

**AERMEC**USE AND INSTALLATION MANUAL  
MANUEL D'UTILISATION ET D'INSTALLATION

## FAN COIL WITH INVERTER VENTILO-CONVECTEUR AVEC INVERTER



# FCXI USP



FCXI 20 / 220 USP  
FCXI 30 / 220 USP  
FCXI 40 / 220 USP  
FCXI 50 / 220 USP  
FCXI 80 / 220 USP

FCXI 24 / 220 USP  
FCXI 34 / 220 USP  
FCXI 44 / 220 USP  
FCXI 54 / 220 USP  
FCXI 84 / 220 USP



IFCXIUSPLJ 1203 - 5383920\_00



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## CARRIAGE • TRANSPORT



Do NOT wet

CRAINT l'humidité



Stacking: control the packing to know the number of machines that can be stacked

Empilement: vérifier sur l'emballage pour connaître le nombre d'appareils pouvant être empilés



Do NOT leave loose packages during transport

ATTACHER les emballages pendant le transport



Fragile, handle with care

Fragile, manipuler avec soin



Do NOT step

NE PAS marcher sur cet emballage



DO NOT handle the machine alone if its weight is over 55lb / 25Kg

NE PAS transporter tout seul l'appareil si son poids dépasse 55lb / 25Kg



Arrow: high

Flèche: haut

## SAFETY SYMBOL • SIMBOLES DE SECURITE



Danger:  
Power supply

Danger:  
Tension



Danger:  
Moving parts

Danger:  
Organes en mouvement



Danger!!!

Danger!!!

**Congratulations on your purchase of this Aermec FCXI fan coil.**

**Made with materials of superior quality in strict compliance with safety regulations, "FCXI" is easy to use and will have a long life.**

**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 control of both air temperature and humidity in the air-conditioned rooms.**

## REMARKS

Store the manuals in a dry location to avoid deterioration, as they must be kept for at least 10 years for any future reference.

**All the information in this manual must be carefully read and understood. Pay particular attention to the operating standards with "DANGER" or "WARNING" signals as failure to comply with them can cause damage to the machine and/or persons or objects.**

If any malfunctions are not included in this manual, contact the local After-sales Service immediately.

**The apparatus must be installed in such a way that maintenance and/or repair operations are possible.**

The apparatus's warranty does not in any case cover costs due to automatic ladders, scaffolding or other lifting systems necessary for carrying out repairs under guarantee.

AERMEC S.p.A. declines all responsibility for any damage whatsoever caused by improper use of the machine, and a partial or superficial acquaintance with the information contained in this manual.

The number of pages in this manual is :28

## DESCRIPTION OF THE UNIT

### MACHINE PURPOSE

The fan coil is a room air treatment terminal unit for both winter and summer operation.

### AVAILABLE SIZES

The FCXI\_USP fan coils are available in:

#### 5 sizes 220V 60Hz with 3-row coil

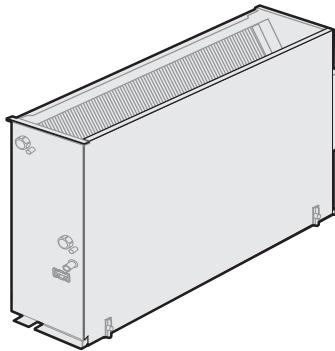
FCXI 20 / 220 USP  
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FCXI 40 / 220 USP  
FCXI 50 / 220 USP  
FCXI 80 / 220 USP

#### 5 sizes 220V 60Hz with 4-row coil

FCXI 24 / 220 USP  
FCXI 34 / 220 USP  
FCXI 44 / 220 USP  
FCXI 54 / 220 USP  
FCXI 84 / 220 USP

### Version FCXI\_USP

Inverter fan coil for suspended ceiling) installation. Without control panel and with Inverter motor, 3-rows or 4-rows heat exchanger. Requires external control panel.



## PACKAGING

The fan coils are shipped in standard package which consists of expanded polystyrene foam and cardboard shells.

## USE

Consult control panel manual for use instructions.

## IMPORTANT INFORMATION AND MAINTENANCE

**WARNING:** the fan coil is connected to the power supply and a water circuit. Intervention by persons without the required technical skills can lead to personal injury to the operator or damage to the unit and surrounding objects.

### POWER THE FAN COIL ONLY WITH 220V, SINGLE-PHASE VOLTAGE

Any other type of power supply could permanently damage the fan coil.

### DO NOT USE THE FAN COIL IMPROPERLY

Do not use the fan coil for animal husbandry applications (e.g. incubation).

### AIR THE ROOM

Periodically air the room in which the fan coil has been installed. This is particularly important if the room is occupied by many people, or if gas appliances or sources of odours are present.

### ADJUST TEMPERATURE ADEQUATELY

The room temperature should be adjusted in order to provide maximum comfort to the people in the room, especially if they are elderly, children or sick people; avoid differences over 44.6°F / 7°C between the outdoor temperature and the temperature inside the room in summer.

In summer, a temperature that is too low causes higher electrical consumption.

### CORRECT AIR JET AIMING ADJUSTMENT

Air coming out from the fan coil must not reach people directly; in fact, even if the air is warmer than the room temperature, it could cause a cold sensation and result in discomfort.

### DO NOT USE EXCESSIVELY HOT WATER

Clean the fan coil with a soft cloth or sponge soaked in water not over 104°F / 40°C. Do not use chemical products or solvents to clean any part of the fan coil. Do not spray water on the outer or inner surfaces of the fan coil (it might cause short circuits).

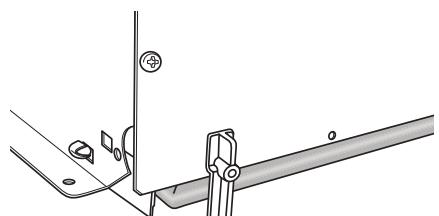
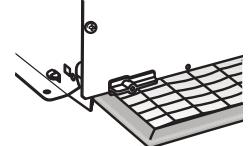
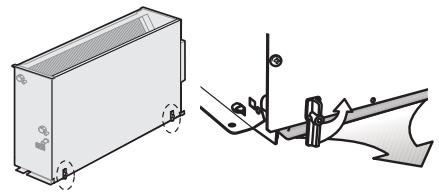
### CLEAN THE FILTER FREQUENTLY

Cleaning the filter frequently guarantees enhanced operating efficiency.

Check whether the filter is very dirty: if it is, clean it more often.

Clean frequently; remove the accumulated dust with a vacuum cleaner.

Once the filter is clean, refit it to the fan coil following the removal instructions but in reverse order.



### SUPPLEMENTARY CLEANING

The fact that the blades of examinable shrouds can be removed (operation done only by adequately skilled technicians) ensures a thorough cleaning of the internal components, which is particularly important when installing the unit in crowded areas or venues requiring high hygiene standards.

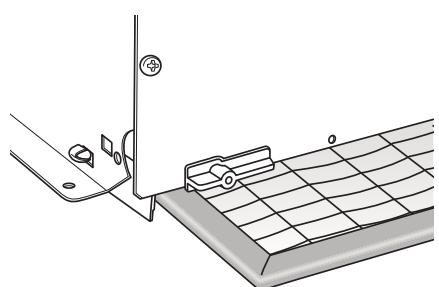
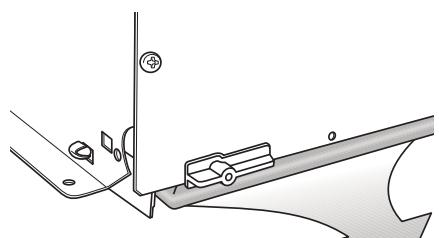
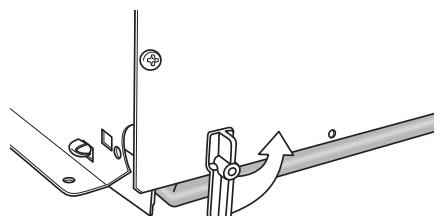
### DURING OPERATION

Always leave the filter fitted on the fan coil during operation (otherwise dust in the air could soil the coil surface area).

### WHAT IS NORMAL

In the cooling function, water vapour may be present in the air delivery of the fan coil.

In the heating function, a slight hiss might be heard close to the fan coil. Sometimes the fan coil might give off unpleasant smells due to the accumulation of substances present in the air of the room (clean the filter more often, especially if the room is not ventilated regularly).



While the unit is functioning, there could be noises and creaks inside the device due to the various thermal expansions of the elements (plastic and metal), but this does not indicate any malfunction and does not damage the unit unless the maximum input water temperature is exceeded.

### WARNING

Avoid that the device is used by children or incompetent persons without appropriate supervision; also note that the unit should not be used by children as a game.

$$^{\circ}\text{C} = (\text{ }^{\circ}\text{F}-32)/1.8$$

$$\text{ }^{\circ}\text{F}=(^{\circ}\text{C}\times 1.8)+32$$

$$\text{mm} = 0.03937 \text{ inch}$$

$$\text{inch} = 25.4 \text{ mm}$$

## OPERATING LIMITS

FCXI	20 /220USP	30 /220USP	40 /220US	50 /220US	80 /220US
	24 /220USP	34 /220USP	44 /220US	54 /220US	84 /220US
Maximum water inlet temperature	176°F / 80°C				
Maximum recommended water inlet temperature	149°F / 65°C				
Maximum operating pressure	115psi / 8bar /				
Room temperature limits (Ta)	32°F < Ta < 113°F / 0°C < Ta < 45°C				
Relative humidity limits in the room (R.H.)	U.R. < 85%				
Power supply	220V ( ±10% ) ~ 60Hz				

Performance values refer to the following conditions:

- at the maximum motor speed;

- the total input power is determined by adding the input power for the unit and the input power for the accessories connected and declared in the corresponding manuals.

### Water temperature

In order to prevent air stratification in the room, and therefore to achieve improved mixing, it is advisable not

to supply the fan coil with water at a temperature over 149°F / 65°C.

The use of water at high temperatures could cause squeaking due to the different

thermal expansions of the elements (plastic and metal), this does not however cause damage to the unit if the maximum operating temperature is not exceeded.

### Minimum average water temperature

If the fan coil is working in continuous cooling mode in an environment where the relative humidity is high, condensate might form on the air delivery and on the outside of the device. This condensate might be deposited on any objects underneath and on the floor.

To avoid condensate on the external structure of the device while the fan is functioning, the average temperature of the water must not be lower than the limits shown in the table below, that depend on the thermo-hygrometric conditions of the air in the room.

The limits mentioned above refer to operation while the fan is set to its

minimum speed level.

In the event of prolonged fan inactivity and with cold water passing through the coil, condensate may form on the external case of the unit. **As a result, we recommend including the 3-way valve accessory.**

MINIMUM AVERAGE WATER TEMPERATURE [°F/°C]	Dry bulb ambient air temperature					
	70/21	73/23	77/25	80/27	84/29	88/31
Wet bulb ambient air temperature	59 / 15	37.4/3	37.4/3	37.4/3	37.4/3	37.4/3
	62.6 / 17	37.4/3	37.4/3	37.4/3	37.4/3	37.4/3
	66.2 / 19	37.4/3	37.4/3	37.4/3	37.4/3	37.4/3
	69.8/21	48.2/6	41/5	39.2/4	37.4/3	37.4/3
	73.4/23	-	46.4/8	44.6/7	48.2/6	41/5

### Water flow limits for 3-row coil

FCXI	20/220USP	30/220USP	40/220USP	50/220USP	80/220USP
Minimum water flow	l/h	100	100	150	150
	gpm	0.44	0.44	0.66	0.66
Maximum water flow	l/h	750	750	1100	1100
	gpm	3.3	3.3	4.84	4.84

### Water flow limits for 1-row coil

FCXI	20/220USP	30/220USP	40/220USP	50/220USP	80/220USP
Minimum water flow	l/h	50	50	50	50
	gpm	0.22	0.22	0.22	0.22
Maximum water flow	l/h	400	400	400	400
	gpm	1.76	1.76	1.76	1.76

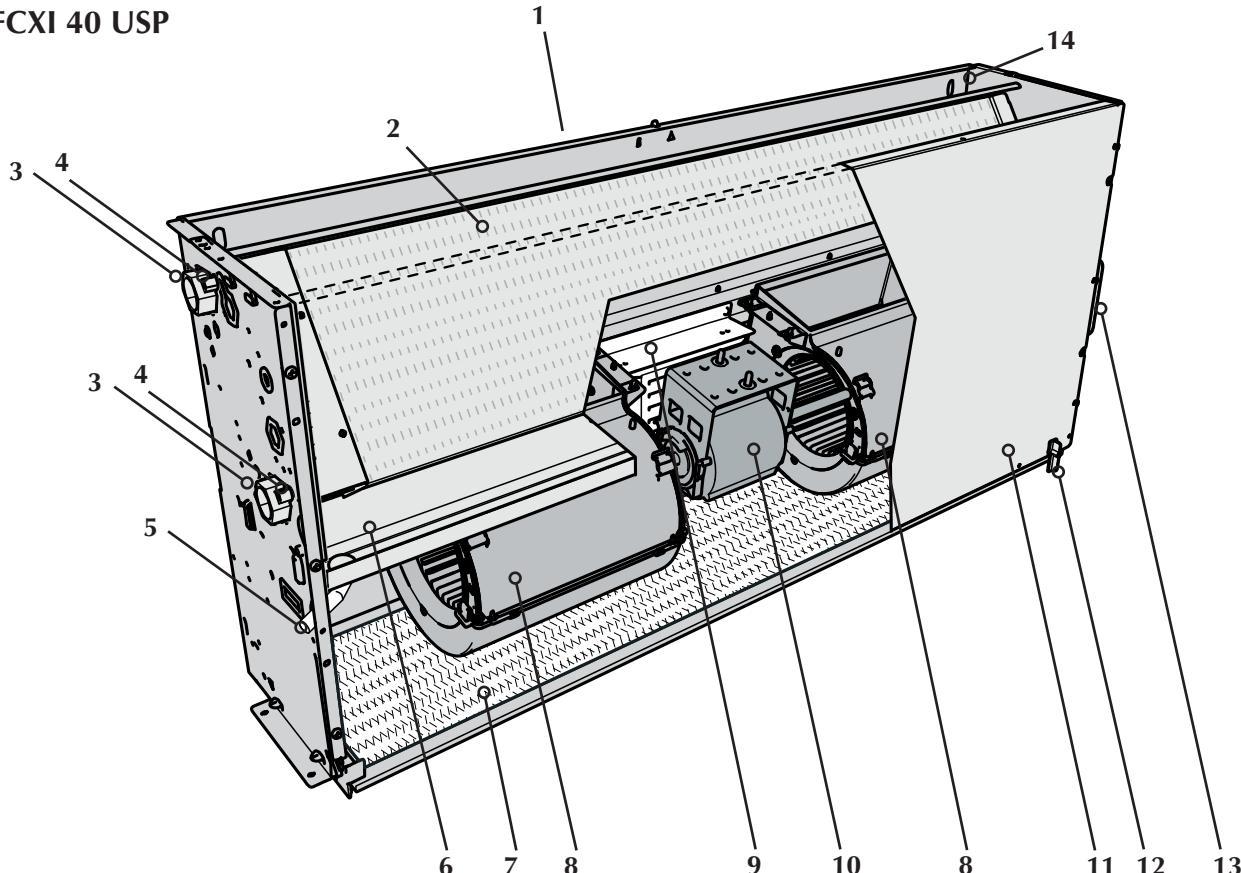
### Water flow limits for 4-row coil

FCXI	24/220USP	34/220USP	44/220USP	54/220USP	84/220USP
Minimum water flow	l/h	150	150	150	150
	gpm	0.66	0.66	0.66	0.66
Maximum water flow	l/h	1100	1100	1100	1100
	gpm	4.84	4.84	4.84	4.84

## MAIN COMPONENTS

- |                         |                        |                           |
|-------------------------|------------------------|---------------------------|
| 1 Air delivery          | 6 Tray                 | 11 Front closure panel    |
| 2 Heat exchange coil    | 7 Air filter (suction) | 12 Filter clip            |
| 3 Water connections     | 8 Fan                  | 13 Electrical wiring      |
| 4 Air vents on the coil | 9 Inverter device      | 14 Load-bearing structure |
| 5 Condensate drain      | 10 Electric motor      |                           |

## FCXI 40 USP



English

## DESCRIPTION

### SYSTEM TYPES

The fan coils are designed for systems with 2 and 4 pipes, in the versions:

- 3-Rows: without valve;
- 3-Rows: with valve;
- 3-Rows: with 1-Row hot water coil (BV) and 2 valves;
- 4-Rows: without valve;
- 4-Rows: with valve.

### HEAT EXCHANGE COIL

Coil with copper pipe and aluminium fins blocked by means of the mechanical expansion of the pipes. The collectors are fitted with female connections and air vents in the upper part of the coil.

### FILTERING SECTION

Filter of G2 filtering class.

Easily removable and made from regenerable materials. May be cleaned by washing.

### ELECTRIC FAN UNIT

This consists of double suction centrifugal fans with lengthways blades to obtain a high air flow with a low number of revs. The fans are directly coupled with the shaft of the electric motor.

The brushless electric motor is powered by a dedicated inverter device that allows the ventilation speed to be continuously varied.

The electric motor is cushioned with elastic supports and the steel shaft is mounted on bearings and resists salty fog in accordance with ASTM B117/84.

### LOAD-BEARING STRUCTURE

Made of galvanised sheet iron of a suitable thickness. There are holes on the back for fixing the device to the wall. The fan unit is closed at the front with a metal panel. Every device is equipped with condensate collection trays (for both vertical and horizontal installation).

### CONDENSATE DRAIN

Every device is equipped with condensate collection trays, with a connection for draining the condensate produced by the unit in cooling mode.

**WATER CONNECTIONS**  
The connections, located on the left hand side, are female. The coil may also be rotated.

**Delivery and suction couplings**  
The FCXI\_USP fan coils are compatible with all the accessories already available for the fan coils of the FCX\_P range.

### CONTROL PANEL

Use a control panel with thermostat and ventilation speed control, with 0-10V outputs.

## INSTALLATION INFORMATION

**WARNING:** check that the power supply is disconnected before carrying out any procedures on the unit.

**WARNING:** before carrying out any work, put the proper individual protection equipment on.

**WARNING:** the device must be installed in compliance with the national plant engineering rules.

**WARNING:** electrical wirings, installation of the fan coils and relevant accessories should be performed by a technician who has the necessary technical and professional expertise to install, modify, extend and maintain systems, and who is able to check the systems for the purposes of safety and correct operation.

**WARNING:** install a device, main switch, or electric plug so you can fully disconnect the device from the power supply.

**WARNING:** Consult all documentation before starting the installation.

The essential indications to install the device correctly are given here.

The completion of all the operations in accordance with the specific requirements is however left to the experience of the installation engineer.

The water, condensate discharge and electrical circuit ducts must be provided for.

The fan coil must be installed in such a position that the air can be distributed throughout the room and so that there are no obstacles (curtains or objects) to the passage of the air from the suction louvers.

The fan coil should be installed in such a way as to facilitate routine (filter cleaning) and special maintenance operations, as well as access to the air drain valve on the side of the unit frame (connections side).

Do not install units in rooms where there are inflammable gases or acid or alkaline substances that could irretrievably damage the aluminium-copper heat exchanger or the internal plastic parts.

Do not install the unit in workshops or kitchens where the oil vapours mixed with the treated air can be deposited on the exchange coils, reducing their performance, or on the parts inside the unit, damaging the plastic parts.

The FCXI\_USP unit is prepared for connection with air ducting. The maximum speed on FCXI\_USP fan coils can be increased by changing the settings of the motor dip switches.

If a three-way valve is installed, the minimum water temperature sensor can be installed in two locations:

- in its housing in the coil, MANDATORY if the thermostat is connected to a system with centralised control or monitoring device;
- on the delivery pipe up stream of the valve.

Check the thermostat manual before choosing the location of the minimum water temperature sensor, according to the preferred control logic. The thermostat may need the settings of the dip-switches changed.

**WARNING:** After completing the installation check the operation of the condensate discharge system, the seal of the hydraulic fittings, insulation of ducts and pipes. Then perform a functional test.

In the event of malfunction consult the Alarm Codes Table to interpret the alarms indicated by the 2 LEDs (Alarm / Power) that indicate the status of the unit.

The inverter card is located inside the unit and requires dismantling.

**DANGER!** Only qualified service personnel can access it.

## ALARM CODES

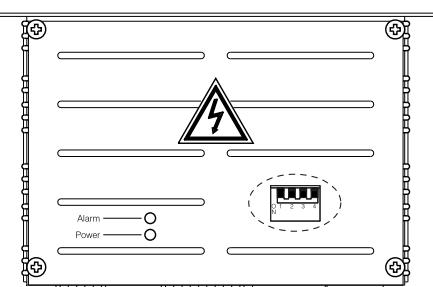
This section is reserved for the After Sales service only.

The card is located inside the unit and requires dismantling.

**DANGER!** Only qualified service personnel can access it.

There are 2 LEDs on the Inverter card (Alarm / Power) that indicate the unit's operating status.

The table below shows how to decode the messages.



ALARM TYPE	INDICATIONS	IRREGULARITY	Notes
High temperature			
Overvoltage	ALARM LED flashes 3sec ON 0.5sec OFF	Motor off	Auto-Restart Alarm. If the conditions persist after 1.5min, the alarm becomes permanent, the Alarm LED stays on, the system turns off.
Undervoltage	The LED if permanently ON after 1.5min		
Overcurrent			
Overload	ALARM LED flashes 0.5sec ON 0.5sec OFF	Speed reduction	Power limitation
Safety control			
STOP	Alarm LED permanently on	Motor off	For alarms reset: Set 0V ON INPUT (turn the power off and then on again)

## INSTALLATION (FCXI\_USP)

To install the unit, proceed as follows:

- remove the air filter;
- Remove the front closure panel;
- For wall mounting, maintain a minimum distance of 3.15inch /80mm from the floor;
- For floor mounting (using feet), refer to the instructions supplied with the accessory;
- For wall or ceiling mounting, use wall plugs (not supplied).

When using the AMP supports, proceed as follows:

- Assemble the 4 supports at the sides of the device, inserting the hole in the special slit and fixing the lower part to the component by means of the screws supplied;
- Fix the flanges to the ceiling, using wall plugs (not supplied); for the relative positions between the flanges and the component, refer to the size data.

Make the water connections as described in the relative chapter.

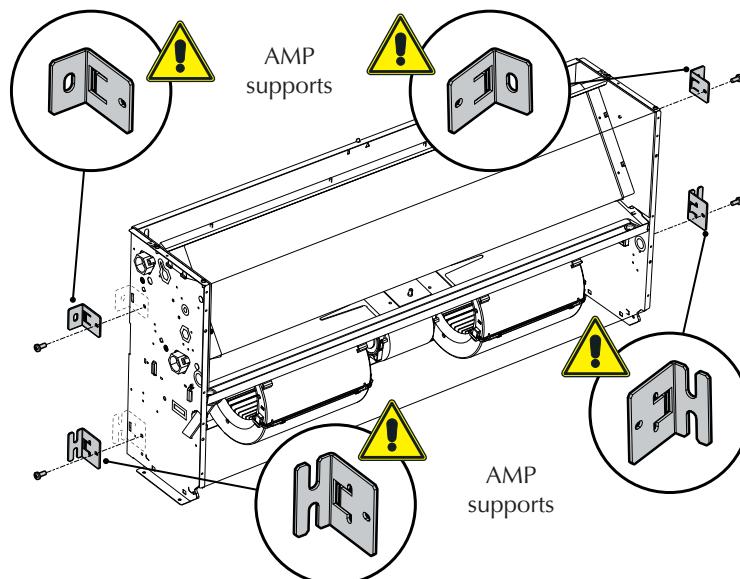
Make the condensate discharge connection as described in the relative chapter. The fan coils that work in heat mode only do not require condensate discharge.

Make the electrical wiring as shown in the relative chapter and in the wiring diagrams.

Install and connect any accessories.

Complete the installation by reassembling the front panel and air filter.

Start up the fan coil and check all the components and functions are operating correctly.



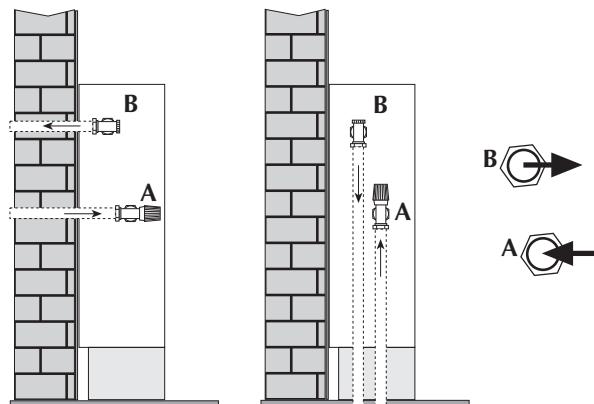
### WATER CONNECTIONS

- Make the water connections.
- In the event of disassembly and reinstallation, use new gaskets.

Refer to the size data for the position, type and diameter of the water connections.

**You are advised to adequately insulate water lines** and/or fit the auxiliary condensate drain tray (available as an accessory), to prevent dripping during the cooling function.

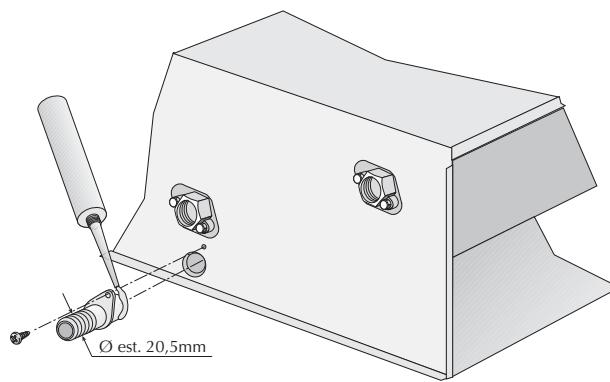
After installing, check the seal on the connections.



### CONDENSATE DISCHARGE

In the event of horizontal installation, assemble the condensate discharge connection supplied. Make sure you seal the connection between the drip tray and the fitting with silicone. The condensate drain network must be properly scaled and the piping situated in such a way as to keep an adequate slope along the route (min. 1%). If condensate is discharged into the sewage system, install a siphon to prevent the return of unpleasant odours into the room.

Carry out a functioning and seal test of the condensate drain system by pouring water into the tray.



## ELECTRICAL WIRINGS

**The unit must be connected directly to an electrical outlet or to an independent circuit.**

**WARNING: it is compulsory to connect the power cables Phase (L) and Neutral (N) to the respective terminals, do not to reverse the connections, and observe the wiring diagram.**

**install a device, main switch, or electric plug so you can fully disconnect the device from the power supply.**

**To protect the unit against short circuits, fit an omnipolar thermal-magnetic trip 2A 250V (IG) to the power line with a minimum contact opening distance of 0.12inch / 3mm.**

**The use of B-type circuit breakers is recommended.**

For installations with three-phase power

supply, the following precautions should be considered:

1. In the presence of breakers or thermomagnetic switches 3P + N, the triggering current must be at least 170% of the total load absorbed by the fan coils for each phase.

2. The section of the neutral wire must be of a dimension taking into consideration the operating current equal to 170% of the total load absorbed by the fan coils for each phase.

### CHARACTERISTICS OF THE CONNECTION CABLES

Use H05V-K or N07V-K type cables with 300/500V with insulation, piped or ducted.

All the cables must be piped or ducted until they are inside the fan coil.

The cables leaving the pipe or raceway

must be so positioned that they are not pulled or twisted and are anyway protected from outside agents.

**Stranded cables can only be used with crimping terminals. Check the wire strands are well inserted.**

**The wiring diagrams are subject to continuous updates, so it is essential to use those on the machine as your reference.**

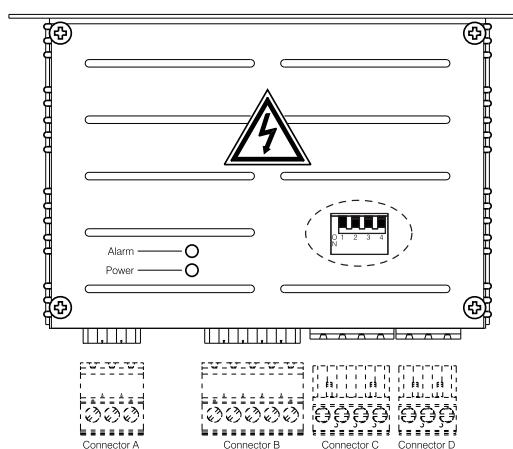
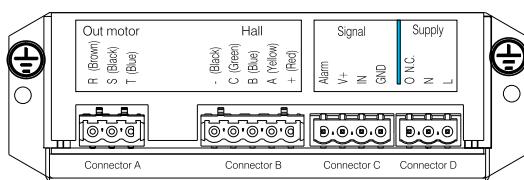
The control panel may not be fitted on a metal wall unless this is permanently connected to an earthed outlet.

When using remote control panels, the relative wiring diagram must be respected. Before installing the control panel, read the instructions carefully and configure the panel if necessary.

Connect the valve and sensor to the control board, in the positions indicated in the wiring diagram.

## DIP SWITCH SETTING (for the FCXI\_USP series only)

To help adapt the head provided by the fan to the pressure drops of the duct, the maximum speed of the FCXI\_USP series fan coil can be increased by changing the settings of the dip switches on the motor.



FCXI20/220USP	ON            ON	STANDARD 850 RPM MAX 1150 RPM
FCXI30/220USP	ON            ON	STANDARD 750 RPM MAX 1150 RPM
FCXI40/220USP	ON            ON	STANDARD 850 RPM MAX 1150 RPM
FCXI50/220USP	ON            ON	STANDARD 1050 RPM MAX 1250 RPM
FCXI80/220USP	ON            ON	STANDARD 1150 RPM MAX 1350 RPM

## ROTATING THE COIL

If the hydraulic connections require the rotation of the coil, remove the front closure panel and proceed as follows:

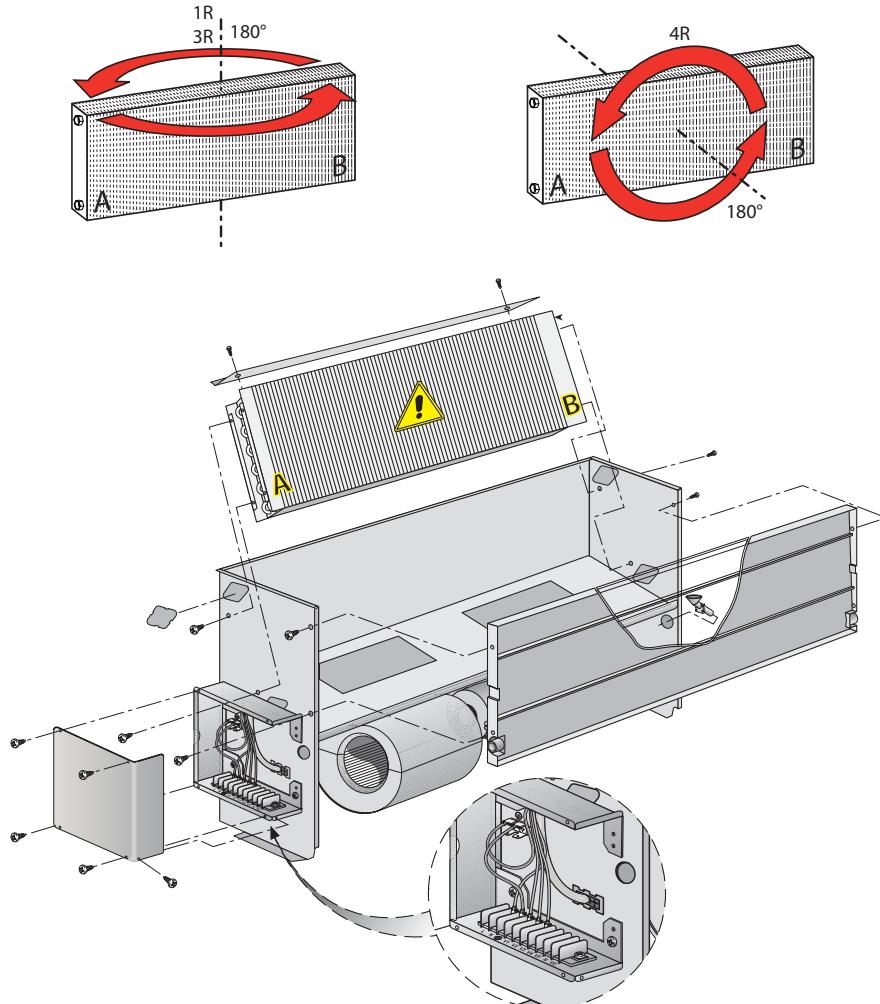
- Remove the condensate drip tray;
- Undo the screws and remove the coil cover;
- Remove the screws securing the coil, then remove the coil;
- Remove the push-outs on the right-hand side;
- Rotate the coil and secure it with the previously removed screws;
- Reassemble the cover and fix it with the screws;
- Reassemble the plastic plugs (supplied) in the holes left free by the water connections;
- All the trays can be used to collect condensate on both sides. In case of vertical installation, to discharge condensate on the right side, position the drain connection to the right;
- Slide out the electrical wirings from the right-hand side, remove the push-out and move the cable grommet from the right to the left side;
- Transfer the electrical wirings to the left side through the cable grommet;
- Move the control board, the earthing u-bolt and any electric devices to the left-hand side.

### 3-Rows and 1-Row coil

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FCXI 80 / 220 USP

### 4-Row coil

FCXI 24 / 220 USP  
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FCXI 84 / 220 USP



**Nous désirons vous féliciter pour avoir acheté le ventilo-convector FCXI Aermec.**

**Réalisé avec des matériaux de qualité supérieure, dans le plus grand respect des règles de sécurité, le modèle FCXI est facile à utiliser et a été conçu pour durer longtemps.**

**Grâce à la série de ventilo-convecteurs à inverter FCXI d'Aermec, la technologie brushless fait désormais son entrée dans le domaine de la climatisation à eau refroidie, tout en apportant d'avantages considérables en termes d'économie d'énergie et de commande exacte et précise de la température et de l'humidité relative de l'air des locaux climatisés.**

## **REMARKS**

Conserver les manuels dans un endroit sec, afin d'éviter leur détérioration, pendant au moins 10 ans, pour toutes éventuelles consultations futures.

**Lire attentivement et entièrement toutes les informations contenues dans ce manuel. Prêter une attention particulière aux normes d'utilisation signalées par les inscriptions "DANGER" ou "ATTENTION", car leur non observance pourrait causer un dommage à l'appareil et/ou aux personnes et objets.**

Pour toute anomalie non mentionnée dans ce manuel, contacter aussitôt le service après-vente de votre secteur.

**Lors de l'installation de l'appareil, il faut prévoir l'espace nécessaire pour les opérations d'entretien et/ou de réparation.** La garantie de l'appareil ne couvre pas les coûts dérivant de l'utilisation de voitures avec échelle mécanique, d'échafaudages ou d'autres systèmes de levée employés pour effectuer des interventions en garantie.

AERMEC S.p.A. décline toute responsabilité pour tout dommage dû à une utilisation impropre de l'appareil et à une lecture partielle ou superficielle des informations contenues dans ce manuel.

Ce manuel se compose de pages: 28

## **DESCRIPTION DE L'UNITÉ**

### **FINALITÉ DE L'APPAREIL**

Le ventilo-convector est un terminal pour le traitement de l'air d'un milieu, tant en hiver qu'en été.

### **GRANDEURS DISPONIBLES**

Les ventilo-convecteurs de la série FCXI\_USP sont disponibles en :

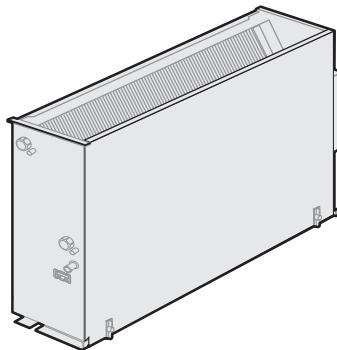
**5 grandeurs 220V 60Hz  
avec batterie à 3 rangs**

FCXI 20 / 220 USP  
FCXI 30 / 220 USP  
FCXI 40 / 220 USP  
FCXI 50 / 220 USP  
FCXI 80 / 220 USP

**5 grandeurs 220V 60Hz  
avec batterie à 4 rangs**

FCXI 24 / 220 USP  
FCXI 34 / 220 USP  
FCXI 44 / 220 USP  
FCXI 54 / 220 USP  
FCXI 84 / 220 USP

**FCXI\_USP:** Inverter fan coil for suspended ceiling) installation. Without control panel and with Inverter motor, 3-rows or 4-rows heat exchanger. Requires external control panel.



## **EMBALLAGE**

Les ventilo-convecteurs sont envoyés dans un emballage standard constitué de coques en polystyrène expansé et en carton.

## **EMPLOI**

Consulter le manuel du panneau de commandes pour le mode d'emploi.

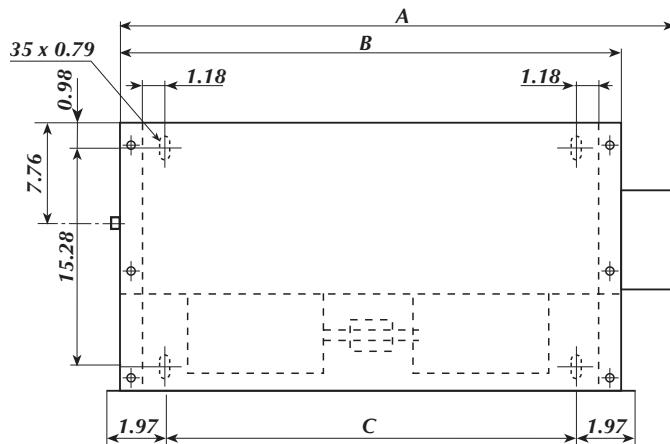
## DIMENSIONS

US measure system • Système de mesure US

FCXI 20 - 30 - 40 - 50 /20USP  
FCXI 24 - 34 - 44 - 54 /220USP

3 R / 4 R

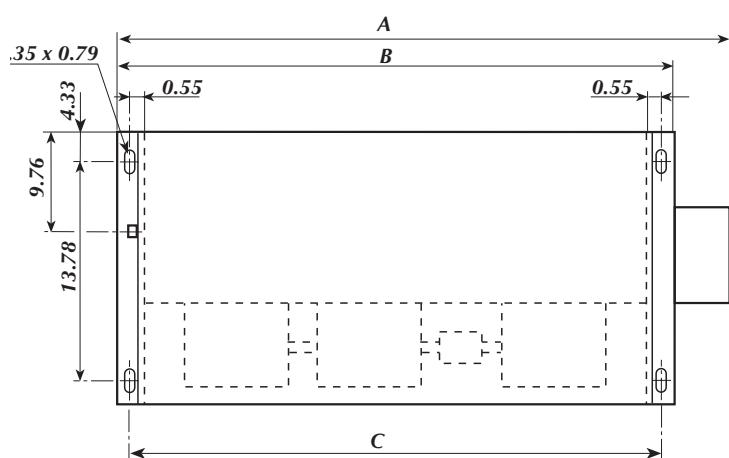
3 R + 1 R



FCXI 80 USP  
FCXI 84 USP

3 R / 4 R

3 R + 1 R



FCXI		20/220USP	30/220USP	40/220USP	50/220USP	80/220USP
A	[inches]	22.56	31.65	40.31	40.31	45.60
B	[inches]	20.55	29.65	38.31	38.31	44.17
C	[inches]	17.32	26.42	35.08	35.08	43.39

FCXI		24/220USP	34/220USP	44/220USP	54/220USP	84/220USP
A	[inches]	22.56	31.65	40.31	40.31	45.60
B	[inches]	20.55	29.65	38.31	38.31	44.17
C	[inches]	17.32	26.42	35.08	35.08	43.39

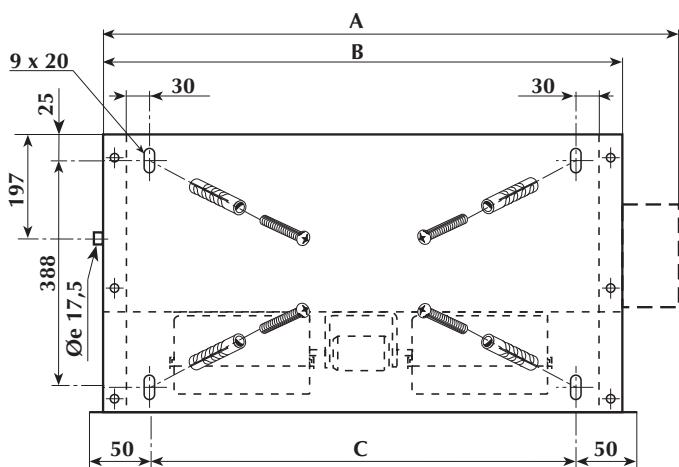
## COIL CONNECTIONS (FEMALE) • RACCORDS BATTERIE (FEMELLE)

FCXI	20/220USP	30/220USP	40/220USP	50/220USP	80/220USP
Coil connections (female) • Raccords batterie (femelle)	1/2"F	1/2"F	3/4"F	3/4"F	3/4"F
FCXI	24/220USP	34/220USP	44/220USP	54/220USP	84/220USP
Coil connections (female) • Raccords batterie (femelle)	3/4"F	3/4"F	3/4"F	3/4"F	3/4"F

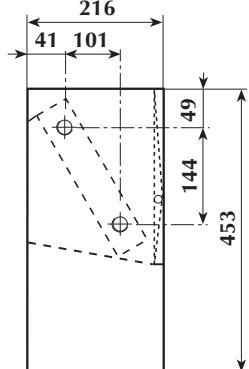
## DIMENSIONS

Metric system • Système métrique

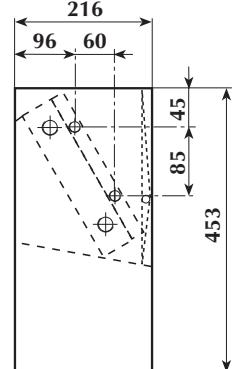
**FCXI 20 - 30 - 40 - 50 /220USP**  
**FCXI 24 - 34 - 44 - 54 /220USP**



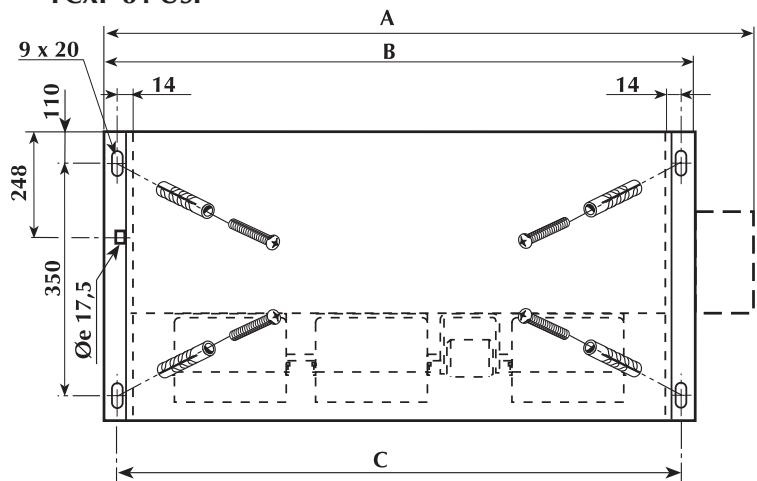
**3 R / 4 R**



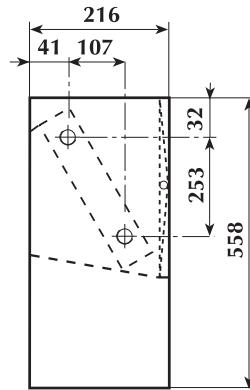
**3 R + 1 R**



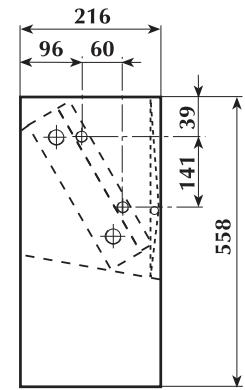
**FCXI 80 USP**  
**FCXI 84 USP**



**3 R / 4 R**



**3 R + 1 R**



Français

<b>FCXI</b>		<b>20/220USP</b>	<b>30/220USP</b>	<b>40/220USP</b>	<b>50/220USP</b>	<b>80/220USP</b>
<b>A</b>	[mm]	573	804	1024	1024	1158
<b>B</b>	[mm]	522	753	973	1122	1122
<b>C</b>	[mm]	440	671	891	891	1102

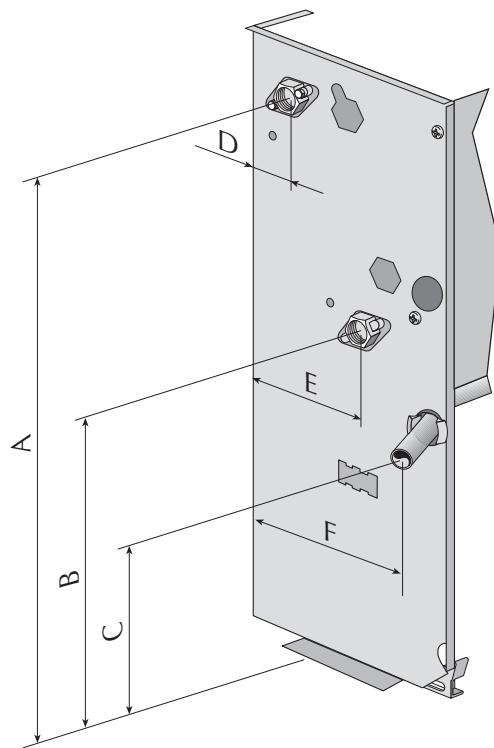
<b>FCXI</b>		<b>24/220USP</b>	<b>34/220USP</b>	<b>44/220USP</b>	<b>54/220USP</b>	<b>84/220USP</b>
<b>A</b>	[mm]	573	804	1024	1024	1158
<b>B</b>	[mm]	522	753	973	1122	1122
<b>C</b>	[mm]	440	671	891	891	1102

## COIL CONNECTIONS (FEMALE) • RACCORDS BATTERIE (FEMELLE)

<b>FCXI</b>	<b>20/220USP</b>	<b>30/220USP</b>	<b>40/220USP</b>	<b>50/220USP</b>	<b>80/220USP</b>
Coil connections (female) • Raccords batterie (femelle)	1/2" F	1/2" F	3/4" F	3/4" F	3/4" F
FCXI	<b>24/220USP</b>	<b>34/220USP</b>	<b>44/220USP</b>	<b>54/220USP</b>	<b>84/220USP</b>
Coil connections (female) • Raccords batterie (femelle)	3/4" F				

## DIMENSIONS

### 3 AND 4 ROW COIL • BATTERIE A 3 ET 4 RANGS

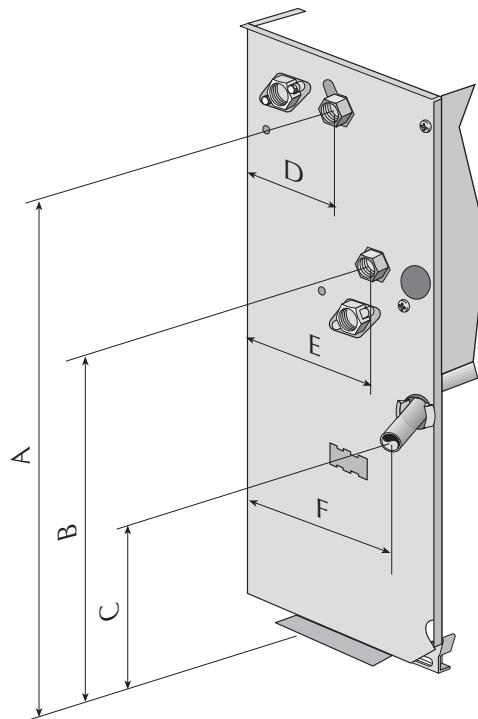


FCXI	20/220USP	30/220USP	40/220USP	50/220USP	80/220USP
	24/220USP	34/220USP	44/220USP	54/220USP	84/220USP
<b>US measure system • Système de mesure US [inches]</b>					
A	15.91	15.91	15.91	15.91	20.71
B	10.24	10.24	10.24	10.24	10.75
C	6.02	6.02	6.02	6.02	6.69
D	1.61	1.61	1.61	1.61	1.61
E	5.59	5.59	5.59	5.59	5.83
F	7.64	7.64	7.64	7.64	7.64
<b>Metric system • Metric system [mm]</b>					
A	404	404	404	404	526
B	260	260	260	260	273
C	153	153	153	153	170
D	41	41	41	41	41
E	142	142	142	142	148
F	194	194	194	194	194

FCXI	20/220USP	30/220USP	40/220USP	50/220USP	80/220USP
Coil connections (female) • Raccords batterie (femelle)	1/2"F	1/2"F	3/4"F	3/4"F	3/4"F
FCXI	24/220USP	34/220USP	44/220USP	54/220USP	84/220USP
Coil connections (female) • Raccords batterie (femelle)	3/4"F	3/4"F	3/4"F	3/4"F	3/4"F

## DIMENSIONS

### BV HEATING COIL (Accessory) • BATTERIE DE CHAUFFAGE (Accessories)



	20/220USP BV1	30/220USP BV1	40/220USP BV1	50/220USP BV1	80/220USP BV1
<b>US measure system • Système de mesure US [inches]</b>					
<b>A</b>	16.06	16.06	16.06	16.06	20.43
<b>B</b>	12.72	12.72	12.72	12.72	14.88
<b>C</b>	6.02	6.02	6.02	6.02	6.69
<b>D</b>	3.78	3.78	3.78	3.78	3.78
<b>E</b>	6.10	6.10	6.10	6.10	6.14
<b>F</b>	7.64	7.64	7.64	7.64	7.64
 <b>Metric system • Metric system [mm]</b>					
<b>A</b>	408	408	408	408	519
<b>B</b>	323	323	323	323	378
<b>C</b>	153	153	153	153	170
<b>D</b>	96	96	96	96	96
<b>E</b>	155	155	155	155	156
<b>F</b>	194	194	194	194	194

FCXI	20/220USP	30/220USP	40/220USP	50/220USP	80/220USP
Coil connections (female) • Raccords batterie (femelle)	1/2" F				

## WIRING DIAGRAMS • SCHEMAS ELECTRIQUES

### READING KEY • LEGENDE

**F** = Fusible • Fuse • Fusible

**IG** = Main switch

Interupteur général I

**M** = Terminal board

Boîtier

**MV** = Fan motor

Moteur ventilateur

**PE** = Earth connection

Mise à terre

**VC** = Solenoid valve hot

Vanne magnétique chaud

**VF** = Solenoid valve cold

Vanne magnétique froid

= Components not supplied

Composants non fournis



= Optional components

Composants en option

- - - = On-site wiring

Raccordements à effectuer in situ

**AR** = Orange • Orange

**BI** = White • Blanc

**BL** = Blue • Bleu

**GI** = Yellow • Jaune

**GR** = Grey • Gris

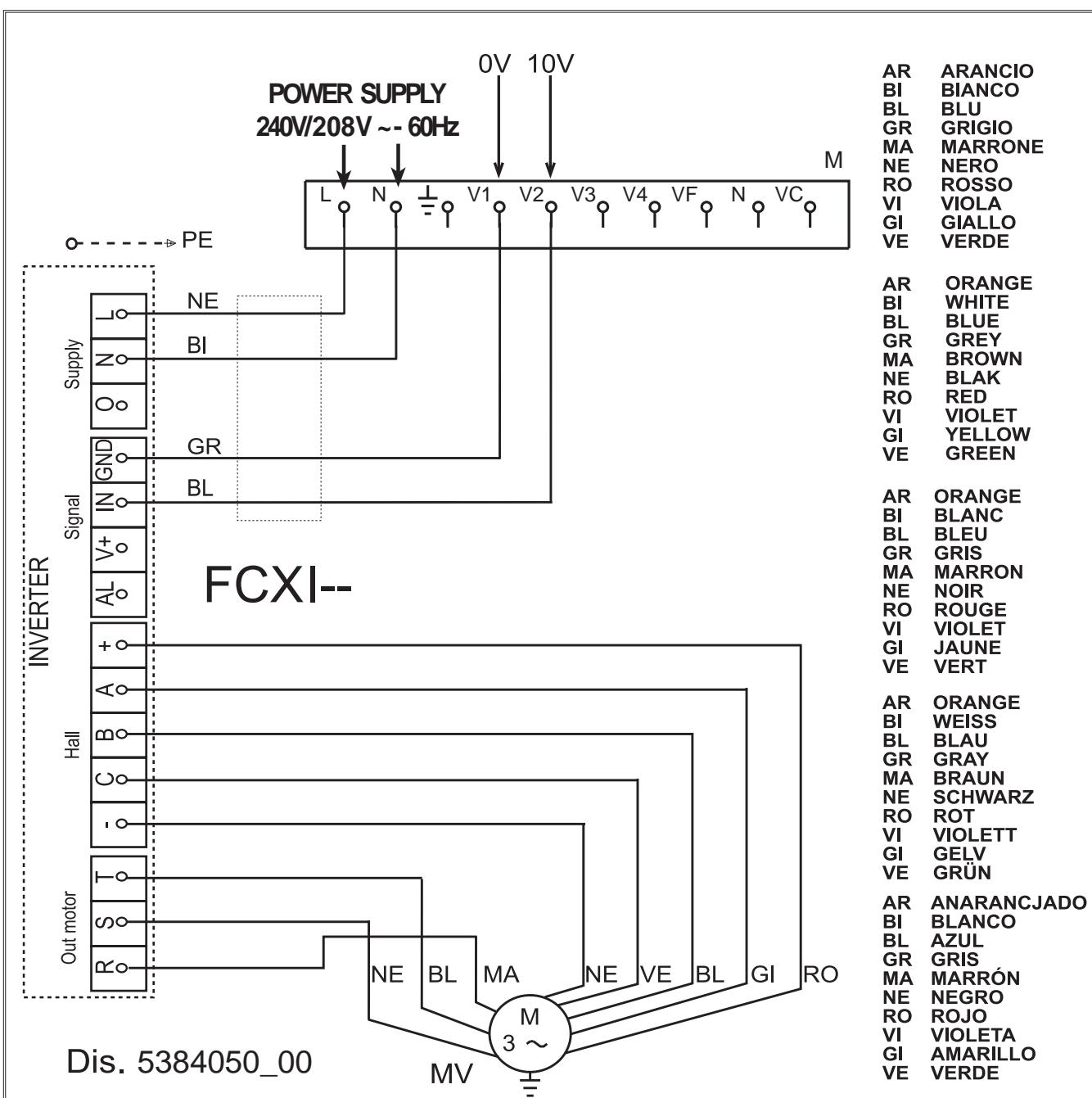
**MA** = Brown • Marron

**NE** = Black • Noir

**RO** = Red • Rouge

**VE** = Green • Vert

**VI** = Violet • Violet



All wiring diagrams are constantly updated. Please refer to the ones supplied with the unit.  
Nos schémas électriques étant constamment mis à jour, il faut absolument se référer à ceux fournis à bord de nos appareils.

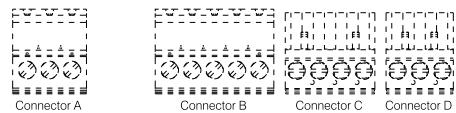
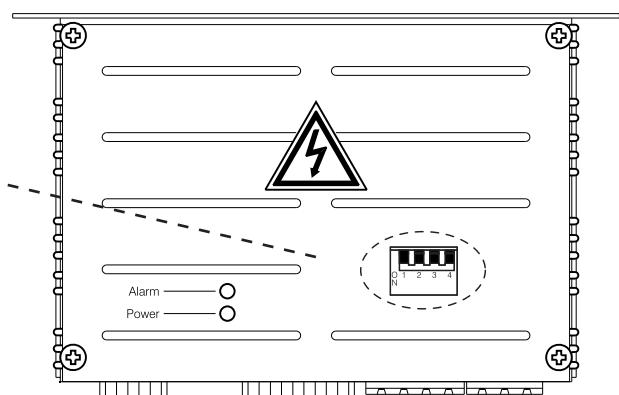
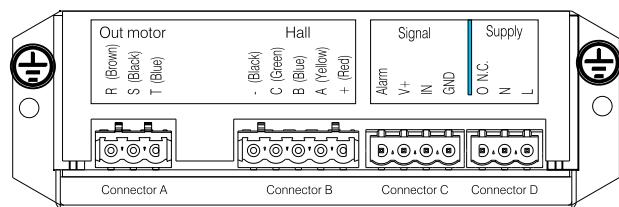
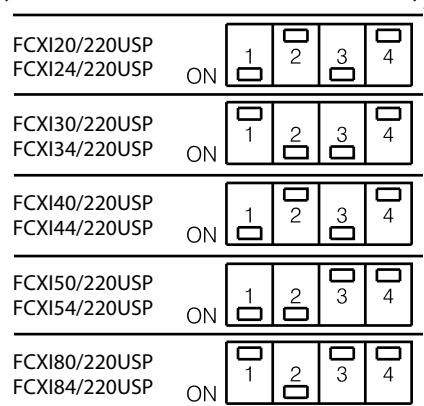
PROBLEM PROBLEME	PROBABLE CAUSE CAUSE PROBABLE	REMEDY SOLUTION
Feeble air discharge. Il y a peu d'air en sortie.	Wrong speed setting on the control panel. Mauvaise préselection de la vitesse sur le panneau de commandes.	Select the speed on the control panel. Choisir la vitesse sur la panneau de commandes.
	Blocked filter. Filtre encrassé.	Clean the filter. Nettoyer le filtre.
It does not heat. Pas de chaleur.	Obstruction of the air flow (inlet and/or outlet). Obstruction du flux d'air (entrée/sortie).	Remove the obstruction. Enlever l'objet faisant obstruction.
	Poor hot water supply. Il n'y a pas d'eau chaude.	Control the boiler. Verifier la chaudière.
It does not cool. Pas de froid.	Wrong setting on control panel. Mauvaise préselection sur le panneau de commandes.	See control panel settings. Présélectionner au panneau de commandes.
	Poor chilled water supply. Il n'y a pas d'eau froide.	Control the chiller. Vérifier le réfrigérateur.
The fan does not turn. Le ventilateur ne tourne pas.	Wrong setting on control panel. Mauvaise préselection sur le panneau de commandes.	See control panel settings. Présélectionner au panneau de commandes.
	No current. Il n'y a pas de courant.	Control the power supply. Contrôler l'alimentation électrique.
	The water has not reached operating temperature. L'eau n'a pas atteint la température de service.	Please check up the boiler or the chiller. Check up the thermostat settings. Contrôler la chaudière ou le refroidisseur. Contrôler le réglage du thermostat.
Condensation on the unit cabinet. Phénomènes de condensation sur la structure extérieure de l'appareil.	The limit conditions of temperature and humidity indicated in "MINIMUM AVERAGE WATER TEMPERATURE" have been reached. On a atteint les conditions limite de température et d'humidité indiquées dans "TEMPERATURE MINIMALE MOYENNE DE L'EAU".	Increase the water temperature beyond the minimum limits indicated in "MINIMUM AVERAGE WATER TEMPERATURE". Elever la température de l'eau audelà des limites minimales indiquées dans "TEMPERATURE MINIMALE MOYENNE DE L'EAU".

**For anomalies don't hesitate, contact the aftersales service immediately.**  
**Pour toute anomalie non répertoriée, consulter le service après-vente.**

## INVERTER CARD FACTORY SETTINGS RÉGLAGES EN USINE DE LA PLATINE INVERTER

**WARNING:** Do not modify the unit's settings.  
Any change to the inverter card dip switch settings may cause damage to the unit. For this reason the diagram of the factory settings are indicated.

**ATTENTION :** Ne pas modifier les réglages de l'unité.  
Toute modification des réglages des commutateurs DIP de la platine inverter peut endommager l'unité. Pour cette raison, on reporte le schéma avec les réglages en usine.





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