

# **FCS**

# Fan coils for sensible cooling only Universal, vertical and ductable installations



#### **Features**

- Available in 6 sizes and 3 versions:
  - FCS-A: vertical free-standing with switch
  - FCS-AS: vertical free-standing without switch FCS-ACB: vertical free-standing with simplified electronic thermostat
  - **FCS-ACT**: vertical free-standing with electronic thermostat
  - **FCS-U**: universal free-standing or wall/ceiling mounting
  - FCS-P: wall/ceiling mounting without cabinet FCS-PO: wall/ceiling mounting with high power multi-speed motor (FCS 22, 32, 42, 50 and 62)
- 3-speed fan unit
- · Full compliance with safety regulations
- Soft, flowing lines
- Adjustable air delivery louver on versions U, except models 62 and 82
- Automatic power-off function with closure of the air delivery louver
- · Broad range of controls
- Metallic protective cabinet with rustproof polyester paint
- Low noise operation
- Reduced pressure drops across heat exchangers
- Motors with permanently connected condensers

- Possibility of residual pressure for duct requirements (FCS-P)
- Type 1 fireproof internal insulation and air filter (FCS-P)
- · Easy installation and maintenance
- · Air filter easily removed and cleaned
- Removable blades for easy and effective cleaning
- Water connections reversibility during installation

#### **Accessories**

- AMP: Kit for wall/ceiling mounting.
- BC: Auxiliary condensate drip tray.
- BV: Single row hot water coil.
- **DSC4**: Condensate drainage device for use when natural run-off is not possible.
- GA: Intake louver with fixed slats.
- GAF: Intake louver with fixed slats and filter.
- **GM**: Delivery louver with adjustable slats.
- MA: A-type cabinet (use Auxiliary Drip Tray BC 4 for FCS AS).
- MU: U-type cabinet (use Auxiliary Drip Tray BC 5-6 for FCS U).
- PC: Rear cover panel.
- PCR: Galvalnized cover panel for controls and heating element terminals.
- PA: Intake Plenum made of galvanized steel sheet, provided with Intake Connections for Circular Section Ducts.
- PA-F: Intake plenum that allows to have the intake and the delivery on the same side, suitable for all the installations where it is requested to put the appliance outside the air-conditioned rooms in order to reduce to the minimum the noise and facilitate the maintenance operations.
- PM: Delivery plenum in galvanized steel with external insulation, with plastic outlet connections for circular section ducting.
- PTI: Control panel with electronic ambient thermostat for unit installation (for FCS AS and 62U, 82U).
- PX: Control panel with selector switch.

- **PXB**: Simplified control panel with electronic ambient thermostat for wall installation.
- **PXBI**: Simplified control panel with electronic ambient thermostat for unit installation.
- PXAE: Electronic thermostat for fan coils installed in two-pipe or four-pipe systems.
   Simplified commands with two selectors for temperature and ventilation control (three speeds with manual or automatic control). It can control up to two valves of the On-Off type. Wall mounting.
- PXAI: Electronic thermostat for fan coils installed in two-pipe or four-pipe systems.
   Simplified commands with two selectors for temperature and ventilation control (three speeds with manual or automatic control). It can control up to two valves of the On-Off type. Water temperature sensor included.
   Wall mounting or mounting on the fan coil.
- PXAR: Electronic thermostat for fan coils installed in two-pipe systems, and systems with two pipes with electric heater or four pipes (without electric heater).

Simplified controls with just two selectors for the control of the temperature and the ventilation (3 speeds with manual or automatic control). The control of the electric heater can be activated using the speed selector. It can monitor the electric heater and one On-Off type valve or up to two On-Off type valves.

Water temperature sensor included. Wall mounting or mounting on the fan coil.

- PXLM: Control panel for motorized louvers operation (for FCS 17-50U only).
- RD: Delivery straight duct connection.
- **RDA**: Intake straight duct connection.
- **RP**: Delivery 90° duct connection.
- RPA: Intake 90° duct connection.
- RX: Armoured electrical heating element with safety thermostat. (Need thermostat with el. heater control).
- SE: Manually operated fresh air intake louver.
- SIT 3-5: Thermostat interface cards. They allow to set up a fancoils network (max. 10) commanded by a centralised panel (switch or thermostat).

<u>SIT3</u>: commands the three speeds of the fan and must be installed on each fancoil of the network; it receives the commands from the switch or from the SIT5 card.

<u>SIT5:</u> commands the 3 fan speeds and up to two valves (four-pipe systems); it sends the thermostat commands to the fancoils network.

- SW: Probe for the electronic thermostats (excluding PXB) which permits operation of the unit only with water above 35 °C.
- TF: Room thermostat with selector.
- VCF: Kit comprising motorized three-way valve, unions and copper pipes. For 3-row (VCF 1 and 3) and 1-row (VCF 4 and 5) coils.
- **ZX**: Feet for built-in installation.

FCS fan coils Accessories Size Versions								
		22	32	42	50	62	82	
AMP		<b>/</b>	<b>✓</b>	<b>V</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	All except FCS-A range
	4	~	V	<u> </u>	<u> </u>	V	V	All except FCS-A range
ВС	<u>5</u>	<b>V</b>	<i>V</i>	· ·	<i>'</i>			All except FCS-A range All except FCS-A range
ьс	8	~	V	· ·	· ·			All
	9					· ·	V	All
	122	~				· · · · · · · · · · · · · · · · · · ·	·	All
BV	132		<b>✓</b>					All
DV	142			<b>V</b>	<b>V</b>			All
B.0.0.1	162					<i>V</i>	<i>V</i>	All
DSC4	22	~	V	· ·	· ·	V	V	All
	22 32	<b>V</b>	· ·					FCS P range FCS P range
GA	42			· ·	· ·			FCS P range
	62						V	FCS P range
	22	~						FCS P range
GAF	32		<b>V</b>					FCS P range
GAF	42			<b>V</b>	<b>V</b>			FCS P range
	62					<b>✓</b>	<b>✓</b>	FCS P range
	22	~						FCS P range
GM	32 42		<i>V</i>		V			FCS P range FCS P range
	62					· ·	· ·	FCS P range
	22	~						FCS P
	32	•	V					FCS P
MA	42		-	V	V			FCS P
	62					V	V	FCS P
	22	~						FCS P
MU	32		<b>✓</b>					FCS P
.,,,	42			· ·	· ·			FCS P
	62					V	V	FCS P
	22 32	<b>V</b>						FCS P range FCS P range
PA	42			V	V			FCS P range FCS P range
	62					V	V	FCS P range
	22	V				•	•	FCS P range
DA E	32		V					FCS P range
PA-F	42			<b>V</b>	<b>✓</b>			FCS P range
	62					<b>✓</b>	<b>✓</b>	FCS P range
	22	V						FCS-A
	23	~						FCS-U
PC	32		V V					FCS-A
PC	33 42			· ·	V			FCS-U FCS-A
	43							FCS-U
	62					V	V	All except FCS-P range
	1	~	· ·	· ·	· ·	•	•	FCS P range
PCR	2					V	V	FCS P range
	22	~						FCS P range
PM	32		V					FCS P range
1 ///	42			<b>✓</b>	<b>✓</b>			FCS P range
PTI	62			· ·		<i>V</i>	V V	FCS P range FCS AS - 62U - 82U
PX2								All
PXB			<u> </u>				~	All
PXBI		V	V	V	V	V	V	All except FCS-P range
PXAE		~	V	V	V	V	V	All
PXAI		<b>V</b>	V	<b>V</b>	<b>✓</b>	<b>V</b>	<b>V</b>	All except FCS-P range
PXAR		~	<b>✓</b>	· ·	· ·	<b>✓</b>	<b>/</b>	All
PXLM		V	<b>✓</b>	<b>V</b>	<b>V</b>	<b>✓</b>	<b>✓</b>	FCS U
	22	V						FCS P range
RD	32 42		V		· ·			FCS P range
	62						· ·	FCS P range FCS P range
	22	~						FCS P range
	32	•	V					FCS P range
RDA	42			<b>V</b>	<b>V</b>			FCS P range
	62					V	V	FCS P range
	22	V						FCS P range
RP	32		<b>✓</b>					FCS P range
	42			V	~		.,	FCS P range
	62 22					<i>V</i>	<b>✓</b>	FCS P range FCS P range
	32		· ·					FCS P range FCS P range
RPA	42			· ·	· ·			FCS P range
	62			<u> </u>	<u> </u>	V	V	FCS P range
	22	~				<del></del>	•	All
	32		<b>✓</b>					All
RX	42			<b>V</b>				All
	52				<b>V</b>			All
	62					<b>✓</b>	V	All
	20X	<b>V</b>						All
SE	30X 40X		<b>V</b>	~	.,			All All
	80X			<u> </u>	<b>✓</b>	· · · · · · · · · · · · · · · · · · ·		All
			· ·	· ·	· ·			FCS AS - U - UE - P - PE - PO
SIT	<u>3</u> 5							FCS AS - U - UE - P - PE - PO
SW3	J							All
TF1								All
	1	~	~			<del>-</del>	<del>-</del>	All
VCF	3 4					<b>✓</b>	<b>✓</b>	All
VCF		~	V	V	<b>✓</b>			All
	5					<b>V</b>	<b>✓</b>	All
	5	V	V	<b>'</b>	<b>V</b>			FCS-A range
ZX	6					<b>/</b>	· ·	FCS-A range
	7 8	<b>V</b>	V	<b>V</b>	<b>'</b>	· ·	· · · · · · · · · · · · · · · · · · ·	FCS-P range FCS-P range
	U					•		1 CJ-1 Talige

# **Technical data**

Aod.		FCS 22	FCS 32	FCS 42	FCS 50	FCS 62	FCS 82
	W (max.)	3640	5410	7960	9270	14600	17110
Heating capacity	W (med.)	2890	4440	6900	8100	12360	15080
	W (min.)	2050	3680	5500	5830	9410	12170
lectric heating element power	W	950	1300	1650	1950	2200	2200
Vater flow rate	l/h	313	465	686	797	1256	1471
Vater pressure drops	kPa	35.1	71.6	36.8	48.5	48.2	64.1
	W (max.)	930	1420	1910	2220	3400	4020
otal cooling capacity	W (med.)	830	1210	1630	1930	2910	3540
· , ,	W (min.)	650	930	1320	1500	2330	2930
	W (max.)	930	1420	1910	2220	3350	3970
Sensible cooling capacity	W (med.)	820	1200	1610	1900	2810	3450
0 , ,	W (min.)	630	890	1270	1450	2180	2790
Vater flow rate	l/h	160	244	329	382	585	691
Vater pressure	kPa	12.0	26.0	11.4	14.7	14.3	18.8
<u> </u>	m³/h (max.)	290	450	600	720	920	1140
Air flow rate	m³/h (med.)	220	350	460	600	720	930
	m³/h (min.)	140	260	330	400	520	700
ans	n.	1	2	2	2	3	3
	dB (A) (max.)	39.5	39.5	42.5	47.5	47	52.5
Sound pressure	dB (A) (med.)	33	32.5	35.5	42.5	40.5	47.5
•	dB (A) (min.)	23	25.5	28.5	33.5	31.5	42.5
	dB (A) (max.)	48	48	51	56	55.5	61
Sound power	dB (A) (med.)	41.5	41	44	51	49	56
·	dB (A) (min.)	31.5	34	37	42	40	51
Vater contents	1	0.79	1.11	1.48	1.48	2.52	2.52
Max. motor power	W	25	44	57	67	82	106
Max. input current	A	0.12	0.21	0.28	0.35	0.40	0.49
Max. motor power	W	977	1349	1713	2030	2285	2312
vith electric heater							
nput current vith electric heater	Α	4.25	5.86	7.45	8.83	9.97	10.06
Coil connections 3R	Ø	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"

# Power supply = $1 \sim 230 \text{V} 50 \text{Hz}$ .

Performance values refer to the following conditions:

Sound pressure measured in an 85 m<sup>3</sup> semi-reverberant test chamber with reverberation time Tr = 0.5s.

### Cooling:

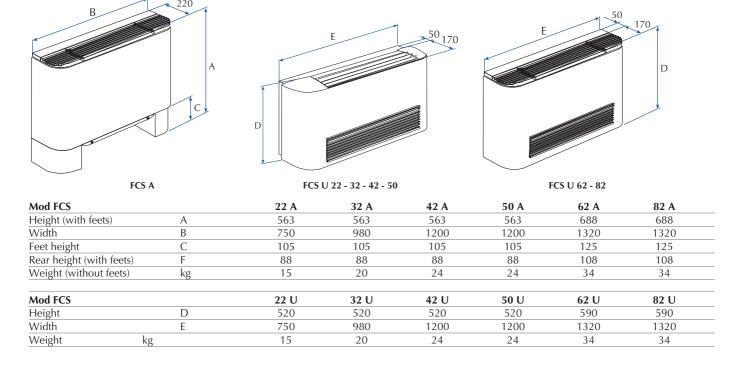
- room air temperature 27 °C D.B., 19 °C W.B.; water inlet temperature 13 °C; max. speed;

- for medium and low speed, water flow rate remains same as at max. speed.

# Heating:

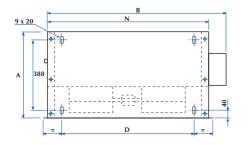
- room air temperature 20 °C;
- water inlet temperature 70 °C; maximum speed;
- Δt water 10 °C;
- for medium and low speed, water flow rate remains same as at maximum speed.

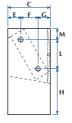
### **Dimensions (mm)**



# **Dimensions (mm)**

### FCS P 22 - 32 - 42 - 50



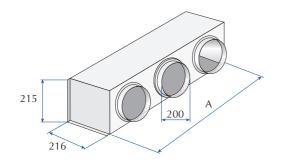






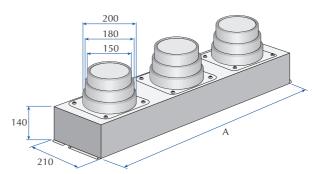
FCS P	22	32	42	50	62	82
A	453	453	453	453	558	558
В	562	793	1013	1013	1147	1147
C	216	216	216	216	216	216
D	440	671	891	891	1102	1102
E	41	41	41	41	41	41
F	101	101	101	101	107	107
G	74	74	74	74	68	68
H	260	260	260	260	273	273
L	144	144	144	144	253	253
M	49	49	49	49	32	32
N	522	753	973	973	1122	1122
Weight (Kg)	13	18	22	22	33	33

### PA - INTAKE PLENUM



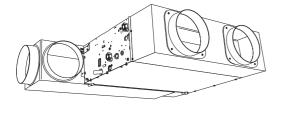
PA	22	32	42	62
A	500	731	951	1072
Blocks	2	2	3	4

# PM - DELIVERY PLENUM



PM	22	32	42	62
A	522	753	973	1094
Blocks	2	2	3	4

#### PA-F - FRONT INTAKE PLENUM



	PA 22 F	PA 32 F	PA 42 F	PA 62 F
A	768	1039	1259	1381
Blocks	1 [A]	2 [A+B*]	2 [A+B*]	2 [A+B]

 $B^*=$  unopened intake spigot. To use it remove the pre-cut element.

