

Electa-ECOS.2-B

MHAITI 114-116 + IUB 16

Cooling capacity 11.3-11.6 kW

Heating capacity 14.5-16.1 kW



Features

Low GWP R32 refrigerant

Energy class A+++

Temperature of the produced water up to 60°C

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

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

Touch-screen control panel.

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

New digital inputs and outputs



Tax incentives*

Two-section reversible air-water heat pumps. Range with hermetic rotary DC Inverter compressors and R32 refrigerant gas.

Construction features

IUB indoor unit

Indoor unit for wall mounting installation:

- Structure: made of galvanised and painted steel plate.
- Water side heat exchanger: adequately 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 heating system, according to the various

requirements relating to the use of the energy sources:

- 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), DHW/system mode activation from external contact
- Parental control and start-up menu password.
- Pump contact and 3-way valve status (digital outputs).
- 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+USB: 2-section air-water heat pump.

Separately supplied accessories

KSA – Rubber anti-vibration mounts.

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

Technical data

MHAITI outdoor unit		114M	116M	116T	
IUB indoor unit		16M	16M	16T	
❶ Heating capacity	kW	14,50	16,10	16,10	
❶ Absorbed power	kW	3,87	4,41	4,41	
❶ C.O.P.		3,75	3,65	3,65	
❷ Heating capacity	kW	14,00	15,50	15,50	
❷ Absorbed power	kW	2,98	3,44	3,44	
❷ C.O.P.		4,70	4,50	4,50	
❸ Cooling capacity	kW	11,30	11,60	11,60	
❸ Absorbed power	kW	4,04	4,38	4,38	
❸ E.E.R.		2,80	2,65	2,65	
❹ Cooling capacity	kW	12,60	13,00	13,00	
❹ Absorbed power	kW	3,41	3,60	3,60	
❹ E.E.R.		3,70	3,61	3,61	
❺ Sound pressure (outdoor unit)	dB(A)	47	47	47	
❻ Available circulator head	kPa	54	48	48	
Electrical supply	V-ph-Hz	230-1-50	230-1-50	400-3+N-50	
Internal unit electrical resistance	no. x kW	2 x 3,0	2 x 3,0	2 x 3,0	
Refrigeration lines max length/height difference	m / m	15 / 15	15 / 15	15 / 15	
MHAITI outdoor unit		114M	116M	116T	
L – Width	mm	940	940	940	
H – Height	mm	840	840	840	
P – Depth	mm	460	460	460	
Weight	kg	104	104	110	
IUB indoor unit		16M	16M	16T	
L – Width	mm	460	460	460	
H – Height	mm	860	860	860	
P – Depth	mm	315	315	315	
Weight	kg	58	58	60	
ENERGY PERFORMANCE		MHAITI	114M	116M	116T
		IUB	16M	16M	16T
AMBIENT HEATING – Low temperature application 35°C					
❸ Pdesignh (EN 14825)	kW		12,00	13,00	13,00
❸ SCOP (EN 14825)			4,65	4,60	4,45
❹ ηs	%		183	181	175
❹ Energy class			A+++	A+++	A+++
AMBIENT HEATING – Average application temperature 55°C					
❸ Pdesignh (EN 14825)	kW		13,00	13,00	13,00
❸ SCOP (EN 14825)			3,50	3,50	3,35
❹ ηs	%		137	137	131
❹ Energy class			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 Weight refers to the most complete set up.
Performance according to EN 14511
- ❸ In Average climatic conditions.
- ❹ Seasonal energy efficiency: ambient heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



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