

# FREECOOLING Y-Pack TFAEY-TGAEY 4160÷4320

Cooling capacity: 170+361 kW



√ Availability of NO GLYCOL version

√ Plug&Play range

√ Software for estimate of energy saving



Web code: YKF11

Air cooled water chillers in Freecooling mode (TFAEY) and Freecooling NO-GLYCOL mode (TGAEY) with axial fans. Range with hermetic Scroll compressors and R410A refrigerant.

## Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and crankcase heater.
- 4 capacity steps with high efficiency at partial loads.
- Water side heat exchanger (evaporator): stainless steel plate exchanger, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch (TFAEY) or flow switch (TGAEY).
- Heat exchanger (water-water) in Free-cooling NO-GLYCOL mode: stainless steel plate exchanger, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.
- Air side heat exchanger (condenser): featuring finned coil with copper pipes and aluminium fins.
- Fan: axial electric fans with external rotor, equipped with internal thermal protection and protection grilles and a proportional electronic device for continuous fan rotation speed regulation.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: load bearing structure made of galvanised sheet steel and painted with polyester powders.
- The unit is also complete with:
  - compressors and fans MCBs;
  - clock board;
  - 3-way modulating water side valve.

## Versions

- T - High efficiency version (TFAEY-TGAEY).
- S - Silenced version complete with soundproofed compressor compartment and lower fan speed (TCAESY-THAESY).

## Models

- TFAEY: high efficiency unit in Freecooling mode.
- TFAESY: silenced unit in Freecooling mode.
- TGAEY: high efficiency unit in Freecooling NO-GLYCOL mode.
- TGAESY: silenced unit in Freecooling NO-GLYCOL mode.

## Factory fitted accessories

- PUMP with single or double electric pump, including an automatic pump in standby complete with safety valve. The pumps are available in the low or high pressure versions.
- Electronic expansion valve.
- Power factor correction capacitors ( $\cos\phi > 0.91$ ).
- Soft starter.
- Refrigerant circuit high and low pressure gauges.
- Metal filters or coil protection grilles.
- Copper/copper or copper/pre-painted aluminium coils.
- Digital input for double set-point.
- 4-20 mA analogue input for shifting set-point.
- Evaporator antifreeze heater resistance, electric pumps if present.
- Interfaces for serial communication with other devices.
- Anti-vibration mountings.

## Accessories separately supplied

- Remote keypad with display.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of several water chillers.

## Technical Data

TFAETY-TFAESY MODEL		4160	4180	4200	4230	4260	4290	4320
<b>FREE-COOLING OFF</b>								
● Nominal cooling capacity	kW	178	202	224	251	286	326	361
● Nominal cooling capacity	kW	170	197	215	240	274	312	344
● E.E.R.		3,31	3,41	3,27	3,20	3,34	3,20	3,09
● E.E.R.		3,21	3,32	3,11	3,11	3,22	3,09	2,92
● Absorbed power	kW	53,8	59,3	68,4	78,5	85,6	102,0	117,0
● Absorbed power	kW	53,0	59,3	69,2	77,2	85,2	100,9	117,9
<b>FREE-COOLING ON 100%</b>								
● Nominal cooling capacity	kW	178	202	224	251	286	326	361
● Nominal cooling capacity	kW	170	197	215	240	274	312	344
● E.E.R.		21,3	24,4	26,9	20,5	22,8	19,5	21,5
● E.E.R.		33,0	37,8	41,4	31,7	35,2	30,0	32,9
● Absorbed power	kW	8	8	8	12	12	16	16
● Absorbed power	kW	5	5	5	7,5	7,5	10	10
● Total Free-cooling temperature	°C	0,3	1	0,4	0,7	0,9	0,4	-0,8
● Total Free-cooling temperature	°C	-1,3	-0,8	-1,5	-1,3	-1,1	-1,6	-3,0
<b>TFAETY-TFAESY MODEL</b>								
● Sound pressure	dB(A)	60	63	63	65	65	66	66
● Sound pressure	dB(A)	55	56	56	58	59	60	60
● Sound power level	dB(A)	89	91	91	93	93	94	94
● Sound power level	dB(A)	85	86	86	88	89	90	90
Scroll/step compressor	no.	4/4	4/4	4/4	4/4	4/4	4/4	4/4
Circuits	no.	2	2	2	2	2	2	2
Electric power supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
<b>SIZES AND WEIGHTS</b>								
W - Width	mm	4.8	4.8	4.8	4.8	5.3	5.3	5.3
H - Height	mm	2.03	2.03	2.03	2.03	2.03	2.03	2.03
D - Depth	mm	2.09	2.09	2.09	2.09	2.09	2.09	2.09
● TFAETY-TFAESY weight	kg	2.37	2.82	2.92	3.02	3.23	3.38	3.43
● TGAETY-TGAESY weight	kg	2.47	2.97	3.07	3.17	3.28	3.43	3.48

Details under the following conditions:

- Air: 30°C - Water: 15/10°C - 30% ethylene glycol.
- Water: 15/10°C - 30% ethylene glycol.
- At 10 m from the unit in free field (Q = 2), coil side.
- Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- Weight refers to the accessorised unit when empty.
  - TFAESY silenced version.



Rhoss s.p.a.

Via Oltre Ferrovia 33  
33033 Codroipo (UD)

Tel. +39 0432 911611  
Fax +39 0432 911600

www.rhoss.com  
rhoss@rhoss.it