

Air Cooled Chillers & Heat Pumps

WinPACK SE



TCAEY-THAEY 2110-4340



ÜNTES®
52
years

WinPACK SE

TCAEY-THAEY 2110-4340

-  Cooling capacity: 97,6-328,6 kW
-  Heating capacity: 109,5-354,6 kW

- High performance range with extended operating limits
- Wide range of accessories
- Compact version B for replacement markets
- Multipurpose for systems with 2 pipes + DHW (with optional RC100)
- Integrated MASTER/SLAVE control



TCAESY 2200
with Tank&Pump

THAEBY 4310 with coil
protection nets accessory



Water chillers and packaged reversible air-cooled 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.
- 2, 3 or 4 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 or finned coil with copper pipes and aluminium fins depending on models/sizes.
- 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;
 - Master/Slave control up to 4 units in parallel;
 - clock board.

Versions

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

Models

- TCAEY: standard unit designed 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 integrated buffer tank from 300 to 700 litres (depending on models) 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
- Electronic expansion valve.
- -10°C condensing control (standard in 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 technical compartment soundproofing.
- Compressor soundproof enclosures.
- Cooling circuit delivery and intake valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Metal filters or Coil protection grilles.
- Micro-channel coils with E-coating treatment.
- Copper/copper or copper/pre-painted aluminium coils.
- 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.
- Buffer tank integrative heaters
- Low temperature water production.
- Interfaces for serial communication with other devices.
- Anti-vibration mounts.

Separately supplied accessories

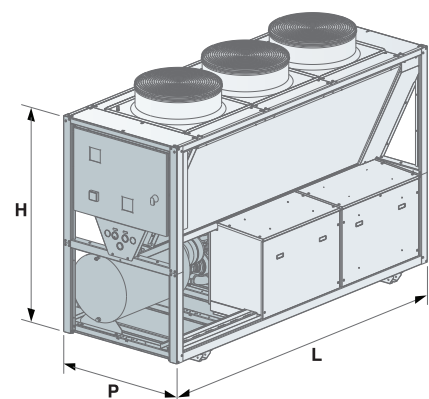
- Remote keypad with display.
- Thermostat with display.
- Untes supervisors for unit monitoring and remote management.
- Untes sequencer for integrated management of multiple chillers.

TCAEY-TCAESY MODEL		2110	2120	2140	2150	2170	2200	2220	
①	Nominal cooling capacity	kW	106,5	114,4	127,4	147,3	165,2	188,1	212,1
①	Nominal cooling capacity	kW	102,5	110,4	122,4	142,3	159,2	183,2	205,1
①	E.E.R.		2,81	2,79	2,80	2,81	2,81	2,80	2,80
①	E.E.R.		2,72	2,67	2,65	2,71	2,70	2,66	2,70
①	Absorbed power	kW	37,9	41,0	45,5	52,4	58,8	67,2	75,8
①	Absorbed power	kW	37,7	41,3	46,2	52,5	59,0	68,9	76,0
THAEY-THAESY MODEL		2110	2120	2140	2150	2170	2200	2220	
②	Nominal heating capacity	kW	112,6	123,7	139,7	158,8	176,9	198,0	229,1
②	Nominal heating capacity	kW	109,5	121,7	135,7	155,8	173,9	195,9	226,0
②	C.O.P.		3,05	3,08	3,08	3,04	3,06	3,07	3,07
②	C.O.P.		3,10	3,13	3,10	3,13	3,10	3,09	3,13
①	Nominal cooling capacity	kW	99,5	110,4	123,4	142,3	159,3	182,2	206,1
①	Nominal cooling capacity	kW	97,6	106,5	117,5	136,4	152,3	175,3	199,2
②	Absorbed power	kW	36,9	40,2	45,4	52,2	57,8	64,5	74,6
②	Absorbed power	kW	35,3	38,9	43,8	49,8	56,1	63,4	72,2
TCAEY-TCAESY-THAEY-THAESY MODEL		2110	2120	2140	2150	2170	2200	2220	
③	TCAEY sound pressure	dB(A)	55	56	56	57	58	58	59
③	THAEY sound pressure	dB(A)	53	54	54	55	56	56	57
③	TCAESY sound pressure	dB(A)	49	50	50	51	52	52	53
③	THAESY sound pressure	dB(A)	49	50	50	51	52	52	53
④	TCAEY sound power	dB(A)	87	88	88	89	90	90	91
④	THAEY sound power	dB(A)	85	86	86	87	88	88	89
④	TCAESY sound power	dB(A)	81	82	82	83	84	84	85
④	THAESY sound power	dB(A)	81	82	82	83	84	84	85
	Scroll/step compressor	no.	2/3	2/3	2/2	2/3	2/2	2/3	2/2
	Circuits	no.	1	1	1	1	1	1	1
	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
DIMENSIONS AND WEIGHTS		2110	2120	2140	2150	2170	2200	2220	
	W - TCAEY-TCAESY width	mm	2.650	2.650	2.650	3.600	3.600	3.600	4.550
	W - THAEY-THAESY width	mm	2.650	2.650	2.650	3.600	3.600	3.600	4.550
	H - TCAEY-TCAESY height	mm	2.440	2.440	2.440	2.440	2.440	2.440	2.440
	H - THAEY-THAESY height	mm	2.440	2.440	2.440	2.440	2.440	2.440	2.440
	D - TCAEY-TCAESY depth	mm	1.350	1.350	1.350	1.350	1.350	1.350	1.350
	D - THAEY-THAESY depth	mm	1.350	1.350	1.350	1.350	1.350	1.350	1.350
⑤	TCAEY Weight	kg	990	1.000	1.010	1.160	1.180	1.180	1.340
⑤	TCAESY Weight	kg	1.110	1.120	1.130	1.280	1.300	1.300	1.460
⑤	THAEY weight	kg	1.250	1.310	1.320	1.470	1.480	1.565	1.730
⑤	THAESY weight	kg	1.250	1.310	1.320	1.470	1.480	1.565	1.730

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		2110	2120	2140	2150	2170	2200	2220
TCAEY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
① P _{designc} (EN 14825)	kW	106,5	114,4	127,3	147,2	165,2	188,1	212,0
① SEER (EN 14825)		3,85	3,87	3,89	3,84	3,91	4,00	3,89
② $\eta_{s,c}$	%	151	152	153	150	153	157	153
TCAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE								
① P _{designc} (EN 14825)	kW	102,5	110,4	122,4	142,3	159,2	183,2	205,1
① SEER (EN 14825)		3,92	3,94	3,93	3,96	3,95	4,00	3,96
② $\eta_{s,c}$	%	154	155	154	155	155	157	155
THAEY MODEL SEASONAL PERFORMANCE IN HEATING MODE								
③ P _{designh} (EN 14825)	kW	95	104	119	134	149	170	200
③ SCOP (EN 14825)		3,38	3,40	3,67	3,36	3,63	3,34	3,53
④ η_s	%	132	133	144	131	142	131	138
THAESY MODEL SEASONAL PERFORMANCE IN HEATING MODE								
③ P _{designh} (EN 14825)	kW	92	102	115	131	146	167	197
③ SCOP (EN 14825)		3,47	3,49	3,71	3,50	3,72	3,39	3,62
④ η_s	%	136	136	145	137	146	133	142

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)

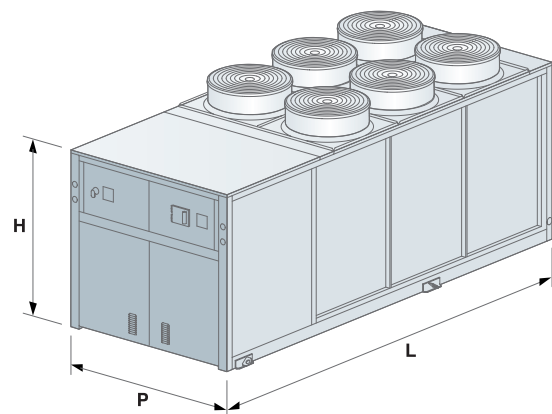
④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/213 and No.813/2013)

TCAEY-TCAESY MODEL		4150	4170	4200	4220	4240	4270	4310	4340	
①	Nominal cooling capacity	kW	146,3	166,4	189,2	213,2	229,2	256,0	299,9	328,7
①	Nominal cooling capacity	kW	142,3	161,4	182,3	207,2	224,2	250,0	291,0	319,7
①	E.E.R.		2,99	2,90	2,83	2,92	2,80	2,80	2,81	2,76
①	E.E.R.		2,93	2,82	2,67	2,82	2,68	2,66	2,68	2,61
①	Absorbed power	kW	48,9	57,4	66,9	73,0	81,9	91,4	106,7	119,1
①	Absorbed power	kW	48,6	57,2	68,3	73,5	83,7	94,0	108,6	122,5
THAEY-THAESY MODEL		4150	4170	4200	4220	4240	4270	4310	4340	
②	Nominal heating capacity	kW	152,7	172,6	197,8	225,9	249,0	281,3	319,3	354,6
②	Nominal heating capacity	kW	147,7	167,6	192,8	219,9	245,0	278,3	315,2	345,5
②	C.O.P.		3,09	3,14	3,04	3,04	3,03	3,01	3,01	2,98
②	C.O.P.		3,10	3,12	3,09	3,09	3,09	3,05	3,07	3,03
①	Nominal cooling capacity	kW	141,3	163,4	186,2	209,1	227,1	253,9	295,9	324,7
①	Nominal cooling capacity	kW	136,4	156,4	180,3	200,2	220,2	248,0	286,1	313,8
②	Absorbed power	kW	49,4	55,0	65,1	74,3	82,2	93,5	106,1	119,0
②	Absorbed power	kW	47,6	53,7	62,4	71,2	79,3	91,2	102,7	114,0
TCAEY-TCAESY-THAEY-THAESY MODEL		4150	4170	4200	4220	4240	4270	4310	4340	
③	TCAEY sound pressure	dB(A)	57	57	57	58	60	60	60	61
③	THAEY sound pressure	dB(A)	54	54	56	56	58	60	60	61
③	TCAESY sound pressure	dB(A)	51	51	51	52	54	54	56	57
③	THAESY sound pressure	dB(A)	50	50	52	52	54	55	56	57
④	TCAEY sound power	dB(A)	89	89	89	90	92	92	92	93
④	THAEY sound power	dB(A)	86	86	88	88	90	92	92	93
④	TCAESY sound power	dB(A)	83	83	83	84	86	86	88	89
④	THAESY sound power	dB(A)	82	82	84	84	86	87	88	89
	Scroll/step compressor	no.	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	Circuits	no.	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		4150	4170	4200	4220	4240	4270	4310	4340	
	W - TCAEY-TCAESY width	mm	3.600	3.600	3.600	4.550	4.550	4.550	4.800	4.800
	W - THAEY-THAESY width	mm	3.450	3.450	3.700	3.700	4.800	4.800	4.800	4.800
	H - TCAEY-TCAESY height	mm	2.440	2.440	2.440	2.440	2.440	2.440	2.030	2.030
	H - THAEY-THAESY height	mm	2.000	2.000	2.030	2.030	2.030	2.030	2.030	2.030
	D - TCAEY-TCAESY depth	mm	1.350	1.350	1.350	1.350	1.350	1.350	2.090	2.090
	D - THAEY-THAESY depth	mm	1.520	1.520	2.090	2.090	2.090	2.090	2.090	2.090
⑤	TCAEY Weight	kg	1.165	1.185	1.190	1.335	1.670	1.690	2.400	2.410
⑤	TCAESY Weight	kg	1.300	1.320	1.325	1.470	1.830	1.850	2.440	2.450
⑤	THAEY weight	kg	1.450	1.525	1.725	1.800	2.375	2.460	2.580	2.595
⑤	THAESY weight	kg	1.475	1.550	1.765	1.840	2.415	2.500	2.620	2.635

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		4150	4170	4200	4220	4240	4270	4310	4340
TCAEY MODEL SEASONAL PERFORMANCE IN COOLING MODE									
① P _{designc} (EN 14825)	kW	146,3	166,4	189,2	213,1	229,2	256,0	299,9	328,6
① SEER (EN 14825)		4,05	4,09	4,09	4,12	4,04	4,10	4,02	4,03
② $\eta_{s,c}$	%	159	161	161	162	159	161	158	158
TCAESY MODEL SEASONAL PERFORMANCE IN COOLING MODE									
① P _{designc} (EN 14825)	kW	142,3	161,4	182,3	207,2	224,2	250,0	291,0	319,7
① SEER (EN 14825)		4,15	4,15	4,03	4,16	4,06	4,07	4,07	4,03
② $\eta_{s,c}$	%	163	163	158	163	159	160	160	158
THAEY MODEL SEASONAL PERFORMANCE IN HEATING MODE									
③ P _{designh} (EN 14825)	kW	129	145	168	192	211	240	271	301
③ SCOP (EN 14825)		3,41	3,47	3,33	3,33	3,35	3,34	3,35	3,32
④ η_s	%	133	136	130	130	131	130	131	130
THAESY MODEL SEASONAL PERFORMANCE IN HEATING MODE									
③ P _{designh} (EN 14825)	kW	125	140	164	187	207	238	267	292
③ SCOP (EN 14825)		3,42	3,46	3,40	3,40	3,44	3,39	3,41	3,37
④ η_s	%	134	135	133	133	135	133	133	132

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