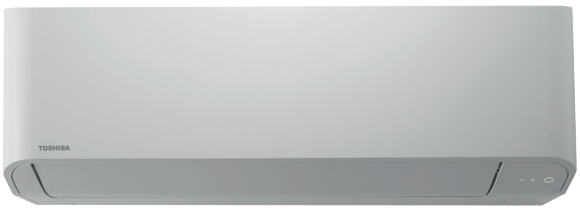
TOSHIBA

TCTC-E21-VRF006-5

Engineering Data Book

High-Wall Type

MMK-UP0031HP-E / TR
MMK-UP0051HP-E / TR
MMK-UP0071HP-E / TR
MMK-UP0091HP-E / TR
MMK-UP0121HP-E / TR
MMK-UP0151HP-E / TR
MMK-UP0181HP-E / TR
MMK-UP0241HP-E / TR
MMK-UP0271HP-E / TR
MMK-UP0301HP-E / TR
MMK-UP0361HP-E / TR



MMK-UP0031HPL-E
MMK-UP0051HPL-E
MMK-UP0071HPL-E
MMK-UP0091HPL-E
MMK-UP0121HPL-E
MMK-UP0151HPL-E
MMK-UP0181HPL-E
MMK-UP0241HPL-E

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1. Specification

Model name			MMK-	UP0031HP-E / TR UP0031HPL-E	UP0051HP-E / TR UP0051HPL-E	UP0071HP-E / TR UP0071HPL-E	UP0091HP-E / TR UP0091HPL-E	UP0121HP-E / TR UP0121HPL-E
Power supply				1 ph 230V (220-240V) ~ 50 Hz & 1 ph 220V (208-230V) ~ 60 Hz				
Cooling capacity (*1)			(kW)	0.9	1.7	2.2	2.8	3.6
Heating capacity (*1)			(kW)	1.3	1.9	2.5	3.2	4.0
Running current			(A)	0.15	0.15	0.16	0.17	0.18
Power consumption			(kW)	0.015	0.015	0.015	0.016	0.017
Starting current			(A)	0.19	0.19	0.20	0.21	0.22
FCU dimension		Height	(mm)	293				
		Width	(mm)	798				
		Depth	(mm)	230				
Total weight			(kg)	11				
Heat exchangere				Finned tube				
Soundproof / Heat-insulation material				Non-flammable insulation				
Fan				Cross Flow Fan				
Air flow volume	Indoor unit (H/M/L)		(m^3/h)	455 / 370 / 270	455 / 370 / 270	480 / 385 / 270	510 / 395 / 270	540 / 410 / 270
Sound pressure	Indoor unit (H/M/L)		dB(A)	33 / 29 / 25	33 / 29 / 25	35 / 30 / 25	36 / 31 / 25	37 / 32 / 25
Motor output			(W)	30.00				
Conecting pipe	Gas side		(mm)	Ø 9.52				
	Liquid side		(mm)	Ø 6.35				
	Drain pipe		(mm)	16 (Polyvinyl chloride tube)				
Operating Range for SMMS-u	Cooling		(°C)	5 ~ 46 - 52 (*2)				
	Heating		(°C)	-10 ~ 46				

(*1) Rated testing conditions Cooling : Indoor air tempureature 27 °C DB/ 19°C WB, Outdoor 35 °C DB
Heating : Indoor air tempureature 20 °C DB, Outdoor 7°C DB / 6°C WB

(*2) 46-52 °C is also availabel but temporary oparate

Model name			MMK-	UP0151HP-E / TR UP0151HPL-E	UP0181HP-E / TR UP0181HPL-E	UP0241HP-E / TR UP0241HPL-E
Power supply				1 ph 230V (220-240V) ~ 50 Hz & 1 ph 220V (208-230V) ~ 60 Hz		
Cooling capacity (*1)			(kW)	4.5	5.6	7.1
Heating capacity (*1)			(kW)	5.0	6.3	8.0
Running current			(A)	0.26	0.29	0.40
Power consumption			(kW)	0.028	0.032	0.050
Starting current			(A)	0.35	0.38	0.50
FCU dimension		Height	(mm)	320		
		Width	(mm)	1050		
		Depth	(mm)	250		
Total weight			(kg)	16		
Heat exchangere				Finned tube		
Soundproof / Heat-insulation material				Non-flammable insulation		
Fan				Cross Flow Fan		
Air flow volume	Indoor unit (H/M/L)		(m^3/h)	840 / 690 / 550	900 / 720 / 550	1200 / 900 / 600
Sound pressure	Indoor unit (H/M/L)		dB(A)	40 / 36 / 32	41 / 37 / 32	45 / 39 / 33
Motor output			(W)	30		
Conecting pipe	Gas side		(mm)	Ø 12.70		Ø 15.88
	Liquid side		(mm)	Ø 6.35		Ø 9.53
	Drain pipe		(mm)	16 (Polyvinyl chloride tube)		
Operating Range for SMMS-u	Cooling		(°C)	5 ~ 46 - 52 (*2)		
	Heating		(°C)	-10 ~ 46		

(*1) Rated testing conditions Cooling : Indoor air tempureature 27 °C DB/ 19°C WB, Outdoor 35 °C DB
Heating : Indoor air tempureature 20 °C DB, Outdoor 7°C DB / 6°C WB

(*2) 46-52 °C is also availabel but temporary oparate

Model name			MMK-	UP0271HP-E/TR	UP0301HP-E/TR	UP0361HP-E/TR
Power supply				1 ph 230V (220-240V) ~ 50 Hz & 1 ph 220V (208-230V) ~ 60 Hz		
Cooling capacity (*1)			(kW)	8.0	9.0	11.2
Heating capacity (*1)			(kW)	9.0	10.0	12.5
Running current			(A)	0.30	0.46	0.56
Power consumption			(kW)	0.034	0.054	0.066
Starting current			(A)	0.34	0.50	0.60
FCU dimension		Height	(mm)	348		
		Width	(mm)	1200		
		Depth	(mm)	280		
Total weight			(kg)	21		
Heat exchangere				Finned tube		
Soundproof / Heat-insulation material				Non-flammable insulation		
Fan				Cross Flow Fan		
Air flow volume	Indoor unit (H/M/L)		(m^3/h)	1200 / 1000 / 800	1500 / 1300 / 1100	1650 / 1350 / 1250
Sound pressure	Indoor unit (H/M/L)		dB(A)	43 / 41 / 39	48 / 44 / 41	50 / 45 / 43
Motor output			(W)	61		
Sound power	Indoor unit (H)		dB(A)	60	63	65
Conecting pipe	Gas side		(mm)	ø 15.88		
	Liquid side		(mm)	ø 9.53		
	Drain pipe		(mm)	16 (Polyvinyl chloride tube)		
Operating Range for SMMS-u	Cooling		(°C)	-10 to 52		
	Heating		(°C)	-25.0 to 15.5		

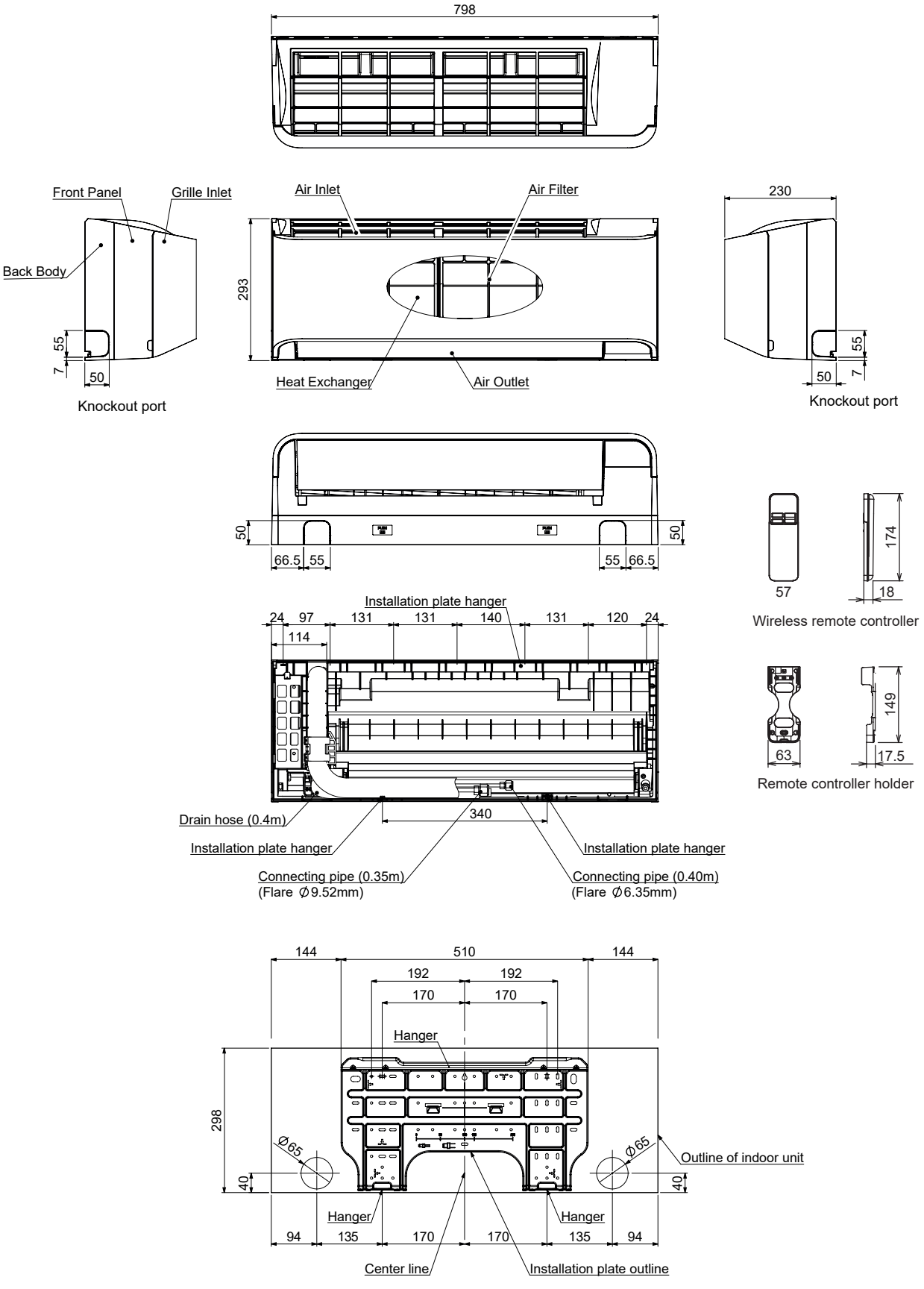
(*1) Rated testing conditions Cooling : Indoor air tempureature 27 °C DB/ 19°C WB, Outdoor 35 °C DB

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

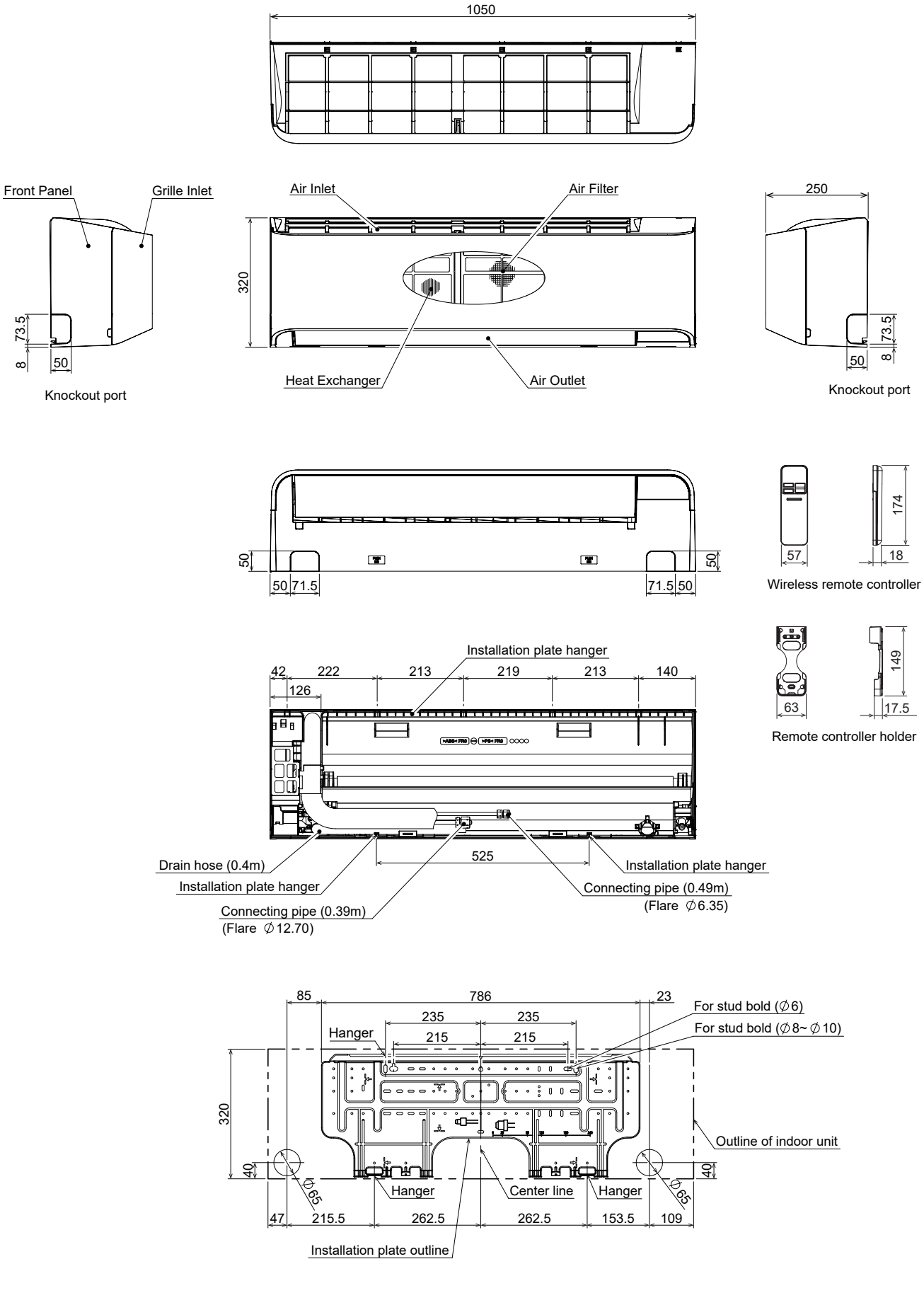
2. Dimension

MMK-UP0031HP(L)* / MMK-UP0051HP(L)* / MMK-UP0071HP(L)* / MMK-UP0091HP(L)* / MMK-UP0121HP(L)*

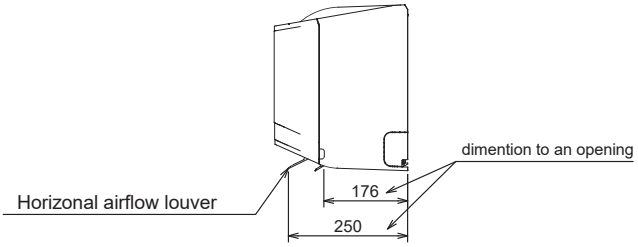
Indoor Unit

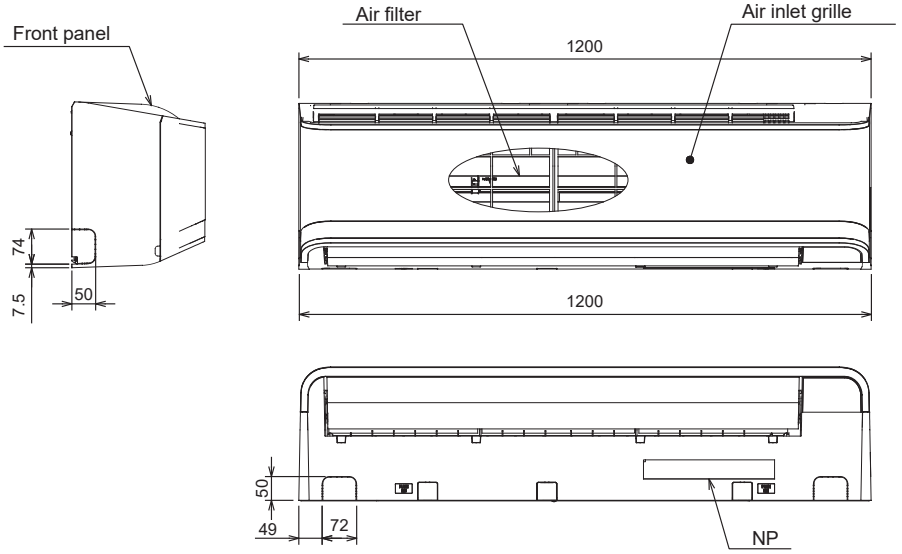


MMK-UP0151HP(L)* / MMK-UP0181HP(L)* / MMK-UP0241HP(L)*

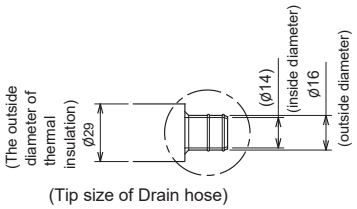


MMK-UP0271HP* / MMK-UP0301HP* / MMK-UP0361HP*

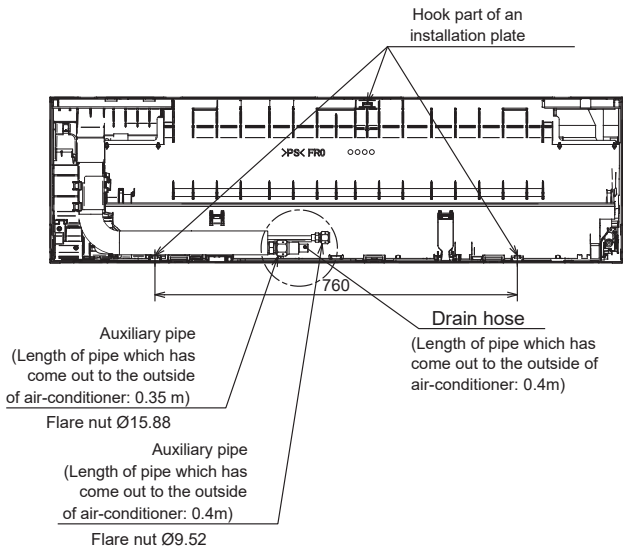


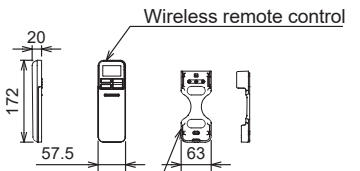


Color of Front panel
(W) : GRAN WHITE

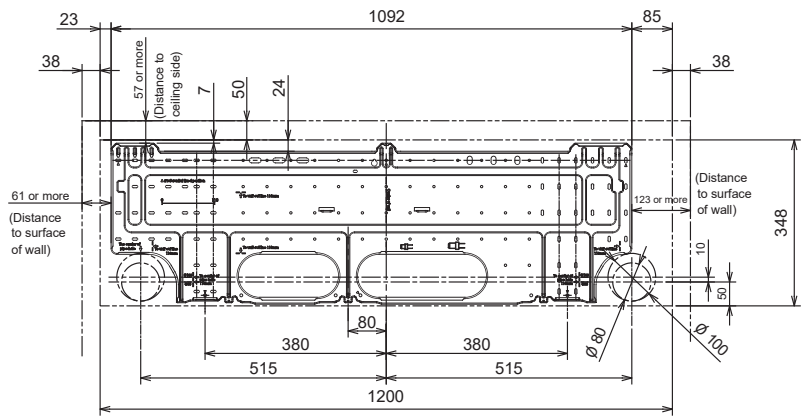


(Tip size of Drain hose)



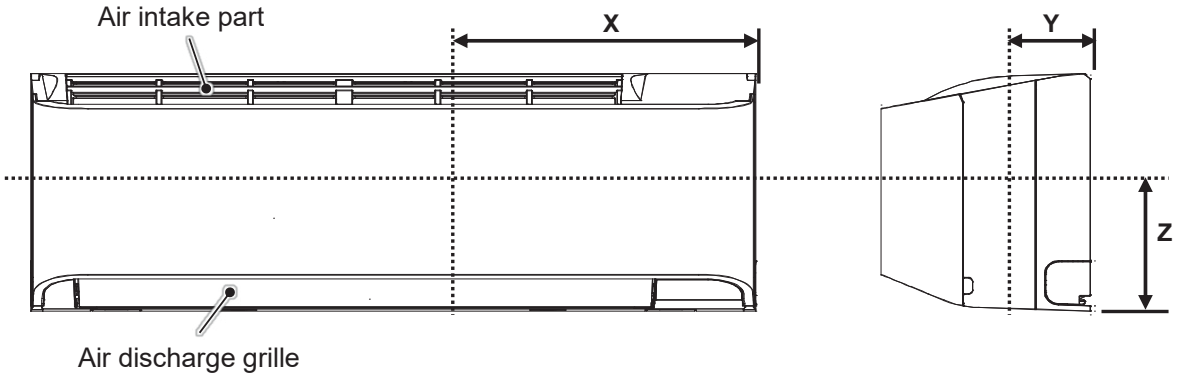


Remocon model name
WH-TA09NE

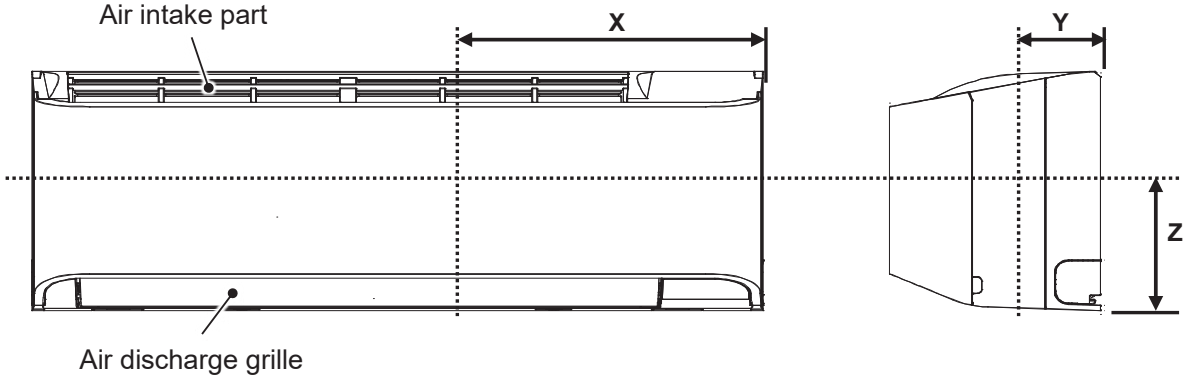


3. Center of gravity

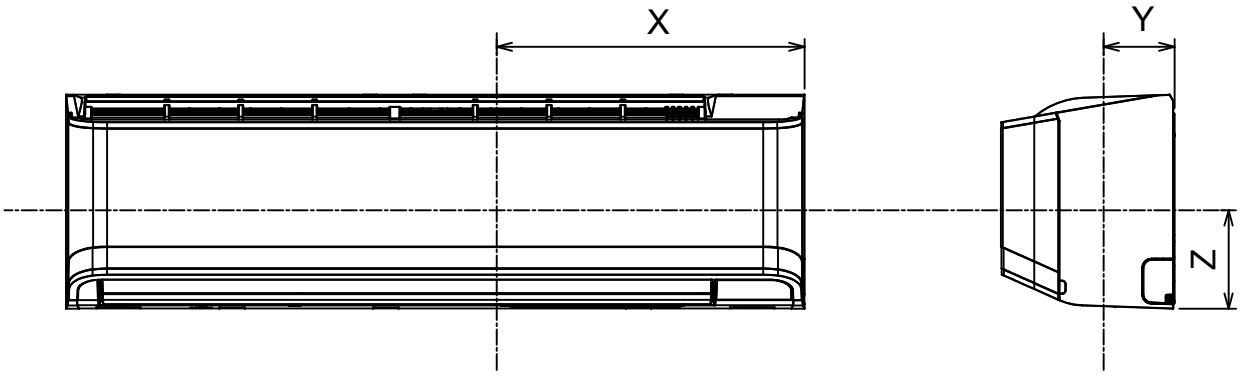
Model name	X (mm)	Y (mm)	Z (mm)	Total weight (kg)
MMK-UP0031HP-E / TR MMK-UP0031HPL-E	335	110	150	11
MMK-UP0051HP-E / TR MMK-UP0051HPL-E				
MMK-UP0071HP-E / TR MMK-UP0071HPL-E				
MMK-UP0091HP-E / TR MMK-UP0091HPL-E				
MMK-UP0121HP-E / TR MMK-UP0121HPL-E				



Model name	X (mm)	Y (mm)	Z (mm)	Total weight (kg)
MMK-UP0151HP-E / TR MMK-UP0151HPL-E	425	120	125	16
MMK-UP0181HP-E / TR MMK-UP0181HPL-E				
MMK-UP0241HP-E / TR MMK-UP0241HPL-E				

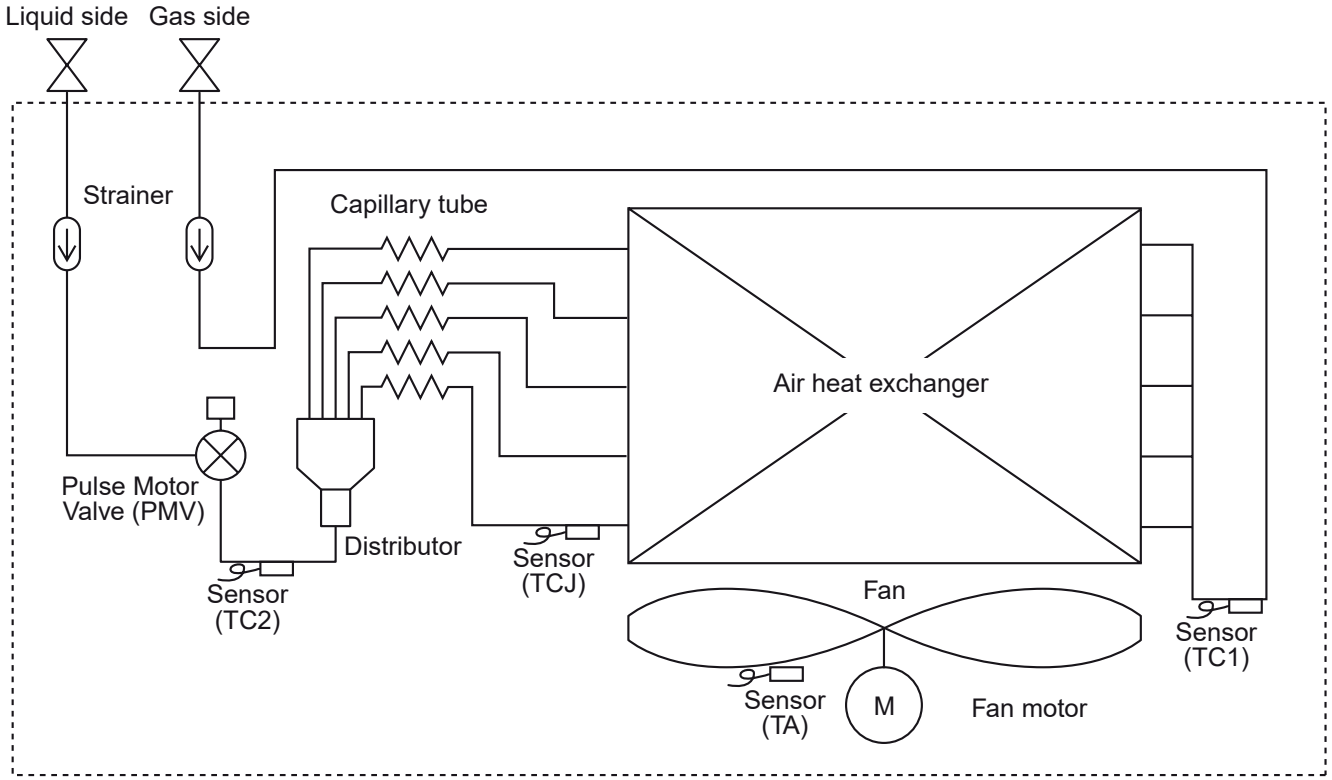


Model name	X (mm)	Y (mm)	Z (mm)	Total weight (kg)
MMK-UP0271HP-E / TR	500	115	160	21
MMK-UP0301HP-E / TR				
MMK-UP0361HP-E / TR				



4. Piping diagram

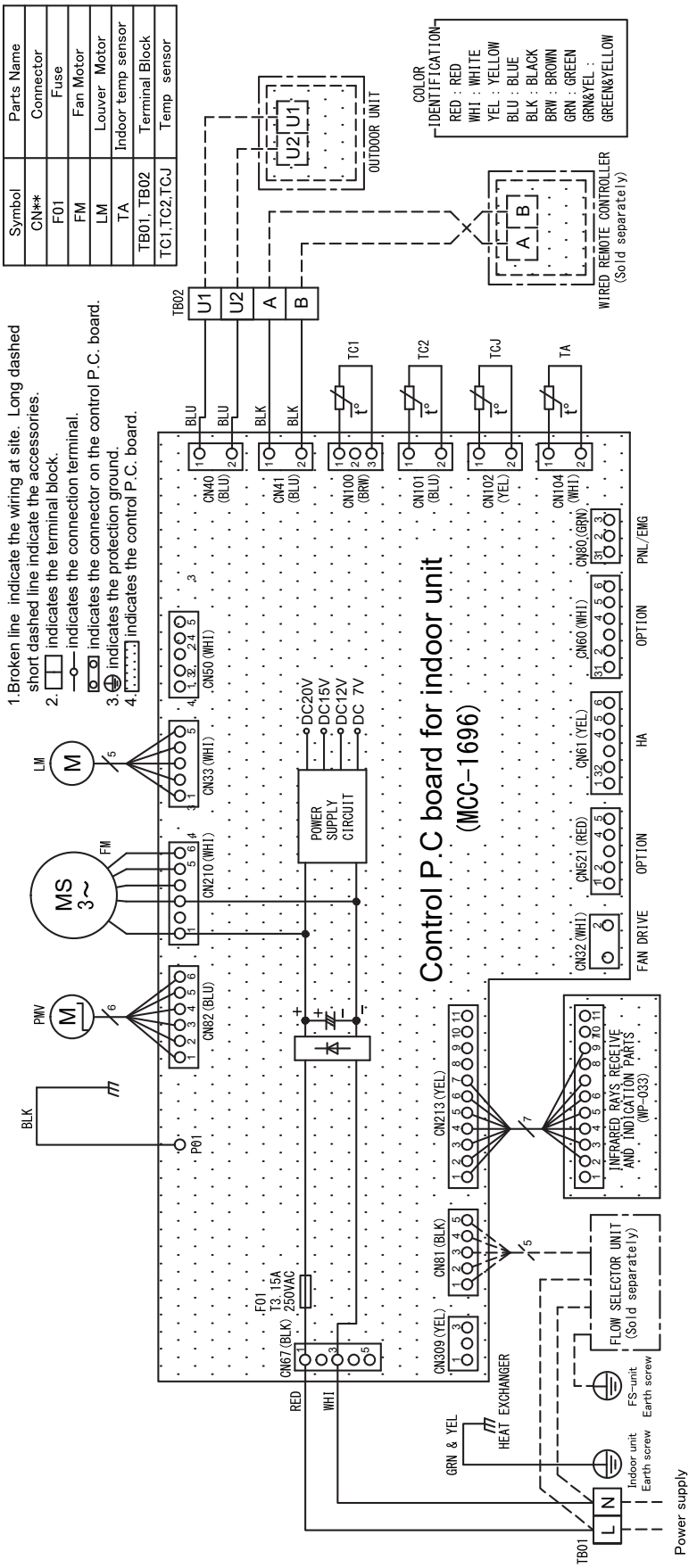
MMK-UP0031HP(L)* / MMK-UP0051HP(L)* / MMK-UP0071HP(L)* / MMK-UP0091HP(L)* / MMK-UP0121HP(L)* / MMK-UP0151HP(L)* / MMK-UP0181HP(L)* / MMK-UP0241HP(L)* / MMK-UP0271HP* / MMK-UP0301HP* / MMK-UP0361HP*



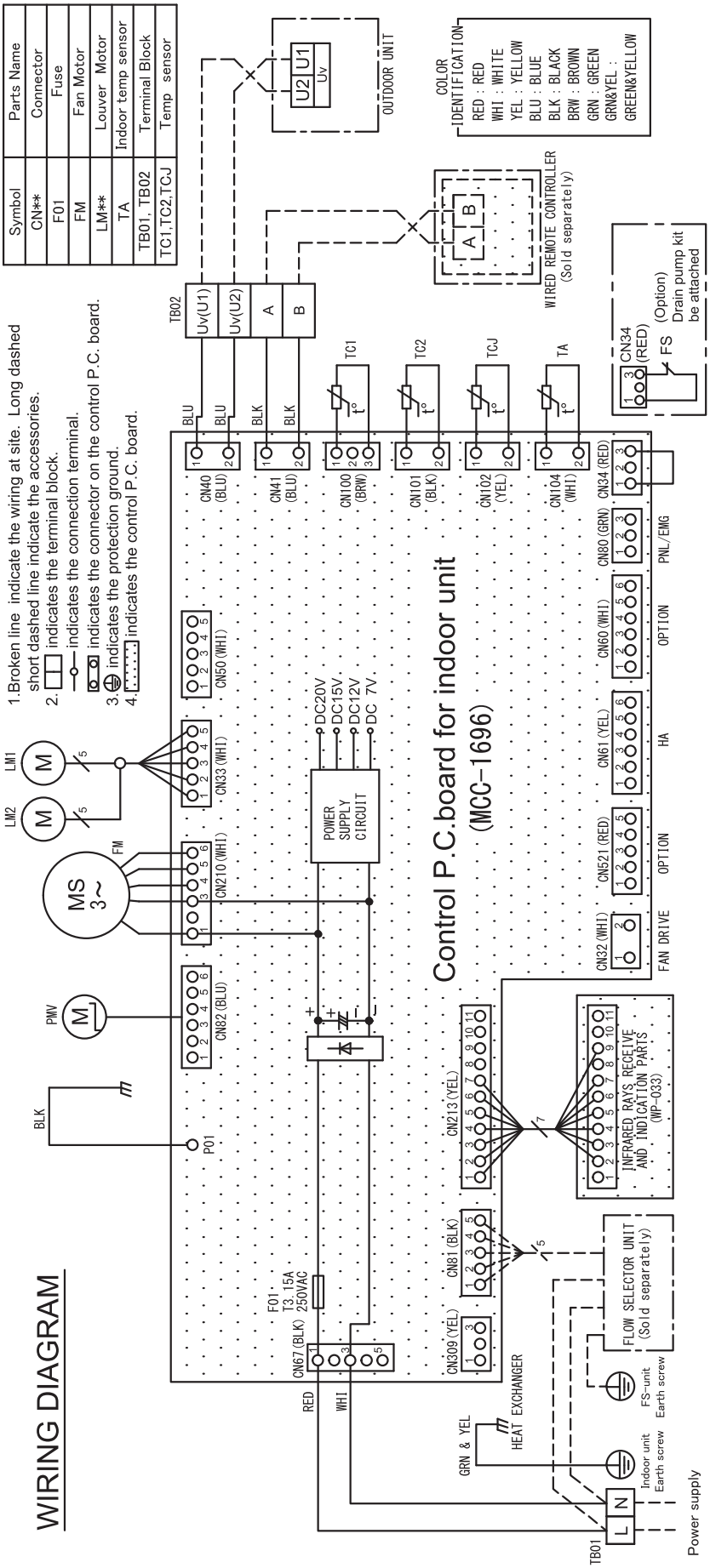
Functional part name		Functional outline
Pulse Motor Valve	PMV	(Connector CN82 (6P): Blue) 1) Controls super heat in cooling operation 2) Controls under cool in heating operation 3) Recovers refrigerant oil in cooling operation 4) Recovers refrigerant oil in heating operation
Temp. sensor	1. TA	(Connector CN104 (2P): White) 1) Detects indoor suction temperature
	2. TC1	(Connector CN100 (3P): Brown) 1) Controls PMV super heat in cooling operation
	3. TC2	(Connector CN101 (2P): Blue) 1) Controls PMV under cool in heating operation
	4. TCJ	(Connector CN102 (2P): Yellow) 1) Controls PMV super heat in cooling operation

5. Wiring diagram

MMK-UP0031HP(L)* / MMK-UP0051HP(L)* / MMK-UP0071HP(L)* / MMK-UP0091HP(L)* / MMK-UP0121HP(L)* / MMK-UP0151HP(L)* / MMK-UP0181HP(L)* / MMK-UP0241HP(L)*



MMK-UP0271HP* / MMK-UP0301HP* / MMK-UP0361HP*



6. Electrical characteristics

50 Hz

Type	Model	Nominal Voltage	Voltage Range		Fan Motor		Power Supply	
		(V-Ph-Hz)	Min	Max	kW	FLA	MCA	MOCP
High Wall Type	MMK-UP0031HP-E / TR MMK-UP0031HPL-E	230-1-50	198	264	0.030	0.16	0.21	15
	MMK-UP0051HP-E / TR MMK-UP0051HPL-E	230-1-50	198	264	0.030	0.16	0.21	15
	MMK-UP0071HP-E / TR MMK-UP0071HPL-E	230-1-50	198	264	0.030	0.17	0.21	15
	MMK-UP0091HP-E / TR MMK-UP0091HPL-E	230-1-50	198	264	0.030	0.18	0.23	15
	MMK-UP0121HP-E / TR MMK-UP0121HPL-E	230-1-50	198	264	0.030	0.20	0.25	15
	MMK-UP0151HP-E / TR MMK-UP0151HPL-E	230-1-50	198	264	0.042	0.30	0.38	15
	MMK-UP0181HP-E / TR MMK-UP0181HPL-E	230-1-50	198	264	0.042	0.33	0.41	15
	MMK-UP0241HP-E / TR MMK-UP0241HPL-E	230-1-50	198	264	0.042	0.48	0.60	15

Type	Model	Nominal Voltage	Voltage Range		Fan Motor		Power Supply	
		(V-Ph-Hz)	Min	Max	kW	FLA	MCA	MOCP
High Wall Type	MMK-UP0271HP-E / TR	230-1-50	198	264	0.061	0.66	0.83	15
	MMK-UP0301HP-E / TR	230-1-50	198	264	0.061	0.66	0.83	15
	MMK-UP0361HP-E / TR	230-1-50	198	264	0.061	0.66	0.83	15

MCA : Minimum Cicuit Amps
MOCP : Maximum Overcurrent Protection (Amps)
FLA : Full Load Amps
kW : Fan Motor Output (kW)

7. Sensible capacity table

High-wall type : MMK-UP___1HP(L)

unit size	outdoor air temp. ˚CDB	indoor air temp. 14 ˚CWB 20 ˚CDB		16 ˚CWB 23 ˚CDB		18 ˚CWB 26 ˚CDB		19 ˚CWB 27 ˚CDB		20 ˚CWB 28 ˚CDB		22 ˚CWB 30 ˚CDB		24 ˚CWB 32 ˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
003	10	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	12	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	14	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	16	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	18	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	20	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	21	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	23	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	25	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	27	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	29	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	31	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	33	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	35	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.8	1.0	0.8
	37	0.7	0.7	0.8	0.7	0.8	0.8	0.9	0.8	0.9	0.8	0.9	0.8	1.0	0.7
	39	0.7	0.7	0.8	0.7	0.8	0.7	0.9	0.8	0.9	0.8	0.9	0.7	1.0	0.7

Unit size	Outdoor air temp. ˚C DB	Indoor Air temperature 14.0 ˚C WB 20.0 ˚C DB		16.0 ˚C WB 23.0 ˚C DB		18.0 ˚C WB 26.0 ˚C DB		19.0 ˚C WB 27.0 ˚C DB		20.0 ˚C WB 28.0 ˚C DB		22.0 ˚C WB 30.0 ˚C DB		24.0 ˚C WB 32.0 ˚C DB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
005	10.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	12.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	14.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	16.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	18.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	20.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	21.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	23.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	25.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	27.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	29.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	31.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	33.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	35.0	1.4	1.3	1.5	1.4	1.6	1.5	1.7	1.5	1.8	1.5	1.9	1.5	1.9	1.5
	37.0	1.4	1.3	1.5	1.4	1.6	1.5	1.6	1.5	1.7	1.5	1.8	1.4	1.9	1.4
	39.0	1.3	1.2	1.4	1.3	1.5	1.4	1.6	1.4	1.6	1.4	1.7	1.4	1.8	1.3

Unit size	Outdoor air temp. ˚C DB	Indoor Air temperature 14.0 ˚C WB 20.0 ˚C DB		16.0 ˚C WB 23.0 ˚C DB		18.0 ˚C WB 26.0 ˚C DB		19.0 ˚C WB 27.0 ˚C DB		20.0 ˚C WB 28.0 ˚C DB		22.0 ˚C WB 30.0 ˚C DB		24.0 ˚C WB 32.0 ˚C DB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
007	10.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	12.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	14.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	16.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	18.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	20.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	21.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	23.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	25.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	27.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	29.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	31.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	33.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	35.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	37.0	1.7	1.5	1.9	1.6	2.1	1.7	2.1	1.6	2.2	1.6	2.3	1.6	2.4	1.6
	39.0	1.7	1.4	1.9	1.5	2.0	1.6	2.1	1.6	2.1	1.6	2.3	1.6	2.4	1.5

Unit size	Outdoor air temp. ˚C DB	Indoor Air temperature 14.0 ˚C WB 20.0 ˚C DB		16.0 ˚C WB 23.0 ˚C DB		18.0 ˚C WB 26.0 ˚C DB		19.0 ˚C WB 27.0 ˚C DB		20.0 ˚C WB 28.0 ˚C DB		22.0 ˚C WB 30.0 ˚C DB		24.0 ˚C WB 32.0 ˚C DB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
009	10.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	12.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	14.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	16.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	18.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	20.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	21.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	23.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	25.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	27.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	29.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	31.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	33.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	35.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	37.0	2.2	1.7	2.5	1.8	2.6	1.9	2.7	1.9	2.8	1.9	3.0	1.9	3.1	1.9
	39.0	2.2	1.7	2.4	1.8	2.6	1.9	2.6	1.9	2.7	1.9	2.9	1.9	3.0	1.8

TC: Total Capacity [kW]
SHC: Sensible Heat Capacity [kW]

High-wall type : MMK-UP___1HP(L)

Indoor Air temperature														
Unit size	Outdoor air temp.	14.0 °C WB		16.0 °C WB		18.0 °C WB		19.0 °C WB		20.0 °C WB		22.0 °C WB		24.0 °C WB	
		20.0 °C DB		23.0 °C DB		26.0 °C DB		27.0 °C DB		28.0 °C DB		30.0 °C DB		32.0 °C DB	
	°C DB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
012	10.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	12.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	14.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	16.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	18.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	20.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	21.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	23.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	25.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	27.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	29.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	31.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	33.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	35.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	37.0	2.9	2.1	3.2	2.3	3.4	2.4	3.5	2.4	3.6	2.4	3.8	2.4	4.0	2.3
	39.0	2.8	2.1	3.1	2.2	3.3	2.4	3.4	2.4	3.5	2.4	3.7	2.3	3.9	2.3

Indoor Air temperature														
Unit size	Outdoor air temp.	14.0 °C WB		16.0 °C WB		18.0 °C WB		19.0 °C WB		20.0 °C WB		22.0 °C WB		24.0 °C WB	
		20.0 °C DB		23.0 °C DB		26.0 °C DB		27.0 °C DB		28.0 °C DB		30.0 °C DB		32.0 °C DB	
	°C DB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
015	10.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	12.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	14.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	16.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	18.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	20.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	21.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	23.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	25.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	27.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	29.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	31.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	33.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	35.0	3.70	2.85	4.08	3.03	4.37	3.22	4.50	3.20	4.63	3.19	4.90	3.13	5.13	3.04
	37.0	3.60	2.78	3.98	2.95	4.26	3.13	4.38	3.12	4.51	3.10	4.77	3.05	4.99	2.96
	39.0	3.50	2.70	3.86	2.87	4.14	3.04	4.26	3.03	4.38	3.01	4.64	2.96	4.85	2.88

Indoor Air temperature														
Unit size	Outdoor air temp.	14.0 °C WB		16.0 °C WB		18.0 °C WB		19.0 °C WB		20.0 °C WB		22.0 °C WB		24.0 °C WB	
		20.0 °C DB		23.0 °C DB		26.0 °C DB		27.0 °C DB		28.0 °C DB		30.0 °C DB		32.0 °C DB	
	°C DB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
018	10.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	12.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	14.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	16.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	18.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	20.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	21.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	23.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	25.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	27.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	29.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	31.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	33.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	35.0	4.60	3.48	5.08	3.70	5.44	3.92	5.60	3.90	5.76	3.88	6.10	3.80	6.38	3.69
	37.0	4.48	3.39	4.95	3.60	5.30	3.82	5.45	3.80	5.61	3.78	5.94	3.71	6.21	3.59
	39.0	4.35	3.30	4.81	3.50	5.15	3.71	5.30	3.69	5.45	3.67	5.77	3.60	6.04	3.49

Indoor Air temperature														
Unit size	Outdoor air temp.	14.0 °C WB		16.0 °C WB		18.0 °C WB		19.0 °C WB		20.0 °C WB		22.0 °C WB		24.0 °C WB	
		20.0 °C DB		23.0 °C DB		26.0 °C DB		27.0 °C DB		28.0 °C DB		30.0 °C DB		32.0 °C DB	
	°C DB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
024	10.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	12.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	14.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	16.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	18.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	20.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	21.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	23.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	25.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	27.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	29.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	31.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	33.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	35.0	5.83	4.46	6.44	4.74	6.90	5.03	7.10	5.00	7.30	4.98	7.73	4.88	8.09	4.74
	37.0	5.68	4.35	6.27	4.61	6.72	4.90	6.92	4.87	7.11	4.85	7.53	4.76	7.88	4.62
	39.0	5.52	4.22	6.09	4.48	6.52	4.76	6.72	4.73	6.91	4.71	7.32	4.62	7.65	4.49

TC: Total Capacity [kW]
SHC: Sensible Heat Capacity [kW]

High-wall type : MMK-UP___1HP

Unit size	outdoor air temp.	Indoor air temp.													
		14 ˚C WB		16 ˚C WB		18 ˚C WB		19 ˚C WB		20 ˚C WB		22 ˚C WB		24 ˚C WB	
		20 ˚C DB		23 ˚C DB		26 ˚C DB		27 ˚C DB		28 ˚C DB		30 ˚C DB		32 ˚C DB	
	˚C DB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
027	10.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	12.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	14.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	16.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	18.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	20.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	21.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	23.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	25.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	27.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	29.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	31.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	33.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	35.00	6.80	5.40	7.10	5.60	7.60	5.80	8.00	6.00	8.10	6.00	8.70	6.00	9.00	5.70
	37.00	6.60	5.20	6.90	5.40	7.40	5.60	7.80	5.80	7.90	5.80	8.40	5.80	8.70	5.50
	39.00	6.40	5.10	6.70	5.30	7.20	5.50	7.60	5.70	7.70	5.70	8.20	5.70	8.50	5.40

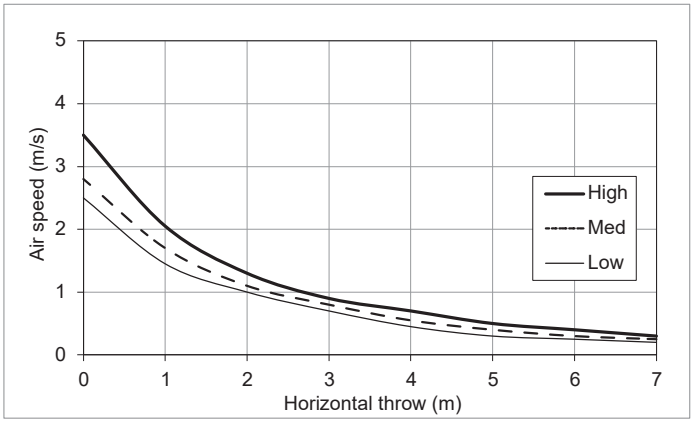
Unit size	outdoor air temp.	Indoor air temp.													
		14 ˚C WB		16 ˚C WB		18 ˚C WB		19 ˚C WB		20 ˚C WB		22 ˚C WB		24 ˚C WB	
		20 ˚C DB		23 ˚C DB		26 ˚C DB		27 ˚C DB		28 ˚C DB		30 ˚C DB		32 ˚C DB	
	˚C DB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
030	10.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	12.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	14.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	16.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	18.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	20.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	21.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	23.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	25.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	27.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	29.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	31.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	33.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	35.00	7.70	6.20	8.00	6.30	8.50	6.60	9.00	6.80	9.20	6.90	9.70	6.70	10.10	6.50
	37.00	7.50	6.00	7.80	6.10	8.30	6.40	8.70	6.60	8.90	6.70	9.40	6.50	9.80	6.30
	39.00	7.30	5.90	7.60	6.00	8.10	6.30	8.50	6.40	8.70	6.50	9.20	6.40	9.60	6.20

Unit size	outdoor air temp.	Indoor air temp.													
		14 ˚C WB		16 ˚C WB		18 ˚C WB		19 ˚C WB		20 ˚C WB		22 ˚C WB		24 ˚C WB	
		20 ˚C DB		23 ˚C DB		26 ˚C DB		27 ˚C DB		28 ˚C DB		30 ˚C DB		32 ˚C DB	
	˚C DB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
036	10.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	12.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	14.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	16.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	18.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	20.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	21.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	23.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	25.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	27.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	29.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	31.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	33.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	35.00	9.50	7.60	10.00	7.80	10.60	8.10	11.20	8.40	11.40	8.40	12.10	8.30	12.60	8.00
	37.00	9.20	7.40	9.70	7.60	10.30	7.90	10.90	8.20	11.10	8.20	11.70	8.10	12.20	7.80
	39.00	9.00	7.20	9.50	7.40	10.00	7.70	10.60	8.00	10.80	8.00	11.50	7.90	11.90	7.60

TC: Total Capacity [kW]
SHC: Sensible Heat Capacity [kW]

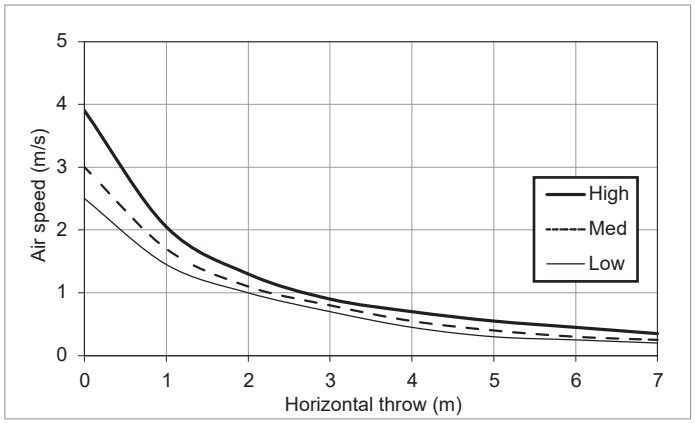
8. Air throw distance chart

MMK-UP0031HP(L)* / MMK-UP0051HP(L)*



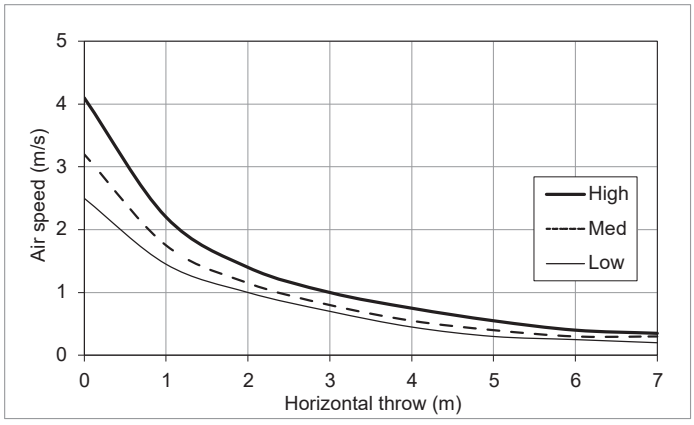
High wind : 3.8m/s
Mid wind : 2.8m/s
Low wind : 2.5m/s

MMK-UP0071HP(L)*



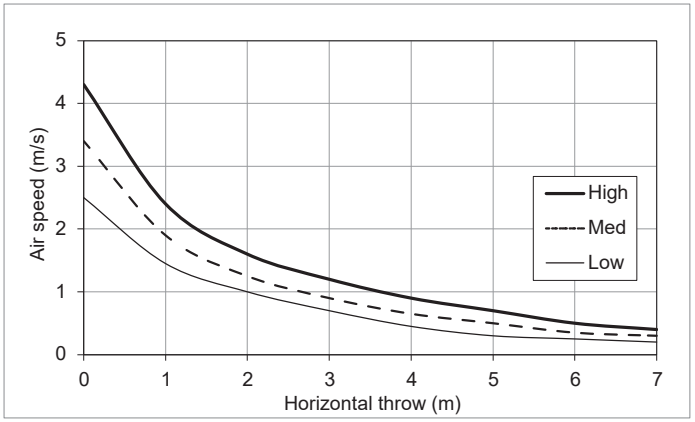
High wind : 3.9 m/s
Mid wind : 3.0 m/s
Low wind : 2.5 m/s

MMK-UP0091HP(L)*



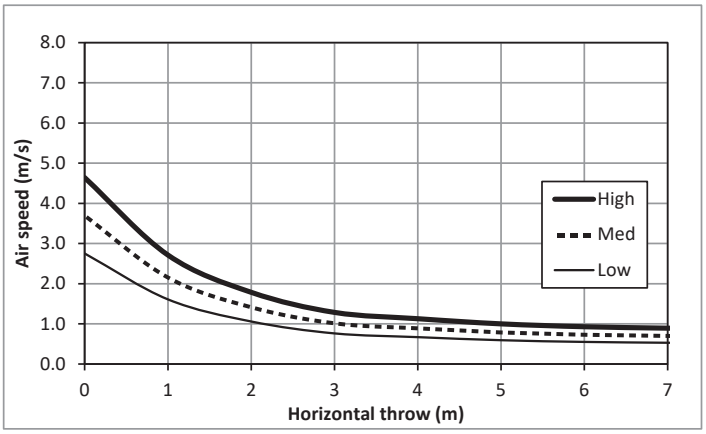
High wind : 4.1 m/s
Mid wind : 3.2 m/s
Low wind : 2.5 m/s

MMK-UP0121HP(L)*



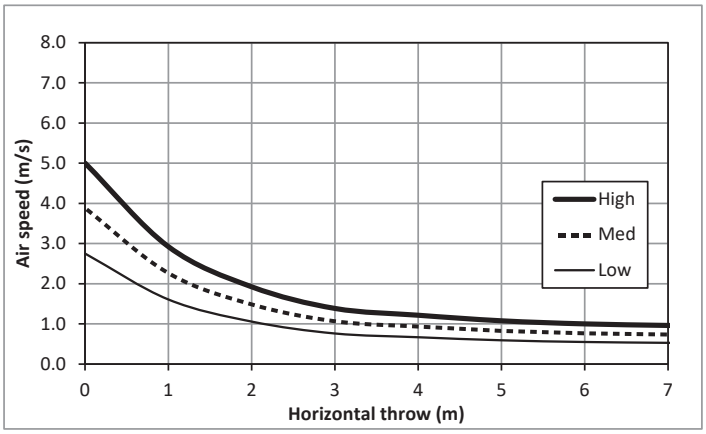
High wind : 4.3 m/s
Mid wind : 3.4 m/s
Low wind : 2.5 m/s

MMK-UP0151HP(L)*



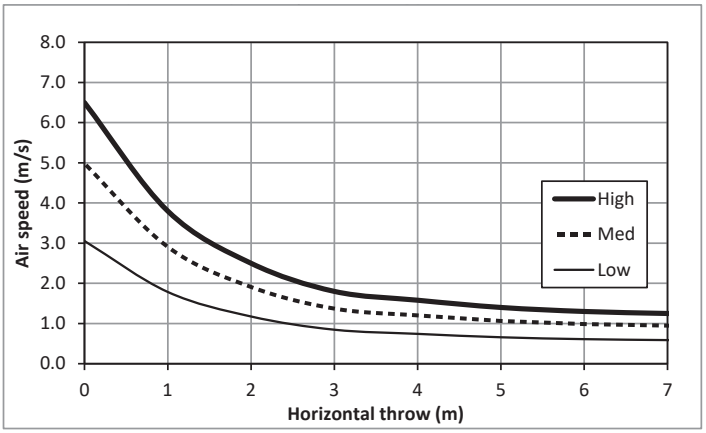
High wind : 4.6 m/s
Mid wind : 3.7 m/s
Low wind : 2.8 m/s

MMK-UP0181HP(L)*



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

MMK-UP0247HP(L)*

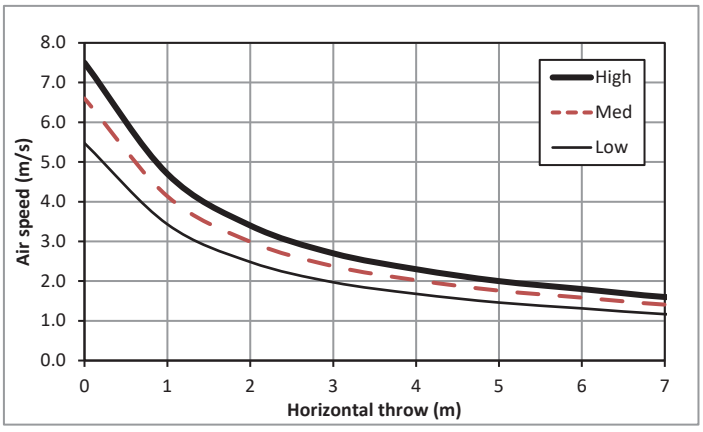


High wind : 6.5 m/s
Mid wind : 5.0 m/s
Low wind : 3.1 m/s

MMK-UP0271HP*

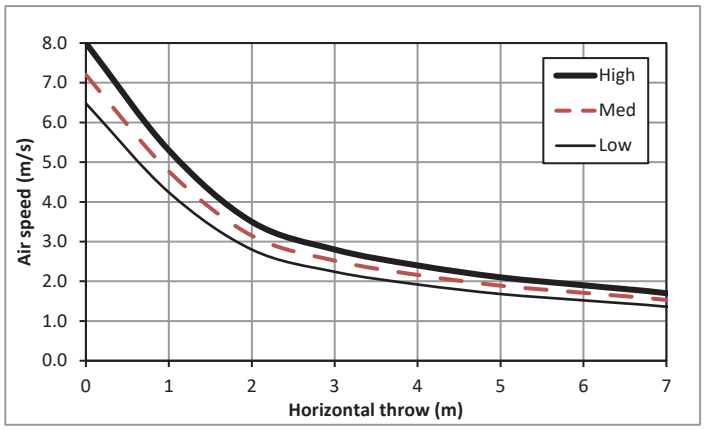
High wind : 6.5 m/s
Mid wind : 5.2 m/s
Low wind : 3.6 m/s

MMK-UP0301HP*



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

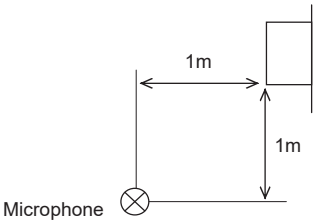
MMK-UP0361HP*



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

9. Sound data

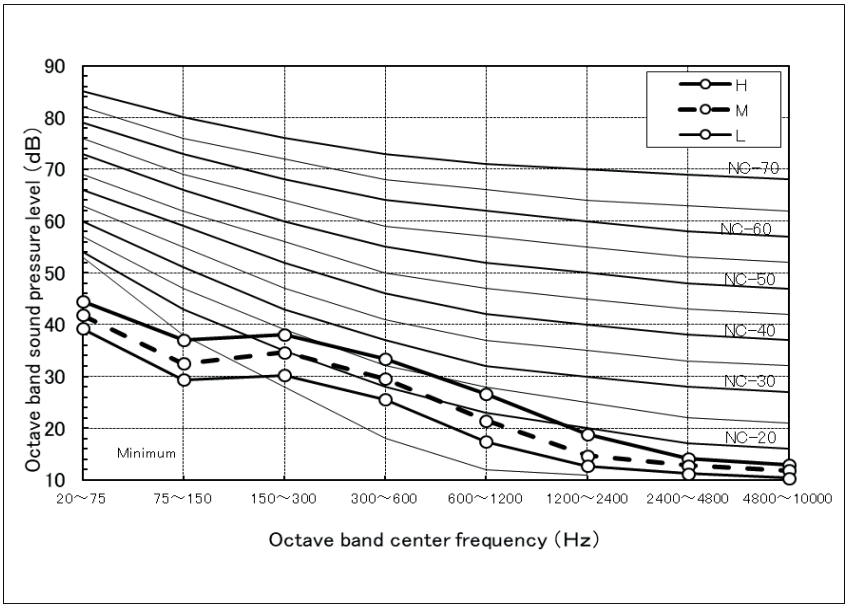
Sound pressure spectrum



MMK-UP0031HP(L)* / MMK-UP0051HP(L)*

Specification (dB)

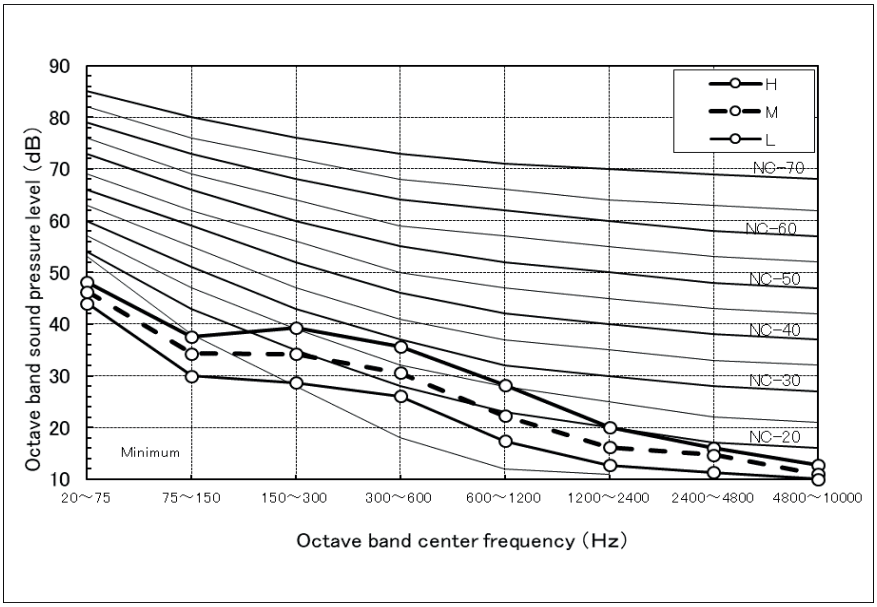
Fan tab	H	M	L
Sound pressure level (dB(A))	33	29	25



MMK-UP0071HP(L)*

Specification (dB)

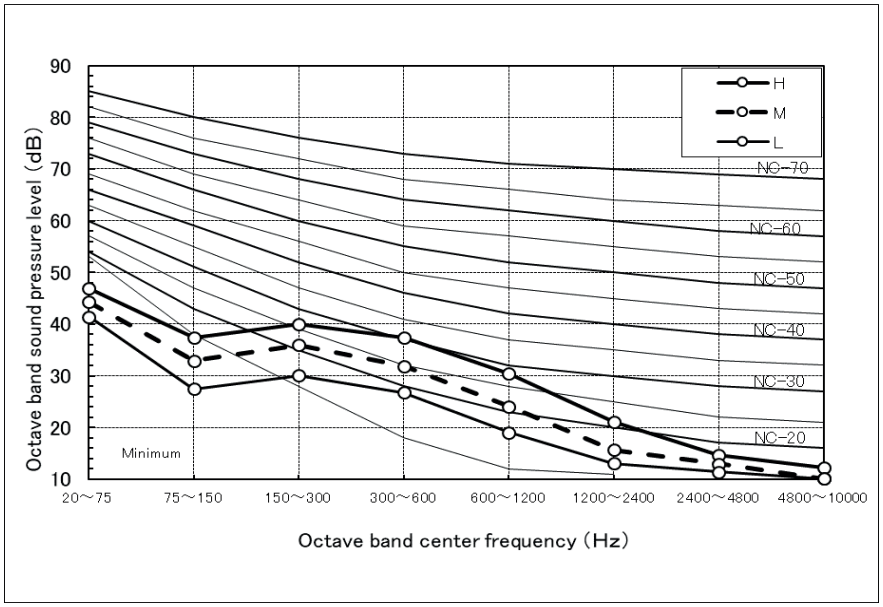
Fan tab	H	M	L
Sound pressure level (dB(A))	35	30	25



MMK-UP0091HP(L)*

Specification (dB)

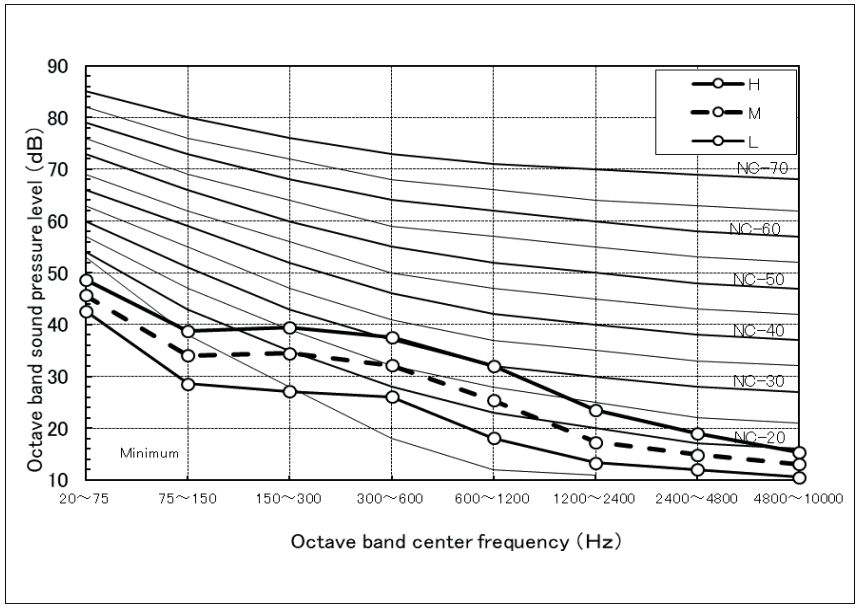
Fan tab	H	M	L
Sound pressure level (dB(A))	36	31	25



MMK-UP0121HP(L)*

Specification (dB)

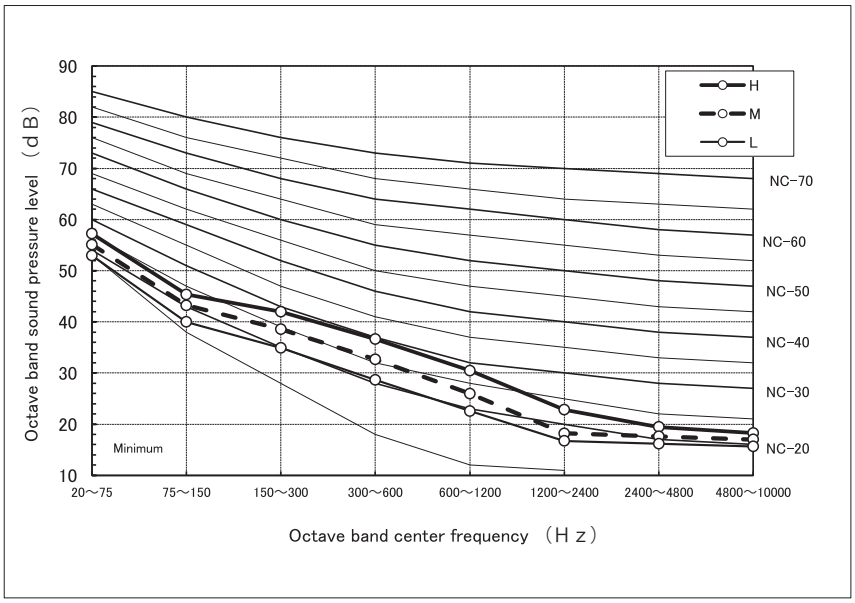
Fan tab	H	M	L
Sound pressure level (dB(A))	37	32	25



MMK-UP0151HP(L)*

Specification (dB)

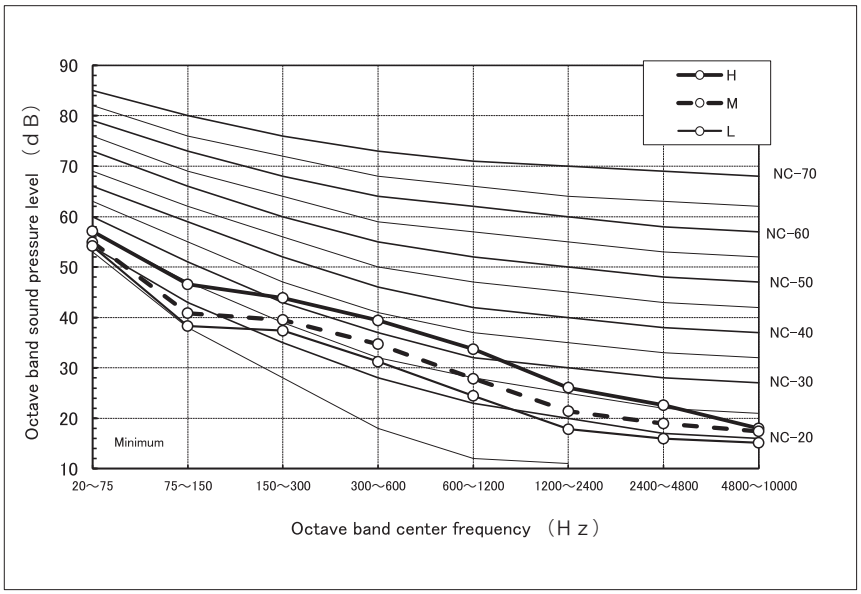
Fan tab	H	M	L
Sound pressure level (dB(A))	40	36	32



MMK-UP0181HP(L)*

Specification (dB)

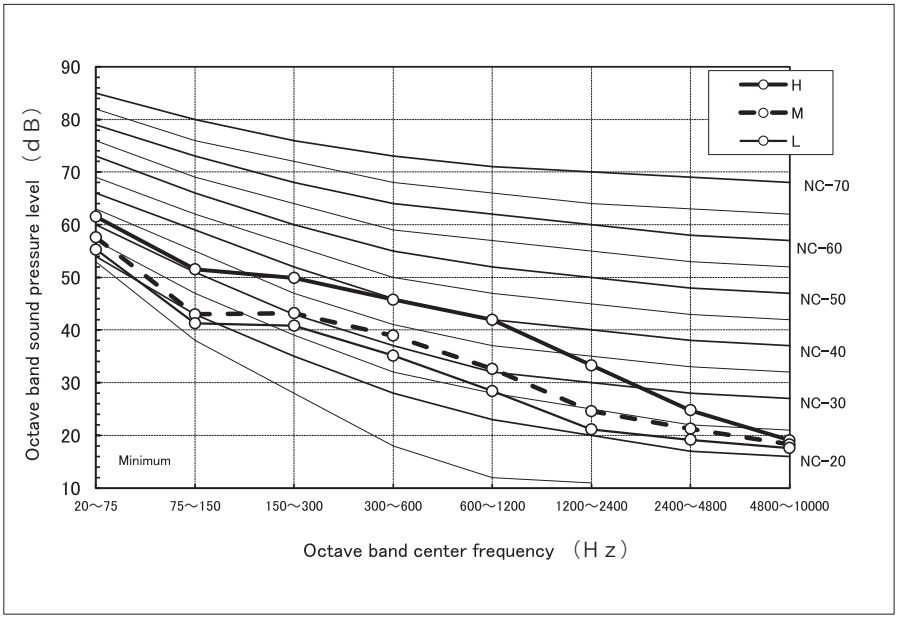
Fan tab	H	M	L
Sound pressure level (dB(A))	41	37	32



MMK-UP0241HP(L)*

Specification (dB)

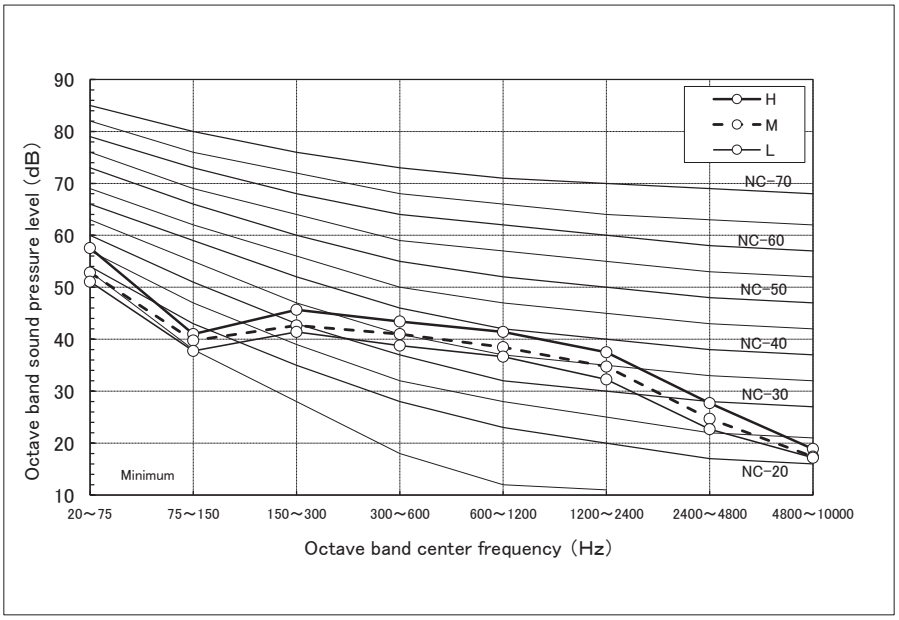
Fan tab	H	M	L
Sound pressure level (dB(A))	45	39	33



MMK-UP0271HP*

Specification (dB)

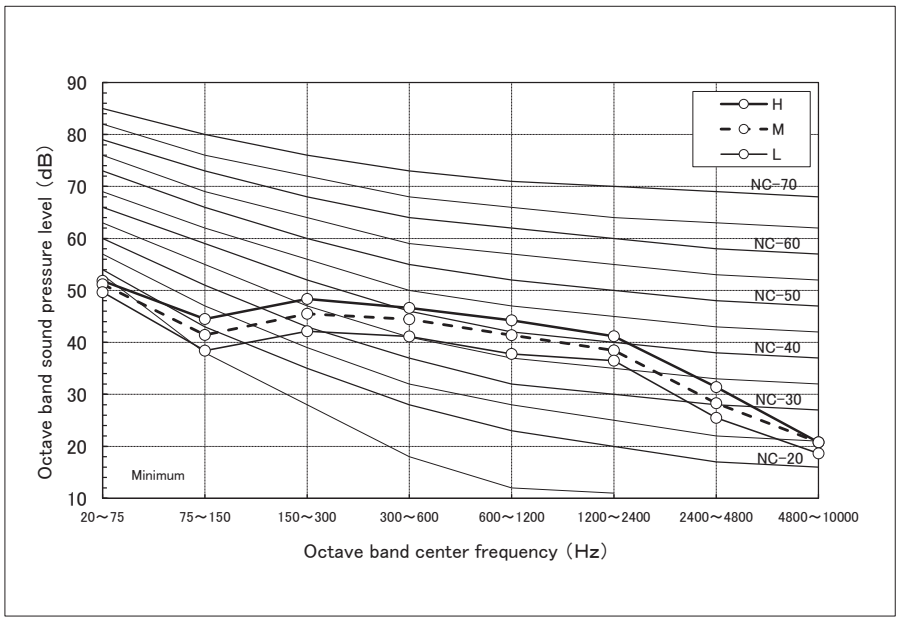
Fan tab	H	M	L
Sound pressure level (dB(A))	44	41	39



MMK-UP0301HP*

Specification (dB)

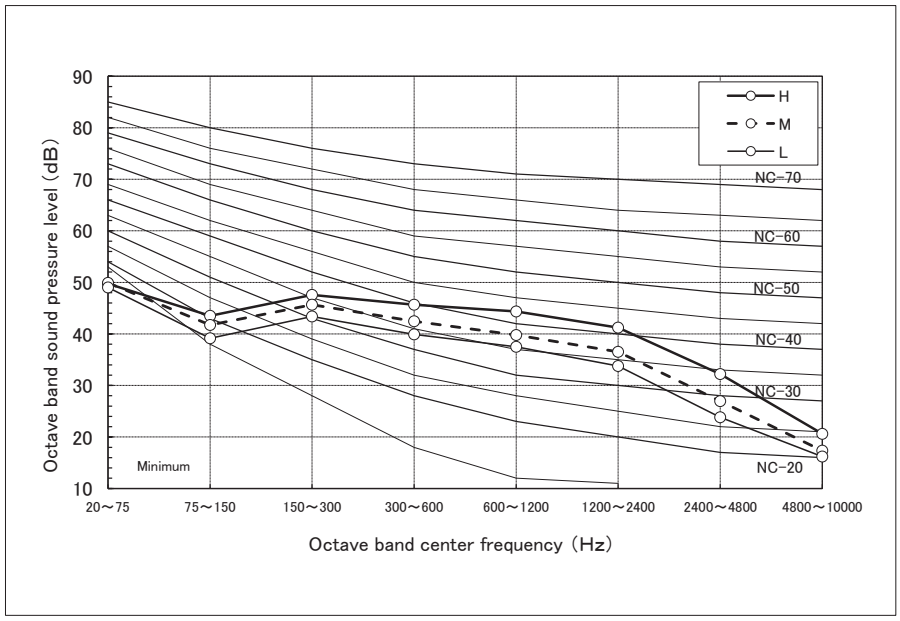
Fan tab	H	M	L
Sound pressure level (dB(A))	48	44	41



MMK-UP0361HP*

Specification (dB)

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



10. Accessories

Option Parts	Model Name	Applicable FCU
PMV kit	RBM-PMV0361U-E	MMD-UP*__1HPL-E / TR (*03 / 05 / 07 / 09 / 12)
	RBM-PMV0901U-E	MMD-UP*__1HPL-E / TR (*15 / 18 / 24)

Name	Model name	Appearance	Application	Function
Wireless remote controller	WH-TA09NE			• Start / Stop • Changing mode • Temperature setting • Air flow changing (5 steps) • Louver setting • Clock • Timer function - ON/OFF timer (10 min. step) - Everyday timer - Sleep timer - COMFORT SLEEP timer • High power mode • QUIET mode • One-touch pre-set memory • One-touch Auto (*1)

Packed with the indoor unit

(*1) SMMS-i cannot accept “AUTO” mode, SHRM-i can accept “AUTO” mode.

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Revision : 05 / 220222