Unical

HP_OWER 1150 N

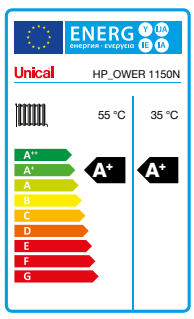
POWER HEAT PUMPS WITH DOUBLE REFRIGERANT CIRCUIT

High efficiency air-water DC INVERTER heat pump with very high shutting and double refrigerant circuit, R410A refrigerant, fully wired and pre-assembled, designed for heating, cooling and DHW preparation.

Outdoor installation, resistant to atmospheric agents thanks to the hot-dip galvanized sheet and painted, after processing, with polyurethane powders in the oven at 180 °C.

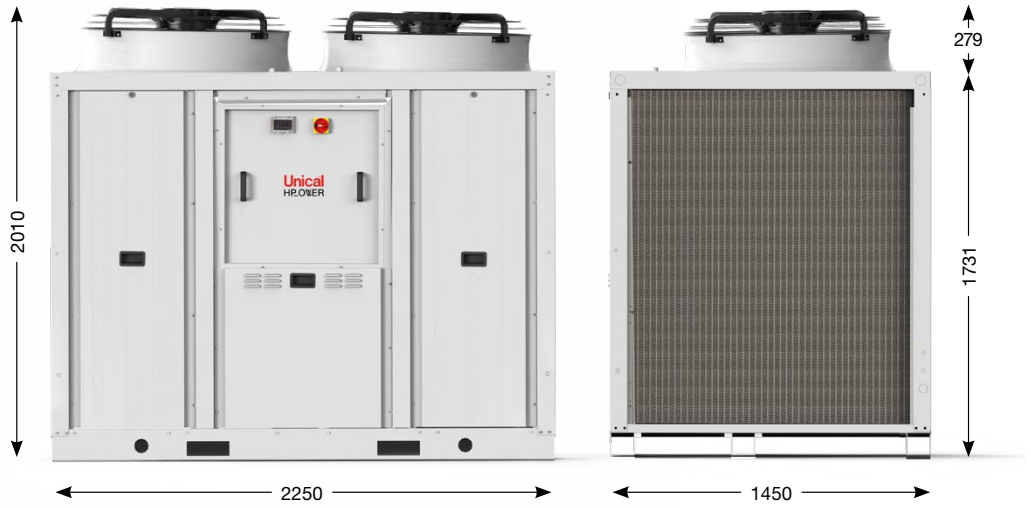
- **"Full inverter"** Air-Water heat pump
- High efficiency, **Energy Class A+**
  C.O.P. = 3.90 - E.E.R. = 3.65
- **Extraordinary 1:16 modulation ratio** to optimize operating consumption
- **Double refrigerant circuit, powered by 6 scroll compressors** that ensure reliability and operating safety even in the event of a component failure, avoiding the complete blocking of the machine
- Possibility to configure **up to 7 machines in cascade**
- **Sequential defrosting of the circuits** to avoid downtime
- **Intelligent electronics** that equally shares the operation hours of the compressors, increasing the useful life of the system
- **Standard antifreeze kit** to optimize the operation of the heat pump in unfavorable temperature conditions, consisting of low absorption heating cables with automatic management and pre-wired electrical connection
- **LN silencing as standard**, consisting of soundproofed compressor housing, guarantee of reduced noise emissions
- Low energy consumption **DC INVERTER fan motors**
- **Resistance to atmospheric agents** guaranteed by galvanized sheet metal casing and polyurethane painting
- **Air-gas exchanger in copper pipes and aluminium fins**. Geometrically designed to have the highest heat exchange and lowest pressure drops
- **Electrical panel board with IP54 protection degree**, with dedicated door to facilitate installation and maintenance works
- **Control system** to monitor and adapt the performance of the inverter compressor, circulator and fan, together with the INVERTER technology and the on-board sensors
- **HYDRONIC KIT** equipped with:
  - Patented high efficiency water-gas, stainless steel plate exchanger for R410A conceived with double refrigerant circuit and single hydraulic circuit.
  - Integrated modulating INVERTER circulator
  - Circulation and protection flow switch
  - Automatic air vent valve, safety valve (6 bar) and fill & drain cock.
- Integrated system configurator with **expansion modules for I / O resources** and MODBUS connection port
- Flow temperatures: up to 57 °C
- Operating limit outside temperature:
  -15 °C (Heating) + 46 °C (Cooling).

ErP



front view

side view



Technical data

HP_OWER			1150N
Season EFFICIENCY CLASS in heating mode (T_{out} = 35/55°C)			A+ / A+
Cooling	Cooling capacity (1) / (2)	kW	139.3 / 114.3
	Input power (1) / (2)	kW	38.16 / 39.4
	E.E.R. (1) / (2)	W/W	3.65 / 2.9
	S.E.E.R. (5)	W/W	3.81
Heating	Heating capacity (3) / (4)	kW	111.47 / 108.28
	Input power (3) / (4)	kW	28.58 / 36.09
	C.O.P. (3) / (4)	W/W	3.9 / 3.0
	S.C.O.P. (6)	W/W	3.50
Electric data	Power supply	V/Ph/Hz	400/3/50
	Maximum input power	kW	63
	Maximum current absorbed	A	96.3
Hydraulic circuit	Water flow rate (4)	l/s	5.18
	Minimum volume of water	l	260
	Available head pressure (2)	kPa	77
Noise level	Sound power L_w (8) LN	dB(A)	83.7
	Sound press. level at a dist. of 10m (9) LN	dB(A)	54.2
Weight	Shipping weight	kg	1142
	Operating weight	kg	1120
Rated air flow		m^3/s	9 x 2
R410A Refrigerant quantity (circuit 1 / circuit 2) (7)		kg	14.3 / 14.3
External working temperature range		°C	-15 / +46

Performance referring to the following conditions:

(1) Cooling: outdoor air temperature 35°C; in/out water temperature 23/18 °C
(2) Cooling: outdoor air temperature 35°C; in/out water temperature 12/7°C.
(3) Heating: outdoor air temperature 7°C DB 6°C WB; in/out water temp 30/35°C.
(4) Heating: outdoor air temperature 7°C DB 6°C WB; in/out water temp 40/45°C.
(5) Cooling: in/out water temperature 7/12°C.
(6) Heating: average climatic conditions; Tbiv=-7°C; in/out water temp 30/35°C.
(7) Indicative data subject to variation. For the correct data, always refer to the technical label on the unit.
(8) Sound power level: full load unit in heating mode according to EU Regulation 813/2013 for medium and low temperature applications. Value determined on the basis of measurements carried out in accordance with EN 12102-1: 2017, used in conjunction with UNI EN ISO 9614-2 which describes the test with the Intensimetric method.
The tolerance on the value of the total sound power level is 2 dB (A).
(9) Sound pressure level: value calculated from the sound power level using ISO 3744:2010, considering the units in the open field.

Performance data declared in points (1), (2), (3) and (4) is intended to refer to instantaneous power according to UNI EN 14511. The value declared in point (5) and (6) is determined according to UNI EN 14825.

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