



# VOLCANO

HEATING UNIT  
2023



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# VOLCANO

## NEW HEATING UNITS RANGE



Volcano combines innovative technical solutions with a modern and functional design. We precisely engineer each component to achieve „The Function“, and we also strive for „The Form“, a form that is neglected on the segment.

We were capable of conceptualizing a diamond, simplicity, strength, and beauty were the key concepts that we used, allowing us to create a contemporary and functional cover design.

The Volcano is the 1st Engineer/Design Unit heater in the market with the IF design award in 2017

# VOLCANO VR4



**Up to 100kW**  
heating power

- » 4 rows heat exchanger
- » **ABS** casing is characterized by high mechanical strength
- » Durable colour thanks to **anti-UV** pigment mixture
- » Resistance to high temperatures
- » Volcanos are equipped with 1R, 2R, 3R or 4R coils heaters



**Cooling**  
mode

- » Dedicated drain pan
- » Unique design awarded with **IF Design award**
- » Failure-free proven by **3 year warranty**



**Highly effective**  
with heat pump

- » ECO FRIENDLY
- » Equipped with **EC motors**
- » Performance efficiency is guaranteed, even at low speeds
- » Volcano fan design + ECM can save up to 40% of energy





## Classics vs Modernity

All VOLCANO devices are available with a three-speed AC motor and electronically commutated drive EC.



## VOLCANO AC

### High quality and low price

- » mounting bracket included
- » high capacity of the device
- » reliable three-speed motor
- » three step fan speed control
- » quick assembly and intuitive connection
- » competitive price



## VOLCANO EC

### Convenience and energy savings

- » mounting bracket included
- » highly efficient EC motor
- » smooth fan speed control
- » up to 40% lower operating costs
- » possibility of direct connection to the BMS system
- » quiet running at high speeds
- » advance callendar options
- » up to 8 units connecion possibility

## Product range



| <i><b>VOLCANO</b></i>    | VR Mini   | VR Mini 3 | VR-D-Mini | VR1       | VR2       | VR3       | VR4       | VR-D      |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Type                     | AC/EC     | AC/EC     | AC/EC     | AC/EC     | AC/EC     | AC/EC     | AC/EC     | AC/EC     |
| Heating power range      | 3-20 kW   | 4-27 kW   | -         | 5-30 kW   | 8-50 kW   | 13-75 kW  | 10-90 kW  | -         |
| Nominal cooling power**  | 3,5 kW    | 5 kW      | -         | 4 kW      | 8 kW      | 12 kW     | 16 kW     | -         |
| Maximum air output       | 2100 m³/h | 2000 m³/h | 2330 m³/h | 5300 m³/h | 4850 m³/h | 5700 m³/h | 5300 m³/h | 6500 m³/h |
| Horizontal range (max.)  | 14 m      | 14 m      | 16 m      | 23 m      | 22 m      | 25 m      | 23 m      | 28 m      |
| Vertical range (max.)    | 8 m       | 8 m       | 10 m      | 11 m      | 11 m      | 12 m      | 11 m      | 15 m      |
| Electricity consumption* | 13-91 W   | 13-91 W   | 13-91 W   | 41-202 W  | 45-226 W  | 55-355 W  | 55-355 W  | 55-355 W  |

\* EC motor power for the above specified fan outputs.  
\*\* Power for chilled water 7/12°C and ambient temperature 25°C.

## Technical parameters

|                                           |      | VR Mini                                                                                         |               | VR Mini 3     |               | VR1           |               | VR2           |               | VR3           |               | VR4           |               | VR-D          |               | VR-D Mini     |               |
|-------------------------------------------|------|-------------------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Parameter                                 | Unit | AC                                                                                              | EC            | AC            | EC            | AC            | EC            | AC            | EC            | AC            | EC            | AC            | EC            | AC            | EC            | AC            | EC            |
| VTS article No.                           |      | 1-4-0101-0445                                                                                   | 1-4-0101-0455 | 1-4-0101-0625 | 1-4-0101-0624 | 1-4-0101-0446 | 1-4-0101-0442 | 1-4-0101-0447 | 1-4-0101-0443 | 1-4-0101-0448 | 1-4-0101-0444 | 1-4-0101-0627 | 1-4-0101-0626 | 1-4-0101-0449 | 1-4-0101-0450 | 1-4-0101-0506 | 1-4-0101-0498 |
| Number of heater rows                     | -    | 2                                                                                               |               | 3             |               | 1             |               | 2             |               | 3             |               | 4             |               | ---           |               | ---           |               |
| Maximum air output                        | m³/h | 2100                                                                                            |               | 2000          |               | 5300          |               | 4850          |               | 5700          |               | 5300          |               | 6500          |               | 2200          | 2330          |
| Heating power range                       | kW   | 3-20                                                                                            |               | 4-27          |               | 5-30          |               | 8-50          |               | 13-75         |               | 10-90         |               | ---           |               | ---           |               |
| Maximum temperature of the heating medium | °C   | 130                                                                                             |               |               |               |               |               |               |               |               |               | 100           |               | ---           |               | ---           |               |
| Maximum working pressure                  | MPa  | 1,6                                                                                             |               |               |               |               |               |               |               |               |               |               |               | ---           |               | ---           |               |
| Water capacity                            | dm³  | 1,12                                                                                            |               | 1,48          |               | 1,25          |               | 2,16          |               | 3,1           |               | 4,13          |               | ---           |               | ---           |               |
| Connection pipes diameter                 | "    | 3/4                                                                                             |               |               |               |               |               |               |               |               |               |               |               | ---           |               | ---           |               |
| Device weight (without water)             | kg   | 13                                                                                              | 14            | 14            | 15            | 21            | 21            | 21,5          | 21,5          | 25,5          | 24,5          | 27            | 26,5          | 18            | 15,5          | 10,6          | 8             |
| Power supply voltage                      | V/Hz | 1 ~ 230/50                                                                                      |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Motor power                               | kW   | 0,115                                                                                           | 0,095         | 0,115         | 0,095         | 0,28          | 0,25          | 0,28          | 0,25          | 0,45          | 0,37          | 0,45          | 0,37          | 0,45          | 0,37          | 0,115         | 0,095         |
| Rated current                             | A    | 0,53                                                                                            | 0,51          | 0,53          | 0,51          | 1,3           |               |               |               | 1,95          | 1,7           | 1,95          | 1,7           | 1,95          | 1,7           | 0,53          | 0,51          |
| Rated motor rotational speed              | rpm  | 1450                                                                                            | 1200          | 1450          | 1200          | 1380          | 1430          | 1380          | 1430          | 1380          | 1400          | 1380          | 1400          | 1380          | 1400          | 1450          | 1200          |
| Motor protection level                    | IP   | 54                                                                                              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Casing color palette                      |      | Front: RAL 9016 Traffic White, rear + console: RAL 7036 Platinum Gray, fan (EC): RAL 6038 Green |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |

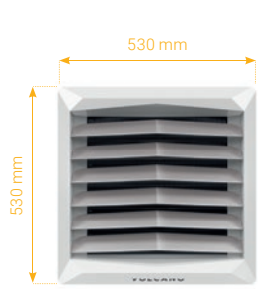
### PIPELINE DIAMETERS\*

|                                                | VR Mini               |                       | VR Mini 3             |                       | VR1                   |                       | VR2                   |                       | VR3                   |                       | VR4                   |                       |
|------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Number of heaters connected to the main line** | Max water flow [m³/h] | Pipeline diameter ["] | Max water flow [m³/h] | Pipeline diameter ["] | Max water flow [m³/h] | Pipeline diameter ["] | Max water flow [m³/h] | Pipeline diameter ["] | Max water flow [m³/h] | Pipeline diameter ["] | Max water flow [m³/h] | Pipeline diameter ["] |
| 1                                              | 0,9                   | 3/4                   | 1,4                   | 3/4                   | 1,3                   | 3/4                   | 2,2                   | 3/4                   | 3,3                   | 3/4                   | 5,0                   | 3/4                   |
| 2                                              | 1,8                   | 3/4                   | 2,7                   | 1                     | 2,6                   | 3/4                   | 4,4                   | 1                     | 6,6                   | 1 1/4                 | 9,9                   | 1 1/2                 |
| 3                                              | 2,7                   | 1                     | 4,1                   | 1                     | 3,9                   | 1                     | 6,6                   | 1 1/4                 | 9,9                   | 1 1/2                 | 14,9                  | 1 1/2                 |
| 4                                              | 3,6                   | 1                     | 5,4                   | 1                     | 5,2                   | 1                     | 8,8                   | 1 1/4                 | 13,2                  | 1 1/2                 | 19,8                  | 2                     |
| 5                                              | 4,5                   | 1                     | 6,8                   | 1 1/4                 | 6,5                   | 1 1/4                 | 11                    | 1 1/2                 | 16,5                  | 2                     | 24,8                  | 2                     |
| 6                                              | 5,4                   | 1 1/4                 | 8,1                   | 1 1/4                 | 7,8                   | 1 1/4                 | 13,2                  | 1 1/2                 | 19,8                  | 2                     | 29,7                  | 2 1/2                 |
| 7                                              | 6,3                   | 1 1/4                 | 9,5                   | 1 1/4                 | 9,1                   | 1 1/4                 | 15,4                  | 2                     | 23,1                  | 2 1/2                 | 34,7                  | 2 1/2                 |
| 8                                              | 7,2                   | 1 1/4                 | 10,8                  | 1 1/2                 | 10,4                  | 1 1/2                 | 17,6                  | 2                     | 26,4                  | 2 1/2                 | 39,6                  | 2 1/2                 |
| 9                                              | 8,1                   | 1 1/4                 | 12,2                  | 1 1/2                 | 11,7                  | 1 1/2                 | 19,8                  | 2                     | 29,7                  | 2 1/2                 | 44,6                  | 3                     |
| 10                                             | 9,0                   | 1 1/4                 | 13,5                  | 1 1/2                 | 13                    | 1 1/2                 | 22                    | 2 1/2                 | 33                    | 3                     | 49,5                  | 3                     |

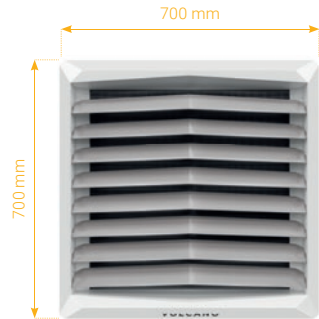
\* Pipeline diameters selected for maximum water flow rate up to 2,5 m/s  
\*\* Heaters connected successively to one main line

Device type series

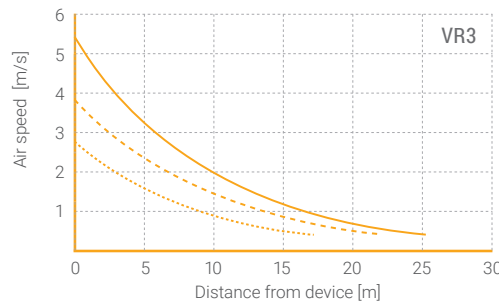
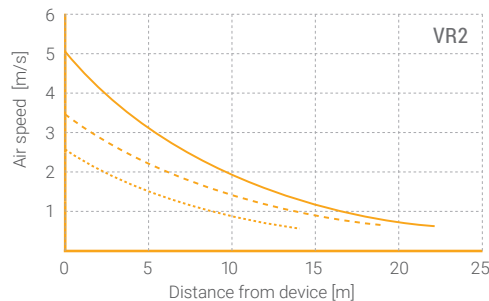
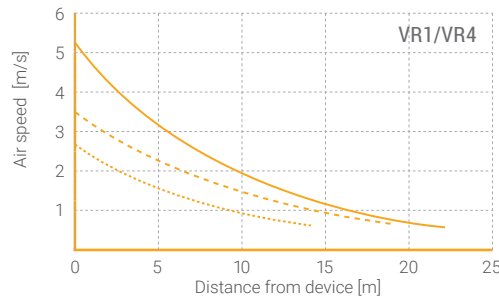
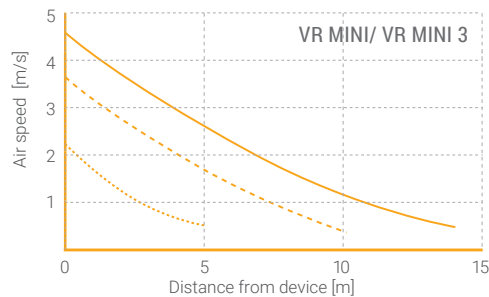
VR MINI  
VR MINI 3  
VR-D MINI



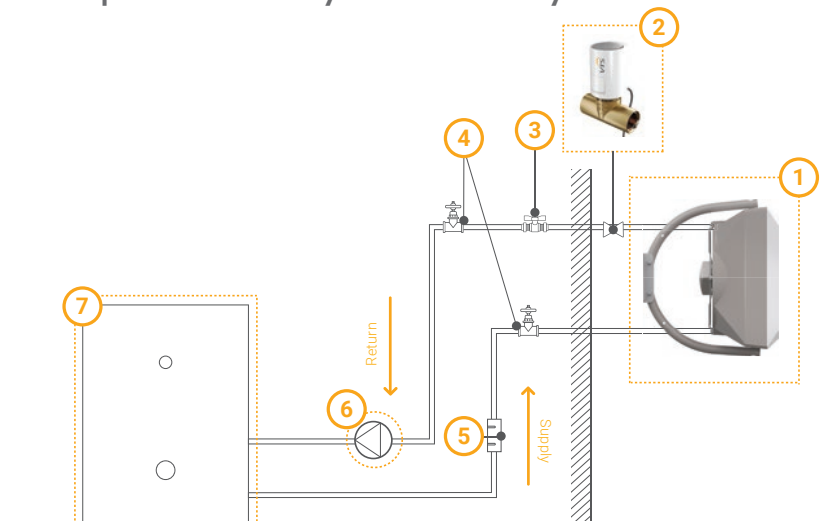
VR1  
VR2  
VR3  
VR4  
VR-D



Air speed in the distance function



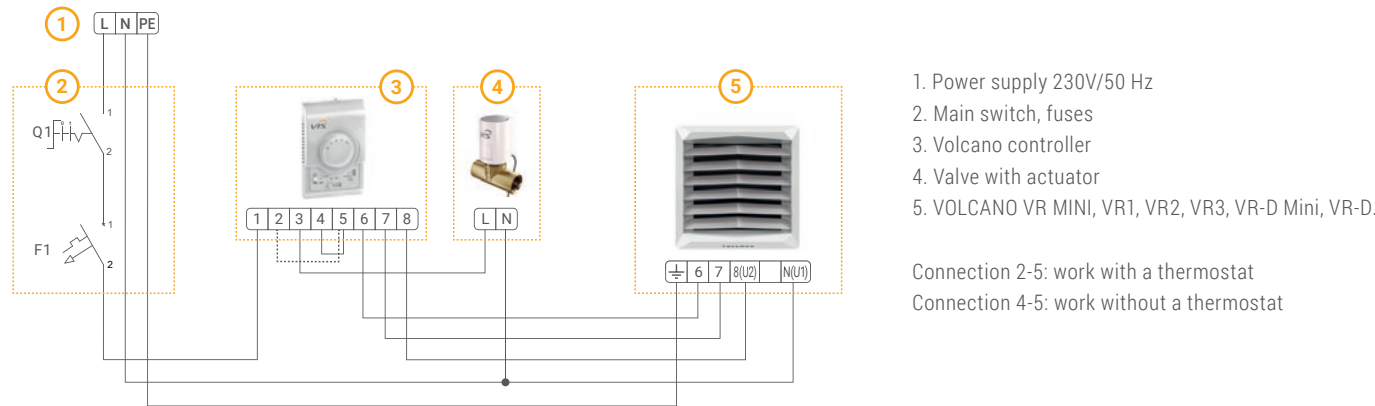
Example of a hydraulic system



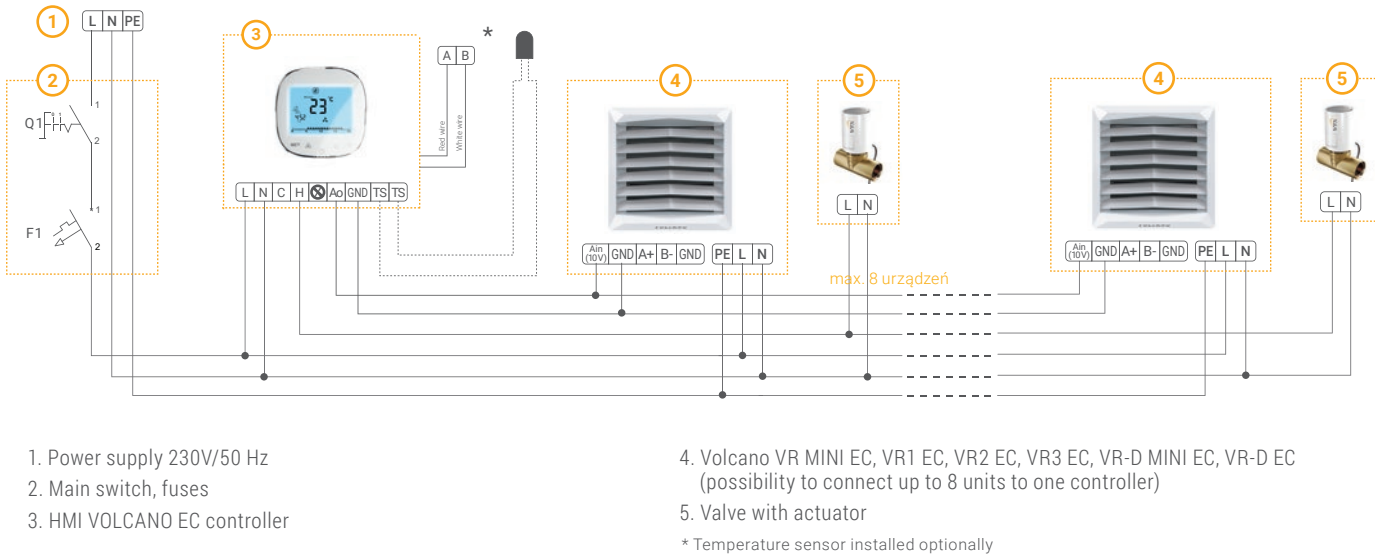
- 1. Unit heater
- 2. Valve with actuator
- 3. Vent valve
- 4. Cut-off valve
- 5. Filter
- 6. Circulation pump
- 7. Boiler

Example of a heating unit connection

AC MOTOR VERSION



EC MOTOR VERSION



VOLCANO VR-D

Destratifier - an easy way to save energy

VR-D or VR-Mini destratifier supports the air distribution in the given room. It directs the hot air, that naturally goes up, back down, by which it is lowering the demand for heat from other sources.

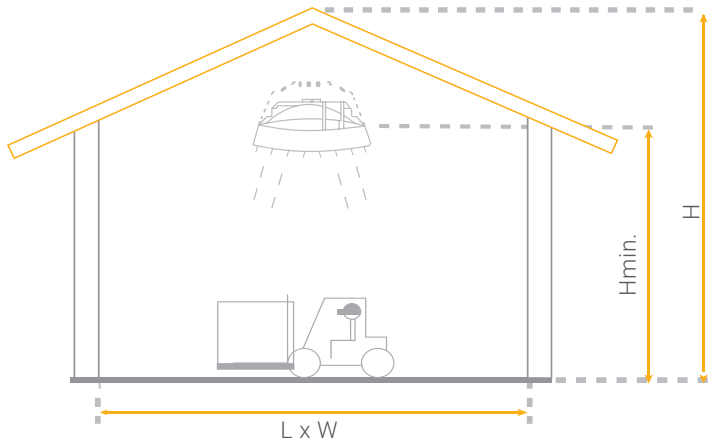
Selection method based on the room size

Assembly height should be no less than 3/4 of the height of the room, measuring from the floor up.

An example calculation of the minimal VOLCANO VR-D destratifier assembly height:  $H_{MIN} = \frac{3}{4} \times H$

In a room of H=12m, the minimal VOLCANO VR-D destratifier assembly height will be:  $H_{MIN} = \frac{3}{4} \times 12 \text{ m} = 9 \text{ m}$

The minimum number of destratifiers should be calculated in a way to allow for a 6-time exchange of the air over them in a period of one hour.



DESCRIPTION

H - height

L - length

W - width



Technical parameters

VOLCANO VR MINI

| FAN SPEED                               |       | III  |    | II   |    | I    |    |
|-----------------------------------------|-------|------|----|------|----|------|----|
|                                         |       | AC   | EC | AC   | EC | AC   | EC |
| Fan output                              | m³/h  | 2100 |    | 1650 |    | 1100 |    |
| Noise level for heaters with EC motors* | dB(A) | 52   | 50 | 42   | 40 | 29   | 27 |
| EC motor power**                        | W     | 115  | 95 | 68   | 56 | 48   | 39 |
| electricity consumption***              | W     | 112  | 91 | 73   | 32 | 53   | 13 |
| Horizontal range                        | m     | 14   |    | 8    |    | 5    |    |
| Vertical range                          | m     | 8    |    | 5    |    | 3    |    |

VOLCANO VR MINI 3

| FAN SPEED                               |       | III  |    | II   |    | I    |    |
|-----------------------------------------|-------|------|----|------|----|------|----|
|                                         |       | AC   | EC | AC   | EC | AC   | EC |
| Fan output                              | m³/h  | 2000 |    | 1550 |    | 1000 |    |
| Noise level for heaters with EC motors* | dB(A) | 52   | 50 | 41   | 39 | 29   | 27 |
| EC motor power**                        | W     | 115  | 95 | 68   | 56 | 48   | 39 |
| electricity consumption***              | W     | 112  | 91 | 73   | 32 | 53   | 13 |
| Horizontal range                        | m     | 14   |    | 8    |    | 5    |    |
| Vertical range                          | m     | 8    |    | 5    |    | 3    |    |

VOLCANO VR1

| FAN SPEED                               |       | III  |     | II   |     | I    |     |
|-----------------------------------------|-------|------|-----|------|-----|------|-----|
|                                         |       | AC   | EC  | AC   | EC  | AC   | EC  |
| Fan output                              | m³/h  | 5300 |     | 3900 |     | 2800 |     |
| Noise level for heaters with EC motors* | dB(A) | 56   | 54  | 51   | 49  | 40   | 38  |
| EC motor power**                        | W     | 280  | 250 | 220  | 190 | 190  | 162 |
| electricity consumption***              | W     | 280  | 202 | 220  | 75  | 190  | 41  |
| Horizontal range                        | m     | 23   |     | 20   |     | 15   |     |
| Vertical range                          | m     | 12   |     | 9    |     | 7    |     |

VOLCANO VR2

| FAN SPEED                               |       | III  |     | II   |     | I    |     |
|-----------------------------------------|-------|------|-----|------|-----|------|-----|
|                                         |       | AC   | EC  | AC   | EC  | AC   | EC  |
| Fan output                              | m³/h  | 4850 |     | 3600 |     | 2400 |     |
| Noise level for heaters with EC motors* | dB(A) | 56   | 54  | 51   | 49  | 40   | 38  |
| EC motor power**                        | W     | 280  | 250 | 220  | 190 | 190  | 162 |
| electricity consumption***              | W     | 280  | 226 | 220  | 89  | 190  | 45  |
| Horizontal range                        | m     | 22   |     | 19   |     | 14   |     |
| Vertical range                          | m     | 11   |     | 8    |     | 6    |     |

VOLCANO VR3

| FAN SPEED                               |       | III  |     | II   |     | I    |     |
|-----------------------------------------|-------|------|-----|------|-----|------|-----|
|                                         |       | AC   | EC  | AC   | EC  | AC   | EC  |
| Fan output                              | m³/h  | 5700 |     | 4100 |     | 3000 |     |
| Noise level for heaters with EC motors* | dB(A) | 57   | 55  | 51   | 49  | 45   | 43  |
| EC motor power**                        | W     | 450  | 370 | 320  | 285 | 245  | 218 |
| electricity consumption***              | W     | 450  | 355 | 320  | 123 | 245  | 55  |
| Horizontal range                        | m     | 25   |     | 22   |     | 17   |     |
| Vertical range                          | m     | 12   |     | 9    |     | 7    |     |

VOLCANO VR4

| FAN SPEED                               |       | III  |     | II   |     | I    |     |
|-----------------------------------------|-------|------|-----|------|-----|------|-----|
|                                         |       | AC   | EC  | AC   | EC  | AC   | EC  |
| Fan output                              | m³/h  | 5300 |     | 3950 |     | 2850 |     |
| Noise level for heaters with EC motors* | dB(A) | 52   | 50  | 41   | 39  | 29   | 27  |
| EC motor power**                        | W     | 450  | 370 | 320  | 285 | 245  | 218 |
| electricity consumption***              | W     | 450  | 355 | 320  | 123 | 245  | 55  |
| Horizontal range                        | m     | 23   |     | 20   |     | 15   |     |
| Vertical range                          | m     | 12   |     | 9    |     | 7    |     |

VOLCANO VR-D MINI

| FAN SPEED                               |       | III  |      | II   |      | I    |      |
|-----------------------------------------|-------|------|------|------|------|------|------|
|                                         |       | AC   | EC   | AC   | EC   | AC   | EC   |
| Fan output                              | m³/h  | 2200 | 2300 | 1730 | 1830 | 1150 | 1220 |
| Noise level for heaters with EC motors* | dB(A) | 49   | 50   | 39   | 40   | 27   | 27   |
| EC motor power**                        | W     | 115  | 95   | 68   | 56   | 48   | 39   |
| Horizontal range                        | m     | 15   | 16   | 9    | 10   | 6    | 7    |
| Vertical range                          | m     | 9    | 10   | 6    | 7    | 5    | 5    |

VOLCANO VR-D

| FAN SPEED                               |       | III  |     | II   |     | I    |     |
|-----------------------------------------|-------|------|-----|------|-----|------|-----|
|                                         |       | AC   | EC  | AC   | EC  | AC   | EC  |
| Fan output                              | m³/h  | 6500 |     | 4600 |     | 3400 |     |
| Noise level for heaters with EC motors* | dB(A) | 56   |     | 50   |     | 43   |     |
| EC motor power**                        | W     | 450  | 370 | 320  | 285 | 245  | 218 |
| Horizontal range                        | m     | 28   |     | 24   |     | 19   |     |
| Vertical range                          | m     | 15   |     | 11   |     | 9    |     |

\* reference conditions: 1500m³ room volume, measurement performed at 5m  
\*\* EC motor power for the above specified fan outputs  
\*\*\* Standard laboratory conditions

VOLCANO VR MINI

| Parameters Tz /Tp [°C] |           |         |          |           |          |         |          |           |          |         |          |           |          |         |          |           |          |
|------------------------|-----------|---------|----------|-----------|----------|---------|----------|-----------|----------|---------|----------|-----------|----------|---------|----------|-----------|----------|
|                        |           | 90/70   |          |           |          | 80/60   |          |           |          | 70/50   |          |           |          | 50/30   |          |           |          |
| Tp1 [°C]               | Qp [m³/h] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] |
| 0                      | 2100      | 20,7    | 29,5     | 0,92      | 13,9     | 17,9    | 25,4     | 0,79      | 10,7     | 15,1    | 21,4     | 0,66      | 7,9      | 9,2     | 13,1     | 0,4       | 3,4      |
|                        | 1650      | 18,1    | 32,6     | 0,8       | 10,7     | 15,6    | 28,2     | 0,69      | 8,3      | 13,1    | 23,7     | 0,58      | 6,1      | 8       | 14,6     | 0,35      | 2,6      |
|                        | 1100      | 14,1    | 38,3     | 0,63      | 6,8      | 12,2    | 33,2     | 0,54      | 5,3      | 10,3    | 27,9     | 0,45      | 3,9      | 6,3     | 17,2     | 0,28      | 1,7      |
| 5                      | 2100      | 19,4    | 32,6     | 0,86      | 12,3     | 16,6    | 28,6     | 0,73      | 9,3      | 13,7    | 24,5     | 0,6       | 6,6      | 7,6     | 16,1     | 0,34      | 2,5      |
|                        | 1650      | 16,9    | 35,6     | 0,75      | 9,5      | 14,5    | 31,1     | 0,64      | 7,2      | 12      | 26,6     | 0,53      | 5,2      | 6,8     | 17,4     | 0,3       | 2        |
|                        | 1100      | 13,3    | 40,9     | 0,59      | 6        | 11,3    | 35,8     | 0,5       | 4,6      | 9,4     | 30,5     | 0,41      | 3,3      | 5,4     | 19,6     | 0,23      | 1,3      |
| 10                     | 2100      | 18,1    | 35,7     | 0,8       | 10,8     | 15,3    | 31,7     | 0,67      | 8        | 12,4    | 27,6     | 0,54      | 5,5      | 6,4     | 19,1     | 0,28      | 1,7      |
|                        | 1650      | 15,8    | 35,5     | 0,7       | 8,4      | 13,3    | 34,1     | 0,59      | 6,2      | 10,8    | 29,5     | 0,47      | 4,3      | 5,6     | 20,1     | 0,24      | 1,4      |
|                        | 1100      | 12,4    | 43,5     | 0,55      | 5,3      | 10,4    | 38,3     | 0,46      | 3,9      | 8,5     | 33       | 0,37      | 2,8      | 4,4     | 21,9     | 0,19      | 0,9      |
| 15                     | 2100      | 16,8    | 38,8     | 0,74      | 9,4      | 13,9    | 34,8     | 0,61      | 6,7      | 11      | 30,7     | 0,48      | 4,4      | 4,9     | 22       | 0,22      | 1,1      |
|                        | 1650      | 14,6    | 41,4     | 0,65      | 7,3      | 12,1    | 37       | 0,54      | 5,2      | 9,6     | 32,4     | 0,42      | 3,5      | 4,3     | 22,8     | 0,19      | 0,9      |
|                        | 1100      | 11,5    | 46,1     | 0,51      | 4,6      | 9,5     | 40,9     | 0,42      | 3,3      | 7,6     | 35,5     | 0,33      | 2,2      | 3,3     | 24,1     | 0,15      | 0,5      |
| 20                     | 2100      | 15,5    | 41,9     | 0,69      | 8        | 12,6    | 37,9     | 0,56      | 5,6      | 9,7     | 33,7     | 0,42      | 3,5      | 3,3     | 24,7     | 0,14      | 0,5      |
|                        | 1650      | 13,5    | 44,3     | 0,6       | 6,2      | 11      | 39,8     | 0,48      | 4,3      | 8,4     | 35,2     | 0,37      | 2,7      | 2,8     | 25,1     | 0,12      | 0,4      |
|                        | 1100      | 10,6    | 48,6     | 0,47      | 4        | 8,6     | 43,4     | 0,38      | 2,8      | 6,6     | 38       | 0,29      | 1,8      | 1,9     | 25,2     | 0,08      | 0,2      |

VOLCANO VR MINI 3

| Parameters Tz /Tp [°C] |           |         |          |           |          |         |          |           |          |         |          |           |          |         |          |           |          |
|------------------------|-----------|---------|----------|-----------|----------|---------|----------|-----------|----------|---------|----------|-----------|----------|---------|----------|-----------|----------|
|                        |           | 90/70   |          |           |          | 70/50   |          |           |          | 60/40   |          |           |          | 40/30   |          |           |          |
| Tp1 [°C]               | Qp [m³/h] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] |
| 0                      | 2000      | 26,7    | 37,0     | 1,20      | 23,8     | 19,5    | 27,0     | 0,90      | 14,5     | 15,9    | 21,9     | 0,70      | 10,4     | 11,5    | 16,0     | 1,10      | 25,8     |
|                        | 1550      | 22,6    | 40,3     | 1,00      | 17,7     | 16,5    | 29,5     | 0,70      | 10,8     | 13,4    | 24,0     | 0,60      | 7,8      | 9,7     | 17,4     | 0,90      | 19,1     |
|                        | 1000      | 16,7    | 46,2     | 0,70      | 10,4     | 12,3    | 33,8     | 0,50      | 6,4      | 9,9     | 27,5     | 0,40      | 4,6      | 7,2     | 19,9     | 0,70      | 11,2     |
| 5                      | 2000      | 24,9    | 40,0     | 1,10      | 20,9     | 17,7    | 29,9     | 0,80      | 12,3     | 14,1    | 24,8     | 0,60      | 8,4      | 9,8     | 18,7     | 0,90      | 19,1     |
|                        | 1550      | 21,0    | 43,1     | 0,90      | 15,6     | 14,9    | 32,2     | 0,70      | 9,1      | 11,8    | 26,6     | 0,50      | 6,3      | 8,2     | 20,0     | 0,80      | 14,2     |
|                        | 1000      | 15,5    | 48,7     | 0,70      | 9,1      | 11,1    | 36,2     | 0,50      | 5,4      | 8,8     | 29,8     | 0,40      | 3,7      | 6,1     | 22,1     | 0,60      | 8,3      |
| 10                     | 2000      | 23,0    | 43,0     | 1,00      | 18,3     | 15,9    | 32,7     | 0,70      | 10,1     | 12,2    | 27,5     | 0,50      | 6,6      | 8,0     | 21,4     | 0,80      | 13,4     |
|                        | 1550      | 19,5    | 45,9     | 0,90      | 13,6     | 13,4    | 34,8     | 0,60      | 7,5      | 10,3    | 29,1     | 0,50      | 4,9      | 6,7     | 22,4     | 0,60      | 10,0     |
|                        | 1000      | 14,3    | 51,1     | 0,60      | 8,0      | 9,9     | 38,5     | 0,40      | 4,4      | 7,6     | 31,9     | 0,30      | 2,9      | 5,0     | 24,2     | 0,50      | 5,8      |
| 15                     | 2000      | 21,3    | 45,9     | 0,90      | 15,9     | 14,1    | 35,5     | 0,60      | 8,2      | 10,4    | 30,1     | 0,50      | 5,0      | 6,2     | 24,0     | 0,60      | 8,6      |
|                        | 1550      | 17,9    | 48,6     | 0,80      | 11,8     | 11,9    | 37,4     | 0,50      | 6,1      | 8,8     | 31,5     | 0,40      | 3,7      | 5,2     | 24,8     | 0,50      | 6,4      |
|                        | 1000      | 13,2    | 53,5     | 0,60      | 6,9      | 8,8     | 40,6     | 0,40      | 3,6      | 6,5     | 33,9     | 0,30      | 2,20     | 3,9     | 26,2     | 0,40      | 3,70     |
| 20                     | 2000      | 19,4    | 48,7     | 0,90      | 13,6     | 12,3    | 38,2     | 0,50      | 6,4      | 8,6     | 32,6     | 0,40      | 3,50     | 4,4     | 26,5     | 0,40      | 4,70     |
|                        | 1550      | 16,4    | 51,2     | 0,70      | 10,0     | 10,4    | 39,8     | 0,50      | 4,8      | 7,2     | 33,8     | 0,30      | 2,60     | 3,7     | 27,0     | 0,40      | 3,50     |
|                        | 1000      | 12,1    | 55,7     | 0,50      | 5,9      | 7,7     | 42,7     | 0,30      | 2,8      | 5,3     | 35,7     | 0,20      | 1,50     | 2,7     | 27,9     | 0,30      | 2,00     |

Legend:

- T<sub>z</sub>

T<sub>p</sub>

T<sub>p1</sub>

T<sub>p2</sub>
- device feed water temperature

- device return water temperature

- device feed air temperature

- device outlet air temperature

- P<sub>g</sub>

Q<sub>p</sub>

Q<sub>w</sub>

Δp
- device heating power

- air output

- water flow

- heat exchanger pressure loss



VOLCANO VR1

| Parameters Tz /Tp [°C] |           |         |          |           |          |         |          |           |          |         |          |           |          |         |          |           |          |
|------------------------|-----------|---------|----------|-----------|----------|---------|----------|-----------|----------|---------|----------|-----------|----------|---------|----------|-----------|----------|
|                        |           | 90/70   |          |           |          | 80/60   |          |           |          | 70/50   |          |           |          | 50/30   |          |           |          |
| Tp1 [°C]               | Qp [m³/h] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] |
| 0                      | 5300      | 29,9    | 16,8     | 1,33      | 26       | 25,8    | 14,5     | 1,14      | 20       | 21,7    | 12,2     | 0,95      | 14,6     | 13,2    | 7,5      | 0,58      | 6,2      |
|                        | 3900      | 25,4    | 19,4     | 1,12      | 19,1     | 21,9    | 16,7     | 0,97      | 14,7     | 18,4    | 14,1     | 0,81      | 10,8     | 11,3    | 8,6      | 0,49      | 4,6      |
|                        | 2800      | 21,2    | 22,6     | 0,94      | 13,6     | 18,3    | 19,5     | 0,81      | 10,5     | 15,4    | 16,4     | 0,68      | 7,8      | 9,4     | 10,1     | 0,41      | 3,3      |
| 5                      | 5300      | 28      | 20,8     | 1,24      | 23       | 23,9    | 18,4     | 1,05      | 17,3     | 19,7    | 16,1     | 0,87      | 12,3     | 11,3    | 11,3     | 0,49      | 4,6      |
|                        | 3900      | 23,8    | 23,2     | 1,05      | 16,9     | 20,3    | 20,5     | 0,9       | 12,8     | 16,8    | 17,8     | 0,74      | 9,1      | 9,6     | 12,3     | 0,42      | 3,4      |
|                        | 2800      | 19,9    | 26,2     | 0,88      | 12,1     | 16,9    | 23,1     | 0,75      | 9,1      | 14      | 19,9     | 0,62      | 6,6      | 8       | 13,6     | 0,35      | 2,5      |
| 10                     | 5300      | 26,1    | 24,7     | 1,16      | 20,2     | 22      | 22,4     | 0,97      | 14,8     | 17,8    | 20       | 0,78      | 10,2     | 9,2     | 15,2     | 0,4       | 3,2      |
|                        | 3900      | 22,2    | 27       | 0,98      | 14,9     | 18,7    | 24,3     | 0,82      | 10,9     | 15,1    | 21,6     | 0,66      | 7,6      | 7,9     | 16       | 0,34      | 2,4      |
|                        | 2800      | 18,5    | 29,7     | 0,82      | 10,6     | 15,6    | 26,6     | 0,69      | 7,8      | 12,7    | 23,5     | 0,56      | 5,4      | 6,6     | 17       | 0,29      | 1,8      |
| 15                     | 5300      | 24,2    | 28,6     | 1,07      | 17,5     | 20      | 26,3     | 0,88      | 12,5     | 15,8    | 23,9     | 0,7       | 8,2      | 7,2     | 19       | 0,31      | 2        |
|                        | 3900      | 20,5    | 30,7     | 0,91      | 12,9     | 17      | 28       | 0,75      | 9,2      | 13,5    | 25,3     | 0,59      | 6,1      | 6,1     | 19,7     | 0,27      | 1,5      |
|                        | 2800      | 17,2    | 33,3     | 0,76      | 9,2      | 14,2    | 30,2     | 0,63      | 6,6      | 11,3    | 27       | 0,5       | 4,4      | 5,1     | 20,4     | 0,22      | 1,1      |
| 20                     | 5300      | 22,2    | 32,5     | 0,99      | 15       | 18,1    | 30,2     | 0,8       | 10,3     | 13,8    | 27,8     | 0,61      | 6,4      | 5       | 22,8     | 0,22      | 1,1      |
|                        | 3900      | 18,9    | 34,5     | 0,84      | 11,1     | 15,4    | 31,8     | 0,68      | 7,6      | 11,8    | 29       | 0,52      | 4,8      | 4,2     | 23,2     | 0,18      | 0,8      |
|                        | 2800      | 15,8    | 36,8     | 0,7       | 7,9      | 12,9    | 33,7     | 0,57      | 5,5      | 9,9     | 30,5     | 0,43      | 3,5      | 3,5     | 23,7     | 0,15      | 0,6      |

VOLCANO VR2

| Parameters Tz /Tp [°C] |          |         |          |           |          |         |          |           |          |         |          |           |          |         |          |           |          |
|------------------------|----------|---------|----------|-----------|----------|---------|----------|-----------|----------|---------|----------|-----------|----------|---------|----------|-----------|----------|
|                        |          | 90/70   |          |           |          | 80/60   |          |           |          | 70/50   |          |           |          | 50/30   |          |           |          |
| Tp1 [°C]               | Qp[m³/h] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] |
| 0                      | 4850     | 50,0    | 30,7     | 2,21      | 23,8     | 43,1    | 26,5     | 1,9       | 18,3     | 36,2    | 22,3     | 1,59      | 13,5     | 22,3    | 13,7     | 0,97      | 5,7      |
|                        | 3600     | 41,9    | 34,7     | 1,86      | 17,2     | 36,5    | 30       | 1,6       | 13,3     | 30,5    | 25,3     | 1,34      | 9,8      | 18,8    | 15,6     | 0,82      | 4,2      |
|                        | 2400     | 32,7    | 40,6     | 1,45      | 10,8     | 28,3    | 35,2     | 1,25      | 8,4      | 23,9    | 29,7     | 1,05      | 6,2      | 14,8    | 18,4     | 0,64      | 2,7      |
| 5                      | 4850     | 46,7    | 33,7     | 2,07      | 21,1     | 39,9    | 29,5     | 1,76      | 15,9     | 33,1    | 25,3     | 1,45      | 11,4     | 19      | 16,7     | 0,83      | 4,3      |
|                        | 3600     | 39,3    | 37,5     | 1,74      | 15,2     | 33,6    | 32,8     | 1,48      | 11,5     | 27,9    | 28,1     | 1,22      | 8,3      | 16,1    | 18,3     | 0,7       | 3,1      |
|                        | 2400     | 30,6    | 43,1     | 1,36      | 9,6      | 26,2    | 37,6     | 1,16      | 7,3      | 21,8    | 32,1     | 0,96      | 5,3      | 12,6    | 20,7     | 0,55      | 2        |
| 10                     | 4850     | 43,6    | 36,8     | 1,93      | 18,5     | 36,7    | 32,6     | 1,62      | 13,6     | 29,8    | 28,4     | 1,31      | 9,4      | 15,6    | 19,6     | 0,68      | 3        |
|                        | 3600     | 36,6    | 40,4     | 1,62      | 13,4     | 30,9    | 35,6     | 1,36      | 9,9      | 25,2    | 30,9     | 1,11      | 6,8      | 13,2    | 21       | 0,58      | 2,2      |
|                        | 2400     | 28,6    | 45,5     | 1,27      | 8,4      | 24,2    | 40       | 1,07      | 6,3      | 19,7    | 34,5     | 0,87      | 4,4      | 10,4    | 22,9     | 0,45      | 1,4      |
| 15                     | 4850     | 40,4    | 39,8     | 1,79      | 16       | 33,5    | 35,6     | 1,48      | 11,5     | 26,6    | 31,3     | 1,17      | 7,6      | 12,2    | 22,5     | 0,53      | 1,9      |
|                        | 3600     | 34      | 43,1     | 1,51      | 11,6     | 28,2    | 38,4     | 1,25      | 8,3      | 22,4    | 33,6     | 0,99      | 5,5      | 10,3    | 23,5     | 0,45      | 1,4      |
|                        | 2400     | 26,5    | 48       | 1,18      | 7,3      | 22,1    | 42,5     | 0,98      | 5,3      | 17,6    | 36,9     | 0,77      | 3,5      | 8       | 25       | 0,35      | 0,9      |
| 20                     | 4850     | 37,2    | 42,8     | 1,65      | 13,7     | 30,3    | 38,6     | 1,34      | 9,5      | 23,3    | 34,3     | 1,02      | 5,9      | 8,4     | 25,2     | 0,37      | 1        |
|                        | 3600     | 31,3    | 45,9     | 1,39      | 10       | 25,5    | 41,1     | 1,13      | 6,9      | 19,7    | 36,3     | 0,86      | 4,3      | 7       | 25,8     | 0,31      | 0,7      |
|                        | 2400     | 24,5    | 50,4     | 1,09      | 6,3      | 20      | 44,8     | 0,88      | 4,4      | 15,5    | 39,2     | 0,68      | 2,8      | 5,3     | 26,6     | 0,23      | 0,4      |

Legend:

- T<sub>z</sub>

- device feed water temperature
- T<sub>p</sub>

- device return water temperature
- T<sub>pt1</sub>

- device feed air temperature
- T<sub>pt2</sub>

- device outlet air temperature

- P<sub>g</sub>

- device heating power
- Q<sub>p</sub>

- air output
- Q<sub>w</sub>

- water flow
- Δp

- heat exchanger pressure loss

VOLCANO VR3

| Parameters Tz /Tp [°C] |           |         |          |           |          |         |          |           |          |         |          |           |          |         |          |           |          |
|------------------------|-----------|---------|----------|-----------|----------|---------|----------|-----------|----------|---------|----------|-----------|----------|---------|----------|-----------|----------|
|                        |           | 90/70   |          |           |          | 80/60   |          |           |          | 70/50   |          |           |          | 50/30   |          |           |          |
| Tp1 [°C]               | Qp [m³/h] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] | Pg [kW] | Tp2 [°C] | Qw [m³/h] | Δp [kPa] |
| 0                      | 5700      | 75,0    | 39       | 3,31      | 32,6     | 64,5    | 33,8     | 2,85      | 25,1     | 54,3    | 28,4     | 2,39      | 18,4     | 33,6    | 17,6     | 1,46      | 7,8      |
|                        | 4100      | 60,6    | 44,1     | 2,69      | 22       | 52,5    | 38,2     | 2,32      | 17       | 44,3    | 32,2     | 1,95      | 12,5     | 27,5    | 20       | 1,2       | 5,4      |
|                        | 3000      | 49,5    | 49,2     | 2,19      | 15       | 42,9    | 42,7     | 1,89      | 11,6     | 36,3    | 36,1     | 1,59      | 8,6      | 22,6    | 22,5     | 0,98      | 3,7      |
|                        | 5700      | 69,9    | 41,6     | 3,1       | 28,9     | 59,8    | 36,3     | 2,64      | 21,7     | 49,6    | 31       | 2,18      | 15,5     | 28,7    | 20       | 1,25      | 5,8      |
| 5                      | 4100      | 56,8    | 46,3     | 2,52      | 19,5     | 48,7    | 40,4     | 2,15      | 14,8     | 40,5    | 34,4     | 1,78      | 10,6     | 23,5    | 22,1     | 1,02      | 4        |
|                        | 3000      | 46,4    | 51,1     | 2,06      | 13,3     | 39,8    | 44,6     | 1,76      | 10,1     | 33,1    | 37,9     | 1,46      | 7,3      | 19,3    | 24,2     | 0,84      | 2,8      |
| 10                     | 5700      | 65,2    | 44,1     | 2,89      | 25,3     | 55      | 38,8     | 2,43      | 18,6     | 44,8    | 33,4     | 1,97      | 12,8     | 23,7    | 22,4     | 1,03      | 4,1      |
|                        | 4100      | 53      | 48,6     | 2,35      | 17,1     | 44,9    | 42,6     | 1,98      | 12,7     | 36,6    | 36,6     | 1,61      | 8,8      | 19,4    | 24,1     | 0,84      | 2,8      |
|                        | 3000      | 43,3    | 53,1     | 1,92      | 11,7     | 36,7    | 46,5     | 1,62      | 8,7      | 30      | 39,8     | 1,32      | 6,1      | 15,9    | 25,8     | 0,69      | 2        |
| 15                     | 5700      | 60,4    | 46,6     | 2,68      | 21,9     | 50,2    | 41,3     | 2,22      | 15,7     | 40      | 35,9     | 1,76      | 10,3     | 18,4    | 24,6     | 0,8       | 2,6      |
|                        | 4100      | 49,2    | 50,8     | 2,18      | 14,9     | 41      | 44,8     | 1,81      | 10,7     | 32,7    | 38,8     | 1,44      | 7,1      | 15,1    | 26       | 0,66      | 1,8      |
|                        | 3000      | 40,2    | 55       | 1,78      | 10,2     | 33,6    | 48,4     | 1,48      | 7,4      | 26,8    | 41,6     | 1,18      | 4,9      | 12,4    | 27,3     | 0,54      | 1,2      |
| 20                     | 5700      | 55,6    | 49,1     | 2,47      | 18,8     | 45,4    | 43,8     | 2         | 13       | 35      | 38,3     | 1,54      | 8,1      | 12,8    | 26,7     | 0,56      | 1,3      |
|                        | 4100      | 45,3    | 53       | 2,01      | 12,8     | 37,1    | 47       | 1,64      | 8,9      | 28,7    | 40,9     | 1,26      | 5,6      | 10,4    | 27,5     | 0,45      | 0,9      |
|                        | 3000      | 37,1    | 56,9     | 1,64      | 8,8      | 30,4    | 50,2     | 1,34      | 6,1      | 23,6    | 43,4     | 1,04      | 3,9      | 8,3     | 28,2     | 0,36      | 0,6      |

VOLCANO VR4

| Parameters Tz /Tp [°C] |           |            |             |              |             |            |             |              |             |            |             |              |             |            |             |              |             |
|------------------------|-----------|------------|-------------|--------------|-------------|------------|-------------|--------------|-------------|------------|-------------|--------------|-------------|------------|-------------|--------------|-------------|
|                        |           | 90/70      |             |              |             | 70/50      |             |              |             | 40/30      |             |              |             | 35/25      |             |              |             |
| Tp1<br>[°C]            | Qp [m³/h] | Pg<br>[kW] | Tp2<br>[°C] | Qw<br>[m³/h] | Δp<br>[kPa] | Pg<br>[kW] | Tp2<br>[°C] | Qw<br>[m³/h] | Δp<br>[kPa] | Pg<br>[kW] | Tp2<br>[°C] | Qw<br>[m³/h] | Δp<br>[kPa] | Pg<br>[kW] | Tp2<br>[°C] | Qw<br>[m³/h] | Δp<br>[kPa] |
| 0                      | 5300      | 88,6       | 43,3        | 3,70         | 143,8       | 61,6       | 32,1        | 2,70         | 102,9       | 36,0       | 18,6        | 3,10         | 126,0       | 30,3       | 15,8        | 2,60         | 112,6       |
|                        | 3950      | 69,4       | 47,5        | 3,00         | 105,1       | 50,5       | 35,2        | 2,20         | 72,4        | 29,2       | 20,1        | 2,50         | 103,1       | 24,8       | 17,4        | 2,10         | 79,0        |
|                        | 2850      | 57,7       | 52,2        | 2,40         | 76,4        | 40,1       | 38,9        | 1,80         | 48,3        | 23,2       | 22,5        | 2,00         | 68,6        | 19,7       | 19,1        | 1,70         | 52,9        |
| 5                      | 5300      | 77,3       | 46,1        | 3,40         | 114,6       | 56,0       | 34,7        | 2,50         | 87,1        | 30,2       | 21,1        | 2,60         | 108,1       | 24,9       | 18,2        | 2,20         | 79,5        |
|                        | 3950      | 63,2       | 50,0        | 2,80         | 91,5        | 45,9       | 37,7        | 2,00         | 61,3        | 24,8       | 22,7        | 2,10         | 77,2        | 20,4       | 19,5        | 1,80         | 56,1        |
|                        | 2850      | 50,1       | 54,5        | 2,20         | 67,4        | 36,5       | 41,0        | 1,60         | 40,9        | 19,7       | 24,4        | 1,70         | 51,4        | 16,2       | 21,0        | 1,40         | 3,5         |
| 10                     | 5300      | 71,7       | 48,7        | 3,20         | 106,8       | 50,5       | 37,3        | 2,20         | 72,6        | 24,9       | 23,4        | 2,20         | 77,7        | 19,6       | 20,5        | 1,70         | 51,7        |
|                        | 3950      | 58,6       | 52,5        | 2,60         | 88,8        | 41,4       | 40,0        | 1,80         | 51,1        | 20,4       | 24,8        | 1,80         | 54,8        | 16,0       | 1,4         | 1,40         | 36,5        |
|                        | 2850      | 46,4       | 56,5        | 2,10         | 59,0        | 32,9       | 43,0        | 1,40         | 34,1        | 16,2       | 26,3        | 1,40         | 36,5        | 12,7       | 22,8        | 1,10         | 24,4        |
| 15                     | 5300      | 66,2       | 51,3        | 2,90         | 99,9        | 45,0       | 39,7        | 2,00         | 59,3        | 19,5       | 25,7        | 1,70         | 50,7        | 14,0       | 22,7        | 1,20         | 29,1        |
|                        | 3950      | 54,1       | 54,8        | 2,40         | 77,1        | 36,9       | 42,2        | 1,60         | 41,8        | 16,0       | 26,8        | 1,40         | 35,8        | 11,5       | 23,5        | 1,00         | 20,6        |
|                        | 2850      | 42,8       | 58,7        | 1,90         | 51,2        | 29,3       | 44,9        | 1,30         | 27,9        | 12,7       | 28,0        | 1,10         | 23,90       | 9,4        | 24,4        | 0,80         | 13,70       |
| 20                     | 5300      | 60,6       | 53,8        | 2,70         | 84,5        | 39,6       | 42,1        | 1,70         | 47,3        | 15,1       | 28,3        | 1,30         | 36,00       | 9,4        | 24,7        | 0,70         | 11,70       |
|                        | 3950      | 49,6       | 57,1        | 2,20         | 66,2        | 32,5       | 44,3        | 1,40         | 33,3        | 12,2       | 28,9        | 1,20         | 26,60       | 7,7        | 25,1        | 0,60         | 8,40        |
|                        | 2850      | 39,3       | 60,7        | 1,70         | 43,9        | 25,8       | 46,7        | 1,10         | 22,3        | 9,7        | 29,3        | 0,90         | 17,80       | 6,4        | 25,6        | 0,50         | 5,50        |



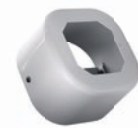
Controls

|                                                                      |         |  |  |  |  |  |  |  |  |
|----------------------------------------------------------------------|---------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| PARAMETERS<br>Model                                                  |         | Wall controller<br>WING/<br>VOLCANO                                               | VR Thermostat                                                                     | Speed<br>regulator ARW<br>3.0/2                                                   | Speed<br>regulator ARW<br>0.6                                                     | Potentiometer<br>VR EC (0-10V)                                                    | Potentiometer<br>with<br>thermostat<br>VR EC (0-10V)                                | HMI VOLCANO<br>EC<br>controller                                                     | HMI VOLCANO<br>EC WIFI<br>controller                                                |
| VTS product number                                                   |         | 1-4-0101-0438                                                                     | 1-4-0101-0038                                                                     | 1-4-0101-0434                                                                     | 1-4-0101-0167                                                                     | 1-4-0101-0453                                                                     | 1-4-0101-0473                                                                       | 1-4-2801-0157                                                                       | 1-4-2801-0158                                                                       |
| Motor support                                                        |         | AC                                                                                |                                                                                   |                                                                                   |                                                                                   | EC                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Power supply<br>voltage                                              | V/ph/Hz | ~230/1/50                                                                         | ~230/1/50                                                                         | ~230/1/50                                                                         | ~230/1/50                                                                         | ~230/1/50                                                                         | ~230/1/50                                                                           | ~230/1/50                                                                           | ~230/1/50                                                                           |
| Permissible load<br>current                                          | A       | 6(3)                                                                              | 3                                                                                 | 3                                                                                 | 0,6                                                                               | 0,02 A for 0-10V                                                                  |                                                                                     | 1A for 230VAC<br>0,02A for 0-10V                                                    | 1A for 230VAC<br>0,02A for 0-10V                                                    |
| Settings range                                                       | °C      | 10...30                                                                           | 10....30                                                                          | 10....30                                                                          | 10....30                                                                          | -                                                                                 | 5...30                                                                              | 5...40                                                                              | 5...40                                                                              |
| Work mode                                                            | ---     | manual                                                                            | manual                                                                            | manual                                                                            | manual                                                                            | manual                                                                            | manual                                                                              | manual/automatic                                                                    | manual/automatic                                                                    |
| Hourly-weekly<br>calendar                                            | ---     | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | Yes                                                                                 | Yes                                                                                 |
| Clock                                                                | ---     | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | Yes                                                                                 | Yes                                                                                 |
| Temperature<br>measurement                                           | ---     | Integrated in the device                                                          |                                                                                   |                                                                                   | No                                                                                | No                                                                                | Integrated in the device                                                            |                                                                                     |                                                                                     |
| The possibility of<br>connecting a<br>separate<br>temperature sensor | pcs.    | No                                                                                |                                                                                   |                                                                                   |                                                                                   | No                                                                                | 1 or 4                                                                              | 1 or 4                                                                              | 1 or 4                                                                              |
| Output signal                                                        | ---     | on/off                                                                            |                                                                                   |                                                                                   |                                                                                   | 0-10 V DC                                                                         |                                                                                     |                                                                                     |                                                                                     |
| Protection rate                                                      | IP      | 30                                                                                |                                                                                   |                                                                                   | 54                                                                                | 30                                                                                |                                                                                     | 20                                                                                  |                                                                                     |

COOPERATION OF CONTROLS AND REGULATORS WITH HEATING UNITS

|                               |      |   |   |   |   |   |  |
|-------------------------------|------|---|---|---|---|---|--|
| VR Mini/ VR Mini 3/ VR-D Mini | pcs. | 4 | 1 | 4 | 1 | 8 |  |
| VR1/ VR2                      | pcs. | 2 | 1 | 1 | 0 | 8 |  |
| VR3/ VR4/ VR-D                | pcs. | 1 | 1 | 1 | 0 | 8 |  |

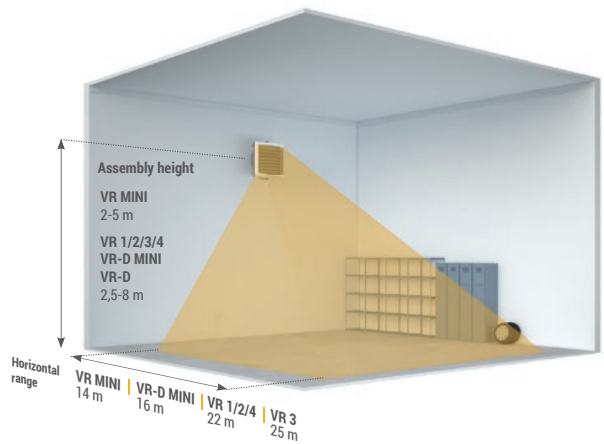
Accessories

|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |
| Valve with actuator                                                                 | Room NTC sensor                                                                     | Flex. connecting hoses (set)                                                        | Surface mounted box for HMI                                                          | Drain pan for VR Mini – VR Mini 3                                                     |
| VTS article No.1-2-1204-2019                                                        | VTS article No.1-2-1205-0007                                                        | VTS article No.1-2-2702-0076                                                        | VTS article No.1-2-0393-1987                                                         | VTS article No.1-2-2701-4021                                                          |
| power supply voltage~230V/1ph /50Hz                                                 | resistance measurement elementNTC 10K kΩ                                            | length0,6-0,9 m                                                                     | dimensions100x100x70mm                                                               | dimensions532x145x43 mm                                                               |
| power consumption electrical1 W                                                     | assemblysurface-mounted                                                             | connection typeGW 3/4"                                                              | typesurface mounted                                                                  | Drain pan for VR1-4                                                                   |
| connection3/4 "                                                                     | max. signal wire length100 m                                                        | max. fluid pressure1,6 MPa                                                          | colorRAL 9016                                                                        |                                                                                       |
| Coefficient of Volume4,5 m³/h                                                       | ambient-20...+70°C                                                                  | min. working temperature for water5°C                                               | set includesbracket and 2 screws                                                     | VTS article No.1-2-2701-4019                                                          |
| opening/ closing time3/3 min.                                                       | protection rating-20...+70°C                                                        | min. working temperature for glycol-20°C                                            |                                                                                      | dimensions702x145x43                                                                  |
| protection ratingIP 54                                                              | stopień ochronyIP 66                                                                | max. working temperature130°C                                                       |                                                                                      |                                                                                       |
|                                                                                     |                                                                                     | set includeshose (2 pcs) gasket (4 pcs)                                             |                                                                                      |                                                                                       |

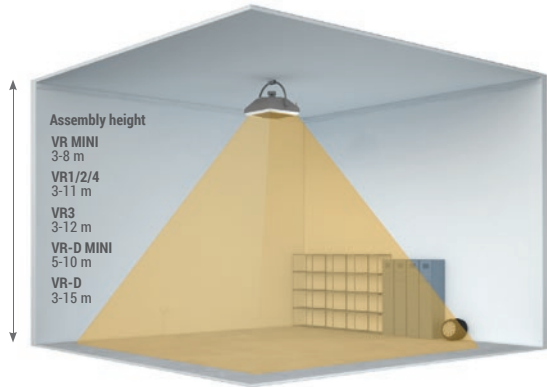


Assembly

ASSEMBLY WALL



ASSEMBLY CEILING





# WING

## YOUR INVISIBLE BARRIER

WING is the next generation air curtain created from a passion for a light and modern design representing characteristics of gliders.



**RAL7016**

### Unique shape

A minimal casing with a streamlined form of a wing that seems to float in the air. The diamond style side panels hide the excellent components in an innovative curtain body to set new standards for air curtains. WING combines the unique design and excellent efficiency to redefine the air curtain image.

### Quality and design

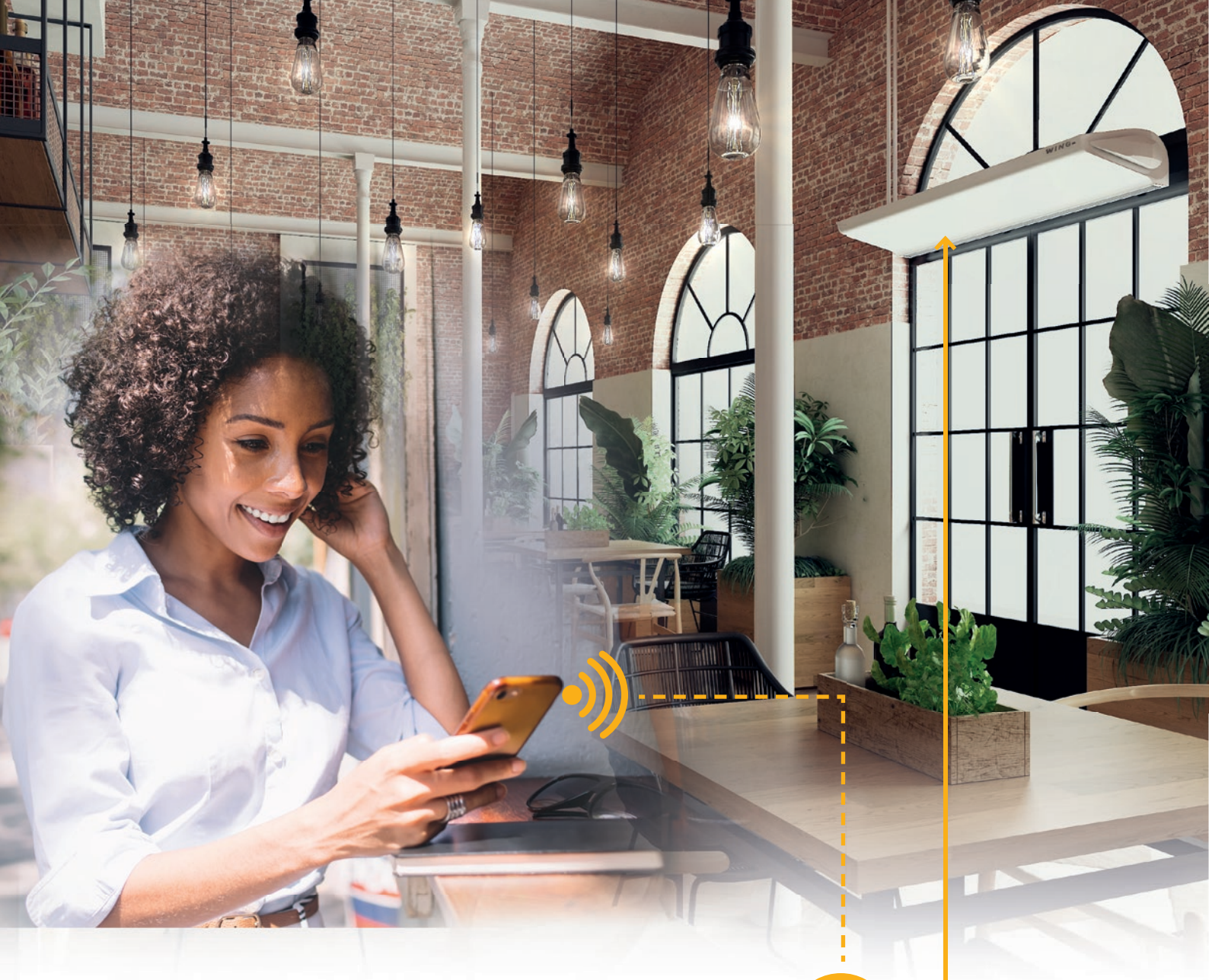
High quality materials, unique shape and rigid construction are the basic assumptions of the designers of the curtain. Simple cleaning of the curtain, double protective coating and efficient and durable EC motor ensure trouble-free operation of the device.

### Energy efficiency

- » highly efficient EC motor
- » maximum unit efficiency even at reduced speed
- » smooth speed regulation
- » optimal fan shape and EC motor let save up to 40% of energy







## HMI WiFi Wing controller

- » modern and compact design
- » high contrast and clear screen
- » advanced calendar for each day of the week
- » door sensor cooperation
- » wireless communication with a smartphone
- » preset 3-levels speed control
- » build-in thermostat
- » 3-levels of heating power
- » up to 8 air curtains connected with the one controller



### DOOR OPTIMUM function

Door Optimum function allows the WING to maintain full protection of the door opening and at the same time optimize costs associated with its operation. It keeps the air curtain operating at minimum speed and continues to protect the door, from the outside air, once the door begins opening it also increases the speed of air by +1 or +2 levels, depending on user's preferences.

## Product range

### WING W

#### WATER HEAT EXCHANGER

HEATING POWER RANGE:  
**4 – 47 kW**

EXHAUST FLOW RATE:  
**1850-4400 m³/h**

MAXIMUM AIR COVERAGE:  
**3,7 m**

WING 100/150/200



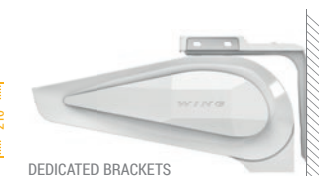
### WING E

#### ELECTRIC HEATER

HEATING POWER RANGE:  
**2 – 15 kW**

EXHAUST FLOW RATE:  
**1850-4500 m³/h**

MAXIMUM AIR COVERAGE:  
**3,7 m**



DEDICATED BRACKETS

### WING C

#### WITHOUT HEAT EXCHANGER (AMBIENT)

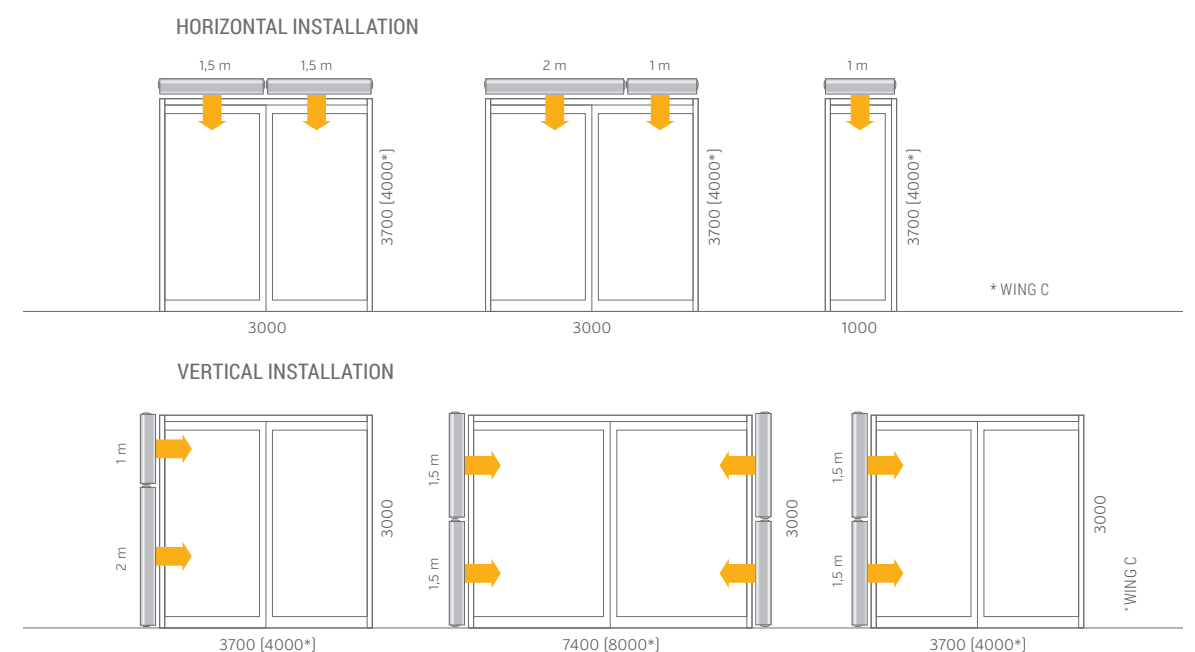
EXHAUST FLOW RATE:  
**4 m**

EXHAUST FLOW RATE:  
**1950-4600 m³/h**



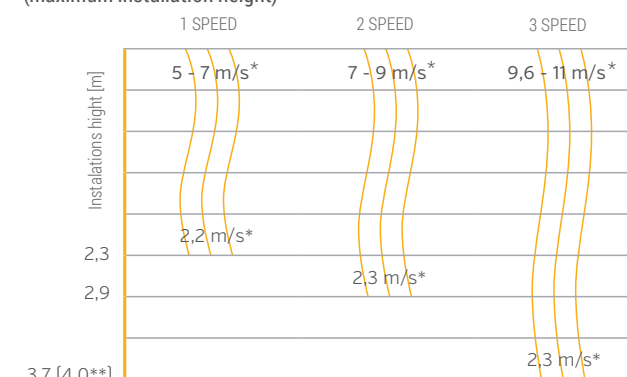
FASTENING PINS

\* width does not include side covers



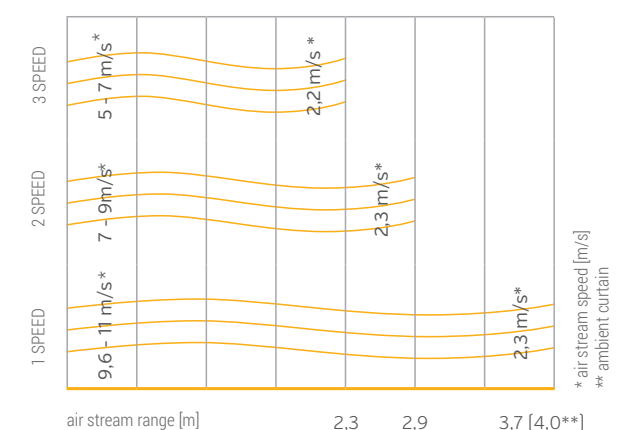
## Stream range

### Vertical air stream range (maximum installation height)



\* air stream speed [m/s]  
\*\* ambient curtain

### Horizontal air stream range (for vertical installation)



\* air stream speed [m/s]  
\*\* ambient curtain



Technical parameters

| PARAMETERS                                      |         | WATER AIR CURTAIN |               |               |               |               |               | ELECTRIC AIR CURTAIN                     |               |               |               |               |               | AMBIENT AIR CURTAIN |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-------------------------------------------------|---------|-------------------|---------------|---------------|---------------|---------------|---------------|------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                                 |         | W100              |               | W150          |               | W200          |               | E100                                     |               | E150          |               | E200          |               | C100                |               | C150          |               | C200          |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|                                                 |         | AC                | EC            | AC            | EC            | AC            | EC            | AC                                       | EC            | AC            | EC            | AC            | EC            | AC                  | EC            | AC            | EC            | AC            | EC            |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Colour<br>○ WHITE (RAL 9016) ● DARK (RAL 7016)  |         | ○                 | ●             | ○             | ●             | ○             | ●             | ○                                        | ●             | ○             | ●             | ○             | ●             | ○                   | ●             | ○             | ●             | ○             | ●             |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| VTS article No.                                 |         | 1-4-2801-0250     | 1-4-2801-0299 | 1-4-2801-0259 | 1-4-2801-0308 | 1-4-2801-0251 | 1-4-2801-0300 | 1-4-2801-0260                            | 1-4-2801-0309 | 1-4-2801-0252 | 1-4-2801-0301 | 1-4-2801-0261 | 1-4-2801-0310 | 1-4-2801-0253       | 1-4-2801-0302 | 1-4-2801-0262 | 1-4-2801-0311 | 1-4-2801-0254 | 1-4-2801-0303 | 1-4-2801-0263 | 1-4-2801-0312 | 1-4-2801-0255 | 1-4-2801-0304 | 1-4-2801-0264 | 1-4-2801-0313 | 1-4-2801-0256 | 1-4-2801-0305 | 1-4-2801-0265 | 1-4-2801-0314 | 1-4-2801-0257 | 1-4-2801-0306 | 1-4-2801-0266 | 1-4-2801-0315 | 1-4-2801-0258 | 1-4-2801-0307 | 1-4-2801-0267 | 1-4-2801-0316 |
| maximum door width (1 device)                   | m       | 1                 |               | 1,5           |               | 2             |               | 1                                        |               | 1,5           |               | 2             |               | 1                   |               | 1,5           |               | 2             |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| maximum door height<br>(vertical stream range)* | m       | 3,7               |               |               |               |               |               | 3,7                                      |               |               |               |               |               | 4                   |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| maximum exhaustflow rate                        | m³/h    | 1850              |               | 3100          |               | 4400          |               | 1850                                     |               | 3150          |               | 4500          |               | 1950                |               | 3200          |               | 4600          |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| heating power range**                           | kW      | 4-17              |               | 10-32         |               | 17-47         |               | 2 lub 4/6                                |               | 8/12          |               | 10/15         |               | -                   |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| maximum temperature of heating agent            | °C      | 95                |               |               |               |               |               | -                                        |               |               |               |               |               | -                   |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| maximum operating pressure                      | MPa     | 1,6               |               |               |               |               |               | -                                        |               |               |               |               |               | -                   |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| water volume                                    | dm³     | 1,6               |               | 2,6           |               | 3,6           |               | -                                        |               |               |               |               |               | -                   |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| number of heat exchanger rows                   | pcs.    | 2                 |               |               |               |               |               | -                                        |               |               |               |               |               | -                   |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| supply voltage                                  | V/ph/Hz | ~ 230/1/50        |               |               |               |               |               | ~230/1/50 for 2kW<br>~400/3/50 for 4/6kW |               | ~400/3/50     |               |               |               | ~230/1/50           |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| electric heating coil power                     | kW      | -                 |               |               |               |               |               | 2 and 4                                  |               | 4 and 8       |               | 5 and 10      |               | -                   |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| electric heating coil current draw              | A       | -                 |               |               |               |               |               | 6/max.9                                  |               | 11,5/max.17,3 |               | 14,5/max.21,4 |               | -                   |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| motor power                                     | kW      | 0,235             | 0,2           | 0,375         | 0,3           | 0,58          | 0,47          | 0,235                                    | 0,2           | 0,375         | 0,3           | 0,58          | 0,47          | 0,235               | 0,2           | 0,375         | 0,3           | 0,58          | 0,47          |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| rated current                                   | A       | 1,2               | 1,1           | 1,7           | 1,3           | 2,6           | 1,9           | 1,2                                      | 1,1           | 1,7           | 1,3           | 2,6           | 1,9           | 1,2                 | 1,1           | 1,7           | 1,3           | 2,6           | 1,9           |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| weight (without water)                          | kg      | 20,8              | 21,2          | 27,8          | 24,5          | 34,6          | 30,4          | 20                                       | 17,3          | 26,8          | 23,4          | 33,3          | 29,1          | 17,9                | 15,3          | 23,8          | 20,4          | 29,3          | 25,1          |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| protection rating                               | IP      | 20                |               |               |               |               |               |                                          |               |               |               |               |               |                     |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |

Accessories



Sterownik HMI WING EC

|                      |                               |
|----------------------|-------------------------------|
| VTS article No.      | 1-4-2801-0155                 |
| Motor support        | EC                            |
| Power supply voltage | ~230V/1ph /50Hz               |
| Permissible load     | 1A for 230VAC 0,02A for 0-10V |
| Setting range        | 5...40 °C                     |
| Protection rating    | IP 20                         |



Controller WING EC WIFI

|                      |                               |
|----------------------|-------------------------------|
| VTS article No.      | 1-4-2801-0156                 |
| Motor support        | EC                            |
| Power supply voltage | ~230V/1ph /50Hz               |
| Permissible load     | 1A for 230VAC 0,02A for 0-10V |
| Setting range        | 5...40 °C                     |
| Protection rating    | IP 20                         |



Wall controller WING/VOLCANO

|                      |                               |
|----------------------|-------------------------------|
| VTS article No.      | 1-4-0101-0438                 |
| Motor support        | AC                            |
| Power supply voltage | 6(3) V/ph/Hz                  |
| Permissible load     | 1A for 230VAC 0,02A for 0-10V |
| Setting range        | 10...30 °C                    |
| Protection rating    | IP 30                         |



Door sensor (reed switch)

|                       |               |
|-----------------------|---------------|
| VTS article No.       | 1-4-0101-0454 |
| Contact configuration | NO            |
| Switching current     | 500 mA        |
| Switching voltage     | max 200 V     |
| Connection            | screw         |



Door sensor adapter WING AC

|                                                                                                                                         |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| VTS article No.                                                                                                                         | 1-4-0101-0578   |
| Power supply                                                                                                                            | ~230V/1ph /50Hz |
| Rated input power                                                                                                                       | 1W              |
| Protection rating                                                                                                                       | IP 55           |
| Dedicated to curtains with AC motor. Adapter gives possibility to use Door sensor (1-4-0101-0454) with Wall controller (1-4-0101-0438). |                 |



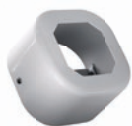
Valve with actuator

|                      |                 |
|----------------------|-----------------|
| VTS article No.      | 1-2-1204-2019   |
| Power supply voltage | ~230V/1ph /50Hz |
| Opening              | 3/3 min         |
| Kvs                  | 4,5             |
| Protection rating    | IP 54           |



Flex. connection hoses (set)

|                                     |                                |
|-------------------------------------|--------------------------------|
| VTS article No.                     | 1-2-2702-0076                  |
| Lenght                              | 0,6-0,9 m                      |
| Connection type                     | GW 3/4"                        |
| Max. fluid pressure                 | 1,6 MPa                        |
| Min. working temperature for water  | 5 °C                           |
| Min. working temperature for glycol | -20 °C                         |
| Max. working temperature            | 130 °C                         |
| Set includes                        | hose (2 pcs)<br>gasket (4 pcs) |



Surface mounted box for HMI

|                 |                         |
|-----------------|-------------------------|
| VTS article No. | 1-2-0393-1987           |
| dimensions      | 100x100x70mm            |
| type            | surface mounted         |
| color           | RAL 9016                |
| set includes    | bracket<br>and 2 screws |



Smart entrance protection

INSIDE

- ← CHILLED AIR
- ← CLEAN AIR

OUTSIDE

- WARM AIR
- DUST
- INSECTS
- POLLUTION
- UNPLEASANT SCENTS

Noise level

| Fan speed | Noise level | WING W100-200 |      |    | WING E100-200 |      |    | WING C100-200 |      |    |
|-----------|-------------|---------------|------|----|---------------|------|----|---------------|------|----|
|           |             | 1m            | 1,5m | 2m | 1m            | 1,5m | 2m | 1m            | 1,5m | 2m |
| I         | dB(A)**     | 52            | 53   | 56 | 49            | 51   | 55 | 53            | 54   | 57 |
| II        |             | 55            | 58   | 61 | 51            | 56   | 59 | 59            | 62   | 61 |
| III       |             | 57            | 59   | 62 | 58            | 58   | 60 | 62            | 63   | 63 |

\* air stream range depends on curtain operation speed  
\*\* available heating power in the control option configuration: Wing E100 2 or 4/6kW, for Wing E150 8/12kW, for Wing E200 10/15kW  
\*\*\* speed measurement conditions: semi-open space, horizontal installation on the wall, measurement performed 5 m away from the device



# WING PRO

AIR CURTAINS  
FOR PROFESSIONALS



## Energy saving

**EC motor** use even 40% less electrical energy and allow for **BMS direct connection**.



## Power

The wide air stream, range up to **8 meters**, capacity up to 88 kW.



## Installation

Vertical or horizontal mounting possibility plus easy unit connection.



## Price

Intelligent design with never-before-seen performance available at a **competitive price**.





## Product range

### WING PRO **WR2**

#### DOUBLE ROW COIL

HEATING POWER RANGE:  
**17 - 88 kW**  
EXHAUST FLOW RATE:  
**7 300 - 10 700 m<sup>3</sup>/h**  
MAXIMUM AIR STREAM RANGE:  
**7 m**

WING PRO 200



2072 mm

### WING PRO **WR1**

#### SINGLE ROW COIL

HEATING POWER RANGE:  
**9 - 48 kW**  
EXHAUST FLOW RATE:  
**7 900 - 11 900 m<sup>3</sup>/h**  
MAXIMUM AIR STREAM RANGE:  
**7,5 m**

WING PRO 150



1556 mm

### WING PRO **C**

#### WITHOUT HEATING (AMBIENT)

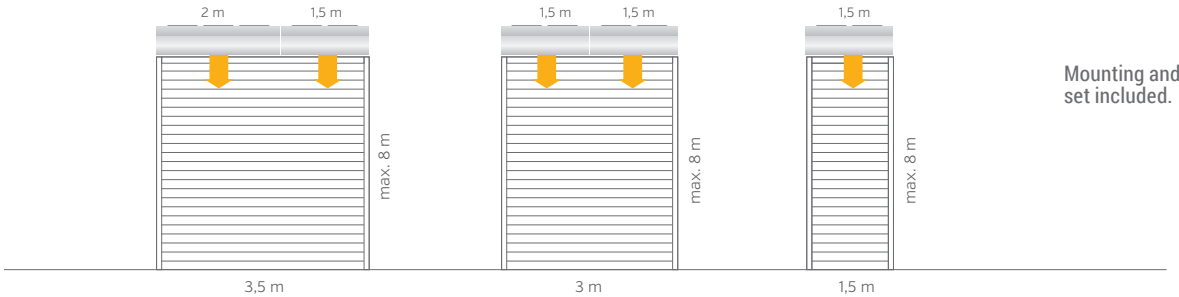
EXHAUST FLOW RATE:  
**8 500 - 12 800 m<sup>3</sup>/h**  
MAXIMUM AIR STREAM RANGE:  
**8 m**

EC

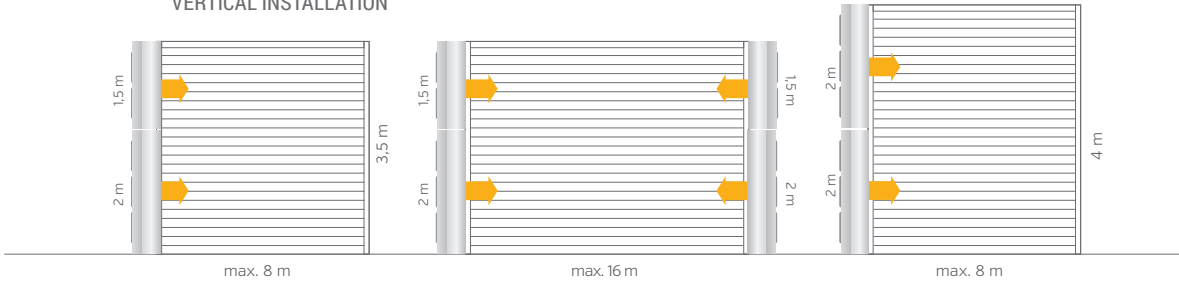


536 mm  
530 mm

#### HORIZONTAL INSTALLATION

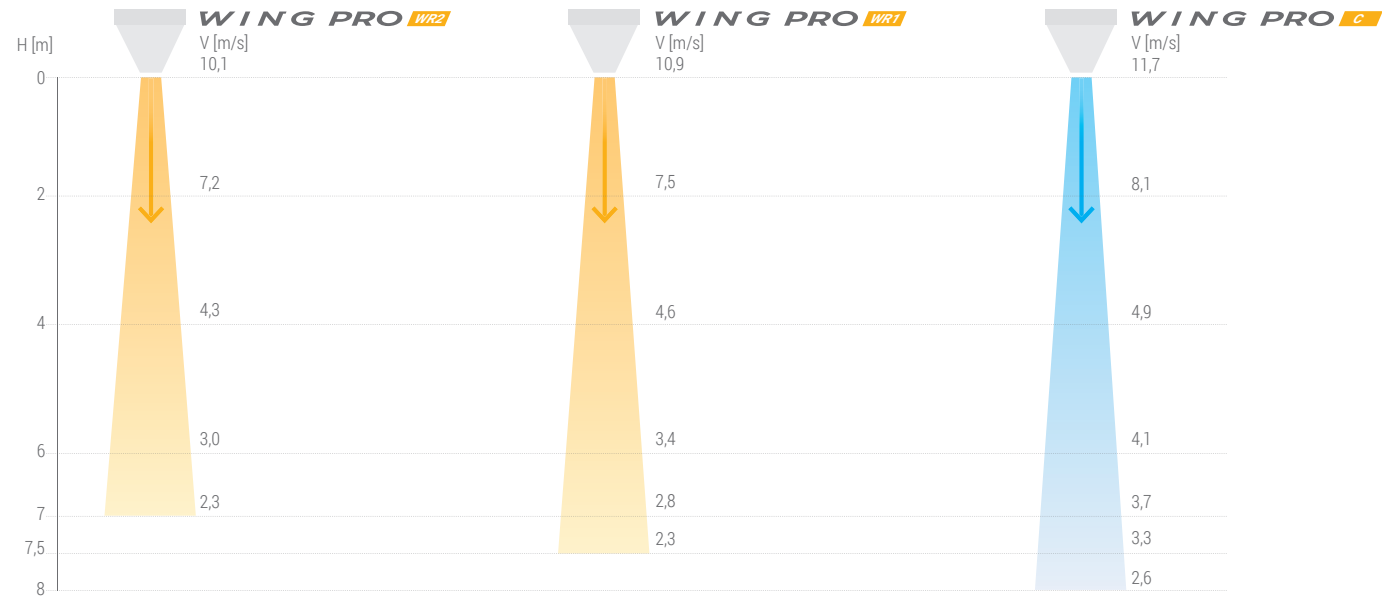


#### VERTICAL INSTALLATION



Mounting and connection set included.

## Stream range





Technical parameters

| PARAMETERS                         |         | WING PRO DOUBLE ROW COIL |               | WING PRO SINGLE ROW COIL |               | WITHOUT HEATING (AMBIENT) |               |
|------------------------------------|---------|--------------------------|---------------|--------------------------|---------------|---------------------------|---------------|
|                                    |         | W150                     | W200          | W150                     | W200          | C150                      | C200          |
|                                    |         | EC                       | EC            | EC                       | EC            | EC                        | EC            |
| VTS article No.                    |         | 1-4-2801-0349            | 1-4-2801-0355 | 1-4-2801-0348            | 1-4-2801-0354 | 1-4-2801-0347             | 1-4-2801-0353 |
| Max. height of door                | m       | 1,5                      | 2             | 1,5                      | 2             | 1,5                       | 2             |
| Max. air stream range              | m       | 7                        |               | 7,5                      |               | 8                         |               |
| Max. flow rate                     | m³/h    | 7 300                    | 10 700        | 7 900                    | 11 900        | 8 500                     | 12 800        |
| Heating power range                | kW      | 17-58                    | 28-88         | 3-32                     | 15-48         | -                         |               |
| Max. temperature of heating medium | °C      | 130                      |               |                          |               | -                         |               |
| Max. Working pressure              | MPa     | 1,6                      |               |                          |               | -                         |               |
| Diameter of stub pipe connectors   | "       | 3/4                      |               |                          |               | -                         |               |
| Supply voltage                     | V/ph/Hz | ~230/1/50                |               |                          |               |                           |               |
| EC motor power                     | kW      | 2 x 0,25                 | 3 x 0,25      | 2 x 0,25                 | 3 x 0,25      | 2 x 0,25                  | 3 x 0,25      |
| Rated current (EC motor)           | A       | 2 x 1,3                  | 3 x 1,3       | 2 x 1,3                  | 3 x 1,3       | 2 x 1,3                   | 3 x 1,3       |
| Weight AC/EC (without water)       | kg      | 53,6                     | 69,6          | 50,5                     | 66,1          | 43,4                      | 58,3          |
| IP protection rating               | IP      | 54                       |               |                          |               |                           |               |



Accessories

|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
| <b>HMI WING EC controller</b>                                                       | <b>Controller WING EC WIFI</b>                                                      | <b>Door sensor (reed switch)</b>                                                    | <b>Valve with actuator</b>                                                          | <b>Flex. connection hoses (set)</b>                                                   | <b>Surface mounted box for HMI</b>                                                    |
| VTS article No. 1-4-2801-0155                                                       | VTS article No. 1-4-2801-0156                                                       | VTS article No. 1-4-0101-0454                                                       | VTS article No. 1-2-1204-2019                                                       | VTS article No. 1-2-2702-0076                                                         | VTS article No. 1-2-0393-1987                                                         |
| Motor support EC                                                                    | Motor support EC                                                                    | Contact configuration NO                                                            | Power supply voltage ~230V/1ph /50Hz                                                | Lenght 0,6-0,9 m                                                                      | dimensions 100x100x70mm                                                               |
| Power supply voltage ~230V/1ph /50Hz                                                | Power supply voltage ~230V/1ph /50Hz                                                | Switching current 500 mA                                                            | Opening 3/3 min                                                                     | Connection type GW 3/4"                                                               | type surface mounted                                                                  |
| Permissible load 1A for 230VAC 0,02A for 0-10V                                      | Permissible load 1A for 230VAC 0,02A for 0-10V                                      | Switching voltage max 200 V                                                         | Kvs 4,5                                                                             | Max. fluid pressure 1,6 MPa                                                           | color RAL 9016                                                                        |
| Setting range 5...40 °C                                                             | Setting range 5...40 °C                                                             | Connection screw                                                                    | Protection rating IP 54                                                             | Min. working temperature for water 5 °C                                               | set includes bracket and 2 screws                                                     |
| Protection rating IP 20                                                             | Protection rating IP 20                                                             |                                                                                     |                                                                                     | Min. working temperature for glycol -20 °C                                            |                                                                                       |
|                                                                                     |                                                                                     |                                                                                     |                                                                                     | Max. working temperature 130 °C                                                       |                                                                                       |
|                                                                                     |                                                                                     |                                                                                     |                                                                                     | Set includes hose (2 pcs) gasket (4 pcs)                                              |                                                                                       |

Noise level

| Fan speed | Noise level | WING PRO W R1 |    | WING PRO W R2 |    | WING PRO C |    |
|-----------|-------------|---------------|----|---------------|----|------------|----|
|           |             | 1,5m          | 2m | 1,5m          | 2m | 1,5m       | 2m |
| I         | dB(A)*      | 45            | 46 | 45            | 45 | 47         | 48 |
| II        |             | 55            | 57 | 54            | 55 | 57         | 58 |
| III       |             | 64            | 65 | 62            | 63 | 65         | 66 |

\* speed measurement conditions: semi-open space, horizontal installation on the wall, measurement performed 5 m away from the device



# WING



Coca Cola Arena

Dubai, UAE

# VOLCANO



Green Plantations

Piaseczno, Poland



IKEA

Poznan, Poland



Claas factory

Woippy, France



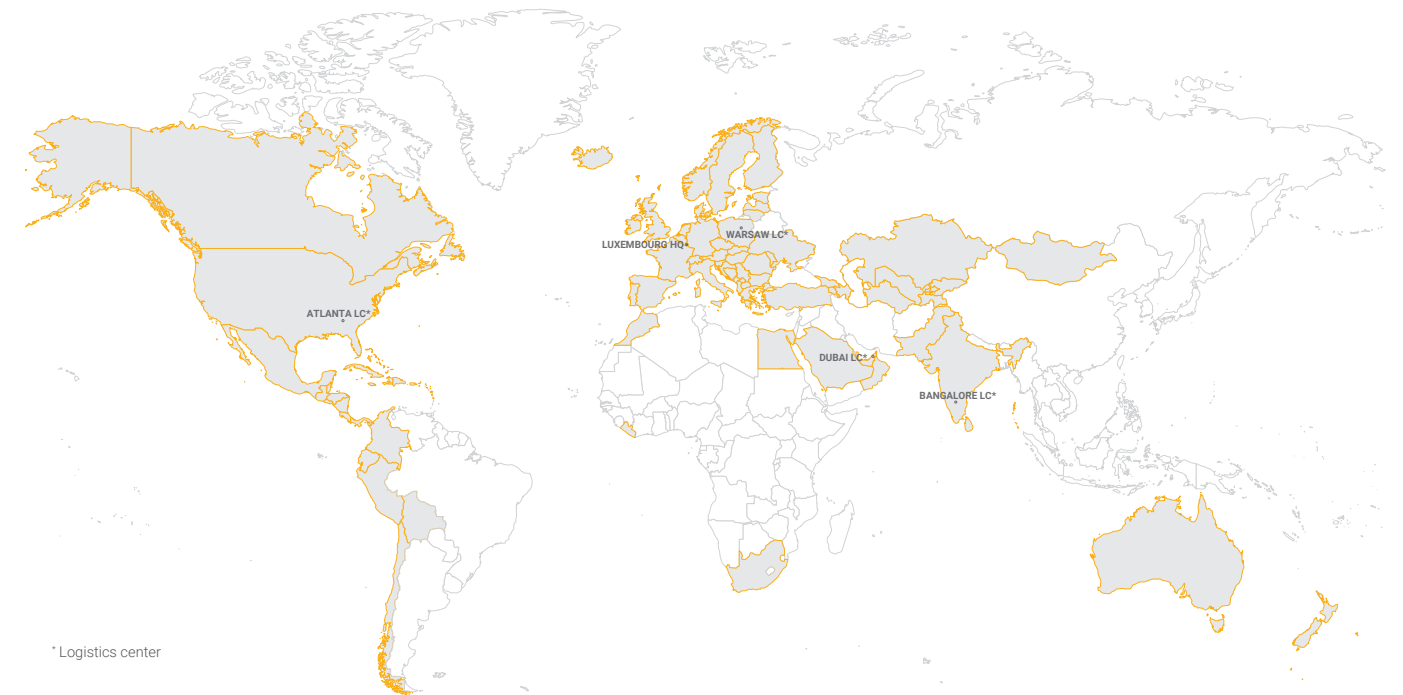
Dubai Expo Pavilions

Dubai, UAD



Daxing Airport

Beijing, China



\* Logistics center

COMPETITIVE  
\$ PRICE

HIGH  
CROWN QUALITY

OVER  
1 000 000  
UNITS  
SOLD

EH CAD SELECTION TOOL



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The features mentioned are subject to continuous upgrades and can change any time.  
VTS assuring continuous improvement for products and data and reserves the right to change design and specifications without notice.





**WING**

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2023



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