TOSHIBA

SMMS∞

SUPER MODULAR MULTI SYSTEM

Customized for efficiency.
Customized to help you ace.

TOSHIBA AIR CONDITIONING

Better Air Solutions

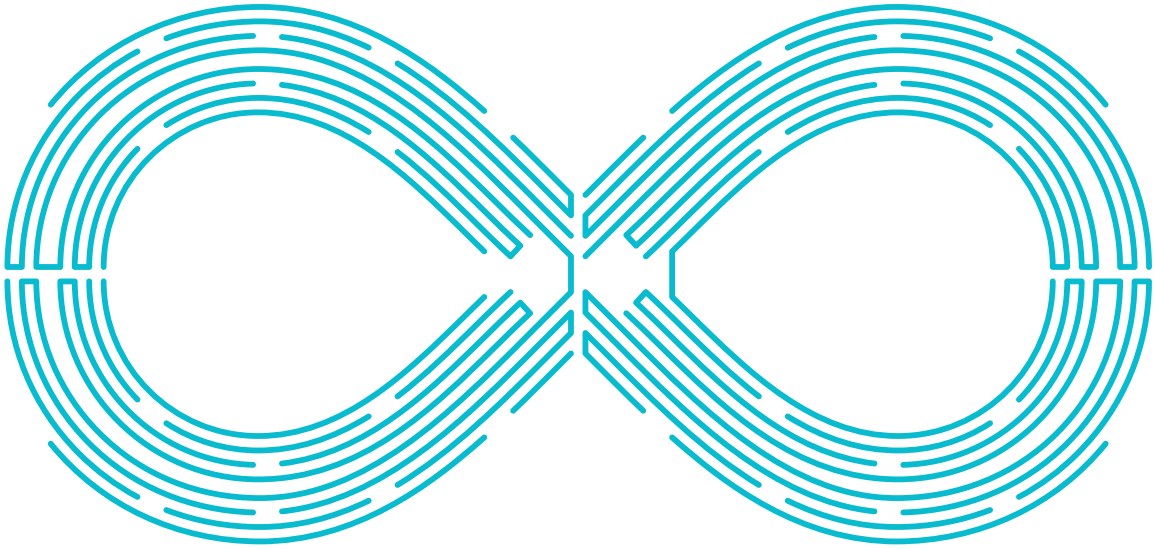
TOSHIBA
EXPERIENCE THE FUTURE SMMS∞

CUSTOMIZED FOR EFFICIENCY
CUSTOMIZED TO HELP YOU ACE

Discover the next generation of efficient and flexible VRF system for sustainable cooling. Engineered in Japan, the SMMS∞ integrates latest technological innovations and provides multiple customization options to achieve top-class efficiency and ensure unrivalled comfort.

SMMS∞
SUPER MODULAR MULTI SYSTEM

Enhanced Efficiency
Improved Flexibility
Superior Serviceability



Benefits for the consultants

SMMS∞ offers unlimited possibilities in terms of capacity, connectivity, indoor unit lineup and control solutions, providing the correct solution for your customers needs. Toshiba's intuitive selection tool will guide you through the selection process with minimal input from your side, ensuring trouble-free installation and operation.

Benefits for the users

There is nothing like a comfortable place to enjoy the present moment. Full of Toshiba innovations, the new SMMS∞ guarantees all year round comfort combined with superior energy management, advanced air filtration and full control solutions for maximized product usability.

Benefits for the installers

The brand new chassis of SMMS∞ is both compact and lightweight. This brand new design and technology make it easier for an installer to install SMMS∞. It needs simplified piping work, reduced additional refrigerant recharge, and simplified test runs. Therefore, the installer ace with this.

A BRAND NEW CHASSIS

Engineered in Japan, SMMS∞ integrates all the latest technological innovations from Toshiba to achieve top class efficiency and ensure unrivalled comfort.

Up to 26HP single module / 120HP combination

Simplified maintenance: Easy access to main internal components

Earthquake and typhoon Durability chassis

8 to 14HP

14A to 26HP

Strong static pressure: Up to 80Pa available

Compact chassis: Only 1,690mm height

Super-efficient: Full product height heat exchanger

UNIQUE ON THE MARKET: TWIN ROTARY COMPRESSOR

The exclusive Toshiba twin rotary compressor brings outstanding performance to SMMS∞ for enhanced system reliability.

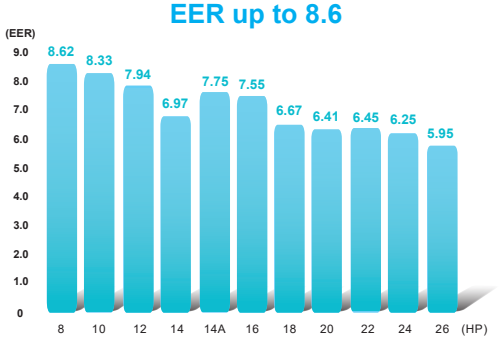
- Large capacity
- Wide operating range
- Low required refrigerant
- Low vibration
- DLC treatment

TOP CLASS EFFICIENCY

The SMMS∞ utilises new and improved highly efficient core technologies, resulting in greater energy efficiency and performance.

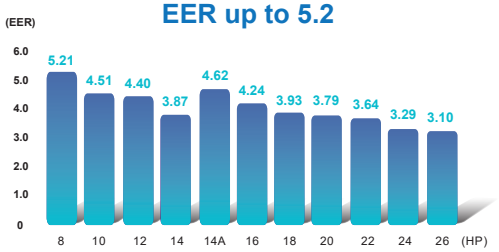
50% part load

EER up to 8.6



100% load

EER up to 5.2



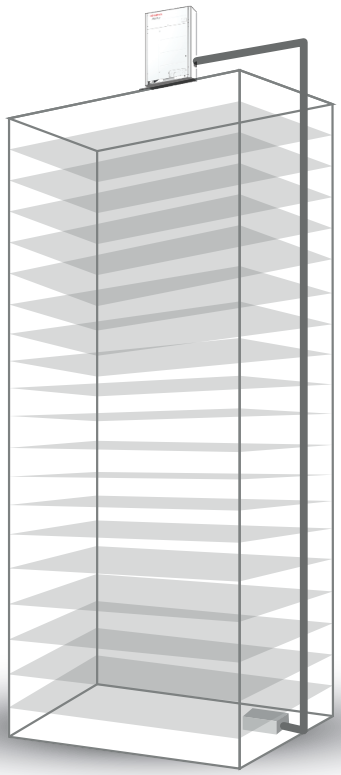
INFINITE FLEXIBILITY

The SMMS∞ exceeds the limits of VRF for maximised project coverage, resulting in a combination that offers options on efficiency, space, and cost. Whatever your requirement, SMMS∞ can be customized to deliver the best result for your project.

4,000 combinations patterns
Free combination

1,200m max
Long piping length

110m max
High piping lift



Up to 128 indoor
Large IDU connection

Max 120HP by 5 units connection
Large system capacity

Max 200% combination
High diversity

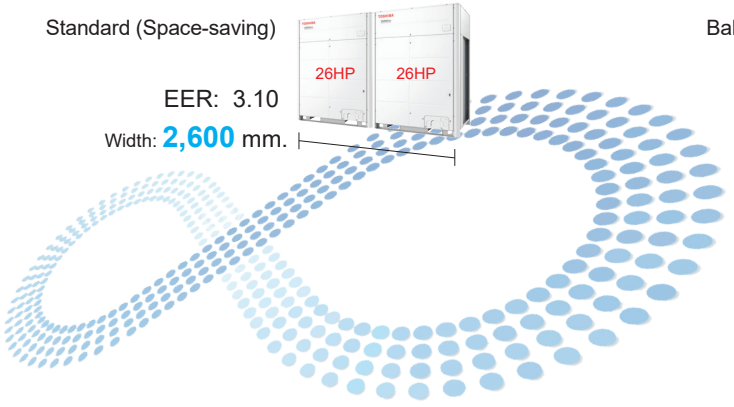
FLEXIBLE FREE COMBINATION

Unit combination can be customized to meet the installation site requirement.

Total **4000** combination pattern is available

Combinations examples - SMMS∞ 52HP
total 69 combinations

Standard (Space-saving)
EER: 3.10
Width: **2,600** mm.



Balance (Space-saving)
EER: 3.95
Width: **3,610** mm.

Balance (Moderate)
EER: 4.09
Width: **4,020** mm.

Max. Highest efficiency
EER: 4.87
Width: 5,630 mm.

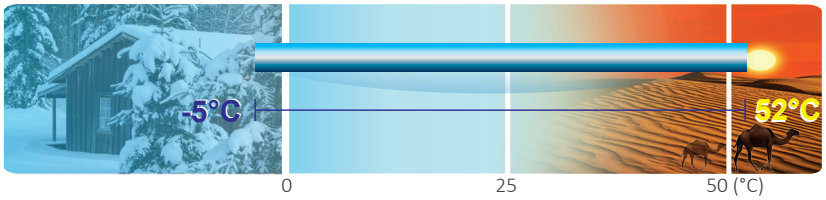
Balance efficiency
EER: 4.62
Width: 5,030 mm.

Note: Outdoor unit still should align from larger to smaller HP

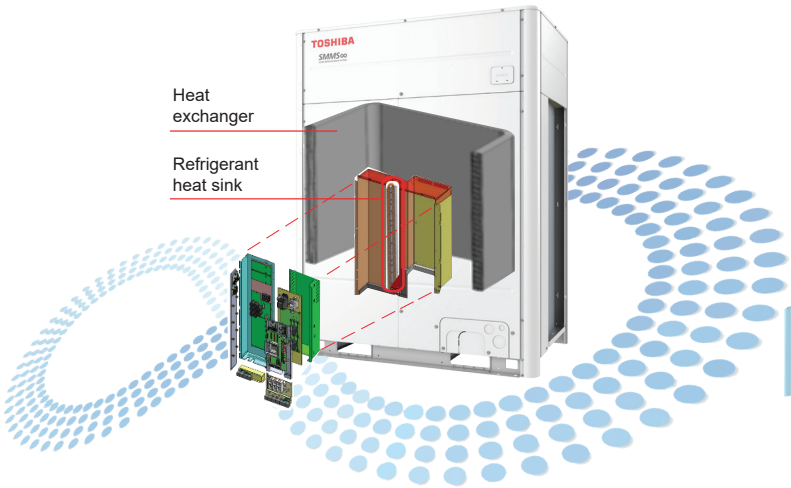
COMFORT ABOVE ALL

Ensuring occupants comfort is SMMS∞'s top priority. It can connect with a wide range of indoor units adapted to any room configuration. SMMS∞ offers the most accurate refrigerant flow management system.

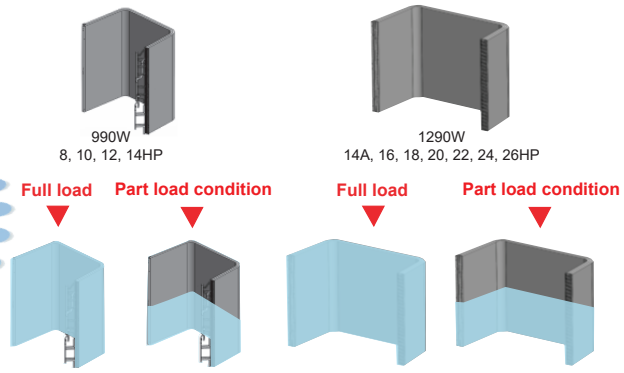
WIDE OPERATING TEMPERATURE RANGE



The refrigerant heat sink can bring down temperature of electronic parts.
By using this new function, SMMS∞ can operate in high ambient condition such as 52°C.



SMMS∞ can select optimal heat exchanger size based on operating mode, outdoor temp, and capacity load. It allows SMMS∞ to realize high efficiency, not only for full load operation but also for part load operation.



STRONG ADAPTABILITY

SMMS∞ integrates new features to adapt operations to local constraints with a constant target: the alliance of comfort and energy savings.

Splitted heat exchanger
Heat exchanger usage area automatically varies depending on workload, maximizing energy savings and system reliability.

Demand control
Smart Grid ready with remote or dry contact demand control function.

Auto backup function
Automatic backup in case of combinations systems failure.

Rotation drive
Smart control to automatically equalize compressor operating hours.

Sealed up inverter box
Inverter box is fully sealed up in order to avoid malfunction due to small animals.

Auto refrigerant charge
Automatic refrigerant charge to minimize installation workload.

INSTALLATION FLEXIBILITY

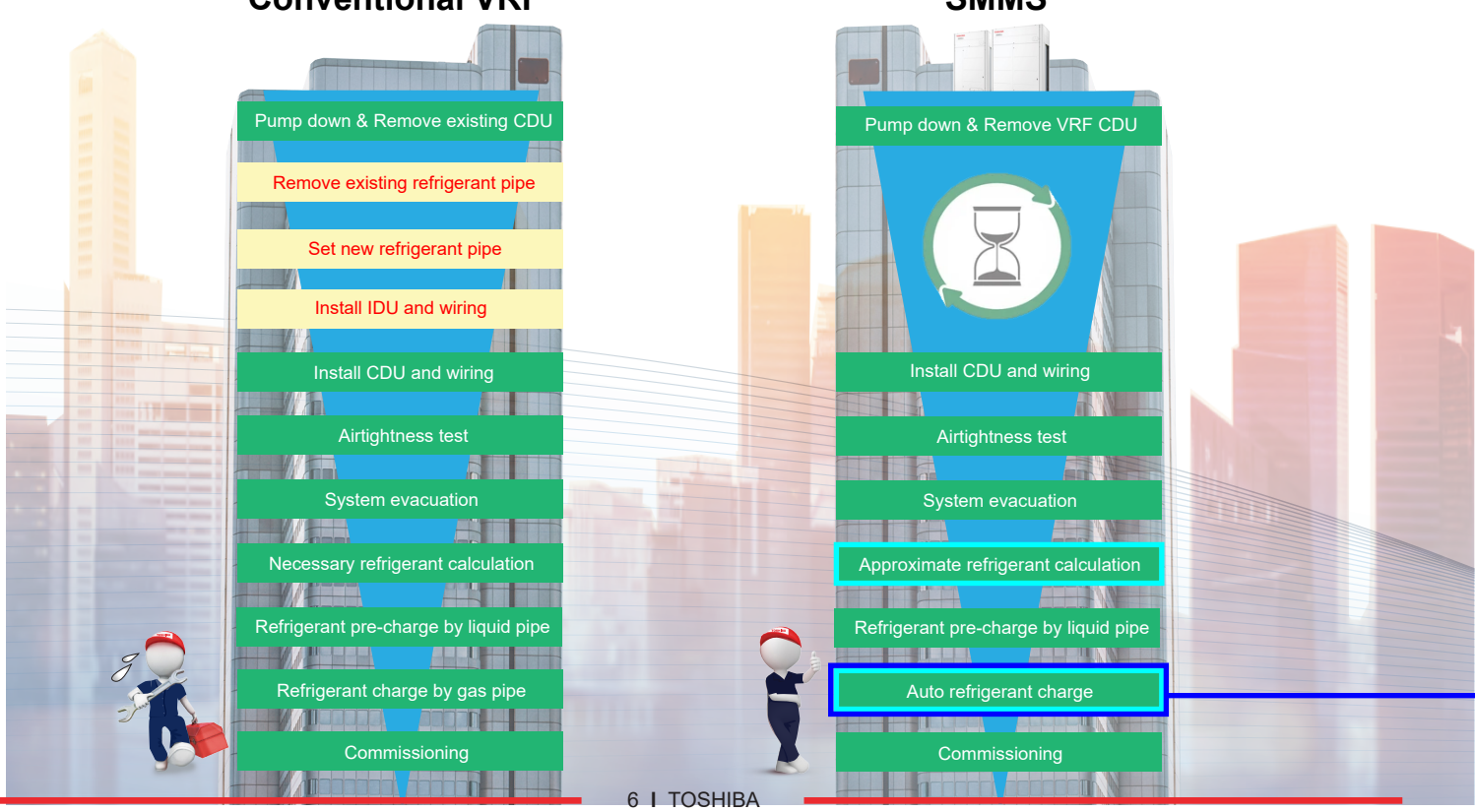
Reusable pipes and IDU

Toshiba SMMS∞ comes with the flexibility of reusing pipes and IDU of the existing VRF solution. This flexibility lets SMMS∞ replace any VRF solution in a shorter time. SMMS∞ is a cost-effective solution as it allows you to replace both IDU and ODU in different intervals.

Auto refrigerant charge

Auto refrigerant recharge helps when using the existing pipes, as the pipe length may not be unknown initially. It also helps recharge the refrigerant with more accuracy and reliability.

Since it is not required to know the refrigerant filling amount in advance, it helps effective time utilization of the service team and reduces the load.



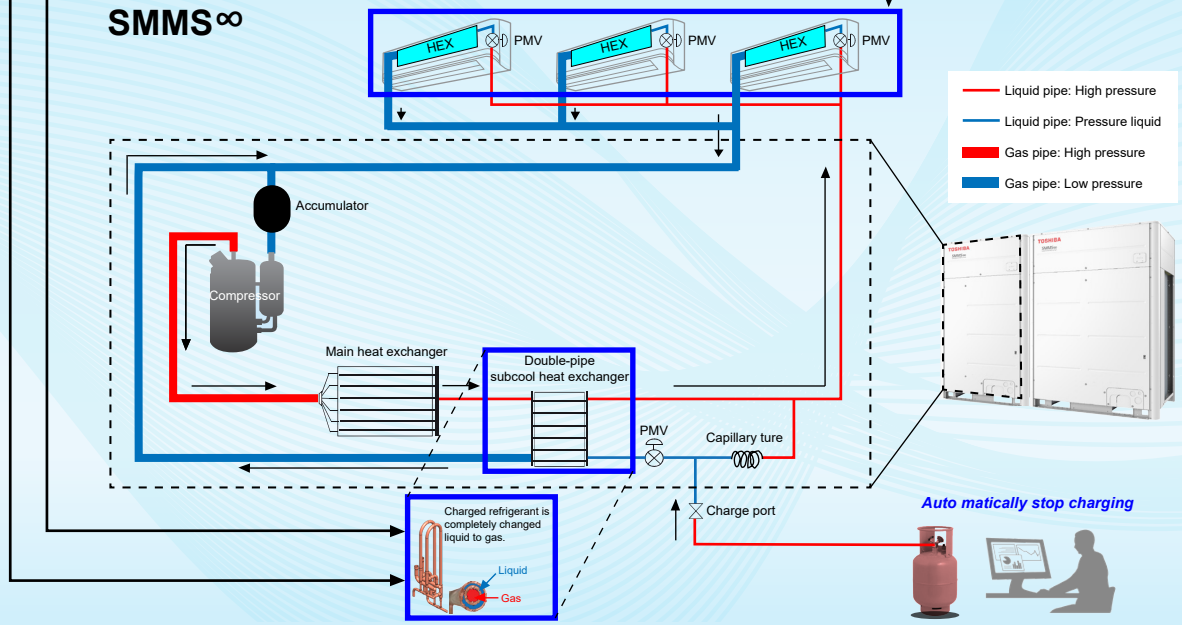
RELIABILITY

Toshiba SMMS∞ uses a "Double-pipe subcool heat exchanger" that transforms the charging refrigerant completely from liquid to gas phase. Therefore, even during high-speed refrigerant charge conditions, SMMS∞ reduces the risk of liquid compression.

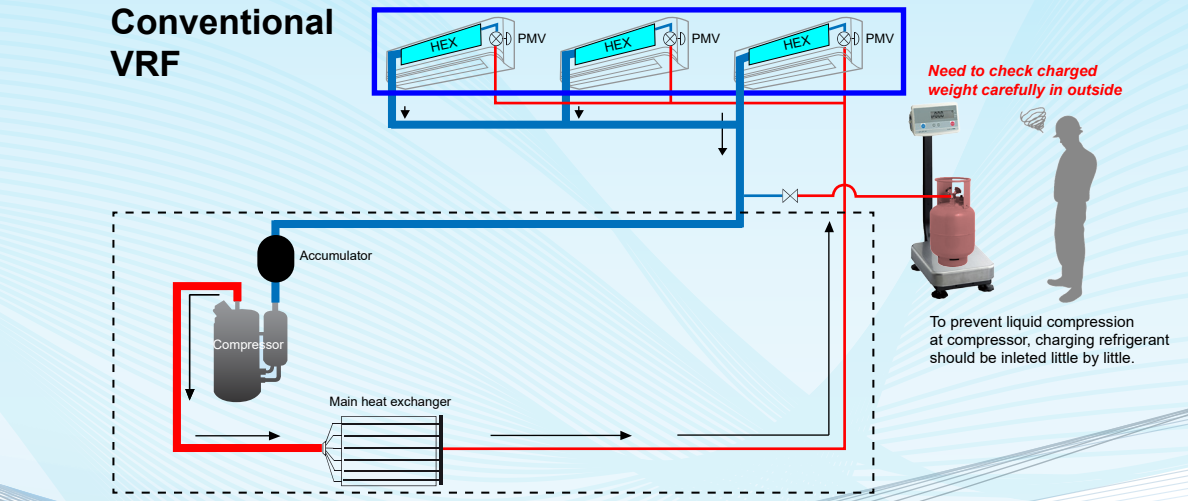
ACCURACY

Toshiba SMMS∞ senses temperature data through "Double-pipe subcool heat exchanger" and "IDU PMV condition" to identify the required refrigerant amount accurately.

SMMS∞



Conventional VRF



To prevent liquid compression at compressor, charging refrigerant should be inleted little by little.

MMY-MUP_1T8(J)P
SMMS∞

NEW

CAPACITY 8 HP ~ 120 HP

OPERATION -5°C ~ +52°C

With new chassis, new compressor, new heat exchanger, the SMMS∞, latest generation of Toshiba VRF, is customized for efficiency, customized to help you ace.

SMMS∞ Performances

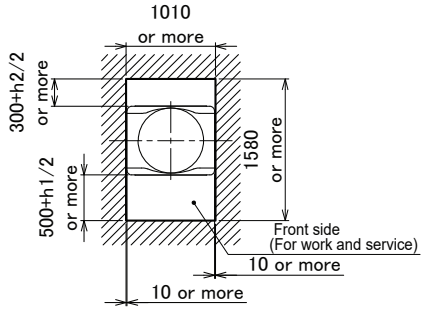
Outdoor unit	MMY-	MUP0801T8P	MUP1001T8P	MUP1201T8P	MUP1401T8P	MUP14A1T8P	MUP1601T8P	MUP1801T8P	MUP2001T8P	MUP2201T8P	MUP2401T8P	MUP2601T8P
Outdoor unit (Anti-Corrosion)	MMY-	MUP0801T8JP	MUP1001T8JP	MUP1201T8JP	MUP1401T8JP	MUP14A1T8JP	MUP1601T8JP	MUP1801T8JP	MUP2001T8JP	MUP2201T8JP	MUP2401T8JP	MUP2601T8JP
		8 HP	10 HP	12 HP	14 HP	14 HP	16 HP	18 HP	20 HP	22 HP	24 HP	26 HP
Cooling capacity	kW	**22.4**	**28.0**	**33.5**	**40.0**	**40.0**	**45.0**	**50.4**	**56.0**	**61.5**	**67.0**	**73.0**
Power input	kW	4.30	6.21	7.61	10.34	8.66	10.61	12.82	14.78	16.90	20.36	23.55
EER (Capacity 100%)	kW/kW	5.21	4.51	4.40	3.87	4.62	4.24	3.93	3.79	3.64	3.29	3.10
EER (Capacity 50%)	kW/kW	8.62	8.33	7.94	6.97	7.75	7.55	6.67	6.41	6.45	6.25	5.95
Running current	A	6.90	9.74	11.8	15.9	13.6	16.5	19.7	22.7	26.0	31.3	36.2
Maximum overcurrent protection		20	25	25	32	40	50	50	50	63	63	63

SMMS∞ Physical data

Outdoor unit	MMY-	MUP0801T8P	MUP1001T8P	MUP1201T8P	MUP1401T8P	MUP14A1T8P	MUP1601T8P	MUP1801T8P	MUP2001T8P	MUP2201T8P	MUP2401T8P	MUP2601T8P
Outdoor unit (Anti-Corrosion)	MMY-	MUP0801T8JP	MUP1001T8JP	MUP1201T8JP	MUP1401T8JP	MUP14A1T8JP	MUP1601T8JP	MUP1801T8JP	MUP2001T8JP	MUP2201T8JP	MUP2401T8JP	MUP2601T8JP
Air flow	m^3/h	9900	10500	11700	11880	13750	14300	14300	15200	16500	16500	18200
Sound power level	dB(A)	76.0	77.0	79.0	82.0	80.0	82.0	82.0	83.0	86.0	86.0	88.0
Sound pressure level	dB(A)	53.0	55.0	58.0	58.0	59.0	60.0	61.0	61.0	63.0	63.0	66.0
Number of fan	unit	1	1	1	1	1	1	1	1	2	2	2
External static pressure available	Pa	80	80	80	80	80	80	80	50	80	80	80
Dimensions (h x w x d)	mm	1690 x 990 x 780	1690 x 990 x 780	1690 x 990 x 780	1690 x 990 x 780	1690 x 1290 x 780	1690 x 1290 x 780	1690 x 1290 x 780	1690 x 1290 x 780	1690 x 1290 x 780	1690 x 1290 x 780	1690 x 1290 x 780
Weight	kg	223	223	223	223	294	294	294	294	329	329	329
Compressor type		Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary
Refrigerant charge R410A	kg	6.0	6.0	6.0	6.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Gas line type - diameter	mm	Brazing - 19.1	Brazing - 22.2	Brazing - 28.6	Brazing - 28.6	Brazing - 28.6	Brazing - 28.6	Brazing - 28.6	Brazing - 28.6	Brazing - 28.6	Brazing - 34.9	Brazing - 34.9
Liquid line type - diameter	mm	Brazing - 12.7	Brazing - 12.7	Brazing - 12.7	Brazing - 15.9	Brazing - 15.9	Brazing - 15.9	Brazing - 15.9	Brazing - 15.9	Brazing - 19.1	Brazing - 19.1	Brazing - 19.1
Farthest piping equivalent length	m	210	210	210	210	210	210	210	210	210	210	210
Farthest piping real length	m	190	190	190	190	190	190	190	190	190	190	190
Maximum total piping length	m	500	500	500	500	500	500	500	500	500	500	500
Maximum lift (indoor unit above/below)	m	40 / 110*1	40 / 110*1	40 / 110*1	40 / 110*1	40 / 110*1	40 / 110*1	40 / 110*1	40 / 110*1	40 / 110*1	40 / 110*1	40 / 110*1
Operating range - DB	°C	-5/52	-5/52	-5/52	-5/52	-5/52	-5/52	-5/52	-5/52	-5/52	-5/52	-5/52
Power supply	V-ph-Hz	400(380/415)-3-50	400(380/415)-3-50	400(380/415)-3-50	400(380/415)-3-50	400(380/415)-3-50	400(380/415)-3-50	400(380/415)-3-50	400(380/415)-3-50	400(380/415)-3-50	400(380/415)-3-50	400(380/415)-3-50

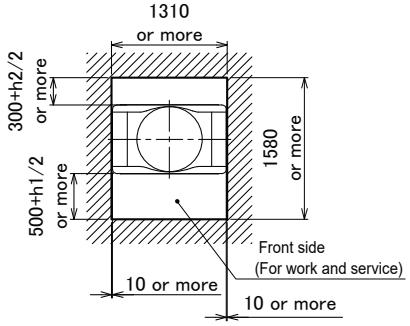
Installation space

MMY-MUP0801T8(J)P, MMY-MUP1001T8(J)P, MMY-MUP1201T8(J)P, MMY-MUP1401T8(J)P



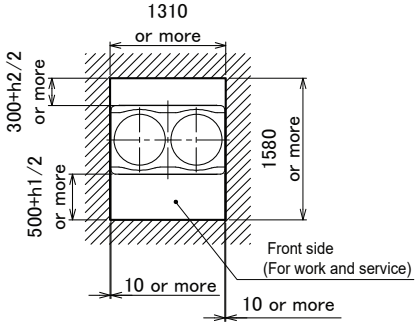
Space required for service

MMY-MUP14A1T8(J)P, MMY-MUP1601T8(J)P, MMY-MUP1801T8(J)P, MMY-MUP2001T8(J)P



Space required for service

MMY-MUP2201T8(J)P, MMY-MUP2401T8(J)P, MMY-MUP2601T8(J)P



Space required for service

Leave space necessary for running, installation and servicing.
- If there is an obstacle above the outdoor unit, leave a space of 2000 mm or more to the top end of the outdoor unit.
- If there is a wall around the outdoor unit, make sure that its height does not exceed 800 mm.

Capacity table

Capacity		Combination	Model	EER	Max Indoor connectivity	
HP	Cooling (kW)					
8	22.4	-	MMY-MUP0801T8(J)P	5.21	18	
10	28.0	-	MMY-MUP1001T8(J)P	4.51	22	
12	33.5	-	MMY-MUP1201T8(J)P	4.40	27	
14	40.0	-	MMY-MUP1401T8(J)P	3.87	31	
14	40.0	-	MMY-MUP14A1T8(J)P	4.62	31	
16	45.0	-	MMY-MUP1601T8(J)P	4.24	36	
18	50.4	-	MMY-MUP1801T8(J)P	3.93	40	
20	56.6	-	MMY-MUP2001T8(J)P	3.79	45	
22	61.5	-	MMY-MUP2201T8(J)P	3.64	49	
24	67.0	-	MMY-MUP2401T8(J)P	3.29	54	
26	73.5	-	MMY-MUP2601T8(J)P	3.10	58	
28	80.0	14 + 14	MMY-UP2811T8(J)P	3.90	63	
30	83.9	18 + 12	MMY-UP3011T8(J)P	4.10	64	
32	89.5	20 + 12	MMY-UP3211T8(J)P	4.00	65	
34	95.0	20 + 14	MMY-UP3411T8(J)P	3.90	66	
36	100.5	24 + 12	MMY-UP3611T8(J)P	3.60	67	
38	106.5	26 + 12	MMY-UP3811T8(J)P	3.40	68	
40	113.0	26 + 14	MMY-UP4011T8(J)P	3.30	69	
42	117.5	22 + 20	MMY-UP4211T8(J)P	3.70	70	
44	123.0	22 + 22	MMY-UP4411T8(J)P	3.60	71	
46	128.5	24 + 22	MMY-UP4611T8(J)P	3.50	72	
48	134.0	24 + 24	MMY-UP4811T8(J)P	3.30	73	
50	140.0	26 + 24	MMY-UP5011T8(J)P	3.20	74	
52	146.0	26 + 26	MMY-UP5211T8(J)P	3.10	75	
54	151.0	22 + 20 + 12	MMY-UP5411T8(J)P	3.80	76	
56	156.5	22 + 22 + 12	MMY-UP5611T8(J)P	3.80	77	
58	162.0	24 + 22 + 12	MMY-UP5811T8(J)P	3.60	78	
60	167.5	24 + 24 + 12	MMY-UP6011T8(J)P	3.50	79	
62	174.0	24 + 24 + 14	MMY-UP6211T8(J)P	3.40	80	
64	179.5	26 + 26 + 12	MMY-UP6411T8(J)P	3.30	81	
66	184.5	22 + 22 + 22	MMY-UP6611T8(J)P	3.60	82	
68	190.0	24 + 24 + 20	MMY-UP6811T8(J)P	3.40	83	
70	195.5	24 + 24 + 22	MMY-UP7011T8(J)P	3.40	84	
72	201.0	24 + 24 + 24	MMY-UP7211T8(J)P	3.30	85	
74	207.0	26 + 24 + 24	MMY-UP7411T8(J)P	3.20	86	
76	213.0	26 + 26 + 24	MMY-UP7611T8(J)P	3.20	87	
78	219.0	26 + 26 + 26	MMY-UP7811T8(J)P	3.10	88	
80	223.5	24 + 24 + 20 + 12	MMY-UP8011T8(J)P	3.60	90	
82	229.0	24 + 24 + 22 + 12	MMY-UP8211T8(J)P	3.50	92	
84	234.5	24 + 24 + 24 + 12	MMY-UP8411T8(J)P	3.40	94	
86	240.5	26 + 24 + 24 + 14	MMY-UP8611T8(J)P	3.40	96	
88	246.5	26 + 26 + 24 + 12	MMY-UP8811T8(J)P	3.30	98	
90	252.5	26 + 26 + 26 + 12	MMY-UP9011T8(J)P	3.20	100	
92	259.0	26 + 26 + 26 + 14	MMY-UP9211T8(J)P	3.20	102	
94	262.5	24 + 24 + 24 + 22	MMY-UP9411T8(J)P	3.40	104	
96	268.0	24 + 24 + 24 + 24	MMY-UP9611T8(J)P	3.30	106	
98	274.5	26 + 26 + 24 + 22	MMY-UP9811T8(J)P	3.30	108	
100	280.0	26 + 26 + 24 + 24	MMY-UP10011T8(J)P	3.20	110	
102	286.0	26 + 26 + 26 + 24	MMY-UP10211T8(J)P	3.10	112	
104	292.5	26 + 26 + 26 + 14 + 12	MMY-UP10411T8(J)P	3.30	114	
106	297.0	26 + 26 + 22 + 20 + 12	MMY-UP10611T8(J)P	3.40	116	
108	302.4	26 + 26 + 24 + 24 + 8	MMY-UP10811T8(J)P	3.30	118	
110	308.0	26 + 26 + 24 + 22 + 12	MMY-UP11011T8(J)P	3.40	120	
112	313.5	26 + 26 + 24 + 24 + 12	MMY-UP11211T8(J)P	3.30	122	
114	319.5	26 + 26 + 26 + 24 + 12	MMY-UP11411T8(J)P	3.20	124	
116	326.0	26 + 26 + 26 + 24 + 14	MMY-UP11611T8(J)P	3.20	126	
118	329.5	24 + 24 + 24 + 24 + 22	MMY-UP11811T8(J)P	3.40	128	
120	335.0	24 + 24 + 24 + 24 + 24	MMY-UP12011T8(J)P	3.30	128	

MMY-MUP_1T8(J)P
SMMS∞

Piping rules

			Allowable value	Piping section
Piping length	"Total extension of pipe (Liquid pipe, real length)"	Single ODU	500m	LA+LB+LC+La+Lb+Lc+Ld+Le+L1+L2+L3 +L4+L5+L6+L7+a+b+c+d+e+f+g+h+i+j
		Combination ODU	1200m (*6)	
	Farthest piping length (*1)	Equivalent length	250m	LA+LB+LC+Le+L1+L3+L4+L5+L6+j
		Real length	210m	
	Equivalent length of farthest piping form 1st branching (*1)		90m (*2)	L3 + L4 + L5 + L6 + j
	Equivalent length of farthest piping between outdoor units		40m	LA+LB+LC+Le(LA+LB+LC+Ld)
	Max. equivalent length of main piping	Equivalent length	120m (*3)	L1
		Real length	100m (*3)	
	Max. equivalent length of outdoor unit connecting piping		10m	Le(La, Lb, Lc, Ld)
	Max. real length of indoor unit connecting piping		30m	a, b, c, d, e, f, g, h, i, j
	Max. equivalent length between branches		50m	L2, L3, L4, L5, L6, L7
Difference in height	Height between indoor and outdoor units	Upper outdoor unit	70m (*4)(*7)	-
		Lower outdoor unit	40m (*5)(*8)	-
	Height between indoor units		50m (*9)	-
	Height between outdoor units		5m	-

(*1) : (e) is outdoor unit farthest from the 1st branch and (j) is the indoor unit farthest from the 1st branch.
(*2) : If the height difference (H1) between indoor and outdoor unit exceeds 3 m, set 65m or less.
(*3) : If the max. combined outdoor unit capacity is 54HP or more, then max. equivalent length is 70 m or less (real length is 50 m or less).
(*4) : If the height difference (H2) between indoor units exceeds 3 m, set 50 m or less.
(*5) : If the height difference (H2) between indoor units exceeds 3 m, set 30 m or less.
(*6) : Total charging refrigerant is 140kg or less.

(*7) : Extension up till 110m is possible with conditions below:
- Single outdoor unit system
- Connected ratio of indoor units to outdoor units is below 105%
- Liquid side is been increased 1 size from the standard size
- Height between indoor units is equal or less than 40 m.

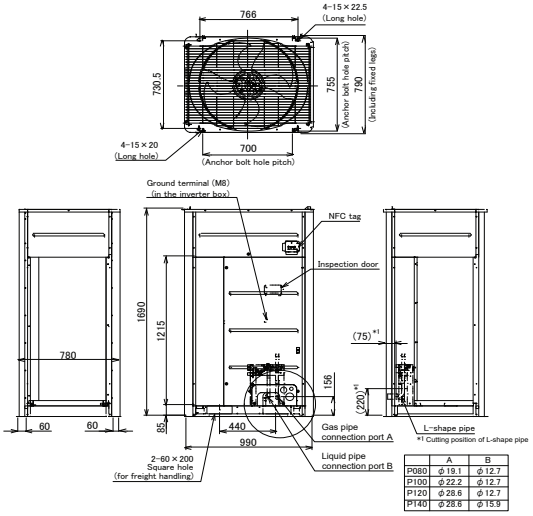
(*8) : Extension up till 110m is possible with conditions below :
- Height between indoor units is equal or less than 3 m.
- Connected ratio of indoor units to outdoor units is below 105%
- Minimum capacity of connecting indoor unit is more than 3HP

(*9) : If the connected ratio of indoor units to outdoor units is more than 105%, set 15 m.

Drawings

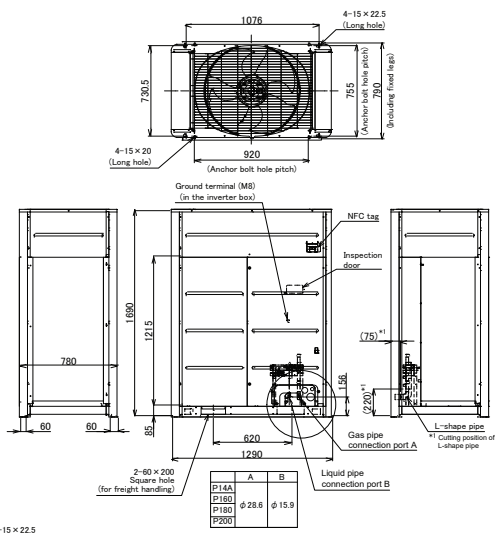
Unit : mm

MMY-MUP0801T8(J)P, MMY-MUP1001T8(J)P, MMY-MUP1201T8(J)P, MMY-MUP1401T8(J)P



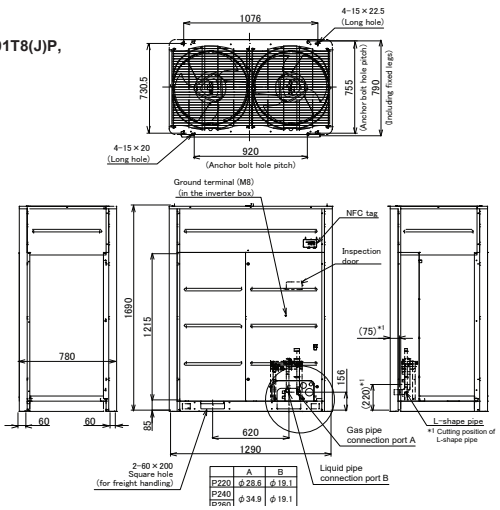
	A	B
P080	ϕ19.1	ϕ12.7
P100	ϕ22.2	ϕ12.7
P120	ϕ28.6	ϕ12.7
P140	ϕ28.6	ϕ15.9

MMY-MUP14A1T8(J)P, MMY-MUP1601T8(J)P, MMY-MUP1801T8(J)P, MMY-MUP2001T8(J)P



	A	B
P14A P160 P180 P200	ϕ28.6	ϕ15.9

MMY-MUP2201T8(J)P, MMY-MUP2401T8(J)P, MMY-MUP2601T8(J)P



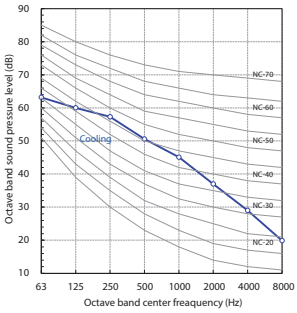
	A	B
P220	ϕ28.6	ϕ19.1
P240	ϕ34.9	ϕ19.1
P260		

Sound pressure levels

Unit : dB(A)

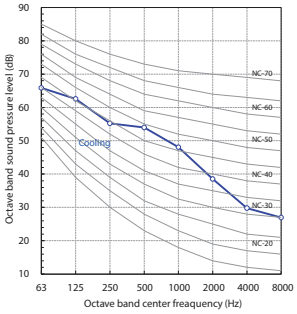
MMY-MUP0801T8(J)P

Sound pressure Level (dB(A))	Cooling
	53.0



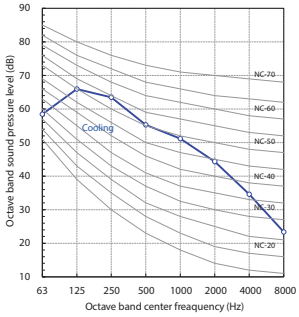
MMY-MUP1001T8(J)P

Sound pressure Level (dB(A))	Cooling
	55.0



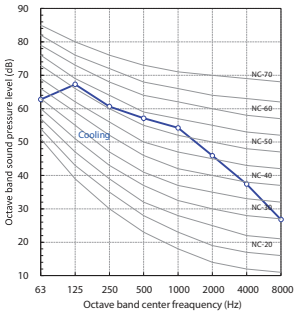
MMY-MUP1201T8(J)P, MMY-MUP1401T8(J)P

Sound pressure Level (dB(A))	Cooling
	58.0



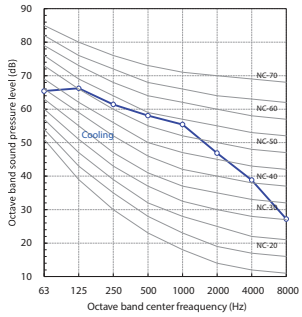
MMY-MUP14A1T8(J)P

Sound pressure Level (dB(A))	Cooling
	59.0



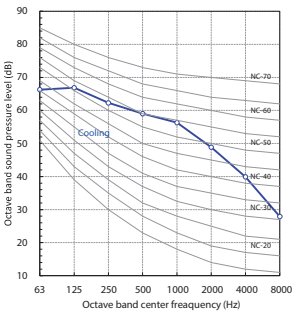
MMY-MUP1601T8(J)P

Sound pressure Level (dB(A))	Cooling
	60.0



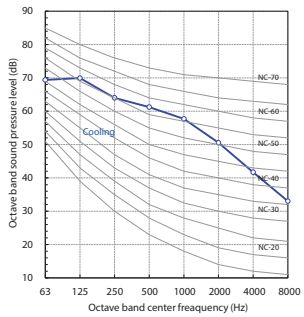
MMY-MUP1801T8(J)P, MMY-MUP2001T8(J)P

Sound pressure Level (dB(A))	Cooling
	61.0



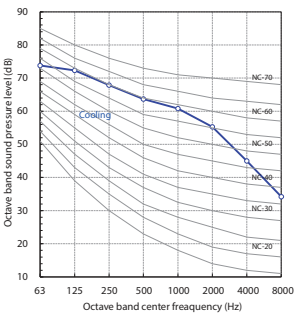
MMY-MUP2201T8(J)P, MMY-MUP2401T8(J)P,

Sound pressure Level (dB(A))	Cooling
	63.0



MMY-MUP2601T8(J)P

Sound pressure Level (dB(A))	Cooling
	66.0



Night mode sound pressure levels

Sound reduction and approximation capacity (reference)

Type	"Night operation sound reduction dB (A)"	Cooling capacity
801	50	85%
1001	50	70%
1201	50	60%
1401	50	60%
14A1	53	70%
1601	53	70%
1801	54	65%
2001	54	60%
2201	52	55%
2401	53	55%
2601	53	55%

Condition: Cooling: (Indoor 27°DB, 19°WB) - (Outdoor temperature 25°DB)

	Name	Model name	Capacity	Appearance	Remarks
Branching joints and headers	Y-shape branching joint	RBM-BY55E	under 6.4HP		
		RBM-BY105E	from 6.4 to 14.2HP		
		RBM-BY205E	from 14.2 to 25.2HP		
		RBM-BY305E	from 25.2 to 61.2HP		
		RBM-BY405E	61.2HP or more		
	4-branching header	RBM-HY1043E	under 14.2HP		
		RBM-HY2043E	from 14.2 to 25.2HP		
	8-branching header	RBM-HY1083E	under 14.2HP		
		RBM-HY2083E	from 14.2 to 25.2HP		
	Branching joint for connection of outdoor units	RBM-BT14E	under 26HP		
		RBM-BT24E	from 26HP to 62HP		
		RBM-BT34E	62HP or more		
Optional PCB of outoor unit	Power peak-cut control board	TCB-PCDM4E			Limit capacity of the VRF outdoor unit at 85%, 75%, 70% or 60% load or stop it. Dry contact
	External master ON/OFF control board	TCB-PCMO4E			Dry contact
	Output control board	TCB-PCIN4E			Operation output : The operation indicator is on while any indoor unit in the system is operating. Error output : The error indicator is on when an error is occurred on even one of the indoor or outdoor units in the system. Dry contact

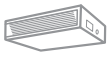
WIDE CHOICE
INDOOR UNITS

LARGE INDOOR UNIT LINE-UP

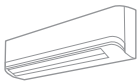
The wide range of indoor units help enhanced design flexibility and lower costs, ensuring efficiency in installing a perfect system.

- **18 different types of indoor units**
- **Capacity from 0.8 HP to 20 HP**
- **For cooling and fresh air production**


4-WAY CASSETTE


DUCTED


CEILING


HIGH WALL

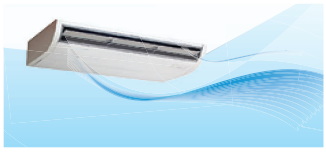

1-WAY CASSETTE


FRESH AIR SOLUTIONS

SUPERIOR AIR COMFORT

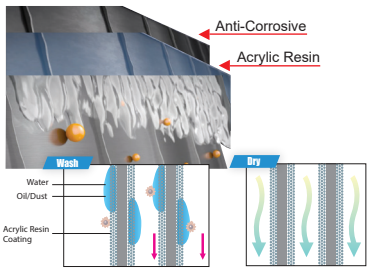
Cool comfort with soft cooling mode

The development of the soft cooling mode provides a new level of cooling to personalize the air flow intensity, angle and direction directly from the remote control and enjoy the indoor environment at the right temperature without being exposed to the direct cold draft.



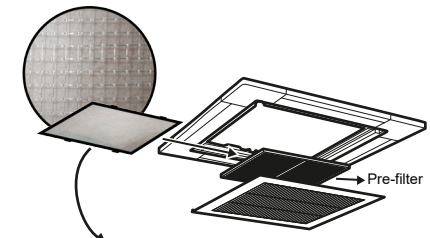
Special coated for IDU heat exchanger

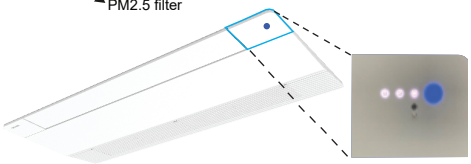
With a specially coated heat exchanger, Toshiba IDU provides odorless and fresh air always. This special coating enables the dust particles on the heat exchanger to be washed out along with condensed water.



Air purifier solution

Air purifier kit removes small particles by high-quality filter and Plasma solution. This new solution traps mold, pollen and PM2.5 particle by electrostatic force. Moreover, the users are notified of the air quality level by the LED indicator color.





Color	Blue	Green	Yellow	Red
Air quality category	GOOD	Moderate	Unhealthy	Very Unhealthy

Low consumption for low operation cost

Premium comfort doesn't mean high power consumption. By using DC motor, large air discharge surface and resin coating system, Toshiba reduces drastically the indoor unit power consumption.

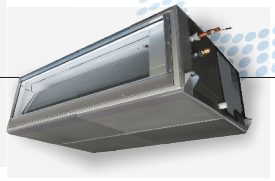
Example for Compact 4-Way Cassette (0.8HP)

	PCB	FAN	DRAIN	TOTAL
Low fan speed	4 W	6 W	3 W	13 W
Medium fan speed	4 W	7 W	3 W	14 W
High fan speed	4 W	9 W	3 W	16 W

CHOOSE YOUR ADAPTED SYSTEM SOLUTION

NEW indoor units

1-Way Cassette



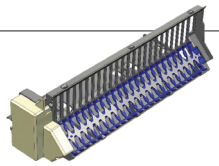
Fresh Air Intake

Dx-coil interface advance

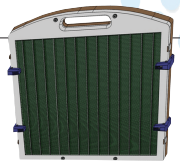
Zoning Airconditioning Unit

NEW Air purifier solution

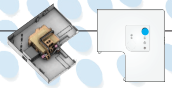
PM2.5 filter
4-Way Cassette



Air purifier kit
1-Way Cassette



Air purifier kit
4-Way Cassette



PM2.5 dust sensor
Air Quality Indicator

- Blue : Air quality “Good”
- Green : Air quality “Moderate”
- Yellow : Air quality “Unhealthy”
- Red : Air quality “Very Unhealthy”

SMMS∞ Indoor units

Model	(HP)	0.8	1.0	1.25	1.7	2.0	2.5	3.0	3.2	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0
	(kW)	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	16.0	22.4	28.0	34.0	40.0	45.0	50.4	56.0
4-way Cassette High performance MMU-UP_1H-E			■	■	■	■	■	■	■	■	■	■							
4-way Cassette MMU-UP_1HP-E			■	■	■	■	■	■	■	■	■	■							
Compact 4-way Cassette MMU-UP_1MH-E		■	■	■	■	■													
2-way Cassette MMU-UP_1WH-E		■	■	■	■	■	■	■	■	■	■	■							
1-way Cassette MMU-UP_1YHP-E		■	■	■	■	■	■	■											
Slim Duct MMD-UP_1SPHY-E		■	■	■	■	■	■	■											
Concealed Duct MMD-UP_1BHP-E		■	■	■	■	■	■	■	■	■	■	■							
Concealed Duct High Static Pressure MMD-UP_1HP-E(1)						■	■	■		■	■	■	■	■					
Fresh Air Intake MMD-UP_1HFP-E(1)											■		■	■	■	■			
Ceiling MMC-UP_1HP-E					■	■	■	■		■	■	■							
High Wall MMK-UP_1HP-E		■	■	■	■	■	■	■	■	■									
Zoning Airconditioning Unit MMZ-UP_1F/D			■																
Floor Standing Concealed MML-UP_1BH-E		■	■	■	■	■													
Floor Standing Cabinet MML-UP_1H-E		■	■	■	■	■	■												
Console MML-UP_1NHP-E		■	■	■	■	■	■												
Floor Standing MMF-UP_1H-E					■	■	■	■		■	■	■							
Large Capacity Floor Standing*1 MMF-AP_5(D)HP-VA/VB													■	■	■	■	■	■	■
Air-to-Air Heat exchanger with DX-coil *1 MMD-VN_2HEX1E(2)					■		■					■	■						
Dx-coil interface advance TCB-IFDMX01UP-E & RBM-A_1UPVA-E													■	■	■	■	■	■	■

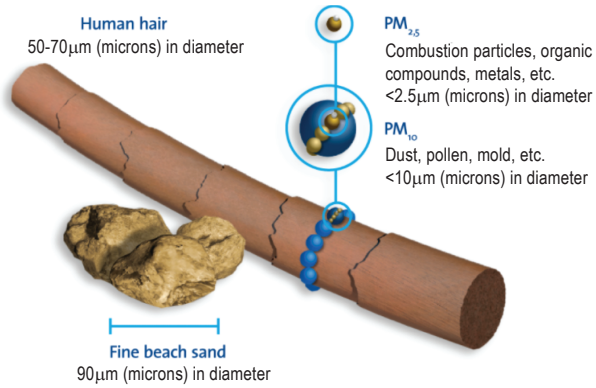
Model	Air flow in m3/h	150	250	350	500	650	800	1000	1500	2000
Air-to-Air Heat exchanger *1 VN-M_0HE		■	■	■	■	■	■	■	■	■

■ New chassis

*1: Because these models can support only old communication protocol, please communicate with local distributor if you want to connect these indoor units.

IAQ SOLUTION

PARTICLE SIZE OF PM2.5



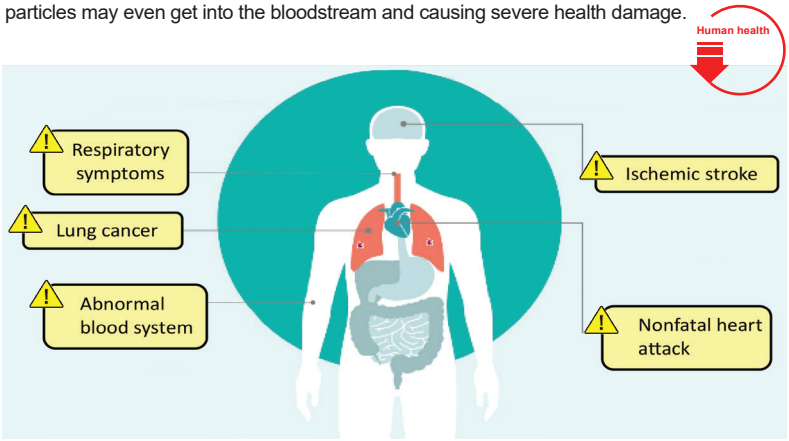
IMPACT FOR...

Impact for air conditioner

The accumulation of dust particles on the heat exchanger reduces the overall efficiency of air conditioners and air volume. It leads to poor indoor air quality and impacts the health of occupants. It also reduces the life span of the air conditioner.

Impact for human health

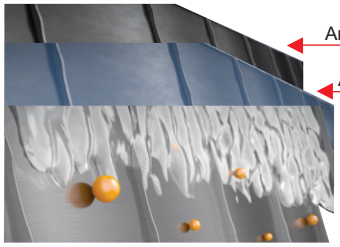
PM2.5 particles have risk to penetrate deep into the respiratory tract. Moreover, some particles may even get into the bloodstream and causing severe health damage.

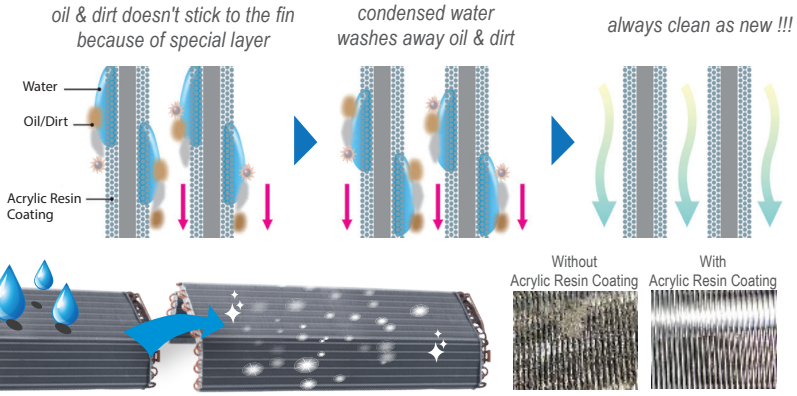


SOLUTION TO...

Solution to keep the heat exchanger of indoor unit stays clean always

Acrylic resin coated heat exchanger enables the dust particles on the fin to be washed out along with drain water. This keeps the heat exchanger always clean, with better cooling performance.

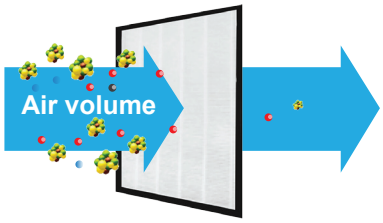




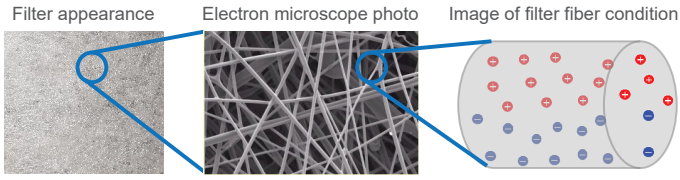
SOLUTION TO...

Solution to keep the indoor air clean

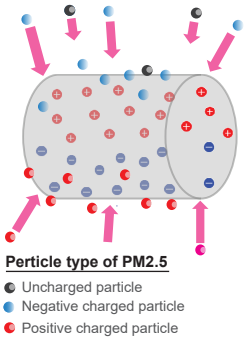
NEW PM2.5 filter

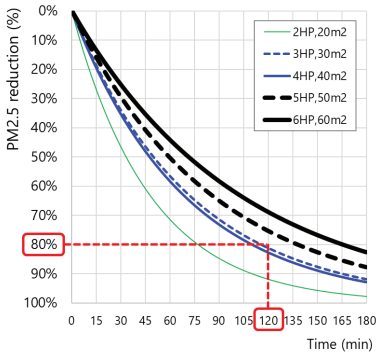


Air purifier performance	Satisfactory
Air volume	Satisfactory

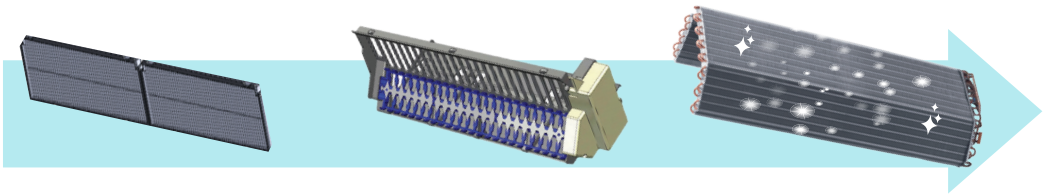


PM2.5 filter has "Electrostatic" solution.
Each fiber of PM2.5 filter captures PM2.5 particles by Electrostatic force, achieving effective filtration despite a thinner filter.





NEW Plasma Air purifier (1way cassette)



Pre-filter
Pre filter captures the large dust particles

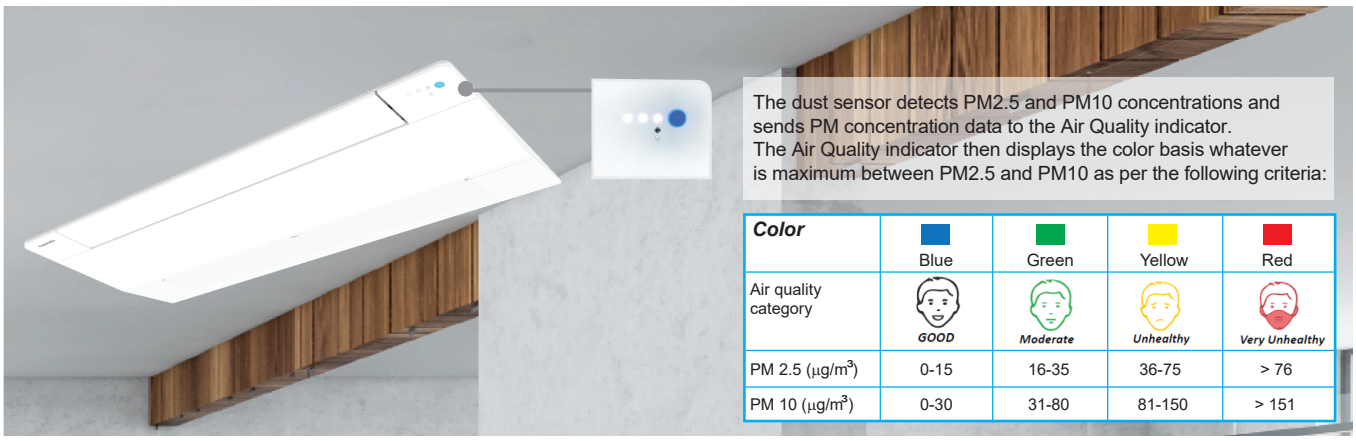
Plasma Air purifier

Resin coated heat exchanger
Due to the special coating on the heat exchanger, the pollutants do not accumulate and get drained out with condensing water.

Plasma ionizer forces impurities to adopt a negative electrical charge

Pollutants become negative charge

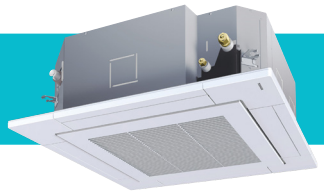
Negatively charged pollutants get attracted towards the heat exchanger.



The dust sensor detects PM2.5 and PM10 concentrations and sends PM concentration data to the Air Quality indicator.
The Air Quality indicator then displays the color basis whatever is maximum between PM2.5 and PM10 as per the following criteria:

Color	Blue	Green	Yellow	Red
Air quality category	GOOD	Moderate	Unhealthy	Very Unhealthy
PM 2.5 (μg/m³)	0-15	16-35	36-75	> 76
PM 10 (μg/m³)	0-30	31-80	81-150	> 151

MMU-UP_1H-E
4-WAY CASSETTE HIGH PERFORMANCE



High efficiency 4-Way Cassette, simple and elegant design which fits various indoor space. It has a unique flap style for optimal air distribution.

CAPACITY

1 HP ~ 6 HP

SOUND PRESSURE LEVEL

26 dB(A)

LOCAL CONTROLS

RBC-AXU41U-E

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

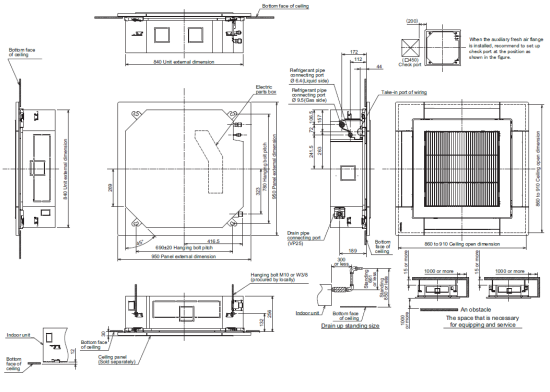
Features

Model name		MMU-	Standard									High efficiency	
			UP0091H-E	UP0121H-E	UP0151H-E	UP0181H-E	UP0241H-E	UP0271H-E	UP0301H-E	UP0361H-E	UP0481H-E	UP0561H-E	UP0092	UP0122
Capacity code		HP	1.0	1.25	1.7	2.0	2.5	3.0	3.2	4.0	5.0	6.0	1.0	1.25
Cooling capacity		kW	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	16.0	2.8	3.6
Electrical characteristics	Power supply		1-phase 230V (220-240V) 50Hz / 1-phase 220V (208-230V) 60Hz											
	Running current (50Hz/60Hz)	A	0.17/0.18		0.19/0.20	0.25/0.26	0.36/0.38	0.46/0.48	0.57/0.60	0.90/0.94	0.92/0.96	0.93/0.97	0.20/0.21	0.20/0.21
	Power consumption (50Hz/60Hz)	kW	0.020/0.020		0.018/0.018	0.026/0.026	0.042/0.042	0.054/0.054	0.068/0.068	0.125/0.125	0.135/0.135	0.137/0.137	0.023/0.023	0.023/0.023
	Starting current (50Hz/60Hz)	A	0.26/0.27		0.29/0.30	0.37/0.39	0.55/0.57	0.69/0.72	0.86/0.90	1.35/1.41	1.38/1.44	1.40/1.46	0.30/0.32	0.30/0.32
Appearance	Main unit		Heat-insulating material attached - Zinc hot dipping steel plate											
	Ceiling panel name		RBC-U41PG(W)-E											
	Panel color		Gran White (Munsell 5PB9/1)											
Outer dimensions	Main unit (HxWxD)	mm	256x840x840		319x840x840								256x840x840	
	Ceiling panel (HxWxD)	mm	30x950x950											
Total weight	Main unit	kg	18		25								20	
	Ceiling panel	kg	5											
Heat exchanger			Finned tube											
Soundproof / Heat-insulating material			Non-flammable insulation											
Fan unit	Fan		Turbo fan											
	Standard air flow (H/M/L)	m^3/h	846/768/708		1060/ 920/800	1260/ 1100/940	1580/ 1300/1120	1770/ 1380/1250	1940/ 1520/1400	2184/ 1596/1260	2262/ 1740/1368	2262/ 1782/1404	910/820/708	
	Motor output	W	60		130								60	
Sound pressure level (H/M/L)		dB(A)	30/28/26		32/30/28	36/33/31	41/37/35	42/37/35	44/39/37	45/38/32	46/39/33	46/40/35	35/33/30	
Sound power level		dB(A)	45		46	50	55	56	58	60	61	61	50	
Air filter			Standard filter supplied (Long life filter)											
Controller (Optional)			Wired or infrared remote controller											
Connecting pipe	Gas side	mm	9.5	9.5	12.7	12.7	15.9	15.9	15.9	15.9	15.9	15.9	9.5	9.5
	Liquid side	mm	6.4	6.4	6.4	6.4	9.5	9.5	9.5	9.5	9.5	9.5	6.4	6.4
	Drain port (nominal dia)	mm	25 (Polyvinyl chloride tube)											

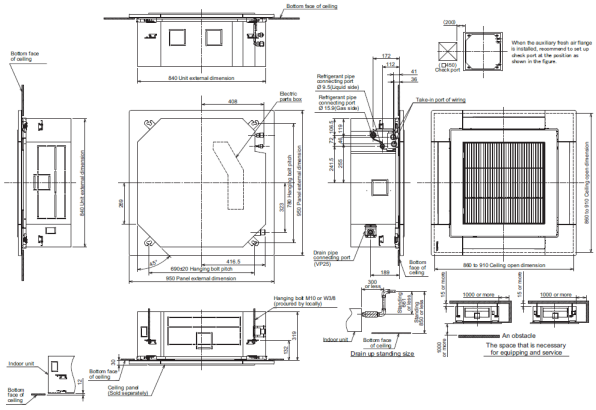
Drawings

Unit : mm

MMU-UP0091H-E to MMU-UP0121H-E
MMU-UP0092 to MMU-UP0122



MMU-UP0151H-E to MMU-UP0561H-E

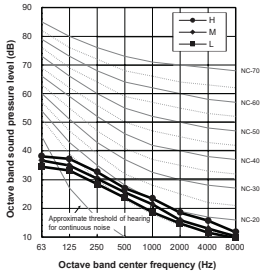


Sound pressure levels

Unit : dB(A)

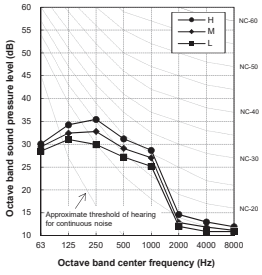
MMU-UP0091, 0121H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	30	28	26



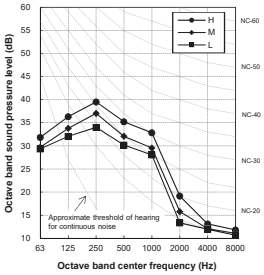
MMU-UP0151H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	33	31	29



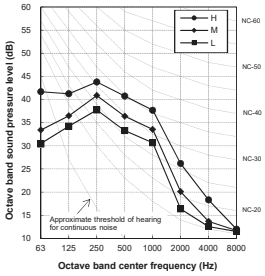
MMU-UP0181H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	37	34	32



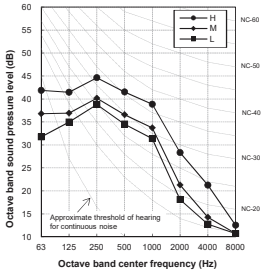
MMU-UP0241H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	42	38	35



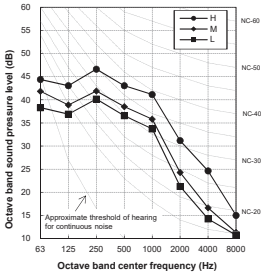
MMU-UP0271H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	43	38	36



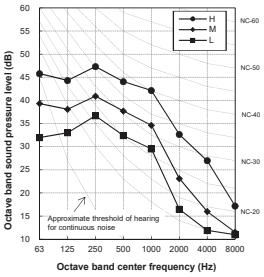
MMU-UP0301H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	46	40	38



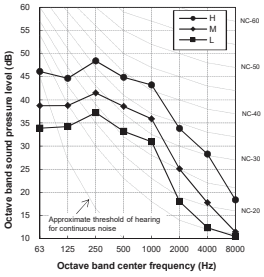
MMU-UP0361H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	46	39	34



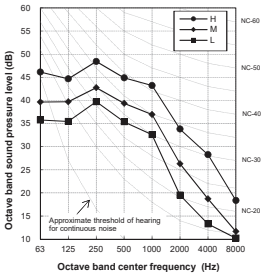
MMU-UP0481H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	47	40	35



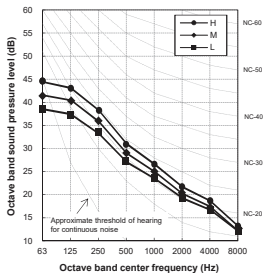
MMU-UP0561H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	47	41	37



MMU-UP0092, 0122

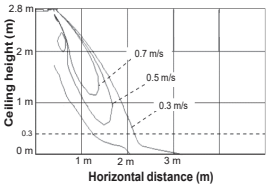
Fan tap	H	M	L
Sound pressure level (dB(A))	35	33	30



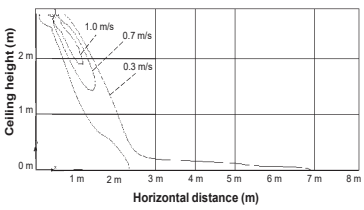
Air diffusion

Unit : m/s

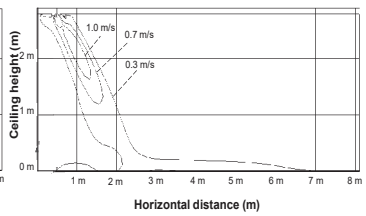
MMU-UP0091, 0121H-E
MMU-UP0092, 0122



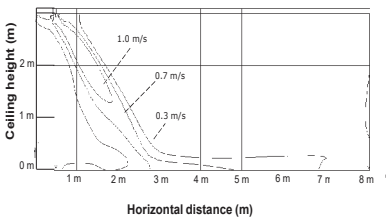
MMU-UP0151H-E



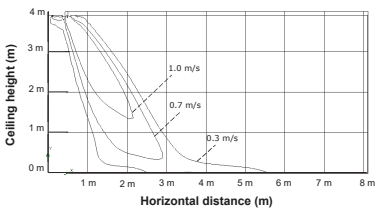
MMU-UP0181H-E



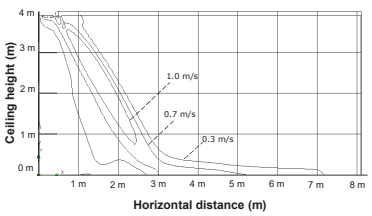
MMU-UP0241H-E



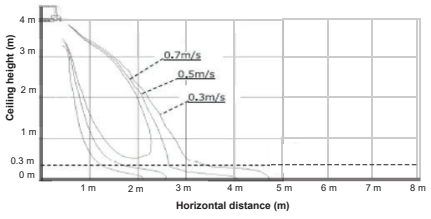
MMU-UP0271H-E



MMU-UP0301H-E



MMU-UP0361, 0481, 0561H-E



Accessories

No.	Part name	Model name	Applied model	Notes	Remarks
1	Ceiling panel	RBC-U41PG(W)-E	MMU-UP_1H-E	Required accessory	
2	Wireless remote controller	RBC-AXU41U-E		For Installing on panel	
3	Wireless remote controller	RBC-AXU31-E		For installing as stand alone	
4	Fresh air chamber	TCB-GFC1603UE			
5	Space for height adjustment	TCB-SP1603UE			
6	Air discharge direction kit	TCB-BC1603UE			
7	Occupancy sensor	TCB-SIR41U-E			

4-way cassette high performance connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	•	•	•	•	•

MMU-UP_1HP-E
4-WAY CASSETTE

The 4-Way Cassette is designed to provide uniform air distribution and total user comfort. It is ideal for small commercial applications.

CAPACITY

1 HP ~ 6 HP

SOUND PRESSURE LEVEL

27 dB(A)

LOCAL CONTROLS

RBC-AXU31-E
RBC-AXU31U-E

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

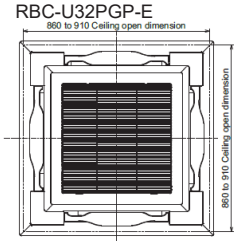
Features

Model name		MMU-	UP0091HP-E	UP0121HP-E	UP0151HP-E	UP0181HP-E	UP0241HP-E	UP0271HP-E	UP0301HP-E	UP0361HP-E	UP0481HP-E	UP0561HP-E
Capacity code		HP	1.0	1.25	1.7	2.0	2.5	3.0	3.2	4.0	5.0	6.0
Cooling capacity		kW	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	16.0
Electrical characteristics	Power supply		1-phase 230V (220-240V) 50Hz / 1-phase 220V (208-230V) 60Hz									
	Running current (50Hz/60Hz)	A	0.23/0.24		0.28/0.29	0.29/0.30	0.38/0.40	0.38/0.39	0.43/0.45	0.73/0.76	0.88/0.92	
	Power consumption (50Hz/60Hz)	kW	0.021/0.021		0.023/0.023	0.026/0.026	0.036/0.036		0.043/0.043	0.088/0.088	0.112/0.112	
	Starting current (50Hz/60Hz)	A	0.30/0.30		0.33/0.33	0.36/0.36	0.42/0.42		0.59/0.59	0.87/0.87	1.23/1.23	1.26/1.26
Appearance	Main unit		Heat-insulating material attached - Zinc hot dipping steel plate									
	Ceiling panel name		Standard panel: RBC-U32PGP-E / Smart panel: RBC-U33P-E									
	Panel color		Standard panel: White (Munsell: 2.5GY9.0/0.5) / Smart panel: Gran White (Munsell 5PB9/1)									
Outer dimensions	Main unit (HxWxD)	mm	256x840x840							319x840x840		
	Ceiling panel (HxWxD)	mm	30x950x950									
Total weight	Main unit	kg	18		20					25		
	Ceiling panel	kg	4									
Heat exchanger			Finned tube									
Soundproof / Heat-insulating material			Non-flammable insulation									
Fan unit	Fan		Turbo fan									
	Standard air flow (H/M/L)	m^3/h	800/730/680		930/830/790	1050/920/800	1290/920/800		1320/1100/850	1970/1430/1070	2130/1430/1130	2130/1520/1230
	Motor output	W	14				20			68	72	
Sound pressure level (H/M/L)		dB(A)	30/29/27		31/29/27	32/29/27	35/31/28		38/33/30	43/38/32	46/38/33	46/40/33
Sound power level		dB(A)	45		46	47	50		53	58	61	61
Air filter			Standard filter supplied (Long life filter)									
Controller (Optional)			Wired or infrared remote controller									
Connecting pipe	Gas side	mm	9.5	9.5	12.7	12.7	15.9	15.9	15.9	15.9	15.9	15.9
	Liquid side	mm	6.4	6.4	6.4	6.4	9.5	9.5	9.5	9.5	9.5	9.5
	Drain port (nominal dia)	mm	25 (Polyvinyl chloride tube)									

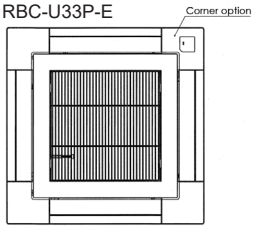
Drawings

Unit : mm

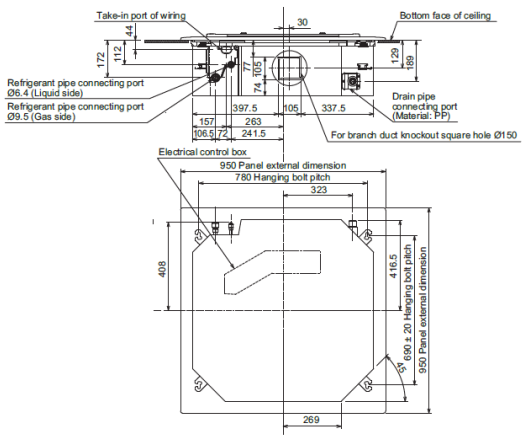
RBC-U32PGP-E



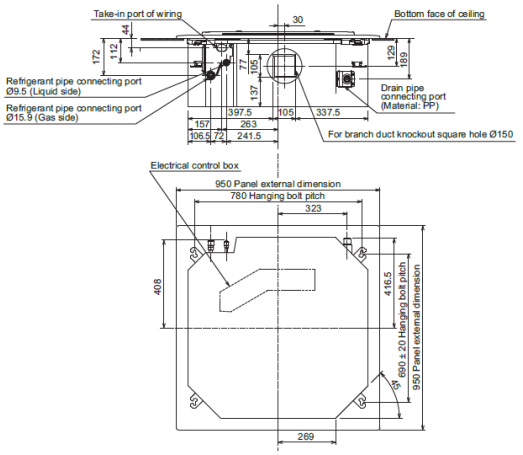
RBC-U33P-E



MMU-UP0091HP-E to MMU-UP0301HP-E



MMU-UP0361HP-E to MMU-UP0561HP-E

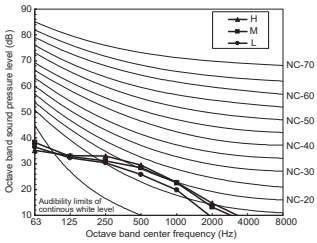


Sound pressure levels

Unit : dB(A)

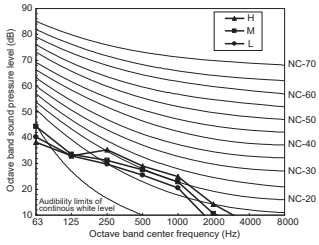
MMU-UP0091, 0121HP-E

Sound pressure level(dB)(A)	H-M-L
	30-29-27



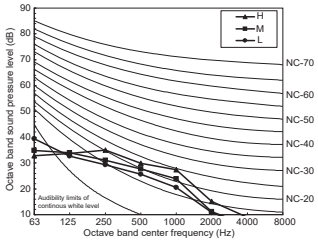
MMU-UP0151HP-E

Sound pressure level(dB)(A)	H-M-L
	31-29-27



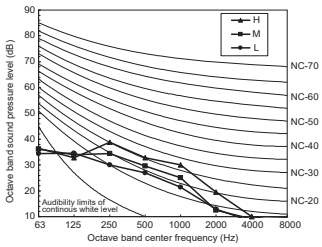
MMU-UP0181HP-E

Sound pressure level(dB)(A)	H-M-L
	32-29-27



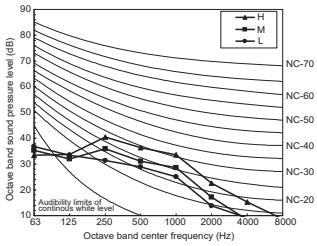
MMU-UP0241, 0271HP-E

Sound pressure level(dB)(A)	H-M-L
	35-31-28



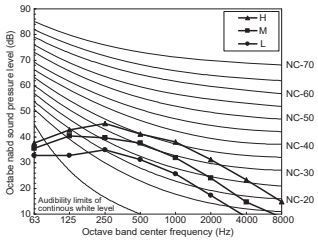
MMU-UP0301HP-E

Sound pressure level(dB)(A)	H-M-L
	38-33-30



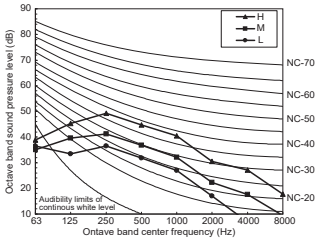
MMU-UP0361HP-E

Sound pressure level(dB)(A)	H-M-L
	43-38-32



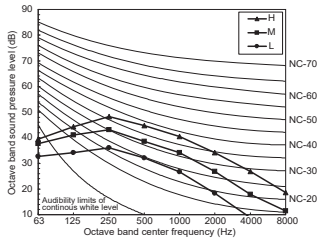
MMU-UP0481HP-E

Sound pressure level(dB)(A)	H-M-L
	46-38-33



MMU-UP0561HP-E

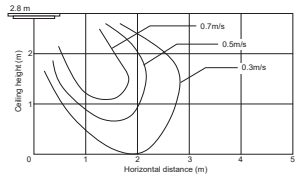
Sound pressure level(dB)(A)	H-M-L
	46-40-33



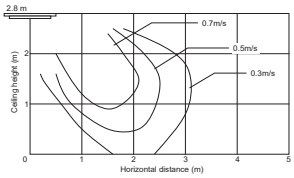
Air diffusion

Unit : m/s

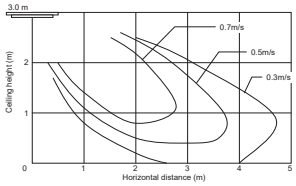
MMU-UP0091, 0121HP-E



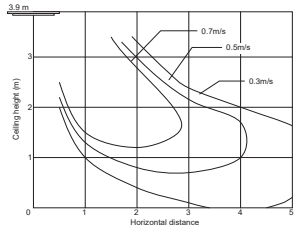
MMU-UP0151, 0181HP-E



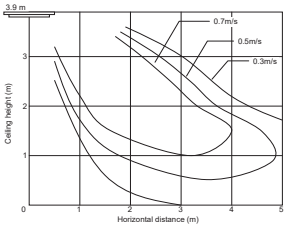
MMU-UP0241, 0271, 0301HP-E



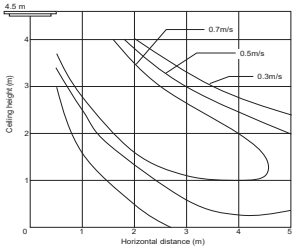
MMU-UP0361HP-E



MMU-UP0481, 0561HP-E



MMU-UP0361, 0481, 0561HP-E (High ceiling 3)



Accessories

No.	Part name	Model name	Applied model	Notes	Remarks
1	Ceiling panel (Wide-flow louver)	RBC-U32PGP-E	MMU-UP_1HP-E	Required accessory	
2	Ceiling panel (Smart design)	RBC-U33P-E		Required accessory	
3	Wireless remote controller	RBC-AXU31U-E		For Installing on panel	Use with RBC-U32PGP-E
4	Wireless remote controller	RBC-AXU31-E		For installing as stand alone	
5	Fresh air chamber	TCB-GFC1602UE			Use with TCB-GB1602UEE
6	Fresh air inlet box	TCB-GB1602UE		For fresh air intake by using the knockout hole of Fresh air and filter chamber. (dia.=100 mm)	Use with TCB-GFC1602UE
7	Auxiliary fresh air flange	TCB-FF101URE2		For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)	
8	Space for height adjustment	TCB-SP1602UE		Height 50 mm	
9	Air discharge direction kit	TCB-BC1602UE		Air direction change by cutting off air discharge port (3 pcs.)	
10	PM2.5 filter	TCB-PLFC1UPE-120		Before Pre-Filter type	
11	PM2.5 filter	TCB-PLFC2UPE-80		After Pre-Filter type	
12	Wireless remote controller	RBC-AXU33UP-E		*New product and coming soon	Use with RBC-U33P-E
13	Occupancy sensor	TCB-SIR33UP-E		*New product and coming soon	Use with RBC-U33P-E
14	Air purifier kit	TCB-EAPC1UCP-E		*New product and coming soon	Use with RBC-U33P-E

4-way cassette connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	TCB-PCUC2E PCB needed	•	•	•	•

MMU-UP_1MH-E
COMPACT 4-WAY CASSETTE

The Compact 4-Way Cassette is especially designed for office applications, where a compact and efficient solution is required.

CAPACITY

0.8 HP ~ 2 HP

SOUND PRESSURE LEVEL

29 dB(A)

LOCAL CONTROLS

RBC-AXU31-E
RBC-AXU31UM-E

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

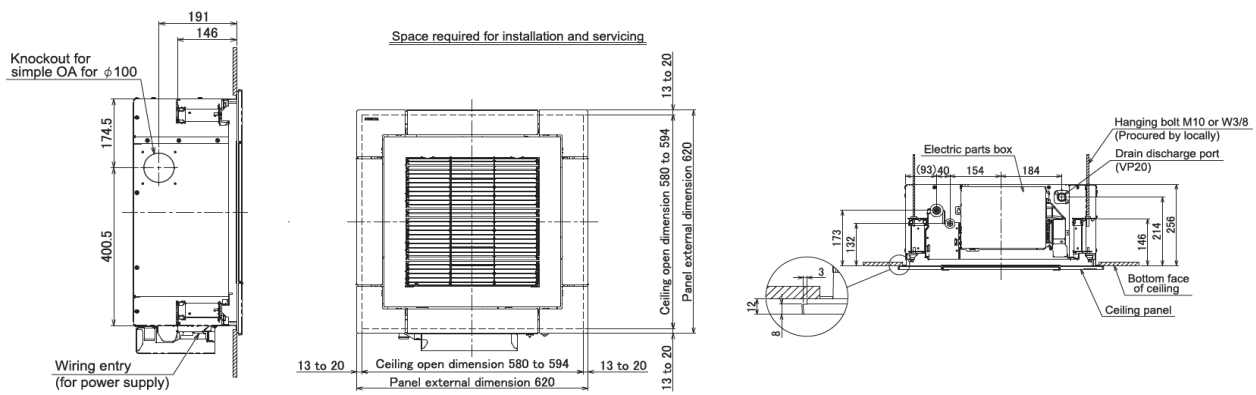
Features

Model name		MMU-	UP0071MH-E	UP0091MH-E	UP0121MH-E	UP0151MH-E	UP0181MH-E
Capacity code		HP	0.8	1.0	1.25	1.7	2.0
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6
Electrical characteristics	Power supply		1-phase 230V (220-240V) 50Hz / 1-phase 220V (208-230V) 60Hz				
	Running current (50Hz/60Hz)	A	0.23/0.23	0.24/0.24	0.25/0.25	0.28/0.26	0.46/0.46
	Power consumption (50Hz/60Hz)	kW	0.023/0.023	0.025/0.025	0.027/0.027	0.030/0.030	0.052/0.052
	Starting current (50Hz/60Hz)	A	0.41/0.41	0.43/0.43	0.44/0.44	0.50/0.47	0.80/0.81
Appearance	Main unit		Zinc hot dipping steel plate (Heat-insulating material attached to only upper plate)				
	Ceiling panel name		RBC-UM21PG(W)-E				
	Panel color		Gran White (Munsell 5PB9/1)				
Outer dimensions	Main unit (HxWxD)	mm	256x575x575				
	Ceiling panel (HxWxD)	mm	12x620x620				
Total weight	Main unit	kg	15				
	Ceiling panel	kg	2.5				
Heat exchanger			Finned tube				
Soundproof / Heat-insulating material			Non-flammable insulation				
Fan unit	Fan		Turbo fan				
	Standard air flow (H/M/L)	m^3/h	552/462/378	570/468/378	594/504/402	660/552/468	840/642/522
	Motor output	W	60				
Sound pressure level (H/M/L)		dB(A)	37/33/29	38/33/29	38/34/30	40/35/31	47/39/34
Sound power level		dB(A)	52	53	53	55	62
Air filter			Standard filter supplied (Long life filter)				
Controller (Optional)			Wired or infrared remote controller				
Connecting pipe	Gas side	mm	9.5	9.5	9.5	12.7	12.7
	Liquid side	mm	6.4	6.4	6.4	6.4	6.4
	Drain port (nominal dia)	mm	VP20 (Polyvinyl chloride tube)				

Drawings

Unit : mm

All model

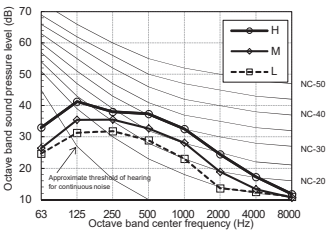


Sound pressure levels

Unit : dB(A)

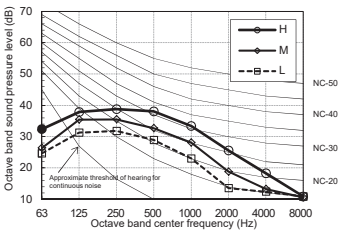
MMU-UP0071MH-E

Fan tap	H	M	L
Sound pressure level (dB(A))	37	33	29



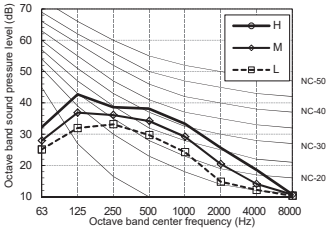
MMU-UP0091MH-E

Fan tap	H	M	L
Sound pressure level (dB(A))	38	33	29



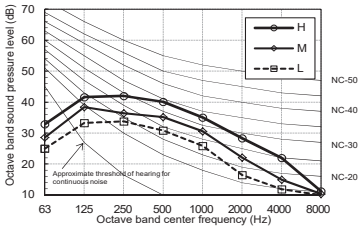
MMU-UP0121MH-E

Fan tap	H	M	L
Sound pressure level (dB(A))	38	34	30



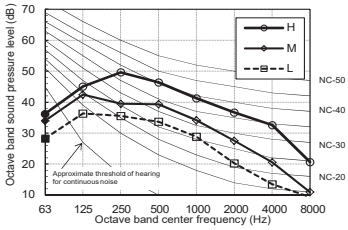
MMU-UP0151MH-E

Fan tap	H	M	L
Sound pressure level (dB(A))	40	35	31



MMU-UP0181MH-E

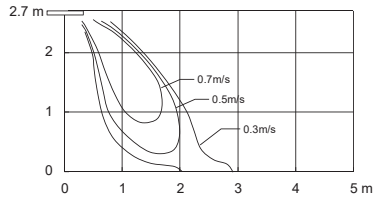
Fan tap	H	M	L
Sound pressure level (dB(A))	47	39	34



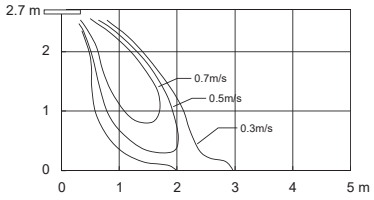
Air diffusion

Unit : m/s

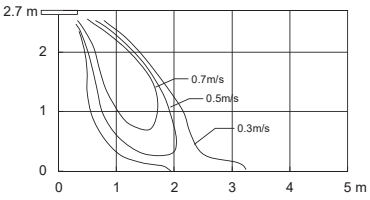
MMU-UP0071MH-E



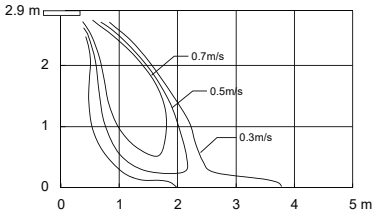
MMU-UP0091MH-E



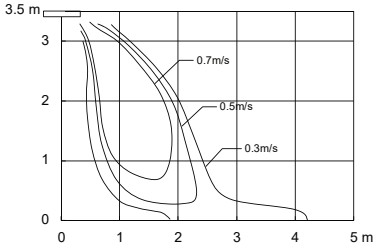
MMU-UP0121MH-E



MMU-UP0151MH-E

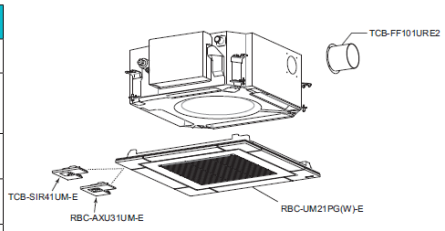


MMU-UP0181MH-E



Accessories

No.	Part name	Model name	Applied model	Notes
1	Ceiling panel	RBC-UM21PG(W)-E	MMU-UP_1MH-E	Required accessory
2	Auxiliary fresh air flange	TCB-FF101URE2		For easy fresh air intake by using the knockout hole of indoor unit (dia=100 mm)
3	Wireless remote controller	RBC-AXU31UM-E		For Installing on panel
4	Wireless remote controller	RBC-AXU31-E		For installing as stand alone
5	Occupancy sensor	TCB-SIR41UM-E		



Compact 4-way cassette connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	TCB-PCUC2E PCB needed	•	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed

MMU-UP_1WH-E
2-WAY CASSETTE

Slim, compact and lightweight, the 2-Way Cassette has been designed to fit easily and discreetly into any room interior.

CAPACITY

0.8 HP ~ 6 HP

SOUND PRESSURE LEVEL

30 dB(A)

LOCAL CONTROLS

RBC-AXU31UW-E
RBC-AXU31-E

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

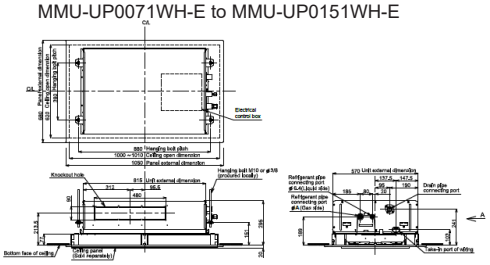
Features

Model name		MMU-	UP0071WH-E	UP0091WH-E	UP0121WH-E	UP0151WH-E	UP0181WH-E	UP0241WH-E	UP0271WH-E	UP0301WH-E	UP0361WH-E	UP0481WH-E	UP0561WH-E
Capacity code		HP	0.8	1.0	1.25	1.7	2.0	2.5	3.0	3.2	4.0	5.0	6.0
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	16.0
Electrical characteristics	Power supply		1-phase 230V (220-240V) 50Hz / 1-phase 220V (208-230V) 60Hz										
	Running current (50Hz/60Hz)	A	0.21/0.22			0.21/0.22	0.28/0.29	0.37/0.39		0.43/0.46	0.50/0.53	0.57/0.59	0.77/0.81
	Power consumption (50Hz/60Hz)	kW	0.024/0.024			0.026/0.026	0.034/0.034	0.045/0.045		0.055/0.055	0.081/0.081	0.091/0.091	0.131/0.131
	Starting current (50Hz/60Hz)	A	0.31/0.32			0.33/0.35	0.42/0.44	0.57/0.60		0.65/0.68	0.76/0.79	0.85/0.89	1.17/1.22
Appearance	Main unit		Heat-insulating material attached - Zinc hot dipping steel plate										
	Ceiling panel name		RBC-UW283PG(W)-E				RBC-UW803PG(W)-E				RBC-UW1403PG(W)-E		
	Panel color		Moon white (Munsell 2.5GY9.0/0.5)										
Outer dimensions	Main unit (HxWxD)	mm	295x815x570				345x1180x570				345x1600x570		
	Ceiling panel (HxWxD)	mm	20x1050x680				20x1415x680				20x1835x680		
Total weight	Main unit	kg	18				26				35		
	Ceiling panel	kg	10				14				14		
Heat exchanger			Finned tube										
Soundproof / Heat-insulating material			Non-flammable insulation										
Fan unit	Fan		Turbo fan					Centrifugal fan					
	Standard air flow (H/M/L)	m^3/h	558/498/450			600/534/450	900/750/618	1050/840/738		1260/900/780	1740/1434/1182	1800/1482/1230	2040/1578/1320
	Motor output	W	60				94				139		
Sound pressure level (H/M/L)		dB(A)	34/32/30			35/33/30		38/35/33		40/37/34	42/39/36	43/40/37	46/42/39
Sound power level		dB(A)	49			50		53		55	57	58	61
Air filter			Standard filter supplied (Long life filter)										
Controller (Optional)			Wired or infrared remote controller										
Connecting pipe	Gas side	mm	9.5	9.5	9.5	12.7	12.7	15.9	15.9	15.9	15.9	15.9	15.9
	Liquid side	mm	6.4	6.4	6.4	6.4	6.4	9.5	9.5	9.5	9.5	9.5	9.5
	Drain port (nominal dia)	mm	25 (Polyvinyl chloride tube)										

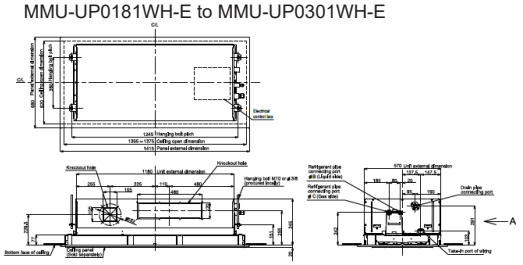
Drawings

Unit : mm

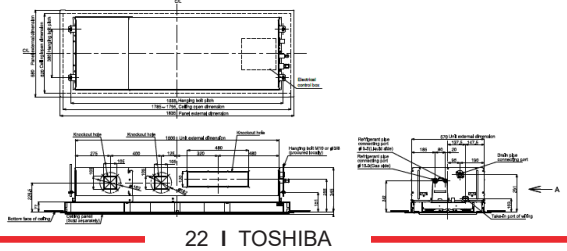
MMU-UP0071WH-E to MMU-UP0151WH-E



MMU-UP0181WH-E to MMU-UP0301WH-E



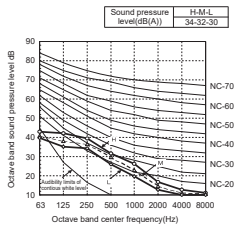
MMU-UP0361WH-E to MMU-UP0561WH-E



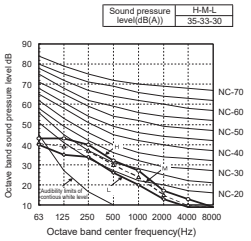
Sound pressure levels

Unit : dB(A)

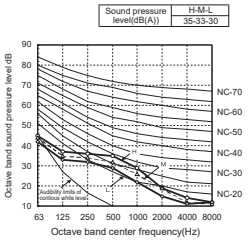
MMU-UP0071, 0091, 0121WH-E



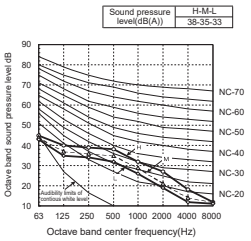
MMU-UP0151WH-E



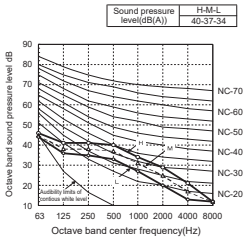
MMU-UP0181WH-E



MMU-UP0241, 0271WH-E



MMU-UP0301WH-E



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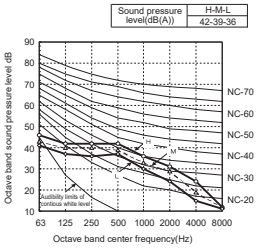
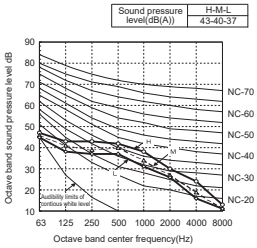
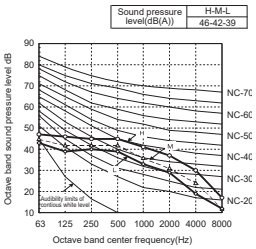


MMU-UP0481WH-E



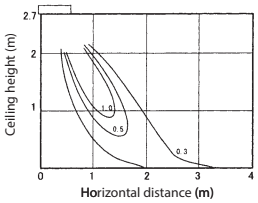
MMU-UP0561WH-E



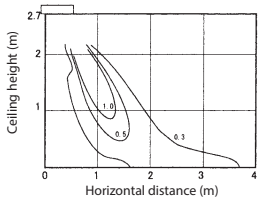
Air diffusion

Unit : m/s

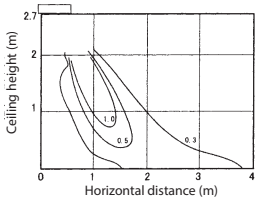
MMU-UP0071, 0091, 0121, 0151WH-E



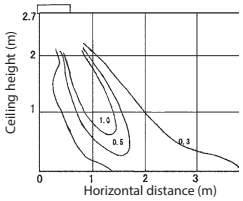
MMU-UP0181WH-E



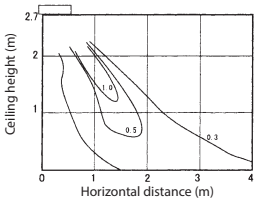
MMU-UP0241, 0271WH-E



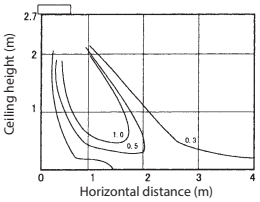
MMU-UP0301WH-E



MMU-UP0361, 0481WH-E

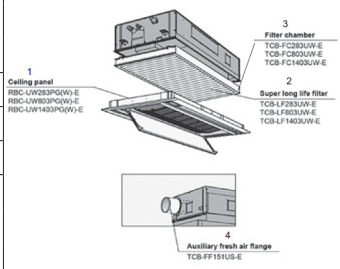


MMU-UP0561WH-E



Accessories

No.	Part name	Model name	Applied model	Notes	Remarks
1	Ceiling Panel	RBC-UW283PG(W)-E	MMU-UP0071 to 0151WH-E	Required accessory	
2	Ceiling Panel	RBC-UW803PG(W)-E	MMU-UP0181 to 0301WH-E		
3	Ceiling Panel	RBC-UW1403PG(W)-E	MMU-UP0361 to 0561WH-E		
4	Super long life filter	TBC-LF283UW-E	MMU-UP0071 to 0151WH-E	Dust collecting effect: 50% (Weight method)	Use with TBC-FC283UW-E
5	Super long life filter	TBC-LF803UW-E	MMU-UP0181 to 0301WH-E		Use with TBC-FC803UW-E
6	Super long life filter	TBC-LF1403UW-E	MMU-UP0361 to 0561WH-E		Use with TBC-FC1403UW-E
7	Filter chamber	TBC-FC283UW-E	MMU-UP0071 to 0151WH-E	For super long life filter	
8	Filter chamber	TBC-FC803UW-E	MMU-UP0181 to 0301WH-E		
9	Filter chamber	TBC-FC1403UW-E	MMU-UP0361 to 0561WH-E		
10	Auxiliary fresh air flange	TBC-FF151US-E	MMU-UP0071 to 0561WH-E	For fresh air intake by using the knockout hole of indoor unit.	
11	Wireless remote controller	RBC-AXU31-E	MMU-UP_1WH-E		



2-way cassette connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	•	•	•	•	•

MMU-UP_1YHP-E
1-WAY CASSETTE

NEW

Toshiba's innovative slim-line 1-Way Cassette is simple to install and suitable for small areas, such as hotels, offices and lobby.

CAPACITY

0.8 HP ~ 3.0 HP

SOUND PRESSURE LEVEL

25 dB(A)

LOCAL CONTROLS

RBC-AX33UYP-E

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

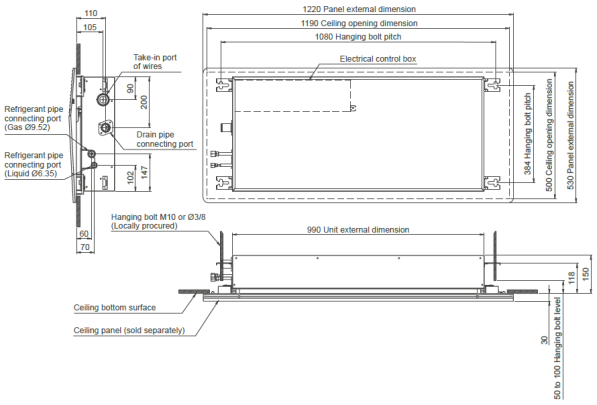
Features

Model name		MMU-	UP0071YHP-E	UP0091YHP-E	UP0121YHP-E	UP0151YHP-E	UP0181YHP-E	UP0241YHP-E	UP0271YHP-E
Capacity code		HP	0.8	1.0	1.25	1.7	2.0	2.5	3.0
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	8.0
Electrical characteristics	Power supply		1-phase 230V (220-240V) 50Hz / 1-phase 220V (208-230V) 60Hz						
	Running current (50Hz/60Hz)	A	0.17/0.18	0.18/0.19	0.19/0.20	0.24/0.25	0.26/0.27	0.34/0.36	0.41/0.43
	Power consumption (50Hz/60Hz)	kW	0.017/0.017	0.018/0.018	0.019/0.019	0.025/0.025	0.027/0.027	0.042/0.042	0.050/0.050
	Starting current (50Hz/60Hz)	A	0.43/0.43	0.43/0.43	0.43/0.43	0.28/0.28	0.30/0.30	0.38/0.38	0.45/0.45
Appearance	Main unit		Heat-insulating material attached - Zinc hot dipping steel plate						
	Ceiling panel name		RBC-UY32P-E			RBC-UY42P-E			
	Panel color		Moon white (Munsell 2.5GY9.0/0.5)						
Outer dimensions	Main unit (HxWxD)	mm	150x990x450			150x1180x450			
	Ceiling panel (HxWxD)	mm	30x1220x530			30x1410x530			
Total weight	Main unit	kg	14			15		16	
	Ceiling panel	kg	4			5			
Heat exchanger			Finned tube						
Soundproof / Heat-insulating material			Non-flammable insulation						
Fan unit	Fan		Centrifugal fan						
	Standard air flow (H/M/L)	m^3/h	500/390/270	520/410/290	540/420/290	750/630/500	800/650/500	940/760/600	1000/860/720
	Motor output	W	30			42		59	
Sound pressure level (H/M/L)		dB(A)	38/34/25	39/35/26	40/36/26	39/36/33	40/37/33	46/42/37	47/44/41
Sound power level		dB(A)	53	54	55				
Air filter			Standard filter supplied (Long life filter) / Air purifier available as option						
Controller (Optional)			Wired or infrared remote controller						
Connecting pipe	Gas side	mm	9.5	9.5	9.5	12.7	12.7	15.9	15.9
	Liquid side	mm	6.4	6.4	6.4	6.4	6.4	9.5	9.5
	Drain port (nominal dia)	mm	25 (Polyvinyl chloride tube)						

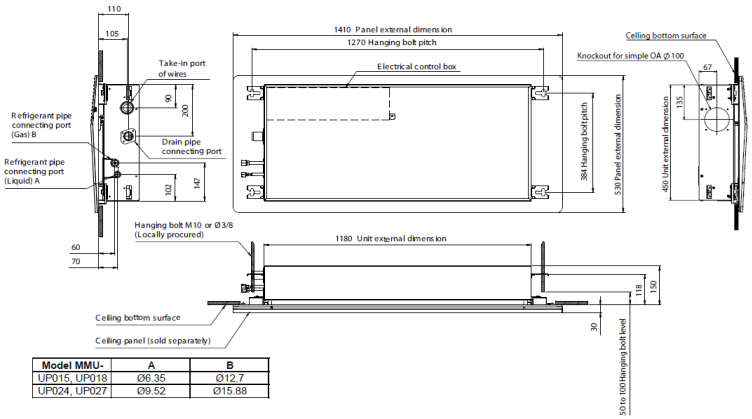
Drawings

Unit : mm

MMU-UP0071YHP-E to MMU-UP0121YHP-E



MMU-UP0151YHP-E to MMU-UP0271YHP-E



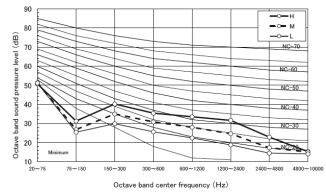
Model MMU-	A	B
UP015, UP018	Ø6.35	Ø12.7
UP024, UP027	Ø9.52	Ø15.88

Sound pressure levels

Unit : dB(A)

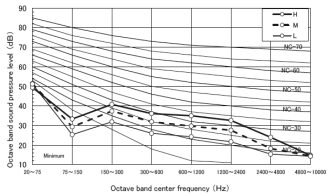
MMU-UP0071YHP-E

Sound pressure level(dB(A))	H-M-L
	38-34-25



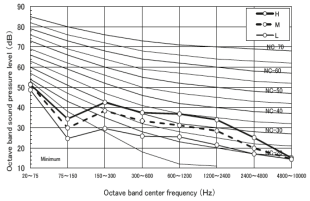
MMU-UP0091YHP-E

Sound pressure level(dB(A))	H-M-L
	39-35-26



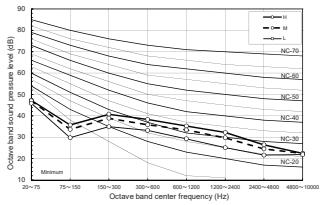
MMU-UP0121YHP-E

Sound pressure level(dB(A))	H-M-L
	40-36-26



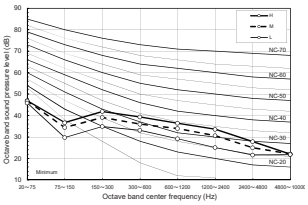
MMU-UP0151YHP-E

Sound pressure level(dB(A))	H-M-L
	39-36-33



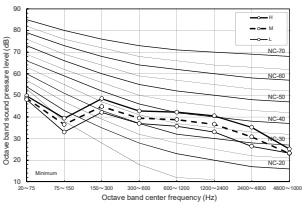
MMU-UP0181YHP-E

Sound pressure level(dB(A))	H-M-L
	40-37-33



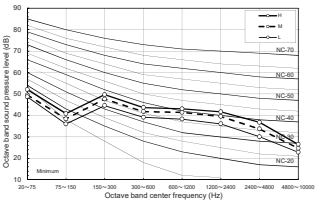
MMU-UP0241YHP-E

Sound pressure level(dB(A))	H-M-L
	46-42-37



MMU-UP0271YHP-E

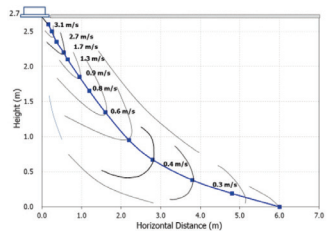
Sound pressure level(dB(A))	H-M-L
	47-44-41



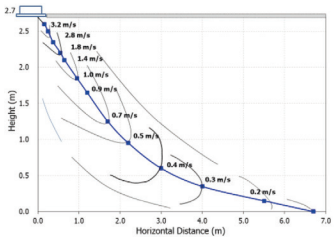
Air diffusion

Unit : m/s

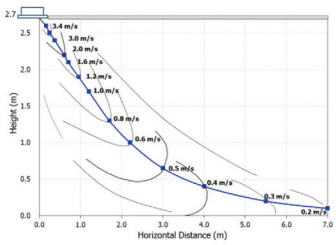
MMU-UP0071YHP-E



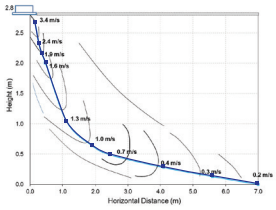
MMU-UP0091YHP-E



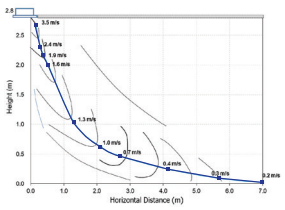
MMU-UP0121YHP-E



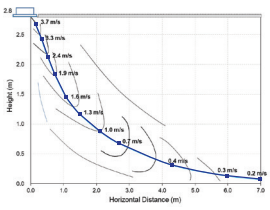
MMU-UP0151YHP-E



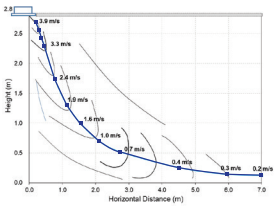
MMU-UP0181YHP-E



MMU-UP0241YHP-E



MMU-UP0271YHP-E



Accessories

No.	Part name	Model name	Applied model	Notes	Remarks
1	Ceiling Panel	RBC-UY32P-E	MMU-UP0071 to 0121YHP-E	Required accessory	
2	Ceiling Panel	RBC-UY42P-E	MMU-UP0151 to 0271YHP-E	Required accessory	
3	Auxiliary fresh air flange	TCB-FF101URE2	MMU-UP0151 to 0271YHP-E	For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)	
4	Air purifier kit	TCB-EAPC1UYHP-E	MMU-UP_1YHP-E		
5	Occupancy sensor	TCB-SIR41UYP-E			
6	Wireless remote controller	RBC-AX33UYP-E		For Installing on panel	
7	Wireless remote controller	RBC-AXU31-E		For installing as stand alone	

1-way cassette connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	TCB-PCUC2E PCB needed	•	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed

MMD-UP_1SPHY-E
SLIM DUCT

Design for installation in a ceiling void or in a false ceiling, Toshiba Slim Duct offers the ultimate technology, with exceptional energy saving, high performance and easy installation.

CAPACITY

0.8 HP ~ 3 HP

SOUND PRESSURE LEVEL

26 dB(A)

LOCAL CONTROLS

RBC-AXU31-E

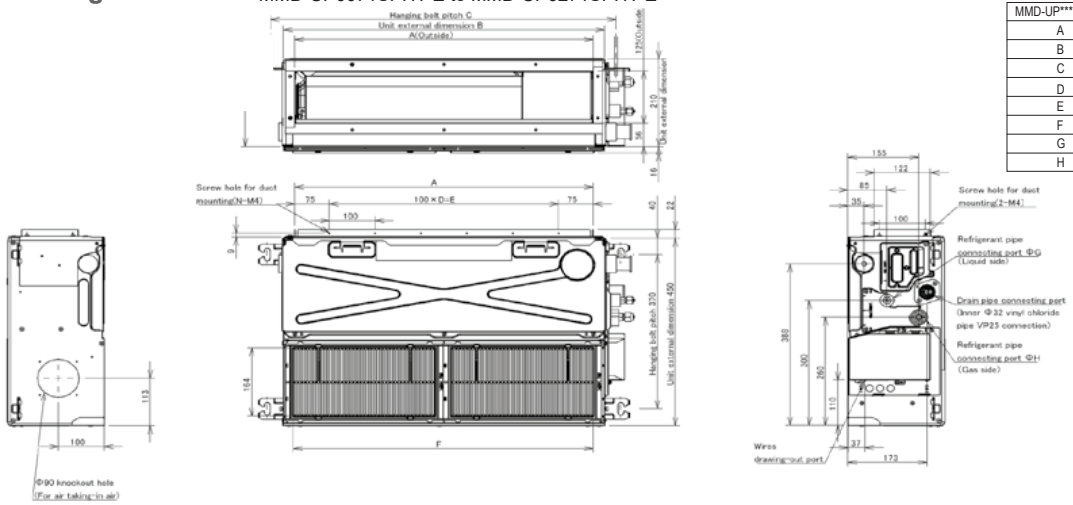
RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

Features

Model name		MMD-	UP0071SPHY-E	UP0091SPHY-E	UP0121SPHY-E	UP0151SPHY-E	UP0181SPHY-E	UP0241SPHY-E	UP0271SPHY-E
Cooling code		HP	0.8	1.0	1.25	1.7	2.0	2.5	3.0
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	8.0
Electrical characteristics	Power supply		1-phase 50Hz 220-240V / 1-phase 60Hz 208-230V						
	Running current (50Hz/60Hz)	A	0.40/0.42	0.42/0.44	0.44/0.46	0.47/0.49	0.53/0.56	0.69/0.73	0.74/0.78
	Power consumption (50Hz/60Hz)	kW	0.026/0.026	0.029/0.029	0.031/0.031	0.035/0.035	0.044/0.044	0.067/0.067	0.072/0.072
	Starting current (50Hz/60Hz)	A	0.69/0.73	0.73/0.77	0.77/0.81	0.82/0.86	0.92/0.97	1.21/1.27	1.30/1.36
Appearance			Zinc hot dipping steel plate						
Outer dimensions (HxWxD)		mm	210x700x450			210x900x450		210x1110x450	
Total weight		kg	15			19		22	
Heat exchanger			Finned tube						
Soundproof / Heat-insulating material			Polyethlene foam + Polyurethane foam						
Fan unit	Fan		Centrifugal fan (sirocco fan)						
	Standard air flow (H/M/L)	m^3/h	540/460/400	570/500/420	600/520/440	690/640/550	780/730/650	1080/950/860	1140/980/910
	Motor output	W	50			94			
	External static pressure (Factory setting)	Pa	10						
	External static pressure	Pa	10-20-30-40-50 (5 Steps)						
Sound pressure level (H/M/L)	Under air intake	dB(A)	41/39/35	42/40/36	44/40/37	42/39/37	44/42/39	47/44/41	48/45/43
	Back air intake	dB(A)	31/29/26	32/29/26	33/30/27	33/30/28	34/32/29	36/33/30	37/34/32
Sound power level		dB(A)	52	54	54	52	56	60	61
Air filter			Standard filter supplied (Long life filter)						
Controller (Optional)			Wired or infrared remote controller						
Connecting pipe	Gas side	mm	9.5	9.5	9.5	12.7	12.7	15.9	15.9
	Liquid side	mm	6.4	6.4	6.4	6.4	6.4	9.5	9.5
	Drain port (nominal dia)	mm	25 (Polyvinyl chloride tube : External dia.32 Internal dia.25)						

Drawings

MMD-UP0071SPHY-E to MMD-UP0271SPHY-E



Unit : mm

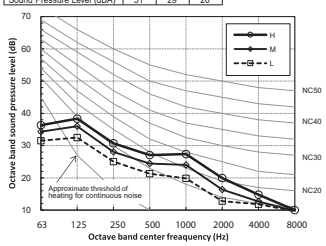
MMD-UP***1SPHY-E	007~012	015~018	024~027
A	650	850	1050
B	700	900	1100
C	770	970	1170
D	5	7	9
E	500	700	900
F	655	855	1055
G	6.4		9.5
H	9.5	12.7	15.9

Sound pressure levels

Unit : dB(A)

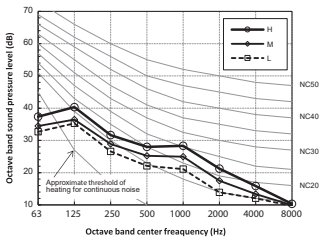
MMD-UP0071SPHY-E

Sound Pressure Level (dBA)	H	M	L
	31	29	26



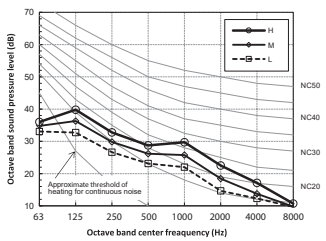
MMD-UP0091SPHY-E

Sound Pressure Level (dBA)	H	M	L
	32	29	26



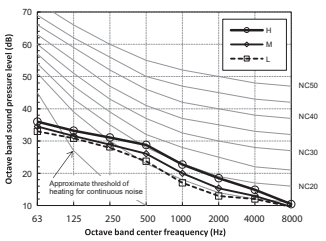
MMD-UP0121SPHY-E

Sound Pressure Level (dBA)	H	M	L
	33	30	27



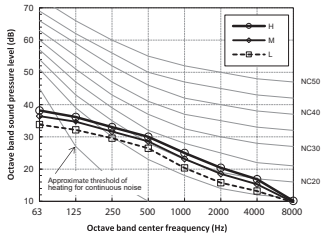
MMD-UP0151SPHY-E

Sound Pressure Level (dBA)	H	M	L
	33	30	28



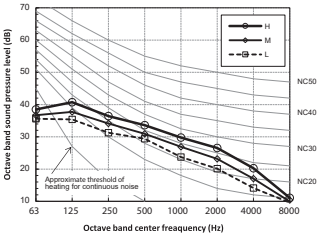
MMD-UP0181SPHY-E

Sound Pressure Level (dBA)	H	M	L
	34	32	29



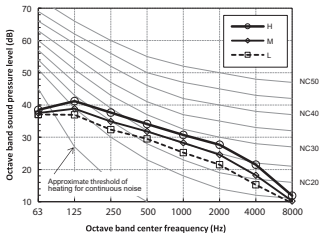
MMD-UP0241SPHY-E

Sound Pressure Level (dBA)	H	M	L
	36	33	30



MMD-UP0271SPHY-E

Sound Pressure Level (dBA)	H	M	L
	37	34	32



Accessories

No.	Part name	Model name	Applied model	Notes
1	Auxiliary fresh air flange	TCB-FF101URE2	MMD-UP_1SPHY-E	For fresh air intake by using the knockout hole of indoor unit (dia.=100 mm)
2	Wireless remote controller	RBC-AXU31-E		For installing as stand alone

Slim duct connectors

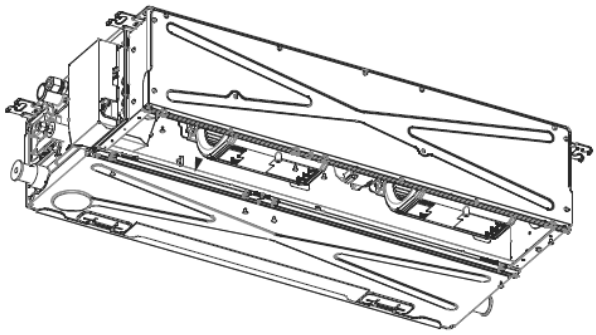
• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	TCB-PCUC2E PCB needed	•	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed

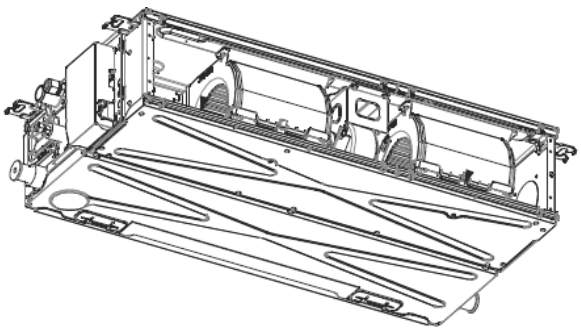
Installation flexibility

Change from under air intake to back air intake

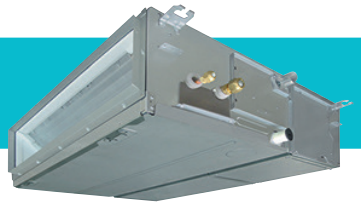
Under air intake



Back air intake



MMD-UP_1BHP-E
CONCEALED DUCT



Whatever the shape of the room, this flexible model ensures a uniform temperature and optimal air distribution for end user comfort.

CAPACITY

0.8 HP ~ 6 HP

SOUND PRESSURE LEVEL

23 dB(A)

LOCAL CONTROLS

RBC-AXU31-E

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

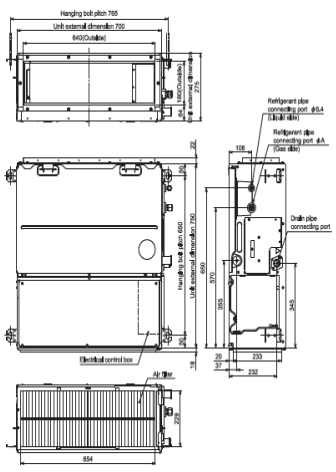
Features

Model name		MMD-	UP0071BHP-E	UP0091BHP-E	UP0121BHP-E	UP0151BHP-E	UP0181BHP-E	UP0241BHP-E	UP0271BHP-E	UP0301BHP-E	UP0361BHP-E	UP0481BHP-E	UP0561BHP-E
Capacity code		HP	0.8	1.0	1.25	1.7	2.0	2.5	3.0	3.2	4.0	5.0	6.0
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	16.0
Electrical characteristics	Power supply		1-phase 50Hz 220-240V / 1-phase 60Hz 208-230V										
	Running current (50Hz/60Hz)	A	0.35/0.36	0.38/0.40		0.70/0.72		0.80/0.83		0.95/0.98	1.29/1.33	1.70/1.70	
	Power consumption (50Hz/60Hz)	kW	0.055/0.055	0.060/0.060		0.110/0.110		0.135/0.135		0.160/0.160	0.220/0.220	0.290/0.290	
	Starting current (50Hz/60Hz)	A	0.55/0.56	0.58/0.60		1.10/1.12		1.20/1.23		1.35/1.38	2.09/2.13	2.50/2.56	
Appearance			Zinc hot dipping steel plate										
Dimensions (HxWxD)		mm	275x700x750					275x1000x750			275x1400x750		
Total weight		kg	23					30			40		
Heat exchanger			Finned tube										
Soundproof / Heat-insulating material			Polyethlene foam										
Fan unit	Fan		Centrifugal fan										
	Standard air flow (H/M/L)	m^3/h	540/450/360	570/480/390		920/660/540		1320/1090/870		1450/1200/960	1920/1620/1380	2350/1920/1500	2350/1090/1500
	Motor output	W	150								250		
	External static pressure (Factory setting)	Pa	30					40			50		
	External static pressure	Pa	30-40-50-65-80-100-150 (7 Steps)										
Sound pressure level (H/M/L)		dB(A)	29/26/23	30/26/23	30/26/23	33/29/25	33/29/25	33/30/27	33/30/27	36/31/27	36/34/31	40/36/33	40/36/33
Sound power level		dB(A)	44	45	45	48	48	48	48	51	51	55	55
Air filter			Standard filter supplied (Long life filter)										
Controller (Optional)			Wired or infrared remote controller										
Connecting pipe	Gas side	mm	9.5	9.5	9.5	12.7	12.7	15.9	15.9	15.9	15.9	15.9	15.9
	Liquid side	mm	6.4	6.4	6.4	6.4	6.4	9.5	9.5	9.5	9.5	9.5	9.5
	Drain port (nominal dia)	mm	25 (Polyvinyl chloride tube)										

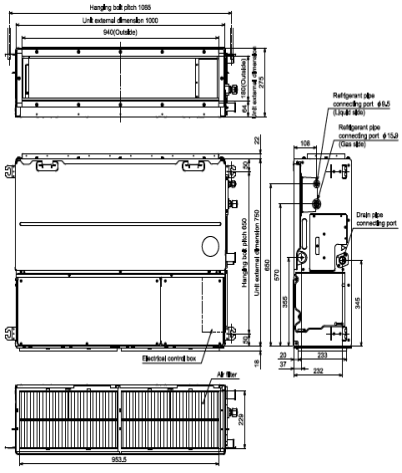
Drawings

Unit : mm

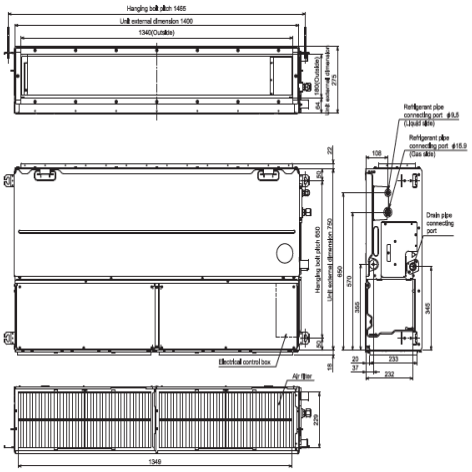
MMD-UP0071BHP-E to MMD-UP0181BHP-E



MMD-UP0241BHP-E to MMD-UP0301BHP-E



MMD-UP0361BHP-E to MMD-UP0561BHP-E



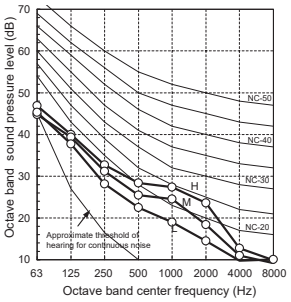
Sound pressure levels

Unit : dB(A)

MMD-UP0071BHP-E

External static pressure 80 Pa

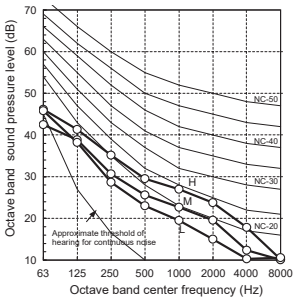
FAN tap	H	M	L
Sound pressure level (dB(A))	33	30	27



MMD-UP0091, 0121BHP-E

External static pressure 80 Pa

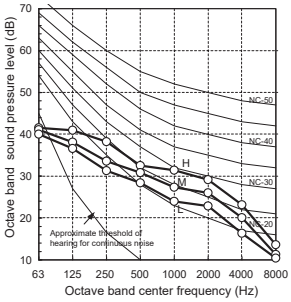
FAN tap	H	M	L
Sound pressure level (dB(A))	34	30	28



MMD-UP0151, 0181BHP-E

External static pressure 80 Pa

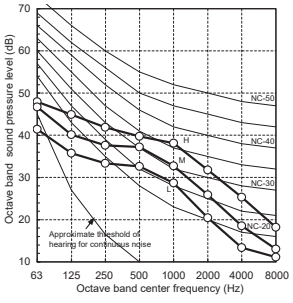
FAN tap	H	M	L
Sound pressure level (dB(A))	37	33	31



MMD-UP0241, 0271BHP-E

External static pressure 80 Pa

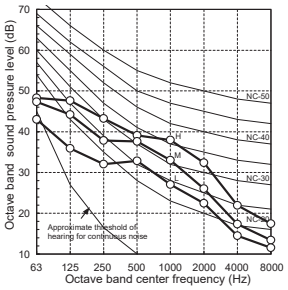
FAN tap	H	M	L
Sound pressure level (dB(A))	42	38	33



MMD-UP0301BHP-E

External static pressure 80 Pa

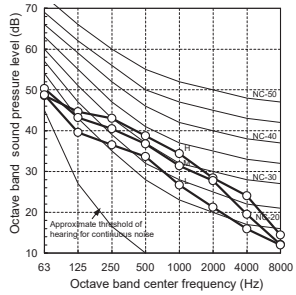
FAN tap	H	M	L
Sound pressure level (dB(A))	42	39	33



MMD-UP0361BHP-E

External static pressure 80 Pa

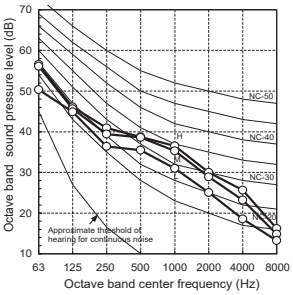
FAN tap	H	M	L
Sound pressure level (dB(A))	41	39	35



MMD-UP0481, 0561BHP-E

External static pressure 80 Pa

FAN tap	H	M	L
Sound pressure level (dB(A))	41	40	36



Accessories

No.	Part name	Model name	Applied model	Appearance	Notes
1	Spigot shaped flange	TCB-SF56C6BE	MMD-UP0071 to 0181BHP-E		263x694x175mm / Spigot diameter 200mm
2	Spigot shaped flange	TCB-SF80C6BE	MMD-UP0241 to 0301BHP-E		263x994x175mm / Spigot diameter 200mm
3	Spigot shaped flange	TCB-SF160C6BE	MMD-UP0361 to 0561BHP-E		263x1394x175mm / Spigot diameter 200mm
4	Wireless remote controller	RBC-AXU31-E	MMD-UP_1BHP-E		For installing as stand alone

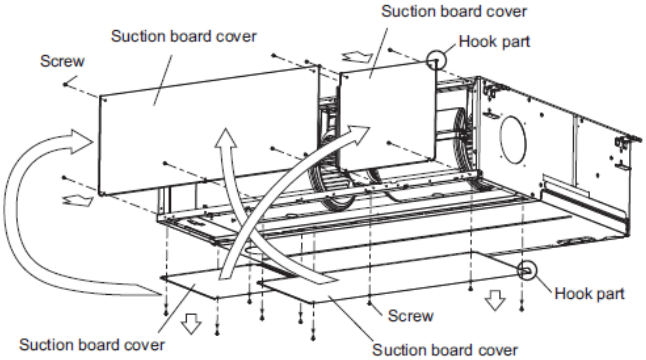
Concealed duct connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	•	•	•	•	•

Installation flexibility

Changing from back air intake to under air intake



MMD-UP_1HP-E(1)
CONCEALED DUCT HIGH STATIC PRESSURE

This is Toshiba's most powerful ducted unit delivering air flows up to 4,800 m3/h with an external static pressure of up to 250 Pa.

CAPACITY

2 HP ~ 10 HP

SOUND PRESSURE LEVEL

31 dB(A)

LOCAL CONTROLS

RBC-AXU31-E

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

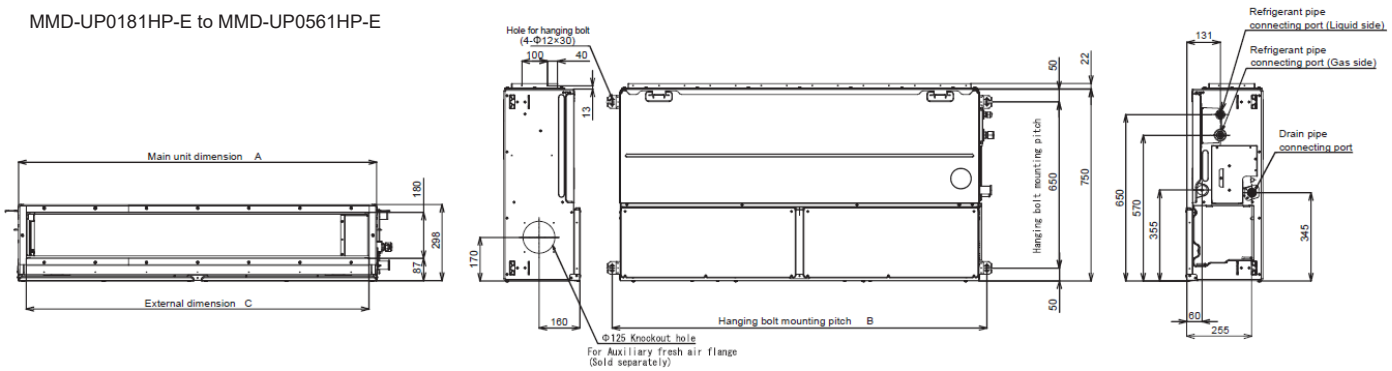
Features

Model name		MMD-	UP0181HP-E	UP0241HP-E	UP0271HP-E	UP0361HP-E	UP0481HP-E	UP0561HP-E	UP0721HP-E1	UP0961HP-E1
Capacity code		HP	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0
Cooling capacity		kW	5.6	7.1	8.0	11.2	14.0	16.0	22.4	28.0
Electrical characteristics	Power supply		1-phase 50Hz 220-240V / 1-phase 60Hz 208-230V							
	Running current (50Hz/60Hz)	A	0.82/0.85	0.92/0.95	1.16/1.20	1.39/1.43	1.81/1.86	2.48/2.57	2.83/2.93	3.77/3.92
	Power consumption (50Hz/60Hz)	kW	0.125/0.125	0.140/0.140	0.190/0.190	0.230/0.230	0.300/0.300	0.400/0.400	0.540/0.540	0.790/0.790
	Starting current (50Hz/60Hz)	A	1.12/1.15	1.22/1.25	1.46/1.50	1.89/1.93	2.41/2.46	3.08/3.17	7.80/8.15	7.80/8.15
Appearance			Zinc hot dipping steel plate							
Dimensions (HxWxD)		mm	298x1000x750			298x1400x750			448x1400x900	
Total weight		kg	34			43			97	
Heat exchanger			Finned tube							
Soundproof / Heat-insulating material			Polyethlene foam							
Fan unit	Fan		Centrifugal fan							
	Standard air flow (H/M/L)	m³/h	1100/990/900	1200/1050/960	1500/1350/1200	1920/1560/1340	2340/1980/1695	2760/2340/1920	3800/3200/2500	4800/4200/3500
	Motor output	W	250			350			1000	
	External static pressure (Factory setting)	Pa	100						150	
	External static pressure	Pa	50-75-125-100-150-175-200 (7steps)						50-83-117-150-183-217-250 (7steps)	
Sound pressure level (H/M/L)		dB(A)	37/33/31	38/34/31	43/41/38	41/37/34	44/44/38	46/44/41	44/40/36	46/42/38
Sound power level		dB(A)	60			62	67	69	79	81
Air filter			Sold separately (TCB-LK801D-E)			Sold separately (TCB-LK1401D-E)			Sold separately (TCB-LK2801DP-E)	
Controller (Optional)			Wired or infrared remote controller							
Connecting pipe	Gas side	mm	12.7	15.9	15.9	15.9	15.9	15.9	22.2	22.2
	Liquid side	mm	6.4	9.5	9.5	9.5	9.5	9.5	12.7	12.7
	Drain port (nominal dia)	mm	25 (Polyvinyl chloride tube)							

Drawings

Unit : mm

MMD-UP0181HP-E to MMD-UP0561HP-E



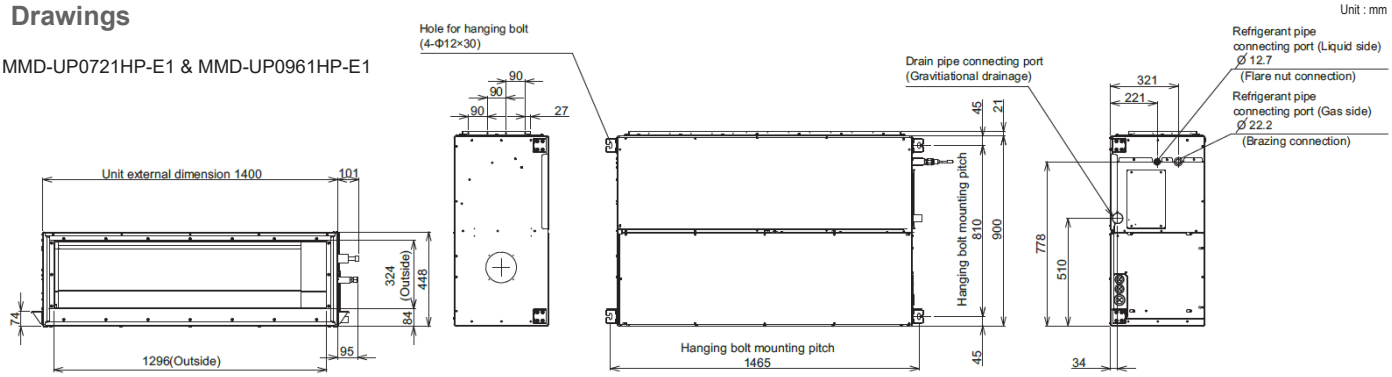
Dimension

	A	B	C	D
AP018~027 type	1000	1065	940	500
AP036~056 type	1400	1465	1340	700

Drawings

MMD-UP0721HP-E1 & MMD-UP0961HP-E1

Unit : mm



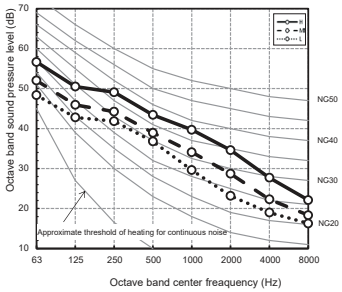
Sound pressure levels

Unit : dB(A)

MMD-UP0181HP-E

External static pressure 150Pa

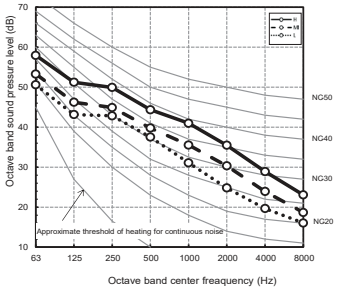
Fan tap	H	M	L
Sound pressure (dBA)	41.0	36.0	33.0



MMD-UP0241, 0271HP-E

External static pressure 150Pa

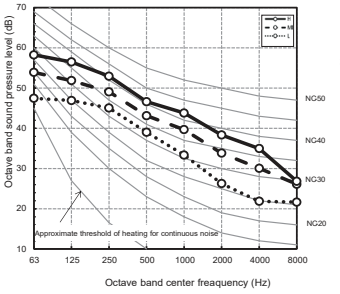
Fan tap	H	M	L
Sound pressure (dBA)	42.0	37.0	34.0



MMD-UP0361HP-E

External static pressure 150Pa

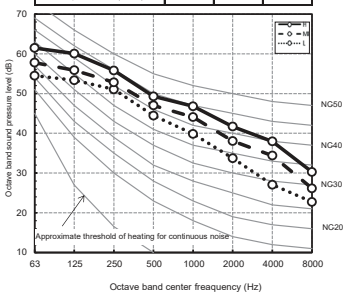
Fan tap	H	M	L
Sound pressure (dBA)	45.0	41.0	36.0



MMD-UP0481HP-E

External static pressure 150Pa

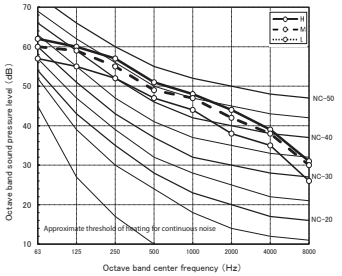
Fan tap	H	M	L
Sound pressure (dBA)	48.0	45.0	42.0



MMD-UP0561HP-E

External static pressure 150Pa

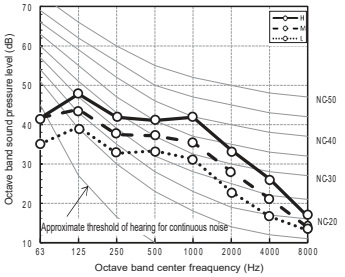
Fan tap	H	M	L
Sound pressure (dBA)	49.0	48.0	45.0



MMD-UP0721HP-E1

External static pressure 150Pa

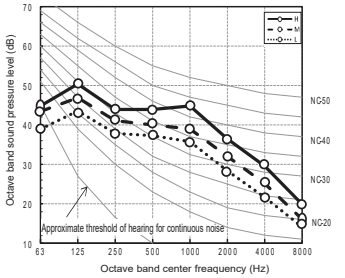
Fan tap	H	M	L
Sound pressure (dBA)	44.0	40.0	36.0



MMD-UP0961HP-E1

External static pressure 150Pa

Fan tap	H	M	L
Sound pressure (dBA)	46.0	42.0	38.0



Accessories

No.	Part name	Model name	Applied model	Appearance	Notes
1	Spigot shaped flange	TCB-SF80C6BE	MMD-UP0181 to 0271HP-E		263x994x175mm / Spigot diameter 200mm
2	Spigot shaped flange	TCB-SF160C6BE	MMD-UP0361 to 0561HP-E		263x1394x175mm / Spigot diameter 200mm
3	Long life filter kit	TCB-LK801D-E	MMD-UP0181 to 0271HP-E		Flange shaped Mount chassis directly Upside down mounting possible Left and right removable
4	Long life filter kit	TCB-LK1401D-E	MMD-UP0361 to 0561HP-E		
5	Long life filter kit	TCB-LK2801DP-E	MMD-UP0721 to 0961HP-E1		
6	Auxiliary fresh air flange	TCB-FF151US-E	MMD-UP0181 to 0561HP-E		
7	Drain pump kit	TCB-DP40DPE	MMD-UP0721 to 0961HP-E1		
8	Wireless remote controller	RBC-AXU31-E	MMD-UP_1HP-E		For installing as stand alone

Concealed duct high static pressure connectors

• : Available

	CN32	CN60	CN61	CN70	CN73	CN80
	Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
Up to 6HP	•	•	•	•	•	•
8 & 10HP	•	TCB-PCUC2E PCB needed	•	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed

MMD-UP_1HFP-E(1)
FRESH AIR INTAKE

This indoor unit has been specifically designed to manage and treat fresh air before its distribution into the building.

CAPACITY
5 HP ~ 14 HP

AIR FLOW
Up to 1,080m3/h ~ 3,060m3/h

SOUND PRESSURE LEVEL
31 dB(A)

LOCAL CONTROLS

RBC-AXU31-E

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

Features

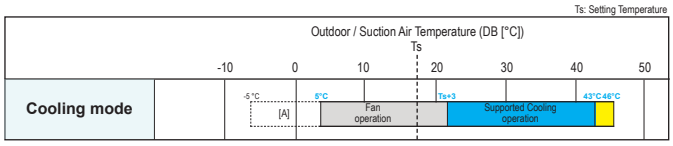
Model name			MMD-	UP0481HFP-E	UP0721HFP-E1	UP0961HFP-E1	UP1121HFP-E1	UP1281HFP-E1
Cooling code			HP	5.0	8.0	10.0	12.0	14.0
Cooling capacity (*) (Note 1)			kW	14.0	22.4	28.0	33.5	40.0
Electrical characteristics	Power supply			1-phase 50Hz 220-240V / 1-phase 60Hz 208-230V				
	Running current (50Hz/60Hz)		A	0.77/0.80	0.86/0.90	1.07/1.12	1.30/1.36	1.83/1.91
	Power consumption (50Hz/60Hz)		kW	0.108/0.108	0.153/0.153	0.198/0.198	0.240/0.240	0.330/0.330
	Starting current (50Hz/60Hz)		A	2.01/2.10	7.80/8.15	7.80/8.15	7.80/8.15	7.80/8.15
Dimensions (HxWxD)			mm	327x1430x750	477x1430x900			
Total weight			kg	44	99			
Heat exchanger				Finned tube				
Soundproof / Heat-insulating material				Non-flammable insulation				
Fan unit	Fan			Centrifugal fan				
	Standard air flow (H/M/L)		m^3/h	1080/930/760	1680/1440/1200	2100/1800/1470	2520/2130/1770	3060/2580/2130
	Motor output		W	350	1000			
	External static pressure (Factory setting)		Pa	100				
	External static pressure		Pa	50-75-100-125-150-175-200 (7 Steps)				
	Air flow limit	Lower limit	m^3/h	600	960	1320	1500	1800
		Upper limit	m^3/h	1320	2040	2520	3060	3600
Sound pressure level (H/M/L)			dB(A)	38/35/31	38/36/33	39/36/33	40/37/34	42/38/35
Air filter				Option or field supply				
Controller (Optional)				Wired or infrared remote controller				
Connecting pipe	Gas / Liquid side		mm	15.9 / 9.5	22.2 / 12.7		28.6 / 12.7	28.6 / 12.7
	Drain port (nominal dia)		mm	25 (Polyvinyl chloride tube)				

* The setting temperature is 13 - 25°C (standard IDU 18 - 30 °C).

Note 1 : Rated conditions
Cooling : Outdoor air temperature 33°C DB/28°C WB setting temperature 18°C
Note 2 : When supply air temperature is "setting temperature + 3°C" or less, Fresh Air Intake unit operates as FAN mode
Note 3 : When supply air temperature is "setting temperature -3°C" or over, Fresh Air Intake unit operates as FAN mode
Note 4 : 46-52°C is also avaialble but temporary operable

Use conditions

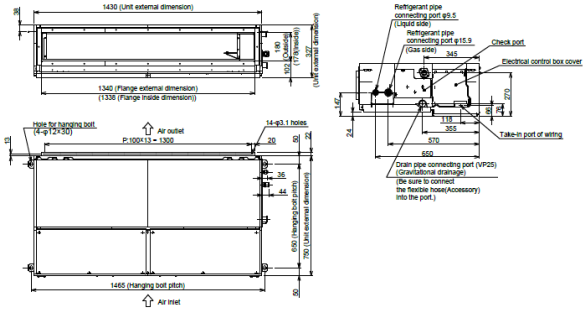
• In "COOL" or "FAN" mode, if temperature of the outdoor/suction air is under 5°C, the operation stops automatically in order to protect the equipment.



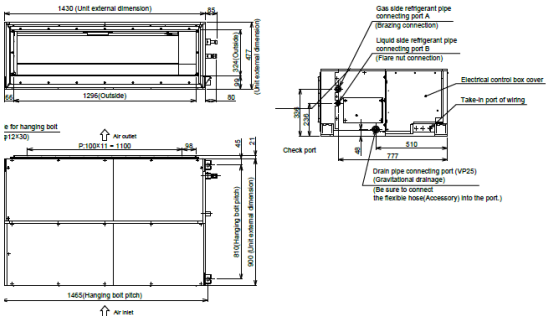
Drawings

Unit : mm

MMD-UP0481HFP-E



MMD-UP0721HFP-E1 to MMD-UP1281HFP-E1



FRESH AIR INTAKE

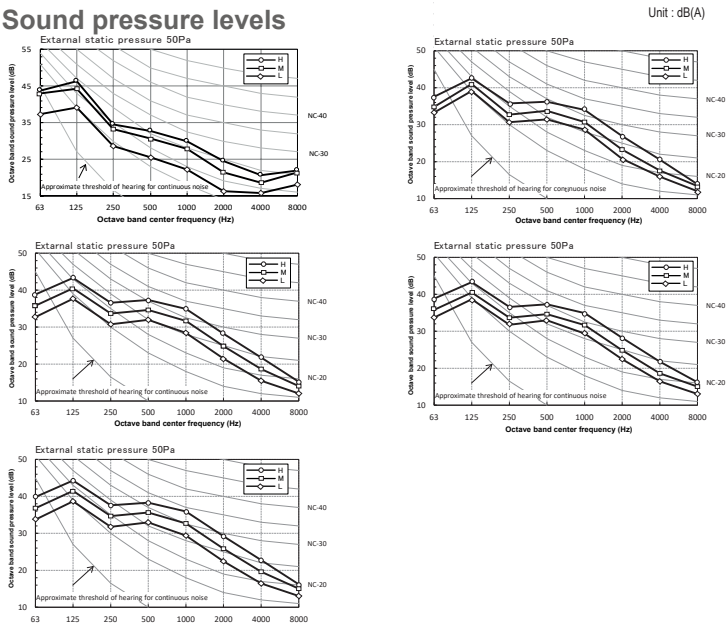
Fresh air intake indoor unit type

System restriction	SMMS-7 Multi IDU connection	SMMS-7 All fresh air intake connection	SMMS∞ Multi IDU connection	SMMS∞ All fresh air intake connection
Max. no. of combined outdoor units	3	1	5	2
Max. capacity of combined outdoor units	60HP	24HP	120HP	52HP
Maximum number of connected indoor uits	64	3	128	4
Total capacity of combined Indoor+fresh air unit	80 to 110%	100%	80 to 110%	
Max. no. of combined Indoor units	3		4	

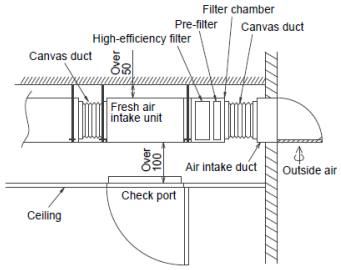
Allowable length and height difference of refrigerant piping				Allowable value (m)			
				SMMS-7 Multi IDU connection	SMMS-7 All fresh air intake connection	SMMS∞ Multi IDU connection	SMMS∞ All fresh air intake connection
Pipe length	Total extension of pipe (Liquid pipe)	Actual length	m	300/1000	300	500/1200	300
	Farthest piping length	Equivalent / Actual length	m	235/190	150/130	250/210	230/210
	Main piping length	Equivalent / Actual length	m	120/100	120/100	120/100	120/100
	Farthest equivalent piping length from the first branching section	Equivalent length	m	90/65	30	90	90
	Maximum actual length of pipes connected to indoor units	Actual length	m	30	30	30	30
	Maximum equivalent length between branching sections	Equivalent length	m	50	50	50	50
Height difference	Height between outdoor and indoor units	Upper / Lower outdoor unit	m	70/40	40/3	70/40	70/40
	Height between indoor units /fresh air intake inits		m	0.5	0.5	40	5

Sound pressure levels

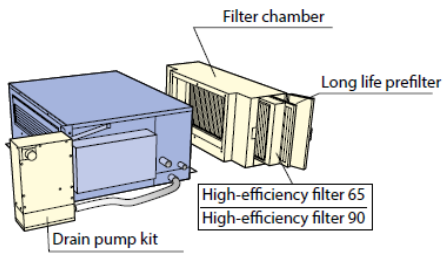
Unit : dB(A)



Other information



Accessories

No.	Part name	Model name	Applied model	Appearance	Notes
1	High-efficiency filter 65	TCB-UFM0481D-E	MMD-UP0481HFP-E		
2	High-efficiency filter 65	TCB-UFM1281D-E	MMD-UP0721 to 1281HFP-E		
3	High-efficiency filter 90	TCB-UFH0481D-E	MMD-UP0481HFP-E		
4	High-efficiency filter 90	TCB-UFH1281D-E	MMD-UP0721 to 1281HFP-E		
5	Stand alone long life prefilter	TCK-LK1401D-E	MMD-UP0481HFP-E		
6	Stand alone long life prefilter	TCK-LK2801DP-E	MMD-UP0721 to 1281HFP-E		
7	High efficiency long life prefilter	TCK-LK1401D-E (*2)	MMD-UP0481HFP-E		
8	High efficiency long life prefilter	TCK-PF1281DF-E	MMD-UP0721 to 1281HFP-E		
9	Filter chamber	TCB-FC0481DF-E	MMD-UP0481HFP-E		
10	Filter chamber	TCB-FC1281DF-E	MMD-UP0721 to 1281HFP-E		
11	Drain pump kit	TCB-DP40DFP-E	All models		
12	Wireless remote controller	RBC-AXU31-E	MMD-UP_1HFP-E		For installing as stand alone

Fresh air intake connectors

• : Available

	CN32	CN60	CN61	CN70	CN73	CN80
	Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
5HP	•	•	•	•	•	•
8 & 14HP	•	TCB-PCUC2E PCB needed	•	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed

MMC-UP_1HP-E
CEILING

Simple, yet elegant design helps to create a pleasant and relaxing environment, quickly conditioning the room air to the desired temperature.

CAPACITY

1.7 HP ~ 6 HP

SOUND PRESSURE LEVEL

28 dB(A)

LOCAL CONTROLS

RBC-AXU31-E
RBC-AXU31C-E

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

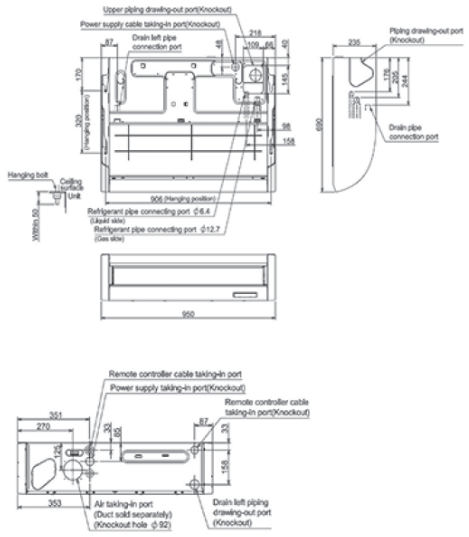
Features

Model name		MMC-	UP0151HP-E	UP0181HP-E	UP0241HP-E	UP0271HP-E	UP0361HP-E	UP0481HP-E	UP0561HP-E
Capacity code		HP	1.7	2.0	2.5	3.0	4.0	5.0	6.0
Cooling capacity		kW	4.5	5.6	7.1	8.0	11.2	14.0	16.0
Electrical characteristics	Power supply		1 phase 50Hz 230V (220-240V) / 1 phase 60Hz 220V						
	Running current (50Hz/60Hz)	A	0.35/0.37	0.36/0.38	0.64/0.67	0.65/0.67	0.77/0.80	0.77/0.80	0.99/1.02
	Power consumption (50Hz/60Hz)	kW	0.033/0.033	0.034/0.034	0.067/0.067	0.067/0.067	0.083/0.083	0.083/0.083	0.111/0.111
	Starting current (50Hz/60Hz)	A	0.54/0.55	0.55/0.57	0.96/1.00	0.97/1.00	1.15/1.20	1.15/1.20	1.49/1.43
Appearance			Pure White (Munsell N9.1)						
Dimensions (HxWxD)		mm	235x950x690		235x1270x690			235x1586x690	
Total weight		kg	24		30			39	
Heat exchanger			Finned tube						
Soundproof / Heat-insulating material			Polyethylene foam						
Fan unit	Fan		Centrifugal fan (Sirocco fan)						
	Standard air flow (H/M/L)	m^3/h	840/690/540	960/720/540	1440/1020/750	1440/1020/750	1860/1350/1020	1860/1530/1200	2040/1650/1260
	Motor output	W	94				139		
Sound pressure level (H/M/L)		dB(A)	36/34/28	37/35/28	41/36/29	41/36/29	44/38/32	44/41/35	46/42/36
Sound power level		dB(A)	51	52	56	56	59	59	61
Air filter			Standard filter supplied (Long life filter)						
Controller (Optional)			Wired or infrared remote controller						
Connecting pipe	Gas side	mm	12.7	12.7	15.9	15.9	15.9	15.9	15.9
	Liquid side	mm	6.4	6.4	9.5	9.5	9.5	9.5	9.5
	Drain port (nominal dia)	mm	20 (Polyvinyl chloride tube)						

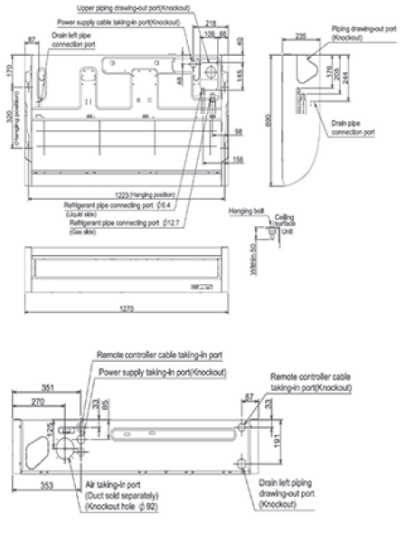
Drawings

Unit : mm

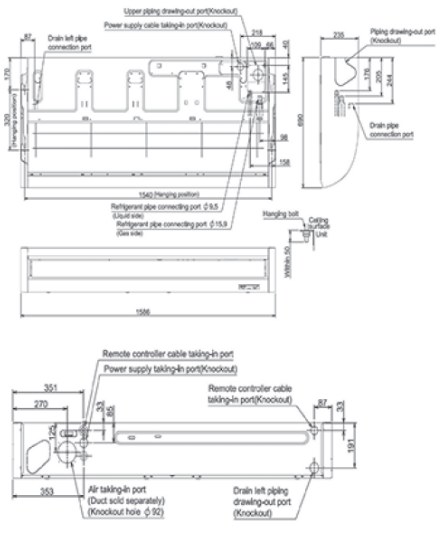
MMC-UP0151HP-E, MMC-UP0181HP-E



MMC-UP0241HP-E, MMC-UP0271HP-E



MMC-UP0361HP-E to MMC-UP0561HP-E

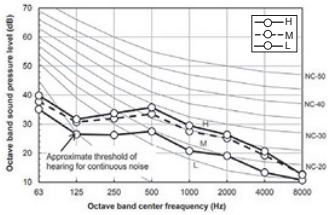


Sound pressure levels

Unit : dB(A)

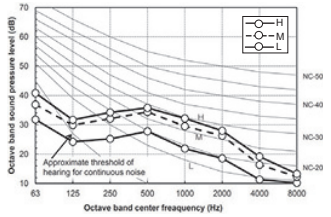
MMC-UP0151HP-E

Fan tap	H	M	L
Sound pressure level (dB(A))	36	34	28



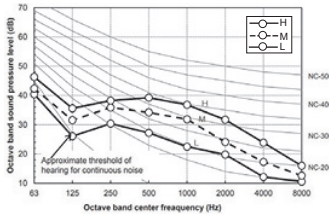
MMC-UP0181HP-E

Fan tap	H	M	L
Sound pressure level (dB(A))	37	35	28



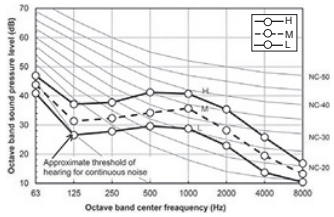
MMC-UP0241, 0271HP-E

Fan tap	H	M	L
Sound pressure level (dB(A))	41	36	29



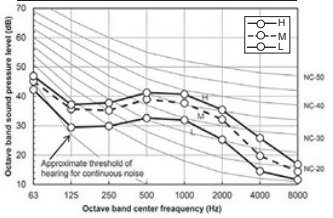
MMC-UP0361HP-E

Fan tap	H	M	L
Sound pressure level (dB(A))	44	38	32



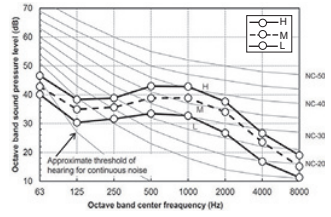
MMC-UP0481HP-E

Fan tap	H	M	L
Sound pressure level (dB(A))	44	41	35



MMC-UP0561HP-E

Fan tap	H	M	L
Sound pressure level (dB(A))	46	42	36

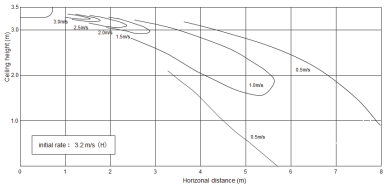


Air diffusion

Unit : m/s

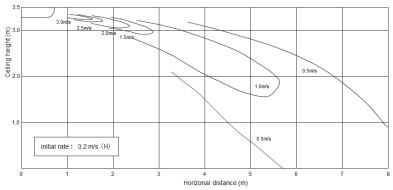
MMC-UP0151HP-E

Cooling



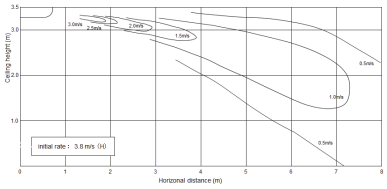
MMC-UP0181HP-E

Cooling



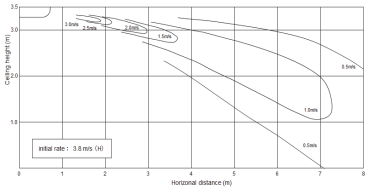
MMC-UP0241, 0271HP-E

Cooling



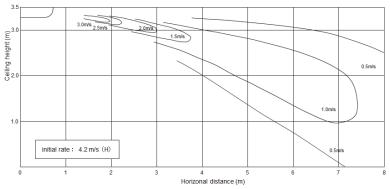
MMC-UP0361, 0481HP-E

Cooling



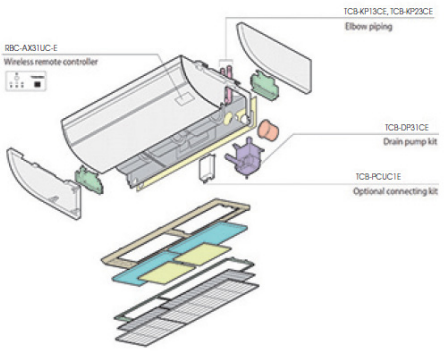
MMC-UP0561HP-E

Cooling



Accessories

No.	Part name	Model name	Applied model	Notes	Remarks
1	Wireless Remote Controller kit	RBC-AXU31C-E	MMC-UP_1HP-E		
2	Wireless Remote Controller	RBC-AXU31-E		For installing as stand alone	
3	Drain pump kit	TCB-DP31CE		Antibacterial glass is built into drain pump kit	
4	Elbow piping kit	TCB-KP14CPE	MMC-UP0151 to 0181HP-E	It is necessary for installation of drain pump kit	Use with TCB-DP31CE
5	Elbow piping kit	TCB-KP24CPE	MMC-UP0241 to 0561HP-E		
6	Option connecting kit	TCB-PCUC2E	MMC-UP_1HP-E	For external I/O signal without local relay preparation	



Ceiling connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	TCB-PCUC2E PCB needed	•	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed

MMK-UP_1HP-E
HIGH-WALL

Particularly compact, this high-wall is perfect for limited spaces, such as offices or small shops.

CAPACITY

0.8 HP ~ 4 HP

SOUND PRESSURE LEVEL

25 dB(A)

LOCAL CONTROLS

Included

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

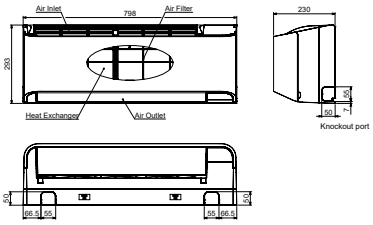
Features

Model name		MMK-	UP0071HP-E	UP0091HP-E	UP0121HP-E	UP0151HP-E	UP0181HP-E	UP0241HP-E	UP0271HP-E	UP0301HP-E	UP0361HP-E
Cooling code		HP	0.8	1.0	1.25	1.7	2.0	2.5	3.0	3.2	4.0
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2
Electrical characteristics	Power supply		1 phase 50Hz 230V (220-240V) / 1 phase 60Hz 220V								
	Running current (50Hz/60Hz)	A	0.15/0.16	0.16/0.17	0.17/0.18	0.25/0.26	0.28/0.29	0.40/0.42	0.28/0.30	0.44/0.46	0.52/0.56
	Power consumption (50Hz/60Hz)	kW	0.015/0.015	0.016/0.016	0.017/0.017	0.028/0.028	0.032/0.032	0.050/0.050	0.034/0.034	0.054/0.054	0.066/0.066
	Starting current (50Hz/60Hz)	A	0.19/0.20	0.20/0.21	0.21/0.22	0.33/0.35	0.36/0.38	0.48/0.50	0.34/0.34	0.50/0.50	0.60/0.60
Dimensions (HxWxD)		mm	293x798x230			320x1050x250			348x1200x280		
Total weight		kg	11			16			21		
Heat exchanger			Finned tube								
Soundproof / Heat-insulating material			Non-flammable insulation								
Fan unit	Fan		Cross Flow Fan								
	Standard air flow (H/M/L)	m^3/h	480/385/270	510/395/270	540/410/270	840/690/550	900/720/550	1200/900/600	1200/1000/800	1500/1300/1100	1650/1350/1250
Sound pressure level (H/M/L)		dB(A)	35/30/25	36/31/25	37/32/25	40/36/32	41/37/32	45/39/33	44/41/39	48/44/41	50/45/43
Sound power level		dB(A)	50	51	52	55	56	60	60	63	65
Air filter			Standard filter supplied (Long life filter)								
Controller (Packed with unit)			Wireless remote controller								
Connecting pipe	Gas side	mm	12.7	12.7	12.7	12.7	12.7	15.9	15.9	15.9	15.9
	Liquid side	mm	6.4	6.4	6.4	6.4	6.4	9.5	9.5	9.5	9.5
	Drain port (nominal dia)	mm	16 (Polyvinyl chloride tube)								

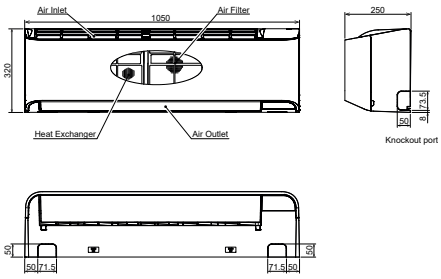
Drawings

Unit : mm

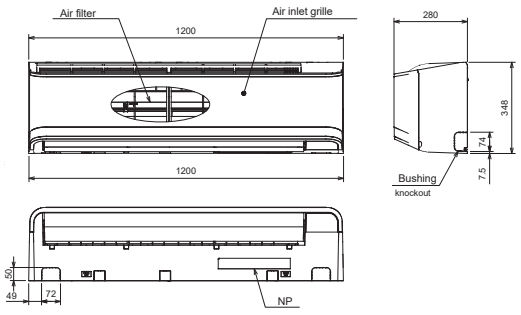
MMK-UP0071HP-E to MMK-UP0121HP-E



MMK-UP0151HP-E to MMK-UP0241HP-E



MMK-UP0271HP-E to MMK-UP0361HP-E

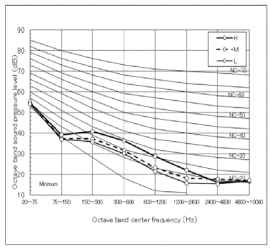


Sound pressure levels

Unit : dB(A)

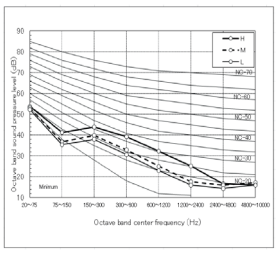
MMK-UP0071HP-E

Sound pressure level(dB(A))	H / M / L
	36 / 30 / 26



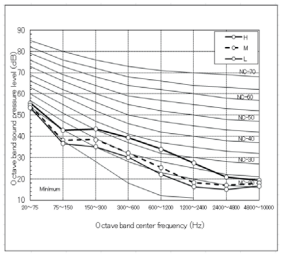
MMK-UP0091HP-E

Sound pressure level(dB(A))	H / M / L
	36 / 31 / 25



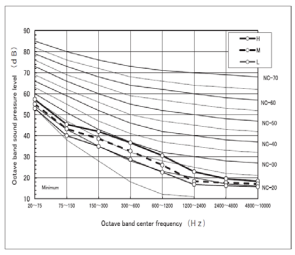
MMK-UP0121HP-E

Sound pressure level(dB(A))	H / M / L
	37 / 32 / 35



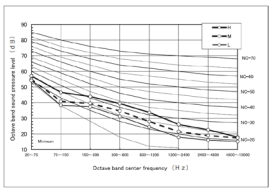
MMK-UP0151HP-E

Sound pressure level(dB(A))	H / M / L
	40 / 36 / 32



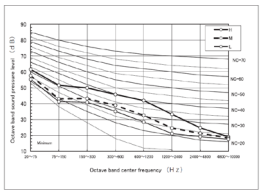
MMK-UP0181HP-E

Sound pressure level(dB(A))	H / M / L
	41 / 37 / 32



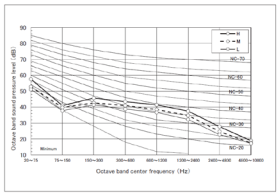
MMK-UP0241HP-E

Sound pressure level(dB(A))	H / M / L
	45 / 39 / 33



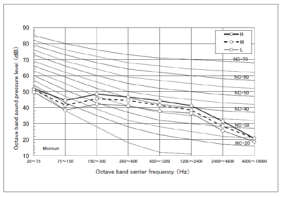
MMK-UP0271HP-E

Sound pressure level(dB(A))	H / M / L
	43 / 41 / 39



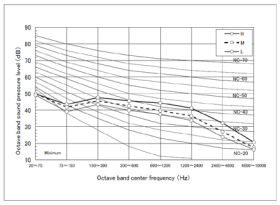
MMK-UP0301HP-E

Sound pressure level(dB(A))	H / M / L
	48 / 44 / 41



MMK-UP0361HP-E

Sound pressure level(dB(A))	H / M / L
	50 / 45 / 43

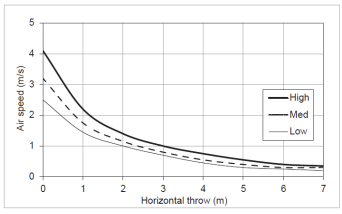


Air diffusion

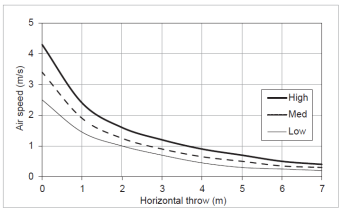
Unit : m/s

MMK-UP0071HP-E
High wind: 3.9m/s
Mid wind: 3.0m/s
Low wind: 2.5m/s

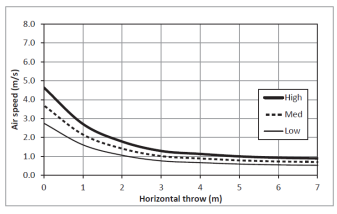
MMK-UP0091HP-E
High wind: 4.1m/s
Mid wind: 3.2m/s
Low wind: 2.5m/s



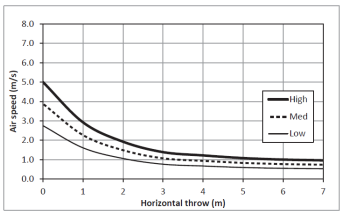
MMK-UP0121HP-E
High wind: 4.3m/s
Mid wind: 3.4m/s
Low wind: 2.5m/s



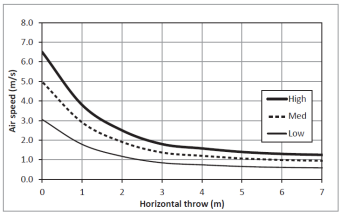
MMK-UP0151HP-E
High wind: 4.6m/s
Mid wind: 3.7m/s
Low wind: 2.8m/s



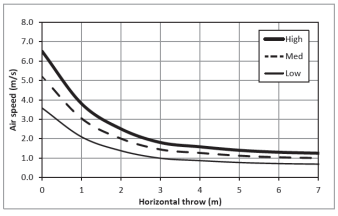
MMK-UP0181HP-E
High wind: 5.0m/s
Mid wind: 3.9m/s
Low wind: 2.8m/s



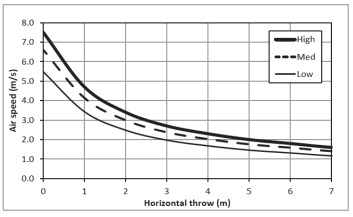
MMK-UP0241HP-E
High wind: 6.5m/s
Mid wind: 5.0m/s
Low wind: 3.1m/s



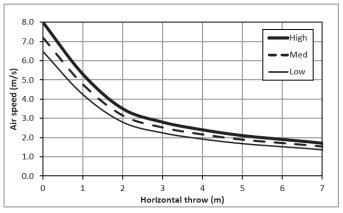
MMK-UP0271HP-E
High wind: 6.5m/s
Mid wind: 5.2m/s
Low wind: 3.6m/s



MMK-UP0301HP-E
High wind: 7.5m/s
Mid wind: 6.6m/s
Low wind: 5.5m/s



MMK-UP0361HP-E
High wind: 8.0m/s
Mid wind: 7.2m/s
Low wind: 6.5m/s



High wall connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	•	•	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed	•

MMZ-UP0091F/MMZ-UP0091D
ZONING AIRCONDITIONING UNIT

NEW

Zoning airconditioning unit can be operated efficiently by supplying the required amount of cold air in specific spot or zone.

CAPACITY

1 HP

SOUND PRESSURE LEVEL

47/42 dB(A)

LOCAL CONTROLS

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

Features

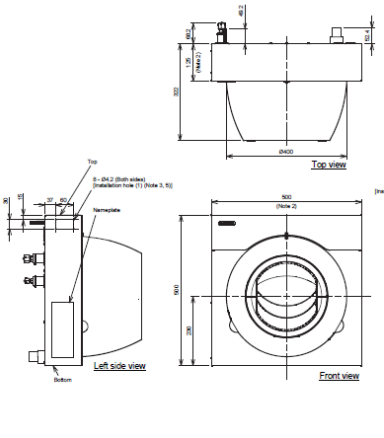
Model name		MMZ-	UP0091F Auto flap type	UP0091D Duct flange type
Capacity code		HP	1.0	1.0
Cooling capacity		kW	2.8	2.8
Electrical characteristics	Power supply		1 phase 50Hz 220-240V / 1 phase 60Hz 220V	
	Running current (50Hz/60Hz)	A	0.53/0.56	0.53/0.56
	Power consumption (50Hz/60Hz)	kW	0.061/0.061	0.061/0.061
	Starting current (50Hz/60Hz)	A	0.74/0.74	0.74/0.74
Appearance			Silky shade (Munsell: 1Y 8.5 / 0.5)	
Outer Dimensions (HxWxD)		mm	500x500x322	500x500x322
Total weight		kg	13	15
Heat exchanger			Finned tube	
Soundproof / Heat-insulating material			Acrylonitrile styrene foam	
Fan unit	Fan		Propeller fan	
	Standard air flow (H/M/L)	m^3/h	912/726/558	
	Air flow range	m^3/h	342~912	
	External static pressure (factory setting)	Pa	-	10
	External static pressure*	Pa	-	75
Sound pressure level (H/M/L)		dB(A)	57/52/47	52/48/42
Sound power level (H/M/L)		dB(A)	72/67/62	72/67/61
Air filter (Optional)			Standard filter	
Controller (Optional)			Wired and infrared remote controller	
Connecting pipe	Gas side	mm	9.5	
	Liquid side	mm	6.4	
	Drain port (nominal dia)	mm	25	R1

Avoid installing in the following places.
• A kitchen in restaurant or places around machines and equipment in a factory, where a lot of oils are used.(Oil adhering to the heat exchanger and the resin parts in the indoor unit may lower the unit performance, splash water drops, or produce mist and may cause the resin parts to be deformed or damaged.)
• Places where iron or other metal dust is present. If iron or other metal dust adheres to or collects on the interior of the air conditioner, it may spontaneously combusted and start a fire.

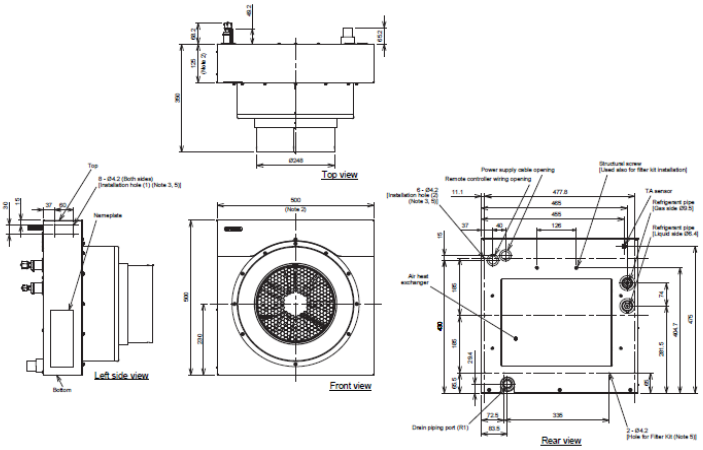
Drawings

Unit : mm

MMZ-UP0091F



MMZ-UP0091D

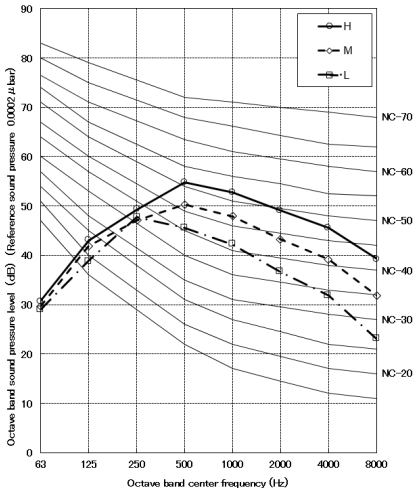


Sound pressure levels

Unit : dB(A)

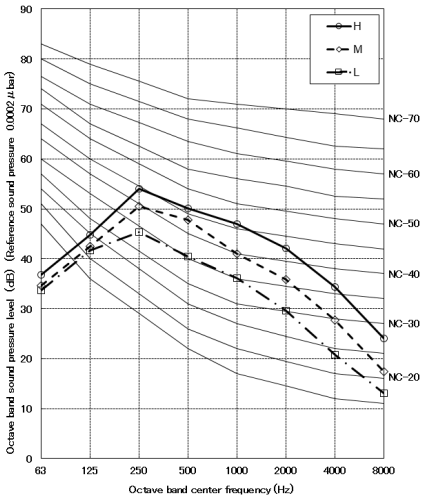
MMZ-UP0091F

Sound pressure level(dB)(A)	H	M	L
	57	52	47



MMZ-UP0091D

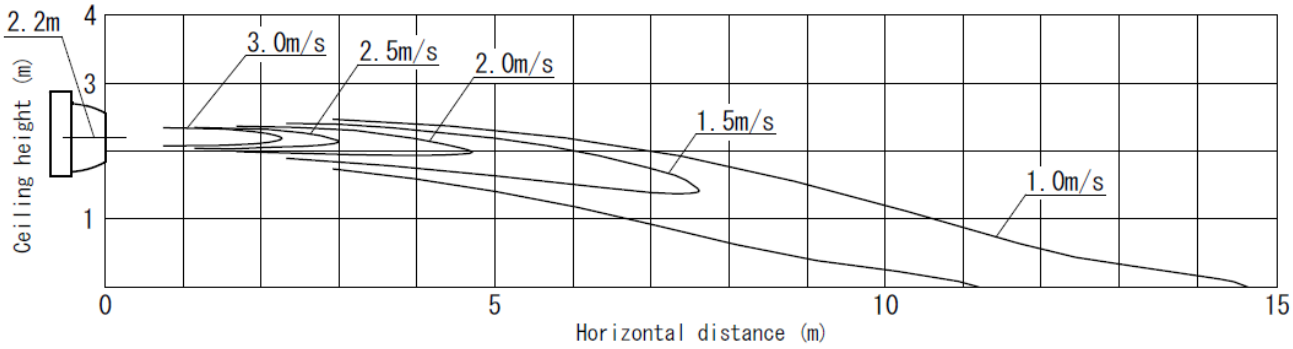
Sound pressure level(dB)(A)	H	M	L
	52	48	42



Air diffusion

Unit : m/s

MMZ-UP0091F



Accessories

No.	Part name	Model name	Applied model	Notes	Remarks
1	Hanging fitting	TCB-TK0091Z-E	MMZ-UP0091F & MMZ-UP0091D	For installing by hanging bolt	
2	Fixing bracket	TCB-TB0091Z-E		For installing on the pillar and wall	
3	Filter kit	TCB-LK0091Z-E			
4	Replacement filter	TCB-PF0091Z-E			
5	Extension valve kit	TCB-VA0091Z-E			

Zoning airconditioning unit connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	TCB-PCUC2E PCB needed	•	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed

MML-UP_1BH-E
FLOOR STANDING CONCEALED

This slim unit is designed to easily fit into a compact space and to perfectly integrate itself behind a decorative panel. This is the ideal solution that blends into any interior.

CAPACITY

0.8 HP ~ 2.5 HP

SOUND PRESSURE LEVEL

32 dB(A)

LOCAL CONTROLS

RBC-AXU31-E

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

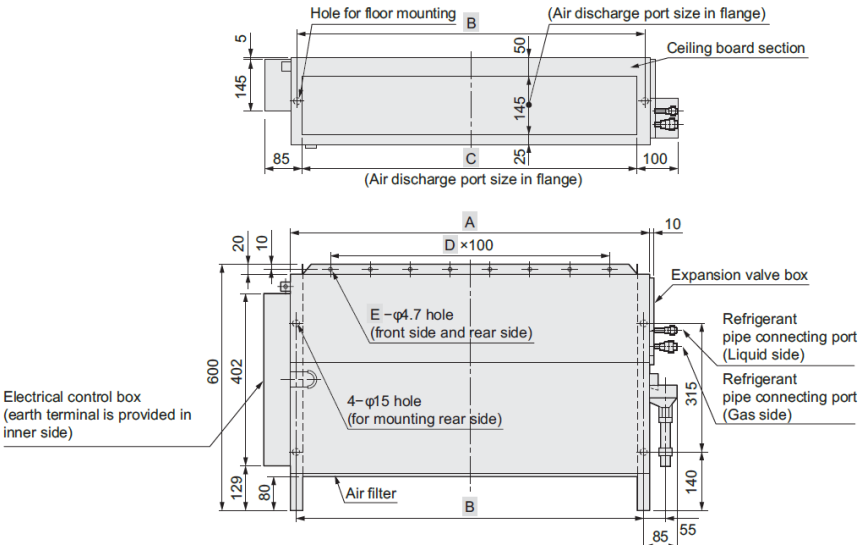
Features

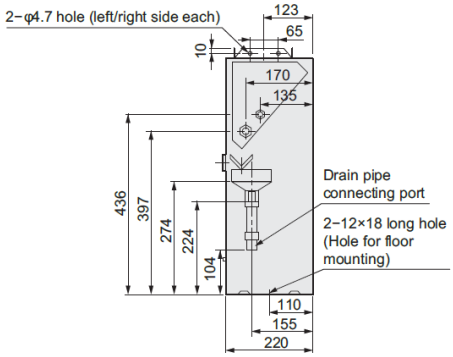
Model name		MML-	UP0071BH-E	UP0091BH-E	UP0121BH-E	UP0151BH-E	UP0181BH-E	UP0241BH-E
Capacity code		HP	0.8	1.0	1.25	1.7	2.0	2.5
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1
Electrical characteristics	Power supply		1 phase 50Hz 230V (220-240V) / 1 phase 60Hz 220V					
	Running current (50Hz/60Hz)	A	0.25/0.27			0.45/0.46		0.46/0.51
	Power consumption (50Hz/60Hz)	kW	0.056/0.058			0.090/0.096		0.095/0.110
	Starting current (50Hz/60Hz)	A	0.60/0.60			0.80/0.80		1.00/1.00
Appearance			Zinc hot dipping steel plate					
Dimensions (HxWxD)		mm	600x745x220			600x1045x220		
Total weight		kg	21			28		
Heat exchanger			Finned tube					
Soundproof / Heat-insulating material			Non-flammable insulation					
Fan unit	Fan		Centrifugal fan					
	Standard air flow (H/M/L)	m^3/h	460/400/300			740/600/490		950/790/640
	Motor output	W	19			70		
Sound pressure level (H/M/L)		dB(A)	36/34/32					42/37/33
Sound power level		dB(A)	54					60
Air filter			Standard filter supplied (Simple filter)					
Controller (Optional)			Wired or infrared remote controller					
Connecting pipe	Gas side	mm	9.5	9.5	9.5	12.7	12.7	15.9
	Liquid side	mm	6.4	6.4	6.4	6.4	6.4	9.5
	Drain port (nominal dia)	mm	20 (Polyvinyl chloride tube)					

Drawings

Unit : mm

All model





Model MML-	A	B	C	D	E
UP0071BH-E to UP0121BH-E	610	580	550	4	5
UP0151BH-E to UP0241BH-E	910	880	850	7	8

FLOOR STANDING CONCEALED

Sound pressure levels

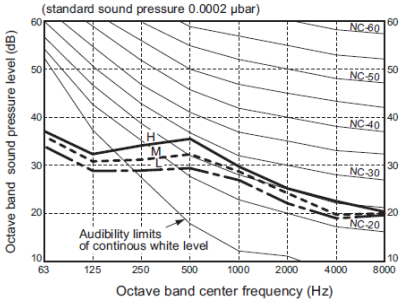
Unit : dB(A)

MML-UP0071, 0091, 0121BH-E

50Hz

Fan Tap		H	M	L
Overall level (dB)	A	36.0	34.0	32.0
	C	41.7	40.2	37.9

(standard sound pressure 0.0002 μbar)

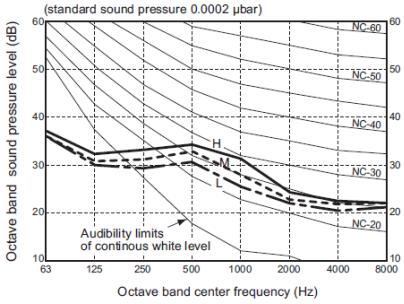


MML-UP0151, 0181BH-E

50Hz

Fan Tap		H	M	L
Overall level (dB)	A	36.0	34.0	32.0
	C	41.4	40.0	38.8

(standard sound pressure 0.0002 μbar)

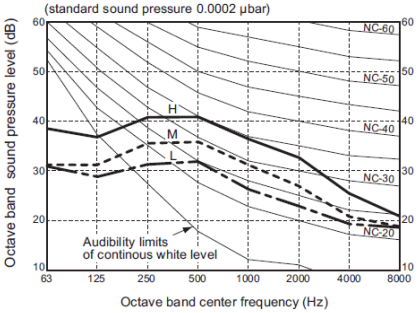


MML-UP0241BH-E

50Hz

Fan Tap		H	M	L
Overall level (dB)	A	42.0	37.0	33.0
	C	46.4	41.0	37.7

(standard sound pressure 0.0002 μbar)



Floor standing concealed connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	•	•	•	•	•

MML-UP_1H-E
FLOOR STANDING CABINET

The simple design of this unit represents the perfect choice for refurbishment projects, where the available space is limited, or where neither the walls nor ceiling is able to house the unit.

CAPACITY

0.8 HP ~ 2.5 HP

SOUND PRESSURE LEVEL

35 dB(A)

LOCAL CONTROLS

RBC-AXU31-E

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

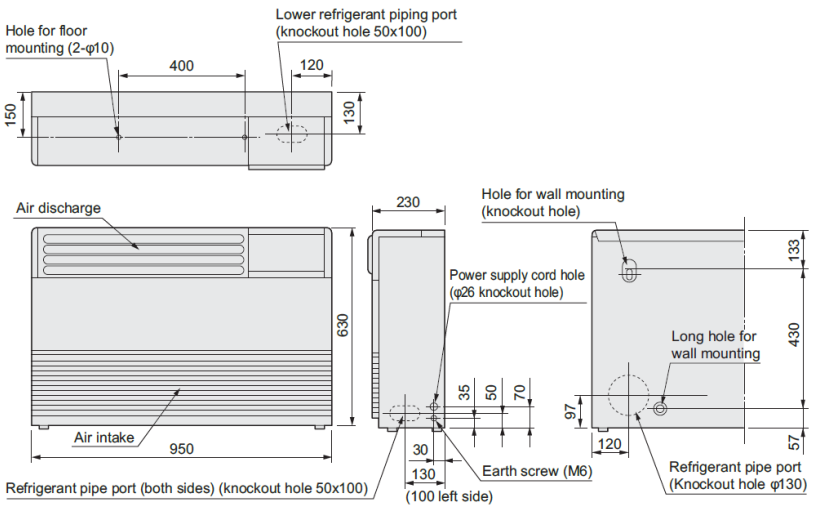
Features

Model name		MML-	UP0071H-E	UP0091H-E	UP0121H-E	UP0151H-E	UP0181H-E	UP0241H-E
Capacity code		HP	0.8	1.0	1.25	1.7	2.0	2.5
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1
Electrical characteristics	Power supply		1 phase 50Hz 230V (220-240V) / 1 phase 60Hz 220V					
	Running current (50Hz/60Hz)	A	0.26/0.25		0.43/0.44		0.47/0.53	
	Power consumption (50Hz/60Hz)	kW	0.056/0.044		0.092/0.069		0.102/0.076	
	Starting current (50Hz/60Hz)	A	0.60/0.60		0.80/0.80		1.10/1.10	
Appearance			Silky shade (1Y8.5/0.5)					
Dimensions (HxWxD)		mm	630x950x230					
Total weight		kg	35				38	
Heat exchanger			Finned tube					
Soundproof / Heat-insulating material			Non-flammable insulation					
Fan unit	Fan		Centrifugal fan					
	Standard air flow (H/M/L)	m^3/h	480/420/360		900/780/650		1080/930/780	
	Motor output	W	45				70	
Sound pressure level (H/M/L)		dB(A)	39/37/35		45/41/38		49/44/39	
Sound power level		dB(A)	54		60		64	
Air filter			Standard filter supplied (Simple filter)					
Controller (Optional)			Wired or infrared remote controller					
Connecting pipe	Gas side	mm	9.5	9.5	9.5	12.7	12.7	15.9
	Liquid side	mm	6.4	6.4	6.4	6.4	6.4	9.5
	Drain port (nominal dia)	mm	20 (Polyvinyl chloride tube)					

Drawings

Unit : mm

All model

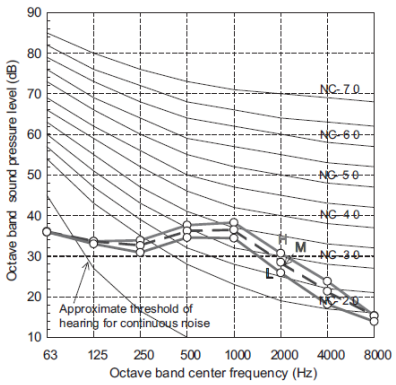


Sound pressure levels

Unit : dB(A)

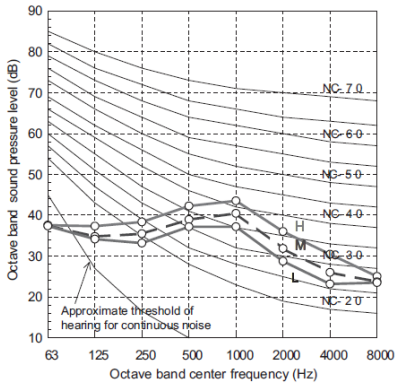
MML-UP0071, 0091H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	39	37	35



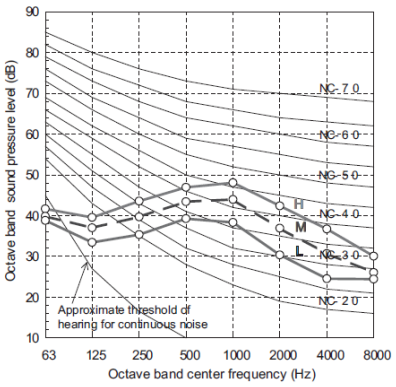
MML-UP0121, 0151H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	45	41	38



MML-UP0181, 0241H-E

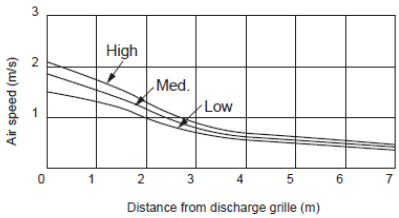
Fan tap	H	M	L
Sound pressure level (dB(A))	49	44	39



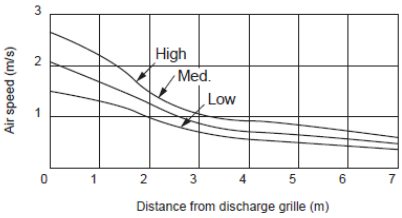
Air diffusion

Unit : m/s

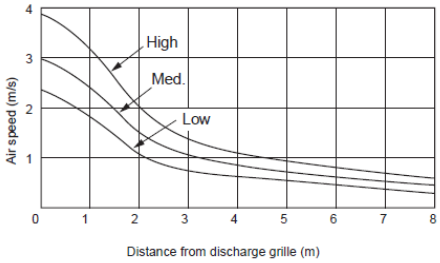
MML-UP0071, 0091H-E



MML-UP0121, 0151H-E



MML-UP0181, 0241H-E



Floor standing cabinet connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	•	•	•	•	•

MML-UP_1NHP-E
CONSOLE

Innovative and compact unit to be installed on the floor and in low wall applications, fits perfectly under the window sills or in a low ceiling attic.

CAPACITY

0.8 HP ~ 2 HP

SOUND PRESSURE LEVEL

26 dB(A)

LOCAL CONTROLS

Included

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

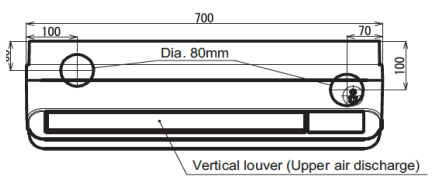
Features

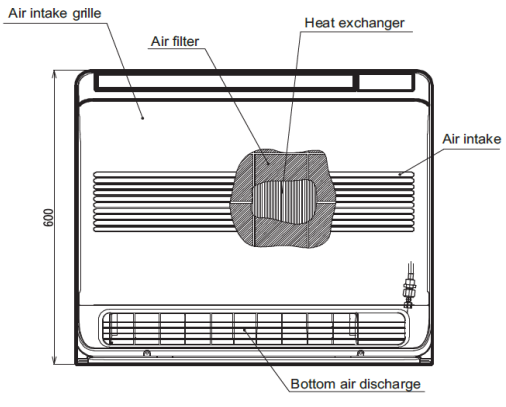
Model name		MML-	UP0071NHP-E	UP0091NHP-E	UP0121NHP-E	UP0151NHP-E	UP0181NHP-E
Capacity code		HP	0.8	1.0	1.25	1.7	2.0
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6
Electrical characteristics	Power supply		1 phase 50Hz 230V (220-240V) / 1 phase 60Hz 220V				
	Running current (50Hz/60Hz)	A	0.20/0.17	0.20/0.17	0.23/0.19	0.29/0.25	0.42/0.36
	Power consumption (50Hz/60Hz)	kW	0.021/0.021	0.021/0.021	0.025/0.025	0.034/0.034	0.052/0.052
	Starting current (50Hz/60Hz)	A	0.26/0.22	0.26/0.22	0.30/0.30	0.33/0.38	0.55/0.55
Appearance	Air intake grille and side panel		Moon white (Munsell : 2.5GY 9.0/0.5)				
	Discharge-grille		Moon white (Munsell : 2.5GY 9.0/0.5)				
	Bottom surface		Moon white (Munsell : 2.5GY 9.0/0.5)				
Dimensions (HxWxD)		mm	600x700x220				
Total weight		kg	17				
Heat exchanger			Finned tube				
Soundproof / Heat-insulating material			Foamed polystyrene / Polyethylene				
Fan unit	Fan		Turbo fan				
	Standard air flow (H/M/L)	m^3/h	510/366/282	510/366/282	552/408/324	624/468/384	726/528/426
	Motor output	W	41				
Sound pressure level (H/M/L)		dB(A)	38/32/26	38/32/26	40/34/29	43/37/31	47/40/34
Sound power level		dB(A)	53	53	55	58	62
Air filter			Standard filter supplied (Long life filter)				
Controller (Packed with indoor unit)			Wireless remote controller				
Connecting pipe	Gas side	mm	9.5	9.5	9.5	12.7	12.7
	Liquid side	mm	6.4	6.4	6.4	6.4	6.4
	Drain port (nominal dia)	mm	16 (Polypropylene tube)				

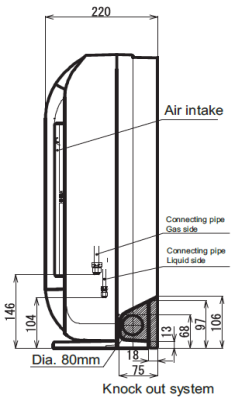
Drawings

Unit : mm

All model





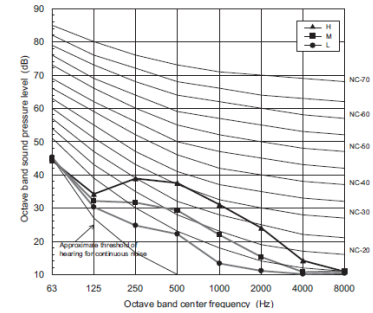


Sound pressure levels

Unit : dB(A)

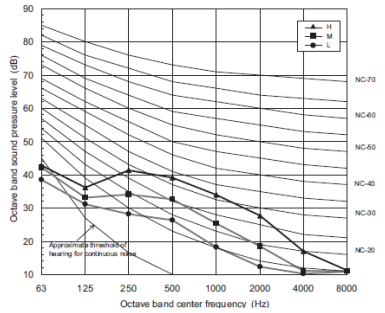
MML-UP0071, 0091NHP-E

Fan tap	H	M	L
Sound pressure level (dB(A))	38	32	26



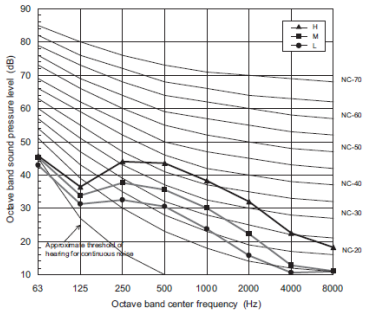
MML-UP0121NHP-E

Fan tap	H	M	L
Sound pressure level (dB(A))	40	34	29



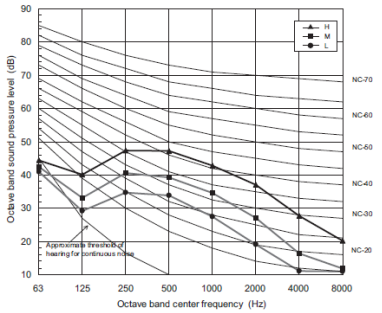
MML-UP0151NHP-E

Fan tap	H	M	L
Sound pressure level (dB(A))	43	37	31



MML-UP0181NHP-E

Fan tap	H	M	L
Sound pressure level (dB(A))	47	40	34

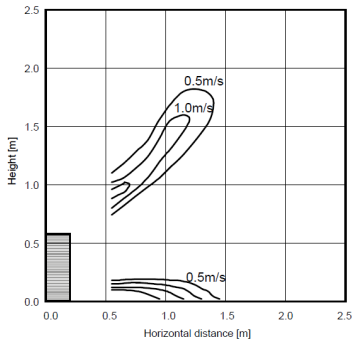


Air diffusion

Unit : m/s

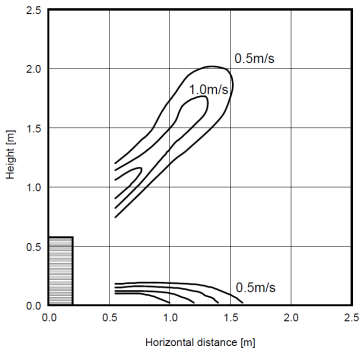
MML-UP0071, 0091NHP-E

Cooling - Upper & Lower



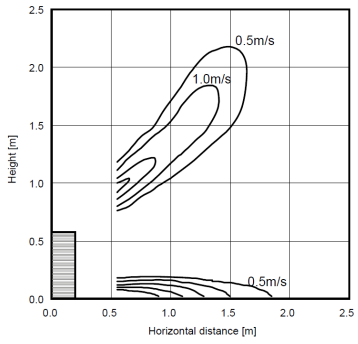
MML-UP0121NHP-E

Cooling - Upper & Lower



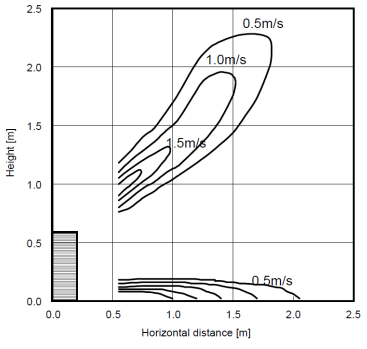
MML-UP0151NHP-E

Cooling - Upper & Lower



MML-UP0181NHP-E

Cooling - Upper & Lower



Console connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	•	•	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed	•

MMF-UP_1H-E
FLOOR STANDING

This system is particularly suitable for large rooms air condition like shops, showrooms and with low ceilings like restaurants.

CAPACITY

1.7 HP ~ 6 HP

SOUND PRESSURE LEVEL

38 dB(A)

LOCAL CONTROLS

RBC-AXU31-E

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

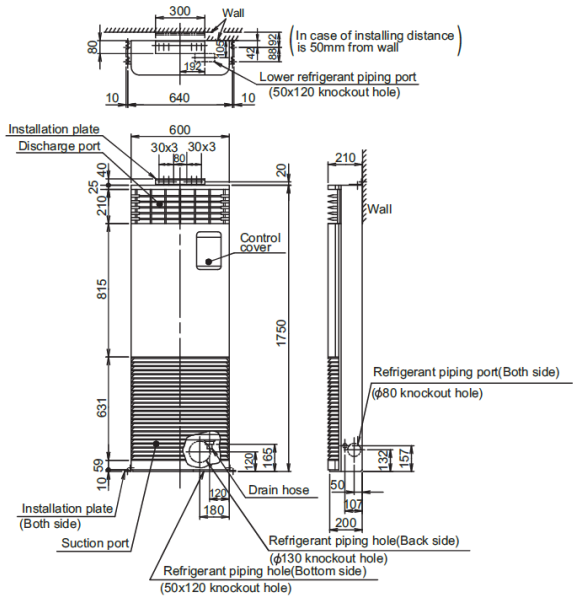
Features

Model name		MMF-	UP0151H-E	UP0181H-E	UP0241H-E	UP0271H-E	UP0361H-E	UP0481H-E	UP0561H-E
Capacity code		HP	1.7	2.0	2.5	3.0	4.0	5.0	6.0
Cooling capacity		kW	4.5	5.6	7.1	8.0	11.2	14.0	16.0
Electrical characteristics	Power supply		1 phase 50Hz 230V (220-240V) / 1 phase 60Hz 220V						
	Running current (50Hz/60Hz)	A	0.37/0.38		0.55/0.58		0.82/0.86	0.97/1.02	
	Power consumption (50Hz/60Hz)	kW	0.053/0.053		0.087/0.087		0.133/0.133	0.158/0.158	
	Starting current (50Hz/60Hz)	A	0.48/0.50		0.71/0.75		1.06/1.11	1.27/1.33	
Appearance			Silky shade (Munsell / 1Y 8.5 / 8.0)						
Dimensions (HxWxD)		mm	1750x600x210				1750x600x390		
Total weight		kg	46		47		61		
Heat exchanger			Finned tube						
Soundproof / Heat-insulating material			Non-flammable insulation						
Fan unit	Fan		Centrifugal fan						
	Standard air flow (H/M/L)	m^3/h	820/700/600		930/770/640		1660/1420/1170	1760/1480/1350	
	Motor output	W	62				109		
Sound pressure level (H/M/L)		dB(A)	46/42/38		50/45/41		51/46/41	53/48/45	
Sound power level		dB(A)	64		67		69	72	
Air filter			Standard filter supplied (Simple filter)						
Controller (Optional)			Wired or infrared remote controller						
Connecting pipe	Gas side	mm	12.7	12.7	12.7	12.7	12.7	12.7	12.7
	Liquid side	mm	6.4	6.4	6.4	9.5	9.5	9.5	9.5
	Drain port (nominal dia)	mm	20 (Polyvinyl chloride tube)						

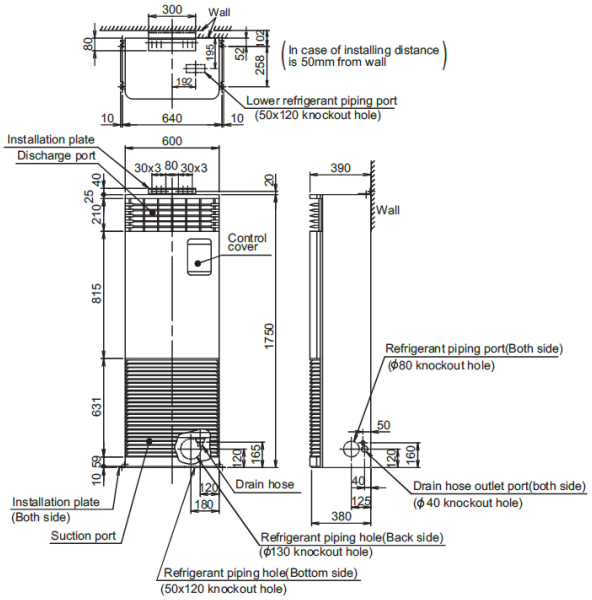
Drawings

Unit : mm

MMF-UP0151H-E to MMF-UP0271H-E



MMF-UP0361H-E to MMF-UP0561H-E



Sound pressure levels

Unit : dB(A)

MMF-UP0151, 0181H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	46.0	42.0	37.0

MMF-UP0241, 0271H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	49.0	45.0	39.0

MMF-UP0361H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	51.0	46.0	41.0

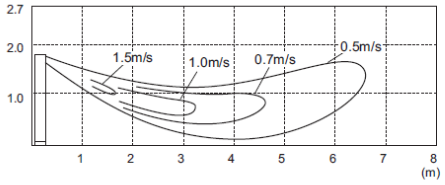
MMF-UP0481, 0561H-E

Fan tap	H	M	L
Sound pressure level (dB(A))	54.0	49.0	44.0

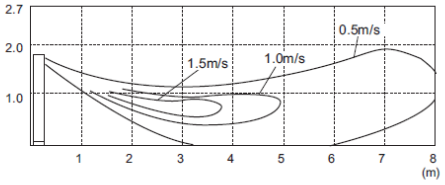
Air diffusion

Unit : m/s

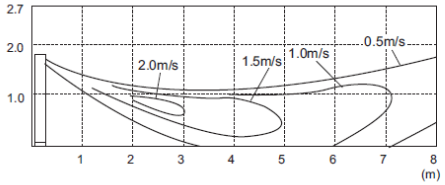
MMF-UP0151, 0181H-E



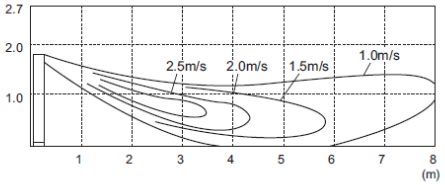
MMF-UP0241, 0271H-E



MMF-UP0361H-E



MMF-UP0481, 0561H-E



Floor standing connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	TCB-PCUC2E PCB needed	•	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed

MMF-AP_5(D)HP-VA/VB
LARGE CAPACITY FLOOR STANDING

This system is particularly suitable for large rooms air conditioning like warehouse, factory and shopping mall.

CAPACITY
8 HP ~ 20 HP

AIR FLOW
Up to 3,600m³/h ~ 8,400m³/h

SOUND PRESSURE LEVEL
59 dB(A)

LOCAL CONTROLS

RBC-AXU31-E

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

Features

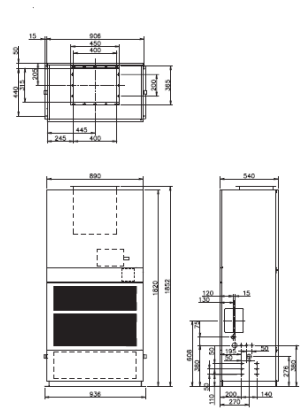
Model name		MMF-	Ducted Type				Direct Blow Type			
			AP0725DHP-VA	AP0965DHP-VA	AP1445DHP-VA	AP1925DHP-VA	AP0725HP-VA	AP0965HP-VA	AP1445HP-VA	AP1925HP-VA
			AP0725DHP-VB	AP0965DHP-VB	AP1445DHP-VB	AP1925DHP-VB	AP0725HP-VB	AP0965HP-VB	AP1445HP-VB	AP1925HP-VB
Capacity code		HP	8	10	16	20	8	10	16	20
Cooling capacity		kW	22.4	28.0	45.0	56.0	22.4	28.0	45.0	56.0
Electrical characteristics	Power supply		VA: 3 phase 50Hz 380-415V / VB: 3 phase 60Hz 380V							
	Running current (50Hz/60Hz)	A	1.68/1.69	2.85/2.74	4.26/4.16	5.67/5.18	1.42/1.29	2.27/1.94	2.91/2.54	3.77/3.49
	Power consumption (50Hz/60Hz)	kW	0.83/0.93	1.35/1.48	2.30/2.41	2.67/2.80	0.62/0.67	0.80/0.86	1.28/1.31	1.96/1.98
	Starting current (50Hz/60Hz)	A	9.4/8.2	19.6/17.7	31.5/27.0	45.6/42.0	9.4/8.2	19.6/17.7	31.5/27.0	31.5/27.0
Appearance			Cream (5Y 7/1.5)							
Dimensions (HxWxD)		mm	1820x890x540		1870x1300x760		2130x890x540		2280x1300x760	
Total weight		kg	150	155	280	290	170	175	320	
Heat exchanger			Copper tubes, Aluminum plate fins							
Soundproof / Heat-insulating material			Polyolefin form							
Fan unit	Fan		Multi blades centrifugal; Belt drive							
	Standard air flow	m³/h	3600	4500	7200	8400	3600	4200	7200	8400
	Air flow limit (Lower/Upper)	m³/h	2880/4320	3360/5040	5760/8640	6720/10080	2880/4320	3360/5040	5760/8640	6720/10080
	External static pressure	Pa	200	300	300	300	-	-	-	-
Sound pressure level		dB(A)	59	64	66	68	60	64	63	66
Air filter			Standard filter supplied (Simple filter)							
Controller (Optional)			Remote controller							
Connecting pipe	Gas side	mm	22.2		28.6		22.2		28.6	
	Liquid side	mm	12.7		15.9		12.7		15.9	
	Drain port (nominal dia)	mm	25 (Both sides of male screw)							

*1: Because these models can support only old communication protocol, please communicate with local distributor if you want to connect these indoor units.

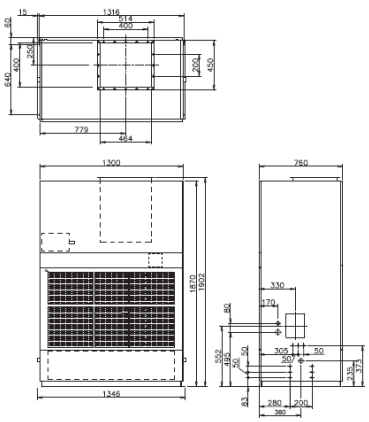
Drawings

Unit : mm

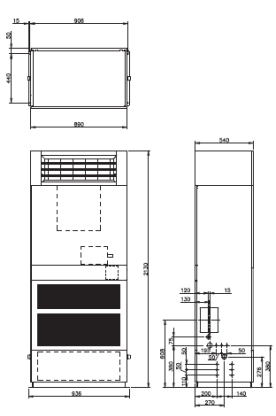
MMF-AP0725DHP-VA/VB,
MMF-AP0965DHP-VA/VB



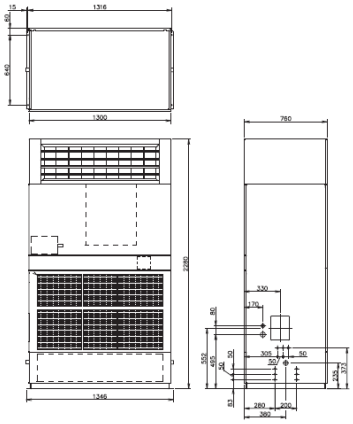
MMF-AP1445DHP-VA/VB,
MMF-AP1925DHP-VA/VB



MMF-AP0725HP-VA/VB,
MMF-AP0965HP-VA/VB



MMF-AP1445HP-VA/VB,
MMF-AP1925HP-VA/VB

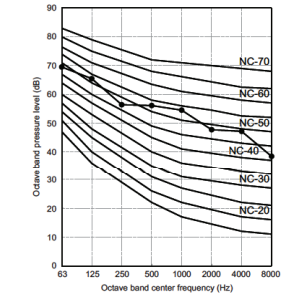


Sound pressure levels

Unit : dB(A)

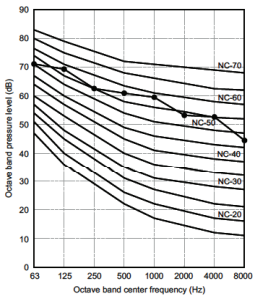
MMF-AP0725DHP-VA/VB

Sound pressure level (dB(A))	59



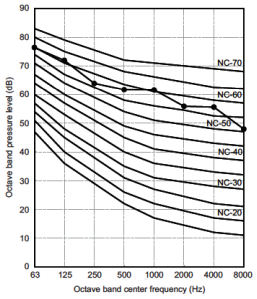
MMF-AP0965DHP-VA/VB

Sound pressure level (dB(A))	64



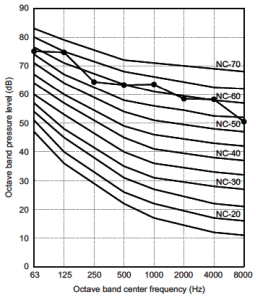
MMF-AP1445DHP-VA/VB

Sound pressure level (dB(A))	66



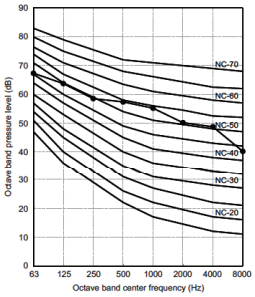
MMF-AP1925DHP-VA/VB

Sound pressure level (dB(A))	68



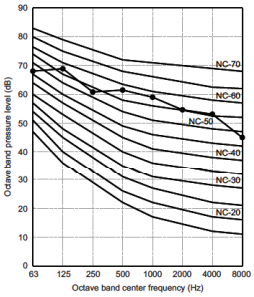
MMF-AP0725HP-VA/VB

Sound pressure level (dB(A))	60



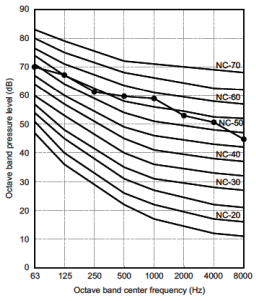
MMF-AP0965HP-VA/VB

Sound pressure level (dB(A))	64



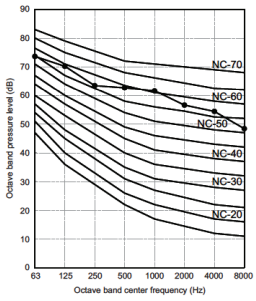
MMF-AP1445HP-VA/VB

Sound pressure level (dB(A))	63



MMF-AP1925HP-VA/VB

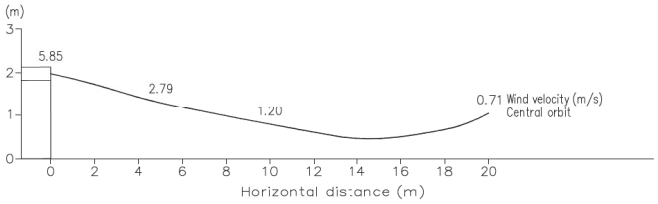
Sound pressure level (dB(A))	66



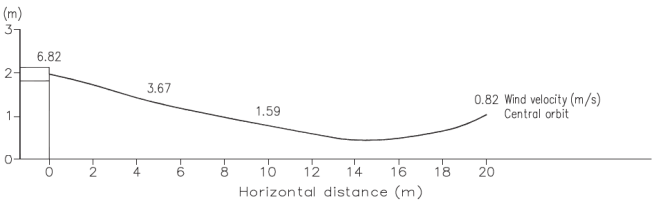
Air diffusion

Unit : m/s

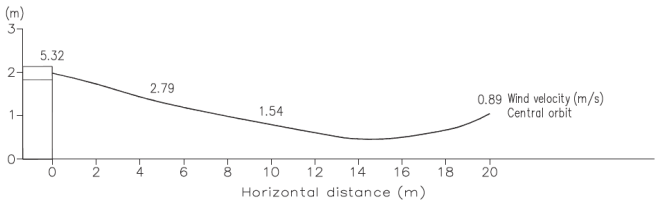
MMF-AP0725HP-VA(VB)



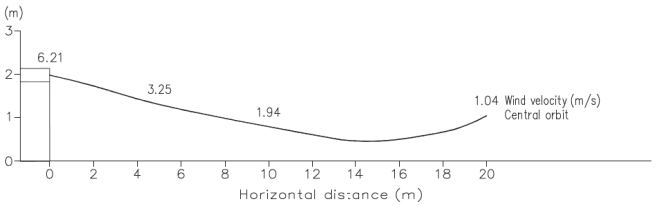
MMF-AP0965HP-VA(VB)



MMF-AP1445HP-VA(VB)



MMF-AP1925HP-VA(VB)



Large capacity floor standing connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
•	TCB-PCUC2E PCB needed	•	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed	TCB-PCUC2E PCB needed

MMD-VN
AIR-TO-AIR HEAT EXCHANGER WITH DX-COIL

MMD-VN ventilation products are using exhaust air + DX-coil to pre-condition the incoming air, thus reducing the cooling load and the overall size of the required air conditioning system.

CAPACITY
4.1 kW ~ 8.25 kW

AIR FLOW
Up to 500m³/h ~ 950m³/h

SOUND PRESSURE LEVEL
34.5 dB(A)

LOCAL CONTROLS

NRC-01HE
RBC-AMTU31E

Features

Model name			MMD-	Without humidifier			
				VN502HEX1E	VN802HEX1E	VN1002HEX1E	VN1002HEX1E2
Cooling capacity			kW	4.10(1.30)	6.56(2.06)	8.25(2.32)	8.25(2.32)
Power supply				1 phase 50Hz 230V (220-240V) / 1 phase 60Hz 220V		1 phase 50Hz 230V(220V-240V)	1 phase 60Hz 220V
Temperature exchange efficiency	Extra high/High/Low		%	70.5/71.5/72.0	70.5/72.5/73.0	65.5/67.5/68.0	65.5/67.5/68.0
Enthalpy exchange efficiency (%)	Cooling (Extra high/High/Low)		%	56.5/57.5/58.0	56.0/59.0/59.5	52.0/54.0/55.0	52.0/54.0/55.0
Power input (Heat exchange mode)	Extra high		kw	0.300/0.365	0.505/0.595	0.550	0.720
	High		kw	0.280/0.350	0.465/0.555	0.545	0.665
	Low		kw	0.235/0.250	0.335/0.390	0.485	0.530
Running current	Extra high		A	1.30/1.65	2.25/2.77	2.46	3.38
	High		A	1.21/1.62	2.07/2.59	2.43	3.11
	Low		A	1.01/1.14	1.46/1.79	2.16	2.45
Fan unit	Standard air flow	Extra high	m³/h	500/-	800/-	950	950
		High	m³/h	500/-	800/-	950	950
		Low	m³/h	440/410	640/600	820	800
	External static pressure	Extra high	Pa	120/200	120/190	135	195
		High	Pa	105/170	100/155	120	160
		Low	Pa	115/150	100/130	105	130
	Air flow limit	Lower limit	m³/h	330	480	640	640
		Upper limit	m³/h	600	960	1140	1140
Sound pressure level	Extra high		dB(A)	37.5/40	41/43	43	43.5
	High		dB(A)	36.5/38	40/42	42	42
	Low		dB(A)	34.5/36.5	38/37	40	40
Sound power level			dB(A)	55	58	59	59
Appearance				Zinc hot dipping steel plate			
Dimensions (HxWxD)			mm	430x1140x1690	430x1189x1739	430x1189x1789	430x1189x1789
Weight			kg	84	100	101	101
Heat exchanger / Heat-insulating material				Finned tube / Flexible urethane foam			
Air filter				Standard filter & High efficiency filter			
Controller				Remote controller (Separately sold parts)			
Connecting pipe	Gas side / Liquid side		mm	9.5 / 6.4	12.7 / 6.4	12.7 / 6.4	12.7 / 6.4
	Drain port (nominal dia)		mm	25 (Polyvinyl chloride tube)			
Water supply connection (Port size)				-	-	-	-
Operating range	Around unit			-10 - 40°C . RH ≤80%			
	Outdoor Air (OA)			-15 - 43°C . RH ≤80%			
	Return Air (RA)			5 - 40°C . RH ≤80%			

*1: Because these models can support only old communication protocol, please communicate with local distributor if you want to connect these indoor units.

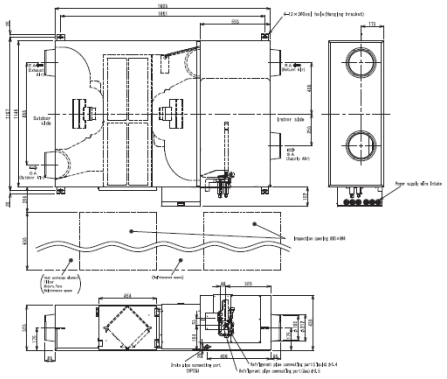
Cooling capacities are based on the following conditions:
Cooling capacities are based on: indoor temperature: 27°CDB/19°C WB, Outdoor temperature: 35°C DB
The figures in ( ) indicate the heat reclaimed from the heat recovery ventilator.

AIR-TO-AIR HEAT EXCHANGER WITH DX-COIL

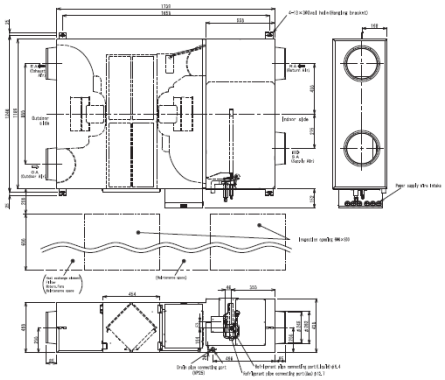
Drawings

Unit : mm

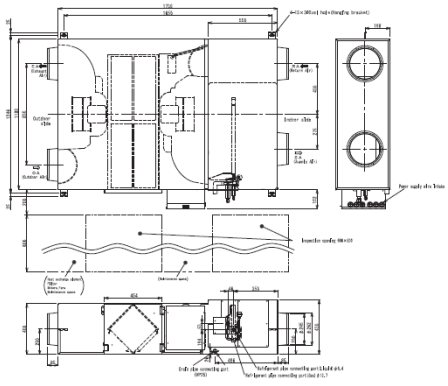
MMD-VN502HEX1E



MMD-VN802HEX1E



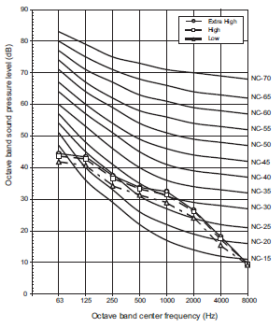
MMD-VN1002HEX1E, MMD-VN1002HEX1E2



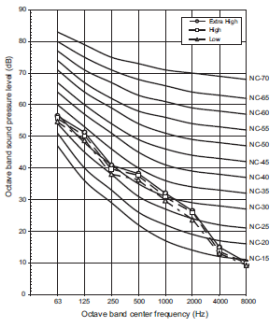
Sound pressure levels

Unit : dB(A)

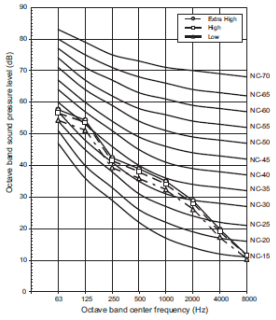
MMD-VN502HEX1E



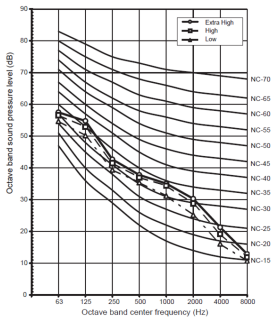
MMD-VN802HEX1E



MMD-VN1002HEX1E



MMD-VN1002HEX1E2



Accessories

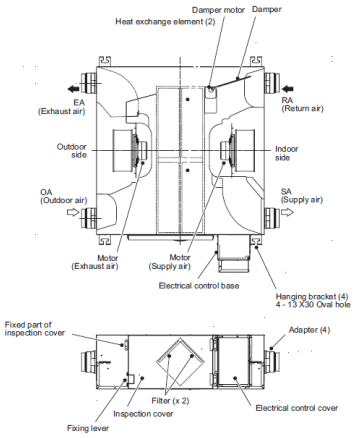
Part name	Model name	Description	Appearance	Remarks
Control	NRC-01HE	Dedicated remote controller for air-to-air heat exchanger		Integrated functions : fan speed, freecooling, air balance volume rate, temperature management and timer.
	NRB-1HE	On/off optional PCB for air-to-air heat exchanger		
Condensates	TCB-DP31HEXE	Drain pump kit		

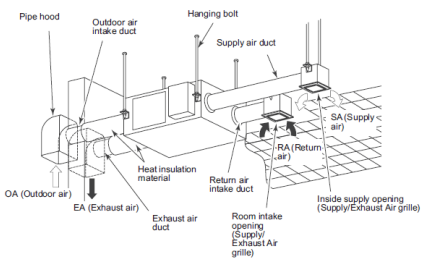
Air-to-air heat exchanger (with DX-coil) connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, fan, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.	Forced IDU thermo-off based on signal input	Forced IDU thermo-off and IDU lock based on signal input
-	-	•	•	•	•

Other information





TCB-IFDMX(R)01UP-E/RBM-A_1UPVA-E
DX-COIL INTERFACE ADVANCE

NEW

Dx-coil interface advance enables to connect SMMS∞ and third party AHU by TA, DDC or TF control condition.

CAPACITY

8 HP ~ 20HP

LOCAL CONTROLS

RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

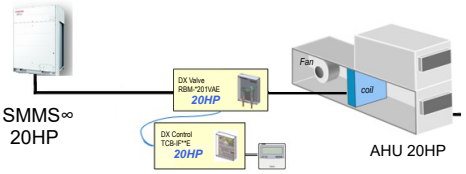
DX coil controller

Model name	TCB-	IFDMX01UP-E (Terminal block without relay)	IFDMR01UP-E (Terminal block with relay)
Power supply		1 phase 50Hz 220-240V / 1 phase 60Hz 208-230V	
Appearance		Zinc hot dipping steel plate	
Dimensions (HxWxD)	mm	420x330x122	
Total weight	kg	4.0	4.1
Controllable operation type		TA, DDC, TF	
Operable ambient condition	° C/RH	5-52 / 10-80	

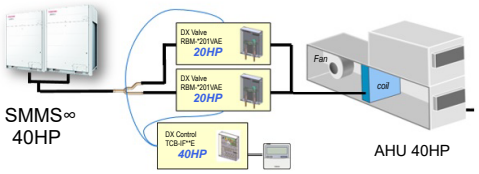
DX valve kit

Model name	RBM-	A101UPVA-E			A201UPVA-E			
Capacity code	HP	8	10	12	14	16	18	20
Dimensions (HxWxD)	mm	360x209x80						
Total weight	kg	2.3			2.4			

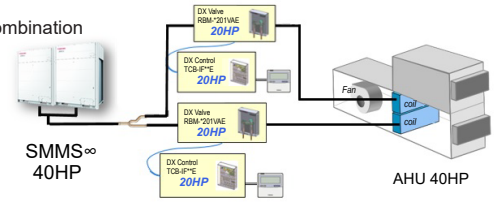
Single combination



Twin combination



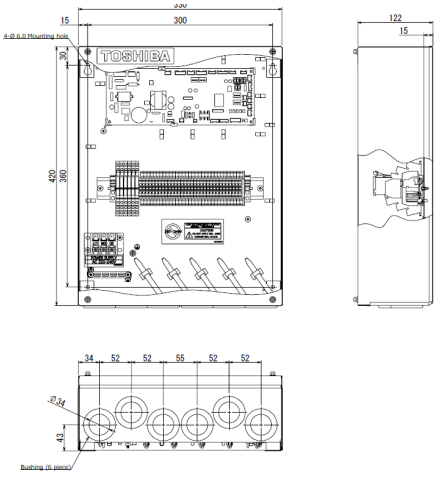
Multi combination



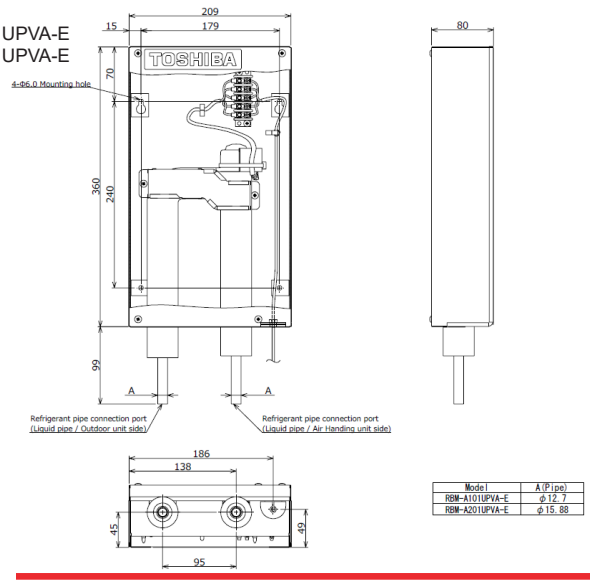
Drawings

Unit : mm

TCB-IFDMX01UP-E
TCB-IFDMR01UP-E

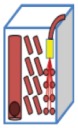
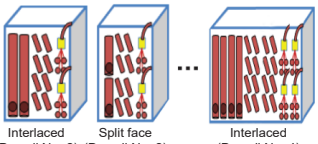


RBM-A101UPVA-E
RBM-A201UPVA-E



Model	A (Pipe)
RBM-A101UPVA-E	ϕ12.7
RBM-A201UPVA-E	ϕ15.88

DX-COIL INTERFACE ADVANCE

Type of AHU Dx-coil	Normal	Interlaced, Split face
Appearance of AHU Dx-coil		 Interlaced (Dx-coil No=2) Split face (Dx-coil No=2) Interlaced (Dx-coil No=4) Split face (Dx-coil No=4) Interlaced (Dx-coil No=6) Split face (Dx-coil No=6)

Dx-coil number		1	1	2	3	4	5	6	2	3
Dx's combination		Single	Twin	Single multi (2)	Single multi (3)	Single multi (4)	Single multi (5)	Single multi (6)	Double Twin	Triple Twin
Dx-controller No.		1	1	2	3	4	5	6	2	3
Dx-valve kit No.		1	2	2	3	4	5	6	4	6
Dx-valve kit Combination [HP]	8	8								
	10	10								
	12	12								
	14	14								
	16	16	8+8	8+8						
	18	18		10+8						
	20	20	10+10	10+10						
	22			12+10						
	24		12+12	12+12	8+8+8					
	26				10+8+8					
	28		14+14	14+14	10+10+8					
	30			16+14	10+10+10					
	32		16+16	16+16	12+10+10	8+8+8+8			(8+8)+(8+8)	
	34			18+16	12+12+10	10+8+8+8				
	36		18+18	18+18	12+12+12	10+10+8+8				
	38			20+18		10+10+10+8				
	40		20+20	20+20		10+10+10+10	8+8+8+8+8		(10+10)+(10+10)	
	42				14+14+14	12+10+10+10	10+8+8+8+8			
	44				16+14+14	12+12+10+10	10+10+8+8+8			
	46				16+16+14	12+12+12+10	10+10+10+8+8			
	48				16+16+16	12+12+12+12	10+10+10+10+8	8+8+8+8+8+8	(12+12)+(12+12)	(8+8)+(8+8)+(8+8)
	50				18+16+16		10+10+10+10+10	10+8+8+8+8+8		
	52				18+18+16		12+10+10+10+10	10+10+8+8+8+8		
	54				18+18+18		12+12+10+10+10	10+10+10+8+8+8		
	56				20+18+18	14+14+14+14	12+12+12+10+10	10+10+10+10+8+8	(14+14)+(14+14)	
	58				20+20+18	16+14+14+14	12+12+12+12+10	10+10+10+10+10+8		
	60				20+20+20	16+16+14+14	12+12+12+12+12	10+10+10+10+10+10		(10+10)+(10+10)+(10+10)
	62					16+16+16+14		12+10+10+10+10+10		
	64					16+16+16+16		12+12+10+10+10+10	(16+16)+(16+16)	
	66					18+16+16+16		12+12+12+10+10+10		
	68					18+18+16+16		12+12+12+12+10+10		
	70					18+18+18+16	14+14+14+14+14	12+12+12+12+12+10		
	72					18+18+18+18	16+14+14+14+14	12+12+12+12+12+12	(18+18)+(18+18)	(12+12)+(12+12)+(12+12)
	74					20+18+18+18	16+16+14+14+14			
	76					20+20+18+18	16+16+16+14+14			
	78					20+20+20+18	16+16+16+16+14			
	80					20+20+20+20	16+16+16+16+16		(20+20)+(20+20)	
	82						18+16+16+16+16			
	84						18+18+16+16+16	14+14+14+14+14+14		(14+14)+(14+14)+(14+14)
	86						18+18+18+16+16	16+14+14+14+14+14		
	88						18+18+18+18+16	16+16+14+14+14+14		
	90						18+18+18+18+18	16+16+16+14+14+14		
	92						20+18+18+18+18	16+16+16+16+14+14		
	94						20+20+18+18+18	16+16+16+16+16+14		
	96						20+20+20+18+18	16+16+16+16+16+16		(16+16)+(16+16)+(16+16)
	98						20+20+20+20+18	18+16+16+16+16+16		
	100						20+20+20+20+20	18+18+16+16+16+16		
	102							18+18+18+16+16+16		
	104							18+18+18+18+16+16		
	106							18+18+18+18+18+16		
	108							18+18+18+18+18+18		(18+18)+(18+18)+(18+18)
	110							20+18+18+18+18+18		
	112							20+20+18+18+18+18		
	114							20+20+20+18+18+18		
	116							20+20+20+20+18+18		
	118							20+20+20+20+20+18		
	120							20+20+20+20+20+20		(20+20)+(20+20)+(20+20)

* Please refer to the guideline of Dx-coil interface advance for other combination of DX coil controller and DX valve kit.

VN-M_HE
AIR-TO-AIR HEAT EXCHANGER

Toshiba's VN model uses exhaust air to pre-condition the incoming air, thus reducing the cooling load on the system. This allows the overall capacity size of the system to be reduced.

AIR FLOW

150m3/h ~ 2,000m3/h

SOUND PRESSURE LEVEL

20 dB(A)

LOCAL CONTROLS

NRC-01HE
RBC-AMTU31E

Features

Model name			VN-M150HE	VN-M250HE	VN-M350HE	VN-M500HE	VN-M650HE	VN-M800HE	VN-M1000HE	VN-M1500HE	VN-M2000HE
Air volume (Extra high/High/Low)		m^3/h	150/150/110	250/250/155	350/350/210	500/500/390	650/650/520	800/800/700	1000/1000/755	1500/1500/1200	2000/2000/1400
Power consumption	Extra high	W	68-78	123-138	165-182	214-238	262-290	360-383	532-569	751-786	1084-1154
	High	W	59-67	99-111	135-145	176-192	240-258	339-353	494-538	708-784	1032-1080
	Low	W	42-47	52-69	82-88	128-142	178-191	286-300	353-370	570-607	702-742
External static pressure	Extra high	Pa	82-102	80-98	114-125	134-150	91-107	142-158	130-150	135-156	124-143
	High	Pa	52-78	34-65	56-83	69-99	58-82	102-132	97-122	103-129	92-116
	Low	Pa	47-64	28-40	65-94	62-92	61-96	76-112	84-127	112-142	110-143
Sound pressure level	Extra high	dB(A)	26-28	29.5-30	34-35	32.5-34	34-36	37-38.5	39.5-40.5	38-39	41-42.5
	High	dB(A)	24-25.5	25-27	30-32	29.5-31	33-34	35.5-37	38.5-40	36.5-37.5	39.5-41
	Low	dB(A)	20-22	21-22	27-29	26-29	31-32.5	33.5-35	34-35.5	36-37.5	37-38
Temperature exchange efficiency (%)	Extra high		81.5	78	74.5	76.5	75	76.5	73.5	76.5	73.5
	High		81.5	78	74.5	76.5	75	76.5	73.5	76.5	73.5
	Low		83	81.5	79.5	78	76.5	77.5	77	79	77.5
Enthalpy exchange efficiency (%)	Extra high	Heating	74.5	70	65	72	69.5	71	68.5	71	68.5
	High	Heating	74.5	70	65	72	69.5	71	68.5	71	68.5
	Low	Heating	76	74	71.5	73.5	71.5	71.5	71.5	73.5	72
	Extra high	Cooling	69.5	65	60.5	64.5	61.5	64	60.5	64	60.5
	High	Cooling	69.5	65	60.5	64.5	61.5	64	60.5	64	60.5
	Low	Cooling	71	69	67	66.5	64	65.5	64.5	67	65.5
Power supply			1 phase 50Hz 230V (220-240V) / 1 phase 60Hz 220V								
Dimensions (HxWxD)		mm	900x900x290			1140x1140x350		1189x1189x400		1189x1189x810	
Weight		kg	36	36	38	53	53	70	70	143	143
Duct diameter		mm	100	150		200		250		Inside: 250 / Outside: 283x730	
Filtration efficiency grade (%)			82								
Operating range	Around unit		-10°C-40°C 80%RH or less								
	Outdoor Air (OA)		-15°C(*1)-43°C 80%RH or less								
	Return Air (RA)		5°C-40°C 80%RH or less								

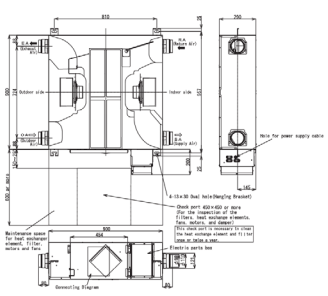
*1: Because these models can support only old communication protocol, please communicate with local distributor if you want to connect these indoor units.

* Air volume can be changed over to high (Extra high) mode or low mode at both heat exchange and normal ventilation modes.
* Sound pressure level is measured 1.5 m below the center of the unit, and the value which was measured at the acoustic room.
* Sound pressure levels usually become higher than above values by the influence of actual installation condition such as reflected sound and peripheral noise.
* Sound power level is the value of casing.
*1) When the temperature of the outdoor air is below -10°C, the unit runs cold oepration mode (intermittent operation of the ventilation for air supply). The unit cannot be used at -15°C or less. The ventilator for air supply stops, and the ventilator for air exhaust also can be stopped by the setting.

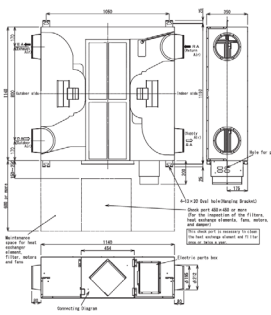
Drawings

Unit : mm

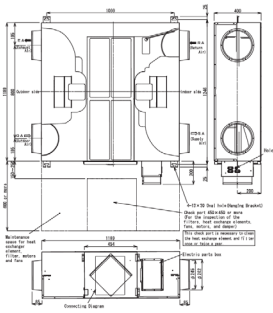
VN-M150HE to VN-M350HE



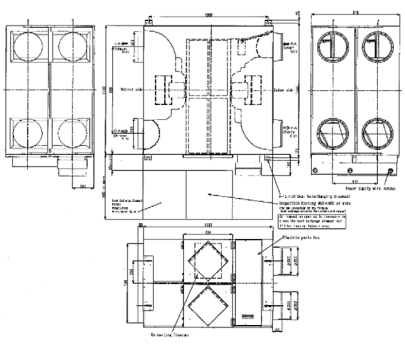
VN-M500HE to VN-M650HE



VN-M800HE to VN-M1000HE1



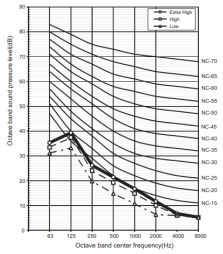
VN-M1500HE1 to VN-M2000HE1



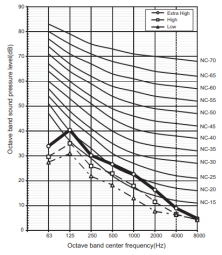
Sound pressure levels

Unit : dB(A)

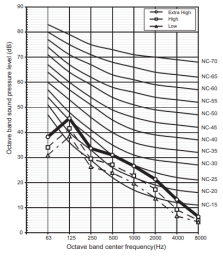
VN-M150HE



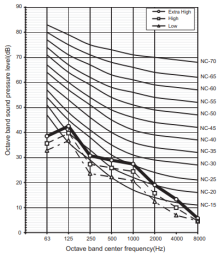
VN-M250HE



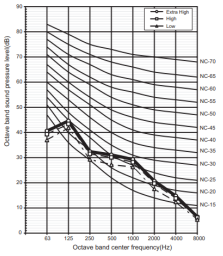
VN-M350HE



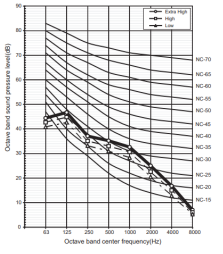
VN-M500HE



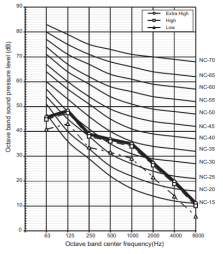
VN-M650HE



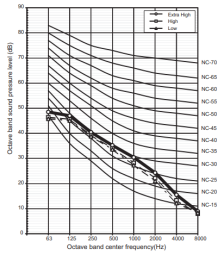
VN-M800HE



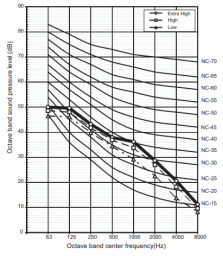
VN-M1000HE



VN-M1500HE



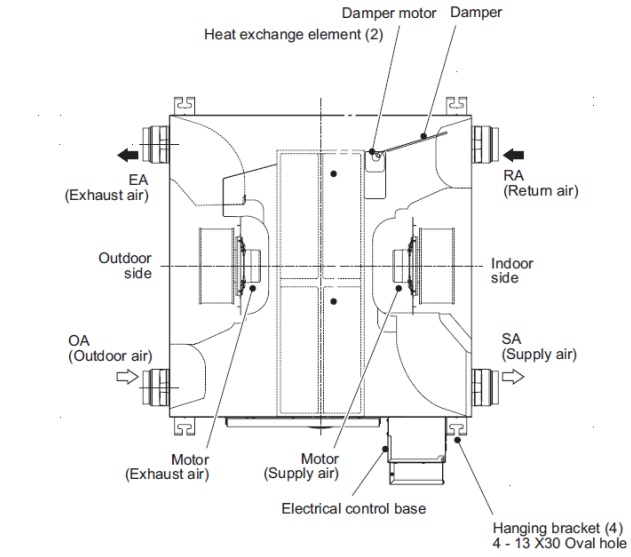
VN-M2000HE

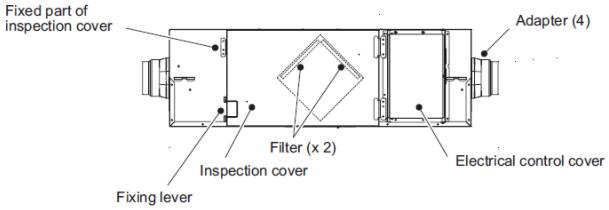


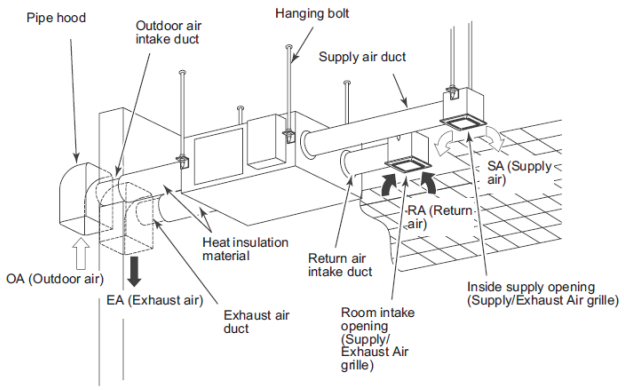
Accessories

Part name	Model name	Description	Appearance	Remarks
Control	NRC-01HE	All air-to-air heat exchangers dedicated remote control		Integrated functions : fan speed, freecooling, air balance volume rate, temperature management and timer.
	NRB-1HE	All air-to-air heat exchangers On/Off additionnal PCB		On/off optionnal PCB for air-to-air heat exchanger

Other information







WIRELESS SOLUTIONS KEEP CONTROL

In addition to the high quality of the air conditioners, the controls also play a significant part in the ease-of-use and efficiency of the units. Optimized settings create the perfect climate. As well as local control options, Toshiba also offers a broad selection of central control systems or the option to integrate these in the building control system.

ONE CONTROL FOR EVERY USAGE

Local controls

Cable remote controls (max. cable length 500 m) or wireless infrared remote controls are used to control individual units or groups of up to 8 indoor units. Additional modules allow units to be controlled from any location via apps or the Internet.

Central controls

VRF systems can be controlled from a preferred central location, such as the reception or plant room. Cable lengths can be max. 2,000 m and up to 512 indoor units can be controlled.

Building control systems

Toshiba air conditioners can be interlinked with all conventional building control systems. This makes air conditioning an integral part of the central control of a building.

WHEREVER YOU ARE

On the cloud with Toshiba AC control app

Locally with standard remote control

Using Toshiba WebBrowser for all your facilities

TRUST TOSHIBA TU2C-LINK

All control devices are connected to the air conditioner side using Toshiba's dedicated central control network, also called the TU2C-LINK. It can be used to directly connect all equipment.

Wiring: 2-core, non-polarity
Type: Shield wire
Size/length:
•1 to 1.5 mm² / Up to 1,000 m
•2 mm² / Up to 2,000 m

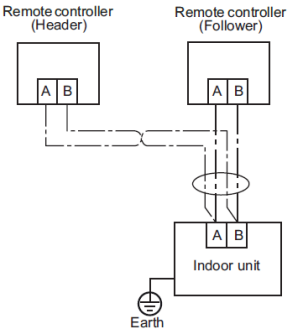
INDIVIDUAL REMOTE CONTROLLER

• : Available

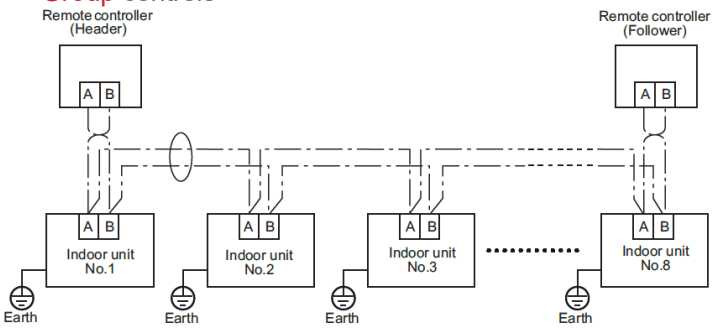
TYPE		INFRARED								WIRED			
Part number		RBC-AXU31-E	RBC-AXU41U-E	RBC-AXU31U-E	RBC-AXU33UP-E	RBC-AXU31UM-E	RBC-AXU31UW-E	RBC-AX33UYP-E	RBC-AXU31C-E	RBC-ASCU11-E	RBC-AMTU31-E	RBC-AMSU51-EN/ES	NRC-01HE
Picture													
Dimensions (HxWxD) in mm	Remote	157x56x19	157x56x19	157x56x19	157x56x19	157x56x19	157x56x19	157x56x19	157x56x19	86x86x16	120x120x16	120x120x20	120x120x16
	Infrared receiver	120x70x18	204x204x24	163x163x24	204x204x24	163x163x24	71x162x39	140x113x12	130x65				
Compatibility		All indoor units	4 way cassette high performance	4 way cassette	4 way cassette	Compact 4 way cassette	2 way cassette	1 way cassette	Ceiling	All indoor units	All indoor units	All indoor units	Air to air heat exchanger
Connectivity		1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:16	1:16	1:16	1:8
Standard functions	On/Off	•	•	•	•	•	•	•	•	•	•	•	•
	Mode (heat, cool, ventilation,dry, auto)	•	•	•	•	•	•	•	•	•	•	•	•
	Temperature setting	• / 17°C-30°C	• / 17°C-30°C	• / 17°C-30°C	• / 17°C-30°C	• / 17°C-30°C	• / 17°C-30°C	• / 17°C-30°C	• / 17°C-30°C	• / 18°C-29°C	• / 18°C-29°C	• / 18°C-29°C	• / 18°C-29°C
	Fan speed (auto, manual 5 speed)	•	•	•	•	•	•	•	•	•		•	
	Air direction (swing mode or manual orientation)	•	•	•	•	•	•	•	•	•	•	•	
Scheduling	Timer function	•	•	•	•	•	•	•	•		•	•	•
	Schedule fonction									•		•	
	Return back											•	
Advanced functions	Dual set point											•	
	Soft cooling											•	
	Night operation											•	
	Energy save function										•	•	•
	Frost protection										•	•	•
	Lock function											•	
	Summer time											•	
	Room naming											•	
Installation & maintenance	Filter duirty indication									•	•	•	
	Error display	•	•	•	•	•	•	•	•	•	•	•	•
	System settings									•	•	•	
	Indoor unit serial number											•	
Outputs	Error output									•	•	•	•
	External ventilation control										•	•	
Display & Interface	Interface	Icon	Icon	Icon	Icon	Icon	Icon	Icon	Icon	Icon	Icon	Menu	Icon
	Multilanguage											•	
	Luminous buttons											•	
	Backlight display											•	
Other	Temperature sensor									•	•	•	•
Communication protocol										TU2C-LINK	TU2C-LINK	TU2C-LINK	TCC-LINK

Installation drawings

Individual controls



Group controls

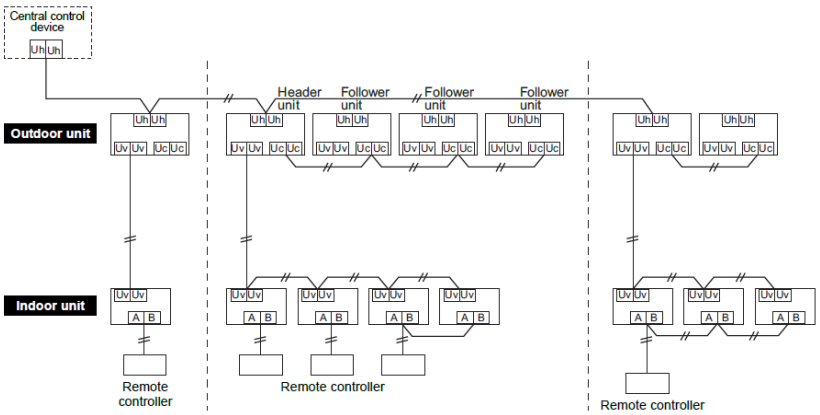


CONTROL

TOUCH SCREEN SOLUTIONS

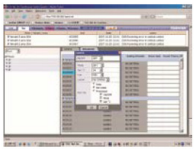
TYPE		WIRED	
Part number		TCB-SC640U-E	BMS-SM1281ETLE - Smart Manager
Picture			
Dimensions (HxWxD) in mm		120x120x16	180x120x90
Compatibility		all systems	all systems
Connectivity		1:64	1:128
Standard functions	On/Off	•	•
	Mode (heat, cool, ventilation, dry, auto)	•	•
	Temperature setting	•	•
	Fan speed (auto, manual 5 speed)	•	•
	Air direction (swing mode or manual orientation)	•	•
Scheduling	Timer function		•
	Schedule fonction	•	•
	Return back		•
Advanced functions	Dual set point		•
	Soft cooling		•
	Energy save function		
	Energy monitoring		• (If power metter,BMS-IFWH5E interface relay needed)
Central control	Permit/prohibit function	•	•
	Group control	•	•
Installation & maintenance	Filter dirty indication	•	•
	Error display	•	•
	Error transfer by Email		•
	System settings	•	V
Display & Interface	Interface	Menu	Icon
	Multilanguage	•	•
	Luminous buttons	•	
	Backlight display	•	
Other	Digital Input/output		• (BMS-IFDD03E interface needed)
	Web connection		•
Communication protocol		TU2C-LINK	TCC-LINK

Drawings



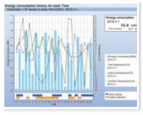
Focus on Web Browser

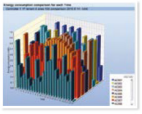
The Smart Manager can be remotely connected via a computer and all functions can be controlled via web browser:
Standard operation - Advanced scheduling - Dual set point management - Up to 64 zones - Permit/Prohibit function - Energy saving - Return back



Focus on Data Analyzer

With or without power meter, the Data Analyzer software allows facility manager to manage system energy consumption. Through graphics on different periods, different indoor units, different energy consumption zones can be compared to optimize global efficiency. Set point, ambient temperature and outdoor temperature are monitored.

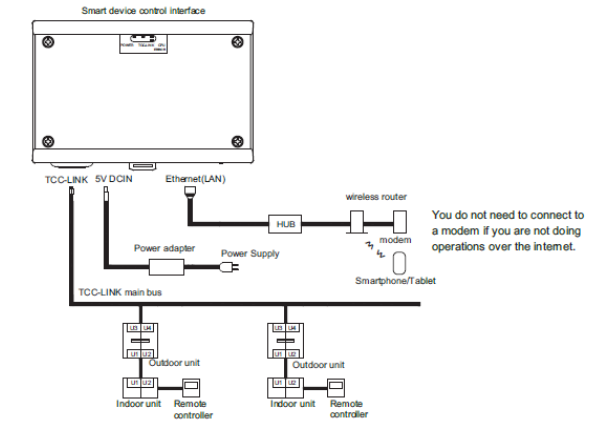

Energy consumption history


Energy consumption comparison

CLOUD SOLUTION

Part number		BMS-IWF0320E - Smart Device control interface
App name		Toshiba AC control
Picture		
Dimensions (HxWxD) in mm		140x90x45
Compatibility		All indoor units (except hot water module, DX kit, fresh air, A2A heat exhcanger)
Connectivity		1:32
Standard functions	On/Off	•
	Mode (heat, cool, ventilation, dry, auto)	•
	Temperature setting	•
	Fan speed (auto, manual 5 speed)	•
	Air direction (swing mode or manual orientation)	•
Scheduling	Timer function	•
	Schedule function	•
	Return back	•
Advanced functions	Energy save function	•
	Eco temperature schift	•
	Soft cooling	•
	Customize room/floor/building name	•
Central control	Permit/prohibit function	•
	Group control	•
Display & Interface	Interface	App
	Multilanguage	•
	App compatiblity	Android & IOS
	Devices compatibility	Smartphone and Phablet
Installation & maintenance	Filter dirty indication	•
	Error display	•
	Error transfer by Email	•
Users	User acces	Login & Password
	Max user	1 admin / 32 users
Communication protocol		TCC-LINK

Drawings

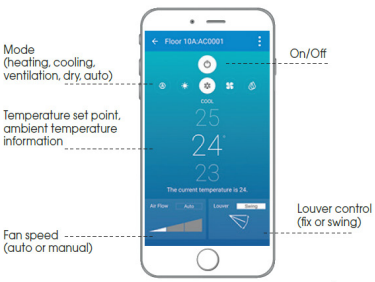


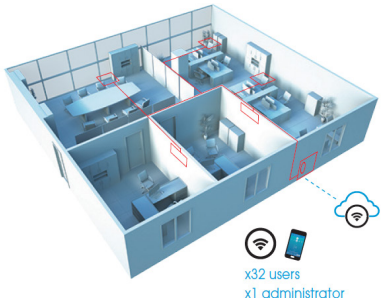
Level function	Administrator	User
Air conditioner's display	•	•*1
Air conditioner's settings	•	•*1, *2
Users sttings	•	-
Alarm	•	-*3
Schedule	•	-
Air conditioner's various settings	•	-*4
Clock settings	• (via intranet acces only)	-
Operation mode restriction	• (via intranet acces only)	-

*1:Only the air conditioners in the "Access Area" can be displayed.
*2:If the locking setting is enabled, you cannot do any settings.
*3:The alarm settings for "Access Area" can only be displayed.
*4:The settings can only be displayed.

Toshiba AC control

Designed for commercial applications, the Toshiba AC Control App is your one-stop solution for managing up to 32 indoor units via an Android or iOS smartphone, with all main functions accessible in a single touch.



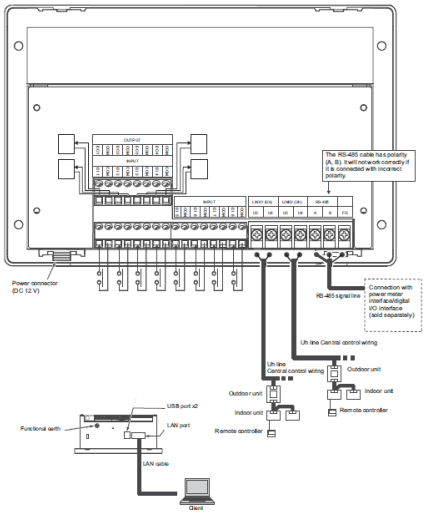


TOUCH SCREEN SOLUTIONS

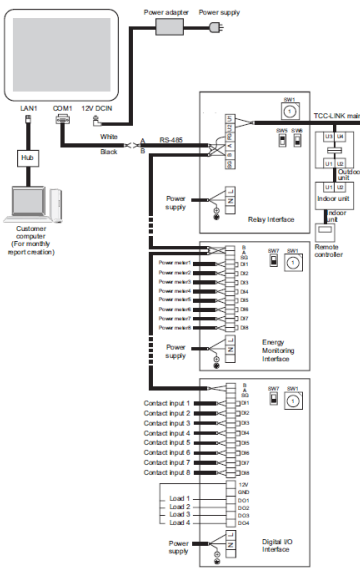
Part number	Touch Screen Smart Manager	BMS-CT2560U-E	BMS-CT5121E
Picture			
Dimensions (HxWxD) in mm		205x136x90	255x323x49
Compatibility		All indoor units (except hot water module, DX kit, fresh air, A2A heat exhcanger)	All indoor units. TCS-NET relay interface needed (BMS-IFLSV4E)
Connectivity		1:256	1:512
Screen	Type / Dimension	Capacitive color touch screen / 7"	Capacitive color touch screen / 12.1"
Standard functions	On/Off	•	•
	Mode (heat, cool, ventilation, dry, auto)	•	•
	Temperature setting	•	•
	Fan speed (auto, manual 5 speed)	•	•
	Air direction (swing mode or manual orientation)	•	•
Scheduling	Timer function	•	•
	Schedule function	•	•
	Return back	•	•
Advanced functions	Dual set point	•	•
	Soft cooling	•	•
	Energy save function	•	•
	Energy monitoring	•	• (If power metter,BMS-IFWH5E interface relay needed)
	Rooms naming		
Central control	Permit/prohibit function		
	Group control	•	•
Installation & maintenance	Filter dirty indication	•	•
	Error display	•	•
	Error transfer by Email	•	•
	System settings	•	•
Outputs	Digital Input/output	•	• (Digital I/O BMS-IFDD03E needed)
	Web connection	•	•
Display & Interface	Interface	Menu	Menu
	Multilanguage	•	•
	Backlight display	•	•
Communication protocol		TU2C-LINK	TCC-LINK

Installation drawings

BMS-CT2560U-E



BMS-CT5121E



Additional PCB for outdoor units

Model name	Power peak-cut control borad			External master ON/OFF control board			Output control board		
									
	TCB-PCDM4E			TCB-PCMO4E			TCB-PCIN4E		
System	SMMSu/ SMMS-7/SMMS∞	SHRMe	MiNi SMMSe	SMMSu/ SMMS-7/SMMS∞	SHRMe	MiNi SMMSe	SMMSu/ SMMS-7/SMMS∞	SHRMe	MiNi SMMSe
Power peak cut control	•	•	•						
Power peak cut extand	•	•	•						
Snowfall fan control				•	•				
External master ON/OFF control				•	•	•			
Night operation (Sound reduction) control				•	•	•			
Operation mode selection cotnrol				•	•	•			
Error/Operation output control							•	•	•
Compressor operation output							•	•	•
Operation rate display							•	•	•
Max number installed	1	1	1	4	4	2	2	2	1
Kind of digital input / output	2/1			6/-			-/8		

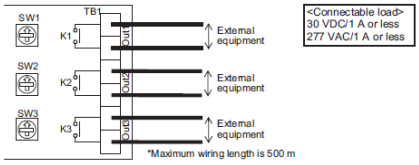
Additional PCB for Indoor units

Optional connection kit TCB-PCUC2-E

SIGNAL

OUTPUT TERMINAL TB1

Signal outputs (Mode, fans status, alarm, defrost,…) are extracted from “OUT1”, “OUT2”, and “OUT3.

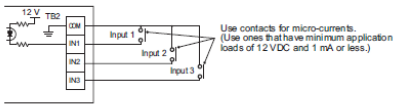


EXTERNAL

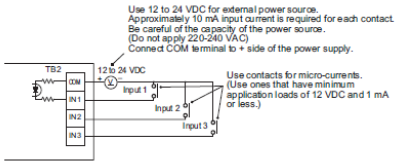
DIGITAL INPUT TERMINAL TB2

Stop air conditioner or lock local remote by inputting signal.

“Voltage OFF” input



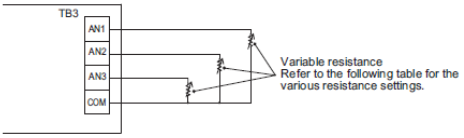
“Voltage ON” input



EXTERNAL

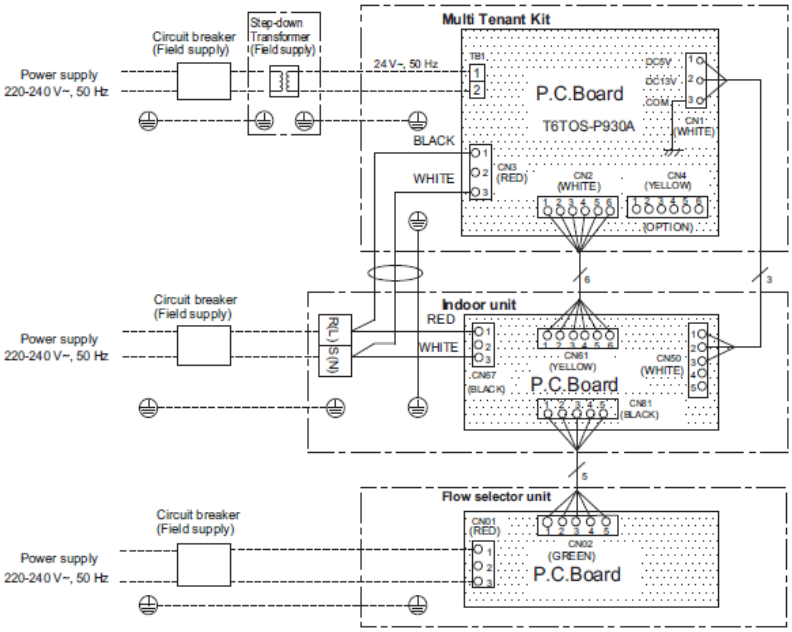
ANALOG INPUT TERMINAL TB3

Change the indoor unit’s operation mode (AN1), set temperature (AN2), and blower setting (AN3) by connecting a variable resistor to the analog input terminal.



Multi tenant kit TCB-PSMT1E

For multi tenant application, this PCB maintain low voltage power during tenant absence when main power supply for the IDU is shut down.



Features

Part number		BMS-IFMB1280U-E	TCB-IFLN642TLE	BMS-IFBN1280U-E	TCB-IFCB640TLE
Langage		Modbus ®	LONWORKS ®	BACnet ®	Analogue and digital inputs
Picture					
Dimensions (HxWxD) in mm		170x200x66	193x246x66	90x140x45	66x170x200
Compatibility		All indoor units (HWM, A2A heat exchanger excluded)	All indoor units (HWM, A2A heat exchanger excluded)	All indoor units (HWM excluded)	All indoor units
Connectivity	Max number of indoor units	128	64	128	64
	Max number of outdoor units	16	16		
	Max number of gateways	15	10	1	
Command	On/Off	R/W	R/W	R/W	R/W
	Accumulated operation time	R/W			
	Mode (heat, cool, ventilation, dry, auto)	R/W	R/W	R/W	R/W
	Temperature setting	R/W	R/W	R/W	R/W
	Fan speed (auto, manual 5 speed)	R/W	R/W	R/W	R/W
	Air direction (swing mode or manual orientation)	R/W	R/W	R/W	R/W
	Soft cooling				
	Save operation				
	Filter dirty indication	R/W	R/W	R/W	
	Room temperature	R	R	R	
	Permit/Prohibt of local operation	R/W	R/W	R/W	
	Temperature setting range limitation	R/W			
	Error status	R	R	R	R
	Error code	R	R		
	Error address				
	Model name	R			
	Serial number	R			
	Indoor unit capacity	R			
	Indoor unit type	R			
Protocol		Modbus RTU	Lontalk communication	Bacnet IP	Voltage signal
Infrastructure		RS-485	Twisted pair shield cable	LAN cable (higher than Category 5, UTP)	
Requirements (Locally supplied)		Modbus master device	Lonworks control system		
		Modbus master device	Lonworks Network Card for PC Control		
Toshiba communication protocol		TU2C-LINK	TCC-LINK	TU2C-LINK	TCC-LINK

Controls

Model number	Reference	TCC-LINK	TU2C-LINK	Description	Used with
BMS-CT256U-E	7" Touch Screen Controller	x	x	Enables full control of up to 256 indoor units	
BMS-CT5121E	12" Touch Screen Controller	x		Enables full control of up to 512 indoor units with electric billing, ML	
BMS-IFBN1280U-E	BN Interface	x	x	BACnet Interface for LC & VRF	Enables integration with BACnet
BMS-IFDD03E	Digital I/O relay interface	x		Digital I/O relay interface	Touch screen controller, Compliant manager, Web based controller, Smart Manager
BMS-IFKX0TLR-E	1:1 KNX interface	x		Connect the system to a KNX Building Management System	Remote Control wiring
BMS-IFLSV4E	TCS-Net Relay Interface	x		Relay for integration to TCS-Net	Bacnet gateway, Touch-screens & Web based controller
BMS-IFMB0TLR-E	1:1 Modbus interface	x		Connect the system to a Modbus Building Management System	Remote Control wiring
BMS-IFWH5E	Energy monitoring relay interface	x		Energy monitoring relay interface	Touch screen controller, Compliant manager, Web based controller, Smart Manager
BMS-IWF0320E	Smart Device Control Interface	x		Enables full control of up to 32 indoor units by usin Toshiba AC app (Smart phone & Tablet)	
BMS-SM1281ETLE	Smart BMS Manager with data analyzer	x		Enables full control of up to 128 indoor units with Energy Monitoring and Advanced Control Options.	Network 1:1 model connection interface required for DI/SDI (Excluding high-wall type)
NRB-1HE	Remote ON/OFF adapter	x		Allows ON/OFF control	All Air-to-air heat exchangers
NRC-01HE	Wired Remote Controller	x		Air-to-air heat exchanger remote controller, including with DX coil and humidifiers models	Air-to-air heat exchangers and Air-to-air heat exchangers with DX coil
RBC-AMS41E	Remote controller with schedule timer	x		Indoor unit operation with schedule timer (7-days) allowing to program 8 functions/day + clock display	
RBC-AMSU51-EN/ES	Design remote Controller with schedule timer	x	x	Multi-Language LCD display, a built-in 7-Day timer, Energy Saving options and return back function,Dual set points,and Soft cooling. EN = English, Italian, Polish, Greek, Russian, Turkish. ES = English, Spanish, Portuguese, French, Dutch, German	
RBC-AMTU31-E	Wired Remote Controller	x	x	Main wired remote controller	
RBC-AMT32-E	Wired Remote Controller	x		Main wired remote controller	
RBC-AS41E	Simplified Wired Remote Controller	x		Dedicated for hotel and domestic applications	
RBC-AXU31C-E	Infra-red Remote Kit	x	x	Wireless remote controller	All ceiling units
RBC-AXU31U-E	Wireless remote unit kit	x	x	Wireless remote unit kit for 4-way cassette	4 way cassette series 1 & RBC-U32PGP-E
RBC-AXU33UP-E	Wireless remote unit kit	x	x	Wireless remote unit kit for 4-way cassette	4 way cassette series 1 & RBC-U33P-E
RBC-AX33UYP-E	Wireless remote kit	x	x	Wireless remote kit for YHP 1-way cassette	
RBC-AXU31-E	Infra-red Remote Kit	x	x	Wireless remote controller	All units
TCB-IFCB-4E2	Remote location On/Off Control Box	x		Enables remote location On/Off control	
TCB-IFCB5-PE	Window Switch & Remote on/off	x		Ensure the indoor unit not operate when outside window is open or for Door Entry systems	
TCB-IFCB640TLE	Analog interface	x		Control & monitoring up to 64 IU on TCC-link	Combination with TCB-IFCG1TLE
TCB-IFCG1TLE	General purpose interface	x		Enables control of A/C by the DI/DO and AI/AO	Combination with TCB-IFCB640TLE
TCB-IFLN642TLE	LN interface	x		Allows control of 64 indoor units from a Lonworks based BMS	
BMS-IFMB1280U-E	Modbus interface box	x	x	Connect the system to a Modbus Building Management System	
TCB-KBCN32VEE	Connectors	x		For CN32	
TCB-KBCN60OPE	Connectors	x		For CN60	
TCB-KBCN61HAE	Connectors	x		For CN61	
TCB-KBCN70OAE	Connectors	x		For CN70	
TCB-KBCN73DEE	Connectors	x		For CN73	
TCB-KBCN80EXE	Connectors	x		For CN80	
TCB-PCDM4E	Application Control PC Board	x		Power Peak Cut Control	
TCB-PCIN4E	Application Control PC Board	x		Error/Individual compressor Operation Output Control Board	
TCB-PCMO4E	Application Control PC Board	x		External Master ON/OFF Control Board	
TCB-PCUC2E	Optionnal connection kit	x			
TCB-PSMT1E	Optionnal connection kit	x		Multi-Tenant Kit for VRF Systems	SMMS-u, SMMS∞, SMMS-e, SHRM-e and Mini-SMMS Indoor Units (refer to I/M for more details of connectable Indoor units)
TCB-PX100-PE	Enclosure for the Window Switch / Remote On/Off	x		For use when the Window Switch / Remote On/Off Accessory cannot fit within the AC unit, eg. High Walls	For use with TCB-IFCB5-PE
TCB-PX30MUE	E-Box Extension Enclosure	x		For 1:1 Model connection I/F and Window Switch / Remote On/Off PCB	4-Way Cassettes only & TCB-IFCB5-PE
TCB-PX40MUE	E-Box Extension Enclosure	x		For 1:1 Model connection I/F and Window Switch / Remote On/Off PCB	4-Way Compact Cassettes only & TCB-IFCB5-PE
TCB-SC640U-E	Centralized remote controlle	x	x	Up to 64 indoor units	
TCB-TC41U-E	Remote temperature sensor	x	x	Remote temperature sensor for cassette & duct	
RBC-ASC11U-E	Wired Remote Controller	x	x	Main wired remote controller	
RBC-ASC11-E	Wired Remote Controller	x		Main wired remote controller	

ACCESSORIES

Indoor units accessories

Indoor unit type	Parts name	Model name	Applied model	Notes	Remarks
4-way cassette high performance	Ceiling Panel	RBC-U41PG(W)-E	MMU-UP_1H-E	Required accessory	
	Wireless remote controller	RBC-AXU41U-E		For Installing on panel	
	Wireless remote controller	RBC-AXU31-E		For installing as stand alone	
	Fresh air chamber	TCB-GFC1603UE			
	Spacer for height adjustment	TCB-SP1603UE			
	Air discharge direction kit	TCB-BC1603UE			
4-way cassette	Ceiling Panel(Wide-flow louver)	RBC-U32PGP-E	MMU-UP_1HP-E	Required accessory	
	Ceiling panel (Smart design)	RBC-U33P-E		Required accessory	
	Wireless remote controller	RBC-AXU31U-E		For Installing on panel	Use with RBC-U32PGP-E
	Wireless remote controller	RBC-AXU31-E		For installing as stand alone	
	Fresh air chamber	TCB-GFC1602UE			Use with TCB-GB1602UE
	Fresh air inlet box	TCB-GB1602UE		For fresh air intake by using the knockout hole of Fresh air and filter chamber. (dia.=100 mm)	Use with TCB-GFC1602UE
	Auxiliary fresh air flange	TCB-FF101URE2		For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)	
	Spacer for height adjustment	TCB-SP1602UE		Height 50 mm	
	Air discharge direction kit	TCB-BC1602UE		Air direction change by cutting off air discharge port (3 pcs.)	
	PM2.5 filter	TCB-PLFC1UPE-120		Before Pre-Filter type	
		TCB-PLFC2UPE-80		After Pre-Filter type	
	Wireless remote controller	RBC-AXU33UP-E		*New product and coming soon	Use with RBC-U33P-E
	Occupancy sensor	TCB-SIR33UP-E		*New product and coming soon	Use with RBC-U33P-E
	Air purifier kit	TCB-EAPC1UCP-E		*New product and coming soon	Use with RBC-U33P-E
Compact 4-way cassette	Standard panel	RBC-UM21PG(W)-E	MMU-UP_1MH-E	Required accessory	
	Motion Sensor	TCB-SIR41UM-E			Wireless remote controller kit (RBC-AX32UM(W)-E) and Occupancy sensor cannot be used on the same indoor unit.
2-way cassette	Standard panel	RBC-UW283PG(W)-E	MMU-UP0071 to 0151WH-E	Required accessory	
		RBC-UW803PG(W)-E	MMU-UP0181 to 0301WH-E		
		RBC-UW1403PG(W)-E	MMU-UP0361 to 0561WH-E		
	Auxiliary fresh air flange	TCB-FF151US-E	MMU-UP_1WH-E	For easy fresh air intake by using the knockout hole of indoor unit	
	Filter chamber	TCB-FC283UW-E	MMU-UP0071 to 0151WH-E		
		TCB-FC803UW-E	MMU-UP0181 to 0301WH-E		
		TCB-FC1403UW-E	MMU-UP0361 to 0561WH-E		
	Super Long life filter	TCB-LF283UW-E	MMU-UP0071 to 0151WH-E	For use with filter chamber	Use with TCB-FC283UW-E
		TCB-LF803UW-E	MMU-UP0181 to 0301WH-E		Use with TCB-FC283UW-E
		TCB-LF1403UW-E	MMU-UP0361 to 0561WH-E		Use with TCB-FC283UW-E
1-way cassette	Ceiling Panel	RBC-UY32P-E	MMU-UP0071 to 0121YHP-E	Required accessory	
		RBC-UY42P-E	MMU-UP0151 to 0271YHP-E	Required accessory	
	Auxiliary fresh air flange	TCB-FF101URE2	MMU-UP0151 to 0271YHP-E	For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)	
	Air purifier kit	TCB-EAPC1UYHP-E	MMU-UP_1YHP-E		
	Occupancy sensor	TCB-SIR41UYP-E			
	Wireless remote controller	RBC-AX33UYP-E		For Installing on panel	
	Wireless remote controller	RBC-AXU31-E		For installing as stand alone	
Slim duct	Auxiliary fresh air flange	TCB-FF101URE2	MMD-UP_1SPHY-E	For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)	
Concealed duct	Spigot shaped flange	TCB-SF56C6BE	MMD-UP0071 to 0181BHP-E		
		TCB-SF80C6BE	MMD-UP0241 to 0301BHP-E		
		TCB-SF160C6BE	MMD-UP0361 to 0561BHP-E		
Concealed duct high static pressure	Long life filter kit	TCB-LK801D-E	MMD-UP0181 to 0271HP-E		
		TCB-LK1401D-E	MMD-UP0361 to 0561HP-E		
		TCB-LK2801DP-E	MMD-UP0721 to 0961HP-E		
	Spigot shaped flange	TCB-SF80C6BE	MMD-UP0181 to 0271HP-E		
		TCB-SF160C6BE	MMD-UP0361 to 0561HP-E		
	Auxiliary fresh air flange	TCB-FF151US-E	MMD-UP_1HP-E		
	Drain Pump kit	TCB-DP40DPE			

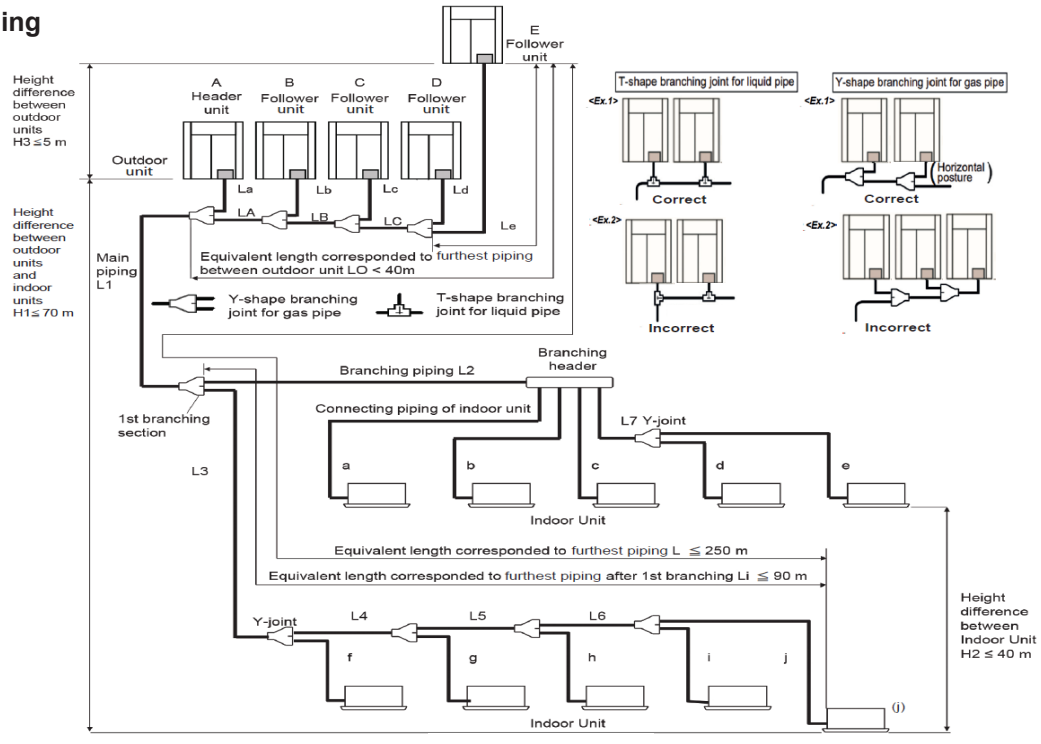
Indoor units accessories

Indoor unit type	Parts name	Model name	Applied model	Notes	Remarks
Ceiling	Drain pump kit	TCB-DP31CE	MMC-UP_1HP-E	Lift up to 600 mm	Use TCB-KP13, 23CE
	Elbow Piping kit	TCB-KP13CE	MMC-UP0151 to 0181HP-E		
		TCB-KP23CE	MMC-UP0241 to 0561HP-E		
	Wireless remote controller	RBC-AXU31C-E	MMC-UP_1HP-E	For Installing on panel	
	Wireless remote controller	RBC-AXU31-E	MMC-UP_1HP-E	For installing as stand alone	
Fresh air intake	High-efficiency filter 65	TCB-UFM0481D-E	MMD-UP0481HFP-E	Dust collecting effect: 65% (NBS Colorimetric method)	Use with TCB-FC0481DF-E
		TCB-UFM1281D-E	MMD-UP0721 to 1281HFP-E		Use with TCB-FC1281DF-E
	High-efficiency filter 90	TCB-UFH0481D-E	MMD-UP0481HFP-E	Dust collecting effect: 90% (NBS Colorimetric method)	Use with TCB-FC0481DF-E
		TCB-UFH1281D-E	MMD-UP0721 to 1281HFP-E		Use with TCB-FC1281DF-E
	Stand alone long life prefilter	TCK-LK1401D-E	MMD-UP0481HFP-E		
		TCK-LK2801DP-E	MMD-UP0721-1281HFP-E		
	Filter chamber	TCB-FC0481DF-E	MMD-UP0481HFP-E	For high efficiency filter or long life prefilter	
		TCB-FC1281DF-E	MMD-UP0721 to 1281HFP-E		
	Drain pump kit	TCB-DP40DFP-E	All models	Lift up to 330 mm	
Air-to-air heat exchanger with Dx-coil	Drain pump kit	TCB-DP31HEXE	MMD-VN502/802/1002HEX1E & MMD-VN1002HEX1E2	Lift up to 330 mm	

Refrigerant accessories

Model name	Specification	Picture	Total capacity codes
Compatible SMMS∞			
RBM-BY55E	Branching joint		under 6.4 HP
RBM-BY105E			from 6.4 to 14.2 HP
RBM-BY205E			from 14.2 to 25.2 HP
RBM-BY305E			from 25.2 to 61.2 HP
RBM-BY405E			61.2 HP or more
RBM-HY1043E	Headers branching four-way		< 14.2 HP
RBM-HY2043E			< 14.2 - 25.2 HP
RBM-HY1083E	Headers branching eight-way		< 14.2 HP
RBM-HY2083E			< 14.2 - 25.2 HP
RBM-BT14E	Joints for connection of outdoor units		< 26 HP system capacity
RBM-BT24E			> 26 < 62 HP system capacity
RBM-BT34E			> 62 HP system capacity

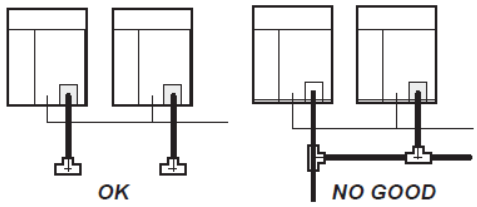
SMMS∞ piping



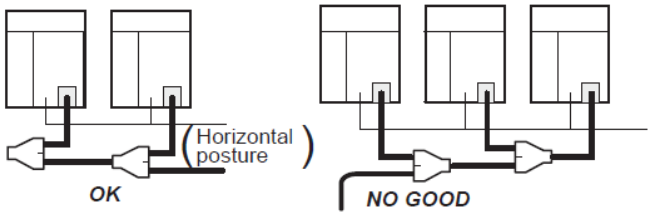
SYSTEM RESTRICTION

		SMMS∞	SMMS-7
Outdoor unit combination		Up to 5 units	Up to 3 units
Total capacity of outdoor units		Up to 120HP	Up to 60HP
Indoor unit connection		Up to 128 units	Up to 64 units
Total capacity of indoor units	H2 ≤ 15m	Max. 200%	Max. 200%
	15m > H2	105%	105%

T-shape branching joint for liquid pipe



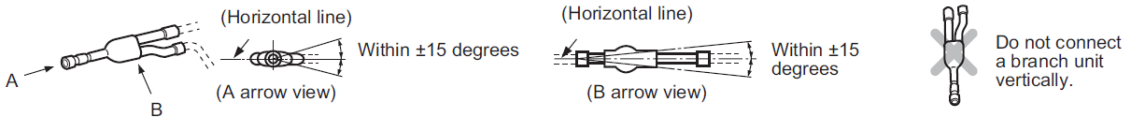
Y-shape branching joint for gas pipe



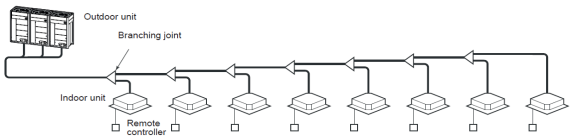
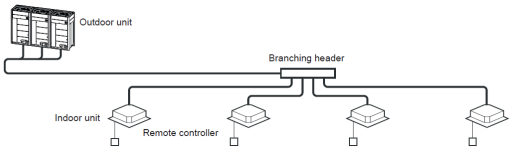
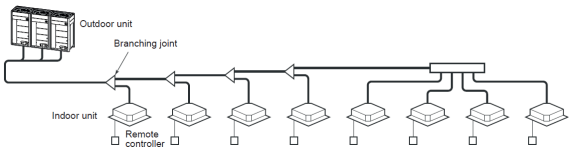
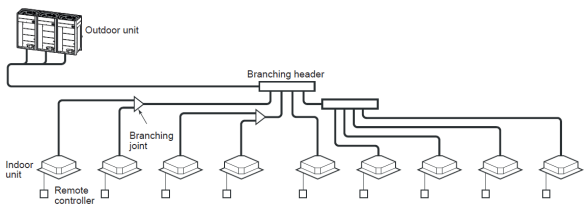
CAUTION FOR INSTALLATION

Be careful of the connecting arrangement of the header unit and follower units. Set the outdoor units in order of capacity from the one with the largest capacity.

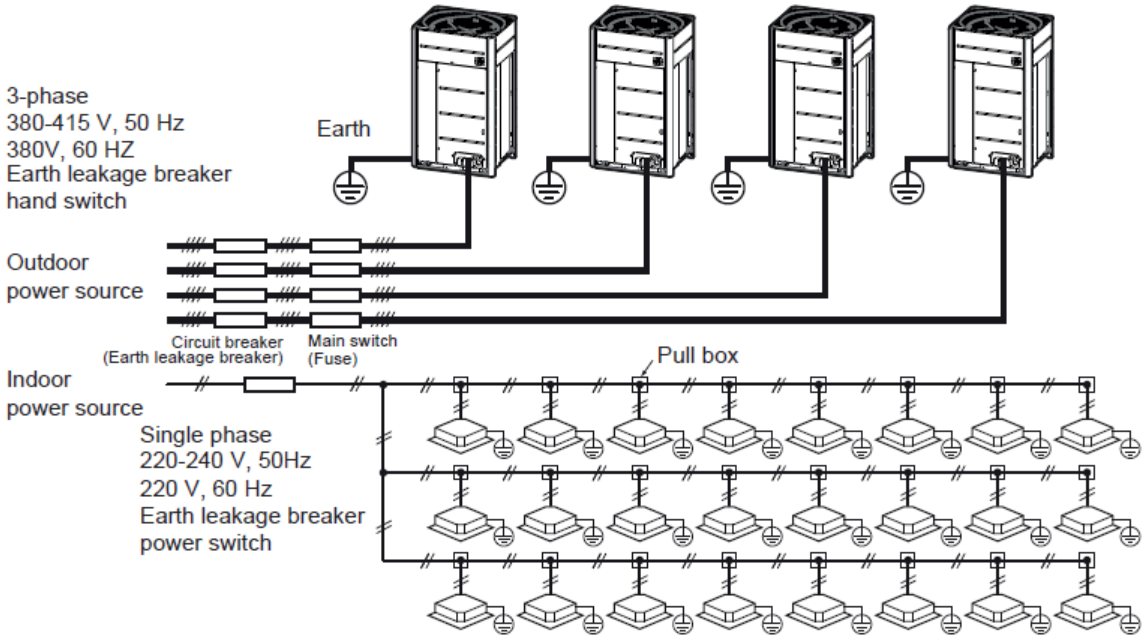
At a level position



FREE BRANCHING SYSTEM

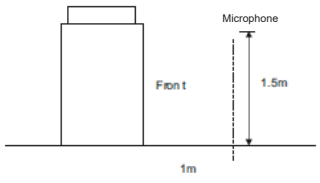
Line branching system	
Header branching system	
Header branching system after line branching	
Line branching system after header branching	
Header branching system after header branching	

Electrical wiring

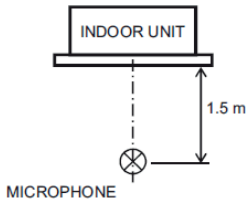


Sound pressure level measurement

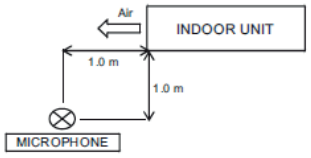
SMMS∞



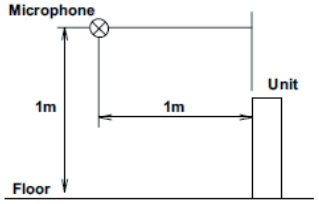
COMPACT 4-WAY CASSETTE & SMART 4-WAY CASSETTE & 4-WAY CASSETTE & 2-WAY CASSETTE & 1-WAY CASSETTE



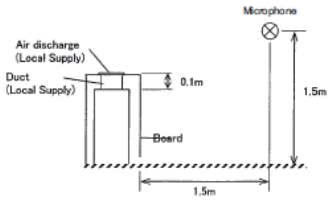
HIGH-WALL & CEILING



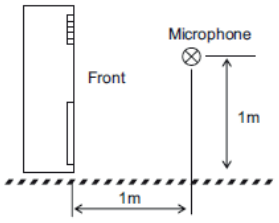
CONSOLE & BIFLOW CONSOLE



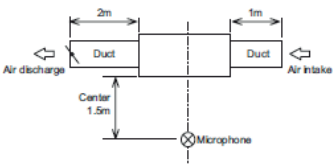
CONCEALED CHASSIS



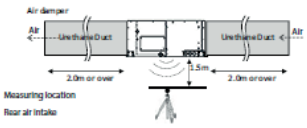
FLOOR STANDING



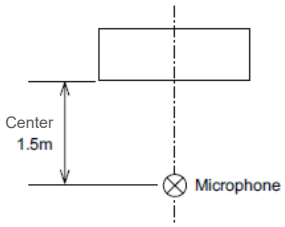
SLIM DUCT & STANDARD DUCT & HIGH STATIC DUCT



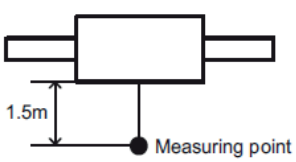
HIGH STATIC DUCT SIZES 72 & 96



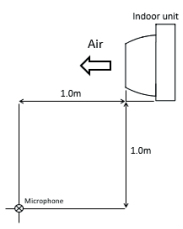
FRESH AIR



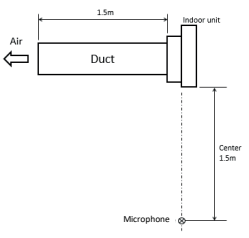
A2A HEAT EXCHANGER



ZONING AIRCONDITIONING UNIT AUTO FLAP TYPE



ZONING AIRCONDITIONING UNIT DUCT FLANGE TYPE



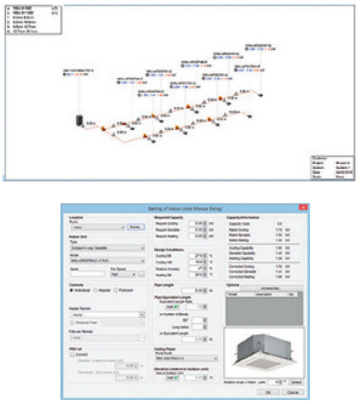
CONTROL

SELECTION TOOL

Toshiba Selection software has been fully designed, with a user-friendly interface allowing novice and expert users alike to create simple, yet detailed VRF system schematics. It is highly versatile, allowing the level of detail to be tailored to suit customer requirements. The software also allows the user to specify pricing strategy and create additional interim reports, including any diagrams and schematics required. Final detailed reports can then be produced and sent to customers in PDF format or in more complex files, such as AutoCAD DXF, allowing simple integration into their existing software packages.

Software main screen

Project fully customizable

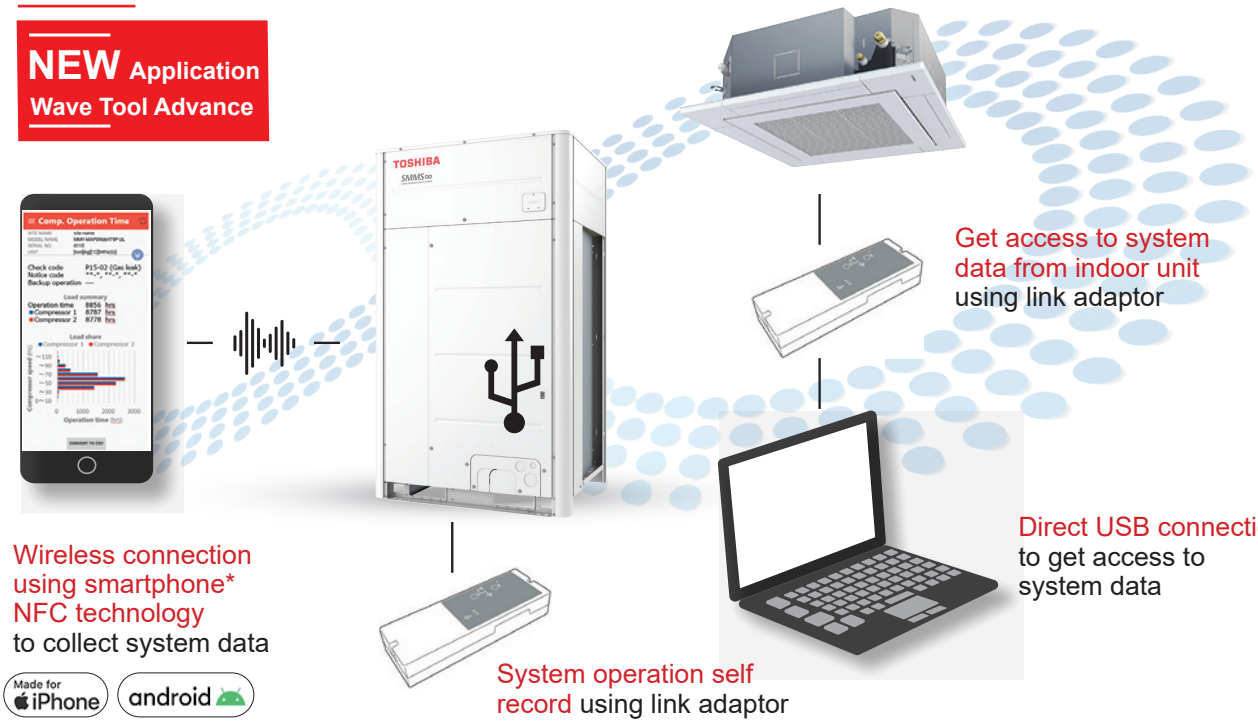


Complete report

SERVICE TOOL

Save time during commissioning and maintenance. Choose between the “Wave Tool Advance” using Smartphone NFC connection or the link adaptor connected to the outdoor or indoor unit.

NEW Application
Wave Tool Advance



Get access to system data from indoor unit using link adaptor

Direct USB connection to get access to system data

Wireless connection using smartphone* NFC technology to collect system data

Made for iPhone android

System operation self record using link adaptor

NOTE

TOSHIBA

Better Air Solutions

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

HFC R-410A

MASCI

ISO 9001	QMS18026/1686
ISO 14001	EMS18012/471
ISO 45001	OHSMS19061/078

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

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

T2022-C02-SMMS∞