TOSHIBA Leading Innovation

Toshiba Air Conditioning - Estia Data Sheet

RUA-CP2101H
Estia - Air-to-Water Heat Pump

Features

- High performance and large operating range
- Twin rotary compressor and control integration
- Wired remote controller with large backlit screen
- Hydronic module with variable speed pump and expansion tank

Technical Data

Model reference			RUA-CP2101H
Power source		V-ph-Hz	400-3 + N-50
Heating capacity *1		kW	21.1
Coefficient of performance *1			4.1
Cooling capacity *2		kW	18.6
Energy efficiency ratio *2			3.1
Variable range compressor frequency		Hz	30-96
Electric characteristic *1 *2	Voltage range	V	360-440
	Nominal unit current drawn (Un) *2	A	14.3
	Maximum unit power input (Un) **	kW	12.4
	Cos Phi unit at maximum power **		0.93
	Max. unit current drawn (Un-10%) ***	A	21.2
	Maximum unit current drawn (Un) ****	kW	19.1
Operating noise	Sound power level *3	dB(A)	74
	Sound pressure level at 10 m *4	dB(A)	43
Outer dimension	H x W x D†	mm	1579
Net weight *5		kg	199.4
Colour			Light grey (RAL 7035)
Compressor	Type		Twin rotary type with DC-inverter variable speed control
Fan motor	Quantity		2
	Max. air capacity	m^3/h	8640
	Max. rotational speed	rps	16
Remote controller (RC) *6	H x W x D	mm	87.6 x 90.1 x 15.4
Heat exchanger	Type		Plate-type heat exchange
	Water volume	l	1.9
	Max. water-side operating pressure without hydronic module	kPa	1000
Refrigerant	Refrigerant type		R410A
	Charge amount	kg	8.0
Monobloc with variable speed hydronic module	Min. flow rate	l/s	0.57
	Max. flow rate	l/s	1.5
	Pump motor input	W	310
	Expansion tank volume	l	8
	Min. pump suction pressure	kPa	40 (0.4 bar)
	Max. pump suction pressure	kPa	300 (3 bar)
Water piping (with hydronic module)	Inlet pipe diameter	(BSP GAS inch)	1-1/4
	Outlet pipe diameter	(BSP GAS inch)	1
Water pressure relief valve	Operating pressure	mPa	0.3 (3 bar)
Operating range *7	Cooling mode outdoor temperature	°C	0 - 46
	Heating mode outdoor temperature	°C	-20 - 30
	Storage temperature	°C	-20 - 48
	Protection level		IP44
Wiring connection	Power wiring		4 wires: including earth wire
	RC wiring		4 wires (H07RN-F)

*1 Heating performance measurement conditions: outside air temperature 7°C, water supply temperature 30°C, outlet temperature 35°C.
*2 Cooling performance measurement conditions: outside air temperature 35°C, water supply temperature 12°C, outlet temperature 7°C.
*3 In dB ref=10^{-12} W, (A) weighting. Declared dual number noise emission values in accordance with ISO 4871 (with an associated uncertainty of ±3dB(A)). Measured in accordance with ISO 9614-1 and certified by Eurovent.
*4 Values are guidelines only. Refer to unit nameplate.
*5 In dB ref 20 µPa, (A) weighting. Declared dual number noise emission values in accordance with ISO 4871 (with an associated uncertainty of ±3dB(A)). For information, calculated from the sound power level LwA.
*6 The remote controller should be shipped with the Monobloc unit.
*7 For operation at an outdoor ambient temperature below 0°C (cooling mode and heating mode), the water freeze protection should be available and/or the water loop can be protected against frost by the installer, using an anti-freeze solution.
** Power input, compressors and fans, at the unit operating limits (saturated suction temperature 15°C, saturated condensing temperature 68.3°C) and nominal voltage of 400 V (data given on the unit nameplate).
*** Maximum unit operating current at maximum unit power input and at 360 V.
**** Maximum unit operating current at maximum unit power input and at 400 V (values given on the unit nameplate).
† Width including disconnect switch = 1141 mm.

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