

MidiPACK-PI

TCAITP-THAITP 139÷171

Cooling capacity 34.6÷70.5 kW
Heating capacity 38.2÷71.2 kW



Features



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.

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.
- Rhoss supervisors for unit monitoring and remote management.

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).

Technical data

TCAITP MODEL		139	147	156	165	171
❶ Cooling capacity	kW	35,6	48	52,5	60,3	70,5
❶ Absorbed power	kW	12,6	15,3	16,6	21,2	26,4
❶ E.E.R.		2,83	3,14	3,17	2,85	2,67
THAITP MODEL		139	147	156	165	171
❷ Heating capacity	kW	38,2	49,1	56,1	64,7	71,2
❷ Absorbed power	kW	12,3	14,6	16,6	20,1	22,5
❷ C.O.P.		3,11	3,36	3,37	3,22	3,16
❸ Heating capacity	kW	39,1	50,6	57,8	66,5	72,8
❸ Absorbed power	kW	10,7	12,7	14,4	17,5	19,2
❸ C.O.P		3,65	3,97	4,02	3,79	3,79
❶ Cooling capacity	kW	34,6	45,4	51,4	58,9	67,8
❶ E.E.R.		2,62	3,1	3,08	2,71	2,54
TCAITP-THAITP MODELS		139	147	156	165	171
❸ Sound pressure	dB(A)	52,5	52,5	53,5	54,5	55,5
Scroll compressor	n.	1 inverter	1 inverter	1 inverter	1 inverter	1 inverter
Circuits	n.	1	1	1	1	1
Buffer tank water content (TANK&PUMP)	l	80	150	150	150	150
❶ Standard head pump nominal available head (TCAITP)	kPa	144	113	109	88	118
Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
DIMENSIONS AND WEIGHT		139	147	156	165	171
L – Width	mm	1715	2320	2320	2320	2320
H – Height	mm	1550	1550	1550	1550	1550
P – Depth	mm	1000	1000	1000	1000	1000
❸ TCAITP weight	kg	390	490	495	500	580
❸ THAITP weight	kg	410	530	535	540	620
SEASONAL ENERGY PERFORMANCE		139	147	156	165	171
TCAITP MODEL SEASONAL PERFORMANCE IN COOLING MODE						
❶ Pdesignc (EN 14825)	kW	35,6	48	52,5	60,3	70,5
❶ SEER (EN 14825)		4,91	4,93	4,85	4,93	4,91
❷ η _{s,c}	%	193	194	191	194	193
THAITP MODEL SEASONAL PERFORMANCE IN HEATING MODE – Low temperature application 35°C						
❸ Pdesignh (EN 14825)	kW	31	41	46	53	58
❸ SCOP (EN 14825)		4,24	4,31	4,31	4,22	4,24
❷ η _s	%	167	169	169	166	166
❷ Energy class		A++	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	57
❸ SCOP (EN 14825)		3,4	3,5	3,45	3,34	3,44
❷ η _s	%	133	137	135	131	134
❷ Energy class		A++	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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