

Compact 4-Way Cassette type

MMU-UP0071MH-UL

MMU-UP0091MH-UL

MMU-UP0121MH-UL

MMU-UP0151MH-UL

MMU-UP0181MH-UL



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1. Specifications



Compact 4-Way Cassette type

Model name				MMU-UP0071MH-UL	MMU-UP0091MH-UL	MMU-UP0121MH-UL	MMU-UP0151MH-UL	MMU-UP0181MH-UL
Cooling Capacity			kBtu/h	7.5	9.5	12.0	15.4	18.0
Heating Capacity			kBtu/h	8.5	10.5	13.5	17.0	20.0
Electrical chararacteristics	Power supply			230 V (208 V / 230 V) 1 phase 60 Hz				
	Running current		A	0.23	0.24	0.25	0.28	0.36
	Power consumption		kW	0.023	0.025	0.027	0.030	0.039
	Starting current		A	0.41	0.43	0.44	0.50	0.62
Appearance	Main Unit			Zinc hot dipping steel plate				
	Ceiling Panel (*1)	Model Name		RBC-UM21PG-UL				
		Panel Color		Gran White (Mansell 5PB9 / 1)				
Outer dimension	Main Unit	Height	In	10.1				
		Width	In	22.6				
		Depth (*2)	In	22.6				
	Ceiling Panel	Height	In	0.5				
		Width	In	24.4				
		Depth	In	24.4				
Total weight	Main Unit		lbs	33.1				
	Ceiling Panel		lbs	5.5				
Heat exchanger				Finned tube				
Soundproof/Heat-insulating material				Non - flammable insulation				
Fan unit	Fan			Turbo fan				
	Standard air flow (H / M + / M / L + / L)		cfm	320 / 290 / 270 / 230 / 220	340 / 310 / 280 / 230 / 220	350 / 320 / 300 / 250 / 240	390 / 350 / 320 / 280 / 270	450 / 420 / 380 / 320 / 310
	Motor		W	60				
Air filter				Standard filter (Long life filter) (14.0 In × 14.0 In)				
Controller (*1)				Remote controller				
Connecting pipe	Gas side		In	3 / 8"			1 / 2"	
	Liquid side		In	1 / 4"				
Drain port (Nominal dia. mm)				VP20 (Polyvinyl chloride tube)				
Sound puessure level (H / M + / M / L + / L)			dB	39 / 36 / 35 / 32 / 31	40 / 37 / 35 / 33 / 31	40 / 38 / 36 / 34 / 32	43 / 39 / 38 / 35 / 33	46 / 44 / 42 / 39 / 37
Sound power level (H / M + / M / L + / L)			dB	52 / 49 / 48 / 45 / 44	53 / 50 / 48 / 45 / 44	53 / 51 / 49 / 46 / 45	55 / 52 / 50 / 47 / 46	59 / 57 / 54 / 51 / 49
Operating Range (*3)		Cooling	(°F)	59 to 75 (Wet Bulb)				
		Heating	(°F)	59 to 82 (Dry Bulb)				

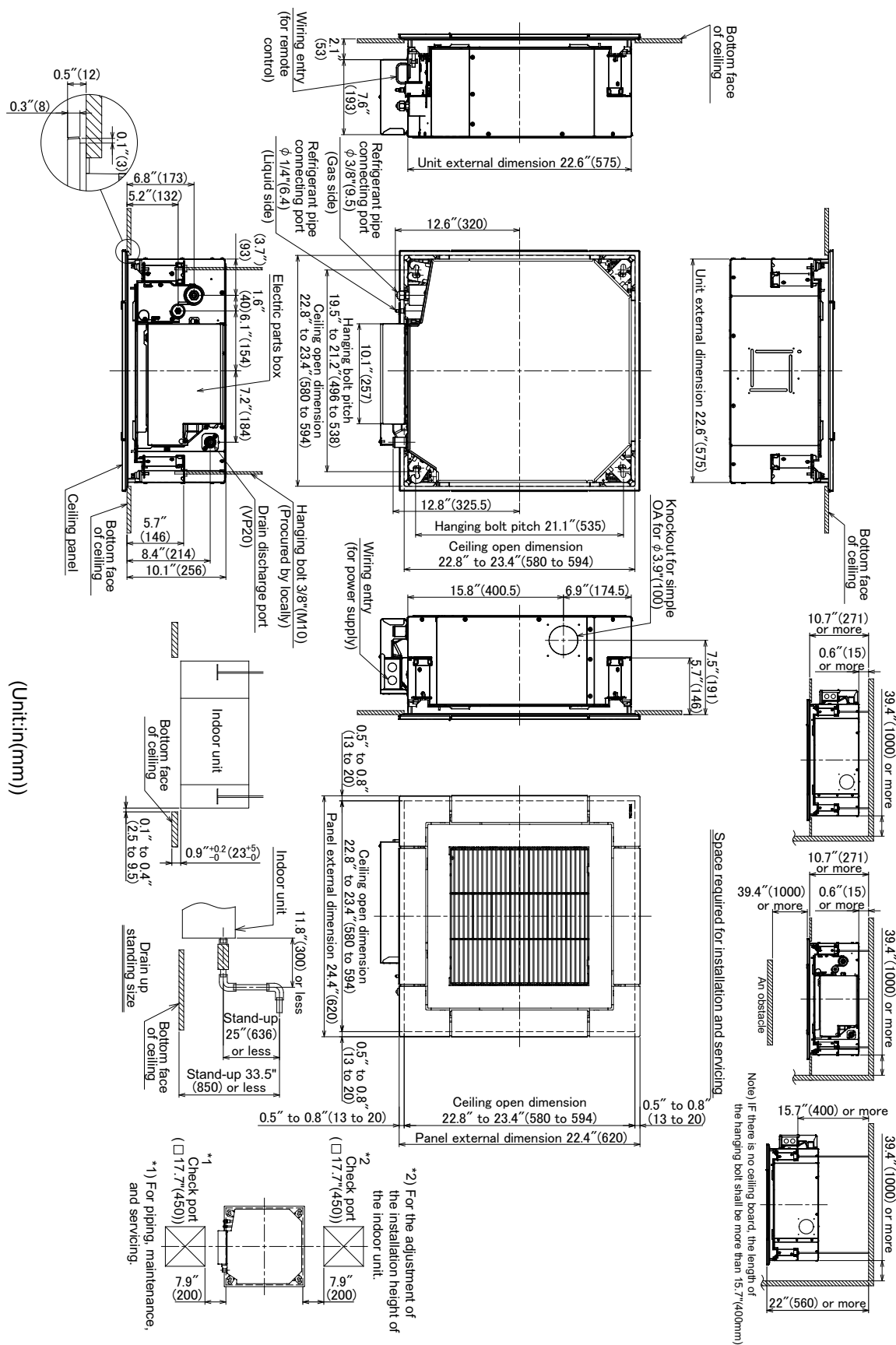
(*1) Remote controller and ceiling panel are sold separately

(*2) Depth doesn't include the Electric parts box.

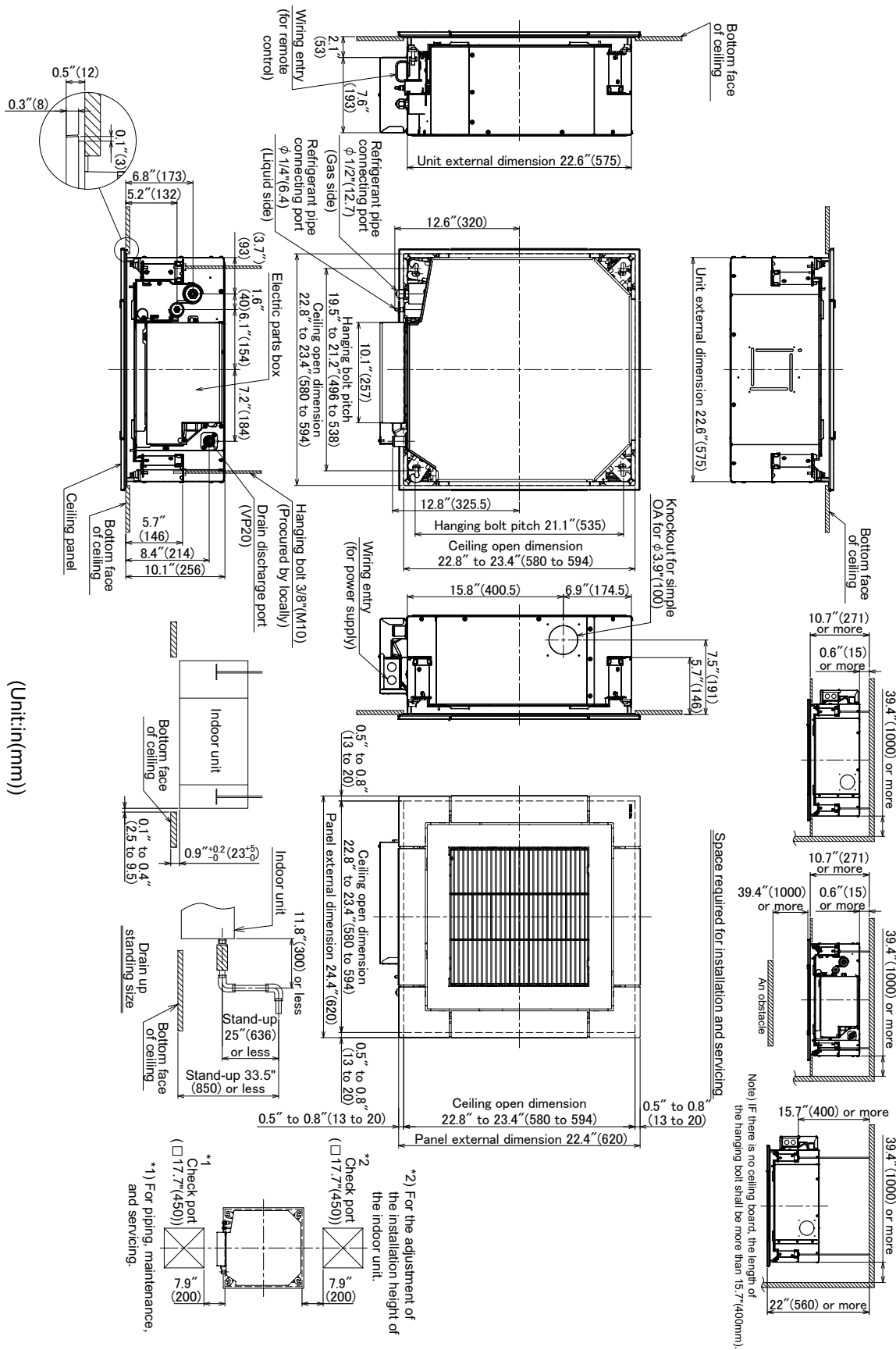
(*3) Refer to outdoor unit databook for operating range of outdoor units.

2. Dimensions

MMU-UP0071MH-UL, UP0091MH-UL, UP0121MH-UL

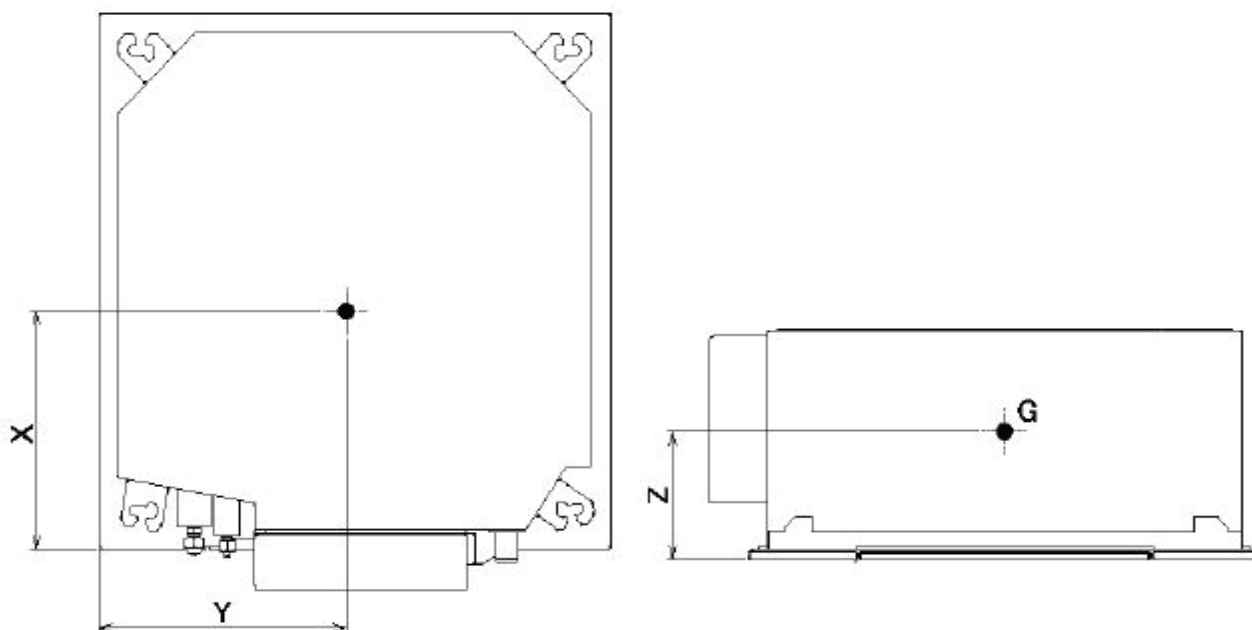


MMU-UP0151MH-UL, UP0181MH-UL

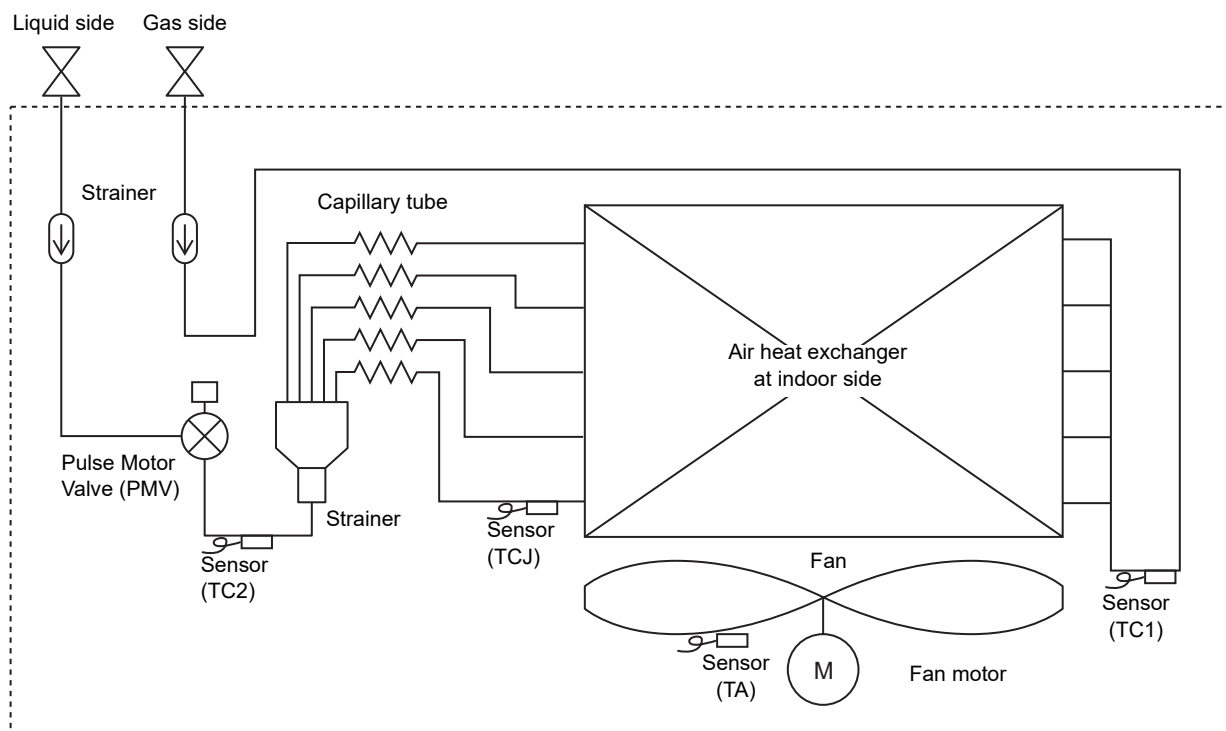


3. Center of gravity

Model name	X (In)	Y (In)	Z (In)	Total weight	
				Main unit (lbs)	Ceiling panel (lbs)
MMU-UP0071MH-UL	10.8	11.8	5.8	33.1	5.5
MMU-UP0091MH-UL					
MMU-UP0121MH-UL					
MMU-UP0151MH-UL					
MMU-UP0181MH-UL					



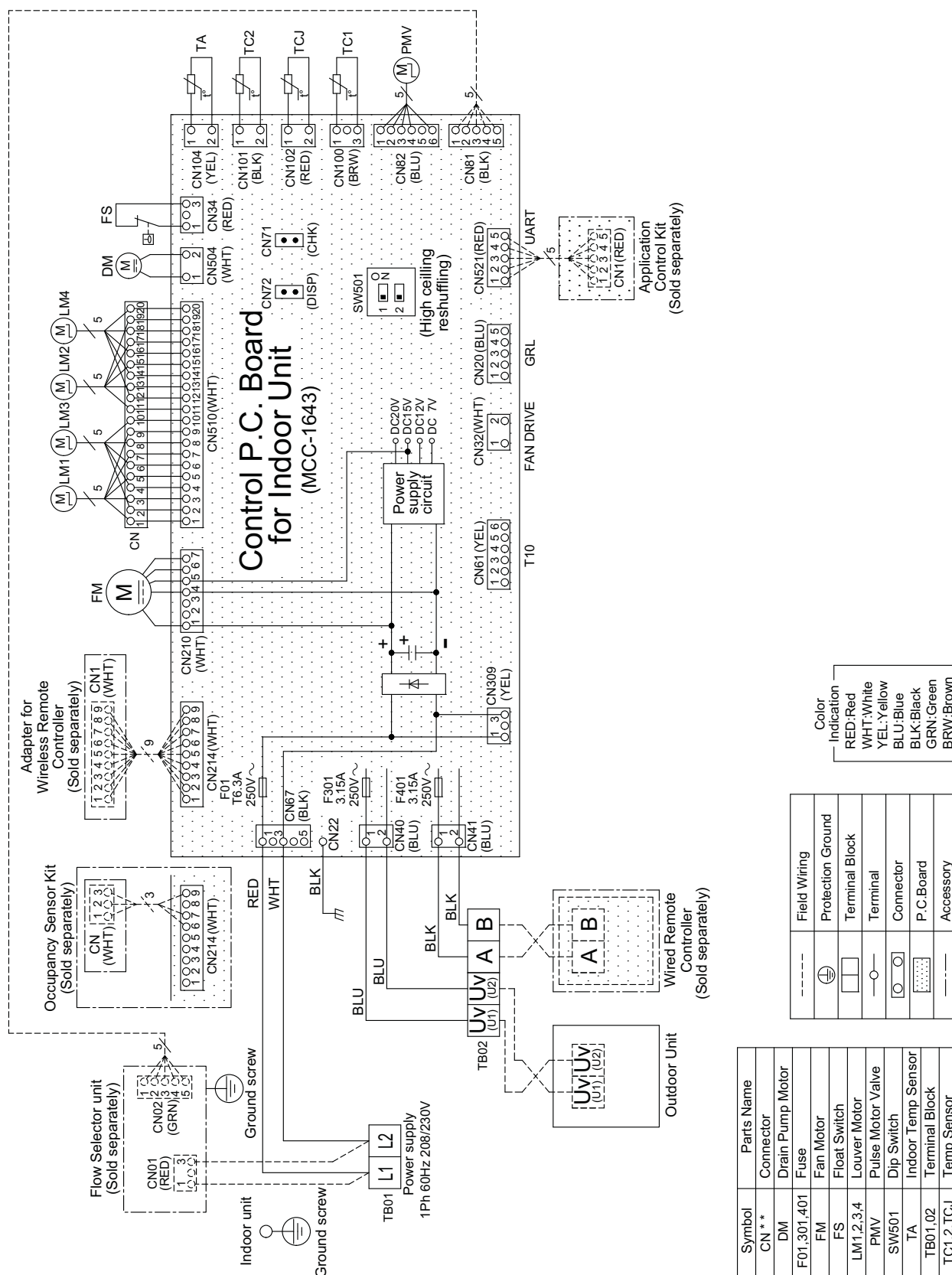
4. Piping diagram



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

MMU-UP0071MH-UL, UP0091MH-UL, UP0121MH-UL, UP0151MH-UL, UP0181MH-UL



6. Electrical current characteristics

Type	Model	Nominal Voltage (V-Ph-Hz)	Voltage Range (V)		Power consumption kW	FLA A	MCA A	MOCP A
			Min	Max				
Compact 4-Way Cassette type	MMU-UP0071MH-UL	208/230-1-60	187	253	0.060	0.4	0.5	15
	MMU-UP0091MH-UL	208/230-1-60	187	253	0.060	0.4	0.5	15
	MMU-UP0121MH-UL	208/230-1-60	187	253	0.060	0.4	0.5	15
	MMU-UP0151MH-UL	208/230-1-60	187	253	0.060	0.5	0.6	15
	MMU-UP0181MH-UL	208/230-1-60	187	253	0.060	0.6	0.7	15

MCA: Minimum Circuit Amps

FLA: Full Load Amps

MOCP: Maximum Overcurrent Protection (Amps)

7. Sensible capacity table

Compact 4-Way Cassette type (MMU-UP__1MH-UL)

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

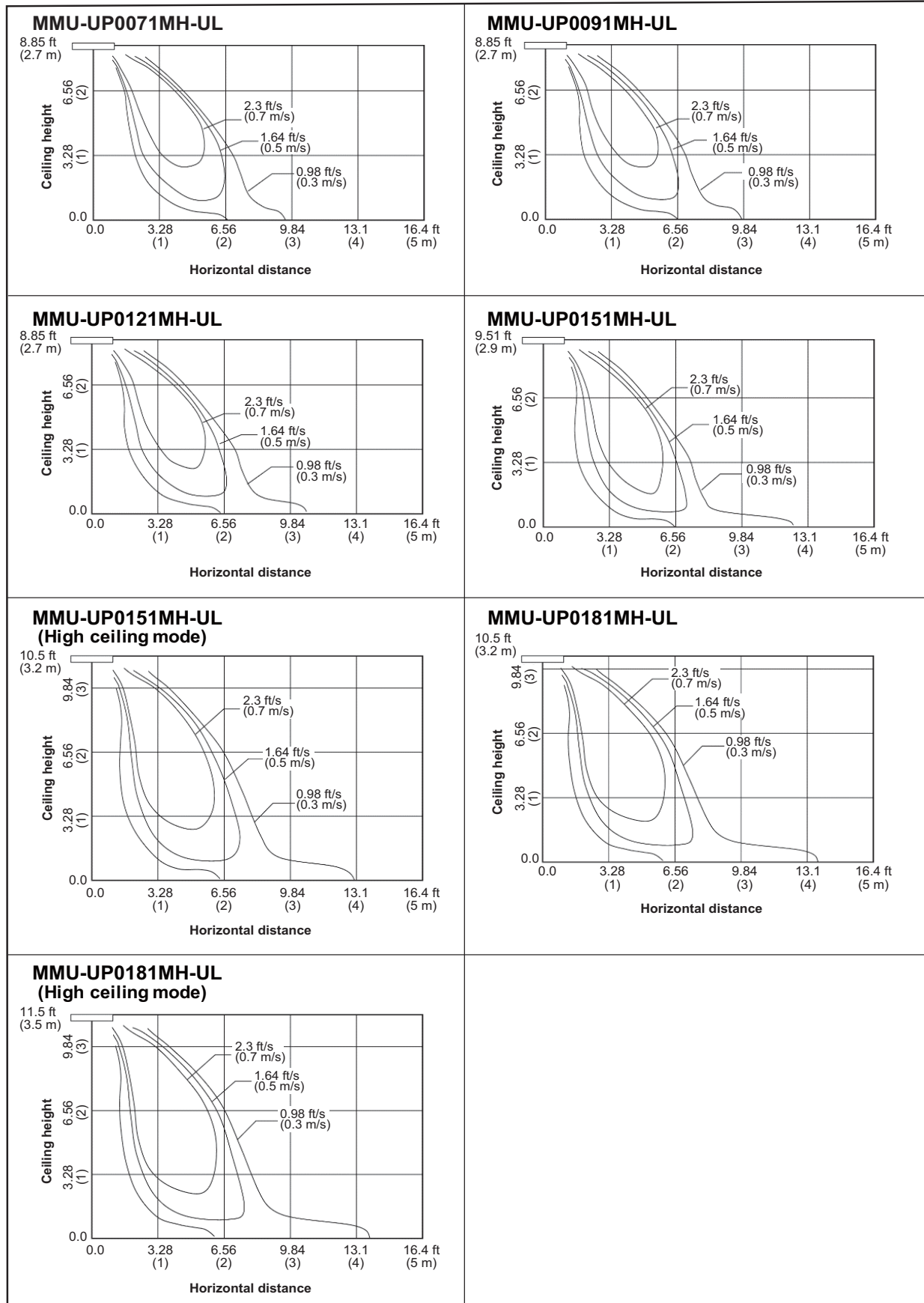
unit size	outdoor air temp. °FDB	indoor air temp.													
		59°FWB		61°FWB		64°FWB		67°FWB		68°FWB		72°FWB		75°FWB	
		71°FDB		73°FDB		77°FDB		80°FDB		82°FDB		86°FDB		90°FDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
007	50	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
	54	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
	57	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
	61	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
	64	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
	68	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
	70	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
	73	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
	77	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
	81	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
	84	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
	88	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
	91	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
	95	6160	5450	6810	5810	7280	6170	7500	6150	7730	6150	8180	6090	8550	5950
009	50	5980	5290	6610	5640	7060	5990	7280	5970	7500	5970	7940	5920	8300	5780
	102	5840	5170	6460	5510	6900	5850	7110	5830	7320	5830	7750	5780	8110	5640
	50	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
	54	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
	57	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
	61	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
	64	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
	68	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
	70	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
	73	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
	77	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
	81	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
	84	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
	88	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
012	91	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
	95	7800	6650	8630	7090	9220	7530	9500	7510	9790	7500	10360	7440	10830	7260
	99	7570	6460	8380	6880	8950	7310	9220	7290	9500	7290	10050	7220	10520	7050
	102	7390	6310	8180	6720	8740	7140	9010	7110	9280	7110	9820	7050	10270	6890
	50	9850	7980	10900	8500	11640	9030	12000	9000	12360	9000	13080	8920	13680	8710
	54	9850	7980	10900	8500	11640	9030	12000	9000	12360	9000	13080	8920	13680	8710
	57	9850	7980	10900	8500	11640	9030	12000	9000	12360	9000	13080	8920	13680	8710
	61	9850	7980	10900	8500	11640	9030	12000	9000	12360	9000	13080	8920	13680	8710
	64	9850	7980	10900	8500	11640	9030	12000	9000	12360	9000	13080	8920	13680	8710
	68	9850	7980	10900	8500	11640	9030	12000	9000	12360	9000	13080	8920	13680	8710
	70	9850	7980	10900	8500	11640	9030	12000	9000	12360	9000	13080	8920	13680	8710
	73	9850	7980	10900	8500	11640	9030	12000	9000	12360	9000	13080	8920	13680	8710
	77	9850	7980	10900	8500	11640	9030	12000	9000	12360	9000	13080	8920	13680	8710
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	88	9850	7980	10900	8500	11640	9030	12000	9000	12360	9000	13080	8920	13680	8710
	91	9850	7980	10900	8500	11640	9030	12000	9000	12360	9000	13080	8920	13680	8710
	95	9850	7980	10900	8500	11640	9030	12000	9000	12360	9000	13080	8920	13680	8710
	99	9570	7750	10580	8250	11300	8770	11650	8740	12000	8740	12700	8660	13280	8460
	102	9340	7570	10330	8060	11030	8560	11380	8530	11720	8530	12400	8450	12970	8260

Compact 4-Way Cassette type (MMU-UP__1MH-UL)

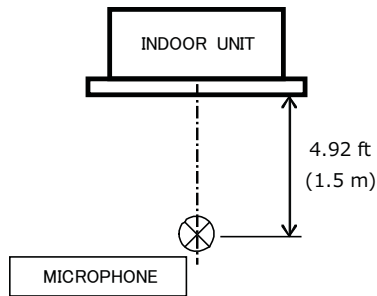
TC: Total capacity [Btu/h] SHC: Sensible capacity [Btu/h]

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
015	50	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	54	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	57	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	61	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	64	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	68	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	70	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	73	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	77	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	81	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	84	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	88	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	91	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	95	12640	9970	13980	10620	14940	11280	15400	11240	15860	11240	16790	11140	17560	10880
	99	12280	9680	13580	10310	14500	10950	14950	10920	15400	10920	16300	10810	17050	10560
	102	11990	9450	13260	10060	14160	10690	14600	10660	15040	10660	15910	10560	16640	10310
018	50	14780	11650	16340	12410	17460	13180	18000	13140	18540	13140	19620	13020	20520	12720
	54	14780	11650	16340	12410	17460	13180	18000	13140	18540	13140	19620	13020	20520	12720
	57	14780	11650	16340	12410	17460	13180	18000	13140	18540	13140	19620	13020	20520	12720
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	70	14780	11650	16340	12410	17460	13180	18000	13140	18540	13140	19620	13020	20520	12720
	73	14780	11650	16340	12410	17460	13180	18000	13140	18540	13140	19620	13020	20520	12720
	77	14780	11650	16340	12410	17460	13180	18000	13140	18540	13140	19620	13020	20520	12720
	81	14780	11650	16340	12410	17460	13180	18000	13140	18540	13140	19620	13020	20520	12720
	84	14780	11650	16340	12410	17460	13180	18000	13140	18540	13140	19620	13020	20520	12720
	88	14780	11650	16340	12410	17460	13180	18000	13140	18540	13140	19620	13020	20520	12720
	91	14780	11650	16340	12410	17460	13180	18000	13140	18540	13140	19620	13020	20520	12720
	95	14780	11650	16340	12410	17460	13180	18000	13140	18540	13140	19620	13020	20520	12720
	99	14350	11310	15870	12050	16950	12800	17480	12760	18000	12760	19050	12640	19920	12350
	102	14010	11050	15490	11760	16550	12490	17060	12460	17580	12460	18600	12340	19450	12060

8. Air throw distance chart

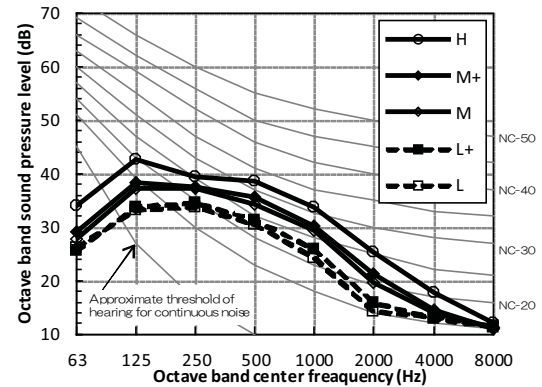


9. Sound data



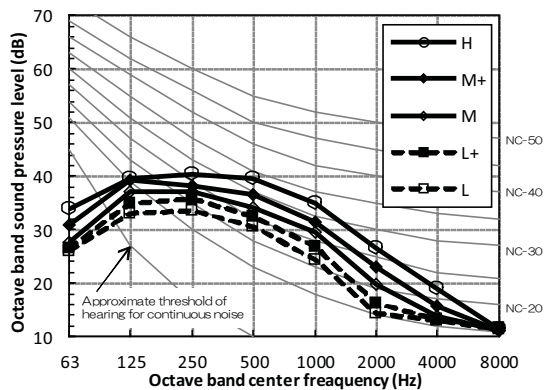
MMU-UP0071MH-UL

Fan tap	H	M+	M	L+	L
Sound pressure level (dB(A))	39	36	35	32	31



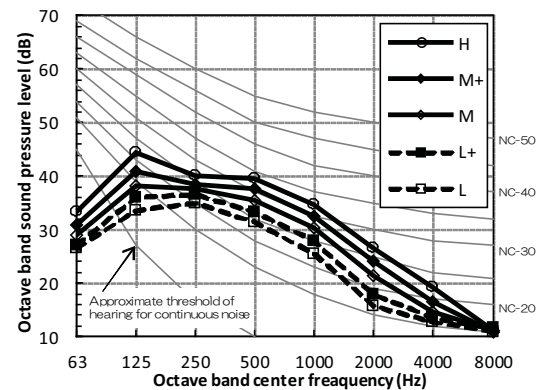
MMU-UP0091MH-UL

Fan tap	H	M+	M	L+	L
Sound pressure level (dB(A))	40	37	35	33	31



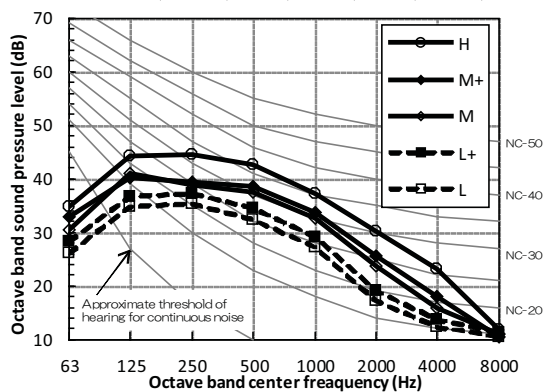
MMU-UP0121MH-UL

Fan tap	H	M+	M	L+	L
Sound pressure level (dB(A))	40	38	36	34	32



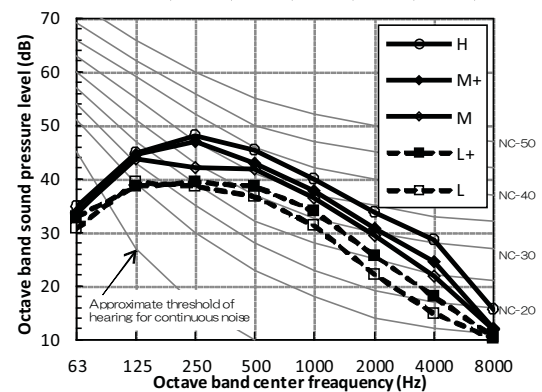
MMU-UP0151MH-UL

Fan tap	H	M+	M	L+	L
Sound pressure level (dB(A))	43	39	38	35	33



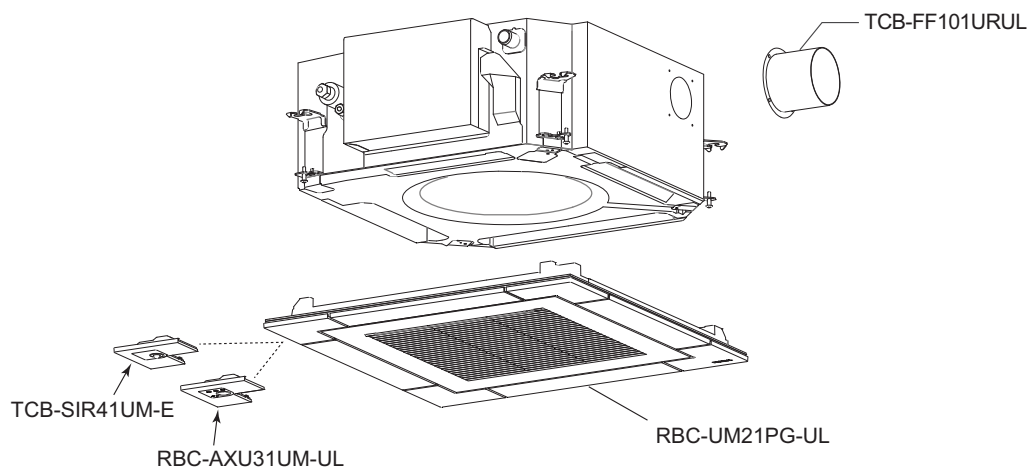
MMU-UP0181MH-UL

Fan tap	H	M+	M	L+	L
Sound pressure level (dB(A))	46	44	42	39	37



10. Accessories

Optional part for Compact 4-Way Cassette type



Parts Name	Model name	Applied Model	Notes
Ceiling panel	RBC-UM21PG-UL	MMU-UP___1MH-UL	Required accessory
Auxiliary fresh air Flange	TCB-FF101URUL		For easy fresh air intake by using the knockout hole of indoor unit. (dia=3.9"(100 mm))
Wireless Remote Control kit	RBC-AXU31UM-UL		Wireless remote control kit and Occupancy sensor cannot be used on the same indoor unit.
Occupancy Sensor	TCB-SIR41UM-E		

11. Reference

11-1.Fresh air intake (Design guide)

Caution

The fresh air shall be conditioned by a heat reclaim ventilator or similar.

Ensure the fresh air volume is determined so that mixed suction air and fresh air can maintain the operating temperature.

*1.Recommended conditioned air temperature is 54°F to 86°F.

However, Make a fresh air volume within 2% of standard.

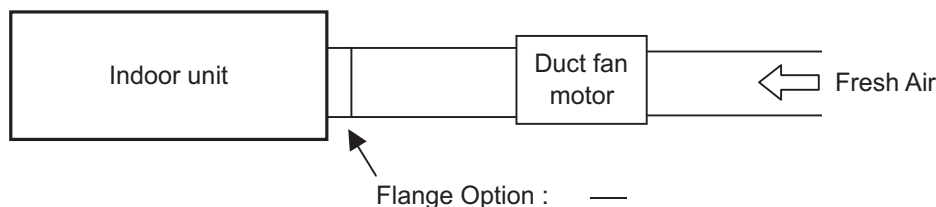
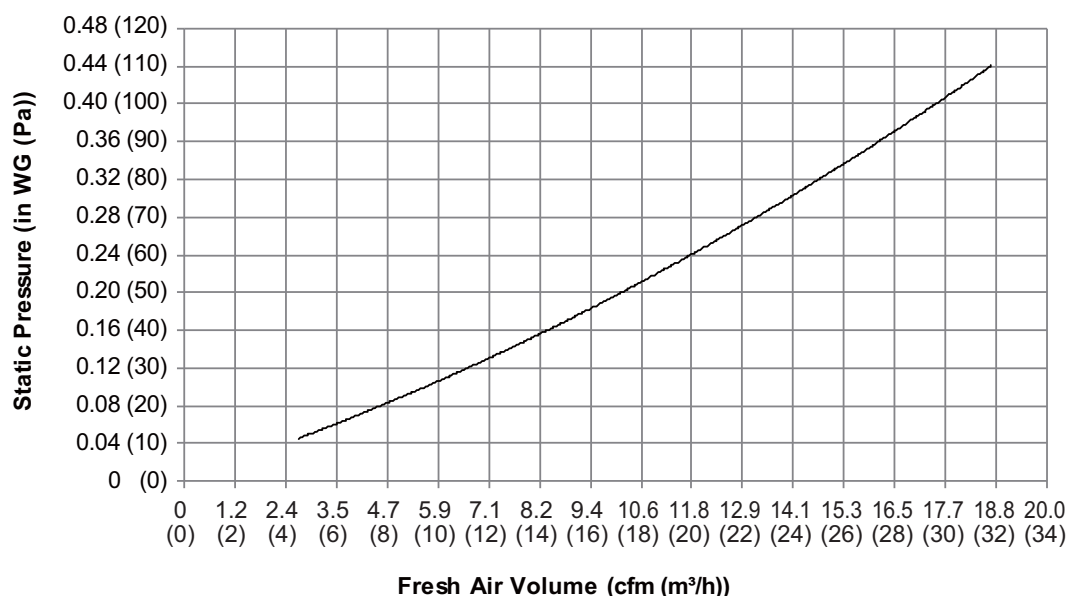
Model name	MMU-	UP0071MH-UL	UP0091MH-UL	UP0121MH-UL	UP0151MH-UL	UP0181MH-UL
Standard air flow	cfm (m³/h)	320 (552)	340 (570)	350 (594)	390 (660)	450 (762)

Install a filter within the fresh air duct.

(Fresh air does not pass through the filter of Indoor unit.)

Insulate the fresh air duct.

Electrically connect the fan of the Heat exchanger unit and the Indoor unit to a single isolator.



Inter - lock circuit

Connect the driving relay of the duct fan(DC 12V) between 1 and 6 on the indoor P.C. board.
(Rated current of the relay for duct fan should be up to 75mA.)

After installation, carry out a test run to check that the duct fan of the indoor unit start/stop simultaneously.

(Carry out the test run following the installation manual of the indoor unit.)

Compact 4-Way Cassette type Engineering Data Book

Model name:

MMU-UP___1MH-UL

November, 2022

TOSHIBA

Carrier