TOSOT

TMV- 6 Ultra Series

120,000 BTU / VRF SYSTEM

SUBMITTAL DATA: TVRF-VQ120WM/C

Job Name	Location		Date	
Purchaser	Engineer			
Submitted To	For	☐ Reference	☐ Approval	☐ Construction
Unit Designation	Schedule No.			

AHRI CERTIFIED REF	
NON-DUCTED	214825943
DUCTED	214825946



System Performance			
Capacity Range		Ton	10
Nominal Capacity	Cooling	kBtu/h	120
	Heating	kBtu/h	135
Sound Pressure Level		dB(A)	62
Operating Temperature Range	Cooling	°C/°F	-15~52 / 5~125※
	Heating	°C/°F	-30~24 / -22~75
Cooling Capacity@95F		kBtu/h	114 / 114
IEER(Ducted/Non-Ducted)		-	19.70 / 20.40
Heating Capacity@47F		kBtu/h	129 / 129
COP@47F(Ducted/Non-ducted)		-	3.80 / 3.94
Heating Capacity@17F(Ducted/Non-ducted)		kBtu/h	81 / 81
COP@17F(Ducted/Non-ducted)		-	2.25 / 2.25
SCHE(Ducted/Non-ducted)		-	26.70 / 29.50
Electrical Data			
Power Supply		-	208/230V, 3 Phase, 60Hz
Maximum Overcurrent Protection (MOP)		A	90.0
Minimum Circuit Amps (MCA)		A	83.0
Fan			
Type x Quantity		-	Axial- flow x 2
Air Flow Volume		CFM	6,532
		m^3/h	11,100
Fan Motor Power Output		W	750+750
Compressor			
Compressor Type x Quantity		-	Inverter Scroll x 2
Compressor Rated Load Amps (RLA)		A	36.1+36.1
Oil Type		-	FV68H
Oil Charge Volume	Compressor + others	L	1.1+1.1+5.0
Connection Piping			
Refrigerant Pipe	Gas (High)	inch	7/8"
	Gas(Low)	inch	1- 1/8"
	Liquid	inch	1/2"
Refrigerant Type		-	R410A
Refrigerant Pre-charged Amount		kg/oz	11.7 / 413
Dimension/Wight			
Unit Dimensions (W x D x H)		inch	52-3/4 x 30-1/2 x 66-1/2
		mm	1,340 x 775 x 1,690
Weight	Net	kg/lbs	400 / 882
	Gross	kg/lbs	415 / 915
Other			
Capacity Diversity Range(IDUs/ODU)		-	50%~135%
Moisture Protection		-	IPX4

※ Cooling at -15~5°C(5~23°F) is conditional

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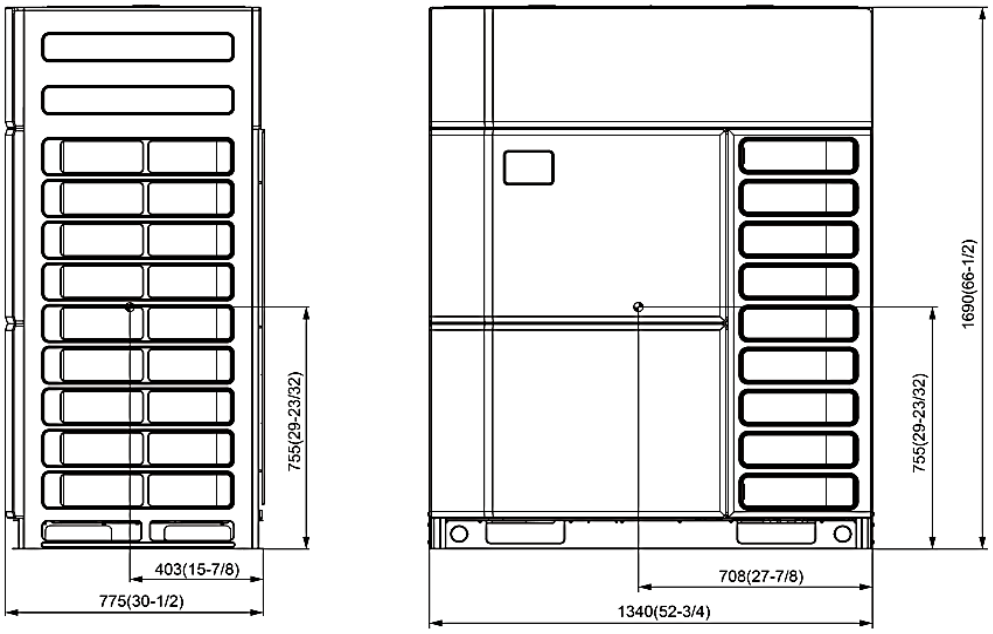
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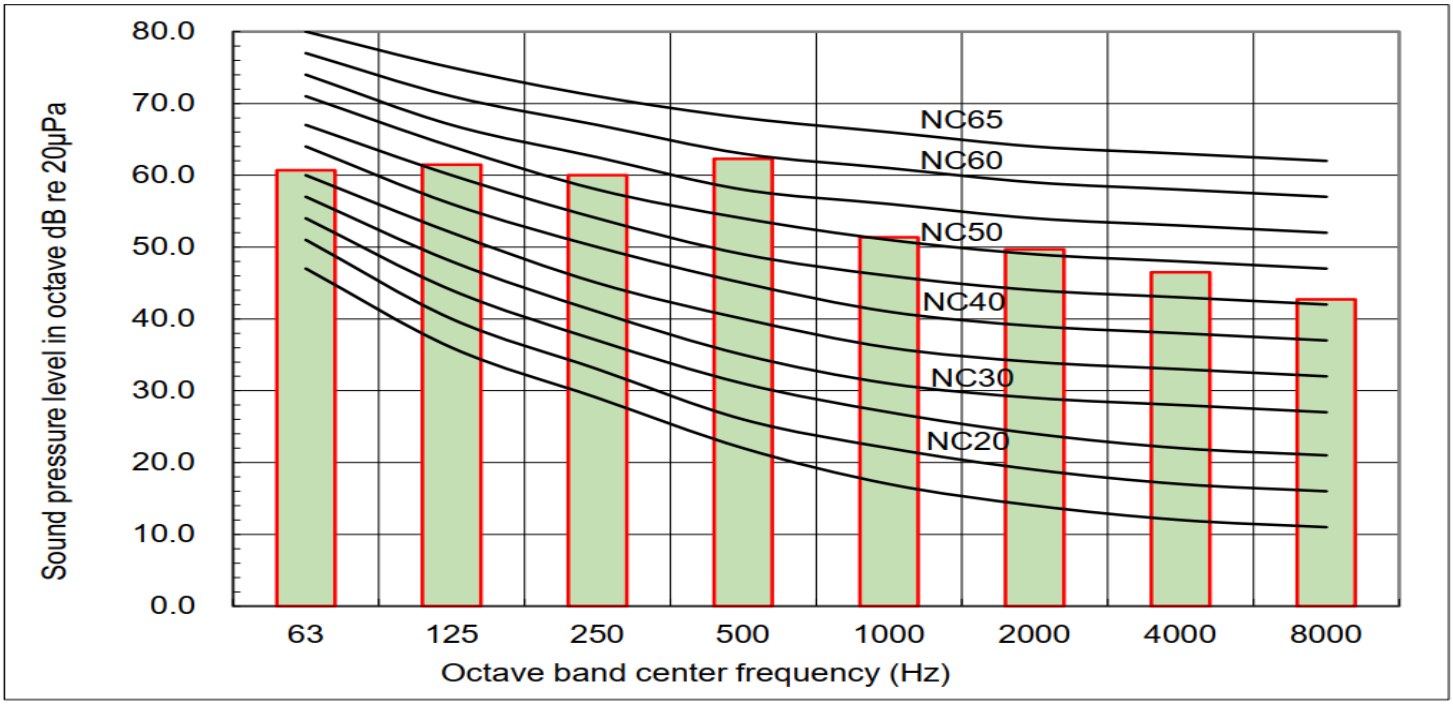
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Dimension and Gravity point

Unit:mm(inch)



Acoustic Octave-band Sound Power Data



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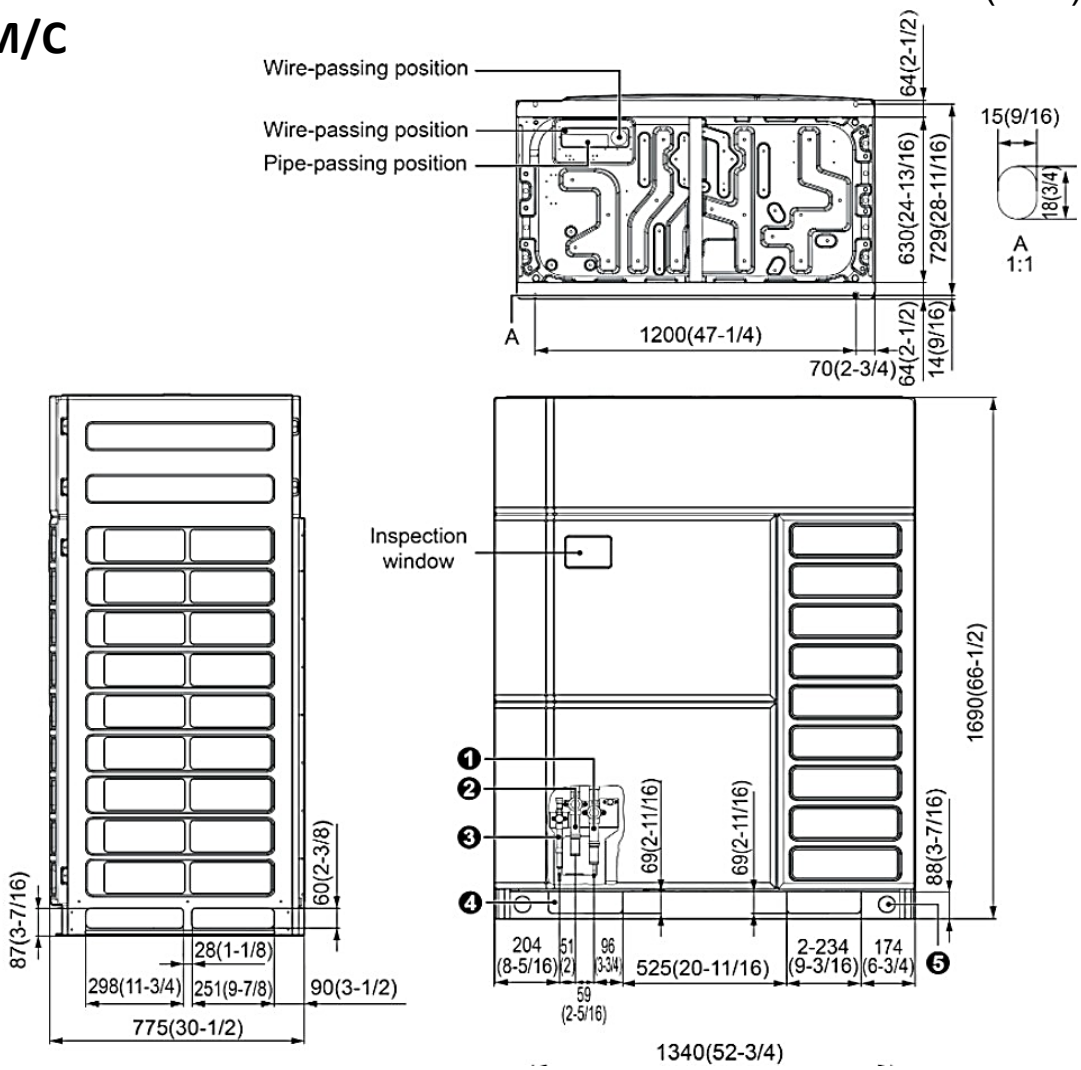
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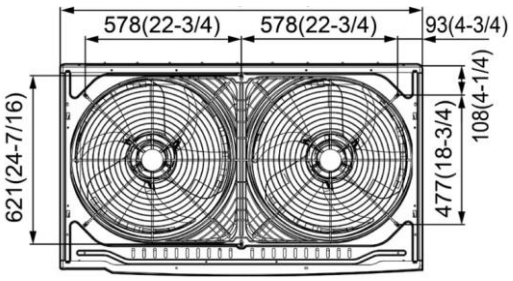
Dimension and Installation Hole

Unit:mm(inch)

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No	Name	Required Piping Size	Remark
①	Low pressure gas pipe	Φ28.6 (1-1/8)	For Heat Recovery Mode
②	High pressure gas pipe	Φ22.2 (7/8)	
③	Liquid pipe	Φ12.7 (1/2)	
②	Gas pipe	Φ28.6 (1-1/8)	For Heat Pump Mode
③	Liquid pipe	Φ12.7 (1/2)	
④	Pipe and wiring pass hole (L x W)	234x69 (9-3/16 x 2-11/16)	/
⑤	Hoist hole	Φ50 (1-15/16)	/



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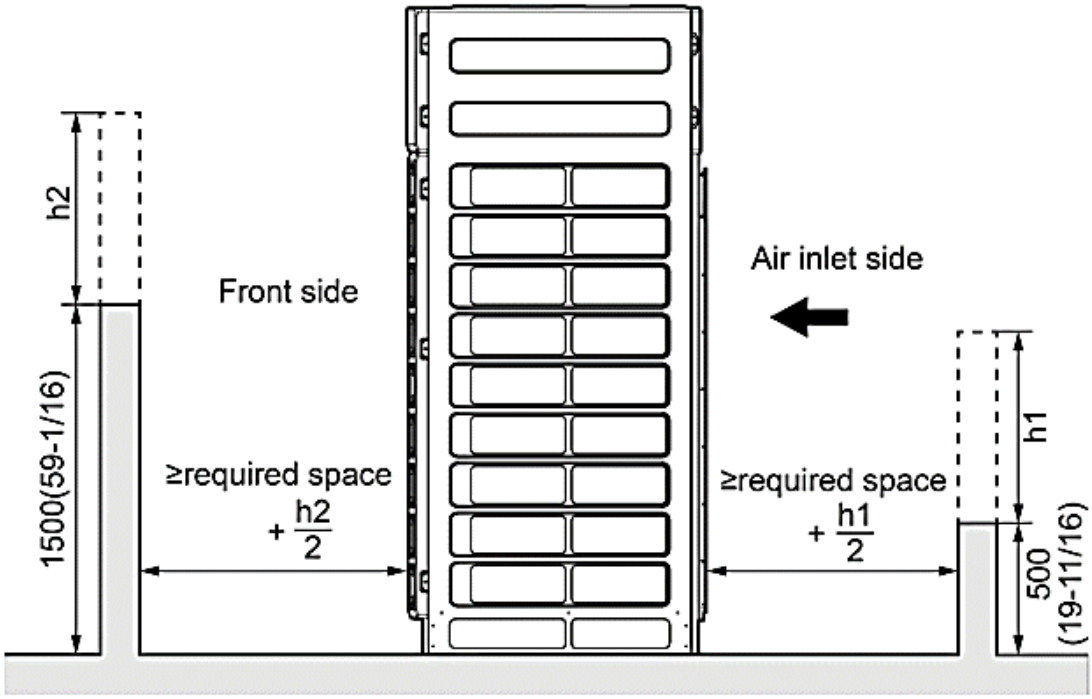
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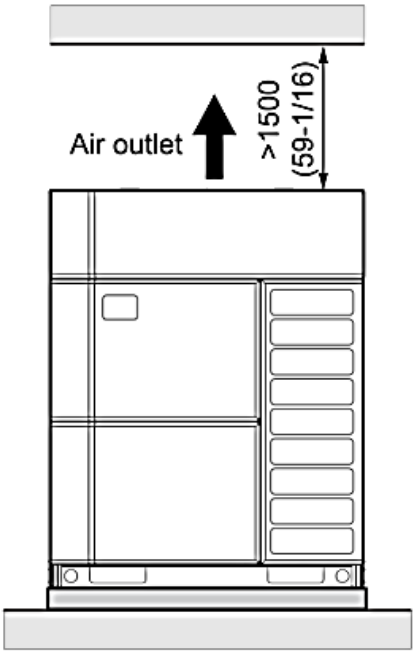
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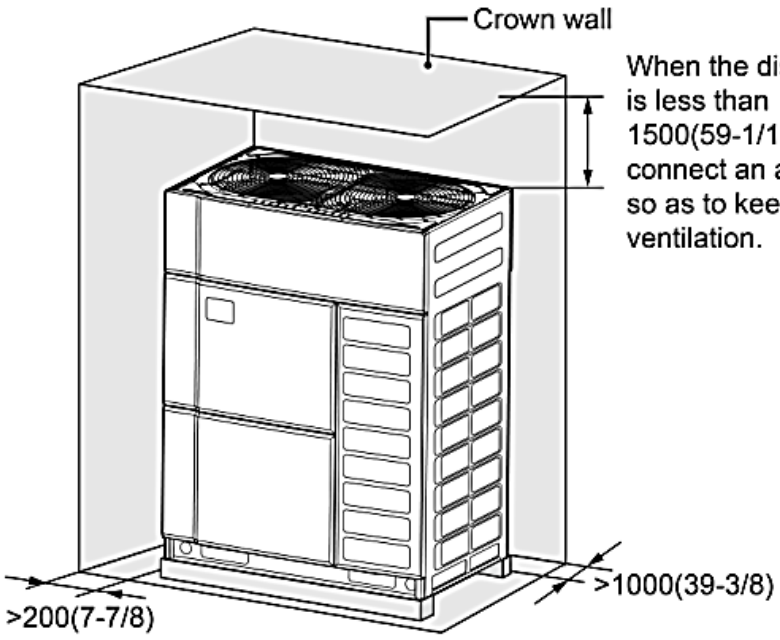
Installation Space

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Unit: mm(inch)







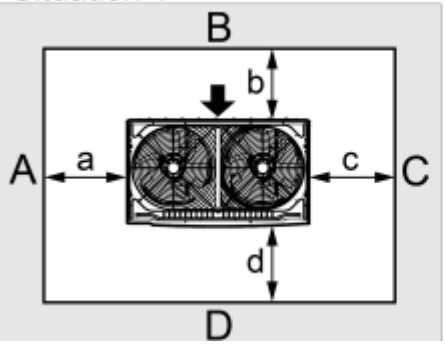
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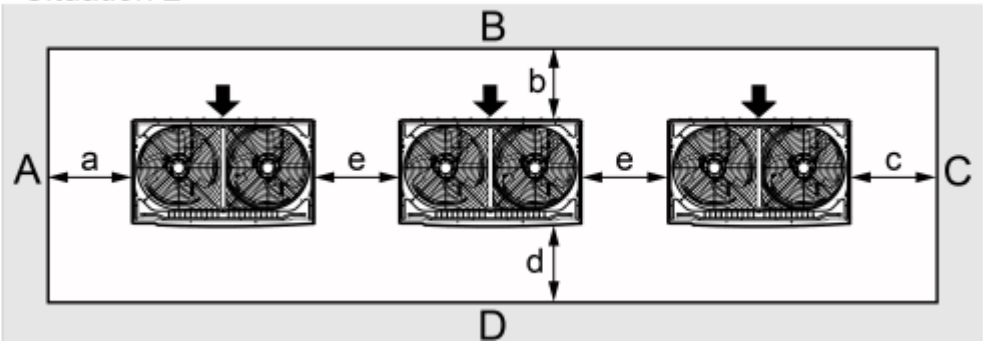
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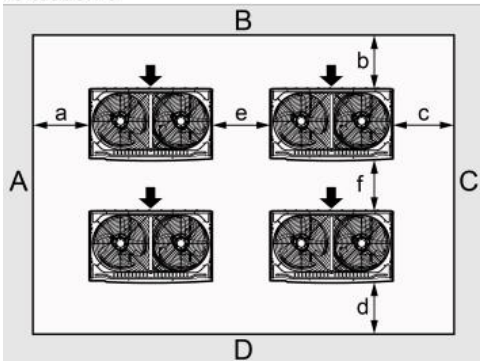
Situation 1



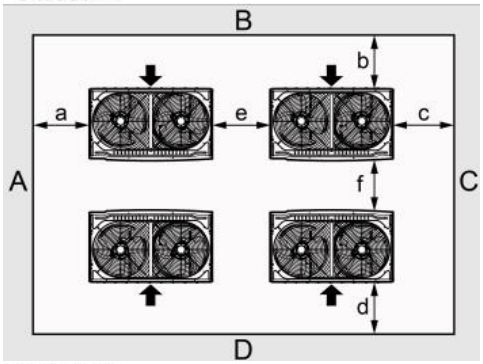
Situation 2



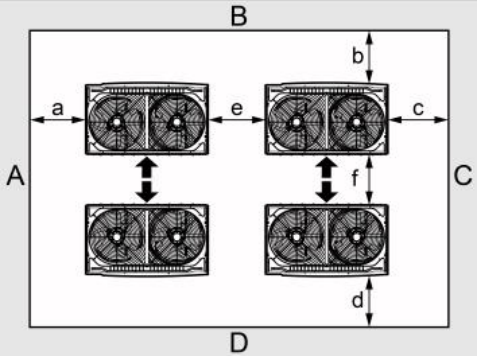
Situation 3



Situation 4



Situation 5



Unit: mm(inch)

	A+B+C+D	A+B
Situation 1	a≥300(11-13/16) b≥100(3-15/16) c≥100(3-15/16) d≥500(19-11/16)	a≥300(11-13/16) b≥300(11-13/16)
Situation 2	a≥300(11-13/16) b≥100(3-15/16) c≥100(3-15/16) d≥500(19-11/16) e≥100(3-15/16)	a≥300(11-13/16) b≥300(11-13/16) e≥400(15-3/4)
Situation 3	a≥300(11-13/16) b≥100(3-15/16) c≥100(3-15/16) d≥500(19-11/16) e≥200(7-7/8) f≥600(23-5/8)	NA
Situation 4	a≥300(11-13/16) b≥100(3-15/16) c≥100(3-15/16) d≥100(3-15/16) e≥200(7-7/8) f≥500(19-11/16)	NA
Situation 5	a≥300(11-13/16) b≥500(19-11/16) c≥100(3-15/16) d≥500(19-11/16) e≥200(7-7/8) f≥900(35-7/16)	NA

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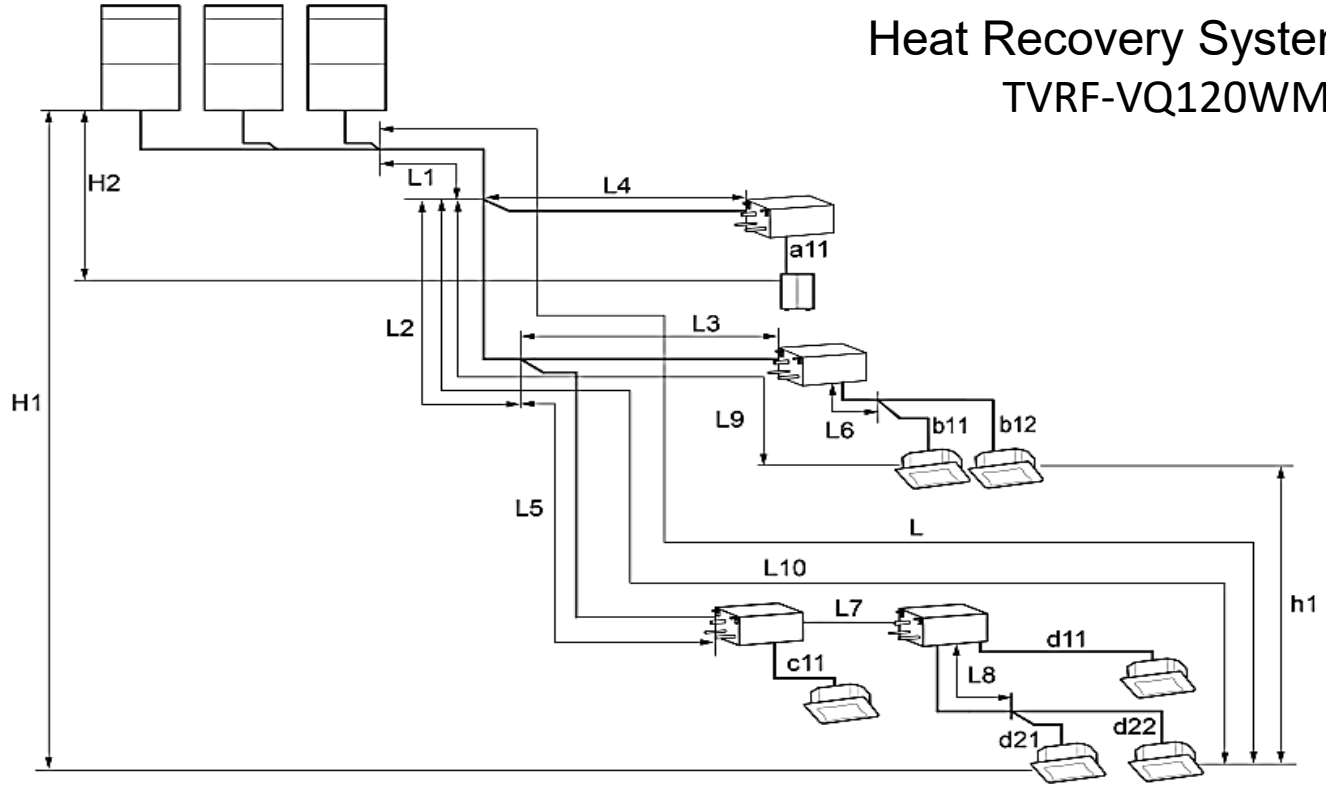
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Heat Recovery System

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L10: Length from the first branch to the farthest IDU;

L9: Length from the first branch to the nearest IDU;

Equivalent length of branch of IDU is 0.5m(1-3/4ft.).

—		Length(m)(ft.)	Fitting Pipe
Total length (actual length) of fitting pipe		≤1000(3280-3/4)	L1+(L2+L3+L4+…+L8)×2+a11+a12 +b21+b22+…+d21+d22
Length of farthest fitting pipe	Actual length	≤165(541-1/4)	L
	Equivalent length	≤190(623-1/4)	—
Equivalent length from the first branch to the farthest indoor unit*1		≤40(131-1/4)	L2+L5+L7+L8+d22
Length between tandem mode exchange boxes		≤15(49-1/4)	L7
Height difference between outdoor unit and indoor unit	Outdoor unit at upper	≤90(295-1/4)	H1*2
	Outdoor unit at lower	≤90(295-1/4)	
Height difference between outdoor unit and hydro box	Outdoor unit at upper	≤40(131-1/4)	H2
	Outdoor unit at lower	≤40(131-1/4)	
Maximum height difference between indoor units:h1		≤30(98-1/2)	h1
Length from the mode exchange box to the indoor unit with capacity over 48500Btu/h		≤20(65-5/8)	—

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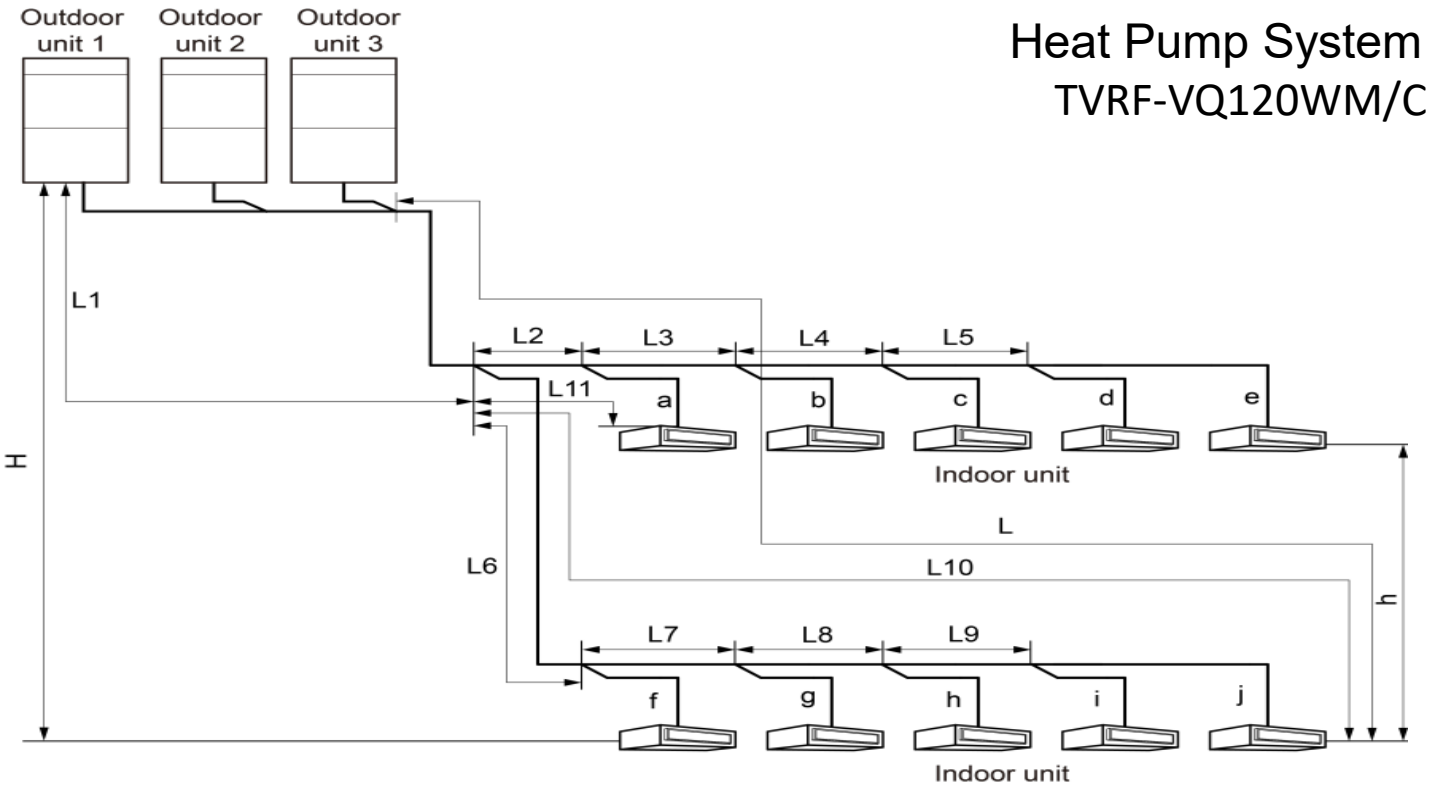
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Heat Pump System

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L10: Length from the first branch to the farthest IDU;

L9: Length from the first branch to the nearest IDU;

Equivalent length of branch of IDU is 0.5m(1-3/4ft.).

—		Length(m)(ft.)	Fitting Pipe
Total length (actual length) of fitting pipe		≤1000(3280-3/4)	L1+(L2+L3+L4+...+L9)×2+a+b+c+...+i+j
Length of farthest fitting pipe	Actual length	≤165(541-1/4)	L
	Equivalent length	≤190(623-1/4)	—
Equivalent length from the first branch to the farthest indoor unit*1		≤40(131-1/4)	L6+L7+L8+L9+j
Height difference between outdoor unit and indoor unit	Outdoor unit at upper	≤90(295-1/4)	H*2
	Outdoor unit at lower	≤90(295-1/4)	
Maximum height difference between indoor units:h1		≤30(98-1/2)	h

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