

FullFLOW VFD (1+i) TCHITL 1390÷21700



Cooling capacity: 389.5-1701.1 kW

- √ **Non-flammable reduced GWP gas**
- √ **High efficiency levels**
- √ **Continuous power regulation**
- √ **Various soundproofing options**
- √ **Touch interface (optional)**
- √ **Free-Cooling management**
- √ **Integrated MASTER/SLAVE control**



Web code: FFE03

Water-cooled water chillers. Range with semi-hermetic screw compressors with variable Vi, inverter regulation and R513A refrigerant gas.

Construction features

- Compressor: high energy efficiency semi-hermetic screw driven by fixed speed motor with linear capacity control and/or variable Vi regulated by inverter (25%-100% single-compressor sizes, 12.5-100% bi-compressor sizes), limited start, complete with integral protection, casing heater, oil level sensor and shut-off valves on delivery and intake piping.
- Water side heat exchanger (evaporator): low refrigerant charge spray flooded type shell and tube exchanger, complete with closed cell polyurethane foam rubber insulation, water flow differential pressure switch and Victaulic fittings.
- Water side heat exchanger (condenser): tube and shell complete with safety valve, service valve on the high-pressure refrigerant gas circuit, and a water flow differential pressure switch and Victaulic fittings.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
 - clock board;
 - electronic expansion valve;
 - display of cooling circuit high/low pressure;
 - Master/Slave control up to 4 units in parallel;
 - 0-10V analogue signal for condensing control from external device;
 - control of Variable Primary Flow (VPF_R).

Versions

- T - High efficiency version

Models

- TCHITL: unit designed for cooling only.

Factory fitted accessories

- Free-Cooling management
- Dry-Cooler management
- 100% heat recovery unit.
- Set up for heat pump operation.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Circuit breaker switches.
- Forced limit of power consumption.
- Soft starter.
- Electro-mechanical flow switch.
- EMC anti-disturbance filters.
- Energy parameter measuring device.
- Compressor soundproof enclosures.
- Full acoustic casing.
- Refrigerant leak detector.
- Double safety valves.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater.
- Control of min/max power supply voltage.
- Interfaces for serial communication with other devices.
- Colour touch user keypad (fitted on the machine or remotely) with 7" display.
- Anti-vibration mounts.

Separately supplied accessories

- Remote keypad with display.
- Outdoor air temperature probe for set-point compensation
- Thermostat with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

Technical Data

TCHITL MODEL		1390	1490	1600	2720	2810	2900	21000	21110
① Nominal cooling capacity	kW	389,5	486,5	610,4	727,4	816,3	920,3	1001,3	1117,2
① E.E.R.		5,18	5,16	5,11	5,5	5,41	5,5	5,45	5,32
① Absorbed power	kW	75,2	94,3	119,5	132,3	150,9	167,3	183,7	210
② Sound power	dB(A)	97	99	101	98	98	100	100	102
② Sound power with enclosure accessory	dB(A)	93	95	97	94	94	96	96	98
Screw/step compressor	n.	1/ CONTINUOUS REGULATION	1/ CONTINUOUS REGULATION	1/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION
Circuits	n.	1	1	1	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		1390	1490	1600	2720	2810	2900	21000	21110
L - Width	mm	3859	3859	3859	3990	3990	3990	4329	4407
H - Height	mm	1830	1830	1830	2040	2040	2040	2040	2040
P - Depth	mm	1531	1531	1591	1676	1676	1676	1676	1814
③ TCHITL weight	kg	2460	2530	2605	4700	4830	4915	5385	5600
SEASONAL ENERGY PERFORMANCE		1390	1490	1600	2720	2810	2900	21000	21110
TCHITL MODEL SEASONAL PERFORMANCE IN COOLING MODE									
① Pdesignc (EN 14825)	kW	389,5	486,5	610,4	727,4	816,3	920,3	1001,3	1117,2
① SEER (EN 14825)		8,52	8,22	8,16	8,18	8,43	8,34	8,1	8,04
② ηs,c	%	338	326	323	324	334	331	321	319
TCHITL MODEL				21260	21360	21520	21700		
① Nominal cooling capacity	kW			1260,2	1361,1	1524,2	1701,1		
① E.E.R.				5,36	5,4	5,57	5,55		
① Absorbed power	kW			235,1	252,1	273,6	306,5		
② Sound power	dB(A)			103	103	102	103		
② Sound power with enclosure accessory	dB(A)			99	99	98	99		
Screw/step compressor	n.			2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION	2/ CONTINUOUS REGULATION		
Circuits	n.			2	2	2	2		
Electrical supply	V-ph-Hz			400-3-50	400-3-50	400-3-50	400-3-50		
DIMENSIONS AND WEIGHTS				21260	21360	21520	21700		
L - Width	mm			4407	4407	4501	4586		
H - Height	mm			2080	2080	2090	2090		
P - Depth	mm			1844	1844	1979	2024		
③ TCHITL weight	kg			6325	6455	7765	8115		
SEASONAL ENERGY PERFORMANCE				21260	21360	21520	21700		
TCHITL MODEL SEASONAL PERFORMANCE IN COOLING MODE									
① Pdesignc (EN 14825)	kW			1260,2	1361,1	1524,2	1701,1		
① SEER (EN 14825)				8	8,03	8,1	7,96		
② ηs,c	%			317	318	321	316		

Data at the following conditions:

- ① Chilled water: 7/12°C. - Condenser inlet water: 30/35°C.
 - ② Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.
 - ③ Empty weight.
- Performance according to EN 14511.
- ① Low temperature application (7°C)
 - ② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

RHOSS S.P.A. declines all responsibility for possible mistakes in this document and reserves the right to alter the features of their products without notice.

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