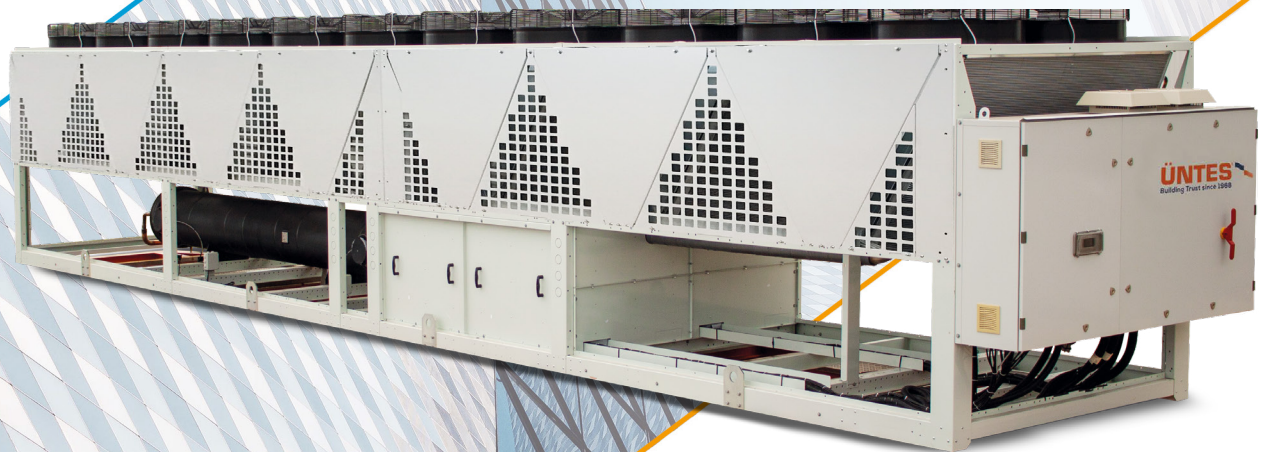


Air Cooled Chillers & Heat Pumps

FullPOWER EVO VFD

TCAIT-TCAIQ 2565÷21495



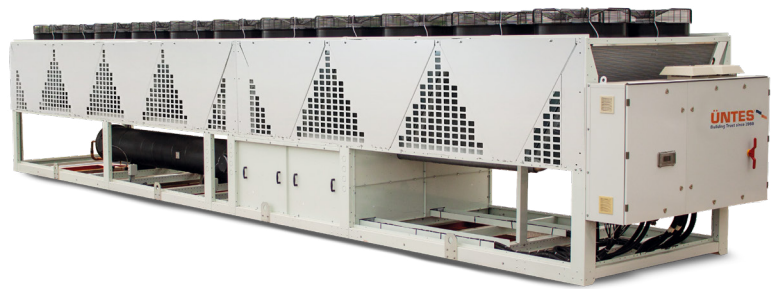
FullPOWER EVO VFD

TCAIT-TCAIQ 2565÷21495

TCAIT 21495
with BCIP accessory

 Cooling capacity: 550,4÷1504,1 kW

- Screw compressors with variable Vi, suitable for all applications
- Continuous power adjustment from 12.5 to 100%
- SEER up to 5,49 with FIEC accessory (EC fans)
- R513A and R134a
- Wide range of accessories
- Integrated MASTER/SLAVE control



Packaged air-cooled water chillers with axial fans.

Series with semi-hermetic screw compressors with variable Vi, inverter adjustment and R513A or R134a refrigerant gas

Construction features

- Compressor: high energy efficiency semi-hermetic screw compressor with variable Vi intrinsic compression ratio, star-delta limited start-up, inverter rotation adjustment (12.5-100%), 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 adjustment.
- 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;
 - oil level sensor;
 - clock board;
 - Master/Slave control up to 4 units in parallel;
 - control of Variable Primary Flow (VPF_R).

Versions

- T - High efficiency version with oversized condensing section (TCAITL-TCAITZ).
- Q - Super-silenced version complete with compressor technical compartment soundproofing, reduced speed fans and oversized condensing section (TCAIQL-TCAIQZ).

Models

- TCAITL: high efficiency unit designed for cooling only with R513A gas.
- TCAIQL: super silenced unit designed for cooling only with R513A gas.
- TCAITZ: high efficiency unit designed for cooling only with R134a gas.
- TCAIQZ: super silenced unit designed for cooling only with R134a gas.

Factory fitted accessories

- PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high head versions.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit.
- Condensing control with fans with EC motor.
- Condensing control with over-pressure fans (T version only).
- 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.
- Soundproofed compressor box.
- Cooling circuit intake valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Coil protection nets or buffer panels.
- Microchannel coils with E-coating treatment, copper/aluminium, copper/copper, pre-painted copper/aluminium.
- 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.
- Colour touch user keypad (fitted on the machine or remotely) with 7" display.
- Spring anti-vibration mounts.
- Protective packaging.

Separately supplied accessories

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

TCAITL-TCAIQL MODEL		2565	2615	2685	2775	2845	2945	21005	21195	21365	21495	
①	Nominal cooling capacity	kW	568,4	616,5	686,4	779,4	852,3	951,3	1010,3	1190,2	1358,3	1497,1
①	Nominal cooling capacity	kW	550,4	601,5	670,4	756,4	829,3	923,4	985,3	1153,2	1315,3	1451,2
①	E.E.R.		3,13	3,13	3,11	3,15	3,12	3,15	3,07	3,03	3,1	3,05
①	E.E.R.		2,92	3,01	2,9	2,95	2,86	2,94	2,89	2,8	2,88	2,88
①	Absorbed power	kW	181,6	197	220,7	247,4	273,2	302	329,1	392,8	438,2	490,9
①	Absorbed power	kW	188,5	199,8	231,2	256,4	290	314,1	340,9	411,9	456,7	503,9
TCAITL-TCAIQL MODEL		2565	2615	2685	2775	2845	2945	21005	21195	21365	21495	
②	Sound pressure	dB(A)	69	70	70	71	71	72	72	72	73	73
②	Sound pressure	dB(A)	61	61	61	62	63	63	64	64	65	65
⑤	Sound power	dB(A)	102	103	103	104	104	105	105	105	106	106
⑤	Sound power	dB(A)	94	94	94	95	96	96	97	97	98	98
	Screw compressors	n.					2					
	Circuits	n.	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

DIMENSIONS AND WEIGHTS		2565	2615	2685	2775	2845	2945	21005	21195	21365	21495	
	L - Width	mm	6090	7250	7250	8350	8350	10550	10550	10550	11650	12810
	H - Height	mm	2480	2480	2480	2480	2480	2480	2480	2480	2480	2480
	P - Depth	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
④	TCAITL weight	kg	4320	4770	4870	5210	5330	6030	6140	7290	8185	9280
④	TCAIQL weight	kg	4700	5170	5270	5610	5730	6430	6540	7710	8605	9720

SEASONAL ENERGY PERFORMANCE		2565	2615	2685	2775	2845	2945	21005	21195	21365	21495	
TCAITL MODEL SEASONAL PERFORMANCE IN COOLING MODE												
①	P _{designc} (EN 14825)	kW	568,4	616,5	686,4	779,4	852,3	951,3	1010,3	1190,2	1358,3	1497,1
①	SEER (EN 14825)		5,3	5,23	5,28	5,27	5,23	5,26	5,28	5,2	5,26	5,19
②	η _{s,c}	%	209	206	208	208	206	207	208	205	208	205
TCAIQL MODEL SEASONAL PERFORMANCE IN COOLING MODE												
①	P _{designc} (EN 14825)	kW	550,4	601,5	670,4	756,4	829,3	923,4	985,3	1153,2	1315,3	1451,2
①	SEER (EN 14825)		5,19	5,12	5,17	5,17	5,13	5,17	5,17	5,1	5,19	5,13
②	η _{s,c}	%	205	202	204	204	202	204	204	201	205	202

TCAITZ-TCAIQZ MODEL		2565	2615	2685	2775	2845	2945	21005	21195	21365	21495	
①	Nominal cooling capacity	kW	570,4	619,5	689,4	782,4	856,3	955,3	1015,3	1195,2	1364,3	1504,1
①	Nominal cooling capacity	kW	552,4	604,5	673,4	759,4	833,3	927,4	989,3	1158,2	1321,3	1458,2
①	E.E.R.		3,21	3,21	3,2	3,23	3,21	3,23	3,15	3,11	3,17	3,13
①	E.E.R.		3	3,09	2,98	3,02	2,94	3,02	2,96	2,87	2,95	2,95
①	Absorbed power	kW	177,7	193	215,4	242,2	266,8	295,8	322,3	384,3	430,4	480,5
①	Absorbed power	kW	184,1	195,6	226	251,5	283,4	307,1	334,2	403,6	447,9	494,3
TCAITZ-TCAIQZ MODEL		2565	2615	2685	2775	2845	2945	21005	21195	21365	21495	
②	Sound pressure	dB(A)	69	70	70	71	71	72	72	72	73	73
②	Sound pressure	dB(A)	61	61	61	62	63	63	64	64	65	65
⑤	Sound power	dB(A)	102	103	103	104	104	105	105	105	106	106
⑤	Sound power	dB(A)	94	94	94	95	96	96	97	97	98	98
	Screw compressors/steps	n.					2					
	Circuits	n.	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

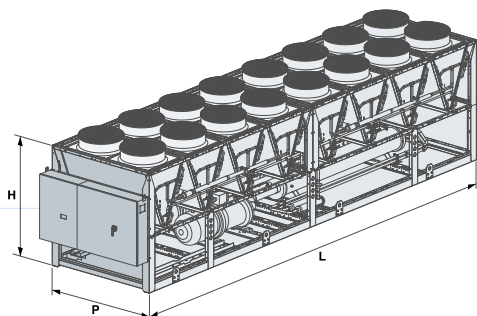
DIMENSIONS AND WEIGHTS		2565	2615	2685	2775	2845	2945	21005	21195	21365	21495	
	L - Width	mm	6090	7250	7250	8350	8350	10550	10550	10550	11650	12810
	H - Height	mm	2480	2480	2480	2480	2480	2480	2480	2480	2480	2480
	P - Depth	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
④	TCAITZ weight	kg	4320	4770	4870	5210	5330	6030	6140	7290	8185	9280
④	TCAIQZ weight	kg	4700	5170	5270	5610	5730	6430	6540	7710	8605	9720

SEASONAL ENERGY PERFORMANCE		2565	2615	2685	2775	2845	2945	21005	21195	21365	21495	
TCAITZ MODEL SEASONAL PERFORMANCE IN COOLING MODE												
①	P _{designc} (EN 14825)	kW	570,4	619,5	689,4	782,4	856,3	955,3	1015,3	1195,2	1364,3	1504,1
①	SEER (EN 14825)		5,33	5,27	5,32	5,29	5,28	5,28	5,32	5,23	5,32	5,25
②	η _{s,c}	%	210	208	210	209	208	208	210	206	210	207
TCAIQZ MODEL SEASONAL PERFORMANCE IN COOLING MODE												
①	P _{designc} (EN 14825)	kW	552,4	604,5	673,4	759,4	833,3	927,4	989,3	1158,2	1321,3	1458,2
①	SEER (EN 14825)		5,23	5,18	5,21	5,22	5,17	5,2	5,2	5,14	5,23	5,15
②	η _{s,c}	%	206	204	205	206	204	205	205	202	206	203

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.
- ⑤ 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.
- TCAIQL-TCAIQZ super-silenced versions. Performance according to EN 14511.

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



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