

Y-Pack C-PF TCCEY-THCETY 233÷2160



Cooling capacity: 32.3÷160.2 kW - Heating capacity:
37.7÷175.6 kW

- √ **High energy efficiency range**
- √ **“Plug-Fan” type centrifugal fans with EC motor (brushless)**
- √ **Multi-purpose for systems with 2 pipes + DHW (with optional RC100)**
- √ **Integrated MASTER/SLAVE control**



Web code: YKC11

High efficiency air cooled water chillers and packaged reversible heat pumps with plug-fan type centrifugal fans with EC motors. Range with scroll hermetic compressors and R410A refrigerant.

Construction features

- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- 2 or 3 capacity steps depending on the models, to obtain excellent load modulation along with high energy efficiency at partial loads.

Water side heat exchanger: with stainless steel plates, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.

- Air side heat exchanger: featuring finned coil with copper pipes and aluminium fins.
- Plug-Fan type centrifugal electric fans with EC motors, equipped with internal thermal protection arranged in single row with horizontal outlet.
- Horizontal outlet of the evaporation condensing air opposite side to finned coil or vertical outlet can be easily transformed on site.
- Proportional electronic device for continuous fan rotation speed regulation up to an outdoor air temperature of -15°C in chiller mode and up to an outdoor air temperature of 40°C in heat pump mode.
- Control: microprocessor electronic control with Adaptive Function Plus logic.

• Load-bearing structure and panelling made of painted and galvanised sheet steel (RAL 9018); galvanised sheet steel base

- The unit is also complete with:
 - fan and compressor circuit breaker switches;
 - display of cooling circuit high and low pressure;
 - Master/Slave control up to 4 units in parallel;
 - clock board;
 - control of Variable Primary Flow (VPF_R).

Versions

- T - High efficiency version (TCCEY-THCETY).

Models

- TCCEY: unit for cooling only.
- THCETY: reversible heat pump unit.

Factory fitted accessories

- PUMP with single or double electric pump, including an automatic actuation pump in standby, complete with expansion tank, safety valve and water side pressure gauge. The electric pumps are available in the low or high head versions.
- TANK&PUMP with integrated buffer tank and single or double electric pump, complete with expansion tank, air vent valves, safety valve and water side pressure gauge.
- Inverter pump control for unit start-up.
- Desuperheater.
- 100% heat recovery unit.
- Low temperature water production.
- Electronic expansion valve.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Forced limit of power consumption.
- Energy parameter measuring device.
- Optimised energy efficiency.
- Soft starter.

- Compressor soundproofing.
- Cooling circuit outlet and inlet valves.
- Refrigerant leak detector.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Copper/copper or copper/pre-painted aluminium coils.
- 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, buffer tank, 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.
- Rhoss supervisors for unit monitoring and remote management.
- Rhoss sequencer for integrated management of multiple chillers.

Technical Data

TCCETY MODEL		233	238	245	250	260	265	270	280
① Nominal cooling capacity	kW	32,3	38,5	43,9	51	58,9	63,7	69,9	79,1
① E.E.R.		2,61	2,77	2,7	2,73	2,67	2,6	2,83	2,89
① Absorbed power	kW	12,38	13,9	16,26	18,55	21,98	24,5	24,53	27,37
THCETY MODEL		233	238	245	250	260	265	270	280
② Nominal heating capacity	kW	37,7	42,1	48,1	56,2	62,5	68,3	79,4	86,3
② C.O.P.		3	3	3,01	2,96	2,97	2,86	3,23	3,36
② Absorbed power in winter mode	kW	12,57	14,03	15,98	18,8	20,9	23,72	24,36	25,53
① Nominal cooling capacity	kW	32,3	38,5	42,3	50,3	57,8	61,6	69,1	77,4
③ Sound power	dB(A)	82	82	83	85	85	85	85	85
Scroll/step compressor	n.	2/2	2/2	2/3	2/3	2/3	2/3	2/3	2/2
Circuits	no.	1	1	1	1	1	1	1	1
Fan nominal air flow	m³/h	13000	13000	13000	26000	26000	26000	26000	26000
Fan maximum available static pressure	Pa	250	250	250	250	250	250	250	250
Electrical 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	400-3+N-50

DIMENSIONS		233	238	245	250	260	265	270	280
L - Width	mm	2650	2650	2650	2650	2650	2650	3650	3650
H - Height	mm	1920	1920	1920	1920	1920	1920	1920	1920
P - Depth	mm	870	870	870	870	870	870	1100	1100
① TCCETY weight	kg	820	820	850	885	890	890	1120	1290
① THCETY weight	kg	840	840	875	910	910	910	1175	1350

SEASONAL ENERGY PERFORMANCE		233	238	245	250	260	265	270	280
TCCETY MODEL SEASONAL PERFORMANCE IN COOLING MODE									
① Pdesignc (EN 14825)	kW	32,3	38,5	43,9	51	58,9	63,7	69,9	79,1
① SEER (EN 14825)		4,54	4,54	4,56	4,51	4,53	4,57	4,59	4,53
② ηs,c	%	179	178	179	177	178	180	181	178

THCETY MODEL SEASONAL PERFORMANCE IN HEATING MODE		233	238	245	250	260	265	270	280
③ Pdesignh (EN 14825)	kW	31	35	41	48	52	59	66	71
③ SCOP (EN 14825)		3,52	3,27	3,86	3,52	3,46	3,57	3,71	4,12
④ ηs	%	138	128	152	138	136	140	145	162
④ Energy class		A+	A+	A++	A+	A+	A+	A+	A+

TCCETY MODEL		290	2100	2115	2130	2145	2160
① Nominal cooling capacity	kW	87,5	100,6	113,9	125,3	142,3	160,2
① E.E.R.		2,81	2,71	2,9	2,87	2,86	2,86
① Absorbed power	kW	31,03	36,72	38,28	43,66	49,07	55,43

THCETY MODEL		290	2100	2115	2130	2145	2160
② Nominal heating capacity	kW	96,4	111,5	122,5	139,6	157,6	175,6
② C.O.P.		3,18	3,16	3,21	3,3	3,21	3,2
② Absorbed power in winter mode	kW	30,31	34,95	37,69	42,3	48,49	54,2
① Nominal cooling capacity	kW	84,9	98,9	110,6	123,4	140,8	159,3
③ Sound power	dB(A)	86	88	88	88	89	89
Scroll/step compressor	n.	2/3	2/3	2/3	2/2	2/3	2/2
Circuits	no.	1	1	1	1	1	1
Fan nominal air flow	m³/h	27000	39000	39000	39000	52000	52000
Fan maximum available static pressure	Pa	250	250	250	250	250	250
Electrical 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

DIMENSIONS		290	2100	2115	2130	2145	2160
L - Width	mm	3650	3650	4450	4450	4450	4450
H - Height	mm	1920	1920	2320	2320	2320	2320
P - Depth	mm	1100	1100	1100	1100	1100	1100
① TCCETY weight	kg	1330	1395	1610	1665	1740	1750
① THCETY weight	kg	1390	1460	1680	1745	1825	1825

SEASONAL ENERGY PERFORMANCE		290	2100	2115	2130	2145	2160
TCCETY MODEL SEASONAL PERFORMANCE IN COOLING MODE							
① Pdesignc (EN 14825)	kW	87,5	100,6	113,9	125,3	142,3	160,2
① SEER (EN 14825)		4,54	4,54	4,58	4,48	4,56	4,47
② ηs,c	%	179	179	180	176	179	176

THCETY MODEL SEASONAL PERFORMANCE IN HEATING MODE		290	2100	2115	2130	2145	2160
③ Pdesignh (EN 14825)	kW	80	93	102	117	132	147
③ SCOP (EN 14825)		3,66	3,58	3,67	4,05	3,63	3,93
④ ηs	%	143	140	144	159	142	154
④ Energy class							

Data at the following conditions:

- ① Air: 35°C - Water: 12/7°C and ESP: 250 Pa.
- ② Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C and ESP: 250 Pa.
- 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.

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

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