

TOSHIBA



SMMS
SUPER MODULAR MULTI SYSTEM



Air Conditioning for large buildings



Better Air Solutions

INDEX

Introduction**SMMS-e features**

Energy saving	8
Capacity range	10
SMMS wave tool	12
DC twin-rotary compressor	14
Heat exchanger	15
Piping design flexibility	16
Slimmer pipe size	18
Propeller fan	19
Reliability	20
Operating temperature range	21

Outdoor units

Outdoor unit line-ups	22
Outdoor unit specifications	24
Outdoor unit external view drawings	29

Indoor units


Indoor unit line-ups	32
4-way air discharge cassette type	34
Compact 4-way cassette type	36
2-way air discharge cassette type	38
1-way air discharge cassette type	40
Slim duct type	42
Concealed duct type	44
Concealed duct high static pressure type	46
Ceiling type	48
High-wall type (series 3)	50
High-wall type (series 7)	51
Console type	52
Floor standing cabinet type	53
Floor standing concealed type	54
Floor standing type	55
Dx-coil Interface	56
Fresh air intake indoor unit type	58
Air-to-Air heat exchanger with Dx-coil	60
Air-to-Air heat exchange	62
Indoor unit accessories	64
Remote controllers	66
Building management systems	70
Open network systems	72
Application controls	74
Safety precautions	77

Toshiba solutions

At Toshiba, we believe that "Evolution is leading the path to a better future". Through the decades, we have been constantly creating innovative and high-quality electrical appliances to increase our consumers' satisfaction. Now, with Toshiba "SMMS-e", the latest commercial air conditioning for various buildings,

The SMMS-e has been creatively developed and designed under the concept Excellence, Expansion, and Experience to ensure your utmost comfort and convenience like never before.

With the latest technology improved and developed to make SMMS-e the top commercial air conditioning for any solution that intelligently meets your needs, Toshiba will stop at nothing to create innovation to evolution of the future, where life is a step away from perfection.



Better Air Solutions

Through our commitment to world-class **efficiency**, versatile **scalability** and leading **quality**, Toshiba Air Conditioning advances leading-edge technologies to find the most forward-thinking solutions possible for your world.

TOSHIBA

SMMS
SUPER MODULAR MULTI SYSTEM



Air Conditioning for large buildings

EXCELLENCE

EXPANSION

EXPERIENCE



Air Conditioning for large buildings

EXCELLENCE

EXPANSION

EXPERIENCE



*e*volution

 *XPANSION*



SMMS
SUPER MODULAR MULTI SYSTEM



Air Conditioning for large buildings

on

 XPERIENCE



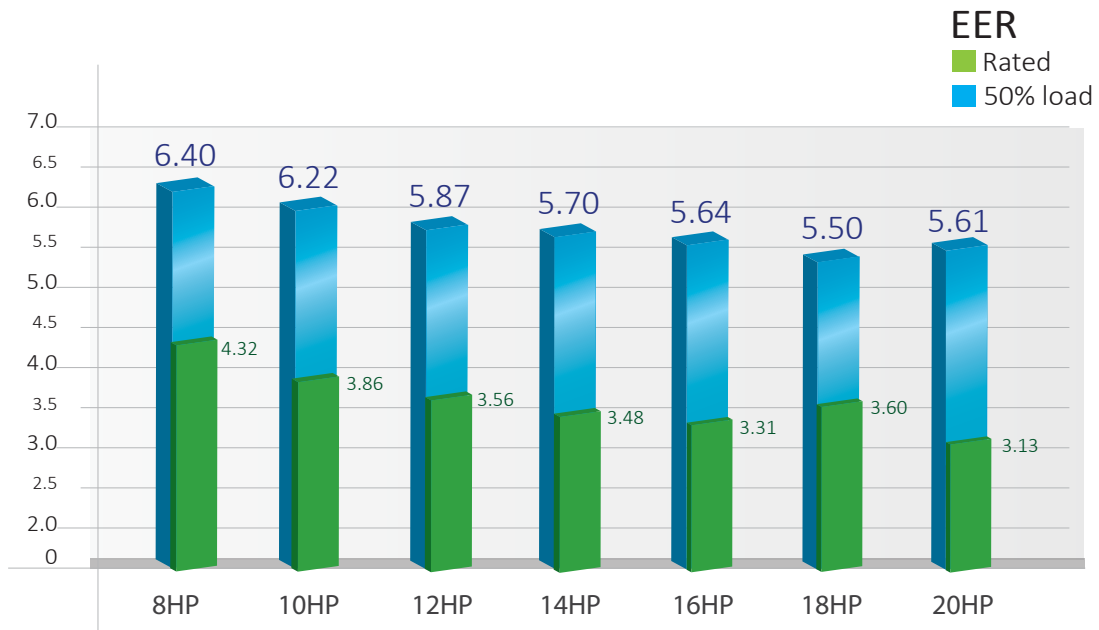
 XCELLENCE



ENERGY SAVING

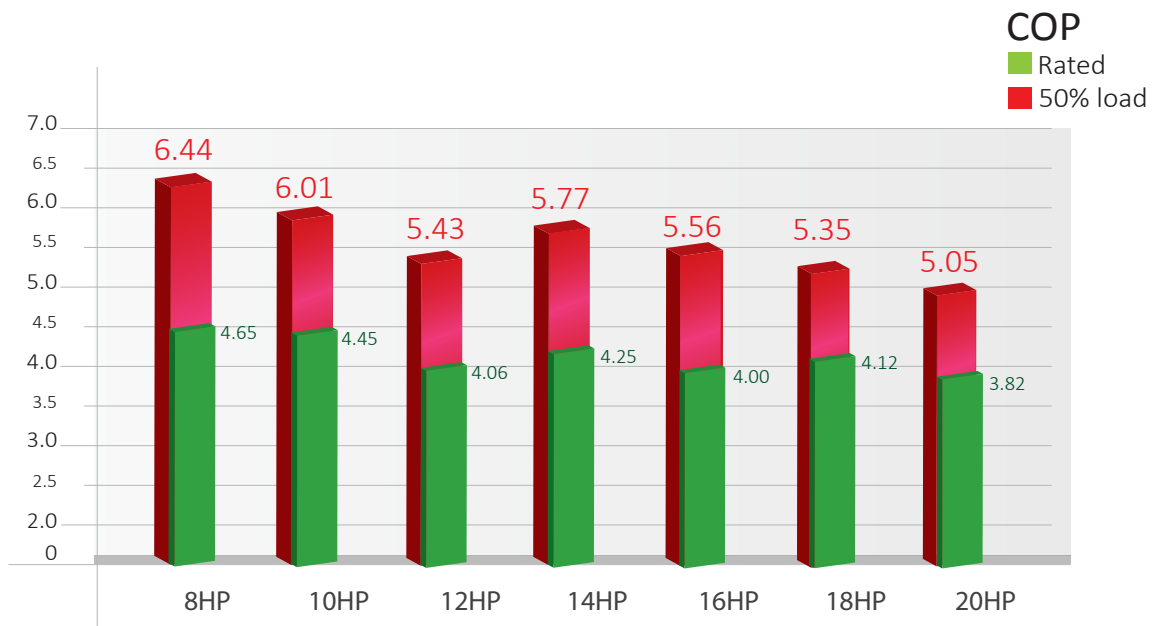
Greater efficiency performance

Adopting the highly efficient new DC twin-rotary compressors with various technologies.





The overall capacity range and the highest EER and COP of 6.39 and 6.44, the SMMS-e has truly excellence as the industry's top class in energy saving.





CAPACITY RANGE

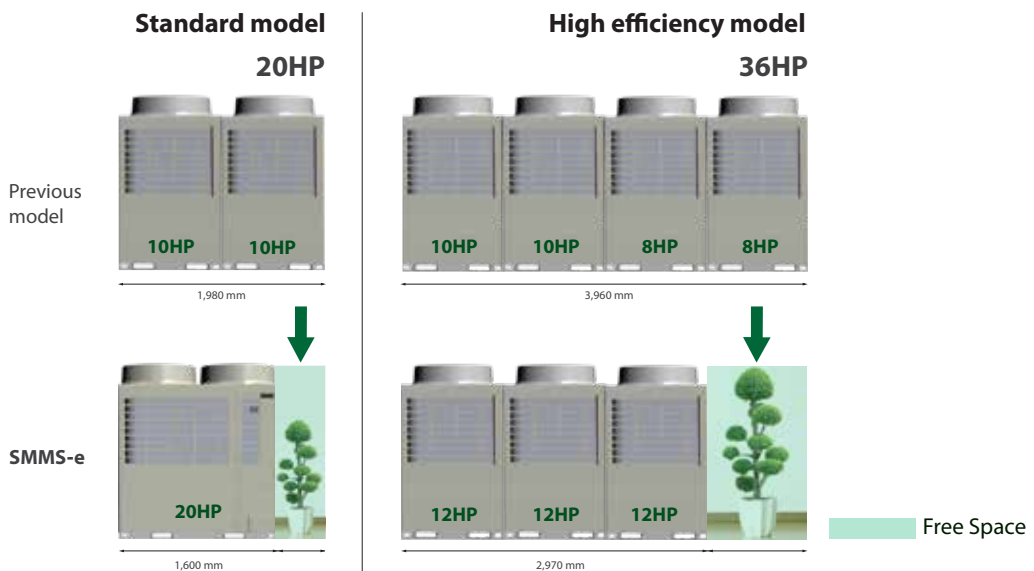
Single unit capacity expanded

SMMS-e comes with 3 new larger capacity units, producing up to 20HP on a single module platform.



Industry-leading installation flexibility

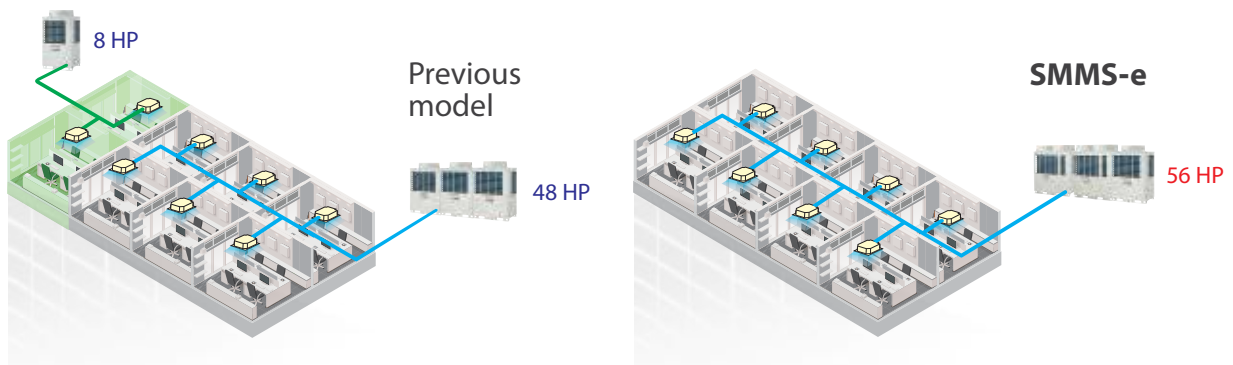
Outdoor units improve performance to achieve greater space efficiency that defies their compact module size to deliver greater freedom in layout design. This minimizes weight-related restrictions and allows for quicker installation.





System capacity expanded

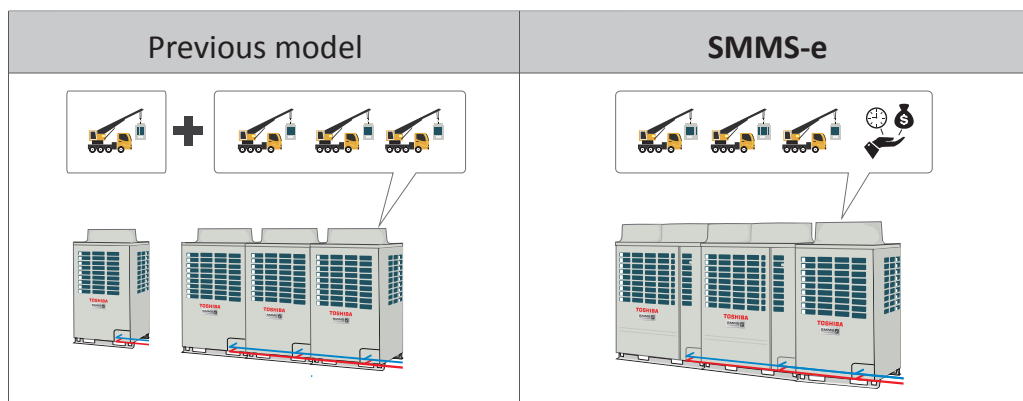
With the SMMS-e, it is now possible to connect up to 56HP in one system, with up to 64 connectable indoor units.



Installation flexibility

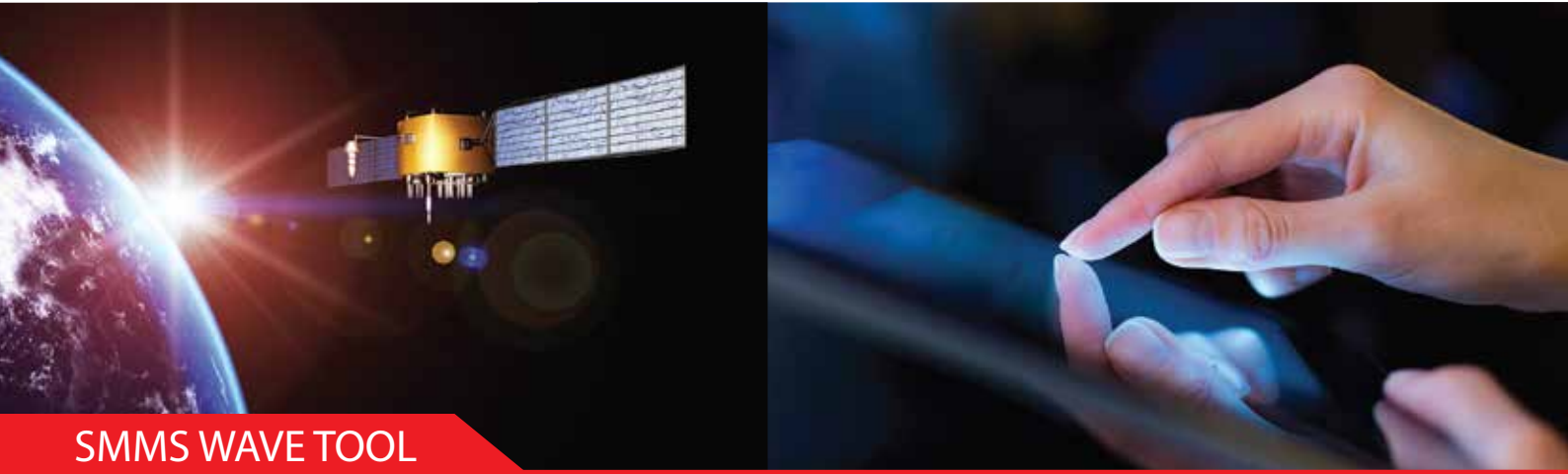
While expanding the maximum combination from 48 to 56HP in one system. This helps save more time and expense on additional unit system required in the previous model. The new compact unit design also increases more flexibility on installation with less foot print.

56 HP



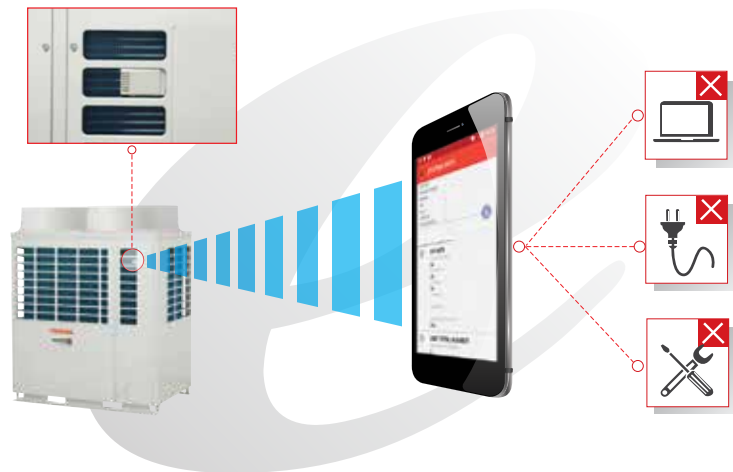
SMMS-e is capable of covering up to 20HP with a single module. Reducing pipe work and overall installation time.



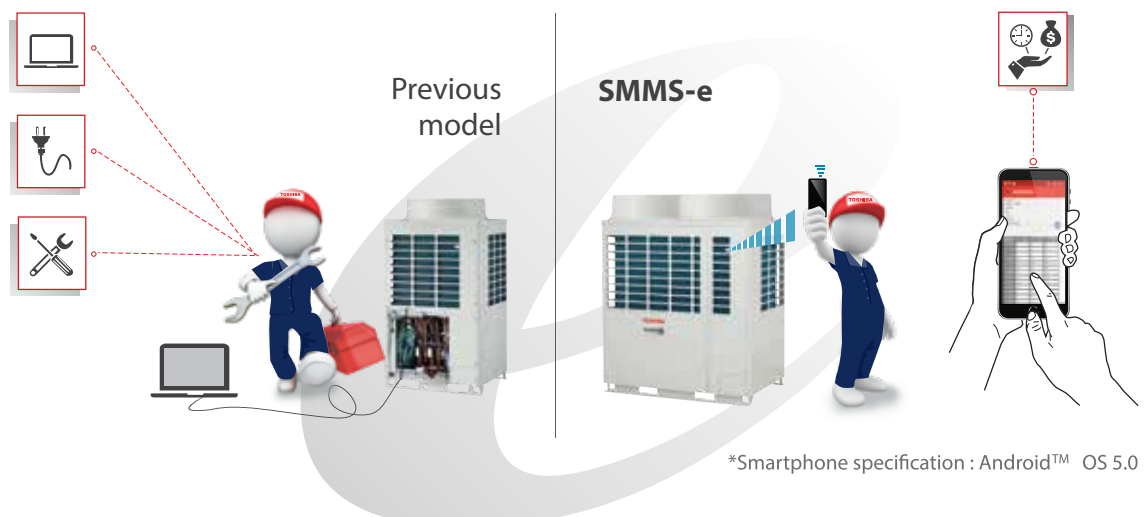


SMMS wave tool

With SMMS wave Tool, you can read and write data from outdoor unit directly on your smart phone without the needs of connecting PC or opening cabinet.



By the new smart phone application, the testing and commissioning can be done without opening the cabinet.



Available data

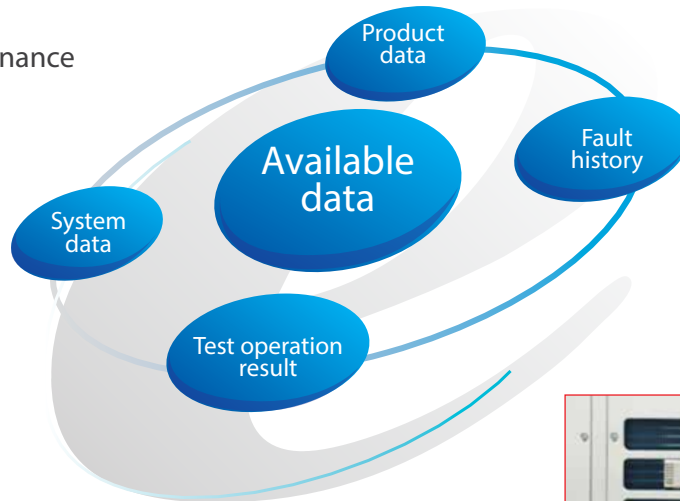
Whether the product data, system data, fault history or testing and commissioning, all can be obtained easily even in case of under service maintenance or power failure. The data can be easily sent to the distant office via email. Possible to receive system data by e-mail without moving from your office and the operation conditions can be checked in the office.

In case of below situation

- ✓ Installation
- ✓ Service maintenance
- ✓ Power failure



Smart phone

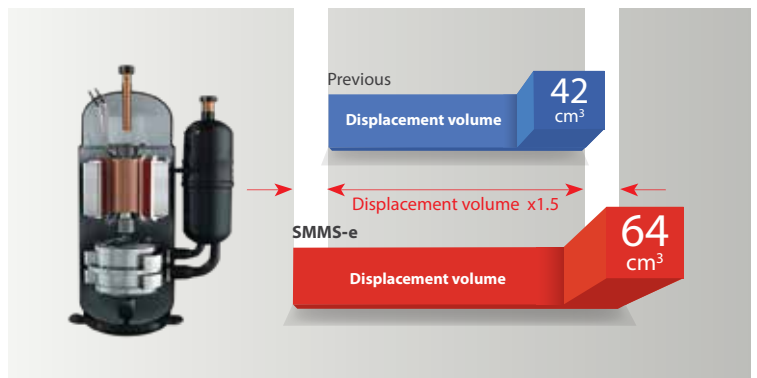




DC TWIN-ROTARY COMPRESSOR

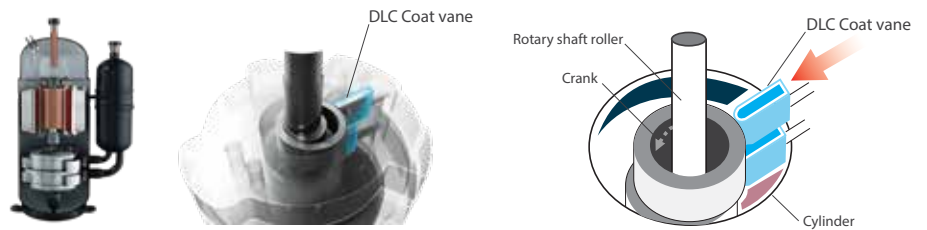
Wide range compressor

More powerful and efficient with the cutting-edge technology of compressor – DC Twin-Rotary operates in wider range of rotation speed.



DLC coated vane

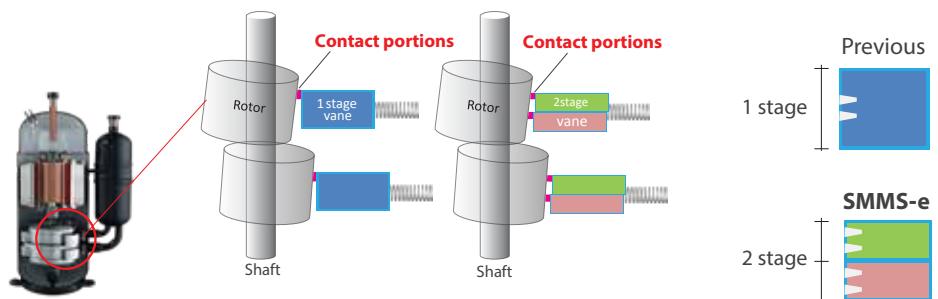
Increased hardness of the DLC coated vane reduces friction and increase both reliability and performance.



* DLC: Diamond Like Carbon

2-stage vane

With 2-stage vane innovatively designed to reduce friction while increasing hardness and enhancing performance at its best.

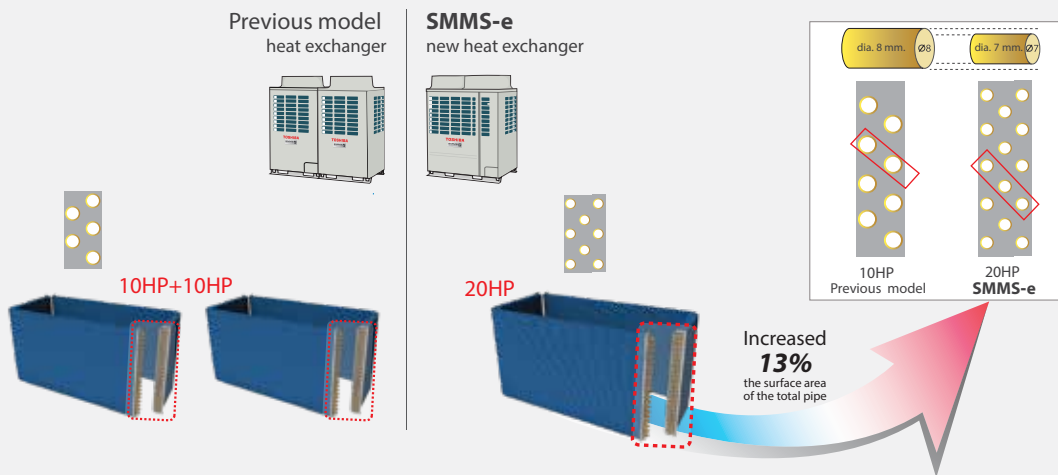




HEAT EXCHANGER

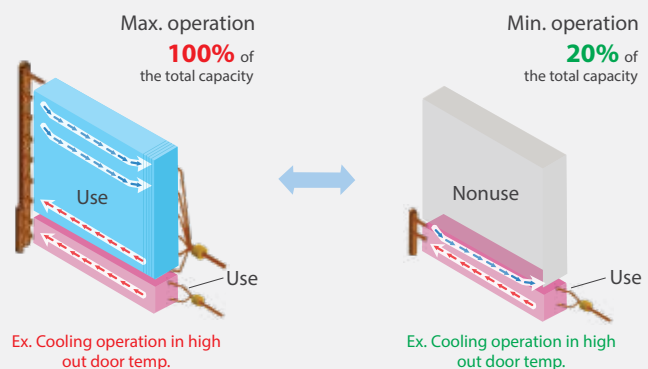
New heat exchanger

New heat exchanger of SMMS-e increases from 2 to 3 rows, providing even more surface area of the total pipe up to 13%.



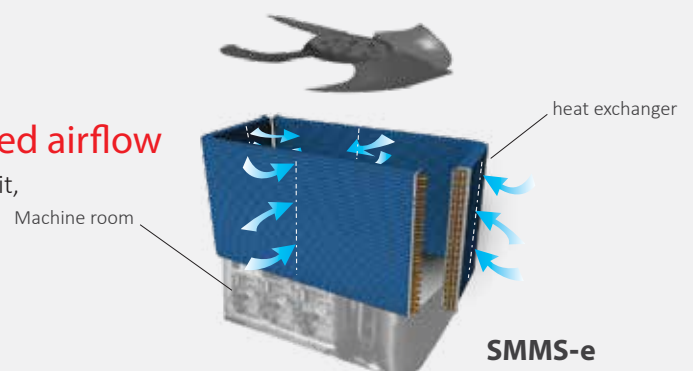
Variable heat exchanger

New system controls allows the outdoor unit to select the most efficient heat exchanger size, which matches the capacity load in order to provide higher energy savings.



4-way heat exchanger can realize balanced airflow

Heat exchangers are located on all four sides of the outdoor unit, ensuring air flow is equal in all directions.

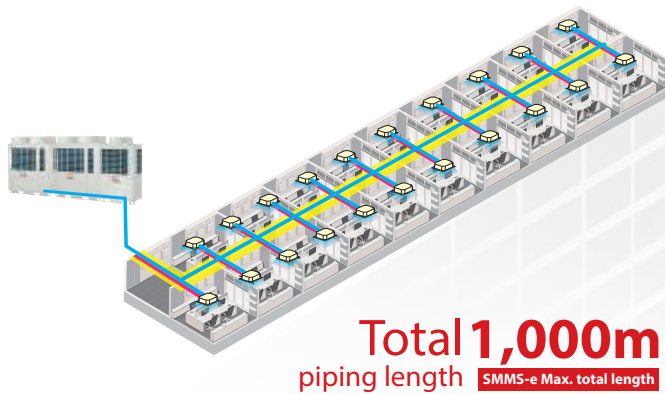




PIPING DESIGN FLEXIBILITY

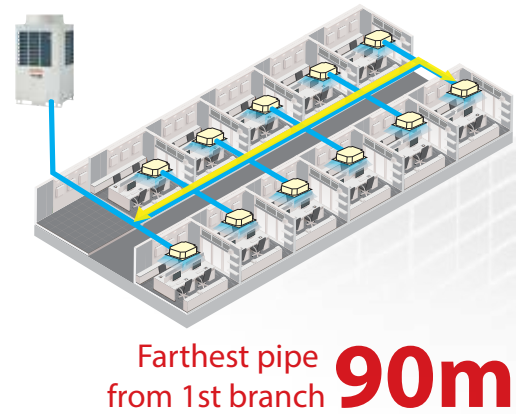
Total piping length

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



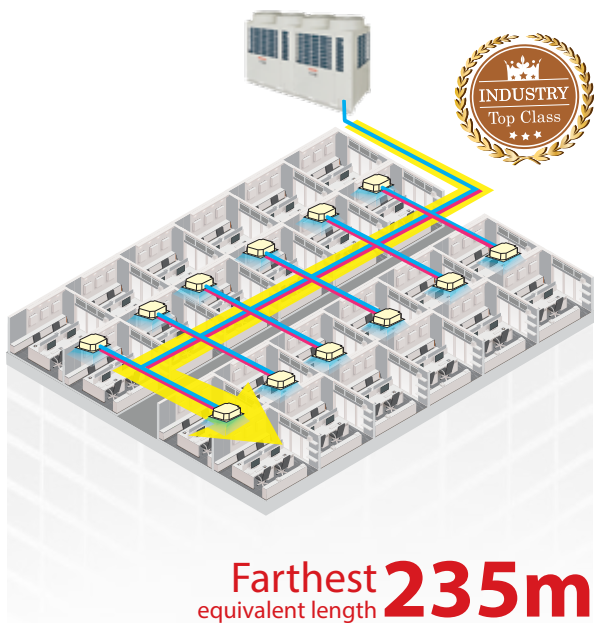
Farthest pipe from 1st branch

Even more convenient with the piping distance from the first branch to the furthest indoor unit at 90 meters, increasing the flexibility of the installation within the hotel or office building.



Farthest equivalent length

The maximum equivalent distance between outdoor unit and farthest indoor unit tops at 235 meters, which tops the industry class.



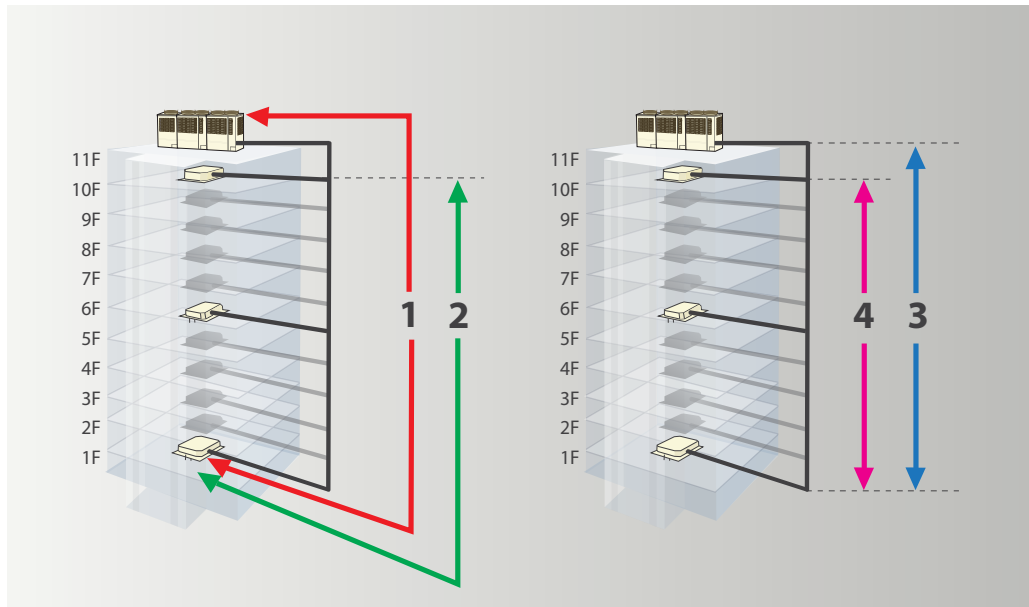
Height between indoor units

Another industry's top class is a maximum vertical distance between indoor units which reaches up to 40 meters, equal to an entire 11-storied building. SMMS-e's enhanced piping capabilities result in more benefits for the system design, installation flexibility, as well as the less installation cost.



Piping capabilities summary

Piping capability can provide more benefits for the system design, the installation flexibility, and the installation cost.



Total length	1,000m*
1. Farthest equivalent length	235m
2. Farthest pipe from 1 st branch	90m**
3. Height between outdoor unit - indoor unit (outdoor unit above/below)	90m*** / 40m
4. Height between indoor unit - indoor unit	40m

* : 34HP combination or more

** : 65m if the height piping length between outdoor unit and indoor unit is more than 3m

*** : Be sure to refer to the Engineering Data Book for details of these conditions and requirements.

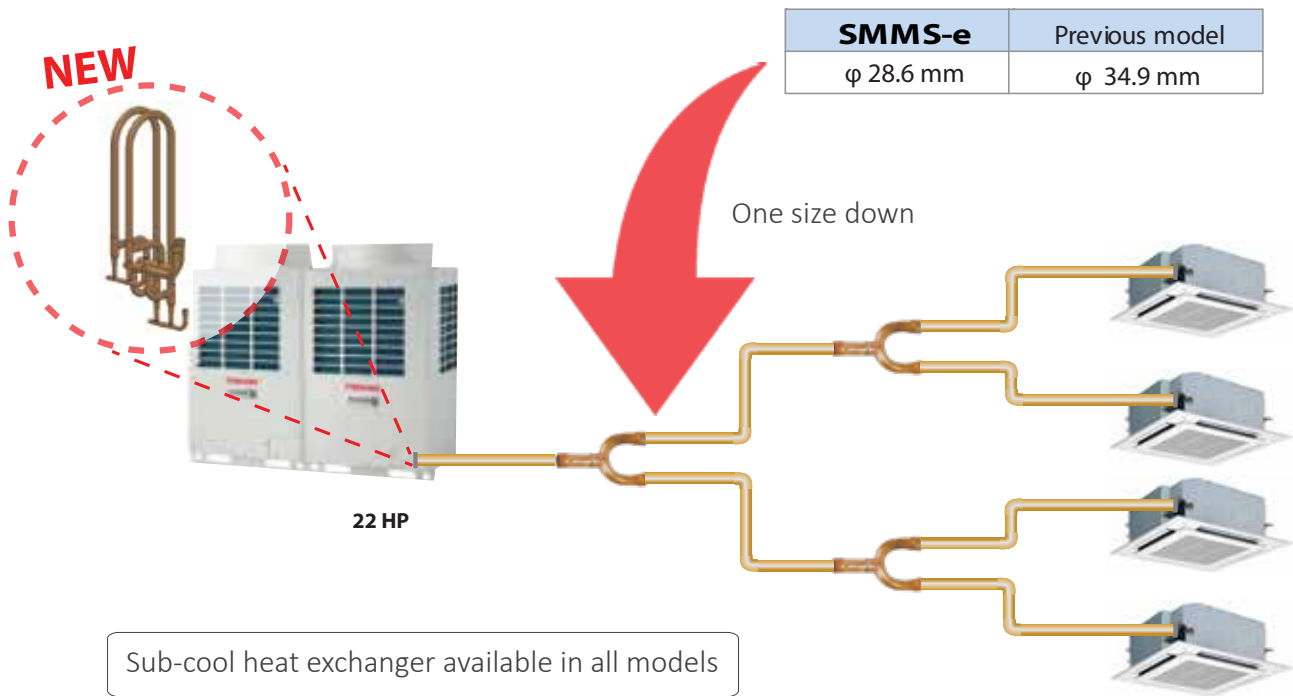




SLIMMER PIPE SIZE

Piping saving costs

With the sub-cool heat exchanger less refrigerant is needed therefore now it is possible to use smaller pipes and save in installation costs.







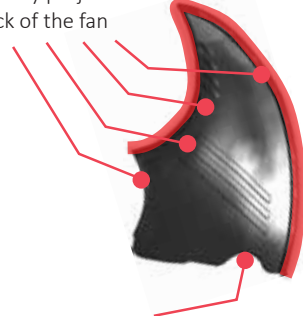


PROPELLER FAN

New advanced blade shapes for a better air flow management

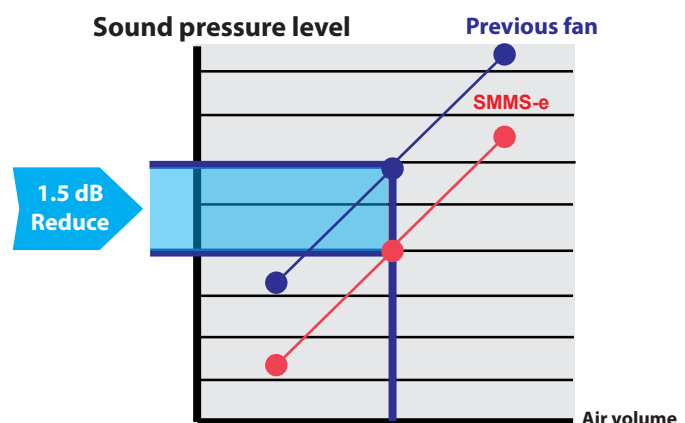
Every single blade is designed with a unique profile, a solution that guarantees a smoother air flow without turbulences. The new propeller deliver the same amount of air with less sound pressure level.



Each blade has a unique profile	Design improvements
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>A</p>  </div> <div style="text-align: center;"> <p>B</p>  </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;"> <p>C</p>  </div> <div style="text-align: center;"> <p>D</p>  </div> </div>	<p>New anti-eddy projections on the back of the fan</p>  <p>New profiles of the reverse-arc shaped wings</p>

More quiet in comparison with the previous fan

In the same working condition the new design of the propeller ensure a reduction of 1.5 dB compared to the previous models



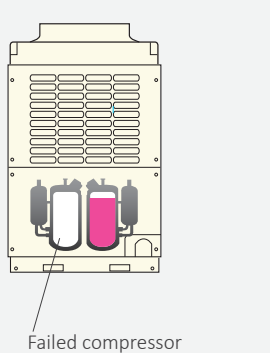


RELIABILITY

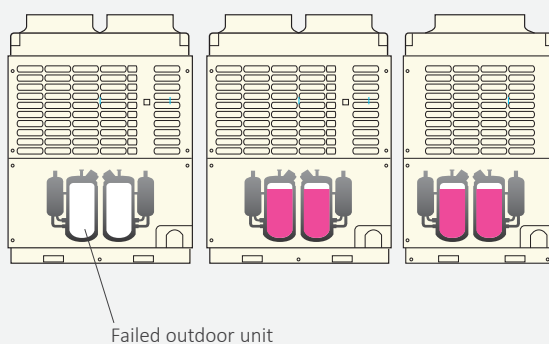
Backup operation

In case of a compressor failure, SMMS-e can keep working with the backup operation under All Inverter Control to compensate a failed compressor or header unit. This backup operation is available in both a single system or as a module.

Single outdoor unit backup

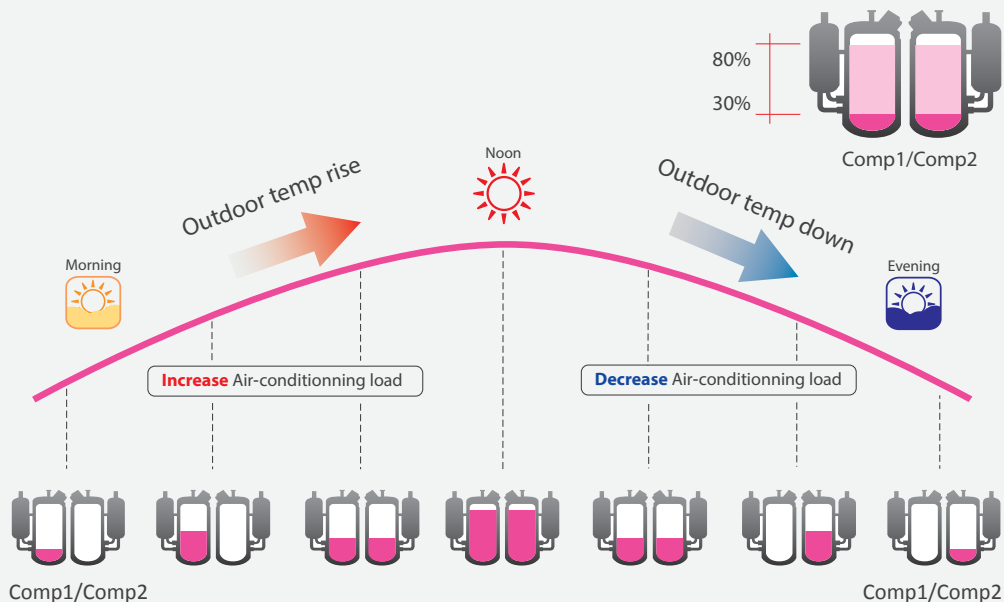


Module outdoor unit backup



Reliability rotational control

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





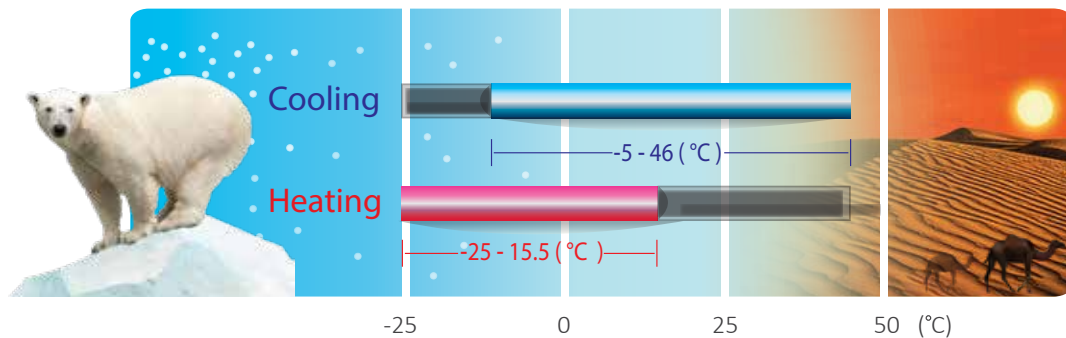
OPERATING TEMPERATURE RANGE

Outdoor temperature range

Utilizing the newly designed compressor, SMMS-e can operate under the wider range of outdoor ambience with the expansion of cooling and heating temperature from -25°C to 46°C.

Operation ambient temperature expansion

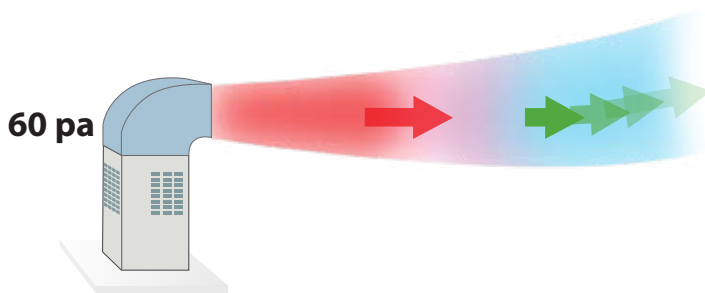
(Cooling : °CDB, Heating : °CWB)



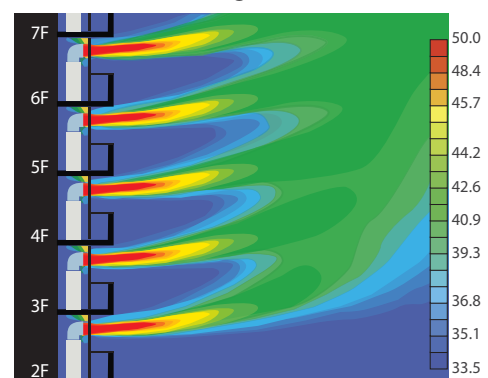
Note : Based on equivalent piping length of 7.5 m and piping height difference of 0 m.

The external static pressure

The SMMS-e units are suitable for challenging installations where high external static pressure performance



Air flow simulation diagram






Note : This result is analytical simulation, that does not guarantee actual temperatures.



Outdoor units

Standard model

								
Capacity		8HP	10HP	12HP	14HP	16HP	18HP	20HP
Model Name (MMY-)	CO	MAP0806T5P	MAP1006T5P	MAP1206T5P	MAP1406T5P	MAP1606T5P	MAP1806T5P	MAP2006T5P
	HP	MAP0806HT5P	MAP1006HT5P	MAP1206HT5P	MAP1406HT5P	MAP1606HT5P	MAP1806HT5P	MAP2006HT5P
Cooling capacity (kW)		22.4	28.0	33.5	40.0	45.0	50.4	56.0
Heating capacity (kW)		25.0	31.5	37.5	45.0	50.0	56.0	63.0

													
Capacity		22HP		24HP		26HP		28HP		30HP		32HP	
Model Name (MMY-)	CO	AP2216T5P		AP2416T5P		AP2616T5P		AP2816T5P		AP3016T5P		AP3216T5P	
	HP	AP2216HT5P		AP2416HT5P		AP2616HT5P		AP2816HT5P		AP3016HT5P		AP3216HT5P	
Units in combination (MMY-)		MAP1206T5P	MAP1006T5P	MAP1206T5P	MAP1206T5P	MAP1406T5P	MAP1206T5P	MAP1606T5P	MAP1206T5P	MAP1606T5P	MAP1406T5P	MAP1606T5P	MAP1606T5P
		MAP1206HT5P	MAP1006HT5P	MAP1206HT5P	MAP1206HT5P	MAP1406HT5P	MAP1206HT5P	MAP1606HT5P	MAP1206HT5P	MAP1606HT5P	MAP1406HT5P	MAP1606HT5P	MAP1606HT5P
Cooling capacity (kW)		61.5		67.0		73.5		78.5		85.0		90.0	
Heating capacity (kW)		69.0		75.0		82.5		87.5		95.0		100.0	

													
Capacity		34HP		36HP		38HP		40HP		42HP			
Model Name (MMY-)	CO	AP3416T5P		AP3616T5P		AP3816T5P		AP4016T5P		AP4216T5P			
	HP	AP3416HT5P		AP3616HT5P		AP3816HT5P		AP4016HT5P		AP4216HT5P			
Units in combination (MMY-)		MAP1806T5P	MAP1606T5P	MAP2006T5P	MAP1606T5P	MAP2006T5P	MAP1806T5P	MAP2006T5P	MAP2006T5P	MAP1606T5P	MAP1406T5P	MAP1206T5P	
		MAP1806HT5P	MAP1606HT5P	MAP2006HT5P	MAP1606HT5P	MAP2006HT5P	MAP1806HT5P	MAP2006HT5P	MAP2006HT5P	MAP1606HT5P	MAP1406HT5P	MAP1206HT5P	
Cooling capacity (kW)		95.4		101.0		106.4		112.0		118.5			
Heating capacity (kW)		106.0		113.0		119.0		126.0		132.5			

																	
Capacity		44HP				46HP				48HP				50HP			
Model Name (MMY-)	CO	AP4416T5P				AP4616T5P				AP4816T5P				AP5016T5P			
	HP	AP4416HT5P				AP4616HT5P				AP4816HT5P				AP5016HT5P			
Units in combination (MMY-)		MAP1606T5P	MAP1606T5P	MAP1206T5P	MAP1606T5P	MAP1606T5P	MAP1406T5P	MAP1606T5P	MAP1606T5P	MAP1606T5P	MAP1606T5P	MAP1806T5P	MAP1606T5P	MAP1606T5P			
		MAP1606HT5P	MAP1606HT5P	MAP1206HT5P	MAP1606HT5P	MAP1606HT5P	MAP1406HT5P	MAP1606HT5P	MAP1606HT5P	MAP1606HT5P	MAP1606HT5P	MAP1806HT5P	MAP1606HT5P	MAP1606HT5P			
Cooling capacity (kW)		123.5				130.0				135.0				140.4			
Heating capacity (kW)		137.5				145.0				150.0				156.0			

* Power : 3 phase 60 Hz 220V (208-230V)

* The source voltage must not fluctuate more than ±10%.



* 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


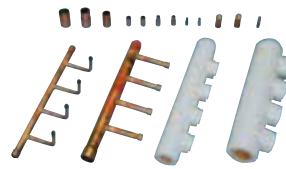

MMY-MAPxxx6T5P; Cooling only model, MMY-MAPxxx6HT5P; Heatpump model

Standard model

										
Capacity		52HP			54HP			56HP		
Model Name (MMY-)	CO	AP5216T5P			AP5416T5P			AP5616T5P		
	HP	AP5216HT5P			AP5416HT5P			AP5616HT5P		
Units in combination (MMY-)		MAP2006T5P	MAP1606T5P	MAP1606T5P	MAP2006T5P	MAP2006T5P	MAP1406T5P	MAP2006T5P	MAP2006T5P	MAP1606T5P
		MAP2006HT5P	MAP1606HT5P	MAP1606HT5P	MAP2006HT5P	MAP2006HT5P	MAP1406HT5P	MAP2006HT5P	MAP2006HT5P	MAP1606HT5P
Cooling capacity (kW)		146.0			152.0			157.0		
Heating capacity (kW)		163.0			171.0			176.0		

High efficiency / Heating capacity priority model

												
Capacity		20HP		36HP			38HP			40HP		
Model Name (MMY-)	CO	AP2026T5P		AP3626T5P			AP3826T5P			AP4026T5P		
	HP	AP2026HT5P		AP3626HT5P			AP3826HT5P			AP4026HT5P		
Units in combination (MMY-)		MAP1006T5P	MAP1006T5P	MAP1206T5P	MAP1206T5P	MAP1206T5P	MAP1406T5P	MAP1206T5P	MAP1206T5P	MAP1406T5P	MAP1406T5P	MAP1206T5P
		MAP1006HT5P	MAP1006HT5P	MAP1206HT5P	MAP1206HT5P	MAP1206HT5P	MAP1406HT5P	MAP1206HT5P	MAP1206HT5P	MAP1406HT5P	MAP1406HT5P	MAP1206HT5P
Cooling capacity (kW)		56.0		100.5			107.0			113.5		
Heating capacity (kW)		63.0		112.5			120.0			127.5		

	Y-shape branching joint				Branch headers				Outdoor unit connection piping kit	
Appearance					 (4-branch headers)					
Model name	RBM-BY55E	RBM-BY105E	RBM-BY205E	RBM-BY305E	RBM-HY1043E	RBM-HY2043E	RBM-HY1083E	RBM-HY2083E	RBM-BT14E	RBM-BT24E
Usage (Classification according to indoor unit capacity code)	Total below 6.4	Total 6.4 or more and below 14.2	Total 14.2 or more and below 25.2	Total 25.2 or more	Max.4 branches		Max.8 branches		Total below 26.0	Total 26.0 or more
					Total below 14.2	Total 14.2 or more and below 25.2	Total below 14.2	Total 14.2 or more and below 25.2		

Outdoor unit specifications

Standard model (Single unit)

Technical specifications

Equivalent HP		8HP	10HP	12HP	
Model name	Cooling only (MMY-)	MAP0806T5P	MAP1006T5P	MAP1206T5P	
	Heat pump (MMY-)	MAP0806HT5P	MAP1006HT5P	MAP1206HT5P	
Outdoor unit type		Inverter			
Power supply (*1)		3 phase 4 wire 60Hz 220V(208-230V)			
Cooling (*2)	Capacity (kW)	22.4	28.0	33.5	
	Power consumption (kW)	5.19	7.26	9.41	
	EER (Energy Efficiency Ratio)	Capacity 100%	4.32	3.86	3.56
		Capacity 80%	5.09	4.66	4.26
		Capacity 50%	6.40	6.22	5.87
Heating (*2)	Capacity (kW)	25.0	31.5	37.5	
	Power consumption (kW)	5.38	7.08	9.24	
	COP (Coefficient of Performance)	Capacity 100%	4.65	4.45	4.06
		Capacity 80%	5.38	5.05	4.55
		Capacity 50%	6.44	6.01	5.43
Dimensions (Height / Width / Depth) (mm)		1800 / 990 / 780	1800 / 990 / 780	1800 / 990 / 780	
Total weight	Heat pump / Cooling only (kg)	242 / 240	242 / 240	242 / 240	
Compressor	Motor output (kW)	2.1 x 2	3.1 x 2	3.9 x 2	
	Motor output (kW)	1.0	1.0	1.0	
Fan unit	Air volume (m ³ /h)	9700	9700	12200	
	Refrigerant piping	Gas side (mm)	ø 19.1	ø 22.2	ø 28.6
Main pipe diameter		Liquid side (mm)	ø 12.7	ø 12.7	ø 12.7
		Balance pipe (mm)	ø 9.5	ø 9.5	ø 9.5
Sound pressure level (Cooling / Heating) (dB(A))		55.0 / 56.0	57.0 / 58.0	59.0 / 61.0	

Standard model (Single unit)

Technical specifications

Equivalent HP		14HP	16HP	18HP	20HP	
Model name	Cooling only (MMY-)	MAP1406T5P	MAP1606T5P	MAP1806T5P	MAP2006T5P	
	Heat pump (MMY-)	MAP1406HT5P	MAP1606HT5P	MAP1806HT5P	MAP2006HT5P	
Outdoor unit type		Inverter				
Power supply (*1)		3 phase 4 wire 60Hz 220V(208-230V)				
Cooling (*2)	Capacity (kW)	40.0	45.0	50.4	56.0	
	Power consumption (kW)	11.5	13.60	14.0	17.9	
	EER (Energy Efficiency Ratio)	Capacity 100%	3.48	3.31	3.60	3.13
		Capacity 80%	4.16	3.99	4.20	3.86
		Capacity 50%	5.70	5.64	5.50	5.61
Heating (*2)	Capacity (kW)	45.0	50.0	56.0	63.0	
	Power consumption (kW)	10.6	12.5	13.6	16.5	
	COP (Coefficient of Performance)	Capacity 100%	4.25	4.00	4.12	3.82
		Capacity 80%	4.88	4.62	4.58	4.27
		Capacity 50%	5.77	5.56	5.35	5.05
Dimensions (Height / Width / Depth) (mm)		1800 / 1210 / 780	1800/1210/780	1800 / 1600 / 780	1800 / 1600 / 780	
Weight	Heat pump / Cooling only (kg)	311 / 310	311 / 310	380 / 379	380 / 379	
Compressor	Motor output (kW)	4.8 x 2	5.8 x 2	6.5 x 2	7.6 x 2	
	Motor output (kW)	1.0	1.0	2.0	2.0	
Fan unit	Air volume (m ³ /h)	12200	12600	17300	17900	
	Refrigerant piping	Gas side (mm)	ø 28.6	ø 28.6	ø 28.6	ø 28.6
Main pipe diameter		Liquid side (mm)	ø 15.9	ø 15.9	ø 15.9	ø 15.9
		Balance pipe (mm)	ø 9.5	ø 9.5	ø 9.5	ø 9.5
Sound pressure level (Cooling / Heating) (dB(A))		60.0 / 62.0	62.0 / 64.0	60.0 / 61.0	61.0 / 62.0	

Standard model (Combination)

Technical specifications

Equivalent HP		22HP		24HP		26HP		
Model name	Cooling only (MMY-)	AP2216T5P		AP2416T5P		AP2616T5P		
	Heat pump (MMY-)	AP2216HT5P		AP2416HT5P		AP2616HT5P		
Outdoor unit type		Inverter						
Power supply (*1)		3 phase 4 wire 60Hz 220V(208-230V)						
Outdoor unit model	Cooling only (MMY-)	MAP1206T5P	MAP1006T5P	MAP1206T5P	MAP1206T5P	MAP1406T5P	MAP1206T5P	
	Heat pump (MMY-)	MAP1206HT5P	MAP1006HT5P	MAP1206HT5P	MAP1206HT5P	MAP1406HT5P	MAP1206HT5P	
Cooling (*2)	Capacity (kW)	61.5		67.0		73.5		
	Power consumption (kW)	16.7		18.8		20.9		
	EER (Energy Efficiency Ratio)	Capacity 100%	3.69		3.56		3.52	
		Capacity 80%	4.43		4.25		4.20	
		Capacity 50%	6.03		5.86		5.78	
Heating (*2)	Capacity (kW)	69.0		75.0		82.5		
	Power consumption (kW)	16.3		18.50		19.8		
	COP (Coefficient of Performance)	Capacity 100%	4.23		4.06		4.16	
		Capacity 80%	4.76		4.55		4.71	
		Capacity 50%	5.67		5.42		5.61	
Weight	Heat pump / Cooling only (kg)	242 + 242	240 + 240	242 + 242	240 + 240	311 + 242	310 + 240	
Compressor	Motor output (kW)	3.9 x 2 + 3.1 x 2		3.9 x 2 + 3.9 x 2		4.8 x 2 + 3.9 x 2		
Fan unit	Motor output (kW)	1.0 + 1.0		1.0 + 1.0		1.0 + 1.0		
	Air volume (m ³ /h)	12200 + 9700		12200 + 12200		12200 + 12200		
Refrigerant piping	Main pipe diameter	Gas side (mm)	ø 28.6		ø 34.9		ø 34.9	
		Liquid side (mm)	ø 19.1		ø 19.1		ø 19.1	
		Balance pipe (mm)	ø 9.5		ø 9.5		ø 9.5	
Sound pressure level (Cooling / Heating)		(dB(A))		61.5 / 63.0		62.0 / 64.0		

Standard model (Combination)

Technical specifications

Equivalent HP		28HP		30HP		32HP		
Model name	Cooling only (MMY-)	AP2816T5P		AP3016T5P		AP3216T5P		
	Heat pump (MMY-)	AP2816HT5P		AP3016HT5P		AP3216HT5P		
Outdoor unit type		Inverter						
Power supply (*1)		3 phase 4 wire 60Hz 220V(208-230V)						
Outdoor unit model	Cooling only (MMY-)	MAP1606T5P	MAP1206T5P	MAP1606T5P	MAP1406T5P	MAP1606T5P	MAP1606T5P	
	Heat pump (MMY-)	MAP1606HT5P	MAP1206HT5P	MAP1606HT5P	MAP1406HT5P	MAP1606HT5P	MAP1606HT5P	
Cooling (*2)	Capacity (kW)	78.5		85.0		90.0		
	Power consumption (kW)	23.0		25.1		27.2		
	EER (Energy Efficiency Ratio)	Capacity 100%	3.41		3.39		3.31	
		Capacity 80%	4.10		4.07		4.00	
		Capacity 50%	5.74		5.67		5.64	
Heating (*2)	Capacity (kW)	87.5		95.0		100.0		
	Power consumption (kW)	21.7		23.1		25.0		
	COP (Coefficient of Performance)	Capacity 100%	4.02		4.11		4.00	
		Capacity 80%	4.61		4.75		4.62	
		Capacity 50%	5.50		5.66		5.56	
Weight	Heat pump / Cooling only (kg)	311 + 242	310 + 240	311 + 311	310 + 310	311 + 311	310 + 310	
Compressor	Motor output (kW)	5.8 x 2 + 3.9 x 2		5.8 x 2 + 4.8 x 2		5.8 x 2 + 5.8 x 2		
Fan unit	Motor output (kW)	1.0 + 1.0		1.0 + 1.0		1.0 + 1.0		
	Air volume (m ³ /h)	12600 + 12200		12600 + 12200		12600 + 12600		
Refrigerant piping	Main pipe diameter	Gas side (mm)	ø 34.9		ø 34.9		ø 34.9	
		Liquid side (mm)	ø 19.1		ø 19.1		ø 19.1	
		Balance pipe (mm)	ø 9.5		ø 9.5		ø 9.5	
Sound pressure level (Cooling / Heating)		(dB(A))		64.0 / 66.0		64.5 / 66.5		

*1 The source voltage must not flucture more than ±10%.

*2 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
Based on equivalent piping length of 7.5 m and piping height difference of 0 m.

Standard model (Combination)

Technical specifications

Equivalent HP		34HP		36HP		38HP		
Model name	Cooling only (MMY-)	AP3416T5P		AP3616T5P		AP3816T5P		
	Heat pump (MMY-)	AP3416HT5P		AP3616HT5P		AP3816HT5P		
Outdoor unit type		Inverter						
Power supply (*1)		3 phase 4 wire 60Hz 220V(208-230V)						
Outdoor unit model	Cooling only (MMY-)	MAP1806T5P	MAP1606T5P	MAP2006T5P	MAP1606T5P	MAP2006T5P	MAP1806T5P	
	Heat pump (MMY-)	MAP1806HT5P	MAP1606HT5P	MAP2006HT5P	MAP1606HT5P	MAP2006HT5P	MAP1806HT5P	
Cooling (*2)	Capacity (kW)	95.4		101.0		106.4		
	Power consumption (kW)	27.6		31.5		31.9		
	EER (Energy Efficiency Ratio)	Capacity 100%	3.46		3.21		3.34	
		Capacity 80%	4.10		3.92		4.01	
		Capacity 50%	5.60		5.62		5.56	
Heating (*2)	Capacity (kW)	106.0		113.0		119.0		
	Power consumption (kW)	26.1		29.0		30.1		
	COP (Coefficient of Performance)	Capacity 100%	4.06		3.90		3.95	
		Capacity 80%	4.61		4.41		4.41	
		Capacity 50%	5.45		5.28		5.17	
Weight	Heat pump / Cooling only (kg)	380 + 311	379 + 310	380 + 311	379 + 310	380 + 380	379 + 379	
Compressor	Motor output (kW)	6.5 x 2 + 5.8 x 2		7.6 x 2 + 5.8 x 2		7.6 x 2 + 6.5 x 2		
Fan unit	Motor output (kW)	2.0 + 1.0		2.0 + 1.0		2.0 + 2.0		
	Air volume (m ³ /h)	17300 + 12600		17900 + 12600		17900 + 17300		
Refrigerant piping	Main pipe diameter	Gas side (mm)	ø 34.9		ø 41.3		ø 41.3	
		Liquid side (mm)	ø 19.1		ø 22.2		ø 22.2	
		Balance pipe (mm)	ø 9.5		ø 9.5		ø 9.5	
Sound pressure level (Cooling / Heating) (dB(A))		64.5 / 66.0		64.5 / 66.5		63.5 / 64.5		

Standard model (Combination)

Technical specifications

Equivalent HP		40HP		42HP			44HP			
Model name	Cooling only (MMY-)	AP4016T5P		AP4216T5P			AP4416T5P			
	Heat pump (MMY-)	AP4016HT5P		AP4216HT5P			AP4416HT5P			
Outdoor unit type		Inverter								
Power supply (*1)		3 phase 4 wire 60Hz 220V(208-230V)								
Outdoor unit model	Cooling only (MMY-)	MAP2006T5P	MAP2006T5P	MAP1606T5P	MAP1406T5P	MAP1206T5P	MAP1606T5P	MAP1606T5P	MAP1206T5P	
	Heat pump (MMY-)	MAP2006HT5P	MAP2006HT5P	MAP1606HT5P	MAP1406HT5P	MAP1206HT5P	MAP1606HT5P	MAP1606HT5P	MAP1206HT5P	
Cooling (*2)	Capacity (kW)	112.0		118.5			123.5			
	Power consumption (kW)	35.8		34.5			36.6			
	EER (Energy Efficiency Ratio)	Capacity 100%	3.13		3.43			3.37		
		Capacity 80%	3.86		4.12			4.07		
		Capacity 50%	5.61		5.70			5.72		
Heating (*2)	Capacity (kW)	126.0		132.5			137.5			
	Power consumption (kW)	33.0		32.3			34.2			
	COP (Coefficient of Performance)	Capacity 100%	3.82		4.10			4.02		
		Capacity 80%	4.25		4.69			4.70		
		Capacity 50%	5.04		5.57			5.50		
Weight	Heat pump / Cooling only (kg)	380 + 380	379 + 379	311 + 311 + 242	310 + 310 + 240	311 + 311 + 242	310 + 310 + 240			
Compressor	Motor output (kW)	7.6 x 2 + 7.6 x 2		5.8 x 2 + 4.8 x 2 + 3.9 x 2			5.8 x 2 + 5.8 x 2 + 3.9 x 2			
Fan unit	Motor output (kW)	2.0 + 2.0		1.0 + 1.0 + 1.0			1.0 + 1.0 + 1.0			
	Air volume (m ³ /h)	17900 + 17900		12600 + 12200 + 12200			12600 + 12600 + 12200			
Refrigerant piping	Main pipe diameter	Gas side (mm)	ø 41.3		ø 41.3			ø 41.3		
		Liquid side (mm)	ø 22.2		ø 22.2			ø 22.2		
		Balance pipe (mm)	ø 9.5		ø 9.5			ø 9.5		
Sound pressure level (Cooling / Heating) (dB(A))		64.0 / 65.0		65.5 / 67.5			66.0 / 68.0			

Standard model (Combination)

Technical specifications

Equivalent HP		46HP			48HP			50HP			
Model name	Cooling only (MMY-)	AP4616T5P			AP4816T5P			AP5016T5P			
	Heat pump (MMY-)	AP4616HT5P			AP4816HT5P			AP5016HT5P			
Outdoor unit type		Inverter									
Power supply (*1)		3 phase 4 wire 60Hz 220V(208-230V)									
Outdoor unit model	Cooling only (MMY-)	MAP1606T5P	MAP1606T5P	MAP1406T5P	MAP1606T5P	MAP1606T5P	MAP1606T5P	MAP1806T5P	MAP1606T5P	MAP1606T5P	
	Heat pump (MMY-)	MAP1606HT5P	MAP1606HT5P	MAP1406HT5P	MAP1606HT5P	MAP1606HT5P	MAP1606HT5P	MAP1806HT5P	MAP1606HT5P	MAP1606HT5P	
Cooling (*2)	Capacity (kW)	130.0			135.0			140.4			
	Power consumption (kW)	38.7			40.8			41.2			
	EER (Energy Efficiency Ratio)	Capacity 100%	3.36			3.31			3.41		
		Capacity 80%	4.05			4.00			4.07		
		Capacity 50%	5.65			5.63			5.57		
Heating (*2)	Capacity (kW)	145.0			150.0			156.0			
	Power consumption (kW)	35.6			37.5			38.6			
	COP (Coefficient of Performance)	Capacity 100%	4.07			4.00			4.04		
		Capacity 80%	4.70			4.62			4.61		
		Capacity 50%	5.62			5.56			5.49		
Weight	Heat pump / Cooling only (kg)	311 + 311 + 311	310 + 310 + 310	311 + 311 + 311	310 + 310 + 310	380 + 311 + 311	379 + 310 + 310				
Compressor	Motor output (kW)	5.8 x 2 + 5.8 x 2 + 4.8 x 2			5.8 x 2 + 5.8 x 2 + 5.8 x 2			6.5 x 2 + 5.8 x 2 + 5.8 x 2			
	Motor output (kW)	1.0 + 1.0 + 1.0			1.0 + 1.0 + 1.0			2.0 + 1.0 + 1.0			
Fan unit	Motor output (kW)	1.0 + 1.0 + 1.0			1.0 + 1.0 + 1.0			2.0 + 1.0 + 1.0			
	Air volume (m ³ /h)	12600 + 12600 + 12200			12600 + 12600 + 12600			17300 + 12600 + 12600			
Refrigerant piping	Main pipe diameter	Gas side (mm)	ø 41.3			ø 41.3			ø 41.3		
		Liquid side (mm)	ø 22.2			ø 22.2			ø 22.2		
		Balance pipe (mm)	ø 9.5			ø 9.5			ø 9.5		
			ø 9.5			ø 9.5			ø 9.5		
Sound pressure level (Cooling / Heating)		(dB(A)) 66.5 / 68.5			67.0 / 69.0			66.5 / 68.0			

Standard model (Combination)

Technical specifications

Equivalent HP		52HP			54HP			56HP			
Model name	Cooling only (MMY-)	AP5216T5P			AP5416T5P			AP5616T5P			
	Heat pump (MMY-)	AP5216HT5P			AP5416HT5P			AP5616HT5P			
Outdoor unit type		Inverter									
Power supply (*1)		3 phase 4 wire 60Hz 220V(208-230V)									
Outdoor unit model	Cooling only (MMY-)	MAP2006T5P	MAP1606T5P	MAP1606T5P	MAP2006T5P	MAP2006T5P	MAP1406T5P	MAP2006T5P	MAP2006T5P	MAP1606T5P	
	Heat pump (MMY-)	MAP2006HT5P	MAP1606HT5P	MAP1606HT5P	MAP2006HT5P	MAP2006HT5P	MAP1406HT5P	MAP2006HT5P	MAP2006HT5P	MAP1606HT5P	
Cooling (*2)	Capacity (kW)	146.0			152.0			157.0			
	Power consumption (kW)	45.1			47.3			49.4			
	EER (Energy Efficiency Ratio)	Capacity 100%	3.24			3.21			3.18		
		Capacity 80%	3.95			3.94			3.90		
		Capacity 50%	5.62			5.63			5.61		
Heating (*2)	Capacity (kW)	163.0			171.0			176.0			
	Power consumption (kW)	41.5			43.6			45.5			
	COP (Coefficient of Performance)	Capacity 100%	3.93			3.92			3.87		
		Capacity 80%	4.47			4.40			4.36		
		Capacity 50%	5.36			5.21			5.18		
Weight	Heat pump / Cooling only (kg)	380 + 311 + 311	379 + 310 + 310	380 + 380 + 311	379 + 379 + 310	380 + 380 + 311	379 + 379 + 310				
Compressor	Motor output (kW)	7.6 x 2 + 5.8 x 2 + 5.8 x 2			7.6 x 2 + 7.6 x 2 + 4.8 x 2			7.6 x 2 + 7.6 x 2 + 5.8 x 2			
	Motor output (kW)	2.0 + 1.0 + 1.0			2.0 + 2.0 + 1.0			2.0 + 2.0 + 1.0			
Fan unit	Motor output (kW)	2.0 + 1.0 + 1.0			2.0 + 2.0 + 1.0			2.0 + 2.0 + 1.0			
	Air volume (m ³ /h)	17900 + 12600 + 12600			17900 + 17900 + 12200			17900 + 17900 + 12600			
Refrigerant piping	Main pipe diameter	Gas side (mm)	ø 41.3			ø 41.3			ø 41.3		
		Liquid side (mm)	ø 22.2			ø 22.2			ø 22.2		
		Balance pipe (mm)	ø 9.5			ø 9.5			ø 9.5		
			ø 9.5			ø 9.5			ø 9.5		
Sound pressure level (Cooling / Heating)		(dB(A)) 66.5 / 68.5			65.5 / 67.0			66.5 / 67.5			

High efficiency / Heating capacity priority model (Combination)

Technical specifications

Equivalent HP		20HP		36HP				
Model name	Cooling only (MMY-)	AP2026T5P		AP3626T5P				
	Heat pump (MMY-)	AP2026HT5P		AP3626HT5P				
Outdoor unit type		Inverter						
Power supply (*)		3 phase 4 wire 60Hz 220V(208-230V)						
Outdoor unit model	Cooling only (MMY-)	MAP1006T5P	MAP1006T5P	MAP1206T5P	MAP1206T5P	MAP1206T5P	MAP1206T5P	
	Heat pump (MMY-)	MAP1006HT5P	MAP1006HT5P	MAP1206HT5P	MAP1206HT5P	MAP1206HT5P	MAP1206HT5P	
Cooling (*2)	Capacity (kW)	56.0		100.5				
	Power consumption (kW)	14.5		28.2				
	EER (Energy Efficiency Ratio)	Capacity 100	3.86		3.56			
		Capacity 80%	4.66		4.25			
		Capacity 50%	6.22		5.86			
Heating (*2)	Capacity (kW)	63.0		112.5				
	Power consumption (kW)	14.2		27.7				
	COP (Coefficient of Performance)	Capacity 100%	4.45		4.06			
		Capacity 80%	5.05		4.55			
		Capacity 50%	5.98		5.41			
Weight	Heat pump / Cooling only (kg)	242 + 242	240 + 240	242 + 242 + 242	240 + 240 + 240			
Compressor	Motor output (kW)	3.1 x 2 + 3.1 x 2		3.9 x 2 + 3.9 x 2 + 3.9 x 2				
	Motor output (kW)	1.0 + 1.0		1.0 + 1.0 + 1.0				
Fan unit	Motor output (kW)	1.0 + 1.0		1.0 + 1.0 + 1.0				
	Air volume (m ³ /h)	9700 + 9700		12200 + 12200 + 12200				
Refrigerant piping	Main pipe diameter	Gas side (mm)	ø 28.6		ø 41.3			
		Liquid side (mm)	ø 15.9		ø 22.2			
		Balance pipe(mm)	ø 9.5		ø 9.5			
Sound pressure level (Cooling / Heating) (dB(A))		60.0 / 61.0		64.0 / 66.0				

High efficiency / Heating capacity priority model (Combination)

Technical specifications

Equivalent HP		38HP		40HP				
Model name	Cooling only (MMY-)	AP3826T5P		AP4026T5P				
	Heat pump (MMY-)	AP3826HT5P		AP4026HT5P				
Outdoor unit type		Inverter						
Power supply (*)		3 phase 4 wire 60Hz 220V(208-230V)						
Outdoor unit model	Cooling only (MMY-)	MAP1406T5P	MAP1206T5P	MAP1206T5P	MAP1406T5P	MAP1406T5P	MAP1206T5P	
	Heat pump (MMY-)	MAP1406HT5P	MAP1206HT5P	MAP1206HT5P	MAP1406HT5P	MAP1406HT5P	MAP1206HT5P	
Cooling (*2)	Capacity (kW)	107.0		113.5				
	Power consumption (kW)	30.3		32.4				
	EER (Energy Efficiency Ratio)	Capacity 100	3.53		3.50			
		Capacity 80%	4.22		4.18			
		Capacity 50%	5.80		5.75			
Heating (*2)	Capacity (kW)	120.0		127.5				
	Power consumption (kW)	29.1		30.4				
	COP (Coefficient of Performance)	Capacity 100%	4.13		4.19			
		Capacity 80%	4.66		4.79			
		Capacity 50%	5.56		5.65			
Weight	Heat pum/Cooling only (kg)	311 + 242 + 242	310 + 240 + 240	311 + 311 + 242	310 + 310 + 240			
Compressor	Motor output (kW)	4.8 x 2 + 3.9 x 2 + 3.9 x 2		4.8 x 2 + 4.8 x 2 + 3.9 x 2				
	Motor output (kW)	1.0 + 1.0 + 1.0		1.0 + 1.0 + 1.0				
Fan unit	Motor output (kW)	1.0 + 1.0 + 1.0		1.0 + 1.0 + 1.0				
	Air volume (m ³ /h)	12200 + 12200 + 12200		12200 + 12200 + 12200				
Refrigerant piping	Main pipe diameter	Gas side (mm)	ø 41.3		ø 41.3			
		Liquid side (mm)	ø 22.2		ø 22.2			
		Balance pipe(mm)	ø 9.5		ø 9.5			
Sound pressure level (Cooling / Heating) (dB(A))		64.5 / 66.5		64.5 / 66.5				

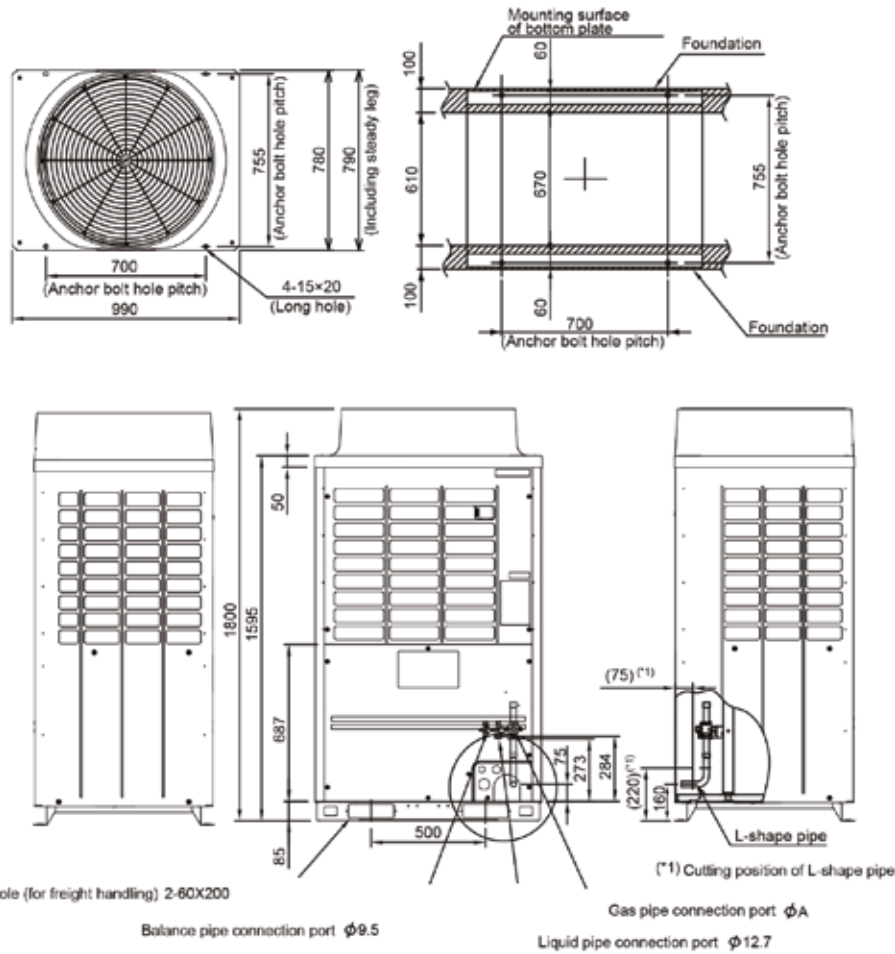
*1 The source voltage must not flucture more than ±10%.

*2 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
 The standard piping means that main pipe length is 5m, branching pipe length is 2.5m of branch piping connected with a 0 meter height.

Outdoor unit external drawings

**Model: MMY-MAP0806T5P, MMY-MAP0806HT5P
MMY-MAP1006T5P, MMY-MAP1006HT5P
MMY-MAP1206T5P, MMY-MAP1206HT5P**

Model Name	ØA
MMY-MAP0806 type	Ø19.1
MMY-MAP1006 type	Ø22.2
MMY-MAP1206 type	Ø28.6

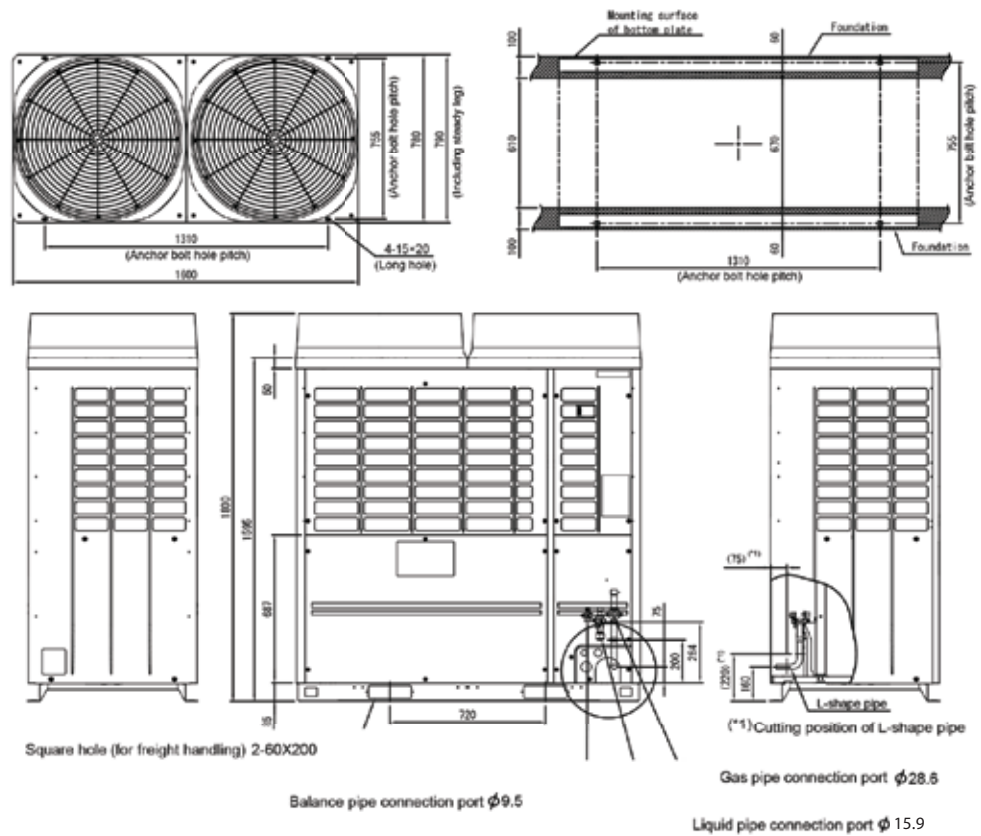


(Note)

1. If there is an obstacle at the upper side of the outdoor unit, set the top end of the outdoor unit 2000mm apart from the obstacle.
2. Limit the height of the obstacle surrounding the outdoor unit to 800mm or less from the bottom end of the outdoor unit.
3. Draw out the pipe procured locally to the front of the outdoor unit horizontally, and keep 500mm or more between the outdoor unit and traversing pipe if placing pipe transversely.
4. Dimensional drawing of corrosion heavy protection model is the same as that of standard model.

(Unit:mm)

**Model: MMY-MAP1806T5P, MMY-MAP1806HT5P
MMY-MAP2006T5P, MMY-MAP2006HT5P**



(Note)

1. If there is an obstacle at the upper side of the outdoor unit, set the top end of the outdoor unit 2000mm apart from the obstacle.
2. Limit the height of the obstacle surrounding the outdoor unit to 800mm or less from the bottom end of the outdoor unit.
3. Draw out the pipe procured locally to the front of the outdoor unit horizontally, and keep 500mm or more between the outdoor unit and traversing pipe if placing pipe transversely.
4. Dimensional drawing of corrosion heavy protection model is the same as that of standard model.

(Unit:mm)



Indoor units



Cooling capacity (HP equivalent)	4-way air discharge cassette type	Compact 4-way cassette type	2-way air discharge cassette type	1-way air discharge cassette type	Slim duct type
007 type 2.2 kW (0.8HP)		MMU-AP0077MH-E	MMU-AP0072WH1	MMU-AP0074YH1-E	MMD-AP0074SPH1-E
009 type 2.8 kW (1HP)	MMU-AP0094HP1-E	MMU-AP0097MH-E	MMU-AP0092WH1	MMU-AP0094YH1-E	MMD-AP0094SPH1-E
012 type 3.6 kW (1.25HP)	MMU-AP0124HP1-E	MMU-AP0127MH-E	MMU-AP0122WH1	MMU-AP0124YH1-E	MMD-AP0124SPH1-E
015 type 4.5 kW (1.7HP)	MMU-AP0154HP1-E	MMU-AP0157MH-E	MMU-AP0152WH1	MMU-AP0154SH1-E	MMD-AP0154SPH1-E
018 type 5.6 kW (2HP)	MMU-AP0184HP1-E	MMU-AP0187MH-E	MMU-AP0182WH1	MMU-AP0184SH1-E	MMD-AP0184SPH1-E
024 type 7.1 kW (2.5HP)	MMU-AP0244HP1-E		MMU-AP0242WH1	MMU-AP0244SH1-E	MMD-AP0244SPH1-E
027 type 8.0 kW (3HP)	MMU-AP0274HP1-E		MMU-AP0272WH1		MMD-AP0274SPH1-E
030 type 9.0 kW (3.2HP)	MMU-AP0304HP1-E		MMU-AP0302WH1		
036 type 11.2 kW (4HP)	MMU-AP0364HP1-E		MMU-AP0362WH1		
048 type 14.0 kW (5HP)	MMU-AP0484HP1-E		MMU-AP0482WH1		
056 type 16.0kW (6HP)	MMU-AP0564HP1-E		MMU-AP0562WH1		
072 type 22.4kW (8HP)					
096 type 28.0kW (10HP)					



Cooling capacity (HP equivalent)	Concealed duct type	Concealed duct high static pressure type	Ceiling type	High wall type (Series 3)	High wall type (Series 7)
007 type 2.2 kW (0.8HP)	MMD-AP0076BHP1-E			MMK-AP0073H1	MMK-AP0077HP-E
009 type 2.8 kW (1HP)	MMD-AP0096BHP1-E			MMK-AP0093H1	MMK-AP0097HP-E
012 type 3.6 kW (1.25HP)	MMD-AP0126BHP1-E			MMK-AP0123H1	MMK-AP0127HP-E
015 type 4.5 kW (1.7HP)	MMD-AP0156BHP1-E		MMC-AP0158HP-E	MMK-AP0153H1	
018 type 5.6 kW (2HP)	MMD-AP0186BHP1-E	MMD-AP0186HP1-E	MMC-AP0188HP-E	MMK-AP0183H1	
024 type 7.1 kW (2.5HP)	MMD-AP0246BHP1-E	MMD-AP0246HP1-E	MMC-AP0248HP-E	MMK-AP0243H1	
027 type 8.0 kW (3HP)	MMD-AP0276BHP1-E	MMD-AP0276HP1-E	MMC-AP0278HP-E		
030 type 9.0 kW (3.2HP)	MMD-AP0306BHP1-E				
036 type 11.2 kW (4HP)	MMD-AP0366BHP1-E	MMD-AP0366HP1-E	MMC-AP0368HP-E		
048 type 14.0 kW (5HP)	MMD-AP0486BHP1-E	MMD-AP0486HP1-E	MMC-AP0488HP-E		
056 type 16.0kW (6HP)	MMD-AP0566BHP1-E	MMD-AP0566HP1-E	MMC-AP0568HP-E		
072 type 22.4kW (8HP)		MMD-AP0726HP-E			
096 type 28.0 kW (10HP)		MMD-AP0966HP-E			

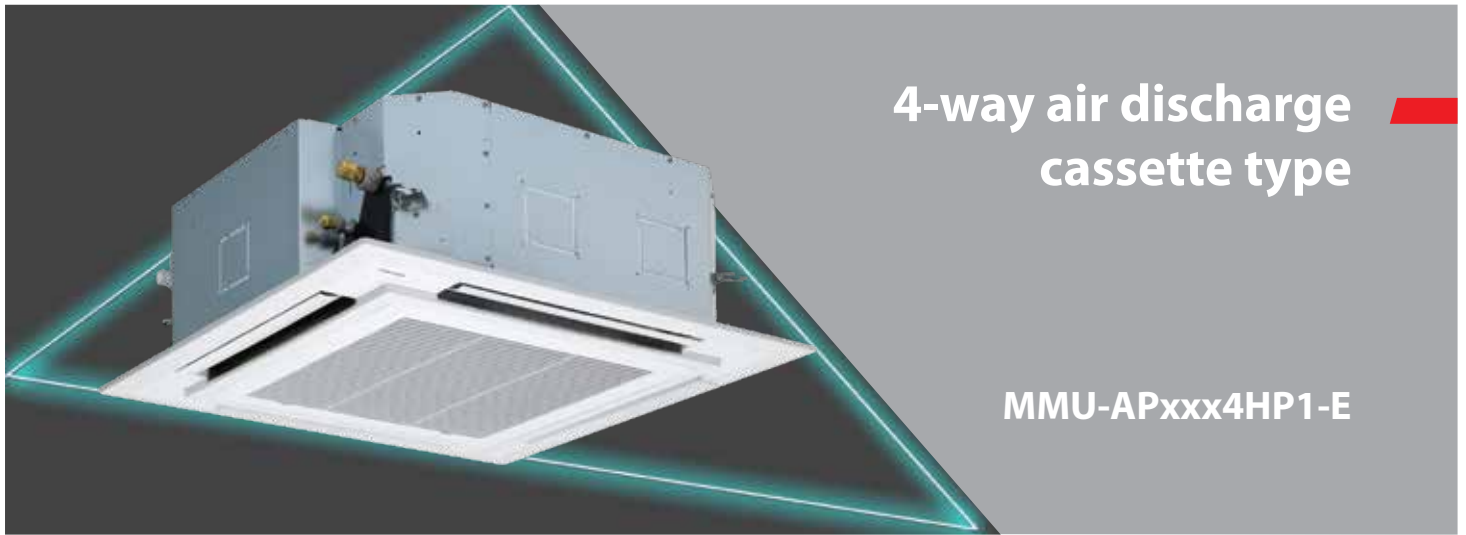


Cooling capacity (HP equivalent)	Console type	Floor standing cabinet type	Floor standing concealed type	Floor standing type
007 type 2.2 kW (0.8HP)	MML-AP0074NH1-E	MML-AP0074H1-E	MML-AP0074BH1-E	
009 type 2.8 kW (1HP)	MML-AP0094NH1-E	MML-AP0094H1-E	MML-AP0094BH1-E	
012 type 3.6 kW (1.25HP)	MML-AP0124NH1-E	MML-AP0124H1-E	MML-AP0124BH1-E	
015 type 4.5 kW (1.7HP)	MML-AP0154NH1-E	MML-AP0154H1-E	MML-AP0154BH1-E	MMF-AP0156H1-E
018 type 5.6 kW (2HP)	MML-AP0184NH1-E	MML-AP0184H1-E	MML-AP0184BH1-E	MMF-AP0186H1-E
024 type 7.1 kW (2.5HP)		MML-AP0244H1-E	MML-AP0244BH1-E	MMF-AP0246H1-E
027 type 8.0 kW (3HP)				MMF-AP0276H1-E
030 type 9.0 kW (3.2HP)				
036 type 11.2 kW (4HP)				MMF-AP0366H1-E
048 type 14.0kW (5HP)				MMF-AP0486H1-E
056 type 16.0 kW (6HP)				MMF-AP0566H1-E
072 type 22.4kW (8HP)				
096 type 28.0 kW (10HP)				
144 type 45.0 kW (16HP)				
192 type 56.0 kW (20HP)				



Air volume	Fresh air intake indoor unit type	Air to air heat exchanger with Dx-coil type	Air to air heat exchanger*
150 m ³ /h			VN-M150HE
250 m ³ /h			VN-M250HE
350 m ³ /h			VN-M350HE
500 m ³ /h		MMD-VN502HEX1E	VN-M500HE
650 m ³ /h			VN-M650HE
800 m ³ /h		MMD-VN802HEX1E	VN-M800HE
1000 m ³ /h		MMD-VN1002HEX1E2	VN-M1000HE
1500 m ³ /h			VN-M1500HE
2000 m ³ /h			VN-M2000HE
1080 m ³ /h	MMD-AP0481HFE		
1680 m ³ /h	MMD-AP0721HFE		
2100 m ³ /h	MMD-AP0961HFE		

*Do not connect to refrigerant piping from outdoor unit.
Control wires can be connected.



4-way air discharge cassette type

MMU-APxxx4HP1-E

Individual louver control

The angles of each of the four louvers can be set individually
=> Enables air flow to be adapted to user preferences.

Easy installation

The panel is attached using the bolt already installed on the indoor unit.



RBC-U31PGP(W)-E

Technical specifications

Model name		MMU-AP0094HP1-E	AP0124HP1-E	AP0154HP1-E	AP0184HP1-E	AP0244HP1-E	AP0274HP1-E	AP0304HP1-E	AP0364HP1-E	AP0484HP1-E	AP0564HP1-E		
Cooling/Heating capacity*1		(kW)	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	9.0/10.0	11.2/12.5	14.0/16.0	16.0/18.0	
Electrical characteristics	Power requirements	1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 208-230V (Separate power supply for indoor units required.)											
	Power consumption 50 Hz/60 Hz	(kW)	0.021/0.021	0.023/0.023	0.026/0.026	0.036/0.036	0.043/0.043	0.088/0.088	0.112/0.112				
Appearance (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)	18 (4)*		20 (4)*				25 (4)*				
Fan unit	Standard air flow (High/Mid/Low)	(m ³ /h)	800/730/680		930/830/790	1050/920/800	1290/920/800		1320/1110/850	1970/1430/1070	2130/1430/1130	2130/1520/1230	
	Motor output	(W)	14				20			68	72		
Connecting pipe	Gas side	(mm)	ø9.5		ø12.7			ø15.9					
	Liquid side	(mm)	ø6.4						ø9.5				
	Drain port (Nominal dia.)	(mm)	25 (Polyvinyl chloride tube)										
Sound pressure level*2 (High/Mid/Low)		(dB(A))	30/29/27		31/29/27	32/29/27	35/31/28		38/33/30	43/38/32	46/38/33	46/40/33	

* Figures in parentheses are for ceiling panels.

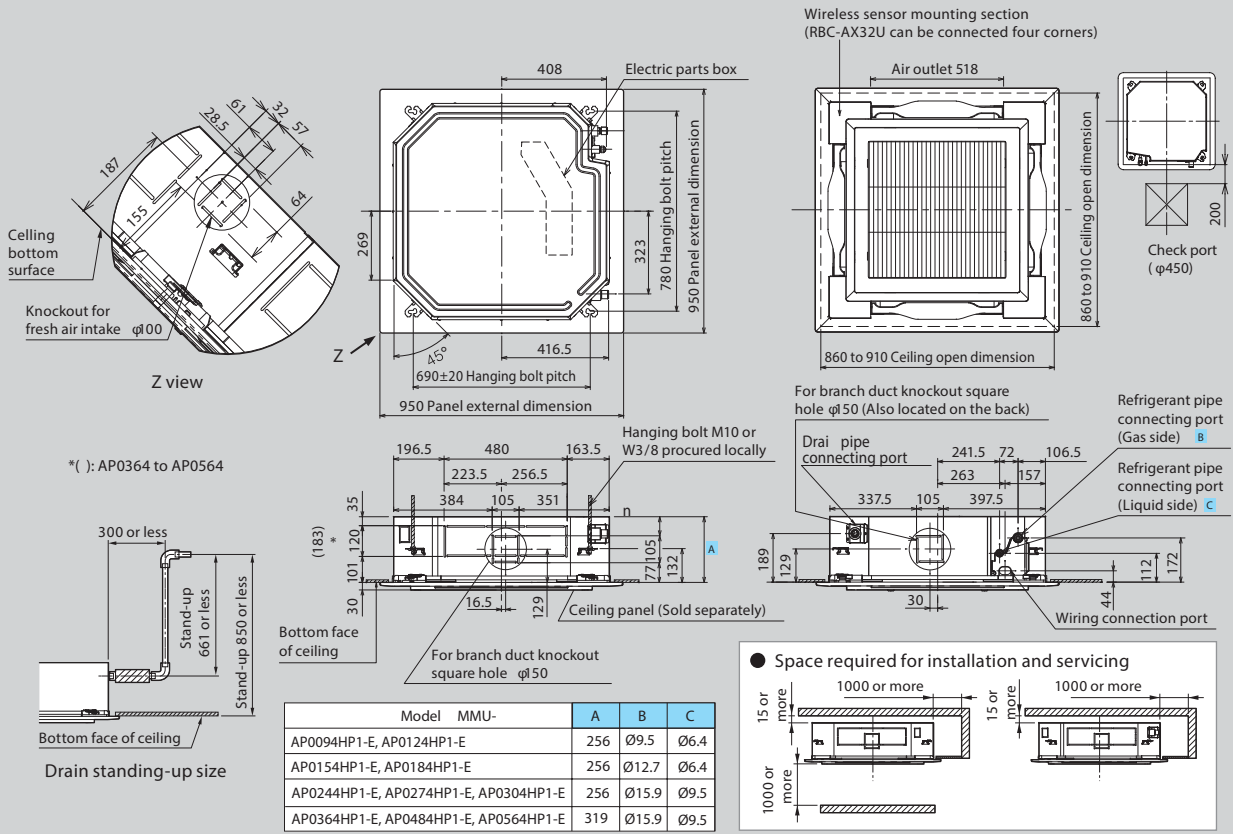
Note 1 : The capacities are measured under the conditions specified by JIS B 8615 based on the reference piping.
The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 m height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

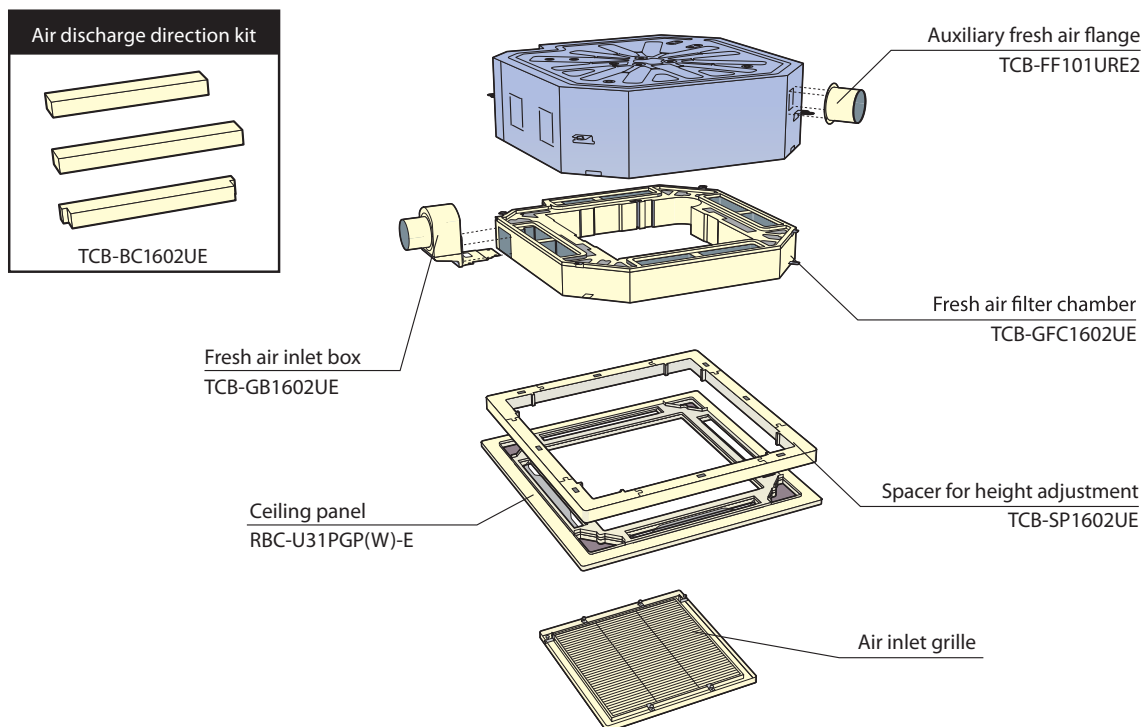
Note : Rated conditions Cooling : Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB
Heating : Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

MMU-AP0094HP1-E to MMU-AP0564HP1-E



*The figure shows the RBC-U31PGP(W)-E panel.

Options



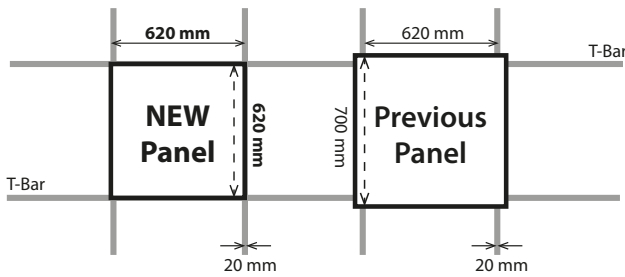


Compact 4-way cassette type

MMU-APxxx7MH-E

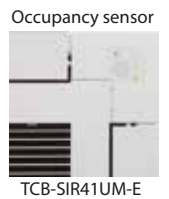
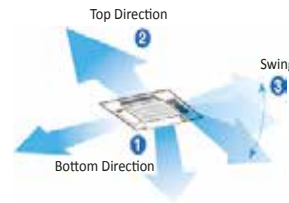
Superior design with compact chassis

This compact unit (620 × 620 mm) fits with flat panel perfectly into ceilings and matches standard architectural modules without the need to cut ceiling tiles, makes your room look more elegant.



Individual louver control*

The wind direction and swing operation can be set individually by each louver, which can be set into memory for future use. Furthermore, the optional occupancy sensor also improve efficiency energy.



*The function is available only RBC-AMS55E-ES/EN

Technical specifications

Model name	MMU-	AP0077MH-E	AP0097MH-E	AP0127MH-E	AP0157MH-E	AP0187MH-E	
Cooling/Heating capacity*1	(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	
Electrical characteristics	Power requirements	1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 220V (Separate power supply for indoor units required.)					
	Power consumption 50 Hz/60 Hz	(kW)	0.016/0.016	0.025/0.025	0.027/0.027	0.030/0.030	0.052/0.052
Appearance (Ceiling panel)	Model	RBC-UM21PG(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 (M+/M/L+/L)	(m³/h)	552 (500/462/395/378)	570 (520/468/395/378)	594 (550/504/420/402)	660 (600/552/480/468)	840 (740/642/540/522)
	Motor output	(W)	60				
Connecting pipe	Gas side	(mm)	ø9.5		ø12.7		
	Liquid side	(mm)	ø6.4				
	Drain port (Nominal dia.)	(mm)	VP 20 (Polyvinyl chloride tube)				
Sound pressure level*2 High (M+/M/L+/L)	dB(A)	37(34/33/30/29)	38(35/33/30/29)	38(36/34/31/30)	40(37/35/32/31)	47(43/39/36/34)	

* Figures in parentheses are for ceiling panels.

Note 1 : The capacities are measured under the conditions specified by JIS B 8615 based on the reference piping.

The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 m height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

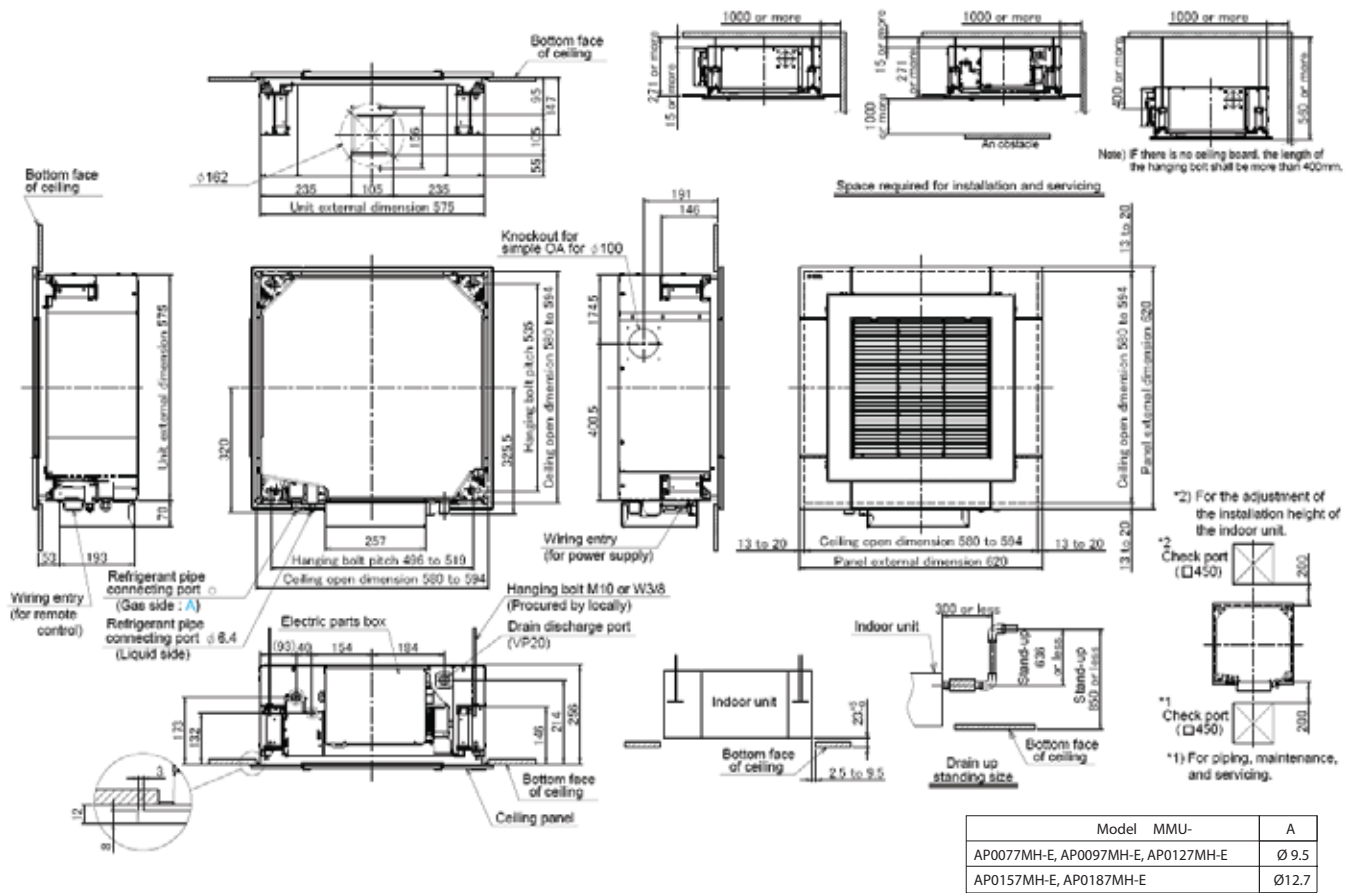
Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : Rated conditions Cooling : Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB

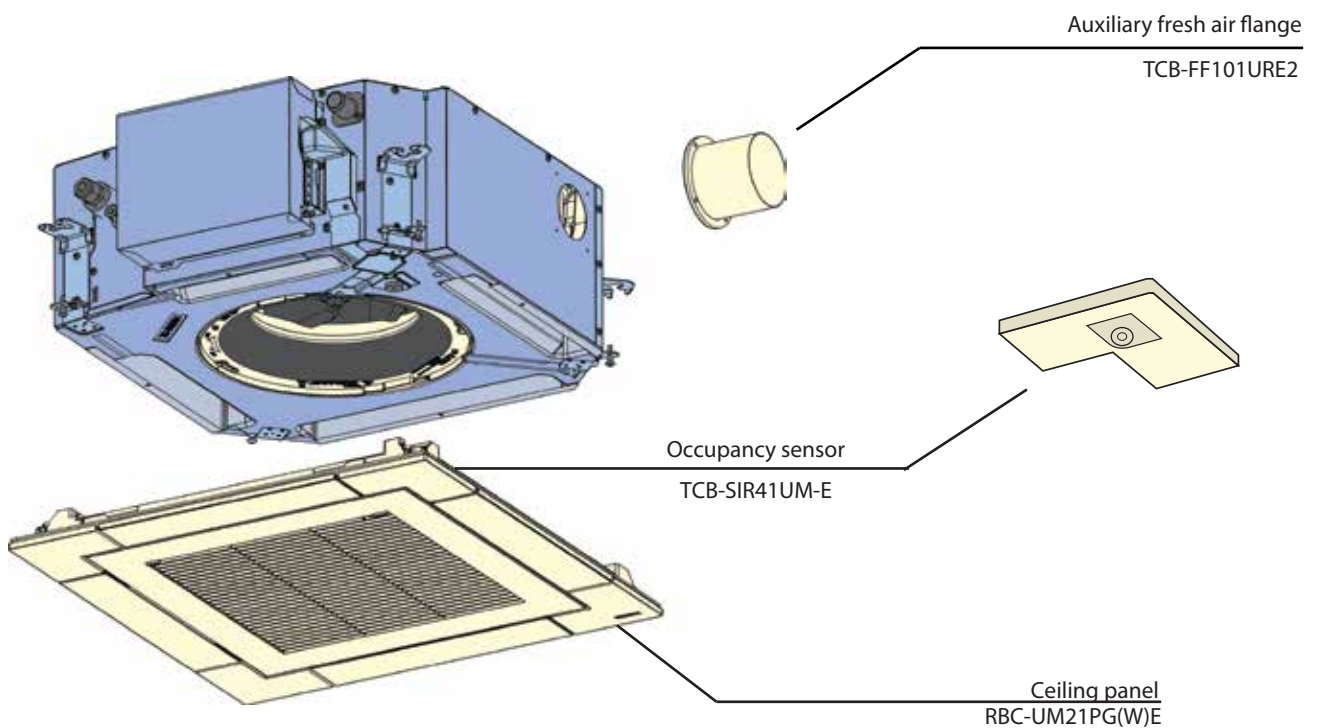
Heating : Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

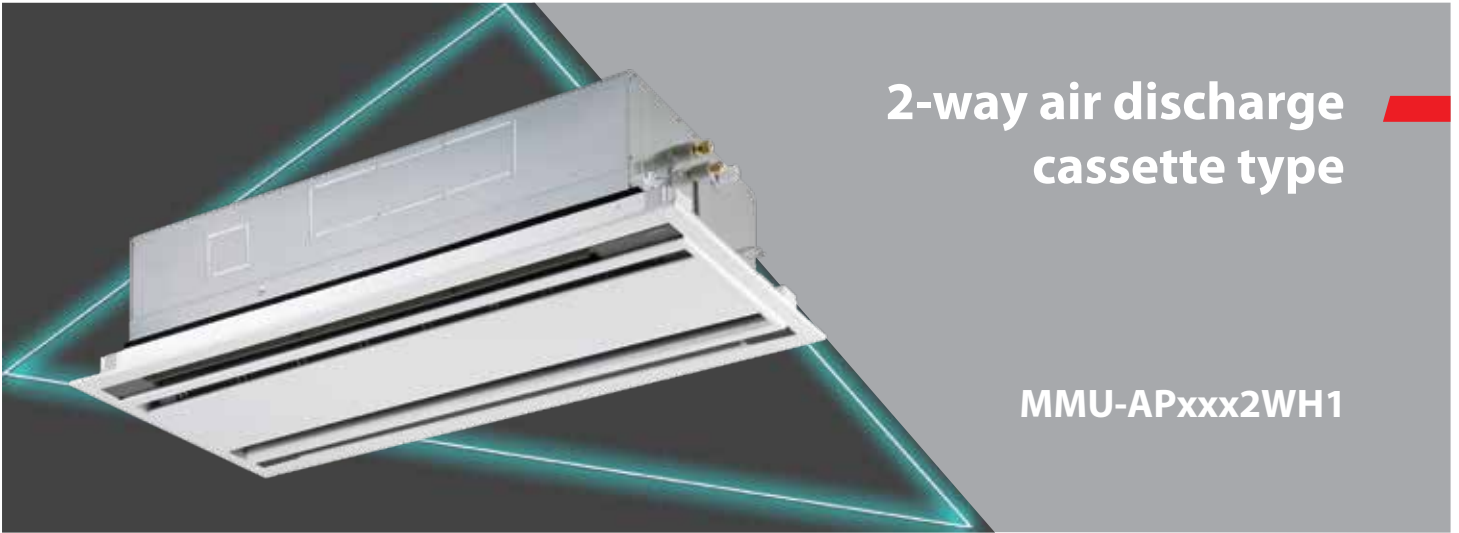
Note: M+, L+ will be available with RBC-AMS55E-ES/EN only.

MMU-AP0077MH-E to MMU-AP0187MH-E



Options





2-way air discharge cassette type

MMU-APxxx2WH1

Slim and compact unit

Unified the width of ceiling panel to 680mm.

Condensate drain pump included.

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

Easy installation and fine adjustment using the "Adjust-Cover" function.

Technical specifications

Model name		MMU-	AP0072WH1	AP0092WH1	AP0122WH1	AP0152WH1	AP0182WH1	AP0242WH1	AP0272WH1	AP0302WH1	AP0362WH1	AP0482WH1	AP0562WH1						
Cooling/Heating capacity*1		(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	9.0/10.0	11.2/12.5	14.0/16.0	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 50 Hz/60 Hz	(kW)	0.029/0.029		0.030/0.030		0.044/0.044		0.054/0.054		0.064/0.064		0.076/0.076		0.088/0.088		0.117/0.117		
Appearance (Ceiling panel)*		Model	RBC-UW283PG(W)-E				RBC-UW803PG(W)-E				RBC-UW1403(W)PG-E								
External dimensions: Main unit (Ceiling panel)*	Height	(mm)	295 (20)*				345 (20)*												
	Width	(mm)	815 (1050)*				1180 (1415)*				1600 (1835)*								
	Depth	(mm)	570 (680)*																
Total weight: Main unit (Ceiling panel)*		(kg)	19 (10)*				26 (14)*				36 (14)*								
Fan unit	Standard air flow (High/Mid/Low)	(m ³ /h)	558/498/450			600/534/450		900/750/618		1050/840/738		1260/900/780		1740/1434/1182		1800/1482/1230		2040/1578/1320	
	Motor output	(W)	20				30		40		50		70						
Connecting pipe	Gas side	(mm)	ø9.5			ø12.7			ø15.9										
	Liquid side	(mm)	ø6.4						ø9.5										
	Drain port (Nominal dia.) (mm)	25 (Polyvinyl chloride tube)																	
Sound pressure level*2 (High/Mid/Low) (dB(A))			34/32/30			35/33/30		38/35/33		40/37/34		42/39/36		43/40/37		46/42/39			

* Figures in parentheses are for ceiling panels.

Note 1 : The capacities are measured under the conditions specified by JIS B 8615 based on the reference piping.

The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 m height.

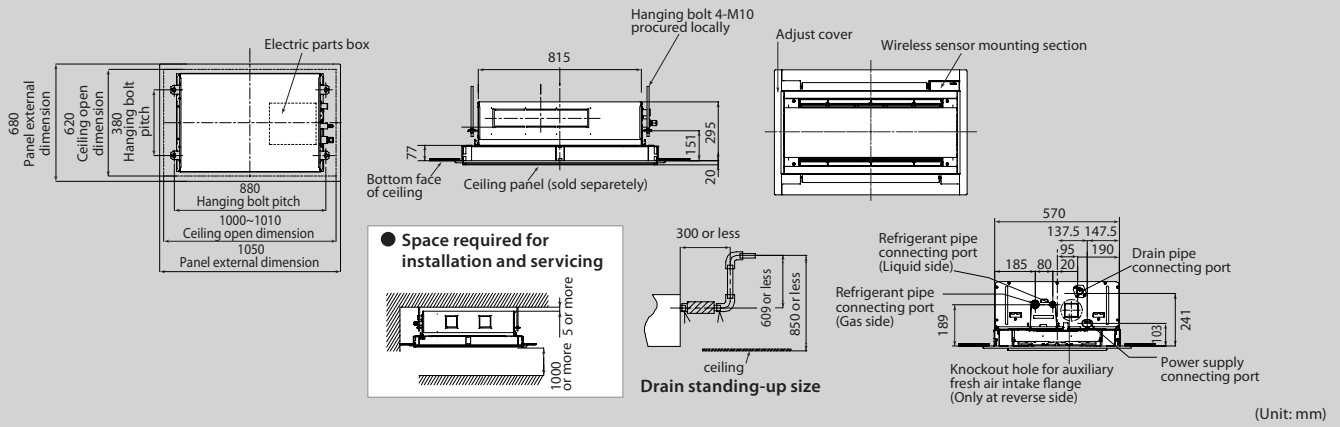
Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

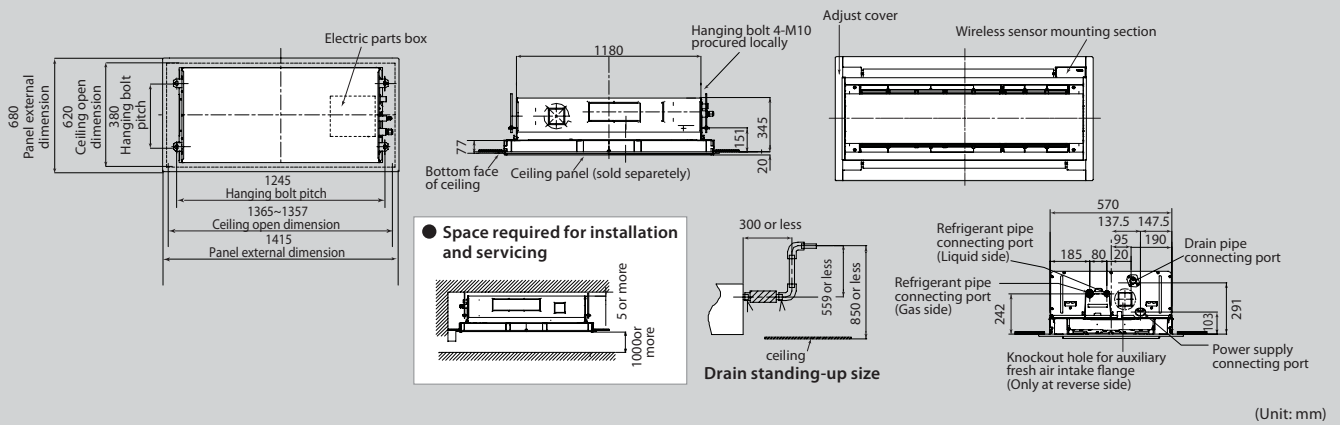
Note : Rated conditions Cooling : Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB

Heating : Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

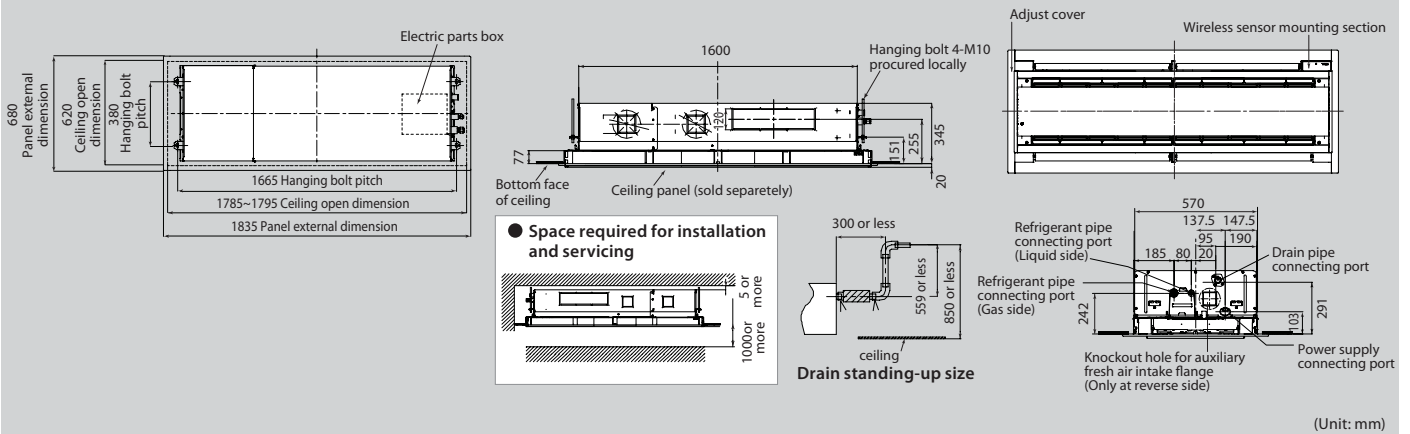
MMU-AP0072WH1 to MMU-AP0152WH1



MMU-AP0182WH1 to MMU-AP0302WH1

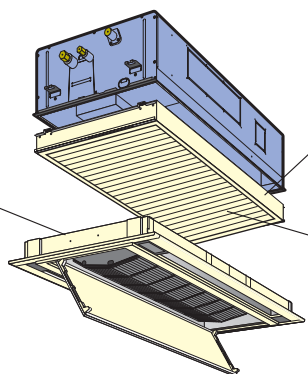


MMU-AP0362WH1 to MMU-AP0562WH1



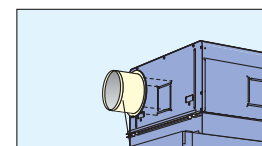
Options

Ceiling panel
RBC-UW283PG(W)-E
RBC-UW803PG(W)-E
RBC-UW1403PG(W)-E

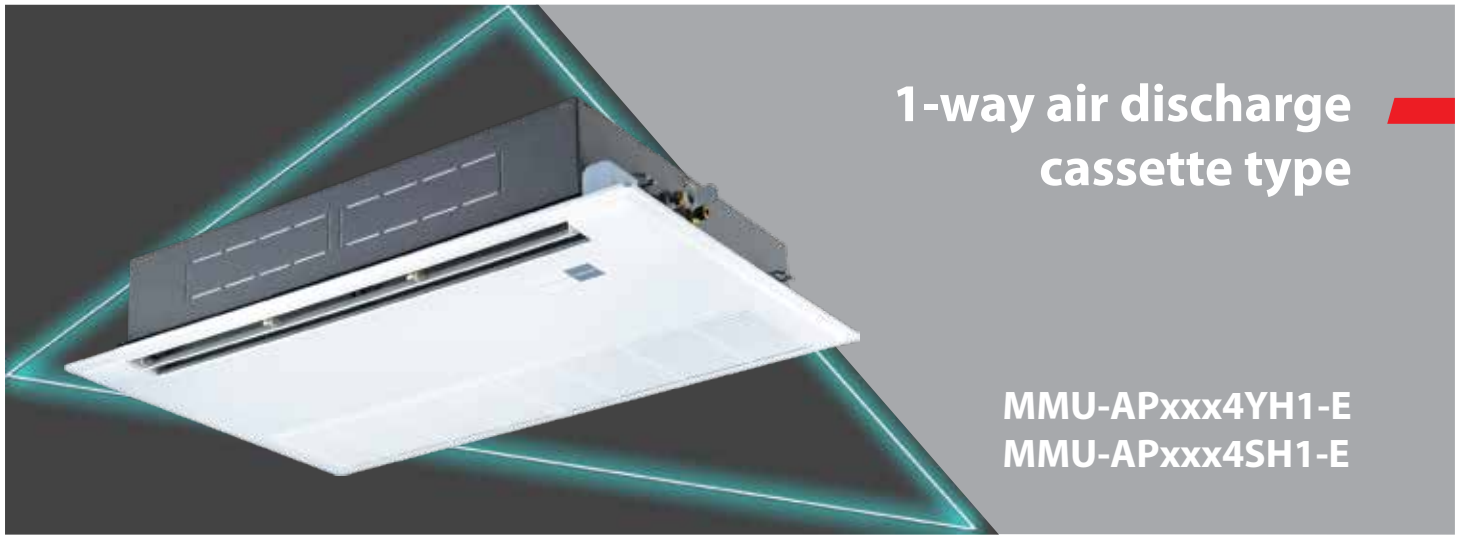


Filter chamber
TCB-FC283UW-E
TCB-FC803UW-E
TCB-FC1403UW-E

Super long life filter
TCB-LF283UW-E
TCB-LF803UW-E
TCB-LF1403UW-E



Auxiliary fresh air flange
TCB-FF151US-E



1-way air discharge cassette type

MMU-APxxx4YH1-E
MMU-APxxx4SH1-E

The perfect choice for hotels and reception areas

Silent sound design ensures the quiet required for the office. 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 (MMU-AP***4SH1-E)

Preparations/connection possible with a circle duct flange.

Technical specifications

Model name		MMU-	AP0074YH1-E	AP0094YH1-E	AP0124YH1-E	AP0154SH1-E	AP0184SH1-E	AP0244SH1-E	
Cooling/Heating capacity*1		(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0	
Electrical characteristics	Power requirements	1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 220V (Separate power supply for indoor units required.)							
	Power consumption 50 Hz/60 Hz	(kW)	0.053/0.056		0.042/0.041		0.046/0.045	0.075/0.073	
Appearance (Ceiling panel)*		Model	RBC-UY136PG			RBC-US21PGE			
External dimensions: Main unit (Ceiling panel)*	Height	(mm)	35 (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 (High/Mid/Low)	(m ³ /h)	540/480/420			750/690/630	780/720/660		1140/960/810
	Motor output	(W)	22			30			
Connecting pipe	Gas side	(mm)	ø9.5			ø12.7		ø15.9	
	Liquid side	(mm)	ø6.4					ø9.5	
	Drain port (Nominal dia.)	(mm)	25 (Polyvinyl chloride tube)						
Sound pressure level*2 (High/Mid/Low) (dB(A))			42/39/34			37/35/32	38/36/34		45/41/37

* Figures in parentheses are for ceiling panels.

Note 1 : The capacities are measured under the conditions specified by JIS B 8615 based on the reference piping.

The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 m height.

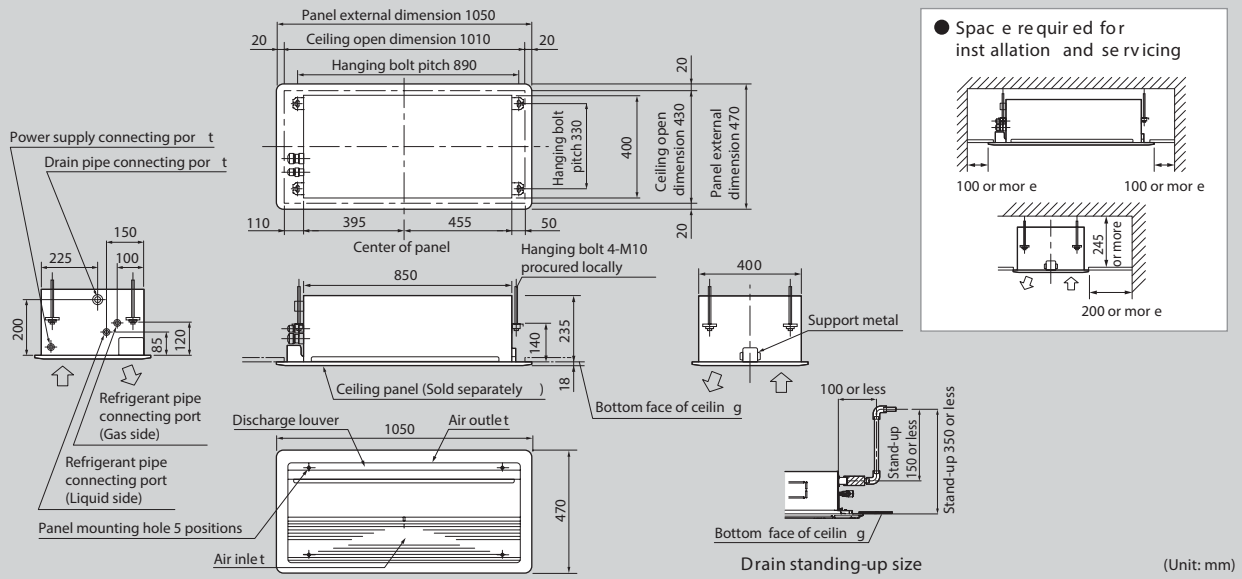
Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

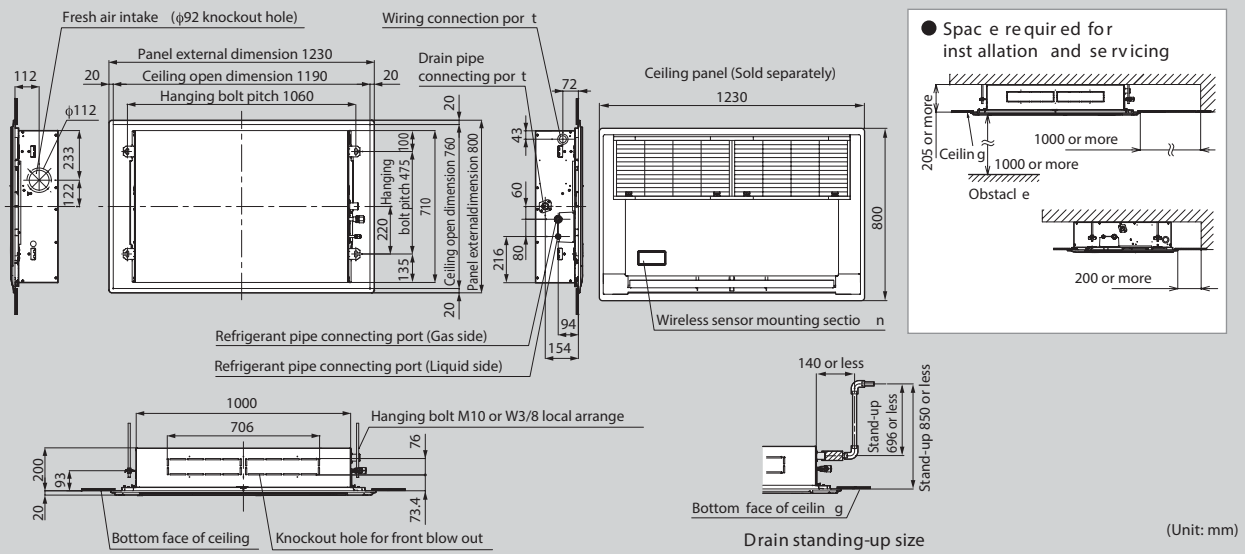
Note : Rated conditions Cooling : Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB

Heating : Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

MMU-AP0074YH1-E to MMU-AP0124YH1-E

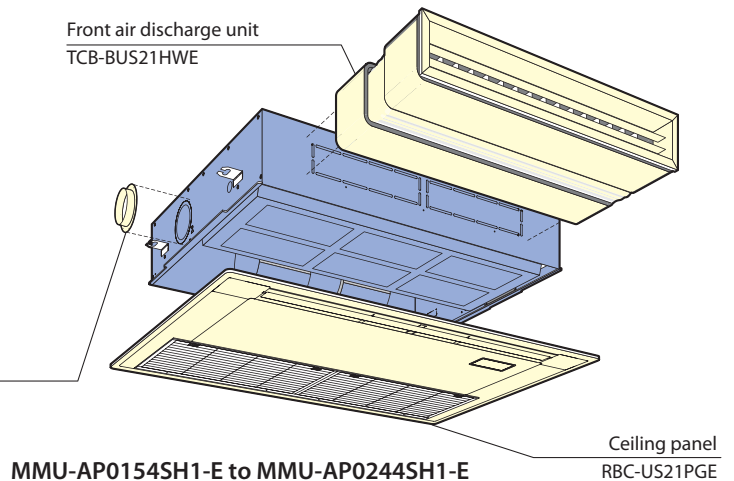
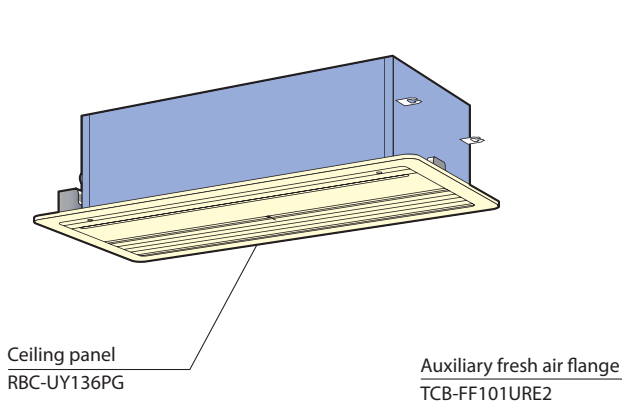


MMU-AP0154SH1-E to MMU-AP0244SH1-E

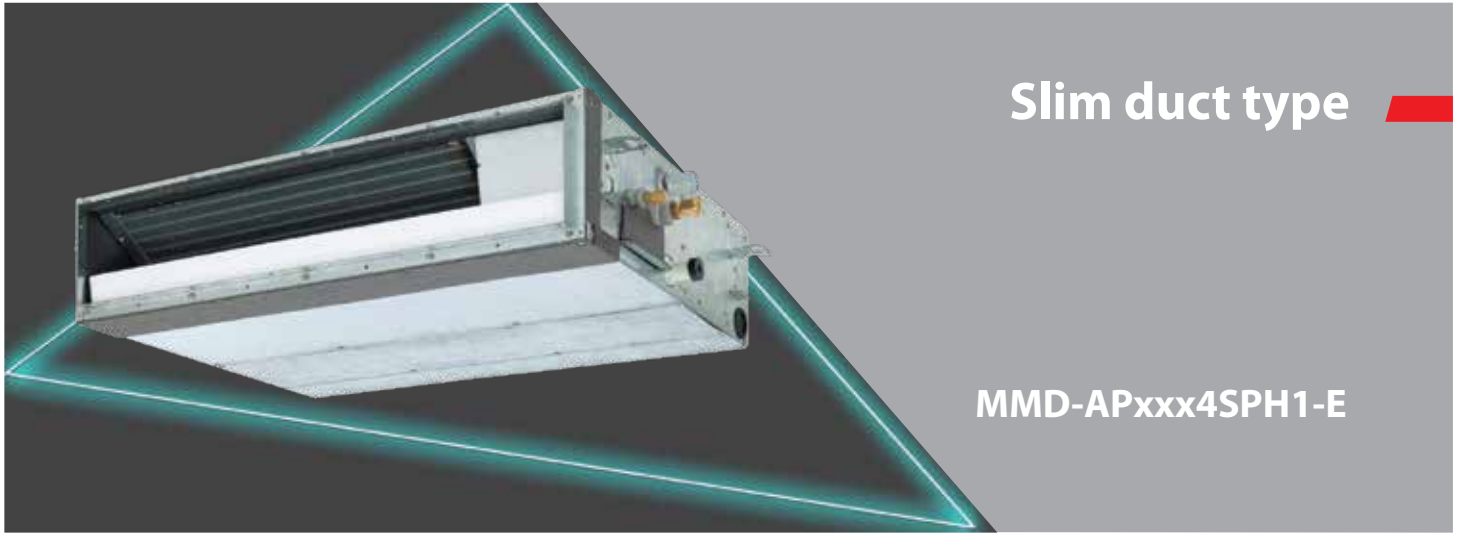


Options

MMU-AP0074YH1-E to MMU-AP0124YH1-E



MMU-AP0154SH1-E to MMU-AP0244SH1-E



Slim duct type

MMD-APxxx4SPH1-E

Functional design

Only 210 mm in height for greater application flexibility. 4-step static pressure setup. Concealed installation within a ceiling void. Auxiliary fresh air intake available.

Slim & quiet

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

Technical specifications

Model name	MMD-	AP0074SPH1-E	AP0094SPH1-E	AP0124SPH1-E	AP0154SPH1-E	AP0184SPH1-E	AP0244SPH1-E	AP0274SPH1-E	
Cooling/Heating capacity*1	(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	
Electrical characteristics	Power supply	1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 220V (Separate power supply for indoor units required.)							
	Power consumption 50 Hz/60 Hz	(kW)	0.039/0.037	0.043/0.041	0.045/0.043	0.054/0.052	0.105/0.105		
External dimensions	Height	(mm)	210						
	Width	(mm)	845				1140		
	Depth	(mm)	645						
Total weight	(kg)	22			23		29		
Fan unit	Standard air flow (High/Mid/Low)	(m ³ /h)	540/470/400	600/520/450	690/600/520	780/680/580	1080/1000/900		
	Motor output	(W)	60				120		
	External static pressure	(Pa)	6-16-31-46 (4 steps)	5-15-30-45 (4 steps)		4-14-29-44 (4 steps)	2-12-22-42 (4 steps)		
Connecting pipe	Gas side	(mm)	ø9.5		ø12.7		ø15.9		
	Liquid side	(mm)	ø6.4				ø9.5		
	Drain port (Nominal dia.)	(mm)	25 (Polyvinyl chloride tube)						
Sound pressure level*2 (High/Mid/Low)	Under air inlet	(dB(A))	36/33/30	38/35/32	39/36/33	40/38/36	49/47/44		
	Back air inlet	(dB(A))	28/26/24	29/27/25	32/30/28	33/31/29	38/36/33		

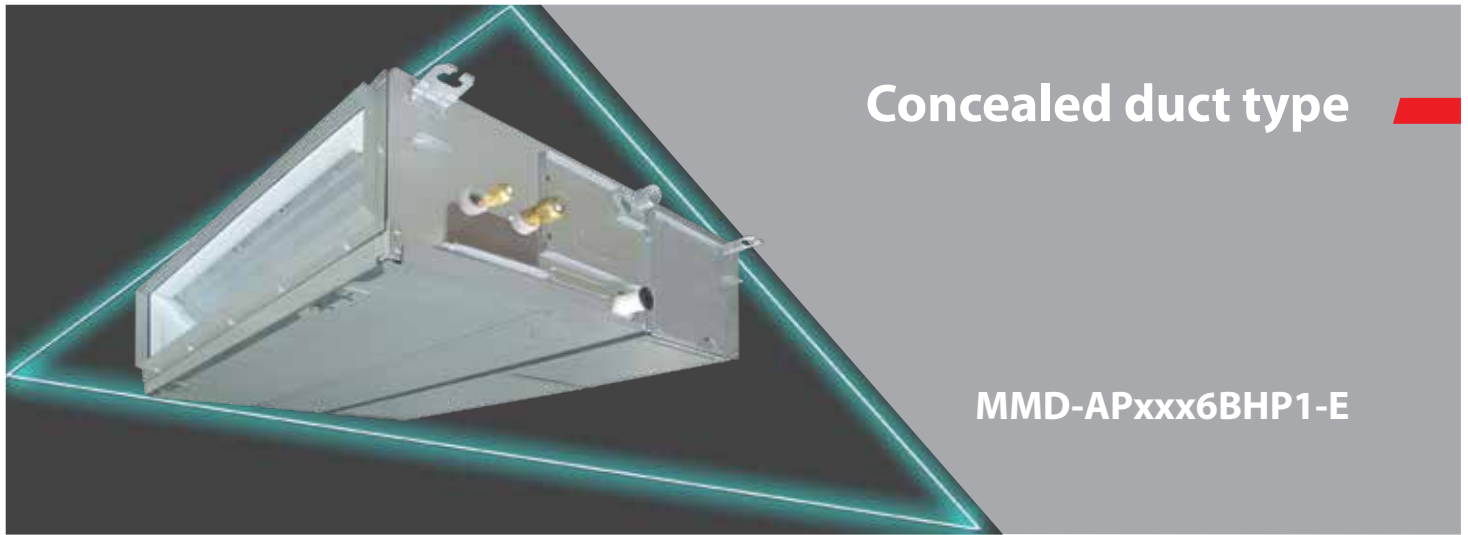
Note 1 : The capacities are measured under the conditions specified by JIS B 8615 based on the reference piping.

The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 m height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



Concealed duct type

MMD-APxxx6BHP1-E

High static pressure

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

High-lift drain pump

Built-in high-lift drain pump up to 850 mm.

Technical specifications

Model name		MMD-	AP0076BHP1-E	AP0096BHP1-E	AP0126BHP1-E	AP0156BHP1-E	AP0186BHP1-E	AP0246BHP1-E	AP0276BHP1-E	AP0306BHP1-E	AP0366BHP1-E	AP0486BHP1-E	AP0566BHP1-E		
Cooling/Heating capacity*1		(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	9.0/10.0	11.2/12.5	14.0/16.0	16.0/18.0		
Electrical characteristics	Power requirements	1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 208-230V (Separate power supply for indoor units required.)													
	Power consumption 50 Hz/60 Hz (kW)	0.038/0.038	0.043/0.043			0.062/0.062		0.077/0.077		0.094/0.094	0.172/0.172		0.198/0.198		
External dimension	Height (mm)	275													
	Width (mm)	700					1000				1400				
	Depth (mm)	750													
Total weight (kg)		23					30				40				
Fan unit	Standard air flow (High/Mid/Low) (m ³ /h)	540/450/360	570/480/390			798/660/540		1200/990/870		1260/1110/930		1920/1620/1380		2100/1740/1500	
	Motor output (W)	150													
	External static pressure (factory setting) (Pa)	30					40				50				
	External static pressure (Pa)	30-40-50-65-80-100-120 (7 steps)													
Connecting pipe	Gas side (mm)	ø9.5				ø12.7				ø15.9					
	Liquid side (mm)	ø6.4								ø9.5					
	Drain port (Nominal dia.) (mm)	25 (Polypropylene tube)													
Sound pressure level*2 (High/Mid/Low) (dB(A))		29/26/23	30/26/23			33/29/25		36/31/27			40/36/33				

Note 1 : The capacities are measured under the conditions specified by JIS B 8615 based on the reference piping.

The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 m height.

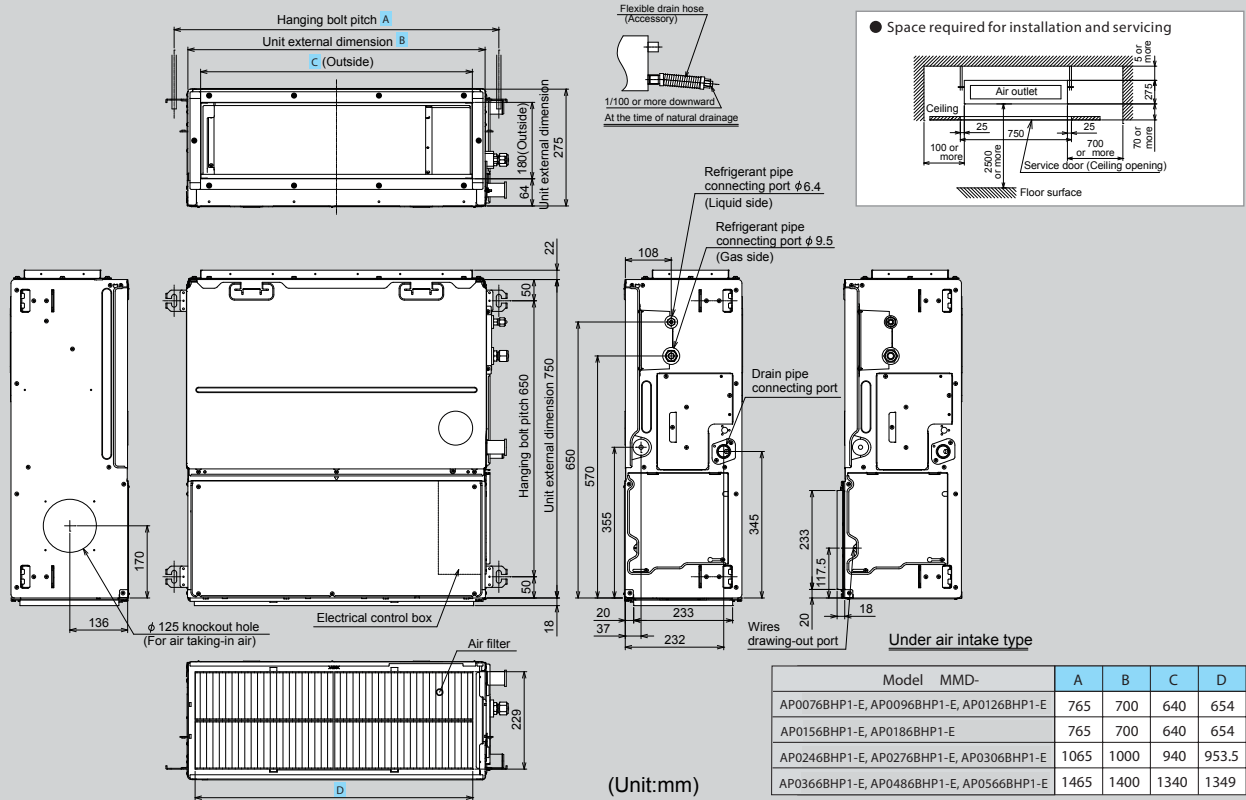
Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : Rated conditions Cooling : Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB

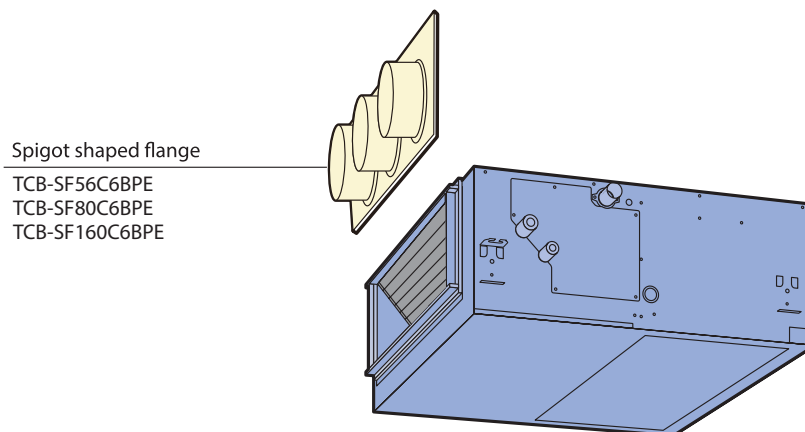
Heating : Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

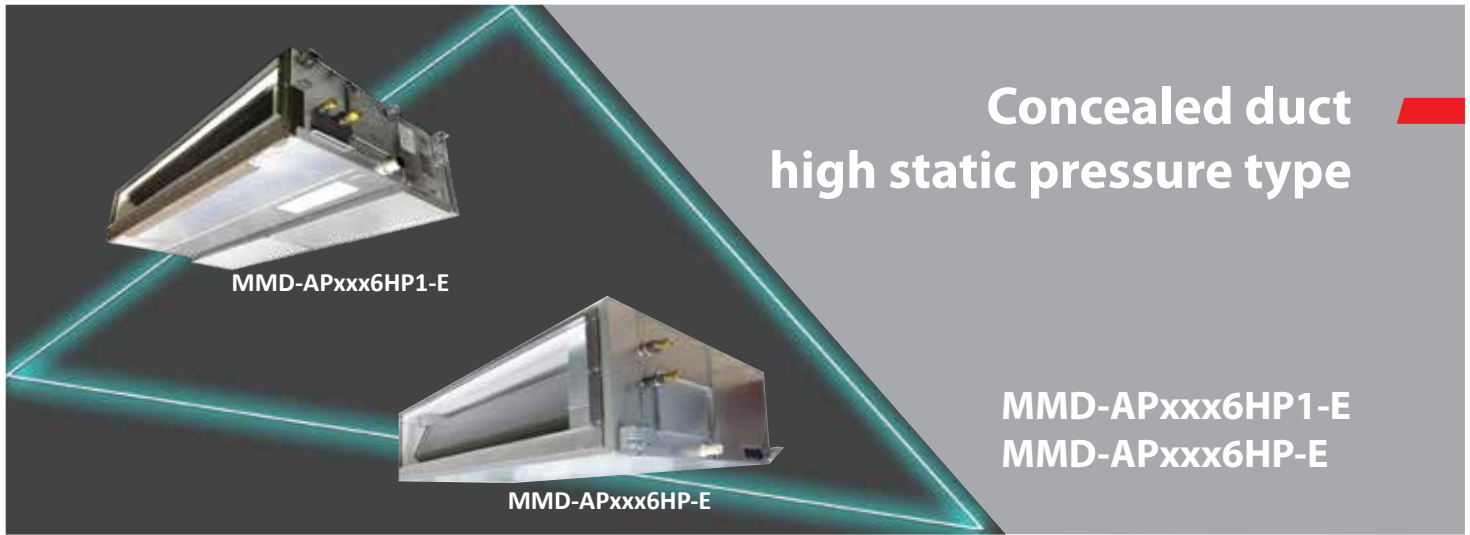
MMD-AP0076BHP1-E to MMD-AP0566BHP1-E



* Standard filter is provided, but deeper filtration filter needs to be purchased locally.

Options





Concealed duct high static pressure type

MMD-APxxx6HP1-E
MMD-APxxx6HP-E

Design flexibility

Satisfies all your design needs.
Compatible with external static pressures up to 250 Pa.

Can be equipped with the following options:

- Long life filter kit
- Drain pump kit

Construction characteristics

Seven-stage-switchable static pressure.
The flexible duct is accessible.
Easy service and installation.
Inspection hole enables easy access and maintenance.

*Built-in Drain-pump: up to 6HP model

Technical specifications

Model name	MMD-	AP0186HP1-E	AP0246HP1-E	AP0276HP1-E	AP0366HP1-E	AP0486HP1-E	AP0566HP1-E	AP0726HP-E	AP0966HP-E	
Cooling/Heating capacity*1	(kW)	5.6/6.3	7.1/8.0	8.0/9.0	11.2/12.5	14.0/16.0	16.0/18.0	22.4/25.0	28.0/31.5	
Electrical characteristics	Power requirements	1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 208-230V (Separate power supply for indoor units required.)								
	Power consumption 50 Hz/60 Hz (kW)	0.085/0.085	0.115/0.115	0.198/0.198	0.230/0.230	0.290/0.290	0.540/0.540	0.790/0.790		
External dimensions	Height (mm)	298						448		
	Width (mm)	1000			1400			1400		
	Depth (mm)	750						900		
Total weight (kg)		34			43			97		
Fan unit	Standard air flow (High/Mid/Low) (m ³ /h)	800/660/550	1200/970/800	1920/1560/1340	2100/1740/1420	2400/2040/1660	3800/3200/2500	4800/4200/3500		
	Motor output (W)	250			350			250		
	External static pressure (factory setting) (Pa)	100						150		
	External static pressure (Pa)	50-75-125-150-175-200 (7steps)						50-83-117-150-183-217-250 (7steps)		
Connecting pipe	Gas side (mm)	ø12.7	ø15.9			ø22.2				
	Liquid side (mm)	ø6.4	ø9.5			ø12.7				
	Drain port (Nominal dia.) (mm)	25 (Polyvinyl chloride tube)						25 (Polyvinyl chloride tube)		
Sound pressure level*2 (High/Mid/Low) (dB(A))		37/32/30	38/34/31	41/37/34	42/40/35	45/42/37	44/40/36	46/42/38		

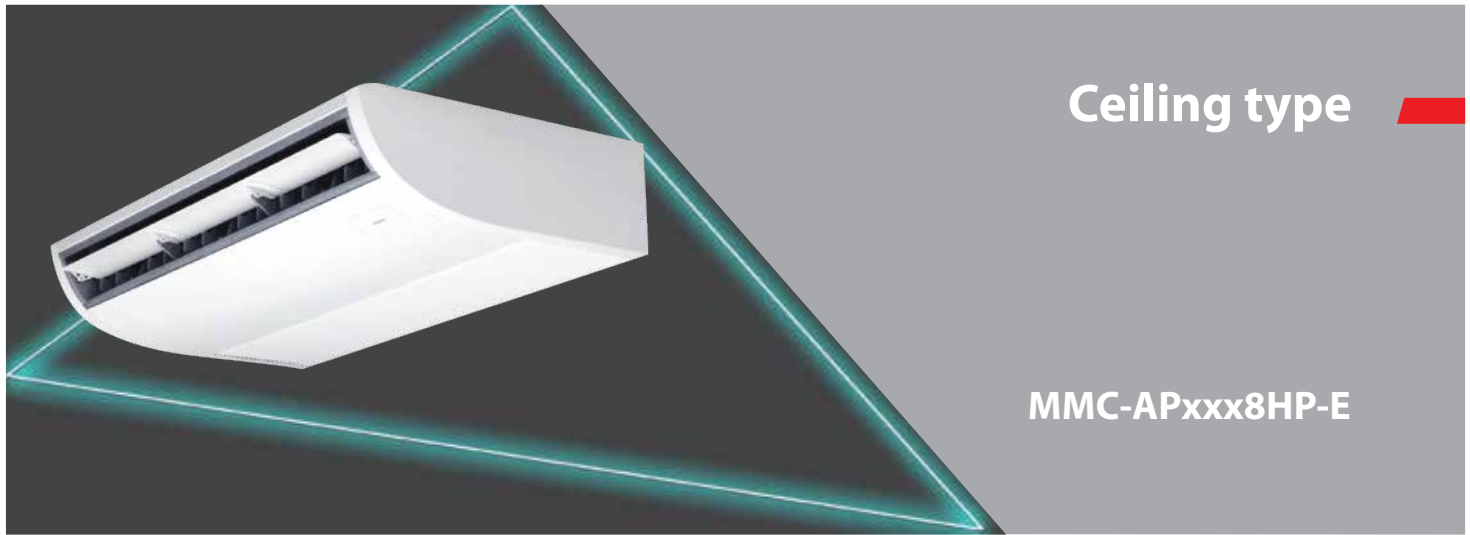
Note 1 : The cooling capacities and electrical characteristics are measured under the conditions specified by JIS B 8615 based on the reference piping.

The reference piping consists of 5m of main piping and 2.5 of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



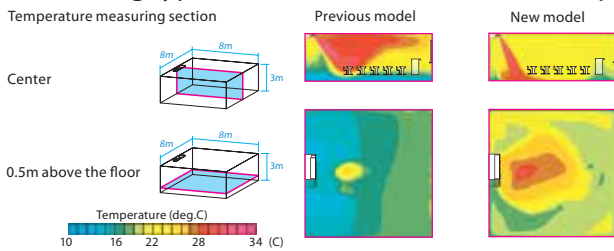
Ceiling type

MMC-APxxx8HP-E

Smooth curve for pliant shape

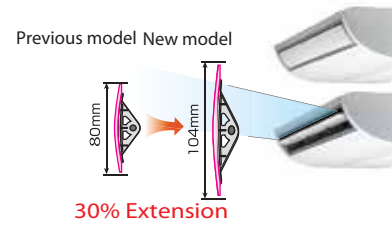
All-new chassis and new rounded design, This new models have been developed in response to customers' needs for ceiling units that better match their room interiors.

New fan has adopted the turbulence prevention rib to optimize the ventilating way. Air volume has increased and noise level also has decreased compared with previous model. Winds of new ceiling type of 4HP to 6HP can be reached up to 4.3 metre



New designed wide flap

The new air outlet has realized both high noise reduction and large air volume.



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.

Technical specifications

Model name	MMC-	AP0158HP-E	AP0188HP-E	AP0248HP-E	AP0278HP-E	AP0368HP-E	AP0488HP-E	AP0568HP-E
Cooling/Heating capacity* 1	(kW)	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	11.2/12.5	14.0/16.0	16.0/18.0
Electrical characteristics	Power requirements	1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 208-230V (Separate power supply for indoor units required.)						
	Power consumption 50 Hz/60 Hz (kW)	0.033/0.033	0.034/0.034	0.067/0.067		0.083/0.083		0.111/0.111
External dimensions	Height (mm)	235						
	Width (mm)	950		1270		1586		
	Depth (mm)	690						
Total weight (kg)		24		30		39		
Fan unit	Standard air flow (High/Mid/Low) (m ³ /h)	840/690/540	960/720/540	1440/1020/750		1860/1350/1020	1860/1530/1200	2040/1650/1260
	Motor (W)	94		94		139		
Connecting pipe	Gas side (mm)	ø12.7			ø15.9			
	Liquid side (mm)	ø6.4			ø9.5			
	Drain port (Nominal dia.)(mm)	20 (Polyvinyl chloride tube)						
Sound pressure level*2 (High/Mid/Low) (dB(A))		36/34/28	37/35/28	41/36/29		44/38/32	44/41/35	46/42/36

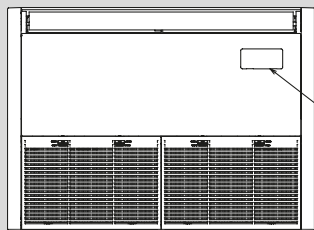
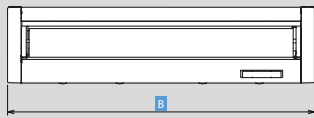
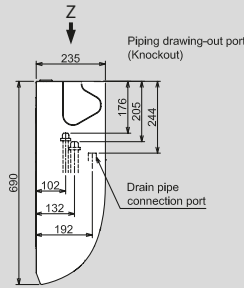
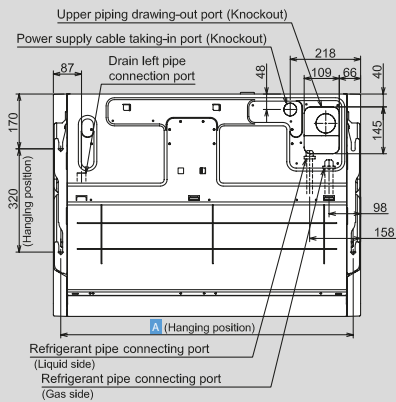
Note 1 : The capacities are measured under the conditions specified by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 m height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

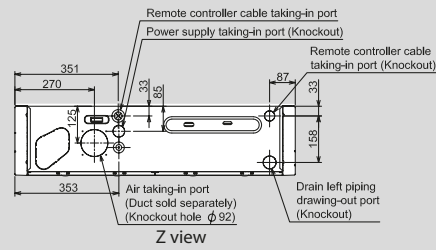
Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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

MMC-AP0158HP-E to MMC-AP0568HP-E

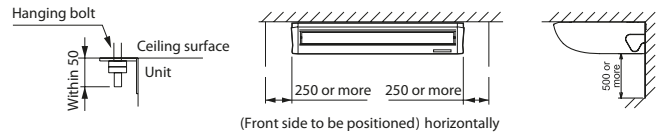


Wireless sensor mounting section



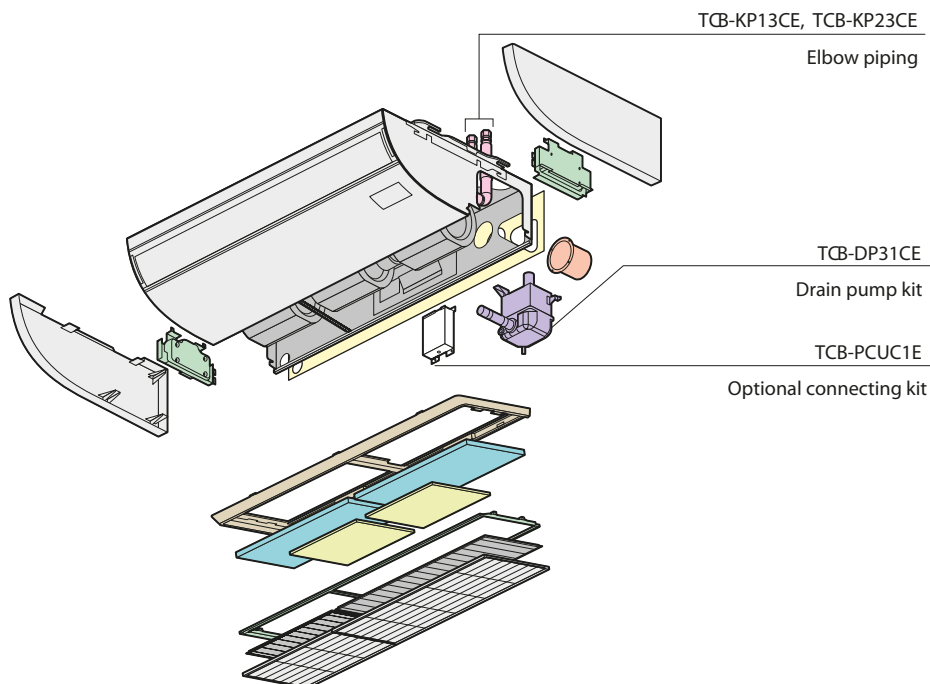
Model	MMC-	A	B
AP0158HP-E, AP0188HP-E		906	950
AP0248HP-E, AP0278HP-E		1,223	1,270
AP0368HP-E, AP0488HP-E, AP0568HP-E		1,540	1,586

● Space required for installation and servicing



(Unit: mm)

Options





High-wall type (Series 3)

MMK-APxxx3H1

Elegant and slim

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

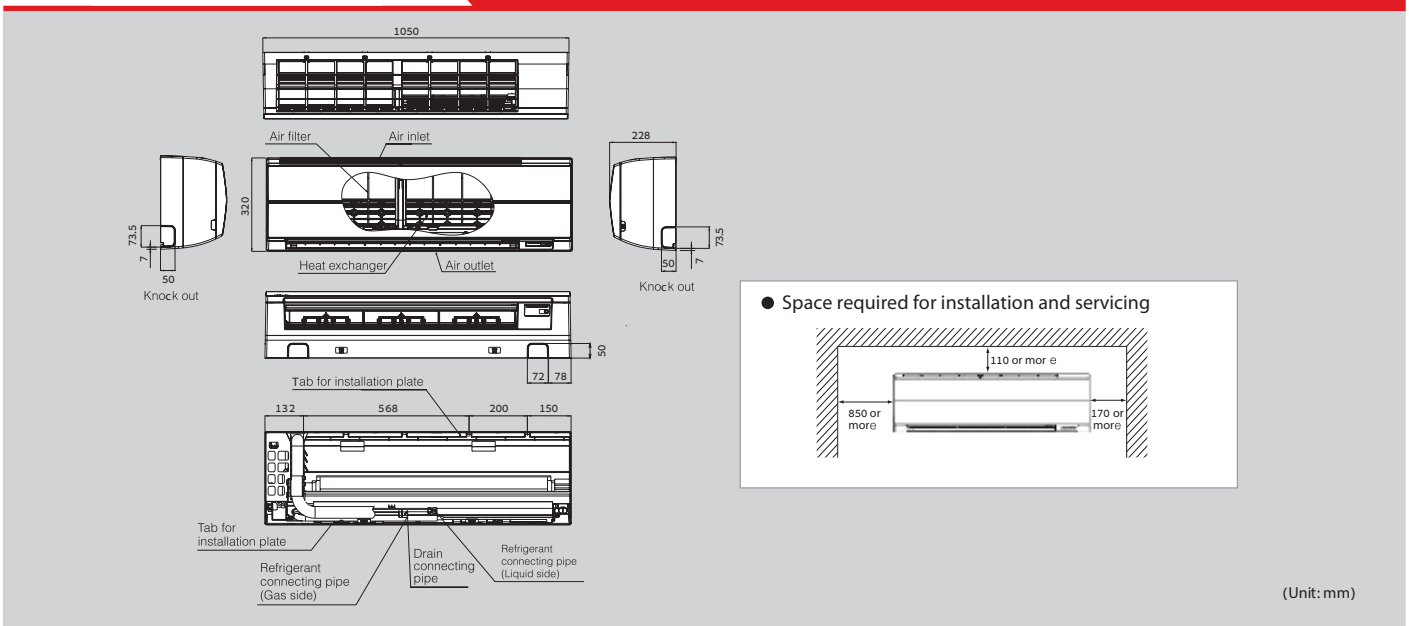
Total comfort is granted, thanks also to the 70° directional auto-swing louver that provides uniform air distribution.



Remote controller*

* Wireless remote controller is packed with indoor unit.

MMK-AP0073H1 to MMK-AP0243H1



Technical specifications

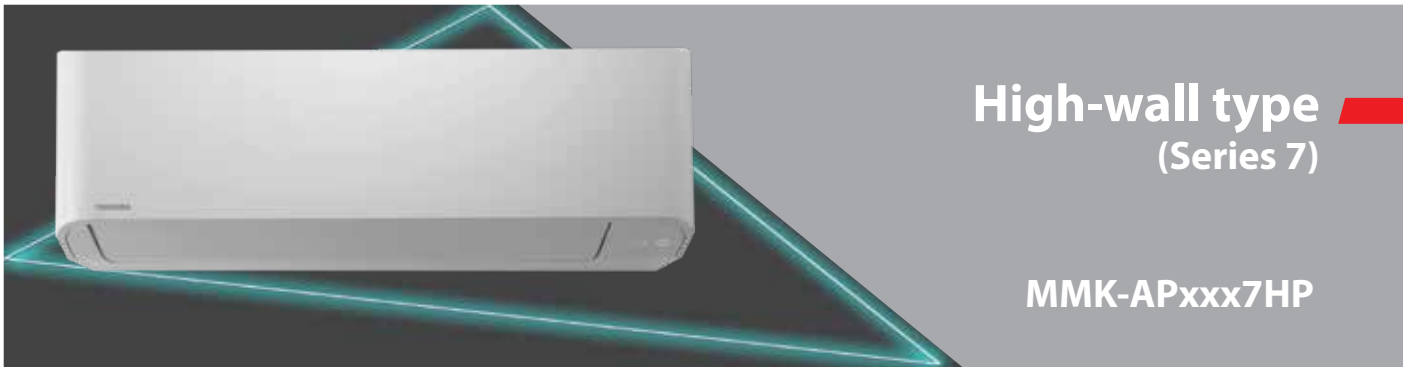
Mode In name	MMK-	AP0073H1	AP0093H1	AP0123H1	AP0153H1	AP0183H1	AP0243H1
Cooling/Heating capacity*1	(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0
Electrical characteristics	Power requirements	1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 208-230V (Separate power supply for indoor units required.)					
	Power consumption 50 Hz/60 Hz	(kW)	0.018/0.018	0.021/0.021	0.043/0.043	0.050/0.050	
External dimensions	Height	(mm)	320				
	Width	(mm)	1050				
	Depth	(mm)	228				
Total weight	(kg)	15					
Fan unit	Standard air flow (High/Mid/Low)	(m ³ /h)	570/450/390	600/480/390	840/660/540	1020/750/570	
	Motor output	(W)	30				
Connecting pipe	Gas side	(mm)	ø9.5		ø12.7		ø15.9
	Liquid side	(mm)	ø6.4				
	Drain port (Nominal dia.)	(mm)	16 (polyvinyl chloride tube)				
Sound pressure level*2 (High/Mid/Low)	(dB(A))	35/31/28	37/32/28	41/36/33	46/39/34		

Note 1 : The capacities are measured under the conditions specified by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 m height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



High-wall type (Series 7)

MMK-APxxx7HP

Compact and aesthetic design

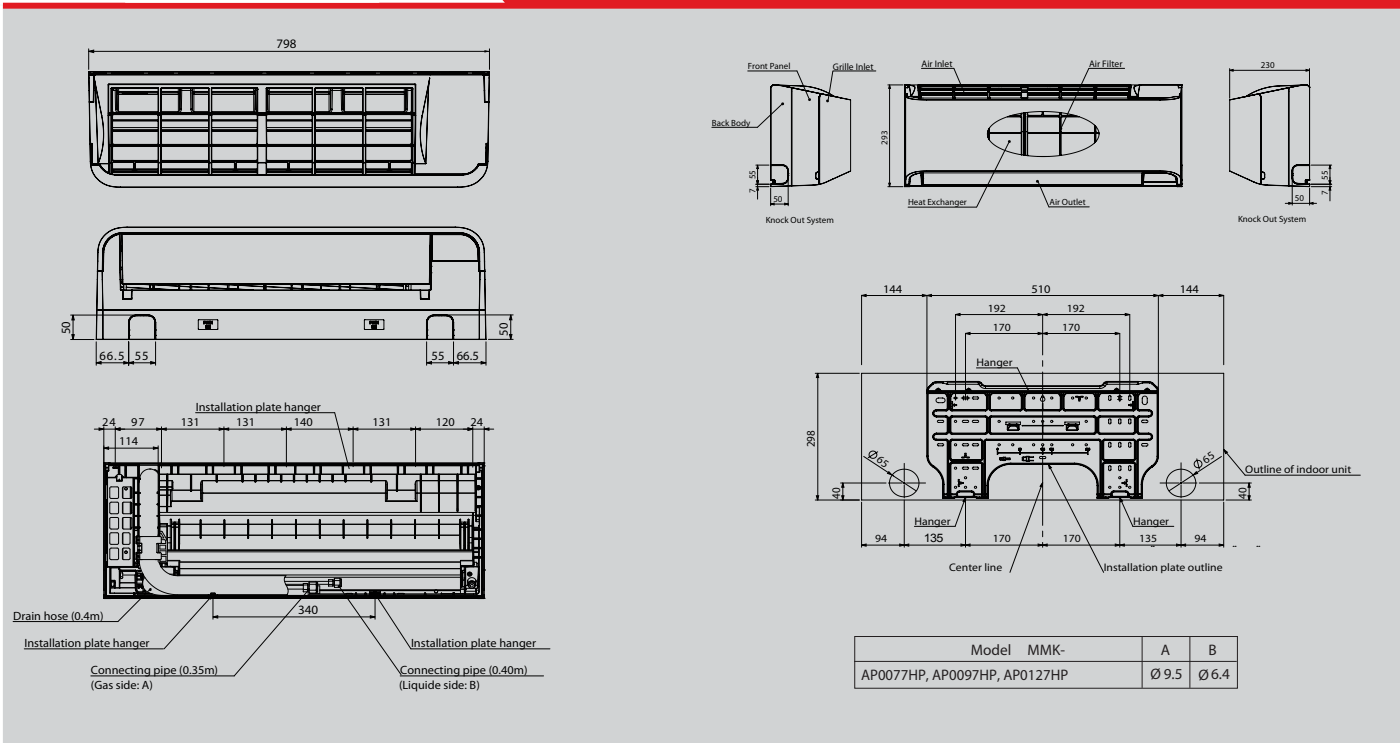
Glossy material, smooth, curve and white LED are designed to reflect luxurious appearance and to complement modern exterior beautifully.



Remote controller*

*Wireless remote controller is packed with indoor unit.

MMK-AP0077HP to MMK-AP0127HP



Technical specifications

Model name	MMK-	AP0077HP	AP0097HP	AP0127HP	
Cooling/Heating capacity*1	(kW)	2.2/2.5	2.8/3.2	3.6/4.0	
Electrical characteristics	Power requirements	1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 208-230V (Separate power supply for indoor units required.)			
	Power consumption 50 Hz/60 Hz	(kW)	0.015/0.015	0.016/0.016	0.017/0.017
External dimensions	Height	(mm)	293		
	Width	(mm)	798		
	Depth	(mm)	230		
Total weight	(kg)	11			
Fan unit	Standard air flow (High/Mid/Low)	(m ³ /h)	480/385/270	510/395/270	540/410/300
	Motor output	(W)	30		
Connecting pipe	Gas side	(mm)	Ø9.5		
	Liquid side	(mm)	Ø6.4		
	Drain port (Nominal dia.)	(mm)	16 (Polyvinyl chloride tube)		
Sound pressure level*2 (High/Mid/Low)	(dB(A))	35/30/25	36/31/25	37/32/25	

Note 1 : The capacities are measured under the conditions specified by JIS B 8615 based on the reference piping.

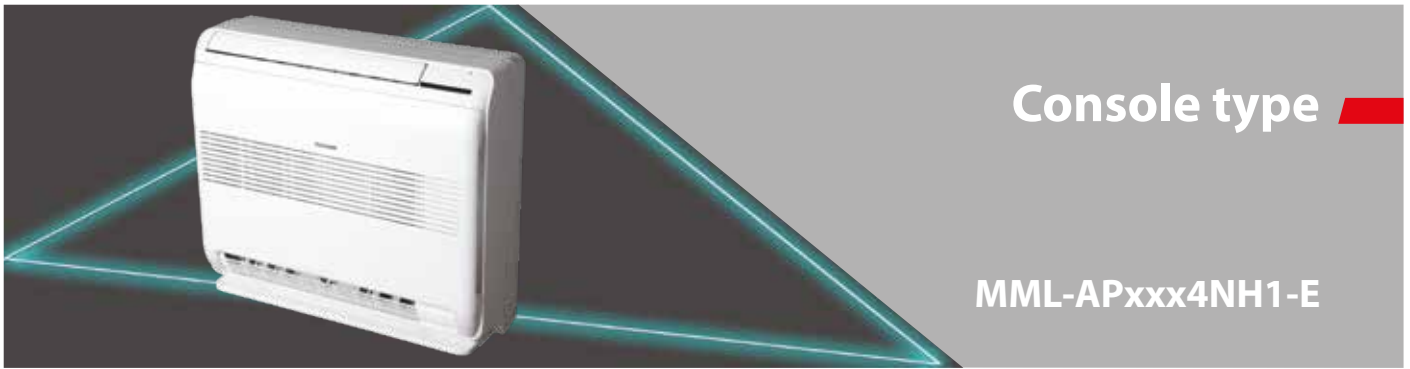
The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 m height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



Console type

MML-APxxx4NH1-E

Elegant & simple design

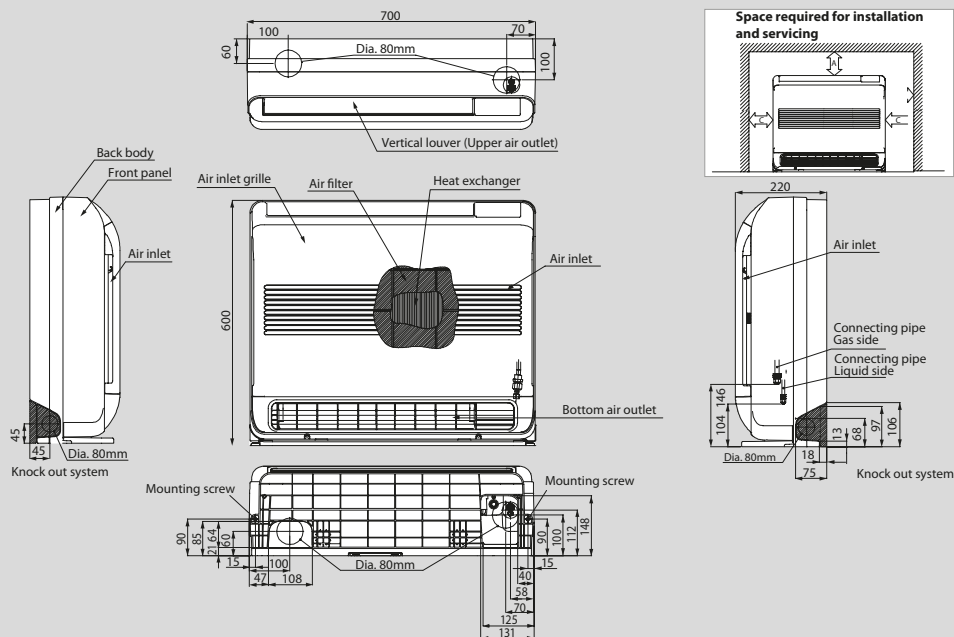
Elegant & simple design makes this unit a perfect fit for shops, office buildings, and luxury apartments. Bottom flow functionality ensures comfortable air bi-flow for an advantage in heating and floor warming. Multi-function operation is convenient, making adjustments by the user possible using the wireless remote controller.



Remote controller*

*Wireless remote controller is packed with indoor unit.

MML-AP0074NH1-E to MML-AP0184NH1-E



(Unit: mm)

Technical specifications

Model name		MML-	AP0074NH1-E	AP0094NH1-E	AP0124NH1-E	AP0154NH1-E	AP0184NH1-E
Cooling/Heating capacity*1		(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3
Electrical characteristics	Power requirements	1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 208-230V (Separate power supply for indoor units required.)					
	Power consumption 50 Hz/60 Hz	(kW)	0.021/0.021		0.025/0.025	0.034/0.034	0.052/0.052
External dimensions	Height	(mm)	600				
	Width	(mm)	700				
	Depth	(mm)	220				
Total weight		(kg)	17				
Fan unit	Standard air flow (High/Mid/Low)	(m ³ /h)	510/366/282		552/408/324	624/468/384	726/528/426
	Motor output	(W)	41				
Connecting pipe	Gas side	(mm)	ø9.5			ø12.7	
	Liquid side	(mm)	ø6.4				
	Drain port	(Nominal dia.)	16 (Polyvinyl chloride tube)				
Sound pressure level*2 (High/Mid/Low)		(dB(A))	38/32/26		40/34/29	43/37/31	47/40/34

Note 1 : The capacities are measured under the conditions specified by JIS B 8615 based on the reference piping.

The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 m height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



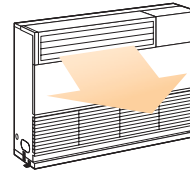
Floor standing cabinet type

MML-APxxx4H1-E

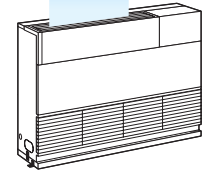
Slim & compact design

Under-window mounting does not block lighting.
Indoor unit size of 2.2 kW to 7.1 kW is the same.
Distribution can be reversed to suit occupant preference.

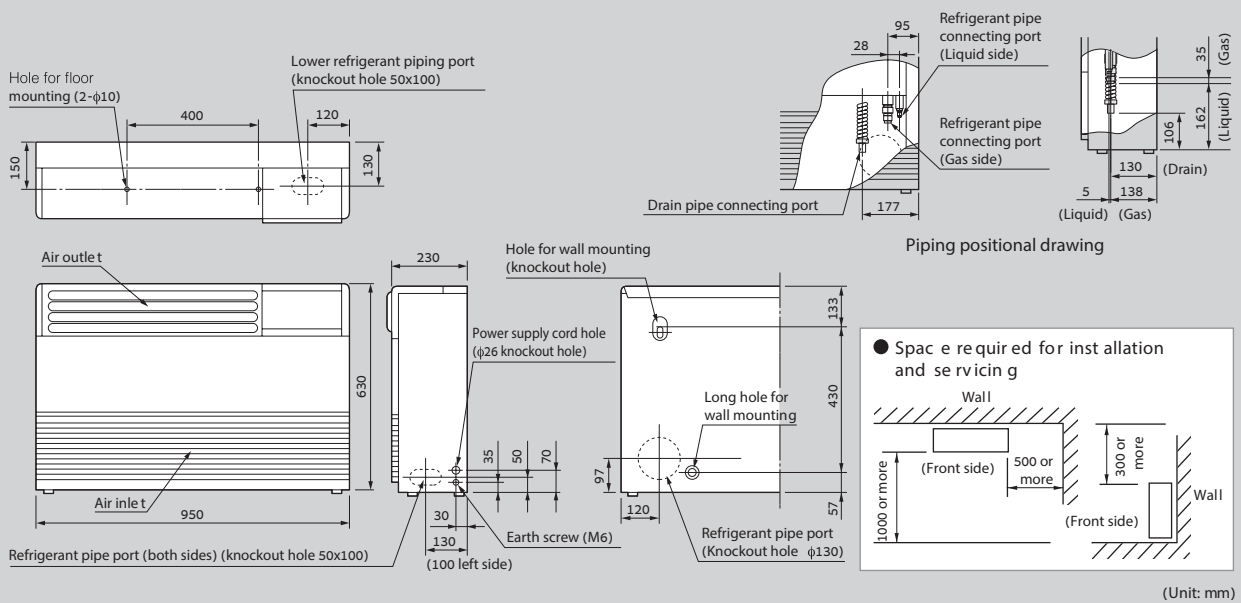
Air blow from front panel
(factory default)



Air blow from top



MML-AP0074H1-E to MML-AP0244H1-E



Technical specifications

Model name	MML-AP0074H1-E	MML-AP0094H1-E	MML-AP0124H1-E	MML-AP0154H1-E	MML-AP0184H1-E	MML-AP0244H1-E
Cooling/Heating capacity*1	(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3
Electrical characteristics	Power requirements	1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 220V (Separate power supply for indoor units required.)				
	Power consumption 50 Hz/60Hz (kW)	0.056/0.053		0.092/0.092		0.102/0.113
External dimensions	Height (mm)	630				
	Width (mm)	950				
	Depth (mm)	230				
Total weight (kg)	37				40	
Fan unit	Standard air flow (High/Mid/Low) (m ³ /h)	480/420/360		900/780/650		1080/930/780
	Motor output (W)	45				70
Connecting pipe	Gas side (mm)	ø9.5		ø12.7		ø15.9
	Liquid side (mm)	ø6.4				
	Drain port (Nominal dia.)	20 (Polyvinyl chloride tube)				
Sound pressure level*2 (High/Mid/Low) (dB(A))	39/37/35		45/41/38		49/44/39	

Note 1 : The capacities are measured under the conditions specified by JIS B 8615 based on the reference piping.

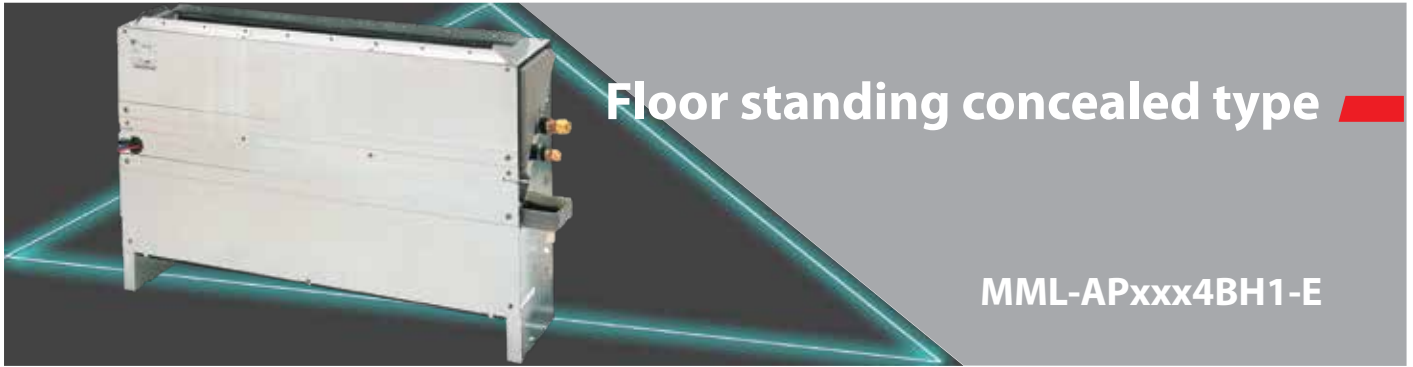
The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 m height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



Floor standing concealed type

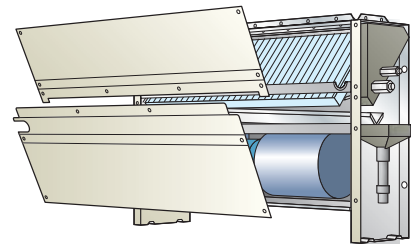
MML-APxxx4BH1-E

Cool air makes for a pleasant indoor environment

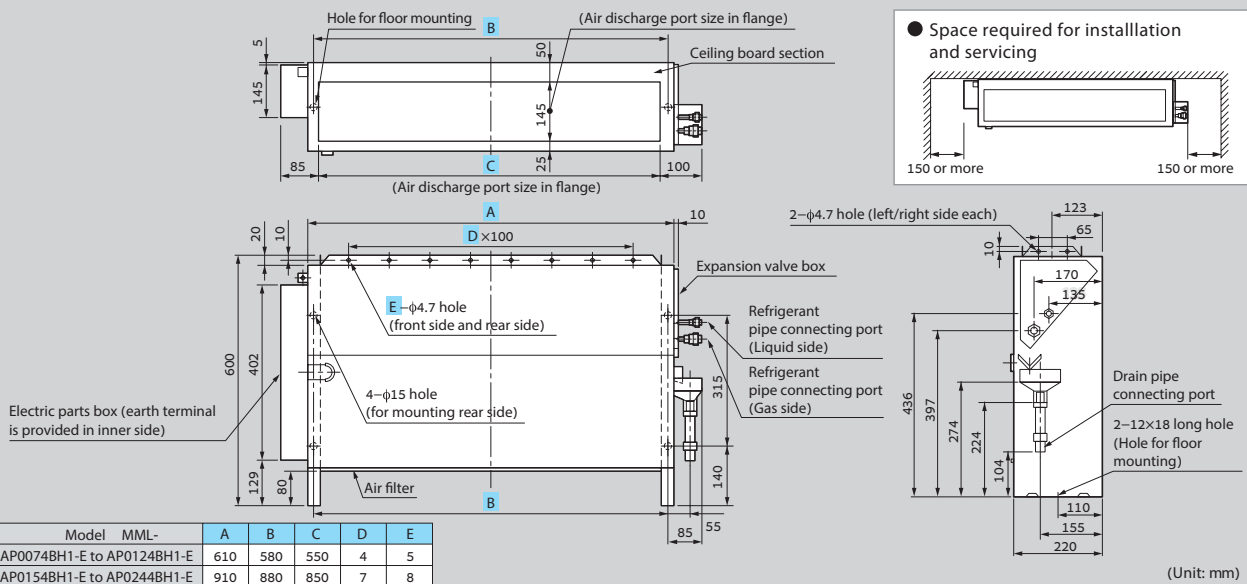
Install it under a window and air-condition any room effectively.

Easy maintenance

Simplified design of fan and drainage pipe eases maintenance.



MML-AP0074BH1-E to MML-AP0244BH1-E



Technical specifications

Model name	MML-	AP0074BH1-E	AP0094BH1-E	AP0124BH1-E	AP0154BH1-E	AP0184BH1-E	AP0244BH1-E	
Cooling/Heating capacity*1	(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0	
Electrical characteristics	Power requirements	1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 220V (Separate power supply for indoor units required.)						
	Power consumption 50 Hz/60 Hz	(kW)	0.056/0.058		0.090/0.096		0.095/0.110	
External dimensions	Height	(mm)	600				1045	
	Width	(mm)	745				1045	
	Depth	(mm)	220				220	
Total weight	(kg)	21			29		29	
Fan unit	Standard air flow (High/Mid/Low)	(m ³ /h)	460/400/300		740/600/490		950/790/640	
	Motor output	(W)	19		70		70	
Connecting pipe	Gas side	(mm)	φ9.5		φ12.7		φ15.9	
	Liquid side	(mm)	φ6.4				φ9.5	
	Drain port	(Nominal dia.)	20 (Polyvinyl chloride tube)					
Sound pressure level*2 (High/Mid/Low)	(dB(A))	36/34/32				42/37/33		

Note 1 : The capacities are measured under the conditions specified by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 m height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

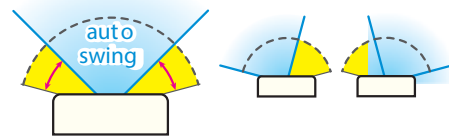
Note : Rated conditions Cooling : Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB
Heating : Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

Floor standing type

MMF-APxxx6H1-E

Wide outlet

Corner location is also possible, with right and left auto swing. Set the vertical angle manually.



MMF-AP0156H1-E to MMF-AP0566H1-E

Model	MMF-	A	B	C	D	E	F
AP0154H1-E to AP0274H1-E		200	107	132	157	210	50
AP0364H1-E to AP0564H1-E		380	125	120	160	390	40

Technical specifications

Model name	MMF-	AP0156H1-E	AP0186H1-E	AP0246H1-E	AP0276H1-E	AP0366H1-E	AP0486H1-E	AP0566H1-E
Cooling/Heating capacity*1	(kW)	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	11.2/12.5	14.0/16.0	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 50 Hz/60 Hz	(kW)	0.055/0.055	0.089/0.089	0.135/0.135	0.160/0.160		
External dimensions	Height	(mm)	1750					
	Width	(mm)	600					
	Depth	(mm)	210			390		
Total weight	(kg)	46		47		62		
Fan unit	Standard air flow (High/Mid/Low)	(m ³ /h)	900/780/660		1200/990/840	1920/1620/1380	2160/1730/1560	
	Motor output	(W)	62		62	109	109	
Connecting pipe	Gas side	(mm)	ø12.7			ø12.7		
	Liquid side	(mm)	ø6.4			ø9.5		
	Drain port	(Nominal dia.)	20 (one side of male screw)					
Sound pressure level*2 (High/Mid/Low)	(dB(A))	46/42/37		49/45/39		51/46/41	54/49/44	

Note 1 : The capacities are measured under the conditions specified by JIS B 8615 based on the reference piping.

The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 m height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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

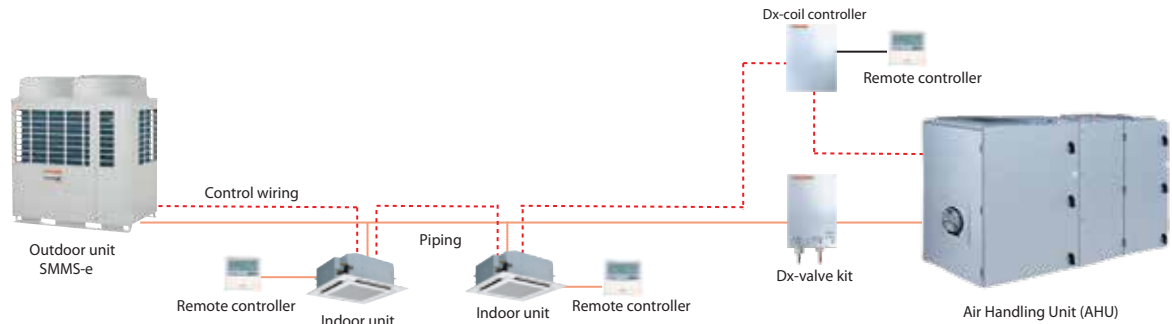


Key Features

The Dx-coil interface enables the connection between third party AHU and TOSHIBA SMMS-e with maximum capacity of the connectable AHU up to 60 HP for multiple Dx-coil (TA Control type) interface and 20 HP for single Dx-coil (DDC) interface.

Technical Specifications

Dx-coil interface type		Dx-valve kit					Dx-coil interface type		Dx-coil controller	
		RBM-A101VAE		RBM-A201VAE					TA Control type	DDC Control type
Model name		RBM-A101VAE		RBM-A201VAE			Model name		TCB-IFDTA201E	TCB-IFDDC201E
HP		8	10	16	18	20	Power supply		1ph 50Hz 220V - 240V / 1ph 60 Hz 220V	
Dimension	Height (mm)	420					Dimension	Height (mm)	420	
	Width (mm)	420						Width (mm)	330	
	Depth (mm)	420						Depth (mm)	95	
Weight (kg)		3.0					Weight (kg)		3.5	4.5

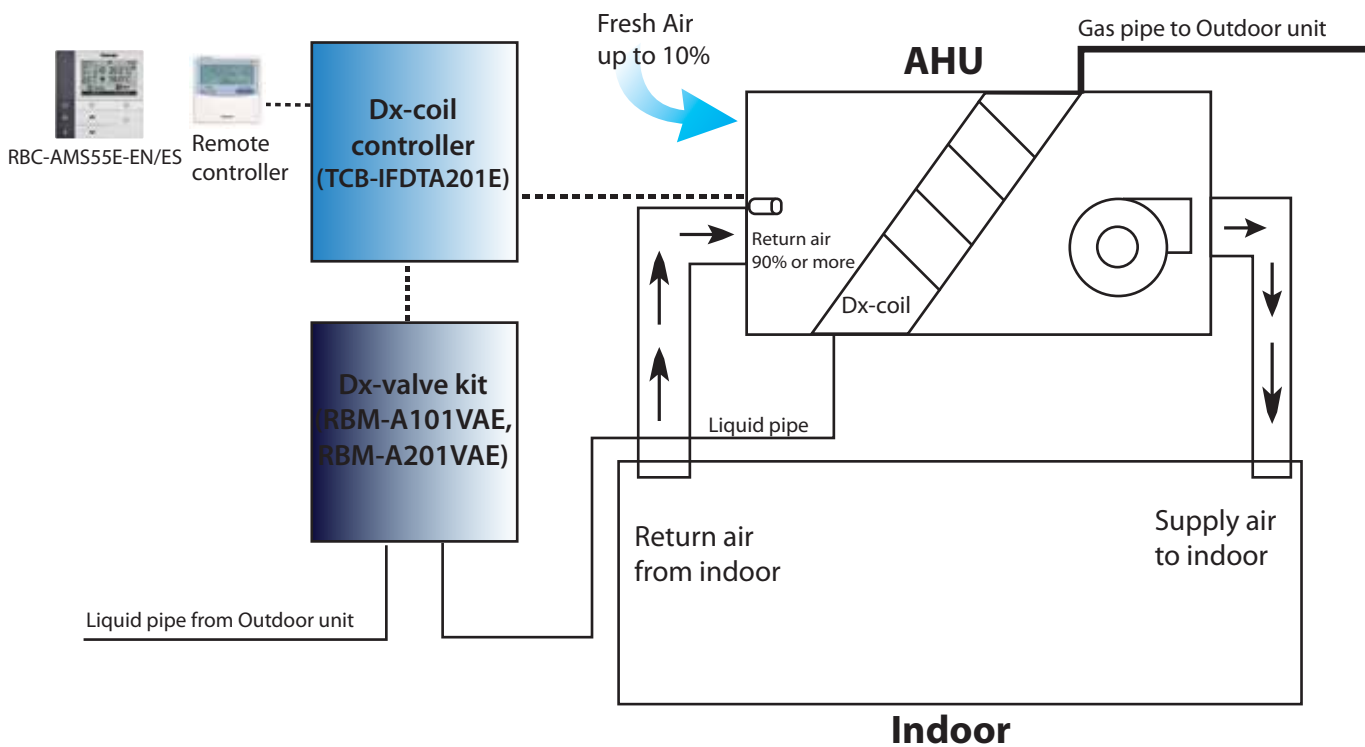


Combination

Type of Dx-coil		TA Control type						DDC Control type		
		Normal			Interlaced, Split face			Normal		
		Dx-coil controller	Dx-valve kit		Dx-coil controller	Dx-valve kit		Dx-coil controller	Dx-valve kit	
Model name		TCB-IFDTA201E	RBM-A101VAE	RBM-A201VAE	TCB-IFDTA201E	RBM-A101VAE	RBM-A201VAE	TCB-IFDDC201E	RBM-A101VAE	RBM-A201VAE
Connectable AHU Capacity	8 HP	1	1	-	-	-	-	1	1	-
	10 HP	1	1	-	-	-	-	1	1	-
	16 HP	1	-	1	2	2	-	1	-	1
	18 HP	1	-	1	2	2	-	1	-	1
	20 HP	1	-	1	2	2	-	1	-	1
	32 HP	1	-	2	2	-	2	-	-	-
	36 HP	1	-	2	2	-	2	-	-	-
	40 HP	1	-	2	2	-	2	-	-	-
	48 HP	-	-	-	3	-	3	-	-	-
	54 HP	-	-	-	3	-	3	-	-	-
	60 HP	-	-	-	3	-	3	-	-	-

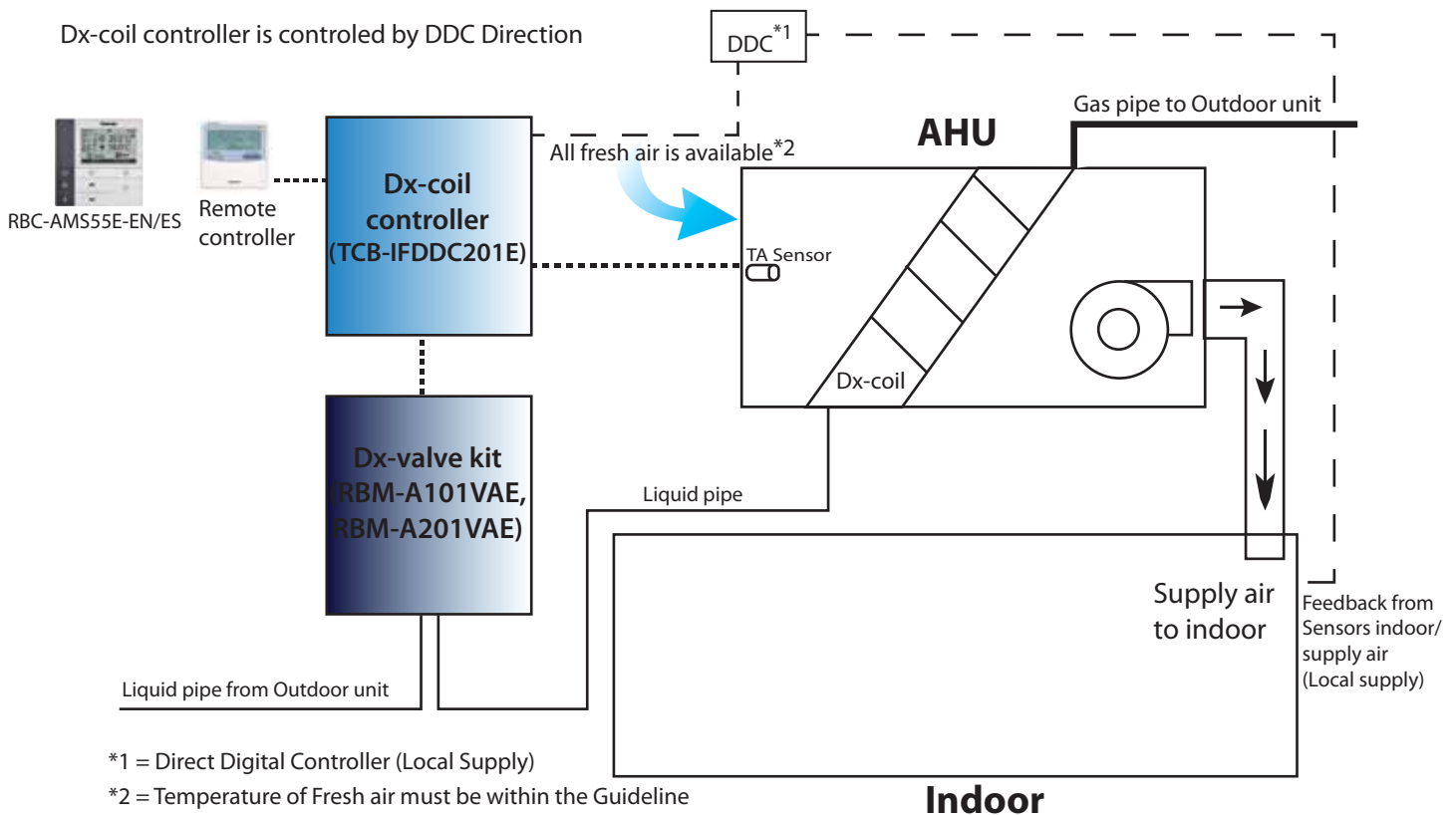
Operation Pattern 1: TA Control

Dx-coil controller is controlled by TA Sensor.



Operation Pattern 2: DDC Control

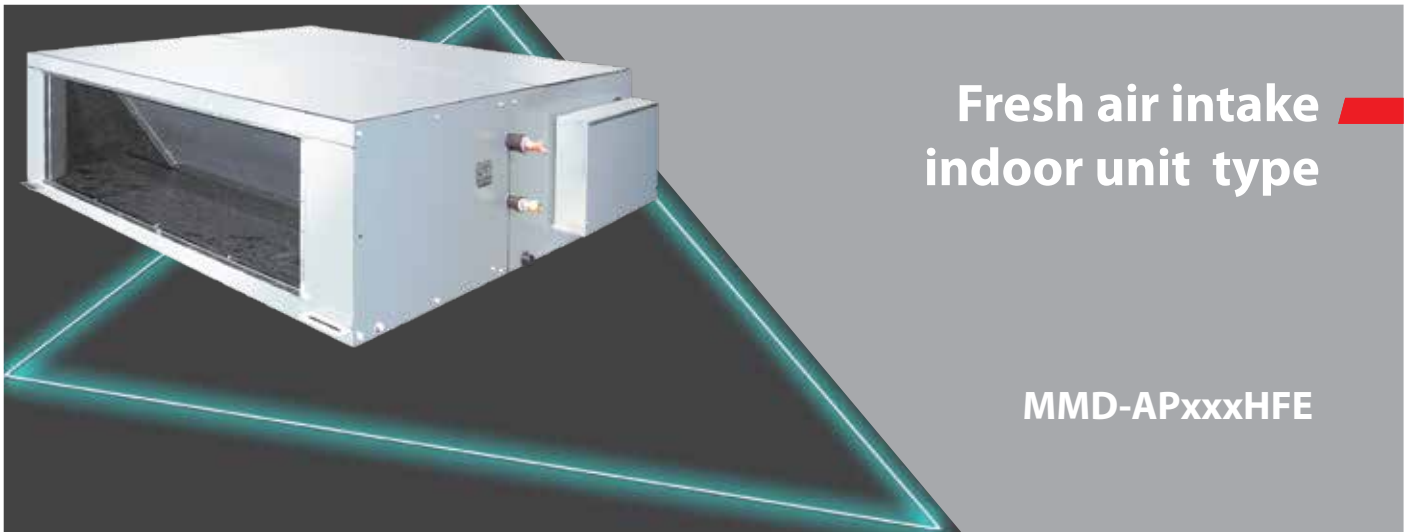
Dx-coil controller is controlled by DDC Direction



*1 = Direct Digital Controller (Local Supply)

*2 = Temperature of Fresh air must be within the Guideline

For more detail, please contact your local sales company.



Fresh air intake indoor unit type

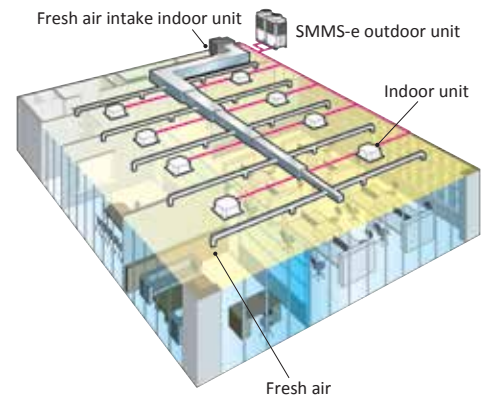
MMD-APxxxHFE

Air controller for fresh-air intake

Fresh-air intake often influences the system, rendering normal control of the air conditioner difficult, or placing large loads on the system and its cooling performance.

Therefore it is frequently adopted to handle the fresh air to a certain condition before the fresh air will enter in the main air conditioner.

This device is known as a fresh air intake indoor unit.



Note: The fresh air intake indoor unit is an air conditioner provided to handle the fresh air load and is not to control the room temperature. For correspondence to the load of the indoor air controller, set an air conditioner separately.

Technical specifications

Model name		MMD-	AP0481HFE	AP0721HFE	AP0961HFE
Cooling/Heating capacity (Note 1)		(kW)	14.0/8.9	22.4/13.9	28.0/17.4
Electrical characteristics	Power supply	(kW)	1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 220V		
	Power consumption 50 Hz/60 Hz	(kW)	0.28/0.34	0.45/0.55	0.52/0.65
External dimensions	Main unit	Height	(mm) 492		
		Width	892	1392	
		Depth	(mm) 1262		
Total weight		(kg)	93	144	
Fan unit	Standard air flow	(m ³ /h)	1080	1680	2100
	Motor output	(kW)	0.160	0.160×2	
	External static pressure	(Pa)	115-215-260	150-210-235	80-180-220
	Air flow limit Lower limit/Upper limit	(m ³ /h)	756/1188	1176/1848	1470/2310
Connecting pipe	Gas side	(mm)	ø15.9		
	Liquid side	(mm)	ø9.5		
	Drain port	(mm)	25		
Sound pressure level (Note 2) (High/Mid/Low)		(dB(A))	45/43/41	46/45/44	
Operation range	Cooling (Note 3)	(°C)	5 – 43		
	Heating (Note 4)	(°C)	-5 – 43		

* The setting temperature is 16 – 27°C (standard FCU...18 – 29°C).
 * An optional humidifier is not available with fresh air intake indoor unit.
 * Height difference between fresh air intake indoor units must be within 0.5 m. Height difference between fresh air intake indoor unit and standard FCU must be within 30 m.

Note 1 Rated conditions Cooling: Outdoor air temperature 33°C DB/28°C WB setting temperature 18°C
 Heating: Outdoor air temperature 0°C DB/-2.9°C WB setting temperature 25°C
 Piping: Length 7.5 m / Height 0 m
 Note 2 Normally, the values measured in the actual operating environment become large than the indicated values due to the effects of external sound.
 Note 3 * When supply air temperature is "setting temperature + 3°C" or less, fresh air intake indoor unit operates as FAN mode.
 * When supply air temperature is 19°C or less, Fresh Air Intake Indoor unit operates as FAN mode.
 Note 4 * When supply air temperature is "setting temperature -3°C" or over, fresh air intake indoor unit operates as FAN mode.

Use Conditions

• In COOL mode, if temperature of the fresh air is below the setup temp. of +3°C, FAN status is automatically made. When temperature of the fresh air is below 19°C, FAN status is also made regardless of the setup temperature.

• In HEAT mode, if temperature of the fresh air is above the setup temp. -3°C, FAN status is automatically made. When temperature of the fresh air is above 15°C, FAN status is also made regardless of the setup temperature.



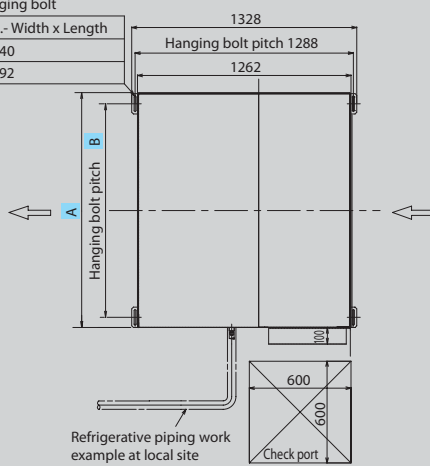
Operable mode and discharge temperature setup range

Operation mode	At shipment from factory	Setup range
COOL	18°C	16 to 27°C
HEAT	25°C	16 to 27°C

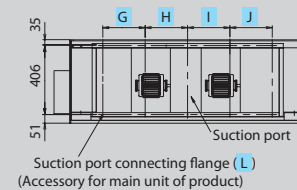
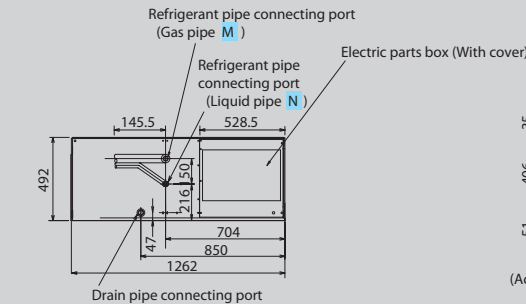
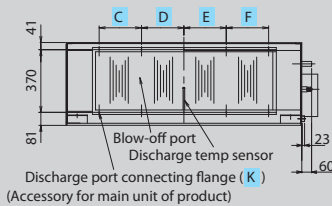
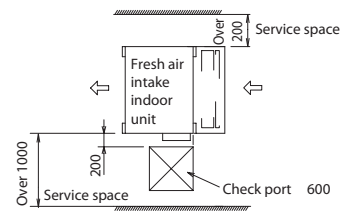
MMD-AP0481HFE to MMD-AP0961HFE

Long hole for M10 hanging bolt

Type	Hole dia. - Width x Length
0481	4-φ12 x 40
0721, 0961	4-φ12 x 92



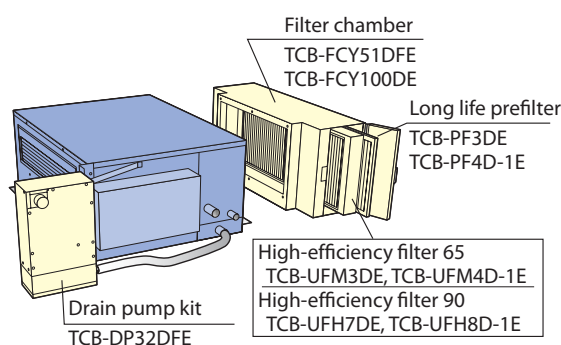
Space required for installation and servicing



Model MMD-	A	B	C	D	E	F	G	H	I	J	K	L	M	N
AP0961HFE	1392	1260	250	250	250	250	250	250	250	250	10-M6	10-M6	φ22.2 brazin g	φ12.7 flare
AP0721HFE	1392	1260	250	250	250	250	250	250	250	250	10-M6	10-M6	φ22.2 brazin g	φ12.7 flare
AP0481HFE	892	810	215	107.5	107.5	215	—	250	250	—	8-M6	6-M6	φ15.9 flare	φ9.5 flare

(Unit: mm)

Options





Air-to-Air heat exchanger with Dx-coil

MMD-VNxxxHEX1E(2)

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 room being cooled.

Free cooling at night

When the air outdoors 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.

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.



Remote controller NRC-01HE

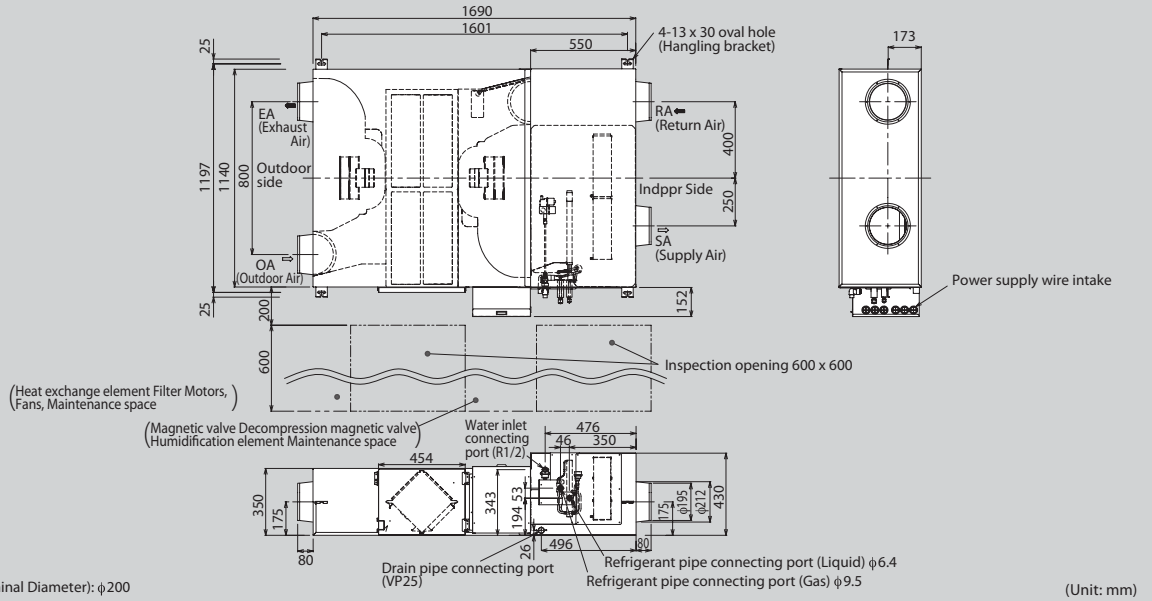
Technical specifications

Model name		MMD-	VN502HEX1E	VN802HEX1E	VN1002HEX1E2	
Fresh air conditioning load	Cooling (*1)	(kW)	4.10 (1.30)	6.56 (2.06)	8.25 (2.32)	
	Heating (*1)	(kW)	5.53 (2.33)	8.61 (3.61)	10.92 (4.32)	
Power supply			1-phase 50Hz 230V (220-240V) / 1-phase 60Hz 220V		1-phase 60Hz 220 V	
(Separate power supply for indoor units required.)						
Temperature exchange efficiency 50Hz / 60Hz	High	(%)	70.5/70.5	70.0/70.0	65.5	
	Mid	(%)	70.5/70.5	70.0/70.0	65.5	
	Low	(%)	71.5/72.0	72.5/73.0	68.0	
Enthalpy exchange efficiency 50Hz / 60Hz	Cooling	High	(%)	56.5/56.5	56.0/56.0	52.0
		Mid	(%)	56.5/56.5	56.0/56.0	52.0
		Low	(%)	57.5/58.0	59.0/59.5	55.0
	Heating	High	(%)	68.5/68.5	70.0/70.0	66.0
		Mid	(%)	68.5/68.5	70.0/70.0	66.0
		Low	(%)	69.0/69.0	73.0/73.5	69.0
Fan unit 50Hz / 60Hz	Standard air flow	High	(m ³ /h)	500/500	800/800	950
		Mid	(m ³ /h)	500/500	800/800	950
		Low	(m ³ /h)	440/410	640/600	800
	External static pressure	High	(Pa)	120/200	120/190	195
		Mid	(Pa)	105/170	100/155	160
		Low	(Pa)	115/150	105/130	130
Sound pressure 50Hz / 60Hz	High	(dB(A))	37.5/40.0	41.0/43.0	43.5	
	Mid	(dB(A))	36.5/38.0	40.0/42.0	42.0	
	Low	(dB(A))	34.5/36.5	38.0/37.0	40.0	
External dimensions	Height	(mm)	430	430	430	
	Width	(mm)	1140	1189	1189	
	Depth	(mm)	1690	1739	1739	
Total weight		(kg)	84	100	103	
Connecting piping	Gas side	(mm)	ø9.5	ø12.7		
	Liquid side	(mm)		ø6.4		
Drain port (Nominal dia.)		(mm)	25(Polyvinyl chloride tube)			

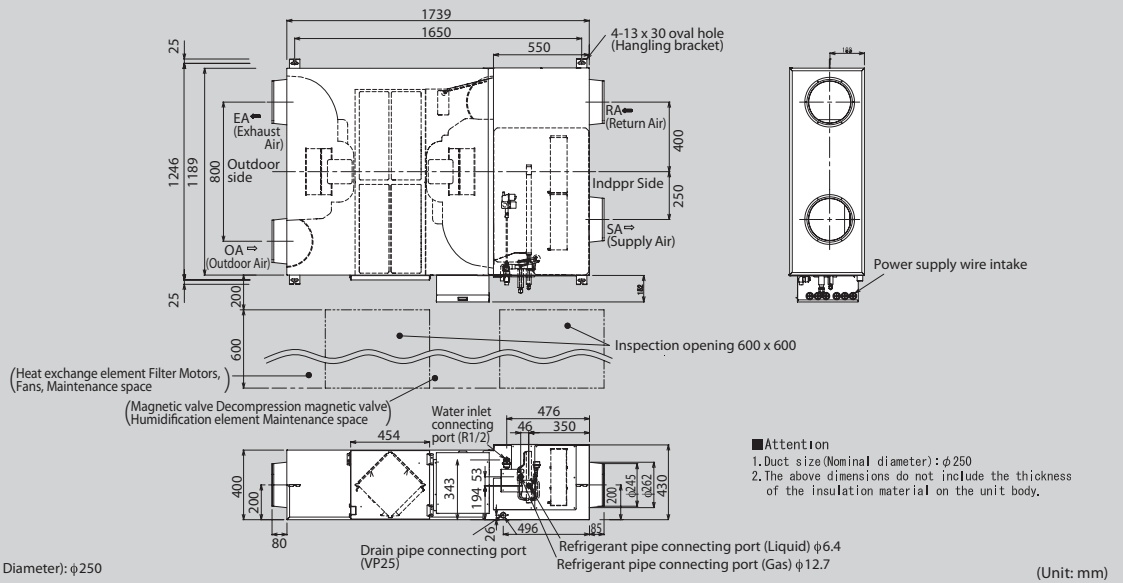
(*1) Cooling and heating capacities are based on the following conditions:
 Cooling capacities are based on : indoor temperature :27 °C DB/19°C WB, Outdoor temperature : 35°C DB
 Heating capacities are based on : indoor temperature :20 °C DB, Outdoor temperature : 7 °C DB/6°C WB
 Fan is based on High and Middle
 (): The figures in () indicate the heat reclaimed from the heat recovery ventilator.

*If high humidity air (about 80% or more of relative humidity), such as fog, is inhaled by the Heat Exchanger, dew condensation water may trickle from a main body.

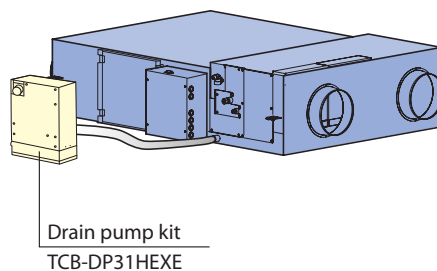
MMD-VN502HEX1E



MMD-VN802HEX1E to MMD-VN1002HEX1E2



Options





Air-to-Air heat exchanger (Stand alone unit)

VN-MxxxHE

Greater comfort and reduced load

Easily integrated into air conditioning systems of 150 m³/h to 2000 m³/h air volume, the air-to-air heat exchangers use exhaust air to pre-condition the incoming air, thus reducing the cooling or heating load and the overall size of the required system.

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.

Easy maintenance

The heat exchange element can be washed in water.



Remote controller
NRC-01HE

* Do not connect to refrigerant piping from outdoor unit. Control wires can be connected.

Technical specifications

Model name		VN-M150HE	VN-M250HE	VN-M350HE	VN-M500HE	VN-M650HE	VN-M-800HE	VN-M1000HE	VN-M1500HE	VN-M2000HE		
Power supply		1-phase 50Hz 230V (220–240V) / 1-phase 60Hz 220V (Separate power supply for indoor units required.)										
Power consumption 50Hz/60Hz	(Extra high)	(W)	68-78/76	123-138/131	165-182/209	214-238/260	262-290/307	360-383/446	532-569/622	751-786/928	1084-1154/1294	
	High	(W)	59-67/65	99-111/105	135-145/162	176-192/206	240-258/283	339-353/408	494-538/589	708-784/830	1032-1080/1220	
	Low	(W)	42-47/45	52-59/54	82-88/94	128-142/144	178-191/206	286-300/333	353-370/411	570-607/660	702-742/818	
Air volume	(Extra high)	(m ³ /h)	150/150	250/250	350/350	500/500	650/650	800/800	1000/1000	1500/1500	2000/2000	
	High	(m ³ /h)	150/150	250/250	350/350	500/500	650/650	800/800	1000/1000	1500/1500	2000/2000	
	Low	(m ³ /h)	110/110	155/155	210/210	390/390	520/520	700/700	755/755	1200/1200	1400/1400	
External static pressure	(Extra high)	(Pa)	82-102/99	80-98/97	114-125/167	134-150/181	91-107/134	142-158/171	130-150/185	135-156/165	124-143/165	
	High	(Pa)	52-78/59	34-65/38	56-83/33	69-99/63	58-82/68	102-132/102	97-122/120	103-129/108	92-116/102	
	Low	(Pa)	47-64/46	28-40/22	65-94/39	62-92/44	61-96/52	76-112/58	84-127/55	112-142/109	110-143/87	
Sound pressure level	(Extra high)	(dB(A))	26-28/27.5	29.5-30/31.5	34-35/35.5	32.5-34/33.5	34-36/35.5	37-38.5/38	39.5-40.5/41.5	38-39/39.5	41-42.5/42.5	
	High	(dB(A))	24-25.5/24.5	25-27/25	30-32/29.5	29.5-31/29	33-34/34	35.5-37/35	38.5-40/39	36.5-37.5/36.5	39.5-41/40	
	Low	(dB(A))	20-22/20	21-22/21	27-29/23.5	26-29/24.5	31-32.5/29.5	33.5-35/32.5	34-35.5/33.5	36-37.5/35.5	37-38/36.5	
Temperature exchange efficiency	(Extra high)	(%)	81.5/81.5	78.0/78.0	74.5/74.5	76.5/76.5	75.0/75.0	76.5/76.5	73.5/73.5	76.5/76.5	73.5/73.5	
	High	(%)	81.5/81.5	78.0/78.0	74.5/74.5	76.5/76.5	75.0/75.0	76.5/76.5	73.5/73.5	76.5/76.5	73.5/73.5	
	Low	(%)	83/83	81.5/81.5	79.5/79.5	78/78	76.5/76.5	77.5/77.5	77/77	79/79	77.5/77.5	
Enthalpy exchange efficiency	Heating	(Extra high)	(%)	74.5/74.5	70/70	65/65	72/72	69.5/69.5	71/71	68.5/68.5	71/71	68.5/68.5
		High	(%)	74.5/74.5	70/70	65/65	72/72	69.5/69.5	71/71	68.5/68.5	71/71	68.5/68.5
		Low	(%)	76/76	74/74	71.5/71.5	73.5/73.5		71.5/71.5		73.5/73.5	72/72
	Cooling	(Extra high)	(%)	69.5/69.5	65/65	60.5/60.5	64.5/64.5	61.5/61.5	64/64	60.5/60.5	64/64	60.5/60.5
		High	(%)	69.5/69.5	65/65	60.5/60.5	64.5/64.5	61.5/61.5	64/64	60.5/60.5	64/64	60.5/60.5
		Low	(%)	71/71	69/69	67/67	66.5/66.5	64/64	65.5/65.5	64.5/64.5	67/67	65.5/65.5
Dimensions (Length x Width x Height)		(mm)	900 x 900 x 290			1140 x 1140 x 350		1189 x 1189 x 400		1189 x 1189 x 810		
Weight		(kg)	36		38	53		70		143		
Duct diameter		(mm)	100	150		200		250		Inside: 250, Outside: 283 x 730		
Operating range	Around unit											
	Outdoor Air (OA)		-10°C – 40°C 80% RH or less									
	Return Air (RA)		-15°C (*) – 43°C RH									
			5°C – 40°C 0% RH or less									

* Air volume can be changed over to high (extra high) mode or low mode.

* Sound pressure level is measured 1.5m below the center of the unit.

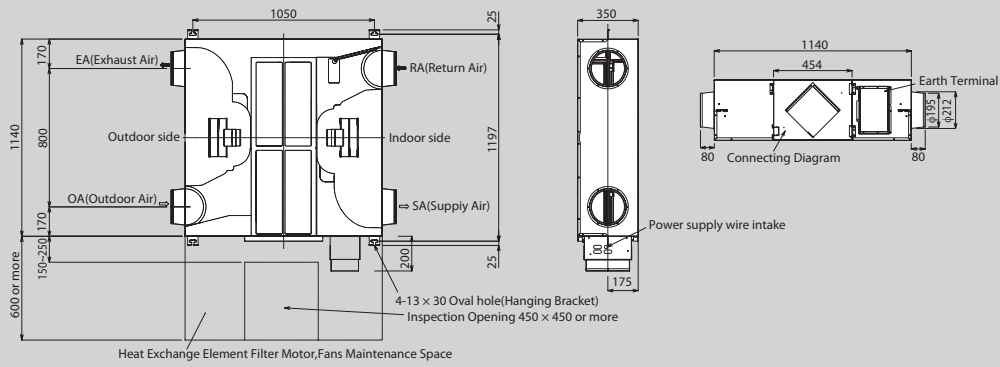
* Sound pressure level is the value which was measured at the acoustic room.

* The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise.

* Sound pressure level is less than 70 dBA

*If high humidity air (about 80% or more of relative humidity), such as fog, is inhaled by the Heat Exchanger, dew condensation water may trickle from a main body.

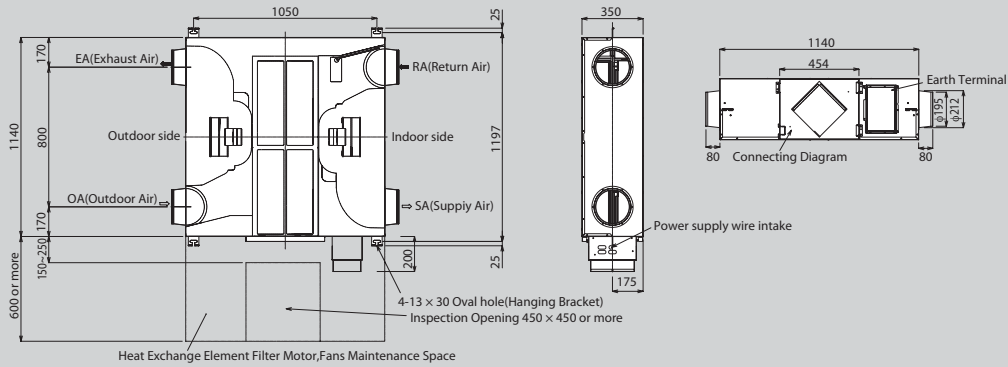
VN-M150HE to VN-M350HE



Duct size (Nominal Diameter): $\phi 200$

(Unit: mm)

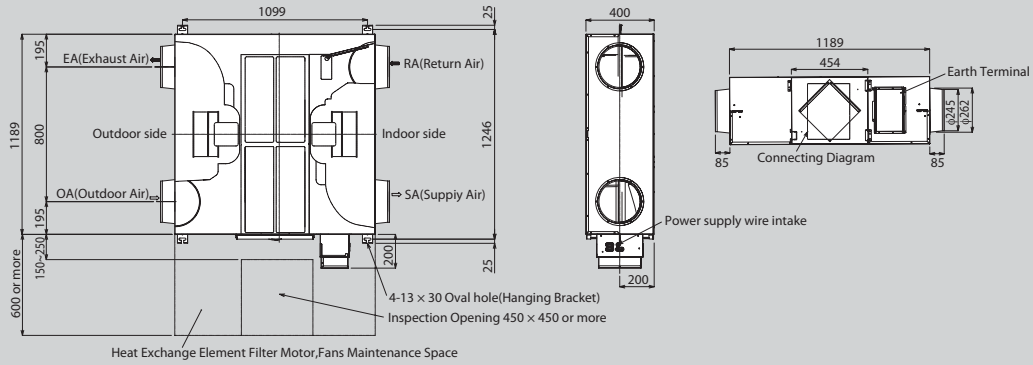
VN-M500HE, VN-M650HE



Duct size (Nominal Diameter): $\phi 200$

(Unit: mm)

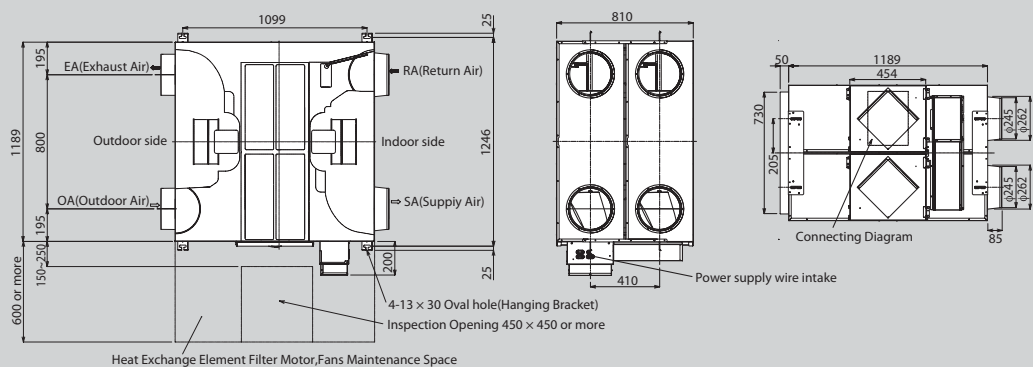
VN-M800HE, VN-M1000HE



Duct size (Nominal Diameter): $\phi 250$

(Unit: mm)

VN-M1500HE, VN-M2000HE



Duct size (Nominal Diameter): $\phi 250$

(Unit: mm)

Indoor unit accessories

Indoor unit	Parts Name	Model Name	Applied Model	Notes	Remarks	
4-way air discharge cassette type	Ceiling panel	RBC-U31PG(W)-E	MMU-AP***4HP1-E	Required accessory	Use with TCB-GFC1602UE	
	Fresh air inlet box	TCB-GB1602UE		For fresh air intake by using the knockout hole of fresh air filter chamber. (dia.=100 mm)		
	Fresh air filter chamber	TCB-GFC1602UE		For fresh air inlet box		
	Auxiliary fresh air flange	TCB-FF101URE2		For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100 mm)		
	Spacer for height	TCB-SP1602UE		Height=50 mm		
	Air discharge direction kit	TCB-BC1602UE		Air direction charge by cutting off air discharge port (3 pcs.)		
Compact 4-way cassette type	Ceiling panel	RBC-UM21PG(W)-E	MMU-AP***7MH-E	Required accessory		
	Auxiliary fresh air flange	TCB-FF101URE2		For fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)		
	Occupancy sensor	TCB-SIR41UM-E				
2-way air discharge cassette type	Ceiling panel	RBC-UW283PG(W)-E	MMU-AP0072 to 0152WH1	Required accessory		
		RBC-UW803PG(W)-E	MMU-AP0182 to 0302WH1			
		RBC-UW1403PG(W)-E	MMU-AP0362 to 0562WH1			
	Super long life filter		TCB-LF283UW-E			MMU-AP0072 to 0152WH1
			TCB-LF803UW-E			MMU-AP0182 to 0302WH1
			TCB-LF1403UW-E			MMU-AP0362 to 0562WH1
	Filter chamber		TCB-FC283UW-E			MMU-AP0072 to 0152WH1
			TCB-FC803UW-E			MMU-AP0182 to 0302WH1
		TCB-FC1403UW-E	MMU-AP0362 to 0562WH1			
Auxiliary fresh air flange	TCB-FF151US-E	MMU-AP***2WH1	For fresh air intake by using the knockout hole of indoor unit.			
1-way air discharge cassette type	Ceiling panel	RBC-UY136PG	MMU-AP***4YH1-E	Required accessory		
	Front air discharge unit	RBC-US21PGE		Required accessory		
	Auxiliary fresh air flange	TCB-BUS21HWE				
Slim duct type	Auxiliary fresh air flange	TCB-FF101URE2	MMD-AP***4SPH1-E	For fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)		
Concealed duct type	Spigot shaped flange	TCB-SF56C6BPE	MMD-AP0076 to 0186BHP1-E			
		TCB-SF80C6BPE	MMD-AP0246 to 0306BHP1-E			
		TCB-SF160C6BPE	MMD-AP0366 to 0566BHP1-E			
Concealed duct high static pressure type	Long life filter kit	TCB-LK801D-E	MMD-AP0186 to 0276HP1-E			
		TCB-LK1401D-E	MMD-AP0366 to 0566HP1-E			
	Spigot shaped flange	TCB-SF80C6BPE	MMD-AP0186 to 0276HP1-E			
		TCB-SF160C6BPE	MMD-AP0366 to 0566HP1-E			
	Auxiliary fresh air flange	TCB-SF160C6BPE	MMD-AP***6HP1-E			
	Long life filter kit	TCB-LK2801DP-E	MMD-AP0726/0966HP-E	Flange shaped, Mount chassis directly, Upside down mountable		
Drain pump kit	TCB-DP40DPE	MMD-AP0726/0966HP-E	Lift up 500 mm			
Ceiling type	Drain pump kit	TCB-DP31CE	MMC-AP0158 to 0188HP-E MMC-AP0248 to 0568HP-E	Stand-up 600 or less (from bottom face of ceiling)	Use with TCB-KP13CE Use with TCB-KP23CE	
		TCB-KP13CE	MMC-AP0158 to 0188HP-E			
	Elbow piping kit	TCB-KP23CE	MMC-AP0248 to 0568HP-E	Needed when drain pump kit is used		
Air to Air heat exchanger with Dx-coil	Drain pump kit	TCB-DP31HEXE	MMD-VN502 to 1002HEX1E2	Stand-up 330 mm or less (from bottom face of ceiling)		
Fresh air intake indoor unit type	High-efficiency filter 65	TCB-UFM3DE	MMD-AP0721/0961HFE	Dust collecting effect: 65% (NBS Colorimetric method)	Use with TCB-PF3DE	
		TCB-UFM4D-1E	MMD-AP0481HFE		Use with TCB-PF4D-1E	
	High-efficiency filter 90	TCB-UFH7DE	MMD-AP0721/0961HFE	Dust collecting effect: 90% (NBS Colorimetric method)	Use with TCB-PF3DE	
		TCB-UFH8D-1E	MMD-AP0481HFE		Use with TCB-PF4D-1E	
	Long life prefilter	TCB-PF3DE	MMD-AP0721/0961HFE	Dust collecting effect: 50% (Weight method)		
		TCB-PF4D-1E	MMD-AP0481HFE			
	Filter chamber	TCB-FCY51DFE	MMD-AP0481HFE	For high-efficiency filter or long life prefilter		
		TCB-FCY100DE	MMD-AP0721/0961HFE			
Drain pump kit	TCB-DP32DFE	MMD-AP0481 to 0961HFE	Stand-up 330 or less (from bottom face of ceiling)			

Combination pattern

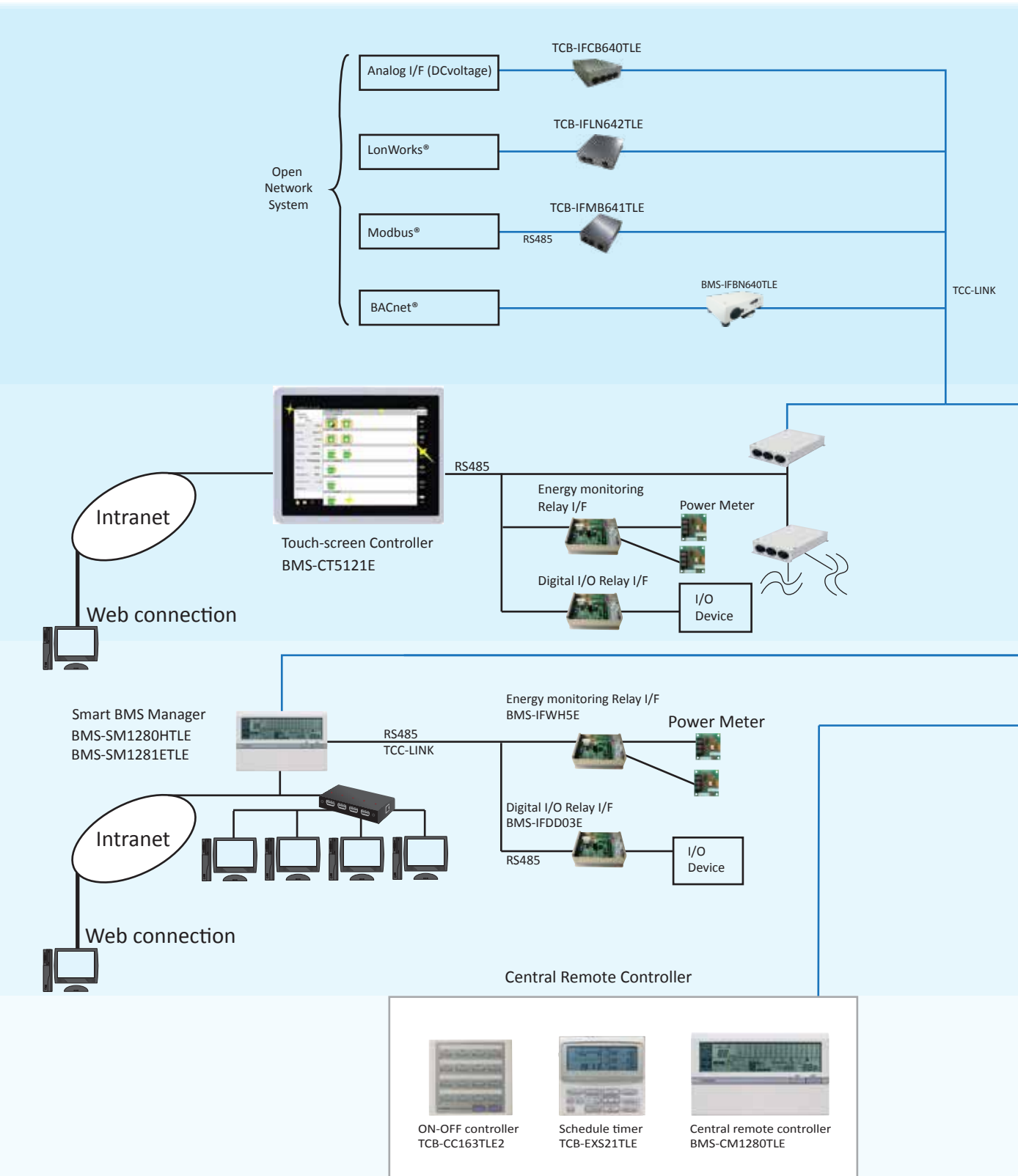
Accessory for 4-way air discharge cassette type: combination pattern

		1	2	3	4	5	6
		Ceiling panel	Fresh air inlet box + Fresh air filter chamber	Fresh air filter chamber	Auxiliary fresh air flange	Spacer for height adjustment	Air discharge direction kit
1	Ceiling panel		OK	OK	OK	OK	OK
2	Fresh air inlet box + Fresh air filter chamber	OK			OK	—	OK
3	Fresh air filter chamber	OK			OK	OK	OK
4	Auxiliary fresh air flange	OK	OK	OK		OK	OK
5	Spacer for height adjustment	OK	—	OK	OK		OK
6	Air discharge direction kit	OK	OK	OK	OK	OK	

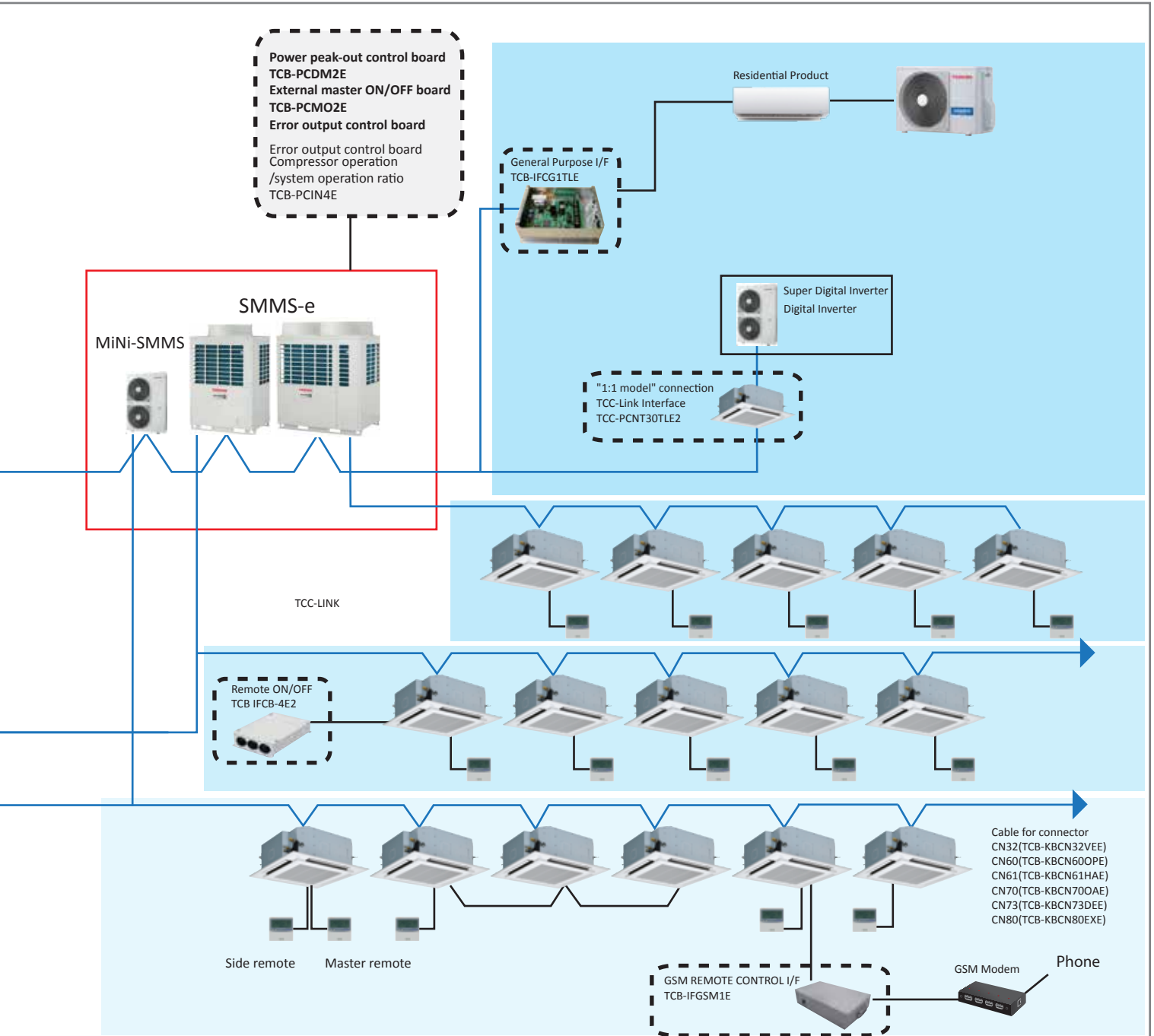


Remote controllers

Air-conditioning Management System on site



1.LonWorks® : Registered trademark by Echelon corporation.
 2.BACnet® : ANSI/ASHRAE 135-1995, A data Communication Protocol for Building Automation and Control Network.
 3.Modbus® : Registered trademark by Schneider E.



Wire remote controller/Wireless remote controller



Wired remote controller



**Wired remote controller
RBC-AMS55E-EN
RBC-AMS55E-ES**

Wired remote controller with a **summer time shift**-featuring LCD with **AM/PM display**.

- 7-day timer function.
- Multi-language available.
- Possibility to set and display the room name to easily set-up and monitor the working parameter.
- New modern and desirable controller design with menu driven display.
- Save mode by schedule timer to optimise energy consumption.
- Room temperature display always available.
- Two "Hot Keys" (F1, F2) for easy operation of air conditioner functions.
- Easy to read layout including display of indoor unit model name and serial number.
- Built-in backup power. Settings are kept in memory up to 72 hours in case of power failure.
- Remote TA sensor available in controller.
- Can be connected to a single indoor unit or a group of up to 8 indoor units.



**Standard remote controller
RBC-AMT32E**

Standard wired remote controller can be connected to a single indoor unit or a group of up to 8 indoor units.

Power save operation limits the greatest current value. The remote controller allows error to be displayed while the protective device works or a error occurs.



**Remote controller with weekly timer
(7-day timer function)
RBC-AMS41E**

- Clock display
- Schedule timer: Possible to program schedule timer (7-day timer) function Possible to program 8 functions for each day of the week

*The following items can be set in program: Operation time, Operation start/stop, Operation mode, Temperature setting, Restriction on button operation.



**Simple wired remote controller
RBC-AS41E**

- Start/Stop
- Temperature setting
- Air flow changing
- Check code display

Wireless remote controller



**Wireless remote controller kit & Sensor unit
(Receiver unit)**

- Start/Stop
- Changing mode
- Temperature setting
- Air flow changing
- Timer function
Either "ON" time or "OFF" time or "CYCLIC" can be set how many 30 min. later ON or OFF is operated.
- Control by 2 remote controllers is available. Two wireless remote controllers can operate one indoor unit. The indoor unit can then be operated separately from the two different locations.
- Check code display



**Integral receiver
RBC-AX33CE**

(MMC-AP***8HP-E, MMU-AP***4SH1-E)
For Ceiling and 1-way air discharge cassette



**Stand alone receiver
TCB-AX32E2**

For 4-way air discharge cassette, Compact 4-way cassette, 2-way air discharge cassette, Ceiling, Concealed duct, Slim duct, Floor standing cabinet, Floor standing, 1-way air discharge cassette (MMU-AP***4YH1-E/SH1-E)



**Integral receiver
RBC-AX32U(W)-E
RBC-AX32U(WS)-E**

(MMU-AP***4HP1-E)
For 4-way air discharge cassette



**Integral receiver
RBC-AX23UW(W)-E**

(MMU-AP***2WH1)
For 2-way air discharge cassette



**Integral receiver
RBC-AX32UM(W)-E**

(MMU-AP***7MH-E)
For compact 4-way cassette

Central remote controller



Central remote controller
BMS-CM1280TLE

- **Operation**
 - Individual operation of 128 indoor units available
 - Return Back Operation
 - Weekly Schedule Operation* (ON/OFF)
- * Schedule timer necessary
- **Monitoring**
 - Zone setting (64 zones x 2)
 - Individual unit operation mode operation restriction
 - Alarm display
 - Control input
 - Status output



ON-OFF controller
TCB-CC163TLE2

- Individual control of up to 16 indoor units.
- Setting of simultaneous ON/OFF 3 times per day combined with the weekly timer.



Schedule timer
TCB-EXS21TLE

- **Schedule timer mode**
 - 6 programmings per day
 - Enabling 8 groups to be programmed
 - A maximum of 64 indoor units can be controlled
 - A maximum of 100 hours back-up power supply
- **Weekly timer mode**
 - 7 types of weekly schedule and 3 programmings per day

Other



Remote sensor
TCB-TC41LE

Install this sensor when outside air has been introduced or when overcooling and overheating are to be minimised.

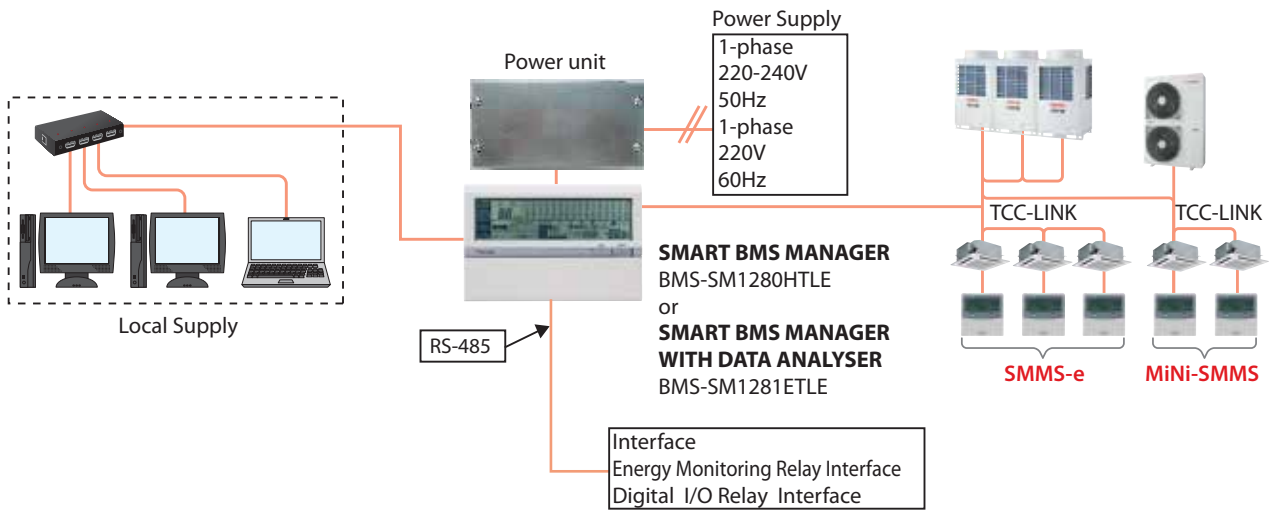


Wired remote controller for air to air heat exchanger
NRC-01HE

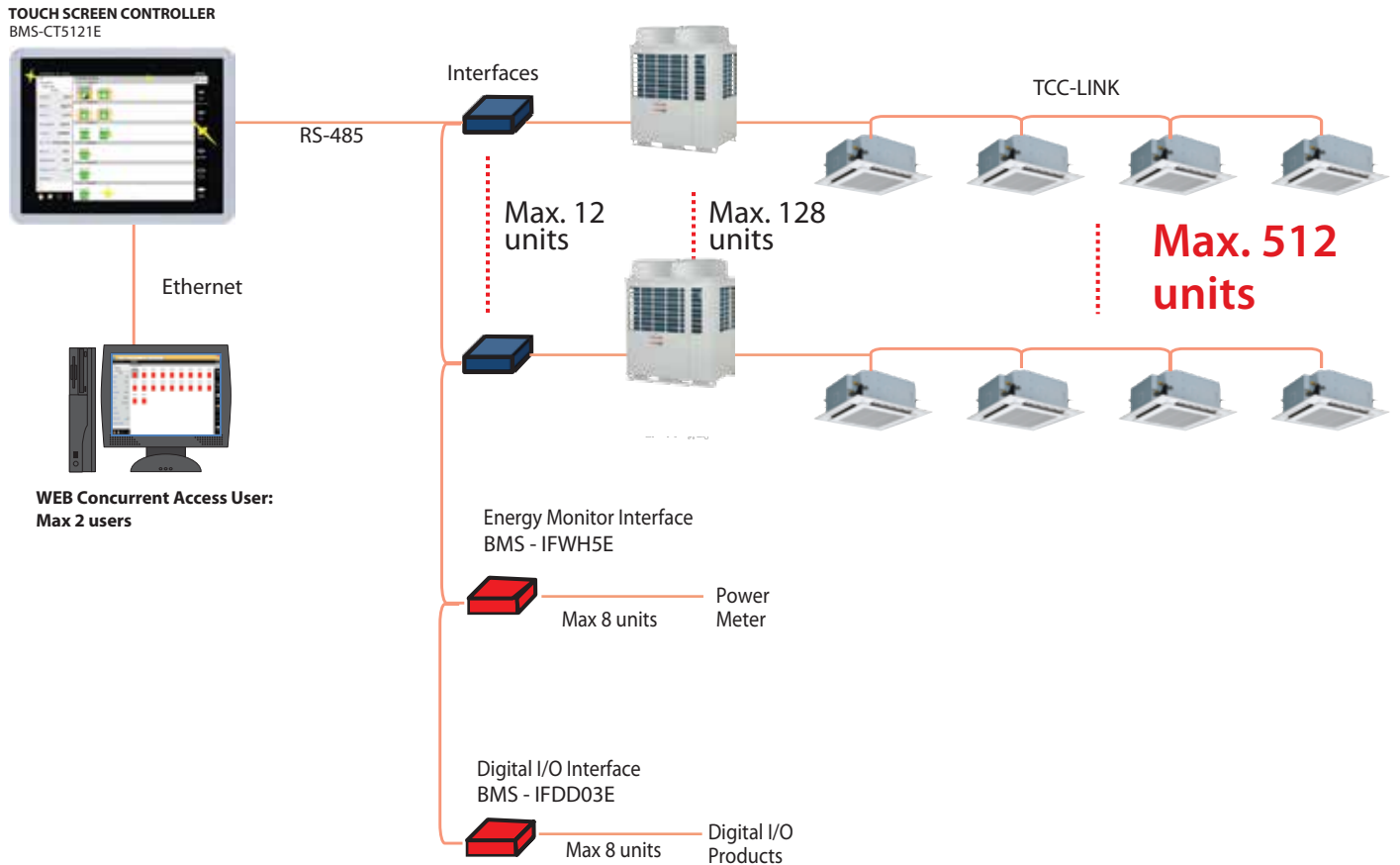
- Up to 8 units of the Air to Air Heat Exchanger can be operated using this remote controller.
- Control by 2 remote controllers is available. Two remote controllers can operate a single Air to Air Heat Exchanger.
- Air conditioning units may be controlled in addition to controlling the Air to Air Heat Exchanger.
- Central control allows linked ON/OFF operation of air conditioner and Air to Air Heat Exchanger.
- Central control can be set to allow standalone operation of the Air to Air Heat Exchanger.
- Switchable ventilation modes (Automatic/Air to Air/Normal)
- Switchable ventilation air volume (Extra-high/High-Low)

Building management systems

SMART BMS MANAGER / SMART BMS MANAGER WITH DATA ANALYSER



Touch screen controller





SMART BMS MANAGER
BMS-SM1280HTLE

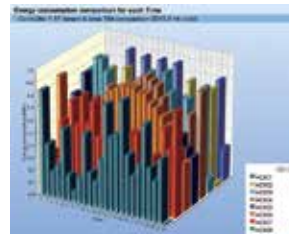
Web browser control software

- List View available - Displays all indoor units in one screen
- Set View available - Shows basic indoor unit settings on main screen
- Advanced operation and master schedule functions available
- Advanced operation & master schedules can be set on a calendar
- Up to 4 concurrent users can be connected
- Up to 32 user accounts can be programmed with different levels of access (at least 1 must be administrator level)
- Energy monitoring and billing functions are available. Power meter locally supplied energy.
- Additional digital I/O device is available
- Thin profile controller and separate power supply unit enables easy installation.

SMART MANAGER WITH DATA ANALYSER
BMS-SM1281ETLE



Energy monitoring display



3D energy view



Daily energy view



TOUCH SCREEN CONTROLLER
BMS-CT5121E

• Touch screen controller

Using the touch screen controller provides a clear display and enables easy operation.

A maximum of 512 units / groups are controllable.

• Energy monitoring and billing application

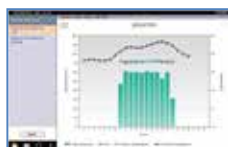
Power meter locally supplied Energy

• Web connection

• Layout diagram function (Option)



LAYOUT DIAGRAM FUNCTION (OPTION)



GRAPH FUNCTION

FEATURES

- Icon display
- Return back function
- Save & demand control for outdoor unit
- Ventilation unit control & monitoring
- Setting temp. range control
- Setting temp. shift
- Layout diagram function (Option)



Relay Interface BMS-IFWH5E
For Energy Monitoring to connect power meter

Relay Interface BMS-IFDD03E
Fto connect external digital input/output



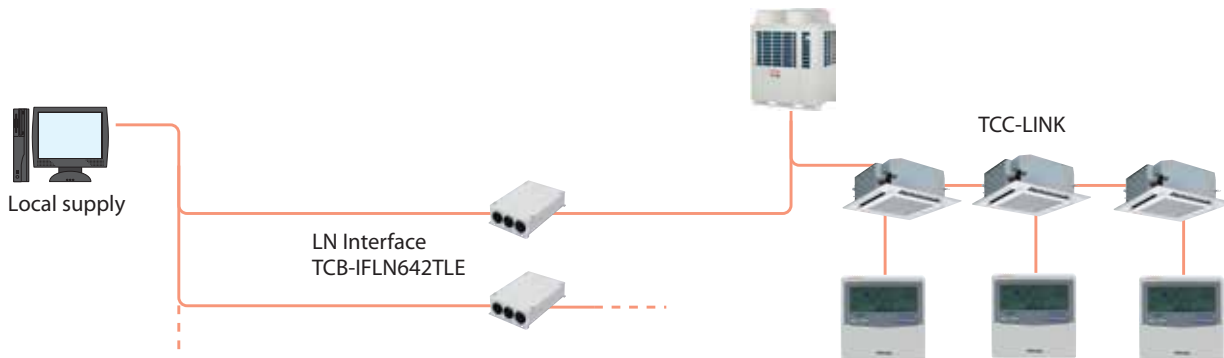
Relay Interface BMS-IFLSV4E
For TCS-NET (Max. 64 FCU/Unit)

Open network systems

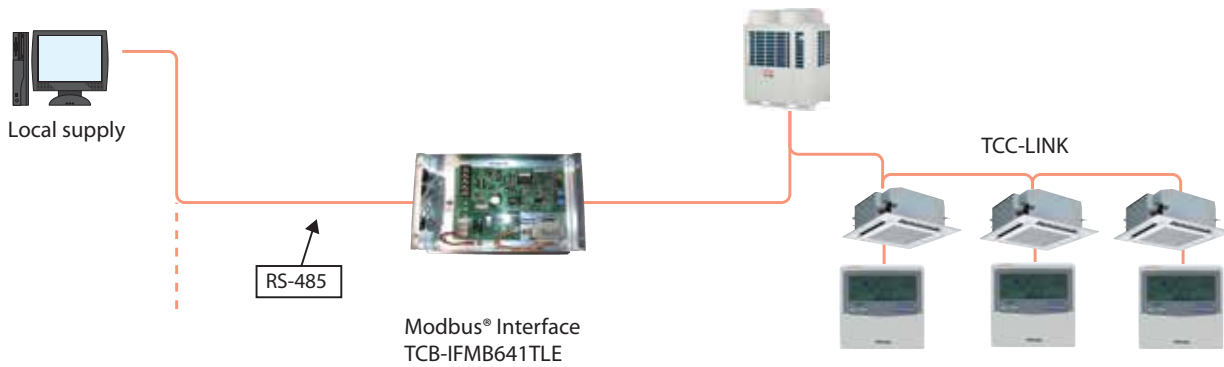
BACnet® system



LonWorks®



Modbus®





BN Interface
BMS-IFBN640TLE

• **BACnet®**

The BACnet® system operates in conjunction with the BACnet®. Server uses object signals to provide the following functions:

• **Control**

- ON/OFF
- Temperature setting
- Fan speed
- Max. 64 FCU

• **Monitoring**

- ON/OFF
- Operation mode
- Temperature setting
- Room temperature
- Local remote controller : permit / prohibit



LN Interface
TCB-IFLN642TLE

• **LonWorks® LN Interface**

The LonWorks® interface manages the SMMS-e air conditioning system as a Lon device to communicate with the customer's Building Management System and to monitor operational status.

A maximum of 64 units / groups are controllable per interface.

• **SNVT signal**

Signals and provides the following functions:

• **Control**

- ON/OFF
- Temperature setting
- Fan speed
- Max. 64 FCU

• **Monitoring**

- ON/OFF
- Operation mode
- Temperature setting
- Room temperature
- Local remote controller : permit / prohibit



Modbus® Interface
TCB-IFMB641TLE

• **Modbus®**

The Modbus® interface manages the SMMS-e air conditioning system as a Modbus® device to communicate with the customer's Building Management System.

Accessible to 64 units / groups per one TCB-IFMB641TLE, 15 TCB-IFMB641TLEs on one Modbus® Master (prepared by user).

Signals and provides the following functions:

• **Control**

- ON/OFF
- Temperature setting
- Fan speed
- Max. 64 FCU

• **Monitoring**

- ON/OFF
- Operation mode
- Temperature setting
- Room temperature
- Local remote controller : permit / prohibit

1. LonWorks®: Registered trademark Echelon corporation.
 2. BACnet®: ANSI/ASHRAE 135-2008, A data Communication Protocol for Building Automation and Control Networks.
 3. Modbus® is a registered trademark of Schneider E.

Application controls

TCB-PCDM4E



Size: 71 × 85 (mm)

Power peak-cut control

• Feature

The upper limit capacity of the outdoor unit is restricted based on the outdoor power peak selected setting.

• Function

Two control settings are selectable by setting SW07 on the interface P.C. board on the outdoor unit.

TCB-PCMO4E



Size: 55.5 × 60 (mm)

Snowfall fan control

• Feature

The upper limit capacity of the outdoor unit is restricted based on the outdoor power peak selected setting.

External master ON/OFF control

• Feature

The outdoor unit starts or stops the system.

Night operation (Sound reduction) control

• Feature

Sound level can be reduced by restricting the compressor and fan speeds.

Operation mode selection control

• Feature

This control can restrict the selectable operation modes.

TCB-PCIN4E



Size: 73 x 79 (mm)

Error/Operation output control

- Feature

Enables external output of error and operation signals.

Compressor operation output

- Feature

Enables external signal output for each compressor that is in operation within any given outdoor unit. This feature provides a practical method for calculating total operating times for each compressor.

Operating rate output

- Feature

External output of system operating rates enables remote monitoring of operating conditions.

TCB-IFCB-4E2

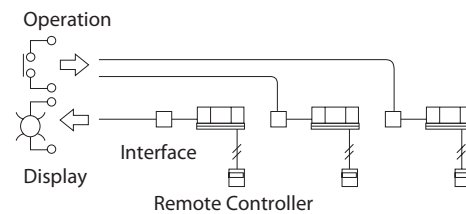


Size: 200 x 170 x 66 (mm)

Remote location ON/OFF control box

- Feature

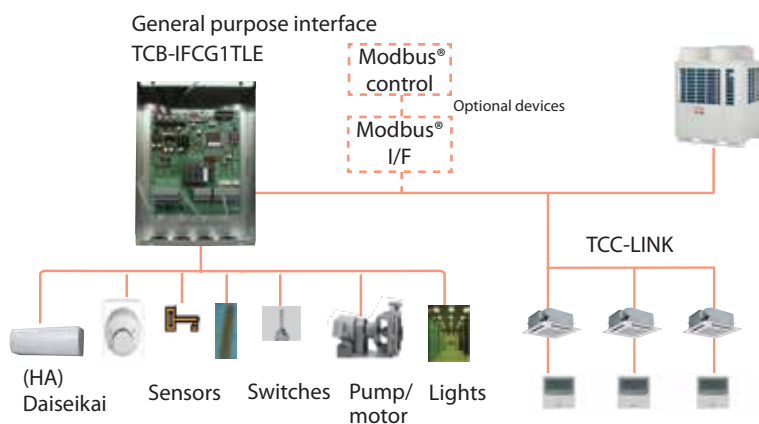
Start and stop of the air conditioner is possible by an external signal and indication of operation/ alarm externally.



Monitoring

ON/OFF status (for indoor unit)
Alarm status (system & indoor unit stop)
ON/OFF command
Air conditioner can be turned ON/OFF by the external signals.
The external ON/OFF signals will initiate the signals shown below.

General Purpose Interface



Concept

- Controls the operation status of each indoor unit.
- ON/OFF control of peripheral equipment via the relay point of Toshiba's BMS. (1 pt only)

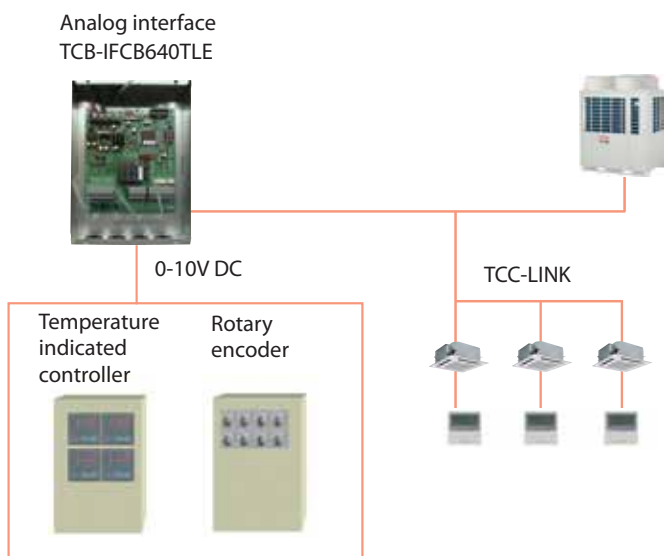
Standard function

Central remote controller and Building Management System devices can control ON/OFF function via digital I/O ports.

Optional function

Control using the following channels: 4-channel relay control, 6-channel digital input, 2-channel temperature measurement functions via Modbus® I/F.

Analog Interface



Concept

- Provides access to 64 indoor units.
- Does not require special network knowledge.
- Can control each indoor unit on TCC-LINK, (on/off, temperature setting, airflow volume, louver position), and monitor status based on 0-10V DC voltage input.
- Enables relay control and status monitoring of general-purpose I/F TCB-IFCG1TLE.

Installation and the use of refrigerants not specified by Toshiba Carrier Corporation

Toshiba refrigeration and air-conditioning units are designed and manufactured on the assumption that the product is used with a specific refrigerant suitable for each unit.

We have recently seen some cases where the type of refrigerant used is different from the one originally installed in the product. Such actions may cause mechanical defects, malfunctions, failures and in some cases result in a serious safety issue. Therefore do not install any refrigerant other than the one specified by Toshiba Carrier Corporation for its respective products.

The type of the refrigerant used for each of our products is shown in the accompanying owners manual, or on the product label attached on the product itself.

Toshiba Carrier Corporation shall not assume any liability for failures, malfunctions or safety in its products if the refrigerant used is different from the one specified.



SAFETY PRECAUTIONS

For operation:

- Before use, read through the operating instructions to ensure proper use.

Concerning the purpose for which the air conditioners are to be used

- The air conditioners presented in this catalogue are air conditioning/heating units to be used solely by general consumers.
 - Do not use these air conditioners for special applications such as for the storage of food items, animals, plants, precision machines or works of art. Doing so may degrade the quality of the items.
 - Do not use these air conditioners for air-conditioning applications in vehicles or ships. Doing so may cause water and/or power leakages.

Precautions for using air conditioners

Concerning the automatic defrosting unit

When the outdoor air temperature drops, frost may form on the heat exchanger of the outdoor unit. In such cases, the automatic defrosting unit will be activated, and it will take 5 to 8 minutes for the heating operation to be restored.

Concerning the air conditioner's operating conditions and their selection

(1) Avoid using the air conditioner in the following locations.

- Locations with acidic or alkaline atmospheres (locations at which highly acidic or alkaline air is directly drawn in, such as in hot springs areas from which sulfur gases are given off, or where chemicals, vinegar, exhaust air from burners, etc., are given off) The heat exchangers and other parts may become corroded.
- Locations with atmospheres filled with coolant or other machine oil or steam exhaust (such as at food preparation factories or machine plants). The heat exchangers may corrode; frost may form as a result of heat exchanger malfunction; air conditioner operating performance may be compromised or condensation may form as a result of clogged filters; plastic parts may incur damage; heat-insulation materials may become separated, etc.

(2) Before using an air conditioner in any of the following locations, consult with your dealer or a qualified contractor.

- Locations where vapors from edible oils are given off (such as in bakeries or kitchens and restaurants that use edible oils) ... The air conditioner's operating performance may be compromised or condensation may form as a result of clogged filters, and the plastic parts may incur damage. In line with the prevailing conditions, take countermeasures such as tailoring the installation conditions in accordance with the conditions, using air conditioners designed for kitchens or oil guard filters, etc.
- Locations with disinfectant-induced chlorine atmospheres (water tanks, etc.) The metal parts in the heat exchangers, motors, etc., may become corroded.
- Locations with high salinity (coastal areas, etc.) Corrosion may occur so use outdoor units specifically designed to withstand exposure to salt.
- Locations where power is supplied from independent power generators. The power line frequency and/or voltage may fluctuate, possibly causing the air conditioner to malfunction.

- Locations where high frequencies or electrical noise is generated (from high-frequency welders used for vinyl welding and processing, high-frequency therapeutic devices used for thermotherapy, etc.) The electronic components may be adversely affected, possibly causing the air conditioner to malfunction.

- Locations where electronic equipment is installed. Electrical noise may adversely affect the operation of the electronic equipment.

(3) Concerning use in locations with high ceilings

- In locations with high ceilings, use of circulators for improving the temperature distribution during heating is recommended.

(4) Concerning use in high-humidity environments

- When the ceiling-recessed type of indoor unit is installed in a location, such as those described below, and it is very hot and humid inside the ceiling, condensation may form on the external surfaces of the indoor unit and drip down. In such cases, add external heat-insulating materials.
 - Locations such as food preparation sites in which the areas above the ceilings are hot and humid
 - Locations in which outside air is drawn in and routed above the ceiling
 - Above ceilings with a slate roof or tiled roof overhead

(5) Even when an air conditioner is shut down, it will still consume a small amount of power to protect the unit. If the air conditioner will not be used for a prolonged period, turn OFF the main switch (ground fault circuit breaker). However, before the unit is to be used again, turn ON the main switch (ground fault circuit breaker) for at least 12 hours in order to prevent trouble.

TOSHIBA



Notice: - Products listed in this leaflet/catalogue use HFC refrigerant R410A with a GWP of 2,088*
- Toshiba is committed to continuously improving its products to ensure the highest quality and reliability standards, and to meet local regulations and market requirements. All features and specifications are subject to change without prior notice.

*The GWP value is calculated based on information provided in the EU F-Gas Regulation and IPCC Fourth Assessment Report.

