

Electa-ECOS-B-IN

MHAITI 104÷110 + IUB 06-10 + IN

Cooling capacity 3,1÷6,5 kW

Heating capacity 4÷9,5 kW

DHW capacity 150 l +150l



Features

Efficient and eco-friendly range in R32

Energy class A++ and class A for DHW

Domestic hot water production from –25°C to +45°C outdoor air

Indoor recessed unit with circulator, expansion tank, 3-way valve, DHW tank and electrical resistance.

Touch-screen control panel.

APP for managing the unit via smartphone (iOS and Android)

150 litre or 150+150 litre DHW storage tank



Tax incentives*

Two-section reversible air-water heat pumps recessed, with tank for domestic hot water. Range with hermetic rotary DC Inverter compressors and R32 refrigerant gas.

Construction features

Indoor unit IN/150

Internal recessed unit consisting of KAR cabinet, KACSI DHW tank and KID group, supplied separately for on-site assembly.

> KAR – Pre-assembled cabinet for recessed wall-mounted installation, made of galvanised sheet steel, for housing KACSI DHW tank, KID group and IUB indoor unit.

> KACSI – 150-litre domestic hot water tank, complete with:

- Carbon steel tank with double layer vitrification as per DIN 4753-3.
- Injected rigid polyurethane external insulation.
- Carbon steel tube serpentine.

- Magnesium anode.
- Electrical resistance (2 kW);
- > KID – Hydro-sanitary unit, complete with:
 - Safety group with non-return valve and safety valve (7 bar), DHW domestic hot water side.
 - DHW side expansion tank (8 l).
 - Anti-scald thermostatic valve, DHW side.
 - Set-up for domestic hot water recirculation circuit.
 - System side inertial tank (20 l).
 - Differential by-pass valve on system circuit.
 - Connection hoses and water filter.

IUB indoor unit

Indoor unit for installation in KAR cabinet, complete with:

- Structure: made of galvanised and painted steel plate.
- Water/refrigerant exchanger: properly insulated stainless steel plates, complete with antifreeze heater.
- Pump unit complete with: EC circulator, automatic air vent valve, safety valve (3 bar), flow switch, expansion tank (10 l), pressure gauge, water filter.
- 3-way valve for the production of domestic hot water.
- Supplementary electrical resistance, system side.
- Control: microprocessor electronic control with touch-screen panel for integrated management of the heat pump and the hydro-sanitary system, according to the various requirements for energy source use:
 - 3-way diverter valve management for domestic hot water production.
 - Rapid heating function for domestic hot water.
 - Anti-legionella cycle function, with activation timer.
 - Auxiliary or supplementary heat source management.
 - Operation in silent mode with timer.
 - Weekly and daily time bands.
 - Holiday mode and antifreeze function
 - Power consumption limiting function.
 - 2-way on/off valve management for shutting off a part of the system, in heating or cooling mode.
 - Management through room thermostat, as an alternative to the touch-screen panel.
 - Unit activation from external contact (remote ON/OFF)
- Unit complete with:
 - Outdoor temperature probe for set-point compensation.
 - Remote ambient air temperature probe, for managing the unit according to the ambient set-point.
 - Water temperature probe for domestic hot water tank (20 m).
 - Communication cable between outdoor and indoor units.
- RS485 interface for serial communication with other devices (Modbus RTU protocol).
- iOS and Android APP for managing the unit via smartphone and tablet.

MHAITI outdoor unit

- Compressor: hermetic, twin rotary DC Inverter with steam injection, complete with thermal protection and casing heater.
- Expansion valve: electronic.
- Cooling circuit with economiser.
- Air side heat exchanger: finned coil with copper pipes and aluminium-manganese fins with Golden Fin anti-corrosion treatment in epoxy resin and hydrophilic treatment, complete with protection grilles.
- Fan: axial type impeller with DC brushless motors, equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed adjustment.
- Structure: made of galvanised and painted steel plate RAL9002, complete with condensate drain pan and unit base antifreeze heater.

Models

MHAITI+IUB+IN: recessed 2-section air-water heat pump.

Separately supplied accessories

KPET – Remote touch-screen control panel in the room with connection cable (8 m) – mandatory.

IN/150+150 module: additional 150 litre DHW module for a total capacity of 300 litres, for flush mounting next to the IN/150 module, consisting of the following **COMPULSORY** accessories supplied separately:

> KAR2 – Additional built-in cabinet assembled

> KACSI2 – Additional domestic hot water storage tank 150 litres

> KQEA – Additional electrical panel

KPRT – Touch-screen connection cable, length 20 m.

KPRE – Wiring for RS485 serial connection to the touch-screen panel.

KR2AB – Two-zone circulation kit: high temperature and low temperature (mixed).

KR2AA – Two-zone circulation kit: high temperature.

KSA – Rubber anti-vibration mounts.

Technical data

MHAITI outdoor unit		104	106	108	110	
IUB indoor unit		06	06	10	10	
Indoor unit IN/		150	150	150	150	
❶ Heating capacity	kW	4,0	5,9	8,0	9,5	
❶ Absorbed power	kW	1,02	1,51	2,14	2,64	
❶ C.O.P.		3,92	3,91	3,74	3,60	
❷ Heating capacity	kW	4,0	6,0	8,0	9,5	
❷ Absorbed power	kW	0,78	1,20	1,70	2,07	
❷ C.O.P.		5,13	5,00	4,71	4,59	
❸ Cooling capacity	kW	3,2	4,1	5,3	6,5	
❸ Absorbed power	kW	0,94	1,28	1,73	2,27	
❸ E.E.R.		3,42	3,20	3,06	2,86	
❹ Cooling capacity	kW	3,8	5,8	7,0	8,5	
❹ Absorbed power	kW	0,82	1,32	1,75	2,24	
❹ E.E.R.		4,63	4,40	4,00	3,79	
❺ Sound pressure (outdoor unit)	dB(A)	37	37	41	42	
❻ System residual head	kPa	76	73	66	54	
DHW tank capacity	L	150	150	150	150	
Electrical supply	V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	
System / DHW side electrical resistance	kW	3,0 / 2,0	3,0 / 2,0	6,0 / 2,0	6,0 / 2,0	
Refrigeration lines max Height difference / length	m	20 / 15	20 / 15	25 / 15	25 / 15	
DIMENSIONS AND WEIGHTS						
MHAITI outdoor unit		104	106	108	110	
L – Width	mm	975	975	980	980	
H – Height	mm	702	702	788	788	
P – Depth	mm	396	396	427	427	
Weight	kg	55	55	82	82	
Indoor unit IN/		150	150	150	150	
L – Width KAR / KAR2	mm	950 / 450	950 / 450	950 / 450	950 / 450	
H – Height	mm	2200	2200	2200	2200	
P – Depth	mm	350	350	350	350	
Empty weight IUB+IN/150	kg	200	200	200	200	
Empty weight IUB+IN/150+150	kg	270	270	270	270	
Performance according to EN 14511						
ENERGY PERFORMANCE		MHAITI	104	106	108	110
		IUB	06	06	10	10
		IN/	150	150	150	150
AMBIENT HEATING – Average application temperature 55°C						
❸ Pdesignh (EN 14825)	kW		5	5	7	8
❸ SCOP (EN 14825)			3,27	3,25	3,31	3,25
❹ ηs	%		128	127	129	127
❹ Energy class			A++	A++	A++	A++
WATER HEATING						
Load profile			L	L	L	L
❺ ηwh	%		91	91	85	85
❺ Energy class			A	A	A	A

Data at the following conditions:

- ❶ Air: 7°C D.B. – 6°C W.B. – Water: 40/45°C.
- ❷ Air: 7°C D.B. – 6°C W.B. – Water: 30/35°C.
- ❸ Air: 35°C D.B. – Water: 12/7°C.
- ❹ Air: 35°C D.B. – Water: 23/18°C.
- ❺ In open field (Q = 2) at 5 m from the unit.
- ❻ In Average climatic conditions.
- ❼ Seasonal energy efficiency: ambient heating in Average climate (EU Regulations No.811/2013 and No.813/2013 – class between D and A+++)
- ❽ Water heating energy efficiency in Average climate (+7°C). (Regulations (EU) No.812/2013 and No.814/2013 – class between F and A+)

RHOSS S.p.A.
Via Oltre Ferrovia, 32
33033 Codroipo (UD) - ITALY
tel. **+39 0432 911611**
rhoss@rhoss.com

rhoss.com

RHOSS S.p.A. non si assume alcuna responsabilità per eventuali errori del presente stampato e si ritiene libera di variare senza preavviso le caratteristiche dei propri prodotti.