

# Air coolers FC38

## Standard

### Cu/Al-R404A/Coolants

GEA Heat Exchangers

Goedhart FC38S



Goedhart FC38D



Goedhart FC38L







# Goedhart FC38

The range Goedhart FC38 standard ceiling mounted air coolers are standard air coolers for cooling and freezing applications (FC38S), working/preparation rooms and storage rooms for humidity sensitive products (FC38D) and for cold storage rooms with height limitation (FC38L).

The standard FC38 aircoolers are suitable for all known refrigerants and not corrosive coolants, with the exception of NH3.

## Type description

### FC38Si(dx) 6.2.40.7-230-E

|                                     |     |                      |
|-------------------------------------|-----|----------------------|
| FC38S = Ceiling mounted air coolers | 2   | = Number of fans     |
| FC38D = Dual discharge air coolers  |     |                      |
| FC38L = Extra low air cooler        | 40  | = Fan diameter in cm |
| i = internally enhanced tubes       | 7   | = Fin spacing        |
| p = plain tubes                     |     |                      |
|                                     | 230 | = 1x230V Fan tension |
|                                     | 400 | = 3x400V Fan tension |
| (dx) = R404A                        |     |                      |
| (G) = coolant                       |     |                      |
| 6 = number of tubes deep            | E   | = Electrical defrost |
|                                     | H   | = Hot gas defrost    |

## General features

### Coil block

- Tube distance : 38x33 mm versprongen
- Tubes : 12mm o.d copper tube
- : I= internally enhanced tubes for refrigerants (dx)  
P= internally plain tubes for coolants(G) and refrigerants (dx)
- Fins : aluminium HT-fins
- Fin spacing : 4 mm : Suitable for applications with air temperatures above 0°C and with expected limited frost  
: 7 mm : Suitable for applications with air temperatures below 0°C and expected frost
- A good thermal with the fins contact because the copper tubes are mechanically expanded into fully collared aluminium fins.
- The suction header is executed with a Schröder valve for testing applications
- All coil blocks for refrigerants are pressure tested to 40 bars. All coil blocks for coolants are pressure tested to 15 bars.
- FC38 aircoolers are supplied with a light overpressure charge.



# General features

## Casing

- Standard refrigerant connections are fixed on the left hand side of the unit when looking with the direction of the air flow.
- Construction suitable for mounting to the ceiling.
- The FC38 casing is made from galvanized sheet steel, with exception of:
  - FC38S drip tray is hinged and made from light aluminum.
  - FC38D has a fixed galvanized drip tray.
  - FC38L drip tray is hinged and made from light aluminum.
- Goedhart FC38L air cooler is executed with a short splash plate as standard.
- The casing has a corrosion resistant white epoxy spray finish (RAL 9003).
- Almost all fixing materials are made of stainless steel to prevent corrosion.
- A possible hot gas spiral or electric defrost elements will be fixed to the bottom side of the coil

## Options

| Extra opties           | FC38S | FC38D | FC38L |
|------------------------|-------|-------|-------|
| Hot gas defrost        | •     |       |       |
| Warm glycol defrost    | •     |       |       |
| Fan heating            | •     |       | •     |
| Splash plate           | •     |       | •     |
| Zuigende uitvoering    | •     |       |       |
| Draw through execution | •     |       |       |
| StSt tubes             | •     | •     | •     |
| StSt casing            | •     | •     | •     |
| Goldlack fins          | •     | •     | •     |
| Almg fins              | •     | •     | •     |
| Insulated drip tray    | •     |       |       |

## P.E.D.

All air coolers produced by Goedhart comply with the Pressure Equipment Directive 97/23/EC. PED certificates can be downloaded from [www.goedhart.nl](http://www.goedhart.nl).

## Guarantee

Goedhart gives in conformity with her general conditions of delivery the following guarantee periode on the Goedhart FC38 air coolers:

- within a 12 month period of product use
- at the latest within 18 months after the time of delivery.

## Sound data

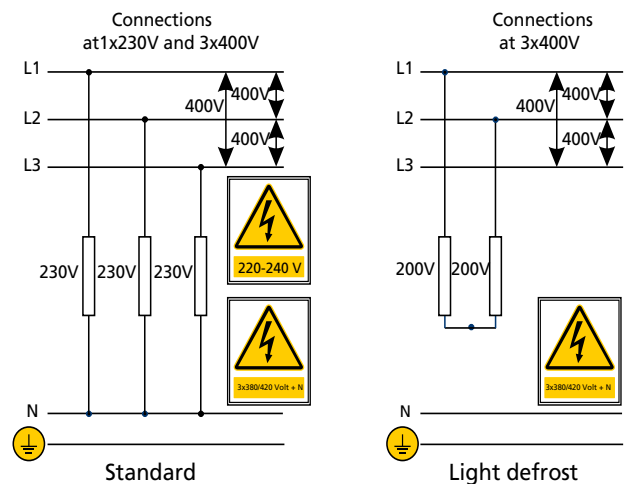
The mean sound pressure (LpA @ 3m ± 2 dB (A)) each air cooler is a calculated indication value according to the EN13487 standard parallel pipe. Goedhart uses the fan manufacturer's sound power level (LwA) at the inlet side of the fan. Changes to or by the fan or the product, affect the sound, in these cases, consult the manufacturer for the new indication value. In critical sound requirements, we advise you to consult an expert.

## Defrost systems

For room temperatures where ripe formation can be expected and where the coil can not be defrosted by the room air, electrical or hot gas defrost is necessary

### Electrical defrost

On request FC38 can be provided with electrical defrost. FC38 is always delivered with heavy defrost. The heater elements are rated for 220/240 V and are 400/420 V with zero wire supply. The stainless steel heater elements are fitted in the coil block in inner tubes which form a highly conductive medium between the heaters and the fins. In the drip-tray, the heater elements are fitted to the bottom side of the underside of the aluminum inner tray. The heater elements in the coil block are removable from the header side of the unit, whilst the tray heater elements can be removed once the outer tray has been taken off.



### Hot gas defrost

The coil block is suited for hot gas defrost (hot gas supply through the suction header). The drip tray can be provided with a copper hot gas spiral, which is enclosed in special aluminum profiles, which are rigidly secured to underside of the aluminum inner tray.

## Mounting & Maintenance

FC38 is delivered in a wooden crate. FC38S will be delivered with the separate drip-tray. When crated, FC38 can be handled by crane or fork-lift truck, which makes it very easy to mount. The drip tray of the FC38S is delivered separately. For maintenance and instructions see our manual delivered on order or can be downloaded from our web site [www.goedhart.nl](http://www.goedhart.nl).



## Fans

FC38 aircoolers are executed with 2 fan manufactures:  
 EBM : Ø250, Ø300, Ø350, Ø400 and Ø450  
 Ziehl Abegg : Ø500

(We reserve the right to alter the manufacturer)

The fans are suitable for operation in air temperatures between -30 °C to +40 °C. When the air temperature is lower then -30 °C , special fans are needed. These speciale fans have a longer delivery time. The protection class is IP44. The fans are neither available with stainless steel protection guards nor stainless steel arms.

The technical data in the table are the same as on the motor name plates and is valid for an air temperature of +20 oC. Also the data are given for working in an air temperature of 0 °C and -20 °C.

### 1x230V-50Hz

The standard connection tension for the EBM fans is 230V-50Hz-1 phase for the fan diameters Ø250, Ø300, Ø350, Ø400 en Ø450.

The fan motors are standard equipped with internally connected thermo-contacts.

### 3x400V-50Hz

The EBMØ450 fan is on request available in 230/400V-50Hz-3 phase. The fan is executed with a thermal contact.

The standard connection voltage for the Ziehl Abegg Ø500 is 400/690V-50Hz- 3phase (on request 230V-50Hz-1 phase). This fan is equipped with thermo contacts.

| Fan type                              | Values at 1x230V-50Hz |       |       |       |      |       |       |       | Sound power indication ach fan LwA (+/-2dB(A)) |
|---------------------------------------|-----------------------|-------|-------|-------|------|-------|-------|-------|--|
|                                       | Speed                 | Input | +20°C |       | 0°C  |       | -20°C |       |  |
|                                       |                       |       | FLC   | Start | FLC  | Start | FLC   | Start |  |
| rpm                                   | [W]                   | [A]   | [A]   | [A]   | [A]  | [A]   | [A]   | [dBA] |  |
| <b>4 pole fans (1500 rpm nominal)</b> |                       |       |       |       |      |       |       |       |  |
| S4E250                                | 400                   | 45    | 0,21  | 0,35  | 0,23 | 0,38  | 0,24  | 0,41  | 69   |
| S4E300                                | 1390                  | 73    | 0,32  | 0,60  | 0,44 | 0,65  | 0,46  | 0,70  | 74   |
| S4E350                                | 1400                  | 130   | 0,58  | 1,30  | 0,63 | 1,40  | 0,67  | 1,51  | 79   |
| S4E400                                | 1430                  | 160   | 0,73  | 1,90  | 0,79 | 2,05  | 0,85  | 2,20  | 82   |
| S4E450*                               | 1390                  | 245   | 1,10  | 2,70  | 1,19 | 2,92  |       |       | 85   |
| S4E450                                | 1350                  | 480   | 2,20  | 5,80  | 2,27 | 6,26  | 2,44  | 3,13  | 85   |
| FE050                                 | 1210                  | 770   | 3,40  | 7,40  | 3,67 | 7,99  | 3,94  | 8,58  | 81   |

### 6 pole fans (1000 rpm nominal) \*

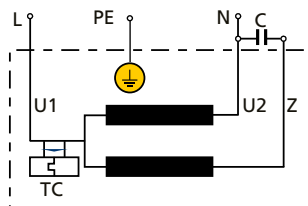
|        |     |     |      |      |      |      |  |  |    |
|--------|-----|-----|------|------|------|------|--|--|----|
| S6E400 | 950 | 120 | 0,55 | 0,90 | 0,59 | 0,97 |  |  | 72 |
| S6E450 | 920 | 165 | 0,80 | 1,36 | 0,85 | 1,47 |  |  | 77 |

| Fan type                              | Values at 3x230/400V-50Hz |       |       |       |      |       |       |       | Sound pressure level each fan ** |
|---------------------------------------|---------------------------|-------|-------|-------|------|-------|-------|-------|----------------------------------|
|                                       | Speed                     | Input | +20°C |       | 0°C  |       | -20°C |       |                                  |
|                                       |                           |       | FLC   | Start | FLC  | Start | FLC   | Start |                                  |
| rpm                                   | [W]                       | [A]   | [A]   | [A]   | [A]  | [A]   | [A]   | [dBA] |                                  |
| <b>4 pole fans (1500 rpm nominal)</b> |                           |       |       |       |      |       |       |       |                                  |
| S4D450                                | 1330                      | 585   | 1,10  | 3,00  | 1,18 | 3,24  | 1,28  | 3,48  | 85                               |
| FE050                                 | 1330                      | 790   | 1,45  | 5,20  | 1,57 | 5,62  | 1,68  | 6,03  | 83                               |

\* = Only FC38D

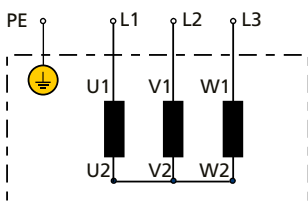
### ebm-papst 1x230V-50Hz

L= blue  
 N=black  
 Z=brown



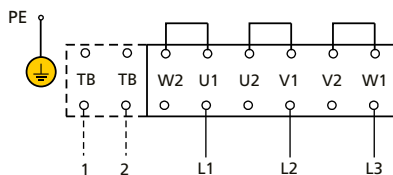
### ebm-papst 3x230/400V-50Hz

U1 =black  
 V1 =blue  
 W1 =brown  
 U2 =green  
 V2 =white  
 W2 =yellow



### Ziehl Abegg 3x400/690V

U1 =brown  
 V1 =blue  
 W1 =black  
 U2 =red  
 V2 =grey  
 W2 =orange  
 TB =white



# Correction factors

## Correction factors DT1 (=Air-on)

The nominal capacities of the Goedhart FC38i(dx) and FC38p(dx) air coolers are based on R-404A direct expansion, DT1 and a RH of 85%. DT1 is the difference between air-on temperature and the evaporation temperature of the cooler. The evaporation temperature is the saturated temperature corresponding to the pressure at the suction outlet of the cooler.

The nominal capacities:

- (SC1)  $t_o = 0\text{ }^\circ\text{C}$  and DT1= 10 K
- (SC2)  $t_o = -8\text{ }^\circ\text{C}$  and DT1= 8 K
- (SC3)  $t_o = -25\text{ }^\circ\text{C}$  and DT1= 7 K

Correction factors for various evaporation temperatures and temperature differences (DT1) are as indicated in the tables below. The requested capacity must be multiplied by a correction factor from the table, so that a cooler with the resulting nominal capacity can be chosen from the selection tables.

**Q nominal = factor x Q requested**

| R404A |                              |      |      |      |      |      |      |      |      |      |
|-------|------------------------------|------|------|------|------|------|------|------|------|------|
| DT1   | Evaporation temperature (°C) |      |      |      |      |      |      |      |      |      |
| K     | +7                           | +6   | +5   | +4   | +3   | +2   | +1   | 0    | -1   | -2   |
| 6     | 1,81                         | 1,81 | 1,82 | 1,82 | 1,83 | 1,83 | 1,84 | 1,84 | 1,84 | 1,85 |
| 7     | 1,49                         | 1,50 | 1,50 | 1,50 | 1,51 | 1,51 | 1,52 | 1,52 | 1,52 | 1,53 |
| 8     | 1,27                         | 1,28 | 1,28 | 1,29 | 1,29 | 1,29 | 1,30 | 1,30 | 1,30 | 1,31 |
| 9     | 1,10                         | 1,10 | 1,11 | 1,11 | 1,12 | 1,12 | 1,13 | 1,13 | 1,13 | 1,14 |
| 10    | 0,97                         | 0,98 | 0,98 | 0,99 | 0,99 | 0,99 | 1,00 | 1,00 | 1,00 | 1,01 |
| 11    | 0,88                         | 0,88 | 0,88 | 0,89 | 0,89 | 0,90 | 0,90 | 0,90 | 0,90 | 0,91 |
| 12    | 0,79                         | 0,79 | 0,79 | 0,80 | 0,80 | 0,81 | 0,81 | 0,81 | 0,81 | 0,82 |

**SC1** DT1 = 10K  
Air on = 10°C (0/+10°C)

| R404A |                              |      |      |      |      |      |      |      |      |      |
|-------|------------------------------|------|------|------|------|------|------|------|------|------|
| DT1   | Evaporation temperature (°C) |      |      |      |      |      |      |      |      |      |
| K     | -3                           | -4   | -5   | -6   | -7   | -8   | -9   | -10  | -11  | -12  |
| 6     | 1,30                         | 1,34 | 1,38 | 1,42 | 1,42 | 1,43 | 1,43 | 1,43 | 1,44 | 1,44 |
| 7     | 1,04                         | 1,07 | 1,10 | 1,14 | 1,17 | 1,18 | 1,18 | 1,18 | 1,19 | 1,19 |
| 8     | 0,86                         | 0,88 | 0,91 | 0,94 | 0,97 | 1,00 | 1,00 | 1,01 | 1,01 | 1,01 |
| 9     | 0,75                         | 0,75 | 0,77 | 0,79 | 0,82 | 0,84 | 0,87 | 0,87 | 0,87 | 0,88 |
| 10    | 0,66                         | 0,66 | 0,66 | 0,68 | 0,70 | 0,72 | 0,74 | 0,77 | 0,77 | 0,77 |
| 11    | 0,59                         | 0,59 | 0,59 | 0,59 | 0,61 | 0,63 | 0,65 | 0,67 | 0,69 | 0,69 |
| 12    | 0,54                         | 0,54 | 0,54 | 0,54 | 0,54 | 0,55 | 0,57 | 0,58 | 0,60 | 0,62 |

**SC2** DT1 = 8K  
Air on = 0°C (-8/0°C)

| R404A |                              |      |      |      |      |      |      |      |      |      |
|-------|------------------------------|------|------|------|------|------|------|------|------|------|
| DT1   | Evaporation temperature (°C) |      |      |      |      |      |      |      |      |      |
| K     | -21                          | -22  | -23  | -24  | -25  | -26  | -27  | -28  | -29  | -30  |
| 6     | 1,20                         | 1,20 | 1,21 | 1,21 | 1,21 | 1,22 | 1,22 | 1,23 | 1,23 | 1,23 |
| 7     | 0,99                         | 0,99 | 0,99 | 1,00 | 1,00 | 1,00 | 1,00 | 1,01 | 1,01 | 1,02 |
| 8     | 0,84                         | 0,84 | 0,84 | 0,85 | 0,85 | 0,85 | 0,85 | 0,86 | 0,86 | 0,86 |
| 9     | 0,73                         | 0,73 | 0,73 | 0,73 | 0,73 | 0,74 | 0,74 | 0,74 | 0,74 | 0,75 |
| 10    | 0,64                         | 0,64 | 0,64 | 0,64 | 0,65 | 0,65 | 0,65 | 0,65 | 0,66 | 0,66 |
| 11    | 0,57                         | 0,57 | 0,57 | 0,58 | 0,58 | 0,58 | 0,58 | 0,58 | 0,59 | 0,59 |
| 12    | 0,52                         | 0,52 | 0,52 | 0,52 | 0,52 | 0,52 | 0,53 | 0,53 | 0,53 | 0,53 |

**SC3** DT1 = 7K  
Air on = -18°C (-25/-18°C)

## Capacity optimization

To achieve the best possible combination of application, refrigerant and capacity, Goedhart can optimise the coil circuiting, depending on the specific conditions under which the products will be used. FC38 is a standard product to ensure shorter delivery times. The circuiting of these evaporators has been optimized according to the most commonly used coolants/refrigerants and conditions. Specific applications can vary from this, our sales department is there to assist you in selecting the best circuiting for your application.

## Correction factors for coolants

The nominal capacities of the Goedhart FC38p(G) air coolers are based on an air-on temperature of 12°C, a RH of 85% and:

- Water : in / out temperatuur = +1/+5°C
- E-Glycol : in / out temperatuur = - 2/+3°C
- P-Glycol : in / out temperatuur = - 2/+3°C
- Pekasol : in / out temperatuur = - 2/+3°C
- Freezium : in / out temperatuur = - 2/+3°C

Correction factors for various air-on temperatures and refrigerants or secondary coolants are as indicated in the tables below. The requested capacity must be multiplied by a correction factor from the table, so that a cooler with the resulting nominal capacity can be chosen from the selection tables.

**Q nominal = faktor x Q requested**

| Water  |                         |      |      |      |      |      |      |      |      |  |
|--------|-------------------------|------|------|------|------|------|------|------|------|--|
| in/out | Air-on temperature (°C) |      |      |      |      |      |      |      |      |  |
| °C     | +8                      | +9   | +10  | +11  | +12  | +13  | +14  | +15  | +16  |  |
| 1 / 5  | 1,99                    | 1,59 | 1,32 | 1,14 | 1,00 | 0,88 | 0,78 | 0,72 | 0,66 |  |
| 2 / 6  |                         | 1,95 | 1,57 | 1,30 | 1,12 | 0,98 | 0,87 | 0,78 | 0,71 |  |
| 3 / 7  |                         |      | 1,92 | 1,54 | 1,28 | 1,11 | 0,97 | 0,86 | 0,77 |  |
| 4 / 8  |                         |      |      | 1,94 | 1,56 | 1,31 | 1,13 | 0,98 | 0,87 |  |
| 5 / 9  |                         |      |      |      | 1,86 | 1,49 | 1,25 | 1,07 | 0,94 |  |

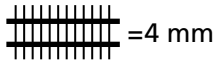
| E-Glycol 28% |                         |      |      |      |      |      |      |      |      |  |
|--------------|-------------------------|------|------|------|------|------|------|------|------|--|
| in/out       | Air-on temperature (°C) |      |      |      |      |      |      |      |      |  |
| °C           | +8                      | +9   | +10  | +11  | +12  | +13  | +14  | +15  | +16  |  |
| -2 / 3       | 1,81                    | 1,46 | 1,34 | 1,16 | 1,00 | 0,88 | 0,82 | 0,81 | 0,69 |  |
| -1 / 4       | 2,35                    | 1,72 | 1,41 | 1,28 | 1,10 | 0,96 | 0,85 | 0,79 | 0,75 |  |
| 0 / 5        | 2,43                    | 2,30 | 1,64 | 1,40 | 1,24 | 1,06 | 0,93 | 0,84 | 0,76 |  |
| 1 / 6        |                         | 2,38 | 2,28 | 1,59 | 1,37 | 1,21 | 1,05 | 0,92 | 0,82 |  |
| 2 / 7        |                         |      | 2,28 | 2,09 | 1,55 | 1,35 | 1,17 | 1,03 | 0,91 |  |

| P-Glycol 28% |                         |      |      |      |      |      |      |      |      |  |
|--------------|-------------------------|------|------|------|------|------|------|------|------|--|
| in/out       | Air-on temperature (°C) |      |      |      |      |      |      |      |      |  |
| °C           | +8                      | +9   | +10  | +11  | +12  | +13  | +14  | +15  | +16  |  |
| -2 / 3       | 1,66                    | 1,45 | 1,26 | 1,11 | 1,00 | 0,91 | 0,83 | 0,76 | 0,70 |  |
| -1 / 4       | 2,00                    | 1,65 | 1,42 | 1,24 | 1,11 | 1,01 | 0,90 | 0,81 | 0,77 |  |
| 0 / 5        | 2,48                    | 1,94 | 1,65 | 1,41 | 1,23 | 1,14 | 1,00 | 0,91 | 0,85 |  |
| 1 / 6        |                         | 2,46 | 1,97 | 1,64 | 1,42 | 1,29 | 1,12 | 1,00 | 0,92 |  |
| 2 / 7        |                         |      | 2,45 | 1,96 | 1,63 | 1,42 | 1,28 | 1,11 | 1,00 |  |

| Pekasol 50% |                         |      |      |      |      |      |      |      |      |  |
|-------------|-------------------------|------|------|------|------|------|------|------|------|--|
| in/out      | Air-on temperature (°C) |      |      |      |      |      |      |      |      |  |
| °C          | +8                      | +9   | +10  | +11  | +12  | +13  | +14  | +15  | +16  |  |
| -2 / 3      | 1,68                    | 1,42 | 1,26 | 1,11 | 1,00 | 0,90 | 0,82 | 0,77 | 0,70 |  |
| -1 / 4      | 2,02                    | 1,65 | 1,42 | 1,24 | 1,10 | 0,98 | 0,89 | 0,81 | 0,76 |  |
| 0 / 5       | 2,39                    | 1,96 | 1,62 | 1,39 | 1,22 | 1,07 | 0,96 | 0,87 | 0,80 |  |
| 1 / 6       |                         | 2,36 | 1,93 | 1,60 | 1,37 | 1,20 | 1,06 | 0,94 | 0,86 |  |
| 2 / 7       |                         |      | 2,32 | 1,89 | 1,57 | 1,35 | 1,18 | 1,05 | 0,94 |  |

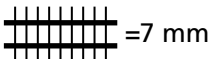
| Freezium 24% |                         |      |      |      |      |      |      |      |      |  |
|--------------|-------------------------|------|------|------|------|------|------|------|------|--|
| in/out       | Air-on temperature (°C) |      |      |      |      |      |      |      |      |  |
| °C           | +8                      | +9   | +10  | +11  | +12  | +13  | +14  | +15  | +16  |  |
| -2 / 3       | 1,66                    | 1,44 | 1,25 | 1,11 | 1,00 | 0,91 | 0,83 | 0,77 | 0,71 |  |
| -1 / 4       | 1,94                    | 1,62 | 1,42 | 1,23 | 1,09 | 0,98 | 0,89 | 0,82 | 0,76 |  |
| 0 / 5        | 2,38                    | 1,91 | 1,59 | 1,39 | 1,21 | 1,07 | 0,97 | 0,88 | 0,81 |  |
| 1 / 6        |                         | 2,34 | 1,88 | 1,57 | 1,37 | 1,20 | 1,06 | 0,95 | 0,86 |  |
| 2 / 7        |                         |      | 2,30 | 1,86 | 1,55 | 1,35 | 1,18 | 1,05 | 0,94 |  |

# F38Di(dx) - R404A



| Type     | Fan diameter | 1x230V-50Hz-4 pole                   |                                   |            |                             | 1x230V-50Hz-6 pole                   |                                   |            |                             | Surface        | Connections |    | Weight | Internal volume |
|----------|--------------|--------------------------------------|-----------------------------------|------------|-----------------------------|--------------------------------------|-----------------------------------|------------|-----------------------------|----------------|-------------|----|--------|-----------------|
|          |              | SC1                                  | SC2                               |            |                             | SC1                                  | SC2                               |            |                             |                | I           | K  |        |                 |
| FC38D    | mm           | DT1 = 10K<br>Air on =10°C<br>0 / +10 | DT1 = 8K<br>Air on =0°C<br>-8 / 0 | Air volume | LpA @ 3 m<br>(+/- 2 dB(A))* | DT1 = 10K<br>Air on =10°C<br>0 / +10 | DT1 = 8K<br>Air on =0°C<br>-8 / 0 | Air volume | LpA @ 3 m<br>(+/- 2 dB(A))* | m <sup>2</sup> | mm          | mm | kg     | dm <sup>3</sup> |
| 6.1.30.4 | 1x300        | 4,6                                  | 3,1                               | 1048       | 52                          |                                      |                                   |            |                             | 16             | 12          | 28 | 54     | 4               |
| 6.1.35.4 | 1x350        | 6,8                                  | 4,6                               | 1644       | 57                          |                                      |                                   |            |                             | 20             | 12          | 28 | 66     | 6               |
| 6.2.30.4 | 2x300        | 8,9                                  | 6,1                               | 2045       | 55                          |                                      |                                   |            |                             | 30             | 12          | 28 | 82     | 8               |
| 6.2.35.4 | 2x350        | 12,2                                 | 8,3                               | 3060       | 60                          |                                      |                                   |            |                             | 34             | 16          | 28 | 92     | 8               |
| 6.2.40.4 | 2x400        | 20,2                                 | 13,8                              | 4890       | 63                          | 15,6                                 | 10,8                              | 3434       | 53                          | 61             | 16          | 35 | 123    | 14              |
| 6.2.45.4 | 2x450        | 34,4                                 | 23,4                              | 8674       | 68                          | 25,4                                 | 17,6                              | 5669       | 58                          | 95             | 16          | 42 | 161    | 20              |
| 6.3.30.4 | 3x300        | 13,7                                 | 9,5                               | 3155       | 57                          |                                      |                                   |            |                             | 48             | 16          | 28 | 114    | 10              |
| 6.3.35.4 | 3x350        | 17,2                                 | 11,7                              | 4343       | 62                          |                                      |                                   |            |                             | 48             | 16          | 28 | 116    | 10              |
| 6.3.40.4 | 3x400        | 30,2                                 | 20,7                              | 7339       | 64                          | 23,4                                 | 16,2                              | 5156       | 54                          | 91             | 16          | 35 | 169    | 20              |
| 6.3.45.4 | 3x450        | 52,4                                 | 35,7                              | 13139      | 69                          | 38,3                                 | 26,5                              | 8600       | 60                          | 146            | 22          | 42 | 228    | 32              |
| 6.4.30.4 | 4x300        | 17,7                                 | 12,2                              | 4095       | 58                          |                                      |                                   |            |                             | 61             | 16          | 28 | 138    | 14              |
| 6.4.35.4 | 4x350        | 22,1                                 | 15,1                              | 5609       | 63                          |                                      |                                   |            |                             | 61             | 16          | 28 | 139    | 14              |
| 6.4.40.4 | 4x400        | 37,5                                 | 25,6                              | 9240       | 65                          | 28,7                                 | 19,8                              | 6439       | 55                          | 110            | 16          | 42 | 200    | 24              |

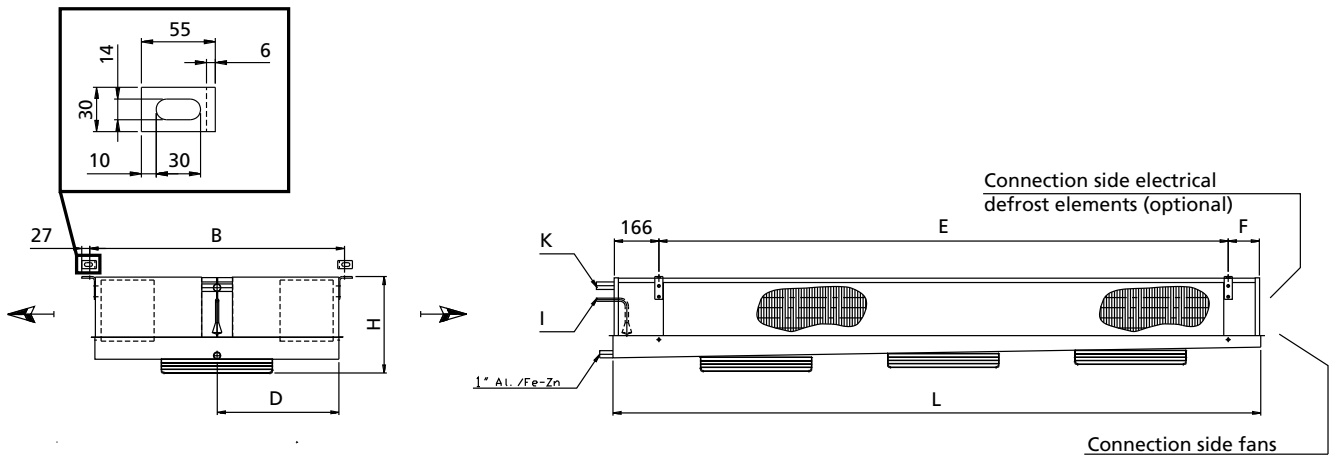
\* = Sound pressure indication (LpA) at 3 m distance each air cooler (+/- 2 dB(A)), free field conditions, according EN13487



| Type     | Fan diameter | 1x230V-50Hz-4 pole                   |                                   |            |                             | 1x230V-50Hz-6 pole                   |                                   |            |                             | Surface        | Connections |    | Weight | Internal volume |
|----------|--------------|--------------------------------------|-----------------------------------|------------|-----------------------------|--------------------------------------|-----------------------------------|------------|-----------------------------|----------------|-------------|----|--------|-----------------|
|          |              | SC1                                  | SC2                               |            |                             | SC1                                  | SC2                               |            |                             |                | I           | K  |        |                 |
| FC38D    | mm           | DT1 = 10K<br>Air on =10°C<br>0 / +10 | DT1 = 8K<br>Air on =0°C<br>-8 / 0 | Air volume | LpA @ 3 m<br>(+/- 2 dB(A))* | DT1 = 10K<br>Air on =10°C<br>0 / +10 | DT1 = 8K<br>Air on =0°C<br>-8 / 0 | Air volume | LpA @ 3 m<br>(+/- 2 dB(A))* | m <sup>2</sup> | mm          | mm | kg     | dm <sup>3</sup> |
| 6.1.30.7 | 1x300        | 3,9                                  | 2,6                               | 1262       | 52                          |                                      |                                   |            |                             | 10             | 12          | 28 | 51     | 4               |
| 6.1.35.7 | 1x350        | 5,6                                  | 3,8                               | 2004       | 57                          |                                      |                                   |            |                             | 12             | 12          | 28 | 62     | 6               |
| 6.2.30.7 | 2x300        | 7,5                                  | 5,1                               | 2480       | 55                          |                                      |                                   |            |                             | 18             | 12          | 28 | 77     | 8               |
| 6.2.35.7 | 2x350        | 10,0                                 | 6,8                               | 3706       | 60                          |                                      |                                   |            |                             | 21             | 12          | 28 | 87     | 8               |
| 6.2.40.7 | 2x400        | 16,6                                 | 11,2                              | 5793       | 63                          | 13,5                                 | 9,3                               | 4197       | 53                          | 36             | 16          | 28 | 114    | 14              |
| 6.2.45.7 | 2x450        | 27,6                                 | 18,7                              | 10019      | 68                          | 21,5                                 | 14,7                              | 6703       | 58                          | 57             | 16          | 35 | 145    | 20              |
| 6.3.30.7 | 3x300        | 11,7                                 | 7,9                               | 3795       | 57                          |                                      |                                   |            |                             | 29             | 16          | 28 | 107    | 10              |
| 6.3.35.7 | 3x350        | 14,3                                 | 9,7                               | 5320       | 62                          |                                      |                                   |            |                             | 29             | 12          | 28 | 109    | 10              |
| 6.3.40.7 | 3x400        | 24,9                                 | 16,9                              | 8695       | 64                          | 20,3                                 | 13,9                              | 6299       | 54                          | 55             | 16          | 35 | 154    | 20              |
| 6.3.45.7 | 3x450        | 41,7                                 | 28,2                              | 15125      | 69                          | 32,8                                 | 22,5                              | 10128      | 60                          | 88             | 16          | 42 | 203    | 32              |
| 6.4.30.7 | 4x300        | 15,1                                 | 10,2                              | 4964       | 58                          |                                      |                                   |            |                             | 36             | 16          | 28 | 128    | 14              |
| 6.4.35.7 | 4x350        | 18,4                                 | 12,4                              | 6912       | 63                          |                                      |                                   |            |                             | 36             | 16          | 28 | 129    | 14              |
| 6.4.40.7 | 4x400        | 31,0                                 | 20,9                              | 11135      | 65                          | 25,4                                 | 17,4                              | 7999       | 55                          | 66             | 16          | 35 | 181    | 24              |

\* = Sound pressure indication (LpA) at 3 m distance each air cooler (+/- 2 dB(A)), free field conditions, according EN13487

# F38Di(dx) - R404A



## Declarations

|                           |                                      |
|---------------------------|--------------------------------------|
| Connection $\leq$ 35 mm   | : Declaration of incorporation (SEP) |
| Connection 42mm and 54 mm | : module A                           |
| Group of fluid            | : 2                                  |
| PS                        | : 28 bar                             |
| TS                        | : +55 / -40 °C                       |

| Type     | Dimensions |      |     |     |      |     | Electrical defrost at 3x400V-50Hz |        |           |        | Standard | Light | Dimensions & Electrical defrost |    |      |
|----------|------------|------|-----|-----|------|-----|-----------------------------------|--------|-----------|--------|----------|-------|---------------------------------|----|------|
|          | L          | B    | H   | D   | E    | F   | Coil block                        |        | Drip tray |        |          |       |                                 | kW | kW** |
|          | mm         | mm   | mm  | mm  | mm   | mm  | number                            | O [mm] | number    | O [mm] |          |       |                                 |    |      |
| FC38D    | mm         | mm   | mm  | mm  | mm   | mm  | number                            | O [mm] | number    | O [mm] | kW       | kW**  |                                 |    |      |
| 6.1.30.* | 925        | 850  | 280 | 405 | 575  | 166 | 2x L=1600                         | 132    | 2x L=1600 | 150    | 2,5      |       |                                 |    |      |
| 6.1.35.* | 1080       | 850  | 280 | 405 | 730  | 166 | 2x L=1900                         | 132    | 2x L=1900 | 150    | 3,0      |       |                                 |    |      |
| 6.2.30.* | 1425       | 850  | 280 | 405 | 1075 | 166 | 2x L=2500                         | 132    | 2x L=2500 | 150    | 4,1      |       |                                 |    |      |
| 6.2.35.* | 1570       | 850  | 280 | 405 | 1220 | 166 | 2x L=2800                         | 132    | 2x L=2800 | 150    | 4,6      |       |                                 |    |      |
| 6.2.40.* | 1775       | 950  | 390 | 455 | 1425 | 166 | 4x L=3100                         | 132    | 2x L=3400 | 150    | 8        | 6,1   |                                 |    |      |
| 6.2.45.* | 2025       | 1000 | 465 | 480 | 1675 | 166 | 4x L=3700                         | 132    | 2x L=3700 | 150    | 9,3      | 7,0   |                                 |    |      |
| 6.3.30.* | 2025       | 850  | 280 | 405 | 1675 | 166 | 2x L=3700                         | 132    | 2x L=3700 | 150    | 6,2      |       |                                 |    |      |
| 6.3.35.* | 2025       | 850  | 280 | 405 | 1675 | 166 | 2x L=3700                         | 132    | 2x L=3700 | 150    | 6,2      |       |                                 |    |      |
| 6.3.40.* | 2475       | 950  | 390 | 455 | 2125 | 166 | 4x L=4600                         | 132    | 2x L=4600 | 150    | 11,6     | 8,8   |                                 |    |      |
| 6.3.45.* | 2850       | 1000 | 465 | 480 | 2550 | 116 | 4x L=5500                         | 132    | 2x L=5500 | 150    | 14,0     | 10,6  |                                 |    |      |
| 6.4.30.* | 2475       | 850  | 280 | 405 | 2125 | 166 | 2x L=4600                         | 132    | 2x L=4600 | 150    | 7,8      |       |                                 |    |      |
| 6.4.35.* | 2475       | 850  | 280 | 455 | 2125 | 166 | 2x L=4600                         | 132    | 2x L=4600 | 150    | 7,8      |       |                                 |    |      |
| 6.4.40.* | 2850       | 950  | 390 | 480 | 2550 | 116 | 4x L=5500                         | 132    | 2x L=5500 | 150    | 14,0     | 10,6  |                                 |    |      |



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