

HPE EVO 5-16T INVERTER R32

High efficiency air/water inverter heat pumps with axial fans for the production of hot/cold and DHW



Technical and construction characteristics

HPE EVO is a line of very high efficiency R32 refrigerant gas inverter air/water heat pumps for the production of hot water for heating, chilled water for summer air conditioning and domestic hot water via a storage tank equipped with an exchanger. This product can control a system of solar thermal panels for the integration of domestic hot water thanks to the control of the circulation pump and water temperature sensor. HPE EVO is equipped with a wired control with wi-fi (which allows control from the MSmartHome app) and is able to control two differentiated temperature zones to simultaneously manage terminals that operate at different distribution temperatures. These heat pump models are composed of: double DC rotary inverter compressors, axial fans with brushless DC motors, source exchanger with circuitry optimized by a finned coil with copper tubes and aluminum fins, user exchanger with brazed stainless steel plates AISI 304 with reduced pressure drop on the water side.

The refrigeration circuit is made of copper tube which includes the condensation control, the electronic thermostatic valve, the reversal valve, the high and low pressure switches, liquid separator and receiver, the valves for maintenance and control, pressure transducers high and low pressure.

HPE EVO is also equipped with an integrated hydraulic circuit complete with high-efficiency brushless circulator with variable speed, expansion vessel, flow switch, air vent valve, overpressure valve (6 bar).

HPE EVO is an all-in-one unit placed externally, single fan up to 16 kW with the possibility of having as an accessory the hot cold inertial storage produced specifically for this model which can be installed under the machine.

HPE EVO allows you to set the water delivery temperature for heating production up to a maximum temperature of 65 °C with the possibility of operating with low temperature or medium temperature systems.



GAS ECOLOGICAL



POWER RENEWABLE



CIRCULATOR DC INVERTER



CONTROLLER STANDARD



COMPRESSOR DC INVERTER



WI-FI STANDARD



AXIAL FANS DC BRUSHLESS



DHW CON DIVERTER OPTIONAL

Model	Thermal Power kW	Refrigeration power kW	Code	€
HPE EVO 5	6,50	6,50	37960000	4.900,00
HPE EVO 7	8,40	8,30	37960001	5.700,00
HPE EVO 9	10,00	10,00	37960002	5.940,00
HPE EVO 12	12,20	12,20	37960003	9.000,00
HPE EVO 14	14,10	13,90	37960004	9.080,00
HPE EVO 16	16,00	15,40	37960005	9.400,00
HPE EVO 12T Three-phase	12,20	12,20	37960006	9.300,00
HPE EVO 14T Three-phase	14,10	13,90	37960007	9.400,00
HPE EVO 16T Three-phase	16,00	15,40	37960008	9.680,00

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Accessories HPE EVO 5-16T INVERTER R32		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.	INCLUDED	
	Temperature probe for activation of "DHW production function" via separate domestic hot water tank or inertial buffer with rapid DHW exchanger	INCLUDED	
	"Y" mechanical brass filter with removable metal mesh	INCLUDED	
	Diverter valve kit	37920013	334,00
	ATC - Hot - cold thermal flywheel and 75 liter hydraulic separator, for monobloc heat pump with rigid polyurethane foam with high thermal insulation, for installation under the unit for all HPE EVO models	37900838	1.380,00
	230 V single-phase integrative electrical resistance IP 65 protection rating	mod. 1500 W - 1" 1/4 mod. 2000 W - 1" 1/2 mod. 3000 W - 1" 1/2	75050102 200,00 75050103 220,00 75060300 240,00
	Additional 6 liter system expansion vessel	10726306	98,00
	Expansion vessel installation kit on board the ATC hot - cold thermal flywheel with connection pipes and cover panel for 75 liter technical storage.	76802021	140,00
	Anti-vibration floor base in vulcanized rubber (height from the ground 95 mm, length 600 mm) with screws (package of 2 pieces)	75100042	120,00
	ATC accumulation support Omega in galvanized sheet metal	75100043	80,00
	Automatic antifreeze valve, brass body, opening temperature 3 °C	mod. 1" 30403144 184,00 mod. 1" 1/4 30403145 196,00	
	Adjustable differential by-pass valve with graduated scale, 1" 1/4 threaded connections	mod. 1 - 6 m 30403140 360,00 mod. 5 - 25 m 30403141 360,00	
	Brass balancing valve with graduated scale flow meter	mod. 1" 30403142 200,00 mod. 1" 1/4 30403143 226,00	
	Adjustable semi-automatic self-cleaning magnetic dirt separator for vertical and horizontal installations	mod. 1" 30403085 424,00 mod. 1" 1/4 30403137 480,00	
	Thermal and anti-condensation insulation for 1" and 1" 1/4 self-cleaning magnetic dirt separator	30403132	48,00

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Accessories HPE EVO 5-16T INVERTER R32

Code

€



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

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

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

WP1 V 200 l	37304007	1.630,00
WP1 V 300 l	37304000	2.250,00
WP1 V 400 l	37304001	2.830,00
WP1 V 500 l	37304002	3.100,00
WP1 V 600 l	37304003	3.550,00
WP1 V 800 l	37304004	4.300,00
WP1 V 1000 l	37304005	4.490,00
WP1 V 1500 l	37304006	7.640,00

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 ²	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 entrance		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

WP2 V 300 l	37304298	2.660,00
WP2 V 400 l	37304299	2.880,00
WP2 V 500 l	37304300	3.480,00
WP2 V 600 l	37304301	4.310,00
WP2 V 800 l	37304302	4.720,00
WP2 V 1000 l	37304303	5.490,00
WP2 V 1500 l	37304304	8.570,00

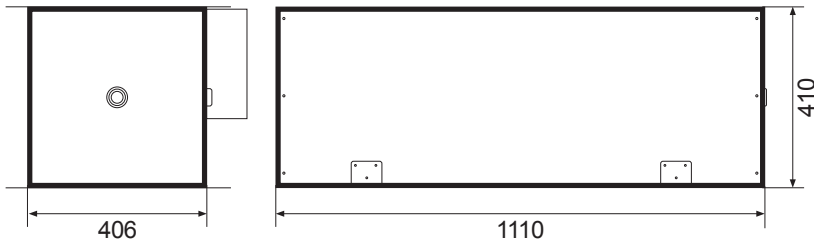
Models	U.M.	300	400	500	600	800	1000	1500
Outer diameter*	mm	500	650	650	650	790	790	1000
Total height	mm	1610	1410	1660	1910	1750	2110	2115
Lower exchanger Sol.	m ²	1,0	1,2	1,5	2,0	2,0	3,3	3,6
Upper HP exchanger	m ²	2,4	3,0	4,2	5,0	5,2	6,0	7,5
Recircul. connections		1/2"	1/2"	1/2"	1/2"	1"	1"	1"
HP entrance		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

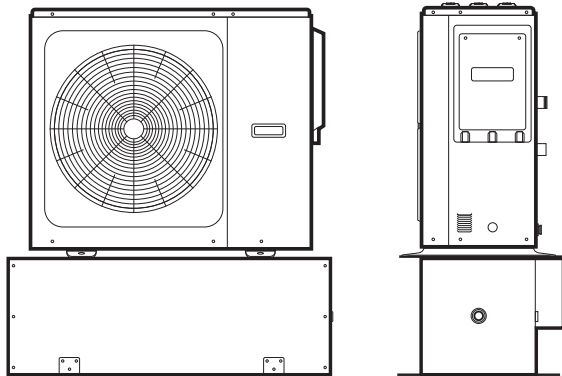
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ATC 75 liter inertial technical storage for hot and chilled technical water



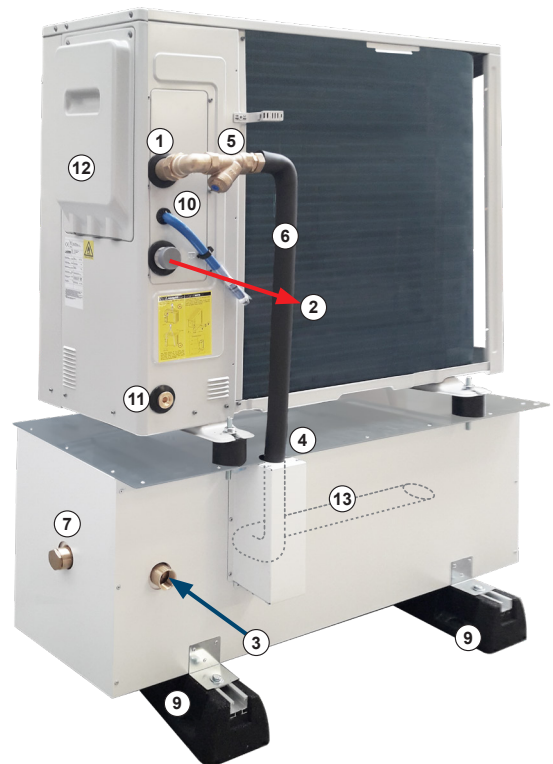
Values expressed in mm



DESCRIPTION	U.M.	75
Useful capacity	l	75
Insulation thickness	mm	50
Thermal conductivity coefficient	W/mK	0,033
Max operating temp	°C	60
Max working pressure	bar	3
Max testing pressure	bar	6
Empty weight	kg	65
Operating weight	kg	140

Values expressed in mm

ATC hydraulic connection instructions for 75 liter inertial technical buffer (optional)



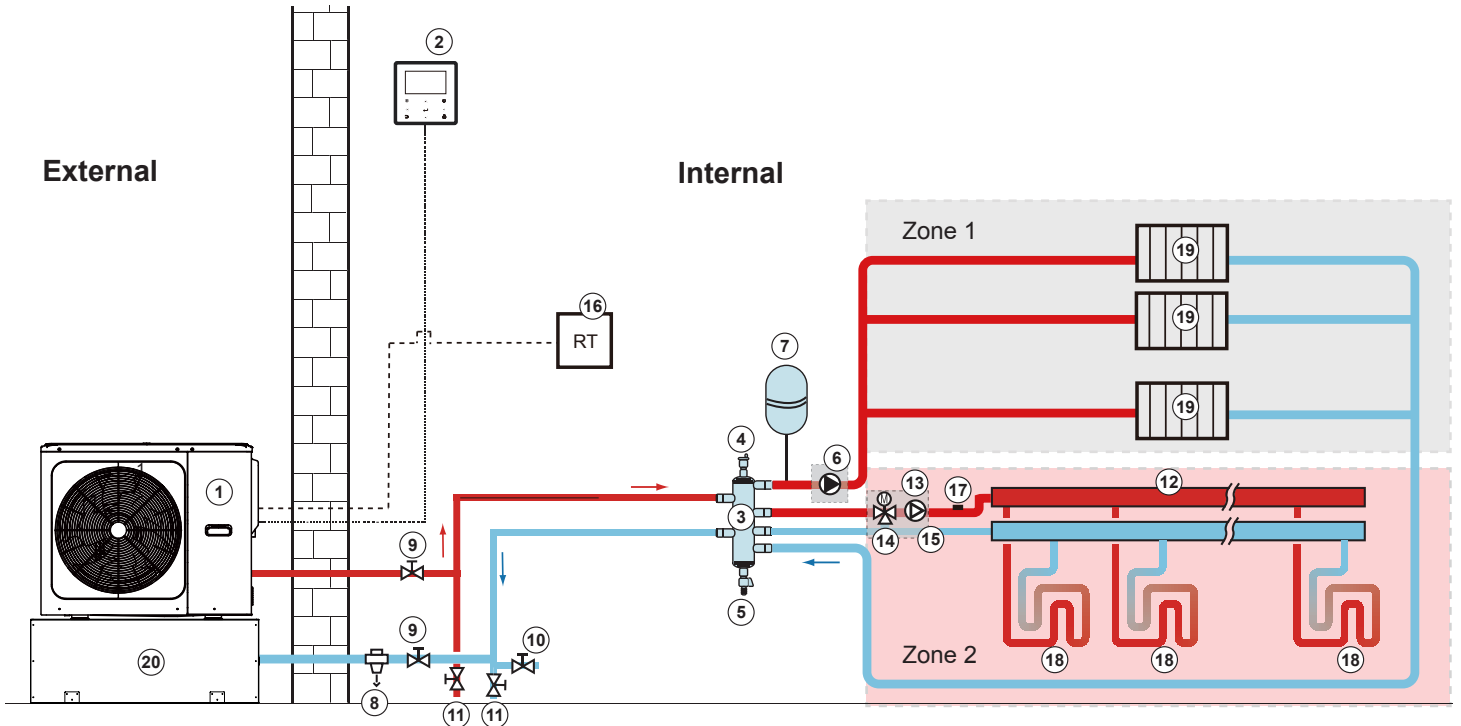
- 1 By-pass input
- 2 System delivery 1" (mod. 5/7/9) - 1"1/4 (mod. 12/14/16)
- 3 System return 1" (mod. 5/7/9) - 1"1/4 (mod. 12/14/16)
- 4 By-pass output
- 5 "Y" filter 1" (mod. 5/7/9) - 1"1/4 (mod. 12/14/16)
- 6 Hose 1" (mod. 5/7/9) - 1"1/4 (mod. 12/14/16)
- 7 Additional connection for electric resistance (1" 1/2 F)

- 8 75 liter technical inertial storage (puffer).
- 9 Vulcanized rubber anti-vibration floor base (optional)
- 10 Safety valve drain
- 11 Condensate drain
- 12 Electrical connection board
- 13 Dip tube Technical inertial accumulation (puffer)

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General functional diagram EVO INVERTER R32



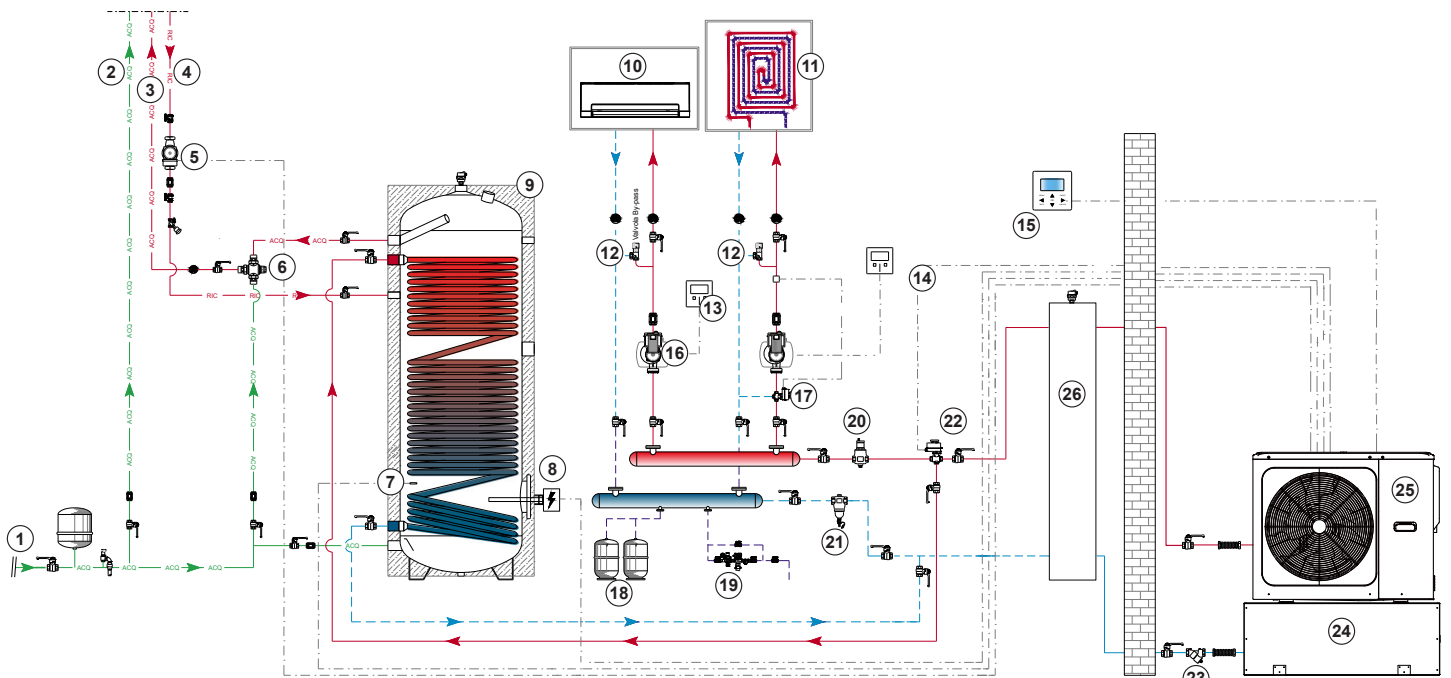
- 1 HPE EVO heat pump
- 2 Standard remote control
- 3 Hydraulic separator
- 4 Automatic drain valve
- 5 Drain valve
- 6 External circulation pump
- 7 System expansion vessel

- 8 Magnetic dirt separator
- 9 Shut-off valve
- 10 Filling valve
- 11 Drain valve
- 12 Manifold/distributor
- 13 Mixing station
- 14 Mixing valve

- 15 Zone 2 circulation pump
- 16 Low voltage room thermostat
- 17 Water flow temperature probe
- 18 Underfloor radiant system
- 19 Radiator
- 20 75 liter ATC accumulation

Space heating
Zone 1 can operate in cooling or heating mode, while Zone 2 can only operate in heating mode.
The operating mode and water temperature are set on the user interface.

General functional diagram HPE EVO INVERTER R32



- 1 water mains input
- 2 Domestic cold water
- 3 Domestic hot water
- 4 DHW recirculation
- 5 Pump recirculation
- 6 Thermostatic mixer
- 7 DHW temperature probe
- 8 Electrical resistance
- 9 WP2 V storage tank

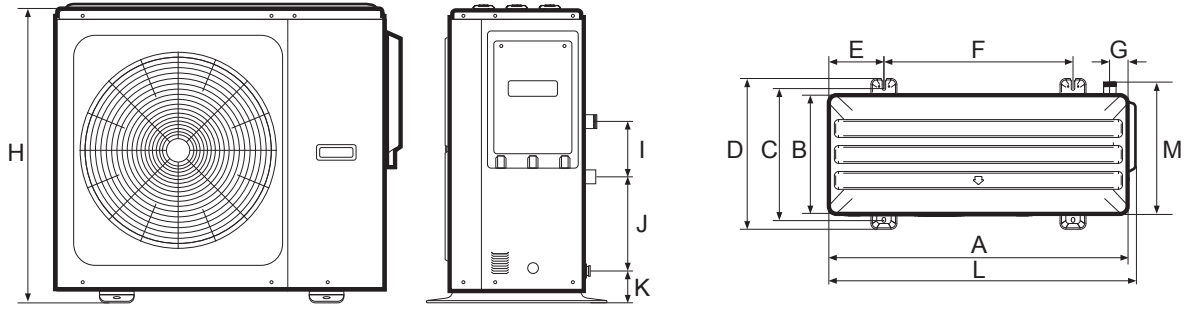
- 10 Fan coil system
- 11 Underfloor radiant system
- 12 By pass valve
- 13 Zone 1 thermostat
- 14 Zone 2 thermostat
- 15 Standard remote control
- 16 Relaunch circulator
- 17 Mixing valve
- 18 Expansion vessels

- 19 Automatic filling unit
- 20 Deaerator
- 21 Dirt separator
- 22 3-way diverter valve
- 23 Y filter
- 24 ATC Technical inertial storage 75 liters
- 25 HPE EVO heat pump
- 26 POWER UNIT mod. 80 LT

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Dimensions HPE EVO 5-16T INVERTER R32



Model	A	B	C	D	E	F	G	H	I	J	K	L	M
5-16T	1040	410	458	523	191	656	64	865	165	279	89	1068	450

Values expressed in mm

Heat pump technical data table HPE EVO 5-16T INVERTER R32

Model		U.M.	5	7	9	12-12T	14-14T	16-16T
HEATING (1)	Thermal power	kW	6,50	8,40	10,00	12,20	14,10	16,00
	Absorbed power	kW	1,22	1,66	2,12	2,49	3,00	3,55
	COP	W/W	5,30	5,05	4,70	4,90	4,70	4,50
HEATING (2)	Thermal power	kW	6,30	8,20	9,40	12,00	14,00	16,00
	Absorbed power	kW	1,96	2,60	3,03	4,00	4,74	5,61
	COP	W/W	3,20	3,15	3,10	3,00	2,95	2,85
COOLING (3)	Refrigeration power	kW	6,50	8,30	10,00	12,20	13,90	15,40
	Absorbed power	kW	1,27	1,71	2,32	2,65	3,15	3,66
	EER	W/W	5,10	4,85	4,30	4,60	4,40	4,20
COOLING (4)	Refrigeration power	kW	5,50	7,40	9,00	11,60	13,40	14,00
	Absorbed power	kW	1,69	2,34	3,10	3,74	4,57	4,82
	EER	W/W	3,25	3,15	2,90	3,10	2,93	2,90
Seasonal thermal efficiency class in heating (5)	LWT at 35 °C		A+++	A+++	A+++	A+++	A+++	A+++
	LWT at 55 °C		A++	A++	A++	A++	A++	A++
SCOP (5)	LWT at 35 °C		5,12	5,17	5,12	5,08	4,89	4,84
	LWT at 55 °C		3,59	3,67	3,71	3,61	3,62	3,59
SEER (5)	LWT at 7 °C		5,09	5,19	5,08	5,07	5,09	5,11
	LWT at 18 °C		7,81	8,09	8,31	7,79	7,59	7,49
Sound power level (6)	dB(A)		60	63	65	70	72	72
External fan air flow	m³/h		3900	4500	4500	5200	5200	5200
Electrical supply			230V/50/Hz			230V/50/Hz - 400V/3+N/50Hz only for models T		
Water pipe connections			1"	1"	1"	1"1/4	1"1/4	1"1/4
Pressure set in the safety valve	MPa		0,3					
Total volume of water	l		5					
Nominal head circulator	m.c.a.		5	5	5	9	9	9
Operation limits	Cooling	°C	-5 / +43					
	Heating	°C	-25 / +35					
	DHW	°C	-25 / +43					
LWT range	Cooling	°C	+5 / +30					
	Heating	°C	+12 / +65					
	DHW	°C	+10 / +60					
Refrigerant	Type (GWP)		R32(675)					
	Volume loaded	Kg	1,25					
Expansion valve Net			Electronic					
dimensions (LxHxP)	mm		1040 x 865 x 410					
Dimensions with packaging (LxHxP)	mm		1190 x 970 x 560					
Net / gross weight	Kg		87 / 103					

EU standards and legislation:

EN14511: 2016; EN14825: 2016; EN50564: 2011; EN12102: 2017; (EU) N° 811/2013;

(EU) N° 813/2013; OJ 2014/C 207/02; OJ 2017/C 229/01.

1) Outside air temperature 7 °C DB, 85% R.H.; EWT 30 °C, LWT 35 °C.

2) Outside air temperature 7 °C DB, 85% R.H.; EWT 47 °C, LWT 55 °C.

3) Outside air temperature 35 °C DB; EWT 23 °C, LWT 18 °C.

4) Outside air temperature 35 °C DB; EWT 12 °C, LWT 7 °C.

5) Seasonal energy efficiency class for heating in average climate conditions.

6) Maximum sound power level tested in conditions of:

a) Heating with external air temperature 7 °C DB, 6 °C WB; EWT 30 °C, LWT 35 °C;

b) Heating with external air temperature 7 °C DB, 6 °C WB; EWT 47 °C, LWT 55 °C;

c) Cooling with external air temperature 35 °C DB, 24 °C WB; EWT 12 °C, LWT 7 °C.