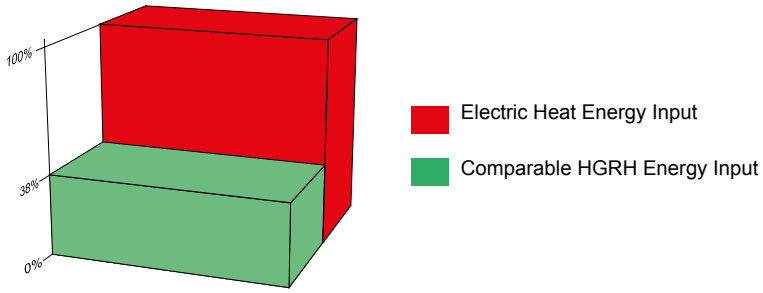
A 3-way regulating valve, electronically actuated via the microprocessor, utilises a liquid line pressure transducer to measure and adjust head pressure. The valve will allow cooling water to flow to the condenser, to bypass the condenser, or to allow water flow to both condenser and by-pass line in order to maintain correct refrigerant head pressure. The head pressure can be monitored via the display keypad.

### Hot Gas Re-Heat (HGRH)

(X Models)

The HGRH system consists of a heating coil and solenoid valve(s) and can be fitted to units with humidification selected. The microprocessor monitors the temperature and humidity setpoints and initiates HGRH to provide optimum system efficiency. HGRH may be fitted instead of electric heating or low pressure hot water.
During dehumidification, the hot gas re-heat coil re-heats the cooled air from the evaporator coil using hot gas from the discharge line to maintain the room setpoint. Normally reheating of the air during dehumidification is performed by electric heating which requires additional power input. By utilising the available hot gas, the HGRH option does not require additional power input and is therefore far more energy efficient than electric heating.

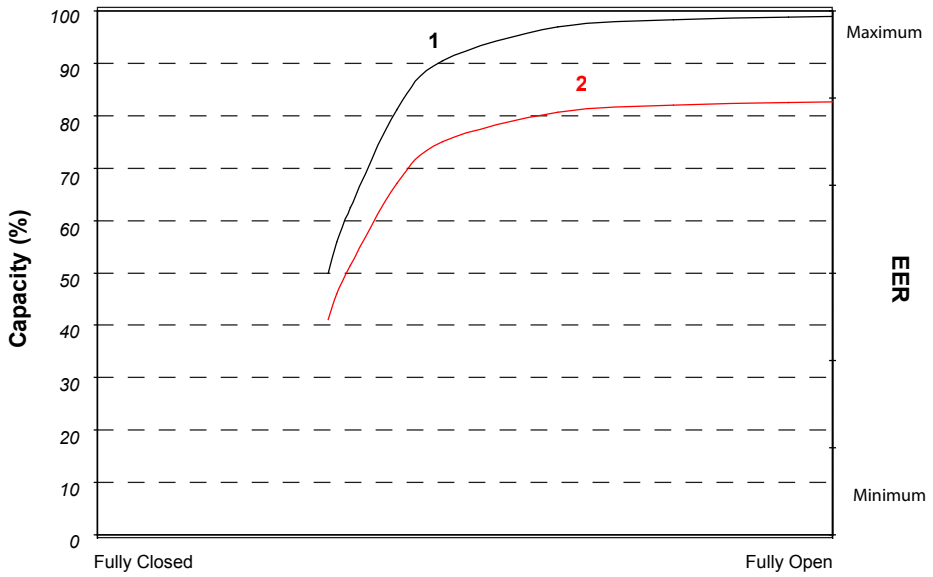
Average Energy Input Comparison HGRH vs Electric Heat



**Suction Throttle Valve**

The valve can be selected for units fitted with EEVs.

An electrically operated suction throttle valve can be fitted to provide accurate capacity control from 50% to 100% depending on the room load. Precise temperature control is obtained as a result of modulating the refrigerant flow in the evaporator by throttling the valve on the suction line.




1 Capacity @ 24°C / 45% RH return air conditions

2 EER @ 24°C / 45% RH return air conditions

**Electronic Expansion Valves (EEV)**

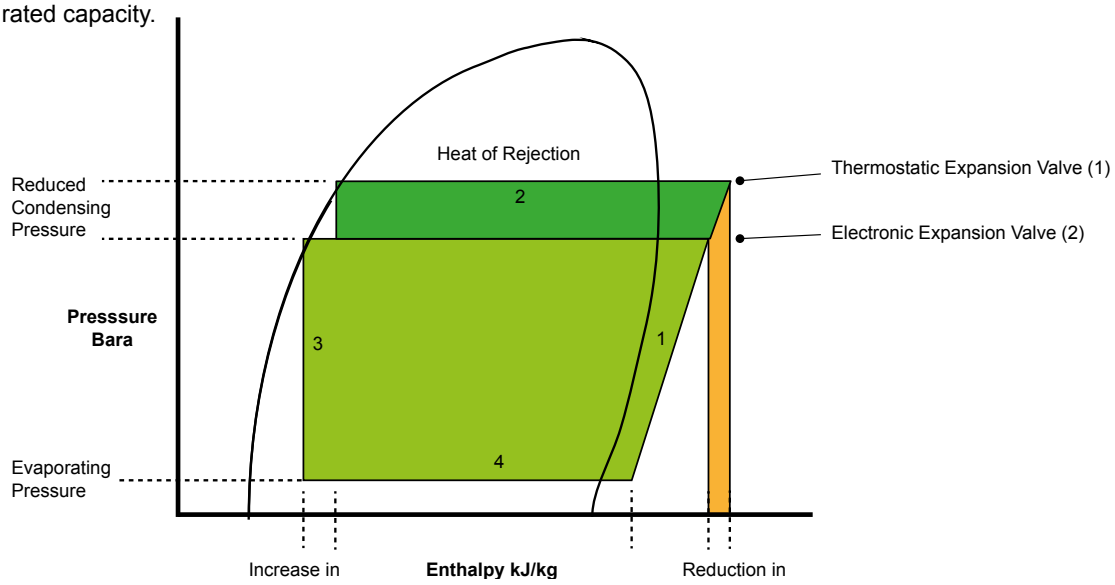
Electronic expansion valves differ to the normal thermostatic expansion valves in their ability to maintain control of the suction superheat at reduced head pressures. This can lead to significant energy savings particularly at reduced loading and low ambient temperatures.

EEV step position, superheat setpoint, head pressure set point and other features can be viewed and adjusted via the microprocessor display.

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

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

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




| | | | |
|---|---|---|---|
| 1 | Compression | 3 | Expansion |
| 2 | Condensation | 4 | Evaporation |

Key:

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

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

**Airflow Components**

Pleated Disposable Panel Filter

EC Direct Drive Forward Curve Fan

| | | System Configuration | | | |
|---|---|---|---|---|---|
| | | Downflow | | Upflow | |
| | Features | X Type | WX Type | X Type | WX Type |
| Airflow Components | EC Forward Curved Direct Drive Fans 6 - 26 | ● | ● | ● | ● |
| | AC Forward Curved Direct Drive Fans 6 - 26 | ○ | ○ | ○ | ○ |
| | AC Forward Curved Belt and Pulley Fans 28 - 60 | ● | ● | ● | ● |
| | AC Larger Fan Motor** | ○ | ○ | ○ | ○ |
| | 2 way Discharge Grille | – | – | ○ | ○ |
| | 3 Way Discharge Grille | – | – | ○ | ○ |
| | Return Air Grille | – | – | ● | ● |
| | G4 Return Door Air Filter | ○ | ○ | ○ | ○ |

● Standard Feature ○ Optional Feature – Not Available

** Model Dependant on selected units with AC fans as standard.

**EC Motor**

**Sizes 6 - 26**

(Direct Drive)

Units utilise a double inlet, forward curved, direct drive centrifugal fan with integral shaft mounted EC motor which is statically and dynamically balanced for quiet operation. Impellers and casings are galvanised for protection against corrosion. The integral motor runs in sealed for life, lubricated bearings and features automatic thermal overload protection.

Fan speed, airflow and external static pressure are controlled by the use of a 0-10 Volts signal via the microprocessor display keypad which offers easy on site adjustment. Adjustable by increments of 1% within + / - 10% of the set point.

**Sizes 6 - 17**

Units have a single fan and motor assembly.

**Sizes 20 - 26**

Units have 2 fan and motor assemblies.

**Sizes 28 - 60**

(Belt & Pulley) Double inlet forward curved centrifugal fan(s) with galvanised impellers and casing. Mild steel fan shaft with lifetime lubricated ball bearings. Fan and drive assembly design is based on a minimum of 25,000 hours life expectancy.

Each fan assembly is separately driven by a high efficiency air cooled AC motor through a pulley and 'V' belt drive. The complete motor assembly is mounted on a fully adjustable platform for belt tensioning. Motor specification conforms to Efficiency Class 1(IE3). With integrated plummer block bearings (4kW motors only).

**Sizes 28 - 45**

Units have a single fan and motor assembly.

**Sizes 50 - 60**

Units have 2 fan and motor assemblies.

Large AC fan motor options available on most sizes, refer to Mechanical Data.

Energy efficient Electronically Commutated (EC) fans are also available.

**Airflow Switch**

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

**Filters**

Pleated disposable panel filters in a rigid frame. Conform to EN16890- ISO-C-75. Access and removal from unit front.

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

### Fan & Motor Assembly Optional Features

#### Larger & Next Larger Fan Motor

(AC Fan Motors Only Sizes 28 to 60)
For applications where higher static air pressures are required, a larger fan and motor assembly size can be fitted to replace the standard assembly and is available on most models.

#### Electronically Commutated (EC) Fan Motor

#### Sizes 6 - 60

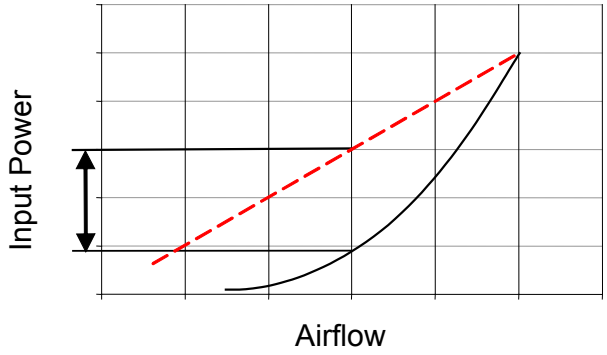
Backward curved impellers, direct drive centrifugal fan assemblies with integral rotor mounted motor which is statically and dynamically balanced for quiet operation.

Designed for high corrosion resistance, the impellers are laser welded aluminium with a galvanised rotor and die cast aluminium EC power module. EC motors incorporate integrated electronics to convert AC power to DC for efficient and accurate speed control and are adjustable via the microprocessor display keypad.

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

EC motors are DC motors with integrated AC to DC conversion; this gives the flexibility of connecting to AC mains with the efficiency and simple speed control of a DC motor. The EC fan offers significant power reduction in comparison with equivalent AC fan at both full and modulated fan speeds. The inbuilt EC fan control module allows for fan speed modulation from 15-100%, a standard AC fans modulating range is typically 40 to 100% of full fan speed. The EC fan presents superior energy efficiency at full and reduced fan speed compared to the equivalent AC fan motor.
Standard voltage regulated (VR) fan speed controllers offer a linear response. By comparison the EC fan is adjusted on demand via the unit microprocessor with precision, offering substantial energy savings.

The following illustration shows a comparison of the typical power input required by each method.




Key

EC (Electronically Commutated) Fan Speed Control

Regulated (VR) Fan Speed Control

## Electrical Components

Power Meter

| | Features | System Configuration | | | |
|---|---|---|---|---|---|
| | | Downflow | | Upflow | |
| | | X Type | WX Type | X Type | WX Type |
| Electrical | Electrical Switch Gear | ● | ● | ● | ● |
| | Door Interlocking Electric Isolator | ● | ● | ● | ● |
| | Energy Manager | ○ | ○ | ○ | ○ |
| | Phase Rotation Monitoring | ○ | ○ | ○ | ○ |
| | Thyristor Controlled Electric Heat | ○ | ○ | ○ | ○ |

● Standard Feature ○ Optional Feature ━ Not Available

### Electrical

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

### Sub Fusing

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

### Main Electric Isolator

To ensure complete unit isolation of the electrical panel during adjustment and maintenance a door interlocking isolator is provided as standard.

### Energy Manager

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

### Phase Rotation Protection

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

**Heating and Humidification**

Electric Heat

Humidification

| | | System Configuration | | | |
|---|---|---|---|---|---|
| | | Downflow | | Upflow | |
| | | X Type | WX Type | X Type | WX Type |
| Heating | Electric Heat | ○ | ○ | ○ | ○ |
| | Hot gas Reheat | ○ | – | ○ | – |
| | Low Pressure Hot Water | ○ | ○ | ○ | ○ |
| Humidification | Humidifier | ○ | ○ | ○ | ○ |
| | Hot Water Condensate Pump | ○ | ○ | ○ | ○ |
| | Low Conductivity (Soft Water) Bottle | ○ | ○ | ○ | ○ |
| | Standard Conductivity (Moderate/Hard Water) Bottle | ○ | ○ | ○ | ○ |
| | High Conductivity (Very Hard Water) Bottle | ○ | ○ | ○ | ○ |
| | Cleanable Humidifier Bottle | ○ | ○ | ○ | ○ |

● Standard Feature ○ Optional Feature – Not Available

**Heating**

**Hot Gas Re-Heat (HGRH)**

(X Models) Refer to Hot Gas Re-Heat (HGRH).

Or

**Electric Heating**

Multi-stage finned electric heating elements complete with auto and manual reset overheat cut-out protection.

**Electric Heating Thyristor Control**

Offers precision control between 0 - 100% via the microprocessor.

Or

**Low Pressure Hot Water**

A low pressure hot water coil constructed of refrigeration quality copper tube and mechanically bonded aluminium fins can be factory fitted. Frost protection is fitted to prevent freezing of the low pressure hot water coil assembly. Proportional heating control is provided by a factory fitted 3 port, raise/lower type, modulating valve.

Access to the right hand side of the unit is required to set up the regulating valve.

**Humidifier - Intelligent Modulation**

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

Featuring modulating capacity output control as standard, the system provides continuous modulation of steam output in response to a proportional control signal. The output control range is 20%-100% of the humidifier rated value and is designed to give an approximate steam output of +/- 3% at 25°C at the sensor, thus ensuring precise control of the conditioned space.

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

All humidifier parameters and alarms are accessible and adjustable via the microprocessor display keypad unit, main features include:

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

Water Conductivity & Cylinder TypeConductivity is a measure of the ability of water to pass an electric current, measured in micro Siemens / centimetre (µS/cm). 3 different cylinders are available which correspond to the supply water conductivity. Matching the correct cylinder type with the conductivity of the supply water ensures optimum performance and increases the life span of the cylinder.

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

As standard the humidifier is fitted with the standard conductivity cylinder which covers the majority of water supplies. Where the water conductivity is known, please specify at order. For further details please contact Airedale.

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

**Humidification**

**Control Principles**

In a humidifier with electrodes, steam shall be produced by passing a current between electrode plates to generate heat. The higher the current being passed between the electrodes, the greater the quantity of steam that is produced.
To modulate the rate of steam production, this system shall vary the level of water within the cylinder, thereby increasing the immersion level of the electrodes and the current being passed between them. The more conducting area that is available to pass current between the electrodes, the larger the amount of steam that shall be produced.

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

**Optimised Lifetime**

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

Example: (Optimised Lifetime with High Water Conductivity Supply)
As liquid water is boiled off into steam, mineral deposits are left in solution increasing the conductivity of the water. To counter this, the intelligent software increases the frequency of drain meaning that the replenishing supply water keeps the concentration of minerals diluted. By maintaining an acceptable mineral concentration, the bottle life span is maximised.

**De-humidification**

(With Electric Heating and Humidification only)
Controlled by the microprocessor the de-humidification feature reduces fan speeds by 20% (adjustable). The reduction of fan speed increases de-humidification which means that the time taken to reduce the room humidity to the required level is drastically decreased, along with the energy required to do so.

The return temperature is monitored during de-humidification to ensure that the temperature does not fall to a critical level. If the temperature reaches the low limit de-humidification is cancelled until the return air temperature increases.

## Controls

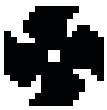

| | | System Configuration | | | |
|---|---|---|---|---|---|
| | | Downflow | | Upflow | |
| | Features | X Type | WX Type | X Type | WX Type |
| Controls | Microprocessor Control | ● | ● | ● | ● |
| | Graphical Display | ● | ● | ● | ● |
| | Filter Change Monitoring | ○ | ○ | ○ | ○ |
| | Water Detection | ○ | ○ | ○ | ○ |
| | Fire / Smoke Detection | ○ | ○ | ○ | ○ |

● Standard Feature ○ Optional Feature – Not Available

Units are fitted with the microprocessor controller which offers powerful analogue and digital control to meet a wide range of monitoring and control requirements. Includes a communication port plus networking and BMS connections. An 8 x 22 character, white backlit LCD door mounted display keypad assembly is used to view the unit status and allow operator adjustment. Using a combination of text and standard Icons, the unit display is easy to read and interpret.

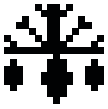
The standard display keypad visually displays operating alarms by flashing the relevant icon, however, as an optional extra; a display keypad with audible alarms is available.
The default screen shows the unit status and room condition (°C/RH %) without the need for interrogation and an easy to navigate menu structure for further interrogation and adjustment.

### Standard Icons


Fan Operating


Cooling - Up to 2 Stages


Heating - Up to 3 Stages


De-humidification


Humidification - Variable

## Controls

### Temperature Control

A temperature sensor is mounted in the return air with an option for a humidity sensor on full function units.
The temperature sensor is a NTC type thermistor accurate up to +/- 0.25°C and the humidity sensor accurate to +/- 3% RH at 25°C at the sensor. The microprocessor senses the return air conditions and maintains the return air temperature and humidity conditions by controlling cooling, heating, humidification and dehumidification outputs accordingly.

### Monitoring

The microprocessor monitors and displays the following values:

- Return Air Temperature
- Return Air Humidity (Optional on Full Function units)
- Condensing Pressure (Optional on DX units only)
- Coil Temperature Sensor (Indoor)

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

### Alarm Log

The controller logs and allows viewing of the last 100 conditions recorded in descending chronological order through the keypad display. The standard display keypad visually displays operating alarms, however, as an optional extra, a display keypad with audible alarms is available.

### Modbus/Carel BMS Connection

The Airedale controllers shall be able to communicate directly using the Modbus® protocol. The Modbus® card shall be a small PCB (60mm x 30mm), which can be plugged into the controller to provide it with the following protocol support:

- Modbus® - JBus slave
- RTU mode (Remote Terminal Unit) with 8 bit encoding and error handling using 16 bit CRC
- Communication standard connection options of RS485 (multipoint) or RS232 (point-point)
- Maximum Baud Rate of 19200

The data communication shall be asynchronous serial, 8 data bits, 2 stop bits and no parity (in total 11 bits/datum).
The data/parameters from the controller shall be represented within Modbus® registers, each register containing information pertaining to temperatures, pressures, setpoint, status, etc and is available to the site integration company in a spreadsheet format.

## Controls

### Alarm Handling

An alarm will be generated under the following conditions and will be visually displayed through the alarm log. In addition, under certain conditions the relevant Icon will flash repeatedly as indicated below:

**Sizes 6 - 26**

- Return air temperature high limit
- Return air temperature low limit
- Return air humidity high limit (Optional on Full Function units)
- Return air humidity low limit (Optional on Full Function units)
- Frost protection low limit (LPHW option only)
- Low pressure trip (Optional on DX units only)
- Filter change alarm
- Manual override
- Common alarm
- Power fail reset
- Communications failure
- Maintenance - fan and compressor (once hours run limit exceeded)
- Airflow failure (  )
- Compressor failure (Optional on DX units only) (  )
- Electric Heating Overheat cut-out (  )
- Humidifier alarm (Full Function units only) (  )

**Sizes 28 - 60**

- Return air temperature high limit
- Return air temperature low limit
- Return air humidity high limit (Optional on Full Function units)
- Return air humidity low limit (Optional on Full Function units)
- Frost protection low limit (LPHW option only)
- Low pressure trip (Optional on DX units only)
- Filter change alarm
- Manual override
- Common alarm
- Power fail reset
- Communications failure
- Maintenance - fan and compressor (once hours run limit exceeded)
- Fire
- Flood
- Phase Failure
- Critical
- Non-critical
- Airflow failure (  )
- Compressor failure (Optional on DX units only) (  )
- Electric Heating Overheat cut-out (  )
- Humidifier alarm (Full Function units only) (  )

## Controls

### 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.

### Remote On/Off

Terminals for interlocking are provided to enable or disable the unit remotely.

### Fire Shut Down

Terminals for interlocking are provided to shut down the unit in the event of fire.

### Compressor Anti-Cycle Control

Programmed to provide automatic anti-cycling delays of up to 10 starts per hour with a minimum off time of 3 minutes.

### Compressor Rotation

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

### Compressor Hours Run Log & Reset

Allows the user to monitor the running times of each compressor and reset after maintenance. Hours run log or visual service indicator provided.

### Evaporator Fan Hours Run Log & Reset

Allows the user to monitor the running times of the evaporator fans and reset after maintenance. Hours run log or visual service indicator provided.

### Head Pressure Control and Condenser Fan Speed Controller

Each refrigerant circuit (TEV or EEV) is fitted with condenser pressure transducers and a modulating condenser fan speed controller to allow the designed head pressure to be monitored and maintained under varying ambient conditions. Condenser fan speed control settings are input via the display keypad.

### Evaporator Fan Speed Controller

(Sizes 6 - 26) Evaporator fan speed control is easily set via the display keypad and can be incrementally increased or decreased to meet on site airflow and external static pressure requirements.

### Filter Change Alarm

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

### LPHW Frost Protection

(DX units with LPHW option)

The coil temperature sensor is mounted on the DX coil and has a fixed 3°C low limit setting to disable DX cooling.

## Controls

### Standard Network Features

As standard the AireTronix controller is capable of the providing a platform for the following and can be enabled on request for 2 to 8 units, please specify at order:

### Networking

A Local Area Network (LAN) can be used to connect up to 8 units to offer intercommunication and Duty/Standby control. This also allows the connection of computers, printers and modems on the same communications ring.

For further details, please contact Airedale Controls.

**CAUTION**

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

### Duty/Standby Operation

The controller enables units to operate in run/standby mode, with up to 6 units networked together, without the need for additional hardware or controllers. Standby units can be configured to start when the run unit has a critical alarm and/or a high/low return air temperature alarm. During peak demand, the standby units can temperature assist.

### Duty Rotation

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

## OPTIONAL EXTRAS

### Audible Alarm

The display keypad can be upgraded to include audible alerts.

### BMS Interface Card

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

### Water Detector

Two methods are available:

1. A solid state (probe) sensor is supplied loose for remote mounting on site.
2. Tape suitable for sensing water droplets is supplied loose for remote mounting on site. Standard tape length 10m.

### Water Detection Tape

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

### Smoke Detector

Supplied loose for remote mounting to shut down the unit and activate the alarm upon sensing the presence of smoke.

### Firestat

Installed in the return air stream to shut down the unit in the event of an unusually high return air temperature.

## General Features

Condensate Pump

Floorstand

| | | System Configuration | | | |
|---|---|---|---|---|---|
| | | Downflow | | Upflow | |
| | Features | X Type | WX Type | X Type | WX Type |
| General | Secure Door Locks | ● | ● | ● | ● |
| | Return Air Grille | – | – | ● | ● |
| | Cold Water Condensate Pump | ○ | ○ | ○ | ○ |
| | Open Floorstand | ○ | ○ | ○ | ○ |
| | Enclosed Floorstand | ○ | ○ | ○ | ○ |
| | Ceiling Duct Extension | ○ | ○ | ○ | ○ |

● Standard Feature ○ Optional Feature – Not Available

### Open & Enclosed Floorstand

Open or enclosed floorstands are available, complete with adjustable feet and floor tile lip. Enclosed floorstands incorporate an air turning vane. Height of the floorstand; please specify at order.

### Discharge Air Configuration

Standard configuration is forward air discharge. Reverse air discharge is available, please specify at order.

### Ceiling Duct Extension

Straight and 'L' shaped duct extensions up to a height of 1350 mm constructed and finished to match the unit are available. For extensions greater than 1350 mm, please contact Airedale. Height; please specify at order.

### Services Side Access Gland Plate

As standard services can be routed through the gland plate in the base of the units. A gland plate can be optionally located to the lower left hand side face of the unit, if required.

### Bolt on Doors

Simple bolt on cabinet doors can be factory fitted as a cost reduction option. The cabinet doors are full height and secured by M6 bolts, a 4 mm Allen key is provided for access.

### Plain Doors - No Display Keypad

Networking is a standard option of the AireTronix microprocessor; refer to Controls, for full details. To reduce costs, the "slave" units can be supplied with plain doors (no display keypad), in all door types, please specify at order.

### Threaded Water Pipe Connection

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

### Export Packing

Units can be supplied packed inside a case to provide additional protection during transportation, (not required for container delivery). Standard construction material is solid wood.

### Sterling Board LAT (Wooden Case) Packing

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

## Optional Extras General

### Condensate Pump

### Sizes 6 - 26

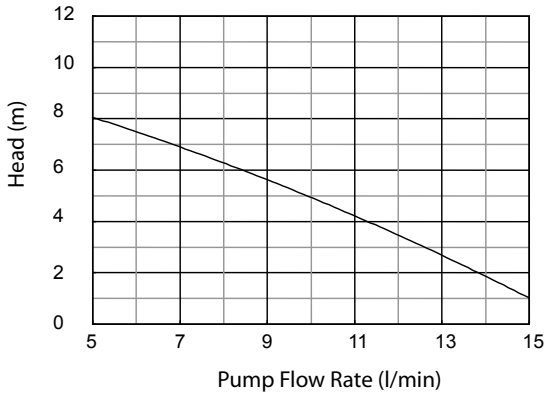
The condensate pump has a 3 litre reservoir with a capacity of 5 l/m at a head of 8m and is mounted in the unit base.

### Sizes 28 - 60

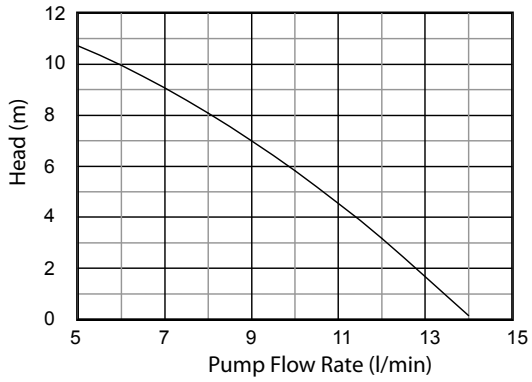
The condensate pump has a 6 litre reservoir with a capacity of 5 l/m at a head of 10.8m and is mounted in the unit base. The following graphs illustrate the TOTAL static (head) pressure available. The system horizontal pipe losses and vertical lift should be factored in when calculating the condensate pump performance.

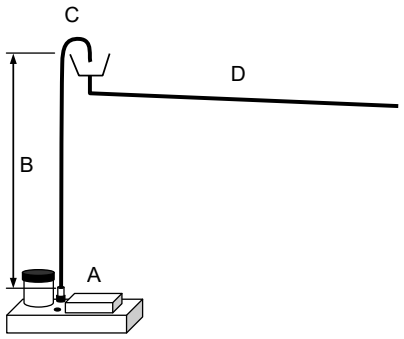
| | |
|---|---|
| **IMPORTANT ⚠** | Use only 10mm (3/8”) copper tube when connecting the discharge stub to the condensate pump. The discharge line from the pump should rise no more than 6 meters vertically and no more than 8 metres in total length before being interrupted with a swan neck air break and tundish. |

6 - 26




28-60




A Condensate Pump
B Condensate pump discharge line; 10mm (3/8”) copper tube; maximum vertical run 6m, maximum TOTAL run 8m
C Swan Neck with Tundish
D Drain line from Tundish, > 10mm (3/8”) tube **(MUST BE copper tube when coupled with humidifier drain)**, minimum fall 1 : 20

### Condensate and Humidifier

All drain trays are fitted with their own trap assembly.
Condensate drain may be run to waste via ordinary plastic waste pipe.
Humidifier drain may be run to waste via pipe suitable for liquid temperatures of 100°C.
All drain pipework operating under gravity should be sloped away from the equipment and the gradient should be made as steep as possible.
Suitable rodding positions should be incorporated particularly if the run is long.

### Water Conductivity

As standard the humidifier is fitted with the standard conductivity cylinder which covers the majority of water supplies. Low and High conductivity options can be specified at order.

### Safe Operation of Humidifier

To protect the humidifier bottle from dangerous pressures in event of the steam supply pipe becoming blocked, a tundish is installed between the water inlet solenoid and the cylinder to act as a reservoir and to feed water to the humidifier inlet manifold as required.

| | |
|---|---|
| **CAUTION ⚠** | An overflow weir is incorporated in the common fill/drain tundish. Any pressure build up in the cylinder would be allowed to vent through the tundish to atmosphere. It is MOST IMPORTANT that the steam distribution pipe is not damaged or kinked at any time to avoid the risk of unacceptably high pressure building up in the electrode bottle. |

**Sound Measurement Method**

**Measurement Of Sound Power**

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

All Sound Power Levels quoted are calculated from measured sound intensity according to BS EN ISO9614 Part 1 : 2009.

**Semi Hemispherical**

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

**Free Field**

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

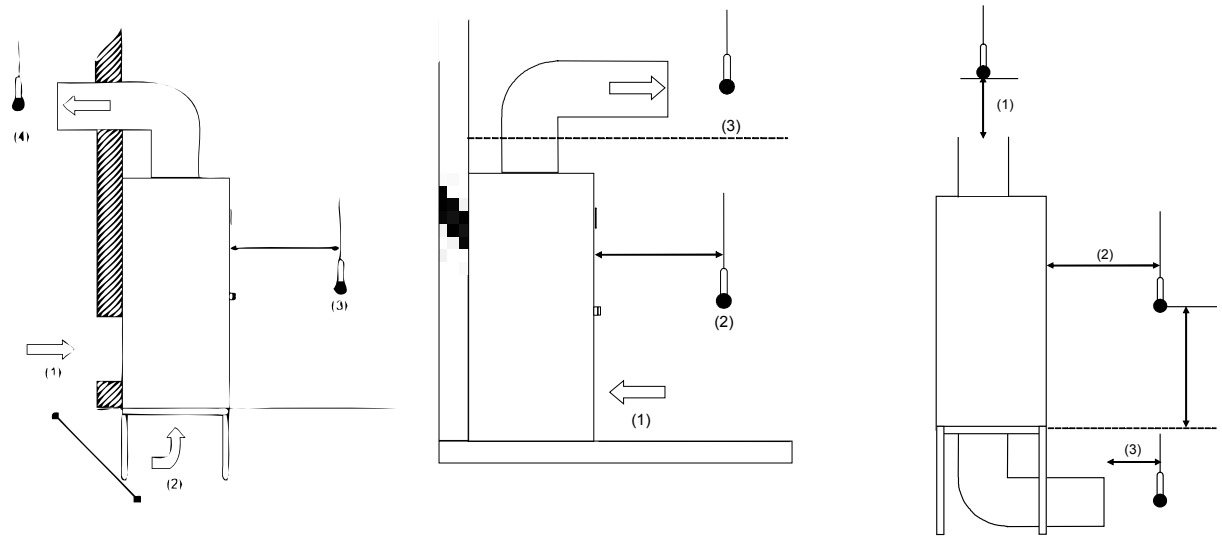
**IMPORTANT**

The sound data quoted is based on the unit having a ducted return air, ducted (or underfloor) discharge air and standard forward curved fan and EC motors fitted, refer to illustration below.

Case breakout sound data is therefore independent of the discharge air and return air sound data.

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

Specialist acoustic advice is recommended for noise critical applications.



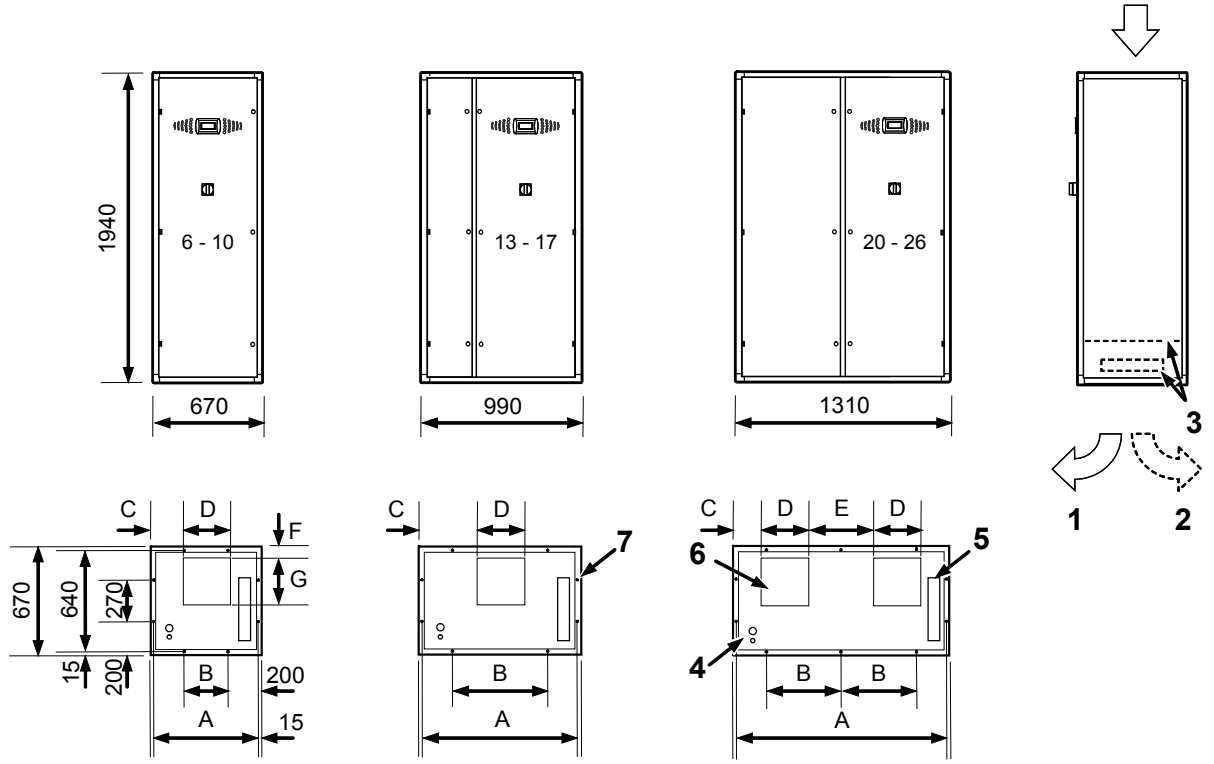

(1) Return Air
(2) Case Breakout
(3) Discharge Air

**Notes**

## Dimensional & Installation Data

### Dimensions

DF6 - DF25 - Standard Airflow Configuration (mm) with Standard EC Fan Motors



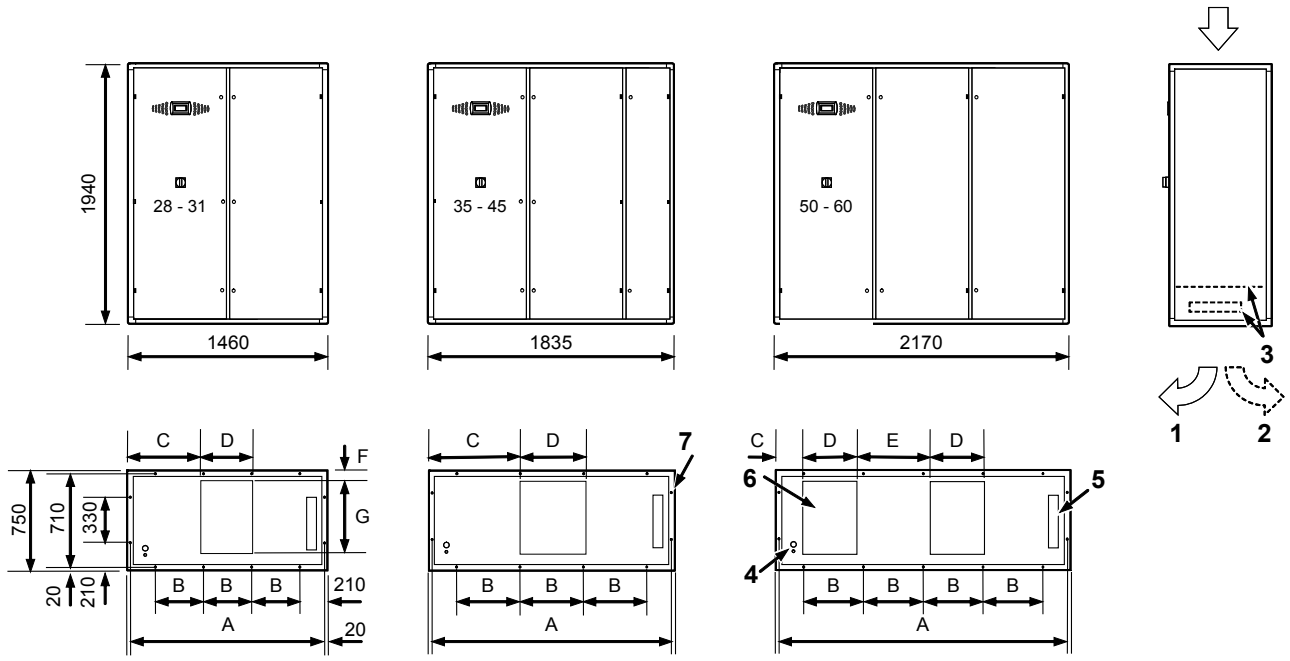

| | | | W x D x H | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|---|---|---|
| **DF6** | **X/WX** | mm | 670 x 670 x 1940 | 640 | 270 | 216 | 238 | N/A | 50 | 268 |
| **DF8** | **X/WX** | mm | 670 x 670 x 1940 | 640 | 270 | 183 | 304 | N/A | 50 | 268 |
| **DF10** | **X/WX** | mm | 670 x 670 x 1940 | 640 | 270 | 167 | 337 | N/A | 50 | 295 |
| **DF13** | **X/WX** | mm | 990 x 670 x 1940 | 960 | 590 | 326 | 337 | N/A | 50 | 295 |
| **DF15** | **X/WX** | mm | 990 x 670 x 1940 | 960 | 590 | 294 | 401 | N/A | 50 | 347 |
| **DF17** | **X/WX** | mm | 990 x 670 x 1940 | 960 | 590 | 294 | 401 | N/A | 50 | 347 |
| **DF22** | **X2/WX2** | mm | 1310 x 670 x 1940 | 1280 | 455 | 166 | 337 | 303 | 50 | 295 |
| **DF25** | **X2/WX2** | mm | 1310 x 670 x 1940 | 1280 | 455 | 166 | 337 | 303 | 50 | 295 |

(1) Standard forward airflow direction.
(2) Optional reverse airflow direction.
(3) Optional gland plate and panel for side services access via the right side of unit. For services details contact Airedale.
(4) Base mains cable entry.
(5) Standard base gland plate entry for refrigeration/water services. For services details contact Airedale.
(6) Shaded area denotes fan discharge aperture. Optional EC fan motor discharge aperture provided with protective mesh, not shown.
(7) M6 fixing hole positions.
(8) Units fitted with optional EC fan motors require a floorstand.

## Dimensional & Installation Data

### Dimensions

DF26 - DF60 - Standard Airflow Configuration (mm) with Standard AC Fan Motors



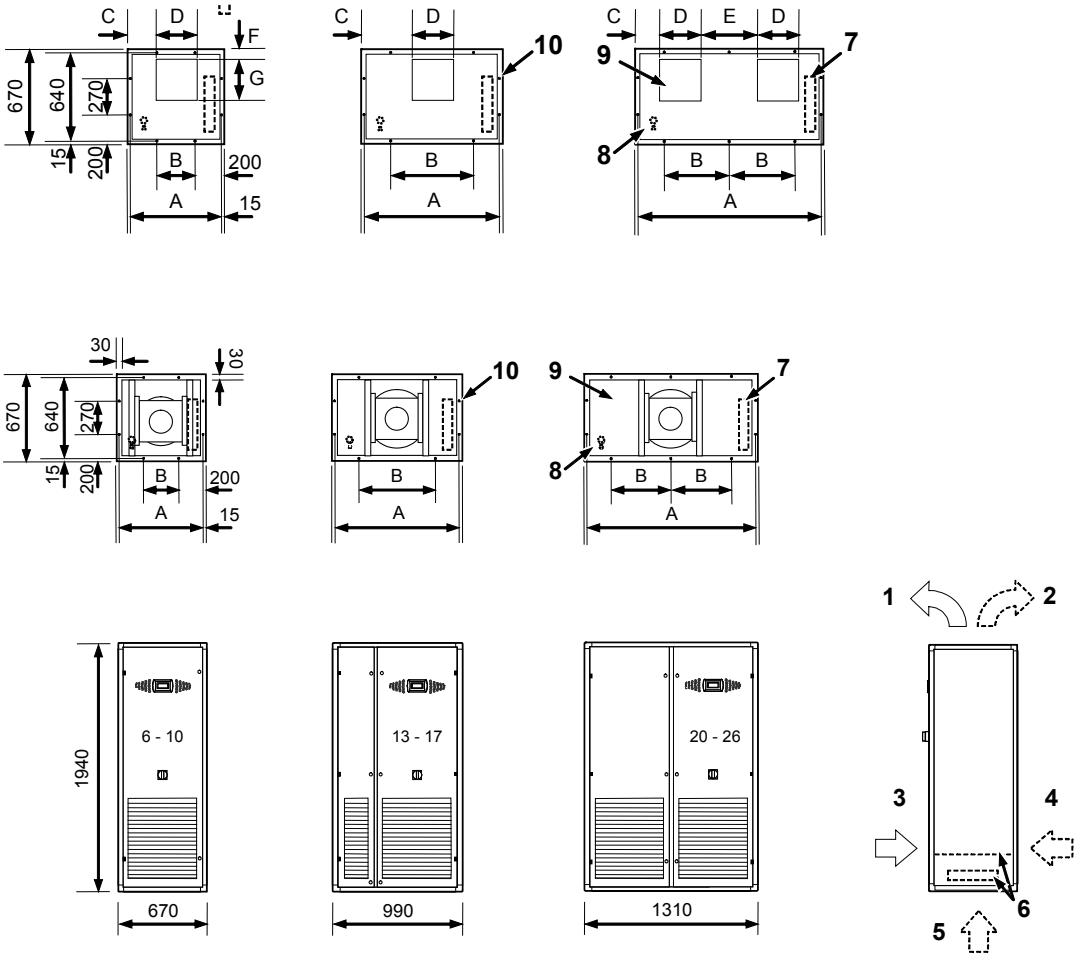

| | | | W x D x H | A | B | C(8) | D(8) | E | F(9) | G(8) |
|---|---|---|---|---|---|---|---|---|---|---|
| DF26 | X/WX | mm | 1460 x 750 x 1940 | 1420 | 347 | 540 | 379 | N/A | 91 (113) | 546 |
| DF28 | X/WX | mm | 1460 x 750 x 1940 | 1420 | 347 | 540 | 379 | N/A | 91 (113) | 546 |
| DF31 | X/WX | mm | 1460 x 750 x 1940 | 1420 | 347 | 540 | 379 | N/A | 91 (113) | 546 |
| DF35 | X/WX | mm | 1835 x 750 x 1940 | 1795 | 472 | 679 | 477 | N/A | 91 (113) | 546 |
| DF40 | X/WX | mm | 1835 x 750 x 1940 | 1795 | 472 | 679 | 477 | N/A | 91 (113) | 546 |
| DF45 | X/WX | mm | 1835 x 750 x 1940 | 1795 | 472 | 679 | 477 | N/A | 91 (113) | 546 |
| DF50 | X2/WX2 | mm | 2170 x 750 x 1940 | 2130 | 438 | 206 | 401 | 543 | 76 (257) | 345 |
| DF55 | X2/WX2 | mm | 2170 x 750 x 1940 | 2130 | 438 | 206 | 401 | 543 | 76 (257) | 345 |
| DF60 | X2/WX2 | mm | 2170 x 750 x 1940 | 2130 | 438 | 206 | 401 | 543 | 76 (257) | 345 |

(1) Standard forward airflow direction.
(2) Optional reverse airflow direction.
(3) Optional gland plate and panel for side services access via the right side of unit. For services details contact Airedale.
(4) Base mains cable entry.
(5) Standard base gland plate entry for refrigeration/water services. For services details contact Airedale.
(6) Shaded area denotes fan discharge aperture. Optional EC fan motor discharge aperture provided with protective mesh, not shown.
(7) M6 fixing hole positions.
(8) Figures in brackets represent position of fan discharge aperture when larger AC fan motor option is fitted.
(9) Figures in brackets represent optional reverse air discharge configuration when fitted with standard AC fan motors.
(10) Units fitted with optional EC fan motors require a floorstand.

## Dimensional & Installation Data

### Dimensions

V6 - V25 - Standard Airflow Configuration (mm) with Standard EC Fan Motors



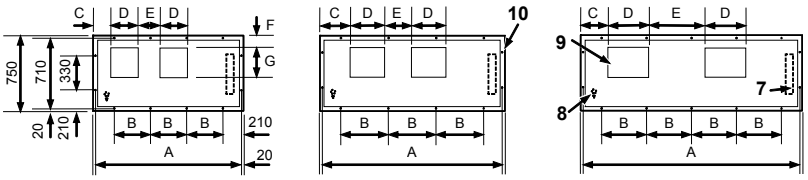

| | | | W x D x H | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|---|---|---|
| V6 | X/WX | mm | 670 x 670 x 1940 | 640 | 270 | 216 | 238 | N/A | 50 | 268 |
| V8 | X/WX | mm | 670 x 670 x 1940 | 640 | 270 | 183 | 304 | N/A | 50 | 268 |
| V10 | X/WX | mm | 670 x 670 x 1940 | 640 | 270 | 167 | 337 | N/A | 50 | 295 |
| V13 | X/WX | mm | 990 x 670 x 1940 | 960 | 590 | 387 | 337 | N/A | 50 | 295 |
| V15 | X/WX | mm | 990 x 670 x 1940 | 960 | 590 | 355 | 401 | N/A | 50 | 347 |
| V17 | X/WX | mm | 990 x 670 x 1940 | 960 | 590 | 355 | 401 | N/A | 50 | 347 |
| V22 | X2/WX2 | mm | 1310 x 670 x 1940 | 1280 | 455 | 166 | 337 | 303 | 50 | 295 |
| V25 | X2/WX2 | mm | 1310 x 670 x 1940 | 1280 | 455 | 166 | 337 | 303 | 50 | 295 |

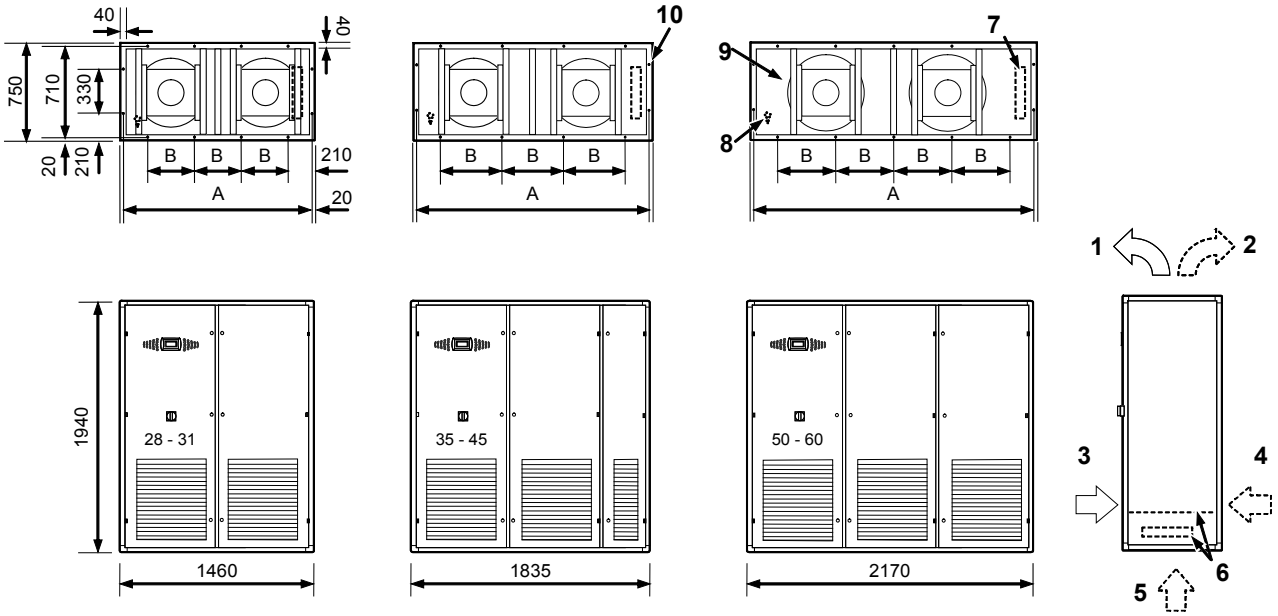
(1) Standard forward airflow direction.
(2) Optional reverse airflow direction.
(3) Optional gland plate and panel for side services access via the right side of unit. For services details contact Airedale.
(4) Base mains cable entry.
(5) Standard base gland plate entry for refrigeration/water services. For services details contact Airedale.
(6) Shaded area denotes fan discharge aperture. Optional EC fan motor discharge aperture provided with protective mesh, not shown.
(7) M6 fixing hole positions.

## Dimensional & Installation Data

### Dimensions

V26 - V60 - Standard Airflow Configuration (mm) with Standard AC Fan Motors




| | | | W x D x H | A | B | C | D | E | F[8] | G |
|---|---|---|---|---|---|---|---|---|---|---|
| V26 | X/X2/WX/WX2 | mm | 1460 x 750 x 1940 | 1420 | 347 | 175 | 271 | 208 | 123 (335) | 292 |
| V28 | X/X2/WX/WX2 | mm | 1460 x 750 x 1940 | 1420 | 347 | 175 | 271 | 208 | 123 (335) | 292 |
| V31 | X/X2/WX/WX2 | mm | 1460 x 750 x 1940 | 1420 | 347 | 175 | 271 | 208 | 123 (335) | 292 |
| V35 | X/X2/WX/WX2 | mm | 1460 x 750 x 1940 | 1795 | 472 | 304 | 337 | 258 | 123 (335) | 292 |
| V40 | X/X2/WX/WX2 | mm | 1835 x 750 x 1940 | 1795 | 472 | 304 | 337 | 258 | 123 (335) | 292 |
| V45 | X2/WX2 | mm | 1835 x 750 x 1940 | 1795 | 472 | 304 | 337 | 258 | 123 (335) | 292 |
| V50 | X2/WX2 | mm | 2170 x 750 x 1940 | 2130 | 438 | 277 | 401 | 544 | 78 (327) | 345 |
| V55 | X2/WX2 | mm | 2170 x 750 x 1940 | 2130 | 438 | 277 | 401 | 544 | 78 (327) | 345 |
| V60 | X2/WX2 | mm | 2170 x 750 x 1940 | 2130 | 438 | 277 | 401 | 544 | 78 (327) | 345 |

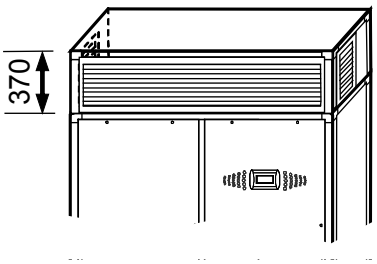
(1) Standard forward airflow direction.
(2) Optional reverse airflow direction.
(3) Optional gland plate and panel for side services access via the right side of unit. For services details contact Airedale.
(4) Base mains cable entry.
(5) Standard base gland plate entry for refrigeration/water services. For services details contact Airedale.
(6) Shaded area denotes fan discharge aperture. Optional Backwards curved EC fan motor discharge aperture provided with protective mesh, not shown.
(7) M6 fixing hole positions.
(8) Figures in brackets represent position of fan discharge aperture when larger AC fan motor option is fitted. (only on 26 - 60 units)

## Dimensional & Installation Data

### Upflow

### Options

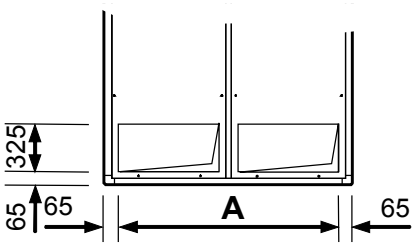
#### Discharge Air Plenum




1 Discharge air plenum shows as 3 way, also available is front discharge only

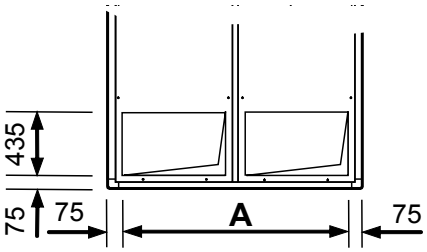
#### Rear Return Air Aperture (mm)

#### V6 - V26




| | | | A |
|---|---|---|---|
| V6 | X/WX | mm | 540 |
| V8 | X/WX | mm | 540 |
| V10 | X/WX | mm | 540 |
| V13 | X/WX | mm | 860 |
| V15 | X/WX | mm | 860 |
| V17 | X/WX | mm | 860 |
| V22 | X2/WX2 | mm | 1180 |
| V25 | X2/WX2 | mm | 1180 |
| V26 | X2/WX2 | mm | 1180 |

#### V28 - V60




| | | | A |
|---|---|---|---|
| V28 | X/X2/WX/WX2 | mm | 1310 |
| V31 | X/X2/WX/WX2 | mm | 1310 |
| V35 | X/X2/WX/WX2 | mm | 1685 |
| V40 | X/X2/WX/WX2 | mm | 1685 |
| V45 | X2/WX2 | mm | 1685 |
| V50 | X2/WX2 | mm | 3020 |
| V55 | X2/WX2 | mm | 3020 |
| V60 | X2/WX2 | mm | 3020 |

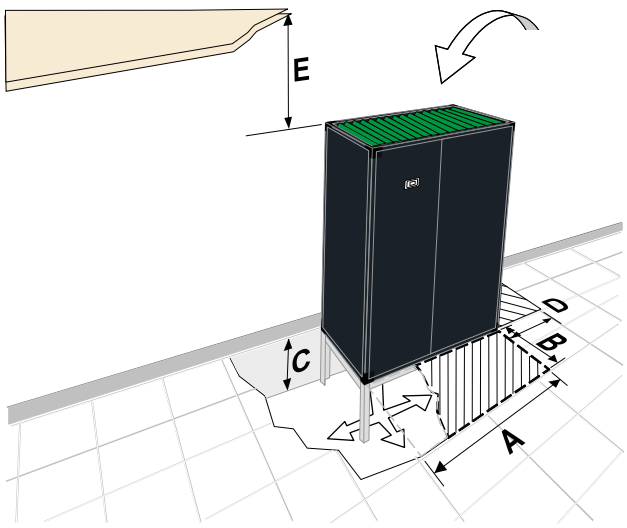
1 25 mm flange required to return air duct work, supplied by others.
2 M6 fixings holes required.

## Dimensional & Installation Data

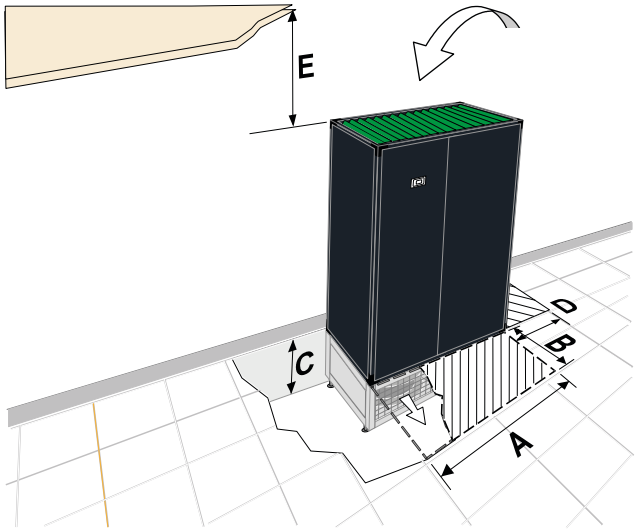
### Positioning

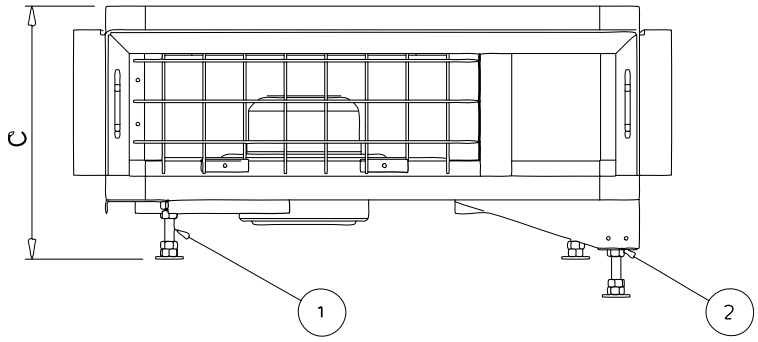
### Down flow

Standard Return and Standard Fan Motors




Standard Return and Optional Backward Curved EC Fan Motors




(1) With adjustable feet fitted
(2) With variable size leg and adjustable feet fitted

| | |
|---|---|
| **CAUTION ⚠** | When placing the unit on the floorstand ensure appropriate air seal is used to prevent leakage at the join. It is also important to place all locking bolts in place to secure the unit to its base (EC fan floorstands only). |

## Dimensional & Installation Data

### Minimum Unit Clearances

Open & Enclosed Floorstands Option

| | | A | B | C - Floorstand(3) | D(4) |
|---|---|---|---|---|---|
| DF6 - DF10 | mm | 670 | 610 | Min 200 - Max 750 (+ 50mm Feet Adjustable +/- 20mm) | Min 300 |
| DF13 - DF17 | mm | 990 | 610 | | Min 300 |
| DF22 - DF26 | mm | 1310 | 610 | | Min 300 |
| DF28 - DF31 | mm | 1460 | 700 | Min 300 - Max 800 (+ 50mm Feet Adjustable +/- 20mm) | N/A |
| DF35 - DF45 | mm | 1835 | 700 | | N/A |
| DF50 - DF60 | mm | 2170 | 700 | | N/A |

Backward Curved EC Fan Motor Option

| | | A | B | C (3) | | | | D(5) |
|---|---|---|---|---|---|---|---|---|
| | | | | With Feet Only (4) | | With Leg & Feet (4) | | |
| DF6 - DF10 | mm | 670 | 610 | 284 | 329 | 604 | 1074 | Min 300 |
| DF13 - DF17 | mm | 990 | 610 | 362 | 407 | 697 | 1152 | Min 300 |
| DF22 - DF26 | mm | 1310 | 610 | 362 | 407 | 697 | 1152 | Min 300 |
| DF28 - DF31 | mm | 1460 | 700 | 356 | 401 | 686 | 1146 | Min 300 |
| DF35 - DF45 | mm | 1835 | 700 | 356 | 401 | 686 | 1146 | Min 300 |
| DF50 - DF60 | mm | 2170 | 700 | 356 | 401 | 686 | 1146 | Min 300 |

Minimum Ceiling Clearance

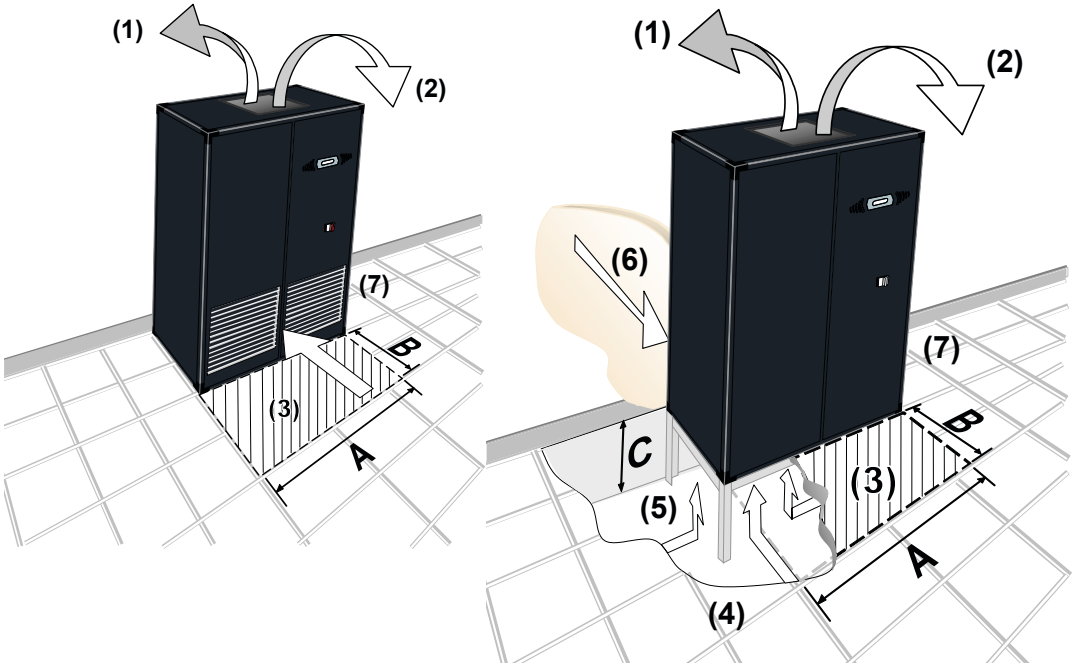
| | | E | | | |
|---|---|---|---|---|---|
| | | Forward Only | Forward & 1 Side | Forward & 2 Sides | All Faces |
| DF6 - DF10 | mm | 470 | 240 | 160 | 120 |
| DF13 - DF17 | mm | 550 | 330 | 240 | 170 |
| DF22 - DF26 | mm | 560 | 370 | 280 | 190 |
| DF28 - DF31 | mm | 620 | 410 | 310 | 210 |
| DF35 - DF45 | mm | 640 | 450 | 350 | 230 |
| DF50 - DF60 | mm | 640 | 480 | 380 | 240 |

(1) Shown with optional open floor stand.
(2) Shaded area indicates minimum service and maintenance requirements.
(3) Dimension C denotes recommended minimum/maximum floorstand height, refer to Airedale for special applications, please specify at order.
(4) Min = Threaded foot at minimum extension.
Max = Threaded foot at maximum extension.
(5) Dimension D refers to units fitted with LPHW which require access to the RHS of the unit to set up the regulating valve.
(6) SERVICES SIDE ACCESS GLAND PLATE, OPTIONAL POSITION; ensure appropriate clearance is available to the base of the RHS of the unit if this option is selected.

## Dimensional & Installation Data

### Positioning

### Upflow




| | |
|---|---|
| **IMPORTANT** ⚠ | The unit is designed for use with either ducted discharge or a plenum. If neither is used, protection from rotating parts in the form of a grille must be used on the discharge air outlet. Placing objects near an unguarded fan may cause injury. |

### Minimum Unit Clearance

| | | A | B | C - Floorstand(3) |
|---|---|---|---|---|
| V6 - V10 | mm | 670 | 610 | Min 200 - Max 750 |
| V13 - V17 | mm | 990 | 610 | (+ 50mm Feet |
| V22 - V26 | mm | 1310 | 610 | Adjustable +/- 20mm) |
| V28 - V31 | mm | 1460 | 700 | Min 300 - Max 800 |
| V35 - V45 | mm | 1835 | 700 | (+ 50mm Feet |
| V50 - V60 | mm | 2170 | 700 | Adjustable +/- 20mm) |

(1) Reversed discharge air.
(2) Forward discharge air.
(3) Shaded area indicates minimum service and maintenance requirements
(4) Shown with optional open floor stand.
(5) Optional base return.
(6) Optional rear return.
(7) SERVICES SIDE ACCESS GLAND PLATE, OPTIONAL POSITION; ensure appropriate clearance is available to the base of the RHS of the unit if this option is selected.

## Dimensional & Installation Data

### Weights

### Downflow

| | | Standard Evaporator Fan - Fwd EC Motor | | Optional Evaporator Fan - Bkwd EC Motor | | |
|---|---|---|---|---|---|---|
| | | Machine (AHU)(3) | Operating (AHU) | Machine (AHU)(3) | Operating (AHU) | Floorstand |
| **DF6X** | kg | 194 | | 176 | | 26 |
| **DF8X** | kg | 195 | | 179 | | 26 |
| **DF10X** | kg | 199 | | 187 | | 26 |
| **DF13X** | kg | 217 | | 206 | | 29 |
| **DF15X** | kg | 241 | | 213 | | 29 |
| **DF17X** | kg | 242 | | 214 | | 29 |
| **DF22X2** | kg | 293 | | 267 | | 44 |
| **DF25X2** | kg | 293 | | 267 | | 44 |
| **DF26X** | kg | | | | | |
| **DF28X** | kg | 424 | | 380 | | 125 |
| **DF31X** | kg | 420.8 | | 375 | | 125 |
| **DF35X** | kg | 478.8 | | 430 | | 128 |
| **DF40X** | kg | 506.5 | | 439 | | 128 |
| **DF45X** | kg | 559.5 | | 492 | | 128 |
| **DF50X2** | kg | 641 | | 562 | | 190 |
| **DF55X2** | kg | 658 | | 579 | | 190 |
| **DF60X2** | kg | 658 | | 573 | | 190 |

| | | Standard Evaporator Fan - Fwd EC Motor | | Optional Evaporator Fan - Bkwd EC Motor | | |
|---|---|---|---|---|---|---|
| | | Machine (AHU)(3) | Operating (AHU) | Machine (AHU)(3) | Operating (AHU) | Floorstand |
| **DF6WX** | kg | 210 | 212 | 192 | 194 | 26 |
| **DF8WX** | kg | 215 | 216 | 199 | 200 | 26 |
| **DF10WX** | kg | 218 | 219 | 206 | 207 | 26 |
| **DF13WX** | kg | 240 | 241 | 229 | 230 | 29 |
| **DF15WX** | kg | 271 | 273 | 243 | 245 | 29 |
| **DF17WX** | kg | 275 | 277 | 247 | 249 | 29 |
| **DF22WX2** | kg | 334 | 336 | 308 | 310 | 44 |
| **DF25WX2** | kg | 334 | 336 | 308 | 310 | 44 |
| **DF26WX2** | kg | 333 | 336 | 307 | 310 | 44 |
| **DF28WX** | kg | 480 | 486 | 436 | 442 | 125 |
| **DF31WX** | kg | 476.8 | 482.8 | 431 | 437 | 125 |
| **DF35WX** | kg | 538.8 | 544.8 | 490 | 496 | 128 |
| **DF40WX** | kg | 571.5 | 577.5 | 504 | 510 | 128 |
| **DF45WX** | kg | 646.5 | 656.5 | 579 | 589 | 128 |
| **DF50WX2** | kg | 732 | 742 | 653 | 663 | 190 |
| **DF55WX2** | kg | 751 | 761 | 672 | 682 | 190 |
| **DF60WX2** | kg | 751 | 761 | 666 | 676 | 190 |

(1) Weights quoted for units fitted with the standard Forward curved EC fan motor ***include*** the cooling fan weight within the unit cabinet (AHU).
(2) Weights quoted for units fitted with the optional Backward Curved EC fan motor ***exclude*** the cooling fan weight within the unit cabinet (AHU).
(3) Machine weight includes a refrigerant charge / Operating weight includes calculated water volume.

## Dimensional & Installation Data

### Weights

### Upflow

| | | Standard Evaporator Fan - Fwd EC Motor | | Optional Evaporator Fan - Bkwd EC Motor | |
|---|---|---|---|---|---|
| | | Machine | Operating | Machine | Operating |
| **V6X** | kg | 174 | | 165 | |
| **V8X** | kg | 173 | | 166 | |
| **V10X** | kg | 177 | | 174 | |
| **V13X** | kg | 211 | | 213 | |
| **V15X** | kg | 235 | | 220 | |
| **V17X** | kg | 236 | | 221 | |
| **V22X2** | kg | 289 | | 285 | |
| **V25X2** | kg | | | | |
| **V26X** | kg | | | | |
| **V26X2** | kg | 289 | | 285 | |
| **V28X** | kg | 422 | | 415 | |
| **V28X2** | kg | 431 | | 424 | |
| **V31X** | kg | 414 | | 407 | |
| **V31X2** | kg | 447 | | 440 | |
| **V35X** | kg | 476 | | 465 | |
| **V35X2** | kg | 518 | | 507 | |
| **V40X** | kg | 504 | | 475 | |
| **V40X2** | kg | 532 | | 503 | |
| **V45X2** | kg | 538 | | 509 | |
| **V50X2** | kg | 639 | | 609 | |
| **V55X2** | kg | 656 | | 626 | |
| **V60X2** | kg | 660 | | 630 | |

| | | Standard Evaporator Fan - Fwd EC Motor | | Optional Evaporator Fan - Bkwd EC Motor | |
|---|---|---|---|---|---|
| | | Machine | Operating | Machine | Operating |
| **V6WX** | kg | 189 | 191 | 180 | 182 |
| **V8WX** | kg | 193 | 194 | 186 | 187 |
| **V10WX** | kg | 196 | 197 | 193 | 194 |
| **V13WX** | kg | 234 | 235 | 236 | 237 |
| **V15WX** | kg | 265 | 267 | 250 | 252 |
| **V17WX** | kg | 268 | 270 | 253 | 255 |
| **V22WX2** | kg | 326 | 328 | 322 | 324 |
| **V25WX2** | kg | | | | |
| **V26WX** | kg | | | | |
| **V26WX2** | kg | 325 | 328 | 321 | 324 |
| **V28WX** | kg | 478 | 484 | 471 | 477 |
| **V28WX2** | kg | 487 | 493 | 480 | 486 |
| **V31WX** | kg | 470 | 476 | 463 | 469 |
| **V31WX2** | kg | 502 | 508 | 495 | 501 |
| **V35WX** | kg | 536 | 542 | 525 | 531 |
| **V35WX2** | kg | 578 | 584 | 567 | 573 |
| **V40WX** | kg | 569 | 575 | 540 | 546 |
| **V40WX2** | kg | 596 | 602 | 567 | 573 |
| **V45WX2** | kg | 627 | 637 | 598 | 608 |
| **V50WX2** | kg | 729 | 739 | 699 | 709 |
| **V55WX2** | kg | 749 | 759 | 719 | 729 |
| **V60WX2** | kg | 753 | 763 | 723 | 733 |

(1) Weights quoted for units fitted with the standard forward curved EC fan motor ***include*** the cooling fan weight within the unit cabinet (AHU).

(2) Machine weight includes a refrigerant charge / Operating weight includes calculated water volume..

# Installation

## Refrigeration Pipework

### Oil Traps

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

### Pipe Supports

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

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

### Lines passing through walls

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

### Horizontal Sections

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

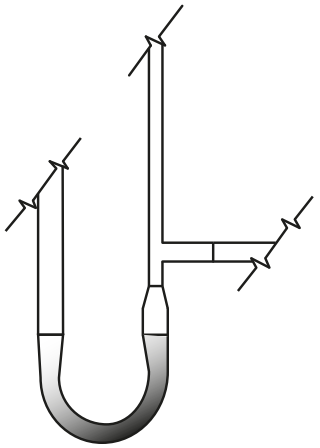
### Discharge Risers

Consideration must be taken when designing vertical risers. Refrigerant velocity must be ensured in vertical risers at a minimum of 8m/s.

If required double risers must be designed into the system. Pipework must be sizes based upon a reduction in unit capacity as low as 30% of design.
The double riser must be sized so that the refrigerant still maintains adequate velocity for the oil to travel around the system.

At part load the velocity is reduced in the larger diameter pipe (and cannot carry oil). An oil trap is formed forcing vapour up the smaller tube which still has adequate velocity due to its size to continue carrying oil around the system.
The trap at the base of the riser must be as small as possible. This ensures that the trap causes a pressure drop causing vapour to pass up the smaller tube.

When the load increases the velocity of the refrigerant ensures that oil carries up both tubes.



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

## Installation

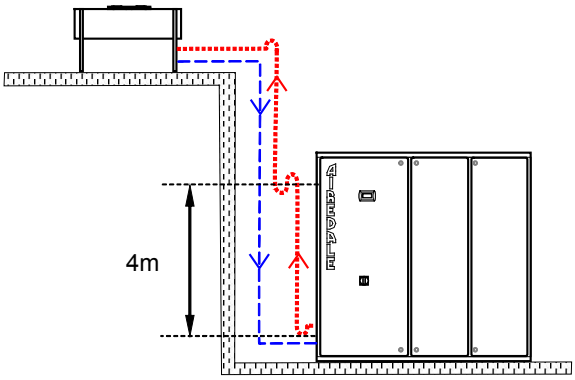
### Liquid Line

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

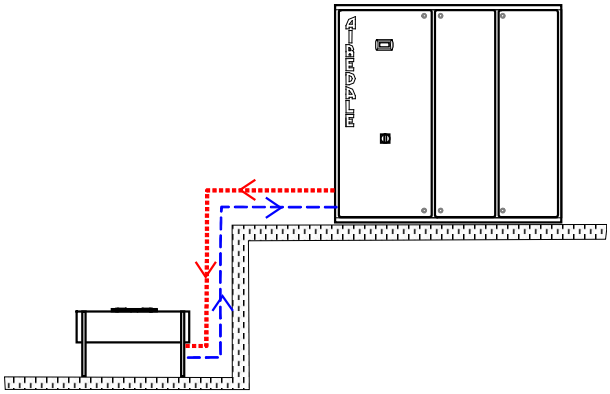
### Pipe Insulation

The liquid line of the system must be insulated if passing through extremely warm places (boiler houses etc). Ensuring that the refrigerant does not become flash gas.

**Condenser above Air Handling Unit**




**Condenser below Air Handling Unit**



Discharge Line Liquid Line

### Refrigerant Charging Guide

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

### Unit Refrigerant Charge

(kg / Circuit)

The following information can be used to estimate the refrigerant quantity required in a typical split system installation.
The table shows the refrigerant charge / circuit for the indoor and outdoor units.

| Indoor Unit | | Standard Condenser | | Upgraded Condenser | |
|---|---|---|---|---|---|
| (IR) | kg/Circuit | (OR) | kg/Circuit | (OR) | kg/Circuit |
| DF6X-EZE | 2 | C11 | 2.1 | C15 | 2.1 |
| DF8X-EZE | 2 | C15 | 2.1 | C20 | 2.3 |
| DF10X-EZE | 2 | C15 | 2.1 | C20 | 2.3 |
| DF13X-EZE | 3.2 | C20 | 2.3 | C25 | 3.1 |
| DF15X-EZE | 3.2 | C25 | 3.1 | C35 | 6.1 |
| DF17X-EZE | 3.2 | C35 | 6.1 | C45 | 6.1 |
| DF22X2-EZE | 4.1 | C45 | 6.1 | CS50 | 4.3 |
| DF25X2-EZE | 4.1 | C45 | 6.1 | CS50 | 4.3 |
| DF26X-EZE | 4.9 | C45 | 6.1 | CS50 | 4.3 |
| DF28X-EZE | 4.9 | C45 | 6.1 | CS50 | 4.3 |
| DF31X-EZE | 4.9 | C45 | 6.1 | CS50 | 4.3 |
| DF35X-EZE | 6.5 | CS50 | 4.3 | CS65 | 8.5 |
| DF40X-EZE | 6.5 | CS50 | 4.3 | CS65 | 8.5 |
| DF50X2-EZE | 7.7 | CS65 | 8.5 | CS80 | 7.3 |
| DF55X2-EZE | 9.4 | CS80 | 7.3 | CS105 | 14.6 |
| DF60X2-EZE | 9.4 | CS80 | 7.3 | CS105 | 14.6 |

| Indoor Unit | | Standard Condenser | | Upgraded Condenser | |
|---|---|---|---|---|---|
| (IR) | kg/Circuit | (OR) | kg/Circuit | (OR) | kg/Circuit |
| V6X-EZE | 2 | C11 | 2.1 | C15 | 2.1 |
| V8X-EZE | 2 | C15 | 2.1 | C20 | 2.3 |
| V10X-EZE | 2 | C15 | 2.1 | C20 | 2.3 |
| V13X-EZE | 3.2 | C20 | 2.3 | C25 | 3.1 |
| V15X-EZE | 3.2 | C25 | 3.1 | C35 | 6.1 |
| V17X-EZE | 3.2 | C35 | 6.1 | C45 | 6.1 |
| V22X2-EZE | 4.1 | C45 | 6.1 | CS50 | 4.3 |
| V25X2-EZE | 4.1 | C45 | 6.1 | CS50 | 4.3 |
| V26X-EZE | 4.9 | C45 | 6.1 | CS50 | 4.3 |
| V26X2-EZE | 4.9 | C45 | 6.1 | CS50 | 4.3 |
| V28X-EZE | 4.9 | C45 | 6.1 | CS50 | 4.3 |
| V28X2-EZE | 4.9 | C45 | 6.1 | CS50 | 4.3 |
| V31X-EZE | 4.9 | C45 | 6.1 | CS50 | 4.3 |
| V35X-EZE | 6.5 | CS50 | 4.3 | CS65 | 8.5 |
| V35X2-EZE | 6.5 | CS50 | 4.3 | CS65 | 8.5 |
| V40X-EZE | 6.5 | CS50 | 4.3 | CS65 | 8.5 |
| V45X2-EZE | 7.9 | CS50 | 4.3 | CS65 | 8.5 |
| V50X2-EZE | 7.7 | CS65 | 8.5 | CS80 | 7.3 |
| V55X2-EZE | 9.4 | CS80 | 7.3 | CS105 | 14.6 |
| V60X2-EZE | 9.4 | CS80 | 7.3 | CS105 | 14.6 |

### Packaged Unit Pre-Charged Refrigerant Volumes

| Indoor Unit | |
|---|---|
| (IR) | kg/Circuit |
| DF6WX-EZE | 2.4 |
| DF8WX-EZE | 2.5 |
| DF10WX-EZE | 2.5 |
| DF13WX-EZE | 3.7 |
| DF15WX-EZE | 4.1 |
| DF17WX-EZE | 4.1 |
| DF22WX2-EZE | 5.1 |
| DF25WX2-EZE | 5.1 |
| DF26WX-EZE | 7.2 |
| DF28WX-EZE | 7.2 |
| DF31WX-EZE | 7.2 |
| DF35WX-EZE | 8.9 |
| DF40WX-EZE | 8.9 |
| DF50WX2-EZE | 11.6 |
| DF55WX2-EZE | 13.3 |
| DF60WX2-EZE | 13.3 |

| Indoor Unit | |
|---|---|
| (IR) | kg/Circuit |
| V6WX-EZE | 2.2 |
| V8WX-EZE | 2.3 |
| V10WX-EZE | 2.3 |
| V13WX-EZE | 3.6 |
| V15WX-EZE | 3.9 |
| V17WX-EZE | 3.9 |
| V22WX2-EZE | 4.9 |
| V25WX2-EZE | 4.9 |
| V26WX-EZE | 6.9 |
| V26WX2 | 6.9 |
| V26WX2-EZE | 6.9 |
| V28WX-EZE | 6.9 |
| V28WX2-EZE | 6.9 |
| V31WX-EZE | 6.9 |
| V31X2-EZE | 6.9 |
| V35WX-EZE | 8.5 |
| V35WX2-EZE | 8.5 |
| V40WX-EZE | 8.5 |
| V40WX2-EZE | 8.5 |
| V45WX2-EZE | 11.3 |
| V50WX2-EZE | 11.2 |
| V55WX2-EZE | 12.9 |
| V60WX2-EZE | 12.9 |

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

### Liquid Line Refrigerant Charge (kg/m)

The following table shows the refrigerant charge / metre for the liquid line, using R07C and assuming a liquid line temperature of 40°C.

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

## Installation

### Calculation of System Refrigerant Charge (kg)

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

SR = LR + IR + OR

Where:

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

Example

Indoor Unit Model Ref. = DF10X-EZE

Outdoor Unit Model Ref = CR16 Condenser

Interconnecting Pipework = 10 metres

From the Refrigerant Pipe Sizing Guide, the liquid line size given for pipework length of 10 metres is:0.05kg/m

LR = L x m

Where:

| | | |
|---|---|---|
| L | = | 10 metres |
| m | = | 0.05 kg/m (Liquid Line Size = 3/8”) |
| LR | = | 10 x 0.05 = 0.5kg |

### System Refrigerant Charge

SR = LR + IR + OR

Where:

LR = 0.5 kg. (As calculated from above)

IR = 1.0 kg

OR = 2.7 kg

SR = 0.5 + 1.0 + 2.7

Therefore

System Refrigerant Charge

= 4.2 kg / Circuit

## Installation

### Liquid Sub Cooling

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

Subcooling = Condensing temperature — Saturation temperature (Nett pressure at expansion valve)
Given the following as an example:

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

### Pressure Loss due to Liquid Lift

= H x spl
Where
H = Height (m)
spl = Static pressure loss

= 20 x 0.115 = 2.3 bar

### Total Pressure Loss in Liquid Line

TPL Liquid = PFL + Valves + Lift

Where
PFL = Pipe friction loss (0.21Bar)
Valves = Losses through Valves and fittings

= 0.21 +0.5 + 2.3
Total pressure loss in liquid line = 3.01 Bar

### Nett Pressure at Expansion Valve

= Condensing pressure - Total pressure loss in liquid line

= 34 - 3.01 = 30.99 bar

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

### Sub Cooling Required

=Condensing temperature - Saturation temperature

= 54.4 - 52 = 2.4 °C

Therefore liquid sub cooling required to prevent liquid flashing = 2.4 °C

**Oil Charging Guide**

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

OT = (RC / 200) - (OC x 0.09)
Where
OT = Additional Oil Charge / Circuit (kg)
RC = Total Refrigerant Charge / Circuit (kg)
OC = Total Compressor Oil Charge / Circuit (l)

This calculation is based on the following assumptions:

1) 10% of the total compressor oil charge enters the system
2) A specific gravity of 0.09 between oil and water
3) Oil is added at a rate of 5 grams per kilogram of refrigerant
Example
What is the additional oil charge required per circuit for an DF10X-EZE matched with a CR16 and a 3/8” 80m interconnecting liquid line?

Refrigerant charge of an DF10X - EZE = 1.0 kg
Refrigerant charge of a CR50 = 2.7 kg
Interconnecting pipe line = 80 x 0.05 = 4.0 kg
Total system refrigerant charge = 1.0 + 2.7 + 4.0 = 7.7 kg
Compressor oil charge(s) = 1.2 litre

So,

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

OT = (7.7 / 200) - (1.2 x 0.09)

OT = -0.07 litre

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

OT = (RC / 200) - (OC x 0.09)
RC = (OT + OC x 0.09) x 200
RC = (0 + 1.2x 0.09) x 200
RC = 21.6 kg

### Refrigerant Pipesizing Guide - X Type Downflow

Pipe lengths calculated for Indoor unit with Airedale Outdoor Unit match.

| Indoor | Outdoor | Indoor Unit | | Equivalent Pipe Lengths with R407C | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Connection Size | | 0-15m | | | 15-40m | | |
| | | Liquid | Discharge | Liquid | Discharge | | Liquid | Discharge | |
| | | | | | Horizontal(1) | Vertical(2) | | Horizontal(1) | Vertical(2) |
| **DF6X** | **C11** | 3/8” | 5/8” | 3/8” | 5/8” | 5/8” | 1/2” | 3/4” | 3/4” |
| **DF8X** | **C15** | 3/8” | 5/8” | 3/8” | 5/8” | 5/8” | 1/2” | 3/4” | 3/4” |
| **DF10X** | **C15** | 3/8” | 5/8” | 3/8” | 5/8” | 5/8” | 1/2” | 3/4” | 3/4” |
| **DF13X** | **C20** | 1/2” | 3/4” | 1/2” | 3/4” | 3/4” | 5/8” | 7/8” | 7/8” |
| **DF15X** | **C25** | 1/2” | 3/4” | 1/2” | 3/4” | 3/4” | 5/8” | 7/8” | 7/8” |
| **DF17X** | **C35** | 1/2” | 3/4” | 1/2” | 3/4” | 3/4” | 5/8” | 7/8” | 7/8” |
| **DF22X2** | **C45** | 5/8” | 7/8” | 5/8” | 7/8” | 7/8” | 5/8” | 7/8” | 7/8” |
| **DF25X2** | **C45** | 5/8” | 7/8” | 5/8” | 7/8” | 7/8” | 5/8” | 1 1/8” | 7/8” |
| **DF26X** | **C45** | 5/8” | 7/8” | 5/8” | 1 1/8” | 1 1/8” | 3/4” | 1 1/8” | 1 1/8” |
| **DF28X** | **C45** | 5/8” | 7/8” | 5/8” | 1 1/8” | 1 1/8” | 3/4” | 1 1/8” | 1 1/8” |
| **DF31X** | **C45** | 5/8” | 7/8” | 5/8” | 1 1/8” | 1 1/8” | 3/4” | 1 1/8” | 1 1/8” |
| **DF35X** | **CS50** | 5/8” | 7/8” | 5/8” | 1 1/8” | 1 1/8” | 3/4” | 1 3/8” | 1 1/8” |
| **DF40X** | **CS50** | 7/8” | 1 1/8” | 7/8” | 1 3/8” | 1 3/8” | 3/4” | 1 3/8” | 1 3/8” |
| **DF45X** | **CS50** | 7/8” | 1 1/8” | 7/8” | 1 3/8” | 1 3/8” | 7/8” | 1 3/8” | 1 3/8” |
| **DF50X2** | **CS65** | 7/8” | 1 3/8” | 7/8” | 1 3/8” | 1 3/8” | 7/8” | 1 5/8” | 1 3/8” |
| **DF55X2** | **CS80** | 7/8” | 1 3/8” | 7/8” | 1 5/8” | 1 3/8” | 7/8” | 1 5/8” | 1 5/8” |
| **DF60X2** | **CS80** | 7/8” | 1 3/8” | 7/8” | 1 5/8” | 1 5/8” | 1 1/8” | 1 5/8” | 1 5/8” |

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

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

| | |
|---|---|
| **CAUTION ⚠** | Tandem compressor and suction throttle valve applications: In part load, gas velocity should be taken into account when selecting and commissioning pipework to ensure full oil return. |

| | |
|---|---|
| **IMPORTANT ⚠** | Remember excessive pressure loss in interconnecting pipework will impair system performance; this should be factored in during the design of the system and where necessary oil separators employed. |

### Refrigerant Pipesizing Guide - X Type Upflow

Pipe lengths calculated for Indoor unit with Airedale Outdoor Unit match.

| Indoor | Outdoor | Indoor Unit | | Equivalent Pipe Lengths with R407C | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Connection Size | | 0-15m | | | 15-40m | | |
| | | Liquid | Discharge | Liquid | Discharge | | Liquid | Discharge | |
| | | | | | Horizontal(1) | Vertical(2) | | Horizontal(1) | Vertical(2) |
| **V6X** | **C11** | 3/8” | 5/8” | 3/8” | 5/8” | 5/8” | 1/2” | 3/4” | 3/4” |
| **V8X** | **C15** | 3/8” | 5/8” | 3/8” | 5/8” | 5/8” | 1/2” | 3/4” | 3/4” |
| **V10X** | **C15** | 3/8” | 5/8” | 3/8” | 5/8” | 5/8” | 1/2” | 3/4” | 3/4” |
| **V13X** | **C20** | 1/2” | 7/8” | 1/2” | 3/4” | 3/4” | 5/8” | 7/8” | 7/8” |
| **V15X** | **C25** | 1/2” | 7/8” | 1/2” | 3/4” | 3/4” | 5/8” | 7/8” | 7/8” |
| **V17X** | **C35** | 1/2” | 7/8” | 1/2” | 3/4” | 3/4” | 5/8” | 7/8” | 7/8” |
| **V22X2** | **C45** | 5/8” | 7/8” | 5/8” | 7/8” | 7/8” | 5/8” | 7/8” | 7/8” |
| **V25X2** | **C45** | 5/8” | 7/8” | 5/8” | 7/8” | 7/8” | 5/8” | 1 1/8” | 7/8” |
| **V26X** | **C45** | 5/8” | 7/8” | 5/8” | 1 1/8” | 1 1/8” | 3/4” | 1 1/8” | 1 1/8” |
| **V26X2** | **C45** | 5/8” | 7/8” | 5/8” | 7/8” | 7/8” | 5/8” | 7/8” | 7/8” |
| **V28X** | **C45** | 5/8” | 7/8” | 5/8” | 1 1/8” | 1 1/8” | 3/4” | 1 1/8” | 1 1/8” |
| **V28X2** | **C45** | 5/8” | 7/8” | 5/8” | 7/8” | 7/8” | 5/8” | 7/8” | 7/8” |
| **V31X** | **C45** | 5/8” | 7/8” | 5/8” | 1 1/8” | 1 1/8” | 3/4” | 1 1/8” | 1 1/8” |
| **V31X2** | **C45** | 5/8” | 7/8” | 5/8” | 7/8” | 7/8” | 5/8” | 7/8” | 7/8” |
| **V35X** | **CS50** | 5/8” | 7/8” | 5/8” | 1 1/8” | 1 1/8” | 3/4” | 1 3/8” | 1 1/8” |
| **V35X2** | **CS50** | 5/8” | 7/8” | 5/8” | 1 1/8” | 7/8” | 5/8” | 1 1/8” | 7/8” |
| **V40X** | **CS50** | 7/8” | 1 1/8” | 7/8” | 1 3/8” | 1 3/8” | 3/4” | 1 3/8” | 1 3/8” |
| **V40X2** | **CS50** | 7/8” | 1 1/8” | 7/8” | 1 1/8” | 7/8” | 3/4” | 1 1/8” | 1 1/8” |
| **V45X2** | **CS50** | 7/8” | 1 1/8” | 7/8” | 1 1/8” | 7/8” | 7/8” | 1 1/8” | 1 1/8” |
| **V50X2** | **CS65** | 7/8” | 1 3/8” | 7/8” | 1 3/8” | 1 1/8” | 7/8” | 1 3/8” | 1 1/8” |
| **V55X2** | **CS80** | 7/8” | 1 3/8” | 7/8” | 1 3/8” | 1 1/8” | 7/8” | 1 3/8” | 1 1/8” |
| **V60X2** | **CS80** | 7/8” | 1 3/8” | 7/8” | 1 3/8” | 1 1/8” | 7/8” | 1 3/8” | 1 3/8” |

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

| | |
|---|---|
| **CAUTION ⚠** | Tandem compressor and suction throttle valve applications: In part load, gas velocity should be taken into account when selecting and commissioning pipework to ensure full oil return. |

| | |
|---|---|
| **IMPORTANT ⚠** | Remember excessive pressure loss in interconnecting pipework will impair system performance; this should be factored in during the design of the system and where necessary oil separators employed. |

### Ethylene Glycol Correction Factors - WX Models

For conditions outside those quoted, please refer to Airedale.

### The Use of Glycol

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.

The presence of glycol in the system has a direct effect upon the Cooling Duty, the Design Flow Rate and the unit Pressure Drop.

To approximate the effect of glycol on unit performance, the following correction factors when applied can be used as a guide.

Where:

$\dot{V}$ = Corrected Flow Rate
THR = Equivalent Total Heat of Rejection (THR) (kW), refer to ***Cooling Duties - WX Models***, (the change in THR values as glycol concentration is increased is negligible.)
$\Delta T$ = Temperature difference between Water/Glycol Inlet/Outlet (°C).
$\Delta P$ = Maximum Water/ Glycol Pressure Drop for the indoor unit (kPa).
$\Delta P_W$ = Equivalent Water Pressure Drop for indoor unit (kPa), use the corrected flow rate $\dot{V}$. Refer to ***Waterside Pressure Drop (kPa) - WX Models***.

| | | | | | | Ethylene Glycol (Volume) / Freezing Point °C | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 10% / -4°C | 20% / -9°C | 30% / -15°C | 40% / -23°C |
| $\dot{V}$ | Corrected Flow Rate | = | THR / $\Delta T$ | Flow Rate | x by | 0.240 | 0.250 | 0.250 | 0.260 |
| $\Delta P$ | Corrected Pressure Drop | = | $\Delta Pw$ | Pressure Drop | | 1.041 | 1.083 | 1.133 | 1.200 |

Example: V26WX2-EZE Condensing Entering / Leaving at 30°C/35°C, Based on ΔT of 5°C, 24°C/45% RH Ambient, 20% Ethylene Glycol

| | | | | | | Ethylene Glycol (Volume) / Freezing Point °C | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 10% / -4°C | 20% / -9°C | 30% / -15°C | 40% / -23°C |
| $\dot{V}$ | 1.76 l/s | = | THR (35.2) / $\Delta T$ (12 - 7 = 5$\Delta T$) = | 7.04 | x by | 0.240 | 0.250 | 0.250 | 0.260 |
| $\Delta P$ | 157Pa | = | $\Delta Pw$ | 145 kPa | | 1.041 | 1.083 | 1.133 | 1.200 |

### Water Detector Tape Installation

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

The recommended installation process is as follows:

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

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

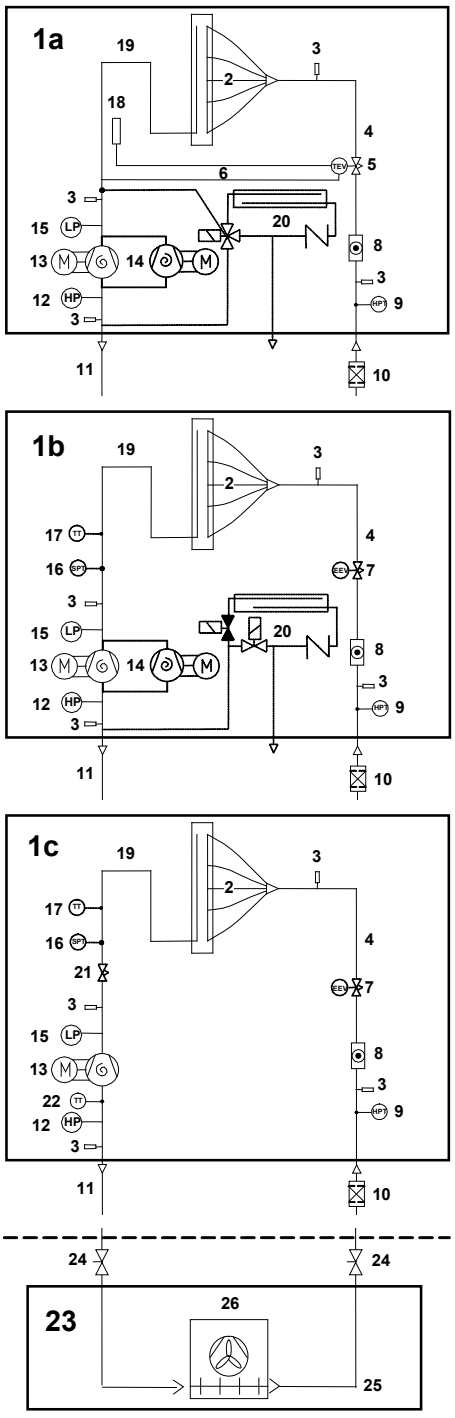
| | |
|---|---|
| **CAUTION ⚠** | Any electrically conductive attachment devices used must not touch the wires that are within the tape fabric. The maximum length of a detector loop, including wire and detector tape is 50 metres. However, this tape length is not practical for most applications. Where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

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

### System Pipework Schematic

### X Type

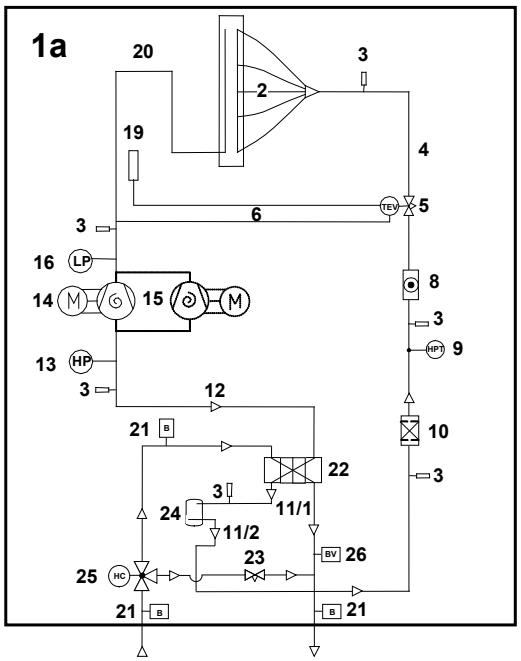
Design should be in accordance with good refrigeration practice to ensure good oil return to the compressor under all normal operating conditions to prolong the life of your unit.

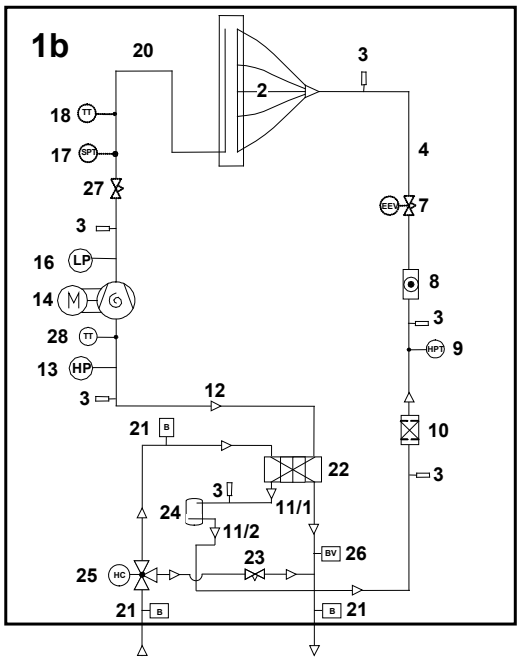



| | |
|---|---|
| **1** | INDOOR UNIT |
| 1a | Shown with Optional Hot Gas Re-Heat (HGRH): Sizes 6 - 35 comprising: Coil, Check Valve & 3 Way Solenoid Valve |
| 1b | Shown with Optional Hot Gas Re-Heat (HGRH): Sizes 40 - 60 comprising: Coil, Check Valve & 2 x 2 way Solenoid Valves (1 NC and 1 NO) |
| 1c | Shown with Optional Suction Throttle Valve, optional EEV standard with Suction Throttle Valve selection |
| 2 | Evaporator Coil |
| 3 | Schrader Point |
| 4 | Liquid Expansion Line |
| 5 | Thermostatic Expansion Valve (TEV) - Standard |
| 6 | Equalisation Line - Standard with TEV - Standard |
| 7 | Electronic Expansion Valve (EEV) - Optional in place of TEV and standard with Suction Throttle Valve option |
| 8 | Sight Glass |
| 9 | Head Pressure Transducer |
| 10 | Filter Drier (Supplied Loose) |
| 11 | Discharge Line |
| 12 | High Pressure Switch |
| 13 | Scroll Compressor |
| 14 | Additional Scroll Compressor (Tandem Set), Suction Throttle Valve not available with Tandem set |
| 15 | Low Pressure Switch |
| 16 | Suction Pressure Transducer - With Optional EEV |
| 17 | Temperature Transmitter - With Optional EEV |
| 18 | TEV Bulb - Standard with TEV |
| 19 | Suction Line |
| 20 | Hot Gas Re-Heat Option |
| 21 | Suction Throttle Valve; not available with HGRH and not available with Tandem Scroll units (Sizes 22X2 - 26X2 & 50X2 - 60X2) |
| 22 | Temperature Sensor - Discharge Gas (Sizes 28X - 45X & 50X2 - 60X2) |
| 23 | MATCHED OUTDOOR CONDENSER |
| 24 | Shut Off Valve (Supplied loose) - Optional with Outdoor Units |
| 25 | Liquid Line |
| 26 | Condenser Coil & Fan |

**System Pipework Schematic**

**WX Type**




1 INDOOR UNIT

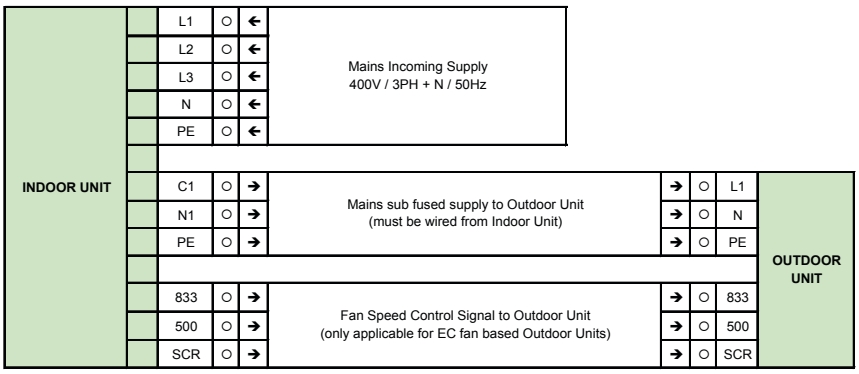
**1a** Shown with standard Thermostatic Expansion Valve

**1b** Shown with Optional Suction Throttle Valve, optional EEV standard with Suction Throttle Valve selection

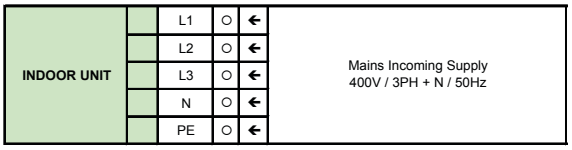
2 Evaporator Coil
3 Schrader Point
4 Liquid Expansion Line
5 Thermostatic Expansion Valve (TEV) - Standard
6 Equalisation Line - Standard with TEV
7 Electronic Expansion valve (EEV) - Optional in place of TEV
8 Sight Glass
9 Head Pressure Transducer
10 Filter Drier
11 Liquid Line 1 & 2
12 Discharge Line
13 High Pressure Switch
14 Scroll Compressor
15 Additional Scroll Compressor (Tandem Set), Suction Throttle Valve not available with Tandem set
16 Low Pressure Switch
17 Suction Pressure Transducer - With Optional EEV
18 Temperature Transmitter - With Optional EEV
19 TEV Bulb - Standard with TEV
20 Suction Line
21 Binder Point
22 Plate Condenser
23 Bypass Leg & Bypass Balancing Valve
24 Liquid Receiver
25 Head Pressure Control Valve
26 Bleed Valve
27 Suction Throttle Valve; not available with HGRH and not available with Tandem Scroll units (Sizes 22X2 - 26X2 & 50X2 - 60X2)
28 Temperature Sensor - Discharge Gas (Sizes 28X - 45X & 50X2 - 60X2)

## Interconnecting Wiring

### X Models (Matched System)



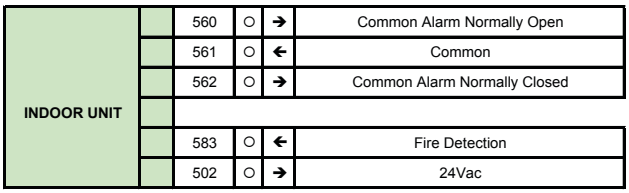

### WX Models (Non-Matched System)



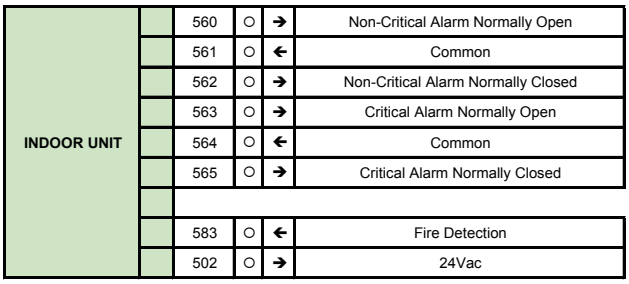

## X and WX Models

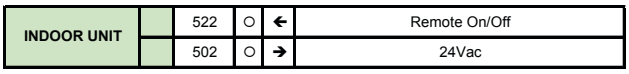
### Indoor Controls Only

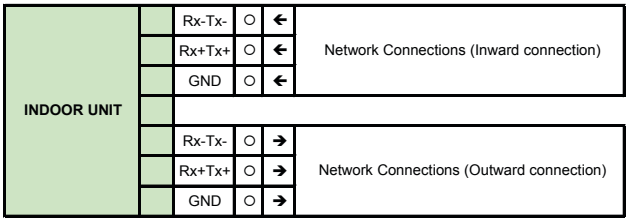
### Sizes 6-26




### Sizes 28-60

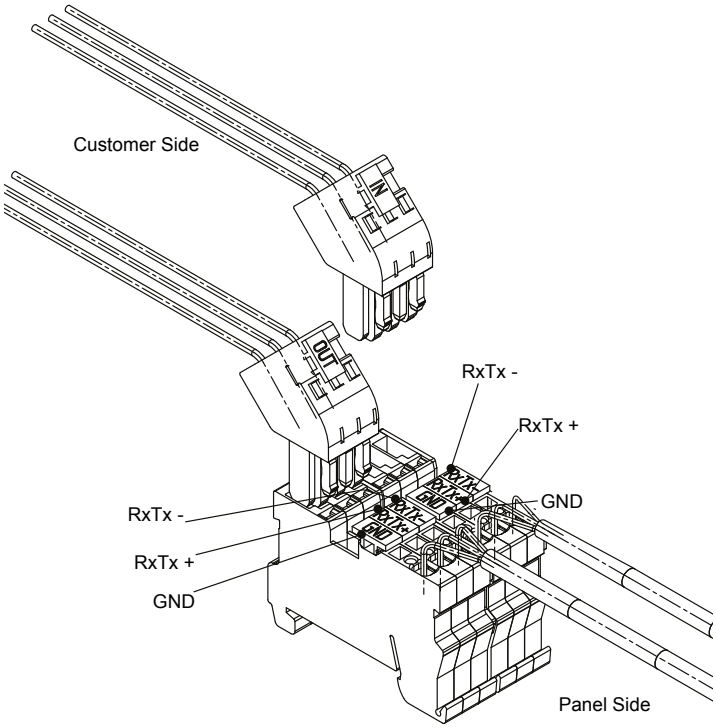


**pLAN Termination**

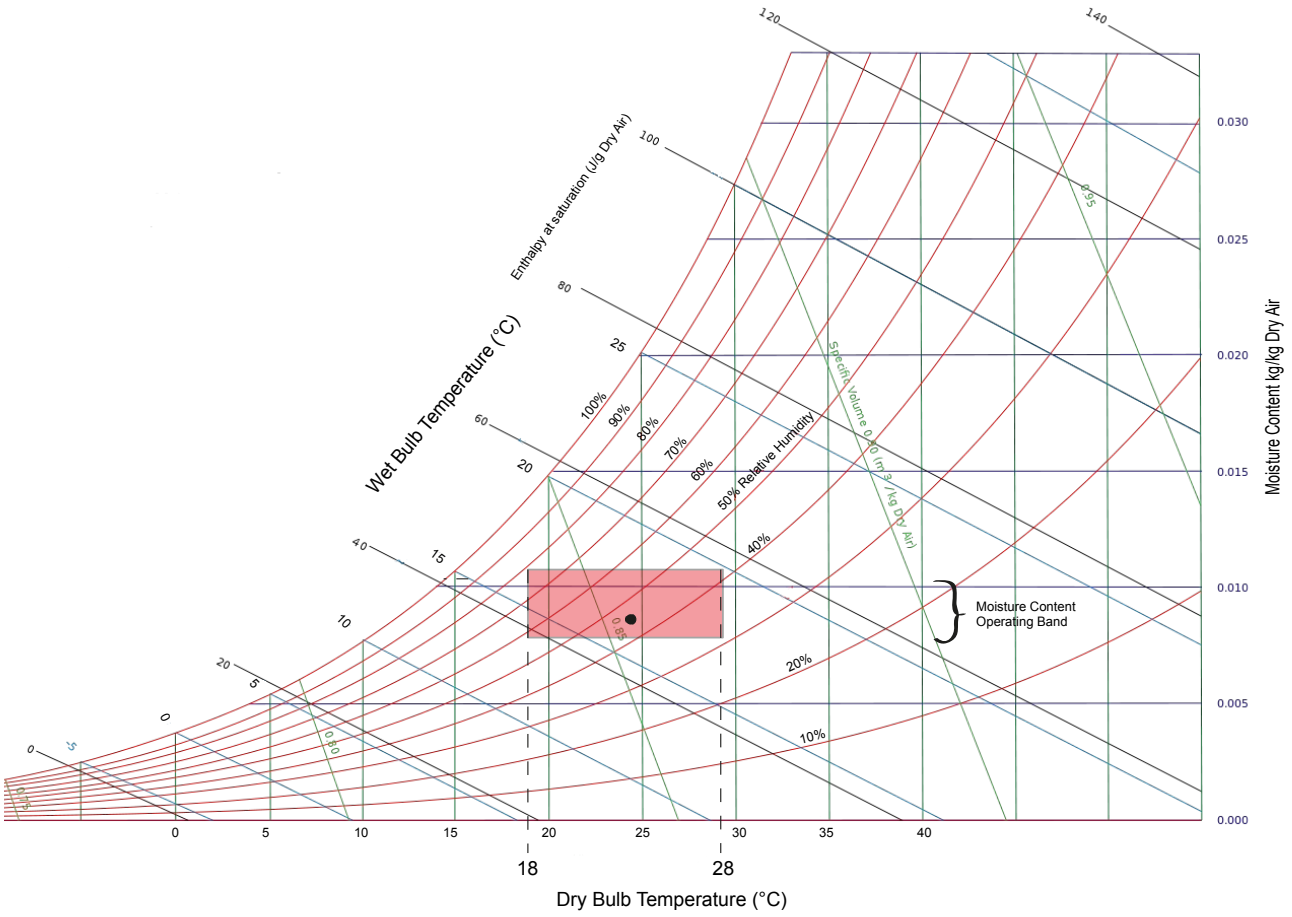
The plugged termination ensures that the connections are made simultaneously. Failure to attach the cables this way may cause damage to the controller.



## Technical Data

### Operating Limits

| | |
|---|---|
| Indoor Air Temperature | +18°C to +28°C |
| Indoor RH% | +40% to +55% (Based upon 24°C Dry Bulb) |
| Outdoor Temperature | -20°C to +41°C |




- Nominal Design Operating Condition 24°C Dry Bulb 45% RH

| | |
|---|---|
| **IMPORTANT** ⚠ | Fan Power Input (Fan Gain) must be added to the room load to establish full gross cooling capacity requirements. Fan Power Input can be found in the mechanical data sections. Fan Power Input is taken at the operating conditions based on 25Pa ESP. |

Technical

## Technical Data Downflow Units X Type

### Performance Data

### Standard Condenser

| Cooling Capacity (1) | | Ambient | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Air On | 25°C | | 30°C | | 35°C | | 40°C | |
| | (DB°C/%RH) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) |
| | 22/50 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 5.9 | 5.9 |
| **DF6X-EZE C11** | 24/45 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.1 | 6.1 |
| | 26/40 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.3 | 6.3 |
| | 22/50 | 9.0 | 8.4 | 9.0 | 8.4 | 8.9 | 8.4 | 8.5 | 8.2 |
| **DF8X-EZE C15** | 24/45 | 9.3 | 9.3 | 9.3 | 9.3 | 9.2 | 9.2 | 8.9 | 8.9 |
| | 26/40 | 9.6 | 9.6 | 9.6 | 9.6 | 9.5 | 9.5 | 9.1 | 9.1 |
| | 22/50 | 10.4 | 10.0 | 10.4 | 10.0 | 10.2 | 9.9 | 9.8 | 9.6 |
| **DF10X-EZE C15** | 24/45 | 10.9 | 10.9 | 10.9 | 10.9 | 10.7 | 10.7 | 10.2 | 10.2 |
| | 26/40 | 11.4 | 11.4 | 11.4 | 11.4 | 11.1 | 11.1 | 10.7 | 10.7 |
| | 22/50 | 13.3 | 12.1 | 13.3 | 12.1 | 13.0 | 12.0 | 12.4 | 11.8 |
| **DF13X-EZE C20** | 24/45 | 13.7 | 13.6 | 13.7 | 13.6 | 13.3 | 13.3 | 12.7 | 12.7 |
| | 26/40 | 14.0 | 14.0 | 14.0 | 14.0 | 13.6 | 13.6 | 13.0 | 13.0 |
| | 22/50 | 16.1 | 14.6 | 16.1 | 14.6 | 15.5 | 14.4 | 14.7 | 14.0 |
| **DF15X-EZE C25** | 24/45 | 16.6 | 16.4 | 16.6 | 16.4 | 16.0 | 16.0 | 15.1 | 15.1 |
| | 26/40 | 17.1 | 17.1 | 17.1 | 17.1 | 16.4 | 16.4 | 15.6 | 15.6 |
| | 22/50 | 20.5 | 17.5 | 20.5 | 17.5 | 20.0 | 17.3 | 19.1 | 16.9 |
| **DF17X-EZE C35** | 24/45 | 21.1 | 19.6 | 21.1 | 19.6 | 20.6 | 19.4 | 19.6 | 18.9 |
| | 26/40 | 21.7 | 21.7 | 21.7 | 21.7 | 21.2 | 21.2 | 20.2 | 20.2 |
| | 22/50 | 24.3 | 21.3 | 24.3 | 21.3 | 24.3 | 21.3 | 23.2 | 21.0 |
| **DF22X2-EZE C45** | 24/45 | 25.7 | 23.9 | 25.7 | 23.9 | 25.6 | 23.9 | 24.3 | 23.3 |
| | 26/40 | 26.5 | 26.5 | 26.5 | 26.5 | 26.2 | 26.2 | 24.9 | 24.9 |
| | 22/50 | 25.5 | 23.1 | 25.5 | 23.1 | 25.3 | 23.1 | 24.1 | 22.5 |
| **DF25X2-EZE C45** | 24/45 | 26.5 | 26.1 | 26.5 | 26.1 | 26.3 | 26.0 | 25.0 | 25.0 |
| | 26/40 | 27.2 | 27.2 | 27.2 | 27.2 | 26.9 | 26.9 | 25.6 | 25.6 |
| | 22/50 | 28.8 | 25.4 | 28.8 | 25.4 | 28.3 | 25.1 | 26.7 | 24.4 |
| **DF26X-EZE C45** | 24/45 | 29.7 | 28.4 | 29.7 | 28.4 | 29.1 | 28.1 | 27.5 | 27.5 |
| | 26/40 | 30.6 | 30.6 | 30.6 | 30.6 | 29.8 | 29.8 | 28.2 | 28.2 |

### Operating Limits

| | |
|---|---|
| Indoor Air Temperature | +18°C to +28°C |
| Indoor RH% | +40% to +55% (based upon 24°C Dry Bulb) |
| Outdoor Temperature | -20°C to +41°C |

TC = Total Cooling
SC = Sensible Cooling
(1) All data quoted is gross

## Technical Data Downflow Units X Type

### Performance Data

### Standard Condenser

| Cooling Capacity (1) | | Ambient | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Air On | 25°C | | 30°C | | 35°C | | 40°C | |
| | (DB°C/%RH) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) |
| **DF28X-EZE C45** | 22/50 | 29.4 | 27.0 | 29.4 | 27.0 | 28.7 | 26.7 | 27.1 | 26.0 |
| | 24/45 | 30.3 | 30.3 | 30.3 | 30.3 | 29.6 | 29.6 | 27.9 | 27.9 |
| | 26/40 | 35.9 | 35.0 | 35.9 | 35.0 | 36.6 | 35.0 | 38.2 | 35.3 |
| **DF31X-EZE C45** | 22/50 | 33.7 | 30.9 | 33.7 | 30.9 | 32.4 | 30.2 | 30.5 | 29.3 |
| | 24/45 | 34.9 | 34.5 | 34.9 | 34.5 | 33.4 | 33.4 | 31.4 | 31.4 |
| | 26/40 | 36.0 | 36.0 | 35.9 | 35.9 | 34.3 | 34.3 | 32.4 | 32.4 |
| **DF35X-EZE CS50** | 22/50 | 39.1 | 36.3 | 39.1 | 36.3 | 37.7 | 35.7 | 35.7 | 34.8 |
| | 24/45 | 40.7 | 40.7 | 40.7 | 40.7 | 39.1 | 39.1 | 37.1 | 37.1 |
| | 26/40 | 41.6 | 41.6 | 41.6 | 41.6 | 39.9 | 39.9 | 37.9 | 37.9 |
| **DF40X-EZE CS50** | 22/50 | 44.3 | 40.5 | 44.1 | 40.5 | 42.6 | 39.6 | 41.3 | 38.8 |
| | 24/45 | 46.2 | 46.0 | 45.9 | 45.8 | 43.9 | 43.9 | 41.9 | 41.9 |
| | 26/40 | 47.8 | 47.8 | 47.3 | 47.3 | 45.3 | 45.3 | 43.3 | 43.3 |
| **DF45X-EZE CS50** | 22/50 | 50.6 | 43.9 | 49.5 | 43.4 | 47.2 | 42.4 | 44.8 | 41.4 |
| | 24/45 | 52.1 | 49.1 | 50.8 | 48.6 | 48.5 | 47.5 | 46.1 | 46.1 |
| | 26/40 | 53.6 | 53.6 | 52.1 | 52.1 | 49.7 | 49.7 | 47.3 | 47.3 |
| **DF50X2-EZE CS65** | 22/50 | 57.0 | 48.9 | 57.0 | 48.9 | 54.6 | 47.8 | 51.9 | 46.6 |
| | 24/45 | 58.4 | 54.5 | 58.4 | 54.5 | 56.3 | 53.4 | 54.5 | 52.3 |
| | 26/40 | 60.6 | 60.6 | 60.4 | 60.4 | 57.7 | 57.7 | 54.9 | 54.9 |
| **DF55X2-EZE CS80** | 22/50 | 62.4 | 51.8 | 62.4 | 51.8 | 60.5 | 51.0 | 57.6 | 49.8 |
| | 24/45 | 64.3 | 58.4 | 64.3 | 58.4 | 62.2 | 57.5 | 59.3 | 56.3 |
| | 26/40 | 66.0 | 64.7 | 66.0 | 64.7 | 63.7 | 63.7 | 60.7 | 60.7 |
| **DF60X2-EZE CS80** | 22/50 | 66.3 | 55.6 | 66.3 | 55.6 | 63.8 | 54.5 | 60.7 | 53.2 |
| | 24/45 | 68.4 | 62.5 | 68.4 | 62.5 | 65.7 | 61.3 | 62.5 | 60.0 |
| | 26/40 | 76.0 | 72.1 | 75.6 | 71.9 | 72.8 | 70.7 | 70.1 | 69.5 |

### Operating Limits

| | |
|---|---|
| Indoor Air Temperature | +18°C to +28°C |
| Indoor RH% | +40% to +55% (based upon 24°C Dry Bulb) |
| Outdoor Temperature | -20°C to +41°C |

TC = Total Cooling
SC = Sensible Cooling
(1) All data quoted is gross

## Technical Data Downflow Units X Type

### Performance Data

### Larger Condenser

| Cooling Capacity (1) | | Ambient | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Air On | 25°C | | 30°C | | 35°C | | 40°C | | 45°C | |
| | (DB°C/%RH) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) |
| **DF6X-EZE C15** | 22/50 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 6.1 | 6.1 | 5.8 | 5.8 |
| | 24/45 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.3 | 6.3 | 6.0 | 6.0 |
| | 26/40 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.4 | 6.4 | 6.1 | 6.1 |
| **DF8X-EZE C20** | 22/50 | 9.0 | 8.4 | 9.0 | 8.4 | 9.0 | 8.4 | 8.7 | 8.3 | 8.3 | 8.1 |
| | 24/45 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.0 | 9.0 | 8.6 | 8.6 |
| | 26/40 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.6 | 9.3 | 9.3 | 8.9 | 8.9 |
| **DF10X-EZE C20** | 22/50 | 10.4 | 10.0 | 10.4 | 10.0 | 10.4 | 10.0 | 10.0 | 9.8 | 9.6 | 9.5 |
| | 24/45 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.5 | 10.5 | 10.1 | 10.1 |
| | 26/40 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.0 | 11.0 | 10.5 | 10.5 |
| **DF13X-EZE C25** | 22/50 | 13.3 | 12.1 | 13.3 | 12.1 | 13.1 | 12.1 | 12.5 | 11.8 | 11.8 | 11.6 |
| | 24/45 | 13.7 | 13.6 | 13.7 | 13.6 | 13.5 | 13.5 | 12.9 | 12.9 | 12.2 | 12.2 |
| | 26/40 | 14.0 | 14.0 | 14.0 | 14.0 | 13.8 | 13.8 | 13.2 | 13.2 | 12.5 | 12.5 |
| **DF15X-EZE C35** | 22/50 | 16.1 | 14.6 | 16.1 | 14.6 | 16.1 | 14.6 | 15.4 | 14.3 | 14.6 | 14.0 |
| | 24/45 | 16.6 | 16.4 | 16.6 | 16.4 | 16.6 | 16.4 | 15.8 | 15.8 | 15.0 | 15.0 |
| | 26/40 | 17.1 | 17.1 | 17.1 | 17.1 | 17.1 | 17.1 | 16.3 | 16.3 | 15.5 | 15.5 |
| **DF17X-EZE C45** | 22/50 | 20.5 | 17.5 | 20.5 | 17.5 | 20.5 | 17.5 | 19.8 | 17.2 | 18.7 | 16.7 |
| | 24/45 | 21.1 | 19.6 | 21.1 | 19.6 | 21.1 | 19.6 | 20.3 | 19.2 | 19.2 | 18.7 |
| | 26/40 | 21.7 | 21.7 | 21.7 | 21.7 | 21.7 | 21.7 | 20.9 | 20.9 | 19.8 | 19.8 |
| **DF22X2-EZE CS50** | 22/50 | 24.3 | 21.3 | 24.3 | 21.3 | 24.3 | 21.3 | 23.5 | 21.1 | 22.7 | 20.8 |
| | 24/45 | 25.7 | 23.9 | 25.7 | 23.9 | 25.7 | 23.9 | 24.7 | 23.5 | 23.7 | 23.0 |
| | 26/40 | 26.5 | 26.5 | 26.5 | 26.5 | 26.5 | 26.5 | 25.4 | 25.4 | 24.2 | 24.2 |
| **DF25X2-EZE CS50** | 22/50 | 25.5 | 23.1 | 25.5 | 23.1 | 25.5 | 23.1 | 24.5 | 22.7 | 23.4 | 22.2 |
| | 24/45 | 26.5 | 26.1 | 26.5 | 26.1 | 26.5 | 26.1 | 25.5 | 25.5 | 24.4 | 24.4 |
| | 26/40 | 27.2 | 27.2 | 27.2 | 27.2 | 27.2 | 27.2 | 26.1 | 26.1 | 24.9 | 24.9 |
| **DF26X-EZE CS50** | 22/50 | 28.8 | 25.4 | 28.8 | 25.4 | 28.7 | 25.3 | 27.4 | 24.7 | 26.0 | 24.1 |
| | 24/45 | 29.7 | 28.4 | 29.7 | 28.4 | 29.6 | 28.4 | 28.2 | 27.8 | 26.8 | 26.8 |
| | 26/40 | 30.6 | 30.6 | 30.6 | 30.6 | 30.4 | 30.4 | 29.0 | 29.0 | 27.5 | 27.5 |

### Operating Limits

| | |
|---|---|
| Indoor Air Temperature | +18°C to +28°C |
| Indoor RH% | +40% to +55% (based upon 24°C Dry Bulb) |
| Outdoor Temperature | -20°C to +41°C |

TC = Total Cooling
SC = Sensible Cooling
(1) All data quoted is gross

## Technical Data Downflow Units X Type

### Performance Data

### Larger Condenser

| Cooling Capacity (1) | | Ambient | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Air On | 25°C | | 30°C | | 35°C | | 40°C | | 45°C | |
| | (DB°C/%RH) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) |
| **DF28X-EZE CS50** | 22/50 | 29.4 | 27.0 | 29.4 | 27.0 | 29.2 | 27.0 | 27.8 | 26.3 | 26.4 | 25.7 |
| | 24/45 | 30.3 | 30.3 | 30.3 | 30.3 | 30.1 | 30.1 | 28.7 | 28.7 | 27.2 | 27.2 |
| | 26/40 | 35.9 | 35.0 | 35.9 | 35.0 | 36.1 | 35.0 | 37.1 | 35.1 | 38.6 | 35.4 |
| **DF31X-EZE CS50** | 22/50 | 33.7 | 30.9 | 33.7 | 30.9 | 33.1 | 30.6 | 31.6 | 29.8 | 30.0 | 29.1 |
| | 24/45 | 34.9 | 34.5 | 34.9 | 34.5 | 34.1 | 34.1 | 32.6 | 32.6 | 31.0 | 31.0 |
| | 26/40 | 36.0 | 36.0 | 36.0 | 36.0 | 35.2 | 35.2 | 33.6 | 33.6 | 32.0 | 32.0 |
| **DF35X-EZE CS65** | 22/50 | 39.1 | 36.3 | 39.1 | 36.3 | 39.0 | 36.2 | 37.1 | 35.4 | 35.1 | 34.5 |
| | 24/45 | 40.7 | 40.7 | 40.7 | 40.7 | 40.4 | 40.4 | 38.5 | 38.5 | 36.5 | 36.5 |
| | 26/40 | 41.6 | 41.6 | 41.6 | 41.6 | 41.3 | 41.3 | 39.3 | 39.3 | 37.3 | 37.3 |
| **DF40X-EZE CS65** | 22/50 | 44.3 | 40.5 | 44.3 | 40.5 | 43.8 | 40.3 | 42.3 | 39.4 | 40.9 | 38.6 |
| | 24/45 | 46.2 | 46.0 | 46.2 | 46.0 | 45.5 | 45.5 | 43.5 | 43.5 | 41.4 | 41.4 |
| | 26/40 | 47.8 | 47.8 | 47.8 | 47.8 | 46.9 | 46.9 | 44.9 | 44.9 | 42.8 | 42.8 |
| **DF45X-EZE CS65** | 22/50 | 50.6 | 43.9 | 50.6 | 43.9 | 49.2 | 43.3 | 46.8 | 42.3 | 44.5 | 41.3 |
| | 24/45 | 52.1 | 49.1 | 52.1 | 49.1 | 50.5 | 48.4 | 48.1 | 47.4 | 45.7 | 45.7 |
| | 26/40 | 53.6 | 53.6 | 53.6 | 53.6 | 51.9 | 51.9 | 49.5 | 49.5 | 47.0 | 47.0 |
| **DF50X2-EZE CS80** | 22/50 | 57.0 | 48.9 | 57.0 | 48.9 | 55.9 | 48.4 | 53.3 | 47.2 | 50.7 | 46.0 |
| | 24/45 | 58.4 | 54.5 | 58.4 | 54.5 | 57.4 | 54.0 | 55.5 | 52.9 | 53.7 | 51.9 |
| | 26/40 | 60.6 | 60.6 | 60.6 | 60.6 | 59.1 | 59.1 | 56.4 | 56.4 | 53.7 | 53.7 |
| **DF55X2-EZE CS105** | 22/50 | 62.4 | 51.8 | 62.4 | 51.8 | 62.3 | 51.8 | 59.4 | 50.6 | 56.5 | 49.4 |
| | 24/45 | 64.3 | 58.4 | 64.3 | 58.4 | 64.1 | 58.3 | 61.2 | 57.1 | 58.2 | 55.9 |
| | 26/40 | 66.0 | 64.7 | 66.0 | 64.7 | 65.6 | 64.6 | 62.7 | 62.7 | 59.6 | 59.6 |
| **DF60X2-EZE CS105** | 22/50 | 66.3 | 55.6 | 66.3 | 55.6 | 65.9 | 55.4 | 62.8 | 54.1 | 59.7 | 52.8 |
| | 24/45 | 68.4 | 62.5 | 68.4 | 62.5 | 67.8 | 62.2 | 64.7 | 60.9 | 61.5 | 59.6 |
| | 26/40 | 76.0 | 72.1 | 76.0 | 72.1 | 74.9 | 71.6 | 72.1 | 70.4 | 69.4 | 69.1 |

### Operating Limits

| | |
|---|---|
| Indoor Air Temperature | +18°C to +28°C |
| Indoor RH% | +40% to +55% (based upon 24°C Dry Bulb) |
| Outdoor Temperature | -20°C to +41°C |

TC = Total Cooling
SC = Sensible Cooling
(1) All data quoted is gross

## Technical Data Downflow Units X Type

### Noise Data

| Sound Measurement | | | Overall dB(A) | Frequency (Hz) dB 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DF6X | Discharge Air | Power | 71 | 65 | 69 | 67 | 67 | 67 | 66 | 58 | 54 |
| | Return Air | Power | 62 | 68 | 68 | 66 | 59 | 54 | 51 | 49 | 39 |
| | Case Breakout | Power | 58 | 64 | 66 | 58 | 55 | 52 | 47 | 44 | 38 |
| | Sound @ 3m | Pressure | 43 | 50 | 51 | 43 | 40 | 37 | 33 | 29 | 24 |
| DF8X | Discharge Air | Power | 77 | 70 | 74 | 73 | 72 | 72 | 71 | 64 | 59 |
| | Return Air | Power | 68 | 73 | 74 | 72 | 65 | 59 | 56 | 54 | 44 |
| | Case Breakout | Power | 63 | 70 | 71 | 63 | 60 | 56 | 53 | 50 | 43 |
| | Sound @ 3m | Pressure | 48 | 55 | 57 | 49 | 45 | 42 | 38 | 36 | 29 |
| DF10X | Discharge Air | Power | 80 | 73 | 77 | 76 | 75 | 75 | 74 | 67 | 62 |
| | Return Air | Power | 71 | 76 | 77 | 75 | 68 | 62 | 59 | 57 | 47 |
| | Case Breakout | Power | 66 | 73 | 74 | 66 | 63 | 59 | 55 | 53 | 47 |
| | Sound @ 3m | Pressure | 51 | 58 | 60 | 52 | 48 | 45 | 41 | 38 | 32 |
| DF13X | Discharge Air | Power | 77 | 71 | 74 | 72 | 72 | 72 | 71 | 64 | 59 |
| | Return Air | Power | 67 | 73 | 74 | 72 | 65 | 59 | 56 | 54 | 44 |
| | Case Breakout | Power | 63 | 70 | 71 | 63 | 60 | 56 | 52 | 50 | 44 |
| | Sound @ 3m | Pressure | 48 | 56 | 57 | 49 | 45 | 42 | 38 | 36 | 30 |
| DF15X | Discharge Air | Power | 73 | 70 | 75 | 72 | 69 | 68 | 67 | 62 | 57 |
| | Return Air | Power | 66 | 73 | 74 | 71 | 62 | 55 | 52 | 53 | 42 |
| | Case Breakout | Power | 62 | 70 | 72 | 63 | 57 | 54 | 49 | 51 | 44 |
| | Sound @ 3m | Pressure | 47 | 55 | 57 | 49 | 43 | 39 | 34 | 36 | 29 |
| DF17X | Discharge Air | Power | 77 | 74 | 78 | 76 | 73 | 72 | 70 | 66 | 61 |
| | Return Air | Power | 70 | 77 | 78 | 75 | 66 | 59 | 55 | 56 | 46 |
| | Case Breakout | Power | 65 | 73 | 76 | 67 | 61 | 57 | 52 | 53 | 46 |
| | Sound @ 3m | Pressure | 50 | 59 | 61 | 52 | 46 | 43 | 38 | 39 | 31 |
| DF22X2 | Discharge Air | Power | 81 | 74 | 78 | 77 | 76 | 77 | 75 | 68 | 63 |
| | Return Air | Power | 72 | 77 | 78 | 76 | 69 | 63 | 60 | 59 | 48 |
| | Case Breakout | Power | 67 | 74 | 76 | 68 | 64 | 61 | 56 | 54 | 48 |
| | Sound @ 3m | Pressure | 52 | 59 | 61 | 53 | 49 | 46 | 42 | 40 | 34 |
| DF25X2 | Discharge Air | Power | 85 | 79 | 83 | 81 | 80 | 81 | 79 | 72 | 67 |
| | Return Air | Power | 76 | 81 | 82 | 80 | 73 | 67 | 64 | 63 | 52 |
| | Case Breakout | Power | 71 | 78 | 80 | 72 | 68 | 65 | 60 | 58 | 52 |
| | Sound @ 3m | Pressure | 56 | 64 | 65 | 57 | 54 | 50 | 46 | 43 | 37 |
| DF26X | Discharge Air | Power | 84 | 75 | 76 | 77 | 79 | 79 | 79 | 76 | 72 |
| | Return Air | Power | 65 | 75 | 68 | 60 | 64 | 61 | 55 | 54 | 44 |
| | Case Breakout | Power | 67 | 77 | 67 | 61 | 64 | 64 | 57 | 54 | 45 |
| | Sound @ 3m | Pressure | 53 | 62 | 52 | 46 | 50 | 49 | 42 | 39 | 31 |

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

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

## Technical Data Downflow Units X Type

### Noise Data

| Sound Measurement | | | Overall dB(A) | Frequency (Hz) dB 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DF28X | Discharge Air | Power | 87 | 77 | 80 | 79 | 81 | 81 | 82 | 79 | 76 |
| | Return Air | Power | 68 | 77 | 71 | 63 | 66 | 63 | 58 | 56 | 47 |
| | Case Breakout | Power | 70 | 79 | 70 | 63 | 67 | 66 | 60 | 57 | 48 |
| | Sound @ 3m | Pressure | 55 | 64 | 56 | 49 | 52 | 52 | 45 | 42 | 34 |
| DF31X | Discharge Air | Power | 91 | 78 | 84 | 83 | 85 | 84 | 85 | 83 | 80 |
| | Return Air | Power | 71 | 77 | 75 | 66 | 69 | 66 | 60 | 60 | 52 |
| | Case Breakout | Power | 73 | 79 | 74 | 67 | 70 | 69 | 62 | 60 | 52 |
| | Sound @ 3m | Pressure | 58 | 65 | 59 | 52 | 55 | 55 | 48 | 46 | 38 |
| DF35X | Discharge Air | Power | 90 | 77 | 83 | 82 | 87 | 83 | 84 | 82 | 79 |
| | Return Air | Power | 71 | 76 | 74 | 65 | 71 | 65 | 60 | 59 | 51 |
| | Case Breakout | Power | 72 | 78 | 73 | 66 | 71 | 68 | 61 | 60 | 51 |
| | Sound @ 3m | Pressure | 58 | 64 | 58 | 51 | 57 | 53 | 47 | 45 | 37 |
| DF40X | Discharge Air | Power | 92 | 80 | 86 | 85 | 89 | 86 | 86 | 85 | 81 |
| | Return Air | Power | 73 | 78 | 76 | 67 | 73 | 67 | 62 | 62 | 53 |
| | Case Breakout | Power | 75 | 80 | 75 | 68 | 74 | 70 | 64 | 62 | 54 |
| | Sound @ 3m | Pressure | 60 | 65 | 61 | 54 | 59 | 56 | 49 | 48 | 40 |
| DF45X | Discharge Air | Power | 92 | 80 | 86 | 85 | 89 | 86 | 86 | 85 | 81 |
| | Return Air | Power | 73 | 78 | 76 | 67 | 73 | 67 | 62 | 62 | 54 |
| | Case Breakout | Power | 75 | 80 | 75 | 68 | 74 | 70 | 64 | 62 | 54 |
| | Sound @ 3m | Pressure | 60 | 65 | 61 | 54 | 59 | 56 | 49 | 48 | 40 |
| DF50X2 | Discharge Air | Power | 89 | 78 | 84 | 86 | 82 | 83 | 84 | 81 | 76 |
| | Return Air | Power | 69 | 76 | 75 | 69 | 66 | 64 | 59 | 58 | 48 |
| | Case Breakout | Power | 71 | 79 | 74 | 69 | 67 | 68 | 61 | 58 | 49 |
| | Sound @ 3m | Pressure | 56 | 64 | 59 | 55 | 52 | 53 | 47 | 43 | 34 |
| DF55X2 | Discharge Air | Power | 89 | 78 | 84 | 86 | 82 | 83 | 84 | 81 | 76 |
| | Return Air | Power | 70 | 77 | 75 | 69 | 67 | 64 | 60 | 58 | 48 |
| | Case Breakout | Power | 71 | 79 | 74 | 69 | 68 | 68 | 62 | 58 | 49 |
| | Sound @ 3m | Pressure | 57 | 64 | 59 | 55 | 53 | 53 | 47 | 44 | 35 |
| DF60X2 | Discharge Air | Power | 91 | 80 | 85 | 89 | 84 | 85 | 86 | 83 | 79 |
| | Return Air | Power | 71 | 79 | 76 | 72 | 69 | 66 | 62 | 60 | 51 |
| | Case Breakout | Power | 73 | 81 | 75 | 73 | 69 | 69 | 63 | 60 | 52 |
| | Sound @ 3m | Pressure | 58 | 66 | 60 | 58 | 55 | 54 | 49 | 46 | 37 |

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

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

## Technical Data Downflow Units X Type DF6X - DF8X - DF10X

### Mechanical Data

| | | | DF6X-EZE-0 | DF8X-EZE-0 | DF10X-EZE-0 |
|---|---|---|---|---|---|
| **Standard Matched Condenser** | | | C11 | C15 | C15 |
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 6.3 | 8.9 | 10.1 |
| Capacity Steps | | | 1 | 1 | 1 |
| Fan Input Power (Fan Gain) | (2) | kW | 0.25 | 0.54 | 0.77 |
| **Dimensions - W x D x H** | | mm | 670 x 670 x 1940 | 670 x 670 x 1940 | 670 x 670 x 1940 |
| **Weight** | (3) | kg | 194 | 198 | 195 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling / Dehum Stages | | | 1/1 | 1/1 | 1/1 |
| **Fan & Motor** | | | Centrifugal Forward Curved EC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Direct Drive | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 0.56 | 0.56 | 0.56 |
| Maximum ESP | | Pa | 328 | 233 | 274 |
| Nominal Airflow | | $m^3/s$ | 0.55 | 0.75 | 0.95 |
| **Compressor - Scroll** | | | | Single | |
| Quantity | | | 1 | 1 | 1 |
| Oil Charge Volume (Total) | | l | 1 | 1.1 | 1.1 |
| Oil Type | | | | Polyol Ester | |
| **Refrigeration** | (5) | | | Single Circuit | |
| Refrigeration Control | | | | Thermostatic Expansion Valve (Optional EEV) | |
| Refrigeration Type | | | | R407C | |
| Holding Charge | | | | Inert Gas | |
| **Connections** | | | | | |
| Liquid (Sweat) | | in | 3/8 | 3/8 | 3/8 |
| Discharge (Sweat) | | in | 5/8 | 5/8 | 5/8 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | | Disposable to ISO-C-75- 50mm | |
| Quantity | | | 1 | 1 | 1 |
| **OPTIONAL EXTRAS** | | | | | |
| **Upgraded Condenser Match** | | | C15 | C20 | C20 |
| Nom Cooling (Gross) | | kW | 6.3 | 8.9 | 10.3 |
| **Electric Heating (Total)** | | kW | 7.5 | 7.5 | 7.5 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 0.6 - 3.0 | 0.6 - 3.0 | 0.6 - 3.0 |
| Feed/Drain | | | 3/4" BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 8 | 8 | 8 |
| Flow | | l/m | 5 | 5 | 5 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Low Pressure Hot Water** | (7) | | Copper Tube / Aluminium Fin | | |
| Capacity Gross | | kW | 6.5 | 7.5 | 8.4 |
| Water Flow (Nominal) | | l/s | 0.14 | 0.17 | 0.19 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |

## Technical Data Downflow Units X Type DF6X - DF8X - DF10X

### Electrical Data

| | | DF6X-EZE-0 | DF8X-EZE-0 | DF10X-EZE-0 |
|---|---|---|---|---|
| Standard Condenser Match | | C11 | C15 | C15 |
| **Unit Data Full Function** (1) | | | | |
| Nominal Run Amps | A | 18.9 | 20.3 | 21.1 |
| Maximum Start Amps | A | 39.6 | 55.6 | 61.6 |
| Recommended Mains Fuse Size | A | 25 | 25 | 25 |
| **Unit Data Cooling Only** (2) | | | | |
| Nominal Run Amps | A | 8.0 | 9.5 | 10.3 |
| Maximum Start Amps | A | 28.8 | 44.8 | 50.8 |
| Recommended Mains Fuse Size | A | 16 | 16 | 16 |
| Max Mains Incoming Cable Size | mm² | 6 | 6 | 6 |
| Mains Supply | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | |
| Maximum Electrical Input Power (3) | kW | 1 x 1.1 | 1 x 1.1 | 1 x 1.1 |
| Full Load Amps | A | 4.8 | 4.8 | 4.8 |
| Locked Rotor Amps | A | 4.8 | 4.8 | 4.8 |
| **Compressor - Per Compressor** | | | | |
| Quantity x Motor Size | kW | 1 x 2 | 1 x 2.6 | 1 x 3.9 |
| Nominal Run Amps | A | 3.2 | 4.7 | 5.5 |
| Locked Rotor Amps | A | 24 | 40 | 46 |
| Type of Start | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | |
| Quantity x Motor Size | kW | 1 x 0.15 | 2 x 0.15 | 2 x 0.15 |
| Full Load Amps | A | 0.65 | 1.3 | 1.3 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating** | | | | |
| Stage of Reheat | | 1 | 1 | 1 |
| Number of Elements | | 3 | 3 | 3 |
| Rating | kW | 7.5 | 7.5 | 7.5 |
| Current per Phase | A | 10.83 | 10.83 | 10.83 |
| **Humidifier** | | | | |
| Capacity | kg/hr | 3 | 3 | 3 |
| Rating | kW | 2.25 | 2.25 | 2.25 |
| Full Load Amps | A | 3.25 | 3.25 | 3.25 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Downflow Units X Type DF13X - DF15X - DF17X

### Mechanical Data

| | | | DF13X-EZE-0 | DF15X-EZE-0 | DF17X-EZE-0 |
|---|---|---|---|---|---|
| **Standard Matched Condenser** | | | C20 | C25 | C35 |
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 13.2 | 15.7 | 19 |
| Capacity Steps | | | 1 | 1 | 1 |
| Fan Input Power (Fan Gain) | (2) | kW | 0.62 | 0.67 | 1.04 |
| **Dimensions - W x D x H** | | mm | 990 x 670 x 1940 | 990 x 670 x 1940 | 990 x 670 x 1940 |
| **Weight** | (3) | kg | 217 | 239 | 242 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling / Dehum Stages | | | 1/1 | 1/1 | 1/1 |
| **Fan & Motor** | | | Centrifugal Forward Curved EC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Direct Drive | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 0.56 | 0.92 | 0.92 |
| Maximum ESP | | Pa | 443 | 324 | 245 |
| Nominal Airflow | | m³/s | 1.00 | 1.20 | 1.40 |
| **Compressor - Scroll** | | | Single | | |
| Quantity | | | 1 | 1 | 1 |
| Oil Charge Volume (Total) | | l | 1.36 | 1.85 | 1.65 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Holding Charge | | | Inert Gas | | |
| **Connections** | | | | | |
| Liquid (Sweat) | | in | 1/2 | 1/2 | 1/2 |
| Discharge (Sweat) | | in | 3/4 | 3/4 | 3/4 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75- 50mm | | |
| Quantity | | | 2 | 2 | 2 |
| **OPTIONAL EXTRAS** | | | | | |
| **Upgraded Condenser Match** | | | C25 | C35 | C45 |
| Nom Cooling (Gross) | | kW | 13.3 | 16.2 | 19.2 |
| **Electric Heating (Total)** | | kW | 7.5 | 7.5 | 7.5 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 0.6 - 3.0 | 0.6 - 3.0 | 0.6 - 3.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 8 | 8 | 8 |
| Flow | | l/m | 5 | 5 | 5 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Low Pressure Hot Water** | (7) | | Copper Tube / Aluminium Fin | | |
| Capacity Gross | | kW | 11.5 | 12.5 | 13.3 |
| Water Flow (Nominal) | | l/s | 0.26 | 0.28 | 0.3 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |

## Technical Data Downflow Units X Type DF13X - DF15X - DF17X

### Electrical Data

| | | DF13X-EZE-0 | DF15X-EZE-0 | DF17X-EZE-0 |
|---|---|---|---|---|
| Standard Condenser Match | | C20 | C25 | C35 |
| **Unit Data Full Function** (1) | | | | |
| Nominal Run Amps | A | 22.1 | 26.3 | 27.2 |
| Maximum Start Amps | A | 65.6 | 84.0 | 92.0 |
| Recommended Mains Fuse Size | A | 25 | 32 | 32 |
| **Unit Data Cooling Only** (2) | | | | |
| Nominal Run Amps | A | 11.3 | 15.5 | 16.4 |
| Maximum Start Amps | A | 54.8 | 73.2 | 81.2 |
| Recommended Mains Fuse Size | A | 16 | 20 | 20 |
| Max Mains Incoming Cable Size | mm² | 6 | 6 | 6 |
| Mains Supply | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | |
| Maximum Electrical Input Power (3) | kW | 1 x 1.1 | 1 x 1.6 | 1 x 1.6 |
| Full Load Amps | A | 4.8 | 7.2 | 7.2 |
| Locked Rotor Amps | A | 4.8 | 7.2 | 7.2 |
| **Compressor - Per Compressor** | | | | |
| Quantity x Motor Size | kW | 1 x 4.7 | 1 x 5.6 | 1 x 6.5 |
| Nominal Run Amps | A | 6.5 | 8.3 | 9.2 |
| Locked Rotor Amps | A | 50 | 66 | 74 |
| Type of Start | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | |
| Quantity x Motor Size | kW | 1 x 0.6 | 1 x 0.6 | 1 x 0.6 |
| Full Load Amps | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating** | | | | |
| Stage of Reheat | | 1 | 1 | 1 |
| Number of Elements | | 3 | 3 | 3 |
| Rating | kW | 7.5 | 7.5 | 7.5 |
| Current per Phase | A | 10.83 | 10.83 | 10.83 |
| **Humidifier** | | | | |
| Capacity | kg/hr | 3 | 3 | 3 |
| Rating | kW | 2.25 | 2.25 | 2.25 |
| Full Load Amps | A | 3.25 | 3.25 | 3.25 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Downflow Units X Type DF22X2 - DF25X2

### Mechanical Data

| | | | DF22X2-EZE-0 | DF25X2-EZE-0 |
|---|---|---|---|---|
| **Standard Matched Condenser** | | | C45 | C45 |
| **Capacity** | (1) | | | |
| Nom Cooling (Gross) | | kW | 24.7 | 25.4 |
| Capacity Steps | | | 2 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 1.16 | 1.86 |
| **Dimensions - W x D x H** | | mm | 1310 x 670 x 1940 | 1310 x 670 x 1940 |
| **Weight** | (3) | kg | 294 | 294 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | |
| Cooling / Dehum Stages | | | 2/2 | 2/2 |
| **Fan & Motor** | | | Centrifugal Forward Curved EC - Designed to 25Pa ESP | |
| Fan Transmission Type | | | Direct Drive | |
| Quantity | | | 2 | 2 |
| Motor Shaft Power | (4) | kW | 0.56 | 0.56 |
| Maximum ESP | | Pa | 342 | 192 |
| Nominal Airflow | | m³/s | 1.70 | 2.00 |
| **Compressor - Scroll** | | | Tandem | |
| Quantity | | | 2 | 2 |
| Oil Charge Volume (Total) | | l | 2.72 | 2.72 |
| Oil Type | | | Polyol Ester | |
| **Refrigeration** | (5) | | Single Circuit | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | |
| Refrigeration Type | | | R407C | |
| Holding Charge | | | Inert Gas | |
| **Connections** | | | | |
| Liquid (Sweat) | | in | 5/8 | 5/8 |
| Discharge (Sweat) | | in | 7/8 | 7/8 |
| Condensate Drain Hose | | mm | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75- 50mm | |
| Quantity | | | 3 | 3 |
| **OPTIONAL EXTRAS** | | | | |
| **Upgraded Condenser Match** | | | CS50 | CS50 |
| Nom Cooling (Gross) | | kW | 24.5 | 25.5 |
| **Electric Heating (Total)** | | kW | 15 | 15 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 0.6 - 3.0 | 0.6 - 3.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | |
| **Condensate Pump** | | | | |
| Head | | m | 8 | 8 |
| Flow | | l/m | 5 | 5 |
| Drain | | | 10mm Stainless Steel Stub Connection | |
| **Low Pressure Hot Water** | (7) | | Copper Tube / Aluminium Fin | |
| Capacity Gross | | kW | 16.1 | 16.6 |
| Water Flow (Nominal) | | l/s | 0.36 | 0.37 |
| LPHW Connection Sizes | | mm | 22 | 22 |

## Technical Data Downflow Units X Type DF22X2 - DF25X2

### Electrical Data

| | | | DF22X2-EZE-0 | DF25X2-EZE-0 |
|---|---|---|---|---|
| Standard Condenser Match | | | C45 | C45 |
| **Unit Data Full Function** | (1) | | | |
| Nominal Run Amps | | A | 39.9 | 39.9 |
| Maximum Start Amps | | A | 83.4 | 83.4 |
| Recommended Mains Fuse Size | | A | 50 | 50 |
| **Unit Data Cooling Only** | (2) | | | |
| Nominal Run Amps | | A | 18.2 | 18.2 |
| Maximum Start Amps | | A | 61.7 | 61.7 |
| Recommended Mains Fuse Size | | A | 25 | 25 |
| Max Mains Incoming Cable Size | | mm² | 35 | 35 |
| Mains Supply | | V | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | |
| Maximum Electrical Input Power | (3) | kW | 2 x 1.1 | 2 x 1.1 |
| Full Load Amps | | A | 4.8 | 4.8 |
| Locked Rotor Amps | | A | 4.8 | 4.8 |
| **Compressor - Per Compressor** | | | | |
| Quantity x Motor Size | | kW | 2 x 4.7 | 2 x 4.7 |
| Nominal Run Amps | | A | 6.5 | 6.5 |
| Locked Rotor Amps | | A | 50 | 50 |
| Type of Start | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating** | | | | |
| Stage of Reheat | | | 2 | 2 |
| Number of Elements | | | 6 | 6 |
| Rating | | kW | 15 | 15 |
| Current per Phase | | A | 21.65 | 21.65 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 3 | 3 |
| Rating | | kW | 2.25 | 2.25 |
| Full Load Amps | | A | 3.25 | 3.25 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Downflow Units X Type DF26X - DF28X - DF31X

### Mechanical Data

| | | | DF26X-EZE-0 | DF28X-EZE-0 | DF31X-EZE-0 |
|---|---|---|---|---|---|
| **Standard Matched Condenser** | | | C45 | C45 | C45 |
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 29.1 | 29.6 | 33.4 |
| Capacity Steps | | | 1 | 1 | 1 |
| Fan Input Power (Fan Gain) | (2) | kW | 1.81 | 2.60 | 4.60 |
| **Dimensions - W x D x H** | | mm | 1460 x 750 x 1940 | 1460 x 750 x 1940 | 1460 x 750 x 1940 |
| **Weight** | (3) | kg | 452 | 452 | 459 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling / Dehum Stages | | | 1/1 | 1/1 | 1/1 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Belt & Pulley | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 1.5 | 2.2 | 4.0 |
| Maximum ESP | | Pa | 65 | 75 | 265 |
| Nominal Airflow | | m³/s | 2.1 | 2.4 | 2.8 |
| **Compressor - Scroll** | | | Single | | |
| Quantity | | | 1 | 1 | 1 |
| Oil Charge Volume (Total) | | l | 3.25 | 3.25 | 3.25 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Holding Charge | | | Inert Gas | | |
| **Connections** | | | | | |
| Liquid (Sweat) | | in | 5/8 | 5/8 | 5/8 |
| Discharge (Sweat) | | in | 7/8 | 7/8 | 7/8 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | | |
| Quantity | | | 3 | 3 | 3 |
| **OPTIONAL EXTRAS** | | | | | |
| **Upgraded Condenser Match** | | | CS50 | CS50 | CS50 |
| Nom Cooling (Gross) | | kW | 26.8 | 27.5 | 31 |
| **Electric Heating (Total)** | | kW | 20 | 20 | 20 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 1.6 - 8.0 | 1.6 - 8.0 | 1.6 - 8.0 |
| Feed/Drain | | | 3/4" BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 5 | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Larger / Next Larger Fan Motor Size** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Belt & Pulley | | |
| Quantity | | kW | 1 | 1 | N/A |
| Motor Shaft Power | (4) | kW | 2.2 | 3.0 | N/A |
| Maximum ESP | | Pa | 345 | 362 | N/A |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 20.1 | 21.3 | 22.7 |
| Water Flow (Nominal) | | l/s | 0.45 | 0.48 | 0.51 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |

## Technical Data Downflow Units X Type DF26X - DF28X - DF31X

### Electrical Data

| | | DF26X-EZE-0 | DF28X-EZE-0 | DF31X-EZE-0 |
|---|---|---|---|---|
| Standard Condenser Match | | C45 | C45 | C45 |
| **Unit Data Full Function** (1) | | | | |
| Nominal Run Amps | A | 55.4 | 56.7 | 62.3 |
| Maximum Start Amps | A | 152.6 | 153.9 | 164.3 |
| Recommended Mains Fuse Size | A | 63 | 80 | 80 |
| **Unit Data Cooling Only** (2) | | | | |
| Nominal Run Amps | A | 22.9 | 24.2 | 29.9 |
| Maximum Start Amps | A | 120.1 | 121.4 | 131.9 |
| Recommended Mains Fuse Size | A | 32 | 32 | 40 |
| Max Mains Incoming Cable Size | mm² | 35 | 35 | 35 |
| Mains Supply | V | | Mains Supply | |
| Control Circuit | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | |
| Maximum Electrical Input Power (3) | kW | 1 x 1.5 | 1 x 2.2 | 1 x 4 |
| Full Load Amps | A | 3.43 | 4.68 | 8.14 |
| Locked Rotor Amps | A | 23.3 | 32.8 | 57 |
| **Compressor - Per Compressor** | | | | |
| Quantity x Motor Size | kW | 1 x 7.9 | 1 x 7.9 | 1 x 8.95 |
| Nominal Run Amps | A | 13.8 | 13.8 | 16 |
| Locked Rotor Amps | A | 111 | 111 | 118 |
| Type of Start | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | |
| Quantity x Motor Size | kW | 2 x 0.6 | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating** | | | | |
| Stage of Reheat | | 3 | 3 | 3 |
| Number of Elements | | 8 | 8 | 8 |
| Rating | kW | 20 | 20 | 20 |
| Curent per Phase | A | 32.48 | 32.48 | 32.48 |
| **Humidifier** | | | | |
| Capacity | kg/hr | 8 | 8 | 8 |
| Rating | kW | 6 | 6 | 6 |
| Full Load Amps | A | 8.66 | 8.66 | 8.66 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Downflow Units X Type DF35X - DF40X - DF45X

### Mechanical Data

| | | | DF35X-EZE-0 | DF40X-EZE-0 | DF45X-EZE-0 |
|---|---|---|---|---|---|
| **Standard Matched Condenser** | | | CS50 | CS50 | CS50 |
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 39.1 | 43.9 | 48.5 |
| Capacity Steps | | | 1 | 1 | 1 |
| Fan Input Power (Fan Gain) | (2) | kW | 4.60 | 6.30 | 6.30 |
| **Dimensions - W x D x H** | | mm | 1835 x 750 x 1940 | 1835 x 750 x 1940 | 1835 x 750 x 1940 |
| **Weight** | (3) | kg | 501 | 522 | 550 |
| **Construction** Material/Colour | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling / Dehum Stages | | | 1/1 | 1/1 | 1/1 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Belt & Pulley | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 4.0 | 5.5 | 5.5 |
| Maximum ESP | | Pa | 165 | 175 | 175 |
| Nominal Airflow | | m³/s | 3.3 | 3.7 | 3.7 |
| **Compressor - Scroll** | | | Single | | |
| Quantity | | | 1 | 1 | 1 |
| Oil Charge Volume (Total) | | l | 3.25 | 3.3 | 6.2 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Holding Charge | | | Inert Gas | | |
| **Connections** | | | | | |
| Liquid (Sweat) | | in | 5/8 | 7/8 | 7/8 |
| Discharge (Sweat) | | in | 7/8 | 1 1/8 | 1 1/8 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | | |
| Quantity | | | 3 | 3 | 3 |
| **OPTIONAL EXTRAS** | | | | | |
| **Upgraded Condenser Match** | | | CS65 | CS65 | CS65 |
| Nom Cooling (Gross) | | kW | 37 | 41.2 | 44.8 |
| **Electric Heating (Total)** | | kW | 20 | 20 | 20 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 3.0 - 15.0 | 3.0 - 15.0 | 3.0 - 15.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 5 | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Larger / Next Larger Fan Motor Size** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Belt & Pulley | | |
| Quantity | | kW | 1 | N/A | N/A |
| Motor Shaft Power | (4) | kW | 5.5 | N/A | N/A |
| Maximum ESP | | Pa | 322 | N/A | N/A |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 30 | 31.5 | 31.5 |
| Water Flow (Nominal) | | l/s | 0.67 | 0.7 | 0.7 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |

## Technical Data Downflow Units X Type DF35X - DF40X - DF45X

### Electrical Data

| | | DF35X-EZE-0 | DF40X-EZE-0 | DF45X-EZE-0 |
|---|---|---|---|---|
| Standard Condenser Match | | CS50 | CS50 | CS50 |
| **Unit Data Full Function** (1) | | | | |
| Nominal Run Amps | A | 65.4 | 72.0 | 75.1 |
| Maximum Start Amps | A | 191.3 | 194.1 | 224.1 |
| Recommended Mains Fuse Size | A | 80 | 80 | 100 |
| **Unit Data Cooling Only** (2) | | | | |
| Nominal Run Amps | A | 33.0 | 39.5 | 42.6 |
| Maximum Start Amps | A | 158.9 | 161.6 | 191.6 |
| Recommended Mains Fuse Size | A | 40 | 50 | 50 |
| Max Mains Incoming Cable Size | mm² | 35 | 35 | 35 |
| Mains Supply | V | | Mains Supply | |
| Control Circuit | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | |
| Maximum Electrical Input Power (3) | kW | 1 x 4 | 1 x 5.5 | 1 x 5.5 |
| Full Load Amps | A | 8.14 | 11.1 | 11.1 |
| Locked Rotor Amps | A | 57 | 77.7 | 77.7 |
| **Compressor - Per Compressor** | | | | |
| Quantity x Motor Size | kW | 1 x 11 | 1 x 11.9 | 1 x 13.2 |
| Nominal Run Amps | A | 19.1 | 22.9 | 26 |
| Locked Rotor Amps | A | 145 | 145 | 175 |
| Type of Start | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | |
| Quantity x Motor Size | kW | 2 x 0.6 | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating** | | | | |
| Stage of Reheat | | 3 | 3 | 3 |
| Number of Elements | | 8 | 8 | 8 |
| Rating | kW | 20 | 20 | 20 |
| Curent per Phase | A | 32.48 | 32.48 | 32.48 |
| **Humidifier** | | | | |
| Capacity | kg/hr | 15 | 15 | 15 |
| Rating | kW | 11.25 | 11.25 | 11.25 |
| Full Load Amps | A | 16.24 | 16.24 | 16.24 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Downflow Units X Type DF50X2 - DF55X2 - DF60X2

### Mechanical Data

| | | DF50X2-EZE-0 | DF55X2-EZE-0 | DF60X2-EZE-0 |
|---|---|---|---|---|
| **Standard Matched Condenser** | | CS65 | CS80 | CS80 |
| **Capacity** | (1) | | | |
| Nom Cooling (Gross) | kW | 56.3 | 62.2 | 65.7 |
| Capacity Steps | | 2 | 2 | 2 |
| Fan Input Power (Fan Gain) | (2) kW | 5.20 | 5.20 | 7.00 |
| **Dimensions - W x D x H** | mm | 2170 x 750 x 1940 | 2170 x 750 x 1940 | 2170 x 750 x 1940 |
| **Weight** | (3) kg | 665 | 678 | 674 |
| **Construction** | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | |
| Material/Colour | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling / Dehum Stages | | 2/2 | 2/2 | 2/2 |
| **Fan & Motor** | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | Belt & Pulley | | |
| Quantity | | 2 | 2 | 2 |
| Motor Shaft Power | (4) kW | 2.2 | 2.2 | 3.0 |
| Maximum ESP | Pa | 35 | 35 | 75 |
| Nominal Airflow | m³/s | 4.2 | 4.2 | 4.6 |
| **Compressor - Scroll** | | Tandem | | |
| Quantity | | 2 | 2 | 2 |
| Oil Charge Volume (Total) | l | 6.5 | 7.6 | 7.6 |
| Oil Type | | Polyol Ester | | |
| **Refrigeration** | (5) | Single Circuit | | |
| Refrigeration Control | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | R407C | | |
| Holding Charge | | Inert Gas | | |
| **Connections** | | | | |
| Liquid (Sweat) | in | 7/8 | 7/8 | 7/8 |
| Discharge (Sweat) | in | 1 3/8 | 1 3/8 | 1 3/8 |
| Condensate Drain Hose | mm | 19 | 19 | 19 |
| **Filtration** | | Disposable to ISO-C-75 - 75mm | | |
| Quantity | | 4 | 4 | 4 |
| **OPTIONAL EXTRAS** | | | | |
| **Upgraded Condenser Match** | | CS80 | CS105 | CS105 |
| Nom Cooling (Gross) | kW | 51.2 | 58.5 | 61.8 |
| **Electric Heating (Total)** | kW | 30 | 30 | 30 |
| **Humidifier** | | | | |
| Capacity | kg/hr | 3.0 - 15.0 | 3.0 - 15.0 | 3.0 - 15.0 |
| Feed/Drain | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | |
| Head | m | 5 | 5 | 5 |
| Flow | l/m | 10.8 | 10.8 | 10.8 |
| Drain | | 10mm Stainless Steel Stub Connection | | |
| **Larger / Next Larger Fan Motor Size** | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | Belt & Pulley | | |
| Quantity | kW | 2 | 2 | 2 |
| Motor Shaft Power | (4) kW | 3.0 | 3.0 | 4.0 |
| Maximum ESP | Pa | 310 | 310 | 275 |
| **Low Pressure Hot Water** | (7) | Copper Tube/Aluminium Fin | | |
| Capacity Gross | kW | 38.3 | 38.3 | 39.8 |
| Water Flow (Nominal) | l/s | 0.85 | 0.85 | 0.89 |
| LPHW Connection Sizes | mm | 22 | 22 | 22 |

## Technical Data Downflow Units X Type DF50X2 - DF55X2 - DF60X2

### Electrical Data

| | | DF50X2-EZE-0 | DF55X2-EZE-0 | DF60X2-EZE-0 |
|---|---|---|---|---|
| Standard Condenser Match | | CS65 | CS80 | CS80 |
| **Unit Data Full Function** (1) | | | | |
| Nominal Run Amps | A | 89.7 | 89.9 | 96.2 |
| Maximum Start Amps | A | 204.0 | 195.4 | 200.1 |
| Recommended Mains Fuse Size | A | 100 | 100 | 125 |
| **Unit Data Cooling Only** (2) | | | | |
| Nominal Run Amps | A | 46.4 | 46.6 | 52.9 |
| Maximum Start Amps | A | 160.7 | 152.1 | 156.8 |
| Recommended Mains Fuse Size | A | 63 | 63 | 63 |
| Max Mains Incoming Cable Size | mm² | 50 | 50 | 50 |
| Mains Supply | V | | Mains Supply | |
| Control Circuit | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | |
| Maximum Electrical Input Power (3) | kW | 2 x 2.2 | 2 x 2.2 | 2 x 3 |
| Full Load Amps | A | 4.68 | 4.68 | 6.32 |
| Locked Rotor Amps | A | 32.8 | 32.8 | 45.5 |
| **Compressor - Per Compressor** | | | | |
| Quantity x Motor Size | kW | 2 x 7.8 | 2 x 8.5 | 2 x 9.7 |
| Nominal Run Amps | A | 15.7 | 14.5 | 16.1 |
| Locked Rotor Amps | A | 130 | 120 | 120 |
| Type of Start | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | |
| Quantity x Motor Size | kW | 2 x 0.6 | 3 x 0.6 | 3 x 0.6 |
| Full Load Amps | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating** | | | | |
| Stage of Reheat | | 3 | 3 | 3 |
| Number of Elements | | 9 | 9 | 9 |
| Rating | kW | 30 | 30 | 30 |
| Curent per Phase | A | 43.30 | 43.30 | 43.30 |
| **Humidifier** | | | | |
| Capacity | kg/hr | 15 | 15 | 15 |
| Rating | kW | 11.25 | 11.25 | 11.25 |
| Full Load Amps | A | 16.24 | 16.24 | 16.24 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

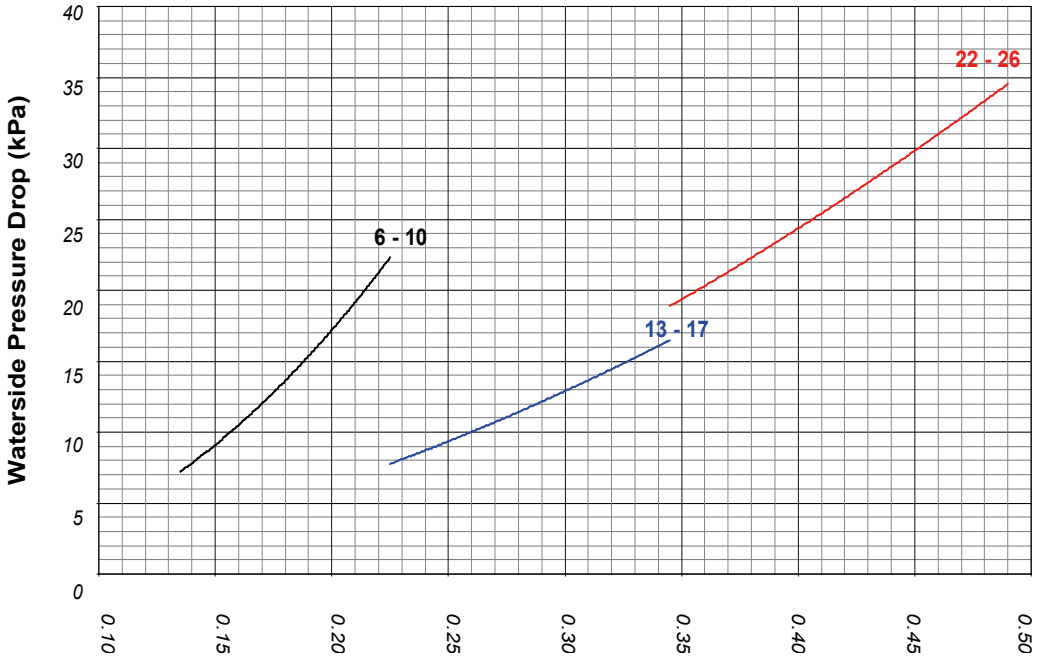
Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

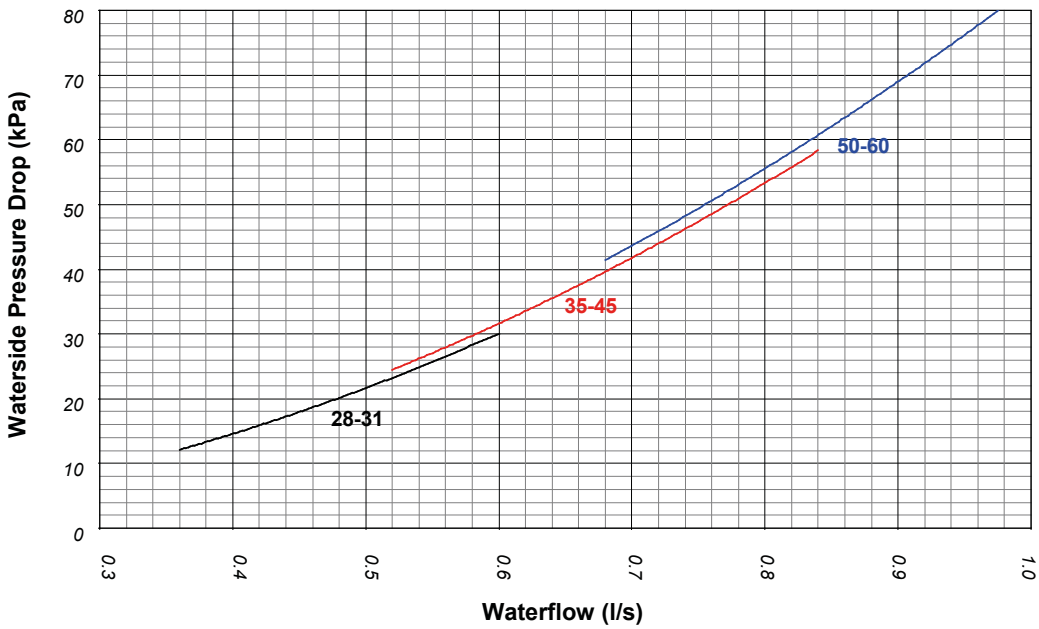
## Technical Data Downflow Units X Type

### Hydronic Data Low Pressure Hot Water

**DF6 - DF26**




**DF28 - DF60**




(1) Includes coil, 3 port valve and pipework.

(2) To calculate 3 port valve pressure drop

$\Delta P$ valve = $\left(\frac{Q}{M}\right)^2$ where $\Delta P$ = Pressure Drop in kPa, Q = Water Flow Rate in l/s and $M$ = $\left(\frac{Kv}{36}\right)$

(3) Fluid 100% water, for glycol use, refer to ***Ethylene Glycol Correction Factors***.

**Notes**

## Technical Data Upflow Units X Type

### Performance Data

### Standard Condenser

| Cooling Capacity (1) | | Ambient | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Air On | 25°C | | 30°C | | 35°C | | 40°C | |
| | (DB°C/%RH) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) |
| **V6X-EZE C11** | 22/50 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 5.9 | 5.9 |
| | 24/45 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.1 | 6.1 |
| | 26/40 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.2 | 6.2 |
| **V8X-EZE C15** | 22/50 | 8.8 | 8.4 | 8.8 | 8.4 | 8.8 | 8.3 | 8.4 | 8.2 |
| | 24/45 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 8.7 | 8.7 |
| | 26/40 | 9.4 | 9.4 | 9.4 | 9.4 | 9.3 | 9.3 | 8.9 | 8.9 |
| **V10X-EZE C15** | 22/50 | 11.6 | 10.8 | 11.6 | 10.8 | 11.3 | 10.6 | 10.8 | 10.3 |
| | 24/45 | 12.1 | 11.9 | 12.1 | 11.9 | 11.7 | 11.7 | 11.2 | 11.2 |
| | 26/40 | 12.5 | 12.5 | 12.5 | 12.5 | 12.1 | 12.1 | 11.7 | 11.7 |
| **V13X-EZE C20** | 22/50 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10.5 | 10.5 |
| | 24/45 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 10.8 | 10.8 |
| | 26/40 | 11.7 | 11.7 | 11.7 | 11.7 | 11.6 | 11.6 | 11.1 | 11.1 |
| **V15X-EZE C25** | 22/50 | 15.8 | 14.5 | 15.8 | 14.5 | 15.3 | 14.2 | 14.5 | 13.9 |
| | 24/45 | 16.3 | 16.2 | 16.3 | 16.2 | 15.8 | 15.8 | 14.9 | 14.9 |
| | 26/40 | 16.8 | 16.8 | 16.8 | 16.8 | 16.2 | 16.2 | 15.4 | 15.4 |
| **V17X-EZE C35** | 22/50 | 19.3 | 17.0 | 19.3 | 17.0 | 19.0 | 16.8 | 18.1 | 16.4 |
| | 24/45 | 19.9 | 19.0 | 19.9 | 19.0 | 19.6 | 18.9 | 18.6 | 18.4 |
| | 26/40 | 20.5 | 20.5 | 20.5 | 20.5 | 20.1 | 20.1 | 19.2 | 19.2 |
| **V22X2-EZE C45** | 22/50 | 23.8 | 21.0 | 23.8 | 21.0 | 23.8 | 21.0 | 22.7 | 20.6 |
| | 24/45 | 25.2 | 23.7 | 25.2 | 23.7 | 25.1 | 23.6 | 23.9 | 23.1 |
| | 26/40 | 26.0 | 26.0 | 26.0 | 26.0 | 25.8 | 25.8 | 24.5 | 24.5 |
| **V25X2-EZE C45** | 22/50 | 25.0 | 22.9 | 25.0 | 22.9 | 24.9 | 22.9 | 23.7 | 22.3 |
| | 24/45 | 26.0 | 25.8 | 26.0 | 25.8 | 25.8 | 25.7 | 24.6 | 24.6 |
| | 26/40 | 26.7 | 26.7 | 26.7 | 26.7 | 26.5 | 26.5 | 25.2 | 25.2 |
| **V26X-EZE C45** | 22/50 | 29.2 | 26.3 | 29.2 | 26.3 | 28.6 | 26.0 | 27.0 | 25.3 |
| | 24/45 | 30.1 | 29.5 | 30.1 | 29.5 | 29.4 | 29.1 | 27.7 | 27.7 |
| | 26/40 | 31.0 | 31.0 | 31.0 | 31.0 | 30.1 | 30.1 | 28.5 | 28.5 |
| **V26X2-EZE C45** | 22/50 | 31.2 | 27.0 | 31.2 | 27.0 | 30.2 | 26.6 | 28.4 | 25.8 |
| | 24/45 | 32.2 | 30.3 | 32.2 | 30.3 | 31.0 | 29.8 | 29.2 | 29.0 |
| | 26/40 | 33.1 | 33.1 | 33.1 | 33.1 | 31.8 | 31.8 | 30.0 | 30.0 |
| **V28X-EZE C45** | 22/50 | 29.7 | 28.0 | 29.7 | 28.0 | 29.0 | 27.7 | 27.4 | 26.9 |
| | 24/45 | 30.7 | 30.7 | 30.7 | 30.7 | 29.9 | 29.9 | 28.2 | 28.2 |
| | 26/40 | 27.8 | 27.8 | 27.8 | 27.8 | 27.5 | 27.5 | 26.6 | 26.6 |

### Operating Limits

| | |
|---|---|
| Indoor Air Temperature | +18°C to +28°C |
| Indoor RH% | +40% to +55% |
| Outdoor Temperature | -20°C to +41°C |

TC = Total Cooling
SC = Sensible Cooling

(1) All data quoted is gross

## Technical Data Upflow Units X Type

### Performance Data

### Standard Condensers

| Cooling Capacity (1) | | Ambient | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Air On | 25°C | | 30°C | | 35°C | | 40°C | |
| | (DB°C/%RH) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) |
| **V28X2-EZE C45** | 22/50 | 31.7 | 28.8 | 31.7 | 28.8 | 30.7 | 28.3 | 28.8 | 27.5 |
| | 24/45 | 32.8 | 32.3 | 32.8 | 32.3 | 31.6 | 31.6 | 29.7 | 29.7 |
| | 26/40 | 29.2 | 29.2 | 29.2 | 29.2 | 28.6 | 28.6 | 27.6 | 27.6 |
| **V31X-EZE C45** | 22/50 | 34.2 | 31.9 | 34.2 | 31.9 | 32.7 | 31.2 | 30.8 | 30.3 |
| | 24/45 | 35.3 | 35.3 | 35.3 | 35.3 | 33.7 | 33.7 | 31.7 | 31.7 |
| | 26/40 | 36.4 | 36.4 | 36.3 | 36.3 | 34.7 | 34.7 | 32.7 | 32.7 |
| **V31X2-EZE C45** | 22/50 | 36.7 | 33.1 | 36.4 | 33.0 | 34.5 | 32.0 | 32.1 | 30.9 |
| | 24/45 | 37.9 | 36.9 | 37.5 | 36.7 | 35.5 | 35.5 | 33.0 | 33.0 |
| | 26/40 | 39.1 | 39.1 | 38.4 | 38.4 | 36.4 | 36.4 | 33.9 | 33.9 |
| **V35X-EZE CS50** | 22/50 | 39.6 | 37.6 | 39.6 | 37.6 | 38.1 | 36.9 | 36.1 | 36.0 |
| | 24/45 | 41.2 | 41.2 | 41.2 | 41.2 | 39.5 | 39.5 | 37.5 | 37.5 |
| | 26/40 | 42.2 | 42.2 | 42.2 | 42.2 | 40.3 | 40.3 | 38.2 | 38.2 |
| **V35X2-EZE CS50** | 22/50 | 38.5 | 37.0 | 38.5 | 37.0 | 37.1 | 36.3 | 35.0 | 35.0 |
| | 24/45 | 40.0 | 40.0 | 40.0 | 40.0 | 38.4 | 38.4 | 36.3 | 36.3 |
| | 26/40 | 40.9 | 40.9 | 40.9 | 40.9 | 39.2 | 39.2 | 37.0 | 37.0 |
| **V40X-EZE CS50** | 22/50 | 45.2 | 42.0 | 45.0 | 41.9 | 43.5 | 41.0 | 42.1 | 40.2 |
| | 24/45 | 46.9 | 46.9 | 46.4 | 46.4 | 44.4 | 44.4 | 42.4 | 42.4 |
| | 26/40 | 48.5 | 48.5 | 47.9 | 47.9 | 45.9 | 45.9 | 43.8 | 43.8 |
| **V40X2-EZE CS50** | 22/50 | 43.2 | 40.7 | 43.1 | 40.7 | 41.6 | 39.8 | 40.3 | 38.9 |
| | 24/45 | 44.5 | 44.5 | 44.3 | 44.3 | 42.2 | 42.2 | 40.1 | 40.1 |
| | 26/40 | 46.1 | 46.1 | 45.8 | 45.8 | 43.6 | 43.6 | 41.4 | 41.4 |
| **V45X2-EZE CS50** | 22/50 | 51.2 | 45.4 | 50.0 | 44.9 | 47.7 | 43.9 | 45.3 | 42.9 |
| | 24/45 | 52.8 | 50.8 | 51.4 | 50.2 | 49.0 | 49.0 | 46.6 | 46.6 |
| | 26/40 | 54.3 | 54.3 | 52.8 | 52.8 | 50.4 | 50.4 | 47.9 | 47.9 |
| **V50X2-EZE CS65** | 22/50 | 57.8 | 50.5 | 57.8 | 50.5 | 55.2 | 49.3 | 52.4 | 48.1 |
| | 24/45 | 59.6 | 56.3 | 59.4 | 56.2 | 57.4 | 55.1 | 55.5 | 54.0 |
| | 26/40 | 61.4 | 61.4 | 61.0 | 61.0 | 58.3 | 58.3 | 55.5 | 55.5 |
| **V55X2-EZE CS80** | 22/50 | 63.1 | 53.5 | 63.1 | 53.5 | 61.1 | 52.7 | 58.1 | 51.4 |
| | 24/45 | 65.1 | 60.3 | 65.1 | 60.3 | 62.8 | 59.4 | 59.8 | 58.2 |
| | 26/40 | 66.8 | 66.8 | 66.8 | 66.8 | 64.3 | 64.3 | 61.2 | 61.2 |
| **V60X2-EZE CS80** | 22/50 | 67.2 | 57.6 | 67.2 | 57.6 | 64.6 | 56.5 | 61.4 | 55.2 |
| | 24/45 | 69.3 | 64.8 | 69.3 | 64.8 | 66.4 | 63.6 | 63.2 | 62.3 |
| | 26/40 | 77.6 | 74.9 | 77.0 | 74.7 | 74.2 | 73.4 | 71.3 | 71.3 |

### Operating Limits

| | |
|---|---|
| Indoor Air Temperature | +18°C to +28°C |
| Indoor RH% | +40% to +55% |
| Outdoor Temperature | -20°C to +41°C |

TC = Total Cooling
SC = Sensible Cooling

(1) All data quoted is gross

## Technical Data Upflow Units X Type

### Performance Data

### Larger Condensers

| Cooling Capacity (1) | | Ambient | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Air On | 25°C | | 30°C | | 35°C | | 40°C | | 45°C | |
| | (DB°C/%RH) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) |
| V6X-EZE C15 | 22/50 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.0 | 6.0 | 5.7 | 5.7 |
| | 24/45 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.2 | 6.2 | 5.9 | 5.9 |
| | 26/40 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.3 | 6.3 | 6.0 | 6.0 |
| V8X-EZE C20 | 22/50 | 8.8 | 8.4 | 8.8 | 8.4 | 8.8 | 8.4 | 8.6 | 8.2 | 8.2 | 8.1 |
| | 24/45 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 8.9 | 8.9 | 8.5 | 8.5 |
| | 26/40 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.1 | 9.1 | 8.7 | 8.7 |
| V10X-EZE C20 | 22/50 | 11.6 | 10.8 | 11.6 | 10.8 | 11.5 | 10.7 | 11.1 | 10.5 | 10.6 | 10.2 |
| | 24/45 | 12.1 | 11.9 | 12.1 | 11.9 | 11.9 | 11.9 | 11.5 | 11.5 | 11.1 | 11.1 |
| | 26/40 | 12.5 | 12.5 | 12.5 | 12.5 | 12.4 | 12.4 | 12.0 | 12.0 | 11.5 | 11.5 |
| V13X-EZE C25 | 22/50 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10.6 | 10.6 | 10.0 | 10.0 |
| | 24/45 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 10.9 | 10.9 | 10.4 | 10.4 |
| | 26/40 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.7 | 11.2 | 11.2 | 10.6 | 10.6 |
| V15X-EZE C35 | 22/50 | 15.8 | 14.5 | 15.8 | 14.5 | 15.8 | 14.5 | 15.2 | 14.2 | 14.4 | 13.9 |
| | 24/45 | 16.3 | 16.2 | 16.3 | 16.2 | 16.3 | 16.2 | 15.6 | 15.6 | 14.8 | 14.8 |
| | 26/40 | 16.8 | 16.8 | 16.8 | 16.8 | 16.8 | 16.8 | 16.1 | 16.1 | 15.3 | 15.3 |
| V17X-EZE C45 | 22/50 | 19.3 | 17.0 | 19.3 | 17.0 | 19.3 | 17.0 | 18.7 | 16.7 | 17.7 | 16.3 |
| | 24/45 | 19.9 | 19.0 | 19.9 | 19.0 | 19.9 | 19.0 | 19.3 | 18.7 | 18.3 | 18.3 |
| | 26/40 | 20.5 | 20.5 | 20.5 | 20.5 | 20.5 | 20.5 | 19.8 | 19.8 | 18.8 | 18.8 |
| V22X2-EZE CS50 | 22/50 | 23.8 | 21.0 | 23.8 | 21.0 | 23.8 | 21.0 | 23.0 | 20.8 | 22.2 | 20.4 |
| | 24/45 | 25.2 | 23.7 | 25.2 | 23.7 | 25.2 | 23.7 | 24.3 | 23.3 | 23.2 | 22.8 |
| | 26/40 | 26.0 | 26.0 | 26.0 | 26.0 | 26.0 | 26.0 | 25.0 | 25.0 | 23.8 | 23.8 |
| V25X2-EZE CS50 | 22/50 | 25.0 | 22.9 | 25.0 | 22.9 | 25.0 | 22.9 | 24.1 | 22.5 | 23.0 | 22.0 |
| | 24/45 | 26.0 | 25.8 | 26.0 | 25.8 | 26.0 | 25.8 | 25.0 | 25.0 | 23.9 | 23.9 |
| | 26/40 | 26.7 | 26.7 | 26.7 | 26.7 | 26.7 | 26.7 | 25.7 | 25.7 | 24.5 | 24.5 |
| V26X-EZE CS50 | 22/50 | 29.2 | 26.3 | 29.2 | 26.3 | 29.0 | 26.2 | 27.7 | 25.6 | 26.2 | 25.0 |
| | 24/45 | 30.1 | 29.5 | 30.1 | 29.5 | 29.9 | 29.4 | 28.5 | 28.5 | 27.0 | 27.0 |
| | 26/40 | 31.0 | 31.0 | 31.0 | 31.0 | 30.7 | 30.7 | 29.3 | 29.3 | 27.8 | 27.8 |
| V26X2-EZE CS50 | 22/50 | 31.2 | 27.0 | 31.2 | 27.0 | 30.8 | 26.9 | 29.3 | 26.2 | 27.8 | 25.6 |
| | 24/45 | 32.2 | 30.3 | 32.2 | 30.3 | 31.7 | 30.1 | 30.2 | 29.4 | 28.6 | 28.6 |
| | 26/40 | 33.1 | 33.1 | 33.1 | 33.1 | 32.6 | 32.6 | 31.0 | 31.0 | 29.5 | 29.5 |
| V28X-EZE CS50 | 22/50 | 29.7 | 28.0 | 29.7 | 28.0 | 29.5 | 27.9 | 28.1 | 27.3 | 26.7 | 26.6 |
| | 24/45 | 30.7 | 30.7 | 30.7 | 30.7 | 30.4 | 30.4 | 29.0 | 29.0 | 27.5 | 27.5 |
| | 26/40 | 27.8 | 27.8 | 27.8 | 27.8 | 27.8 | 27.8 | 26.9 | 26.9 | 26.3 | 26.3 |

### Operating Limits

| | |
|---|---|
| Indoor Air Temperature | +18°C to +28°C |
| Indoor RH% | +40% to +55% |
| Outdoor Temperature | -20°C to +41°C |

TC = Total Cooling
SC = Sensible Cooling

(1) All data quoted is gross

## Technical Data Upflow Units X Type

### Performance Data

### Larger Condensers

| Cooling Capacity (1) | | Ambient | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Air On | 25°C | | 30°C | | 35°C | | 40°C | | 45°C | |
| | (DB°C/%RH) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) | TC (kW) | SC (kW) |
| **V28X2-EZE CS50** | 22/50 | 31.7 | 28.8 | 31.7 | 28.8 | 31.3 | 28.6 | 29.8 | 27.9 | 28.2 | 27.3 |
| | 24/45 | 32.8 | 32.3 | 32.8 | 32.3 | 32.3 | 32.1 | 30.7 | 30.7 | 29.1 | 29.1 |
| | 26/40 | 29.2 | 29.2 | 29.2 | 29.2 | 29.0 | 29.0 | 28.1 | 28.1 | 27.3 | 27.3 |
| **V31X-EZE CS50** | 22/50 | 34.2 | 31.9 | 34.2 | 31.9 | 33.5 | 31.6 | 32.0 | 30.8 | 30.4 | 30.1 |
| | 24/45 | 35.3 | 35.3 | 35.3 | 35.3 | 34.5 | 34.5 | 32.9 | 32.9 | 31.3 | 31.3 |
| | 26/40 | 36.4 | 36.4 | 36.4 | 36.4 | 35.6 | 35.6 | 34.0 | 34.0 | 32.4 | 32.4 |
| **V31X2-EZE CS50** | 22/50 | 36.7 | 33.1 | 36.7 | 33.1 | 35.6 | 32.6 | 33.8 | 31.6 | 31.8 | 30.7 |
| | 24/45 | 37.9 | 36.9 | 37.9 | 36.9 | 36.7 | 36.3 | 34.7 | 34.7 | 32.8 | 32.8 |
| | 26/40 | 39.1 | 39.1 | 39.1 | 39.1 | 37.7 | 37.7 | 35.7 | 35.7 | 33.8 | 33.8 |
| **V35X-EZE CS65** | 22/50 | 39.6 | 37.6 | 39.6 | 37.6 | 39.4 | 37.5 | 37.5 | 36.6 | 35.5 | 35.5 |
| | 24/45 | 41.2 | 41.2 | 41.2 | 41.2 | 40.9 | 40.9 | 38.9 | 38.9 | 36.9 | 36.9 |
| | 26/40 | 42.2 | 42.2 | 42.2 | 42.2 | 41.8 | 41.8 | 39.7 | 39.7 | 37.6 | 37.6 |
| **V35X2-EZE CS65** | 22/50 | 38.5 | 37.0 | 38.5 | 37.0 | 38.4 | 37.0 | 36.4 | 36.0 | 34.3 | 34.3 |
| | 24/45 | 40.0 | 40.0 | 40.0 | 40.0 | 39.9 | 39.9 | 37.8 | 37.8 | 35.7 | 35.7 |
| | 26/40 | 40.9 | 40.9 | 40.9 | 40.9 | 40.7 | 40.7 | 38.5 | 38.5 | 36.4 | 36.4 |
| **V40X-EZE CS65** | 22/50 | 45.2 | 42.0 | 45.2 | 42.0 | 44.6 | 41.7 | 43.1 | 40.8 | 41.8 | 40.0 |
| | 24/45 | 46.9 | 46.9 | 46.9 | 46.9 | 46.0 | 46.0 | 44.0 | 44.0 | 41.9 | 41.9 |
| | 26/40 | 48.5 | 48.5 | 48.5 | 48.5 | 47.5 | 47.5 | 45.4 | 45.4 | 43.3 | 43.3 |
| **V40X2-EZE CS65** | 22/50 | 43.2 | 40.7 | 43.2 | 40.7 | 42.7 | 40.5 | 41.3 | 39.6 | 40.0 | 38.7 |
| | 24/45 | 44.5 | 44.5 | 44.5 | 44.5 | 43.8 | 43.8 | 41.7 | 41.7 | 39.5 | 39.5 |
| | 26/40 | 46.1 | 46.1 | 46.1 | 46.1 | 45.3 | 45.3 | 43.1 | 43.1 | 40.9 | 40.9 |
| **V45X2-EZE CS65** | 22/50 | 51.2 | 45.4 | 51.2 | 45.4 | 49.7 | 44.7 | 47.4 | 43.7 | 44.9 | 42.7 |
| | 24/45 | 52.8 | 50.8 | 52.8 | 50.8 | 51.1 | 50.1 | 48.7 | 48.7 | 46.2 | 46.2 |
| | 26/40 | 54.3 | 54.3 | 54.3 | 54.3 | 52.5 | 52.5 | 50.1 | 50.1 | 47.6 | 47.6 |
| **V50X2-EZE CS80** | 22/50 | 57.8 | 50.5 | 57.8 | 50.5 | 56.5 | 49.9 | 53.9 | 48.7 | 51.2 | 47.5 |
| | 24/45 | 59.6 | 56.3 | 59.6 | 56.3 | 58.4 | 55.7 | 56.5 | 54.6 | 54.8 | 53.5 |
| | 26/40 | 61.4 | 61.4 | 61.4 | 61.4 | 59.8 | 59.8 | 57.1 | 57.1 | 54.3 | 54.3 |
| **V55X2-EZE CS105** | 22/50 | 63.1 | 53.5 | 63.1 | 53.5 | 63.0 | 53.5 | 60.0 | 52.2 | 57.1 | 51.0 |
| | 24/45 | 65.1 | 60.3 | 65.1 | 60.3 | 64.8 | 60.2 | 61.8 | 59.0 | 58.8 | 57.8 |
| | 26/40 | 66.8 | 66.8 | 66.8 | 66.8 | 66.3 | 66.3 | 63.3 | 63.3 | 60.2 | 60.2 |
| **V60X2-EZE CS105** | 22/50 | 67.2 | 57.6 | 67.2 | 57.6 | 66.7 | 57.4 | 63.6 | 56.1 | 60.4 | 54.8 |
| | 24/45 | 69.3 | 64.8 | 69.3 | 64.8 | 68.6 | 64.5 | 65.4 | 63.2 | 62.2 | 61.9 |
| | 26/40 | 77.6 | 74.9 | 77.6 | 74.9 | 76.3 | 74.4 | 73.5 | 73.1 | 70.6 | 70.6 |

### Operating Limits

| | |
|---|---|
| Indoor Air Temperature | +18°C to +28°C |
| Indoor RH% | +40% to +55% |
| Outdoor Temperature | -20°C to +41°C |

TC = Total Cooling
SC = Sensible Cooling

(1) All data quoted is gross

## Technical Data Upflow Units X Type

### Noise Data

| Sound Measurement | | | Overall dB(A) | Frequency (Hz) dB | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| V6X | Discharge Air | Power | 72 | 66 | 70 | 68 | 68 | 68 | 67 | 59 | 55 |
| | Return Air | Power | 58 | 63 | 67 | 58 | 53 | 54 | 48 | 41 | 36 |
| | Case Breakout | Power | 58 | 63 | 67 | 58 | 53 | 54 | 48 | 41 | 36 |
| | Sound @ 3m | Pressure | 43 | 48 | 51 | 43 | 38 | 40 | 33 | 27 | 21 |
| V8X | Discharge Air | Power | 78 | 71 | 75 | 74 | 73 | 73 | 72 | 65 | 60 |
| | Return Air | Power | 63 | 68 | 71 | 63 | 58 | 59 | 53 | 48 | 41 |
| | Case Breakout | Power | 63 | 68 | 71 | 63 | 58 | 59 | 53 | 48 | 41 |
| | Sound @ 3m | Pressure | 49 | 53 | 57 | 49 | 43 | 44 | 39 | 33 | 26 |
| V10X | Discharge Air | Power | 81 | 74 | 78 | 77 | 76 | 76 | 75 | 68 | 63 |
| | Return Air | Power | 66 | 71 | 74 | 66 | 61 | 62 | 56 | 50 | 43 |
| | Case Breakout | Power | 66 | 71 | 74 | 66 | 61 | 62 | 56 | 50 | 43 |
| | Sound @ 3m | Pressure | 51 | 56 | 61 | 52 | 46 | 47 | 41 | 36 | 29 |
| V13X | Discharge Air | Power | 78 | 72 | 75 | 73 | 73 | 73 | 72 | 65 | 60 |
| | Return Air | Power | 63 | 69 | 71 | 63 | 58 | 59 | 53 | 48 | 42 |
| | Case Breakout | Power | 63 | 69 | 71 | 63 | 58 | 59 | 53 | 48 | 42 |
| | Sound @ 3m | Pressure | 48 | 54 | 57 | 48 | 43 | 44 | 38 | 34 | 27 |
| V15X | Discharge Air | Power | 74 | 71 | 76 | 73 | 70 | 69 | 68 | 63 | 58 |
| | Return Air | Power | 62 | 68 | 72 | 63 | 56 | 56 | 49 | 48 | 42 |
| | Case Breakout | Power | 62 | 68 | 72 | 63 | 56 | 56 | 49 | 48 | 42 |
| | Sound @ 3m | Pressure | 47 | 53 | 57 | 48 | 41 | 42 | 35 | 34 | 27 |
| V17X | Discharge Air | Power | 78 | 75 | 79 | 77 | 74 | 73 | 71 | 67 | 62 |
| | Return Air | Power | 65 | 72 | 75 | 67 | 59 | 59 | 53 | 51 | 44 |
| | Case Breakout | Power | 65 | 72 | 75 | 67 | 59 | 59 | 53 | 51 | 44 |
| | Sound @ 3m | Pressure | 50 | 57 | 61 | 52 | 44 | 44 | 38 | 36 | 30 |
| V22X2 | Discharge Air | Power | 82 | 75 | 79 | 78 | 77 | 78 | 76 | 69 | 64 |
| | Return Air | Power | 67 | 73 | 75 | 67 | 62 | 63 | 57 | 52 | 46 |
| | Case Breakout | Power | 67 | 73 | 75 | 67 | 62 | 63 | 57 | 52 | 46 |
| | Sound @ 3m | Pressure | 53 | 58 | 61 | 53 | 48 | 48 | 42 | 37 | 31 |
| V25X2 | Discharge Air | Power | 86 | 80 | 84 | 82 | 81 | 82 | 80 | 73 | 68 |
| | Return Air | Power | 71 | 77 | 80 | 71 | 66 | 67 | 61 | 55 | 49 |
| | Case Breakout | Power | 71 | 77 | 80 | 71 | 66 | 67 | 61 | 55 | 49 |
| | Sound @ 3m | Pressure | 57 | 62 | 65 | 57 | 52 | 52 | 46 | 41 | 35 |
| V26X | Discharge Air | Power | 87 | 99 | 95 | 82 | 82 | 82 | 78 | 78 | 75 |
| | Return Air | Power | 77 | 86 | 80 | 76 | 76 | 72 | 65 | 61 | 53 |
| | Case Breakout | Power | 71 | 84 | 79 | 69 | 68 | 66 | 61 | 54 | 47 |
| | Sound @ 3m | Pressure | 57 | 69 | 64 | 55 | 54 | 52 | 46 | 39 | 32 |
| V26X2 | Discharge Air | Power | 86 | 80 | 84 | 82 | 81 | 82 | 80 | 73 | 68 |
| | Return Air | Power | 71 | 77 | 80 | 71 | 66 | 67 | 61 | 55 | 49 |
| | Case Breakout | Power | 71 | 77 | 80 | 71 | 66 | 67 | 61 | 55 | 49 |
| | Sound @ 3m | Pressure | 57 | 62 | 65 | 57 | 52 | 52 | 46 | 41 | 35 |
| V28X | Discharge Air | Power | 90 | 102 | 95 | 86 | 84 | 85 | 81 | 81 | 78 |
| | Return Air | Power | 79 | 88 | 80 | 79 | 77 | 75 | 68 | 63 | 57 |
| | Case Breakout | Power | 73 | 86 | 79 | 73 | 69 | 69 | 64 | 56 | 50 |
| | Sound @ 3m | Pressure | 59 | 72 | 64 | 58 | 55 | 54 | 49 | 42 | 36 |
| V28X2 | Discharge Air | Power | 90 | 102 | 95 | 86 | 84 | 85 | 81 | 81 | 78 |
| | Return Air | Power | 79 | 87 | 80 | 79 | 76 | 74 | 67 | 63 | 57 |
| | Case Breakout | Power | 79 | 87 | 80 | 79 | 76 | 74 | 67 | 63 | 57 |
| | Sound @ 3m | Pressure | 64 | 73 | 65 | 65 | 61 | 60 | 53 | 49 | 42 |
| V31X | Discharge Air | Power | 93 | 105 | 96 | 89 | 86 | 88 | 84 | 84 | 82 |
| | Return Air | Power | 81 | 91 | 80 | 82 | 78 | 77 | 70 | 66 | 60 |
| | Case Breakout | Power | 75 | 89 | 79 | 75 | 70 | 71 | 66 | 59 | 54 |
| | Sound @ 3m | Pressure | 61 | 74 | 65 | 61 | 56 | 56 | 52 | 45 | 39 |

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

## Technical Data Upflow Units X Type

### Noise Data

| Sound Measurement | | | Overall dB(A) | Frequency (Hz) dB | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| V31X2 | Discharge Air | Power | 93 | 105 | 96 | 89 | 86 | 88 | 84 | 84 | 82 |
| | Return Air | Power | 81 | 91 | 80 | 82 | 77 | 77 | 70 | 66 | 60 |
| | Case Breakout | Power | 81 | 91 | 80 | 82 | 77 | 77 | 70 | 66 | 60 |
| | Sound @ 3m | Pressure | 66 | 76 | 66 | 67 | 63 | 62 | 55 | 51 | 46 |
| V35X | Discharge Air | Power | 92 | 111 | 98 | 90 | 87 | 82 | 82 | 83 | 80 |
| | Return Air | Power | 81 | 97 | 82 | 84 | 80 | 72 | 69 | 66 | 58 |
| | Case Breakout | Power | 81 | 97 | 82 | 84 | 80 | 72 | 69 | 66 | 58 |
| | Sound @ 3m | Pressure | 67 | 82 | 68 | 69 | 66 | 58 | 54 | 51 | 44 |
| V35X2 | Discharge Air | Power | 92 | 111 | 98 | 90 | 87 | 82 | 82 | 83 | 80 |
| | Return Air | Power | 81 | 97 | 82 | 84 | 79 | 72 | 69 | 66 | 59 |
| | Case Breakout | Power | 81 | 97 | 82 | 84 | 79 | 72 | 69 | 66 | 59 |
| | Sound @ 3m | Pressure | 66 | 82 | 68 | 69 | 65 | 58 | 54 | 51 | 45 |
| V40X | Discharge Air | Power | 94 | 113 | 99 | 92 | 89 | 84 | 85 | 85 | 83 |
| | Return Air | Power | 83 | 98 | 84 | 85 | 82 | 74 | 71 | 68 | 61 |
| | Case Breakout | Power | 83 | 98 | 84 | 85 | 82 | 74 | 71 | 68 | 61 |
| | Sound @ 3m | Pressure | 68 | 84 | 69 | 71 | 67 | 59 | 56 | 53 | 46 |
| V40X2 | Discharge Air | Power | 94 | 113 | 99 | 92 | 89 | 84 | 85 | 85 | 83 |
| | Return Air | Power | 82 | 98 | 84 | 85 | 81 | 74 | 71 | 68 | 62 |
| | Case Breakout | Power | 82 | 98 | 84 | 85 | 81 | 74 | 71 | 68 | 62 |
| | Sound @ 3m | Pressure | 68 | 85 | 69 | 71 | 66 | 59 | 56 | 53 | 47 |
| V45X2 | Discharge Air | Power | 94 | 113 | 99 | 92 | 89 | 84 | 85 | 85 | 83 |
| | Return Air | Power | 83 | 98 | 84 | 85 | 83 | 74 | 71 | 68 | 62 |
| | Case Breakout | Power | 77 | 97 | 83 | 79 | 75 | 68 | 67 | 61 | 55 |
| | Sound @ 3m | Pressure | 63 | 82 | 68 | 64 | 60 | 53 | 53 | 47 | 41 |
| V50X2 | Discharge Air | Power | 97 | 115 | 109 | 95 | 92 | 84 | 86 | 84 | 80 |
| | Return Air | Power | 84 | 99 | 93 | 86 | 83 | 74 | 71 | 66 | 58 |
| | Case Breakout | Power | 84 | 99 | 93 | 86 | 83 | 74 | 71 | 66 | 58 |
| | Sound @ 3m | Pressure | 70 | 85 | 79 | 72 | 68 | 60 | 57 | 52 | 43 |
| V55X2 | Discharge Air | Power | 97 | 115 | 109 | 95 | 92 | 84 | 86 | 84 | 80 |
| | Return Air | Power | 84 | 99 | 93 | 86 | 83 | 74 | 72 | 66 | 58 |
| | Case Breakout | Power | 84 | 99 | 93 | 86 | 83 | 74 | 72 | 66 | 58 |
| | Sound @ 3m | Pressure | 70 | 85 | 79 | 72 | 68 | 60 | 57 | 52 | 43 |
| V60X2 | Discharge Air | Power | 98 | 116 | 110 | 97 | 93 | 86 | 87 | 86 | 82 |
| | Return Air | Power | 86 | 102 | 94 | 89 | 85 | 76 | 73 | 69 | 60 |
| | Case Breakout | Power | 86 | 102 | 94 | 89 | 85 | 76 | 73 | 69 | 60 |
| | Sound @ 3m | Pressure | 72 | 87 | 80 | 75 | 70 | 61 | 59 | 54 | 46 |

(1)Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard fan AC motors, for optional data, please contact Airedale.

(2)Values given for full function units (incl. electric heating and humidification) at 7°C evaporating and 54.4°C condensing with standard fan AC motors, for optional data, please contact Airedale.

(3)AC fan motors: motor size relates to the shaft power. EC fan motors: motor size relates to the absorbed electrical power.

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

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

## Technical Data Upflow Units X Type V6X - V8X - V10X

### Mechanical Data

| | | | V6X-EZE-0 | V8X-EZE-0 | V10X-EZE-0 |
|---|---|---|---|---|---|
| **Standard Matched Condenser** | | | C11 | C15 | C15 |
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 6.2 | 8.6 | 10.9 |
| Capacity Steps | | | 1 | 1 | 1 |
| Fan Input Power (Fan Gain) | (2) | kW | 0.22 | 0.48 | 0.64 |
| **Dimensions - W x D x H** | | mm | 670 x 670 x 1940 | 670 x 670 x 1940 | 67 0x 670 x 1940 |
| **Weight** | (3) | kg | 174 | 173 | 177 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling / Dehum Stages | | | 1/1 | 1/1 | 1/1 |
| **Fan & Motor** | | | Centrifugal Forward Curved EC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Direct Drive | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 0.56 | 0.56 | 0.56 |
| Maximum ESP | | Pa | 369 | 303 | 378 |
| Nominal Airflow | | m³/s | 0.55 | 0.75 | 0.95 |
| **Compressor - Scroll** | | | | Single | |
| Quantity | | | 1 | 1 | 1 |
| Oil Charge Volume (Total) | | l | 1 | 1.1 | 1.1 |
| Oil Type | | | | Polyol Ester | |
| **Refrigeration** | (5) | | | Single Circuit | |
| Refrigeration Control | | | | Thermostatic Expansion Valve (Optional EEV) | |
| Refrigeration Type | | | | R407C | |
| Holding Charge | | | | Inert Gas | |
| **Connections** | | | | | |
| Liquid (Sweat) | | in | 3/8 | 3/8 | 3/8 |
| Discharge (Sweat) | | in | 5/8 | 5/8 | 5/8 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | | Disposable to ISO-C-75- 50mm | |
| Quantity | | | 1 | 1 | 1 |
| **OPTIONAL EXTRAS** | | | | | |
| **Upgraded Condenser Match** | | | C15 | C20 | C20 |
| Nom Cooling (Gross) | | kW | 6.3 | 8.8 | 11.1 |
| **Electric Heating (Total)** | | kW | 7.5 | 7.5 | 7.5 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 0.6 - 3.0 | 0.6 - 3.0 | 0.6 - 3.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 8 | 8 | 8 |
| Flow | | l/m | 5 | 5 | 5 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 6.6 | 7.9 | 8.9 |
| Water Flow (Nominal) | | l/s | 0.15 | 0.18 | 0.2 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |

## Technical Data Upflow Units X Type V6X - V8X - V10X

### Electrical Data

| | | V6X-EZE-0 | V8X-EZE-0 | V10X-EZE-0 |
|---|---|---|---|---|
| Standard Condenser Match | | C11 | C15 | C15 |
| **Unit Data Full Function** (1) | | | | |
| Nominal Run Amps | A | 18.9 | 20.3 | 21.1 |
| Maximum Start Amps | A | 39.6 | 55.6 | 61.6 |
| Recommended Mains Fuse Size | A | 25 | 25 | 25 |
| **Unit Data Cooling Only** (2) | | | | |
| Nominal Run Amps | A | 8.0 | 9.5 | 10.3 |
| Maximum Start Amps | A | 28.8 | 44.8 | 50.8 |
| Recommended Mains Fuse Size | A | 16 | 16 | 16 |
| Max Mains Incoming Cable Size | mm² | 6 | 6 | 6 |
| Mains Supply | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | |
| Maximum Electrical Input Power (3) | kW | 1 x 1.1 | 1 x 1.1 | 1 x 1.1 |
| Full Load Amps | A | 4.8 | 4.8 | 4.8 |
| Locked Rotor Amps | A | 4.8 | 4.8 | 4.8 |
| **Compressor - Per Compressor** | | | | |
| Quantity x Motor Size | kW | 1 x 2 | 1 x 2.6 | 1 x 3.9 |
| Nominal Run Amps | A | 3.2 | 4.7 | 5.5 |
| Locked Rotor Amps | A | 24 | 40 | 46 |
| Type of Start | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | |
| Quantity x Motor Size | kW | 1 x 0.15 | 2 x 0.15 | 2 x 0.15 |
| Full Load Amps | A | 0.65 | 1.3 | 1.3 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating** | | | | |
| Stage of Reheat | | 1 | 1 | 1 |
| Number of Elements | | 3 | 3 | 3 |
| Rating | kW | 7.5 | 7.5 | 7.5 |
| Current per Phase | A | 10.83 | 10.83 | 10.83 |
| **Humidifier** | | | | |
| Capacity | kg/hr | 3 | 3 | 3 |
| Rating | kW | 2.25 | 2.25 | 2.25 |
| Full Load Amps | A | 3.25 | 3.25 | 3.25 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units X Type V13X - V15X - V17X

### Mechanical Data

| | | | V13X-EZE-0 | V15X-EZE-0 | V17X-EZE-0 |
|---|---|---|---|---|---|
| **Standard Matched Condenser** | | | C20 | C25 | C35 |
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 11.2 | 15.4 | 18.4 |
| Capacity Steps | | | 1 | 1 | 1 |
| Fan Input Power (Fan Gain) | (2) | kW | 0.61 | 0.66 | 1.03 |
| **Dimensions - W x D x H** | | mm | 990 x 670 x 1940 | 990 x 670 x 1940 | 990 x 670 x 1940 |
| **Weight** | (3) | kg | 211 | 233 | 236 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling / Dehum Stages | | | 1/1 | 1/1 | 1/1 |
| **Fan & Motor** | | | Centrifugal Forward Curved EC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Direct Drive | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 0.56 | 0.92 | 0.92 |
| Maximum ESP | | Pa | 448 | 331 | 253 |
| Nominal Airflow | | m³/s | 1.00 | 1.20 | 1.40 |
| **Compressor - Scroll** | | | Single | | |
| Quantity | | | 1 | 1 | 1 |
| Oil Charge Volume (Total) | | l | 1.36 | 1.85 | 1.65 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Holding Charge | | | Inert Gas | | |
| **Connections** | | | | | |
| Liquid (Sweat) | | in | 1/2 | 1/2 | 1/2 |
| Discharge (Sweat) | | in | 7/8 | 7/8 | 7/8 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75- 50mm | | |
| Quantity | | | 2 | 2 | 2 |
| **OPTIONAL EXTRAS** | | | | | |
| **Upgraded Condenser Match** | | | C25 | C35 | C45 |
| Nom Cooling (Gross) | | kW | 11.3 | 15.9 | 18.9 |
| **Electric Heating (Total)** | | kW | 7.5 | 7.5 | 7.5 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 0.6 - 3.0 | 0.6 - 3.0 | 0.6 - 3.0 |
| Feed/Drain | | | 3/4" BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 8 | 8 | 8 |
| Flow | | l/m | 5 | 5 | 5 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 11.5 | 12.7 | 13.7 |
| Water Flow (Nominal) | | l/s | 0.26 | 0.28 | 0.31 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |

## Technical Data Upflow Units X Type V13X - V15X - V17X

### Electrical Data

| | | V13X-EZE-0 | V15X-EZE-0 | V17X-EZE-0 |
|---|---|---|---|---|
| Standard Condenser Match | | C20 | C25 | C35 |
| **Unit Data Full Function** (1) | | | | |
| Nominal Run Amps | A | 22.1 | 26.3 | 27.2 |
| Maximum Start Amps | A | 65.6 | 84.0 | 92.0 |
| Recommended Mains Fuse Size | A | 25 | 32 | 32 |
| **Unit Data Cooling Only** (2) | | | | |
| Nominal Run Amps | A | 11.3 | 15.5 | 16.4 |
| Maximum Start Amps | A | 54.8 | 73.2 | 81.2 |
| Recommended Mains Fuse Size | A | 16 | 20 | 20 |
| Max Mains Incoming Cable Size | mm² | 6 | 6 | 6 |
| Mains Supply | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | |
| Maximum Electrical Input Power (3) | kW | 1 x 1.1 | 1 x 1.6 | 1 x 1.6 |
| Full Load Amps | A | 4.8 | 7.2 | 7.2 |
| Locked Rotor Amps | A | 4.8 | 7.2 | 7.2 |
| **Compressor - Per Compressor** | | | | |
| Quantity x Motor Size | kW | 1 x 4.7 | 1 x 5.6 | 1 x 6.5 |
| Nominal Run Amps | A | 6.5 | 8.3 | 9.2 |
| Locked Rotor Amps | A | 50 | 66 | 74 |
| Type of Start | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | |
| Quantity x Motor Size | kW | 1 x 0.6 | 1 x 0.6 | 1 x 0.6 |
| Full Load Amps | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating** | | | | |
| Stage of Reheat | | 1 | 1 | 1 |
| Number of Elements | | 3 | 3 | 3 |
| Rating | kW | 7.5 | 7.5 | 7.5 |
| Current per Phase | A | 10.83 | 10.83 | 10.83 |
| **Humidifier** | | | | |
| Capacity | kg/hr | 3 | 3 | 3 |
| Rating | kW | 2.25 | 2.25 | 2.25 |
| Full Load Amps | A | 3.25 | 3.25 | 3.25 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units X Type V22X2 - V25X2

### Mechanical Data

| | | | V22X2-EZE-0 | V25X2-EZE-0 |
|---|---|---|---|---|
| **Standard Matched Condenser** | | | C45 | C45 |
| **Capacity** | (1) | | | |
| Nom Cooling (Gross) | | kW | 24 | 24.7 |
| Capacity Steps | | | 2 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 1.13 | 1.82 |
| **Dimensions - W x D x H** | | mm | 1310 x 670 x 1940 | 1310 x 670 x 1940 |
| **Weight** | (3) | kg | 290 | 290 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | |
| Cooling / Dehum Stages | | | 2/2 | 2/2 |
| **Fan & Motor** | | | Centrifugal Forward Curved EC - Designed to 25Pa ESP | |
| Fan Transmission Type | | | Direct Drive | |
| Quantity | | | 2 | 2 |
| Motor Shaft Power | (4) | kW | 0.56 | 0.56 |
| Maximum ESP | | Pa | 350 | 204 |
| Nominal Airflow | | m³/s | 1.70 | 2.00 |
| **Compressor - Scroll** | | | Tandem | |
| Quantity | | | 2 | 2 |
| Oil Charge Volume (Total) | | l | 2.72 | 2.72 |
| Oil Type | | | Polyol Ester | |
| **Refrigeration** | (5) | | Single Circuit | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | |
| Refrigeration Type | | | R407C | |
| Holding Charge | | | Inert Gas | |
| **Connections** | | | | |
| Liquid (Sweat) | | in | 5/8 | 5/8 |
| Discharge (Sweat) | | in | 7/8 | 7/8 |
| Condensate Drain Hose | | mm | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75- 50mm | |
| Quantity | | | 3 | 3 |
| **OPTIONAL EXTRAS** | | | | |
| **Upgraded Condenser Match** | | | CS50 | CS50 |
| Nom Cooling (Gross) | | kW | 24 | 24.7 |
| **Electric Heating (Total)** | | kW | 15 | 15 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 0.6 - 3.0 | 0.6 - 3.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | |
| **Condensate Pump** | | | | |
| Head | | m | 8 | 8 |
| Flow | | l/m | 5 | 5 |
| Drain | | | 10mm Stainless Steel Stub Connection | |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | |
| Capacity Gross | | kW | 19.2 | 19.9 |
| Water Flow (Nominal) | | l/s | 0.43 | 0.44 |
| LPHW Connection Sizes | | mm | 22 | 22 |

## Technical Data Upflow Units X Type V22X2 - V25X2

### Electrical Data

| | | | V22X2-EZE-0 | V25X2-EZE-0 |
|---|---|---|---|---|
| Standard Condenser Match | | | C45 | C45 |
| **Unit Data Full Function** | (1) | | | |
| Nominal Run Amps | | A | 39.9 | 39.9 |
| Maximum Start Amps | | A | 83.4 | 83.4 |
| Recommended Mains Fuse Size | | A | 50 | 50 |
| **Unit Data Cooling Only** | (2) | | | |
| Nominal Run Amps | | A | 18.2 | 18.2 |
| Maximum Start Amps | | A | 61.7 | 61.7 |
| Recommended Mains Fuse Size | | A | 25 | 25 |
| Max Mains Incoming Cable Size | | mm² | 35 | 35 |
| Mains Supply | | V | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | |
| Maximum Electrical Input Power | (3) | kW | 2 x 1.1 | 2 x 1.1 |
| Full Load Amps | | A | 4.8 | 4.8 |
| Locked Rotor Amps | | A | 4.8 | 4.8 |
| **Compressor - Per Compressor** | | | | |
| Quantity x Motor Size | | kW | 2 x 4.7 | 2 x 4.7 |
| Nominal Run Amps | | A | 6.5 | 6.5 |
| Locked Rotor Amps | | A | 50 | 50 |
| Type of Start | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating** | | | | |
| Stage of Reheat | | | 2 | 2 |
| Number of Elements | | | 6 | 6 |
| Rating | | kW | 15 | 15 |
| Current per Phase | | A | 21.65 | 21.65 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 3 | 3 |
| Rating | | kW | 2.25 | 2.25 |
| Full Load Amps | | A | 3.25 | 3.25 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units X Type

**V26X - V26X2 - V28X - V28X2**

### Mechanical Data

| | | | V26X-EZE-0 | V26X2-EZE-0 | V28X-EZE-0 | V28X2-EZE-0 |
|---|---|---|---|---|---|---|
| **Standard Matched Condenser** | | | C45 | C45 | C45 | C45 |
| **Capacity** | (1) | | | | | |
| Nom Cooling (Gross) | | kW | 29.4 | 31 | 29.9 | 31.6 |
| Capacity Steps | | | 1 | 2 | 1 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 1.81 | 1.81 | 3.50 | 3.50 |
| **Dimensions - W x D x H** | | mm | 1460 x 750 x 1940 | 1460 x 750 x 1940 | 1460 x 750 x 1940 | 1460 x 750 x 1940 |
| **Weight** | (3) | kg | 445 | 430 | 450 | 436 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | | |
| Cooling / Dehum Stages | | | 1/1 | 2/2 | 1/1 | 2/2 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | | |
| Fan Transmission Type | | | Belt & Pulley | | | |
| Quantity | | | 1 | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 2.2 | 2.2 | 3 | 3 |
| Maximum ESP | | Pa | 170 | 170 | 160 | 160 |
| Nominal Airflow | | m³/s | 2.1 | 2.1 | 2.4 | 2.4 |
| **Compressor - Scroll** | | | Single | Tandem | Single | Tandem |
| Quantity | | | 1 | 2 | 1 | 2 |
| Oil Charge Volume (Total) | | l | 3.25 | 3.37 | 3.25 | 3.37 |
| Oil Type | | | Polyol Ester | | | |
| **Refrigeration** | (5) | | Single Circuit | | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | | |
| Refrigeration Type | | | R407C | | | |
| Holding Charge | | | Inert Gas | | | |
| **Connections** | | | | | | |
| Liquid (Sweat) | | in | 5/8 | 5/8 | 5/8 | 5/8 |
| Discharge (Sweat) | | in | 7/8 | 7/8 | 7/8 | 7/8 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | | | |
| Quantity | | | 3 | 3 | 3 | 3 |
| **OPTIONAL EXTRAS** | | | | | | |
| **Upgraded Condenser Match** | | | CS50 | CS50 | CS50 | CS50 |
| Nom Cooling (Gross) | | kW | 27 | 28.7 | 27.6 | 29.4 |
| **Electric Heating (Total)** | | kW | 22.5 | 22.5 | 22.5 | 22.5 |
| **Humidifier** | | | | | | |
| Capacity | | kg/hr | 1.6 - 8.0 | 1.6 - 8.0 | 1.6 - 8.0 | 1.6 - 8.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | | |
| **Condensate Pump** | | | | | | |
| Head | | m | 5 | 5 | 5 | 5 |
| Flow | | l/m | 10.5 | 10.8 | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | | | |
| **Larger / Next Larger Fan Motor Size** | | | | | | |
| Quantity | | kW | 1 | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 3.0 | 3.0 | 4.0 | 4.0 |
| Maximum ESP | | Pa | 450 | 450 | 470 | 470 |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | | |
| Capacity Gross | | kW | 20.5 | 20.5 | 21.7 | 21.7 |
| Water Flow (Nominal) | | l/s | 0.46 | 0.46 | 0.48 | 0.48 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 | 22 |

## Technical Data Upflow Units X Type V26X - V26X2 - V28X - V28X2

### Electrical Data

| | | V26X-EZE-0 | V26X2-EZE-0 | V28X-EZE-0 | V28X2-EZE-0 |
|---|---|---|---|---|---|
| Standard Condenser Match | | C45 | C45 | C45 | C45 |
| **Unit Data Full Function** (1) | | | | | |
| Nominal Run Amps | A | 56.7 | 62.9 | 58.2 | 64.4 |
| Maximum Start Amps | A | 153.9 | 112.4 | 155.4 | 113.9 |
| Recommended Mains Fuse Size | A | 63 | 80 | 80 | 80 |
| **Unit Data Cooling Only** (2) | | | | | |
| Nominal Run Amps | A | 24.2 | 30.4 | 25.7 | 31.9 |
| Maximum Start Amps | A | 121.4 | 79.9 | 122.9 | 81.4 |
| Recommended Mains Fuse Size | A | 32 | 40 | 32 | 40 |
| Max Mains Incoming Cable Size | mm² | 35 | 35 | 35 | 35 |
| Mains Supply | V | | 400V / 3PH + N / 50HZ | | |
| Control Circuit | VAC | 24 | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | | |
| Maximum Electrical Input Power (3) | kW | 1 x 2.2 | 1 x 2.2 | 1 x 3 | 1 x 3 |
| Full Load Amps | A | 4.68 | 4.68 | 6.32 | 6.32 |
| Locked Rotor Amps | A | 32.8 | 32.8 | 45.5 | 45.5 |
| **Compressor - Per Compressor** | | | | | |
| Quantity x Motor Size | kW | 1 x 7.9 | 2 x 4.45 | 1 x 7.9 | 2 x 4.45 |
| Nominal Run Amps | A | 13.8 | 10 | 13.8 | 10 |
| Locked Rotor Amps | A | 111 | 59.5 | 111 | 59.5 |
| Type of Start | | | Direct On Line | | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | | |
| Quantity x Motor Size | kW | 2 x 0.6 | 2 x 0.6 | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | A | 2.62 | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating** | | | | | |
| Stage of Reheat | | 3 | 3 | 3 | 3 |
| Number of Elements | | 9 | 9 | 9 | 9 |
| Rating | kW | 22.5 | 22.5 | 22.5 | 22.5 |
| Curent per Phase | A | 32.48 | 32.48 | 32.48 | 32.48 |
| **Humidifier** | | | | | |
| Capacity | kg/hr | 8 | 8 | 8 | 8 |
| Rating | kW | 6 | 6 | 6 | 6 |
| Full Load Amps | A | 8.66 | 8.66 | 8.66 | 8.66 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units X Type V31X - V31X2

### Mechanical Data

| | | | V31X-EZE-0 | V31X2-EZE-0 |
|---|---|---|---|---|
| **Standard Matched Condenser** | | | C45 | C45 |
| **Capacity** | (1) | | | |
| Nom Cooling (Gross) | | kW | 33.7 | 35.5 |
| Capacity Steps | | | 1 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 4.60 | 4.60 |
| **Dimensions - W x D x H** | | mm | 1460 x 750 x 1940 | 1460 x 750 x 1940 |
| **Weight** | (3) | kg | 452 | 445 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | |
| Cooling / Dehum Stages | | | 1/1 | 2/2 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | |
| Fan Transmission Type | | | Belt & Pulley | |
| Quantity | | | 1 | 1 |
| Motor Shaft Power | (4) | kW | 4 | 4 |
| Maximum ESP | | Pa | 35 | 35 |
| Nominal Airflow | | m³/s | 2.8 | 2.8 |
| **Compressor - Scroll** | | | Single | Tandem |
| Quantity | | | 1 | 2 |
| Oil Charge Volume (Total) | | l | 3.25 | 3.2 |
| Oil Type | | | Polyol Ester | |
| **Refrigeration** | (5) | | Single Circuit | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | |
| Refrigeration Type | | | R407C | |
| Holding Charge | | | Inert Gas | |
| **Connections** | | | | |
| Liquid (Sweat) | | in | 5/8 | 5/8 |
| Discharge (Sweat) | | in | 7/8 | 7/8 |
| Condensate Drain Hose | | mm | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | |
| Quantity | | | 3 | 3 |
| **OPTIONAL EXTRAS** | | | | |
| **Upgraded Condenser Match** | | | CS50 | CS50 |
| Nom Cooling (Gross) | | kW | 31.7 | 34 |
| **Electric Heating (Total)** | | kW | 22.5 | 22.5 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 1.6 - 8.0 | 1.6 - 8.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | |
| **Condensate Pump** | | | | |
| Head | | m | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | |
| **Larger / Next Larger Fan Motor Size** | | | | |
| Quantity | | kW | N/A | N/A |
| Motor Shaft Power | (4) | kW | N/A | N/A |
| Maximum ESP | | Pa | N/A | N/A |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | |
| Capacity Gross | | kW | 23.2 | 23.2 |
| Water Flow (Nominal) | | l/s | 0.52 | 0.52 |
| LPHW Connection Sizes | | mm | 22 | 22 |

## Technical Data Upflow Units X Type V31X - V31X2

### Electrical Data

| | | V31X-EZE-0 | V31X2-EZE-0 |
|---|---|---|---|
| Standard Condenser Match | | C45 | C45 |
| **Unit Data Full Function** (1) | | | |
| Nominal Run Amps | A | 62.3 | 64.7 |
| Maximum Start Amps | A | 164.3 | 129.5 |
| Recommended Mains Fuse Size | A | 80 | 80 |
| **Unit Data Cooling Only** (2) | | | |
| Nominal Run Amps | A | 29.9 | 32.3 |
| Maximum Start Amps | A | 131.9 | 97.1 |
| Recommended Mains Fuse Size | A | 40 | 40 |
| Max Mains Incoming Cable Size | mm² | 35 | 35 |
| Mains Supply | V | 400V / 3PH + N / 50HZ | |
| Control Circuit | VAC | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | |
| Maximum Electrical Input Power (3) | kW | 1 x 4 | 1 x 4 |
| Full Load Amps | A | 8.14 | 8.14 |
| Locked Rotor Amps | A | 57 | 57 |
| **Compressor - Per Compressor** | | | |
| Quantity x Motor Size | kW | 1 x 8.95 | 2 x 6.5 |
| Nominal Run Amps | A | 16 | 9.2 |
| Locked Rotor Amps | A | 118 | 74 |
| Type of Start | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | |
| Quantity x Motor Size | kW | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | A | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | |
| **Electric Heating** | | | |
| Stage of Reheat | | 3 | 3 |
| Number of Elements | | 9 | 9 |
| Rating | kW | 22.5 | 22.5 |
| Curent per Phase | A | 32.48 | 32.48 |
| **Humidifier** | | | |
| Capacity | kg/hr | 8 | 8 |
| Rating | kW | 6 | 6 |
| Full Load Amps | A | 8.66 | 8.66 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units X Type V35X - V35X2

### Mechanical Data

| | | | V35X-EZE-0 | V35X2-EZE-0 |
|---|---|---|---|---|
| **Standard Matched Condenser** | | | CS50 | CS50 |
| **Capacity** | (1) | | | |
| Nom Cooling (Gross) | | kW | 39.5 | 38.4 |
| Capacity Steps | | | 1 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 4.60 | 4.60 |
| **Dimensions - W x D x H** | | mm | 1835 x 750 x 1940 | 1835 x 750 x 1940 |
| **Weight** | (3) | kg | 498 | 516 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | |
| Cooling / Dehum Stages | | | 1/1 | 2/2 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | |
| Fan Transmission Type | | | Belt & Pulley | |
| Quantity | | | 1 | 1 |
| Motor Shaft Power | (4) | kW | 4.0 | 4.0 |
| Maximum ESP | | Pa | 35 | 35 |
| Nominal Airflow | | m³/s | 3.3 | 3.3 |
| **Compressor - Scroll** | | | Single | Tandem |
| Quantity | | | 1 | 2 |
| Oil Charge Volume (Total) | | l | 3.25 | 3.2 |
| Oil Type | | | | |
| **Refrigeration** | (5) | | Single Circuit | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | |
| Refrigeration Type | | | R407C | |
| Holding Charge | | | Inert Gas | |
| **Connections** | | | | |
| Liquid (Sweat) | | in | 5/8 | 5/8 |
| Discharge (Sweat) | | in | 7/8 | 7/8 |
| Condensate Drain Hose | | mm | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | |
| Quantity | | | 4 | 4 |
| **OPTIONAL EXTRAS** | | | | |
| **Upgraded Condenser Match** | | | CS65 | CS65 |
| Nom Cooling (Gross) | | kW | 38.2 | 37.3 |
| **Electric Heating (Total)** | | kW | 30 | 30 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 3.0 - 15.0 | 3.0 - 15.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | |
| **Condensate Pump** | | | | |
| Head | | m | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | |
| **Larger / Next Larger Fan Motor Size** | | | | |
| Quantity | | kW | 1 | 1 |
| Motor Shaft Power | (4) | kW | 5.5 | 5.5 |
| Maximum ESP | | Pa | 240 | 240 |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | |
| Capacity Gross | | kW | 29.9 | 29.9 |
| Water Flow (Nominal) | | l/s | 0.67 | 0.67 |
| LPHW Connection Sizes | | mm | 22 | 22 |

## Technical Data Upflow Units X Type V35X - V40X

### Electrical Data

| | | V35X-EZE-0 | V35X2-EZE-0 |
|---|---|---|---|
| Standard Condenser Match | | CS50 | CS50 |
| **Unit Data Full Function** (1) | | | |
| Nominal Run Amps | A | 76.3 | 75.6 |
| Maximum Start Amps | A | 202.2 | 140.4 |
| Recommended Mains Fuse Size | A | 100 | 100 |
| **Unit Data Cooling Only** (2) | | | |
| Nominal Run Amps | A | 33.0 | 32.3 |
| Maximum Start Amps | A | 158.9 | 97.1 |
| Recommended Mains Fuse Size | A | 40 | 40 |
| Max Mains Incoming Cable Size | mm² | 35 | 35 |
| Mains Supply | V | 400V / 3PH + N / 50HZ | |
| Control Circuit | VAC | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | |
| Maximum Electrical Input Power (3) | kW | 1 x 4 | 1 x 4 |
| Full Load Amps | A | 8.14 | 8.14 |
| Locked Rotor Amps | A | 57 | 57 |
| **Compressor - Per Compressor** | | | |
| Quantity x Motor Size | kW | 1 x 11 | 2 x 6.5 |
| Nominal Run Amps | A | 19.1 | 9.2 |
| Locked Rotor Amps | A | 145 | 74 |
| Type of Start | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | |
| Quantity x Motor Size | kW | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | A | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | |
| **Electric Heating** | | | |
| Stage of Reheat | | 3 | 3 |
| Number of Elements | | 9 | 9 |
| Rating | kW | 30 | 30 |
| Curent per Phase | A | 43.30 | 43.30 |
| **Humidifier** | | | |
| Capacity | kg/hr | 15 | 15 |
| Rating | kW | 11.25 | 11.25 |
| Full Load Amps | A | 16.24 | 16.24 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units X Type V40X - V40X2 - V45X2

### Mechanical Data

| | | | V40X-EZE-0 | V40X2-EZE-0 | V45X2-EZE-0 |
|---|---|---|---|---|---|
| **Standard Matched Condenser** | | | CS50 | CS50 | CS50 |
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 44.4 | 42.2 | 49 |
| Capacity Steps | | | 1 | 2 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 6.30 | 6.30 | 6.30 |
| **Dimensions - W x D x H** | | mm | 1835 x 750 x 1940 | 1835 x 750 x 1940 | 1835 x 750 x 1940 |
| **Weight** | (3) | kg | 519 | 516 | 635 |
| **Construction** Material/Colour | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling / Dehum Stages | | | 1/1 | 2/2 | 2/2 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Belt & Pulley | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 5.5 | 5.5 | 5.5 |
| Maximum ESP | | Pa | 25 | 25 | 25 |
| Nominal Airflow | | m³/s | 3.7 | 3.7 | 3.7 |
| **Compressor - Scroll** | | | Single | Tandem | |
| Quantity | | | 1 | 2 | 2 |
| Oil Charge Volume (Total) | | l | 3.3 | 3.4 | 9.66 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Holding Charge | | | Inert Gas | | |
| **Connections** | | | | | |
| Liquid (Sweat) | | in | 7/8 | 7/8 | 7/8 |
| Discharge (Sweat) | | in | 1 1/8 | 1 1/8 | 1 1/8 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | | |
| Quantity | | | 4 | 4 | 4 |
| **OPTIONAL EXTRAS** | | | | | |
| **Upgraded Condenser Match** | | | CS65 | CS65 | CS65 |
| Nom Cooling (Gross) | | kW | 42.3 | 40.6 | 42.7 |
| **Electric Heating (Total)** | | kW | 30 | 30 | 30 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 3.0 - 15.0 | 3.0 - 15.0 | 3.0 - 15.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 5 | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Larger / Next Larger Fan Motor Size** | | | | | |
| Quantity | | kW | N/A | N/A | N/A |
| Motor Shaft Power | (4) | kW | N/A | N/A | N/A |
| Maximum ESP | | Pa | N/A | N/A | N/A |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 31.5 | 31.5 | 31.5 |
| Water Flow (Nominal) | | l/s | 0.7 | 0.7 | 0.7 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |

## Technical Data Upflow Units X Type V40X2 - V40X2 - V45X2

### Electrical Data

| | | | V40X-EZE-0 | V40X2-EZE-0 | V45X2-EZE-0 |
|---|---|---|---|---|---|
| Standard Condenser Match | | | CS50 | CS50 | CS50 |
| **Unit Data Full Function** | (1) | | | | |
| Nominal Run Amps | | A | 82.8 | 83.9 | 85.6 |
| Maximum Start Amps | | A | 204.9 | 172.9 | 167.8 |
| Recommended Mains Fuse Size | | A | 100 | 100 | 100 |
| **Unit Data Cooling Only** | (2) | | | | |
| Nominal Run Amps | | A | 39.5 | 40.6 | 42.3 |
| Maximum Start Amps | | A | 161.6 | 129.6 | 124.5 |
| Recommended Mains Fuse Size | | A | 50 | 50 | 50 |
| Max Mains Incoming Cable Size | | mm² | 35 | 35 | 35 |
| Mains Supply | | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | | |
| Maximum Electrical Input Power | (3) | kW | 1 x 5.5 | 1 x 5.5 | 1 x 5.5 |
| Full Load Amps | | A | 11.1 | 11.1 | 11.1 |
| Locked Rotor Amps | | A | 77.7 | 77.7 | 77.7 |
| **Compressor - Per Compressor** | | | | | |
| Quantity x Motor Size | | kW | 1 x 11.9 | 2 x 6 | 2 x 6.95 |
| Nominal Run Amps | | A | 22.9 | 12 | 12.85 |
| Locked Rotor Amps | | A | 145 | 101 | 95 |
| Type of Start | | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating** | | | | | |
| Stage of Reheat | | | 3 | 3 | 3 |
| Number of Elements | | | 9 | 9 | 9 |
| Rating | | kW | 30 | 30 | 30 |
| Curent per Phase | | A | 43.30 | 43.30 | 43.30 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 15 | 15 | 15 |
| Rating | | kW | 11.25 | 11.25 | 11.25 |
| Full Load Amps | | A | 16.24 | 16.24 | 16.24 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units X Type V50X2 - V55X2 - V60X2

### Mechanical Data

| | | | V50X2-EZE-0 | V55X2-EZE-0 | V60X2-EZE-0 |
|---|---|---|---|---|---|
| **Standard Matched Condenser** | | | CS65 | CS80 | CS80 |
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 57.4 | 62.8 | 66.4 |
| Capacity Steps | | | 2 | 2 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 7.00 | 7.00 | 7.00 |
| **Dimensions - W x D x H** | | mm | 2170 x 750 x 1940 | 2170 x 750 x 1940 | 2170 x 750 x 1940 |
| **Weight** | (3) | kg | 663 | 676 | 676 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) / Frame: Aluminium Frame with Aluminium Corners | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling / Dehum Stages | | | 2/2 | 2/2 | 2/2 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Belt & Pulley | | |
| Quantity | | | 2 | 2 | 2 |
| Motor Shaft Power | (4) | kW | 3.0 | 3.0 | 3.0 |
| Maximum ESP | | Pa | 255 | 255 | 35 |
| Nominal Airflow | | m³/s | 4.2 | 4.2 | 4.6 |
| **Compressor - Scroll** | | | Tandem | | |
| Quantity | | | 2 | 2 | 2 |
| Oil Charge Volume (Total) | | l | 6.5 | 7.6 | 7.6 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Holding Charge | | | Inert Gas | | |
| **Connections** | | | | | |
| Liquid (Sweat) | | in | 7/8 | 7/8 | 7/8 |
| Discharge (Sweat) | | in | 1 3/8 | 1 3/8 | 1 3/8 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | | |
| Quantity | | | 5 | 5 | 5 |
| **OPTIONAL EXTRAS** | | | | | |
| **Upgraded Condenser Match** | | | CS80 | CS105 | CS105 |
| Nom Cooling (Gross) | | kW | 52.2 | 60.7 | 64.3 |
| **Electric Heating (Total)** | | kW | 30 | 30 | 30 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 3.0 - 15.0 | 3.0 - 15.0 | 3.0 - 15.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 5 | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Larger / Next Larger Fan Motor Size** | | | | | |
| Quantity | | kW | 2 | 2 | 2 |
| Motor Shaft Power | (4) | kW | 4.0 | 4.0 | 4.0 |
| Maximum ESP | | Pa | 305 | 305 | 230 |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 37.7 | 37.7 | 39.2 |
| Water Flow (Nominal) | | l/s | 0.84 | 0.84 | 0.87 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |

## Technical Data Upflow Units X Type V50X2 - V55X2 - V60X2

### Electrical Data

| | | | V50X2-EZE-0 | V55X2-EZE-0 | V60X2-EZE-0 |
|---|---|---|---|---|---|
| Standard Condenser Match | | | CS65 | CS80 | CS80 |
| **Unit Data Full Function** | (1) | | | | |
| Nominal Run Amps | | A | 92.8 | 93.0 | 96.2 |
| Maximum Start Amps | | A | 207.1 | 198.5 | 200.1 |
| Recommended Mains Fuse Size | | A | 125 | 125 | 125 |
| **Unit Data Cooling Only** | (2) | | | | |
| Nominal Run Amps | | A | 49.5 | 49.7 | 52.9 |
| Maximum Start Amps | | A | 163.8 | 155.2 | 156.8 |
| Recommended Mains Fuse Size | | A | 63 | 63 | 63 |
| Max Mains Incoming Cable Size | | mm² | 50 | 50 | 50 |
| Mains Supply | | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | | |
| Maximum Electrical Input Power | (3) | kW | 2 x 3 | 2 x 3 | 2 x 3 |
| Full Load Amps | | A | 6.32 | 6.32 | 6.32 |
| Locked Rotor Amps | | A | 45.5 | 45.5 | 45.5 |
| **Compressor - Per Compressor** | | | | | |
| Quantity x Motor Size | | kW | 2 x 7.8 | 2 x 8.5 | 2 x 9.7 |
| Nominal Run Amps | | A | 15.7 | 14.5 | 16.1 |
| Locked Rotor Amps | | A | 130 | 120 | 120 |
| Type of Start | | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 3 x 0.6 | 3 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating** | | | | | |
| Stage of Reheat | | | 3 | 3 | 3 |
| Number of Elements | | | 9 | 9 | 9 |
| Rating | | kW | 30 | 30 | 30 |
| Curent per Phase | | A | 43.30 | 43.30 | 43.30 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 15 | 15 | 15 |
| Rating | | kW | 11.25 | 11.25 | 11.25 |
| Full Load Amps | | A | 16.24 | 16.24 | 16.24 |

Mechanical

(1) Entering air 24°C/45% RH ambient 35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water***.

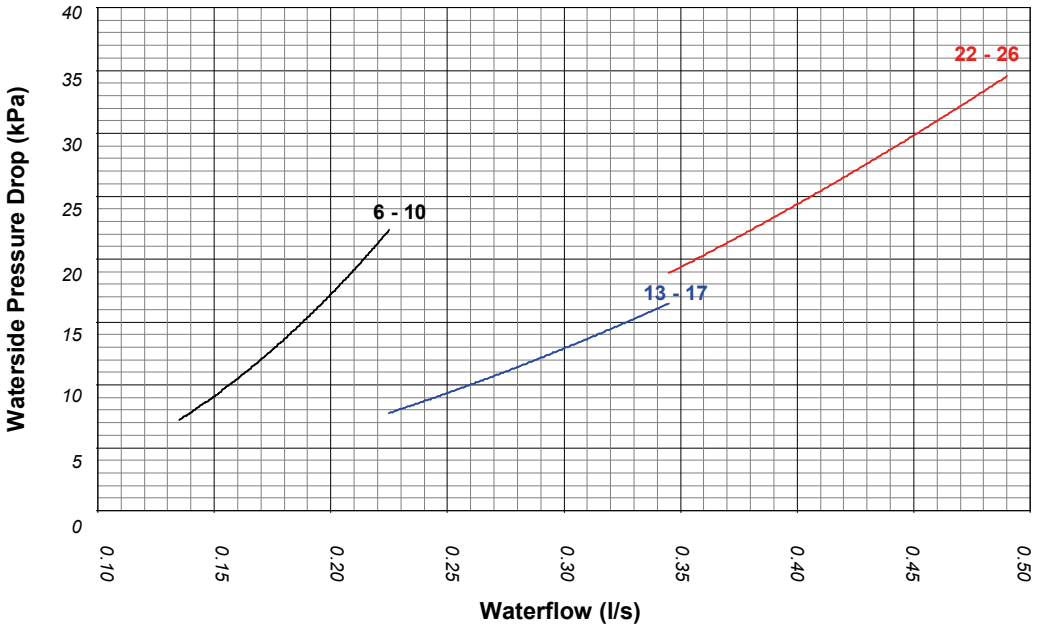
Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

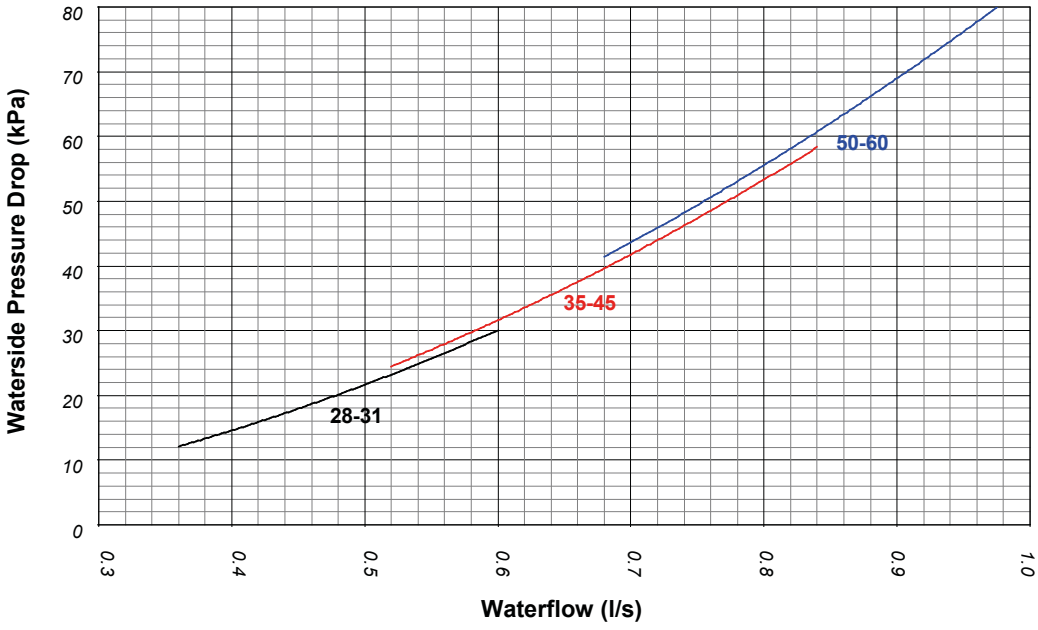
## Technical Data Upflow Units X Type

### Hydronic Data Low Pressure Hot Water

**V6 - V26**




**V28 - V60**




(1) Includes coil, 3 port valve and pipework.

(2) To calculate 3 port valve pressure drop

$\Delta P$ valve = $\left(\frac{Q}{M}\right)^2$ where $\Delta P$ = Pressure Drop in kPa, Q = Water Flow Rate in l/s and $M$ = $\left(\frac{Kv}{36}\right)$

(3) Fluid 100% water, for glycol use, refer to ***Ethylene Glycol Correction Factors***.

**Notes**

## Technical Data Downflow Units WX Type

### Performance Data

| Cooling Capacity (1) | | Condenser Entering/Leaving Temperature - Based on 5°C ΔT | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Air On | 25°C/30°C | | | 30°C/35°C | | | 35°C/40°C | | | 40°C/45°C | | |
| | (DB°C/%RH) | TC (kW) | SC (kW) | THR (kW) | TC (kW) | SC (kW) | THR (kW) | TC (kW) | SC (kW) | THR (kW) | TC (kW) | SC (kW) | THR (kW) |
| **DF6WX-EZE** | 22/50 | 6.7 | 6 | 8.9 | 6.5 | 5.9 | 8.5 | 6.2 | 5.7 | 8.2 | 5.9 | 5.6 | 7.9 |
| | 24/45 | 6.9 | 6.6 | 9 | 6.6 | 6.4 | 8.7 | 6.4 | 6.3 | 8.4 | 6.1 | 6.1 | 8.1 |
| | 26/40 | 7.1 | 7.1 | 9.2 | 6.8 | 6.8 | 8.9 | 6.5 | 6.5 | 8.5 | 6.2 | 6.2 | 8.2 |
| **DF8WX-EZE** | 22/50 | 9.4 | 8.1 | 11.6 | 9.1 | 8 | 11.5 | 8.7 | 7.8 | 11.3 | 8.4 | 7.6 | 11.2 |
| | 24/45 | 9.7 | 8.8 | 11.9 | 9.4 | 8.6 | 11.8 | 9 | 8.5 | 11.6 | 8.7 | 8.3 | 11.5 |
| | 26/40 | 10 | 9.5 | 12.2 | 9.6 | 9.4 | 12 | 9.3 | 9.2 | 11.9 | 8.9 | 8.9 | 11.7 |
| **DF10WX-EZE** | 22/50 | 10.8 | 9.7 | 13 | 10.4 | 9.5 | 13 | 10 | 9.3 | 12.9 | 9.6 | 9.1 | 12.8 |
| | 24/45 | 11.1 | 10.5 | 13.4 | 10.7 | 10.3 | 13.3 | 10.4 | 10.1 | 13.3 | 10 | 9.8 | 13.2 |
| | 26/40 | 11.4 | 11.3 | 13.7 | 11.1 | 11 | 13.7 | 10.8 | 10.8 | 13.6 | 10.4 | 10.4 | 13.6 |
| **DF13WX-EZE** | 22/50 | 14.3 | 11.7 | 16.7 | 13.7 | 11.5 | 16.6 | 13.2 | 11.2 | 16.5 | 12.5 | 11 | 16.4 |
| | 24/45 | 14.7 | 12.8 | 17.1 | 14.1 | 12.6 | 17 | 13.5 | 12.3 | 16.9 | 12.9 | 12 | 16.7 |
| | 26/40 | 15 | 14.1 | 17.4 | 14.4 | 13.9 | 17.3 | 13.8 | 13.7 | 17.2 | 13.2 | 13.2 | 17 |
| **DF15WX-EZE** | 22/50 | 17.4 | 14.2 | 19.7 | 16.7 | 13.8 | 19.7 | 16 | 13.6 | 19.8 | 15.3 | 13.2 | 19.8 |
| | 24/45 | 17.9 | 15.4 | 20.2 | 17 | 15 | 20.2 | 16.5 | 14.8 | 20.2 | 15.7 | 14.5 | 20.2 |
| | 26/40 | 18.3 | 16.7 | 20.6 | 17.4 | 16.3 | 20.6 | 16.9 | 16.1 | 20.6 | 16.1 | 15.8 | 20.6 |
| **DF17WX-EZE** | 22/50 | 20.4 | 17.6 | 22.9 | 19.6 | 17.2 | 23.2 | 19 | 16.9 | 23.5 | 18.1 | 16.4 | 23.9 |
| | 24/45 | 20.9 | 19 | 23.4 | 20.2 | 18.7 | 23.8 | 19.5 | 18.3 | 24.1 | 18.6 | 17.9 | 24.5 |
| | 26/40 | 21.4 | 20.6 | 23.9 | 20.6 | 20.2 | 24.2 | 19.9 | 19.8 | 24.6 | 19.1 | 19.1 | 24.9 |
| **DF22WX2-EZE** | 22/50 | 25.8 | 20.6 | 28.5 | 24.6 | 20.1 | 29 | 23.6 | 19.7 | 29.5 | 22.5 | 19.2 | 30 |
| | 24/45 | 27 | 22.6 | 29.8 | 25.9 | 22.1 | 30.3 | 24.9 | 21.6 | 30.7 | 23.8 | 21.1 | 31.2 |
| | 26/40 | 27.8 | 24.4 | 30.6 | 26.7 | 23.9 | 31 | 25.7 | 23.4 | 31.5 | 24.5 | 22.9 | 31.9 |
| **DF25WX2-EZE** | 22/50 | 27 | 22.6 | 29.8 | 25.9 | 22 | 30.2 | 24.9 | 21.6 | 30.6 | 23.7 | 21 | 31.1 |
| | 24/45 | 27.8 | 24.6 | 30.6 | 26.7 | 24.1 | 31.1 | 25.7 | 23.7 | 31.5 | 24.5 | 23.1 | 32 |
| | 26/40 | 28.6 | 26.9 | 31.4 | 27.5 | 26.3 | 31.9 | 26.5 | 25.8 | 32.2 | 25.2 | 25.1 | 32.7 |
| **DF26WX-EZE** | 22/50 | 28.3 | 25.2 | 31.3 | 27.3 | 24.6 | 31.9 | 26.3 | 24.1 | 32.6 | 25.1 | 23.5 | 33.2 |
| | 24/45 | 29.1 | 27.2 | 32.1 | 28.1 | 26.6 | 32.7 | 27 | 26.1 | 33.3 | 25.8 | 25.5 | 34 |
| | 26/40 | 29.8 | 29.3 | 32.8 | 28.7 | 28.7 | 33.4 | 27.6 | 27.6 | 34 | 26.5 | 26.5 | 34.7 |

### Operating Limits

| | |
|---|---|
| Indoor Air Temperature | +18°C to +28°C |
| Indoor RH% | +40% to +55% |
| Condenser Minimum Entering Temperature °C | +25°C |
| Condenser Maximum Leaving Water Temperature °C | +45°C |

TC = Total Cooling
SC = Sensible Cooling
THR = Total Heat Rejection

(1) All data quoted is gross
(2) Interpolate for water temperatures between those quoted, do not extrapolate
(3) Water flow rate (l/s) = THR/(4.19*ΔT) at 100% Water; for glycol use refer to Ethylene Glycol Correction Factors section

## Technical Data Downflow Units WX Type

### Performance Data

| Cooling Capacity (1) | | Condenser Entering/Leaving Temperature - Based on 5°C ΔT | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Air On | 25°C/30°C | | | 30°C/35°C | | | 35°C/40°C | | | 40°C/45°C | | |
| | (DB°C/%RH) | TC (kW) | SC (kW) | THR (kW) | TC (kW) | SC (kW) | THR (kW) | TC (kW) | SC (kW) | THR (kW) | TC (kW) | SC (kW) | THR (kW) |
| **DF28WX-EZE** | 22/50 | 29 | 26.9 | 32 | 28 | 26.4 | 32.6 | 26.9 | 25.8 | 33.2 | 25.7 | 25.1 | 33.9 |
| | 24/45 | 29.8 | 29.2 | 32.9 | 28.8 | 28.6 | 33.4 | 27.7 | 27.7 | 34 | 26.5 | 26.5 | 34.6 |
| | 26/40 | 29.7 | 29.7 | 32.8 | 28.6 | 28.6 | 33.6 | 27.5 | 27.5 | 34.3 | 26.6 | 26.6 | 35.1 |
| **DF31WX-EZE** | 22/50 | 32.6 | 30.8 | 35.8 | 31.5 | 30.2 | 36.7 | 30.3 | 29.5 | 37.6 | 29 | 28.8 | 38.5 |
| | 24/45 | 33.6 | 33.3 | 36.8 | 32.5 | 32.5 | 37.7 | 31.3 | 31.3 | 38.6 | 30 | 30 | 39.4 |
| | 26/40 | 34.2 | 34.2 | 37.5 | 33.1 | 33.1 | 38.4 | 31.9 | 31.9 | 39.2 | 30.6 | 30.6 | 40.2 |
| **DF35WX-EZE** | 22/50 | 38.9 | 36.5 | 42.5 | 37.5 | 35.7 | 43.6 | 36 | 34.9 | 44.7 | 34.4 | 34 | 45.8 |
| | 24/45 | 40 | 39.6 | 43.7 | 38.6 | 38.6 | 44.8 | 37.1 | 37.1 | 45.9 | 35.5 | 35.5 | 47 |
| | 26/40 | 40.9 | 40.9 | 44.6 | 39.5 | 39.5 | 45.7 | 38 | 38 | 46.7 | 36.3 | 36.3 | 47.8 |
| **DF40WX-EZE** | 22/50 | 42.7 | 40.6 | 46.8 | 41.1 | 39.8 | 48 | 39.6 | 38.9 | 49.4 | 38.1 | 38.1 | 50.7 |
| | 24/45 | 44.4 | 44.4 | 48.4 | 43.1 | 43.1 | 49.8 | 41.6 | 41.6 | 51.2 | 40 | 40 | 52.7 |
| | 26/40 | 45.4 | 45.4 | 49.4 | 44.1 | 44.1 | 50.8 | 42.7 | 42.7 | 52.3 | 41.1 | 41.1 | 53.8 |
| **DF45WX-EZE** | 22/50 | 48.1 | 43.4 | 51.8 | 46.5 | 42.6 | 53.4 | 44.9 | 41.7 | 55 | 43.1 | 40.7 | 56.7 |
| | 24/45 | 49.4 | 46.9 | 53.2 | 47.8 | 46.1 | 54.7 | 46.1 | 45.2 | 56.4 | 44.3 | 44.2 | 57.9 |
| | 26/40 | 50.4 | 50.4 | 54.3 | 48.9 | 48.9 | 55.8 | 47.1 | 47.1 | 57.4 | 45.3 | 45.3 | 59 |
| **DF50WX2-EZE** | 22/50 | 55.7 | 49.7 | 60 | 54 | 48.8 | 61.9 | 52 | 47.7 | 63.9 | 50 | 46.6 | 65.8 |
| | 24/45 | 56 | 53.6 | 60.5 | 54 | 52.5 | 62.3 | 51.9 | 51.3 | 64.2 | 50 | 50 | 66 |
| | 26/40 | 58.4 | 57.8 | 62.8 | 56.6 | 56.6 | 64.7 | 54.6 | 54.6 | 66.6 | 52.6 | 52.6 | 68.5 |
| **DF55WX2-EZE** | 22/50 | 61.6 | 53 | 66.4 | 59.6 | 51.9 | 68.4 | 57.3 | 50.7 | 70.5 | 54.9 | 49.4 | 72.6 |
| | 24/45 | 63.3 | 57 | 68.2 | 61.2 | 55.9 | 70.1 | 58.9 | 54.7 | 72.2 | 56.5 | 53.5 | 74.2 |
| | 26/40 | 64.8 | 61.3 | 69.7 | 62.6 | 60.2 | 71.6 | 60.2 | 59 | 73.6 | 57.8 | 57.8 | 75.6 |
| **DF60WX2-EZE** | 22/50 | 65.5 | 56.9 | 70.6 | 63.3 | 55.7 | 72.7 | 60.8 | 54.4 | 74.9 | 58.3 | 53 | 77.1 |
| | 24/45 | 67.1 | 61.3 | 72.3 | 64.9 | 60.1 | 74.4 | 62.4 | 58.8 | 76.6 | 59.9 | 57.5 | 78.7 |
| | 26/40 | 69.8 | 66.8 | 75.2 | 67.8 | 65.8 | 77.7 | 65.7 | 64.7 | 80.2 | 63.6 | 63.6 | 82.8 |

### Operating Limits

| | |
|---|---|
| Indoor Air Temperature | +18°C to +28°C |
| Indoor RH% | +40% to +55% |
| Condenser Minimum Entering Temperature °C | +25°C |
| Condenser Maximum Leaving Water Temperature °C | +45°C |

TC = Total Cooling
SC = Sensible Cooling
THR = Total Heat Rejection

(1) All data quoted is gross
(2) Interpolate for water temperatures between those quoted, do not extrapolate
(3) Water flow rate (l/s) = THR/(4.19*ΔT) at 100% Water; for glycol use refer to Ethylene Glycol Correction Factors section

## Technical Data Downflow Units WX Type

### Noise Data

| | Sound Measurement | | Overall dB(A) | Frequency (Hz) dB 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **DF6WX** | Discharge Air | Power | 71 | 65 | 69 | 67 | 67 | 67 | 66 | 58 | 54 |
| | Return Air | Power | 62 | 68 | 68 | 66 | 59 | 54 | 51 | 49 | 39 |
| | Case Breakout | Power | 58 | 64 | 66 | 58 | 55 | 52 | 47 | 44 | 38 |
| | Sound @ 3m | Pressure | 43 | 50 | 51 | 43 | 40 | 37 | 33 | 29 | 24 |
| **DF8WX** | Discharge Air | Power | 77 | 70 | 74 | 73 | 72 | 72 | 71 | 64 | 59 |
| | Return Air | Power | 68 | 73 | 74 | 72 | 65 | 59 | 56 | 54 | 44 |
| | Case Breakout | Power | 63 | 70 | 71 | 63 | 60 | 56 | 53 | 50 | 43 |
| | Sound @ 3m | Pressure | 48 | 55 | 57 | 49 | 45 | 42 | 38 | 36 | 29 |
| **DF10WX** | Discharge Air | Power | 80 | 73 | 77 | 76 | 75 | 75 | 74 | 67 | 62 |
| | Return Air | Power | 71 | 76 | 77 | 75 | 68 | 62 | 59 | 57 | 47 |
| | Case Breakout | Power | 66 | 73 | 74 | 66 | 63 | 59 | 55 | 53 | 47 |
| | Sound @ 3m | Pressure | 51 | 58 | 60 | 52 | 48 | 45 | 41 | 38 | 32 |
| **DF13WX** | Discharge Air | Power | 77 | 71 | 74 | 72 | 72 | 72 | 71 | 64 | 59 |
| | Return Air | Power | 67 | 73 | 74 | 72 | 65 | 59 | 56 | 54 | 44 |
| | Case Breakout | Power | 63 | 70 | 71 | 63 | 60 | 56 | 52 | 50 | 44 |
| | Sound @ 3m | Pressure | 48 | 56 | 57 | 49 | 45 | 42 | 38 | 36 | 30 |
| **DF15WX** | Discharge Air | Power | 73 | 70 | 75 | 72 | 69 | 68 | 67 | 62 | 57 |
| | Return Air | Power | 66 | 73 | 74 | 71 | 62 | 55 | 52 | 53 | 42 |
| | Case Breakout | Power | 62 | 70 | 72 | 63 | 57 | 54 | 49 | 51 | 44 |
| | Sound @ 3m | Pressure | 47 | 55 | 57 | 49 | 43 | 39 | 34 | 36 | 29 |
| **DF17WX** | Discharge Air | Power | 77 | 74 | 78 | 76 | 73 | 72 | 70 | 66 | 61 |
| | Return Air | Power | 70 | 77 | 78 | 75 | 66 | 59 | 55 | 56 | 46 |
| | Case Breakout | Power | 65 | 73 | 76 | 67 | 61 | 57 | 52 | 53 | 46 |
| | Sound @ 3m | Pressure | 50 | 59 | 61 | 52 | 46 | 43 | 38 | 39 | 31 |
| **DF22WX2** | Discharge Air | Power | 81 | 74 | 78 | 77 | 76 | 77 | 75 | 68 | 63 |
| | Return Air | Power | 72 | 77 | 78 | 76 | 69 | 63 | 60 | 59 | 48 |
| | Case Breakout | Power | 67 | 74 | 76 | 68 | 64 | 61 | 56 | 54 | 48 |
| | Sound @ 3m | Pressure | 52 | 59 | 61 | 53 | 49 | 46 | 42 | 40 | 34 |
| **DF25WX2** | Discharge Air | Power | 85 | 79 | 83 | 81 | 80 | 81 | 79 | 72 | 67 |
| | Return Air | Power | 76 | 81 | 82 | 80 | 73 | 67 | 64 | 63 | 52 |
| | Case Breakout | Power | 71 | 78 | 80 | 72 | 68 | 65 | 60 | 58 | 52 |
| | Sound @ 3m | Pressure | 56 | 64 | 65 | 57 | 54 | 50 | 46 | 43 | 37 |
| **DF26WX** | Discharge Air | Power | 85 | 79 | 83 | 81 | 80 | 81 | 79 | 72 | 67 |
| | Return Air | Power | 76 | 81 | 82 | 80 | 73 | 67 | 64 | 63 | 52 |
| | Case Breakout | Power | 71 | 78 | 80 | 72 | 68 | 65 | 60 | 58 | 52 |
| | Sound @ 3m | Pressure | 56 | 64 | 65 | 57 | 54 | 50 | 46 | 43 | 37 |
| **DF28WX** | Discharge Air | Power | 87 | 77 | 80 | 79 | 81 | 81 | 82 | 79 | 76 |
| | Return Air | Power | 68 | 77 | 71 | 63 | 66 | 63 | 58 | 56 | 47 |
| | Case Breakout | Power | 70 | 80 | 70 | 63 | 67 | 67 | 60 | 57 | 48 |
| | Sound @ 3m | Pressure | 55 | 65 | 56 | 49 | 53 | 52 | 45 | 42 | 34 |

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

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

## Technical Data Downflow Units WX Type

### Noise Data

| | Sound Measurement | | Overall dB(A) | Frequency (Hz) dB 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **DF31WX** | Discharge Air | Power | 91 | 78 | 84 | 83 | 85 | 84 | 85 | 83 | 80 |
| | Return Air | Power | 71 | 77 | 75 | 66 | 69 | 66 | 61 | 60 | 52 |
| | Case Breakout | Power | 73 | 80 | 74 | 67 | 70 | 69 | 63 | 60 | 52 |
| | Sound @ 3m | Pressure | 58 | 66 | 59 | 52 | 55 | 55 | 48 | 46 | 38 |
| **DF35WX** | Discharge Air | Power | 90 | 77 | 83 | 82 | 87 | 83 | 84 | 82 | 79 |
| | Return Air | Power | 71 | 76 | 74 | 65 | 71 | 65 | 60 | 59 | 51 |
| | Case Breakout | Power | 72 | 78 | 73 | 66 | 71 | 68 | 61 | 60 | 51 |
| | Sound @ 3m | Pressure | 58 | 65 | 58 | 51 | 57 | 53 | 47 | 45 | 37 |
| **DF40WX** | Discharge Air | Power | 92 | 80 | 86 | 85 | 89 | 86 | 86 | 85 | 81 |
| | Return Air | Power | 73 | 78 | 76 | 67 | 73 | 67 | 62 | 62 | 53 |
| | Case Breakout | Power | 75 | 80 | 75 | 68 | 74 | 70 | 64 | 62 | 54 |
| | Sound @ 3m | Pressure | 60 | 65 | 61 | 54 | 59 | 56 | 49 | 48 | 40 |
| **DF45WX** | Discharge Air | Power | 92 | 80 | 86 | 85 | 89 | 86 | 86 | 85 | 81 |
| | Return Air | Power | 73 | 78 | 76 | 67 | 73 | 67 | 62 | 62 | 54 |
| | Case Breakout | Power | 75 | 80 | 75 | 68 | 74 | 70 | 64 | 62 | 54 |
| | Sound @ 3m | Pressure | 60 | 65 | 61 | 54 | 59 | 56 | 49 | 48 | 40 |
| **DF50WX2** | Discharge Air | Power | 89 | 78 | 84 | 86 | 82 | 83 | 84 | 81 | 76 |
| | Return Air | Power | 69 | 76 | 75 | 69 | 66 | 64 | 59 | 58 | 48 |
| | Case Breakout | Power | 71 | 79 | 74 | 69 | 67 | 68 | 61 | 58 | 49 |
| | Sound @ 3m | Pressure | 56 | 64 | 59 | 55 | 52 | 53 | 47 | 43 | 34 |
| **DF55WX2** | Discharge Air | Power | 89 | 78 | 84 | 86 | 82 | 83 | 84 | 81 | 76 |
| | Return Air | Power | 70 | 77 | 75 | 69 | 67 | 64 | 60 | 58 | 48 |
| | Case Breakout | Power | 71 | 79 | 74 | 69 | 68 | 68 | 62 | 58 | 49 |
| | Sound @ 3m | Pressure | 57 | 64 | 59 | 55 | 53 | 53 | 47 | 44 | 35 |
| **DF60WX2** | Discharge Air | Power | 91 | 80 | 85 | 89 | 84 | 85 | 86 | 83 | 79 |
| | Return Air | Power | 71 | 79 | 76 | 72 | 69 | 66 | 62 | 60 | 51 |
| | Case Breakout | Power | 73 | 81 | 75 | 73 | 69 | 69 | 63 | 60 | 52 |
| | Sound @ 3m | Pressure | 58 | 66 | 60 | 58 | 55 | 54 | 49 | 46 | 37 |

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

## Technical Data Downflow Units WX Type DF6WX - DF8WX - DF10WX

### Mechanical Data

| | | | DF6WX-EZE-0 | DF8WX-EZE-0 | DF10WX-EZE-0 |
|---|---|---|---|---|---|
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 6.3 | 8.9 | 10.3 |
| Total Heat of Rejection | | kW | 8.1 | 11.7 | 13.5 |
| Capacity Steps | | | 1 | 1 | 1 |
| Fan Input Power (Fan Gain) | (2) | kW | 0.25 | 0.54 | 0.77 |
| **Dimensions - W x D x H** | | mm | 670 x 670 x 1940 | 670 x 670 x 1940 | 670 x 670 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 209 / 211 | 216 / 218 | 213 / 215 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling/Dehum Stages | | | 1/1 | 1/1 | 1/1 |
| **Condenser** | | | Stainless Steel Brazed Plate | | |
| Water Volume | | l | 1.1 | 1.4 | 1.4 |
| **Fan & Motor** | | | Centrifugal Forward Curved EC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Direct Drive | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 0.56 | 0.56 | 0.56 |
| Maximum ESP | | Pa | 328 | 233 | 274 |
| Nominal Airflow | | m³/s | 0.55 | 0.75 | 0.95 |
| **Compressor - Scroll** | | | Single | | |
| Quantity | | | 1 | 1 | 1 |
| Oil Charge Volume (Total) | | l | 1.0 | 1.1 | 1.1 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Charge (Total) | | kg | 2.4 | 2.5 | 2.5 |
| **Connections** | | | | | |
| Water Inlet / Outlet | | mm | 22 | 22 | 22 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 50mm | | |
| Quantity | | | 1 | 1 | 1 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating (Total)** | | kW | 7.5 | 7.5 | 7.5 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 0.6 - 3.0 | 0.6 - 3.0 | 0.6 - 3.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 8 | 8 | 8 |
| Flow | | l/m | 5 | 5 | 5 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 6.5 | 7.5 | 8.4 |
| Water Flow (Nominal) | | l/s | 0.14 | 0.17 | 0.19 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |
| **Threaded Connection** | | | | | |
| Brass Male Taper | | in | 3/4 | 3/4 | 3/4 |

## Technical Data Downflow Units WX Type DF6WX - DF8WX - DF10WX

### Electrical Data

| | | | DF6WX-EZE-0 | DF8WX-EZE-0 | DF10WX-EZE-0 |
|---|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | | |
| Nominal Run Amps | | A | 18.9 | 20.3 | 21.1 |
| Maximum Start Amps | | A | 39.6 | 55.6 | 61.6 |
| Recommended Mains Fuse Size | | A | 25 | 25 | 25 |
| **Unit Data Cooling Only** | (2) | | | | |
| Nominal Run Amps | | A | 8.0 | 9.5 | 10.3 |
| Maximum Start Amps | | A | 28.8 | 44.8 | 50.8 |
| Recommended Mains Fuse Size | | A | 16 | 16 | 16 |
| Max Mains Incoming Cable Size | | mm² | 6 | 6 | 6 |
| Mains Supply | | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | | |
| Maximum Electrical Input Power | (3) | kW | 1 x 1.1 | 1 x 1.1 | 1 x 1.1 |
| Full Load Amps | | A | 4.8 | 4.8 | 4.8 |
| Locked Rotor Amps | | A | 4.8 | 4.8 | 4.8 |
| **Compressor - Per Compressor** | | | | | |
| Quantity x Motor Size | | kW | 1 x 2 | 1 x 2.6 | 1 x 3.9 |
| Nominal Run Amps | | A | 3.2 | 4.7 | 5.5 |
| Locked Rotor Amps | | A | 24 | 40 | 46 |
| Type of Start | | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | | |
| Quantity x Motor Size | | kW | 1 x 0.15 | 2 x 0.15 | 2 x 0.15 |
| Full Load Amps | | A | 0.65 | 1.3 | 1.3 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating** | | | | | |
| Stage of Reheat | | | 1 | 1 | 1 |
| Number of Elements | | | 3 | 3 | 3 |
| Rating | | kW | 7.5 | 7.5 | 7.5 |
| Curent per Phase | | A | 10.83 | 10.83 | 10.83 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 3 | 3 | 3 |
| Rating | | kW | 2.25 | 2.25 | 2.25 |
| Full Load Amps | | A | 3.25 | 3.25 | 3.25 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Downflow Units WX Type DF13WX - DF15WX - DF17WX

### Mechanical Data

| | | | DF13WX-EZE-0 | DF15WX-EZE-0 | DF17WX-EZE-0 |
|---|---|---|---|---|---|
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 13.4 | 16.2 | 29.2 |
| Total Heat of Rejection | | kW | 17.4 | 21.2 | 25.6 |
| Capacity Steps | | | 1 | 1 | 1 |
| Fan Input Power (Fan Gain) | (2) | kW | 0.62 | 0.67 | 1.04 |
| **Dimensions - W x D x H** | | mm | 990 x 670 x 1940 | 990 x 670 x 1940 | 990 x 670 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 238 / 239 | 266 / 268 | 272 / 274 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling/Dehum Stages | | | 1/1 | 1/1 | 1/1 |
| **Condenser** | | | Stainless Steel Brazed Plate | | |
| Water Volume | | l | 1.4 | 2 | 2.5 |
| **Fan & Motor** | | | Centrifugal Forward Curved EC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Direct Drive | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 0.56 | 0.92 | 0.92 |
| Maximum ESP | | Pa | 443 | 324 | 245 |
| Nominal Airflow | | m³/s | 1.00 | 1.20 | 1.40 |
| **Compressor - Scroll** | | | Single | | |
| Quantity | | | 1 | 1 | 1 |
| Oil Charge Volume (Total) | | l | 1.36 | 1.85 | 1.65 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Charge (Total) | | kg | 3.7 | 4.1 | 4.1 |
| **Connections** | | | | | |
| Water Inlet / Outlet | | mm | 22 | 22 | 28 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 50mm | | |
| Quantity | | | 2 | 2 | 2 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating (Total)** | | kW | 7.5 | 7.5 | 7.5 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 0.6 - 3.0 | 0.6 - 3.0 | 0.6 - 3.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 8 | 8 | 8 |
| Flow | | l/m | 5 | 5 | 5 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 11.5 | 12.5 | 13.3 |
| Water Flow (Nominal) | | l/s | 0.26 | 0.28 | 0.3 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |
| **Threaded Connection** | | | | | |
| Brass Male Taper | | in | 3/4 | 3/4 | 1 |

## Technical Data Downflow Units WX Type DF13WX - DF15WX - DF17WX

### Electrical Data

| | | | DF13WX-EZE-0 | DF15WX-EZE-0 | DF17WX-EZE-0 |
|---|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | | |
| Nominal Run Amps | | A | 22.1 | 26.3 | 27.2 |
| Maximum Start Amps | | A | 65.6 | 84.0 | 92.0 |
| Recommended Mains Fuse Size | | A | 25 | 32 | 32 |
| **Unit Data Cooling Only** | (2) | | | | |
| Nominal Run Amps | | A | 11.3 | 15.5 | 16.4 |
| Maximum Start Amps | | A | 54.8 | 73.2 | 81.2 |
| Recommended Mains Fuse Size | | A | 16 | 20 | 20 |
| Max Mains Incoming Cable Size | | mm² | 6 | 6 | 6 |
| Mains Supply | | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | | |
| Maximum Electrical Input Power | (3) | kW | 1 x 1.1 | 1 x 1.6 | 1 x 1.6 |
| Full Load Amps | | A | 4.8 | 7.2 | 7.2 |
| Locked Rotor Amps | | A | 4.8 | 7.2 | 7.2 |
| **Compressor - Per Compressor** | | | | | |
| Quantity x Motor Size | | kW | 1 x 4.7 | 1 x 5.6 | 1 x 6.5 |
| Nominal Run Amps | | A | 6.5 | 8.3 | 9.2 |
| Locked Rotor Amps | | A | 50 | 66 | 74 |
| Type of Start | | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | | |
| Quantity x Motor Size | | kW | 1 x 0.6 | 1 x 0.6 | 1 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating** | | | | | |
| Stage of Reheat | | | 1 | 1 | 1 |
| Number of Elements | | | 3 | 3 | 3 |
| Rating | | kW | 7.5 | 7.5 | 7.5 |
| Curent per Phase | | A | 10.83 | 10.83 | 10.83 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 3 | 3 | 3 |
| Rating | | kW | 2.25 | 2.25 | 2.25 |
| Full Load Amps | | A | 3.25 | 3.25 | 3.25 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Downflow Units WX Type DF22WX2 - DF25WX2

### Mechanical Data

| | | | DF22WX2-EZE-0 | DF25WX2-EZE-0 |
|---|---|---|---|---|
| **Capacity** | (1) | | | |
| Nom Cooling (Gross) | | kW | 24.7 | 25.5 |
| Total Heat of Rejection | | kW | 32.6 | 33.4 |
| Capacity Steps | | | 2 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 1.16 | 1.86 |
| **Dimensions - W x D x H** | | mm | 1310 x 670 x 1940 | 1310 x 670 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 331 / 334 | 331 / 334 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | |
| Cooling/Dehum Stages | | | 2/2 | 2/2 |
| **Condenser** | | | Stainless Steel Brazed Plate | |
| Water Volume | | l | 2.5 | 2.5 |
| **Fan & Motor** | | | Centrifugal Forward Curved EC - Designed to 25Pa ESP | |
| Fan Transmission Type | | | Direct Drive | |
| Quantity / Motor Size | | | 2 | 2 |
| Motor Shaft Power | (4) | kW | 0.56 | 0.56 |
| Maximum ESP | | Pa | 342 | 192 |
| Nominal Airflow | | m³/s | 1.70 | 2.00 |
| **Compressor - Scroll** | | | Tandem | |
| Quantity | | | 2 | 2 |
| Oil Charge Volume (Total) | | l | 2.72 | 2.72 |
| Oil Type | | | Polyol Ester | |
| **Refrigeration** | (5) | | Single Circuit | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | |
| Refrigeration Type | | | R407C | |
| Charge (Total) - WX | | kg | 5.1 | 5.1 |
| **Connections** | | | | |
| Water Inlet / Outlet - WX | | mm | 28 | 28 |
| Condensate Drain Hose | | mm | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 50mm | |
| Quantity | | | 3 | 3 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating (Total)** | | kW | 15 | 15 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 0.6 - 3.0 | 0.6 - 3.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | |
| **Condensate Pump** | | | | |
| Head | | m | 8 | 8 |
| Flow | | l/m | 5 | 5 |
| Drain | | | 10mm Stainless Steel Stub Connection | |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | |
| Capacity Gross | | kW | 16.1 | 16.6 |
| Water Flow (Nominal) | | l/s | 0.36 | 0.37 |
| LPHW Connection Sizes | | mm | 22 | 22 |
| **Threaded Connection** | | | | |
| Brass Male Taper | | in | 1 | 1 |

## Technical Data Downflow Units WX Type DF22WX2 - DF25WX2

### Electrical Data

| | | | DF22WX2-EZE-0 | DF25WX2-EZE-0 |
|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | |
| Nominal Run Amps | | A | 39.5 | 39.5 |
| Maximum Start Amps | | A | 83.0 | 83.0 |
| Recommended Mains Fuse Size | | A | 50 | 50 |
| **Unit Data Cooling Only** | (2) | | | |
| Nominal Run Amps | | A | 17.8 | 17.8 |
| Maximum Start Amps | | A | 61.3 | 61.3 |
| Recommended Mains Fuse Size | | A | 20 | 20 |
| Max Mains Incoming Cable Size | | mm² | 35 | 35 |
| Mains Supply | | V | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | |
| Maximum Electrical Input Power | (3) | kW | 2 x 1.1 | 2 x 1.1 |
| Full Load Amps | | A | 4.8 | 4.8 |
| Locked Rotor Amps | | A | 4.8 | 4.8 |
| **Compressor - Per Compressor** | | | | |
| Quantity x Motor Size | | kW | 2 x 4.7 | 2 x 4.7 |
| Nominal Run Amps | | A | 6.5 | 6.5 |
| Locked Rotor Amps | | A | 50 | 50 |
| Type of Start | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating** | | | | |
| Stage of Reheat | | | 2 | 2 |
| Number of Elements | | | 6 | 6 |
| Rating | | kW | 15 | 15 |
| Curent per Phase | | A | 21.65 | 21.65 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 3 | 3 |
| Rating | | kW | 2.25 | 2.25 |
| Full Load Amps | | A | 3.25 | 3.25 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Downflow Units WX Type DF26WX - DF28WX - DF31WX

### Mechanical Data

| | | | DF26WX-EZE-0 | DF28WX-EZE-0 | DF31WX-EZE-0 |
|---|---|---|---|---|---|
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 29.7 | 30.3 | 34.9 |
| Total Heat of Rejection | | kW | 38.36 | 38.97 | 44.94 |
| Capacity Steps | | | 1 | 1 | 1 |
| Fan Input Power (Fan Gain) | (2) | kW | 1.81 | 2.60 | 4.60 |
| **Dimensions - W x D x H** | | mm | 1460 x 750 x 1940 | 1460 x 750 x 1940 | 1460 x 750 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 503 / 509 | 503 / 509 | 510 / 516 |
| **Construction** Material/Colour | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling/Dehum Stages | | | 1/1 | 1/1 | 1/1 |
| **Condenser** | | | Stainless Steel Brazed Plate | | |
| Water Volume | | l | 6.1 | 6.1 | 6.1 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Belt & Pulley | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 1.5 | 2.2 | 4.0 |
| Maximum ESP | | Pa | 65 | 75 | 265 |
| Nominal Airflow | | m³/s | 2.1 | 2.4 | 2.8 |
| **Compressor - Scroll** | | | Single | | |
| Quantity | | | 1 | 1 | 1 |
| Oil Charge Volume (Total) | | l | 4.1 | 4.1 | 4.1 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Charge (Total) | | kg | 7.2 | 7.2 | 7.2 |
| **Connections** | | | | | |
| Water Inlet / Outlet | | mm | 35 | 35 | 35 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | | |
| Quantity | | | 3 | 3 | 3 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating (Total)** | | kW | 20 | 20 | 20 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 1.6 - 8.0 | 1.6 - 8.0 | 1.6 - 8.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 5 | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Larger / Next Larger Fan Motor Size** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Transmission Type | | | Belt & Pulley | | |
| Quantity | | kW | 1 | 1 | N/A |
| Motor Shaft Power | (4) | | 2.2 | 3.0 | N/A |
| Maximum ESP | | Pa | 345 | 362 | N/A |
| Speed @ Maximum ESP | | rpm | | | |
| Fan Input Power (Fan Gain) | | kW | 2.60 | 3.50 | N/A |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 20.1 | 21.3 | 22.7 |
| Water Flow (Nominal) | | l/s | 0.45 | 0.48 | 0.51 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |
| **Threaded Connection** | | | | | |
| Brass Male Taper | | in | 1 1/4 | 1 1/4 | 1 1/4 |

## Technical Data Downflow Units WX Type DF26WX - DF28WX - DF31WX

### Electrical Data

| | | | DF26WX-EZE-0 | DF28WX-EZE-0 | DF31WX-EZE-0 |
|---|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | | |
| Nominal Run Amps | | A | 50.2 | 51.4 | 57.1 |
| Maximum Start Amps | | A | 147.4 | 148.6 | 159.1 |
| Recommended Mains Fuse Size | | A | 63 | 63 | 80 |
| **Unit Data Cooling Only** | (2) | | | | |
| Nominal Run Amps | | A | 17.7 | 18.9 | 24.6 |
| Maximum Start Amps | | A | 114.9 | 116.1 | 126.6 |
| Recommended Mains Fuse Size | | A | 25 | 25 | 32 |
| Max Mains Incoming Cable Size | | mm² | 35 | 35 | 35 |
| Mains Supply | | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | | |
| Maximum Electrical Input Power | (3) | kW | 1 x 1.5 | 1 x 2.2 | 1 x 4 |
| Full Load Amps | | A | 3.43 | 4.68 | 8.14 |
| Locked Rotor Amps | | A | 23.3 | 32.8 | 57 |
| **Compressor - Per Compressor** | | | | | |
| Quantity x Motor Size | | kW | 1 x 7.9 | 1 x 7.9 | 1 x 8.95 |
| Nominal Run Amps | | A | 13.8 | 13.8 | 16 |
| Locked Rotor Amps | | A | 111 | 111 | 118 |
| Type of Start | | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating** | | | | | |
| Stage of Reheat | | | 3 | 3 | 3 |
| Number of Elements | | | 8 | 8 | 8 |
| Rating | | kW | 20 | 20 | 20 |
| Curent per Phase | | A | 32.48 | 32.48 | 32.48 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 8 | 8 | 8 |
| Rating | | kW | 6 | 6 | 6 |
| Full Load Amps | | A | 8.66 | 8.66 | 8.66 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Downflow Units WX Type DF35WX - DF40WX - DF45WX

### Mechanical Data

| | | | DF35WX-EZE-0 | DF40WX-EZE-0 | DF45WX-EZE-0 |
|---|---|---|---|---|---|
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 40.7 | 46.2 | 52.1 |
| Total Heat of Rejection | | kW | 52.97 | 59.58 | 67.43 |
| Capacity Steps | | | 1 | 1 | 1 |
| Fan Input Power (Fan Gain) | (2) | kW | 4.60 | 6.30 | 6.30 |
| **Dimensions - W x D x H** | | mm | 1835 x 750 x 1940 | 1835 x 750 x 1940 | 1835 x 750 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 555 / 561 | 581 / 587 | 628 / 638 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling/Dehum Stages | | | 1/1 | 1/1 | 1/1 |
| **Condenser** | | | Stainless Steel Brazed Plate | | |
| Water Volume | | l | 6.1 | 6.1 | 9.9 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Belt & Pulley | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 4.0 | 5.5 | 5.5 |
| Maximum ESP | | Pa | 165 | 175 | 175 |
| Nominal Airflow | | m³/s | 3.3 | 3.7 | 3.7 |
| **Compressor - Scroll** | | | Single | | |
| Quantity | | | 1 | 1 | 1 |
| Oil Charge Volume (Total) | | l | 3.25 | 3.3 | 6.2 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Charge (Total) | | kg | 8.9 | 8.9 | 11.7 |
| **Connections** | | | | | |
| Water Inlet / Outlet | | mm | 35 | 35 | 42 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | | |
| Quantity | | | 3 | 3 | 3 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating (Total)** | | kW | 20 | 20 | 20 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 3.0 - 15.0 | 3.0 - 15.0 | 3.0 - 15.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 5 | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Larger / Next Larger Fan Motor Size** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Transmission Type | | | Belt & Pulley | | |
| Quantity | | kW | 1 | N/A | N/A |
| Motor Shaft Power | (4) | | 5.5 | N/A | N/A |
| Maximum ESP | | Pa | 322 | N/A | N/A |
| Speed @ Maximum ESP | | rpm | | | |
| Fan Input Power (Fan Gain) | | kW | 6.30 | N/A | N/A |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 30 | 31.5 | 31.5 |
| Water Flow (Nominal) | | l/s | 0.67 | 0.7 | 0.7 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |
| **Threaded Connection** | | | | | |
| Brass Male Taper | | in | 1 1/4 | 1 1/4 | 1 1/2 |

## Technical Data Downflow Units WX Type DF35WX - DF40WX - DF45WX

### Electrical Data

| | | | DF35WX-EZE-0 | DF40WX-EZE-0 | DF45WX-EZE-0 |
|---|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | | |
| Nominal Run Amps | | A | 60.2 | 66.8 | 69.9 |
| Maximum Start Amps | | A | 186.1 | 188.9 | 218.9 |
| Recommended Mains Fuse Size | | A | 80 | 80 | 80 |
| **Unit Data Cooling Only** | (2) | | | | |
| Nominal Run Amps | | A | 27.7 | 34.3 | 37.4 |
| Maximum Start Amps | | A | 153.6 | 156.4 | 186.4 |
| Recommended Mains Fuse Size | | A | 40 | 50 | 50 |
| Max Mains Incoming Cable Size | | mm² | 35 | 35 | 35 |
| Mains Supply | | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | | |
| Maximum Electrical Input Power | (3) | kW | 1 x 4 | 1 x 5.5 | 1 x 5.5 |
| Full Load Amps | | A | 8.14 | 11.1 | 11.1 |
| Locked Rotor Amps | | A | 57 | 77.7 | 77.7 |
| **Compressor - Per Compressor** | | | | | |
| Quantity x Motor Size | | kW | 1 x 11 | 1 x 11.9 | 1 x 13.2 |
| Nominal Run Amps | | A | 19.1 | 22.9 | 26 |
| Locked Rotor Amps | | A | 145 | 145 | 175 |
| Type of Start | | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating** | | | | | |
| Stage of Reheat | | | 3 | 3 | 3 |
| Number of Elements | | | 8 | 8 | 8 |
| Rating | | kW | 20 | 20 | 20 |
| Curent per Phase | | A | 32.48 | 32.48 | 32.48 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 15 | 15 | 15 |
| Rating | | kW | 11.25 | 11.25 | 11.25 |
| Full Load Amps | | A | 16.24 | 16.24 | 16.24 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Downflow Units WX Type DF50WX2 - DF55WX2 - DF60WX2

### Mechanical Data

| | | | DF50WX2-EZE-0 | DF55WX2-EZE-0 | DF60WX2-EZE-0 |
|---|---|---|---|---|---|
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 58.4 | 64.3 | 68.4 |
| Total Heat of Rejection | | kW | 75.73 | 83.13 | 88.25 |
| Capacity Steps | | | 2 | 2 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 5.20 | 5.20 | 7.00 |
| **Dimensions - W x D x H** | | mm | 2170 x 750 x 1940 | 2170 x 750 x 1940 | 2170 x 750 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 747 / 756 | 761 / 771 | 757 / 767 |
| **Construction** Material/Colour | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling/Dehum Stages | | | 2/2 | 2/2 | 2/2 |
| **Condenser** | | | Stainless Steel Brazed Plate | | |
| Water Volume | | l | 9.9 | 9.9 | 9.9 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Belt & Pulley | | |
| Quantity | | | 2 | 2 | 2 |
| Motor Shaft Power | (4) | kW | 2.2 | 2.2 | 3.0 |
| Maximum ESP | | Pa | 35 | 35 | 75 |
| Nominal Airflow | | m³/s | 4.2 | 4.2 | 4.6 |
| **Compressor - Scroll** | | | Tandem | | |
| Quantity | | | 2 | 2 | 2 |
| Oil Charge Volume (Total) | | l | 6.5 | 7.6 | 7.6 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Charge (Total) | | kg | 11.6 | 13.3 | 13.3 |
| **Connections** | | | | | |
| Water Inlet / Outlet | | mm | 42 | 42 | 42 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | | |
| Quantity | | | 4 | 4 | 4 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating (Total)** | | kW | 30 | 30 | 30 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 3.0 - 15.0 | 3.0 - 15.0 | 3.0 - 15.0 |
| Feed/Drain | | | 3/4" BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 5 | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Larger / Next Larger Fan Motor Size** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Transmission Type | | | Belt & Pulley | | |
| Quantity / Motor Size | | kW | 2 | 2 | 2 |
| Motor Shaft Power | (4) | | 3.0 | 3.0 | 4.0 |
| Maximum ESP | | Pa | 310 | 310 | 275 |
| Speed @ Maximum ESP | | rpm | | | |
| Fan Input Power (Fan Gain) | | kW | 7.00 | 7.00 | 9.20 |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 38.3 | 38.3 | 39.8 |
| Water Flow (Nominal) | | l/s | 0.85 | 0.85 | 0.89 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |
| **Threaded Connection** | | | | | |
| Brass Male Taper | | in | 1 1/2 | 1 1/2 | 1 1/2 |

## Technical Data Downflow Units WX Type DF50WX2 - DF55WX2 - DF60WX2

### Electrical Data

| | | | DF50WX2-EZE-0 | DF55WX2-EZE-0 | DF60WX2-EZE-0 |
|---|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | | |
| Nominal Run Amps | | A | 84.5 | 82.1 | 88.4 |
| Maximum Start Amps | | A | 198.8 | 187.6 | 192.3 |
| Recommended Mains Fuse Size | | A | 100 | 100 | 100 |
| **Unit Data Cooling Only** | (2) | | | | |
| Nominal Run Amps | | A | 41.2 | 38.8 | 45.1 |
| Maximum Start Amps | | A | 155.5 | 144.3 | 149.0 |
| Recommended Mains Fuse Size | | A | 50 | 50 | 63 |
| Max Mains Incoming Cable Size | | mm² | 35 | 35 | 35 |
| Mains Supply | | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | | |
| Maximum Electrical Input Power | (3) | kW | 2 x 2.2 | 2 x 2.2 | 2 x 3 |
| Full Load Amps | | A | 4.68 | 4.68 | 6.32 |
| Locked Rotor Amps | | A | 32.8 | 32.8 | 45.5 |
| **Compressor - Per Compressor** | | | | | |
| Quantity x Motor Size | | kW | 2 x 7.8 | 2 x 8.5 | 2 x 9.7 |
| Nominal Run Amps | | A | 15.7 | 14.5 | 16.1 |
| Locked Rotor Amps | | A | 130 | 120 | 120 |
| Type of Start | | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 3 x 0.6 | 3 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating** | | | | | |
| Stage of Reheat | | | 3 | 3 | 3 |
| Number of Elements | | | 9 | 9 | 9 |
| Rating | | kW | 30 | 30 | 30 |
| Curent per Phase | | A | 43.30 | 43.30 | 43.30 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 15 | 15 | 15 |
| Rating | | kW | 11.25 | 11.25 | 11.25 |
| Full Load Amps | | A | 16.24 | 16.24 | 16.24 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

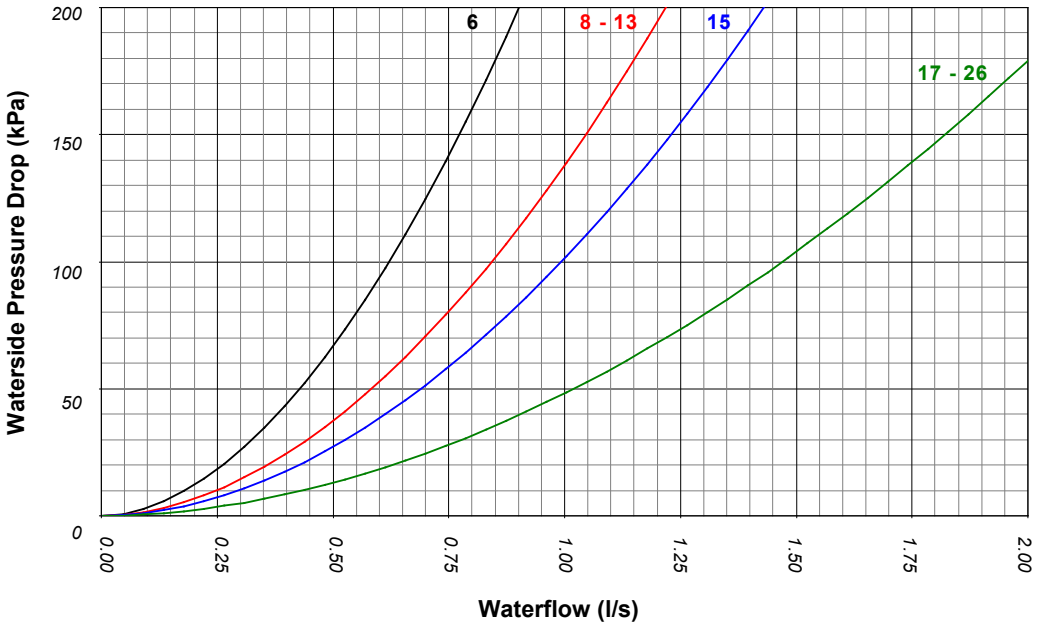
Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

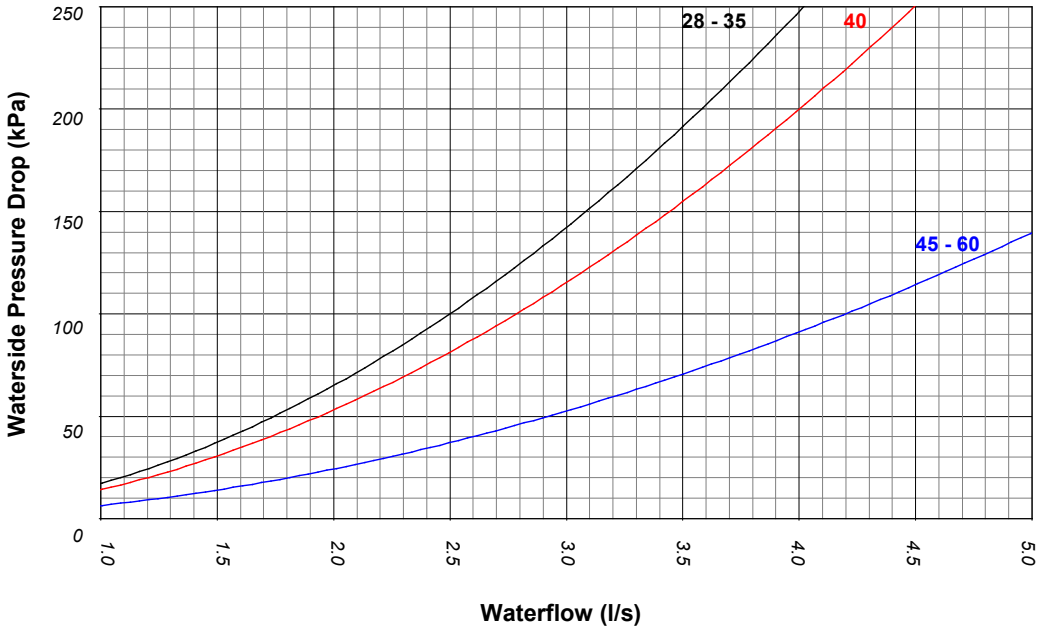
## Technical Data Downflow Units WX Type

### Hydronic Data Condenser Waterside Pressure Drop

**DF6 - DF26**




**DF28 - DF60**




(1) Includes coil, 3 port valve and pipework.

(2) To calculate 3 port valve pressure drop

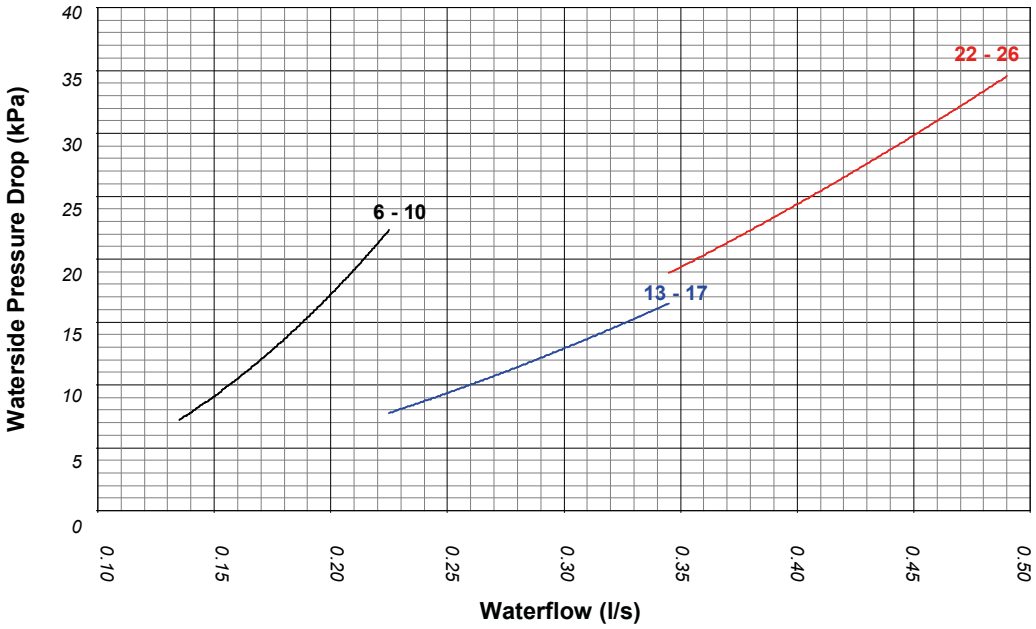
$\Delta P$ valve = $\left(\frac{Q}{M}\right)^2$ where $\Delta P$ = Pressure Drop in kPa, Q = Water Flow Rate in l/s and $M$ = $\left(\frac{Kv}{36}\right)$

(3) Fluid 100% water, for glycol use, refer to ***Ethylene Glycol Correction Factors***.

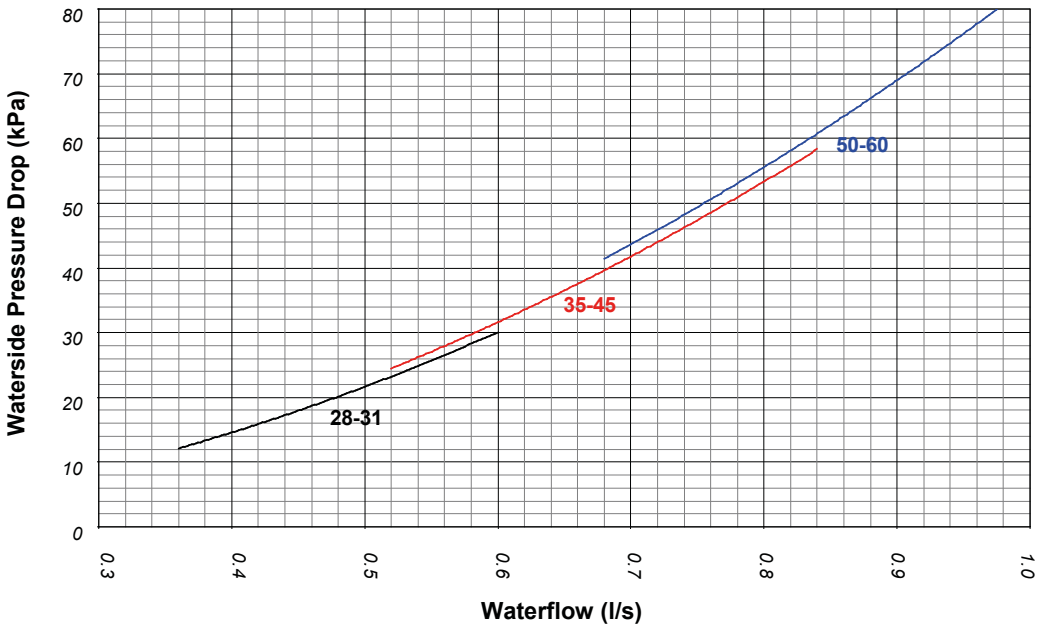
## Technical Data Downflow Units WX Type

### Hydronic Data Low Pressure Hot Water

**DF6 - DF26**




**DF28 - DF60**




(1) Includes coil, 3 port valve and pipework.

(2) To calculate 3 port valve pressure drop

$\Delta P$ valve = $\left(\frac{Q}{M}\right)^2$ where $\Delta P$ = Pressure Drop in kPa, Q = Water Flow Rate in l/s and $M$ = $\left(\frac{Kv}{36}\right)$

(3) Fluid 100% water, for glycol use, refer to ***Ethylene Glycol Correction Factors***.

## Technical Data Upflow Units WX Type

### Performance Data

| Cooling Capacity (1) | | Condenser Entering/Leaving Temperature - Based on 5°C ΔT | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Air On | 25°C/30°C | | | 30°C/35°C | | | 35°C/40°C | | | 40°C/45°C | | |
| | (DB°C/%RH) | TC (kW) | SC (kW) | THR (kW) | TC (kW) | SC (kW) | THR (kW) | TC (kW) | SC (kW) | THR (kW) | TC (kW) | SC (kW) | THR (kW) |
| V6WX-EZE | 22/50 | 6.6 | 5.9 | 8.7 | 6.3 | 5.8 | 8.4 | 6.1 | 5.7 | 8.1 | 5.8 | 5.6 | 7.8 |
| | 24/45 | 6.8 | 6.5 | 8.9 | 6.5 | 6.4 | 8.6 | 6.2 | 6.2 | 8.3 | 6.0 | 6.0 | 8.0 |
| | 26/40 | 6.9 | 6.9 | 9.0 | 6.6 | 6.6 | 8.7 | 6.4 | 6.4 | 8.4 | 6.1 | 6.1 | 8.1 |
| V8WX-EZE | 22/50 | 9.1 | 8.0 | 11.3 | 8.8 | 7.9 | 11.2 | 8.5 | 7.7 | 11.1 | 8.2 | 7.5 | 11.0 |
| | 24/45 | 9.4 | 8.7 | 11.6 | 9.1 | 8.5 | 11.5 | 8.8 | 8.4 | 11.3 | 8.4 | 8.2 | 11.2 |
| | 26/40 | 9.6 | 9.4 | 11.9 | 9.3 | 9.3 | 11.7 | 9.0 | 9.0 | 11.6 | 8.7 | 8.7 | 11.4 |
| V10WX-EZE | 22/50 | 11.7 | 10.4 | 14.1 | 11.4 | 10.2 | 14.2 | 11.0 | 10.0 | 14.3 | 10.6 | 9.7 | 14.4 |
| | 24/45 | 12.0 | 11.3 | 14.3 | 11.6 | 11.0 | 14.4 | 11.2 | 10.8 | 14.5 | 10.9 | 10.6 | 14.7 |
| | 26/40 | 12.1 | 12.1 | 14.5 | 11.8 | 11.8 | 14.6 | 11.5 | 11.5 | 14.8 | 11.1 | 11.1 | 14.9 |
| V13WX-EZE | 22/50 | 12.0 | 10.8 | 14.3 | 11.5 | 10.5 | 14.1 | 11.0 | 10.3 | 13.9 | 10.5 | 10.1 | 13.7 |
| | 24/45 | 12.4 | 11.7 | 14.7 | 11.9 | 11.5 | 14.4 | 11.3 | 11.3 | 14.2 | 10.8 | 10.8 | 14.0 |
| | 26/40 | 12.6 | 12.6 | 14.9 | 12.1 | 12.1 | 14.7 | 11.6 | 11.6 | 14.5 | 11.1 | 11.1 | 14.3 |
| V15WX-EZE | 22/50 | 16.9 | 14.0 | 19.3 | 16.3 | 13.7 | 19.3 | 15.7 | 13.4 | 19.4 | 14.9 | 13.1 | 19.4 |
| | 24/45 | 17.4 | 15.2 | 19.7 | 16.7 | 14.9 | 19.8 | 16.1 | 14.6 | 19.8 | 15.4 | 14.3 | 19.9 |
| | 26/40 | 17.8 | 16.5 | 20.1 | 17.1 | 16.2 | 20.2 | 16.5 | 15.9 | 20.2 | 15.7 | 15.6 | 20.2 |
| V17WX-EZE | 22/50 | 19.7 | 17.5 | 22.1 | 19.0 | 17.1 | 22.5 | 18.3 | 16.7 | 22.9 | 17.6 | 16.3 | 23.3 |
| | 24/45 | 20.2 | 18.9 | 22.6 | 19.5 | 18.5 | 23.1 | 18.8 | 18.1 | 23.4 | 18.0 | 17.7 | 23.9 |
| | 26/40 | 20.6 | 20.3 | 23.1 | 19.9 | 19.9 | 23.5 | 19.3 | 19.3 | 23.9 | 18.5 | 18.5 | 24.3 |
| V22WX2-EZE | 22/50 | 25.1 | 20.5 | 27.8 | 23.9 | 19.9 | 28.3 | 22.9 | 19.5 | 28.8 | 21.8 | 19.0 | 29.3 |
| | 24/45 | 26.1 | 22.3 | 28.9 | 25.1 | 21.8 | 29.4 | 24.2 | 21.4 | 29.9 | 23.1 | 20.8 | 30.5 |
| | 26/40 | 26.9 | 24.0 | 29.6 | 25.9 | 23.6 | 30.2 | 25.0 | 23.1 | 30.7 | 23.8 | 22.6 | 31.2 |
| V25WX2-EZE | 22/50 | 26.2 | 22.3 | 28.9 | 25.1 | 21.8 | 29.4 | 24.2 | 21.3 | 29.9 | 23.0 | 20.8 | 30.4 |
| | 24/45 | 26.9 | 24.3 | 29.6 | 25.8 | 23.8 | 30.2 | 24.9 | 23.3 | 30.7 | 23.8 | 22.8 | 31.2 |
| | 26/40 | 27.7 | 26.5 | 30.4 | 26.6 | 26.0 | 31.0 | 25.7 | 25.5 | 31.4 | 24.5 | 24.5 | 32.0 |
| V26WX-EZE | 22/50 | 29.2 | 26.2 | 32.2 | 28.1 | 25.6 | 32.7 | 27.0 | 25.0 | 33.3 | 25.8 | 24.4 | 33.9 |
| | 24/45 | 30.0 | 28.3 | 33.0 | 28.9 | 27.7 | 33.5 | 27.7 | 27.2 | 34.1 | 26.5 | 26.5 | 34.7 |
| | 26/40 | 30.7 | 30.6 | 33.7 | 29.6 | 29.6 | 34.3 | 28.4 | 28.4 | 34.8 | 27.2 | 27.2 | 35.4 |
| V26WX2-EZE | 22/50 | 30.9 | 27.1 | 34.1 | 29.9 | 26.5 | 34.8 | 28.8 | 25.9 | 35.6 | 27.5 | 25.3 | 36.5 |
| | 24/45 | 31.8 | 29.3 | 34.9 | 30.7 | 28.7 | 35.7 | 29.6 | 28.1 | 36.5 | 28.3 | 27.5 | 37.3 |
| | 26/40 | 32.5 | 31.6 | 35.7 | 31.4 | 31.0 | 36.5 | 30.3 | 30.3 | 37.3 | 29.0 | 29.0 | 38.1 |
| V28WX-EZE | 22/50 | 29.9 | 28.0 | 32.9 | 28.8 | 27.4 | 33.4 | 27.6 | 26.8 | 34.0 | 26.3 | 26.1 | 34.5 |
| | 24/45 | 30.7 | 30.4 | 33.8 | 29.6 | 29.6 | 34.3 | 28.4 | 28.4 | 34.8 | 27.1 | 27.1 | 35.3 |
| | 26/40 | 30.7 | 30.7 | 33.8 | 29.5 | 29.5 | 34.6 | 28.5 | 28.5 | 35.4 | 27.6 | 27.6 | 36.2 |

| | |
|---|---|
| Indoor Air Temperature | +18°C to +28°C |
| Indoor RH% | +40% to +55% |
| Condenser Minimum Entering Temperature °C | +25°C |
| Condenser Maximum Leaving Water Temperature °C | +45°C |

TC = Total Cooling
SC = Sensible Cooling
THR = Total Heat Rejection

(1) All data quoted is gross
(2) Interpolate for water temperatures between those quoted, do not extrapolate
(3) Water flow rate (l/s) = THR/(4.19*ΔT) at 100% Water; for glycol use refer to Ethylene Glycol Correction Factors section

## Technical Data Upflow Units WX Type

### Performance Data

| Cooling Capacity (1) | | Condenser Entering/Leaving Temperature - Based on 5°C ΔT | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Air On | 25°C/30°C | | | 30°C/35°C | | | 35°C/40°C | | | 40°C/45°C | | |
| | (DB°C/%RH) | TC (kW) | SC (kW) | THR (kW) | TC (kW) | SC (kW) | THR (kW) | TC (kW) | SC (kW) | THR (kW) | TC (kW) | SC (kW) | THR (kW) |
| **V28WX2-EZE** | 22/50 | 31.8 | 29.0 | 34.9 | 30.7 | 28.4 | 35.7 | 29.5 | 27.8 | 36.4 | 28.2 | 27.1 | 37.2 |
| | 24/45 | 32.7 | 31.5 | 35.8 | 31.5 | 30.8 | 36.6 | 30.3 | 30.2 | 37.3 | 29.0 | 29.0 | 38.1 |
| | 26/40 | 32.5 | 32.5 | 35.8 | 31.3 | 31.3 | 36.7 | 30.2 | 30.2 | 37.5 | 29.2 | 29.2 | 38.4 |
| **V31WX-EZE** | 22/50 | 33.7 | 32.1 | 36.9 | 32.5 | 31.4 | 37.7 | 31.2 | 30.7 | 38.5 | 29.8 | 29.8 | 39.3 |
| | 24/45 | 34.7 | 34.7 | 38.0 | 33.5 | 33.5 | 38.8 | 32.2 | 32.2 | 39.5 | 30.8 | 30.8 | 40.3 |
| | 26/40 | 35.4 | 35.4 | 38.7 | 34.2 | 34.2 | 39.5 | 32.9 | 32.9 | 40.3 | 31.5 | 31.5 | 41.1 |
| **V31WX2-EZE** | 22/50 | 36.2 | 33.5 | 39.7 | 35.0 | 32.8 | 40.7 | 33.7 | 32.1 | 41.7 | 32.2 | 31.2 | 42.8 |
| | 24/45 | 37.3 | 36.2 | 40.8 | 36.1 | 35.5 | 41.8 | 34.7 | 34.7 | 42.8 | 33.2 | 33.2 | 43.8 |
| | 26/40 | 38.0 | 38.0 | 41.5 | 36.7 | 36.7 | 42.5 | 35.4 | 35.4 | 43.5 | 33.9 | 33.9 | 44.6 |
| **V35WX-EZE** | 22/50 | 40.0 | 38.0 | 43.7 | 38.6 | 37.2 | 44.7 | 37.0 | 36.3 | 45.7 | 35.3 | 35.3 | 46.7 |
| | 24/45 | 41.2 | 41.2 | 45.0 | 39.7 | 39.7 | 46.0 | 38.1 | 38.1 | 46.9 | 36.4 | 36.4 | 48.0 |
| | 26/40 | 42.1 | 42.1 | 45.9 | 40.6 | 40.6 | 46.9 | 39.0 | 39.0 | 47.8 | 37.2 | 37.2 | 48.8 |
| **V35WX2-EZE** | 22/50 | 39.4 | 37.6 | 43.0 | 37.9 | 36.8 | 43.7 | 36.2 | 35.9 | 44.4 | 34.4 | 34.4 | 45.2 |
| | 24/45 | 40.6 | 40.6 | 44.3 | 39.0 | 39.0 | 44.9 | 37.3 | 37.3 | 45.6 | 35.5 | 35.5 | 46.4 |
| | 26/40 | 41.5 | 41.5 | 45.2 | 39.9 | 39.9 | 45.8 | 38.1 | 38.1 | 46.5 | 36.3 | 36.3 | 47.2 |
| **V40WX-EZE** | 22/50 | 43.9 | 42.2 | 48.0 | 42.3 | 41.3 | 49.2 | 40.7 | 40.5 | 50.5 | 39.1 | 39.1 | 51.8 |
| | 24/45 | 45.9 | 45.9 | 50.0 | 44.5 | 44.5 | 51.3 | 42.9 | 42.9 | 52.6 | 41.2 | 41.2 | 53.9 |
| | 26/40 | 47.0 | 47.0 | 51.2 | 45.6 | 45.6 | 52.4 | 44.0 | 44.0 | 53.7 | 42.3 | 42.3 | 55.1 |
| **V40WX2-EZE** | 22/50 | 42.3 | 41.4 | 46.3 | 40.5 | 40.4 | 47.4 | 38.9 | 38.9 | 48.6 | 37.2 | 37.2 | 49.8 |
| | 24/45 | 44.4 | 44.4 | 48.4 | 42.8 | 42.8 | 49.5 | 41.1 | 41.1 | 50.6 | 39.2 | 39.2 | 51.7 |
| | 26/40 | 45.5 | 45.5 | 49.6 | 43.9 | 43.9 | 50.7 | 42.2 | 42.2 | 51.8 | 40.4 | 40.4 | 53.0 |
| **V45WX2-EZE** | 22/50 | 46.6 | 43.6 | 50.2 | 44.8 | 42.7 | 51.4 | 42.8 | 41.6 | 52.7 | 40.8 | 40.6 | 53.9 |
| | 24/45 | 47.9 | 47.3 | 51.6 | 46.1 | 46.1 | 52.8 | 44.1 | 44.1 | 54.0 | 42.0 | 42.0 | 55.2 |
| | 26/40 | 49.0 | 49.0 | 52.8 | 47.2 | 47.2 | 53.9 | 45.2 | 45.2 | 55.2 | 43.1 | 43.1 | 56.3 |
| **V50WX2-EZE** | 22/50 | 57.6 | 51.8 | 62.0 | 55.7 | 50.7 | 63.7 | 53.6 | 49.6 | 65.5 | 51.4 | 48.4 | 67.3 |
| | 24/45 | 57.7 | 55.8 | 62.2 | 55.6 | 54.6 | 64.0 | 53.5 | 53.4 | 65.8 | 51.5 | 51.5 | 67.6 |
| | 26/40 | 60.4 | 60.3 | 65.0 | 58.5 | 58.5 | 66.7 | 56.3 | 56.3 | 68.4 | 54.1 | 54.1 | 70.2 |
| **V55WX2-EZE** | 22/50 | 63.5 | 55.1 | 68.4 | 61.3 | 53.9 | 70.2 | 58.8 | 52.6 | 72.2 | 56.4 | 51.3 | 74.1 |
| | 24/45 | 65.2 | 59.4 | 70.2 | 63.0 | 58.3 | 72.0 | 60.5 | 57.0 | 73.9 | 58.0 | 55.8 | 75.8 |
| | 26/40 | 66.7 | 64.0 | 71.8 | 64.4 | 62.8 | 73.6 | 61.9 | 61.5 | 75.4 | 59.3 | 59.3 | 77.2 |
| **V60WX2-EZE** | 22/50 | 67.5 | 59.1 | 72.7 | 65.1 | 57.8 | 74.7 | 62.5 | 56.5 | 76.7 | 59.8 | 55.1 | 78.7 |
| | 24/45 | 69.2 | 63.9 | 74.6 | 66.8 | 62.7 | 76.5 | 64.2 | 61.3 | 78.5 | 61.4 | 59.9 | 80.4 |
| | 26/40 | 72.6 | 70.1 | 78.2 | 70.5 | 69.0 | 80.5 | 68.2 | 67.8 | 82.9 | 65.9 | 65.9 | 85.2 |

| | |
|---|---|
| Indoor Air Temperature | +18°C to +28°C |
| Indoor RH% | +40% to +55% |
| Condenser Minimum Entering Temperature °C | +25°C |
| Condenser Maximum Leaving Water Temperature °C | +45°C |

TC = Total Cooling
SC = Sensible Cooling
THR = Total Heat Rejection

(1) All data quoted is gross
(2) Interpolate for water temperatures between those quoted, do not extrapolate
(3) Water flow rate (l/s) = THR/(4.19*ΔT) at 100% Water; for glycol use refer to Ethylene Glycol Correction Factors section

## Technical Data Upflow Units WX Type

### Noise Data

| | Sound Measurement | | Overall dB(A) | Frequency (Hz) dB 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **V6WX** | Discharge Air | Power | 72 | 66 | 70 | 68 | 68 | 68 | 67 | 59 | 55 |
| | Return Air | Power | 58 | 63 | 67 | 58 | 53 | 54 | 48 | 41 | 36 |
| | Case Breakout | Power | 58 | 63 | 67 | 58 | 53 | 54 | 48 | 41 | 36 |
| | Sound @ 3m | Pressure | 43 | 48 | 51 | 43 | 38 | 40 | 33 | 27 | 21 |
| **V8WX** | Discharge Air | Power | 78 | 71 | 75 | 74 | 73 | 73 | 72 | 65 | 60 |
| | Return Air | Power | 63 | 68 | 71 | 63 | 58 | 59 | 53 | 48 | 41 |
| | Case Breakout | Power | 63 | 68 | 71 | 63 | 58 | 59 | 53 | 48 | 41 |
| | Sound @ 3m | Pressure | 49 | 53 | 57 | 49 | 43 | 44 | 39 | 33 | 26 |
| **V10WX** | Discharge Air | Power | 81 | 74 | 78 | 77 | 76 | 76 | 75 | 68 | 63 |
| | Return Air | Power | 66 | 71 | 74 | 66 | 61 | 62 | 56 | 50 | 43 |
| | Case Breakout | Power | 66 | 71 | 74 | 66 | 61 | 62 | 56 | 50 | 43 |
| | Sound @ 3m | Pressure | 51 | 56 | 61 | 52 | 46 | 47 | 41 | 36 | 29 |
| **V13WX** | Discharge Air | Power | 78 | 72 | 75 | 73 | 73 | 73 | 72 | 65 | 60 |
| | Return Air | Power | 63 | 69 | 71 | 63 | 58 | 59 | 53 | 48 | 42 |
| | Case Breakout | Power | 63 | 69 | 71 | 63 | 58 | 59 | 53 | 48 | 42 |
| | Sound @ 3m | Pressure | 48 | 54 | 57 | 48 | 43 | 44 | 38 | 34 | 27 |
| **V15WX** | Discharge Air | Power | 74 | 71 | 76 | 73 | 70 | 69 | 68 | 63 | 58 |
| | Return Air | Power | 62 | 68 | 72 | 63 | 56 | 56 | 49 | 48 | 42 |
| | Case Breakout | Power | 62 | 68 | 72 | 63 | 56 | 56 | 49 | 48 | 42 |
| | Sound @ 3m | Pressure | 47 | 53 | 57 | 48 | 41 | 42 | 35 | 34 | 27 |
| **V17WX** | Discharge Air | Power | 78 | 75 | 79 | 77 | 74 | 73 | 71 | 67 | 62 |
| | Return Air | Power | 65 | 72 | 75 | 67 | 59 | 59 | 53 | 51 | 44 |
| | Case Breakout | Power | 65 | 72 | 75 | 67 | 59 | 59 | 53 | 51 | 44 |
| | Sound @ 3m | Pressure | 50 | 57 | 61 | 52 | 44 | 44 | 38 | 36 | 30 |
| **V22WX2** | Discharge Air | Power | 82 | 75 | 79 | 78 | 77 | 78 | 76 | 69 | 64 |
| | Return Air | Power | 67 | 73 | 75 | 67 | 62 | 63 | 57 | 52 | 46 |
| | Case Breakout | Power | 67 | 73 | 75 | 67 | 62 | 63 | 57 | 52 | 46 |
| | Sound @ 3m | Pressure | 53 | 58 | 61 | 53 | 48 | 48 | 42 | 37 | 31 |
| **V25WX2** | Discharge Air | Power | 86 | 80 | 84 | 82 | 81 | 82 | 80 | 73 | 68 |
| | Return Air | Power | 71 | 77 | 80 | 71 | 66 | 67 | 61 | 55 | 49 |
| | Case Breakout | Power | 71 | 77 | 80 | 71 | 66 | 67 | 61 | 55 | 49 |
| | Sound @ 3m | Pressure | 57 | 62 | 65 | 57 | 52 | 52 | 46 | 41 | 35 |
| **V26WX** | Discharge Air | Power | 87 | 99 | 95 | 82 | 82 | 82 | 78 | 78 | 75 |
| | Return Air | Power | 77 | 86 | 80 | 76 | 76 | 72 | 65 | 61 | 53 |
| | Case Breakout | Power | 71 | 84 | 79 | 69 | 68 | 66 | 61 | 54 | 47 |
| | Sound @ 3m | Pressure | 57 | 69 | 64 | 55 | 54 | 52 | 46 | 39 | 32 |
| **V26WX2** | Discharge Air | Power | 86 | 80 | 84 | 82 | 81 | 82 | 80 | 73 | 68 |
| | Return Air | Power | 71 | 77 | 80 | 71 | 66 | 67 | 61 | 55 | 49 |
| | Case Breakout | Power | 71 | 77 | 80 | 71 | 66 | 67 | 61 | 55 | 49 |
| | Sound @ 3m | Pressure | 57 | 62 | 65 | 57 | 52 | 52 | 46 | 41 | 35 |
| **V28WX** | Discharge Air | Power | 90 | 102 | 95 | 86 | 84 | 85 | 81 | 81 | 78 |
| | Return Air | Power | 79 | 89 | 80 | 79 | 76 | 75 | 68 | 63 | 57 |
| | Case Breakout | Power | 79 | 89 | 80 | 79 | 76 | 75 | 68 | 63 | 57 |
| | Sound @ 3m | Pressure | 64 | 75 | 65 | 65 | 62 | 60 | 53 | 49 | 42 |

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

## Technical Data Upflow Units WX Type

### Noise Data

| | Sound Measurement | | Overall dB(A) | Frequency (Hz) dB 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **V28WX2** | Discharge Air | Power | 90 | 102 | 95 | 86 | 84 | 85 | 81 | 81 | 78 |
| | Return Air | Power | 79 | 87 | 80 | 79 | 76 | 74 | 67 | 63 | 57 |
| | Case Breakout | Power | 79 | 87 | 80 | 79 | 76 | 74 | 67 | 63 | 57 |
| | Sound @ 3m | Pressure | 64 | 73 | 65 | 65 | 61 | 60 | 53 | 49 | 42 |
| **V31WX** | Discharge Air | Power | 93 | 105 | 96 | 89 | 86 | 88 | 84 | 84 | 82 |
| | Return Air | Power | 81 | 92 | 80 | 82 | 78 | 77 | 70 | 66 | 60 |
| | Case Breakout | Power | 81 | 92 | 80 | 82 | 78 | 77 | 70 | 66 | 60 |
| | Sound @ 3m | Pressure | 66 | 77 | 66 | 67 | 64 | 62 | 56 | 51 | 45 |
| **V31WX2** | Discharge Air | Power | 93 | 105 | 96 | 89 | 86 | 88 | 84 | 84 | 82 |
| | Return Air | Power | 81 | 91 | 80 | 82 | 77 | 77 | 70 | 66 | 60 |
| | Case Breakout | Power | 81 | 91 | 80 | 82 | 77 | 77 | 70 | 66 | 60 |
| | Sound @ 3m | Pressure | 66 | 76 | 66 | 67 | 63 | 62 | 55 | 51 | 46 |
| **V35WX** | Discharge Air | Power | 92 | 111 | 98 | 90 | 87 | 82 | 82 | 83 | 80 |
| | Return Air | Power | 81 | 97 | 82 | 84 | 80 | 72 | 69 | 66 | 58 |
| | Case Breakout | Power | 81 | 97 | 82 | 84 | 80 | 72 | 69 | 66 | 58 |
| | Sound @ 3m | Pressure | 67 | 82 | 68 | 69 | 66 | 58 | 54 | 51 | 44 |
| **V35WX2** | Discharge Air | Power | 92 | 111 | 98 | 90 | 87 | 82 | 82 | 83 | 80 |
| | Return Air | Power | 81 | 97 | 82 | 84 | 79 | 72 | 69 | 66 | 59 |
| | Case Breakout | Power | 81 | 97 | 82 | 84 | 79 | 72 | 69 | 66 | 59 |
| | Sound @ 3m | Pressure | 66 | 82 | 68 | 69 | 65 | 58 | 54 | 51 | 45 |
| **V40WX** | Discharge Air | Power | 94 | 113 | 99 | 92 | 89 | 84 | 85 | 85 | 83 |
| | Return Air | Power | 83 | 98 | 84 | 85 | 82 | 74 | 71 | 68 | 61 |
| | Case Breakout | Power | 83 | 98 | 84 | 85 | 82 | 74 | 71 | 68 | 61 |
| | Sound @ 3m | Pressure | 68 | 84 | 69 | 71 | 67 | 59 | 56 | 53 | 46 |
| **V40WX2** | Discharge Air | Power | 94 | 113 | 99 | 92 | 89 | 84 | 85 | 85 | 83 |
| | Return Air | Power | 82 | 98 | 84 | 85 | 81 | 74 | 71 | 68 | 62 |
| | Case Breakout | Power | 82 | 98 | 84 | 85 | 81 | 74 | 71 | 68 | 62 |
| | Sound @ 3m | Pressure | 68 | 85 | 69 | 71 | 66 | 59 | 56 | 53 | 47 |
| **V45WX2** | Discharge Air | Power | 94 | 113 | 99 | 92 | 89 | 84 | 85 | 85 | 83 |
| | Return Air | Power | 83 | 98 | 84 | 85 | 83 | 74 | 71 | 68 | 62 |
| | Case Breakout | Power | 83 | 98 | 84 | 85 | 83 | 74 | 71 | 68 | 62 |
| | Sound @ 3m | Pressure | 69 | 84 | 69 | 71 | 68 | 59 | 57 | 53 | 47 |
| **V50WX2** | Discharge Air | Power | 97 | 115 | 109 | 95 | 92 | 84 | 86 | 84 | 80 |
| | Return Air | Power | 84 | 99 | 93 | 86 | 83 | 74 | 71 | 66 | 58 |
| | Case Breakout | Power | 84 | 99 | 93 | 86 | 83 | 74 | 71 | 66 | 58 |
| | Sound @ 3m | Pressure | 70 | 85 | 79 | 72 | 68 | 60 | 57 | 52 | 43 |
| **V55WX2** | Discharge Air | Power | 97 | 115 | 109 | 95 | 92 | 84 | 86 | 84 | 80 |
| | Return Air | Power | 84 | 99 | 93 | 86 | 83 | 74 | 72 | 66 | 58 |
| | Case Breakout | Power | 84 | 99 | 93 | 86 | 83 | 74 | 72 | 66 | 58 |
| | Sound @ 3m | Pressure | 70 | 85 | 79 | 72 | 68 | 60 | 57 | 52 | 43 |
| **V60WX2** | Discharge Air | Power | 98 | 116 | 110 | 97 | 93 | 86 | 87 | 86 | 82 |
| | Return Air | Power | 86 | 102 | 94 | 89 | 85 | 76 | 73 | 69 | 60 |
| | Case Breakout | Power | 86 | 102 | 94 | 89 | 85 | 76 | 73 | 69 | 60 |
| | Sound @ 3m | Pressure | 72 | 87 | 80 | 75 | 70 | 61 | 59 | 54 | 46 |

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

## Technical Data Upflow Units WX Type V6WX - V8WX - V10WX

### Mechanical Data

| | | | V6WX-EZE-0 | V8WX-EZE-0 | V10WX-EZE-0 |
|---|---|---|---|---|---|
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 6.5 | 9.1 | 11 |
| Total Heat of Rejection | | kW | 8.6 | 11.5 | 14.4 |
| Capacity Steps | | | 1 | 1 | 1 |
| Fan Input Power (Fan Gain) | (2) | kW | 0.22 | 0.48 | 0.64 |
| **Dimensions - W x D x H** | | mm | 670 x 670 x 1940 | 670 x 670 x 1940 | 670 x 670 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 188 / 190 | 194 / 195 | 191 / 192 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling/Dehum Stages | | | 1/1 | 1/1 | 1/1 |
| **Condenser** | | | Stainless Steel Brazed Plate | | |
| Water Volume | | l | 1.1 | 1.4 | 1.4 |
| **Fan & Motor** | | | Centrifugal Forward Curved EC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Direct Drive | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 0.56 | 0.56 | 0.56 |
| Maximum ESP | | Pa | 369 | 303 | 378 |
| Nominal Airflow | | m³/s | 0.55 | 0.75 | 0.95 |
| **Compressor - Scroll** | | | Single | | |
| Quantity | | | 1 | 1 | 1 |
| Oil Charge Volume (Total) | | l | 1.0 | 1.1 | 1.1 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Charge (Total) | | kg | 2.2 | 2.3 | 2.3 |
| **Connections** | | | | | |
| Water Inlet / Outlet | | mm | 22 | 22 | 22 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 50mm | | |
| Quantity | | | 1 | 1 | 1 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating (Total)** | | kW | 7.5 | 7.5 | 7.5 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 0.6 - 3.0 | 0.6 - 3.0 | 0.6 - 3.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 8 | 8 | 8 |
| Flow | | l/m | 5 | 5 | 5 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 6.6 | 7.9 | 8.9 |
| Water Flow (Nominal) | | l/s | 0.15 | 0.18 | 0.2 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |
| **Threaded Connection** | | | | | |
| Brass Male Taper | | in | 3/4 | 3/4 | 3/4 |

## Technical Data Upflow Units WX Type V6WX - V8WX - V10WX

### Electrical Data

| | | | V6WX-EZE-0 | V8WX-EZE-0 | V10WX-EZE-0 |
|---|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | | |
| Nominal Run Amps | | A | 18.9 | 20.3 | 21.1 |
| Maximum Start Amps | | A | 39.6 | 55.6 | 61.6 |
| Recommended Mains Fuse Size | | A | 25 | 25 | 25 |
| **Unit Data Cooling Only** | (2) | | | | |
| Nominal Run Amps | | A | 8.0 | 9.5 | 10.3 |
| Maximum Start Amps | | A | 28.8 | 44.8 | 50.8 |
| Recommended Mains Fuse Size | | A | 16 | 16 | 16 |
| Max Mains Incoming Cable Size | | mm² | 6 | 6 | 6 |
| Mains Supply | | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | | |
| Maximum Electrical Input Power | (3) | kW | 1 x 1.1 | 1 x 1.1 | 1 x 1.1 |
| Full Load Amps | | A | 4.8 | 4.8 | 4.8 |
| Locked Rotor Amps | | A | 4.8 | 4.8 | 4.8 |
| **Compressor - Per Compressor** | | | | | |
| Quantity x Motor Size | | kW | 1 x 2 | 1 x 2.6 | 1 x 3.9 |
| Nominal Run Amps | | A | 3.2 | 4.7 | 5.5 |
| Locked Rotor Amps | | A | 24 | 40 | 46 |
| Type of Start | | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | | |
| Quantity x Motor Size | | kW | 1 x 0.15 | 2 x 0.15 | 2 x 0.15 |
| Full Load Amps | | A | 0.65 | 1.3 | 1.3 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating** | | | | | |
| Stage of Reheat | | | 1 | 1 | 1 |
| Number of Elements | | | 3 | 3 | 3 |
| Rating | | kW | 7.5 | 7.5 | 7.5 |
| Curent per Phase | | A | 10.83 | 10.83 | 10.83 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 3 | 3 | 3 |
| Rating | | kW | 2.25 | 2.25 | 2.25 |
| Full Load Amps | | A | 3.25 | 3.25 | 3.25 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units WX Type V13WX - V15WX - V17WX

### Mechanical Data

| | | | V13WX-EZE-0 | V15WX-EZE-0 | V17WX-EZE-0 |
|---|---|---|---|---|---|
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 11.9 | 16.7 | 19.5 |
| Total Heat of Rejection | | kW | 14.4 | 19.8 | 23.1 |
| Capacity Steps | | | 1 | 1 | 1 |
| Fan Input Power (Fan Gain) | (2) | kW | 0.61 | 0.66 | 1.03 |
| **Dimensions - W x D x H** | | mm | 990 x 670 x 1940 | 990 x 670 x 1940 | 990 x 670 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 232 / 233 | 260 / 262 | 265 / 268 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling/Dehum Stages | | | 1/1 | 1/1 | 1/1 |
| **Condenser** | | | Stainless Steel Brazed Plate | | |
| Water Volume | | l | 1.4 | 2 | 2.5 |
| **Fan & Motor** | | | Centrifugal Forward Curved EC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Direct Drive | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 0.56 | 0.92 | 0.92 |
| Maximum ESP | | Pa | 448 | 331 | 253 |
| Nominal Airflow | | m³/s | 1.00 | 1.20 | 1.40 |
| **Compressor - Scroll** | | | Single | | |
| Quantity | | | 1 | 1 | 1 |
| Oil Charge Volume (Total) | | l | 1.36 | 1.85 | 1.65 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Charge (Total) | | kg | 3.6 | 3.9 | 3.9 |
| **Connections** | | | | | |
| Water Inlet / Outlet | | mm | 22 | 22 | 28 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 50mm | | |
| Quantity | | | 2 | 2 | 2 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating (Total)** | | kW | 7.5 | 7.5 | 7.5 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 0.6 - 3.0 | 0.6 - 3.0 | 0.6 - 3.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 8 | 8 | 8 |
| Flow | | l/m | 5 | 5 | 5 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 11.5 | 12.7 | 13.7 |
| Water Flow (Nominal) | | l/s | 0.26 | 0.28 | 0.31 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |
| **Threaded Connection** | | | | | |
| Brass Male Taper | | in | 3/4 | 3/4 | 1 |

## Technical Data Upflow Units WX Type V13WX - V15WX - V17WX

### Electrical Data

| | | | V13WX-EZE-0 | V15WX-EZE-0 | V17WX-EZE-0 |
|---|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | | |
| Nominal Run Amps | | A | 22.1 | 26.3 | 27.2 |
| Maximum Start Amps | | A | 65.6 | 84.0 | 92.0 |
| Recommended Mains Fuse Size | | A | 25 | 32 | 32 |
| **Unit Data Cooling Only** | (2) | | | | |
| Nominal Run Amps | | A | 11.3 | 15.5 | 16.4 |
| Maximum Start Amps | | A | 54.8 | 73.2 | 81.2 |
| Recommended Mains Fuse Size | | A | 16 | 20 | 20 |
| Max Mains Incoming Cable Size | | mm² | 6 | 6 | 6 |
| Mains Supply | | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | | |
| Maximum Electrical Input Power | (3) | kW | 1 x 1.1 | 1 x 1.6 | 1 x 1.6 |
| Full Load Amps | | A | 4.8 | 7.2 | 7.2 |
| Locked Rotor Amps | | A | 4.8 | 7.2 | 7.2 |
| **Compressor - Per Compressor** | | | | | |
| Quantity x Motor Size | | kW | 1 x 4.7 | 1 x 5.6 | 1 x 6.5 |
| Nominal Run Amps | | A | 6.5 | 8.3 | 9.2 |
| Locked Rotor Amps | | A | 50 | 66 | 74 |
| Type of Start | | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | | |
| Quantity x Motor Size | | kW | 1 x 0.6 | 1 x 0.6 | 1 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating** | | | | | |
| Stage of Reheat | | | 1 | 1 | 1 |
| Number of Elements | | | 3 | 3 | 3 |
| Rating | | kW | 7.5 | 7.5 | 7.5 |
| Curent per Phase | | A | 10.83 | 10.83 | 10.83 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 3 | 3 | 3 |
| Rating | | kW | 2.25 | 2.25 | 2.25 |
| Full Load Amps | | A | 3.25 | 3.25 | 3.25 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units WX Type V22WX2 - V25WX

### Mechanical Data

| | | | V22WX2-EZE-0 | V25WX2-EZE-0 |
|---|---|---|---|---|
| **Capacity** | (1) | | | |
| Nom Cooling (Gross) | | kW | 25.1 | 25.8 |
| Total Heat of Rejection | | kW | 29.4 | 30.2 |
| Capacity Steps | | | 2 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 1.13 | 1.82 |
| **Dimensions - W x D x H** | | mm | 1310 x 670 x 1940 | 1310 x 670 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 323 / 326 | 323 / 326 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | |
| Cooling/Dehum Stages | | | 2/2 | 2/2 |
| **Condenser** | | | | |
| Water Volume | | l | 2.5 | 2.5 |
| **Fan & Motor** | | | Centrifugal Forward Curved EC - Designed to 25Pa ESP | |
| Fan Transmission Type | | | Direct Drive | |
| Quantity / Motor Size | | | 2 | 2 |
| Motor Shaft Power | (4) | kW | 0.56 | 0.56 |
| Maximum ESP | | Pa | 350 | 204 |
| Nominal Airflow | | m³/s | 1.70 | 2.00 |
| **Compressor - Scroll** | | | Tandem | |
| Quantity | | | 2 | 2 |
| Oil Charge Volume (Total) | | l | 2.72 | 2.72 |
| Oil Type | | | Polyol Ester | |
| **Refrigeration** | (5) | | Single Circuit | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | |
| Refrigeration Type | | | R407C | |
| Charge (Total) - WX | | kg | 4.9 | 4.9 |
| **Connections** | | | | |
| Water Inlet / Outlet - WX | | mm | 28 | 28 |
| Condensate Drain Hose | | mm | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 50mm | |
| Quantity | | | 3 | 3 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating (Total)** | | kW | 15 | 15 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 0.6 - 3.0 | 0.6 - 3.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | |
| **Condensate Pump** | | | | |
| Head | | m | 8 | 8 |
| Flow | | l/m | 5 | 5 |
| Drain | | | 10mm Stainless Steel Stub Connection | |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | |
| Capacity Gross | | kW | 19.2 | 19.9 |
| Water Flow (Nominal) | | l/s | 0.43 | 0.44 |
| LPHW Connection Sizes | | mm | 22 | 22 |
| **Threaded Connection** | | | | |
| Brass Male Taper | | in | 1 | 1 |

## Technical Data Upflow Units WX Type V22WX2 - V25WX

### Electrical Data

| | | | V22WX2-EZE-0 | V25WX2-EZE-0 |
|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | |
| Nominal Run Amps | | A | 39.5 | 39.5 |
| Maximum Start Amps | | A | 83.0 | 83.0 |
| Recommended Mains Fuse Size | | A | 50 | 50 |
| **Unit Data Cooling Only** | (2) | | | |
| Nominal Run Amps | | A | 17.8 | 17.8 |
| Maximum Start Amps | | A | 61.3 | 61.3 |
| Recommended Mains Fuse Size | | A | 20 | 20 |
| Max Mains Incoming Cable Size | | mm² | 35 | 35 |
| Mains Supply | | V | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | |
| Maximum Electrical Input Power | (3) | kW | 2 x 1.1 | 2 x 1.1 |
| Full Load Amps | | A | 4.8 | 4.8 |
| Locked Rotor Amps | | A | 4.8 | 4.8 |
| **Compressor - Per Compressor** | | | | |
| Quantity x Motor Size | | kW | 2 x 4.7 | 2 x 4.7 |
| Nominal Run Amps | | A | 6.5 | 6.5 |
| Locked Rotor Amps | | A | 50 | 50 |
| Type of Start | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating** | | | | |
| Stage of Reheat | | | 2 | 2 |
| Number of Elements | | | 6 | 6 |
| Rating | | kW | 15 | 15 |
| Curent per Phase | | A | 21.65 | 21.65 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 3 | 3 |
| Rating | | kW | 2.25 | 2.25 |
| Full Load Amps | | A | 3.25 | 3.25 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units WX Type

**V26WX - V26WX2 - V28WX - V28WX2**

### Mechanical Data

| | | | V26WX-EZE-0 | V26WX2-EZE-0 | V28WX-EZE-0 | V28WX2-EZE-0 |
|---|---|---|---|---|---|---|
| **Capacity** | (1) | | | | | |
| Nom Cooling (Gross) | | kW | 30.1 | 32.2 | 30.7 | 32.8 |
| Total Heat of Rejection | | kW | 38.74 | 42.15 | 39.35 | 42.85 |
| Capacity Steps | | | 1 | 2 | 1 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 1.81 | 1.81 | 3.50 | 3.50 |
| **Dimensions - W x D x H** | | mm | 1460 x 750 x 1940 | 1460 x 750 x 1940 | 1460 x 750 x 1940 | 1460 x 750 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 495 / 501 | 480 / 486 | 501 / 506 | 487 / 492 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | | |
| Cooling/Dehum Stages | | | 1/1 | 2/2 | 1/1 | 2/2 |
| **Condenser** | | | Stainless Steel Brazed Plate | | | |
| Water Volume | | l | 6.1 | 6.1 | 6.1 | 6.1 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | | |
| Fan Transmission Type | | | Belt & Pulley | | | |
| Quantity | | | 1 | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 2.2 | 2.2 | 3.0 | 3.0 |
| Maximum ESP | | Pa | 170 | 170 | 160 | 160 |
| Nominal Airflow | | m³/s | 2.1 | 2.1 | 2.4 | 2.4 |
| **Compressor - Scroll** | | | Single | Tandem | Single | Tandem |
| Quantity | | | 1 | 2 | 1 | 2 |
| Oil Charge Volume (Total) | | l | 4.1 | 3.37 | 4.1 | 3.37 |
| Oil Type | | | Polyol Ester | | | |
| **Refrigeration** | (5) | | Single Circuit | | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | | |
| Refrigeration Type | | | R407C | | | |
| Charge (Total) | | kg | 6.9 | 6.9 | 6.9 | 6.9 |
| **Connections** | | | | | | |
| Water Inlet / Outlet | | mm | 35 | 35 | 35 | 35 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | | | |
| Quantity | | | 3 | 3 | 3 | 3 |
| **OPTIONAL EXTRAS** | | | | | | |
| **Electric Heating (Total)** | | kW | 22.5 | 22.5 | 22.5 | 22.5 |
| **Humidifier** | | | | | | |
| Capacity | | kg/hr | 1.6 - 8.0 | 1.6 - 8.0 | 1.6 - 8.0 | 1.6 - 8.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | | |
| **Condensate Pump** | | | | | | |
| Head | | m | 5 | 5 | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | | | |
| **Larger / Next Larger Fan Motor Size** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | | |
| Transmission Type | | | Belt & Pulley | | | |
| Quantity | | | 1 | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 3.0 | 3.0 | 4.0 | 4.0 |
| Maximum ESP | | Pa | 450 | 450 | 470 | 470 |
| Speed @ Maximum ESP | | rpm | 1786 | 1786 | 1910 | 1910 |
| Fan Input Power (Fan Gain) | | kW | 3.50 | 3.50 | 4.60 | 4.60 |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | | |
| Capacity Gross | | kW | 20.5 | 20.5 | 21.7 | 21.7 |
| Water Flow (Nominal) | | l/s | 0.46 | 0.46 | 0.48 | 0.48 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 | 22 |
| **Threaded Connection** | | | | | | |
| Brass Male Taper | | in | 1 1/4 | 1 1/4 | 1 1/4 | 1 1/4 |

## Technical Data Upflow Units WX Type

**V26WX - V26WX2 - V28WX - V28WX2**

### Electrical Data

| | | | V26WX-EZE-0 | V26WX2-EZE-0 | V28WX-EZE-0 | V28WX2-EZE-0 |
|---|---|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | | | |
| Nominal Run Amps | | A | 51.4 | 57.6 | 53.0 | 59.2 |
| Maximum Start Amps | | A | 148.6 | 107.1 | 150.2 | 108.7 |
| Recommended Mains Fuse Size | | A | 63 | 80 | 63 | 80 |
| **Unit Data Cooling Only** | (2) | | | | | |
| Nominal Run Amps | | A | 18.9 | 25.1 | 20.5 | 26.7 |
| Maximum Start Amps | | A | 116.1 | 74.6 | 117.7 | 76.2 |
| Recommended Mains Fuse Size | | A | 25 | 32 | 25 | 32 |
| Max Mains Incoming Cable Size | | mm² | 35 | 35 | 35 | 35 |
| Mains Supply | | V | 400V / 3PH + N / 50HZ | | | |
| Control Circuit | | VAC | 24 | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | | | |
| Maximum Electrical Input Power | (3) | kW | 1 x 2.2 | 1 x 2.2 | 1 x 3 | 1 x 3 |
| Full Load Amps | | A | 4.68 | 4.68 | 6.32 | 6.32 |
| Locked Rotor Amps | | A | 32.8 | 32.8 | 45.5 | 45.5 |
| **Compressor - Per Compressor** | | | | | | |
| Quantity x Motor Size | | kW | 1 x 7.9 | 2 x 4.45 | 1 x 7.9 | 2 x 4.45 |
| Nominal Run Amps | | A | 13.8 | 10 | 13.8 | 10 |
| Locked Rotor Amps | | A | 111 | 59.5 | 111 | 59.5 |
| Type of Start | | | Direct On Line | | | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 2 x 0.6 | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | | | |
| **Electric Heating** | | | | | | |
| Stage of Reheat | | | 3 | 3 | 3 | 3 |
| Number of Elements | | | 9 | 9 | 9 | 9 |
| Rating | | kW | 22.5 | 22.5 | 22.5 | 22.5 |
| Curent per Phase | | A | 32.48 | 32.48 | 32.48 | 32.48 |
| **Humidifier** | | | | | | |
| Capacity | | kg/hr | 8 | 8 | 8 | 8 |
| Rating | | kW | 6 | 6 | 6 | 6 |
| Full Load Amps | | A | 8.66 | 8.66 | 8.66 | 8.66 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units WX Type V31WX - V31WX2

### Mechanical Data

| | | | V31WX-EZE-0 | V31WX2-EZE-0 |
|---|---|---|---|---|
| **Capacity** | (1) | | | |
| Nom Cooling (Gross) | | kW | 35.3 | 37.9 |
| Total Heat of Rejection | | kW | 42.41 | 49.43 |
| Capacity Steps | | | 1 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 4.60 | 4.60 |
| **Dimensions - W x D x H** | | mm | 1460 x 750 x 1940 | 1460 x 750 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 503 / 508 | 495 / 501 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | |
| Cooling/Dehum Stages | | | 1/1 | 2/2 |
| **Condenser** | | | Stainless Steel Brazed Plate | |
| Water Volume | | l | 6.1 | 6.1 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | |
| Fan Transmission Type | | | Belt & Pulley | |
| Quantity | | | 1 | 1 |
| Motor Shaft Power | (4) | kW | 4.0 | 4.0 |
| Maximum ESP | | Pa | 35 | 35 |
| Nominal Airflow | | m³/s | 2.8 | 2.8 |
| **Compressor - Scroll** | | | Single | Tandem |
| Quantity | | | 1 | 2 |
| Oil Charge Volume (Total) | | l | 4.1 | 3.2 |
| Oil Type | | | Polyol Ester | |
| **Refrigeration** | (5) | | Single Circuit | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | |
| Refrigeration Type | | | R407C | |
| Charge (Total) | | kg | 6.9 | 6.9 |
| **Connections** | | | | |
| Water Inlet / Outlet | | mm | 35 | 35 |
| Condensate Drain Hose | | mm | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | |
| Quantity | | | 3 | 3 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating (Total)** | | kW | 22.5 | 22.5 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 1.6 - 8.0 | 1.6 - 8.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | |
| **Condensate Pump** | | | | |
| Head | | m | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | |
| Capacity Gross | | kW | 23.2 | 23.2 |
| Water Flow (Nominal) | | l/s | 0.52 | 0.52 |
| LPHW Connection Sizes | | mm | 22 | 22 |
| **Threaded Connection** | | | | |
| Brass Male Taper | | in | 1 1/4 | 1 1/4 |

## Technical Data Upflow Units WX Type V31WX - V31WX2

### Electrical Data

| | | | V31WX-EZE-0 | V31WX2-EZE-0 |
|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | |
| Nominal Run Amps | | A | 57.1 | 59.5 |
| Maximum Start Amps | | A | 159.1 | 124.3 |
| Recommended Mains Fuse Size | | A | 80 | 80 |
| **Unit Data Cooling Only** | (2) | | | |
| Nominal Run Amps | | A | 24.6 | 27.0 |
| Maximum Start Amps | | A | 126.6 | 91.8 |
| Recommended Mains Fuse Size | | A | 32 | 32 |
| Max Mains Incoming Cable Size | | mm² | 35 | 35 |
| Mains Supply | | V | | |
| Control Circuit | | VAC | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | |
| Maximum Electrical Input Power | (3) | kW | 1 x 4 | 1 x 4 |
| Full Load Amps | | A | 8.14 | 8.14 |
| Locked Rotor Amps | | A | 57 | 57 |
| **Compressor - Per Compressor** | | | | |
| Quantity x Motor Size | | kW | 1 x 8.95 | 2 x 6.5 |
| Nominal Run Amps | | A | 16 | 9.2 |
| Locked Rotor Amps | | A | 118 | 74 |
| Type of Start | | | | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating** | | | | |
| Stage of Reheat | | | 3 | 3 |
| Number of Elements | | | 9 | 9 |
| Rating | | kW | 22.5 | 22.5 |
| Curent per Phase | | A | 32.48 | 32.48 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 8 | 8 |
| Rating | | kW | 6 | 6 |
| Full Load Amps | | A | 8.66 | 8.66 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units WX Type V35WX - V35WX2

### Mechanical Data

| | | | V35WX-EZE-0 | V35WX2-EZE-0 |
|---|---|---|---|---|
| **Capacity** | (1) | | | |
| Nom Cooling (Gross) | | kW | 41.2 | 40 |
| Total Heat of Rejection | | kW | 53.51 | 51.64 |
| Capacity Steps | | | 1 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 4.60 | 4.60 |
| **Dimensions - W x D x H** | | mm | 1835 x 750 x 1940 | 1835 x 750 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 552 / 558 | 570 / 576 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | |
| Cooling/Dehum Stages | | | 1/1 | 2/2 |
| **Condenser** | | | Stainless Steel Brazed Plate | |
| Water Volume | | l | 6.1 | 6.1 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | |
| Fan Transmission Type | | | Belt & Pulley | |
| Quantity | | | 1 | 1 |
| Motor Shaft Power | (4) | kW | 4.0 | 4.0 |
| Maximum ESP | | Pa | 35 | 35 |
| Nominal Airflow | | m³/s | 3.3 | 3.3 |
| **Compressor - Scroll** | | | Single | Tandem |
| Quantity | | | 1 | 2 |
| Oil Charge Volume (Total) | | l | 3.25 | 3.2 |
| Oil Type | | | Polyol Ester | |
| **Refrigeration** | (5) | | Single Circuit | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | |
| Refrigeration Type | | | R407C | |
| Charge (Total) | | kg | 8.5 | 8.5 |
| **Connections** | | | | |
| Water Inlet / Outlet | | mm | 35 | 35 |
| Condensate Drain Hose | | mm | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | |
| Quantity | | | 4 | 4 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating (Total)** | | kW | 30 | 30 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 3.0 - 15.0 | 3.0 - 15.0 |
| Feed/Drain | | | 3/4" BSPF Braided Flexible Hose / 19mm Hose Connection | |
| **Condensate Pump** | | | | |
| Head | | m | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | |
| **Larger / Next Larger Fan Motor Size** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | |
| Transmission Type | | | Belt & Pulley | |
| Quantity | | | 1 | 1 |
| Motor Shaft Power | (4) | kW | 5.5 | 5.5 |
| Maximum ESP | | Pa | 240 | 240 |
| Speed @ Maximum ESP | | rpm | 1695 | 1695 |
| Fan Input Power (Fan Gain) | | kW | 6.30 | 6.30 |
| **Low Pressure Hot Water** | (7) | | | |
| Capacity Gross | | kW | 29.9 | 29.9 |
| Water Flow (Nominal) | | l/s | 0.67 | 0.67 |
| LPHW Connection Sizes | | mm | 22 | 22 |
| **Threaded Connection** | | | | |
| Brass Male Taper | | in | 1 1/4 | 1 1/4 |

## Technical Data Upflow Units WX Type V35WX - V35WX2

### Electrical Data

| | | | V35WX-EZE-0 | V35WX2-EZE-0 |
|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | |
| Nominal Run Amps | | A | 71.0 | 70.3 |
| Maximum Start Amps | | A | 196.9 | 135.1 |
| Recommended Mains Fuse Size | | A | 80 | 80 |
| **Unit Data Cooling Only** | (2) | | | |
| Nominal Run Amps | | A | 27.7 | 27.0 |
| Maximum Start Amps | | A | 153.6 | 91.8 |
| Recommended Mains Fuse Size | | A | 40 | 32 |
| Max Mains Incoming Cable Size | | mm² | 35 | 35 |
| Mains Supply | | V | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | |
| Maximum Electrical Input Power | (3) | kW | 1 x 4 | 1 x 4 |
| Full Load Amps | | A | 8.14 | 8.14 |
| Locked Rotor Amps | | A | 57 | 57 |
| **Compressor - Per Compressor** | | | | |
| Quantity x Motor Size | | kW | 1 x 11 | 2 x 6.5 |
| Nominal Run Amps | | A | 19.1 | 9.2 |
| Locked Rotor Amps | | A | 145 | 74 |
| Type of Start | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | |
| **Electric Heating** | | | | |
| Stage of Reheat | | | 3 | 3 |
| Number of Elements | | | 9 | 9 |
| Rating | | kW | 30 | 30 |
| Curent per Phase | | A | 43.30 | 43.30 |
| **Humidifier** | | | | |
| Capacity | | kg/hr | 15 | 15 |
| Rating | | kW | 11.25 | 11.25 |
| Full Load Amps | | A | 16.24 | 16.24 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units WX Type V40WX - V40WX2 - V45WX2

### Mechanical Data

| | | | V40WX-EZE-0 | V40WX2-EZE-0 | V45WX2-EZE-0 |
|---|---|---|---|---|---|
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 46.9 | 44.5 | 52.8 |
| Total Heat of Rejection | | kW | 60.25 | 57.76 | 68.17 |
| Capacity Steps | | | 1 | 2 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 6.30 | 6.30 | 6.30 |
| **Dimensions - W x D x H** | | mm | 1835 x 750 x 1940 | 1835 x 750 x 1940 | 1835 x 750 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 578 / 583 | 574 / 580 | 715 / 725 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling/Dehum Stages | | | 1/1 | 2/2 | 2/2 |
| **Condenser** | | | Stainless Steel Brazed Plate | | |
| Water Volume | | l | 6.1 | 6.1 | 9.9 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Belt & Pulley | | |
| Quantity | | | 1 | 1 | 1 |
| Motor Shaft Power | (4) | kW | 5.5 | 5.5 | 5.5 |
| Maximum ESP | | Pa | 25 | 25 | 25 |
| Nominal Airflow | | m³/s | 3.7 | 3.7 | 3.7 |
| **Compressor - Scroll** | | | Single | Tandem | |
| Quantity | | | 1 | 2 | 2 |
| Oil Charge Volume (Total) | | l | 3.3 | 3.4 | 8.1 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Charge (Total) | | kg | 8.5 | 8.5 | 11.3 |
| **Connections** | | | | | |
| Water Inlet / Outlet | | mm | 35 | 35 | 42 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | | |
| Quantity | | | 4 | 4 | 4 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating (Total)** | | kW | 30 | 30 | 30 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 3.0 - 15.0 | 3.0 - 15.0 | 3.0 - 15.0 |
| Feed/Drain | | | 3/4” BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 5 | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 31.5 | 31.5 | 31.5 |
| Water Flow (Nominal) | | l/s | 0.7 | 0.7 | 0.7 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |
| **Threaded Connection** | | | | | |
| Brass Male Taper | | in | 1 1/4 | 1 1/4 | 1 1/2 |

## Technical Data Upflow Units WX Type V40WX - V40WX2 - V45WX2

### Electrical Data

| | | | V40WX-EZE-0 | V40WX2-EZE-0 | V45WX2-EZE-0 |
|---|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | | |
| Nominal Run Amps | | A | 77.6 | 78.7 | 80.4 |
| Maximum Start Amps | | A | 199.7 | 167.7 | 162.6 |
| Recommended Mains Fuse Size | | A | 100 | 100 | 100 |
| **Unit Data Cooling Only** | (2) | | | | |
| Nominal Run Amps | | A | 34.3 | 35.4 | 37.1 |
| Maximum Start Amps | | A | 156.4 | 124.4 | 119.3 |
| Recommended Mains Fuse Size | | A | 50 | 40 | 50 |
| Max Mains Incoming Cable Size | | mm² | 35 | 35 | 100 |
| Mains Supply | | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | | |
| Maximum Electrical Input Power | (3) | kW | 1 x 5.5 | 1 x 5.5 | 1 x 5.5 |
| Full Load Amps | | A | 11.1 | 11.1 | 11.1 |
| Locked Rotor Amps | | A | 77.7 | 77.7 | 77.7 |
| **Compressor - Per Compressor** | | | | | |
| Quantity x Motor Size | | kW | 1 x 11.9 | 2 x 6 | 2 x 6.95 |
| Nominal Run Amps | | A | 22.9 | 12 | 12.85 |
| Locked Rotor Amps | | A | 145 | 101 | 95 |
| Type of Start | | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 2 x 0.6 | 2 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating** | | | | | |
| Stage of Reheat | | | 3 | 3 | 3 |
| Number of Elements | | | 9 | 9 | 9 |
| Rating | | kW | 30 | 30 | 30 |
| Curent per Phase | | A | 43.30 | 43.30 | 43.30 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 15 | 15 | 15 |
| Rating | | kW | 11.25 | 11.25 | 11.25 |
| Full Load Amps | | A | 16.24 | 16.24 | 16.24 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

## Technical Data Upflow Units WX Type V50WX2 - V55WX2 - V60WX2

### Mechanical Data

| | | | V50WX2-EZE-0 | V55WX2-EZE-0 | V60WX2-EZE-0 |
|---|---|---|---|---|---|
| **Capacity** | (1) | | | | |
| Nom Cooling (Gross) | | kW | 59.6 | 65.1 | 69.3 |
| Total Heat of Rejection | | kW | 76.89 | 83.92 | 89.22 |
| Capacity Steps | | | 2 | 2 | 2 |
| Fan Input Power (Fan Gain) | (2) | kW | 7.00 | 7.00 | 7.00 |
| **Dimensions - W x D x H** | | mm | 2170 x 750 x 1940 | 2170 x 750 x 1940 | 2170 x 750 x 1940 |
| **Weight** - Machine / Operating | (3) | kg | 744 / 754 | 759 / 769 | 759 / 769 |
| **Construction** | | | Panels: Galvanised Sheet Steel, Epoxy Baked Powder Paint - Black, (RAL7021) | | |
| Material/Colour | | | Frame: Aluminium Frame with Aluminium Corners | | |
| **Evaporator** | | | Rifled Copper Tube/Turbulated Hydrophilic Coated Aluminium Fins | | |
| Cooling/Dehum Stages | | | 2/2 | 2/2 | 2/2 |
| **Condenser** | | | Stainless Steel Brazed Plate | | |
| Water Volume | | l | 9.9 | 9.9 | 9.9 |
| **Fan & Motor** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Fan Transmission Type | | | Belt & Pulley | | |
| Quantity | | | 2 | 2 | 2 |
| Motor Shaft Power | (4) | kW | 3.0 | 3.0 | 3.0 |
| Maximum ESP | | Pa | 255 | 255 | 35 |
| Nominal Airflow | | m³/s | 4.2 | 4.2 | 4.6 |
| **Compressor - Scroll** | | | Tandem | | |
| Quantity | | | 2 | 2 | 2 |
| Oil Charge Volume (Total) | | l | 6.5 | 7.6 | 7.6 |
| Oil Type | | | Polyol Ester | | |
| **Refrigeration** | (5) | | Single Circuit | | |
| Refrigeration Control | | | Thermostatic Expansion Valve (Optional EEV) | | |
| Refrigeration Type | | | R407C | | |
| Charge (Total) | | kg | 11.2 | 12.9 | 12.9 |
| **Connections** | | | | | |
| Water Inlet / Outlet | | mm | 42 | 42 | 42 |
| Condensate Drain Hose | | mm | 19 | 19 | 19 |
| **Filtration** | | | Disposable to ISO-C-75 - 75mm | | |
| Quantity | | | 5 | 5 | 5 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating (Total)** | | kW | 30 | 30 | 30 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 3.0 - 15.0 | 3.0 - 15.0 | 3.0 - 15.0 |
| Feed/Drain | | | 3/4" BSPF Braided Flexible Hose / 19mm Hose Connection | | |
| **Condensate Pump** | | | | | |
| Head | | m | 5 | 5 | 5 |
| Flow | | l/m | 10.8 | 10.8 | 10.8 |
| Drain | | | 10mm Stainless Steel Stub Connection | | |
| **Larger / Next Larger Fan Motor Size** | | | Centrifugal Forward Curved AC - Designed to 25Pa ESP | | |
| Transmission Type | | | Belt and Pulley | | |
| Quantity / Motor Size | | | 2 | 2 | 2 |
| Motor Shaft Power | (4) | kW | 4.0 | 4.0 | 4.0 |
| Maximum ESP | | Pa | 305 | 305 | 230 |
| Speed @ Maximum ESP | | rpm | 1495 | 1495 | 1499 |
| Fan Input Power (Fan Gain) | | kW | 9.20 | 9.20 | 9.20 |
| **Low Pressure Hot Water** | (7) | | Copper Tube/Aluminium Fin | | |
| Capacity Gross | | kW | 37.7 | 37.7 | 39.2 |
| Water Flow (Nominal) | | l/s | 0.84 | 0.84 | 0.87 |
| LPHW Connection Sizes | | mm | 22 | 22 | 22 |
| **Threaded Connection** | | | | | |
| Brass Male Taper | | in | 1 1/2 | 1 1/2 | 1 1/2 |

## Technical Data Upflow Units WX Type V50WX2 - V55WX2 - V60WX2

### Electrical Data

| | | | V50WX2-EZE-0 | V55WX2-EZE-0 | V60WX2-EZE-0 |
|---|---|---|---|---|---|
| **Unit Data Full Function** | (1) | | | | |
| Nominal Run Amps | | A | 87.6 | 85.2 | 88.4 |
| Maximum Start Amps | | A | 201.9 | 190.7 | 192.3 |
| Recommended Mains Fuse Size | | A | 100 | 100 | 100 |
| **Unit Data Cooling Only** | (2) | | | | |
| Nominal Run Amps | | A | 44.3 | 41.9 | 45.1 |
| Maximum Start Amps | | A | 158.6 | 147.4 | 149.0 |
| Recommended Mains Fuse Size | | A | 50 | 50 | 63 |
| Max Mains Incoming Cable Size | | mm² | 35 | 35 | 35 |
| Mains Supply | | V | | 400V / 3PH + N / 50HZ | |
| Control Circuit | | VAC | 24 | 24 | 24 |
| **Evaporator Fan - Per Fan** | | | | | |
| Maximum Electrical Input Power | (3) | kW | 2 x 3 | 2 x 3 | 2 x 3 |
| Full Load Amps | | A | 6.32 | 6.32 | 6.32 |
| Locked Rotor Amps | | A | 45.5 | 45.5 | 45.5 |
| **Compressor - Per Compressor** | | | | | |
| Quantity x Motor Size | | kW | 2 x 7.8 | 2 x 8.5 | 2 x 9.7 |
| Nominal Run Amps | | A | 15.7 | 14.5 | 16.1 |
| Locked Rotor Amps | | A | 130 | 120 | 120 |
| Type of Start | | | | Direct On Line | |
| **Standard Condenser Match - AC Motor - Per Fan** | | | | | |
| Quantity x Motor Size | | kW | 2 x 0.6 | 3 x 0.6 | 3 x 0.6 |
| Full Load Amps | | A | 2.62 | 2.62 | 2.62 |
| **OPTIONAL EXTRAS** | | | | | |
| **Electric Heating** | | | | | |
| Stage of Reheat | | | 3 | 3 | 3 |
| Number of Elements | | | 9 | 9 | 9 |
| Rating | | kW | 30 | 30 | 30 |
| Curent per Phase | | A | 43.30 | 43.30 | 43.30 |
| **Humidifier** | | | | | |
| Capacity | | kg/hr | 15 | 15 | 15 |
| Rating | | kW | 11.25 | 11.25 | 11.25 |
| Full Load Amps | | A | 16.24 | 16.24 | 16.24 |

Mechanical

(1) Entering air 24°C/45% RH condenser water in / out: 30°C/35°C.
(2) Fan Gain / Fan power input based upon fan operating with design airflow at 25Pa ESP, These values may change with different ESP.
(3) With Standard forward curved fan motors; Machine weight includes a refrigerant charge /Operating weight includes calculated water volume.
(4) Backward curved EC fan options quote electrical power. All other options quote shaft power.
(5) For refrigerant charges, refer to ***Unit Refrigerant Charge (kg/Circuit)***.
(6) Based on air temperature of 15.5°C leaving the evaporator coil.
(7) Based upon low pressure hot water 82°C inlet / 71°C outlet. Air on 20°C. Refer to ***Low Pressure Hot Water (Optional Extra) - X & WX Models***.

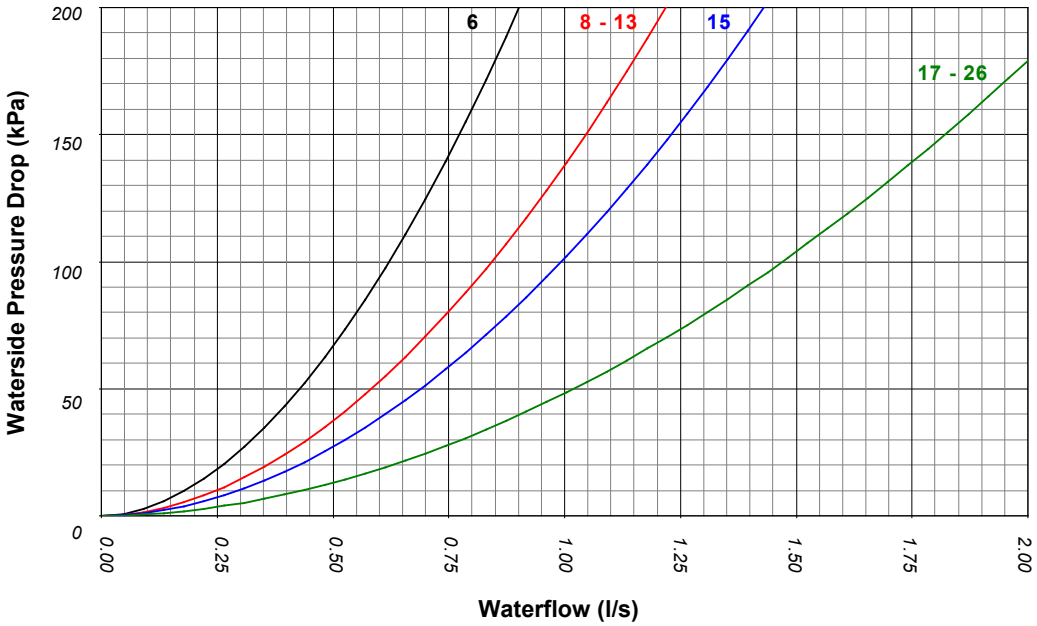
Electrical

(1) Values given for full function units (incl. electric heating, humidification and matched condenser) at 7°C evaporating and 54.4°C condensing with standard forward curved fan motors, for optional data, please contact Airedale.
(2) Values given for Cooling only units (incl. Compressor, evaporator fan and matched condenser) at 7°C evaporating and 54.4°C condensing, for optional data, please contact Airedale.
(3) Electrical input power relates to the maximum absorbed electrical power. Actual operating fan power input is shown in the mechanical data tables.

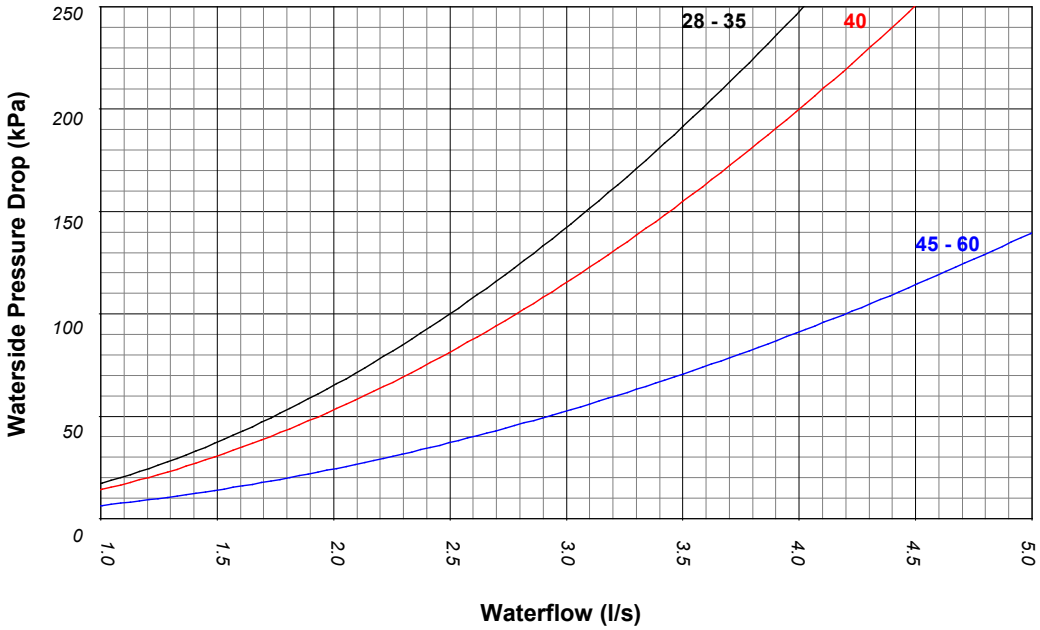
## Technical Data Upflow Units WX Type

### Hydronic Data Condenser Waterside Pressure Drop

**V6 - V26**




**V28 - V60**




(1) Includes coil, 3 port valve and pipework.

(2) To calculate 3 port valve pressure drop

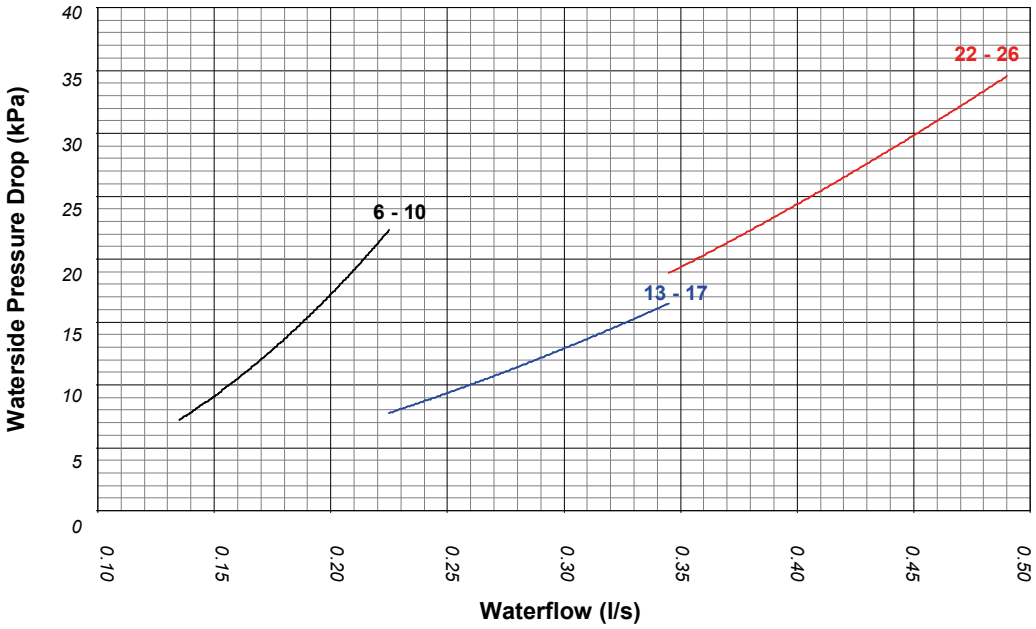
$\Delta P$ valve = $\left(\frac{Q}{M}\right)^2$ where $\Delta P$ = Pressure Drop in kPa, Q = Water Flow Rate in l/s and $M$ = $\left(\frac{Kv}{36}\right)$

(3) Fluid 100% water, for glycol use, refer to ***Ethylene Glycol Correction Factors***.

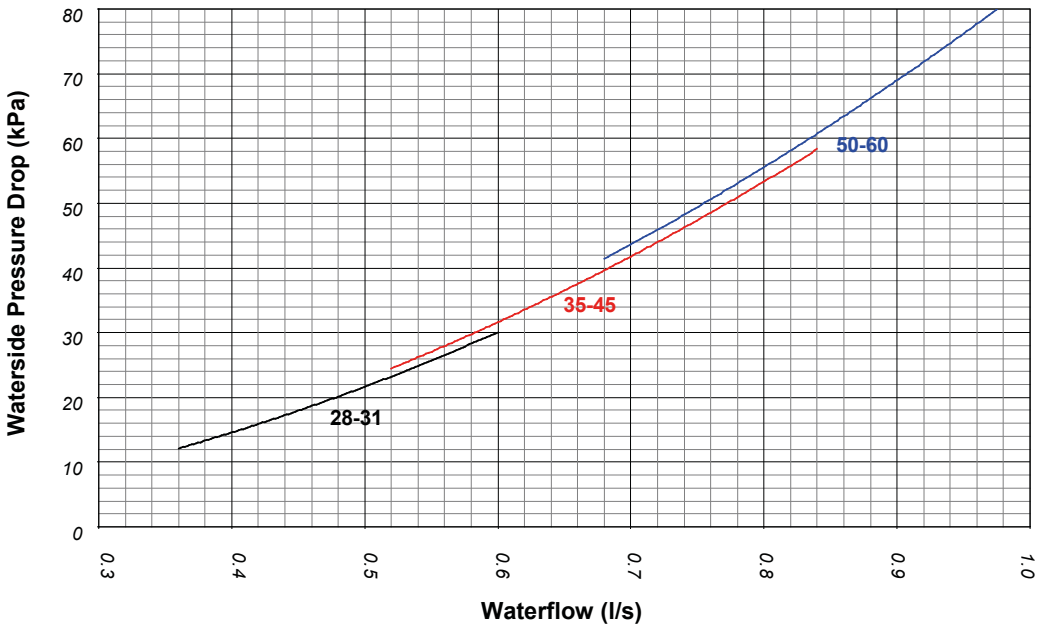
## Technical Data Upflow Units WX Type

### Hydronic Data Low Pressure Hot Water

**V6 - V26**




**V28 - V60**




(1) Includes coil, 3 port valve and pipework.

(2) To calculate 3 port valve pressure drop

$\Delta P$ valve = $\left(\frac{Q}{M}\right)^2$ where $\Delta P$ = Pressure Drop in kPa, Q = Water Flow Rate in l/s and $M$ = $\left(\frac{Kv}{36}\right)$

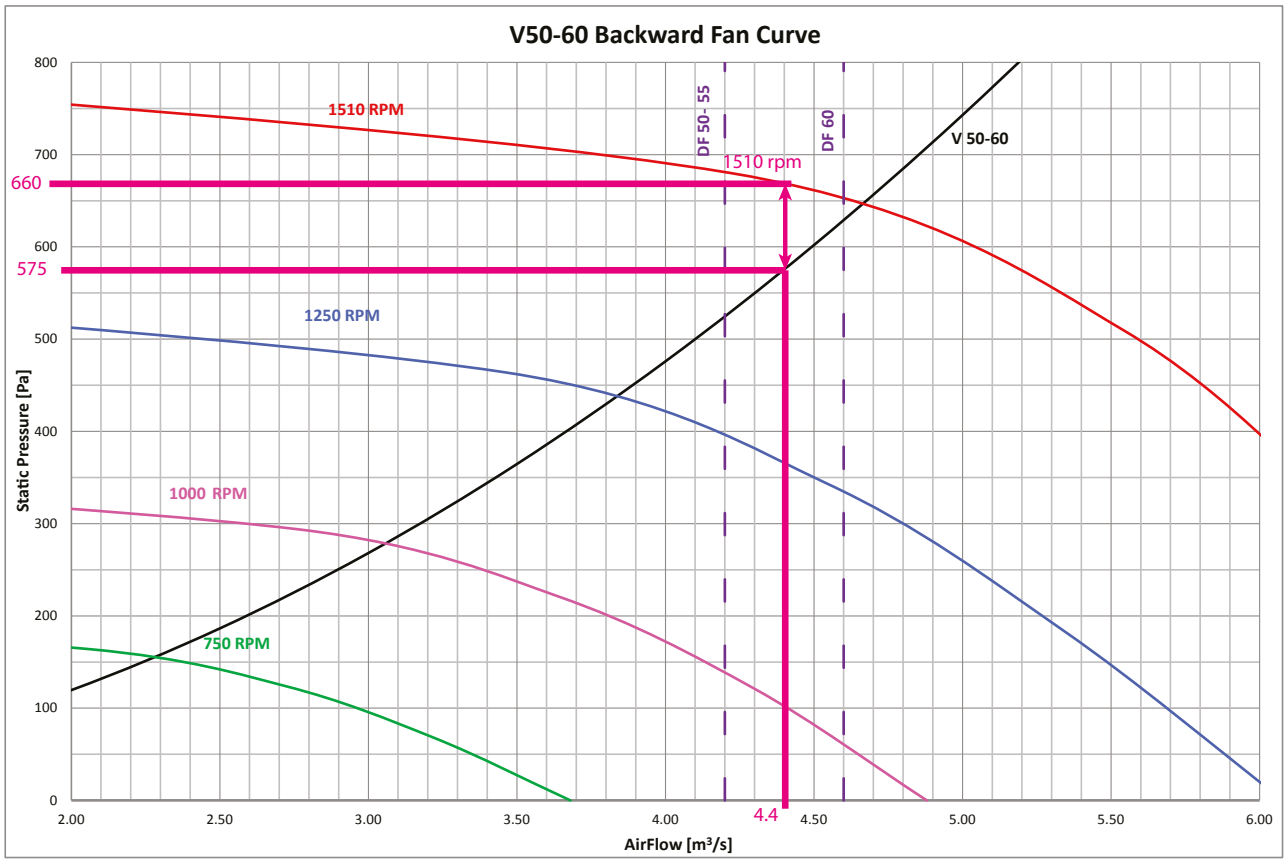
(3) Fluid 100% water, for glycol use, refer to ***Ethylene Glycol Correction Factors***.

## Fan Data

### Calculating Total Static Pressure

**Example**
**Indoor Unit Model Ref = V50-CW-EZRE-2**
**Design Air Volume = 4.4m³/s**
**Design External Static Pressure (ESP) = 85Pa**

- Plot the Design Air Volume from the X Axis vertically.
- Where the X Axis and the System Curve intersect, plot a line to the Y Axis, to establish the Internal Static Pressure (ISP)
- Calculate the Total Static Pressure (TSP) of the system thus:
  **ISP + ESP = TSP**
- Using the TSP, plot a line from the Y Axis to intersect with the Design Air Volume line. Where the line intersects, an approximate Input Voltage can be estimated between those noted on the graphs.

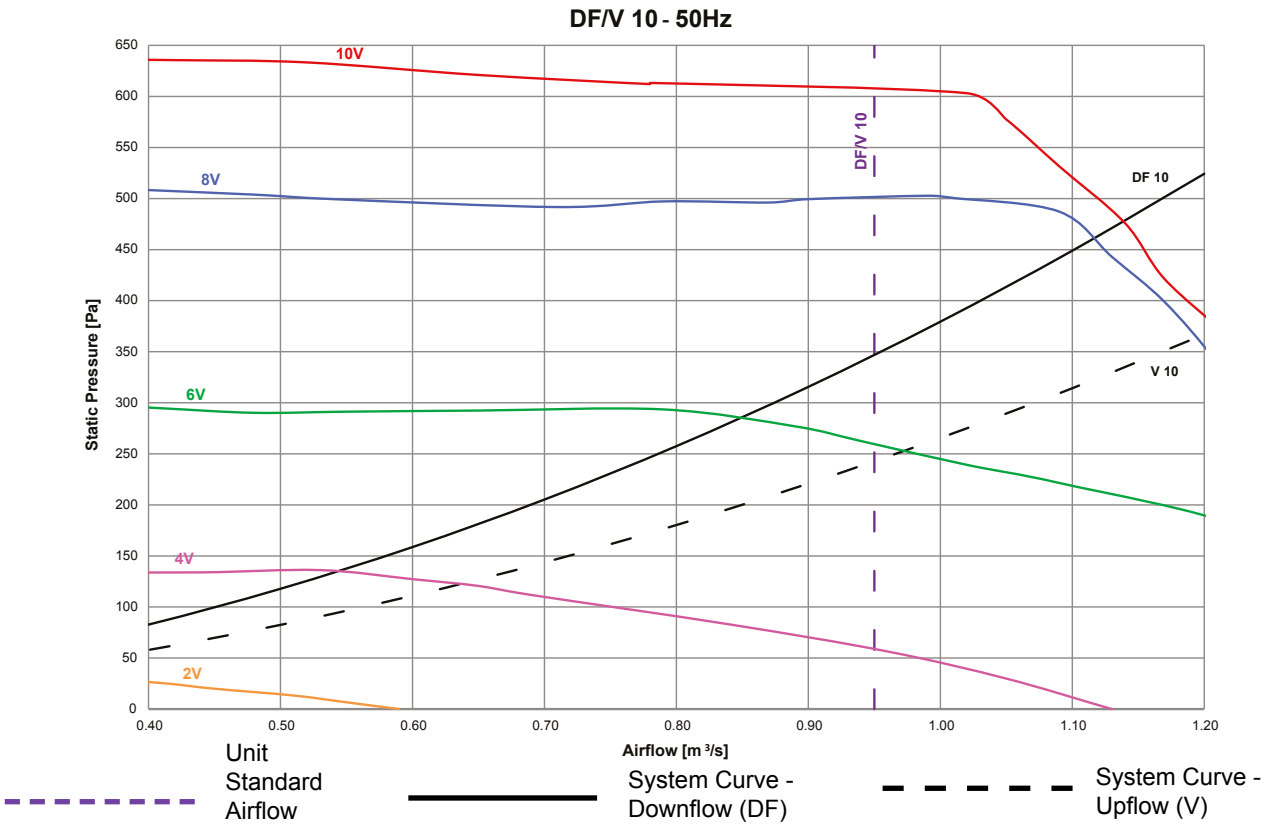


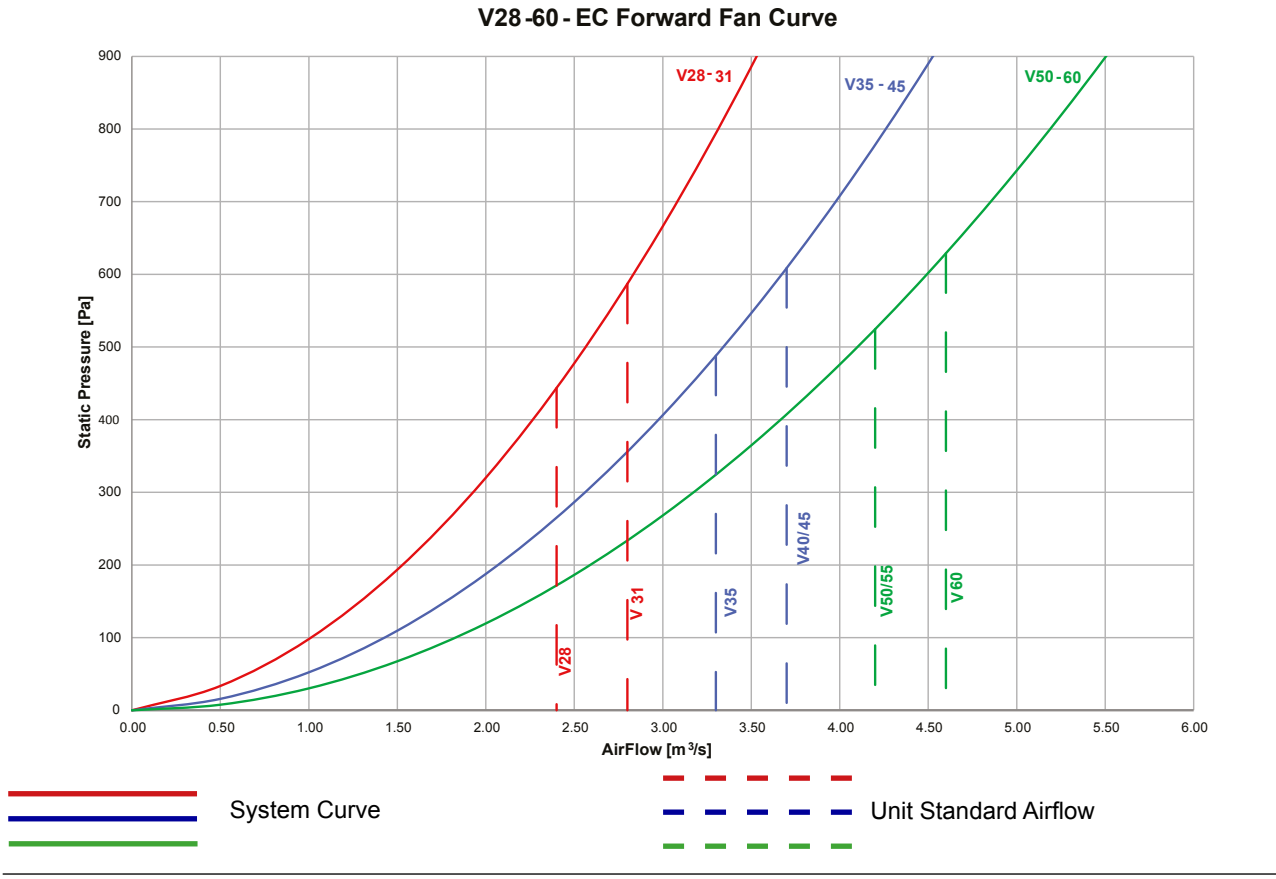

Internal Static Pressure + External Static Pressure = Total Static Pressure

e.g. 575+85 = 660

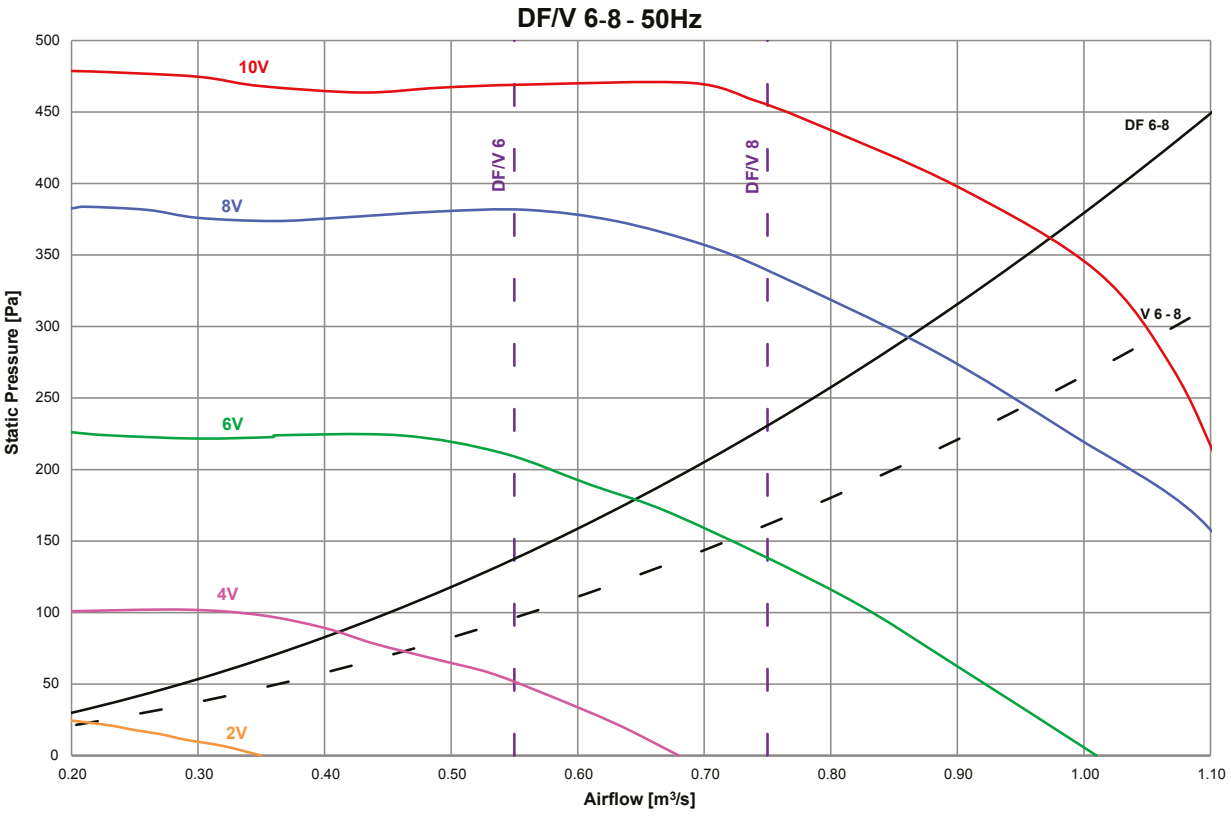
## Fan Speed Data

**Key**

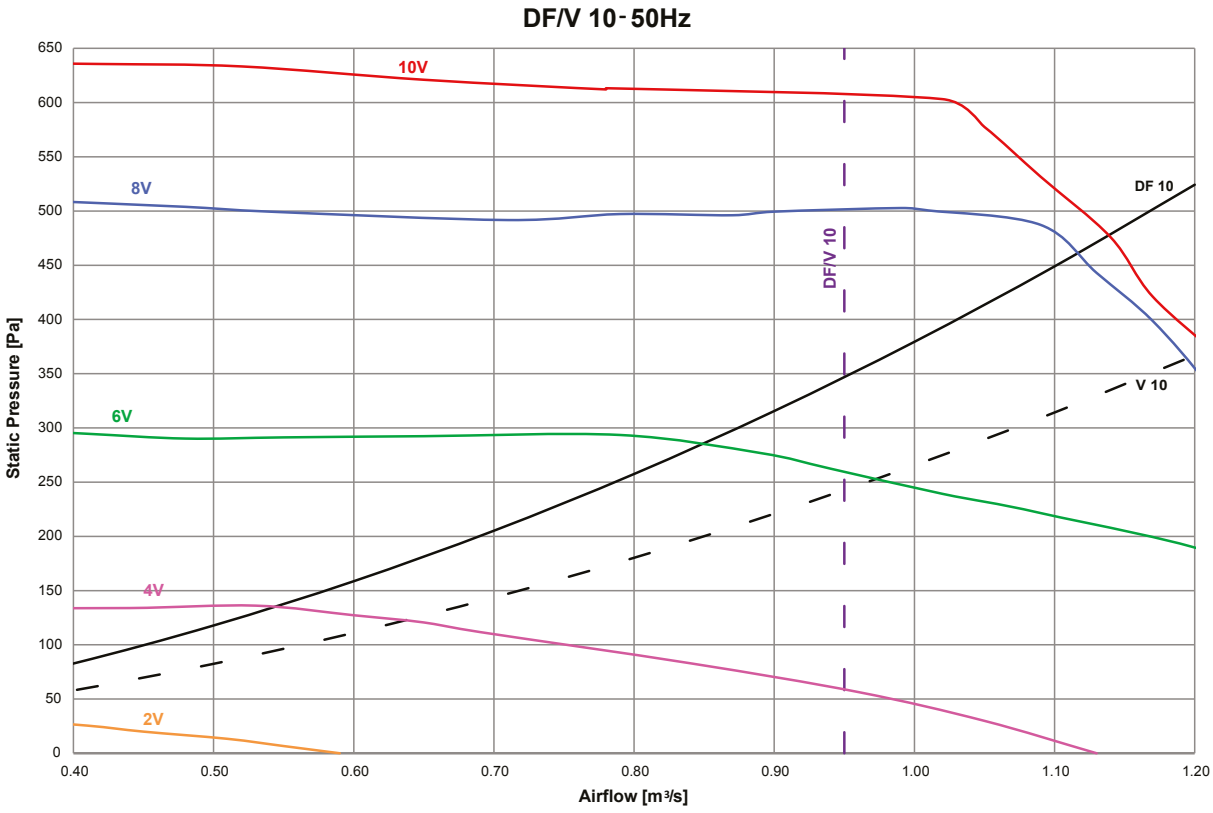


**EZE Direct Expansion 400V 50Hz (-0)**
**DF/V6 - 8 - 50Hz**

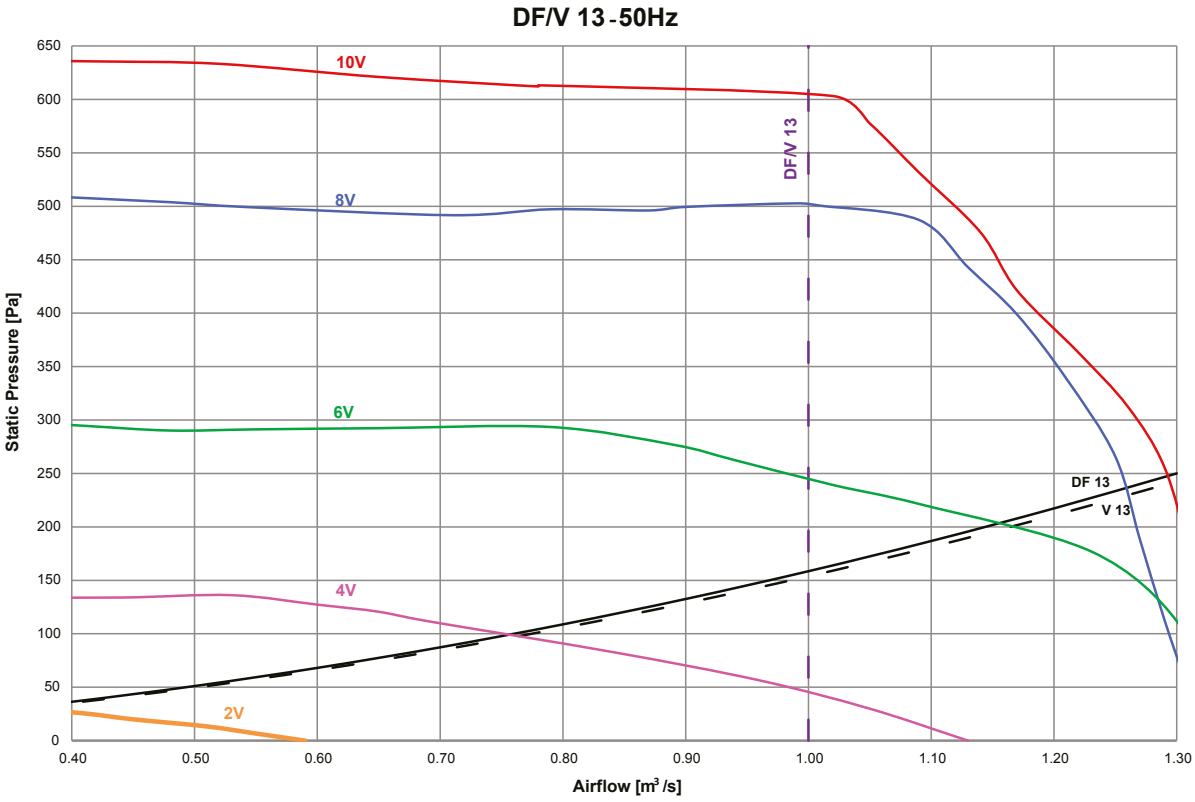



**DF/V10 - 50Hz**

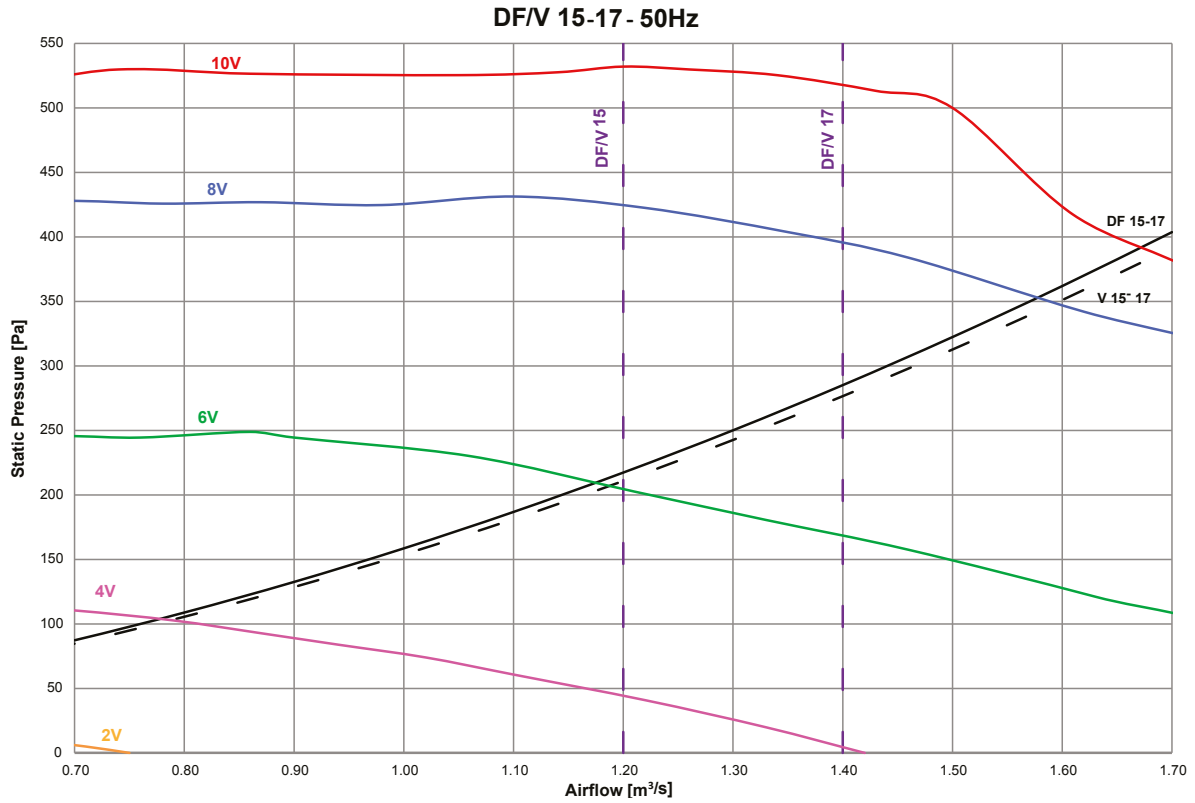


**EZE Direct Expansion 400V 50Hz (-0)**

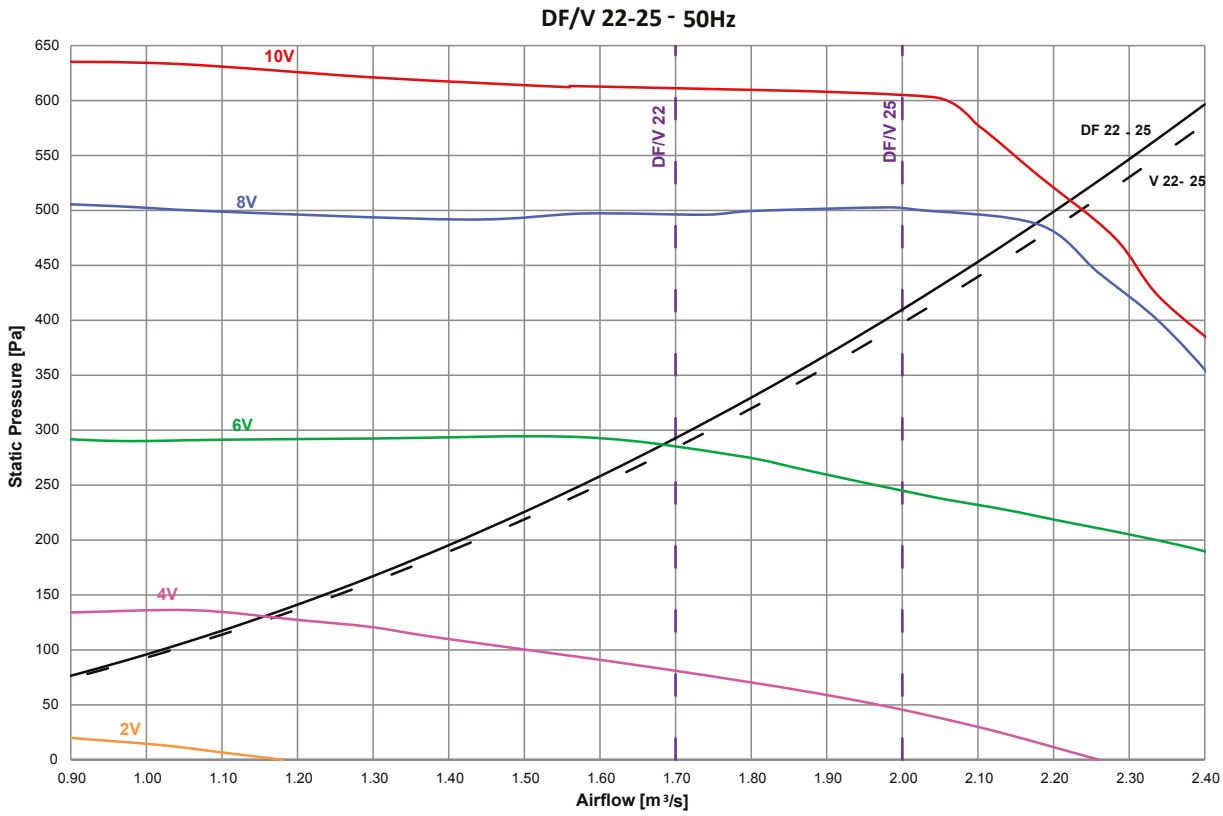
**DF/V 13 - 50Hz**



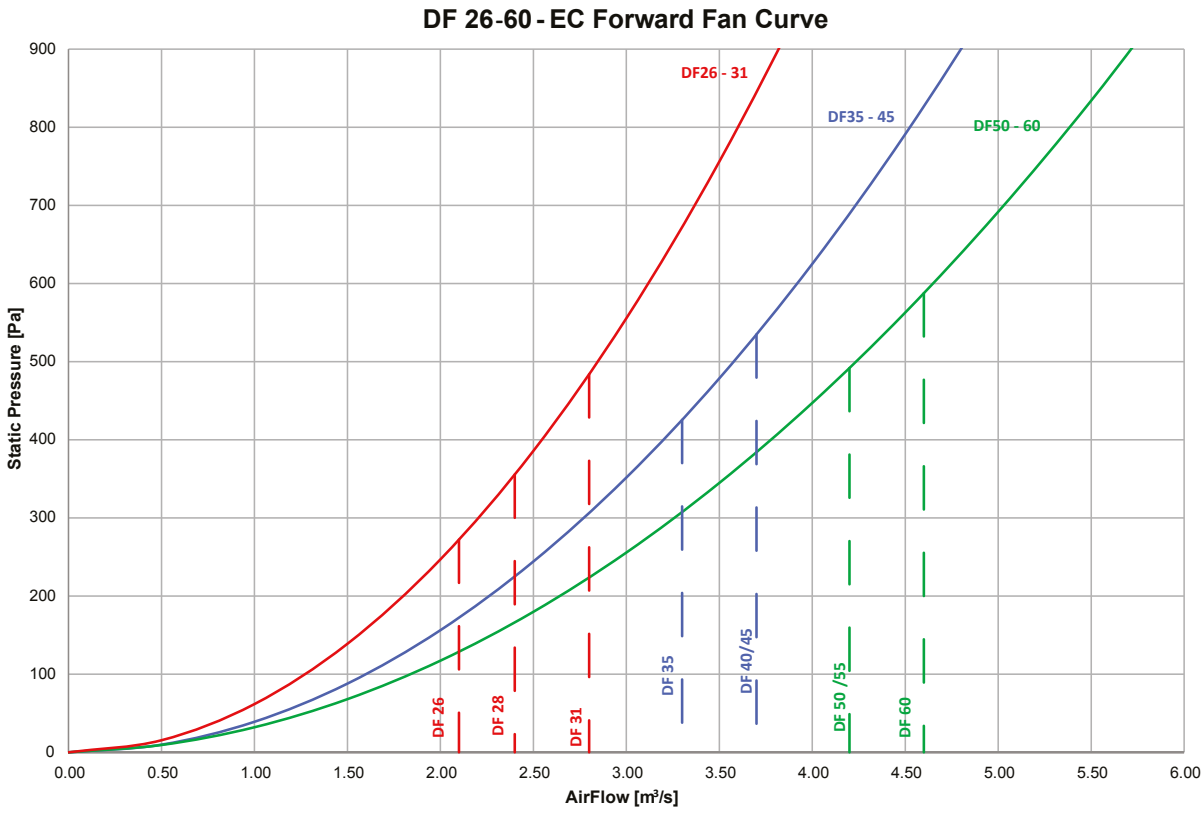

**DF/V15 - 17 - 50Hz**



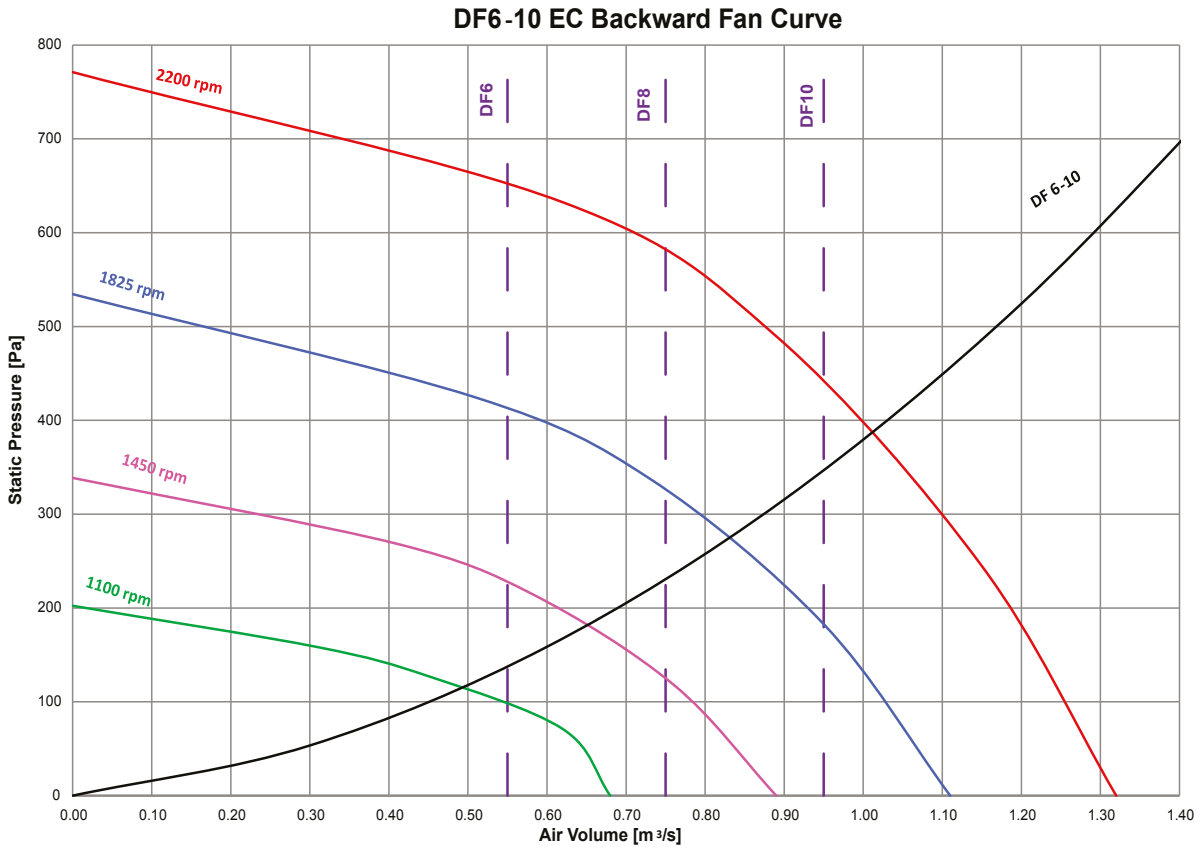
**EZE Direct Expansion 400V 50Hz (-0)**
**DF/V22 - 25 - 50Hz**



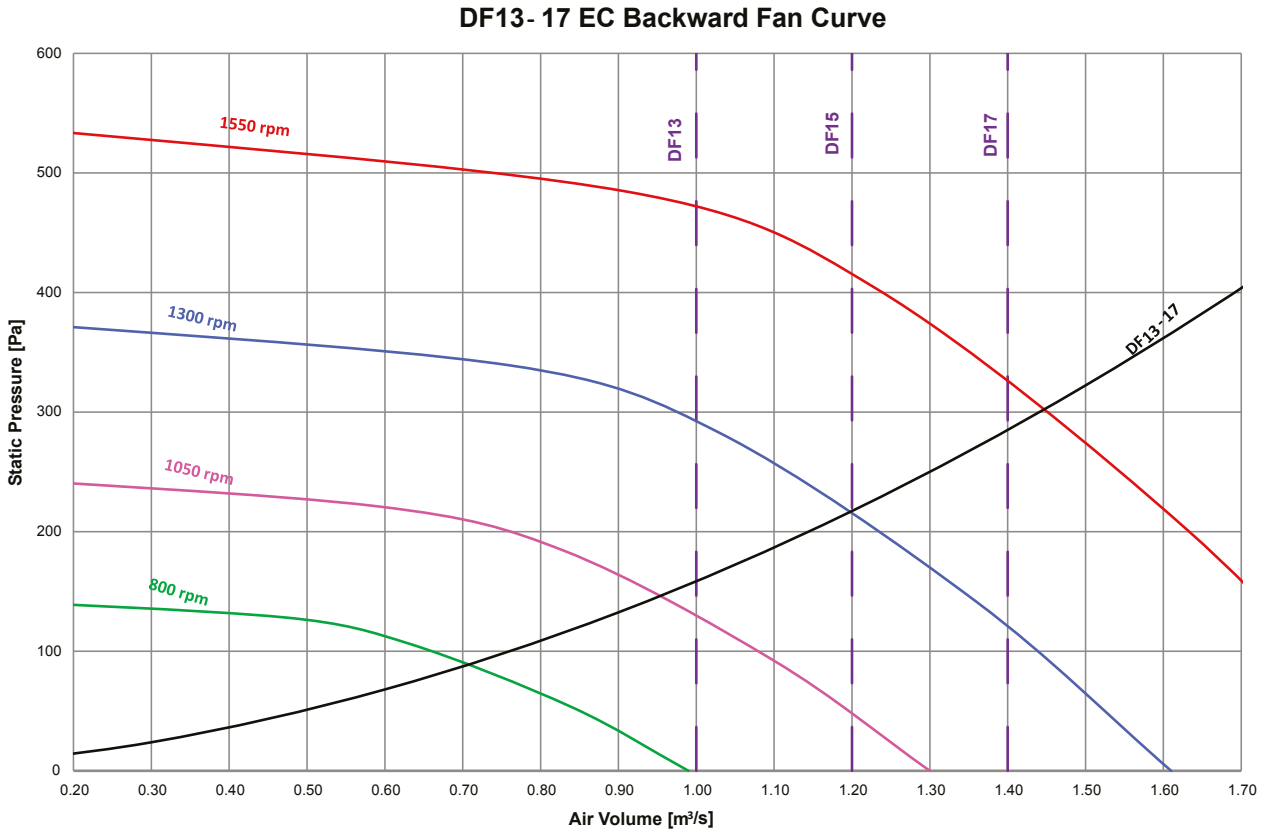

**DF26 - 60 - EC Forward Fan Curve**



**EZE Direct Expansion 400V 50Hz (-0)**
**DF6-10 EC Backward Fan Curve**

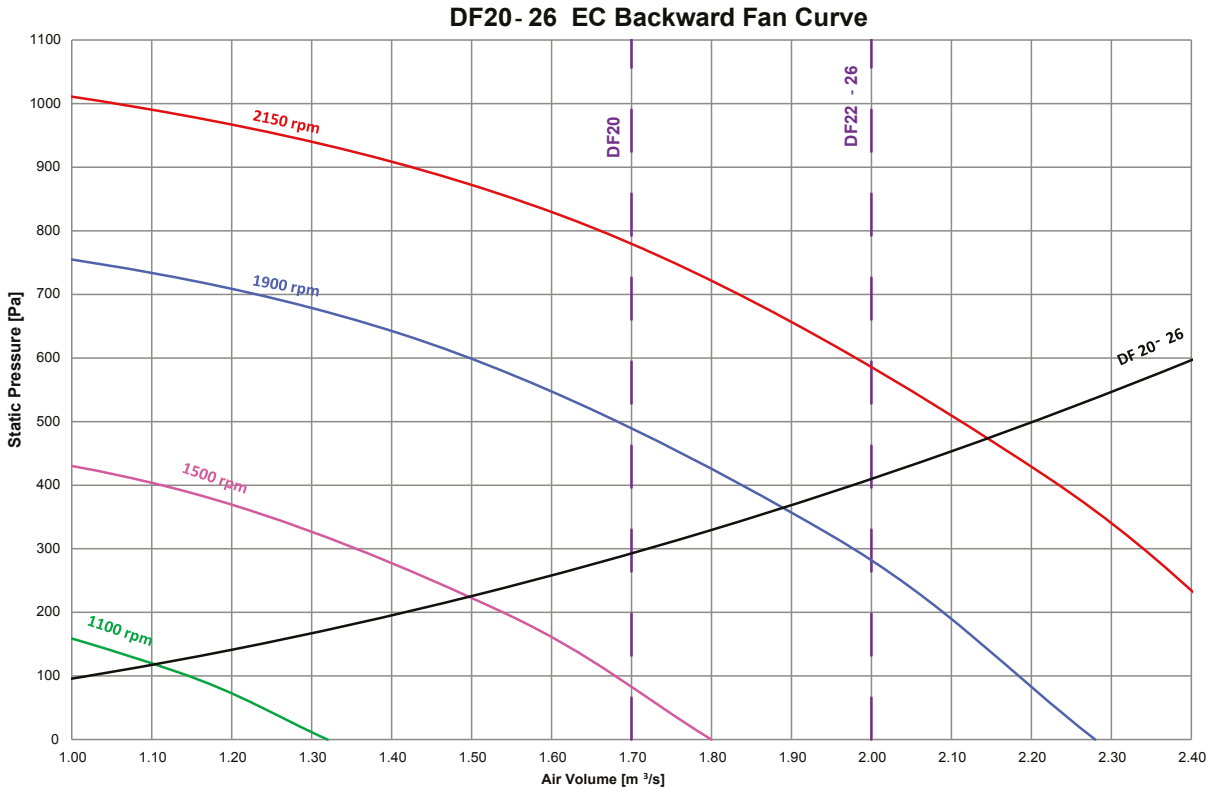



**DF13-17 EC Backward Fan Curve**

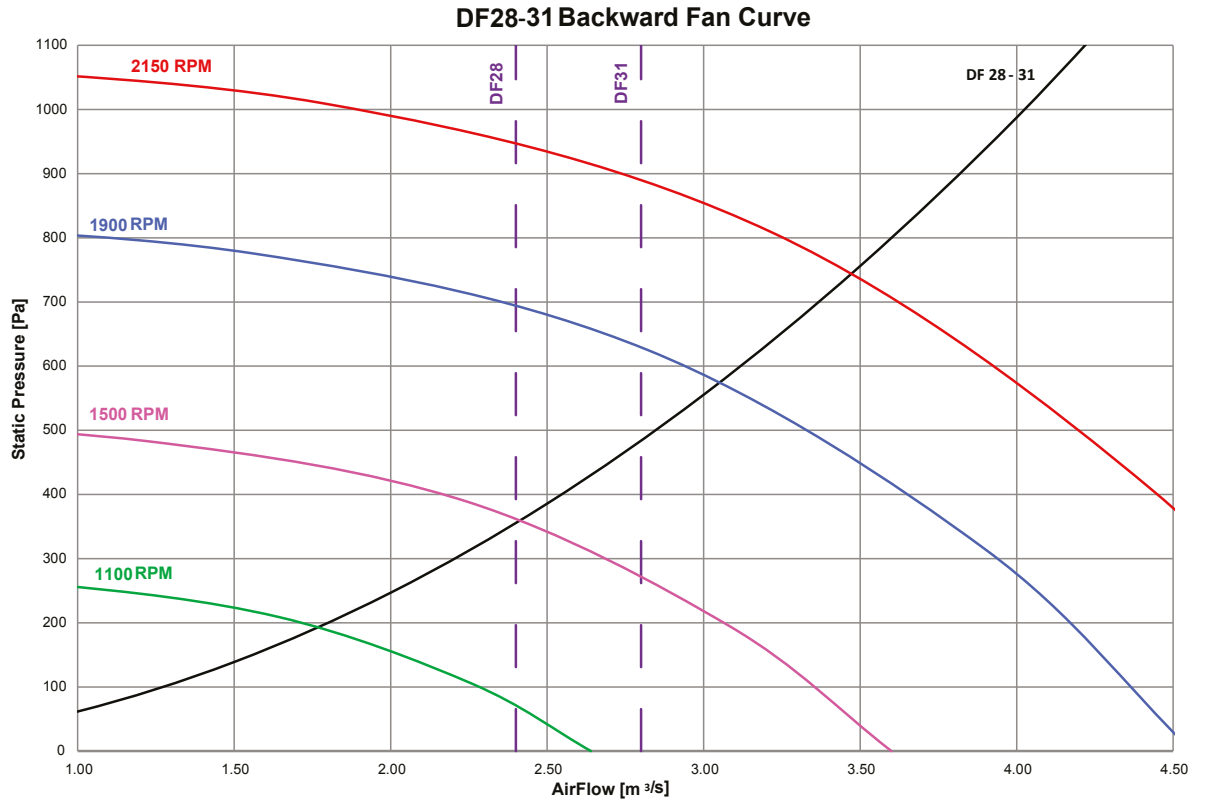


## EZE Direct Expansion 400V 50Hz (-0)

### DF20-26 EC Backward Fan Curve

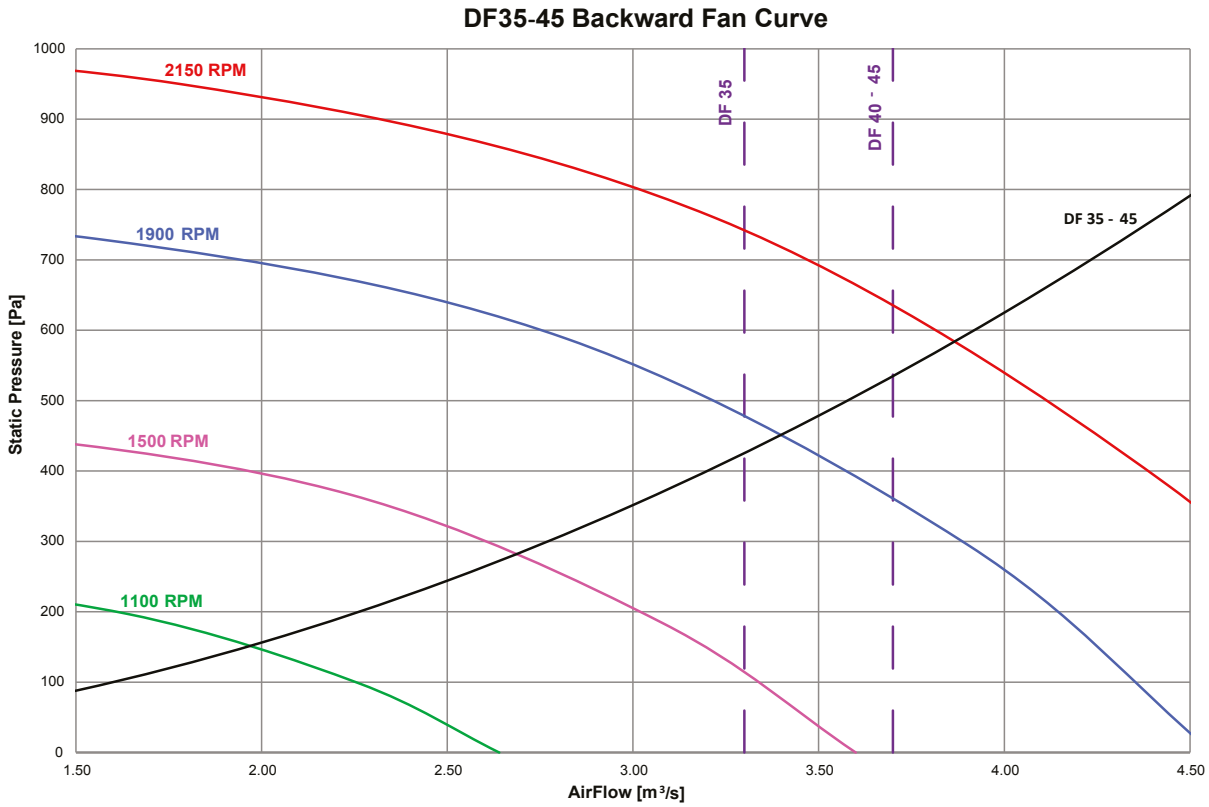



### DF28-31 Backward Fan Curve

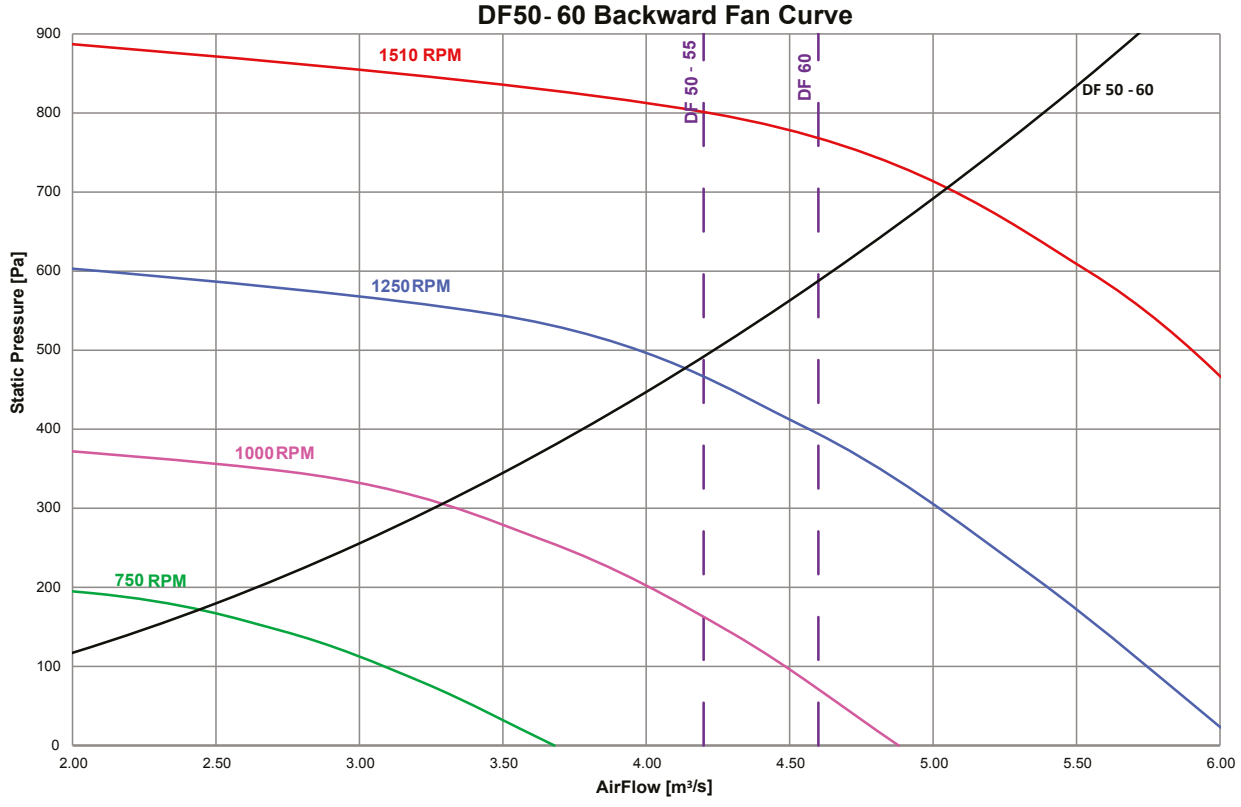


### EZE Direct Expansion 400V 50Hz (-0)

### DF35-45 Backward Fan Curve

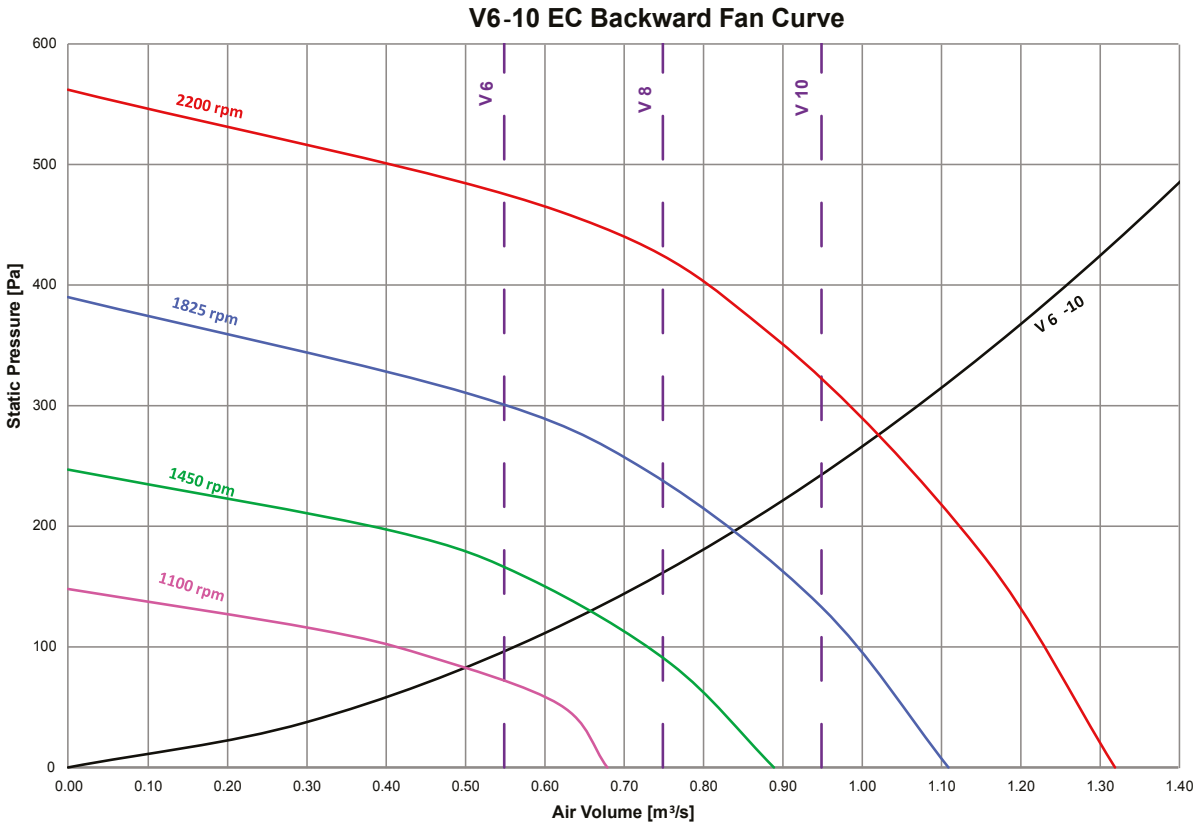



### DF50-60 Backward Fan Curve

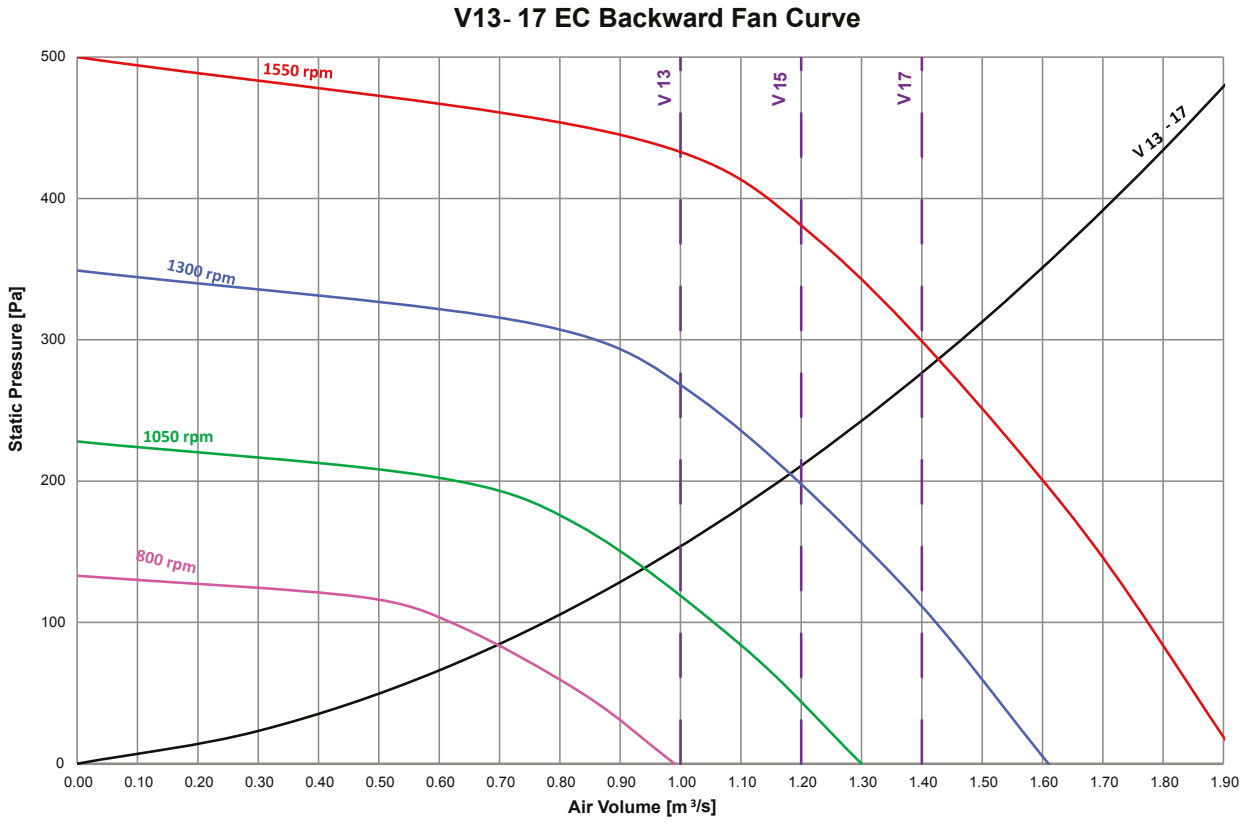


**EZE Direct Expansion 400V 50Hz (-0)**

**V6-10 EC Backward Fan Curve**

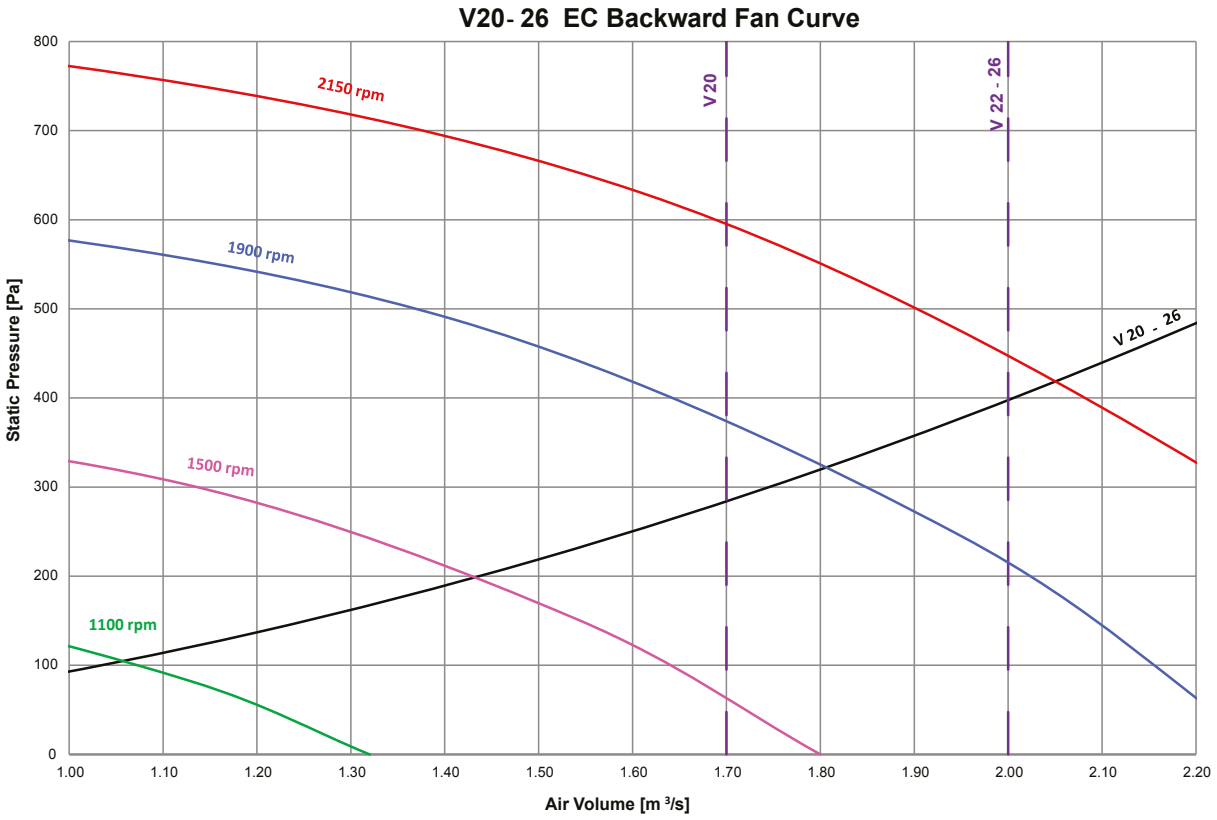



**V13-17 EC Backward Fan Curve**

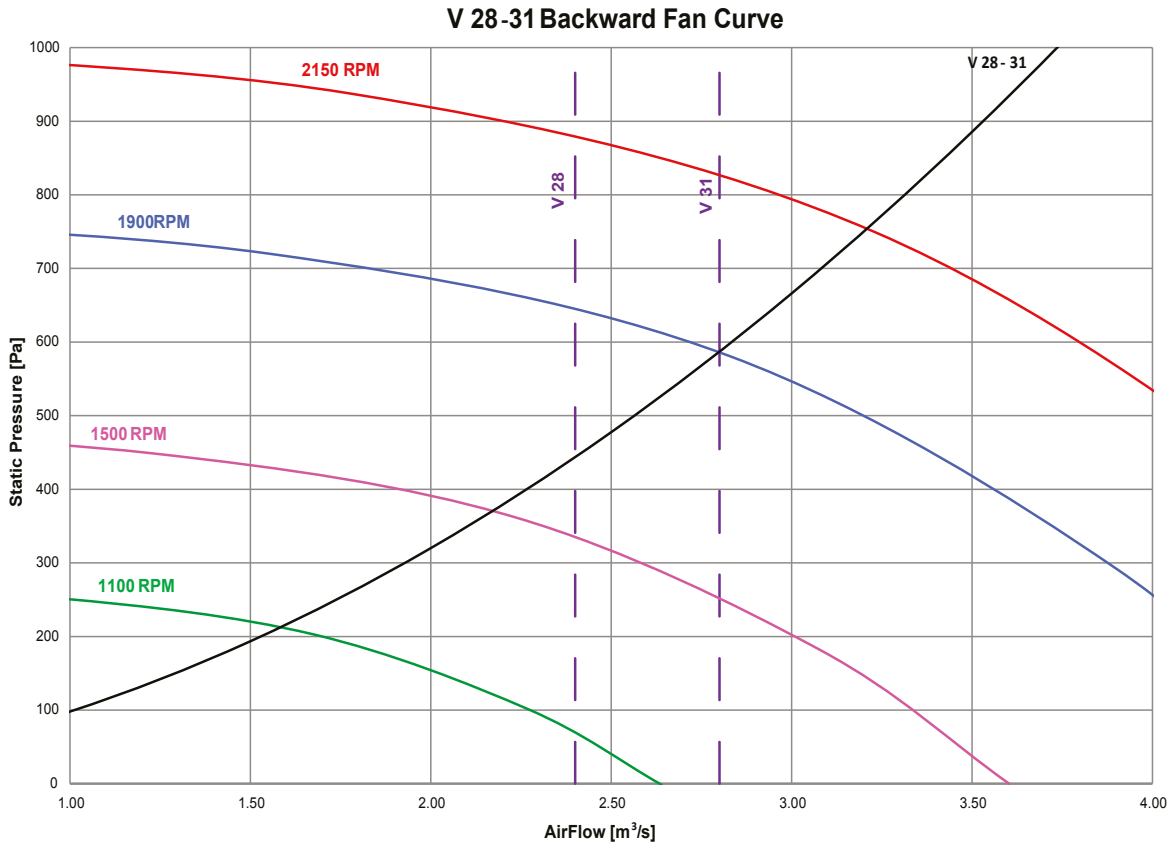


**EZE Direct Expansion 400V 50Hz (-0)**

**V20-26 EC Backward Fan Curve**

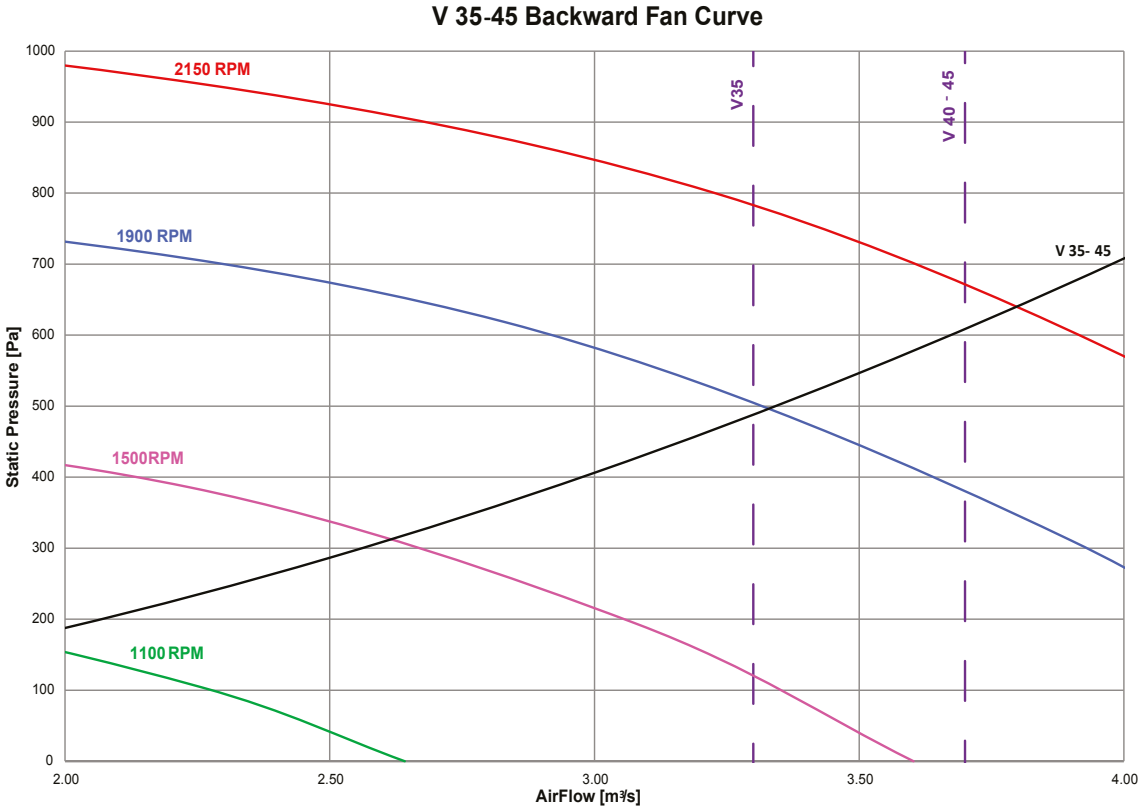



**V28-31 Backward Fan Curve**

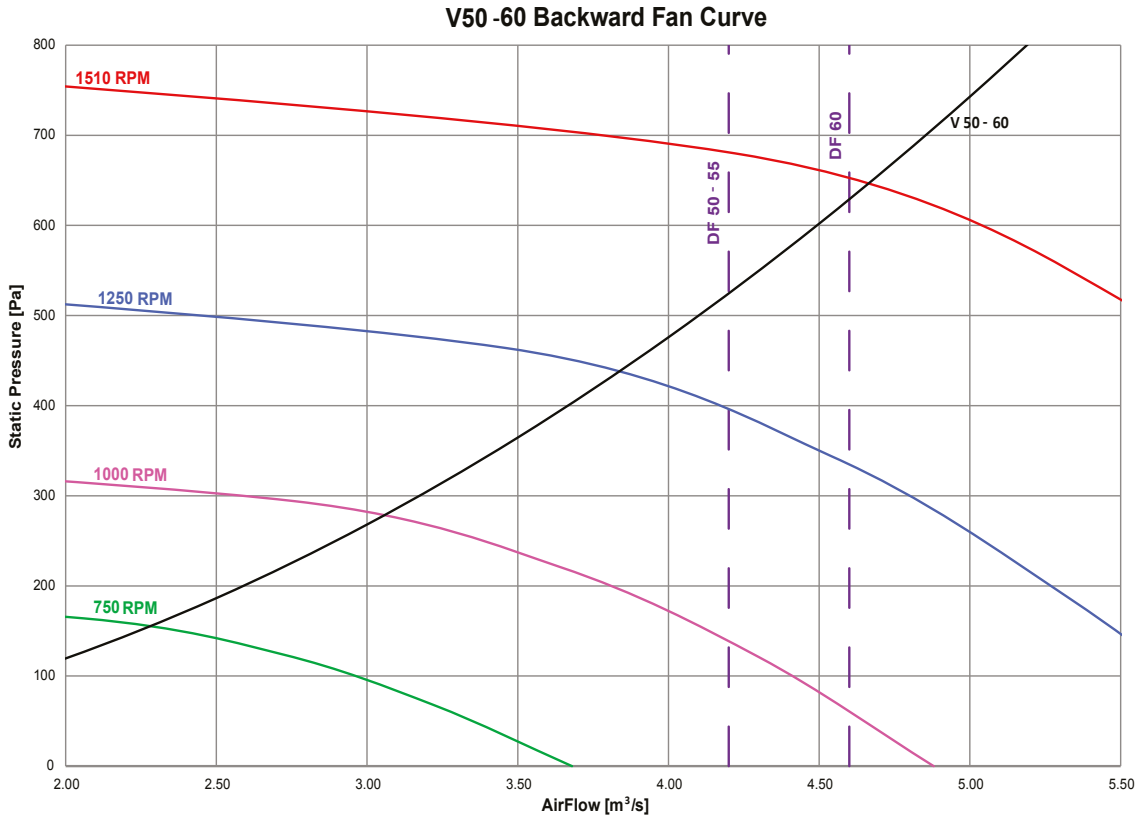


**EZE Direct Expansion 400V 50Hz (-0)**

**V35-45 Backward Fan Curve**




**V50-60 Backward Fan Curve**



## After Sales

### Warranty

All Airedale products or parts (non consumable) supplied for installation within the UK mainland and commissioned by an Airedale engineer, carry a full Parts & Labour warranty for a period of 12 months from the date of commissioning or 18 months from the date of despatch, whichever is the sooner.
Parts or Equipment supplied by Airedale for installation within the UK or for Export that are properly commissioned in accordance with Airedale standards and specification, not commissioned by an Airedale engineer; carry a 12 month warranty on non consumable Parts only from the date of commissioning or 18 months from the date of despatch, whichever is the sooner.
Parts or equipment installed or commissioned not to acceptable Airedale standards or specification invalidate all warranty.

### Warranty is only valid in the event that

In the period between delivery and commissioning the equipment:

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

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

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

Any spare part supplied by Airedale under warranty shall be warranted for the unexpired period of the warranty or 3 months from delivery, whichever period is the longer. To be read in conjunction with the Airedale Conditions of Sale - Warranty and Warranty Procedure, available upon request.

### Procedure

When a component part fails, a replacement part should be obtained through our Spares department. If the part is considered to be under warranty, the following details are required to process this requirement. Full description of part required, including Airedale's part number, if known. The original equipment serial number. An appropriate purchase order number.
A spares order will be raised under our warranty system and the replacement part will be despatched, usually within 24 hours should they be in stock. When replaced, the faulty part must be returned to Airedale with a suitably completed and securely attached "Faulty Component Return" (FCR) tag. FCR tags are available from Airedale and supplied with each Warranty order.
On receipt of the faulty part, suitably tagged, Airedale will pass to its Warranty department, where it will be fully inspected and tested in order to identify the reason for failure, identifying at the same time whether warranty is justified or not.
On completion of the investigation of the returned part, a full "Report on Goods Returned" will be issued. On occasion the release of this complete report may be delayed as component manufacturers become involved in the investigation. When warranty is allowed, a credit against the Warranty invoice will be raised. Should warranty be refused the Warranty invoice becomes payable on normal terms.

### Exclusions

Warranty may be refused for the following reasons.

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

### Returns analysis

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

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