



# EasiCool™

## 6 - 64kW

ENHANCED EASICOOL™ RANGE:

- + Up to 37% increase in EER
  - + Up to 8% more cooling kW/m<sup>2</sup>
- Compared with our previous generation EasiCool units



# Precision air conditioning

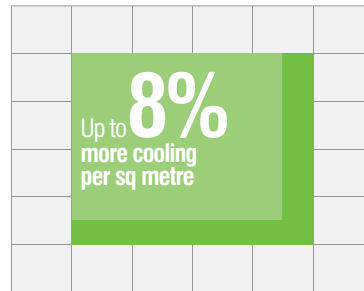
In a value, flexible package

**The EasiCool™ is a quiet, efficient, indoor unit that maintains a precisely controlled air conditioned environment within the smallest possible footprint.**

An excellent value, modular package that is easy to install, the EasiCool™ is ideal for small computer rooms and other critical applications where performance and reliability are essential and space is at a premium. Providing exceptional configuration flexibility, the EasiCool™ enables you to tailor unit selection to your specific application.

**An extensive 374 models offer a choice of:**

- Downflow or upflow configuration
- 17 capacity steps
- Three cooling types: Air cooled, water cooled or chilled water
- Two refrigerants: R410A (EZRE) or R407C (EZE)
- Three power supplies: 400V/50Hz (-0); 380V/60Hz (-1) or 220V/60Hz (-2)
- Six case sizes
- Full function (cooling, heating and de-humidification) or cooling only



## Minimum space claim

The EasiCool™ typically offers up to 8% more cooling per kW/m<sup>2</sup> than our previous generation EasiCool™ systems



Backward curved EC fan  
**Up to 70% more efficient\***

Electronically commutated (EC) fans give increased performance for reduced power input

\* than an AC fan at part load



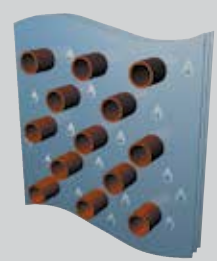
Tandem scroll compressors  
**More precise capacity match**

Quiet and cost effective scroll compressors in tandem sets for part load efficiencies (20 – 64kW upflow and selected downflow models)



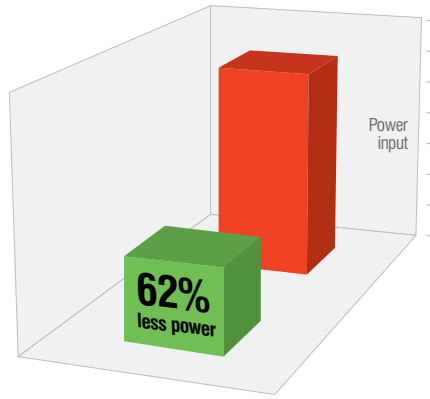
Variable humidification  
**Using less power input**

Efficient de-humidification uses less mechanical cooling and minimum re-heat whilst maintaining precise humidification control



Optimised evaporator  
**More cooling, less space claim**

Slab evaporator combined with hydrophilic fin technology to give more cooling in an extremely compact footprint



■ Power input with HGRH (kW)  
 ■ Power input with electric heating (kW)

# Up to 62% less power input on average with hot gas re-heat (HGRH)

Where heating is used during the cooling de-humidification process, hot gas re-heat (HGRH) offers an eco-friendly, re-heat capability by utilising energy that would normally be rejected outside by the condenser. HGRH is far more efficient than existing electric heat or low pressure hot water as no further power input is required over the standard power requirement for the refrigeration circuit.

## EasiCool EER increased by up to 37%

The enhanced EasiCool™ range offers EER\* values up to 37% higher than Airedale's previous generation EasiCool™ units. Whilst ensuring the lowest possible life-cycle costs, the EasiCool™ supports stable conditions for sensitive equipment in critical environments where load conditions are typically fluctuating. Intuitive control strategies anticipate and respond immediately to expected or unforeseen load variations, intelligently switching to the best operating mode. Control-led key components work in harmony, simultaneously balancing temperature, humidity, air flow and pressure to maximise part load efficiencies whilst precisely maintaining setpoint.

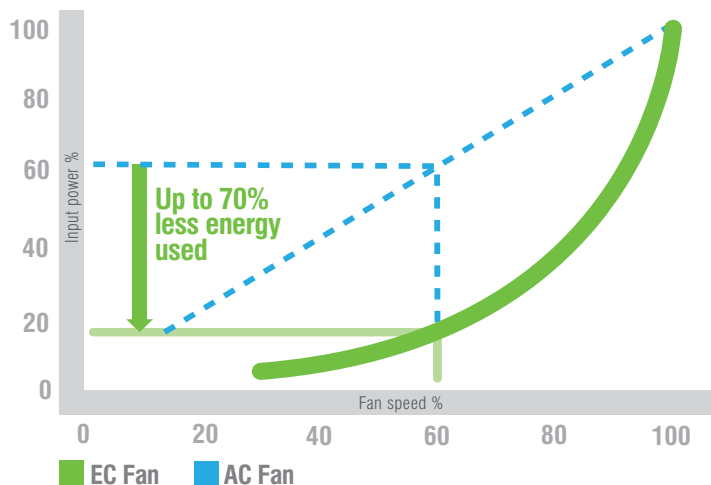
\*EER: Energy Efficiency Ratio

Precise capacity match

## 50 – 100% modulation

When the EasiCool™ is supplied with an optional suction throttle valve and electronic expansion valve compared with a standard tandem scroll compressor configuration

## EC fan: Up to 70% more efficient than an AC fan at part load



# Up to 70% energy savings\*

EC fans available on every unit



Quiet, speed-controlled EC (electronically commutated) fans use substantially less power than an AC fan equivalent at part load conditions. They respond seamlessly to load fluctuations, improving room air distribution and management.

\* than an AC fan at part load

# Easy, versatile

## Future-proof in application

User-friendly and future-proof, the EasiCool™ is designed to give the best performance in all operating conditions, whether in clean rooms, computer rooms, data centres, hospitals, laboratories or other commercial applications.

### Growing with your application

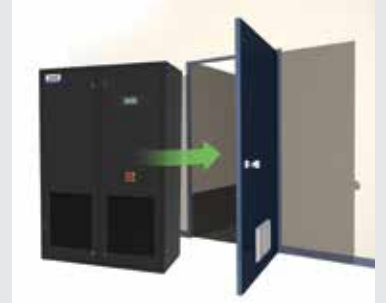
When load increases, the compact, modular design of the EasiCool™ makes it easy for multiple units of different size and capacity to be added. As an intelligent stand-alone unit or when networked with up to eight units, the EasiCool™ adapts to your room requirements and ensures 24/7 availability.

### Low sound

When matched with the appropriate Airedale outdoor unit, the EasiCool™ effectively minimises sound during night-time operation and in outdoor sound-critical applications. Night-time set back is also an option. The R410A EasiCool™ can be matched with an R410A configured condenser with EC fan option for even greater efficiency and lower sound levels. See page 5 'Environment' for more details of how the EasiCool™ achieves low sound levels.

### Easy to install and maintain

Being a single circuit system, the need for multiple pipe work connections is minimised reducing installation costs. The rigid aluminium exo-frame allows for full service from the front and full 360° unit service and maintenance access via detachable access panels.



EasiCool™: Fits through a standard door

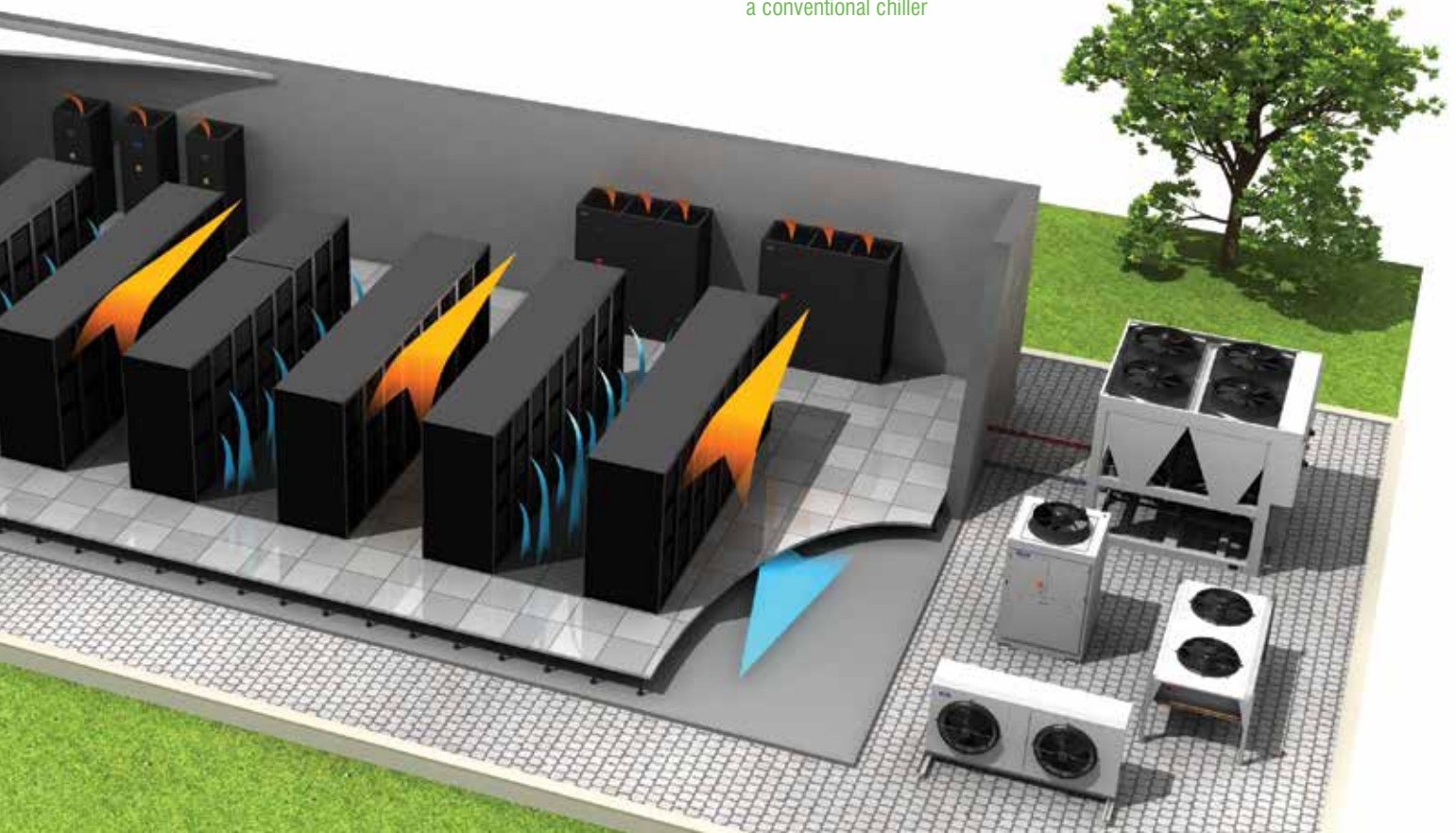
Over  
**50%**  
energy savings



When an EasiCool™ is applied with an Airedale free-cooling chiller compared with a conventional chiller

### Free-cooling for up to 95% of the year

In a 24/7 data centre with a typical room temperature of 24°C, total life cycle costs can be significantly reduced when EasiCool™ chilled water units are integrated with an Airedale free-cooling chiller which captures free-cooling whenever the ambient is below the return water temperature.







# Intelligent controls

## Seamlessly managing your system

The control centre of each of our cooling systems is a sophisticated electronic microprocessor with control logic specially developed by Airedale. The intelligent microprocessor uses sensors to send and receive messages to and from active components so they respond and interact. By integrating and sequencing components, the controller manages and optimises the system's performance, availability and power draw, giving the operator complete system control.

**Smart networking solutions:** Fully-programmable via the control panel's user-friendly display, the microprocessor can be linked with all standard BMS protocols to:

-  **Trigger alarm messages**
-  **Send alarm/service messages via email or SMS using an interface**
-  **Operate time scheduling**
-  **Allow adjustment of temperature setpoints**

# 30%

## increase in EER\*

An electronic expansion valve (EEV) and reduced head pressure control setting

\*Energy Efficiency Ratio



## Taking building management to another level



ACIS™ building management system developed by Airedale, enables you to manage smart cooling and other building services, from any manufacturer, in a single, integrated system across multiple sites and communication protocols. ACIS™ sits at the front end of a building system, putting you in control of reducing operating costs.

With the click of a button on a PC, tablet or phone, intelligent information can be pulled back automatically for remote 24/7 monitoring and maintenance; enhanced system operation and improved decision-making.



### Integration protocols

- Modbus®
- BACnet™
- SNMP
- ECHELON™  
THE LoxWORKS COMPANY

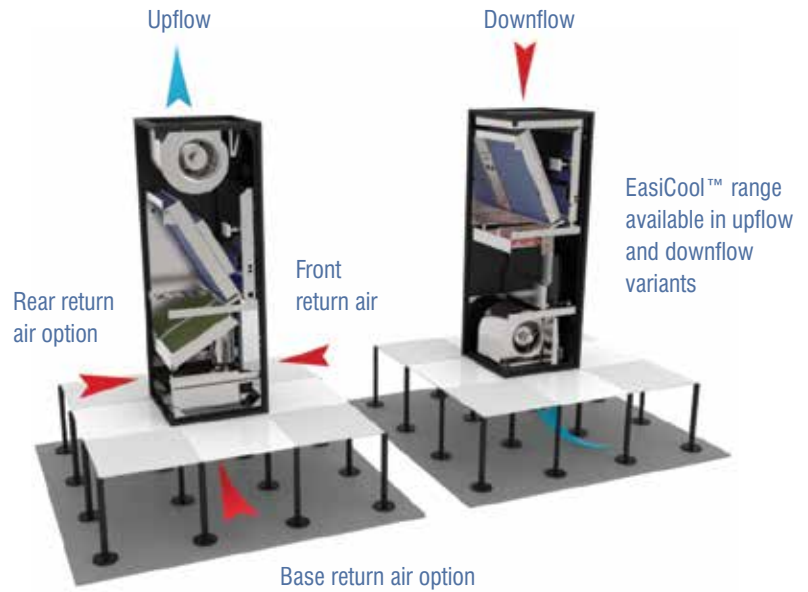
# Specifications

## At a glance

Configuration flexibility and a choice of 374 models allow selection of the optimum specification in terms of capacity, energy efficiency and sound.

### Downflow and upflow configuration

The EasiCool™ downflow unit is ideal for computer rooms and low density areas of a data centre with a raised floor. Upflow models are available configured as base return air for rooms with a raised floor or as rear or front return air (the latter is particularly suitable where the EasiCool™ unit is positioned against a wall).



### KEY

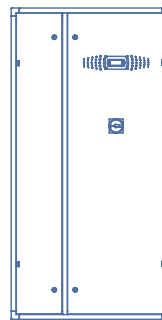
EZRE = R410A

EZE = R407C

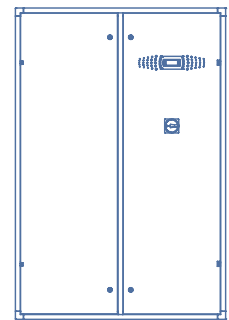
Case size	Height (mm)	Width (mm)	Depth (mm)
1	1940	670	670
2	1940	990	670
3	1940	1310	670
4	1940	1460	750
5	1940	1835	750
6	1940	2170	750



EZRE 6 – 10  
EZE 6 – 10



EZRE 13 – 17  
EZE 13 – 17



EZRE 20 – 26  
EZE 22 – 25

## Environment

- Optimised for R410A which has a high heat transfer coefficient and requires minimum refrigerant charge
- Low noise, axial condenser fans housed in a bellmouth to enhance efficiency and reduce sound levels
- Quiet scroll compressors minimise sound
- Direct drive, speed controllable, forward curved EC fan options (indoor) for reduced sound and power input (6 – 26kW)
- 30mm acoustic insulation on all panels minimises sound levels for quieter operation

### Optional

- Upgradeable condenser options to reduce sound and enhance energy efficiency at higher ambients
- Direct drive, speed controllable, backward curved EC fan (indoor) for reduced sound and power input
- Axial EC fans (outdoor) for low sound and power input

## Mechanical

- 6 – 64kW nominal cooling capacities
- 374 models
- Six case sizes; each fit through a standard door frame
- Downflow or upflow configurations
- Single circuit systems for quick, simple and low cost installation, minimising multiple pipe work connections
- 'Slab' evaporator coil with hydrophilic-coated fins to maximise design air flows and cooling capacity
- Efficient forward curved EC fans as standard on the following 50Hz units: R410A 6-26kW; R407C 6-25kW
- Easy access to components from the front of the unit and full 360° unit access via detachable access panels
- Painted aluminium exo-frame that is extremely rigid

### Optional

- Efficient backward curved EC fans; open and enclosed floor stands available
- Anti-vibration mounts
- Duct extensions and integrated plenum enhance sound levels (upflow models)
- Dual purpose condensate pump for humidifier and condensate drains

## Complete cooling solutions

Designed as an efficient, stand-alone indoor unit, the performance of the EasiCool™ is further enhanced when integrated with Airedale outdoor products.

## EU F-Gas Regulations

This product range contains R407C/R410A fluorinated greenhouse gases with a GWP of 1774 (R407C), 2088 (R410A), weight range of 1.0 - 13.3kg, representing 2.0 - 23.5 equivalent tonnes of CO<sub>2</sub>.



### Air cooled

The DX air cooled EasiCool™ can be linked with an Airedale condenser; the condenser is designed for night-time operation and outdoor noise-critical applications



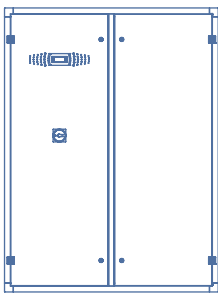
### Water cooled

A DX water cooled EasiCool™ can be applied with an Airedale dry cooler or cooling tower

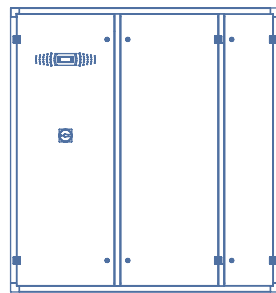


### Chilled water

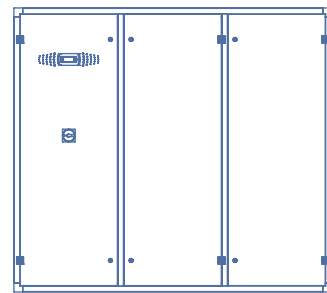
One or more chilled water EasiCool™ units can be integrated with an Airedale chiller; see page 3 for details of how an Airedale free-cooling chiller can achieve savings of over 50% compared with a conventional chiller



EZRE 28 – 31  
EZE 26 – 31



EZRE 35 – 45  
EZE 35 – 45



EZRE 50 – 60  
EZE 50 - 60

## Precision

- Full function (cooling, heating and de-humidification) or cooling only
- Variable humidification for precise relative humidity control (adjustable from display)
- Tandem scroll compressors to more precisely match the application (20 – 64kW upflow and selected downflow models)

### Optional

- Staged electric heating during de-humidification to ensure thermal balance
- Electric heating for precise control and can be upgraded with thyristor control for fully modulated output
- Low pressure, hot water heating (LPHW)
- Suction throttle valve technology for 50 – 100% variable capacity and precise setpoint control

## Electrical & Controls

- Advanced controls technology including alarm management, time scheduling and adjustment of setpoints
- Latest technology control platform for faster processing of information
- Monitoring and adjustment of the head pressure from the display for easier on-site commissioning
- Single point of isolation for ease of maintenance

### Optional

- ACIS™ building energy management integrates cooling and other building services, improves data and reduces lifecycle costs
- Electrical supply phase rotation protection
- Energy Manager for local and remote energy analysis and power monitoring
- Refrigerant leak detection for F Gas compliance
- Fire, flood and smoke detection

## Energy-saving

- Tandem scroll compressors increase part load efficiencies and flexibility in application (20 – 64kW upflow and selected downflow models)
- EC fans available on all units (indoor and outdoor) contribute to up to 37% increase in EER (Energy Efficiency Ratio)
- Intelligent, variable head pressure control for increased efficiency (adjustable from display)
- Optimised evaporator coils for maximum capacity ensuring low cost per kW.
- High efficiency G4 (EU4) rated, pleated disposable filters give superior high performance with lower airside pressure drops

### Optional

- Hot gas re-heat utilises heat that would normally be rejected by the condenser (model dependent)
- Electronic expansion valves (EEVs) for up to 30% increase in efficiency







# EasiCool CW chilled water

		Chilled water												
		EZRE-0 (50Hz 400V/N)				EZRE-1 (60Hz 380V/N)				EZRE-2 (60Hz 220V)				
		Nominal capacity <sup>8</sup>				Nominal capacity <sup>8</sup>				Nominal capacity <sup>8</sup>				
Case size	Model <sup>1</sup>	TC (kW)	SC (kW)	EER <sup>3</sup>	Rec mains fuse (A)	TC (kW)	SC (kW)	EER <sup>3</sup>	Rec mains fuse (A)	TC (kW)	SC (kW)	EER <sup>3</sup>	Rec mains fuse (A)	Sound pressure @ 3m (dBA) <sup>5</sup>
<b>Downflow DF</b>														
1	DF6CW	8.0	7.4	38.01	25	8.0	7.4	15.23	32	8.0	7.4	15.23	40	43
	DF8CW	9.7	9.1	20.58	25	9.7	9.1	17.33	32	9.7	9.1	17.33	50	48
	DF10CW	11.8	11.8	16.07	25	11.8	11.8	15.23	32	11.8	11.8	15.23	50	51
2	DF13CW	15.4	13.9	29.61	25	15.4	13.9	19.95	32	15.4	13.9	19.95	50	48
	DF15CW	17.4	16.1	26.04	32	17.4	16.1	26.25	32	17.4	16.1	26.25	50	46
	DF17CW	19.0	17.3	18.80	32	19.0	17.3	28.56	32	19.0	17.3	28.56	50	50
3	DF20CW	22.9	20.8	24.36	40	22.9	20.8	14.91	50	22.9	20.8	14.91	80	52
	DF22CW	24.6	22.7	14.07	40	24.6	22.7	15.96	50	24.6	22.7	15.96	80	52
	DF26CW	26.9	24.8	15.44	40	26.9	24.8	17.43	50	26.9	24.8	17.43	80	56
4	DF28CW	35.9	32.0	13.76	63	35.9	32.0	39.48	63	35.9	32.0	39.48	125	55
	DF31CW	39.9	36.2	8.72	63	39.9	36.2	24.78	80	39.9	36.2	24.78	125	58
5	DF35CW	45.9	42.6	9.98	80	45.9	42.6	28.56	80	45.9	42.6	28.56	160	58
	DF40CW	50.0	46.8	7.98	80	50.0	46.8	22.68	100	50.0	46.8	22.68	160	60
	DF45CW	53.1	49.8	8.40	80	53.1	49.8	24.05	100	53.1	49.8	24.05	160	60
6	DF50CW	53.9	51.6	10.40	100	53.9	51.6	29.61	100	53.9	51.6	29.61	160	56
	DF55CW	61.4	56.1	11.76	100	61.4	56.1	33.71	100	61.4	56.1	33.71	160	56
	DF60CW	65.4	60.4	9.35	100	65.4	60.4	26.67	100	65.4	60.4	26.67	200	58
<b>Upflow V</b>														
1	V6CW	8.0	7.4	47.04	25	8.0	7.4	15.23	32	8.0	7.4	15.23	40	37
	V8CW	9.7	9.1	24.89	25	9.7	9.1	17.33	32	9.7	9.1	17.33	50	42
	V10CW	11.8	11.8	20.16	25	11.8	11.8	15.23	32	11.8	11.8	15.23	50	45
2	V13CW	15.4	13.9	30.77	25	15.4	13.9	19.95	32	15.4	13.9	19.95	50	42
	V15CW	17.4	16.1	26.88	32	17.4	16.1	26.25	32	17.4	16.1	26.25	50	41
	V17CW	19.0	17.3	19.32	32	19.0	17.3	28.56	32	19.0	17.3	28.56	50	45
3	V20CW	22.9	20.8	24.89	40	22.9	20.8	14.91	50	22.9	20.8	14.91	80	47
	V22CW	24.6	22.7	14.49	40	24.6	22.7	15.96	50	24.6	22.7	15.96	80	47
	V26CW	26.9	24.8	15.86	40	26.9	24.8	17.43	50	26.9	24.8	17.43	80	51
4	V28CW	35.9	32.0	10.29	63	35.9	32.0	29.30	63	35.9	32.0	29.30	125	58
	V31CW	39.9	36.2	8.72	63	39.9	36.2	24.78	80	39.9	36.2	24.78	125	60
5	V35CW	45.9	42.6	9.98	100	45.9	42.6	28.56	100	45.9	42.6	28.56	160	60
	V40CW	50.0	46.8	7.98	100	50.0	46.8	22.68	100	50.0	46.8	22.68	200	62
	V45CW	53.1	49.8	8.40	100	53.1	49.8	24.05	100	53.1	49.8	24.05	200	62
6	V50CW	53.9	51.6	7.67	100	53.9	51.6	21.95	100	53.9	51.6	21.95	200	64
	V55CW	61.4	56.1	8.82	100	61.4	56.1	25.10	100	61.4	56.1	25.10	200	64
	V60CW	65.4	60.4	9.35	100	65.4	60.4	26.67	100	65.4	60.4	26.67	200	66

TC = total cooling | SC = sensible cooling

Electric heating available on all above units - refer to EasiCool technical manual

3) EER data is for units fitted with EC backward curved fans

5) Ducted rear return air on upflow models

8) Nominal cooling based on 24°C db/45% RH return air, 7-12°C water entering-leaving

Performance data calculated in accordance with BSEN 14511-2011 and Eurovent 6/6



## EasiCool™ in action: Victoria & Albert Museum data centre

### “ Reliability of the cooling system is key

We have put in an energy efficient model. The EasiCool™ is a robust, well sized design for the room and the four EasiCool™ 40kW downflow units are giving excellent performance. The prime driver is the resilience of the IT systems; reliability of the cooling system is key. We also have a maintenance contract with Airedale that gives us remote alarm monitoring.

Airedale knows about a change in state before we do. Not many companies can provide Airedale's level of quality and reliability. It is the whole package: Airedale covered all key design considerations. It all works perfectly. ”

**Edmund Fosbrook**  
Senior Estate Manager, V&A

# Total support

Whenever you need it

At Airedale, we don't just manufacture and supply cooling and refrigeration products; we also provide a broad range of supporting services to ensure our customers receive the best possible aftersales care.

With more than 40 years' experience in business critical cooling, investing in an Airedale cooling or refrigeration solution means that you can benefit from our advice, expertise and technical support too. From design and selection, through to commissioning and beyond, we make sure your system reduces your total cost of ownership, whilst providing maximum availability and longevity.

## Service plans Maximising your system's effectiveness 24/7



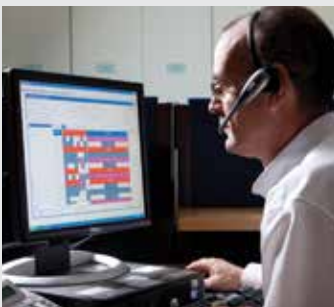
An Airedale service plan provides a planned, preventative maintenance package to sustain the optimum efficiency of your system, enabling the user to see real savings in energy costs and reduced carbon emissions.

With Airedale, you can rest assured that help is never far away. Our 24/7 emergency helpline and call out service is available 365 days of the year, ensuring that we are always on hand to provide expert advice and immediate help, day or night.

A guaranteed emergency response time means that a qualified Airedale engineer will be with you in no time, therefore maximising your system's uptime. Service plans also ensure F Gas compliance and incorporate a full parts and labour warranty for the first 12 months.

For more information visit [www.airedale.com](http://www.airedale.com)

\* For customers outside the UK, our international distributors trained by Airedale would be pleased to offer service on Airedale units



### Talk directly with an experienced engineer

Find out how we design our systems to reduce your whole life costs. Our highly experienced engineers are adept at tailoring our systems to suit your requirements.

**+44 (0)113 239 1000**



### Have complete control of your site

Customers with critical sites can benefit from our remote monitoring facility. Aftersales services include chiller sequencing, network setup and integration as well as a live demonstration and training centre at our head office.



### 24/7 support; maintenance and spares

Immediate help on hand to keep your critical cooling system operational. Realise the full potential of your system; improve its longevity and efficiency and be F Gas compliant. Avoid downtime with our fast, efficient spares service.



### Develop your skills

Learn more about your cooling system by attending an air conditioning and refrigeration course in our purpose-built training school. Train on high-tech cooling systems and fully operational rigs in our dedicated workshops. Industry recognised courses also available. Email [training@airedale.com](mailto:training@airedale.com) for further details.

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