



**SEC/F** Fan Coil Units

# LOW NOISE FAN COIL

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In line with innovative trends and modern industrial design, the **SEC/F** fan coil range meets today's demanding requirements of performance, size, acoustics, low energy, ease of installation and maintenance.

The **SEC/F** fan coil unit has been designed around a platform of models, versions and accessories.

Designed around 5 different versions, the extensive range includes wall and ceiling mounted units, exposed or concealed with centrifugal fan, delivering one of the most versatile ranges of fan coils on the market today.

All **SEC/F** fan coils with centrifugal fans are equipped with electric motors which dramatically reduce electrical consumption of up to 40% comparative to previous models, with 6 speed motors as standard offering greater flexibility in the selection of products.

New market trends have also led to an extension of the four pipe model which now has a two row LTHW coil giving improved outputs at lower flow and return temperatures.

A full range of adjustment and control devices is available for rapidly obtaining correct environmental temperature and with an investment proportional to performances, comfort and desired measurement precision.

The **SEC/F** model is complemented with a full range of accessories: various types of adjustment valves, sturdy support feet, rear covering panel for glass installation, additional electric heater, auxiliary condensate pump, fresh air intake louver, air inlet/outlet diffusers for fitted installations.



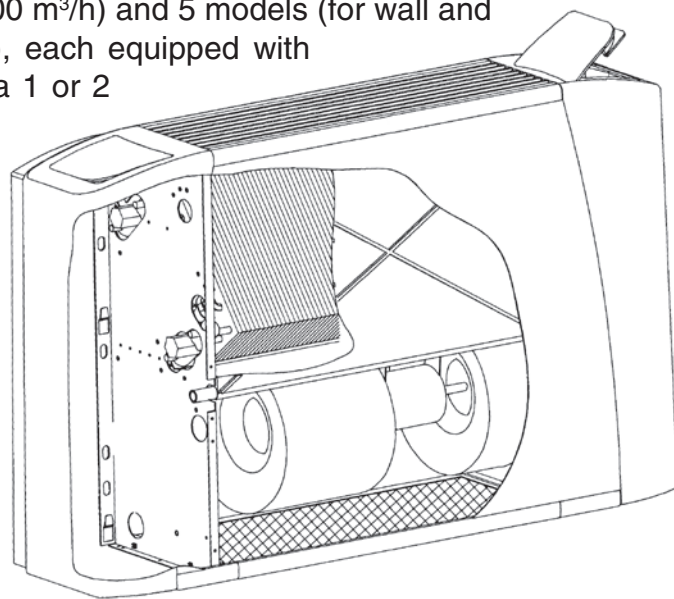
**PLASTIC OUTLET  
GRID IN ONE SINGLE PIECE:  
EXTRAORDINARY DESIGN AND STRENGTH**

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## **SEC/F version with centrifugal fan**

Range includes 9 air flow rates (from 105 to 1500 m<sup>3</sup>/h) and 5 models (for wall and ceiling installation, with casing and concealed), each equipped with 3 or 4 row coil and with the possibility to add a 1 or 2 row coil for 4 pipe systems.

It is the most comprehensive range, perfectly suited to meet all of the climate control needs of work environments such as offices, shops, restaurants and hotel rooms featuring ducted installations with available pressure up to 50 Pa.



### Construction

#### Outer casing

Made with strong synthetic lateral corners and from galvanized and pre-painted front steel panel. The plastic top grid has fixed louvres and is reversible in order to distribute the air in two different directions.

##### Standard colours:

- Lateral corners and top grid: **Pantone 427 C (light grey)**
- Frontal panel: **RAL 9003 (white)**
- Other colours on request.

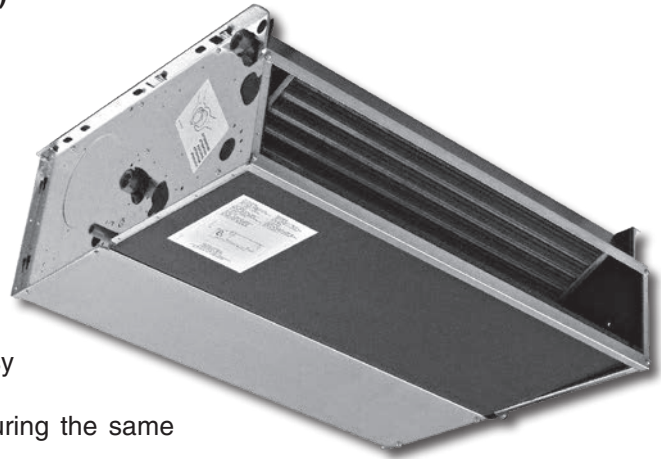
#### Inner casing

Made from 1 mm galvanized steel insulated with 3 mm polyolefin (PO) foam (class M1).

#### Filter

Polypropylene cellular fabric regenerating filter. The filter frame of galvanized steel is inserted into special plastic sliding guides fastened to the internal structure for easy insertion and removal of the filter.

Filter presence is highlighted by a plastic front cover featuring the same colour as the top grid.



#### Fan assembly

The fans have aluminium or plastic blades directly keyed on the motor with double aspiration and they are dynamically and statically balanced during manufacture in order to have an extremely quiet operation.

#### Electric motor

The motor is wired for single phase and has six speeds, three of which are connected, with capacitor. The motor is fitted on sealed for life bearings and is secured on anti-vibration and self-lubricating mountings. Internal thermal protection with automatic reset, protection IP 20, class B. The speeds connected in the factory are indicated by "MIN, MED and MAX" in the following tables.

#### Coil

It is manufactured from drawn copper tube and the aluminium fins are mechanically bonded onto the tube by an expansion process. The coil has two 1/2inch BSP internal connections and 1/8 inch BSP air vent and drain. The coil is not suitable for use in corrosive atmosphere or in environments where aluminium may be subject to corrosion.

**The connections are on the left hand side facing the unit. On request we can deliver the unit with the connections on the right end side. This operation can also be easily carried out on site during installation.**

#### Condensate collection tray

Made from plastic (ABS UL94 HB) with an "L"-shaped plastic fitted on the inner casing; in the CH, CVB and NC model the tray is insulated with polyolefin 3 mm (PO) foam (class M1). The outside diameter of the condensate discharge pipe is 15mm.

#### Accessories and Controls

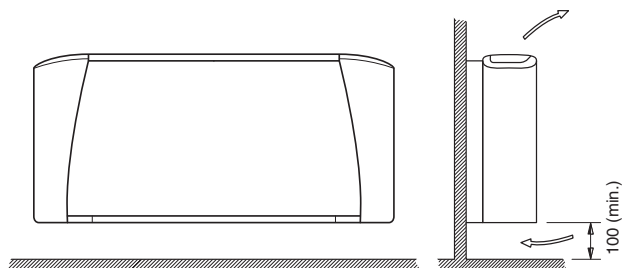
See pages 26 and 43.



## Models

### CV

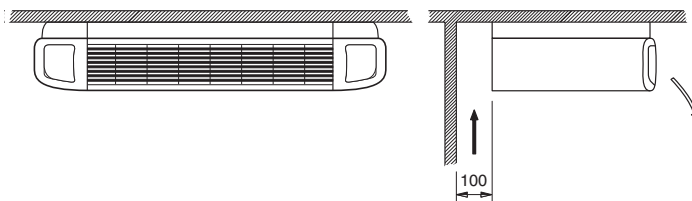
**Vertical Casing – Wall Installation**



### CV

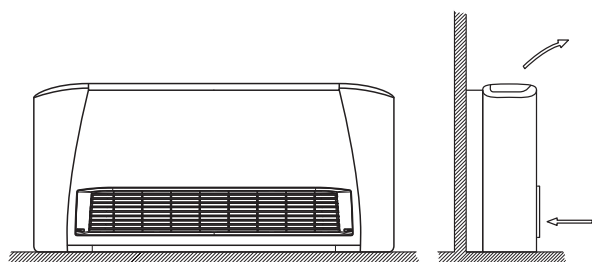
**Vertical Casing – Ceiling Installation**

**NOTE:** the CV model can also be installed horizontally leaving behind a 100 mm gap for air intake.



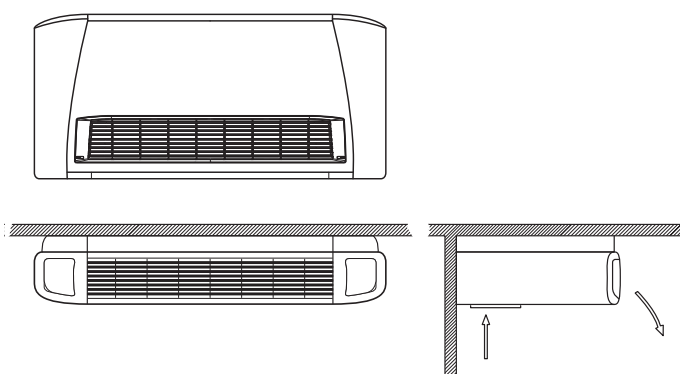
### CVB

**Vertical Casing – Floor Installation**



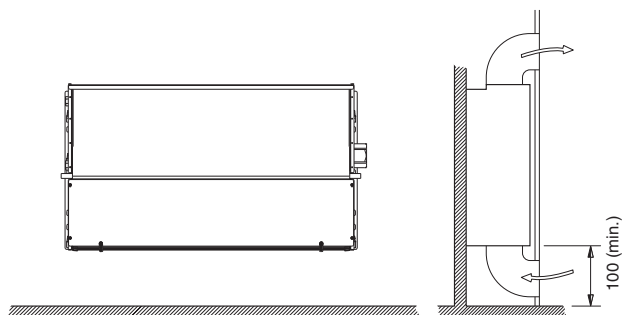
### CH

**Horizontal Casing**



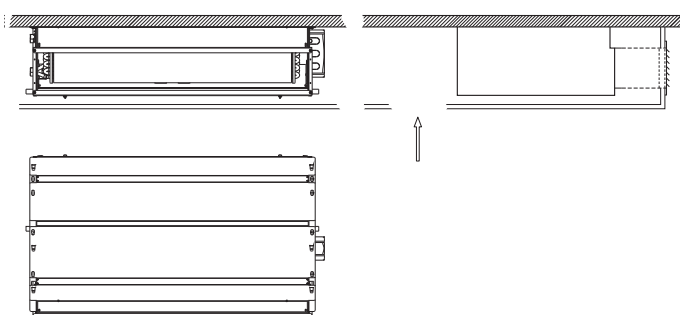
### NC

**Vertical Concealed**



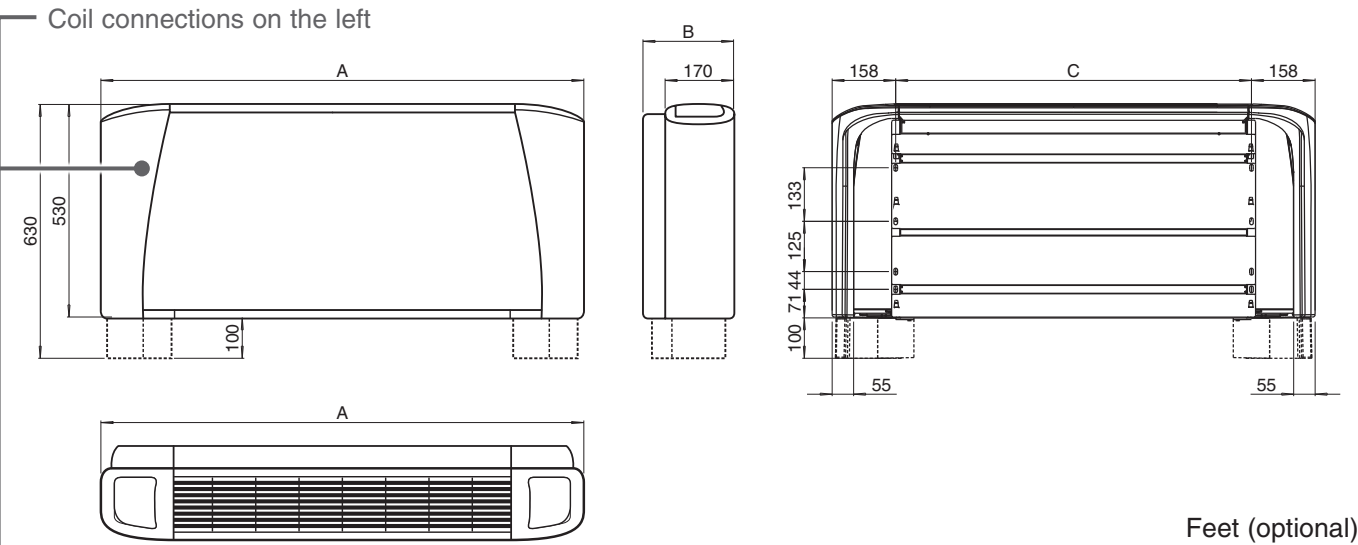
### NC

**Horizontal Concealed**

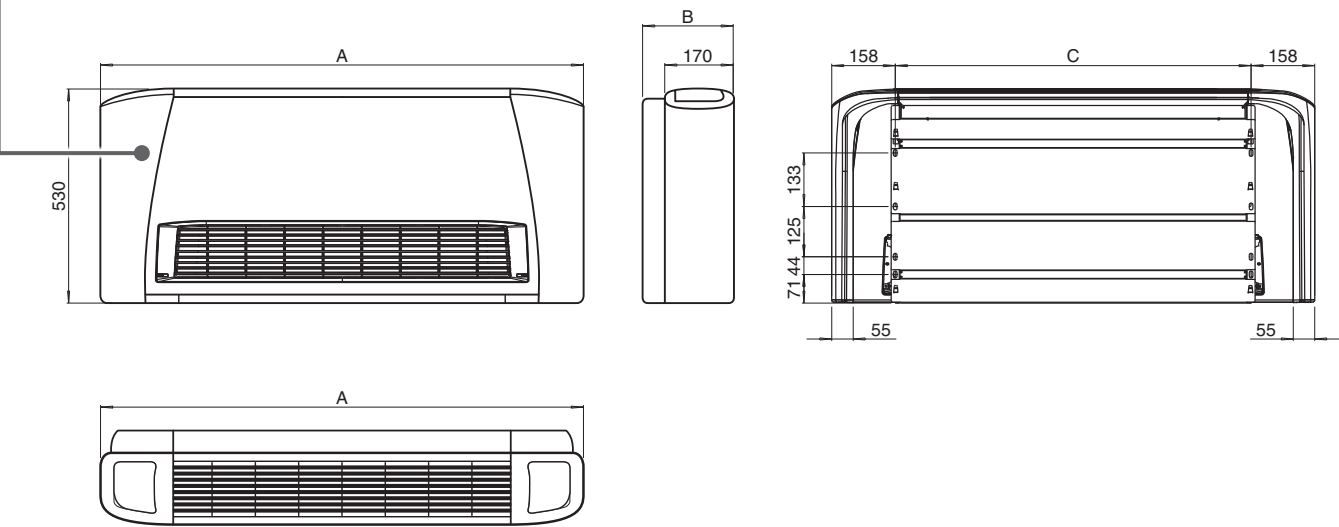


Dimension, Weight, Water content

CV

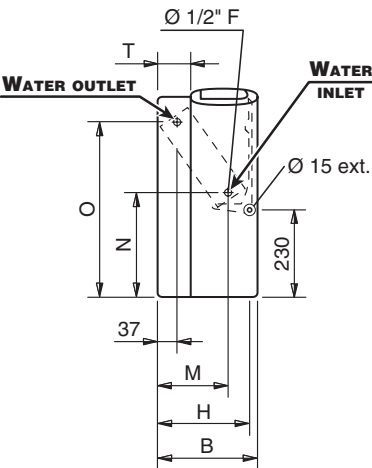


CH-CVB

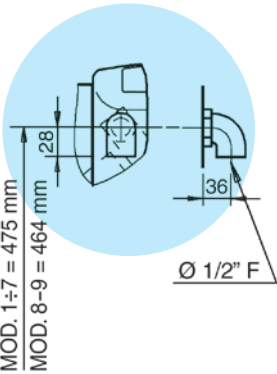
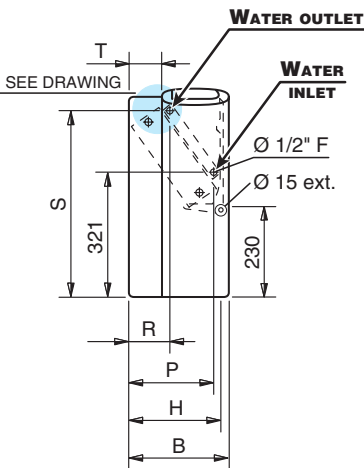


COIL CONNECTIONS

3 or 4 row coils

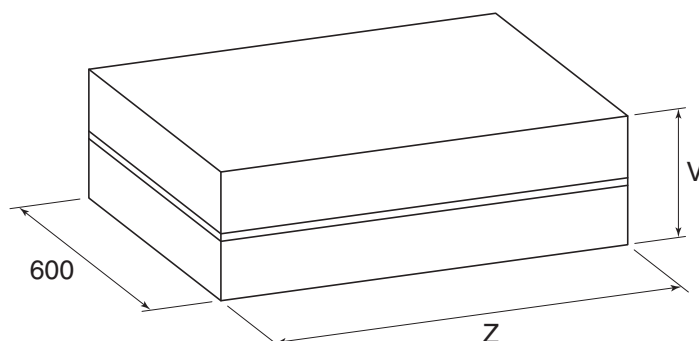


Heating additional coil (1 or 2 rows)



## Dimension, Weight, Water content

### PACKAGING



### Dimension (mm)

| MODEL | 1   | 2   | 3    | 4    | 5    | 6    | 7    | 8    | 9    |
|-------|-----|-----|------|------|------|------|------|------|------|
| A     | 670 | 770 | 985  | 985  | 1200 | 1200 | 1415 | 1415 | 1415 |
| B     | 225 | 225 | 225  | 225  | 225  | 225  | 225  | 255  | 255  |
| C     | 354 | 454 | 669  | 669  | 884  | 884  | 1099 | 1099 | 1099 |
| H     | 205 | 205 | 205  | 205  | 205  | 205  | 205  | 235  | 235  |
| M     | 145 | 145 | 145  | 145  | 145  | 145  | 145  | 170  | 170  |
| N     | 260 | 260 | 260  | 260  | 260  | 260  | 260  | 270  | 270  |
| O     | 460 | 460 | 460  | 460  | 460  | 460  | 460  | 450  | 450  |
| P     | 185 | 185 | 185  | 185  | 185  | 185  | 185  | 210  | 210  |
| R     | 105 | 105 | 105  | 105  | 105  | 105  | 105  | 110  | 110  |
| S     | 475 | 475 | 475  | 475  | 475  | 475  | 475  | 465  | 465  |
| T     | 55  | 55  | 55   | 55   | 55   | 55   | 55   | 85   | 85   |
| V     | 260 | 260 | 260  | 260  | 260  | 260  | 260  | 290  | 290  |
| Z     | 720 | 820 | 1035 | 1035 | 1250 | 1250 | 1465 | 1465 | 1465 |

### Weight (kg)

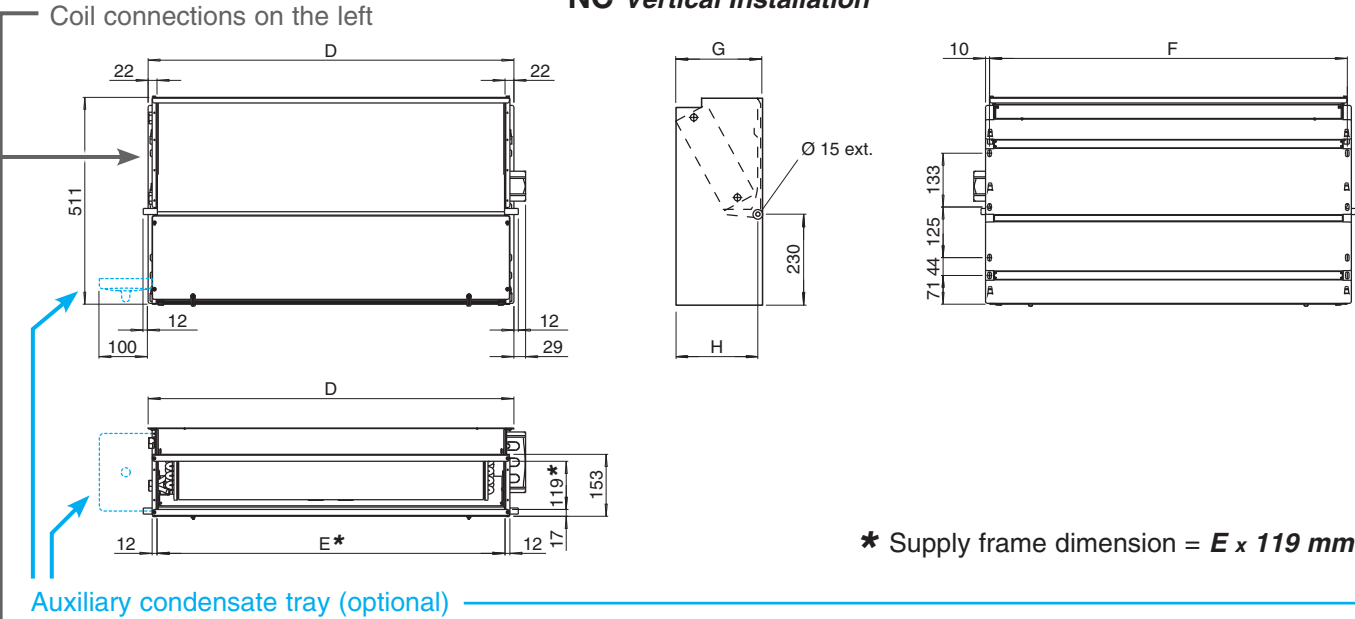
|       |     | Weight with packaging |      |      |      |      |      |      |      |      | Weight without packaging |      |      |      |      |      |      |      |      |
|-------|-----|-----------------------|------|------|------|------|------|------|------|------|--------------------------|------|------|------|------|------|------|------|------|
| MODEL |     | 1                     | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 1                        | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    |
| Rows  | 3   | 15,5                  | 17,2 | 21,4 | 22,5 | 26,9 | 27,7 | 32,1 | 35,7 | 35,9 | 13,9                     | 15,4 | 19,1 | 20,2 | 24,1 | 24,9 | 28,8 | 32,0 | 32,2 |
|       | 3+1 | 16,2                  | 18,0 | 22,6 | 23,7 | 28,4 | 29,2 | 33,9 | 37,5 | 37,7 | 14,6                     | 16,2 | 20,3 | 21,4 | 25,6 | 26,4 | 30,6 | 33,8 | 34,0 |
|       | 3+2 | 16,7                  | 18,6 | 23,3 | 24,4 | 29,3 | 30,1 | 35,0 | 38,6 | 38,8 | 15,1                     | 16,8 | 21,0 | 22,1 | 26,5 | 27,3 | 31,7 | 34,9 | 35,1 |
|       | 4   | 16,0                  | 18,0 | 22,4 | 23,5 | 28,1 | 29,0 | 33,6 | 37,2 | 37,4 | 14,4                     | 16,2 | 20,1 | 21,2 | 25,3 | 26,2 | 30,3 | 33,5 | 33,7 |
|       | 4+1 | 16,7                  | 18,8 | 23,6 | 24,7 | 29,6 | 30,5 | 35,4 | 39,0 | 39,2 | 15,1                     | 17,0 | 21,3 | 22,4 | 26,8 | 27,7 | 32,1 | 35,3 | 35,5 |

### Water content (litres)

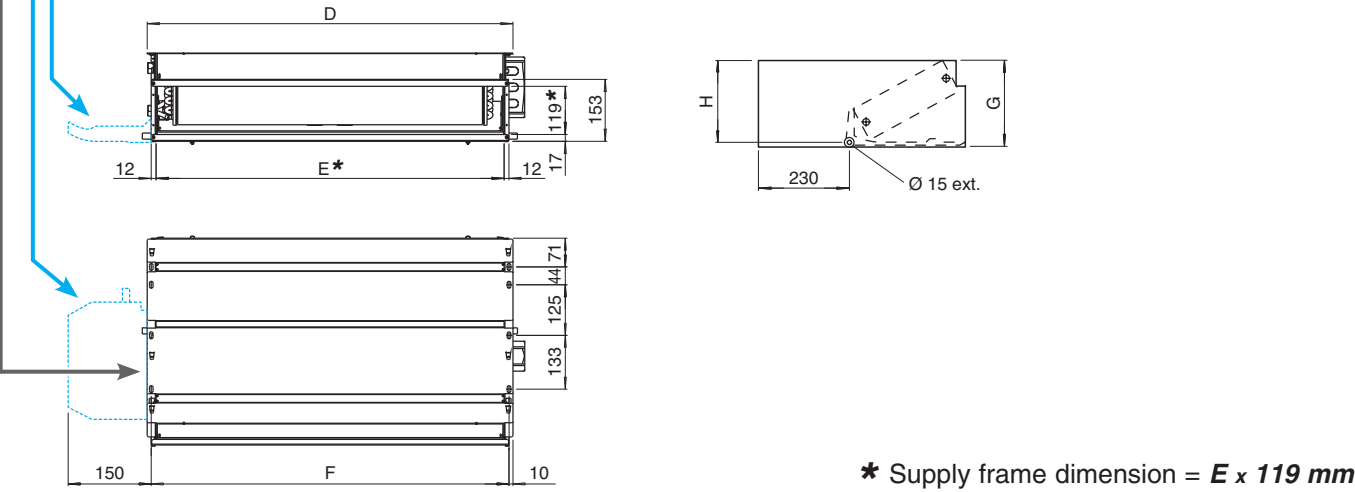
| MODEL | 1  | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   |
|-------|----|-----|-----|-----|-----|-----|-----|-----|-----|
| Rows  | 3  | 0,5 | 0,6 | 0,9 | 0,9 | 1,3 | 1,6 | 1,7 | 1,9 |
|       | 4  | 0,7 | 0,8 | 1,3 | 1,3 | 1,7 | 2,2 | 2,4 | 2,8 |
|       | +1 | 0,2 | 0,2 | 0,3 | 0,3 | 0,4 | 0,5 | 0,5 | 0,6 |
|       | +2 | 0,4 | 0,4 | 0,6 | 0,6 | 0,8 | 1,0 | 1,0 | 1,2 |

Dimension, Weight, Water content

NC Vertical Installation

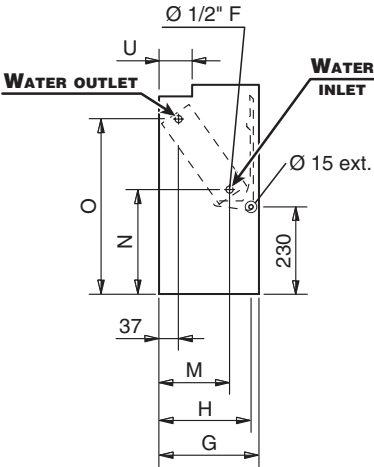


NC Horizontal Installation

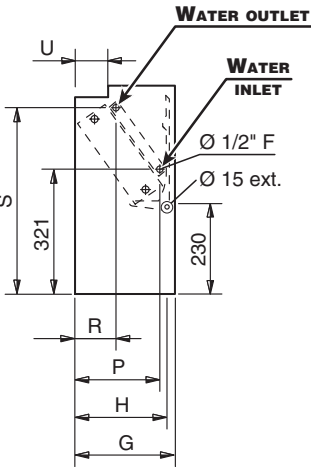


COIL CONNECTIONS

3 or 4 row coils

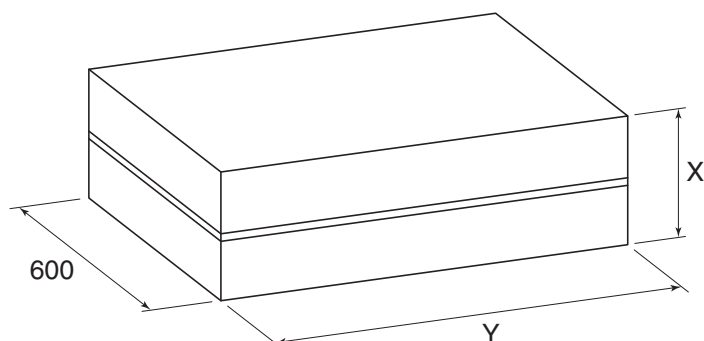


Heating additional coil (1 or 2 rows)



## Dimension, Weight, Water content

## PACKAGING



## Dimension (mm)

| MODEL | 1   | 2   | 3   | 4   | 5    | 6    | 7    | 8    | 9    |
|-------|-----|-----|-----|-----|------|------|------|------|------|
| D     | 374 | 474 | 689 | 689 | 904  | 904  | 1119 | 1119 | 1119 |
| E     | 330 | 430 | 645 | 645 | 860  | 860  | 1075 | 1075 | 1075 |
| F     | 354 | 454 | 669 | 669 | 884  | 884  | 1099 | 1099 | 1099 |
| G     | 218 | 218 | 218 | 218 | 218  | 218  | 218  | 248  | 248  |
| H     | 205 | 205 | 205 | 205 | 205  | 205  | 205  | 235  | 235  |
| M     | 145 | 145 | 145 | 145 | 145  | 145  | 145  | 170  | 170  |
| N     | 260 | 260 | 260 | 260 | 260  | 260  | 260  | 270  | 270  |
| O     | 460 | 460 | 460 | 460 | 460  | 460  | 460  | 450  | 450  |
| P     | 185 | 185 | 185 | 185 | 185  | 185  | 185  | 210  | 210  |
| R     | 105 | 105 | 105 | 105 | 105  | 105  | 105  | 110  | 110  |
| S     | 475 | 475 | 475 | 475 | 475  | 475  | 475  | 465  | 465  |
| U     | 65  | 65  | 65  | 65  | 65   | 65   | 65   | 95   | 95   |
| X     | 260 | 260 | 260 | 260 | 260  | 260  | 260  | 290  | 290  |
| Y     | 720 | 820 | 820 | 820 | 1035 | 1035 | 1250 | 1250 | 1250 |

## Weight (kg)

|       |     | Weight with packaging |      |      |      |      |      |      |      |      | Weight without packaging |      |      |      |      |      |      |      |      |
|-------|-----|-----------------------|------|------|------|------|------|------|------|------|--------------------------|------|------|------|------|------|------|------|------|
| MODEL |     | 1                     | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 1                        | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    |
| Rows  | 3   | 12,2                  | 13,6 | 17,1 | 18,1 | 21,9 | 22,8 | 27,0 | 30,2 | 30,4 | 10,6                     | 11,8 | 15,3 | 16,3 | 19,6 | 20,5 | 24,2 | 27,1 | 27,3 |
|       | 3+1 | 12,9                  | 14,4 | 18,3 | 19,3 | 23,4 | 24,3 | 28,8 | 32,0 | 32,2 | 11,3                     | 12,6 | 16,5 | 17,5 | 21,1 | 22,0 | 26,0 | 28,9 | 29,1 |
|       | 3+2 | 13,4                  | 15,0 | 19,0 | 20,0 | 24,3 | 25,2 | 29,9 | 33,1 | 33,3 | 11,8                     | 13,2 | 17,2 | 18,2 | 22,0 | 22,9 | 27,1 | 30,0 | 30,2 |
|       | 4   | 12,7                  | 14,4 | 18,1 | 19,1 | 23,1 | 24,1 | 28,5 | 31,7 | 31,9 | 11,1                     | 12,6 | 16,3 | 17,3 | 20,8 | 21,8 | 25,7 | 28,6 | 28,8 |
|       | 4+1 | 13,4                  | 15,2 | 19,3 | 20,3 | 24,6 | 25,6 | 30,3 | 33,5 | 33,7 | 11,8                     | 13,4 | 17,5 | 18,5 | 22,3 | 23,3 | 27,5 | 30,4 | 30,6 |

## Water content (litres)

| MODEL | 1  | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   |
|-------|----|-----|-----|-----|-----|-----|-----|-----|-----|
| Rows  | 3  | 0,5 | 0,6 | 0,9 | 0,9 | 1,3 | 1,6 | 1,7 | 1,9 |
|       | 4  | 0,7 | 0,8 | 1,3 | 1,3 | 1,7 | 2,2 | 2,4 | 2,8 |
|       | +1 | 0,2 | 0,2 | 0,3 | 0,3 | 0,4 | 0,5 | 0,5 | 0,6 |
|       | +2 | 0,4 | 0,4 | 0,6 | 0,6 | 0,8 | 1,0 | 1,0 | 1,2 |

## Technical features

### SEC/F UNITS WITH 3 ROW COIL

#### 2 pipe units.

The following standard rating conditions are used:

#### COOLING

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

#### HEATING

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

| MODEL                     |          | SEC/F 1.3-2T |      |      |      |      |      | SEC/F 2.3-2T |      |      |      |      |      | SEC/F 3.3-2T |      |      |      |      |      |
|---------------------------|----------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|
| Speed                     |          | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    |
|                           |          | MIN          |      |      | MED  |      | MAX  | MIN          |      | MED  |      | MAX  |      |              | MIN  | MED  |      | MAX  |      |
| Air flow                  | m³/h     | 105          | 125  | 150  | 175  | 195  | 220  | 145          | 170  | 220  | 250  | 295  | 340  | 185          | 235  | 270  | 325  | 385  | 440  |
| Cooling total emission    | kW       | 0,57         | 0,66 | 0,75 | 0,84 | 0,91 | 1,00 | 0,90         | 0,99 | 1,23 | 1,35 | 1,53 | 1,70 | 1,27         | 1,55 | 1,76 | 2,04 | 2,35 | 2,61 |
| Cooling sensible emission | kW       | 0,45         | 0,53 | 0,60 | 0,69 | 0,75 | 0,83 | 0,68         | 0,76 | 0,95 | 1,06 | 1,21 | 1,36 | 0,92         | 1,13 | 1,30 | 1,51 | 1,76 | 1,97 |
| Heating                   | kW       | 0,64         | 0,76 | 0,86 | 0,98 | 1,07 | 1,19 | 0,94         | 1,06 | 1,34 | 1,49 | 1,70 | 1,92 | 1,26         | 1,56 | 1,79 | 2,10 | 2,44 | 2,74 |
| Dp Cooling                | kPa      | 2,5          | 3,0  | 3,8  | 4,7  | 5,4  | 6,3  | 2,5          | 3,0  | 4,4  | 5,3  | 6,5  | 7,9  | 6,6          | 9,4  | 11,8 | 15,3 | 19,7 | 23,8 |
| Dp Heating                | kPa      | 0,9          | 1,1  | 1,4  | 1,8  | 2,1  | 2,5  | 2,2          | 2,8  | 4,2  | 5,0  | 6,4  | 7,9  | 5,4          | 7,8  | 10,0 | 13,2 | 17,1 | 21,0 |
| Fan                       | W        | 16           | 19   | 21   | 25   | 29   | 33   | 14           | 16   | 22   | 26   | 32   | 40   | 15           | 20   | 25   | 32   | 41   | 49   |
| Sound power               | Lw dB(A) | 32           | 34   | 36   | 39   | 42   | 45   | 30           | 33   | 40   | 43   | 47   | 51   | 31           | 36   | 40   | 45   | 49   | 52   |
| Sound pressure (*)        | Lp dB(A) | 23           | 25   | 27   | 30   | 33   | 36   | 21           | 24   | 31   | 34   | 38   | 42   | 22           | 27   | 31   | 36   | 40   | 43   |

| MODEL                     |          | SEC/F 4.3-2T |      |      |      |      |      | SEC/F 5.3-2T |      |      |      |      |      | SEC/F 6.3-2T |      |      |      |      |      |
|---------------------------|----------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|
| Speed                     |          | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    |
|                           |          |              | MIN  | MED  |      | MAX  |      |              | MIN  |      | MED  |      | MAX  | MIN          |      | MED  |      | MAX  |      |
| Air flow                  | m³/h     | 185          | 265  | 335  | 400  | 485  | 570  | 250          | 315  | 420  | 495  | 545  | 650  | 415          | 505  | 590  | 680  | 760  | 830  |
| Cooling total emission    | kW       | 1,25         | 1,71 | 2,11 | 2,43 | 2,83 | 3,19 | 1,66         | 2,01 | 2,55 | 2,90 | 3,13 | 3,58 | 2,50         | 2,94 | 3,32 | 3,70 | 4,01 | 4,26 |
| Cooling sensible emission | kW       | 0,91         | 1,26 | 1,57 | 1,82 | 2,15 | 2,45 | 1,22         | 1,49 | 1,91 | 2,19 | 2,38 | 2,76 | 1,87         | 2,23 | 2,54 | 2,86 | 3,12 | 3,35 |
| Heating                   | kW       | 1,25         | 1,74 | 2,18 | 2,52 | 2,97 | 3,41 | 1,65         | 2,02 | 2,61 | 3,00 | 3,24 | 3,75 | 2,56         | 3,05 | 3,45 | 3,90 | 4,26 | 4,56 |
| Dp Cooling                | kPa      | 6,5          | 11,2 | 16,2 | 20,8 | 27,2 | 33,8 | 4,1          | 5,8  | 8,8  | 11,1 | 12,7 | 16,2 | 8,6          | 11,4 | 14,1 | 17,2 | 19,8 | 22,1 |
| Dp Heating                | kPa      | 5,3          | 9,5  | 14,0 | 18,2 | 24,3 | 30,8 | 3,4          | 4,8  | 7,5  | 9,6  | 11,0 | 14,2 | 7,3          | 9,9  | 12,3 | 15,2 | 17,8 | 20,1 |
| Fan                       | W        | 14           | 21   | 28   | 34   | 44   | 57   | 18           | 22   | 32   | 39   | 46   | 61   | 37           | 46   | 55   | 67   | 78   | 88   |
| Sound power               | Lw dB(A) | 27           | 33   | 39   | 43   | 47   | 52   | 26           | 31   | 37   | 41   | 43   | 48   | 37           | 42   | 46   | 49   | 52   | 54   |
| Sound pressure (*)        | Lp dB(A) | 18           | 24   | 30   | 34   | 38   | 43   | 17           | 22   | 28   | 32   | 34   | 39   | 28           | 33   | 37   | 40   | 43   | 45   |

| MODEL                     |          | SEC/F 7.3-2T |      |      |      |      |      | SEC/F 8.3-2T |      |      |      |      |      | SEC/F 9.3-2T |      |      |      |      |      |
|---------------------------|----------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|
| Speed                     |          | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    |
|                           |          |              | MIN  |      | MED  |      | MAX  |              | MIN  |      | MED  |      | MAX  |              | MIN  |      | MED  |      | MAX  |
| Air flow                  | m³/h     | 445          | 535  | 630  | 735  | 840  | 925  | 510          | 655  | 815  | 1020 | 1100 | 1200 | 735          | 830  | 980  | 1210 | 1365 | 1500 |
| Cooling total emission    | kW       | 2,82         | 3,29 | 3,74 | 4,21 | 4,66 | 5,01 | 3,01         | 3,68 | 4,32 | 5,09 | 5,36 | 5,69 | 4,00         | 4,38 | 4,95 | 5,74 | 6,21 | 6,56 |
| Cooling sensible emission | kW       | 2,08         | 2,45 | 2,80 | 3,19 | 3,56 | 3,85 | 2,27         | 2,82 | 3,35 | 4,02 | 4,26 | 4,55 | 3,08         | 3,40 | 3,89 | 4,60 | 5,03 | 5,37 |
| Heating                   | kW       | 2,83         | 3,34 | 3,83 | 4,33 | 4,83 | 5,23 | 3,22         | 4,02 | 4,78 | 5,75 | 6,11 | 6,55 | 4,42         | 4,86 | 5,58 | 6,62 | 7,26 | 7,78 |
| Dp Cooling                | kPa      | 12,3         | 16,2 | 20,3 | 25,1 | 30,1 | 34,2 | 7,2          | 10,3 | 13,8 | 18,4 | 20,2 | 22,5 | 11,8         | 13,8 | 17,3 | 22,4 | 25,9 | 28,6 |
| Dp Heating                | kPa      | 10,1         | 13,5 | 17,2 | 21,3 | 25,9 | 29,7 | 5,6          | 8,3  | 11,3 | 15,6 | 17,3 | 19,6 | 9,8          | 11,6 | 14,8 | 19,9 | 23,5 | 26,5 |
| Fan                       | W        | 44           | 54   | 66   | 79   | 92   | 103  | 47           | 62   | 81   | 105  | 116  | 130  | 78           | 92   | 108  | 134  | 152  | 176  |
| Sound power               | Lw dB(A) | 38           | 42   | 47   | 51   | 54   | 56   | 39           | 45   | 50   | 56   | 58   | 60   | 47           | 50   | 54   | 58   | 62   | 64   |
| Sound pressure (*)        | Lp dB(A) | 29           | 33   | 38   | 42   | 45   | 47   | 30           | 36   | 41   | 47   | 49   | 51   | 38           | 41   | 45   | 49   | 53   | 55   |

MIN-MED-MAX = Standard connected speeds.

(\*) = 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.

## Technical features

## SEC/F UNITS WITH 4 ROW COIL

## 2 pipe units.

The following standard rating conditions are used:

## COOLING

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

## HEATING

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

| MODEL                     |                   | SEC/F 1.4-2T |      |      |      |      |      | SEC/F 2.4-2T |      |      |      |      |      | SEC/F 3.4-2T |      |      |      |      |      |
|---------------------------|-------------------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|
| Speed                     |                   | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    |
|                           |                   | MIN          |      |      | MED  |      | MAX  | MIN          |      | MED  |      | MAX  |      |              | MIN  | MED  |      | MAX  |      |
| Air flow                  | m <sup>3</sup> /h | 105          | 125  | 150  | 175  | 195  | 220  | 145          | 170  | 220  | 250  | 295  | 340  | 185          | 235  | 270  | 325  | 385  | 440  |
| Cooling total emission    | kW                | 0,65         | 0,77 | 0,87 | 1,00 | 1,08 | 1,20 | 1,00         | 1,11 | 1,41 | 1,56 | 1,78 | 2,00 | 1,32         | 1,63 | 1,87 | 2,17 | 2,53 | 2,83 |
| Cooling sensible emission | kW                | 0,49         | 0,58 | 0,66 | 0,77 | 0,84 | 0,94 | 0,73         | 0,82 | 1,05 | 1,17 | 1,35 | 1,53 | 0,95         | 1,18 | 1,36 | 1,59 | 1,86 | 2,09 |
| Heating                   | kW                | 0,69         | 0,80 | 0,92 | 1,07 | 1,17 | 1,31 | 0,99         | 1,11 | 1,43 | 1,60 | 1,83 | 2,08 | 1,30         | 1,62 | 1,87 | 2,19 | 2,59 | 2,88 |
| Dp Cooling                | kPa               | 1,9          | 2,5  | 3,2  | 4,0  | 4,7  | 5,6  | 4,9          | 6,1  | 9,1  | 11,0 | 13,9 | 17,2 | 3,7          | 5,3  | 6,7  | 8,8  | 11,5 | 14,1 |
| Dp Heating                | kPa               | 1,7          | 2,2  | 2,8  | 3,7  | 4,3  | 5,3  | 4,0          | 4,9  | 7,6  | 9,3  | 11,8 | 14,8 | 2,8          | 4,2  | 5,4  | 7,1  | 9,8  | 11,5 |
| Fan                       | W                 | 16           | 19   | 21   | 25   | 29   | 33   | 14           | 16   | 22   | 26   | 32   | 40   | 15           | 20   | 25   | 32   | 41   | 49   |
| Sound power               | Lw dB(A)          | 32           | 34   | 36   | 39   | 42   | 45   | 30           | 33   | 40   | 43   | 47   | 51   | 31           | 36   | 40   | 45   | 49   | 52   |
| Sound pressure (*)        | Lp dB(A)          | 23           | 25   | 27   | 30   | 33   | 36   | 21           | 24   | 31   | 34   | 38   | 42   | 22           | 27   | 31   | 36   | 40   | 43   |

| MODEL                     |                   | SEC/F 4.4-2T |      |      |      |      |      | SEC/F 5.4-2T |      |      |      |      |      | SEC/F 6.4-2T |      |      |      |      |      |
|---------------------------|-------------------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|
| Speed                     |                   | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    |
|                           |                   |              | MIN  | MED  |      | MAX  |      |              | MIN  |      | MED  |      | MAX  | MIN          |      | MED  |      | MAX  |      |
| Air flow                  | m <sup>3</sup> /h | 185          | 265  | 335  | 400  | 485  | 570  | 250          | 315  | 420  | 495  | 545  | 650  | 415          | 505  | 590  | 680  | 760  | 830  |
| Cooling total emission    | kW                | 1,31         | 1,81 | 2,25 | 2,62 | 3,08 | 3,50 | 1,77         | 2,17 | 2,79 | 3,21 | 3,49 | 4,03 | 2,79         | 3,34 | 3,81 | 4,31 | 4,71 | 5,04 |
| Cooling sensible emission | kW                | 0,94         | 1,32 | 1,65 | 1,93 | 2,30 | 2,63 | 1,28         | 1,58 | 2,04 | 2,36 | 2,58 | 3,01 | 2,03         | 2,45 | 2,81 | 3,20 | 3,52 | 3,79 |
| Heating                   | kW                | 1,28         | 1,80 | 2,27 | 2,64 | 3,14 | 3,62 | 1,71         | 2,10 | 2,74 | 3,16 | 3,46 | 4,01 | 2,82         | 3,39 | 3,90 | 4,46 | 4,92 | 5,31 |
| Dp Cooling                | kPa               | 3,4          | 6,1  | 9,0  | 11,7 | 15,5 | 19,6 | 7,3          | 10,4 | 16,3 | 20,8 | 24,2 | 31,3 | 14,4         | 19,7 | 24,8 | 30,9 | 36,2 | 40,9 |
| Dp Heating                | kPa               | 2,6          | 5,0  | 7,2  | 9,4  | 12,8 | 16,4 | 5,6          | 8,1  | 12,9 | 16,6 | 19,5 | 25,2 | 11,9         | 16,5 | 21,1 | 26,8 | 31,8 | 36,3 |
| Fan                       | W                 | 14           | 21   | 28   | 34   | 44   | 57   | 18           | 22   | 32   | 39   | 46   | 61   | 37           | 46   | 55   | 67   | 78   | 88   |
| Sound power               | Lw dB(A)          | 27           | 33   | 39   | 43   | 47   | 52   | 26           | 31   | 37   | 41   | 43   | 48   | 37           | 42   | 46   | 49   | 52   | 54   |
| Sound pressure (*)        | Lp dB(A)          | 18           | 24   | 30   | 34   | 38   | 43   | 17           | 22   | 28   | 32   | 34   | 39   | 28           | 33   | 37   | 40   | 43   | 45   |

| MODEL                     |                   | SEC/F 7.4-2T |      |      |      |      |      | SEC/F 8.4-2T |      |      |      |      |      | SEC/F 9.4-2T |      |      |      |      |      |
|---------------------------|-------------------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|
| Speed                     |                   | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    |
|                           |                   |              | MIN  |      | MED  |      | MAX  |              | MIN  |      | MED  |      | MAX  |              | MIN  |      | MED  |      | MAX  |
| Air flow                  | m <sup>3</sup> /h | 445          | 535  | 630  | 735  | 840  | 925  | 510          | 655  | 815  | 1020 | 1100 | 1200 | 735          | 830  | 980  | 1210 | 1365 | 1500 |
| Cooling total emission    | kW                | 2,99         | 3,51 | 4,01 | 4,56 | 5,08 | 5,48 | 3,22         | 3,97 | 4,72 | 5,63 | 5,94 | 6,34 | 4,34         | 4,79 | 5,45 | 6,41 | 6,98 | 7,42 |
| Cooling sensible emission | kW                | 2,18         | 2,57 | 2,96 | 3,39 | 3,80 | 4,13 | 2,38         | 2,98 | 3,58 | 4,33 | 4,59 | 4,93 | 3,28         | 3,63 | 4,18 | 4,98 | 5,48 | 5,87 |
| Heating                   | kW                | 2,95         | 3,49 | 4,03 | 4,62 | 5,15 | 5,59 | 3,37         | 4,26 | 5,14 | 6,27 | 6,60 | 7,20 | 4,70         | 5,23 | 6,01 | 7,18 | 7,93 | 8,52 |
| Dp Cooling                | kPa               | 9,5          | 12,5 | 15,9 | 20,0 | 24,2 | 27,7 | 9,6          | 14,0 | 19,0 | 26,0 | 28,6 | 32,2 | 8,9          | 10,6 | 13,4 | 17,8 | 20,7 | 23,2 |
| Dp Heating                | kPa               | 7,5          | 10,1 | 13,1 | 16,6 | 20,1 | 23,2 | 8,5          | 12,8 | 17,9 | 24,9 | 27,8 | 31,7 | 8,3          | 10,0 | 12,8 | 17,6 | 20,9 | 23,7 |
| Fan                       | W                 | 44           | 54   | 66   | 79   | 92   | 103  | 47           | 62   | 81   | 105  | 116  | 130  | 78           | 92   | 108  | 134  | 152  | 176  |
| Sound power               | Lw dB(A)          | 38           | 42   | 47   | 51   | 54   | 56   | 39           | 45   | 50   | 56   | 58   | 60   | 47           | 50   | 54   | 58   | 62   | 64   |
| Sound pressure (*)        | Lp dB(A)          | 29           | 33   | 38   | 42   | 45   | 47   | 30           | 36   | 41   | 47   | 49   | 51   | 38           | 41   | 45   | 49   | 53   | 55   |

MIN-MED-MAX = Standard connected speeds.

(\*) = 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.

## Technical features

## SEC/F UNITS WITH 1 ROW ADDITIONAL COIL

## 4 pipe units.

The following standard rating conditions are used:

## COOLING

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

## HEATING

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

| MODEL                     |                   | SEC/F 1.3-4T |      |      |      |      |      | SEC/F 2.3-4T |      |      |      |      |      | SEC/F 3.3-4T |      |      |      |      |      |
|---------------------------|-------------------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|
| Speed                     |                   | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    |
|                           |                   | MIN          |      |      | MED  |      | MAX  | MIN          |      | MED  |      | MAX  |      |              | MIN  | MED  |      | MAX  |      |
| Air flow                  | m <sup>3</sup> /h | 105          | 125  | 150  | 175  | 195  | 220  | 145          | 170  | 220  | 250  | 295  | 340  | 185          | 235  | 270  | 325  | 385  | 440  |
| Cooling total emission    | kW                | 0,57         | 0,66 | 0,75 | 0,84 | 0,91 | 1,00 | 0,90         | 0,99 | 1,23 | 1,35 | 1,53 | 1,70 | 1,27         | 1,55 | 1,76 | 2,04 | 2,35 | 2,61 |
| Cooling sensible emission | kW                | 0,45         | 0,53 | 0,60 | 0,69 | 0,75 | 0,83 | 0,68         | 0,76 | 0,95 | 1,06 | 1,21 | 1,36 | 0,92         | 1,13 | 1,30 | 1,51 | 1,76 | 1,97 |
| Heating                   | kW                | 0,55         | 0,62 | 0,69 | 0,77 | 0,83 | 0,91 | 0,83         | 0,91 | 1,09 | 1,19 | 1,33 | 1,47 | 1,19         | 1,40 | 1,56 | 1,76 | 1,99 | 2,18 |
| Dp Cooling                | kPa               | 0,9          | 1,1  | 1,4  | 1,7  | 2,0  | 2,3  | 2,5          | 3,0  | 4,4  | 5,3  | 6,5  | 7,9  | 6,6          | 9,4  | 11,8 | 15,3 | 19,7 | 23,8 |
| Dp Heating                | kPa               | 0,5          | 0,7  | 0,8  | 1,0  | 1,1  | 1,3  | 1,3          | 1,6  | 2,2  | 2,5  | 3,1  | 3,7  | 3,2          | 4,2  | 5,1  | 6,3  | 7,8  | 9,2  |
| Fan                       | W                 | 16           | 19   | 21   | 25   | 29   | 33   | 14           | 16   | 22   | 26   | 32   | 40   | 15           | 20   | 25   | 32   | 41   | 49   |
| Sound power               | Lw dB(A)          | 32           | 34   | 36   | 39   | 42   | 45   | 30           | 33   | 40   | 43   | 47   | 51   | 31           | 36   | 40   | 45   | 49   | 52   |
| Sound pressure (*)        | Lp dB(A)          | 23           | 25   | 27   | 30   | 33   | 36   | 21           | 24   | 31   | 34   | 38   | 42   | 22           | 27   | 31   | 36   | 40   | 43   |

| MODEL                     |                   | SEC/F 4.3-4T |      |      |      |      |      | SEC/F 5.3-4T |      |      |      |      |      | SEC/F 6.3-4T |      |      |      |      |      |
|---------------------------|-------------------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|
| Speed                     |                   | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    |
|                           |                   |              | MIN  | MED  |      | MAX  |      |              | MIN  |      | MED  |      | MAX  | MIN          |      | MED  |      | MAX  |      |
| Air flow                  | m <sup>3</sup> /h | 185          | 265  | 335  | 400  | 485  | 570  | 250          | 315  | 420  | 495  | 545  | 650  | 415          | 505  | 590  | 680  | 760  | 830  |
| Cooling total emission    | kW                | 1,25         | 1,71 | 2,11 | 2,43 | 2,83 | 3,19 | 1,66         | 2,01 | 2,55 | 2,90 | 3,13 | 3,58 | 2,50         | 2,94 | 3,32 | 3,70 | 4,01 | 4,26 |
| Cooling sensible emission | kW                | 0,91         | 1,26 | 1,57 | 1,82 | 2,15 | 2,45 | 1,22         | 1,49 | 1,91 | 2,19 | 2,39 | 2,76 | 1,87         | 2,23 | 2,54 | 2,86 | 3,12 | 3,35 |
| Heating                   | kW                | 1,18         | 1,52 | 1,81 | 2,04 | 2,33 | 2,60 | 1,55         | 1,84 | 2,22 | 2,50 | 2,66 | 3,00 | 2,19         | 2,51 | 2,79 | 3,09 | 3,33 | 3,53 |
| Dp Cooling                | kPa               | 6,5          | 11,2 | 16,2 | 20,8 | 27,2 | 33,8 | 5,4          | 7,6  | 11,5 | 14,6 | 16,7 | 21,1 | 8,6          | 11,4 | 14,1 | 17,2 | 19,8 | 22,1 |
| Dp Heating                | kPa               | 3,1          | 4,9  | 6,6  | 8,2  | 10,3 | 12,5 | 1,0          | 1,3  | 1,9  | 2,3  | 2,6  | 3,2  | 1,8          | 2,3  | 2,8  | 3,3  | 3,8  | 4,2  |
| Fan                       | W                 | 14           | 21   | 28   | 34   | 44   | 57   | 18           | 22   | 32   | 39   | 46   | 61   | 37           | 46   | 55   | 67   | 78   | 88   |
| Sound power               | Lw dB(A)          | 27           | 33   | 39   | 43   | 47   | 52   | 26           | 31   | 37   | 41   | 43   | 48   | 37           | 42   | 46   | 49   | 52   | 54   |
| Sound pressure (*)        | Lp dB(A)          | 18           | 24   | 30   | 34   | 38   | 43   | 17           | 22   | 28   | 32   | 34   | 39   | 28           | 33   | 37   | 40   | 43   | 45   |

| MODEL                     |                   | SEC/F 7.3-4T |      |      |      |      |      | SEC/F 8.3-4T |      |      |      |      |      | SEC/F 9.3-4T |      |      |      |      |      |
|---------------------------|-------------------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|
| Speed                     |                   | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    | 1            | 2    | 3    | 4    | 5    | 6    |
|                           |                   |              | MIN  |      | MED  |      | MAX  |              | MIN  |      | MED  |      | MAX  |              | MIN  |      | MED  |      | MAX  |
| Air flow                  | m <sup>3</sup> /h | 445          | 535  | 630  | 735  | 840  | 925  | 510          | 655  | 815  | 1020 | 1100 | 1200 | 735          | 830  | 980  | 1210 | 1365 | 1500 |
| Cooling total emission    | kW                | 2,82         | 3,29 | 3,74 | 4,21 | 4,66 | 5,01 | 3,01         | 3,68 | 4,32 | 5,09 | 5,36 | 5,69 | 4,00         | 4,38 | 4,95 | 5,74 | 6,21 | 6,56 |
| Cooling sensible emission | kW                | 2,08         | 2,45 | 2,80 | 3,19 | 3,56 | 3,85 | 2,27         | 2,82 | 3,35 | 4,02 | 4,26 | 4,55 | 3,08         | 3,40 | 3,89 | 4,60 | 5,03 | 5,37 |
| Heating                   | kW                | 2,54         | 2,89 | 3,23 | 3,59 | 3,94 | 4,20 | 2,66         | 3,16 | 3,66 | 4,26 | 4,48 | 4,75 | 3,41         | 3,71 | 4,15 | 4,79 | 5,17 | 5,46 |
| Dp Cooling                | kPa               | 12,3         | 16,2 | 20,3 | 25,1 | 30,1 | 34,2 | 7,2          | 10,3 | 13,8 | 18,4 | 20,2 | 22,5 | 12,5         | 14,6 | 18,2 | 23,6 | 27,3 | 30,1 |
| Dp Heating                | kPa               | 2,8          | 3,5  | 4,2  | 5,1  | 6,0  | 6,7  | 3,0          | 4,1  | 5,3  | 6,9  | 7,5  | 8,3  | 4,7          | 5,4  | 6,6  | 8,5  | 9,7  | 10,7 |
| Fan                       | W                 | 44           | 54   | 66   | 79   | 92   | 103  | 47           | 62   | 81   | 105  | 116  | 130  | 78           | 92   | 108  | 134  | 152  | 176  |
| Sound power               | Lw dB(A)          | 38           | 42   | 47   | 51   | 54   | 56   | 39           | 45   | 50   | 56   | 58   | 60   | 47           | 50   | 54   | 58   | 62   | 64   |
| Sound pressure (*)        | Lp dB(A)          | 29           | 33   | 38   | 42   | 45   | 47   | 30           | 36   | 41   | 47   | 49   | 51   | 38           | 41   | 45   | 49   | 53   | 55   |

MIN-MED-MAX = Standard connected speeds.

(\*) = 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.

## Operation limits

Highest water inlet temperature..... + 85 °C

Lowest water inlet temperature..... + 5 °C

*for entering water temperatures below + 5°C, contact the technical department*

Highest working pressure..... 1000 kPa (10 bars)

**Note:** For CH model the maximum installation height is 2,8 m.

On heating it must be paid attention to rooms where the floor temperature is particularly low (for example less than 5°C).

In this situation the floor can cool the lower layer of air to a level that can stop the uniform diffusion of the hot air coming from the unit.

### Water flow limits for 3 row coil (l/h)

| MODEL   | SEC/F 1.3 | SEC/F 2.3 | SEC/F 3.3 | SEC/F 4.3 | SEC/F 5.3 | SEC/F 6.3 | SEC/F 7.3 | SEC/F 8.3 | SEC/F 9.3 |
|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Lowest  | 100       | 100       | 100       | 100       | 150       | 150       | 150       | 200       | 200       |
| Highest | 400       | 500       | 750       | 750       | 1000      | 1000      | 1500      | 2000      | 2000      |

### Water flow limits for 4 row coil (l/h)

| MODEL   | SEC/F 1.4 | SEC/F 2.4 | SEC/F 3.4 | SEC/F 4.4 | SEC/F 5.4 | SEC/F 6.4 | SEC/F 7.4 | SEC/F 8.4 | SEC/F 9.4 |
|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Lowest  | 100       | 100       | 150       | 150       | 150       | 150       | 200       | 300       | 300       |
| Highest | 650       | 750       | 1000      | 1000      | 1000      | 1500      | 2000      | 2000      | 2250      |

### Water flow limits for 1 row additional coil (l/h)

| MODEL   | SEC/F 1 | SEC/F 2 | SEC/F 3 | SEC/F 4 | SEC/F 5 | SEC/F 6 | SEC/F 7 | SEC/F 8 | SEC/F 9 |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Lowest  | 50      | 50      | 50      | 50      | 100     | 100     | 100     | 100     | 100     |
| Highest | 200     | 250     | 350     | 350     | 450     | 500     | 650     | 700     | 750     |

### Water flow limits for 2 row additional coil (l/h)

| MODEL   | SEC/F 1 | SEC/F 2 | SEC/F 3 | SEC/F 4 | SEC/F 5 | SEC/F 6 | SEC/F 7 | SEC/F 8 | SEC/F 9 |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Lowest  | 50      | 50      | 100     | 100     | 100     | 100     | 100     | 100     | 100     |
| Highest | 200     | 250     | 350     | 350     | 450     | 500     | 650     | 700     | 750     |

## Motor electrical data (max. absorption)

| MODEL |   | SEC/F 1 | SEC/F 2 | SEC/F 3 | SEC/F 4 | SEC/F 5 | SEC/F 6 | SEC/F 7 | SEC/F 8 | SEC/F 9 |
|-------|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 230/1 | W | 33      | 40      | 49      | 57      | 61      | 88      | 103     | 130     | 176     |
| 50Hz  | A | 0,16    | 0,18    | 0,23    | 0,26    | 0,27    | 0,39    | 0,47    | 0,58    | 0,78    |

## Cooling emission of 3 row coil

Entering air temperature: 27°C – R.H.: 50%

| MODEL     | Speed |     | WT: 7/12 °C |      |      |      |       | WT: 8/13 °C |       |      |       | WT: 10/15 °C |      |     |       | WT: 12/17 °C |      |     |       |
|-----------|-------|-----|-------------|------|------|------|-------|-------------|-------|------|-------|--------------|------|-----|-------|--------------|------|-----|-------|
|           |       |     | Qv          | Pc   | Ps   | Qw   | Dp(c) | Pc          | Ps    | Qw   | Dp(c) | Pc           | Ps   | Qw  | Dp(c) | Pc           | Ps   | Qw  | Dp(c) |
|           |       |     | m³/h        | kW   | kW   | l/h  | kPa   | kW          | kW    | l/h  | kPa   | kW           | kW   | l/h | kPa   | kW           | kW   | l/h | kPa   |
| SEC/F 1.3 | VI    | MAX | 220         | 1,08 | 0,83 | 191  | 2,7   | 0,95        | 0,78  | 169  | 2,1   | 0,69         | 0,69 | 124 | 1,2   | 0,58         | 0,58 | 105 | 0,9   |
|           | V     |     | 195         | 0,99 | 0,75 | 175  | 2,3   | 0,87        | 0,70  | 155  | 1,8   | 0,61         | 0,60 | 110 | 1,0   | 0,52         | 0,52 | 95  | 0,8   |
|           | IV    | MED | 175         | 0,92 | 0,69 | 162  | 2,0   | 0,81        | 0,64  | 143  | 1,6   | 0,58         | 0,56 | 103 | 0,9   | 0,48         | 0,48 | 86  | 0,6   |
|           | III   |     | 150         | 0,81 | 0,60 | 143  | 1,6   | 0,72        | 0,56  | 127  | 1,3   | 0,51         | 0,48 | 91  | 0,7   | 0,42         | 0,42 | 76  | 0,5   |
|           | II    |     | 125         | 0,72 | 0,52 | 127  | 1,3   | 0,64        | 0,49  | 114  | 1,1   | 0,46         | 0,42 | 83  | 0,6   | 0,37         | 0,37 | 67  | 0,4   |
|           | I     | MIN | 105         | 0,62 | 0,45 | 110  | 1,0   | 0,55        | 0,42  | 98   | 0,8   | 0,40         | 0,36 | 72  | 0,5   | 0,31         | 0,31 | 57  | 0,3   |
| SEC/F 2.3 | VI    |     | 340         | 1,84 | 1,35 | 323  | 9,0   | 1,63        | 1,27  | 287  | 7,3   | 1,19         | 1,10 | 212 | 4,2   | 0,96         | 0,96 | 172 | 2,9   |
|           | V     | MAX | 295         | 1,66 | 1,20 | 291  | 7,5   | 1,47        | 1,13  | 258  | 6,1   | 1,08         | 0,98 | 191 | 3,5   | 0,86         | 0,86 | 153 | 2,3   |
|           | IV    |     | 250         | 1,46 | 1,05 | 256  | 6,0   | 1,30        | 0,98  | 229  | 4,9   | 0,96         | 0,85 | 170 | 2,9   | 0,75         | 0,75 | 134 | 1,8   |
|           | III   | MED | 220         | 1,33 | 0,95 | 232  | 5,1   | 1,19        | 0,89  | 208  | 4,1   | 0,88         | 0,77 | 155 | 2,4   | 0,68         | 0,68 | 120 | 1,5   |
|           | II    |     | 170         | 1,07 | 0,75 | 187  | 3,5   | 0,96        | 0,70  | 169  | 2,8   | 0,71         | 0,61 | 126 | 1,7   | 0,54         | 0,54 | 96  | 1,0   |
|           | I     | MIN | 145         | 0,97 | 0,68 | 169  | 2,9   | 0,86        | 0,63  | 150  | 2,3   | 0,65         | 0,55 | 114 | 1,4   | 0,49         | 0,49 | 86  | 0,8   |
| SEC/F 3.3 | VI    |     | 440         | 2,81 | 1,96 | 492  | 27,1  | 2,52        | 1,84  | 442  | 22,3  | 1,90         | 1,60 | 335 | 13,5  | 1,41         | 1,41 | 251 | 8,0   |
|           | V     | MAX | 385         | 2,53 | 1,75 | 442  | 22,4  | 2,27        | 1,65  | 397  | 18,4  | 1,72         | 1,43 | 303 | 11,2  | 1,26         | 1,26 | 224 | 6,5   |
|           | IV    |     | 325         | 2,20 | 1,51 | 384  | 17,4  | 1,97        | 1,42  | 344  | 14,4  | 1,50         | 1,23 | 263 | 8,8   | 1,08         | 1,08 | 191 | 5,0   |
|           | III   | MED | 270         | 1,90 | 1,30 | 330  | 13,4  | 1,70        | 1,22  | 296  | 11,1  | 1,30         | 1,06 | 227 | 6,8   | 0,94         | 0,94 | 165 | 3,8   |
|           | II    | MIN | 235         | 1,66 | 1,13 | 289  | 10,6  | 1,50        | 1,06  | 261  | 8,8   | 1,14         | 0,92 | 200 | 5,4   | 0,81         | 0,81 | 143 | 3,0   |
|           | I     |     | 185         | 1,37 | 0,93 | 237  | 7,5   | 1,23        | 0,87  | 213  | 6,2   | 0,95         | 0,75 | 165 | 3,9   | 0,66         | 0,66 | 115 | 2,1   |
| SEC/F 4.3 | VI    |     | 570         | 3,43 | 2,44 | 600  | 38,5  | 3,07        | 2,29  | 538  | 31,5  | 2,30         | 1,99 | 406 | 19,0  | 1,75         | 1,75 | 311 | 11,7  |
|           | V     | MAX | 485         | 3,04 | 2,14 | 530  | 31,0  | 2,73        | 2,01  | 476  | 25,4  | 2,06         | 1,75 | 361 | 15,4  | 1,54         | 1,54 | 272 | 9,2   |
|           | IV    |     | 400         | 2,62 | 1,82 | 456  | 23,7  | 2,35        | 1,71  | 409  | 19,5  | 1,78         | 1,49 | 311 | 11,8  | 1,31         | 1,31 | 230 | 6,9   |
|           | III   | MED | 335         | 2,27 | 1,57 | 396  | 18,5  | 2,04        | 1,47  | 356  | 15,2  | 1,55         | 1,28 | 272 | 9,3   | 1,12         | 1,12 | 198 | 5,3   |
|           | II    | MIN | 265         | 1,84 | 1,26 | 320  | 12,8  | 1,66        | 1,18  | 289  | 10,5  | 1,27         | 1,03 | 222 | 6,5   | 0,91         | 0,91 | 160 | 3,6   |
|           | I     |     | 185         | 1,35 | 0,92 | 234  | 7,3   | 1,22        | 0,86  | 212  | 6,1   | 0,94         | 0,75 | 163 | 3,8   | 0,66         | 0,66 | 115 | 2,0   |
| SEC/F 5.3 | VI    | MAX | 650         | 3,86 | 2,75 | 674  | 23,0  | 3,45        | 2,58  | 604  | 18,9  | 2,59         | 2,25 | 456 | 11,4  | 1,97         | 1,97 | 349 | 7,0   |
|           | V     |     | 545         | 3,37 | 2,37 | 588  | 18,1  | 3,02        | 2,23  | 528  | 14,9  | 2,27         | 1,94 | 399 | 9,0   | 1,70         | 1,70 | 301 | 5,4   |
|           | IV    | MED | 495         | 3,12 | 2,19 | 544  | 15,8  | 2,80        | 2,05  | 488  | 12,9  | 2,11         | 1,78 | 370 | 7,9   | 1,57         | 1,57 | 277 | 4,6   |
|           | III   |     | 420         | 2,75 | 1,91 | 478  | 12,5  | 2,46        | 1,79  | 428  | 10,3  | 1,87         | 1,56 | 327 | 6,3   | 1,37         | 1,37 | 241 | 3,6   |
|           | II    | MIN | 315         | 2,16 | 1,49 | 375  | 8,3   | 1,95        | 1,40  | 339  | 6,8   | 1,48         | 1,21 | 258 | 4,1   | 1,07         | 1,07 | 187 | 2,4   |
|           | I     |     | 250         | 1,78 | 1,22 | 310  | 5,9   | 1,60        | 1,14  | 279  | 4,9   | 1,22         | 0,99 | 213 | 3,0   | 0,87         | 0,87 | 153 | 1,6   |
| SEC/F 6.3 | VI    |     | 830         | 4,60 | 3,33 | 807  | 25,2  | 4,10        | 3,13  | 721  | 20,6  | 3,06         | 2,72 | 542 | 12,3  | 2,39         | 2,39 | 427 | 7,9   |
|           | V     | MAX | 760         | 4,32 | 3,11 | 757  | 22,6  | 3,86        | 2,92  | 678  | 18,5  | 2,89         | 2,55 | 511 | 11,0  | 2,23         | 2,23 | 397 | 7,0   |
|           | IV    |     | 680         | 3,99 | 2,85 | 698  | 19,6  | 3,57        | 2,68  | 626  | 16,0  | 2,67         | 2,33 | 471 | 9,6   | 2,04         | 2,04 | 363 | 6,0   |
|           | III   | MED | 590         | 3,58 | 2,53 | 624  | 16,0  | 3,20        | 2,38  | 559  | 13,1  | 2,41         | 2,07 | 423 | 7,9   | 1,82         | 1,82 | 322 | 4,8   |
|           | II    |     | 505         | 3,16 | 2,22 | 552  | 13,0  | 2,83        | 2,08  | 495  | 10,6  | 2,14         | 1,81 | 377 | 6,4   | 1,59         | 1,59 | 282 | 3,8   |
|           | I     | MIN | 415         | 2,69 | 1,87 | 470  | 9,7   | 2,41        | 1,75  | 421  | 8,0   | 1,82         | 1,52 | 320 | 4,9   | 1,34         | 1,34 | 237 | 2,8   |
| SEC/F 7.3 | VI    | MAX | 925         | 5,40 | 3,84 | 946  | 38,8  | 4,83        | 3,18  | 848  | 31,9  | 3,64         | 3,14 | 643 | 19,3  | 2,76         | 2,76 | 492 | 11,9  |
|           | V     |     | 840         | 5,03 | 3,55 | 881  | 34,2  | 4,50        | 2,80  | 789  | 28,1  | 3,40         | 2,91 | 600 | 17,1  | 2,55         | 2,55 | 454 | 10,3  |
|           | IV    | MED | 735         | 4,54 | 3,18 | 795  | 28,6  | 4,07        | 2,34  | 714  | 23,5  | 3,08         | 2,60 | 544 | 14,3  | 2,28         | 2,28 | 406 | 8,5   |
|           | III   |     | 630         | 4,02 | 2,79 | 703  | 23,1  | 3,61        | 18,93 | 633  | 19,0  | 2,73         | 2,28 | 482 | 11,6  | 2,00         | 2,00 | 356 | 6,7   |
|           | II    | MIN | 535         | 3,54 | 2,45 | 617  | 18,3  | 3,18        | 15,05 | 556  | 15,1  | 2,42         | 1,99 | 425 | 9,3   | 1,75         | 1,75 | 310 | 5,3   |
|           | I     |     | 445         | 3,04 | 2,08 | 530  | 14,0  | 2,73        | 11,56 | 476  | 11,6  | 2,09         | 1,70 | 366 | 7,2   | 1,50         | 1,50 | 265 | 4,0   |
| SEC/F 8.3 | VI    | MAX | 1200        | 6,14 | 4,52 | 1078 | 21,7  | 5,46        | 4,25  | 961  | 17,6  | 4,03         | 3,71 | 716 | 10,3  | 3,23         | 3,23 | 578 | 7,0   |
|           | V     |     | 1100        | 5,78 | 4,23 | 1015 | 19,5  | 5,15        | 3,97  | 906  | 15,8  | 3,81         | 3,46 | 676 | 9,3   | 3,02         | 3,02 | 540 | 6,2   |
|           | IV    | MED | 1020        | 5,50 | 4,00 | 963  | 17,7  | 4,90        | 3,76  | 860  | 14,4  | 3,63         | 3,27 | 642 | 8,5   | 2,86         | 2,86 | 509 | 5,6   |
|           | III   |     | 815         | 4,67 | 3,34 | 817  | 13,3  | 4,17        | 3,14  | 731  | 10,8  | 3,11         | 2,73 | 549 | 6,5   | 2,39         | 2,39 | 425 | 4,1   |
|           | II    | MIN | 655         | 3,97 | 2,81 | 693  | 9,9   | 3,55        | 2,63  | 621  | 8,1   | 2,66         | 2,29 | 468 | 4,9   | 2,02         | 2,02 | 358 | 3,0   |
|           | I     |     | 510         | 3,24 | 2,26 | 566  | 7,0   | 2,91        | 2,12  | 509  | 5,7   | 2,19         | 1,84 | 385 | 3,5   | 1,62         | 1,62 | 287 | 2,0   |
| SEC/F 9.3 | VI    | MAX | 1500        | 7,09 | 5,32 | 1250 | 28,1  | 6,30        | 5,01  | 1115 | 22,8  | 4,62         | 4,38 | 826 | 13,2  | 3,80         | 3,80 | 685 | 9,4   |
|           | V     |     | 1365        | 6,71 | 5,00 | 1180 | 25,4  | 5,96        | 4,70  | 1051 | 20,6  | 4,39         | 4,10 | 781 | 12,0  | 3,57         | 3,57 | 640 | 8,4   |
|           | IV    | MED | 1210        | 6,20 | 4,57 | 1089 | 22,0  | 5,51        | 4,29  | 970  | 17,9  | 4,07         | 3,75 | 722 | 10,5  | 3,27         | 3,27 | 585 | 7,1   |
|           | III   |     | 980         | 5,34 | 3,87 | 937  | 16,9  | 4,76        | 3,64  | 838  | 13,8  | 3,53         | 3,16 | 626 | 8,2   | 2,77         | 2,77 | 495 | 5,3   |
|           | II    | MIN | 830         | 4,73 | 3,39 | 829  | 13,6  | 4,22        | 3,18  | 741  | 11,1  | 3,14         | 2,76 | 556 | 6,6   | 2,42         | 2,42 | 432 | 4,2   |
|           | I     |     | 735         | 4,32 | 3,07 | 757  | 11,6  | 3,85        | 2,88  | 676  | 9,5   | 2,88         | 2,50 | 509 | 5,7   | 2,19         | 2,19 | 390 | 3,5   |

## Correction factors for different R.H.

| R.H. | WT: | 7/12°C | 8/13°C | 10/15°C | 12/17°C |
|------|-----|--------|--------|---------|---------|
| 48%  | Pc  | 0,95   | 0,94   | 1,00    | 1,00    |
|      | Ps  | 1,00   | 1,00   | 1,00    | 1,00    |
| 46%  | Pc  | 0,90   | 0,88   | 1,00    | 1,00    |
|      | Ps  | 1,00   | 1,00   | 1,00    | 1,00    |

## LEGEND

WT = Water temperature

Pc = Cooling total emission

Ps = Cooling sensible emission

Qw = Water flow

Dp(c) = Water pressure drop

Speed = Fan speed

MAX = High speed

MED = Medium speed

MIN = Low speed

Qv = Air flow

## Cooling emission of 3 row coil

Entering air temperature: 26°C – R.H.: 50%

|           |       |     | WT: 7/12 °C |      |      |     |       | WT: 8/13 °C |      |     |       | WT: 10/15 °C |      |     |       | WT: 12/17 °C |      |     |       |
|-----------|-------|-----|-------------|------|------|-----|-------|-------------|------|-----|-------|--------------|------|-----|-------|--------------|------|-----|-------|
| MODEL     | Speed |     | Qv          | Pc   | Ps   | Qw  | Dp(c) | Pc          | Ps   | Qw  | Dp(c) | Pc           | Ps   | Qw  | Dp(c) | Pc           | Ps   | Qw  | Dp(c) |
|           |       |     | m³/h        | kW   | kW   | l/h | kPa   | kW          | kW   | l/h | kPa   | kW           | kW   | l/h | kPa   | kW           | kW   | l/h | kPa   |
| SEC/F 1.3 | VI    | MAX | 220         | 0,95 | 0,78 | 169 | 2,2   | 0,82        | 0,73 | 146 | 1,7   | 0,64         | 0,64 | 115 | 1,1   | 0,52         | 0,52 | 95  | 0,8   |
|           | V     |     | 195         | 0,87 | 0,70 | 155 | 1,8   | 0,75        | 0,65 | 134 | 1,4   | 0,57         | 0,57 | 103 | 0,9   | 0,47         | 0,47 | 86  | 0,6   |
|           | IV    | MED | 175         | 0,81 | 0,64 | 143 | 1,6   | 0,70        | 0,60 | 124 | 1,2   | 0,53         | 0,53 | 95  | 0,8   | 0,44         | 0,44 | 79  | 0,5   |
|           | III   |     | 150         | 0,71 | 0,56 | 126 | 1,3   | 0,62        | 0,52 | 110 | 1,0   | 0,46         | 0,46 | 83  | 0,6   | 0,38         | 0,38 | 69  | 0,4   |
|           | II    |     | 125         | 0,63 | 0,49 | 112 | 1,1   | 0,55        | 0,46 | 98  | 0,8   | 0,40         | 0,40 | 72  | 0,5   | 0,33         | 0,33 | 60  | 0,3   |
|           | I     | MIN | 105         | 0,55 | 0,42 | 98  | 0,8   | 0,47        | 0,39 | 84  | 0,6   | 0,35         | 0,35 | 64  | 0,4   | 0,28         | 0,28 | 52  | 0,3   |
| SEC/F 2.3 | VI    |     | 340         | 1,62 | 1,27 | 286 | 7,3   | 1,42        | 1,19 | 251 | 5,7   | 1,05         | 1,05 | 187 | 3,4   | 0,87         | 0,87 | 157 | 2,5   |
|           | V     | MAX | 295         | 1,46 | 1,13 | 256 | 6,0   | 1,28        | 1,06 | 225 | 4,8   | 0,94         | 0,94 | 167 | 2,8   | 0,78         | 0,78 | 139 | 2,0   |
|           | IV    |     | 250         | 1,29 | 0,98 | 227 | 4,9   | 1,13        | 0,92 | 200 | 3,9   | 0,82         | 0,82 | 146 | 2,2   | 0,68         | 0,68 | 122 | 1,6   |
|           | III   | MED | 220         | 1,18 | 0,89 | 206 | 4,1   | 1,04        | 0,83 | 182 | 3,3   | 0,72         | 0,71 | 127 | 1,7   | 0,62         | 0,62 | 110 | 1,3   |
|           | II    |     | 170         | 0,95 | 0,70 | 167 | 2,8   | 0,83        | 0,66 | 146 | 2,2   | 0,59         | 0,56 | 105 | 1,2   | 0,49         | 0,49 | 88  | 0,9   |
|           | I     | MIN | 145         | 0,86 | 0,63 | 150 | 2,3   | 0,76        | 0,59 | 132 | 1,9   | 0,54         | 0,51 | 95  | 1,0   | 0,44         | 0,44 | 77  | 0,7   |
| SEC/F 3.3 | VI    |     | 440         | 2,50 | 1,85 | 439 | 22,2  | 2,21        | 1,72 | 389 | 17,8  | 1,58         | 1,48 | 280 | 9,9   | 1,28         | 1,28 | 229 | 6,8   |
|           | V     | MAX | 385         | 2,25 | 1,65 | 394 | 18,4  | 1,99        | 1,54 | 349 | 14,7  | 1,43         | 1,32 | 253 | 8,3   | 1,15         | 1,15 | 205 | 5,6   |
|           | IV    |     | 325         | 1,96 | 1,42 | 342 | 14,3  | 1,73        | 1,33 | 303 | 11,5  | 1,25         | 1,14 | 220 | 6,5   | 0,99         | 0,99 | 175 | 4,3   |
|           | III   | MED | 270         | 1,69 | 1,22 | 294 | 11,0  | 1,50        | 1,14 | 261 | 8,9   | 1,09         | 0,98 | 191 | 5,0   | 0,86         | 0,86 | 151 | 3,3   |
|           | II    | MIN | 235         | 1,48 | 1,06 | 258 | 8,8   | 1,32        | 0,99 | 230 | 7,1   | 0,96         | 0,85 | 169 | 4,0   | 0,74         | 0,74 | 131 | 2,6   |
|           | I     |     | 185         | 1,22 | 0,87 | 212 | 6,2   | 1,09        | 0,81 | 189 | 5,0   | 0,80         | 0,70 | 139 | 2,9   | 0,61         | 0,61 | 107 | 1,8   |
| SEC/F 4.3 | VI    |     | 570         | 3,05 | 2,29 | 535 | 31,5  | 2,69        | 2,14 | 473 | 25,1  | 1,91         | 1,84 | 339 | 13,8  | 1,60         | 1,60 | 286 | 10,0  |
|           | V     | MAX | 485         | 2,71 | 2,02 | 473 | 25,3  | 2,39        | 1,89 | 418 | 20,3  | 1,71         | 1,62 | 301 | 11,2  | 1,41         | 1,41 | 249 | 7,9   |
|           | IV    |     | 400         | 2,33 | 1,72 | 406 | 19,4  | 2,06        | 1,60 | 359 | 15,5  | 1,49         | 1,38 | 261 | 8,7   | 1,20         | 1,20 | 212 | 5,9   |
|           | III   | MED | 335         | 2,02 | 1,47 | 353 | 15,1  | 1,79        | 1,38 | 313 | 12,2  | 1,29         | 1,18 | 227 | 6,9   | 1,03         | 1,03 | 182 | 4,5   |
|           | II    | MIN | 265         | 1,65 | 1,19 | 287 | 10,5  | 1,46        | 1,11 | 255 | 8,5   | 1,06         | 0,95 | 186 | 4,8   | 0,83         | 0,83 | 146 | 3,1   |
|           | I     |     | 185         | 1,21 | 0,86 | 210 | 6,1   | 1,08        | 0,81 | 187 | 4,9   | 0,79         | 0,69 | 138 | 2,8   | 0,60         | 0,60 | 105 | 1,7   |
| SEC/F 5.3 | VI    | MAX | 650         | 3,43 | 2,59 | 600 | 18,8  | 3,02        | 2,42 | 530 | 15,0  | 2,14         | 2,08 | 378 | 8,1   | 1,80         | 1,80 | 320 | 6,0   |
|           | V     |     | 545         | 3,00 | 2,23 | 525 | 14,9  | 2,65        | 2,09 | 464 | 11,9  | 1,89         | 1,79 | 334 | 6,5   | 1,55         | 1,55 | 275 | 4,6   |
|           | IV    | MED | 495         | 2,78 | 2,06 | 485 | 12,9  | 2,45        | 1,92 | 428 | 10,3  | 1,76         | 1,65 | 310 | 5,8   | 1,43         | 1,43 | 253 | 4,0   |
|           | III   |     | 420         | 2,45 | 1,80 | 427 | 10,3  | 2,16        | 1,68 | 377 | 8,3   | 1,56         | 1,44 | 273 | 4,6   | 1,25         | 1,25 | 220 | 3,1   |
|           | II    | MIN | 315         | 1,93 | 1,40 | 335 | 6,8   | 1,71        | 1,31 | 298 | 5,4   | 1,24         | 1,12 | 217 | 3,1   | 0,98         | 0,98 | 172 | 2,0   |
|           | I     |     | 250         | 1,59 | 1,14 | 277 | 4,9   | 1,41        | 1,07 | 246 | 3,9   | 1,03         | 0,91 | 181 | 2,3   | 0,80         | 0,80 | 141 | 1,4   |
| SEC/F 6.3 | VI    |     | 830         | 4,09 | 3,13 | 719 | 20,6  | 3,59        | 2,93 | 633 | 16,3  | 2,60         | 2,60 | 463 | 9,3   | 2,17         | 2,17 | 389 | 6,8   |
|           | V     | MAX | 760         | 3,84 | 2,93 | 674 | 18,4  | 3,38        | 2,74 | 595 | 14,7  | 2,38         | 2,35 | 423 | 7,9   | 2,03         | 2,02 | 363 | 6,0   |
|           | IV    |     | 680         | 3,55 | 2,68 | 623 | 16,0  | 3,12        | 2,51 | 549 | 12,7  | 2,21         | 2,15 | 392 | 6,9   | 1,86         | 1,86 | 332 | 5,1   |
|           | III   | MED | 590         | 3,18 | 2,38 | 556 | 13,1  | 2,81        | 2,23 | 492 | 10,5  | 2,00         | 1,91 | 353 | 5,7   | 1,66         | 1,66 | 294 | 4,1   |
|           | II    |     | 505         | 2,82 | 2,09 | 494 | 10,6  | 2,49        | 1,95 | 437 | 8,5   | 1,77         | 1,67 | 313 | 4,7   | 1,45         | 1,45 | 258 | 3,3   |
|           | I     | MIN | 415         | 2,40 | 1,76 | 420 | 8,0   | 2,12        | 1,64 | 372 | 6,4   | 1,52         | 1,41 | 268 | 3,6   | 1,22         | 1,22 | 217 | 2,4   |
| SEC/F 7.3 | VI    | MAX | 925         | 4,81 | 3,61 | 845 | 31,8  | 4,24        | 3,38 | 746 | 25,4  | 3,02         | 2,91 | 537 | 14,0  | 2,16         | 2,16 | 389 | 6,8   |
|           | V     |     | 840         | 4,48 | 3,34 | 786 | 28,0  | 3,95        | 3,13 | 695 | 22,5  | 2,82         | 2,69 | 501 | 12,5  | 2,02         | 2,02 | 363 | 6,0   |
|           | IV    | MED | 735         | 4,04 | 2,99 | 709 | 23,4  | 3,57        | 2,80 | 628 | 18,8  | 2,56         | 2,40 | 454 | 10,5  | 1,85         | 1,85 | 332 | 5,1   |
|           | III   |     | 630         | 3,58 | 2,63 | 628 | 18,9  | 3,17        | 2,46 | 557 | 15,2  | 2,28         | 2,11 | 404 | 8,6   | 1,64         | 1,64 | 294 | 4,1   |
|           | II    | MIN | 535         | 3,16 | 2,30 | 552 | 15,1  | 2,80        | 2,15 | 490 | 12,1  | 2,03         | 1,85 | 358 | 6,9   | 1,45         | 1,45 | 258 | 3,3   |
|           | I     |     | 445         | 2,72 | 1,96 | 475 | 11,5  | 2,41        | 1,83 | 421 | 9,3   | 1,75         | 1,57 | 308 | 5,3   | 1,22         | 1,22 | 217 | 2,4   |
| SEC/F 8.3 | VI    | MAX | 1200        | 5,44 | 4,26 | 958 | 17,6  | 4,77        | 3,99 | 843 | 13,9  | 3,53         | 3,53 | 630 | 8,2   | 2,94         | 2,94 | 528 | 6,0   |
|           | V     |     | 1100        | 5,13 | 3,98 | 903 | 15,8  | 4,49        | 3,72 | 793 | 12,5  | 3,30         | 3,30 | 588 | 7,3   | 2,75         | 2,75 | 494 | 5,3   |
|           | IV    | MED | 1020        | 4,88 | 3,76 | 857 | 14,4  | 4,28        | 3,52 | 753 | 11,4  | 3,12         | 3,12 | 554 | 6,6   | 2,60         | 2,60 | 464 | 4,8   |
|           | III   |     | 815         | 4,14 | 3,15 | 726 | 10,8  | 3,64        | 2,94 | 640 | 8,6   | 2,56         | 2,52 | 454 | 4,6   | 2,18         | 2,18 | 389 | 3,5   |
|           | II    | MIN | 655         | 3,53 | 2,64 | 617 | 8,1   | 3,11        | 2,47 | 545 | 6,5   | 2,20         | 2,11 | 389 | 3,5   | 1,84         | 1,84 | 327 | 2,6   |
|           | I     |     | 510         | 2,89 | 2,13 | 506 | 5,7   | 2,55        | 1,99 | 447 | 4,6   | 1,82         | 1,70 | 322 | 2,5   | 1,48         | 1,48 | 263 | 1,7   |
| SEC/F 9.3 | VI    | MAX | 1500        | 5,39 | 4,21 | 958 | 17,6  | 5,48        | 4,70 | 974 | 18,0  | 4,16         | 4,16 | 746 | 11,1  | 3,45         | 3,45 | 624 | 8,0   |
|           | V     |     | 1365        | 5,10 | 3,95 | 903 | 15,8  | 5,20        | 4,41 | 920 | 16,3  | 3,91         | 3,91 | 698 | 9,9   | 3,25         | 3,25 | 585 | 7,1   |
|           | IV    | MED | 1210        | 4,85 | 3,73 | 857 | 14,4  | 4,81        | 4,03 | 850 | 14,1  | 3,57         | 3,57 | 636 | 8,4   | 2,97         | 2,97 | 533 | 6,1   |
|           | III   |     | 980         | 4,11 | 3,12 | 726 | 10,8  | 4,15        | 3,41 | 733 | 10,9  | 3,02         | 3,02 | 538 | 6,2   | 2,51         | 2,51 | 451 | 4,5   |
|           | II    | MIN | 830         | 3,50 | 2,61 | 617 | 8,1   | 3,69        | 2,98 | 650 | 8,8   | 2,59         | 2,55 | 461 | 4,7   | 2,20         | 2,20 | 394 | 3,6   |
|           | I     |     | 735         | 2,86 | 2,10 | 506 | 5,7   | 3,37        | 2,70 | 593 | 7,5   | 2,37         | 2,31 | 421 | 4,1   | 1,99         | 1,99 | 356 | 3,0   |

## Correction factors for different R.H.

| R.H. | WT: | 7/12°C | 8/13°C | 10/15°C | 12/17°C |
|------|-----|--------|--------|---------|---------|
| 48%  | Pc  | 0,95   | 0,94   | 1,00    | 1,00    |
|      | Ps  | 1,00   | 1,00   | 1,00    | 1,00    |
| 46%  | Pc  | 0,90   | 0,88   | 1,00    | 1,00    |
|      | Ps  | 1,00   | 1,00   | 1,00    | 1,00    |

## LEGEND

WT = Water temperature

Pc = Cooling total emission

Ps = Cooling sensible emission

Qw = Water flow

Dp(c) = Water pressure drop

Speed = Fan speed

MAX = High speed

MED = Medium speed

MIN = Low speed

Qv = Air flow

## Cooling emission of 3 row coil

Entering air temperature: 25°C – R.H.: 50%

|           |       |     | WT: 7/12 °C |      |      |     |       | WT: 8/13 °C |      |     |       | WT: 10/15 °C |      |     |       | WT: 12/17 °C |      |     |       |
|-----------|-------|-----|-------------|------|------|-----|-------|-------------|------|-----|-------|--------------|------|-----|-------|--------------|------|-----|-------|
| MODEL     | Speed |     | Qv          | Pc   | Ps   | Qw  | Dp(c) | Pc          | Ps   | Qw  | Dp(c) | Pc           | Ps   | Qw  | Dp(c) | Pc           | Ps   | Qw  | Dp(c) |
|           |       |     | m³/h        | kW   | kW   | l/h | kPa   | kW          | kW   | l/h | kPa   | kW           | kW   | l/h | kPa   | kW           | kW   | l/h | kPa   |
| SEC/F 1.3 | VI    | MAX | 220         | 0,82 | 0,73 | 146 | 1,7   | 0,68        | 0,67 | 122 | 1,2   | 0,58         | 0,58 | 105 | 0,9   | 0,47         | 0,47 | 86  | 0,6   |
|           | V     |     | 195         | 0,75 | 0,65 | 134 | 1,4   | 0,62        | 0,60 | 112 | 1,1   | 0,52         | 0,52 | 95  | 0,8   | 0,42         | 0,42 | 77  | 0,5   |
|           | IV    | MED | 175         | 0,70 | 0,60 | 124 | 1,2   | 0,59        | 0,56 | 105 | 0,9   | 0,48         | 0,48 | 86  | 0,7   | 0,39         | 0,39 | 71  | 0,5   |
|           | III   |     | 150         | 0,62 | 0,52 | 110 | 1,0   | 0,52        | 0,48 | 93  | 0,7   | 0,42         | 0,42 | 76  | 0,5   | 0,34         | 0,34 | 62  | 0,4   |
|           | II    |     | 125         | 0,55 | 0,46 | 98  | 0,8   | 0,46        | 0,42 | 83  | 0,6   | 0,37         | 0,37 | 67  | 0,4   | 0,30         | 0,30 | 55  | 0,3   |
|           | I     | MIN | 105         | 0,47 | 0,39 | 84  | 0,6   | 0,40        | 0,36 | 72  | 0,5   | 0,31         | 0,31 | 57  | 0,3   | 0,25         | 0,25 | 46  | 0,2   |
| SEC/F 2.3 | VI    |     | 340         | 1,42 | 1,19 | 251 | 5,8   | 1,21        | 1,11 | 215 | 4,4   | 0,96         | 0,96 | 172 | 2,9   | 0,78         | 0,78 | 141 | 2,0   |
|           | V     | MAX | 295         | 1,28 | 1,06 | 225 | 4,8   | 1,09        | 0,98 | 193 | 3,6   | 0,86         | 0,86 | 153 | 2,4   | 0,70         | 0,70 | 126 | 1,7   |
|           | IV    |     | 250         | 1,13 | 0,92 | 200 | 3,9   | 0,97        | 0,86 | 172 | 2,9   | 0,75         | 0,75 | 134 | 1,9   | 0,61         | 0,61 | 110 | 1,3   |
|           | III   | MED | 220         | 1,03 | 0,84 | 181 | 3,3   | 0,89        | 0,78 | 157 | 2,5   | 0,68         | 0,68 | 120 | 1,6   | 0,56         | 0,56 | 100 | 1,1   |
|           | II    |     | 170         | 0,83 | 0,66 | 146 | 2,2   | 0,72        | 0,61 | 127 | 1,7   | 0,54         | 0,54 | 96  | 1,0   | 0,44         | 0,44 | 79  | 0,7   |
|           | I     | MIN | 145         | 0,75 | 0,59 | 131 | 1,9   | 0,65        | 0,55 | 114 | 1,4   | 0,49         | 0,49 | 86  | 0,9   | 0,40         | 0,40 | 71  | 0,6   |
| SEC/F 3.3 | VI    |     | 440         | 2,20 | 1,73 | 387 | 17,8  | 1,91        | 1,61 | 337 | 13,8  | 1,41         | 1,41 | 251 | 8,1   | 1,16         | 1,16 | 208 | 5,8   |
|           | V     | MAX | 385         | 1,98 | 1,55 | 347 | 14,8  | 1,72        | 1,44 | 303 | 11,5  | 1,26         | 1,26 | 224 | 6,6   | 1,04         | 1,04 | 186 | 4,7   |
|           | IV    |     | 325         | 1,73 | 1,33 | 303 | 11,5  | 1,50        | 1,24 | 263 | 9,0   | 1,09         | 1,09 | 193 | 5,1   | 0,90         | 0,90 | 160 | 3,6   |
|           | III   | MED | 270         | 1,49 | 1,14 | 260 | 8,9   | 1,30        | 1,06 | 227 | 6,9   | 0,94         | 0,94 | 165 | 3,9   | 0,78         | 0,78 | 138 | 2,8   |
|           | II    | MIN | 235         | 1,31 | 1,00 | 229 | 7,1   | 1,14        | 0,93 | 200 | 5,5   | 0,82         | 0,82 | 144 | 3,1   | 0,67         | 0,67 | 119 | 2,2   |
|           | I     |     | 185         | 1,08 | 0,82 | 187 | 5,0   | 0,95        | 0,76 | 165 | 3,9   | 0,64         | 0,64 | 112 | 2,0   | 0,55         | 0,55 | 96  | 1,5   |
| SEC/F 4.3 | VI    |     | 570         | 2,68 | 2,15 | 471 | 25,2  | 2,32        | 2,00 | 409 | 19,5  | 1,76         | 1,76 | 313 | 11,9  | 1,44         | 1,44 | 258 | 8,4   |
|           | V     | MAX | 485         | 2,39 | 1,89 | 418 | 20,3  | 2,07        | 1,76 | 363 | 15,7  | 1,55         | 1,55 | 273 | 9,4   | 1,27         | 1,27 | 225 | 6,6   |
|           | IV    |     | 400         | 2,06 | 1,61 | 359 | 15,6  | 1,78        | 1,50 | 311 | 12,1  | 1,32         | 1,32 | 232 | 7,0   | 1,08         | 1,08 | 191 | 5,0   |
|           | III   | MED | 335         | 1,78 | 1,38 | 311 | 12,2  | 1,55        | 1,28 | 272 | 9,5   | 1,13         | 1,13 | 200 | 5,4   | 0,93         | 0,93 | 165 | 3,8   |
|           | II    | MIN | 265         | 1,45 | 1,11 | 253 | 8,5   | 1,27        | 1,03 | 222 | 6,6   | 0,91         | 0,91 | 160 | 3,7   | 0,75         | 0,75 | 132 | 2,6   |
|           | I     |     | 185         | 1,07 | 0,81 | 186 | 4,9   | 0,94        | 0,75 | 163 | 3,8   | 0,64         | 0,63 | 112 | 1,9   | 0,55         | 0,55 | 96  | 1,5   |
| SEC/F 5.3 | VI    | MAX | 650         | 3,02 | 2,42 | 530 | 15,0  | 2,61        | 2,26 | 459 | 11,6  | 1,98         | 1,98 | 351 | 7,1   | 1,62         | 1,62 | 289 | 5,0   |
|           | V     |     | 545         | 2,64 | 2,09 | 463 | 11,9  | 2,28        | 1,95 | 401 | 9,1   | 1,71         | 1,71 | 303 | 5,5   | 1,40         | 1,40 | 249 | 3,9   |
|           | IV    | MED | 495         | 2,45 | 1,93 | 428 | 10,4  | 2,12        | 1,79 | 372 | 8,0   | 1,57         | 1,57 | 277 | 4,8   | 1,29         | 1,29 | 229 | 3,4   |
|           | III   |     | 420         | 2,16 | 1,68 | 377 | 8,3   | 1,87        | 1,57 | 327 | 6,4   | 1,37         | 1,37 | 241 | 3,8   | 1,13         | 1,13 | 200 | 2,6   |
|           | II    | MIN | 315         | 1,71 | 1,31 | 298 | 5,4   | 1,48        | 1,22 | 258 | 4,3   | 1,08         | 1,08 | 189 | 2,4   | 0,89         | 0,89 | 157 | 1,8   |
|           | I     |     | 250         | 1,41 | 1,07 | 246 | 3,9   | 1,23        | 0,99 | 215 | 3,0   | 0,87         | 0,87 | 153 | 1,6   | 0,72         | 0,72 | 127 | 1,1   |
| SEC/F 6.3 | VI    |     | 830         | 3,58 | 2,94 | 631 | 16,4  | 3,09        | 2,73 | 547 | 12,6  | 2,39         | 2,39 | 427 | 8,1   | 1,96         | 1,96 | 353 | 5,7   |
|           | V     | MAX | 760         | 3,37 | 2,74 | 593 | 14,7  | 2,91        | 2,56 | 514 | 11,3  | 2,23         | 2,23 | 397 | 7,1   | 1,83         | 1,83 | 329 | 5,0   |
|           | IV    |     | 680         | 3,12 | 2,51 | 549 | 12,8  | 2,69        | 2,34 | 475 | 9,9   | 2,05         | 2,05 | 365 | 6,1   | 1,68         | 1,68 | 301 | 4,3   |
|           | III   | MED | 590         | 2,80 | 2,23 | 490 | 10,5  | 2,42        | 2,08 | 425 | 8,1   | 1,82         | 1,82 | 322 | 4,9   | 1,50         | 1,50 | 267 | 3,5   |
|           | II    |     | 505         | 2,48 | 1,95 | 435 | 8,5   | 2,14        | 1,82 | 377 | 6,6   | 1,59         | 1,59 | 282 | 3,9   | 1,31         | 1,31 | 234 | 2,8   |
|           | I     | MIN | 415         | 2,11 | 1,64 | 370 | 6,4   | 1,83        | 1,53 | 322 | 5,0   | 1,34         | 1,34 | 237 | 2,9   | 1,10         | 1,10 | 196 | 2,0   |
| SEC/F 7.3 | VI    | MAX | 925         | 4,23 | 3,39 | 745 | 25,5  | 3,66        | 3,16 | 647 | 19,8  | 2,76         | 2,76 | 492 | 12,1  | 2,27         | 2,27 | 408 | 8,5   |
|           | V     |     | 840         | 3,94 | 3,14 | 693 | 22,5  | 3,41        | 2,92 | 602 | 17,5  | 2,56         | 2,56 | 456 | 10,5  | 2,10         | 2,10 | 377 | 7,4   |
|           | IV    | MED | 735         | 3,56 | 2,81 | 626 | 18,8  | 3,09        | 2,61 | 545 | 14,6  | 2,29         | 2,29 | 408 | 8,6   | 1,88         | 1,88 | 337 | 6,1   |
|           | III   |     | 630         | 3,16 | 2,46 | 556 | 15,2  | 2,74        | 2,29 | 483 | 11,9  | 2,01         | 2,01 | 358 | 6,9   | 1,65         | 1,65 | 296 | 4,9   |
|           | II    | MIN | 535         | 2,79 | 2,16 | 488 | 12,1  | 2,42        | 2,00 | 425 | 9,5   | 1,76         | 1,76 | 311 | 5,4   | 1,45         | 1,45 | 258 | 3,8   |
|           | I     |     | 445         | 2,40 | 1,84 | 420 | 9,3   | 2,09        | 1,71 | 366 | 7,3   | 1,51         | 1,51 | 267 | 4,1   | 1,24         | 1,24 | 220 | 2,9   |
| SEC/F 8.3 | VI    | MAX | 1200        | 4,76 | 3,99 | 841 | 14,0  | 4,08        | 3,72 | 724 | 10,7  | 3,24         | 3,24 | 580 | 7,1   | 2,64         | 2,64 | 476 | 5,0   |
|           | V     |     | 1100        | 4,49 | 3,73 | 793 | 12,6  | 3,85        | 3,47 | 683 | 9,6   | 3,03         | 3,03 | 542 | 6,3   | 2,47         | 2,47 | 445 | 4,4   |
|           | IV    | MED | 1020        | 4,27 | 3,53 | 752 | 11,5  | 3,67        | 3,28 | 648 | 8,8   | 2,87         | 2,87 | 511 | 5,7   | 2,34         | 2,34 | 420 | 4,0   |
|           | III   |     | 815         | 3,63 | 2,95 | 638 | 8,6   | 3,13        | 2,74 | 552 | 6,6   | 2,39         | 2,39 | 425 | 4,1   | 1,96         | 1,96 | 351 | 2,9   |
|           | II    | MIN | 655         | 3,10 | 2,47 | 544 | 6,5   | 2,67        | 2,30 | 470 | 5,0   | 2,03         | 2,03 | 359 | 3,1   | 1,66         | 1,66 | 296 | 2,2   |
|           | I     |     | 510         | 2,54 | 1,99 | 445 | 4,6   | 2,20        | 1,85 | 387 | 3,5   | 1,63         | 1,63 | 289 | 2,1   | 1,34         | 1,34 | 239 | 1,5   |
| SEC/F 9.3 | VI    | MAX | 1500        | 5,49 | 4,71 | 975 | 18,1  | 4,68        | 4,39 | 836 | 13,7  | 3,81         | 3,81 | 686 | 9,6   | 3,10         | 3,10 | 564 | 6,7   |
|           | V     |     | 1365        | 5,20 | 4,42 | 920 | 16,4  | 4,44        | 4,11 | 789 | 12,4  | 3,58         | 3,58 | 642 | 8,5   | 2,92         | 2,92 | 528 | 5,9   |
|           | IV    | MED | 1210        | 4,81 | 4,04 | 850 | 14,2  | 4,12        | 3,76 | 731 | 10,8  | 3,27         | 3,27 | 585 | 7,2   | 2,67         | 2,67 | 482 | 5,1   |
|           | III   |     | 980         | 4,15 | 3,41 | 733 | 11,0  | 3,56        | 3,17 | 631 | 8,4   | 2,77         | 2,77 | 495 | 5,4   | 2,26         | 2,26 | 408 | 3,8   |
|           | II    | MIN | 830         | 3,68 | 2,98 | 648 | 8,8   | 3,17        | 2,78 | 561 | 6,8   | 2,42         | 2,42 | 432 | 4,2   | 1,98         | 1,98 | 356 | 3,0   |
|           | I     |     | 735         | 3,36 | 2,70 | 592 | 7,5   | 2,90        | 2,51 | 513 | 5,8   | 2,20         | 2,20 | 392 | 3,6   | 1,80         | 1,80 | 323 | 2,5   |

## Correction factors for different R.H.

| R.H. | WT: | 7/12°C | 8/13°C | 10/15°C | 12/17°C |
|------|-----|--------|--------|---------|---------|
| 48%  | Pc  | 0,95   | 0,94   | 1,00    | 1,00    |
|      | Ps  | 1,00   | 1,00   | 1,00    | 1,00    |
| 46%  | Pc  | 0,90   | 0,88   | 1,00    | 1,00    |
|      | Ps  | 1,00   | 1,00   | 1,00    | 1,00    |

## LEGEND

WT = Water temperature

Pc = Cooling total emission

Ps = Cooling sensible emission

Qw = Water flow

Dp(c) = Water pressure drop

Speed = Fan speed

MAX = High speed

MED = Medium speed

MIN = Low speed

Qv = Air flow

## Cooling emission of 4 row coil

Entering air temperature: 27°C – R.H.: 50%

|           |       |     | WT: 7/12 °C |      |      |      |       | WT: 8/13 °C |      |      |       | WT: 10/15 °C |      |     |       | WT: 12/17 °C |      |     |       |
|-----------|-------|-----|-------------|------|------|------|-------|-------------|------|------|-------|--------------|------|-----|-------|--------------|------|-----|-------|
| MODEL     | Speed |     | Qv          | Pc   | Ps   | Qw   | Dp(c) | Pc          | Ps   | Qw   | Dp(c) | Pc           | Ps   | Qw  | Dp(c) | Pc           | Ps   | Qw  | Dp(c) |
|           |       |     | m³/h        | kW   | kW   | l/h  | kPa   | kW          | kW   | l/h  | kPa   | kW           | kW   | l/h | kPa   | kW           | kW   | l/h | kPa   |
| SEC/F 1.4 | VI    | MAX | 220         | 1,30 | 0,93 | 229  | 6,4   | 1,15        | 0,88 | 203  | 5,2   | 0,84         | 0,76 | 150 | 3,0   | 0,67         | 0,67 | 120 | 2,0   |
|           | V     |     | 195         | 1,17 | 0,84 | 206  | 5,4   | 1,04        | 0,78 | 184  | 4,3   | 0,76         | 0,68 | 136 | 2,5   | 0,59         | 0,59 | 107 | 1,6   |
|           | IV    | MED | 175         | 1,08 | 0,77 | 189  | 4,6   | 0,96        | 0,72 | 169  | 3,7   | 0,71         | 0,62 | 126 | 2,2   | 0,55         | 0,55 | 98  | 1,4   |
|           | III   |     | 150         | 0,94 | 0,66 | 165  | 3,6   | 0,84        | 0,62 | 148  | 2,9   | 0,62         | 0,53 | 110 | 1,7   | 0,47         | 0,47 | 84  | 1,1   |
|           | II    |     | 125         | 0,83 | 0,58 | 146  | 2,9   | 0,74        | 0,54 | 131  | 2,4   | 0,55         | 0,46 | 98  | 1,4   | 0,41         | 0,41 | 74  | 0,9   |
|           | I     | MIN | 105         | 0,71 | 0,49 | 126  | 2,2   | 0,63        | 0,45 | 112  | 1,8   | 0,47         | 0,39 | 84  | 1,1   | 0,35         | 0,35 | 64  | 0,6   |
| SEC/F 2.4 | VI    |     | 340         | 2,16 | 1,52 | 378  | 19,6  | 1,93        | 1,43 | 339  | 16,0  | 1,45         | 1,24 | 256 | 9,6   | 1,09         | 1,09 | 194 | 5,9   |
|           | V     | MAX | 295         | 1,92 | 1,34 | 335  | 15,9  | 1,72        | 1,26 | 301  | 13,0  | 1,30         | 1,09 | 229 | 7,8   | 0,96         | 0,96 | 170 | 4,7   |
|           | IV    |     | 250         | 1,68 | 1,16 | 294  | 12,5  | 1,50        | 1,09 | 263  | 10,3  | 1,13         | 0,94 | 200 | 6,2   | 0,83         | 0,83 | 148 | 3,6   |
|           | III   | MED | 220         | 1,52 | 1,05 | 265  | 10,4  | 1,36        | 0,98 | 237  | 8,6   | 1,03         | 0,85 | 181 | 5,2   | 0,75         | 0,75 | 132 | 3,0   |
|           | II    |     | 170         | 1,20 | 0,81 | 210  | 6,9   | 1,07        | 0,76 | 187  | 5,7   | 0,82         | 0,66 | 144 | 3,5   | 0,58         | 0,58 | 103 | 1,9   |
|           | I     | MIN | 145         | 1,07 | 0,73 | 186  | 5,6   | 0,96        | 0,68 | 167  | 4,6   | 0,74         | 0,59 | 129 | 2,9   | 0,52         | 0,52 | 91  | 1,6   |
| SEC/F 3.4 | VI    |     | 440         | 3,04 | 2,09 | 531  | 16,0  | 2,73        | 1,96 | 478  | 13,2  | 2,07         | 1,70 | 365 | 8,1   | 1,50         | 1,50 | 267 | 4,6   |
|           | V     | MAX | 385         | 2,72 | 1,86 | 475  | 13,1  | 2,44        | 1,74 | 427  | 10,8  | 1,85         | 1,51 | 325 | 6,6   | 1,33         | 1,33 | 236 | 3,7   |
|           | IV    |     | 325         | 2,34 | 1,59 | 408  | 10,1  | 2,11        | 1,49 | 368  | 8,3   | 1,61         | 1,29 | 282 | 5,1   | 1,14         | 1,14 | 201 | 2,8   |
|           | III   | MED | 270         | 2,01 | 1,36 | 349  | 7,6   | 1,81        | 1,27 | 315  | 6,3   | 1,38         | 1,10 | 241 | 3,9   | 0,98         | 0,98 | 172 | 2,1   |
|           | II    | MIN | 235         | 1,75 | 1,18 | 304  | 6,0   | 1,57        | 1,10 | 273  | 5,0   | 1,21         | 0,95 | 212 | 3,1   | 0,84         | 0,84 | 148 | 1,6   |
|           | I     |     | 185         | 1,42 | 0,96 | 246  | 4,1   | 1,29        | 0,90 | 224  | 3,4   | 0,99         | 0,78 | 172 | 2,2   | 0,69         | 0,69 | 120 | 1,1   |
| SEC/F 4.4 | VI    |     | 570         | 3,65 | 2,54 | 638  | 21,2  | 3,27        | 2,38 | 573  | 17,4  | 2,47         | 2,06 | 435 | 10,5  | 1,82         | 1,82 | 323 | 6,2   |
|           | V     | MAX | 485         | 3,31 | 2,29 | 576  | 17,7  | 2,97        | 2,15 | 518  | 14,5  | 2,25         | 1,86 | 394 | 8,8   | 1,65         | 1,65 | 291 | 5,1   |
|           | IV    |     | 400         | 2,82 | 1,93 | 490  | 13,3  | 2,53        | 1,81 | 440  | 10,9  | 1,93         | 1,57 | 337 | 6,7   | 1,39         | 1,39 | 244 | 3,8   |
|           | III   | MED | 335         | 2,42 | 1,65 | 421  | 10,2  | 2,18        | 1,55 | 380  | 8,4   | 1,66         | 1,34 | 291 | 5,2   | 1,18         | 1,18 | 208 | 2,9   |
|           | II    | MIN | 265         | 1,95 | 1,32 | 339  | 6,9   | 1,76        | 1,24 | 306  | 5,7   | 1,34         | 1,07 | 234 | 3,6   | 0,95         | 0,95 | 167 | 1,9   |
|           | I     |     | 185         | 1,41 | 0,95 | 244  | 3,9   | 1,27        | 0,89 | 220  | 3,2   | 0,98         | 0,77 | 170 | 2,0   | 0,68         | 0,68 | 119 | 1,1   |
| SEC/F 5.4 | VI    | MAX | 650         | 4,34 | 3,00 | 757  | 35,5  | 3,90        | 2,82 | 681  | 29,3  | 2,96         | 2,45 | 519 | 18,0  | 2,16         | 2,16 | 382 | 10,3  |
|           | V     |     | 545         | 3,75 | 2,57 | 654  | 27,4  | 3,37        | 2,41 | 588  | 22,7  | 2,57         | 2,10 | 451 | 14,0  | 1,85         | 1,85 | 327 | 7,8   |
|           | IV    | MED | 495         | 3,45 | 2,36 | 600  | 23,6  | 3,10        | 2,21 | 540  | 19,5  | 2,37         | 1,92 | 415 | 12,1  | 1,69         | 1,69 | 298 | 6,7   |
|           | III   |     | 420         | 3,00 | 2,04 | 521  | 18,5  | 2,71        | 1,92 | 471  | 15,3  | 2,08         | 1,67 | 363 | 9,5   | 1,47         | 1,47 | 258 | 5,2   |
|           | II    | MIN | 315         | 2,33 | 1,57 | 404  | 11,8  | 2,10        | 1,48 | 365  | 9,8   | 1,62         | 1,28 | 282 | 6,1   | 1,13         | 1,13 | 198 | 3,2   |
|           | I     |     | 250         | 1,90 | 1,28 | 330  | 8,3   | 1,72        | 1,20 | 299  | 6,9   | 1,33         | 1,04 | 232 | 4,3   | 0,87         | 0,87 | 153 | 2,1   |
| SEC/F 6.4 | VI    |     | 830         | 5,43 | 3,77 | 949  | 46,5  | 4,87        | 3,54 | 853  | 38,3  | 3,69         | 3,08 | 650 | 23,4  | 2,71         | 2,71 | 482 | 13,6  |
|           | V     | MAX | 760         | 5,06 | 3,51 | 884  | 41,1  | 4,55        | 3,29 | 796  | 33,9  | 3,45         | 2,86 | 607 | 20,8  | 2,52         | 2,52 | 447 | 12,0  |
|           | IV    |     | 680         | 4,63 | 3,19 | 808  | 35,1  | 4,16        | 2,99 | 728  | 28,9  | 3,17         | 2,60 | 557 | 17,8  | 2,29         | 2,29 | 406 | 10,1  |
|           | III   | MED | 590         | 4,10 | 2,81 | 714  | 28,1  | 3,69        | 2,64 | 643  | 23,3  | 2,81         | 2,29 | 492 | 14,4  | 2,02         | 2,02 | 356 | 8,0   |
|           | II    |     | 505         | 3,58 | 2,44 | 624  | 22,3  | 3,23        | 2,29 | 564  | 18,4  | 2,47         | 1,98 | 433 | 11,4  | 1,75         | 1,75 | 310 | 6,2   |
|           | I     | MIN | 415         | 3,00 | 2,03 | 523  | 16,3  | 2,70        | 1,90 | 471  | 13,5  | 2,08         | 1,65 | 365 | 8,4   | 1,46         | 1,46 | 258 | 4,5   |
| SEC/F 7.4 | VI    | MAX | 925         | 5,90 | 4,11 | 1032 | 31,4  | 5,29        | 3,86 | 927  | 25,9  | 4,01         | 3,36 | 707 | 15,8  | 2,95         | 2,95 | 525 | 9,3   |
|           | V     |     | 840         | 5,47 | 3,79 | 956  | 27,5  | 4,91        | 3,56 | 860  | 22,6  | 3,72         | 3,10 | 655 | 13,9  | 2,72         | 2,72 | 483 | 8,0   |
|           | IV    | MED | 735         | 4,90 | 3,38 | 857  | 22,7  | 4,40        | 3,17 | 771  | 18,7  | 3,35         | 2,76 | 590 | 11,5  | 2,42         | 2,42 | 430 | 6,5   |
|           | III   |     | 630         | 4,31 | 2,95 | 753  | 18,1  | 3,88        | 2,77 | 679  | 14,9  | 2,95         | 2,40 | 519 | 9,2   | 2,11         | 2,11 | 375 | 5,1   |
|           | II    | MIN | 535         | 3,77 | 2,57 | 657  | 14,2  | 3,39        | 2,41 | 592  | 11,8  | 2,60         | 2,09 | 456 | 7,3   | 1,85         | 1,85 | 327 | 4,0   |
|           | I     |     | 445         | 3,21 | 2,18 | 559  | 10,7  | 2,90        | 2,04 | 506  | 8,9   | 2,22         | 1,77 | 389 | 5,5   | 1,56         | 1,56 | 275 | 3,0   |
| SEC/F 8.4 | VI    | MAX | 1200        | 6,85 | 4,91 | 1201 | 36,0  | 6,11        | 4,60 | 1073 | 29,3  | 4,55         | 4,00 | 805 | 17,5  | 3,50         | 3,50 | 624 | 11,0  |
|           | V     |     | 1100        | 6,41 | 4,57 | 1123 | 32,0  | 5,72        | 4,29 | 1004 | 26,1  | 4,27         | 3,72 | 755 | 15,5  | 3,26         | 3,26 | 581 | 9,7   |
|           | IV    | MED | 1020        | 6,07 | 4,31 | 1061 | 29,0  | 5,42        | 4,04 | 949  | 23,6  | 4,05         | 3,51 | 714 | 14,0  | 3,08         | 3,08 | 547 | 8,6   |
|           | III   |     | 815         | 5,09 | 3,57 | 889  | 21,2  | 4,56        | 3,35 | 798  | 17,3  | 3,42         | 2,91 | 602 | 10,4  | 2,57         | 2,57 | 456 | 6,3   |
|           | II    | MIN | 655         | 4,28 | 2,98 | 746  | 15,7  | 3,84        | 2,79 | 671  | 12,8  | 2,89         | 2,42 | 507 | 7,7   | 2,13         | 2,13 | 377 | 4,5   |
|           | I     |     | 510         | 3,46 | 2,38 | 604  | 10,8  | 3,11        | 2,23 | 544  | 8,8   | 2,35         | 1,93 | 413 | 5,4   | 1,70         | 1,70 | 301 | 3,1   |
| SEC/F 9.4 | VI    | MAX | 1500        | 8,02 | 5,83 | 1410 | 26,5  | 7,14        | 5,47 | 1259 | 21,6  | 5,28         | 4,76 | 939 | 12,7  | 4,16         | 4,16 | 746 | 8,4   |
|           | V     |     | 1365        | 7,54 | 5,45 | 1323 | 23,7  | 6,72        | 5,12 | 1182 | 19,3  | 4,98         | 4,46 | 882 | 11,4  | 3,89         | 3,89 | 695 | 7,4   |
|           | IV    | MED | 1210        | 6,92 | 4,96 | 1213 | 20,3  | 6,17        | 4,66 | 1084 | 16,5  | 4,59         | 4,05 | 812 | 9,8   | 3,54         | 3,54 | 631 | 6,2   |
|           | III   |     | 980         | 5,89 | 4,17 | 1032 | 15,3  | 5,26        | 3,91 | 924  | 12,5  | 3,93         | 3,39 | 695 | 7,5   | 2,97         | 2,97 | 530 | 4,6   |
|           | II    | MIN | 830         | 5,16 | 3,62 | 903  | 12,1  | 4,62        | 3,40 | 810  | 9,9   | 3,46         | 2,94 | 611 | 6,0   | 2,60         | 2,60 | 463 | 3,6   |
|           | I     |     | 735         | 4,69 | 3,27 | 820  | 10,2  | 4,19        | 3,06 | 734  | 8,4   | 3,15         | 2,66 | 556 | 5,0   | 2,34         | 2,34 | 416 | 3,0   |

## Correction factors for different R.H.

| R.H. | WT: | 7/12°C | 8/13°C | 10/15°C | 12/17°C |
|------|-----|--------|--------|---------|---------|
| 48%  | Pc  | 0,95   | 0,94   | 1,00    | 1,00    |
|      | Ps  | 1,00   | 1,00   | 1,00    | 1,00    |
| 46%  | Pc  | 0,90   | 0,88   | 1,00    | 1,00    |
|      | Ps  | 1,00   | 1,00   | 1,00    | 1,00    |

## LEGEND

WT = Water temperature

## Cooling emission of 4 row coil

Entering air temperature: 26°C – R.H.: 50%

| MODEL     | Speed |     | WT: 7/12 °C |      |      |      |       | WT: 8/13 °C |      |      |       | WT: 10/15 °C |      |     |       | WT: 12/17 °C |      |     |       |
|-----------|-------|-----|-------------|------|------|------|-------|-------------|------|------|-------|--------------|------|-----|-------|--------------|------|-----|-------|
|           |       |     | Qv          | Pc   | Ps   | Qw   | Dp(c) | Pc          | Ps   | Qw   | Dp(c) | Pc           | Ps   | Qw  | Dp(c) | Pc           | Ps   | Qw  | Dp(c) |
|           |       |     | m³/h        | kW   | kW   | l/h  | kPa   | kW          | kW   | l/h  | kPa   | kW           | kW   | l/h | kPa   | kW           | kW   | l/h | kPa   |
| SEC/F 1.4 | VI    | MAX | 220         | 1,14 | 0,88 | 201  | 5,1   | 1,00        | 0,82 | 177  | 4,0   | 0,73         | 0,73 | 131 | 2,3   | 0,60         | 0,60 | 108 | 1,7   |
|           | V     |     | 195         | 1,03 | 0,78 | 182  | 4,3   | 0,90        | 0,73 | 160  | 3,4   | 0,65         | 0,65 | 117 | 1,9   | 0,54         | 0,54 | 98  | 1,4   |
|           | IV    | MED | 175         | 0,95 | 0,72 | 167  | 3,7   | 0,83        | 0,67 | 146  | 2,9   | 0,58         | 0,57 | 103 | 1,5   | 0,50         | 0,50 | 89  | 1,2   |
|           | III   |     | 150         | 0,83 | 0,62 | 146  | 2,9   | 0,73        | 0,58 | 129  | 2,3   | 0,51         | 0,49 | 91  | 1,2   | 0,43         | 0,43 | 77  | 0,9   |
|           | II    |     | 125         | 0,73 | 0,54 | 129  | 2,4   | 0,64        | 0,50 | 114  | 1,9   | 0,45         | 0,43 | 81  | 1,0   | 0,37         | 0,37 | 67  | 0,7   |
|           | I     | MIN | 105         | 0,63 | 0,46 | 112  | 1,8   | 0,55        | 0,42 | 98   | 1,4   | 0,39         | 0,36 | 71  | 0,8   | 0,31         | 0,31 | 57  | 0,5   |
| SEC/F 2.4 | VI    |     | 340         | 1,92 | 1,43 | 337  | 16,0  | 1,69        | 1,34 | 298  | 12,7  | 1,20         | 1,14 | 213 | 7,0   | 0,99         | 0,99 | 177 | 5,0   |
|           | V     | MAX | 295         | 1,71 | 1,26 | 299  | 13,0  | 1,51        | 1,18 | 265  | 10,3  | 1,08         | 1,01 | 191 | 5,7   | 0,88         | 0,88 | 157 | 4,0   |
|           | IV    |     | 250         | 1,49 | 1,09 | 261  | 10,3  | 1,32        | 1,02 | 232  | 8,2   | 0,95         | 0,87 | 169 | 4,6   | 0,76         | 0,76 | 136 | 3,1   |
|           | III   | MED | 220         | 1,35 | 0,98 | 236  | 8,5   | 1,20        | 0,92 | 210  | 6,8   | 0,86         | 0,79 | 151 | 3,8   | 0,69         | 0,69 | 122 | 2,5   |
|           | II    |     | 170         | 1,07 | 0,77 | 187  | 5,7   | 0,95        | 0,71 | 167  | 4,6   | 0,68         | 0,61 | 120 | 2,6   | 0,53         | 0,53 | 95  | 1,7   |
|           | I     | MIN | 145         | 0,96 | 0,68 | 167  | 4,6   | 0,85        | 0,64 | 148  | 3,7   | 0,62         | 0,55 | 108 | 2,1   | 0,48         | 0,48 | 84  | 1,3   |
| SEC/F 3.4 | VI    |     | 440         | 2,71 | 1,97 | 475  | 13,1  | 2,40        | 1,83 | 421  | 10,6  | 1,73         | 1,57 | 306 | 5,9   | 1,37         | 1,37 | 244 | 3,9   |
|           | V     | MAX | 385         | 2,43 | 1,75 | 425  | 10,8  | 2,15        | 1,63 | 377  | 8,7   | 1,55         | 1,39 | 273 | 4,9   | 1,22         | 1,22 | 217 | 3,2   |
|           | IV    |     | 325         | 2,09 | 1,50 | 365  | 8,3   | 1,86        | 1,40 | 325  | 6,7   | 1,35         | 1,19 | 237 | 3,8   | 1,04         | 1,04 | 184 | 2,4   |
|           | III   | MED | 270         | 1,79 | 1,28 | 311  | 6,3   | 1,59        | 1,19 | 277  | 5,1   | 1,16         | 1,02 | 203 | 2,9   | 0,89         | 0,89 | 157 | 1,8   |
|           | II    | MIN | 235         | 1,56 | 1,11 | 272  | 4,9   | 1,39        | 1,03 | 243  | 4,0   | 1,02         | 0,88 | 179 | 2,3   | 0,77         | 0,77 | 136 | 1,4   |
|           | I     |     | 185         | 1,28 | 0,90 | 222  | 3,4   | 1,14        | 0,84 | 198  | 2,8   | 0,84         | 0,72 | 146 | 1,6   | 0,63         | 0,63 | 110 | 1,0   |
| SEC/F 4.4 | VI    |     | 570         | 3,25 | 2,39 | 569  | 17,3  | 2,87        | 2,23 | 504  | 13,8  | 2,06         | 1,91 | 365 | 7,7   | 1,66         | 1,66 | 296 | 5,3   |
|           | V     | MAX | 485         | 2,96 | 2,16 | 516  | 14,5  | 2,61        | 2,01 | 456  | 11,6  | 1,88         | 1,72 | 330 | 6,5   | 1,51         | 1,51 | 267 | 4,4   |
|           | IV    |     | 400         | 2,52 | 1,82 | 439  | 10,9  | 2,23        | 1,70 | 389  | 8,8   | 1,61         | 1,45 | 282 | 4,9   | 1,27         | 1,27 | 224 | 3,2   |
|           | III   | MED | 335         | 2,16 | 1,55 | 377  | 8,4   | 1,92        | 1,45 | 335  | 6,7   | 1,39         | 1,24 | 244 | 3,8   | 1,08         | 1,08 | 191 | 2,4   |
|           | II    | MIN | 265         | 1,74 | 1,24 | 303  | 5,7   | 1,55        | 1,16 | 270  | 4,6   | 1,13         | 0,99 | 198 | 2,6   | 0,87         | 0,87 | 153 | 1,6   |
|           | I     |     | 185         | 1,26 | 0,89 | 218  | 3,2   | 1,12        | 0,83 | 194  | 2,6   | 0,83         | 0,71 | 144 | 1,5   | 0,62         | 0,62 | 108 | 0,9   |
| SEC/F 5.4 | VI    | MAX | 650         | 3,87 | 2,83 | 676  | 29,1  | 3,43        | 2,64 | 600  | 23,5  | 2,49         | 2,27 | 439 | 13,3  | 1,97         | 1,97 | 349 | 8,8   |
|           | V     |     | 545         | 3,35 | 2,42 | 585  | 22,6  | 2,97        | 2,26 | 519  | 18,2  | 2,16         | 1,94 | 380 | 10,4  | 1,69         | 1,69 | 299 | 6,7   |
|           | IV    | MED | 495         | 3,08 | 2,22 | 537  | 19,4  | 2,74        | 2,07 | 478  | 15,7  | 2,00         | 1,78 | 351 | 9,0   | 1,55         | 1,55 | 273 | 5,7   |
|           | III   |     | 420         | 2,69 | 1,93 | 468  | 15,2  | 2,39        | 1,80 | 416  | 12,3  | 1,75         | 1,54 | 306 | 7,1   | 1,35         | 1,35 | 237 | 4,5   |
|           | II    | MIN | 315         | 2,09 | 1,48 | 363  | 9,7   | 1,86        | 1,38 | 323  | 7,9   | 1,37         | 1,19 | 239 | 4,6   | 1,04         | 1,04 | 182 | 2,8   |
|           | I     |     | 250         | 1,70 | 1,20 | 296  | 6,8   | 1,52        | 1,12 | 265  | 5,6   | 1,12         | 0,96 | 196 | 3,2   | 0,84         | 0,84 | 148 | 1,9   |
| SEC/F 6.4 | VI    |     | 830         | 4,84 | 3,55 | 848  | 38,1  | 4,28        | 3,32 | 752  | 30,6  | 3,09         | 2,85 | 547 | 17,2  | 2,48         | 2,48 | 442 | 11,7  |
|           | V     | MAX | 760         | 4,52 | 3,30 | 791  | 33,8  | 4,00        | 3,09 | 702  | 27,1  | 2,89         | 2,65 | 511 | 15,4  | 2,30         | 2,30 | 409 | 10,2  |
|           | IV    |     | 680         | 4,14 | 3,00 | 724  | 28,8  | 3,66        | 2,81 | 642  | 23,2  | 2,66         | 2,41 | 470 | 13,2  | 2,09         | 2,09 | 372 | 8,7   |
|           | III   | MED | 590         | 3,66 | 2,64 | 638  | 23,1  | 3,25        | 2,47 | 568  | 18,7  | 2,37         | 2,12 | 416 | 10,7  | 1,84         | 1,84 | 325 | 6,8   |
|           | II    |     | 505         | 3,20 | 2,29 | 559  | 18,3  | 2,84        | 2,14 | 497  | 14,8  | 2,08         | 1,84 | 366 | 8,5   | 1,60         | 1,60 | 284 | 5,4   |
|           | I     | MIN | 415         | 2,68 | 1,91 | 468  | 13,4  | 2,39        | 1,78 | 418  | 10,9  | 1,75         | 1,53 | 308 | 6,3   | 1,33         | 1,33 | 236 | 3,9   |
| SEC/F 7.4 | VI    | MAX | 925         | 5,26 | 3,87 | 922  | 25,8  | 4,65        | 3,62 | 817  | 20,7  | 3,35         | 3,11 | 593 | 11,6  | 2,70         | 2,70 | 482 | 7,9   |
|           | V     |     | 840         | 4,88 | 3,57 | 855  | 22,6  | 4,32        | 3,34 | 759  | 18,1  | 3,12         | 2,86 | 552 | 10,2  | 2,49         | 2,49 | 444 | 6,9   |
|           | IV    | MED | 735         | 4,38 | 3,18 | 767  | 18,6  | 3,88        | 2,97 | 681  | 15,0  | 2,81         | 2,55 | 497 | 8,5   | 2,21         | 2,21 | 394 | 5,6   |
|           | III   |     | 630         | 3,85 | 2,78 | 674  | 14,9  | 3,41        | 2,59 | 599  | 12,0  | 2,48         | 2,22 | 439 | 6,8   | 1,93         | 1,93 | 344 | 4,4   |
|           | II    | MIN | 535         | 3,37 | 2,42 | 588  | 11,7  | 2,99        | 2,26 | 523  | 9,4   | 2,18         | 1,94 | 384 | 5,4   | 1,69         | 1,69 | 299 | 3,4   |
|           | I     |     | 445         | 2,87 | 2,05 | 501  | 8,8   | 2,56        | 1,91 | 447  | 7,1   | 1,87         | 1,64 | 329 | 4,1   | 1,43         | 1,43 | 253 | 2,6   |
| SEC/F 8.4 | VI    | MAX | 1200        | 6,08 | 4,61 | 1068 | 29,2  | 5,33        | 4,31 | 939  | 23,2  | 3,73         | 3,70 | 664 | 12,4  | 3,19         | 3,19 | 571 | 9,4   |
|           | V     |     | 1100        | 5,69 | 4,30 | 999  | 26,1  | 5,00        | 4,01 | 881  | 20,7  | 3,51         | 3,44 | 624 | 11,2  | 2,97         | 2,97 | 531 | 8,3   |
|           | IV    | MED | 1020        | 5,39 | 4,05 | 944  | 23,6  | 4,74        | 3,79 | 832  | 18,7  | 3,34         | 3,24 | 592 | 10,1  | 2,80         | 2,80 | 499 | 7,4   |
|           | III   |     | 815         | 4,53 | 3,36 | 793  | 17,3  | 3,99        | 3,14 | 700  | 13,9  | 2,83         | 2,68 | 501 | 7,6   | 2,34         | 2,34 | 416 | 5,4   |
|           | II    | MIN | 655         | 3,81 | 2,80 | 666  | 12,8  | 3,36        | 2,61 | 588  | 10,3  | 2,40         | 2,23 | 423 | 5,6   | 1,95         | 1,95 | 346 | 3,8   |
|           | I     |     | 510         | 3,09 | 2,24 | 540  | 8,8   | 2,73        | 2,09 | 478  | 7,0   | 1,96         | 1,78 | 346 | 4,0   | 1,55         | 1,55 | 275 | 2,5   |
| SEC/F 9.4 | VI    | MAX | 1500        | 7,11 | 5,48 | 1254 | 21,5  | 6,22        | 5,13 | 1101 | 17,0  | 4,54         | 4,54 | 812 | 9,8   | 3,78         | 3,78 | 681 | 7,1   |
|           | V     |     | 1365        | 6,69 | 5,13 | 1176 | 19,3  | 5,86        | 4,80 | 1034 | 15,2  | 4,25         | 4,25 | 757 | 8,7   | 3,54         | 3,54 | 635 | 6,3   |
|           | IV    | MED | 1210        | 6,14 | 4,67 | 1078 | 16,5  | 5,39        | 4,36 | 949  | 13,1  | 3,77         | 3,74 | 671 | 7,0   | 3,22         | 3,22 | 576 | 5,3   |
|           | III   |     | 980         | 5,23 | 3,92 | 918  | 12,5  | 4,60        | 3,66 | 810  | 9,9   | 3,24         | 3,13 | 576 | 5,4   | 2,70         | 2,70 | 483 | 3,9   |
|           | II    | MIN | 830         | 4,59 | 3,41 | 805  | 9,9   | 4,04        | 3,18 | 710  | 7,9   | 2,86         | 2,72 | 507 | 4,3   | 2,37         | 2,37 | 423 | 3,1   |
|           | I     |     | 735         | 4,17 | 3,07 | 731  | 8,3   | 3,67        | 2,87 | 645  | 6,6   | 2,61         | 2,45 | 463 | 3,7   | 2,14         | 2,14 | 382 | 2,6   |

## Correction factors for different R.H.

| R.H. | WT: | 7/12°C | 8/13°C | 10/15°C | 12/17°C |
|------|-----|--------|--------|---------|---------|
| 48%  | Pc  | 0,95   | 0,94   | 1,00    | 1,00    |
|      | Ps  | 1,00   | 1,00   | 1,00    | 1,00    |
| 46%  | Pc  | 0,90   | 0,88   | 1,00    | 1,00    |
|      | Ps  | 1,00   | 1,00   | 1,00    | 1,00    |

## LEGEND

WT = Water temperature

Pc = Cooling total emission

Ps = Cooling sensible emission

Qw = Water flow

Dp(c) = Water pressure drop

Speed = Fan speed

MAX = High speed

MED = Medium speed

MIN = Low speed

Qv = Air flow

## Cooling emission of 4 row coil

Entering air temperature: 25°C – R.H.: 50%

|           |       |     | WT: 7/12 °C |      |      |      |       | WT: 8/13 °C |      |     |       | WT: 10/15 °C |      |     |       | WT: 12/17 °C |      |     |       |
|-----------|-------|-----|-------------|------|------|------|-------|-------------|------|-----|-------|--------------|------|-----|-------|--------------|------|-----|-------|
| MODEL     | Speed |     | Qv          | Pc   | Ps   | Qw   | Dp(c) | Pc          | Ps   | Qw  | Dp(c) | Pc           | Ps   | Qw  | Dp(c) | Pc           | Ps   | Qw  | Dp(c) |
|           |       |     | m³/h        | kW   | kW   | l/h  | kPa   | kW          | kW   | l/h | kPa   | kW           | kW   | l/h | kPa   | kW           | kW   | l/h | kPa   |
| SEC/F 1.4 | VI    | MAX | 220         | 1,00 | 0,82 | 177  | 4,1   | 0,85        | 0,76 | 151 | 3,1   | 0,67         | 0,67 | 120 | 2,0   | 0,54         | 0,54 | 98  | 1,4   |
|           | V     |     | 195         | 0,90 | 0,73 | 160  | 3,4   | 0,77        | 0,68 | 138 | 2,6   | 0,60         | 0,60 | 108 | 1,7   | 0,48         | 0,48 | 88  | 1,2   |
|           | IV    | MED | 175         | 0,83 | 0,67 | 146  | 2,9   | 0,71        | 0,62 | 126 | 2,2   | 0,55         | 0,55 | 98  | 1,4   | 0,45         | 0,45 | 81  | 1,0   |
|           | III   |     | 150         | 0,73 | 0,58 | 129  | 2,3   | 0,62        | 0,54 | 110 | 1,8   | 0,47         | 0,47 | 84  | 1,1   | 0,38         | 0,38 | 69  | 0,8   |
|           | II    |     | 125         | 0,64 | 0,50 | 114  | 1,9   | 0,55        | 0,47 | 98  | 1,4   | 0,41         | 0,41 | 74  | 0,9   | 0,34         | 0,34 | 62  | 0,6   |
|           | I     | MIN | 105         | 0,55 | 0,42 | 98   | 1,4   | 0,47        | 0,39 | 84  | 1,1   | 0,35         | 0,35 | 64  | 0,7   | 0,28         | 0,28 | 52  | 0,5   |
| SEC/F 2.4 | VI    |     | 340         | 1,69 | 1,34 | 298  | 12,8  | 1,46        | 1,24 | 258 | 9,8   | 1,09         | 1,09 | 194 | 6,0   | 0,90         | 0,90 | 162 | 4,2   |
|           | V     | MAX | 295         | 1,51 | 1,18 | 265  | 10,4  | 1,30        | 1,10 | 229 | 8,0   | 0,97         | 0,97 | 172 | 4,7   | 0,79         | 0,79 | 141 | 3,4   |
|           | IV    |     | 250         | 1,32 | 1,02 | 232  | 8,2   | 1,14        | 0,95 | 201 | 6,4   | 0,83         | 0,83 | 148 | 3,7   | 0,68         | 0,68 | 122 | 2,6   |
|           | III   | MED | 220         | 1,19 | 0,92 | 208  | 6,8   | 1,03        | 0,85 | 181 | 5,3   | 0,75         | 0,75 | 132 | 3,0   | 0,62         | 0,62 | 110 | 2,1   |
|           | II    |     | 170         | 0,94 | 0,72 | 165  | 4,6   | 0,82        | 0,66 | 144 | 3,5   | 0,59         | 0,59 | 105 | 2,0   | 0,48         | 0,48 | 86  | 1,4   |
|           | I     | MIN | 145         | 0,85 | 0,64 | 148  | 3,7   | 0,74        | 0,59 | 129 | 2,9   | 0,53         | 0,53 | 93  | 1,6   | 0,43         | 0,43 | 76  | 1,1   |
| SEC/F 3.4 | VI    |     | 440         | 2,39 | 1,84 | 420  | 10,6  | 2,07        | 1,71 | 365 | 8,2   | 1,50         | 1,50 | 267 | 4,7   | 1,24         | 1,24 | 222 | 3,3   |
|           | V     | MAX | 385         | 2,14 | 1,64 | 375  | 8,7   | 1,86        | 1,52 | 327 | 6,7   | 1,34         | 1,34 | 237 | 3,8   | 1,10         | 1,10 | 196 | 2,7   |
|           | IV    |     | 325         | 1,85 | 1,40 | 323  | 6,7   | 1,61        | 1,30 | 282 | 5,2   | 1,15         | 1,15 | 203 | 2,9   | 0,95         | 0,95 | 169 | 2,0   |
|           | III   | MED | 270         | 1,59 | 1,20 | 277  | 5,1   | 1,38        | 1,11 | 241 | 4,0   | 0,93         | 0,93 | 163 | 2,0   | 0,81         | 0,81 | 143 | 1,5   |
|           | II    | MIN | 235         | 1,38 | 1,04 | 241  | 4,0   | 1,21        | 0,96 | 212 | 3,1   | 0,82         | 0,80 | 144 | 1,6   | 0,70         | 0,70 | 124 | 1,2   |
|           | I     |     | 185         | 1,13 | 0,84 | 196  | 2,8   | 0,99        | 0,78 | 172 | 2,2   | 0,68         | 0,66 | 119 | 1,1   | 0,57         | 0,57 | 100 | 0,8   |
| SEC/F 4.4 | VI    |     | 570         | 2,95 | 2,31 | 518  | 14,6  | 2,56        | 2,15 | 451 | 11,3  | 1,89         | 1,89 | 335 | 6,7   | 1,50         | 1,50 | 268 | 4,5   |
|           | V     | MAX | 485         | 2,60 | 2,02 | 454  | 11,6  | 2,26        | 1,87 | 396 | 9,0   | 1,65         | 1,65 | 291 | 5,2   | 1,36         | 1,36 | 241 | 3,7   |
|           | IV    |     | 400         | 2,22 | 1,70 | 387  | 8,8   | 1,93        | 1,58 | 337 | 6,8   | 1,40         | 1,40 | 246 | 3,8   | 1,15         | 1,15 | 203 | 2,7   |
|           | III   | MED | 335         | 1,91 | 1,45 | 334  | 6,7   | 1,66        | 1,35 | 291 | 5,3   | 1,19         | 1,19 | 210 | 2,9   | 0,98         | 0,98 | 174 | 2,1   |
|           | II    | MIN | 265         | 1,54 | 1,16 | 268  | 4,6   | 1,34        | 1,08 | 234 | 3,6   | 0,91         | 0,90 | 160 | 1,8   | 0,79         | 0,79 | 139 | 1,4   |
|           | I     |     | 185         | 1,12 | 0,83 | 194  | 2,6   | 0,98        | 0,77 | 170 | 2,0   | 0,67         | 0,65 | 117 | 1,0   | 0,56         | 0,56 | 98  | 0,8   |
| SEC/F 5.4 | VI    | MAX | 650         | 3,42 | 2,65 | 599  | 23,5  | 2,97        | 2,46 | 521 | 18,3  | 2,16         | 2,16 | 382 | 10,5  | 1,78         | 1,78 | 316 | 7,4   |
|           | V     |     | 545         | 2,96 | 2,27 | 518  | 18,2  | 2,58        | 2,11 | 452 | 14,2  | 1,85         | 1,85 | 327 | 8,0   | 1,53         | 1,53 | 272 | 5,7   |
|           | IV    | MED | 495         | 2,72 | 2,08 | 475  | 15,7  | 2,38        | 1,93 | 416 | 12,3  | 1,70         | 1,70 | 299 | 6,8   | 1,40         | 1,40 | 248 | 4,8   |
|           | III   |     | 420         | 2,38 | 1,80 | 415  | 12,3  | 2,08        | 1,68 | 363 | 9,7   | 1,48         | 1,48 | 260 | 5,3   | 1,22         | 1,22 | 215 | 3,8   |
|           | II    | MIN | 315         | 1,85 | 1,39 | 322  | 7,9   | 1,62        | 1,29 | 282 | 6,2   | 1,11         | 1,09 | 194 | 3,2   | 0,94         | 0,94 | 165 | 2,4   |
|           | I     |     | 250         | 1,51 | 1,13 | 263  | 5,5   | 1,32        | 1,05 | 230 | 4,4   | 0,91         | 0,88 | 160 | 2,3   | 0,76         | 0,76 | 134 | 1,6   |
| SEC/F 6.4 | VI    |     | 830         | 4,27 | 3,33 | 750  | 30,7  | 3,70        | 3,09 | 652 | 23,9  | 2,72         | 2,72 | 483 | 13,9  | 2,24         | 2,24 | 401 | 9,9   |
|           | V     | MAX | 760         | 3,99 | 3,09 | 700  | 27,2  | 3,46        | 2,87 | 609 | 21,2  | 2,53         | 2,53 | 449 | 12,2  | 2,08         | 2,08 | 372 | 8,6   |
|           | IV    |     | 680         | 3,65 | 2,81 | 640  | 23,2  | 3,17        | 2,62 | 557 | 18,1  | 2,30         | 2,30 | 408 | 10,3  | 1,89         | 1,89 | 337 | 7,3   |
|           | III   | MED | 590         | 3,24 | 2,48 | 566  | 18,7  | 2,82        | 2,30 | 494 | 14,6  | 2,02         | 2,02 | 356 | 8,1   | 1,67         | 1,67 | 296 | 5,8   |
|           | II    |     | 505         | 2,83 | 2,15 | 495  | 14,8  | 2,47        | 2,00 | 433 | 11,6  | 1,75         | 1,75 | 310 | 6,4   | 1,45         | 1,45 | 258 | 4,5   |
|           | I     | MIN | 415         | 2,38 | 1,79 | 416  | 10,9  | 2,08        | 1,66 | 365 | 8,5   | 1,41         | 1,39 | 249 | 4,3   | 1,21         | 1,21 | 215 | 3,3   |
| SEC/F 7.4 | VI    | MAX | 925         | 4,64 | 3,63 | 815  | 20,7  | 4,02        | 3,37 | 709 | 16,1  | 2,96         | 2,96 | 526 | 9,4   | 2,44         | 2,44 | 437 | 6,7   |
|           | V     |     | 840         | 4,30 | 3,35 | 755  | 18,2  | 3,74        | 3,11 | 659 | 14,1  | 2,73         | 2,73 | 485 | 8,2   | 2,25         | 2,25 | 402 | 5,8   |
|           | IV    | MED | 735         | 3,86 | 2,98 | 678  | 15,0  | 3,36        | 2,77 | 592 | 11,7  | 2,43         | 2,43 | 432 | 6,7   | 2,00         | 2,00 | 358 | 4,7   |
|           | III   |     | 630         | 3,40 | 2,60 | 597  | 12,0  | 2,96        | 2,42 | 521 | 9,4   | 2,12         | 2,12 | 377 | 5,2   | 1,75         | 1,75 | 313 | 3,7   |
|           | II    | MIN | 535         | 2,98 | 2,27 | 521  | 9,4   | 2,60        | 2,11 | 456 | 7,4   | 1,86         | 1,86 | 329 | 4,1   | 1,53         | 1,53 | 272 | 2,9   |
|           | I     |     | 445         | 2,54 | 1,92 | 444  | 7,1   | 2,22        | 1,78 | 389 | 5,6   | 1,51         | 1,50 | 267 | 2,8   | 1,30         | 1,30 | 230 | 2,2   |
| SEC/F 8.4 | VI    | MAX | 1200        | 5,32 | 4,32 | 937  | 23,2  | 4,58        | 4,02 | 810 | 17,8  | 3,51         | 3,51 | 626 | 11,2  | 2,87         | 2,87 | 516 | 7,9   |
|           | V     |     | 1100        | 4,99 | 4,02 | 879  | 20,7  | 4,29        | 3,74 | 759 | 15,8  | 3,27         | 3,27 | 583 | 9,9   | 2,67         | 2,67 | 480 | 6,8   |
|           | IV    | MED | 1020        | 4,73 | 3,79 | 831  | 18,7  | 4,07        | 3,53 | 717 | 14,4  | 3,08         | 3,08 | 547 | 8,8   | 2,53         | 2,53 | 452 | 6,3   |
|           | III   |     | 815         | 3,98 | 3,14 | 698  | 13,9  | 3,43        | 2,92 | 604 | 10,6  | 2,57         | 2,57 | 456 | 6,5   | 2,11         | 2,11 | 377 | 4,5   |
|           | II    | MIN | 655         | 3,35 | 2,62 | 587  | 10,3  | 2,90        | 2,43 | 509 | 7,9   | 2,14         | 2,14 | 378 | 4,7   | 1,76         | 1,76 | 313 | 3,2   |
|           | I     |     | 510         | 2,72 | 2,09 | 476  | 7,0   | 2,36        | 1,94 | 415 | 5,4   | 1,70         | 1,70 | 301 | 3,1   | 1,40         | 1,40 | 249 | 2,2   |
| SEC/F 9.4 | VI    | MAX | 1500        | 6,22 | 5,14 | 1101 | 17,1  | 5,33        | 4,78 | 948 | 13,1  | 4,16         | 4,16 | 746 | 8,5   | 3,39         | 3,39 | 614 | 5,9   |
|           | V     |     | 1365        | 5,85 | 4,80 | 1032 | 15,3  | 5,02        | 4,47 | 889 | 11,7  | 3,90         | 3,90 | 697 | 7,5   | 3,18         | 3,18 | 573 | 5,3   |
|           | IV    | MED | 1210        | 5,38 | 4,37 | 948  | 13,1  | 4,62        | 4,06 | 817 | 10,1  | 3,55         | 3,55 | 633 | 6,3   | 2,90         | 2,90 | 521 | 4,4   |
|           | III   |     | 980         | 4,58 | 3,67 | 807  | 9,9   | 3,95        | 3,41 | 698 | 7,6   | 2,98         | 2,98 | 531 | 4,7   | 2,44         | 2,44 | 439 | 3,3   |
|           | II    | MIN | 830         | 4,03 | 3,18 | 709  | 7,9   | 3,48        | 2,96 | 614 | 6,1   | 2,61         | 2,61 | 464 | 3,7   | 2,14         | 2,14 | 384 | 2,6   |
|           | I     |     | 735         | 3,66 | 2,87 | 643  | 6,7   | 3,16        | 2,67 | 557 | 5,1   | 2,35         | 2,35 | 418 | 3,1   | 1,93         | 1,93 | 346 | 2,2   |

## Correction factors for different R.H.

| R.H. | WT: | 7/12°C | 8/13°C | 10/15°C | 12/17°C |
|------|-----|--------|--------|---------|---------|
| 48%  | Pc  | 0,95   | 0,94   | 1,00    | 1,00    |
|      | Ps  | 1,00   | 1,00   | 1,00    | 1,00    |
| 46%  | Pc  | 0,90   | 0,88   | 1,00    | 1,00    |
|      | Ps  | 1,00   | 1,00   | 1,00    | 1,00    |

## LEGEND

WT = Water temperature

Pc = Cooling total emission

Ps = Cooling sensible emission

Qw = Water flow

Dp(c) = Water pressure drop

Speed = Fan speed

MAX = High speed

MED = Medium speed

MIN = Low speed

Qv = Air flow

## Heating emission of 3 row coil

Entering air temperature: 20°C

|           |       |     | WT: 70/60 °C |       |      |       | WT: 60/50 °C |      |       | WT: 50/40 °C |     |       | WT: 50/45 °C |      |       | WT: 45/40 °C |      |       |
|-----------|-------|-----|--------------|-------|------|-------|--------------|------|-------|--------------|-----|-------|--------------|------|-------|--------------|------|-------|
| MODEL     | Speed |     | Qv           | Ph    | Qw   | Dp(c) | Ph           | Qw   | Dp(c) | Ph           | Qw  | Dp(c) | Ph           | Qw   | Dp(c) | Ph           | Qw   | Dp(c) |
|           |       |     | m³/h         | kW    | l/h  | kPa   | kW           | l/h  | kPa   | kW           | l/h | kPa   | kW           | l/h  | kPa   | kW           | l/h  | kPa   |
| SEC/F 1.3 | VI    | MAX | 220          | 2,42  | 208  | 2,4   | 1,83         | 157  | 1,5   | 1,25         | 108 | 0,8   | 1,48         | 255  | 3,7   | 1,19         | 205  | 2,5   |
|           | V     |     | 195          | 2,18  | 187  | 2,0   | 1,66         | 143  | 1,3   | 1,13         | 97  | 0,7   | 1,33         | 229  | 3,1   | 1,07         | 184  | 2,1   |
|           | IV    | MED | 175          | 1,99  | 171  | 1,7   | 1,51         | 130  | 1,1   | 1,03         | 89  | 0,6   | 1,21         | 208  | 2,6   | 0,98         | 169  | 1,8   |
|           | III   |     | 150          | 1,75  | 151  | 1,4   | 1,33         | 114  | 0,9   | 0,91         | 78  | 0,5   | 1,07         | 184  | 2,1   | 0,86         | 148  | 1,4   |
|           | II    |     | 125          | 1,53  | 132  | 1,1   | 1,17         | 101  | 0,7   | 0,80         | 69  | 0,4   | 0,94         | 162  | 1,6   | 0,76         | 131  | 1,1   |
|           | I     | MIN | 105          | 1,31  | 113  | 0,8   | 1,00         | 86   | 0,5   | 0,68         | 58  | 0,3   | 0,80         | 138  | 1,2   | 0,64         | 110  | 0,9   |
| SEC/F 2.3 | VI    |     | 340          | 3,89  | 335  | 7,5   | 2,97         | 255  | 4,8   | 2,05         | 176 | 2,6   | 2,38         | 409  | 11,2  | 1,92         | 330  | 7,9   |
|           | V     | MAX | 295          | 3,44  | 296  | 6,0   | 2,63         | 226  | 3,9   | 1,82         | 157 | 2,1   | 2,10         | 361  | 9,1   | 1,70         | 292  | 6,4   |
|           | IV    |     | 250          | 3,00  | 258  | 4,7   | 2,30         | 198  | 3,0   | 1,59         | 137 | 1,6   | 1,84         | 316  | 7,1   | 1,49         | 256  | 5,0   |
|           | III   | MED | 220          | 2,70  | 232  | 3,9   | 2,07         | 178  | 2,5   | 1,43         | 123 | 1,4   | 1,65         | 284  | 5,9   | 1,34         | 230  | 4,2   |
|           | II    |     | 170          | 2,14  | 184  | 2,6   | 1,64         | 141  | 1,7   | 1,14         | 98  | 0,9   | 1,31         | 225  | 3,9   | 1,06         | 182  | 2,8   |
|           | I     | MIN | 145          | 1,90  | 163  | 2,1   | 1,46         | 126  | 1,4   | 1,01         | 87  | 0,7   | 1,16         | 200  | 3,2   | 0,94         | 162  | 2,2   |
| SEC/F 3.3 | VI    |     | 440          | 5,52  | 475  | 19,8  | 4,24         | 365  | 12,8  | 2,96         | 255 | 7,0   | 3,37         | 580  | 29,8  | 2,74         | 471  | 21,0  |
|           | V     | MAX | 385          | 4,92  | 423  | 16,1  | 3,78         | 325  | 10,5  | 2,64         | 227 | 5,8   | 3,00         | 516  | 24,3  | 2,44         | 420  | 17,1  |
|           | IV    |     | 325          | 4,24  | 365  | 12,4  | 3,26         | 280  | 8,1   | 2,28         | 196 | 4,5   | 2,59         | 445  | 18,7  | 2,10         | 361  | 13,2  |
|           | III   | MED | 270          | 3,61  | 310  | 9,4   | 2,78         | 239  | 6,1   | 1,95         | 168 | 3,4   | 2,21         | 380  | 14,1  | 1,79         | 308  | 10,0  |
|           | II    | MIN | 235          | 3,14  | 270  | 7,3   | 2,42         | 208  | 4,8   | 1,70         | 146 | 2,6   | 1,92         | 330  | 11,0  | 1,56         | 268  | 7,8   |
|           | I     |     | 185          | 2,54  | 218  | 5,1   | 1,96         | 169  | 3,3   | 1,38         | 119 | 1,8   | 1,55         | 267  | 7,6   | 1,26         | 217  | 5,4   |
| SEC/F 4.3 | VI    |     | 570          | 6,87  | 591  | 29,1  | 5,27         | 453  | 18,8  | 3,67         | 316 | 10,3  | 4,20         | 722  | 43,8  | 3,41         | 587  | 30,8  |
|           | V     | MAX | 485          | 6,00  | 516  | 22,9  | 4,60         | 396  | 14,8  | 3,21         | 276 | 8,1   | 3,66         | 630  | 34,4  | 2,97         | 511  | 24,3  |
|           | IV    |     | 400          | 5,08  | 437  | 17,1  | 3,90         | 335  | 11,1  | 2,73         | 235 | 6,1   | 3,10         | 533  | 25,7  | 2,52         | 433  | 18,2  |
|           | III   | MED | 335          | 4,36  | 375  | 13,1  | 3,36         | 289  | 8,5   | 2,36         | 203 | 4,7   | 2,68         | 461  | 19,9  | 2,18         | 375  | 14,0  |
|           | II    | MIN | 265          | 3,51  | 302  | 8,9   | 2,70         | 232  | 5,8   | 1,89         | 163 | 3,2   | 2,14         | 368  | 13,4  | 1,74         | 299  | 9,5   |
|           | I     |     | 185          | 2,51  | 216  | 5,0   | 1,94         | 167  | 3,2   | 1,36         | 117 | 1,8   | 1,54         | 265  | 7,5   | 1,25         | 215  | 5,3   |
| SEC/F 5.3 | VI    | MAX | 650          | 7,57  | 651  | 13,5  | 5,81         | 500  | 8,7   | 4,04         | 347 | 4,7   | 4,62         | 795  | 20,2  | 3,75         | 645  | 14,2  |
|           | V     |     | 545          | 6,54  | 562  | 10,4  | 5,02         | 432  | 6,7   | 3,49         | 300 | 3,7   | 3,99         | 686  | 15,6  | 3,24         | 557  | 11,0  |
|           | IV    | MED | 495          | 6,04  | 519  | 9,0   | 4,64         | 399  | 5,9   | 3,23         | 278 | 3,2   | 3,69         | 635  | 13,6  | 3,00         | 516  | 9,6   |
|           | III   |     | 420          | 5,26  | 452  | 7,1   | 4,04         | 347  | 4,6   | 2,82         | 243 | 2,5   | 3,21         | 552  | 10,6  | 2,61         | 449  | 7,5   |
|           | II    | MIN | 315          | 4,07  | 350  | 4,5   | 3,13         | 269  | 2,9   | 2,19         | 188 | 1,6   | 2,49         | 428  | 6,8   | 2,02         | 347  | 4,8   |
|           | I     |     | 250          | 3,32  | 286  | 3,2   | 2,56         | 220  | 2,1   | 1,79         | 154 | 1,1   | 2,03         | 349  | 4,8   | 1,65         | 284  | 3,4   |
| SEC/F 6.3 | VI    |     | 830          | 9,22  | 793  | 19,0  | 7,06         | 607  | 12,3  | 4,91         | 422 | 6,7   | 5,63         | 968  | 28,6  | 4,56         | 784  | 20,1  |
|           | V     | MAX | 760          | 8,61  | 740  | 16,9  | 6,59         | 567  | 10,9  | 4,58         | 394 | 5,9   | 5,26         | 905  | 25,3  | 4,26         | 733  | 17,8  |
|           | IV    |     | 680          | 7,87  | 677  | 14,4  | 6,03         | 519  | 9,3   | 4,20         | 361 | 5,1   | 4,81         | 827  | 21,7  | 3,90         | 671  | 15,2  |
|           | III   | MED | 590          | 6,96  | 599  | 11,6  | 5,34         | 459  | 7,5   | 3,71         | 319 | 4,1   | 4,25         | 731  | 17,4  | 3,45         | 593  | 12,3  |
|           | II    |     | 505          | 6,15  | 529  | 9,3   | 4,72         | 406  | 6,0   | 3,29         | 283 | 3,3   | 3,76         | 647  | 14,0  | 3,05         | 525  | 9,9   |
|           | I     | MIN | 415          | 5,17  | 445  | 6,9   | 3,97         | 341  | 4,4   | 2,77         | 238 | 2,4   | 3,15         | 542  | 10,3  | 2,56         | 440  | 7,3   |
| SEC/F 7.3 | VI    | MAX | 925          | 10,55 | 907  | 28,1  | 8,10         | 697  | 18,2  | 5,64         | 485 | 10,0  | 6,44         | 1108 | 42,2  | 5,23         | 900  | 29,7  |
|           | V     |     | 840          | 9,76  | 839  | 24,5  | 7,49         | 644  | 15,8  | 5,22         | 449 | 8,7   | 5,96         | 1025 | 36,8  | 4,83         | 831  | 25,9  |
|           | IV    | MED | 735          | 8,73  | 751  | 20,1  | 6,71         | 577  | 13,0  | 4,68         | 402 | 7,2   | 5,33         | 917  | 30,3  | 4,33         | 745  | 21,3  |
|           | III   |     | 630          | 7,67  | 660  | 16,0  | 5,93         | 510  | 10,5  | 4,15         | 357 | 5,8   | 4,71         | 810  | 24,4  | 3,83         | 659  | 17,2  |
|           | II    | MIN | 535          | 6,72  | 578  | 12,7  | 5,17         | 445  | 8,3   | 3,62         | 311 | 4,5   | 4,11         | 707  | 19,1  | 3,34         | 574  | 13,5  |
|           | I     |     | 445          | 5,71  | 491  | 9,5   | 4,39         | 378  | 6,2   | 3,08         | 265 | 3,4   | 3,49         | 600  | 14,3  | 2,83         | 487  | 10,1  |
| SEC/F 8.3 | VI    | MAX | 1200         | 13,25 | 1140 | 18,5  | 10,13        | 871  | 11,9  | 7,01         | 603 | 6,5   | 8,09         | 1391 | 27,9  | 6,55         | 1127 | 19,6  |
|           | V     |     | 1100         | 12,36 | 1063 | 16,4  | 9,45         | 813  | 10,6  | 6,55         | 563 | 5,7   | 7,55         | 1299 | 24,7  | 6,11         | 1051 | 17,3  |
|           | IV    | MED | 1020         | 11,63 | 1000 | 14,7  | 8,90         | 765  | 9,5   | 6,17         | 531 | 5,2   | 7,10         | 1221 | 22,2  | 5,75         | 989  | 15,6  |
|           | III   |     | 815          | 9,67  | 832  | 10,6  | 7,40         | 636  | 6,9   | 5,14         | 442 | 3,7   | 5,90         | 1015 | 16,0  | 4,78         | 822  | 11,3  |
|           | II    | MIN | 655          | 8,11  | 697  | 7,8   | 6,22         | 535  | 5,1   | 4,33         | 372 | 2,8   | 4,96         | 853  | 11,8  | 4,02         | 691  | 8,3   |
|           | I     |     | 510          | 6,49  | 558  | 5,3   | 4,98         | 428  | 3,4   | 3,47         | 298 | 1,9   | 3,97         | 683  | 7,9   | 3,22         | 554  | 5,6   |
| SEC/F 9.3 | VI    | MAX | 1500         | 15,74 | 1354 | 25,1  | 12,03        | 1035 | 16,1  | 8,31         | 715 | 8,7   | 9,61         | 1653 | 37,8  | 7,78         | 1338 | 26,5  |
|           | V     |     | 1365         | 14,70 | 1264 | 22,3  | 11,23        | 966  | 14,3  | 7,77         | 668 | 7,7   | 8,98         | 1545 | 33,5  | 7,26         | 1249 | 23,5  |
|           | IV    | MED | 1210         | 13,39 | 1152 | 18,9  | 10,24        | 881  | 12,1  | 7,09         | 610 | 6,6   | 8,18         | 1407 | 28,4  | 6,62         | 1139 | 19,9  |
|           | III   |     | 980          | 11,29 | 971  | 14,0  | 8,64         | 743  | 9,0   | 5,99         | 515 | 4,9   | 6,89         | 1185 | 21,0  | 5,58         | 960  | 14,8  |
|           | II    | MIN | 830          | 9,82  | 845  | 11,0  | 7,52         | 647  | 7,1   | 5,22         | 449 | 3,8   | 6,00         | 1032 | 16,5  | 4,86         | 836  | 11,6  |
|           | I     |     | 735          | 8,87  | 763  | 9,2   | 6,85         | 589  | 6,0   | 4,76         | 409 | 3,3   | 5,46         | 939  | 13,9  | 4,42         | 760  | 9,8   |

## LEGEND

WT = Water temperature

Speed = Fan speed

Ph = Emission

MAX = High speed

Qw = Water flow

MED = Medium speed

Dp(c) = Water pressure drop

MIN = Low speed

Qv = Air flow

## Heating emission of 4 row coil

Entering air temperature: 20°C

| MODEL     | Speed |     | WT: 70/60 °C |       |      |       | WT: 60/50 °C |      |       | WT: 50/40 °C |     |       | WT: 50/45 °C |      |       | WT: 45/40 °C |      |       |
|-----------|-------|-----|--------------|-------|------|-------|--------------|------|-------|--------------|-----|-------|--------------|------|-------|--------------|------|-------|
|           |       |     | Qv           | Ph    | Qw   | Dp(c) | Ph           | Qw   | Dp(c) | Ph           | Qw  | Dp(c) | Ph           | Qw   | Dp(c) | Ph           | Qw   | Dp(c) |
|           |       |     | m³/h         | kW    | l/h  | kPa   | kW           | l/h  | kPa   | kW           | l/h | kPa   | kW           | l/h  | kPa   | kW           | l/h  | kPa   |
| SEC/F 1.4 | VI    | MAX | 220          | 2.63  | 226  | 4.9   | 2.00         | 172  | 3.1   | 1.38         | 119 | 1.7   | 1.60         | 275  | 7.3   | 1.30         | 224  | 5.1   |
|           | V     |     | 195          | 2.36  | 203  | 4.0   | 1.80         | 155  | 2.6   | 1.24         | 107 | 1.4   | 1.44         | 248  | 6.1   | 1.17         | 201  | 4.3   |
|           | IV    | MED | 175          | 2.15  | 185  | 3.4   | 1.64         | 141  | 2.2   | 1.14         | 98  | 1.2   | 1.32         | 227  | 5.2   | 1.06         | 182  | 3.6   |
|           | III   |     | 150          | 1.86  | 160  | 2.7   | 1.43         | 123  | 1.7   | 0.99         | 85  | 0.9   | 1.14         | 196  | 4.0   | 0.92         | 158  | 2.8   |
|           | II    |     | 125          | 1.62  | 139  | 2.1   | 1.24         | 107  | 1.3   | 0.86         | 74  | 0.7   | 0.99         | 170  | 3.1   | 0.80         | 138  | 2.2   |
|           | I     | MIN | 105          | 1.38  | 119  | 1.6   | 1.06         | 91   | 1.0   | 0.73         | 63  | 0.5   | 0.84         | 144  | 2.4   | 0.68         | 117  | 1.7   |
| SEC/F 2.4 | VI    |     | 340          | 4.19  | 360  | 14.0  | 3.22         | 277  | 9.0   | 2.24         | 193 | 4.9   | 2.56         | 440  | 21.0  | 2.08         | 358  | 14.8  |
|           | V     | MAX | 295          | 3.69  | 317  | 11.1  | 2.83         | 243  | 7.2   | 1.97         | 169 | 3.9   | 2.25         | 387  | 16.7  | 1.83         | 315  | 11.8  |
|           | IV    |     | 250          | 3.22  | 277  | 8.7   | 2.47         | 212  | 5.7   | 1.72         | 148 | 3.1   | 1.97         | 339  | 13.2  | 1.60         | 275  | 9.3   |
|           | III   | MED | 220          | 2.88  | 248  | 7.2   | 2.21         | 190  | 4.7   | 1.54         | 132 | 2.6   | 1.76         | 303  | 10.8  | 1.43         | 246  | 7.6   |
|           | II    |     | 170          | 2.24  | 193  | 4.6   | 1.73         | 149  | 3.0   | 1.21         | 104 | 1.7   | 1.37         | 236  | 7.0   | 1.11         | 191  | 4.9   |
|           | I     | MIN | 145          | 1.98  | 170  | 3.7   | 1.53         | 132  | 2.4   | 1.07         | 92  | 1.3   | 1.21         | 208  | 5.6   | 0.99         | 170  | 4.0   |
| SEC/F 3.4 | VI    |     | 440          | 5.80  | 499  | 10.8  | 4.46         | 384  | 7.0   | 3.12         | 268 | 3.9   | 3.55         | 611  | 16.3  | 2.88         | 495  | 11.5  |
|           | V     | MAX | 385          | 5.14  | 442  | 8.7   | 3.96         | 341  | 5.7   | 2.77         | 238 | 3.1   | 3.14         | 540  | 13.2  | 2.56         | 440  | 9.3   |
|           | IV    |     | 325          | 4.40  | 378  | 6.6   | 3.39         | 292  | 4.3   | 2.38         | 205 | 2.4   | 2.69         | 463  | 10.0  | 2.19         | 377  | 7.1   |
|           | III   | MED | 270          | 3.73  | 321  | 5.0   | 2.87         | 247  | 3.2   | 2.02         | 174 | 1.8   | 2.28         | 392  | 7.5   | 1.85         | 318  | 5.3   |
|           | II    | MIN | 235          | 3.23  | 278  | 3.9   | 2.49         | 214  | 2.5   | 1.75         | 151 | 1.4   | 1.98         | 341  | 5.8   | 1.61         | 277  | 4.1   |
|           | I     |     | 185          | 2.60  | 224  | 2.6   | 2.01         | 173  | 1.7   | 1.41         | 121 | 1.0   | 1.59         | 273  | 4.0   | 1.30         | 224  | 2.8   |
| SEC/F 4.4 | VI    |     | 570          | 7.30  | 628  | 15.4  | 5.60         | 482  | 10.0  | 3.90         | 335 | 5.5   | 4.46         | 767  | 23.2  | 3.62         | 623  | 16.4  |
|           | V     | MAX | 485          | 6.33  | 544  | 12.0  | 4.86         | 418  | 7.8   | 3.39         | 292 | 4.3   | 3.87         | 666  | 18.1  | 3.14         | 540  | 12.8  |
|           | IV    |     | 400          | 5.32  | 458  | 8.9   | 4.09         | 352  | 5.8   | 2.86         | 246 | 3.2   | 3.25         | 559  | 13.3  | 2.64         | 454  | 9.4   |
|           | III   | MED | 335          | 4.56  | 392  | 6.8   | 3.51         | 302  | 4.4   | 2.46         | 212 | 2.4   | 2.79         | 480  | 10.2  | 2.27         | 390  | 7.2   |
|           | II    | MIN | 265          | 3.62  | 311  | 4.5   | 2.79         | 240  | 2.9   | 1.96         | 169 | 1.6   | 2.21         | 380  | 6.8   | 1.80         | 310  | 4.8   |
|           | I     |     | 185          | 2.57  | 221  | 2.5   | 1.99         | 171  | 1.6   | 1.40         | 120 | 0.9   | 1.57         | 270  | 3.7   | 1.28         | 220  | 2.6   |
| SEC/F 5.4 | VI    | MAX | 650          | 8.07  | 694  | 23.7  | 6.21         | 534  | 15.4  | 4.34         | 373 | 8.5   | 4.93         | 848  | 35.7  | 4.01         | 690  | 25.2  |
|           | V     |     | 545          | 6.97  | 599  | 18.3  | 5.36         | 461  | 11.9  | 3.76         | 323 | 6.6   | 4.26         | 733  | 27.6  | 3.46         | 595  | 19.5  |
|           | IV    | MED | 495          | 6.37  | 548  | 15.6  | 4.90         | 421  | 10.2  | 3.44         | 296 | 5.6   | 3.89         | 669  | 23.5  | 3.16         | 544  | 16.6  |
|           | III   |     | 420          | 5.51  | 474  | 12.1  | 4.24         | 365  | 7.9   | 2.97         | 255 | 4.4   | 3.36         | 578  | 18.2  | 2.74         | 471  | 12.9  |
|           | II    | MIN | 315          | 4.23  | 364  | 7.6   | 3.26         | 280  | 5.0   | 2.29         | 197 | 2.8   | 2.58         | 444  | 11.4  | 2.10         | 361  | 8.1   |
|           | I     |     | 250          | 3.44  | 296  | 5.3   | 2.65         | 228  | 3.4   | 1.87         | 161 | 1.9   | 2.10         | 361  | 7.9   | 1.71         | 294  | 5.6   |
| SEC/F 6.4 | VI    |     | 830          | 10.68 | 918  | 34.1  | 8.22         | 707  | 22.2  | 5.75         | 495 | 12.2  | 6.53         | 1123 | 51.4  | 5.31         | 913  | 36.3  |
|           | V     | MAX | 760          | 9.90  | 851  | 29.9  | 7.62         | 655  | 19.4  | 5.34         | 459 | 10.7  | 6.05         | 1041 | 44.9  | 4.92         | 846  | 31.8  |
|           | IV    |     | 680          | 8.98  | 772  | 25.2  | 6.92         | 595  | 16.4  | 4.85         | 417 | 9.1   | 5.49         | 944  | 37.9  | 4.46         | 767  | 26.8  |
|           | III   | MED | 590          | 7.85  | 675  | 19.8  | 6.05         | 520  | 12.9  | 4.24         | 365 | 7.2   | 4.80         | 826  | 29.9  | 3.90         | 671  | 21.1  |
|           | II    |     | 505          | 6.81  | 586  | 15.5  | 5.25         | 452  | 10.1  | 3.69         | 317 | 5.6   | 4.17         | 717  | 23.3  | 3.39         | 583  | 16.5  |
|           | I     | MIN | 415          | 5.66  | 487  | 11.2  | 4.37         | 376  | 7.3   | 3.07         | 264 | 4.1   | 3.46         | 595  | 16.8  | 2.82         | 485  | 11.9  |
| SEC/F 7.4 | VI    | MAX | 925          | 11.26 | 968  | 21.9  | 8.65         | 744  | 14.2  | 6.05         | 520 | 7.8   | 6.88         | 1183 | 32.8  | 5.59         | 961  | 23.2  |
|           | V     |     | 840          | 10.38 | 893  | 18.9  | 7.98         | 686  | 12.3  | 5.58         | 480 | 6.8   | 6.34         | 1090 | 28.5  | 5.15         | 886  | 20.1  |
|           | IV    | MED | 735          | 9.30  | 800  | 15.6  | 7.16         | 616  | 10.2  | 5.01         | 431 | 5.6   | 5.68         | 977  | 23.5  | 4.62         | 795  | 16.6  |
|           | III   |     | 630          | 8.12  | 698  | 12.3  | 6.25         | 538  | 8.0   | 4.38         | 377 | 4.4   | 4.96         | 853  | 18.5  | 4.03         | 693  | 13.1  |
|           | II    | MIN | 535          | 7.02  | 604  | 9.5   | 5.41         | 465  | 6.2   | 3.79         | 326 | 3.4   | 4.29         | 738  | 14.3  | 3.49         | 600  | 10.1  |
|           | I     |     | 445          | 5.93  | 510  | 7.1   | 4.57         | 393  | 4.6   | 3.21         | 276 | 2.6   | 3.63         | 624  | 10.6  | 2.95         | 507  | 7.5   |
| SEC/F 8.4 | VI    | MAX | 1200         | 14.36 | 1235 | 16.3  | 11.00        | 946  | 10.5  | 7.63         | 656 | 5.7   | 8.77         | 1508 | 24.5  | 7.11         | 1223 | 17.2  |
|           | V     |     | 1100         | 13.34 | 1147 | 14.3  | 10.22        | 879  | 9.2   | 7.10         | 611 | 5.0   | 8.15         | 1402 | 21.6  | 6.60         | 1135 | 15.2  |
|           | IV    | MED | 1020         | 12.52 | 1077 | 12.8  | 9.60         | 826  | 8.3   | 6.67         | 574 | 4.5   | 7.65         | 1316 | 19.3  | 6.20         | 1066 | 13.6  |
|           | III   |     | 815          | 10.37 | 892  | 9.2   | 7.96         | 685  | 6.0   | 5.54         | 476 | 3.3   | 6.34         | 1090 | 13.8  | 5.14         | 884  | 9.8   |
|           | II    | MIN | 655          | 8.55  | 735  | 6.6   | 6.57         | 565  | 4.2   | 4.58         | 394 | 2.3   | 5.23         | 900  | 9.9   | 4.24         | 729  | 7.0   |
|           | I     |     | 510          | 6.78  | 583  | 4.4   | 5.22         | 449  | 2.8   | 3.65         | 314 | 1.6   | 4.15         | 714  | 6.6   | 3.37         | 580  | 4.6   |
| SEC/F 9.4 | VI    | MAX | 1500         | 17.23 | 1482 | 22.5  | 13.18        | 1133 | 14.5  | 9.13         | 785 | 7.8   | 10.53        | 1811 | 33.8  | 8.52         | 1465 | 23.7  |
|           | V     |     | 1365         | 16.02 | 1378 | 19.8  | 12.26        | 1054 | 12.7  | 8.50         | 731 | 6.9   | 9.79         | 1684 | 29.7  | 7.93         | 1364 | 20.9  |
|           | IV    | MED | 1210         | 14.52 | 1249 | 16.6  | 11.12        | 956  | 10.7  | 7.71         | 663 | 5.8   | 8.87         | 1526 | 25.0  | 7.18         | 1235 | 17.6  |
|           | III   |     | 980          | 12.13 | 1043 | 12.1  | 9.30         | 800  | 7.8   | 6.46         | 556 | 4.3   | 7.41         | 1275 | 18.2  | 6.01         | 1034 | 12.8  |
|           | II    | MIN | 830          | 10.55 | 907  | 9.5   | 8.09         | 696  | 6.1   | 5.63         | 484 | 3.4   | 6.44         | 1108 | 14.3  | 5.23         | 900  | 10.0  |
|           | I     |     | 735          | 9.47  | 814  | 7.8   | 7.27         | 625  | 5.1   | 5.07         | 436 | 2.8   | 5.79         | 996  | 11.8  | 4.70         | 808  | 8.3   |

## LEGEND

WT = Water temperature

Ph = Emission

Qw = Water flow

Dp(c) = Water pressure drop

Speed = Fan speed

MAX = High speed

MED = Medium speed

MIN = Low speed

Qv = Air flow

## Heating emission of 1 row additional coil

Entering air temperature: 20°C

|         |       |     | WT: 80/70 °C |      |     |       | WT: 75/65 °C |     |       | WT: 70/60 °C |     |       | WT: 65/55 °C |     |       | WT: 60/50 °C |     |       | WT: 55/45 °C |     |       |
|---------|-------|-----|--------------|------|-----|-------|--------------|-----|-------|--------------|-----|-------|--------------|-----|-------|--------------|-----|-------|--------------|-----|-------|
| MODEL   | Speed |     | Qv           | Ph   | Qw  | Dp(c) | Ph           | Qw  | Dp(c) | Ph           | Qw  | Dp(c) | Ph           | Qw  | Dp(c) | Ph           | Qw  | Dp(c) | Ph           | Qw  | Dp(c) |
|         |       |     | m³/h         | kW   | l/h | kPa   | kW           | l/h | kPa   | kW           | l/h | kPa   | kW           | l/h | kPa   | kW           | l/h | kPa   | kW           | l/h | kPa   |
| SEC/F 1 | VI    | MAX | 220          | 1,32 | 114 | 2,4   | 1,18         | 101 | 2,0   | 1,04         | 89  | 1,6   | 0,91         | 78  | 1,3   | 0,77         | 66  | 1,0   | 0,63         | 54  | 0,7   |
|         | V     |     | 195          | 1,21 | 104 | 2,1   | 1,08         | 93  | 1,7   | 0,96         | 83  | 1,4   | 0,83         | 71  | 1,1   | 0,71         | 61  | 0,9   | 0,58         | 50  | 0,6   |
|         | IV    | MED | 175          | 1,12 | 96  | 1,8   | 1,00         | 86  | 1,5   | 0,89         | 77  | 1,2   | 0,77         | 66  | 1,0   | 0,65         | 56  | 0,7   | 0,54         | 46  | 0,5   |
|         | III   |     | 150          | 1,00 | 86  | 1,5   | 0,90         | 77  | 1,2   | 0,79         | 68  | 1,0   | 0,69         | 59  | 0,8   | 0,59         | 51  | 0,6   | 0,48         | 41  | 0,4   |
|         | II    |     | 125          | 0,90 | 77  | 1,2   | 0,81         | 70  | 1,0   | 0,71         | 61  | 0,8   | 0,62         | 53  | 0,7   | 0,53         | 46  | 0,5   | 0,44         | 38  | 0,4   |
|         | I     | MIN | 105          | 0,79 | 68  | 1,0   | 0,71         | 61  | 0,8   | 0,63         | 54  | 0,7   | 0,55         | 47  | 0,5   | 0,47         | 40  | 0,4   | 0,39         | 34  | 0,3   |
| SEC/F 2 | VI    |     | 340          | 2,11 | 181 | 6,6   | 1,90         | 163 | 5,6   | 1,68         | 144 | 4,6   | 1,47         | 126 | 3,7   | 1,26         | 108 | 2,8   | 1,05         | 90  | 2,1   |
|         | V     | MAX | 295          | 1,90 | 163 | 5,5   | 1,71         | 147 | 4,7   | 1,52         | 131 | 3,8   | 1,33         | 114 | 3,1   | 1,14         | 98  | 2,4   | 0,95         | 82  | 1,8   |
|         | IV    |     | 250          | 1,70 | 146 | 4,5   | 1,53         | 132 | 3,8   | 1,36         | 117 | 3,2   | 1,19         | 102 | 2,5   | 1,02         | 88  | 2,0   | 0,85         | 73  | 1,4   |
|         | III   | MED | 220          | 1,56 | 134 | 3,9   | 1,41         | 121 | 3,3   | 1,25         | 108 | 2,7   | 1,09         | 94  | 2,2   | 0,94         | 81  | 1,7   | 0,78         | 67  | 1,2   |
|         | II    |     | 170          | 1,30 | 112 | 2,8   | 1,17         | 101 | 2,4   | 1,04         | 89  | 2,0   | 0,91         | 78  | 1,6   | 0,78         | 67  | 1,2   | 0,65         | 56  | 0,9   |
|         | I     | MIN | 145          | 1,18 | 101 | 2,4   | 1,06         | 91  | 2,0   | 0,94         | 81  | 1,7   | 0,83         | 71  | 1,3   | 0,71         | 61  | 1,0   | 0,59         | 51  | 0,8   |
| SEC/F 3 | VI    |     | 440          | 3,08 | 265 | 16,2  | 2,78         | 239 | 13,7  | 2,48         | 213 | 11,4  | 2,18         | 187 | 9,2   | 1,88         | 162 | 7,2   | 1,57         | 135 | 5,4   |
|         | V     | MAX | 385          | 2,81 | 242 | 13,8  | 2,54         | 218 | 11,7  | 2,26         | 194 | 9,7   | 1,99         | 171 | 7,8   | 1,71         | 147 | 6,1   | 1,44         | 124 | 4,6   |
|         | IV    |     | 325          | 2,49 | 214 | 11,1  | 2,25         | 194 | 9,4   | 2,00         | 172 | 7,8   | 1,76         | 151 | 6,3   | 1,52         | 131 | 4,9   | 1,28         | 110 | 3,7   |
|         | III   | MED | 270          | 2,20 | 189 | 9,0   | 1,98         | 170 | 7,6   | 1,77         | 152 | 6,3   | 1,56         | 134 | 5,1   | 1,34         | 115 | 4,0   | 1,13         | 97  | 3,0   |
|         | II    | MIN | 235          | 1,98 | 170 | 7,4   | 1,78         | 153 | 6,3   | 1,59         | 137 | 5,2   | 1,40         | 120 | 4,2   | 1,21         | 104 | 3,3   | 1,02         | 88  | 2,5   |
|         | I     |     | 185          | 1,68 | 144 | 5,6   | 1,52         | 131 | 4,7   | 1,35         | 116 | 3,9   | 1,19         | 102 | 3,2   | 1,03         | 89  | 2,5   | 0,86         | 74  | 1,9   |
| SEC/F 4 | VI    |     | 570          | 3,68 | 316 | 22,1  | 3,32         | 286 | 18,7  | 2,96         | 255 | 15,5  | 2,60         | 224 | 12,5  | 2,24         | 193 | 9,8   | 1,88         | 162 | 7,3   |
|         | V     | MAX | 485          | 3,30 | 284 | 18,2  | 2,97         | 255 | 15,4  | 2,65         | 228 | 12,8  | 2,33         | 200 | 10,3  | 2,00         | 172 | 8,1   | 1,68         | 144 | 6,0   |
|         | IV    |     | 400          | 2,89 | 249 | 14,4  | 2,60         | 224 | 12,2  | 2,32         | 200 | 10,1  | 2,04         | 175 | 8,2   | 1,76         | 151 | 6,4   | 1,47         | 126 | 4,8   |
|         | III   | MED | 335          | 2,56 | 220 | 11,7  | 2,31         | 199 | 9,9   | 2,06         | 177 | 8,2   | 1,81         | 156 | 6,6   | 1,56         | 134 | 5,2   | 1,31         | 113 | 3,9   |
|         | II    | MIN | 265          | 2,15 | 185 | 8,6   | 1,94         | 167 | 7,3   | 1,73         | 149 | 6,0   | 1,52         | 131 | 4,9   | 1,31         | 113 | 3,8   | 1,10         | 95  | 2,9   |
|         | I     |     | 185          | 1,67 | 144 | 5,5   | 1,50         | 129 | 4,7   | 1,34         | 115 | 3,9   | 1,18         | 101 | 3,1   | 1,02         | 88  | 2,5   | 0,86         | 74  | 1,8   |
| SEC/F 5 | VI    | MAX | 650          | 4,28 | 368 | 5,6   | 3,85         | 331 | 4,8   | 3,42         | 294 | 3,9   | 3,00         | 258 | 3,2   | 2,57         | 221 | 2,4   | 2,14         | 184 | 1,8   |
|         | V     |     | 545          | 3,79 | 326 | 4,6   | 3,41         | 293 | 3,8   | 3,03         | 261 | 3,2   | 2,66         | 229 | 2,6   | 2,28         | 196 | 2,0   | 1,90         | 163 | 1,5   |
|         | IV    | MED | 495          | 3,54 | 304 | 4,0   | 3,18         | 273 | 3,4   | 2,83         | 243 | 2,8   | 2,48         | 213 | 2,3   | 2,13         | 183 | 1,8   | 1,78         | 153 | 1,3   |
|         | III   |     | 420          | 3,16 | 272 | 3,3   | 2,85         | 245 | 2,8   | 2,53         | 218 | 2,3   | 2,22         | 191 | 1,9   | 1,90         | 163 | 1,4   | 1,59         | 137 | 1,1   |
|         | II    | MIN | 315          | 2,59 | 223 | 2,3   | 2,33         | 200 | 2,0   | 2,07         | 178 | 1,6   | 1,82         | 157 | 1,3   | 1,56         | 134 | 1,0   | 1,30         | 112 | 0,8   |
|         | I     |     | 250          | 2,20 | 189 | 1,8   | 1,99         | 171 | 1,5   | 1,77         | 152 | 1,2   | 1,55         | 133 | 1,0   | 1,33         | 114 | 0,8   | 1,12         | 96  | 0,6   |
| SEC/F 6 | VI    |     | 830          | 5,05 | 434 | 7,5   | 4,54         | 390 | 6,4   | 4,04         | 347 | 5,3   | 3,53         | 304 | 4,2   | 3,03         | 261 | 3,3   | 2,53         | 218 | 2,4   |
|         | V     | MAX | 760          | 4,77 | 410 | 6,8   | 4,29         | 369 | 5,8   | 3,81         | 328 | 4,8   | 3,33         | 286 | 3,8   | 2,86         | 246 | 2,9   | 2,38         | 205 | 2,2   |
|         | IV    |     | 680          | 4,42 | 380 | 6,0   | 3,98         | 342 | 5,0   | 3,54         | 304 | 4,1   | 3,09         | 266 | 3,3   | 2,65         | 228 | 2,6   | 2,21         | 190 | 1,9   |
|         | III   | MED | 590          | 3,99 | 343 | 5,0   | 3,59         | 309 | 4,2   | 3,19         | 274 | 3,5   | 2,79         | 240 | 2,8   | 2,40         | 206 | 2,1   | 2,00         | 172 | 1,6   |
|         | II    |     | 505          | 3,59 | 309 | 4,1   | 3,23         | 278 | 3,5   | 2,87         | 247 | 2,9   | 2,51         | 216 | 2,3   | 2,16         | 186 | 1,8   | 1,80         | 155 | 1,3   |
|         | I     | MIN | 415          | 3,12 | 268 | 3,2   | 2,81         | 242 | 2,7   | 2,50         | 215 | 2,3   | 2,19         | 188 | 1,8   | 1,88         | 162 | 1,4   | 1,57         | 135 | 1,1   |
| SEC/F 7 | VI    | MAX | 925          | 5,97 | 513 | 11,9  | 5,38         | 463 | 10,1  | 4,79         | 412 | 8,3   | 3,53         | 304 | 5,9   | 3,61         | 310 | 5,2   | 3,03         | 261 | 3,9   |
|         | V     |     | 840          | 5,59 | 481 | 10,6  | 5,04         | 433 | 9,0   | 4,49         | 386 | 7,4   | 3,33         | 286 | 5,3   | 3,39         | 292 | 4,7   | 2,84         | 244 | 3,5   |
|         | IV    | MED | 735          | 5,10 | 439 | 9,0   | 4,59         | 395 | 7,6   | 4,09         | 352 | 6,3   | 3,09         | 266 | 4,7   | 3,09         | 266 | 4,0   | 2,59         | 223 | 3,0   |
|         | III   |     | 630          | 4,58 | 394 | 7,5   | 4,13         | 355 | 6,3   | 3,68         | 316 | 5,2   | 2,79         | 240 | 3,9   | 2,78         | 239 | 3,3   | 2,33         | 200 | 2,5   |
|         | II    | MIN | 535          | 4,10 | 353 | 6,1   | 3,69         | 317 | 5,2   | 3,29         | 283 | 4,3   | 2,51         | 216 | 3,3   | 2,49         | 214 | 2,7   | 2,09         | 180 | 2,0   |
|         | I     |     | 445          | 3,60 | 310 | 4,9   | 3,25         | 280 | 4,1   | 2,89         | 249 | 3,4   | 2,19         | 188 | 2,5   | 2,19         | 188 | 2,2   | 1,84         | 158 | 1,6   |
| SEC/F 8 | VI    | MAX | 1200         | 6,75 | 581 | 14,8  | 6,08         | 523 | 12,5  | 5,41         | 465 | 10,3  | 4,75         | 409 | 8,3   | 4,08         | 351 | 6,5   | 3,42         | 294 | 4,8   |
|         | V     |     | 1100         | 6,37 | 548 | 13,3  | 5,74         | 494 | 11,3  | 5,11         | 439 | 9,3   | 4,48         | 385 | 7,5   | 3,85         | 331 | 5,9   | 3,23         | 278 | 4,4   |
|         | IV    | MED | 1020         | 6,05 | 520 | 12,2  | 5,45         | 469 | 10,3  | 4,86         | 418 | 8,5   | 4,26         | 366 | 6,9   | 3,66         | 315 | 5,4   | 3,07         | 264 | 4,0   |
|         | III   |     | 815          | 5,19 | 446 | 9,3   | 4,68         | 402 | 7,9   | 4,17         | 359 | 6,5   | 3,66         | 315 | 5,3   | 3,15         | 271 | 4,1   | 2,64         | 227 | 3,1   |
|         | II    | MIN | 655          | 4,48 | 385 | 7,2   | 4,04         | 347 | 6,1   | 3,60         | 310 | 5,0   | 3,16         | 272 | 4,1   | 2,72         | 234 | 3,2   | 2,28         | 196 | 2,4   |
|         | I     |     | 510          | 3,76 | 323 | 5,3   | 3,39         | 292 | 4,5   | 3,03         | 261 | 3,7   | 2,66         | 229 | 3,0   | 2,29         | 197 | 2,3   | 1,92         | 165 | 1,7   |
| SEC/F 9 | VI    | MAX | 1500         | 7,77 | 668 | 18,9  | 7,00         | 602 | 16,0  | 6,23         | 536 | 13,2  | 5,46         | 470 | 10,7  | 4,69         | 403 | 8,3   | 3,93         | 338 | 6,2   |
|         | V     |     | 1365         | 7,36 | 633 | 17,2  | 6,63         | 570 | 14,5  | 5,90         | 507 | 12,0  | 5,17         | 445 | 9,7   | 4,45         | 383 | 7,5   | 3,72         | 320 | 5,6   |
|         | IV    | MED | 1210         | 6,81 | 586 | 15,0  | 6,13         | 527 | 12,7  | 5,46         | 470 | 10,5  | 4,79         | 412 | 8,5   | 4,12         | 354 | 6,6   | 3,45         | 297 | 4,9   |
|         | III   |     | 980          | 5,90 | 507 | 11,7  | 5,32         | 458 | 9,9   | 4,74         | 408 | 8,2   | 4,15         | 357 | 6,6   | 3,57         | 307 | 5,1   | 2,99         | 257 | 3,8   |
|         | II    | MIN | 830          | 5,26 | 452 | 9,5   | 4,74         | 408 | 8,1   | 4,22         | 363 | 6,7   | 3,71         | 319 | 5,4   | 3,19         | 274 | 4,2   | 2,67         | 230 | 3,1   |
|         | I     |     | 735          | 4,84 | 416 | 8,2   | 4,37         | 376 | 7,0   | 3,89         | 335 | 5,8   | 3,41         | 293 | 4,7   | 2,94         | 253 | 3,6   | 2,46         | 212 | 2,7   |

## LEGEND

WT = Water temperature

Ph = Emission

Qw = Water flow

Dp(c) = Water pressure drop

Speed = Fan speed

MAX = High speed

MED = Medium speed

MIN = Low speed

Qv = Air flow

## Heating emission of 2 row additional coil

Entering air temperature: 20°C

|         |       |     | WT: 65/55 °C |       |     |       | WT: 60/50 °C |     |       |      | WT: 55/45 °C |       |      |     | WT: 50/40 °C |      |     |       | WT: 45/40 °C |     |       |    | WT: 45/35 °C |       |  |  |
|---------|-------|-----|--------------|-------|-----|-------|--------------|-----|-------|------|--------------|-------|------|-----|--------------|------|-----|-------|--------------|-----|-------|----|--------------|-------|--|--|
| MODEL   | Speed |     | Qv           | Ph    | Qw  | Dp(c) | Ph           | Qw  | Dp(c) | Ph   | Qw           | Dp(c) | Ph   | Qw  | Dp(c)        | Ph   | Qw  | Dp(c) | Ph           | Qw  | Dp(c) | Ph | Qw           | Dp(c) |  |  |
|         |       |     | m³/h         | kW    | l/h | kPa   | kW           | l/h | kPa   | kW   | l/h          | kPa   | kW   | l/h | kPa          | kW   | l/h | kPa   | kW           | l/h | kPa   | kW | l/h          | kPa   |  |  |
| SEC/F 1 | VI    | MAX | 220          | 1,67  | 144 | 7,1   | 1,44         | 124 | 5,5   | 1,20 | 103          | 4,1   | 0,97 | 83  | 2,9          | 0,93 | 160 | 9,1   | 0,74         | 64  | 1,8   |    |              |       |  |  |
|         | V     |     | 195          | 1,52  | 131 | 6,0   | 1,31         | 113 | 4,7   | 1,10 | 95           | 3,5   | 0,89 | 77  | 2,5          | 0,85 | 146 | 7,8   | 0,68         | 58  | 1,6   |    |              |       |  |  |
|         | IV    | MED | 175          | 1,40  | 120 | 5,2   | 1,21         | 104 | 4,1   | 1,01 | 87           | 3,0   | 0,82 | 71  | 2,1          | 0,78 | 134 | 6,7   | 0,63         | 54  | 1,3   |    |              |       |  |  |
|         | III   |     | 150          | 1,24  | 107 | 4,2   | 1,07         | 92  | 3,3   | 0,90 | 77           | 2,5   | 0,73 | 63  | 1,7          | 0,69 | 119 | 5,4   | 0,56         | 48  | 1,1   |    |              |       |  |  |
|         | II    |     | 125          | 1,10  | 95  | 3,4   | 0,95         | 82  | 2,7   | 0,80 | 69           | 2,0   | 0,65 | 56  | 1,4          | 0,62 | 107 | 4,4   | 0,50         | 43  | 0,9   |    |              |       |  |  |
|         | I     | MIN | 105          | 0,97  | 83  | 2,7   | 0,83         | 71  | 2,1   | 0,70 | 60           | 1,6   | 0,57 | 49  | 1,1          | 0,54 | 93  | 3,5   | 0,44         | 38  | 0,7   |    |              |       |  |  |
| SEC/F 2 | VI    |     | 340          | 2,58  | 222 | 17,9  | 2,23         | 192 | 14,0  | 1,88 | 162          | 10,6  | 1,53 | 132 | 7,5          | 1,44 | 248 | 23,1  | 1,18         | 101 | 4,8   |    |              |       |  |  |
|         | V     | MAX | 295          | 2,32  | 200 | 14,8  | 2,00         | 172 | 11,6  | 1,69 | 145          | 8,8   | 1,37 | 118 | 6,2          | 1,30 | 224 | 19,2  | 1,06         | 91  | 4,0   |    |              |       |  |  |
|         | IV    |     | 250          | 2,06  | 177 | 12,0  | 1,78         | 153 | 9,4   | 1,50 | 129          | 7,1   | 1,22 | 105 | 5,0          | 1,15 | 198 | 15,5  | 0,94         | 81  | 3,3   |    |              |       |  |  |
|         | III   | MED | 220          | 1,87  | 161 | 10,2  | 1,62         | 139 | 8,0   | 1,37 | 118          | 6,0   | 1,11 | 95  | 4,3          | 1,05 | 181 | 13,2  | 0,86         | 74  | 2,8   |    |              |       |  |  |
|         | II    |     | 170          | 1,52  | 131 | 7,1   | 1,32         | 114 | 5,6   | 1,11 | 95           | 4,2   | 0,91 | 78  | 3,0          | 0,85 | 146 | 9,1   | 0,70         | 60  | 1,9   |    |              |       |  |  |
|         | I     | MIN | 145          | 1,39  | 120 | 6,0   | 1,20         | 103 | 4,7   | 1,01 | 87           | 3,6   | 0,83 | 71  | 2,5          | 0,78 | 134 | 7,7   | 0,64         | 55  | 1,6   |    |              |       |  |  |
| SEC/F 3 | VI    |     | 440          | 3,52  | 303 | 6,3   | 3,04         | 261 | 5,0   | 2,56 | 220          | 3,7   | 2,00 | 172 | 2,6          | 1,97 | 339 | 8,2   | 1,59         | 137 | 1,7   |    |              |       |  |  |
|         | V     | MAX | 385          | 3,19  | 274 | 5,3   | 2,76         | 237 | 4,2   | 2,32 | 200          | 3,1   | 1,88 | 162 | 2,2          | 1,79 | 308 | 6,9   | 1,45         | 125 | 1,4   |    |              |       |  |  |
|         | IV    |     | 325          | 2,80  | 241 | 4,2   | 2,42         | 208 | 3,3   | 2,04 | 175          | 2,5   | 1,66 | 143 | 1,8          | 1,57 | 270 | 5,5   | 1,27         | 109 | 1,1   |    |              |       |  |  |
|         | III   | MED | 270          | 2,45  | 211 | 3,3   | 2,11         | 181 | 2,6   | 1,78 | 153          | 2,0   | 1,46 | 126 | 1,4          | 1,38 | 237 | 4,4   | 1,13         | 97  | 0,9   |    |              |       |  |  |
|         | II    | MIN | 235          | 2,20  | 189 | 2,8   | 1,90         | 163 | 2,2   | 1,60 | 138          | 1,6   | 1,30 | 112 | 1,2          | 1,23 | 212 | 3,6   | 1,00         | 86  | 0,7   |    |              |       |  |  |
|         | I     |     | 185          | 1,82  | 157 | 2,0   | 1,58         | 136 | 1,6   | 1,33 | 114          | 1,2   | 1,08 | 93  | 0,8          | 1,02 | 175 | 2,6   | 0,84         | 72  | 0,5   |    |              |       |  |  |
| SEC/F 4 | VI    |     | 570          | 4,13  | 355 | 8,4   | 3,56         | 306 | 6,5   | 2,99 | 257          | 4,9   | 2,42 | 208 | 3,4          | 2,31 | 397 | 10,8  | 1,86         | 160 | 2,2   |    |              |       |  |  |
|         | V     | MAX | 485          | 3,78  | 325 | 7,2   | 3,26         | 280 | 5,6   | 2,74 | 236          | 4,2   | 2,22 | 191 | 3,0          | 2,11 | 363 | 9,2   | 1,70         | 146 | 1,9   |    |              |       |  |  |
|         | IV    |     | 400          | 3,28  | 282 | 5,6   | 2,83         | 243 | 4,4   | 2,38 | 205          | 3,3   | 1,94 | 167 | 2,3          | 1,84 | 316 | 7,2   | 1,49         | 128 | 1,5   |    |              |       |  |  |
|         | III   | MED | 335          | 2,89  | 249 | 4,5   | 2,49         | 214 | 3,5   | 2,10 | 181          | 2,6   | 1,70 | 146 | 1,9          | 1,61 | 277 | 5,8   | 1,31         | 113 | 1,2   |    |              |       |  |  |
|         | II    | MIN | 265          | 2,41  | 207 | 3,2   | 2,08         | 179 | 2,6   | 1,76 | 151          | 1,9   | 1,43 | 123 | 1,4          | 1,35 | 232 | 4,2   | 1,10         | 95  | 0,9   |    |              |       |  |  |
|         | I     |     | 185          | 1,81  | 156 | 2,0   | 1,56         | 134 | 1,5   | 1,32 | 114          | 1,2   | 1,07 | 92  | 0,8          | 1,01 | 174 | 2,5   | 0,83         | 71  | 0,5   |    |              |       |  |  |
| SEC/F 5 | VI    | MAX | 650          | 5,23  | 450 | 15,6  | 4,52         | 389 | 12,3  | 3,82 | 329          | 9,3   | 3,11 | 267 | 6,6          | 2,93 | 504 | 20,2  | 2,41         | 207 | 4,3   |    |              |       |  |  |
|         | V     |     | 545          | 4,59  | 395 | 12,4  | 3,97         | 341 | 9,8   | 3,36 | 289          | 7,4   | 2,74 | 236 | 5,3          | 2,57 | 442 | 16,1  | 2,12         | 182 | 3,4   |    |              |       |  |  |
|         | IV    | MED | 495          | 4,26  | 366 | 10,9  | 3,68         | 316 | 8,6   | 3,11 | 267          | 6,5   | 2,54 | 218 | 4,6          | 2,38 | 409 | 14,1  | 1,97         | 169 | 3,0   |    |              |       |  |  |
|         | III   |     | 420          | 3,76  | 323 | 8,7   | 3,26         | 280 | 6,9   | 2,75 | 237          | 5,2   | 2,25 | 194 | 3,7          | 2,11 | 363 | 11,3  | 1,74         | 150 | 2,4   |    |              |       |  |  |
|         | II    | MIN | 315          | 3,03  | 261 | 6,0   | 2,62         | 225 | 4,7   | 2,22 | 191          | 3,6   | 1,82 | 157 | 2,6          | 1,70 | 292 | 7,7   | 1,41         | 121 | 1,7   |    |              |       |  |  |
|         | I     |     | 250          | 2,52  | 217 | 4,3   | 2,18         | 187 | 3,4   | 1,85 | 159          | 2,6   | 1,51 | 130 | 1,8          | 1,41 | 243 | 5,6   | 1,18         | 101 | 1,2   |    |              |       |  |  |
| SEC/F 6 | VI    |     | 830          | 6,22  | 535 | 21,2  | 5,38         | 463 | 16,6  | 4,54 | 390          | 12,5  | 3,70 | 318 | 8,9          | 3,48 | 599 | 27,4  | 2,86         | 246 | 5,8   |    |              |       |  |  |
|         | V     | MAX | 760          | 5,86  | 504 | 19,0  | 5,06         | 435 | 15,0  | 4,27 | 367          | 11,3  | 3,48 | 299 | 8,0          | 3,28 | 564 | 24,6  | 2,69         | 231 | 5,2   |    |              |       |  |  |
|         | IV    |     | 680          | 5,41  | 465 | 16,6  | 4,68         | 402 | 13,0  | 3,95 | 340          | 9,8   | 3,22 | 277 | 7,0          | 3,03 | 521 | 21,4  | 2,49         | 214 | 4,5   |    |              |       |  |  |
|         | III   | MED | 590          | 4,85  | 417 | 13,7  | 4,20         | 361 | 10,7  | 3,54 | 304          | 8,1   | 2,89 | 249 | 5,7          | 2,72 | 468 | 17,7  | 2,24         | 193 | 3,8   |    |              |       |  |  |
|         | II    |     | 505          | 4,32  | 372 | 11,2  | 3,74         | 322 | 8,8   | 3,16 | 272          | 6,6   | 2,58 | 222 | 4,8          | 2,42 | 416 | 14,4  | 2,00         | 172 | 3,1   |    |              |       |  |  |
|         | I     | MIN | 415          | 3,70  | 318 | 8,5   | 3,21         | 276 | 6,7   | 2,71 | 233          | 5,1   | 2,21 | 190 | 3,6          | 2,07 | 356 | 11,0  | 1,72         | 148 | 2,4   |    |              |       |  |  |
| SEC/F 7 | VI    | MAX | 925          | 7,30  | 628 | 33,3  | 6,32         | 544 | 26,3  | 5,35 | 460          | 19,9  | 4,37 | 376 | 14,2         | 4,08 | 702 | 43,1  | 3,40         | 292 | 9,3   |    |              |       |  |  |
|         | V     |     | 840          | 6,81  | 586 | 29,5  | 5,90         | 507 | 23,3  | 4,99 | 429          | 17,6  | 4,08 | 351 | 12,6         | 3,81 | 655 | 38,2  | 3,17         | 273 | 8,2   |    |              |       |  |  |
|         | IV    | MED | 735          | 6,17  | 531 | 24,8  | 5,34         | 459 | 19,6  | 4,52 | 389          | 14,8  | 3,70 | 318 | 10,6         | 3,45 | 593 | 32,1  | 2,88         | 248 | 6,9   |    |              |       |  |  |
|         | III   |     | 630          | 5,49  | 472 | 20,2  | 4,76         | 409 | 16,0  | 4,03 | 347          | 12,1  | 3,30 | 284 | 8,7          | 3,07 | 528 | 26,2  | 2,57         | 221 | 5,7   |    |              |       |  |  |
|         | II    | MIN | 535          | 4,85  | 417 | 16,3  | 4,21         | 362 | 12,9  | 3,57 | 307          | 9,8   | 2,92 | 251 | 7,0          | 2,72 | 468 | 21,1  | 2,27         | 195 | 4,6   |    |              |       |  |  |
|         | I     |     | 445          | 4,24  | 365 | 12,8  | 3,68         | 316 | 10,2  | 3,12 | 268          | 7,7   | 2,56 | 220 | 5,5          | 2,38 | 409 | 16,6  | 1,99         | 171 | 3,6   |    |              |       |  |  |
| SEC/F 8 | VI    | MAX | 1200         | 8,76  | 753 | 46,0  | 7,58         | 652 | 36,2  | 6,41 | 551          | 27,4  | 5,24 | 451 | 19,6         | 4,90 | 843 | 59,5  | 4,07         | 350 | 12,8  |    |              |       |  |  |
|         | V     |     | 1100         | 8,25  | 710 | 41,4  | 7,14         | 614 | 32,6  | 6,04 | 519          | 24,7  | 4,94 | 425 | 17,6         | 4,62 | 795 | 53,5  | 3,83         | 329 | 11,5  |    |              |       |  |  |
|         | IV    | MED | 1020         | 7,82  | 673 | 37,7  | 6,78         | 583 | 29,7  | 5,73 | 493          | 22,5  | 4,69 | 403 | 16,1         | 4,38 | 753 | 48,8  | 3,64         | 313 | 10,5  |    |              |       |  |  |
|         | III   |     | 815          | 6,65  | 572 | 28,3  | 5,76         | 495 | 22,3  | 4,87 | 419          | 16,9  | 3,99 | 343 | 12,1         | 3,72 | 640 | 36,6  | 3,10         | 267 | 7,9   |    |              |       |  |  |
|         | II    | MIN | 655          | 5,66  | 487 | 21,3  | 4,91         | 422 | 16,9  | 4,16 | 358          | 12,8  | 3,40 | 292 | 9,1          | 3,17 | 545 | 27,6  | 2,65         | 228 | 6,0   |    |              |       |  |  |
|         | I     |     | 510          | 4,66  | 401 | 15,1  | 4,04         | 347 | 12,0  | 3,42 | 294          | 9,1   | 2,81 | 242 | 6,5          | 2,61 | 449 | 19,6  | 2,19         | 188 | 4,3   |    |              |       |  |  |
| SEC/F 9 | VI    | MAX | 1500         | 10,18 | 875 | 59,9  | 8,81         | 758 | 47,2  | 7,45 | 641          | 35,7  | 6,08 | 523 | 25,4         | -    | -   | -     | 4,72         | 406 | 16,6  |    |              |       |  |  |
|         | V     |     | 1365         | 9,59  | 825 | 53,9  | 8,30         | 714 | 42,5  | 7,02 | 604          | 32,1  | 5,73 | 493 | 22,9         | -    | -   | -     | 4,45         | 383 | 14,9  |    |              |       |  |  |
|         | IV    | MED | 1210         | 8,84  | 760 | 46,8  | 7,65         | 658 | 36,8  | 6,47 | 556          | 27,8  | 5,29 | 455 | 19,9         | -    | -   | -     | 4,10         | 353 | 13,0  |    |              |       |  |  |
|         | III   |     | 980          | 7,62  | 655 | 36,0  | 6,60         | 568 | 28,4  | 5,58 | 480          | 21,5  | 4,57 | 393 | 15,3         | -    | -   | -     | 3,55         | 305 | 10,0  |    |              |       |  |  |
|         | II    | MIN | 830          | 6,74  | 580 | 29,0  | 5,84         | 502 | 22,9  | 4,94 | 425          | 17,3  | 4,04 | 347 | 12,4         | -    | -   | -     | 3,14         | 270 | 8,1   |    |              |       |  |  |
|         | I     |     | 735          | 6,17  | 531 | 24,8  | 5,34         | 459 | 19,6  | 4,52 | 389          | 14,8  | 3,70 | 318 | 10,6         | -    | -   | -     | 2,88         | 248 | 6,9   |    |              |       |  |  |

## LEGEND

WT = Water temperature

Ph = Emission

Qw = Water flow

Dp(c) = Water pressure drop

Speed = Fan speed

MAX = High speed

MED = Medium speed

MIN = Low speed

Qv = Air flow

Air flow and correction factors for emission  
with different available pressures

| MODEL   | Speed |     | Qv (m³/h) |      |      |      |      |      | K1      |      |      |      |      |      | K2      |      |      |      |      |      |
|---------|-------|-----|-----------|------|------|------|------|------|---------|------|------|------|------|------|---------|------|------|------|------|------|
|         |       |     | Ap (Pa)   |      |      |      |      |      | Ap (Pa) |      |      |      |      |      | Ap (Pa) |      |      |      |      |      |
|         |       |     | 0         | 10   | 20   | 30   | 40   | 50   | 0       | 10   | 20   | 30   | 40   | 50   | 0       | 10   | 20   | 30   | 40   | 50   |
| SEC/F 1 | VI    | MAX | 220       | 199  | 179  | 154  | 128  | 100  | 1,00    | 0,92 | 0,84 | 0,75 | 0,66 | 0,53 | -       | 0,91 | 0,83 | 0,73 | 0,64 | 0,51 |
|         | V     |     | 195       | 174  | 152  | 130  | 102  | 72   | 1,00    | 0,91 | 0,82 | 0,72 | 0,60 | -    | 1,00    | 0,90 | 0,80 | 0,71 | 0,58 | -    |
|         | IV    | MED | 175       | 151  | 129  | 100  | 74   | -    | 1,00    | 0,88 | 0,78 | 0,65 | 0,50 | -    | 1,00    | 0,87 | 0,77 | 0,63 | 0,48 | -    |
|         | III   |     | 150       | 123  | 94   | 69   | -    | -    | 1,00    | 0,85 | 0,69 | 0,54 | -    | -    | 1,00    | 0,84 | 0,67 | 0,52 | -    | -    |
|         | II    |     | 125       | 96   | 63   | -    | -    | -    | 1,00    | 0,81 | 0,58 | -    | -    | -    | 1,00    | 0,79 | 0,56 | -    | -    | -    |
|         | I     | MIN | 105       | 70   | 43   | -    | -    | -    | 1,00    | 0,73 | 0,49 | -    | -    | -    | 1,00    | 0,71 | 0,47 | -    | -    | -    |
| SEC/F 2 | VI    |     | 340       | 312  | 287  | 254  | 218  | 180  | 1,00    | 0,93 | 0,87 | 0,79 | 0,71 | 0,61 | -       | 0,92 | 0,85 | 0,77 | 0,69 | 0,59 |
|         | V     | MAX | 295       | 260  | 233  | 195  | 163  | 117  | 1,00    | 0,90 | 0,83 | 0,72 | 0,63 | 0,48 | 1,00    | 0,89 | 0,81 | 0,70 | 0,61 | 0,45 |
|         | IV    |     | 250       | 218  | 180  | 145  | 108  | -    | 1,00    | 0,89 | 0,77 | 0,65 | 0,51 | -    | 1,00    | 0,88 | 0,75 | 0,63 | 0,49 | -    |
|         | III   | MED | 220       | 177  | 135  | 98   | -    | -    | 1,00    | 0,84 | 0,68 | 0,52 | -    | -    | 1,00    | 0,82 | 0,66 | 0,50 | -    | -    |
|         | II    |     | 170       | 119  | 92   | -    | -    | -    | 1,00    | 0,75 | 0,62 | -    | -    | -    | 1,00    | 0,73 | 0,60 | -    | -    | -    |
|         | I     | MIN | 145       | 83   | 45   | -    | -    | -    | 1,00    | 0,64 | 0,37 | -    | -    | -    | 1,00    | 0,62 | 0,35 | -    | -    | -    |
| SEC/F 3 | VI    |     | 440       | 413  | 380  | 348  | 314  | 270  | 1,00    | 0,95 | 0,88 | 0,83 | 0,76 | 0,68 | -       | 0,94 | 0,87 | 0,81 | 0,75 | 0,66 |
|         | V     | MAX | 385       | 351  | 320  | 287  | 249  | 208  | 1,00    | 0,93 | 0,86 | 0,79 | 0,71 | 0,62 | 1,00    | 0,92 | 0,84 | 0,77 | 0,69 | 0,60 |
|         | IV    |     | 325       | 284  | 244  | 209  | 179  | -    | 1,00    | 0,89 | 0,79 | 0,71 | 0,63 | -    | 1,00    | 0,88 | 0,78 | 0,69 | 0,61 | -    |
|         | III   | MED | 270       | 212  | 178  | 141  | -    | -    | 1,00    | 1,17 | 0,72 | 0,60 | -    | -    | 1,00    | 1,20 | 0,70 | 0,58 | -    | -    |
|         | II    | MIN | 235       | 177  | 138  | -    | -    | -    | 1,00    | 0,79 | 0,66 | -    | -    | -    | 1,00    | 0,78 | 0,64 | -    | -    | -    |
|         | I     |     | 185       | 125  | 75   | -    | -    | -    | 1,00    | 0,73 | 0,48 | -    | -    | -    | 1,00    | 0,72 | 0,46 | -    | -    | -    |
| SEC/F 4 | VI    |     | 570       | 527  | 472  | 432  | 381  | 314  | 1,00    | 0,94 | 0,86 | 0,80 | 0,73 | 0,63 | -       | 0,93 | 0,84 | 0,78 | 0,71 | 0,61 |
|         | V     | MAX | 485       | 437  | 387  | 340  | 282  | 230  | 1,00    | 0,92 | 0,83 | 0,75 | 0,65 | 0,55 | 1,00    | 0,91 | 0,82 | 0,74 | 0,63 | 0,53 |
|         | IV    |     | 400       | 343  | 293  | 238  | 187  | -    | 1,00    | 0,88 | 0,78 | 0,67 | 0,55 | -    | 1,00    | 0,87 | 0,76 | 0,65 | 0,53 | -    |
|         | III   | MED | 335       | 275  | 215  | 159  | -    | -    | 1,00    | 0,85 | 0,71 | 0,56 | -    | -    | 1,00    | 0,83 | 0,69 | 0,54 | -    | -    |
|         | II    | MIN | 265       | 176  | 124  | -    | -    | -    | 1,00    | 0,72 | 0,55 | -    | -    | -    | 1,00    | 0,70 | 0,53 | -    | -    | -    |
|         | I     |     | 185       | 78   | -    | -    | -    | -    | 1,00    | 0,50 | -    | -    | -    | -    | 1,00    | 0,48 | -    | -    | -    | -    |
| SEC/F 5 | VI    | MAX | 650       | 590  | 532  | 472  | 405  | 341  | 1,00    | 0,92 | 0,85 | 0,77 | 0,69 | 0,60 | -       | 0,91 | 0,83 | 0,76 | 0,67 | 0,58 |
|         | V     |     | 545       | 480  | 413  | 341  | 283  | 230  | 1,00    | 0,90 | 0,80 | 0,69 | 0,60 | -    | 1,00    | 0,89 | 0,78 | 0,67 | 0,58 | -    |
|         | IV    | MED | 495       | 420  | 343  | 275  | 226  | -    | 1,00    | 0,87 | 0,75 | 0,63 | 0,54 | -    | 1,00    | 0,86 | 0,73 | 0,61 | 0,52 | -    |
|         | III   |     | 420       | 333  | 247  | 192  | -    | -    | 1,00    | 0,83 | 0,66 | 0,54 | -    | -    | 1,00    | 0,81 | 0,64 | 0,52 | -    | -    |
|         | II    | MIN | 315       | 205  | 135  | -    | -    | -    | 1,00    | 0,71 | 0,51 | -    | -    | -    | 1,00    | 0,69 | 0,49 | -    | -    | -    |
|         | I     |     | 250       | 150  | -    | -    | -    | -    | 1,00    | 0,67 | -    | -    | -    | -    | 1,00    | 0,65 | -    | -    | -    | -    |
| SEC/F 6 | VI    |     | 830       | 771  | 719  | 648  | 585  | 521  | 1,00    | 0,94 | 0,89 | 0,82 | 0,76 | 0,69 | -       | 0,93 | 0,87 | 0,80 | 0,74 | 0,67 |
|         | V     | MAX | 760       | 705  | 639  | 581  | 514  | 446  | 1,00    | 0,94 | 0,87 | 0,81 | 0,73 | 0,66 | 1,00    | 0,93 | 0,85 | 0,79 | 0,72 | 0,64 |
|         | IV    |     | 680       | 592  | 555  | 503  | 436  | 360  | 1,00    | 0,89 | 0,85 | 0,79 | 0,70 | 0,61 | 1,00    | 0,88 | 0,83 | 0,77 | 0,69 | 0,59 |
|         | III   | MED | 590       | 524  | 466  | 411  | 347  | 282  | 1,00    | 0,91 | 0,83 | 0,75 | 0,66 | 0,56 | 1,00    | 0,89 | 0,81 | 0,73 | 0,64 | 0,54 |
|         | II    |     | 505       | 430  | 362  | 298  | 244  | -    | 1,00    | 0,88 | 0,77 | 0,66 | 0,56 | -    | 1,00    | 0,86 | 0,75 | 0,64 | 0,54 | -    |
|         | I     | MIN | 415       | 332  | 271  | -    | -    | -    | 1,00    | 0,83 | 0,71 | -    | -    | -    | 1,00    | 0,82 | 0,69 | -    | -    | -    |
| SEC/F 7 | VI    | MAX | 925       | 873  | 814  | 748  | 673  | 593  | 1,00    | 0,95 | 0,90 | 0,84 | 0,78 | 0,70 | -       | 0,95 | 0,89 | 0,83 | 0,76 | 0,69 |
|         | V     |     | 840       | 794  | 775  | 676  | 609  | 542  | 1,00    | 0,95 | 0,93 | 0,84 | 0,77 | 0,71 | 1,00    | 0,95 | 0,93 | 0,82 | 0,76 | 0,69 |
|         | IV    | MED | 735       | 686  | 633  | 573  | 512  | 443  | 1,00    | 0,94 | 0,88 | 0,82 | 0,75 | 0,67 | 1,00    | 0,94 | 0,87 | 0,80 | 0,73 | 0,65 |
|         | III   |     | 630       | 580  | 522  | 470  | 405  | 352  | 1,00    | 0,93 | 0,86 | 0,79 | 0,71 | 0,63 | 1,00    | 0,92 | 0,84 | 0,77 | 0,69 | 0,61 |
|         | II    | MIN | 535       | 471  | 415  | 359  | 302  | -    | 1,00    | 0,90 | 0,81 | 0,73 | 0,64 | -    | 1,00    | 0,89 | 0,80 | 0,71 | 0,62 | -    |
|         | I     |     | 445       | 373  | 318  | 254  | -    | -    | 1,00    | 0,87 | 0,77 | 0,65 | -    | -    | 1,00    | 0,85 | 0,75 | 0,63 | -    | -    |
| SEC/F 8 | VI    | MAX | 1200      | 1138 | 1076 | 1020 | 952  | 869  | 1,00    | 0,96 | 0,91 | 0,87 | 0,83 | 0,77 | -       | 0,95 | 0,90 | 0,86 | 0,81 | 0,75 |
|         | V     |     | 1100      | 1043 | 975  | 907  | 834  | 751  | 1,00    | 0,95 | 0,90 | 0,85 | 0,80 | 0,74 | 1,00    | 0,95 | 0,89 | 0,84 | 0,78 | 0,72 |
|         | IV    | MED | 1020      | 946  | 885  | 815  | 736  | 668  | 1,00    | 0,94 | 0,89 | 0,83 | 0,77 | 0,72 | 1,00    | 0,93 | 0,88 | 0,82 | 0,75 | 0,70 |
|         | III   |     | 815       | 736  | 668  | 589  | 526  | 452  | 1,00    | 0,92 | 0,85 | 0,77 | 0,71 | 0,63 | 1,00    | 0,91 | 0,83 | 0,75 | 0,69 | 0,61 |
|         | II    | MIN | 655       | 556  | 487  | 385  | 312  | -    | 1,00    | 0,87 | 0,79 | 0,66 | 0,56 | -    | 1,00    | 0,86 | 0,77 | 0,64 | 0,54 | -    |
|         | I     |     | 510       | 406  | 291  | 208  | -    | -    | 1,00    | 0,83 | 0,65 | 0,49 | -    | -    | 1,00    | 0,81 | 0,63 | 0,47 | -    | -    |
| SEC/F 9 | VI    | MAX | 1500      | 1438 | 1387 | 1315 | 1233 | 1063 | 1,00    | 0,96 | 0,94 | 0,90 | 0,85 | 0,76 | -       | 0,96 | 0,93 | 0,88 | 0,84 | 0,74 |
|         | V     |     | 1365      | 1312 | 1259 | 1190 | 1127 | 931  | 1,00    | 0,97 | 0,93 | 0,89 | 0,85 | 0,74 | 1,00    | 0,96 | 0,93 | 0,88 | 0,84 | 0,72 |
|         | IV    | MED | 1210      | 1167 | 1114 | 1055 | 964  | 803  | 1,00    | 0,97 | 0,93 | 0,89 | 0,83 | 0,72 | 1,00    | 0,97 | 0,92 | 0,88 | 0,82 | 0,70 |
|         | III   |     | 980       | 927  | 873  | 799  | 724  | 597  | 1,00    | 0,95 | 0,91 | 0,85 | 0,79 | 0,68 | 1,00    | 0,95 | 0,90 | 0,83 | 0,77 | 0,66 |
|         | II    | MIN | 830       | 761  | 702  | 633  | 575  | 447  | 1,00    | 0,93 | 0,87 | 0,80 | 0,75 | 0,62 | 1,00    | 0,92 | 0,86 | 0,79 | 0,73 | 0,60 |
|         | I     |     | 735       | 662  | 599  | 525  | 457  | -    | 1,00    | 0,91 | 0,85 | 0,77 | 0,69 | -    | 1,00    | 0,91 | 0,83 | 0,75 | 0,67 | -    |

LEGEND

Qv = Air flow

K1 = Correction factors for Total cooling emission

K2 = Correction factors for Sensible cooling emission and Heating emission

Ap = Available pressure

Speed = Fan speed

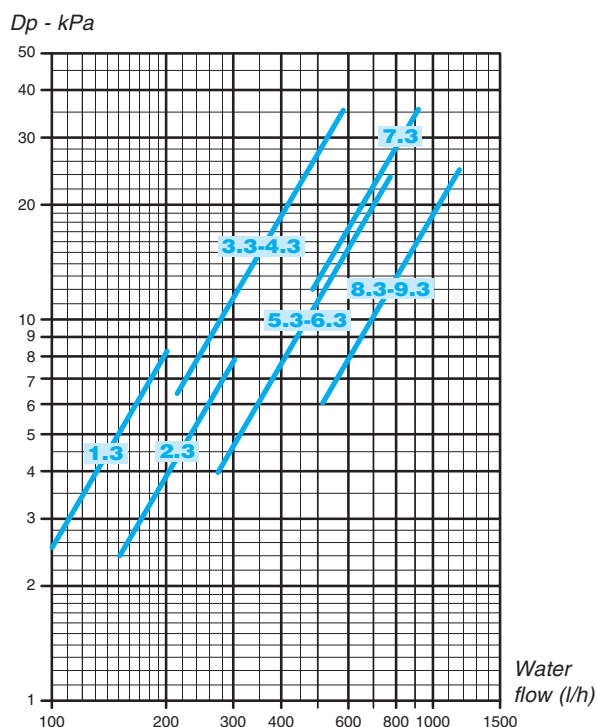
MAX = High speed

MED = Medium speed

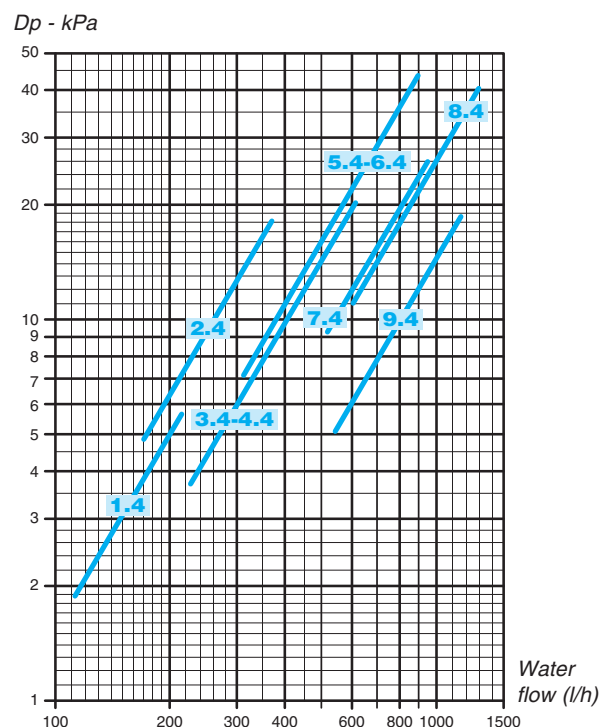
MIN = Low speed

## Water pressure drop

3 row coil



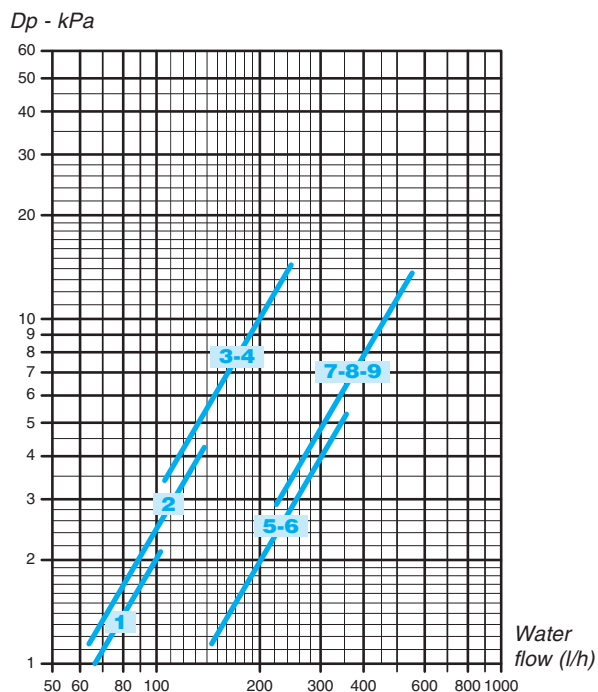
4 row coil



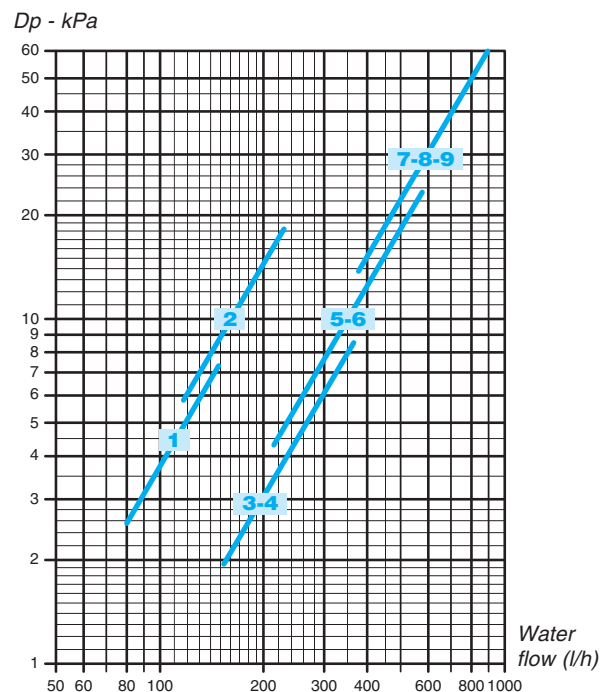
The water pressure drop figures refer to a mean water temperature of **10°C**; for different temperatures, multiply the pressure drop figures by the correction factors *K*.

| °C | 20   | 30   | 40   | 50   | 60   | 70   | 80   |
|----|------|------|------|------|------|------|------|
| K  | 0,94 | 0,90 | 0,86 | 0,82 | 0,78 | 0,74 | 0,70 |

1 row additional coil



2 row additional coil



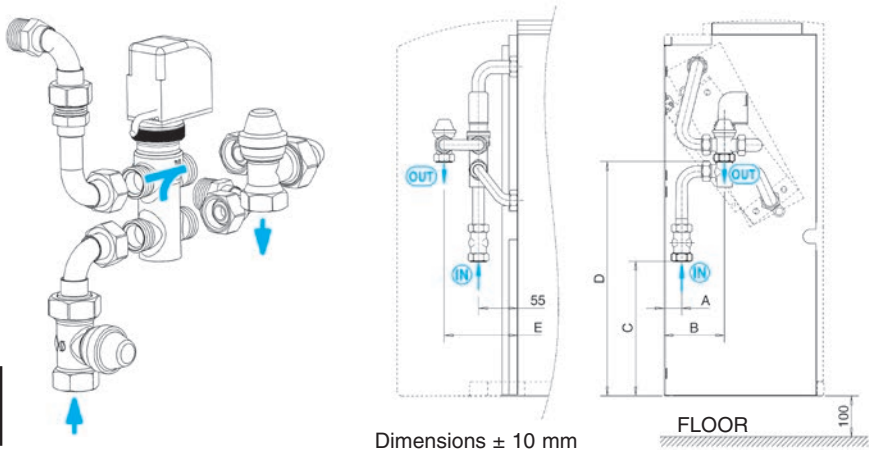
The water pressure drop figures refer to a mean water temperature of **60°C**; for different temperatures, multiply the pressure drop figures by the correction factors *K*.

| °C | 40   | 50   | 70   | 80   |
|----|------|------|------|------|
| K  | 1,12 | 1,06 | 0,94 | 0,88 |

VBP  
main coil 3 way valve

Control valve kit:  
3 way valve, ON-OFF,  
with electric motor and mounting kit  
with micrometric lockshield valve.

| VERSION | SEC/F              |
|---------|--------------------|
| MODEL   | CV - CH - CVB - NC |



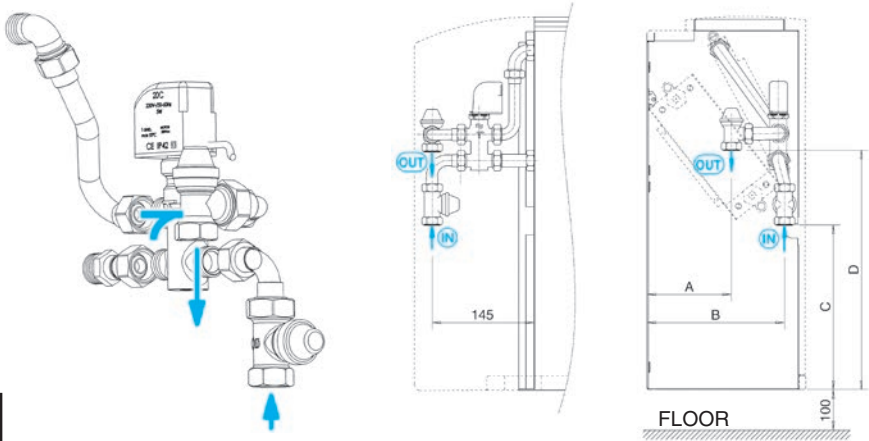
Dimensions ± 10 mm

| Mod.  | Dimensions (mm) |     |     |     |     | Valve |      |     | Micrometric lockshield valve |        |     | Code     |            |
|-------|-----------------|-----|-----|-----|-----|-------|------|-----|------------------------------|--------|-----|----------|------------|
|       | A               | B   | C   | D   | E   | DN    | (Ø)  | Kvs | DN                           | (Ø)    | Kvs | FITTED   | NOT FITTED |
| 1 ÷ 5 | 25              | 85  | 190 | 290 | 105 | 15    | 1/2" | 1,6 | 15                           | 1/2" F | 2   | 9066561H | 9066560H   |
| 6 - 7 | 25              | 85  | 190 | 290 | 105 | 20    | 3/4" | 2,5 | 15                           | 1/2" F | 2   | 9060471H | 9060474H   |
| 8 - 9 | 50              | 120 | 185 | 290 | 105 | 20    | 3/4" | 2,5 | 15                           | 1/2" F | 2   | 9060471H | 9060474H   |

VBA  
additional coil 3 way valve

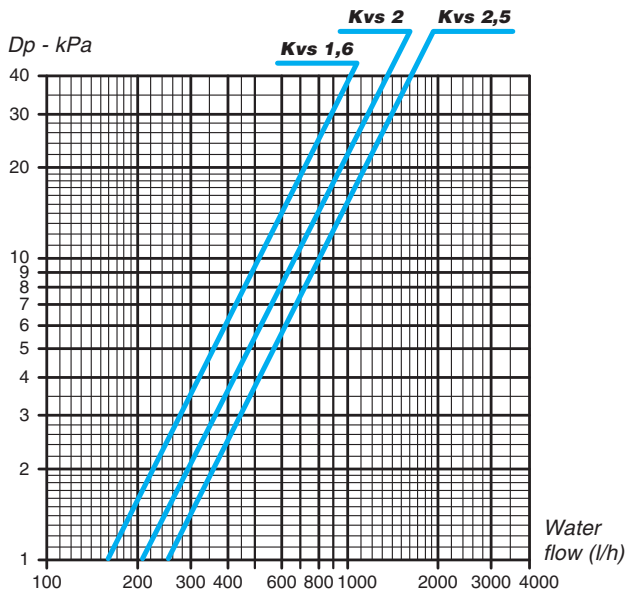
Control valve kit:  
3 way valve, ON-OFF,  
with electric motor and mounting kit  
with micrometric lockshield valve.

| VERSION | SEC/F              |
|---------|--------------------|
| MODEL   | CV - CH - CVB - NC |



Dimensions ± 10 mm

| Mod.  | Dimensions (mm) |     |     |     | Valve |      |     | Micrometric lockshield valve |        |     | Code     |            |
|-------|-----------------|-----|-----|-----|-------|------|-----|------------------------------|--------|-----|----------|------------|
|       | A               | B   | C   | D   | DN    | (Ø)  | Kvs | DN                           | (Ø)    | Kvs | FITTED   | NOT FITTED |
| 1 ÷ 7 | 120             | 195 | 240 | 340 | 15    | 1/2" | 1,6 | 15                           | 1/2" F | 2   | 9060472H | 9060475H   |
| 8 - 9 | 135             | 200 | 235 | 330 | 15    | 1/2" | 1,6 | 15                           | 1/2" F | 2   | 9060472H | 9060475H   |

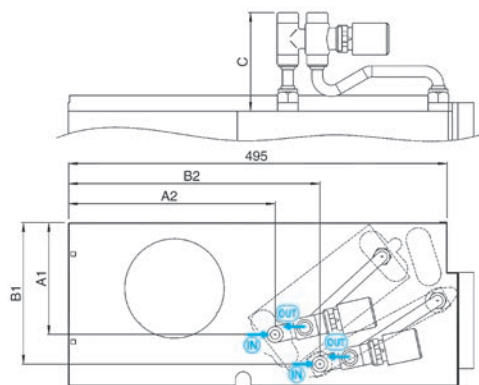
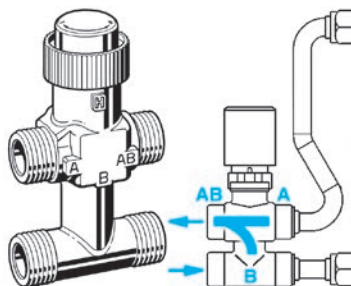


## Accessories for SEC/F

### VS

#### simplified kit for 3 way valve (concealed model only)

3 way valve, (ON-OFF)  
with electric motor and mounting kit.  
Valve with flat connection  
without micrometric lockshield valve.



Dimensions ± 10 mm

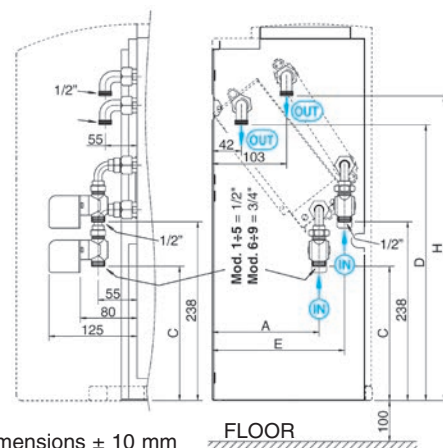
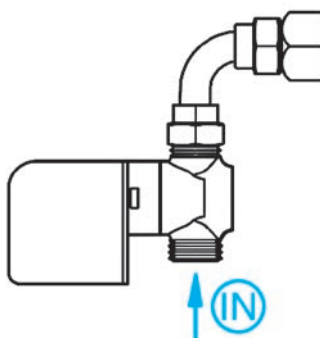
| VERSION | SEC/F |
|---------|-------|
| MODEL   | NC    |

| Mod.  | Dimensions (mm) |     |            |     |     | MAIN  |      |     |          |            | ADDITIONAL |      |     |          |            |
|-------|-----------------|-----|------------|-----|-----|-------|------|-----|----------|------------|------------|------|-----|----------|------------|
|       | MAIN            |     | ADDITIONAL |     | C   | Valve |      |     | Code     |            | Valve      |      |     | Code     |            |
|       | A1              | A2  | B1         | B2  |     | DN    | (Ø)  | Kvs | FITTED   | NOT FITTED | DN         | (Ø)  | Kvs | FITTED   | NOT FITTED |
| 1 ÷ 5 | 152             | 270 | 185        | 330 | 116 | 15    | 1/2" | 1,6 | 9066571H | 9066570H   | 15         | 1/2" | 1,6 | 9060483H | 9060480H   |
| 6 - 7 | 152             | 268 | 185        | 330 | 124 | 20    | 3/4" | 2,5 | 9060484H | 9060481H   |            |      |     |          |            |
| 8 - 9 | 177             | 270 | 210        | 327 | 124 | 20    | 3/4" | 2,5 | 9060484H | 9060481H   |            |      |     |          |            |

### V2

#### 2 way valve for main and additional coil

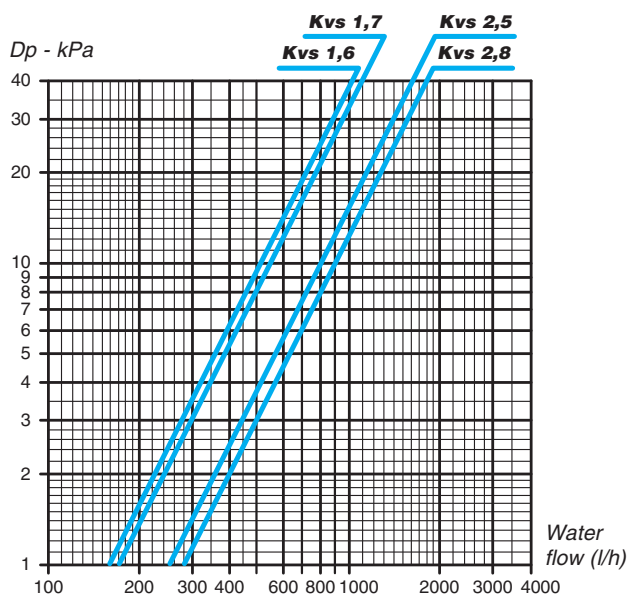
Control valve kit:  
2 way valve, ON-OFF,  
with electric motor and mounting kit.



Dimensions ± 10 mm

| VERSION | SEC/F              |
|---------|--------------------|
| MODEL   | CV - CH - CVB - NC |

| Mod.  | Dimensions (mm) |     |            |     |     | MAIN  |      |     |          |            | ADDITIONAL |      |     |          |            |
|-------|-----------------|-----|------------|-----|-----|-------|------|-----|----------|------------|------------|------|-----|----------|------------|
|       | MAIN            |     | ADDITIONAL |     | H   | Valve |      |     | Code     |            | Valve      |      |     | Code     |            |
|       | A               | C   | D          | E   |     | DN    | (Ø)  | Kvs | FITTED   | NOT FITTED | DN         | (Ø)  | Kvs | FITTED   | NOT FITTED |
| 1 ÷ 5 | 149             | 180 | 438        | 186 | 456 | 15    | 1/2" | 1,7 | 9066573H | 9066575H   | 15         | 1/2" | 1,7 | 9066573H | 9066575H   |
| 6 - 7 | 150             | 181 | 438        | 186 | 456 | 20    | 3/4" | 2,8 | 9066574H | 9066576H   |            |      |     |          |            |
| 8 - 9 | 176             | 175 | 422        | 210 | 440 | 20    | 3/4" | 2,8 | 9066574H | 9066576H   |            |      |     |          |            |



3 way double valve kit for 4 tube installation and single coil

- The kit consists of:
- 2 special 3 way valves;
  - 2 230 Volt ON-OFF actuators with internal safety micro switch;
  - insulated pipe kit;
  - external valve insulation sleeve.

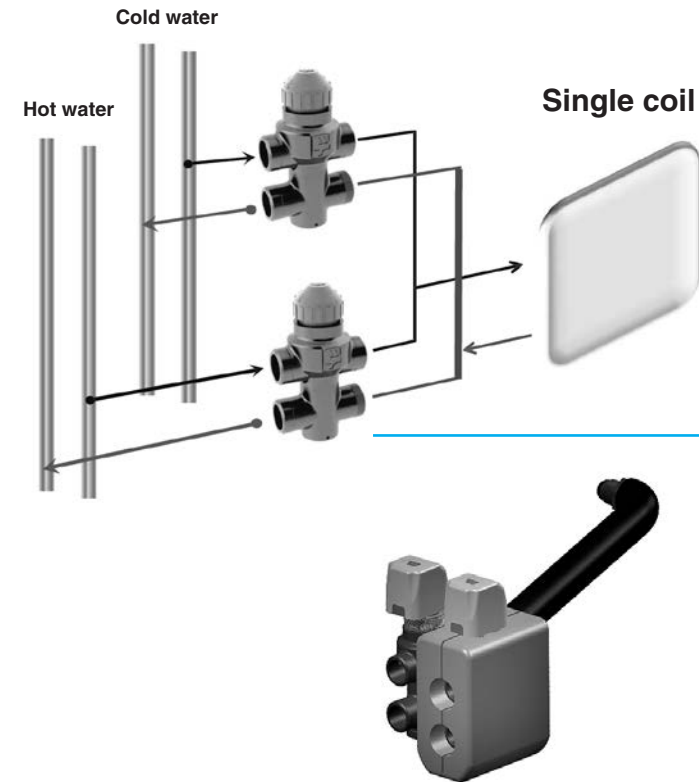
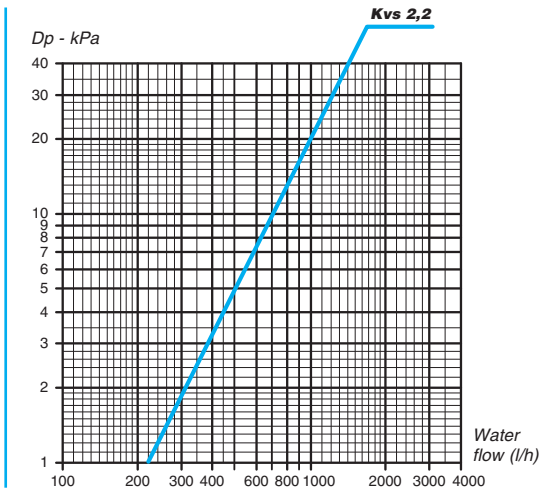
| VERSION | SEC/F              |
|---------|--------------------|
| MODEL   | CV - CH - CVB - NC |

| Mod.  | Ø    | Kvs | FITTED   |        | NOT FITTED |        |
|-------|------|-----|----------|--------|------------|--------|
|       |      |     | CODE     | TYPE   | CODE       | TYPE   |
| 1 ÷ 9 | 3/4" | 2,2 | 9066572W | V3M4X2 | 9066562W   | V3S4X2 |

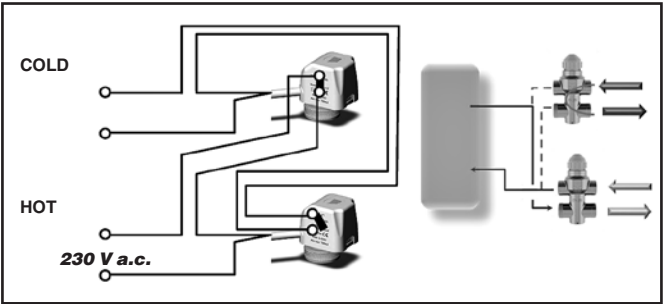
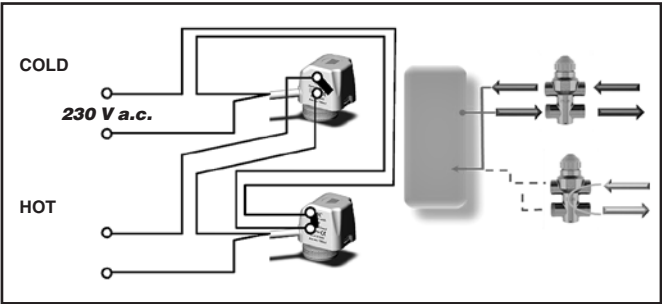
The kit uses a special 3 way valve which allows the transformation of the fan coil, equipped with one single coil, into a 4 tube installation.

The new **4X2** valve has been designed to keep the water flow between flow and return perfectly separated, allowing its use in parallel.

Therefore, it can be used on 4 pipe fan coil systems with one single heat-exchange coil on board the fan coil.



Double actuator electrical connections



### Balancing valves independent from the system pressure

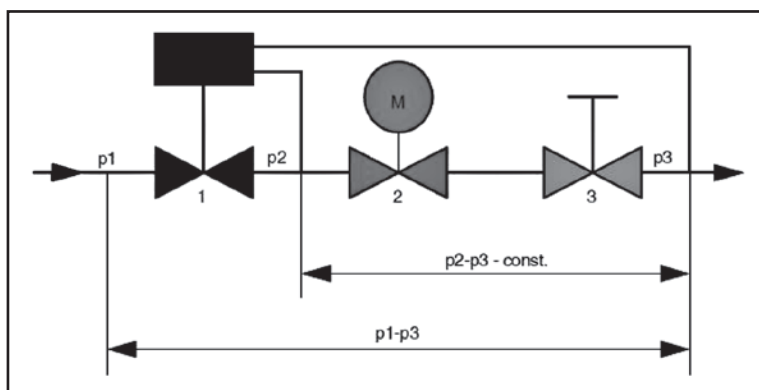
- The balancing valve and a combined 2 way valve allow the regulation of the water flow value autonomously, regardless of the system pressure, and the control of the flow by using an ON/OFF electro-thermal actuator.
- The balancing valve allows you to balance the hydraulic system by supplying the required water flow, for each fan- coil, and to maintain it even under partial load conditions.
- A graduated ring nut placed under the valve allows you to set the flow rate value and also allows direct reading of the set value.



### Valve operation logic

- “p1” is the valve inlet pressure.
- “p3” is the outlet pressure.
- “p2” is the diaphragm activation pressure, which allows differential pressure “p2” – “p3” to be maintained at a constant value, in order to guarantee the water to flow at the set value.

The minimum differential pressure “p1” – “p3”, required to guarantee the correct value of the set water flow rate, is indicated in the diagrams on page 30. This is an essential factor to size the system pressure drop and pump pressure head. The flow rate is kept at a constant value only if the valve pressure drop is higher than the indicated value.



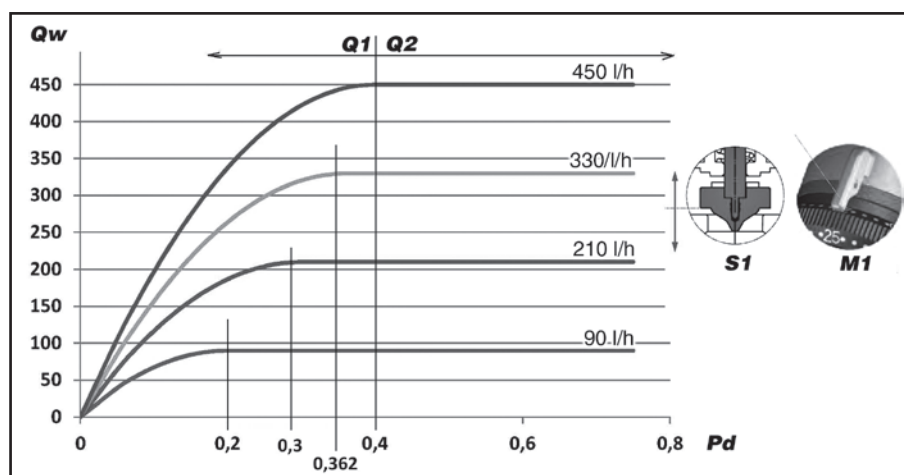
### Minimum operating differential pressure

The minimum differential pressure and the balancing valve pressure drop must be considered to size the system pumps.

Flow rate is constant if the pressure drop is higher than that indicated in the diagrams on page 30.

The following diagram shows an example of the flow rate trend according to the pressure drop and calibration required.

**Example DN 10 Model**



#### LEGEND:

**Qw** = Water flow rate

**Pd** = Min. differential pressure “p1” – “p3” (bar)

**Q1** = Area with inconstant water flow

**Q2** = Area with constant water flow

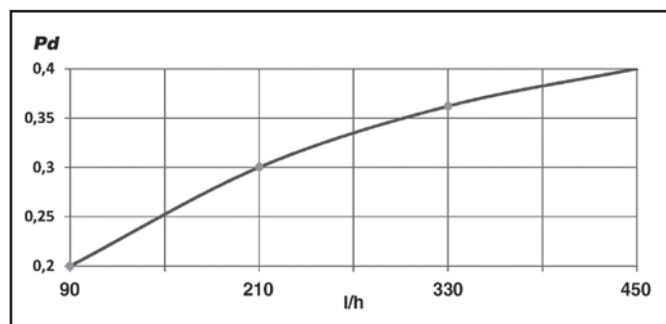
**S1** = Position of the adjustment valve plunger

**M1** = Position of the knob

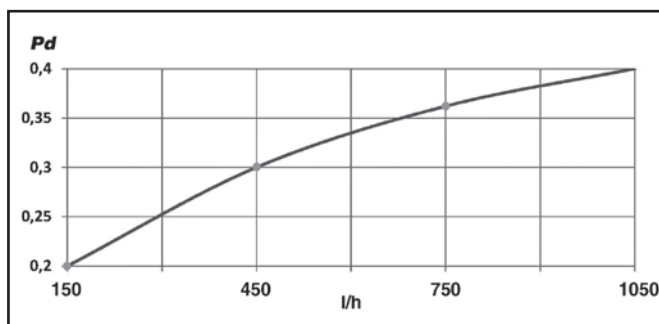
## Accessories for SEC/F

The valve upstream-downstream minimum differential pressure ("p1" – "p3"), which depends on the valve calibration value, must be exceeded to access the constant flow rate field.

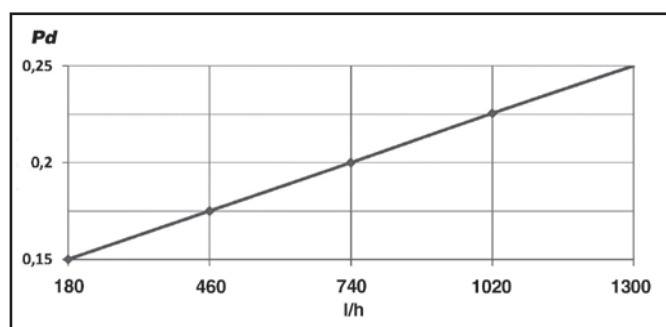
**DN 10 Model**



**DN 15 Model**



**DN 20 Model**



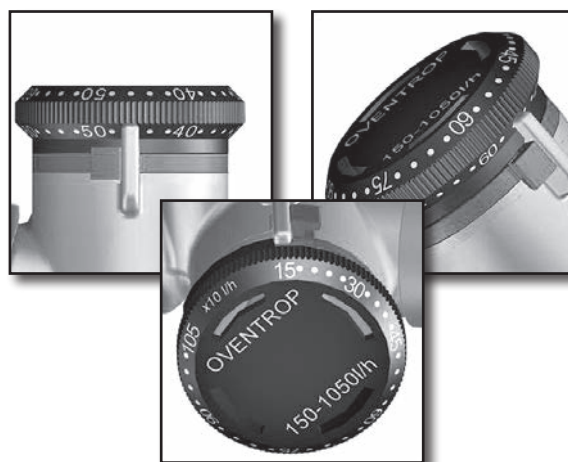
### LEGEND:

**Pd** = Min. differential pressure "p1" – "p3" (bar)

E.g., when sizing the system pump, in which the **DN 10** valves will be installed and in which 210 l/h are constantly required for each device, consider a useful pressure of 0.3 bar (to compensate the pressure drop of the valve) for each balancing valve. Therefore, the pressure drop values produced by the system balancing valves must be summed and the pump must be sized to produce a pressure equal to or greater than the value obtained previously.

## Benefits

- Reduced dimensions.
- Easy installation on 2 or 4 pipe devices.
- Pre-regulation of the nominal value set even with installed actuator.
- Easy display of the nominal value set. Nominal values are indicated in 10 l/h without any conversion.
- Guarantee of constant flow rate set even with partial loads.
- Pre-regulation can be blocked and leaded with the locking ring.



## Technical features

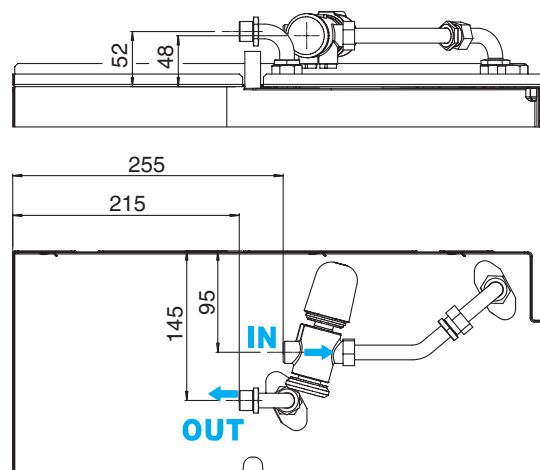
| DN MODEL     | FLOW RATE RANGE (l/h) | Kvs |
|--------------|-----------------------|-----|
| <b>DN 10</b> | 90 – 450              | 1,1 |
| <b>DN 15</b> | 150 – 1050            | 1,8 |
| <b>DN 20</b> | 180 – 1300            | 2,5 |

## Operation limits of the balancing valves

- Maximum operating temperature 120°C
- Maximum operating pressure 16 bar
- Maximum % of water/glycol mixture 50%
- Minimum operating temperature -10°C
- Maximum differential pressure 4 bar

### Balancing valves for main coil

2 way valve for main coil and assembly kit.  
The valve is supplied equipped with  
230 Volt electro-thermal actuator for the ON/OFF control.

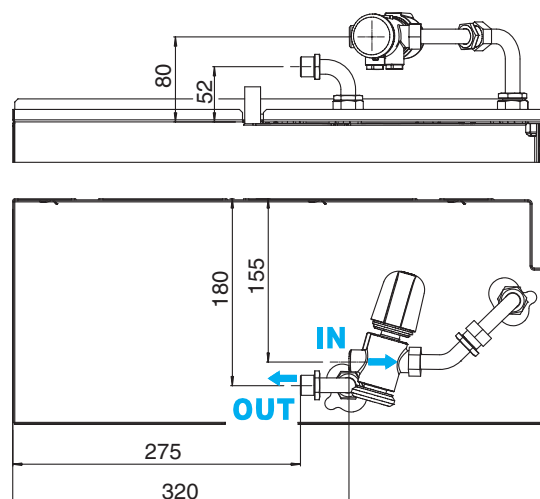


| VERSION | SEC/F              |
|---------|--------------------|
| MODEL   | CV - CH - CVB - NC |

| MOD.  | VALVE |      |            | FITTED  |                  | NOT FITTED |                  |
|-------|-------|------|------------|---------|------------------|------------|------------------|
|       | DN    | Ø    | Range      | CODE    | TYPE             | CODE       | TYPE             |
| 1 ÷ 3 | 10    | 1/2" | 90 – 450   | 9066660 | V2OVBPM 90-450   | 9066650    | V2OVBPS 90-450   |
| 4 ÷ 7 | 15    | 3/4" | 150 – 1050 | 9066661 | V2OVBPM 150-1050 | 9066651    | V2OVBPS 150-1050 |
| 8 – 9 | 20    | 1"   | 180 – 1300 | 9066662 | V2OVBPM 180-1300 | 9066652    | V2OVBPS 180-1300 |

### Balancing valves for additional coil

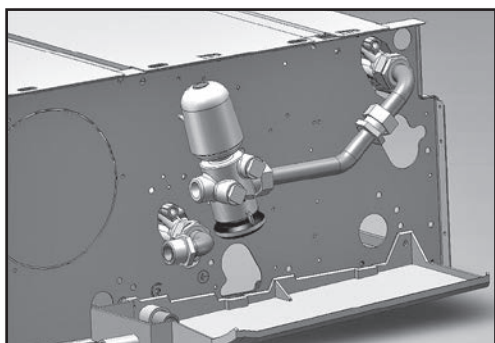
2 way valve for additional coil and assembly kit.  
The valve is supplied equipped with  
230 Volt electro-thermal actuator for the ON/OFF control.



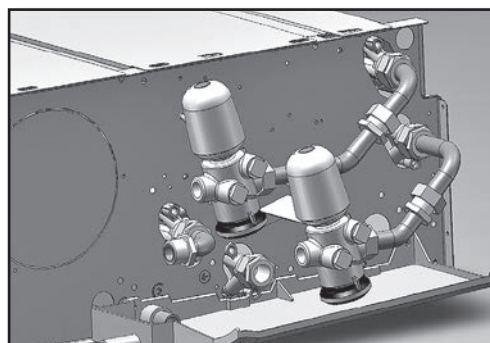
| VERSION | SEC/F              |
|---------|--------------------|
| MODEL   | CV - CH - CVB - NC |

| MOD.  | VALVE |      |            | FITTED  |                  | NOT FITTED |                  |
|-------|-------|------|------------|---------|------------------|------------|------------------|
|       | DN    | Ø    | Range      | CODE    | TYPE             | CODE       | TYPE             |
| 1 ÷ 5 | 10    | 1/2" | 90 – 450   | 9066663 | V2OVBAM 90-450   | 9066653    | V2OVBAS 90-450   |
| 6 ÷ 9 | 15    | 3/4" | 150 – 1050 | 9066664 | V2OVBAM 150-1050 | 9066654    | V2OVBAS 150-1050 |

**2 pipe system**



**4 pipe system**



### **BREEZE frame kit for wall concealed installation**

The Breeze frame kit is available in 3 sizes and allows the installation of recessed SEC/F fan coils. The kit includes a top closing panel that prevents the access to technical spaces and coil ensuring the safety of the end user.



### Recessed box kit



### Aesthetic frame kit



The **Aesthetic frame kit** and the **Recessed box kit** have different codes as they are separately delivered with their own packaging and they must be assembled together.

These items are only suitable for SEC/F models, NC version, 2-6 sizes.

When the Fan Coil is equipped with the Recessed box kit, it must be connected to a remote control and it is not possible to use the built-in electronic controls.

With the Breeze frame kit the simplified valve kits can not be installed.

### Technical characteristics of the main components:

#### The aesthetic frame includes:

- the closing frame;
- air supply louver;
- front panel;
- air intake grid.

**Perimeter frame, front panel** and **intake grid** are made of steel painted with epoxy polyester coat, dried in a furnace at 180°, colour RAL 9003. It is possible to repaint the entire frame of the same color as the wall.



**The air supply louver** is made of extruded aluminum with satin finish.



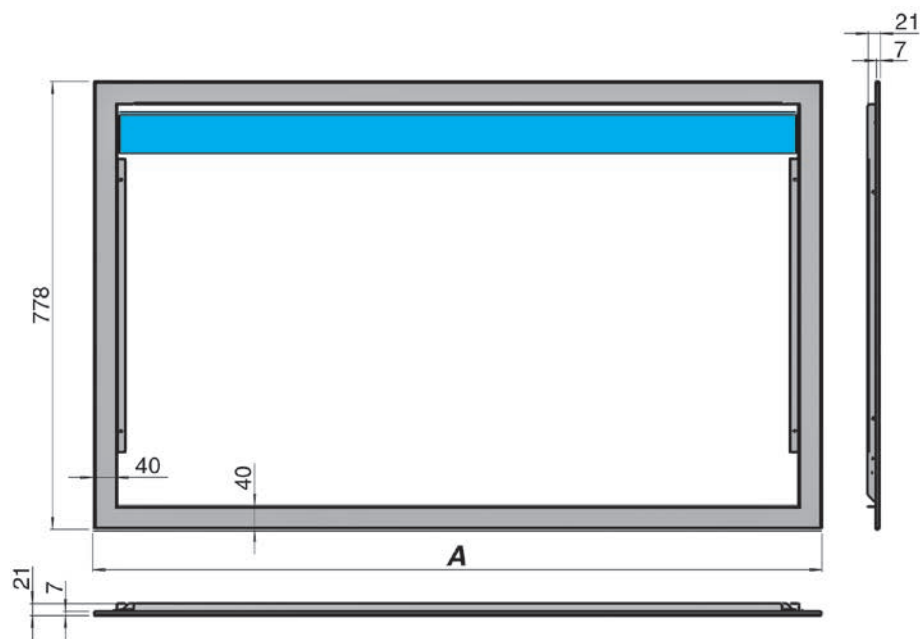
**The Grid** is fixed to the frame by using a simple and fast connecting system and it can be easily removed to clean the filter and the inner casing.



**The recessed box** is made of galvanized steel with opening for the electrical and hydraulic connections. To fit in the Fan Coil easily, there are 4 grub screws.



Aesthetic frame dimensions



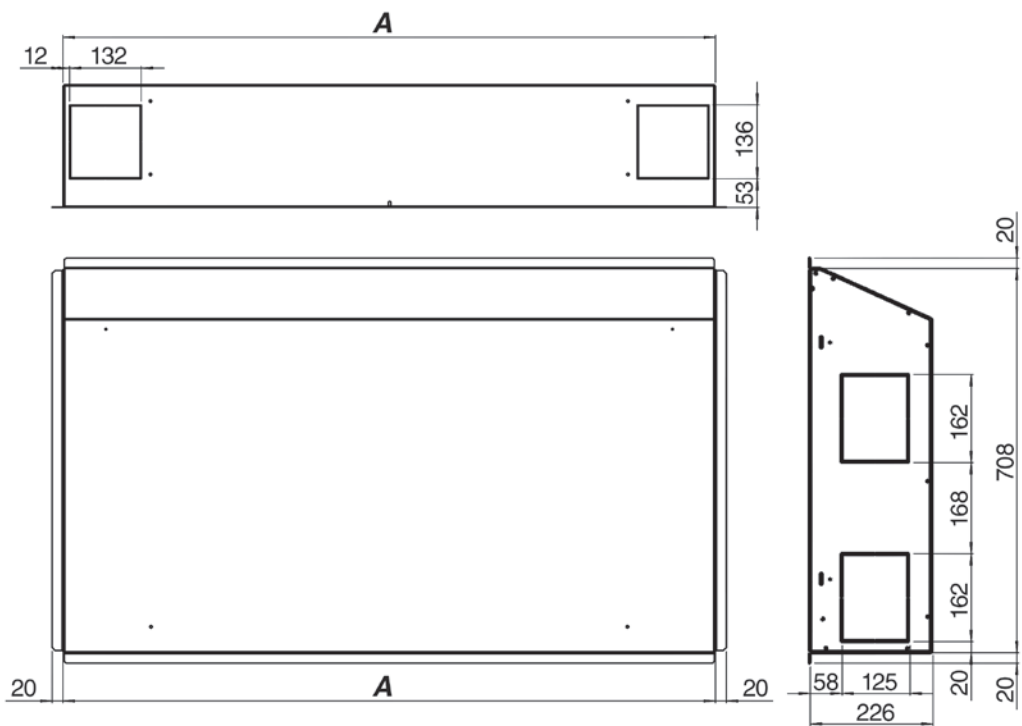
| VERSION | SEC/F |
|---------|-------|
| MODEL   | NC    |

| SIZE  | TYPE    | A    | CODE    |
|-------|---------|------|---------|
| 2     | CBR 2   | 837  | 9076452 |
| 3 - 4 | CBR 3-4 | 1052 | 9076453 |
| 5 - 6 | CBR 5-6 | 1267 | 9076455 |

| PACKAGED AESTHETIC FRAME WEIGHT |
|---------------------------------|
| 10,5                            |
| 12,5                            |
| 14,5                            |



Recessed box dimensions



| VERSION | SEC/F   |      |         |
|---------|---------|------|---------|
| MODEL   | NC      |      |         |
| SIZE    | TYPE    | A    | CODE    |
| 2       | IBR 2   | 771  | 9076462 |
| 3 - 4   | IBR 3-4 | 986  | 9076463 |
| 5 - 6   | IBR 5-6 | 1201 | 9076465 |

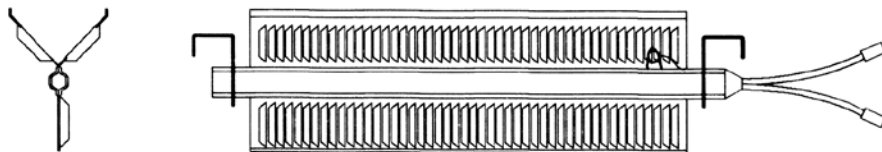
| PACKAGED RECESSED BOX WEIGHT |
|------------------------------|
| 13                           |
| 16                           |
| 18                           |



## Accessories for **SEC/F**

### BEL electric heater

1 PHASE 230V Electric heater with integral: safety thermostat and relay control.

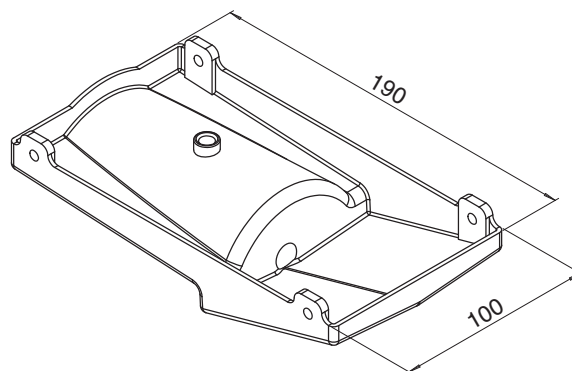


| VERSION | SEC/F              |
|---------|--------------------|
| MODEL   | CV - CH - CVB - NC |

| CV - CH - CVB MODEL |      |          |
|---------------------|------|----------|
| SIZE                | WATT | CODE     |
| 1                   | 650  | 9066491E |
| 2                   | 1000 | 9066492E |
|                     | 600  | 9066482E |
|                     | 400  | 9066472E |
| 3 - 4               | 1500 | 9066493E |
|                     | 900  | 9066483E |
|                     | 600  | 9066473E |
| 5 - 6               | 2000 | 9066495E |
|                     | 1250 | 9066485E |
|                     | 750  | 9066475E |
| 7 - 8 - 9           | 2500 | 9066497E |
|                     | 1500 | 9066487E |
|                     | 1000 | 9066477E |

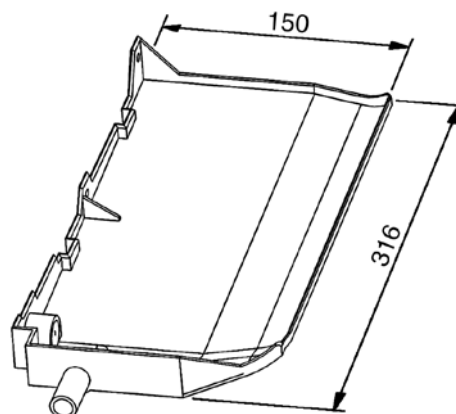
| NC MODEL  |      |         |
|-----------|------|---------|
| SIZE      | WATT | CODE    |
| 1         | 650  | 9066611 |
| 2         | 1000 | 9066612 |
|           | 600  | 9066602 |
|           | 400  | 9066592 |
| 3 - 4     | 1500 | 9066613 |
|           | 900  | 9066603 |
|           | 600  | 9066593 |
| 5 - 6     | 2000 | 9066615 |
|           | 1250 | 9066605 |
|           | 750  | 9066595 |
| 7 - 8 - 9 | 2500 | 9066617 |
|           | 1500 | 9066607 |
|           | 1000 | 9066597 |

### BSV extension condensate collection tray to cover valve assembly (for vertical units)



| VERSION | SEC/F                    |
|---------|--------------------------|
| MODEL   | CV - CVB - NC (vertical) |
| CODE    | 6060400                  |

### BSO extension condensate collection tray to cover valve assembly (for CH horizontal units with casing)



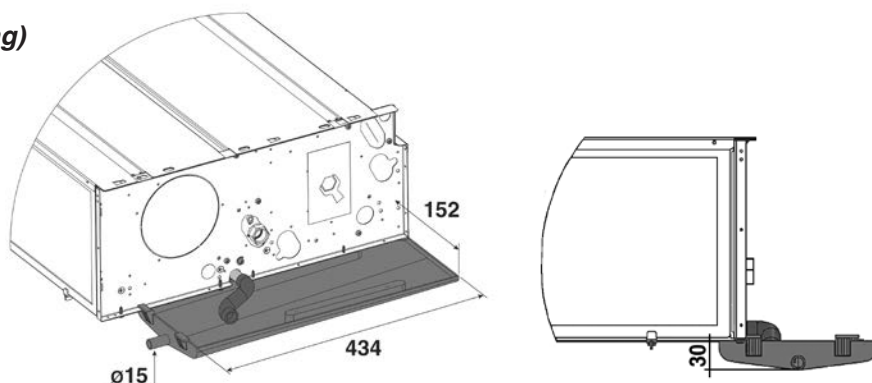
| VERSION         | SEC/F           |         |
|-----------------|-----------------|---------|
| MODEL           | CH (horizontal) |         |
| CONNECTION SIDE | LEFT            | RIGHT   |
| TYPE            | BSO-SX          | BSO-DX  |
| CODE            | 6060402         | 6060403 |

## Accessories for SEC/F

### BSI-C extension condensate collection tray to cover valve assembly (for NC horizontal units without casing)

Not to be used with **KAF** accessory.

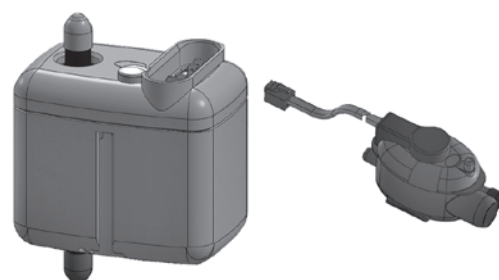
| VERSION | SEC/F           |
|---------|-----------------|
| MODEL   | NC (horizontal) |
| CODE    | 6066039         |



### DRPV-C fitted condensate pump (for vertical units)

|      | FITTED   | NOT FITTED |
|------|----------|------------|
| TYPE | DRPV-C-M | DRPV-C-S   |
| CODE | 9066297  | 9066296    |

| HEIGHT<br>FOR VERTICAL<br>FLOW (m) | WATER FLOW (l/h)<br>DEPENDING ON THE LENGTH OF HORIZONTAL FLOW |      |
|------------------------------------|----------------------------------------------------------------|------|
|                                    | 5 m                                                            | 10 m |
| 1                                  | 7,6                                                            | 7,2  |
| 2                                  | 5,6                                                            | 5,2  |
| 3                                  | 4,0                                                            | 3,7  |
| 4                                  | 3,2                                                            | 2,9  |



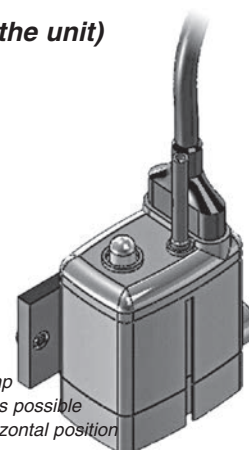
| VERSION | SEC/F                    |
|---------|--------------------------|
| MODEL   | CV - CVB - NC (vertical) |

### DRPO-C fitted condensate pump (for CH horizontal units, fitted on the unit)

| VERSION | SEC/F             |
|---------|-------------------|
| MODEL   | CV (horizontal) * |
| CODE    | 9066295           |

| HEIGHT<br>FOR VERTICAL<br>FLOW (m) | WATER FLOW (l/h)<br>DEPENDING ON THE LENGTH OF HORIZONTAL FLOW |      |
|------------------------------------|----------------------------------------------------------------|------|
|                                    | 5 m                                                            | 10 m |
| 1                                  | 7,6                                                            | 7,2  |
| 2                                  | 5,6                                                            | 5,2  |
| 3                                  | 4,0                                                            | 3,7  |
| 4                                  | 3,2                                                            | 2,9  |

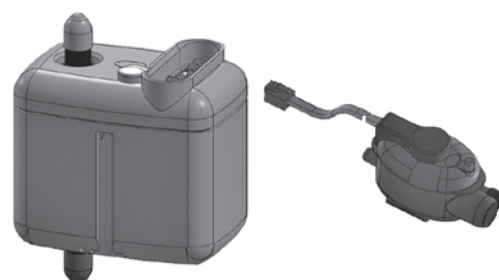
\* With CH model the pump can not be mounted; it is possible to use CV model in horizontal position using GAP and PAP.



### DRPI-C fitted condensate pump (for NC horizontal units)

| VERSION | SEC/F           |
|---------|-----------------|
| MODEL   | NC (horizontal) |
| CODE    | 9066180         |

| HEIGHT<br>FOR VERTICAL<br>FLOW (m) | WATER FLOW (l/h)<br>DEPENDING ON THE LENGTH OF HORIZONTAL FLOW |      |
|------------------------------------|----------------------------------------------------------------|------|
|                                    | 5 m                                                            | 10 m |
| 1                                  | 7,6                                                            | 7,2  |
| 2                                  | 5,6                                                            | 5,2  |
| 3                                  | 4,0                                                            | 3,7  |
| 4                                  | 3,2                                                            | 2,9  |

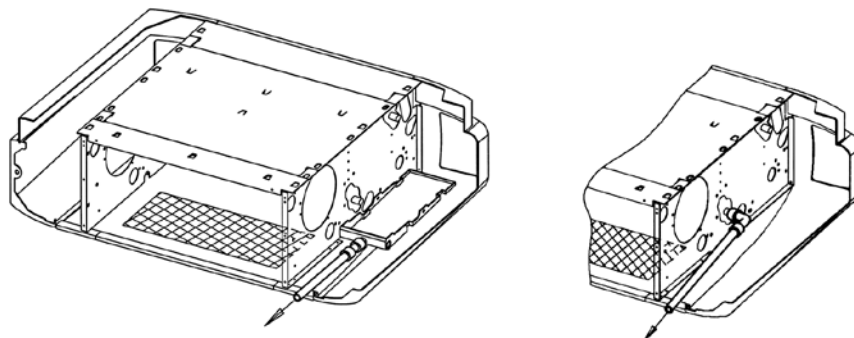


## Accessories for **SEC/F**

### SCR plastic condensate drain pipe with fast connection

(allows correct condensate drain)

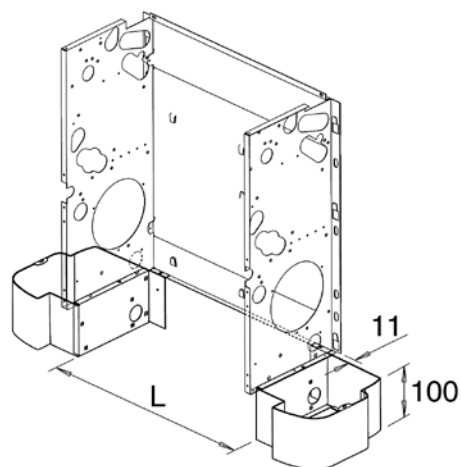
| VERSION | SEC/F   |
|---------|---------|
| MODEL   | CH - NC |
| CODE    | 6060420 |



### PAP feet

| VERSION | SEC/F |
|---------|-------|
| MODEL   | CV    |

| SIZE  | L    | CODE    |
|-------|------|---------|
| 1     | 330  | 9060150 |
| 2     | 430  | 9060150 |
| 3 - 4 | 645  | 9060150 |
| 5 - 6 | 860  | 9060150 |
| 7     | 1119 | 9060150 |
| 8 - 9 | 1119 | 9060151 |

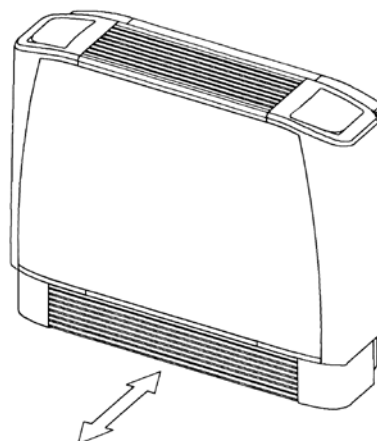


### GAP

Aluminium low intake grid  
(to be installed with PAP feet)

| VERSION | SEC/F |
|---------|-------|
| MODEL   | CV    |

| SIZE  | CODE    |
|-------|---------|
| 1     | 9066541 |
| 2     | 9066542 |
| 3 - 4 | 9066543 |
| 5 - 6 | 9066545 |
| 7 ÷ 9 | 9066547 |



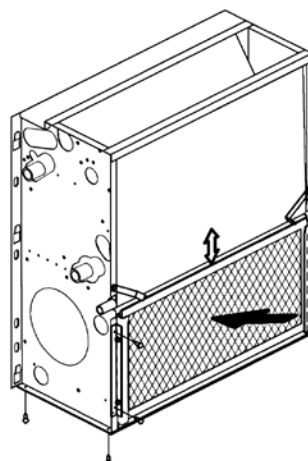
### KAF frontal intake kit

Bottom closing panel and filter sliding guides.

| VERSION | SEC/F |
|---------|-------|
| MODEL   | NC    |

| SIZE  | CODE    |
|-------|---------|
| 1     | 9066501 |
| 2     | 9066502 |
| 3 - 4 | 9066503 |
| 5 - 6 | 9066505 |
| 7     | 9066507 |
| 8 - 9 | 9066508 |

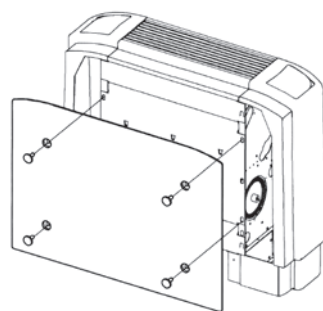
Not to be used  
with **BSI-C** accessory.



## Accessories for **SEC/F**

### PCV-F rear closing panel (for vertical units)

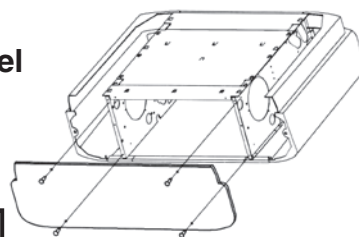
| SIZE  | CODE    |
|-------|---------|
| 1     | 9062005 |
| 2     | 9060180 |
| 3 - 4 | 9060181 |
| 5 - 6 | 9060182 |
| 7 ÷ 9 | 9060183 |



| VERSION | SEC/F    |
|---------|----------|
| MODEL   | CV - CVB |

### PCO-F bottom closing panel (for horizontal units)

| SIZE  | CODE    |
|-------|---------|
| 1     | 9060187 |
| 2     | 9060190 |
| 3 - 4 | 9060191 |
| 5 - 6 | 9060192 |
| 7     | 9060193 |
| 8 - 9 | 9060194 |



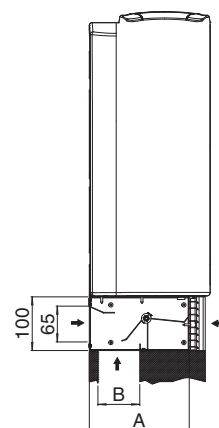
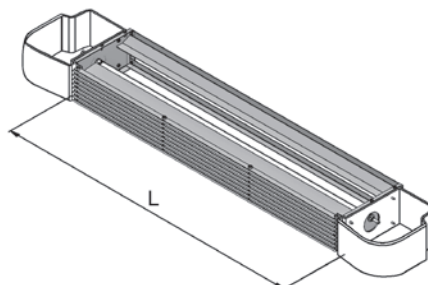
| VERSION | SEC/F |
|---------|-------|
| MODEL   | CH    |

### SAEM fresh air mixing damper (factory mounted with feet and intake grid included, CV only)

| VERSION | SEC/F |
|---------|-------|
| MODEL   | CV    |

(can be motorized on request)

| SIZE  | A   | B   | L    | CODE    |
|-------|-----|-----|------|---------|
| 1     | 186 | 78  | 354  | 9076331 |
| 2     | 186 | 78  | 454  | 9076332 |
| 3 - 4 | 186 | 78  | 669  | 9076333 |
| 5 - 6 | 186 | 78  | 884  | 9076335 |
| 7     | 186 | 78  | 1099 | 9076337 |
| 8 - 9 | 216 | 108 | 1099 | 9076338 |

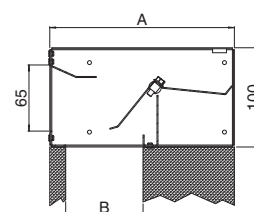
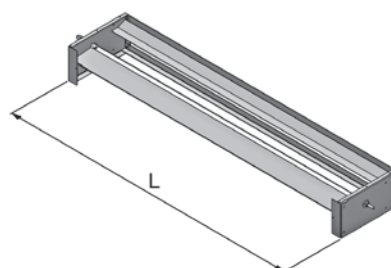


### SAE fresh air mixing damper (not mounted, NC only)

| VERSION | SEC/F |
|---------|-------|
| MODEL   | NC    |

(can be motorized on request)

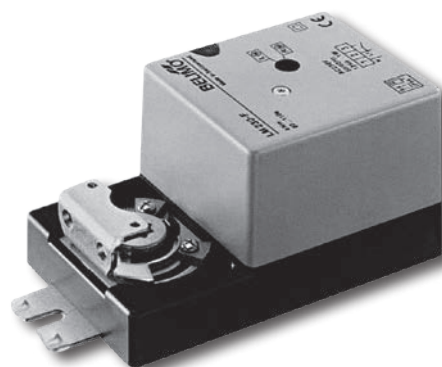
| SIZE  | A   | B   | L    | CODE    |
|-------|-----|-----|------|---------|
| 1     | 186 | 78  | 354  | 9066531 |
| 2     | 186 | 78  | 454  | 9066532 |
| 3 - 4 | 186 | 78  | 669  | 9066533 |
| 5 - 6 | 186 | 78  | 884  | 9066535 |
| 7     | 186 | 78  | 1099 | 9066537 |
| 8 - 9 | 216 | 108 | 1099 | 9066538 |



### Belimo motor

Fitted on the unit for motorized version of the SAE damper (available with "IAQ" control only).

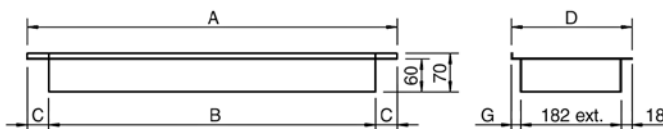
| VERSION | SEC/F   |
|---------|---------|
| MODEL   | CV - NC |
| TYPE    | BESAE   |
| CODE    | 9066620 |



## Accessories for SEC/F

### FRD straight inlet flange

Can be used together with GRAG air inlet grid.  
Made of galvanized steel.

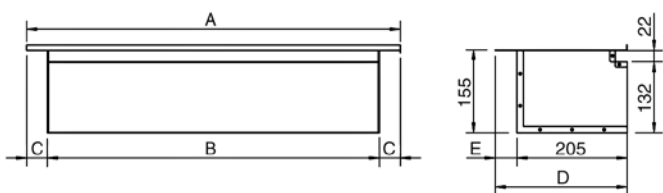


| SIZE  | TYPE      | A    | B   | C    | D   | G  | CODE    |
|-------|-----------|------|-----|------|-----|----|---------|
| 1     | FRD - 1   | 354  | 290 | 32   | 216 | 16 | 9066451 |
| 2     | FRD - 2   | 454  | 390 | 32   | 216 | 16 | 9060720 |
| 3 - 4 | FRD - 3/4 | 669  | 590 | 39,5 | 216 | 16 | 9060721 |
| 5 - 6 | FRD - 5/6 | 884  | 790 | 47   | 216 | 16 | 9060722 |
| 7     | FRD - 7   | 1099 | 990 | 54,5 | 216 | 16 | 9060723 |
| 8 - 9 | FRD - 8/9 | 1099 | 990 | 54,5 | 246 | 46 | 9060724 |

|         |       |
|---------|-------|
| VERSION | SEC/F |
| MODEL   | NC    |

### FR 90 90° inlet flange

Can be used together with GRAP air inlet grid.  
Made of galvanized steel.

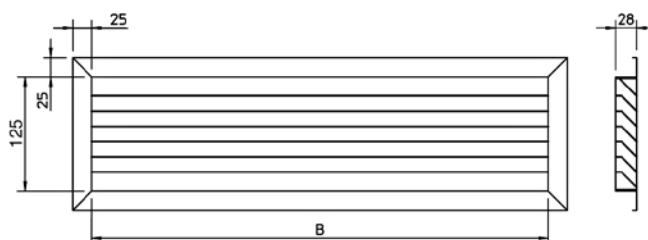


| SIZE  | TYPE       | A    | B   | C    | D   | E  | CODE    |
|-------|------------|------|-----|------|-----|----|---------|
| 1     | FR90 - 1   | 354  | 290 | 32   | 216 | 11 | 9066441 |
| 2     | FR90 - 2   | 454  | 390 | 32   | 216 | 11 | 9060710 |
| 3 - 4 | FR90 - 3/4 | 669  | 590 | 39,5 | 216 | 11 | 9060711 |
| 5 - 6 | FR90 - 5/6 | 884  | 790 | 47   | 216 | 11 | 9060712 |
| 7     | FR90 - 7   | 1099 | 990 | 54,5 | 216 | 11 | 9060713 |
| 8 - 9 | FR90 - 8/9 | 1099 | 990 | 54,5 | 246 | 41 | 9060714 |

|         |       |
|---------|-------|
| VERSION | SEC/F |
| MODEL   | NC    |

### GRAP air inlet grid

To be used with FR 90 90° inlet flange.  
Made of anodized aluminium.

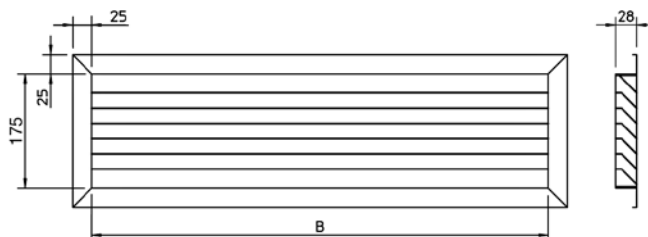


| SIZE  | TYPE       | DESCRIPTION   | B   | CODE    |
|-------|------------|---------------|-----|---------|
| 1     | GRAP - 1   | Grid 300x150  | 275 | 9066421 |
| 2     | GRAP - 2   | Grid 400x150  | 375 | 9060760 |
| 3 - 4 | GRAP - 3/4 | Grid 600x150  | 575 | 9060761 |
| 5 - 6 | GRAP - 5/6 | Grid 800x150  | 775 | 9060762 |
| 7 ÷ 9 | GRAP - 7/9 | Grid 1000x150 | 975 | 9060763 |

|         |       |
|---------|-------|
| VERSION | SEC/F |
| MODEL   | NC    |

### GRAG air inlet grid

To be used with FRD straight inlet flange.  
Made of anodized aluminium.



| SIZE  | TYPE       | DESCRIPTION   | B   | CODE    |
|-------|------------|---------------|-----|---------|
| 1     | GRAG - 1   | Grid 300x200  | 275 | 9066431 |
| 2     | GRAG - 2   | Grid 400x200  | 375 | 9060764 |
| 3 - 4 | GRAG - 3/4 | Grid 600x200  | 575 | 9060765 |
| 5 - 6 | GRAG - 5/6 | Grid 800x200  | 775 | 9060766 |
| 7 ÷ 9 | GRAG - 7/9 | Grid 1000x200 | 975 | 9060767 |

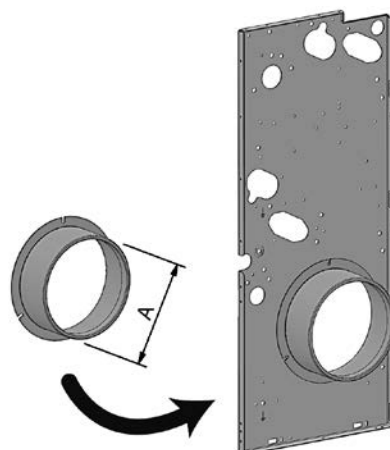
|         |       |
|---------|-------|
| VERSION | SEC/F |
| MODEL   | NC    |

## Accessories for **SEC/F**

### FRC side fresh air connection (not mounted)

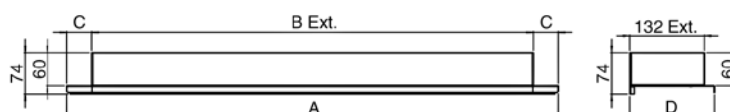
| VERSION | SEC/F |
|---------|-------|
| MODEL   | NC    |

| SIZE  | TYPE    | A   | CODE    |
|-------|---------|-----|---------|
| 1 ÷ 7 | FRC 100 | 98  | 6064191 |
| 1 ÷ 7 | FRC 120 | 122 | 6064192 |



### FMD straight outlet flange

Made of galvanized steel.

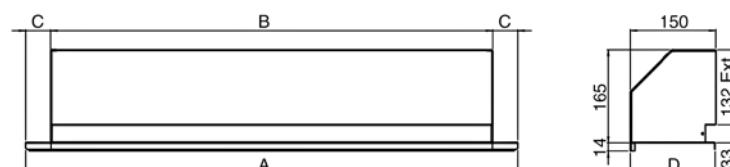


| SIZE  | TYPE      | A    | B   | C    | D   | CODE    |
|-------|-----------|------|-----|------|-----|---------|
| 1     | FMD - 1   | 352  | 290 | 31   | 152 | 9066371 |
| 2     | FMD - 2   | 452  | 390 | 31   | 152 | 9066372 |
| 3 - 4 | FMD - 3/4 | 667  | 590 | 38,5 | 152 | 9066373 |
| 5 - 6 | FMD - 5/6 | 882  | 790 | 46   | 152 | 9066375 |
| 7     | FMD - 7   | 1097 | 990 | 53,5 | 152 | 9066377 |
| 8 - 9 | FMD - 8/9 | 1097 | 990 | 53,5 | 179 | 9066378 |

| VERSION | SEC/F |
|---------|-------|
| MODEL   | NC    |

### FM 90 90° outlet flange

Made of galvanized steel  
insulated with polyethylene lining.



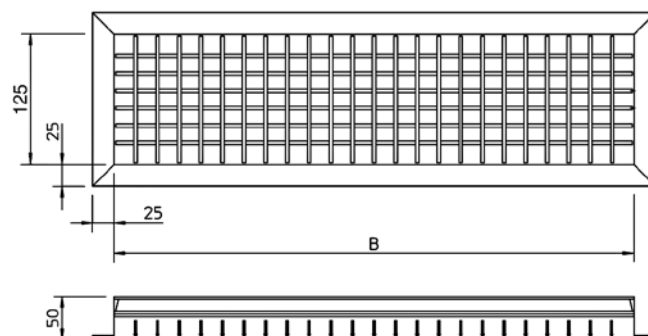
| SIZE  | TYPE       | A    | B   | C    | D   | CODE    |
|-------|------------|------|-----|------|-----|---------|
| 1     | FM90 - 1   | 352  | 290 | 31   | 152 | 9066381 |
| 2     | FM90 - 2   | 452  | 390 | 31   | 152 | 9066382 |
| 3 - 4 | FM90 - 3/4 | 667  | 590 | 38,5 | 152 | 9066383 |
| 5 - 6 | FM90 - 5/6 | 882  | 790 | 46   | 152 | 9066385 |
| 7     | FM90 - 7   | 1097 | 990 | 53,5 | 152 | 9066387 |
| 8 - 9 | FM90 - 8/9 | 1097 | 990 | 53,5 | 179 | 9066388 |

| VERSION | SEC/F |
|---------|-------|
| MODEL   | NC    |

### BMA air outlet grid

Double louvre grid to be fitted to the duct,  
to the FMD straight outlet flange  
or to the FM 90 90° outlet flange.  
Made of anodized aluminium.

| SIZE  | TYPE      | B   | CODE    |
|-------|-----------|-----|---------|
| 1     | BMA - 1   | 275 | 9066411 |
| 2     | BMA - 2   | 375 | 9060750 |
| 3 - 4 | BMA - 3/4 | 575 | 9060751 |
| 5 - 6 | BMA - 5/6 | 775 | 9060752 |
| 7 ÷ 9 | BMA - 7/9 | 975 | 9060753 |

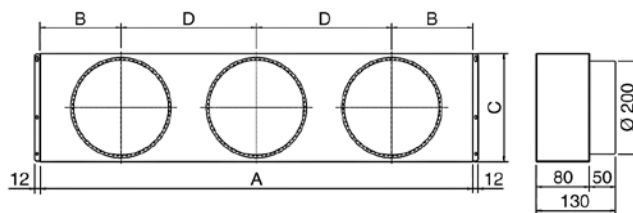


| VERSION | SEC/F |
|---------|-------|
| MODEL   | NC    |

## Accessories for SEC/F

### PRC air inlet spigot plenum

Made of galvanized steel  
insulated with polyethylene lining.



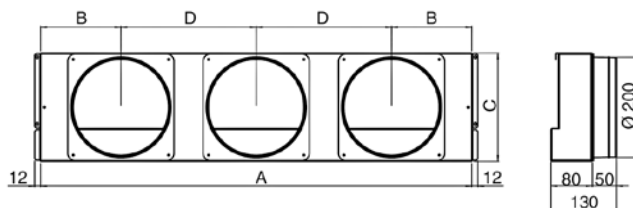
| SIZE  | TYPE      | A    | B   | C   | D     | SPIGOTS | CODE    |
|-------|-----------|------|-----|-----|-------|---------|---------|
| 1     | PRC - 1   | 330  | 165 | 218 | /     | N° 1    | 9066461 |
| 2     | PRC - 2   | 430  | 107 | 218 | 216   | N° 2    | 9066462 |
| 3 - 4 | PRC - 3/4 | 645  | 166 | 218 | 313   | N° 2    | 9066463 |
| 5 - 6 | PRC - 5/6 | 860  | 160 | 218 | 270   | N° 3    | 9066465 |
| 7     | PRC - 7   | 1075 | 190 | 218 | 347,5 | N° 3    | 9066467 |
| 8 - 9 | PRC - 8/9 | 1075 | 190 | 248 | 347,5 | N° 3    | 9066468 |

All the plenums are supplied  
with spigots  
for the connection of flexible ducts.

| VERSION | SEC/F |
|---------|-------|
| MODEL   | NC    |

### PMC spigot diffuser

Made of galvanized steel  
insulated with polyethylene lining.



| SIZE  | TYPE      | A    | B   | C   | D     | SPIGOTS | CODE    |
|-------|-----------|------|-----|-----|-------|---------|---------|
| 1     | PMC - 1   | 330  | 165 | 218 | /     | N° 1    | 9066361 |
| 2     | PMC - 2   | 430  | 107 | 218 | 216   | N° 2    | 9066362 |
| 3 - 4 | PMC - 3/4 | 645  | 166 | 218 | 313   | N° 2    | 9066363 |
| 5 - 6 | PMC - 5/6 | 860  | 160 | 218 | 270   | N° 3    | 9066365 |
| 7     | PMC - 7   | 1075 | 190 | 218 | 347,5 | N° 3    | 9066367 |
| 8 - 9 | PMC - 8/9 | 1075 | 190 | 248 | 347,5 | N° 3    | 9066368 |

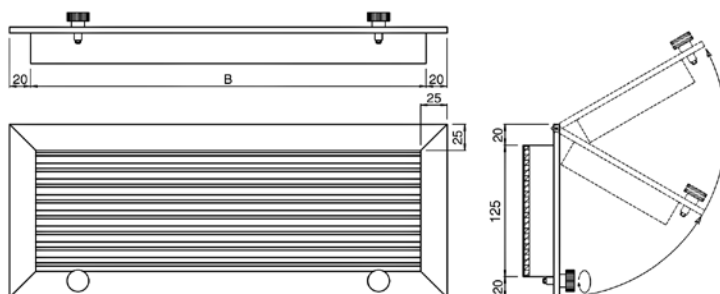
All the plenums are supplied  
with spigots  
for the connection of flexible ducts.

| VERSION | SEC/F |
|---------|-------|
| MODEL   | NC    |

### GRAFP air inlet grid with filter

To be fitted to the FR 90 90° inlet flange.  
Made of anodized aluminium.

| SIZE  | TYPE        | B   | CODE    |
|-------|-------------|-----|---------|
| 1     | GRAFP - 1   | 275 | 9066391 |
| 2     | GRAFP - 2   | 375 | 9060770 |
| 3 - 4 | GRAFP - 3/4 | 575 | 9060771 |
| 5 - 6 | GRAFP - 5/6 | 775 | 9060772 |
| 7 ÷ 9 | GRAFP - 7/9 | 975 | 9060773 |

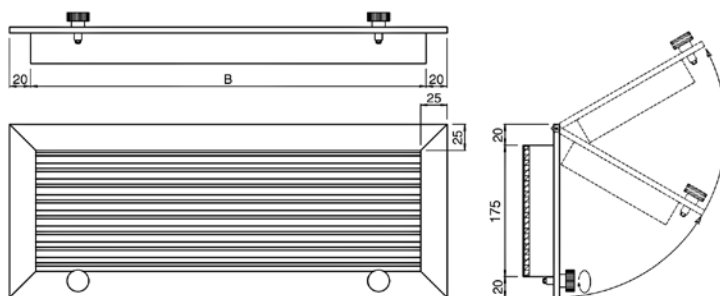


| VERSION | SEC/F |
|---------|-------|
| MODEL   | NC    |

### GRAFG air inlet grid with filter

To be fitted to the FRD straight inlet flange.  
Made of anodized aluminium.

| SIZE  | TYPE        | B   | CODE    |
|-------|-------------|-----|---------|
| 1     | GRAFG - 1   | 275 | 9066401 |
| 2     | GRAFG - 2   | 375 | 9060774 |
| 3 - 4 | GRAFG - 3/4 | 575 | 9060775 |
| 5 - 6 | GRAFG - 5/6 | 775 | 9060776 |
| 7 ÷ 9 | GRAFG - 7/9 | 975 | 9060777 |

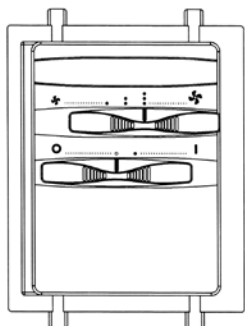


| VERSION | SEC/F |
|---------|-------|
| MODEL   | NC    |

[illegible]

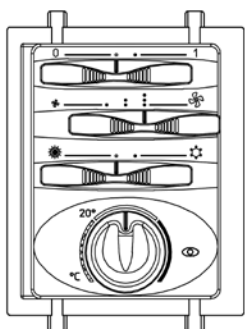
## Electronic controls to be fitted on CV-CVB units

| IDENTIFICATION | CODE    |
|----------------|---------|
| MV-3V          | 9060130 |



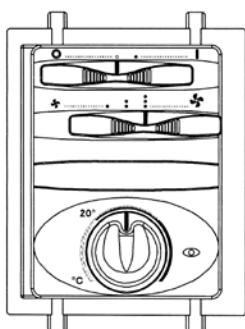
- ON-OFF switch and 3 speed switch.
- Without thermostatic control.
- It allows to control the low temperature cut-out thermostat (TMM).

| IDENTIFICATION | CODE    |
|----------------|---------|
| TMV-S          | 9060140 |



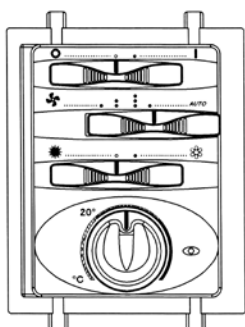
- ON-OFF switch.
- 3 speed switch.
- Summer/Winter switch.
- Electronic room thermostat for fan or valve control (ON-OFF).
- It allows to control the low temperature cut-out thermostat (TMM).
- It allows to control the chilled water valve (ON-OFF) and the electric heater (BEL) only in case that hot water is not used in winter (otherwise please use TMV-R-IAQ control with on/off switch for the electric heater).

| IDENTIFICATION | CODE    |
|----------------|---------|
| TMV-C          | 9060133 |



- ON-OFF switch.
- 3 speed switch.
- It allows to control the summer or winter cycle with centralized and remote switch, or an automatic change-over fitted on the water pipe (for 2-tube installations only).
- Electronic room thermostat for fan or valve control (ON-OFF).
- It allows to control the low temperature cut-out thermostat (TME).
- It allows to control the chilled water valve (ON-OFF) and the electric heater (BEL) only in case that hot water is not used in winter (otherwise please use TMV-T-IAQ control with on/off switch for the electric heater).

| IDENTIFICATION | CODE    |
|----------------|---------|
| TMV-AUT        | 9066319 |



- Manual or automatic speed switch: on Auto Mode there is the automatic speed selection in accordance to the difference between room temperature and setpoint. When the setpoint is reached the fan go on OFF.
- Summer/Winter switch.
- Electronic room thermostat for valve(s) control (ON-OFF).
- Simultaneous thermostatic control of the valves and fan.
- It allows to control the low temperature cut-out (NTC).
- It allows to control the chilled water valve (ON-OFF) and the electric heater (BEL) only in case that hot water is not used in winter (otherwise please use TMV-AU-IAQ control with on/off switch for the electric heater).
- It allows to control the summer/winter cycle with a centralized and remote switch or with an automatic change-over fitted on the water pipe (for 2-tube installations only).

**N.B.:** with 4 pipe installations and continuous chilled and hot water supply, it allows the automatic summer/winter change-over in accordance to the room temperature (-1°C = Winter, +1°C = Summer, Neutral Zone 2°C).

## Wall electronic controls

| IDENTIFICATION | CODE    |
|----------------|---------|
| WM-3V          | 9066642 |



Dimensions: 75x75x30 mm

- Manual 3 speed switch.
- Without thermostatic control.
- It does not control the valves.

| IDENTIFICATION | CODE     |
|----------------|----------|
| WM-T           | 9066630E |



Dimensions: 135x86x31 mm

- ON-OFF switch.
- Manual 3 speed switch.
- Manual Summer/Winter switch.
- Electronic room thermostat for fan control (ON-OFF).
- Electronic room thermostat for valve control (ON-OFF) (the fan keeps working).
- It allows to control the low temperature cut-out thermostat (TMM).
- It allows to control the chilled water valve (ON-OFF) and the electric heater (BEL) only in case that hot water is not used in winter (otherwise please use WM-TQR control with on/off switch for the electric heater).
- Presence of a LED signal when the thermostat is on.

Control power absorption: 0,25 VA

| IDENTIFICATION | CODE     |
|----------------|----------|
| WM-TQR         | 9066631E |



Dimensions: 135x86x31 mm

- ON-OFF switch.
- Manual 3 speed switch.
- Manual, automatic or centralized Summer/Winter switch.
- Electric heater activation button.
- Electronic room thermostat for fan control (ON-OFF).
- Electronic room thermostat for valve control (ON-OFF).
- Simultaneous thermostatic control of the valves and fan.
- It allows to control the low temperature cut-out thermostat (NTC).
- It allows to control the water valves (ON-OFF) and the electric heater managed as main heating element or as an integration element.
- Energy saving function.
- Presence of a LED signal when the thermostat is on.

Control power absorption: 1 VA

| IDENTIFICATION | CODE     |
|----------------|----------|
| WM-AU          | 9066632E |



Dimensions: 135x86x24 mm

**The control must always be connected with UPM-AU power unit (fitted on the unit) or with UP-AU power unit (not fitted on the unit).**

- ON-OFF push button.
- Manual, automatic or centralized Summer/Winter switch.
- Manual or automatic 3 speed progressive push button.
- Summer/Winter/Fan/Auto mode push button.
- Electric heater activation button.
- Electronic room thermostat for fan control (ON-OFF).
- Electronic room thermostat for valve control (ON-OFF).
- Simultaneous thermostatic control of the valves and fan.
- It allows to control the low temperature cut-out thermostat (NTC).
- It allows to control the water valves (ON-OFF) and the electric heater managed as main heating element or as an integration element.
- Energy saving push button.
- Presence of a LED signal when the thermostat is on.

**N.B.:** with 4 pipe installations and continuous chilled and hot water supply, it allows the automatic summer winter change-over in accordance to the room temperature (-1°C = Winter, +1°C = Summer, Neutral Zone 2°C).

Control power absorption: see the UP-AU power unit

## Wall electronic controls

| IDENTIFICATION | CODE     |
|----------------|----------|
| T-MB           | 9066331E |



Dimensions: 110x72x25 mm

**The control must always be connected with UPM-AU power unit (fitted on the unit) or with UP-AU power unit (not fitted on the unit).**

Wall control with display that allows controlling one or more units in Master/Slave mode. The control is equipped with internal sensor to detect the room temperature, which can be defined as a priority compared to the return air sensor on the fan coil.

The T-MB control features the following functions:

- Switch the unit ON and OFF.
- Temperature set.
- Manual, centralized or automatic Summer/Winter switch.
- Set the fan speed (low, medium, high or autofan).
- Set the operation mode (fan only, cooling, heating; auto for 4 pipe systems with mode selection depending on the air temperature).
- Possibility of use of the low temperature cut-out thermostat NTC mounted on the UP-AU power unit.
- It allows to control the water valves (ON-OFF) and the electric heater managed as main heating element or as an integration element.
- Time setting and Weekly ON/OFF program.

Control power absorption: see the UP-AU power unit

| IDENTIFICATION | CODE     |
|----------------|----------|
| WM-503         | 9066676E |



Dimensions: 68x52.2x58 mm

The WM-503 control is designed to be installed in a 503 wall box.

Easy to use, it is equipped with a large and efficient backlit LCD screen with 4 keys.

The thermostat is delivered with an external frame conceived for several combinations with adaptors and covers that make it suitable for more than 25 different frames belonging to various brands.

- Manual or automatic 3 speed switch.
- One single digital input to select: ON-OFF/SETPOINT reduction/Summer-Winter switch.
- Electronic room thermostat for fan control (ON-OFF).
- Electronic room thermostat for 1 water valve control (ON-OFF) (2 pipe system).
- Electronic room thermostat for 2 water valves control (ON-OFF) (4 pipe system).
- Simultaneous thermostatic control of the valves and fan.
- One single input to select: return air/water/change-over control probe.
- Possibility to use a low temperature cut-out thermostat NTC (optional).

Control power absorption: see the UP-503 power unit

| IDENTIFICATION | CODE    |
|----------------|---------|
| T2T            | 9060174 |



Dimensions: 128x75x25 mm

**2 pipes units only.**

- ON-OFF switch.
- 3 speed switch.
- Manual Summer/Winter switch.
- Thermostatic control on the fan.
- Thermostatic control on the valve and continuous fan operation.
- Simultaneous thermostatic control of the valve and fan.
- Cannot be used with speed switch (master-slave).

Control power absorption: 1,5 VA

## Electronic controls to be fitted on **SEC/F** units with electric heater

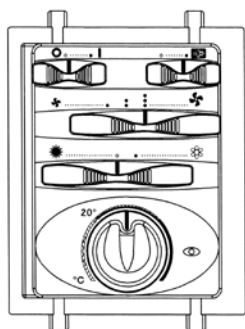
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### IDENTIFICATION

### CODE

TMV-R-IAQ

9063006



- ON-OFF switch.
- 3 speed switch.
- Summer/Winter switch.
- Electric heater ON-OFF switch.
- Electronic room thermostat for fan or valve control (ON-OFF).
- It allows to control the low temperature cut-out thermostat (TME).
- It allows to control the chilled water valve (ON-OFF) and the electric heater (BEL) only in case that hot water is not used in winter.
- It allows to control the summer/winter cycle with a centralized and remote switch or with an automatic change-over fitted on the water pipe (for 2-tube installations only).

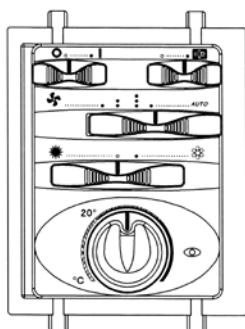
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### IDENTIFICATION

### CODE

TMV-AU-IAQ

9063004



- Manual or automatic speed switch: on Auto Mode there is the automatic speed selection in accordance to the difference between room temperature and setpoint. When the setpoint is reached the fan and the filter go on OFF.
- Summer/Winter switch.
- Electric heater ON-OFF switch.
- Electronic room thermostat for valve control (ON-OFF).
- It allows to control the low temperature cut-out (TME).
- It allows to control the chilled water valve (ON-OFF) and the electric heater (BEL) only in case that hot water is not used in winter.
- It allows to control the summer/winter cycle with a centralized and remote switch or with an automatic change-over fitted on the water pipe (for 2-tube installations only).

**N.B.:** with 4 pipe installations and continuous chilled and hot water supply, it allows the automatic summer/winter change-over in accordance to the room temperature (-1.6°C = Winter, +1.6°C = Summer, Neutral Zone 3.2°C).

## Wall electronic controls for **SEC/F** units with electric heater

| IDENTIFICATION | CODE     |
|----------------|----------|
| WM-TQR         | 9066631E |



Dimensions: 135x86x31 mm

- ON-OFF switch.
- Manual 3 speed switch.
- Manual, automatic or centralized Summer/Winter switch.
- Electric heater activation button.
- Electronic room thermostat for fan control (ON-OFF).
- Electronic room thermostat for valve control (ON-OFF).
- Simultaneous thermostatic control of the valves and fan.
- It allows to control the low temperature cut-out thermostat (NTC).
- It allows to control the water valves (ON-OFF) and the electric heater managed as main heating element or as an integration element.
- Energy saving function.
- Presence of a LED signal when the thermostat is on.

Control power absorption: 1 VA

| IDENTIFICATION | CODE     |
|----------------|----------|
| WM-AU          | 9066632E |



Dimensions: 135x86x24 mm

**The control must always be connected with UPM-AU power unit (fitted on the unit) or with UP-AU power unit (not fitted on the unit).**

- ON-OFF switch.
- Manual, automatic or centralized Summer/Winter switch.
- Manual or automatic 3 speed progressive switch.
- Summer/Winter/Fan/Auto mode push button.
- Electric heater activation button.
- Electronic room thermostat for fan control (ON-OFF).
- Electronic room thermostat for valve control (ON-OFF).
- Simultaneous thermostatic control of the valves and fan.
- It allows to control the low temperature cut-out thermostat (NTC).
- It allows to control the water valves (ON-OFF) and the electric heater managed as main heating element or as an integration element.
- Energy saving push button.
- Presence of a LED signal when the thermostat is on.

**N.B.:** with 4 pipe installations and continuous chilled and hot water supply, it allows the automatic summer winter change-over in accordance to the room temperature (-1°C = Winter, +1°C = Summer, Neutral Zone 2°C).

Control power absorption: see the UP-AU power unit

| IDENTIFICATION | CODE     |
|----------------|----------|
| T-MB           | 9066331E |



Dimensions: 110x72x25 mm

**The control must always be connected with UPM-AU power unit (fitted on the unit) or with UP-AU power unit (not fitted on the unit).**

Wall control with display that allows controlling one or more units in Master/Slave mode. The control is equipped with internal sensor to detect the room temperature, which can be defined as a priority compared to the return air sensor on the fan coil.

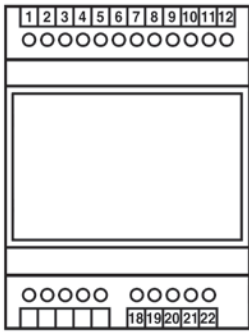
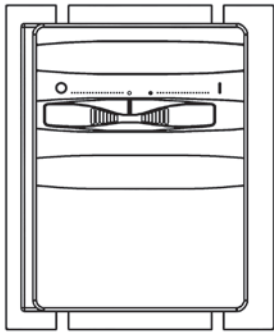
The T-MB control features the following functions:

- Switch the unit ON and OFF.
- Temperature set.
- Manual, centralized or automatic Summer/Winter switch.
- Set the fan speed (low, medium, high or autofan).
- Set the operation mode (fan only, cooling, heating; auto for 4 pipe systems with mode selection depending on the air temperature).
- Possibility of use of the low temperature cut-out thermostat NTC mounted on the UP-AU power unit.
- It allows to control the water valves (ON-OFF) and the electric heater managed as main heating element or as an integration element.
- Time setting and Weekly ON/OFF program.

Control power absorption: see the UP-AU power unit

# Speed switches

| IDENTIFICATION | CODE    |
|----------------|---------|
| SEL-V          | 9060136 |



- For CV-CVB models.**
- Speed switch (Slave).
  - It allows to control up to 8 units with only one centralized wall control (1 speed switch for each unit).
  - For controls WM-T and WM-TQR.

| IDENTIFICATION | CODE    |
|----------------|---------|
| SEL-CR         | 9066311 |



- For CH-NC models.**
- Speed switch (Slave).
  - It allows to control up to 8 units with only one centralized wall control (1 speed switch for each unit).
  - For controls WM-T and WM-TQR.

| DESCRIPTION                                                           | IDENTIFICATION | CODE    |
|-----------------------------------------------------------------------|----------------|---------|
| Power unit for WM-AU and T-MB remote control (fitted on the unit)     | UPM-AU         | 9066641 |
| Power unit for WM-AU and T-MB remote control (not fitted on the unit) | UP-AU          | 9066640 |



- Power unit to be installed on the fan coil (fan coil interface).
- It controls the fan and the valves of the fan coil.
  - It is connected to the electric supply.
  - It receives the information required from the control.
  - Possibility to use the low temperature cut-out thermostat (optional) for the T1 function which allows the return air control.
  - Possibility to use the low temperature cut-out thermostat (optional) for the T2 function which controls the summer/winter switch.
  - Possibility to use the low temperature cut-out thermostat (optional) for the T3 function as low temperature cut-out thermostat.
  - It allows to control up to 10 units (1 master and 9 slaves).
  - Max. Network length: 100 meters.
  - Max cable length between control and first connected power unit: 20 meters.
- Control power absorption: 2,3 VA

| IDENTIFICATION | CODE    |
|----------------|---------|
| UP-503         | 9066677 |



- Power unit to be installed on the fan coil (fan coil interface).
- It controls the fan and the valves of the fan coil.
  - It is connected to the electric supply.
  - It receives the information required from the control WM-503.
  - It allows to control up to 5 units (1 master and 4 slaves).
  - Max. Network length: 100 meters.
  - Max cable length between control and first connected power unit: 20 meters.
- Control power absorption: 2 VA

## Electronic control accessories for SEC/F

### TME low temperature cut-out thermostat

To be fitted between the coil fins. When connecting the control, the TME probe cable must be separated from the power supply wires.  
To be used with the following controls: TMV-C, TMV-R-IAQ and TMV-AU-IAQ.  
It stops the fan when the water temperature is lower than 38°C and it starts the fan when is higher than 42°C.

| VERSION | SEC/F              |
|---------|--------------------|
| MODEL   | CV - CH - CVB - NC |
| CODE    | 3021091            |



### TMM low temperature cut-out thermostat

To be installed in contact with the hot water circuit.  
To be used with the following controls: TMV-S and WM-T.  
For units working on heating only.  
It stops the fan when the water temperature is lower than 30°C and it starts the fan when is higher than 38°C.

| VERSION | SEC/F              |
|---------|--------------------|
| MODEL   | CV - CH - CVB - NC |
| CODE    | 9053048            |



### NTC low temperature cut-out thermostat

To be fitted between the coil fins. When connecting the control, the NTC probe cable must be separated from the power supply wires.  
To be used with controls TMV-AUT, WM-TQR and UP-AU, UP-503 power units.  
It stops the fan when the water temperature is lower than 28°C and it starts the fan when is higher than 33°C.

To use as:

- T1 function for the return air control.
- T2 function which controls the summer/winter switch.
- T3 function as low temperature cut-out thermostat.

| VERSION | SEC/F              |
|---------|--------------------|
| MODEL   | CV - CH - CVB - NC |
| CODE    | 3021090            |



### Change-Over CH 15-25

Automatic summer/winter switch  
to be installed in contact with the water circuit.  
For 2-tube installations only (not to be used with 2 way valve).  
To be used with the following controls:  
TMV-C, TMV-R-IAQ, TMV-AU-IAQ and WM-TQR.

| VERSION | SEC/F              |
|---------|--------------------|
| MODEL   | CV - CH - CVB - NC |
| CODE    | 9053049            |



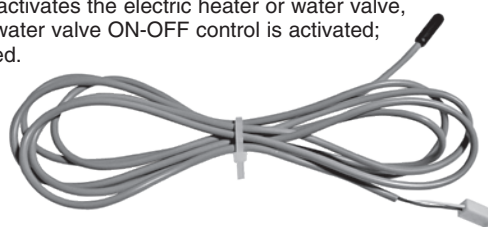
### T2 sensor to be placed on the water supply pipe upstream 3 way valves (not to be used with 2 way valve).

The T2 sensor must be used as described below:

- Change-Over for the automatic switch of the operating mode. If water temperature is lower than 20°C, cooling mode is set; on the other hand, if water temperature exceeds 30°C, heating mode is set.
- It can be used on units with electric heater and hot water supply. The T2 priority probe activates the electric heater or water valve, depending on the water temperature detected. If water temperature exceeds 34°C, the water valve ON-OFF control is activated; on the other hand, if water temperature is lower than 30°C, the electric heater is activated.

To be used with the UP-AU power unit.

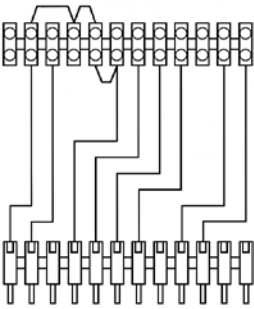
| VERSION | SEC/F              |
|---------|--------------------|
| MODEL   | CV - CH - CVB - NC |
| CODE    | 9025310            |



**Terminal board adaptor kit**

To connect the units CV and CVB with the WM-3V, WM-T, WM-TQR or WM-AU controls, a terminal board adaptor kit is available on request.

|                       |                 |
|-----------------------|-----------------|
| <b>VERSION</b>        | <b>SEC/F</b>    |
| <b>MODEL</b>          | <b>CV – CVB</b> |
| <b>IDENTIFICATION</b> | <b>KIT</b>      |
| <b>CODE</b>           | 9060103         |



## Controls and units **MB** version

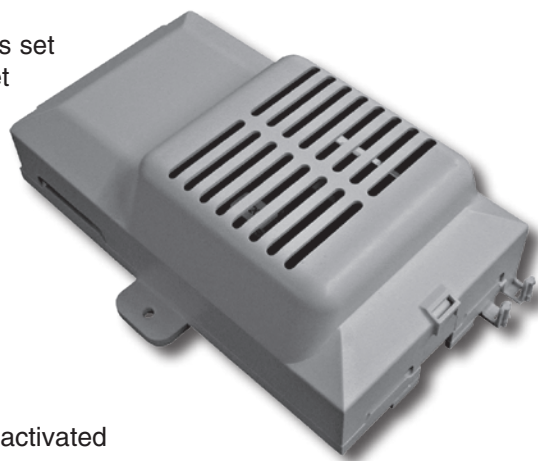
All the **SEC/F** units can be supplied with a wide range of controls, which allows managing one single unit or several units by using the Modbus RTU - RS 485 communication protocol. Units can be managed according to the Master/Slave logic (up to 20 units) or by supervisory components. The system consists in a **MB** board and a series of controls, such as the **T-MB** control, the **RT03** infra-red remote control, the **PSM-DI** multifunction control and the **NET** supervisory program.

### ***MB electronic board***

| DESCRIPTION                                                 | IDENTIFICATION | CODE           |
|-------------------------------------------------------------|----------------|----------------|
| <i>MB electronic board fitted on the unit</i>               | <i>MB-M</i>    | <i>9066332</i> |
| <i>MB electronic board supplied with separate packaging</i> | <i>MB-S</i>    | <i>9066333</i> |

The **MB** electronic board, to be mounted on the fan coil internal unit, is set to carry out different functions and adjustment modes, in order to meet the installation requirements. These modes are selected by setting the configuration dip switches on the board.

- 2/4 pipe system.
- Fan ON/OFF thermostatic control.
- Valve ON/OFF thermostatic control and continuous ventilation.
- Valve and simultaneous ventilation ON/OFF thermostatic control.
- Fan operation control depending on the coil temperature (cut-out T3 probe fitted), which can be activated only in heating mode or heating and cooling mode.
- Automatic switch of the operating mode by means of T2 water probe (optional) applied on the 2 pipe system.
- Seasonal switch by means of remote contact.
- ON/OFF of the fan coil by means of the remote contact (window or clock contact).
- Electric heater control.



By activating the cut-out T3 probe function, the fan is stopped in winter when the coil temperature is lower than 32°C and started when the temperature reaches 36°C. In summer mode, the fan stops when the temperature inside the coil exceeds 22°C and starts when it drops below 18°C.

The following connections are located on the power board:

- Receiver for infra-red remote control.
- T-MB control.
- RS 485 serial connection to manage several fan coils in Master/Slave configuration or to create a supervisory network.

NTC sensor included for T1 function (return air control).

NTC sensor included for T3 function (low temperature cut-out thermostat).

NTC sensor (option) for T2 function (summer/winter switch).

### **T-MB control**

| DESCRIPTION                                                                                 | IDENTIFICATION | CODE     |
|---------------------------------------------------------------------------------------------|----------------|----------|
| Wall control (to be used with MB board)                                                     | T-MB           | 9066331E |
| Control fitted on the unit, for CV/CVB models (to be used with MB board only)               | T-MB-LM        | 9066646  |
| Control supplied with separate packaging, for CV/CVB models (to be used with MB board only) | T-MB-LS        | 9066645  |
| Control fitted on the unit, for CV/CVB models (UP-AU included)                              | T-MB-M-UP      | 9066675  |
| Control supplied with separate packaging, for CV/CVB models (UP-AU included)                | T-MB-S-UP      | 9066674  |

Control with display that allows controlling one or more units in Master/Slave mode. The control is equipped with internal sensor to detect the room temperature, which can be defined as a priority compared to the return air sensor on the fan coil.

The **T-MB** control features the following functions:

- Switch the appliance ON and OFF.
- Temperature set.
- Modify the set point (when used as a +/- 3° variation of the set point configured from NET supervisory program or PSM-DI).
- Set the fan speed (low, medium, high or autofan).
- Set the operation mode (fan only, cooling, heating; auto for 4 pipe systems with mode selection depending on the air temperature).
- Time setting.
- Weekly ON/OFF program.
- Display and change of the fan coil operation parameters.



Dimensions: 110x72x25 mm

### ***RT03 infra-red remote control***

| <b>DESCRIPTION</b>                                                                                                             | <b>IDENTIFICATION</b> | <b>CODE</b>    |
|--------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|
| <i>RT03 infra-red remote control with fitted receiver, for CV / CH / CVB models (to be used with MB board only)</i>            | <i>RM-RT03</i>        | <i>9066336</i> |
| <i>RT03 infra-red remote control with receiver supplied with separate packaging (to be used with MB board only)</i>            | <i>RS-RT03</i>        | <i>9066337</i> |
| <i>RT03 infra-red remote control supplied with separate packaging (to be used with MB board only)</i>                          | <i>RT03</i>           | <i>3021203</i> |
| <i>Receiver for RT03 infra-red remote control fitted on the unit, for CV / CH / CVB models (to be used with MB board only)</i> | <i>RM</i>             | <i>9066339</i> |
| <i>Receiver for RT03 infra-red remote control supplied with separate packaging (to be used with MB board only)</i>             | <i>RS</i>             | <i>9066338</i> |

The infra-red remote control allows setting by a remote position the fan coil operation parameters.

The **RT03** infra-red remote control features the following functions:

- Switch the appliance ON and OFF.
- Temperature set.
- Set the fan speed (low, medium, high or autofan).
- Set the operation mode (fan only, cooling, heating; auto for 4 pipe systems with mode selection depending on the air temperature).
- Time setting.
- 24 hours ON/OFF program.



***INSTALLATION EXAMPLE  
WITH INFRA-RED REMOTE CONTROL***

## Controls and units **MB version**

A group of **SEC/F** units with **MB** electronic board can be connected via a serial link and can consequently be managed at the same time by just one **T-MB** control or **RT03** infra-red remote control. Using the special jumper present on the **MB** board, one unit must be configured as the master, and all the others as slaves. It is clear that the remote control must be pointed at the receiver on the master unit. To avoid problems, it is recommended to install and connect the receiver only on the master unit.

### **With T-MB control**

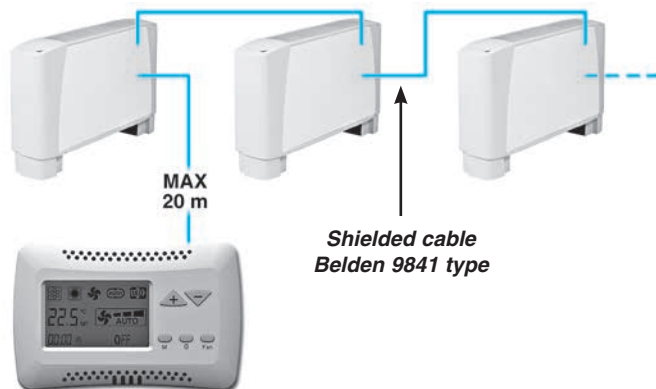
#### One control for each unit

(MAXIMUM LENGTH OF THE CONNECTION CABLE = 20 m)



#### One control for more units (20 units max.)

(MAXIMUM TOTAL LENGTH OF THE CONNECTION CABLE = 800 m)



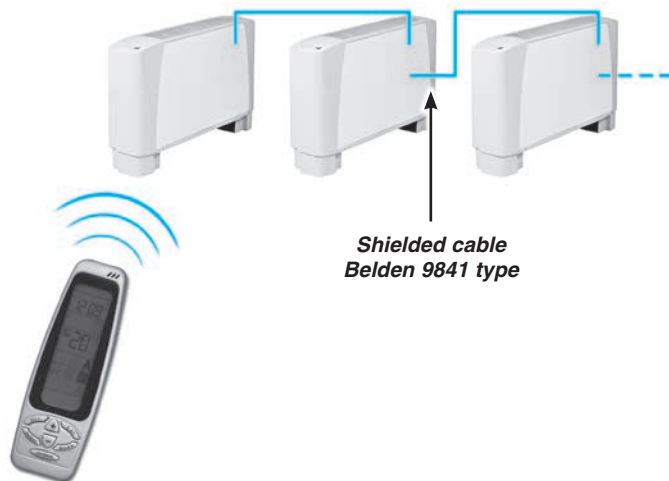
### **With RT03 infra-red remote control**

#### One control for each unit



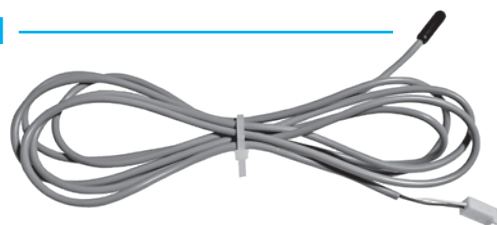
#### One control for more units (20 units max.)

(MAXIMUM TOTAL LENGTH OF THE CONNECTION CABLE = 800 m)



## T2 accessory for units with MB electronic board

| IDENTIFICATION | CODE    |
|----------------|---------|
| T2             | 9025310 |



The T2 sensor can be combined with MB boards to be placed on the water supply pipe upstream 3 way valves (not to be used with 2 way valve).

The T2 sensor must be used as described below:

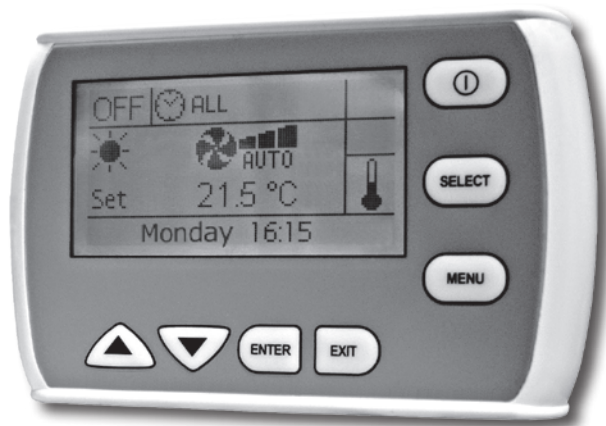
- Change-Over for 2-pipe system for the automatic switch of the operating mode.  
If water temperature is lower than 20°C, cooling mode is set; on the other hand, if water temperature exceeds 30°C, heating mode is set.
- It can be used on units with electric heater and hot water supply. The T2 priority probe activates the electric heater or water valve, depending on the water temperature detected. If water temperature exceeds 34°C, the water valve ON-OFF control is activated; on the other hand, if water temperature is lower than 30°C, the electric heater is activated.

### ***PSM-DI multifunction control panel***

| DESCRIPTION                                           | IDENTIFICATION | CODE    |
|-------------------------------------------------------|----------------|---------|
| Multifunction control (to be used with MB board only) | PSM-DI         | 3021293 |

Another option available for the serial communication between the units is the possibility to connect up to 60 **SEC/F** units in series and manage them with just one wall mounted **PSM-DI** controller. The wall mounted controller can be used to set the operating mode for each individual unit connected, display the operating conditions of each individual unit, and set the ON/OFF time sets for each day of the week (the program can be set for all the units and for a maximum of ten groups of units).

If more than 60 units need to be connected, two or more control panels must be used. Each unit must have a MB board. The **PSM-DI** control is used to manage a series of fan coils, up to a maximum of 60 units (the maximum length of the RS 485 connection cable must not exceed 800 m), from one single control point.



The **PSM-DI** control communicates via a serial line with all the units connected, with the possibility of controlling them all together or individually. In fact, the unique address of each individual fan coil means that all the units can be called at the same time, or the individual unit called, to perform the following functions:

- display the current operating mode, the fan speed, the set point;
- display the room temperature measured on the individual unit;
- turn all the units ON and OFF at the same time or alternatively each unit individually;
- change the operating mode (fan only, heating, cooling, automatic changeover);
- change the set point;
- modify the values and operation parameters of the fan speed.

Each function can then be sent to all the units connected, or alternatively to each individual unit.

Different set points or operating modes can be set for each individual unit.

The **PSM-DI** panel can also be used for the time management of the units over the week. Four ON times and four OFF times can be set on the units for each day of the week. A different temperature set that will be considered as Operation set for all connected appliances, can be set for each event. If the temperature set is not entered for the individual event, it must be set during programming for each individual unit or for the entire network.

Units without receiver or with receiver can be connected within the network: the former can receive instructions only from the **PSM-DI** wall mounted panel; while the latter can receive information from both the wall mounted panel (**PSM-DI**) and infra-red remote control. Use the infra-red remote control to force ON mode of the individual unit, if ON/OFF daily time programming has been set. The unit will regain the settings from the **PSM-DI** panel during execution of successive start-up program.

***The PSM-DI panel cannot be used together with the NET management program (see next page).***

#### **Notes:**

- set the Dip Switches of each fan coil as illustrated in the remote control installation manual, based on the required solutions.
- it is possible to connect only one single SIOS board per each PSM-DI control panel.
- about "Priority pump function": when just one unit calls for, the relay RL1 on the SIOS board is automatically activated to connect a hot water pump.
- the RS 485 network's overall length must not exceed 700/800 metres.

### ***NET program for managing a network of MB fan coils***

| DESCRIPTION                                                          | IDENTIFICATION | CODE    |
|----------------------------------------------------------------------|----------------|---------|
| Hardware/software supervisory system (to be used with MB board only) | NET            | 9079118 |

**NET** is a centralised control system for networks of MB fan coils, based on software that runs on LINUX™ operating system (the program is provided pre-installed on a PC) and it works in a “stand alone” way, as an ordinary computer, so that it can be connected to a monitor, to a mouse and to a keyboard. By connecting an Ethernet cable is instead possible to work at a distance and visualize the entire program setting-up through whatever browsers. The **NET** software offers a practical and economical solution for managing the units, with the simple click of the mouse.

The main characteristics include:

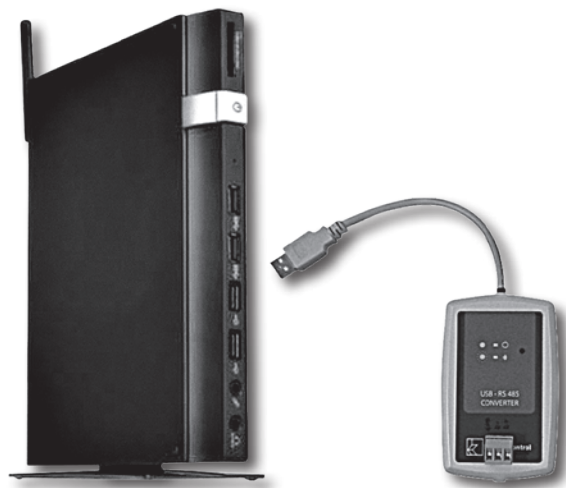
- simplicity of use;
- an extremely complete and functional weekly program;
- possibility to access the historical operating data for each individual unit connected;
- possibility to save automatically every 6 h the data on SD support and to force the saving with a button;
- possibility of data saving also on other items, as for example USB key;
- visualization of the saved configuration on a new ASUS PC.

The program exploits all the potential of our units with remote controls, representing an addition to the latter.

The **NET** program is a control tool that can be used as a replacement for the remote control, or in parallel, however the settings made using **NET** can have priority over those made using the remote control.

The program can be used to:

- Create uniform groups (groups of units on individual floors, in offices or rooms).
- Save weekly programs configured for different types of operation (summer, winter, mid seasons, closing periods etc.); these can then be recalled and activated with a simple click of the mouse. Weekly on/off cycles can be set for individual units or groups of units.
- Set the operating conditions for each individual unit or groups of units (operating mode, fan speed, temperature setting).
- Set the set point limits for each individual unit or groups of units.
- Switch each individual unit or groups of units ON or OFF.



## Management system for a network of fan coils

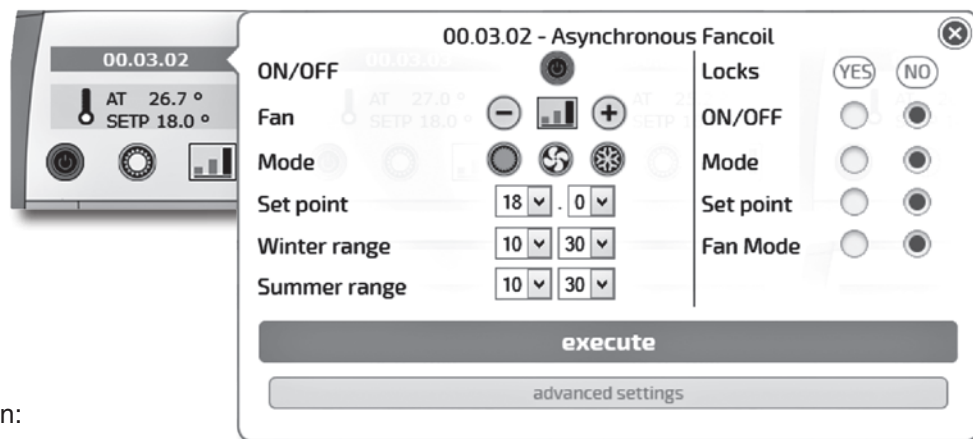
The main program screen can display and interact with the entire network of units. An individual unit, a group of units or the entire network can be called so as to make modifications to the operating mode and the set point. The user can then check the operating status of each individual unit, read the room temperature, the coil temperature and the operating status of the condensate drain pump or any alarms.

“MONITORING” SCREEN



### Displaying a unit

The “**MONITORING**” SCREEN shows the units that are connected to the network and scanned by the program.

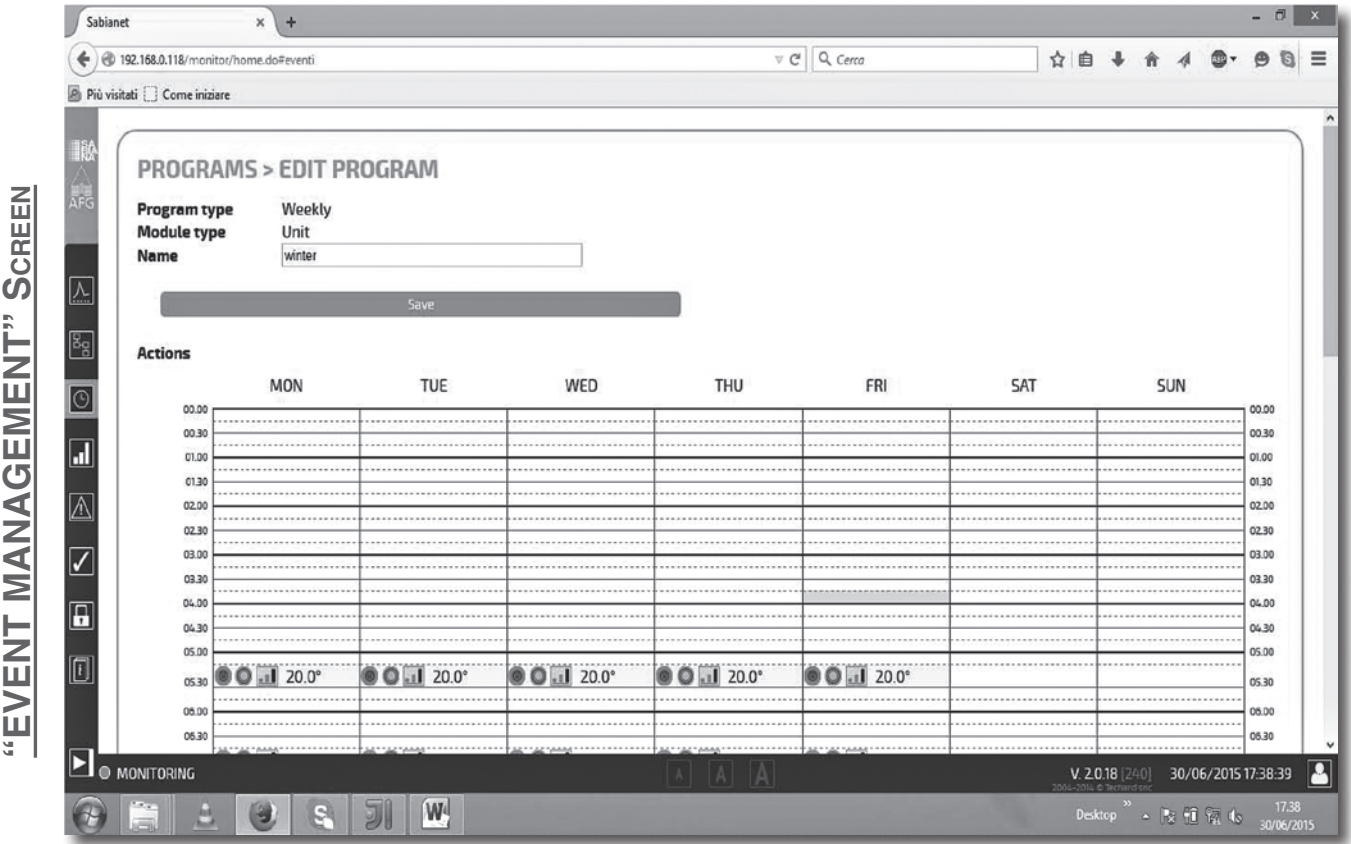


The icon of the terminal unit provides the following information:

- Unit name (**00.03.02**)
- Set temperature (SETP)
- Room temperature (AT)
- Unit status: ON (Green) or OFF (Red)
- Mode:
  - Summer
  - Winter
  - Fan only
  - Auto
- Fan speed:
  - Low
  - Medium
  - High
  - AutoFan

# Management system for a network of fan coils

The “Weekly Program” can be used to set the unit operating parameters for each day of the week. Several weekly programs can be set.



Time bands are available for each day of the week. The time and the type of operation to be performed by the unit can be set for each band. The time and the operating parameters can then be displayed before being sent to the unit and implemented.

## Displaying of the parameters and Dip Switches set up

Every time that the reading of the set up Dip Switches results not easy (as for example by the false ceiling installations), it is always possible to display them directly through the NET program.

|                             |                                 |                                        |                              |
|-----------------------------|---------------------------------|----------------------------------------|------------------------------|
| <b>Group:</b> gruppo 1      | <b>FW release:</b> 0.50         | <b>Program:</b> gruppo 1 inverno       |                              |
| <b>Remote control:</b> N.A. | <b>M/S network:</b> N.A.        | <b>Unit tree:</b> Level 2 --> Router 1 |                              |
| <b>Unit status:</b> ON      | <b>Mode:</b> WINTER             | <b>Fan mode:</b> AUTO                  | <b>Fan status:</b> OFF       |
| <b>Set Point:</b> 22.0°     | <b>Heating status:</b> OFF      | <b>Cooling status:</b> [OFF]           | <b>Inverter voltage:</b> 0.2 |
| <b>T1:</b> 22.5°            | <b>T2:</b> N.A.                 | <b>T3:</b> 28.5°                       |                              |
| <b>Pump:</b> YES            | <b>Remote ON/OFF input:</b> OFF | <b>Window input:</b> OFF               |                              |

| Unit settings                         |                                            |  | Alarms                 |
|---------------------------------------|--------------------------------------------|--|------------------------|
| <b>Dip Switch:</b>                    | OFF ON                                     |  |                        |
| <input type="checkbox"/> 1            | 2 pipe unit                                |  | <b>T1 Fault</b> OFF    |
| <input type="checkbox"/> 2            | Thermal station with valves                |  |                        |
| <input type="checkbox"/> 3            | T3 disabled                                |  | <b>T2 Fault</b> OFF    |
| <input type="checkbox"/> 4            | T3 only winter when enabled                |  |                        |
| <input checked="" type="checkbox"/> 5 | Simultaneous ventilation of valves         |  | <b>T3 Fault</b> OFF    |
| <input type="checkbox"/> 6            | Unit without eletrical heater              |  |                        |
| <input type="checkbox"/> 7            | T2 as CH Change-over (resistence phase II) |  | <b>Condesation</b> OFF |
| <input type="checkbox"/> 8            | UNIT ALERT                                 |  |                        |
| <input type="checkbox"/> 9            | Remote ON/OFF input                        |  |                        |
| <input type="checkbox"/> 10           | MASTER                                     |  |                        |

# Management system for a network of fan coils

## Alarm control by E-mail and sms

In addition to the alarm set on the NT display, it is possible to send the ON-OFF alarm notification via E-mail and sms.

ALARMS

Ongoing alarms

| At        | Address | Unit name | Group | Alarm type |
|-----------|---------|-----------|-------|------------|
| No alarms |         |           |       |            |

Alarms log

| From      | To | Address | Unit name | Group | Alarm type |
|-----------|----|---------|-----------|-------|------------|
| No alarms |    |         |           |       |            |

Notification

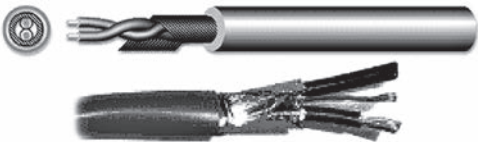
Event type

|                          | none                             | instant               | after 1 hour          | eMail                 |                       |                          | SMS                              |                       |                       |                       |                       |                          |
|--------------------------|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------|
|                          |                                  |                       |                       | after 3 hours         | after 6 hours         | at the end               | none                             | instant               | after 1 hour          | after 3 hours         | after 6 hours         | at the end               |
| Alarm on unit [any]      | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="checkbox"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="checkbox"/> |
| Condensate alarm on unit | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="checkbox"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="checkbox"/> |
| Probe alarm on unit      | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="checkbox"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="checkbox"/> |

Save

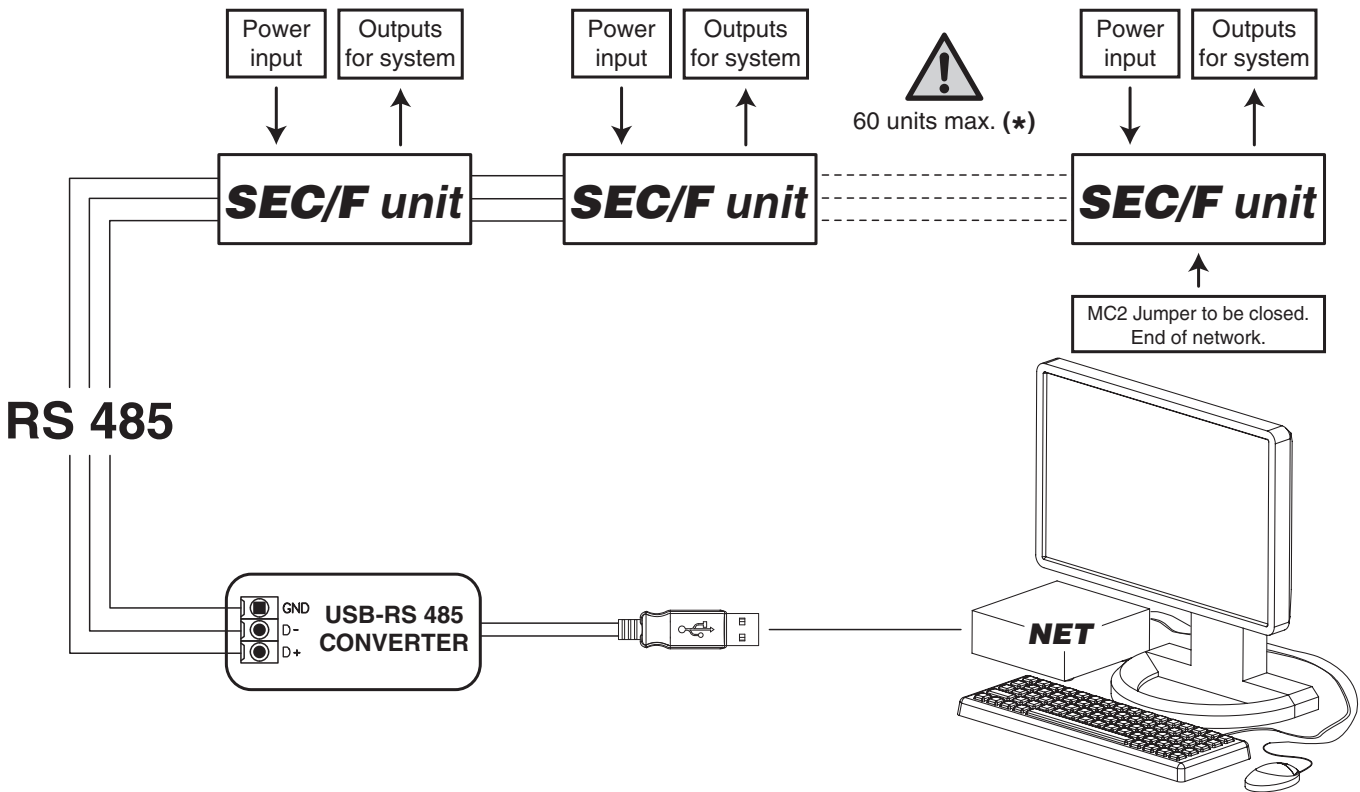
## RS 485 serial connection cable

Shielded cable to be used:  
Belden 9841, RS-485, 1x2x24 AWG SFTP, 120 Ohm



## PC NET Software

Connection of a **SEC/F** network with MB electronic board



(\*) In the event of more than 60 units,  
add one or more Router-S (see next page).

## PSM-DI and NET electronic boards for SEC/F units

| IDENTIFICATION | CODE    |
|----------------|---------|
| SIOS           | 3021292 |

SIOS is a board equipped with 8 relays with potential free contact to control the activation or deactivation of remote electric utilities. Moreover, the board has 8 digital inlets to display the actuators or external consents, such as motor or other.

The SIOS boards can be connected:

- inside a network managed by NET;
- to a PSM-DI panel (one SIOS for each PSM-DI panel).



| IDENTIFICATION | CODE    |
|----------------|---------|
| Router-S       | 3021290 |

The Router-S is an electronic board that allows to control several units inside a network managed by NET (default) or within a sub-network managed by BMS systems, that are not provided by us (it is necessary to operate on a Dip Switch on the board).

### Managed by NET

The Router-S in the standard version is an electronic board that:

- allows creating networks with more than 60 units (minimum 2 Router-S are required) or to divide the network (per floor, building, etc.);
- allows creating a Master/Slave sub-network to be controlled as an independent group.

The number of Router-S to be used is:

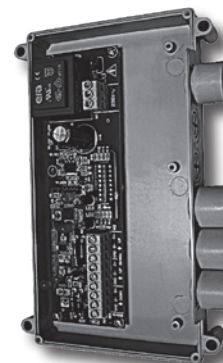
- up to 60 units: no Router-S
- from 61 to 120 units: 2 Router-S
- every 60 subsequent units: 1 additional Router-S

### Managed by BMS Systems which are not provided by us

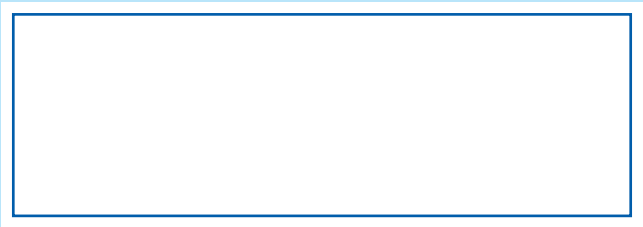
The Router-S becomes an electronic board to use with BMS systems not supplied by us, only after having set the Dip Switch on the board and so creating a Master/Slave sub-network to be controlled as an independent group.

The number of Router-S to use is:

- maximum 14 Router-S
- maximum 15 Fan Coils per Router-S



**The descriptions and illustrations provided in this publication are not binding: we reserve the right, whilst maintaining the essential characteristics of the types described and illustrated, to make, at any time, without the requirement to promptly update this piece of literature, any changes that it considers useful for the purpose of improvement or for any other manufacturing or commercial requirements.**



**SEC/F - 03/18**

Cod. 99A4760147 E/03/18