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> Toshiba Solutions

Toshiba offers a solution for all applications: residential, light commercial and larger commercial buildings. Residential indoor units are designed to blend perfectly with all interiors and incorporate advanced filtration systems to deliver optimum indoor air quality. For small commercial premises, products are designed to deliver top performance combined with energy efficiency.

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

> Absolute comfort

Toshiba's commitment to society drives a company-wide focus on attention to the details through every stage of the development process, from design to user field tests. Installations using our products and systems therefore feature a higher standard of indoor air quality, sound levels, energy savings, and environmental awareness.





innovation

The new SMMS-i offers innovations in every savings with highly efficient DC twin rotary compressors and advanced vector-controlled inverters boasting COP of 6.41* at 50% partial load.

*MMY-MAP0804HT8 Calculated based on JRA4048:2006 specification.

intelligence

The intelligent VRF ensures precise control over cooling on a room by room basis, delivering consistent temperature to even the furthest room from the unit.

> imagination

With flexible layout variations beyond imagination, this extremely versatile system can accommodate up to an impressive 235 metres in length and maximum height of 40 metres between indoor units.

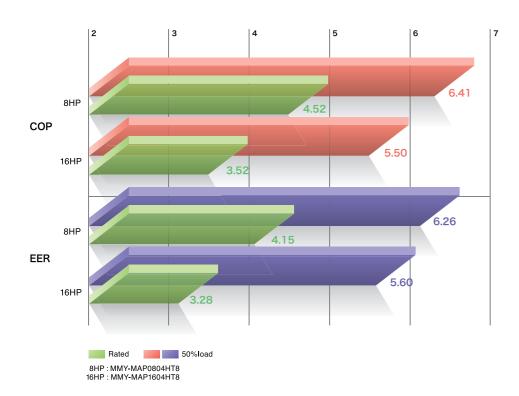




> High energy savings

Energy-efficient performance for greater eco-consciousness

Adopting the highly efficient new DC twin-rotary compressors and advanced vectorcontrolled inverters realizes a COP of 6.41 (under 50% partial load). Greater operating performance is now possible when operating under a constant load.



→ ① New DC twin-rotary compressor

Leading the world with Toshiba's own new DC twin-rotary compressor

Three new DC twin-rotary compressors that feature outstanding capacity under partial load drive the 14 and 16HP outdoor unit models, while two are used by the other outdoor unit models. These new compressors improve both energy efficiency and comfort levels.



Newly designed



New DC twin-rotary compressor

Optimization of discharge port positioning and blade thickness reduces compression loss and friction resistance. Increasing the surface area of the rotor magnets and the addition of slits realize greater efficiency and reduced

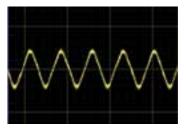
Twin-rotary

Each motor employs a compact and powerful magnetic rotor (rare earth magnet) and features

> 2 Fast-calculating vector-controlled inverter

All-inverter control realizes finer control over operation to match the load on the system

Toshiba SMMS-i leads the industry in controlling all 3 compressors with a dedicated inverter board that taps the compressor's full potential to provide smoother operation.



Smooth sine curve

The fast-calculating vector-controlled inverter produces a smooth sine curve that improves operating efficiency.

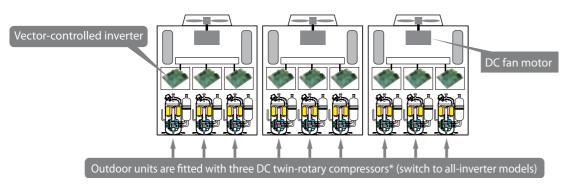


Circuit board

The vector-controlled inverter quickly converts current into a smooth sine curve to achieve smoother operation of the compressor's DC motor.

> High-efficiency DC twin-rotary compressors

Every outdoor unit incorporates three new DC twin-rotary compressors* and three inverter drives — this is unique to Toshiba and the air conditioning industry.

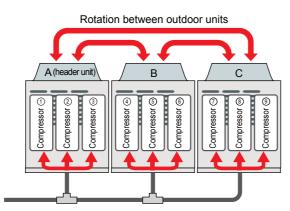


*14, 16HP Outdoor unit

Reliability

With dual-rotation, the load is distributed more evenly — this means that the operating sequence of the outdoor units and the individual compressors is rotated to spread the operating hours more evenly.

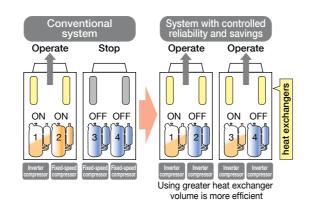
As the compressors are all inverter driven, power surges are eliminated. Over- or under-utilisation of power, typical for non-inverter compressors is eliminated, and there is no on/off power surge as the system adjusts to the demand required by the occupant or system. The use of inverter compressors reduces the risk of compressor failure, more common in standard non-inverter systems.



Sequencing of individual compressors

Energy savings

During operation the system determines which heat exchanger can be used most efficiently and selects the compressor to deliver the power required. Inverter systems save energy as continuous operation offers the same capacity with lower power consumption. This benefits all occupants by maintaining even room temperatures, as well as the environment by reducing energy consumption.



> DC twin-rotary compressor advantage

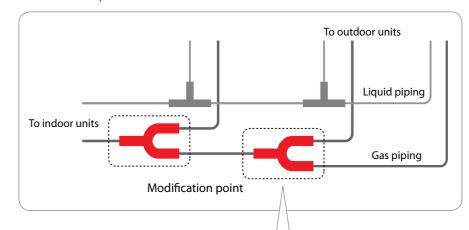
Each SMMS-i uses twin-rotary inverter compressors that feature more stable energy efficiency through their full range of compressor rotation than do scroll type compressors.

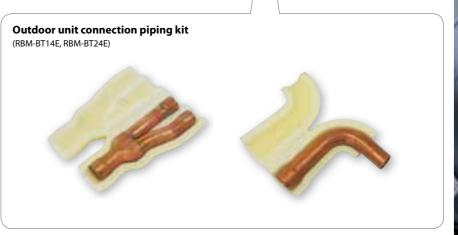
Scroll compressors can achieve high-efficiency operation, but only within in a narrow range.

As VRF systems require a wide range of capacity, the twin-rotary compressor is best suited for use.

Piping

A change from T-shape to Y-shape branching joints on the gas pipes between SMMS-i outdoor units results in equalized flow to each branch that enables more reliable operation.





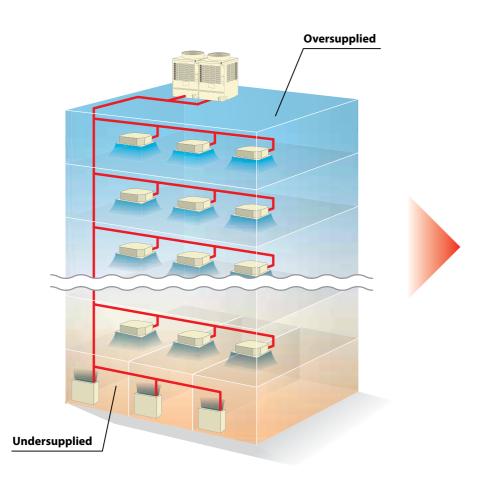




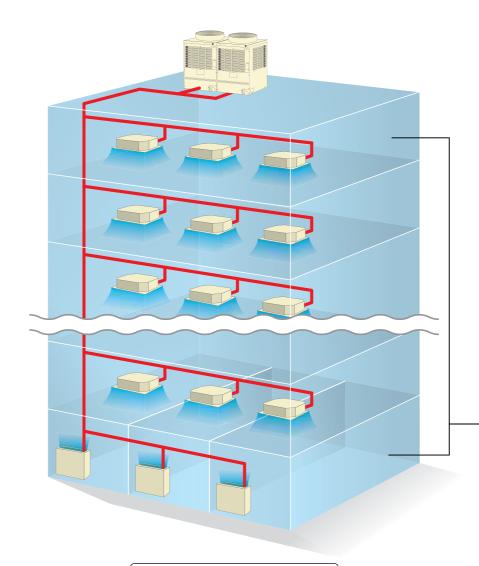


> New intelligent VRF control

Differing pipe lengths result in inconsistent performance levels when several indoor units are connected to a system. This imbalance is caused by pressure loss and thermal leaks that inhibit the supply of the right amount of refrigerant to each indoor unit.



Without intelligent VRF control



Total system control and consistent room-to-room temperature

Intelligent VRF control provides precise control over each indoor unit. For example, the upper floor indoor units of VRF systems without intelligent VRF control placed load on the supply of refrigerant, causing a delay before indoor units on lower floors would reach efficient operating levels.

Toshiba's SMMS-i monitors the flow of refrigerant to each indoor unit, while also tracking the model of the indoor unit, the pipe length between it and the outdoor unit, as well as data on operating conditions. The system computes the amount of refrigerant required by each indoor unit and controls the unit's pulse motor valve to ensure optimal supply across the system.

Can be adjusted to maintain consistent temperature

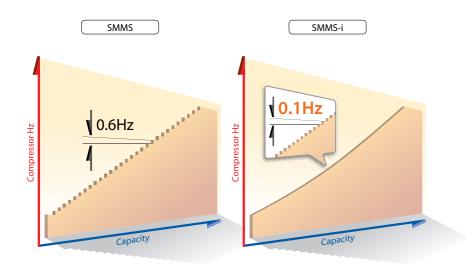
With intelligent VRF control



> Infinity variable control

Ultra-precise 0.1 Hz control over compressor rotation speed

Infinity variable control adjusts compressor rotation speed in near-seamless 0.1 Hz steps. Responding precisely to the capacity needs of the moment, this fine control minimizes energy loss when changing frequencies, and also creates a comfortable environment subject to minimal temperature variations.

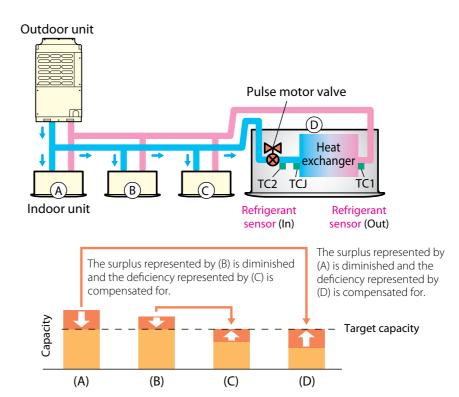






> Optimal refrigerant control

- When a multiple number of indoor units are connected, an insufficient or excess amount of refrigerant may be supplied to indoor units depending on the difference in length of the connection pipe from the outdoor unit.
- This is caused by pressure loss and heat leaks as the refrigerant travels through the pipes, resulting in incorrect amounts of refrigerant being supplied to the indoor units.
- Optimal refrigerant flow control featuring intelligent control over the refrigerant sensors and opening rate of individual pulse motor valves realizes stable indoor temperatures throughout a building with height differences of up to 40m between indoor units.





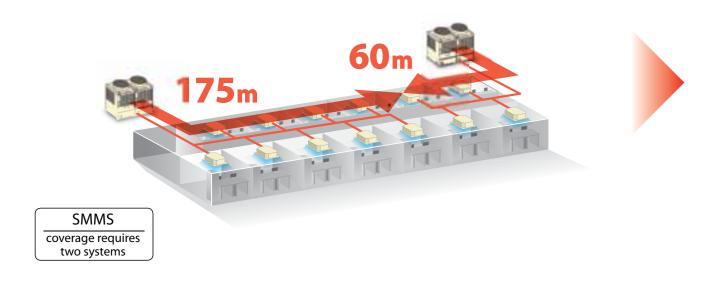


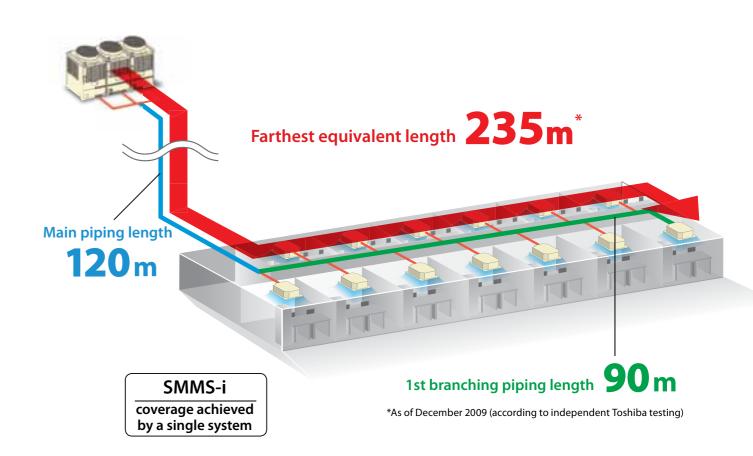


> Great pipe length for greater flexibility

Layout flexibility with few design limitations

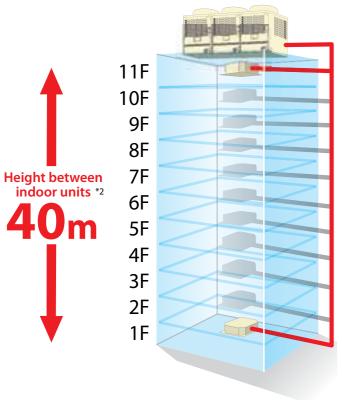
System layouts can use a maximum equivalent distance of up to 235 metres. This makes it much easier to design for floors with many small rooms, or for tenants who often rearrange their floor layouts.





> Greater support for height differences between indoor units

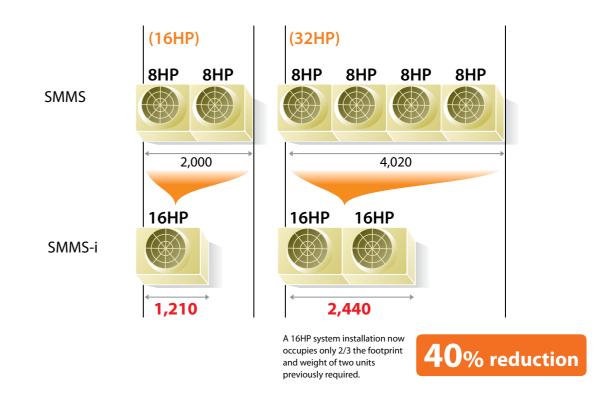
Toshiba SMMS-i leads the industry with support for height differences of up to 40 metres between indoor units on a single system. For instance, in an 11-story building, this is enough height to fully cover the entire floor as well as the elevator halls.



- *1 As of December 2009 (according to independent Toshiba testing)
- *2 Calculated at 3.5 metres per floor

> Great installation flexibility

At 1800mm (H) x 1210mm (W) x 780mm (D), the 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.



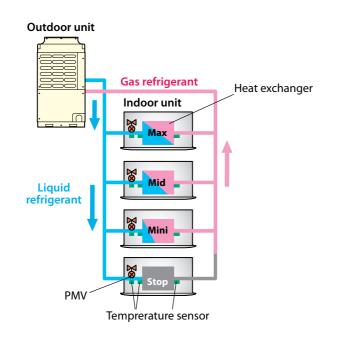






> Refrigerant flow

Toshiba's own PMV (pulse motor valve) control prevents unneeded refrigerant from flowing to indoor units that are not operating at any given time. Benefits include the prevention of by-pass loss and finer control over the compressor capacity of the outdoor unit.

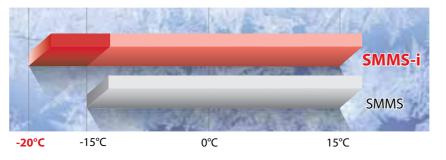


> Operating temperature range

SMMS-i extends the low end of its heating function's outdoor temperature operating range to -20°C. This enables wider applications and use of the system in colder regions.

	SMMS-i	SMMS
Outdoor temp. range when cooling *	-5°C to	43°C
Outdoor temp. range when heating*	-20°C to 15°C	-15°C to 15°C
	*Cooling: °CDB, Heating: °CWB	

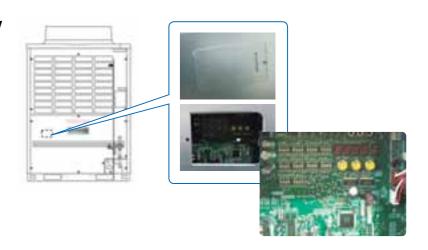
Heating operation range



> Inverter box inspection window

The SMMS-i inverter box window enables easier maintenance. The window opens quickly to allow inspection of the PCB, test run operations, repairs, and control over address settings.

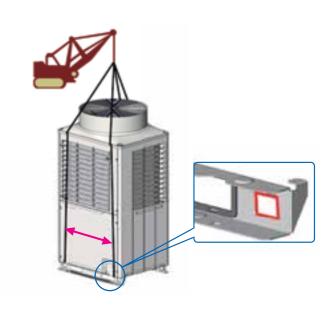
Not applicable to 5HP & 6HP module



> Square carrying holes

Square holes added to the lower corners of the SMMS-i outdoor units facilitate safer and surer lifting by a crane. Belts passed through the dedicated corner holes maintain their position and the balance of the load throughout the lifting operation.

Not applicable to 5HP & 6HP module





> SMMS Outdoor units

Standard model



Capacity	18HP	20HP	22HP	24HP	26HP	28HP	30HP	32HP	
Model Name (MMY-)	AP1814HT8	AP2014HT8	AP2214HT8	AP2414HT8	AP2614HT8	AP2814HT8	AP3014HT8	AP3214HT8	
Units in combination (MMY-)	MAP1004HT8 MAP0804HT8	MAP1004HT8 MAP1004HT8	MAP1204HT8 MAP1004HT8	MAP1204HT8 MAP1204HT8	MAP1604HT8 MAP1004HT8	MAP1604HT8 MAP1204HT8	MAP1604HT8 MAP1404HT8	MAP1604HT8 MAP1604HT8	
Cooling capacity (kW)	50.4	56.0	61.5	68.0	73.0	78.5	85.0	90.0	
Heating capacity (kW)	56.5	63.0	69.0	76.5	81.5	88.0	95.0	100.0	

					" "				
Capacity	34HP	36HP	38HP	40HP	42HP	44HP	46HP	48HP	
Model Name (MMY-)	AP3414HT8	AP3614HT8	AP3814HT8	AP4014HT8	AP4214HT8	AP4414HT8	AP4614HT8	AP4814HT8	
Units in combination (MMY-)	MAP1204HT8 MAP1204HT8 MAP1004HT8	MAP1204HT8 MAP1204HT8 MAP1204HT8	MAP1604HT8 MAP1204HT8 MAP1004HT8	MAP1604HT8 MAP1204HT8 MAP1204HT8	MAP1604HT8 MAP1404HT8 MAP1204HT8	MAP1604HT8 MAP1604HT8 MAP1204HT8	MAP1604HT8 MAP1604HT8 MAP1404HT8	MAP1604HT8 MAP1604HT8 MAP1604HT8	
Cooling capacity (kW)	96.0	101.0	106.5	112.0	118.0	123.5	130.0	135.0	
Heating capacity (kW)	108.0	113.0	119.5	127.0	132.0	138.0	145.0	150.0	



			11	11	
Capacity	16HP	24HP	26HP	28HP	30HP
Model Name (MMY-)	AP1624HT8	AP2424HT8	AP2624HT8	AP2824HT8	AP3024HT8
Units in combination (MMY-)	MAP0804HT8 MAP0804HT8	MAP0804HT8 MAP0804HT8 MAP0804HT8	MAP1004HT8 MAP0804HT8 MAP0804HT8	MAP1004HT8 MAP1004HT8 MAP0804HT8	MAP1004HT8 MAP1004HT8 MAP1004HT8
Cooling capacity (kW)	45.0	68.0	73.0	78.5	85.0
Heating capacity (kW)	50.0	76.5	81.5	88.0	95.0



Capacity	32HP	34HP	36HP	38HP	40HP	42HP	44HP	46HP	48HP
Model Name (MMY-)	AP3224HT8	AP3424HT8	AP3624HT8	AP3824HT8	AP4024HT8	AP4224HT8	AP4424HT8	AP4624HT8	AP4824HT8
Units in combination (MMY-)	MAP0804HT8 MAP0804HT8 MAP0804HT8 MAP0804HT8	MAP1004HT8 MAP0804HT8 MAP0804HT8 MAP0804HT8	MAP1004HT8 MAP1004HT8 MAP0804HT8 MAP0804HT8	MAP1004HT8 MAP1004HT8 MAP1004HT8 MAP0804HT8	MAP1004HT8 MAP1004HT8 MAP1004HT8 MAP1004HT8	MAP1204HT8 MAP1004HT8 MAP1004HT8 MAP1004HT8	MAP1204HT8 MAP1204HT8 MAP1004HT8 MAP1004HT8	MAP1204HT8 MAP1204HT8 MAP1204HT8 MAP1004HT8	MAP1204HT8 MAP1204HT8 MAP1204HT8 MAP1204HT8
Cooling capacity (kW)	90.0	96.0	101.0	106.5	112.0	118.0	123.5	130.0	135.0
Heating capacity (kW)	100.0	108.0	113.0	119.5	127.0	132.0	138.0	145.0	150.0

		Y-shape bra	nching joint			Branch	headers		Outdoor unit connection piping kit		
Appearance		44.		8	(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		Total 6.4 or	Total 14.2		Max.4 b	oranches	Max.8 b	ranches			
(Classification according to indoor unit capacity code)	Total below 6.4	tal below more and		Total 25.2 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	Total below 26.0	Total 26.0 or more	





^{*} Power: 3-phase 50 Hz 400V (380 - 415V)

* 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



> Outdoor unit specifications

Standard mo	odel (Sin	ngle unit)						Tech	nical speci	ifications		
	Eguiva	lent HP		5HP	6HP	8HP	10HP	12HP	14HP	16HP		
Model name	Heat Pump		(MMY-)	MAP0501HT8	MAP0601HT8	MAP0804HT8	MAP1004HT8	MAP1204HT8	MAP1404HT8	MAP1604HT8		
Outdoor unit type			, , ,			Inve	rter					
Cooling capacity (*1)		(kW)	14.0	16.0	22.4	28.0	33.5	40.0	45.0		
Heating capacity (*1)		(kW)	16.0	18.0	25.0	31.5	37.5	45.0	50.0		
Power supply (*2)			. , ,	3phase 4wires 50Hz 400V (380-415V)								
.,,,	Caalina	Power consumption	(kW)	3.65	4.64	5.40	7.41	9.55	11.50	13.70		
Electrical	Cooling	Cooling EER (Energy Efficiency I		3.84	3.45	4.15	3.78	3.51	3.48	3.28		
characteristics	Heating	Power consumption	(kW)	3.84	4.56	5.53	7.50	10.20	11.20	14.20		
(*1)	Heating	COP (Coefficient of Perfo	ormance)	4.17	3.95	4.52	4.20	3.68	4.02	3.52		
External dimensions	s (Height / V	Vidth / Depth)	(mm)	1,800 / 990 / 750	1,800 / 990 / 750	1,800 / 990 / 780	1,800 / 990 / 780	1,800 / 990 / 780	1,800 / 1,210 / 780	1,800 / 1,210 / 780		
Total weight	Heat Pump	0	(kg)	228	228	242	242	242	330	330		
Total weight	Cooling or	nly	(kg)	227	227	241	241	241	330	330		
Compressor	Motor out	put	(kW)	1.1 x 2	1.4 x 2	2.3 x 2	3.1 x 2	4.2 x 2	3.0 x 3	3.6 x 3		
Fan unit	Motor out	put	(kW)	0.6	0.6	1.0	1.0	1.0	1.0	1.0		
raniunit	Air volume	2	(m³/h)	9,000	9,000	9,900	10,500	11,600	12,000	13,000		
	Main	Gas side	(mm)	ø 15.9	ø 19.1	ø 22.2	ø 22.2	ø 28.6	ø 28.6	ø 28.6		
Refrigerant piping	pipe	Liquid side	(mm)	ø 9.5	ø 9.5	ø 12.7	ø 12.7	ø 12.7	ø 15.9	ø 15.9		
	diameter	Balance pipe	(mm)	ø 9.5	ø 9.5	ø 9.5	ø 9.5	ø 9.5	ø 9.5	ø 9.5		
Sound pressure leve	el (Cooling/l	Heating)	(dB(A))	55 / 55	56 / 56	55 / 56	57 / 58	59 / 61	60 / 62	61 / 63		

Standard mo	del (Com	binatio	n)							Technic	al specifi	cations	
	Equiva	lent HP			181	НP	20HP		22HP		24	IP	
Model name	Heat Pum)		MMY-	- AP1814HT8 AP2014HT8 AP2214HT8					4HT8	T8 AP2414HT8		
Outdoor unit type								Inve	erter				
Outdoor unit model	Heat Pum)		MMY-	MAP1004HT8	MAP0804HT8	MAP1004HT8	MAP1004HT8	MAP1204HT8	MAP1004HT8	MAP1204HT8	MAP1204HT8	
Cooling capacity (*1)			(kW)	50	.4	56	.0	61	.5	68.	0	
Heating capacity (*1)			(kW)	56	.5	63	.0	69	.0	76.	5	
Power supply (*2)							3pha	se 4wires 50H	z 400V (380-41	5V)			
	Cooling Power		nsumption	(kW)	12.81		14.82		16.96		19.66		
Electrical	Electrical Cooling EE	EER (Energ	gy Efficiency Rati	io)	3.9	3.93		8	3.63		3.4	6	
characteristics (*1)	Heating	Power cor	sumption	(kW)	13.	03	15.	00	17.	70	21.1	13	
	пеаціід	COP (Coef	ficient of Perfor	mance)	4.3	34	4.20		3.9	90	3.6	2	
Total weight	Heat Pum)		(kg)	242	242	242	242	242	242	242	242	
Total weight	Cooling or	nly		(kg)	241	241	241	241	241	241	241	241	
Compressor	Motor out	out		(kW)	3.1 x 2	2.3 x 2	3.1 x 2	3.1 x 2	4.2 x 2	3.1 x 2	4.2 x 2	4.2 x 2	
F	Motor out	out		(kW)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Fan unit	Air volume	:		(m³/h)	10,500	9,900	10,500	10,500	11,600	10,500	11,600	11,600	
			Gas side	(mm)	ø 2	8.6	ø 28	3.6	ø3	4.9	ø 34	1.9	
Refrigerant piping	Main pipe	diameter	Liquid side	(mm)	ø 1	5.9	ø 1:	5.9	ø 1	9.1	ø 19	9.1	
	Balance pipe				ø 9	0.5	ø 9.5		ø 9.5		ø 9.5		
Sound pressure leve	el (Cooling/l	leating)		(dB(A))	59.5 /	60.5	60.0 /	61.0	61.5 / 63.0		62.0 / 64.0		

Standard mod	del (Com	binatior	۱)					Te	echnical spe	cifications	
	Equiva	lent HP			2	6НР	28	HP	30HP		
Model name	Heat Pum)		MMY-	AP2	614HT8	AP28	14HT8	AP301	4HT8	
Outdoor unit type							Inverter				
Outdoor unit model	Heat Pum)		MMY-	MAP1604HT8	MAP1004HT8	MAP1604HT8	MAP1204HT8	MAP1604HT8	MAP1404HT8	
Cooling capacity (*1)			(kW)		73.0	78	3.5	85	.0	
Heating capacity (*1)			(kW)		31.5	88	3.0	95	.0	
Power supply (*2)											
	Cooling	Cooling Power consumption			2	1.11	23	.25	25.20		
Electrical	Cooling	Cooling EER (Energy Efficience		io)	3	3.46	3.	38	3.3	37	
characteristics (*1)	Heating	Power cor	nsumption	(kW)	2	1.70	24	.65	25.	40	
	пеаціі	COP (Coef	ficient of Perfor	mance)	3.76		3.57		3.74		
Total weight	Heat Pum)		(kg)	330	242	330	242	330	330	
Total weight	Cooling or	nly		(kg)	330	241	330	241	330	330	
Compressor	Motor out	put		(kW)	3.6 x 3	3.1 x 2	3.6 x 3	4.2 x 2	3.6 x 3	3.0 x 3	
Fan unit	Motor out	put		(kW)	1.0	1.0	1.0	1.0	1.0	1.0	
ran unit	Air volume	9		(m³/h)	13,000	11,500	13,000	11,600	13,000	12,000	
		Gas side			Ø	34.9	ø 3	34.9	ø 3	4.9	
Refrigerant piping	Main pipe	diameter	Liquid side	(mm)	Ø	19.1	Ø	9.1	ø 1	9.1	
	Balance pip			(mm)	ø 9.5		ø 9.5		ø 9.5		
Sound pressure leve	el (Cooling/l	leating)		(dB(A))	62.5	6 / 64.5	63.5	/ 65.5	63.5 / 65.5		

Standard mod	del (Comb	oination	1)						Te	chnical s	specific	ations	
	Equiva	lent HP			32HP			34HP		36HP			
Model name	Heat Pump)		MMY-	/- AP3214HT8 AP3414HT8						AP3614HT8		
Outdoor unit type								Inverter					
Outdoor unit model	Heat Pump)		MMY-	MAP1604HT8	MAP1604HT8	MAP1204HT8	MAP1204HT8	MAP1004HT8	MAP1204HT8	MAP1204HT8	MAP1204HT8	
Cooling capacity (*1)			(kW)	9	0.0		96.0			101.0		
Heating capacity (*1)			(kW)	10	0.0		108.0			113.0		
Power supply (*2)							3phase 4wir	es 50Hz 400V	(380-415V)				
Cooling Power		Power cor	rsumption	(kW)	27	7.40		27.06		28.93			
Electrical	Electrical Cooling [EER (Energ	gy Efficiency Rati	o)	3	.28		3.55			3.49		
characteristics (*1)	Heating	Power cor	rsumption	(kW)	28	3.40		28.60			30.84		
	rieating	COP (Coef	ficient of Perforn	nance)	3	52 3.78				3.66			
Total weight	Heat Pump)		(kg)	330	330	242	242	242	242	242	242	
Total Weight	Cooling or	nly		(kg)	330	330	241	241	241	241	241	241	
Compressor	Motor out	put		(kW)	3.6 x 3	3.6 x 3	4.2 x 2	4.2 x 2	3.1 x 2	4.2 x 2	4.2 x 2	4.2 x 2	
Fan unit	Motor out	put		(kW)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
raii uiiit	Air volume	2		(m³/h)	13,000	13,000	11,600	11,600	10,500	11,600	11,600	11,600	
			Gas side	(mm)	Ø:	34.9		ø 34.9			ø 41.3		
Refrigerant piping	Main pipe	diameter	Liquid side	(mm)	Ø	19.1		ø 19.1			ø 22.2		
	Balance pipe				ø 9.5		ø 9.5			ø 9.5			
Sound pressure leve	l (Cooling/F	leating)		(dB(A))	64.0	/ 66.0	63.5 / 65.0			64.0 / 66.0			

Standard mod	del (Comb	oination	1)							1	Гесhnicа	l specifi	cations	
	Equiva	lent HP				38HP			40HP		42HP			
Model name	Heat Pump)		MMY-		AP3814HT8			AP4014HT8		AP4214HT8			
Outdoor unit type									Inverter					
Outdoor unit model	Heat Pump)		MMY-	MAP1604HT8	MAP1204HT8	MAP1004HT8	MAP1604HT8	MAP1204HT8	MAP1204HT8	MAP1604HT8	MAP1404HT8	MAP1204HT8	
Cooling capacity (*1)			(kW)		106.5			112.0			118.0		
Heating capacity (*1)			(kW)		119.5			127.0			132.0		
Power supply (*2)					3phase 4wires 50Hz 400V (380-415V)									
Electrical	Cooling	Power cor	rsumption	(kW)		30.66			32.80			34.47		
	Cooming	EER (Energ	gy Efficiency Rati	o)		3.47			3.41			3.42		
characteristics (*1)	Heating	Power cor	nsumption	32.14				35.29		35.46				
	пеаші	COP (Coef	ficient of Perforr	nance)	3.72			3.60			3.72			
Total weight	Heat Pump)		(kg)	330	242	242	330	242	242	330	330	242	
Total weight	Cooling or	nly		(kg)	330	241	241	330	241	241	330	330	241	
Compressor	Motor out	put		(kW)	3.6 x 3	4.2 x 2	3.1 x 2	3.6 x 3	4.2 x 2	4.2 x 2	3.6 x 3	3.0 x 3	4.2 x 2	
Fan unit	Motor out	put		(kW)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
ran unit	Air volume			(m³/h)	13,000	11,600	10,500	13,000	11,600	11,600	13,000	12,000	11,600	
			Gas side	(mm)		ø 41.3			ø 41.3			ø 41.3		
Refrigerant piping N	Main pipe	diameter	Liquid side	(mm)				ø 22.2			ø 22.2			
Balance pipe			(mm)	ø 9.5			ø 9.5			ø 9.5				
Sound pressure leve	(dB(A))		64.5 / 66.0		64.5 / 66.5			65.0 / 67.0						

Standard mod	del (Comb	oination	1)								Гесhnica	l specifi	cations
	Equiva	lent HP				44HP			46HP			48HP	
Model name	Heat Pump)		MMY-		AP4414HT8			AP4614HT8		AP4814HT8		
Outdoor unit type									Inverter				
Outdoor unit model	Heat Pump)		MMY-	MAP1604HT8	MAP1604HT8	MAP1204HT8	MAP1604HT8	MAP1604HT8	MAP1404HT8	MAP1604HT8	MAP1604HT8	MAP1604HT8
Cooling capacity (*1)			(kW)		123.5			130.0		135.0		
Heating capacity (*1)			(kW)		138.0			145.0			150.0	
Power supply (*2)								3phase 4wir	es 50Hz 400\	/ (380-415V	/)		
	Cooling	Power cor	sumption	(kW)		36.95			38.90			41.10	
Electrical	Cooling	EER (Energ	gy Efficiency Rati	o)		3.34			3.34			3.28	
characteristics (*1)	Hantina	Power cor	nsumption	(kW)		38.85			39.60			42.60	
	Heating	COP (Coef	ficient of Perforr	nance)		3.55			3.66			3.52	
Total weight	Heat Pump)		(kg)	330	330	242	330	330	330	330	330	330
rotal weight	Cooling or	nly		(kg)	330	330	241	330	330	330	330	330	330
Compressor	Motor out	put		(kW)	3.6 x 3	3.6 x 3	4.2 x 2	3.6 x 3	3.6 x 3	3.0 x 3	3.6 x 3	3.6 x 3	3.6 x 3
F==	Motor out	put		(kW)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Fan unit	Air volume			(m³/h)	13,000	13,000	11,600	13,000	13,000	12,000	13,000	13,000	13,000
			Gas side	(mm)		ø 41.3			ø 41.3			ø 41.3	
Refrigerant piping	Main pipe	n pipe diameter Liquid side (n		(mm)				ø 22.2			ø 22.2		
			(mm)	ø 9.5			ø 9.5			ø 9.5			
Sound pressure leve	el (Cooling/F	leating)		(dB(A))		65.5 / 67.5		65.5 / 67.5			66.0 / 68.0		

^{*1} Rated conditions Cooling: Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB Heating: Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

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



High efficiency	model (C	ombina	tion)						Te	echnical	specific	ations
	Equiva	lent HP			16	HP		24HP			26HP	
Model name	Heat Pump)		MMY-	AP162	24HT8		AP2424HT8			AP2624HT8	
Outdoor unit type								Inverter				
Outdoor unit model	Heat Pump)		MMY-	MAP0804HT8	MAP0804HT8	MAP0804HT8	MAP0804HT8	MAP0804HT8	MAP1004HT8	MAP0804HT8	MAP0804HT8
Cooling capacity (*1)			(kW)	45	5.0		68.0			73.0	
Heating capacity (*1)			(kW)	50	0.0		76.5			81.5	
Power supply (*2)							3phase 4wii	res 50Hz 400	V (380-415V)			
	Cooling	Power cor	nsumption	(kW)	10	.89		16.58			18.31	
Electrical	Cooming	EER (Ener	gy Efficiency Rat	io)	4.	13		4.10			3.99	
characteristics (*1)	Heating	Power cor	nsumption	(kW)	11	.06		17.18			18.56	
	Heating	COP (Coet	fficient of Perfor	mance)	4.	52		4.45			4.39	
Total weight	Heat Pump)		(kg)	242	242	242	242	242	242	242	242
rotal weight	Cooling or	ıly		(kg)	241	241	241	241	241	241	241	241
Compressor	Motor out	out		(kW)	2.3 x 2	2.3 x 2	2.3 x 2	2.3 x 2	2.3 x 2	3.1 x 2	2.3 x 2	2.3 x 2
Fam	Motor out	out		(kW)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Fan unit	Air volume			(m³/h)	9,900	9,900	9,900	9,900	9,900	10,500	9,900	9,900
			Gas side	(mm)	ø 2	8.6		ø 34.9			ø 34.9	
Refrigerant piping	Main pipe	diameter	Liquid side	(mm)	ø 1	5.9		ø 19.1			ø 19.1	
			Balance pipe	(mm)	Ø!	9.5		ø 9.5			ø 9.5	
Sound pressure leve	el (Cooling/F	leating)		(dB(A))	58.0	/ 59.0		60.0 / 61.0			60.5 / 61.5	

High efficiency	model (C	ombinat	tion)							Te	echnic	al spe	cificat	ions
	Equiva	lent HP				28HP			30HP			321	HP	
Model name	Heat Pump)		MMY-		AP2824HT8			AP3024HT8			AP322	24HT8	
Outdoor unit type									Inverter					
Outdoor unit model	Heat Pump)		MMY-	MAP1004HT8	MAP1004HT8	MAP0804HT8	MAP1004HT8	MAP1004HT8	MAP1004HT8	MAP0804HT8	MAP0804HT8	MAP0804HT8	MAP0804HT8
Cooling capacity (*1)				(kW)		78.5			85.0			90	0.0	
Heating capacity (*1))			(kW)		88.0			95.0			100	0.0	
Power supply (*2)								3phase 4wi	res 50Hz 400'	/ (380-415V)				
	Cooling	Power cor	nsumption	(kW)		20.27			22.75			21.	79	
Electrical	Cooling	EER (Energ	gy Efficiency Rati	0)		3.87			3.74			4.1	13	
characteristics (*1)	Heating	Power cor	nsumption	(kW)		20.53			22.71			22.	.12	
	Heating	COP (Coef	fficient of Perforn	nance)		4.29			4.18			4.5	52	
Total weight	Heat Pump)		(kg)	242	242	242	242	242	242	242	242	242	242
rotal weight	Cooling or	ıly		(kg)	241	241	241	241	241	241	241	241	241	241
Compressor	Motor out	out		(kW)	3.1 x 2	3.1 x 2	2.3 x 2	3.1 x 2	3.1 x 2	3.1 x 2	2.3 x 2	2.3 x 2	2.3 x 2	2.3 x 2
Fan conta	Motor out	out		(kW)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Fan unit	Air volume			(m³/h)	10,500	10,500	9,900	10,500	10,500	10,500	9,900	9,900	9,900	9,900
			Gas side	(mm)		ø 34.9			ø 34.9			ø 3	4.9	
Refrigerant piping	Main pipe	diameter	Liquid side	(mm)		ø 19.1			ø 19.1			ø 1	9.1	
			Balance pipe	(mm)		ø 9.5			ø 9.5			ø 9	9.5	
Sound pressure leve	l (Cooling/F	leating)		(dB(A))		61.5 / 62.5			62.0 / 63.0			61.0 /	62.0	

High efficiency	model (C	omhinat	tion)									
riigir ciliciciicy	illouci (C	.Ombina	LIOII)							Technic	al specif	ications
	Equiva	alent HP				34	HP			36	HP	
Model name	Heat Pump	0		MMY-		AP34:	24HT8			AP36	24HT8	
Outdoor unit type								Inve	erter			
Outdoor unit model	Heat Pump	0		MMY-	MAP1004HT8	MAP0804HT8	MAP0804HT8	MAP0804HT8	MAP1004HT8	MAP1004HT8	MAP0804HT8	MAP0804HT8
Cooling capacity (*1)			(kW)		96	5.0			10	1.0	
Heating capacity (*1)			(kW)		10	8.0		113.0			
Power supply (*2)							3ph	ase 4wires 50h	Hz 400V (380-4	15V)		
	Cooling	Power cor	nsumption	(kW)		24	.00			25	.72	
Electrical	Cooming	EER (Energ	gy Efficiency Rati	o)		4.	00			3.	93	
characteristics (*1)	Heating	Power cor	nsumption	(kW)		24	.70			26	.06	
	Heating	COP (Coeff	ficient of Performa	ance)		4.	37			4.	34	
Total weight	Heat Pump	0		(kg)	242	242	242	242	242	242	242	242
Total weight	Cooling or	nly		(kg)	241	241	241	241	241	241	241	241
Compressor	Motor out	put		(kW)	3.1 x 2	2.3 x 2	2.3 x 2	2.3 x 2	3.1 x 2	3.1 x 2	2.3 x 2	2.3 x 2
Fam	Motor out	put		(kW)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Fan unit	Air volume	2		(m³/h)	10,500	9,900	9,900	9,900	10,500	10,500	9,900	9,900
			Gas side	(mm)		ø 3	4.9			ø 4	1.3	
Refrigerant piping	Main pipe	diameter	Liquid side	(mm)		ø 1	9.1			ø 2	2.2	
	Balance pipe				ø 9.5				ø 9.5			
Sound pressure leve	el (Cooling/H	Heating)		(dB(A))		62.0	/ 63.0		62.5 / 63.5			

High efficiency	model (C	ombinat	ion)							Technic	cal specifi	ications
	Equiva	lent HP				38	HP			40	HP	
Model name	Heat Pum)		MMY-		AP38	24HT8		AP4024HT8			
Outdoor unit type								Inve	erter			
Outdoor unit model	Heat Pump)		MMY-	MAP1004HT8	MAP1004HT8	MAP1004HT8	MAP0804HT8	MAP1004HT8	MAP1004HT8	MAP1004HT8	MAP1004HT8
Cooling capacity (*1)			(kW)		10	6.5			11	2.0	
Heating capacity (*1)			(kW)		11	9.5			12	7.0	
Power supply (*2)							3ph	ase 4wires 50H	Iz 400V (380-4	15V)		
	Cooling	Power cor	rsumption	(kW)		27	.68			29	.64	
Electrical	Cooling	EER (Energ	gy Efficiency Rati	o)		3.	.85			3.	78	
characteristics (*1)	Heating	Power cor	rsumption	(kW)		28	3.03			30	.42	
	Heating	COP (Coef	ficient of Perforn	nance)		4.	26			4.	17	
Total weight	Heat Pum)		(kg)	242	242	242	242	242	242	242	242
rotal weight	Cooling or	nly		(kg)	241	241	241	241	241	241	241	241
Compressor	Motor out	put		(kW)	3.1 x 2	3.1 x 2	3.1 x 2	2.3 x 2	3.1 x 2	3.1 x 2	3.1 x 2	3.1 x 2
F===:t	Motor out	put		(kW)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Fan unit	Air volume			(m³/h)	10,500	10,500	10,500	9,900	10,500	10,500	10,500	10,500
		Gas side		(mm)		Ø 4	11.3			ø 4	11.3	
Refrigerant piping	Main pipe	diameter	Liquid side	(mm)		ø 2	22.2			ø 2	2.2	
	' '	Balance pipe			ø 9.5				ø 9.5			
Sound pressure level (Cooling/Heating) (dB(A))				63.0 / 64.0				63.0 / 64.0				

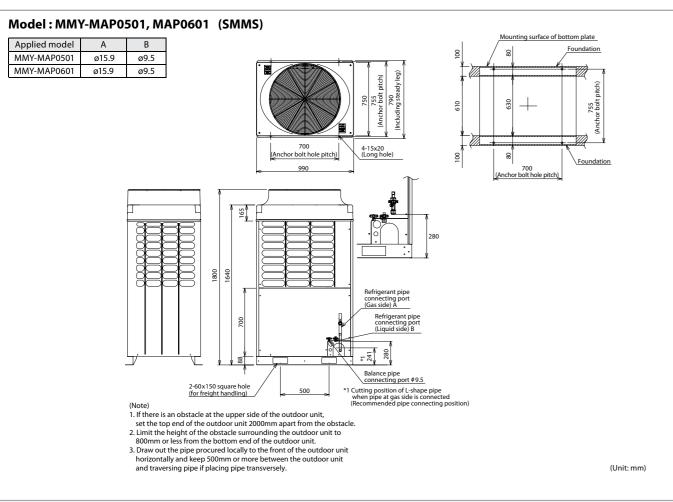
High efficiency	model (C	ombinat	ion)							Technic	cal specif	ications	
	Equiva	alent HP				42	HP			44	HP.		
Model name	Heat Pump)		MMY-		AP42	24HT8			AP44	24HT8		
Outdoor unit type								Inve	erter				
Outdoor unit model	Heat Pump)		MMY-	MAP1204HT8	MAP1004HT8	MAP1004HT8	MAP1004HT8	MAP1204HT8	MAP1204HT8	MAP1004HT8	MAP1004HT8	
Cooling capacity (*1	del Heat Pump y (*1) y (*1) 2) Cooling Power consumption EER (Energy Efficiency Ration Heating Power consumption COP (Coefficient of Perform Heat Pump			(kW)		11	8.0			12	3.5		
Heating capacity (*1)			(kW)		132.0				13	8.0		
Power supply (*2)							3ph	ase 4wires 50H	lz 400V (380-4	15V)			
	Cooling	Power cor	rsumption	(kW)		32	.04			34	.19		
Electrical	Cooming	EER (Energ	gy Efficiency Rati	0)		3.	68			3.	61		
characteristics (*1)	Hanting	Power cor	nsumption	(kW)		32	.70			35	.40		
	Heating	COP (Coef	ficient of Perforn	nance)	4.04				3.90				
Takal i alak	Heat Pump)		(kg)	242	242	242	242	242	242	242	242	
Total weight	Cooling or	nly		(kg)	241	241	241	241	241	241	241	241	
Compressor	Motor out	put		(kW)	4.2 x 2	3.1 x 2	3.1 x 2	3.1 x 2	4.2 x 2	4.2 x 2	3.1 x 2	3.1 x 2	
F 1.	Motor out	put		(kW)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Fan unit	Air volume	2		(m³/h)	11,600	10,500	10,500	10,500	11,600	11,600	10,500	10,500	
			Gas side	(mm)		ø 4	11.3			ø 4	11.3		
Refrigerant piping	Main pipe	Main pipe diameter Liquid side				ø 2	2.2		ø 22.2				
				(mm)					ø 9.5				
Sound pressure leve	el (Cooling/F	Heating)		(dB(A))		64.0	/ 65.0		64.5 / 66.0				

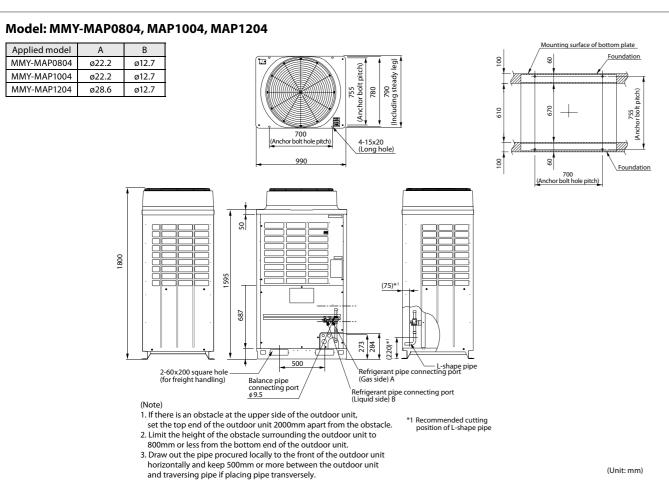
High efficiency	model (C	ombinat	tion)							Technic	cal specif	ications
	Equiva	lent HP				46	HP			48	HP	
Model name	Heat Pump)		MMY-		AP462	24HT8			AP48	24HT8	
Outdoor unit type								Inve	erter			
Outdoor unit model	Heat Pump)		MMY-	MAP1204HT8	MAP1204HT8	MAP1204HT8	MAP1004HT8	MAP1204HT8	MAP1204HT8	MAP1204HT8	MAP1204HT8
Cooling capacity (*1))			(kW)		130	0.0			13	5.0	
Heating capacity (*1)			(kW)		14:	5.0			15	0.0	
Power supply (*2)							3ph	ase 4wires 50H	łz 400V (380-4	15V)		
	Cooling	Power cor	nsumption	(kW)		36.	.88			38	.76	
Electrical	Cooming	EER (Energ	gy Efficiency Rati	0)		3.	52			3.	48	
characteristics (*1)	Heating	Power cor	nsumption	(kW)		38.	.57			40	.80	
	rieating	COP (Coef	fficient of Perforr	nance)		3.	76			3.	68	
Total weight	Heat Pump)		(kg)	242	242	242	242	242	242	242	242
iotai weigiit	Cooling or	nly		(kg)	241	241	241	241	241	241	241	241
Compressor	Motor out	put		(kW)	4.2 x 2	4.2 x 2	4.2 x 2	3.1 x 2	4.2 x 2	4.2 x 2	4.2 x 2	4.2 x 2
F===:t	Motor out	put		(kW)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Fan unit	Air volume			(m³/h)	11,600	11,600	11,600	10,500	11,600	11,600	11,600	11,600
			Gas side	(mm)		ø 4	1.3			ø 4	11.3	
Refrigerant piping	Main pipe	diameter	Liquid side	(mm)		ø 2	2.2			ø 2	2.2	
	'		Balance pipe	(mm)		ø 9	9.5			Ø!	9.5	
Sound pressure leve	l (Cooling/F	leating)		(dB(A))		65.0 /	66.5			65.0	/ 67.0	

^{*1} Rated conditions Cooling: Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB Heating: Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

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







Model: MMY-MAP1404, MAP1604 Mounting surface of bottom plate Applied model Α MMY-MAP1404 ø28.6 ø15.9 MMY-MAP1604 ø28.6 ø15.9 920 (Anchor bolt hole pitch) 4-15x20 (Long hole) / L-shape pipe 620 Balance pipe connecting port \$\phi 9.5\$ (for freight handling) 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 1 Recommended cutting position of L-shape pipe 800mm or less from the bottom end of the outdoor unit. 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. (Unit: mm)

AIR CONDITIONING

R-410A

WIDE RANGE OF INDOOR UNITS





Superior EER and COP

Quiet operation

MiNi-SMMS VRF Outdoor unit

Features

The MiNi-SMMS system has been developed to achieve the best performance in a wide variety of commercial applications including shops, offices and large apartments, where unobtrusive appearance and quiet operation are important advantages.

The extraordinary flexibility of this Toshiba system is guaranteed by the breadth of the range of SMMS indoor units – up to 13 models with a combination of 81 units. MiNi-SMMS can be easily installed.

PMV Kit

- The PMV kit is an option for supersilent operation, available for hotel rooms and residential applications where noise levels are critical
- Ease of installation
- Integral condensate pump
- Low cost

Key features

Best COP (4.61 for 4HP): represents state-of-art energy saving efficiency.

Wide range: up to 9 indoor units may be connected with a single outdoor unit.

DC Twin Rotary compressor delivers high efficiency and complete reliability.

Full SMMS indoor and control units available.

The compact design of the outdoor unit (70% smaller overall than standard VRF unit) means it can be easily installed virtually anywhere; including on a balcony.

Note: All features depicted on SMMSi (pages 4 to 19) does not apply to Mini-SMMS



Note: All features depicted on SMMSi (pages 4 to 19) does not apply to Mini-SMMS

				Technical specific	cations heat pump
Outdoor unit		НР	MCY-MAP0401HT	MCY-MAP0501HT	MCY-MAP0601HT
			4 HP	5 HP	6 HP
Cooling capacity	kW		12.1	14.0	15.5
Power input	kW	C	2.82	3.47	4.63
EER	W/W		4.29	4.03	3.35
Running current	Α	C	13.2	16.1	21.4
Heating capacity	kW		12.5	16.0	18.0
Power input	kW	Н	2.71	4.00	4.85
COP	W/W		4.61	4.00	3.71
Running current	Α	Н	12.5	18.3	22.2
Peak demand current	Α		25	28	31
Air flow	I/s		1617	1700	1783
Sound pressure level	dB(A)	C/H	49/50	50/52	51/53
Operating range – (DB)	°C	С	-10 to 43	-10 to 43	-10 to 43
Operating range – (WB)	°C	Н	-15 to 15.5	-15 to 15.5	-15 to 15.5
Dimensions $(h \times w \times d)$	mm		1340 × 900 × 320	1340 × 900 × 320	1340 × 900 × 320
Weight	kg		117	117	117
Compressor type			Twin Rotary	Twin Rotary	Twin Rotary
Refrigerant charge R410A	kg		7.2	7.2	7.2
Connecting port size (Gas)			Flare – 5/8"	Flare – 5/8"	Brazing – 3/4"
Connecting port size (Liquid)			Flare – 3/8"	Flare – 3/8"	Flare – 3/8"
Maximum equivalent length separation*	m		125	125	125
Maximum actual piping separation*	m		100	100	100
Maximum pipe length*	m		180	180	180
Maximum lift (Indoor unit above/below)	m		20/30	20/30	20/30
Power supply	V-ph-Hz		230-1-50	230-1-50	230-1-50

^{*} when PMV Kit is used: Maximum equivalent length separation (80 m); Maximum actual piping separation (65 m); Maximum pipe length (150 m)

C = cooling mode H = heating mode

				Technical spec	ifications ou	tdoor units
Model Name		Cooling capacity	Heating capacity	Number of indoor units	Total capacity of con	nectable indoor units
				Max	Min	Max
MCY-MAP0401HT	4 HP	12.1 kW	12.5 kW	6	3.2 HP	5.2 HP
MCY-MAP0501HT	5 HP	14.0 kW	16.0 kW	8	4.0 HP	6.5 HP
MCY-MAP0601HT	6 HP	15.5 kW	18.0 kW	9	4.8 HP	7.8 HP

		Technical specifications PMV kit
	Model Name	Indoor unit capacity code
	RBM-PMV0361E**	0.8 – 1 – 1.25
MALL MALL MALL	RBM-PMV0362E***	0.8 – 1 – 1.25
E English	RBM-PMV0901E**	1.7 – 2 – 2.5
	RBM-PMV0902E***	1.7 – 2 – 2.5

^{**} Applicable to MMU-APxxx1MH, MMU-APxxx1YH, MMU-APxxx2SH, MMD-APxxx1SPH, MMK-APxxx2H fan coils only

^{***} Applicable to MMU-APxxx1MH, MMU-APxxx1YH, MMU-APxxx2SH, MMD-APxxx1SPH, MMK-APxxx2H, MMK-APxxx3H fan coils only



R-410A

SUPER HEAT RECOVERY MULTI SYSTEM





Dual Inverter heat recovery VRF

SHRM VRF Outdoor unit

Features

The three-pipe VRF Super Heat Recovery Multi System (SHRM) delivers simultaneously cooling and heating and has exceptional energy efficiency.

Key features

Extremely efficient energy consumption efficiency: average COP of 3.97 (22.4 kW).

Compact flow selector unit: it automatically adjusts the temperature either by unit or by area.

Piping branch flexibility: the threepipe connection allows installation height variation of 35 m (equivalent to a 9-story building).

Active Oil Management system: it increases the operation reliability.

Wide control applications: Artificial Intelligence network system available and Building Management System (BMS) compatible.

Protection devices

- Discharge and suction temperature sensors
- Internal overload relay
- Compressor over current relay
- Over current sensor
- High pressure switch
- Low pressure sensors



Technical specifications **heat pump** Outdoor unit MMY-MAP0802FT8 MMY-MAP1202FT8 8 HP 10 HP 12 HP Cooling capacity¹ kW 22.4 28 33.5 kW 8.54 12.9 Power input 6.07 EER W/W 3.69 3.18 2.6 Running current 9.25 13.15 19.85 kW 25 31.5 35.5 Heating capacity² 6.29 8.73 9.65 Power input COP W/W 3.97 3.61 3.68 9.55 14.85 13.4 Running current 30 30 Peak demand current³ Air flow 2750 2917 2917 Sound pressure level – at 1 m dB(A) 57 58 59 Operating range - (DB) °C -10 to 43 -10 to 43 -10 to 43 Operating range - (WB)4 -15 to 15.5 -15 to 15.5 -15 to 15.5 1800 × 990 × 750 1800 × 990 × 750 Dimensions $(h \times w \times d)$ 1800 × 990 × 750 Weight 263 263 263 Twin Rotary Twin Rotary Twin Rotary Compressor type

11.5

Brazed - 7/8"

Flare - 1/2"

Brazed - 3/4"

150

125

300

30/50

400-3-50

11.5

Brazed - 7/8"

Flare - 1/2"

Brazed - 3/4"

150

125

300

30/50

400-3-50

11.5

Brazed - 1 - 1/8

Flare - 1/2"

Brazed - 3/4'

150

125

300

30/50

400-3-50

Note: All features depicted on SMMSi (pages 4 to 19) does not apply to SHRM

V-ph-Hz

Refrigerant charge R410A

Connecting port size (Liquid)

Maximum pipe length

Power supply

Connecting port size (Suction Gas)

Connecting port size (Discharge Gas)

Maximum actual piping separation

Maximum equivalent length separation

Maximum lift (Indoor unit above/below)

					Technical sp	pecification	s outdoc	or units
	Model Name	_	Cooling capacity	Heating capacity	Outdoor units in combination	Number of indoor units		connectable r units
						Max	Min	Max
THE R. LEWIS CO., LANSING, MICH.	MMY-MAP0802FT8	8 HP	22.4 kW	25 kW	1	13	5.6 HP	10.8 HP
1111	MMY-MAP1002FT8	10 HP	28 kW	31.5 kW	1	16	7 HP	13.5 HP
-	MMY-MAP1202FT8	12 HP	33.5 kW	35.5 kW	1	16	8.4 HP	14.4 HP
trees of trees of	MMY-AP1602FT8	16 HP	45 kW	50 kW	2 (22.4 kW + 22.4 kW)	27	11.2 HP	21.6 HP
#1#1	MMY-AP1802FT8	18 HP	50.4 kW	56.5 kW	2 (22.4 kW + 28 kW)	30	12.6 HP	24.3 HP
-	MMY-AP2002FT8	20 HP	56 kW	63 kW	2 (28 kW+28 kW)	33	14 HP	27 HP
	MMY-AP2402FT8	24 HP	68 kW	76.5 kW	3 (22.4 kW + 22.4 kW + 22.4 kW)	40	16.8 HP	32.4 HP
	MMY-AP2602FT8	26 HP	73 kW	81.5 kW	3 (22.4 kW + 22.4 kW + 28 kW)	43	18.2 HP	35.1 HP
更加更加更加	MMY-AP2802FT8	28 HP	78.5 kW	88 kW	3 (22.4 kW + 28 kW + 28 kW)	47	19.6 HP	37.8 HP
	MMY-AP3002FT8	30 HP	84 kW	95 kW	3 (28 kW + 28 kW + 28kW)	48	21 HP	40.5 HP

 $^{^1}$ based on an indoor air temperature of 27 °C db/19 °C wb and an outdoor air temperature of 35 °C db 2 based on an indoor air temperature of 20 °C db and an outdoor air temperature of 7 °C db/6 °C wb 3 if outdoor units are combined, refer to the installation manual

the unit can be operated even if outdoor temperature gets down to -20 °C, however note that the warranty covers only up to -15 °C because operation beyond that temperature is out of specification. When outdoor air temperature falls to under -15 °C, it may cause shortening the product lifetime

5 if the height difference between indoor units exceeds 3 m and if the indoor unit is above, max. lift is reduced to 30 m

C = cooling mode H = heating mode

> Indoor units









Cooling capacity (HP equivalent)	4-way air discharge cassette type	Compact 4-way cassette (600 × 600) type	2-way air discharge cassette type	1-way air discharge cassette type
007 type 2.2 kW (0.8HP)		MMU-AP0071MH	MMU-AP0072WH	MMU-AP0071YH
009 type 2.8 kW (1HP)	MMU-AP0092H	MMU-AP0091MH	MMU-AP0092WH	MMU-AP0091YH
012 type 3.6 kW (1.25HP)	MMU-AP0122H	MMU-AP0121MH	MMU-AP0122WH	MMU-AP0121YH
015 type 4.5 kW (1.7HP)	MMU-AP0152H	MMU-AP0151MH	MMU-AP0152WH	MMU-AP0152SH
018 type 5.6 kW (2HP)	MMU-AP0182H	MMU-AP0181MH	MMU-AP0182WH	MMU-AP0182SH
024 type 7.1 kW (2.5HP)	MMU-AP0242H		MMU-AP0242WH	MMU-AP0242SH
027 type 8.0 kW (3HP)	MMU-AP0272H		MMU-AP0272WH	
030 type 9.0 kW (4HP)	MMU-AP0302H		MMU-AP0302WH	
036 type 11.2 kW (4HP)	MMU-AP0362H		MMU-AP0362WH	
048 type 14.0 kW (5HP)	MMU-AP0482H		MMU-AP0482WH	
056 type 16.0 kW (6HP)	MMU-AP0562H		MMU-AP0562WH	
072 type 22.4kW (8HP)				
096 type 28.0kW (10HP)				







Cooling capacity (HP equivalent)	Concealed duct type	Concealed duct high static pressure type	Slim duct type
007 type 2.2 kW (0.8HP)	MMD-AP0071BH		MMD-AP0071SPH
009 type 2.8 kW (1HP)	MMD-AP0091BH		MMD-AP0091SPH
012 type 3.6 kW (1.25HP)	MMD-AP0121BH		MMD-AP0121SPH
015 type 4.5 kW (1.7HP)	MMD-AP0151BH		MMD-AP0151SPH
018 type 5.6 kW (2HP)	MMD-AP0181BH	MMD-AP0181H	MMD-AP0181SPH
024 type 7.1 kW (2.5HP)	MMD-AP0241BH	MMD-AP0241H	
027 type 8.0 kW (3HP)	MMD-AP0271BH	MMD-AP0271H	
030 type 9.0 kW (3.2HP)	MMD-AP0301BH		
036 type 11.2 kW (4HP)	MMD-AP0361BH	MMD-AP0361H	
048 type 14.0 kW (5HP)	MMD-AP0481BH	MMD-AP0481H	
056 type 16.0 kW (6HP)	MMD-AP0561BH		
072 type 22.4kW (8HP)		MMD-AP0721H	
096 type 28.0 kW (10HP)		MMD-AP0961H	





Cooling capacity (HP equivalent)	Ceiling type	High wall type 3 series
007 type 2.2 kW (0.8HP)		MMK-AP0073H
009 type 2.8 kW (1HP)		MMK-AP0093H
012 type 3.6 kW (1.25HP)		MMK-AP0123H
015 type 4.5 kW (1.7HP)	MMC-AP0151H	MMK-AP0153H
018 type 5.6 kW (2HP)	MMC-AP0181H	MMK-AP0183H
024 type 7.1 kW (2.5HP)	MMC-AP0241H	MMK-AP0243H
027 type 8.0 kW (3HP)	MMC-AP0271H	
030 type 9.0 kW (3.2HP)		
036 type 11.2 kW (4HP)	MMC-AP0361H	
048 type 14.0 kW (5HP)	MMC-AP0481H	
056 type 16.0 kW (6HP)		
072 type 22.4 kW (8HP)		
096 type 28.0 kW (10HP)		









	7			
Cooling capacity (HP equivalent)	Floor standing concealed type	Floor standing cabinet type	Floor standing type	Fresh air intake indoor unit type
007 type 2.2 kW (0.8HP)	MML-AP0071BH	MML-AP0071H		
009 type 2.8 kW (1HP)	MML-AP0091BH	MML-AP0091H		
012 type 3.6 kW (1.25HP)	MML-AP0121BH	MML-AP0121H		
015 type 4.5 kW (1.7HP)	MML-AP0151BH	MML-AP0151H	MMF-AP0151H	
018 type 5.6 kW (2HP)	MML-AP0181BH	MML-AP0181H	MMF-AP0181H	
024 type 7.1 kW (2.5HP)	MML-AP0241BH	MML-AP0241H	MMF-AP0241H	
027 type 8.0 kW (3HP)			MMF-AP0271H	
030 type 9.0 kW (3.2HP)				
036 type 11.2 kW (4HP)			MMF-AP0361H	
048 type 14.0kW (5HP)			MMF-AP0481H	MMD-AP0481HFE
056 type 16.0 kW (6HP)			MMF-AP0561H	
072 type 22.4 kW (8HP)				MMD-AP0721HFE
096 type 28.0kW (10HP)				MMD-AP0961HFE

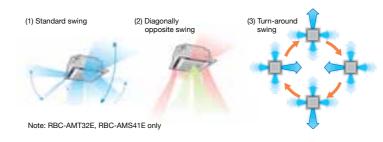


> 4-way Air Discharge Cassette Type



Individual louver control

The angles of each of the four louver can be set individually ⇒ Enables airflow to be adapted to user preferences.

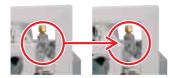






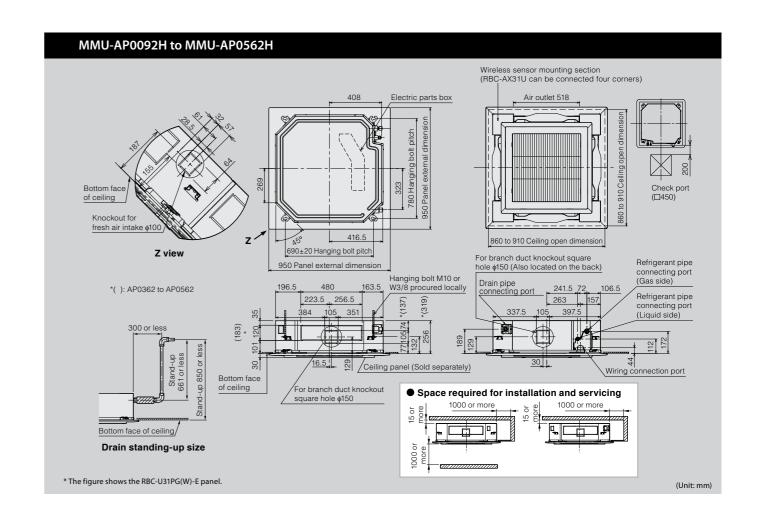
Easy installation

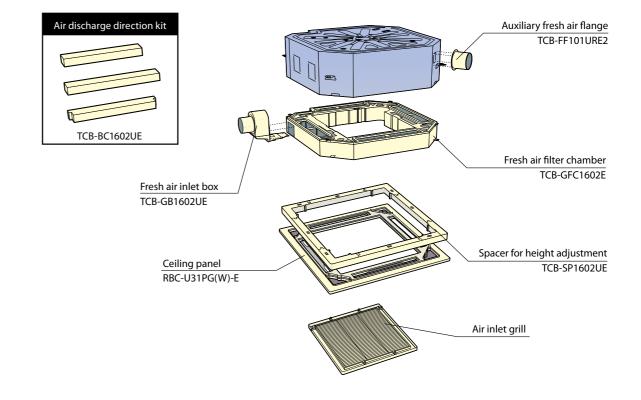
The panel is attached using the bolt already installed on the indoor unit.



									Te	echnical	specific	ations
Model name		MMU-	AP0092H	AP0122H	AP0152H	AP0182H	AP0242H	AP0272H	AP0302H	AP0362H	AP0482H	AP0562H
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	Power requiremen	ts	1-pł	1-phase 50 Hz 230 V (220–240 V)/1-phase 60 Hz 220 V (Separate power supply				ly for indoo	r units requi	red.)		
characteristics	Power consumptio 50 Hz/60 Hz(kW)	n	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	0.112/ 0.112
Appearance (Ceili	ng panel)	Model		RBC-U31PG(W)-E								
External	Height	(mm)				256 (30)*				319 (30)*		
dimensions: Main unit	Width	(mm)					840 (950)*				
(Ceiling panel)*	Depth	(mm)					840 (950)*				
Total weight: Main ur	nit (Ceiling panel)*	(kg)	18 (4)*					25 (4)*				
Fan unit	Standard air flow (High/Mid/Low)	(I/s)	222/20	03/189	258/ 230/219	292/ 256/222	358/2	56/236	367/ 306/297	547/ 397/297	592/ 397/314	592/ 422/342
	Motor output	(W)		1	4			20		68	7	2
	Gas side	(mm)	ø9).5	ø1	2.7			ø1	5.9		
Connecting pipe Liquid side (mm)				ø6	5.4				Ø!	9.5		
Drain port (nominal dia.)					2	5 (Polyvinyl	chloride tub	e)				
Sound pressure le (High/Mid/Low)	evel*2	(dB(A))	30/2	9/27	31/29/27	32/29/27	35/3	1/28	38/33/30	43/38/32	46/38/33	46/40/33

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





^{*}Figures in parentheses are for ceiling panels.
*1 This reference piping consists of 5 m of main piping and 2.5 m of branch piping connected at the same height level.

^{*2} The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise.



> Compact 4-way Cassette (600 × 600) Type

Perfect for grid system ceiling Designed for simple & easy installation and maintenance

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

The flaps fold tightly against the ceiling when operation stops so that the ceiling is affected only slightly even if air conditioning is installed.

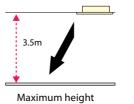
The slim design is only 268 mm in height even when an electrical box is located inside the unit.

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

Available for ceilings up to 3.5 m in height.

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





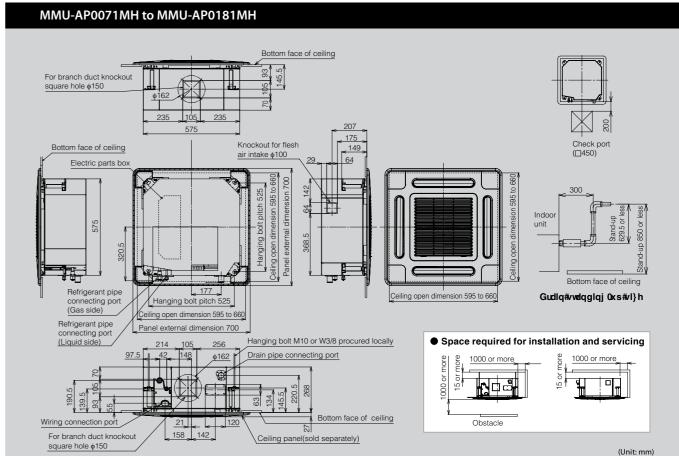
RBC-UM11PG(W)E

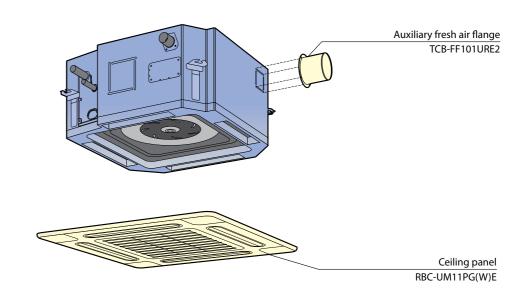
Drain-checking hole

						Technical	specification				
Model name		MMU-	AP0071MH	AP0091MH	AP0121MH	AP0151MH	AP0181MH				
Cooling/Heating cap	acity*1	(kW)	2.2/2.5	2.2/2.5 2.8/3.2 3.6/4.0 4.5/5.0							
Electrical	Power requirements		1-phase 50 Hz 230	V (220–240 V)/1-phas	e 60 Hz 220 V (Separato	e power supply for ind	oor units required.)				
characteristics	Power consumption 50 Hz/60 Hz	(kW)	0.034/0.034	0.036/0.036	0.038/0.038	0.041/0.041	0.052/0.052				
Appearance (Ceiling	panel)	Model			RBC-UM11PG(W)-E						
External	Height	(mm)			268 (27)*						
dimensions: Main unit Width		(mm)		575 (700)*							
(Ceiling panel)*	Depth	(mm)			575(700)*						
Total weight: Main u	nit (Ceiling panel)*	(kg)	17 (3)*								
Fan unit	Standard air flow (High/Mid/Low)	(I/s)	153/128/105	158/130/105	165/140/112	183/153/130	212/178/145				
	Motor output	(W)			60						
	Gas side	(mm)		ø9.5		ø1	2.7				
Connecting pipe Liquid side		(mm)	ø6.4								
	Drain port (r	nominal dia.)	25 (Polyvinyl chloride tube)								
Sound pressure level (High/Mid/Low)	*2	(dB(A))	36/32/28	37/33/28	37/33/29	40/35/30	44/39/34				

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









Figures in parentheses are for ceiling panels.
 This reference piping consists of 5 m of main piping and 2.5 m of branch piping connected at the same height level.

^{*2} The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise.



> 2-way Air Discharge Cassette Type



Slim and compact unit

Unified the width of ceiling panels, 680mm.

Condensate drain pump included.

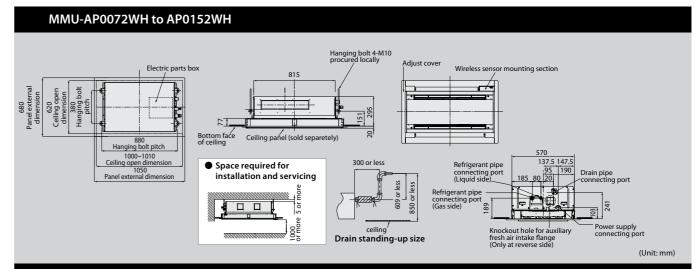
Available for ceilings up to 3.8m in height. (in case of 0.8HP to 3.2HP)

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

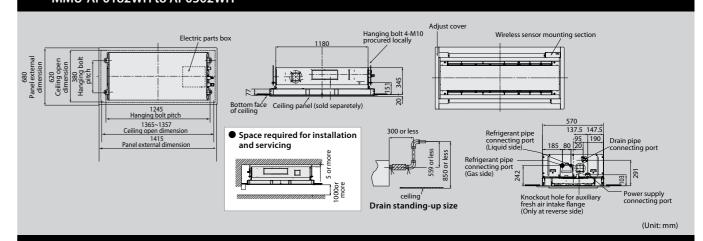
MMU-AP***2WH

										T	achnical	cnocific	ations
												specific	
Model name		MMU-	AP0072WH	AP0092WH	AP0122WH	AP0152WH	AP0182WH	AP0242WH	AP0272WH	AP0302WH	AP0362WH	AP0482WH	AP0562WH
Cooling/Heating of	apacity*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
Power requirements Electrical		nts		1-phase 50Hz 230V (220-240V)/1-phase 60Hz 220V (Separate power supply for indoor units required)						ts required)			
characteristics	Power consumpti 50 Hz/60 Hz	on (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 (Ceili	ng panel)	Model		RBC-UW283PG(W)-E				RBC-UW8	03PG(W)-E		RBC-	UW1403(W)	PG-E
External	Height	(mm)		295 (20)			345 (20))		
dimensions: Main unit	Width	(mm)		815 (1050)			1180	(1415)			1600 (1835)	
(Ceiling panel)*	Depth	(mm)						570 (680))				
Total weight: Mair	unit (Ceiling pane	l)* (kg)	19 (10)				26	(14)			36 (14)		
Fan unit	Standard air flow (High/Mid/Low)	(I/s)		155/138/125	5	167/148/125	250/208/172	292/2	33/205	350/250/217	483/398/328	500/412/342	567/438/367
	Motor output	(W)		2	0		30	4	0	50		70	
	Gas side	(mm)		ø9.5		ø1	2.7			Ø	15.9		
Connecting pipe	Liquid side	(mm)		ø6.4						ø9.5			
Drain port (nominal dia.)						2	5 (Polyviny	chloride tu	ıbe)				
Sound pressure le (High/Mid/Low)	vel* ²	(dB(A))		34/32/30 35/			3/30	38/3	5/33	40/37/34	42/39/36	43/40/37	46/42/39

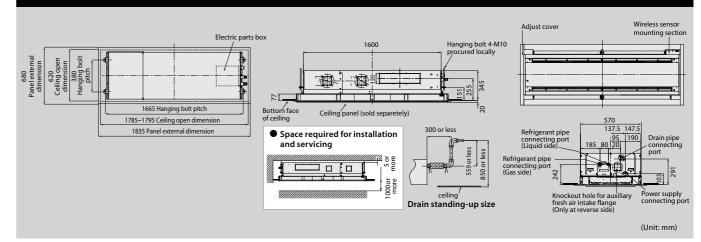
Cooling: Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB Heating: Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

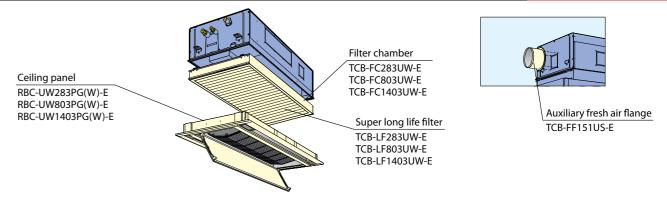


MMU-AP0182WH to AP0302WH



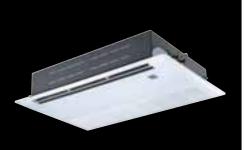
MMU-AP0362WH to AP0562WH





^{*} Figures in parentheses are for ceiling panels.
*1 This reference piping consists of 5 m of main piping and 2.5 m of branch piping connected at the same height level.
*2 The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise.





> 1-way Air Discharge Cassette Type



The perfect choice for hotels and reception areas

Silent sound design ensures the guiet 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.

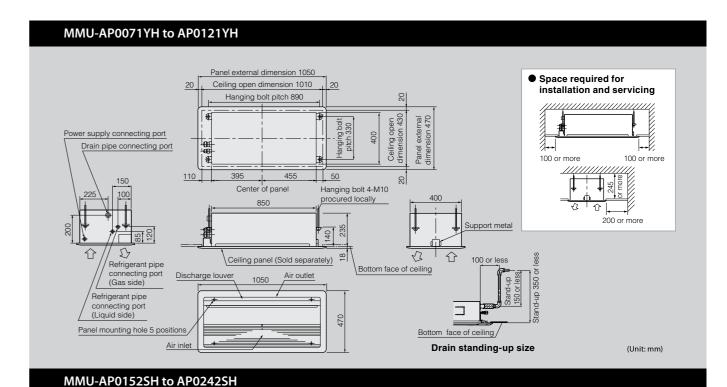
MMU-AP***1YH MMU-AP***2SH

Fresh air intake is possible

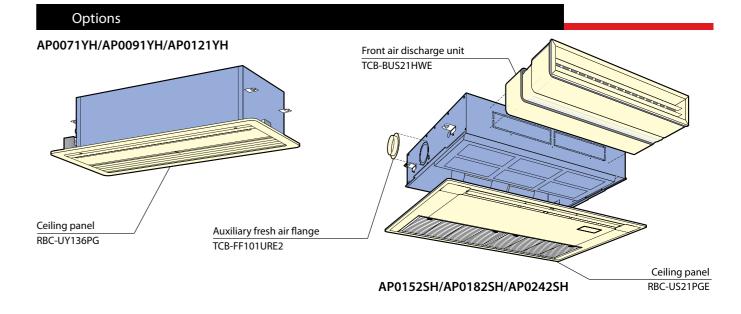
Preparations/connection possible with a circle duct flange.

							Technical s	pecifications	
Model name		MMU-	AP0071YH	AP0091YH	AP0121YH	AP0152SH	AP0182SH	AP0242SH	
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	
Power requirements Electrical			1-phase 50	0 Hz 230 V (220–240	V)/1-phase 60 Hz 22	0 V (Separate power	supply for indoor un	its required.)	
characteristics	Power consumption 50 Hz/60 Hz	on (kW)		0.053/0.056		0.042/0.041	0.046/0.045	0.075/0.073	
Appearance (Ceili	ng panel)	Model		RBC-UY136PG		RBC-US21PGE			
External	Height	(mm)		235 (18)*		200 (20)*			
dimensions: Main unit	Width	(mm)		850 (1050)*			1000 (1230)*		
(Ceiling panel)*	Depth	(mm)		400 (470)*			710 (800)*		
Total weight: Mair	n unit (Ceiling panel	l)* (kg)		22 (3.5)*		21 (5.5)*	22 (5.5)*	
Fan unit	Standard air flow (High/Mid/Low)	(I/s)		150/133/117		208/192/175	217/200/183	317/267/225	
	Motor output	(W)		22			30		
	Gas side	(mm)		ø9.5		ø1	2.7	ø15.9	
Connecting pipe	Liquid side	(mm)			ø6.4			ø9.5	
	Drain port (nom	ninal dia.)	25 (Polyviny			lyvinyl chloride tube)			
Sound pressure level*2 (High/Mid/Low) (dB(A)) 42/39/34					37/35/32	38/36/34	45/41/37		

*2 The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise. Cooling : Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB Note: Rated conditions Heating : Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB



Wiring connection port Space required for installation and servicing Panel external dimension 1230 Drain pipe Ceiling panel (Sold separately) Ceiling open dimension 1190 Hanging bolt pitch 1060 1000 or more ¹⁹ 1000 or more 200 or more Refrigerant pipe connecting port (Liquid side) Hanging bolt M10 or W3/8 local arrange Bottom face of ceiling Knockout hole for front blow out Drain standing-up size



^{*} The photo shows the MMU-AP***2SH Series.

Figures in parentheses are for ceiling panels.
 This reference piping consists of 5 m of main piping and 2.5 m of branch piping connected at the same height level.





MMD-AP***1BH

Concealed Duct Type



High static pressure

External static pressure can be raised as high as 110 Pa, so that all areas of the room can be reached for even temperature distribution, no matter how complex the layout.

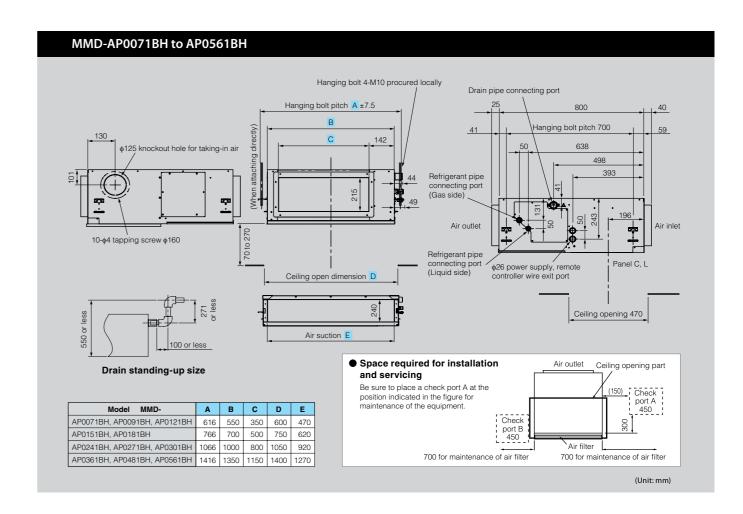
High-lift drain pump

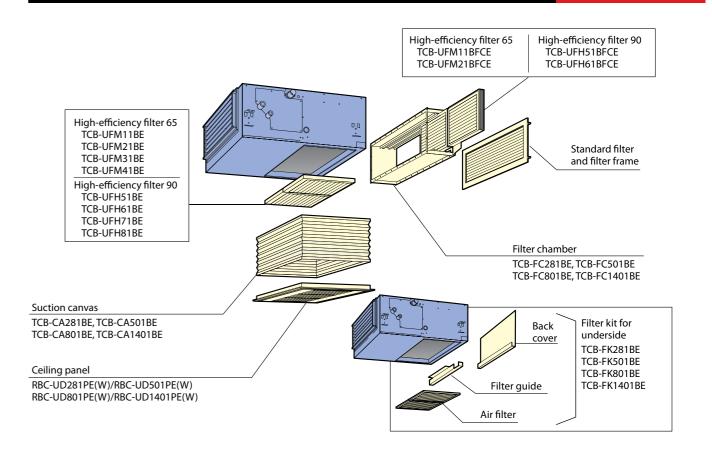
Kit that raises the drain piping up to 27 cm from the drain port.

Factory supplied Kit.

										Te	echnical	specific	ations
Model name		MMD-	AP0071BH	AP0091BH	AP0121BH	AP0151BH	AP0181BH	AP0241BH	AP0271BH	AP0301BH	AP0361BH	AP0481BH	AP0561BH
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
Power requirements				1-phase 50 Hz 230 V (220–240 V)/1-phase 60 Hz 220 V (Separate power supply for indoor units required.)									
characteristics	Power consun 50 Hz/60 Hz	nption (kW)	0.033/	0.033	0.039/	/0.039	0.050/ 0.050	0.060	/0.060	0.071/ 0.071	0.107/ 0.107	0.128/	0.128
	Height	(mm)						320					
External dimension	Width	(mm)		550		7	00		1000			1350	
	Depth	(mm)						800					
Total weight		(kg)		28		:	32		43			55	
	Standard air fl (High/Mid/Lo		133/1	17/94	158/ 136/111	181/ 150/133	217/ 183/150	317/275/242 350/ 300/242			450/ 392/333	55 475/	
	Motor output	(W)	120										
Fan unit	External station (factory setting							50 (4 mmAq)				
	External statio	pressure (Pa)					1	10 (10 mmA	q)				
	Gas side	(mm)		ø9.5		ø1	12.7			ø1	15.9		
Connecting pipe	Liquid side	(mm)			ø6.4					Ø	9.5		
	Drain port dia.)	(nominal					25 (Poly	vinyl chlori	de tube)				
Sound pressure (High/Mid/Low)	level*2	(dB(A))	30/2	8/26	31/2	9/27	32/30/28	33/3	1/29	34/32/29	36/34/32	36/34/32	2 (50Hz)

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: Rated conditions





^{*1} This reference piping consists of 5 m of main piping and 2.5 m of branch piping connected at the same height level.
*2 The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise.



MMD-AP***1H

> Concealed Duct High Static Pressure Type



Design flexibility

Satisfies all your design needs.

Compatible with external static pressures up to 196 Pa.

Inspection inlet enables easy access and maintenance.

Optional

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

Construction characteristics

Three-phase-switchable static pressure.

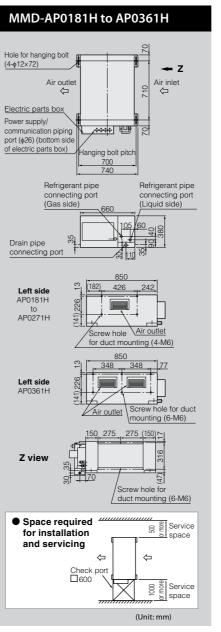
The flexible duct is accessible.

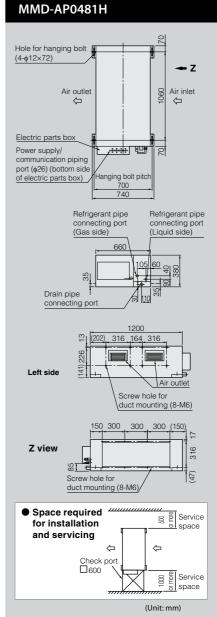
Easy service and installation.

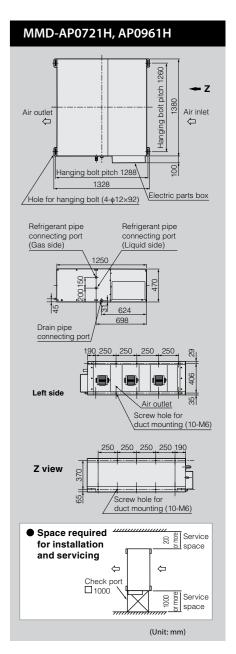
Inspection hole enables easy access and maintenance.

							Te	chnical spe	cifications	
Model name		MMD-	AP0181H	AP0241H	AP0271H	AP0361H	AP0481H	AP0721H	AP0961H	
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	22.4/25.0	28.0/31.5	
Electrical	Power require	ments	1-phase	50 Hz 230 V (220-	-240 V)/1-phase 60	O Hz 220 V (Separa	te power supply	for indoor units required.)		
characteristics	Power consum 50 Hz/60 Hz	nption (kW)	0.184/0.198	0.299	0.299/0.385 0.368/0.4		0.414/0.490	1.200/1.540	1.260/1.610	
	Height	(mm)		380					70	
External dimensions	Width	(mm)		850 1200					80	
	Depth	(mm)		660					50	
Total weight	-	(kg)	50	5	52	56	67	150		
	Airflow (High/Mid/Lov	v) (l/s)	300/250/200	439/3	67/294	533/444/356	700/583/467	1200/1000/800	1400/1167/933	
	Motor output	(W)		160		2	60	370×3		
Fan unit	External static					137				
	External statio	pressure (Pa)				68.6 – 137 – 196				
	Gas side	(mm)	ø12.7		ø1.	5.9		ø2	2.2	
Connecting pipe	Liquid side	(mm)	ø6.4 ø9.5					ø1	2.7	
	Drain port	(nominal dia.)				25 (male screw)				
Sound pressure le (High/Mid/Low)	evel*2	(dB(A))	37		4	0		49	50	

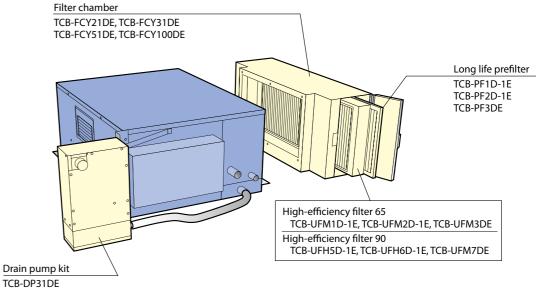
Cooling: Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB Heating: Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB







Options



TCB-DP32DE (Applies to model MMD-AP0721H AND MMD-AP0961H

^{*1} This reference piping consists of 5 m of main piping and 2.5 m of branch piping connected at the same height level.
*2 The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise.

AIR CONDITIONING

47



Slim Duct Type



Functional design

Only 210 mm in height for greater application flexibility.

4-step static pressure setup.

Concealed installation within a ceiling void.

Fresh air intake available.

Slim & quiet

Perfect comfort throughout the room.

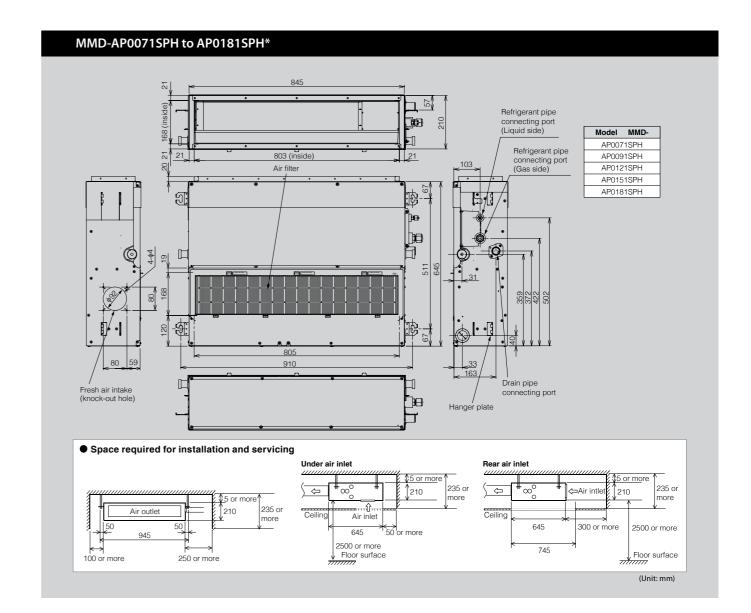
Can be used with any style of air diffuser.

Quiet, powerful operation.

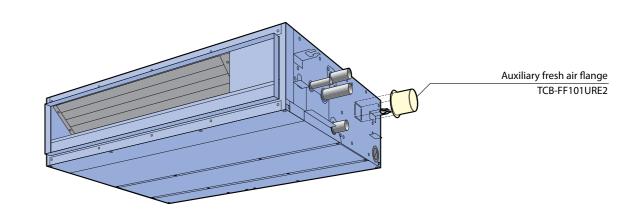
MMD-AP***1SPH

						Technical	specifications		
Model name		MMU-	AP0071SPH	AP0091SPH	AP0121SPH	AP0151SPH	AP0181SPH		
Cooling/Heating capac	city* ¹	(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3		
Electrical	Power supply		1 phase 50Hz 230V (220-240V) (Separate power supply for indoor units is required.)						
characteristics			0.0	39	0.043	0.045	0.054		
	Height (mm				210				
External dimensions	Width	(mm)			845				
	Depth	(mm)			645				
Total weight		(kg)	22 23						
	Standard air flow (High/Mid/Low)	(I/s)	150/13	31/111	167/144/125	192/167/144	217/189/161		
Fan unit	Motor output	(W)			60				
	External static pres (factory setting)	sure (Pa)	6 (Factory setting)-16-31-46, 4steps	5 (Factory setting)-15-30-45, 4steps	4 (Factory setting) -14-29-44, 4steps		
	Gas side	(mm)		ø9.5		Ø	12.7		
Connecting pipe	Liquid side	(mm)			ø6.4				
Drain port (nominal dia.)				25	5 (Polyvinyl chloride tu	be)			
Sound pressure	Under air inlet	(dB(A))	36/3	3/30	38/35/32	39/36/33	40/38/36		
level*2 (High/Med./Low)	Back air inlet	(dB(A))	28/2	6/24	29/27/25	32/30/28	33/31/29		

^{*1} The cooling capacities and electrical characteristics are measured under the conditions specified by JIS B 8615 based on the reference piping.



Options



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

The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.
*2 The sound level are measured in an anechoic chamber in accordance with JIS B 8616.

^{2.} The sound ever are interesting an area of carried an actual containing in accurate with 13 bords.

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





MMD-AP***HFE

Connectable outdoor unit MMY-MAPXXXXHT8

> Fresh Air Intake Indoor Unit Type

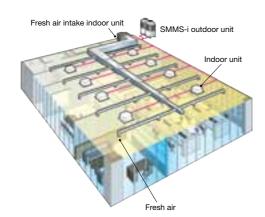
Air controller for fresh-air intake

Outside static pressure maximum 230 Pa (in case of 50 Hz of 5HP). Use of high-performance filter provides more comfortable room environment. Introduces outdoor air at a temperature close to that of the indoor air. Primary processing of fresh outdoor air.

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.



					Tech	nnical specifications		
Model name			MMD-	AP0481HFE	AP0721HFE	AP0961HFE		
Cooling/Heating ca	pacity (Note 1)		(kW)	14.0/8.9	14.0/8.9 22.4/13.9 28.0/17.4			
Electrical	Power supply		(kW)	1-pha	se 50 Hz 230 V (220–240 V)/60 Hz	220 V		
characteristics	Power consumption	on	(kW)	0.28/0.34	0.45/0.55	0.52/0.65		
Height		Height	(mm)		492			
External dimensions	Main unit	Width	(mm)	892	13	92		
unicisions		Depth	(mm)		1262			
Total weight			(kg)	93	14	14		
	Standard air flow		(I/s)	300	467	583		
Fan unit	Motor output		(kW)	0.160	0.160 0.160×2			
ran unit	External static pre	ssure 50 Hz/60 Hz	·	170-210-230 / 115-215-260	140-165-180 / 150-210-235	160-190-205 / 80-180-220		
	Air flow limit Low	er limit/Upper limi	t (l/s)	210/330	327/513	408/642		
	Gas side		(mm)	ø15.9	ø2:	2.2		
Connecting pipe	Liquid side		(mm)	ø9.5	ø1:	2.7		
Drain port OD(mr		OD(mm)		32				
Sound pressure level (Note 2) (High/Med./Low) (dB(A)			(dB(A))	45/43/41 46/45/44				
0	Cooling (Note 3)		(°C)		5 to 43			
Operation range Heating (Note 4)			(°C)		-5 to 43			

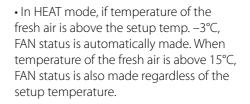
- The setting temperature is 16 27°C (standard FCU...18 29°C).
 An optional humidifier is not available with fresh air intake indoor unit
- * Height difference between fresh air intake indoor units must be within 0.5 m. Height difference between fresh air intake indoor unit and standard FCU must be within 30 m.
- 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 NOTE 1 Rated conditions

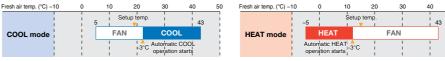
- Piping: Length 7.5 m / Height 0 m

 NOTE 2 Normally, the values measured in the actual operating environment become large than the indicated values due to the effects of external sound.
 - * 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

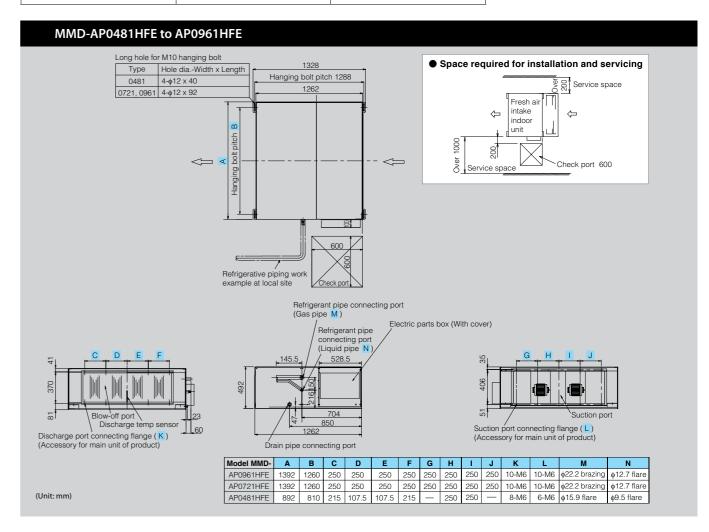
• In COOL mode, if temperature of the fresh air is below the setup temp. of $+3^{\circ}$ C, FAN status is automatically made. When temperature of the fresh air is below 19°C, FAN status is also made regardless of the setup temperature.

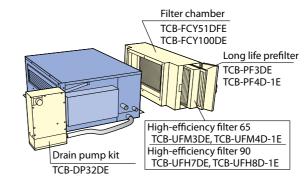




Operable mode and discharge temperature setup range

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







MMC-AP***1H



Ceiling Type



Comfortable ambience

Quietest in industry

• New design reduces noise level to half that of conventional units.

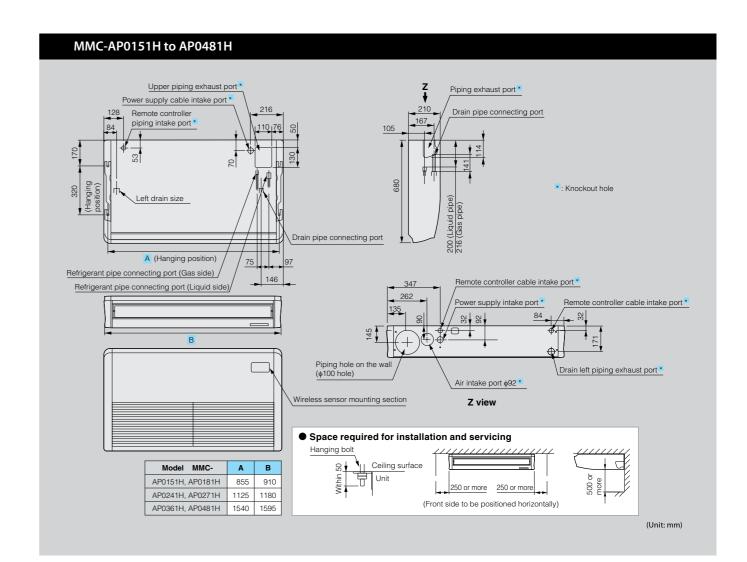
Flap control

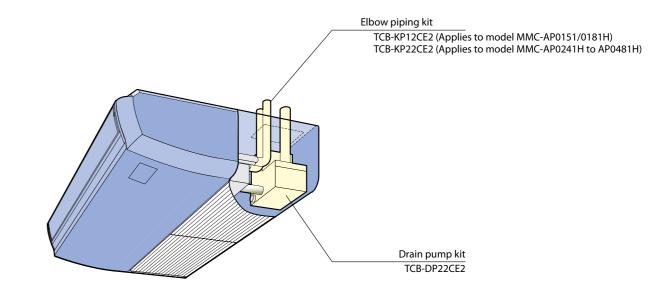
• The airflow angle is automatically set to the most suitable setting according to your cooling or heating needs, and an automatic swing mode enables airflow to reach all areas of the room to create a comfortable ambience.

Installation efficiency

The unit can be suspended from the ceiling simply by adjusting two screws on the intake grill, avoiding complex procedures which can involve up to a dozen installation screws.

	_									
							Technical sp	ecifications		
Model name		MMC-	AP0151H	AP0181H	AP0241H	AP0271H	AP0361H	AP0481H		
Cooling/Heating of	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		
Electrical	Power requiremen	ts	1-phase 50 Hz 230 V (220–240 V)/1-phase 60 Hz 220 V (Separate power supply for indoor units required.)							
characteristics	Power consumptio 50 Hz/60 Hz	n (kW)	0.033/0.033	0.038/0.038	0.050/0.050		0.091/0.091	0.110/0.110		
	Height	(mm)			210					
dimensions	Width	(mm)	9.	10	1,1	180	1,595			
	Depth	(mm)								
Total weight		(kg)	2	2	26		34			
Fan unit	Standard air flow (High/Mid/Low)	(I/s)	200/167/150	217/183/150	308/2	50/233	458/383/333	500/433/367		
	Motor output	(W)	3	0	4	10	80			
	Gas side	(mm)	ø1:	2.7	ø15.9					
Connecting pipe	Liquid side	(mm)	ø6	5.4	ø9.5					
	Drain port (nomi	nal dia.)			20 (Polyvinyl chloride tube)					
Sound pressure level*2 (High/Mid/Low) (dB(A		(dB(A))	35/32/30	36/33/30	38/3	66/33	41/38/35	43/40/37		





^{*1} This reference piping consists of 5 m of main piping and 2.5 m of branch piping connected at the same height level.
*2 The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise. 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 (2 series)



Slim-line design

high-wall unit.

With its attractive, slim-line design, this unit is best suited for restaurants and other applications requiring understated elegance.

The filtration system further improves the indoor air quality benefits of this

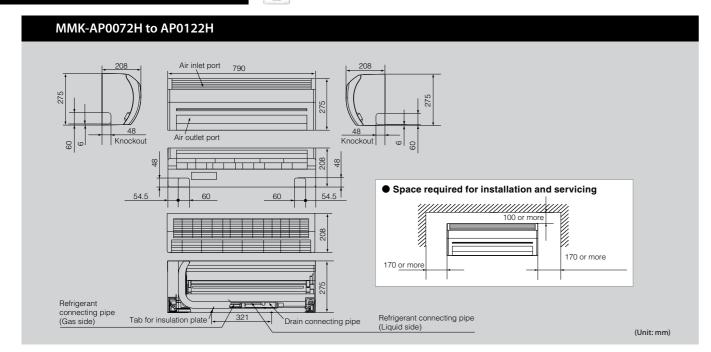
Auto-louver mode allows optimum air distribution throughout the room.

Wireless controller is included.



Remote controller

MMK-AP***2H



				To	echnical specification			
Model name		MMK-	AP0072H	AP0092H	AP0122H			
Cooling/Heating cap	pacity*1	(kW)	2.2/2.5 2.8/3.2 3.6/4.0					
Electrical	Power requirements		1-phase 50 Hz 230	V (220–240 V) (Power exclusive for i	ndoor is required.)			
characteristics	Power consumption 50 Hz	(kW)	0.017	0.018	0.019			
External dimensions	Height	(mm)	275					
	Width	(mm)		790				
diffictions	Depth	(mm)	208					
Total weight		(kg)	11					
Fan unit	Standard air flow (High/Mid/Low)	(m³/h)	480/420/360 510/450/360		540/450/360			
	Motor output	(W)		30				
	Gas side	(mm)		ø9.5				
Connecting pipe	Liquid side	(mm)	ø6.4					
	Drain port	(nominal dia.)						
Sound pressure leve (High/Mid/Low)	 *2	(dB(A))	35/32/29	36/33/29	37/33/29			



> High-wall Type (3 series)

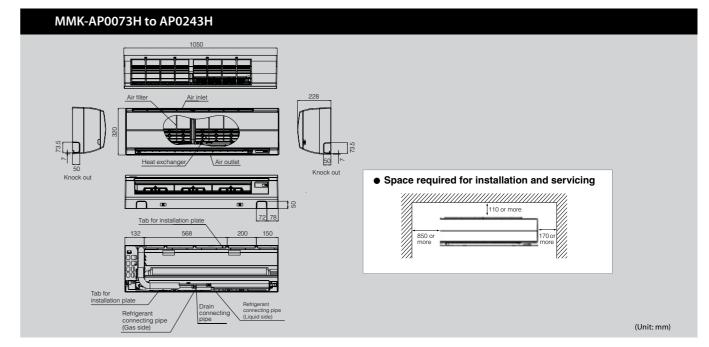
Elegant and slim

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 provide uniform air distribution.



Remote controller



						T	echnical sp	ecification		
Model name		MMK-	AP0073H	AP0093H	AP0123H	AP0153H	AP0183H	AP0243H		
Cooling/Heating capa	acity*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	Power requirements		1 pha	se 50Hz 230V (22	0-240V) (Separate	e power supply for i	ndoor units is req	or units is required.)		
characteristics	Power consumption	(kW)	0.018	0.0	021	0.0	43	0.050		
	Height	(mm)				320				
External dimensions	Width	(mm)	1050							
	Depth	(mm)	228							
Total weight		(kg)				15				
Fan unit	Standard air flow (High/Mid/Low)	(l/s)	158/125/108	167/13	33/108	233/183/150		283/208/158		
	Motor output	(W)				30	233/183/150 283 ### ### ### ### ### ### ### ### ### #			
	Gas side	(mm)		ø9.5		ø12	.7	ø15.9		
Connecting pipe	Liquid side	(mm)			ø6.4			ø9.5		
	Drain port	(nominal dia.)	16 (polyvinyl chloride tube)			/l chloride tube)				
Sound pressure level* (High/Mid/Low)	:2	(dB(A))	35/31/28	37/3	2/28	41/36	5/33	46/39/34		

 ^{*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 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.
 *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

^{*1} This reference piping consists of 5 m of main piping and 2.5 m of branch piping connected at the same height level.
*2 The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise.





> Floor Standing Concealed Type

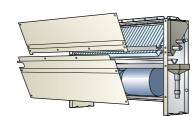


Cool air makes for a pleasant indoor environment

Install it under a window and aircondition any room effectively.

Easy maintenance

Simplified design of fan and drainage pipe eases maintenance.



MML-AP***1BH

MML-AP0071BH to AP0241BH Hole for floor mounting (Air discharge port size in flange) Space required for installation and servicing (Air discharge port size in flange) 2-φ4.7 hole (left/right side each) D×100 + + + + + + + 1 Expansion valve box F - φ4.7 hole (front side and rear side) pipe connecting port (Liquid side) Refrigerant pipe connecting port 4-φ15 hole connecting port Electric parts box (earth terminal (Gas side) 2-12×18 long hole is provided in inner side) mounting) Model MML- A B C D E AP0071BH to AP0121BH 610 580 550 4 5 AP0151BH to AP0241BH 910 880 850 7 8 (Unit: mm)

						7	echnical sp	ecifications
Model name		MML-	AP0071BH	AP0091BH	AP0121BH	AP0151BH	AP0181BH	AP0241BH
Cooling/Heating ca	apacity* 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	Power requirements		1-phase 50 Hz 2	30 V (220–240 V)/	1-phase 60 Hz 22	0 V (Separate pov	er supply for indo	or units required.)
characteristics	Power consumption 50 Hz/60 Hz	(kW)	0.056/0.058			0.090	/0.096	0.095/0.110
	Height	(mm)	600					
External dimensions	Width	(mm)	745				1045	
difficusions	Depth	(mm)	220			220		
Total weight		(kg)		21			29	
Fancia	Standard air flow (High/Mid/Low)	(l/s)		128/111/83		205/167/136		264/219/178
Fan unit	Motor output	(W)		19			70	
	Gas side	(mm)		ø9.5		ø1	2.7	ø15.9
Connecting pipe	Liquid side	(mm)			ø6.4			ø9.5
	Drain port (nomin	nal dia.)			20 (Polyvinyl chloride tube)			
Sound pressure lev	el*² (High/Mid/Low)	(dB(A))	36/34/32				42/37/33	

 $^{^{*}1}$ This reference piping consists of 5 m of main piping and 2.5 m of branch piping connected at the same height level.

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



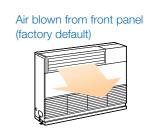
Slim & compact design

Under-window mounting does not block lighting.

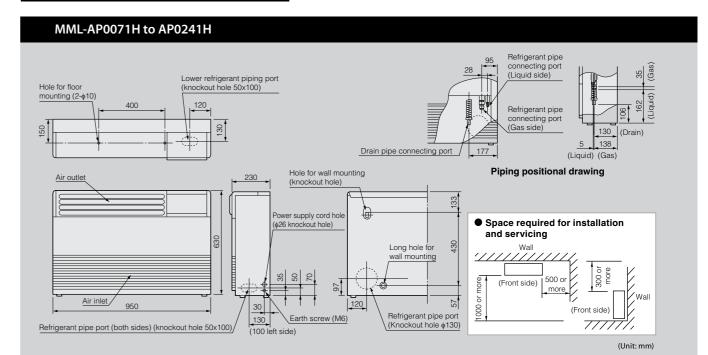
Indoor unit size of 2.2 kW to 7.1 kW is the same.

Air exits from front or top

Distribution can be reversed to suit occupant preference.







					To	echnical spe	ecifications
	MML-	AP0071H	AP0091H	AP0121H	AP0151H	AP0181H	AP0241H
Cooling/Heating capacity*1			2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0
Power requirements		1-phase 50	1-phase 50 Hz 230 V (220–240 V) (Power exclusively for indoor is required.)/1-phase 60 Hz 220 V				
Power consumption 50 Hz/60 Hz	(kW)	0.056	/0.053	0.092/	0.092	0.102	2/0.113
Height	(mm)	630					
Width	(mm)			9	50		
Depth	(mm)						
	(kg)		3	37			40
Standard air flow (High/Mid/Low)	(l/s)	133/1	17/100	250/21	7/181	/181 300/258/217	
Motor output	(W)		2	45			70
Gas side	(mm)		ø9.5		ø1.	2.7	ø15.9
Liquid side	(mm)			ø6.4			ø9.5
Drain port (nomi	nal dia.)			20 (Polyvinyl	chloride tube)		
Sound pressure level*2 (High/Mid/Low) (dB(A))			39/37/35 45/41/38		49/44/39		
	Power requirements Power consumption 50 Hz/60 Hz Height Width Depth Standard air flow (High/Mid/Low) Motor output Gas side Liquid side Drain port (nomin	Power requirements Power consumption 50 Hz/60 Hz (kW) Height (mm) Width (mm) Depth (mm) Standard air flow (High/Mid/Low) (I/s) Motor output (W) Gas side (mm) Liquid side (mm) Drain port (nominal dia.)	pacity*1 (kW) 2.2/2.5 Power requirements 1-phase 50 Power consumption 50 Hz/60 Hz (kW) 0.056 Height (mm) Width (mm) Depth (mm) (kg) Standard air flow (High/Mid/Low) (l/s) 133/11 Motor output (W) Gas side (mm) Liquid side (mm) Drain port (nominal dia.)	Power requirements	Power requirements 1-phase 50 Hz 230 V (220–240 V) (Power exclusion Power consumption 50 Hz/60 Hz (kW) 0.056/0.053 0.092/0.054 0.056/0.053 0.092/0.056 0.056/0.053 0.092/0.056 0.056	MML- pacity*1 AP0071H AP0091H AP0121H AP0151H apacity*1 (kW) 2.2/2.5 2.8/3.2 3.6/4.0 4.5/5.0 Power requirements 1-phase 50 Hz 230 V (220–240 V) (Power exclusively for indoor is power consumption 50 Hz/60 Hz (kW) 0.056/0.053 0.092/0.092 Height (mm) 630 Width (mm) 950 Depth (mm) 230 Standard air flow (High/Mid/Low) (l/s) 133/117/100 250/217/181 Motor output (W) 45 Gas side (mm) Ø9.5 Ø1 Liquid side (mm) Ø6.4 Drain port (nominal dia.) 20 (Polyvinyl chloride tube)	Power requirements

- *1 This reference piping consists of 5 m of main piping and 2.5 m of branch piping connected at the same height level.
 *2 The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise.

 $Note: Rated\ conditions \qquad Cooling: Indoor\ air\ temperature\ 27^{\circ}C\ DB/19^{\circ}C\ WB, Outdoor\ air\ temperature\ 35^{\circ}C\ DB/19^{\circ}C\ WB, Outdoor\ air\ temperature\ 35^{\circ}C$ Heating: Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

^{*2} The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise.





> Floor Standing Concealed Type



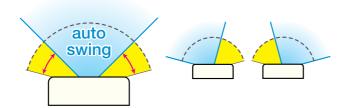
Thin profile suits interior design

Slender, space-saving type (1.7–8.0HP)

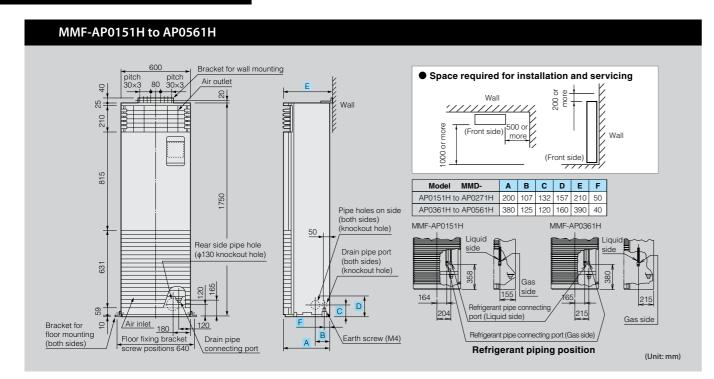
Wide outlet

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

Set the vertical angle manually.



MMF-AP***1H



							Techi	nical speci	fications	
Model name		MMF-	AP0151H	AP0181H	AP0241H	AP0271H	AP0361H	AP0481H	AP0561H	
Cooling/Heating ca	pacity*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	Power requirements		1-phase	1-phase 50 Hz 230 V (220–240 V) (Power exclusive for indoor is required.)/1-phase 60 Hz 220 V					Hz 220 V	
characteristics	Power consumption 50 Hz/60 Hz	(kW)	0.150/0.146		0.190/	0.195	0.280/0.295	0.350	/0.380	
	Height	(mm)				1750	750			
External dimensions	Width	(mm)	600							
difficusions	Depth	(mm)		21	0			390		
Total weight		(kg)	4	8	49)		65		
F	Standard air flow (High/Mid/Low)	(l/s)	250/2	17/183	333/28	3/233	533/467/383	600/5	17/433	
Fan unit	Motor output	(W)	3	7	63	3	110	16	50	
	Gas side	(mm)	ø1:	2.7			ø15.9			
Connecting pipe	Liquid side	(mm)	ø6	5.4			ø9.5			
	Drain port (nomin	nal dia.)			20 (polyvinyl chloride tube)					
Sound pressure lev	el*² (High/Mid/Low)	(dB(A))	46/4	3/38	49/45	5/40	51/48/44	54/5	0/46	



^{*1} This reference piping consists of 5 m of main piping and 2.5 m of branch piping connected at the same height level.
*2 The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise.

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



				indoor uni	t accessories
Indoor unit	Parts Name	Model Name	Applied Model	Notes	Remarks
	Ceiling panel	RBC-U31PG(W)-E		Required accessory	
4-way air discharge	Fresh air inlet box	TCB-GB1602UE	MMU-AP***2H	For fresh air intake by using the knockout hole of fresh air filter chamber. (dia.=100 mm)	Use with TCB-GFC1602UE
cassette type	Fresh air filter chamber	TCB-GFC1602UE	11110711 211	For fresh air inlet box For easy fresh air intake by using the knockout hole of indoor	
	Auxiliary fresh air flange	TCB-FF101URE2		unit. (dia.=100 mm)	
	Spacer for height adjustment			Height=50 mm	
Compact 4-way	Air discharge direction kit Ceiling panel	TCB-BC1602UE RBC-UM11PG(W)E		Air direction charge by cutting off air discharge port (3 pcs.) Required accessory	
cassette (600 × 600)	Auxiliary fresh air flange	TCB-FF101URE2	MMU-AP***1MH	For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100 mm)	
	Ceiling panel	RBC-UW283PG(W)-E RBC-UW803PG(W)-E	MMU-AP0072 to 0152WH MMU-AP0182 to 0302WH	Required accessory	
		RBC-UW1403PG(W)-E	MMU-AP0362/0482/0562WH		Lie
	Super long life filter	TCB-LF283UW-E TCB-LF803UW-E	MMU-AP0072 to 0152WH MMU-AP0182 to 0302WH	Dust collecting effect: 50%	Use with TCB-FC283UW- Use with TCB-FC803UW-
2-way air discharge cassette type	Superioring me meet	TCB-LF1403UW-E	MMU-AP0362/0482/0562WH	(Weight method)	Use with TCB-FC1403UV
assette type		TCB-FC283UW-E	MMU-AP0072 to 0152WH		
	Filter chamber	TCB-FC803UW-E TCB-FC1403UW-E	MMU-AP0182 to 0302WH MMU-AP0362/0482/0562WH	For super long life filter	
	Auxiliary fresh air flange	TCB-FF151US-E	MMU-AP***2WH	For fresh air intake by using the knockout hole of indoor unit. (dia.=150mm)	
	Ceiling panel	RBC-UY136PG	MMU-AP***1YH	Required accessory	
1-way air discharge	Front air discharge unit	RBC-US21PGE TCB-BUS21HWE		Required accessory	
cassette type	Auxiliary fresh air flange	TCB-FF101URE2	MMU-AP***2SH	For easy fresh air intake by using the knockout hole of indoor	
	Auxiliary fresh air flange			unit. (dia.=100 mm)	
	High-efficiency filter 65	TCB-UFM11BFCE TCB-UFM21BFCE	MMD-AP0071/0091/0121BH MMD-AP0151/0181BH	Dust collecting effect: 65%	Use with TCB-FC281BE Use with TCB-FC501BE
	(for rear suction)	TCB-UFM11BFCE (2 pcs.)	MMD-AP0241/0271/0301BH	(NBS Colorimentric method)	Use with TCB-FC801BE
		TCB-UFM21BFCE (2 pcs.)	MMD-AP0361/0481/0561BH		Use with TCB-FC1401E
	11: 1 60: 01: 00	TCB-UFH51BFCE	MMD-AP0071/0091/0121BH	D . II .: (6 . 000)	Use with TCB-FC281BI
	High-efficiency filter 90 (for rear suction)	TCB-UFH61BFCE TCB-UFH51BFCE (2 pcs.)	MMD-AP0151/0181BH MMD-AP0241/0271/0301BH	Dust collecting effect: 90% (NBS Colorimentric method)	Use with TCB-FC501B Use with TCB-FC801B
	, ,	TCB-UFH61BFCE (2 pcs.)			Use with TCB-FC1401
		TCB-FC281BE	MMD-AP0071/0091/0121BH		
	Filter chamber (for rear suction)	TCB-FC501BE TCB-FC801BE	MMD-AP0151/0181BH MMD-AP0241/0271/0301BH	For high-efficiency filter	
	(ror rear succion)	TCB-FC1401BE	MMD-AP0361/0481/0561BH		
		TCB-UFM11BE	MMD-AP0071/0091/0121BH		
	High-efficiency filter 65 (for underside suction)	TCB-UFM21BE TCB-UFM31BE	MMD-AP0151/0181BH MMD-AP0241/0271/0301BH	Dust collecting effect: 65% (NBS Colorimentric method)	
	(ioi dildeiside saction)	TCB-UFM41BE	MMD-AP0361/0481/0561BH	(NB3 Colonnentic metrod)	
Concealed duct type		TCB-UFH51BE	MMD-AP0071/0091/0121BH		
	High-efficiency filter 90 (for underside suction)	TCB-UFH61BE	MMD-AP0151/0181BH	Dust collecting effect: 90% (NBS Colorimentric method)	
	(ioi dildeiside saction)	TCB-UFH71BE TCB-UFH81BE	MMD-AP0241/0271/0301BH MMD-AP0361/0481/0561BH	(NB3 Colonnentic metrod)	
	Coiling panel	RBC-UD281PE(W)	MMD-AP0071/0091/0121BH		
	Ceiling panel (half panel for underside	RBC-UD501PE(W)	MMD-AP0151/0181BH		
	suction)	RBC-UD801PE(W) RBC-UD1401PE(W)	MMD-AP0241/0271/0301BH MMD-AP0361/0481/0561BH		
		TCB-CA281BE	MMD-AP0071/0091/0121BH		
	Suction canvas	TCB-CA501BE	MMD-AP0151/0181BH	Adjustment height of the suction canvas is between 40 mm and	
	(for underside suction)	TCB-CA801BE TCB-CA1401BE	MMD-AP0241/0271/0301BH MMD-AP0361/0481/0561BH	100 mm	
		TCB-FK281BE	MMD-AP0071/0091/0121BH		
	Filter kit for underside	TCB-FK501BE	MMD-AP0151/0181BH	Kit of underside prefilter & shielding plate of rear suction	
		TCB-FK801BE TCB-FK1401BE	MMD-AP0241/0271/0301BH MMD-AP0361/0481/0561BH		
		TCB-UFM1D-1E	MMD-AP0181H		Use with TCB-FCY21D
	High-efficiency filter 65	TCB-UFM2D-1E (2 pcs.)	MMD-AP0241/0271/0361H	Dust collecting effect: 65%	Use with TCB-FCY31D
		TCB-UFM1D-1E (2 pcs.) TCB-UFM3DE	MMD-AP0481H MMD-AP0721/0961H	(NBS Colorimentric method)	Use with TCB-FCY51D Use with TCB-FCY100
		TCB-UFH5D-1E	MMD-AP0181H		Use with TCB-FCY21D
	High-efficiency filter 90	TCB-UFH6D-1E (2 pcs.)	MMD-AP0241/0271/0361H	Dust collecting effect: 90%	Use with TCB-FCY31D
	riigir emelency inter 50	TCB-UFH5D-1E (2 pcs.)	MMD-AP0481H	(NBS Colorimentric method)	Use with TCB-FCY51D
Concealed duct high		TCB-UFH7DE TCB-PF1D-1E	MMD-AP0721/0961H MMD-AP0181H		Use with TCB-FCY100 Use with TCB-FCY21D
tatic pressure type	Lang life profilter	TCB-PF2D-1E (2 pcs.)	MMD-AP0241/0271/0361H	Dust collecting effect: 50%	Use with TCB-FCY31D
	Long life prefilter	TCB-PF1D-1E (2 pcs.)	MMD-AP0481H	(Weight method)	Use with TCB-FCY51D
		TCB-PF3DE TCB-FCY21DE	MMD-AP0721/0961H MMD-AP0181H		Use with TCB-FCY100
	Eilter chamber	TCB-FCY31DE	MMD-AP0241/0271/0361H	For high officionay filter or long life profile	
	Filter chamber	TCB-FCY51DE	MMD-AP0481H	For high-efficiency filter or long life prefilter	
		TCB-FCY100DE	MMD-AP0721/0961H	Stand up 220 or loss	
	Drain pump kit	TCB-DP31DE TCB-DP32DE	MMD-AP0181H to 0481H MMD-AP0721/0961H	Stand-up 330 or less (from bottom face of ceiling)	
Slim duct type	Auxiliary fresh air flange	TCB-FF101URE2	MMD-AP***1SPH	For fresh air intake by using the knockout hole of indoor unit. (dia.=100 mm)	
		TCD DD33CF3	MMC-AP0151/0181H	Stand-up 600 or less	Use with TCB-KP12CE2
	Drain pump kit	TCB-DP22CE2	MMC-AP0241 to 0481H	(from bottom face of ceiling)	Use with TCB-KP22CE2

				Indoor	unit accessories
Indoor unit	Parts Name	Model Name	Applied Model	Notes	Remarks
	High-efficiency filter 65	TCB-UFM3DE	MMD-AP0721/0961HFE	Dust collecting effect: 65%	Use with TCB-PF3DE
	High-efficiency filter 65	TCB-UFM4D-1E	MMD-AP0481HFE	(NBS Colorimentric method)	Use with TCB-PF4D-1E
		TCB-UFH7DE	MMD-AP0721/0961HFE	Dust collecting effect: 90%	Use with TCB-PF3DE
Fresh air intake	High-efficiency filter 90	TCB-UFH8D-1E	MMD-AP0481HFE	(NBS Colorimentric method)	Use with TCB-PF4D-1E
indoor unit type	1 1:66:6	TCB-PF3DE	MMD-AP0721/0961HFE	Dust collecting effect: 50%	Use with TCB-FCY100DE
indoor unit type	Long life prefilter	TCB-PF4D-1E	MMD-AP0481HFE	(Weight method)	Use with TCB-FCY51DFE
	Eth. I. I.	TCB-FCY51DFE	MMD-AP0481HFE	5 1:1 (C: C) 1 1:(C)	
	Filter chamber	TCB-FCY100DE	MMD-AP0721/0961HFE	For high-efficiency filter or long life prefilter	
	Drain pump kit	TCB-DP32DE	MMD-AP0481/0721/0961HFE	Stand-up 330 or less (from bottom face of ceiling)	

						Combinat	ion Pattern
	Accessory for 4-way air discharge cassette	1	2	3	4	5	6
t	ype: combination pattern	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		ОК	ОК	ОК	ОК	ОК
2	Fresh air inlet box + Fresh air filter chamber	ОК			ОК	_	ОК
3	Fresh air filter chamber	ОК			ОК	ОК	ОК
4	Auxiliary fresh air flange	ОК	ОК	ОК		ОК	ОК
5	Spacer for height adjustment	ОК	_	ОК	ОК		ОК
6	Air discharge direction kit	ОК	ОК	ОК	ОК	ОК	

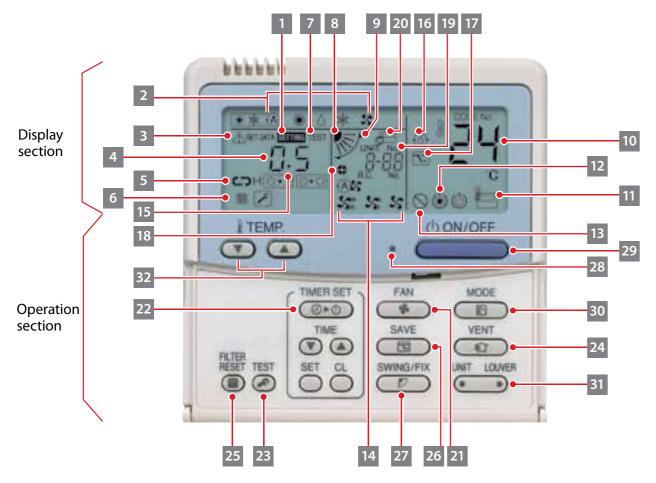
	ccessory for concealed duct type:	1	2	3	4	5	6	7	9	
C	ombination pattern	For rear suction			For underside suction					
		High- efficiency filter 65 (For rear suction)	High- efficiency filter 90 (For rear suction)	Filter chamber (for rear suction)	High- efficiency filter 65 (for underside suction)	High- efficiency filter 90 (for underside suction)	Ceiling panel (half panel for underside suction)	Suction canvas (for underside suction)	Filter kit for underside*	
1	High-efficiency filter 65 (for rear suction)		_	ОК	_	_	_	_	_	
2	High-efficiency filter 90 (for rear suction)	_		ОК	_	_	_	_	_	
3	Filter chamber (for rear suction)	ОК	ОК		_	_	_	_	_	
4	High-efficiency filter 65 (for underside suction)	_	_	_		_	ОК	ОК	ОК	
6	High-efficiency filter 90 (for underside suction)	_	_	_	_		ОК	ОК	ОК	
7	Ceiling panel (half panel for underside suction)	_	_	_	ОК	ОК		ОК	ОК	
8	Suction canvas (for underside suction)	_	_	_	ОК	ОК	ОК		ОК	
9	Filter kit for underside*	_	_	_	ОК	ОК	ОК	ОК		

^{*} In case of underside, Filter kit is required accessory

	Accessory for concealed duct high static	1	2	3	4	5
	oressure type/fresh air intake indoor unit ype: combination pattern	High-efficiency filter 65	High-efficiency filter 90	Long life prefilter	Filter chamber	Drain pump kit
1	High-efficiency filter 65		_	ОК	ОК	ОК
2	High-efficiency filter 90	_		ОК	ОК	ОК
7	Long life prefilter	ОК	ОК		ОК	ОК
8	Filter chamber	ОК	ОК	ОК		ОК
9	Drain pump kit	ОК	ОК	ОК	ОК	

> Remote Controller

RBC-AMT32E



Display section

SETTING display
Displayed during setup of the timer, etc.

Operation mode select display The selected operation mode is displayed.

CHECK display
Displayed while the protective device works or a problem occurs.

Timer time display
Time of the timer is displayed. (When a problem occurs, the check code is displayed)

Timer SET IN setup display
When pushing the Timer SET IN button, the display of the timer is selected in order of [OFF] $\bigcirc \cdot \bigcirc \rightarrow \bigcirc \bigcirc$ [OFF] repeat OFF timer \rightarrow [ON] $\bigcirc \cdot \bigcirc$ → No display.

Filter display

If "FILTER III" is displayed, clean the air filter.

7 TEST run display Displayed during a test run.

8 Louver position display Displays louver position

Operation section

Selects the desired air volume mode.

TIMER SET button is used when the timer is set up.

During normal operation, do not use this button.

24 Substitution (Ventilation button) Ventilation button is used when a fan which is sold separately is connected. •If "No function ○" is displayed on the remote controller when pushing the Ventilation button, a fan is not connected.

25 button (Filter reset button) Resets (Erases) "FILTER " display. 9 SWING display Displayed during up/down movement of the

Set up temperature display
The selected set up temperature is displayed.

emote controller sensor display Remote controller sensor of the remote controller is used.

PRE-HEAT display
Displayed when the heating operation starts or defrost operation is carried out While this indication is displayed, the indoor fan

No function display
Displayed if there is no function even if the button is pushed.

Air volume select display
The selected air volume mode is displayed.
(AUTO) (AUTO) (HIGH) (AUTO) (MED.) (LOW)

Louver Number display (example: 01, 02, 03, 04)

Dry operation in self-cleaning function
Displayed during dry operation in self-cleaning function

Power-saving mode display
Displayed during capacity saving mode by temporary peak-cut limiting the power current level of the outdoor unit.

Louver lock display
Displayed when there is a louver-locked unit in the group (including 1 indoor unit by

1 outdoor unit).

Unit Number display
Unit number of the indoor unit selected with the unit select button or abnormal indicate the indoor/outdoor unit.

Central control display
Displayed when the air conditioner is used under the central control in combination with a central control remote controller.

In case the remote controller is disabled by the central control system, flashes 🗗. The button operation is not accepted.

Even when you push ON/OFF, MODE, or TEMP. button, and the button operation is not accepted (Settings made by the remote controller vary with the central control mode. For details, refer to the Owner's Manual of the central control remote controller.)

button (Air volume select button)

button (Timer set button)

button (Check button) The CHECK button is used for the check operation.

26 SAVE button

(Power-save operation) SAVE button is used for power-save operation.

swing/fix
button 27 ____button (Swing/Wind direction button) Selects automatic swing or setting the louver

Operation lamp Lamp is lit during operation. Lamp is off when stopped.

The lamp flashes when operating the protection device or abnormal time.

ON/OFF button button
When the button is pushed, operation starts, and When operation has stopped, the operation lamp and all the displays disappear.

30 D button (Operation select button) Selects desired operation mode button

(Unit/Louver select button) Selects a unit number (left) and louver number

Selects an indoor unit when adjusting wind direction when multiple indoor units are controlled with one remote controller (4-way air discharge cassette type only)

Selects a louver when setting louver lock or wind direction adjustment independently.

32 (Set up temperature button) Adjusts the room temperature. Set the desired set temperature by pushing TEMP. ▼ or I TEMP. ▲.

Remote controller sensor

Usually the TEMP, sensor of the indoor unit senses the temperature. The temperature surrounding the remote controller can also be sensed.

For details, contact the dealer from which you have purchased the air conditioner.

RBC-AMS41E



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-AS21E2

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



Remote sensor

TCB-TC21LE2

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



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
- *The wireless remote control cannot be connected to Concealed duct high static pressure type or Fresh air intake indoor unit type.



RBC-AX31U(W)-E/RBC-AX31U(WS)-E

Integral receiver (For 4-way air discharge cassette)



RBC-AX23UW(W)-E

Integral receiver

(For 2-way air discharge cassette)



RBC-AX22CE2

(For Ceiling, 1-way air discharge cassette (MMU-AP***2SH))



TCB-AX21E2

Stand alone receiver

(For 4-way air discharge cassette, Compact 4-way cassette (600 x 600), 2-way air discharge cassette, Ceiling, Concealed duct standard, Slim duct, Floor standing cabinet, Floor standing, 1-way discharge cassette (MMU-AP***1YH))



ON-OFF controller

TCB-CC163TLE2

- Individual control of up to 16 indoor units.
- Connection by 2 remote controllers is available.
- Setting of simultaneous ON/OFF 3 times per day combined with the weekly timer.





Central remote controller

TCB-SC642TLE2

- Individual control of up to 64 indoor units.
- Individual control for max. 64 indoor units divided into 1 to 4 zone (Up to 16 indoor units for each zone)
- Up to 16 outdoor header units are connectable
- 4 types of central control settings to inhibit individual operation by remote controller can be selected
- Setting for one of 1 to 4 zones is available
- Usable with other central control devices
- (Up to 10 central control devices in one control circuit)
- Two control mode selectivity

(Central controller mode) Remote controller mode

• 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
- Can program off mode by one-minute units



BMS-CM1280TLE, BMS-SM1280HTLE (Smart Manager)

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

Web Application (BMS-SM1280HTLE)

Network connection

Setting Schedule (ON/OFF, Setting temperature, operation mode and $\,$ Remote control Permit/Prohibit)

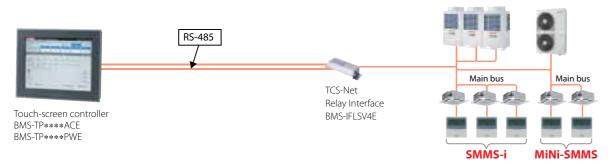
Error history electrical power distribution* external connection*

* PC necessary

TOSHIBA

> Air conditioning control systems

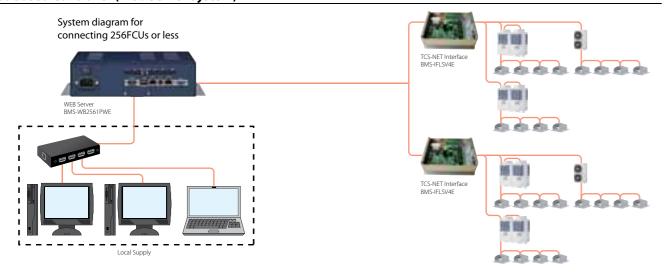
Touch-screen controller



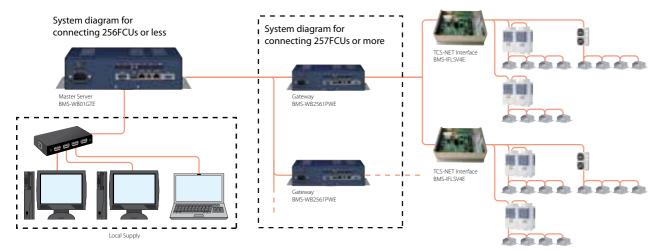
Compliant manager



Web Based Controller (Web Server System)



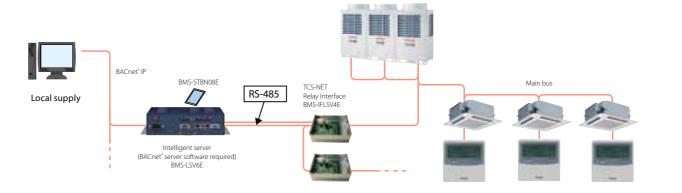
Web Based Controller (Master Server System)



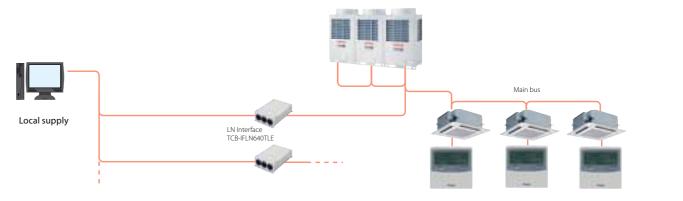
> Open network systems



BACnet® system



LonWorks®



Modbus®



Network Control

Touch-screen controller



Touch-screen Controller

BMS-TP0641ACE BMS-TP5121ACE BMS-TP0641PWE* BMS-TP5121PWE*

* With energy monitoring and billing

• Touch-screen controller

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

A maximum of 512 units are controllable using the one-touch controller.

• Energy monitoring and billing application

Power meter interface, power meter locally supplied Energy Monitoring relay I/F (BMS-IFWH5E)

Power Meter

(Local Supply)
1 kWh/pulse or 10 kWh/pulse
(Pulse duration 50 to 1000 ms)
(Maximum 8 power meter per interface)



Relay Interface BMS-IFWH5EFor Energy Monitoring

Relay Interface BMS-IFDD03E

For Digital I/O



Relay Interface BMS-IFLSV4E For TCS-NET

WEB Based Controller



WEB Based Controller BMS-WB2561PWE (Web Server/Gateway Server)



WEB Based Controller BMS-WE01GTE (Master Server)

•WEB Based Controller

Signals and provides the following functions:

- Operation monitoring
- Operation control
- Operation Schedule
- Operation display
- Error Code
- Alarm List
- Energy monitoring/Billing
- Digital I/O Signal Control

Connect the WEB server for every 256 indoor units, and connect a gateway server upstream from the server.



Relay Interface BMS-IFWH5EFor Energy Monitoring

Relay Interface BMS-IFDD03E

For Digital I/O



Relay Interface BMS-IFLSV4E For TCS-NET

BACnet® system



Intelligent Server BMS-LSV6E



BACnet® Server Software BMS-STBN08E

BACnet[®]

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

Object signals command

- ON/OFF
- Mode: cool/heat/fan
- Temperature setting
- Central/local
- Fan speedMonitoring
- ON/OFF etc.

Mode

- Cool/heat/fan/failure
- Temperature setting
- Room temperature
- Central/local, etc.



Relay Interface BMS-IFLSV4E For TCS-NET

LonWorks®



LN Interface TCB-IFLN640TLE

LonWorks® LN Interface

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

A maximum of 64 units are controllable per interface.

SNVT signal

Signals and provides the following functions:

Object signals command

- ON/OFF

- Central/local

Mode: cool/heat/fanTemperature setting

cool/heat/fan – ON/OFF

Mode

- Cool/heat/fan/failure

Monitorina

- Temperature setting
- Room temperature
- Central/local, etc.

<u>Modbus®</u>



Modbus Interface TCB-IFMB640TLE

Modbus[®]

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

Accessible to 64 units per one TCB-IFMB640TLE, 15 TCB-IFMB640TLEs on one Modbus® Master (prepared by user).

Signals and provides the following functions:

- ON/OFF
- Mode: cool/heat/fan
- Air flow/Louver setting
- Temperature setting
- Filter reset
- Accumulated operation time, etc.
- 1. LonWorks*: Registered trademark Echelon corporation
- 2. BACnet*: ANSI/ASHRAE 135-1995, A data Communication Protocol for Building Automation and Control Networks.
- 3. Modbus® is a registered trademark of Schneider E.



> Application controls

MADE IN JAPAN

TCB-PCDM4E



Size: 71×85 (mm)

P.C. board in the

inverter assembly of

the outdoor header

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 header outdoor unit.

• •





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.



* Install the optional P.C. board in the inverter assembly of the outdoor header unit.

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 mode.

TCB-PCIN4E



Size: 73 × 79 (mm)

* Install the optional

P.C. board in the inverter assembly of the outdoor header

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.

(i): Operation monitoring lamp

②: Error monitoring lamp

Operation monitoring: Display relay is ON with more than one indoor unit operation. EMG monitoring: Display relay is ON when the system is in error status.

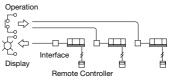
TCB-IFCB-4E2



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.



TCB-PCNT30TLE2



Size: 85 × 52 (mm) Install optional P.C. board in E-parts of the indoor unit.

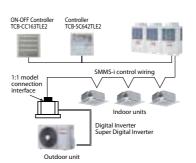
Network adapter

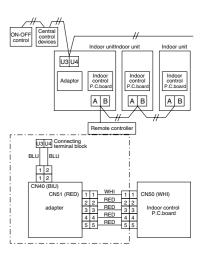
• Feature

Link adapter for "1:1 model" to enable connection to VRF system network.

1:1 model: Super digital inverter

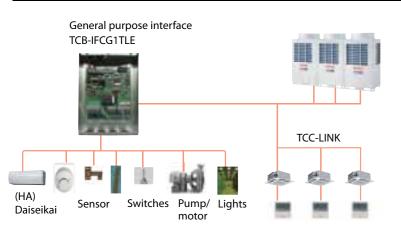
oder: Super digital inverter Digital inverter Used only for light commercial products







General Purpose Interface



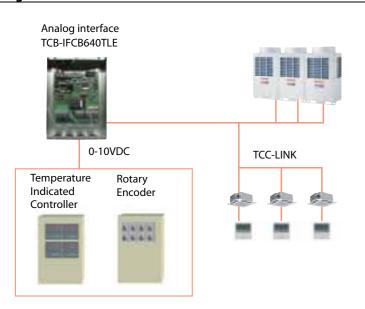
Concept

- · Controls the operation status of each indoor unit.
- ON/OFF control of peripheral equipment via the relay point of Toshiba's BMS. (1pt only)
- Provides 4-channel relay control, 6-channel digital input, 2-channel analog voltage input and output, and 2-channel temperature measurement functions via Modbus I/F.

Programmable conjunction function

Operation of specified indoor units can interlock with input signal.

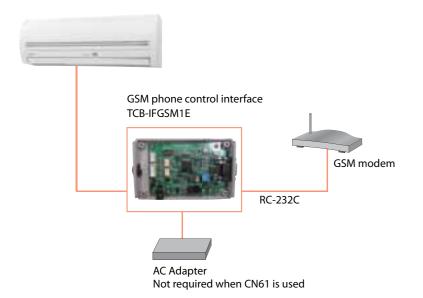
Analog Interface



Concept

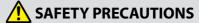
- Provides access to 64 indoor units.
- Does not require special network knowledge.
- Can control each indoor unit on TCC-LINK, (on/off, temperature setting, airflow volume, louver position), and monitor status based on 0-10V DC voltage input.
- Enables relay control and status monitoring of general-purpose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

GSM Phone Control Interface



Concep

- ON/OFF control and status monitoring of the air-conditioner via the SMS system of GSM mobile phones.
- Up to 5 mobile phone numbers can be registered for on/off control and status monitoring.
- Auto alarm transfer function for SMMS-i, SDI, DI.
- Up to 5 mobile phone numbers can be registered for an alarm signal output.



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 catalog 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

- (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.

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TOSHIBA AIR CONDITIONING

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

All features and specifications subject to change without prior

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

