

Air Cooled Chillers & Heat Pumps

FullPower VFD (1+i)

TCAITZ-TCAIQZ 2560-21310




APPLIES TO
EUROPEAN
DIRECTIVE
FOR ENERGY
RELATED
PRODUCTS



ÜNTES®
52
years

FullPOWER VFD (1+i) TCAITZ-TCAIQZ 2560-21310

 Cooling capacity: 518-1.307,4 kW



TCAITZ 24560 with
BCI60 accessory

- Continuous power regulation from 12.5 to 100%
- High efficiency levels
- Wide range of accessories
- Integrated MASTER/SLAVE control



Packaged air-cooled water chillers with axial fans. Range with stepless semi-hermetic screw compressors and with variable Vi with inverter regulation and R134a refrigerant gas.

Construction features

- Compressor: high energy efficiency semi-hermetic screw driven by fixed speed motor with linear capacity control and variable Vi regulated by inverter (12.5-100%), limited start, complete with integral protection, casing heater, oil level sensor and shut-off valve on refrigerant gas outlet piping.
- Water side heat exchanger: dry expansion shell and tube exchanger with counterflow heat exchange, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Air side heat exchanger: with micro-channels.
- Fan: external rotor axial type electric fans equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
 - Display of cooling circuit high/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 (TCAITZ).
- Q - Super-silenced version complete with compressor technical compartment soundproofing, super-reduced speed fans and oversized condensing section (TCAIQZ).

Models

- TCAITZ: high efficiency unit designed for cooling only.
- TCAIQZ: super silenced unit designed for cooling only.

Factory fitted accessories

- PUMP with single or double electric pump, including an automatic pump in standby. The pumps are available in the low or high head versions.
- VPF control.
- Desuperheater.
- 100% heat recovery unit
- -15°C condensing control with fans with EC motor (standard with Q versions).
- Condensing control with over-pressure fans.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Compressor circuit breaker switches.
- Electro-mechanical flow switch.
- EMC anti-disturbance filters
- Forced limit of power consumption.
- Forced noise limit.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter
- Soundproofed compressor box.
- Inlet compressor shut-off valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Coil protection grilles.
- Micro-channel coils with E-coating treatment.
- 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, electric pumps and heat exchangers for heat recovery if applicable.
- 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.

TCAITZ-TCAIQZ MODEL		2560	2600	2670	2710	2770	2860	2930	2980	21080	21160	21310	
❶	Nominal cooling capacity	kW	561,4	602,2	671,6	712,3	766,5	861,7	933,1	978,8	1.079,8	1.156,8	1.307,4
❶	Nominal cooling capacity	kW	517,9	553,5	633,9	670,7	707,0	804,2	869,5	909,4	1.009,5	1.067,6	1.192,4
❶	E.E.R.		3,11	3,17	3,15	3,13	3,19	3,15	3,23	3,20	3,16	3,16	3,17
❶	E.E.R.		2,74	2,86	2,79	2,76	2,85	2,80	2,84	2,83	2,82	2,81	2,81
❶	Absorbed power	kW	180,5	189,9	213,2	227,6	240,3	273,6	288,9	305,9	341,7	366,1	412,4
❶	Absorbed power	kW	189,0	193,5	227,2	243,0	248,1	287,2	306,2	321,3	357,9	379,9	424,3
TCAITZ-TCAIQZ MODEL		2560	2600	2670	2710	2770	2860	2930	2980	21080	21160	21310	
❷	Sound pressure	dB(A)	69	69	69	69	70	70	71	71	71	71	72
❷	Sound pressure	dB(A)	59	59	59	59	60	61	61	61	62	62	63
❸	Sound power	dB(A)	101	102	102	102	103	103	104	104	104	104	105
❸	Sound power	dB(A)	91	92	92	92	93	94	94	94	95	95	96
Screw/step compressor		no.	1+i / CONTINUOUS REGULATION										
Circuits		no.	2	2	2	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	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS		2560	2600	2670	2710	2770	2860	2930	2980	21080	21160	21310	
L - Width		mm	6.090	7.250	7.250	7.250	8.350	8.350	9.400	10.550	10.550	10.550	11.750
H - Height		mm	2.450	2.450	2.450	2.450	2.450	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	2.260	2.260	2.260	2.260	2.260
❹	TCAITZ weight	kg	4.390	4.770	4.840	4.850	5.690	5.790	6.250	6.500	6.610	6.970	7.330
❹	TCAIQZ weight	kg	4.770	5.170	5.240	5.250	6.090	6.190	6.650	6.900	7.010	7.370	7.730

Data at the following conditions:

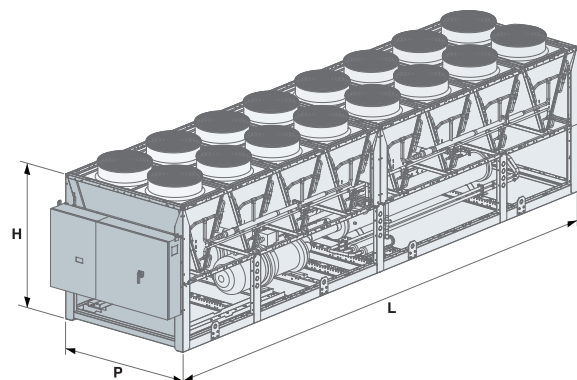
- ① Air: 35°C - Water: 12/7°C.
- ② In open field (Q = 2) at 10 m from the unit.
- ③ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.
- ④ Weight referred to the unit without load and not accessorised.

■ TCAIQZ super-silenced versions.

Performance according to EN 14511:2013.

SEASONAL ENERGY PERFORMANCE			2560	2600	2670	2710	2770	2860	2930	2980	21080	21160	21310
TCAITZ MODEL SEASONAL PERFORMANCE IN COOLING MODE													
①	P _{design,c} (EN 14825)	kW	561,4	602,2	671,6	712,3	766,5	861,7	933,1	978,8	1.079,8	1.156,8	1.307,4
①	SEER (EN 14825)		4,81	4,84	4,81	4,80	4,82	4,80	4,84	4,85	4,84	4,80	4,81
②	η _{s,c}	%	189	191	189	189	190	189	190	191	191	189	189
TCAIQZ MODEL SEASONAL PERFORMANCE IN COOLING MODE													
①	P _{design,c} (EN 14825)	kW	517,9	553,5	633,9	670,7	707,0	804,2	869,5	909,4	1.009,5	1.067,6	1.192,4
①	SEER (EN 14825)		4,68	4,74	4,73	4,72	4,74	4,72	4,71	4,76	4,74	4,72	4,74
②	η _{s,c}	%	184	187	186	186	187	186	186	187	187	186	187

- ① Low temperature application (7°C)
- ② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)



ÜNTES®

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

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