

# HPE R32 18÷30 INVERTER

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



## Technical and construction characteristics

The HPE R32 18÷30 INVERTER heat pumps are high-efficiency monobloc units designed for outdoors that can produce domestic hot water via an external boiler, offering a total heating and air conditioning solution all year round.

In addition to the standard components, the technical inertial storage under the unit already mounted in the company is available as an option. The HPE R32 18÷30 INVERTER are equipped with an innovative inverter system that precisely regulates the rotation frequency of the compressor based on energy demand, offering:

- Quick start-up;
- Less frequent starting/stopping;
- Achievement of comfort conditions in less time compared to a non-inverter system;
- Lower levels of temperature fluctuation during the operation.

The Twin Rotary DC Inverter permanent magnet compressor guarantees quality, reliability, high performance at partial loads and particularly silent operation, as it is installed on rubber anti-vibration supports and is acoustically isolated by a special sound-absorbing material.

The full-DC frequency conversion system dramatically reduces energy consumption by more than 30%.

The fan's brushless DC motors help meet heating and cooling demands while ensuring low noise emission and low energy consumption.

The fan and protection grill are designed according to CFD technology, ensuring operation with high silence and efficiency.

The exchanger is made up of: internally grooved copper tubes which optimize heat exchange efficiency; aluminum fins with hydrophilic treatment which facilitates water drainage and largely prevents the formation of ice.

The units are equipped with an integrated hydronic module with DC circulator, expansion tank and flow switch.

These hydraulic components are already installed inside the unit to guarantee:

- High reliability;
- Reduction of overall space;
- Faster and easier maintenance of the hydraulic circuit.



Model	Thermal power kW	Cooling power kW	Code	€
HPE R32 18 INVERTER	18,00	17,00	37920030	11.990,00
HPE R32 22 INVERTER	22,00	21,00	37920027	12.200,00
HPE R32 26 INVERTER	26,00	26,00	37920028	12.480,00
HPE R32 30 INVERTER	30,00	29,50	37920029	12.750,00

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Accessories HPE R32 19÷30 INVERTER		Code	€
	Wired wall-mounted remote control with temperature sensor, weekly programming, management of operating parameters, error code display, smart grid function, and integrated wi-fi module for control and monitoring manageable via application.	<b>INCLUDED</b>	
	Temperature probe for activation of "DHW production function" via separate domestic hot water tank or inertial buffer with rapid DHW exchanger	<b>INCLUDED</b>	
	"Y" mechanical brass filter with removable metal mesh	<b>INCLUDED</b>	
	Diverter valve kit	<b>37920013</b>	<b>334,00</b>
	Hot - cold thermal flywheel and hydraulic separator 140 litres, for monobloc heat pump with rigid polyurethane foam with high thermal insulation, for installation under the unit for all HPE R32 18÷30 INVERTER models	<b>37900836</b>	<b>1.600,00</b>
	230 V single-phase integrative electrical resistance IP 65 protection rating	<b>mod. 1500 W</b> <b>mod. 2000 W</b> <b>mod. 3000 W</b>	<b>75050102</b> <b>75050103</b> <b>75060300</b> <b>200,00</b> <b>220,00</b> <b>240,00</b>
	Additional 6 liter system expansion vessel	<b>10726306</b>	<b>98,00</b>
	Expansion vessel installation kit on board the hot - cold thermal flywheel with connection pipes and cover panel for 140 liter technical storage	<b>76802121</b>	<b>160,00</b>
	Anti-vibration floor base in vulcanized rubber (height from the ground 95 mm, length 600 mm) with screws (package of 2 pieces)	<b>75100042</b>	<b>120,00</b>
	ATC accumulation support Omega in galvanized sheet metal	<b>75100043</b>	<b>80,00</b>
	Automatic antifreeze valve, brass body, opening temperature 3 °C with 1" 1/4 connections	<b>30403145</b>	<b>196,00</b>
	Adjustable differential by-pass valve with graduated scale, 1" 1/4 threaded connections	<b>mod. 1 - 6 m</b> <b>mod. 5 - 25 m</b>	<b>30403140</b> <b>30403141</b> <b>360,00</b> <b>360,00</b>
	Brass balancing valve with graduated scale flow meter with 1" 1/4 connections	<b>30403143</b>	<b>226,00</b>
	Adjustable semi-automatic self-cleaning magnetic dirt separator for vertical and horizontal installations with 1" 1/4 connections	<b>30403137</b>	<b>480,00</b>
	Thermal and anti-condensation insulation for 1" 1/4 self-cleaning magnetic dirt separator	<b>30403132</b>	<b>48,00</b>

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## Accessories HPE R32 18÷30 INVERTER

Code

€



Puffer POWER UNIT Compact inertial technical water storage provided standard with drain cock, jolly valve and valve safety

<b>POWER UNIT 80 LT - H 160</b>	<b>76011500</b>	<b>1.580,00</b>
<b>POWER UNIT 105 LT - H 210</b>	<b>76012500</b>	<b>1.680,00</b>
<b>POWER UNIT 130 LT - H 250</b>	<b>76011501</b>	<b>1.740,00</b>
<b>POWER UNIT 165 LT - H 160 D.</b>	<b>76011505</b>	<b>1.890,00</b>
<b>POWER UNIT 220 LT - H 210 D.</b>	<b>76012502</b>	<b>1.990,00</b>
<b>POWER UNIT 315 LT - H 170</b>	<b>76012503</b>	<b>2.100,00</b>

Models	U.M.	80 LT	105 LT	130 LT	165 LT D.	220 LT D.	315 LT
Overall width	mm	340,5	340,5	340,5	594,6	594,6	803,4
Total depth	mm	340,5	340,5	340,5	340,5	340,5	461,1
Total height	mm	1656,2	2156,2	2524,3	1656,2	2156,2	1690,0
HP attacks		1" 1/4 x 2	1" 1/4 x 2	1" 1/4 x 2	1" 1/4 x 2	1" 1/4 x 2	1" 1/4 x 2
Secondary circuit connections		1" 1/4 x 2	1" 1/4 x 2	1" 1/4 x 2	1" 1/4 x 2	1" 1/4 x 2	1" 1/4 x 2
Electric resistance connections		1" 1/2 x 2	1" 1/2 x 2	1" 1/2 x 2	1" 1/2 x 2	1" 1/2 x 2	1" 1/2 x 2
Jolly valve connection		3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Safety valve connections		1/2" x 2	1/2" x 2	1/2" x 2	1/2" x 2	1/2" x 2	1/2" x 2
Drainage tap connections		1/2" x 2	1/2" x 2	1/2" x 2	1/2" x 2	1/2" x 2	1/2" x 2
Probe holder well		1/2" x 3	1/2" x 3	1/2" x 3	1/2" x 3	1/2" x 3	1/2" x 3
Volume	l	79,2	105,0	132,0	166,5	224,4	314,2
Empty weight	kg	57,4	74,7	86,9	102,0	121,0	230,0



WP1 V storage tank Glass-porcelain boiler with oversized exchanger for heat pump

<b>WP1 V 200 l</b>	<b>37304007</b>	<b>1.632,00</b>
<b>WP1 V 300 l</b>	<b>37304000</b>	<b>2.248,00</b>
<b>WP1 V 400 l</b>	<b>37304001</b>	<b>2.828,00</b>
<b>WP1 V 500 l</b>	<b>37304002</b>	<b>3.094,00</b>
<b>WP1 V 600 l</b>	<b>37304003</b>	<b>3.554,00</b>
<b>WP1 V 800 l</b>	<b>37304004</b>	<b>4.298,00</b>
<b>WP1 V 1000 l</b>	<b>37304005</b>	<b>4.486,00</b>
<b>WP1 V 1500 l</b>	<b>37304006</b>	<b>7.644,00</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
HP exchanger	m <sup>2</sup>	2,1	3,5	4,5	5,7	5,7	6,0	6,0	7,50
Recircul. connections		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 Exit		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 insulation is removable except for the 200 to 600 liter models



WP2 V storage tank Enameled glass boiler with increased exchanger for heat pump and solar thermal exchanger

<b>WP2 V 300 l</b>	<b>37304298</b>	<b>2.656,00</b>
<b>WP2 V 400 l</b>	<b>37304299</b>	<b>2.878,00</b>
<b>WP2 V 500 l</b>	<b>37304300</b>	<b>3.482,00</b>
<b>WP2 V 600 l</b>	<b>37304301</b>	<b>4.310,00</b>
<b>WP2 V 800 l</b>	<b>37304302</b>	<b>4.722,00</b>
<b>WP2 V 1000 l</b>	<b>37304303</b>	<b>5.490,00</b>
<b>WP2 V 1500 l</b>	<b>37304304</b>	<b>8.574,00</b>

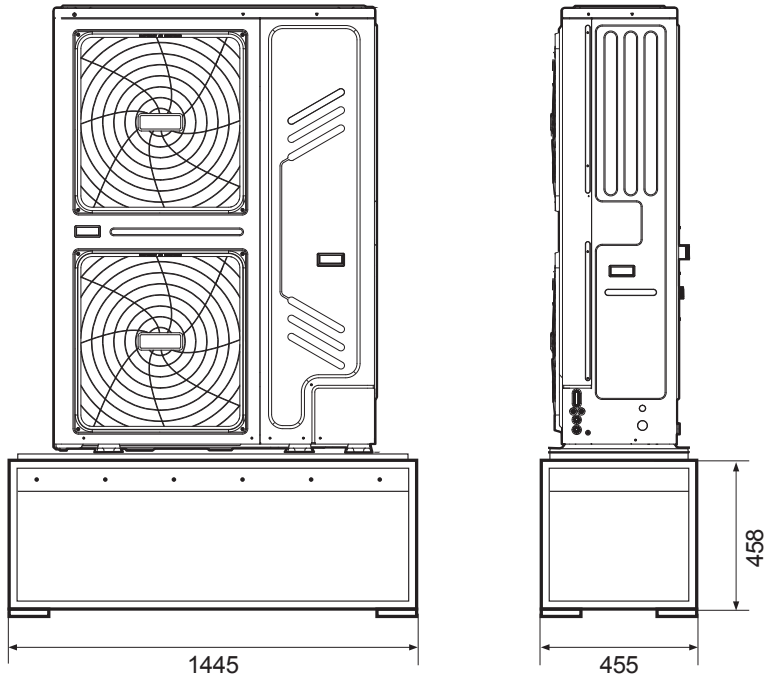
Models	U.M.	300	400	500	600	800	1000	1500
Outer diameter*	mm	500	650	650	650	790	790	1000
Total height	mm	1610	1410	1660	1910	1750	2110	2115
Lower exchanger Sol.	m <sup>2</sup>	1,0	1,2	1,5	2,0	2,0	3,3	3,6
Upper HP exchanger	m <sup>2</sup>	2,4	3,0	4,2	5,0	5,2	6,0	7,5
Recircul. connections		1/2"	1/2"	1/2"	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 Exit		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 insulation is removable except for the 300 to 600 liter models

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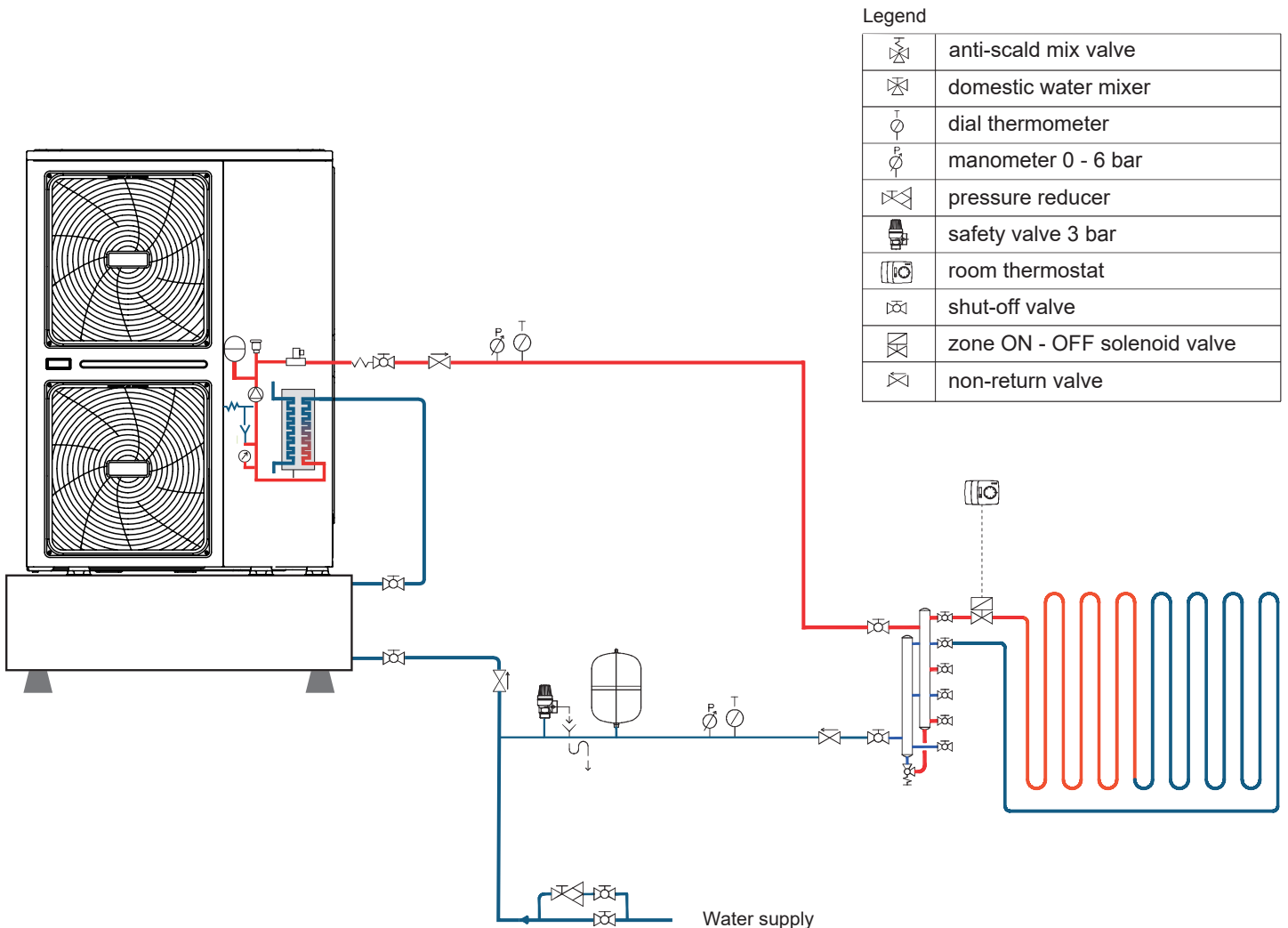
## Integrated 140 liter technical inertial storage (optional)



DESCRIPTION	U.M.	<b>140</b>
Useful capacity	l	140
Insulation thickness	mm	40
Thermal conductivity coefficient	W/mK	0,03
Max operating temp	°C	95
Max working pressure	bar	3
Max testing pressure	bar	6
Empty weight	kg	85
Operating weight	kg	225

Values expressed in mm

## Application example HPE R32 18÷30 INVERTER



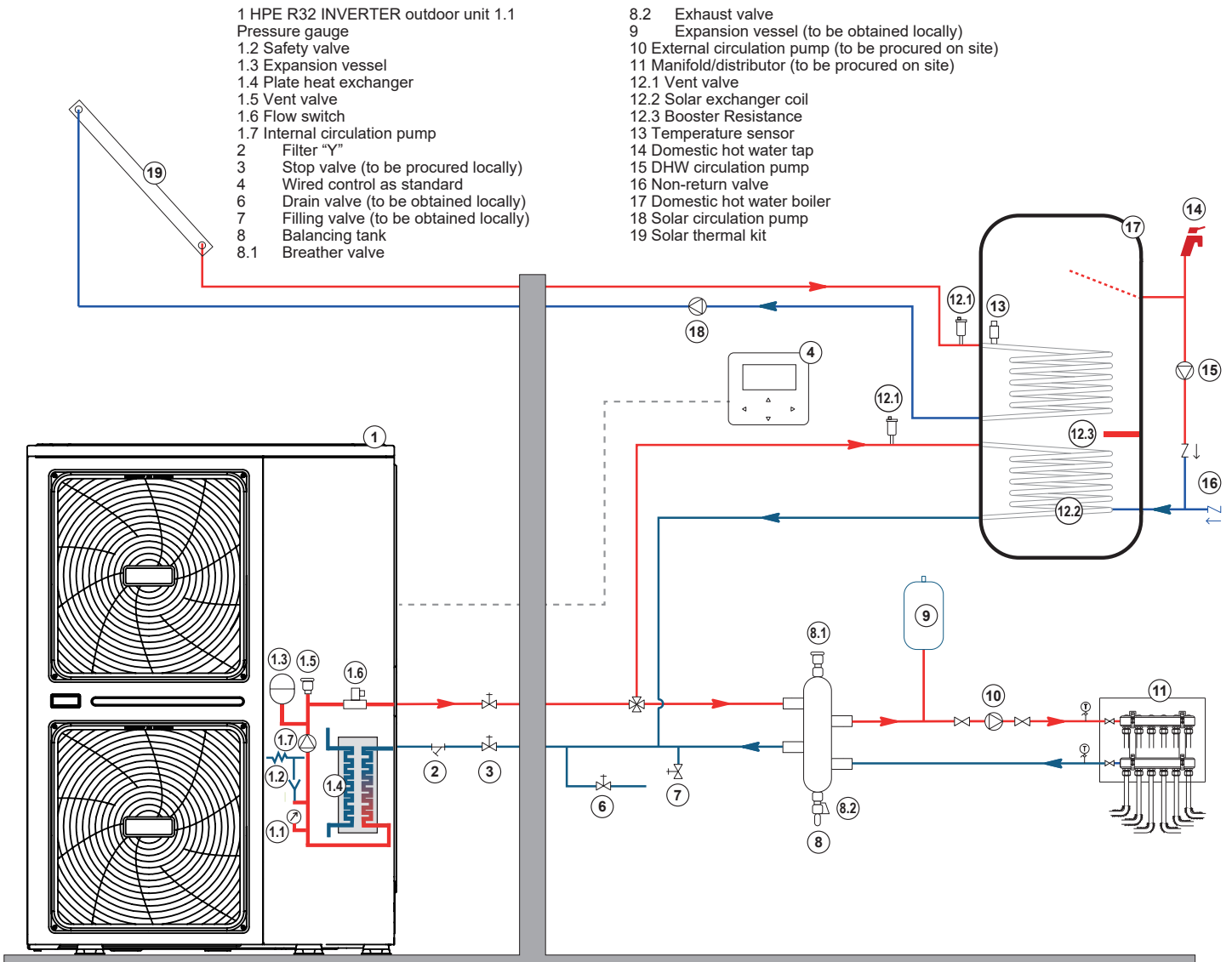
### Legend

	anti-scald mix valve
	domestic water mixer
	dial thermometer
	manometer 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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## Application example HPE R32 INVERTER



### Unit operation and room heating:

When the Unit is connected to a room thermostat and this sends a heating request, the Unit comes into operation to bring the system water to the temperature set on the wired control.

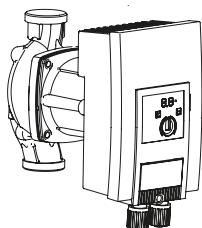
When the room temperature exceeds the thermostat set point in Heating mode, the Unit stops.

The circulation pumps also stop. In this case, the room thermostat is used as a switch.

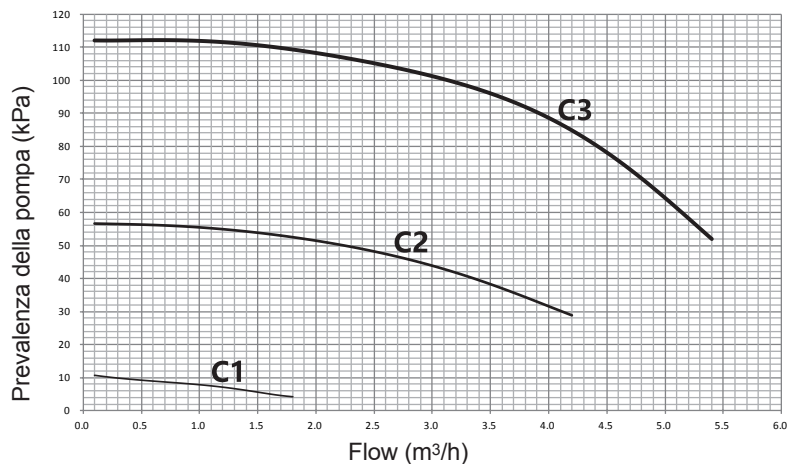
## Setting the pump speed HPE R32 INVERTER

The speed of the pump can be chosen by adjusting the red selector on the pump itself. The mark indicates the speed of the pump. The default setting is the highest speed (III).

If the flow rate of water inside the system is too high, set the pump speed to "low" (I).



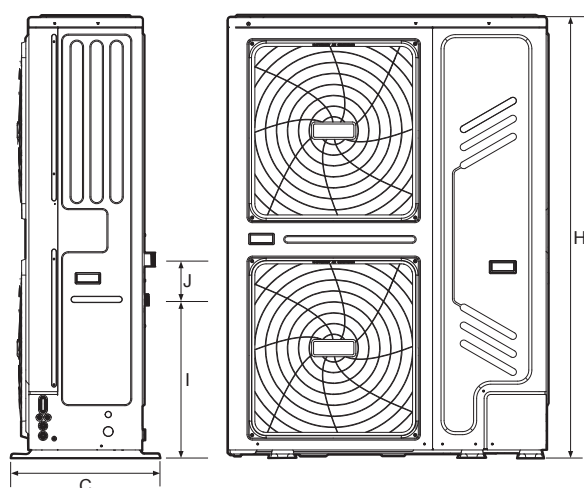
Pump prevalence on flow rate



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## Dimensions HPE R32 18÷30 INVERTER



HPE R32	18	22	26	30
A	1129	1129	1129	1129
B	494	494	494	494
C	528	528	528	528
D	668	668	668	668
E	192	192	192	192
F	98	98	98	98
G	206	206	206	206
H	1558	1558	1558	1558
I	558	558	558	558
J	143	143	143	143
K	400	400	400	400
L	440	440	440	440

Values expressed in mm

## Heat pump technical data table HPE R32 18÷30 INVERTER

Model		U.M.	HPE 18	HPE 22	HPE 26	HPE 30
<b>Heatin</b>						
Nominal power		kW	18,00	22,00	26,00	30,10
Electrical absorption	A7/W35 (1)	kW	3,83	5,00	6,37	7,70
COP			4,70	4,40	4,08	3,91
Nominal power		kW	18,00	22,00	26,00	30,00
Electrical absorption	A7/W45 (2)	kW	5,143	6,471	8,387	10,345
COP			3,50	3,40	3,10	2,90
Seasonal energy efficiency (η <sub>s</sub> )	35/55	%	171,1 / 121,2	168,2 / 124,2	164,2 / 122,4	156,2 / 122,6
Energy efficiency class	35/55		A+++ / A++	A+++ / A++	A+++ / A+	A++ / A+
<b>Cooling</b>						
Nominal power		kW	18,50	23,00	27,00	31,00
Electrical absorption	A35/W18 (3)	kW	3,895	5,00	6,279	7,75
ERR			4,75	4,60	4,30	4,00
Nominal power		kW	17,00	21,00	26,00	29,50
Electrical absorption	A35/W7 (4)	kW	5,574	7,119	9,63	11,569
ERR			3,05	2,95	2,70	2,55

## OPERATING LIMITS

Outside air temperature	Heating	°C	-25 / +35			
	Cooling	°C	-5 / +46			
	DHW	°C	-25 / +43			
Delivery water temperature	Heating	°C	+25 / +60			
	Cooling	°C	+5 / +25			
	DHW	°C	+40 / +60			
Refrigerant	Type(GWP)		R32 (675)			
	Quantity (Tons CO <sub>2</sub> )	kg/(t)	5 (3,375)			
	Control system		electronic expansion valve			
Type of compressor			Twin Rotary - DC inverter			
Internal circulator			Wilo Yonos Para RS 25/7.5 RKC			
Expansion vessel	Volum	l	8			
	Pre-charge	bar	1,0			
Hydraulic connections - water inlet/outlet			1"1/4			
Power supply			400V/3+N/50Hz			
Max. current	A		16,80	19,60	21,60	22,80
Power cord	mm <sup>2</sup>		5x6			
Wired control			Wired remote control			
Sound pressure at 1 m	dB(A)		57,6	59,8	61,5	63,5
Sound level	dB(A)		71	73	75	77
Net weight	kg		177			

(1) Heating: external air temperature 7 °C d.b. 6 °C b.u.; inlet/outlet water temp. 30/35 °C - (2) Heating: external air temperature 7 °C d.b. 6 °C b.u.; inlet/outlet water temp. 40/45 °C (3) Cooling: external air temperature 35 °C; water inlet/outlet temperature 23/18 °C - (4) Cooling: external air temperature 35 °C; water inlet/outlet temperature 12/7 °C The above data refers to the following standards: EN14511:2013; EN14825:2013; EN50564:2011; EN12102:2011; (EU) No.811:2013; (EU) No.813:2013; OJ 2014/C 207/02:2014;