

Compact-ID

TCCITY-THCITY 117÷128

Cooling capacity 16,4÷27,5 kW
Heating capacity 17,7÷28,5 kW



Features

PLUG-FANS with low consumption EC motor

Vertically or horizontally ducted delivery.

Hot water up to -15°C outdoor air

Temperature of the produced water up to 60°C

Integrated MASTER/SLAVE control

Inertial buffer tank

Tax incentives*



Packaged air-cooled water chillers and reversible heat pumps with Plug-Fans with EC motor. Range with scroll hermetic compressors, DC Inverter and R410A refrigerant gas.

• **Compressor: scroll type, rotary, hermetic with Inverter actuation, complete with thermal protection and casing heater.**

- Water side heat exchanger: adequately insulated stainless steel plates, complete with antifreeze heater and water flow differential pressure switch.
- Air side heat exchanger: featuring a finned coil with copper pipes and aluminium fins for TCCITY and with hydrophilic treatment for THCITY, complete with protection grilles.
- Fan: Plenum electric fan with directly coupled, low consumption EC motor fitted with internal thermal protection and accident protection grilles. Removable fan unit section for on-site positioning.
- Vertical condensing air delivery, horizontal outlet easily transformed on-site.
- Proportional electronic device for the continuous regulation of the fan rotation speed up to a temperature of outdoor air of -10°C when running as a chiller.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate, complete with condensate drain pan and unit base antifreeze heater for THCITY.
- The unit is also complete with:
 - outdoor air temperature probe for set-point compensation;
 - electronic expansion valve;
 - display of cooling circuit high and low pressure;

- Master/Slave control up to 4 units in parallel;
- clock board.

Version

T - High efficiency.

Models

TCCITY: unit designed for cooling only.
THCITY: heat pump unit.

PUMP set-up

- Pump unit complete with: EC circulator with 3 speed selector or continuous speed regulation or electric pump, membrane expansion tank, manual air vent valve, safety valve and pressure gauge.

TANK&PUMP set up

- Pump unit complete with: inertial buffer tank, circulator or electric circulation pump, membrane expansion tank, manual air vent valve, safety valve, and pressure gauge.

Factory fitted accessories

- Forced Download. Compressor partialisation or switch-off to limit power and current consumption (digital input).
- Antifreeze heater on the tank.
- Circulator/electric pump antifreeze heater.
- Pre-painted copper/coils or copper/copper coils.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.
- Low water set-point temperature.

Accessories supplied loose

- 3-way valve for the production of domestic hot water, managed by regulation.
- Additional electrical resistance for heat pump, managed by regulation.
- Remotable outdoor air temperature probe for compensation of the set-point.
- Delivery anti-vibration fitting.
- Suction duct fitting.
- Water filter.
- Rubber anti-vibration mounts.
- Remote keypad with display.
- Interfaces for serial communication with other devices.
- RS485/USB serial converter.
- Rhoss supervisors for unit monitoring and remote management.

Technical data

TCCITY MODEL		117	124	128
❶ Cooling capacity	kW	16,4	24,3	27,5
❶ NOM absorbed power	kW	5,24	8,15	9,01
❶ E.E.R.		3,13	2,98	3,05
THCITY MODEL		117	124	128
❷ Heating capacity	kW	17,7	24,3	28,5
❷ NOM absorbed power	kW	5,33	7,48	8,88
❷ C.O.P.		3,32	3,25	3,21
❸ Heating capacity	kW	18,8	25	29,1
❸ NOM absorbed power	kW	4,59	6,1	7,28
❸ C.O.P.		4,1	4,1	4
❹ Heating capacity	kW	12,3	18,1	22,9
❹ NOM absorbed power	kW	4,14	6,65	7,46
❹ C.O.P.		2,97	2,72	3,07
❹ MIN/NOM/MAX cooling capacity		16,2	23,8	27
❹ E.E.R.		2,98	2,84	2,91
TCCITY – THCITY MODEL		117	124	128
❺ Fan delivery sound pressure	dB(A)	53	53	56
❺ Machine body sound pressure	dB(A)	42	42	45
Fan nominal air flow	m3/h	7600	7600	8640
Fan available static pressure	Pa	80	80	80
❶ P0 circulator available head	kPa	89	89	76
Buffer tank water content	l	110	110	110
Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50
DIMENSIONS AND WEIGHT		117	124	128
L – PUMP width	mm	1522	1522	1522
L – TANK&PUMP width	mm	1625	1625	1625
H – PUMP height	mm	1280	1280	1280
H – TANK&PUMP height	mm	1590	1590	1590
P – PUMP Depth	mm	815	815	815
P – TANK&PUMP Depth	mm	815	815	815
❶ PUMP Weight	kg	265	285	295
❶ TANK&PUMP Weight	kg	365	385	395
SEASONAL ENERGY PERFORMANCE		117	124	128
TCCITY MODEL SEASONAL PERFORMANCE IN COOLING MODE				
❶ Pdesignc (EN 14825)	kW	16,4	24,3	27,5
❶ SEER (EN 14825)		4,54	4,52	4,59
❷ ηs,c	%	179	178	181
THCITY MODEL SEASONAL PERFORMANCE IN HEATING MODE – Low temperature application 35°C				
❸ Pdesignh (EN 14825)	kW	19	28	35
❸ SCOP (EN 14825)		4,14	3,53	3,69
❹ ηs	%	162	138	145
❹ Energy class		A++	A+	A+
THCITY MODEL SEASONAL PERFORMANCE IN HEATING MODE – Medium temperature application 55°C				
❸ Pdesignh (EN 14825)	kW	16	-	-
❸ SCOP (EN 14825)		3,08	-	-
❹ ηs	%	120	-	-
❹ Energy class		A+	-	-

Data at the following conditions:

- ❶ Air: 35°C D.B. – Water: 12/7°C.
- ❷ Air: 7°C D.B. – 6°C W.B. – Water: 40/45°C.
- ❸ Air: 35°C D.B. – 6°C W.B. – Water: 30/35°C.
- ❹ Air: 7°C D.B. – Water: 30/35°C.

RHOSS S.p.A. open field (Q = 2) at 5 m from the unit and ducted fan.

❶ Weight refers to the most complete setup.

❷ Performance according to EN 14511. P0/PI0 setup.

❸ Low temperature application (7°C)

❹ Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

❺ In Average climatic conditions.

❻ Seasonal energy efficiency: ambient heating in Average climate (EU Regulations No.811/2013 and No.813/2013)

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