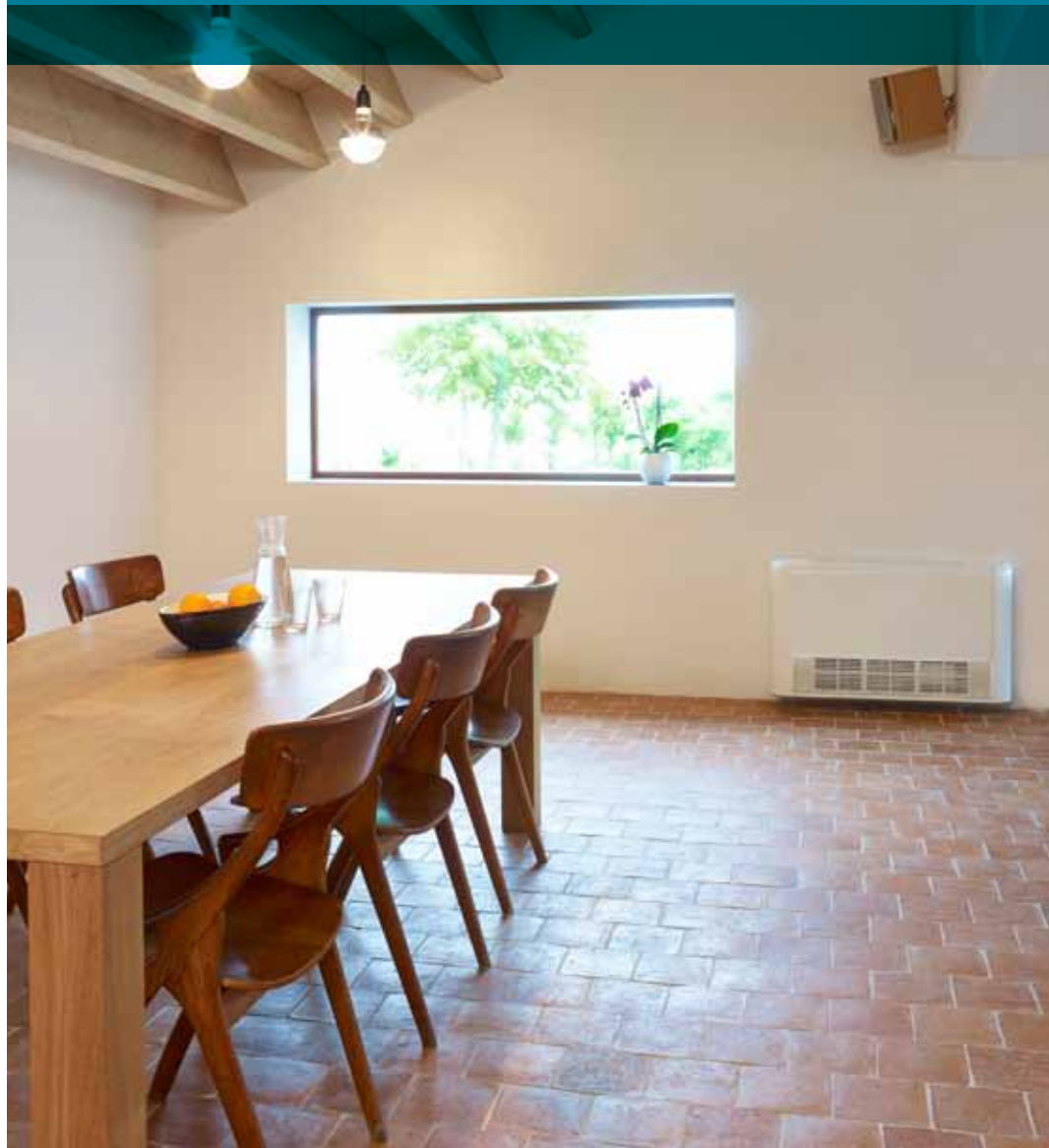


Fan coil units

Fan coil units with brushless DC motor with inverter

- » Up to 70% energy saving with BLDC motor technology
- » Instant adjustment to temperature and relative humidity changes
- » Low noise levels
- » Highly flexible solutions



www.daikin.eu

INVERTER



FWZ-AT/AF



FWR-AT/AF



FWS-AT/AF



FWP-AT



About Daikin

Daikin is Europe's leading manufacturer of highly energy efficient heating, cooling, ventilation and refrigeration solutions for commercial, residential and industrial applications

About fan coil units

Essentially made up of a motor with a fan, a heating or cooling coil connected to the building's central hot water and cold water system, and controller, a fan coil unit is simple heating and cooling device. It is designed to heat or cool the specific space where it is installed and, since it is typically not connected to ductwork, it is highly economical to install. The Daikin advanced BLDC fan coil units, can be fitted concealed or exposed to suit your building and décor requirements. They are quiet and very energy efficient, so are ideal for your house and for many commercial environments such as offices, small shops, apartments and hotels where spaces are relatively small and ease of installation is essential. Daikin BLDC fan coil units are a technically and aesthetically versatile solution.

Today, Daikin is leading the way towards more efficient and cost-effective comfort solutions.

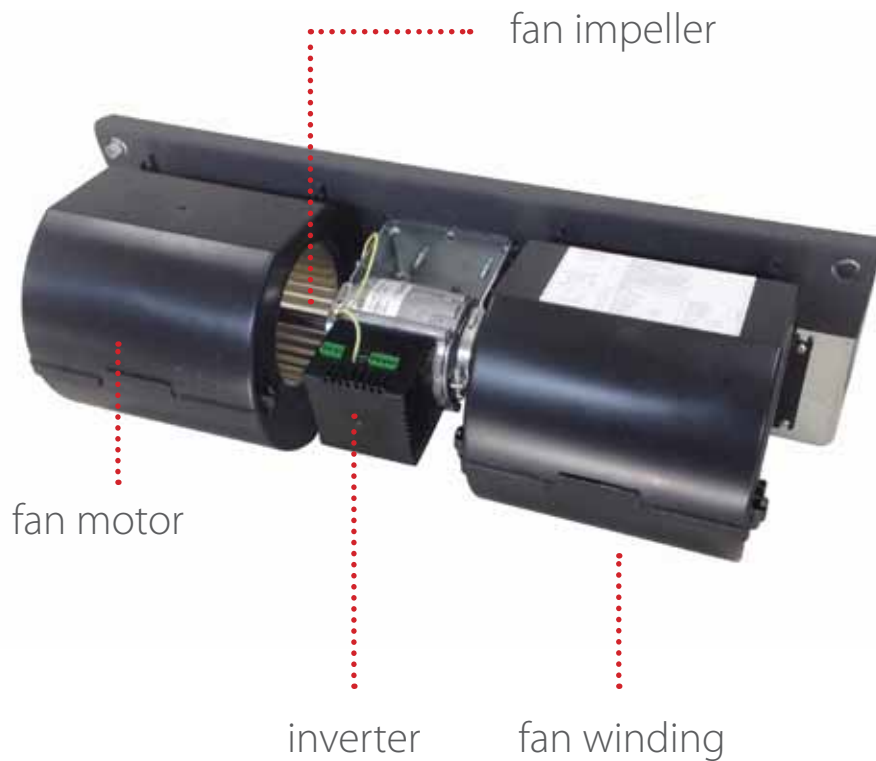
All Daikin products - residential and commercial as well as industrial - are seasonal efficient, they all reduce energy and costs in a smart way.



SEASONAL EFFICIENCY
Smart use of energy

Daikin goes further. We have now changed to the instantly controllable BLDC driven fan coil units that deliver up to 70% saving in energy usage in comparison to the older AC technologies. This has big implications for season efficiency as rapid modification to small temperature and humidity changes allows a close to set point performance thus reducing overall energy consumption whilst delivering quality heating and cooling.

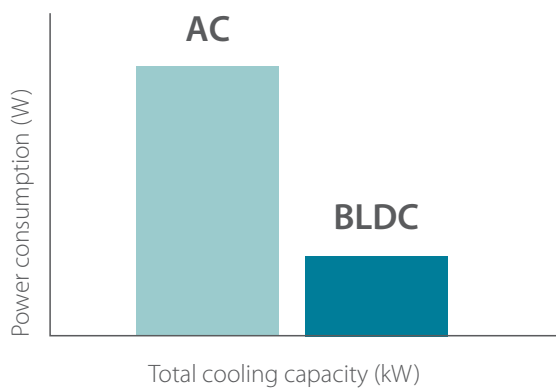
What is BLDC technology?



Brushless Direct Current technology or BLDC motors are also known as Electronically Commutated (EC) motors and consist of a motor combined with an inverter. The BLDC motor has a rotor that is a permanent magnet, the magnetic field of which interacts with the rotating magnetic field produced by the stator windings. This is combined with an electronic commutation system that is made up of an electronic controller plus an inverter. This powers the stator by generating a magnetic field, the rotation speed of which is adjusted in accordance with the gap between the actual temperature and the set point temperature, thus the rotor speed is perfectly synchronised with the demand. The result is a stepless modulation of fan speed, which makes it possible to accurately regulate air flow in strict relation to the requirement in terms of cooling or heating capacity.

Why choose for fan coil units with

1. Reduction in power consumption up to 70%

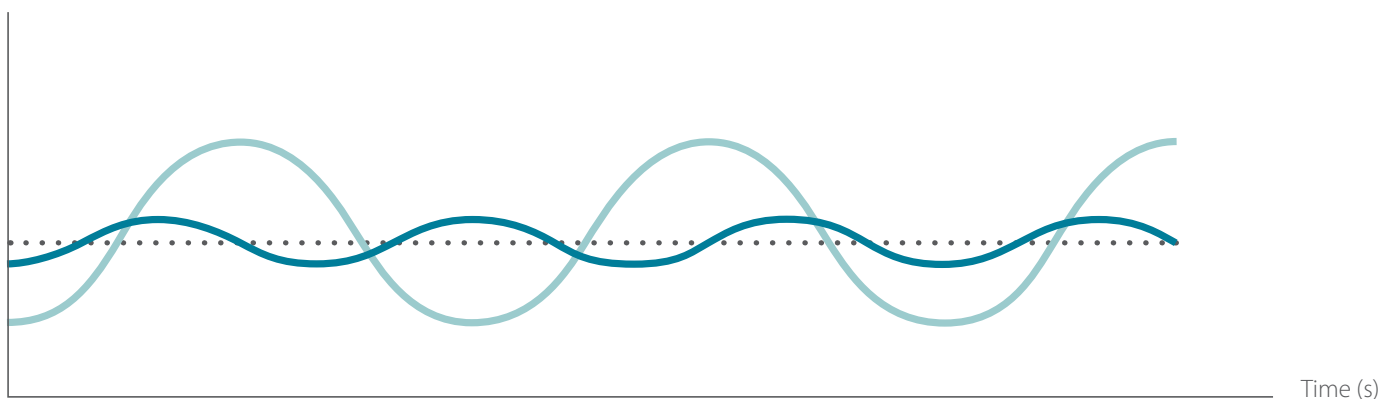


Having no rotor induced current, as in case of a traditional fixed-speed AC motor driven fan coil unit, means a significant reduction in power consumption.

Electrical energy usage is up to 70% lower compared to an AC motor, with a related **reduction in CO₂ emissions and top energy efficiency!**

2. Slight fluctuation in air temperature and relative humidity

Local climate controlled air temperature (°C)

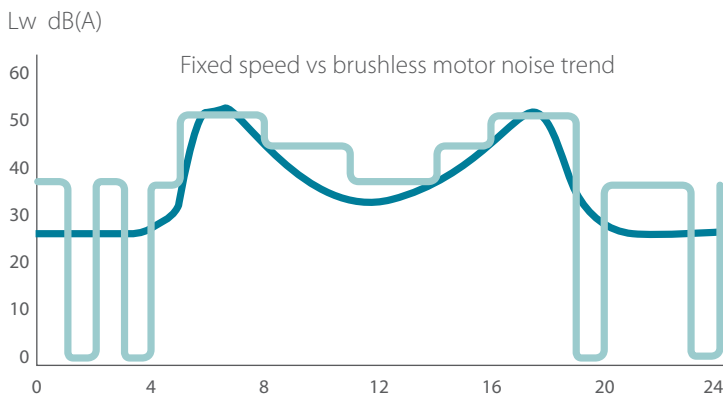


- AC driven FCU
- BLDC driven FCU
- Set point

Instant adjustment of air flow, based on thermal load changing, guarantees an almost constant level of room temperature and relative humidity, so assuring an **absolute comfort level.**

BLDC technology?

3. Lower sound power



Continuous modulation of fan rotation speed results in reduction of average sound emission, in comparison with fixed speed AC motor fan coil units. This lower noise level is especially appreciated in night-time operation.

4. High flexibility and versatility

Multiple configurations are possible for this new range: floor standing, flexi units with or without cabinet and ducted units. But most importantly, these units can all be exactly tailored to the client's needs as they come in different sizes, different heating and cooling capacities, and different piping topologies and connection valves.



FWZ-AT/AF
Floor standing unit



FWR-AT/AF
Flexi units with cabinet



FWS-AT/AF
Flexi units without cabinet



FWP-AT
Medium ESP ducted units



FWEC3A

FWEC3A with timer programmed operating mode and easy integration in BMS system via modbus protocol.

Heating & Cooling



MODEL				2-PIPE				4-PIPE			
				FWZ,R,S02AT	FWZ,R,S03AT	FWZ,R,S06AT	FWZ,R,S08AT	FWZ,R,S02AF	FWZ,R,S03AF	FWZ,R,S06AF	FWZ,R,S08AF
Cooling capacity	Total capacity	High	kW	2.64 (1)	4.96 (1)	6.32 (1)	10.08 (1)	2.64 (3)	4.96 (3)	6.32 (3)	10.08 (3)
	Sensible capacity	High	kW	1.95 (1)	3.60 (1)	4.80 (1)	7.43 (1)	1.95 (3)	3.60 (3)	4.80 (3)	7.43 (3)
Heating capacity	2-Pipe	High	kW	3.47 (2)	6.40 (2)	7.51 (2)	11.18 (2)	-			
	4-Pipe	High	kW	-				2.46 (4)	4.19 (4)	6.45 (4)	10.06 (4)
Power input		High	W	57.4	82.7	101.4	147	57.4	82.7	101.4	147
Current input		High	A	0.50	0.72	0.88	1.27	0.50	0.72	0.88	1.27
		Low	A	0.05		0.07	0.09	0.05		0.07	0.09
Dimensions FWZ & FWR	Unit	HeightxWidthxDepth	mm	564x774x226	564x987x226	564x1,194x226	564x1,404x251	564x774x226	564x987x226	564x1,194x226	564x1,404x251
Dimensions FWS				535x584x224	535x794x224	535x1,004x224	535x1,214x249	535x584x224	535x794x224	535x1,214x249	535x1,004x224
Weight FWZ			kg	20	25	31	41	21	26	33	44
Weight FWR	Unit			21	27	33	44	22	28	35	46
Weight FWS				15	19	23	32	16	20	34	25
Heat exchanger	Water volume		l	0.7	1	1.4	2.1	0.7	1	1.4	2.1
Additional heat exchanger	Water volume		l	-				0.2	0.3	0.4	0.6
Water flow	Cooling		l/h	454 (5)	853 (5)	1,084 (5)	1,728 (5)	454 (5)	853 (5)	1,084 (5)	1,728 (5)
	Heating		l/h	454 (5)	853 (5)	1,084 (5)	1,728 (5)	216 (5)	367 (5)	565 (5)	882 (5)
Water pressure drop	Cooling		kPa	20 (5)	29 (5)	24 (5)	25 (5)	20 (5)	29 (5)	24 (5)	25 (5)
	Heating		kPa	16 (5)	23 (5)	19 (5)	20 (5)	11 (5)	9 (5)	14 (5)	45 (5)
Fan	Type	Centrifugal multi-blade, double suction									
	Air flow rate	High	m ³ /h	560 (6)	900 (6)	1,200 (6)	1,660 (6)	560 (6)	900 (6)	1,200 (6)	1,660 (6)
Sound power level	High		dBA	62	70	64	71	62	70	64	71
Piping connections	Water	Inlet		1/2"				1/2"			
	Drain FWZ & FWS	Outlet		1/2"				1/2"			
		OD	mm	16							
Power supply	Phase/Frequency/Voltage		Hz/V	1~/50/230							

- (1) Cooling: 2 pipe: air 27°CDB, 19°CWB; entering water 7°C; leaving water 12°C
 (2) Heating: 2 pipe: air 20°CDB, entering water 50°C, water flow as per cooling mode
 (3) Cooling: 4 pipe: air 27°CDB, 19°CWB; entering water 7°C; leaving water 12°C
 (4) Heating: 4 pipe: air 20°CDB; entering water 70°C; leaving water 60°C
 (5) Water flow rate and water pressure drop values are at maximum speed
 (6) Air flow rate at 0Pa ESP



MODEL				2-PIPE							
				FWP02AT	FWP03AT	FWP04AT	FWP05AT	FWP06AT	FWP07AT		
Cooling capacity	Total capacity	High	kW	2.61 (1)	3.14 (1)	3.49 (1)	5.08 (1)	5.45 (1)	6.47 (1)		
	Sensible capacity	High	kW	1.88 (1)	2.16 (1)	2.34 (1)	3.6 (1)	3.87 (1)	4.4 (1)		
Heating capacity	2-Pipe	High	kW	5.47 (2)	6.01 (2)	6.47 (2)	10.31 (2)	11.39 (2)	12.28 (2)		
	4-Pipe	High	kW	-				5.99 (2)			
Power input	High		W	46.4				80			
Dimensions	Unit	HeightxWidthxDepth	mm	239x1,039x609				239x1,389x609			
Weight	Unit		kg	23	24	26	31	33	35		
	Operation weight		kg	24	26	28	33	35	38		
Heat exchanger	Water volume		l	1.1	1.5	2.2	1.6	2.1	3.2		
Additional heat exchanger	Water volume		l	0.4						0.6	
Water flow	Cooling		l/h	448 (3)	539 (3)	598 (3)	873 (3)	936 (3)	1,111 (3)		
	Heating		l/h	480 (3)	527 (3)	567 (3)	904 (3)	999 (3)	1,077 (3)		
	Additional heat exchanger		l/h	275 (3)				526 (3)			
Water pressure drop	Cooling		kPa	8 (3)	14 (3)	11 (3)	15 (3)	8 (3)	14 (3)		
	Heating		kPa	7 (3)	10 (3)	8 (3)	12 (3)	7 (3)	10 (3)		
	Additional heat exchanger		kPa	3 (3)				5 (3)			
Fan	Type	Centrifugal - forward blades - directly coupled on fan motor									
	Air flow rate	High	m ³ /h	400 (4)				800 (4)			
	Available pressure	High	Pa	71				65			
Sound power level	High		dBA	55.6				60.6			
Sound pressure level	High		dBA	44.1				49.1			
Piping connections	Drain	OD	mm	16							
Water connections	Std. heat exchanger		inch	3/4							
	Add. heat exchanger		inch	3/4							
Power supply	Phase/Frequency/Voltage		Hz/V	1~/50/230							

- (1) Cooling: 2 pipe: air 27°CDB, 19°CWB; entering water 7°C; leaving water 12°C
 (2) Heating: 2 pipe: air 20°CDB; entering water 70°C; leaving water 60°C
 (3) Water flow rate and water pressure drop values are at maximum speed
 (4) Air flow at 0Pa ESP

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