

Medium Static Pressure Duct Type

MMD-UP0071BHP-UL
MMD-UP0091BHP-UL
MMD-UP0121BHP-UL
MMD-UP0151BHP-UL
MMD-UP0181BHP-UL
MMD-UP0211BHP-UL
MMD-UP0241BHP-UL
MMD-UP0301BHP-UL
MMD-UP0361BHP-UL
MMD-UP0421BHP-UL
MMD-UP0481BHP-UL
MMD-UP0541BHP-UL



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1. Specifications

Model name		MMD-	UP0071BHP-UL	UP0091BHP-UL	UP0121BHP-UL	UP0151BHP-UL	UP0181BHP-UL	UP0211BHP-UL
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	39.4	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	73	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 exchanger			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	589 / 489 / 394	589 / 489 / 394	624 / 489 / 394	706 / 583 / 512
Sound pressure	Indoor unit (H/M/L)	dB(A)	39 / 34 / 30	41 / 36 / 32	44 / 41 / 35	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 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

Model name		MMD-	UP0241BHP-UL	UP0301BHP-UL	UP0361BHP-UL	UP0421BHP-UL	UP0481BHP-UL	UP0541BHP-UL
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					

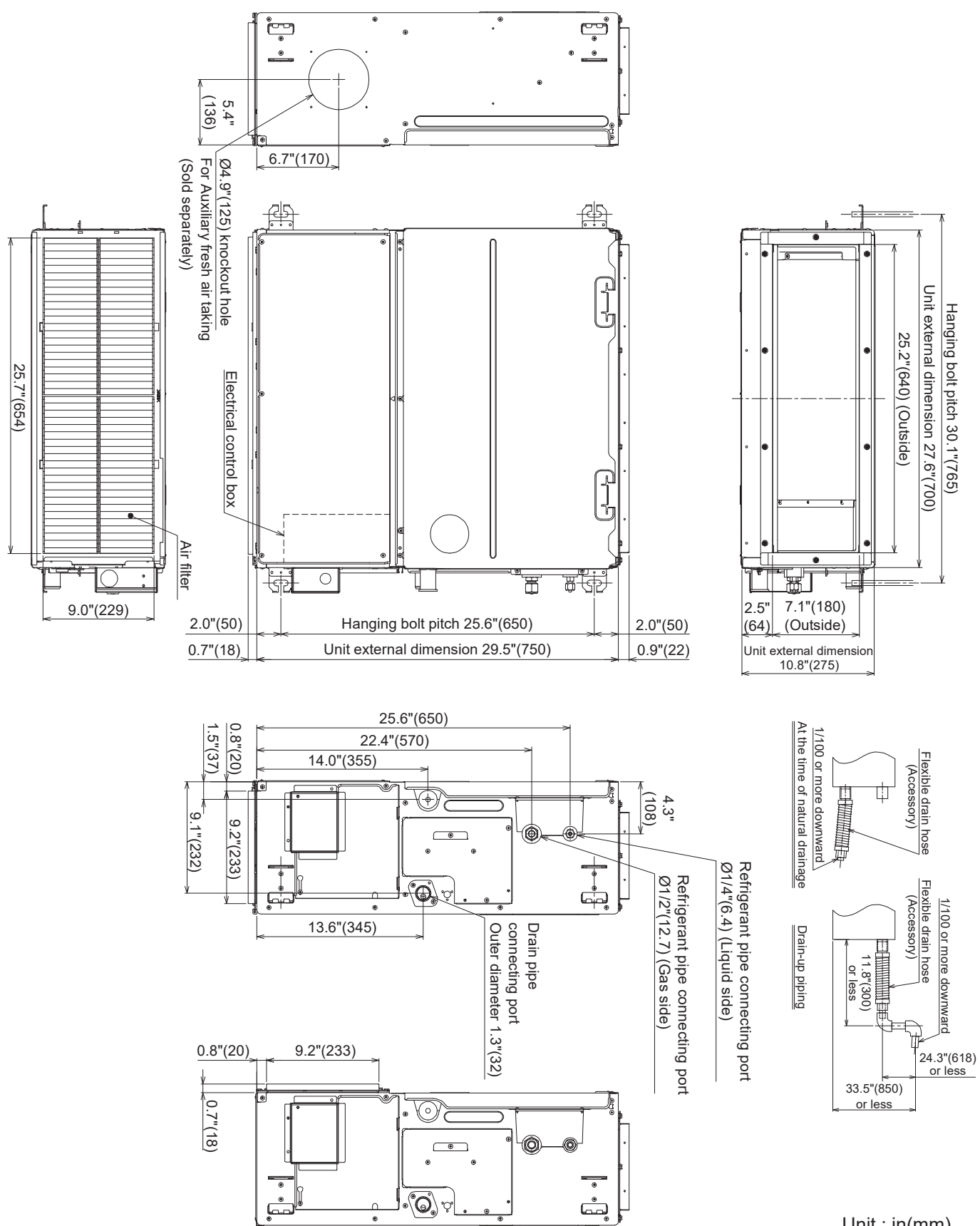
(*1) Rated testing conditions Cooling : Indoor air temperature 80°F Dry Bulb / 67°F Wet Bulb, Outdoor 95°F Dry Bulb

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

(*2) Non attached filter

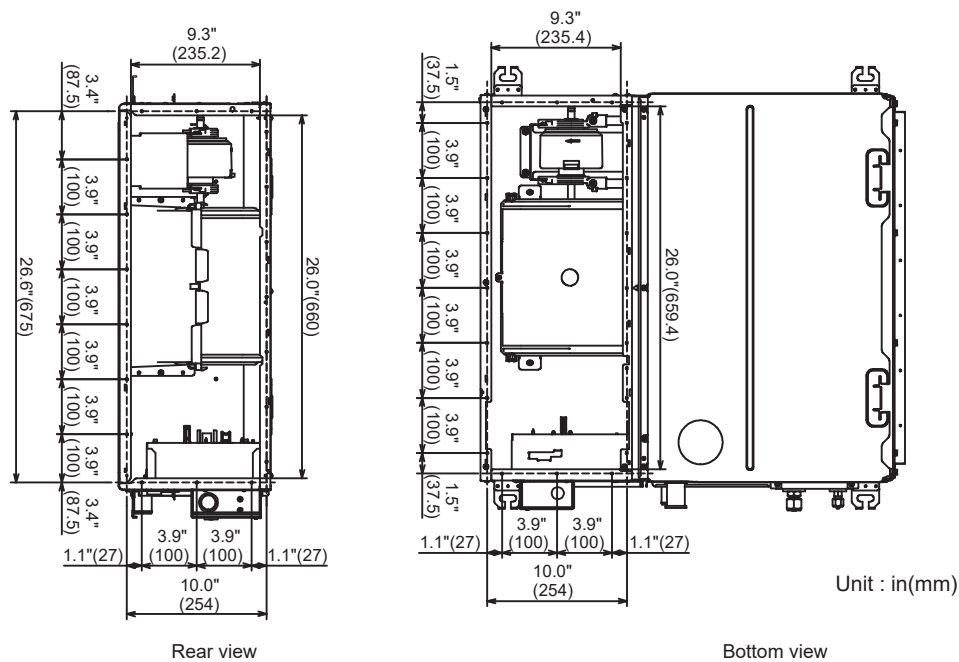
2. Dimension

MMD-UP*__1BHP-UL (*007 / 009)

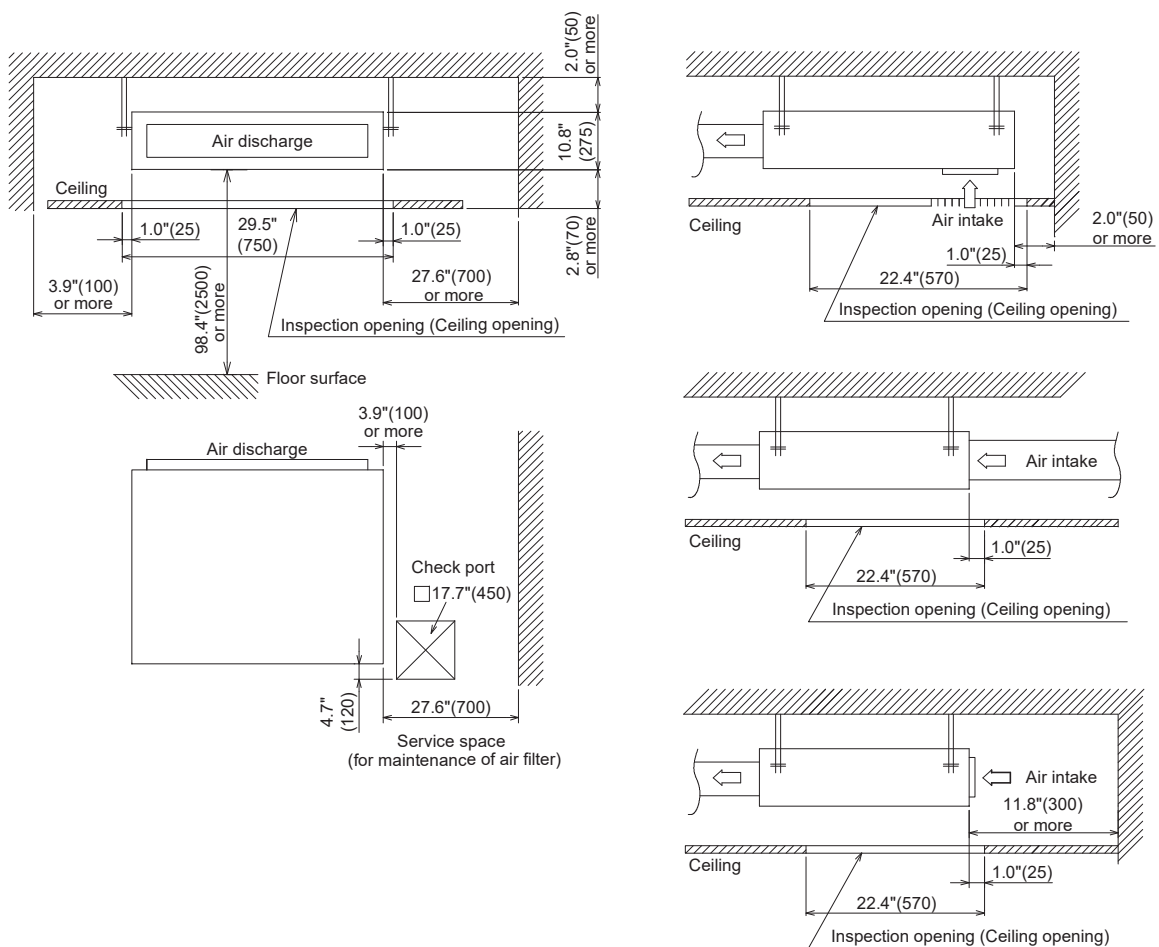


Unit : in(mm)

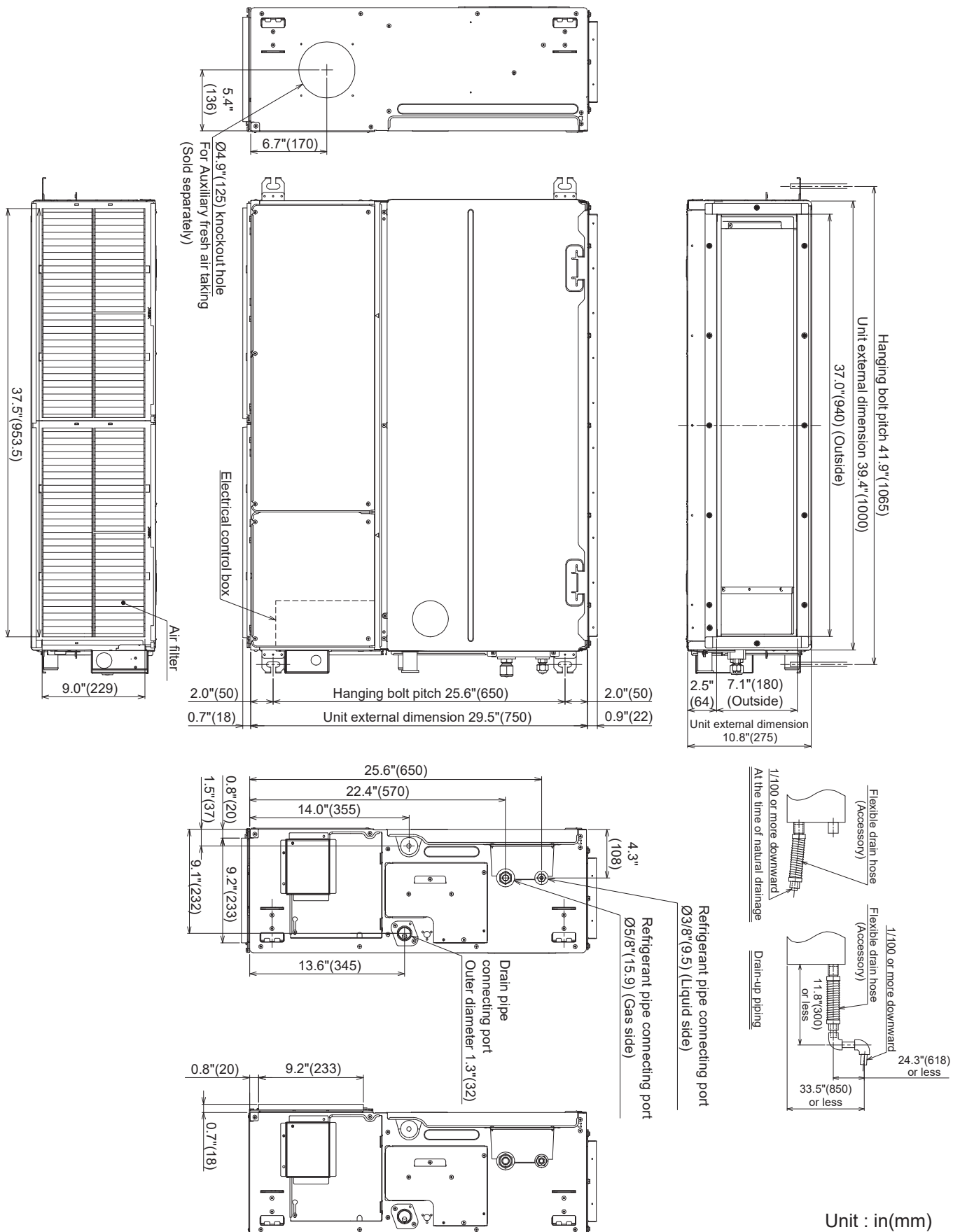
For duct design MMD-UP*__1BHP-UL (*007 / 009)



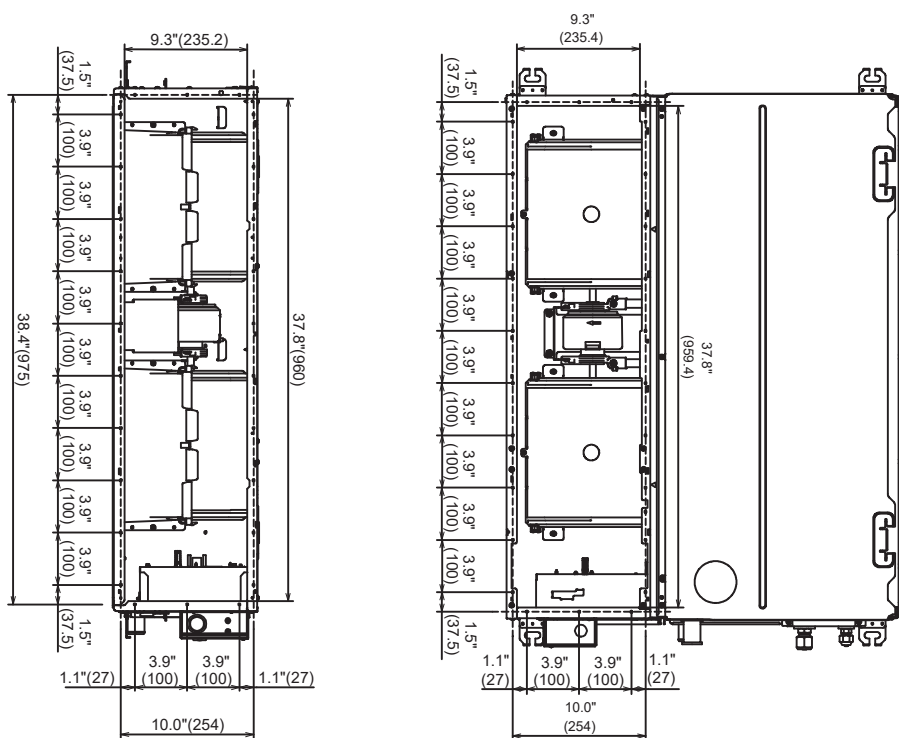
Space required for installation and servicing



MMD-UP*___1BHP-UL (*012 / 015 / 018)



For duct design MMD-UP*__1BHP-UL (*012 / 015 / 018)

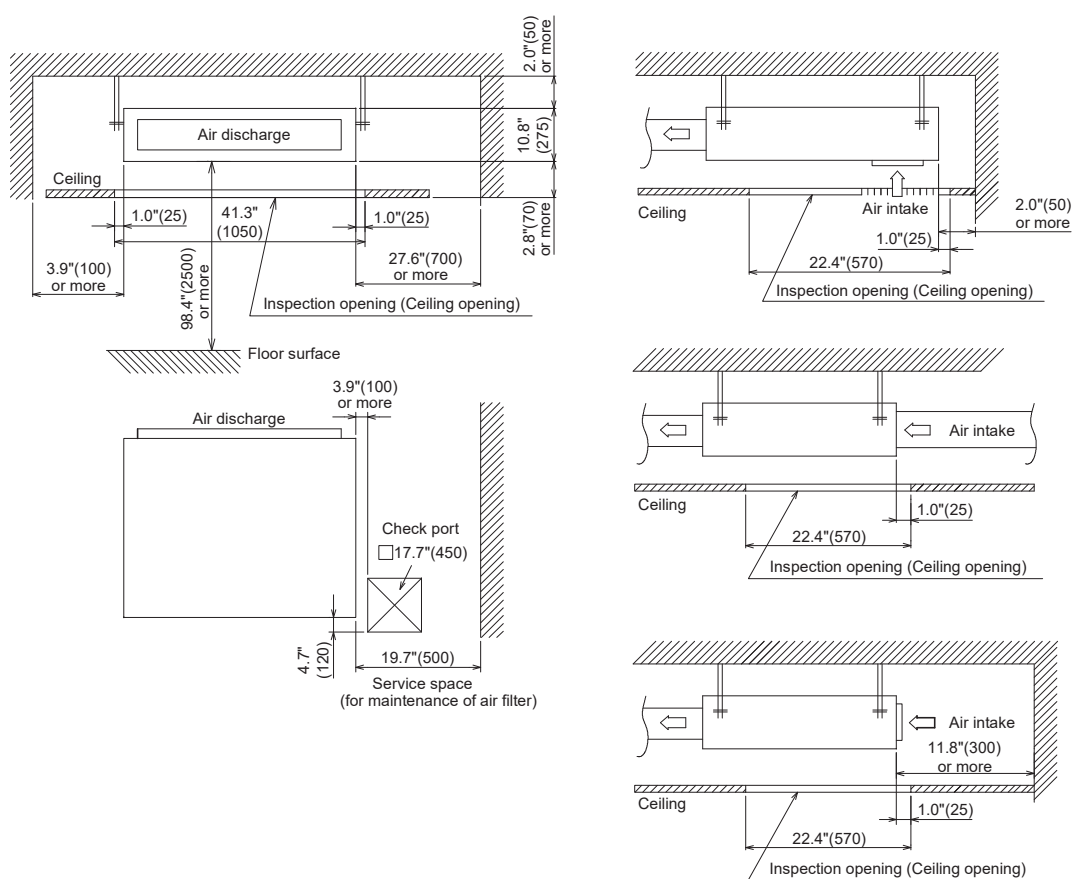


Rear view

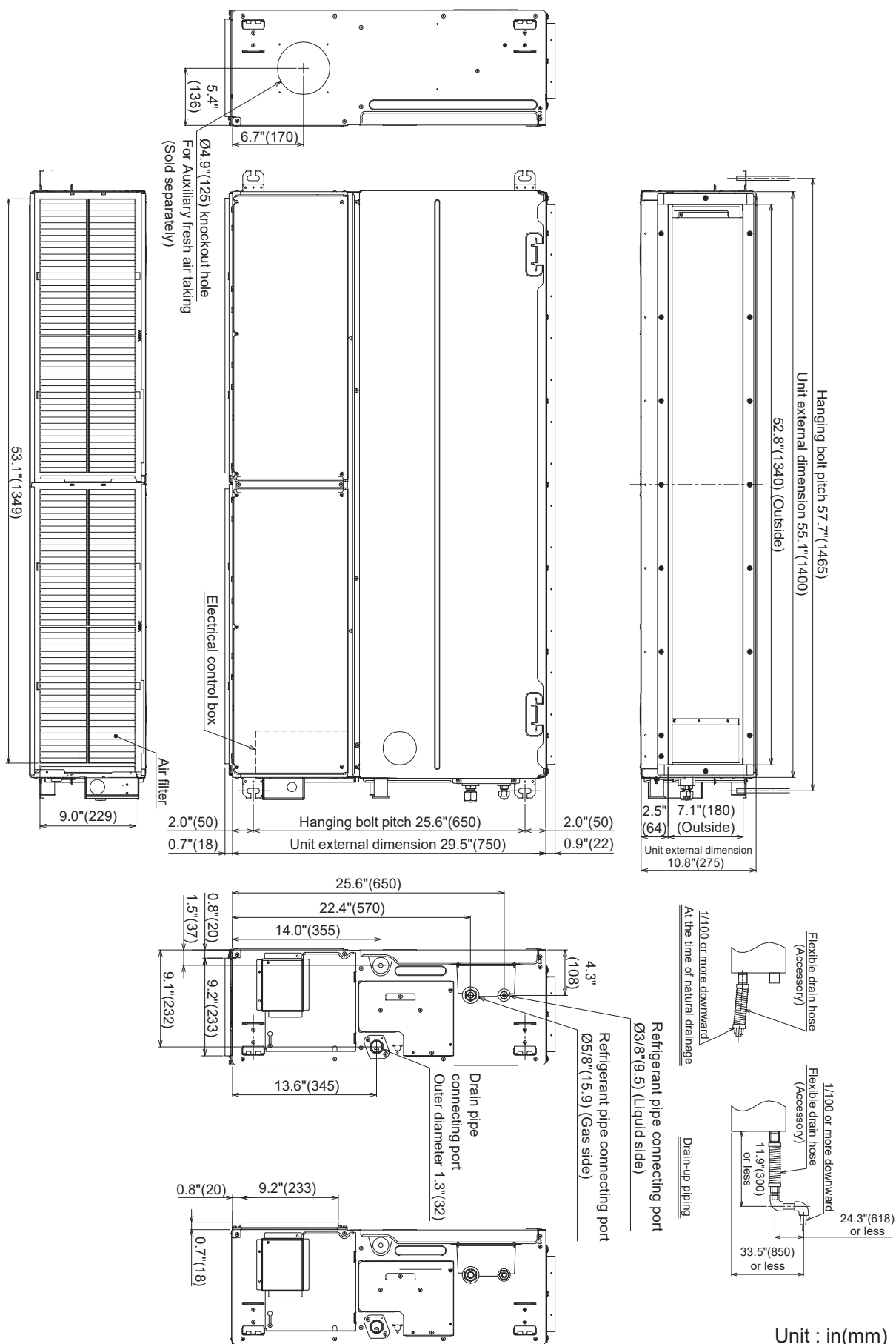
Bottom view

Unit : in(mm)

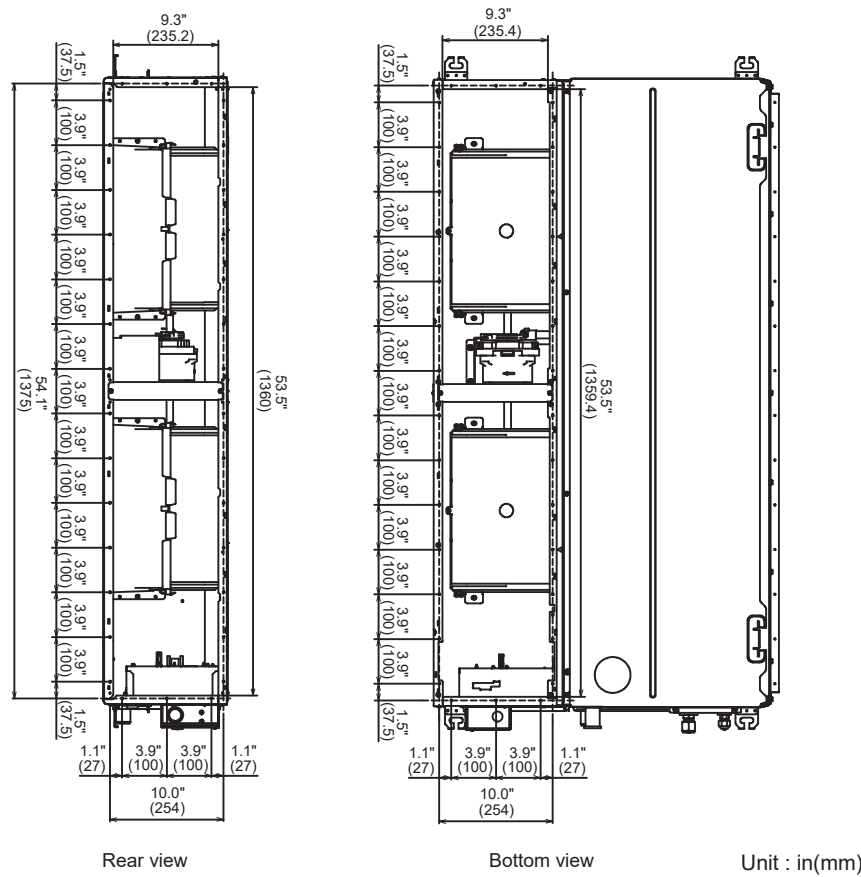
Space required for installation and servicing



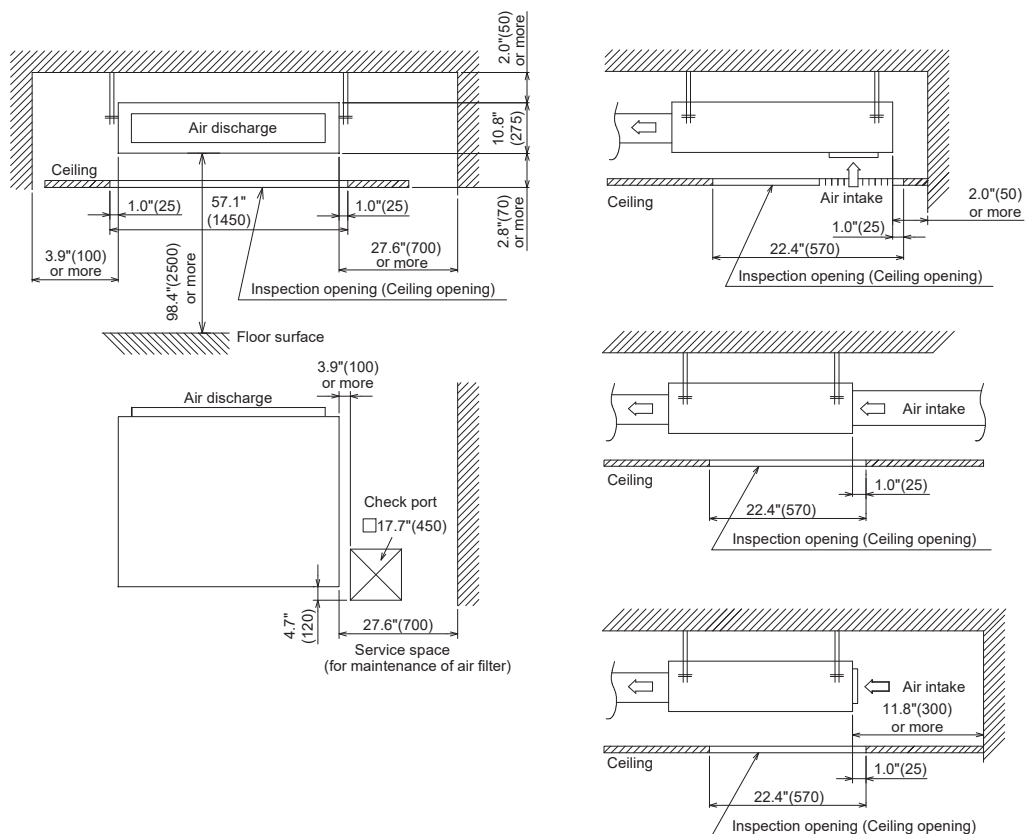
MMD-UP*__1BHP-UL (*021 / 024 / 030 / 036 / 042 / 048 / 054)



For duct design MMD-UP*___1BHP-UL (*021 / 024 / 030 / 036 / 042 / 048 / 054)

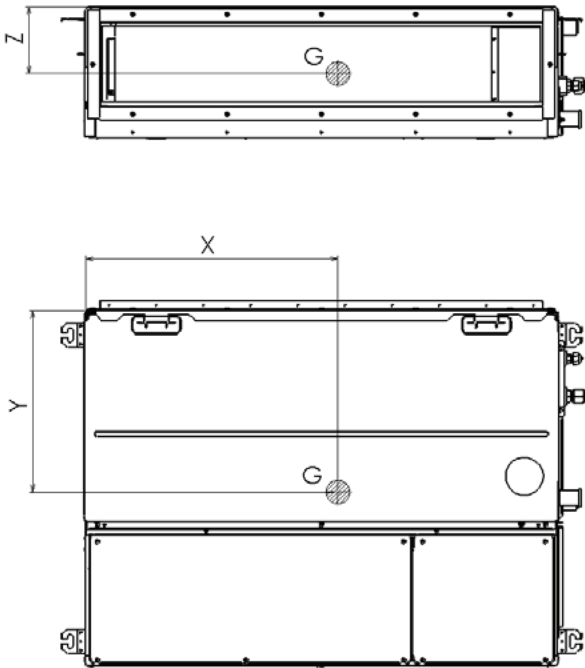


Space required for installation and servicing



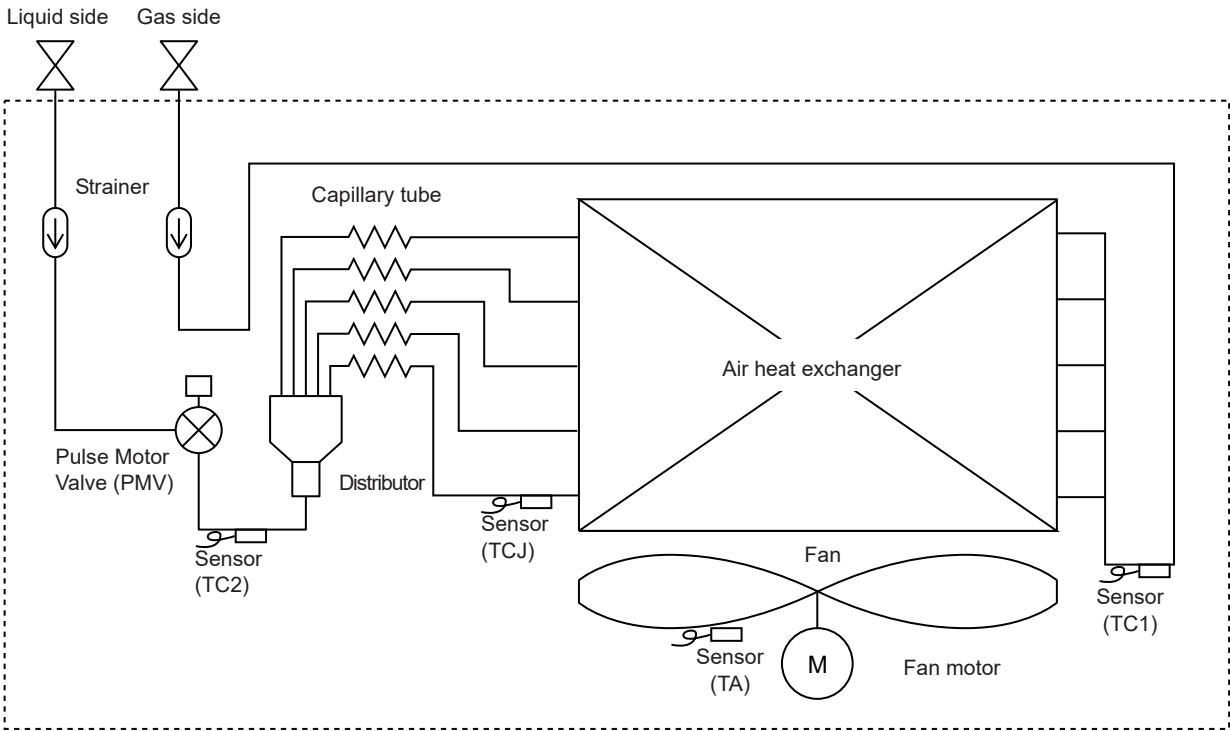
3. Center of gravity

Model name	X (in)	Y (in)	Z (in)	Total weight (lbs)
MMD-UP0071BHP-UL	13.7	15.2	5.6	56
MMD-UP0091BHP-UL				
MMD-UP0121BHP-UL	21.1	15.2	5.6	73
MMD-UP0151BHP-UL				
MMD-UP0181BHP-UL	29.3	15.2	5.6	93
MMD-UP0211BHP-UL				
MMD-UP0241BHP-UL				
MMD-UP0301BHP-UL				
MMD-UP0361BHP-UL				
MMD-UP0421BHP-UL				
MMD-UP0481BHP-UL				
MMD-UP0541BHP-UL				



4. Piping diagram

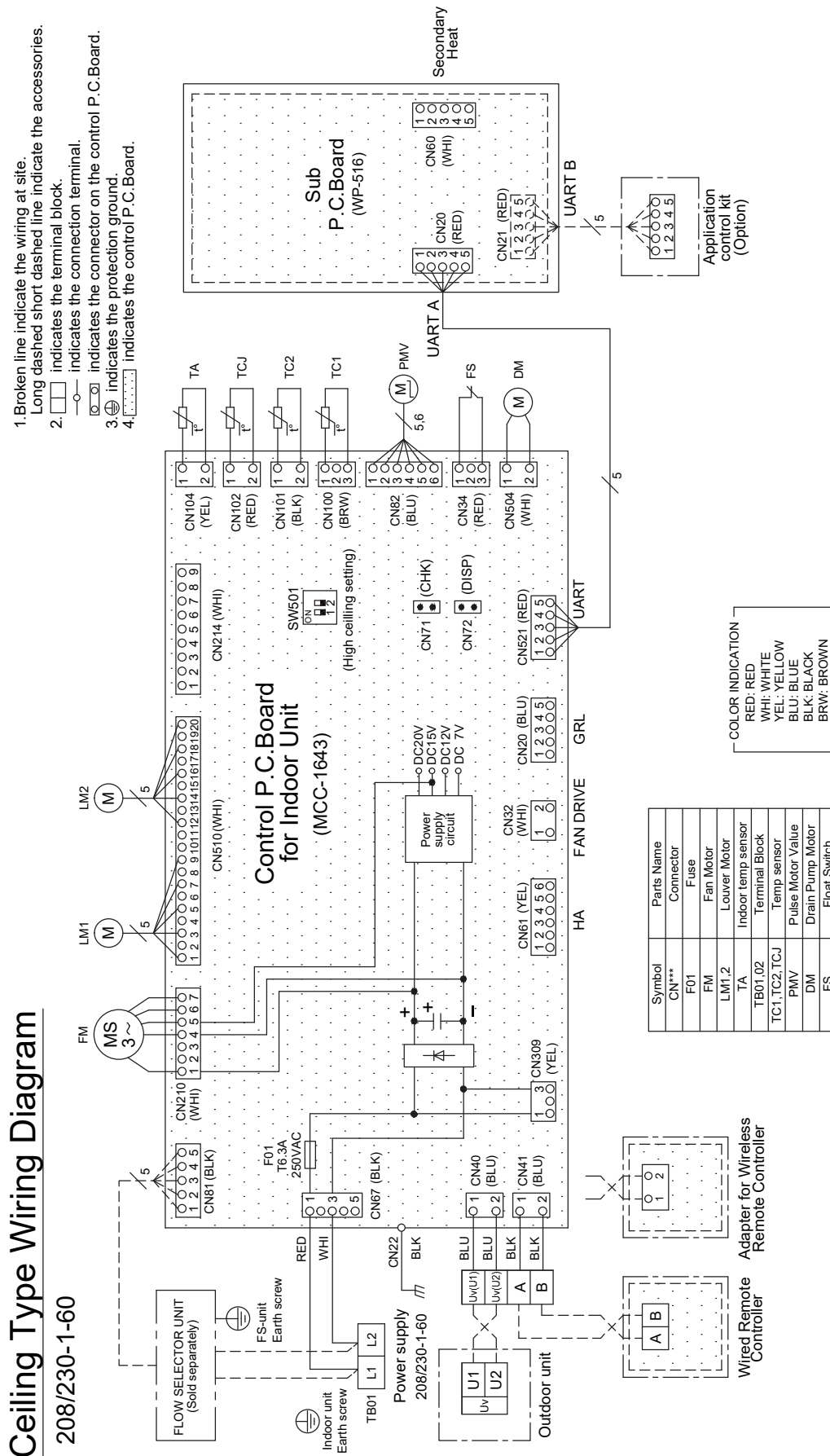
MMMD-UP0*__1BHP-UL (*07 / 09 / 12 / 15 / 18 / 21 / 24 / 30 / 36 / 42 / 48 / 54)



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
	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
Temp. sensor	4. TCJ	(Connector CN102 (2P): Red) 1) Controls PMV super heat in cooling operation

5. Wiring diagram

MMMD-UP0*__1BHP-UL (*07 / 09 / 12 / 15 / 18 / 21 / 24 / 30 / 36 / 42 / 48 / 54)



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-UP0071BHP-UL	208/230-1-60	187	253	0.73	0.91	15
	MMD-UP0091BHP-UL	208/230-1-60	187	253	0.88	1.10	15
	MMD-UP0121BHP-UL	208/230-1-60	187	253	0.88	1.10	15
	MMD-UP0151BHP-UL	208/230-1-60	187	253	1.53	1.91	15
	MMD-UP0181BHP-UL	208/230-1-60	187	253	1.53	1.91	15
	MMD-UP0211BHP-UL	208/230-1-60	187	253	1.78	2.23	15
	MMD-UP0241BHP-UL	208/230-1-60	187	253	1.78	2.23	15
	MMD-UP0301BHP-UL	208/230-1-60	187	253	1.85	2.31	15
	MMD-UP0361BHP-UL	208/230-1-60	187	253	2.71	3.39	15
	MMD-UP0421BHP-UL	208/230-1-60	187	253	2.71	3.39	15
	MMD-UP0481BHP-UL	208/230-1-60	187	253	2.85	3.56	15
	MMD-UP0541BHP-UL	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-UP__1BHP-UL)

unit size	outdoor air temp. FDB	Indoor air temp.														
		59 ° FWB		61 ° FWB		64 ° FWB		67 ° FWB		68 ° FWB		72 ° FWB		75 ° FWB		
		71 ° FDB		73 ° FDB		77 ° FDB		80 ° FDB		82 ° FDB		86 ° FDB		90 ° FDB		
007	41	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	
		6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340	
		45	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		50	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		54	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		57	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		61	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		64	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		68	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		70	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		73	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		77	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		81	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		84	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		88	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		91	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		95	6380	5070	6680	5220	7100	5430	7500	5600	7630	5620	8110	5540	8450	5340
		99	6190	4920	6490	5070	6890	5270	7280	5440	7410	5460	7870	5380	8200	5190
		102	6050	4810	6330	4950	6730	5150	7110	5310	7230	5330	7690	5250	8010	5060
		106	5880	4670	6160	4810	6550	5010	6920	5160	7030	5180	7480	5110	7790	4920
		109	5720	4550	5990	4680	6370	4870	6730	5020	6840	5040	7270	4970	7580	4790
009	41	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770	
		45	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770
		50	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770
		54	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770
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		64	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770
		68	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770
		70	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770
		73	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770
		77	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770
		81	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770
		84	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770
		88	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770
		91	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770
		95	8090	6440	8460	6610	9000	6890	9500	7100	9660	7120	10270	7030	10700	6770
		99	7860	6250	8210	6420	8740	6690	9220	6890	9380	6910	9970	6830	10390	6570
		102	7670	6110	8020	6270	8530	6530	9010	6730	9160	6750	9740	6660	10140	6420
		106	7460	5940	7800	6090	8300	6350	8760	6550	8910	6560	9470	6480	9870	6240
		109	7260	5780	7590	5930	8070	6180	8520	6370	8670	6390	9210	6310	9600	6070
012	41	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580	
		45	10210	8160	10690	8390	11360	8720	12000	9000	12210	9030	12980	8910	13510	8580
		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
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		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
		106	9410	7520	9860	7740	10470	8040	11060	8300	11260	8330	11970	8220	12460	7910
		109	9160	7320	9590	7530	10190	7820	10760	8070	10950	8100	11640	7990	12120	7700
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		45	13110	10520	13710	10800	14580	11240	15400	11600	15660	11630	16660	11490	17340	11050
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		57	13110	10520	13710	10800	14580	11240	15400	11600	15660	11630	16660	11490	17340	11050
		61	13110	10520	13710	10800	14580	11240	15400	11600	15660	11630	16660	11490	17340	11050
		64	13110	10520	13710	10800	14580	11240	15400	11600	15660	11630	16660	11490	17340	11050
		68	13110	10520	13710	10800	14580	11240	15400	11600	15660	11630	16660	11490	17340	11050
		70	13110	10520	13710	10800	14580	11240	15400	11600	15660	11630	16660	11490	17340	11050
		73	13110	10520	13710	10800	14580	11240	15400	11600	15660	11630	16660	11490	17340	11050
		77	13110	10520	13710	10800	14580	11240	15400	11600	15660	11630	16660	11490	17340	11050
		81	13110	10520	13710	10800	14580	11240	15400	11600	15660	11630	16660	11490	1	

Medium static pressure duct (MMD-UP__1BHP-UL)

unit size	outdoor air temp. °FDB	Indoor air temp.													
		59 °FWB		61 °FWB		64 °FWB		67 °FWB		68 °FWB		72 °FWB		75 °FWB	
		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
018	41	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	45	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	50	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	54	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	57	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	61	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	64	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	68	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	70	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	73	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	77	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	81	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	84	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	88	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	91	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	95	15320	12240	16030	12580	17040	13090	18000	13500	18310	13540	19470	13370	20270	12870
	99	14880	11890	15570	12220	16550	12710	17480	13110	17780	13150	18910	12980	19680	12500
	102	14520	11600	15200	11930	16150	12410	17060	12800	17360	12840	18460	12670	19220	12200
	106	14130	11290	14780	11600	15710	12070	16600	12450	16880	12480	17950	12330	18690	11870
	109	13740	10980	14380	11280	15280	11740	16150	12110	16420	12150	17460	11990	18180	11540
021	41	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	45	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	50	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	54	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	57	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	61	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	64	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	68	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	70	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	73	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	77	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	81	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	84	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	88	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	91	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	95	17240	14010	19070	14920	20370	15850	21000	15800	21630	15800	22890	15650	23940	15290
	99	16740	13600	18520	14490	19780	15390	20390	15340	21000	15340	22230	15200	23250	14850
	102	16340	13280	18080	14140	19310	15030	19910	14980	20510	14980	21700	14840	22700	14490
	106	15900	12920	17580	13760	18780	14610	19360	14570	19940	14570	21100	14430	22070	14100
	109	15460	12570	17110	13380	18270	14220	18840	14170	19400	14170	20530	14040	21470	13720
024	41	19704	15960	21792	16998	23280	18054	24000	18000	24720	17999	26160	17833	27360	17420
	45	19704	15960	21792	16998	23280	18054	24000	18000	24720	17999	26160	17833	27360	17420
	50	19704	15960	21792	16998	23280	18054	24000	18000	24720	17999	26160	17833	27360	17420
	54	19704	15960	21792	16998	23280	18054	24000	18000	24720	17999	26160	17833	27360	17420
	57	19704	15960	21792	16998	23280	18054	24000	18000	24720	17999	26160	17833	27360	17420
	61	19704	15960	21792	16998	23280	18054	24000	18000	24720	17999	26160	17833	27360	17420
	64	19704	15960	21792	16998	23280	18054	24000	18000	24720	17999	26160	17833	27360	17420
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	81	19704	15960	21792	16998	23280	18054	24000	18000	24720	17999	26160	17833	27360	17420
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	88	19704	15960	21792	16998	23280	18054	24000	18000	24720	17999	26160	17833	27360	17420
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	95	19704	15960	21792	16998	23280	18054	24000	18000	24720	17999	26160	17833	27360	17420
	99	19133	15497	21160	16505	22605	17530	23304	17478	24003	17477	25401	17316	26567	16915
	102	18679	15130	20659	16114	22069	17115	22752	17064	23435	17063	24800	16906	25937	16515
	106	18170	14720	20090	15670	21460	16650	22130	16600	22790	16590	24120	16440	25230	16060
	109	17670	14320	19550	15250	20880	16190	21530	16150	22170	16140	23470	16000	24540	15630
030	41	24630	19950	27240	21250	29100	22570	30000	22500	30900	22500	32700	22290	34200	21780
	45	24630	19950	27240	21250	29100	22570	30000	22500	30900	22500	32700	22290	34200	21780
	50	24630	19950	27240	21250	29100	22570	30000	22500	30900	22500	32700	22290	34200	21780
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	70	24630	19950	27240	21250	29100	22570	30000	22500	30900	22500	32700	22290	34200	21780
	73	24630	19950	27240	21250	29100	22570	30000	22500	30900	22500	32700	22290	34200	21780
	77	24630	19950	27240	21250	29100	22570	30000	22500	30900	22500	32700	22290	34200	21780
	81	24630	19950	27240	21250	29100	22570	30000	22500	309					

Medium static pressure duct (MMD-UP__1BHP-UL)

unit size	outdoor air temp. °FDB	Indoor air temp.													
		59 ° FWB		61 ° FWB		64 ° FWB		67 ° FWB		68 ° FWB		72 ° FWB		75 ° FWB	
		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
036	41	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	45	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	50	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	54	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	57	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	61	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	64	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	68	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	70	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	73	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	77	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	81	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	84	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	88	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	91	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	95	29560	23940	32690	25500	34920	27080	36000	27000	37080	27000	39240	26750	41040	26130
	99	28700	23250	31740	24760	33910	26290	34960	26220	36000	26220	38100	25970	39850	25370
	102	28020	22700	30990	24170	33100	25670	34130	25600	35150	25600	37200	25360	38910	24770
	106	27250	22070	30140	23510	32200	24970	33190	24890	34190	24890	36180	24660	37840	24090
	109	26520	21470	29320	22870	31320	24290	32290	24220	33260	24220	35200	23990	36810	23440
042	41	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	45	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	50	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	54	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	57	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	61	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	64	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	68	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	70	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	73	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	77	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	81	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	84	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	88	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	91	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	95	34480	27930	38140	29750	40740	31590	42000	31500	43260	31500	45780	31210	47880	30490
	99	33480	27120	37030	28890	39560	30670	40780	30590	42010	30590	44450	30300	46490	29610
	102	32690	26480	36160	28200	38620	29950	39820	29860	41010	29860	43400	29590	45390	28900
	106	31790	25750	35170	27430	37560	29130	38720	29040	39890	29040	42210	28780	44150	28110
	109	30930	25050	34210	26690	36540	28340	37670	28260	38800	28260	41060	28000	42950	27350
048	41	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	45	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	50	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	54	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	57	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	61	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	64	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	68	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	70	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	73	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	77	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	81	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	84	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	88	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	91	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	95	39410	31920	43580	33990	46560	36110	48000	36000	49440	36000	52320	35670	54720	34840
	99	38270	30990	42320	33000	45210	35060	46610	34960	48010	34960	50800	34640	53130	33830
	102	37360	30260	41310	32220	44140	34230	45500	34130	46870	34130	49600	33820	51870	33030
	106	36340	29430	40180	31340	42930	33290	44260	33190	45580	33190	48240	32890	50450	32120
	109	35350	28630	39090	30490	41760	32390	43060	32290	44350	32290	46930	32000	49080	31250
054	41	44330	35910	49030	38240	54000	40620	54000	40500	55620	40500	58860	40120	61560	39200
	45	44330	35910	49030	38240	54000	40620	54000	40500	55620	40500	58860	40120	61560	39200
	50	44330	35910	49030	38240	54000	40620	54000	40500	55620	40500	58860	40120	61560	39200
	54	44330	35910	49030	38240	54000	40620	54000	40500	55620	40500	58860	40120	61560	39200
	57	44330	35910	49030	38240	54000	40620	54000	40500	55620	40500	58860	40120	61560	39200
	61	44330	35910	49030	38240	54000	40620	54000	40500	55620	40500	58860	40120	61560	39200
	64	44330	35910	49030	38240	54000	40620	54000	40500	55620	40500	58860	40120	61560	39200
	68	44330	35910	49030	38240	54000	40620	54000	40500	55620	40500	58860	40120	61560	39200
	70	44330	35910	49030	38240	54000	40620	54000	40500	55620	40500	58860	40120	61560	39200
	73	44330	35910	49030	38240	54000	40620	54000	40500	55620	40500	58860	40120	61560	39200
	77	44330	35910	49030	38240	54000	40620	54000	40500	55620	40500	58860	40120	61560	39200
	81	44330	35910	49030	38240	54000	40620	54000	40500	55620</					

Heating capacity table

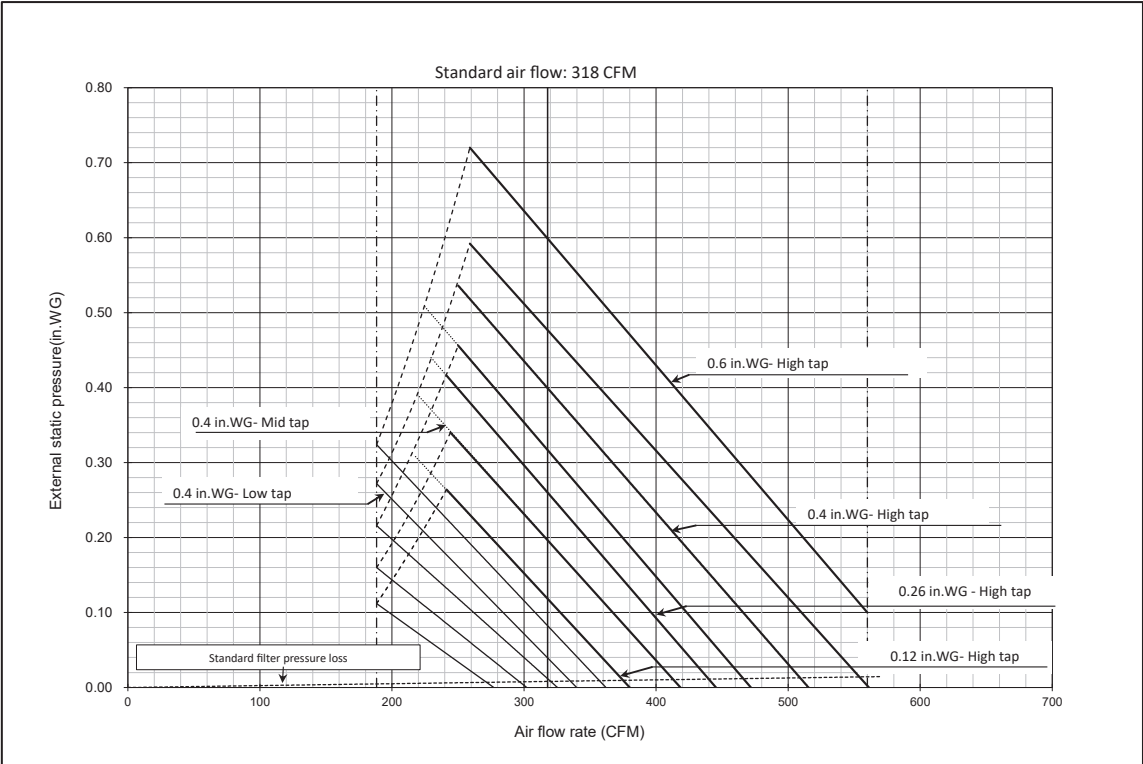
	Indoor air temp. °FDB					
Fahrenheit(°F)	62	65	68	70	72	75
Celsius(°C)	16.7	18.3	20	21.1	22.2	23.9
	Total capacity (TC) (kBtu/h)					
MMD-UP0071BHP-UL	8.9	8.8	8.6	8.5	8.4	8.2
MMD-UP0091BHP-UL	11.0	10.8	10.6	10.5	10.4	10.1
MMD-UP0121BHP-UL	14.1	13.9	13.7	13.5	13.3	13.0
MMD-UP0151BHP-UL	17.8	17.5	17.2	17.0	16.8	16.4
MMD-UP0181BHP-UL	20.9	20.6	20.2	20.0	19.7	19.3
MMD-UP0211BHP-UL	25.1	24.7	24.3	24.0	23.7	23.2
MMD-UP0241BHP-UL	28.2	27.8	27.3	27.0	26.6	26.1
MMD-UP0301BHP-UL	35.5	35.0	34.4	34.0	33.6	32.9
MMD-UP0361BHP-UL	41.8	41.2	40.5	40.0	39.5	38.6
MMD-UP0421BHP-UL	49.6	48.9	48.1	47.5	46.9	45.9
MMD-UP0481BHP-UL	56.4	55.6	54.7	54.0	53.3	52.2
MMD-UP0541BHP-UL	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.

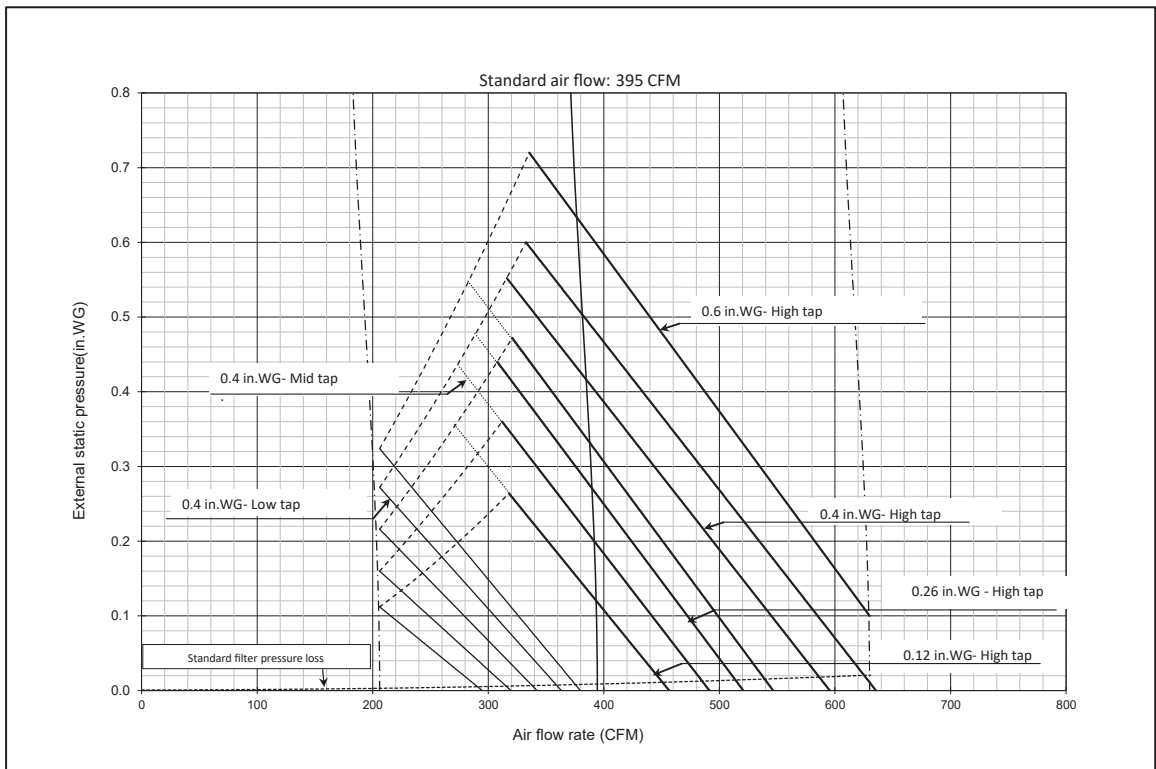
Notes: 2. This is the capacity table of rated heating test condition of Outdoor 47°F Dry Bulb / 43°F Wet Bulb.

8. Fan characteristics

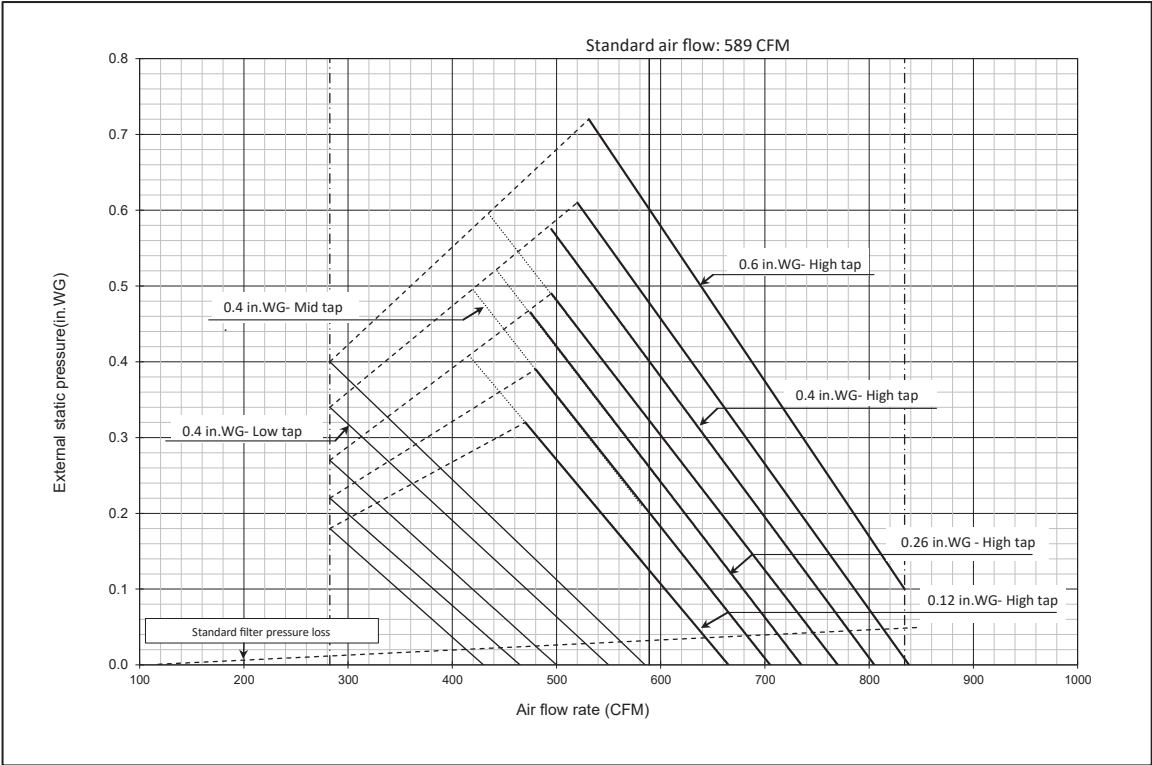
MMD-UP0071BHP-UL



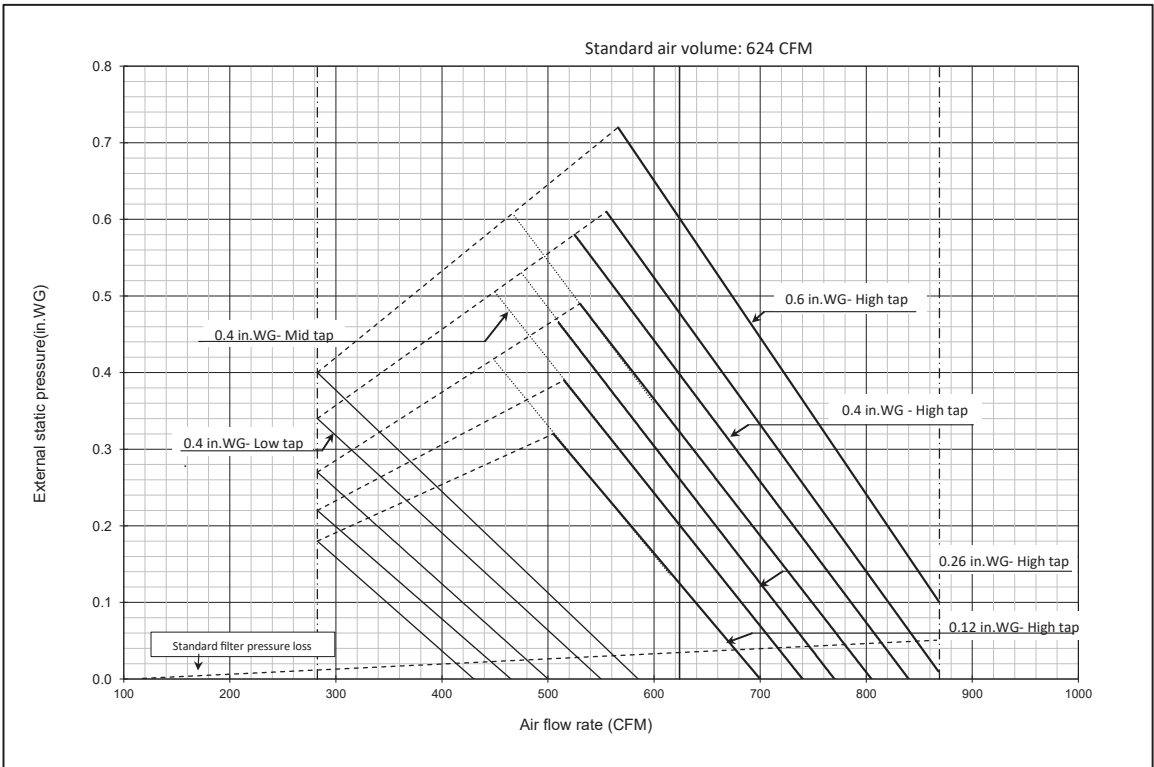
MMD-UP0091BHP-UL



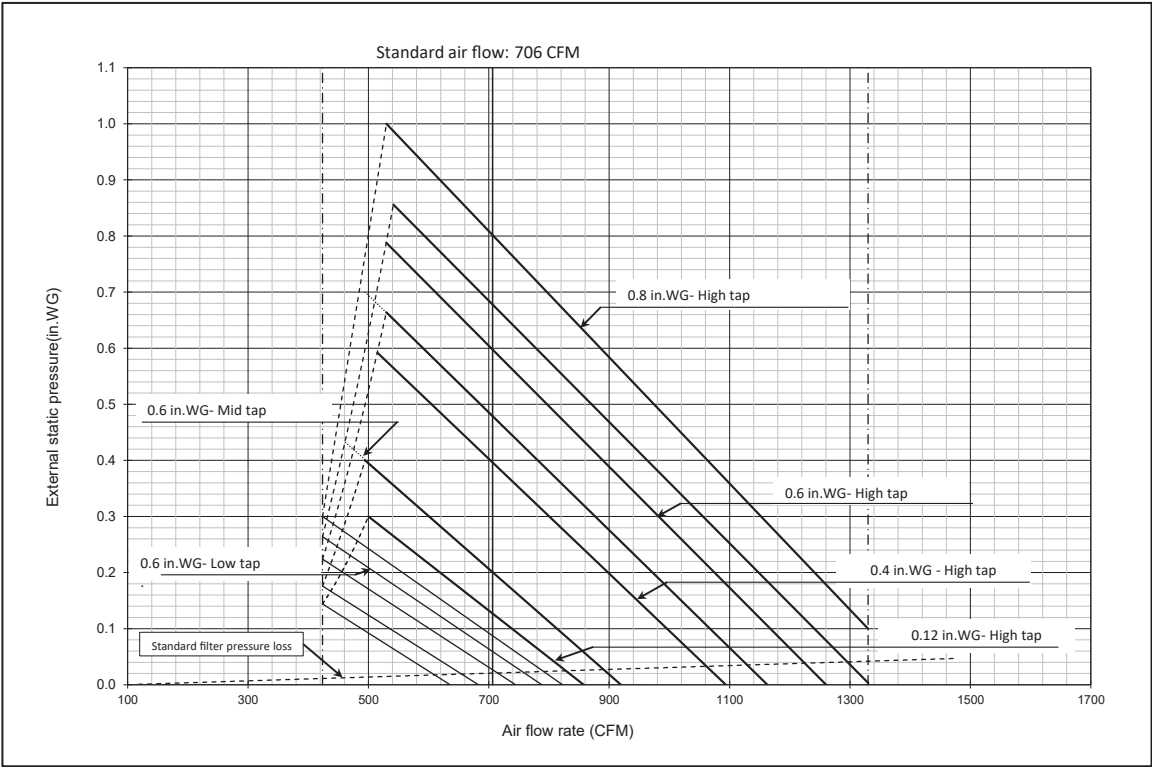
MMD-UP0121BHP-UL / UP0151BHP-UL



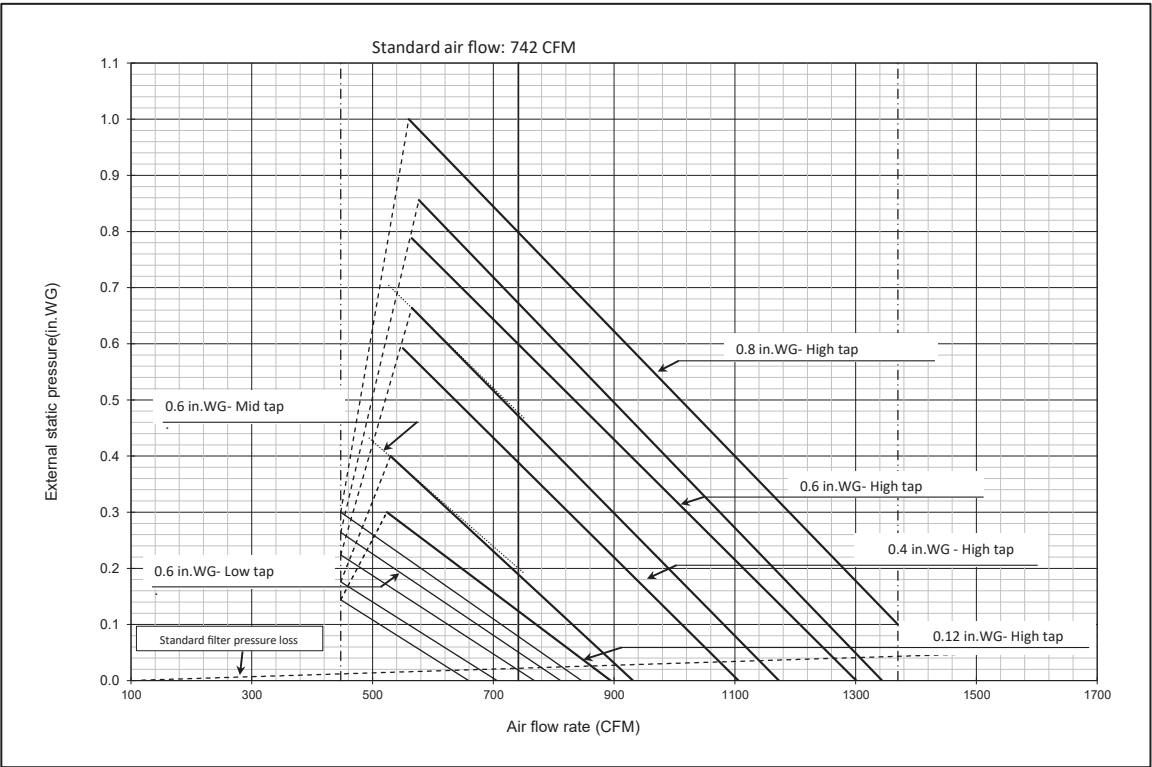
MMD-UP0181BHP-UL



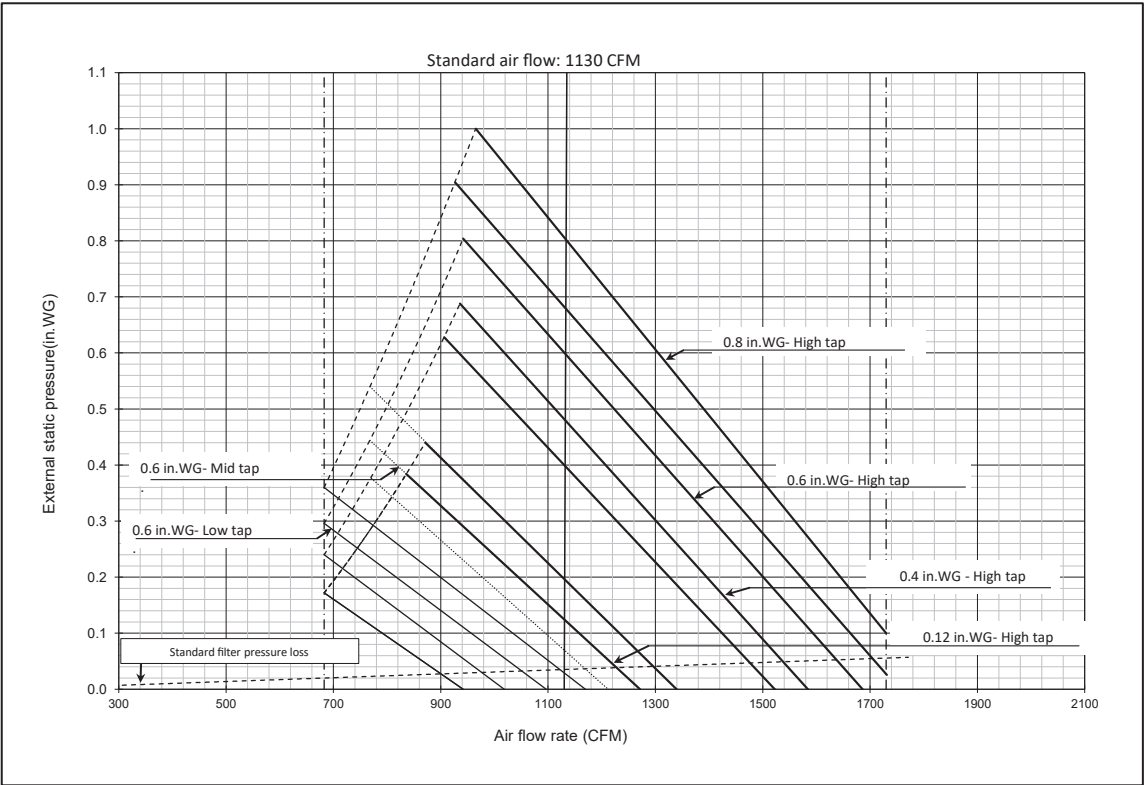
MMD-UP0211BHP-UL / AP0241BHP-UL



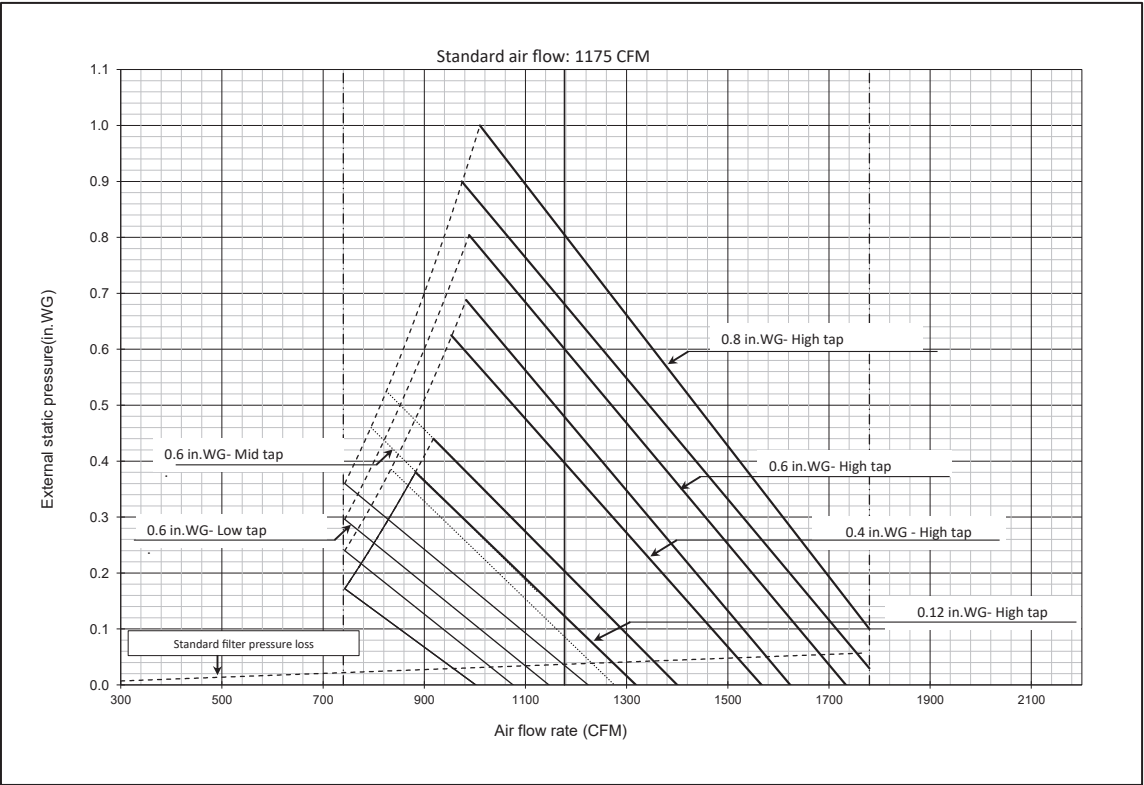
MMD-UP0301BHP-UL



MMD-UP0361BHP-UL / UP0421BHP-UL



MMD-UP0481BHP-UL / UP0541BHP-UL



The concealed duct unit has 7 steps of static pressure (MMD-UP007 ~ 081* : 0.12 - 0.6 in.WG, MMD-UP021 ~ 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.

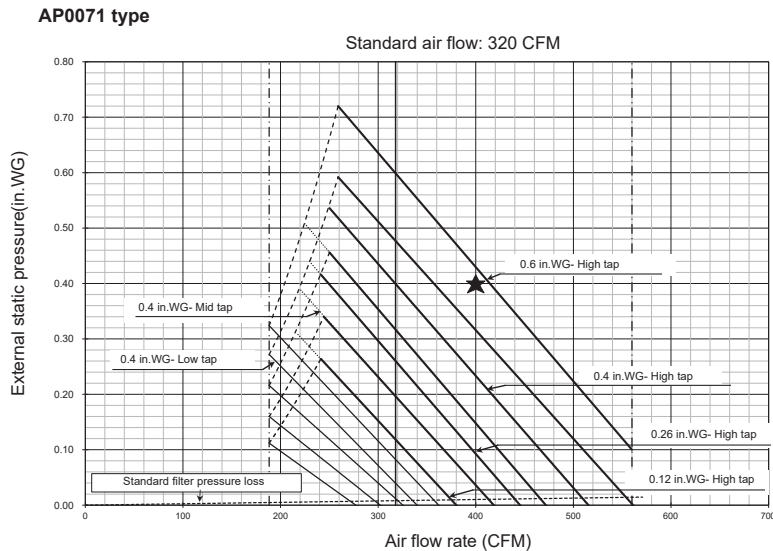
For meeting the site requirement / conditions, make sure the external static pressure and air flow are determined.

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

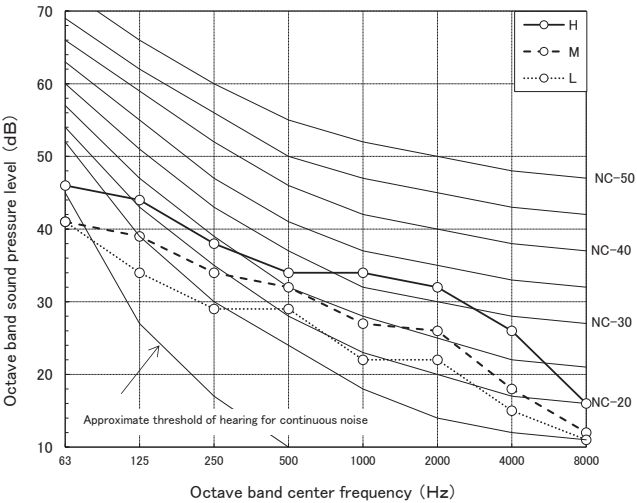
Supply air CFM will follow the solid line fan curve shown in the above graph if there is any change in the external static pressure.

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

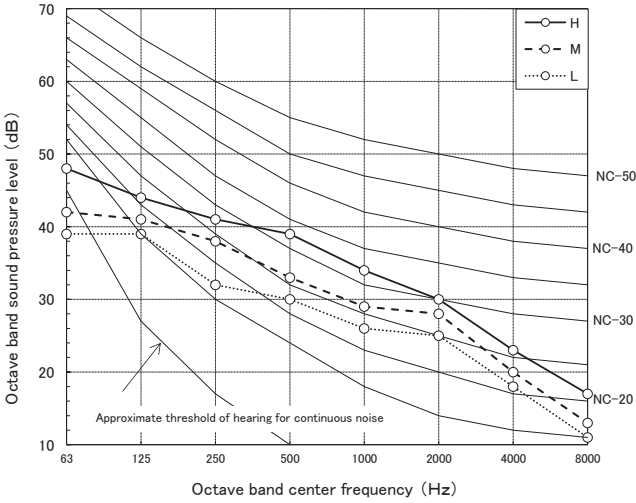
MMD-UP0071BHP-UL

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



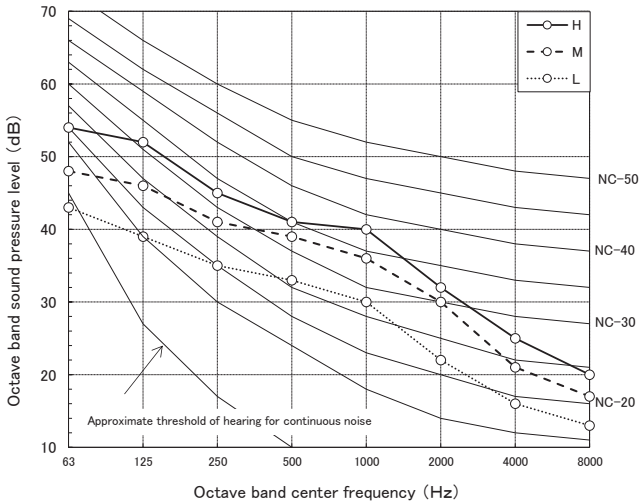
MMD-UP0091BHP-UL

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



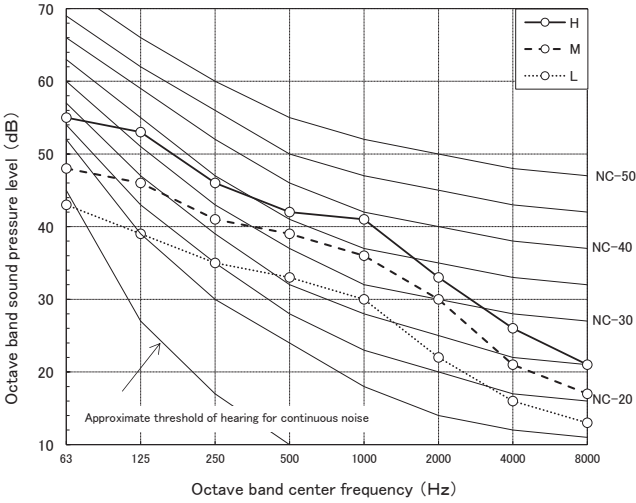
MMD-UP0121BHP-UL / UP0151BHP-UL

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



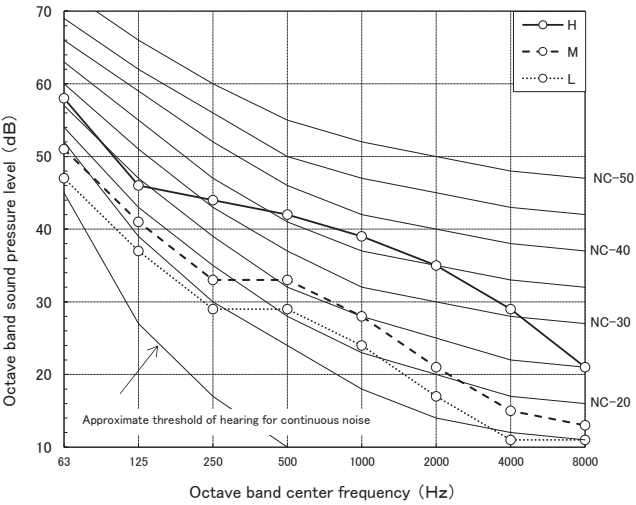
MMD-UP0181BHP-UL

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



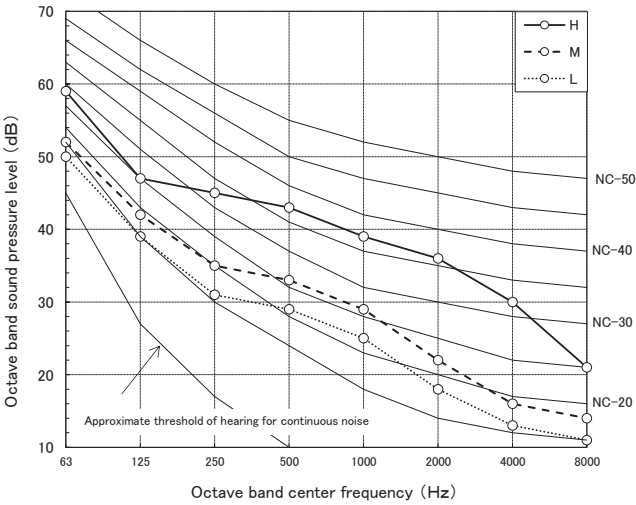
MMD-UP0211BHP-UL / UP0241BHP-UL

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



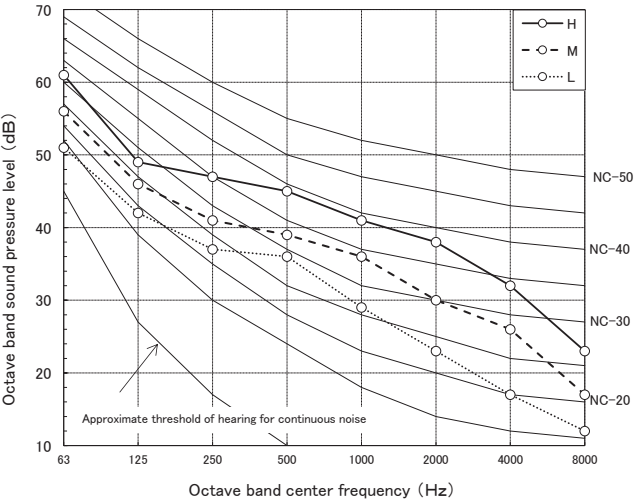
MMD-UP0301BHP-UL

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



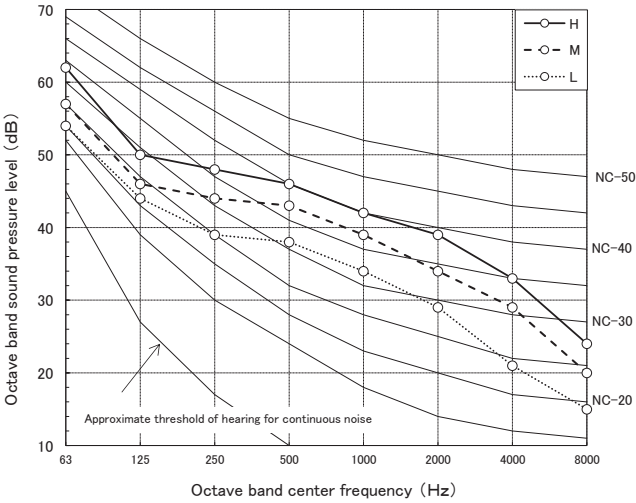
MMD-UP0361BHP-UL / UP0421BHP-UL

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



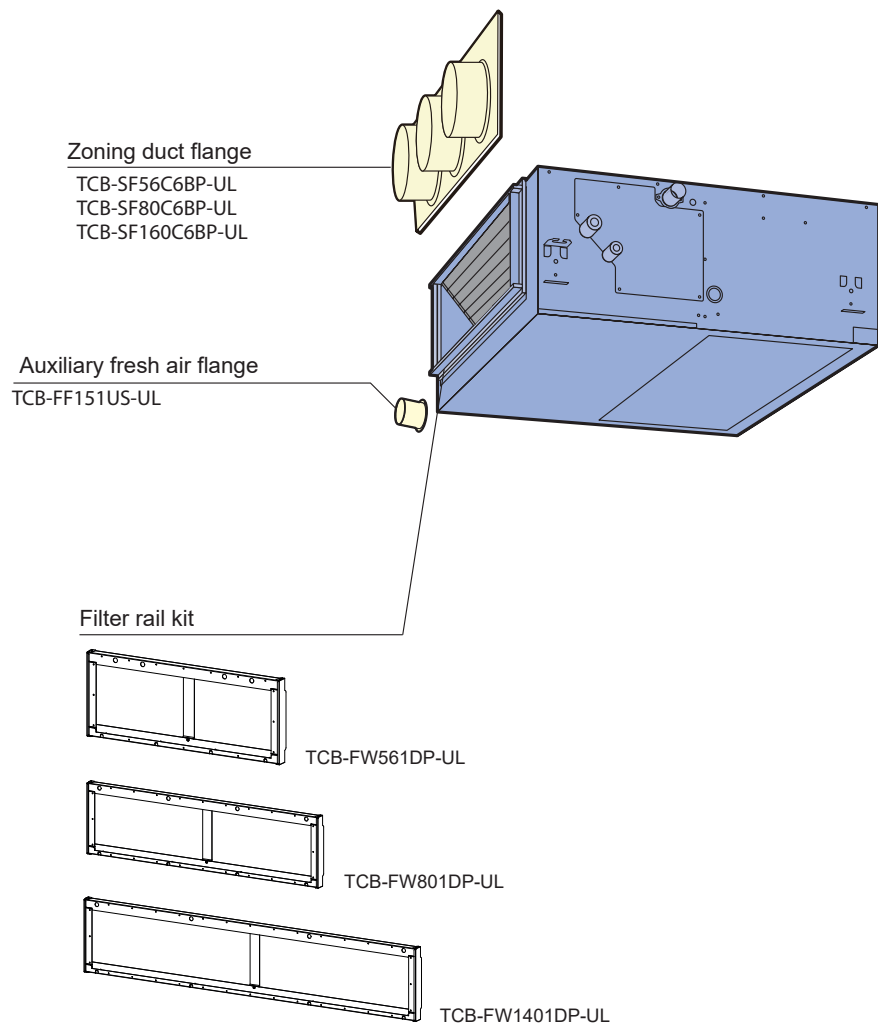
MMD-UP0481BHP-UL / UP0541BHP-UL

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-UP0071/0091BHP-UL
	TCB-SF80C6BP-UL	MMD-UP0121/0151/0181BHP-UL
	TCB-SF160C6BP-UL	MMD-UP0211/0241/0301/0361BHP-UL MMD-UP0421/0481/0541BHP-UL
Auxiliary fresh air flange	TCB-FF151US-UL	For Duct type
Filter rail kit	TCB-FW561DP-UL	MMD-UP0071/0091BHP-UL
	TCB-FW801DP-UL	MMD-UP0121/0151/0181BHP-UL
	TCB-FW1401DP-UL	MMD-UP0211/0241/0301/0361BHP-UL MMD-UP0421/0481/0541BHP-UL



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