

TOSHIBA

SMMSu
SUPER MODULAR MULTI SYSTEM

TOSHIBA AIR CONDITIONING



QUALITY RELIABILITY ENVIRONMENT PROFITABILITY SIMPLICITY

USABILITY

UNRIVALLED

SMMS-u



Air Conditioning for large buildings

QUALITY RELIABILITY ENVIRONMENT PROFITABILITY SIMPLICITY

UNIVERSAL



SMMSu
SUPER MODULAR MULTI SYSTEM

TOSHIBA BUSINESS SOLUTIONS SMMS-u

> CREATING BENEFITS AROUND COMFORT

Benefits for the consultant



SMMS-u 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 user

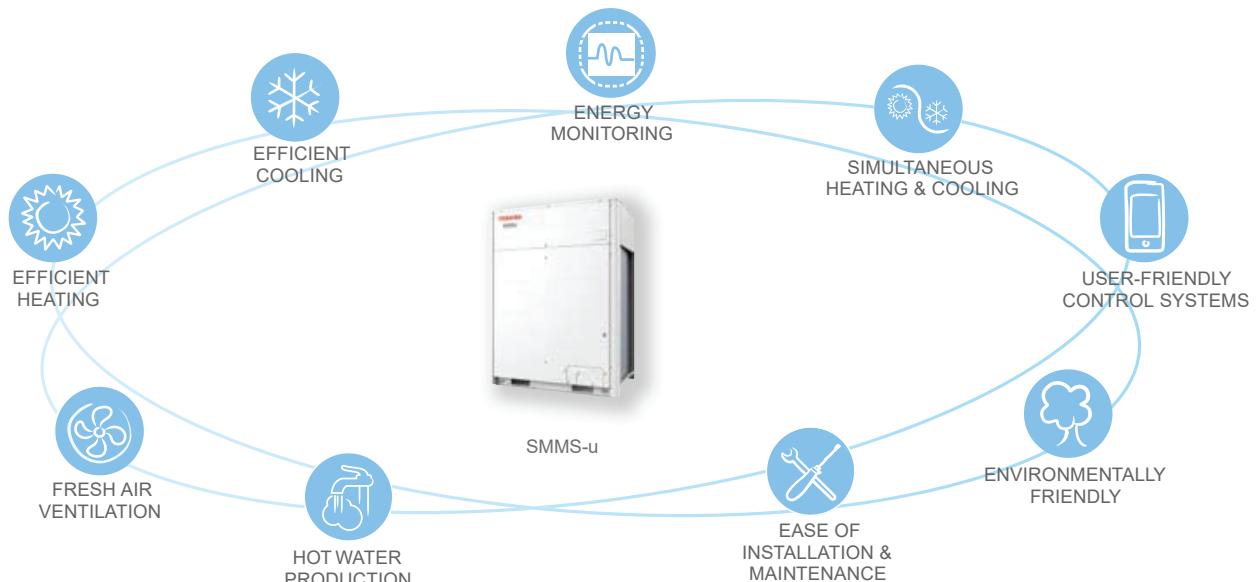


There is nothing like a comfortable place to enjoy the present moment. Full of Toshiba innovations, the SMMS-u guarantees all year round comfort combined with superior energy management, advanced air filtration and full control solutions for maximized product usability.

Benefits for the installer



Brand new chassis of SMMS-u realized compact chassis and light weight. By using benefits of this brand new chassis and technology, installer can enjoy shortening work time by simplified piping work, less additional refrigerant necessary amount and simplified test run setting. Therefore, installer is able to get profit greatly from SMMS-u design.



A BRAND NEW CHASSIS

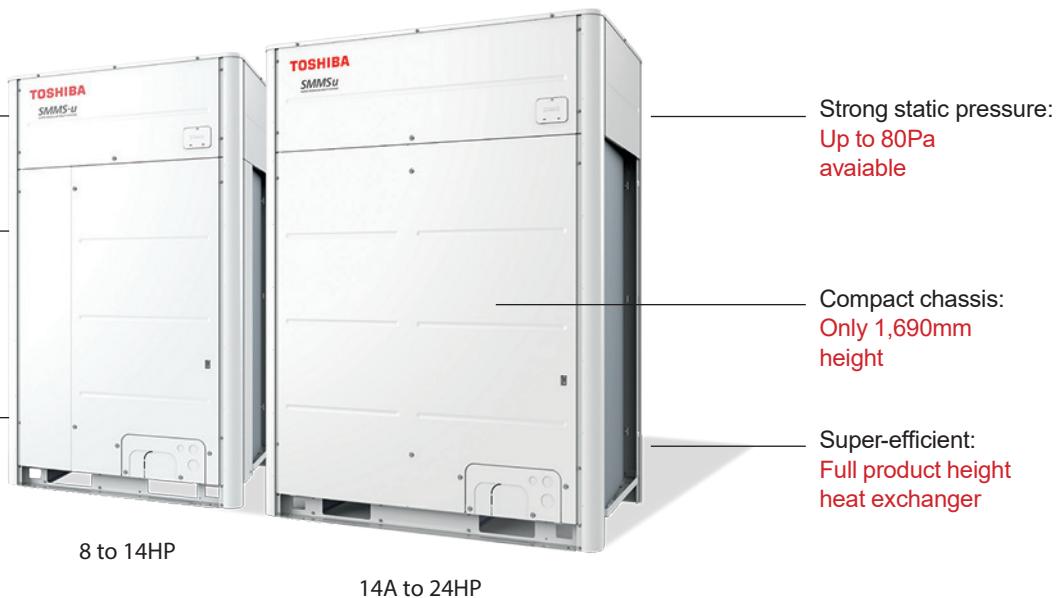
Please take a look at this brand new chassis, which is the perfect mix of dimension, efficiency, capacity & sound level.

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

Up to 24HP single module / **120HP** combination

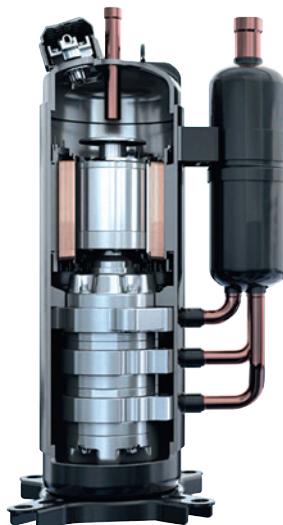
Simplified maintenance:
Easy acces to main internal components

Earthquake and typhoon Durability chassis



> UNIQUE ON THE MARKET: TRIPLE ROTARY COMPRESSOR

The exclusive Toshiba triple rotary compressor brings outstanding performances to SMMS-u without compromise on system reliability.



Large capacity

Wide operating range

Low required refrigerant

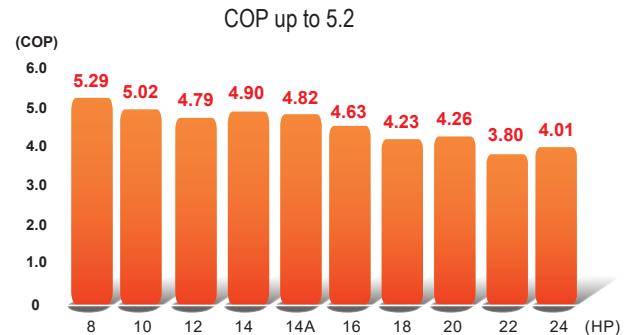
Low vibration

DLC treatment

> TOP CLASS EFFICIENCY



Utilizing the new highly efficient core technologies results in greater energy efficiency and performances.



FLEXIBLE CONNECTIVITY

SMMS-u oversteps all the limits of VRF for maximized project coverage. Whatever the piping length, the height difference, the number of indoor units connected and operating... SMMS-u is always delivering the best.

3,000 combinations patterns

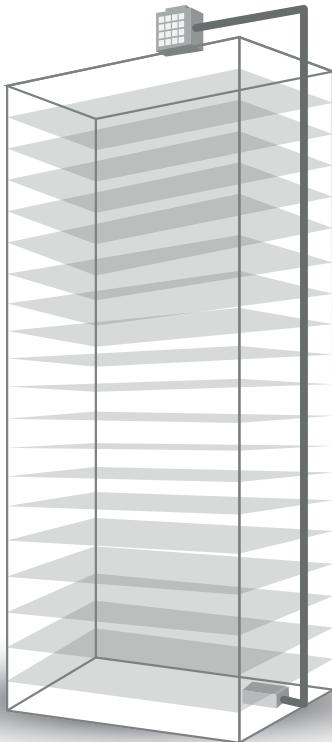
Free combination

1,200m max

Long piping length

110m max

High piping lift



Up to 128 indoor units
Large number of indoor units connection

Max 120HP by 5 units connection

Large system capacity

Max 200% connection

High diversity

› FLEXIBLE FREE COMBINATION

Combinations examples - SMMS-u 44HP
total 36 combinations

Unit combination can be arranged to follow installation site requirement.

Total
3000
combination pattern is available

Standard (Space-saving)

Capacity Cooling: 123.0 kW
Heating: 132.0 kW
Efficiency Cooling: 3.56
Heating: 4.13



Width: 2,600 mm.

Balance (Space-saving)

Capacity Cooling: 123.0 kW
Heating: 132.0 kW
Efficiency Cooling: 3.75
Heating: 4.43



Width: 3,310 mm.

Increased heating capacity

Capacity Cooling: 123.0 kW
Heating: 138.0 kW
Efficiency Cooling: 3.61
Heating: 3.80



Width: 2,600 mm.

Balance (Moderate)

Capacity Cooling: 123.5 kW
Heating: 137.5 kW
Efficiency Cooling: 4.24
Heating: 4.67



Width: 3,610 mm.

Max. Highest efficiency

Capacity Cooling: 123.1 kW
Heating: 137.5 kW
Efficiency Cooling: 4.83
Heating: 5.14



Width: 5,030 mm.

Balance efficiency

Capacity Cooling: 123.0 kW
Heating: 138.0 kW
Efficiency Cooling: 4.35
Heating: 4.89

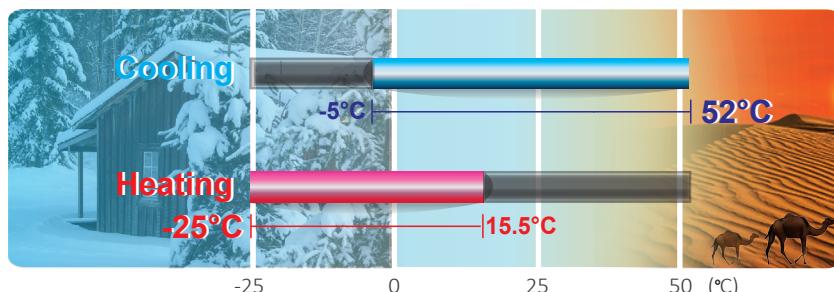


Width: 4,020 mm.

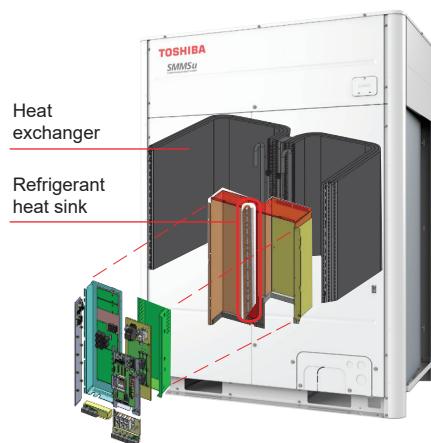
Note: Outdoor unit still should align from larger to smaller HP

COMFORT ABOVE ALL

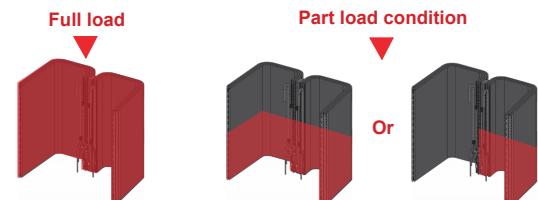
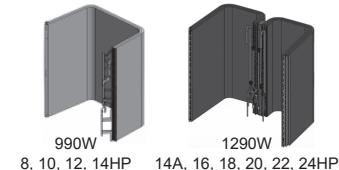
› EXPANSION OPERATING TEMPERATURE RANGE



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



SMMS-u can select optimal heat exchanger size based on operating mode, outdoor temp and capacity load. By using this function, SMMS-u can realize high efficiency not only full load operation but also part load operation.



› STRONG ADAPTABILITY

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



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

Split heat exchanger



Demand control

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



Autobackup function

Automatic backup in case of combinations systems failure.



Rotation drive

Smart control to automatically equalize compressor operating hours.



Balance oil circuit free

No need to prepare oil balance pipe by new lubrication technology.



CAPACITY
↑
8 HP ~ 120 HP

OPERATION
0°
-25°C ~ +52°C

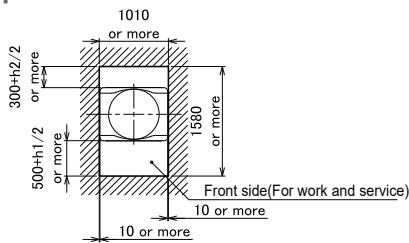
With new chassis, new compressor, new heat exchanger, the SMMS-u, latest generation of Toshiba VRF, is achieving unrivaled efficiency and comfort level.

Performances

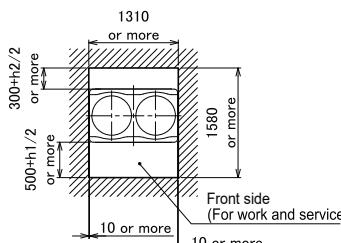
Outdoor unit	MMY-	MUP0801HT8P	MUP1001HT8P	MUP1201HT8P	MUP1401HT8P	MUP14A1HT8P	MUP1601HT8P	MUP1801HT8P	MUP2001HT8P	MUP2201HT8P	MUP2401HT8P
Outdoor unit (Anti-Corrosion)	MMY-	MUP0801HT8JP	MUP1001HT8JP	MUP1201HT8JP	MUP1401HT8JP	MUP14A1HT8JP	MUP1601HT8JP	MUP1801HT8JP	MUP2001HT8JP	MUP2201HT8JP	MUP2401HT8JP
		8 HP	10 HP	12 HP	14 HP	14 HP	16 HP	18 HP	20 HP	22 HP	24 HP
Cooling capacity	kW	22.4	28.0	33.5	40.0	40.0	45.0	50.4	56.0	61.5	67.0
Power input	kW	4.39	6.21	7.92	10.64	8.65	10.61	12.82	14.15	17.04	20.37
EER	kW/kW	5.10	4.51	4.23	3.76	4.62	4.24	3.93	3.96	3.61	3.29
Running current	A	c	7.12	9.96	12.3	16.5	13.4	16.3	19.7	21.7	31.3
Heating capacity	kW	25.0	31.5	37.5	40.0	45.0	50.0	56.0	63.0	69.0	69.0
Power input	kW	H	4.73	6.28	7.83	8.17	9.34	10.80	13.25	14.78	18.17
COP	kW/kW		5.29	5.02	4.79	4.90	4.82	4.63	4.23	4.26	4.01
Running current	A	H	7.67	10.1	12.2	12.7	14.5	16.6	20.3	22.7	26.4
Maximum overcurrent protection	A		20	32	32	40	40	40	50	50	80

Outdoor unit	MMY-	MUP0801HT8P	MUP1001HT8P	MUP1201HT8P	MUP1401HT8P	MUP14A1HT8P	MUP1601HT8P	MUP1801HT8P	MUP2001HT8P	MUP2201HT8P	MUP2401HT8P
Outdoor unit (Anti-Corrosion)	MMY-	MUP0801HT8JP	MUP1001HT8JP	MUP1201HT8JP	MUP1401HT8JP	MUP14A1HT8JP	MUP1601HT8JP	MUP1801HT8JP	MUP2001HT8JP	MUP2201HT8JP	MUP2401HT8JP
Air flow	m ³ /h	9900	10500	11700	11880	13800	15300	16800	15900	16500	16500
Sound power level	dB(A)	C	75.0	77.0	79.0	81.0	83.0	84.0	86.0	86.0	86.0
Sound pressure level	dB(A)	C	53.0	55.0	58.0	58.0	60.0	61.0	63.0	63.0	63.0
Sound power level	dB(A)	H	76.0	77.0	81.0	82.0	83.0	86.0	89.0	90.0	90.0
Sound pressure level	dB(A)	H	56.0	58.0	62.0	62.0	63.0	67.0	67.0	67.0	67.0
External static pressure available	Pa	80	80	80	80	80	80	80	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 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	228	228	228	312	312	312	334	356	356	356
Compressor type		Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Triple Rotary	Hermetic Triple Rotary	Hermetic Triple Rotary	Hermetic Triple Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary
Refrigerant charge R410A	kg	6.0	6.0	6.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Gas line type - diameter		Brazed - 3/4"	Brazed - 7/8"	Brazed - 1-1/8"	Brazed - 1-1/8"	Brazed - 1-1/8"	Brazed - 1-1/8"	Brazed - 1-1/8"	Brazed - 1-1/8"	Brazed - 1-3/8"	
Liquid line type - diameter		Brazed - 1/2"	Brazed - 1/2"	Brazed - 1/2"	Brazed - 5/8"	Brazed - 5/8"	Brazed - 5/8"	Brazed - 5/8"	Brazed - 3/4"	Brazed - 3/4"	
Farthest piping equivalent length	m	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
Maximum total extension of piping length	m	500	500	500	500	500	500	500	500	500	500
Maximum lift (indoor unit above/below)	m	40 / 110	40 / 110	40 / 110	40 / 110	40 / 110	40 / 110	40 / 110	40 / 110	40 / 110	40 / 110
Operating range - DB	°C	C	-5/52	-5/52	-5/52	-5/52	-5/52	-5/52	-5/52	-5/52	-5/52
Operating range - WB	°C	H	-25/15.5	-25/15.5	-25/15.5	-25/15.5	-25/15.5	-25/15.5	-25/15.5	-25/15.5	-25/15.5
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

Installation space



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.

SMMS-u

Capacity table

HP	Capacity Cooling / Heating (kW)	Combination	Model	EER	COP	Max Indoor connectivity	
8	22.4 / 25.0	-	MMY-MUP0801HT8(J)P	5.10	5.29	18	
10	28.0 / 31.5	-	MMY-MUP1001HT8(J)P	4.51	5.02	22	
12	33.5 / 37.5	-	MMY-MUP1201HT8(J)P	4.23	4.79	27	
14	40.0 / 40.0	-	MMY-MUP1401HT8(J)P	3.76	4.90	31	
14	40.0 / 45.0	-	MMY-MUP14A1HT8(J)P	4.62	4.82	31	
16	45.0 / 50.0	-	MMY-MUP1601HT8(J)P	4.24	4.63	36	
18	50.4 / 56.0	-	MMY-MUP1801HT8(J)P	3.93	4.23	40	
20	56.0 / 63.0	-	MMY-MUP2001HT8(J)P	3.96	4.26	45	
22	61.5 / 69.0	-	MMY-MUP2201HT8(J)P	3.61	3.80	49	
24	67.0 / 69.0	-	MMY-MUP2401HT8(J)P	3.29	4.01	54	
26	73.5 / 77.5	14 + 12	MMY-UP2611HT8(J)P	3.96	4.84	58	
28	80.0 / 80.0	14 + 14	MMY-UP2811HT8(J)P	3.76	4.90	63	
30	83.9 / 93.5	18 + 12	MMY-UP3011HT8(J)P	4.05	4.44	64	
32	89.5 / 100.5	20 + 12	MMY-UP3211HT8(J)P	4.06	4.44	65	
34	96.0 / 103.0	20 + 14	MMY-UP3411HT8(J)P	3.87	4.49	66	
36	100.5 / 106.5	24 + 12	MMY-UP3611HT8(J)P	3.55	4.25	67	
38	107.0 / 109.0	24 + 14	MMY-UP3811HT8(J)P	3.45	4.29	68	
40	112.0 / 126.0	20 + 20	MMY-UP4011HT8(J)P	3.96	4.26	69	
42	117.4 / 125.0	24 + 18	MMY-UP4211HT8(J)P	3.54	4.10	70	
44	123.0 / 132.0	24 + 20	MMY-UP4411HT8(J)P	3.56	4.13	71	
46	128.5 / 138.0	24 + 22	MMY-UP4611HT8(J)P	3.43	3.90	72	
48	134.0 / 138.0	24 + 24	MMY-UP4811HT8(J)P	3.29	4.01	73	
50	140.5 / 146.5	24 + 14 + 12	MMY-UP5011HT8(J)P	3.61	4.41	74	
52	147.0 / 149.0	24 + 14 + 14	MMY-UP5211HT8(J)P	3.53	4.44	75	
54	152.0 / 166.0	20 + 20 + 14	MMY-UP5411HT8(J)P	3.90	4.40	76	
56	156.5 / 169.5	24 + 20 + 12	MMY-UP5611HT8(J)P	3.69	4.26	77	
58	163.0 / 172.0	24 + 20 + 14	MMY-UP5811HT8(J)P	3.61	4.28	78	
60	167.5 / 175.5	24 + 24 + 12	MMY-UP6011HT8(J)P	3.44	4.15	79	
62	174.0 / 178.0	24 + 24 + 14	MMY-UP6211HT8(J)P	3.39	4.18	80	
64	179.0 / 195.0	24 + 20 + 20	MMY-UP6411HT8(J)P	3.68	4.17	81	
66	184.5 / 201.0	24 + 22 + 20	MMY-UP6611HT8(J)P	3.58	4.01	82	
68	190.0 / 201.0	24 + 24 + 20	MMY-UP6811HT8(J)P	3.46	4.08	83	
70	195.5 / 207.0	24 + 24 + 22	MMY-UP7011HT8(J)P	3.38	3.93	84	
72	201.0 / 207.0	24 + 24 + 24	MMY-UP7211HT8(J)P	3.29	4.01	85	
74	207.5 / 215.5	24 + 24 + 14 + 12	MMY-UP7411HT8(J)P	3.50	4.27	86	
76	214.0 / 218.0	24 + 24 + 14 + 14	MMY-UP7611HT8(J)P	3.45	4.29	87	
78	219.0 / 235.0	24 + 20 + 20 + 14	MMY-UP7811HT8(J)P	3.69	4.28	88	
80	223.5 / 238.5	24 + 24 + 20 + 12	MMY-UP8011HT8(J)P	3.56	4.18	90	
82	230.0 / 241.0	24 + 24 + 20 + 14	MMY-UP8211HT8(J)P	3.51	4.20	92	
84	234.5 / 244.5	24 + 24 + 24 + 12	MMY-UP8411HT8(J)P	3.40	4.11	94	
86	241.0 / 247.0	24 + 24 + 24 + 14	MMY-UP8611HT8(J)P	3.36	4.13	96	
88	246.0 / 264.0	24 + 24 + 20 + 20	MMY-UP8811HT8(J)P	3.56	4.13	98	
90	251.5 / 270.0	24 + 24 + 22 + 20	MMY-UP9011HT8(J)P	3.50	4.01	100	
92	257.0 / 270.0	24 + 24 + 24 + 20	MMY-UP9211HT8(J)P	3.41	4.06	102	
94	262.5 / 276.0	24 + 24 + 24 + 22	MMY-UP9411HT8(J)P	3.36	3.95	104	
96	268.0 / 276.0	24 + 24 + 24 + 24	MMY-UP9611HT8(J)P	3.29	4.01	106	
98	274.5 / 284.5	24 + 24 + 24 + 14 + 12	MMY-UP9811HT8(J)P	3.45	4.20	108	
100	281.0 / 287.0	24 + 24 + 24 + 14 + 14	MMY-UP10011HT8(J)P	3.41	4.22	110	
102	286.0 / 304.0	24 + 24 + 20 + 20 + 14	MMY-UP10211HT8(J)P	3.59	4.21	112	
104	290.5 / 307.5	24 + 24 + 24 + 20 + 12	MMY-UP10411HT8(J)P	3.49	4.14	114	
106	297.0 / 310.0	24 + 24 + 24 + 20 + 14	MMY-UP10611HT8(J)P	3.46	4.15	116	
108	301.5 / 313.5	24 + 24 + 24 + 24 + 12	MMY-UP10811HT8(J)P	3.37	4.09	118	
110	308.0 / 316.0	24 + 24 + 24 + 24 + 14	MMY-UP11011HT8(J)P	3.34	4.10	120	
112	313.0 / 333.0	24 + 24 + 24 + 20 + 20	MMY-UP11211HT8(J)P	3.50	4.10	122	
114	318.5 / 339.0	24 + 24 + 24 + 22 + 20	MMY-UP11411HT8(J)P	3.45	4.01	124	
116	324.0 / 339.0	24 + 24 + 24 + 24 + 20	MMY-UP11611HT8(J)P	3.39	4.05	126	
118	329.5 / 345.0	24 + 24 + 24 + 24 + 22	MMY-UP11811HT8(J)P	3.34	3.96	128	
120	335.0 / 345.0	24 + 24 + 24 + 24 + 24	MMY-UP12011HT8(J)P	3.29	4.01	128	

CDU



Piping rules

			Allowable value	Piping section
Piping lenght	"Total extension of pipe (Liquide pipe, real lenght)"		Single ODU Combination ODU	LA+LB+LC+La+Lc+Ld+Le+L1+L2+L3 +L4+L5+L6+L7+a+b+c+d+e+f+g+h+i+j
	Farthest piping lenght (*1)		Equivalent lenght Real lenght	LA+LB+LC+Le+L1+L3+L4+L5+L6+j
	Equivalent lenght of farthest piping form 1st branching (*1)		90m (*2)	L3 + L4 + L5 + L6 + j
	Equivalent lenght of farthest piping between outdoor units		40m	LA+LB+LC+Le(LA+LB+LC+Ld)
	Max. equivalent lenght of main piping	Equivalent lenght	120m (*3)	L1
		Real lenght	100m (*3)	
	Max. equivalent lenght of outdoor unit connecting piping		10m	Le(La, Lb, Lc, Ld)
	Max. real lenght of indoor unit connecting piping		30m	a, b, c, d, e, f, g, h, i, j
Max. equivalent lenght 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 furthest from the 1st branch and (j) is the indoor unit furthest 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

(*8) : Extension up till 110m is possible with conditions below :

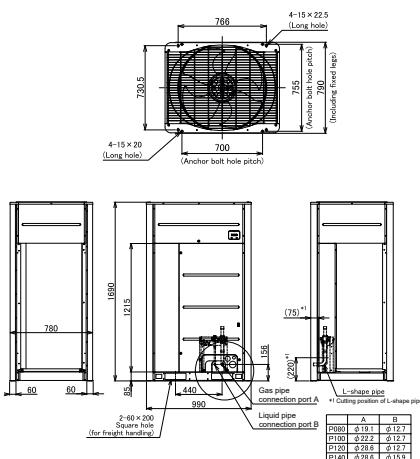
- Multiple outdoor unit system
- Connected ratio of indoor units to outdoor units is below 105%
- Minimum capacity of connecting indoor unit is more than 3HP

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

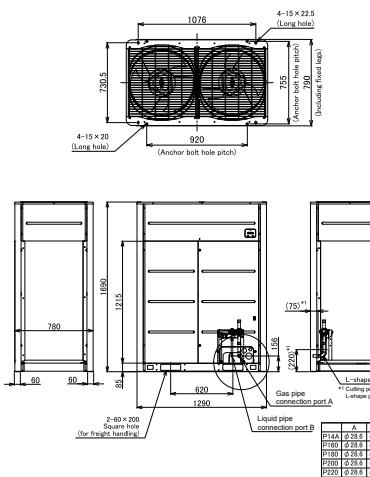
Drawings

Unit : mm

MMY-MUP0801HT8(J)P, MMY-MUP1001HT8(J)P,
MMY-MUP1201HT8(J)P, MMY-MUP1401HT8(J)P



MMY-MUP14A1HT8(J)P, MMY-MUP1601HT8(J)P, MMY-MUP1801HT8(J)P,
MMY-MUP2001HT8(J)P, MMY-MUP2201HT8(J)P, MMY-MUP2401HT8(J)P

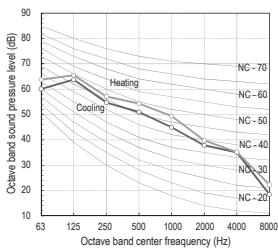


Sound pressure levels

Unit : dB(A)

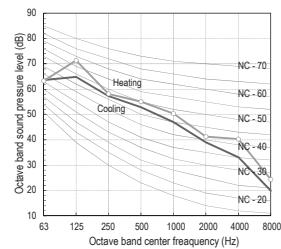
MMY-MUP0801HT8(J)P

Sound pressure Level (dB(A))	Cooling	Heating
53.0	56.0	



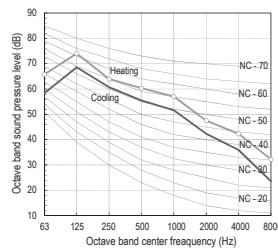
MMY-MUP1001HT8(J)P

Sound pressure Level (dB(A))	Cooling	Heating
55.0	58.0	



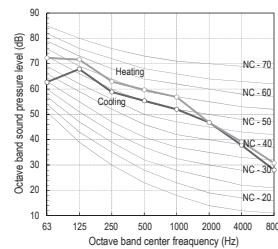
MMY-MUP1201HT8(J)P

Sound pressure Level (dB(A))	Cooling	Heating
58.0	62.0	

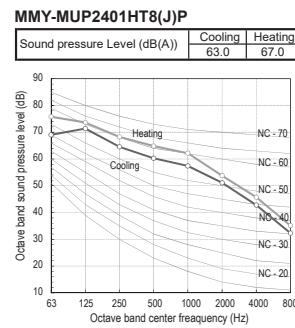
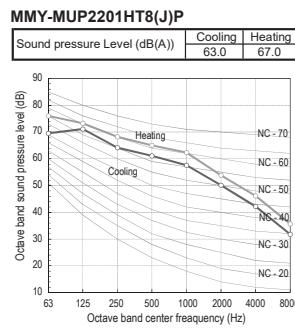
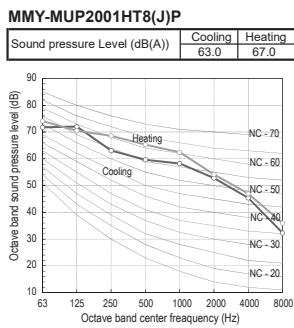
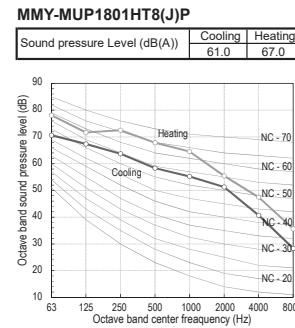
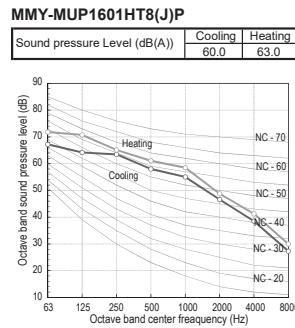
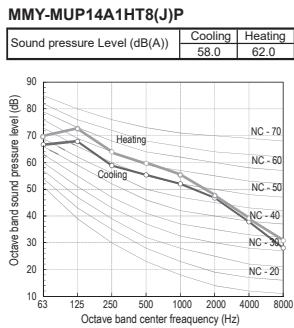


MMY-MUP1401HT8(J)P

Sound pressure Level (dB(A))	Cooling	Heating
58.0	62.0	



Sound pressure levels



Night mode sound pressure levels

Sound reduction and approximation capacity (reference)

Type	"Night operation sound reduction dB (A)"	Capacity	
		Cooling	Heating
801	50	85%	80%
1001	50	70%	65%
1201	50	60%	55%
1401	50	60%	55%
14A1	53	70%	65%
1601	53	70%	70%
1801	54	65%	65%
2001	54	60%	60%
2201	54	55%	55%
2401	54	55%	55%

Condition: Cooling: (Indoor 27°DB, 19°WB) - (Outdoor temperature 25°DB)
Heating: (Indoor 20°DB) - (Outdoor temperature 7°DB, 6°WB)

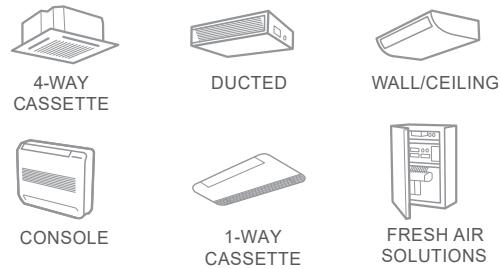
	Name	Model name	Capacity	Appearance	Remarks
Branching joints and headers	Y-shape branching joint	RBM-BY55E	under 6.4HP		
		RBM-BY105E	from 6.4 to 14.2HP		
		RBM-BY205E	from 14.2 to 25.2HP		
		RBM-BY305E	from 25.2 to 61.2HP		
		RBM-BY405E	61.2HP or more		
	4-branching header	RBM-HY1043E	under 14.2HP		
	8-branching header	RBM-HY2043E	from 14.2 to 25.2HP		
		RBM-HY1083E	under 14.2HP		
Optional PCB of outdoor unit	Branching joint for connection of outdoor units	RBM-BT14E	under 26HP		
		RBM-BT24E	from 26HP to 62HP		
		RBM-BT34E	62HP or more		
	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-PCM04E			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 choice of indoor unit models increases design flexibility and reduces costs to the building's owner by ensuring the most appropriate system is installed.

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



› SUPERIOR AIR COMFORT

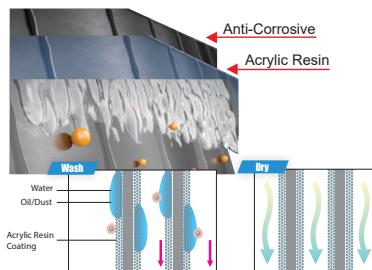
Cool comfort with soft cooling mode

The development of the soft cooling mode provides a new level for cool 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 directly exposed to the cold draft.



Special coated for FCU heat exchanger

The Toshiba FCU provide odorless and fresh air always, thanks to special coated heat exchanger. This special coating is able to release dust which is attached on heat exchanger with condensed water.



Optimised heating operations

The Toshiba VRF allow continuous heating, even during external defrost operations, thanks to the Kobetsu and Renkei function integrated in SMMS-u. Indoor units will now operate continually, with only a minimal reduction in capacity output. This results in an uninterrupted flow of warm air, ensuring maximum comfort to the end user.



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

No compromise on air quality



Every indoor units are equipped with air suction filters. A symbol on the remote warns the user when filters need to be cleaned.

CHOOSE YOUR ADAPTED SYSTEM SOLUTION

**2021
NEW**
indoor
units



Smart Cassette

High performance
Smart operation



1-Way Cassette

Compact chassis
Smart operation
Advanced filtration



Fresh Air Intake Duct

Light and compact chassis
Wide air flow range



High Wall

Expanding capacity up to 4HP
Big air flow volume
Low noise

IDU

Model	(HP) (kW)	0.8 2.2	1.0 2.8	1.25 3.6	1.7 4.5	2.0 5.6	2.5 7.1	3.0 8.0	3.2 9.0	4.0 11.2	5.0 14.0	6.0 16.0	8.0 22.4	10.0 28.0	12.0 34.0	14.0 40.0	16.0 45.0	18.0 50.4	20.0 56.0
Smart 4-way Cassette 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																			
1-way Cassette MMU-UP_1SH-E																			
Slim Duct MMD-UP_1SPHY-E																			
Concealed Duct MMD-UP_1BHP-E																			
HSP Concealed Duct MMD-UP_1HP-E																			
Fresh Air Intake Duct MMD-UP_1HFP-E																			
Ceiling MMC-UP_1HP-E																			
High Wall MMK-UP_1HP-E																			
Console MML-UP_1NHP-E																			
Floor Standing Concealed MML-UP_1BH-E																			
Floor Standing Cabinet MML-UP_1H-E																			
Floor Standing MMF-UP_1H-E																			
Large Capacity Floor Standing*1 MMF-AP_5(D)HP-VA/VB																			
Dx-coil controller & Dx-valve kit TCB-IFD_1E & RBM-A_1VAE																			

Model	Air flow in m3/h	500	600	700	800	900	1000	1100	1200	1300
Air -to- Air Heat exchanger with DX-coil *1 MMD-VN_2HEX1E										

* 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.

MMU-UP_1H-E

SMART 4-WAY CASSETTE



New high efficiency 4-Way Cassette, simple and elegant design fits various rooms. Also unique flap style for optimal air distribution.



LOCAL CONTROLS



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

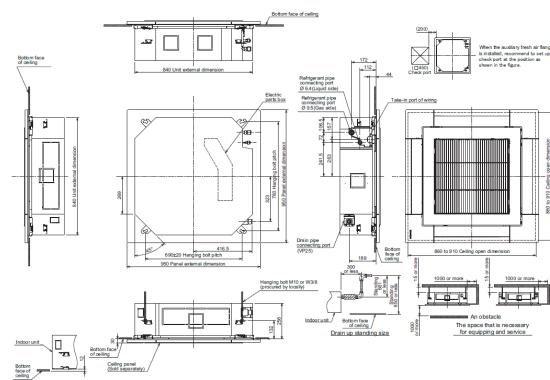
Features

Model name	MMU-	UP0091H-E	UP0121H-E	UP0151H-E	UP0181H-E	UP0241H-E	UP0271H-E	UP0301H-E	UP0361H-E	UP0481H-E	UP0561H-E			
Cooling 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			
Heating capacity	kW	3.2	4.0	5.0	6.3	8.0	9.0	10.0	12.5	16.0	18.0			
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	0.19/0.20	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			
	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			
	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			
Appearance	Main unit	Heat-insulating material attached - Zinc hot dipping steel plate												
	Ceiling panel name	RBC-U41PG(W)-E												
	Panel color	White (Munsell: 2.5GY9.0/0.5)												
Outer dimensions	Main unit (HxWxD)	mm	256x840x840	319x840x840										
	Ceiling panel (HxWxD)	mm	30x950x950											
Total weight	Main unit	kg	18	25										
	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			
	Motor output	W	60	130										
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				
Sound power level	dB(A)	45	46	50	55	56	58	60	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			
	Liquid side	mm	6.4	6.4	6.4	6.4	9.5	9.5	9.5	9.5	9.5			
	Drain port (nominal dia)	mm	25 (Polyvinyl chloride tube)											

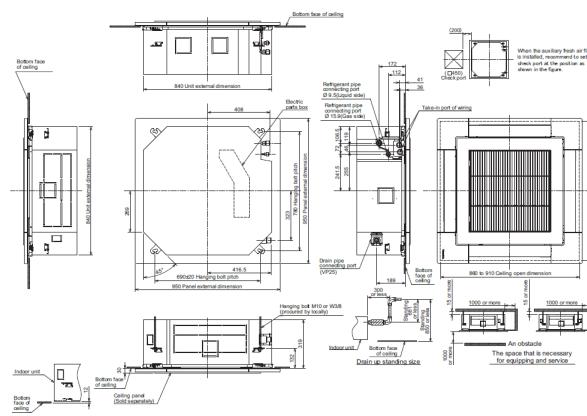
Drawings

Unit : mm

MMU-UP0091H-E to MMU-UP0121H-E



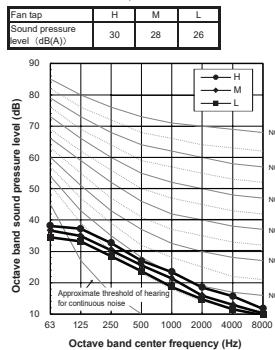
MMU-UP0151H-E to MMU-UP0561H-E



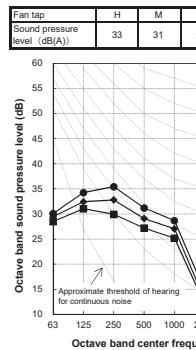
SMART 4-WAY CASSETTE

Sound pressure levels

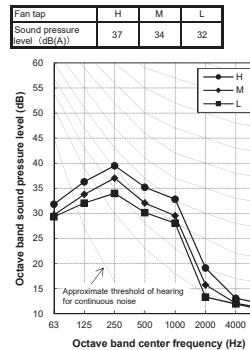
MMU-UP0091, 0121H-E



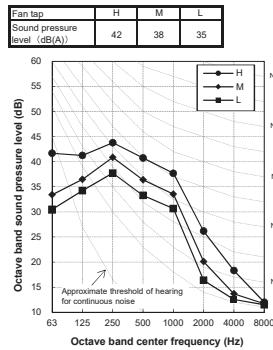
MMU-UP0151H-E



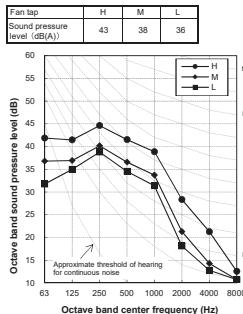
MMU-UP0181H-E



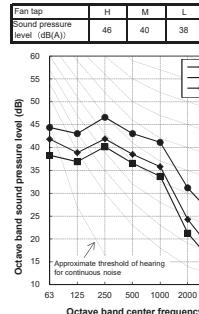
MMU-UP00241H-E



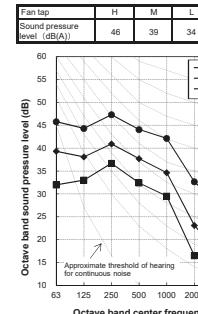
MMU-UP0271H-E



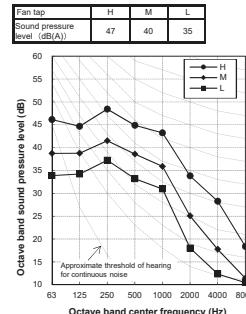
MMU-UP0301H-E



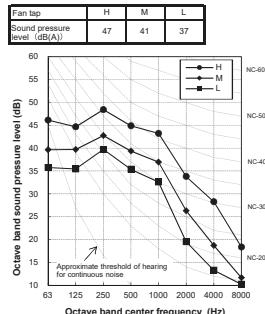
MMU-UP0361H-E



MMU-UP00481H-E

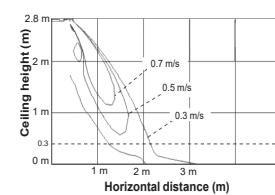


MMU-UP00561H-E

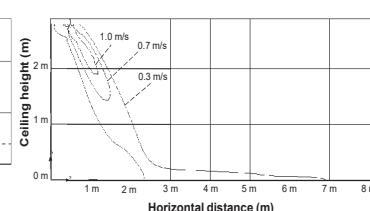


Air diffusion

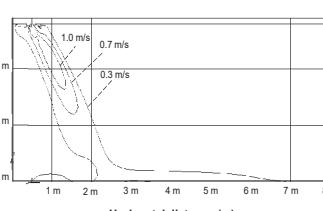
MMU-UP0091, 0121H-E



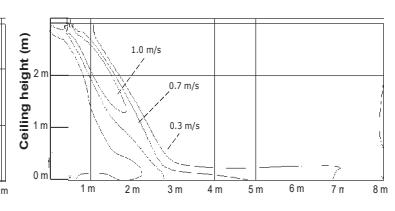
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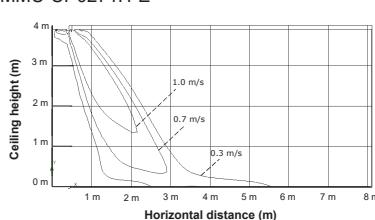
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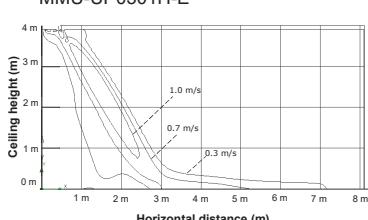
MMU-UP00241H-E



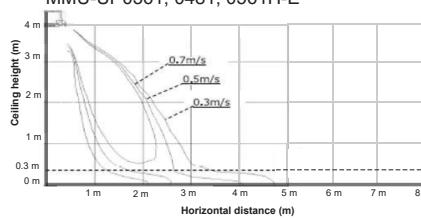
MMU-UP0271H-E



MMU-UP0301H-E



MMU-UP0361, 0481, 0561H-E



Accessories

No.	Part name	Model name	Remarks
1	Occupancy sensor	TCB-SIR41U-E	
2	Fresh air and filter chamber	TCB-GFC1603UE	
3	Spacer for height adjustment	TCB-SP1603UE	
4	Air discharge direction kit	TCB-BC1603UE	

Smart 4-way cassette connectors

• : Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, heating, fan, defrost, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.o.off	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 making this unit the ideal solution for small commercial applications.



LOCAL CONTROLS



RBC-AXU31-E
RBC-AXU31U-E

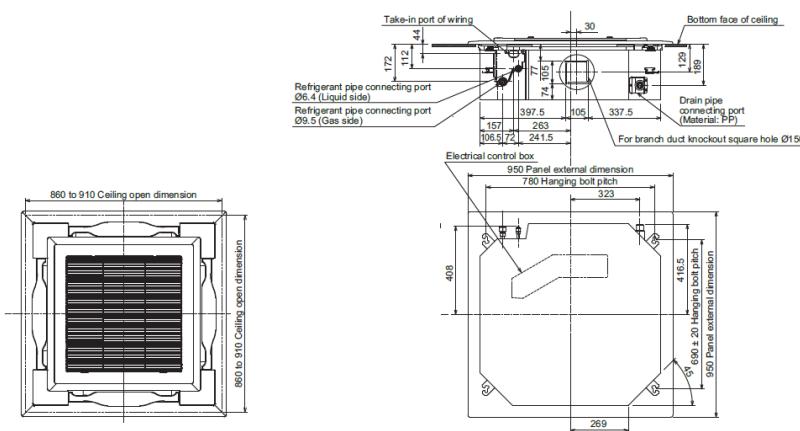


RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

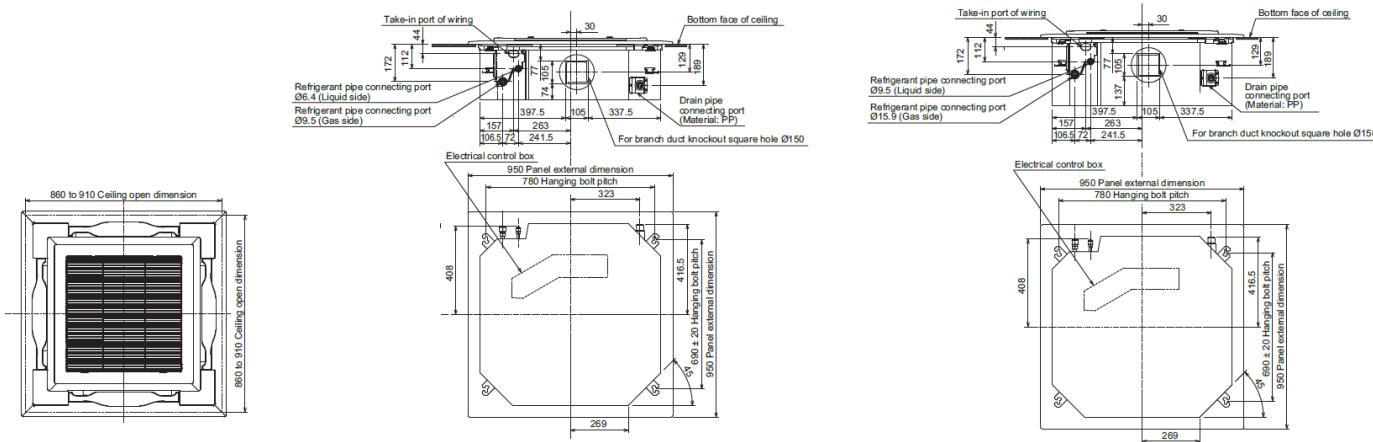
Features

Drawings

MMU-UP0091HP-E to MMU-UP0301HP-E



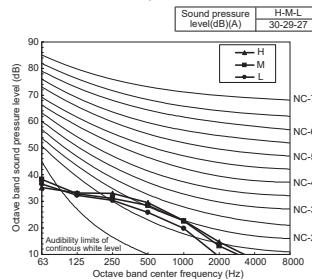
MMU-UP0361HP-E to MMU-UP0561HP-E



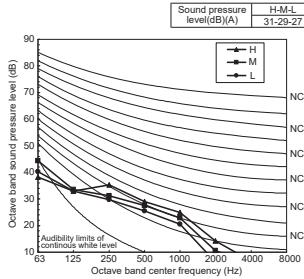
4-WAY CASSETTE

Sound pressure levels

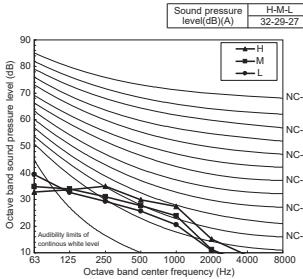
MMU-UP0091HP-E, MMU-UP0121HP-E



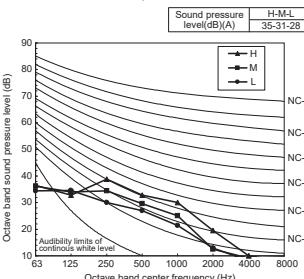
MMU-UP0151HP-E



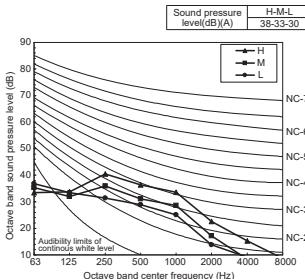
MMU-UP0181HP-E



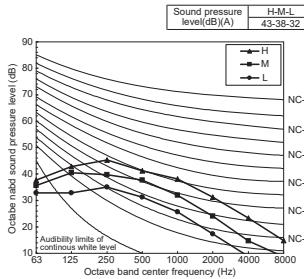
MMU-UP0241HP-E, UP0271HP-E



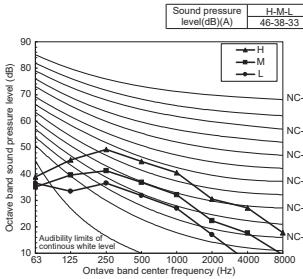
MMU-UP0301HP-E



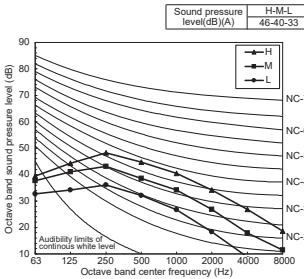
MMU-UP03061HP-E



MMU-UP0481HP-E

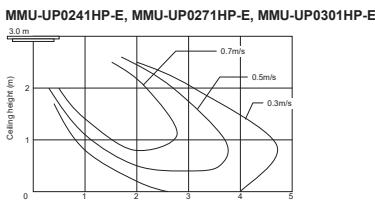
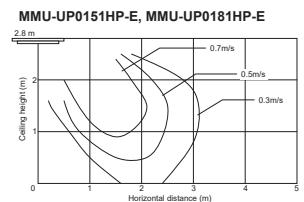
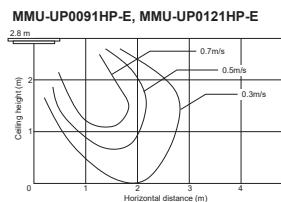


MMU-UP0561HP-E

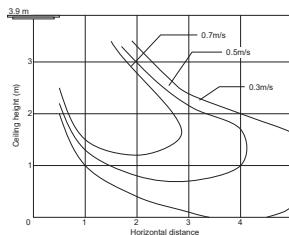


Air diffusion

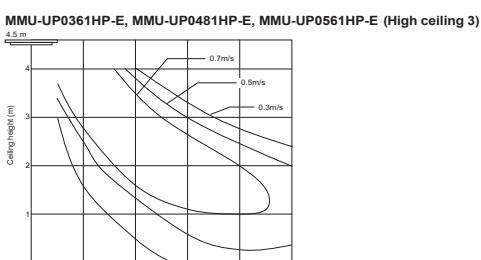
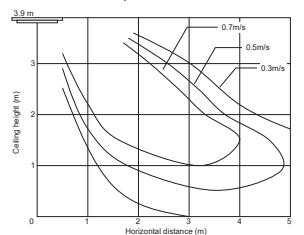
Unit: m/s



MMU-UP0361HP-E

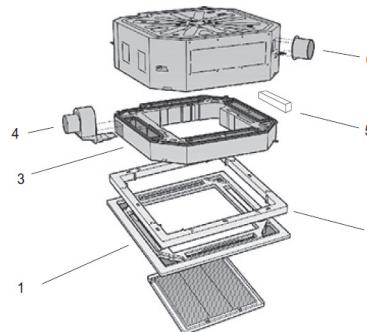


MMU-UP0481HP-E, MMU-UP0561HP-E



Accessories

No.	Part name	Model name	Remarks
1	Ceiling Panel (Wide-flow louver)	RBC-U32PGP-E	White (Munsell: 2.5GY9.0/0.5)
2	Spacer for height adjustment	TCB-SP1602UE	50 mm
3	Fresh air chamber	TCB-GFC1602UE	Use with TCB-GB1602U
4	Fresh air intake box	TCB-GB1602UE	Connection=Dia.100 mm fresh air intake ratio: Up to 20%
5	Air discharge direction kit	TCB-BC1602UE	6-direction patterns
6	Auxiliary fresh air flange	TCB-FF101URE2	Connection=Dia.100 mm fresh air intake ratio: Up to 5%



4-way cassette connectors

• : Available

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

CASSETTE

MMU-UP_1MH-E COMPACT 4-WAY CASSETTE



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



LOCAL CONTROLS



RBC-AXU31-E
RBC-AXU31UM-E



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

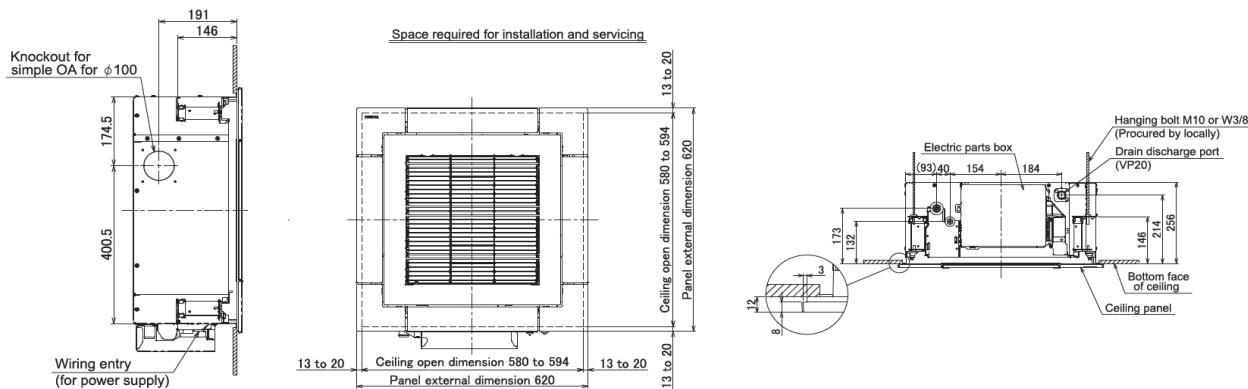
Features

Model name	MMU	UP0071MH-E	UP0091MH-E	UP0121MH-E	UP0151MH-E	UP0181MH-E				
Cooling 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				
Heating capacity	kW	2.5	3.2	4.0	5.0	6.3				
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 (Mansell 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)	m³/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



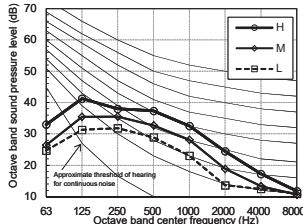
COMPACT 4-WAY CASSETTE

Sound pressure levels

Unit : dB(A)

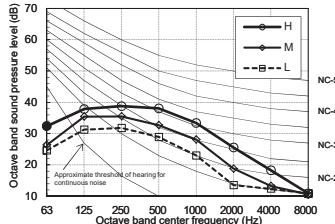
MMU-UP0071MH-E

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



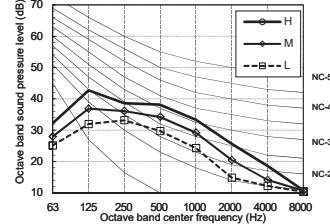
MMU-UP0091MH-E

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



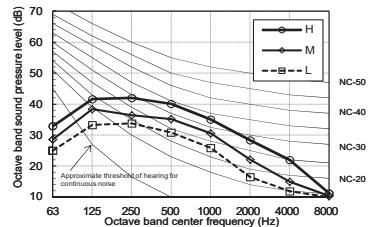
MMU-UP0121MH-E

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



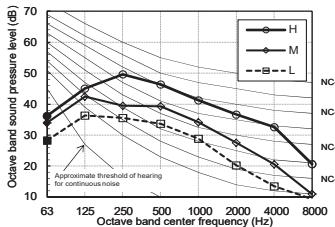
MMU-UP0151MH-E

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



MMU-UP0181MH-E

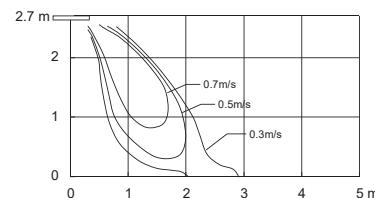
Fan tap	H	M	L
Sound pressure level (dB(A))	47	39	34



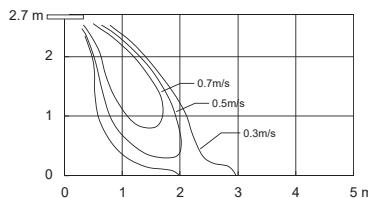
Air diffusion

Unit : m/s

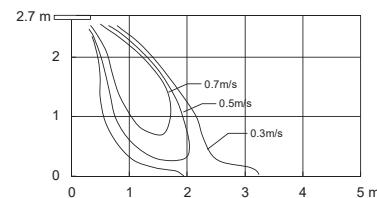
MMU-UP0071MH-E



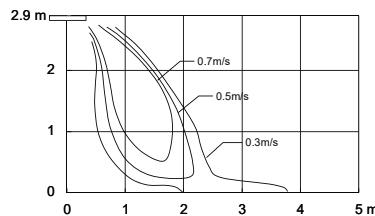
MMU-UP0091MH-E



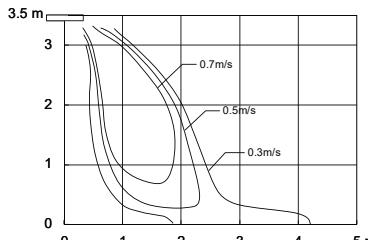
MMU-UP0121MH-E



MMU-UP0151MH-E

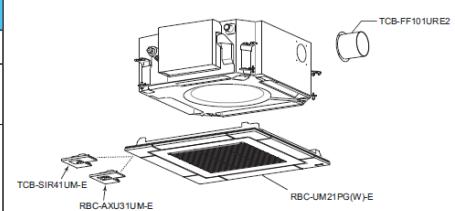


MMU-UP0181MH-E



Accessories

Part name	Model name	Applied model	Remarks
Ceiling panel	RBC-UM21PG(W)-E		Required accessory
Auxiliary fresh air flange	TCB-FF101URE2		For easy fresh air intake by using the knockout hole of indoor unit (dia=100 mm)
Wireless Remote Control kit	RBC-AXU31UM-E		Wireless remote control kit and occupancy sensor cannot be used on the same indoor unit*
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, heating, fan, defrost, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.o off.	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

CASSETTE

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



SOUND PRESSURE LEVEL



0.8 HP ~ 6 HP

30 dB(A)

LOCAL CONTROLS



RBC-AXU31UW-E
RBC-AXU31-E



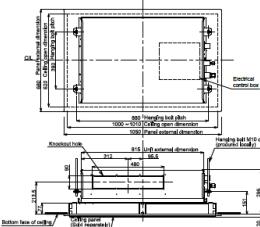
RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

Features

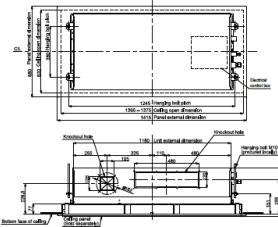
Model name	MMU-	UP0071WH-E	UP0091WH-E	UP0121WH-E	UP0151WH-E	UP0181WH-E	UP0241WH-E	UP0271WH-E	UP0301WH-E	UP0361WH-E	UP0481WH-E	UP0561WH-E													
Cooling code	HP	0.8	1.0	1.25	1.7	2.0	2.5	3.0	3.2	4.0	5.0	6.0													
Cooling capacity	kW	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	16.0													
Heating capacity	kW	2.5	3.2	4.0	5.0	6.3	8.0	9.0	10.0	12.5	16.0	18.0													
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														
	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														
	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	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)	m³/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													
	Liquid side	mm	6.4	6.4	6.4	6.4	6.4	9.5	9.5	9.5	9.5	9.5													
	Drain port (nominal dia)	mm	25 (Polyvinyl chloride tube)																						

Drawings

MMU-UP0071WH-E to MMU-UP151WH-E

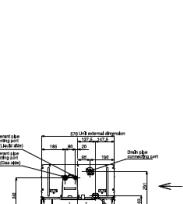
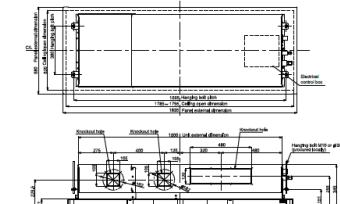


MMU-UP181WH-E to MMU-UP301WH-E



Unit : mm

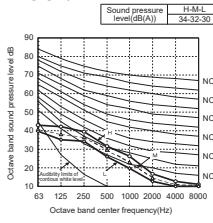
MMU-UP361WH-E to MMU-UP0561WH-E



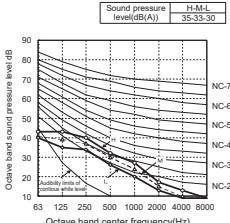
2-WAY CASSETTE

Sound pressure levels

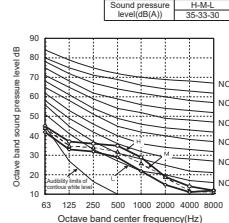
Unit : dB(A)

MMU-UP0071WH-E, MMU-UP0091WH-E,
MMU-UP0121WH-E

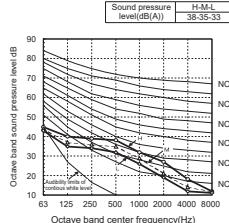
MMU-UP0151WH-E



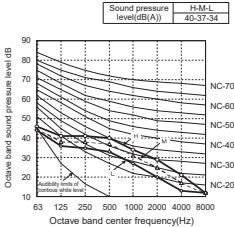
MMU-UP0181WH-E



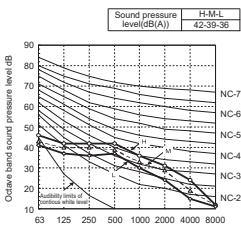
MMU-UP0241WH-E, MMU-UP0271WH-E



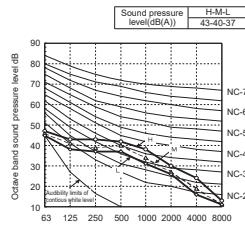
MMU-UP0301WH-E



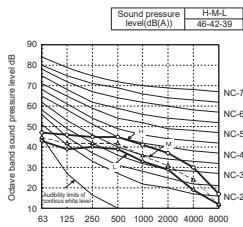
MMU-UP0361WH-E



MMU-UP0481WH-E

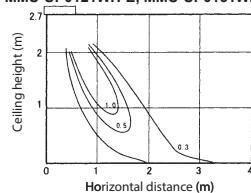


MMU-UP0561WH-E

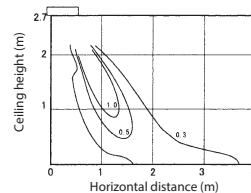


Air diffusion

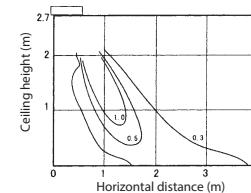
Unit : m/s

MMU-UP0071WH-E, MMU-UP0091WH-E,
MMU-UP0121WH-E, MMU-UP0151WH-E

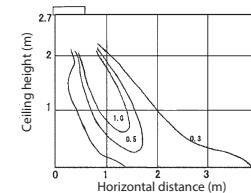
MMU-UP0181WH-E



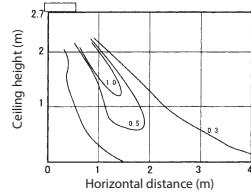
MMU-UP0241WH-E, MMU-UP0271WH-E



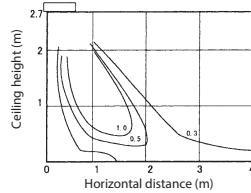
MMU-UP0301WH-E



MMU-UP0361WH-E, MMU-UP0481WH-E



MMU-UP0561WH-E



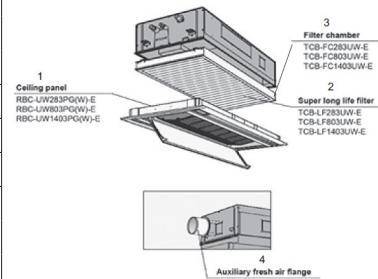
Accessories

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

2-way cassette connectors

*: Available

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



CASSETTE

MMU-UP_1YHP-E/SH-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 reception rooms.



0.8 HP ~ 2.5 HP

25 dB(A)

LOCAL CONTROLS



RBC-AX33UYP-E RBC-AXU31C-E



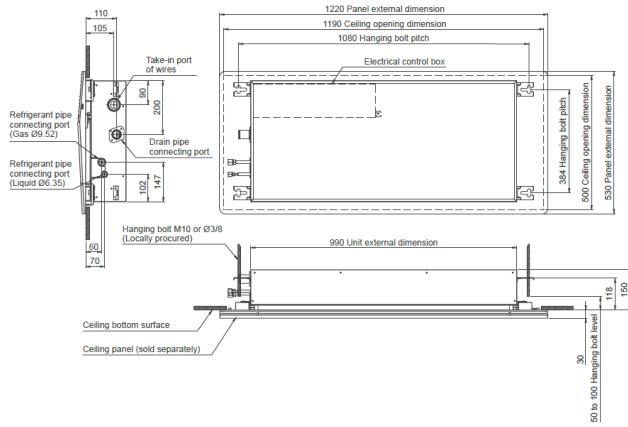
RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

Features

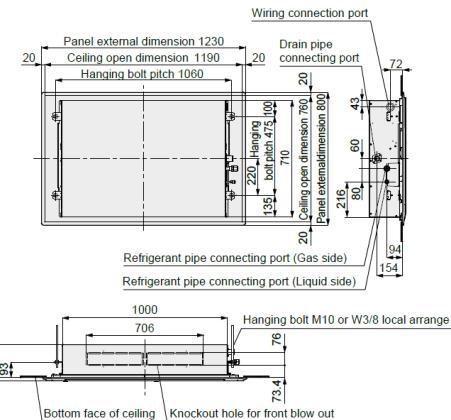
Model name	MMU	UP0071YHP-E	UP0091YHP-E	UP0121YHP-E	UP0151SH-E	UP0181SH-E	UP0241SH-E				
Cooling code	HP	0.8	1.0	1.25	1.7	2.0	2.5				
Cooling capacity	kW	2.2	2.8	3.6	4.5	5.6	7.1				
Heating capacity	kW	2.5	3.2	4.0	5.0	6.3	8.0				
Electrical characteristics		1-phase 230V (220-240V) 50Hz / 1-phase 220V (208-230V) 60Hz									
Running current (50Hz/60Hz)		A	0.17/0.18	0.18/0.19	0.19/0.20	0.34/0.35	0.37/0.39	0.62/0.62			
Power consumption (50Hz/60Hz) kW			0.017/0.017	0.018/0.018	0.019/0.019	0.042/0.041	0.046/0.045	0.075/0.073			
Starting current (50Hz/60Hz)		A	0.43/0.43	0.43/0.43	0.43/0.43	0.51/0.53	0.54/0.54	0.80/0.80			
Appearance		Main unit	Heat-insulating material attached - Zinc hot dipping steel plate								
Ceiling panel name			RBC-UY32P-E			RBC-US21PGE					
Panel color			Moon white_(Munsell 2.5GY9.0/0.5)								
Outer dimensions		Main unit (HxWxD) mm	150x990x450			200x1000x710					
Ceiling panel (HxWxD) mm			30x1220x530			20x1230x800					
Total weight		Main unit kg	14			21	22				
Ceiling panel		kg	4			5.5					
Heat exchanger			Finned tube								
Soundproof / Heat-insulating material			Non-flammable insulation			Polyethylene foam + Expanded polyethylene					
Fan unit	Fan		Centrifugal fan								
	Standard air flow (H/M/L) m³/h		500/390/270	520/410/290	540/420/290	750/690/630	780/720/660	1140/960/810			
	Motor output W			30							
Sound pressure level (H/M/L) dB(A)		38/34/25	39/35/26	40/36/26	37/35/32	38/36/34	45/41/37				
Sound power level dB(A)		53	54	55	52	53	60				
Air filter		Standard filter supplied (Long life filter) / Air purifier available as option					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			
	Liquid side mm		6.4	6.4	6.4	6.4	6.4	9.5			
	Drain port (nominal dia) mm			25 (Polyvinyl chloride tube)							

Drawings

MMU-UP0071YHP-E to MMU-UP121YHP-E



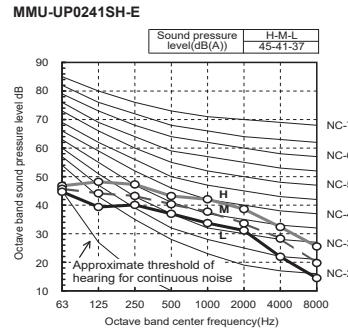
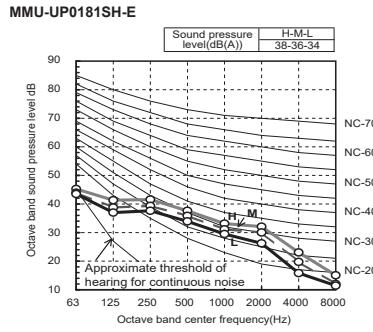
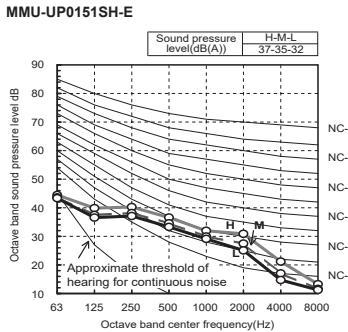
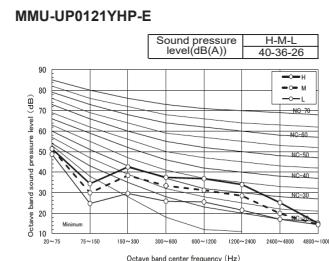
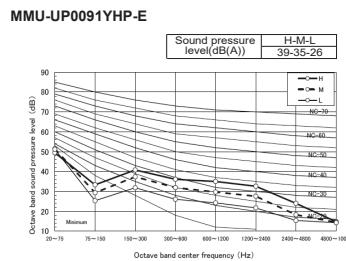
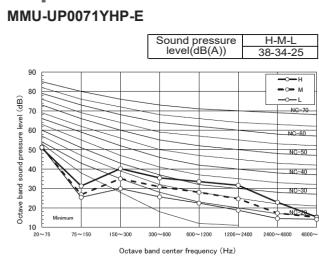
MMU-UP151SH-E to MMU-UP241SH-E



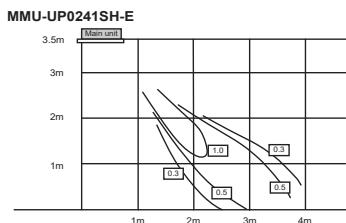
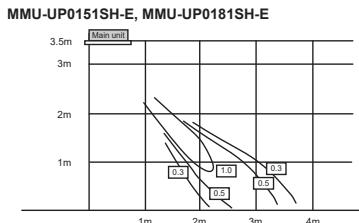
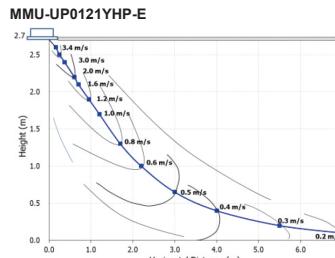
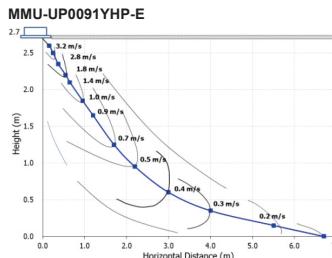
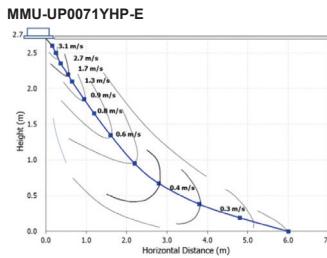
Unit : mm

1-WAY CASSETTE

Sound pressure levels

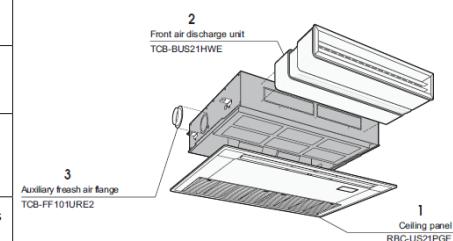


Air diffusion



Accessories

No.	Part name	Model name	Applied model	Notes	Remarks
1	Ceiling Panel	RBC-UY32P-E	MMU-UP_1YHP-E	1-Way cassette panel without receiver	Required accessory
		RBC-US21PGE			Required accessory
2	Front air discharge unit	TCB-BUS21HWE	MMU-UP_1SH-E		
3	Auxiliary fresh air flange	TCB-FF101URE2			
4	Air purifier kit	TCB-EAPC1UYHP-E	MMU-UP_1YHP-E	Set of Plasma Air Purifier, Dust sensor, Air quality indicator, Wireless receiver and Wireless RC	
5	Occupancy sensor	TCB-SIR41UYP-E	MMU-UP_1YHP-E	Occupancy sensor	Cannot match with Wireless receiver Kit
6	Wireless receiver kit	RBC-AX33UYP-E	MMU-UP_1YHP-E	Wireless RC kit	Cannot match with Occupancy sensor
7	Wireless receiver kit	RBC-AXU31C-E	MMU-UP_1SH-E	Wireless RC kit	



1-way cassette connectors

*: Available

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

MMD-UP_1SPHY-E

SLIM DUCT



Whatever installed 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	SOUND PRESSURE LEVEL
 0.8 HP ~ 3 HP	 26 dB(A)

LOCAL CONTROLS



RBC-AXU31-E

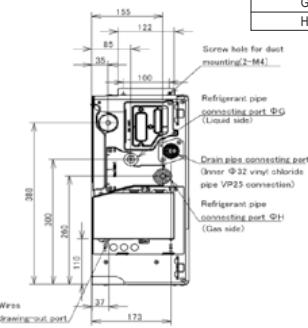
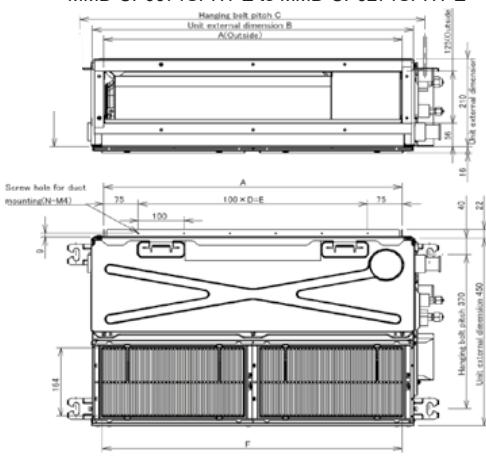
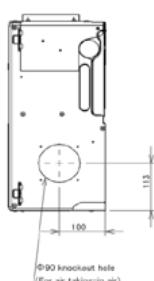


RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

Features

Drawings

MMD-LIP0071SPHY-E to MMD-LIP0271SPHY-E



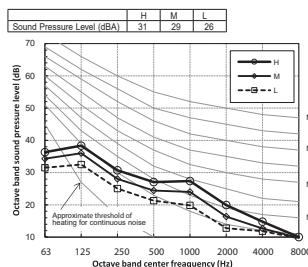
MMD-UP***ISPHY-E	007-012	015-018	024-027
A	650	850	1050
B	700	900	1100
C	770	970	1170
D	5	7	9
E	500	700	900
F	655	855	1055
G	6.4		9.5
H	6.5	10.7	15.9

SLIM DUCT

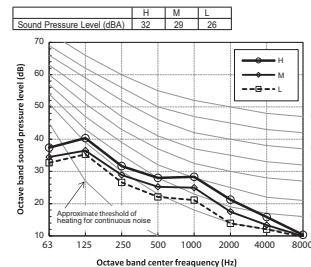
Sound pressure levels

Unit: dB(A)

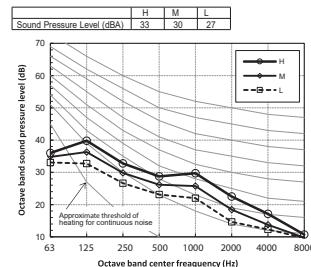
MMD-UP0071SPHY-E



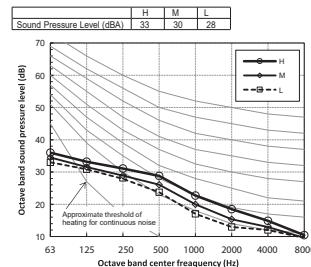
MMD-UP0091SPHY-E



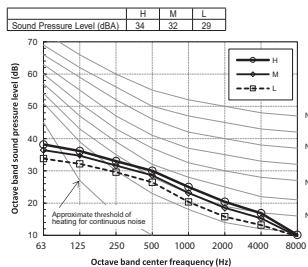
MMD-UP0121SPHY-E



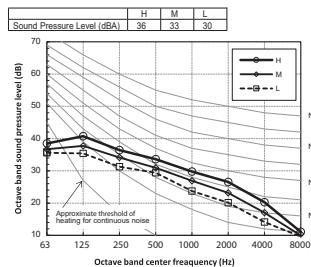
MMD-UP0151SPHY-E



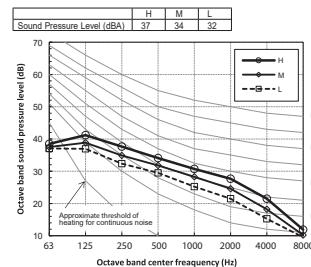
MMD-UP0181SPHY-E



MMD-UP0241SPHY-E



MMD-UP0271SPHY-E



Accessories

Part name	Model name	Applied model	Remarks
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)

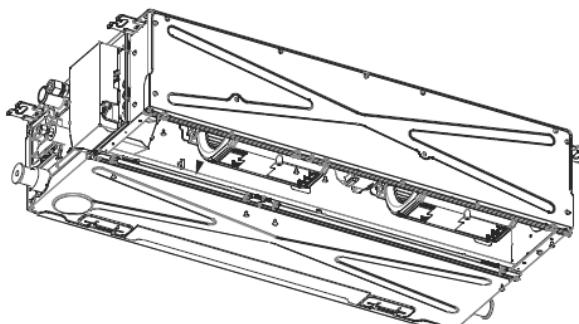
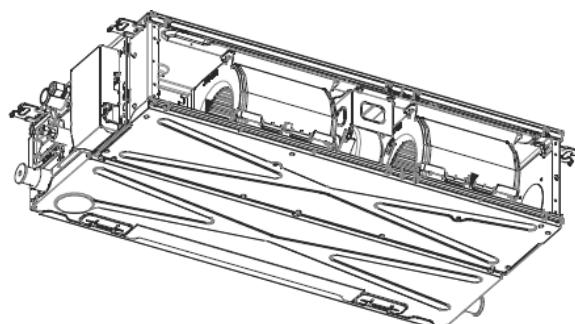
Slim duct connectors

*: Available

CN32	CN60	CN61	CN70	CN73	CN80
Additional ventilation control from remote control	Operation status signal output (Cooling, heating, fan, defrost, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input.o.off	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 intakeBack air intake

MMD-UP_1BHP-E

STANDARD DUCT



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

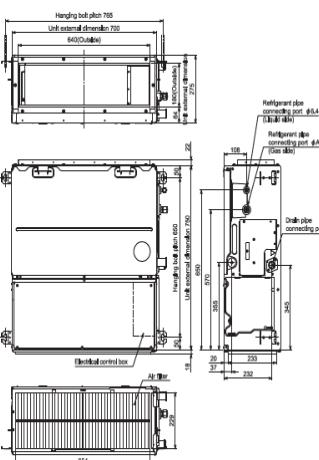
Features

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										
Cooling 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										
Heating capacity	kW	2.5	3.2	4.0	5.0	6.3	8.0	9.0	10.0	12.5	16.0	18.0										
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		Polyethylene foam																				
Fan unit	Fan	Centrifugal fan																				
	Standard air flow (H/M/L)	m³/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										
Sound power level		dB(A)	44	45	45	48	48	48	48	51	51	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										
	Liquid side	mm	6.4	6.4	6.4	6.4	6.4	9.5	9.5	9.5	9.5	9.5										
	Drain port (nominal dia)	mm	25 (Polyvinyl chloride tube)																			

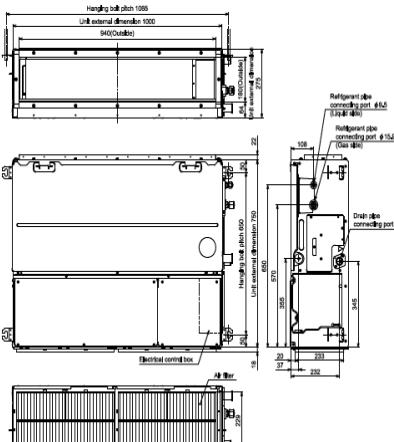
Drawings

Unit : mm

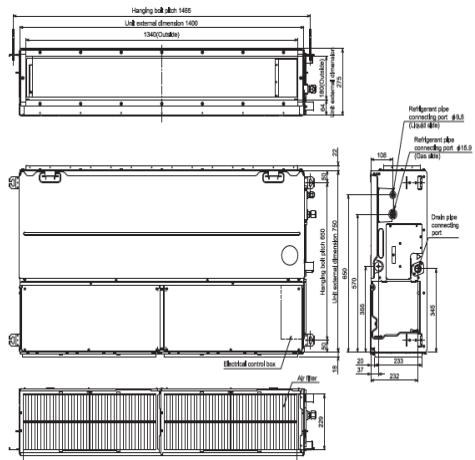
MMD-UP0071BHP-E to MMD-UP0181BHP-E



MMD-UP0241BHP-E to MMD-UP0301BHP-E



MMD-UP0361BHP-E to MMD-UP0561BHP-E



STANDARD DUCT

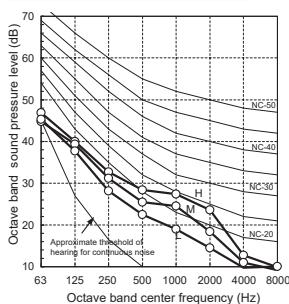
Sound pressure levels

Unit: dB(A)

▶ IDU

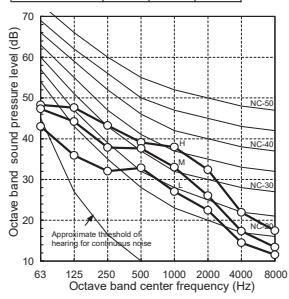
MMD-UP0071BHP-E

External static pressure 80 Pa			
FAN tap	H	M	L
Sound pressure level (dB(A))	33	30	27



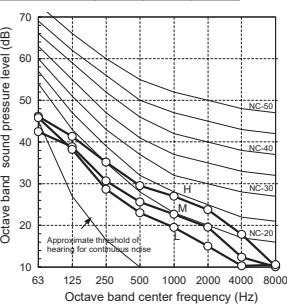
MMD-UP0301BHP-E

External static pressure 80 Pa			
FAN tap	H	M	L
Sound pressure level (dB(A))	42	39	33



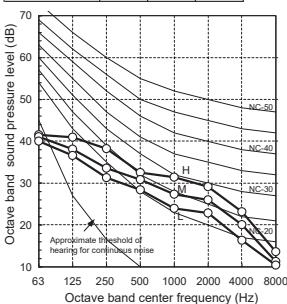
MMD-UP0091BHP-E, MMD-UP0121BHP-E

External static pressure 80 Pa			
FAN tap	H	M	L
Sound pressure level (dB(A))	34	30	28



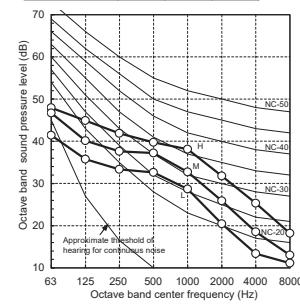
MMD-UP0151BHP-E, MMD-UP0181BHP-E

External static pressure 80 Pa			
FAN tap	H	M	L
Sound pressure level (dB(A))	37	33	31



MMD-UP0241BHP-E, MMD-UP0271BHP-E

External static pressure 80 Pa			
FAN tap	H	M	L
Sound pressure level (dB(A))	42	38	33



Accessories

Part name	Model name	Applied model	Appearance	Remarks
Spigot shaped flange	TCB-SF56C6BE	MMD-UP0071/0091/0121/0151/0181BHP-E		263x694x175mm / Spigot diameter 200mm
	TCB-SF80C6BE	MMD-UP0241/0271/0301BHP-E		263x994x175mm / Spigot diameter 200mm
	TCB-SF160C6BE	MMD-UP0361/0481/0561BHP-E		263x1394x175mm / Spigot diameter 200mm

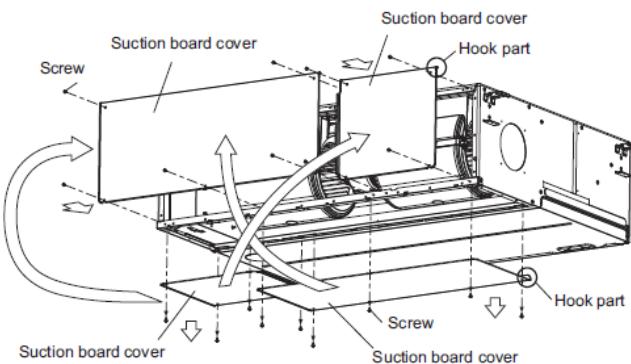
1-way cassette connectors

• : Available

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

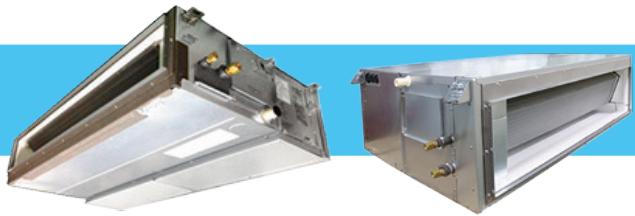
Installation flexibility

Changing from back air intake to under air intake



MMD-UP_1HP-E

HIGH STATIC PRESSURE DUCT



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



2 HP ~ 10 HP

31 dB(A)

LOCAL CONTROLS



RBC-AXU31-E

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

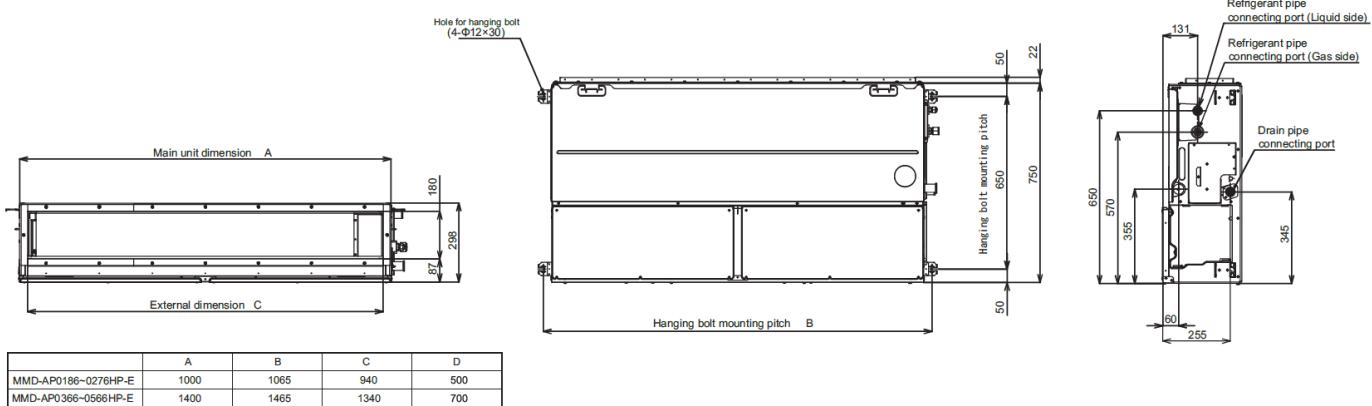
Features

Model name	MMD-	UP0181HP-E	UP0241HP-E	UP0271HP-E	UP0361HP-E	UP0481HP-E	UP0561HP-E	UP0721HP-E	UP0961HP-E								
Cooling 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								
Heating capacity	kW	6.3	8.0	9.0	12.5	16.0	18.0	25.0	31.5								
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	Polyethylene foam																
Fan unit	Fan	Centrifugal fan															
Standard air flow (H/M/L)	m ³ /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			250									
External static pressure (Factory setting)	Pa	100															
External static pressure	Pa	50-75-125-100-150-175-200 (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			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

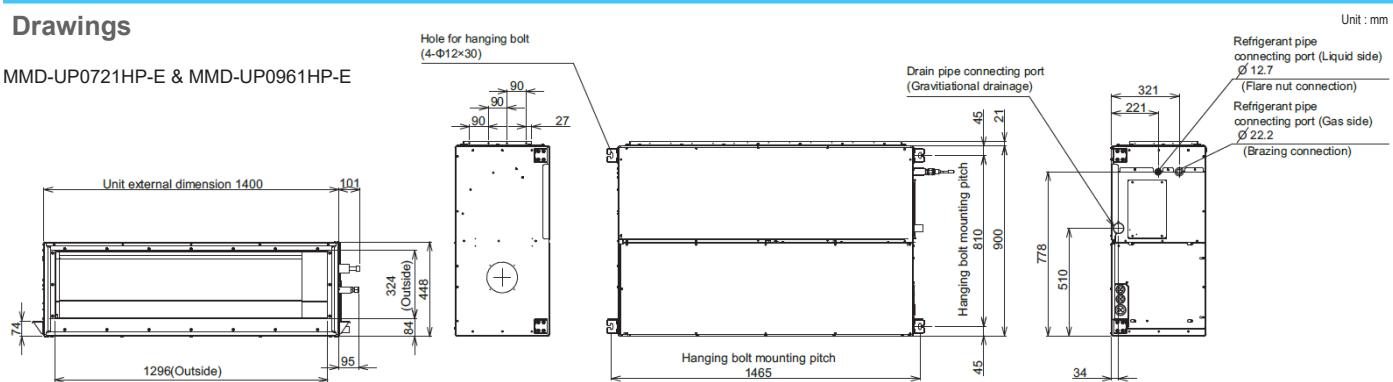
MMD-UP0181HP-E to MMD-UP0561HP-E



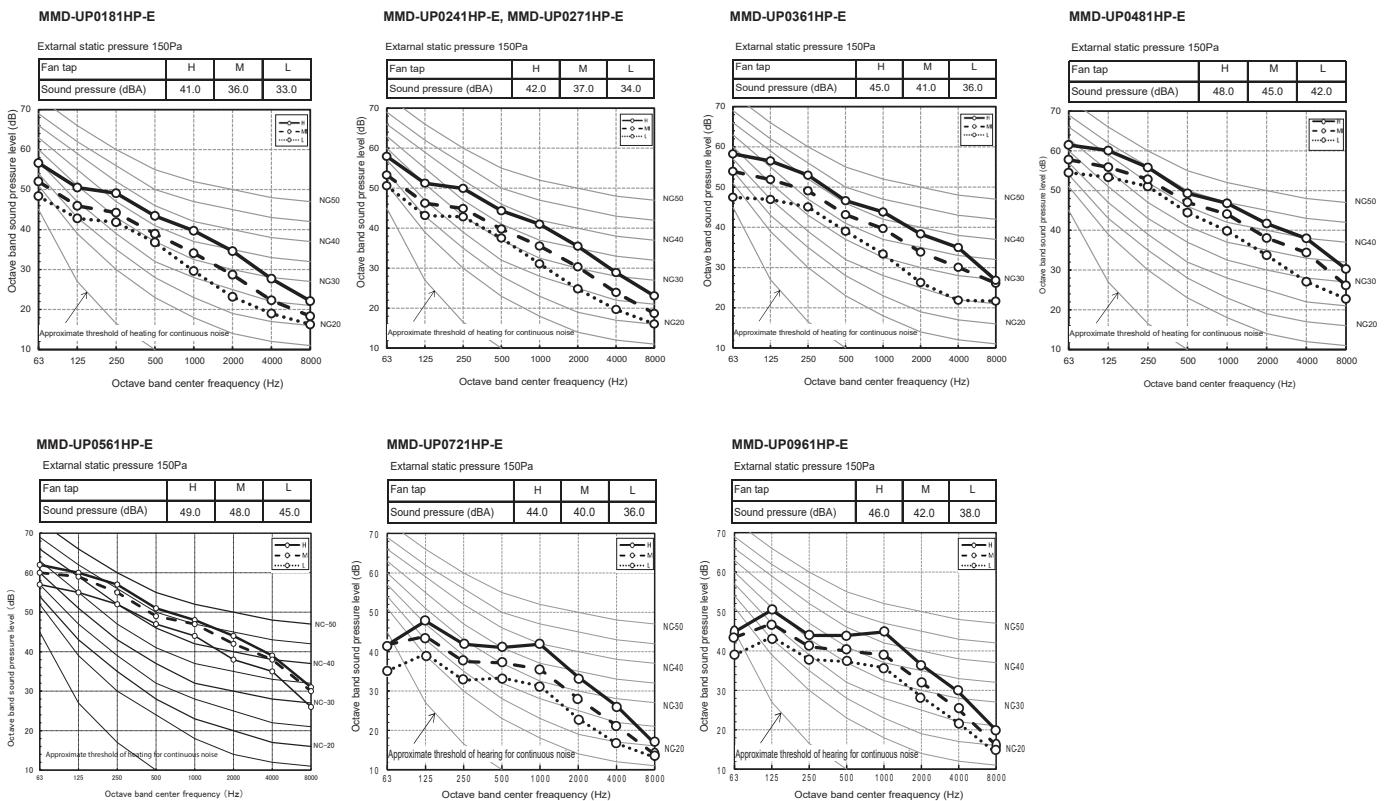
HIGH STATIC PRESSURE DUCT

Drawings

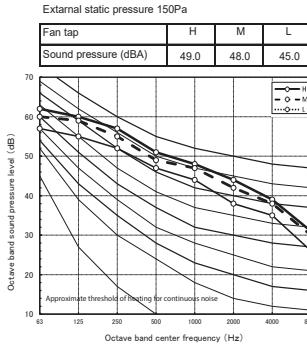
MMD-UP0721HP-E & MMD-UP0961HP-E



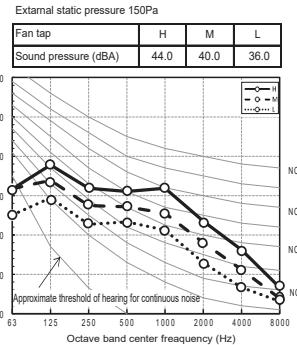
Sound pressure levels



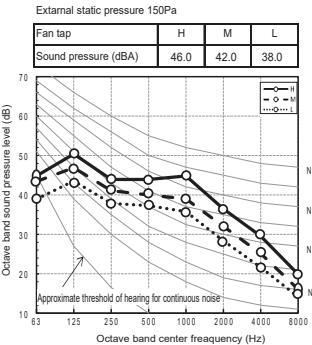
MMD-UP0561HP-E



MMD-UP0721HP-E



MMD-UP0961HP-E



Accessories

Part name	Model name	Applied model	Appearance	Remarks
Spigot shaped flange	TCB-SF80C6BE	MMD-UP0181/0241/0271HP-E		263x994x175mm / Spigot diameter 200mm
	TCB-SF160C6BE	MMD-UP0361/0481/0561HP-E		263x1394x175mm / Spigot diameter 200mm
Long life filter kit	TCB-LK801D-E	MMD-UP0181/0241/0271HP-E		
	TCB-LK1401D-E	MMD-UP0361/0481/0581HP-E		
	TCB-LK2801DP-E	MMD-UP0721/0961HP-E		Flange shaped Mount chassis directly Upside down mounting possible Left and right removable
Auxiliary fresh air flange	TCB-FF151US-E	MMD-UP0181/0241/0271/0361/0481/0581HP-E		
Drain pump kit	TCB-DP40DPE	MMD-UP0721/0961HP-E		

HSP duct connectors

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

* : Available

FRESH AIR INTAKE

MMD-UP_1HFP-E FRESH AIR INTAKE



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



AIR FLOW
Up to 1,080m³/h ~ 3,060m³/h



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-E	UP0961HFP-E	UP1121HFP-E	UP1281HFP-E			
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			
Heating capacity (*) (Note 2)	kW	8.9	13.9	17.4	20.8	25.2			
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			
	Power consumption (50Hz/60Hz)	kW	0.108/0.108	0.153/0.153	0.198/0.198	0.240/0.240			
	Starting current (50Hz/60Hz)	A	2.01/2.10	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		
Fan unit	Motor output	W	350	1000					
	External static pressure (Factory setting)	Pa	100						
Fan unit	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		
Fan unit	Air flow limit	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 FCU.., 18 - 30 °C).

* Height difference between Fresh Air Intake Indoor units must be within 5 m.

Note 1 : Rated conditions

Cooling : Outdoor air temperature 33°C DB/28°C WB setting temperature 18°C

Heating : Outdoor air temperature 0°C DB/-2.9°C WB setting temperature 25°C

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

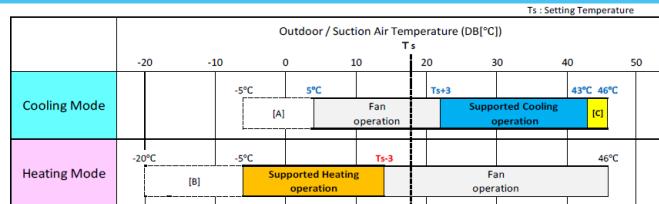
Note 4 : 46-52°C is also available but temporary operable

In case of connecting with SMMS-e for all Fresh Air Intake unit, it can use down to -5°C in heating mode

Use conditions

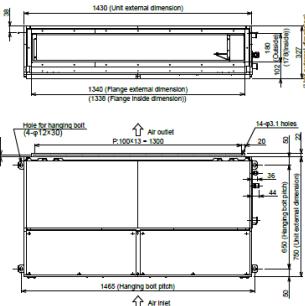
• In "COOL" or "FAN" mode, if temperature of the outdoor/suction air is under 5°C, the operation stops automatically in order to protect the equipment. In this case, continue the operating by selecting "HEAT" mode.

• In "HEAT" mode, if temperature of outdoor/suction air is under -5°C the operation stops automatically in order to protect the equipment. When operation the fresh intake unit with the outdoor/suction temperature under -5°C, make sure to -5°C using duct heater (locally procured).

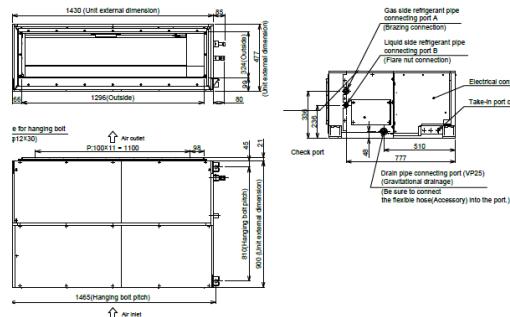


Drawings

MMD-UP0481HFP-E



MMD-UP0721HFP-E to MMD-UP1281HFP-E



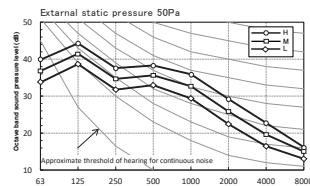
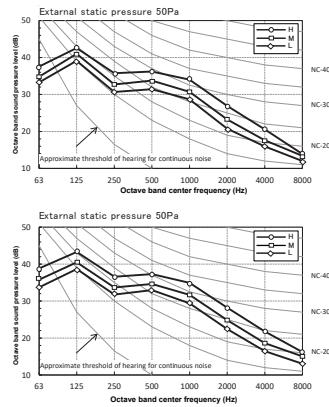
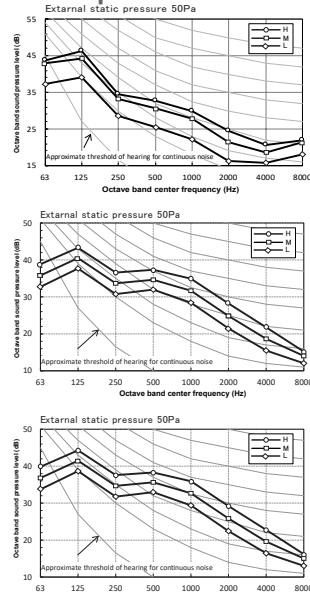
FRESH AIR INTAKE

Fresh air intake indoor unit type

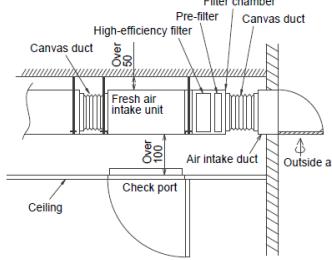
System restriction	SMMS-7 Multi FCU connection	SMMS-7 All fresh air intake connection	SMMS-u Multi FCU connection	SMMS-u All fresh air intake connection
Max. no. of combined outdoor units	3	1	5	2
Max. capacity of combined outdoor units	60HP	24HP	120HP	44HP
Maximum number of connected indoor units	64	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 FCU connection	SMMS-7 All fresh air intake connection	SMMS-u Multi FCU connection	SMMS-u 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 units		m	0.5	0.5	40	5

Sound pressure levels



Other information



Accessories

Part name	Model name	Description	Applied model	Appearance
Air filtration	TCB-UFM0481D-E	High-efficiency filter 65	MMD-UP0481HF-E	<p>Filter chamber</p> <p>Long life prefilter</p> <p>High-efficiency filter 65</p> <p>High-efficiency filter 90</p> <p>Drain pump kit</p>
	TCB-UFM1281D-E	High-efficiency filter 65	MMD-UP0721HF-E to MMD-UP1281HF-E	
	TCB-UFH0481D-E	High-efficiency filter 90	MMD-UP0481HF-E	
	TCB-UFH1281D-E	High-efficiency filter 90	MMD-UP0721HF-E to MMD-UP1281HF-E	
	TCK-LK1401D-E	Stand alone long life prefilter	MMD-UP0481HF-E	
	TCK-LK2801DP-E	Stand alone long life prefilter	MMD-UP0721HF-E to MMD-UP1281HF-E	
	TCK-LK1401D-E (*2)	High efficiency long life prefilter	MMD-UP0481HF-E	
	TCK-PF1281DF-E	High efficiency long life prefilter	MMD-UP0721HF-E to MMD-UP1281HF-E	
	TCB-FC0481DF-E	Filter chamber	MMD-UP0481HF-E	
	TCB-FC1281DF-E	Filter chamber	MMD-UP0721HF-E to MMD-UP1281HF-E	
Drain pump kit	TCB-DP40DFP-E	Drain pump kit	All models	

Fresh air duct embedded connectors

*: Available

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

UNDER CEILING

MMC-UP_1HP-E UNDER CEILING



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



1.7 HP ~ 6 HP

28 dB(A)

LOCAL CONTROLS



RBC-AXU31-E
RBC-AXU31C-E



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

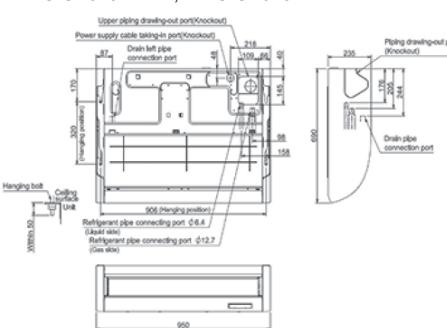
Features

Model name	MMC-	UP0151HP-E	UP0181HP-E	UP0241HP-E	UP0127HP-E	UP0361HP-E	UP0481HP-E	UP0561HP-E	
Cooling 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	
Heating capacity	kW	5.0	6.3	8.0	9.0	12.5	16.0	18.0	
Electrical characteristics		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)	m³/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	
	Liquid side	mm	6.4	6.4	9.5	9.5	9.5	9.5	
	Drain port (nominal dia)	mm	20 (Polyvinyl chloride tube)						

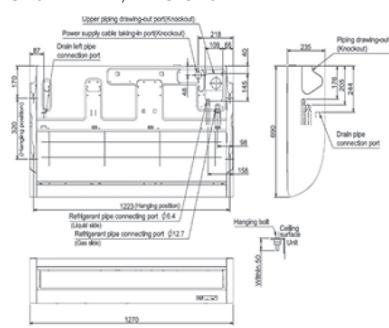
Drawings

Unit : mm

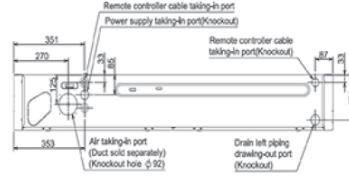
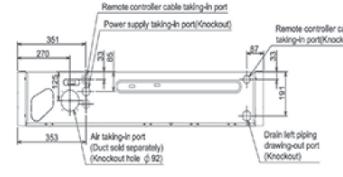
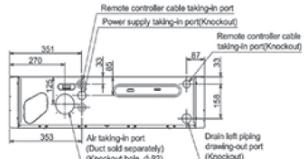
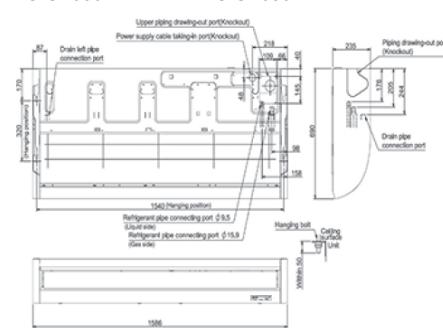
MMC-UP0151HP-E, MMC-UP0181HP-E



MMC-UP0241HP-E, MMC-UP0271HP-E



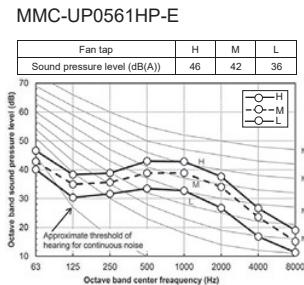
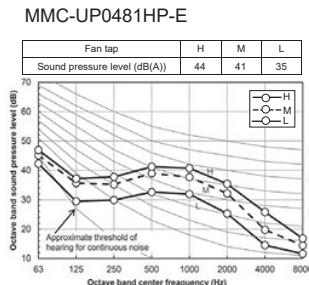
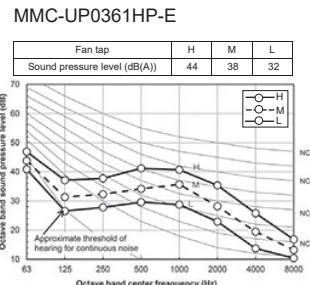
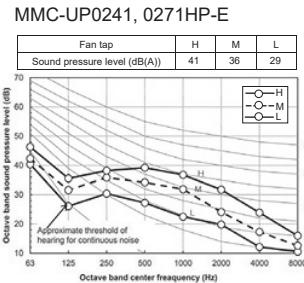
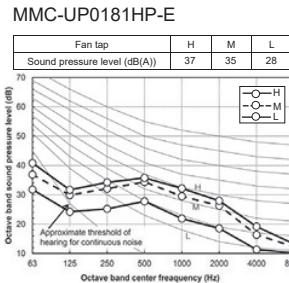
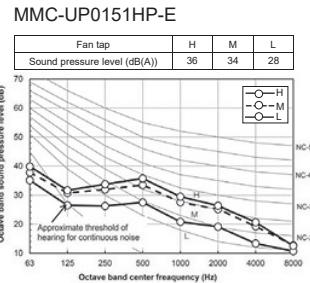
MMC-UP0361HP-E to MMC-UP0561HP-E



UNDER CEILING

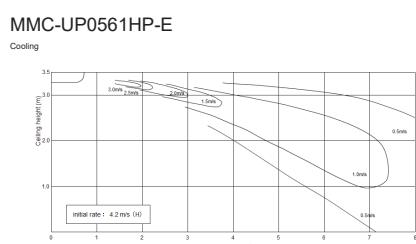
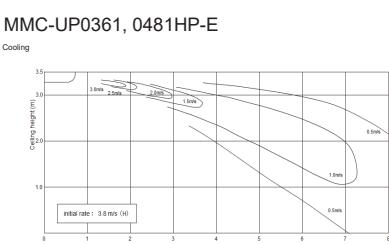
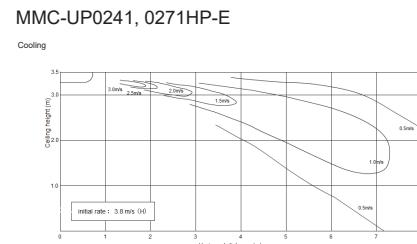
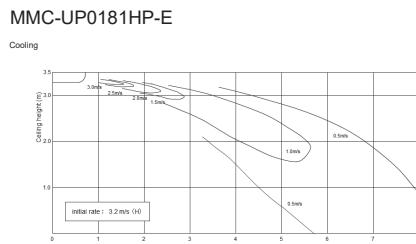
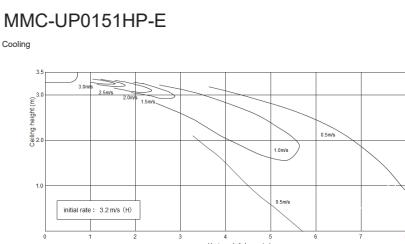
Sound pressure levels

Unit : dB(A)



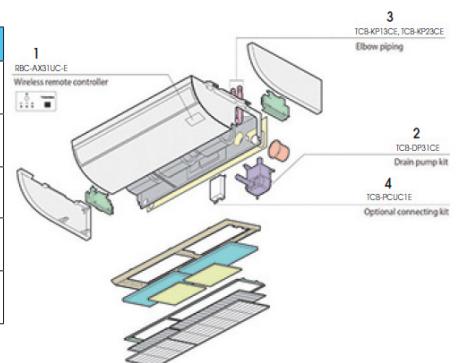
Air diffusion

Unit : m/s



Accessories

No.	Part name	Model name	Applied model	Notes	Remarks
1	Wireless Remote Controller kit	RBC-AXU31C-E	MMC-UP_1HP-E		
2	Drain pump kit	TCB-DP31CE		Antibacterial glass is built into drain pump kit	
3	Elbow piping kit	TCB-KP14CPE		It is necessary for installation of drain pump kit	Use with TCB-DP31CE
4	Option connecting kit	TCB-PCUC2E		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, heating, fan, defrost, thermo-on)	External On/Off, operation output and alarm output	Warning symbol on remote control based on signal input o off.	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



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

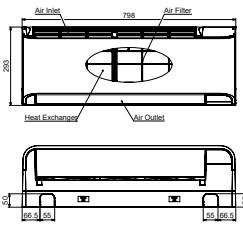
Features

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											
Heating capacity	kW	2.5	3.2	4.0	5.0	6.3	8.0	9.0	10.0	12.5											
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)	m³/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)			16 (Polyvinyl chloride tube)																		

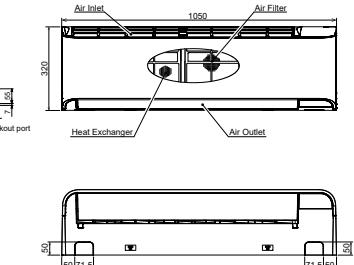
Drawings

Unit : mm

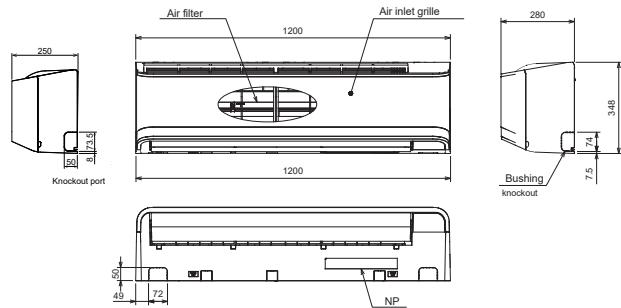
MMK-UP0071HP-E to MMK-UP0121HP-E



MMK-UP0151HP-E to MMU-UP0241HP-E

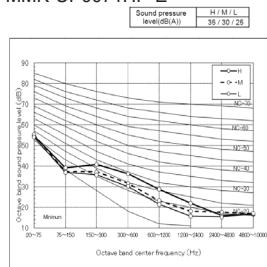


MMK-UP0271HP-E to MMU-UP0361HP-E

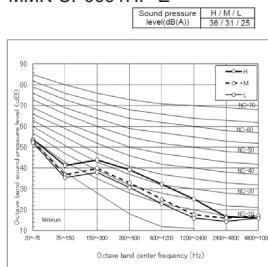


HIGH-WALL**Sound pressure levels**

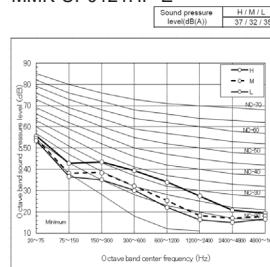
MMK-UP0071HP-E



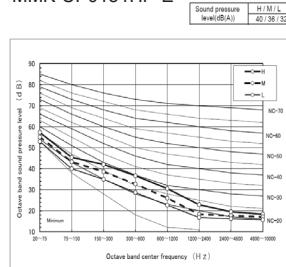
MMK-UP0091HP-E



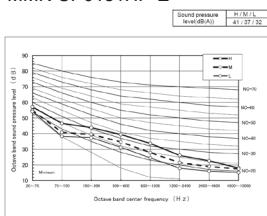
MMK-UP0121HP-E



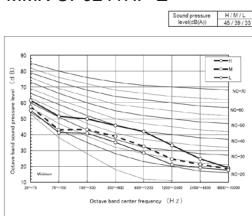
MMK-UP0151HP-E



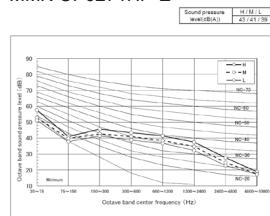
MMK-UP0181HP-E



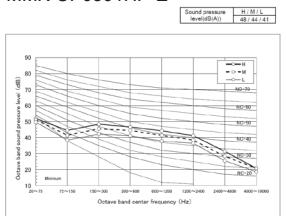
MMK-UP0241HP-E



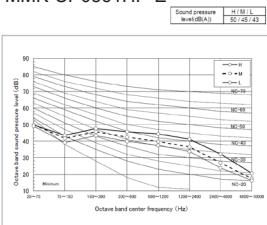
MMK-UP0271HP-E



MMK-UP0301HP-E

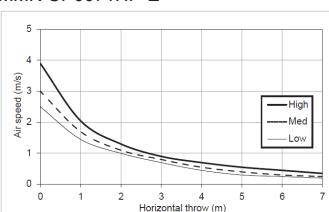


MMK-UP0361HP-E

**Air diffusion**

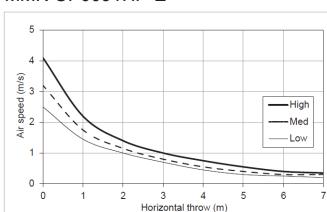
High wind: 3.9m/s
Mid wind: 3.0m/s
Low wind: 2.5m/s

MMK-UP0071HP-E



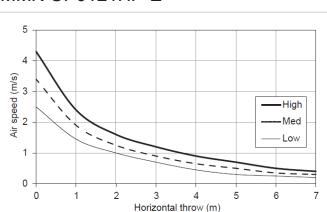
High wind: 4.1m/s
Mid wind: 3.2m/s
Low wind: 2.5m/s

MMK-UP0091HP-E



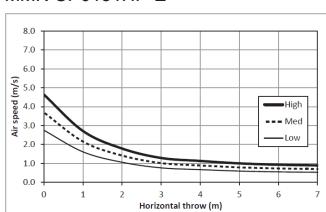
High wind: 4.3m/s
Mid wind: 3.4m/s
Low wind: 2.5m/s

MMK-UP0121HP-E



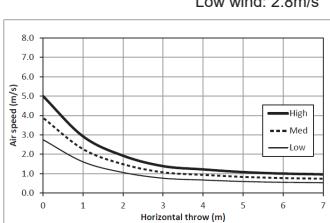
High wind: 4.6m/s
Mid wind: 3.7m/s
Low wind: 2.8m/s

MMK-UP0151HP-E



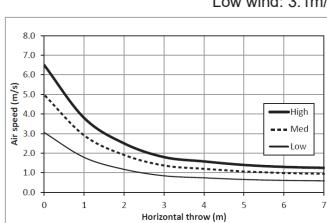
MMK-UP0181HP-E

High wind: 5.0m/s
Mid wind: 3.9m/s
Low wind: 2.8m/s

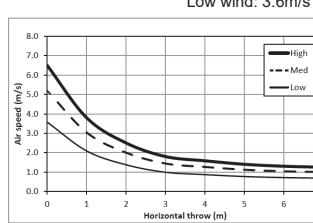


MMK-UP0241HP-E

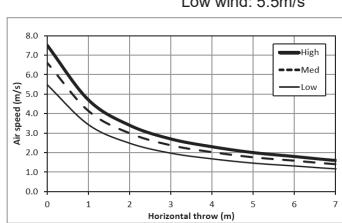
High wind: 6.5m/s
Mid wind: 5.0m/s
Low wind: 3.1m/s



High wind: 6.5m/s
Mid wind: 5.2m/s
Low wind: 3.6m/s

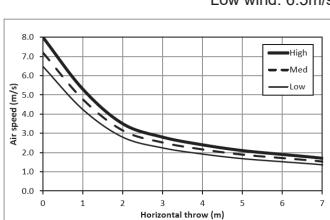


High wind: 7.5m/s
Mid wind: 6.6m/s
Low wind: 5.5m/s



MMK-UP0361HP-E

High wind: 8.0m/s
Mid wind: 7.2m/s
Low wind: 6.5m/s

**High wall embedded connectors**

* : Available

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

CONSOLE

MML-UP_1NHP-E BI-FLOW 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



SOUND PRESSURE LEVEL



0.8 HP ~ 2 HP

26 dB(A)

LOCAL CONTROLS



Included



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

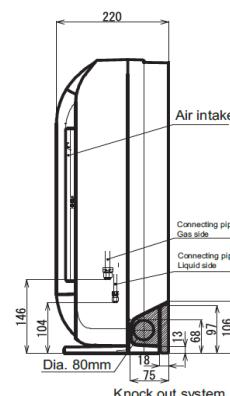
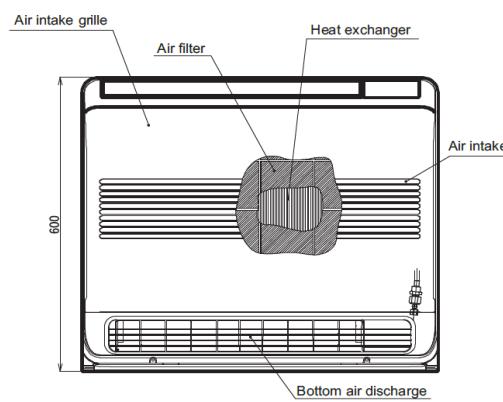
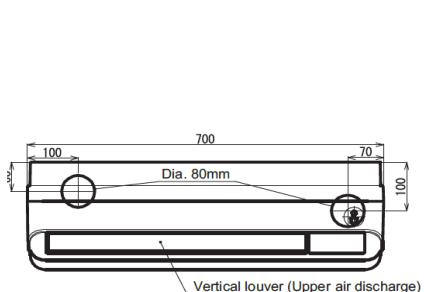
Features

Model name	MML-	UP0071NHP-E	UP0091NHP-E	UP0121NHP-E	UP0151NHP-E	UP0181NHP-E	
Cooling 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	
Heating capacity	kW	2.5	3.2	4.0	5.0	6.3	
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

All model

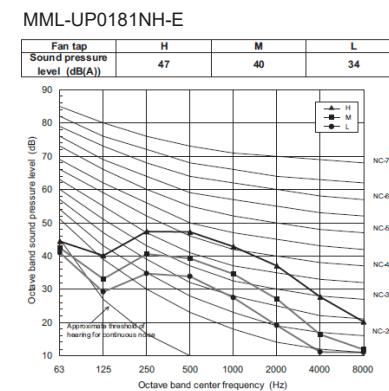
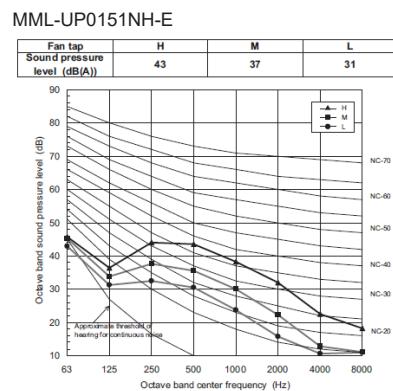
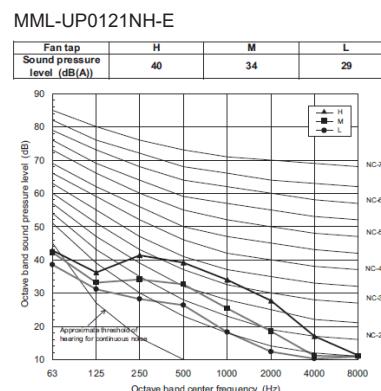
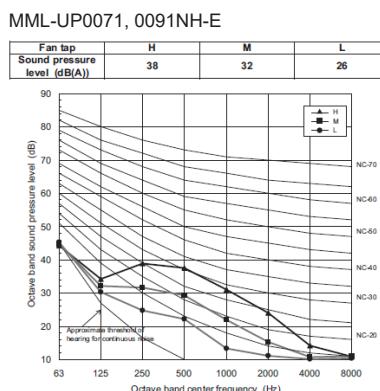
Unit : mm



BI-FLOW CONSOLE

Sound pressure levels

Unit : dB(A)

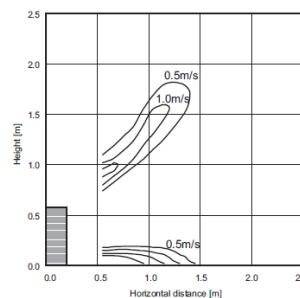


Air diffusion

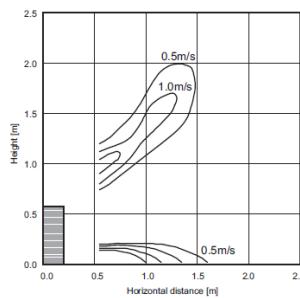
Unit : m/s

MML-UP0071NH-E, UP0091NH-E

Cooling - Upper & Lower

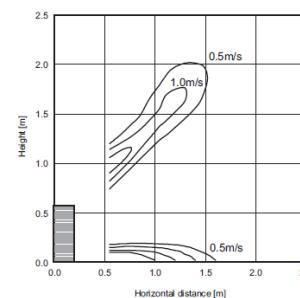


Heating - Upper & Lower

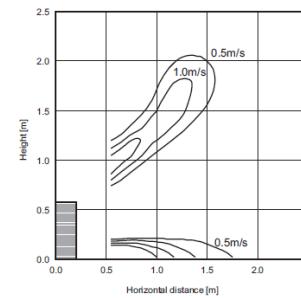


MML-UP0121NH-E

Cooling - Upper & Lower

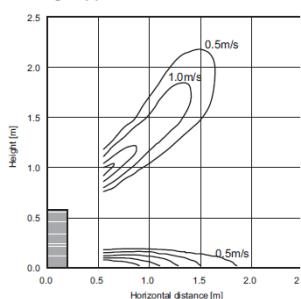


Heating - Upper & Lower

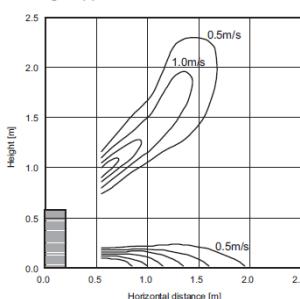


MML-UP0151NH-E

Cooling - Upper & Lower

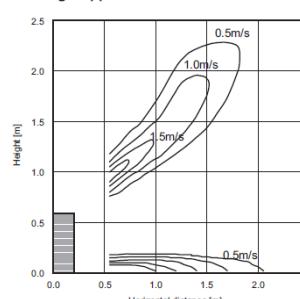


Heating - Upper & Lower

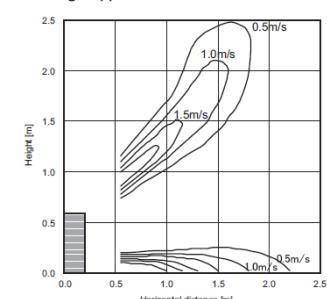


MML-UP0181NH-E

Cooling - Upper & Lower



Heating - Upper & Lower



Bi-flow console connectors

* : Available

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

FLOOR STANDING

MML-UP_1BH-E 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 unobtrusive solution that blends into any interior.

CAPACITY



SOUND PRESSURE LEVEL



0.8 HP ~ 2.5 HP

32 dB(A)

LOCAL CONTROLS



RBC-AXU31-E



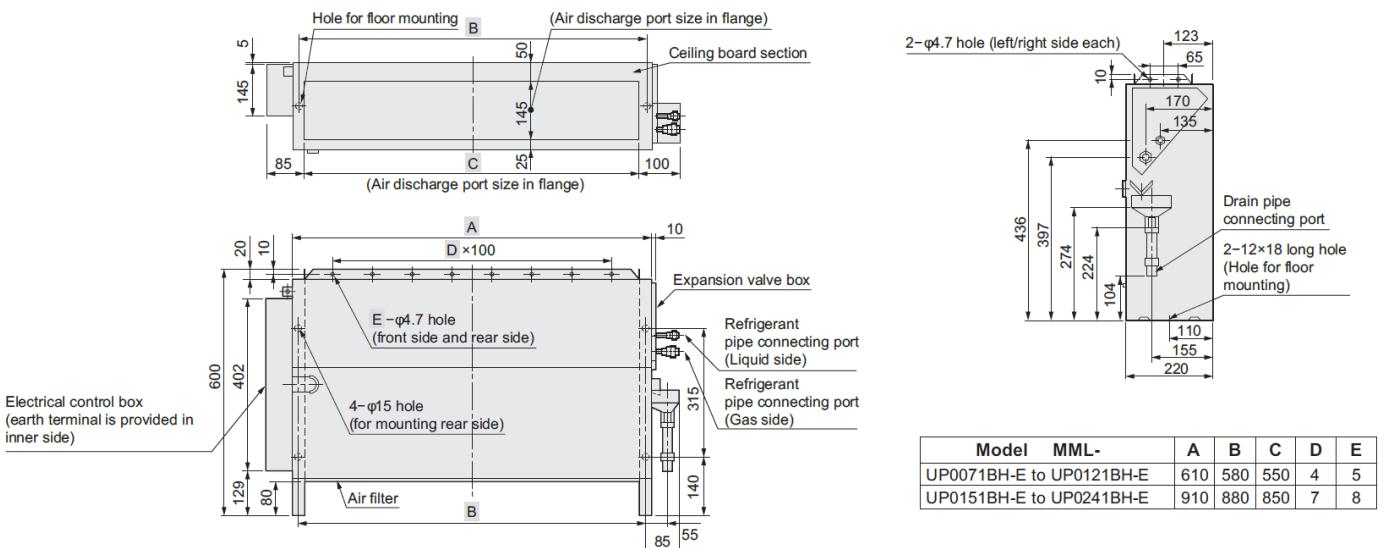
RBC-ASCU11-E
RBC-AMTU31-E
RBC-AMSU51-EN/ES

Features

Model name	MML-	UP0071BH-E	UP0091BH-E	UP0121BH-E	UP0151BH-E	UP0181BH-E	UP0241BH-E					
Cooling 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					
Heating capacity	kW	2.5	3.2	4.0	5.0	6.3	8.0					
Electrical characteristics		1 phase 50Hz 230V (220-240V) / 1 phase 60Hz 220V										
Fan unit	Power supply											
	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)	m³/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					
	Liquid side	mm	6.4	6.4	6.4	6.4	6.4					
	Drain port (nominal dia)	mm	20 (Polyvinyl chloride tube)									

Drawings

All model

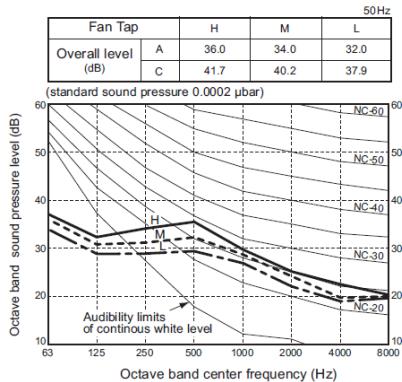


CONCEALED

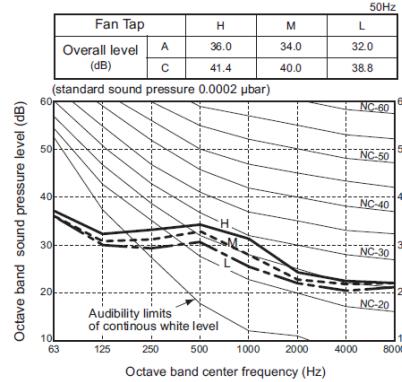
Sound pressure levels

Unit : dB(A)

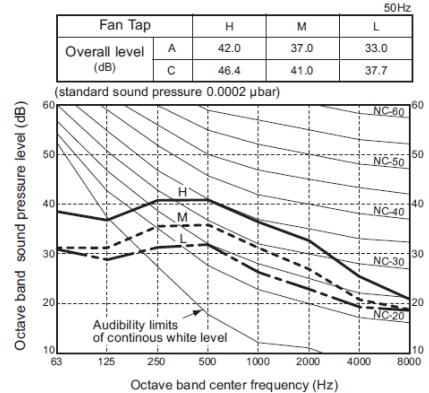
MML-UP0071BH-E to MML-UP0121BH-E



MML-UP0151BH-E, MML -UP181BH-E



MML-UP241BH-E



Concealed chassis embedded connectors

• : Available

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

FLOOR STANDING

MML-UP_1H-E 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 are able to house the unit.

CAPACITY



SOUND PRESSURE LEVEL



0.8 HP ~ 2.5 HP

35 dB(A)

LOCAL CONTROLS



RBC-AXU31-E



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

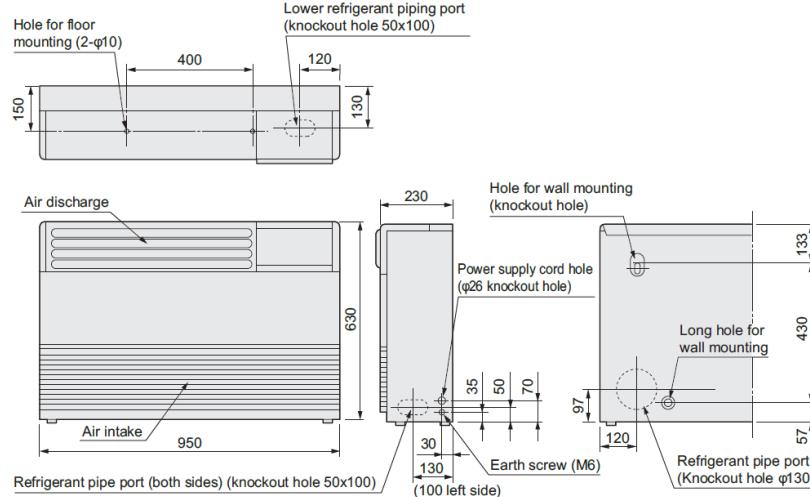
Features

Model name	MML-	UP0071H-E	UP0091H-E	UP0121H-E	UP0151H-E	UP0181H-E	UP0241H-E					
Cooling 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					
Heating capacity	kW	2.5	3.2	4.0	5.0	6.3	8.0					
Electrical characteristics		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						
	kW	0.056/0.044		0.092/0.069		0.102/0.076						
	A	0.60/0.60		0.80/0.80		1.10/1.10						
Appearance		Silky shade (Y18.5/0.5)										
Dimensions (HxWxD)		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)	m³/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



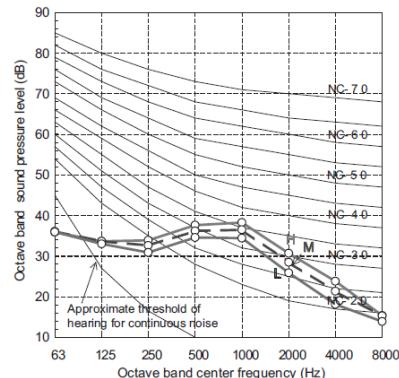
CABINET

Sound pressure levels

Unit : dB(A)

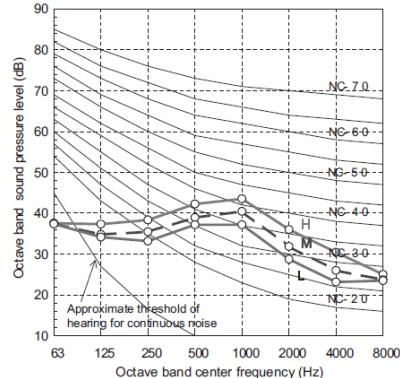
MML-UP0071H-E, MML-UP0091H-E

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



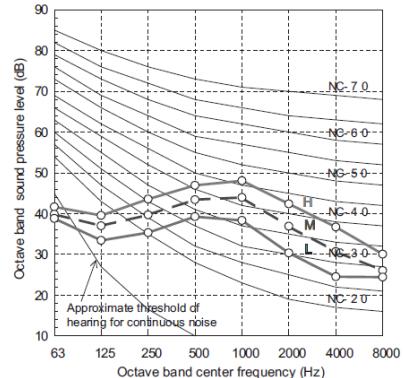
MML-UP0121H-E, MML-UP151H-E

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



MML-UP0181H-E, MML-UP241H-E

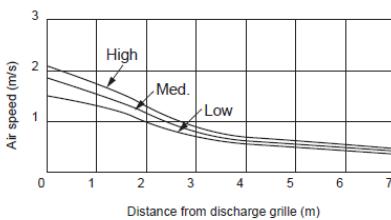
Fan tap	H	M	L
Sound pressure level (dB(A))	49	44	39



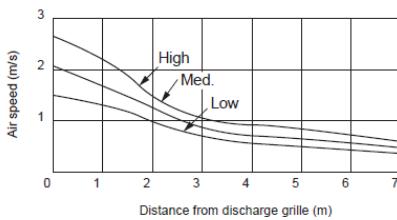
Air diffusion

Unit : m/s

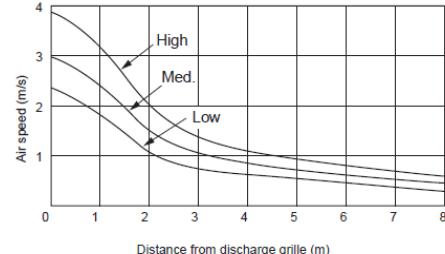
MML-UP0071H-E, MML-UP0091H-E



MML-UP0121H-E, MML-UP151H-E



MML-UP0181H-E, MML-UP241H-E



Console connectors

*: Available

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

FLOOR STANDING

MMF-UP_1H-E FLOOR STANDING



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



LOCAL CONTROLS



RBC-AXU31-E



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

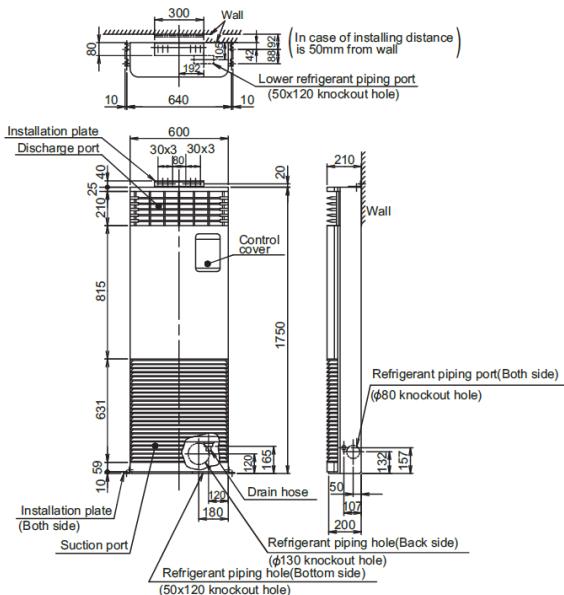
Features

Model name	MMF	UP0151H-E	UP0181H-E	UP0241H-E	UP0271H-E	UP0361H-E	UP0481H-E	UP0561H-E								
Cooling 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								
Heating capacity	kW	5.0	6.3	8.0	9.0	12.5	16.0	18.0								
Electrical characteristics		1 phase 50Hz 230V (220-240V) / 1 phase 60Hz 220V														
Power supply																
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)	m³/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)													

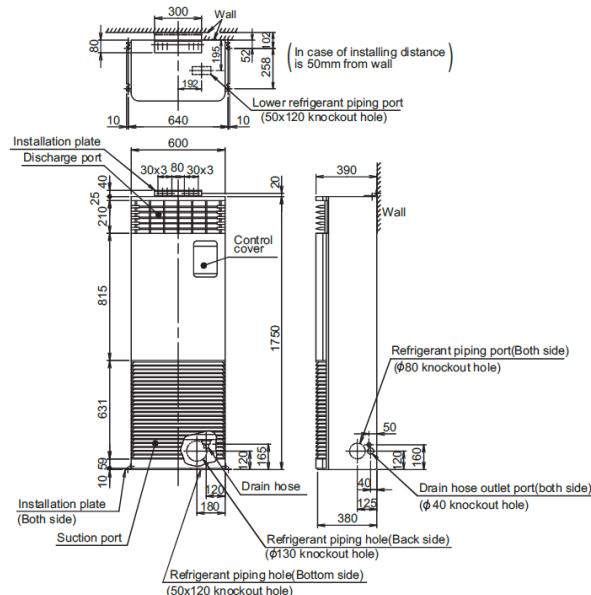
Drawings

Unit : mm

MMF-UP0151H-E to MMF-UP0271H-E



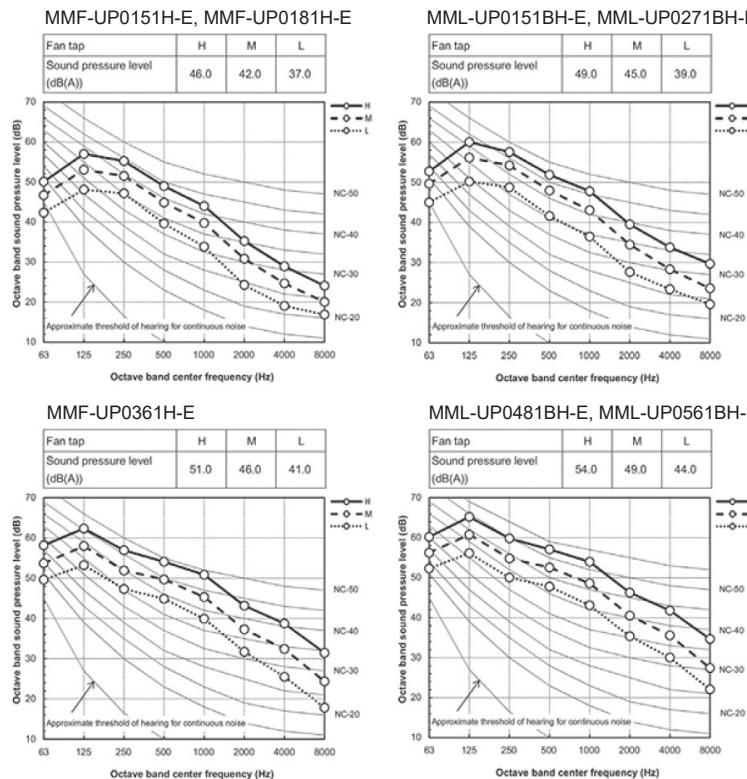
MMF-UP0361H-E to MMF-UP0561H-E



FLOOR STANDING

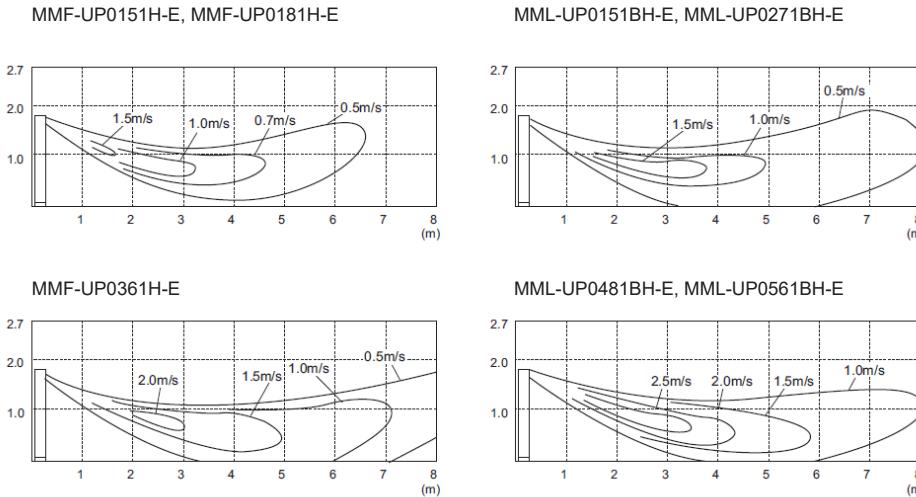
Sound pressure levels

Unit : dB(A)



Air diffusion

Unit : m/s



Floor standing embedded connectors

• : Available

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

FLOOR STANDING

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



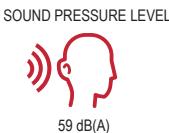
This system is particularly suitable to large rooms air condition like warehouse, factory and shopping mall.



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

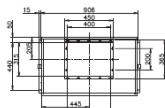
Features

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		
Cooling 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	
Heating capacity		kW	25.0	31.5	50.0	63.0	25.0	31.5	50.0	63.0	
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)							

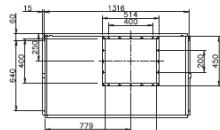
Drawings

Unit : mm

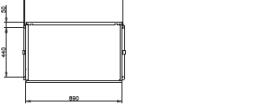
MMF-AP0725DHP-VA/VB,
MMF-AP0965DHP-VA/VB



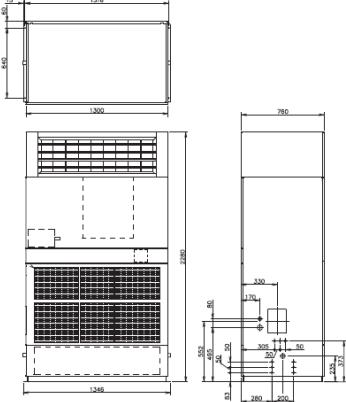
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MMF-AP1925DHP-VA/VB



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



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

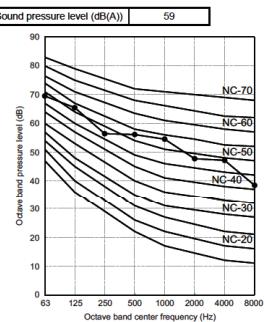


LARGE CAPACITY FLOOR STANDING

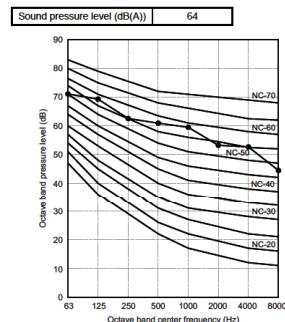
Sound pressure levels

Unit : dB(A)

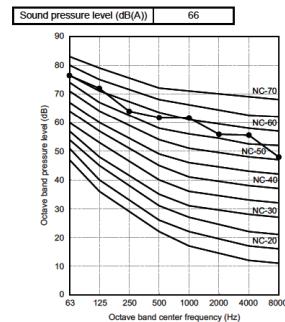
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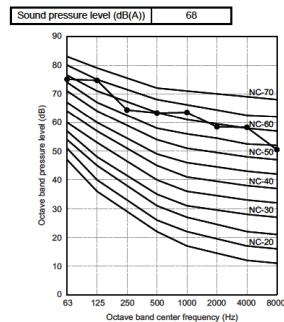
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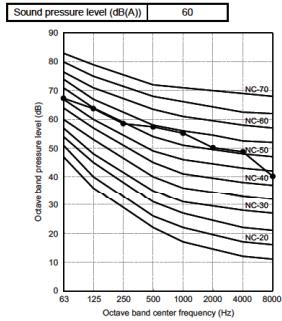
MMF-AP1445DHP-VA/VB



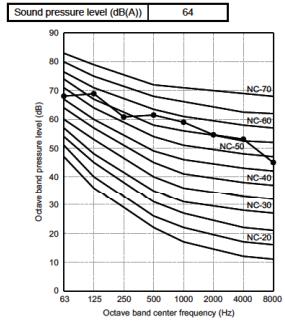
MMF-AP1925DHP-VA/VB



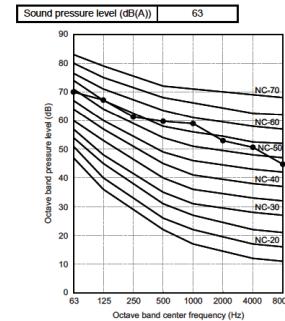
MMF-AP0725HP-VA/VB



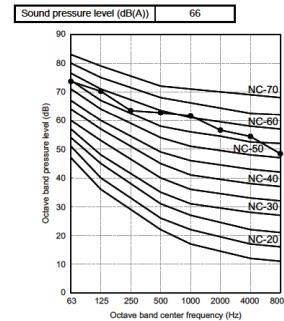
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MMF-AP1445HP-VA/VB



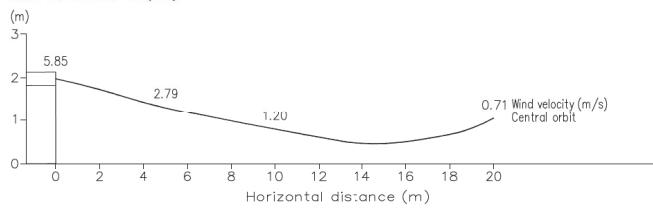
MMF-AP1925HP-VA/VB



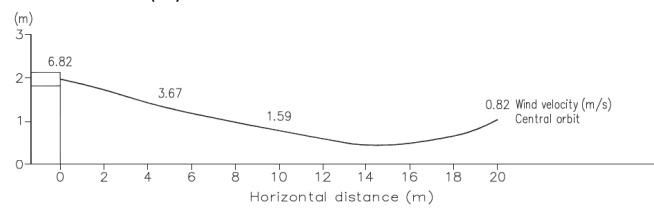
Air diffusion

Unit : m/s

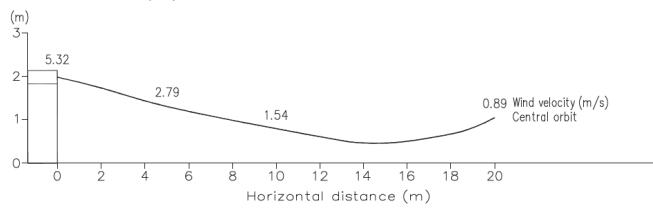
MMF-AP0725HP-VA(VB)



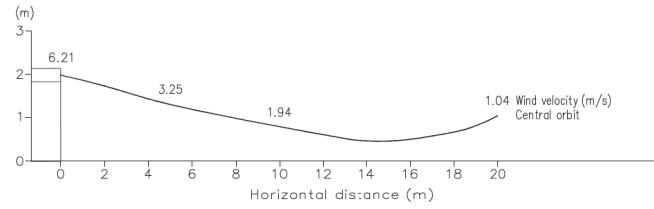
MMF-AP0965HP-VA(VB)



MMF-AP1445HP-VA(VB)



MMF-AP1925HP-VA(VB)



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 or heating load and the overall size of the required air conditioning system.

CAPACITY	AIR FLOW	SOUND PRESSURE LEVEL
4.1 kW ~ 8.25 kW	Up to 500m³/h ~ 950m³/h	34.5 dB(A)

LOCAL CONTROLS

NRC-01HE
RBC-AMTU31E

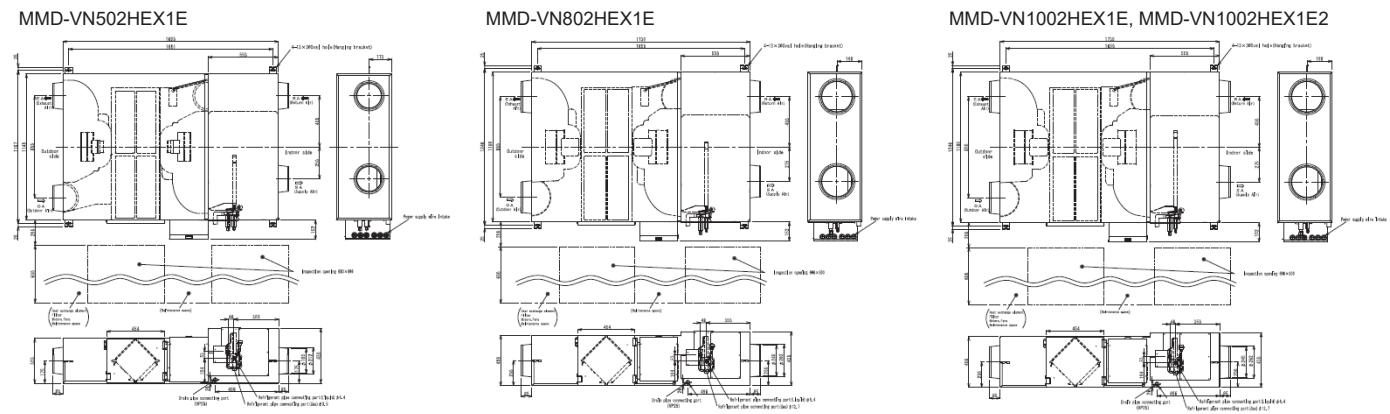
Features

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)
Heating capacity	kW		5.53(2.33)	8.61(3.61)	10.92(4.32)	10.92(4.32)
Power supply			1 phase 50Hz 230V (220-240V) / 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
	Heating (Extra high/High/Low)	%	68.5/69.0/69.0	70.0/73.0/73.5	66.0/68.5/69.0	66.0/68.5/69.0
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
		High	m³/h	500/-	800/-	950
		Low	m³/h	440/410	640/600	820
	External static pressure	Extra high	Pa	120/200	120/190	135
		High	Pa	105/170	100/155	120
		Low	Pa	115/150	100/130	105
	Air flow limit	Lower limit	m³/h	330	480	640
		Upper limit	m³/h	600	960	1140
Humidifier	System			-	-	-
	Amount			-	-	-
	Feed water pressure			-	-	-
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
Appearance						
Dimensions (HxWxD)			mm	430x1140x1690	430x1189x1739	430x1189x1789
Weight			kg	84	100	101
Heat exchanger / Heat-insulating material						
Air filter						
Controller						
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%		

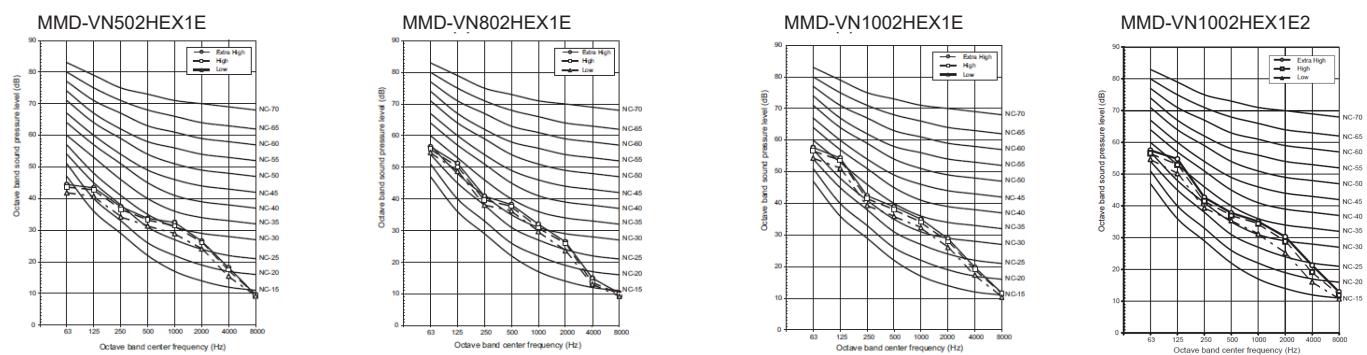
Cooling and heating capacities are based on the following conditions:
 cooling capacities are based on: indoor temperature: 27°CDB/19°C WB, Outdoor temperature: 35°C DB
 Heating capacities are based on: indoor temperature: 20°C DB, Outdoor temperature: 7 °CDB/6°C WB.
 The figures in () indicate the heat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

AIR-TO-AIR HEAT EXCHANGER WITH DX COIL

Drawings



Sound pressure levels



Accessories

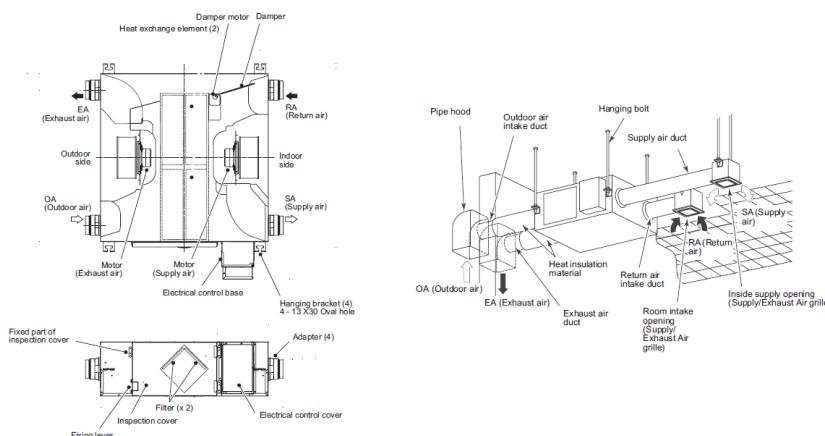
Part name	Model name	Description	Appearance	Remarks
Control	NRC-01HE	Dedicated remote controller for air-to-air heat exchanger		Integrated functions : fan speed, freecooling, air balance volume rate, temperature management and timer.
	NRB-1HE	On/off optional PCB for air-to-air heat exchanger		
Condensates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

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

• : Available

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

Other information



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 or heating load on the system. This allows the overall capacity size of the system to be reduced.

AIR FLOW



SOUND PRESSURE LEVEL

150m³/h ~ 2.000m³/h

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-M1000HE1	VN-M1500HE1	VN-M2000HE1									
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	1000/1000/700	1500/1500/1200	2000/2000/1400								
Power consumption	Extra high	W	68-78	123-138	165-182	214-238	262-290	360-383	390	640	780								
	High	W	59-67	99-111	135-145	176-192	240-258	339-353	340	570	680								
	Low	W	42-47	52-69	82-88	128-142	178-191	286-300	190	320	380								
External static pressure	Extra high	Pa	82-102	80-98	114-125	134-150	91-107	142-158	105	140	105								
	High	Pa	52-78	34-65	56-83	69-99	58-82	102-132	80	110	80								
	Low	Pa	47-64	28-40	65-94	62-92	61-96	76-112	70	80	70								
Sound pressure level	Extra high	dB(A)	26-28	29.5-30	34-35	32.5-34	34-36	37-38.5	38.0	41.0	41.5								
	High	dB(A)	24-25.5	25-27	30-32	29.5-31	33-34	35.5-37	37.0	40.0	40.5								
	Low	dB(A)	20-22	21-22	27-29	26-29	31-32.5	33.5-35	33.0	36.0	36.5								
Sound power level (Extra high)		dB(A)	41-43	44.5-45	49-50	47.5-49	49-51	52-53.5	53.0	56.0	56.5								
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	77.0	79.0	77.5								
Enthalpy exchange efficiency (%)	Extra high	Heating	74.5	70	65	72	69.5	71	68.5	71.0	68.5								
	High	Heating	74.5	70	65	72	69.5	71	68.5	71.0	68.5								
	Low	Heating	76	74	71.5	73.5	71.5	71.5	71.5	73.5	72.0								
	Extra high	Cooling	69.5	65	60.5	64.5	61.5	64	60.5	64.0	60.5								
	High	Cooling	69.5	65	60.5	64.5	61.5	64	60.5	64.0	60.5								
	Low	Cooling	71	69	67	66.5	64	65.5	64.5	67.0	65.5								
Power supply			220V-240V / 50Hz																
Dimensions (HxWxD)		mm	900x900x290			1140x1140x350		1189x1189x400		1189x1189x810									
Weight		kg	36	36	38	53	53	70	70	126	126								
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																

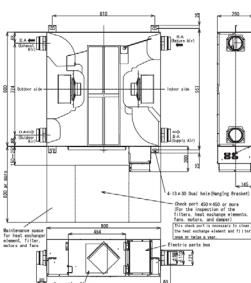
* Air volume can be changed over to high (Extra high) mode or low mode at both heat exchange and normal ventilation modes.
 * Sound pressure level is measured 1.5 m below the center of the unit, and the value which was measured at the acoustic room.
 * Sound pressure levels usually become higher than 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 operation 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.

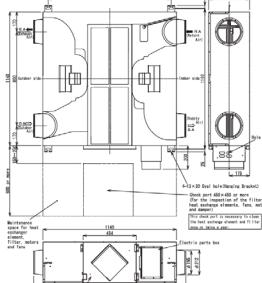
Drawings

Unit : mm

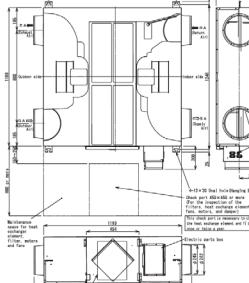
VN-M150HE to VN-M350HE



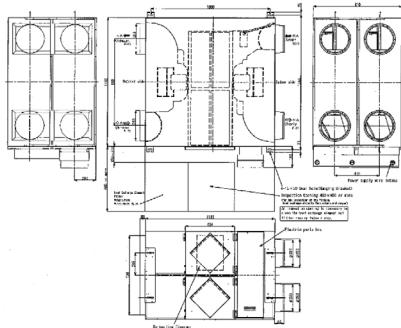
VN-M500HE to VN-M650HE



VN-M800HE to VN-M1000HE1

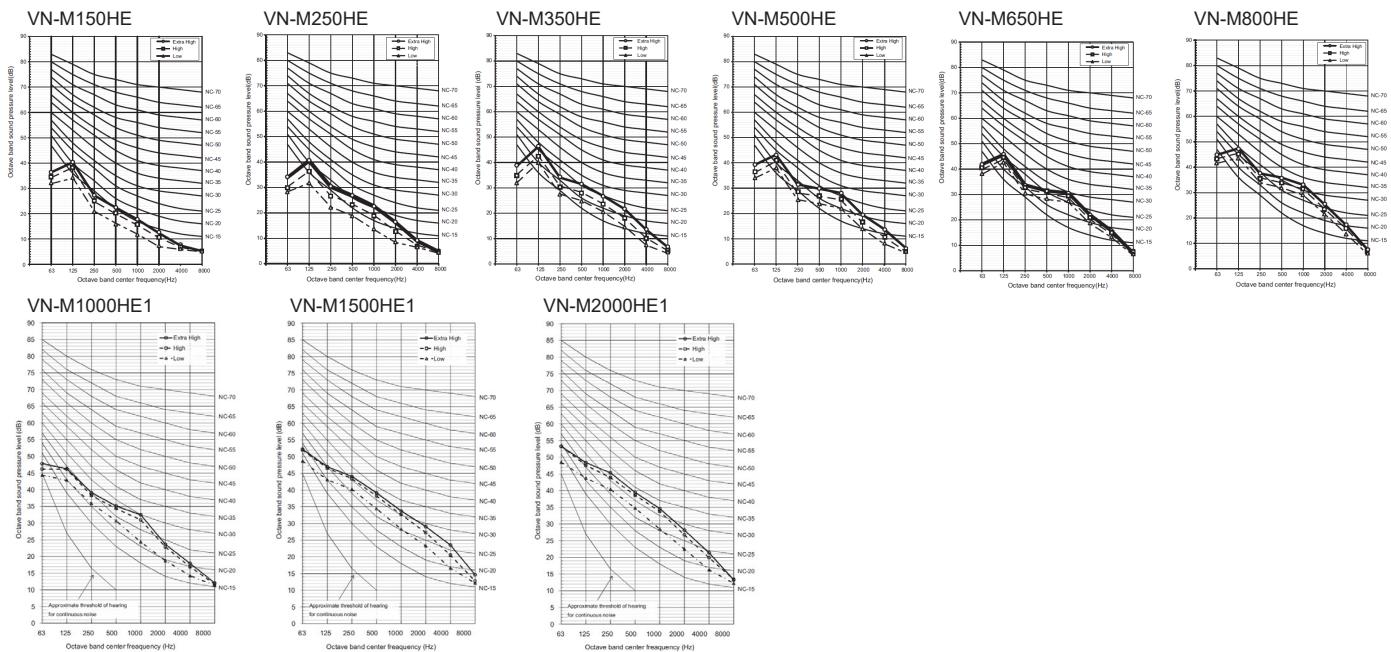


VN-M1500HE1 to VN-M2000HE1



AIR-TO-AIR HEAT EXCHANGER

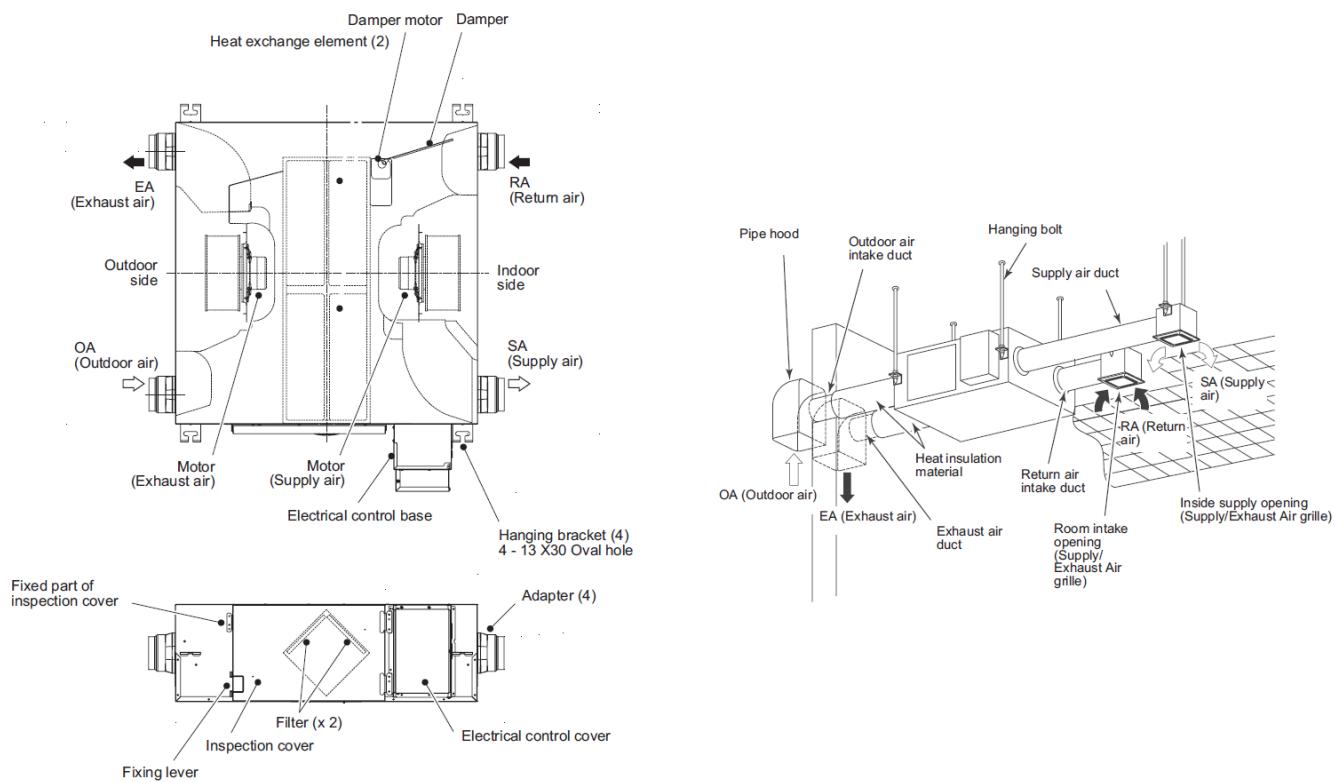
Sound pressure levels



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 additional PCB		On/off optional PCB for air-to-air heat exchanger

Other information



HOT WATER MODULE

MMW-UP_1LQ-E MID TEMP HOT WATER MODULE

With the mid temperature hot water module, produce hot water in addition of cooling and heating.



LOCAL CONTROLS



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



CAPACITY
8 kW ~ 16 HP



HOT WATER
Max 50°C



SOUND PRESSURE LEVEL
25 dB(A)

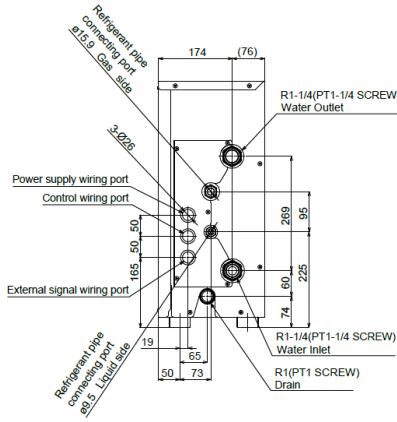
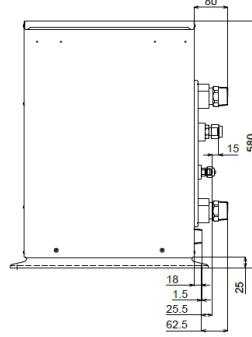
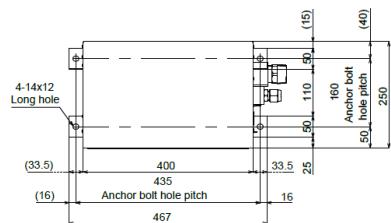
Features

Model name		MMW-	UP0271LQ-E	UP0561LQ-E		
Heating capacity *1	kW		8.0	16.0		
Electrical characteristics	Power supply *2	1 phase / 50Hz / 230V (220V-240V)				
	Running current A	0.08				
	Power consumption kW	0.14				
Appearance		Zinc hot dipping steel plate				
Dimensions (HxL(leg included)xD)		mm 580x400(467)x250				
Weight	kg	17.8				
Design pressure	Refrigerant / water side MPa	4.15 / 1.0				
Heat exchanger		Plate type heat exchanger				
Heat-insulating material		Polyethylene foam + Polyurethane foam				
Water flow rate	Standard / Min. L/min	22.9/19.5				
Water pressure loss (at standard water flow rate)		kPa 40.5				
Controller		Remote controller				
Operation range	Ambient	Indoor °CDB	5 - 32			
		°CWB	23 or less			
		RH(%)	30 - 85			
		Outdoor (at heating) SMMS-e, SMMS-u °CDB	-25 - 21			
		°CWB	-25 - 19			
		Outdoor (at heating) SMMS-7 °CDB				
		°CWB				
	Water inlet side °C	15 or more and 45 or less				
	Water outlet side °C	25 - 50				
Water filter		Strainer with Mesh 30 to 40 (procured locally)				
Connecting pipe	Water pipe (Inlet/Outlet)	R1 - 1/4				
	Gas / Liquid side mm	φ15.9 / φ9.5				
	Drain port (nominal dia) mm	R1				
Sound pressure level / Sound power level		dB(A) 25/25				

*1: Rated conditions: inlet water temp. 30 °C outlet water temp. 35 °C Outdoor air temp. 7 °CDB / 6 °CWB
The standard piping means that mean pipe length is 5 m, branching pipe length is 2.5 m of branch piping connected with a 0 meter height.
*2: The source voltage must not fluctuate more than ±10%.

*3: The unit is packed in a sideways state.

Drawings



MID TEMPERATURE HOT WATER MODULE

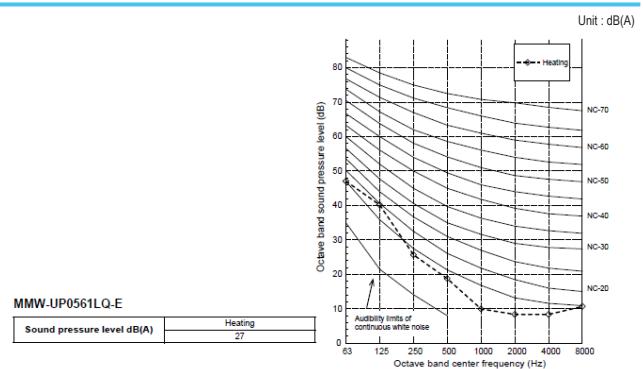
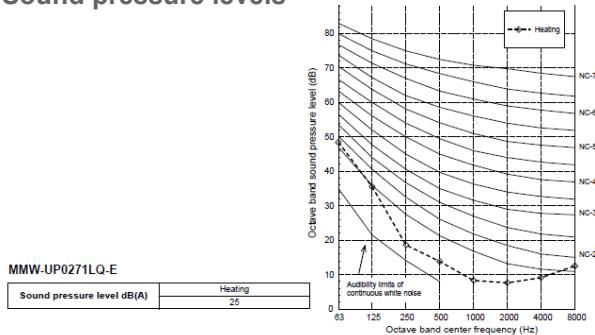
Allowable length / height difference of refrigerant piping

		SMMS-e	SMMS-u
Pipe length	Total extension of pipe (Liquide pipe, real lenght)	Below 34HP 34HP or more	300m 1000m 1200m
	Farthest piping lenght	Equivalent lenght Real lenght	235m 190m 210m
	Equivalent lenght of farthest piping form 1st branching	High differnece btween IDU >3m	65m 65m
		High differnece btween IDU ≤3m	90m 90m
	Equivalent lenght of farthest piping between outdooor unuits		25m 40m
	Max equivalent lenght of main piping	High differnece btween IDU >3m	120/100m
		High differnece btween IDU ≤3m	120/100m
	Max. equivalent lenght of outdoor unit connectng piping		10m 10m
	Max. real lenght of indoor unit connectng piping		30m 30m
	Max. equivalenet lenght between branches		50m 50m
Difference in height	Maximum real lenght of terminal branching section to indoor units	Single / Multi port type	- -
	Maximum equivalent lenght between branching section		- -
	Height between indoor and outdoor units	Upper / Lower Outdoor unit	70m / 40m 70m / 40m
In case of 4serie flow selector connection to indoor units	Height between indoor units	Upper / Lower Outdoor unit	3m* / 10m* 3m* / 10m*
	Height between HWM	Upper / Lower Outdoor unit	3m 3m
	Height between indoor units and HWM	Upper / Lower Outdoor unit	3m* / 10m* 3m* / 10m*
	Height between outdoor units		5m 5m
	Maximum equivalent lenght indoor units in group cotrol by one single port flow selector unit		- -
	Maximum real lenght between flow selector unit and indoor unit	Single / Multi port type	- -
	Height difference between indoor units in group control by one flow selector unit		- -

Diversity and connectivity restrictions

		SMMS-e	SMMS-u
Indoor connection capacity	Total	Standard indoor unit + M-HWM	65 - 115%
	Allowed capacity	Standard indoor unit	50 - 115%
		M-HWM	0 - 50%
Number of combined indoor units and M-HWM	Total	Standard indoor unit + M-HWM	2 - 64
	Allowed capacity	Standard indoor unit	2 - 128
		M-HWM	0 - 2

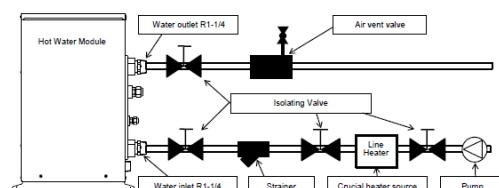
Sound pressure levels



Other information

- Water piping and line heater installation
 - Make the piping route a closed circuit. (An open water circuit may cause a failure.)
 - Before a long period of none use, purge the water out of the pipes and thoroughly let them dry.
 - Do not add brine to the circulating water.
 - Do not use the water used for the unit for drinking or food manufacturing.
 - To ensure easy maintenance, inspection, and replacement of the unit, use a proper joint, valve, etc. (procured locally) on the water inlet and outlet port.
 - Be sure to install a strainer with 30 to 40 meshes (procured locally) on the water inlet pipe.
 - If a strainer is not installed, this may cause impaired performance, or damage to the plate heat exchanger from freezing.
 - Install a suitable air vent (procured locally) on the water pipe. After sending water through the pipe, be sure to vent the excess air.
 - To avoid water leak, wrap some sealing tape around the screw part.
 - Water pipes can get very hot, depending on the preset temperature. Wrap the water pipes with heat insulation (procured locally) to prevent burns.
 - Be sure to install the line heater (procured locally) on the water inlet side. In addition, position it within 5 m of the water inlet pipe of the Hot Water Module.
 - Follow capacity table to select a line heater (procured locally) within the range of 40 to 50% of the Hot Water Module's rated capacity.

Hot Water Module model name	Capacity of line heater (kW)
MMW-UP0271LQ-E	3.2~4.0
MMW-UP0561LQ-E	6.4~8.0



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

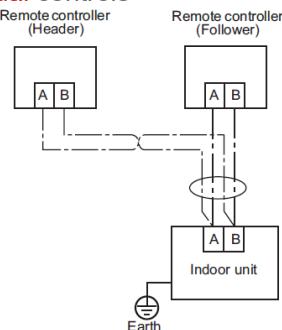
• 2 mm² / Up to 2,000 m

INDIVIDUAL REMOTE CONTROLLER

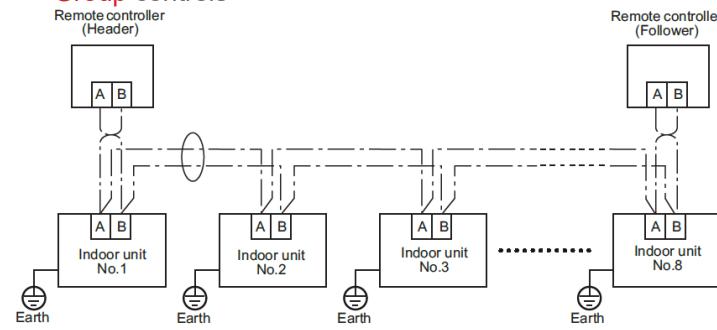
TYPE		INFRARED							WIRED			
Part number		RBC-AXU31-E	RBC-AXU41U-E	RBC-AXU31U-E	RBC-AXU31UM-E	RBC-AXU31UW-E	RBC-AXU31C-E	RBC-AX33UYP-E	RBC-ASCU11-E	RBC-AMTU31-E	RBC-AMSU51-EN/ES	NRC-01HE
Picture												
Dimensions (HxWxD) in mm	Remote	157x56x19	157x56x19	157x56x19	157x56x19	157x56x19	157x56x19	157x56x19	86x86x16	120x120x16	120x120x20	120x120x16
Infrared receiver		120x70x18	204x204x24	163x163x24	163x163x24	71x162x39	130x65	140x113x12				
Compatibility	All indoor units	Smart 4 way cassette	4 way cassette	Compact 4 way cassette	2 way cassette	Ceiling, 1 way cassette (SH)	1 way cassette (YHP)	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	1:16	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	• / 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											•
Installation & maintenance	Room naming											•
	Filter dirty indication								•	•	•	•
	Error display	•	•	•	•	•	•	•	•	•	•	•
	System settings								•	•	•	
Outputs	Indoor unit serial number											•
	Error output								•	•	•	•
	External ventilation control								•	•		
Display & Interface	Interface	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



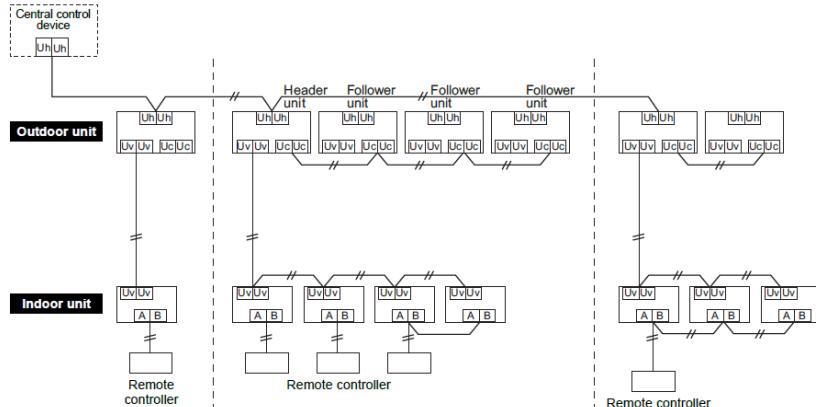
Group controls



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 meter,BMS-IFWH5E interface relay needed)
Central control	Permit/prohibit function	•	•
	Groupe control	•	•
Installation & maintenance	Filter dirty indication	•	•
	Error display	•	•
	Error transfert 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



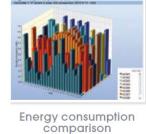
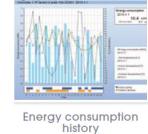
Focus on Web Browser

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

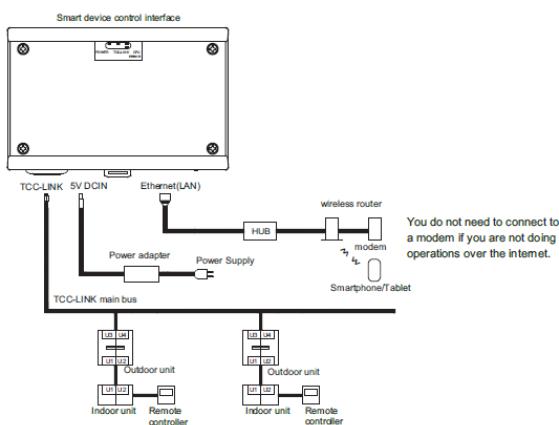
With or without power meter, the Data Analyzer software allows facility manager to manage system energy consumption. Through graphics on different periods, different indoor units, different energy consumption zones can be compared to optimize global efficiency. Set point, ambient temperature and outdoor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



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 exchanger)	
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 fonction	•
	Return back	•
Advanced functions	Energy save function	•
	Eco temperature shift	•
	Soft cooling	•
	Customize room/floor/building name	•
Central control	Permit/prohibit function	•
	Groupe control	•
Display & Interface	Interface	App
	Multilanguage	•
	App compatibility	Android & IOS
	Devices compatibility	Smartphone and Phablet
Installation & maintenance	Filter dirty indication	•
	Error display	•
	Error transfer by Email	•
Users	User access	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 settings	•	-
Alarm	•	-*3
Schedule	•	-
Air conditioner's various settings	•	-*4
Clock settings	• (via intranet access only)	-
Operation mode restriction	• (via intranet access 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.

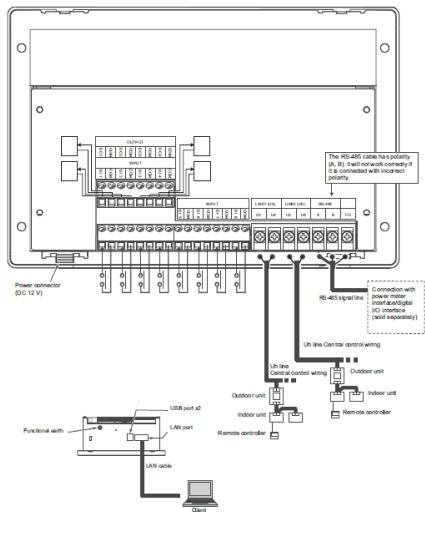


TOUCH SCREEN SOLUTIONS

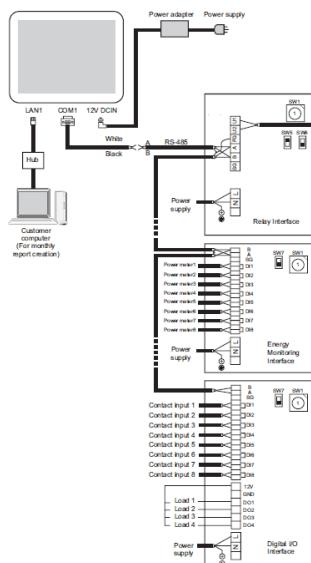
Part number	Touch Screen Smart Manager	BMS-CT2560U-E	BMS-CT5121E
Picture	 		
Dimensions (HxWxD) in mm	205x136x90	255x323x49	
Compatibility	All indoor units (except hot water module, DX kit, fresh air, A2A heat exchanger)	All indoor units. TCS-NET relay interface needed (BMS-IFLSV4E)	
Connectivity	1:256	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 fonction	•	•
	Return back	•	•
Advanced functions	Dual set point	•	•
	Soft cooling	•	•
	Energy save function	•	•
	Energy monitoring	•	• (If power meter,BMS-IFWH5E interface relay needed)
	Rooms naming		
Central control	Permit/prohibit function		
	Groupe control	•	•
Installation & maintenance	Filter duriy indication	•	•
	Error display	•	•
	Error transfert 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

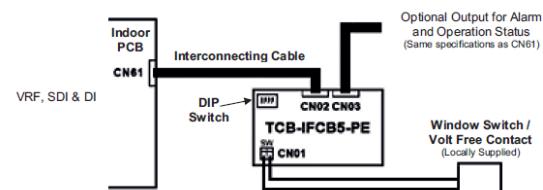
Additional PCB for outdoor units

Model name	Power peak-cut control board			External master ON/OFF control board			Output control board		
									
	TCB-PCDM4E			TCB-PCM04E			TCB-PCIN4E		
System	SMMSe/SMMSu	SHRMe	Mini SMMSe	SMMSe/SMMSu	SHRMe	Mini SMMSe	SMMSe/SMMSu	SHRMe	Mini SMMSe
Power peak cut control	•	•	•						
Power peak cut extend	•	•	•						
Snowfall fan control					•	•			
External master ON/OFF control					•	•	•		
Night operation (Sound reduction) control					•	•	•		
Operation mode selection control					•	•	•		
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

Windows switch sensor TCB-IFCB5PE

Function	Mode / Description	Dip Switch setting
Remote On/Off control application	Remote On-Off signal has full priority	All Bits OFF
	Priority is given to the remote ON signal	Bit 1 ON
	Priority is given to the remote OFF signal	Bit 2 ON
	Last touch priority	Bit 1 & 2 ON
Window switch application	With return back to previous operation	Bit 3 ON
	With no return back function	Bit 4 ON

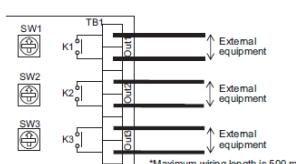


Optional connection kit TCB-PCUC2-E

SIGNAL

OUTPUT TERMINAL TB1

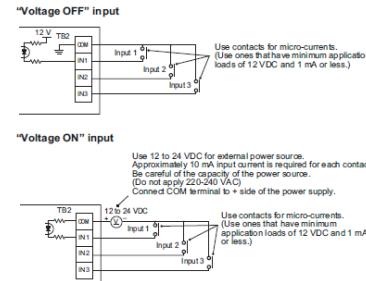
Signal outputs (Mode, fans status, alarm, defrost,...) are extracted from "OUT1", "OUT2", and "OUT3".



EXTERNAL

DIGITAL INPUT TERMINAL TB2

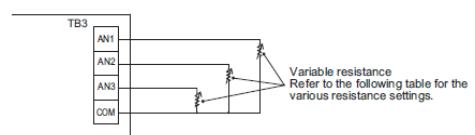
Stop air conditioner or lock local remote by inputting signal.



EXTERNAL

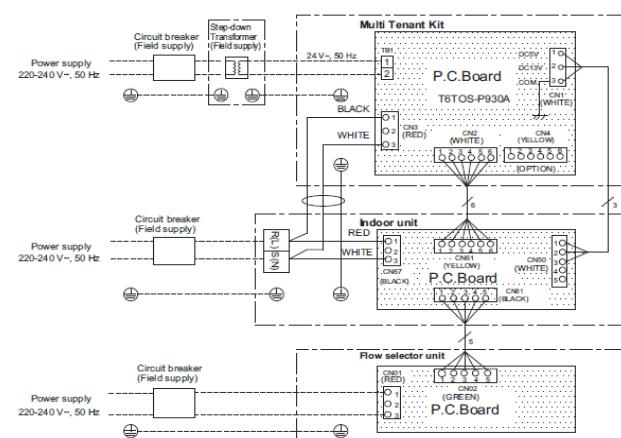
ANALOG INPUT TERMINAL TB3

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 maintains low voltage power during tenant absence when main power supply for the FCU is shut down.



Features

Part number	BMS-IFMB0TLR-E	TCB-IFMB641TLE	BMS-IFKX0TLR-E	TCB-IFLN642TLE	BMS-IFBN640TLE	TCB-IFCB640TLE
Langage	Modbus		KNX	LonWorks	Bacnet	Analogue and digital inputs
Picture						
Dimensions (HxWxD) in mm	53x86	170x200x66	92x82x33	193x246x66	90x140x45	66x170x200
Compatibility	All indoor units	All indoor units (HWM, A2A heat exchanger excluded)	All indoor units (HWM, A2A heat exchanger excluded)	All indoor units (HVVM, A2A heat exchanger excluded)	All indoor units (HVVM excluded)	All indoor units
Connectivity	Max number of indoor units	8	64	8	64	64
	Max number of outdoor units		16		16	
	Max number of gateways	63	15		10	1
Command	On/Off	R/W	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	R/W
	Temperature setting	R/W (Dual set point supported)	R/W	R/W (Dual set point supported)	R/W	R/W
	Fan speed (auto, manual 5 speed)	R/W	R/W	R/W	R/W	R/W
	Air direction (swing mode or manual orientation)	R/W	R/W	R/W	R/W	R/W
	Soft cooling	R/W				
	Save operation	R/W				
	Filter dirty indication	R/W	R/W	R/W	R/W	
	Room temperature	R	R	R	R	R
	Permit/Prohibit of local operation	R/W	R/W	R/W	R/W	
	Temperature setting range limitation		R/W			
	Error status	R	R	R	R	R
	Error code	R	R	R	R	
	Error address	R		R		
Protocol	Model name		R			
	Serial number		R			
Infrastructure	Indoor unit capacity		R			
	Indoor unit type		R			
Protocol	Modbus RTU	Modbus RTU	EIB bus	LonTalk communication	Bacnet IP	Voltage signal
Infrastructure	RS-485	RS-485	KNX TP1	Twisted pair shield cable	LAN cable (higher than Category 5, UTP)	
Requirements (Locally supplied)		Modbus master device	KNX power unit	Lonworks control system		
		Modbus master device	ETS4 or ETS5 tool	Lonworks Network Card for PC Control		
Toshiba communication protocol	TCC Link	TCC Link	TCC Link	TCC Link	TCC Link	TCC Link

BUSINESS / CONTROL SUMMARY

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-CT512E	12" Touch Screen Controller	x		Enables full control of up to 512 indoor units with electric billing, ML	
BMS-IFBN640TLE	BN Interface	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 and one-way cassettes (SH series)
RBC-AXU31U-E	Wireless remote unit kit	x	x	Wireless remote unit kit for 4-way cassette	4 way cassette series 4 & RBC-U31PGP(W)-E panel
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	
TCB-IFMB641TLE	Modbus interface box	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-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 controller	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	

Indoor units accessories

Indoor unit type	Parts name	Model name	COMPLY WITH VRF FCU	Notes	Remarks
4-way Air Discharge cassette type	Standard panel	RBC-U32PGP-E	MMU-UP***1HP-E	Required accessory	
	Fresh air and filter chamber TCB	TCB-GFC1602UE		For fresh air inlet box	
	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.)	
Compact 4-way cassette type	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 type	Standard panel	RBC-UW283PG(W)-E	MMU-UP0071-0151WH-E	Required accessory	
		RBC-UW803PG(W)-E	MMU-UP0181-0301WH-E		
		RBC-UW1403PG(W)-E	MMU-UP0361-0561WH-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-UP0071-0151WH-E		
		TCB-FC803UW-E	MMU-UP0181-0301WH-E		
		TCB-FC1403UW-E	MMU-UP0361-0561WH-E		
	Super Long life filter	TCB-LF283UW-E	MMU-UP0071-0151WH-E	For use with filter chamber	Use with TCB-FC283UW-E
		TCB-LF803UW-E	MMU-UP0181-0301WH-E		Use with TCB-FC803UW-E
		TCB-LF1403UW-E	MMU-UP0361-0561WH-E		Use with TCB-LF1403UW-E
1-way cassette type	Standard panel	RBC-UY32P-E	MMU-UP_1YHP-E	Required accessory	
		RBC-US21PGE	MMU-UP-0151/0181/0241SH-E		
	Front air discharge unit	TCB-BUS21WHE			
	Auxiliary fresh air flange	TCB-FF101URE2	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	Set of Plasma Air Purifier, Dust sensor, Air quality indicator and Wireless receiver	
	Occupancy sensor	TCB-SIR41UYP-E		Occupancy sensor for 1Way cassette	Cannot be match with Wireless receiver Kit
	Wireless receiver kit	RBC-AX33UYP-E		Wireless RC kit for 1Way cassette	Cannot be match with Occupancy sensor
Slim duct type	Auxiliary fresh air flange	TCB-FF101URE2	MMU-UP***1SPH-E	For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)	
Concealed duct type	Spigot shaped flange	TCB-SF56C6BE	MMD-UP0071-0181BHP-E		
		TCB-SF80C6BE	MMD-UP0241-0301BHP-E		
		TCB-SF160C6BE	MMD-UP0361-0561BHP-E		
Concealed Duct high static pressure type	Long life filter kit	TCB-LK801D-E	MMD-UP0181-0271HP-E		
		TCB-LK1401D-E	MMD-UP0361-0561HP-E		
		TCB-LK2801DP-E	MMD-UP0721-0961HP-E		
	Spigot shaped flange	TCB-SF80C6BE	MMD-UP0181-0271HP-E		
		TCB-SF160C6BE	MMD-UP0361-0561HP-E		
	Auxiliary fresh air flange	TCB-FF151US-E	MMD-UP***1HP-E		
	Drain Pump kit	TCB-DP40DPE			
High Wall	PMV Kit	RBM-PMV0361U-E		For FCU capacity 0.8-1.3HP	Suitable for high wall 1 serie with or without embedded PMV
		RBM-PMV0901U-E		For FCU capacity 1.7-2.5HP	
Under Ceiling type	Drain pump kit	TCB-DP31CE	MMC-UP***1HP-E	Lift up to 600 mm	Use TCB-KP13, 23CE
	Elbow Piping kit	TCB-KP13CE	MMC-UP0151/0181HP-E		
		TCB-KP23CE	MMC-UP0241-0561HP-E		
Fresh air intake type	High-efficiency filter 65	TCB-UFM0481D-E	MMD-UP0481HF-E	Dust collecting effect: 65% (NBS Colorimetric method)	Use with TCB-FC0481DF-E
		TCB-UFM1281D-E	MMD-UP0721-1281HF-E		Use with TCB-FC1281DF-E
	High-efficiency filter 90	TCB-UFH0481D-E	MMD-UP0481HF-E	Dust collecting effect: 90% (NBS Colorimetric method)	Use with TCB-FC0481DF-E
		TCB-UFH1281D-E	MMD-UP0721-1281HF-E		Use with TCB-FC1281DF-E
	Stand alone long life prefilter	TCK-LK1401D-E	MMD-UP0481HF-E		
		TCK-LK2801DP-E	MMD-UP0721-1281HF-E		

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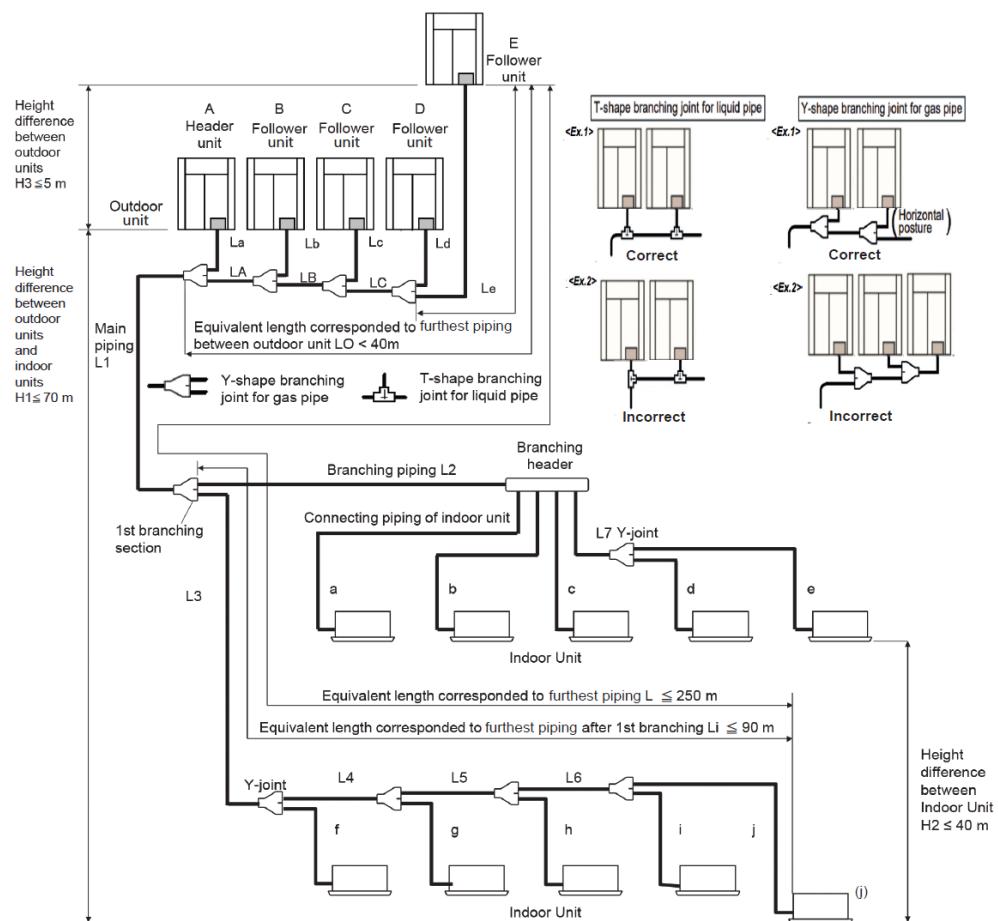
Indoor units accessories

Indoor unit type	Parts name	Model name	COMPLY WITH VRF FCU	Notes	Remarks
Fresh air intake type	High efficiency long life prefilter	TCK-LK1401D-E (*2)	MMD-UP0481HF-E		Use with TCB-FC0481DF-E
		TCK-PF1281DF-E	MMD-UP0721-1281HF-E		Use with TCB-FC1281DF-E
	Filter chamber	TCB-FC0481DF-E	MMD-UP0481HF-E	For high efficiency filter or long life prefilter	
		TCB-FC1281DF-E	MMD-UP0721-1281HF-E		
Air-to-air heat exchanger with DX coil	Drain pump kit	TCB-DP40DFP-E	All models	Lift up to 330 mm	
	Drain pump kit	TCB-DP31HEXE	MMD-VN502/802/1002 HEXE & MMD-VNK502/802/1002 HEXE	Lift up to 330 mm	

Refrigerant accessories

Model name	Specification	Picture	Total capacity codes
Compatible SMMSu	Compatible SHRM-e		
RBM-BY55E	RBM-BY55FE	Branching joint	under 6.4 HP
RBM-BY105E	RBM-BY105FE		from 6.4 to 14.2 HP
RBM-BY205E	RBM-BY205FE		from 14.2 to 25.2 HP
RBM-BY305E	RBM-BY305FE		from 25.2 to 61.2 HP
RBM-BY405E			61.2 HP or more
RBM-HY1043E	RBM-HY1043FE	Headers branching four-way	< 14.2 HP
RBM-HY2043E	RBM-HY2043FE		< 14.2 - 25.2 HP
RBM-HY1083E	RBM-HY1083FE	Headers branching eight-way	< 14.2 HP
RBM-HY2083E	RBM-HY2083FE		< 14.2 - 25.2 HP
RBM-BT14E	RBM-BT14FE	Joints for connection of outdoor units	< 26 HP system capacity
RBM-BT24E	RBM-BT24FE		> 26 < 62 HP system capacity
RBM-BT34E			> 62 HP system capacity

SMMS-u piping

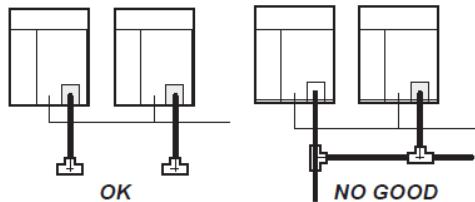




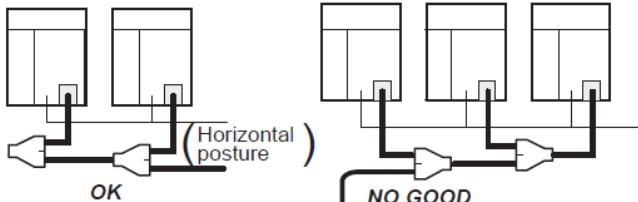
> SYSTEM RESTRICTION

	SMMSu	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 15m > H2	Max. 200% 105%
		Max. 200% 105%

T-shape branching joint for liquid pipe



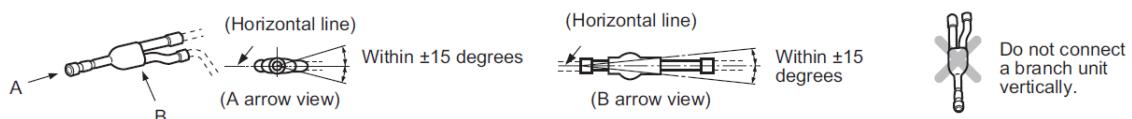
Y-shape branching joint for gas pipe



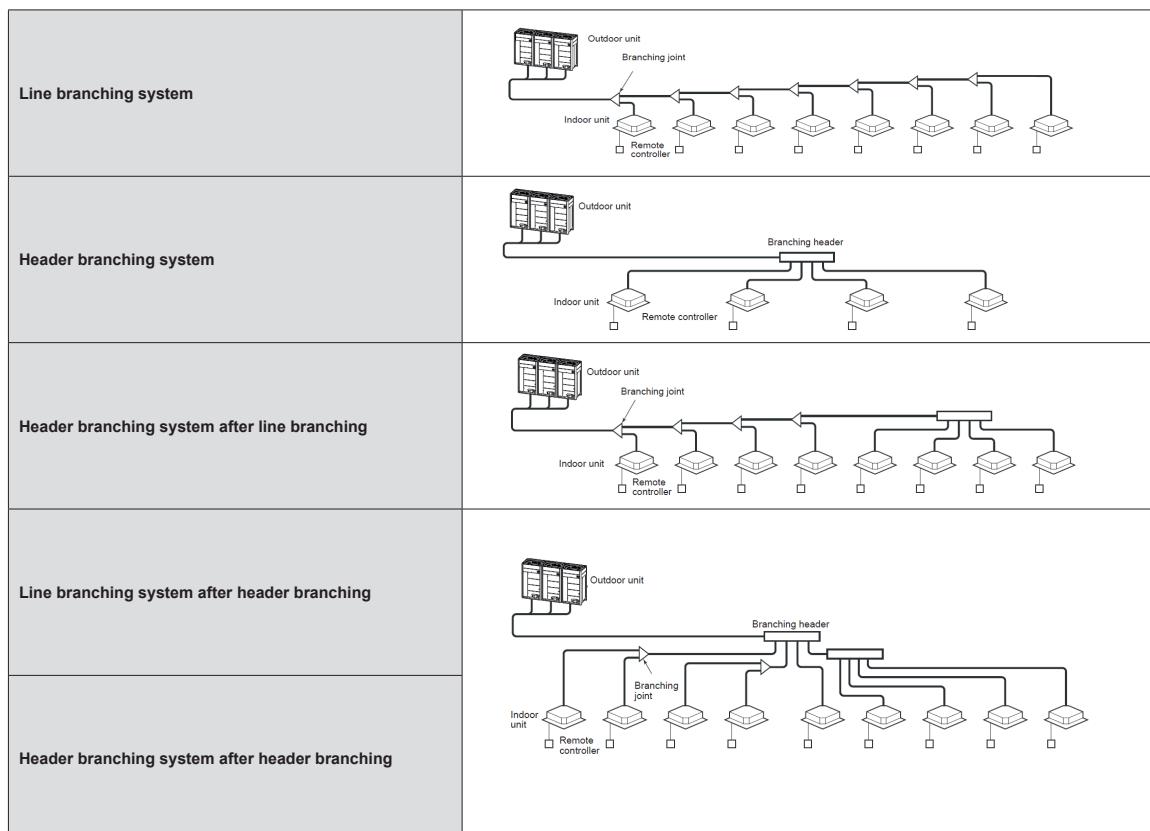
> CAUTION FOR INSTALLATION

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

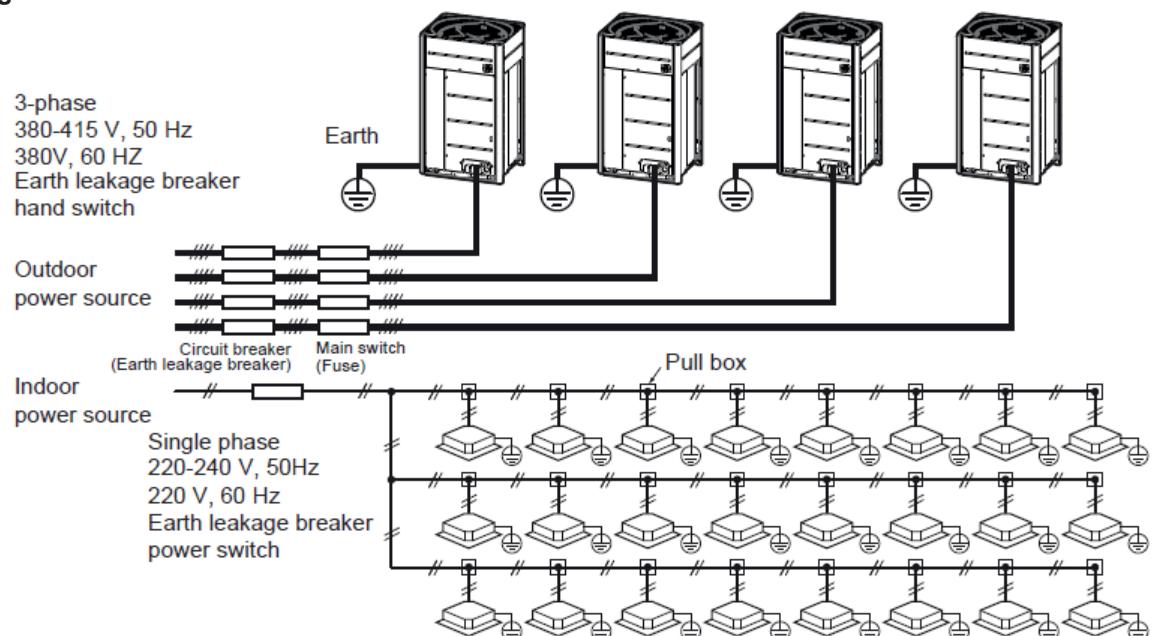


> FREE BRANCHING SYSTEM

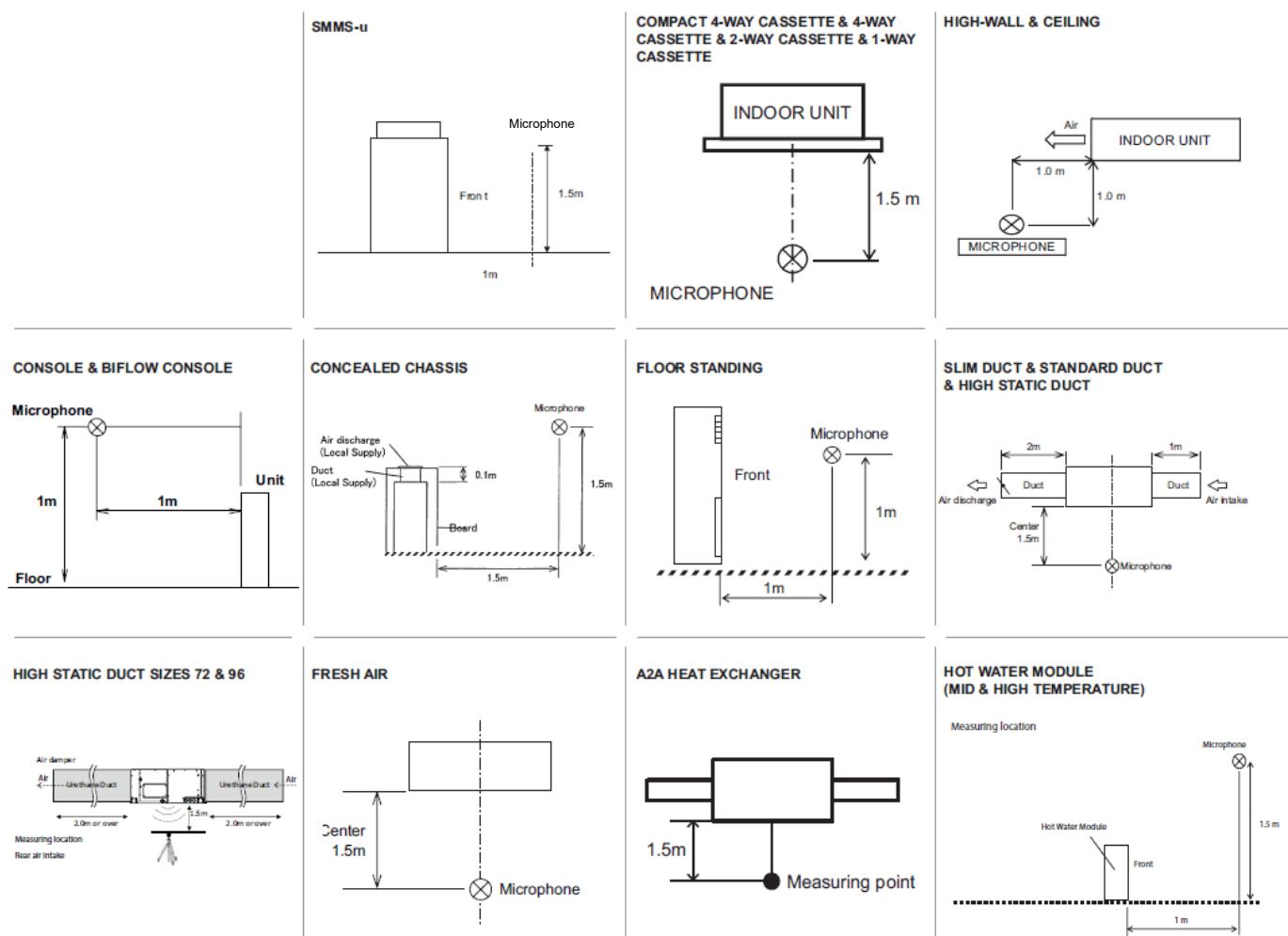


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Electrical wiring



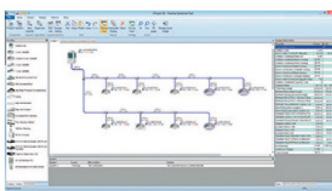
Sound pressure level measurement



> SELECTION TOOL

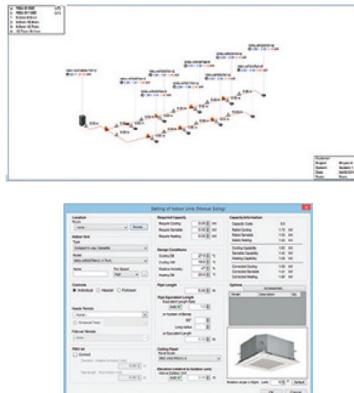


Software main screen

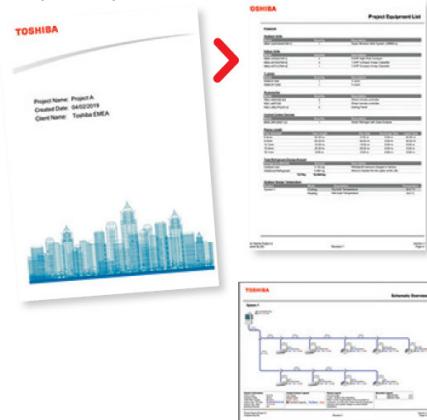


Toshiba Selection software has been fully designed, with a user-friendly interface allowing novice and expert users alike to create simple, yet detailed VRF system schematics. It is highly versatile, allowing the level of detail to be tailored to suit customer requirements. The software also allows the 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.

Project fully customizable

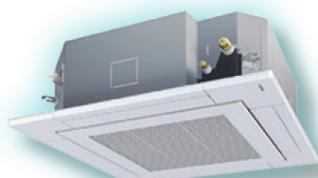


Complete report

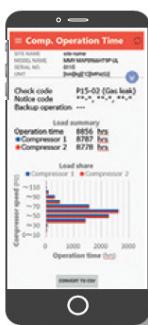


> SERVICE TOOL

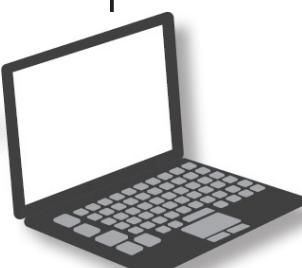
Save time during commissioning and maintenance. Choose between the "Wave Tool Advance" using Smartphone NFC connection or the link adaptor connected to the outdoor or indoor unit.



NEW Application Wave Tool Advance



Wireless connection using smartphone*
NFC technology to collect system data



Get access to system data indoor using link adaptor



System operation self record using link adaptor

* Please contact Toshiba for Android® phone compatibility list.

Direct USB connection to get access to system data

NOTE

TOSHIBA

The image shows a series of white Toshiba SMMS-U air conditioning units installed on a rooftop terrace. The units are arranged in a staggered pattern, with some units having their doors open to reveal the internal components. In the background, a modern city skyline with various skyscrapers under a clear blue sky is visible.

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.

T2021-C07-SMMS-U