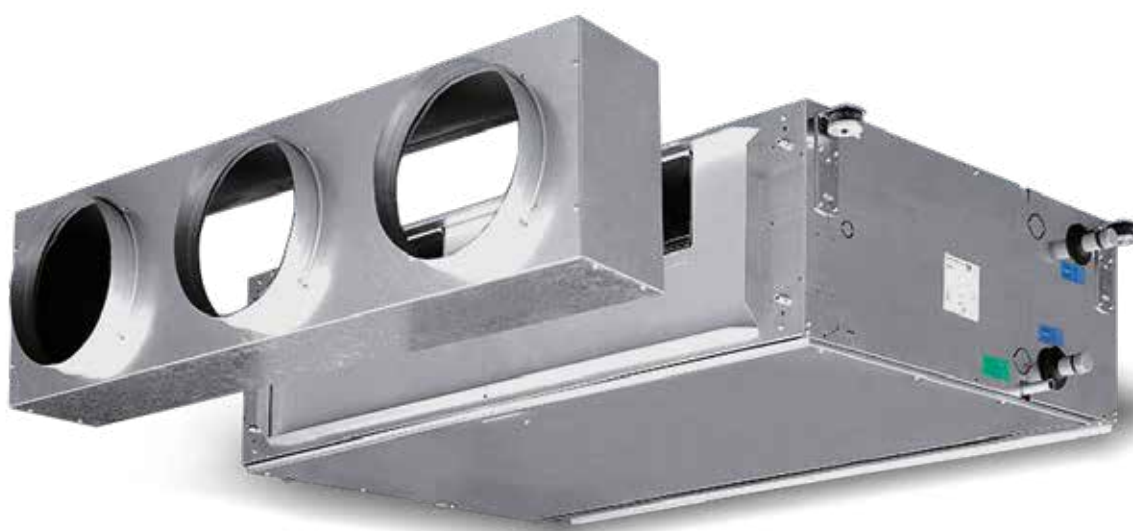




# Maestro

High Pressure Fan Coil Unit  
with Asynchronous Motor

TECHNICAL LEAFLET

# Maestro MTL

## High Pressure Fan Coil Unit with Asynchronous Motor



The **Maestro high pressure** fan coils are produced in 7 sizes.

Designed and built for concealed installations, they have small dimensions, are very silent and have a particularly interesting price in relation to their performance (elevated air flow rates and available static pressures up to 160 Pa for sizes 1-5 and 250 Pa for sizes 6-7).

They are suitable for climate control for small and medium commercial and sports environments or for large civil environments and integrate perfectly in regular false ceilings.

The sizes 1÷5 are equipped with **5 speed** fans, 3 of which are connected to the terminal board while the sizes 6-7 are equipped with **3 speed** fans.

The base models call for a 4 row coil but upon request, units with 3 row coils or additional coils (for 4 pipe systems) with one or two rows can be provided.

A complete set of accessories solves any type of system problem.

**Casing:** made of galvanized steel, 1 mm thick for sizes 1÷3 and 1,2 mm for sizes 4÷7, insulated with 10 mm polyolefin (PO) foam (B-s2-d0 EN 13501-1).

**Fan assembly:** consists of quiet centrifugal fans with two impellers (made of plastic for sizes 1÷5 and made of aluminium for sizes 6÷7) and a directly driven single phase motor (230V 50Hz).



**Coil:** it is manufactured from drawn copper tube and the aluminium fins are mechanically bonded onto the tube by an expansion process.

The Maestro Sabiana range is available with the combination of either 3 or 4 row coils (sizes 1÷5) with the possibility to add a 1 or 2 row coil (3+1, 4+1, 3+2, 4+2 versions for 4 pipe systems), and 4 or 6 row coils (sizes 6-7) with the possibility to add a 2 row coil (4+2, 6+2 versions for 4 pipe systems).



**The connections are on the left hand side looking from the air inlet of the unit (see picture).**

**On request or on site the connections can be moved to the other side.**

The coil is not suitable for use in corrosive atmosphere or in environments where aluminium may be subject to corrosion.

**Filter:** polypropylene cellular fabric regenerating filter.

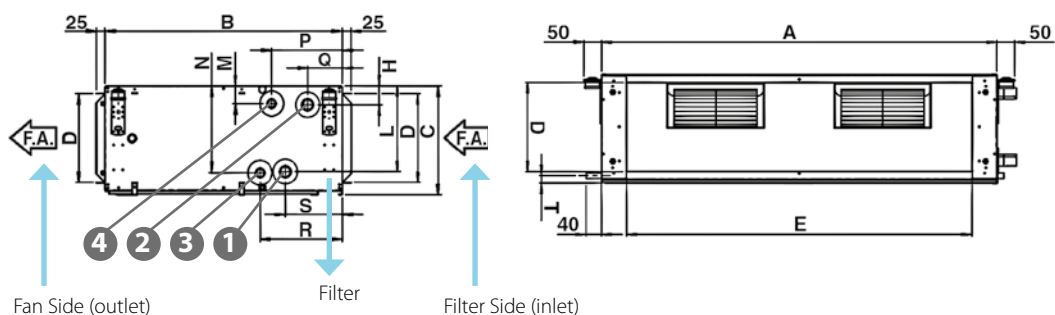
The filter frame of galvanized steel is inserted into sliding guides fastened to the internal structure for easy insertion and removal of the filter.

**Condensate collection tray:** made from galvanized steel insulated with 3 mm polyolefin (PO) foam (B-s2-d0 EN 13501-1).

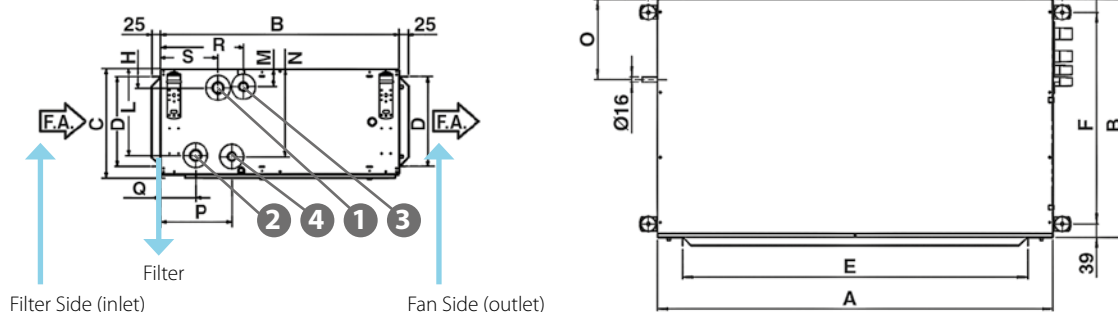
All range is compliant with the **(EU) Regulation No. 327/2011** which requires **very low electric consumption ratings** in relation to performances provided.

# Maestro MTL | DIMENSIONS, WEIGHT, WATER CONTENT

## Left connections (standard)



## Right connections (on request)



| Model   | Dimensions (mm) |     |     |     |
|---------|-----------------|-----|-----|-----|
|         | O               | P   | Q   | R   |
| MTL 1÷5 | 209             | 103 | 169 | 243 |
| MTL 6-7 | 304             | 154 | 264 | 338 |

| Model | Dimensions |      |     |     |      |      |      |    |     |    |     | Coil   |        |            |      |
|-------|------------|------|-----|-----|------|------|------|----|-----|----|-----|--------|--------|------------|------|
|       |            |      |     |     |      |      |      |    |     |    |     | Main   |        | Additional |      |
|       | A          | B    | C   | D   | E    | F    | G    | H  | L   | M  | N   | 1      | 2      | 3          | 4    |
|       | mm         | mm   | mm  | mm  | mm   | mm   | mm   | mm | mm  | mm | mm  | IN     | OUT    | IN         | OUT  |
| MTL 1 | 1133       | 698  | 310 | 255 | 991  | 620  | 1185 | 54 | 245 | 50 | 249 | 3/4"   | 3/4"   | 3/4"       | 3/4" |
| MTL 2 | 1133       | 698  | 310 | 255 | 991  | 620  | 1185 | 54 | 245 | 50 | 249 | 1"     | 1"     | 3/4"       | 3/4" |
| MTL 3 | 1133       | 698  | 360 | 305 | 991  | 620  | 1185 | 54 | 295 | 50 | 299 | 1"     | 1"     | 3/4"       | 3/4" |
| MTL 4 | 1445       | 853  | 360 | 293 | 1302 | 775  | 1497 | 58 | 291 | 54 | 295 | 1 1/4" | 1 1/4" | 1"         | 1"   |
| MTL 5 | 1445       | 853  | 435 | 368 | 1302 | 775  | 1497 | 58 | 367 | 54 | 370 | 1 1/4" | 1 1/4" | 1"         | 1"   |
| MTL 6 | 1535       | 1100 | 488 | 421 | 1393 | 1022 | 1587 | 59 | 416 | 55 | 421 | 1 1/4" | 1 1/4" | 1"         | 1"   |
| MTL 7 | 1535       | 1100 | 588 | 521 | 1393 | 1022 | 1587 | 59 | 516 | 55 | 521 | 1 1/4" | 1 1/4" | 1"         | 1"   |

| Model | Weight without packaging (kg) |      |      |      |      |      | Weight with packaging (kg) |      |      |      |      |      | Water content (litres) |     |     |     |
|-------|-------------------------------|------|------|------|------|------|----------------------------|------|------|------|------|------|------------------------|-----|-----|-----|
|       | 3R                            | 3+1R | 3+2R | 4R   | 4+1R | 4+2R | 3R                         | 3+1R | 3+2R | 4R   | 4+1R | 4+2R | 3R                     | 4R  | 1R  | 2R  |
| MTL 1 | 45                            | 48   | 50   | 47   | 50   | 51   | 48                         | 51   | 53   | 50   | 53   | 54   | 2,0                    | 2,6 | 0,9 | 1,5 |
| MTL 2 | 46                            | 50   | 52   | 48   | 51   | 53   | 49                         | 53   | 55   | 51   | 54   | 56   | 2,9                    | 3,7 | 1,1 | 1,8 |
| MTL 3 | 54                            | 58   | 60   | 56   | 60   | 62   | 57                         | 61   | 63   | 59   | 63   | 65   | 3,5                    | 4,6 | 1,4 | 2,4 |
| MTL 4 | 75                            | 80   | 83   | 78   | 83   | 86   | 79                         | 84   | 87   | 82   | 87   | 90   | 4,7                    | 6,0 | 2,0 | 3,2 |
| MTL 5 | 85                            | 90   | 94   | 88   | 94   | 98   | 89                         | 94   | 98   | 92   | 98   | 102  | 5,7                    | 7,1 | 2,7 | 4,1 |
|       | 4R                            | 4+2R | 6R   | 6+2R | 4R   | 4+2R | 6R                         | 6+2R | 4R   | 6R   | 2R   |      |                        |     |     |     |
| MTL 6 | 124                           | 134  | 130  | 140  | 127  | 137  | 133                        | 143  | 7,6  | 11,1 | 4,1  |      |                        |     |     |     |
| MTL 7 | 140                           | 152  | 148  | 160  | 143  | 155  | 151                        | 163  | 9,7  | 13,8 | 5,5  |      |                        |     |     |     |

## Units with 4 row coil

**2 pipe units.** The following standard rating conditions are used:

**COOLING (summer mode)**

**Entering air temperature:** +27 °C d.b. +19 °C w.b.  
**Water temperature:** +7 °C E.W.T. +12 °C L.W.T.

**HEATING (winter mode)**

**Entering air temperature:** +20 °C  
**Water temperature:** +45 °C E.W.T. +40 °C L.W.T.

| Model MTL                           |                   | 14      |      |      | 24      |      |       | 34      |       |       | 44      |       |       | 54 (**) |       |       | 64 (**) |       |       | 74 (**) |       |       |
|-------------------------------------|-------------------|---------|------|------|---------|------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|
| Speed (E)                           |                   | 1       | 3    | 5    | 1       | 3    | 5     | 1       | 3     | 5     | 1       | 3     | 5     | 1       | 3     | 5     | 1       | 3     | 5     | 1       | 3     | 5     |
| Air flow (E)                        | m <sup>3</sup> /h | 790     | 1125 | 1410 | 840     | 1410 | 1825  | 1710    | 2075  | 2440  | 2070    | 2580  | 3020  | 2740    | 3280  | 3850  | 1880    | 3385  | 4800  | 3925    | 5070  | 7100  |
| Available pressure (E)              | Pa                | 25      | 50   | 75   | 15      | 50   | 80    | 30      | 50    | 70    | 35      | 50    | 70    | 35      | 50    | 67    | 150     | 150   | 150   | 150     | 150   | 150   |
| Cooling total emission (E)          | kW                | 4,17    | 5,21 | 5,92 | 4,99    | 7,01 | 8,15  | 8,71    | 9,76  | 10,71 | 10,90   | 12,40 | 13,60 | 14,54   | 16,19 | 17,76 | 12,42   | 18,73 | 22,89 | 21,54   | 25,33 | 30,63 |
| Cooling sensible emission (E)       | kW                | 3,25    | 4,26 | 5,03 | 3,66    | 5,48 | 6,62  | 6,67    | 7,68  | 8,65  | 8,25    | 9,70  | 10,90 | 11,21   | 12,80 | 14,37 | 8,88    | 14,16 | 17,98 | 16,05   | 19,46 | 24,53 |
| Heating (E)                         | kW                | 4,98    | 6,44 | 7,67 | 5,57    | 8,27 | 10,10 | 10,20   | 11,80 | 13,19 | 12,79   | 14,92 | 16,53 | 17,67   | 20,32 | 22,93 | 20,86   | 33,52 | 43,60 | 39,34   | 47,85 | 61,14 |
| Dp Cooling (E)                      | kPa               | 5,1     | 7,6  | 9,6  | 6,9     | 12,7 | 16,8  | 16,0    | 19,8  | 23,4  | 13,9    | 17,7  | 20,9  | 13,3    | 16,3  | 19,4  | 7,4     | 15,3  | 22,6  | 14,4    | 19,3  | 27,6  |
| Dp Heating (E)                      | kPa               | 5,2     | 8,2  | 11,3 | 6,2     | 17,0 | 18,3  | 15,6    | 23,0  | 24,8  | 13,4    | 17,7  | 21,3  | 14,2    | 18,3  | 22,8  | 3,9     | 9,1   | 14,7  | 8,5     | 12,1  | 18,8  |
| Fan (E)                             | W                 | 115     | 154  | 191  | 170     | 230  | 285   | 350     | 420   | 470   | 390     | 490   | 570   | 500     | 617   | 760   | 574     | 778   | 1304  | 1518    | 1758  | 2460  |
| Sound power outlet (E)              | dB(A)             | 44      | 52   | 58   | 44      | 56   | 61    | 57      | 62    | 65    | 59      | 63    | 66    | 63      | 67    | 70    | 63      | 71    | 77    | 71      | 75    | 81    |
| Sound power inlet + radiated (E)    | dB(A)             | 47      | 55   | 60   | 47      | 59   | 64    | 60      | 64    | 67    | 61      | 65    | 68    | 65      | 69    | 72    | -       | -     | -     | -       | -     | -     |
| Sound pressure outlet (*)           | dB(A)             | 35      | 43   | 49   | 35      | 47   | 52    | 48      | 53    | 56    | 50      | 54    | 57    | 54      | 58    | 61    | 54      | 62    | 68    | 62      | 66    | 72    |
| Sound pressure inlet + radiated (*) | dB(A)             | 38      | 46   | 51   | 38      | 50   | 55    | 51      | 55    | 58    | 52      | 56    | 59    | 56      | 60    | 63    | -       | -     | -     | -       | -     | -     |
| Plenum code                         |                   | 9034200 |      |      | 9034200 |      |       | 9034220 |       |       | 9034230 |       |       | 9034240 |       |       | 9034280 |       |       | 9034290 |       |       |

## Units with additional coil

**4 pipe units.** The following standard rating conditions are used:

**COOLING (summer mode)**

**Entering air temperature:** +27 °C d.b. +19 °C w.b.  
**Water temperature:** +7 °C E.W.T. +12 °C L.W.T.

**HEATING (winter mode)**

**Entering air temperature:** +20 °C  
**Water temperature:** +65 °C E.W.T. +55 °C L.W.T.

| Model MTL                           |                   | 14+1    |      |      | 24+1    |       |       | 34+1    |       |       | 44+1    |       |       | 54+1 (**) |       |       | 64+2 (**) |       |       | 74+2 (**) |       |       |
|-------------------------------------|-------------------|---------|------|------|---------|-------|-------|---------|-------|-------|---------|-------|-------|-----------|-------|-------|-----------|-------|-------|-----------|-------|-------|
| Speed (E)                           |                   | 1       | 3    | 5    | 1       | 3     | 5     | 1       | 3     | 5     | 1       | 3     | 5     | 1         | 3     | 5     | 1         | 3     | 5     | 1         | 3     | 5     |
| Air flow (E)                        | m <sup>3</sup> /h | 770     | 1090 | 1350 | 840     | 1390  | 1775  | 1680    | 2045  | 2390  | 2055    | 2545  | 2960  | 2700      | 3245  | 3800  | 1860      | 3330  | 4680  | 3920      | 5040  | 6980  |
| Available pressure (E)              | Pa                | 25      | 50   | 75   | 15      | 50    | 80    | 30      | 50    | 70    | 35      | 50    | 70    | 35        | 50    | 70    | 150       | 150   | 150   | 150       | 150   | 150   |
| Cooling total emission (E)          | kW                | 4,09    | 5,11 | 5,79 | 4,99    | 6,96  | 8,03  | 8,61    | 9,67  | 10,58 | 10,85   | 12,34 | 13,46 | 13,75     | 15,31 | 16,73 | 12,33     | 18,56 | 22,52 | 21,53     | 25,25 | 30,36 |
| Cooling sensible emission (E)       | kW                | 3,18    | 4,16 | 4,87 | 3,66    | 5,42  | 6,49  | 6,58    | 7,60  | 8,51  | 8,21    | 9,61  | 10,72 | 10,62     | 12,13 | 13,56 | 8,81      | 14,02 | 17,62 | 16,05     | 19,39 | 24,28 |
| Heating (E)                         | kW                | 3,96    | 4,87 | 5,47 | 4,63    | 6,28  | 7,16  | 7,62    | 8,47  | 9,20  | 9,83    | 11,07 | 12,00 | 12,67     | 14,00 | 15,28 | 19,81     | 29,78 | 37,13 | 35,50     | 41,88 | 51,31 |
| Dp Cooling (E)                      | kPa               | 4,90    | 7,30 | 9,20 | 6,90    | 12,50 | 16,30 | 15,70   | 19,40 | 22,90 | 13,80   | 17,40 | 20,50 | 12,00     | 14,70 | 17,40 | 7,30      | 15,00 | 22,00 | 14,40     | 19,10 | 27,10 |
| Dp Heating (E)                      | kPa               | 11,7    | 17,0 | 21,0 | 14,5    | 25,2  | 31,9  | 15,9    | 19,3  | 22,3  | 27,6    | 34,1  | 39,5  | 26,0      | 31,1  | 36,3  | 11,9      | 24,9  | 37,0  | 23,8      | 32,0  | 46,1  |
| Fan (E)                             | W                 | 115     | 154  | 191  | 170     | 230   | 285   | 350     | 420   | 470   | 390     | 490   | 570   | 500       | 617   | 760   | 565       | 750   | 1327  | 1499      | 1727  | 2376  |
| Sound power outlet (E)              | dB(A)             | 44      | 52   | 58   | 44      | 56    | 61    | 57      | 62    | 65    | 59      | 63    | 66    | 63        | 67    | 70    | 63        | 71    | 77    | 71        | 75    | 81    |
| Sound power inlet + radiated (E)    | dB(A)             | 47      | 55   | 60   | 47      | 59    | 64    | 60      | 64    | 67    | 61      | 65    | 68    | 65        | 72    | 72    | -         | -     | -     | -         | -     | -     |
| Sound pressure outlet (*)           | dB(A)             | 35      | 43   | 49   | 35      | 47    | 52    | 48      | 53    | 56    | 50      | 54    | 57    | 54        | 58    | 61    | 54        | 62    | 68    | 62        | 66    | 72    |
| Sound pressure inlet + radiated (*) | dB(A)             | 38      | 46   | 51   | 38      | 50    | 55    | 51      | 55    | 58    | 52      | 56    | 59    | 56        | 60    | 63    | -         | -     | -     | -         | -     | -     |
| Plenum code                         |                   | 9034200 |      |      | 9034200 |       |       | 9034220 |       |       | 9034230 |       |       | 9034240   |       |       | 9034280   |       |       | 9034290   |       |       |

(E) = EUROVENT certified performance.

(\*) = The sound pressure levels are 9 dB(A) lower than the sound power levels and apply to the reverberant field of a 100 m<sup>3</sup> room and a reverberation time of 0.5 sec.

(\*\*) = Models not covered by EUROVENT certification program.

## Kit 230V

### Main and auxiliary coil valve kit

(to be used only with QCV-MB2 control board and WM-T, WM-TQR, WM-AU and T-MB2 controls)

230 V, ON-OFF valve.



## Kit 24V

### Main and auxiliary coil valve kit

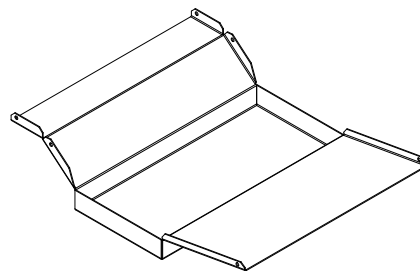
(to be used only with QCV-MB2 modulating valve control board)

Valve with 3 points - 24 Volt actuator.



## BCM

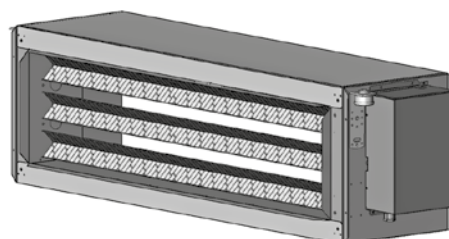
### External auxiliary condensate collection tray



## BEM

### Electric coil

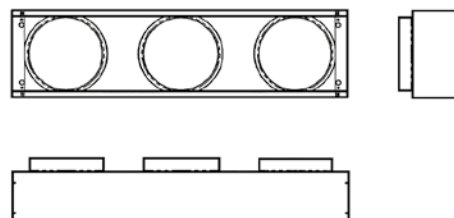
Consists of electric resistances and a security thermostat, which are inside a galvanized steel and insulated casing.



## PMM

### Intake/supply spigot plenum

Intake/supply spigot plenum with 3 spigots (Sizes 1 - 2 - 3) or 4 spigots (Sizes 4 - 5 - 6 - 7).

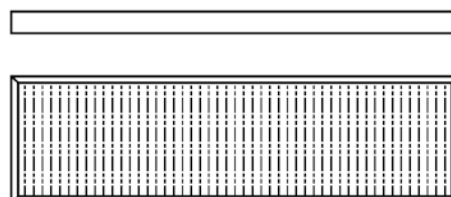


## SFM

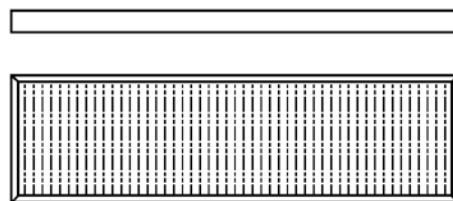
### ePM<sub>10</sub> 50% - G4 class synthetic filter

The filter is a washable synthetic fibre, flame-proof according to Class F1 DIN 53438.

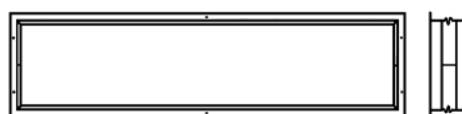
Compliant with: EN 16890.



- SFM-F6** **ePM<sub>10</sub> 70% - F6 class Synthetic Filter**  
(for sizes 6 ÷ 7 only)  
High efficiency compact filter in glass microfiber paper. Compliant with: EN 16890.



- GAV** **Antivibrating connection**  
Intake/supply antivibrating connection, made of two galvanized frames and a PVC flexible connection.



## Electronic wall controls

|                |                                                                                                                      |
|----------------|----------------------------------------------------------------------------------------------------------------------|
| <b>COM</b>     | Speed selector with 4 positions: OFF, first speed, second speed, third speed                                         |
| <b>WM-3V</b>   | 3 speed control                                                                                                      |
| <b>WM-T</b>    | 3 speed control with electronic thermostat and manual summer/winter switch                                           |
| <b>WM-TQR</b>  | 3 speed control with electronic thermostat and centralized/manual summer/winter switch                               |
| <b>WM-AU</b>   | Automatic speed control with electronic thermostat and summer/winter switch (to be used with UPOM-AU or UPO-AU only) |
| <b>T-MB2</b>   | Wall control with LCD color display and WiFi (to be used with UPOM-AU or UPO-AU only)                                |
| <b>SEL-S</b>   | Receiving board for centralized control                                                                              |
| <b>UPOM-AU</b> | UPO-AU power unit for WM-AU and T-MB2 remote controls, fitted on the unit                                            |
| <b>UPO-AU</b>  | UPO-AU power unit for WM-AU and T-MB2 remote controls, not fitted on the unit                                        |

## Electronic controls for MB boards

|                |                                                                                            |
|----------------|--------------------------------------------------------------------------------------------|
| <b>QCV-MB2</b> | MB control panel version (T-MB2 wall control included)                                     |
| <b>PSM-DI</b>  | PSM-DI multifunction control panel (to be used with QCV-MB2 control panel only)            |
| <b>T-DI</b>    | T-DI touch screen multifunction control panel (to be used with QCV-MB2 control panel only) |
| <b>SabWeb</b>  | Web gateway for Sabiana Cloud (to be used with QCV-MB2 control panel only)                 |

### Sabianet management system for a network of fan coils

|                 |                                                                                                                       |
|-----------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Sabianet</b> | Sabianet (to be used with QCV-MB 2 control panel only)                                                                |
| <b>Router-S</b> | Router for Sabianet (default) or for BMS systems not provided by Sabiana (to be used with QCV-MB2 control panel only) |
| <b>SIOS</b>     | Relay output board for Sabianet (to be used with QCV-MB2 control panel only)                                          |

NOTE: for more information about Controls, please see the dedicated pages.

# Maestro MTL-ECM

High Pressure Fan Coil Unit with EC Brushless Electronic Motor and Inverter Board



The **Maestro MTL-ECM high pressure** fan coils are produced in 6 sizes.

Designed and built for concealed installations, they have small dimensions, are very silent and have a particularly interesting price in relation to their performance (elevated air flow rates and available static pressures up to 240 Pa).

They are suitable for climate control for small and medium commercial and sports environments or for large civil environments and integrate perfectly in regular false ceilings.

In high pressure ducted fan coils, the ability to **continuously** vary the air flow gives great regulation and control flexibility, at the same time **ensuring** excellent environmental conditions and extremely low electrical consumption.

**The ECM range** makes use of the excellent experience gained with the SkyStar Cassette fan coils with inverter board, first in the world in production since 2009, and which have had great success on all markets.

The innovative synchronous electronic motor with permanent magnets, is controlled by an electronic board (inverter).

The air flow rate can be varied **in continuously** by means of a 1-10 V signal generated by Sabiana controls or by independent control systems.

The continuous air flow control improves the acoustic comfort and allows a more punctual reply to the variation of the thermal loads and a greater stability of the requested ambient temperature.

The extreme efficiency, also at low speed, makes possible a great reduction in electric consumption (in comparison to the yet efficient MTL motor) under normal operating conditions. The excellent values of the MTL-ECM range have been maintained **in all working conditions**, without any resonance phenomenon at any frequency.

**The full compliance with the Electromagnetic Compatibility Directive** and with the other severe Standards in force is certified by an independent institute.

For the technical characteristics of the various components refer to High Pressure Fan Coil Maestro MTL unit, except for **Electronic motor**:

three phase permanent magnet electronic one that is controlled with current reconstructed according to a **BLAC** sinusoidal wave.

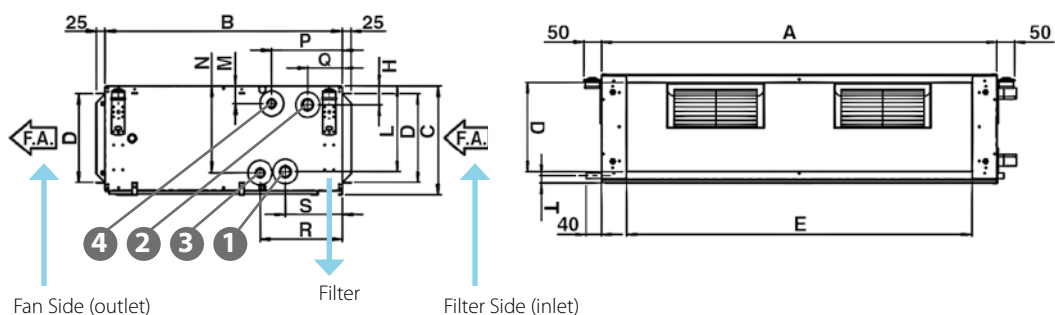
The inverter board that controls the motor operation is powered by 230 Volt, single-phase and, with a **switching system**, it generates a three-phase frequency modulated, wave form power supply. The electric power supply required for the machine is therefore single-phase with voltage of **230 V** and frequency of **50 - 60 Hz**.

All range is compliant with the **(EU) Regulation No. 327/2011** which requires very low electric consumption ratings in relation to performances provided.

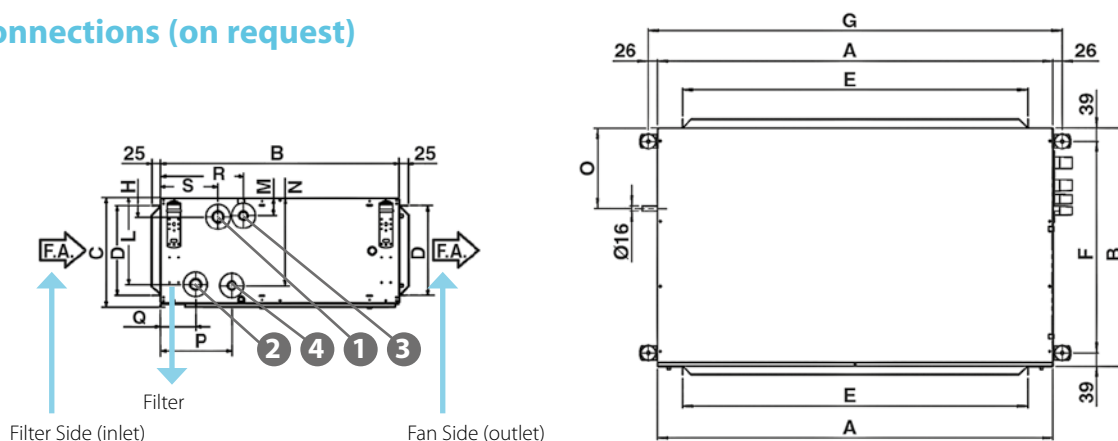


# Maestro MTL-ECM | DIMENSIONS, WEIGHT, WATER CONTENT

## Left connections (standard)



## Right connections (on request)



| Model              | Dimensions (mm) |     |     |     |
|--------------------|-----------------|-----|-----|-----|
|                    | O               | P   | Q   | R   |
| <b>MTL-ECM 1÷6</b> | 209             | 103 | 169 | 243 |

| Model            | Dimensions |         |         |         |         |         |         |         |         |         |         | Coil    |          |            |          |
|------------------|------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|------------|----------|
|                  |            |         |         |         |         |         |         |         |         |         |         | Main    |          | Additional |          |
|                  | A<br>mm    | B<br>mm | C<br>mm | D<br>mm | E<br>mm | F<br>mm | G<br>mm | H<br>mm | L<br>mm | M<br>mm | N<br>mm | 1<br>IN | 2<br>OUT | 3<br>IN    | 4<br>OUT |
| <b>MTL-ECM 1</b> | 1133       | 698     | 310     | 255     | 991     | 620     | 1185    | 54      | 245     | 50      | 249     | 3/4"    | 3/4"     | 3/4"       | 3/4"     |
| <b>MTL-ECM 2</b> | 1133       | 698     | 310     | 255     | 991     | 620     | 1185    | 54      | 245     | 50      | 249     | 1"      | 1"       | 3/4"       | 3/4"     |
| <b>MTL-ECM 3</b> | 1133       | 698     | 360     | 305     | 991     | 620     | 1185    | 54      | 295     | 50      | 299     | 1"      | 1"       | 3/4"       | 3/4"     |
| <b>MTL-ECM 4</b> | 1445       | 853     | 360     | 293     | 1302    | 775     | 1497    | 58      | 291     | 54      | 295     | 1 1/4"  | 1 1/4"   | 1"         | 1"       |
| <b>MTL-ECM 5</b> | 1445       | 853     | 435     | 368     | 1302    | 775     | 1497    | 58      | 367     | 54      | 370     | 1 1/4"  | 1 1/4"   | 1"         | 1"       |
| <b>MTL-ECM 6</b> | 1535       | 1100    | 488     | 421     | 1393    | 1022    | 1587    | 59      | 416     | 55      | 421     | 1 1/4"  | 1 1/4"   | 1"         | 1"       |

| Model            | Weight without packaging (kg) |      |      |     |      |      |     |      | Weight with packaging (kg) |      |      |     |      |      |     |      | Water content (litres) |     |      |     |     |
|------------------|-------------------------------|------|------|-----|------|------|-----|------|----------------------------|------|------|-----|------|------|-----|------|------------------------|-----|------|-----|-----|
|                  | 3R                            | 3+1R | 3+2R | 4R  | 4+1R | 4+2R | 6R  | 6+2R | 3R                         | 3+1R | 3+2R | 4R  | 4+1R | 4+2R | 6R  | 6+2R | 3R                     | 4R  | 6R   | 1R  | 2R  |
| <b>MTL-ECM 1</b> | 45                            | 48   | 50   | 47  | 50   | 51   | -   | -    | 48                         | 51   | 53   | 50  | 53   | 54   | -   | -    | 2,0                    | 2,6 | -    | 0,9 | 1,5 |
| <b>MTL-ECM 2</b> | 46                            | 50   | 52   | 48  | 51   | 53   | -   | -    | 49                         | 53   | 55   | 51  | 54   | 56   | -   | -    | 2,9                    | 3,7 | -    | 1,1 | 1,8 |
| <b>MTL-ECM 3</b> | 54                            | 58   | 60   | 56  | 60   | 62   | -   | -    | 57                         | 61   | 63   | 59  | 63   | 65   | -   | -    | 3,5                    | 4,6 | -    | 1,4 | 2,4 |
| <b>MTL-ECM 4</b> | 75                            | 80   | 83   | 78  | 83   | 86   | -   | -    | 79                         | 84   | 87   | 82  | 87   | 90   | -   | -    | 4,7                    | 6,0 | -    | 2,0 | 3,2 |
| <b>MTL-ECM 5</b> | 85                            | 90   | 94   | 88  | 94   | 98   | -   | -    | 89                         | 94   | 98   | 92  | 98   | 102  | -   | -    | 5,7                    | 7,1 | -    | 2,7 | 4,1 |
| <b>MTL-ECM 6</b> | -                             | -    | -    | 124 | -    | 134  | 130 | 140  | -                          | -    | -    | 127 | -    | 137  | 133 | 143  | -                      | 7,6 | 11,1 | -   | 4,1 |

## Units with 4 row coil

**2 pipe units.** The following standard rating conditions are used:

### COOLING (summer mode)

**Entering air temperature:** +27 °C d.b. +19 °C w.b.  
**Water temperature:** +7 °C E.W.T. +12 °C L.W.T.

### HEATING (winter mode)

**Entering air temperature:** +20 °C  
**Water temperature:** +45 °C E.W.T. +40 °C L.W.T.

| Model MTL-ECM                       |       | 14      |      |      | 24      |      |       | 34      |       |       | 44      |       |       | 54      |       |       |
|-------------------------------------|-------|---------|------|------|---------|------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|
| <b>Inverter Power (E)</b>           | V     | 4,5     | 7    | 9    | 4       | 6    | 8     | 4,5     | 6,5   | 8     | 5,5     | 7,5   | 10    | 3       | 5     | 7     |
| <b>Speed (E)</b>                    |       | MIN     | MED  | MAX  | MIN     | MED  | MAX   | MIN     | MED   | MAX   | MIN     | MED   | MAX   | MIN     | MED   | MAX   |
| Air flow (E)                        | m³/h  | 780     | 1100 | 1310 | 940     | 1360 | 1780  | 1380    | 1950  | 2390  | 1840    | 2440  | 3080  | 2400    | 3320  | 3920  |
| Available pressure (E)              | Pa    | 26      | 50   | 70   | 24      | 50   | 85    | 25      | 50    | 75    | 28      | 50    | 80    | 25      | 50    | 70    |
| Cooling total emission (E)          | kW    | 4,14    | 5,11 | 5,61 | 5,44    | 6,86 | 7,94  | 7,87    | 9,70  | 10,81 | 10,47   | 12,39 | 13,99 | 13,73   | 16,70 | 18,17 |
| Cooling sensible emission (E)       | kW    | 3,24    | 4,18 | 4,72 | 4,08    | 5,36 | 6,44  | 5,93    | 7,61  | 8,72  | 7,90    | 9,65  | 11,23 | 10,46   | 13,26 | 14,75 |
| Heating (E)                         | kW    | 5,18    | 6,80 | 7,76 | 6,42    | 8,64 | 10,62 | 8,64    | 11,25 | 13,06 | 12,13   | 15,15 | 18,08 | 15,90   | 20,51 | 23,25 |
| Dp Cooling (E)                      | kPa   | 4,9     | 7,2  | 8,7  | 7,7     | 11,8 | 15,8  | 11,7    | 17,4  | 21,6  | 12,2    | 16,9  | 21,7  | 12,3    | 17,9  | 21,4  |
| Dp Heating (E)                      | kPa   | 6,5     | 10,7 | 13,7 | 7,5     | 12,9 | 18,8  | 10,1    | 16,4  | 21,4  | 11,6    | 17,4  | 23,9  | 12,8    | 20,3  | 25,4  |
| Fan (E)                             | W     | 40      | 88   | 144  | 44      | 110  | 225   | 80      | 195   | 340   | 110     | 253   | 530   | 166     | 383   | 702   |
| Sound power outlet (E)              | dB(A) | 45      | 52   | 59   | 45      | 55   | 61    | 52      | 60    | 64    | 55      | 62    | 67    | 58      | 67    | 71    |
| Sound power inlet + radiated (E)    | dB(A) | 48      | 55   | 61   | 48      | 57   | 63    | 55      | 62    | 66    | 58      | 64    | 69    | 61      | 70    | 73    |
| Sound pressure outlet (*)           | dB(A) | 36      | 43   | 50   | 36      | 46   | 52    | 43      | 51    | 55    | 46      | 53    | 58    | 49      | 58    | 62    |
| Sound pressure inlet + radiated (*) | dB(A) | 39      | 46   | 52   | 39      | 48   | 54    | 46      | 53    | 57    | 49      | 55    | 60    | 52      | 61    | 64    |
| Plenum code                         |       | 9034200 |      |      | 9034200 |      |       | 9034220 |       |       | 9034230 |       |       | 9034240 |       |       |

(\*\*)

| Model MTL-ECM                       |       | 64      |       |       | 66      |       |       |
|-------------------------------------|-------|---------|-------|-------|---------|-------|-------|
| <b>Inverter Power (E)</b>           | V     | 3       | 6     | 9     | 3       | 6     | 9     |
| <b>Speed (E)</b>                    |       | MIN     | MED   | MAX   | MIN     | MED   | MAX   |
| Air flow (E)                        | m³/h  | 2825    | 4295  | 5205  | 2825    | 4295  | 5205  |
| Available pressure (E)              | Pa    | 22      | 50    | 74    | 22      | 50    | 74    |
| Cooling total emission (E)          | kW    | 16,91   | 21,91 | 24,3  | 20,36   | 27,2  | 30,64 |
| Cooling sensible emission (E)       | kW    | 12,85   | 17,79 | 20,3  | 14,47   | 20,39 | 23,48 |
| Heating (E)                         | kW    | 18,63   | 25,83 | 29,76 | 20,74   | 29,57 | 34,54 |
| Dp Cooling (E)                      | kPa   | 15,9    | 25,9  | 31,8  | 21,3    | 36,6  | 46,1  |
| Dp Heating (E)                      | kPa   | 14,2    | 25,6  | 33,1  | 16,7    | 31,7  | 42    |
| Fan (E)                             | W     | 106     | 330   | 636   | 109     | 339   | 654   |
| Sound power outlet (E)              | dB(A) | 57      | 69    | 73    | 57      | 69    | 73    |
| Sound power inlet + radiated (E)    | dB(A) | 60      | 71,5  | 75    | 60      | 71,5  | 75    |
| Sound pressure outlet (*)           | dB(A) | 48      | 60    | 64    | 48      | 60    | 64    |
| Sound pressure inlet + radiated (*) | dB(A) | 51      | 63    | 66    | 51      | 63    | 66    |
| Plenum code                         |       | 9034280 |       |       | 9034280 |       |       |

(\*\*)

(\*\*)

(E) = EUROVENT certified performance.

(\*) = The sound pressure levels are 9 dB(A) lower than the sound power levels and apply to the reverberant field of a 100 m³ room and a reverberation time of 0.5 sec.

(\*\*) = Models not covered by EUROVENT certification program.

### Units with additional coil

**4 pipe units.** The following standard rating conditions are used:

#### COOLING (summer mode)

**Entering air temperature:** +27 °C d.b. +19 °C w.b.  
**Water temperature:** +7 °C E.W.T. +12 °C L.W.T.

#### HEATING (winter mode)

**Entering air temperature:** +20 °C  
**Water temperature:** +65 °C E.W.T. +55 °C L.W.T.

| Model MTL-ECM                       |                   | 14+1    |      |      | 24+1    |      |      | 34+1    |      |       | 44+1    |       |       | 54+1    |       |       |
|-------------------------------------|-------------------|---------|------|------|---------|------|------|---------|------|-------|---------|-------|-------|---------|-------|-------|
| <b>Inverter Power (E)</b>           | V                 | 4,5     | 7    | 9    | 4       | 6    | 8    | 4,5     | 6,5  | 8     | 5,5     | 7,5   | 10    | 3       | 5     | 7     |
| <b>Speed (E)</b>                    |                   | MIN     | MED  | MAX  | MIN     | MED  | MAX  | MIN     | MED  | MAX   | MIN     | MED   | MAX   | MIN     | MED   | MAX   |
| Air flow (E)                        | m <sup>3</sup> /h | 750     | 1040 | 1250 | 920     | 1340 | 1750 | 1350    | 1920 | 2350  | 1810    | 2400  | 3040  | 2380    | 3300  | 3860  |
| Available pressure (E)              | Pa                | 26      | 50   | 72   | 24      | 50   | 85   | 25      | 50   | 75    | 28      | 50    | 80    | 26      | 50    | 68    |
| Cooling total emission (E)          | kW                | 4,04    | 4,94 | 5,46 | 5,36    | 6,79 | 7,87 | 7,76    | 9,59 | 10,70 | 10,36   | 12,27 | 13,90 | 13,66   | 16,62 | 18,00 |
| Cooling sensible emission (E)       | kW                | 3,14    | 4,01 | 4,55 | 4,01    | 5,30 | 6,35 | 5,83    | 7,51 | 8,61  | 7,79    | 9,53  | 11,13 | 10,39   | 13,19 | 14,58 |
| Heating (E)                         | kW                | 3,43    | 4,18 | 4,62 | 4,33    | 5,42 | 6,25 | 5,90    | 7,20 | 8,02  | 8,06    | 9,48  | 10,75 | 10,53   | 12,67 | 13,77 |
| Dp Cooling (E)                      | kPa               | 4,6     | 6,8  | 8,3  | 7,5     | 11,6 | 15,5 | 11,4    | 17,1 | 21,2  | 12,0    | 16,6  | 21,4  | 11,2    | 16,3  | 19,4  |
| Dp Heating (E)                      | kPa               | 9,4     | 13,4 | 16,0 | 13,6    | 20,4 | 26,4 | 9,9     | 14,3 | 17,3  | 19,6    | 26,3  | 33,0  | 18,5    | 25,7  | 29,9  |
| Fan (E)                             | W                 | 40      | 88   | 144  | 44      | 115  | 225  | 80      | 200  | 340   | 110     | 253   | 530   | 168     | 384   | 695   |
| Sound power outlet (E)              | dB(A)             | 45      | 52   | 59   | 45      | 55   | 61   | 52      | 60   | 64    | 55      | 62    | 67    | 58      | 67    | 71    |
| Sound power inlet + radiated (E)    | dB(A)             | 48      | 55   | 61   | 48      | 57   | 63   | 55      | 62   | 66    | 58      | 64    | 69    | 61      | 70    | 73    |
| Sound pressure outlet (*)           | dB(A)             | 36      | 43   | 50   | 36      | 46   | 52   | 43      | 51   | 55    | 46      | 53    | 58    | 49      | 58    | 62    |
| Sound pressure inlet + radiated (*) | dB(A)             | 39      | 46   | 52   | 39      | 48   | 54   | 46      | 53   | 57    | 49      | 55    | 60    | 52      | 61    | 64    |
| Plenum code                         |                   | 9034200 |      |      | 9034200 |      |      | 9034220 |      |       | 9034230 |       |       | 9034240 |       |       |

(\*\*)

| Model MTL-ECM                       |                   | 64+2    |       |       | 66+2    |       |       |
|-------------------------------------|-------------------|---------|-------|-------|---------|-------|-------|
| <b>Inverter Power (E)</b>           | V                 | 3       | 6     | 9     | 3       | 6     | 9     |
| <b>Speed (E)</b>                    |                   | MIN     | MED   | MAX   | MIN     | MED   | MAX   |
| Air flow (E)                        | m <sup>3</sup> /h | 2790    | 4235  | 5140  | 2750    | 4190  | 5090  |
| Available pressure (E)              | Pa                | 21      | 50    | 73    | 22      | 50    | 74    |
| Cooling total emission (E)          | kW                | 16,77   | 21,71 | 24,1  | 20,08   | 26,91 | 30,34 |
| Cooling sensible emission (E)       | kW                | 12,72   | 17,59 | 20,09 | 14,26   | 20,13 | 23,2  |
| Heating (E)                         | kW                | 23,2    | 30,58 | 34,54 | 22,98   | 30,38 | 34,35 |
| Dp Cooling (E)                      | kPa               | 15,7    | 25,4  | 31,4  | 20,8    | 35,9  | 45,4  |
| Dp Heating (E)                      | kPa               | 20,1    | 33,2  | 41,3  | 19,8    | 32,8  | 40,8  |
| Fan (E)                             | W                 | 110     | 343   | 661   | 115     | 352   | 678   |
| Sound power outlet (E)              | dB(A)             | 57      | 69    | 73    | 57      | 69    | 73    |
| Sound power inlet + radiated (E)    | dB(A)             | 60      | 71,5  | 75    | 60      | 71,5  | 75    |
| Sound pressure outlet (*)           | dB(A)             | 48      | 60    | 64    | 48      | 60    | 64    |
| Sound pressure inlet + radiated (*) | dB(A)             | 51      | 63    | 66    | 51      | 63    | 66    |
| Plenum code                         |                   | 9034280 |       |       | 9034280 |       |       |

(\*\*)

(\*\*)

(E) = EUROVENT certified performance.

(\*) = The sound pressure levels are 9 dB(A) lower than the sound power levels and apply to the reverberant field of a 100 m<sup>3</sup> room and a reverberation time of 0.5 sec.

(\*\*) = Models not covered by EUROVENT certification program.

**Kit 230V**      **Main and auxiliary coil valve kit**  
(to be used only with QCV-MB2 control board and WM-T, WM-TQR, WM-AU and T-MB2 controls)

230 V, ON-OFF valve.

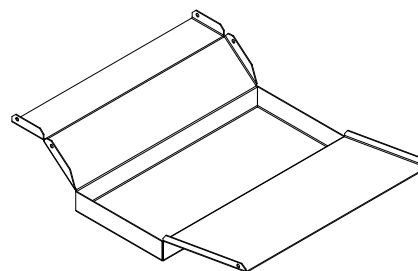


**Kit 24V**      **Main and auxiliary coil valve kit**  
(to be used only with QCV-MB2 control board)

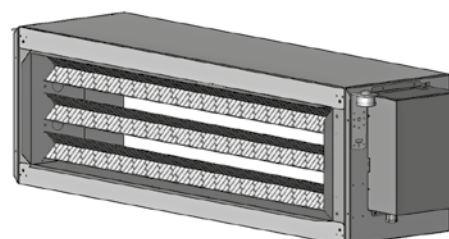
Valve with 3 points - 24 Volt actuator.



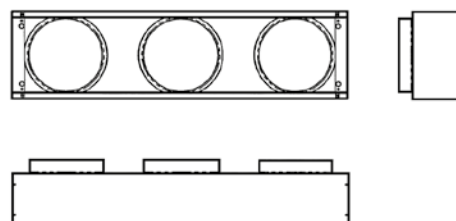
**BCM**      **External auxiliary condensate collection tray**



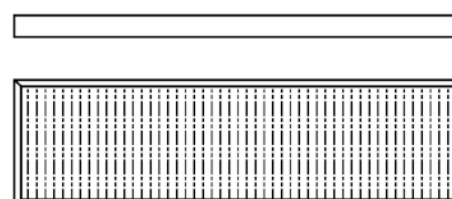
**BEM**      **Electric coil**  
Consists of electric resistances and a security thermostat, which are inside a galvanized steel and insulated casing.



**PMM**      **Intake/supply spigot plenum**  
Intake/supply spigot plenum with 3 spigots (Sizes 1 - 2 - 3) or 4 spigots (Sizes 4 - 5 - 6).

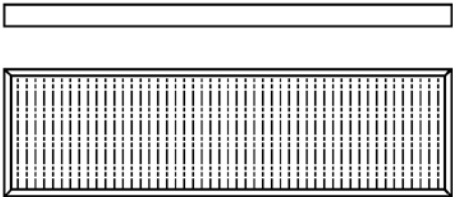


**SFM**      **ePM<sub>10</sub> 50% - G4 class synthetic filter**  
The filter is a washable synthetic fibre, flame-proof according to Class F1 DIN 53438. Compliant with: EN 16890. The filter is supplied as an accessory and must be fitted on the unit on site in place of the standard filter.



SFM-F6

**ePM<sub>10</sub> 70% - F6 class Synthetic Filter**  
(for size 6 only)  
High efficiency compact filter in glass microfiber paper. Compliant with: EN 16890.



GAV

**Antivibrating connection**  
Intake/supply antivibrating connection, made of two galvanized frames and a PVC flexible connection.



## Electronic wall controls

|                |                                                                                                                      |
|----------------|----------------------------------------------------------------------------------------------------------------------|
| <b>WM-AU</b>   | Automatic speed control with electronic thermostat and summer/winter switch (to be used with UPOM-AU or UPO-AU only) |
| <b>T-MB2</b>   | Wall control with LCD color display and WiFi (to be used with UPOM-AU or UPO-AU only)                                |
| <b>UPOM-AU</b> | Power unit for WM-AU and T-MB2 remote controls, fitted on the unit                                                   |
| <b>UPO-AU</b>  | Power unit for WM-AU and T-MB2 remote controls, not fitted on the unit                                               |

## Electronic controls for MB boards

|                |                                                                                            |
|----------------|--------------------------------------------------------------------------------------------|
| <b>QCV-MB2</b> | MB control panel version (T-MB2 wall control included)                                     |
| <b>PSM-DI</b>  | PSM-DI multifunction control panel (to be used with QCV-MB2 control panel only)            |
| <b>T-DI</b>    | T-DI touch screen multifunction control panel (to be used with QCV-MB2 control panel only) |
| <b>SabWeb</b>  | Web gateway for Sabiana Cloud (to be used with QCV-MB2 control panel only)                 |

### Sabianet management system for a network of fan coils

|                 |                                                                                                                       |
|-----------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Sabianet</b> | Sabianet (to be used with QCV-MB2 control panel only)                                                                 |
| <b>Router-S</b> | Router for Sabianet (default) or for BMS systems not provided by Sabiana (to be used with QCV-MB2 control panel only) |
| <b>SIOS</b>     | Relay output board for Sabianet (to be used with QCV-MB2 control panel only)                                          |

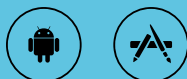


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