

Air Cooled Chillers & Heat Pumps

WinPOWER SE



TCAEY 4360-8860 / THAEY 4360-6670



ÜNTES®
52
years

WinPOWER SE

TCAEY 4360-8860 / THAEY 4360-6670

-  Cooling capacity: 335,0-861,8 kW
-  Heating capacity: 358,1-671,5 kW

- Version B compact and high-performance for replacement markets
- Up to 6 capacity steps
- Simplified installation thanks topump unit accessories
- Multipurpose for systems with 2 pipes + DHW (with optional RC100)
- Integrated MASTER/SLAVE control



TCAESY 8860

THAEY 6590
with BFI accessory



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

- B -Standard version (TCAEY-THAEY).
- S - Silenced version complete with compressor technical compartment soundproofing and reduced speed fans (TCAESY - THAEY).

Models

- TCAEY: unit intended for cooling only.
- TCAESY: silenced unit designed for cooling only.
- THAEY: heat pump unit.
- THAESY: 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 (standard with S versions).
- -15°C condensing control with fans with EC motor.
- 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 (for TCAEY).
- Copper/copper or copper/pre-painted aluminium coils (for 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

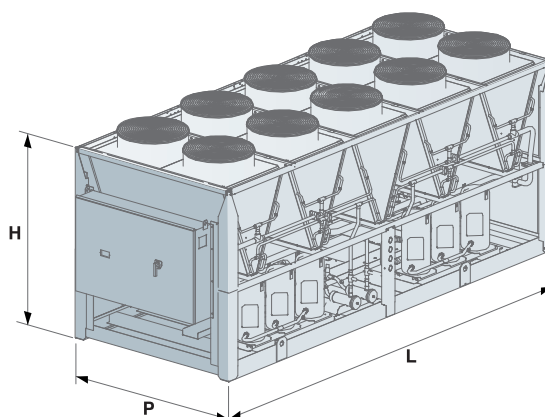
- Remote keypad with display.
- Thermostat with display.
- Untes supervisors for unit monitoring and remote management.
- Untes sequencer for integrated management of multiple chillers.

TCAEY-TCAESY MODEL		4360	4390	4435	5500	6540	6590	
①	Nominal cooling capacity	kW	359,8	389,6	434,6	496,3	538,9	587,9
①	Nominal cooling capacity	kW	350,9	374,7	416,7	478,4	517,1	560,1
①	E.E.R.		2,90	2,84	2,81	2,96	2,90	2,77
①	E.E.R.		2,76	2,62	2,60	2,77	2,68	2,52
①	Absorbed power	kW	124,1	137,2	154,7	167,7	185,9	212,3
①	Absorbed power	kW	127,2	143,1	160,3	172,8	193,0	222,3
TCAEY-TCAESY MODEL		4360	4390	4435	5500	6540	6590	
③	Sound pressure	dB(A)	62	63	64	64	64	64
③	Sound pressure	dB(A)	57	58	59	59	59	59
④	Sound power	dB(A)	94	95	96	96	96	96
④	Sound power	dB(A)	89	90	91	91	91	91
	Scroll/step compressor	no.	4/4	4/4	4/4	5/5	6/6	6/6
	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		4360	4390	4435	5500	6540	6590	
	L - Width	mm	3.740	3.740	3.740	4.840	4.840	4.840
	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
⑤	TCAEY Weight	kg	2.130	2.140	2.200	2.670	2.860	2.890
⑤	TCAESY Weight	kg	2.360	2.370	2.430	2.940	3.165	3.195

THAEY-THAESY MODEL		4360	4390	4435	5500	6540	6590	
②	Nominal heating capacity	kW	374,2	398,4	437,4	487,7	530,0	592,1
②	Nominal heating capacity	kW	358,1	386,3	424,3	473,6	518,9	575,0
②	C.O.P.		3,01	2,94	3,03	2,98	2,93	2,97
②	C.O.P.		3,01	2,94	3,02	2,99	2,95	2,96
①	Nominal cooling capacity	kW	346,9	368,7	410,7	465,4	509,1	553,2
①	Nominal cooling capacity	kW	335,0	355,9	389,9	444,6	486,4	532,4
①	E.E.R.		2,80	2,67	2,64	2,78	2,71	2,60
①	E.E.R.		2,64	2,49	2,42	2,55	2,51	2,41
②	Absorbed power	kW	124,4	135,6	144,4	163,7	180,9	199,4
②	Absorbed power	kW	119,0	131,4	140,5	158,4	175,9	194,3
THAEY-THAESY MODEL		4360	4390	4435	5500	6540	6590	
③	Sound pressure	dB(A)	62	63	64	64	64	64
③	Sound pressure	dB(A)	57	58	59	59	59	59
④	Sound power	dB(A)	94	95	96	96	96	96
④	Sound power	dB(A)	89	90	91	91	91	91
	Scroll/step compressor	no.	4/4	4/4	4/4	5/5	6/6	6/6
	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		4360	4390	4435	5500	6540	6590	
	L - Width	mm	3.740	3.740	3.740	4.840	4.840	4.840
	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
⑤	THAEY weight	kg	2.700	2.710	2.780	3.400	3.580	3.640
⑤	THAESY weight	kg	2.900	2.910	2.980	3.710	3.910	3.970

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.
- TCAESY - THAESY silenced versions
Performance according to EN 14511:2013.



SEASONAL ENERGY PERFORMANCE		4360	4390	4435	5500	6540	6590
TCAEY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{designc} (EN 14825)	kW	359,7	389,5	434,4	496,1	538,7	587,7
① SEER (EN 14825)		4,18	4,17	4,21	4,25	4,20	4,18
② $\eta_{s,c}$	%	164	164	165	167	165	164
TCAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{designc} (EN 14825)	kW	350,8	374,6	416,6	478,2	517,0	560,0
① SEER (EN 14825)		4,27	4,16	4,16	4,37	4,27	4,19
② $\eta_{s,c}$	%	168	163	164	172	168	165
THAEY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{designc} (EN 14825)	kW	-	-	410,6	465,3	509,0	553,0
① SEER (EN 14825)		-	-	4,21	4,12	4,13	4,17
② $\eta_{s,c}$	%	-	-	166	162	162	164
THAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{designc} (EN 14825)	kW	-	-	-	444,4	486,2	532,2
① SEER (EN 14825)		-	-	-	4,12	4,11	4,17
② $\eta_{s,c}$	%	-	-	-	162	161	164
THAEY MODEL SEASONAL PERFORMANCE IN HEATING MODE							
③ P _{designh} (EN 14825)	kW	343	367	-	-	-	-
③ SCOP (EN 14825)		3,44	3,38	-	-	-	-
④ η_s	%	135	132	-	-	-	-
THAESY MODEL SEASONAL PERFORMANCE IN HEATING MODE							
③ P _{designh} (EN 14825)	kW	328	355	391	-	-	-
③ SCOP (EN 14825)		3,45	3,39	3,46	-	-	-
④ η_s	%	135	132	136	-	-	-

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)

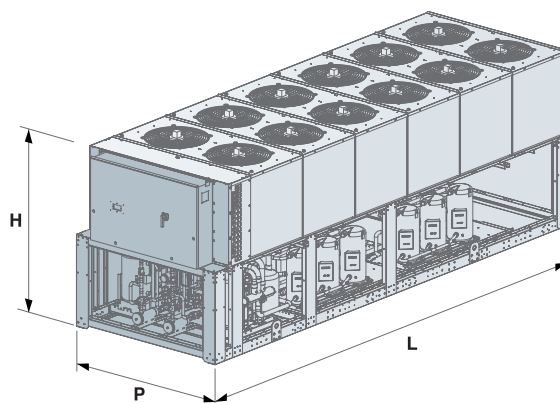
④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/213 and No.813/2013)

TCAEY-TCAESY MODEL		6635	6670	7730	8790	8830	8860
❶	Nominal cooling capacity	kW	637,7	666,5	732,4	784,0	861,8
❶	Nominal cooling capacity	kW	611,9	637,8	705,6	752,3	825,1
❶	E.E.R.		2,93	2,90	2,93	2,84	2,81
❶	E.E.R.		2,74	2,72	2,76	2,63	2,60
❶	Absorbed power	kW	217,7	229,9	250,0	276,1	307,8
❶	Absorbed power	kW	223,4	234,5	255,7	286,1	317,4
TCAEY-TCAESY MODEL		6635	6670	7730	8790	8830	8860
❸	Sound pressure	dB(A)	65	65	65	65	66
❸	Sound pressure	dB(A)	60	60	60	60	61
❹	Sound power	dB(A)	97	97	97	97	98
❹	Sound power	dB(A)	92	93	93	93	94
	Scroll/step compressor	no.	6/6	6/6	7/6	8/6	8/6
	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		6635	6670	7730	8790	8830	8860
	L - Width	mm	5.940	5.940	7.150	7.150	7.150
	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	3.205	3.230	3.870	4.020	4.100
❺	TCAESY Weight	kg	3.510	3.535	4.210	4.410	4.510

THAEY-THAESY MODEL		6635	6670
❷	Nominal heating capacity	kW	638,3
❷	Nominal heating capacity	kW	616,1
❷	C.O.P.		3,04
❷	C.O.P.		3,00
❶	Nominal cooling capacity	kW	600,9
❶	Nominal cooling capacity	kW	576,1
❶	E.E.R.		2,76
❶	E.E.R.		2,58
❷	Absorbed power	kW	210,0
❷	Absorbed power	kW	203,4
THAEY-THAESY MODEL		6635	6670
❸	Sound pressure	dB(A)	65
❸	Sound pressure	dB(A)	60
❹	Sound power	dB(A)	97
❹	Sound power	dB(A)	92
	Scroll/step compressor	no.	6/6
	Circuits	no.	2
	Electrical supply	V-ph-Hz	400-3-50
DIMENSIONS AND WEIGHTS		6635	6670
	L - Width	mm	5.940
	H - Height	mm	2.450
	P - Depth	mm	2.260
❺	THAEY weight	kg	4.080
❺	THAESY weight	kg	4.490

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.
- TCAESY - THAESY silenced versions
Performance according to EN 14511:2013.



SEASONAL ENERGY PERFORMANCE		6635	6670	7730	8790	8830	8860
TCAEY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{designc} (EN 14825)	kW	637,5	666,3	732,3	783,9	827,0	861,7
① SEER (EN 14825)		4,23	4,19	4,26	4,17	4,15	4,11
② $\eta_{s,c}$	%	166	164	167	164	163	162
TCAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{designc} (EN 14825)	kW	611,7	637,6	705,6	752,2	790,4	825,1
① SEER (EN 14825)		4,33	4,20	4,23	4,15	4,12	4,12
② $\eta_{s,c}$	%	170	165	166	163	162	162
THAEY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{designc} (EN 14825)	kW	600,7	631,5	-	-	-	-
① SEER (EN 14825)		4,19	4,17	-	-	-	-
② $\eta_{s,c}$	%	165	164	-	-	-	-
THAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① P _{designc} (EN 14825)	kW	575,9	603,7	-	-	-	-
① SEER (EN 14825)		4,17	4,18	-	-	-	-
② $\eta_{s,c}$	%	164	164	-	-	-	-

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®

52
years

Export Sales Office

Address: 53. Cadde 1450. Sokak Ulusoy
Plaza No: 9/50 Cukurambar, Ankara, Turkey
Email: export@untes.com.tr
T+90 (312) 287 91 00 F+90 (312) 284 91 00

Manufacturing Plant-1

Air Handling & Ventilations Systems,
Fan Coil Systems
Packaged Air Conditioning Systems
Address: Istanbul Yolu 37.km
Kahramankazan, Ankara, Turkey

Manufacturing Plant-2

Water Chiller and Heat Pumps
Address: Istanbul Yolu 24.km Saraykoy, Ankara

www.untes.com



untesklima