

High Static Pressure Duct Type

MMD-UP0721HP-E1 / TR1

MMD-UP0961HP-E1 / TR1



Contents

1. Specifications.....	2
2. Dimensions.....	3
3. Center of gravity.....	5
4. Piping diagram.....	6
5. Wiring diagram.....	7
6. Electrical characteristics.....	8
7. Sensible capacity table.....	9
8. Fan static characteristics.....	10
9. Sound characteristics (NC curve).....	12
10. Accessories.....	16

1. Specifications

Model name		MMD-	UP0721HP-E1/TR1	UP0961HP-E1/TR1
Power supply			1 ph 50Hz 220-240V ~ 1 ph 60Hz 208-230V	
Cooling capacity (*1)		(kW)	22.4	28.0
Heating capacity (*1)		(kW)	25.0	31.5
Running current		(A)	2.83	3.77
Power consumption		(kW)	0.540	0.790
Starting current		(A)	7.80	7.80
FCU dimension	Height	(mm)	448	
	Width	(mm)	1400	
	Depth	(mm)	900	
Total weight		(kg)	97	
Heat exchangere			Finned tube	
Soundproof / Heat-insulation material			Polyethylene foam	
Fan			Centrifugal fan (Sirocco fan)	
Air flow volume	Indoor unit (H/M/L)	(m3/h)	3800 / 3200 / 2500	4800 / 4200 / 3500
Sound pressure	Indoor unit (H/M/L)	dB(A)	44 / 40 / 36	46 / 42 / 38
Motor output		(W)	1000	
Static pressure factory set (Max)		(Pa)	150 (250)	
Conecting pipe	Gas side	(mm)	ø 22.23	
	Liquid side	(mm)	ø 12.7	
	Drain pipe	(mm)	25 (Polyvinyl chloride tube)	
Operating Range for SMMS-u	Cooling	(°C)	5 ~ 46 - 52 (*2)	
	Heating	(°C)	-10 ~ 46	

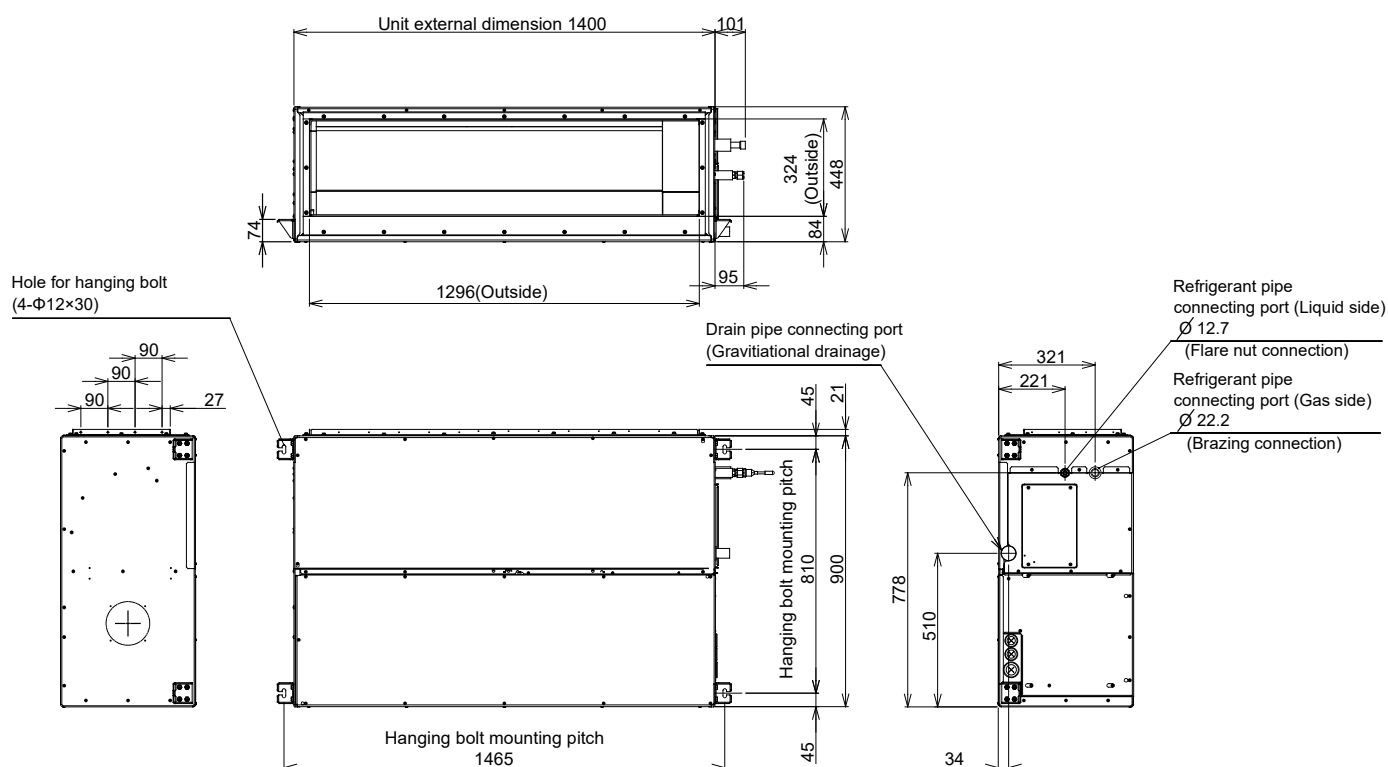
(*1) Rated testing conditions Cooling : Indoor air tempreature 27 °C DB/ 19°C WB, Outdoor 35 °C DB

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

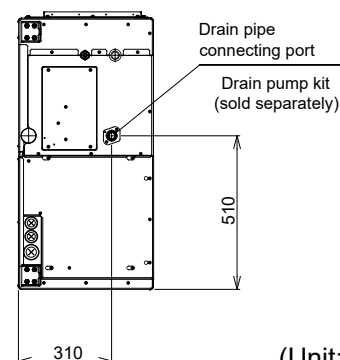
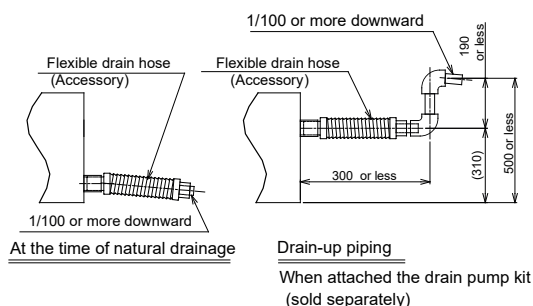
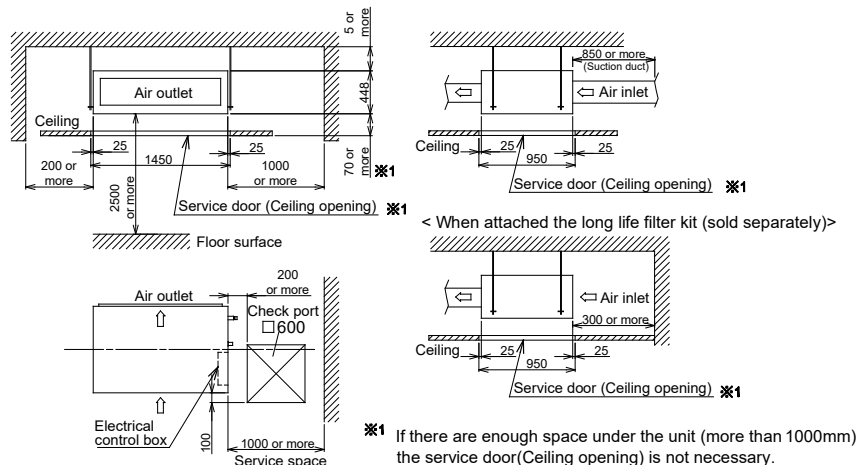
(*2) 46-52 °C is also available but temporary operate

2. Dimensions

MMD-UP0721HP-E1/TR1, MMD-UP0961HP-E1/TR1



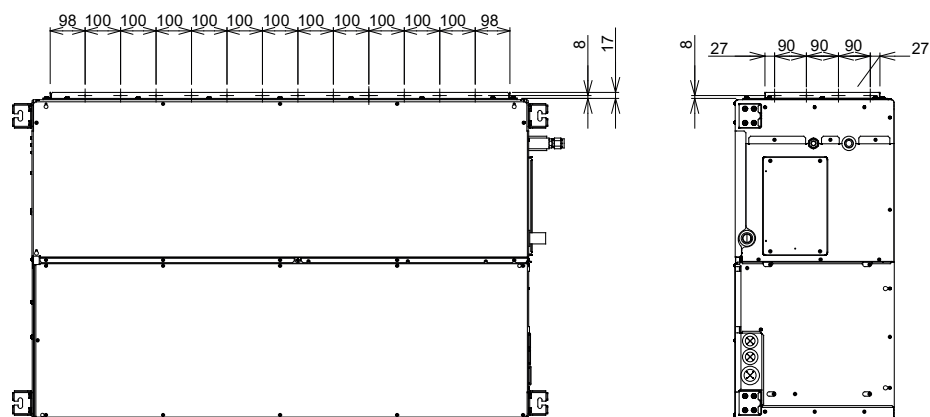
Space required for installation and servicing



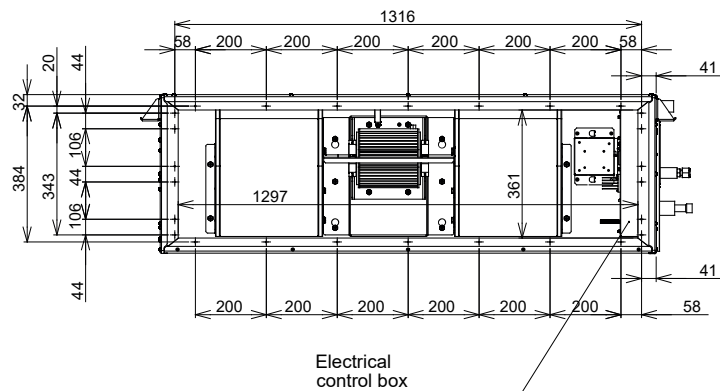
(Unit:mm)

For duct design MMD-UP0721HP-E1/TR1, MMD-UP0961HP-E1/TR1

<Air outlet>

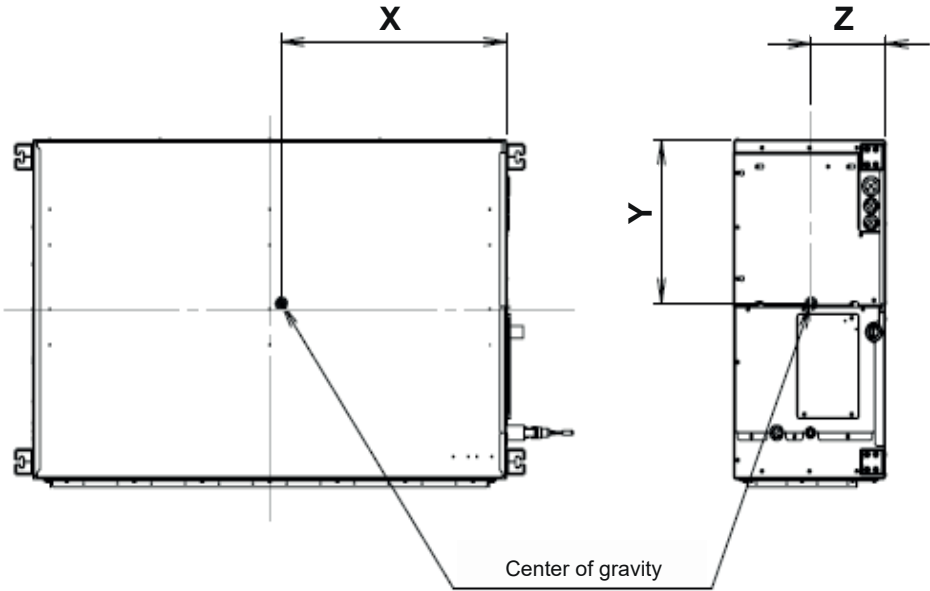


<Air inlet>



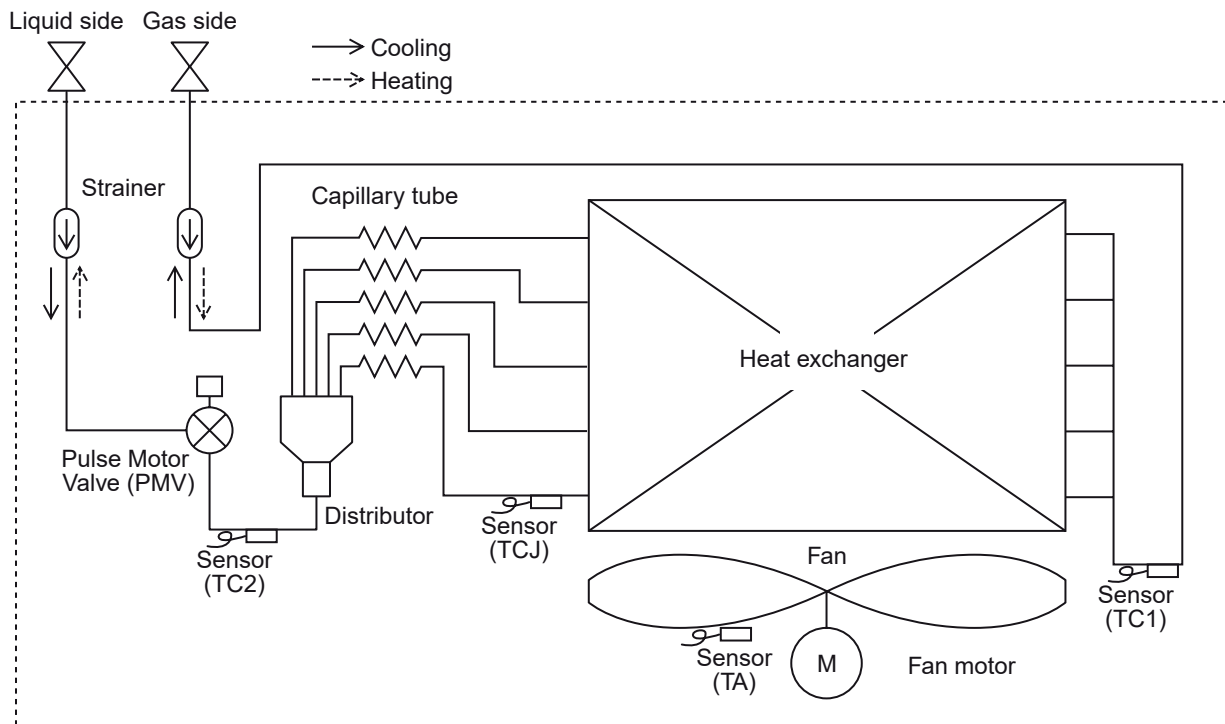
3. Center of gravity

Model name	X (mm)	Y (mm)	Z (mm)	Total weight (kg)
MMD-UP0721HP-E1 / TR1	29.3	655	435	97
MMD-UP0961HP-E1 / TR1				



4. Piping diagram

MMD-UP0721HP-E1/TR1, MMD-UP0961HP-E1/TR1

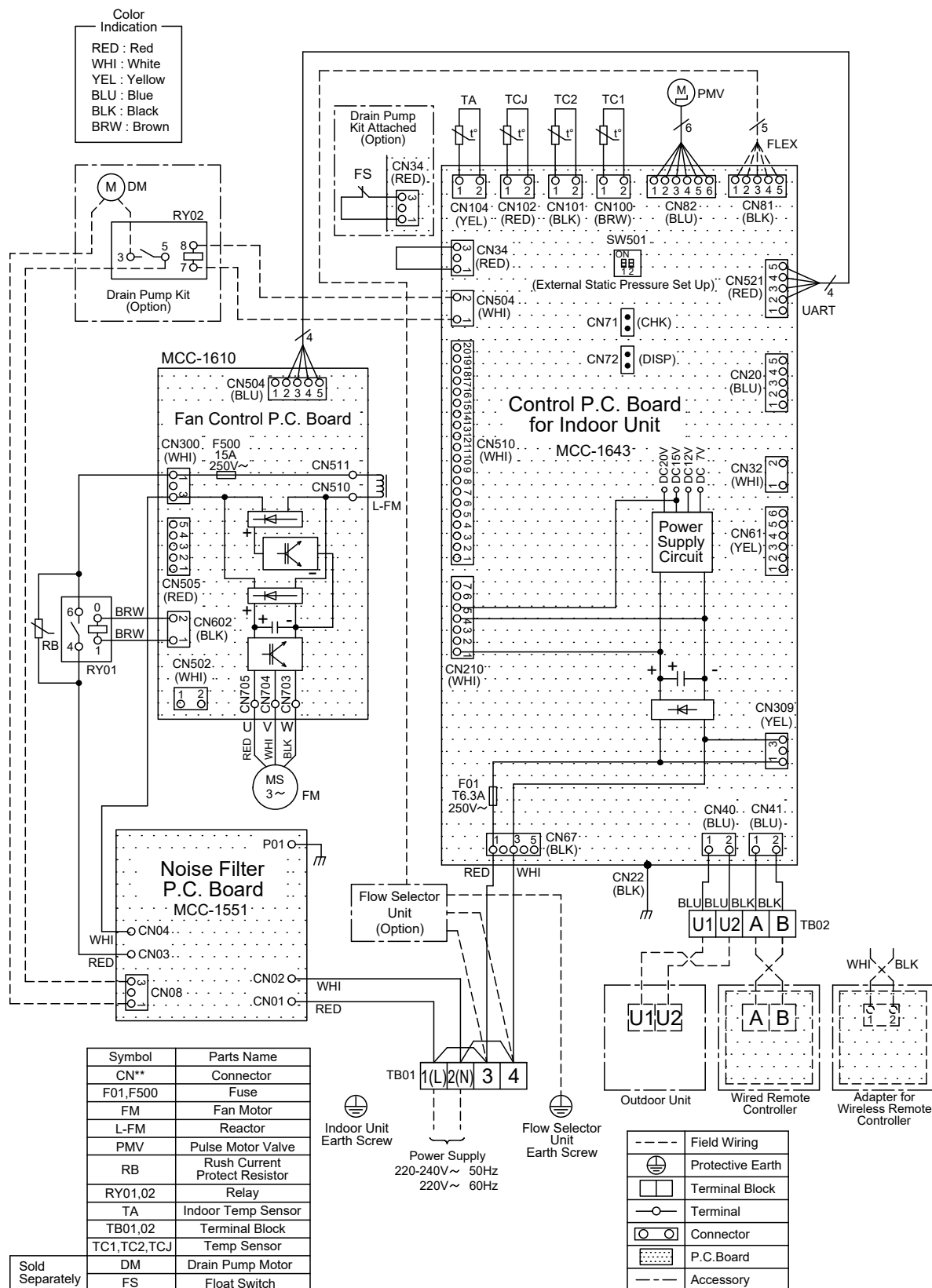


Explanation of functional parts in indoor unit

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

MMD-UP0721HP-E1/TR1, MMD-UP0961HP-E1/TR1



6. Electrical characteristics

Type	Model	Normal Voltage	Voltage Range		Fan Motor		Power Supply	
		(V-Ph-Hz)	Min.	Max.	kW	FLA	MCA	MOCP
Concealed Duct High Static Pressure Type	MMD-UP0721HP-E1 / TR1	220-1-50	198	242	1.000	4.30	5.40	15
	MMD-UP0961HP-E1 / TR1	220-1-50	198	242	1.000	5.50	6.90	15

- Wiring size

Must be independent from the outdoor unit power supply.

Model \ Item	Power supply wiring			
	Wire size			
All models of indoor units	2.0 mm ² (AWG#14)	Max. 20 m	3.5 mm ² (AWG#12)	Max. 50 m

NOTE:

The above connecting lengths stated in the table, indicate the length from the isolator to the outdoor unit. When the power supply of the indoor units are connected in parallel, it is assumed that no more than a 2% voltage drop will occur. If the connecting length is to exceed the stated lengths, select a suitable wire in accordance with the local wiring standards.

7. Sensible capacity table

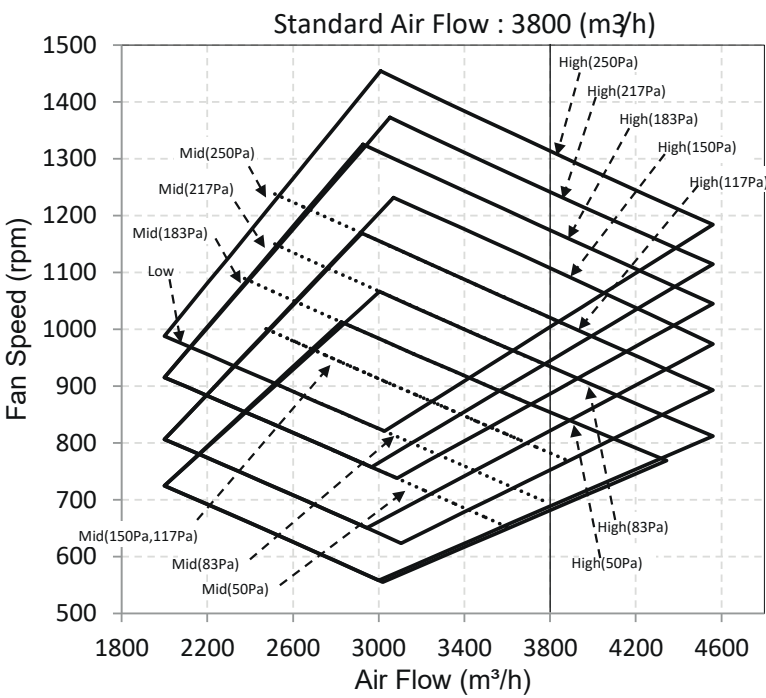
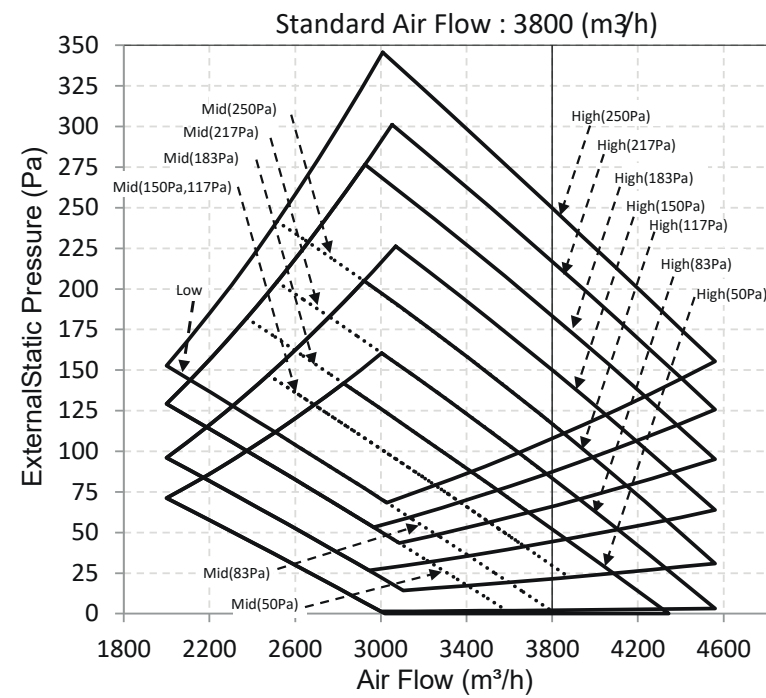
High static duct type (MMD-UP__1HP-E1 / TR1)

unit size	outdoor air temp. °CDB	14 °CWB		16 °CWB		18 °CWB		19 °CWB		20 °CWB		22 °CWB		24 °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
072	10	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	12	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	14	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	16	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	18	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	20	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	21	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	23	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	25	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	27	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	29	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	31	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	33	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	35	18.57	16.62	19.95	17.53	21.77	18.73	22.40	18.82	22.78	18.87	24.23	18.64	25.22	17.93
	37	18.03	16.14	19.37	17.02	21.14	18.19	21.75	18.27	22.12	18.32	23.53	18.10	24.49	17.41
	39	17.60	15.76	18.91	16.62	20.64	17.76	21.24	17.84	21.60	17.89	22.97	17.67	23.91	17.00
096	10	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	12	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	14	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	16	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	18	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	20	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	21	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	23	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	25	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	27	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	29	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	31	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	33	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	35	23.21	20.77	24.93	21.90	27.21	23.40	28.00	23.52	28.48	23.59	30.28	23.28	31.53	22.41
	37	22.54	20.17	24.21	21.26	26.42	22.72	27.19	22.84	27.65	22.91	29.40	22.60	30.62	21.76
	39	22.00	19.69	23.63	20.76	25.80	22.18	26.54	22.30	27.00	22.36	28.71	22.07	29.89	21.24

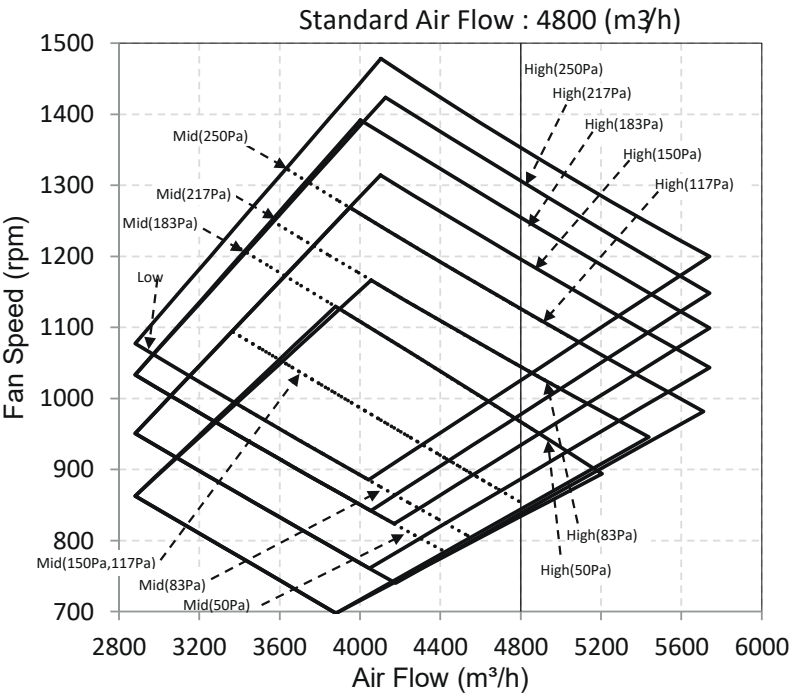
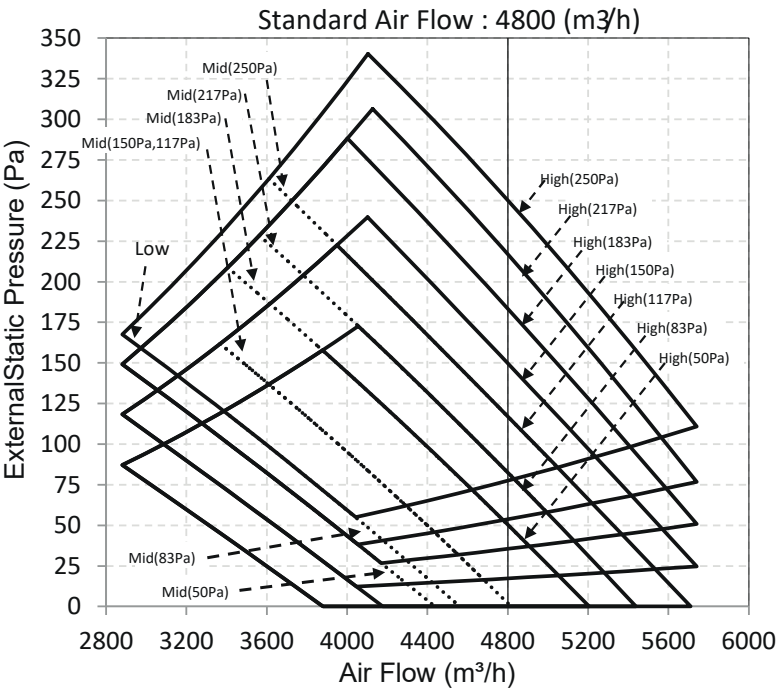
TC : Total capacity [kW] SHC : Sensible capacity [kW]

8. Fan static characteristics

MMD-UP0721HP-E1 / TR1

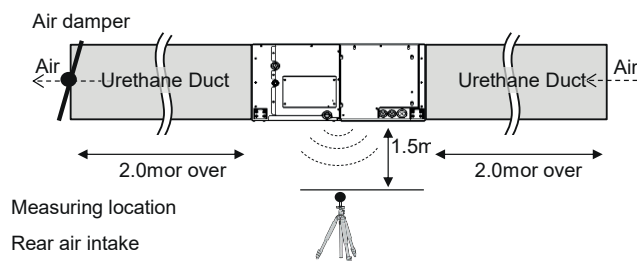


MMD-UP0961HP-E1 / TR1



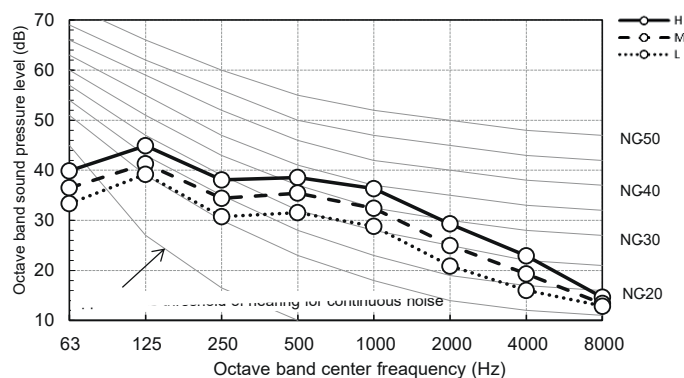
9. Sound characteristics (NC Curve)

MMD-UP0721HP-E1 / TR1



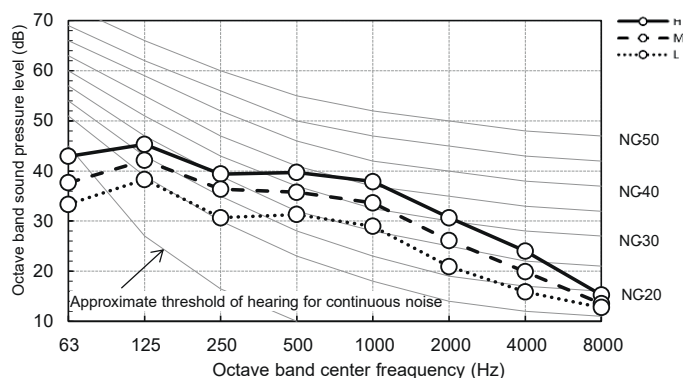
External static pressure 50Pa

Fan tap	H	M	L
Sound pressure (dBA)	42.5	38.5	34.5



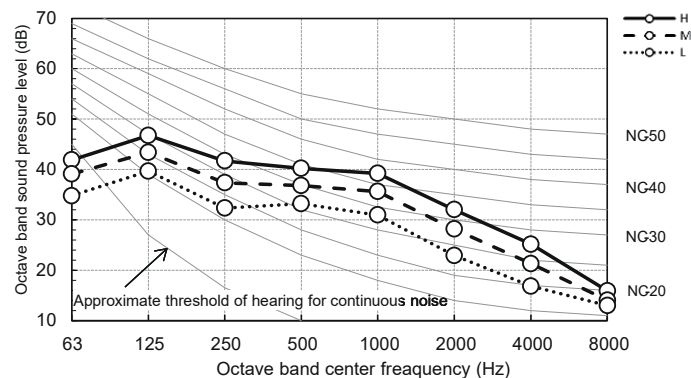
External static pressure 83Pa

Fan tap	H	M	L
Sound pressure (dBA)	43.0	39.0	35.0



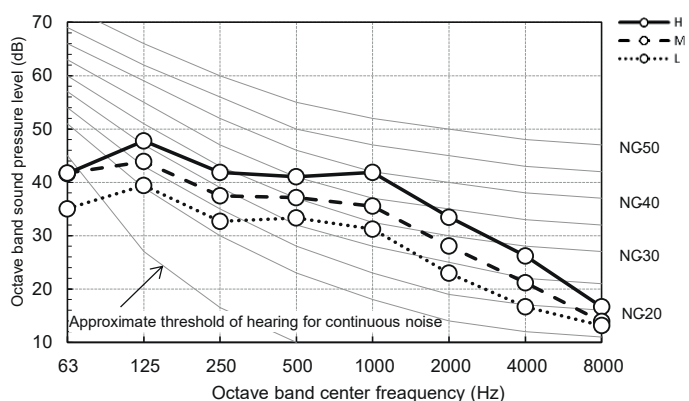
External static pressure 117Pa

Fan tap	H	M	L
Sound pressure (dBA)	43.5	39.5	35.5



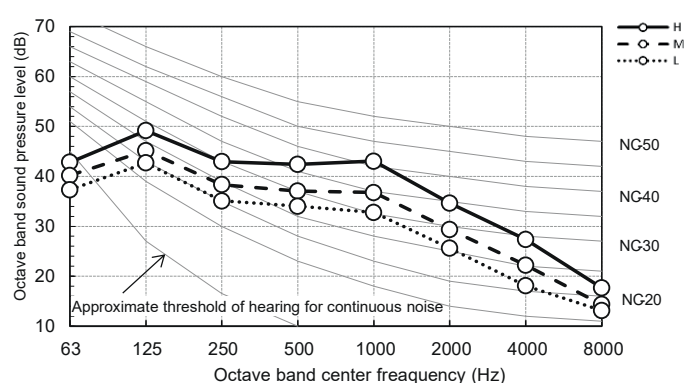
External static pressure 150Pa

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



External static pressure 183Pa

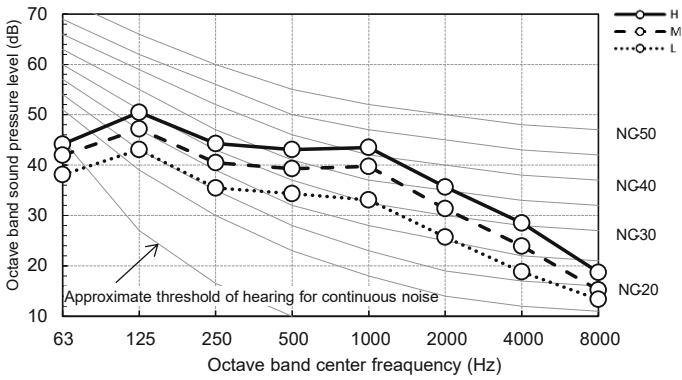
Fan tap	H	M	L
Sound pressure (dBA)	45.0	41.0	37.0



MMD-UP0721HP-E1 / TR1

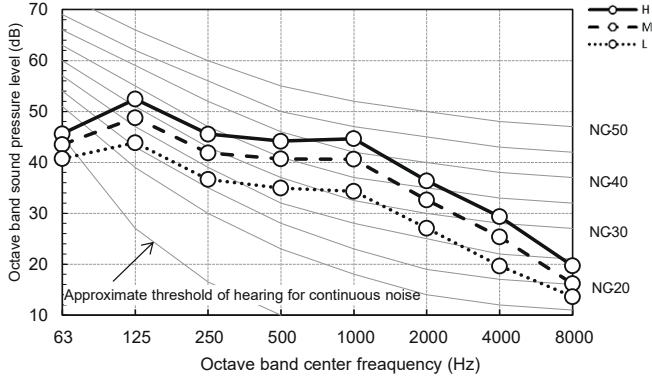
External static pressure 217Pa

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

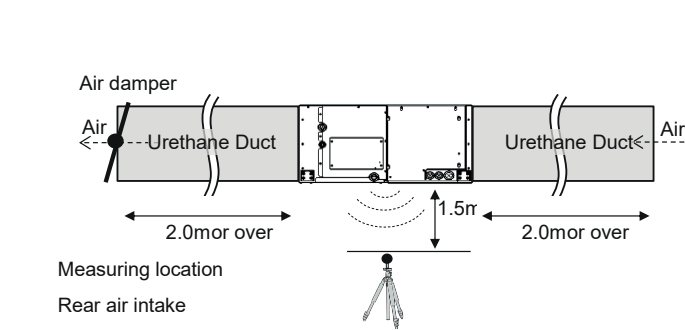


External static pressure 250Pa

Fan tap	H	M	L
Sound pressure (dBA)	47.0	43.0	39.0

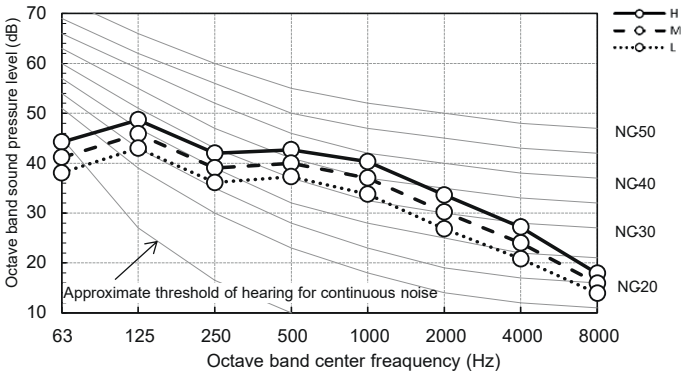


MMD-UP0961HP-E1 / TR1



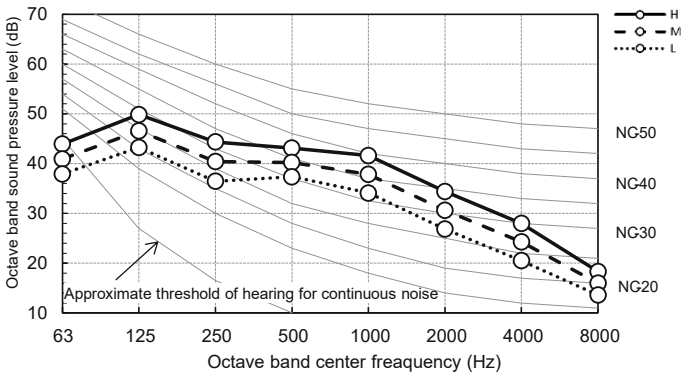
External static pressure 50Pa

Fan tap	H	M	L
Sound pressure (dBA)	44.5	40.5	36.5



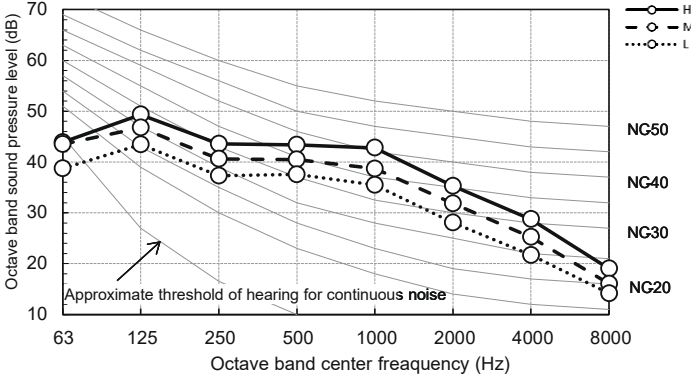
External static pressure 83Pa

Fan tap	H	M	L
Sound pressure (dBA)	45.0	41.0	37.0



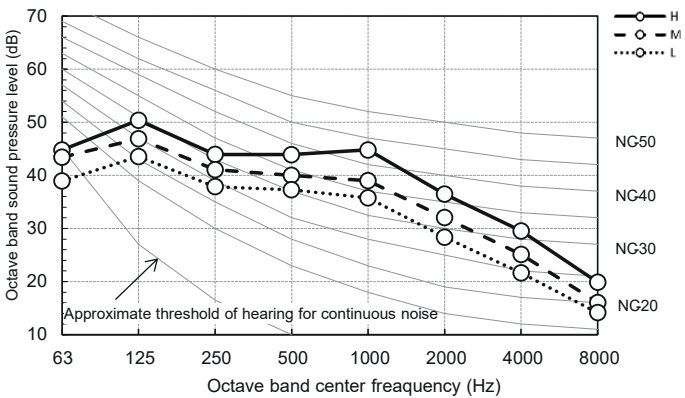
External static pressure 117Pa

Fan tap	H	M	L
Sound pressure (dBA)	45.5	41.5	37.5



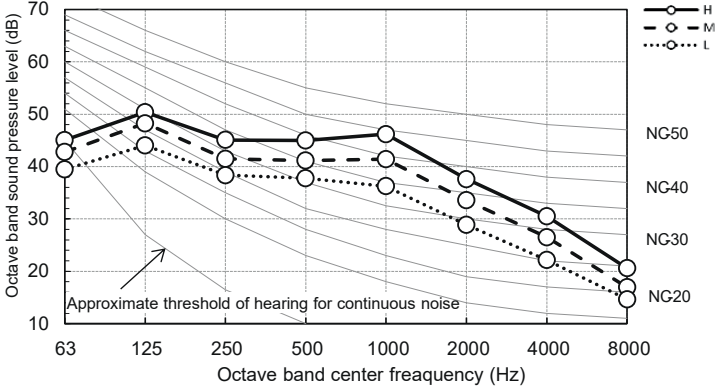
External static pressure 150Pa

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



External static pressure 183Pa

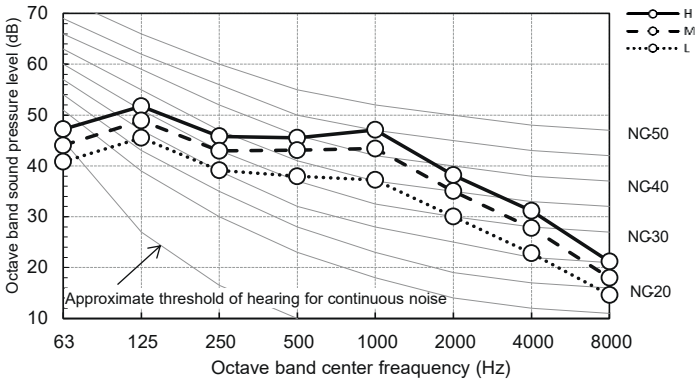
Fan tap	H	M	L
Sound pressure (dBA)	47.0	43.0	39.0



MMD-UP0961HP-E1 / TR1

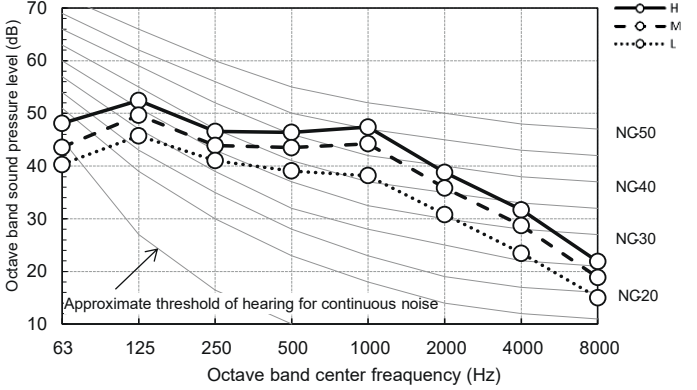
External static pressure 217Pa

Fan tap	H	M	L
Sound pressure (dBA)	48.0	44.0	40.0



External static pressure 250Pa

Fan tap	H	M	L
Sound pressure (dBA)	49.0	45.0	41.0



10. Accessories

Option Parts	Model Name	Applicable FCU
Long life filter kit	TCB-LK2801DP-E	MMD-UP0721 / 0961HP - E1 / TR1
Drain pump kit	TCB-DP40DPE	MMD-UP0721 / 0961HP - E1 / TR1
Auxiliary fresh air flange	TCB-FF151US-E	For Duct type

TOSHIBA CARRIER (THAILAND) CO.,LTD.

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