

TOSHIBA

HEAT PUMPS

Think Toshiba. Think reliability.

Better Air Solutions

SMMS

SUPER MODULAR MULTI SYSTEM



SHRM

SUPER HEAT RECOVERY MULTI



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.



TABLE OF CONTENTS

SMMS-e Outdoor Unit Overview	4 - 7
SMMS-e Outdoor Modules	8
SMMS-e Specifications	9 - 11
SHRM-e Outdoor Unit Overview	12 - 15
SHRM-e Outdoor Modules	16
SHRM-e Specifications	17 - 19
Indoor Unit Product Line Up	20 - 21
Cassette Type Indoor Specifications	22 - 25
Ducted Type Indoor Specifications	26 - 29
Under Ceiling Type Indoor Specifications	30
Hi Wall Type Indoor Specifications	31
Floor Type Indoor Specifications	32 - 35
Heat Exchanger Specifications	36
Controllers	37 - 38
Connectors	39
Warranty Information	39

ABOUT TOSHIBA'S SMMS-e

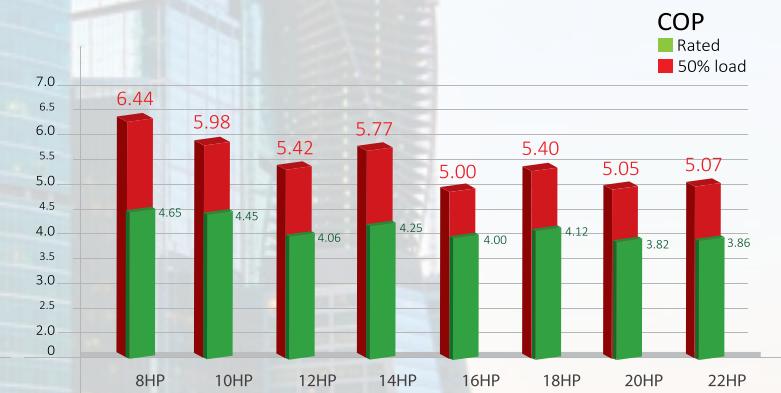
At Toshiba, we believe that innovation should be the path to a better, more efficient future. The expectations of an air conditioning system have evolved in the last few years. In today's world, advanced comfort has to go hand in hand with reduced energy and maintenance cost, combined with maximised simplicity and operations flexibility.

With Toshiba's SMMS-e, our commercial HVAC system for all building applications is the right answer to all these requirements. It encompasses all of the innovations, experience and knowledge of the past and utilises new technologies to create a system that achieves maximum comfort and convenience like never before. The SMMS-e has been designed and developed upon the pillars of **excellence**, **expansion** and **experience**.

INNOVATIVE COMPRESSOR TECHNOLOGY

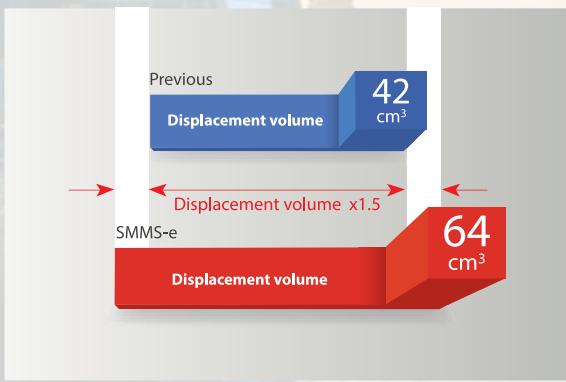
GREATER EFFICIENCY PERFORMANCE

Toshiba's infinitely variable, inverter driven control can continually adjust in real time, the operating speed of the compressors. This ensures that the capacity output precisely matches that of the demand from the end user. The advantages of this control are optimised further by incorporating Toshiba's in-house designed all inverter twin rotary compressors. The twin rotary design is one of the key technologies that has been continually developed by Toshiba to ensure maximum performance and efficiency. This enables the SMMS-e system to achieve class leading EER and COP efficiency values, whilst maintaining Toshiba's reputation of reliability.



INCREASED COMPRESSOR DISPLACEMENT

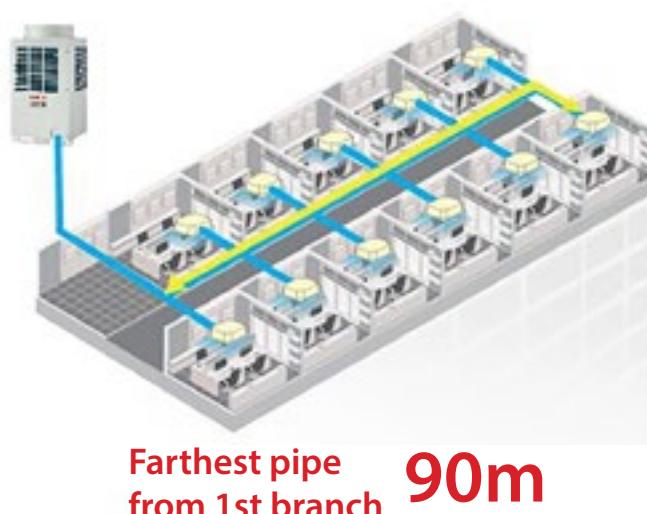
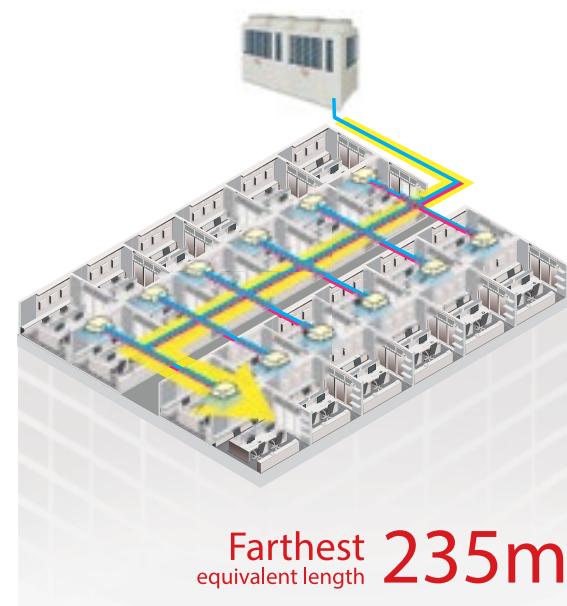
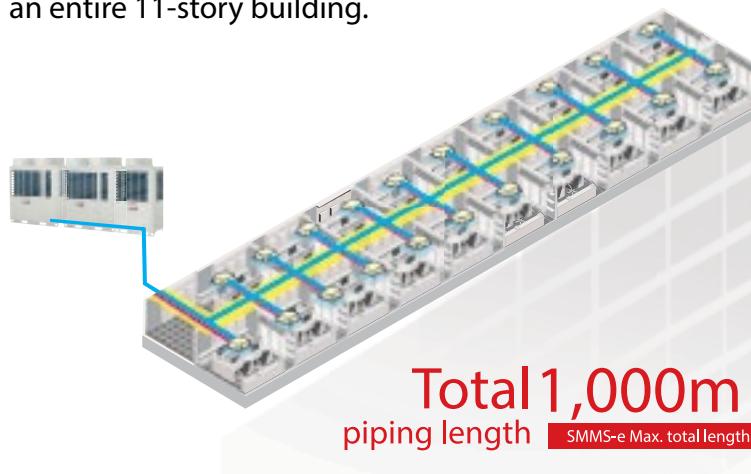
The increase in compressor displacement extends the compressor's capacity output. One single unit with two compressors can now achieve a capacity output of up to 61.5kW (22 HP). With an increase in operation range and more precise control, this means more efficiency, reduced running costs and lighter units.



EXPANDED INSTALLATION FLEXIBILITY

The compact design of the outdoor units give increased performance that defies their compact module size. This delivers greater freedom in layout design and minimises weight-related restrictions and allows for quicker installation.

- Very compact design with reduced footprint.
- Capacity up to 56kW (20HP) can be covered with a single module, reducing pipe work and overall installation time.
- Expanding the maximum combination up to 157kW (56HP) in one system, with up to 64 connectable indoor units.
- Maximum piping length of 1000 metres, farthest equivalent length 235 metres.
- Maximum vertical distance between indoor units, which reaches up to 40 metres, equal to an entire 11-story building.

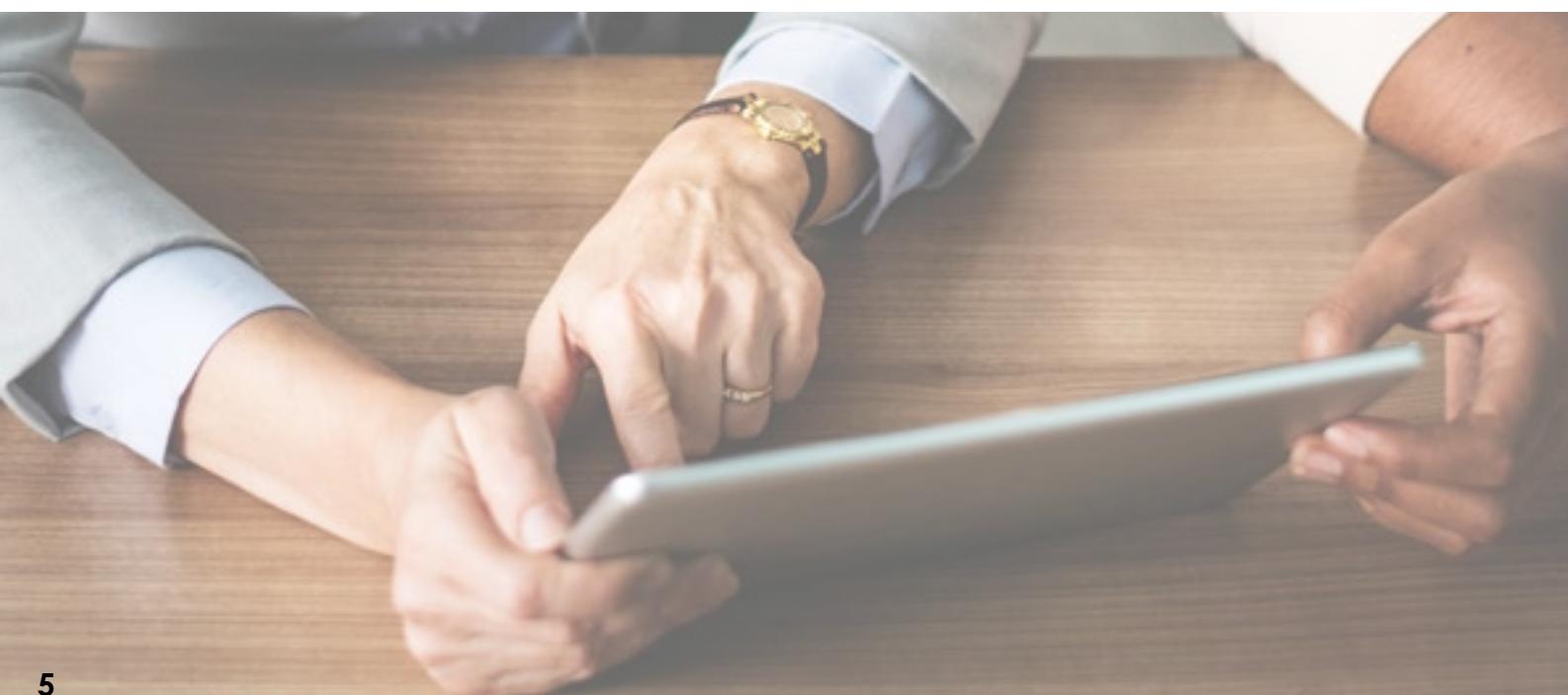
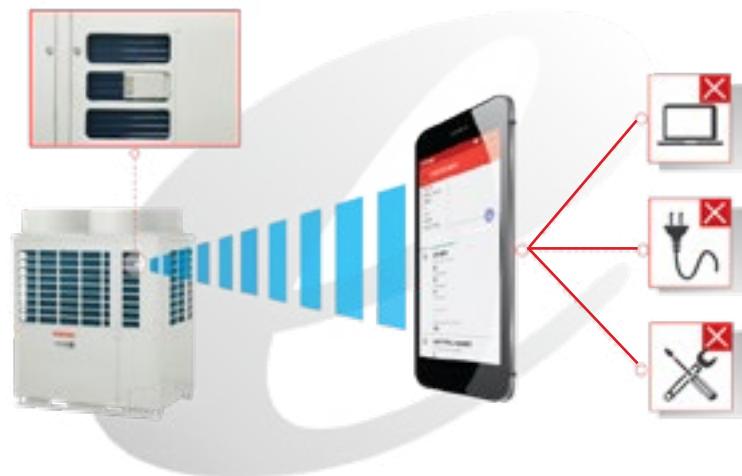


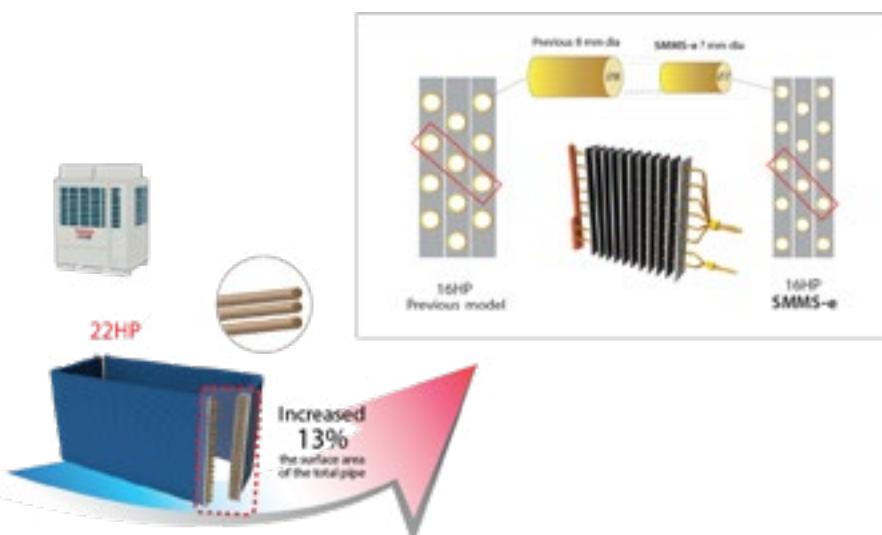
WAVE TOOL

The SMMS-e Wave Tool allows the user to read and write data directly from the outdoor unit using only their smart phone. Therefore mitigating the need to connect a PC or gaining access to the control board of the outdoor unit.

This tool, will allow the service and commissioning engineer to instruct and obtain key system information. This will not only simplify the commissioning of the system and the amount of time spent on-site, but also allows the servicing engineer the ability to quickly and easily send key system data via e-mail back to the office for analysis.

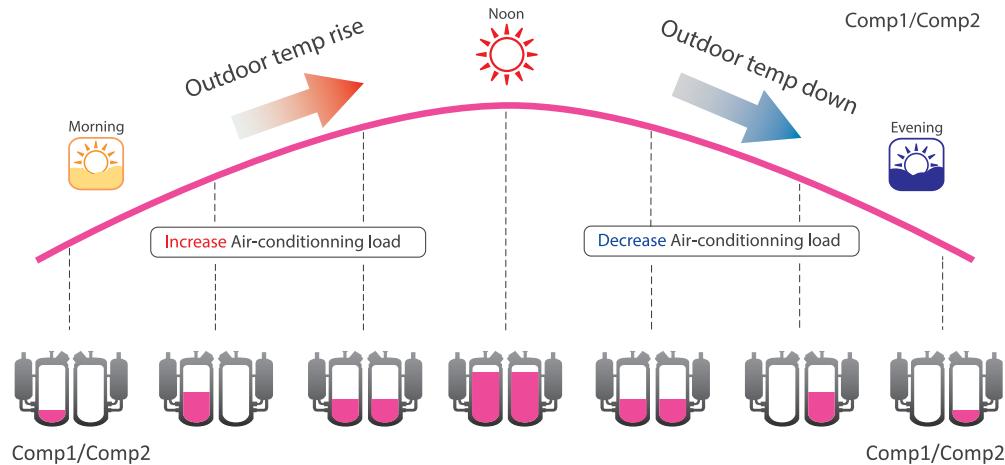
- Safe and quick configuration of the system via an Android or iOS compatible device.
- No requirement to connect directly to the system.
- Using Near Field Technology allows quick and wireless data transfer between two compatible devices.
- Obtain product data fault history, system data and test operation results via the unique monitoring function.





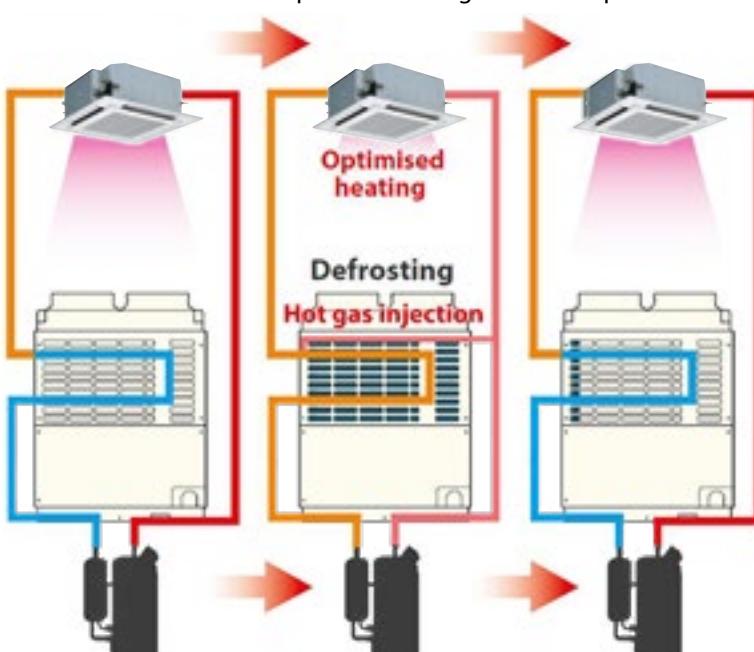
DUTY CYCLE ROTATIONAL CONTROL

The duty cycle rotational control in SMMS-e is designed to improve system reliability by controlling the operation of each compressor to work equally under variable conditions.



How does it work?

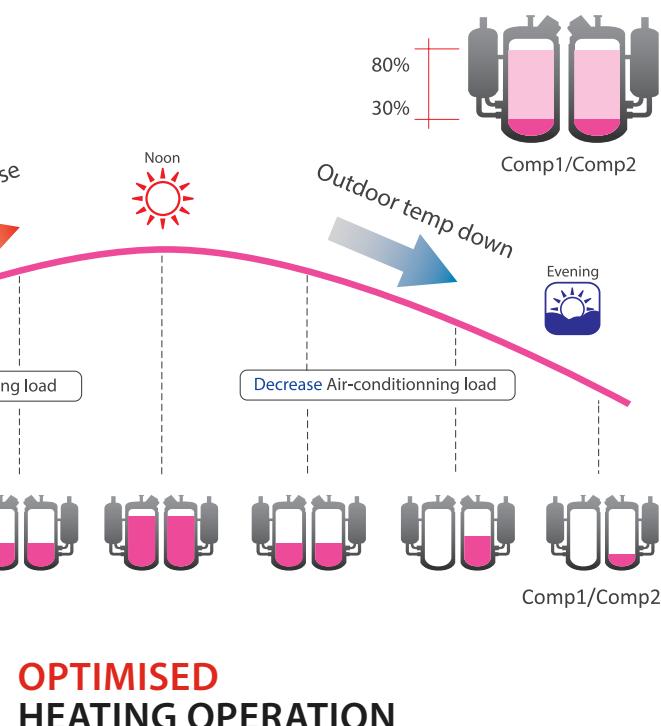
The SMMS-e system incorporates a control algorithm based on continually monitoring the status of the outdoor coil. Once the control senses that the outdoor coil is beginning to frost, the hot gas by-pass operation will start, melting any frost, while also allowing the indoor units to continue to provide heating to the occupant.



HEAT EXCHANGER

Toshiba's 3-row heat exchanger design, with reduced pipe size from 8mm to 7mm and increased total number of passes, improves both system performance and efficiency.

While the 3-row heat exchanger design allows the outdoor unit to automatically select the most suitable heat exchanger size and precisely matching the indoor capacity load, its 4-sided design ensures maximum possible flow rate across the entire coil, improving system efficiency.



OPTIMISED HEATING OPERATION

The SMMS-e range has the ability to extend and in many cases eliminate the requirement for a full outdoor defrost operation. This feature is based on a hot gas by-pass control, which when activated allows the compressors to provide the outdoor coil with an uninterrupted supply of high temperature refrigerant, whilst also extending the operation running time of the indoor units.

An additional benefit of this feature is that the detection accuracy of when and for how long an outdoor defrost should occur is greatly increased. This ensures that the operation of the system is optimised so that the heating output to the indoor rooms is maintained at a comfortable and continuous level.

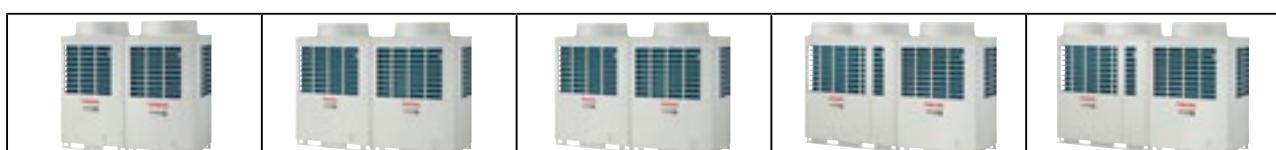
SMMS-e OUTDOOR MODULES (2 PIPE)



Model (MMY)	MAP0806HT8P-A	MAP1006HT8P-A	MAP1206HT8P-A	MAP1406HT8P-A	MAP1606HT8P-A
HP	8	10	12	14	16
Capacity kW (cooling/heating)	22.4	28.0	33.5	40.0	45.0
	25.0	31.5	37.5	45.0	50.0



Model (MMY)	MAP1806HT8P-A	MAP2006HT8P-A	MAP2206HT8P-A	MAP2416HT8P-A	MAP2616HT8P-A
HP	18	20	22	24 = 12 + 12	26 = 14 + 12
Capacity kW (cooling/heating)	50.4	56.0	61.5	67.0	73.5
	56.0	63.0	64.0	75.0	82.5



Model (MMY)	MAP2816HT8P-A	MAP3016HT8P-A	MAP3216HT8P-A	MAP3416HT8P-A	MAP3616HT8P-A
HP	28 = 16 + 12	30 = 16 + 14	32 = 16 + 16	34 = 18 + 16	36 = 20 + 16
Capacity kW (cooling/heating)	78.5	85.0	90.0	95.4	101.0
	87.5	95.0	100.0	106.0	113.0



Model (MMY)	MAP3816HT8P-A	MAP4016HT8P-A	MAP4216HT8P-A	MAP4416HT8P-A	MAP4616HT8P-A
HP	38 = 22 + 16	40 = 20 + 20	42 = 22 + 20	44 = 22 + 22	46 = 16 + 16 + 14
Capacity kW (cooling/heating)	106.4	112.0	118.5	123.5	130.0
	119.0	126.0	132.5	137.5	145.0



Model (MMY)	MAP4816HT8P-A	MAP5016HT8P-A	MAP5216HT8P-A	MAP5416HT8P-A	MAP5616HT8P-A
HP	48 = 16 + 16 + 16	50 = 18 + 16 + 16	52 = 20 + 16 + 16	54 = 22 + 16 + 16	56 = 20 + 20 + 16
Capacity kW (cooling/heating)	135.0	140.4	146.0	152.0	157.0
	150.0	156.0	163.0	171.0	176.0

SMMS-e OUTDOOR UNIT SPECIFICATIONS

2 PIPE

3 Phase 8 - 12HP MODEL		UNIT	TECHNICAL SPECIFICATIONS			
			8HP	10HP	12HP	
Model Name		50Hz	MMY-MAP806HT8P-A	MMY-MAP1006HT8P-A	MMY-MAP1206HT8P-A	
Cooling Capacity * ¹		kW	22.4	28.0	33.5	
Heating Capacity * ¹		kW	25.0	31.5	37.5	
Running Current		Amp	8.8	12.1	15.5	
Power Supply		ph-Hz-V	3-phase 50Hz 380-415V			
Air flow		l/s	2694	2694	3389	
External Static Pressure Available		Pa	60		50	
Efficiency	Cooling	EER	4.04	3.64	3.35	
	Heating	COP	4.52	4.25	3.89	
External Dimensions H/W/D (Weight)		mm (kg)	1830 x 990 x 780 (242kg)			
Refrigerant Piping Specifications	Connecting Port Diameter	Gas Side (OD)	in	Brazed - 3/4"	Brazed - 7/8"	
		Liquid Side(OD)	in	Flare - 1/2"		
Max. no. of connected indoor units			18	22	27	
Sound pressure level (cooling/heating)		dbA	55/56	57/58	59/61	

*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.



SMMS-e OUTDOOR UNIT SPECIFICATIONS

2 PIPE

3 Phase 14-16HP MODEL		UNIT	TECHNICAL SPECIFICATIONS		
Equivalent HP			14HP	16HP	
Model Name		50Hz	MMY-MAP1406HT8P-A	MMY-MAP1606HT8P-A	
Cooling Capacity * ¹		kW	40.0	45.0	
Heating Capacity * ¹		kW	45.0	50.0	
Running Current		Amp	19.5	22.4	
Power Supply		ph-Hz-V	3-phase 50Hz 380-415V		
Air flow		l/s	3389	3500	
External Static Pressure Available		Pa	50	40	
Efficiency	Cooling	EER	3.25	4.02	
	Heating	COP	3.15	3.88	
External Dimensions H/W/D (Weight)		mm (kg)	1830 x 1210 x 780 (300kg)		
Refrigerant Piping Specifications	Connecting Port Diameter	Gas Side (OD)	in	Brazed 1-1/8"	
		Liquid Side(OD)	in	Flare 5/8"	
Max. no. of connected indoor units			31	36	
Sound pressure level (cooling/heating)		dba	60/62	62/64	

*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.



SMMS-e OUTDOOR UNIT SPECIFICATIONS

2 PIPE

3 Phase 18-22HP MODEL		UNIT	TECHNICAL SPECIFICATIONS			
Equivalent HP			18HP	20HP	22HP	
Model Name		50Hz	MMY-MAP1806HT8P-A	MMY-MAP2006HT8P-A	MMY-MAP2206HT8P-A	
Cooling Capacity * ¹		kW	50.4	56.0	61.5	
Heating Capacity * ¹		kW	56.0	63.0	64.0	
Running Current		Amp	22.9	26.8	35.6	
Power Supply		ph-Hz-V	3-phase 50Hz 380-415V			
Air flow		l/s	4806	4972	5138	
External Static Pressure Available		Pa	50	40	40	
Efficiency	Cooling	EER	3.45	3.24	2.65	
	Heating	COP	3.97	3.71	3.74	
External Dimensions H/W/D (Weight)		mm (kg)	1830 x 1600x 780 (371kg)			
Refrigerant Piping Specifications	Connecting Port Diameter	Gas Side (OD)	in	Brazed - 1-1/8"		
		Liquid Side(OD)	in	Flare - 5/8"		
Max. no. of connected indoor units			40	45	49	
Sound pressure level (cooling/heating)		dbA	60/61	61/62		

*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.



ABOUT TOSHIBA'S SHRM-e

Toshiba's SHRM-e VRF system delivers world-class energy efficiency performance and puts the emphasis on evolution driving excellence in energy savings, expansion in capacity line-up and enhancement in applications. Together, they offer professionals and users faster design, installation and commissioning, outstanding seasonal efficiency at lower operating cost, and superior air comfort with enhanced quality and reliability.

HIGH EFFICIENCY AND LOW OPERATING COSTS

INNOVATIVE COMPRESSOR TECHNOLOGY

Toshiba's infinitely variable inverter-driven control can continually adjust the operating speed of the compressors in real time. This ensures that the capacity output precisely matches end user demand. The advantages of this control are further optimised by incorporating Toshiba's twin-rotary compressors. These enable the SHRM-e system to achieve maximum performance and class-leading SEER values.

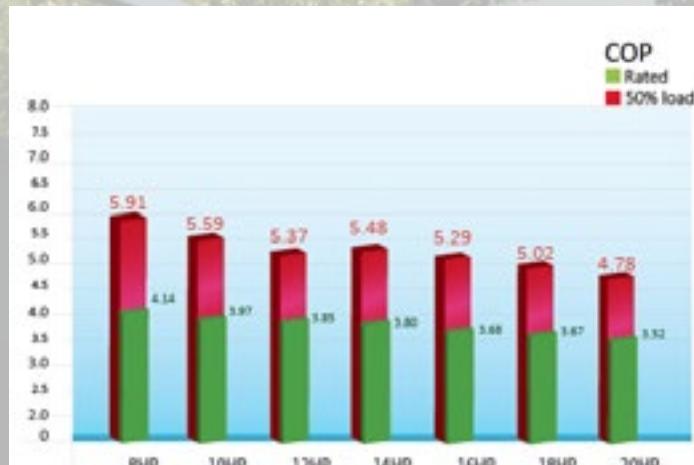


MAXIMUM PART LOAD AND FULL LOAD EFFICIENCIES

Thanks to Toshiba's unique twin-rotary compressor, redesigned heat exchanger and "intelligent flow" technology, the new SHRM-e achieves an SEER of 8.17, the highest seasonal efficiency in the market. Maximum efficiency is obtained under 50% part load conditions, under which VRF systems operate predominantly. The expert use and evolution of Toshiba's core technologies have allowed the new SHRM-e system to achieve the highest part load COP and EER in the industry.



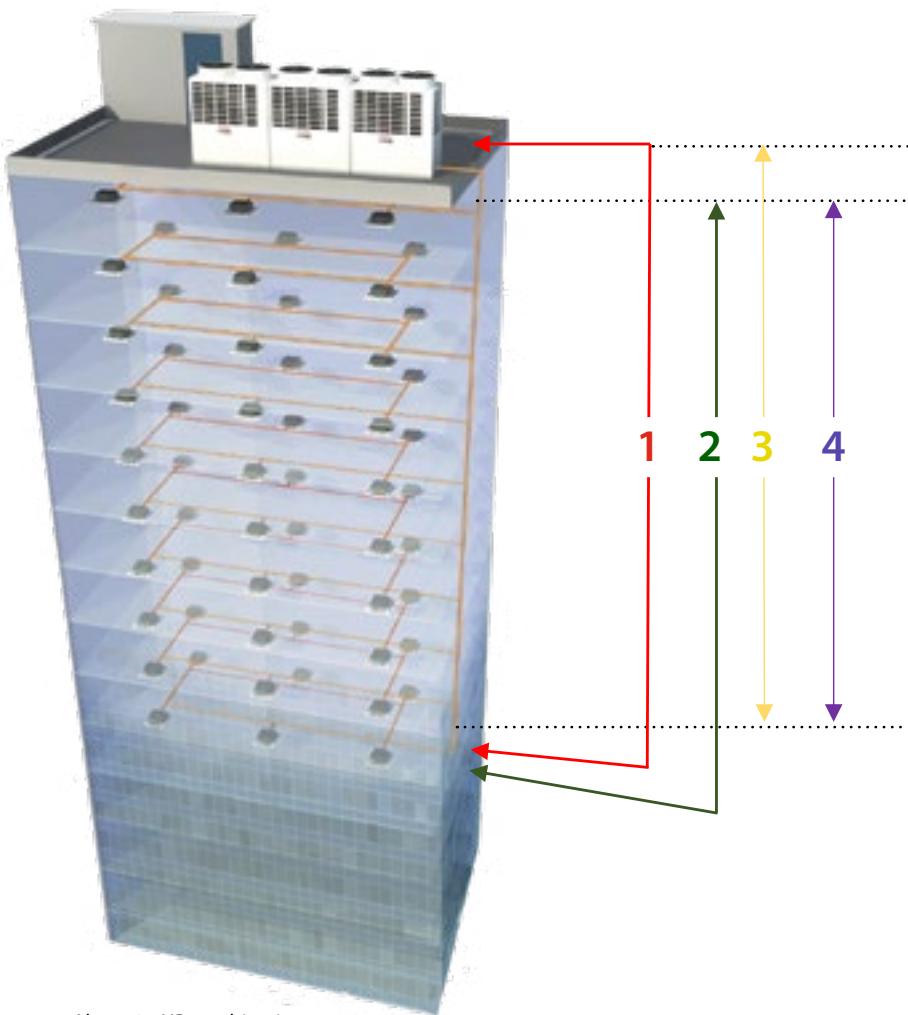
General office accommodation
Cooling part load conditions: 35°C - 100%, 30°C - 75%, 25°C - 50% and 20°C - 25%
Utilising the new highly efficient core technologies has resulted in greater energy efficiency and performance.



FLEXIBLE DESIGN AND QUICK INSTALLATION

PIPING DESIGN FLEXIBILITY

Toshiba's piping technology makes Toshiba one of the industry's leaders in system flexibility and ease of installation and with the SHRM-e system, the level of flexibility has increased further, giving more options to the contractor and installer alike.

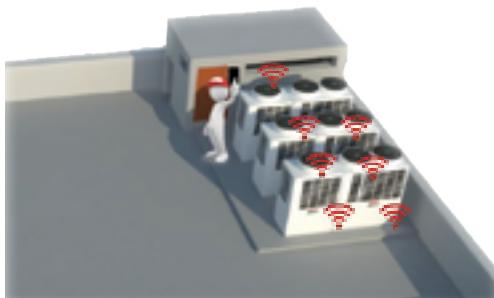


* Above 34 HP combination

** It is 70 m normally, and has some specific conditions for 90m, 50m if piping length between Indoor units is more than 3m.

*** It is allowed only if you use the multi-port FS unit or Premium single-port FS unit.

NEAR FIELD TECHNOLOGY AND WAVE TOOL, ALL YOUR DATA WITHIN REACH

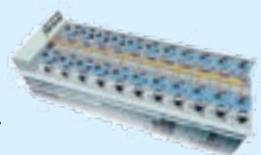


With Near Field Communication (NFC), the SHRM-e is the first in the industry to allow remote monitoring of CDU operations. Using NFC technology, Read and Write data is exchanged wirelessly between the unit and a smartphone (Android, OS, 5.0) for remote commissioning and operations data checking.

1 Total piping length

Applied with Toshiba's unique and greatly improved technology, SHRM-e can reach up to 1,000 meters maximum piping length.

Total piping length
1,000m*



2 Furthest equivalent length

The maximum equivalent distance between the outdoor unit and the farthest indoor unit tops at 200 metres, a best-in class for the industry.

Farthest equivalent length
200m



3 Height between outdoor unit and indoor unit

Another industry best-in-class feature is the maximum vertical distance between the outdoor and indoor units, which can extend up to 90 metres. SHRM-e's enhanced piping capabilities results in more benefits for system design and installation flexibility, as well as lower installation costs.



4 Piping design flexibility "FS unit-FSU"

Farthest pipe from FS unit- Indoor unit
50m***



As the SHRM-e multi-flow selector and indoor unit can be as far as 50 metres apart, the refrigerant piping can be lengthened, offering more flexibility in design to make every space both more comfortable and attractive.



PRODUCT DATA
SYSTEM DATA
FAULT HISTORY
TEST OPERATION RESULTS
(ANDROID, APPLE)

Less time is needed for system configuration and maintenance operations.

SINGLE- AND MULTI-PORT FLOW SELECTOR FOR INCREASED FLEXIBILITY

The latest generation single-port flow selector unit increases the design flexibility of the system, offering longer distances of up to 50m between flow selector box and indoor units, for example where noise level is of paramount importance, and connection of up to 8 indoor units onto one individual flow selector box.

The use of multi-flow selector units increases the design flexibility of the system, offering the same overall capacity and allows much faster and simpler installation, while layout design is more flexible, thanks to simplified branch and branch connections. Reducing the length of the branches also allows increased capacity. This configuration is available with either group of individual remote controllers.

PREMIUM
SINGLE-PORT FS UNIT



FS BOX TO
INDOOR UNIT UP
TO 50M

STANDARD
SINGLE-PORT FS UNIT



MAX. 15M

MULTI-PORT FS UNIT



x6 BRANCH
UP TO 60 X INDOOR UNITS

x4 BRANCH
UP TO 40 X INDOOR UNITS

SUPERIOR AIR COMFORT

COOL COMFORT WITH SOFT COOLING MODE

The development of the soft cooling mode provides a new level for cool comfort. You will have the freedom to personalise the air flow intensity, angle and direction directly from the remote control and enjoy the indoor environment at the right temperature without being directly exposed to the cold draught.



Standard operating mode



Soft cooling mode

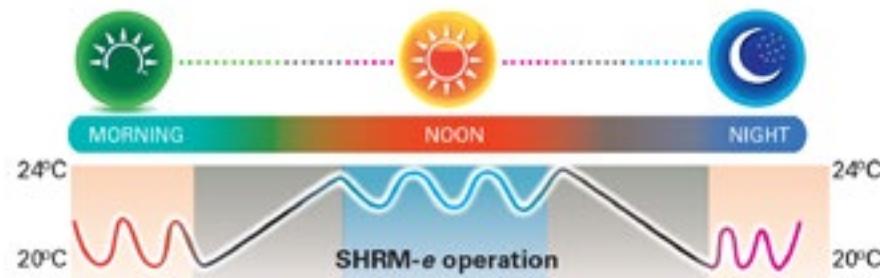
OPTIMISED HEATING OPERATIONS

The SHRM-e allows continuous heating, even during external defrost operations, thanks to the new hot gas bypass control. Indoor units will now operate continually, with only a minimal reduction in capacity output. This results in an uninterrupted flow of warm air, ensuring maximum comfort to the end user.



DUAL SET POINT FOR MORE PRECISION

The Dual Set Point increases the system's energy efficiency and reduces overall running costs, with longer periods of time in thermal off mode. Heating and cooling temperatures at which the indoor unit will begin to operate can now be individually selected giving maximum flexibility to the user.



SMART AUTOMATIC TEMPERATURE CONTROL SYSTEM

The SHRM-e's Automatic Temperature Control (ATC) system has been designed to enhance user comfort and reduce energy consumption. Each user can easily set minimum and maximum temperatures with the ATC, which automatically maintains the air at the desired temperature. Once the maximum temperature has been reached, the intelligent Dual Set Point function will tell the system to shut down and change mode to adjust the temperature to the minimum required, or vice versa. This enhances efficiency and reduces running costs, by extending the thermal off periods, when the unit stops between changes in heating and cooling mode.



INNOVATIVE INDIVIDUAL ON/OFF AND TEMPERATURE CONTROL

The innovative multi-flow selector allows smart temperature control in each space via individual remote controls. This meets users' different temperature requirements for maximum comfort, and if rooms are empty, the unit can be switched off. This solution helps reduce energy waste, improve efficiency and save on overall costs.



SHRM-e OUTDOOR MODULES (3 PIPE)



Model (MMY)	MAP0806FT8P-A	MAP1006FT8P-A	MAP1206FT8P-A	MAP1406FT8P-A	MAP1606FT8P-A
HP	8	10	12	14	16
Capacity kW (cooling/heating)	22.4	28.0	33.5	40.0	45.0
	25.0	31.5	37.5	45.0	50.0



Model (MMY)	MAP1806FT8P-A	MAP2006FT8P-A	MAP2216FT8P-A	MAP2416FT8P-A	MAP2616FT8P-A
HP	18	20	22 = 12 + 10	24 = 14 + 10	26 = 14 + 12
Capacity kW (cooling/heating)	50.4	56.0	61.5	68.0	73.5
	56.0	58.0	69.0	6.5	82.5



Model (MMY)	MAP2816FT8P-A	MAP3016FT8P-A	MAP3216FT8P-A	MAP3416FT8P-A	MAP3616FT8P-A
HP	28 = 14 + 14	30 = 16 + 14	32 = 18 + 14	34 = 18 + 16	36 = 18 + 18
Capacity kW (cooling/heating)	80.0	85.0	90.4	95.4	101.8
	90.0	95.0	101.5	106.5	113.0



Model (MMY)	MAP3816FT8P-A	MAP4016FT8P-A	MAP4216FT8P-A	MAP4416FT8P-A	MAP4616FT8P-A
HP	38 = 20 + 18	40 = 20 + 20	42 = 14 + 14 + 14	44 = 16 + 14 + 14	46 = 18 + 14 + 14
Capacity kW (cooling/heating)	106.4	112.0	120.0	125.0	130.0
	114.5	116.0	135.0	140.0	146.5



Model (MMY)	MAP4816FT8P-A	MAP5016FT8P-A	MAP5216FT8P-A	MAP5416FT8P-A
HP	48 = 18 + 16 + 14	50 = 18 + 18 + 14	52 = 18 + 18 + 16	54 = 18 + 18 + 18
Capacity kW (cooling/heating)	135.4	140.8	145.8	151.2
	151.5	158.0	163.0	169.5

SHRM-e OUTDOOR UNIT SPECIFICATIONS

3 PIPE

3 Phase 8-10HP MODEL		UNIT	TECHNICAL SPECIFICATIONS	
Equivalent HP			8HP	10HP
Model Name		50Hz	MMY-MAP0806FT8P-A	MMY-MAP1006FT8P-A
Cooling Capacity* ¹		kW	22.4	28.0
Heating Capacity* ¹		kW	25.0	31.5
Running Current		Amp	9.44	12.49
Power Supply	ph-Hz-V		3-phase 50Hz 380-415V	
Air flow	l/s		2694	
External Static Pressure Available	Pa		60	50
Efficiency	Cooling	EER	3.76	3.51
	Heating	COP	4.14	3.97
External Dimensions H/W/D (Weight)	mm (kg)		1830 x 990 x 780 (263kg)	
Refrigerant Piping Specifications	Connecting Port Diameter	Gas Side (OD)	in	7/8"
		Liquid Side(OD)	in	1/2"
		Balance Pipe	in	3/8"
Max. no. of connected indoor units			13	16
Sound pressure level (cooling/heating)	dba		59/61	

*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.



SHRM-e OUTDOOR UNIT SPECIFICATIONS

3 PIPE

3 Phase 12-14HP MODEL		UNIT	TECHNICAL SPECIFICATIONS		
Equivalent HP			12HP	14HP	
Model Name		50Hz	MMY-MAP1206FT8P-A	MMY-MAP1406FT8P-A	
Cooling Capacity* ¹		kW	33.5	40.0	
Heating Capacity* ¹		kW	37.5	45.0	
Running Current		Amp	15.46	19.92	
Power Supply		ph-Hz-V	3-phase 50Hz 380-415V		
Air flow		l/s	3389		
External Static Pressure Available		Pa	50	40	
Efficiency	Cooling	EER	3.43	3.14	
	Heating	COP	3.85	3.80	
External Dimensions H/W/D (Weight)		mm (kg)	1830 x 1210 x 780 (316kg)		
Refrigerant Piping Specifications	Connecting Port Diameter	Gas Side (OD)	in	1 1/8"	
		Liquid Side(OD)	in	3/4" 7/8"	
		Balance Pipe	in	3/8"	
Max. no. of connected indoor units			20	23	
Sound pressure level (cooling/heating)		dba	60/62	62/64	

*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.



SHRM-e OUTDOOR UNIT SPECIFICATIONS

3 PIPE

3 Phase 16 - 20HP MODEL		UNIT	TECHNICAL SPECIFICATIONS			
Equivalent HP			16HP	18HP	20HP	
Model Name		50Hz	MMY-MAP1606FT8P-A	MMY-MAP1806FT8P-A	MMY-MAP2006FT8P-A	
Cooling Capacity ^{*1}	kW		45.0	50.4	56.0	
Heating Capacity ^{*1}	kW		50.0	56.5	58.0	
Running Current	Amp		21.81	25.1	29.18	
Power Supply	ph-Hz-V		3-phase 50Hz 380-415V			
Air flow	l/s		4806		4972	
External Static Pressure Available	Pa		40			
Efficiency	Cooling	EER	3.23	3.15	3.01	
	Heating	COP	3.68	3.67	3.52	
External Dimensions H/W/D (Weight)		mm (kg)	1830 x 1600 x 780 (377kg)			
Refrigerant Piping Specifications	Connecting Port Diameter	Gas Side (OD)	in	1 1/8"		
		Liquid Side(OD)	in	7/8"		
		Balance Pipe	in	3/8"		
Max. no. of connected indoor units			27	30	31	
Sound pressure level (cooling/heating)		dbA	61/62			

*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.



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		
056 type 16.0kW (6HP)		MMD-AP0566HP1-E		



	MML-***NH-E	MML-***H1-E	MML-***BH1-E	PMV Kit (Optional)* Compatible with:
Cooling Capacity (HP equivalent)	Console	Floor Standing Cabinet	Floor Standing Concealed	
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	• 1-Way Air Discharge Cassette
012 type 3.6kW (1.25HP)	MML-AP0124NH1-E	MML-AP0124H1-E	MML-AP0124BH1-E	• Concealed Duct High Static Pressure
015 type 4.5kW (1.7HP)	MML-AP0154NH1-E	MML-AP0154H1-E	MML-AP0154BH1-E	• High-Wall Series 3 & 7
018 type 5.6kW (2HP)	MML-AP0184NH1-E	MML-AP0184H1-E	MML-AP0184BH1-E	• Console
024 type 7.1kW (2.5HP)		MML-AP0244H1-E	MML-AP0244BH1-E	• Floor Standing Cabinet
027 type 8.0kW (3HP)				
030 type 9.0kW (3.2HP)				
036 type 11.2kW (4HP)				
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



Cooling Capacity (HP equivalent)	MMU-***HP1-E 4-Way Air Discharge Cassette	MMU-***WH1 2-Way Air Discharge Cassette	MMU-***YH1-E 1-Way Air Discharge Cassette	MMD-***HP1-E 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-AP0154SH1-E	
018 type 5.6kW (2HP)	MMU-AP0184HP1-E	MMU-AP0182WH1	MMU-AP0184SH1-E	MMD-AP0186HP1-E
024 type 7.1kW (2.5HP)	MMU-AP0244HP1-E	MMU-AP0242WH1	MMU-AP0244SH1-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
056 type 14.0kW (6HP)	MMU-AP0564HP1-E	MMU-AP0562WH1		MMD-AP0566HP1-E



Cooling Capacity (HP equivalent)	MMC-***HP1-E Under Ceiling	MMF-***H1-E Floor Standing	MMK-***HP-E1 High-Wall 7 Series	MMD-VN**HEXE 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-AP0158HP1-E	MMF-AP0156H1-E		MMD-VN802HEXE
018 type 5.6kW (2HP)	MMC-AP0188HP1-E	MMF-AP0186H1-E		
024 type 7.1kW (2.5HP)	MMC-AP0248HP1-E	MMF-AP0246H1-E		
027 type 8.0kW (3HP)	MMC-AP0278HP1-E	MMF-AP0276H1-E		
030 type 9.0kW (3.2HP)				
036 type 11.2kW (4HP)	MMC-AP0368HP1-E	MMF-AP0366H1-E		
048 type 14.0kW (5HP)	MMC-AP0488HP1-E	MMF-AP0486H1-E		
056 type 16.0kW (6HP)	MMC-AP0568HP1-E	MMF-AP0566H1-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.



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)	m³/h	800/730/680		930/830/790	1050/920/800	1290/920/800		
	Motor Output	W	14						
Connecting Pipe	Gas Side	in	3/8		1/2		5/8		
	Liquid Side	in	1/4						
	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	AP0564HP1-E					
Cooling Capacity		kW	8.0	9.0	11.2	14.0	16.0					
Heating Capacity		kW	9.0	10.0	12.5	16.0	18.0					
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)	m³/h	1290/920/800	1320/1110/850	1970/1430/1070	2130/1430/1130	2130/1520/1230					
	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	46/40/33					

4-WAY COMPACT CASSETTE



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.

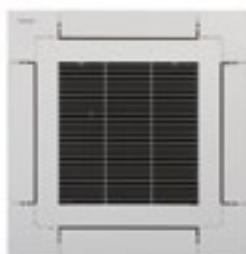
The flaps fold tightly when operation stops, making its appearance smooth against the ceiling.

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.

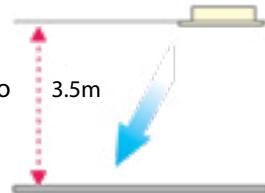


Panel
RBC-UM21PG(W)-E



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 ³ /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)	m³/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	AP0562WH1
Cooling Capacity	kW		7.1	8.0	9.0	11.2	14.0	16.0
Heating Capacity	kW		8.0	9.0	10.0	12.5	16.0	18.0
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	0.117
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)	m³/h	1050/840/738		1260/900/780	1740/1434/1182	1800/1482/1230	2040/1578/1320
	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	46/42/39

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	AP0154SH1	AP0184SH1	AP0244SH1
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 ³ /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)	dbA	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.

Zone Control

Compatible with AirTouch® Zone controller.

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)	m³/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)	m³/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.

Zone Control

Compatible with AirTouch© Zone controller.

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)	m³/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	AP0566BHP1
Cooling Capacity	kW	7.1	8.0	9.0	11.2	14.0	16.0	
Heating Capacity	kW	8.0	9.0	10.0	12.5	16.0	18.0	
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)	m³/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.

Zone Control

Compatible with AirTouch® Zone controller.

Model Number		MMD-	AP0186HP1	AP0246HP1	AP0276HP1	AP0366HP1	AP0486HP1	AP0566HP1								
Cooling Capacity		kW	5.6	7.1	8.0	11.2	14.0	16.0								
Heating Capacity		kW	6.3	8.0	9.0	12.5	16.0	18.0								
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	0.290								
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)	m³/h	800/660/550	1200/970/800		1920/1560/1340	2100/1740/1420	2400/2040/1660								
	Motor Output	W	250				350									
	External Static Pressure (Factory Setting)	Pa	100													
	External Static Pressure	Pa	50-75-125-150-175-200 (7 Steps)													
	Gas Side	in	1/2	5/8												
Connecting Pipe	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	45/42/37								

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.

Zone Control

Compatible with AirTouch® Zone controller.

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)	m³/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)	m³/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-	AP0158HP1	AP0188HP1	AP0248HP1	
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)	m³/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-	AP0278HP1	AP0368HP1	AP0488HP1	AP0568HP1			
Cooling Capacity		kW	8.0	11.2	14.0	16.0			
Heating Capacity		kW	9.0	12.5	16.0	18.0			
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	0.111				
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)	m³/h	1440/1020/750	1860/1350/1020	1860/1530/1200	2040/1650/1260			
	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	46/42/36			

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) High Airflow		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)	m³/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)	m³/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 ³ /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



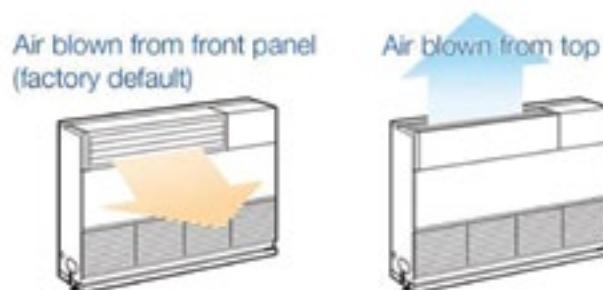
Simple & Compact Design

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.



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)	m³/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

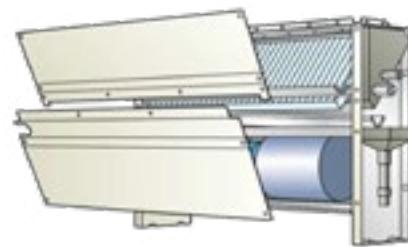


Cool Air Makes for a Pleasant Indoor Environment

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 ³ /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)		dba	36/34/32					42/37/33		

FLOOR STANDING



Thin Profile Suits Interior Design

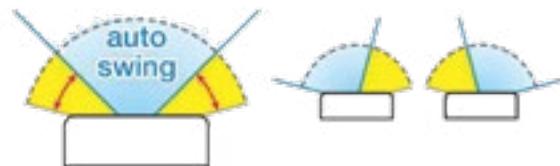
Slender, space-saving (1.7 - 8.0HP)

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)			0.089	
	Power Consumption	kW	0.055			
External Dimensions	Height	mm	1750			
	Width	mm	600			
	Depth	mm	210			
Total Weight		kg	46		47	
Fan Unit	Standard Air Flow (H/M/L)	m³/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)		dbA	46/42/37		49/45/39	

Model Number		MMF-	AP0276H1	AP0366H1	AP0486H1	AP0566H1		
Cooling Capacity		kW	8.0	11.2	14.0	16.0		
Heating Capacity		kW	9.0	12.5	16.0	18.0		
Electrical Characteristics	Power Requirements	1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)			0.160	0.135		
	Power Consumption	kW	0.089	0.135				
External Dimensions	Height	mm	1750			390		
	Width	mm	600					
	Depth	mm	210	390				
Total Weight		kg	47	62		1380		
Fan Unit	Standard Air Flow (H/M/L)	m³/h	1200/990/840	1920/1620/1380	2160/1730/1560			
	Motor Output	W	62	109				
Connecting Pipe	Gas Side	in	5/8			20 (One Side of Male Screw)		
	Liquid Side	in	3/8					
	Drain Port (nominal dia.)		20 (One Side of Male Screw)					
Sound Pressure Level (H/M/L)		dbA	49/45/39	51/46/41	54/49/44			

HEAT EXCHANGER WITH DX COIL



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 outdoor air 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.



Remote Controller
NRC-01HE

Model	Capacity	Dimensions H x W x D (mm)	Weight (KG)	Airflow (m³/h)	Duct Spigot (mm)	Efficiency %	Cooling (kW)	Heating (kW)	Pipe Size (in)	Drain (mm)
MMD-VN502HEXE	1HP	430 x 1140 x 1690	84	500	200	70.5	4.10 (1.3)	5.53 (2.33)	3/8"-1/4"	25
MMD-VN802HEXE	1.7HP	430 x 1189 x 1739	100	800	250	70.0	6.56 (2.06)	8.61 (3.61)	1/2"-1/4"	25
MMD-VN1002HEXE	2HP	430 x 1189 x 1739	101	950	250	65.5	8.25 (2.32)	10.92 (4.32)	1/2"-1/4"	25

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

CONTROLS



Wired Controller
RBC-AMS55E-ES

Backlight, weekly schedule, soft cooling, dual setpoint, occupancy sensor

Note: Some features are indoor dependent.



Basic Controller

NRC-01HE

- Dedicated HEX
- Can control linked AC



Intesis WiFi

Controller

TO-RC-WIFI-1

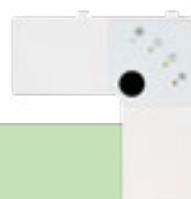


Remote Sensor
TCB-TC21LE2



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.

CONTROLS



**Smart Manager
(with data analyser)**
BMS-SM1281ETLE
BMS-SM1280HTLE
(without data analyser)



**BACnet® Interface
BMS-IFBN640TLE**
Control of up to 64 units.
NB: TCB-PCNT30TLE needed
for RAV units except KRT/P.



**Energy Monitoring
Relay**
BMS-IFWH5E
Interface for smart manager,
touch screen and BACnet®.



**Touch Screen Controller
BMS-CT5121E**

Connect up to 512 indoor units.
Builds on Smart Manager
functions.
NB: BMS-IFLSV4E also required.



**WiFi Controller
BMS-IWF0320E**

Control of up to 32 indoor
units.



**Schedule Timer
TCB-EXS21TLE**

For use with smart manager.



**General Purpose
Interface**
TCB-IFCG1TLE



**Remote On/Off &
Alarm Status**
TCB-IFCB-4E2



**Simple Wired
Controller**
RBC-AS41E

CONNECTORS

APPEARANCE			
PART NUMBER	TCB-KBCN32VEE (CN32)	TCB-KBCN60OPE (CN60)	TCB-KBCN61HAE (CN61)
FUNCTION	<p>External Vent Control Output 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>Operation Status Output Provides a 12Volt DC output for each of the following:</p> <ul style="list-style-type: none"> • Outdoor Unit in Defrost • Compressor is running (also known as 'Thermo On') • Indoor Unit is cooling (cooling mode or dehumidify mode) • Indoor Unit is heating • Indoor Unit has the fan running 	<p>Operation Control Inputs and Status Output Provides control inputs and status outputs (12Volt DC) as follows:</p> <ul style="list-style-type: none"> • On Off Control (INPUT) • Wired controller On Off Lock/Unlock (INPUT) • On Off Status (OUTPUT) • Alarm Status (OUTPUT) • Setting Cooling Set Temp to Max, Setting Heating Set Temp to Min (INPUT)
APPEARANCE			
PART NUMBER	TCB-KBCN70OAE (CN70)	TCB-KBCN73DEE (CN73)	TCB-KBCN80EXE (CN80)
FUNCTION	<p>External Alarm Input 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>Forced Compressor Off Input Enables the compressor to be forced off.</p>	<p>Outside Error Input 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"> • If the input is made for more than 3 seconds but less than 60 seconds the compressor is forced off. • 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.

WARRANTY

SMMS-e and SHRM-e systems have 1 year warranty against both parts and labour. Warranty is conditional upon the design, installation and use of the SMMS-e and SHRM-e systems 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.

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