

# OCEAN|BLUE

AIR COOLER/EVAPORATOR



**烟台海蓝制冷科技有限公司**  
YANTAI OCEANBLUE REFRIGERATION ENGINEERING CO.,LTD

## ABOUT US

We are a consulting and engineering company with main business line of Industrial Refrigeration products.

Ocean Blue is an energetic runner in market of Industrial Refrigeration, Freezing, and Cold Storage, focusing on offering solution and equipments with advanced technology in market of industrial refrigeration, cold storage, quick freezing and cold-chain logistics.

We offer solutions and advanced refrigeration equipments for all kinds of food processing, cooling, freezing and deep freezing projects. Our rapid growth and success can be attributed to our dedication to quality, technical expertise, cost efficiency, and high technology capabilities.

### Business Goal :

World's Leading Refrigeration  
Equipment's Supplier  
Customer-Oriented Company

### Target Market :

Seafood Processing;  
Fruit & Vegetable processing;  
Meat processing;  
Pharmaceutical;  
Chemical industry....



## AIR COOLER/EVAPORATOR

Air cooler is the refrigeration equipment by forcing air circulation through axial flow fan to greatly enhance heat convection effect outside the evaporator tube. Air cooler can be widely used for various food quick-freezers, freezing storage, cold storage, cold drying storage, workshop air-conditioners and all kinds of food mono-instant freezers.

## FEATURES

Apply for Freon, Ammonia, CO<sub>2</sub>, other refrigerating medium;  
3.0Mpa(Freon,Ammonia),5.3Mpa(CO<sub>2</sub>) pressure testing to avoid the leakage;  
Floating Coil Technology.

## OPTIMIZED DESIGN

Structures and covers of air cooler are designed by UNILAB software that can design overall parametric of customized products.

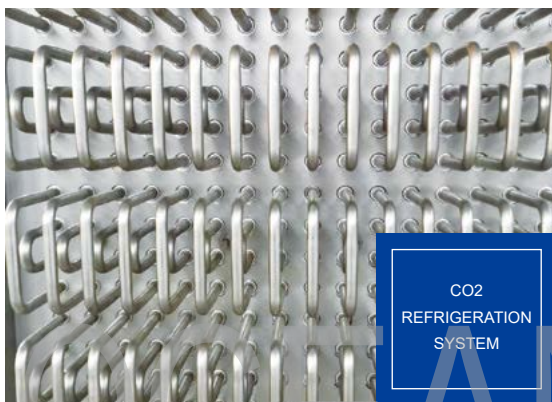
Advanced coil design software can simulate actual operating heat exchange conditions, and ensure maximum cooling capacity by adjusting the pipeline. It can provide the most realistic and reliable data for customized users.





## COIL

Tube material: Stainless Steel tube,  
Copper tube , Aluminum tube ( $\phi 15.88\text{mm}$  or 5/8 inch)  
Fin material: aluminum, hydrophilic coated aluminum,  
epoxy coated aluminum, stainless steel  
Fin spacing: 4mm, 7mm, 10mm, 12mm and dual  
16/8 mm  
Coil pattern: 55\*55mm, or 50\*50mm



## FLOATING COIL TECHNOLOGY

Using "floating coil" technology, the main pipes carrying the fluid are less squeezed, greatly reduce the risk of leakage. This design is more suitable for hot gas defrosting.

Welding process of bend is fully automatic which can guarantee high strength and good appearance.

Compared with the fork pattern, the advantages are:  
small wind resistance;  
it is not easy to be blocked by frost, short defrosting time;  
energy saving and low operating cost;

This kind of structure has small wind resistance, high fin temperature, small temperature difference between evaporating temperature and room temperature, less dehumidification, low dry consumption of goods, then ensure food quality.



## CASING

Galvanized sheet, powder coated  
Stainless steel



## FANS SYSTEM

Low noise, extended air throw.  
Easy to maintenance fan-motors.  
Motor protection class F and IP 54.  
Standard motors are suitable for temperatures  
from - 40 °C to + 70 °C.



## DRIP TRAY

Stainless steel tray, or galvanized sheet, powder  
coated tray  
Drip tray can be folded down as well as detached  
from unit for inspection and cleaning.



## DEFROSTING SYSTEM

Water defrosting- water tray spraying  
Electrical defrosting- stainless steel heating pipe,  
installed in fan, coil and water pan  
Hot gas defrosting- hot gas pipe set in the tray,  
energy saving and high efficiency, helps oil return to  
compressor.



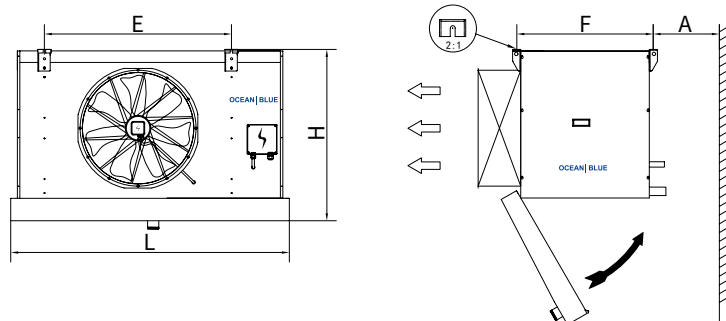
# AMMONIA INDUSTRIAL EVAPORATORS

Tube diameter: ( $\phi 15.88\text{mm}$  or  $5/8$  inch) Thickness:  $0.60\text{mm}$   
Fin thickness:  $0.25\text{mm}$



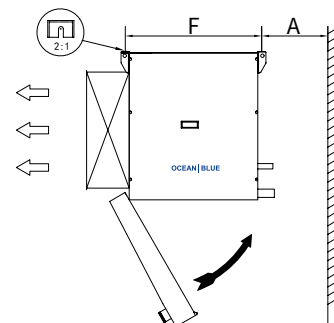
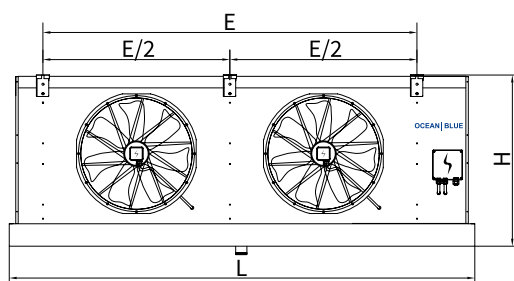
## DATA AND DRAWING (ONE FAN)

| suspended ceiling style | fan diameter | exchange surface | hot gas defrost | number of fans | fin spacing | nom. Capacity NH <sub>3</sub>               |                                                |      | tube volume | airflow | air throw | noise pressure level | Connections |        |           | Fans 50Hz |         |              | drain | Dimensions |      |                                        |      |     |     |  |
|-------------------------|--------------|------------------|-----------------|----------------|-------------|---------------------------------------------|------------------------------------------------|------|-------------|---------|-----------|----------------------|-------------|--------|-----------|-----------|---------|--------------|-------|------------|------|----------------------------------------|------|-----|-----|--|
|                         |              |                  |                 |                |             | DT1=8K° RH85%<br>Air on=0°C<br>Tevap.= -8°C | DT1=7K° RH95%<br>Air on=-18°C<br>Tevap.= -25°C |      |             |         |           |                      | inlet       | outlet | hotgas in | capacity  | current | current type |       | L          | B    | H                                      | E    | F   | A   |  |
|                         |              |                  |                 |                |             |                                             |                                                |      |             |         |           |                      |             |        |           |           |         |              |       |            |      |                                        |      |     |     |  |
|                         | dm           | m²               |                 |                | mm          | kW                                          | kW                                             | dm³  | m³/h        | m       | dB (A)    | mm                   | mm          | mm     | kW        | A         | V       | mm           | mm    |            |      |                                        |      |     |     |  |
| D                       | 50           | 89.5             | H               | 1              | 4           | 15.8                                        | 12.2                                           | 11.4 | 8500        | 21      | 79        | 27                   | 45          | 27     | 0.8       | 1.4       | 400     | 48           | 1490  | 773        | 916  | Water defrost<br>height increased 65mm | 1000 | 510 | 500 |  |
| D                       | 50           | 134.2            | H               | 1              | 4           | 20.5                                        | 15.8                                           | 17.2 | 8500        | 21      | 79        | 27                   | 45          | 27     | 0.8       | 1.4       | 400     | 48           | 1490  | 883        | 916  |                                        | 1000 | 620 | 500 |  |
| D                       | 50           | 179              | H               | 1              | 4           | 23.9                                        | 18.3                                           | 22.9 | 8500        | 21      | 79        | 27                   | 45          | 27     | 0.8       | 1.4       | 400     | 48           | 1490  | 993        | 916  |                                        | 1000 | 730 | 500 |  |
| D                       | 71           | 146.8            | H               | 1              | 4           | 28.8                                        | 21.7                                           | 18.7 | 17000       | 30      | 85        | 27                   | 45          | 27     | 1.8       | 2.9       | 400     | 48           | 1790  | 957        | 1136 |                                        | 1300 | 590 | 800 |  |
| D                       | 71           | 220.3            | H               | 1              | 4           | 38.7                                        | 29.1                                           | 28   | 17000       | 30      | 85        | 27                   | 45          | 27     | 1.8       | 2.9       | 400     | 48           | 1790  | 1067       | 1136 |                                        | 1300 | 700 | 800 |  |
| D                       | 71           | 293.7            | H               | 1              | 4           | 46                                          | 34.4                                           | 37.3 | 17000       | 30      | 85        | 27                   | 45          | 27     | 1.8       | 2.9       | 400     | 48           | 1790  | 1177       | 1136 |                                        | 1300 | 810 | 800 |  |
| D                       | 80           | 218.2            | H               | 1              | 4           | 36.4                                        | 25.8                                           | 27.7 | 21000       | 41      | 80        | 27                   | 45          | 27     | 1.85      | 3.8       | 400     | 48           | 2090  | 1013       | 1356 |                                        | 1600 | 630 | 800 |  |
| D                       | 80           | 327.3            | H               | 1              | 4           | 48.7                                        | 34.7                                           | 41.6 | 21000       | 41      | 80        | 27                   | 57          | 27     | 1.85      | 3.8       | 400     | 48           | 2090  | 1123       | 1356 |                                        | 1600 | 740 | 800 |  |
| D                       | 80           | 436.4            | H               | 1              | 4           | 57.8                                        | 41.4                                           | 55.4 | 21000       | 41      | 80        | 27                   | 57          | 27     | 1.85      | 3.8       | 400     | 48           | 2090  | 1233       | 1356 |                                        | 1600 | 850 | 800 |  |
| D                       | 50           | 52.5             | H               | 1              | 7           | 10.6                                        | 8.4                                            | 11.4 | 8500        | 21      | 79        | 27                   | 45          | 27     | 0.8       | 1.4       | 400     | 48           | 1490  | 773        | 916  | Water defrost<br>height increased 65mm | 1000 | 510 | 500 |  |
| D                       | 50           | 78.8             | H               | 1              | 7           | 14.7                                        | 11.6                                           | 17.2 | 8500        | 21      | 79        | 27                   | 45          | 27     | 0.8       | 1.4       | 400     | 48           | 1490  | 883        | 916  |                                        | 1000 | 620 | 500 |  |
| D                       | 50           | 105              | H               | 1              | 7           | 18                                          | 14.1                                           | 22.9 | 8500        | 21      | 79        | 27                   | 45          | 27     | 0.8       | 1.4       | 400     | 48           | 1490  | 993        | 916  |                                        | 1000 | 730 | 500 |  |
| D                       | 71           | 86.2             | H               | 1              | 7           | 20.4                                        | 15.8                                           | 18.7 | 17000       | 30      | 85        | 27                   | 45          | 27     | 1.8       | 2.9       | 400     | 48           | 1790  | 957        | 1136 |                                        | 1300 | 590 | 800 |  |
| D                       | 71           | 129.2            | H               | 1              | 7           | 28.7                                        | 22                                             | 28   | 17000       | 30      | 85        | 27                   | 45          | 27     | 1.8       | 2.9       | 400     | 48           | 1790  | 1067       | 1136 |                                        | 1300 | 700 | 800 |  |
| D                       | 71           | 172.3            | H               | 1              | 7           | 35.6                                        | 27.1                                           | 37.3 | 17000       | 30      | 85        | 27                   | 45          | 27     | 1.8       | 2.9       | 400     | 48           | 1790  | 1177       | 1136 |                                        | 1300 | 810 | 800 |  |
| D                       | 80           | 128              | H               | 1              | 7           | 27.1                                        | 20.2                                           | 27.7 | 21000       | 41      | 80        | 27                   | 45          | 27     | 1.85      | 3.8       | 400     | 48           | 2090  | 1013       | 1356 |                                        | 1600 | 630 | 800 |  |
| D                       | 80           | 192              | H               | 1              | 7           | 37.8                                        | 28.1                                           | 41.6 | 21000       | 41      | 80        | 27                   | 45          | 27     | 1.85      | 3.8       | 400     | 48           | 2090  | 1123       | 1356 |                                        | 1600 | 740 | 800 |  |
| D                       | 80           | 256              | H               | 1              | 7           | 46.6                                        | 34.5                                           | 55.4 | 21000       | 41      | 80        | 27                   | 45          | 27     | 1.85      | 3.8       | 400     | 48           | 2090  | 1233       | 1356 |                                        | 1600 | 850 | 800 |  |
| D                       | 50           | 37.7             | H               | 1              | 10          | 8.1                                         | 6.5                                            | 11.4 | 8500        | 21      | 79        | 27                   | 45          | 27     | 0.8       | 1.4       | 400     | 48           | 1490  | 773        | 916  | Water defrost<br>height increased 65mm | 1000 | 510 | 500 |  |
| D                       | 50           | 56.6             | H               | 1              | 10          | 11.6                                        | 9.2                                            | 17.2 | 8500        | 21      | 79        | 27                   | 45          | 27     | 0.8       | 1.4       | 400     | 48           | 1490  | 883        | 916  |                                        | 1000 | 620 | 500 |  |
| D                       | 50           | 75.4             | H               | 1              | 10          | 14.5                                        | 11.5                                           | 22.9 | 8500        | 21      | 79        | 27                   | 45          | 27     | 0.8       | 1.4       | 400     | 48           | 1490  | 993        | 916  |                                        | 1000 | 730 | 500 |  |
| D                       | 71           | 61.9             | H               | 1              | 10          | 15.9                                        | 12.4                                           | 18.7 | 17000       | 30      | 85        | 27                   | 45          | 27     | 1.8       | 2.9       | 400     | 48           | 1790  | 957        | 1136 |                                        | 1300 | 590 | 800 |  |
| D                       | 71           | 92.8             | H               | 1              | 10          | 22.8                                        | 17.7                                           | 28   | 17000       | 30      | 85        | 27                   | 45          | 27     | 1.8       | 2.9       | 400     | 48           | 1790  | 1067       | 1136 |                                        | 1300 | 700 | 800 |  |
| D                       | 71           | 123.8            | H               | 1              | 10          | 28.8                                        | 22.4                                           | 37.3 | 17000       | 30      | 85        | 27                   | 45          | 27     | 1.8       | 2.9       | 400     | 48           | 1790  | 1177       | 1136 |                                        | 1300 | 810 | 800 |  |
| D                       | 80           | 218.2            | H               | 1              | 10          | 36.4                                        | 25.8                                           | 27.7 | 21000       | 41      | 80        | 27                   | 45          | 27     | 1.85      | 3.8       | 400     | 48           | 2090  | 1013       | 1356 |                                        | 1600 | 630 | 800 |  |
| D                       | 80           | 327.3            | H               | 1              | 10          | 48.7                                        | 34.7                                           | 41.6 | 21000       | 41      | 80        | 27                   | 45          | 27     | 1.85      | 3.8       | 400     | 48           | 2090  | 1123       | 1356 |                                        | 1600 | 740 | 800 |  |
| D                       | 80           | 436.4            | H               | 1              | 10          | 57.8                                        | 41.4                                           | 55.4 | 21000       | 41      | 80        | 27                   | 57          | 27     | 1.85      | 3.8       | 400     | 48           | 2090  | 1233       | 1356 |                                        | 1600 | 850 | 800 |  |
| D                       | 50           | 58.7             | H               | 1              | 16-8        | 11.9                                        | 9.5                                            | 17.2 | 8500        | 21      | 79        | 27                   | 45          | 27     | 0.8       | 1.4       | 400     | 48           | 1490  | 883        | 916  | Water defrost<br>height increased 65mm | 1000 | 620 | 500 |  |
| D                       | 50           | 71.1             | H               | 1              | 16-8        | 14                                          | 11.1                                           | 22.9 | 8500        | 21      | 79        | 27                   | 45          | 27     | 0.8       | 1.4       | 400     | 48           | 1490  | 993        | 916  |                                        | 1000 | 730 | 500 |  |
| D                       | 71           | 96.3             | H               | 1              | 16-8        | 23.4                                        | 18.2                                           | 28   | 17000       | 30      | 85        | 27                   | 45          | 27     | 1.8       | 2.9       | 400     | 48           | 1790  | 1067       | 1136 |                                        | 1300 | 700 | 800 |  |
| D                       | 71           | 116.6            | H               | 1              | 16-8        | 27.7                                        | 21.6                                           | 37.3 | 17000       | 30      | 85        | 27                   | 45          | 27     | 1.8       | 2.9       | 400     | 48           | 1790  | 1177       | 1136 |                                        | 1300 | 810 | 800 |  |
| D                       | 80           | 143.2            | H               | 1              | 16-8        | 31.7                                        | 23.9                                           | 41.6 | 21000       | 41      | 80        | 27                   | 45          | 27     | 1.85      | 3.8       | 400     | 48           | 2090  | 1123       | 1356 |                                        | 1600 | 740 | 800 |  |
| D                       | 80           | 173.3            | H               | 1              | 16-8        | 37.7                                        | 28.4                                           | 55.4 | 21000       | 41      | 80        | 27                   | 45          | 27     | 1.85      | 3.8       | 400     | 48           | 2090  | 1233       | 1356 |                                        | 1600 | 850 | 800 |  |



# DATA AND DRAWING (TWO FANS)

|   | suspended ceiling style | fan diameter | exchange surface | hot gas defrost | number of fans | fin spacing | nom. Capacity NH <sub>3</sub>              |                                               |         |    | tube volume | airflow | air throw | noise pressure level | Connections |       |        | Fans 50Hz |          |         | drain | Dimensions                             |                                        |      |     |     |   |   |
|---|-------------------------|--------------|------------------|-----------------|----------------|-------------|--------------------------------------------|-----------------------------------------------|---------|----|-------------|---------|-----------|----------------------|-------------|-------|--------|-----------|----------|---------|-------|----------------------------------------|----------------------------------------|------|-----|-----|---|---|
|   |                         |              |                  |                 |                |             | DT=8K° RH85%<br>Air on=0°C<br>Tevap.= -8°C | DT=7K° RH95%<br>Air on=-18°C<br>Tevap.= -25°C | kW      | kW |             |         |           |                      | dm³         | inlet | outlet | hotgas in | capacity | current |       | current type                           | L                                      | B    | H   | E   | F | A |
|   |                         |              |                  |                 |                |             |                                            |                                               |         |    |             |         |           |                      |             |       |        |           |          |         |       |                                        |                                        |      |     |     |   |   |
| D | 50                      | 182.7        | H                | 2               | 4              | 31.5        | 23.1                                       | 23.4                                          | 8500*2  | 21 | 79          | 27      | 45        | 27                   | 0.8*2       | 1.4*2 | 400    | 48        | mm       |         |       |                                        |                                        |      |     |     |   |   |
| D | 50                      | 274          | H                | 2               | 4              | 41.7        | 30.7                                       | 35                                            | 8500*2  | 21 | 79          | 27      | 45        | 27                   | 0.8*2       | 1.4*2 | 400    | 48        | 2490     | 883     | 916   | Water defrost<br>height increased 65mm | 2000                                   | 510  | 500 |     |   |   |
| D | 50                      | 365.3        | H                | 2               | 4              | 49.1        | 36.1                                       | 46.7                                          | 8500*2  | 21 | 79          | 38      | 45        | 27                   | 0.8*2       | 1.4*2 | 400    | 48        | 2490     | 993     | 916   |                                        | 2000                                   | 730  | 500 |     |   |   |
| D | 71                      | 298.4        | H                | 2               | 4              | 58.4        | 44.2                                       | 37.9                                          | 17000*2 | 30 | 85          | 38      | 57        | 27                   | 1.8*2       | 2.9*2 | 400    | 48        | 3090     | 957     | 1136  |                                        | 2600                                   | 590  | 800 |     |   |   |
| D | 71                      | 447.6        | H                | 2               | 4              | 78.2        | 58.9                                       | 56.8                                          | 17000*2 | 30 | 85          | 38      | 57        | 27                   | 1.8*2       | 2.9*2 | 400    | 48        | 3090     | 1067    | 1136  |                                        | 2600                                   | 700  | 800 |     |   |   |
| D | 71                      | 596.6        | H                | 2               | 4              | 93          | 69.6                                       | 75.8                                          | 17000*2 | 30 | 85          | 38      | 76        | 27                   | 1.8*2       | 2.9*2 | 400    | 48        | 3090     | 1177    | 1136  |                                        | 2600                                   | 810  | 800 |     |   |   |
| D | 80                      | 441.9        | H                | 2               | 4              | 73.8        | 52.6                                       | 56.1                                          | 21000*2 | 41 | 80          | 38      | 57        | 27                   | 1.85*2      | 3.8*2 | 400    | 2-48      | 3690     | 1013    | 1356  |                                        | 3200                                   | 630  | 800 |     |   |   |
| D | 80                      | 663          | H                | 2               | 4              | 98.6        | 70.5                                       | 84.2                                          | 21000*2 | 41 | 80          | 38      | 76        | 27                   | 1.85*2      | 3.8*2 | 400    | 2-48      | 3690     | 1123    | 1356  |                                        | 3200                                   | 740  | 800 |     |   |   |
| D | 80                      | 884          | H                | 2               | 4              | 116.8       | 83.9                                       | 112.3                                         | 21000*2 | 41 | 80          | 38      | 76        | 27                   | 1.85*2      | 3.8*2 | 400    | 2-48      | 3690     | 1233    | 1356  |                                        | 3200                                   | 850  | 800 |     |   |   |
| D | 50                      | 107.2        | H                | 2               | 7              | 22.9        | 17.4                                       | 23.4                                          | 8500*2  | 21 | 79          | 27      | 45        | 27                   | 0.8*2       | 1.4*2 | 400    | 48        | 2490     | 773     | 916   |                                        | Water defrost<br>height increased 65mm | 2000 | 510 | 500 |   |   |
| D | 50                      | 160.8        | H                | 2               | 7              | 31.8        | 24                                         | 35                                            | 8500*2  | 21 | 79          | 27      | 45        | 27                   | 0.8*2       | 1.4*2 | 400    | 48        | 2490     | 883     | 916   | 2000                                   |                                        | 620  | 500 |     |   |   |
| D | 50                      | 214.4        | H                | 2               | 7              | 39          | 29.3                                       | 46.7                                          | 8500*2  | 21 | 79          | 38      | 45        | 27                   | 0.8*2       | 1.4*2 | 400    | 48        | 2490     | 993     | 916   | 2000                                   |                                        | 730  | 500 |     |   |   |
| D | 71                      | 175          | H                | 2               | 7              | 41.4        | 32                                         | 37.9                                          | 17000*2 | 30 | 85          | 38      | 45        | 27                   | 1.8*2       | 2.9*2 | 400    | 48        | 3090     | 957     | 1136  | 2600                                   |                                        | 590  | 800 |     |   |   |
| D | 71                      | 262.6        | H                | 2               | 7              | 58          | 44.6                                       | 56.8                                          | 17000*2 | 30 | 85          | 38      | 57        | 27                   | 1.8*2       | 2.9*2 | 400    | 48        | 3090     | 1067    | 1136  | 2600                                   |                                        | 700  | 800 |     |   |   |
| D | 71                      | 350.1        | H                | 2               | 7              | 71.9        | 54.8                                       | 75.8                                          | 17000*2 | 30 | 85          | 38      | 57        | 27                   | 1.8*2       | 2.9*2 | 400    | 48        | 3090     | 1177    | 1136  | 2600                                   |                                        | 810  | 800 |     |   |   |
| D | 80                      | 259.3        | H                | 2               | 7              | 54.8        | 40.9                                       | 56.1                                          | 21000*2 | 41 | 80          | 38      | 57        | 27                   | 1.85*2      | 3.8*2 | 400    | 2-48      | 3690     | 1013    | 1356  | 3200                                   |                                        | 630  | 800 |     |   |   |
| D | 80                      | 388.9        | H                | 2               | 7              | 76.4        | 55.7                                       | 84.2                                          | 21000*2 | 41 | 80          | 38      | 76        | 27                   | 1.85*2      | 3.8*2 | 400    | 2-48      | 3690     | 1123    | 1356  | 3200                                   |                                        | 740  | 800 |     |   |   |
| D | 80                      | 518.6        | H                | 2               | 7              | 94.1        | 69.9                                       | 112.3                                         | 21000*2 | 41 | 80          | 38      | 76        | 27                   | 1.85*2      | 3.8*2 | 400    | 2-48      | 3690     | 1233    | 1356  | 3200                                   |                                        | 850  | 800 |     |   |   |
| D | 50                      | 77           | H                | 2               | 10             | 18.1        | 13.9                                       | 23.4                                          | 8500*2  | 21 | 79          | 27      | 45        | 27                   | 0.8*2       | 1.4*2 | 400    | 48        | 2490     | 773     | 916   | Water defrost<br>height increased 65mm | 2000                                   | 510  | 500 |     |   |   |
| D | 50                      | 115.5        | H                | 2               | 10             | 25.7        | 19.6                                       | 35                                            | 8500*2  | 21 | 79          | 27      | 45        | 27                   | 0.8*2       | 1.4*2 | 400    | 48        | 2490     | 883     | 916   |                                        | 2000                                   | 620  | 500 |     |   |   |
| D | 50                      | 154          | H                | 2               | 10             | 32.2        | 24.5                                       | 46.7                                          | 8500*2  | 21 | 79          | 38      | 45        | 27                   | 0.8*2       | 1.4*2 | 400    | 48        | 2490     | 993     | 916   |                                        | 2000                                   | 730  | 500 |     |   |   |
| D | 71                      | 125.7        | H                | 2               | 10             | 32.3        | 25.2                                       | 37.9                                          | 17000*2 | 30 | 85          | 38      | 45        | 27                   | 1.8*2       | 2.9*2 | 400    | 48        | 3090     | 957     | 1136  |                                        | 2600                                   | 590  | 800 |     |   |   |
| D | 71                      | 188.6        | H                | 2               | 10             | 46.2        | 35.9                                       | 56.8                                          | 17000*2 | 30 | 85          | 38      | 45        | 27                   | 1.8*2       | 2.9*2 | 400    | 48        | 3090     | 1067    | 1136  |                                        | 2600                                   | 700  | 800 |     |   |   |
| D | 71                      | 251.5        | H                | 2               | 10             | 58.3        | 45.4                                       | 75.8                                          | 17000*2 | 30 | 85          | 38      | 57        | 27                   | 1.8*2       | 2.9*2 | 400    | 48        | 3090     | 1177    | 1136  |                                        | 2600                                   | 810  | 800 |     |   |   |
| D | 80                      | 186.2        | H                | 2               | 10             | 43.9        | 33.4                                       | 56.1                                          | 21000*2 | 41 | 80          | 38      | 45        | 27                   | 1.85*2      | 3.8*2 | 400    | 2-48      | 3690     | 1013    | 1356  |                                        | 3200                                   | 630  | 800 |     |   |   |
| D | 80                      | 279.4        | H                | 2               | 10             | 62.6        | 47.3                                       | 84.2                                          | 21000*2 | 41 | 80          | 38      | 57        | 27                   | 1.85*2      | 3.8*2 | 400    | 2-48      | 3690     | 1123    | 1356  |                                        | 3200                                   | 740  | 800 |     |   |   |
| D | 80                      | 372.5        | H                | 2               | 10             | 78.7        | 59.3                                       | 112.3                                         | 21000*2 | 41 | 80          | 38      | 76        | 27                   | 1.85*2      | 3.8*2 | 400    | 2-48      | 3690     | 1233    | 1356  |                                        | 3200                                   | 850  | 800 |     |   |   |
| D | 50                      | 119.9        | H                | 2               | 16-8           | 26.4        | 20.1                                       | 35                                            | 8500*2  | 21 | 79          | 27      | 45        | 27                   | 0.8*2       | 1.4*2 | 400    | 48        | 2490     | 883     | 916   | Water defrost<br>height increased 65mm | 2000                                   | 620  | 500 |     |   |   |
| D | 50                      | 145.1        | H                | 2               | 16-8           | 31          | 23.7                                       | 46.7                                          | 8500*2  | 21 | 79          | 27      | 45        | 27                   | 0.8*2       | 1.4*2 | 400    | 48        | 2490     | 993     | 916   |                                        | 2000                                   | 730  | 500 |     |   |   |
| D | 71                      | 195.8        | H                | 2               | 16-8           | 47.5        | 36.8                                       | 56.8                                          | 17000*2 | 30 | 85          | 38      | 45        | 27                   | 1.8*2       | 2.9*2 | 400    | 48        | 3090     | 1067    | 1136  |                                        | 2600                                   | 700  | 800 |     |   |   |
| D | 71                      | 237          | H                | 2               | 16-8           | 56          | 43.7                                       | 75.8                                          | 17000*2 | 30 | 85          | 38      | 57        | 27                   | 1.8*2       | 2.9*2 | 400    | 48        | 3090     | 1177    | 1136  |                                        | 2600                                   | 810  | 800 |     |   |   |
| D | 80                      | 290          | H                | 2               | 16-8           | 64.1        | 48.4                                       | 84.2                                          | 21000*2 | 41 | 80          | 38      | 57        | 27                   | 1.85*2      | 3.8*2 | 400    | 2-48      | 3690     | 1123    | 1356  |                                        | 3200                                   | 740  | 800 |     |   |   |
| D | 80                      | 351          | H                | 2               | 16-8           | 76          | 57.3                                       | 112.3                                         | 21000*2 | 41 | 80          | 38      | 57        | 27                   | 1.85*2      | 3.8*2 | 400    | 2-48      | 3690     | 1233    | 1356  |                                        | 3200                                   | 850  | 800 |     |   |   |



# DATA AND DRAWING (TWO FANS)

Unilab Coils 9.0 ev - build 230710|P

OCEAN|BLUE



## PUMP EVAPORATOR - HL 16T 4NR 1960A 4P 4NC

|                                |    |                |                             |    |              |          |
|--------------------------------|----|----------------|-----------------------------|----|--------------|----------|
| Geometry                       | HL | Coil Length    | 1960                        | mm |              |          |
| Nr of Tubes per Row            | 16 | Fin Pitch      | 4.00                        | mm |              |          |
| Nr of Rows                     | 4  | Nr of Circuits | 4                           |    | Tube Shape   | Circular |
| Capacity                       |    |                | 31527                       |    | W            |          |
| Sensible Capacity              |    |                | 24842                       |    | W            |          |
| Latent Capacity                |    |                | 6685                        |    | W            |          |
| Sensible/Total Capacity Ratio  |    |                | 0.7880                      |    |              |          |
| Quantity of Produced Water     |    |                | 11.29                       |    | kg/h         |          |
| Exchange Surface               |    |                | 182.76                      |    | m²           |          |
| Global Exchange Coefficient    |    |                | 30                          |    | W kg/(m² kJ) |          |
| DTML                           |    |                | 5.2                         |    | °C           |          |
| Fins Material / Tubes Material |    |                | Aluminium / Stainless Steel |    |              |          |
| Fin Thickness                  |    |                | 0.2500                      |    | mm           |          |
| Coil Internal Volume           |    |                | 23.2                        |    | l            |          |
| Tubes External Diameter        |    |                | 16.6                        |    | mm           |          |
| Tubes Internal Diameter        |    |                | 15.4                        |    | mm           |          |
| Number of skipped tube         |    |                | 0                           |    |              |          |

## AIR SIDE

|                                 |             |           |
|---------------------------------|-------------|-----------|
| Atmospheric Pressure / Altitude | 1.01 / 0.00 | bar A / m |
| Volumetric Air Flow             | 17000.0     | m³/h      |
| Mass Air Flow                   | 21925       | kg/h      |
| Face Velocity on the Coil       | 2.74        | m/s       |
| Inlet Air Density               | 1.29        | kg/m³     |
| Inlet Air Temperature           | 0.0         | °C        |
| Inlet Air Relative Humidity     | 85.00       | %         |
| Inlet Air Specific Humidity     | 3.20        | g/kg DA   |
| Inlet Air Enthalpy              | 8.02        | kJ / kg   |
| Outlet Air Temperature          | -4.0        | °C        |
| Outlet Air Relative Humidity    | 100.00      | %         |
| Outlet Air Specific Humidity    | 2.70        | g/kg DA   |
| Outlet Air Enthalpy             | 2.66        | kJ / kg   |
| Pressure Drop                   | 67          | Pa        |
| Fouling Factor                  | 0.000000    | (m² K)/W  |
| Frost thickness                 | 0.00        | mm        |

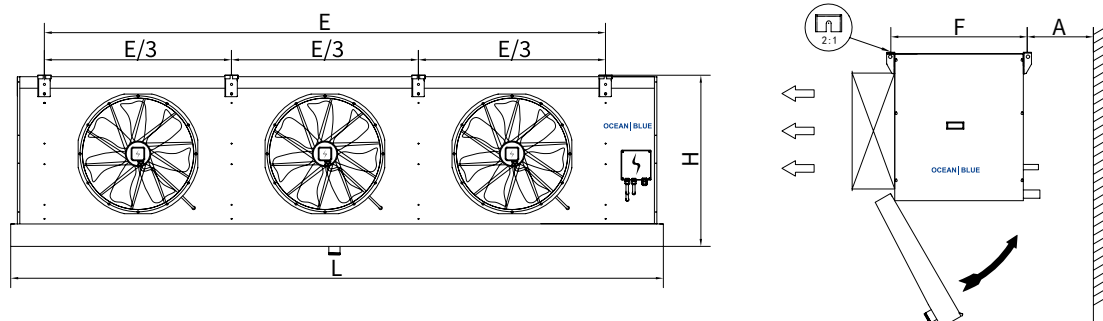
## REFRIGERANT SIDE

|                                               |              |                  |
|-----------------------------------------------|--------------|------------------|
| Fluid                                         | AMMONIA      |                  |
| Mass Fluid Flow / Mass velocity               | 264 / 99     | kg/h / kg/(m² s) |
| Fluid Velocity Gaseous Phase - Nominal / Real | 12.80 / 6.40 | m/s              |
| Fluid Velocity Liquid Phase - Nominal / Real  | 0.15 / 0.13  | m/s              |
| Evaporating Temperature                       | -8.0         | °C               |
| Recirculation Ratio                           | 3            |                  |
| Fluid Pressure Drop                           | 16.69        | kPa              |
| Manifold Pressure Drop                        | 0            | kPa              |
| Total Pressure Drop Fluid Side                | 16.69        | kPa              |
| Fouling Factor                                | 0.000000     | (m² K)/W         |

\* The global exchange coefficient is calculated by considering the entire exchanged capacity, sensible and latent.

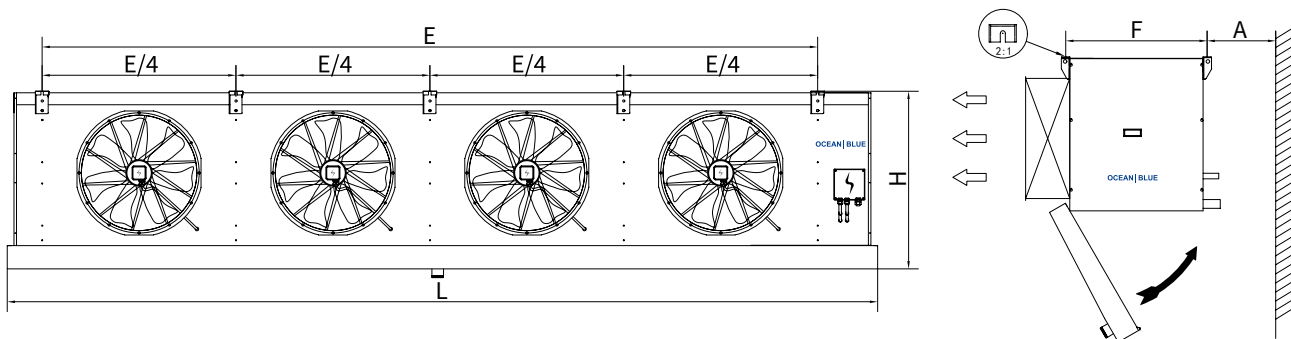
# DATA AND DRAWING (THREE FANS)

| suspended ceiling style | fan diameter | exchange surface | hot gas defrost | number of fans | fin spacing | nom. Capacity<br>NH <sub>3</sub>            |                                                |       | tube volume | airflow | air throw | noise pressure level | Connections |        |           | Fans 50Hz |         |              | drain | Dimensions |      |                                        |      |     |     |    |
|-------------------------|--------------|------------------|-----------------|----------------|-------------|---------------------------------------------|------------------------------------------------|-------|-------------|---------|-----------|----------------------|-------------|--------|-----------|-----------|---------|--------------|-------|------------|------|----------------------------------------|------|-----|-----|----|
|                         |              |                  |                 |                |             | DT1=8K° RH85%<br>Air on=0°C<br>Tevap.= -8°C | DT1=7K° RH95%<br>Air on=-18°C<br>Tevap.= -25°C |       |             |         |           |                      | inlet       | outlet | hotgas in | capacity  | current | current type |       | L          | B    | H                                      | E    | F   | A   |    |
|                         |              |                  |                 |                |             |                                             |                                                |       |             |         |           |                      |             |        |           |           |         |              |       |            |      |                                        |      |     |     |    |
|                         | dm           | m²               |                 |                | mm          | kW                                          | kW                                             | dm³   | m³/h        | m       | dB (A)    | mm                   | mm          | mm     | kW        | A         | V       | mm           |       |            |      |                                        |      |     |     | mm |
| D 50                    | 50           | 275.9            | H               | 3              | 4           | 49.1                                        | 25.5                                           | 35.3  | 8500*3      | 21      | 79        | 38                   | 45          | 27     | 0.8*3     | 1.4*3     | 400     | 48           | 3490  | 773        | 916  | Water defrost<br>height increased 65mm | 3000 | 510 | 500 |    |
| D 50                    | 50           | 413.8            | H               | 3              | 4           | 64.5                                        | 48.6                                           | 52.9  | 8500*3      | 21      | 79        | 38                   | 57          | 27     | 0.8*3     | 1.4*3     | 400     | 48           | 3490  | 883        | 916  |                                        | 3000 | 620 | 500 |    |
| D 50                    | 50           | 551.8            | H               | 3              | 4           | 75.4                                        | 56.4                                           | 70.6  | 8500*3      | 21      | 79        | 38                   | 57          | 27     | 0.8*3     | 1.4*3     | 400     | 48           | 3490  | 993        | 916  |                                        | 3000 | 730 | 500 |    |
| D 71                    | 71           | 449.9            | H               | 3              | 4           | 80.5                                        | 56.8                                           | 57.1  | 17000*3     | 30      | 85        | 38                   | 57          | 27     | 1.8*3     | 2.9*3     | 400     | 2-48         | 4390  | 957        | 1136 |                                        | 3900 | 590 | 800 |    |
| D 71                    | 71           | 674.8            | H               | 3              | 4           | 109.3                                       | 77.4                                           | 85.7  | 17000*3     | 30      | 85        | 45                   | 76          | 27     | 1.8*3     | 2.9*3     | 400     | 2-48         | 4390  | 1067       | 1136 |                                        | 3900 | 700 | 800 |    |
| D 71                    | 71           | 899.8            | H               | 3              | 4           | 131.3                                       | 93.5                                           | 114.3 | 17000*3     | 30      | 85        | 45                   | 76          | 27     | 1.8*3     | 2.9*3     | 400     | 2-48         | 4390  | 1177       | 1136 |                                        | 3900 | 810 | 800 |    |
| D 80                    | 80           | 665.7            | H               | 3              | 4           | 111.2                                       | 89.4                                           | 84.6  | 21000*3     | 41      | 80        | 45                   | 89          | 27     | 1.85*3    | 3.8*3     | 400     | 2-48         | 5290  | 1013       | 1356 |                                        | 4800 | 630 | 800 |    |
| D 80                    | 80           | 998.6            | H               | 3              | 4           | 148.5                                       | 106.3                                          | 126.8 | 21000*3     | 41      | 80        | 45                   | 89          | 27     | 1.85*3    | 3.8*3     | 400     | 2-48         | 5290  | 1123       | 1356 |                                        | 4800 | 740 | 800 |    |
| D 80                    | 80           | 1331.5           | H               | 3              | 4           | 175.8                                       | 126.4                                          | 169.1 | 21000*3     | 41      | 80        | 45                   | 89          | 27     | 1.85*3    | 3.8*3     | 400     | 2-48         | 5290  | 1233       | 1356 | 4800                                   | 850  | 800 |     |    |
| D 50                    | 50           | 161.9            | H               | 3              | 7           | 34.7                                        | 26.8                                           | 35.3  | 8500*3      | 21      | 79        | 38                   | 45          | 27     | 0.8*3     | 1.4*3     | 400     | 48           | 3490  | 773        | 916  | Water defrost<br>height increased 65mm | 3000 | 510 | 500 |    |
| D 50                    | 50           | 242.8            | H               | 3              | 7           | 47.9                                        | 36.8                                           | 52.9  | 8500*3      | 21      | 79        | 38                   | 45          | 27     | 0.8*3     | 1.4*3     | 400     | 48           | 3490  | 883        | 916  |                                        | 3000 | 620 | 500 |    |
| D 50                    | 50           | 323.8            | H               | 3              | 7           | 58.3                                        | 44.8                                           | 70.6  | 8500*3      | 21      | 79        | 38                   | 57          | 27     | 0.8*3     | 1.4*3     | 400     | 48           | 3490  | 993        | 916  |                                        | 3000 | 730 | 500 |    |
| D 71                    | 71           | 264              | H               | 3              | 7           | 60                                          | 44.6                                           | 57.1  | 17000*3     | 30      | 85        | 38                   | 57          | 27     | 1.8*3     | 2.9*3     | 400     | 2-48         | 4390  | 957        | 1136 |                                        | 3900 | 590 | 800 |    |
| D 71                    | 71           | 395.9            | H               | 3              | 7           | 84.4                                        | 62.6                                           | 85.7  | 17000*3     | 30      | 85        | 45                   | 76          | 27     | 1.8*3     | 2.9*3     | 400     | 2-48         | 4390  | 1067       | 1136 |                                        | 3900 | 700 | 800 |    |
| D 71                    | 71           | 527.9            | H               | 3              | 7           | 105                                         | 77.8                                           | 114.3 | 17000*3     | 30      | 85        | 45                   | 76          | 27     | 1.8*3     | 2.9*3     | 400     | 2-48         | 4390  | 1177       | 1136 |                                        | 3900 | 810 | 800 |    |
| D 80                    | 80           | 390              | H               | 3              | 7           | 73.5                                        | 51.1                                           | 84.6  | 21000*3     | 41      | 80        | 45                   | 57          | 27     | 1.85*3    | 3.8*3     | 400     | 2-48         | 5290  | 1013       | 1356 |                                        | 4800 | 630 | 800 |    |
| D 80                    | 80           | 585.9            | H               | 3              | 7           | 103.5                                       | 72.1                                           | 126.8 | 21000*3     | 41      | 80        | 45                   | 76          | 27     | 1.85*3    | 3.8*3     | 400     | 2-48         | 5290  | 1123       | 1356 |                                        | 4800 | 740 | 800 |    |
| D 80                    | 80           | 781.2            | H               | 3              | 7           | 128.8                                       | 90.1                                           | 169.1 | 21000*3     | 41      | 80        | 45                   | 76          | 27     | 1.85*3    | 3.8*3     | 400     | 2-48         | 5290  | 1233       | 1356 | 4800                                   | 850  | 800 |     |    |
| D 50                    | 50           | 116.3            | H               | 3              | 10          | 26.8                                        | 21.1                                           | 35.3  | 8500*3      | 21      | 79        | 38                   | 45          | 27     | 0.8*3     | 1.4*3     | 400     | 48           | 3490  | 773        | 916  | Water defrost<br>height increased 65mm | 3000 | 510 | 500 |    |
| D 50                    | 50           | 174.5            | H               | 3              | 10          | 38                                          | 29.7                                           | 52.9  | 8500*3      | 21      | 79        | 38                   | 45          | 27     | 0.8*3     | 1.4*3     | 400     | 48           | 3490  | 883        | 916  |                                        | 3000 | 620 | 500 |    |
| D 50                    | 50           | 232.6            | H               | 3              | 10          | 47.6                                        | 37                                             | 70.6  | 8500*3      | 21      | 79        | 38                   | 45          | 27     | 0.8*3     | 1.4*3     | 400     | 48           | 3490  | 993        | 916  |                                        | 3000 | 730 | 500 |    |
| D 71                    | 71           | 189.6            | H               | 3              | 10          | 48.1                                        | 36.6                                           | 57.1  | 17000*3     | 30      | 85        | 38                   | 45          | 27     | 1.8*3     | 2.9*3     | 400     | 2-48         | 4390  | 957        | 1136 |                                        | 3900 | 590 | 800 |    |
| D 71                    | 71           | 284.4            | H               | 3              | 10          | 69.1                                        | 52.3                                           | 85.7  | 17000*3     | 30      | 85        | 45                   | 57          | 27     | 1.8*3     | 2.9*3     | 400     | 2-48         | 4390  | 1067       | 1136 |                                        | 3900 | 700 | 800 |    |
| D 71                    | 71           | 379.2            | H               | 3              | 10          | 87.6                                        | 66                                             | 114.3 | 17000*3     | 30      | 85        | 45                   | 76          | 27     | 1.8*3     | 2.9*3     | 400     | 2-48         | 4390  | 1177       | 1136 |                                        | 3900 | 810 | 800 |    |
| D 80                    | 80           | 280.5            | H               | 3              | 10          | 61.2                                        | 44                                             | 84.6  | 21000*3     | 41      | 80        | 45                   | 57          | 27     | 1.85*3    | 3.8*3     | 400     | 2-48         | 5290  | 1013       | 1356 |                                        | 4800 | 630 | 800 |    |
| D 80                    | 80           | 420.8            | H               | 3              | 10          | 87.7                                        | 63.1                                           | 126.8 | 21000*3     | 41      | 80        | 45                   | 76          | 27     | 1.85*3    | 3.8*3     | 400     | 2-48         | 5290  | 1123       | 1356 |                                        | 4800 | 740 | 800 |    |
| D 80                    | 80           | 561.1            | H               | 3              | 10          | 111                                         | 79.8                                           | 169.1 | 21000*3     | 41      | 80        | 45                   | 76          | 27     | 1.85*3    | 3.8*3     | 400     | 2-48         | 5290  | 1233       | 1356 | 4800                                   | 850  | 800 |     |    |
| D 50                    | 50           | 181.1            | H               | 3              | 16-8        | 39.1                                        | 30.5                                           | 52.9  | 8500*3      | 21      | 79        | 38                   | 45          | 27     | 0.8*3     | 1.4*3     | 400     | 48           | 3490  | 883        | 916  | Water defrost<br>height increased 65mm | 3000 | 620 | 500 |    |
| D 50                    | 50           | 219.2            | H               | 3              | 16-8        | 45.8                                        | 35.6                                           | 70.6  | 8500*3      | 21      | 79        | 38                   | 45          | 27     | 0.8*3     | 1.4*3     | 400     | 48           | 3490  | 993        | 916  |                                        | 3000 | 730 | 500 |    |
| D 71                    | 71           | 295.2            | H               | 3              | 16-8        | 70.8                                        | 53.5                                           | 85.7  | 17000*3     | 30      | 85        | 38                   | 57          | 27     | 1.8*3     | 2.9*3     | 400     | 2-48         | 4390  | 1067       | 1136 |                                        | 3900 | 700 | 800 |    |
| D 71                    | 71           | 357.4            | H               | 3              | 16-8        | 84.5                                        | 63.9                                           | 114.3 | 17000*3     | 30      | 85        | 45                   | 76          | 27     | 1.8*3     | 2.9*3     | 400     | 2-48         | 4390  | 1177       | 1136 |                                        | 3900 | 810 | 800 |    |
| D 80                    | 80           | 436.9            | H               | 3              | 16-8        | 89.5                                        | 64.1                                           | 126.8 | 21000*3     | 41      | 80        | 45                   | 76          | 27     | 1.85*3    | 3.8*3     | 400     | 2-48         | 5290  | 1123       | 1356 |                                        | 4800 | 740 | 800 |    |
| D 80                    | 80           | 528.8            | H               | 3              | 16-8        | 107.7                                       | 77.8                                           | 169.1 | 21000*3     | 41      | 80        | 45                   | 76          | 27     | 1.85*3    | 3.8*3     | 400     | 2-48         | 5290  | 1233       | 1356 | 4800                                   | 850  | 800 |     |    |



## DATA AND DRAWING (FOUR FANS)

| suspended ceiling style | fan diameter | exchange surface | hot gas defrost | number of fans | fin spacing | nom. Capacity<br>NH <sub>3</sub>            |                                                |       | tube volume | airflow | air throw | noise pressure level | Connections |        |           | Fans 50Hz |         |              | drain | Dimensions |      |                                        |      |     |     |  |
|-------------------------|--------------|------------------|-----------------|----------------|-------------|---------------------------------------------|------------------------------------------------|-------|-------------|---------|-----------|----------------------|-------------|--------|-----------|-----------|---------|--------------|-------|------------|------|----------------------------------------|------|-----|-----|--|
|                         |              |                  |                 |                |             | DT1=8K° RH85%<br>Air on=0°C<br>Tevap.= -8°C | DT1=7K° RH95%<br>Air on=-18°C<br>Tevap.= -25°C |       |             |         |           |                      | inlet       | outlet | hotgas in | capacity  | current | current type |       | L          | B    | H                                      | E    | F   | A   |  |
|                         |              |                  |                 |                |             |                                             |                                                |       |             |         |           |                      |             |        |           |           |         |              |       |            |      |                                        |      |     |     |  |
|                         | dm           | m²               |                 |                | mm          | kW                                          | kW                                             | dm³   | m³/h        | m       | dB (A)    | mm                   | mm          | mm     | kW        | A         | V       | mm           | mm    |            |      |                                        |      |     |     |  |
| D                       | 50           | 369.1            | H               | 4              | 4           | 47.2                                        | 63.7                                           | 46.9  | 8500*4      | 21      | 79        | 38                   | 76          | 27     | 0.8*4     | 1.4*4     | 400     | 2-48         | 4490  | 773        | 916  | Water defrost<br>height increased 65mm | 4000 | 510 | 500 |  |
| D                       | 50           | 553.6            | H               | 4              | 4           | 70.8                                        | 84.2                                           | 62    | 8500*4      | 21      | 79        | 38                   | 76          | 27     | 0.8*4     | 1.4*4     | 400     | 2-48         | 4490  | 883        | 916  |                                        | 4000 | 620 | 500 |  |
| D                       | 50           | 738.2            | H               | 4              | 4           | 94.4                                        | 98.8                                           | 71.2  | 8500*4      | 21      | 79        | 45                   | 76          | 27     | 0.8*4     | 1.4*4     | 400     | 2-48         | 4490  | 993        | 916  |                                        | 4000 | 730 | 500 |  |
| D                       | 71           | 601.4            | H               | 4              | 4           | 117.5                                       | 89                                             | 76.4  | 17000*4     | 30      | 85        | 57                   | 89          | 27     | 1.8*4     | 2.9*4     | 400     | 2-48         | 5690  | 957        | 1136 |                                        | 5200 | 590 | 800 |  |
| D                       | 71           | 902.1            | H               | 4              | 4           | 157.4                                       | 118.7                                          | 114.6 | 17000*4     | 30      | 85        | 57                   | 108         | 27     | 1.8*4     | 2.9*4     | 400     | 2-48         | 5690  | 1067       | 1136 |                                        | 5200 | 700 | 800 |  |
| D                       | 71           | 1202.8           | H               | 4              | 4           | 140                                         | 187.1                                          | 152.8 | 17000*4     | 30      | 85        | 57                   | 108         | 27     | 1.8*4     | 2.9*4     | 400     | 2-48         | 5690  | 1177       | 1136 |                                        | 5200 | 810 | 800 |  |
| D                       | 50           | 216.6            | H               | 4              | 7           | 46.2                                        | 35.2                                           | 46.9  | 8500*4      | 21      | 79        | 38                   | 45          | 27     | 0.8*4     | 1.4*4     | 400     | 2-48         | 4490  | 773        | 916  | Water defrost<br>height increased 65mm | 4000 | 510 | 500 |  |
| D                       | 50           | 324.8            | H               | 4              | 7           | 64.1                                        | 48.5                                           | 62    | 8500*4      | 21      | 79        | 38                   | 57          | 27     | 0.8*4     | 1.4*4     | 400     | 2-48         | 4490  | 883        | 916  |                                        | 4000 | 620 | 500 |  |
| D                       | 50           | 433.2            | H               | 4              | 7           | 78.6                                        | 59.1                                           | 71.2  | 8500*4      | 21      | 79        | 38                   | 57          | 27     | 0.8*4     | 1.4*4     | 400     | 2-48         | 4490  | 993        | 916  |                                        | 4000 | 730 | 500 |  |
| D                       | 71           | 352.8            | H               | 4              | 7           | 83.2                                        | 64.6                                           | 76.4  | 17000*4     | 30      | 85        | 57                   | 76          | 27     | 1.8*4     | 2.9*4     | 400     | 2-48         | 5690  | 957        | 1136 |                                        | 5200 | 590 | 800 |  |
| D                       | 71           | 529.3            | H               | 4              | 7           | 116.7                                       | 89.7                                           | 114.6 | 17000*4     | 30      | 85        | 57                   | 76          | 27     | 1.8*4     | 2.9*4     | 400     | 2-48         | 5690  | 1067       | 1136 |                                        | 5200 | 700 | 800 |  |
| D                       | 71           | 705.7            | H               | 4              | 7           | 144.6                                       | 110.2                                          | 152.8 | 17000*4     | 30      | 85        | 57                   | 89          | 27     | 1.8*4     | 2.9*4     | 400     | 2-48         | 5690  | 1177       | 1136 |                                        | 5200 | 810 | 800 |  |
| D                       | 50           | 155.6            | H               | 4              | 10          | 36.5                                        | 28.1                                           | 46.9  | 8500*4      | 21      | 79        | 38                   | 57          | 27     | 0.8*4     | 1.4*4     | 400     | 2-48         | 4490  | 773        | 916  | Water defrost<br>height increased 65mm | 4000 | 510 | 500 |  |
| D                       | 50           | 233.4            | H               | 4              | 10          | 51.9                                        | 39.6                                           | 62    | 8500*4      | 21      | 79        | 38                   | 76          | 27     | 0.8*4     | 1.4*4     | 400     | 2-48         | 4490  | 883        | 916  |                                        | 4000 | 620 | 500 |  |
| D                       | 50           | 311.2            | H               | 4              | 10          | 64.9                                        | 49.5                                           | 71.2  | 8500*4      | 21      | 79        | 38                   | 76          | 27     | 0.8*4     | 1.4*4     | 400     | 2-48         | 4490  | 993        | 916  |                                        | 4000 | 730 | 500 |  |
| D                       | 71           | 253.4            | H               | 4              | 10          | 65                                          | 50.8                                           | 76.4  | 17000*4     | 30      | 85        | 57                   | 76          | 27     | 1.8*4     | 2.9*4     | 400     | 2-48         | 5690  | 957        | 1136 |                                        | 5200 | 590 | 800 |  |
| D                       | 71           | 380.1            | H               | 4              | 10          | 93                                          | 72.3                                           | 114.6 | 17000*4     | 30      | 85        | 57                   | 76          | 27     | 1.8*4     | 2.9*4     | 400     | 2-48         | 5690  | 1067       | 1136 |                                        | 5200 | 700 | 800 |  |
| D                       | 71           | 506.9            | H               | 4              | 10          | 117.3                                       | 91.2                                           | 152.8 | 17000*4     | 30      | 85        | 57                   | 76          | 27     | 1.8*4     | 2.9*4     | 400     | 2-48         | 5690  | 1177       | 1136 |                                        | 5200 | 810 | 800 |  |
| D                       | 50           | 242.3            | H               | 4              | 16-8        | 53.2                                        | 40.6                                           | 62    | 8500*4      | 21      | 79        | 38                   | 57          | 27     | 0.8*4     | 1.4*4     | 400     | 2-48         | 4490  | 883        | 916  |                                        | 4000 | 620 | 500 |  |
| D                       | 50           | 293.3            | H               | 4              | 16-8        | 62.5                                        | 47.8                                           | 71.2  | 8500*4      | 21      | 79        | 38                   | 57          | 27     | 0.8*4     | 1.4*4     | 400     | 2-48         | 4490  | 993        | 916  |                                        | 4000 | 730 | 500 |  |
| D                       | 71           | 394.6            | H               | 4              | 16-8        | 95.5                                        | 74.2                                           | 114.6 | 17000*4     | 30      | 85        | 57                   | 76          | 27     | 1.8*4     | 2.9*4     | 400     | 2-48         | 5690  | 1067       | 1136 |                                        | 5200 | 700 | 800 |  |
| D                       | 71           | 477.7            | H               | 4              | 16-8        | 112.7                                       | 87.8                                           | 152.8 | 17000*4     | 30      | 85        | 57                   | 89          | 27     | 1.8*4     | 2.9*4     | 400     | 2-48         | 5690  | 1177       | 1136 |                                        | 5200 | 810 | 800 |  |



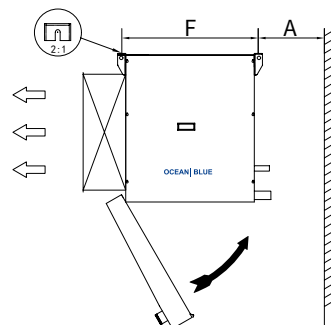
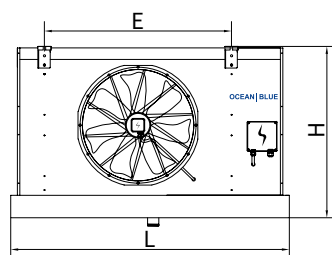
## CO2 INDUSTRIAL EVAPORATORS

Tube diameter: (φ15.88mm or 5/8 inch) Thickness:0.60mm  
Fin thickness:0.25mm



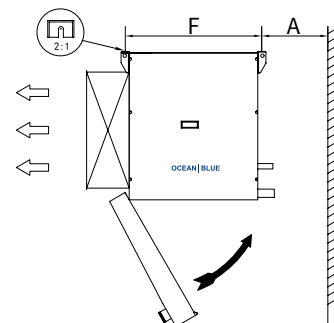
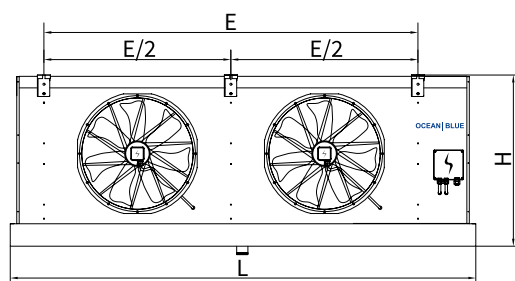
## DATA AND DRAWING (ONE FAN)

| suspended ceiling style | fan diameter | exchange surface | hot gas defrost | number of fans | fin spacing | nom. Capacity CO2                           |                                                |       |      | tube volume | airflow | air throw | noise pressure level | Connections |     |     | Fans 50Hz |      |      | drain | Dimensions                             |      |     |     |  |  |  |
|-------------------------|--------------|------------------|-----------------|----------------|-------------|---------------------------------------------|------------------------------------------------|-------|------|-------------|---------|-----------|----------------------|-------------|-----|-----|-----------|------|------|-------|----------------------------------------|------|-----|-----|--|--|--|
|                         |              |                  |                 |                |             | DT1=8K° RH85%<br>Air on=0°C<br>Tevap.= -8°C | DT1=7K° RH95%<br>Air on=-18°C<br>Tevap.= -25°C | L     | B    |             |         |           |                      | H           | E   | F   | A         |      |      |       |                                        |      |     |     |  |  |  |
|                         |              |                  |                 |                |             |                                             |                                                |       |      |             |         |           |                      |             |     |     |           |      |      |       |                                        |      |     |     |  |  |  |
|                         | dm           | m²               |                 |                | mm          | kW                                          | kW                                             | dm³   | m³/h | m           | dB (A)  | mm        | mm                   | mm          | kW  | A   | V         | mm   | mm   |       |                                        |      |     |     |  |  |  |
| D 50                    | 89.5         | H                | 1               | 4              | 13.8        | 10.9                                        | 11.4                                           | 8500  | 21   | 79          | 27      | 32        | 27                   | 0.8         | 1.4 | 400 | 48        | 1490 | 773  | 916   | Water defrost<br>height increased 65mm | 1000 | 510 | 500 |  |  |  |
| D 50                    | 134.2        | H                | 1               | 4              | 18.5        | 14.4                                        | 17.2                                           | 8500  | 21   | 79          | 27      | 32        | 27                   | 0.8         | 1.4 | 400 | 48        | 1490 | 883  | 916   |                                        | 1000 | 620 | 500 |  |  |  |
| D 50                    | 179          | H                | 1               | 4              | 22          | 16.7                                        | 22.9                                           | 8500  | 21   | 79          | 27      | 32        | 27                   | 0.8         | 1.4 | 400 | 48        | 1490 | 993  | 916   |                                        | 1000 | 730 | 500 |  |  |  |
| D 71                    | 146.8        | H                | 1               | 4              | 26.9        | 21.4                                        | 18.7                                           | 17000 | 30   | 85          | 27      | 32        | 27                   | 1.8         | 2.9 | 400 | 48        | 1790 | 957  | 1136  |                                        | 1300 | 590 | 800 |  |  |  |
| D 71                    | 220.3        | H                | 1               | 4              | 36.3        | 28.4                                        | 28                                             | 17000 | 30   | 85          | 27      | 32        | 27                   | 1.8         | 2.9 | 400 | 48        | 1790 | 1067 | 1136  |                                        | 1300 | 700 | 800 |  |  |  |
| D 71                    | 293.7        | H                | 1               | 4              | 43.3        | 33.6                                        | 37.3                                           | 17000 | 30   | 85          | 27      | 32        | 27                   | 1.8         | 2.9 | 400 | 48        | 1790 | 1177 | 1136  |                                        | 1300 | 810 | 800 |  |  |  |
| D 80                    | 218.2        | H                | 1               | 4              | 35.1        | 27.7                                        | 27.7                                           | 21000 | 41   | 80          | 27      | 32        | 27                   | 1.85        | 3.8 | 400 | 48        | 2090 | 1013 | 1356  |                                        | 1600 | 630 | 800 |  |  |  |
| D 80                    | 327.3        | H                | 1               | 4              | 46.8        | 36.6                                        | 41.6                                           | 21000 | 41   | 80          | 32      | 38        | 27                   | 1.85        | 3.8 | 400 | 48        | 2090 | 1123 | 1356  |                                        | 1600 | 740 | 800 |  |  |  |
| D 80                    | 436.4        | H                | 1               | 4              | 55.5        | 43                                          | 55.4                                           | 21000 | 41   | 80          | 32      | 38        | 27                   | 1.85        | 3.8 | 400 | 48        | 2090 | 1233 | 1356  | 1600                                   | 850  | 800 |     |  |  |  |
| D 50                    | 52.5         | H                | 1               | 7              | 9.5         | 7.2                                         | 11.4                                           | 8500  | 21   | 79          | 27      | 32        | 27                   | 0.8         | 1.4 | 400 | 48        | 1490 | 773  | 916   | Water defrost<br>height increased 65mm | 1000 | 510 | 500 |  |  |  |
| D 50                    | 78.8         | H                | 1               | 7              | 14.3        | 11.2                                        | 17.2                                           | 8500  | 21   | 79          | 27      | 32        | 27                   | 0.8         | 1.4 | 400 | 48        | 1490 | 883  | 916   |                                        | 1000 | 620 | 500 |  |  |  |
| D 50                    | 105          | H                | 1               | 7              | 18.2        | 14.2                                        | 22.9                                           | 8500  | 21   | 79          | 27      | 32        | 27                   | 0.8         | 1.4 | 400 | 48        | 1490 | 993  | 916   |                                        | 1000 | 730 | 500 |  |  |  |
| D 71                    | 86.2         | H                | 1               | 7              | 18.6        | 14.9                                        | 18.7                                           | 17000 | 30   | 85          | 27      | 32        | 27                   | 1.8         | 2.9 | 400 | 48        | 1790 | 957  | 1136  |                                        | 1300 | 590 | 800 |  |  |  |
| D 71                    | 129.2        | H                | 1               | 7              | 26.2        | 20.8                                        | 28                                             | 17000 | 30   | 85          | 27      | 32        | 27                   | 1.8         | 2.9 | 400 | 48        | 1790 | 1067 | 1136  |                                        | 1300 | 700 | 800 |  |  |  |
| D 71                    | 172.3        | H                | 1               | 7              | 32.6        | 25.6                                        | 37.3                                           | 17000 | 30   | 85          | 27      | 32        | 27                   | 1.8         | 2.9 | 400 | 48        | 1790 | 1177 | 1136  |                                        | 1300 | 810 | 800 |  |  |  |
| D 80                    | 128          | H                | 1               | 7              | 26.6        | 21                                          | 27.7                                           | 21000 | 41   | 80          | 27      | 32        | 27                   | 1.85        | 3.8 | 400 | 48        | 2090 | 1013 | 1356  |                                        | 1600 | 630 | 800 |  |  |  |
| D 80                    | 192          | H                | 1               | 7              | 37          | 29                                          | 41.6                                           | 21000 | 41   | 80          | 32      | 38        | 27                   | 1.85        | 3.8 | 400 | 48        | 2090 | 1123 | 1356  |                                        | 1600 | 740 | 800 |  |  |  |
| 8 80                    | 256          | H                | 1               | 7              | 45.5        | 35.4                                        | 55.4                                           | 21000 | 41   | 80          | 32      | 38        | 27                   | 1.85        | 3.8 | 400 | 48        | 2090 | 1233 | 1356  | 1600                                   | 850  | 800 |     |  |  |  |
| D 50                    | 37.7         | H                | 1               | 10             | 8.3         | 6.6                                         | 11.4                                           | 8500  | 21   | 79          | 27      | 32        | 27                   | 0.8         | 1.4 | 400 | 48        | 1490 | 773  | 916   | Water defrost<br>height increased 65mm | 1000 | 510 | 500 |  |  |  |
| D 50                    | 56.6         | H                | 1               | 10             | 12.2        | 9.6                                         | 17.2                                           | 8500  | 21   | 79          | 27      | 32        | 27                   | 0.8         | 1.4 | 400 | 48        | 1490 | 883  | 916   |                                        | 1000 | 620 | 500 |  |  |  |
| D 50                    | 75.4         | H                | 1               | 10             | 15.4        | 11.9                                        | 22.9                                           | 8500  | 21   | 79          | 27      | 32        | 27                   | 0.8         | 1.4 | 400 | 48        | 1490 | 993  | 916   |                                        | 1000 | 730 | 500 |  |  |  |
| D 71                    | 61.9         | H                | 1               | 10             | 14.5        | 11.6                                        | 18.7                                           | 17000 | 30   | 85          | 27      | 32        | 27                   | 1.8         | 2.9 | 400 | 48        | 1790 | 957  | 1136  |                                        | 1300 | 590 | 800 |  |  |  |
| D 71                    | 92.8         | H                | 1               | 10             | 20.9        | 16.6                                        | 28                                             | 17000 | 30   | 85          | 27      | 32        | 27                   | 1.8         | 2.9 | 400 | 48        | 1790 | 1067 | 1136  |                                        | 1300 | 700 | 800 |  |  |  |
| D 71                    | 123.8        | H                | 1               | 10             | 26.6        | 21                                          | 37.3                                           | 17000 | 30   | 85          | 27      | 32        | 27                   | 1.8         | 2.9 | 400 | 48        | 1790 | 1177 | 1136  |                                        | 1300 | 810 | 800 |  |  |  |
| D 80                    | 218.2        | H                | 1               | 10             | 20.8        | 16.5                                        | 27.7                                           | 21000 | 41   | 80          | 27      | 32        | 27                   | 1.85        | 3.8 | 400 | 48        | 2090 | 1013 | 1356  |                                        | 1600 | 630 | 800 |  |  |  |
| D 80                    | 327.3        | H                | 1               | 10             | 29.7        | 23.4                                        | 41.6                                           | 21000 | 41   | 80          | 32      | 38        | 27                   | 1.85        | 3.8 | 400 | 48        | 2090 | 1123 | 1356  |                                        | 1600 | 740 | 800 |  |  |  |
| D 80                    | 436.4        | H                | 1               | 10             | 37.4        | 29.3                                        | 55.4                                           | 21000 | 41   | 80          | 32      | 38        | 27                   | 1.85        | 3.8 | 400 | 48        | 2090 | 1233 | 1356  | 1600                                   | 850  | 800 |     |  |  |  |
| D 50                    | 58.7         | H                | 1               | 16-8           | 12.5        | 9.8                                         | 17.2                                           | 8500  | 21   | 79          | 27      | 32        | 27                   | 0.8         | 1.4 | 400 | 48        | 1490 | 883  | 916   | Water defrost<br>height increased 65mm | 1000 | 620 | 500 |  |  |  |
| D 50                    | 71.1         | H                | 1               | 16-8           | 14.9        | 11.5                                        | 22.9                                           | 8500  | 21   | 79          | 27      | 32        | 27                   | 0.8         | 1.4 | 400 | 48        | 1490 | 993  | 916   |                                        | 1000 | 730 | 500 |  |  |  |
| D 71                    | 96.3         | H                | 1               | 16-8           | 22.7        | 17.9                                        | 28                                             | 17000 | 30   | 85          | 27      | 32        | 27                   | 1.8         | 2.9 | 400 | 48        | 1790 | 1067 | 1136  |                                        | 1300 | 700 | 800 |  |  |  |
| D 71                    | 116.6        | H                | 1               | 16-8           | 27.1        | 21.3                                        | 37.3                                           | 17000 | 30   | 85          | 27      | 32        | 27                   | 1.8         | 2.9 | 400 | 48        | 1790 | 1177 | 1136  |                                        | 1300 | 810 | 800 |  |  |  |
| D 80                    | 143.2        | H                | 1               | 16-8           | 30.5        | 24                                          | 41.6                                           | 21000 | 41   | 80          | 32      | 38        | 27                   | 1.85        | 3.8 | 400 | 48        | 2090 | 1123 | 1356  |                                        | 1600 | 740 | 800 |  |  |  |
| D 80                    | 173.3        | H                | 1               | 16-8           | 36.1        | 28.2                                        | 55.4                                           | 21000 | 41   | 80          | 32      | 38        | 27                   | 1.85        | 3.8 | 400 | 48        | 2090 | 1233 | 1356  | 1600                                   | 850  | 800 |     |  |  |  |



# DATA AND DRAWING (TWO FANS)

| suspended ceiling style | fan diameter | exchange surface | hot gas defrost | number of fans | fin spacing | nom. Capacity CO2           |              |                               |               | tube volume | airflow | air throw | noise pressure level | Connections |        |           | Fans 50Hz |         |              | drain | Dimensions |                                        |      |     |     |   |  |
|-------------------------|--------------|------------------|-----------------|----------------|-------------|-----------------------------|--------------|-------------------------------|---------------|-------------|---------|-----------|----------------------|-------------|--------|-----------|-----------|---------|--------------|-------|------------|----------------------------------------|------|-----|-----|---|--|
|                         |              |                  |                 |                |             | DT1=8K° RH85%<br>Air on=0°C | Tevap.= -8°C | DT1=7K° RH95%<br>Air on=-18°C | Tevap.= -25°C |             |         |           |                      | inlet       | outlet | hotgas in | capacity  | current | current type |       | L          | B                                      | H    | E   | F   | A |  |
|                         |              |                  |                 |                |             |                             |              |                               |               |             |         |           |                      |             |        |           |           |         |              |       |            |                                        |      |     |     |   |  |
|                         | dm           | m²               |                 |                | mm          | kW                          | kW           | dm³                           | m³/h          | m           | dB (A)  | mm        | mm                   | mm          | kW     | A         | V         | mm      | mm           |       |            |                                        |      |     |     |   |  |
| D                       | 50           | 182.7            | H               | 2              | 4           | 30.8                        | 24.2         | 23.4                          | 8500*2        | 21          | 79      | 27        | 32                   | 27          | 0.8*2  | 1.4*2     | 400       | 48      | 2490         | 773   | 916        | Water defrost<br>height increased 65mm | 2000 | 510 | 500 |   |  |
| D                       | 50           | 274              | H               | 2              | 4           | 40.7                        | 31.5         | 35                            | 8500*2        | 21          | 79      | 27        | 32                   | 27          | 0.8*2  | 1.4*2     | 400       | 48      | 2490         | 883   | 916        |                                        | 2000 | 620 | 500 |   |  |
| D                       | 50           | 365.3            | H               | 2              | 4           | 47.8                        | 36.8         | 46.7                          | 8500*2        | 21          | 79      | 27        | 32                   | 27          | 0.8*2  | 1.4*2     | 400       | 48      | 2490         | 993   | 916        |                                        | 2000 | 730 | 500 |   |  |
| D                       | 71           | 298.4            | H               | 2              | 4           | 54.6                        | 43.3         | 37.9                          | 17000*2       | 30          | 85      | 27        | 32                   | 27          | 1.8*2  | 2.9*2     | 400       | 48      | 3090         | 957   | 1136       |                                        | 2600 | 590 | 800 |   |  |
| D                       | 71           | 447.6            | H               | 2              | 4           | 73.3                        | 57.4         | 56.8                          | 17000*2       | 30          | 85      | 27        | 32                   | 27          | 1.8*2  | 2.9*2     | 400       | 48      | 3090         | 1067  | 1136       |                                        | 2600 | 700 | 800 |   |  |
| D                       | 71           | 596.6            | H               | 2              | 4           | 87.5                        | 67.9         | 75.8                          | 17000*2       | 30          | 85      | 27        | 32                   | 27          | 1.8*2  | 2.9*2     | 400       | 48      | 3090         | 1177  | 1136       |                                        | 2600 | 810 | 800 |   |  |
| D                       | 80           | 441.9            | H               | 2              | 4           | 76.2                        | 59.7         | 56.1                          | 21000*2       | 41          | 80      | 27        | 32                   | 27          | 1.85*2 | 3.8*2     | 400       | 2-48    | 3690         | 1013  | 1356       |                                        | 3200 | 630 | 800 |   |  |
| D                       | 80           | 663              | H               | 2              | 4           | 100.8                       | 78.1         | 84.2                          | 21000*2       | 41          | 80      | 32        | 38                   | 27          | 1.85*2 | 3.8*2     | 400       | 2-48    | 3690         | 1123  | 1356       |                                        | 3200 | 740 | 800 |   |  |
| D                       | 80           | 884              | H               | 2              | 4           | 118.5                       | 91           | 112                           | 21000*2       | 41          | 80      | 32        | 38                   | 27          | 1.85*2 | 3.8*2     | 400       | 2-48    | 3690         | 1233  | 1356       |                                        | 3200 | 850 | 800 |   |  |
| D                       | 50           | 107.2            | H               | 2              | 7           | 21.6                        | 17           | 23.4                          | 8500*2        | 21          | 79      | 27        | 32                   | 27          | 0.8*2  | 1.4*2     | 400       | 48      | 2490         | 773   | 916        | Water defrost<br>height increased 65mm | 2000 | 510 | 500 |   |  |
| D                       | 50           | 160.8            | H               | 2              | 7           | 30                          | 23.5         | 35                            | 8500*2        | 21          | 79      | 27        | 32                   | 27          | 0.8*2  | 1.4*2     | 400       | 48      | 2490         | 883   | 916        |                                        | 2000 | 620 | 500 |   |  |
| D                       | 50           | 214.4            | H               | 2              | 7           | 36.9                        | 28.7         | 46.7                          | 8500*2        | 21          | 79      | 27        | 32                   | 27          | 0.8*2  | 1.4*2     | 400       | 48      | 2490         | 993   | 916        |                                        | 2000 | 730 | 500 |   |  |
| D                       | 71           | 175              | H               | 2              | 7           | 37.7                        | 30.1         | 37.9                          | 17000*2       | 30          | 85      | 27        | 32                   | 27          | 1.8*2  | 2.9*2     | 400       | 48      | 3090         | 957   | 1136       |                                        | 2600 | 590 | 800 |   |  |
| D                       | 71           | 262.6            | H               | 2              | 7           | 53.1                        | 42           | 56.8                          | 17000*2       | 30          | 85      | 27        | 32                   | 27          | 1.8*2  | 2.9*2     | 400       | 48      | 3090         | 1067  | 1136       |                                        | 2600 | 700 | 800 |   |  |
| D                       | 71           | 350.1            | H               | 2              | 7           | 66                          | 51.8         | 75.8                          | 17000*2       | 30          | 85      | 27        | 32                   | 27          | 1.8*2  | 2.9*2     | 400       | 48      | 3090         | 1177  | 1136       |                                        | 2600 | 810 | 800 |   |  |
| D                       | 80           | 259.3            | H               | 2              | 7           | 53.7                        | 42.4         | 56.1                          | 21000*2       | 41          | 80      | 27        | 32                   | 27          | 1.85*2 | 3.8*2     | 400       | 2-48    | 3690         | 1013  | 1356       |                                        | 3200 | 630 | 800 |   |  |
| D                       | 80           | 388.9            | H               | 2              | 7           | 74.7                        | 58.5         | 84.2                          | 21000*2       | 41          | 80      | 32        | 38                   | 27          | 1.85*2 | 3.8*2     | 400       | 2-48    | 3690         | 1123  | 1356       |                                        | 3200 | 740 | 800 |   |  |
| D                       | 80           | 518.6            | H               | 2              | 7           | 91.8                        | 71.4         | 112                           | 21000*2       | 41          | 80      | 32        | 38                   | 27          | 1.85*2 | 3.8*2     | 400       | 2-48    | 3690         | 1233  | 1356       |                                        | 3200 | 850 | 800 |   |  |
| D                       | 50           | 77               | H               | 2              | 10          | 16.9                        | 13.4         | 23.4                          | 8500*2        | 21          | 79      | 27        | 32                   | 27          | 0.8*2  | 1.4*2     | 400       | 48      | 2490         | 773   | 916        | Water defrost<br>height increased 65mm | 2000 | 510 | 500 |   |  |
| D                       | 50           | 115.5            | H               | 2              | 10          | 24.1                        | 18.9         | 35                            | 8500*2        | 21          | 79      | 27        | 32                   | 27          | 0.8*2  | 1.4*2     | 400       | 48      | 2490         | 883   | 916        |                                        | 2000 | 620 | 500 |   |  |
| D                       | 50           | 154              | H               | 2              | 10          | 30.3                        | 23.7         | 46.7                          | 8500*2        | 21          | 79      | 27        | 32                   | 27          | 0.8*2  | 1.4*2     | 400       | 48      | 2490         | 993   | 916        |                                        | 2000 | 730 | 500 |   |  |
| D                       | 71           | 125.7            | H               | 2              | 10          | 29.4                        | 23.5         | 37.9                          | 17000*2       | 30          | 85      | 27        | 32                   | 27          | 1.8*2  | 2.9*2     | 400       | 48      | 3090         | 957   | 1136       |                                        | 2600 | 590 | 800 |   |  |
| D                       | 71           | 188.6            | H               | 2              | 10          | 42.3                        | 33.6         | 56.8                          | 17000*2       | 30          | 85      | 27        | 32                   | 27          | 1.8*2  | 2.9*2     | 400       | 48      | 3090         | 1067  | 1136       |                                        | 2600 | 700 | 800 |   |  |
| D                       | 71           | 251.5            | H               | 2              | 10          | 53.7                        | 42.4         | 75.8                          | 17000*2       | 30          | 85      | 27        | 32                   | 27          | 1.8*2  | 2.9*2     | 400       | 48      | 3090         | 1177  | 1136       |                                        | 2600 | 810 | 800 |   |  |
| D                       | 80           | 186.2            | H               | 2              | 10          | 42.1                        | 33.3         | 56.1                          | 21000*2       | 41          | 80      | 27        | 32                   | 27          | 1.85*2 | 3.8*2     | 400       | 2-48    | 3690         | 1013  | 1356       |                                        | 3200 | 630 | 800 |   |  |
| D                       | 80           | 279.4            | H               | 2              | 10          | 60                          | 47.2         | 84.2                          | 21000*2       | 41          | 80      | 32        | 38                   | 27          | 1.85*2 | 3.8*2     | 400       | 2-48    | 3690         | 1123  | 1356       |                                        | 3200 | 740 | 800 |   |  |
| D                       | 80           | 372.5            | H               | 2              | 10          | 75.5                        | 59           | 112                           | 21000*2       | 41          | 80      | 32        | 38                   | 27          | 1.85*2 | 3.8*2     | 400       | 2-48    | 3690         | 1233  | 1356       |                                        | 3200 | 850 | 800 |   |  |
| D                       | 50           | 119.9            | H               | 2              | 16-8        | 24.7                        | 19.4         | 35                            | 8500*2        | 21          | 79      | 27        | 32                   | 27          | 0.8*2  | 1.4*2     | 400       | 48      | 2490         | 883   | 916        | Water defrost<br>height increased 65mm | 2000 | 620 | 500 |   |  |
| D                       | 50           | 145.1            | H               | 2              | 16-8        | 29.2                        | 22.8         | 46.7                          | 8500*2        | 21          | 79      | 27        | 32                   | 27          | 0.8*2  | 1.4*2     | 400       | 48      | 2490         | 993   | 916        |                                        | 2000 | 730 | 500 |   |  |
| D                       | 71           | 195.8            | H               | 2              | 16-8        | 43.4                        | 34.5         | 56.8                          | 17000*2       | 30          | 85      | 27        | 32                   | 27          | 1.8*2  | 2.9*2     | 400       | 48      | 3090         | 1067  | 1136       |                                        | 2600 | 700 | 800 |   |  |
| D                       | 71           | 237              | H               | 2              | 16-8        | 51.7                        | 40.8         | 75.8                          | 17000*2       | 30          | 85      | 27        | 32                   | 27          | 1.8*2  | 2.9*2     | 400       | 48      | 3090         | 1177  | 1136       |                                        | 2600 | 810 | 800 |   |  |
| D                       | 80           | 290              | H               | 2              | 16-8        | 61.6                        | 48.8         | 84.2                          | 21000*2       | 41          | 80      | 32        | 38                   | 27          | 1.85*2 | 3.8*2     | 400       | 2-48    | 3690         | 1123  | 1356       |                                        | 3200 | 740 | 800 |   |  |
| D                       | 80           | 351              | H               | 2              | 16-8        | 72.8                        | 56.9         | 112                           | 21000*2       | 41          | 80      | 32        | 38                   | 27          | 1.85*2 | 3.8*2     | 400       | 2-48    | 3690         | 1233  | 1356       |                                        | 3200 | 850 | 800 |   |  |



# DATA AND DRAWING (TWO FANS)

Unilab Coils 9.0 ev - build 230710|P

OCEAN|BLUE



## PUMP EVAPORATOR - HL 16T 4NR 1960A 4P 4NC

|                                |    |                |                             |    |                          |          |
|--------------------------------|----|----------------|-----------------------------|----|--------------------------|----------|
| Geometry                       | HL | Coil Length    | 1960                        | mm |                          |          |
| Nr of Tubes per Row            | 16 | Fin Pitch      | 4.00                        | mm |                          |          |
| Nr of Rows                     | 4  | Nr of Circuits | 4                           |    | Tube Shape               | Circular |
| Capacity                       |    |                | 30859                       |    | W                        |          |
| Sensible Capacity              |    |                | 23103                       |    | W                        |          |
| Latent Capacity                |    |                | 7756                        |    | W                        |          |
| Sensible/Total Capacity Ratio  |    |                | 0.7487                      |    |                          |          |
| Quantity of Produced Water     |    |                | 11.19                       |    | kg/h                     |          |
| Exchange Surface               |    |                | 182.76                      |    | m <sup>2</sup>           |          |
| Global Exchange Coefficient    |    |                | 29                          |    | W kg/(m <sup>2</sup> KJ) |          |
| DTML                           |    |                | 5.8                         |    | °C                       |          |
| Fins Material / Tubes Material |    |                | Aluminium / Stainless Steel |    |                          |          |
| Fin Thickness                  |    |                | 0.2500                      |    | mm                       |          |
| Coil Internal Volume           |    |                | 23.2                        |    | l                        |          |
| Tubes External Diameter        |    |                | 16.6                        |    | mm                       |          |
| Tubes Internal Diameter        |    |                | 15.4                        |    | mm                       |          |
| Number of skipped tube         |    |                | 0                           |    |                          |          |

## AIR SIDE

|                                 |             |                      |
|---------------------------------|-------------|----------------------|
| Atmospheric Pressure / Altitude | 1.01 / 0.00 | bar A / m            |
| Volumetric Air Flow             | 17000.0     | m <sup>3</sup> /h    |
| Mass Air Flow                   | 21925       | kg/h                 |
| Face Velocity on the Coil       | 2.74        | m/s                  |
| Inlet Air Density               | 1.29        | kg/m <sup>3</sup>    |
| Inlet Air Temperature           | 0.0         | °C                   |
| Inlet Air Relative Humidity     | 85.00       | %                    |
| Inlet Air Specific Humidity     | 3.20        | g/kg DA              |
| Inlet Air Enthalpy              | 8.02        | kJ / kg              |
| Outlet Air Temperature          | -3.7        | °C                   |
| Outlet Air Relative Humidity    | 97.79       | %                    |
| Outlet Air Specific Humidity    | 2.70        | g/kg DA              |
| Outlet Air Enthalpy             | 2.96        | kJ / kg              |
| Pressure Drop                   | 66          | Pa                   |
| Fouling Factor                  | 0.000000    | (m <sup>2</sup> K)/W |
| Frost thickness                 | 0.00        | mm                   |

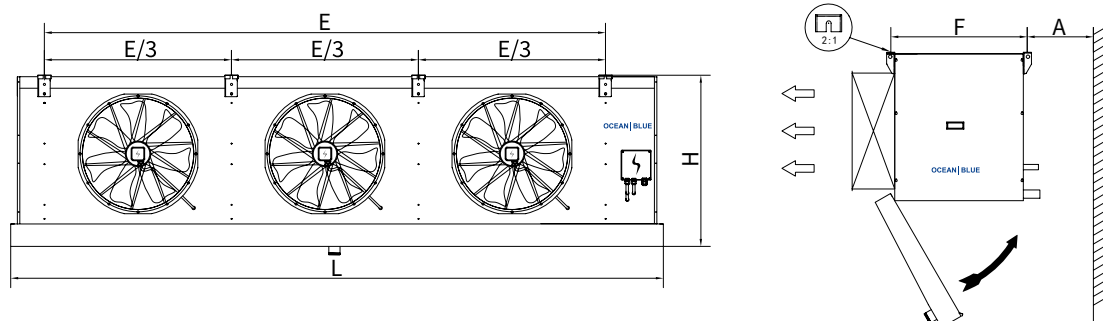
## REFRIGERANT SIDE

|                                               |             |                              |
|-----------------------------------------------|-------------|------------------------------|
| Fluid                                         |             | CO2                          |
| Mass Fluid Flow / Mass velocity               | 877 / 329   | kg/h / kg/(m <sup>2</sup> s) |
| Fluid Velocity Gaseous Phase - Nominal / Real | 2.17 / 1.08 | m/s                          |
| Fluid Velocity Liquid Phase - Nominal / Real  | 0.34 / 0.25 | m/s                          |
| Evaporating Temperature                       | -8.0        | °C                           |
| Recirculation Ratio                           | 2           |                              |
| Fluid Pressure Drop                           | 21.74       | kPa                          |
| Manifold Pressure Drop                        | 0           | kPa                          |
| Total Pressure Drop Fluid Side                | 21.74       | kPa                          |
| Fouling Factor                                | 0.000000    | (m <sup>2</sup> K)/W         |

\* The global exchange coefficient is calculated by considering the entire exchanged capacity, sensible and latent.

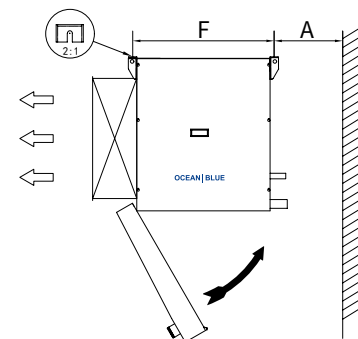
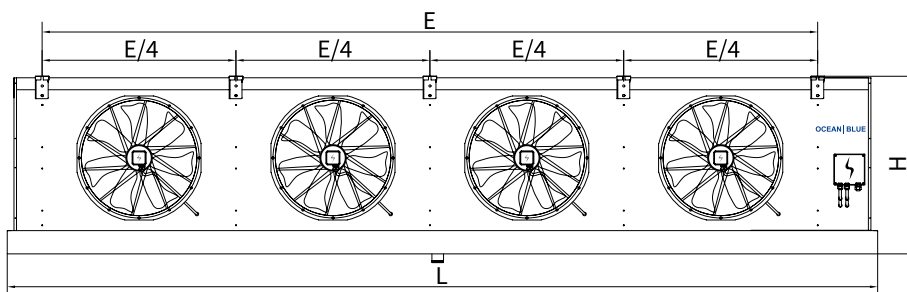
# DATA AND DRAWING (THREE FANS)

| suspended ceiling style | fan diameter | exchange surface | hot gas defrost | number of fans | fin spacing | nom. Capacity CO2                          |                                               | tube volume | airflow | air throw | noise pressure level | Connections |    |        | Fans 50Hz |     |        | drain | Dimensions |      |                                        |      |     |     |    |   |   |   |   |   |   |
|-------------------------|--------------|------------------|-----------------|----------------|-------------|--------------------------------------------|-----------------------------------------------|-------------|---------|-----------|----------------------|-------------|----|--------|-----------|-----|--------|-------|------------|------|----------------------------------------|------|-----|-----|----|---|---|---|---|---|---|
|                         |              |                  |                 |                |             | DT1=8K° RH85%<br>Air on=0°C<br>Tevap.=-8°C | DT1=7K° RH95%<br>Air on=-18°C<br>Tevap.=-25°C |             |         |           |                      | kW          | kW | dm³    | m³/h      | m   | dB (A) |       | mm         | mm   | mm                                     | kW   | A   | V   | mm | L | B | H | E | F | A |
|                         |              |                  |                 |                |             |                                            |                                               |             |         |           |                      |             |    |        |           |     |        |       |            |      |                                        |      |     |     |    |   |   |   |   |   |   |
|                         | dm           | m²               |                 |                | mm          | kW                                         | kW                                            | dm³         | m³/h    | m         | dB (A)               | mm          | mm | mm     | kW        | A   | V      | mm    | mm         |      |                                        |      |     |     |    |   |   |   |   |   |   |
| D 50                    | 275.9        | H                | 3               | 4              | 45          | 35.4                                       | 35.3                                          | 8500*3      | 21      | 79        | 27                   | 32          | 27 | 0.8*3  | 1.4*3     | 400 | 48     | 3490  | 773        | 916  | Water defrost<br>height increased 65mm | 3000 | 510 | 500 |    |   |   |   |   |   |   |
| D 50                    | 413.8        | H                | 3               | 4              | 59.6        | 46.4                                       | 52.9                                          | 8500*3      | 21      | 79        | 27                   | 32          | 27 | 0.8*3  | 1.4*3     | 400 | 48     | 3490  | 883        | 916  |                                        | 3000 | 620 | 500 |    |   |   |   |   |   |   |
| D 50                    | 551.8        | H                | 3               | 4              | 70.2        | 54.2                                       | 70.6                                          | 8500*3      | 21      | 79        | 27                   | 32          | 27 | 0.8*3  | 1.4*3     | 400 | 48     | 3490  | 993        | 916  |                                        | 3000 | 730 | 500 |    |   |   |   |   |   |   |
| D 71                    | 449.9        | H                | 3               | 4              | 84.7        | 66.7                                       | 57.1                                          | 17000*3     | 30      | 85        | 27                   | 32          | 27 | 1.8*3  | 2.9*3     | 400 | 2-48   | 4390  | 957        | 1136 |                                        | 3900 | 590 | 800 |    |   |   |   |   |   |   |
| D 71                    | 674.8        | H                | 3               | 4              | 113.5       | 88.5                                       | 85.7                                          | 17000*3     | 30      | 85        | 32                   | 38          | 27 | 1.8*3  | 2.9*3     | 400 | 2-48   | 4390  | 1067       | 1136 |                                        | 3900 | 700 | 800 |    |   |   |   |   |   |   |
| D 71                    | 899.8        | H                | 3               | 4              | 135.2       | 104.5                                      | 114.3                                         | 17000*3     | 30      | 85        | 32                   | 38          | 27 | 1.8*3  | 2.9*3     | 400 | 2-48   | 4390  | 1177       | 1136 |                                        | 3900 | 810 | 800 |    |   |   |   |   |   |   |
| D 80                    | 665.7        | H                | 3               | 4              | 114.7       | 89.9                                       | 84.6                                          | 21000*3     | 41      | 80        | 32                   | 38          | 27 | 1.85*3 | 3.8*3     | 400 | 2-48   | 5290  | 1013       | 1356 |                                        | 4800 | 630 | 800 |    |   |   |   |   |   |   |
| D 80                    | 998.6        | H                | 3               | 4              | 151.6       | 117.4                                      | 126.8                                         | 21000*3     | 41      | 80        | 32                   | 38          | 27 | 1.85*3 | 3.8*3     | 400 | 2-48   | 5290  | 1123       | 1356 |                                        | 4800 | 740 | 800 |    |   |   |   |   |   |   |
| D 80                    | 1331.5       | H                | 3               | 4              | 178.2       | 136.9                                      | 169.1                                         | 21000*3     | 41      | 80        | 32                   | 38          | 27 | 1.85*3 | 3.8*3     | 400 | 2-48   | 5290  | 1233       | 1356 | 4800                                   | 850  | 800 |     |    |   |   |   |   |   |   |
| D 50                    | 161.9        | H                | 3               | 7              | 31.4        | 24.9                                       | 35.3                                          | 8500*3      | 21      | 79        | 27                   | 32          | 27 | 0.8*3  | 1.4*3     | 400 | 48     | 3490  | 773        | 916  | Water defrost<br>height increased 65mm | 3000 | 510 | 500 |    |   |   |   |   |   |   |
| D 50                    | 242.8        | H                | 3               | 7              | 43.7        | 34.3                                       | 52.9                                          | 8500*3      | 21      | 79        | 27                   | 32          | 27 | 0.8*3  | 1.4*3     | 400 | 48     | 3490  | 883        | 916  |                                        | 3000 | 620 | 500 |    |   |   |   |   |   |   |
| D 50                    | 323.8        | H                | 3               | 7              | 53.8        | 42                                         | 70.6                                          | 8500*3      | 21      | 79        | 27                   | 32          | 27 | 0.8*3  | 1.4*3     | 400 | 48     | 3490  | 993        | 916  |                                        | 3000 | 730 | 500 |    |   |   |   |   |   |   |
| D 71                    | 264          | H                | 3               | 7              | 59.3        | 47.1                                       | 57.1                                          | 17000*3     | 30      | 85        | 27                   | 32          | 27 | 1.8*3  | 2.9*3     | 400 | 2-48   | 4390  | 957        | 1136 |                                        | 3900 | 590 | 800 |    |   |   |   |   |   |   |
| D 71                    | 395.9        | H                | 3               | 7              | 83.3        | 65.6                                       | 85.7                                          | 17000*3     | 30      | 85        | 32                   | 38          | 27 | 1.8*3  | 2.9*3     | 400 | 2-48   | 4390  | 1067       | 1136 |                                        | 3900 | 700 | 800 |    |   |   |   |   |   |   |
| D 71                    | 527.9        | H                | 3               | 7              | 103.4       | 80.8                                       | 114.3                                         | 17000*3     | 30      | 85        | 32                   | 38          | 27 | 1.8*3  | 2.9*3     | 400 | 2-48   | 4390  | 1177       | 1136 |                                        | 3900 | 810 | 800 |    |   |   |   |   |   |   |
| D 80                    | 390          | H                | 3               | 7              | 81.2        | 63.8                                       | 84.6                                          | 21000*3     | 41      | 80        | 32                   | 38          | 27 | 1.85*3 | 3.8*3     | 400 | 2-48   | 5290  | 1013       | 1356 |                                        | 4800 | 630 | 800 |    |   |   |   |   |   |   |
| D 80                    | 585.9        | H                | 3               | 7              | 113         | 88.2                                       | 126.8                                         | 21000*3     | 41      | 80        | 32                   | 38          | 27 | 1.85*3 | 3.8*3     | 400 | 2-48   | 5290  | 1123       | 1356 |                                        | 4800 | 740 | 800 |    |   |   |   |   |   |   |
| D 80                    | 781.2        | H                | 3               | 7              | 139.2       | 107.8                                      | 169.1                                         | 21000*3     | 41      | 80        | 32                   | 38          | 27 | 1.85*3 | 3.8*3     | 400 | 2-48   | 5290  | 1233       | 1356 | 4800                                   | 850  | 800 |     |    |   |   |   |   |   |   |
| D 50                    | 116.3        | H                | 3               | 10             | 24.5        | 19.4                                       | 35.3                                          | 8500*3      | 21      | 79        | 27                   | 32          | 27 | 0.8*3  | 1.4*3     | 400 | 48     | 3490  | 773        | 916  | Water defrost<br>height increased 65mm | 3000 | 510 | 500 |    |   |   |   |   |   |   |
| D 50                    | 174.5        | H                | 3               | 10             | 35          | 27.3                                       | 52.9                                          | 8500*3      | 21      | 79        | 27                   | 32          | 27 | 0.8*3  | 1.4*3     | 400 | 48     | 3490  | 883        | 916  |                                        | 3000 | 620 | 500 |    |   |   |   |   |   |   |
| D 50                    | 232.6        | H                | 3               | 10             | 44.1        | 33.9                                       | 70.6                                          | 8500*3      | 21      | 79        | 27                   | 32          | 27 | 0.8*3  | 1.4*3     | 400 | 48     | 3490  | 993        | 916  |                                        | 3000 | 730 | 500 |    |   |   |   |   |   |   |
| D 71                    | 189.6        | H                | 3               | 10             | 46.4        | 37                                         | 57.1                                          | 17000*3     | 30      | 85        | 27                   | 32          | 27 | 1.8*3  | 2.9*3     | 400 | 2-48   | 4390  | 957        | 1136 |                                        | 3900 | 590 | 800 |    |   |   |   |   |   |   |
| D 71                    | 284.4        | H                | 3               | 10             | 66.7        | 52.8                                       | 85.7                                          | 17000*3     | 30      | 85        | 32                   | 38          | 27 | 1.8*3  | 2.9*3     | 400 | 2-48   | 4390  | 1067       | 1136 |                                        | 3900 | 700 | 800 |    |   |   |   |   |   |   |
| D 71                    | 379.2        | H                | 3               | 10             | 84.5        | 66.4                                       | 114.3                                         | 17000*3     | 30      | 85        | 32                   | 38          | 27 | 1.8*3  | 2.9*3     | 400 | 2-48   | 4390  | 1177       | 1136 |                                        | 3900 | 810 | 800 |    |   |   |   |   |   |   |
| D 80                    | 280.5        | H                | 3               | 10             | 64.5        | 50.9                                       | 84.6                                          | 21000*3     | 41      | 80        | 32                   | 38          | 27 | 1.85*3 | 3.8*3     | 400 | 2-48   | 5290  | 1013       | 1356 |                                        | 4800 | 630 | 800 |    |   |   |   |   |   |   |
| D 80                    | 420.8        | H                | 3               | 10             | 91.9        | 72                                         | 126.8                                         | 21000*3     | 41      | 80        | 32                   | 38          | 27 | 1.85*3 | 3.8*3     | 400 | 2-48   | 5290  | 1123       | 1356 |                                        | 4800 | 740 | 800 |    |   |   |   |   |   |   |
| D 80                    | 561.1        | H                | 3               | 10             | 115.6       | 90                                         | 169.1                                         | 21000*3     | 41      | 80        | 32                   | 38          | 27 | 1.85*3 | 3.8*3     | 400 | 2-48   | 5290  | 1233       | 1356 | 4800                                   | 850  | 800 |     |    |   |   |   |   |   |   |
| D 50                    | 181.1        | H                | 3               | 16-8           | 35.9        | 28.1                                       | 52.9                                          | 8500*3      | 21      | 79        | 27                   | 32          | 27 | 0.8*3  | 1.4*3     | 400 | 48     | 3490  | 883        | 916  | Water defrost<br>height increased 65mm | 3000 | 620 | 500 |    |   |   |   |   |   |   |
| D 50                    | 219.2        | H                | 3               | 16-8           | 42.5        | 32.5                                       | 70.6                                          | 8500*3      | 21      | 79        | 27                   | 32          | 27 | 0.8*3  | 1.4*3     | 400 | 48     | 3490  | 993        | 916  |                                        | 3000 | 730 | 500 |    |   |   |   |   |   |   |
| D 71                    | 295.2        | H                | 3               | 16-8           | 64          | 54.1                                       | 85.7                                          | 17000*3     | 30      | 85        | 32                   | 38          | 27 | 1.8*3  | 2.9*3     | 400 | 2-48   | 4390  | 1067       | 1136 |                                        | 3900 | 700 | 800 |    |   |   |   |   |   |   |
| D 71                    | 357.4        | H                | 3               | 16-8           | 81.3        | 64                                         | 114.3                                         | 17000*3     | 30      | 85        | 32                   | 38          | 27 | 1.8*3  | 2.9*3     | 400 | 2-48   | 4390  | 1177       | 1136 |                                        | 3900 | 810 | 800 |    |   |   |   |   |   |   |
| D 80                    | 436.9        | H                | 3               | 16-8           | 94.2        | 73.7                                       | 126.8                                         | 21000*3     | 41      | 80        | 32                   | 38          | 27 | 1.85*3 | 3.8*3     | 400 | 2-48   | 5290  | 1123       | 1356 |                                        | 4800 | 740 | 800 |    |   |   |   |   |   |   |
| D 80                    | 528.8        | H                | 3               | 16-8           | 111.5       | 86.9                                       | 169.1                                         | 21000*3     | 41      | 80        | 32                   | 38          | 27 | 1.85*3 | 3.8*3     | 400 | 2-48   | 5290  | 1233       | 1356 |                                        | 4800 | 850 | 800 |    |   |   |   |   |   |   |



## DATA AND DRAWING (FOUR FANS)

| suspended ceiling style | fan diameter | exchange surface | hot gas defrost | number of fans | fin spacing | nom. Capacity CO2                           |                                                |       |         | tube volume | airflow | air throw | noise pressure level | Connections |       |       | Fans 50Hz |      |      | drain | Dimensions |                                        |      |     |     |   |   |   |   |   |   |
|-------------------------|--------------|------------------|-----------------|----------------|-------------|---------------------------------------------|------------------------------------------------|-------|---------|-------------|---------|-----------|----------------------|-------------|-------|-------|-----------|------|------|-------|------------|----------------------------------------|------|-----|-----|---|---|---|---|---|---|
|                         |              |                  |                 |                |             | DT1=8K° RH85%<br>Air on=0°C<br>Tevap.= -8°C | DT1=7K° RH95%<br>Air on=-18°C<br>Tevap.= -25°C | kW    | kW      |             |         |           |                      | dm³         | m³/h  | m     | dB (A)    | mm   | mm   |       | mm         | kW                                     | A    | V   | mm  | L | B | H | E | F | A |
|                         |              |                  |                 |                |             |                                             |                                                |       |         |             |         |           |                      |             |       |       |           |      |      |       |            |                                        |      |     |     |   |   |   |   |   |   |
|                         | dm           | m²               |                 |                | mm          | kW                                          | kW                                             | dm³   | m³/h    | m           | dB (A)  | mm        | mm                   | mm          | kW    | A     | V         | mm   | mm   |       |            |                                        |      |     |     |   |   |   |   |   |   |
| D 50                    | 369.1        | H                | 4               | 4              |             | 62.1                                        | 48.7                                           | 46.9  | 8500*4  | 21          | 79      | 27        | 32                   | 27          | 0.8*4 | 1.4*4 | 400       | 2-48 | 4490 | 773   | 916        | Water defrost<br>height increased 65mm | 4000 | 510 | 500 |   |   |   |   |   |   |
| D 50                    | 553.6        | H                | 4               | 4              |             | 81.9                                        | 63.5                                           | 62    | 8500*4  | 21          | 79      | 32        | 38                   | 27          | 0.8*4 | 1.4*4 | 400       | 2-48 | 4490 | 883   | 916        |                                        | 4000 | 620 | 500 |   |   |   |   |   |   |
| D 50                    | 738.2        | H                | 4               | 4              |             | 96.2                                        | 73.9                                           | 71.2  | 8500*4  | 21          | 79      | 32        | 38                   | 27          | 0.8*4 | 1.4*4 | 400       | 2-48 | 4490 | 993   | 916        |                                        | 4000 | 730 | 500 |   |   |   |   |   |   |
| D 71                    | 601.4        | H                | 4               | 4              |             | 109.8                                       | 87                                             | 76.4  | 17000*4 | 30          | 85      | 32        | 38                   | 27          | 1.8*4 | 2.9*4 | 400       | 2-48 | 5690 | 957   | 1136       |                                        | 5200 | 590 | 800 |   |   |   |   |   |   |
| D 71                    | 902.1        | H                | 4               | 4              |             | 147.4                                       | 115.4                                          | 114.6 | 17000*4 | 30          | 85      | 32        | 38                   | 27          | 1.8*4 | 2.9*4 | 400       | 2-48 | 5690 | 1067  | 1136       |                                        | 5200 | 700 | 800 |   |   |   |   |   |   |
| D 71                    | 1202.8       | H                | 4               | 4              |             | 175.7                                       | 136.4                                          | 152.8 | 17000*4 | 30          | 85      | 32        | 38                   | 27          | 1.8*4 | 2.9*4 | 400       | 2-48 | 5690 | 1177  | 1136       | 5200                                   | 810  | 800 |     |   |   |   |   |   |   |
| D 50                    | 216.6        | H                | 4               | 7              |             | 43.5                                        | 34.4                                           | 46.9  | 8500*4  | 21          | 79      | 27        | 32                   | 27          | 0.8*4 | 1.4*4 | 400       | 2-48 | 4490 | 773   | 916        | Water defrost<br>height increased 65mm | 4000 | 510 | 500 |   |   |   |   |   |   |
| D 50                    | 324.8        | H                | 4               | 7              |             | 60.4                                        | 47.4                                           | 62    | 8500*4  | 21          | 79      | 32        | 38                   | 27          | 0.8*4 | 1.4*4 | 400       | 2-48 | 4490 | 883   | 916        |                                        | 4000 | 620 | 500 |   |   |   |   |   |   |
| D 50                    | 433.2        | H                | 4               | 7              |             | 74.3                                        | 57.8                                           | 71.2  | 8500*4  | 21          | 79      | 32        | 38                   | 27          | 0.8*4 | 1.4*4 | 400       | 2-48 | 4490 | 993   | 916        |                                        | 4000 | 730 | 500 |   |   |   |   |   |   |
| D 71                    | 352.8        | H                | 4               | 7              |             | 79.7                                        | 63.1                                           | 76.4  | 17000*4 | 30          | 85      | 32        | 38                   | 27          | 1.8*4 | 2.9*4 | 400       | 2-48 | 5690 | 957   | 1136       |                                        | 5200 | 590 | 800 |   |   |   |   |   |   |
| D 71                    | 529.3        | H                | 4               | 7              |             | 112                                         | 88                                             | 114.6 | 17000*4 | 30          | 85      | 32        | 38                   | 27          | 1.8*4 | 2.9*4 | 400       | 2-48 | 5690 | 1067  | 1136       |                                        | 5200 | 700 | 800 |   |   |   |   |   |   |
| D 71                    | 705.7        | H                | 4               | 7              |             | 139.1                                       | 108.5                                          | 152.8 | 17000*4 | 30          | 85      | 32        | 38                   | 27          | 1.8*4 | 2.9*4 | 400       | 2-48 | 5690 | 1177  | 1136       | 5200                                   | 810  | 800 |     |   |   |   |   |   |   |
| D 50                    | 155.6        | H                | 4               | 10             |             | 34.1                                        | 27                                             | 46.9  | 8500*4  | 21          | 79      | 27        | 32                   | 27          | 0.8*4 | 1.4*4 | 400       | 2-48 | 4490 | 773   | 916        | Water defrost<br>height increased 65mm | 4000 | 510 | 500 |   |   |   |   |   |   |
| D 50                    | 233.4        | H                | 4               | 10             |             | 48.5                                        | 38.2                                           | 62    | 8500*4  | 21          | 79      | 32        | 38                   | 27          | 0.8*4 | 1.4*4 | 400       | 2-48 | 4490 | 883   | 916        |                                        | 4000 | 620 | 500 |   |   |   |   |   |   |
| D 50                    | 311.2        | H                | 4               | 10             |             | 61                                          | 47.7                                           | 71.2  | 8500*4  | 21          | 79      | 32        | 38                   | 27          | 0.8*4 | 1.4*4 | 400       | 2-48 | 4490 | 993   | 916        |                                        | 4000 | 730 | 500 |   |   |   |   |   |   |
| D 71                    | 253.4        | H                | 4               | 10             |             | 62.9                                        | 50                                             | 76.4  | 17000*4 | 30          | 85      | 32        | 38                   | 27          | 1.8*4 | 2.9*4 | 400       | 2-48 | 5690 | 957   | 1136       |                                        | 5200 | 590 | 800 |   |   |   |   |   |   |
| D 71                    | 380.1        | H                | 4               | 10             |             | 90.4                                        | 71.3                                           | 114.6 | 17000*4 | 30          | 85      | 32        | 38                   | 27          | 1.8*4 | 2.9*4 | 400       | 2-48 | 5690 | 1067  | 1136       |                                        | 5200 | 700 | 800 |   |   |   |   |   |   |
| D 71                    | 506.9        | H                | 4               | 10             |             | 114.5                                       | 89.7                                           | 152.8 | 17000*4 | 30          | 85      | 32        | 38                   | 27          | 1.8*4 | 2.9*4 | 400       | 2-48 | 5690 | 1177  | 1136       | 5200                                   | 810  | 800 |     |   |   |   |   |   |   |
| D 50                    | 242.3        | H                | 4               | 16-8           |             | 49.8                                        | 39.2                                           | 62    | 8500*4  | 21          | 79      | 32        | 38                   | 27          | 0.8*4 | 1.4*4 | 400       | 2-48 | 4490 | 883   | 916        |                                        | 4000 | 620 | 500 |   |   |   |   |   |   |
| D 50                    | 293.3        | H                | 4               | 16-8           |             | 58.8                                        | 46                                             | 71.2  | 8500*4  | 21          | 79      | 32        | 38                   | 27          | 0.8*4 | 1.4*4 | 400       | 2-48 | 4490 | 993   | 916        |                                        | 4000 | 730 | 500 |   |   |   |   |   |   |
| D 71                    | 394.6        | H                | 4               | 16-8           |             | 92.7                                        | 73                                             | 114.6 | 17000*4 | 30          | 85      | 32        | 38                   | 27          | 1.8*4 | 2.9*4 | 400       | 2-48 | 5690 | 1067  | 1136       |                                        | 5200 | 700 | 800 |   |   |   |   |   |   |
| D 71                    | 477.7        | H                | 4               | 16-8           |             | 110.3                                       | 86.5                                           | 152.8 | 17000*4 | 30          | 85      | 32        | 38                   | 27          | 1.8*4 | 2.9*4 | 400       | 2-48 | 5690 | 1177  | 1136       |                                        | 5200 | 810 | 800 |   |   |   |   |   |   |



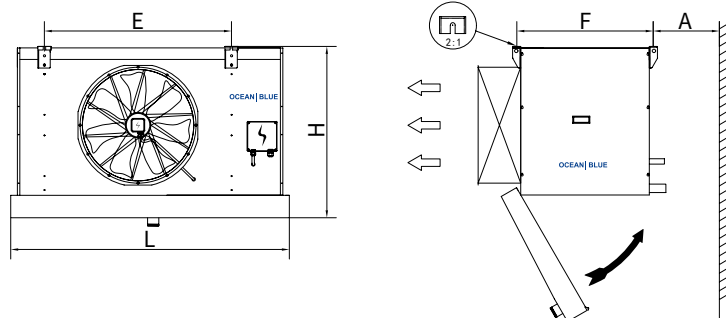
## FREON INDUSTRIAL EVAPORATORS

Tube diameter: (φ15.88mm or 5/8 inch) Thickness:0.45mm  
Fin thickness:0.25mm



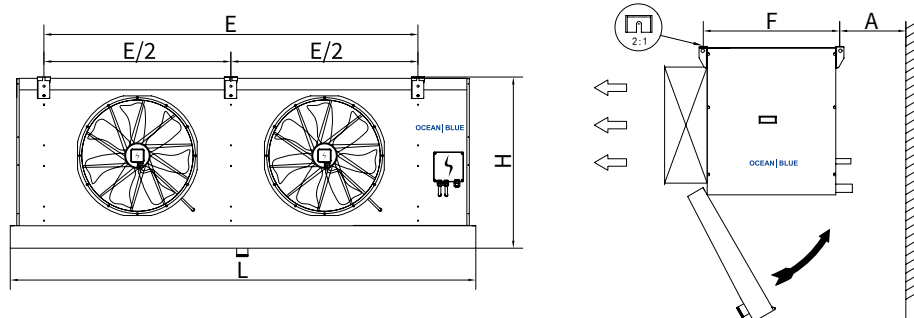
## DATA AND DRAWING (ONE FAN)

| suspended ceiling style | fan diameter | exchange surface | hot gas defrost | number of fans | fin spacing | nom. Capacity R507                          |                                                |       | tube volume | airflow | air throw | noise pressure level | Connections |          | Fans 50Hz |              |        | Electric defrosting |             |      | drain | Dimensions                             |      |     |     |   |  |
|-------------------------|--------------|------------------|-----------------|----------------|-------------|---------------------------------------------|------------------------------------------------|-------|-------------|---------|-----------|----------------------|-------------|----------|-----------|--------------|--------|---------------------|-------------|------|-------|----------------------------------------|------|-----|-----|---|--|
|                         |              |                  |                 |                |             | DT1=8K° RH85%<br>Air on=0°C<br>Tevap.= -8°C | DT1=7K° RH95%<br>Air on=-18°C<br>Tevap.= -25°C | inlet |             |         |           |                      | outlet      | capacity | current   | current type | coil   | drip tray           | total power | L    |       | B                                      | H    | E   | F   | A |  |
|                         |              |                  |                 |                |             |                                             |                                                |       |             |         |           |                      |             |          |           |              |        |                     |             |      |       |                                        |      |     |     |   |  |
|                         | dm           | m²               |                 |                | mm          | kW                                          | kW                                             | dm³   | m³/h        | m       | dB(A)     | mm                   | mm          | kW       | A         | V            | kW     | kW                  | kW          | mm   | mm    |                                        |      |     |     |   |  |
| D 50                    | 89.5         | E 1              | 4               | 10.9           | 8.4         | 11.9                                        | 8500                                           | 21    | 79          | 22      | 35        | 0.8                  | 1.4         | 400      | 2.592     | 0.864        | 3.456  | 48                  | 1490        | 773  | 916   | Water defrost<br>height increased 65mm | 1000 | 510 | 500 |   |  |
| D 50                    | 134.2        | E 1              | 4               | 15             | 11.6        | 17.9                                        | 8500                                           | 21    | 79          | 22      | 35        | 0.8                  | 1.4         | 400      | 4.32      | 1.728        | 6.048  | 48                  | 1490        | 883  | 916   |                                        | 1000 | 620 | 500 |   |  |
| D 50                    | 179          | E 1              | 4               | 18.3           | 13.7        | 23.9                                        | 8500                                           | 21    | 79          | 22      | 35        | 0.8                  | 1.4         | 400      | 5.184     | 1.728        | 6.912  | 48                  | 1490        | 993  | 916   |                                        | 1000 | 730 | 500 |   |  |
| D 71                    | 146.8        | E 1              | 4               | 19.7           | 15.8        | 19.6                                        | 17000                                          | 30    | 85          | 22      | 42        | 1.8                  | 2.9         | 400      | 4.536     | 1.134        | 5.67   | 48                  | 1790        | 957  | 1136  |                                        | 1300 | 590 | 800 |   |  |
| D 71                    | 220.3        | E 1              | 4               | 25.7           | 19          | 29.4                                        | 17000                                          | 30    | 85          | 22      | 42        | 1.8                  | 2.9         | 400      | 6.804     | 2.268        | 9.072  | 48                  | 1790        | 1067 | 1136  |                                        | 1300 | 700 | 800 |   |  |
| D 71                    | 293.7        | E 1              | 4               | 32.7           | 24.8        | 39.2                                        | 17000                                          | 30    | 85          | 22      | 42        | 1.8                  | 2.9         | 400      | 9.072     | 2.268        | 11.34  | 48                  | 1790        | 1177 | 1136  |                                        | 1300 | 810 | 800 |   |  |
| D 80                    | 218.2        | E 1              | 4               | 27.3           | 21.8        | 29.1                                        | 21000                                          | 41    | 80          | 22      | 42        | 1.85                 | 3.8         | 400      | 7.02      | 1.404        | 8.424  | 48                  | 2090        | 1013 | 1356  |                                        | 1600 | 630 | 800 |   |  |
| D 80                    | 327.3        | E 1              | 4               | 36             | 26.6        | 43.7                                        | 21000                                          | 41    | 80          | 28      | 54        | 1.85                 | 3.8         | 400      | 9.828     | 2.808        | 12.636 | 48                  | 2090        | 1123 | 1356  |                                        | 1600 | 740 | 800 |   |  |
| D 80                    | 436.4        | E 1              | 4               | 45.3           | 34.4        | 58.2                                        | 21000                                          | 41    | 80          | 28      | 54        | 1.85                 | 3.8         | 400      | 14.04     | 2.808        | 16.848 | 48                  | 2090        | 1233 | 1356  | 1600                                   | 850  | 800 |     |   |  |
| D 50                    | 52.5         | E 1              | 7               | 8.1            | 6.4         | 11.9                                        | 8500                                           | 21    | 79          | 22      | 28        | 0.8                  | 1.4         | 400      | 2.592     | 0.864        | 3.456  | 48                  | 1490        | 773  | 916   | Water defrost<br>height increased 65mm | 1000 | 510 | 500 |   |  |
| D 50                    | 78.8         | E 1              | 7               | 11             | 8.1         | 17.9                                        | 8500                                           | 21    | 79          | 22      | 28        | 0.8                  | 1.4         | 400      | 4.32      | 1.728        | 6.048  | 48                  | 1490        | 883  | 916   |                                        | 1000 | 620 | 500 |   |  |
| D 50                    | 105          | E 1              | 7               | 14.3           | 10.8        | 23.9                                        | 8500                                           | 21    | 79          | 22      | 35        | 0.8                  | 1.4         | 400      | 5.184     | 1.728        | 6.912  | 48                  | 1490        | 993  | 916   |                                        | 1000 | 730 | 500 |   |  |
| D 71                    | 86.2         | E 1              | 7               | 14.1           | 11.1        | 19.6                                        | 17000                                          | 30    | 85          | 22      | 42        | 1.8                  | 2.9         | 400      | 4.536     | 1.134        | 5.67   | 48                  | 1790        | 957  | 1136  |                                        | 1300 | 590 | 800 |   |  |
| S 71                    | 129.2        | E 1              | 7               | 20.5           | 16.2        | 29.4                                        | 17000                                          | 30    | 85          | 22      | 42        | 1.8                  | 2.9         | 400      | 6.804     | 2.268        | 9.072  | 48                  | 1790        | 1067 | 1136  |                                        | 1300 | 700 | 800 |   |  |
| D 71                    | 172.3        | E 1              | 7               | 25.4           | 19.1        | 39.2                                        | 17000                                          | 30    | 85          | 22      | 42        | 1.8                  | 2.9         | 400      | 9.072     | 2.268        | 11.34  | 48                  | 1790        | 1177 | 1136  |                                        | 1300 | 810 | 800 |   |  |
| D 80                    | 128          | E 1              | 7               | 20             | 15.3        | 29.1                                        | 21000                                          | 41    | 80          | 22      | 54        | 1.85                 | 3.8         | 400      | 7.02      | 1.404        | 8.424  | 48                  | 2090        | 1013 | 1356  |                                        | 1600 | 630 | 800 |   |  |
| D 80                    | 192          | E 1              | 7               | 28.3           | 21.5        | 43.7                                        | 21000                                          | 41    | 80          | 22      | 54        | 1.85                 | 3.8         | 400      | 9.828     | 2.808        | 12.636 | 48                  | 2090        | 1123 | 1356  |                                        | 1600 | 740 | 800 |   |  |
| D 80                    | 256          | E 1              | 7               | 35.4           | 26.8        | 58.2                                        | 21000                                          | 41    | 80          | 28      | 54        | 1.85                 | 3.8         | 400      | 14.04     | 2.808        | 16.848 | 48                  | 2090        | 1233 | 1356  | 1600                                   | 850  | 800 |     |   |  |
| D 50                    | 37.7         | E 1              | 10              | 6.5            | 5           | 11.9                                        | 8500                                           | 21    | 79          | 22      | 28        | 0.8                  | 1.4         | 400      | 2.592     | 0.864        | 3.456  | 48                  | 1490        | 773  | 916   | Water defrost<br>height increased 65mm | 1000 | 510 | 500 |   |  |
| D 50                    | 56.6         | E 1              | 10              | 9.3            | 6.9         | 17.9                                        | 8500                                           | 21    | 79          | 22      | 28        | 0.8                  | 1.4         | 400      | 4.32      | 1.728        | 6.048  | 48                  | 1490        | 883  | 916   |                                        | 1000 | 620 | 500 |   |  |
| D 50                    | 75.4         | E 1              | 10              | 12             | 8.8         | 23.9                                        | 8500                                           | 21    | 79          | 22      | 35        | 0.8                  | 1.4         | 400      | 5.184     | 1.728        | 6.912  | 48                  | 1490        | 993  | 916   |                                        | 1000 | 730 | 500 |   |  |
| D 71                    | 61.9         | E 1              | 10              | 11.2           | 8.4         | 19.6                                        | 17000                                          | 30    | 85          | 22      | 35        | 1.8                  | 2.9         | 400      | 4.536     | 1.134        | 5.67   | 48                  | 1790        | 957  | 1136  |                                        | 1300 | 590 | 800 |   |  |
| D 71                    | 92.8         | E 1              | 10              | 16.8           | 12.9        | 29.4                                        | 17000                                          | 30    | 85          | 22      | 42        | 1.8                  | 2.9         | 400      | 6.804     | 2.268        | 9.072  | 48                  | 1790        | 1067 | 1136  |                                        | 1300 | 700 | 800 |   |  |
| D 71                    | 123.8        | E 1              | 10              | 21.6           | 16.5        | 39.2                                        | 17000                                          | 30    | 85          | 22      | 42        | 1.8                  | 2.9         | 400      | 9.072     | 2.268        | 11.34  | 48                  | 1790        | 1177 | 1136  |                                        | 1300 | 810 | 800 |   |  |
| D 80                    | 218.2        | E 1              | 10              | 16.3           | 12.7        | 29.1                                        | 21000                                          | 41    | 80          | 22      | 54        | 1.85                 | 3.8         | 400      | 7.02      | 1.404        | 8.424  | 48                  | 2090        | 1013 | 1356  |                                        | 1600 | 630 | 800 |   |  |
| D 80                    | 327.3        | E 1              | 10              | 23.5           | 18          | 43.7                                        | 21000                                          | 41    | 80          | 22      | 54        | 1.85                 | 3.8         | 400      | 9.828     | 2.808        | 12.636 | 48                  | 2090        | 1123 | 1356  |                                        | 1600 | 740 | 800 |   |  |
| D 80                    | 436.4        | E 1              | 10              | 29.9           | 22.6        | 58.2                                        | 21000                                          | 41    | 80          | 28      | 54        | 1.85                 | 3.8         | 400      | 14.04     | 2.808        | 16.848 | 48                  | 2090        | 1233 | 1356  | 1600                                   | 850  | 800 |     |   |  |
| D 50                    | 58.7         | E 1              | 16-8            | 9.5            | 7           | 17.9                                        | 8500                                           | 21    | 79          | 22      | 28        | 0.8                  | 1.4         | 400      | 4.32      | 1.728        | 6.048  | 48                  | 1490        | 883  | 916   | Water defrost<br>height increased 65mm | 1000 | 620 | 500 |   |  |
| D 50                    | 71.1         | E 1              | 16-8            | 11.5           | 8.5         | 23.9                                        | 8500                                           | 21    | 79          | 22      | 35        | 0.8                  | 1.4         | 400      | 5.184     | 1.728        | 6.912  | 48                  | 1490        | 993  | 916   |                                        | 1000 | 730 | 500 |   |  |
| D 71                    | 96.3         | E 1              | 16-8            | 17.3           | 13.4        | 29.4                                        | 17000                                          | 30    | 85          | 22      | 42        | 1.8                  | 2.9         | 400      | 6.804     | 2.268        | 9.072  | 48                  | 1790        | 1067 | 1136  |                                        | 1300 | 700 | 800 |   |  |
| D 71                    | 116.6        | E 1              | 16-8            | 20.9           | 16          | 39.2                                        | 17000                                          | 30    | 85          | 22      | 42        | 1.8                  | 2.9         | 400      | 9.072     | 2.268        | 11.34  | 48                  | 1790        | 1177 | 1136  |                                        | 1300 | 810 | 800 |   |  |
| D 80                    | 143.2        | E 1              | 16-8            | 24             | 18.5        | 43.7                                        | 21000                                          | 41    | 80          | 22      | 54        | 1.85                 | 3.8         | 400      | 9.828     | 2.808        | 12.636 | 48                  | 2090        | 1123 | 1356  |                                        | 1600 | 740 | 800 |   |  |
| D 80                    | 173.3        | E 1              | 16-8            | 28.9           | 21.8        | 58.2                                        | 21000                                          | 41    | 80          | 28      | 54        | 1.85                 | 3.8         | 400      | 14.04     | 2.808        | 16.848 | 48                  | 2090        | 1233 | 1356  |                                        | 1600 | 850 | 800 |   |  |



# DATA AND DRAWING (TWO FANS)

| suspended ceiling style | fan diameter | exchange surface | hot gas defrost | number of fans | fin spacing | nom. Capacity R507          |                               | tube volume | airflow | air throw | noise pressure level | Connections |        | Fans 50Hz |         |              | Electric defrosting |           |             | drain | Dimensions |      |                                        |      |     |     |
|-------------------------|--------------|------------------|-----------------|----------------|-------------|-----------------------------|-------------------------------|-------------|---------|-----------|----------------------|-------------|--------|-----------|---------|--------------|---------------------|-----------|-------------|-------|------------|------|----------------------------------------|------|-----|-----|
|                         |              |                  |                 |                |             | DT1=8K° RH85%<br>Air on=0°C | DT1=7K° RH95%<br>Air on=-18°C |             |         |           |                      | inlet       | outlet | capacity  | current | current type | coil                | drip tray | total power |       | L          | B    | H                                      | E    | F   | A   |
|                         | dm           | m²               |                 |                | mm          | kW                          | kW                            | dm³         | m³/h    | m         | dB(A)                | mm          | mm     | kW        | A       | V            | kW                  | kW        | kW          | mm    | mm         |      |                                        |      |     |     |
| D 50                    | 182.7        | H                | 2               | 4              | 22.5        | 17.3                        | 24.4                          | 8500*2      | 21      | 79        | 22                   | 42          | 0.8*2  | 1.4*2     | 400     | 5.292        | 1.764               | 7.056     | 48          | 2490  | 773        | 916  | Water defrost<br>height increased 65mm | 2000 | 510 | 500 |
| D 50                    | 274          | H                | 2               | 4              | 30.7        | 23.8                        | 36.6                          | 8500*2      | 21      | 79        | 22                   | 54          | 0.8*2  | 1.4*2     | 400     | 8.82         | 3.528               | 12.348    | 48          | 2490  | 883        | 916  |                                        | 2000 | 620 | 500 |
| D 50                    | 365.3        | H                | 2               | 4              | 37.4        | 28.1                        | 48.8                          | 8500*2      | 21      | 79        | 22                   | 54          | 0.8*2  | 1.4*2     | 400     | 10.584       | 3.528               | 14.112    | 48          | 2490  | 993        | 916  |                                        | 2000 | 730 | 500 |
| D 71                    | 298.4        | H                | 2               | 4              | 39.2        | 32                          | 39.8                          | 17000*2     | 30      | 85        | 22                   | 54          | 1.8*2  | 2.9*2     | 400     | 9.216        | 2.304               | 11.52     | 48          | 3090  | 957        | 1136 |                                        | 2600 | 590 | 800 |
| D 71                    | 447.6        | H                | 2               | 4              | 55.1        | 42.4                        | 59.7                          | 17000*2     | 30      | 85        | 28                   | 64          | 1.8*2  | 2.9*2     | 400     | 13.824       | 4.608               | 18.432    | 48          | 3090  | 1067       | 1136 |                                        | 2600 | 700 | 800 |
| D 71                    | 596.6        | H                | 2               | 4              | 66.4        | 50.4                        | 79.6                          | 17000*2     | 30      | 85        | 28                   | 64          | 1.8*2  | 2.9*2     | 400     | 18.432       | 4.608               | 23.04     | 48          | 3090  | 1177       | 1136 |                                        | 2600 | 810 | 800 |
| D 80                    | 441.9        | H                | 2               | 4              | 55.5        | 44.3                        | 59                            | 21000*2     | 41      | 80        | 28                   | 54          | 1.85*2 | 3.8*2     | 400     | 14.22        | 2.844               | 17.064    | 2-48        | 3690  | 1013       | 1356 |                                        | 3200 | 630 | 800 |
| D 80                    | 663          | H                | 2               | 4              | 73.2        | 54.1                        | 88.4                          | 21000*2     | 41      | 80        | 28                   | 64          | 1.85*2 | 3.8*2     | 400     | 19.908       | 5.688               | 25.596    | 2-48        | 3690  | 1123       | 1356 |                                        | 3200 | 740 | 800 |
| D 80                    | 884          | H                | 2               | 4              | 91.7        | 69.7                        | 117.9                         | 21000*2     | 41      | 80        | 35                   | 76          | 1.85*2 | 3.8*2     | 400     | 28.44        | 5.688               | 34.128    | 2-48        | 3690  | 1233       | 1356 |                                        | 3200 | 850 | 800 |
| D 50                    | 107.2        | H                | 2               | 7              | 16.6        | 13.1                        | 24.4                          | 8500*2      | 21      | 79        | 22                   | 42          | 0.8*2  | 1.4*2     | 400     | 5.292        | 1.764               | 7.056     | 48          | 2490  | 773        | 916  | Water defrost<br>height increased 65mm | 2000 | 510 | 500 |
| D 50                    | 160.8        | H                | 2               | 7              | 22.6        | 16.7                        | 36.6                          | 8500*2      | 21      | 79        | 22                   | 54          | 0.8*2  | 1.4*2     | 400     | 8.82         | 3.528               | 12.348    | 48          | 2490  | 883        | 916  |                                        | 2000 | 620 | 500 |
| D 50                    | 214.4        | H                | 2               | 7              | 29.3        | 22.2                        | 48.8                          | 8500*2      | 21      | 79        | 22                   | 54          | 0.8*2  | 1.4*2     | 400     | 10.584       | 3.528               | 14.112    | 48          | 2490  | 993        | 916  |                                        | 2000 | 730 | 500 |
| D 71                    | 175          | H                | 2               | 7              | 28.8        | 21.9                        | 39.8                          | 17000*2     | 30      | 85        | 22                   | 54          | 1.8*2  | 2.9*2     | 400     | 9.216        | 2.304               | 11.52     | 48          | 3090  | 957        | 1136 |                                        | 2600 | 590 | 800 |
| D 71                    | 262.6        | H                | 2               | 7              | 41.8        | 33                          | 59.7                          | 17000*2     | 30      | 85        | 28                   | 64          | 1.8*2  | 2.9*2     | 400     | 13.824       | 4.608               | 18.432    | 48          | 3090  | 1067       | 1136 |                                        | 2600 | 700 | 800 |
| D 71                    | 350.1        | H                | 2               | 7              | 52          | 39                          | 79.6                          | 17000*2     | 30      | 85        | 28                   | 64          | 1.8*2  | 2.9*2     | 400     | 18.432       | 4.608               | 23.04     | 48          | 3090  | 1177       | 1136 |                                        | 2600 | 810 | 800 |
| D 80                    | 259.3        | H                | 2               | 7              | 39.8        | 30.7                        | 59                            | 21000*2     | 41      | 80        | 28                   | 54          | 1.85*2 | 3.8*2     | 400     | 14.22        | 2.844               | 17.064    | 2-48        | 3690  | 1013       | 1356 |                                        | 3200 | 630 | 800 |
| D 80                    | 388.9        | H                | 2               | 7              | 57.5        | 43.8                        | 88.4                          | 21000*2     | 41      | 80        | 28                   | 64          | 1.85*2 | 3.8*2     | 400     | 19.908       | 5.688               | 25.596    | 2-48        | 3690  | 1123       | 1356 |                                        | 3200 | 740 | 800 |
| D 80                    | 518.6        | H                | 2               | 7              | 70.2        | 51.6                        | 117.9                         | 21000*2     | 41      | 80        | 35                   | 76          | 1.85*2 | 3.8*2     | 400     | 28.44        | 5.688               | 34.128    | 2-48        | 3690  | 1233       | 1356 |                                        | 3200 | 850 | 800 |
| D 50                    | 77           | H                | 2               | 10             | 13.4        | 10.3                        | 24.4                          | 8500*2      | 21      | 79        | 22                   | 42          | 0.8*2  | 1.4*2     | 400     | 5.292        | 1.764               | 7.056     | 48          | 2490  | 773        | 916  | Water defrost<br>height increased 65mm | 2000 | 510 | 500 |
| D 50                    | 115.5        | H                | 2               | 10             | 19.1        | 14.3                        | 36.6                          | 8500*2      | 21      | 79        | 22                   | 54          | 0.8*2  | 1.4*2     | 400     | 8.82         | 3.528               | 12.348    | 48          | 2490  | 883        | 916  |                                        | 2000 | 620 | 500 |
| D 50                    | 154          | H                | 2               | 10             | 24.4        | 18.1                        | 48.8                          | 8500*2      | 21      | 79        | 22                   | 54          | 0.8*2  | 1.4*2     | 400     | 10.584       | 3.528               | 14.112    | 48          | 2490  | 993        | 916  |                                        | 2000 | 730 | 500 |
| D 71                    | 125.7        | H                | 2               | 10             | 23.8        | 18.4                        | 39.8                          | 17000*2     | 30      | 85        | 22                   | 54          | 1.8*2  | 2.9*2     | 400     | 9.216        | 2.304               | 11.52     | 48          | 3090  | 957        | 1136 |                                        | 2600 | 590 | 800 |
| D 71                    | 188.6        | H                | 2               | 10             | 34.2        | 26.3                        | 59.7                          | 17000*2     | 30      | 85        | 28                   | 64          | 1.8*2  | 2.9*2     | 400     | 13.824       | 4.608               | 18.432    | 48          | 3090  | 1067       | 1136 |                                        | 2600 | 700 | 800 |
| D 71                    | 251.5        | H                | 2               | 10             | 44.1        | 33.6                        | 79.6                          | 17000*2     | 30      | 85        | 28                   | 64          | 1.8*2  | 2.9*2     | 400     | 18.432       | 4.608               | 23.04     | 48          | 3090  | 1177       | 1136 |                                        | 2600 | 810 | 800 |
| D 80                    | 186.2        | H                | 2               | 10             | 32          | 23.8                        | 59                            | 21000*2     | 41      | 80        | 28                   | 54          | 1.85*2 | 3.8*2     | 400     | 14.22        | 2.844               | 17.064    | 2-48        | 3690  | 1013       | 1356 |                                        | 3200 | 630 | 800 |
| D 80                    | 279.4        | H                | 2               | 10             | 47.7        | 36.7                        | 88.4                          | 21000*2     | 41      | 80        | 28                   | 64          | 1.85*2 | 3.8*2     | 400     | 19.908       | 5.688               | 25.596    | 2-48        | 3690  | 1123       | 1356 |                                        | 3200 | 740 | 800 |
| D 80                    | 372.5        | H                | 2               | 10             | 59          | 43.5                        | 117.9                         | 21000*2     | 41      | 80        | 35                   | 76          | 1.85*2 | 3.8*2     | 400     | 28.44        | 5.688               | 34.128    | 2-48        | 3690  | 1233       | 1356 |                                        | 3200 | 850 | 800 |
| D 50                    | 119.9        | H                | 2               | 16-8           | 19.5        | 14.5                        | 36.6                          | 8500*2      | 21      | 79        | 22                   | 54          | 0.8*2  | 1.4*2     | 400     | 8.82         | 3.528               | 12.348    | 48          | 2490  | 883        | 916  | Water defrost<br>height increased 65mm | 2000 | 620 | 500 |
| D 50                    | 145.1        | H                | 2               | 16-8           | 23.6        | 17.4                        | 48.8                          | 8500*2      | 21      | 79        | 22                   | 54          | 0.8*2  | 1.4*2     | 400     | 10.584       | 3.528               | 14.112    | 48          | 2490  | 993        | 916  |                                        | 2000 | 730 | 500 |
| D 71                    | 195.8        | H                | 2               | 16-8           | 35          | 27                          | 59.7                          | 17000*2     | 30      | 85        | 28                   | 64          | 1.8*2  | 2.9*2     | 400     | 13.824       | 4.608               | 18.432    | 48          | 3090  | 1067       | 1136 |                                        | 2600 | 700 | 800 |
| D 71                    | 237          | H                | 2               | 16-8           | 45          | 34.2                        | 79.6                          | 17000*2     | 30      | 85        | 28                   | 64          | 1.8*2  | 2.9*2     | 400     | 18.432       | 4.608               | 23.04     | 48          | 3090  | 1177       | 1136 |                                        | 2600 | 810 | 800 |
| D 80                    | 290          | H                | 2               | 16-8           | 48.8        | 37.6                        | 88.4                          | 21000*2     | 41      | 80        | 28                   | 64          | 1.85*2 | 3.8*2     | 400     | 19.908       | 5.688               | 25.596    | 2-48        | 3690  | 1123       | 1356 |                                        | 3200 | 740 | 800 |
| D 80                    | 351          | H                | 2               | 16-8           | 57.3        | 42.4                        | 117.9                         | 21000*2     | 41      | 80        | 35                   | 76          | 1.85*2 | 3.8*2     | 400     | 28.44        | 5.688               | 34.128    | 2-48        | 3690  | 1233       | 1356 |                                        | 3200 | 850 | 800 |



# DATA AND DRAWING (TWO FANS)

Unilab Coils 9.0 ev - build 230710|P

OCEAN | BLUE



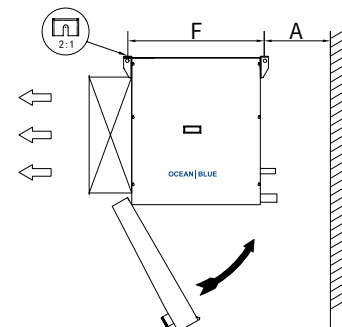
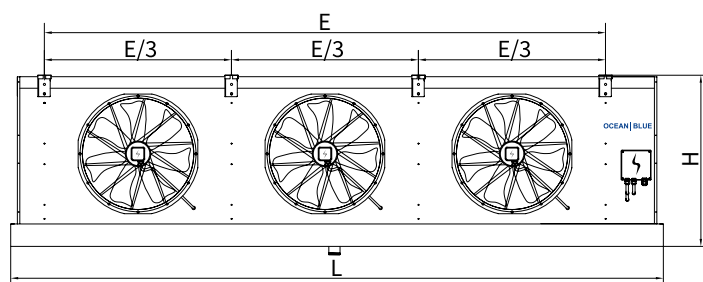
## DIRECT EXPANSION COIL - HL 16T 4NR 1960A 4P 4NC

|                                               |    |                |                    |    |                              |
|-----------------------------------------------|----|----------------|--------------------|----|------------------------------|
| Geometry                                      | HL | Coil Length    | 1960               | mm |                              |
| Nr of Tubes per Row                           | 16 | Fin Pitch      | 4.00               | mm |                              |
| Nr of Rows                                    | 4  | Nr of Circuits | 4                  |    | Tube Shape                   |
|                                               |    |                |                    |    | Circular                     |
| Capacity                                      |    |                | 22565              |    | W                            |
| Sensible Capacity                             |    |                | 17323              |    | W                            |
| Latent Capacity                               |    |                | 5242               |    | W                            |
| Sensible/Total Capacity Ratio                 |    |                | 0.7677             |    |                              |
| Quantity of Produced Water                    |    |                | 7.56               |    | kg/h                         |
| Exchange Surface                              |    |                | 182.76             |    | m <sup>2</sup>               |
| Global Exchange Coefficient                   |    |                | 13                 |    | W kg/(m <sup>2</sup> K)      |
| DHML                                          |    |                | 9.34               |    | kJ / kg                      |
| Fins Material / Tubes Material                |    |                | Aluminium / Copper |    |                              |
| Fin Thickness                                 |    |                | 0.2500             |    | mm                           |
| Coil Internal Volume                          |    |                | 24.4               |    | l                            |
| Tubes External Diameter                       |    |                | 16.6               |    | mm                           |
| Tubes Internal Diameter                       |    |                | 15.7               |    | mm                           |
| Number of skipped tube                        |    |                | 0                  |    |                              |
| <b>AIR SIDE</b>                               |    |                |                    |    |                              |
| Atmospheric Pressure / Altitude               |    |                | 1.01 / 0.00        |    | bar A / m                    |
| Volumetric Air Flow                           |    |                | 17000.0            |    | m <sup>3</sup> /h            |
| Mass Air Flow                                 |    |                | 21925              |    | kg/h                         |
| Face Velocity on the Coil                     |    |                | 2.74               |    | m/s                          |
| Inlet Air Density                             |    |                | 1.29               |    | kg/m <sup>3</sup>            |
| Inlet Air Temperature                         |    |                | 0.0                |    | °C                           |
| Inlet Air Relative Humidity                   |    |                | 85.00              |    | %                            |
| Inlet Air Specific Humidity                   |    |                | 3.20               |    | g/kg DA                      |
| Inlet Air Enthalpy                            |    |                | 8.02               |    | kJ / kg                      |
| Outlet Air Temperature                        |    |                | -2.8               |    | °C                           |
| Outlet Air Relative Humidity                  |    |                | 95.88              |    | %                            |
| Outlet Air Specific Humidity                  |    |                | 2.90               |    | g/kg DA                      |
| Outlet Air Enthalpy                           |    |                | 4.32               |    | kJ / kg                      |
| Pressure Drop                                 |    |                | 65                 |    | Pa                           |
| Partial Exchange Coefficient                  |    |                | 48                 |    | W/(m <sup>2</sup> K)         |
| Fouling Factor                                |    |                | 0.000000           |    | (m <sup>2</sup> K)/W         |
| <b>REFRIGERANT SIDE</b>                       |    |                |                    |    |                              |
| Fluid                                         |    |                |                    |    | R507A                        |
| Mass Fluid Flow / Mass velocity               |    |                | 581 / 208          |    | kg/h / kg/(m <sup>2</sup> s) |
| Fluid Velocity (Gaseous Phase / Liquid Phase) |    |                | 8.35 / 0.17        |    | m/s                          |
| Subcooling Degrees                            |    |                | 0.0                |    | K                            |
| Overheating Degrees                           |    |                | 5.0                |    | K                            |
| Evaporating Temperature                       |    |                | -8.0               |    | °C                           |
| Condensing Temperature                        |    |                | 16.1               |    | °C                           |
| Fluid Pressure Drop                           |    |                | 24.97              |    | kPa                          |
| Manifold Pressure Drop                        |    |                | 0                  |    | kPa                          |
| Total Pressure Drop Fluid Side                |    |                | 24.97              |    | kPa                          |
| Partial Exchange Coefficient                  |    |                | 1834               |    | W/(m <sup>2</sup> K)         |
| Fouling Factor                                |    |                | 0.000000           |    | (m <sup>2</sup> K)/W         |

\* The global exchange coefficient is calculated using the DHML, i.e. the logarithmic mean enthalpy difference.

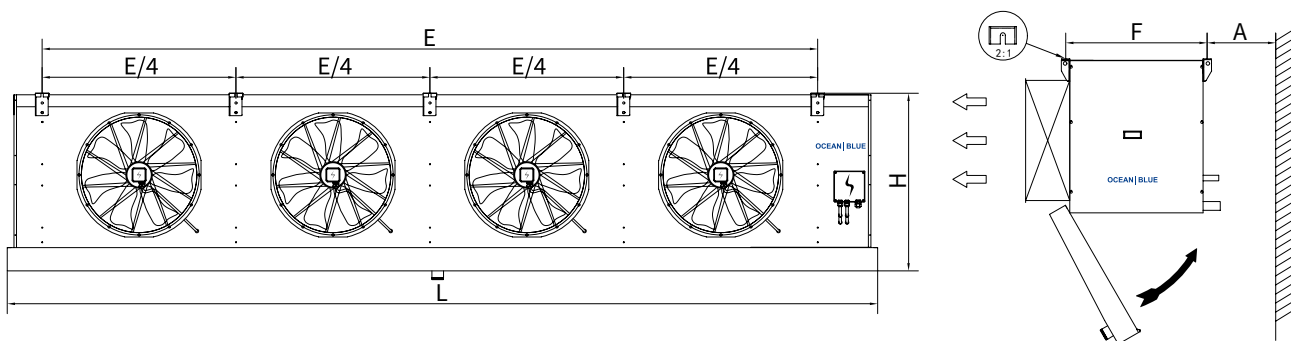
# DATA AND DRAWING (THREE FANS)

| suspended ceiling style | fan diameter | exchange surface | hot gas defrost | number of fans | fin spacing | nom. Capacity R507                        |                                              |     |      | tube volume | airflow | air throw | noise pressure level | Connections |        | Fans 50Hz |        |          | Electric defrosting |              |      | drain                                  | Dimensions |             |     |   |   |   |
|-------------------------|--------------|------------------|-----------------|----------------|-------------|-------------------------------------------|----------------------------------------------|-----|------|-------------|---------|-----------|----------------------|-------------|--------|-----------|--------|----------|---------------------|--------------|------|----------------------------------------|------------|-------------|-----|---|---|---|
|                         |              |                  |                 |                |             | DT1=8K° RH85%<br>Air on=0°C<br>Tevap=-8°C | DT1=7K° RH95%<br>Air on=-18°C<br>Tevap=-25°C | dm³ | m³/h |             |         |           |                      | m           | dB(A)  | inlet     | outlet | capacity | current             | current type | coil |                                        | drip tray  | total power | L   | B | H | E |
|                         | dm           | m²               |                 |                | mm          | kW                                        | kW                                           | dm³ | m³/h | m           | dB(A)   | mm        | mm                   | kW          | A      | V         | kW     | kW       | kW                  | mm           | mm   |                                        |            |             |     |   |   |   |
| D 50                    | 275.9        | E 3              | 4               | 34.1           | 27.4        | 36.8                                      | 8500*3                                       | 21  | 79   | 22          | 54      | 0.8*3     | 1.4*3                | 400         | 7.992  | 2.664     | 10.656 | 48       | 3490                | 773          | 916  | Water defrost<br>height increased 65mm | 3000       | 510         | 500 |   |   |   |
| D 50                    | 413.8        | E 3              | 4               | 45.8           | 34.2        | 55.2                                      | 8500*3                                       | 21  | 79   | 28          | 64      | 0.8*3     | 1.4*3                | 400         | 13.32  | 5.328     | 18.648 | 48       | 3490                | 883          | 916  |                                        | 3000       | 620         | 500 |   |   |   |
| D 50                    | 551.8        | E 3              | 4               | 56.2           | 42.1        | 73.6                                      | 8500*3                                       | 21  | 79   | 28          | 64      | 0.8*3     | 1.4*3                | 400         | 15.984 | 5.328     | 21.312 | 48       | 3490                | 993          | 916  |                                        | 3000       | 730         | 500 |   |   |   |
| D 71                    | 449.9        | E 3              | 4               | 60.2           | 46.9        | 60                                        | 17000*3                                      | 30  | 85   | 28          | 64      | 1.8*3     | 2.9*3                | 400         | 13.896 | 3.474     | 17.37  | 2-48     | 4390                | 957          | 1136 |                                        | 3900       | 590         | 800 |   |   |   |
| D 71                    | 674.8        | E 3              | 4               | 82.8           | 66.3        | 90                                        | 17000*3                                      | 30  | 85   | 28          | 64      | 1.8*3     | 2.9*3                | 400         | 20.844 | 6.948     | 27.792 | 2-48     | 4390                | 1067         | 1136 |                                        | 3900       | 700         | 800 |   |   |   |
| D 71                    | 899.8        | E 3              | 4               | 102.2          | 77.7        | 120                                       | 17000*3                                      | 30  | 85   | 35          | 76      | 1.8*3     | 2.9*3                | 400         | 27.792 | 6.948     | 34.74  | 2-48     | 4390                | 1177         | 1136 |                                        | 3900       | 810         | 800 |   |   |   |
| D 80                    | 665.7        | E 3              | 4               | 80.6           | 62.8        | 88.8                                      | 21000*3                                      | 41  | 80   | 35          | 76      | 1.85*3    | 3.8*3                | 400         | 21.42  | 4.284     | 25.704 | 2-48     | 5290                | 1013         | 1356 |                                        | 4800       | 630         | 800 |   |   |   |
| D 80                    | 998.6        | E 3              | 4               | 114.4          | 88.4        | 133.2                                     | 21000*3                                      | 41  | 80   | 35          | 76      | 1.85*3    | 3.8*3                | 400         | 29.988 | 8.568     | 38.556 | 2-48     | 5290                | 1123         | 1356 |                                        | 4800       | 740         | 800 |   |   |   |
| D 80                    | 1331.5       | E 3              | 4               | 134.9          | 98.9        | 177.6                                     | 21000*3                                      | 41  | 80   | 35          | 76      | 1.85*3    | 3.8*3                | 400         | 42.84  | 8.568     | 51.408 | 2-48     | 5290                | 1233         | 1356 | 4800                                   | 850        | 800         |     |   |   |   |
| D 50                    | 161.9        | E 3              | 7               | 24.2           | 18.3        | 36.8                                      | 8500*3                                       | 21  | 79   | 22          | 54      | 0.8*3     | 1.4*3                | 400         | 7.992  | 2.664     | 10.656 | 48       | 3490                | 773          | 916  | Water defrost<br>height increased 65mm | 3000       | 510         | 500 |   |   |   |
| D 50                    | 242.8        | E 3              | 7               | 35.5           | 27.3        | 55.2                                      | 8500*3                                       | 21  | 79   | 28          | 64      | 0.8*3     | 1.4*3                | 400         | 13.32  | 5.328     | 18.648 | 48       | 3490                | 883          | 916  |                                        | 3000       | 620         | 500 |   |   |   |
| D 50                    | 323.8        | E 3              | 7               | 42.8           | 31.3        | 73.6                                      | 8500*3                                       | 21  | 79   | 28          | 64      | 0.8*3     | 1.4*3                | 400         | 15.984 | 5.328     | 21.312 | 48       | 3490                | 993          | 916  |                                        | 3000       | 730         | 500 |   |   |   |
| D 71                    | 264          | E 3              | 7               | 44.3           | 35.4        | 60                                        | 17000*3                                      | 30  | 85   | 28          | 64      | 1.8*3     | 2.9*3                | 400         | 13.896 | 3.474     | 17.37  | 2-48     | 4390                | 957          | 1136 |                                        | 3900       | 590         | 800 |   |   |   |
| D 71                    | 395.9        | E 3              | 7               | 60.6           | 45.3        | 90                                        | 17000*3                                      | 30  | 85   | 28          | 64      | 1.8*3     | 2.9*3                | 400         | 20.844 | 6.948     | 27.792 | 2-48     | 4390                | 1067         | 1136 |                                        | 3900       | 700         | 800 |   |   |   |
| D 71                    | 527.9        | E 3              | 7               | 79.4           | 61.7        | 120                                       | 17000*3                                      | 30  | 85   | 35          | 76      | 1.8*3     | 2.9*3                | 400         | 27.792 | 6.948     | 34.74  | 2-48     | 4390                | 1177         | 1136 |                                        | 3900       | 810         | 800 |   |   |   |
| D 80                    | 390          | E 3              | 7               | 61.3           | 47.1        | 88.8                                      | 21000*3                                      | 41  | 80   | 35          | 76      | 1.85*3    | 3.8*3                | 400         | 21.42  | 4.284     | 25.704 | 2-48     | 5290                | 1013         | 1356 |                                        | 4800       | 630         | 800 |   |   |   |
| D 80                    | 585.9        | E 3              | 7               | 86             | 66          | 133.2                                     | 21000*3                                      | 41  | 80   | 35          | 76      | 1.85*3    | 3.8*3                | 400         | 29.988 | 8.568     | 38.556 | 2-48     | 5290                | 1123         | 1356 |                                        | 4800       | 740         | 800 |   |   |   |
| D 80                    | 781.2        | E 3              | 7               | 108.4          | 81.9        | 177.6                                     | 21000*3                                      | 41  | 80   | 35          | 76      | 1.85*3    | 3.8*3                | 400         | 42.84  | 8.568     | 51.408 | 2-48     | 5290                | 1233         | 1356 | 4800                                   | 850        | 800         |     |   |   |   |
| D 50                    | 116.3        | E 3              | 10              | 20.1           | 15.1        | 36.8                                      | 8500*3                                       | 21  | 79   | 22          | 54      | 0.8*3     | 1.4*3                | 400         | 7.992  | 2.664     | 10.656 | 48       | 3490                | 773          | 916  | Water defrost<br>height increased 65mm | 3000       | 510         | 500 |   |   |   |
| D 50                    | 174.5        | E 3              | 10              | 29.4           | 22.4        | 55.2                                      | 8500*3                                       | 21  | 79   | 28          | 64      | 0.8*3     | 1.4*3                | 400         | 13.32  | 5.328     | 18.648 | 48       | 3490                | 883          | 916  |                                        | 3000       | 620         | 500 |   |   |   |
| D 50                    | 232.6        | E 3              | 10              | 36.8           | 27.4        | 73.6                                      | 8500*3                                       | 21  | 79   | 28          | 64      | 0.8*3     | 1.4*3                | 400         | 15.984 | 5.328     | 21.312 | 48       | 3490                | 993          | 916  |                                        | 3000       | 730         | 500 |   |   |   |
| D 71                    | 189.6        | E 3              | 10              | 35.7           | 27.8        | 60                                        | 17000*3                                      | 30  | 85   | 28          | 64      | 1.8*3     | 2.9*3                | 400         | 13.896 | 3.474     | 17.37  | 2-48     | 4390                | 957          | 1136 |                                        | 3900       | 590         | 800 |   |   |   |
| D 71                    | 284.4        | E 3              | 10              | 51.2           | 38.6        | 90                                        | 17000*3                                      | 30  | 85   | 28          | 64      | 1.8*3     | 2.9*3                | 400         | 20.844 | 6.948     | 27.792 | 2-48     | 4390                | 1067         | 1136 |                                        | 3900       | 700         | 800 |   |   |   |
| D 71                    | 379.2        | E 3              | 10              | 65.8           | 49.9        | 120                                       | 17000*3                                      | 30  | 85   | 35          | 76      | 1.8*3     | 2.9*3                | 400         | 27.792 | 6.948     | 34.74  | 2-48     | 4390                | 1177         | 1136 |                                        | 3900       | 810         | 800 |   |   |   |
| D 80                    | 280.5        | E 3              | 10              | 50             | 38.9        | 88.8                                      | 21000*3                                      | 41  | 80   | 35          | 76      | 1.85*3    | 3.8*3                | 400         | 21.42  | 4.284     | 25.704 | 2-48     | 5290                | 1013         | 1356 |                                        | 4800       | 630         | 800 |   |   |   |
| D 80                    | 420.8        | E 3              | 10              | 70             | 51.9        | 133.2                                     | 21000*3                                      | 41  | 80   | 35          | 76      | 1.85*3    | 3.8*3                | 400         | 29.988 | 8.568     | 38.556 | 2-48     | 5290                | 1123         | 1356 |                                        | 4800       | 740         | 800 |   |   |   |
| D 80                    | 561.1        | E 3              | 10              | 91.4           | 69.2        | 177.6                                     | 21000*3                                      | 41  | 80   | 35          | 76      | 1.85*3    | 3.8*3                | 400         | 42.84  | 8.568     | 51.408 | 2-48     | 5290                | 1233         | 1356 | 4800                                   | 850        | 800         |     |   |   |   |
| D 50                    | 181.1        | E 3              | 16-8            | 30             | 23          | 55.2                                      | 8500*3                                       | 21  | 79   | 28          | 64      | 0.8*3     | 1.4*3                | 400         | 13.32  | 5.328     | 18.648 | 48       | 3490                | 883          | 916  | Water defrost<br>height increased 65mm | 3000       | 620         | 500 |   |   |   |
| D 50                    | 219.2        | E 3              | 16-8            | 35.7           | 26.6        | 73.6                                      | 8500*3                                       | 21  | 79   | 28          | 64      | 0.8*3     | 1.4*3                | 400         | 15.984 | 5.328     | 21.312 | 48       | 3490                | 993          | 916  |                                        | 3000       | 730         | 500 |   |   |   |
| D 71                    | 295.2        | E 3              | 16-8            | 52.3           | 39.3        | 90                                        | 17000*3                                      | 30  | 85   | 28          | 64      | 1.8*3     | 2.9*3                | 400         | 20.844 | 6.948     | 27.792 | 2-48     | 4390                | 1067         | 1136 |                                        | 3900       | 700         | 800 |   |   |   |
| D 71                    | 357.4        | E 3              | 16-8            | 63.5           | 47.9        | 120                                       | 17000*3                                      | 30  | 85   | 35          | 76      | 1.8*3     | 2.9*3                | 400         | 27.792 | 6.948     | 34.74  | 2-48     | 4390                | 1177         | 1136 |                                        | 3900       | 810         | 800 |   |   |   |
| D 80                    | 436.9        | E 3              | 16-8            | 71.7           | 53.4        | 133.2                                     | 21000*3                                      | 41  | 80   | 35          | 76      | 1.85*3    | 3.8*3                | 400         | 29.988 | 8.568     | 38.556 | 2-48     | 5290                | 1123         | 1356 |                                        | 4800       | 740         | 800 |   |   |   |
| D 80                    | 528.8        | E 3              | 16-8            | 88.4           | 66.7        | 177.6                                     | 21000*3                                      | 41  | 80   | 35          | 76      | 1.85*3    | 3.8*3                | 400         | 42.84  | 8.568     | 51.408 | 2-48     | 5290                | 1233         | 1356 |                                        | 4800       | 850         | 800 |   |   |   |



## DATA AND DRAWING (FOUR FANS)

| suspended ceiling style | fan diameter | exchange surface | hot gas defrost | number of fans | fin spacing | nom. Capacity R507                        |                                              |    |    | tube volume | airflow | air throw | noise pressure level | Connections |    | Fans 50Hz |    |    | Electric defrosting |    |    | drain | Dimensions |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
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|                         |              |                  |                 |                |             | DT1=8K° RH85%<br>Air on=0°C<br>Tevap=-8°C | DT1=7K° RH95%<br>Air on=-18°C<br>Tevap=-25°C | kW | kW |             |         |           |                      | kW          | kW | kW        | mm | mm | mm                  | mm | mm |       | mm         | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm |



## INDUSTRIAL REFRIGERATION AMMONIA/FREON/CO2



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