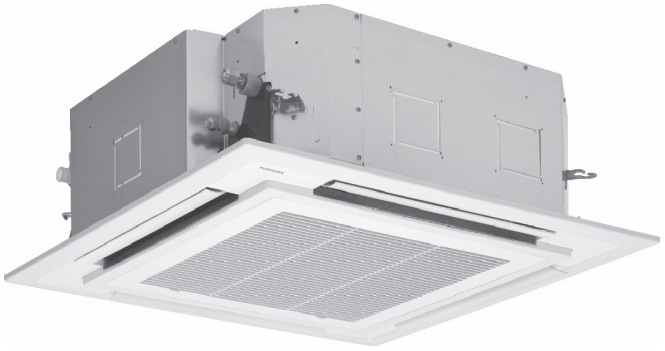
4-Way Cassette type

MMU-AP0072H2UL
MMU-AP0092H2UL
MMU-AP0122H2UL
MMU-AP0152H2UL
MMU-AP0182H2UL
MMU-AP0212H2UL
MMU-AP0242H2UL
MMU-AP0302H2UL
MMU-AP0362H2UL
MMU-AP0422H2UL
MMU-AP0072H2UL-1



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1. Specifications

4-Way Cassette type

Model name				MMU-	AP0072H2UL	AP0092H2UL	AP0122H2UL	AP0152H2UL	AP0182H2UL	AP0212H2UL	AP0242H2UL
Cooling Capacity				kBtu/h	7.5	9.5	12	15.4	18	21	24
Heating Capacity				kBtu/h	8.5	10.5	13.5	17	20	24	27
Electrical characteristics	Power supply				230 V (208/230 V) 1phase 60 Hz						
	Power consumption			kW	0.021	0.021	0.023	0.026	0.026	0.036	0.036
Appearance	Main unit				Zinc hot dipping steel plate Heat-insulating material attached						
	Ceiling panel	Model			RBC-U31PG(W)-UL						
		Panel color			White (2.5GY9.0/0.5)						
Dimension (Ceiling panel)*	Unit	Height		In	10.1 (1.2)*	10.1 (1.2)*	10.1 (1.2)*	10.1 (1.2)*	10.1 (1.2)*	10.1 (1.2)*	10.1 (1.2)*
		Width		In	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*
		Depth		In	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*
	Packing	Height		In	11.3 (3.9)*	11.3 (3.9)*	11.3 (3.9)*	11.3 (3.9)*	11.3 (3.9)*	11.3 (3.9)*	11.3 (3.9)*
		Width		In	36.0 (39.8)*	36.0 (39.8)*	36.0 (39.8)*	36.0 (39.8)*	36.0 (39.8)*	36.0 (39.8)*	36.0 (39.8)*
		Depth		In	37.2 (39.8)*	37.2 (39.8)*	37.2 (39.8)*	37.2 (39.8)*	37.2 (39.8)*	37.2 (39.8)*	37.2 (39.8)*
Total weight (Ceiling panel)*	Unit			lbs	42 (10)*	42 (10)*	46 (10)*	46 (10)*	46 (10)*	48 (10)*	48 (10)*
	Packed unit			lbs	51 (15.5)*	51 (15.5)*	55 (15.5)*	55 (15.5)*	55 (15.5)*	57 (15.5)*	57 (15.5)*
Heat exchanger					Finned tube						
Fan unit	Fan				Turbo fan						
	Standard air flow (High/Mid/Low)			cfm	470/430/400		550/490/460	550/480/440	550/480/440	670/540/490	550/480/440
	Motor			W	60	60	60	60	60	60	60
Air filter					Standard filter (Long life filter)						
Connecting pipe	Gas side			In	3/8"	3/8"	3/8"	1/2"	1/2"	5/8"	5/8"
	Liquid side			In	1/4"	1/4"	1/4"	1/4"	1/4"	3/8"	3/8"
	Drain port (Nominal dia.)			In	VP25 (Polyvinyl chloride tube: External Dia.1-1/4 Internal Dia.1)						
Sound pressure level (High/Mid/Low) (*1)				dB(A)	32.5/30.5/29		34/31.5/29.5	35/33/31	35/33/31	38/33/31	38/33/31
Option parts	Spacer for height adjustment				TCB-SP1602UUL						
	Air-discharge direction kit				TCB-BC1602UUL						
	Fresh-air chamber				TCB-GFC1602UUL						
	Fresh Air inlet box				TCB-GB1602UUL						
	Auxiliary fresh air flange				TCB-FF101URUL						

Note

* Figures in parentheses are for ceiling panels.

(*1) The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise.

Model name			MMU-	AP0302H2UL	AP0362H2UL	AP0422H2UL	AP0072H2UL-1
Cooling Capacity			kBtu/h	30	36	42	7.5
Heating Capacity			kBtu/h	34	40	47.5	8.5
Electrical characteristics	Power supply			230 V (208/230 V) 1phase 60 Hz			
	Power consumption		kW	0.043	0.088	0.112	0.023
Appearance	Main unit			Zinc hot dipping steel plate Heat-insulating material attached			
	Ceiling panel	Model		RBC-U31PG(W)-UL			
		Panel color		White (2.5GY9.0/0.5)			
Dimension (Ceiling panel)*	Unit	Height	In	10.1 (1.2)*	12.6 (1.2)*	12.6 (1.2)*	10.1 (1.2)*
		Width	In	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*
		Depth	In	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*	33.1 (37.4)*
	Packing	Height	In	11.3 (3.9)*	13.8 (3.9)*	13.8 (3.9)*	11.3 (3.9)*
		Width	In	36.0 (39.8)*	36.0 (39.8)*	36.0 (39.8)*	36.0 (39.8)*
		Depth	In	37.2 (39.8)*	37.2 (39.8)*	37.2 (39.8)*	37.2 (39.8)*
Total weight (Ceiling panel)*	Unit		lbs	48 (10)*	59 (10)*	59 (10)*	46 (10)*
	Packed unit		lbs	57 (15.5)*	69 (15.5)*	69 (15.5)*	55 (15.5)*
Heat exchanger				Finned tube			
Fan unit	Fan			Turbo fan			
	Standard air flow (High/Mid/Low)		cfm	730/630/510	1160/840/630	1250/840/670	550/490/460
	Motor		W	60	150	150	60
Air filter				Standard filter (Long life filter)			
Connecting pipe	Gas side		In	5/8"	5/8"	5/8"	3/8"
	Liquid side		In	3/8"	3/8"	3/8"	1/4"
	Drain port (Nominal dia.)		In	VP25 (Polyvinyl chloride tube: External Dia.1-1/4 Internal Dia.1)			
Sound pressure level (High/Mid/Low) (*1)			dB(A)	41/36.5/34	46/40.5/36.5	48.5/40.5/37.5	34/31.5/29.5
Option parts	Spacer for height adjustment			TCB-SP1602UUL			–
	Air-discharge direction kit			TCB-BC1602UUL			–
	Fresh-air chamber			TCB-GFC1602UUL			–
	Fresh Air inlet box			TCB-GB1602UUL			–
	Auxiliary fresh air flange			TCB-FF101URUL			–

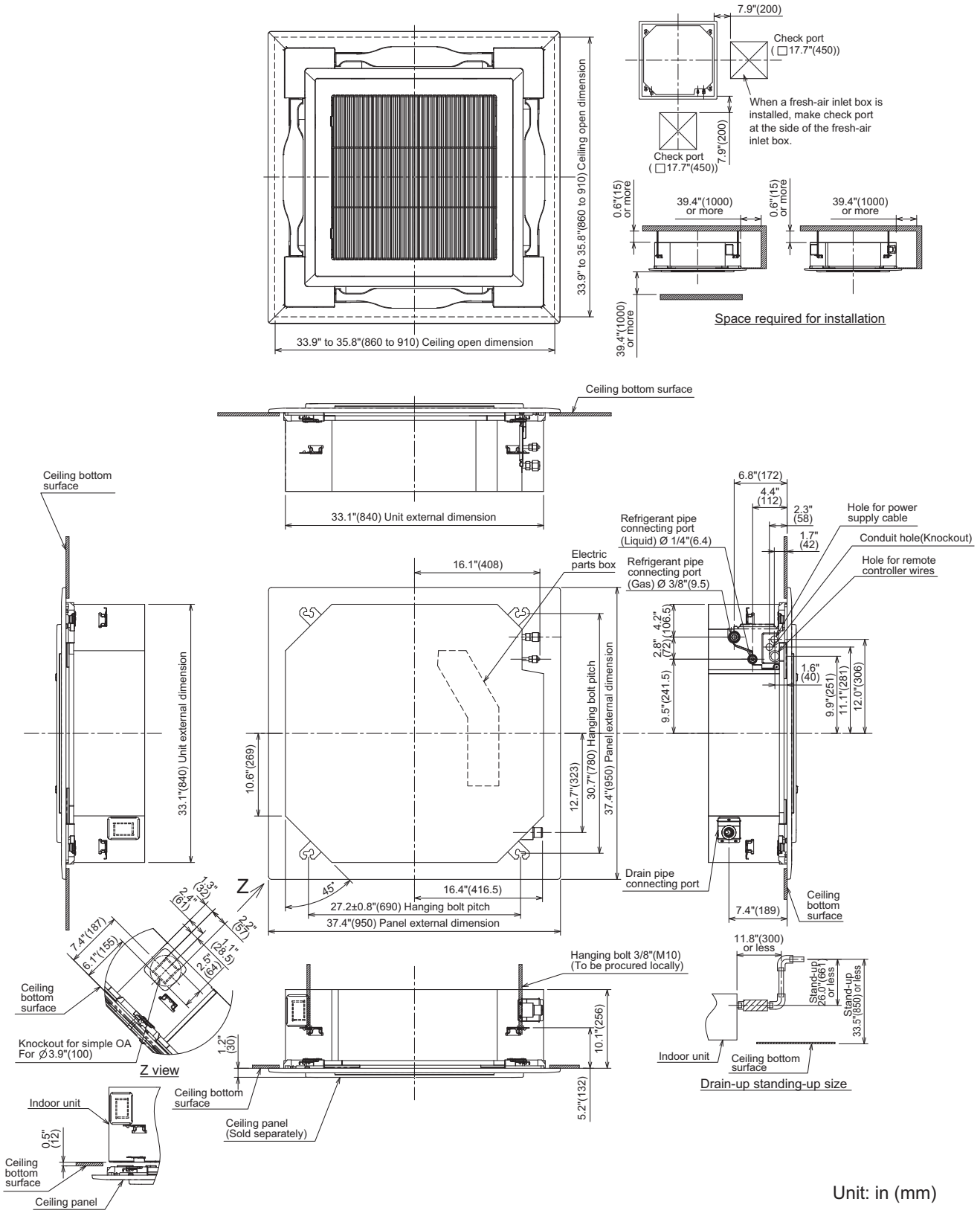
Note

* Figures in parentheses are for ceiling panels.

(*1) The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise.

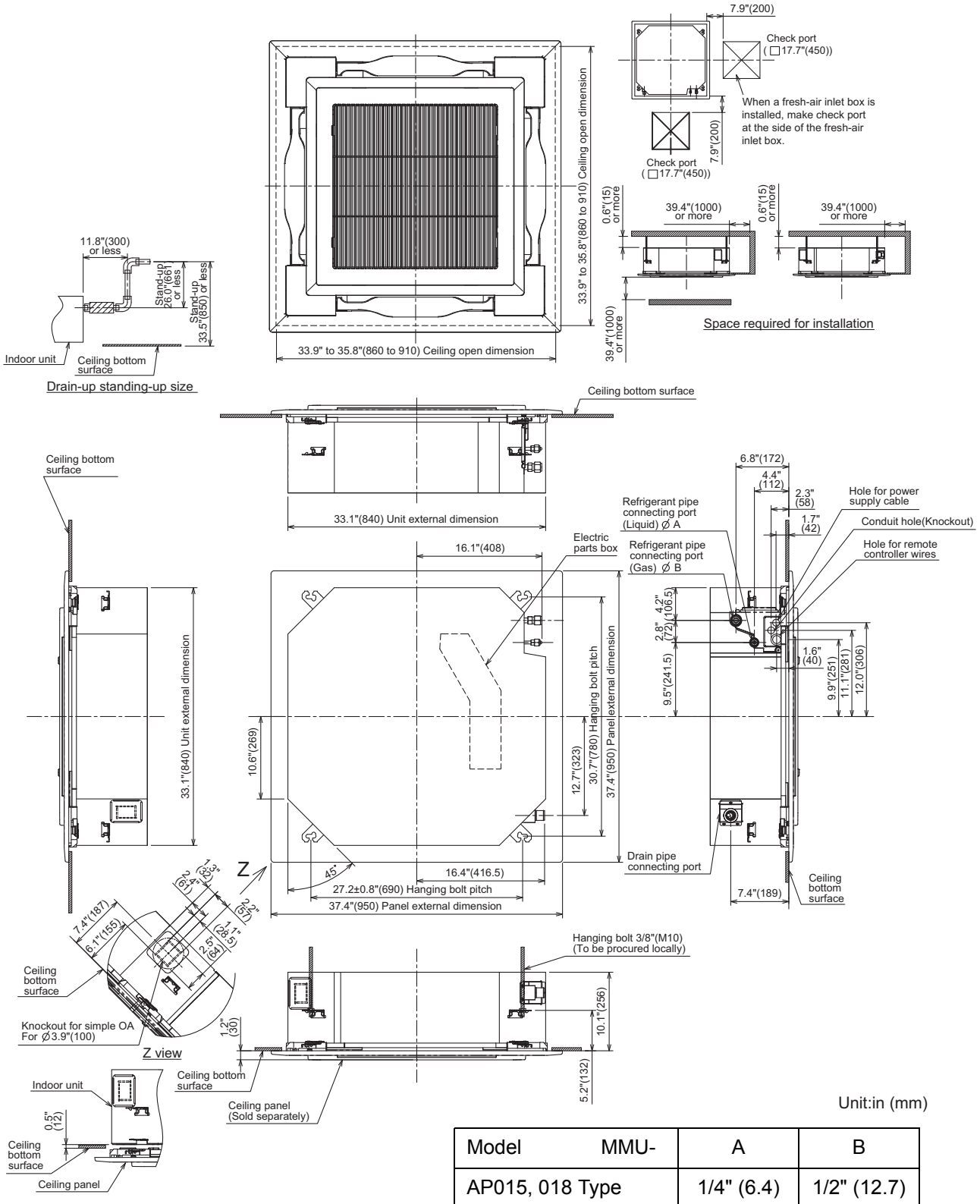
2. Dimensions

MMU-AP0072H2UL, AP0092H2UL, AP0122H2UL, AP0072H2UL-1



Unit: in (mm)

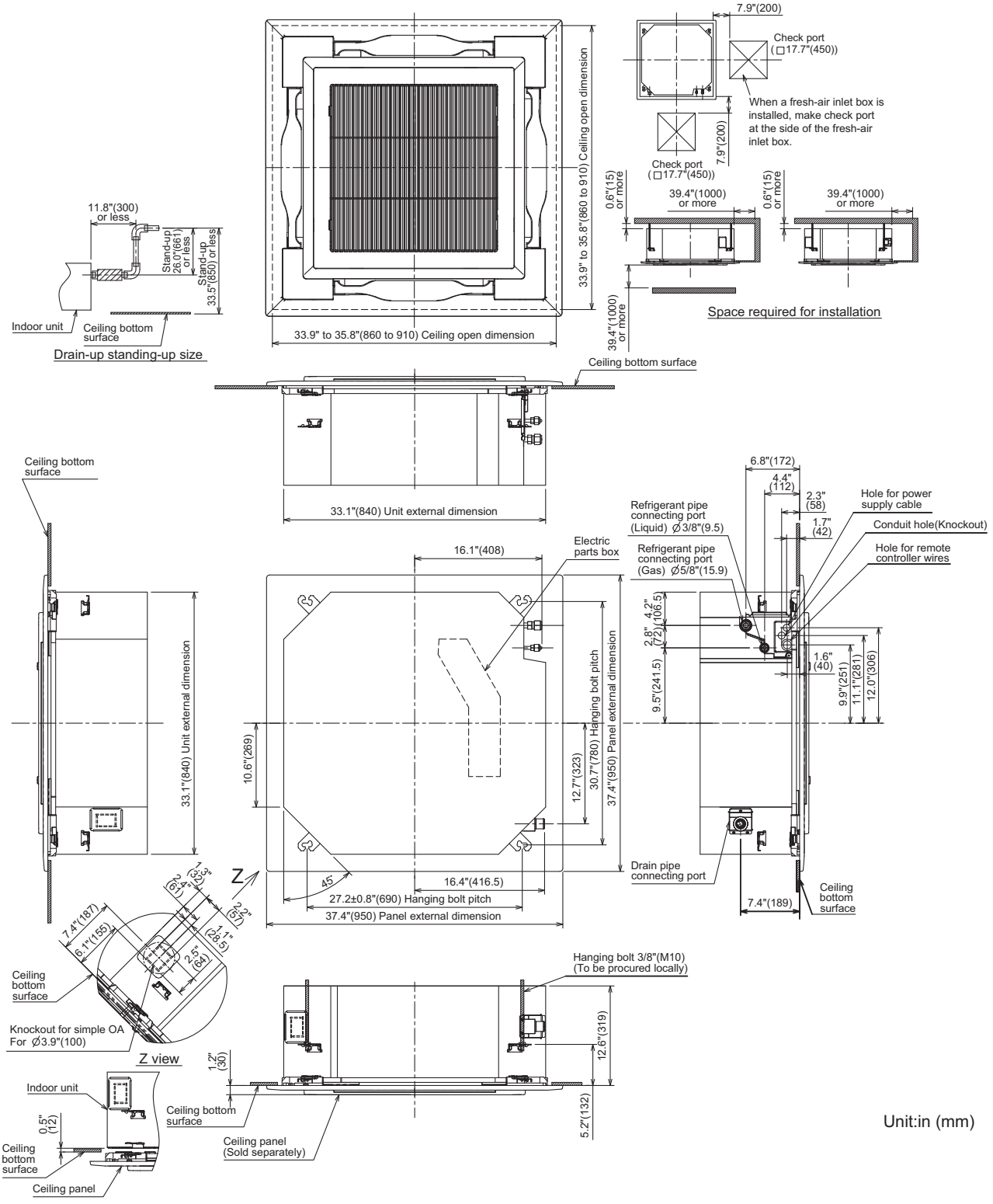
MMU-AP0152H2UL, AP0182H2UL, AP0212H2UL, AP0242H2UL, AP0302H2UL



Unit:in (mm)

Model MMU-	A	B
AP015, 018 Type	1/4" (6.4)	1/2" (12.7)
AP021, 024, 030 Type	3/8" (9.5)	5/8" (15.9)

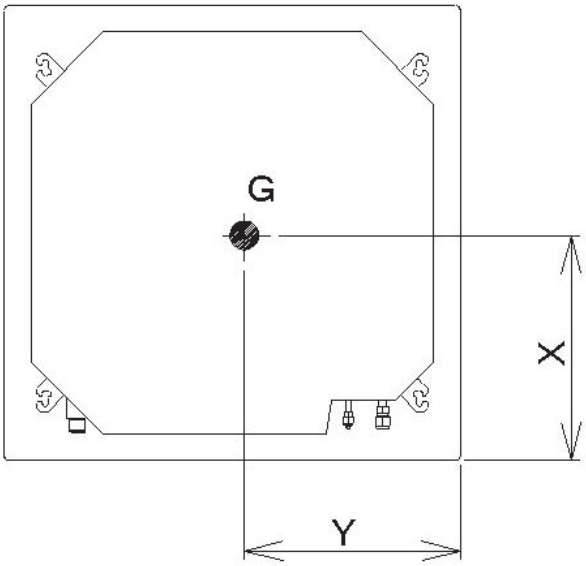
MMU-AP0362H2UL, AP0422H2UL

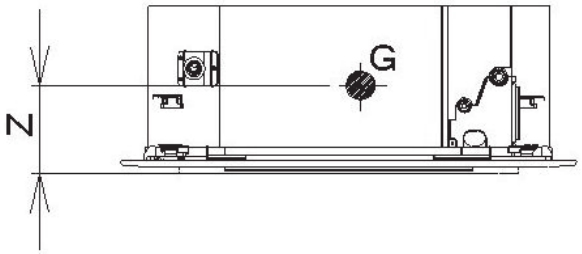


Unit:in (mm)

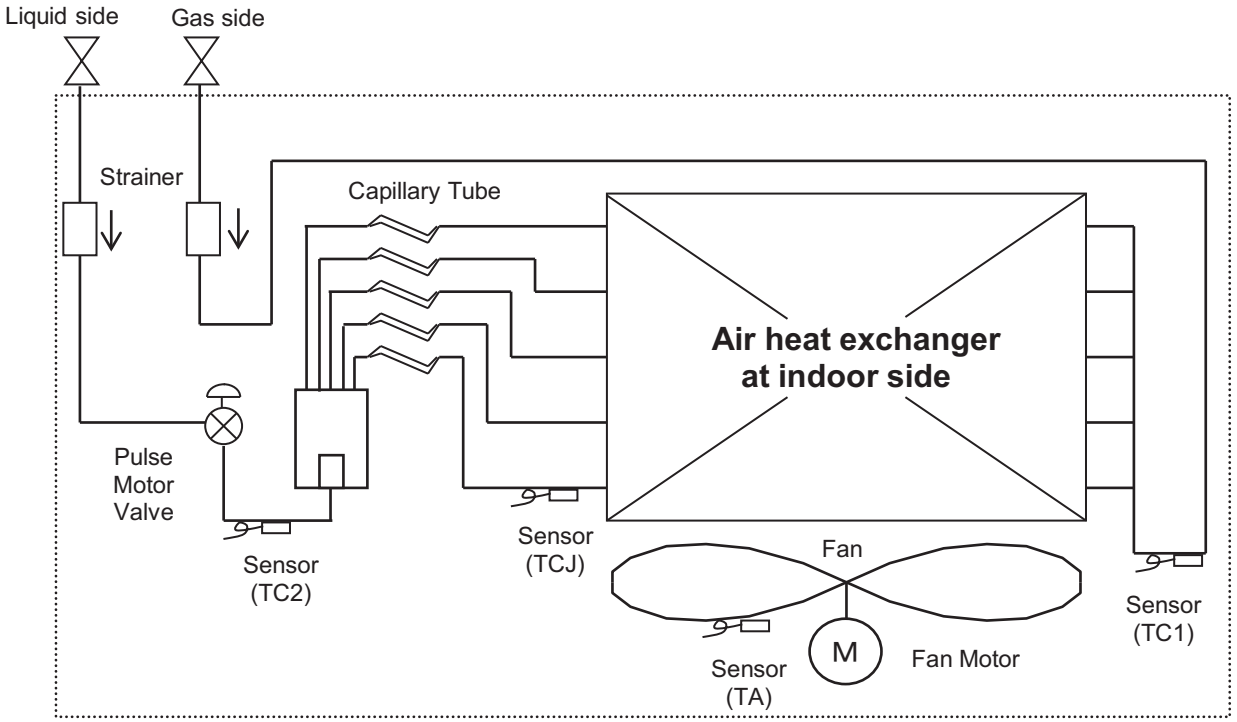
3. Center of gravity

Model name	X (In)	Y (In)	Z (In)	Total weight	
				Main unit (lbs)	Ceiling panel (lbs)
MMU-AP0072H2UL	18.5	17.9	6.05	42	10
MMU-AP0092H2UL					
MMU-AP0122H2UL				46	
MMU-AP0152H2UL					
MMU-AP0182H2UL					
MMU-AP0212H2UL				48	
MMU-AP0242H2UL					
MMU-AP0302H2UL					
MMU-AP0362H2UL		17.7	7.25	59	
MMU-AP0422H2UL					
MMU-AP0072H2UL-1		17.9	6.05	46	



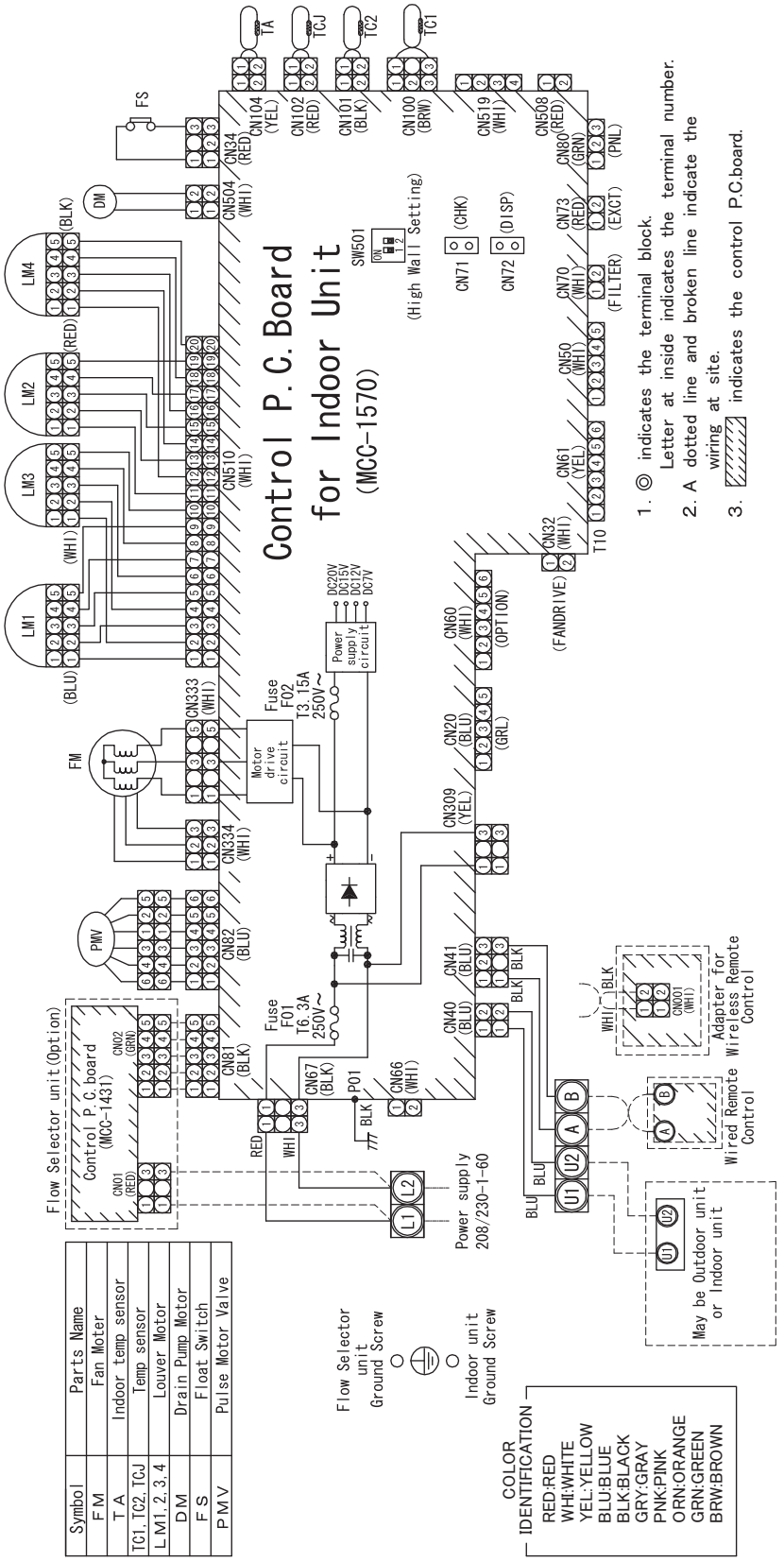


4. Piping diagram



5. Wiring diagram

MMU-AP0072H2UL, AP0092H2UL, AP0122H2UL, AP0152H2UL, AP0182H2UL, AP0212H2UL, AP0242H2UL, AP0302H2UL, AP0362H2UL, AP0422H2UL, AP0072H2UL-1



6. Electrical current characteristics

Type	Model	Nominal Voltage (V-Ph-Hz)	Voltage Range (V)		Power consumption	FLA	MCA	MOCP
			Min	Max	kW	A	A	A
4-Way Cassette type	MMU-AP0072H2UL	208/230-1-60	187	253	0.021	0.6	0.8	15
	MMU-AP0092H2UL	208/230-1-60	187	253	0.021	0.6	0.8	15
	MMU-AP0122H2UL	208/230-1-60	187	253	0.023	0.6	0.8	15
	MMU-AP0152H2UL	208/230-1-60	187	253	0.026	0.6	0.8	15
	MMU-AP0182H2UL	208/230-1-60	187	253	0.026	0.6	0.8	15
	MMU-AP0212H2UL	208/230-1-60	187	253	0.036	0.8	1.0	15
	MMU-AP0242H2UL	208/230-1-60	187	253	0.036	0.8	1.0	15
	MMU-AP0302H2UL	208/230-1-60	187	253	0.043	0.8	1.0	15
	MMU-AP0362H2UL	208/230-1-60	187	253	0.088	1.0	1.3	15
	MMU-AP0422H2UL	208/230-1-60	187	253	0.112	1.0	1.3	15
	MMU-AP0072H2UL-1	208/230-1-60	187	253	0.023	0.6	0.8	15

MCA: Minimum Circuit Amps FLA: Full Load Amps
MOCP: Maximum Overcurrent Protection (Amps)

7. Sensible capacity table

4-Way Cassette type (MMU-AP___2H2UL, MMU-AP___2H2UL-1)

TC: Total capacity [Btu/h] SHC: Sensible capacity [Btu/h]

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
007	50	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	54	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	57	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	61	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	64	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	68	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	70	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	73	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	77	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	81	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	84	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	88	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	91	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	95	6160	5140	6810	5480	7280	5820	7500	5800	7730	5800	8180	5750	8550	5610
	99	5980	4990	6610	5320	7070	5650	7280	5630	7510	5630	7940	5580	8300	5450
	102	5840	4870	6460	5200	6900	5520	7110	5500	7330	5500	7750	5450	8110	5320
009	50	7800	6320	8630	6740	9220	7160	9500	7130	9790	7130	10360	7070	10830	6900
	54	7800	6320	8630	6740	9220	7160	9500	7130	9790	7130	10360	7070	10830	6900
	57	7800	6320	8630	6740	9220	7160	9500	7130	9790	7130	10360	7070	10830	6900
	61	7800	6320	8630	6740	9220	7160	9500	7130	9790	7130	10360	7070	10830	6900
	64	7800	6320	8630	6740	9220	7160	9500	7130	9790	7130	10360	7070	10830	6900
	68	7800	6320	8630	6740	9220	7160	9500	7130	9790	7130	10360	7070	10830	6900
	70	7800	6320	8630	6740	9220	7160	9500	7130	9790	7130	10360	7070	10830	6900
	73	7800	6320	8630	6740	9220	7160	9500	7130	9790	7130	10360	7070	10830	6900
	77	7800	6320	8630	6740	9220	7160	9500	7130	9790	7130	10360	7070	10830	6900
	81	7800	6320	8630	6740	9220	7160	9500	7130	9790	7130	10360	7070	10830	6900
	84	7800	6320	8630	6740	9220	7160	9500	7130	9790	7130	10360	7070	10830	6900
	88	7800	6320	8630	6740	9220	7160	9500	7130	9790	7130	10360	7070	10830	6900
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	95	7800	6320	8630	6740	9220	7160	9500	7130	9790	7130	10360	7070	10830	6900
	99	7570	6140	8380	6540	8950	6950	9220	6920	9510	6920	10060	6860	10520	6700
	102	7390	5990	8180	6390	8740	6790	9010	6760	9280	6760	9820	6700	10270	6540
012	50	9850	7690	10900	8190	11640	8700	12000	8670	12360	8670	13080	8590	13680	8390
	54	9850	7690	10900	8190	11640	8700	12000	8670	12360	8670	13080	8590	13680	8390
	57	9850	7690	10900	8190	11640	8700	12000	8670	12360	8670	13080	8590	13680	8390
	61	9850	7690	10900	8190	11640	8700	12000	8670	12360	8670	13080	8590	13680	8390
	64	9850	7690	10900	8190	11640	8700	12000	8670	12360	8670	13080	8590	13680	8390
	68	9850	7690	10900	8190	11640	8700	12000	8670	12360	8670	13080	8590	13680	8390
	70	9850	7690	10900	8190	11640	8700	12000	8670	12360	8670	13080	8590	13680	8390
	73	9850	7690	10900	8190	11640	8700	12000	8670	12360	8670	13080	8590	13680	8390
	77	9850	7690	10900	8190	11640	8700	12000	8670	12360	8670	13080	8590	13680	8390
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	91	9850	7690	10900	8190	11640	8700	12000	8670	12360	8670	13080	8590	13680	8390
	95	9850	7690	10900	8190	11640	8700	12000	8670	12360	8670	13080	8590	13680	8390
	99	9560	7470	10580	7950	11300	8450	11650	8420	12000	8420	12700	8340	13280	8150
	102	9340	7290	10330	7760	11030	8250	11380	8220	11720	8220	12400	8140	12970	7950
015	50	13110	10960	13710	11260	14580	11720	15400	12090	15660	12120	16660	11970	17340	11520
	54	13110	10960	13710	11260	14580	11720	15400	12090	15660	12120	16660	11970	17340	11520
	57	13110	10960	13710	11260	14580	11720	15400	12090	15660	12120	16660	11970	17340	11520
	61	13110	10960	13710	11260	14580	11720	15400	12090	15660	12120	16660	11970	17340	11520
	64	13110	10960	13710	11260	14580	11720	15400	12090	15660	12120	16660	11970	17340	11520
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	70	13110	10960	13710	11260	14580	11720	15400	12090	15660	12120	16660	11970	17340	11520
	73	13110	10960	13710	11260	14580	11720	15400	12090	15660	12120	16660	11970	17340	11520
	77	13110	10960	13710	11260	14580	11720	15400	12090	15660	12120	16660	11970	17340	11520
	81	13110	10960	13710	11260	14580	11720	15400	12090	15660	12120	16660	11970	17340	11520
	84	13110	10960	13710	11260	14580	11720	15400	12090	15660	12120	16660	11970	17340	11520
	88	13110	10960	13710	11260	14580	11720	15400	12090	15660	12120	16660	11970	17340	11520
	91	13110	10960	13710	11260	14580	11720	15400	12090	15660	12120	16660	11970	17340	11520
	95	13110	10960	13710	11260	14580	11720	15400	12090	15660	12120	16660	11970	17340	11520
	99	12730	10640	13310	10930	14160	11380	14950	11740	15210	11770	16180	11620	16840	11190
	102	12430	10390	13000	10670	13820	11110	14600	11460	14850	11490	15790	11350	16440	10920

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	50	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	54	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	57	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	61	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	64	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	68	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	70	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	73	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	77	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	81	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	84	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	88	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	91	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	95	15320	11660	16030	11980	17040	12470	18000	12860	18310	12900	19470	12730	20270	12260
	99	14880	11320	15570	11630	16550	12110	17480	12490	17780	12530	18910	12360	19680	11900
	102	14520	11050	15200	11360	16150	11820	17060	12190	17360	12230	18460	12070	19220	11620
021	50	17870	14150	18700	14540	19880	15130	21000	15610	21360	15650	22710	15450	23650	14880
	54	17870	14150	18700	14540	19880	15130	21000	15610	21360	15650	22710	15450	23650	14880
	57	17870	14150	18700	14540	19880	15130	21000	15610	21360	15650	22710	15450	23650	14880
	61	17870	14150	18700	14540	19880	15130	21000	15610	21360	15650	22710	15450	23650	14880
	64	17870	14150	18700	14540	19880	15130	21000	15610	21360	15650	22710	15450	23650	14880
	68	17870	14150	18700	14540	19880	15130	21000	15610	21360	15650	22710	15450	23650	14880
	70	17870	14150	18700	14540	19880	15130	21000	15610	21360	15650	22710	15450	23650	14880
	73	17870	14150	18700	14540	19880	15130	21000	15610	21360	15650	22710	15450	23650	14880
	77	17870	14150	18700	14540	19880	15130	21000	15610	21360	15650	22710	15450	23650	14880
	81	17870	14150	18700	14540	19880	15130	21000	15610	21360	15650	22710	15450	23650	14880
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	88	17870	14150	18700	14540	19880	15130	21000	15610	21360	15650	22710	15450	23650	14880
	91	17870	14150	18700	14540	19880	15130	21000	15610	21360	15650	22710	15450	23650	14880
	95	17870	14150	18700	14540	19880	15130	21000	15610	21360	15650	22710	15450	23650	14880
	99	17350	13740	18160	14120	19300	14690	20390	15160	20740	15200	22050	15000	22960	14450
	102	16940	13410	17730	13780	18850	14340	19910	14800	20250	14840	21530	14650	22420	14110
024	50	20430	15020	21370	15430	22730	16060	24000	16563	24410	16610	25960	16400	27020	15780
	54	20430	15020	21370	15430	22730	16060	24000	16563	24410	16610	25960	16400	27020	15780
	57	20430	15020	21370	15430	22730	16060	24000	16563	24410	16610	25960	16400	27020	15780
	61	20430	15020	21370	15430	22730	16060	24000	16563	24410	16610	25960	16400	27020	15780
	64	20430	15020	21370	15430	22730	16060	24000	16563	24410	16610	25960	16400	27020	15780
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	70	20430	15020	21370	15430	22730	16060	24000	16563	24410	16610	25960	16400	27020	15780
	73	20430	15020	21370	15430	22730	16060	24000	16563	24410	16610	25960	16400	27020	15780
	77	20430	15020	21370	15430	22730	16060	24000	16563	24410	16610	25960	16400	27020	15780
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	91	20430	15020	21370	15430	22730	16060	24000	16563	24410	16610	25960	16400	27020	15780
	95	20430	15020	21370	15430	22730	16060	24000	16563	24410	16610	25960	16400	27020	15780
	99	19838	14584	20750	14983	22071	15594	23304	16083	23702	16128	25207	15924	26236	15322
	102	19368	14239	20259	14628	21548	15225	22752	15702	23141	15746	24610	15547	25615	14959

4-Way Cassette type (MMU-AP___2H2UL)

TC: Total capacity [Btu/h] SHC: Sensible capacity [Btu/h]

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
030	50	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	54	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	57	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	61	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	64	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	68	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	70	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	73	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	77	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	81	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	84	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	88	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	91	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	95	25530	18740	26720	19260	28410	20040	30000	20670	30510	20720	32450	20470	33780	19700
	99	24790	18200	25950	18700	27590	19460	29130	20070	29630	20120	31510	19880	32800	19130
	102	24200	17770	25330	18260	26930	19000	28440	19600	28920	19640	30760	19410	32020	18680
036	50	30640	22440	32060	23060	34090	24000	36000	24750	36620	24820	38930	24500	40540	23590
	54	30640	22440	32060	23060	34090	24000	36000	24750	36620	24820	38930	24500	40540	23590
	57	30640	22440	32060	23060	34090	24000	36000	24750	36620	24820	38930	24500	40540	23590
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	70	30640	22440	32060	23060	34090	24000	36000	24750	36620	24820	38930	24500	40540	23590
	73	30640	22440	32060	23060	34090	24000	36000	24750	36620	24820	38930	24500	40540	23590
	77	30640	22440	32060	23060	34090	24000	36000	24750	36620	24820	38930	24500	40540	23590
	81	30640	22440	32060	23060	34090	24000	36000	24750	36620	24820	38930	24500	40540	23590
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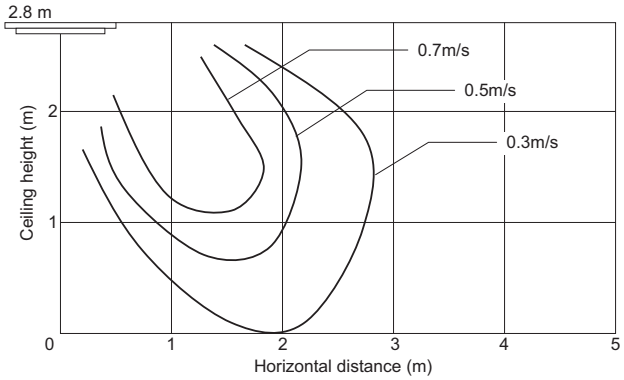
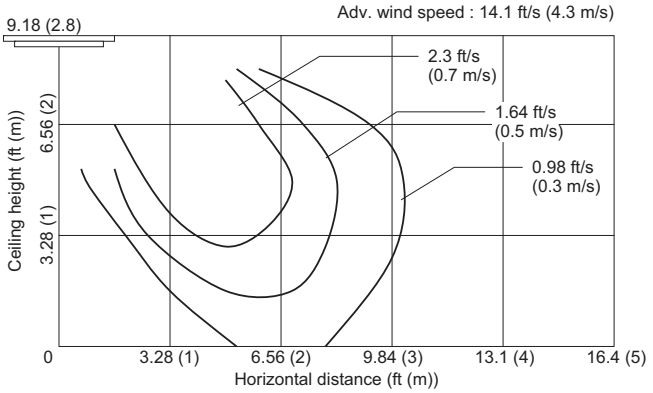
	88	30640	22440	32060	23060	34090	24000	36000	24750	36620	24820	38930	24500	40540	23590
	91	30640	22440	32060	23060	34090	24000	36000	24750	36620	24820	38930	24500	40540	23590
	95	30640	22440	32060	23060	34090	24000	36000	24750	36620	24820	38930	24500	40540	23590
	99	29750	21790	31130	22390	33100	23300	34960	24030	35560	24100	37800	23790	39360	22910
	102	29050	21270	30390	21860	32320	22750	34130	23460	34720	23530	36910	23230	38430	22360
042	50	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	54	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	57	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	61	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	64	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	68	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	70	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	73	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	77	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	81	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	84	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	88	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	91	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	95	35750	26660	37400	27380	39770	28500	42000	29400	42720	29480	45420	29100	47290	28020
	99	34710	25890	36320	26590	38620	27670	40780	28550	41480	28630	44100	28260	45920	27210
	102	33890	25270	35460	25960	37700	27020	39820	27870	40500	27950	43060	27590	44830	26560

8. Air throw distance chart

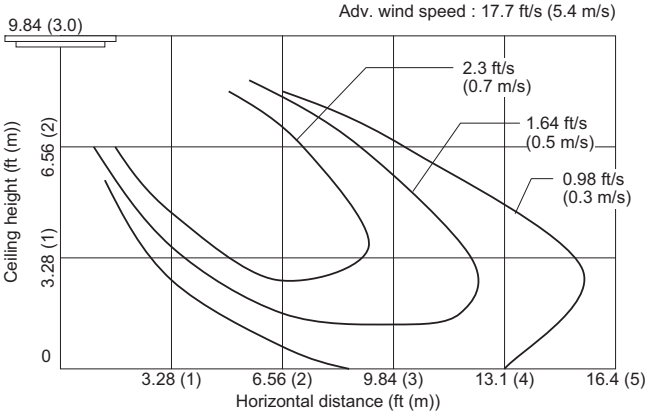
MMU-AP0072H2UL/AP0092H2UL



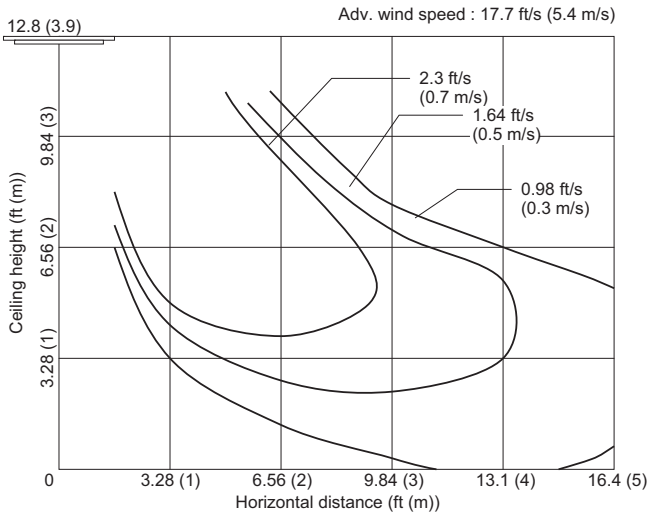
MMU-AP0122H2UL/AP0152H2UL/AP0182H2UL/AP0072H2UL-1



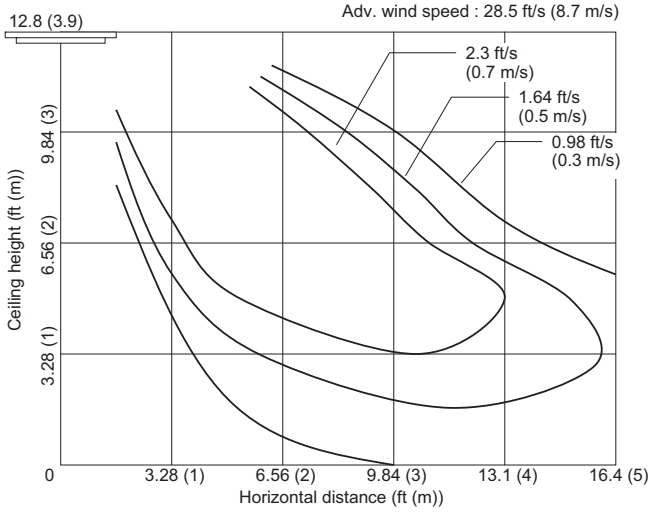
MMU-AP0212H2UL/AP0242H2UL/AP0302H2UL



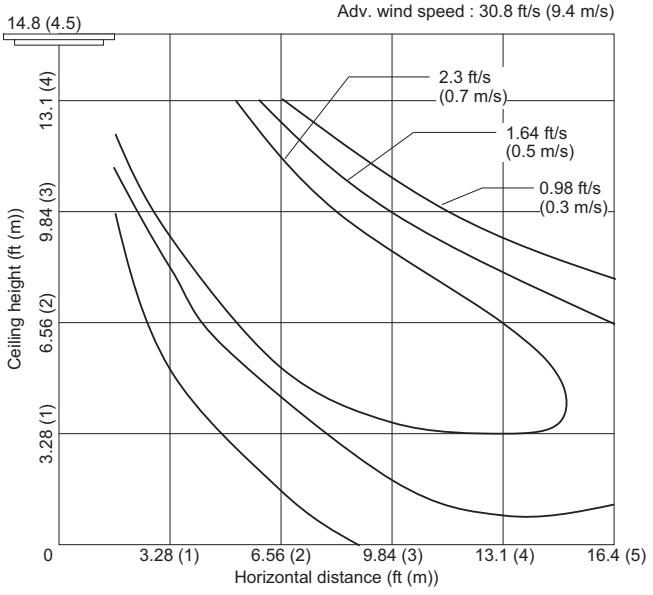
MMU-AP0362H2UL



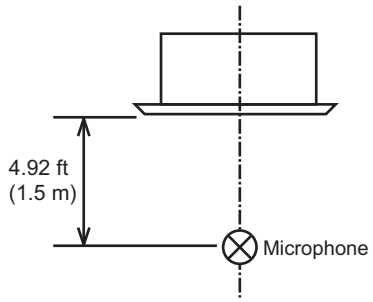
MMU-AP0422H2UL



MMU-AP0362H2UL/AP0422H2UL (High ceiling (3))

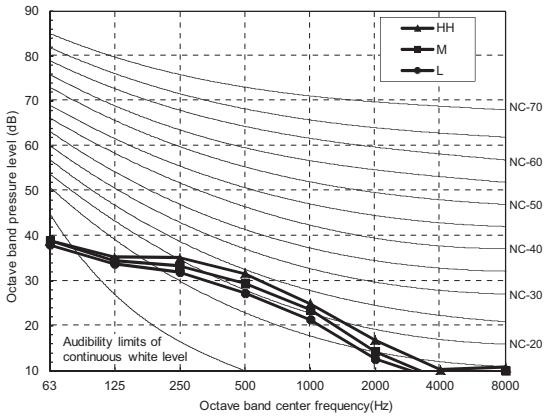


9. Sound data



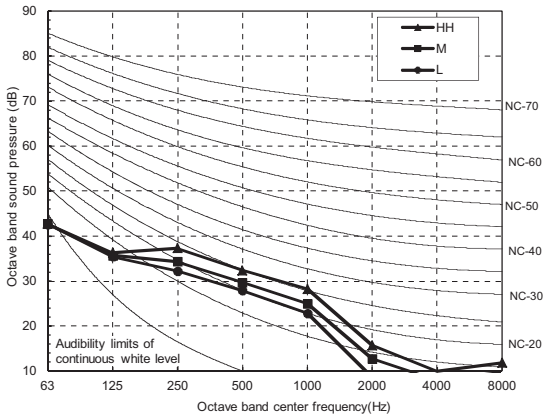
MMU-AP0072H2UL/AP0092H2UL

Sound pressure level (dB (A))	HH - H - L
	32.5-30.5-29



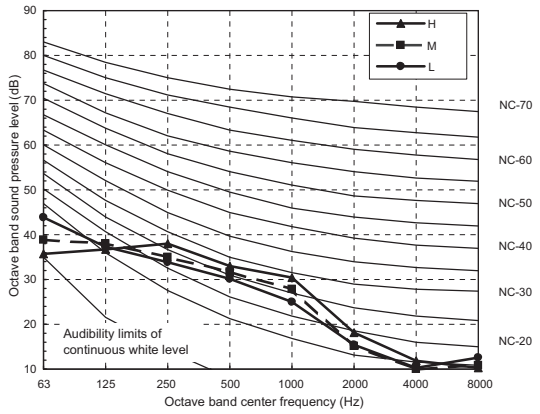
MMU-AP0122H2UL/AP0072H2UL-1

Sound pressure level (dB (A))	HH - H - L
	34-31.5-29.5



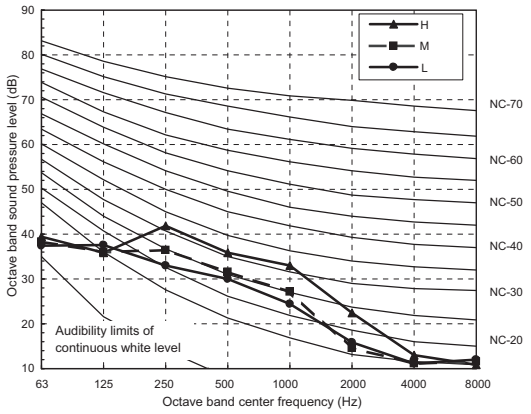
MMU-AP0152H2UL/ AP0182H2UL

Sound pressure level (dB (A))	H - M - L
	35-33-31



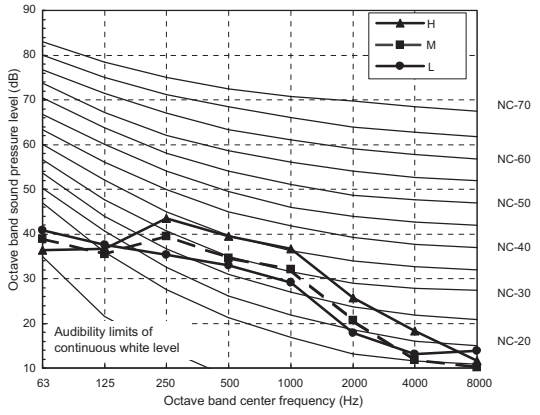
MMU-AP0212H2UL /AP0242H2UL

Sound pressure level (dB (A))	H - M - L
	38-33-31



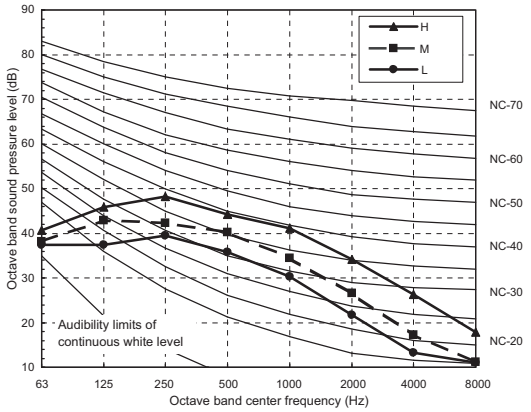
MMU-AP0302H2UL

Sound pressure level (dB (A))	H - M - L
	41-36.5-34



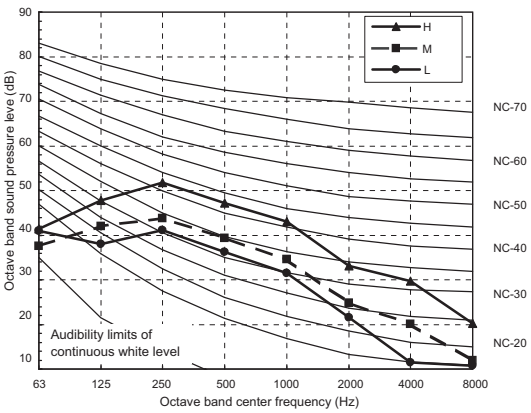
MMU-AP0362H2UL

Sound pressure level (dB (A))	H - M - L
	46-40.5-36.5



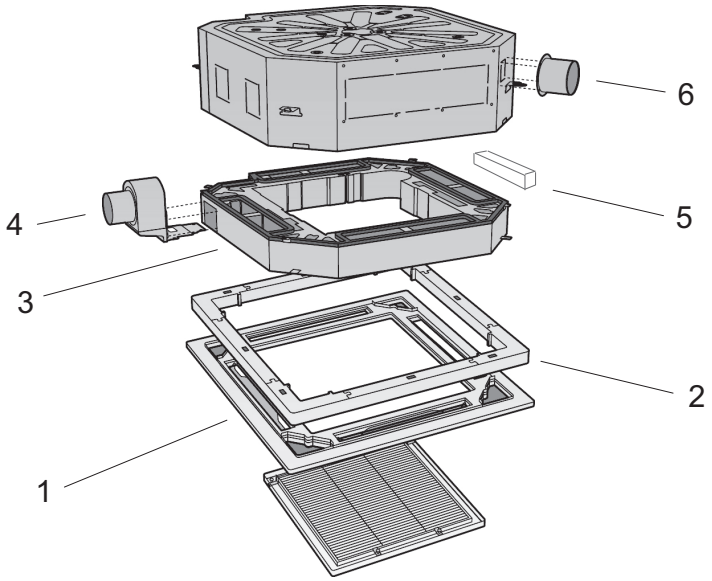
MMU-AP0422H2UL

Sound pressure level (dB (A))	H - M - L
	48.5-40.5-37.5



10. Accessories

Optional parts for 4-Way Cassette type



Optional parts list

No	Type	Model name	Qty/unit	Notes
1	Ceiling Panel	RBC-U31PG(W)-UL	1	White (2.5GY9.0/0.5)
2	Spacer for height adjustment	TCB-SP1602UUL	1	50 mm
3	Fresh-air chamber	TCB-GFC1602UUL	1	Use with TCB-GB1602UUL
4	Fresh-air inlet box	TCB-GB1602UUL	1	Connection=Dia.100 mm
5	Air-discharge direction kit	TCB-BC1602UUL	1	6-direction patterns
6	Auxiliary fresh air flange	TCB-FF101URUL	1	Connection=Dia.100 mm

Combination pattern

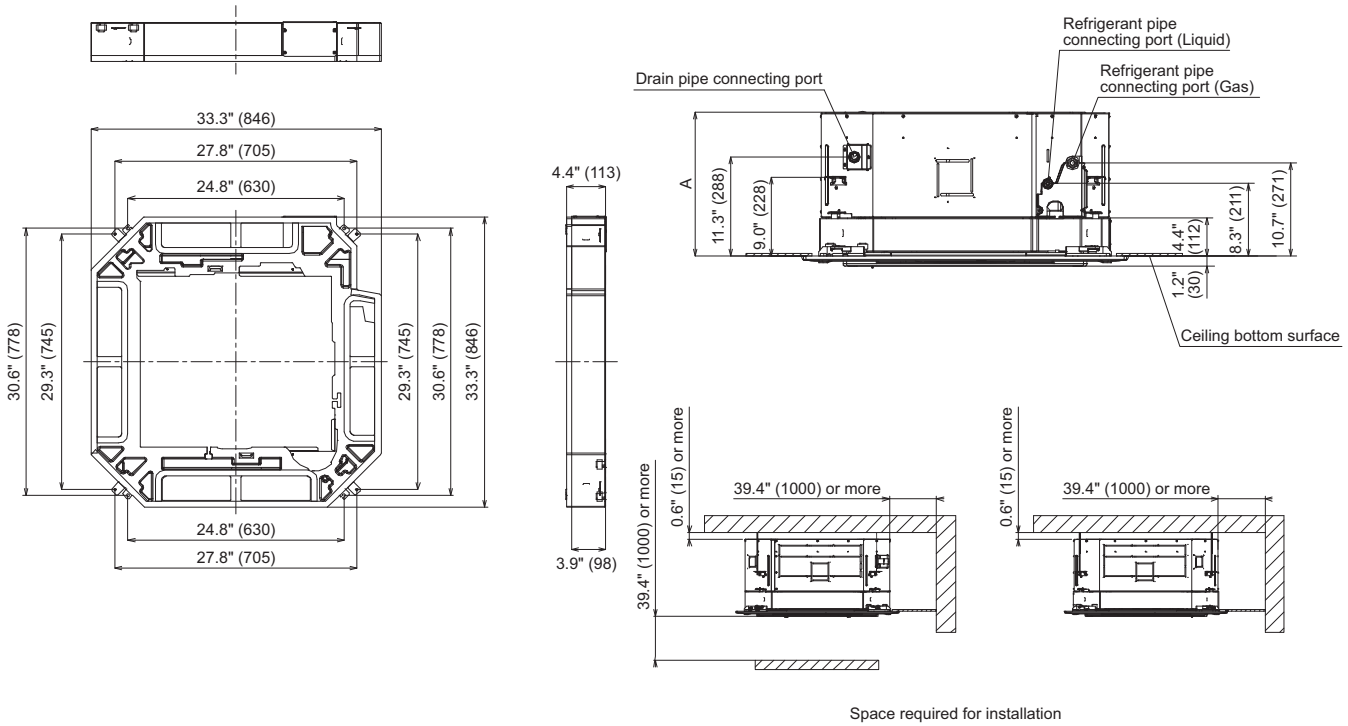
			Ceiling Panel RBC-U31PG(W)-UL	Wireless remote control kit RBC-AX31U(W)-UL	Spacer for height adjustment TCB-SP1602UUL	Fresh-air chamber TCB-GFC1602UUL	Fresh-air inlet box + Fresh-air chamber TCB-GB1602UUL + TCB-GFC1602UUL	Air-discharge direction kit TCB-BC1602UUL	Auxiliary fresh air flange TCB-FF101URUL
Panel	Ceiling Panel	RBC-U31PG(W)-UL		OK	OK	OK	OK	OK	OK
	Wireless remote control kit	RBC-AX31U(W)-UL	OK		OK	OK	OK	OK	OK
Optional parts	Spacer for height adjustment	TCB-SP1602UUL	OK	OK		OK	—	OK	OK
	Fresh-air chamber	TCB-GFC1602UUL	OK	OK	OK		—	OK	OK
	Fresh-air inlet box + Fresh-air chamber	TCB-GB1602UUL + TCB-GFC1602UUL	OK	OK	—	—		OK	OK
	Air-discharge direction kit	TCB-BC1602UUL	OK	OK	OK	OK	OK		OK
	Auxiliary fresh air flange	TCB-FF101URUL	OK	OK	OK	OK	OK	OK	

*All option part is not used with MMU-AP0072H2UL-1.

11. Reference

11-1 Fresh-air chamber (TCB-GFC1602UUL)

Unit: in (mm)



	A
007 to 030 type	14.0" (356)
036 to 042 type	16.5" (419)

*MMU-AP0072H2UL-1 is not used.

11-2 Fresh-air inlet box (TCB-GB1602UUL)

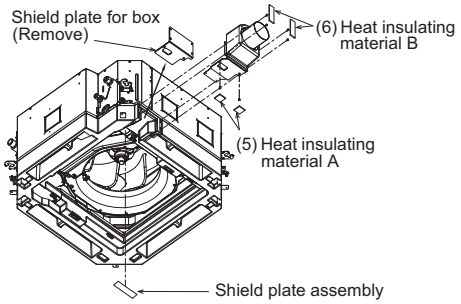
Accessories

(The following parts are included.)

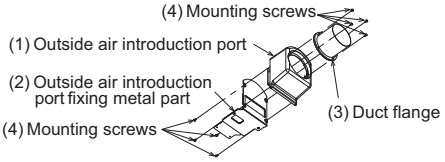
No.	Name	Qty	Remark
(1)	Outside air introduction port	1	
(2)	Outside air introduction port fixing metal part	1	
(3)	Duct flange Ø3.9" (100 mm)	1	
(4)	Mounting screws 0.16" × 0.4" (4 × 10 mm)	16	
(5)	Heat insulating material A	2	
(6)	Heat insulating material B	2	
(7)	Wind shield	1	
(8)	Installation manual	1	
(9)	Wire	1	

Installation

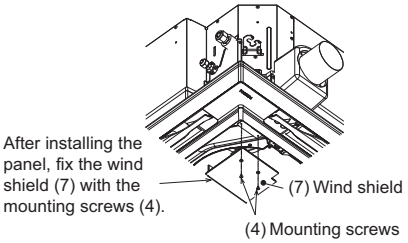
(Fig. 1)



(Fig. 2)

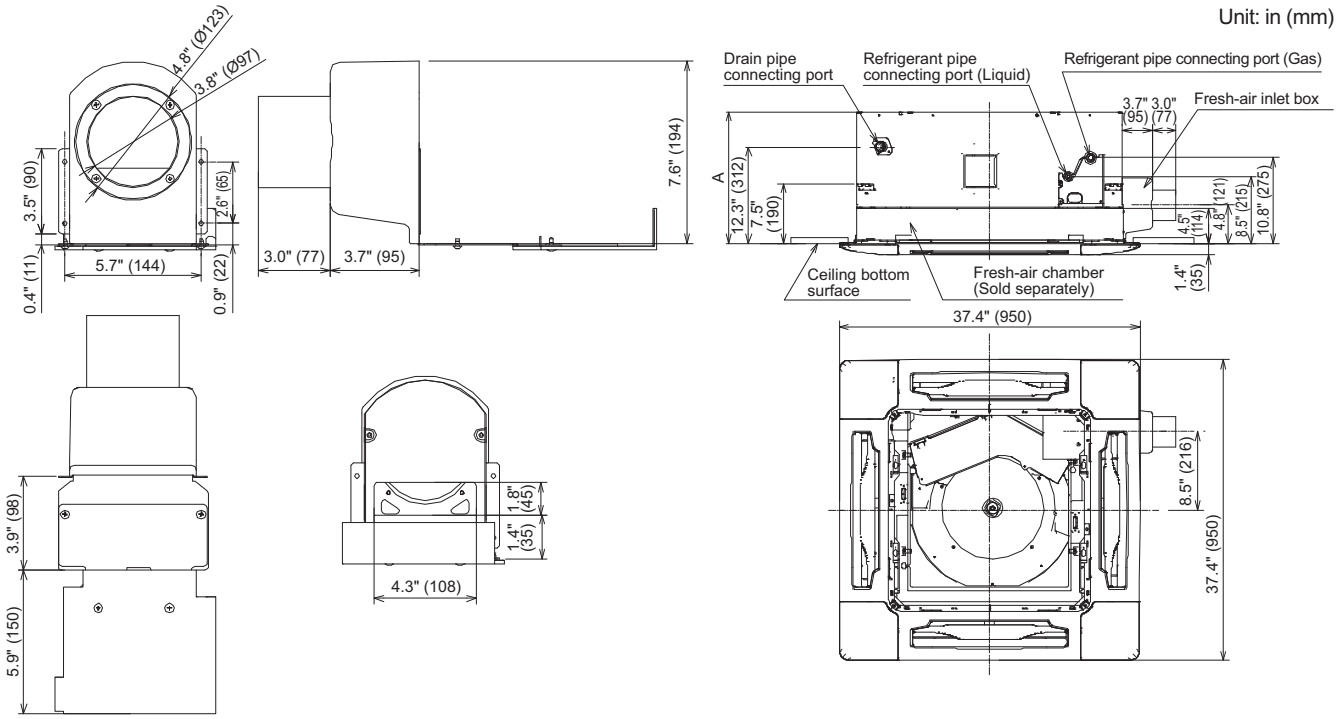


(Fig. 3)



Dimension

Unit: in (mm)



	A
007 to 030 type	14.1" (358)
036 to 042 type	16.6" (421)

*MMU-AP0072H2UL-1 is not used.

NOTE

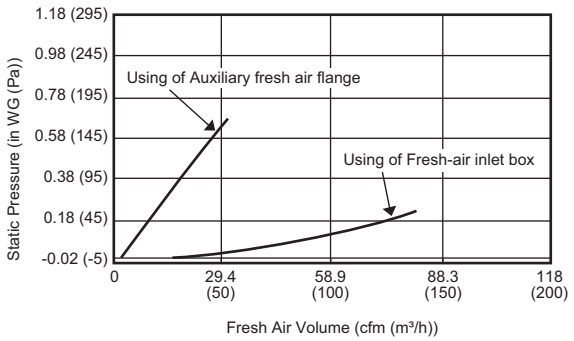
This inlet box shall be used with the fresh-air chamber.

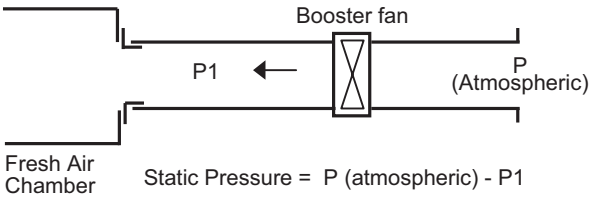
11-3 Fresh Air Intake

4-Way Cassette type

Usage
Fresh air is taken by using Fresh-air chamber and Fresh-air inlet box. And also is subsidiarily taken by using Auxiliary fresh air flange through the knock-out hole of the indoor unit body.

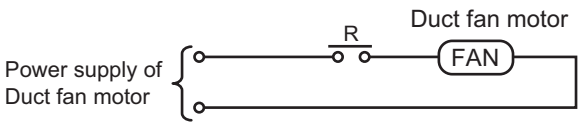
Caution
1. Be sure to provide air return.
2. The fresh air shall be treated by heat reclaim ventilator or the like.
3. Recommended treated air temperature is 54 °F to 86 °F.
4. Be sure to decide the fresh air volume so that mixed suction air with fresh air keep operating temperature. Provide an air filter in fresh air way to prevent sucking dust.
5. Be sure to insulate the fresh air duct. In order to accelerate starting up in heating mode, implement pre-heating operation by cutting off Fresh Air Intake.
6. The operating sound might increase when fresh air intake.

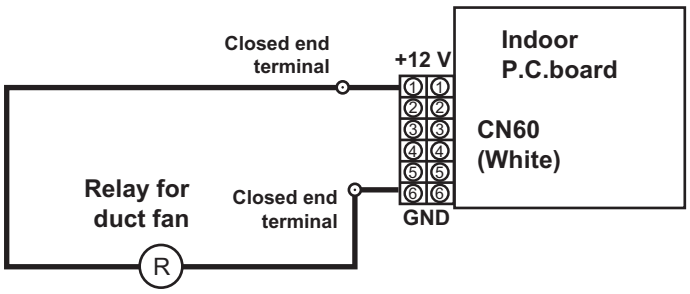




Characteristics between air volume of branching duct and static pressure
Following fresh air intake ratio is available by using the booster fan.
1. Fresh-air inlet box with Fresh-air chamber
   Up to 88 cfm and 10% of rated air volume
2. Auxiliary fresh air flange through the knock-out hole of the indoor unit body
   Up to 24 cfm

Inter - lock circuit
1. Connect the driving relay of the duct fan (DC 12 V) between 1 and 6 on the indoor P.C.board.
   Part indicated with a bold line is the connecting circuit.
   After installation, implement a test run to check that the duct fan of the indoor unit start / stop simultaneously.
   (Implement the test run following to the installation manual of the indoor unit.)



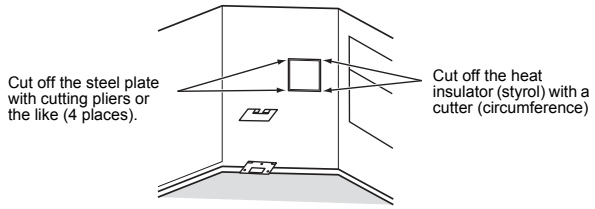


*MMU-AP0072H2UL-1 is not used.

11-4 Auxiliary fresh air flange (TCB-FF101URUL)

Installation

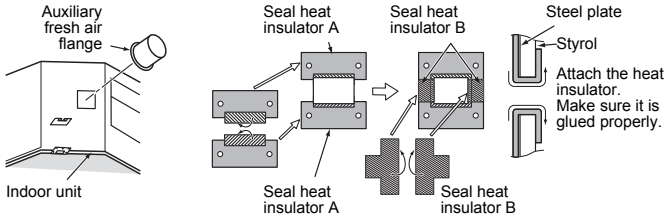
1. Using the knockout of the indoor unit main body, as a marker, cut off the flange with the heat insulator (styrol) with cutting pliers or cutter.



NOTE

When cutting off the styrol inside, be careful not to insert the cutter blade deeper than 1.2" (30mm). (Damage to the drain pan inside can cause water leakage.)
Wear safety globes to carry out these works. Do not attempt with bare hands.

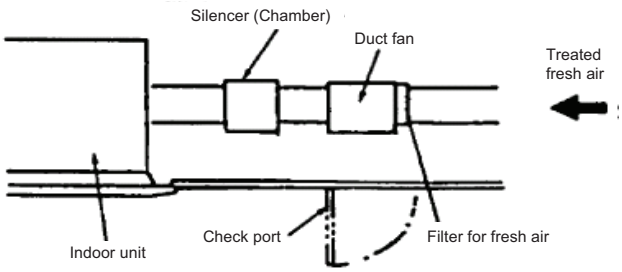
2. A gap between the styrol and steel plate may cause a trouble such as condensation. Be sure to attach the attached heat insulator A first with it aligned to the screw hole, and then attach B, according to the right figure.
3. Install the auxiliary fresh air flange to the indoor unit main body with attached 4 fixing screws.



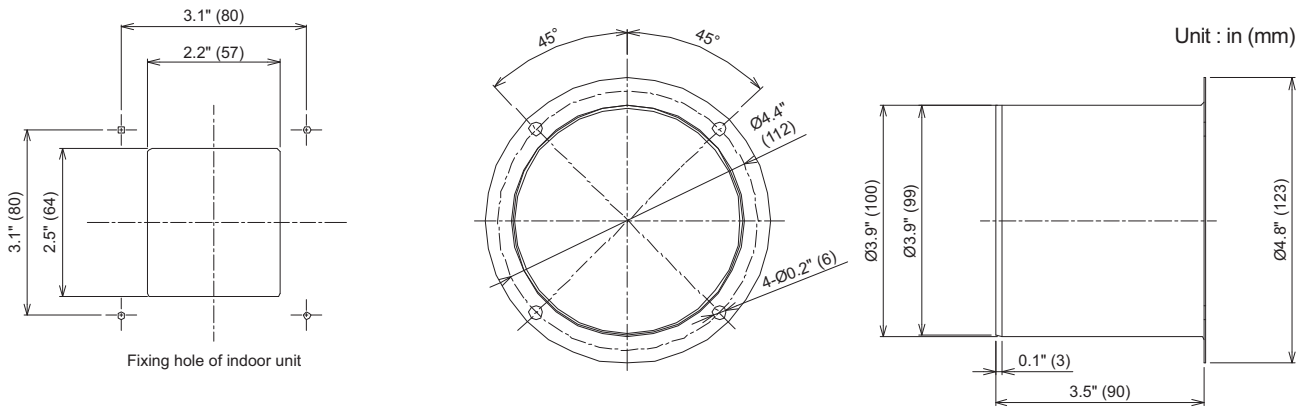
Duct fan

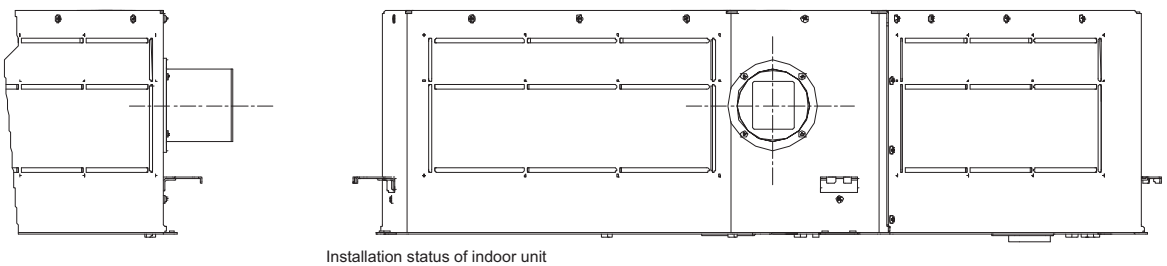
In order to take fresh air, provide the duct fan separately.

1. Install the filter for fresh air
2. Provide the check port beneath the duct fan for maintenance.
3. Connect the duct fan and the indoor unit with inter-lock wiring.
4. Provide the silencer to prevent the effect of noise.



Dimension



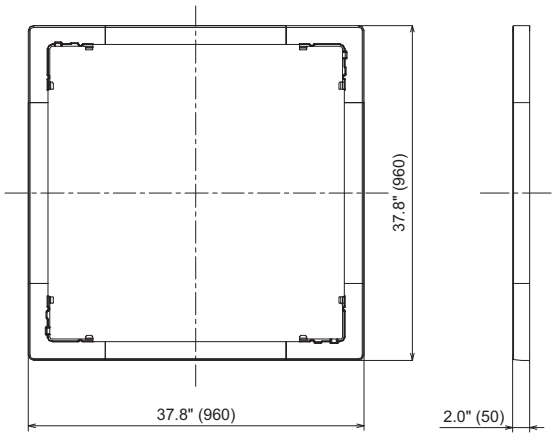


Installation status of indoor unit

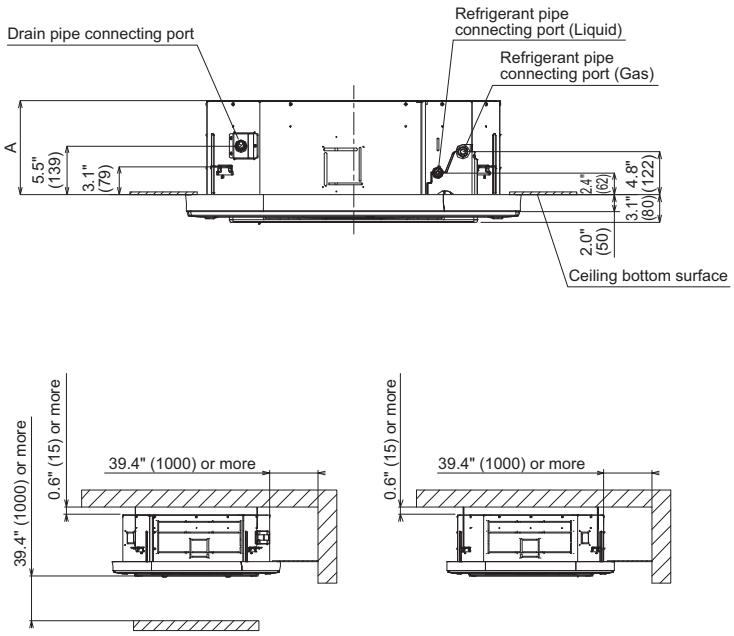
*MMU-AP0072H2UL-1 is not used.

11-5 Spacer for height adjustment (TCB-SP1602UUL)

Unit: in (mm)



Material : Styrene foam
Color : Moon white

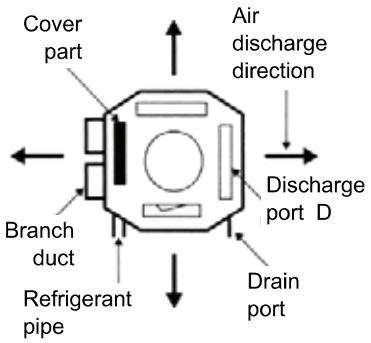


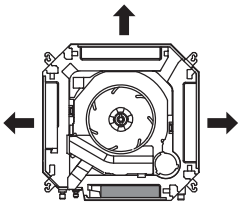
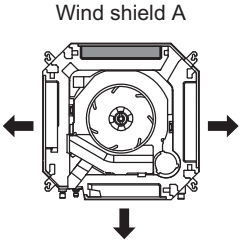
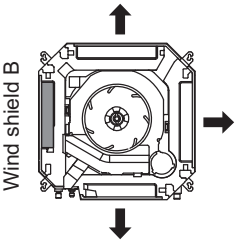
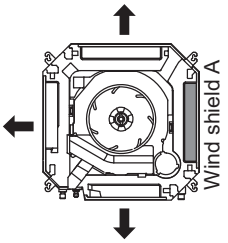
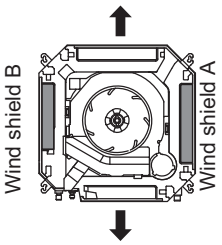
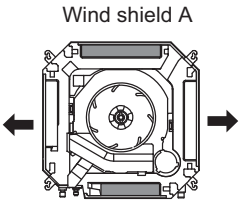
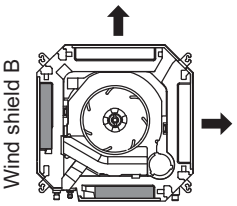
Space required for installation

	A
007 to 030 type	8.1" (206)
036 to 042 type	10.6" (269)

*MMU-AP0072H2UL-1 is not used.

11-6 Air discharge direction kit (TCB-BC1602UUL)



			Limited models only	
3-way air flow				
	Available for all models	Available for all models	Available only for 007 to 030 type	Available only for 036 to 042 type
2-way air flow				
	Available for all models	Available for all models	Available for all models	

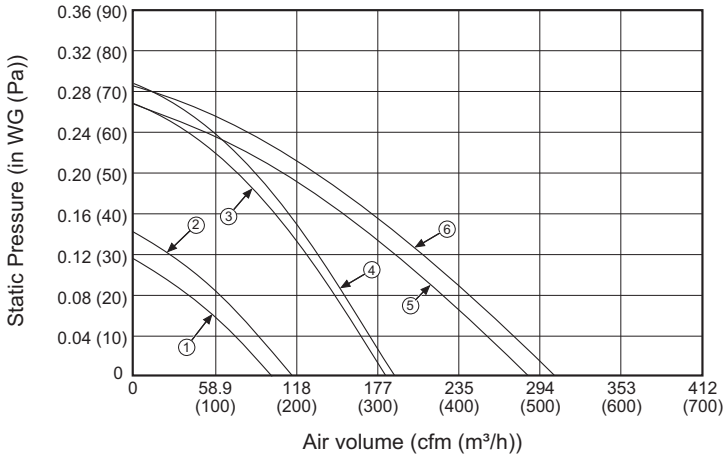
*MMU-AP0072H2UL-1 is not used.

11-7 Branching duct

4-Way Cassette type

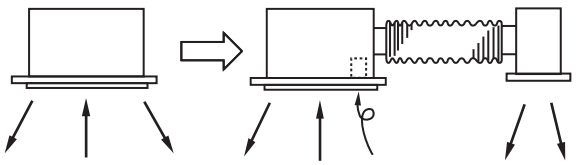
Characteristics between air volume of branching duct and static pressure

In case of connecting dia.= 5.91 inch (150 mm) branching duct, static pressure is as follows.



	Model
①	015, 018, 021 type : 3 directions + 1 branch
②	024, 030 type : 3 directions + 1 branch
③	036 type : 3 directions + 1 branch
④	042 type : 3 directions + 1 branch
⑤	036 type : 3 directions + 2 branches
⑥	042 type : 3 directions + 2 branches

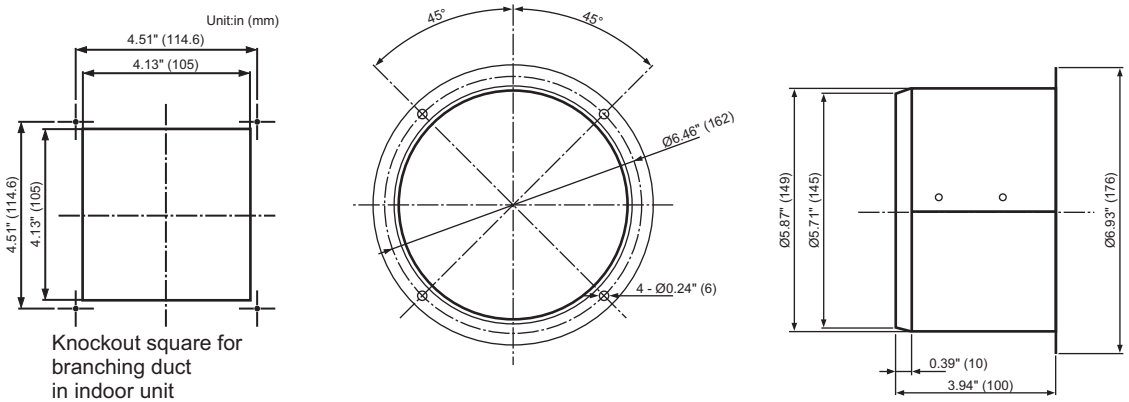
Cover method



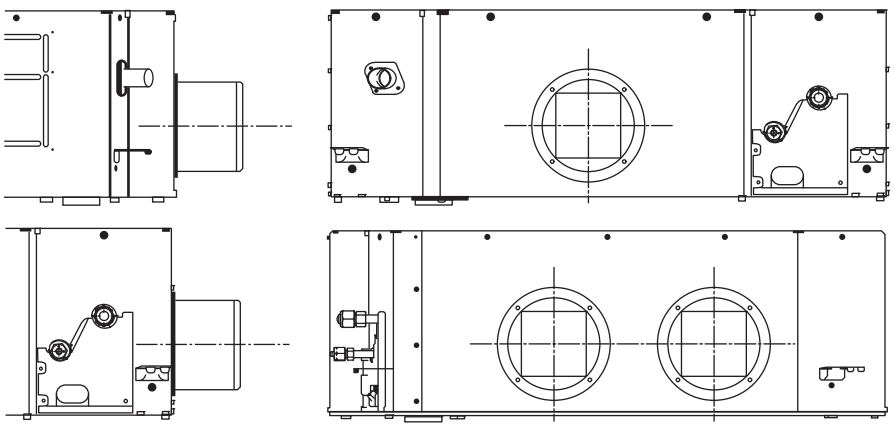
Install the cover

Use air discharge direction kit
(TCB-BC1602UUL)
to cover the air discharge port.

Dimension



Design sample of branching duct flange



Installation sample

*MMU-AP0072H2UL-1 is not used.

MEMO

MEMO

MEMO

4-Way Cassette type Engineering Data Book

Model name:

MMU-AP___2H2UL, AP___2H2UL-1

March, 2016 First Edition

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