AERMEC

FCXI

INVERTER TECHNOLOGY

Fan coils with Inverter brushless motor
Continuous 0-100% air flow rate regulation
Universal, floor and ducted installation

Variable Multi Flow

VMF

FCXI P

FCXI AS

FCXI U

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

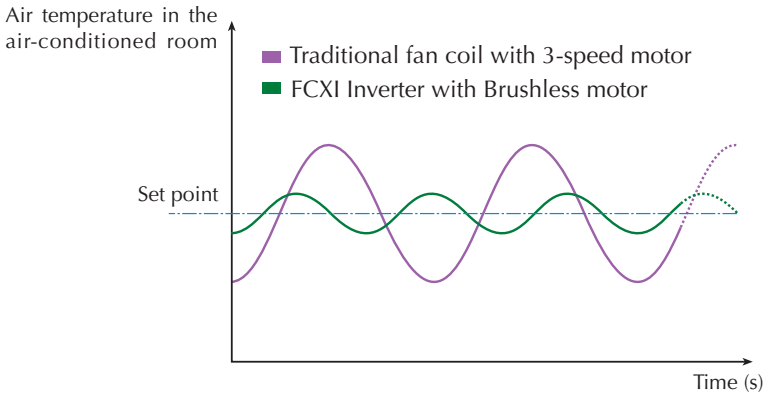
Aermec
participate in the EUROVENT
program: FC / 2 / H
the products are present on the site
www .eurovent-certification. com

White:
housing: RAL 9002
head and feet: RAL 7044

The future is Inverter

FCXI is the Aermec range of fan coils with continuous 0-100% air flow rate variation and therefore continuous heating/ cooling capacity variation.
Thanks to the Inverter technology, the FCXI continuously modifies the air flow rate, adapting it - moment by moment - to the real needs in the room.
This produces considerable advantages in terms of electric savings, comfort and noise reduction compared with a traditional on-off 3-speed fan coil.

- **ELECTRIC SAVINGS OF 50% COMPARED WITH A FAN COIL WITH TRADITIONAL 3–SPEED MOTOR**
- **VERY QUIET OPERATION**
- **TOTAL COMFORT: REDUCED TEMPERATURE AND HUMIDITY VARIATIONS IN THE AIR–CONDITIONED ROOMS**



Characteristics

- Available in 5 sizes and 3 versions:
  FCXI AS: with tall cabinet
  FCXI U: with universal cabinet for floor/ ceiling installation
  FCXI P: without cabinet for ceiling installation
- Compatible with VMF System
- EUROVENT Certification
- Fan unit with Brushless motor (continuous 0-100% speed variation)
- Full compliance with the accident prevention standards
- Rounded line
- Metallic protective cabinet with rustproofing polyester paint
- Adjustable air distribution grille, for U versions
- Fan coil automatic power-off function with closure of the air delivery grille, for U versions
- Quiet operation
- Low loss of charge in the heat exchange batteries
- Configurable during the installation phase - using dip switches - to obtain greater head at nominal delivery, for P versions
- Ease of installation and maintenance
- Air filter easy to remove and clean
- Extractable shrouds for easy, effective cleaning
- Water connections can be reversed during installation phase

Brushless electric motor

The "brushless" electric motor is the result of combining the most sophisticated technologies from the fields of mechanics and electronics.
"Brushless" literally means "without brushes".
The brushless electric motor has no sliding contacts between the rotor and the stator.

In brushless motors, the rotor consists of permanent magnets whose magnetic field interacts - without any mechanical contact - with the stator windings. With the special inverter device, it is possible to control the speed and torque of the rotor continuously, just by means of the stator currents.
Compared with the traditional alternate current motors, the brushless motor offers huge advantages:
- reduced wear and tear
- the possibility to adjust the rotation speed accurately and continuously (0-100%)
- higher energy yields
- longer life and greater reliability

These characteristics have made the brushless motor irreplaceable in a wide variety of applications:

- robotics
- automotive
- precision drives
- CD/DVD players
- medical equipment
- etc.

Thanks to Aermec's FCXI range of inverter fan coils, brushless technology can now make inroads in the field of chilled water air conditioning, bringing notable energy savings along with the precise contro of both air temperature and humidity in the air-conditioned rooms.

Accessories

Compulsory accessory, essential for unit operation:
- **WMT20**: Control panel with electronic thermostat and LCD monitor. Essential for operation. Wall mounting.
- **VMF System**: the characteristics are described on the appropriate card.

Accessories:
- **AMP**: Kit for ceiling installation, for versions FCXI P and FCXI U.
- **BC**: Auxiliary condensate drip tray.
- **BV**: 1-row hot water coil. The accessory is not available for the 4R models.
- **CHF**: VentilCassaforma is a galvanised metal template that allows you to create a space directly in the wall for housing the fan coil. The template facilitates masonry work during the construction of the niche where the fan coil will be installed. When the work is finished, the fan coil will be completely hidden from sight. (For FCXI P only).
- **DSC4**: Condensate drainage device for use when natural run-off is not possible.
- **GA**: Intake grille with fixed fins.
- **GAF**: Intake grille with fixed fins and filter.
- **GM**: Delivery grille with adjustable fins.
- **MA**: A-type covering cabinet (use tray accessory BC 4 for FCXI AS).
- **MU**: U-type covering cabinet (use tray accessory BC 5-6 for FCXI U).
- **PA**: Plenum suction assembly in galvanised sheet metal, complete with suction couplings for circular-section ducts.
- **PA-F**: Plenum suction assembly that allows intake and delivery on the same side; suitable for all installations where the machine needs to be positioned outside the air-conditioned rooms in order to minimise noise levels and facilitate maintenance operations.
- **PC**: Sheet metal panel to close rear of unit.
- **PM**: Delivery plenum in galvanised sheet metal, externally insulated, complete with plastic delivery couplings for circular section ducts.
- **RD**: Straight delivery coupling for canalisation.
- **RDA**: Straight suction coupling for canalisation.
- **RP**: 90° delivery coupling for canalisation.
- **RPA**: 90° suction coupling for canalisation.
- **SE**: External air damper with command FCXI P and FCXI AS.
- **SWI**: Water temperature probe for WMT20 control panels. Cable length L = 2m.
- **VCF**: Kit comprising motorized 3 way valve with isolating shell, unions and insulated copper pipes. For 3/4-row and 1-row coils (BV). Versions with 230V and 24V~50Hz power supply.
- **VCFD**: Kit consisting of powered 2-way valve, copper couplings and pipes. For 3/4-row and 1-row coils (BV).
- **ZX**: Feet for floor installations for FCXI AS models.

Accessories		FCXI fan coil					
		Size					Versions
		20	30	40	50	80	
WMT20		✔	✔	✔	✔	✔	AS - U - P
AMP*		✔	✔	✔	✔	✔	U - P
AMP20		✔	✔	✔	✔	✔	U - P
BC	**4*****	✔	✔	✔	✔	✔	AS - (P+MA)
	5	✔	✔	✔	✔		U - (P+MU)
	6					✔	U - (P+MU)
	8	✔	✔	✔	✔		P
	9					✔	P
BV**	**122**	✔					AS - U - P
	132		✔				AS - U - P
	142			✔	✔		AS - U - P
	162					✔	AS - U - P
CHF	**22**	✔					P
	32		✔				P
	42			✔	✔		P
	62					✔	P
DSC4*		✔	✔	✔	✔	✔	AS - U - P
GA	**22**	✔					P
	32		✔				P
	42			✔	✔		P
	62					✔	P
GAF	**22**	✔					P
	32		✔				P
	42			✔	✔		P
	62					✔	P
GM	**22**	✔					P
	32		✔				P
	42			✔	✔		P
	62					✔	P
MA	**22**	✔					P
	32		✔				P
	42			✔	✔		P
	62					✔	P
MU	**22**	✔					P
	32		✔				P
	42			✔	✔		P
	62					✔	P
PA	**22**	✔					P
	32		✔				P
	42			✔	✔		P
	62					✔	P
PA	**22F**	✔					P
	32F		✔				P
	42F			✔	✔		P
	62F					✔	P
PC	**22**	✔					AS
	23	✔					U
	32		✔				AS
	33		✔				U
	42			✔	✔		AS
	43			✔	✔		U
	62					✔	AS - U
PCR	**1**	✔	✔	✔	✔		P
	2					✔	P
PM	**22**	✔					P
	32		✔				P
	42			✔	✔		P
	62					✔	P
RD	**22**	✔					P
	32		✔				P
	42			✔	✔		P
	62					✔	P
RDA	**22**	✔					P
	32		✔				P
	42			✔	✔		P
	62					✔	P
RP	**22**	✔					P
	32		✔				P
	42			✔	✔		P
	62					✔	P
RPA	**22**	✔					P
	32		✔				P
	42			✔	✔		P
	62					✔	P
SE	**20X**	✔					AS - P
	30X		✔				AS - P
	40X			✔	✔		AS - P
	80X					✔	AS - P
SWI		✔	✔	✔	✔	✔	AS - U - P
VCF ***	**41 - 4124*****	✔	✔				AS - U - P
	42 - 4224***			✔	✔		AS - U - P
	43 - 4324***					✔	AS - U - P
	44 - 4424***	✔****	✔****	✔****	✔****		AS - U - P
	45 - 4524***					✔****	AS - U - P
VCFD	**1 - 124******	✔	✔				AS - U - P
	2 - 224****			✔	✔		AS - U - P
	3 - 324****					✔	AS - U - P
	4 - 424****	✔****	✔****	✔****	✔****	✔****	AS - U - P
ZX	**5**	✔	✔	✔	✔		AS
	6					✔	AS
	7	✔	✔	✔	✔		P
	8					✔	P

* = The DSC4 accessory is not compatible with AMP accessory. The DSC4 accessory is compatible with AMP20 accessory.
** = The accessory is not available for models fitted with a Plasmacluster filter.
*** = 24 Volt.
**** = Only for accessory coil BV 1R.
***** = The BC4 accessory is not available for models fitted with VCF valve.

Technical data

Mod.	FCXI	20	30	40	50	80
Heating capacity (inlet water 70°C)	W (max.)	3400	4975	7400	8620	15140
	W (min.)	1080	1410	1700	1830	2740
Heating capacity (inlet water 50°C) (E)	W (max.)	2100	3160	4240	4900	7990
	W (min.)	670	900	980	1040	1450
Water flow rate	l/h	292	427	636	741	1300
Water pressure drops	kPa	6,3	14,2	14,1	14,2	19,8
Total cooling capacity	W (max.)	1500	2210	3400	4190	7420
	W (min.)	520	690	760	800	1170
Sensible cooling capacity	W (max.)	1240	1750	2760	3000	5680
	W (min.)	370	500	550	536	830
Water flow rate	l/h	258	380	585	721	1276
Water pressure drops	kPa	5,8	16,6	14,3	19,3	13,5
Air flow rate	m^3/h (max.)	290	450	600	720	1140
	m^3/h (min.)	70	115	140	140	190
Number of fans	n.	1	2	2	2	3
♪ Sound pressure	dB(A) Vel. max	41,5	39,5	42,5	47,5	53,5
	dB(A) Vel. med	34,5	32,5	35,5	42,5	48,5
	dB(A) Vel. min	22,5	25,5	28,5	33,5	41,5
Sound power	dB(A) Vel. S.min	21,5	18.5	21,5	21,5	23,5
	dB(A) (max.)	50	48	51	56	62
	dB(A) (min.)	30	28	30	30	32
Water content	l	0,79	1,11	1,48	1,48	2,52
Input power	W (max.)	12	12	16	37	75
Input current	A (max.)	0,11	0,11	0,14	0,3	0,57
Input power** (Maximum head)	W (max.)	36	45	57	62	102
Input current** (Maximum head)	A (max.)	0,33	0,41	0,5	0,51	0,78
Heat exchanger water connections	ø Gas	1/2″	1/2″	3/4″	3/4″	3/4″

Power supply = 230V ~ 50Hz

(E) = **Eurovent certified performance**

Performance values refer to the following conditions:

♪ Level of sound pressure (A-weighted) measured in the room with volume V = 85 m 3; reverberation time t = 0.5 s; direction factor Q = 2; distance r = 2.5 m.

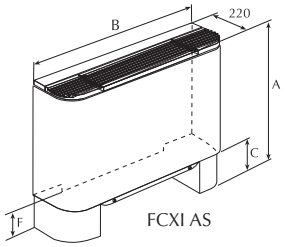
** FCXI P version with internal dip-switch setting to obtain the maximum head at nominal delivery.

Cooling:
- room air temperature 27°C D.B., 19°C W.B;
- inlet water temperature 7°C; maximum speed;
- Dt water 5°C.
- for medium and low speed water flow rate, remains the same as at maximum speed.

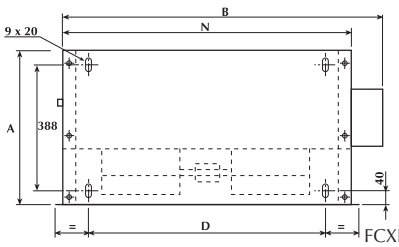
Heating:
room air temperature 20°C D.B.;
- maximum speed:
  - water inlet temperature 70°C; Dt water 10°C;
- medium and minimum speed:
  - water inlet temperature 70°C;
  - water flow rate as at maximum speed.

Heating*:
room air temperature 20°C D.B.;
- maximum speed
  - water inlet temperature 50°C;
  - water flow rate as for cooling operation.

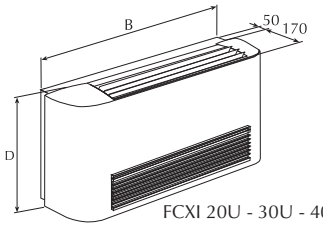
Dimensions (mm)



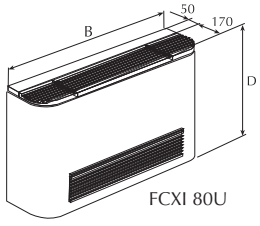
FCXI AS



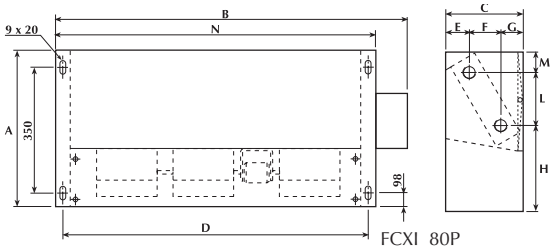
FCXI 20P - 30P - 40P - 50P



FCXI 20U - 30U - 40U - 50U



FCXI 80U



FCXI 80P

Mod FCXI		20 AS	30 AS	40 AS	50 AS	80 AS
Height with feet	A	563	563	563	563	688
Width	B	750	980	1200	1200	1320
Height of feet	C	105	105	105	105	125
Rear height with feet	F	88	88	88	88	108
Weight (without feet)	kg	15	20	24	24	34

Mod FCXI		20 U	30 U	40 U	50 U	80 U
Height	D	520	520	520	520	590
Width	E	750	980	1200	1200	1320
Weight	kg	15	20	24	24	34

FCXI	20P	30P	40P	50P	80P
A	453	453	453	453	558
B	562	793	1013	1013	1147
C	216	216	216	216	216
D	440	671	891	891	1102
E	41	41	41	41	41
F	101	101	101	101	107
G	74	74	74	74	68
H	260	260	260	260	273
L	144	144	144	144	253
M	49	49	49	49	32
N	522	753	973	973	1122
Weight (kg)	13	18	22	22	33

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