HPE LT 25 - LT 50 INVERTER

Air / water inverter heat pumps with axial fans and steam injection versions

A+

R410A ECOLOGIC GAS

TECHNOLOGY STEAM INJECTION

AXIAL FANS DC BRUSHLESS

SILENT VENTILATION

COMPRESSOR DC INVERTER

V.415 CONTROL V.415

PLATE EXCHANGER

PUMP DC INVERTER

DHW CONTROL WITH DEVIATION VALVE

Technical and construction features

The HPE series reaches high SEER and SCOP values thanks to DC Inverter scroll compressors, the EC fan and high efficiency exchangers.
Available versions:
- HPE with DC inverter compressor
- HPE LT with vapor injection DC inverter compressor The DC inverter compressors used allow to save up to 25% of the absorbed power.

The installation of high efficiency DC inverter scroll compressors optimized for heat pump operation in severe working conditions, integrated with a steam injection system, allows to obtain a high level of comfort with low energy consumption even in the winter seasons. colder (down to -25 ° C). The injection technology consists in injecting the refrigerant, in the form of vapor, in the middle of the compression process to significantly increase the capacity and efficiency of the compressor, increasing the performance of this system compared to all traditional gas compression technologies. With this type of machine it is also possible to produce hot water up to 58 °C even with low external temperatures. The HPE - HPE LT 25 ÷ 70 heat pumps are particularly suitable to be combined with radiant panel heating systems or for applications where maximum efficiency is required in heating mode.

Main components:
- Single and double inverter Scroll compressor
- Double mixed compressor (1 Scroll inverter + 1 Scroll on-off)
- Single or double inverter scroll compressor with injection of steam for operation down to -25 °C (HPE LT version)
- DC Brushless fan (standard)
- DC Brushless circulator (optional)
- Compact size
- Possibility of cascade installation
- The highest EER and COP values on the market
- Integrated condensation control
- Mixing valve management

Model	Refrigeration power kW	Heating Power kW	Code	€
HPE 25 INVERTER (steam injection)	**21,00**	**24,15**	**37980806**	**20.830,00**
HPE LT 50 INVERTER (steam injection)	**36,10**	**47,78**	**37980808**	**28.800,00**

Accessories HPE 25÷70 - HPE LT 25÷50

First mandatory ignition	**37980000**	**600,00**
Integrated circulator EC HPE/HPE LT 25-35	**37980001**	**1.100,00**
Integrated circulator EC HPE/HPE 50F - LT 50	**37980002**	**2.260,00**
Integrated circulator EC HPE 60	**37980003**	**4.060,00**
AC pump with inverter HPE 70	**37980005**	**2.580,00**
Shut-off valve HPE/HPE LT 25 - 35 - 50F - 60 - 70	**37980004**	**1.090,00**

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Accessori HPE LT 25 - HPE LT 50 INVERTER	Codice	€
HPE / HPE LT 25 - 35 silencing kit	**37980008**	**180,00**
Kit super silenziamento HPE/HPE LT 25	**37980010**	**1.030,00**
HPE / HPE LT 25 super silencing kit	**37980012**	**1.670,00**
Finguard anti-corrosion treatment	**37980014**	**2.280,00**
Sequence control device, phase failure + minimum and maximum voltage relay	**37980016**	**360,00**

Optional accessories supplied separately HPE 25÷70 - HPE LT 25÷50		
Remote control touchscreen	**37980013**	**610,00**
Wall remote control	**37980017**	**300,00**
Anti-vibration mounts	**37980015**	**230,00**
Battery protection nets	**37980018**	**470,00**

Control V.415

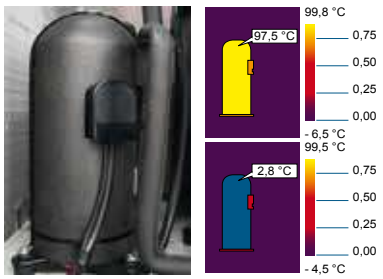
New control logic and display interface installed on all A2B Accorroni E.G. new generation HPE 25 ÷ 70 INVERTER - HPE LT 25 ÷ 50 INVERTER. Allows quick maintenance with parameters and firmware updates from USB peripheral. Memory increase with implementation of new logics.

Technology EC

The EC technology at the base of the fan motor allows an efficiency of up to 90% and allows high levels of energy savings, significantly extending its life and making it almost maintenance-free. These values pay off in safeguarding the environment and saving for the user. This product today presents the greatest possible link between economy and ecology.

Thermal and acoustic insulation (silencing kit)

The innovative thermoacoustic coat allows a reduction of noise up to 10% at certain rotation frequencies of the compressor. The particular multilayer structure allows thermal insulation which at very low temperatures reduces losses by up to 2% compared to standard insulation.



Diffuser (super silencing kit)

This diffuser increases the efficiency of the fan by allowing you to reduce its speed, lowering the sound pressure up to 7.2 dB (A) and energy consumption up to 27%. In this way it is possible to save substantial amounts of electricity for each fan per year. Alternatively, you can count on greater efficiency to improve air flow rates by up to 9% for the same energy consumption.

- Compact size
- Energy savings up to 27%
- Greater air flow
- Noise reduced up to 7.2dB(A)

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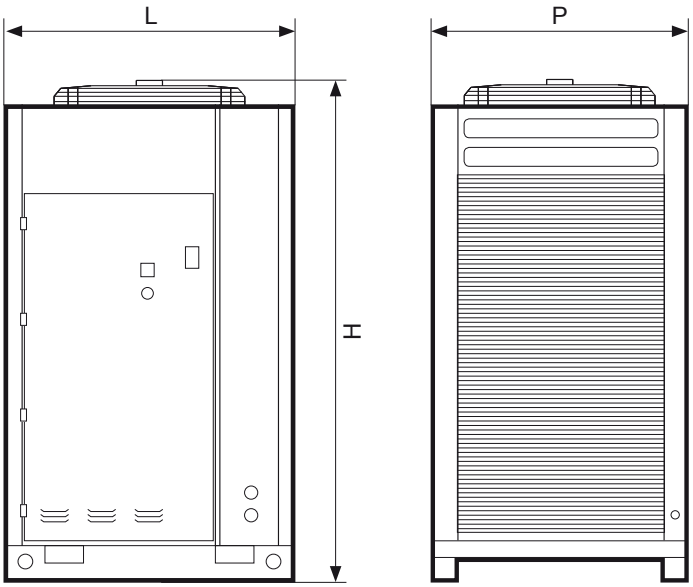
New circulation pumps

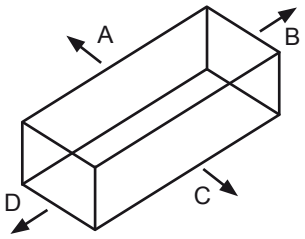
Over 90% of wet rotor circulation pumps currently on the market will soon no longer be able to be sold due to the entry into force of the EcoDesign directive which imposes increasingly restrictive requirements on energy efficiency. In the future, only EC pumps with high efficiency and very low electricity consumption will have to be used; the transition to this last generation therefore guarantees security for the future and immediate convenience. The pumps adopted (optional) have synchronous motor according to ECM technology with maximum efficiency and high starting torque, automatic release function, integral motor protection and error signaling.

HPE 50F INVERTER

HPE 50F INVERTER has a fixed 50 Hz on-off compressor and an inverter with a displacement of 20% greater than the size 0250 inverters, with a working range between 36 and 96 Hz (20% more than 30 and 80 Hz). This involves a minimum of 36Hz (1 inverter compressor at minimum) up to a maximum of 146 Hz = 50Hz + 96Hz (compressor on-off and inverter compressor at maximum). Also in this case, depending on the external temperature, the maximum capacity is appropriately modulated in order to increase efficiency.

Dimensions HPE LT 25 - HPE LT 50 INVERTER





Minimum distances of respect

A	1000
B	850
C	500
D	1550

Values in mm

HPE LT INVERTER	HPE LT 25	HPE LT 50
L	1198	1198
P	1198	1198
H	1673	1745
H Super silenced version	1915	1915

values in mm

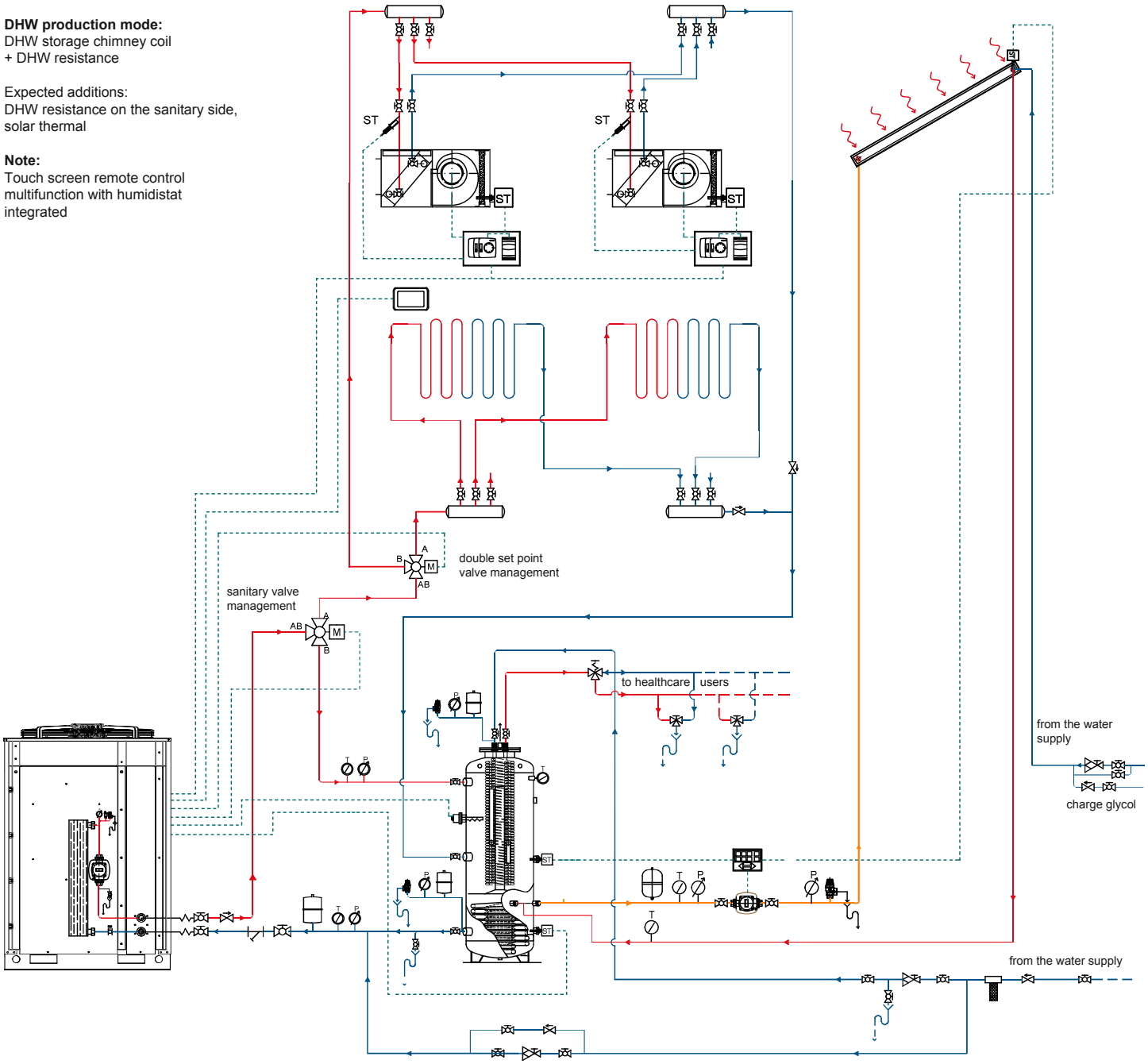
1 - HPE INVERTER system diagram for the production of heating, air conditioning and DHW

System regulation mode:
multizone with management
double set point fixed point
on radiant panels
main area

DHW production mode:
DHW storage chimney coil
+ DHW resistance

Expected additions:
DHW resistance on the sanitary side,
solar thermal

Note:
Touch screen remote control
multifunction with humidistat
integrated



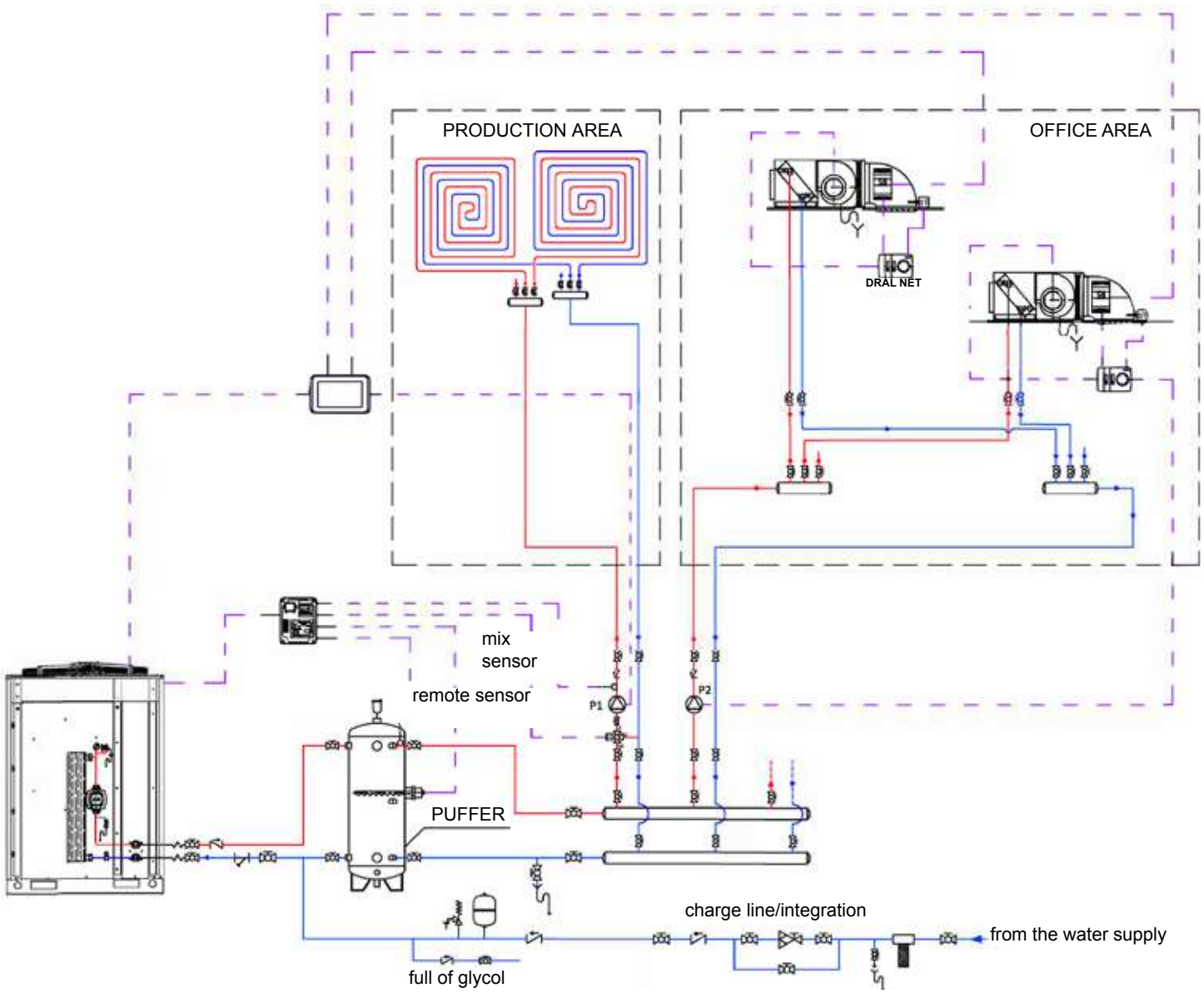
LEGEND

	sanitary water mixer
T	dial thermometer
P	pressure gauge 0 - 6 bar
	loading unit with pressure reducer
	safety valve set at 3 bar
	air bleed valve with tap
	mechanical Y filter
	non-return valve

	shut-off gate valve
M	2-way motorized valve
	sand trap filter
M	2-position motorized 3-way valve
ST	immersion NTC type temperature probe
	external management control
	3-way thermostatic anti-scald valve
	multifunction touch screen remote control

2 - HPE INVERTER system diagram for the production of heating, air conditioning and DHW

System description: Hot / Cold mode, touch screen remote control with hardware expansion unit for mixing and heating management. Remote touch screen control for supervisor management, each zone is controlled by DRAL NET with SB which activates the booster pump (one for each thermostated zone) remote probe on the system puffer. Mixing probe on the floor system side. DHW production mode - Integration: Plant side resistance.



LEGEND

	filter with removable cartridge
	loading unit with pressure reducer
	drain cock
	3 bar safety valve
	shut-off valve
	non-return valve
	thermometer
	pressure gauge 0 - 6 bar
	3-way thermostatic anti-scald valve
	flux regulator
	domestic hot water mixer
ST	immersion NTC temperature probe
	pump
	2-position motorized 3-way valve

	remote keypad remote control touch screen
	expansion valve
	vent valve
	differential by-pass valve
	flow switch

Technical data table HPE LT 25 - LT 50 INVERTER

DESCRIPTION		U.M.	HPE LT 25 INVERTER	HPE LT 50 INVERTER
Cooling down				
Cooling capacity (1)		kW	21,00	36,10
Absorbed power (1)		kW	6,44	12,45
E.E.R. (1)		W/W	3,26	2,90
Cooling capacity (2)		kW	30,67	47,56
Absorbed power (2)		kW	7,34	12,52
E.E.R. (2)		W/W	4,18	3,80
SEER (5)		W/W	3,98	3,90
Water flow (1)		l/s	1,00	1,73
Pressure drops (1)		kPa	32	20
Warm up				
Thermal power (3)		kW	24,15	47,78
Absorbed power (3)		kW	5,79	12,15
C.O.P. (3)		W/W	4,17	3,93
Thermal power (4)		kW	23,76	45,10
Absorbed power (4)		kW	6,88	13,56
C.O.P. (4)		W/W	3,45	3,33
SCOP (6)		W/W	4,02	3,81
Water flow (4)		l/s	1,14	2,16
User side exchanger pressure drops (4)		kPa	37	34
Energy efficiency			A++/A++	A++/A+
Compressor				
Guy				
Compressors		n.	1	2
Refrigerant circuits		n.		
Refrigerant quantity (7)		kg	10,5	16,5
Fan				
Nominal air flow		m^3/s	5	6,94
Hydraulic circuit				
Water flow (1)		l/s	1,00	1,73
Hydraulic connections				
Minimum water volume (8)		l	90	151
Noisiness				
Sound power (9)	Standard	dB(A)	72,5	78
	Silenced	dB(A)	70,7	76,2
	Super Silenced	dB(A)	69,8	75,3
Sound pressure (10)	Standard	dB(A)	56	61,4
	Muted	dB(A)	54,2	59,6
	Super Silenced	dB(A)	53,9	58,5
Electrical data				
Power supply				
Max absorbed power		kW	14,83	28,62
Max absorbed current		A	21,4	41,4
Weight				
Shipping weight		Kg	385	460
Operating weight		Kg	373	442

Performance referred to the following conditions:
(1) Cooling: outdoor air temperature 35 ° C; inlet / outlet water temperature 12/7 ° C.
(2) Cooling: outside air temperature 35 ° C; inlet / outlet water temperature 23/18 ° C
(3) Heating: external air temperature 7 ° C d.b. 6 ° C w.b.; inlet / outlet water temperature 30/35 ° C.
(4) Heating: external air temperature 7 ° C d.b. 6 ° C w.b.; inlet / outlet water temperature 40/45 ° C
(5) Cooling: inlet / outlet water temperature 12/7 ° C.
(6) Heating: average climatic conditions; Tbiv = -7 ° C; inlet / outlet water temperature 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: 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, referred to 10 m away from the unit.
(*) The data of useful head and characteristics of the pump refer to the EC integrated circulator (as optional)
N.B. the performance data shown are indicative and may be subject to change. Furthermore, the yields declared in points (1), (2), (3) and (4) they are to be understood as referring to the instantaneous power according to EN 14511. The data declared in points (5) and (6) is determined according to UNI EN 14825.