



# Skystar SK-ECM-HY

NEW 4-WAY SANITIZABLE CASSETTE FCU – VDI 6022 COMPLIANT

brand of  
ARBONIA  
climate



# Skystar SK-ECM-HY

Hygienic cassette fancoil unit

## Introduction

The cassette unit range gains a new model, built and certified in accordance with VDI 6022 regulation, which is often required in buildings for which a high level of hygiene is requested, such as hospitals, health clinics, food processing sites and high-density occupation rooms.

The SK-ECM-HY offers an extremely high resistance to the proliferation of fungi, bacterias and micro-organisms, thanks to the internal structural components made in Stainless Stees (AISI 304) and insulation polymeric mattress certified according to DIN EN ISO 846.

Moreover, the resistance to abrasion allows the periodic sanification with specific detergents.

All the components can be easily dismantled in order to facilitate maintenance, cleaning and sanifictaion operations.



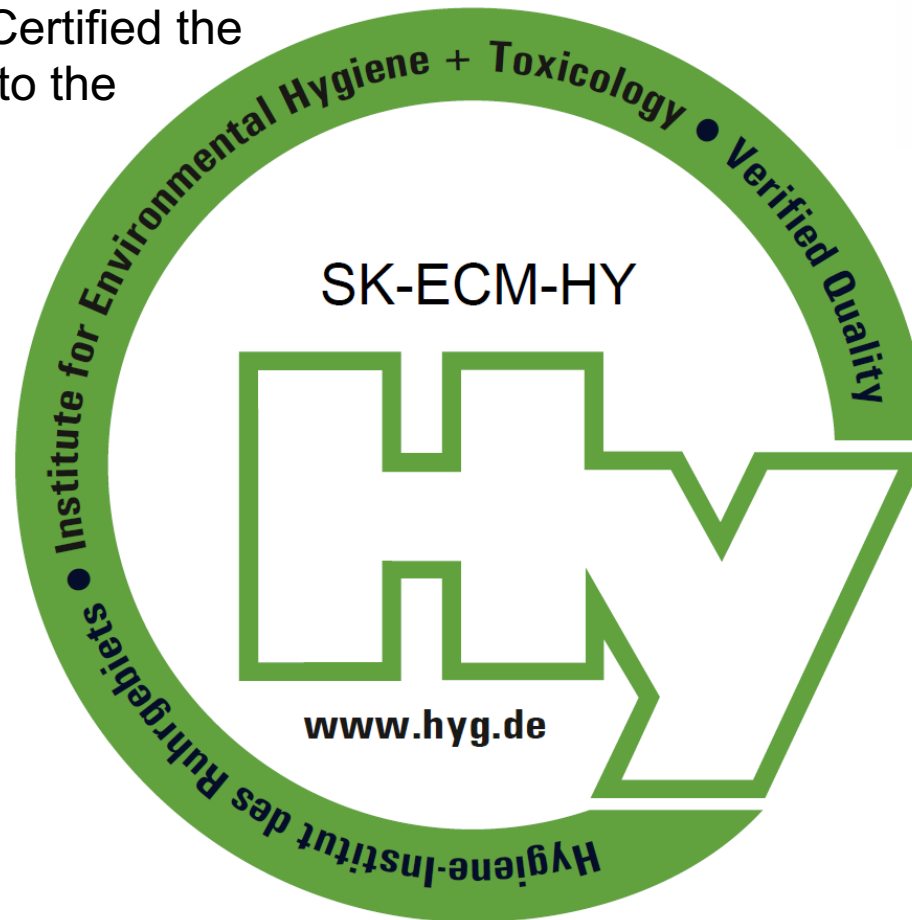
# Skystar SK-ECM-HY

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## Introduction

The **Hygiene Institut des Ruhrgebiets** Certified the conformity of the SK-ECM-HY according to the following regulations:

- **VDI6022 Blatt 1 (01/2018)**
- **ONORM H-6021 (01/2023)**
- **SWKI VA104-01 (01/2019)**



Conformity test: W-389236-24-Zd

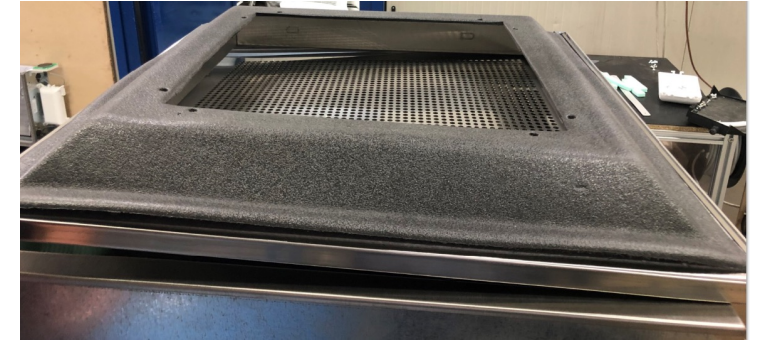
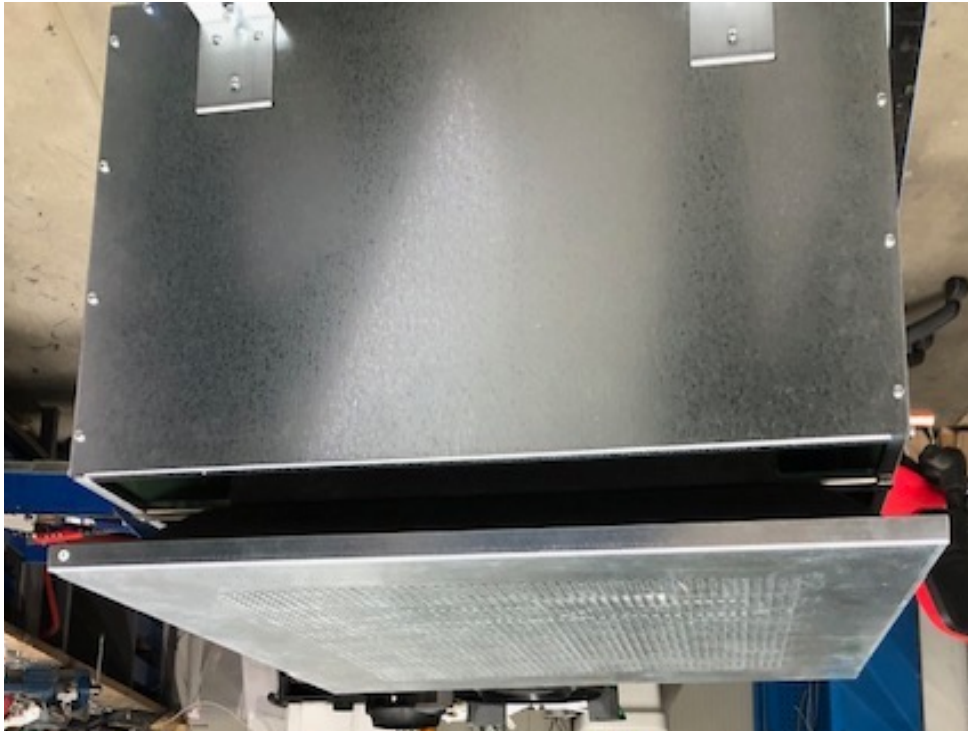
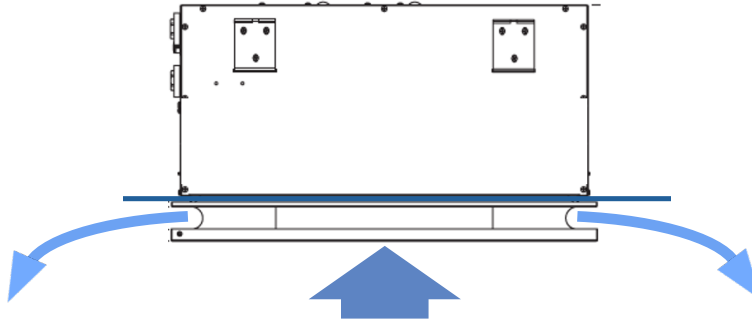
Validity 06/2029

# Skystar SK-ECM-HY

Hygienic cassette fancoil unit

## Construction

The main structure of the cassette unit, which is not directly invested by the airflow, is made externally in galvanized steel.



The 4-way diffuser of the Skystar SK-ECM-HY, the external and visible part that is exposed in the room, is entirely made in **AISI304** steel and insulated with a polymeric component **DIN EN ISO 846** certified.

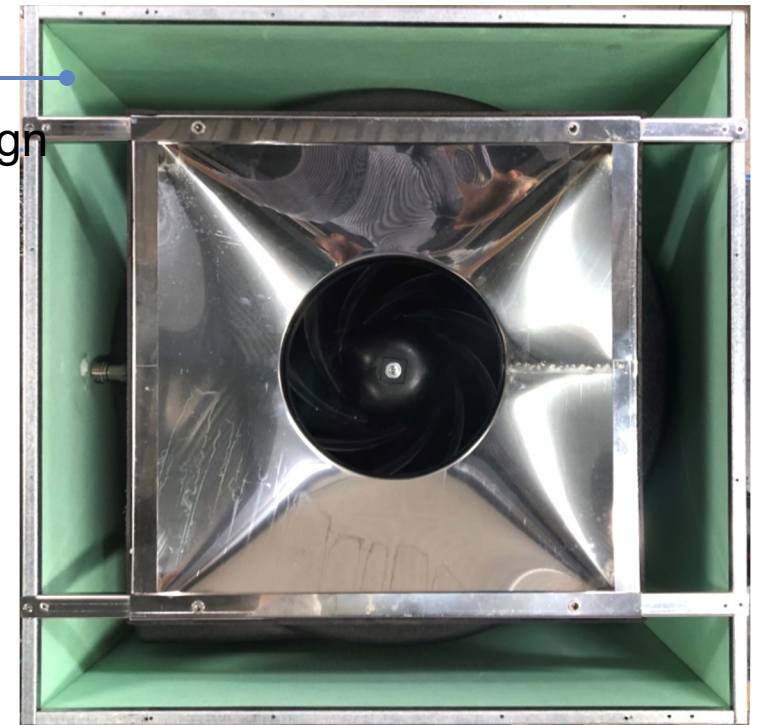
# Skystar SK-ECM-HY

Hygienic cassette fancoil unit

## Construction

The supporting structure is insulated internally with a closed-cells polyethylene B-s2-d0 EN 13501-01 (also DIN EN ISO 846 certified), light colored, to allow a more effective visual feedback of the cleaning operations

The main condensate tray, made in AISI304 allows the condensate discharge only by gravity (no pump is installed) and it is specifically design to avoid the internal permanence of the condensate water



# Skystar SK-ECM-HY

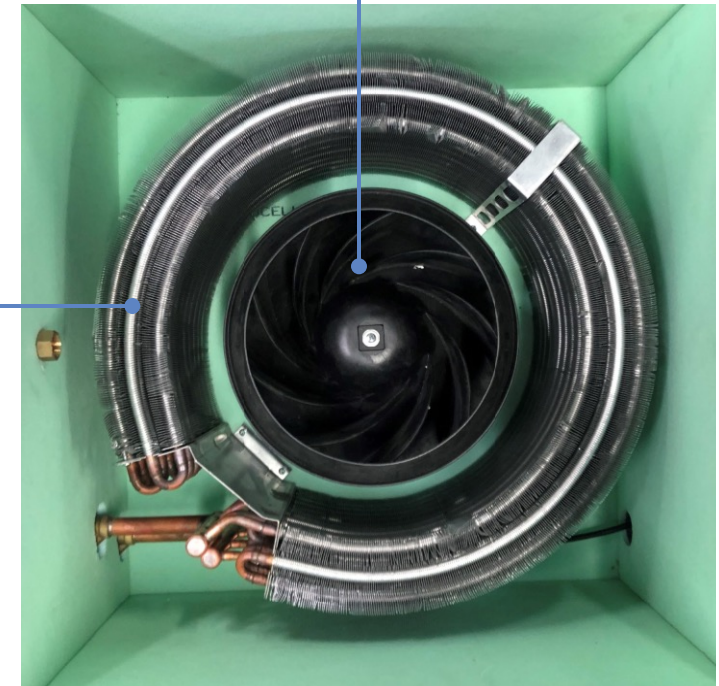
Hygienic cassette fancoil unit

## Construction

The fan-motor assembly is made by a radial fan, made in polymeric material, DIN EN ISO 846 compliant, and by an EC brushless permanent magnets motor controlled by the inverter BLAC board integrated in the control box of the unit.

The coil is the same as the standard SK-ECM range with copper pipes and aluminum fins, 2 pipes or 4 pipes

The whole structure is designed for a simple access for the cleaning of the internal parts.



# Skystar SK-ECM-HY

Hygienic cassette fancoil unit



2 pipes version



## Technical datas

Performances are identical to the standard Skystar SK-ECM range

| MODELLO                                  |                   | SK-ECM 12 |      |      |      |      | SK-ECM 22 |      |      |      |      | SK-ECM 32 |      |      |      |      |
|--|-------------------|-----------|------|------|------|------|-----------|------|------|------|------|-----------|------|------|------|------|
|  |                   | 1         | 3    | 5    | 7,5  | 10   | 1         | 3    | 5    | 7,5  | 10   | 1         | 3    | 5    | 7,5  | 10   |
| Tensione pilotaggio inverter             |                   | MIN       |      | MED  |      | MAX  | MIN       |      | MED  |      | MAX  | MIN       |      | MED  |      | MAX  |
| Prestazioni Eurovent                     |                   | (E)       | -    | (E)  | -    | (E)  | (E)       | -    | (E)  | -    | (E)  | (E)       | -    | (E)  | -    | (E)  |
| Portata aria                             | m <sup>3</sup> /h | 310       | 345  | 380  | 457  | 535  | 310       | 377  | 445  | 577  | 710  | 360       | 485  | 610  | 745  | 880  |
| Raffreddamento resa totale (E)           | kW                | 1,84      | 2,01 | 2,16 | 2,47 | 2,73 | 2,24      | 2,65 | 3,04 | 3,71 | 4,30 | 2,55      | 3,25 | 3,85 | 4,45 | 4,96 |
| Raffreddamento resa sensibile (E)        | kW                | 1,35      | 1,47 | 1,60 | 1,84 | 2,07 | 1,57      | 1,87 | 2,16 | 2,67 | 3,15 | 1,80      | 2,31 | 2,79 | 3,25 | 3,68 |
| Riscaldamento resa (E)                   | kW                | 1,85      | 2,04 | 2,22 | 2,55 | 2,87 | 2,12      | 2,56 | 2,98 | 3,68 | 4,36 | 2,46      | 3,17 | 3,85 | 4,52 | 5,15 |
| Dp lato acqua raffreddamento (E)         | kPa               | 4,9       | 5,8  | 6,6  | 8,4  | 10,1 | 4,6       | 6,3  | 9,4  | 11,6 | 15,1 | 5,9       | 9,1  | 12,4 | 16,2 | 19,7 |
| Dp lato acqua riscaldamento (E)          | kPa               | 4,3       | 5,1  | 5,9  | 7,6  | 9,4  | 3,6       | 5,1  | 6,6  | 9,7  | 13,2 | 4,7       | 7,5  | 10,6 | 14,1 | 17,8 |
| Potenza sonora (Lw) (E)                  | dB(A)             | 33,0      | 36,0 | 39,0 | 43,0 | 47,0 | 33,0      | 38,0 | 43,0 | 48,5 | 54,0 | 37,0      | 43,5 | 50,0 | 55,0 | 60,0 |
| Pressione sonora (Lp) <sup>(1)</sup>     | dB(A)             | 24,0      | 27,0 | 30,0 | 34,0 | 38,0 | 24,0      | 29,0 | 34,0 | 39,5 | 45,0 | 28,0      | 34,5 | 41,0 | 46,0 | 51,0 |
| Potenza assorbita motore (E)             | W                 | 5,0       | 6,5  | 8,0  | 12,0 | 16,0 | 5,0       | 8,0  | 11,0 | 21,0 | 31,0 | 7,0       | 14,0 | 21,0 | 41,5 | 62,0 |
| Potenza assorbita pompa scarico condensa | W                 | 10        | 10   | 10   | 10   | 10   | 10        | 10   | 10   | 10   | 10   | 10        | 10   | 10   | 10   | 10   |
| Contenuto acqua batteria                 | l                 | 1,4       | 1,4  | 1,4  | 1,4  | 1,4  | 2,1       | 2,1  | 2,1  | 2,1  | 2,1  | 2,1       | 2,1  | 2,1  | 2,1  | 2,1  |
| Lunghezza                                | mm                | 575       | 575  | 575  | 575  | 575  | 575       | 575  | 575  | 575  | 575  | 575       | 575  | 575  | 575  | 575  |
| Profondità                               | mm                | 575       | 575  | 575  | 575  | 575  | 575       | 575  | 575  | 575  | 575  | 575       | 575  | 575  | 575  | 575  |
| Altezza                                  | mm                | 275       | 275  | 275  | 275  | 275  | 275       | 275  | 275  | 275  | 275  | 275       | 275  | 275  | 275  | 275  |

# Skystar SK-ECM-HY

Hygienic cassette fancoil unit



4 pipe version



## Technical datas

Performances are identical to the standard Skystar SK-ECM range

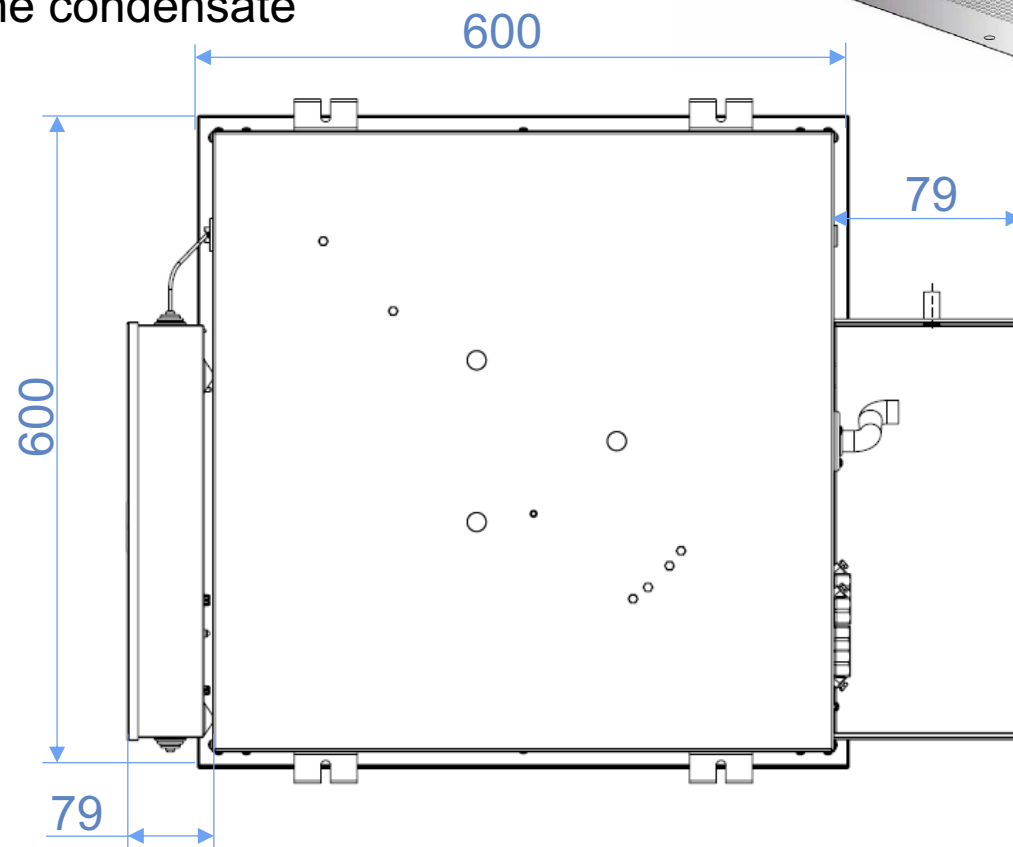
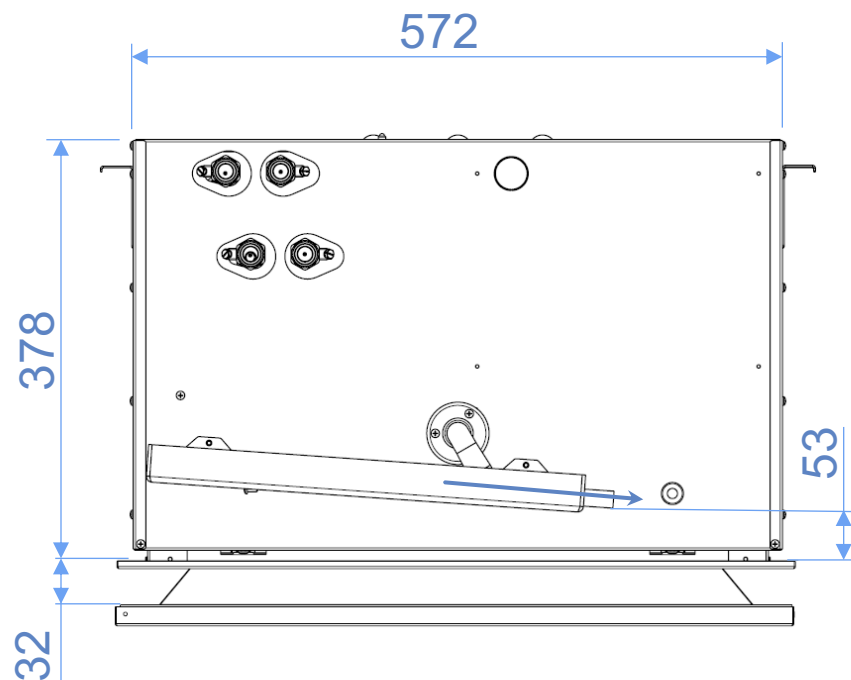
| MODELLO                                  |                   | SK-ECM 14 |      |      |      |      | SK-ECM 26 |      |      |      |      | SK-ECM 36 |      |      |      |      |
|--|-------------------|-----------|------|------|------|------|-----------|------|------|------|------|-----------|------|------|------|------|
|  |                   | 1         | 3    | 5    | 7,5  | 10   | 1         | 3    | 5    | 7,5  | 10   | 1         | 3    | 5    | 7,5  | 10   |
| Tensione pilotaggio inverter             |                   | MIN       |      | MED  |      | MAX  | MIN       |      | MED  |      | MAX  | MIN       |      | MED  |      | MAX  |
| Prestazioni Eurovent                     |                   | (E)       | -    | (E)  | -    | (E)  | (E)       | -    | (E)  | -    | (E)  | (E)       | -    | (E)  | -    | (E)  |
| Portata aria                             | m <sup>3</sup> /h | 310       | 345  | 380  | 457  | 535  | 310       | 377  | 445  | 577  | 710  | 360       | 485  | 610  | 745  | 880  |
| Raffreddamento resa totale (E)           | kW                | 1,85      | 2,02 | 2,17 | 2,48 | 2,75 | 2,09      | 2,46 | 2,81 | 3,39 | 3,90 | 2,37      | 2,99 | 3,51 | 4,03 | 4,47 |
| Raffreddamento resa sensibile (E)        | kW                | 1,34      | 1,31 | 1,59 | 1,64 | 2,06 | 1,49      | 1,76 | 2,03 | 2,49 | 2,92 | 1,70      | 2,17 | 2,60 | 3,01 | 3,40 |
| Riscaldamento resa (E)                   | kW                | 2,13      | 2,32 | 2,51 | 2,85 | 3,18 | 1,73      | 1,97 | 2,20 | 2,57 | 2,91 | 1,92      | 2,31 | 2,66 | 2,99 | 3,29 |
| Dp lato acqua raffreddamento (E)         | kPa               | 4,6       | 5,4  | 6,2  | 7,9  | 9,5  | 3,3       | 4,4  | 5,6  | 7,9  | 10,3 | 4,1       | 6,3  | 8,4  | 10,9 | 13,1 |
| Dp lato acqua riscaldamento (E)          | kPa               | 4,6       | 5,3  | 6,1  | 7,7  | 9,4  | 2,6       | 3,3  | 4,1  | 5,4  | 6,7  | 3,2       | 4,4  | 5,7  | 7,1  | 8,4  |
| Potenza sonora (Lw) (E)                  | dB(A)             | 33,0      | 36,0 | 39,0 | 43,0 | 47,0 | 33,0      | 38,0 | 43,0 | 48,5 | 54,0 | 37,0      | 43,5 | 50,0 | 55,0 | 60,0 |
| Pressione sonora (Lp) <sup>(1)</sup>     | dB(A)             | 24,0      | 27,0 | 30,0 | 34,0 | 38,0 | 24,0      | 29,0 | 34,0 | 39,5 | 45,0 | 28,0      | 34,5 | 41,0 | 46,0 | 51,0 |
| Potenza assorbita motore (E)             | W                 | 5,0       | 6,5  | 8,0  | 12,0 | 16,0 | 5,0       | 8,0  | 11,0 | 21,0 | 31,0 | 7,0       | 14,0 | 21,0 | 41,5 | 62,0 |
| Potenza assorbita pompa scarico condensa | W                 | 10        | 10   | 10   | 10   | 10   | 10        | 10   | 10   | 10   | 10   | 10        | 10   | 10   | 10   | 10   |
| Contenuto acqua batteria freddo          | l                 | 1,4       | 1,4  | 1,4  | 1,4  | 1,4  | 1,7       | 1,7  | 1,7  | 1,7  | 1,7  | 1,7       | 1,7  | 1,7  | 1,7  | 1,7  |
| Contenuto acqua batteria caldo           | l                 | 0,7       | 0,7  | 0,7  | 0,7  | 0,7  | 0,5       | 0,5  | 0,5  | 0,5  | 0,5  | 0,5       | 0,5  | 0,5  | 0,5  | 0,5  |
| Lunghezza                                | mm                | 575       | 575  | 575  | 575  | 575  | 575       | 575  | 575  | 575  | 575  | 575       | 575  | 575  | 575  | 575  |
| Profondità                               | mm                | 575       | 575  | 575  | 575  | 575  | 575       | 575  | 575  | 575  | 575  | 575       | 575  | 575  | 575  | 575  |
| Altezza                                  | mm                | 275       | 275  | 275  | 275  | 275  | 275       | 275  | 275  | 275  | 275  | 275       | 275  | 275  | 275  | 275  |

# Skystar SK-ECM-HY

Hygienic cassette fancoil unit

## Technical datas

Shape and height are in accordance to the Skystar-RSP range 600x600 With increased height (+82 mm) to allow the condensate discharge by mere gravity.



# Skystar SK-ECM-HY

Hygienic cassette fancoil unit

## Coding

The new version SK-ECM-HY is also available with factory-fitted MB board, to allow the integration in ModBus-based systems, and/or IR control

| Version                 | Code           | Description                             |
|-------------------------|----------------|---|
| <i>basic</i><br>2 pipes | <i>0K79001</i> | <i>CASSETTE SKYSTAR SK-ECM-HY 12</i>    |
|                         | <i>0K79002</i> | <i>CASSETTE SKYSTAR SK-ECM-HY 22</i>    |
|                         | <i>0K79003</i> | <i>CASSETTE SKYSTAR SK-ECM-HY 32</i>    |
| <i>basic</i><br>4 pipes | <i>0K79011</i> | <i>CASSETTE SKYSTAR SK-ECM-HY 14</i>    |
|                         | <i>0K79012</i> | <i>CASSETTE SKYSTAR SK-ECM-HY 26</i>    |
|                         | <i>0K79013</i> | <i>CASSETTE SKYSTAR SK-ECM-HY 36</i>    |
| <i>MB</i><br>2 pipes    | <i>0K79021</i> | <i>CASSETTE SKYSTAR SK-ECM-HY-MB 12</i> |
|                         | <i>0K79022</i> | <i>CASSETTE SKYSTAR SK-ECM-HY-MB 22</i> |
|                         | <i>0K79023</i> | <i>CASSETTE SKYSTAR SK-ECM-HY-MB 32</i> |
| <i>MB</i><br>4 pipes    | <i>0K79031</i> | <i>CASSETTE SKYSTAR SK-ECM-HY-MB 14</i> |
|                         | <i>0K79032</i> | <i>CASSETTE SKYSTAR SK-ECM-HY-MB 26</i> |
|                         | <i>0K79033</i> | <i>CASSETTE SKYSTAR SK-ECM-HY-MB 36</i> |



Valve kits and wall mounted controls are the same as the standard Skystar ECM ones.

# Skystar Jumbo

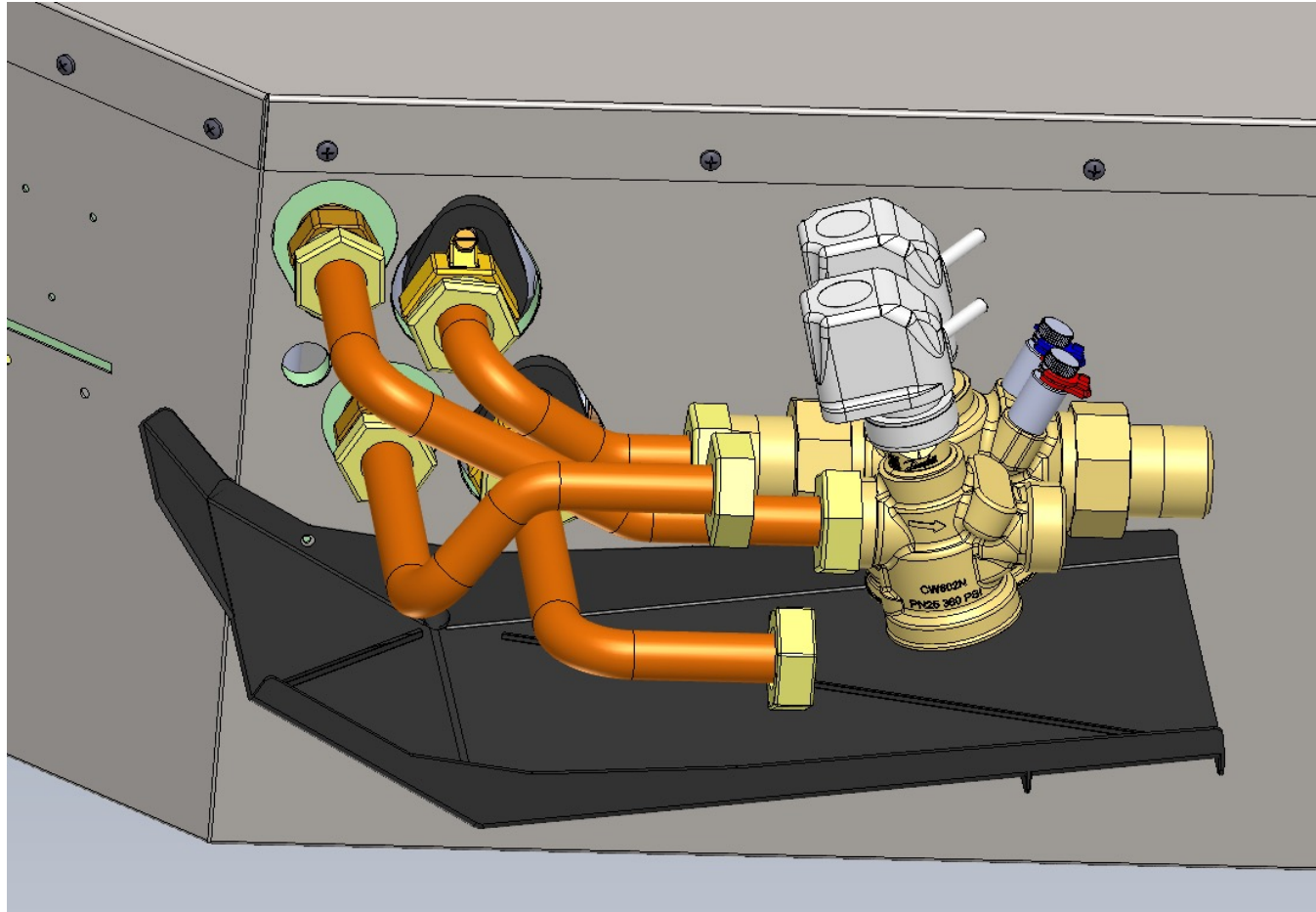
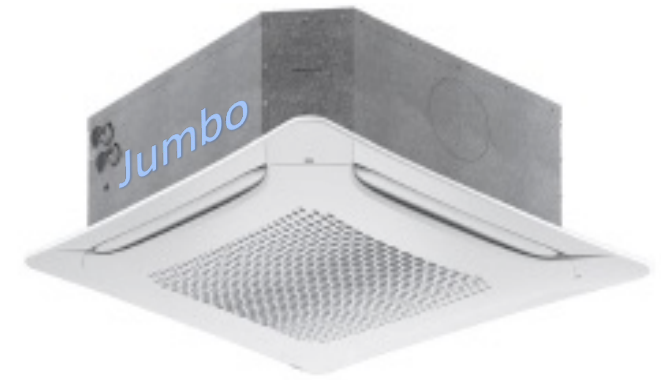
## PICV 2-WAY VALVE KIT

PICV 2 way pressure independent valves

# Kit KV.2V PICV

Pressure independent balancing and control valves

## PICV valve kit for Jumbo units



The new accessory is made by a dedicated copper piping kit, Actuator 22CX Watts 230V ON-OFF with 5mm stroke, and PICV Danfoss 2-way valve – model AB-QM.

A dedicated bracket fixes the valves on the side of the unit.

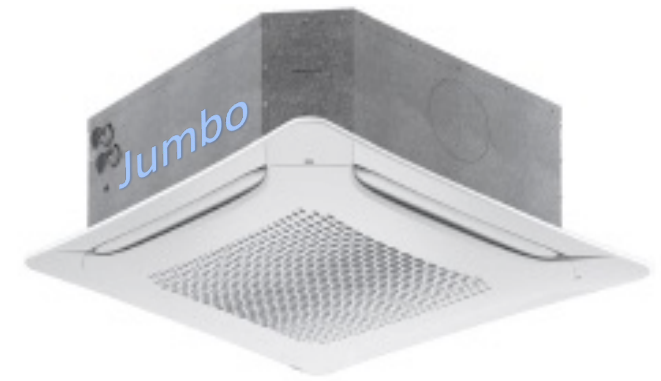
Ball valves and micrometric lockshield are not included.

For the main coil the valve has a DN25 nominal size, with test plugs

For the auxiliary coil the valve has a DN20 nominal size, without test plugs

# Kit KV.2V PICV

Pressure independent balancing and control valves

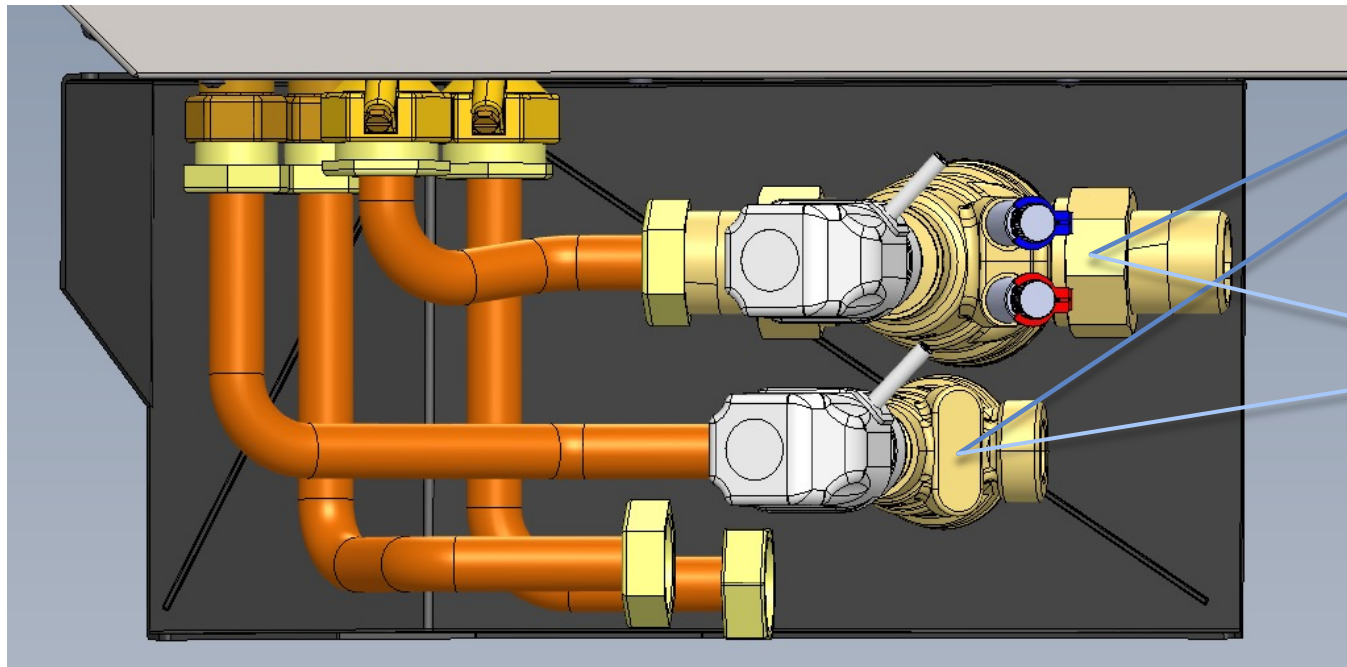


## PICV valve kit for Jumbo units

This valve kit can be supplied loose or factory fitted , with dedicated instruction for installation.

As opposed to the standard valve kit for SK units, the PICV valve kit for Jumbo units has dedicated and separated codes for main coil valve and auxiliary coil valve (following the PICV valve kit logic for sizes 0-6)

Main coil valve shall be used for cooling+heating on 2pipe units, Auxiliary valve shall be used for heating on 4pipe units



Factory fitted valve kit (main/aux):

9079779 K.V.2V PICV PRINC.SK900 SEMP.DANF/M

9079780 K.V.2V PICV AUX SK900 SEMPL.DANF/M

Loose valve kit (main/aux):

9079789 K.V.2V PICV PRINC.SK900 SEMPL.DANF

9079790 K.V.2V PICV AUX SK900 SEMPL. DANF

Thanks for your attention!

SABIANA SSTC Dept.