

# TOSHIBA

## HEAT PUMPS

Think Toshiba. Think reliability.



Better Air Solutions

# Mini VRF



Mini-SMMS 

Blending  
Commercial  
and  
Residential



## **Toshiba Solutions Delivering Absolute Comfort**

Toshiba offers a solution for all applications: residential, light commercial and larger commercial buildings. Residential indoor units are designed to blend perfectly with all interiors and incorporate advanced filtration systems to deliver optimum indoor air quality.

For small commercial premises, products are designed to deliver top performance combined with energy efficiency.

For larger applications, VRF systems combine flexibility, energy efficiency and respect for the environment, with a wide choice of stylish indoor units.

Toshiba's commitment to excellence drives a company-wide focus on attention to the details through every stage of the development process, from design to user field tests.

Installations using our products and systems therefore feature a high standard of indoor air quality, sound level, energy savings and environmental awareness.





## Defining a HIGHER Standard

The MiNi-SMMSe air conditioner lineup lets you cool or warm as many as 9 rooms with a single system. Outdoor units ranging from 3 to 6HP offer best class energy savings, installation flexibility and quiet operation. With 13 indoor units to choose from, the MiNi-SMMSe makes a perfect solution for residential, small shops and office buildings.



### HIGHER Energy Savings

MiNi-SMMSe achieves world-class COP of 4.86\*<sup>1</sup> and EER of 4.29\*<sup>1</sup> thanks to an integrated combination of Toshiba's advanced twin rotary compressor, vector controlled inverter and heat exchanger technologies.

\*1- 3-phase 4HP outdoor unit

### HIGHER Comfort and Ease

A single outdoor unit is powerful enough to accommodate up to nine\*<sup>2</sup> independently controlled interior units, delivering ideal quiet comfort to every room.

\*2- 1 & 3-phase 6HP outdoor unit

### HIGHER Installation Flexibility

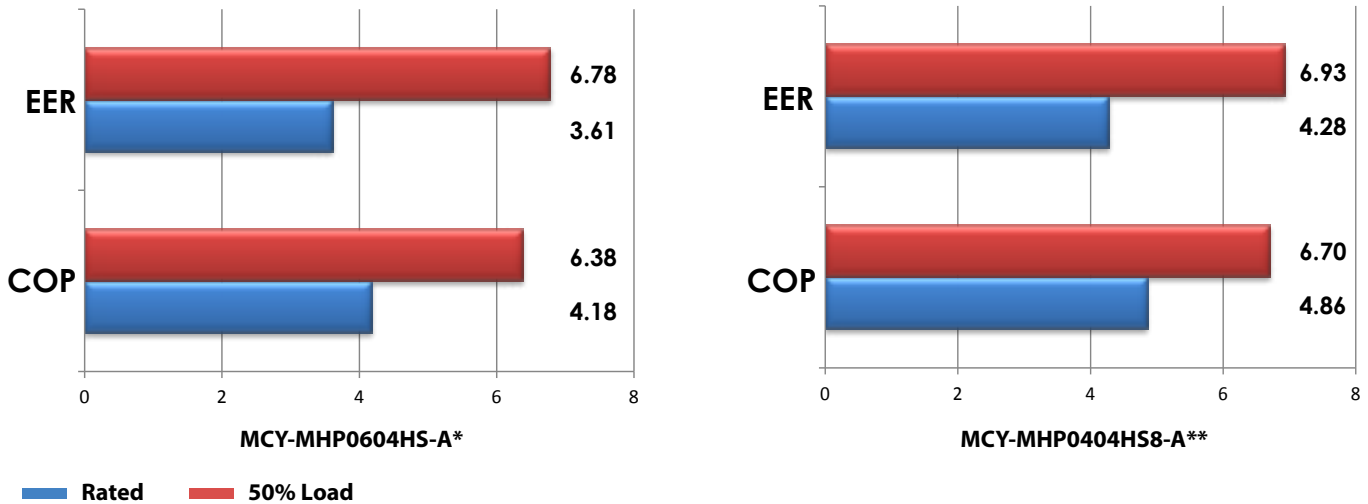
MiNi-SMMSe's small footprint allows for fast and easy installation. Furthermore, a maximum piping extension of 180m\*<sup>3</sup> affords unprecedented configuration flexibility, making this unit ideal for a wide variety of applications.

\*3- 1 & 3-phase 4 & 5HP outdoor unit

## Industry Leading Energy Savings

### Energy-efficient performance for greater eco-consciousness

Adopting the highly efficient DC twin-rotary compressors and advanced vector-controlled inverters realises an EER of 6.78 (under 50% partial load, 6HP, single phase) and 6.93 (under 50% partial load, 4HP, three phase). Greater operating performance is now possible when operating under a constant load.

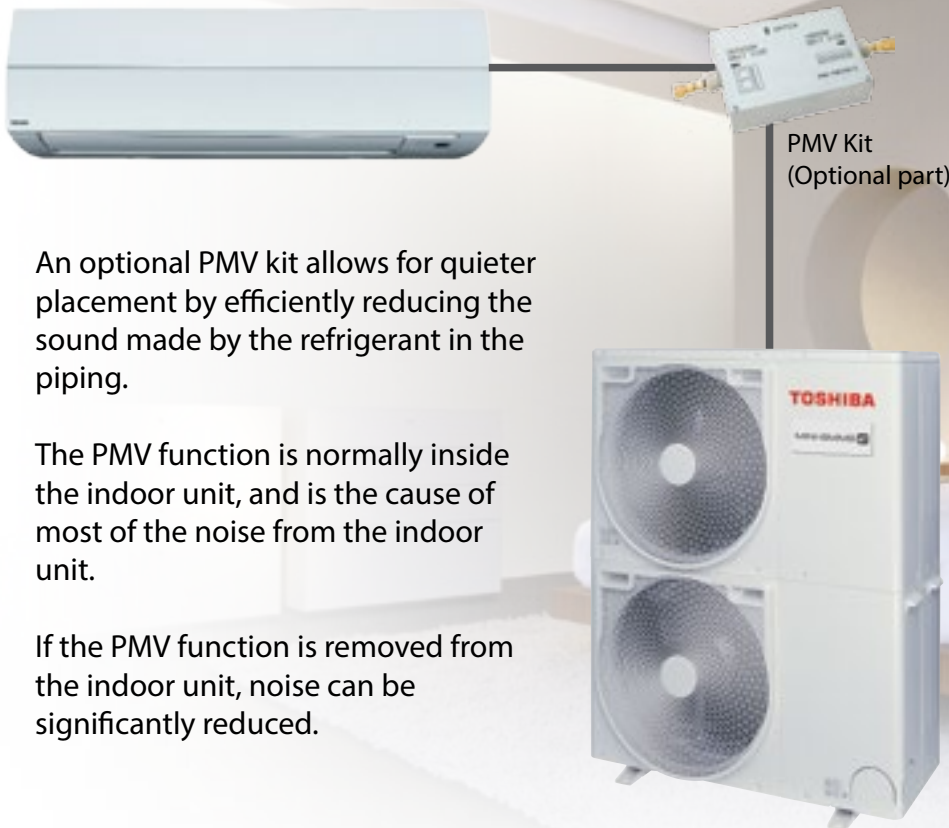


— Rated — 50% Load

\***MCY-MHP0604HS-A.** Based on rated outdoor ambient of 35 °C DB cooling, 7 °C DB heating, 20 °C DB indoor temperature with all indoors running 50% partial load.

\*\***MCY-MHP0404HS8-A.** Based on rated outdoor ambient of 35 °C DB cooling, 7 °C DB heating, 20 °C DB indoor temperature with all indoors running 50% partial load.

## PMV Kit for Quieter Operation



An optional PMV kit allows for quieter placement by efficiently reducing the sound made by the refrigerant in the piping.

The PMV function is normally inside the indoor unit, and is the cause of most of the noise from the indoor unit.

If the PMV function is removed from the indoor unit, noise can be significantly reduced.



## Outdoor Unit

Toshiba's unique energy efficient air conditioning innovations and technologies deliver high energy savings.

### DC Fan Motor

- Highly efficient DC motor.
- Sine wave drive.

### Heat Exchanger

- Increased surface area improves heat transfer, increasing efficiency.
- High-efficiency R410A heat-transfer tube.



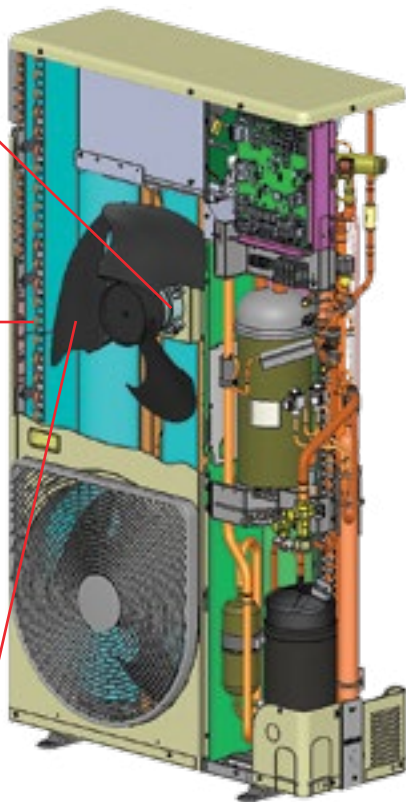
Configuration of the finned heat-transfer tube.

### Large-Diameter Propeller Fan

- High-pressure low volume fan with anti eddy projections.



The bat wing fan realises low sound levels.



### High Tier Vector-Controlled Inverter

- The inverter boosts efficiency by controlling a twin-rotary DC compressor with increased processing speed, now 8x faster.



Smooth sine curve realises higher efficiency and less noise.



Efficient circuit built-in; new PIM.

Vector IPDU control changes the motor current wave to a smooth sine pattern so that noise emitted from the drive units is greatly reduced. 1Hz steps improve control and minimises energy loss when changing frequencies.

### Twin-Rotary DC Compressor

- Increased, wide range efficiency is realised.

DC driven motor with rare earth magnet.

- Compact
- Higher efficiency
- Higher power motor torque

Precise manufacturing technology in the compression parts.

- Higher efficiency (In wide range)
- Higher reliability



## Outdoor Unit Specifications

Single Fan 1-PHASE MODEL		UNIT	TECHNICAL SPECIFICATIONS			
Equivalent HP			3HP	4HP	5HP	6HP
Model Name		50Hz	MCY-MHP0305HT	MCY-MHP0405HT	MCY-MHP0506HT	MCY-MHP0606HT
Cooling Capacity *1		kW	8.0	11.2	14.0	15.5
Heating Capacity *1		kW	9.0	12.5	16.0	17.0
Running Current		Amp	10.7	16.1	18.7	21.3
Power Supply		Volts	1-phase 50Hz 220-240V			
MOCP		Amp	25.0	25.0	32.0	32.0
MCA		Amp	21.2	21.2	26.5	28.0
Efficiency	Cooling	EER	3.90	3.30	3.55	3.45
	Heating	COP	4.29	4.05	4.15	4.10
External Dimensions H/W/D (Weight)		mm (kg)	900 x 990 x 390 (80kg)		900 x 990 x 390 (99kg)	
Refrigerant Piping Specifications	Connecting Port Diameter	Gas Side (OD)	5/8" (15.9)			3/4" (19.1)
		Liquid Side(OD)	3/8" (9.5)			
Max. no. of connected indoor units			5	5	6	6
Sound pressure level (cooling/heating)		dbA	53/54	54/55	54/56	55/57

\*1) Rated conditions - Cooling: indoor air temperature 27°C DB/19°C WB, outdoor air temperature 35°C DB.  
Heating: indoor air temperature 20°C DB, outdoor air temperature 7°C DB/6°C WB.



## Outdoor Unit Specifications

Twin Fan 1-PHASE MODEL		UNIT	TECHNICAL SPECIFICATIONS		
Equivalent HP			4HP	5HP	6HP
Model Name		50Hz	MCY-MHP0404HS-A	MCY-MHP0504HS-A	MCY-MHP0604HS-A
Cooling Capacity * <sup>1</sup>		kW	12.1	14.0	15.5
Heating Capacity * <sup>1</sup>		kW	12.5	16.0	18.0
Running Current		Amp	13.5/13.0/12.4	16.6/15.9/15.2	20.1/19.2/18.4
Power Supply		Volts	1-phase 50Hz 220-240V		
MOCP		Amp	32	32	32
MCA		Amp	23.5	26.5	28.0
Efficiency	Cooling	EER	4.28	4.00	3.61
	Heating	COP	4.83	4.27	4.18
External Dimensions H/W/D (Weight)		mm (kg)	1235 x 990 x 390 (126kg)		
Refrigerant Piping Specifications	Connecting Port Diameter	Gas Side (OD)	in (mm)	5/8" (15.9)	3/4" (19.1)
		Liquid Side(OD)	in (mm)	3/8" (9.5)	
	Total piping (liquid pipe)	m	180 (150* <sup>2</sup> )		90 (75* <sup>2</sup> )
	Furthest piping (indoor to outdoor)	m	100 (60* <sup>2</sup> ) (equivalent length)		50 (40* <sup>2</sup> ) (equivalent length)
	Max equivalent length of main pipe	m	65 (50* <sup>2</sup> ) (outdoor to 1st branch)		30 (25* <sup>2</sup> ) (outdoor to 1st branch)
	Furthest indoor piping to 1st branch	m	35 (15* <sup>2</sup> ) (equivalent length)		20 (15* <sup>2</sup> ) (equivalent length)
Height between indoor & outdoor units		m	30m (outdoor above), 20m (outdoor below)		15m (outdoor above), 10m (outdoor below)
Max. no. of connected indoor units			6	8	9
Sound pressure level (cooling/heating) * <sup>3</sup>		dbA	49/50	50/52	52/55

\*1) Rated conditions - Cooling: indoor air temperature 27°C DB/19°C WB, outdoor air temperature 35°C DB.

Heating: indoor air temperature 20°C DB, outdoor air temperature 7°C DB/6°C WB.

\*2) When PMV kit is used.

\*3) Sound pressure levels measured in an anechoic chamber.



## Outdoor Unit Specifications

Twin Fan 3-PHASE MODEL		UNIT	TECHNICAL SPECIFICATIONS		
Equivalent HP			4HP	5HP	6HP
Model Name		50Hz	MCY-MHP0404HS8-A	MCY-MHP0504HS8-A	MCY-MHP0604HS8-A
Cooling Capacity * <sup>1</sup>		kW	12.1	14.0	15.5
Heating Capacity * <sup>1</sup>		kW	12.5	16.0	18.0
Running Current		Amp	4.8/4.5/4.4	5.7/5.4/5.2	7.0/6.7/6.4
Power Supply		Volts	3-phase 50Hz 220-240V		
MOCP		Amp	16	16	16
MCA		Amp	12.5	12.5	12.5
Efficiency	Cooling	EER	4.29	4.03	3.65
	Heating	COP	4.86	4.30	4.22
External Dimensions H/W/D (Weight)		mm (kg)	1235 x 990 x 390 (124kg)		
Refrigerant Piping Specifications	Connecting Port Diameter	Gas Side (OD)	in (mm)	5/8" (15.9)	3/4" (19.1)
		Liquid Side(OD)	in (mm)	3/8" (9.5)	
	Total piping (liquid pipe)	m	180 (150* <sup>2</sup> )		90 (75* <sup>2</sup> )
	Furthest piping (indoor to outdoor)	m	100 (60* <sup>2</sup> ) (equivalent length)		50 (40* <sup>2</sup> ) (equivalent length)
	Max equivalent length of main pipe	m	65 (50* <sup>2</sup> ) (outdoor to 1st branch)		30 (25* <sup>2</sup> ) (outdoor to 1st branch)
	Furthest indoor piping to 1st branch	m	35 (15* <sup>2</sup> ) (equivalent length)		20 (15* <sup>2</sup> ) (equivalent length)
Height between indoor & outdoor units		m	30m (outdoor above), 20m (outdoor below)		15m (outdoor above), 10m (outdoor below)
Max. no. of connected indoor units			6	8	9
Sound pressure level (cooling/heating) * <sup>3</sup>		dba	49/52	50/53	51/54

\*1) Rated conditions - Cooling: indoor air temperature 27°C DB/19°C WB, outdoor air temperature 35°C DB.

Heating: indoor air temperature 20°C DB, outdoor air temperature 7°C DB/6°C WB.

\*2) When PMV kit is used.

\*3) Sound pressure levels measured in an anechoic chamber.





## Indoor Units



**MMU-\*\*\*MH-E**



**MMD-\*\*\*BHP1-E**



**MMD-\*\*\*SPH1-E**



**MMK-\*\*\*H1**

Cooling Capacity (HP equivalent)	Compact 4-Way Cassette (620 x 620)	Concealed Duct	Concealed Slim Duct High Static Pressure	High-Wall 3 Series
007 type 2.2kW (0.8HP)	MMU-AP0077MH-E	MMD-AP0076BHP1-E	MMD-AP0074SPH1-E	MMK-AP0073H1
009 type 2.8kW (1HP)	MMU-AP0097MH-E	MMD-AP0096BHP1-E	MMD-AP0094SPH1-E	MMK-AP0093H1
012 type 3.6kW (1.25HP)	MMU-AP0127MH-E	MMD-AP0126BHP1-E	MMD-AP0124SPH1-E	MMK-AP0123H1
015 type 4.5kW (1.7HP)	MMU-AP0157MH-E	MMD-AP0156BHP1-E	MMD-AP0154SPH1-E	MMK-AP0153H1
018 type 5.6kW (2HP)	MMU-AP0187MH-E	MMD-AP0186BHP1-E	MMD-AP0184SPH1-E	MMK-AP0183H1
024 type 7.1kW (2.5HP)		MMD-AP0246BHP1-E	MMD-AP0244SPH1-E	MMK-AP0243H1
027 type 8.0kW (3HP)		MMD-AP0276BHP1-E	MMD-AP0274SPH1-E	
030 type 9.0kW (3.2HP)		MMD-AP0306BHP1-E		
036 type 11.2kW (4HP)		MMD-AP0366BHP1-E		
048 type 14.0kW (5HP)		MMD-AP0486BHP1-E		



**MML-\*\*\*NH-E**



**MML-\*\*\*H1-E**



**MML-\*\*\*BH1-E**



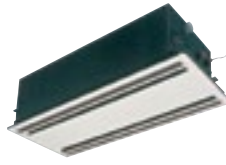
Cooling Capacity (HP equivalent)	Console	Floor Standing Cabinet	Floor Standing Concealed	PMV Kit (Optional)* Compatible with:
007 type 2.2kW (0.8HP)	MML-AP0074NH1-E	MML-AP0074H1-E	MML-AP0074BH1-E	• Compact 4-Way Cassette (620x620)
009 type 2.8kW (1HP)	MML-AP0094NH1-E	MML-AP0094H1-E	MML-AP0094BH1-E	
012 type 3.6kW (1.25HP)	MML-AP0124NH1-E	MML-AP0124H1-E	MML-AP0124BH1-E	• 1-Way Air Discharge Cassette
015 type 4.5kW (1.7HP)	MML-AP0154NH1-E	MML-AP0154H1-E	MML-AP0154BH1-E	
018 type 5.6kW (2HP)	MML-AP0184NH1-E	MML-AP0184H1-E	MML-AP0184BH1-E	• Concealed Duct High Static Pressure
024 type 7.1kW (2.5HP)		MML-AP0244H1-E	MML-AP0244BH1-E	
027 type 8.0kW (3HP)				• High-Wall Series 3 & 7
030 type 9.0kW (3.2HP)				
036 type 11.2kW (4HP)				• Console
048 type 14.0kW (5HP)				

\***PMV Kit**- Can be located away from indoor unit to further reduce the sound made by refrigerant flow in applications such as bedrooms, hotel rooms and other locations where noise may be a factor (2m to 10m from indoor unit).

## Indoor Units



**MMU-\*\*\*HP1-E**



**MMU-\*\*\*WH1**



**MMU-\*\*\*YH1-E**



**MMD-\*\*\*HP1-E**

Cooling Capacity (HP equivalent)	4-Way Air Discharge Cassette	2-Way Air Discharge Cassette	1-Way Air Discharge Cassette	Concealed Duct High Static Pressure
007 type 2.2kW (0.8HP)		MMU-AP0072WH1	MMU-AP0074YH1-E	
009 type 2.8kW (1HP)	MMU-AP0094HP1-E	MMU-AP0092WH1	MMU-AP0094YH1-E	
012 type 3.6kW (1.25HP)	MMU-AP0124HP1-E	MMU-AP0122WH1	MMU-AP0124YH1-E	
015 type 4.5kW (1.7HP)	MMU-AP0154HP1-E	MMU-AP0152WH1	MMU-AP0154YH1-E	
018 type 5.6kW (2HP)	MMU-AP0184HP1-E	MMU-AP0182WH1	MMU-AP0184YH1-E	MMD-AP0186HP1-E
024 type 7.1kW (2.5HP)	MMU-AP0244HP1-E	MMU-AP0242WH1	MMU-AP0244YH1-E	MMD-AP0246HP1-E
027 type 8.0kW (3HP)	MMU-AP0274HP1-E	MMU-AP0272WH1		MMD-AP0276HP1-E
030 type 9.0kW (3.2HP)	MMU-AP0304HP1-E	MMU-AP0302WH1		
036 type 11.2kW (4HP)	MMU-AP0364HP1-E	MMU-AP0362WH1		MMD-AP0366HP1-E
048 type 14.0kW (5HP)	MMU-AP0484HP1-E	MMU-AP0482WH1		MMD-AP0486HP1-E



**MMC-\*\*\*HP1-E**



**MMF-\*\*\*H1-E**



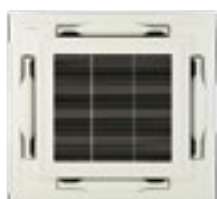
**MMK-\*\*\*HP-E1**



**MMD-VN\*\*HEXE**

Cooling Capacity (HP equivalent)	Under Ceiling	Floor Standing	High-Wall 7 Series	Air to Air Heat Exchanger with DX Coil
005 type 1.7kW (0.6HP)			MMK-AP0057HP-E1	
007 type 2.2kW (0.8HP)			MMK-AP0077HP-E1	
009 type 2.8kW (1HP)			MMK-AP0097HP-E1	MMD-VN502HEXE
012 type 3.6kW (1.25HP)			MMK-AP0127HP-E1	
015 type 4.5kW (1.7HP)	MMC-AP0157HP1-E	MMF-AP0156H1-E		MMD-VN802HEXE
018 type 5.6kW (2HP)	MMC-AP0187HP1-E	MMF-AP0186H1-E		
024 type 7.1kW (2.5HP)	MMC-AP0247HP1-E	MMF-AP0246H1-E		
027 type 8.0kW (3HP)	MMC-AP0277HP1-E	MMF-AP0276H1-E		
030 type 9.0kW (3.2HP)				
036 type 11.2kW (4HP)	MMC-AP0367HP1-E	MMF-AP0366H1-E		
048 type 14.0kW (5HP)	MMC-AP0487HP1-E	MMF-AP0486H1-E		

## 4-Way Cassette



**Panel**  
**RBC-U31PGP(W)-E**

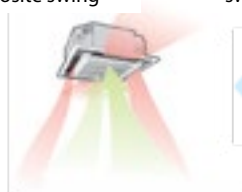
### Individual Louvre Control

The angles of each of the four louvres can be set individually enabling the airflow to be adapted to user preferences.

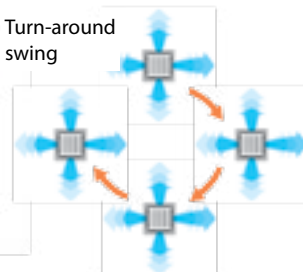
(1) Standard swing



(2) Diagonally opposite swing



(3) Turn-around swing

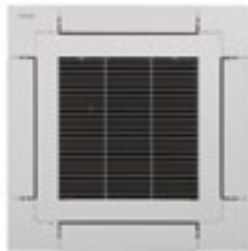


Model Number	MMU-	AP0094HP1-E	AP0124HP1-E	AP0154HP1-E	AP0184HP1-E	AP0244HP1-E	
Cooling Capacity	kW	2.8	3.6	4.5	5.6	7.1	
Heating Capacity	kW	3.2	4.0	5.0	6.3	8.0	
Electrical Characteristics	Power Requirements	1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)					
	Power Consumption	kW	0.021	0.023	0.026	0.036	
Ceiling Panel Model		RBC-U31PGP(W)-E					
External Dimensions: Main Unit (Ceiling Panel)	Height	mm	256 (30)				
	Width	mm	840 (950)				
	Depth	mm	840 (950)				
Total Weight: Main Unit (Ceiling Panel)	kg	18 (4)		20 (4)			
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	800/730/680		930/830/790	1050/920/800	1290/920/800
	Motor Output	W	14			20	
Connecting Pipe	Gas Side	in	3/8		1/2		5/8
	Liquid Side	in	1/4			3/8	
	Drain Port (nominal dia.)		25 (Polyvinyl chloride tube)				
Sound Pressure Level (H/M/L)*	dba	30/29/27		31/29/27	32/29/27	35/31/28	

Model Number	MMU-	AP0274HP1-E	AP0304HP1-E	AP0364HP1-E	AP0484HP1-E	
Cooling Capacity	kW	8.0	9.0	11.2	14.0	
Heating Capacity	kW	9.0	10.0	12.5	16.0	
Electrical Characteristics	Power Requirements	1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)				
	Power Consumption	kW	0.036	0.043	0.088	0.112
Ceiling Panel Model		RBC-U31PGP(W)-E				
External Dimensions: Main Unit (Ceiling Panel)	Height	mm	256 (30)		319 (30)	
	Width	mm	840 (950)			
	Depth	mm	840 (950)			
Total Weight: Main Unit (Ceiling Panel)	kg	20 (4)		25 (4)		
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	1290/920/800	1320/1110/850	1970/1430/1070	2130/1430/1130
	Motor Output	W	20		68	72
Connecting Pipe	Gas Side	in	5/8			
	Liquid Side	in	3/8			
	Drain Port (nominal dia.)		25 (Polyvinyl chloride tube)			
Sound Pressure Level (H/M/L)	dba	35/31/28	38/33/30	43/38/32	46/38/33	



## 4-Way Compact Cassette



**Panel**  
**RBC-UM21PG(W)-E**  
**New flat panel design**

### Perfect for Grid System Ceilings

This compact unit (575 x 575 mm) fits perfectly into ceilings and matches standard architectural modules without the need to cut ceiling tiles.

The flaps fold tightly when operation stops, making its appearance smooth against the ceiling.

### Designed for Simple & Easy Installation and Maintenance

The slim design is only 256mm in height even when an electrical box is located inside the unit.

Easy installation is also possible using the panel adjust pocket. Use the 'adjust pocket' function for fine adjustments after installation.

Available for ceilings up to 3.5m in height.

The drain-checking hole makes it possible to check the drain pan through the side case.



Drain checking viewing cavity

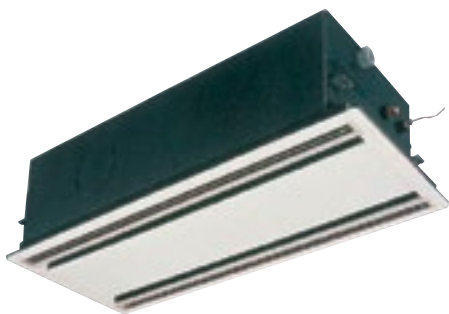


Available up to

3.5m

Model Number		MMU-	AP0077MH-E	AP0097MH-E	AP0127MH-E	AP0157MH-E	AP0187MH-E
Cooling Capacity		kW	2.2	2.8	3.6	4.5	5.6
Heating Capacity		kW	2.5	3.2	4.0	5.0	6.3
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)				
	Power Consumption	kW	0.016	0.025	0.027	0.030	0.052
Ceiling Panel Model			RBC-UM21(PG)W-E				
External Dimensions: Main Unit (Ceiling Panel)	Height	mm	256 (12)				
	Width	mm	575 (620)				
	Depth	mm	575 (620)				
Total Weight: Main Unit (Ceiling Panel)		kg	15 (2.5)				
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	552/462/378	570/468/378	594/504/402	660/552/468	840/642/522
	Motor Output	W	60				
Connecting Pipe	Gas Side	in	3/8			1/2	
	Liquid Side	in	1/4				
	Drain Port (nominal dia.)		VP20 (Polyvinyl chloride tube)				
Sound Pressure Level (H/M/L)*		dbA	37/33/29	38/33/29	38/34/30	40/35/31	47/39/34

## 2-Way Cassette



### Slim and Compact Unit

All ceiling panels share the same 680mm depth making installation easy.

Condensate drain pump included.

Available for ceilings up to 3.8m in height (0.8 to 3.2HP models).

Easy installation and fine adjustment using the 'adjust-cover' function.

Model Number	MMU-	AP0072WH1	AP0092WH1	AP0122WH1	AP0152WH1	AP0182WH1
Cooling Capacity	kW	2.2	2.8	3.6	4.5	5.6
Heating Capacity	kW	2.5	3.2	4.0	5.0	6.3
Electrical Characteristics	Power Requirements	1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)				
	Power Consumption	kW	0.029		0.030	0.044
Ceiling Panel Model		RBC-UW283PG(W)-E				RBC-UW803PG(W)-E
External Dimensions: Main Unit (Ceiling Panel)	Height	mm	295 (20)			345 (20)
	Width	mm	815 (1050)			1180 (1415)
	Depth	mm	570 (680)			
Total Weight: Main Unit (Ceiling Panel)	kg	19 (10)				26 (14)
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	554/498/450		600/534/450	900/750/618
	Motor Output	W	20			30
Connecting Pipe	Gas Side	in	3/8		1/2	
	Liquid Side	in	1/4			
	Drain Port (nominal dia.)		25 (Polyvinyl chloride tube)			
Sound Pressure Level (H/M/L)	dbA	34/32/30			35/33/30	

Model Number	MMU-	AP0242WH1	AP0272WH1	AP0302WH1	AP0362WH1	AP0482WH1	
Cooling Capacity	kW	7.1	8.0	9.0	11.2	14.0	
Heating Capacity	kW	8.0	9.0	10.0	12.5	16.0	
Electrical Characteristics	Power Requirements	1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)					
	Power Consumption	kW	0.054		0.064	0.076	0.088
Ceiling Panel Model		RBC-UW803PG(W)-E			RBC-UW1403PG(W)-E		
External Dimensions: Main Unit (Ceiling Panel)	Height	mm	345 (20)				
	Width	mm	1180 (1415)		1600 (1835)		
	Depth	mm	570 (680)				
Total Weight: Main Unit (Ceiling Panel)	kg	26 (14)			36 (14)		
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	1050/840/738		1260/900/780	1740/1434/1182	1800/1482/1230
	Motor Output	W	40		50	70	
Connecting Pipe	Gas Side	in	5/8				
	Liquid Side	in	3/8				
	Drain Port (nominal dia.)		25 (Polyvinyl chloride tube)				
Sound Pressure Level (H/M/L)	dbA	38/35/33		40/37/34	42/39/36	43/40/37	

## 1-Way Cassette



### Slim and Compact Unit

Designed for quiet operation.

Ideal for smaller rooms where one-way air distribution is required.

Able to blow air straight out.

Condensate drain pump included.

Long-life filters fitted as standard.

### Fresh Air Intake is Possible

Preparation/connection is possible with a circle duct flange.

Model Number		MMU-	AP0074YH1	AP0094YH1	AP0124YH1	AP0154YH1	AP0184YH1	AP0244YH1
Cooling Capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1
Heating Capacity		kW	2.5	3.2	4.0	5.0	6.3	8.0
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)					
	Power Consumption	kW	0.053			0.042	0.046	0.075
Ceiling Panel Model			RBC-UY135PG			RBC-US21PGE		
External Dimensions: Main Unit (Ceiling Panel)	Height	mm	235 (18)			200 (20)		
	Width	mm	850 (1050)			1000 (1230)		
	Depth	mm	400 (470)			710 (800)		
Total Weight: Main Unit (Ceiling Panel)		kg	22 (3.5)			21 (5.5)		22 (5.5)
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	540/480/420			750/690/630	780/720/660	1140/960/810
	Motor Output	W	22			30		
Connecting Pipe	Gas Side	in	3/8			1/2		5/8
	Liquid Side	in	1/4					3/8
	Drain Port (nominal dia.)		25 (Polyvinyl chloride tube)					
Sound Pressure Level (H/M/L)		dB(A)	42/39/34			37/35/32	38/36/34	45/41/37



## Super Slim Duct



### Super Slim

Only 210mm in height, this super slim unit makes it easy to install in narrow spaces.

### Drain Pump

Comes with built-in drain pump.

Model Number	MMD-	AP0076MPHY	AP0086MPHY	AP0096MPHY	AP0106MPHY	AP0126MPHY	AP0146MPHY
Cooling Capacity	kW	2.2	2.5	2.8	3.2	3.6	4.0
Heating Capacity	kW	2.5	2.8	3.2	3.6	4.0	4.5
Electrical Characteristics	Power Requirements	1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)					
	Power Consumption	kW	0.052			0.058	
External Dimensions:	Height	mm	210				
	Width	mm	700				
	Depth	mm	450				
Total Weight:	kg	16					
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	570/475/380			610/500/385	
	Motor Output	W	95				
	External Static Pressure	Pa	10-20-35-45 (4 steps)				
Connecting Pipe	Gas Side	in	3/8				
	Liquid Side	in	1/4				
	Drain Port (nominal dia.)		25 (Polyvinyl chloride tube)				
Sound Pressure Level (H/M/L)	dba	33/29/25				35/29/25	

Model Number	MMD-	AP0156MPHY	AP0176MPHY	AP0186MPHY	AP0206MPHY	AP0246MPHY	AP0276MPHY
Cooling Capacity	kW	4.5	5.0	5.6	6.3	7.1	8.0
Heating Capacity	kW	5.0	5.6	6.3	7.1	8.0	9.0
Electrical Characteristics	Power Requirements	1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)					
	Power Consumption	kW	0.066			0.069	0.076
External Dimensions:	Height	mm	210				
	Width	mm	900		1100		
	Depth	mm	450				
Total Weight:	kg	19			22		
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	780/580/420		1000/870/470	1060/910/760	
	Motor Output	W	95				
	External Static Pressure	Pa	10-20-35-45 (4 steps)				
Connecting Pipe	Gas Side	in	1/2		5/8		
	Liquid Side	in	1/4		3/8		
	Drain Port (nominal dia.)		25 (Polyvinyl chloride tube)				
Sound Pressure Level (H/M/L)	dba	33/27/22			37/33/30		38/34/31

## Concealed Duct



### High Static Pressure

External static pressure can be raised as high as 120Pa, so that all areas of the room can be reached for even temperature distribution, no matter how complex the layout.

### High-lift Drain Pump

The drain piping can be raised up to 27cm for the drain port.

Model Number	MMD-	AP0076BHP1	AP0096BHP1	AP0126BHP1	AP0156BHP1	AP0186BHP1
Cooling Capacity	kW	2.2	2.8	3.6	4.5	5.6
Heating Capacity	kW	2.5	3.2	4.0	5.0	6.3
Electrical Characteristics	Power Requirements	1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)				
	Power Consumption	kW	0.038	0.043	0.062	
External Dimensions	Height	mm	275			
	Width	mm	700			
	Depth	mm	750			
Total Weight	kg	23				
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	540/450/360	570/480/390	800/660/540	
	Motor Output	W	150			
	External Static Pressure (Factory Setting)	Pa	30			
	External Static Pressure	Pa	30-40-50-65-80-100-120 (7 Steps)			
Connecting Pipe	Gas Side	in	3/8		1/2	
	Liquid Side	in	1/4			
	Drain Port (nominal dia.)		25 (Polyvinyl chloride tube)			
Sound Pressure Level (H/M/L)	dBa	29/26/23	30/26/23		33/29/25	

Model Number	MMD-	AP0246BHP1	AP0276BHP1	AP0306BHP1	AP0366BHP1	AP0486BHP1
Cooling Capacity	kW	7.1	8.0	9.0	11.2	14.0
Heating Capacity	kW	8.0	9.0	10.0	12.5	16.0
Electrical Characteristics	Power Requirements	1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)				
	Power Consumption	kW	0.077	0.094	0.172	0.198
External Dimensions	Height	mm	275			
	Width	mm	1000		1400	
	Depth	mm	750			
Total Weight	kg	30			40	
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	1200/990/870	1260/1110/930	1920/1620/1380	2100/1740/1500
	Motor Output	W	150			250
	External Static Pressure (Factory Setting)	Pa	40			50
	External Static Pressure	Pa	30-40-50-65-80-100-120 (7 Steps)			
Connecting Pipe	Gas Side	in	5/8			
	Liquid Side	in	3/8			
	Drain Port (nominal dia.)		25 (Polyvinyl chloride tube)			
Sound Pressure Level (H/M/L)	dBa	36/31/27			40/36/33	

## Concealed Duct - Hi Static



### Design Flexibility

Satisfies all your design needs.

Compatible with external static pressures up to 200 Pa.

Can be equipped with the following options:

- high-efficiency filter (65, 90)
- drain pump kit

### Construction Characteristics

Seven stage switchable static pressure.

Easy service and installation.

Inspection hole enables easy access and maintenance.

Model Number		MMD-	AP0186HP1	AP0246HP1	AP0276HP1	AP0366HP1	AP0486HP1
Cooling Capacity		kW	5.6	7.1	8.0	11.2	14.0
Heating Capacity		kW	6.3	8.0	9.0	12.5	16.0
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)				
	Power Consumption	kW	0.085	0.115		0.198	0.230
External Dimensions	Height	mm	298				
	Width	mm	1000			1400	
	Depth	mm	750				
Total Weight		kg	34			43	
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	800/660/550	1200/970/800		1920/1560/1340	2100/1740/1420
	Motor Output	W	250			350	
	External Static Pressure (Factory Setting)	Pa	100				
	External Static Pressure	Pa	50-75-125-150-175-200 (7 Steps)				
Connecting Pipe	Gas Side	in	1/2	5/8			
	Liquid Side	in	1/4	3/8			
	Drain Port (nominal dia.)		25 (Polyvinyl chloride tube)				
Sound Pressure Level (H/M/L)		dba	37/32/30	38/34/31		41/37/34	42/40/35



## Concealed Duct - Slim Hi Static



### Functional Design

Slim 210mm in height for greater application flexibility.  
4 step static pressure setup.  
Concealed installation within a ceiling void.  
Fresh air intake available.

### Slim & Quiet

Pleasant comfort throughout the room.  
Can be used with any style of air diffuser.  
Quiet yet powerful operation.

### Built-in Condensate Pump

850mm lift from base of unit

Model Number		MMD-	AP0074SPH1	AP0094SPH1	AP0124SPH1	AP0154SPH1
Cooling Capacity		kW	2.2	2.8	3.6	4.5
Heating Capacity		kW	2.5	3.2	4.0	5.0
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)			
	Power Consumption	kW	0.039		0.043	0.045
External Dimensions	Height	mm	210			
	Width	mm	845			
	Depth	mm	645			
Total Weight		kg	22			23
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	540/470/400		600/520/450	690/600/520
	Motor Output	W	60			
	External Static Pressure	Pa	6-16-31-46 (4 Steps)		5-15-30-45 (4 Steps)	
Connecting Pipe	Gas Side	in	3/8			1/2
	Liquid Side	in	1/4			
	Drain Port (nominal dia.)		25 (Polyvinyl chloride tube)			
Sound Pressure Level (H/M/L)	Under Air Inlet	dbA	36/33/30		35/35/32	39/36/33
	Back Air Inlet	dbA	28/26/24		29/27/25	32/30/28

Model Number		MMD-	AP0184SPH1	AP0244SPH1	AP0274SPH1
Cooling Capacity		kW	5.6	7.1	8.0
Heating Capacity		kW	6.3	8.0	9.0
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)		
	Power Consumption	kW	0.054	0.105	
External Dimensions	Height	mm	210		
	Width	mm	845	1140	
	Depth	mm	645		
Total Weight		kg	23	29	
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	780/680/580	1080/1000/900	
	Motor Output	W	60	120	
	External Static Pressure	Pa	4-14-29-44 (4 Steps)	2-12-22-42 (4 Steps)	
Connecting Pipe	Gas Side	in	1/2	5/8	
	Liquid Side	in	1/4	3/8	
	Drain Port (nominal dia.)		25 (Polyvinyl chloride tube)		
Sound Pressure Level (H/M/L)	Under Air Inlet	dbA	40/38/36	49/47/44	
	Back Air Inlet	dbA	33/31/29	38/36/33	

## Under Ceiling



### Comfortable Ambience

Quiet Operation - new design reduces noise level to half that of conventional units.

Flap Control - The airflow angle is automatically set to the most suitable setting according to your cooling or heating needs, and an automatic swing mode enables airflow to reach all areas of the room to create a comfortable ambience.

Model Number		MMC-	AP0157HP1	AP0187HP1	AP0247HP1
Cooling Capacity		kW	4.5	5.6	7.1
Heating Capacity		kW	5.0	6.3	8.0
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)		
	Power Consumption	kW	0.033	0.034	0.067
External Dimensions	Height	mm	235		
	Width	mm	950	1270	
	Depth	mm	690		
Total Weight		kg	23	29	
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	840/690/540	960/720/540	1440/1020/750
	Motor Output	W	94		
Connecting Pipe	Gas Side	in	1/2		5/8
	Liquid Side	in	1/4		3/8
	Drain Port (nominal dia.)		20 (Polyvinyl chloride tube)		
Sound Pressure Level (H/M/L)		dbA	36/34/28	37/35/28	41/36/29

Model Number		MMC-	AP0277HP1	AP0367HP1	AP0487HP1
Cooling Capacity		kW	8.0	11.2	14.0
Heating Capacity		kW	9.0	12.5	16.0
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)		
	Power Consumption	kW	0.067	0.083	
External Dimensions	Height	mm	235		
	Width	mm	1270	1586	
	Depth	mm	690		
Total Weight		kg	29	35	
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	1440/1020/750	1860/1350/1020	1860/1530/1200
	Motor Output	W	94	139	
Connecting Pipe	Gas Side	in	5/8		
	Liquid Side	in	3/8		
	Drain Port (nominal dia.)		20 (Polyvinyl chloride tube)		
Sound Pressure Level (H/M/L)		dbA	41/36/29	44/38/32	44/41/35

## High Wall Series 3 & 7



### Elegant and Slim

This classic high wall is elegant and slim; it can easily blend in with any room interior.

Total comfort is granted, thanks to the 70° directional auto-swing louvre that provides uniform air distribution.

Refrigerant piping can be installed from three different directions.

Wireless remote control included.

Model Number (Series 3)		MMK-	AP0073H1	AP0093H1	AP0123H1	AP0153H1	AP0183H1	AP0243H1
Cooling Capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1
Heating Capacity		kW	2.5	3.2	4.0	5.0	6.3	8.0
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)					
	Power Consumption	kW	0.018	0.021		0.043		0.050
External Dimensions:	Height	mm	320					
	Width	mm	1050					
	Depth	mm	228					
Total Weight:		kg	15					
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	570/450/390	600/480/390		840/660/540		1020/750/570
	Motor Output	W	30					
Connecting Pipe	Gas Side	in	3/8			1/2		5/8
	Liquid Side	in	1/4					3/8
	Drain Port (nominal dia.)		16 (Polyvinyl chloride tube)					
Sound Pressure Level (H/M/L)		dbA	35/31/28	37/32/28		41/36/33		46/39/34



Model Number (Series 7)		MMK-	AP0057HP-E1	AP0077HP-E1	AP0097HP-E1	AP0127HP-E1
Cooling Capacity		kW	1.7	2.2	2.8	3.6
Heating Capacity		kW	1.9	2.5	3.2	4.0
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V) (Separate power supply for indoor units required)			
	Power Consumption	kW	0.013	0.015	0.016	0.017
External Dimensions	Height	mm	293			
	Width	mm	798			
	Depth	mm	230			
Total Weight		kg	11			
Fan Unit	Standard Air Flow (H-L)	m <sup>3</sup> /h	455 - 270	480 - 270	510 - 270	540 - 270
Connecting Pipe	Gas Side	in	3/8			
	Liquid Side	in	1/4			
	Drain Port (nominal dia.)		16 (Polyvinyl chloride tube)			
Sound Pressure Level (H - L)		dbA	33 - 25	35 - 25	36 - 25	37 - 25

## Floor Console



### Features

Elegant & simple in design makes this unit a perfect fit for shops, office buildings and luxury apartments.

Bottom flow functionality ensures comfort for an advantage in heating and floor warming.

Refrigerant piping can be installed from three different directions.

Model Number		MML-	AP0074NH1	AP0094NH1	AP0124NH1	AP0154NH1	AP0184NH1
Cooling Capacity		kW	2.2	2.8	3.6	4.5	5.6
Heating Capacity		kW	2.5	3.2	4.0	5.0	6.3
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)				
	Power Consumption	kW	0.02021		0.025	0.034	0.052
External Dimensions	Height	mm	600				
	Width	mm	700				
	Depth	mm	220				
Total Weight		kg	17				
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	510/366/282		552/408/324	624/468/384	726/528/426
	Motor Output	W	41				
Connecting Pipe	Gas Side	in	3/8			1/2	
	Liquid Side	in	1/4				
	Drain Port (nominal dia.)		16 (Polyvinyl chloride tube)				
Sound Pressure Level (H/M/L)		dbA	38/32/26		40/34/29	43/37/31	47/40/34



## Floor Standing Cabinet



### Simple & Compact Design

Under-window mounting does not block lighting.

Indoor unit size of 2.2 to 7.1kW models are the same.

### Air Exits from Front or Top

Distribution can be reversed to suit occupant preference.

Air blown from front panel  
(factory default)



Air blown from top



Model Number		MML-	AP0074H1	AP0094H1	AP0124H1	AP0154H1	AP0184H1	AP0244H1	
Cooling Capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	
Heating Capacity		kW	2.5	3.2	4.0	5.0	6.3	8.0	
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)						
	Power Consumption	kW	0.056		0.092		0.102		
External Dimensions	Height	mm	630						
	Width	mm	950						
	Depth	mm	230						
Total Weight		kg	37				40		
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	480/420/360		900/780/650		1080/930/780		
	Motor Output	W	45				70		
Connecting Pipe	Gas Side	in	3/8			1/2		5/8	
	Liquid Side	in	1/4					3/8	
	Drain Port (nominal dia.)		20 (Polyvinyl chloride tube)						
Sound Pressure Level (H/M/L)		dba	39/37/35		45/41/38		49/44/39		

## Floor Standing Concealed

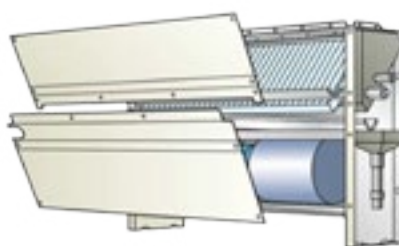


### Cool Air Makes for a Pleasant Indoor Environment

Install it under a window and air-condition any room effectively.

### Easy Maintenance

Simplified design of fan and drainage pipe eases maintenance.



Model Number		MML-	AP0074BH1	AP0094BH1	AP0124BH1	AP0154BH1	AP0184BH1	AP0244BH1		
Cooling Capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1		
Heating Capacity		kW	2.5	3.2	4.0	5.0	6.3	8.0		
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)							
	Power Consumption	kW	0.056			0.090		0.095		
External Dimensions	Height	mm	6600							
	Width	mm	745			1045				
	Depth	mm	220							
Total Weight		kg	21			29				
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	460/400/300			740/600/490		950/790/640		
	Motor Output	W	19			70				
Connecting Pipe	Gas Side	in	3/8			1/2		5/8		
	Liquid Side	in	1/4						3/8	
	Drain Port (nominal dia.)		20 (Polyvinyl chloride tube)							
Sound Pressure Level (H/M/L)		dB(A)	36/34/32					42/37/33		

## Floor Standing



### Thin Profile Suits Interior Design

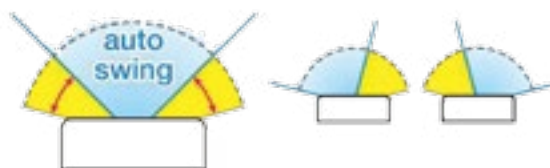
Slender, space-saving (1.7 - 8.0HP)

### Wide Outlet

Corner location is also possible with right and left auto swing.

Set the vertical angle manually.

The unit offers high air flow rates and superior air throw values.



Model Number		MMF-	AP0156H1	AP0186H1	AP0246H1
Cooling Capacity		kW	4.5	5.6	7.1
Heating Capacity		kW	5.0	6.3	8.0
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)		
	Power Consumption	kW	0.055		0.089
External Dimensions	Height	mm	1750		
	Width	mm	600		
	Depth	mm	210		
Total Weight		kg	46		47
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	900/780/660		1200/990/840
	Motor Output	W	62		
Connecting Pipe	Gas Side	in	1/2		5/8
	Liquid Side	in	1/4		3/8
	Drain Port (nominal dia.)		20 (One Side of Male Screw)		
Sound Pressure Level (H/M/L)		dB(A)	46/42/37		49/45/39

Model Number		MMF-	AP0276H1	AP0366H1	AP0486H1
Cooling Capacity		kW	8.0	11.2	14.0
Heating Capacity		kW	9.0	12.5	16.0
Electrical Characteristics	Power Requirements		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)		
	Power Consumption	kW	0.089	0.135	0.160
External Dimensions	Height	mm	1750		
	Width	mm	600		
	Depth	mm	210	390	
Total Weight		kg	47	62	
Fan Unit	Standard Air Flow (H/M/L)	m <sup>3</sup> /h	1200/990/840	1920/1620/1380	2160/1730/1560
	Motor Output	W	62	109	
Connecting Pipe	Gas Side	in	5/8		
	Liquid Side	in	3/8		
	Drain Port (nominal dia.)		20 (One Side of Male Screw)		
Sound Pressure Level (H/M/L)		dB(A)	49/45/39	51/46/41	54/49/44

## Heat Exchanger with DX Coil



**Remote Controller  
NRC-01HE**

### Greater Comfort and Reduce Load

Functionality built into the cooling system reduces load on cooling beyond that of the heat exchanger itself. This improves air quality and ensures maximum comfort throughout the room being cooled.

### Flexible Control

Supply and exhaust fan speed ratios can be changed for improved air volume control that best matches the needs of the environment and location.

### Free Cooling at Night

When the air outdoor is cooler at night, the system expels warm air from the room. This reduces the air conditioning load the next day for improved energy efficiency.

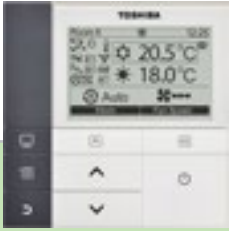
Model	Height (mm)	Width (mm)	Depth (mm)	Weight (KG)	Airflow (L/S)	Duct Spigot (mm)	Number of Cores	Electrical Supply	Temperature Exchange %	Cooling Capacity (kW)	Heating Capacity (kW)
MMD-VN502HEXE	430	1140	1690	84	139	200	2	230VAC 50HZ	70.5	4.10 (1.3)	5.53 (2.33)
MMD-VN802HEXE	430	1189	1739	100	222	250	2	230VAC 50HZ	70.0	6.56 (2.06)	8.61 (3.61)

## Standard Heat Exchanger

Model	Height (mm)	Width (mm)	Depth (mm)	Weight (KG)	Airflow (L/S)	Duct Spigot (mm)	Number of Cores	Electrical Supply	Temperature Exchange %	Operational Range (OA)	Operational Range (RA)
VN-M150HE	290	900	900	36	42	100	2	230 VAC 50-60 Hz	81.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M250HE	290	900	900	36	69	150	2	230 VAC 50-60 Hz	78	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M350HE	290	900	900	38	97	150	2	230 VAC 50-60 Hz	74.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M500HE	350	1140	1140	53	140	150	2	230 VAC 50-60 Hz	76.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M650HE	350	1140	1140	53	181	150	2	230 VAC 50-60 Hz	75	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M800HE	400	1189	1189	70	222	250	2	230 VAC 50-60 Hz	76.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M1000HE	400	1189	1189	70	278	250	2	230 VAC 50-60 Hz	73.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M1500HE	810	1189	1189	143	417	250	4	230 VAC 50-60 Hz	76.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less
VN-M2000HE	810	1189	1189	143	555	250	4	230 VAC 50-60 Hz	73.5	-15°C to +43°C R/H 80% or less	+5°C to 40°C R/H 80% or less



## BMS Compatible Controls



### Wired Controller RBC-AMS54E-ES

- Backlight
  - Weekly schedule
- Note:** Some features are indoor dependent.



### Basic Controller NRC-01HE

- Dedicated HEX



### Intesis Wifi Controller TO-RC-WIFI-1



### Smart Manager BMS-SM1280ETLE BMS-SM1280HTLE



### Remote Sensor TCB-TC21LE2



### Wireless remote controller kit & sensor unit (receiver unit)

\* The wireless remote cannot be connected to concealed duct high static pressure type or fresh air intake indoor unit type.



### Integral Receiver RBC-AX32U(W)-E

For 4-way air discharge cassette.



### Wireless Kit/Receiver RBC-AX32UM(W)-E

For 4-way air discharge cassette, compact 4-way cassette (600x600), 2-way air discharge cassette, ceiling, concealed duct standard, slim duct, floor standing cabinet, floor standing, 1-way discharge cassette.



### Integral Receiver RBC-AX32CE2

For ceiling, 1-way air discharge cassette.



### Integral Receiver RBC-AX23UW(W)-E

For 2-way air discharge cassette.

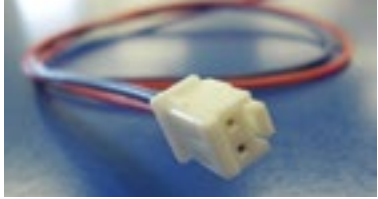
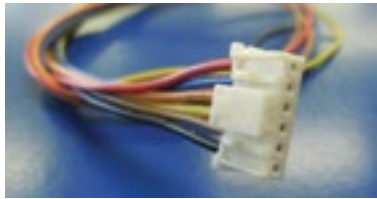
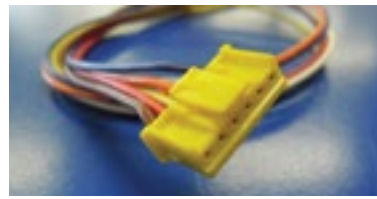





### Occupancy Sensor TCB-SIR41UM-E

For 7 series 4-way air discharge compact cassette.

\*BACnet®, Lonworks®, modbus BMS controls also available.

## Connectors

<p><b>APPEARANCE</b></p>			
<p><b>PART NUMBER</b></p>	<p><b>TCB-KBCN32VEE (CN32)</b></p>	<p><b>TCB-KBCN60OPE (CN60)</b></p>	<p><b>TCB-KBCN61HAE (CN61)</b></p>
<p><b>FUNCTION</b></p>	<p><b>External Vent Control Output</b> Determined by DN Code. Either it can provide a 12Volt DC output when the Indoor Unit is running or it can provide a 12Volt output when the 'Vent' function is chosen on the wired controller.</p>	<p><b>Operation Status Output</b> Provides a 12Volt DC output for each of the following:</p> <ul style="list-style-type: none"> <li>• Outdoor Unit in Defrost</li> <li>• Compressor is running (also known as 'Thermo On')</li> <li>• Indoor Unit is cooling (cooling mode or dehumidify mode)</li> <li>• Indoor Unit is heating</li> <li>• Indoor Unit has the fan running</li> </ul>	<p><b>Operation Control Inputs and Status Output</b> Provides control inputs and status outputs (12Volt DC) as follows:</p> <ul style="list-style-type: none"> <li>• On Off Control (INPUT)</li> <li>• Wired controller On Off Lock/Unlock (INPUT)</li> <li>• On Off Status (OUTPUT)</li> <li>• Alarm Status (OUTPUT)</li> <li>• Setting Cooling Set Temp to Max, Setting Heating Set Temp to Min (INPUT)</li> </ul>
<p><b>APPEARANCE</b></p>			
<p><b>PART NUMBER</b></p>	<p><b>TCB-KBCN70OAE (CN70)</b></p>	<p><b>TCB-KBCN73DEE (CN73)</b></p>	<p><b>TCB-KBCN80EXE (CN80)</b></p>
<p><b>FUNCTION</b></p>	<p><b>External Alarm Input</b> Allows a flashing error symbol to be displayed on the wired controller even when the machine is not running thus allowing the controller to display an error on a third party piece of equipment.</p>	<p><b>Forced Compressor Off Input</b> Enables the compressor to be forced off.</p>	<p><b>Outside Error Input</b> Enables the compressor to be stopped and an error message to be displayed on the wired controller as follows:</p> <ul style="list-style-type: none"> <li>• If the input is made for more than 3 seconds but less than 60 seconds the compressor is forced off.</li> <li>• If the input is made for more than 60 seconds the compressor is forced off and an 'L30' error message is displayed on the wired controller referencing the unit with the input.</li> </ul>

## Warranty

In recognition of the high reliability of Toshiba products we have now increased our warranty term from 1 year to 5 years against both parts and labour. Warranty is valid only to applications with the specific purpose of heating and cooling for human comfort. There is no warranty for any NON standard applications. Warranty is conditional upon the design, installation and use of the VRF system complying with the conditions set out in the applicable design and installation manuals.



# TOSHIBA

## HEAT PUMPS

Think Toshiba. Think reliability.

Notice: Toshiba is committed to continuously improving its product to ensure the highest quality and reliability standards, and to meet local regulations and market requirements.

All features and specifications subject to change without prior notice.

Note: All images provided in this catalogue are used for illustration purposes only.

Date: September 2017

Equipment rated in accordance with MEPS 3823.2-2011 E&OE

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