i-HPV5H

Air/water inverter heat pumps with axial fan

40 kW÷70 kW

Compressors
DC inverter compressor are of the hermetic scroll type expressaly designed for operation with gas R32.

Structure
Structure suitable for outdoor installation consisting of high-thickness profiles made of hop-dip galvanised steel sheets coated with polyester powder, coated with RAL 7035 bush-hammered finish.

User-Side Heat Exchanger
Grade AISI 304 stainless steel brazed plate heat exchanger coated with black closed-cell flexible elastomeric foam.

Source-Side Heat Exchanger
The air exchangers are made of copper pipes and aluminum fins. The tubes are mechanically expanded into the aluminum fins to increase the heat exchange factor.

Fan Section
The fan is axial type with wing profile blades. The electric motor used and controlled in modulation with brushless EC motor.

Refrigerant Circuit
It includes:
- Dehydrator filter;
- Shut-off valve on the liquid line;
- Liquid flow and humidity indicator;
- Electronic expansion valve;
- Service couplers;
- High pressure safety pressure switches;
- High- and low-pressure transducers;
- 4-way valve
- Receiver and liquid separator
- Non-return valves

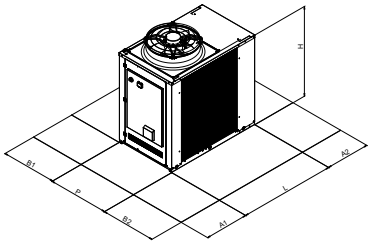
Electric Panel And Control
Entirely made and wired in conformity to the IEC 60335-2-40
The power section includes:
- Isolation transformer for powering the control devices;
- Thermal protection fuses for compressor drivers, EC fan and pump Driver;
- Automatic switch for protecting the compressors (optional);
- Drivers for modulating compressor control;
- Phase sequence control relay;
- Phase sequence control relay with minimum/maximum voltage
- invertion calibration (optional);
- Thermostatic ventilation inside electrical cabinet;
- Plant management module (optional or for the versions that require it)
- Interface terminal with alphanumerical display;
- Visualisation function for the set values, analogue inputs, fault codes, alarm log and parameter index;
- On/off and alarm reset buttons;
- Button combinations for forcing defrosting and for forcing pump to maximum power;
- Unit switch-on management from local or remote source;
- Configuration for Modbus connectivity (CM accessory).

Main accessories

e-Pro	Wi-Fi wall remote control	**PSI-SI**	Inverter modulated single pump AC and inertial tank
e-Lite	Multifunctional remote control system	**PD-SI**	Double pump AC and inertial tank (includes the GI accessory)
DS	Desuperheater partial heat recovery unit	**PSEC-SI**	Single pump EC and inertial tank
BT	Unit for low water temperatures (BT)	**SL**	Silenced unit
C	Ductable unit	**SSL**	Super-silenced unit
C (S)	Ductable unit with compressors insonorization	**VDIS4**	Three-wires diverting valve
PS	Single pump AC	**GI**	Internal hardware expansion module
PSI	Inverter modulated single pump AC	**TR2C4**	Cu/Al battery with anti-corrosion and metal panels treatment
PD	Double pump AC (includes the GI accessory)	**i-CR**	**Remote wall controller**
PSEC	Single pump EC		
PS-SI	Single pump AC and inertial tank		

Versions

i-HPV5H	Standard version reversible heat pump	**i-HPV5H-BT**	BT version reversible heat pump (for low water temperatures)
i-HPV5H-DS	Reversible heat pump with desuperheater		



Dimensions		0140	0250	0260	0270
L	mm	1850	1850	1850	1850
L (with tank)	mm	2460	2460	2460	2460
P	mm	1110	1110	1110	1110
H	mm	1920	1920	1920	1920
H (SSL)	mm	1980	1980	1980	1980

Spaces of respect		0140	0250	0260	0270
A1	mm	1200	1200	1200	1200
A2	mm	1000	1000	1000	1000
B1	mm	1000	1500	1500	1500
B2	mm	1500	1500	1500	1500

i-HPV5H -PS/PSI/PD		0140	0250	0260	0270
Cooling					
Cooling capacity (1)	kW	33,1* / 29,6	41,2* / 36,3	53,1* / 48	58,2* / 53,2
Power input (1)	kW	9,54	11,7	15,5	17,7
EER (1)	W/W	3,1	3,1	3,1	3,0
Cooling capacity (2)	kW	42,4* / 37,3	62,3* / 55,3	71,8* / 65,3	73,8* / 66
Power input (2)	kW	8,9	13	15,5	16,6
EER (2)	W/W	4,2	4,3	4,2	4,0
SEER (5)	W/W	4,8	4,7	4,9	4,8
Water flow (1)	L/s	1,4	1,7	2,3	2,6
Available head (1)	kPa	146	138	155	151
Heating					
Heating capacity (3)	kW	44,3* / 40	56,3* / 50,2	66* / 61,4	74,6* / 66,8
Power input (3)	kW	9,8	12,2	15	16,3
COP (3)	W/W	4,1	4,1	4,1	4,1
Heating capacity (4)	kW	43,6* / 40,6	55,9* / 49,7	64,2* / 59,5	75,5* / 66,6
Power input (4)	kW	12,5	15,4	18,3	20,4
COP (4)	W/W	3,3	3,23	3,3	3,3
SCOP (6)	W/W	4,3	4,16	3,9	3,9
Energy Efficiency (water 35°C / 55°C)	Classe	A++ / A++	A++ / A+	A++ / A+	A++ / A+
Water flow (1)	L/s	1,9	2,4	2,9	3,2
Available head (4)	kPa	125	109	130	122
Compressor					
Type		Scroll DC Inverter	Scroll DC Inverter	Scroll DC Inverter	Scroll DC Inverter
Compressors	n°	1	2	2	2
Refrigerant circuits	n°	1	1	1	1
Refrigerant		R32	R32	R32	R32
Refrigerant charge R32	kg	6,5	8,5	11,7	12,00
Cooling quantity in tonnes of CO2 equivalent	ton	4,4	5,7	7,9	8,1
Fan					
Nominal air flow	L/s	4368	5431	6417	5547
Hydraulic circuit					
Water flow (1)	L/s	1,42	1,74	2,30	2,55
Water connections	inch	1" 1/2 (DN 40)	1" 1/2 (DN 40)	1" 1/2 (DN 40)	1" 1/2 (DN 40)
Max pressure hydronic side	bar	6	6	6	6
Minimum water volume	L	286	389	490	522
Noise level					
Sound power (7)	dB(A)	74	75	80	81
Electrical data					
Power supply		400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz	400V/3P+N+T/50Hz
Max. power input	kW	24	33	39	43
Max. current input	A	38	52	62	68
Weight					
Net weight (**)	kg	440	540	560	600
Hydronic kit (Optional)					
Tank volume	L	400	400	400	400
Expansion vessel volume	L	24	24	24	24

Data referred to the following condition:
(1) Cooling: outdoor air temperature 35°C; in/out water temperature 12/7°C.
(2) Cooling: outdoor air temperature 35°C; in/out water temperature. 23/18°C.
(3) Heating: outdoor air temperature 7°C b.s. 6°C b.u.; in/out water temperature 30/35°C.
(4) Heating: outdoor air temperature 7°C b.s. 6°C b.u.; in/out water temperature 40/45°C.
(5) Cooling: in/out water temperature 7/12°C.
(6) Heating: Average climatic conditions; Tbiv=-7°C; low temperature.

(7) Sound power: heating mode according to EN 12102:2022; value determined on the basis of measurements made in accordance with UNI EN ISO 9614-1, in compliance with Eurovent certification requirements.
N.B. Performance data are indicative and are subject to change. Furthermore the performance 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.
(*) by activating the maximum Hz function
(**) For data relating to other versions, refer to the technical manual