

Console Type

MML-UP0071NHP-E / TR
MML-UP0091NHP-E / TR
MML-UP0121NHP-E / TR
MML-UP0151NHP-E / TR
MML-UP0181NHP-E / TR



Contents

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1. Specifications

Model name		MML-	UP0071NHP-E/TR	UP0091NHP-E/TR	UP0121NHP-E/TR	UP0151NHP-E/TR	UP0181NHP-E/TR
Power supply			1 ph 230V (220-240V) ~ 50 Hz & 1 ph 220V (208-230V) ~ 60 Hz				
Cooling capacity (*1)		(kW)	2.2	2.8	3.6	4.5	5.6
Heating capacity (*1)		(kW)	2.5	3.2	4.0	5.0	6.3
Running current		(A)	0.17	0.17	0.19	0.25	0.36
Power consumption		(kW)	0.021	0.021	0.025	0.034	0.052
Starting current		(A)	0.26	0.26	0.30	0.38	0.56
FCU dimension	Main unit	Height (mm)	600				
		Width (mm)	700				
		Depth (mm)	220				
Total weight	Main unit	(kg)	17				
Heat exchangere			Finned tube				
Soundproof / Heat-insulation material			Foamed polystyrene, Polyethylene				
Fan			Turbo fan				
Air flow volume	Indoor unit (H/M/L)	(m³/h)	510 / 366 / 282	510 / 366 / 282	552 / 408 / 324	624 / 468 / 384	726 / 528 / 426
Sound pressure	Indoor unit (H/M/L)	dB(A)	38 / 32 / 26	38 / 32 / 26	40 / 34 / 29	43 / 37 / 31	47 / 40 / 34
Motor			41				
Conecting pipe	Gas side	(mm)	Ø 9.52			Ø 12.7	
	Liquid side	(mm)	Ø 6.35			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				
Operating Range for Super MMS-I	Cooling	(°C)	5~ 43				
	Heating	(°C)	-10~ 43				

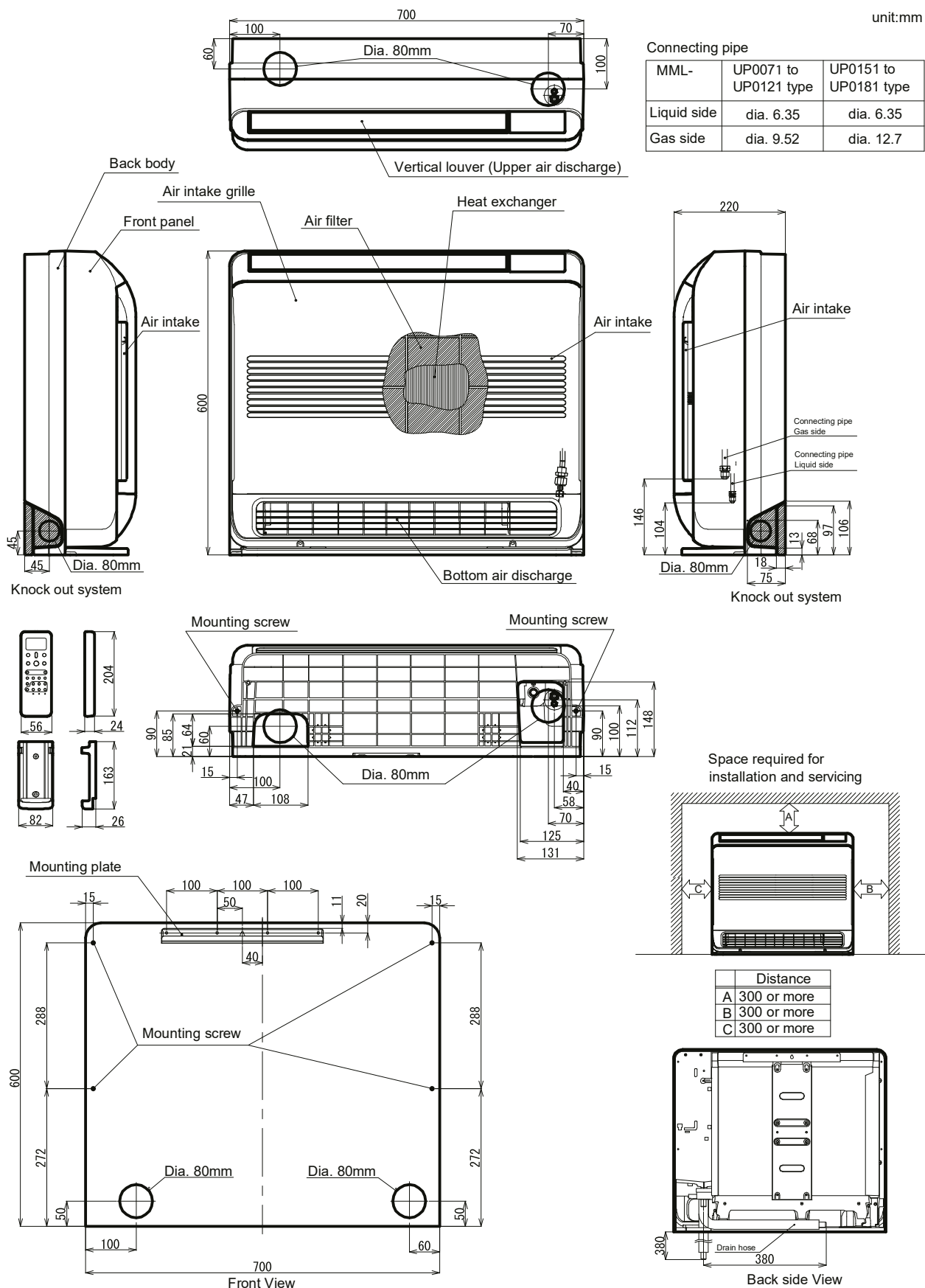
(*1) Rated testing conditions Cooling : Indoor air tempreature 27 °C DB/ 19°C WB, Outdoor 35 °C DB

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

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

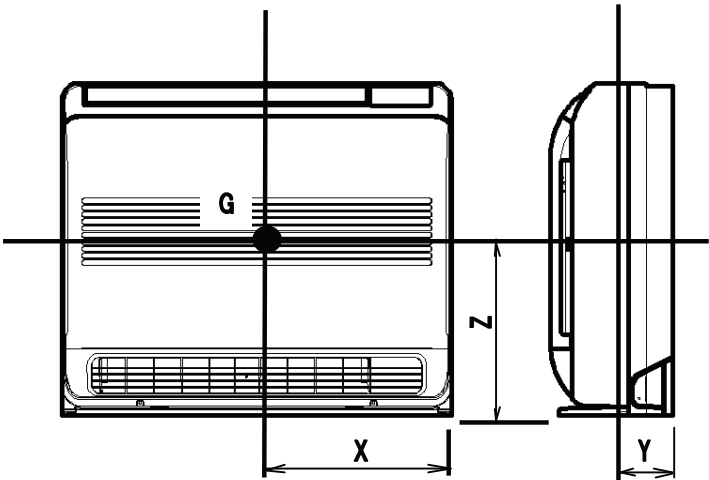
2. Dimension

MML-UP0*___1NHP-E / TR (*07 / 09 / 12 / 15 / 18)



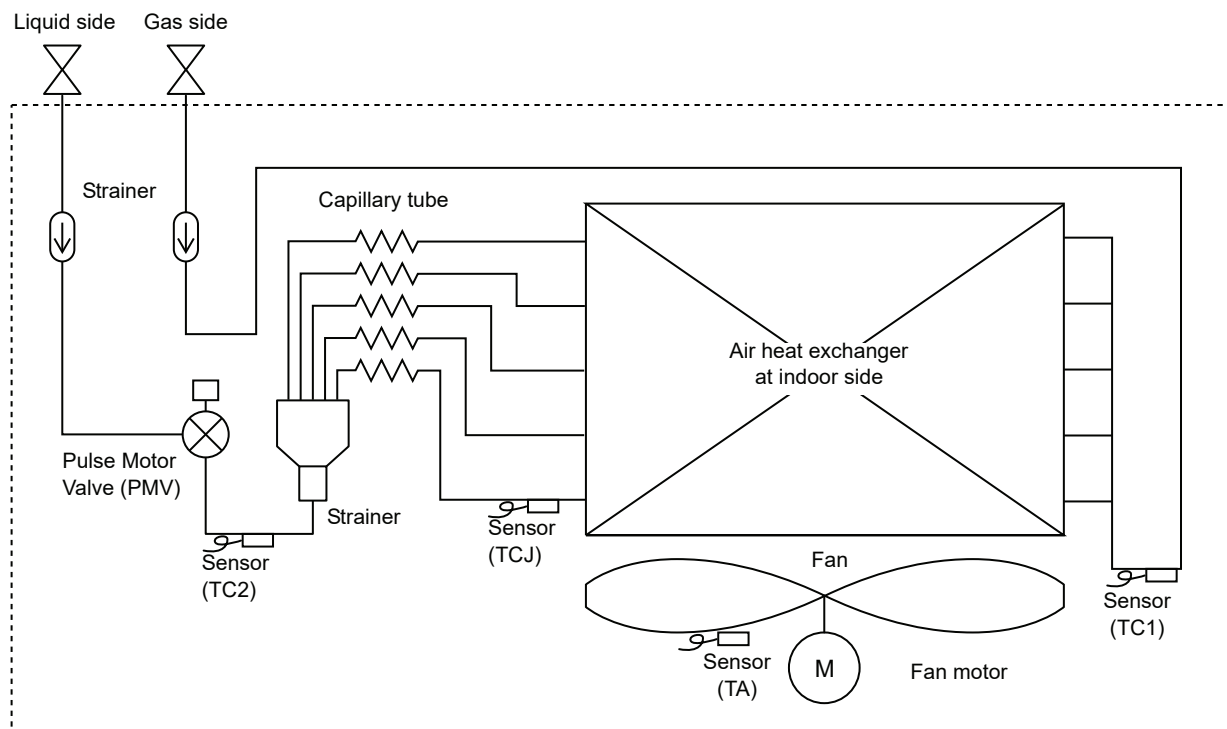
3. Center of gravity

Model name	X(mm)	Y(mm)	Z(mm)	Total weight(kg)
MML-UP0071NHP-E / TR	320	150	310	17
MML-UP0091NHP-E / TR				
MML-UP0121NHP-E / TR				
MML-UP0151NHP-E / TR				
MML-UP0181NHP-E / TR				



4. Piping diagram

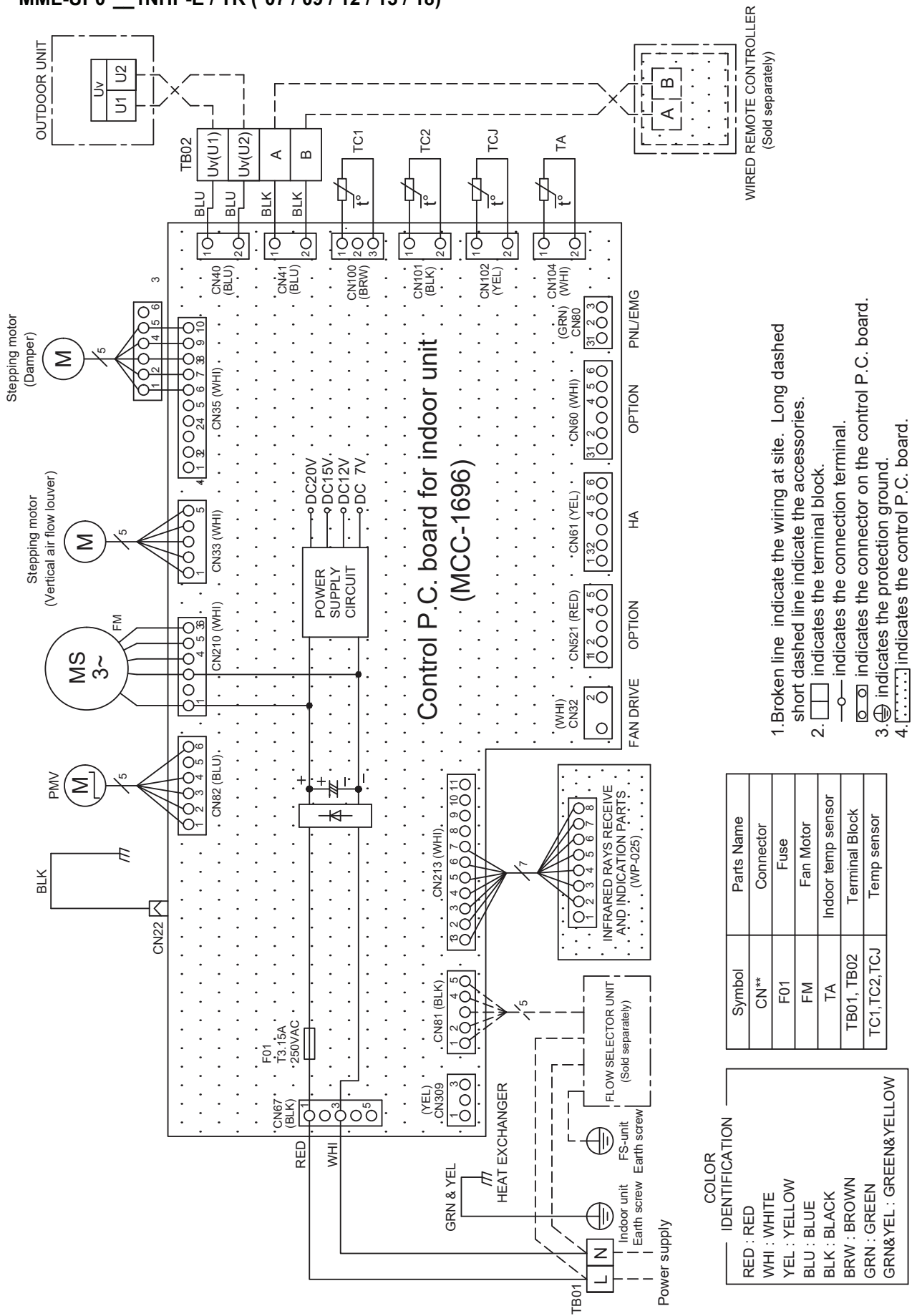
MML-UP0*_1NHP-E / TR (*07 / 09 / 12 / 15 / 18)



Functional part name		Functional outline
Pulse Motor Valve	PMV	(Connector CN082 (6P): Blue) 1) Controls super heat in cooling operation 2) Controls sub 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): Yellow) 1) Detects indoor suction temperature
	2. TC1	(Connector CN100 (3P): Brown) 1) Controls PMV super heat in cooling operation
	3. TC2	(Connector CN101 (2P): Black) 1) Controls PMV sub cool in heating operation
	4. TCJ	(Connector CN102 (2P): Red) 1) Controls PMV super heat in cooling operation

5. Wiring diagram

MML-UP0*_1NHP-E / TR (*07 / 09 / 12 / 15 / 18)



6. Electrical characteristics

50 Hz

Type	Model	Nominal Voltage (V-Ph-Hz)	Voltage Range		Fan Motor		Power supply	
			Min	Max	kW	FLA	MCA	MOCP
Console Type	MML-UP0071NHP-E / TR	230-1-50	198	242	0.041	0.21	0.26	15
	MML-UP0091NHP-E / TR	230-1-50	198	242	0.041	0.21	0.26	15
	MML-UP0121NHP-E / TR	230-1-50	198	242	0.041	0.25	0.31	15
	MML-UP0151NHP-E / TR	230-1-50	198	242	0.041	0.32	0.40	15
	MML-UP0181NHP-E / TR	230-1-50	198	242	0.041	0.46	0.58	15

MCA : Minimum Circuit Amps

FLA : Full Load Amps

MOCP : Maximum Overcurrent Protection (Amps)

kW : Fan Motor Rated Output (kW)

60 Hz

Type	Model	Nominal Voltage (V-Ph-Hz)	Voltage Range		Fan Motor		Power supply	
			Min	Max	kW	FLA	MCA	MOCP
Console Type	MML-UP0071NHP-E / TR	220-1-60	198	242	0.041	0.21	0.26	15
	MML-UP0091NHP-E / TR	220-1-60	198	242	0.041	0.21	0.26	15
	MML-UP0121NHP-E / TR	220-1-60	198	242	0.041	0.25	0.32	15
	MML-UP0151NHP-E / TR	220-1-60	198	242	0.041	0.32	0.40	15
	MML-UP0181NHP-E / TR	220-1-60	198	242	0.041	0.46	0.58	15

MCA : Minimum Circuit Amps

FLA : Full Load Amps

MOCP : Maximum Overcurrent Protection (Amps)

kW : Fan Motor Rated Output (kW)

7. Sensible capacity table

Console Type (MML-UP__1NHP-E / TR)

Unit size	Outdoor air temp. CDB	Indoor air temp.													
		14.0CWB		16.0CWB		18.0CWB		19.0CWB		20.0CWB		22.0CWB		24.0CWB	
		20CDB		23CDB		26CDB		27CDB		28CDB		30CDB		32CDB	
		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
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
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

TC : Total capacity [kW] SHC : Sensible capacity [kW]

Console Type (MML-UP__1NHP-E / TR)

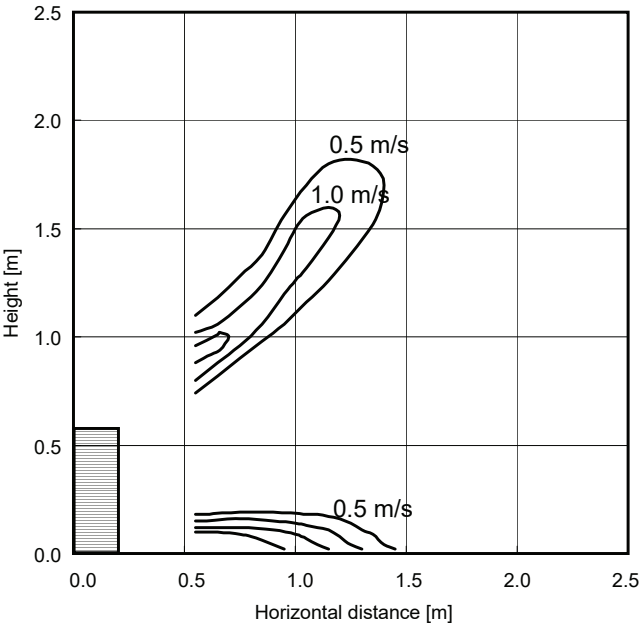
Unit size	Outdoor air temp. CDB	Indoor air temp.													
		14.0CWB		16.0CWB		18.0CWB		19.0CWB		20.0CWB		22.0CWB		24.0CWB	
		20CDB		23CDB		26CDB		27CDB		28CDB		30CDB		32CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
015	10.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	12.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	14.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	16.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	18.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	20.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	21.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	23.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	25.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	27.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	29.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	31.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	33.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	35.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.1	5.1	3.0
	37.0	3.6	2.7	4.0	2.8	4.2	3.0	4.4	3.0	4.5	3.0	4.7	3.0	5.0	2.9
	39.0	3.5	2.6	3.8	2.8	4.1	2.9	4.2	2.9	4.4	2.9	4.6	2.9	4.8	2.8
018	10.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	12.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	14.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	16.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	18.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	20.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	21.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	23.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	25.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	27.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	29.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	31.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	33.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	35.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	37.0	4.5	3.3	4.9	3.5	5.3	3.7	5.4	3.7	5.6	3.7	5.9	3.6	6.2	3.6
	39.0	4.3	3.2	4.8	3.4	5.1	3.6	5.3	3.6	5.4	3.6	5.7	3.5	6.0	3.5

TC : Total capacity [kW] SHC : Sensible capacity [kW]

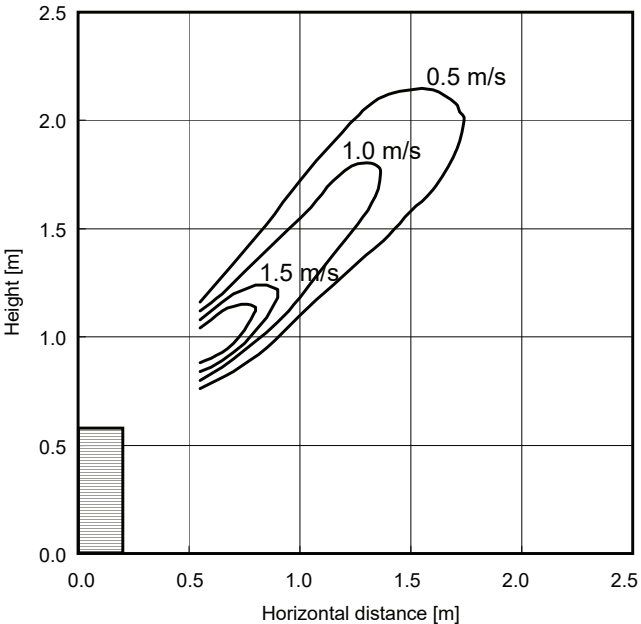
8. Air flow distance chart

MML-UP0071NHP / UP0091NHP-E / TR

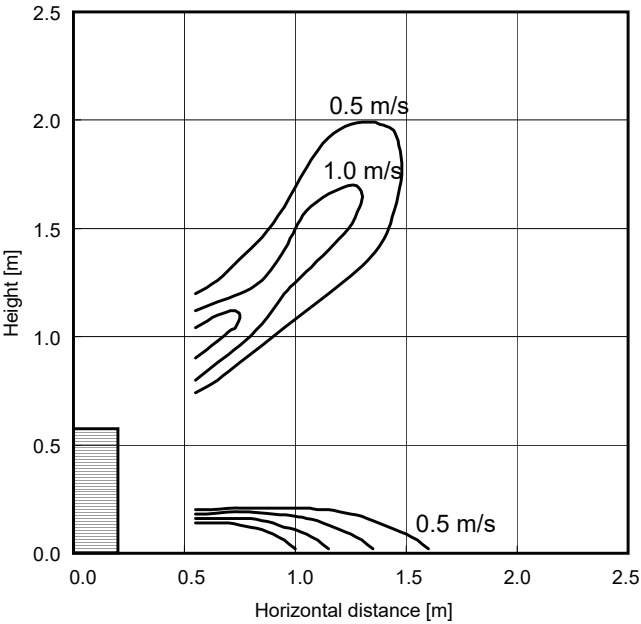
Cooling - Upper & Lower



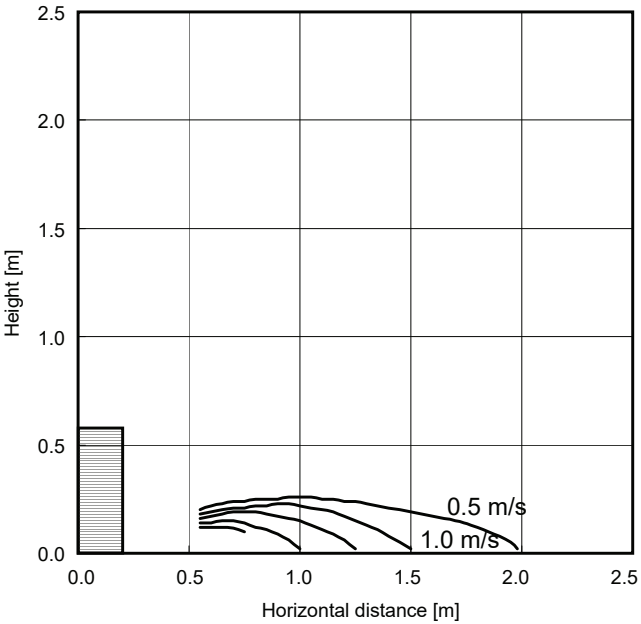
Cooling - Upper



Heating - Upper & Lower

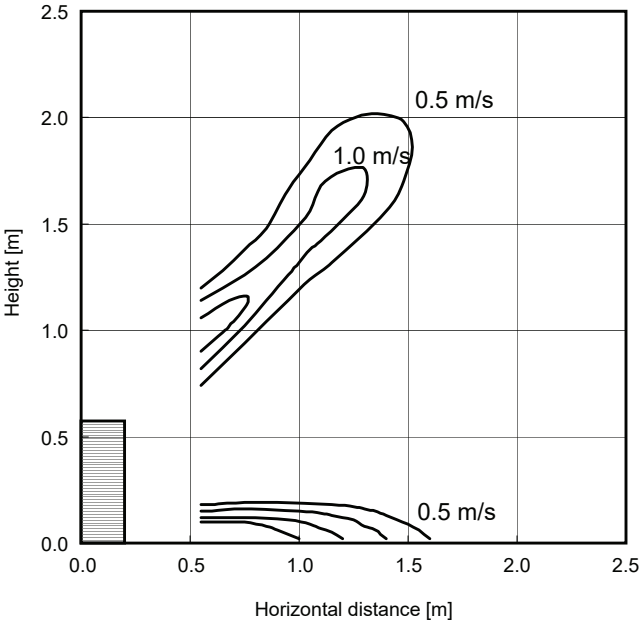


Heating - Lower

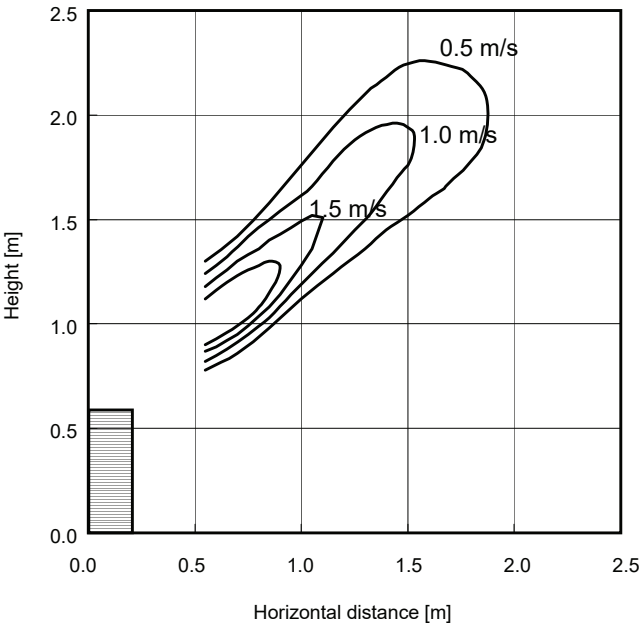


MML-UP0121NHP-E / TR

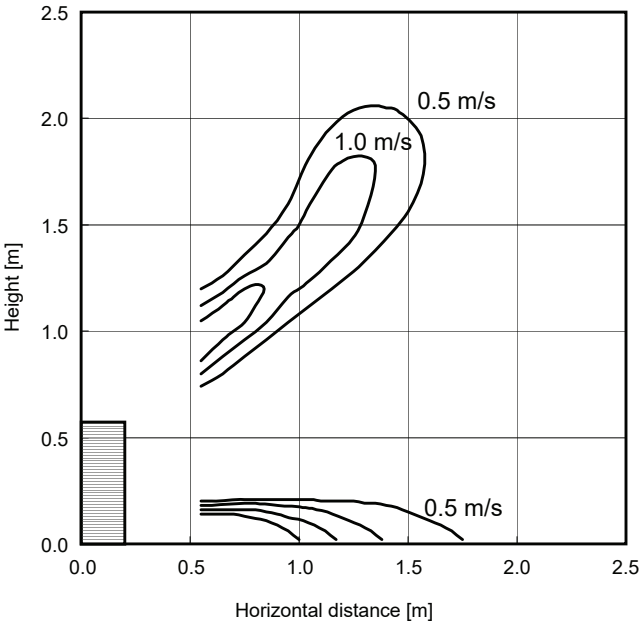
Cooling - Upper & Lower



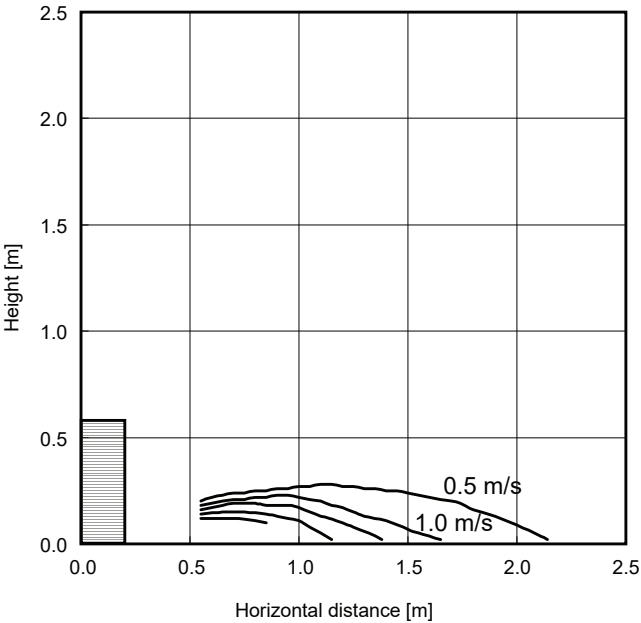
Cooling - Upper



Heating - Upper & Lower

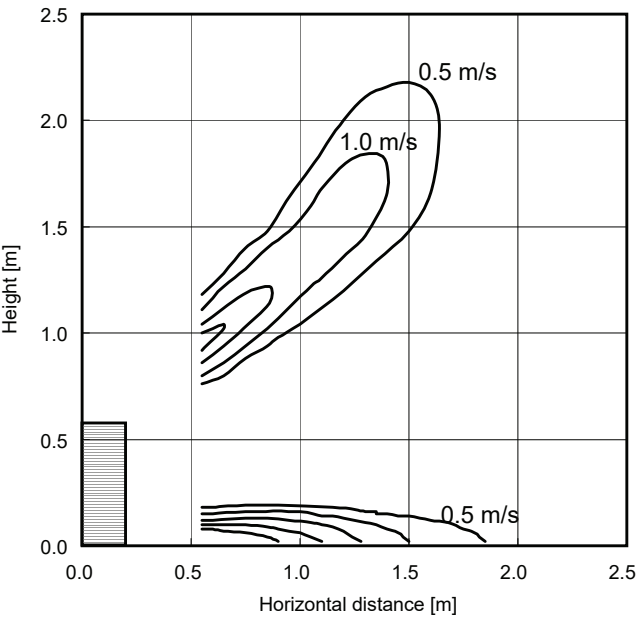


Heating - Lower

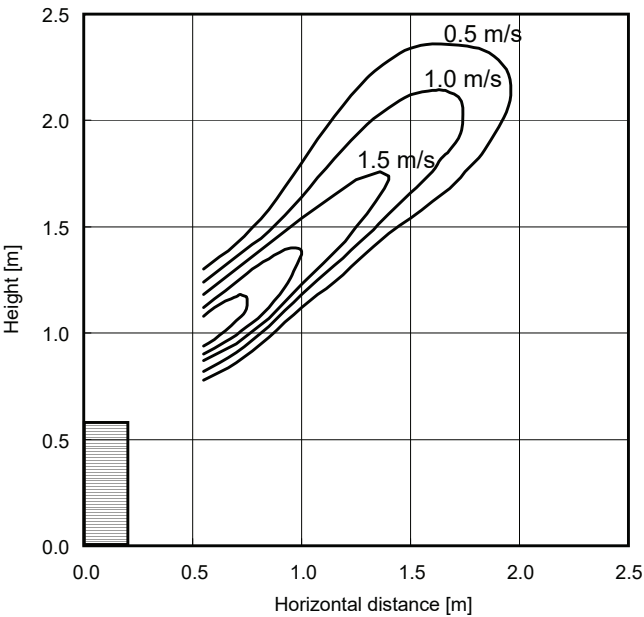


MML-UP0151NHP-E / TR

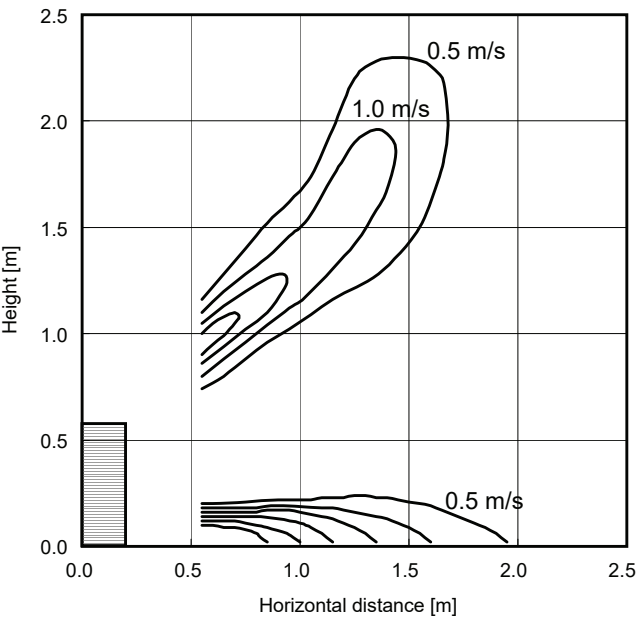
Cooling - Upper & Lower



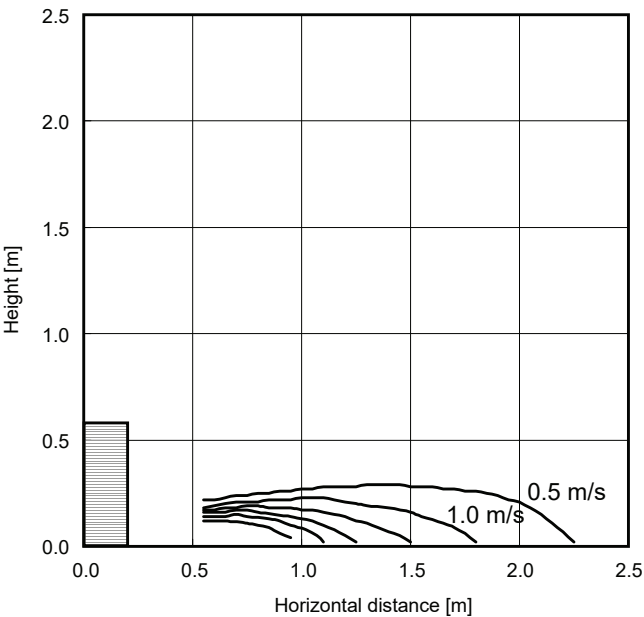
Cooling - Upper



Heating - Upper & Lower

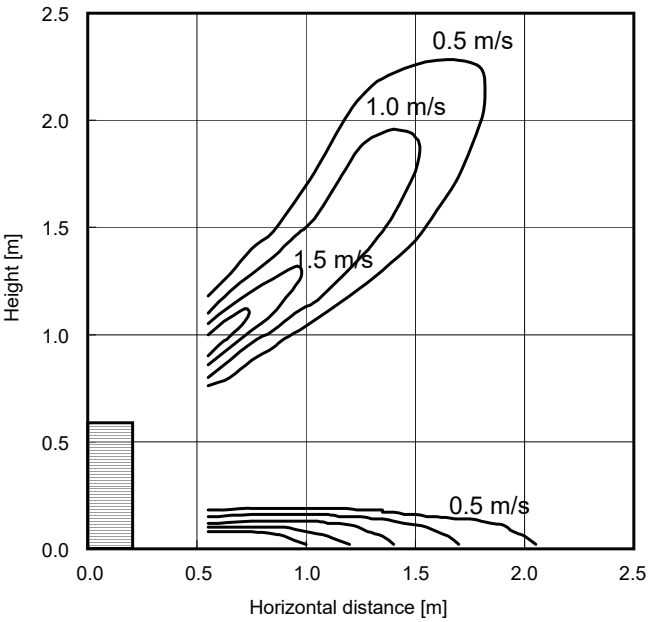


Heating - Lower

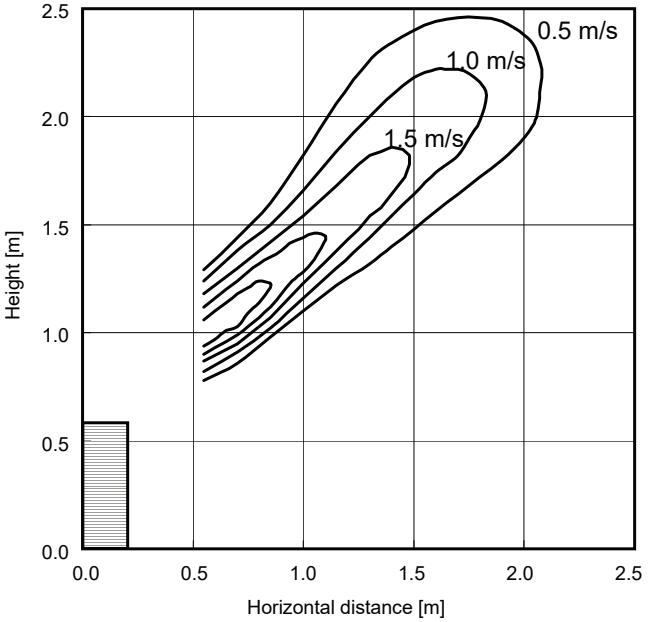


MML-UP0181NHP-E / TR

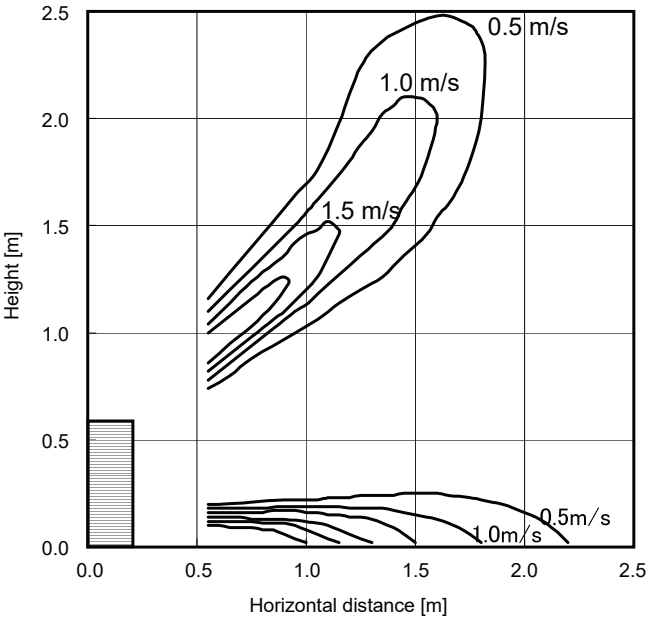
Cooling - Upper & Lower



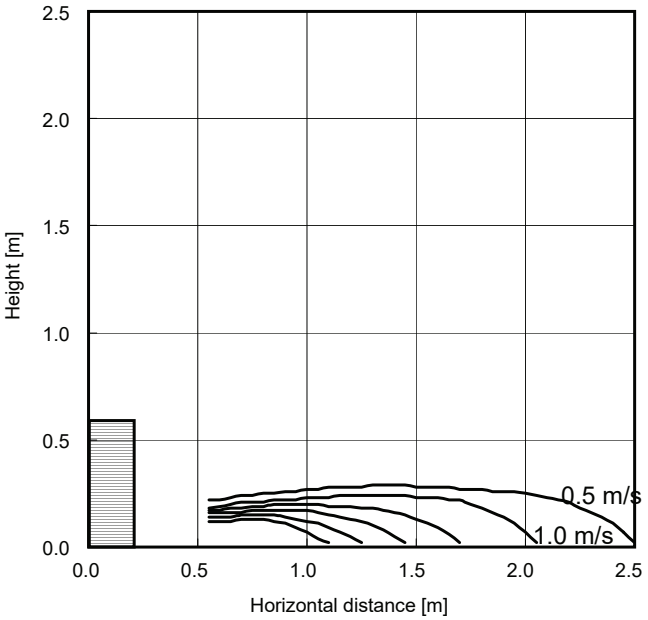
Cooling - Upper



Heating - Upper & Lower

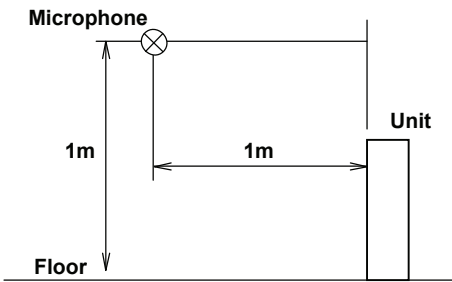


Heating - Lower



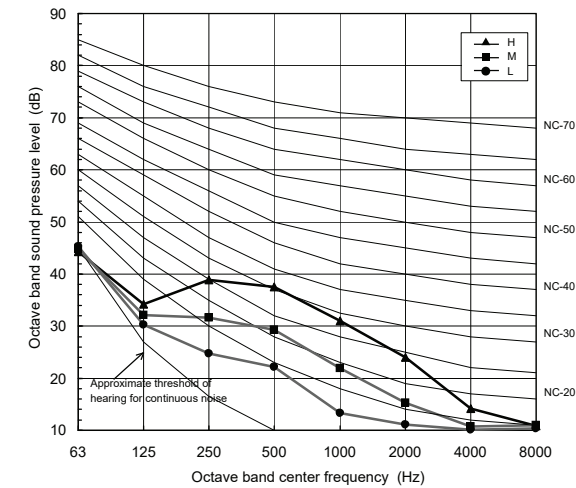
9. Sound data

Sound pressure spectrum



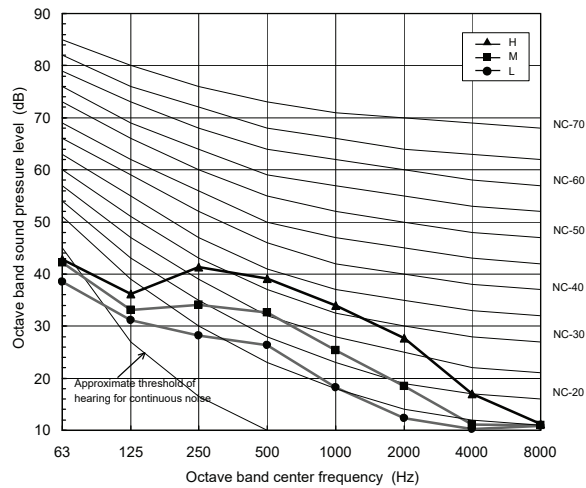
MML-UP0071NHP* / MML-UP0091NHP*

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



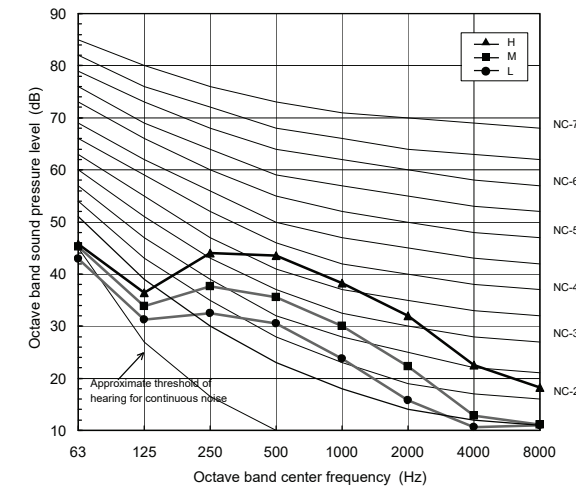
MML-UP0121NHP*

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



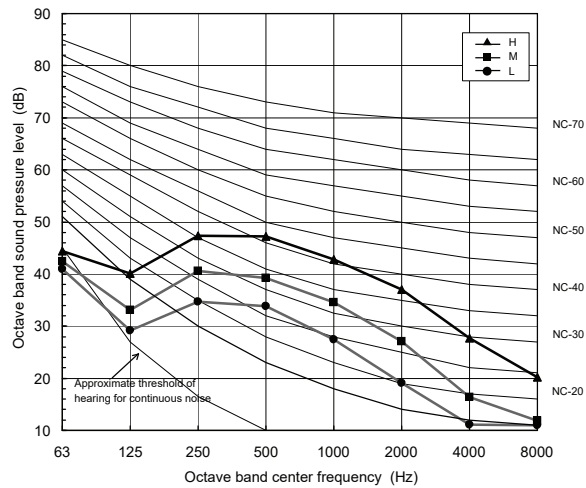
MML-UP0151NHP*

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



MML-UP0181NHP*

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



10. Accessories

Remote controller

Name	Model name	Appearance	Application	Function
Wireless remote controller	WH-TAO9NE			• 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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