

WinPACK-P

TCAEP-THAEP 4200÷6430

Cooling capacity 188,7÷430,7 kW
Heating capacity 198,3÷435,3 kW



Features

Efficient range in R290

Full optional unit

Integrated MASTER/SLAVE control

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

Temperature of the produced water up to 75°C

Tax incentives*



Packaged reversible air-cooled heat pumps with axial fans. Range with hermetic scroll compressors and R290 refrigerant.

Construction features

- Compressor: hermetic rotary, scroll type, complete with thermal protection and casing heater.
- 4÷6 capacity steps with high efficiency at partial loads.
- Water side heat exchanger: with stainless steel plates, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.
- Air side heat exchanger: featuring micro-channels (TCAEP) or finned coil with copper pipes and aluminium fins (THAEP).
- Fan: external rotor axial type electric fans equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed adjustment.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
 - compressor and fan circuit breaker switches;

- electronic expansion valve;
- display of cooling circuit high and low pressure;
- Master/Slave control up to 4 units in parallel;
- clock board;
- control of Variable Primary Flow (VPF_R).

Versions

- T - High efficiency version (TCAETP-THAETP).
- Q - Super silenced version complete with compressor technical compartment soundproofing and reduced speed fans (TCAEQP-THAEQP).

Models

- TCAETP: high efficiency unit designed for cooling only.
- TCAEQP: super silenced unit designed for cooling only.

- THAETP: heat pump unit.
- THAEQP: super silenced heat pump unit.

Factory fitted accessories

- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- TANK&PUMP with 700 litre integrated buffer tank and single or double electric pump, complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit (TCAEP)
- Condensing control with fans with EC motor.
- Condensing control with over-pressure fans (T version only)
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Soft starter.
- Technical compressor compartment soundproofing.
- Compressor soundproof enclosures.
- Double safety valves.
- Buffer panels.
- Microchannel coils with E-coating treatment, copper/copper, copper/aluminium, pre-painted copper/aluminium or with hydrophilic treatment depending on versions.
- Control of min/max power supply.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Contacts for Smart Grid integration and photovoltaic system.
- Evaporator antifreeze heater, electrical panel, buffer tank, electric pumps and heat exchangers for heat

recovery, if applicable, and base.

- Low temperature water production.
- Interfaces for serial communication with other devices.
- Colour touch user keypad (fitted on the machine or remotely) with 7" display.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

Technical data

TCAETP-TCAEQP MODEL		4200	4220	4250	4270	4290	5320	5360	6380
① Nominal cooling capacity	kW	199,7	220,7	249,7	270,7	291,7	321,7	360,7	385,7
① Nominal cooling capacity	kW	194,7	213,7	244,7	263,7	283,7	314,7	351,7	375,7
① E.E.R.		3,16	3,1	3,23	3,19	3,15	3,25	3,14	3,13
① E.E.R.		3,01	2,91	3,12	3,06	3,02	3,14	3,02	3
① Absorbed power	kW	63,2	71,2	77,3	84,9	92,6	99	114,9	123,2
① Absorbed power	kW	64,7	73,4	78,4	86,2	93,9	100,2	116,5	125,2
THAETP-THAEQP MODEL		4200	4220	4250	4270	4290	5320	5360	6380
② Nominal heating capacity	kW	201,3	220,3	256,3	276,3	295,3	332,3	372,3	397,3
② Nominal heating capacity	kW	198,3	216,3	252,3	271,3	291,3	328,3	365,3	390,3
② C.O.P.		3,29	3,28	3,32	3,31	3,3	3,31	3,31	3,3
② C.O.P.		3,3	3,28	3,34	3,32	3,32	3,36	3,33	3,32
① Nominal cooling capacity	kW	193,7	213,7	241,6	261,7	282,7	311,7	348,7	373,7
① Nominal cooling capacity	kW	188,7	207,7	236,6	255,6	275,7	304,6	340,6	363,6
① E.E.R.		3,03	2,96	3,07	3,04	3,02	3,1	3	2,99
① E.E.R.		2,87	2,81	2,97	2,93	2,9	3	2,89	2,87
② Absorbed power	kW	61,2	67,2	77,2	83,5	89,5	100,4	112,5	120,4
② Absorbed power	kW	60,1	65,9	75,5	81,7	87,7	97,7	109,7	117,6
TCAEP-THAEP MODEL		4200	4220	4250	4270	4290	5320	5360	6380
③ TCAETP-THAETP sound pressure	dB(A)	58	59	60	60	61	61	62	62
③ TCAEQP-THAEQP sound pressure	dB(A)	52	53	54	54	55	55	56	56
④ TCAETP-THAETP sound power	dB(A)	90	91	92	92	93	93	94	94
④ TCAEQP-THAEQP sound power	dB(A)	84	85	86	86	87	87	88	88
Scroll compressors/steps	n.	4/4	4/4	4/4	4/4	4/4	5/5	5/5	6/6
Circuits	n.	2	2	2	2	2	2	2	2
Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS		4200	4220	4250	4270	4290	5320	5360	6380
L – Width	mm	2730	2730	3830	3830	3830	4970	4970	4970
⑤ L – Width TCAEP	mm	3750	3750	3830	3830	3830	4970	4970	4970
⑤ L – Width THAEP	mm	3750	3750	4850	4850	4850	4970	4970	4970
H – Height	mm	2480	2480	2480	2480	2480	2480	2480	2480
P – Depth	mm	2260	2260	2260	2260	2260	2260	2260	2260
⑥ TCAETP weight	kg	1875	2000	2555	2670	2785	3315	3545	3600
⑥ TCAEQP weight	kg	1935	2060	2640	2755	2870	3420	3650	3705
⑥ THAETP weight	kg	2230	2360	3030	3160	3285	3905	4155	4175
⑥ THAEQP weight	kg	2310	2440	3135	3265	3390	4045	4295	4315
SEASONAL ENERGY PERFORMANCE		4200	4220	4250	4270	4290	5320	5360	6380
TCAETP MODEL SEASONAL PERFORMANCE IN COOLING MODE									
① Pdesignc (EN 14825)	kW	199,7	220,7	249,7	270,7	291,7	321,7	360,7	385,7
① SEER (EN 14825)		4,64	4,65	4,78	4,66	4,52	4,7	4,57	4,72
② ηs,c	%	183	183	188	183	178	185	180	186
TCAEQP MODEL SEASONAL PERFORMANCE IN COOLING MODE									
① Pdesignc (EN 14825)	kW	194,7	213,7	244,7	263,7	283,7	314,7	351,7	375,7
① SEER (EN 14825)		4,57	4,59	4,77	4,62	4,47	4,67	4,51	4,7
② ηs,c	%	180	180	188	182	176	184	177	185
THAETP MODEL SEASONAL PERFORMANCE IN HEATING MODE – Low temperature application 35°C									
③ Pdesignh (EN 14825)	kW	165	181	209	226	242	272	305	326
③ SCOP (EN 14825)		3,99	4,02	4,03	3,98	3,96	3,96	3,96	4,02
④ ηs	%	156	158	158	156	155	155	156	158
THAEQP MODEL SEASONAL PERFORMANCE IN HEATING MODE – Low temperature application 35°C									
③ Pdesignh (EN 14825)	kW	162	177	206	222	238	269	299	320
③ SCOP (EN 14825)		3,93	3,96	3,97	3,91	3,91	3,91	3,91	3,96
④ ηs	%	154	155	156	153	153	153	153	155
THAETP MODEL SEASONAL PERFORMANCE IN HEATING MODE – Medium temperature application 55°C									
③ Pdesignh (EN 14825)	kW	163	178	203	219	234	263	295	317
③ SCOP (EN 14825)		3,2	3,24	3,29	3,27	3,26	3,23	3,26	3,29

④ ηs	%	125	127	129	128	127	126	128	128
THAEQP MODEL SEASONAL PERFORMANCE IN HEATING MODE – Medium temperature application 55°C									
③ Pdesignh (EN 14825)	kW	161	175	201	216	232	261	289	312
③ SCOP (EN 14825)		3,16	3,18	3,23	3,19	3,19	3,19	3,22	3,23
④ ηs	%	123	124	126	125	125	125	126	126
TCAETP-TCAEQP MODEL									
								6430	
①	Nominal cooling capacity						kW	430,7	
①	Nominal cooling capacity						kW	417,7	
①	E.E.R.							3,1	
①	E.E.R.							2,92	
①	Absorbed power						kW	138,9	
①	Absorbed power						kW	143	
THAETP-THAEQP MODEL									
								6430	
②	Nominal heating capacity						kW	435,3	
②	Nominal heating capacity						kW	427,3	
②	C.O.P.							3,29	
②	C.O.P.							3,3	
①	Nominal cooling capacity						kW	415,7	
①	Nominal cooling capacity						kW	404,7	
①	E.E.R.							2,95	
①	E.E.R.							2,81	
②	Absorbed power						kW	132,3	
②	Absorbed power						kW	129,5	
TCAEP-THAEP MODEL									
								6430	
⑤	TCAETP-THAETP sound pressure						dB(A)	62	
⑤	TCAEQP-THAEQP sound pressure						dB(A)	57	
⑤	TCAETP-THAETP sound power						dB(A)	94	
⑤	TCAEQP-THAEQP sound power						dB(A)	89	
Scroll compressors/steps							n.	6/6	
Circuits							n.	2	
Electrical supply							V-ph-Hz	400-3-50	
DIMENSIONS AND WEIGHTS									
								6430	
L – Width							mm	4970	
⑤	L – Width TCAEP						mm	4970	
⑤	L – Width THAEP						mm	4970	
H – Height							mm	2480	
P – Depth							mm	2260	
⑥	TCAETP weight						kg	3820	
⑥	TCAEQP weight						kg	3925	
⑥	THAETP weight						kg	4435	
⑥	THAEQP weight						kg	4575	
SEASONAL ENERGY PERFORMANCE									
								6430	
TCAETP MODEL SEASONAL PERFORMANCE IN COOLING MODE									
①	Pdesignc (EN 14825)						kW	430,7	
①	SEER (EN 14825)							4,61	
②	ηs,c						%	181	
TCAEQP MODEL SEASONAL PERFORMANCE IN COOLING MODE									
①	Pdesignc (EN 14825)						kW	417,7	
①	SEER (EN 14825)							4,58	
②	ηs,c						%	180	
THAETP MODEL SEASONAL PERFORMANCE IN HEATING MODE – Low temperature application 35°C									
③	Pdesignh (EN 14825)						kW	357	
③	SCOP (EN 14825)							3,97	
④	ηs						%	156	
THAEQP MODEL SEASONAL PERFORMANCE IN HEATING MODE – Low temperature application 35°C									
③	Pdesignh (EN 14825)						kW	349	
③	SCOP (EN 14825)							3,91	
④	ηs						%	153	
THAETP MODEL SEASONAL PERFORMANCE IN HEATING MODE – Medium temperature application 55°C									
③	Pdesignh (EN 14825)						kW	347	

③	SCOP (EN 14825)		3,25
④	ηs	%	127
THAEQP MODEL SEASONAL PERFORMANCE IN HEATING MODE – Medium temperature application 55°C			
③	Pdesignh (EN 14825)	kW	340
③	SCOP (EN 14825)		3,2
④	ηs	%	125

Data at the following conditions:

- ❶ Air: 35°C – Water: 12/7°C
- ❷ Air: 7°C, D.B. – 6°C W.B.- Water: 40/45°C.
- ❸ In open field (Q = 2) at 10 m from the unit.
- ❹ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.
- ❺ Width with ASP-ASDP accessory
- ❻ Weight referred to the unit without load and not accessorised.
- TCAEQP-THAEQP super-silenced versions.
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: heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



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