

# Low consumption compact-ID TCCITY-THCITY 117÷128



Cooling capacity: 16.4÷27.5 kW - Heating capacity: 17.7÷28.5 kW

- ✓ **PLENUM-FANS with low consumption EC motor**
- ✓ **Vertically or horizontally ducted delivery.**
- ✓ **Winter operation up to -20°C outdoor air**
- ✓ **Hot water production up to 60°C**
- ✓ **Integrated MASTER/SLAVE control**
- ✓ **Inertial buffer tank**



Web code: CID01

Water chillers and packaged reversible heat pumps with air cooled and Plenum-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

## 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.
- Copper/pre-painted aluminium or copper/copper coils.
- Digital input for double set-point.
- 4-20 mA analogue signal for shifting set-point.

## Separately supplied accessories

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 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.
- 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.

- 3-way valve for the production of domestic hot water, managed by regulation.
- Additional electrical resistance for heat pump, managed by regulation.
- Remotely controllable outdoor air temperature probe for set-point compensation.
- 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.

## 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.

## Technical Data

TCCITY MODEL		117	124	128
① MIN/NOM/MAX cooling capacity	kW	8,7/16,4/17,3	12,6/24,3/25,9	13,4/27,5/28,7
① NOM absorbed power	kW	5,24	8,15	9,01
① E.E.R. NOM		3,13	2,98	3,05
THCITY MODEL		117	124	128
② MIN/NOM/MAX heating capacity	kW	6,6/17,7/18,8	9,7/24,3/26,7	10,4/28,5/30,6
② NOM absorbed power	kW	5,33	7,48	8,88
② C.O.P. NOM		3,32	3,25	3,21
③ MIN/NOM/MAX heating capacity	kW	7,2/18,8/19,8	10,4/25,0/27,4	11,0/29,1/31,1
③ NOM absorbed power	kW	4,59	6,1	7,28
③ C.O.P. NOM		4,1	4,1	4
④ MIN/NOM/MAX heating capacity	kW	12,3	18,1	22,9
④ NOM absorbed power	kW	4,14	6,65	7,46
④ C.O.P. NOM		2,97	2,72	3,07
① MIN/NOM/MAX cooling capacity		16,2	23,8	27
① E.E.R. NOM		2,98	2,84	2,91
TCCITY - THCITY MODEL		117	124	128
⑥ Fan delivery sound pressure	dB(A)	53	53	56
⑥ Machine body sound pressure	dB(A)	42	42	45
Fan nominal air flow	m <sup>3</sup> /h	7600	7600	8640
Fan available static pressure	Pa	80	80	80
① 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 WEIGHTS		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
⑥ PUMP Weight	kg	275	285	295
⑥ TANK&PUMP Weight	kg	445	455	465
SEASONAL ENERGY PERFORMANCE		117	124	128
TCCITY MODEL SEASONAL PERFORMANCE IN COOLING MODE				
① Pdesignc (EN 14825)	kW	16,4	24,3	27,5
① SEER (EN 14825)		4,54	4,52	4,59
② ηs,c	%	179	178	181
THCITY MODEL SEASONAL PERFORMANCE IN HEATING MODE				
③ Pdesignh (EN 14825)	kW	19	28	35
③ SCOP (EN 14825)		4,14	3,53	3,69
④ ηs	%	162	138	145
④ Energy class		A++	A+	A+

Data at the following conditions:

- ① Air: 35° D.B. - Water: 12/7°C.
- ② Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.
- ③ Air: 7°C D.B. - 6°C W.B. - Water: 30/35°C.
- ④ Air: -7°C D.B. - Water: 30/35°C.
- ⑤ In open field (Q = 2) at 5 m from the unit and ducted fan.
- ⑥ Weight refers to most complete set up.  
Performance according to EN 14511:2013. P0/PI0 set up.
- ① Low temperature application (7°C)
- ② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)
- ③ In Average climatic conditions, low temperature application (35°C)
- ④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/213 and No.813/2013)



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