



NXHM_4 – 16kW_2023_Sales_

14/02/2023

NXHM Monoblock

Customers

Product Bulletin

Toshiba Carrier UK are pleased to announce that the “NXHM Monoblock 4 – 16kW” has been added to the Air to Water product range.

1. Product Description

NXHM is a high-efficiency residential hydronic heat pump for heating and cooling, with the possibility of domestic hot water production for domestic use.

The unit works with R32 ecological refrigerant, guaranteeing not only low global warming potential (GWP) and low CO₂ emissions, but also optimum energy efficiency over the whole operating range.

NXHM is also fitted with new exchange coils with the special hydrophilic and anti-corrosion Blue-Fin treatment that improves the drainage of condensate on the fins, thereby reducing the risk of the coils freezing (maximum efficiency even in damp climates).

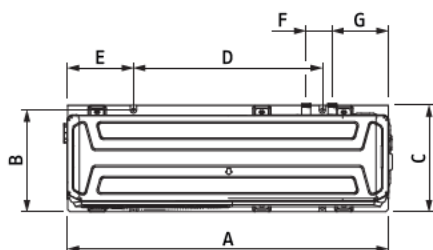
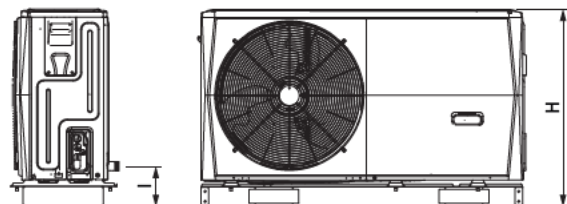
NXHM comes in 10 different models with a heating capacity from 4.2 to 15.9 kW.

- Twin rotary compressor with DC inverter technology, that modulates the output to adapt perfectly to the real load needed.
- High COP and EER values (all the NXHM heat pumps comply with the highest standards requested in terms of energy efficiency).
- Performance ratings certified by the third-party body HP Keymark.
- They can be connected to low-temperature radiators, radiant floor elements and fan coil type units.
- Water heating temperature up to +65°C.
- Easy, quick installation.
- Low unit noise level.
- Wired control panel included, for the complete management of a heating/cooling/DHW system.
- The control panel can manage up to 6 units (even of different output levels) in cascade format - 1 master and 5 slaves.
- Anti-freeze protection as standard, to protect the entire system - in particular the hydraulic parts – from the potential damage caused by freezing.

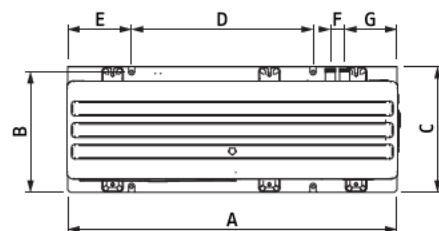
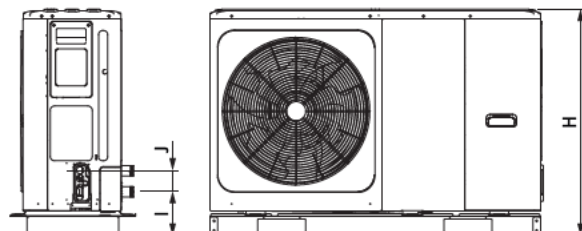
2. Dimensions

OVERALL DIMENSIONS

NXHM 004-006



NXHM 008-016

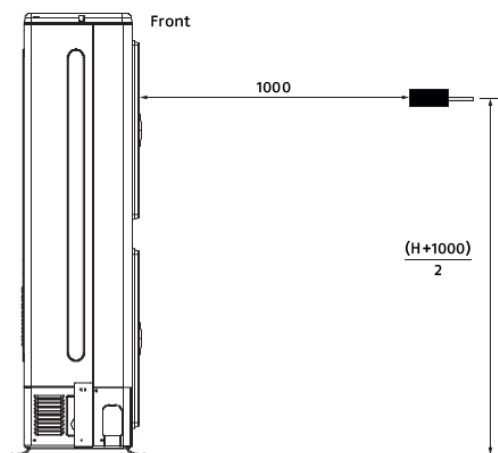


	A	B	C	D	E	F	G	H	I	J
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
NXHM 004-006	1295	365	429	760	265	105	225	792	161	-
NXHM 008-016	1385	438	526	760	270	60	221	945	182	81

3. Sound Pressure levels

SOUND PRESSURE LEVEL

Model	UM	NXHM									
		004	006	008	010	012	014	016	012T	014T	016T
Sound pressure (l)	dB (2)	45	47,5	48,5	50,5	53	53,5	57,5	53,5	54	58



The sound pressure level is measured at a position 1m in front of the unit and $(1+H)/2$ m (where H is the height of the unit) above the floor in a semi-anechoic chamber.

During on-site operation, sound pressure levels may be higher due to ambient noise.

Unit of measurement: mm.

4. Specifications

TECHNICAL DATA NXHM 004-010

		Model	UM	NXHM 004	NXHM 006	NXHM 008	NXHM 010
PERFORMANCE DATA IN HEATING							
Performance in heating (A7°C; W35°C)							
Nominal capacity	kW			4.20	6.35	8.40	10.00
Input power	kW			0.82	1.28	1.63	2.02
COP				5.10	4.95	5.15	4.95
SCOP (temperate zone)				4.85	4.95	5.22	5.20
Seasonal energy efficiency	%			191	195	206	205
Energy class				A+++	A+++	A+++	A+++
Performance in heating (A7°C; W45°C)							
Nominal capacity	kW			4.30	6.30	8.10	10.00
Input power	kW			1.13	1.70	2.10	2.67
COP				3.80	3.70	3.85	3.75
Performance in heating (A7°C; W55°C)							
Nominal capacity	kW			4.40	6.00	7.50	9.50
Input power	kW			1.49	2.03	2.36	3.06
COP				2.95	2.95	3.18	3.10
SCOP (temperate zone)				3.31	3.52	3.37	3.47
Seasonal energy efficiency	%			130	139	133	137
Energy class				A++	A++	A++	A++
PERFORMANCE DATA IN COOLING							
Performance in cooling (A35°C; W7°C)							
Nominal capacity	kW			4.70	7.00	7.45	8.20
Input power	kW			1.36	2.33	2.22	2.52
EER				3.45	3.00	3.35	3.25
SEER				4.99	5.34	5.83	5.99
Seasonal energy efficiency	%			196	210	230	236
Performance in cooling (A35°C; W18°C)							
Nominal capacity	kW			4.50	6.50	8.30	9.90
Input power	kW			0.82	1.35	1.64	2.18
EER				5.50	4.80	5.05	4.55
ELECTRICAL CHARACTERISTICS							
Electrical supply	V/ph/Hz			230/1/50	230/1/50	230/1/50	230/1/50
Total maximum input power (1)	kW			2.30	2.70	3.40	3.70
Total maximum input current (2)	A			12.00	14.00	16.00	17.00
COMPRESSOR							
Compressor	Type/brand			DC twin rotary/ Mitsubishi	DC twin rotary/ Mitsubishi	DC twin rotary/ Mitsubishi	DC twin rotary/ Mitsubishi
Adjustment	Type			Inverter modulating	Inverter modulating	Inverter modulating	Inverter modulating
Minimum capacity control	%			55	43	40	38
Refrigerant	Type			R32	R32	R32	R32
GWP	CO ₂ equiv. in t/kg			675	675	675	675
Refrigerant load	kg			1.40	1.40	1.40	1.40
Control box load	CO ₂ equiv. in t			0.95	0.95	0.95	0.95
Number of circuits	no.			1	1	1	1
Hermetically sealed control box (EU reg. 517_2014)	yes/no			yes	yes	yes	yes

TECHNICAL DATA NXHM 004-010

	Model	UM	NXHM 004	NXHM 006	NXHM 008	NXHM 010
FAN						
	Fan	Type	DC axial	DC axial	DC axial	DC axial
	Quantity	no.	1	1	1	1
	Maximum air flow rate	m ³ /h	2770	2770	4030	4030
HEAT EXCHANGER (SOURCE SIDE)						
	Heat exchanger (source side)	Type	Pipes in copper. fins in hydrophilic aluminium with anti-corrosion treatment	Pipes in copper. fins in hydrophilic aluminium with anti-corrosion treatment	Pipes in copper. fins in hydrophilic aluminium with anti-corrosion treatment	Pipes in copper. fins in hydrophilic aluminium with anti-corrosion treatment
CIRCULATION PUMP						
	Circulation pump	Type	Variable speed centrifuge - model Para 25/9 IPWM-130-1	Variable speed centrifuge - model Para 25/9 IPWM-130-1	Variable speed centrifuge - model Para 25/9 IPWM-130-1	Variable speed centrifuge - model Para 25/9 IPWM-130-1
	Nominal delivery	m ³ /h	0.72	1.09	1.44	1.72
	Maximum operating pressure	bar	3	3	3	3
	Maximum input power	kW	0.043	0.043	0.043	0.043
	Maximum input current	A	0.44	0.44	0.44	0.44
	Expansion tank volume	l	8.00	8.00	8.00	8.00
HEAT EXCHANGER (SYSTEM SIDE)						
	Heat exchanger (system side)	Type	Plate. in stainless steel	Plate. in stainless steel	Plate. in stainless steel	Plate. in stainless steel
	Water content	l	2.16	2.16	2.44	2.44
SOUND DATA						
	Sound output (3)	dB(A)	55	58	59	60
	Sound pressure at 1m (4)	dB(A)	45	47.5	48.5	50.5
WEIGHT						
	Net weight	kg	98	98	121	121

TECHNICAL DATA NXHM 012-016

		Model	UM	NXHM 012	NXHM 014	NXHM 016	NXHM 012T	NXHM 014T	NXHM 016T
PERFORMANCE DATA IN HEATING									
Performance in heating (A7°C; W35°C)									
Nominal capacity	kW			12.10	14.50	15.90	12.10	14.50	15.90
Input power	kW			2.44	3.15	3.53	2.44	3.15	3.53
COP				4.95	4.60	4.50	4.95	4.60	4.50
SCOP (temperate zone)				4.81	4.72	4.62	4.81	4.72	4.62
Seasonal energy efficiency	%			189	186	182	189	186	182
Energy class				A+++	A+++	A+++	A+++	A+++	A+++
Performance in heating (A7°C; W45°C)									
Nominal capacity	kW			12.30	14.10	16.00	12.30	14.10	16.00
Input power	kW			3.32	3.92	4.57	3.32	3.92	4.57
COP				3.70	3.60	3.50	3.70	3.60	3.50
Performance in heating (A7°C; W55°C)									
Nominal capacity	kW			11.90	13.80	16.00	11.90	13.80	16.00
Input power	kW			3.90	4.68	5.61	3.90	4.68	5.61
COP				3.05	2.95	2.85	3.05	2.95	2.85
SCOP (temperate zone)				3.45	3.47	3.41	3.45	3.47	3.41
Seasonal energy efficiency	%			136	137	134	136	137	134
Energy class				A++	A++	A++	A++	A++	A++
PERFORMANCE DATA IN COOLING									
Performance in cooling (A35°C; W7°C)									
Nominal capacity	kW			11.50	12.40	14.00	11.50	12.40	14.00
Input power	kW			4.18	4.96	5.60	4.18	4.96	5.60
EER				2.75	2.50	2.50	2.75	2.50	2.50
SEER				4.89	4.86	4.69	4.86	4.83	4.67
Seasonal energy efficiency	%			193	191	185	191	190	184
Performance in cooling (A35°C; W18°C)									
Nominal capacity	kW			12.00	13.50	14.20	12.00	13.50	14.20
Input power	kW			3.04	3.75	4.38	3.04	3.75	4.38
EER				3.95	3.61	3.61	3.95	3.61	3.61
ELECTRICAL CHARACTERISTICS									
Electrical supply	V/ph/Hz			230/1/50	230/1/50	230/1/50	400/3/50	400/3/50	400/3/50
Total maximum input power (1)	kW			5.50	5.80	6.20	5.50	5.80	6.20
Total maximum input current (2)	A			25.00	26.00	27.00	10.00	11.00	12.00
COMPRESSOR									
Compressor	Type/brand			DC twin rotary/ Mitsubishi	DC twin rotary/ Mitsubishi	DC twin rotary/ Mitsubishi	DC twin rotary/ Mitsubishi	DC twin rotary/ Mitsubishi	DC twin rotary/ Mitsubishi
Adjustment	Type			Inverter modulating	Inverter modulating	Inverter modulating	Inverter modulating	Inverter modulating	Inverter modulating
Minimum capacity control	%			46	41	40	46	41	40
Refrigerant	Type			R32	R32	R32	R32	R32	R32
GWP	CO2 equiv. in t/kg			675	675	675	675	675	675
Refrigerant load	kg			1.75	1.75	1.75	1.75	1.75	1.75
Control box load	CO2 equiv. in t			1.18	1.18	1.18	1.18	1.18	1.18
Number of circuits	no.			1	1	1	1	1	1
Hermetically sealed control box (EU reg. 517_2014)	yes/no			yes	yes	yes	yes	yes	yes
FAN									
Fan	Type			DC axial	DC axial	DC axial	DC axial	DC axial	DC axial
Quantity	no.			1	1	1	1	1	1
Maximum air flow rate	m³/h			4060	4060	4650	4060	4060	4650

TECHNICAL DATA NXHM 012-016

	Model	UM	NXHM 012	NXHM 014	NXHM 016	NXHM 012T	NXHM 014T	NXHM 016T
HEAT EXCHANGER (SOURCE SIDE)								
Heat exchanger (source side)	Type		Pipes in copper. fins in hydrophilic aluminium with anti-corrosion treatment	Pipes in copper. fins in hydrophilic aluminium with anti-corrosion treatment	Pipes in copper. fins in hydrophilic aluminium with anti-corrosion treatment	Pipes in copper. fins in hydrophilic aluminium with anti-corrosion treatment	Pipes in copper. fins in hydrophilic aluminium with anti-corrosion treatment	Pipes in copper. fins in hydrophilic aluminium with anti-corrosion treatment
CIRCULATION PUMP								
Circulation pump	Type		Variable speed centrifuge - model Para 25/9 IPWM-130-1	Variable speed centrifuge - model Para 25/9 IPWM-130-1	Variable speed centrifuge - model Para 25/9 IPWM-130-1	Variable speed centrifuge - model Para 25/9 IPWM-130-1	Variable speed centrifuge - model Para 25/9 IPWM-130-1	Variable speed centrifuge - model Para 25/9 IPWM-130-1
Nominal delivery	m ³ /h		2.08	2.49	2.73	2.08	2.49	2.73
Maximum operating pressure	bar		3	3	3	3	3	3
Maximum input power	kW		0.043	0.043	0.043	0.043	0.043	0.043
Maximum input current	A		0.44	0.44	0.44	0.44	0.44	0.44
Expansion tank volume	l		8.00	8.00	8.00	8.00	8.00	8.00
HEAT EXCHANGER (SYSTEM SIDE)								
Heat exchanger (system side)	Type		Plate. in stainless steel	Plate. in stainless steel	Plate. in stainless steel	Plate. in stainless steel	Plate. in stainless steel	Plate. in stainless steel
Water content	l		2.78	2.78	2.78	2.78	2.78	2.78
SOUND DATA								
Sound output (3)	dB(A)		65	65	68	65	65	68
Sound pressure at 1m (4)	dB(A)		53	53.5	57.5	53.5	54	58
WEIGHT								
Net weight	kg		144	144	144	160	160	160

For full Specification document please visit the Toshiba Website

<https://www.toshiba-aircon.co.uk/product/r32-riello-air-to-water-monoblock-heat-pump-system/>