

# Air Cooled Chillers & Heat Pumps

## FullPower VFD


TCAITZ-TCAIQZ 2565-21005



**ÜNTES<sup>®</sup>**  
**52**  
years

## FullPOWER VFD

TCAITZ-TCAIQZ 2565-21005

 Cooling capacity: 510-1.001,5 kW



TCAITZ 2565 with BCI60 accessory

- Variable Vi screw compressor suitable for all applications
- 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 semi-hermetic screw compressors with variable Vi, inverter regulation and R134a refrigerant gas.

### Construction features

- Compressor: high energy efficiency semi-hermetic screw compressor with variable Vi intrinsic compression ratio, limited start, inverter rotation regulation, complete with integral protection, casing heater, oil level sensor and refrigerant gas outlet piping shut-off valve.
- 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.
- 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		2565	2615	2685	2775	2845	2945	21005
①	Nominal cooling capacity	kW	562,4	610,9	680,5	772,5	844,9	1.001,5
①	Nominal cooling capacity	kW	510,0	555,4	633,0	717,9	791,5	934,2
①	E.E.R.		3,11	3,15	3,13	3,13	3,11	3,13
①	E.E.R.		2,77	2,85	2,79	2,86	2,78	2,79
①	Absorbed power	kW	180,8	193,9	217,4	246,8	271,7	301,3
①	Absorbed power	kW	184,1	194,9	226,9	251,0	284,7	334,8
TCAITZ-TCAIQZ MODEL		2565	2615	2685	2775	2845	2945	21005
②	Sound pressure	dB(A)	70	70	70	71	71	72
②	Sound pressure	dB(A)	60	60	60	61	62	63
③	Sound power	dB(A)	102	103	103	104	104	105
③	Sound power	dB(A)	92	93	93	94	95	96
Screw/step compressor	no.	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION
Circuits	no.	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
DIMENSIONS AND WEIGHTS		2565	2615	2685	2775	2845	2945	21005
L - Width	mm	6.090	7.250	7.250	8.350	8.350	10.550	10.550
H - Height	mm	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
④	TCAITZ weight	kg	4.220	4.650	4.750	5.070	5.190	5.960
④	TCAIQZ weight	kg	4.600	5.050	5.150	5.470	5.590	6.360

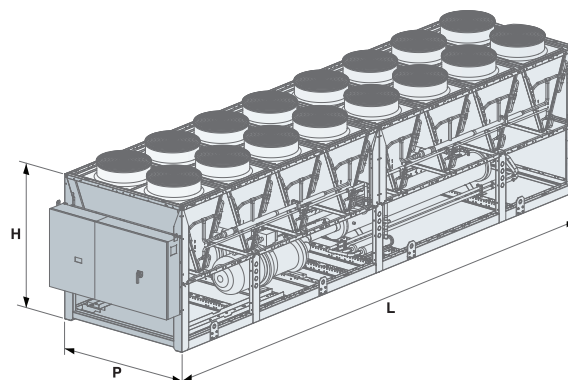
Data at the following conditions:

- 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		2565	2615	2685	2775	2845	2945	21005
TCAITZ MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	P <sub>designc</sub> (EN 14825)	kW	562,4	610,9	680,5	772,5	844,9	1.001,5
①	SEER (EN 14825)		5,10	5,12	5,00	5,08	4,98	5,02
②	η <sub>s,c</sub>	%	201	202	197	200	196	198
TCAIQZ MODEL SEASONAL PERFORMANCE IN COOLING MODE								
①	P <sub>designc</sub> (EN 14825)	kW	510,0	555,4	633,0	717,9	791,5	934,2
①	SEER (EN 14825)		4,73	4,92	4,88	4,89	4,85	4,93
②	η <sub>s,c</sub>	%	186	194	192	192	191	194

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



# ÜNTEŞ®

52  
years

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Fan Coil Systems  
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#### Manufacturing Plant-2

Water Chiller and Heat Pumps  
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