

# FullFLOW DX TCHVTL 1200÷21450

Cooling capacity: 201.7-1.455.2 kW



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



Web code: FFD03

**Water-cooled water chillers. Range with stepless semi-hermetic screw compressors and R513A ecological refrigerant gas.**

## Construction features

- Compressor: high energy efficiency semi-hermetic screw compressor with control of linear capacity, with star-delta or part-winding start up (depending on models) and complete with integral protection, casing heater and refrigerant gas outlet piping shut-off valve.
- Water side heat exchanger (evaporator): 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. Antifreeze heater sizes 1200-1230.
- Water side heat exchanger (condenser): tube and shell complete with differential pressure switch, safety valve, service valve on the high-pressure refrigerant gas circuit.
- Control: microprocessor electronic control.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
  - clock board;
  - display of cooling circuit high/low pressure;
  - electronic expansion valve;
  - 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

- TCHVTL: unit designed for cooling only.

## Factory fitted accessories

- 100% heat recovery unit.
- Free-Cooling Management.
- Dry-Cooler Management.
- Set up for heat pump operation.
- Condenser Victaulic fittings.
- Power factor correction capacitors ( $\cos\phi > 0.94$ ).
- Circuit breaker switches.
- Forced limit of power consumption.
- Soft starter.
- Inlet compressor shut-off valves.
- Energy parameter measuring device.
- Electro-mechanical flow switch.
- Digital input for double set-point.
- Compressor soundproof enclosures.
- Refrigerant leak detector.
- Full acoustic casing.
- Compressor oil level sensor.
- Double safety valves.
- Control of min/max power supply voltage.
- 4-20 mA analogue signal for shifting set-point.
- Evaporator antifreeze heater (sizes 1290-21450).
- Interfaces for serial communication with other devices.
- Colour touch user keypad (fitted on the machine or remotely) with 7" display.
- Anti-vibration mountings supplied loose.
- Protective packaging

## 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

TCHVTL MODEL		1200	1230	1290	1320	1380	2430	2490	2540	
① Nominal cooling capacity	kW	201,7	229,7	289,7	315,6	374,5	433,6	487,5	543,5	
① E.E.R.		4,66	4,65	4,73	4,65	4,74	4,9	4,77	4,8	
① Absorbed power	kW	43,3	49,4	61,2	67,9	79	88,5	102,2	113,2	
② Sound power	dB(A)	94	94	96	96	96	97	97	97	
Screw/step compressor	no.	1/ CONTINUOUS LINEAR REGULATION (50-100%)					2/ CONTINUOUS LINEAR REGULATION (25-100%)			
Circuits	no.	1	1	1	1	1	2	2	2	
Electrical supply	V-ph-Hz	400-3-50								

DIMENSIONS AND WEIGHT		1200	1230	1290	1320	1380	2430	2490	2540
L - Width	mm	2860	2860	3460	3460	3460	4060	4060	4060
H - Height	mm	1670	1670	1670	1670	1670	1850	1850	1850
P - Depth	mm	1000	1000	1000	1000	1000	1320	1320	1320
③ TCHVTL weight	kg	1300	1320	1720	1730	1740	2400	2400	2750

SEASONAL ENERGY PERFORMANCE		1200	1230	1290	1320	1380	2430	2490	2540
<b>TCHVTL MODEL SEASONAL PERFORMANCE IN COOLING MODE</b>									
① Pdesignc (EN 14825)	kW	201,7	229,7	289,7	315,6	374,5	433,6	487,5	543,5
① SEER (EN 14825)		5,82	5,82	5,62	5,73	5,82	6,58	6,46	6,43
② ηs,c	%	230	230	222	226	230	260	255	254

TCHVTL MODEL		2620	2690	2770	2860	2950	21030	21100	21180	
① Nominal cooling capacity	kW	618,4	691,4	774,4	859,4	950,4	1025,4	1098,3	1173,2	
① E.E.R.		4,77	4,81	4,9	4,9	4,92	4,9	4,86	4,86	
① Absorbed power	kW	129,6	143,7	158	175,4	193,2	209,3	226	241,4	
② Sound power	dB(A)	97	97	98	98	99	99	99	99	
Screw/step compressor	no.									
Circuits	no.	2	2	2	2	2	2	2	2	
Electrical supply	V-ph-Hz									

DIMENSIONS AND WEIGHT		2620	2690	2770	2860	2950	21030	21100	21180
L - Width	mm	4210	4240	4670	4710	4850	4850	4850	4850
H - Height	mm	1900	1900	1980	1980	2130	2130	2230	2230
P - Depth	mm	1320	1320	1320	1320	1320	1320	1320	1320
③ TCHVTL weight	kg	3140	3260	3510	3630	4640	4680	4830	4940

SEASONAL ENERGY PERFORMANCE		2620	2690	2770	2860	2950	21030	21100	21180
<b>TCHVTL MODEL SEASONAL PERFORMANCE IN COOLING MODE</b>									
① Pdesignc (EN 14825)	kW	618,4	691,4	774,4	859,4	950,4	1025,4	1.098,3	1.173,2
① SEER (EN 14825)		6,39	6,39	6,54	6,45	6,39	6,38	6,38	6,41
② ηs,c	%	253	252	259	255	253	252	252	253

TCHVTL MODEL			21250	21310	21390	21450
① Nominal cooling capacity	kW		1250,2	1310,3	1391,2	1455,2
① E.E.R.			4,87	4,85	4,85	4,83
① Absorbed power	kW		256,7	270,2	286,8	301,3
② Sound power	dB(A)		99	99	100	100
Screw/step compressor	no.					
Circuits	no.		2	2	2	2
Electrical supply	V-ph-Hz					

DIMENSIONS AND WEIGHT			21250	21310	21390	21450
L - Width	mm		5150	5160	5130	5140
H - Height	mm		2230	2250	2350	2350
P - Depth	mm		1320	1320	1320	1320
③ TCHVTL weight	kg		5030	5220	5590	5820

SEASONAL ENERGY PERFORMANCE			21250	21310	21390	21450
<b>TCHVTL MODEL SEASONAL PERFORMANCE IN COOLING MODE</b>						
① Pdesignc (EN 14825)	kW		1.250,2	1.310,3	1.391,2	1.455,2
① SEER (EN 14825)			6,41	6,43	6,39	6,38
② ηs,c	%		253	254	253	252

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.

Rhoss S.p.A.  
Via Oltre Ferrovia, 32  
33033 Codroipo (UD) - Italy  
tel. +39 0432 911611 - rhoss@rhoss.it  
www.rhoss.it www.rhoss.com



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