

WinPOWER HE-A

TCAEY 4385÷8920 /

THAEY 4385÷6700



Cooling capacity: 354.2÷916.8 kW - Heating capacity:
383.3÷698.9 kW

- ✓ **High energy efficiency chillers**
- ✓ **Extended operating limits**
- ✓ **Up to 6 capacity steps**
- ✓ **Multi-purpose for systems with 2 pipes + DHW (with optional RC100)**
- ✓ **Built-in MASTER/SLAVE control**



Web code: WPE11

Air cooled water chillers and reversible heat pumps with axial fans. Range with scroll hermetic compressors and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- Up to 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, water flow differential pressure switch and Victaulic fittings.
- Air side heat exchanger: featuring micro-channels (TCAEY) or finned coil with copper pipes and aluminium fins (THAEY).
- Fan: external rotor axial type electric fans, equipped with internal thermal protection, accident protection grilles and a proportional electronic device for continuous fan rotation speed regulation (T version; fans with an EC motor are standard in the Q version).
- 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:
 - fan and compressor circuit breaker switches;
 - display of cooling circuit high and low pressure;
 - electronic expansion valve;
 - clock board;
 - Master/Slave control up to 4 units in parallel;
 - control of Variable Primary Flow (VPF_R).

Versions

- T - High efficiency version with oversized condensing section (TCAEY - THAEY).

- Q - Super-silenced version complete with compressor technical compartment soundproofing, reduced speed fans and oversized condensing section (TCAEQY-THAEQY).

Models

- TCAEY: high efficiency unit designed for cooling only.
- TCAEQY: super silenced unit designed for cooling only.
- THAEY: high efficiency heat pump unit.
- THAEQY: super silenced heat pump unit.

Factory fitted accessories

- Shell and tube evaporator.
- 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 or 1000 litre integrated buffer tank (depending on size) 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 (TCAEY, TCAEQY, THAEYQ).
- Desuperheater.
- 100% heat recovery unit.
- Condensing control with fans with EC motor (standard in Q versions).
- Condensing control with over-pressure fans.

- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Soft starter.
- Soundproofed compressor box or Compressor box and soundproofed cooling circuit (THAEY).
- Compressor soundproof enclosures.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves
- Metal filters (THAEY) or coil protection nets.
- Microchannel coils with E-coating treatment, copper/copper or pre-painted copper/aluminium depending on the versions.
- Control of min/max power supply voltage.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater, electrical panel, buffer tank, electric pumps and heat exchangers for heat recovery, if applicable.
- Low temperature water production.
- Interfaces for serial communication with other devices.
- 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

TCAETY-TCAEQY MODEL		4385	4415	4460	5525	6570	6625	6665	6700
① Nominal cooling capacity	kW	385	414	460,8	524,5	569,5	623,1	665,3	695,2
① Nominal cooling capacity	kW	372,1	400	440,9	492,7	535,7	585,4	634,5	663,5
① E.E.R.		3,24	3,16	3,13	3,19	3,17	3,1	3,16	3,13
① E.E.R.		3,12	2,97	2,9	2,98	2,89	2,7	2,96	2,91
① Absorbed power	kW	118,9	131,1	147,3	164,5	179,7	201	210,6	222,2
① Absorbed power	kW	119,3	134,7	152	165,3	185,4	216,8	214,4	228
TCAETY-TCAEQY MODEL		4385	4415	4460	5525	6570	6625	6665	6700
⑥ TCAETY sound pressure	dB(A)	62,5	63,5	64,5	64,5	64,5	64,5	65,5	65,5
⑥ TCAEQY sound pressure	dB(A)	54,5	54,5	55,5	55,5	55,5	55,5	56,5	57,5
④ TCAETY sound power	dB(A)	95	96	97	97	97	97	98	98
④ TCAEQY sound power	dB(A)	87	87	88	88	88	88	89	90
Scroll/step compressor	n.	4/4	4/4	4/4	5/5	6/6	6/6	6/6	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		4385	4415	4460	5525	6570	6625	6665	6700
L - Width	mm	4840	4840	4840	5940	5940	5940	7100	7100
H - Height	mm	2450	2450	2450	2450	2450	2450	2450	2450
P - Depth	mm	2260	2260	2260	2260	2260	2260	2260	2260
⑤ TCAETY weight	kg	2440	2460	2510	2980	3200	3210	3715	3740
⑤ TCAEQY weight	kg	2715	2735	2785	3300	3565	3575	4080	4105
THAETY-THAEQY MODEL		4385	4415	4460	5525	6570	6625	6665	6700
② Nominal heating capacity	kW	386,9	425	464,2	520,4	571,5	626,8	662,6	698,9
② Nominal heating capacity	kW	383,3	420,8	458,3	512,5	556,2	622,1	656,1	687,4
② C.O.P.		3,2	3,2	3,2	3,2	3,2	3,2	3,21	3,22
② C.O.P.		3,33	3,3	3,3	3,28	3,28	3,29	3,33	3,32
① Nominal cooling capacity	kW	359,2	399	439,9	498,7	538,6	584,4	633,5	660,3
① Nominal cooling capacity	kW	354,2	385,1	421,1	474,8	507,8	546,6	606,7	631,5
① E.E.R.		2,97	2,96	2,95	3,02	2,95	2,9	3,02	2,97
① E.E.R.		2,91	2,82	2,75	2,84	2,72	2,53	2,8	2,78
② Absorbed power	kW	121	132,9	145,1	162,7	178,6	195,9	206,5	217,1
② Absorbed power	kW	115,1	127,5	138,9	156,3	169,6	189,1	197	207
THAETY-THAEQY MODEL		4385	4415	4460	5525	6570	6625	6665	6700
⑥ THAETY sound pressure	dB(A)	62,5	63,5	64,5	64,5	64,5	64,5	65,5	65,5
⑥ THAEQY sound pressure	dB(A)	54,5	54,5	55,5	55,5	55,5	55,5	56,5	57,5
④ THAETY sound power	dB(A)	95	96	97	97	97	97	98	98
④ THAEQY sound power	dB(A)	87	87	88	88	88	88	89	90
Scroll/step compressor	n.	4/4	4/4	4/4	5/5	6/6	6/6	6/6	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		4385	4415	4460	5525	6570	6625	6665	6700
L - Width	mm	4840	4840	4840	5940	5940	5940	6840	6840
H - Height	mm	2450	2450	2450	2450	2450	2450	2450	2450
P - Depth	mm	2260	2260	2260	2260	2260	2260	2260	2260
⑤ THAETY weight	kg	3030	3200	3250	3830	4040	4070	4680	4710
⑤ THAEQY weight	kg	3395	3565	3615	4310	4520	4550	5210	5240
SEASONAL ENERGY PERFORMANCE		4385	4415	4460	5525	6570	6625	6665	6700
TCAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE									
① Pdesignc (EN 14825)	kW	385	414	460,8	524,5	569,5	623,1	665,3	695,2
① SEER (EN 14825)		4,78	4,75	4,77	4,76	4,78	4,77	4,76	4,77
② ηs,c	%	188	187	188	187	188	188	187	188
TCAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE									
① Pdesignc (EN 14825)	kW	372,1	400	440,9	492,7	535,7	585,4	634,5	663,5
① SEER (EN 14825)		4,91	4,91	4,89	4,91	4,86	4,87	4,88	4,9
② ηs,c	%	193	193	192	193	191	192	192	193
THAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE									
① Pdesignc (EN 14825)	kW	-	-	439,9	498,7	538,6	584,3	633,5	660,3
① SEER (EN 14825)		-	-	4,68	4,68	4,66	4,67	4,65	4,68
② ηs,c	%	-	-	184	184	184	184	183	184
THAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE									
① Pdesignc (EN 14825)	kW	-	-	421,1	474,8	507,8	546,6	606,7	631,5
① SEER (EN 14825)		-	-	4,81	4,81	4,82	4,81	4,83	4,84
② ηs,c	%	-	-	189	189	190	189	190	191
THAETY MODEL SEASONAL PERFORMANCE IN HEATING MODE									
③ Pdesignh (EN 14825)	kW	354	388	-	-	-	-	-	-
③ SCOP (EN 14825)		3,53	3,56	-	-	-	-	-	-
④ ηs	%	138	139	-	-	-	-	-	-
THAEQY MODEL SEASONAL PERFORMANCE IN HEATING MODE									
③ Pdesignh (EN 14825)	kW	350	385	-	-	-	-	-	-
③ SCOP (EN 14825)		3,8	3,8	-	-	-	-	-	-
④ ηs	%	149	149	-	-	-	-	-	-
TCAETY-TCAEQY MODEL					7760	8820	8870	8920	
① Nominal cooling capacity	kW				758,3	819,9	870	916,8	
① Nominal cooling capacity	kW				728,6	790,1	830,2	867,6	
① E.E.R.					3,14	3,15	3,14	3,13	
① E.E.R.					2,93	2,93	2,9	2,86	

① Absorbed power	kW	241,5	260,3	277,1	293
① Absorbed power	kW	248,7	269,7	286,3	303,4
TCAETY-TCAEQY MODEL		7760	8820	8870	8920
② TCAETY sound pressure	dB(A)	65,5	65,5	66	67
② TCAEQY sound pressure	dB(A)	58	58	59	60
③ TCAETY sound power	dB(A)	98	98	99	100
③ TCAEQY sound power	dB(A)	91	91	92	93
Scroll/step compressor	n.	7/6	8/6	8/6	8/6
Circuits	n.	2	2	2	2
Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS		7760	8820	8870	8920
L - Width	mm	8250	9350	9350	9350
H - Height	mm	2450	2450	2450	2450
P - Depth	mm	2260	2260	2260	2260
⑤ TCAETY weight	kg	4250	4650	4750	4770
⑤ TCAEQY weight	kg	4655	5105	5205	5225
THAETY-THAEQY MODEL					
② Nominal heating capacity	kW				
② Nominal heating capacity	kW				
② C.O.P.					
② C.O.P.					
① Nominal cooling capacity	kW				
① Nominal cooling capacity	kW				
① E.E.R.					
① E.E.R.					
② Absorbed power	kW				
② Absorbed power	kW				
THAETY-THAEQY MODEL					
③ THAETY sound pressure	dB(A)				
③ THAEQY sound pressure	dB(A)				
④ THAETY sound power	dB(A)				
④ THAEQY sound power	dB(A)				
Scroll/step compressor	n.				
Circuits	n.				
Electrical supply	V-ph-Hz				
DIMENSIONS AND WEIGHTS					
L - Width	mm				
H - Height	mm				
P - Depth	mm				
⑤ THAETY weight	kg				
⑤ THAEQY weight	kg				
SEASONAL ENERGY PERFORMANCE		7760	8820	8870	8920
TCAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE					
① Pdesignc (EN 14825)	kW	758,3	819,9	870	916,8
① SEER (EN 14825)		4,77	4,76	4,76	4,77
② ηs,c	%	188	188	187	188
TCAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE					
① Pdesignc (EN 14825)	kW	728,6	790,1	830,2	867,6
① SEER (EN 14825)		4,85	4,86	4,88	4,87
② ηs,c	%	191	191	192	192
THAETY MODEL SEASONAL PERFORMANCE IN COOLING MODE					
① Pdesignc (EN 14825)	kW	-	-	-	-
① SEER (EN 14825)		-	-	-	-
② ηs,c	%	-	-	-	-
THAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE					
① Pdesignc (EN 14825)	kW	-	-	-	-
① SEER (EN 14825)		-	-	-	-
② ηs,c	%	-	-	-	-
THAETY MODEL SEASONAL PERFORMANCE IN HEATING MODE					
③ Pdesignh (EN 14825)	kW	-	-	-	-
③ SCOP (EN 14825)		-	-	-	-
④ ηs	%	-	-	-	-
THAEQY MODEL SEASONAL PERFORMANCE IN HEATING MODE					
③ Pdesignh (EN 14825)	kW	-	-	-	-
③ SCOP (EN 14825)		-	-	-	-
④ ηs	%	-	-	-	-

Data at the following conditions:

- ① Air: 35°C - Water: 12/7°C.
 - ② Air: 7°C, D.B. 6°C W.B. - Water: 40/45°C.
 - ③ In open field (Q = 2) at 10 m from the unit.
 - ④ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.
 - ⑤ Weight referred to the unit without load and not accessorised.
 - TCAEQY super-silenced versions.
- Performance according to EN 14511.
 ① Low temperature application (7°C)

RHOSS S.p.A. assumes all responsibility for possible mistakes in this document. RHOSS S.p.A. reserves the right to alter the features of their products without notice.

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