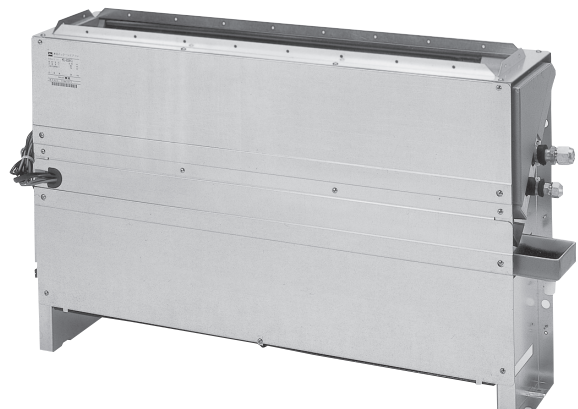


Floor Standing Concealed type

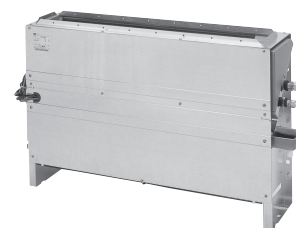
MML-AP0074BH1-E / MML-AP0094BH1-E
MML-AP0124BH1-E / MML-AP0154BH1-E
MML-AP0184BH1-E / MML-AP0244BH1-E



Contents

1. Specifications
2. Dimension
3. Center of gravity
4. Piping diagram
5. Wiring diagram
6. Electrical characteristics
7. Sensible capacity table
8. Sound data

1. Specifications



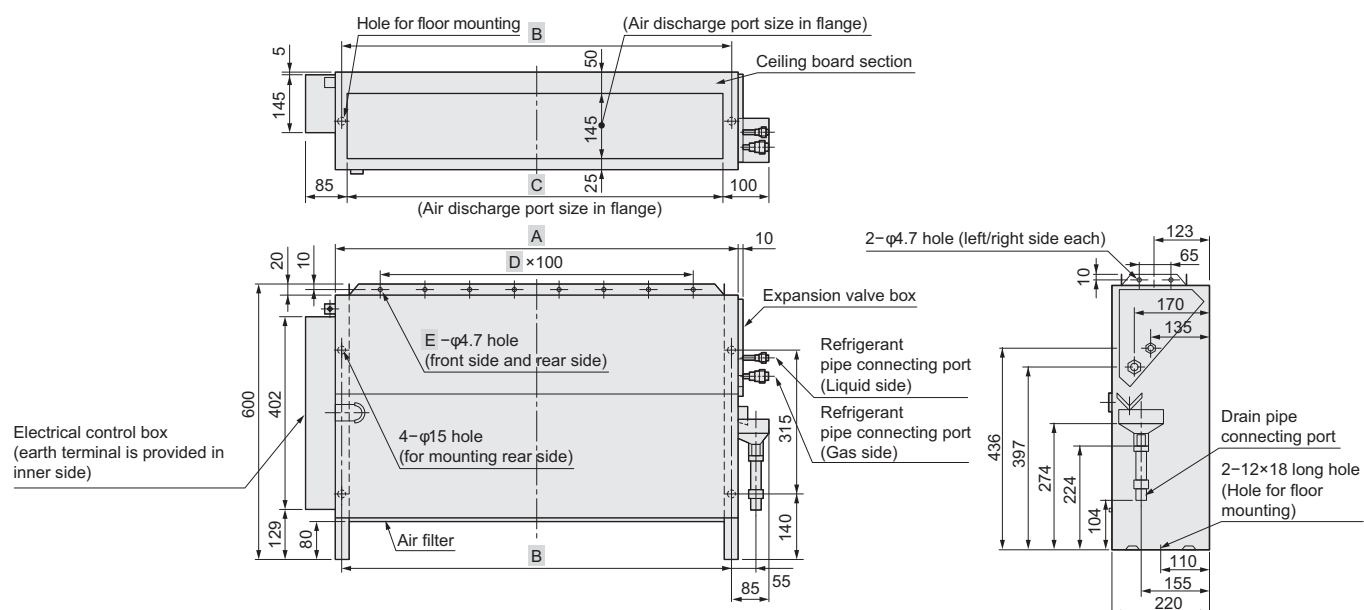
Model name			MML-	AP0074BH1-E	AP0094BH1-E	AP0124BH1-E	AP0154BH1-E	AP0184BH1-E	AP0244BH1-E
Cooling/Heating capacity (*1)			kW	2.2 / 2.5	2.8 / 3.2	3.6 / 4.0	4.5 / 5.0	5.6 / 6.3	7.1 / 8.0
Electical characteristics	Power supply			1 phase 50Hz 200-240V / 1 phase 60Hz 220V (Separate power supply for indoor units is required.)					
	Running current	50 Hz	A	0.25			0.45		0.46
		60 Hz		0.27			0.46		0.51
	Power consumption	50 Hz	kW	0.056			0.090		0.095
		60 Hz		0.058			0.096		0.110
	Power factor	50 Hz	%	97			87		90
		60 Hz		98			95		98
Starting current		A	0.60			0.80		1.00	
Appearance				Zinc hot dipping steel plate					
Outer dimension	Height	mm	600			600			
	Width	mm	745			1,045			
	Depth	mm	220			220			
Total weight			kg	21			29		
Heat exchanger				Finned tube					
Soundproof/Heat-insulating material				Non-flammable insulation					
Fan unit	Fan			Centrifugal fan					
	Standard air flow (High/Mid./Low)		m³/h	460 / 400 / 300			740 / 600 / 490		950 / 790 / 640
	Motor output		W	19			70		
	Static pressure		Pa	0					
Air filter				Standard filter (Simple filter)					
Controller				Remote controller					
Connecting pipe	Gas side		mm	Ø9.5			Ø12.7		Ø15.9
	Liquid side			Ø6.4			Ø9.5		
	Drain port (Nominal dia.)			20 (One side of male screw)					
Sound pressure level (High/Mid./Low)			dB(A)	36 / 34 / 32					42 / 37 / 33

Note

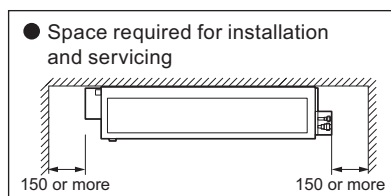
(*1) Rated conditions Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb, Outdoor 35 degC Dry Bulb.
 Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC Wet Bulb.
 Based on equivalent piping length of 7.5 m and piping height difference of 0 m.

2. Dimension

MML-AP0074BH1-E, AP0094BH1-E, AP0124BH1-E, AP0154BH1-E, AP0184BH1-E, AP0244BH1-E



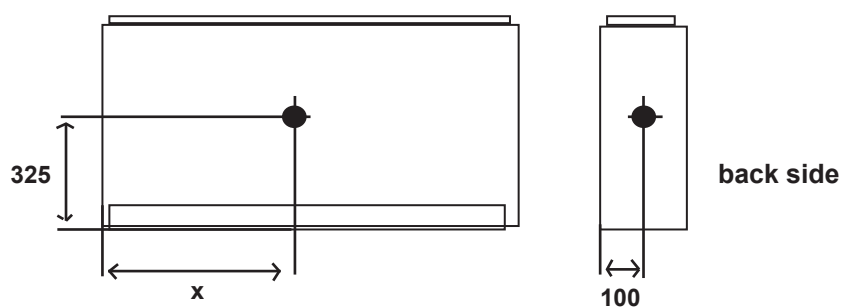
Model	MML-	A	B	C	D	E
AP0074BH1-E to AP0124BH1-E		610	580	550	4	5
AP0154BH1-E to AP0244BH1-E		910	880	850	7	8



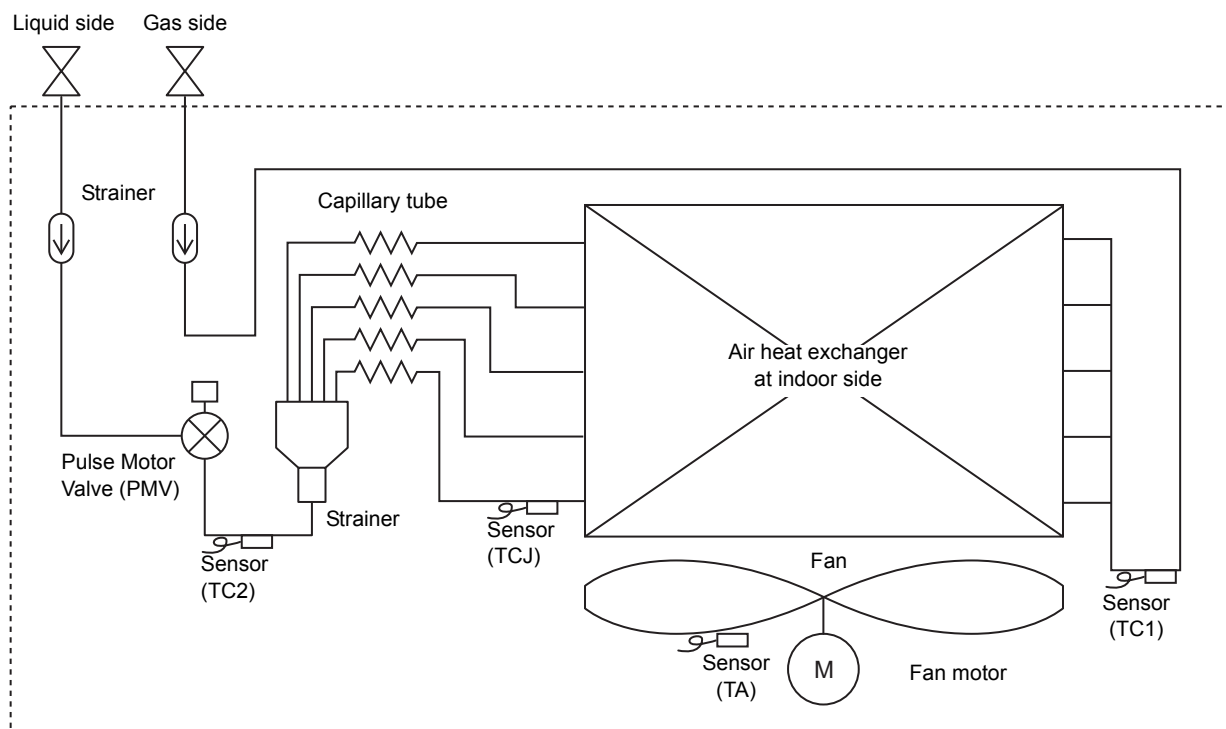
(Unit: mm)

3. Center of gravity

Model name	X (mm)	Total weight(kg)
MML-AP0074BH1-E	340	21
MML-AP0094BH1-E		
MML-AP0124BH1-E		
MML-AP0154BH1-E	470	29
MML-AP0184BH1-E		
MML-AP0244BH1-E		



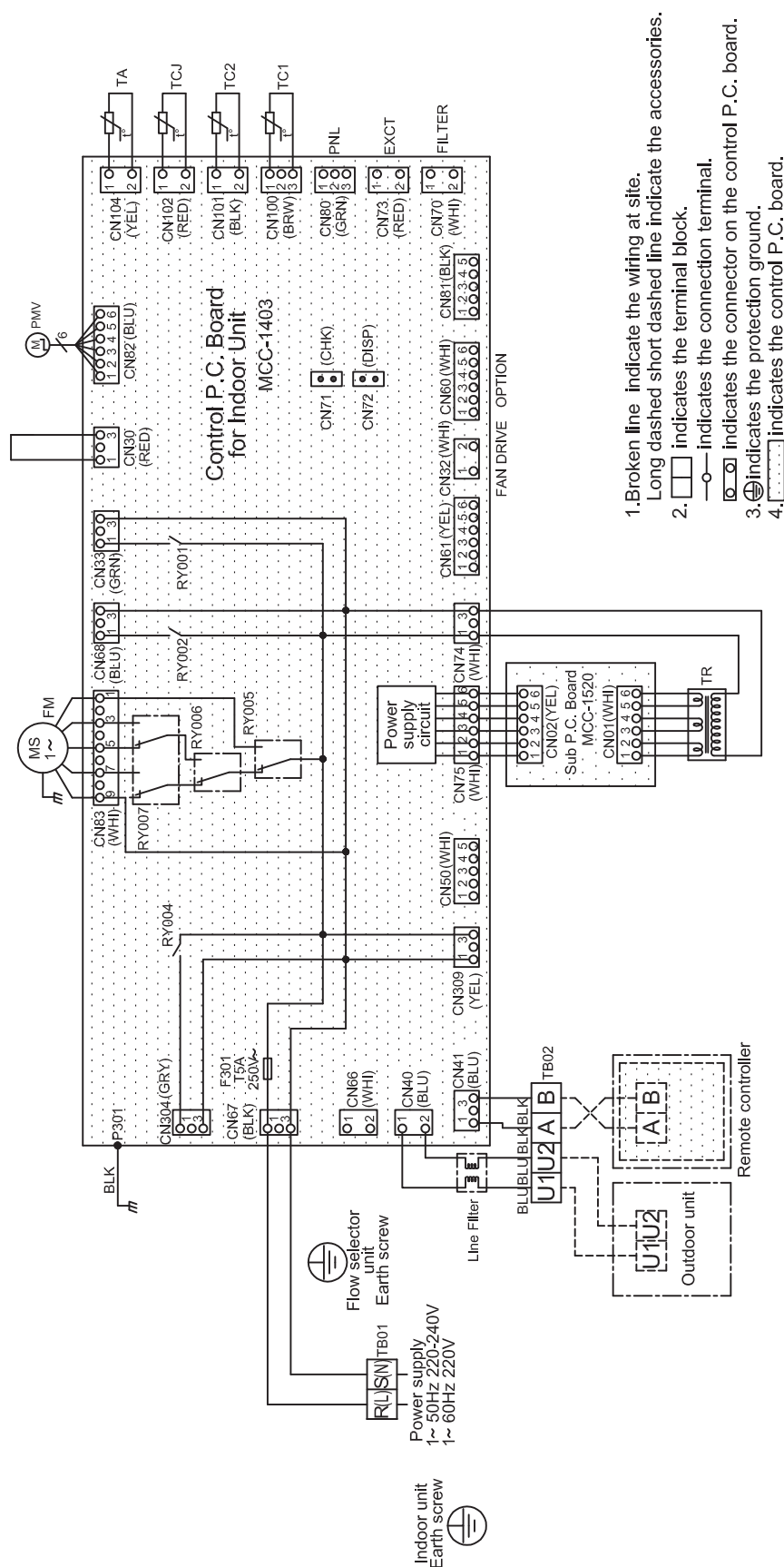
4. Piping diagram



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-AP0074BH1-E, AP0094BH1-E, AP0124BH1-E, AP0154BH1-E, AP0184BH1-E, AP0244BH1-E



1. Broken line indicates the wiring at site.
Long dashed short dashed line indicates the accessories.
2.  indicates the terminal block.
- indicates the connection terminal.
-  indicates the connector on the control P.C. board.
3.  indicates the protection ground.
4.  indicates the control P.C. board.

Symbol	Parts Name
CN**	Connector
F301	Fuse
FM	Fan Motor
PMV	Pulse Motor Valve
RC	Running Capacitor
RY005,006,007	Fan Motor Control Relay
TA	Indoor temp sensor
TB01,02,03	Terminal Block
TC1,TC2,TCJ	Temp sensor
TR	Transformer

COLOR IDENTIFICATION

RED : RED
WHI : WHITE
YEL : YELLOW
BLU : BLUE
BLK : BLACK
GRY : GRAY
PNK : PINK
ORN : ORANGE
BRW : BROWN
GRN : GREEN

6. Electrical characteristics

1. 50 Hz

Type	Model	Nominal Voltage (V-Ph-Hz)	Voltage Range		Fan Motor		Power supply	
			Min	Max	kW	FLA	MCA	MOCP
Floor Standing Concealed Type	MML-AP0094BH1-E	230-1-50	198	264	0.019	0.29	0.36	15
	MML-AP0124BH1-E	230-1-50	198	264	0.019	0.29	0.36	15
	MML-AP0154BH1-E	230-1-50	198	264	0.070	0.52	0.65	15
	MML-AP0184BH1-E	230-1-50	198	264	0.070	0.52	0.65	15
	MML-AP0244BH1-E	230-1-50	198	264	0.070	0.53	0.66	15

MCA : Minimum Circuit Amps

FLA : Full Load Amps

MOCP : Maximum Overcurrent Protection (Amps)

kW : Fan Motor Rated Output (kW)

2. 60 Hz

Type	Model	Nominal Voltage (V-Ph-Hz)	Voltage Range		Fan Motor		Power supply	
			Min	Max	kW	FLA	MCA	MOCP
Floor Standing Concealed Type	MML-AP0074BH1-E	220-1-60	198	242	0.019	0.31	0.39	15
	MML-AP0094BH1-E	220-1-60	198	242	0.019	0.31	0.39	15
	MML-AP0124BH1-E	220-1-60	198	242	0.019	0.31	0.39	15
	MML-AP0154BH1-E	220-1-60	198	242	0.070	0.53	0.66	15
	MML-AP0184BH1-E	220-1-60	198	242	0.070	0.53	0.66	15
	MML-AP0244BH1-E	220-1-60	198	242	0.070	0.59	0.73	15

MCA : Minimum Circuit Amps

FLA : Full Load Amps

MOCP : Maximum Overcurrent Protection (Amps)

kW : Fan Motor Rated Output (kW)

7. Sensible capacity table

Floor Standing Concealed Type (MML-AP__4BH1-E)

unit size	outdoor air temp. °CDB	indoor air temp.													
		14.0°CWB		16.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		22.0°CWB		24.0°CWB	
		20°CDB		23°CDB		26°CDB		27°CDB		28°CDB		30°CDB		32°CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
007	10.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	12.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	14.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	16.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	18.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	20.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	21.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	23.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	25.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	27.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	29.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	31.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	33.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	35.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
009	10.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	12.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	14.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	16.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	18.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	20.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	21.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	23.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	25.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	27.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	29.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	31.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	33.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	35.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
012	10.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	12.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	14.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	16.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	18.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	20.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	21.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	23.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	25.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	27.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	29.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	31.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	33.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	35.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
015	10.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	12.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	14.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	16.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	18.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	20.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	21.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	23.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	25.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	27.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	29.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	31.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	33.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	35.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7

TC : Total capacity [kW]

SHC : Sensible capacity [kW]

Floor Standing Concealed Type (MML-AP__4BH1-E)

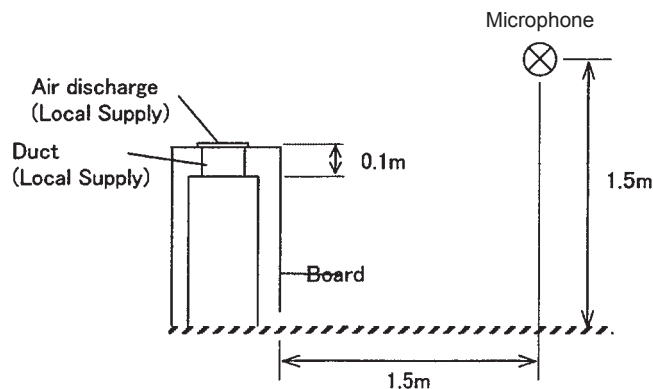
unit size	outdoor air temp. °CDB	indoor air temp.													
		14.0°CWB		16.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		22.0°CWB		24.0°CWB	
		20°CDB		23°CDB		26°CDB		27°CDB		28°CDB		30°CDB		32°CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
018	10.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	12.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	14.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	16.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	18.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	20.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	21.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	23.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	25.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	27.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	29.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	31.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
024	10.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	12.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	14.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	16.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	18.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	20.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	21.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	23.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	25.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	27.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	29.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	31.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	33.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	35.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4

TC : Total capacity [kW]

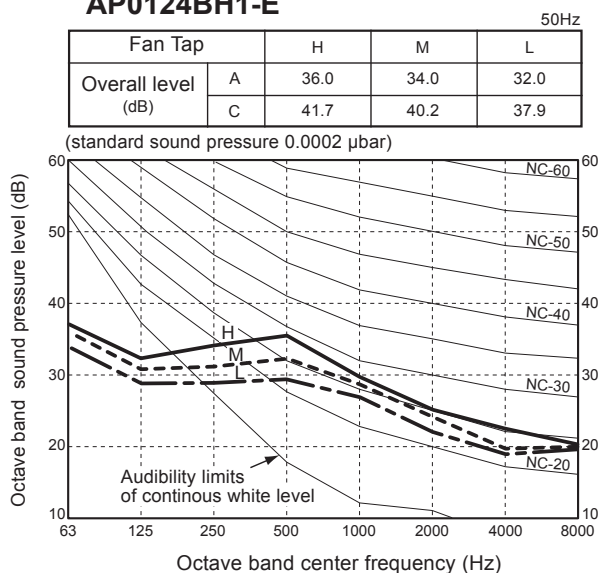
SHC : Sensible capacity [kW]

8. Sound data

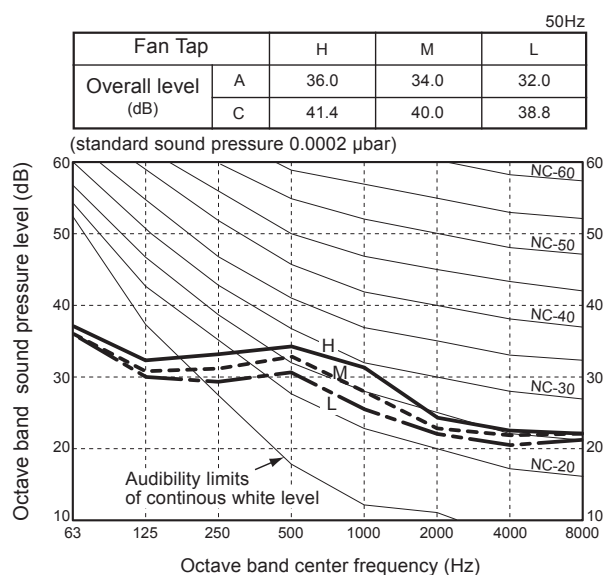
Sound pressure spectrum



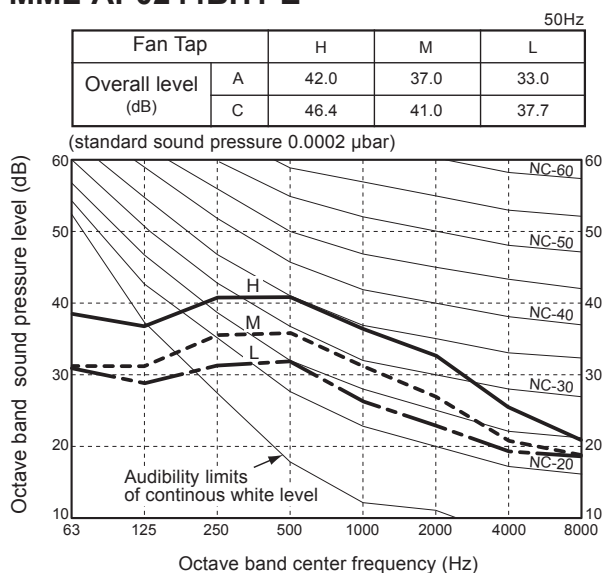
MML-AP0074BH1-E, AP0094BH1-E, AP0124BH1-E

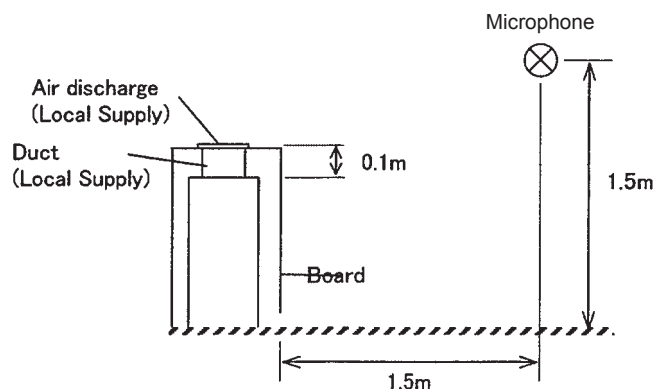


MML-AP0154BH1-E, AP0184BH1-E

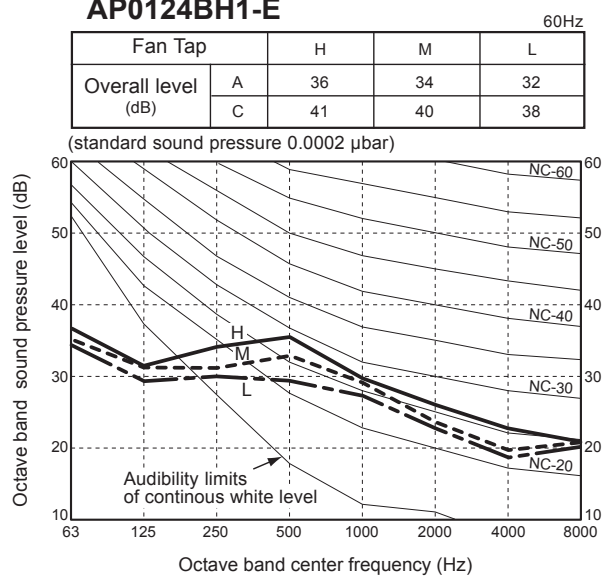


MML-AP0244BH1-E

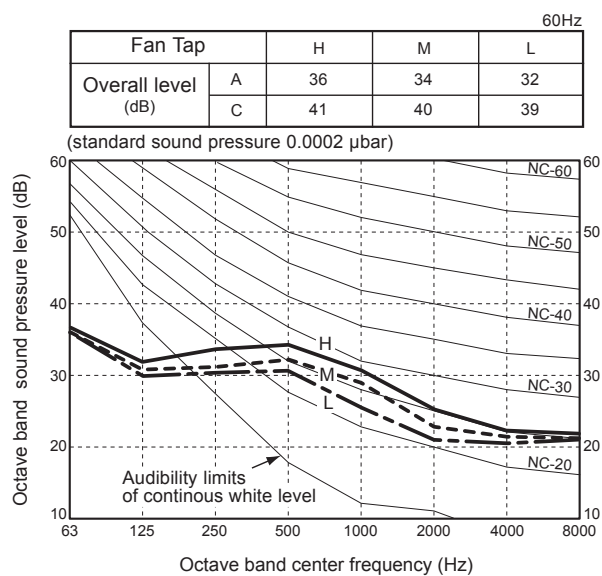




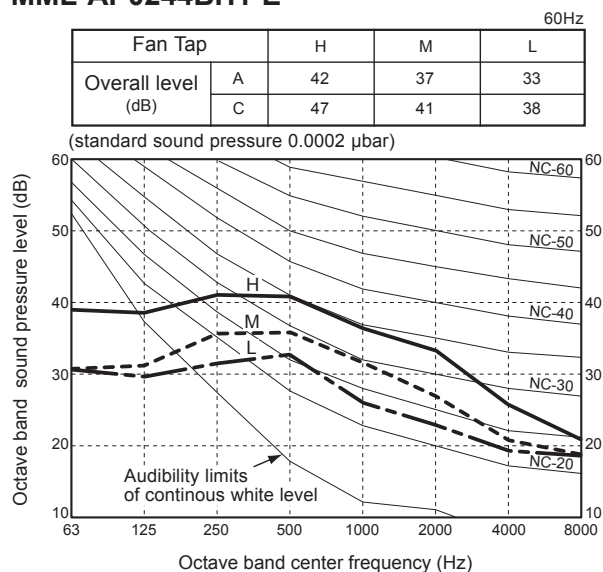
MML-AP0074BH1-E, AP0094BH1-E, AP0124BH1-E



MML-AP0154BH1-E, AP0184BH1-E



MML-AP0244BH1-E



Floor Standing Concealed type Engineering Data Book

Model name:

MML-AP__4BH1-E

September, 2018 Second Edition

TOSHIBA CARRIER CORPORATION