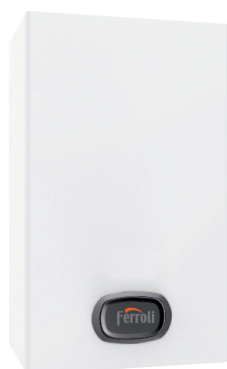
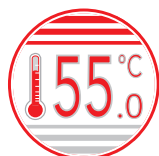


# > OMNIA H

REVERSIBLE HEAT PUMP FOR SPLIT INSTALLATION  
WITH DC INVERTER COMPRESSOR



## Efficiency class in heating mode - Average climate

Model	4	6	8	10	12	16	12T	16T
Efficiency capacity - medium temperature (water 55°C)	A++	A++	A++	A++	A++	A++	A++	A++
Season efficiency - medium temperature (water 55°C)	127	130	125	127	127	128	128	130
Efficiency capacity - low temperature (water 35°C)	A++	A++	A++	A++	A++	A++	A++	A++
Season efficiency - low temperature (water 35°C)	183	185	170	177	175	158	184	172

NOTA: Declared according to European regulation 811/2013. The values are referred to units without options and accessories.

## Description

### > GENERAL CHARACTERISTICS:

- The OMNIA range of heat pumps meets the requirements of space heating, space cooling and the production of domestic hot water for small and medium-sized residential and commercial plants.
- It consists of an inverter external unit available of different capacities associated with a hydronic indoor unit proposed in two variants with or without 3kW electrical integration two-stage (1.5 + 1.5), both equipped as standard with integrated three-way valve for the production of domestic hot water through an external boiler.
- The system is very versatile and can work at outdoor air temperatures down to -20 °C and produce hot water up to 60 °C with the aid of electrical integration.
- Particularly suitable for use in radiant systems, fan coil units, radiators and for indirect production of domestic hot water (DHW) via an external boiler (not supplied).
- Split refrigerant circuit to avoid risks of freezing in particularly for rigid outdoor applications.
- The user interface consists of a digital remote controller (wired max 50m from the indoor unit) equipped with a large display and simple setting commands.

### > EXTERNAL UNIT CHARACTERISTICS OMNIA H-UE:

- Reduced starting current thanks to Inverter technology
- Compressor with twin rotary DC INVERTER motor positioned on rubber anti-vibration mounts and wrapped by a double layer of sound-absorbing material to reduce vibrations

and noise

- The compressor is also equipped with crankcase oil heater
- Bi-flow electronic expansion valve
- 4-way valve
- Axial fans with DC brushless motor complete with safety protection grilles
- Finned coil consisting of copper pipes and aluminum fins
- External air temperature probe already installed on the unit
- DHW tank water temperature sensor supplied as standard (installed by the installer)

### > INTERNAL UNIT CHARACTERISTICS OMNIA H-UI:

- Available with 3kw electrical integration (OMNIA HI-UI) or without integration (OMNIA H-UI)
- Hydraulic unit with 3-way diverter valve for DHW production supplied as standard
- Brazed stainless steel water / gas plate heat exchanger
- Low consumption system circulator with DC brushless motor
- Automatic air vent
- Water differential pressure switch
- Water pressure gauge
- Expansion vessel
- Safety valve
- Y-shaped water filter supplied as standard (installed by the installer)

**TECHNICAL DATA**

**Performances data**

-	Models	4	6	8	10	12	16	12T	16T	UM
<b>A7W35</b>	<b>Heating capacity</b>	4.10	6.10	8.00	10.00	12.10	15.50	12.00	15.50	<b>kW</b>
	Power input	0.82	1.29	1.73	2.17	2.74	3.82	2.66	3.79	<b>kW</b>
	<b>COP</b>	<b>5.00</b>	<b>4.73</b>	<b>4.62</b>	<b>4.61</b>	<b>4.42</b>	<b>4.06</b>	<b>4.51</b>	<b>4.09</b>	<b>W/W</b>
<b>A7W45</b>	<b>Heating capacity</b>	4.01	5.96	7.34	10.12	11.85	16.05	11.97	15.48	<b>kW</b>
	Power input	1.13	1.68	2.13	2.93	3.48	5.03	3.5	4.87	<b>kW</b>
	<b>COP</b>	<b>3.55</b>	<b>3.55</b>	<b>3.45</b>	<b>3.45</b>	<b>3.41</b>	<b>3.19</b>	<b>3.42</b>	<b>3.18</b>	<b>W/W</b>
<b>A35W18</b>	<b>Cooling capacity</b>	4.10	6.20	8.00	10.50	11.70	13.80	12.00	14.50	<b>kW</b>
	Power input	0.84	1.43	1.93	2.30	2.79	3.77	2.8	3.94	<b>kW</b>
	<b>EER</b>	<b>4.88</b>	<b>4.34</b>	<b>4.15</b>	<b>4.57</b>	<b>4.19</b>	<b>3.66</b>	<b>4.29</b>	<b>3.68</b>	<b>W/W</b>
<b>A35W7</b>	<b>Cooling capacity</b>	4.12	6.15	6.44	9.39	11.02	12.85	11.7	12.91	<b>kW</b>
	Power input	1.30	2.08	2.24	3.26	4.17	5.39	4.65	5.52	<b>kW</b>
	<b>EER</b>	<b>3.17</b>	<b>2.96</b>	<b>2.88</b>	<b>2.88</b>	<b>2.64</b>	<b>2.38</b>	<b>2.52</b>	<b>2.34</b>	<b>W/W</b>

The values are referred to units without options and accessories.

Data declared according to **EN 14511**:

**EER** (Energy Efficiency Ratio) = ratio of the total cooling capacity to the effective power input of the unit  
**COP** (Coefficient Of Performance) = ratio of the total heating capacity to the effective power input of the unit

**A35W7** = source : air in 35°C d.b. / plant : water in 12°C out 7°C

**A35W18** = source : air in 35°C d.b. / plant : water in 23°C out 18°C

**A7W45** = source : air in 7°C d.b. 6°C w.b. / plant : water in 40°C out 45°C

**A7W35** = source : air in 7°C d.b. 6°C w.b. / plant : water in 30°C out 35°C

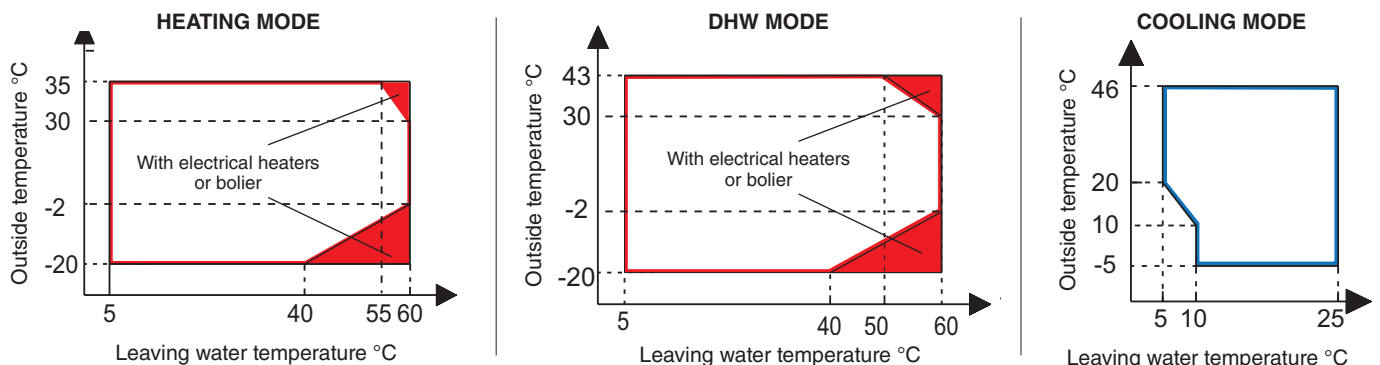
<b>OUTDOOR UNIT TECHNICAL DATA</b>	4	6	8	10	12	16	12T	16T	
Refrigerant	R410A								Typo
Refrigerant charge	2.5	2.5	2.8	3.9	3.9	3.9	4.2	4.2	kg
Power supply	220-240V ~ 50 Hz						380-400V - 3N ~ 50 Hz		
Compressor type	twin rotary								-
N° compressors / N° refrigerant circuits	1 / 1								n°
Source side heat exchanger type	finned coil								-
Fans type	Brushless DC								-
N° fans	1			2					n°
Liquid connections diameter	Ø 9.5								-
Gas connections diameter	Ø 15.9								-
SWL - Sound power level*	62	66	69	67	68	72	70	72	dB(A)

<b>INDOOR UNIT TECHNICAL DATA</b>	8	16	16T	
Plant side heat exchanger type	piastre inox saldobrasate			-
Pump type	circolatore elettronico			-
Expansion tank volume	10			l
Water safety valve set	3			bar
Hydraulic fittings - plant	3/4" M			-
Hydraulic fittings - domestic hot water	1/2" M			-
Liquid connections diameter	Ø 9.5			-
Gas connections diameter	Ø 15.9			-
Resistenze elettriche integrative (opzione)	2 x 1.5		1 x 4.5	Q.ty / kW
SWL - Sound power level*	42		45	dB(A)

\* **SWL = Sound power levels, with reference to 1x10<sup>-12</sup> W.**

The Total sound power level in dB(A) measured in compliance with ISO 9614 standards. The Total Sound Power in dB(A) the only binding acoustic specification.

**OPERATING LIMITS**

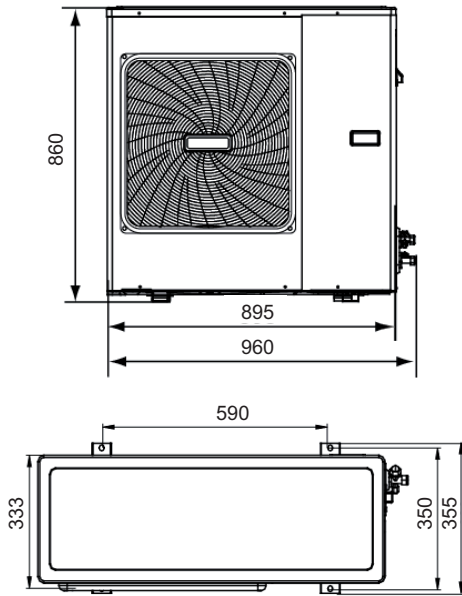


NOTE FOR DHW MODE: leaving water temperature is the temperature of the water produced by the unit and not the DHW temperature available to the user; the DHW temperature is in fact a function of this parameter and of the coil surface of the DHW boiler.

**DIMENSIONS**

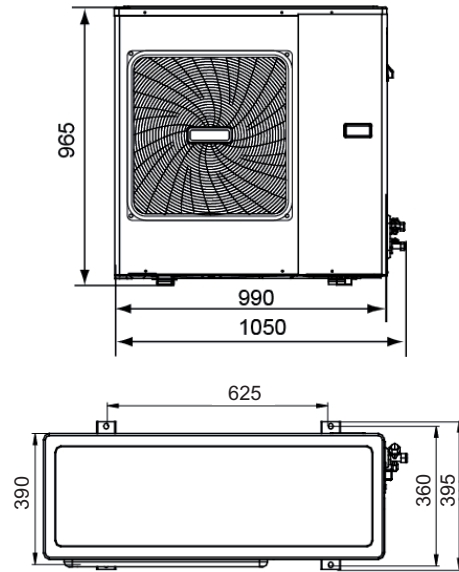
**OUTDOOR UNIT**

**Mod. 4 - 6**



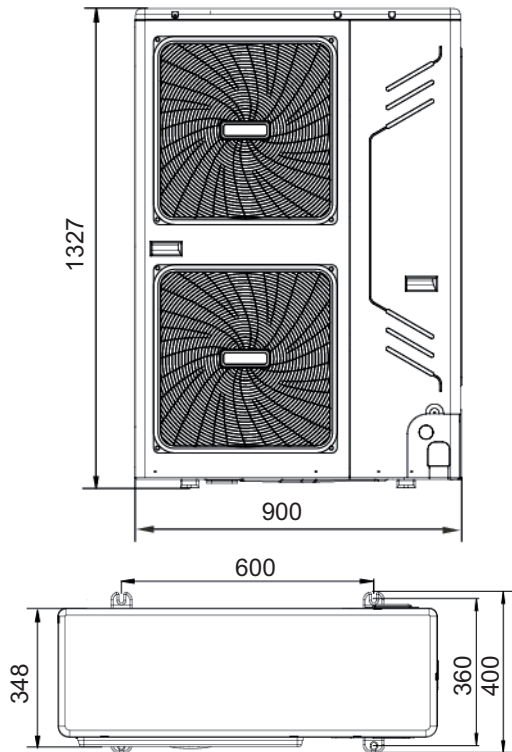
Models	4	6	
Weight net	60	60	kg

**Mod. 8**



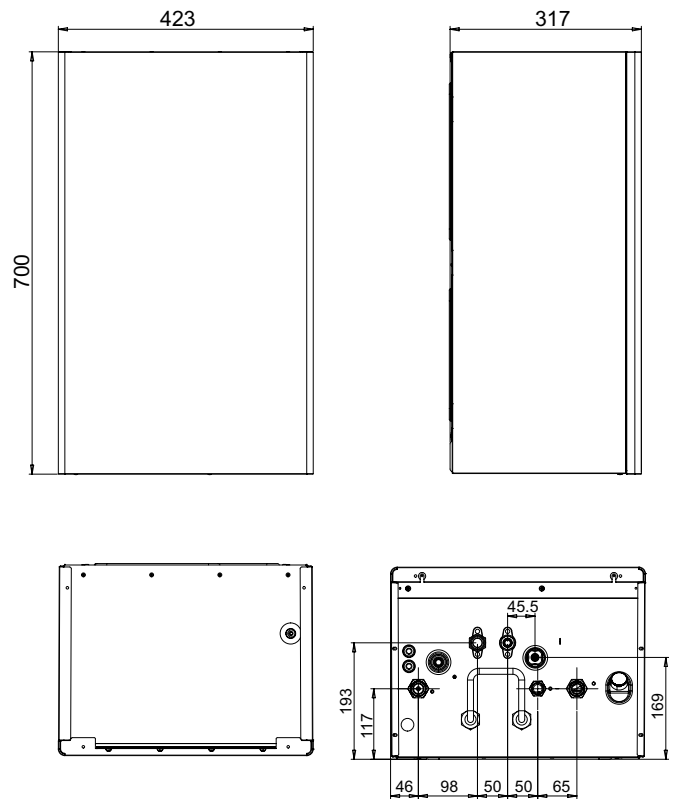
Models	8	
Weight net	76	kg

**Mod. 10 - 12 - 16 - 12T - 16T**



Models	10	12	14	16	12T	14T	16T	
Weight net		99				115		kg

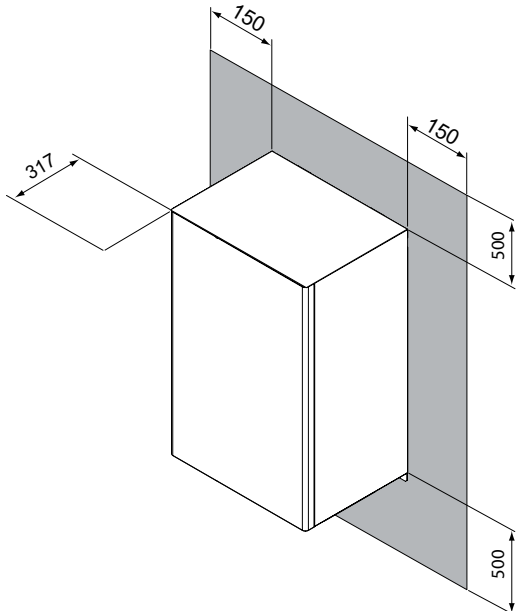
**INDOOR UNIT**



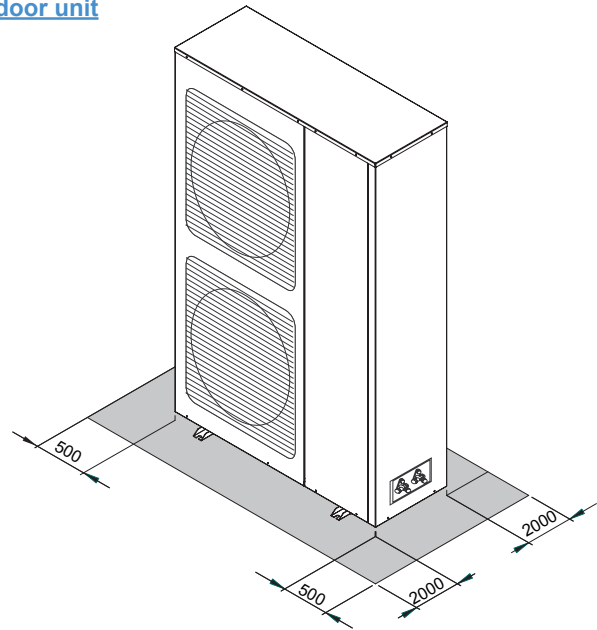
Models	8	16	16T	
Weight net base unit	.....	.....	.....	kg
Weight net base unit + booster	.....	.....	.....	kg

## MINIMUM OPERATING AREA

### Indoor unit



### Outdoor unit



## THE CONTROL SYSTEM

The user interface consists of a wired remote controller (up to 50 m from the unit) which allows the management of:

- **HEATING AND COOLING SYSTEM**, where the heat pump is the sole energy source. The unit, if activated in heat or cool mode, works by modulating the frequency of the compressor to maintain the temperature of the produced water to the setpoint value set by the controller. Through parameter you can use the remote controller (eg. For single-zone systems) as a room thermostat.

- **DOMESTIC HOT WATER PRODUCTION (DHW)**. The unit is activated in a heatt mode to keep the temperature of a DHW tank (not supplied) to the setpoint value. It requires a 3-way diverter valve (not supplied) and a temperature sensor (T5 probe, L = 10m, provided) to be inserted into one well of the DHW tank.

- **ADDITIONAL SOURCES OF ENERGY** (boiler or electrical heater). Depending on the parameters set, these sources can be activated in integration or replacement of the heat pump when the system is used for space heating or for DHW production.

The controller also activate additional energy sources in case the heat pump is not working.

- **ELECTRIC HEATER OF THE DHW TANK**. The controller can manage the activation of an electric heater inserted in the DHW tank as a heat integration to the heat pump, for disinfecting function, or as a source of energy reserve for DHW production in case the heat pump is not working.

**FAST DHW**. This function can be activated manually and it allows you to give priority to DHW production by activating all energy sources (heat pumps, electric heaters, boiler) available for DHW heating to bring in the shortest time possible the DHW tank to the setpoint required.

- **DISINFECT FUNCTION**. You can set from the controller weekly cycles for disinfecting the water in the Dhw tank. In order to successfully execute these cycles, the heat pump must be integrated with DHW electric heater or boiler.

- **SILENT MODE**. If active it allows a reduction of the maximum frequency of the compressor and of the fan speed in order to reduce the noise emitted and the power absorbed by the unit. There are 2 levels of silencing. Through time programming, you can define for 2 daily time bands the desired silent level (eg. during the night).

- **ON / OFF** using an external contact. The unit can be turned on and off (eg. thermostat / remote switch) via an external contact: in this case the unit will operate in the mode set by the controller keyboard.

- **HEAT / COOL** via external contacts. The unit can be activated in heat or cool mode via two external contacts (eg. thermostat that manages the heat and cool demand / remote switch).

- **ECO MODE**. Possibility to define in heat mode a time band within which the heat pump works with a sliding setpoint defined by the chosen climatic curve. 8 climatic curves are available for low temperature systems (radiant floor) and 8 climatic curves for fan coil or radiator systems)

- **WEEKLY SCHEDULING**. It allows a scheduling of 6 time bands for each day of the week: for each time band it is possible to define the mode (COOL / HEAT / DHW) and the required setpoint.

- **Detailed alarms diagnostics with alarms history.**

- **Display of all operating parameters.**

