

SUBMITTAL DATA SHEET

12 RT (H,Y)VAHR144B31S (Consists of two (H,Y)VAHR072B31S modules.)

Job Name:			Location:		
Purchaser:			Order No.:		
Engineer:					
Submitted To:	For:	Ref:	Approval:	Construction:	
Submitted By:			Date:		
Unit Designation:			Schedule No.:		Model No.:

FEATURES:

- Three-pipe system for ductless and ducted applications
- Inverter-driven scroll compressor
- Air source simultaneous cooling and heating with change-over box
- Long refrigerant piping lengths – up to 3,280 feet total pipe run

ACCESSORIES:

- Change-over box (required for a heat recovery system): for details see Change-over box Submittals
- Piping Kit: for details see Pipe Accessories Submittal
- Hail/Snow Protection Hood: for details see Snow/Hail Guards Kit Submittal

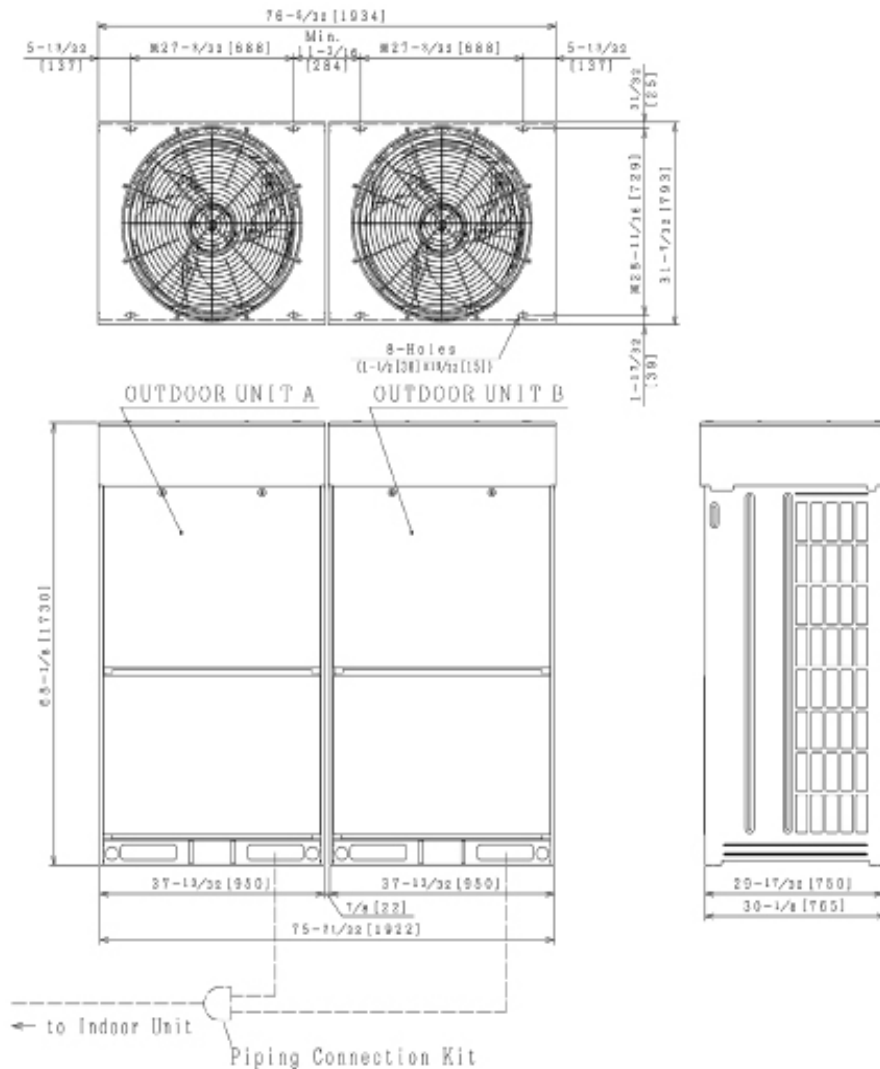
NOTES:

- *1 Rating Conditions are based on the AHRI 1230 test standard.
- *2 Operation under harsh weather requires additional accessories.
- *3 External static pressure can be changed to 0.24in.W.G.(60Pa).

Category	Type	Twin Units			
	Ton	12RT (6RT+6RT)			
Model (combination)				(H,Y)VAHR144B31S	
Model (individual)	Unit A			(H,Y)VAHR072B31S	
	Unit B			(H,Y)VAHR072B31S	
	Unit C			—	
	Unit D			—	
Power Supply				208/230V / 3PH 60Hz	
Cooling * ¹	Capacity	Btu/h	(kW)	138000 (40.5)	
	EER	Btu/Wh	(W/W)	14.50 (4.25)	
	Power input	kW		9.52	
	Current input	A (208V/230V)		29.4 26.6	
	IEER	Btu/Wh	(W/W)	24.20 (7.10)	
Cooling Operating Range * ²	Indoor	F WB (°C WB)		59(15)~73(23)	
	Outdoor	F DB (°C DB)		14(-10)~118(48)* ^{1,2}	
Heating High * ¹	Capacity	Btu/h	(kW)	154000 (45.2)	
	COP	W/W		4.11	
	Power input	kW		10.99	
Heating Low * ¹	Current input	A (208V/230V)		33.9 30.7	
	Capacity	Btu/h	(kW)	109000 (32.0)	
	COP	W/W		2.78	
Heating Operating Range * ²	Indoor	F DB (°C DB)		59(15)~80(27)	
	Outdoor	F WB (°C WB)		-4(-20)~59(15)	
Cooling and Heating	SCHE	Btu/Wh	(W/W)	29.50 (8.65)	
Cabinet Color(Munsell Code)				2.5Y 8/2	
Outer Dimensions	Height	in	(mm)	68-1/8 (1730)	
	Width	in	(mm)	76-5/32 (1934)	
	Depth	in	(mm)	31-7/32 (793)	
Package Dimensions	Height	in	(mm)	— —	
	Width	in	(mm)	— —	
	Depth	in	(mm)	— —	
Weight	Net	lbs	(kg)	1080 (490)	
	Gross	lbs	(kg)	1173 (532)	
Connection Ratio	Tota Indoor Unit Capacity	%		150 ~ 75	
	Max. (Recommendation) indoor units/system			36 (26)	
Heat Exchanger	Type			Multi-Pass Cross-Finned Tube	
	Material			Anti-corrosion/Cu-Al	
Compressor	Type	Inverter	DA65PHD × 2		
		Fix Speed	—		
	Motor Output(Pole)	kW (Pole)		7.26(6) 7.26(6)	
	Start Method	—		inverter	
	Operation Range	%		10~100	
	Refrigeration Oil Type	—		FVC68D	
Crank Case Heater		W × Q'ty		40.8 (230V) × 4	
Fan	Type	—		Propeller Fan	
	Motor Output (Pole)	kW (Pole)		0.75(8) × 2	
	Quantity	Q'ty		2	
	Air Flow Rate	cfm	(m ³ /min)	6178+6178 (175+175)	
	External static pressure * ³	in.WG	(Pa)	0 (0)	
	Drive	Direct-drive			
Electrical	Min Circuit Amps	A		—	
	Recommended Fuse/Breaker Size	A		—	
	Maximum Fuse Size	A		—	
Control	Type-Qty			AWG18-2	
	Maximum length	Ft	(m)	3,280 (1000)	
Sound Pressure Level	Cooling (Night-Shift)	dB(A)		63 (58)	
	Heating	dB(A)		63	
Protection devices	Cycle			High pressure switch at 4.15 (601psi)	
	Inverter			Over-current protection	
	Compressor			Over-heat protection	
	PCB			Over-current protection	
Refrigerant	Type-Qty	—		R410A	
	Charge amount	lb	(kg)	16.1+16.1 (7.3+7.3)	
Refrigeration Oil	Charge amount	gal/Unit	(L/Unit)	1.6+1.6 (6.0+6.0)	
Defrost Method		Reversed Refrigerant cycle			
Main Refrigerant Piping (Heat Recovery)	Gas Line (High/Low)	in	(mm)	1-1/8 (28.58)	
	Gas Line (High/Low)	in	(mm)	7/8 (22.2)	
	Liquid Line	in	(mm)	5/8 (15.88)	

System Dimensions

Heat Recovery Type Model:
(H,Y)VAHR144B31S



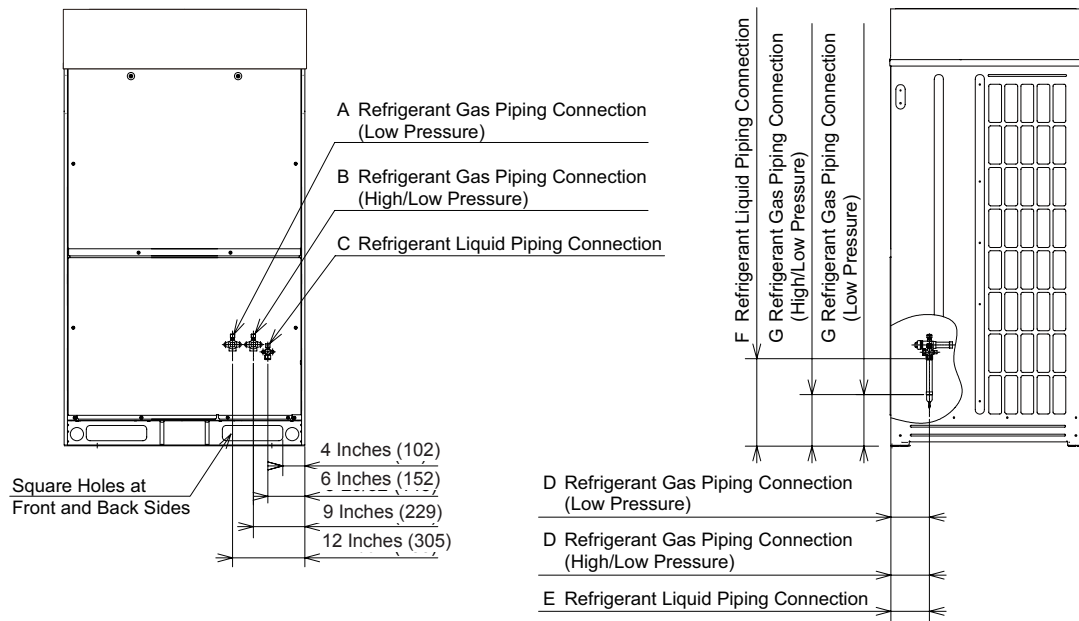
NOTES:

1. Make sure that the outdoor unit A is placed on the indoor unit side.
Arrange the outdoor units according to the capacity, A&B.
2. Check "Installation Manual" for the piping connection kit and piping connection size.
3. This drawing shows that there is $\frac{1}{8}$ inch [22mm] clearance between the base units.
In case of the outdoor unit with "Snow Protection Hood (Optional Parts)" or "Air Outlet Duct (Field-Supplied)", the clearance between the base units of more than $1\frac{31}{32}$ inch [50mm] is required.
4. The dimensions marked with ※ indicates the mounting pitch dimension for anchor bolts.
5. The width of outer dimension and anchor bolt mounting position are changed by clearance between the base units.

Outdoor Unit Model	Combination of Base Unit Models	
	OUTDOOR UNIT A	OUTDOOR UNIT B
(H, Y) VAHR144B31S	(H, Y) VAHR072B31S	(H, Y) VAHR072B31S
(H, Y) VAHR144B41S	(H, Y) VAHR072B41S	(H, Y) VAHR072B41S

Piping Connection Dimensions

Unit: inch (mm)



Model Type	Field Piping (*)					A	B	C	D	E	F	G
	Heat Recovery System		Heat Pump System		Liquid							
	Low Pressure Gas	High/ Low Pressure Gas	Low Pressure Gas	High/ Low Pressure Gas								
72	1-1/8 (28.58)	7/8 (22.2)	-	1-1/8 (28.58)	1/2 (12.7)	7/8 (22.2)	7/8 (22.2)	3/8 (9.52)	5-29/32 (150)	5-29/32 (150)	13-3/8 (340)	8-1/16 (205)
96	1-1/8 (28.58)	7/8 (22.2)	-	1-1/8 (28.58)	1/2 (12.7)	1 (25.4)	1 (25.4)	1/2 (12.7)	6-11/16 (170)	6-11/16 (170)	12-25/32 (325)	7-7/8 (200)
120	1-1/8 (28.58)	7/8 (22.2)	-	1-1/8 (28.58)	1/2 (12.7)	1 (25.4)	1 (25.4)	1/2 (12.7)	6-11/16 (170)	6-11/16 (170)	12-25/32 (325)	7-7/8 (200)

*Using the accessory pipe (refer to Table 3.6 "Factory-Supplied Accessories"), combine the piping size.

Refrigerant Piping Connection



version 201606