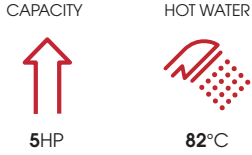




In addition to the standard simultaneous heating and cooling function of the SHRMe system, it is now possible with the new Toshiba high temperature hot water module, to produce hot water up to 85°C, whilst still retaining the comfort operation of the indoor units.



OUTDOOR UNITS COMPATIBILITY



SHRM-e

LOCAL CONTROLS



RBC-AMTU31-E

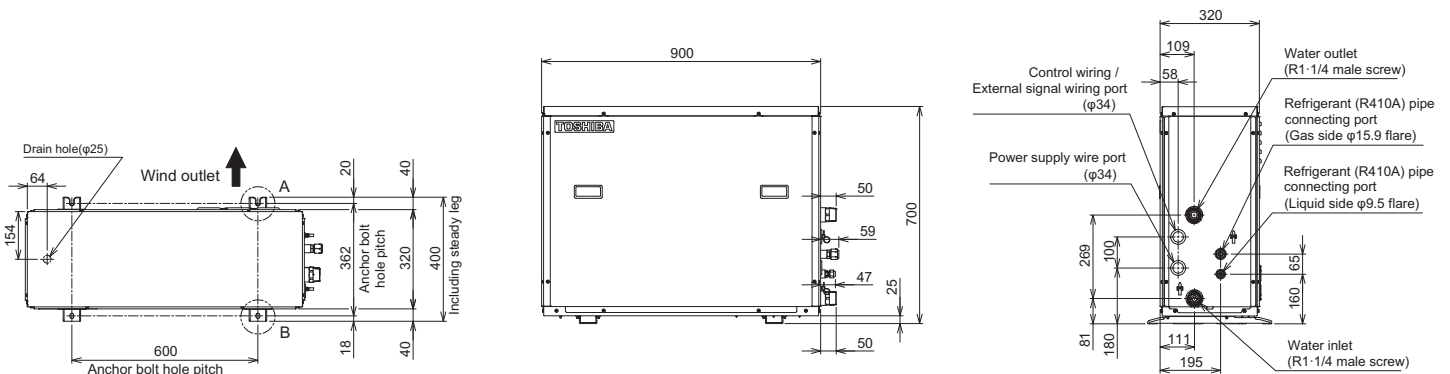
Features

Model		MMW-AP0481CHQ-E	
Heating capacity *1		kW	
		14.0	
Electrical characteristics	Power supply *2	1 phase 50 Hz 220-240 V	
	Running current (max)	A	
	Power consumption (max)	kW	
Appearance		Zinc hot dipping steel plate	
Dimensions	HxWxD(leg included)	mm	
		700x900x320(400)	
Weight	Unit	kg	
		100	
Design pressure	Refrigerant (R410A) side	MPa	
	Refrigerant (R134a) side	MPa	
	Water side	MPa	
		1.0	
Heat exchanger (Water)		Plate type heat exchanger	
Heat exchanger (Cascade)		Plate type heat exchanger	
Heat-insulating material		Polyethylene foam + Polyurethane foam	
Water flow rate	Standard	L/min	40
	Max - Min.	L/min	46 - 34
Water pressure loss (At standard water flow rate)		kPa	
		15	
Control method		Wired remote controller (Option)	
Operation range		indoor	°CDB
			+5 / +32
	Ambient covre		°CWB
	Indoor, allowable and Outdoor	Allowable dew point	RH(%)
			+30 / +85
		Outdoor (At heating) SHRMe	°CDB
		°CWB	
			-25 / +40 (*3)
			-25 / +28 (*3)
	Water outlet side	°C	+50 / +82
Water filter		Strainer with mesh 30 to 40 (Procured locally)	
Connecting pipe	Water pipe	Inlet	R1-1/4
		Outlet	R1-1/4
	Refrigerant pipe	Gas pipe	inch
		Liquid pipe	inch
Drain nipple		mm	
			5.8" flare connection
			3/8" flare connection
			ID 15
Sound pressure level *1		dB(A)	
		44	
Sound power level *1		dB(A)	
		60	
Refrigerant	type/charge	kg/ TCO ₂ eq	R134A 2.1/3
Installation place		Indoor	

*1 Rated conditions: entering condenser water temp. 60°C leaving condenser water temp. 65°C Outdoor air temp. 7°CDB / 6°CWB
 The standard piping means that main pipe length is 5 m, branching pipe length is 2.5 m of branch piping connected with a 0 meter height.
 *2 The source voltage must not fluctuate more than ±10%.
 *3 Low ambient heating (-20°C or less) for extended periods of time is not allowed.
 Model name of usable Flow Selector unit: RBM-Y1124FE, RBM-Y1804FE, RBM-Y2804FE, RBM-Y1801F6PE, RBM-Y1801F4PE

Drawings

Unit: mm



HIGH TEMPERATURE HOT WATER MODULE

Piping rules

			SHRMe
Piping length	Total extension of pipe (Liquid pipe, real length)	Below 34HP	300m
		34HP or more	1000m
	Farthest piping length	Equivalent length	200m
		Real length	180m
	Equivalent length of farthest piping from 1st branching	High difference between IDU >3 m	50m
		High difference between IDU ≤ 3m	65m
	Equivalent length of farthest piping between outdoor units		15m
	Max equivalent length of main piping	High difference between IDU > 3m	100/85m
		High difference between IDU ≤ 3m	120/100m
	Max. equivalent length of outdoor unit connecting piping		10m
	Max. real length of indoor unit connecting piping		30m
Max. equivalent length between branches		50m	
Maximum real length of terminal branching section to indoor units	Single port type	15m	
	Multi port type	50m	
Maximum equivalent length between branching section		50m	
Difference in height	Height between indoor and outdoor units	Upper outdoor unit	70m
		Lower outdoor unit	30m
	Height between indoor units	Upper outdoor unit	40m
		Lower outdoor unit	15m
	Height between HWM	Upper outdoor unit	40m
		Lower outdoor unit	15m
	Height between indoor units and HWM	Upper outdoor unit	40m
		Lower outdoor unit	15m
Height between outdoor units		5m	
In case of 4serie flow selector connection to indoor units	Maximum equivalent length indoor units in group control by one single port flow selector unit		30m
	Maximum real length between flow selector unit and indoor unit	Single port type	15m
		Multi port type	50m
Height difference between indoor units in group control by one flow selector unit			0.5m

Connectivity restrictions

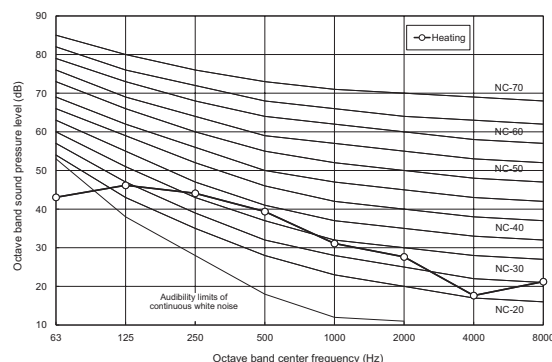
			SHRMe
Indoor connection capacity	Total	Standard indoor unit + M-HWM + H-HWM	90 - 200%
	Allowed capacity	Standard indoor unit	50 - 120%
		H-HWM	0 - 100%
Number of combined indoor units and M-HWM	Total	Standard indoor unit + M-HWM + H-HWM	2 - 32
	Allowed number	Standard indoor unit	2 - 32
		H-HWM	0 - 12

Sound pressure levels

Unit: dB(A)

MMW-AP0481CHQ-E

Sound pressure level dB(A)	Heating
	44



Other information

Water piping and line heater installation

- Make the piping route a closed circuit. (An open water circuit may cause a failure.)
- Before a long period of none use, purge the water out of the pipes and thoroughly let them dry.
- Do not add brine to the circulating water.
- Do not use the water used for the unit for drinking or food manufacturing.
- To ensure easy maintenance, inspection, and replacement of the unit, use a proper joint, valve, etc. (procured locally) on the water inlet and outlet port.
- Be sure to install a strainer with 30 to 40 meshes (procured locally) on the water inlet pipe.
- If a strainer is not installed, this may cause impaired performance, or damage to the plate heat exchanger from freezing.
- Install a suitable air vent (procured locally) on the water pipe. After sending water through the pipe, be sure to vent the excess air.
- To avoid water leak, wrap some sealing tape around the screw part.
- Water pipes can get very hot, depending on the preset temperature. Wrap the water pipes with heat insulation (procured locally) to prevent burns.
- Be sure to install the line heater (procured locally) on the water inlet side. In addition, position it within 5 m of the water inlet pipe of the Hot Water Module.
- Follow capacity table to select a line heater (procured locally) within the range of 40 to 50% of the Hot Water Module's rated capacity.

Hot Water Module model name	Capacity of line heater (kW)
MMW-AP0481CHQ-E	5.8 ~ 7.2

