

VCF 4124 – 4224 – 4324

VCF 4424 – 4524

24V

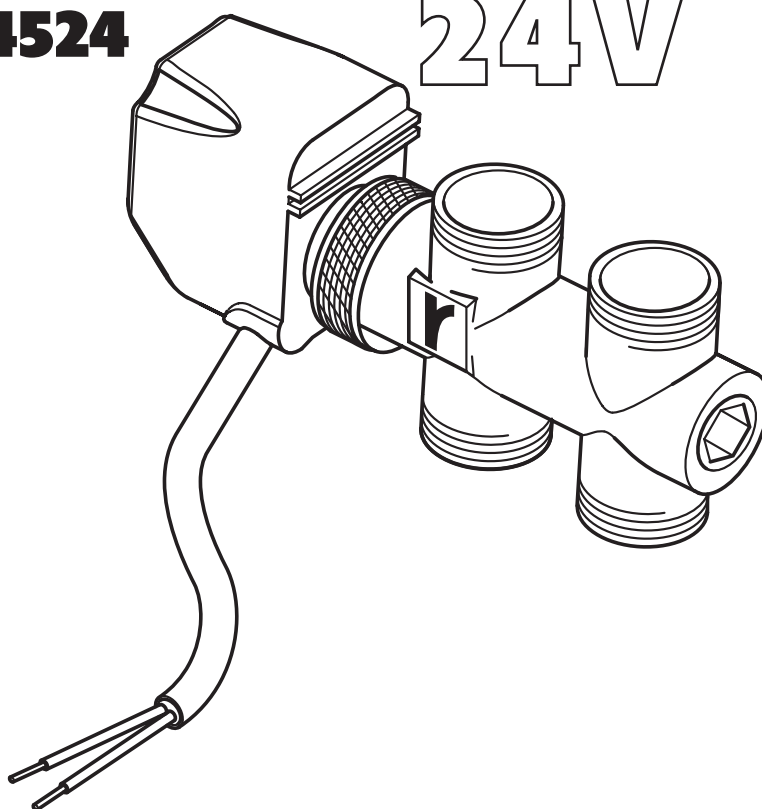
KIT VALVOLA A 3 VIE
per ventilconvettori
FCX, FCS, FHX

THREE WAY KIT VALVES
for fan coils
FCX, FCS, FHX series

VANNE À TROIS VOIES VCF
pour ventiloconvecteurs
série FCX, FCS, FHX

KIT 3-WEG-VENTIL
für Gebläsekonvektoren
Baureihe FCX, FCS, FHX

VÁLVULA MOTORIZADA CON 3 VÍAS VCF
para fan coils
serie FCX, FCS, FHX



WARNING: The appliance must be fitted according to the national rules of process plant engineering.

WARNING: check that the power supply is disconnected before performing operations on the unit.

WARNING: the electrical wirings, the installation of fan coils and their accessories must only be carried out by people with the proper technical and professional qualifications for the installation, conversion, expansion and maintenance of the systems and able to check that it is working properly and safe.

In the specific case of electrical wirings, the following must be checked:

- Measurement of the electrical system insulation strength.

- Continuity test of the protection wires.

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

WARNING: Touching live components could electrocute you.

DESCRIPTION

The kit consists of a valve, actuator and relevant water fittings; it is suitable to be installed on the fan coils with right and left attachments. The valve in this kit is an all or nothing-type valve, normally closed.

The valve must be controlled by the control panels which are enabled for the valve checking function; Consult the control panel characteristics before selecting a panel.

Consult the technical documentation of the fan coil to select the models suitable for the installation to be carried out.

VCF4124, VCF4224, VCF4324 for coil of: FCX, FCS, FHX.

VCF4424, VCF4524 for coil accessory BV at 1 row.

ASSEMBLY INSTRUCTIONS

Preliminary operations

Before installing the VCF kit, consult the fan coil installation manual (FCX, FCS, FHX); it is the installer's job to prepare the water and electrical systems and to make the proper connections with the unit.

The VCF valves can be fitted to the fan coils with left or right connections.

Install according to what is illustrated in the figures; in case of removal, the gaskets must be replaced with a new series having the same characteristics.

Slide off the SW minimum temperature probe from the coil to be then fastened to the upstream delivery pipe of the valve using the specific probe holder supplied with the kit.

WARNING: During installation, pay attention to the flow direction, before fitting the valve, check the installation direction referring to the embossed symbol on the valve body (see figures).

The body of the valve must be installed without overtightening.

All tubes, valves and fittings must be completely isolated. This is very important in systems with cold water which can otherwise cause condensation with consequent outpouring into the environment. The VCF4124-4224-4324 kits are equipped with an isolating shell to be installed on the valve body.

Installation

- Fit the supplied insulated pipes to the valve body;
- Fit the valve unit with the attached pipes to the fan coil;
- Connect the water system pipes to the valve body or to the coupling pipes (depending on the valve model), fittings and gaskets are the installer's responsibility;
- Fit the actuator to the valve body;
- Install the isolating shell on the valve body (only VCF4124-4224-4324) and fix with a clip.
- Fasten the SW minimum temperature probe on the delivery pipe upstream of the valve using the specific probe holder supplied with the kit.
- Isolate all other exposed tubes and joints.

Electrical wirings

Connect the valve electrical wires to the unit control board as indicated in the wiring diagrams attached to the fan coil or the control panel manuals.

Water connections

VCF 4124-4224-4324 water connections directly on the valve with 3/4" flat sealing gaskets (plant side).

VCF 4424 - 4524 water connections on flat flared copper tubes and 1/2" flat sealing gaskets (plant side).

Connect the VCF kit and fan coil with an O-Ring fitting.

COMPLIANCE

VCF complies with the following harmonised standards:

- EN 60730-1

- EN 60730-1-14

complying in this way with the essential requirements of the following directives:

- LVD Directive 2006/95/EC

- Electromagnetic Compatibility Directive 2004/108/EC

- Machine Directive 98/37/EC

TECHNICAL SPECIFICATIONS

Power supply: 24V ~ 50Hz
Initial input power: 6VA
Input power during operation: 2.5W
Water temperature range: 4°C ÷ 80°C
Usable liquids: water (with glycol ≤ 50%)

Operating time: 3min ÷ 5min

Maximum differential pressure: 30kPa

Maximum working pressure applied to fan coils: 800kPa

Environmental operating conditions

Temperature: 0°C ÷ 40°C

relative humidity: 10% ÷ 90%

without condensation

Environmental storage conditions

Temperature: -18°C ÷ 60°C

relative humidity: 10% ÷ 90%

without condensation

Actuator water protection level: IP44 in compliance with EN 60529

Actuator electrical protection level: Type II

Flow direction in the valve (see figure)

with valve powered A - AB

with valve not powered B - AB

Valve connections [mm]

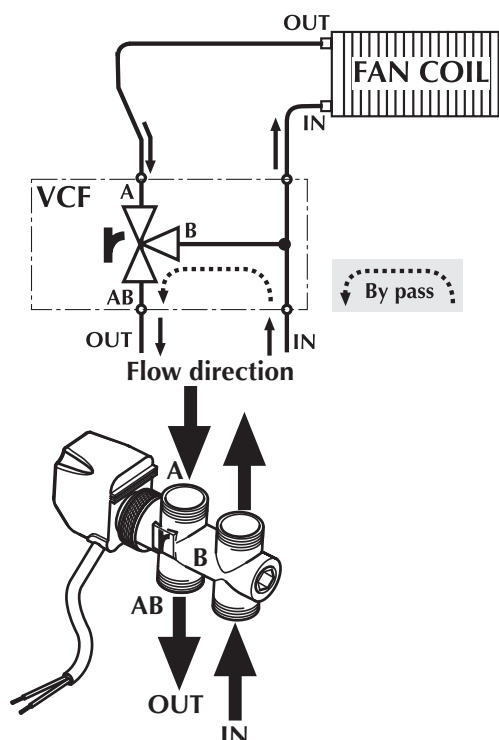
Models	VCF4124	VCF4224	VCF4324	VCF4424	VCF4524
A - AB - B	3/4"	3/4"	3/4"	1/2"	1/2"

Pressure drop

Models	VCF4124	VCF4224	VCF4324	VCF4424	VCF4524
Kvs AB-A	2,5	2,5	2,5	1,7	1,7
Kvs AB-B (by-pass)	1,6	1,6	1,6	1,2	1,2

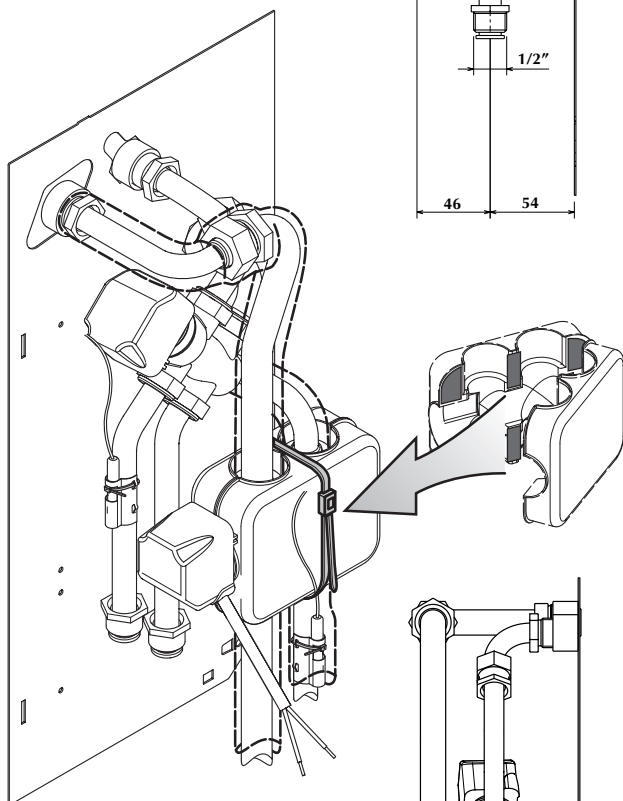
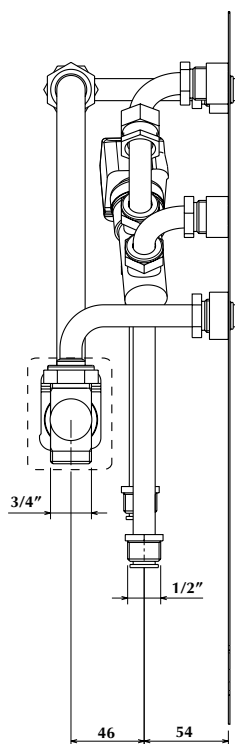
$$\Delta p = \left(\frac{10 \cdot q}{Kvs} \right)^2 \Delta p \text{ [kPa]} = \text{Pressure drop}$$

$$q \text{ [m}^3/\text{h]} = \text{Water flow rate}$$



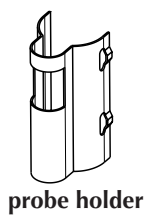
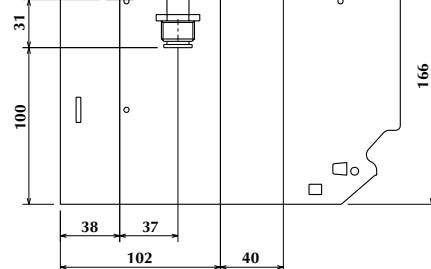
VCF4124
VCF4224
for
FCX, FCS, FHX

VCF4424
for
BV



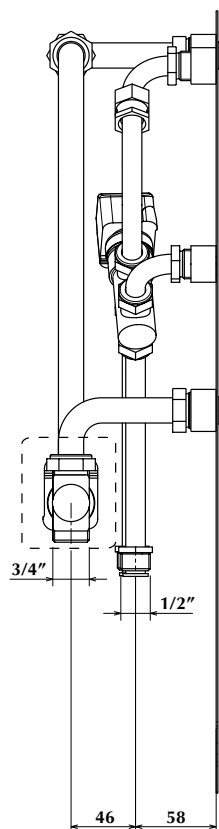
VCF 4424 (1/2")

VCF 4124 (3/4")
VCF 4224 (3/4")



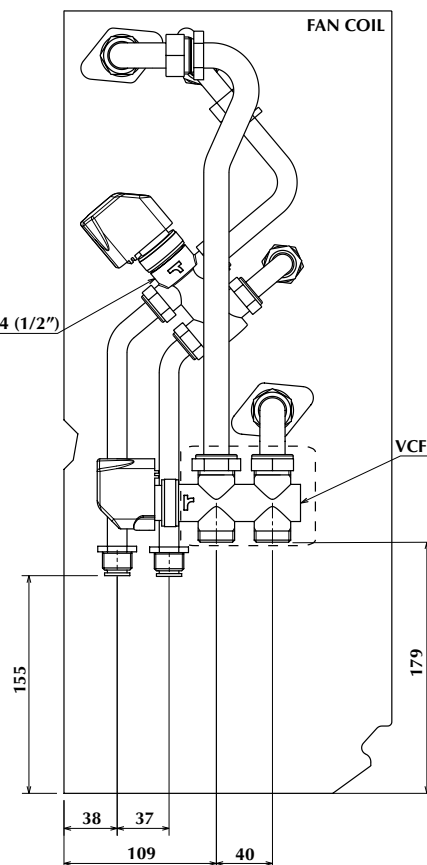
VCF4324
for
FCX, FCS, FHX

VCF4524
for
BV



VCF 4524 (1/2")

VCF 4324 (3/4")



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AERMEC S.p.A.

I-37040 Bevilacqua (VR) - Italia

Via Roma, 44 - Tel. (+39) 0442 633111

Telefax (+39) 0442 93730 - (+39) 0442 93566

www.aermec.com
