

MidiPACK-PI

TCAITP-THAITP 139÷165

Cooling capacity 34.6÷60.3 kW
Heating capacity 38.2÷64.7 kW



Efficient and eco-friendly range in R290

Plug&Play unit with integrated hydraulic module

Full inverter units

Hot water production from -20°C to 40°C outdoor air

Temperature of the produced water up to 80°C

Integrated MASTER/SLAVE control

Tax incentives*



Water chillers and packaged reversible air-cooled heat pumps with axial fans. Series with scroll hermetic compressors, DC Inverter and R290 refrigerant gas.

Construction features

- Compressor: hermetic rotary, scroll type with inverter actuation, complete with thermal protection and casing heater.
- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Air side heat exchanger: finned coil with copper pipes and aluminium fins, complete with protection grilles.
- Fan: external rotor helical type electric fan and permanent magnet motor (EC brushless) for electronic speed control, equipped with internal thermal protection.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
 - electronic expansion valve;
 - outdoor air temperature probe for set-point compensation;

- display of cooling circuit high and low pressure;
- Master/Slave control up to 4 units in parallel;
- clock board;
- automatic management of anti-legionella cycles.

Version

T - High efficiency version.

Models

- TCAITP: high efficiency unit designed for cooling only.
- THAITP: high efficiency heat pump unit.

PUMP set up

Pump unit with single or double electric pump, including an automatic actuation pump in standby, complete with expansion tank, air vent valves, safety valve and water side pressure gauge. The pumps are available in low or high pressure head versions, and with INVERTER operation.

TANK&PUMP set up

- Pump unit complete with inertial buffer tank and single or double electric pump, including an automatic actuation pump in standby, complete with expansion tank, air vent valves, safety valve and water side pressure gauge. The pumps are available in low or high pressure head versions, and with INVERTER operation.

Factory fitted accessories

- Pre-painted copper/aluminium coils with hydrophilic treatment or copper/copper.
- Condensing control with over-pressure fans
- Base antifreeze heater
- Hot wire heaters protecting pump and piping down to -20°C outdoor air.
- Forced Download. Compressor partialisation or switch-off to limit power and current consumption (digital input).
- Double safety valves.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Contacts for Smart Grid integration and photovoltaic system.
- Control of min/max power supply voltage.
- Interfaces for serial communication with other devices.
- Colour touch user keypad (fitted on the machine or remotely) with 7" display.
- Rubber anti-vibration mounts.
- Energy parameters measurement.
- Silenced set up.
- Low water set-point temperature.

Separately supplied accessories

- 3-way valve for the production of domestic hot water,

managed by the adjustment.

- Removable outdoor air temperature probe for compensation of the set-point.
- Additional electrical resistance for heat pump, managed by the adjustment.
- Rubber anti-vibration mounts.
- Water filter.
- Thermostat with display.
- Remote keypad with display.
- Interfaces for serial communication with other devices.
- Serial converter (RS485/USB).
- Rhoss supervisors for unit monitoring and remote management.

Technical data

TCAITP MODEL		139	147	156	165
❶ Cooling capacity	kW	35,6	48	52,5	60,3
❶ Absorbed power	kW	12,6	15,3	16,6	21,2
❶ E.E.R.		2,83	3,14	3,17	2,85
THAITP MODEL		139	147	156	165
❷ Heating capacity	kW	38,2	49,1	56,1	64,7
❷ Absorbed power	kW	12,3	14,6	16,6	20,1
❷ C.O.P.		3,11	3,36	3,37	3,22
❸ Heating capacity	kW	39,1	50,6	57,8	66,5
❸ Absorbed power	kW	10,7	12,7	14,4	17,5
❸ C.O.P.		3,65	3,97	4,02	3,79
❶ Cooling capacity	kW	34,6	45,4	51,4	58,9
❶ E.E.R.		2,62	3,1	3,08	2,71
TCAITP-THAITP MODELS		139	147	156	165
❹ Sound pressure	dB(A)	52,5	52,5	53,5	54,5
Scroll compressor	no.	1 inverter	1 inverter	1 inverter	1 inverter
Circuits	no.	1	1	1	1
Buffer tank water content (TANK&PUMP)	l	80	150	150	150
❶ Standard head pump nominal available head (TCAITP)	kPa	144	113	109	88
Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
DIMENSIONS AND WEIGHT		139	147	156	165
L – Width	mm	1715	2320	2320	2320
H – Height	mm	1550	1550	1550	1550
P – Depth	mm	1000	1000	1000	1000
❹ TCAITP weight	kg	390	490	495	500
❹ THAITP weight	kg	410	530	535	540
SEASONAL ENERGY PERFORMANCE		139	147	156	165
TCAITP MODEL SEASONAL PERFORMANCE IN COOLING MODE					
❶ Pdesignc (EN 14825)	kW	35,6	48	52,5	60,3
❶ SEER (EN 14825)		4,91	4,93	4,85	4,93
❷ ηs,c	%	193	194	191	194
THAITP MODEL SEASONAL PERFORMANCE IN HEATING MODE – Low temperature application 35°C					
❸ Pdesignh (EN 14825)	kW	31	41	46	53
❸ SCOP (EN 14825)		4,24	4,31	4,31	4,22
❹ ηs	%	167	169	169	166
❹ Energy class		A++	A++	A++	A++
THAITP MODEL SEASONAL PERFORMANCE IN HEATING MODE – Medium temperature application 55°C					
❸ Pdesignh (EN 14825)	kW	31	39	45	52
❸ SCOP (EN 14825)		3,4	3,5	3,45	3,34
❹ ηs	%	133	137	135	131
❹ Energy class		A++	A++	A++	A++

Data at the following conditions:

- ❶ Air: 35°C D.B. – Water: 12/7°C.
- ❷ Air: 7°C D.B. – 6°C W.B. – Water: 40/45°C.
- ❸ Air: 7°C D.B. – 6°C W.B. – Water: 30/35°C.
- ❹ In open field (Q = 2) at 5 m from the unit.
- ❺ Weight referred to the unit without load and not accessorised.
Performance according to EN 14511.
- ❶ Low temperature application (7°C)
- ❷ Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)
- ❸ In Average climatic conditions.
- ❹ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013 – class between D and A+++)



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