

# AIR EAGLE 414 C11B G1-1

## HIGH EFFICIENCY AIR/WATER HEAT PUMP INCL. HORIZONTAL SPLIT EVAPORATOR

ORDER NUMBER: 285630

SERIES: G1-1

TF MAX. 65 °C

SPLIT

### APPLIANCE DATA

|                                  |        |  |
|----------------------------------|--------|--|
| Dimensions of outdoor unit HxWxD | [mm]   | 1260x1480x965                            |
| Dimensions of indoor unit HxWxD  | [mm]   | 1150x400x650                             |
| Hydraulic connection             | [inch] | 1" fem.                                  |
| Weight of outdoor unit           | [kg]   | 200                                      |
| Weight of indoor unit            | [kg]   | 75                                       |
| Casing colour                    |        | Tiger white<br>29/11289/grey<br>RAL 7016 |

### SPECIFICATION

|   |              |                         |
|---|--------------|-------------------------|
| Phases/nominal voltage/frequency<br>Outdoor unit, controller                        | [-]/[V]/[Hz] | 1/230/50                |
| Phases/nominal voltage/frequency<br>Electric immersion heater                       | [-]/[V]/[Hz] | 3/400/50 or<br>1/230/50 |
| Electric immersion heater internal  | [kW]         | 8.8 (2.6/3.0/3.2)       |
| Output factor cos φ   |              | 0,93                    |
| Fuse protection (tripping curve "C")  | [A]          | 20                      |
| Max. operating current  | [A]          | 20,00                   |
| Max. starting current, compressor   | [A]          | < 10,00                 |
| Sound power/sound pressure level (at 3 m distance),<br>indoor unit                  | [dBA]**      | < 50,00 / 32,00         |
| Sound power level (A7/W35)/sound pressure level<br>(at 10 m distance), outdoor unit | [dBA]        | 57,0 / 29,0             |

### HEATING MODE PERFORMANCE FIGURES (to EN 14511)

#### Standard point A7/W35

|                                  |      |              |
|----------------------------------|------|--------------|
| Heating output range             | [kW] | 3.50 - 10.60 |
| Heating output/power consumption | [kW] | 6.00 / 1.30  |
| COP                              |      | 4,50         |

#### Operating point A2/W35

|                                  |      |              |
|----------------------------------|------|--------------|
| Heating output range             | [kW] | 3.10 - 10.20 |
| Heating output/power consumption | [kW] | 5.50 / 1.40  |
| COP                              |      | 4,00         |

#### Standard point A7/W55

|                                  |      |              |
|----------------------------------|------|--------------|
| Heating output range             | [kW] | 3.90 - 11.00 |
| Heating output/power consumption | [kW] | 6.40 / 2.10  |
| COP                              |      | 3,10         |

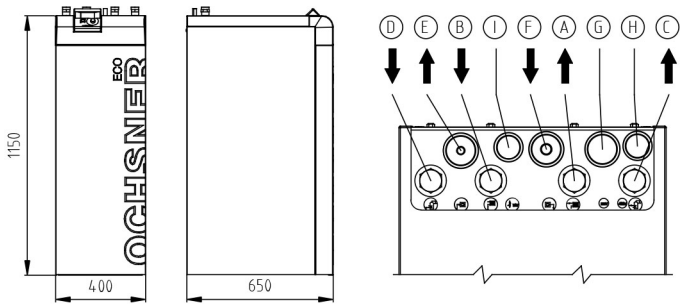
#### Standard point A-7/W34

|                                  |      |             |
|----------------------------------|------|-------------|
| Heating output range             | [kW] | 2.60 - 8.60 |
| Heating output/power consumption | [kW] | 7.80 / 2.70 |
| COP                              |      | 2,90        |

### COOLING MODE PERFORMANCE FIGURES

#### Operating point A35/W18

|   |      |             |
|---|------|-------------|
| Cooling capacity range                        | [kW] | 2.60 - 6.60 |
| Nominal cooling capacity                      | [kW] | 5,60        |
| Total nominal power consumption               | [kW] | 1,70        |
| Energy efficiency ratio EER at nominal output |      | 3,30        |



Indoor unit

- (A) FL heating/cooling
- (B) RTN heating/cooling
- (C) FL DHW charging
- (D) RTN DHW charging
- (E) Refrigerant line LL (liquid line)
- (F) Refrigerant line HG (hot gas line)
- (G) Controller 230 V
- (H) booster heater 400 V/230 V
- (I) Sensor < 12 V

### CONDENSER

|   |                               |
|---|-------------------------------|
| Type  | Plate heat exchanger          |
| Material                                      | Stainless steel 1.4301        |
| Max. refrigerant operating pressure           | [bar] 45                      |
| Max. heat transfer medium operating pressure  | [bar] 3                       |
| Heat transfer medium temperature differential | [K] 5                         |
| Application range                             | [°C] 65                       |
| Heat transfer medium                          | Water                         |
| Test pressure                                 | [bar] 78                      |
| Heat transfer medium flow rate                | [m³/h] 1,40                   |
| Internal pressure differential                | [mbar] 160                    |
| Flow meter FM standard                        | Internal built-in             |
| Circulation pump heat sink WNA                | Internal Yonos Para HPS15/7.5 |
| Residual head I WNA external, incl. FM        | [mbar] 590                    |

### REFRIGERANT CIRCUIT

|                              |              |
|------------------------------|--------------|
| Refrigerant                  | R410A        |
| Defrost technology           | Hot gas      |
| Refrigerant charge (from-to) | [kg] 5,5-9,0 |

### COMPRESSOR

|                   |                     |
|-------------------|---------------------|
| Type              | Scroll              |
| Output levels     | Infinitely variable |
| Speed             | [rpm] 2100-7000     |
| Voltage/frequency | [V]/[Hz] 230/50     |

### FAN

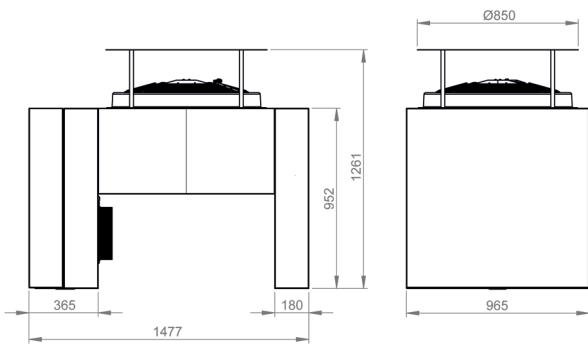
|                   |                 |
|-------------------|-----------------|
| Type              | axial           |
| Number            | [pce] 1         |
| Voltage/frequency | [V]/[Hz] 230/50 |
| Power consumption | [W] 230         |

### EVAPORATOR

|   |  |
|---|--|
| Unit type                                     | built-in                                       |
| Type  | Finned tube                                    |
| Number  | [pce] 1  |
| Fin pack material                             | Copper/aluminium                               |
| Casing material                               | Stainless steel / powder coated, grey RAL 7016 |
| Max. refrigerant operating pressure           | [bar] 40                                       |
| Relative humidity                             | [%] 80   |
| Heat transfer medium temperature differential | [K] 5,70                                       |
| Air flow rate                                 | [m³/h] 4000                                    |
| Application range min./max                    | [°C] -25 / 40                                  |

\*Starting current, compressor with locked rotor

\*\*Sound pressure level measured in a free field; sound power levels measured at max. nominal speed



Outdoor unit



PRODUCT DATA **ErP: AIR EAGLE 414 C11B G1-1**

|                           | COLDER     | MEAN | HOTTER       |
|---------------------------|------------|------|--------------|
| <b>LOW TEMPERATURE</b>    | <b>A++</b> |      | <b>35°C</b>  |
| $\eta_s$                  | 141        | 161  | 191          |
| Energy consumption [kWh]  | 7273       | 5177 | 2641         |
| P rated [kW]              | 10         | 10   | 9            |
| SCOP                      | 3,60       | 4,10 | 4,85         |
| <b>MEDIUM TEMPERATURE</b> | <b>A++</b> |      | <b>55°C</b>  |
| $\eta_s$                  | 118        | 132  | 152          |
| Energy consumption [kWh]  | 9081       | 6197 | 3452         |
| P rated [kW]              | 11         | 10   | 10           |
| SCOP                      | 3,02       | 3,36 | 3,87         |
| <b>DHW</b>                | <b>A</b>   |      | <b>SP300</b> |
| $\eta_{WH}$               | 87         | 95   | 110          |
| Energy consumption [kWh]  | 1638       | 1497 | 1299         |
| Draw-off profile          |            |      | <b>XL</b>    |
| Tank losses [W]           |            |      | <b>94</b>    |

**RECOMMENDED ACCESSORIES**

|                              |                      |  |
|------------------------------|----------------------|--|
| Heat pump buffer tank        | PU200 (optional)     | 30 l/kW, P min. at A20                         |
| DHW tank                     | SP350                | 30 l/kW at P min. 8 kW                         |
| 3-way switching module       | built-in             |  |
| External PHE for DHW heating | PHE 2007 as of SP300 | Primary 1" / 20 mbar<br>Secondary 1" / 16 mbar |

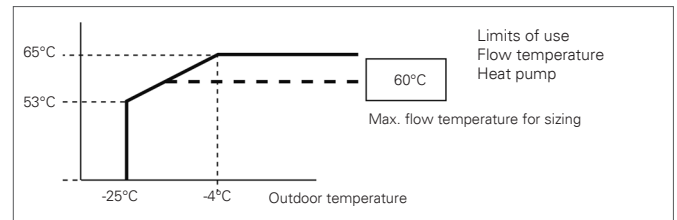
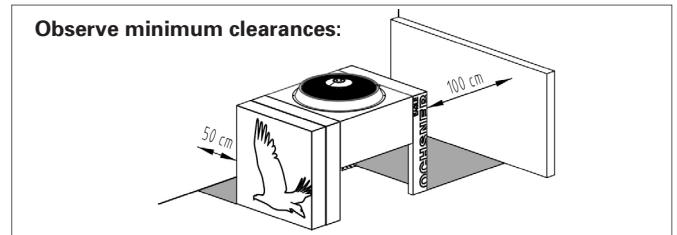
| Application                      | Booster heater output  |
|----------------------------------|--|
| Bivalent <b>parallel</b>         | Sizing according to calculated value (offer program), but with minimum 50% of building heat load |
| Bivalent <b>partial parallel</b> | Sizing to 100% of building heat load   |
| Bivalent <b>alternative</b>      | Sizing to 100% of building heat load   |

|                         | Max. connection length | Max. height differential |
|-------------------------|------------------------|--------------------------|
| AIR EAGLE 414 C11B G1-1 | L ≤ 25                 | Hmax ≤ 15                |

|  | indoor | outdoor                            |
|--|--------|------------------------------------|
| Sound power level [dBA]                      | -      | 57                                 |
| Controller class with room remote control    | VI     | Controller contribution [%]<br>4,0 |
| Controller class without room remote control | II     | Controller contribution [%]<br>2,0 |

**LIMITS OF USE AIR EAGLE 414 C11B G1-1**

|   |  |
|---|--|
| Outdoor temperature/max. heat pump flow temperature | A-10/W60°C<br>A-15/W58°C<br>A-20/W55°C |
| Underfloor heating (-15°C / 35°C)                   | YES                                    |
| Radiators (-15°C / 55°C)                            | YES                                    |
| Radiators (-15°C / 60°C)                            | YES                                    |
| Domestic hot water                                  | YES                                    |



**PERFORMANCE CURVES AIR EAGLE 414 C11B G1-1**

