MAXA HEATING & COOLING

i-32V5H Midi 0121-0132
Monoblock Heat Pump

21kW÷32kW

VERSIONS

i-32V5H Midi	Standard version reversible heat pump
i-32V5H-DS Midi	Reversible heat pump with desuperheater
i-32V5H-BT Midi	BT version reversible heat pump (for low water temperatures)

Possible Acoustic Configurations
SL Silenced version

Compressor
DC inverter compressor are of the hermetic rotary type, expressly designed for operation with R32, equipped with thermal protection and mounted on rubber vibration dampers. This component is installed in a compartment separated from the air flow to reduce noise and is provided with casing resistance to avoid oil dilution of refrigerant providing the correct lubrification and reducing the usury of the moving parts. Compressor inspection is possible through the removal of side and front panels of the unit, permitting maintenance also with unit in operation.

User-Side Heat Exchanger
Grade AISI 304 stainless steel brazed plate heat exchanger coated with black closed-cell flexible elastomeric foam; 9 mm thickness thermal conductivity (λ)≤0.036 W/mK (with air +20°C). A flow switch fitted on the water side guarantees the water flow and prevents ice from building up inside with the protection probe. The exchangers can be equipped with antifreeze electrical resistance (optional accessory KA).

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 resistant to weathering. Removable panels allow maintenance inside the refrigeration circuit and the hydraulic circuit.

Source-Side Heat Exchanger

The air-cooled heat exchangers are made with copper pipes and aluminium fins. The pipes are mechanically expanded in the aluminium fins to increase the thermal exchange factor. Owing to their shape, these heat exchangers ensure a low head loss value on the air side, therefore fans with a low number of revolutions can be used (which helps to reduce the machine's noise levels). On request, the surface of the batteries can be treated to improve their resistance to acidity and saline mist.

Fan

Axial-type fans are mounted, featuring aerofoil blades. They are statically and dynamically balanced and supplied with a protection grille and air inlet and outlet nozzle with double-flared profile, specially shaped to boost efficiency and reduce noise. The electric motor is modulated with EC brushless motor, directly coupled, and equipped with an integrated thermal protection device. The motor has an IP 54 protection rating in accordance with the CEI EN 60529 standard.

Electrical 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)

The control section includes:

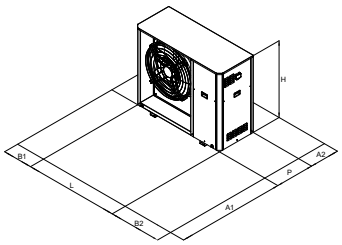
- Interface terminal with alphanumerical display;
- Visualisation function for the set values, analogue inputs, fault codes, alarm log and parameter index;
- On/off and alarm reset buttons;
- Button combinations for forcing defrosting and for forcing pump to maximum power;
- Unit switch-on management from local or remote source;
- Configuration for ModBus connectivity (optional);
- BMS connectivity by converter (Configuration for BMS connectivity (Modbus/BACnet/Knx Lonworks); (optional)

Standard Components

- Electronic circulator
- EEV - electronic valve
- Liquid indicator
- Water side safety valve
- Drain cock
- Flow switch (flow presence signal)
- Remote on / off clean contact
- Dynamic set point
- Three-phase relay for sequence / lack monitoring
- Fan speed regulator (ECM fans)
- 2nd set point

i-32V5H Midi	Datasheet

i-32V5H Midi 0121-0132
Monoblock Heat Pump



Dimensions		0121	0126	0128	0132
L	mm	1600	1600	1600	1600
P	mm	640	640	640	640
H	mm	1315	1315	1315	1315

MCS Certification Numbers
0121: ICIM-PDC-000104-01
0126: ICIM-PDC-000104-02
0128: ICIM-PDC-000105-01
0132: ICIM-PDC-000105-02

i-32V5H Midi		0121	0126	0128	0132
Cooling					
Cooling capacity (1)	kW	17,7	18,7	24,2	26,0
Power input (1)	kW	5,87	6,19	7,98	8,65
E.E.R. (1)	W/W	3,02	3,02	3,03	3,01
Cooling capacity (2)	kW	22,0	25,8	29,0	31,4
Power input (2)	kW	4,44	5,50	6,36	7,08
E.E.R. (2)	W/W	4,95	4,68	4,56	4,44
SEER (5)	W/W	4,44	4,55	4,76	4,81
Water flow (1)	L/s	0,8	0,9	1,2	1,2
Pressure drops on the hydronic circuit side (1)	kPa	32,5	34,5	31,2	34,2
Heating					
Heating capacity (3)	kW	21,3	26,0	28,0	32,1
Power input (3)	kW	4,92	6,44	6,35	7,84
C.O.P. (3)	W/W	4,33	4,04	4,41	4,09
Heating capacity (4)	kW	21,2	25,8	28,3	32,7
Power input (4)	kW	6,36	7,86	8,21	9,90
C.O.P. (4)	W/W	3,34	3,28	3,45	3,30
SCOP (6)	W/W	4,20	3,95	4,29	4,02
Water flow (1)	L/s	1,0	1,2	1,4	1,6
User side exchanger pressure drops (4)	kPa	37,9	53,1	41,4	50,6
Energy efficiency (Water 35°C-55°C)	Class	A++/A+	A++/A+	A++/A++	A++/A+
Compressor					
Type			Twin Rotary DC Inverter		
Compressors	n°	1	1	1	1
Refrigerant circuits	n°	1	1	1	1
Refrigerant R32	kg	4,3	4,3	5,1	5,1
Refrigerant quantity in tonnes of CO2 equivalent Ton eq. refrigerant q.ty	ton	2,90	2,90	3,44	3,44
Fan					
Type			Motore DC Brushless		
Number		1	1	1	1
Nominal air flow	m3/h	10769	10847	12209	13202
Hydronic heat exchanger					
Type		A piastre	A piastre	A piastre	A piastre
Number		1	1	1	1
Hydraulic circuit					
Water connections	inch	1"	1"	1"1/4	1"1/4
Water quantity	L	2,4	2,4	3,4	3,4
Minimum water volume	L	110	110	110	110
Sound level					
Sound power Lw	dB(A)	72	74	75	76
Sound power SL version (Lw)	dB(A)	68	70	71	72
Electrical data					
Power supply			400V/3P+N+T/50Hz		
Max. power input	kW	12,3	12,3	14,7	14,7
Max. current input	A	22,9	22,9	26,8	26,8
Weight					
Gross weight	kg	250	250	265	265
Net weight (*)	kg	240	240	255	255

Performance referred to the following conditions:
1) Cooling: outdoor air temperature 35 ° C; water temperature in / out 12/7 ° C.
2) Cooling: outdoor air temperature 35 ° C; water temperature in / out 23/18 ° C
3) Heating: external air temperature 7 ° C d.b. 6 ° C b.u .; in / out water temp. 30/35 ° C.
4) Heating: external air temperature 7 ° C d.b. 6 ° C b.u .; in / out water temp. 40/45 ° C
5) Cooling: inlet / outlet water temperature 12/7 ° C.
6) Heating: average climatic conditions; Tbiv = -7 ° C; in / out water temp. 30/35 ° C.