

# HPE R32 04÷18T INVERTER

Air / water inverter heat pumps with axial fans for Hot / Cold and DHW production



mod. HPE R32  
14/14T/16  
16T/18T

mod. HPE R32  
04/06/08/10  
10T/12/12T

## Technical and construction features

The use of R32 inverter technology together with brushless DC motors ensures a very high overall energy efficiency due both to the reduction of the specific consumption of each motor and to the high modulation capacity.

The extended use of these technologies to all components results in high COP and EER values with a consistent increase in efficiencies at partial loads.

Main components:

- Proprietary control system with a microcontroller, superheat control logic by means of an electronic expansion valve.
- Twin Rotary DC inverter compressors  
Fans, axial type with brushless DC motor
- Source exchanger, circuitry optimized by a battery finned with copper pipes and aluminum fins.
- User exchanger, with brazed plates in AISI stainless steel 304 with reduced pressure drop on the water side.
- Refrigerant circuit, The circuit, made of copper tube, includes: condensation control, electronic thermostatic valve, inversion valve, high / low pressure switches, liquid separator and receiver, valves for maintenance and control, double pressure tap, high and low pressure transducers.
- Integrated hydraulic circuit: high brushless circulator variable speed efficiency, expansion tank, flow switch, air bleed valve, overpressure valve (6 bar), pressure gauge, system filling and draining cock.

LOGICS AND CONTROLS:

- All units can operate in 3 different modes: heating, cooling and sanitary, with specific programs that enhance the performance in all conditions, with possible management of the climatic curve.
  - The units of the HPE R32 series are able to manage valves secondary side mixers, deviators and circulators; they are also able to control the solar thermal system, any integration with external heat sources, and integration with external Home / Building automation or Domotic systems.
- The whole series has a reversible heat pump and can be controlled with the remote control on the wall as (accessory) by directly accessing the system from any browser (connection to an existing network with an ethernet cable).



ECOLOGIC  
GAS



RENEWABLE  
ENERGY



AXIAL FAN  
DC BRUSHLESS



REMOTE  
CONTROL TOUCH



COMPRESSOR  
DC INVERTER



PLATE EXCHANGER  
AISI 304



EXCHANGER  
DC INVERTER


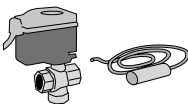

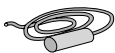







DHW DIVERTER  
VALVE

Model	Power Heating kW	Power Cooling kW	Code	€
HPE R32 04	4,55	4,23	37920000	4.666,00
HPE R32 06	6,08	5,02	37920001	4.756,00
HPE R32 08	7,81	6,08	37920002	5.090,00
HPE R32 10	10,10	7,53	37920003	6.160,00
HPE R32 10T Three-phase	10,10	7,53	37920021	6.850,00
HPE R32 12	11,80	8,51	37920004	6.430,00
HPE R32 12T Three-phase	11,80	8,51	37920022	7.120,00
HPE R32 14	14,10	11,48	37920005	7.694,00
HPE R32 14T Three-phase	14,10	11,48	37920006	7.700,00
HPE R32 16	16,30	13,80	37920007	8.170,00
HPE R32 16T Three-phase	16,30	13,80	37920008	7.900,00
HPE R32 18T Three-phase	17,90	15,04	37920009	8.440,00

# HPE R32 04÷18T INVERTER

Air / water inverter heat pumps with axial fans for Hot / Cold and DHW production

Accessories HPE R32 04÷18T		Code	€
	Remote control from the wall	<b>37920017</b>	<b>270,00</b>
	Diverter valve and DHW sensor kit	<b>DHW sensor</b> 37920014	<b>40,00</b>
		<b>Diverter valve</b> 37920013	<b>334,00</b>
	GI module for managing system terminals terminal block expansion	<b>37920018</b>	<b>334,00</b>
	Solar probe per module GI	<b>37920026</b>	<b>28,00</b>
	Exogel Kit - Frost protection Protects the machine and system from damage caused by unexpected cooling of the working temperature of the technical water near the freezing point by emptying the system	<b>37920011</b>	<b>336,00</b>
	ATC Technical inertial tank for hot and chilled technical water	<b>mod. 55 l</b> 37900828	<b>650,00</b>
		<b>mod. 75 l</b> 37900829	<b>750,00</b>
		<b>mod. 90 l</b> 37900830	<b>850,00</b>
	230 V single-phase integrative electrical resistance degree of protection IP 65	<b>mod. 1500 W</b> 75050102	<b>150,00</b>
		<b>mod. 2000 W</b> 75050103	<b>160,00</b>
		<b>mod. 3000 W</b> 75060300	<b>170,00</b>
	8 liter supplementary system expansion vessel	<b>10726304</b>	<b>80,00</b>
	Antivibration floor base in vulcanized rubber (height from the ground 95 mm) with level and screws for Booster HR 3.0 and Booster HR 7.8 (pack of 2 pieces)	<b>75100018</b>	<b>94,00</b>
Anti-corrosion treatment	<b>mod. 04-06-08</b>	<b>37920023</b>	<b>1.004,00</b>
	<b>mod. 10-10T-12</b>	<b>37920024</b>	<b>1.730,00</b>
	<b>mod. 12T-14-14T-16-16T-18T</b>	<b>37920025</b>	<b>1.875,00</b>

# HPE R32 04÷18T INVERTER

Air / water inverter heat pumps with axial fans for Hot / Cold and DHW production

## Accessories HPE R32 04÷18T

Code

€



AWP1 V storage tank Glass-ceramic boiler with increased exchanger for heat pump

<b>AWP1 V 200 I</b>	<b>37304007</b>	<b>1.258,00</b>
<b>AWP1 V 300 I</b>	<b>37304000</b>	<b>1.670,00</b>
<b>AWP1 V 400 I</b>	<b>37304001</b>	<b>2.100,00</b>
<b>AWP1 V 500 I</b>	<b>37304002</b>	<b>2.298,00</b>
<b>AWP1 V 600 I</b>	<b>37304003</b>	<b>2.640,00</b>
<b>AWP1 V 800 I</b>	<b>37304004</b>	<b>3.314,00</b>
<b>AWP1 V 1000 I</b>	<b>37304005</b>	<b>3.624,00</b>
<b>AWP1 V 1500 I</b>	<b>37304006</b>	<b>5.894,00</b>

Models	U.M.	200	300	400	500	600	800	1000	1500
Outer diameter*	mm	550	600	750	750	750	1050	1050	1260
Total height	mm	1320	1610	1410	1660	1910	1750	2110	2115
Exchanger HP	m <sup>2</sup>	2,1	3,5	4,5	5,7	5,7	6,0	6,0	7,50
Attacchi ricircolo		1/2"	1/2"	1/2"	1/2"	1/2"	1"	1"	1"
hp entry		1"	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4
HP output		1"	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4
Empty weight	kg	78	110	133	159	167	215	251	383

\* All the insulations are removable except for the models from 200 to 600 Lt



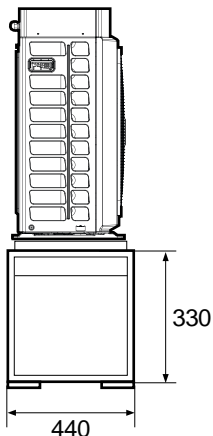
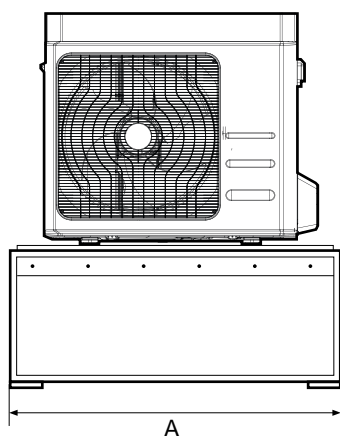
AWP2 V storage tank Glass-ceramic boiler with increased exchanger for heat pump and heat exchanger for solar thermal

<b>AWP2 V 300 I</b>	<b>37304298</b>	<b>1.972,00</b>
<b>AWP2 V 400 I</b>	<b>37304299</b>	<b>2.138,00</b>
<b>AWP2 V 500 I</b>	<b>37304300</b>	<b>2.588,00</b>
<b>AWP2 V 600 I</b>	<b>37304301</b>	<b>3.200,00</b>
<b>AWP2 V 800 I</b>	<b>37304302</b>	<b>3.644,00</b>
<b>AWP2 V 1000 I</b>	<b>37304303</b>	<b>4.236,00</b>
<b>AWP2 V 1500 I</b>	<b>37304304</b>	<b>6.614,00</b>

Models	U.M.	300	400	500	600	800	1000	1500
Outer diameter*	mm	500	650	650	650	790	790	1000
Total height	mm	1610	1410	1660	1910	1750	2110	2115
Lower exchanger Sol.	m <sup>2</sup>	1,0	1,2	1,5	2,0	2,0	3,3	3,6
Upper heat exchanger HP	m <sup>2</sup>	2,4	3,0	4,2	5,0	5,2	6,0	7,5
Recirculation connections		1/2"	1/2"	1/2"	1/2"	1"	1"	1"
HP entry		1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4
HP output		1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4
Empty weight	Kg	108	128	159	188	234	285	417

\* All insulations are removable except for models from 300 to 600 liters

## ATC INERTIAL TECHNICAL ACCUMULATION 55 - 75 - 95 LITERS



DESCRIPTION	U.M.	55	75	95
Useful capacity	l	55	75	95
Insulation thickness	mm	40		
Coefficient of thermal conductivity	W/mK	0,03		
Max working temp	°C	95		
Max working pressure	bar	6		
Max testing pressure	bar	3		
Empty weight	kg	60	65	69
Operating weight	kg	115	140	165
Overall length change (A) depending on the amount of technical water accumulation				
Dimensions quote A	mm			
mod. 55 l		998		
mod. 75 l		1328		
mod. 95 l		1588		

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## HPE R32 18 functional diagram for heating and DHW production

DHW production mode:

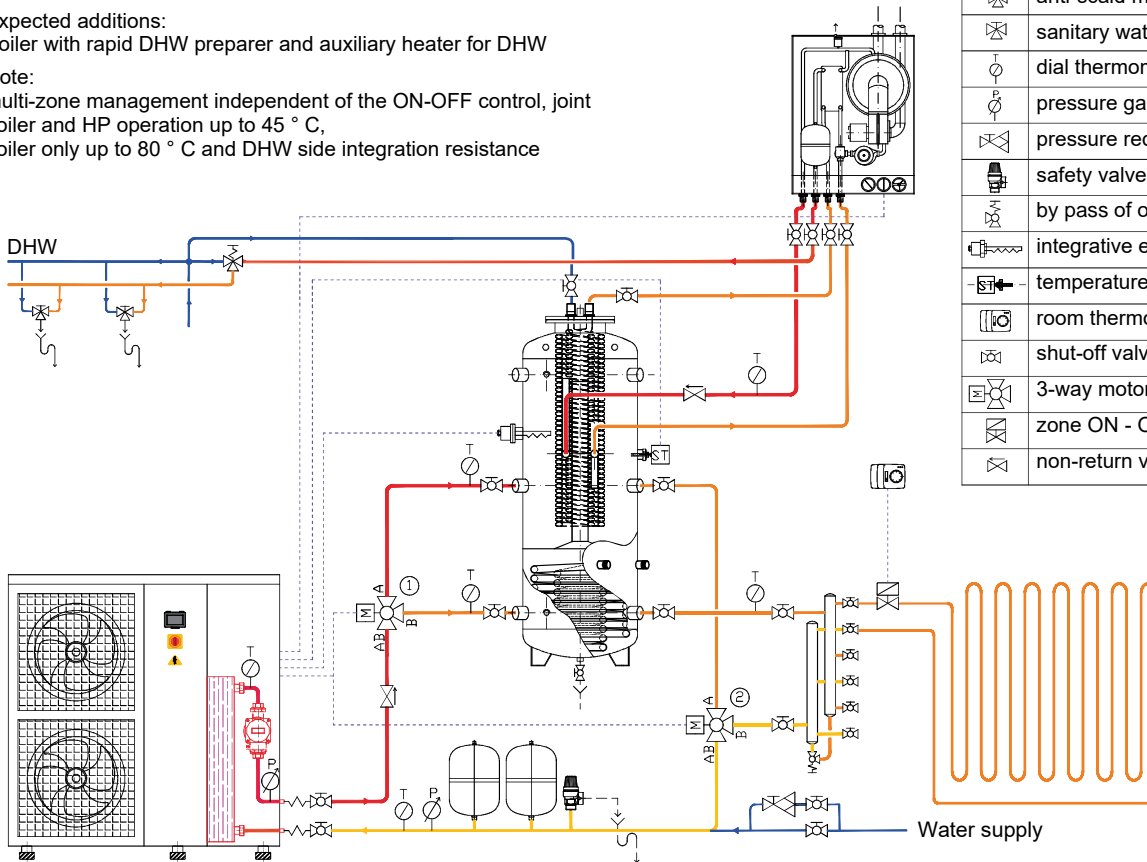
Technical water puffer with immersed DHW exchanger, for rapid preparation with condensing boiler integration

Expected additions:

Boiler with rapid DHW preparer and auxiliary heater for DHW

Note:

multi-zone management independent of the ON-OFF control, joint boiler and HP operation up to 45 ° C, boiler only up to 80 ° C and DHW side integration resistance



Legend

	anti-scald mix valve
	sanitary water mixer
	dial thermometer
	pressure gauge 0 - 6 bar
	pressure reducer
	safety valve 3 bar
	by pass of overpressure
	integrative electrical resistance
	temperature probe NTC
	room thermostat
	shut-off valve
	3-way motorized valve
	zone ON - OFF solenoid valve
	non-return valve

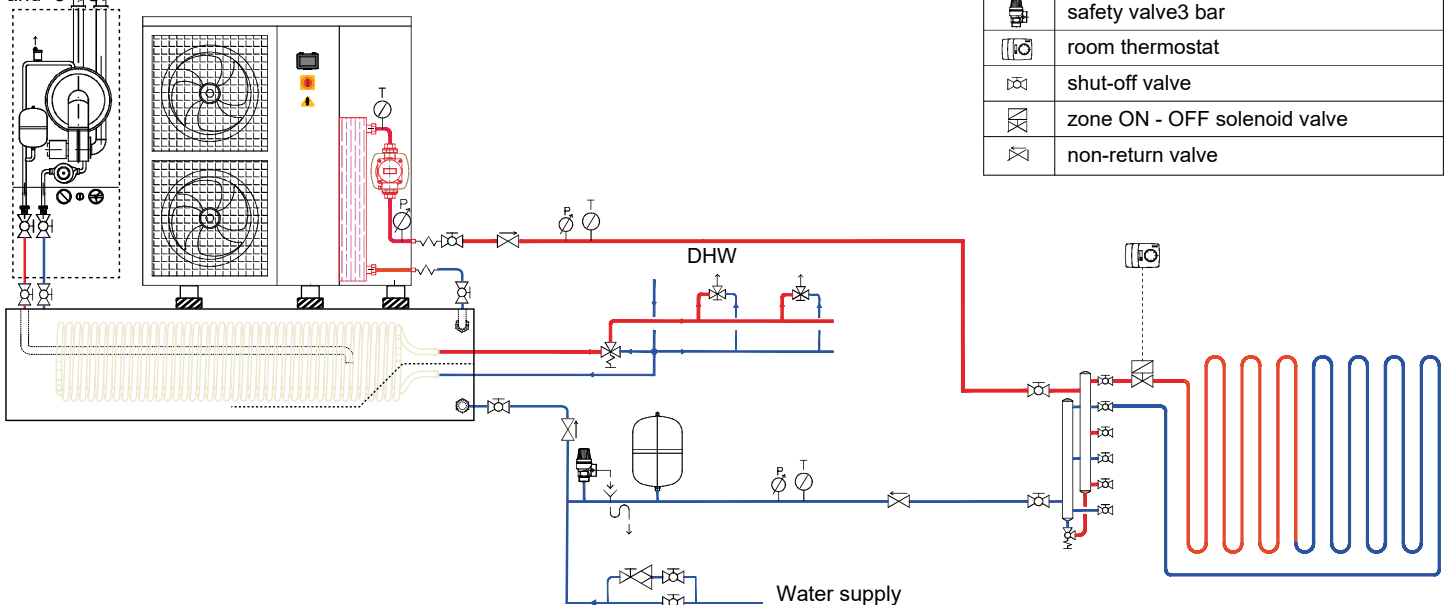
## HPE R32 18 functional diagram for the production of heating and DHW in the monobloc version

Expected additions:

external integration boiler that works by calling an external probe directly on a 90-liter inertial technical water puffer on board the machine with DHW rapid exchanger located below the heat pump (special monobloc version available on request).

Note:

multi-zone management independent from the ON-OFF control, boiler replacement operation below -5 ° C and in integration between 7 ° C and -5 ° C



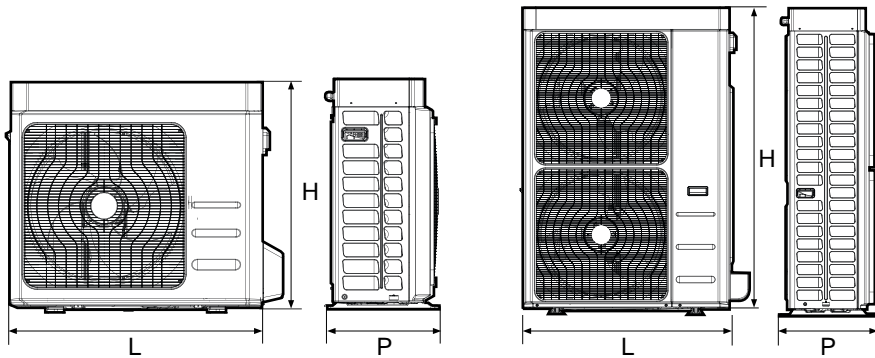
Legend

	anti-scald mix valve
	sanitary water mixer
	dial thermometer
	pressure gauge 0 - 6 bar
	pressure reducer
	safety valve 3 bar
	room thermostat
	shut-off valve
	zone ON - OFF solenoid valve
	non-return valve

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## Dimensionis HPE R32 04 - 06 - 08 - 10 - 10T - 12



HPE R32	04	06	08	10	10T	12
L	924	924	924	1047	1047	1047
P	377	377	377	456	456	456
H	828	828	828	936	936	936

Values in mm

## Heat pumps technical data table HPE R32 04 - 06 - 08 - 10 - 10T - 12

Model HPE R32	U.M.	04	06	08	10	10T	12
<b>Cooling</b>							
Cooling capacity (1)	kW	4,23	5,02	6,08	7,53	7,53	8,51
Absorbed power (1)	kW	1,29	1,60	1,99	2,39	2,39	2,79
E.E.R. (1)	W/W	3,28	3,14	3,05	3,15	3,15	3,05
Cooling capacity (2)	kW	5,51	6,18	7,72	9,5	9,5	11,6
Absorbed power (2)	kW	1,10	1,28	1,76	2,15	2,15	2,79
E.E.R. (2)	W/W	5,02	4,82	4,38	4,41	4,41	4,16
Water flow (1)	l/s	0,20	0,24	0,28	0,36	0,36	0,41
Useful prevalence (1)	kPa	80,8	78,8	76,0	68,9	68,9	63,4
<b>Heating Thermal</b>							
power (3)	kW	4,55	6,08	7,81	10,1	10,1	11,80
Absorbed power (3)	kW	0,95	1,35	1,78	2,28	2,28	2,73
C.O.P. (3)	W/W	4,78	4,51	4,38	4,43	4,43	4,32
Thermal power (4)	kW	4,47	5,88	7,58	9,76	9,76	11,47
Absorbed power (4)	kW	1,17	1,66	2,17	2,80	2,80	3,33
C.O.P. (4)	W/W	3,82	3,54	3,50	3,48	3,48	3,44
Water flow (4)	l/s	0,22	0,28	0,37	0,47	0,47	0,55
Useful prevalence (4)	kPa	80,0	75,8	66,3	55,2	55,2	43,4
S.E.E.R. (5)	W/W	4,07	4,12	4,25	4,15	4,15	4,25
S.C.O.P. (6)	W/W	4,52	4,46	4,46	4,53	4,53	4,47
Energy efficiency		A+++ / A++					
<b>Compressor</b>							
Type		Twin Rotary DC inverter					
Compressors	n.	1					
Refrigerant circuits	n.	1					
Refrigerant quantity(7)	kg	1,5	1,5	1,5	2,5	2,5	2,5
<b>Hydraulic circuit</b>							
Hydraulic connections		1" M					
Minimum water volume (8)	l	35	40	40	50	50	60
<b>Noise</b>							
Sound power (9)	dB(A)	64	64	64	64	64	65
Sound pressure (10)	dB(A)	49,8	49,8	49,8	49,4	49,4	50,4
<b>Electrical data</b>							
Power supply Max		230V/1/50Hz	230V/1/50Hz	230V/1/50Hz	230V/1/50Hz	400V/3+N/50Hz	230V/1/50Hz
absorbed power Max	kW	2,9	3,5	3,9	4,6	4,6	5,1
absorbed current	A	12,6	15,1	17,0	20,2	6,6	22,1
<b>Weight</b>							
Shipping weight	Kg	84	84	84	110	110	110
Operating weight	Kg	72	72	72	96	96	96

Performance referred to the following conditions:

(1) Cooling: outdoor air temperature 35 °C; water temperature in / out 12/7 °C. - (2) Cooling: external air temperature 35 °C; water temperature in / out 23/18 °C. (3) Heating: external air temperature 7 °C d.b. 6 °C w.b.; water temp. in / out 30/35 °C. - (4) Heating: external air temperature 7 °C d.b. 6 °C w.b.; water temp. in / out 40/45 °C. (5) Cooling: water temperature in / out. 12/7 °C. - (6) Heating: average climatic conditions; T<sub>biv</sub> = -7 °C; water temp. in / out 30/35 °C.

(7) Data indicative and subject to change. For the correct data, always refer to the technical label on the unit.

(8) Calculated for a decrease in the system water temperature of 10 °C with a defrost cycle lasting 6 minutes.

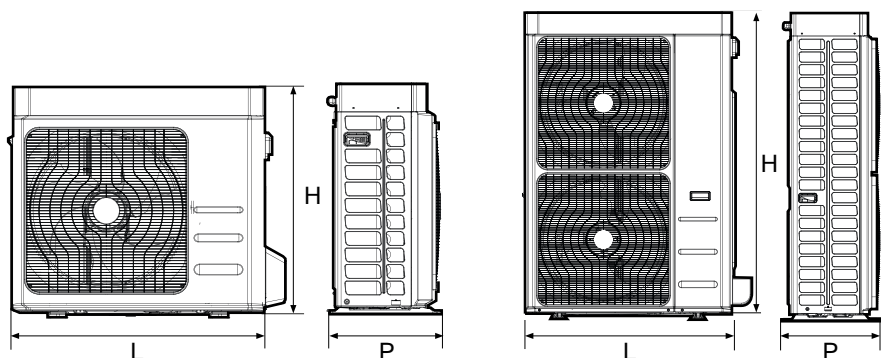
(9) Sound power: heating mode condition (3); value determined on the basis of measurements carried out in accordance with the UNI EN ISO 9614-2 standard, in compliance with the requirements of Eurovent certification.

(10) Sound pressure: value calculated from the sound power level using ISO 3744: 2010 at a distance of 1 m. - (\*) by activating the maximum Hz function

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## Dimensions HPE R32 12T - 14 - 14T - 16 - 16T - 18T



HPE R32	12T	14	14T	16	16T	18T
L	1047	1044	1044	1044	1044	1044
P	456	455	455	455	455	455
H	936	1409	1409	1409	1409	1409

Values in mm

## Heat pumps technical data table HPE R32 12T - 14 - 14T - 16 - 16T - 18T

Model HPE R32	U.M.	12T	14	14T	16	16T	18T
<b>Cooling</b>							
Cooling capacity (1)	kW	8,51	11,48	11,48	13,8	13,8	15,04
Absorbed power (1)	kW	2,79	3,53	3,53	4,38	4,38	4,88
E.E.R. (1)	W/W	3,05	3,25	3,25	3,15	3,15	3,08
Cooling capacity (2)	kW	11,6	14,0	14,0	15,8	15,8	17,1
Absorbed power (2)	kW	2,79	2,59	2,59	3,15	3,15	3,59
E.E.R. (2)	W/W	4,16	5,40	5,40	5,02	5,02	4,76
Water flow (1)	l/s	0,41	0,55	0,55	0,66	0,66	0,71
Useful head (1)	kPa	63,4	75,0	75,0	62,3	62,3	55,6
<b>Heating</b>							
Thermal power(3)	kW	11,80	14,10	14,10	16,30	16,30	17,90
Absorbed power (3)	kW	2,73	2,91	2,91	3,49	3,49	4,07
C.O.P. (3)	W/W	4,32	4,85	4,85	4,67	4,67	4,40
Thermal power(4)	kW	11,47	13,56	13,56	15,77	15,77	17,32
Absorbed power (4)	kW	3,33	3,55	3,55	4,24	4,24	4,92
C.O.P. (4)	W/W	3,44	3,82	3,82	3,72	3,72	3,52
Water flow (4)	l/s	0,55	0,65	0,65	0,76	0,76	0,83
Useful head (4)	kPa	43,4	63,6	63,6	48,5	48,5	37,3
S.E.E.R. (5)	W/W	4,25	4,62	4,62	4,80	4,80	4,91
S.C.O.P. (6)	W/W	4,47	4,48	4,48	4,49	4,49	4,46
Efficienza energetica		A+++ / A++					
<b>Compressor</b>							
Type		Twin Rotary DC inverter					
Compressors	n.	1					
Refrigerant circuits	n.	1					
Refrigerant quantity (7)	kg	2,5	3,6	3,6	4,0	4,0	4,0
<b>Hydraulic circuit</b>							
Hydraulic connections		1" M					
Minimum water volume(8)	l	60	60	60	70	70	70
<b>Noise Sound</b>							
Power (9) Sound	dB(A)	65	68	68	68	68	68
Pressure (10)	dB(A)	50,4	52,7	52,7	52,7	52,7	52,7
<b>Electrical data Power</b>							
supply Max absorbed power		400V/3+N/50Hz	230V/1/50Hz	400V/3+N/50Hz	230V/1/50Hz	400V/3+N/50Hz	400V/3+N/50Hz
power Max absorbed	kW	5,1	6,6	6,6	7,0	7,0	8,3
current	A	7,3	28,6	9,5	30,4	10,1	12,0
<b>Weight</b>							
Shipping weight	Kg	110	134	148	140	154	154
Operating weight	Kg	96	121	136	126	141	141

Performance referred to the following conditions:

(1) Cooling: outdoor air temperature 35 ° C; water temperature in / out 12/7 ° C. - (2) Cooling: external air temperature 35 ° C; water temperature in / out 23/18 ° C. (3) Heating: external air temperature 7 ° C d.b. 6 ° C w.b.; water temp. in / out 30/35 ° C. - (4) Heating: external air temperature 7 ° C d.b. 6 ° C w.b.; water temp. in / out 40/45 ° C. (5) Cooling: water temperature in / out. 12/7 ° C. - (6) Heating: average climatic conditions; T<sub>biv</sub> = -7 ° C; water temp. in / out 30/35 ° C.

(7) Data indicative and subject to change. For the correct data, always refer to the technical label on the unit.

(8) Calculated for a decrease in the system water temperature of 10 ° C with a defrost cycle lasting 6 minutes.

(9) Sound power: heating mode condition (3); value determined on the basis of measurements carried out in accordance with the UNI EN ISO 9614-2 standard,

in compliance with the requirements of Eurovent certification.

(10) Sound pressure: value calculated from the sound power level using ISO 3744: 2010 at a distance of 1 m. - (\*) by activating the maximum Hz function