

Air Cooled Chillers & Heat Pumps

WinPOWER HE-A



TCAEY 4385-8920 / THAEY 4385-6700



ÜNTES[®]
52
years

WinPOWER HE-A

TCAEY 4385-8920 / THAEY 4385-6700

-  Cooling capacity: 337,3-916,8 kW
-  Heating capacity: 368,8-698,9 kW



TCAEQY 8920

THAEY 4460
with BFI accessory

- CLASS A chillers
- Extended operating limits
- Up to 6 capacity steps
- Multipurpose for systems with 2 pipes + DHW (with optional RC100)
- Integrated MASTER/SLAVE control



Reversible air cooled heat pumps and water chillers 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 with internal thermal protection, accident protection grilles.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load bearing structure made of galvanised and painted steel plate coated with polyester powders.
- The unit is also complete with:
 - compressor and fan 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.

Versions

- T - High efficiency version with oversized condensing section (TCAEY - THAEY).
- Q - Super-silenced version complete with compressor technical compartment soundproofing, super-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, including an automatic pump in standby. The 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.
- VPF control.
- Desuperheater.
- 100% heat recovery unit
- -10°C condensing control.
- -15°C condensing control with fans with EC motor (standard with 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.
- Optimised energy efficiency.
- Soft starter.
- Soundproofed compressor box or Compressor box and soundproofed cooling circuit (THAEY).
- Compressor soundproof enclosures.
- Cooling circuit delivery and intake valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves
- Metal filters (THAEY) or Coil protection grilles.
- Micro-channel coils with E-coating treatment (TCAEY).
- Copper/copper or copper/pre-painted aluminium coils (THAEY).
- 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.
- Untes supervisors for unit monitoring and remote management.
- Untes sequencer for integrated management of multiple chillers.

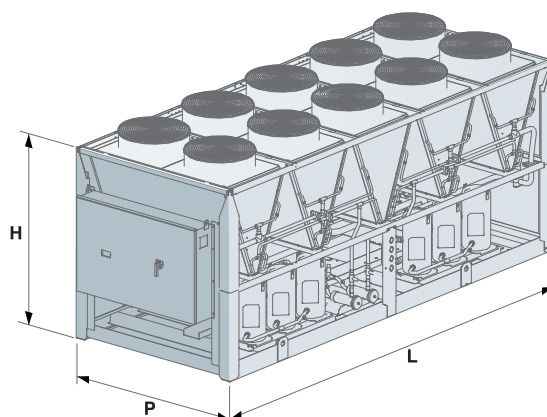
TCAEY-TCAEQY MODEL		4385	4415	4460	5525	6570	6625
❶	Nominal cooling capacity	kW	385,0	414,0	460,8	524,5	623,1
❶	Nominal cooling capacity	kW	355,2	381,1	420,1	469,9	558,6
❶	E.E.R.		3,24	3,16	3,13	3,19	3,17
❶	E.E.R.		2,87	2,71	2,64	2,71	2,63
❶	Absorbed power	kW	118,9	131,1	147,3	164,5	201,0
❶	Absorbed power	kW	123,8	140,7	159,2	173,4	226,2
TCAEY-TCAEQY MODEL		4385	4415	4460	5525	6570	6625
❸	TCAEY sound pressure	dB(A)	63	64	65	65	65
❸	TCAEQY sound pressure	dB(A)	54	54	55	55	55
❹	TCAEY sound power	dB(A)	95	96	97	97	97
❹	TCAEQY sound power	dB(A)	86	86	87	87	87
	Scroll/step compressor	no.	4/4	4/4	4/4	5/5	6/6
	Circuits	no.	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
DIMENSIONS AND WEIGHTS		4385	4415	4460	5525	6570	6625
	L - Width	mm	4.840	4.840	4.840	5.940	5.940
	H - Height	mm	2.450	2.450	2.450	2.450	2.450
	P - Depth	mm	2.260	2.260	2.260	2.260	2.260
❺	TCAEY weight	kg	2.440	2.460	2.510	2.980	3.200
❺	TCAEQY weight	kg	2.715	2.735	2.785	3.300	3.575

THAEY-THAEQY MODEL		4385	4415	4460	5525	6570	6625
❷	Nominal heating capacity	kW	386,9	425,0	464,2	520,4	626,8
❷	Nominal heating capacity	kW	368,8	404,9	441,0	493,2	598,6
❷	C.O.P.		3,20	3,20	3,20	3,20	3,20
❷	C.O.P.		3,24	3,22	3,22	3,20	3,21
❶	Nominal cooling capacity		359,2	399,0	439,9	498,7	538,6
❶	Nominal cooling capacity		337,3	367,2	401,1	453,0	483,9
❶	E.E.R.		2,97	2,96	2,95	3,02	2,95
❶	E.E.R.		2,66	2,55	2,49	2,60	2,47
❷	Absorbed power	kW	121,0	132,9	145,1	162,7	178,6
❷	Absorbed power	kW	113,9	125,8	137,0	154,2	167,3
THAEY-THAEQY MODEL		4385	4415	4460	5525	6570	6625
❸	THAEY sound pressure	dB(A)	63	64	65	65	65
❸	THAEQY sound pressure	dB(A)	54	54	55	55	55
❹	THAEY sound power	dB(A)	95	96	97	97	97
❹	THAEQY sound power	dB(A)	86	86	87	87	87
	Scroll/step compressor	no.	4/4	4/4	4/4	5/5	6/6
	Circuits	no.	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
DIMENSIONS AND WEIGHTS		4385	4415	4460	5525	6570	6625
	L - Width	mm	4.840	4.840	4.840	5.940	5.940
	H - Height	mm	2.450	2.450	2.450	2.450	2.450
	P - Depth	mm	2.260	2.260	2.260	2.260	2.260
❺	THAEY weight	kg	3.030	3.200	3.250	3.830	4.040
❺	THAEQY weight	kg	3.395	3.565	3.615	4.310	4.550

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 Weight referred to the unit without load and not accessorised.
- ❻ TCAEQY super-silenced versions.

Performance according to EN 14511:2013.



SEASONAL ENERGY PERFORMANCE		4385	4415	4460	5525	6570	6625
TCAEY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{designc} (EN 14825)	kW	384,9	413,8	460,7	524,3	569,3	622,9
① SEER (EN 14825)		4,44	4,43	4,40	4,49	4,44	4,42
② $\eta_{s,c}$	%	175	174	173	176	174	174
TCAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{designc} (EN 14825)	kW	355,1	381,0	419,9	469,7	510,7	558,4
① SEER (EN 14825)		4,31	4,19	4,23	4,24	4,19	4,23
② $\eta_{s,c}$	%	169	165	166	167	165	166
THAEY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{designc} (EN 14825)	kW	-	-	439,8	498,5	538,4	584,2
① SEER (EN 14825)		-	-	4,18	4,22	4,17	4,19
② $\eta_{s,c}$	%	-	-	164	166	164	165
THAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{designc} (EN 14825)	kW	-	-	401,0	452,8	483,8	520,6
① SEER (EN 14825)		-	-	4,18	4,21	4,17	4,20
② $\eta_{s,c}$	%	-	-	164	165	164	165
THAEY MODEL SEASONAL PERFORMANCE IN HEATING MODE							
③ P _{designh} (EN 14825)	kW	354	388	-	-	-	-
③ SCOP (EN 14825)		3,61	3,64	-	-	-	-
④ η_s	%	141	143	-	-	-	-
THAEQY MODEL SEASONAL PERFORMANCE IN HEATING MODE							
③ P _{designh} (EN 14825)	kW	337	370	-	-	-	-
③ SCOP (EN 14825)		3,71	3,71	-	-	-	-
④ η_s	%	145	145	-	-	-	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

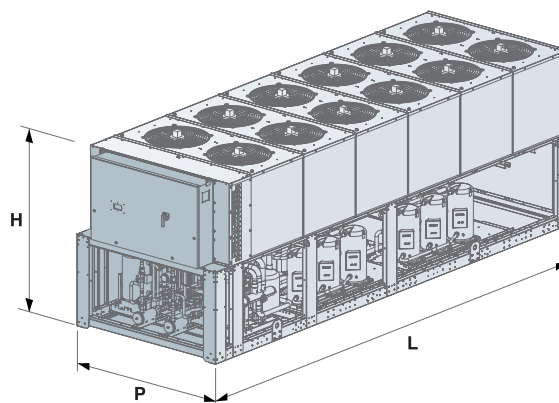
④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

TCAEY-TCAEQY MODEL		6665	6700	7760	8820	8870	8920	
❶	Nominal cooling capacity	kW	665,3	695,2	758,3	819,9	870,0	916,8
❶	Nominal cooling capacity	kW	604,7	632,6	694,7	753,3	791,5	827,3
❶	E.E.R.		3,16	3,13	3,14	3,15	3,14	3,13
❶	E.E.R.		2,70	2,65	2,67	2,67	2,64	2,60
❶	Absorbed power	kW	210,6	222,2	241,5	260,3	277,1	293,0
❶	Absorbed power	kW	224,0	238,8	260,2	282,2	299,9	318,2
TCAEY-TCAEQY MODEL		6665	6700	7760	8820	8870	8920	
❸	TCAEY sound pressure	dB(A)	66	66	66	66	66	67
❸	TCAEQY sound pressure	dB(A)	56	57	57	57	58	59
❹	TCAEY sound power	dB(A)	98	98	98	98	99	100
❹	TCAEQY sound power	dB(A)	88	89	90	90	91	92
	Scroll/step compressor	no.	6/6	6/6	7/6	8/6	8/6	8/6
	Circuits	no.	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
DIMENSIONS AND WEIGHTS		6665	6700	7760	8820	8870	8920	
	L - Width	mm	7.100	7.100	8.250	9.350	9.350	9.350
	H - Height	mm	2.450	2.450	2.450	2.450	2.450	2.450
	P - Depth	mm	2.260	2.260	2.260	2.260	2.260	2.260
❺	TCAEY weight	kg	3.715	3.740	4.250	4.650	4.750	4.770
❺	TCAEQY weight	kg	4.080	4.105	4.655	5.105	5.205	5.225

THAEY-THAEQY MODEL		6665	6700	
❷	Nominal heating capacity	kW	662,6	698,9
❷	Nominal heating capacity	kW	631,4	661,6
❷	C.O.P.		3,21	3,22
❷	C.O.P.		3,25	3,23
❶	Nominal cooling capacity		633,5	660,3
❶	Nominal cooling capacity		578,9	601,7
❶	E.E.R.		3,02	2,97
❶	E.E.R.		2,54	2,51
❷	Absorbed power	kW	206,5	217,1
❷	Absorbed power	kW	194,3	204,9
THAEY-THAEQY MODEL		6665	6700	
❸	THAEY sound pressure	dB(A)	66	66
❸	THAEQY sound pressure	dB(A)	56	57
❹	THAEY sound power	dB(A)	98	98
❹	THAEQY sound power	dB(A)	88	89
	Scroll/step compressor	no.	6/6	6/6
	Circuits	no.	2	2
	Electrical supply	V-ph-Hz	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS		6665	6700	
	L - Width	mm	7.100	7.100
	H - Height	mm	2.450	2.450
	P - Depth	mm	2.260	2.260
❺	THAEY weight	kg	4.680	4.710
❺	THAEQY weight	kg	5.210	5.240

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 Weight referred to the unit without load and not accessorised.
- TCAEY super-silenced versions.



SEASONAL ENERGY PERFORMANCE		6665	6700	7760	8820	8870	8920
TCAEY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{design,c} (EN 14825)	kW	665,2	695,1	758,3	819,9	870,0	916,7
① SEER (EN 14825)		4,40	4,31	4,51	4,51	4,48	4,42
② $\eta_{s,c}$	%	173	169	178	178	176	174
TCAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{design,c} (EN 14825)	kW	604,6	632,5	694,6	753,3	791,4	827,3
① SEER (EN 14825)		4,23	4,22	4,26	4,24	4,20	4,15
② $\eta_{s,c}$	%	166	166	167	167	165	163
THAEY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{design,c} (EN 14825)	kW	633,4	660,2	-	-	-	-
① SEER (EN 14825)		4,19	4,16	-	-	-	-
② $\eta_{s,c}$	%	165	163	-	-	-	-
❖ THAEQY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{design,c} (EN 14825)	kW	578,7	601,6	-	-	-	-
① SEER (EN 14825)		4,16	4,20	-	-	-	-
② $\eta_{s,c}$	%	163	165	-	-	-	-

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

ÜNTEŞ®

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