



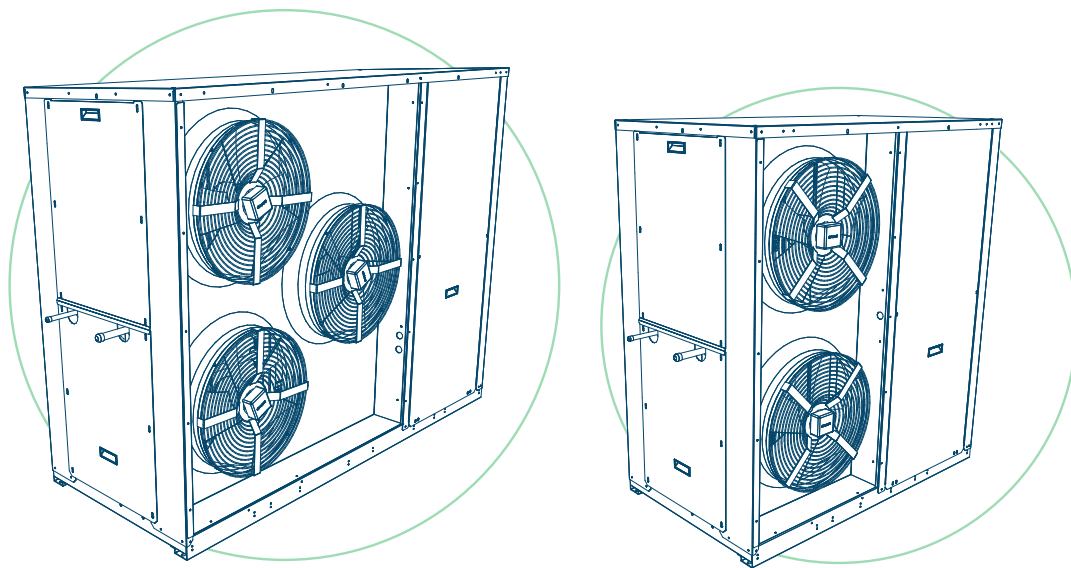
SUSTAINABLE COLD SOLUTIONS

# TRANSCRITICAL CO<sub>2</sub>NDENSING UNITS



We know the art of achieving  
*a perfect temperature*

**BEIJER REF**



## Product Description

Condensing unit for transcritical CO<sub>2</sub> applications equipped with BITZER/DORIN semi-hermetic piston compressors with frequency inverter or BITZER CR11, integrated air cooled gas cooler and EC fans. It is a high-efficiency solution designed for a small footprint and low noise.

### MAIN ADVANTAGES



CO<sub>2</sub> REFRIGERANT



EFFICIENT SOLUTION



LOW NOISE



SMALL FOOTPRINT



EASY START-UP



SEMI-HERMETIC  
RECIPROCATING  
COMPRESSOR



GAS COOLER  
EQUIPPED

## Cooling Capacity

### Transcritical condensing units DX

UMT MTDX

1 kW

39 kW

UMT BTDX

4 kW

29 kW

## Standard Accessories

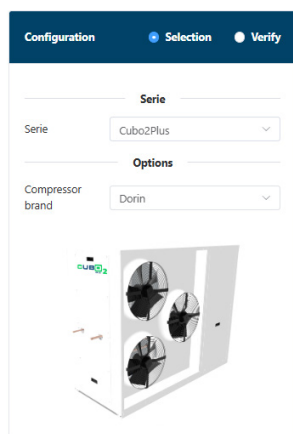
- Semihermetic reciprocating compressor
- Carel controller
- Inverter modulation for capacity control 60% - 140% or BITZER CRII for capacity modulation 10% - 100%
- Integrated gas cooler with EC fans
- Design pressure: 130 bar (high pressure side) | 80 bar (liquid line) | 80 bar (suction line)
- Power supply 400V/3+N/50Hz
- Liquid receiver 15 liters (PED III)
- K65 connections

## Accessories on Request

- Liquid receiver 37 liters (PED III)
- Adiabatic kit water spray, including controller
- RDM/Danfoss/Wurm controller
- Epoxy or Electrofin gas cooler corrosion coil protection

## Software Calculation Tool

Select your unit and check its CO<sub>2</sub> charge



**Input data**

**Selection**

Required Capacity: kW 0,00

Tolerance: % 10,00

**Input**

Evaporation temperature: °C -25,00

Ambient temperature: °C 35,00

**charged Calculation** Cubo2Plus UNIT 055 BTDX

✓ Ricevitore di liquido da 15 litri (PED III)

| LIQUID LINE                    |      | m      | kg |
|--------------------------------|------|--------|----|
| Liquid Line 3/8" (120 bar K65) | 0,00 | 0,0000 |    |
| Liquid Line 1/2" (120 bar K65) | 0,00 | 0,0000 |    |
| Liquid Line 5/8" (120 bar K65) | 0,00 | 0,0000 |    |
| Liquid Line 7/8" (120 bar K65) | 0,00 | 0,0000 |    |
| Sub Total Liquid               |      | 0,0000 |    |

| SUCTION LINE                    |      | m      | kg |
|---------------------------------|------|--------|----|
| Suction Line 3/8" (120 bar K65) | 0,00 | 0,0000 |    |
| Suction Line 1/2" (120 bar K65) | 0,00 | 0,0000 |    |
| Suction Line 5/8" (120 bar K65) | 0,00 | 0,0000 |    |
| Suction Line 7/8" (120 bar K65) | 0,00 | 0,0000 |    |
| Sub Total Suction               |      | 0,0000 |    |

| STANDING CHARGE |  | kg     |
|-----------------|--|--------|
| Receiver        |  | 3,0000 |
| Gas Cooler/ PHE |  | 1,1500 |
| Sub Total CUBO  |  | 4,1500 |

| EVAPORATORS              |      | l      | kg |
|--------------------------|------|--------|----|
| Total evaporators volume | 0,00 | 0,0000 |    |
| Sub Total Evaps          |      | 0,0000 |    |

**TOTALS**

Total Charge (minimum charge is 4kg) kg 4,1500

✓ ok!

Pumpdown from EEV MUST BE ≤ 25kg for 37L and ≤ 10 for 15L kg 3,0000

✓ ok!

Pumpdown from CU MUST BE ≤ 25kg for 37L and ≤ 10 for 15L - if not fit ball valves on branch lines kg 3,0000

✓ ok!

① Oil approved: POE Reniso Fuchs C8SE, Fuchs BSE 85 K

AT THE FOLLOWING LINK YOU CAN CHECK THE UNIT CHARGE.

<https://cubo2calculation.scmfrigo.com/#/home>

|                                 |                               | Evaporation Temperature[°C] |               |       |      |                           |       |       |               |                            |       |               |      |       |       |       |      |      |
|---------------------------------|-------------------------------|-----------------------------|---------------|-------|------|---------------------------|-------|-------|---------------|----------------------------|-------|---------------|------|-------|-------|-------|------|------|
|                                 |                               | -40                         |               |       |      | -35                       |       |       |               | -30                        |       |               |      | -25   |       |       |      |      |
|                                 |                               |                             |               |       |      |                           |       |       |               |                            |       |               |      |       |       |       |      |      |
|                                 |                               | Ambient temperature<br>[°C] | Capacity [kW] | Pe    | COP  | Capacity [kW]             | Pe    | COP   | Capacity [kW] | Pe                         | COP   | Capacity [kW] | Pe   | COP   |       |       |      |      |
| UMT 055 BTDX<br>Dorin CD2S 550  |                               | min                         | max           | kW    | min  | max                       | kW    | min   | max           | kW                         | min   | max           | kW   |       |       |       |      |      |
|                                 | 40                            | -                           | -             | -     | -    | -                         | -     | -     | -             | -                          | 5,15  | 10,30         | 8,92 | 1,15  | 6,45  | 12,90 | 6,22 | 2,08 |
|                                 | 38                            | -                           | -             | -     | -    | 4,42                      | 8,84  | 8,14  | 1,09          | 5,20                       | 10,39 | 8,63          | 1,20 | 6,45  | 12,90 | 6,22  | 2,08 |      |
|                                 | 32                            | 3,85                        | 7,70          | 7,09  | 1,09 | 4,56                      | 9,12  | 7,42  | 1,23          | 5,30                       | 10,60 | 7,82          | 1,35 | 6,03  | 12,06 | 8,16  | 1,48 |      |
|                                 | 25                            | 3,94                        | 7,87          | 6,40  | 1,23 | 4,60                      | 9,20  | 6,70  | 1,37          | 5,40                       | 10,80 | 7,02          | 1,54 | 6,21  | 12,42 | 7,32  | 1,70 |      |
|                                 | 15                            | 4,03                        | 8,05          | 5,56  | 1,45 | 4,80                      | 9,60  | 5,71  | 1,68          | 5,62                       | 11,24 | 6,00          | 1,87 | 6,45  | 12,90 | 6,22  | 2,08 |      |
|                                 | 5                             | 4,18                        | 8,35          | 4,62  | 1,81 | 4,97                      | 9,94  | 4,82  | 2,06          | 5,80                       | 11,59 | 4,98          | 2,33 | -     | -     | -     | -    |      |
|                                 | N. of fans                    | 2 x Ø 500 mm                |               |       |      | MEPS <sup>(c)</sup>       |       |       |               | 1,80                       |       |               |      |       |       |       |      |      |
|                                 | Weight                        | 560 kg                      |               |       |      | Annual Energy Consumption |       |       |               | 65817 kWh/year             |       |               |      |       |       |       |      |      |
|                                 | Sound pressure <sup>(b)</sup> | 48 dB(A)                    |               |       |      | FLA/MRA/Pmax              |       |       |               | 18,9 A / 67,4 A / 9,4 kW   |       |               |      |       |       |       |      |      |
|                                 |                               | Evaporation Temperature[°C] |               |       |      |                           |       |       |               |                            |       |               |      |       |       |       |      |      |
|                                 |                               | -40                         |               |       |      | -35                       |       |       |               | -30                        |       |               |      | -25   |       |       |      |      |
|                                 |                               |                             |               |       |      |                           |       |       |               |                            |       |               |      |       |       |       |      |      |
|                                 |                               | Ambient temperature<br>[°C] | Capacity [kW] | Pe    | COP  | Capacity [kW]             | Pe    | COP   | Capacity [kW] | Pe                         | COP   | Capacity [kW] | Pe   | COP   |       |       |      |      |
| UMT 075 BTDX<br>Dorin CD2S 750  |                               | min                         | max           | kW    | min  | max                       | kW    | min   | max           | kW                         | min   | max           | kW   |       |       |       |      |      |
|                                 | 40                            | -                           | -             | -     | -    | -                         | -     | -     | -             | 6,63                       | 13,26 | 12,14         | 1,09 | 7,39  | 14,78 | 12,59 | 1,17 |      |
|                                 | 38                            | -                           | -             | -     | -    | 5,80                      | 11,59 | 11,11 | 1,04          | 6,68                       | 13,36 | 11,69         | 1,14 | 7,55  | 15,10 | 12,14 | 1,24 |      |
|                                 | 32                            | 5,10                        | 10,20         | 9,65  | 1,06 | 5,87                      | 11,75 | 10,03 | 1,17          | 6,87                       | 13,74 | 10,50         | 1,31 | 7,76  | 15,53 | 10,87 | 1,43 |      |
|                                 | 25                            | 5,18                        | 10,37         | 8,58  | 1,21 | 6,03                      | 12,06 | 8,94  | 1,35          | 6,96                       | 13,92 | 9,29          | 1,50 | 8,12  | 16,24 | 9,48  | 1,71 |      |
|                                 | 15                            | 5,38                        | 10,75         | 7,30  | 1,47 | 6,31                      | 12,62 | 7,60  | 1,66          | 7,21                       | 14,42 | 7,97          | 1,81 | 8,31  | 16,62 | 8,06  | 2,06 |      |
|                                 | 5                             | 5,53                        | 11,05         | 6,04  | 1,83 | 6,55                      | 13,10 | 6,26  | 2,09          | 7,53                       | 15,06 | 6,47          | 2,33 | -     | -     | -     | -    |      |
|                                 | N. of fans                    | 2 x Ø 500 mm                |               |       |      | MEPS <sup>(c)</sup>       |       |       |               | 1,85                       |       |               |      |       |       |       |      |      |
|                                 | Weight                        | 570 kg                      |               |       |      | Annual Energy Consumption |       |       |               | 85345 kWh/year             |       |               |      |       |       |       |      |      |
|                                 | Sound pressure <sup>(b)</sup> | 48 dB(A)                    |               |       |      | FLA/MRA/Pmax              |       |       |               | 23,9 A / 90,4 A / 12,1 kW  |       |               |      |       |       |       |      |      |
|                                 |                               | Evaporation Temperature[°C] |               |       |      |                           |       |       |               |                            |       |               |      |       |       |       |      |      |
|                                 |                               | -40                         |               |       |      | -35                       |       |       |               | -30                        |       |               |      | -25   |       |       |      |      |
|                                 |                               |                             |               |       |      |                           |       |       |               |                            |       |               |      |       |       |       |      |      |
|                                 |                               | Ambient temperature<br>[°C] | Capacity [kW] | Pe    | COP  | Capacity [kW]             | Pe    | COP   | Capacity [kW] | Pe                         | COP   | Capacity [kW] | Pe   | COP   |       |       |      |      |
| UMT 090 BTDX<br>Dorin CD2S 900  |                               | min                         | max           | kW    | min  | max                       | kW    | min   | max           | kW                         | min   | max           | kW   |       |       |       |      |      |
|                                 | 40                            | -                           | -             | -     | -    | -                         | -     | -     | -             | 7,90                       | 15,80 | 14,74         | 1,07 | 8,81  | 17,62 | 15,24 | 1,16 |      |
|                                 | 38                            | -                           | -             | -     | -    | 7,08                      | 14,16 | 13,58 | 1,04          | 8,16                       | 16,32 | 14,28         | 1,14 | 9,11  | 18,23 | 14,76 | 1,23 |      |
|                                 | 32                            | 6,16                        | 12,32         | 11,76 | 1,05 | 7,18                      | 14,36 | 12,26 | 1,17          | 8,29                       | 16,58 | 12,76         | 1,30 | 9,38  | 18,76 | 13,20 | 1,42 |      |
|                                 | 25                            | 6,26                        | 12,53         | 10,46 | 1,20 | 7,38                      | 14,76 | 10,91 | 1,35          | 8,51                       | 17,03 | 11,32         | 1,50 | 9,62  | 19,25 | 11,66 | 1,65 |      |
|                                 | 15                            | 11,30                       | 13,01         | 8,89  | 1,46 | 7,64                      | 15,28 | 9,23  | 1,66          | 8,80                       | 17,59 | 9,52          | 1,85 | 10,16 | 20,33 | 9,80  | 2,07 |      |
|                                 | 5                             | 6,70                        | 13,40         | 7,34  | 1,83 | 7,84                      | 15,68 | 7,57  | 2,07          | 9,11                       | 18,23 | 7,84          | 2,33 | -     | -     | -     | -    |      |
|                                 | N. of fans                    | 3 x Ø 500 mm                |               |       |      | MEPS <sup>(c)</sup>       |       |       |               | 1,87                       |       |               |      |       |       |       |      |      |
|                                 | Weight                        | 650 kg                      |               |       |      | Annual Energy Consumption |       |       |               | 103011 kWh/year            |       |               |      |       |       |       |      |      |
|                                 | Sound pressure <sup>(b)</sup> | 48 dB(A)                    |               |       |      | FLA/MRA/Pmax              |       |       |               | 29,6 A / 98,6 A / 14,8 kW  |       |               |      |       |       |       |      |      |
|                                 |                               | Evaporation Temperature[°C] |               |       |      |                           |       |       |               |                            |       |               |      |       |       |       |      |      |
|                                 |                               | -40                         |               |       |      | -35                       |       |       |               | -30                        |       |               |      | -25   |       |       |      |      |
|                                 |                               |                             |               |       |      |                           |       |       |               |                            |       |               |      |       |       |       |      |      |
|                                 |                               | Ambient temperature<br>[°C] | Capacity [kW] | Pe    | COP  | Capacity [kW]             | Pe    | COP   | Capacity [kW] | Pe                         | COP   | Capacity [kW] | Pe   | COP   |       |       |      |      |
| UMT 200 BTDX<br>Dorin CD2S 2000 |                               | min                         | max           | kW    | min  | max                       | kW    | min   | max           | kW                         | min   | max           | kW   |       |       |       |      |      |
|                                 | 40                            | -                           | -             | -     | -    | -                         | -     | -     | -             | 9,79                       | 19,57 | 16,82         | 1,16 | 11,15 | 22,31 | 17,64 | 1,26 |      |
|                                 | 38                            | -                           | -             | -     | -    | 8,50                      | 17,00 | 15,36 | 1,11          | 9,88                       | 19,75 | 16,28         | 1,21 | 11,26 | 22,51 | 17,06 | 1,32 |      |
|                                 | 32                            | 7,39                        | 14,78         | 13,39 | 1,10 | 8,66                      | 17,33 | 14,08 | 1,23          | 10,07                      | 20,14 | 14,78         | 1,36 | 11,60 | 23,21 | 15,52 | 1,50 |      |
|                                 | 25                            | 7,55                        | 15,10         | 12,08 | 1,25 | 8,84                      | 17,68 | 12,68 | 1,39          | 10,37                      | 20,74 | 13,33         | 1,56 | 11,81 | 23,62 | 13,91 | 1,70 |      |
|                                 | 15                            | 7,81                        | 15,61         | 10,44 | 1,50 | 9,21                      | 18,42 | 10,94 | 1,68          | 10,79                      | 21,58 | 11,45         | 1,88 | 12,39 | 24,78 | 11,88 | 2,09 |      |
|                                 | 5                             | 8,10                        | 16,20         | 8,75  | 1,85 | 9,52                      | 19,04 | 9,12  | 2,09          | 11,12                      | 22,24 | 9,54          | 2,33 | -     | -     | -     | -    |      |
|                                 | N. of fans                    | 3 x Ø 500 mm                |               |       |      | MEPS <sup>(c)</sup>       |       |       |               | 1,89                       |       |               |      |       |       |       |      |      |
|                                 | Weight                        | 655 kg                      |               |       |      | Annual Energy Consumption |       |       |               | 125074 kWh/year            |       |               |      |       |       |       |      |      |
|                                 | Sound pressure <sup>(b)</sup> | 50 dB(A)                    |               |       |      | FLA/MRA/Pmax              |       |       |               | 44,6 A / 183,6 A / 23,7 kW |       |               |      |       |       |       |      |      |
|                                 |                               | Evaporation Temperature[°C] |               |       |      |                           |       |       |               |                            |       |               |      |       |       |       |      |      |
|                                 |                               | -40                         |               |       |      | -35                       |       |       |               | -30                        |       |               |      | -25   |       |       |      |      |
|                                 |                               |                             |               |       |      |                           |       |       |               |                            |       |               |      |       |       |       |      |      |
|                                 |                               | Ambient temperature<br>[°C] | Capacity [kW] | Pe    | COP  | Capacity [kW]             | Pe    | COP   | Capacity [kW] | Pe                         | COP   | Capacity [kW] | Pe   | COP   |       |       |      |      |
| UMT 250 BTDX<br>Dorin CD2S 2500 |                               | min                         | max           | kW    | min  | max                       | kW    | min   | max           | kW                         | min   | max           | kW   |       |       |       |      |      |
|                                 | 40                            | -                           | -             | -     | -    | -                         | -     | -     | -             | 12,38                      | 24,77 | 21,89         | 1,13 | 14,05 | 28,10 | 22,81 | 1,23 |      |
|                                 | 38                            | -                           | -             | -     | -    | 10,92                     | 21,84 | 20,24 | 1,08          | 12,64                      | 25,27 | 21,18         | 1,19 | 14,35 | 28,69 | 22,06 | 1,30 |      |
|                                 | 32                            | 9,48                        | 18,96         | 17,41 | 1,09 | 11,09                     | 22,18 | 18,22 | 1,22          | 12,85                      | 25,69 | 19,02         | 1,35 | 14,58 | 29,16 | 19,76 | 1,48 |      |
|                                 | 25                            | 9,74                        | 19,49         | 15,49 | 1,26 | 11,40                     | 22,80 | 16,31 | 1,40          | 13,04                      | 26,09 | 16,94         | 1,54 | 14,97 | 29,94 | 17,58 | 1,70 |      |
|                                 | 15                            | 10,03                       | 20,05         | 13,42 | 1,49 | 11,81                     | 23,62 | 13,97 | 1,69          | 13,64                      | 27,28 | 14,46         | 1,89 | 15,64 | 31,27 | 14,89 | 2,10 |      |
|                                 | 5                             | 10,33                       | 20,65         | 11,17 | 1,85 | 12,13                     | 24,25 | 11,56 | 2,10          | 14,14                      | 28,27 | 11,99         | 2,36 | -     | -     | -     | -    |      |
|                                 | N. of fans                    | 3 x Ø 500 mm                |               |       |      | MEPS <sup>(c)</sup>       |       |       |               | 1,90                       |       |               |      |       |       |       |      |      |
|                                 | Weight                        | 660 kg                      |               |       |      | Annual Energy Consumption |       |       |               | 159585 kWh/year            |       |               |      |       |       |       |      |      |
|                                 | Sound pressure <sup>(b)</sup> | 50 dB(A)                    |               |       |      | FLA/MRA/Pmax              |       |       |               | 51,6 A / 209,6 A / 27,6 kW |       |               |      |       |       |       |      |      |

## NOTES

<sup>(a)</sup> Inverter modulation from 30 to 60 Hz<sup>(b)</sup> Based on free field area with semi-spherical sound emission in 10m distance; tolerance ± 2 dB(A)<sup>(c)</sup> Minimum Energy Performance Standards, calculated according to Ecodesign Directive EN 2009/125/EC

|              |                               | Evaporation Temperature[°C] |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|--------------|-------------------------------|-----------------------------|-------|-------|-------|---------------|-------|-------|-------|---------------------------|-------|-------|-------|------------------|-------|-------|-------|---------------|-------|-------|-------|------|
|              |                               | -15                         |       |       |       | -10           |       |       |       | -5                        |       |       |       | 0                |       |       |       | 5             |       |       |       |      |
|              |                               | Capacity [kW]               |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   | Capacity [kW]             |       | Pe    | COP   | Capacity [kW]    |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   |      |
|              |                               | min                         | max   | kW    |       | min           | max   | kW    |       | min                       | max   | kW    |       | min              | max   | kW    |       | min           | max   | kW    |       |      |
| UMT 036 MTDX | Dorin CD 360H                 | 40                          | 1,96  | 3,93  | 4,39  | 0,89          | 2,46  | 4,92  | 4,60  | 1,07                      | 3,03  | 6,05  | 4,77  | 1,27             | 3,65  | 7,30  | 4,90  | 1,49          | 4,33  | 8,65  | 4,99  | 1,74 |
|              |                               | 38                          | 2,07  | 4,14  | 4,32  | 0,96          | 2,59  | 5,17  | 4,51  | 1,15                      | 3,18  | 6,35  | 4,66  | 1,36             | 3,83  | 7,65  | 4,77  | 1,60          | 4,53  | 9,05  | 4,83  | 1,88 |
|              |                               | 32                          | 2,44  | 4,88  | 4,08  | 1,20          | 3,03  | 6,06  | 4,20  | 1,44                      | 3,69  | 7,39  | 4,27  | 1,73             | 4,43  | 8,85  | 4,30  | 2,06          | 5,22  | 10,44 | 4,28  | 2,44 |
|              |                               | 25                          | 2,90  | 5,80  | 4,04  | 1,44          | 3,60  | 7,20  | 3,98  | 1,81                      | 4,39  | 8,77  | 4,21  | 2,08             | 5,26  | 10,52 | 4,23  | 2,49          | 6,21  | 12,41 | 4,19  | 2,96 |
|              |                               | 15                          | 3,65  | 7,29  | 3,59  | 2,03          | 4,41  | 8,81  | 3,20  | 2,75                      | 5,40  | 10,80 | 3,57  | 3,03             | 6,43  | 12,86 | 3,47  | 3,70          | 7,54  | 15,08 | 3,32  | 4,54 |
|              |                               | 5                           | 4,46  | 8,93  | 3,00  | 2,97          | 5,41  | 10,83 | 2,63  | 4,12                      | 6,48  | 12,96 | 2,78  | 4,67             | 7,66  | 15,32 | 2,58  | 5,95          | 8,93  | 17,87 | 2,31  | 7,75 |
|              | N. of fans                    | 2 x Ø 500 mm                |       |       |       |               |       |       |       | MEPS <sup>(a)</sup>       |       |       |       | 2,56             |       |       |       |               |       |       |       |      |
|              | Weight                        | 460 kg                      |       |       |       |               |       |       |       | Annual Energy Consumption |       |       |       | 19150 kWh/year   |       |       |       |               |       |       |       |      |
|              | Sound pressure <sup>(b)</sup> | 43 dB(A)                    |       |       |       |               |       |       |       | MRA/Pmax                  |       |       |       | 15,9 A / 7,5 kW  |       |       |       |               |       |       |       |      |
|              |                               |                             |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | Evaporation Temperature[°C] |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | -15                         |       |       |       | -10           |       |       |       | -5                        |       |       |       | 0                |       |       |       | 5             |       |       |       |      |
|              |                               | Capacity [kW]               |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   | Capacity [kW]             |       | Pe    | COP   | Capacity [kW]    |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   |      |
|              |                               | min                         | max   | kW    |       | min           | max   | kW    |       | min                       | max   | kW    |       | min              | max   | kW    |       | min           | max   | kW    |       |      |
| UMT 075 MTDX | Dorin CD 4 75-4.7 H           | 40                          | 4,10  | 8,20  | 7,71  | 1,06          | 5,01  | 10,02 | 8,04  | 1,25                      | 5,99  | 11,97 | 8,28  | 1,45             | 6,98  | 13,97 | 8,45  | 1,65          | 7,96  | 15,92 | 8,52  | 1,87 |
|              |                               | 38                          | 4,27  | 8,55  | 7,53  | 1,14          | 5,20  | 10,40 | 7,81  | 1,33                      | 6,18  | 12,36 | 8,02  | 1,54             | 7,17  | 14,33 | 8,15  | 1,76          | 8,11  | 16,22 | 8,18  | 1,98 |
|              |                               | 32                          | 4,81  | 9,61  | 6,91  | 1,39          | 5,68  | 11,36 | 7,08  | 1,60                      | 6,51  | 13,02 | 7,17  | 1,82             | 7,25  | 14,49 | 7,16  | 2,02          | 7,89  | 15,77 | 7,05  | 2,24 |
|              |                               | 25                          | 5,88  | 11,77 | 6,82  | 1,73          | 7,14  | 14,28 | 6,97  | 2,05                      | 8,49  | 16,98 | 7,04  | 2,41             | 9,85  | 19,70 | 7,01  | 2,81          | 11,13 | 22,25 | 6,88  | 3,23 |
|              |                               | 15                          | 7,12  | 14,23 | 5,86  | 2,43          | 8,41  | 16,83 | 5,85  | 2,88                      | 9,57  | 19,15 | 5,74  | 3,34             | 10,43 | 20,86 | 5,53  | 3,77          | 11,50 | 22,99 | 5,22  | 4,41 |
|              |                               | 5                           | 7,98  | 15,96 | 4,71  | 3,39          | 9,17  | 18,33 | 4,53  | 4,05                      | 10,86 | 21,73 | 4,25  | 5,11             | 12,72 | 25,44 | 3,86  | 6,58          | 14,72 | 29,43 | 3,37  | 8,74 |
|              | N. of fans                    | 2 x Ø 500 mm                |       |       |       |               |       |       |       | MEPS <sup>(a)</sup>       |       |       |       | 2,67             |       |       |       |               |       |       |       |      |
|              | Weight                        | 470 kg                      |       |       |       |               |       |       |       | Annual Energy Consumption |       |       |       | 26174 kWh/year   |       |       |       |               |       |       |       |      |
|              | Sound pressure <sup>(b)</sup> | 45 dB(A)                    |       |       |       |               |       |       |       | MRA/Pmax                  |       |       |       | 20,5 A / 10,4 kW |       |       |       |               |       |       |       |      |
|              |                               |                             |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | Evaporation Temperature[°C] |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | -15                         |       |       |       | -10           |       |       |       | -5                        |       |       |       | 0                |       |       |       | 5             |       |       |       |      |
|              |                               | Capacity [kW]               |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   | Capacity [kW]             |       | Pe    | COP   | Capacity [kW]    |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   |      |
|              |                               | min                         | max   | kW    |       | min           | max   | kW    |       | min                       | max   | kW    |       | min              | max   | kW    |       | min           | max   | kW    |       |      |
| UMT 120 MTDX | Dorin CD4 90-6.4H             | 40                          | 5,66  | 11,32 | 10,33 | 1,10          | 6,93  | 13,86 | 10,78 | 1,29                      | 8,30  | 16,60 | 11,13 | 1,49             | 9,69  | 19,38 | 11,37 | 1,70          | 11,03 | 22,05 | 11,50 | 1,92 |
|              |                               | 38                          | 5,91  | 11,82 | 10,08 | 1,17          | 7,21  | 14,42 | 10,48 | 1,38                      | 8,58  | 17,16 | 10,78 | 1,59             | 9,94  | 19,88 | 10,97 | 1,81          | 11,21 | 22,43 | 11,04 | 2,03 |
|              |                               | 32                          | 6,69  | 13,37 | 9,24  | 1,45          | 7,90  | 15,80 | 9,48  | 1,67                      | 9,00  | 18,00 | 9,61  | 1,87             | 9,95  | 19,90 | 9,63  | 2,07          | 10,78 | 21,56 | 9,52  | 2,27 |
|              |                               | 25                          | 8,10  | 16,21 | 9,11  | 1,78          | 9,86  | 19,72 | 9,33  | 2,11                      | 11,73 | 23,47 | 9,43  | 2,49             | 13,58 | 27,16 | 9,41  | 2,89          | 15,20 | 30,40 | 9,27  | 3,28 |
|              |                               | 15                          | 9,85  | 19,71 | 7,80  | 2,53          | 11,71 | 23,42 | 7,81  | 3,00                      | 13,28 | 26,57 | 7,70  | 3,45             | 14,36 | 28,72 | 7,47  | 3,84          | 15,75 | 31,49 | 7,12  | 4,42 |
|              |                               | 5                           | 11,74 | 23,49 | 6,27  | 3,75          | 12,55 | 25,10 | 6,08  | 4,13                      | 14,86 | 29,72 | 5,79  | 5,13             | 17,38 | 34,75 | 5,38  | 6,46          | 20,08 | 40,15 | 4,88  | 8,24 |
|              | N. of fans                    | 2 x Ø 500 mm                |       |       |       |               |       |       |       | MEPS <sup>(a)</sup>       |       |       |       | 2,75             |       |       |       |               |       |       |       |      |
|              | Weight                        | 645 kg                      |       |       |       |               |       |       |       | Annual Energy Consumption |       |       |       | 35268 kWh/year   |       |       |       |               |       |       |       |      |
|              | Sound pressure <sup>(b)</sup> | 45 dB(A)                    |       |       |       |               |       |       |       | MRA/Pmax                  |       |       |       | 26,3 A / 13,8 kW |       |       |       |               |       |       |       |      |
|              |                               |                             |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | Evaporation Temperature[°C] |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | -15                         |       |       |       | -10           |       |       |       | -5                        |       |       |       | 0                |       |       |       | 5             |       |       |       |      |
|              |                               | Capacity [kW]               |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   | Capacity [kW]             |       | Pe    | COP   | Capacity [kW]    |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   |      |
|              |                               | min                         | max   | kW    |       | min           | max   | kW    |       | min                       | max   | kW    |       | min              | max   | kW    |       | min           | max   | kW    |       |      |
| UMT 150 MTDX | Dorin CD4 120-9.2H            | 40                          | 8,09  | 16,18 | 14,79 | 1,09          | 9,95  | 19,90 | 15,46 | 1,29                      | 12,01 | 24,02 | 16,00 | 1,50             | 14,21 | 28,41 | 16,40 | 1,73          | 16,45 | 32,91 | 16,66 | 1,98 |
|              |                               | 38                          | 8,46  | 16,91 | 14,43 | 1,17          | 10,38 | 20,76 | 15,03 | 1,38                      | 12,50 | 24,99 | 15,50 | 1,61             | 14,73 | 29,46 | 15,83 | 1,86          | 16,98 | 33,95 | 16,00 | 2,12 |
|              |                               | 32                          | 9,72  | 19,45 | 13,24 | 1,47          | 13,61 | 27,22 | 16,92 | 1,61                      | 15,10 | 30,21 | 17,08 | 1,77             | 17,13 | 34,26 | 17,08 | 2,02          | 19,77 | 39,54 | 17,08 | 2,27 |
|              |                               | 25                          | 11,56 | 23,13 | 13,06 | 1,77          | 14,10 | 28,21 | 13,40 | 2,10                      | 16,92 | 33,85 | 13,60 | 2,49             | 19,95 | 39,91 | 13,65 | 2,92          | 23,05 | 46,11 | 13,56 | 3,40 |
|              |                               | 15                          | 14,10 | 28,20 | 11,24 | 2,51          | 17,03 | 34,05 | 11,30 | 3,01                      | 20,22 | 40,45 | 11,23 | 3,60             | 23,48 | 46,96 | 11,05 | 4,25          | 26,44 | 52,87 | 10,75 | 4,92 |
|              |                               | 5                           | 16,75 | 33,51 | 9,15  | 3,66          | 19,94 | 39,88 | 9,03  | 4,42                      | 23,05 | 46,10 | 8,81  | 5,23             | 25,73 | 51,47 | 8,51  | 6,05          | 28,31 | 56,61 | 8,13  | 6,97 |
|              | N. of fans                    | 3 x Ø 500 mm                |       |       |       |               |       |       |       | MEPS <sup>(a)</sup>       |       |       |       | 2,83             |       |       |       |               |       |       |       |      |
|              | Weight                        | 560 kg                      |       |       |       |               |       |       |       | Annual Energy Consumption |       |       |       | 51217 kWh/year   |       |       |       |               |       |       |       |      |
|              | Sound pressure <sup>(b)</sup> | 44 dB(A)                    |       |       |       |               |       |       |       | MRA/Pmax                  |       |       |       | 33,4 A / 18,6 kW |       |       |       |               |       |       |       |      |
|              |                               |                             |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | Evaporation Temperature[°C] |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | -15                         |       |       |       | -10           |       |       |       | -5                        |       |       |       | 0                |       |       |       | 5             |       |       |       |      |
|              |                               | Capacity [kW]               |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   | Capacity [kW]             |       | Pe    | COP   | Capacity [kW]    |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   |      |
|              |                               | min                         | max   | kW    |       | min           | max   | kW    |       | min                       | max   | kW    |       | min              | max   | kW    |       | min           | max   | kW    |       |      |
| UMT 190 MTDX | Dorin CD 2000H                | 40                          | 10,64 | 21,29 | 18,81 | 1,13          | 12,86 | 25,72 | 19,50 | 1,32                      | 15,10 | 30,21 | 20,01 | 1,51             | 17,25 | 34,50 | 16,93 | 1,70          | 18,88 | 31,47 | 17,16 | 1,83 |
|              |                               | 38                          | 11,05 | 22,10 | 18,27 | 1,21          | 13,25 | 26,50 | 18,88 | 1,40                      | 15,42 | 30,84 | 19,31 | 1,60             | 17,44 | 35,07 | 16,24 | 1,79          | 18,86 | 31,44 | 16,38 | 1,92 |
|              |                               | 32                          | 12,92 | 25,84 | 17,29 | 1,49          | 15,41 | 30,81 | 17,76 | 1,74                      | 17,76 | 35,52 | 18,03 | 1,97             | 19,83 | 39,05 | 15,08 | 2,19          | 21,58 | 35,97 | 14,95 | 2,41 |
|              |                               | 25                          | 15,23 | 30,45 | 16,31 | 1,87          | 18,22 | 36,45 | 16,62 | 2,19                      | 21,08 | 42,16 | 16,74 | 2,52             | 22,78 | 37,97 | 13,64 | 2,78          | 24,42 | 40,71 | 13,48 | 3,02 |
|              |                               | 15                          | 17,95 | 35,91 | 13,84 | 2,59          | 20,14 | 40,29 | 13,81 | 2,92                      | 21,79 | 43,58 | 13,59 | 3,21             | 26,32 | 43,86 | 11,49 | 3,82          | 36,12 | 60,20 | 11,52 | 5,23 |
|              |                               | 5                           | 19,84 | 39,67 | 11,05 | 3,59          | 23,73 | 47,45 | 10,71 | 4,43                      | 28,03 | 56,07 | 10,20 | 5,50             | 30,99 | 51,64 | 9,63  | 5,36          | 35,21 | 58,68 | 9,68  | 6,07 |
|              | N. of fans                    | 3 x Ø 500 mm                |       |       |       |               |       |       |       | MEPS <sup>(a)</sup>       |       |       |       | 2,85             |       |       |       |               |       |       |       |      |
|              | Weight                        | 655 kg                      |       |       |       |               |       |       |       | Annual Energy Consumption |       |       |       | 66470 kWh/year   |       |       |       |               |       |       |       |      |
|              | Sound pressure <sup>(b)</sup> | 45 dB(A)                    |       |       |       |               |       |       |       | MRA/Pmax                  |       |       |       | 42,4 A / 24 kW   |       |       |       |               |       |       |       |      |

## NOTES

<sup>(a)</sup> Inverter modulation from 30 to 60 Hz<sup>(b)</sup> Based on free field area with semi-spherical sound emission in 10m distance; tolerance ± 2 dB(A)<sup>(c)</sup> Minimum Energy Performance Standards, calculated according to Ecodesign Directive EN 2009/125/EC

|              |                               | Evaporation Temperature[°C] |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|--------------|-------------------------------|-----------------------------|-------|-------|-------|---------------|-------|-------|-------|---------------------------|-------|-------|-------|------------------|-------|-------|-------|---------------|-------|-------|-------|------|
|              |                               | -15                         |       |       |       | -10           |       |       |       | -5                        |       |       |       | 0                |       |       |       | 5             |       |       |       |      |
|              |                               | Capacity [kW]               |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   | Capacity [kW]             |       | Pe    | COP   | Capacity [kW]    |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   |      |
|              |                               | min                         | max   | kW    |       | min           | max   | kW    |       | min                       | max   | kW    |       | min              | max   | kW    |       | min           | max   | kW    |       |      |
| UMT 036 MTDX | Bitzer 2MTE-5K                | 40                          | 2,85  | 5,70  | 5,23  | 1,09          | 3,48  | 6,95  | 5,93  | 1,17                      | 4,19  | 8,38  | 6,13  | 1,37             | 4,98  | 9,97  | 6,29  | 1,58          | 5,91  | 11,82 | 6,39  | 1,85 |
|              |                               | 38                          | 2,98  | 5,97  | 5,09  | 1,17          | 3,65  | 7,29  | 5,77  | 1,26                      | 4,40  | 8,81  | 5,96  | 1,48             | 5,24  | 10,48 | 6,09  | 1,72          | 6,20  | 12,40 | 6,15  | 2,02 |
|              |                               | 32                          | 3,46  | 6,92  | 4,64  | 1,49          | 4,24  | 8,48  | 5,26  | 1,61                      | 5,11  | 10,23 | 5,37  | 1,91             | 6,03  | 12,05 | 5,40  | 2,23          | 6,94  | 13,87 | 5,36  | 2,59 |
|              |                               | 25                          | 4,09  | 8,18  | 4,58  | 1,79          | 5,04  | 10,08 | 5,19  | 1,94                      | 6,15  | 12,31 | 5,28  | 2,33             | 7,45  | 14,90 | 5,30  | 2,81          | 8,87  | 17,75 | 5,24  | 3,39 |
|              |                               | 15                          | 4,97  | 9,94  | 3,57  | 2,78          | 6,05  | 12,11 | 4,03  | 3,00                      | 7,19  | 14,38 | 4,02  | 3,58             | 8,45  | 16,90 | 3,96  | 4,27          | 9,80  | 19,60 | 3,81  | 5,14 |
|              |                               | 5                           | 5,93  | 11,86 | 2,97  | 3,99          | 7,21  | 14,42 | 3,34  | 4,32                      | 8,55  | 17,11 | 3,24  | 5,28             | 10,09 | 20,17 | 3,10  | 6,51          | 11,69 | 23,37 | 2,86  | 8,17 |
|              | N. of fans                    | 2 x Ø 500 mm                |       |       |       |               |       |       |       | MEPS <sup>(c)</sup>       |       |       |       | 2,75             |       |       |       |               |       |       |       |      |
|              | Weight                        | 460 kg                      |       |       |       |               |       |       |       | Annual Energy Consumption |       |       |       | 18927 kWh/year   |       |       |       |               |       |       |       |      |
|              | Sound pressure <sup>(b)</sup> | 43 dB(A)                    |       |       |       |               |       |       |       | MRA/Pmax                  |       |       |       | 15,9 A / 7,5 kW  |       |       |       |               |       |       |       |      |
|              |                               |                             |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | Evaporation Temperature[°C] |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | -15                         |       |       |       | -10           |       |       |       | -5                        |       |       |       | 0                |       |       |       | 5             |       |       |       |      |
|              |                               | Capacity [kW]               |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   | Capacity [kW]             |       | Pe    | COP   | Capacity [kW]    |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   |      |
|              |                               | min                         | max   | kW    |       | min           | max   | kW    |       | min                       | max   | kW    |       | min              | max   | kW    |       | min           | max   | kW    |       |      |
| UMT 075 MTDX | Bitzer 2KTE-7K                | 40                          | 4,11  | 8,22  | 7,88  | 1,04          | 5,05  | 10,09 | 8,24  | 1,23                      | 6,13  | 12,26 | 8,54  | 1,44             | 7,35  | 14,69 | 8,77  | 1,68          | 8,65  | 17,30 | 8,91  | 1,94 |
|              |                               | 38                          | 4,31  | 8,62  | 7,68  | 1,12          | 5,29  | 10,58 | 8,01  | 1,32                      | 6,42  | 12,83 | 8,28  | 1,55             | 7,67  | 15,33 | 8,48  | 1,81          | 8,99  | 17,97 | 8,57  | 2,10 |
|              |                               | 32                          | 5,00  | 10,00 | 7,04  | 1,42          | 6,09  | 12,19 | 7,27  | 1,68                      | 7,25  | 14,49 | 7,42  | 1,95             | 8,36  | 16,73 | 7,49  | 2,23          | 9,37  | 18,73 | 7,43  | 2,52 |
|              |                               | 25                          | 5,96  | 11,92 | 6,94  | 1,72          | 7,33  | 14,65 | 7,16  | 2,05                      | 8,89  | 17,78 | 7,29  | 2,44             | 10,64 | 21,28 | 7,33  | 2,90          | 12,50 | 25,00 | 7,25  | 3,45 |
|              |                               | 15                          | 7,11  | 14,21 | 5,58  | 2,55          | 8,48  | 16,96 | 5,67  | 2,99                      | 9,99  | 19,98 | 5,70  | 3,51             | 11,64 | 23,28 | 5,64  | 4,12          | 13,43 | 26,86 | 5,50  | 4,88 |
|              |                               | 5                           | 8,51  | 17,02 | 4,74  | 3,59          | 10,09 | 20,18 | 4,73  | 4,27                      | 11,83 | 23,66 | 4,64  | 5,10             | 13,73 | 27,47 | 4,48  | 6,13          | 15,80 | 31,60 | 4,24  | 7,46 |
|              | N. of fans                    | 2 x Ø 500 mm                |       |       |       |               |       |       |       | MEPS <sup>(c)</sup>       |       |       |       | 2,78             |       |       |       |               |       |       |       |      |
|              | Weight                        | 470 kg                      |       |       |       |               |       |       |       | Annual Energy Consumption |       |       |       | 26966 kWh/year   |       |       |       |               |       |       |       |      |
|              | Sound pressure <sup>(b)</sup> | 44 dB(A)                    |       |       |       |               |       |       |       | MRA/Pmax                  |       |       |       | 20,5 A / 10,4 kW |       |       |       |               |       |       |       |      |
|              |                               |                             |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | Evaporation Temperature[°C] |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | -15                         |       |       |       | -10           |       |       |       | -5                        |       |       |       | 0                |       |       |       | 5             |       |       |       |      |
|              |                               | Capacity [kW]               |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   | Capacity [kW]             |       | Pe    | COP   | Capacity [kW]    |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   |      |
|              |                               | min                         | max   | kW    |       | min           | max   | kW    |       | min                       | max   | kW    |       | min              | max   | kW    |       | min           | max   | kW    |       |      |
| UMT 120 MTDX | Bitzer 4MTE-10K               | 40                          | 5,39  | 10,79 | 10,33 | 1,04          | 6,70  | 13,40 | 11,02 | 1,22                      | 8,13  | 16,26 | 11,50 | 1,41             | 9,64  | 19,29 | 11,78 | 1,64          | 11,18 | 22,37 | 11,87 | 1,88 |
|              |                               | 38                          | 5,70  | 11,39 | 10,20 | 1,12          | 7,04  | 14,08 | 10,78 | 1,31                      | 8,48  | 16,95 | 11,16 | 1,52             | 9,97  | 19,94 | 11,34 | 1,76          | 11,43 | 22,87 | 11,34 | 2,02 |
|              |                               | 32                          | 6,61  | 13,22 | 9,53  | 1,39          | 7,88  | 15,76 | 9,81  | 1,61                      | 9,05  | 18,09 | 9,92  | 1,82             | 10,10 | 20,19 | 9,84  | 2,05          | 11,06 | 22,13 | 9,63  | 2,30 |
|              |                               | 25                          | 8,02  | 16,04 | 9,41  | 1,70          | 9,86  | 19,71 | 9,65  | 2,04                      | 11,86 | 23,72 | 9,72  | 2,44             | 13,89 | 27,79 | 9,62  | 2,89          | 15,72 | 31,45 | 9,36  | 3,36 |
|              |                               | 15                          | 9,26  | 18,52 | 7,65  | 2,42          | 11,02 | 22,04 | 7,73  | 2,85                      | 12,95 | 25,90 | 7,73  | 3,35             | 15,05 | 30,10 | 7,64  | 3,94          | 17,33 | 34,65 | 7,47  | 4,64 |
|              |                               | 5                           | 11,07 | 22,14 | 6,44  | 3,44          | 13,00 | 26,00 | 6,28  | 4,14                      | 15,37 | 30,74 | 6,37  | 4,82             | 17,82 | 35,64 | 6,24  | 5,71          | 20,47 | 40,95 | 6,05  | 6,77 |
|              | N. of fans                    | 2 x Ø 500 mm                |       |       |       |               |       |       |       | MEPS <sup>(c)</sup>       |       |       |       | 2,68             |       |       |       |               |       |       |       |      |
|              | Weight                        | 570 kg                      |       |       |       |               |       |       |       | Annual Energy Consumption |       |       |       | 36104 kWh/year   |       |       |       |               |       |       |       |      |
|              | Sound pressure <sup>(b)</sup> | 44 dB(A)                    |       |       |       |               |       |       |       | MRA/Pmax                  |       |       |       | 26,3 A / 13,8 kW |       |       |       |               |       |       |       |      |
|              |                               |                             |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | Evaporation Temperature[°C] |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | -15                         |       |       |       | -10           |       |       |       | -5                        |       |       |       | 0                |       |       |       | 5             |       |       |       |      |
|              |                               | Capacity [kW]               |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   | Capacity [kW]             |       | Pe    | COP   | Capacity [kW]    |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   |      |
|              |                               | min                         | max   | kW    |       | min           | max   | kW    |       | min                       | max   | kW    |       | min              | max   | kW    |       | min           | max   | kW    |       |      |
| UMT 150 MTDX | Bitzer 4KTE-12K               | 40                          | 8,18  | 16,35 | 15,20 | 1,08          | 10,13 | 20,27 | 15,80 | 1,28                      | 12,24 | 24,48 | 16,32 | 1,50             | 14,44 | 28,88 | 16,72 | 1,73          | 16,64 | 33,29 | 16,96 | 1,96 |
|              |                               | 38                          | 8,61  | 17,22 | 14,78 | 1,17          | 10,62 | 21,23 | 15,33 | 1,39                      | 12,73 | 25,47 | 15,79 | 1,61             | 14,89 | 29,78 | 16,11 | 1,85          | 16,99 | 33,98 | 16,26 | 2,09 |
|              |                               | 32                          | 9,80  | 19,59 | 13,45 | 1,46          | 11,66 | 23,31 | 13,82 | 1,69                      | 13,35 | 26,69 | 14,06 | 1,90             | 14,86 | 29,72 | 14,11 | 2,11          | 16,25 | 32,51 | 13,95 | 2,33 |
|              |                               | 25                          | 11,96 | 23,92 | 13,25 | 1,80          | 14,73 | 29,47 | 13,60 | 2,17                      | 17,70 | 35,41 | 13,79 | 2,57             | 20,66 | 41,33 | 13,80 | 2,99          | 23,29 | 46,58 | 13,58 | 3,43 |
|              |                               | 15                          | 13,83 | 27,66 | 10,80 | 2,56          | 16,41 | 32,82 | 11,01 | 2,98                      | 19,26 | 38,51 | 11,10 | 3,47             | 22,38 | 44,76 | 11,06 | 4,05          | 25,79 | 51,58 | 10,85 | 4,76 |
|              |                               | 5                           | 16,93 | 33,87 | 9,19  | 3,69          | 19,80 | 39,61 | 9,22  | 4,30                      | 23,00 | 45,99 | 9,13  | 5,04             | 26,55 | 53,09 | 8,90  | 5,97          | 30,44 | 60,87 | 8,53  | 7,14 |
|              | N. of fans                    | 3 x Ø 500 mm                |       |       |       |               |       |       |       | MEPS <sup>(c)</sup>       |       |       |       | 2,74             |       |       |       |               |       |       |       |      |
|              | Weight                        | 645 kg                      |       |       |       |               |       |       |       | Annual Energy Consumption |       |       |       | 52347 kWh/year   |       |       |       |               |       |       |       |      |
|              | Sound pressure <sup>(b)</sup> | 45 dB(A)                    |       |       |       |               |       |       |       | MRA/Pmax                  |       |       |       | 33,4 A / 18,6 kW |       |       |       |               |       |       |       |      |
|              |                               |                             |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | Evaporation Temperature[°C] |       |       |       |               |       |       |       |                           |       |       |       |                  |       |       |       |               |       |       |       |      |
|              |                               | -15                         |       |       |       | -10           |       |       |       | -5                        |       |       |       | 0                |       |       |       | 5             |       |       |       |      |
|              |                               | Capacity [kW]               |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   | Capacity [kW]             |       | Pe    | COP   | Capacity [kW]    |       | Pe    | COP   | Capacity [kW] |       | Pe    | COP   |      |
|              |                               | min                         | max   | kW    |       | min           | max   | kW    |       | min                       | max   | kW    |       | min              | max   | kW    |       | min           | max   | kW    |       |      |
| UMT 190 MTDX | Bitzer 4HTE-20K               | 40                          | 10,63 | 21,27 | 18,66 | 1,14          | 12,80 | 25,60 | 19,60 | 1,31                      | 15,11 | 27,67 | 18,61 | 1,49             | 17,40 | 29,00 | 17,31 | 1,67          | 19,60 | 32,67 | 17,53 | 1,86 |
|              |                               | 38                          | 11,12 | 22,25 | 18,20 | 1,22          | 13,26 | 26,53 | 19,01 | 1,40                      | 15,49 | 28,38 | 17,96 | 1,58             | 17,65 | 29,41 | 16,62 | 1,77          | 19,68 | 32,80 | 16,75 | 1,96 |
|              |                               | 32                          | 13,13 | 26,25 | 17,29 | 1,52          | 13,73 | 27,46 | 17,01 | 1,61                      | 17,29 | 31,67 | 16,42 | 1,93             | 20,14 | 33,56 | 15,33 | 2,19          | 23,11 | 38,51 | 15,64 | 2,46 |
|              |                               | 25                          | 15,54 | 31,08 | 16,32 | 1,90          | 18,47 | 36,93 | 16,70 | 2,21                      | 21,40 | 39,19 | 15,46 | 2,54             | 23,92 | 39,87 | 14,02 | 2,84          | 25,97 | 43,29 | 13,85 | 3,13 |
|              |                               | 15                          | 17,08 | 34,16 | 13,50 | 2,53          | 20,02 | 40,04 | 13,75 | 2,91                      | 23,31 | 42,70 | 12,75 | 3,35             | 26,87 | 44,78 | 11,67 | 3,84          | 30,70 | 51,17 | 11,68 | 4,38 |
|              |                               | 5                           | 20,22 | 40,44 | 11,58 | 3,49          | 23,66 | 47,33 | 11,65 | 4,06                      | 27,51 | 50,39 | 10,72 | 4,70             | 31,63 | 52,72 | 9,76  | 5,40          | 36,05 | 60,08 | 9,74  | 6,17 |
|              | N. of fans                    | 3 x Ø 500 mm                |       |       |       |               |       |       |       | MEPS <sup>(c)</sup>       |       |       |       | 2,71             |       |       |       |               |       |       |       |      |
|              | Weight                        | 655 kg                      |       |       |       |               |       |       |       | Annual Energy Consumption |       |       |       | 62283 kWh/year   |       |       |       |               |       |       |       |      |
|              | Sound pressure <sup>(b)</sup> | 45 dB(A)                    |       |       |       |               |       |       |       | MRA/Pmax                  |       |       |       | 42,4 A / 24 kW   |       |       |       |               |       |       |       |      |

## NOTES

<sup>(a)</sup> Inverter modulation from 30 to 60 Hz<sup>(b)</sup> Based on free field area with semi-spherical sound emission in 10m distance; tolerance ± 2 dB(A)<sup>(c)</sup> Minimum Energy Performance Standards, calculated according to Ecodesign Directive EN 2009/125/EC

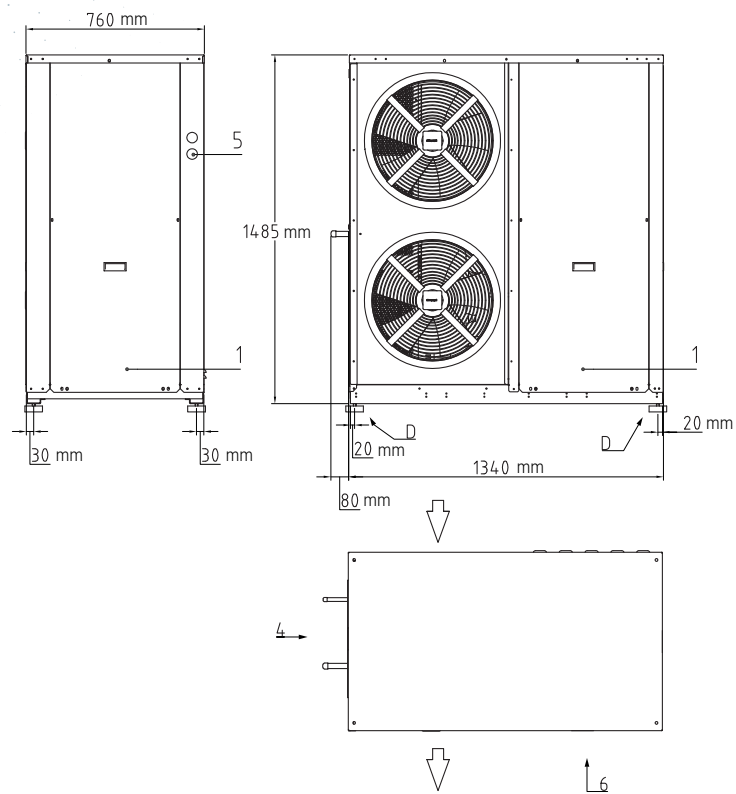
| UMT 075 VS MTDX               |  | Ambient temperature<br>[°C] |      | Evaporation Temperature[°C] |       |                           |      |                     |       |                  |      |               |       |      |      |               |       |      |      |       |       |      |  |
|-------------------------------|--|-----------------------------|------|-----------------------------|-------|---------------------------|------|---------------------|-------|------------------|------|---------------|-------|------|------|---------------|-------|------|------|-------|-------|------|--|
|                               |  |                             |      | -15                         |       |                           |      | -10                 |       |                  |      | -5            |       |      |      | 0             |       |      |      | 5     |       |      |  |
|                               |  |                             |      | Capacity [kW]               |       | Pe                        | COP  | Capacity [kW]       |       | Pe               | COP  | Capacity [kW] |       | Pe   | COP  | Capacity [kW] |       | Pe   | COP  |       |       |      |  |
|                               |  |                             |      | min                         | max   | kW                        |      | min                 | max   | kW               |      | min           | max   | kW   |      | min           | max   | kW   |      | min   | max   | kW   |  |
| Bitzer 4PTE- 7K               |  | 40                          | 0,69 | 6,85                        | 6,26  | 1,10                      | 0,84 | 8,42                | 6,55  | 1,29             | 1,02 | 10,25         | 6,81  | 1,51 | 1,23 | 12,35         | 7,00  | 1,76 | 1,47 | 14,71 | 7,13  | 2,06 |  |
|                               |  | 38                          | 0,72 | 7,18                        | 6,09  | 1,18                      | 0,88 | 8,84                | 6,36  | 1,39             | 1,08 | 10,75         | 6,59  | 1,63 | 1,29 | 12,94         | 6,76  | 1,92 | 1,54 | 15,39 | 6,85  | 2,25 |  |
|                               |  | 32                          | 0,84 | 8,36                        | 5,55  | 1,51                      | 1,03 | 10,28               | 5,74  | 1,79             | 1,24 | 12,45         | 5,88  | 2,12 | 1,48 | 14,82         | 5,94  | 2,50 | 1,72 | 17,19 | 5,91  | 2,91 |  |
|                               |  | 25                          | 0,99 | 9,93                        | 5,47  | 1,82                      | 1,22 | 12,21               | 5,65  | 2,16             | 1,48 | 14,84         | 5,77  | 2,57 | 1,78 | 17,84         | 5,81  | 3,07 | 2,12 | 21,22 | 5,75  | 3,69 |  |
|                               |  | 15                          | 1,22 | 12,23                       | 4,23  | 2,89                      | 1,46 | 14,64               | 4,28  | 3,42             | 1,73 | 17,30         | 4,28  | 4,05 | 2,02 | 20,24         | 4,21  | 4,81 | 2,34 | 23,45 | 4,07  | 5,76 |  |
|                               |  | 5                           | 1,46 | 14,64                       | 3,51  | 4,18                      | 1,74 | 17,41               | 3,47  | 5,02             | 2,05 | 20,48         | 3,37  | 6,07 | 2,39 | 23,88         | 3,21  | 7,44 | 2,76 | 27,59 | 2,98  | 9,26 |  |
|                               |  | N. of fans                  |      | 2 x Ø 500 mm                |       |                           |      | MEPS <sup>(c)</sup> |       |                  |      | 3,14          |       |      |      |               |       |      |      |       |       |      |  |
| Weight                        |  | 470 kg                      |      |                             |       | Annual Energy Consumption |      |                     |       | 20096 kWh/year   |      |               |       |      |      |               |       |      |      |       |       |      |  |
| Sound pressure <sup>(b)</sup> |  | 44 dB(A)                    |      |                             |       | MRA/Pmax                  |      |                     |       | 20,5 A / 10,4 kW |      |               |       |      |      |               |       |      |      |       |       |      |  |
| UMT 120 VS MTDX               |  | Ambient temperature<br>[°C] |      | Evaporation Temperature[°C] |       |                           |      |                     |       |                  |      |               |       |      |      |               |       |      |      |       |       |      |  |
|                               |  |                             |      | -15                         |       |                           |      | -10                 |       |                  |      | -5            |       |      |      | 0             |       |      |      | 5     |       |      |  |
|                               |  |                             |      | Capacity [kW]               |       | Pe                        | COP  | Capacity [kW]       |       | Pe               | COP  | Capacity [kW] |       | Pe   | COP  | Capacity [kW] |       | Pe   | COP  |       |       |      |  |
|                               |  |                             |      | min                         | max   | kW                        |      | min                 | max   | kW               |      | min           | max   | kW   |      | min           | max   | kW   |      | min   | max   | kW   |  |
| Bitzer 4MTE- 10K              |  | 40                          | 0,90 | 8,99                        | 8,61  | 1,04                      | 1,12 | 11,17               | 9,18  | 1,22             | 1,35 | 13,55         | 9,59  | 1,41 | 1,61 | 16,07         | 9,82  | 1,64 | 1,86 | 18,64 | 9,89  | 1,88 |  |
|                               |  | 38                          | 0,95 | 9,50                        | 8,50  | 1,12                      | 1,17 | 11,73               | 8,98  | 1,31             | 1,41 | 14,13         | 9,30  | 1,52 | 1,66 | 16,61         | 9,45  | 1,76 | 1,91 | 19,06 | 9,45  | 2,02 |  |
|                               |  | 32                          | 1,10 | 11,02                       | 7,94  | 1,39                      | 1,31 | 13,13               | 8,18  | 1,61             | 1,51 | 15,08         | 8,26  | 1,82 | 1,68 | 16,83         | 8,20  | 2,05 | 1,84 | 18,44 | 8,02  | 2,30 |  |
|                               |  | 25                          | 1,34 | 13,37                       | 7,84  | 1,70                      | 1,64 | 16,43               | 8,04  | 2,04             | 1,98 | 19,77         | 8,10  | 2,44 | 2,32 | 23,16         | 8,01  | 2,89 | 2,62 | 26,21 | 7,80  | 3,36 |  |
|                               |  | 15                          | 1,54 | 15,43                       | 6,37  | 2,42                      | 1,84 | 18,37               | 6,44  | 2,85             | 2,16 | 21,58         | 6,44  | 3,35 | 2,51 | 25,09         | 6,37  | 3,94 | 2,89 | 28,88 | 6,23  | 4,64 |  |
|                               |  | 5                           | 1,85 | 18,45                       | 5,37  | 3,44                      | 2,17 | 21,66               | 5,23  | 4,14             | 2,56 | 25,61         | 5,31  | 4,82 | 2,97 | 29,70         | 5,20  | 5,71 | 3,41 | 34,12 | 5,04  | 6,77 |  |
|                               |  | N. of fans                  |      | 2 x Ø 500 mm                |       |                           |      | MEPS <sup>(c)</sup> |       |                  |      | 2,68          |       |      |      |               |       |      |      |       |       |      |  |
| Weight                        |  | 570 kg                      |      |                             |       | Annual Energy Consumption |      |                     |       | 30081 kWh/year   |      |               |       |      |      |               |       |      |      |       |       |      |  |
| Sound pressure <sup>(b)</sup> |  | 44 dB(A)                    |      |                             |       | MRA/Pmax                  |      |                     |       | 26,3 A / 13,8 kW |      |               |       |      |      |               |       |      |      |       |       |      |  |
| UMT 150 VS MTDX               |  | Ambient temperature<br>[°C] |      | Evaporation Temperature[°C] |       |                           |      |                     |       |                  |      |               |       |      |      |               |       |      |      |       |       |      |  |
|                               |  |                             |      | -15                         |       |                           |      | -10                 |       |                  |      | -5            |       |      |      | 0             |       |      |      | 5     |       |      |  |
|                               |  |                             |      | Capacity [kW]               |       | Pe                        | COP  | Capacity [kW]       |       | Pe               | COP  | Capacity [kW] |       | Pe   | COP  | Capacity [kW] |       | Pe   | COP  |       |       |      |  |
|                               |  |                             |      | min                         | max   | kW                        |      | min                 | max   | kW               |      | min           | max   | kW   |      | min           | max   | kW   |      | min   | max   | kW   |  |
| Bitzer 4KTE- 12K              |  | 40                          | 1,36 | 13,63                       | 12,67 | 1,08                      | 1,69 | 16,89               | 13,17 | 1,28             | 2,04 | 20,40         | 13,60 | 1,50 | 2,89 | 28,88         | 13,94 | 2,07 | 3,33 | 33,29 | 14,14 | 2,35 |  |
|                               |  | 38                          | 1,43 | 14,35                       | 12,31 | 1,17                      | 1,77 | 17,69               | 12,77 | 1,39             | 2,12 | 21,22         | 13,16 | 1,61 | 2,98 | 29,78         | 13,43 | 2,22 | 3,40 | 33,98 | 13,55 | 2,51 |  |
|                               |  | 32                          | 1,63 | 16,33                       | 11,21 | 1,46                      | 1,94 | 19,43               | 11,52 | 1,69             | 2,22 | 22,25         | 11,72 | 1,90 | 2,97 | 29,72         | 11,76 | 2,53 | 3,25 | 32,51 | 11,63 | 2,80 |  |
|                               |  | 25                          | 1,99 | 19,93                       | 11,05 | 1,80                      | 2,46 | 24,56               | 11,33 | 2,17             | 2,95 | 29,51         | 11,49 | 2,57 | 4,13 | 41,33         | 11,50 | 3,59 | 4,66 | 46,58 | 11,32 | 4,11 |  |
|                               |  | 15                          | 2,31 | 23,05                       | 9,00  | 2,56                      | 2,74 | 27,35               | 9,18  | 2,98             | 3,21 | 32,09         | 9,25  | 3,47 | 4,48 | 44,76         | 9,21  | 4,86 | 5,16 | 51,58 | 9,04  | 5,71 |  |
|                               |  | 5                           | 2,82 | 28,22                       | 7,66  | 3,69                      | 3,30 | 33,01               | 7,68  | 4,30             | 3,83 | 38,33         | 7,61  | 5,04 | 5,31 | 53,09         | 7,41  | 7,16 | 6,09 | 60,87 | 7,11  | 8,56 |  |
|                               |  | N. of fans                  |      | 3 x Ø 500 mm                |       |                           |      | MEPS <sup>(c)</sup> |       |                  |      | 2,80          |       |      |      |               |       |      |      |       |       |      |  |
| Weight                        |  | 645 kg                      |      |                             |       | Annual Energy Consumption |      |                     |       | 42608 kWh/year   |      |               |       |      |      |               |       |      |      |       |       |      |  |
| Sound pressure <sup>(b)</sup> |  | 45 dB(A)                    |      |                             |       | MRA/Pmax                  |      |                     |       | 33,4 A / 18,6 kW |      |               |       |      |      |               |       |      |      |       |       |      |  |
| UMT 190 VS MTDX               |  | Ambient temperature<br>[°C] |      | Evaporation Temperature[°C] |       |                           |      |                     |       |                  |      |               |       |      |      |               |       |      |      |       |       |      |  |
|                               |  |                             |      | -15                         |       |                           |      | -10                 |       |                  |      | -5            |       |      |      | 0             |       |      |      | 5     |       |      |  |
|                               |  |                             |      | Capacity [kW]               |       | Pe                        | COP  | Capacity [kW]       |       | Pe               | COP  | Capacity [kW] |       | Pe   | COP  | Capacity [kW] |       | Pe   | COP  |       |       |      |  |
|                               |  |                             |      | min                         | max   | kW                        |      | min                 | max   | kW               |      | min           | max   | kW   |      | min           | max   | kW   |      | min   | max   | kW   |  |
| Bitzer 4HTE- 20K              |  | 40                          | 1,77 | 17,72                       | 15,55 | 1,14                      | 2,13 | 21,33               | 16,33 | 1,31             | 2,52 | 25,16         | 16,92 | 1,49 | 2,90 | 29,00         | 17,31 | 1,67 | 3,27 | 32,67 | 17,53 | 1,86 |  |
|                               |  | 38                          | 1,85 | 18,54                       | 15,17 | 1,22                      | 2,21 | 22,11               | 15,84 | 1,40             | 2,58 | 25,80         | 16,33 | 1,58 | 2,94 | 29,41         | 16,62 | 1,77 | 3,28 | 32,80 | 16,75 | 1,96 |  |
|                               |  | 32                          | 2,19 | 21,88                       | 14,41 | 1,52                      | 2,29 | 22,88               | 14,17 | 1,61             | 2,88 | 28,79         | 14,93 | 1,93 | 3,36 | 33,56         | 15,33 | 2,19 | 3,85 | 38,51 | 15,64 | 2,46 |  |
|                               |  | 25                          | 2,59 | 25,90                       | 13,60 | 1,90                      | 3,08 | 30,78               | 13,91 | 2,21             | 3,56 | 35,63         | 14,05 | 2,54 | 3,99 | 39,87         | 14,02 | 2,84 | 4,33 | 43,29 | 13,85 | 3,13 |  |
|                               |  | 15                          | 2,85 | 28,47                       | 11,25 | 2,53                      | 3,34 | 33,36               | 11,46 | 2,91             | 3,88 | 38,82         | 11,59 | 3,35 | 4,48 | 44,78         | 11,67 | 3,84 | 5,12 | 51,17 | 11,68 | 4,38 |  |
|                               |  | 5                           | 3,37 | 33,70                       | 9,65  | 3,49                      | 3,94 | 39,44               | 9,71  | 4,06             | 4,58 | 45,81         | 9,74  | 4,70 | 5,27 | 52,72         | 9,76  | 5,40 | 6,01 | 60,08 | 9,74  | 6,17 |  |
|                               |  | N. of fans                  |      | 3 x Ø 500 mm                |       |                           |      | MEPS <sup>(c)</sup> |       |                  |      | 2,71          |       |      |      |               |       |      |      |       |       |      |  |
| Weight                        |  | 655 kg                      |      |                             |       | Annual Energy Consumption |      |                     |       | 51896 kWh/year   |      |               |       |      |      |               |       |      |      |       |       |      |  |
| Sound pressure <sup>(b)</sup> |  | 45 dB(A)                    |      |                             |       | MRA/Pmax                  |      |                     |       | 42,4 A / 24 kW   |      |               |       |      |      |               |       |      |      |       |       |      |  |

## NOTES

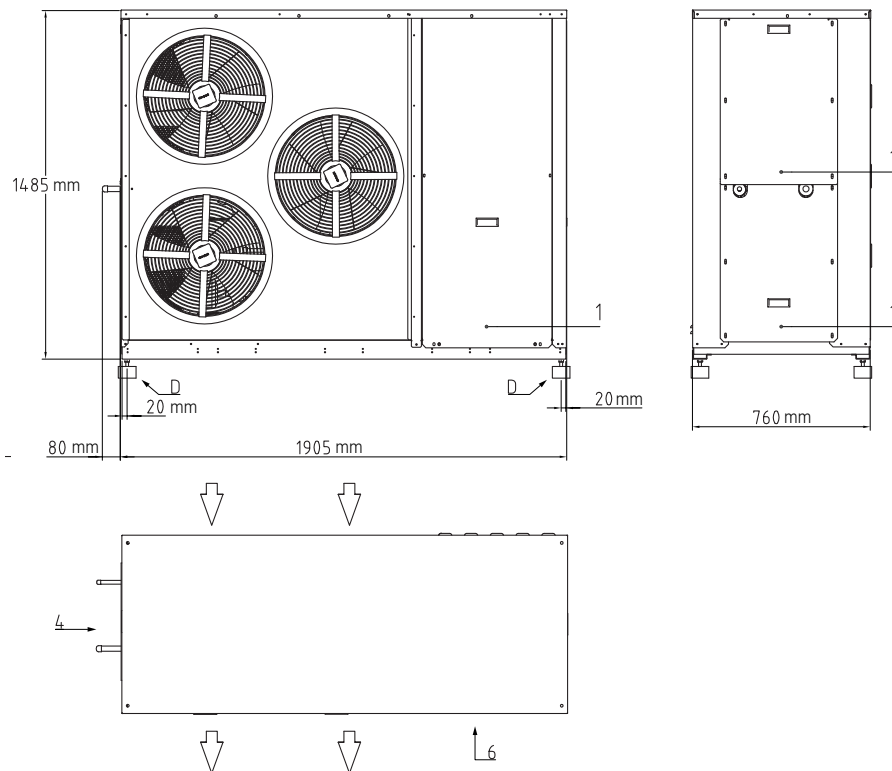
<sup>(a)</sup> Varistep modulation from 10 to 100 % of the capacity @ 50 Hz<sup>(b)</sup> Based on free field area with semi-spherical sound emission in 10m distance; tolerance ± 2 dB(A)<sup>(c)</sup> Minimum Energy Performance Standards, calculated according to Ecodesign Directive EN 2009/125/EC

## Dimensional Data

**2 fans**

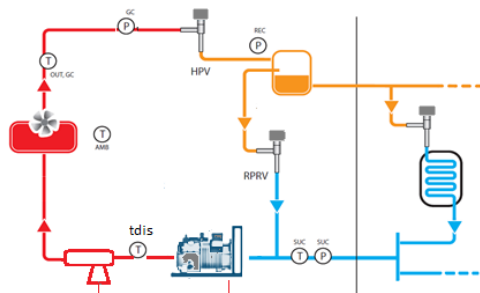


### 3 fans



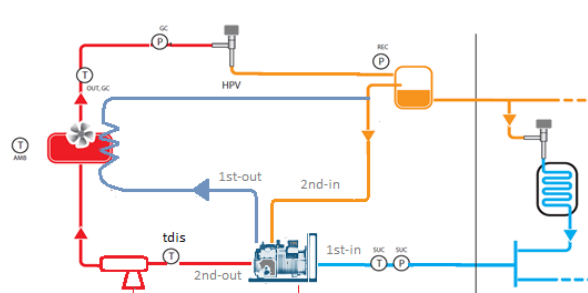
# Unit Configuration

**MODEL UMT MTDX**



- One Semihermetic Compressor
- Oil management with: oil separator, oil reservoir, traxoil
- Receiver Pressure: Fixed SetPoint, adjustable by parameter (Factory Setting = 40 bar). Receiver pressure is managed by the flash valve.

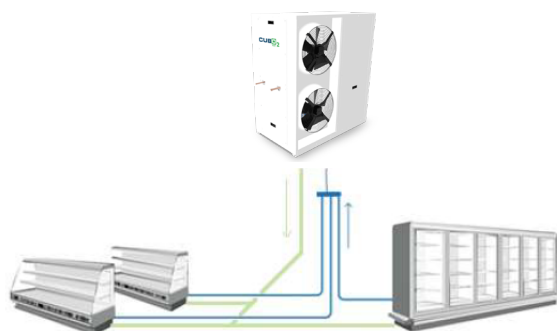
**MODEL UMT BTDX**



- One semihermetic compressor double stage
- Air cooled intercooler integrated in the gas cooler coil
- Oil management with: oil separator, oil reservoir, traxoil
- Receiver Pressure: variable pressure according to the operating conditions and to the model compressor (Open Flash Tank System)

# Installation Design

**Multi-Split**

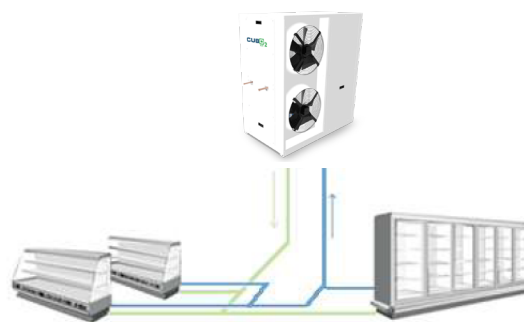


## Pipe Connections (Multi-Split or Branch)

The connection between the Condensing Unit and more remote evaporators can be the same one used for Multi-Split or branch system.

The preferred one is the one is able to guarantee the highest gas velocity in the suction line (for a good oil return) with a low pressure drop.

**Branch**



For Multi-Split layout, the system requires a dedicated suction line for each evaporator that will be collected by a manifold installed close to the condensing unit.

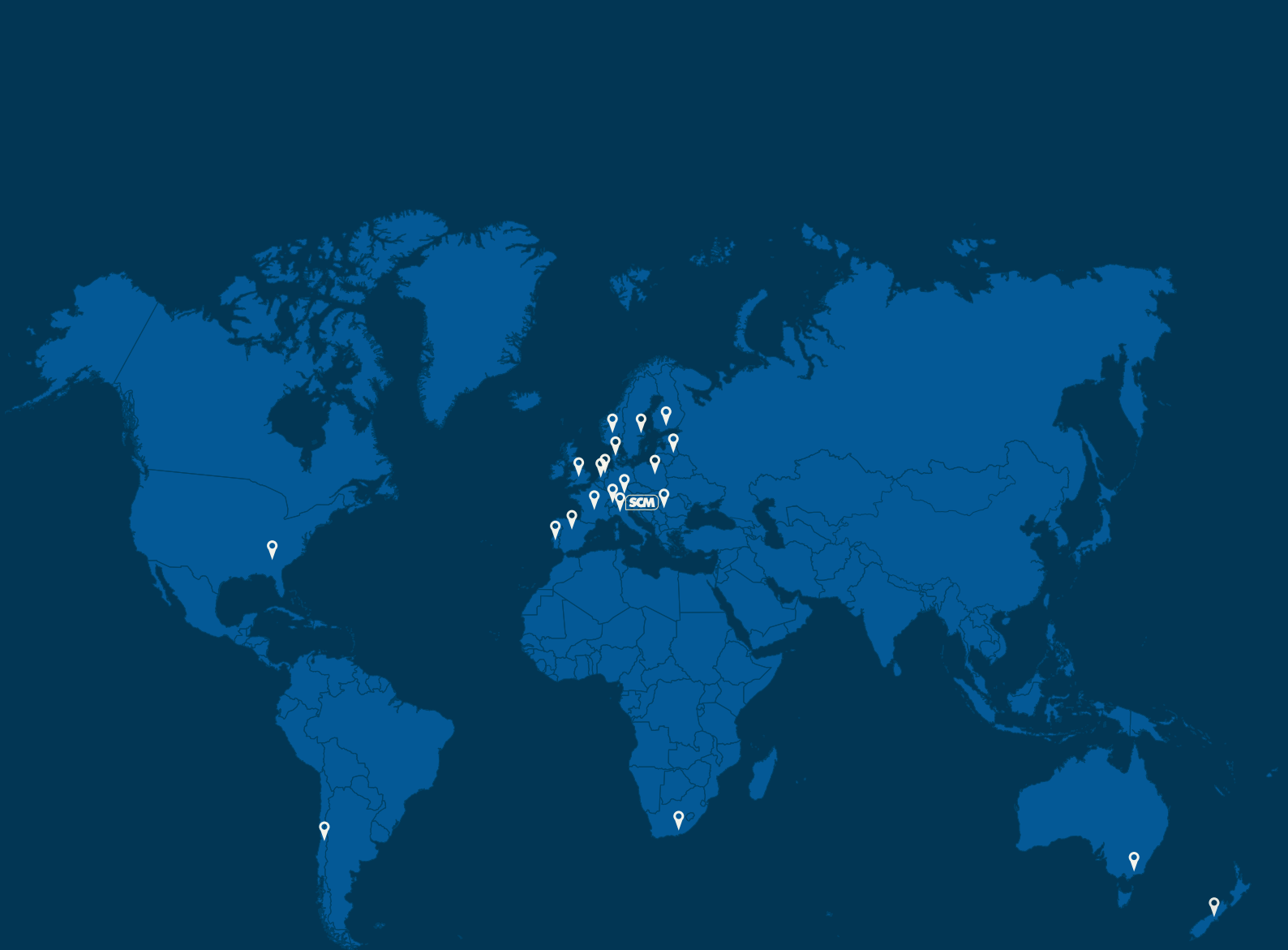
Please refer to the example reported in the pictures.

- Liquid line must be properly sized to supply the farther evaporators (liquid velocity < 1 m/s is suggested).
- Suction line must be properly sized to have a good oil return with a low pressure drop (gas velocity min 5m/s).

## NOTES

[illegible]





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