



Product portfolio 2018

# Chillers and air side equipment



# Daikin Chillers



Whatever your needs in climate control or process chilling, there is a system that has proved its value in many situations – from factories and warehouses to hotels and department stores, and even district cooling for residential applications.

Daikin's ranges of air-cooled and water-cooled chillers are designed to suit every application – large or small – offering the ultimate in flexibility and control. The unique combination of advanced technology, experience and reliability make Daikin chillers the ideal choice.

Daikin chillers have nominal cooling capacities of 5kW to 2,000kW (air-cooled) or 13kW to 2,156kW (water-cooled).

## Worldwide experience

A global leader in HVAC solutions, Daikin has the world's most advanced facilities for air conditioning research and development, meaning that we can manufacture all main chiller components (compressors, fans, condenser coils, software) in-house.

## Highest efficiency

Using the latest technology, Daikin achieves industry-leading efficiency and energy-saving operation for outstanding cost saving performance.

- › Lowest total cost of ownership
- › Fast payback time
- › Environment-friendly solutions

## Quality, reliability

- › Zero defect policy ensures quality of components and finished products
- › All chillers factory run and subjected to quality audit before shipment
- › Eurovent and AHRI certification

# High Efficiency Inverter Chiller Ranges



## Why break from tradition?

- › Seasonal efficiency
- › Seasonal quietness
- › Low starting currents
- › Low GWP using R32 or HFO R1234ze

### Benefits for the installer

- > Factory leak-tested and pre-charged
- > High serviceability
- > User-friendly smart controls which can be integrated easily with building management systems

### Benefits for the consultant

- > Multiple options available, e.g. rapid restart, variable speed water pumps, smart energy meter, EC fans
- > Ideal for both new and retrofit projects: same footprints of non-inverter unit with higher efficiencies and performance

### Benefits for the end user

- > Rapid payback of three years for comfort cooling applications
- > 50% reduction of energy consumption
- > Designed for sound-sensitive environments

### High efficiencies both at full load and part load

- › Daikin compressor with in-built inverter and Variable Volume Ratio (VVR) for optimised efficiency
- › In-house developed software with dynamic condensing pressure management and innovative economiser control logic

### Rapid return on investment

- › Payback of three years, compared to a non-inverter unit for comfort cooling applications
- › Less than one year for process cooling applications

### Perfect comfort level





























- › Infinitely variable load regulation
- › Precise leaving water temperature control thanks to stepless regulation

### Compact design

- › More compact heat exchanger with superior efficiencies
- › Reduced electrical panel dimensions thanks to the inverter compressor mount



# Air Cooled Chillers and Condensing Units

		Refrigerant type *	Refrigerant circuits	Inverter 	Free cooling 	Compressor			Heat exchanger		Efficiency version				Sound version						
						Swing 	Scroll 	Screw 	Water heat exchanger** 	Outdoor heat exchanger*** 	Standard	High	Premium	High ambient	Standard	Low	Reduced				
<b>Cooling only</b>																					
	EWAQ~BAVP <b>NEW</b> 	R-410A	1	●		●			●	●	BPHE	Cu/Al	●				●				
	EWAQ~ACV3/ACW1 	R-410A	1	●			●				●	BPHE	Cu/Al	●				●			
	EWAQ~CW <b>NEW</b> 	R-410A	1-2	●				●			●	BPHE	Cu/Al	●				●			
POA	EWAQ~G- 	R-410A	1					●			●	BPHE	MC	●	●			●		●	
	EWAQ~E- 	R-410A	1					●			●	BPHE	Cu/Al		●			●	●	●	
	EWAQ~F- 	R-410A	2					●			●	BPHE	Cu/Al	●	●			●	●	●	
	EWAT-B <b>NEW</b> 	R32	1-2					●				●	BPHE	MC	●	●			●	●	●
	EWAD~T- B <b>NEW</b> 	R-134a	2						●			●	S&T	MC	●	●			●	●	●
	EWAD~CZ 	R-134a	2-3	●						●		●	S&T	Cu/Al		●			●	●	●
	EWAD~CF 	R-134a	2		●					●		●	S&T	Cu/Al		●			●	●	●
	EWAD~TZ B 	R-134a	1-2	●						●		●	BPHE S&T	MC	●	●	●		●	●	●
	EWAH~TZ <b>NEW</b> 	R-1234ze	1-2	●						●		●	BPHE S&T	MC	●	●	●		●	●	●
	<b>Heat pump</b>																				
	EWYQ~BAVP <b>NEW</b> 	R-410A	1	●		●					●	BPHE	Cu/Al	●				●			
	EWYQ~ACV3/ACW1 	R-410A	1	●				●			●	BPHE	Cu/Al	●				●			
	EWYQ~CW <b>NEW</b> 	R-410A	1-2	●				●			●	BPHE	Cu/Al	●				●			
	SEHVX~BW <b>NEW</b> SERHQ~BW1 	R-410A	1	●				●			●	BPHE	Cu/Al	●				●			
POA	EWYQ~G- 	R-410A	1								●	BPHE	Cu/Al		●			●		●	
	EWYQ~F- 	R-410A	1-2					●			●	BPHE	Cu/Al		●			●	●	●	
	EWYD~BZ 	R-134a	2-3	●						●		●	S&T	Cu/Al	●			●	●		
<b>Multifunctional 4-Pipe Cooling and Heating</b>																					
POA	EWYD~4Z <b>NEW</b> 	R-134a	2	●							●	S&T	Cu/Al		●			●	●	●	
<b>Condensing unit</b>																					
	ERAD~E- 	R-134a	1						●			●	Cu/Al	●				●	●		

\* (GWP) : R-410A (2087.5), R-134a (1430), R32 (675), R1234ze (7)  
 \*\* BPHE: Brazed plate heat exchanger, S&T: Single pass shell and tube exchanger  
 \*\*\* MC: Microchannel exchanger, Cu/Al: Copper tube Aluminium fin exchanger  
 \*\*\*\* Mandatory commissioning by Daikin Airconditioning UK, see page 237

### Mini chillers

Ideal for residential or light commercial applications, Daikin mini chillers are equipped with an inverter swing or scroll compressor allowing a smooth, more reliable and energy-efficient operation with low noise levels and class-leading ESEERs.

### Air cooled scroll chillers

Daikin scroll chillers are designed for small and medium cooling and heating capacities. Our wide range of models match every building's air conditioning and process cooling needs.

### Air cooled screw chillers

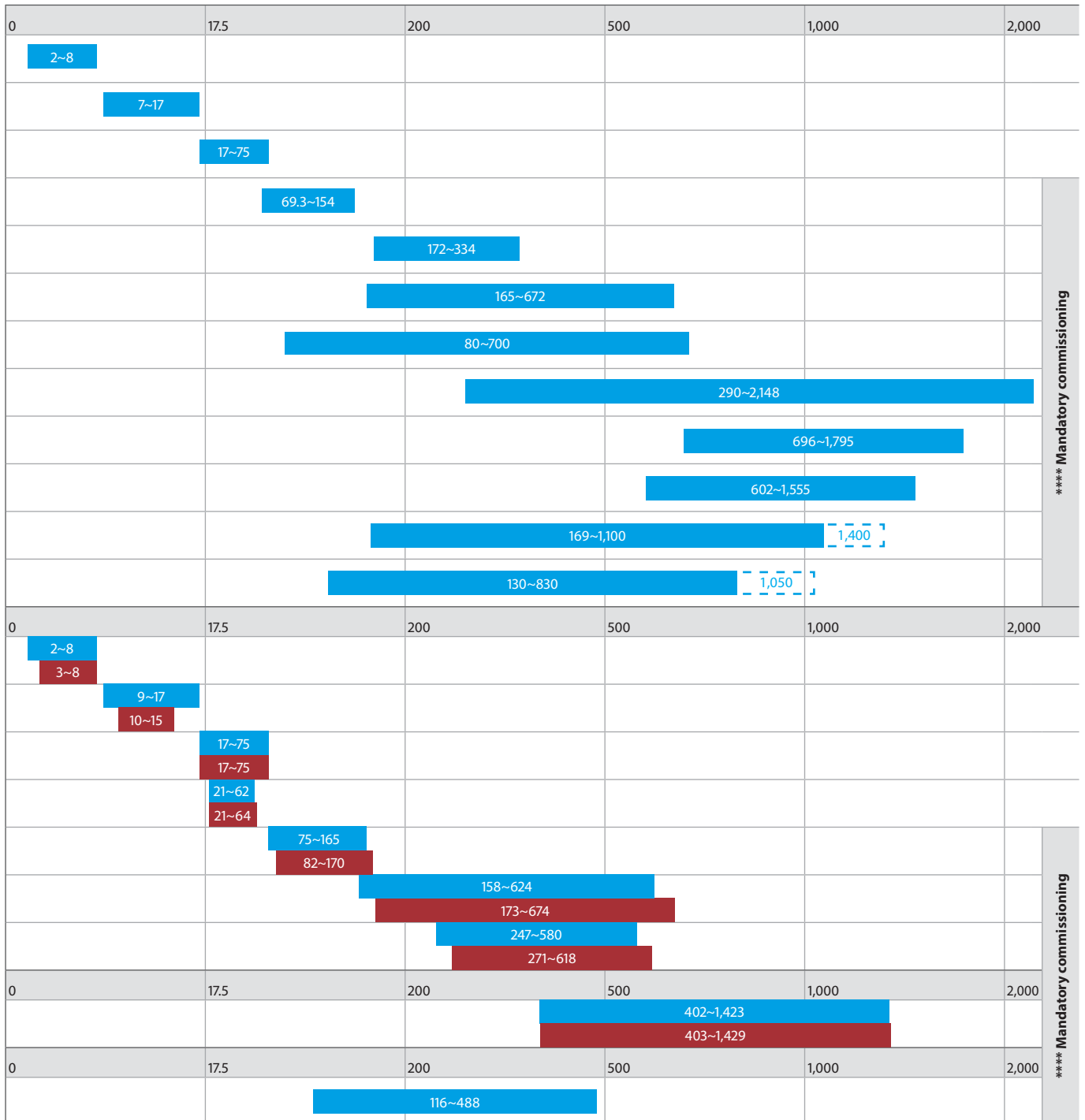
Manufactured for large capacities, Daikin screw chillers deliver unparalleled reliability and efficiency, both for comfort and process cooling. Equipped with an inverter they provide high efficiency at part load.

### Ecodesign

Air cooled Applied products indicated are Ecodesign Lot 1 compliant (Heat pumps below 400kW valid from 25 September 2017) and Lot 21 compliant (Chillers below 2MW valid from 31 December 2017).



Cooling capacity (kW)  
Heating capacity (kW)



Please contact your local sales office for further information on these products and extensive option flexibility – download info from [daikin.co.uk](http://daikin.co.uk)



## EWAD-TZB Chiller Series NEW

### Top class efficiency

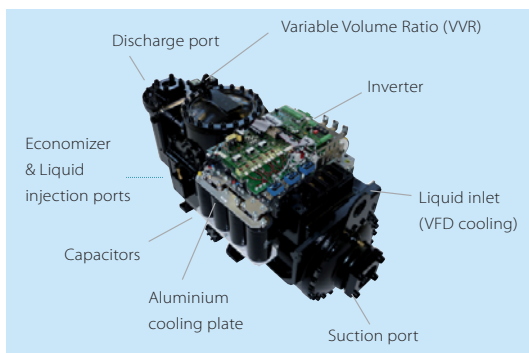
EER up to 3.6  
ESEER up to 5.5

### Best choice for every application

Rapid payback: One year for process cooling and three years for comfort cooling applications

### New generation of Daikin inverter screw compressors

- › Integrated inverter, refrigerant cooled
- › Variable volume ratio technology



### Microchannel condenser coils

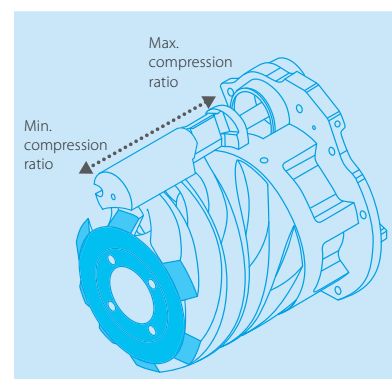
- › High thermal efficiency
- › Small volume, resulting in less refrigerant charge
- › Light & durable design
- › Easy cleaned

### VVR (Variable Volume Ratio)

The operating conditions of a chiller are subjected to sensible changes due to the variation of ambient temperature and load request from the plant.

Screw compressors increase the pressure of the refrigerant by forcing it into a progressive smaller volume, from the suction to the discharge port. Once the geometry of the compressor is defined the volume ratio is also defined.

Daikin compressors can modify their own geometry thanks to variable volume ratio (VVR). The volume ratio will change by moving the sliding valves. VVR changes the point at which the gas leaves the compressor, and therefore changes the pressures at discharge which will be optimal under any condition.



### Silent operation – for distraction-free work

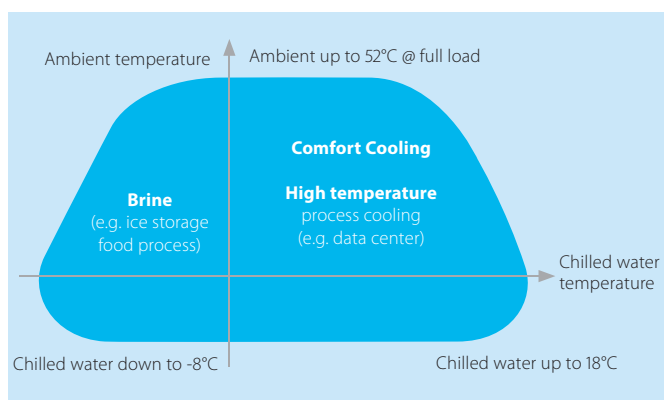
Nothing disrupts the workplace more than the sound of machinery. So our engineers have brought the sound power levels right down to just 90 dB(A)\* at full load operating conditions - and even lower at part load conditions. Thanks to the special acoustic executions on the compressor and a custom Daikin fan design with reduced noise impact and vibration, the EWAD-TZB is ideal for even the most sound-sensitive environment.

\*400 kW size



# Providing a lifetime of comfort in the most flexible way

## Application flexibility



## Compact design

The EWAD-TZ keeps installation space to a minimum, so it's ideal for both new and retrofit projects. In particular, the highly efficient compressor with its integrated inverter allows us to mount more compact heat exchangers in the frame and combined with the integrated compact control panel, deliver more power from a reduced footprint.

## Simple to install. Even simpler to maintain

Our chillers are completely factory assembled with all required options and pre-commissioned, with the unit's software fine tuned and set points established to suit the application. They also integrate easily with existing building management systems. So on site, all that is required is to connect power supply, pipes, communication cables and switch the unit on.

## Proven reliability
















All our chillers and compressors are subjected to intensive performance, acoustic, endurance and vibration tests in Daikin factories and at selected job-sites - even at extreme working conditions. To ensure maximum reliability in every component - and the right, lifelong technical solution for your application.

## Extensive options list

- › **HFO (R1234ze)** - full range available with low GWP HFO: EWAH-TZB
- › **Rapid restart** - when a loss of cooling would be catastrophic, the chiller can restart within 30 seconds of the power being restored and reach full-load cooling capacity in less than 6 minutes
- › **VFD pumps** - variable frequency pumps can be used to optimise the working efficiency of the chiller and maximise energy savings, also in primary variable flow systems
- › **Refrigerant leak detection** - rapid advanced warning of trouble, so you can avoid any environmentally harmful and potentially costly leaks in the refrigerant system
- › **Heat recovery** - a plate to plate heat exchanger for each refrigerant circuit is installed in series to the condenser coil between 15-85% of the total heat rejection of the chiller can be recovered
- › **Partial heat recovery** - a plate to plate heat exchanger for each refrigerant circuit is installed in series to the air condenser coil. The plant manager controls the operation of the pump on the recovery circuit between 15-20% of the total heat rejection of the chiller can be recovered
- › **Smart sequencing capability** - master/slave sequencing function: up to four units connected together for system optimisation and without the need of external control systems.

# High efficiency and versatility

Daikin reimagines and delivers revolutionary air conditioning to the world. As the industry leader, we will continue creating new values by anticipating the future needs of customers for all environments. Daikin chillers and air side equipment provide the ultimate in reliability and flexibility. Our chillers, fan coil units and air handlers deliver superior efficiency across a wide range of applications.

	Refrigerant Type *	Refrigerant circuits	Inverter	Compressor			Water heat exchangers				Efficiency version			Sound version
				Scroll	Screw	Centrifugal	Evaporator		Condenser		Standard	High	Premium	Standard
							BPHE **	S&T ***	BPHE **	S&T ***				
<b>Water cooled chillers (Cooling only &amp; Heating only)</b>														
		R-410A	1-2-4-6		●			●		●				●
POA		R-410A	1		●			●		●				●
		R-410A	1		●			●		●				●
		R-410A	2		●			●		●				●
		R-134a	1			●		●		●				●
		R-134a	1-2			●		●	1 pass	●	●			●
		R-134a	1-2	●		●		●	Flooded 1, 2, 3 pass	●	●	●		●
		R-1234ze	1-2	●		●		●	Flooded 1, 2, 3 pass	●	●	●		●
	<b>Condenserless chillers</b>													
		R-410A	1-2		●			●		●				●
POA		R-410A	1		●			●		●				●
		R-410A	2		●			●		●				●
		R-134a	1-2			●		●		●				●
		R-134a	1-2			●		●	1 pass	●				●
		R-134a	1-2-3			●		●	1 pass	●				●
	<b>Water cooled centrifugal chillers</b>													
POA		R-134a	1	●		●		●	Flooded 1, 2, 3 pass	●	●		●	●

\* (GWP) : R-410A (2087.5), R-134a (1430), R32 (675), R1234ze (7)

\*\* BPHE: Brazed plate heat exchanger

\*\*\* S&T: Shell and tube exchanger

\*\*\*\* Mandatory commissioning by Daikin Airconditioning UK, see page 237





### Water cooled scroll chillers

These units are among the most efficient, quiet and reliable chillers available today and can be easily integrated with the HVAC system of your choice. Their compact, modular design makes them ideal for replacement projects.

### Water cooled screw chillers

The Daikin water cooled screw chillers provide the ideal solution for sound sensitive environments. Applications range from comfort cooling to ice making. Operated as a heat pump, the higher leaving water temperatures up to 65°C provides an ideal solution for LPHW or district heating schemes.

### Water cooled, oil free centrifugal chillers

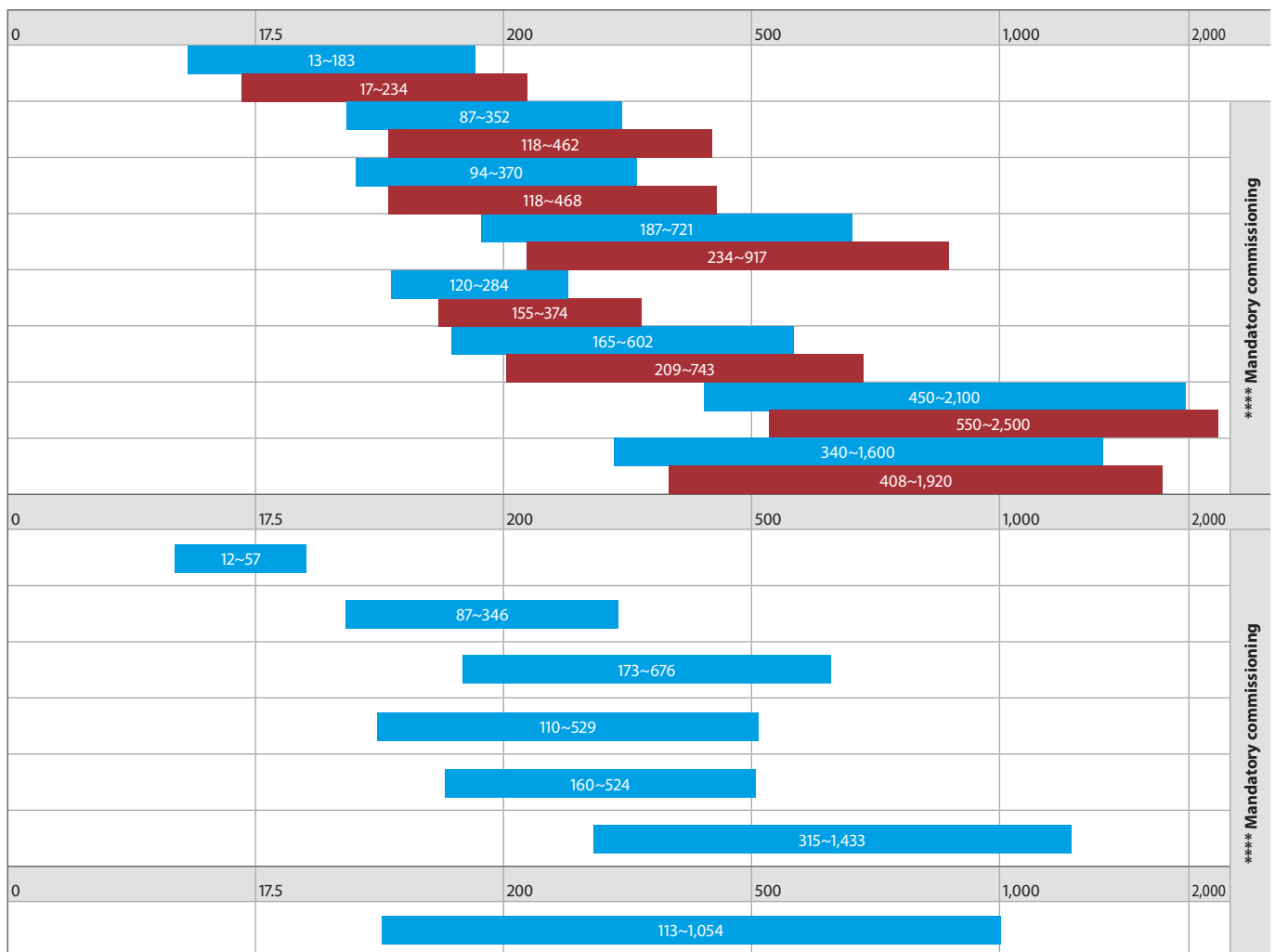
With a small footprint, quiet compressor and ability to integrate easily within the existing HVAC systems, this chiller is the ideal solution for large cooling requirements (e.g. district cooling) and offers a return on investment throughout its lifecycle.

### Ecodesign

Water cooled Applied products indicated are Ecodesign Lot 1 compliant (Heat pumps below 400kW valid from 25 September 2017) and Lot 21 compliant (Chillers below 2MW valid from 31 December 2017).



Cooling capacity (kW)  
Heating capacity (kW)



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## EWWD-VZ chiller series

### Top class efficiency

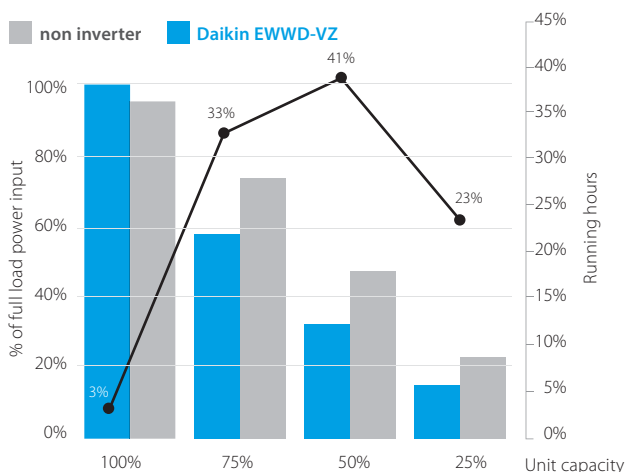
EER up to 5.8  
ESEER up to 8.5

### Best choice for every application

Daikin inverter single screw compressors offer significant power reduction at part load operation, over a non inverter screw. At the 50% partload capacity step there is a 32% reduction in power input, which is 147% increase on EER.

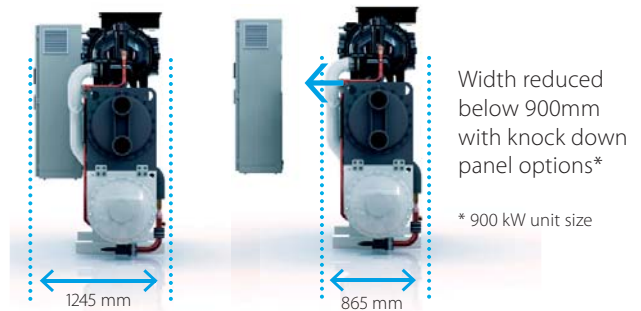
#### Why choose an inverter chiller?

- > -25% energy consumption
- > -25% CO<sub>2</sub> emissions
- > -25% running costs
- > Return on investment < 2 years vs non-inverter chiller



### Compact construction

> Small footprint, ideal for installation through existing doorways

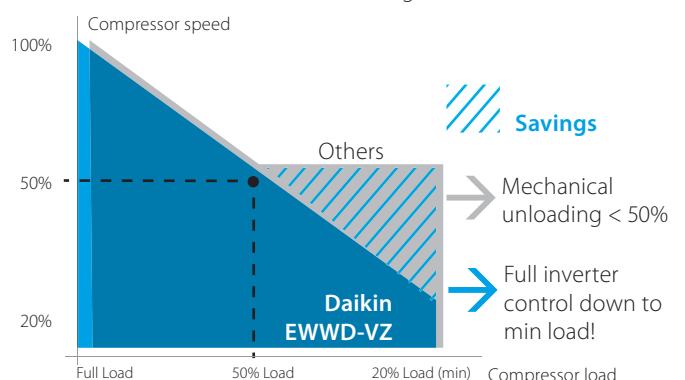


#### 40% footprint reduction in comparison with traditional water cooled series thanks to:

- 1. New single pass condenser technology**
  - > High heat exchange performances thanks to counterflow design
  - > Low water pressure drops < 30 kPa
- 2. New integrated oil separator technology**
  - > Low oil carry over
  - > Low refrigerant pressure drops

#### Why are we better than others?

- > Full inverter capacity control down to 20%
- > No inefficient mechanical unloading slides





# The highest peak in chiller technology

## Optimised design

- › Flooded type technology maximising unit performance
- › Latest technology enhanced surface tubes

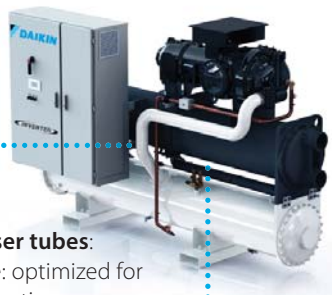
### Evaporator tubes:

- › Outside: cavities for optimised nucleate boiling
- › Inside: helical structure



### Condenser tubes:

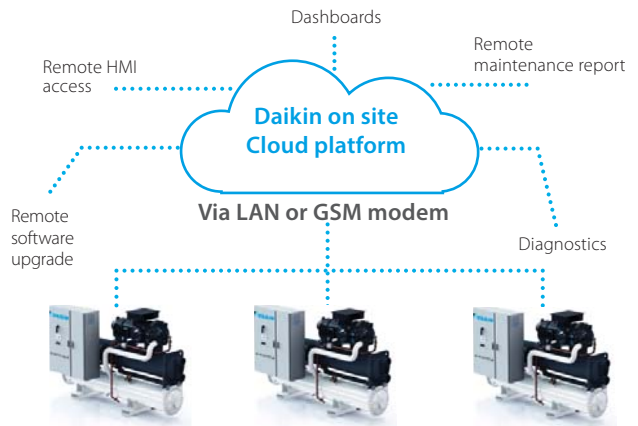
- › Outside: optimized for condensation
- › Inside: helical structure



## Connectivity

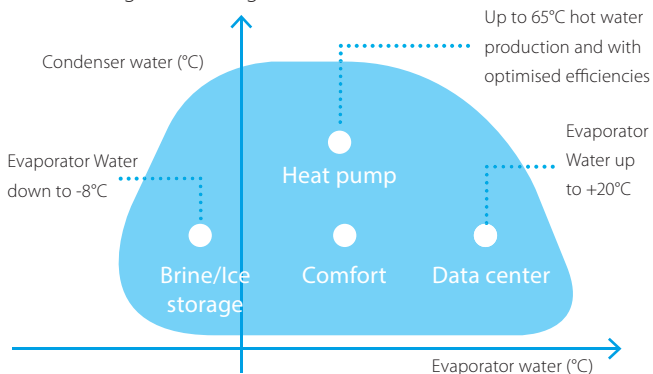
### Remote access with one click

- › Remote monitoring
- › System optimisation
- › Preventive maintenance



## Application flexibility

Widest operating envelope suitable for a variety of applications, both heating and cooling.



## Future readiness

### R-134A refrigerant, still the best choice today:

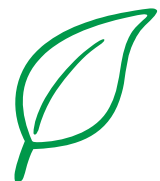
- › Still most efficient refrigerant
- › Availability in high quantities and at competitive prices
- › No phase out planned in F-GAS regulation
- › Classified as non flammable

### R1234ze refrigerant, low GWP range EWWD-VZ

- › GWP <10 for BREEAM
- › Same efficiency as R132a

### All VZ units are 'new refrigerant ready'!

Possibility to retrofit R134a units in the future with lower GWP refrigerant R513a (HFO blend).





# Daikin Air Handling Units



Daikin air handling units, with their plug-and-play design and inherent flexibility, can be configured and combined specifically to meet ventilation or air conditioning requirements.

## Unique Plug-and-Play ventilation solution

### Benefits for the installer

- › Single source of supply for complete ventilation solution
- › Completely wired with temperature and pressure sensors
- › No need for 3rd party design of coils and condenser selection
- › Factory pre-configured to meet design requirements

### Benefits for the consultant

- › ErP compliant and Eurovent certified
- › Pre-defined configuration with factory fitted option flexibility
- › Use of highest efficiency components to meet current and future regulations - ErP2018 compliant
- › Manufacturer defined control algorithm and interface with cooling units

### Benefits for the end user

- › Reduced energy costs due to high heat recovery potential and efficient IE4 EC fan motors
- › Visibility of unit operation via central I-touch Manager or BMS front end
- › Complete Daikin solution

### Daikin fresh air package

The Daikin fresh air package provides a complete solution, including all unit controls (expansion valve, control box and an AHU controller) and sensors, factory mounted and configured. This unique solution allows for plug and play connection of our AHU series to Daikin ERQ and VRV condensers or chillers.

### High efficiency

Daikin heat pumps are renowned for their high energy efficiency. Integrating the AHU with a heat recovery system is even more effective, since an office system can frequently be in cooling mode, while the outdoor air is too cold to be brought inside in an unconditioned state. In this case, heat from the offices is simply transferred to heat up the cold incoming fresh air.

### High comfort levels

Daikin ERQ and VRV units respond rapidly to fluctuations in supply air temperature, resulting in a steady indoor temperature and high comfort levels for the end user. The ultimate is the VRV range which improves comfort even more by offering continuous heating, also during defrost.

### Daikin fresh air package



# Air Handling Units

## Modular AHU with high efficiency heat recovery

### Energy efficiency and indoor air quality

- › 16 predefined sizes per range and configuration from 0.08m<sup>3</sup>/s to 4.2m<sup>3</sup>/s
- › IE4 premium efficiency motor
- › High efficiency heat recovery (Heat Wheel 78% or Plate Heat Exchanger 85%)
- › Integrated control platform, with interface to I-touch Manager
- › Easy installation
- › Indoor air quality compliant with VDI 6022 hygiene guideline
- › Operating limits from -25 °C, (-40 °C with electric heaters) up to +46 °C ambient temperature
- › VRV IV and ERQ coupling capability with Modular R & P
- › Indoor and outdoor versions
- › Free cooling capability
- › Economy and Night mode operation
- › Monitoring and control through Daikin ITM

### New High efficiency EC fan

- › Air flow or pressure control (Variable Air Volume – Constant Air Volume)
- › Nominal air flow programmed at factory
- › Silent operation

### Simple, quick installation

The Modular series' Plug & Play design is more than just a convenient feature for installers. It offers cost-saving benefits as there is no need for expensive adjustments before the unit is commissioned. Plug & Play makes everyone's life simpler, safer and more economical.



D-AHU Modular L - Base Unit							
Modular L Unit Nominal Performance	Size	2	3	4	5	6	7
	Supply/Extract Airflow [m <sup>3</sup> /s]	0.08	0.17	0.33	0.42	0.64	0.75
	Thermal Efficiency [%]	89	89	89	89	90	90
	Maximum ESP [Pa]	300	700	500	350	500	450
	Nominal Fan Current - Supply and Extract [A]	0.49	1.09	2.17	2.72	4.40	5.2
	Nominal Power Input [kW]	0.11	0.25	0.50	0.63	1.02	1.20
	SFPv [kW/m <sup>3</sup> /s]	1.35	1.50	1.50	1.50	1.60	1.60
	Electrical Supply [V-Ph-Hz]	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
	Length [mm]	1660	1800	2000	2000	2000	2000
	Width [mm]	920	1100	1600	1600	2000	2000
	Height [mm]	280	350	415	415	500	500
	Weight [kg]	125	180	270	280	355	360
	Sound Power Level - Lw dB(A)(1)	TBA	TBA	TBA	TBA	TBA	TBA

D-AHU Modular R - Base Unit c/w Sorption Wheel, Mixing Box & DX Module											
Modular R Unit Nominal Performance	Size	1	2	3	4	5	6	7	8	9	10
	Supply/Extract Airflow [m <sup>3</sup> /s]	0.34	0.49	0.78	1.18	1.59	1.67	2.06	2.74	2.92	4.19
	Temp Efficiency Winter [%]	78.50	79.30	79.40	79.90	79.10	80.30	80.80	79.60	82.10	81.20
	Temp Efficiency Summer [%]	78.50	79.30	79.40	79.90	79.10	80.30	80.80	79.60	82.10	81.20
	ESP nominal [Pa]	190	175	250	250	250	230	275	300	275	300
	Nominal Fan Current - Supply/Extract [A]	3.3/3.3	3.1/3.1	1.9/1.9	3.0/3.0	3.8/3.8	4.0/4.0	5.3/5.3	7.7/7.7	4.0/4.0	5.3/5.3
	Power Input Supply, Nominal [kW]	0.43	0.62	0.96	1.41	1.9	2.02	2.47	3.29	2 x 1.80	2 x 2.52
	Power Input Extract, Nominal [kW]	0.36	0.5	0.81	1.21	1.59	1.67	2.04	2.81	2 x 1.48	2 x 2.10
	SFPv [kW/m <sup>3</sup> /s]	2.00	1.99	1.99	1.99	1.99	2.00	2.00	1.99	2.00	1.99
	Electrical Supply [V-Ph-Hz]	230-1-50	230-1-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	Length [mm]	2900	2900	3000	3220	3380	3580	3700	3750	3680	3800
	Depth [mm]	720	820	990	1200	1400	1400	1600	1940	1940	2300
	Height (Including Base Frame) [mm]	1320	1320	1540	1740	1740	1920	1920	2180	2460	2570
	Weight [kg]	441	484	655	807	1018	1065	1269	1736	1871	2275
	DX Nominal Cooling Capacity [kW]	2.6	3.8	6.2	9.3	12.6	13.2	16.3	22.0	23.4	33.4
	Outdoor Unit Nominal Cooling Power Input [kW]	-	-	-	-	3.51	3.51	4.53	5.22	5.22	2 x 4.53
Sound Power Level - Lw dB(A) <sup>(1)</sup>	75	77	72	77	78	76	77	79	78	80	

D-AHU Modular P - Base Unit c/w Plate Heat Exchanger, Mixing Box & DX Module											
Modular P Unit Nominal Performance	Size	1	2	3	4	5	6	7	8	9	10
	Supply/Extract Airflow [m <sup>3</sup> /s]	0.40	0.53	0.88	1.18	1.50	1.64	2.06	2.92	3.22	4.19
	Temp Efficiency Winter [%]	93.00	93.00	92.30	92.00	91.80	92.30	92.10	92.40	92.70	92.50
	Temp Efficiency Summer [%]	83.70	83.70	82.60	82.30	81.90	82.70	82.40	82.80	83.30	82.90
	ESP Nominal [Pa]	300	250	275	250	250	250	250	300	280	300
	Nominal Fan Current - Supply/Extract [A]	3.3/3.3	3.1/3.1	1.9/1.9	3.0/3.0	3.8/3.8	4.0/4.0	5.3/5.3	7.7/7.7	4.0/4.0	5.3/5.3
	Power Input Supply, Nominal [kW]	0.51	0.65	1.05	1.39	1.78	1.98	2.43	3.48	2 x 1.95	2 x 2.49
	Power Input Extract, Nominal [kW]	0.42	0.53	0.91	1.17	1.54	1.66	2.06	3.00	2 x 1.63	2 x 2.13
	SFPv [kW/m <sup>3</sup> /s]	2.00	1.96	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.99
	Electrical Supply [V-Ph-Hz]	230-1-50	230-1-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
	Length [mm]	3220	3390	3800	3950	4090	4500	4630	5130	5450	5580
	Depth [mm]	720	820	990	1200	1400	1400	1600	1940	1940	2300
	Height (Including Base Frame) [mm]	1320	1320	1540	1740	1740	1920	1920	2180	2460	2570
	Weight [kg]	463	491	691	835	1052	1126	1282	1858	2164	2597
	DX Nominal Cooling Capacity [kW]	4.5	5.9	9.8	13.2	16.7	18.4	23.0	32.8	36.3	47.1
	Outdoor Unit Nominal Cooling Power Input [kW]	-	-	-	3.51	4.53	5.22	5.22	2 x 4.53	2 x 5.22	2 x 5.22
Sound Power Level - Lw dB(A) <sup>(1)</sup>	74	77	73	77	77	75	77	79	78	80	

\* Sound pressure level radiated from unit at 1meter according to ISO 3744 (Supply outlet ducted)

Performance data: Indoor Condition: 21°C-50% (S/W), Extract Condition: 23°C-60% (S/W), Ambient: 32°C(S)-5°C (W).

Modular R&P performance data to meet a worst case SFP of 2.0 kW/(m<sup>3</sup>/s) based on maximum ESP at the recommended Nominal Air Flow for new build projects.

Modular L performance data to meet a worst case SFP of 1.6 kW/(m<sup>3</sup>/s) based on maximum ESP at the recommended Nominal Air Flow for new build projects.

# Daikin Fan Coil Units



## Brushless DC Motors for:

- › Higher operational efficiency
- › Tighter comfort control
- › Low sound levels

### Benefits for the installer

- › Reduced amount of sizes: less stock space needed
- › Easy integration to BMS systems via modbus protocol

### Benefits for the consultant

- › Comprehensive range with single source of supply for all configurations
- › Efficient BLDC fan motors for comfort and low sound levels

### Benefits for the end user

- › High comfort level
- › Up to 70% savings on running costs
- › Controller with timer programmed operating mode

### Higher efficiency than AC (Alternative Current) motor

- › Up to 70% energy savings
- › No heat generation
- › No power losses
- › Higher efficiency than AC motors to reach set point
- › Increased life expectancy >10,000 hours

### High comfort level










- › Less fluctuation of air temperature and relative humidity
- › More consistent output level
- › Stepless speed change for gradual air output
- › More accurate adjustments to reach set point

### Low sound levels

- › Lower minimum rotation speed
- › No start-stop sequence
- › Gradual air output



# Fan Coil Units

Type	Model	Product name	Fan motor type	Capacity
Floor standing unit	<b>Floor standing unit</b> - For vertical mounting - Continuous air flow regulation and fan speed modulation - Up to 70% energy savings - Low sound levels	FWZ-AT/AF	 BLDC	Cooling: 0.60 - 10.08 kW Heating: 0.69 - 11.18 kW
Flexi type unit	<b>Flexi type unit</b> - For horizontal or vertical mounting - Continuous air flow regulation and fan speed modulation - Up to 70% energy savings - Low sound levels	FWR-AT/AF	 BLDC	Cooling: 0.60 - 10.08 kW Heating: 0.69 - 11.18 kW
	<b>Concealed flexi type unit</b> - For horizontal or vertical concealed mounting - Continuous air flow regulation and fan speed modulation - Up to 70% energy savings - Low sound levels	FWS-AT/AF	 BLDC	Cooling: 0.60 - 10.08 kW Heating: 0.69 - 11.18 kW
Ducted unit	<b>Concealed ceiling unit with medium ESP</b> - For horizontal concealed mounting - Instant adjustment to temperature and relative humidity changes - Available static pressure up to 80 Pa - Low sound levels	FWP-AT	 BLDC	Cooling: 1.34 - 6.67 kW Heating: 2.77 - 12.28 kW
	<b>Concealed ceiling unit with high ESP</b> - For horizontal or vertical concealed mounting - Available static pressure up to 120 Pa - Easy maintenance	FWN-AT/AF	 BLDC	Cooling: 2.86 - 8.75 kW Heating: 3.70 - 9.13 kW
Ceiling mounted cassette	<b>4-way blow ceiling mounted cassette</b> - 600 x 600 cassette - Integrated fresh air intake - Horizontal auto swing - Easy installation in corners - Standard drain pump with 750 mm lift	FWF-BT/BF	 AC	Cooling: 1.4 - 5.2 kW Heating: 2.3 - 6.7 kW
	<b>Round flow cassette</b> - 900 x 900 cassette - 360° air discharge ensures uniform air flow - Integrated fresh air intake - Easy installation in corners - Standard drain pump with 850 mm lift	 FWC-BT/BF	 BLDC	Cooling: 4.0 - 8.7 kW Heating: 5.5 - 12.1 kW
Wall mounted unit	<b>Wall mounted unit</b> - High aesthetic cabinet design - Optimum air distribution - Easy installation - 3-speed fan motor	FWT-CT	 AC	Cooling: 2.11 - 5.28 kW Heating: 2.49 - 6.01 kW

FWECSA Controller Recommended

## FWECSA Electronic Fan Coil Unit Controller

### Main features:

- › Management of BLDC fan motor using 0-10V/DC
- › Management of on/off or proportional valves
- › Management of electric heater
- › Relative humidity control
- › Cooling/heating mode switching based on air or water temperature
- › Contact for remote activation (window contact or remote on/off)
- › Weekly timer programmed operation
- › Configurable digital output
- › Master slave system on serial RS485
- › Master slave system using conveyed waves (CW)
- › BMS supervision system using Modbus RS485
- › Easy user interface



### Capacity conditions

#### EUROVENT conditions

##### Cooling

27°C db / 19°C wb - Entering water 7°C - Leaving water 12°C

##### Heating 4 Pipe

20°C db - Entering water 70°C - Leaving water 60°C

##### Heating 2 Pipe

20°C db - Entering water 50°C - Flow rate as in cooling mode

#### TYPICAL UK cooling conditions

22°C db / 16.0°C wb - Entering water 7°C - Leaving water 12°C

0 Pa External Static Pressure

0% Glycol

FWP and FWN Ducted FCU - Above capacities are based on 30 Pa and 60 Pa External Static Pressure respectively

FWS Uncased - Based on 20 Pa external static



## Save energy with Daikin 'Total Inverter Solutions'



**INVERTER**



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