

Medium Static Pressure Duct Type

MMD-AP0076BHPUL
MMD-AP0096BHPUL
MMD-AP0126BHPUL
MMD-AP0156BHPUL
MMD-AP0186BHPUL
MMD-AP0216BHPUL
MMD-AP0246BHPUL
MMD-AP0306BHPUL
MMD-AP0366BHPUL
MMD-AP0426BHPUL
MMD-AP0486BHPUL
MMD-AP0546BHPUL



Contents

1. Specifications
2. Dimensions
3. Center of gravity
4. Piping diagram
5. Wiring diagram
6. Electrical current characteristics
7. Sensible capacity table
8. Fan characteristics
9. Sound data
10. Accessories

1. Specifications

Model name			MMD-	AP0076BHPUL	AP0096BHPUL	AP0126BHPUL	AP0156BHPUL	AP0186BHPUL	AP0216BHPUL
Power supply			1 ph 60Hz 230V (208 / 230V)						
Cooling capacity (*1)			kBtu/h	7.5	9.5	12.0	15.4	18.0	21.0
Sensible cooling capacity			kBtu/h	5.6	7.1	9.0	11.6	13.5	15.8
Heating capacity (*1)			kBtu/h	8.5	10.5	13.5	17.0	20.0	24.0
Power consumption			(kW)	0.07	0.09	0.09	0.13	0.14	0.21
FCU dimension	Main unit	Height	(in)	10.9	10.9	10.9	10.9	10.9	10.9
		Width	(in)	27.6	27.6	27.6	39.4	39.4	55.2
		Depth	(in)	29.6	29.6	29.6	29.6	29.6	29.6
Total weight	Main unit	(lbs)	56	56	56	73	73	93	
External static pressure (default) (*2)			in WG	0.4"	0.4"	0.4"	0.4"	0.4"	0.6"
External static pressure (*2)			in WG	0.6"	0.6"	0.6"	0.6"	0.6"	0.8"
Heat exchangere			Finned tube						
Soundproof / Heat-insulation material			Polyethylene foam						
Fan			Centrifugal fan						
Air flow volume	Indoor unit (H/M/L)	(cfm)	318 / 265 / 212	395 / 329 / 263	395 / 329 / 263	589 / 489 / 394	624 / 489 / 394	706 / 583 / 512	
Sound pressure	Indoor unit (H/M/L)	dB(A)	39 / 34 / 30	41 / 36 / 32	41 / 36 / 32	44 / 41 / 35	45 / 41 / 35	44 / 34 / 30	
Motor output			(W)	150	150	150	150	150	150
Flare Connections	Gas side	(in)	3/8	3/8	3/8	5/8	5/8	5/8	
	Liquid side	(in)	1/4	1/4	1/4	3/8	3/8	3/8	
	Drain pipe	(in)	VP25((Polyvinyl Chloride Tube: External Dia. 1-1/4 Internal Dia. 1)						
Operating Range	Cooling	(°F)	41 ~ 109						
for SMMS-I, SMMS-e	Heating	(°F)	14 ~ 109						

(*1) Rated testing conditions Cooling : Indoor air temperature 80°F Dry Bulb / 67°F Wet Bulb, Outdoor 95°F Dry Bulb

Heating : Indoor air temperature 70°F Dry Bulb, Outdoor 47°F Dry Bulb / 43°F Wet Bulb

(*2) Non attached filter

Model name		MMD-	AP0246BHPUL	AP0306BHPUL	AP0366BHPUL	AP0426BHPUL	AP0486BHPUL	AP0546BHPUL
Power supply			1 ph 60Hz 230V (208 / 230V)					
Cooling capacity (*1)		kBtu/h	24.0	30.0	36.0	42.0	48.0	54.0
Sensible cooling capacity		kBtu/h	18.0	22.5	27.0	31.5	36.0	40.5
Heating capacity (*1)		kBtu/h	27.0	34.0	40.0	47.5	54.0	60.0
Power consumption		(kW)	0.21	0.22	0.33	0.33	0.34	0.34
FCU dimension	Main unit	Height (in)	10.9	10.9	10.9	10.9	10.9	10.9
		Width (in)	55.2	55.2	55.2	55.2	55.2	55.2
		Depth (in)	29.6	29.6	29.6	29.6	29.6	29.6
Total weight	Main unit	(lbs)	93	93	93	93	93	93
External static pressure (default) (*2)		in WG	0.6"	0.6"	0.6"	0.6"	0.6"	0.6"
External static pressure (*2)		in WG	0.8"	0.8"	0.8"	0.8"	0.8"	0.8"
Heat exchanger			Finned tube					
Soundproof / Heat-insulation material			Polyethylene foam					
Fan			Centrifugal fan					
Air flow volume	Indoor unit (H/M/L)	(cfm)	706 / 583 / 512	742 / 653 / 547	1130 / 954 / 812	1130 / 954 / 812	1177 / 1024 / 883	1177 / 1024 / 883
Sound pressure	Indoor unit (H/M/L)	dB(A)	44 / 34 / 30	45 / 35 / 31	46 / 41 / 37	46 / 41 / 37	47 / 42 / 38	47 / 42 / 38
Motor output		(W)	150	150	250	250	250	250
Flare Connections	Gas side	(in)	5/8	5/8	5/8	5/8	5/8	5/8
	Liquid side	(in)	3/8	3/8	3/8	3/8	3/8	3/8
	Drain pipe	(in)	VP25((Polyvinyl Chloride Tube: External Dia. 1-1/4 Internal Dia. 1)					
Operating Range for SMMS-I, SMMS-e	Cooling	(°F)	41 ~ 109					
	Heating	(°F)	14 ~ 109					

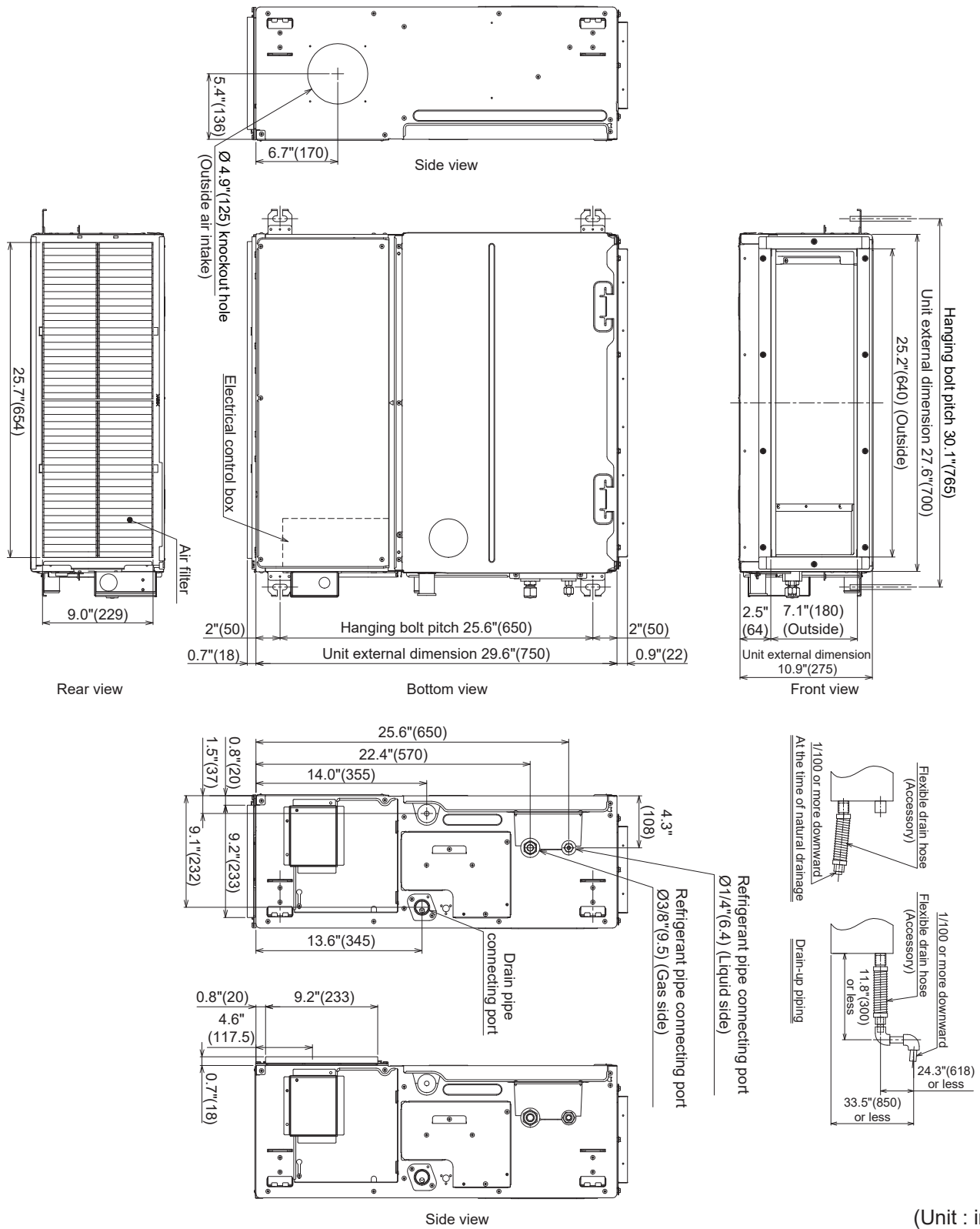
(*1) Rated testing conditions Cooling : Indoor air temperature 80°F Dry Bulb / 67°F Wet Bulb, Outdoor 95°F Dry Bulb

Heating : Indoor air temperature 70°F Dry Bulb, Outdoor 47°F Dry Bulb / 43°F Wet Bulb

(*2) Non attached filter

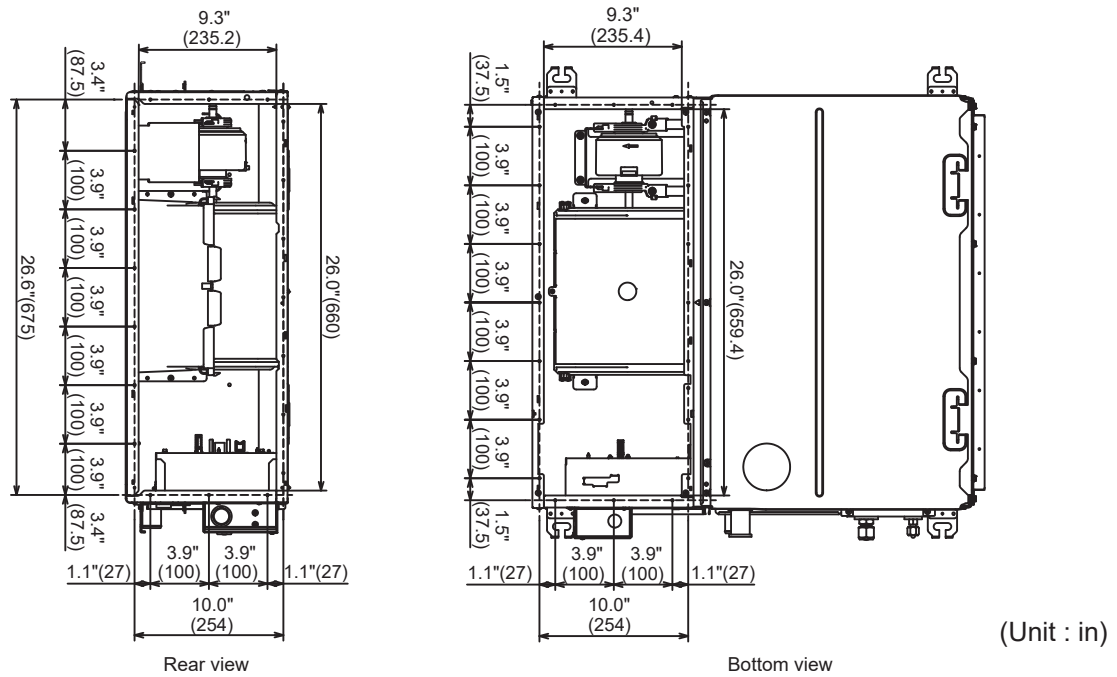
2. Dimension

MMD-AP0076BHPUL / AP0096BHPUL / AP0126BHPUL

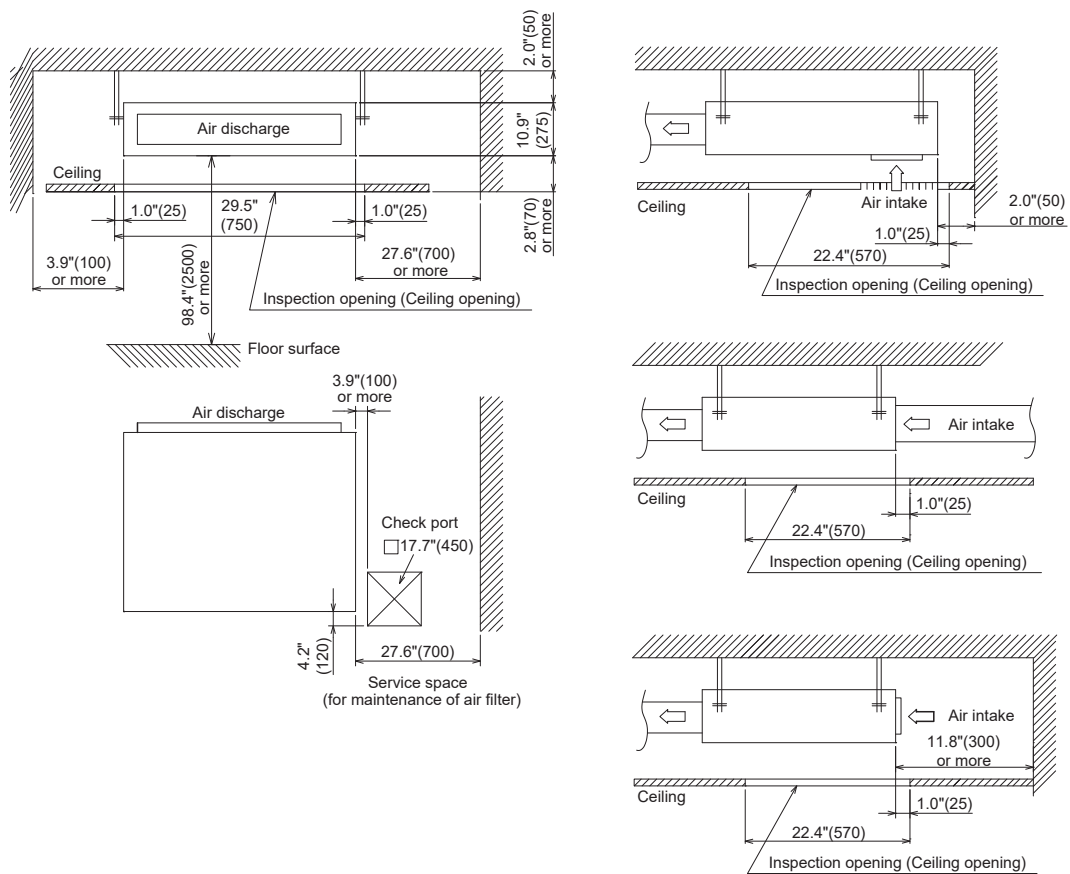


(Unit : in)

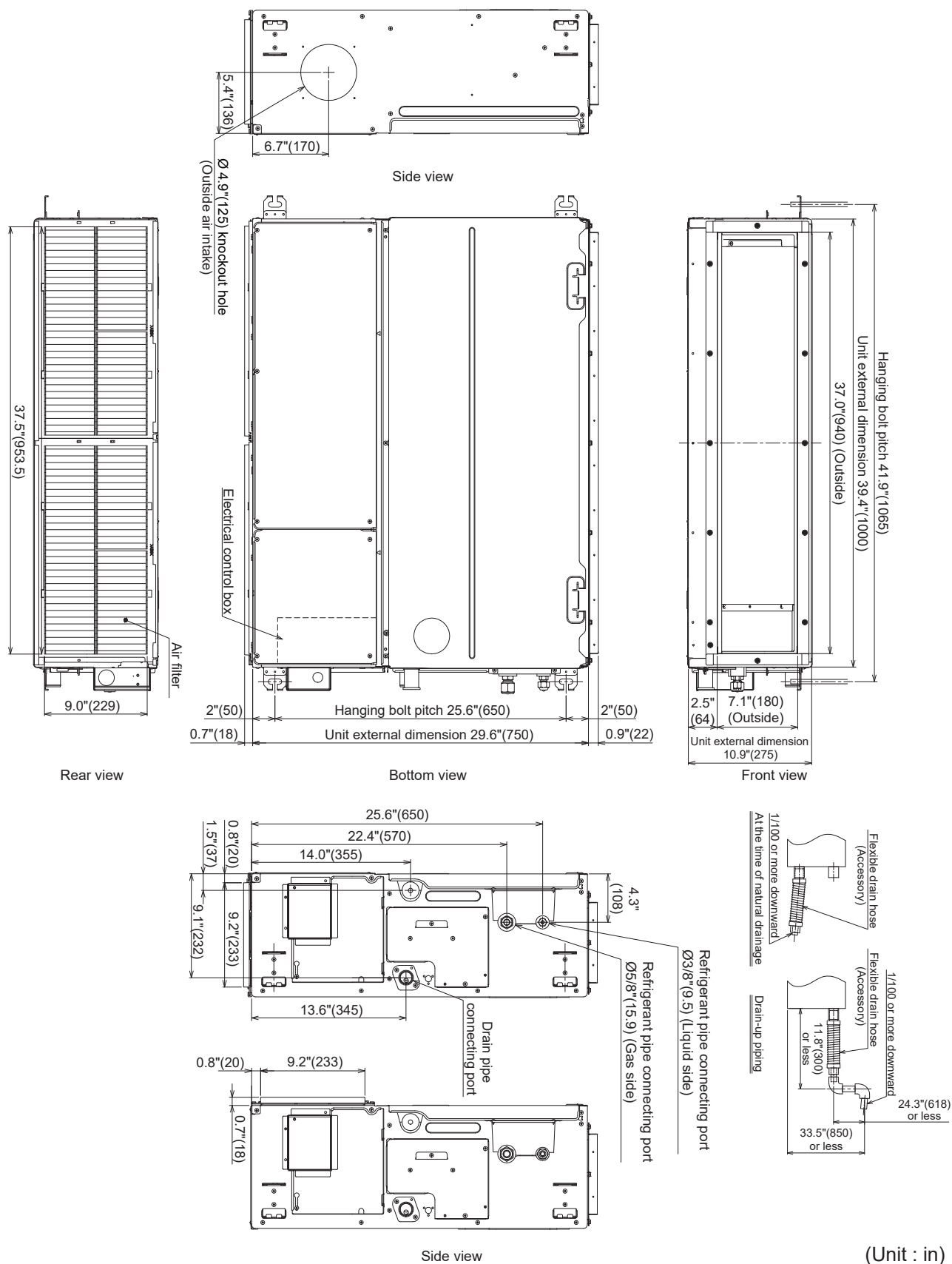
For duct design MMD-AP0076* / 096* / 126*



Space required for installation and servicing

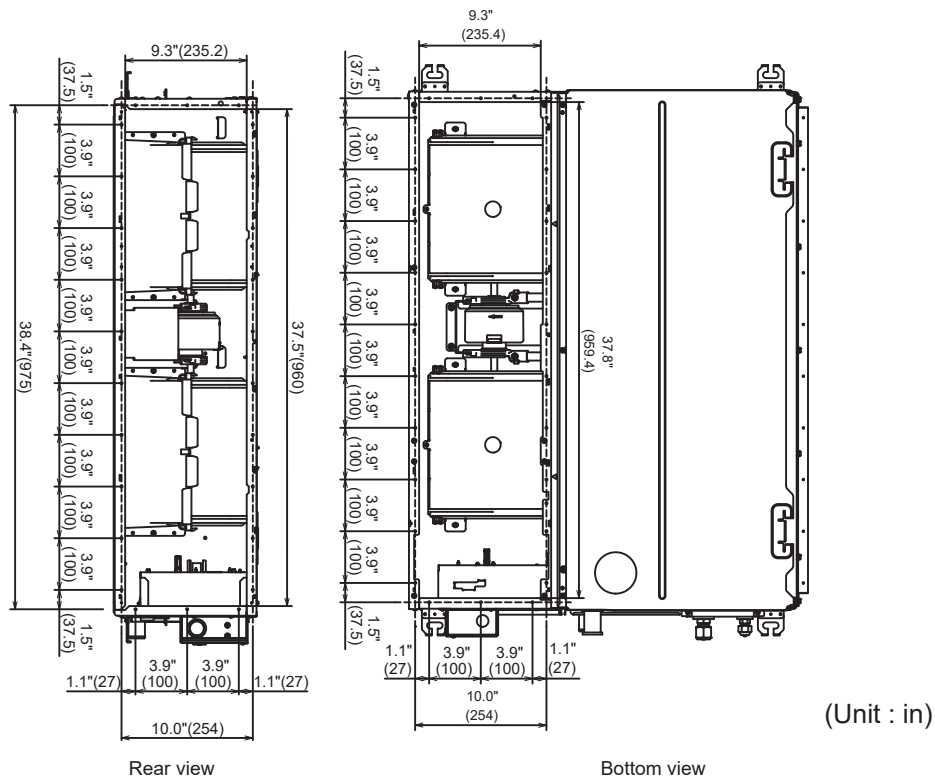


MMD-AP0156BHPUL / AP0186BHPUL

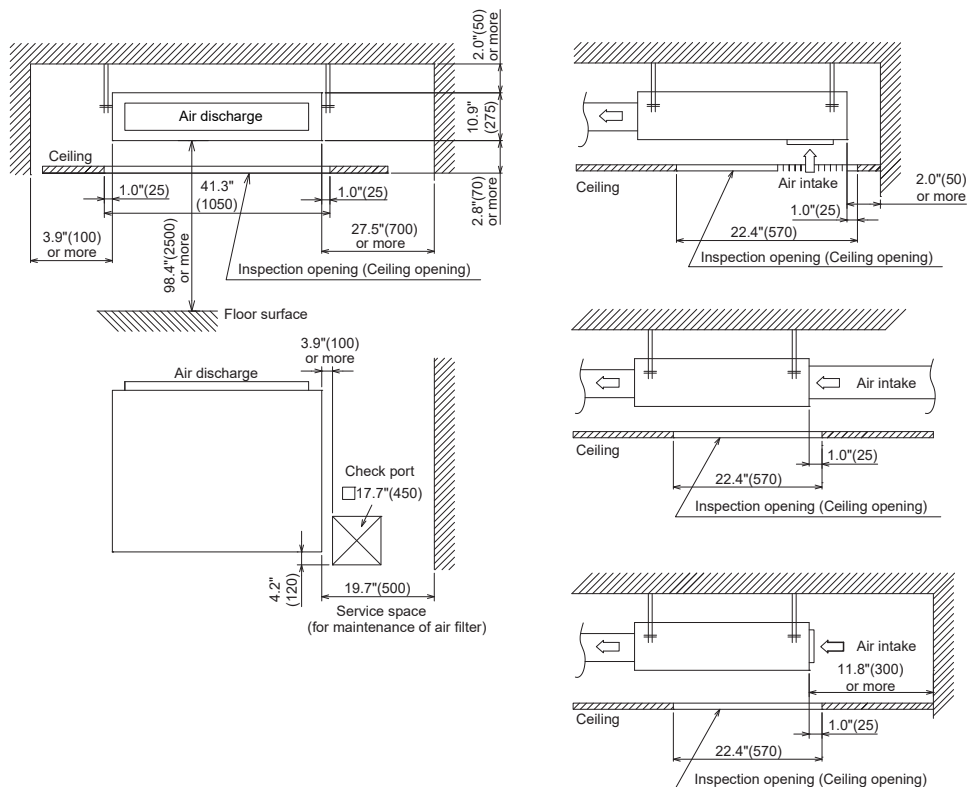


(Unit : in)

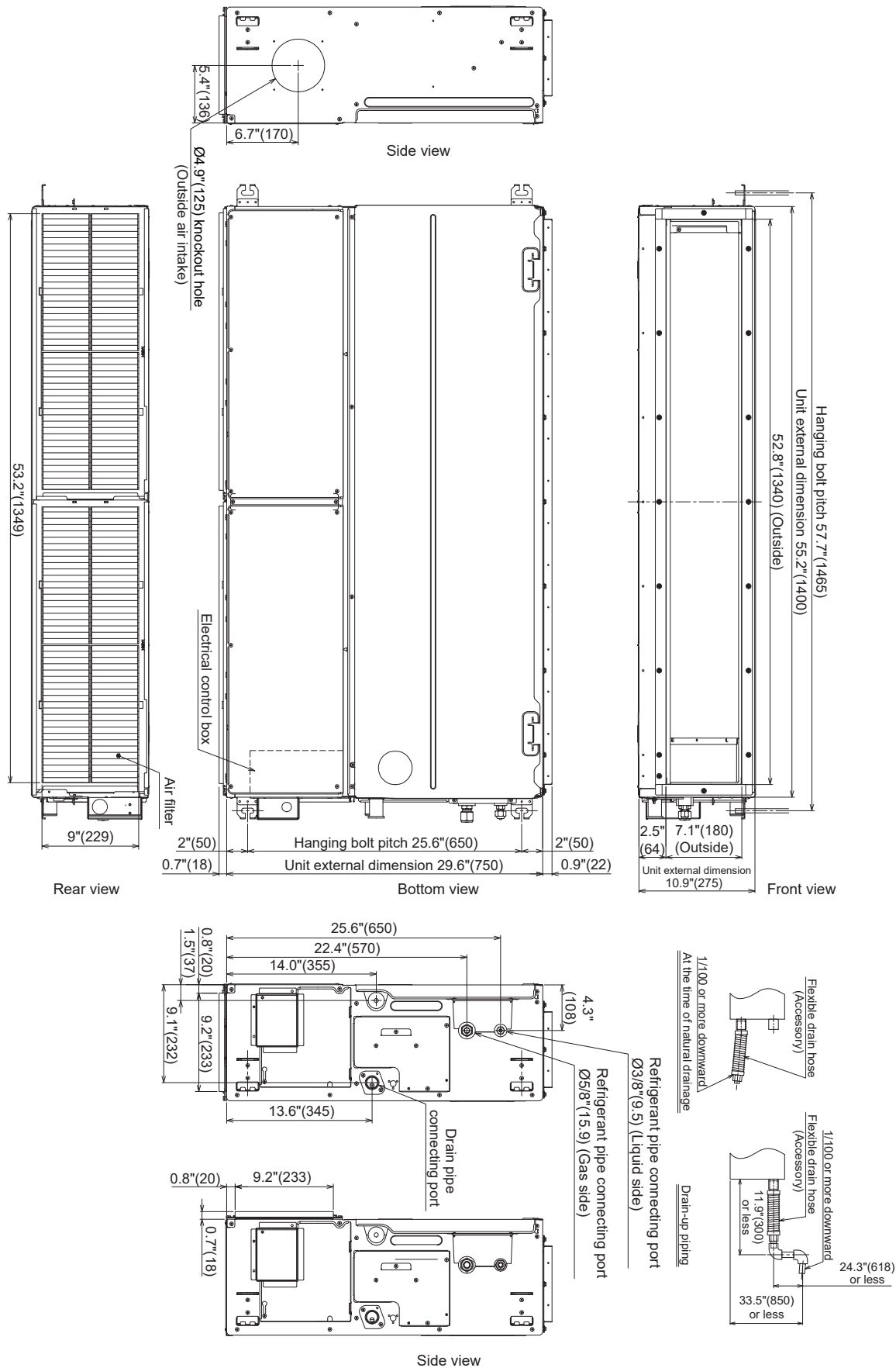
For duct design MMD-AP0156* / 186*



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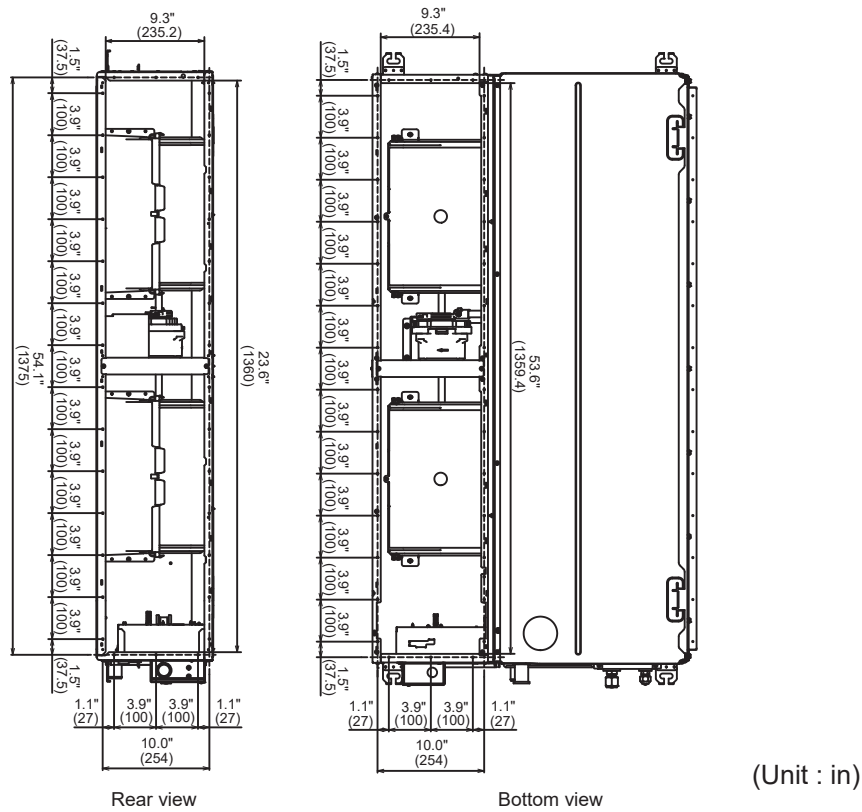


MMD-AP0216BHPUL / AP0246BHPUL / AP0306BHPUL / AP0366BHPUL / AP0426BHPUL /
AP0486BHPUL / AP0546BHPUL

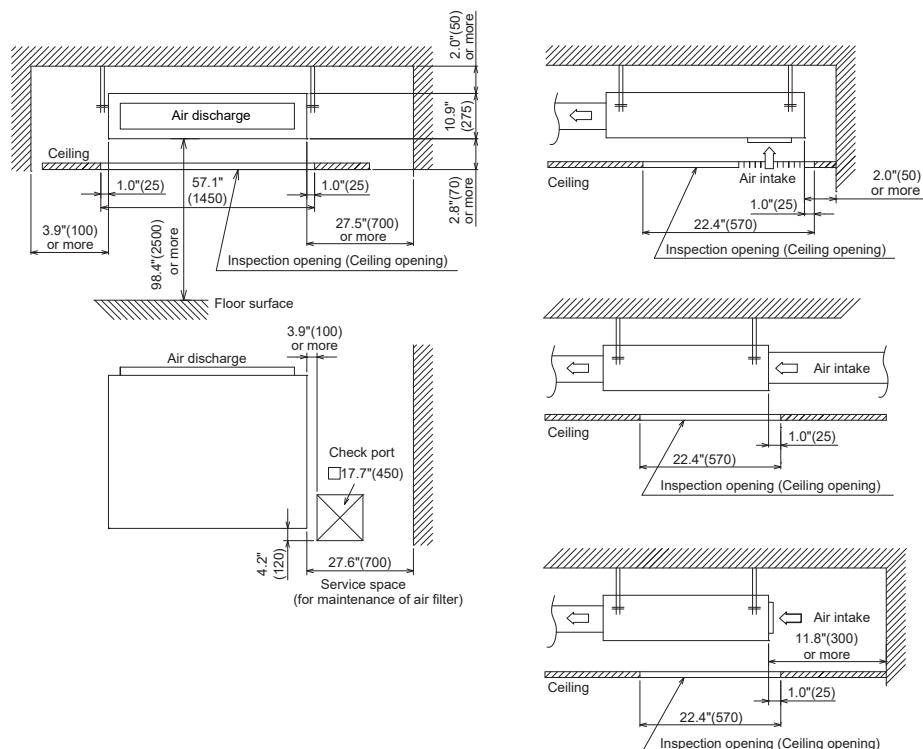


(Unit : in)

For duct design MMD-AP0216* / 246* / 306* / 366* / 426* / 486* / 546*

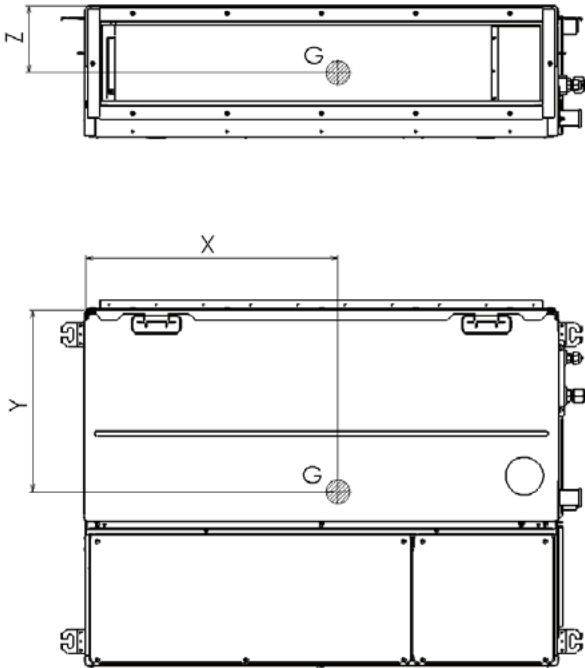


Space required for installation and servicing



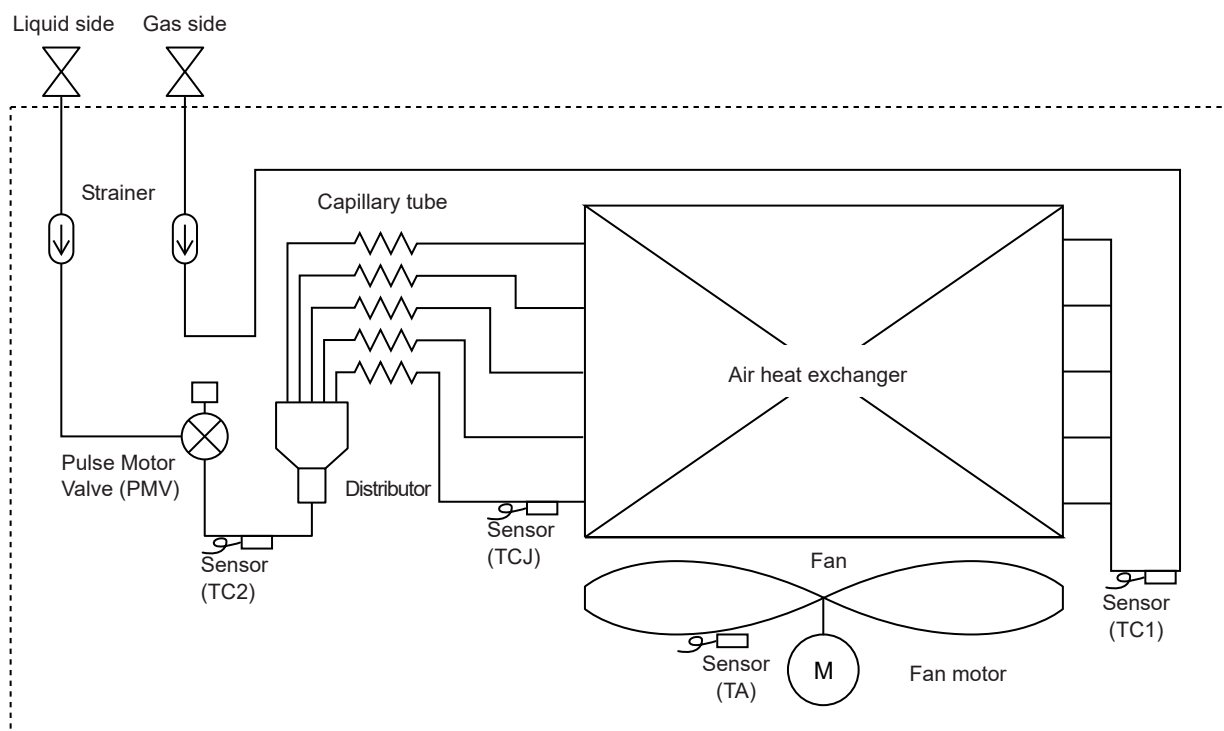
3. Center of gravity

Model name	X (in)	Y (in)	Z (in)	Total weight (lbs)
MMD-AP0076BHPUL	13.7	15.2	5.6	56
MMD-AP0096BHPUL				
MMD-AP0126BHPUL				
MMD-AP0156BHPUL	21.1	15.2	5.6	73
MMD-AP0186BHPUL				
MMD-AP0216BHPUL				
MMD-AP0246BHPUL	29.3	15.2	5.6	93
MMD-AP0306BHPUL				
MMD-AP0366BHPUL				
MMD-AP0426BHPUL				
MMD-AP0486BHPUL				
MMD-AP0546BHPUL				



4. Piping diagram

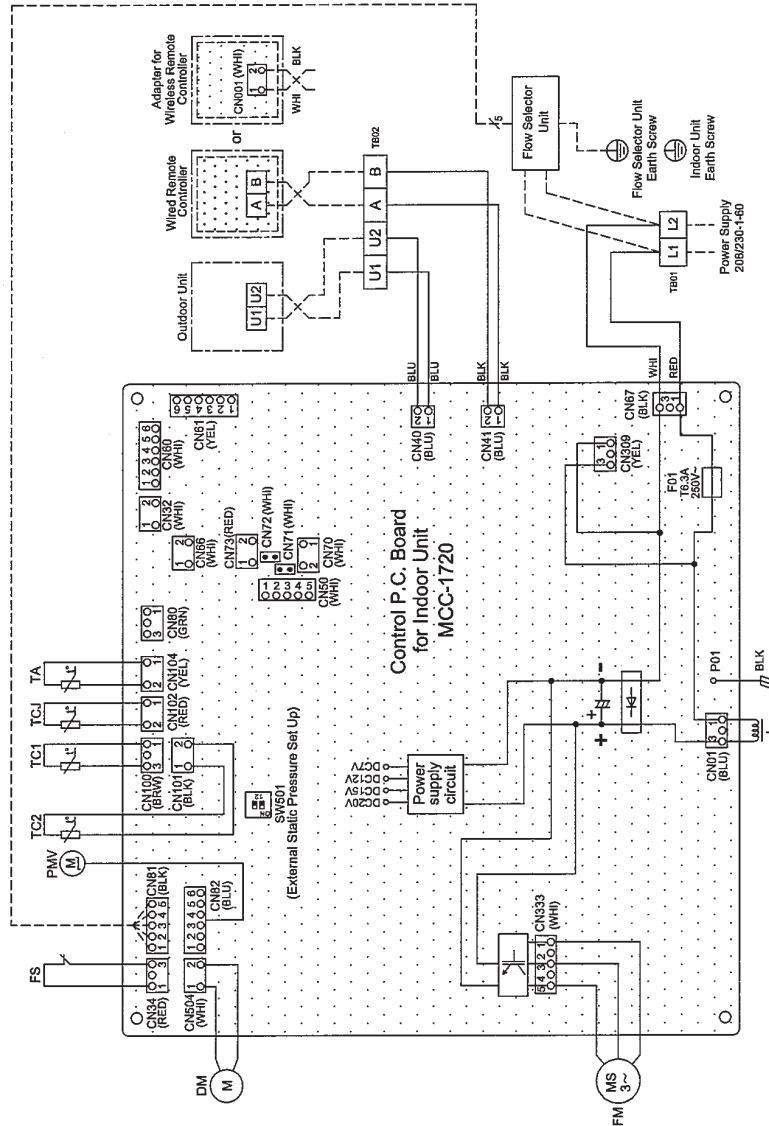
MMMD-AP0__*6BHPUL (*07 / 09 / 12 / 15 / 18 / 21 / 24 / 30 / 36 / 42 / 48 / 54)



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

MMMD-AP0__*6BHPUL (*07 / 09 / 12 / 15 / 18 / 21 / 24 / 30 / 36 / 42 / 48 / 54)



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

6. Electrical current characteristics

Type	Model name	Normal Voltage (V-Ph-Hz)	Voltage Range (V)		FLA	MCA	MOCP
			Min.	Max.	A	A	A
Medium Static Pressure Duct Type	MMD-AP0076BHPUL	208/230-1-60	187	253	0.73	0.91	15
	MMD-AP0096BHPUL	208/230-1-60	187	253	0.88	1.10	15
	MMD-AP0126BHPUL	208/230-1-60	187	253	0.88	1.10	15
	MMD-AP0156BHPUL	208/230-1-60	187	253	1.53	1.91	15
	MMD-AP0186BHPUL	208/230-1-60	187	253	1.53	1.91	15
	MMD-AP0216BHPUL	208/230-1-60	187	253	1.78	2.23	15
	MMD-AP0246BHPUL	208/230-1-60	187	253	1.78	2.23	15
	MMD-AP0306BHPUL	208/230-1-60	187	253	1.85	2.31	15
	MMD-AP0366BHPUL	208/230-1-60	187	253	2.71	3.39	15
	MMD-AP0426BHPUL	208/230-1-60	187	253	2.71	3.39	15
	MMD-AP0486BHPUL	208/230-1-60	187	253	2.85	3.56	15
	MMD-AP0546BHPUL	208/230-1-60	187	253	2.85	3.56	15

MCA : Minimum Circuit (Amps)

FLA : Full load (Amps)

MOCP : Maximum Overcurrent Protection (Amps)

7. Sensible capacity table

Medium static pressure duct (MMD-AP__6BHPUL)

unit size	outdoor air temp. ° F DB	Indoor air temp.													
		59 ° F WB 71 ° F DB		61 ° F WB 73 ° F DB		64 ° F WB 77 ° F DB		67 ° F WB 80 ° F DB		68 ° F WB 82 ° F DB		72 ° F WB 86 ° F DB		75 ° F WB 90 ° F DB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
00 7	50	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	54	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	57	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	61	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	64	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	68	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	70	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	73	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	77	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	81	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	84	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	88	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	91	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	95	6380	5570	6680	5730	7100	5960	7500	6150	7630	6170	8110	6090	8450	5860
	99	6190	5410	6490	5560	6890	5790	7280	5970	7410	5990	7870	5910	8200	5690
	102	6050	5280	6330	5430	6730	5650	7110	5830	7230	5850	7690	5770	8010	5560

unit size	outdoor air temp. ° F DB	Indoor air temp.													
		59 ° F WB 71 ° F DB		61 ° F WB 73 ° F DB		64 ° F WB 77 ° F DB		67 ° F WB 80 ° F DB		68 ° F WB 82 ° F DB		72 ° F WB 86 ° F DB		75 ° F WB 90 ° F DB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
009	50	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	54	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	57	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	61	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	64	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	68	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	70	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	73	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	77	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	81	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	84	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	88	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	91	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	95	8090	7070	8460	7260	9000	7560	9500	7790	9660	7810	10270	7710	10700	7430
	99	7860	6860	8210	7050	8740	7340	9220	7560	9380	7580	9970	7490	10390	7210
	102	7670	6700	8020	6880	8530	7170	9010	7380	9160	7400	9740	7310	10140	7040

unit size	outdoor air temp. ° F DB	Indoor air temp.													
		59 ° F WB 71 ° F DB		61 ° F WB 73 ° F DB		64 ° F WB 77 ° F DB		67 ° F WB 80 ° F DB		68 ° F WB 82 ° F DB		72 ° F WB 86 ° F DB		75 ° F WB 90 ° F DB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
012	50	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	54	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	57	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	61	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	64	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	68	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	70	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	73	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	77	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	81	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	84	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	88	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	91	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	95	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
	99	9910	7920	10380	8150	11030	8470	11650	8740	11860	8770	12600	8650	13120	8330
	102	9680	7740	10130	7950	10770	8270	11380	8530	11580	8560	12310	8450	12810	8130

unit size	outdoor air temp. ° F DB	Indoor air temp.													
		59 ° FWB 71 ° FDB		61 ° FWB 73 ° FDB		64 ° FWB 77 ° FDB		67 ° FWB 80 ° FDB		68 ° FWB 82 ° FDB		72 ° FWB 86 ° FDB		75 ° FWB 90 ° FDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
015	50	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330
	54	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330
	57	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330
	61	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330
	64	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330
	68	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330
	70	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330
	73	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330
	77	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330
	81	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330
	84	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330
	88	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330
	91	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330
95	13110	11730	13710	12050	14580	12540	15400	12940	15660	12970	16660	12810	17340	12330	
99	12730	11390	13310	11700	14160	12180	14950	12560	15210	12590	16180	12440	16840	11970	
102	12430	11120	13000	11420	13820	11890	14600	12270	14850	12300	15790	12140	16440	11690	

Medium static pressure duct (MMD-AP__6BHPUL)

unit size	outdoor air temp. ° F DB	Indoor air temp.													
		59 ° F WB		61 ° F WB		64 ° F WB		67 ° F WB		68 ° F WB		72 ° F WB		75 ° F WB	
		71 ° F DB		73 ° F DB		77 ° F DB		80 ° F DB		82 ° F DB		86 ° F DB		90 ° F DB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
018	50	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	54	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	57	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	61	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	64	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	68	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	70	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	73	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	77	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	81	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	84	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	88	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	91	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	95	15320	13060	16030	13410	17040	13960	18000	14400	18310	14440	19470	14260	20270	13720
	99	14880	12680	15570	13020	16550	13560	17480	13980	17780	14020	18910	13850	19680	13320
	102	14520	12380	15200	12710	16150	13230	17060	13650	17360	13690	18460	13520	19220	13010

unit size	outdoor air temp. ° F DB	Indoor air temp.													
		59 ° F WB		61 ° F WB		64 ° F WB		67 ° F WB		68 ° F WB		72 ° F WB		75 ° F WB	
		71 ° F DB		73 ° F DB		77 ° F DB		80 ° F DB		82 ° F DB		86 ° F DB		90 ° F DB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
021	50	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	54	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	57	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	61	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	64	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	68	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	70	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	73	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	77	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	81	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	84	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	88	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	91	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	95	17240	15640	19070	16660	20370	17690	21000	17640	21630	17640	22890	17480	23940	17070
	99	16740	15190	18520	16180	19780	17180	20390	17130	21000	17130	22230	16970	23250	16570
	102	16340	14830	18080	15790	19310	16770	19910	16720	20510	16720	21700	16570	22700	16180

unit size	outdoor air temp. ° F DB	Indoor air temp.													
		59 ° F WB		61 ° F WB		64 ° F WB		67 ° F WB		68 ° F WB		72 ° F WB		75 ° F WB	
		71 ° F DB		73 ° F DB		77 ° F DB		80 ° F DB		82 ° F DB		86 ° F DB		90 ° F DB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
024	50	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	54	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	57	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	61	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	64	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	68	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	70	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	73	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	77	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	81	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	84	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	88	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	91	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	95	19704	17875	21792	19037	23280	20220	24000	20160	24720	20159	26160	19973	27360	19511
	99	19133	17357	21160	18485	22605	19634	23304	19575	24003	19574	25401	19394	26567	18945
	102	18679	16946	20659	18048	22069	19169	22752	19112	23435	19110	24800	18934	25937	18496

unit size	outdoor air temp. ° F DB	Indoor air temp.													
		59 ° F WB		61 ° F WB		64 ° F WB		67 ° F WB		68 ° F WB		72 ° F WB		75 ° F WB	
		71 ° FDB		73 ° FDB		77 ° FDB		80 ° FDB		82 ° FDB		86 ° FDB		90 ° FDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
030	50	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230
	54	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230
	57	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230
	61	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230
	64	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230
	68	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230
	70	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230
	73	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230
	77	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230
	81	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230
	84	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230
	88	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230
91	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230	
95	24630	21280	27240	22660	29100	24070	30000	24000	30900	24000	32700	23780	34200	23230	
99	23920	20660	26450	22000	28260	23370	29130	23300	30000	23300	31750	23090	33210	22560	
102	23350	20170	25820	21480	27590	22820	28440	22750	29290	22750	31000	22540	32420	22020	

Medium static pressure duct (MMD-AP__6BHPUL)

unit size	outdoor air temp. ° F DB	Indoor air temp.													
		59 ° F WB		61 ° F WB		64 ° F WB		67 ° F WB		68 ° F WB		72 ° F WB		75 ° F WB	
		71 ° F DB	73 ° F DB	73 ° F DB	77 ° F DB	80 ° F DB	82 ° F DB	86 ° F DB	90 ° F DB						
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
036	50	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	54	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	57	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	61	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	64	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	68	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	70	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	73	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	77	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	81	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	84	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	88	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	91	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	95	29560	25220	32690	26860	34920	28520	36000	28440	37080	28440	39240	28180	41040	27520
	99	28700	24490	31740	26080	33910	27690	34960	27620	36000	27620	38100	27360	39850	26720
	102	28020	23910	30990	25460	33100	27040	34130	26960	35150	26960	37200	26710	38910	26090

unit size	outdoor air temp. ° FDB	Indoor air temp.													
		59 ° FWB 71 ° FDB		61 ° FWB 73 ° FDB		64 ° FWB 77 ° FDB		67 ° FWB 80 ° FDB		68 ° FWB 82 ° FDB		72 ° FWB 86 ° FDB		75 ° FWB 90 ° FDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
042	50	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	54	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	57	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	61	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	64	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	68	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	70	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	73	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	77	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	81	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	84	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	88	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	91	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	95	34480	29050	38140	30940	40740	32860	42000	32760	43260	32760	45780	32460	47880	31710
	99	33480	28210	37030	30040	39560	31910	40780	31810	42010	31810	44450	31520	46490	30790
	102	32690	27544	36160	29330	38620	31150	39820	31060	41010	31060	43400	30770	45390	30060

unit size	outdoor air temp. ° FDB	Indoor air temp.													
		59 ° FWB 71 ° FDB		61 ° FWB 73 ° FDB		64 ° FWB 77 ° FDB		67 ° FWB 80 ° FDB		68 ° FWB 82 ° FDB		72 ° FWB 86 ° FDB		75 ° FWB 90 ° FDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
048	50	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	35190	54720	34380
	54	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	32810	54720	34380
	57	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	32810	54720	34380
	61	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	32810	54720	34380
	64	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	32810	54720	34380
	68	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	32810	54720	34380
	70	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	32810	54720	34380
	73	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	32810	54720	34380
	77	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	32810	54720	34380
	81	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	32810	54720	34380
	84	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	32810	54720	34380
	88	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	32810	54720	34380
	91	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	32810	54720	34380
	95	39410	31500	43580	33540	46560	35630	48000	35520	49440	35520	52320	35190	54720	34380
	99	38270	30590	42320	32570	45210	34600	46610	34490	48010	34490	50800	34170	53130	33380
	102	37360	29860	41310	31800	44140	33780	45500	33670	46870	33670	49600	33360	51870	32590

unit size	outdoor air temp. ° F DB	Indoor air temp.													
		59 ° FWB 71 ° FDB		61 ° FWB 73 ° FDB		64 ° FWB 77 ° FDB		67 ° FWB 80 ° FDB		68 ° FWB 82 ° FDB		72 ° FWB 86 ° FDB		75 ° FWB 90 ° FDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
054	50	44330	35430	49030	37730	54000	40080	54000	39960	55620	39960	58860	39590	61560	38670
	54	44330	35430	49030	37730	54000	40080	54000	39960	55620	39960	58860	39590	61560	38670
	57	44330	35430	49030	37730	54000	40080	54000	39960	55620	39960	58860	39590	61560	38670
	61	44330	35430	49030	37730	54000	40080	54000	39960	55620	39960	58860	39590	61560	38670
	64	44330	35430	49030	37730	54000	40080	54000	39960	55620	39960	58860	39590	61560	38670
	68	44330	35430	49030	37730	54000	40080	54000	39960	55620	39960	58860	39590	61560	38670
	70	44330	35430	49030	37730	54000	40080	54000	39960	55620	39960	58860	39590	61560	38670
	73	44330	35430	49030	37730	54000	40080	54000	39960	55620	39960	58860	39590	61560	38670
	77	44330	35430	49030	37730	54000	40080	54000	39960	55620	39960	58860	39590	61560	38670
	81	44330	35430	49030	37730	54000	40080	54000	39960	55620	39960	58860	39590	61560	38670
	84	44330	35430	49030	37730	54000	40080	54000	39960	55620	39960	58860	39590	61560	38670
	88	44330	35430	49030	37730	54000	40080	54000	39960	55620	39960	58860	39590	61560	38670
91	44330	35430	49030	37730	54000	40080	54000	39960	55620	39960	58860	39590	61560	38670	
95	44330	35430	49030	37730	52380	40080	54000	39960	55620	39960	58860	39590	61560	38670	
99	43040	34400	47610	36640	50860	38920	52430	38800	54010	38800	57150	38440	59770	37560	
102	42020	33590	46480	35770	49660	38000	51190	37880	52730	37880	55800	37530	58360	36660	

Heating capacity table

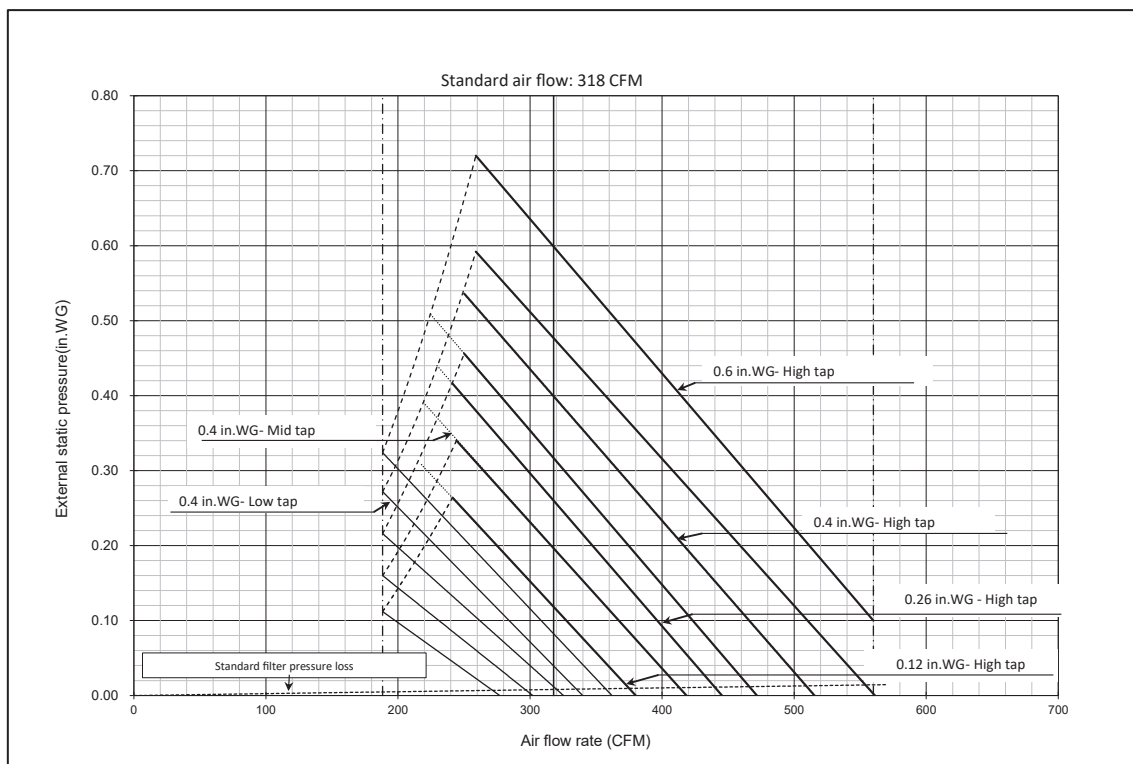
	Indoor air temp. °FDB					
Fahrenheit(°F)	62	65	68	70	72	75
Celsius(°C)	16.7	18.3	20	21.1	22.2	23.9
	Total capacity (TC) (kBtu/h)					
MMD-AP0076BHPUL	8.9	8.8	8.6	8.5	8.4	8.2
MMD-AP0096BHPUL	11.0	10.8	10.6	10.5	10.4	10.1
MMD-AP0126BHPUL	14.1	13.9	13.7	13.5	13.3	13.0
MMD-AP0156BHPUL	17.8	17.5	17.2	17.0	16.8	16.4
MMD-AP0186BHPUL	20.9	20.6	20.2	20.0	19.7	19.3
MMD-AP0216BHPUL	25.1	24.7	24.3	24.0	23.7	23.2
MMD-AP0246BHPUL	28.2	27.8	27.3	27.0	26.6	26.1
MMD-AP0306BHPUL	35.5	35.0	34.4	34.0	33.6	32.9
MMD-AP0366BHPUL	41.8	41.2	40.5	40.0	39.5	38.6
MMD-AP0426BHPUL	49.6	48.9	48.1	47.5	46.9	45.9
MMD-AP0486BHPUL	56.4	55.6	54.7	54.0	53.3	52.2
MMD-AP0546BHPUL	62.7	61.8	60.7	60.0	59.2	58.0

Notes: 1. These capacity tables can be used when selecting a VRF indoor unit. The actual capacity of the VRF system depends on factors such as the selected model of outdoor units, outdoor air temperature and piping length. Please confirm that the corrected capacity of the VRF system satisfies the required heat load.

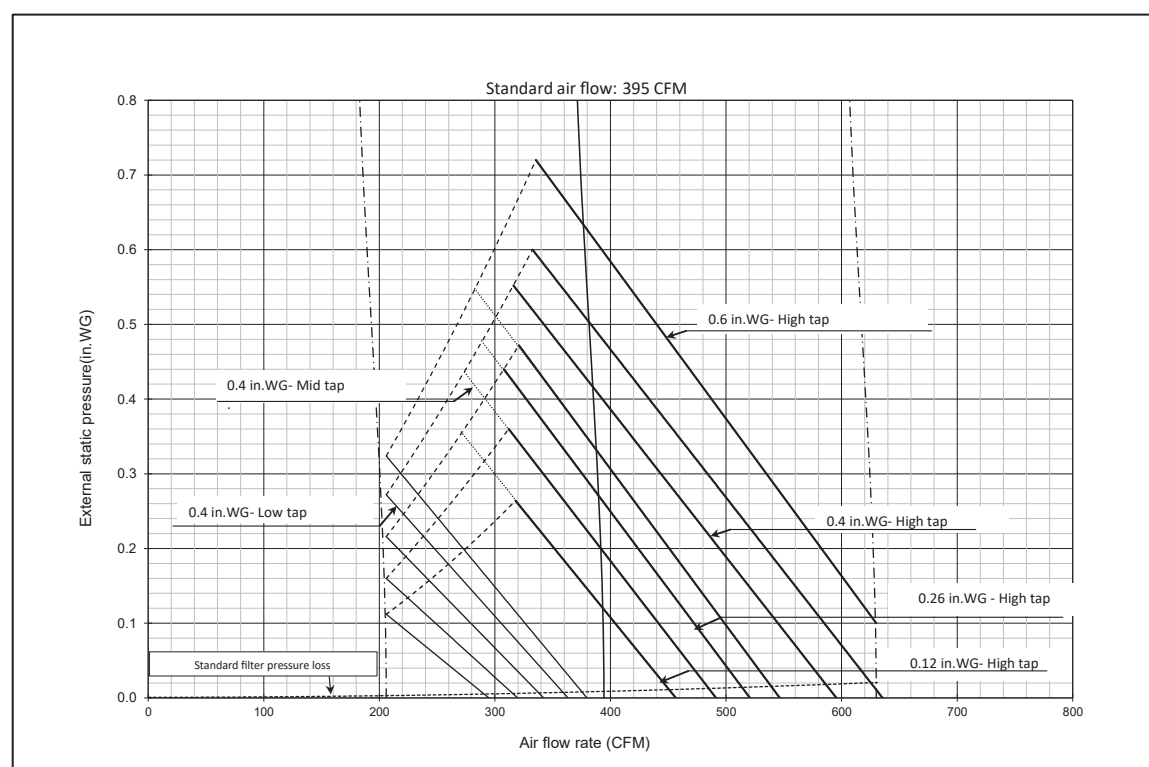
Notes: 2. This is the capacity table of rated heating test condition of Outdoor 47°F Dry Bulb / 43°F Wet Bulb.

8. Fan characteristics

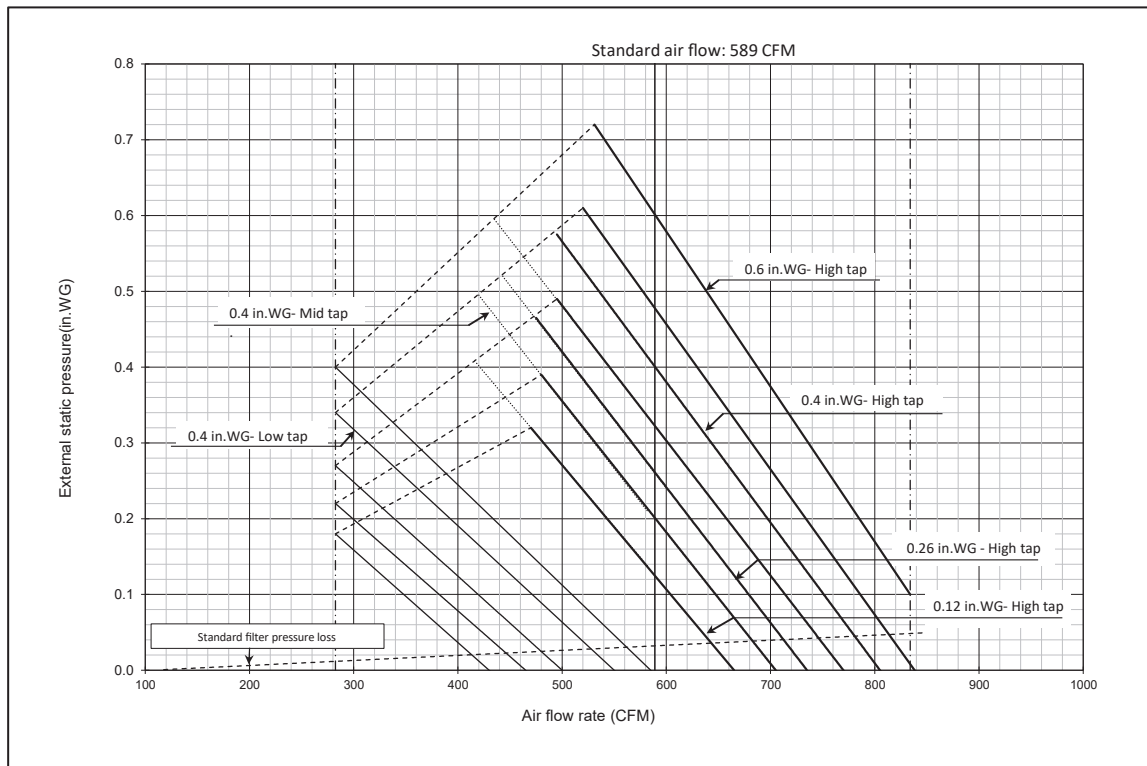
MMD-AP0076BHPUL



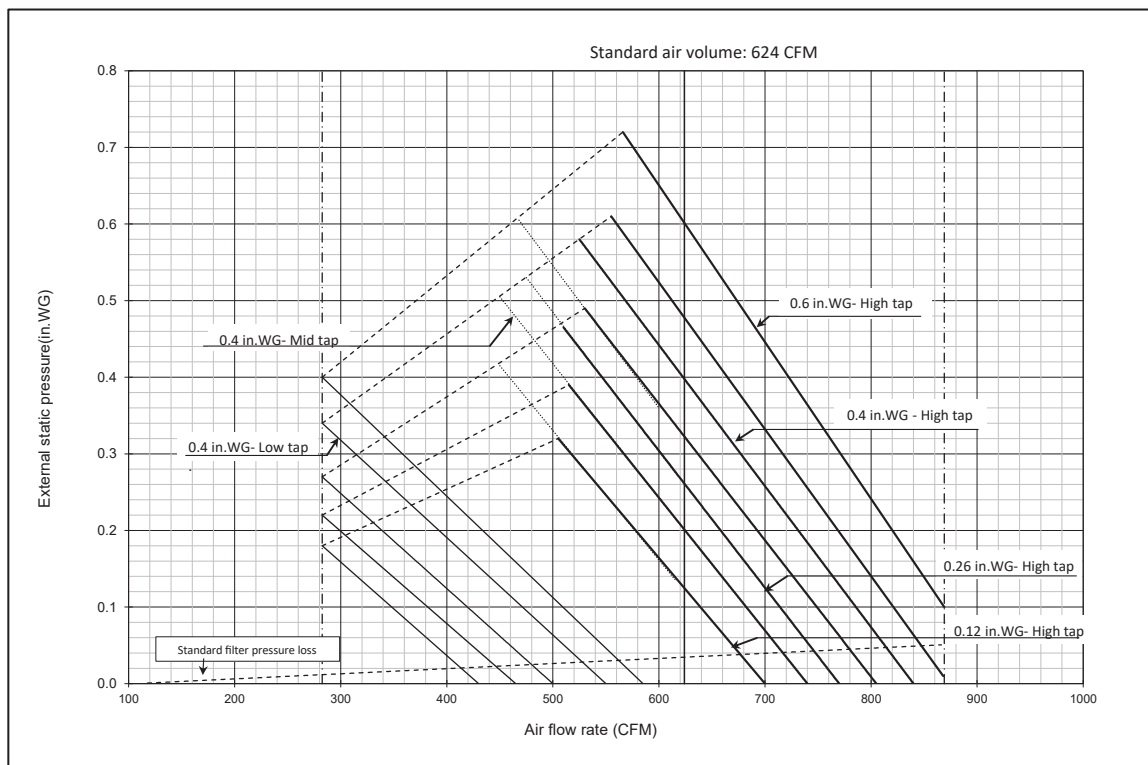
MMD-AP0096BHPUL / AP0126BHPUL



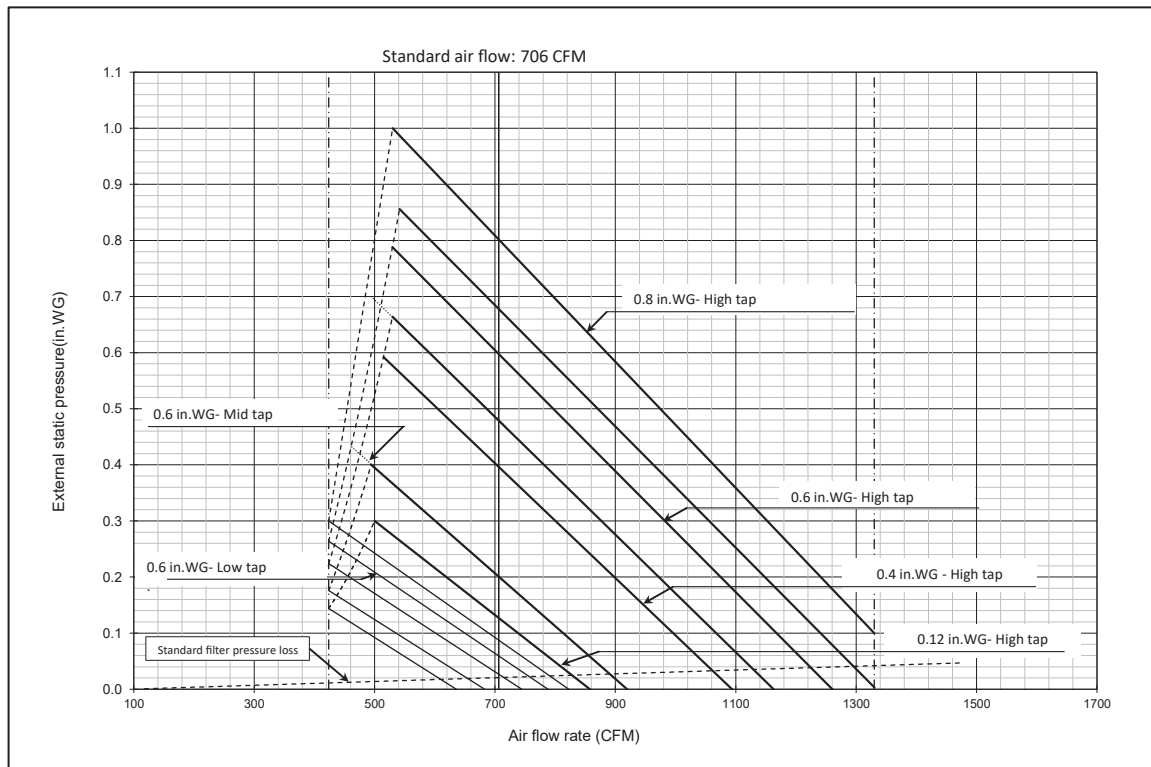
MMD-AP0156BHPUL



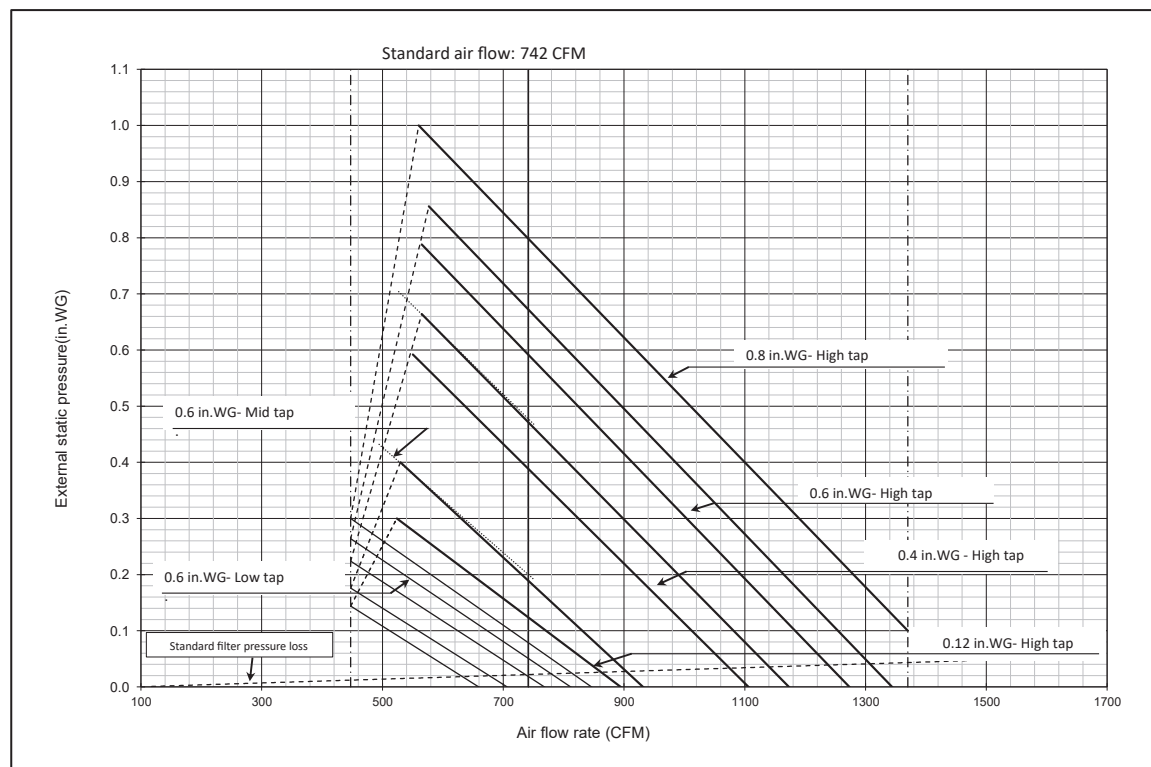
MMD-AP0186BHPUL



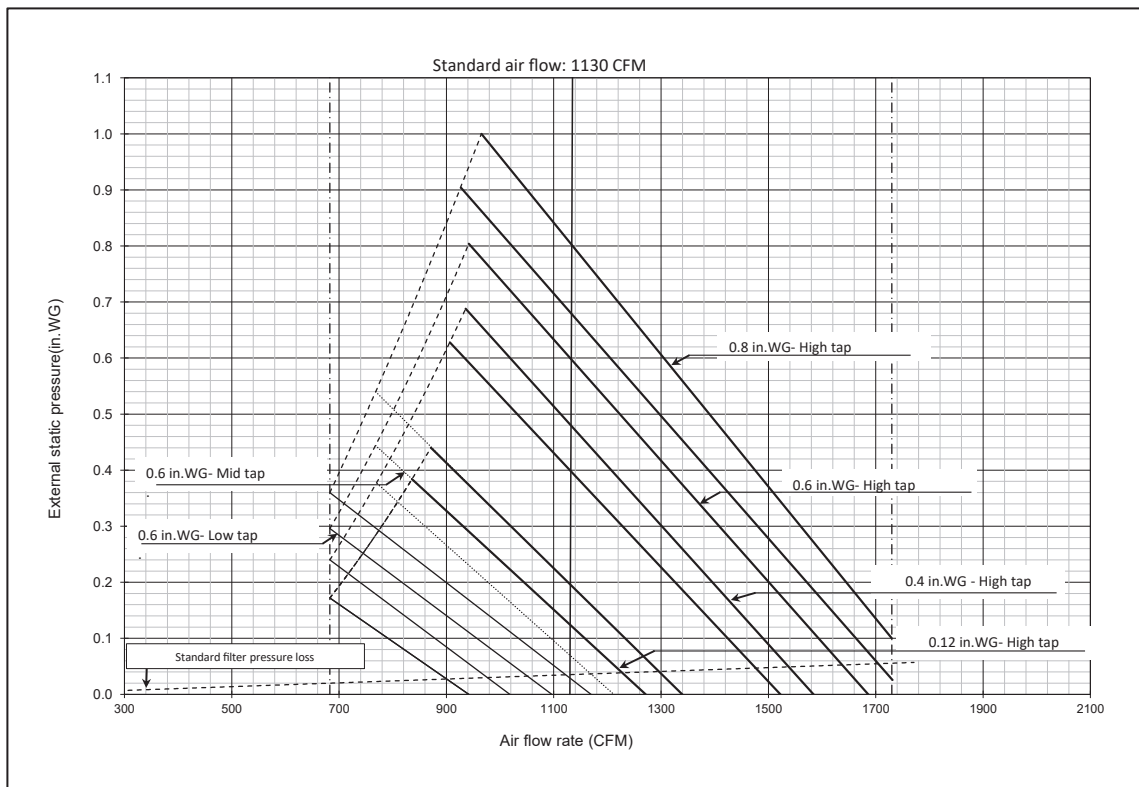
MMD-AP0216BHPUL / AP0246BHPUL



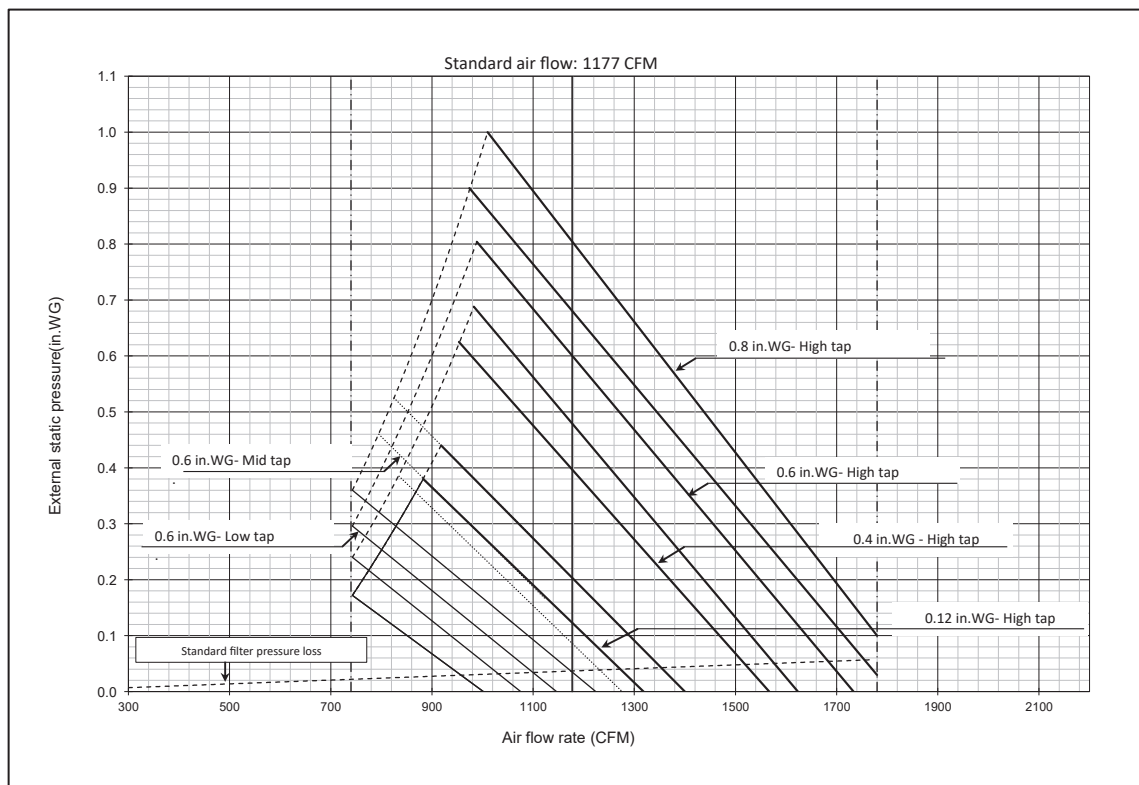
MMD-AP0306BHPUL



MMD-AP0366BHPUL / AP0426BHPUL



MMD-AP0486BHPUL / AP0546BHPUL



The concealed duct unit has 7 steps of static pressure (MMD-AP007 ~ 081* : 0.12 - 0.6 in.WG, MMD-AP021 ~ 056* : 0.12 - 0.8 in.WG) adjustment to meet the installation site requirements / conditions.

With these steps there are different speed fan taps associated to select correct air flow.

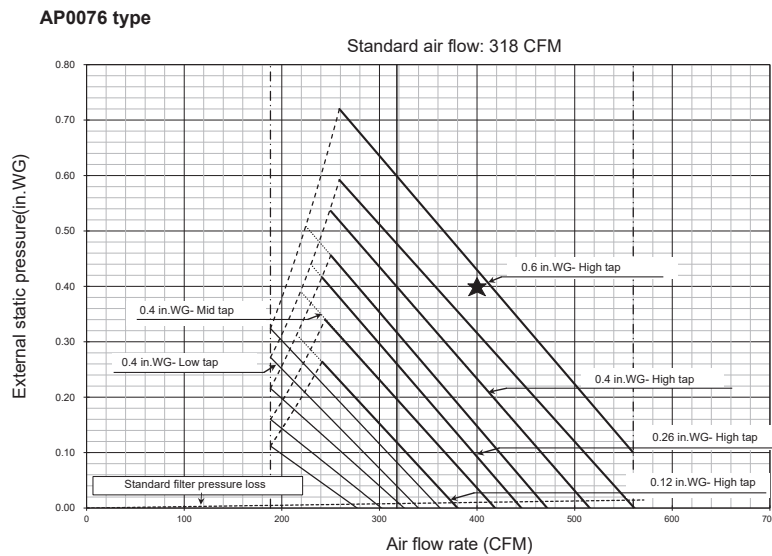
For meeting the site requirement / conditions, make sure the external static pressure and air flow are determined.

Plot the external static pressure and air flow on the below graph to determine the right speed fan step setting.

For example : Job site requirement is to deliver 400 CFM at 0.4 in.WG external static pressure. Using the below graph, external static pressure on vertical axis and air flow on horizontal axis, the star mark indicates the job site requirement.

The star mark is below 0.6 in.WG high speed fan tap line, which means the unit needs to be set to 0.6 in.WG external static pressure with high speed fan tap.

Please follow the process described in application controls of this manual for set up external static pressure.



NOTE

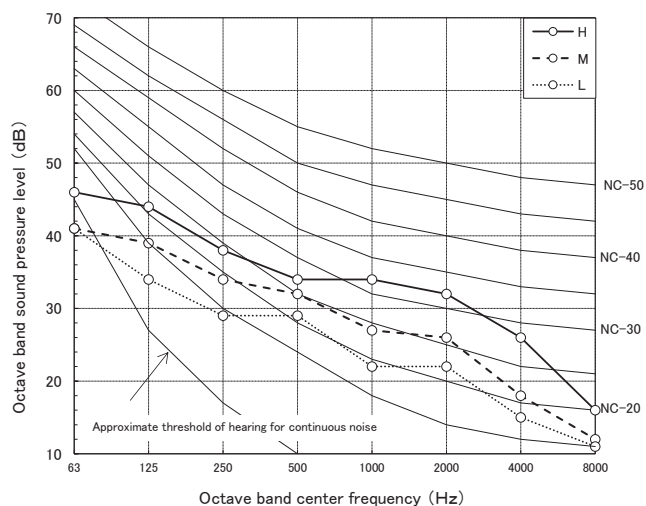
Supply air CFM will follow the solid line fan curve shown in the above graph if there is any change in the external static pressure.

Supply air volume for medium and low fan speed tap is also set by remote controller. It will follow the dotted line fan curve in the graph.

9. Sound data

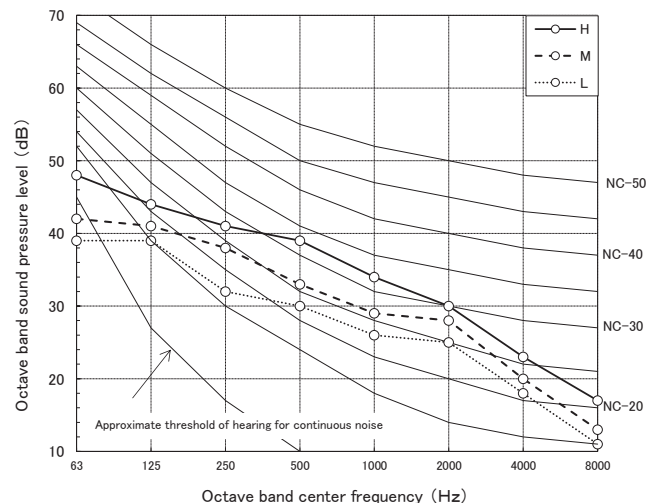
MMD-AP0076BHPUL

Fan tap	H	M	L
Sound pressure level (dB(A))	39	34	30



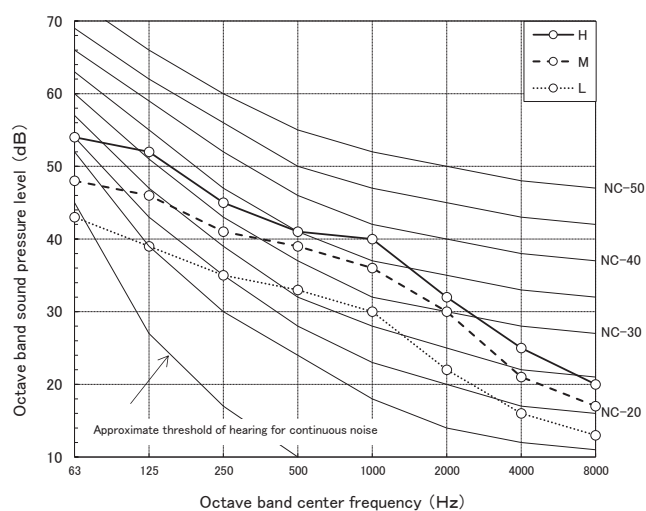
MMD-AP0096BHPUL / AP0126BHPUL

Fan tap	H	M	L
Sound pressure level (dB(A))	41	36	32



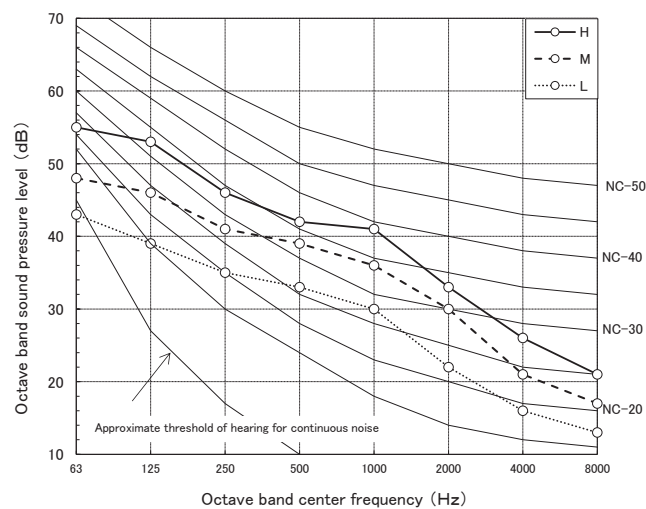
MMD-AP0156BHPUL

Fan tap	H	M	L
Sound pressure level (dB(A))	44	41	35



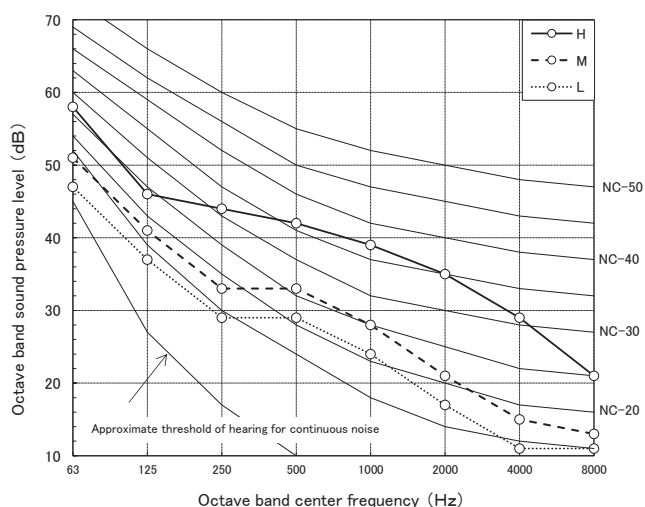
MMD-AP0186BHPUL

Fan tap	H	M	L
Sound pressure level (dB(A))	45	41	35



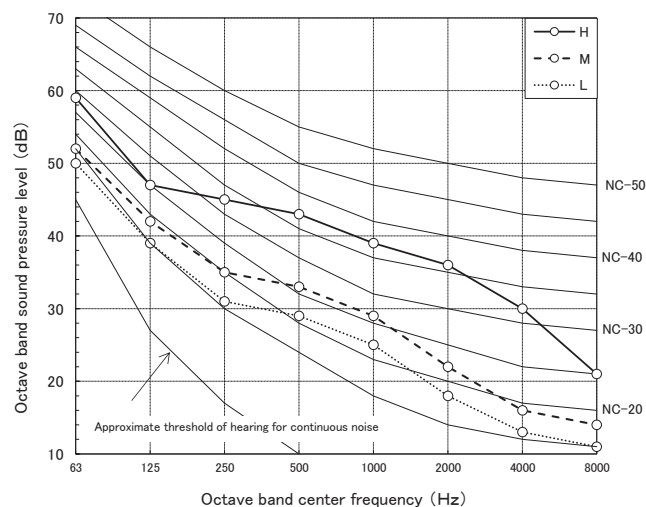
MMD-AP0216BHPUL / AP0246BHPUL

Fan tap	H	M	L
Sound pressure level (dB(A))	44	34	30



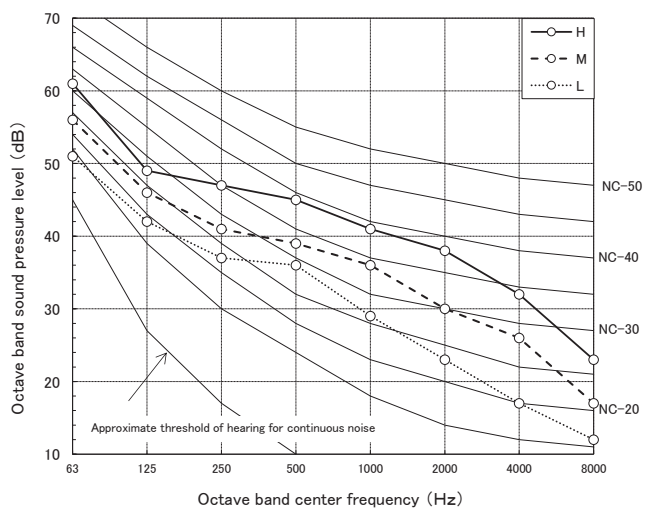
MMD-AP0306BHPUL

Fan tap	H	M	L
Sound pressure level (dB(A))	45	35	31



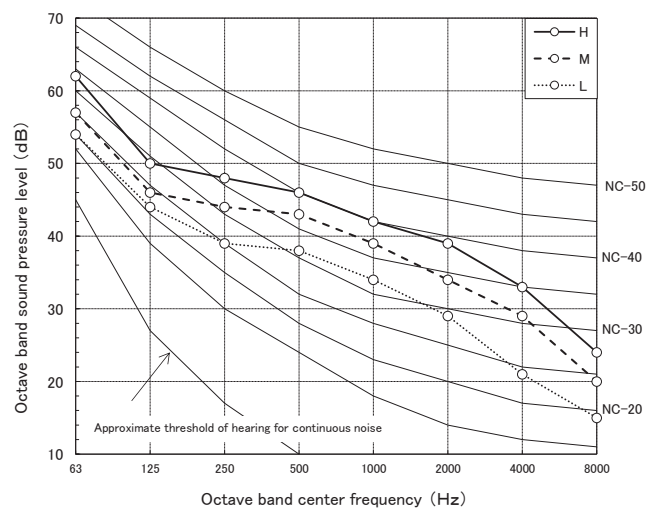
MMD-AP0366BHPUL / AP0426BHPUL

Fan tap	H	M	L
Sound pressure level (dB(A))	46	41	37



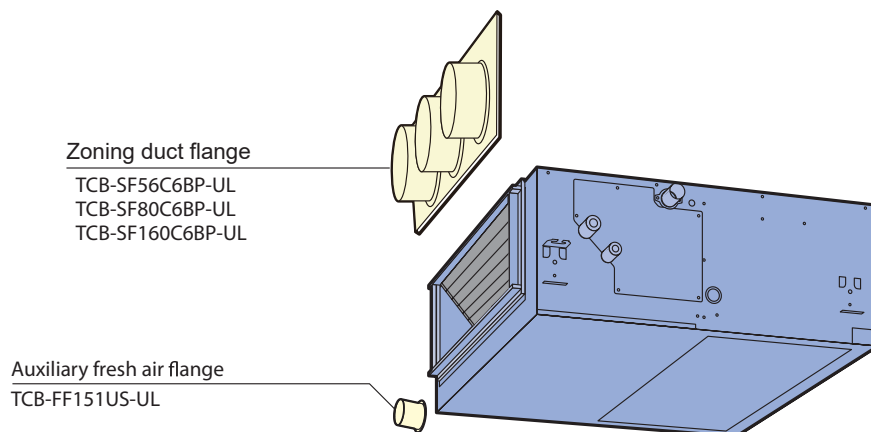
MMD-AP0486BHPUL / AP0546BHPUL

Fan tap	H	M	L
Sound pressure level (dB(A))	47	42	38

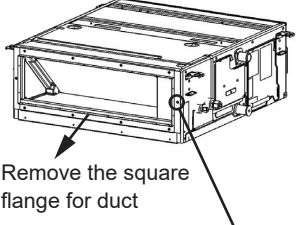
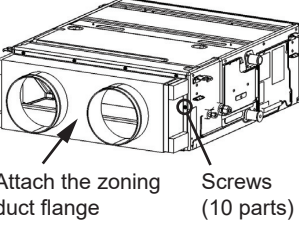
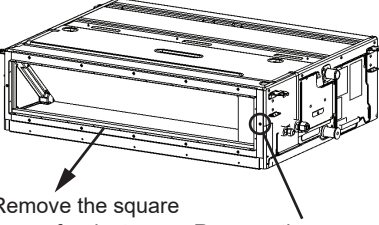
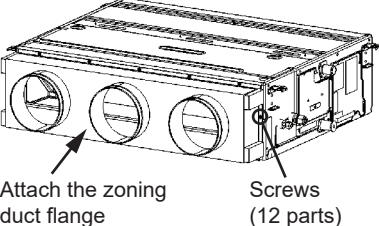
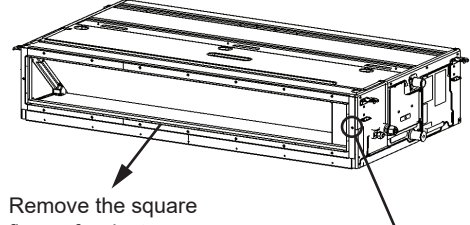
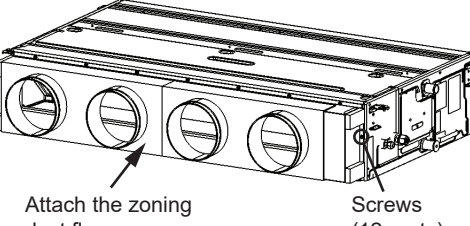


10. Accessories

Optional Parts	Model Name	Applicable FCU
Zoning duct flange	TCB-SF56C6BP-UL	MMD-AP0076/0096/0126BHPUL
	TCB-SF80C6BP-UL	MMD-AP0156/0186BHPUL
	TCB-SF160C6BP-UL	MMD-AP0216/0246/0306/0366BHPUL MMD-AP0426/0486/0546BHPUL
Auxiliary fresh air flange	TCB-FF151US-UL	For Duct type



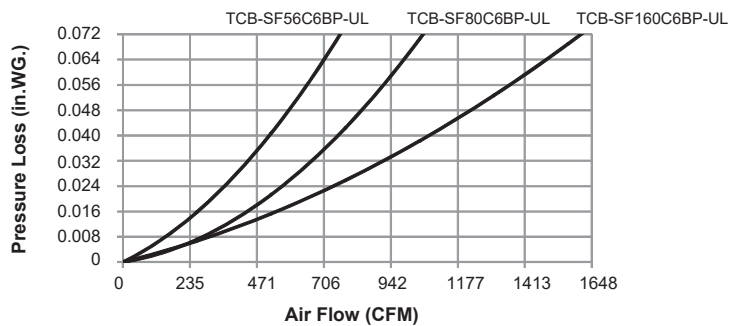
Appendix

Zoning duct flange TCB-SF56C6BP-UL	Zoning duct flange TCB-SF80C6BP-UL	Zoning duct flange TCB-SF160C6BP-UL
 Remove the square flange for duct Remove the screws. (10 parts)  Attach the zoning duct flange Screws (10 parts)	 Remove the square flange for duct Remove the screws. (12 parts)  Attach the zoning duct flange Screws (12 parts)	 Remove the square flange for duct Remove the screws. (16 parts)  Attach the zoning duct flange Screws (12 parts)

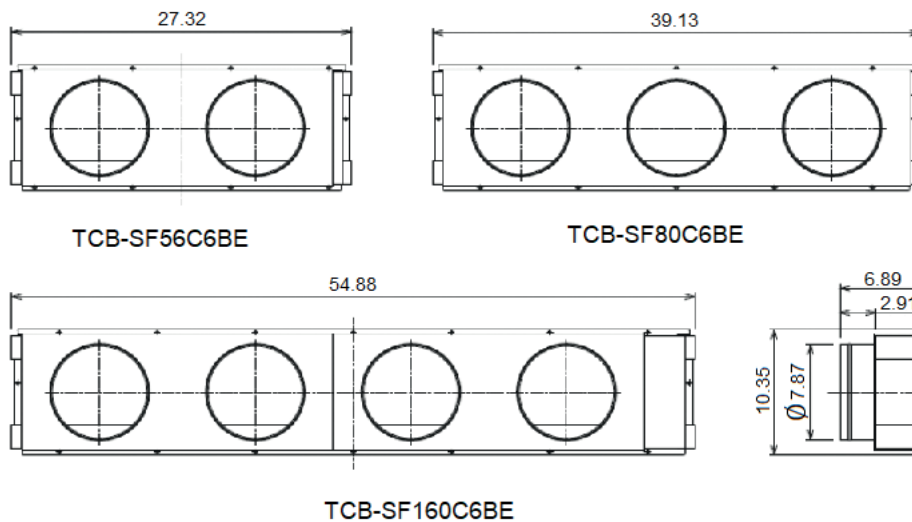
Remove screws on square flange for duct of indoor unit and attach the zoning duct flange with the screw.

External pressure loss characteristic

When you use these “Zoning duct flange” with Concealed Duct Type and High Static Pressure type, pressure-loss characteristics depends on Air Flow.



External Dimension



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