

Under Ceiling Type

MMC-AP0188HPUL
MMC-AP0248HPUL
MMC-AP0308HPUL
MMC-AP0368HPUL
MMC-AP0488HPUL



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1. Specifications

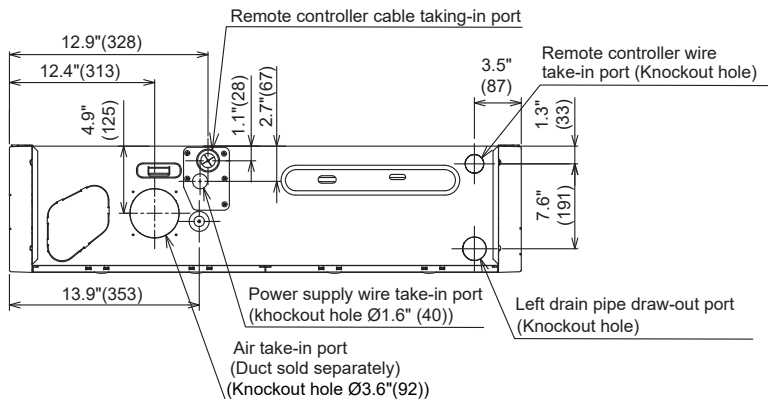
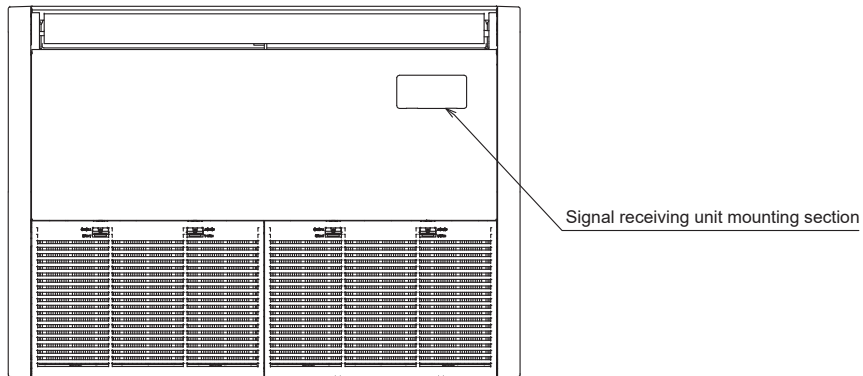
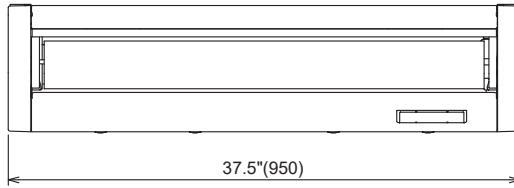
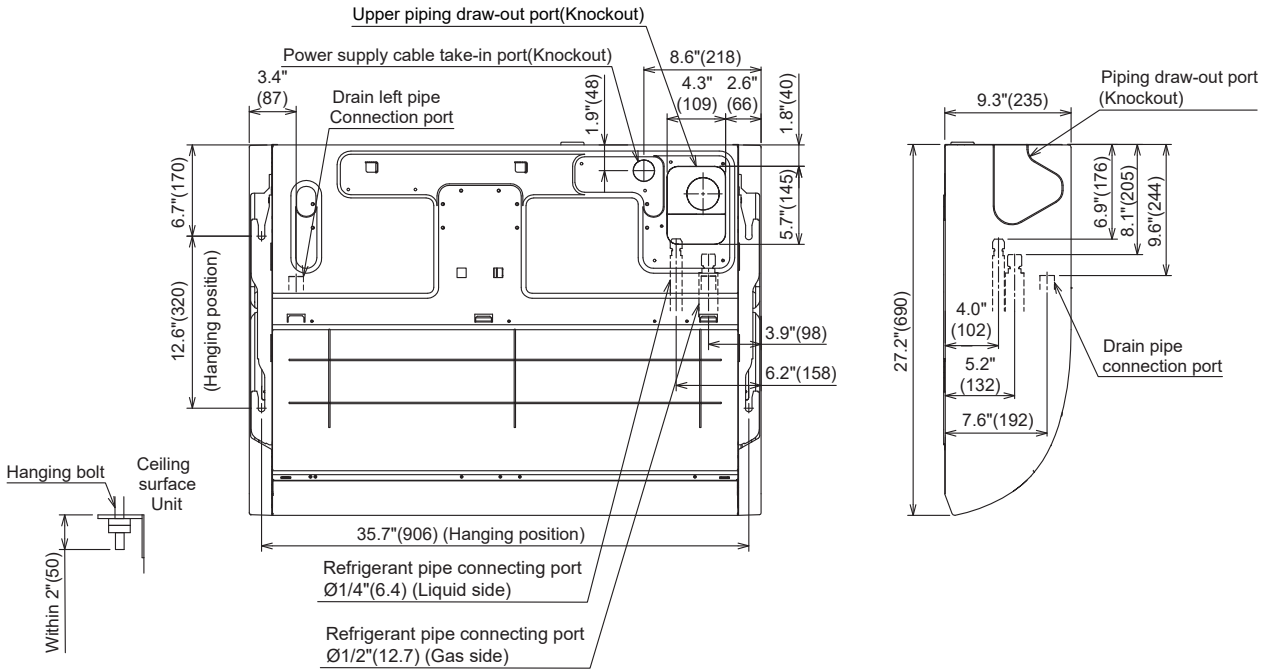
Model name		MMC-	AP0188HPUL	AP0248HPUL	AP0308HPUL	AP0368HPUL	AP0488HPUL
Power supply		1 ph 60Hz 220V 230V (208 / 230V)					
Cooling capacity (*1)		kBtu/h	18.0	24.0	30.0	36.0	48.0
Sensible cooling capacity		kBtu/h	13.5	18.0	22.5	27.0	36.0
Heating capacity (*1)		kBtu/h	20.0	27.0	34.0	40.0	54.0
Power consumption		(kW)	0.034	0.067	0.067	0.083	0.083
FCU dimension	Main unit	Height (in)	9.3	9.3	9.3	9.3	9.3
		Width (in)	37.5	50.0	50.0	62.5	62.5
		Depth (in)	27.2	27.2	27.2	27.2	27.2
Total weight	Main unit	(lbs)	58	69	69	89	89
Heat exchangere		Finned tube					
Soundproof / Heat-insulation material		Polyethylene foam					
Fan		Centrifugal fan					
Air flow volume	Indoor unit (H/M/L)	(cfm)	565 / 424 / 318	847 / 600 / 441	847 / 600 / 441	1095 / 795 / 600	1095 / 900 / 706
Sound pressure	Indoor unit (H/M/L)	dB(A)	38 / 35 / 32	43 / 36 / 33	43 / 36 / 33	44 / 38 / 32	44 / 41 / 35
Motor output		(W)	94	94	94	139	139
Flare Connections	Gas side	(in)	1/2	5/8	5/8	5/8	5/8
	Liquid side	(in)	1/4	3/8	3/8	3/8	3/8
	Drain pipe	(in)	20 (Polyvinyl chloride tube)				
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

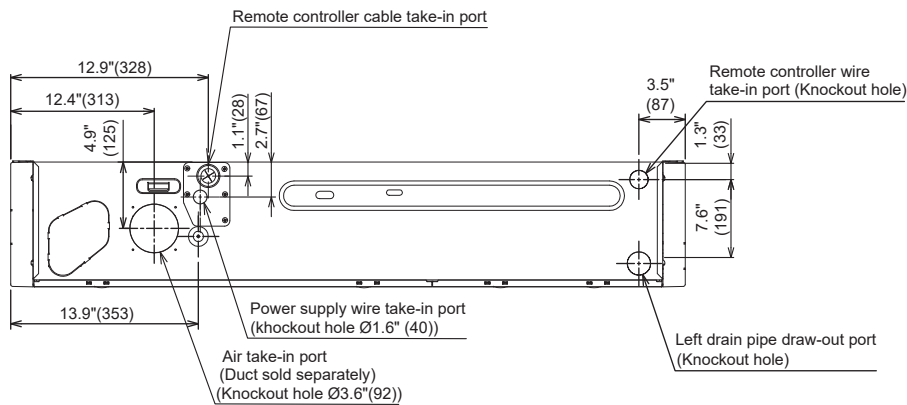
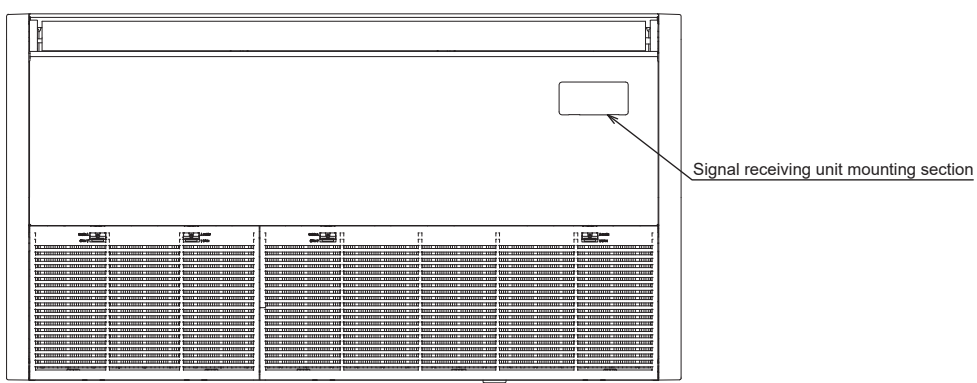
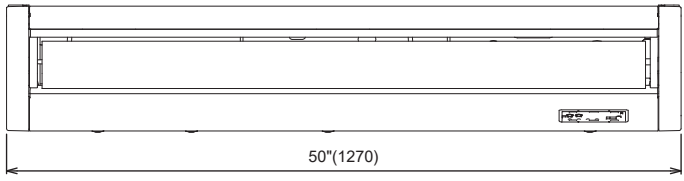
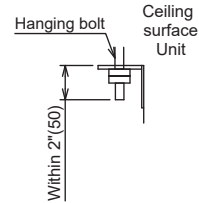
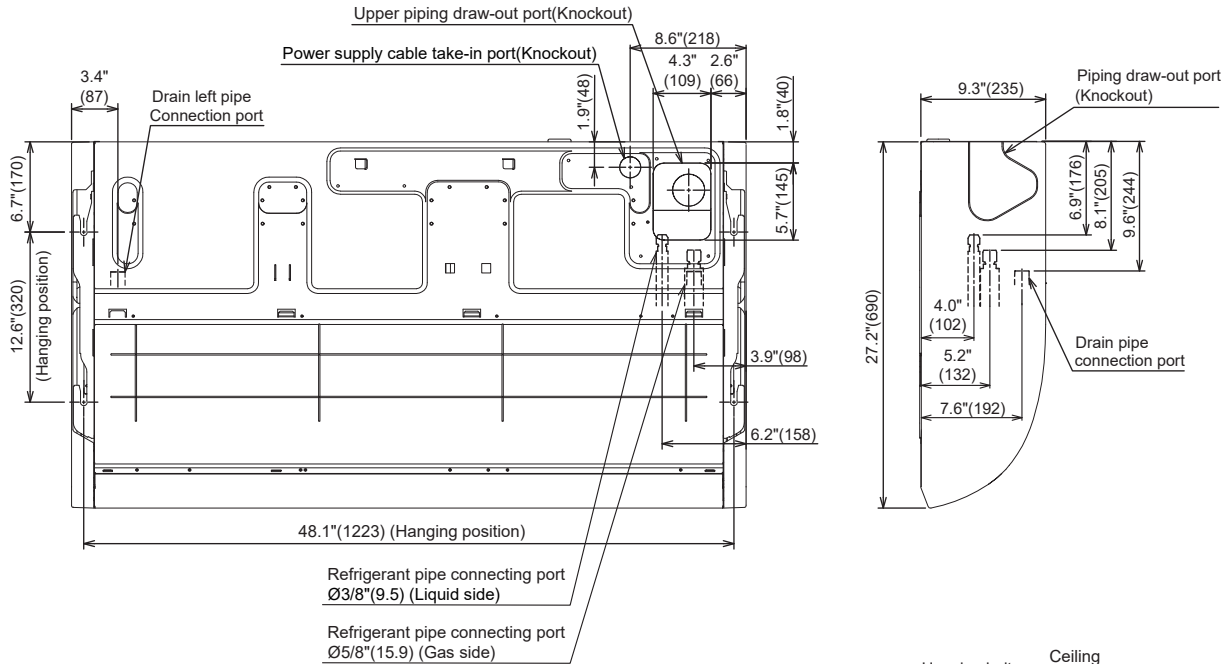
Heating : Indoor air temperature 70°F Dry Bulb, Outdoor 47°F Dry Bulb / 43°F Wet Bulb

2. Dimension

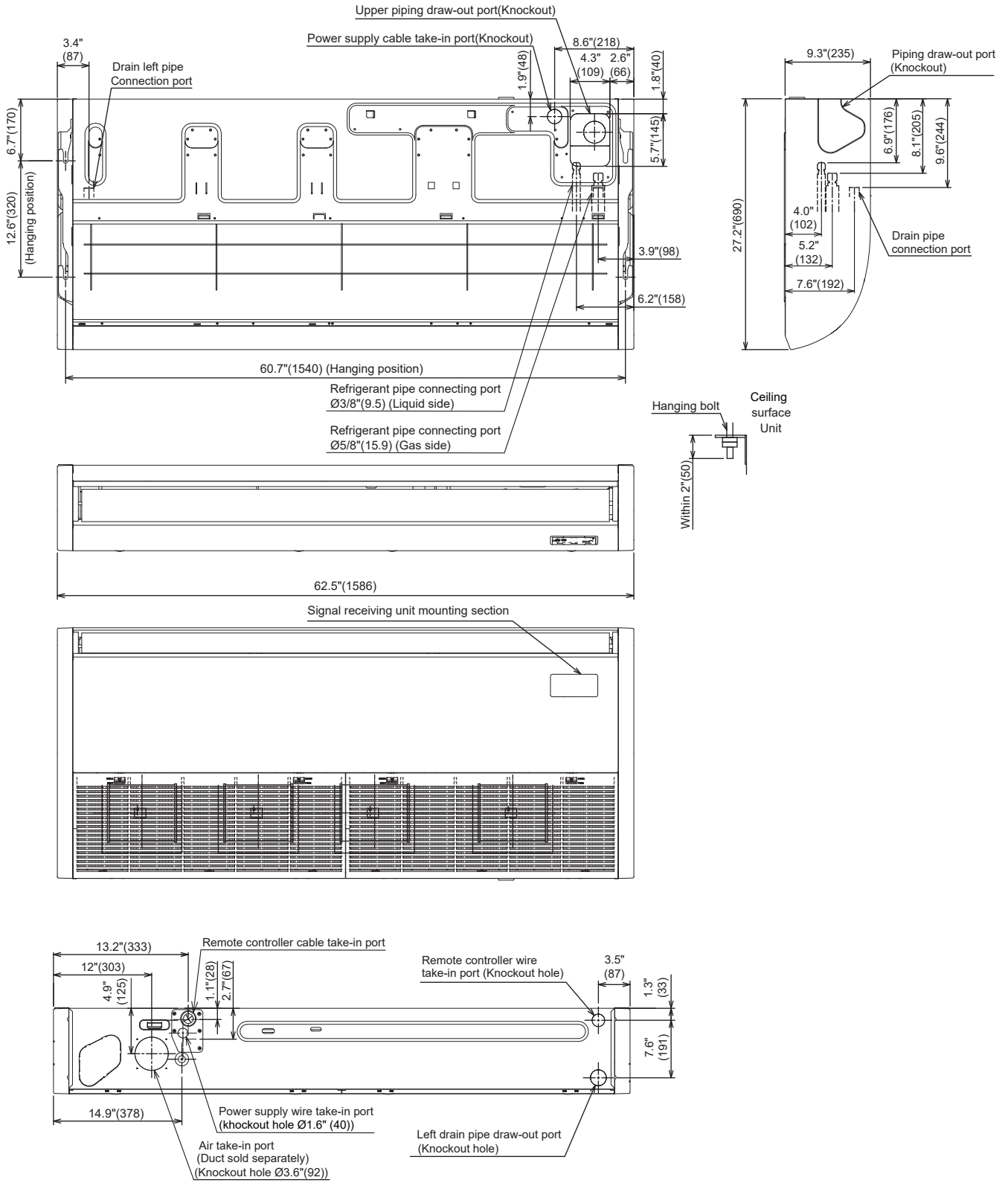
MMC-AP0188HPUL



MMC-AP0248HPUL / AP0308HPUL

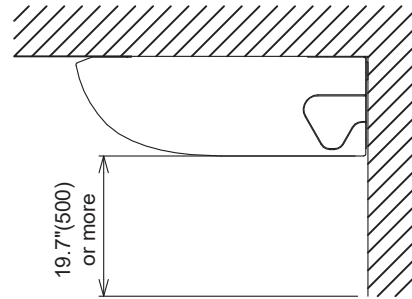
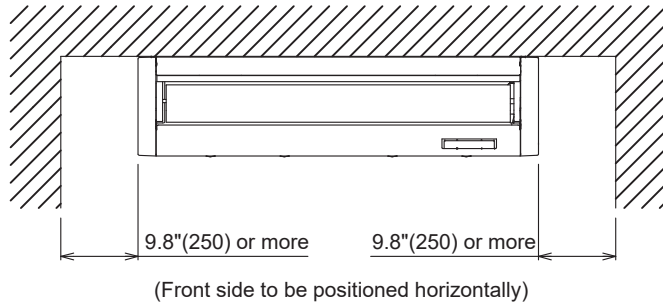


MMC-AP0368HPUL / AP0488HPUL



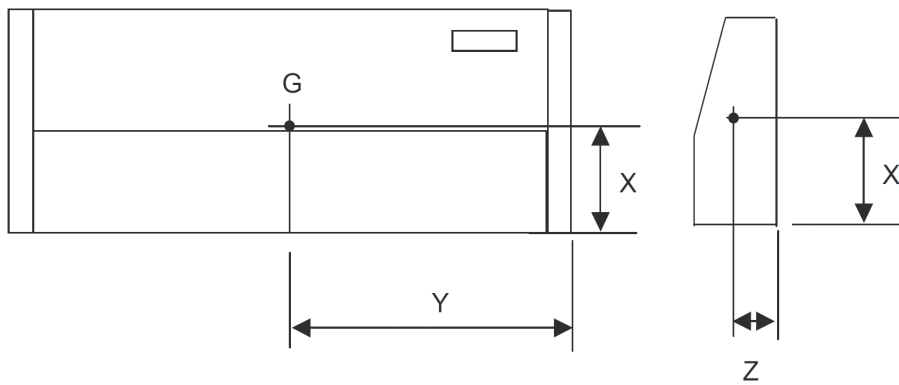
Space required for installation and servicing

MMC-AP0188HPUL / AP0248HPUL / AP0308HPUL / AP0368HPUL / AP0488HPUL



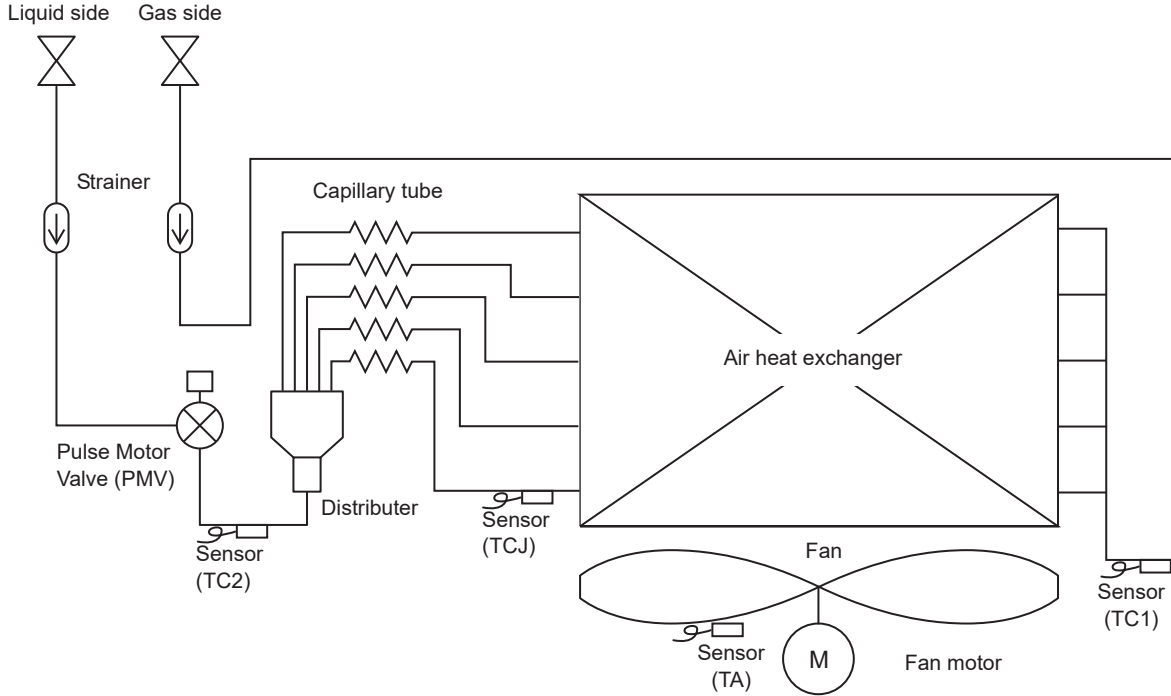
3. Center of gravity

Model name	X (in)	Y (in)	Z (in)	Total weight (lbs)
MMC-AP0188HPUL	14.8	19	3.9	58
MMC-AP0248HPUL	14.8	24.4	3.9	69
MMC-AP0308HPUL				
MMC-AP0368HPUL	14.8	30	3.9	89
MMC-AP0488HPUL				



4. Piping diagram

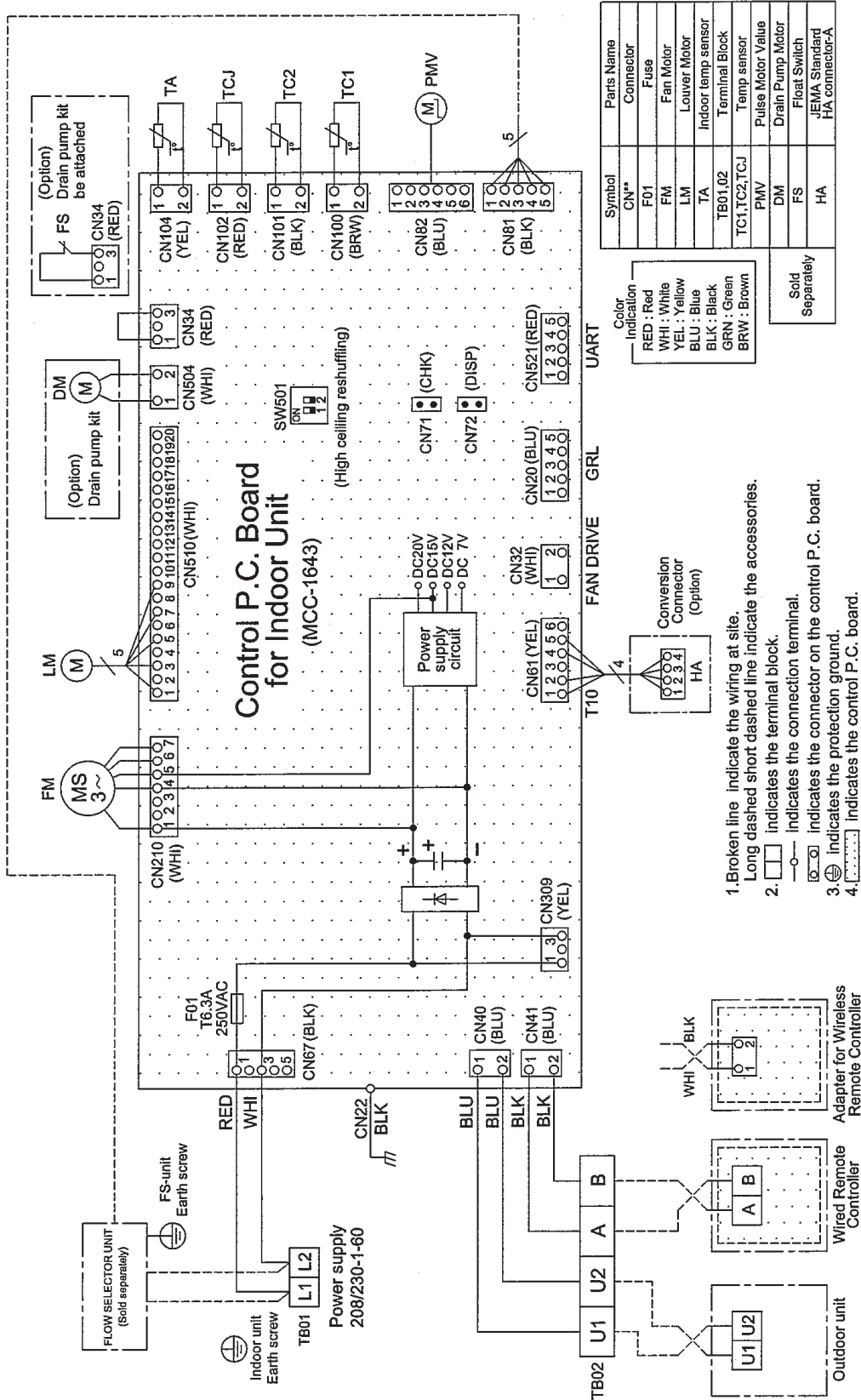
MMC-AP0188HPUL / AP0248HPUL / AP0308HPUL / AP0368HPUL / AP0488HPUL



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

MMC-AP0188HPUL / AP0248HPUL / AP0308HPUL / AP0368HPUL / AP0488HPUL



6. Electrical current characteristics

Indoor unit power supply

Type	Model name	Normal Voltage (V-Ph-Hz)	Voltage Range (V)		FLA	MCA	MOCP
			Min.	Max.	A	A	A
Ceiling Type	MMC-AP0188HPUL	208/230-1-60	187	253	0.42	0.53	15
	MMC-AP0248HPUL	208/230-1-60	187	253	0.75	0.93	15
	MMC-AP0308HPUL	208/230-1-60	187	253	0.75	0.93	15
	MMC-AP0368HPUL	208/230-1-60	187	253	0.89	1.11	15
	MMC-AP0488HPUL	208/230-1-60	187	253	0.89	1.11	15

MCA : Minimum Circuit (Amps)

FLA : Full load (Amps)

MOCP : Maximum Overcurrent Protection (Amps)

7. Sensible capacity table

Ceiling type (MMC-AP***8HPUL)

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
018	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
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	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	
024	50	20430	16320	21370	16760	22730	17450	24000	18000	24410	18050	25960	17820	27020	17150
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99	19840	15850	20750	16270	22070	16940	23300	17480	23700	17530	25210	17300	26240	16650	
102	19370	15470	20260	15890	21550	16540	22750	17060	23140	17110	24610	16890	25610	16260	
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99	23920	19370	26450	20630	28260	21920	29130	21850	30000	21850	31750	21640	33210	21150	
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	91	30640	24480	32060	25150	34090	26180	36000	27000	36620	27080	38930	26730	40540	25730
95	30640	24480	32060	25150	34090	26180	36000	27000	36620	27080	38930	26730	40540	25730	
99	29750	23770	31130	24420	33100	25420	34960	26220	35560	26290	37800	25950	39360	24980	
102	29050	23210	30390	23840	32320	24820	34130	25600	34720	25670	36910	25340	38430	24390	

TC: Total Capacity [Btu/h]
 SHC: Sensible Heat Capacity [Btu/h]

Ceiling type (MMC-AP***8HPUL)

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
048	50	40850	32640	42740	33530	45450	34900	48000	36000	48820	36100	51910	35640	54050	34310
	54	40850	32640	42740	33530	45450	34900	48000	36000	48820	36100	51910	35640	54050	34310
	57	40850	32640	42740	33530	45450	34900	48000	36000	48820	36100	51910	35640	54050	34310
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	64	40850	32640	42740	33530	45450	34900	48000	36000	48820	36100	51910	35640	54050	34310
	68	40850	32640	42740	33530	45450	34900	48000	36000	48820	36100	51910	35640	54050	34310
	70	40850	32640	42740	33530	45450	34900	48000	36000	48820	36100	51910	35640	54050	34310
	73	40850	32640	42740	33530	45450	34900	48000	36000	48820	36100	51910	35640	54050	34310
	77	40850	32640	42740	33530	45450	34900	48000	36000	48820	36100	51910	35640	54050	34310
	81	40850	32640	42740	33530	45450	34900	48000	36000	48820	36100	51910	35640	54050	34310
	84	40850	32640	42740	33530	45450	34900	48000	36000	48820	36100	51910	35640	54050	34310
	88	40850	32640	42740	33530	45450	34900	48000	36000	48820	36100	51910	35640	54050	34310
	91	40850	32640	42740	33530	45450	34900	48000	36000	48820	36100	51910	35640	54050	34310
	95	40850	32640	42740	33530	45450	34900	48000	36000	48820	36100	51910	35640	54050	34310
	99	39670	31690	41500	32560	44130	33890	46610	34960	47400	35050	50400	34610	52480	33320
102	38730	30940	40520	31790	43090	33090	45500	34130	46280	34220	49210	33790	51240	32530	

TC: Total Capacity [Btu/h]
 SHC: Sensible Heat Capacity [Btu/h]

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)					
MMC-AP0188HPUL	20.9	20.6	20.2	20.0	19.7	19.3
MMC-AP0248HPUL	28.2	27.8	27.3	27.0	26.6	26.1
MMC-AP0308HPUL	35.5	35.0	34.4	34.0	33.6	32.9
MMC-AP0368HPUL	41.8	41.2	40.5	40.0	39.5	38.6
MMC-AP0488HPUL	56.4	55.6	54.7	54.0	53.3	52.2

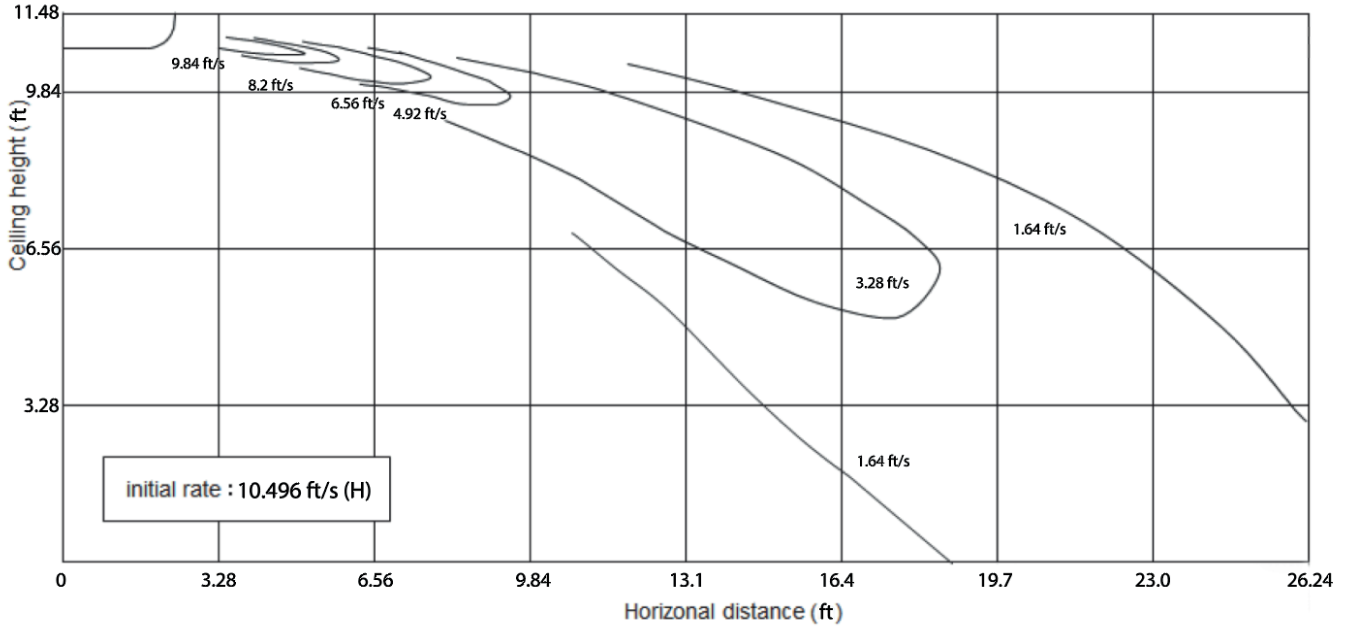
Notes: 1. These capacity tables can be used when selecting a VRF indoor unit. The actual capacity of the VRF system depends on factors such as the selected model of outdoor units, outdoor air temperature and piping length. Please confirm that the corrected capacity of the VRF system satisfies the required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

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

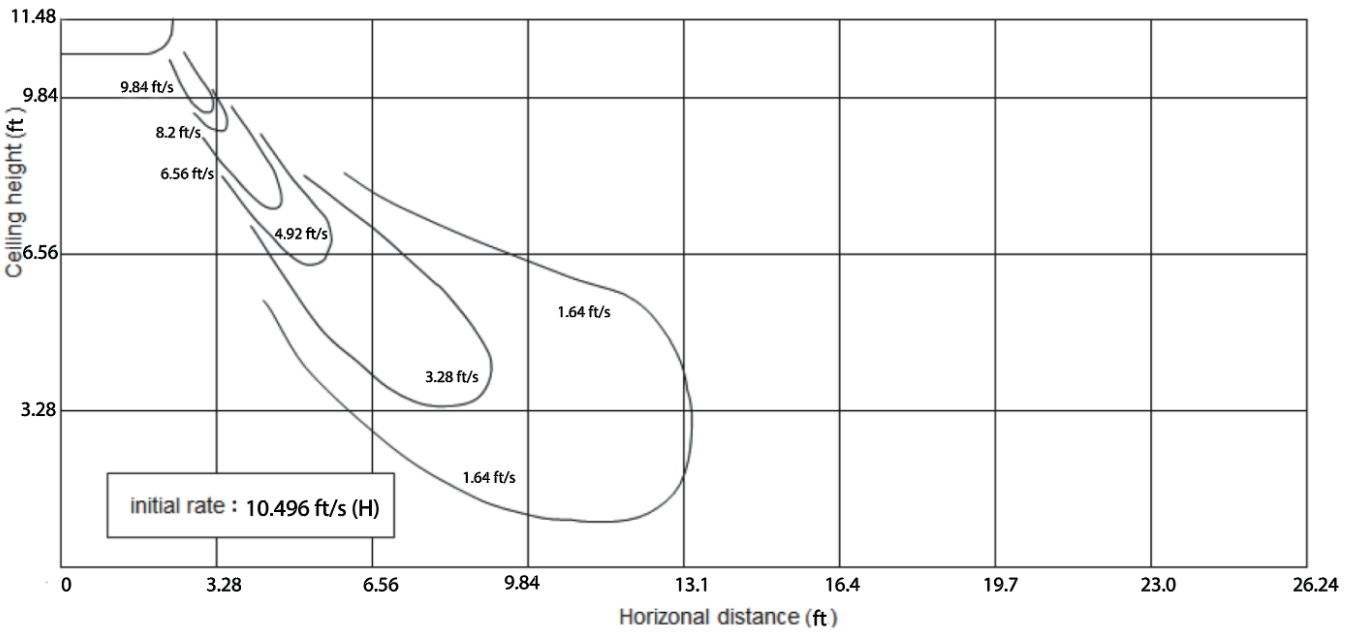
8. Air throw distance chart

MMC-AP0188HPUL

Cooling

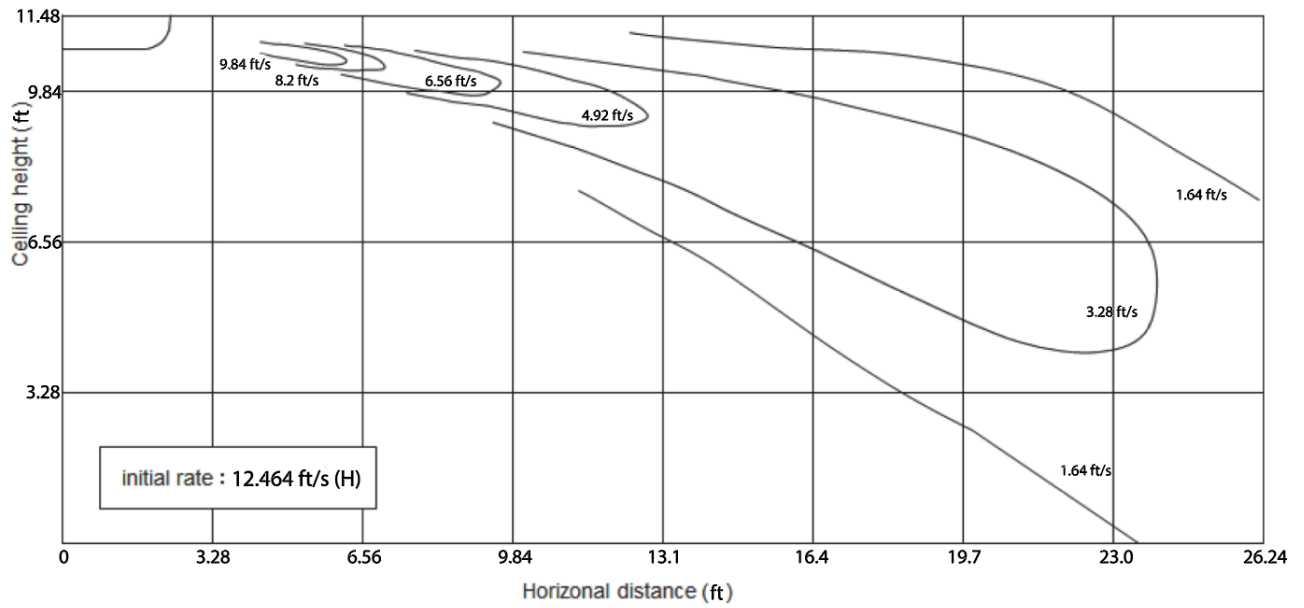


Heating

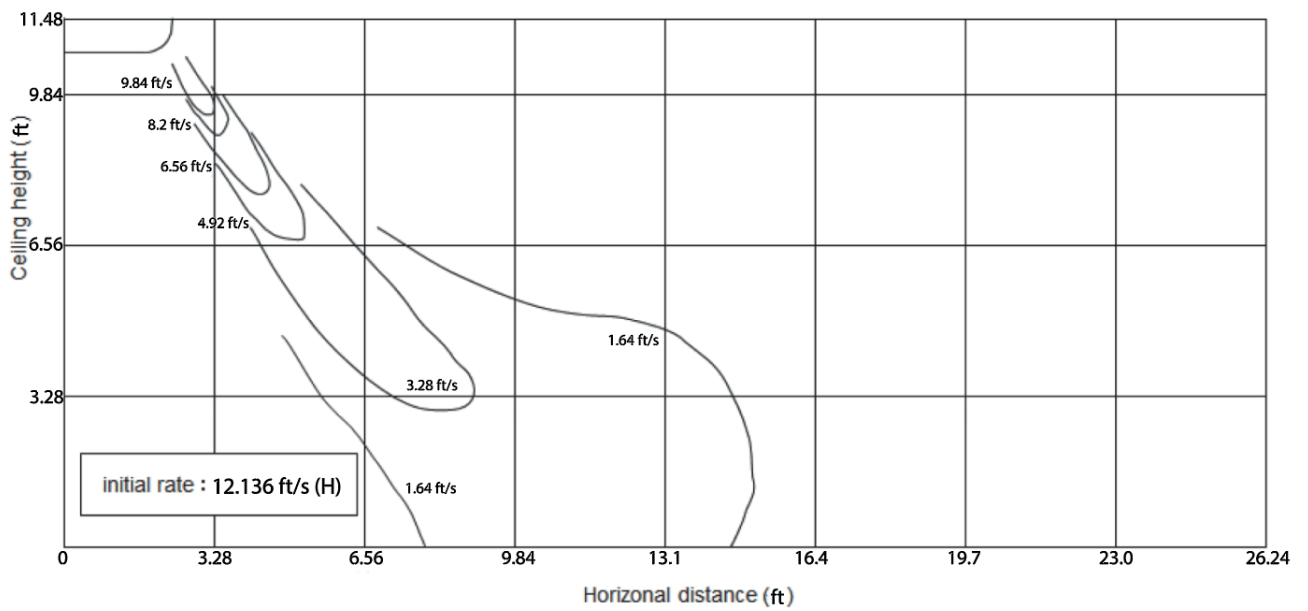


MMC-AP0248HPUL / AP0308HPUL

Cooling

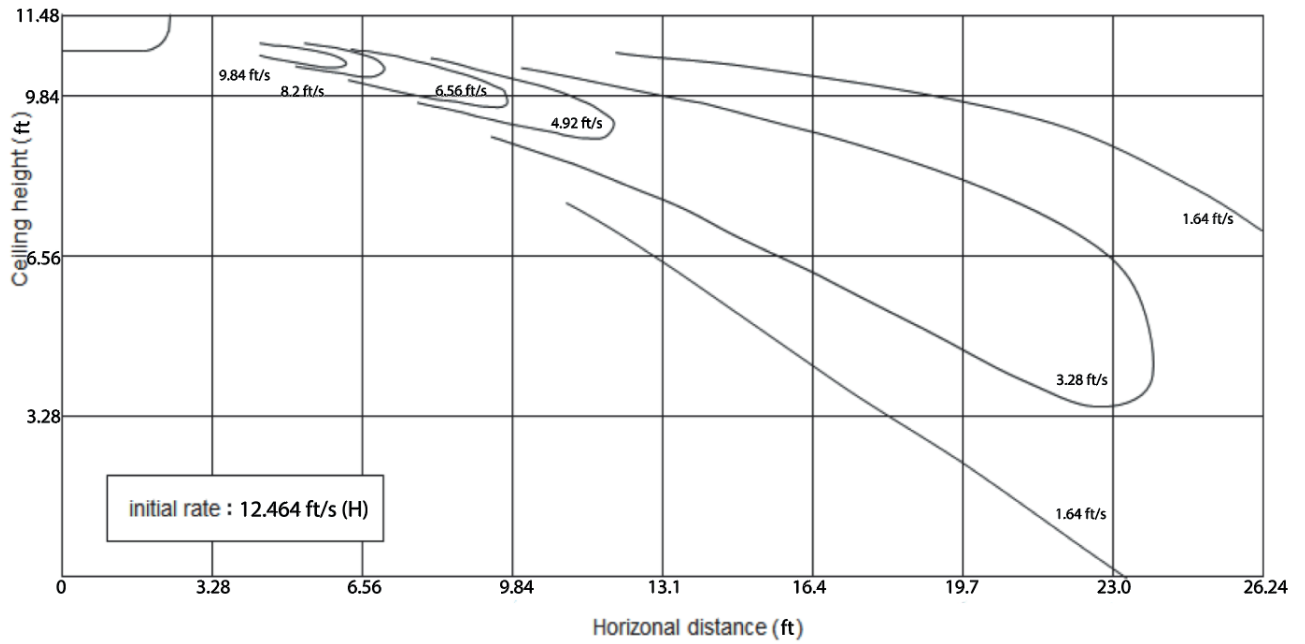


Heating

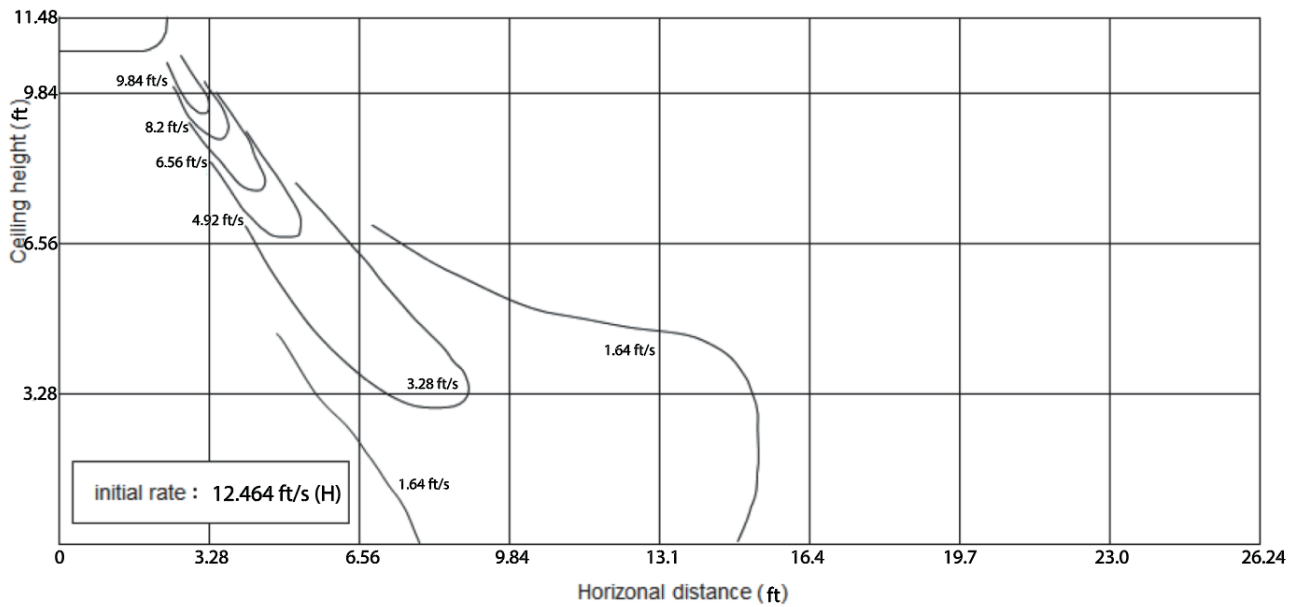


MMC-AP0368HPUL / AP0488HPUL

Cooling

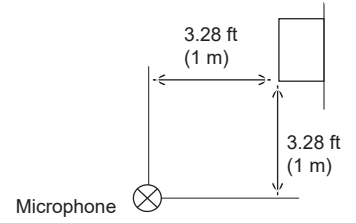


Heating



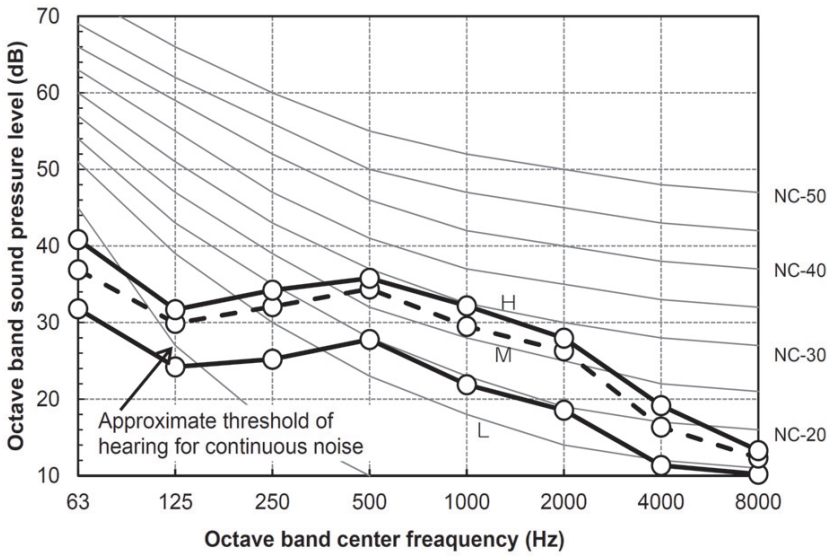
9. Sound data

Sound pressure spectrum



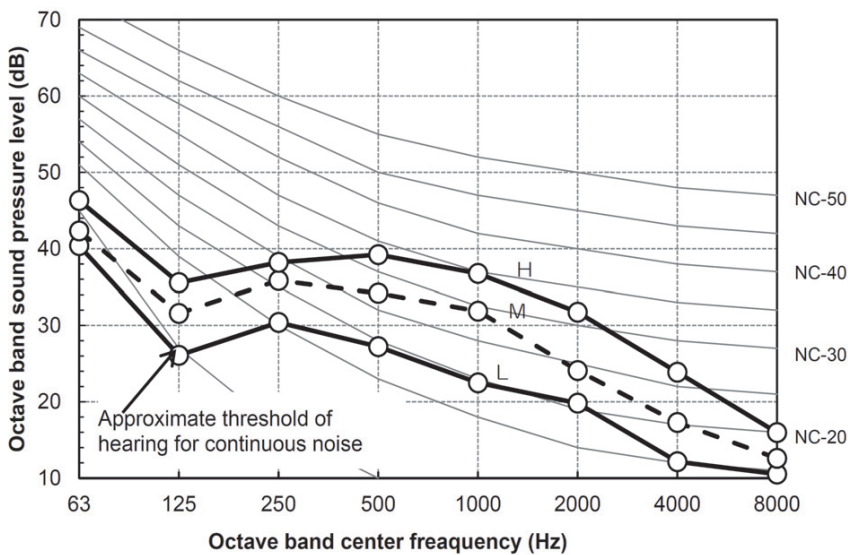
MMC-AP0188HPUL

Fan tap	H	M	L
Sound pressure level (dB(A))	38.0	35.0	32.0



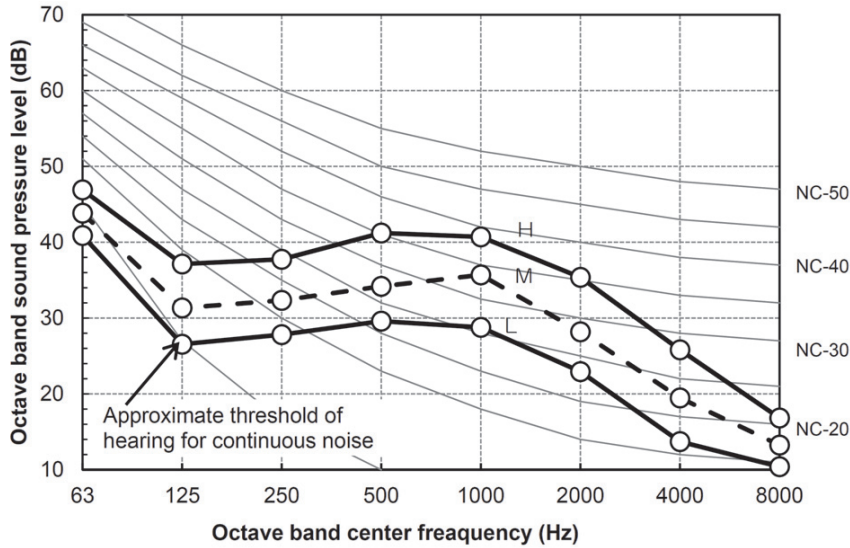
MMC-AP0248HPUL / AP0308HPUL

Fan tap	H	M	L
Sound pressure level (dB(A))	43.0	36.0	33.0



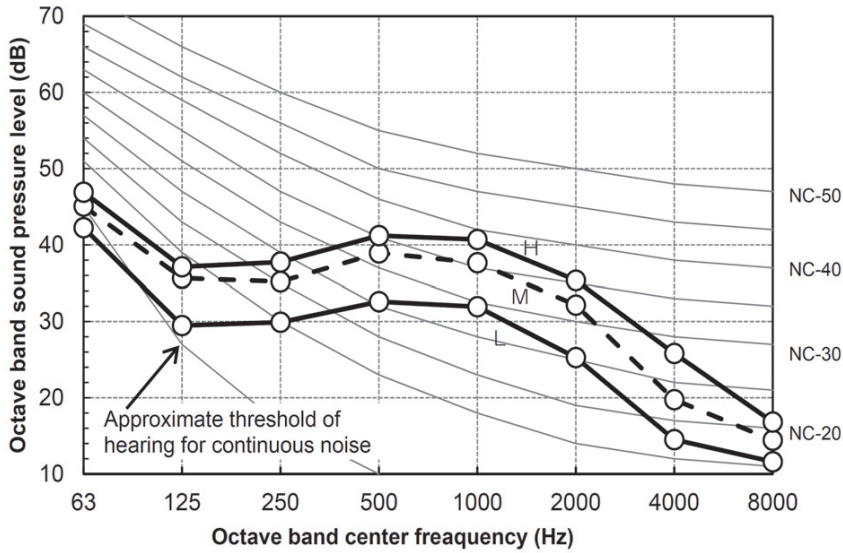
MMC-AP0368HPUL

Fan tap	H	M	L
Sound pressure level (dB(A))	44.0	38.0	32.0



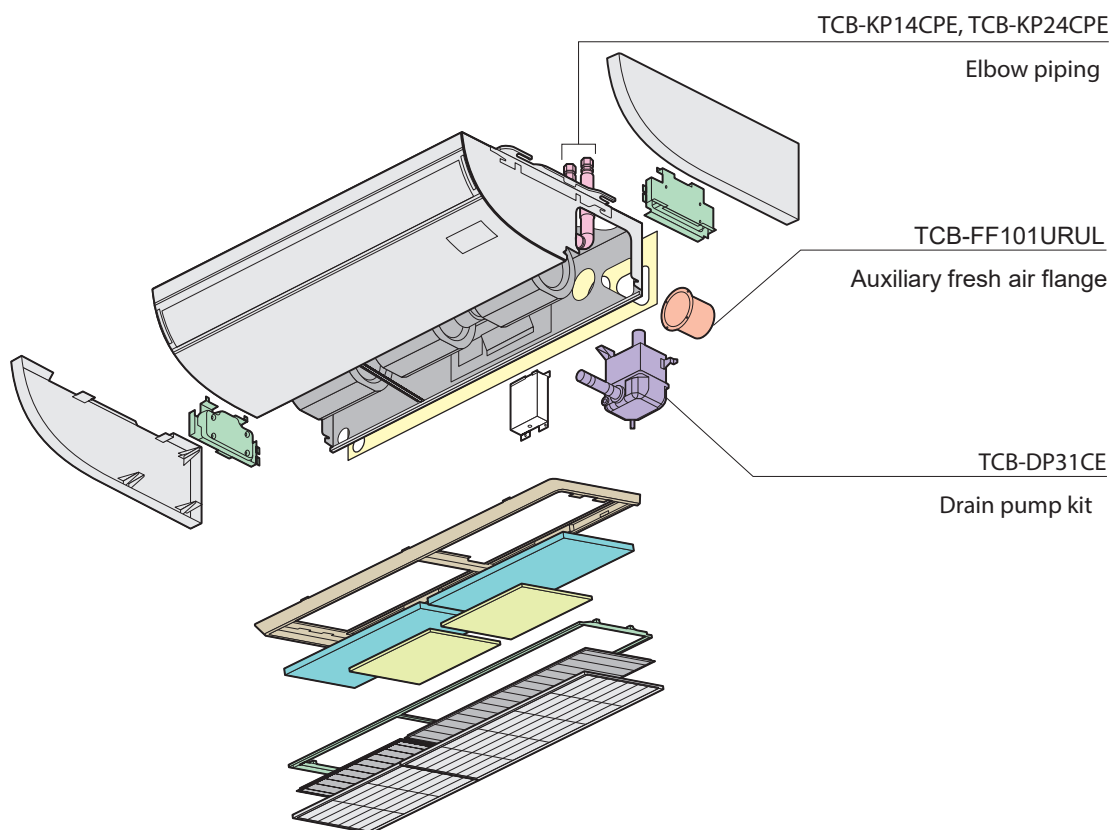
MMC-AP0488HPUL

Fan tap	H	M	L
Sound pressure level (dB(A))	44.0	41.0	35.0



10. Accessories

Optional Parts	Model Name	Applicable FCU
Drain pump kit	TCB-DP31CE	Under ceiling type only
Elbow piping kit	TCB-KP14CPE TCB-KP24CPE	Under ceiling type only
Auxiliary fresh air flange	TCB-FF101URUL	Under ceiling and 4way cassette type
Wireless Remote Controller	RBC-AX33C-UL	Under ceiling type only



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