

SUBMITTAL DATA SHEET

10 RT (H,Y)VAHR120B31S (Consists of one (H,Y)VAHR120B31S module.)

Job Name:	Location:		
Purchaser:	Order No.:		
Engineer:			
Submitted To:	For:	Ref:	Approval:
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

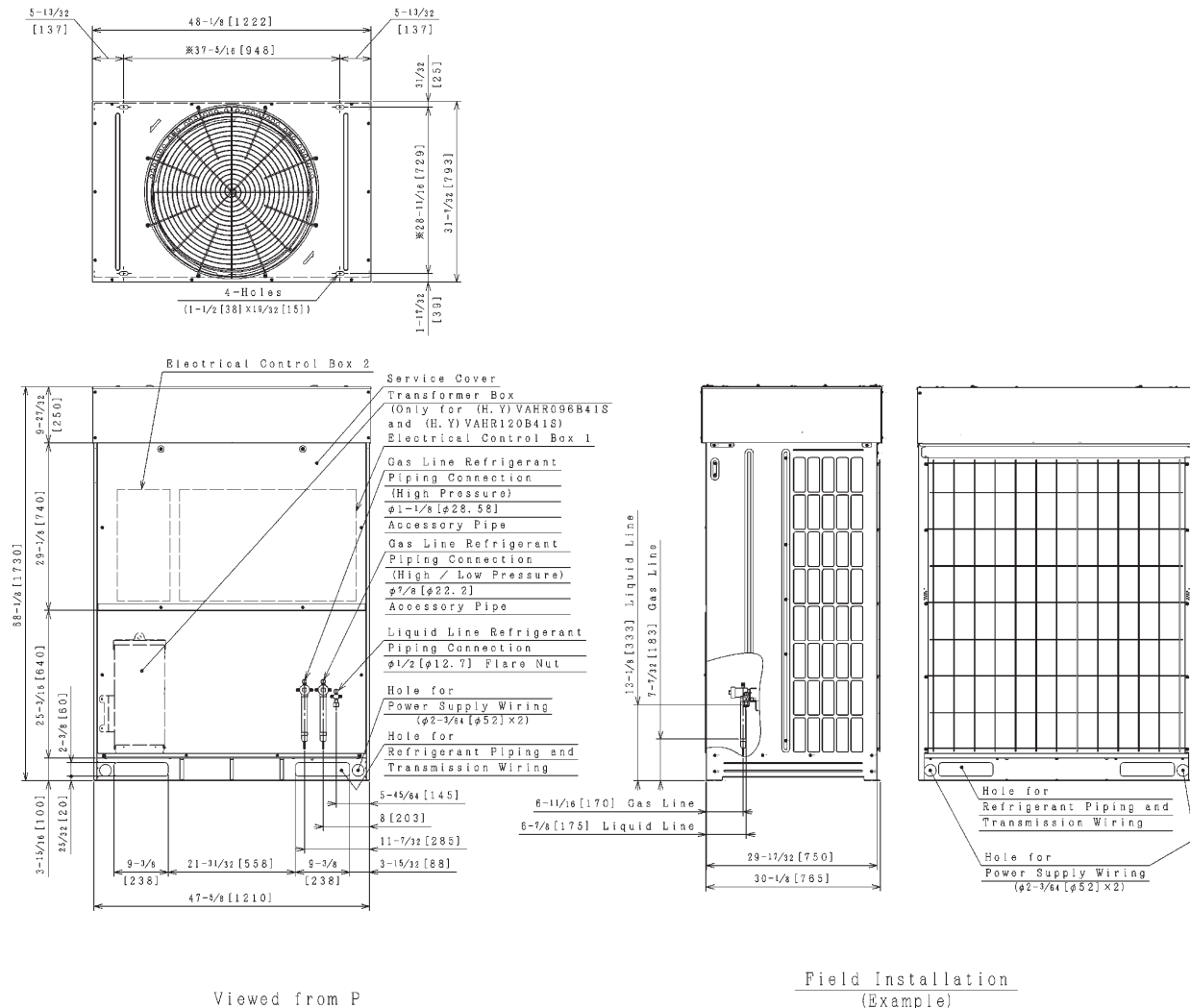
NOTES:

- *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	Single Unit	
Model (combination)	Ton	10RT	
Model (individual)	Unit A	(H,Y)VAHR120B31S	
	Unit B	-	
	Unit C	-	
	Unit D	-	
Power Supply		208/230V/ 3PH 60Hz	
Cooling *1	Capacity	Btu/h (kW)	114000 (33.4)
	EER	Btu/Wh (W/W)	11.60 (3.40)
	Power input	kW	9.83
	Current input	A (208V/230V)	30.3 (27.4)
	IEER	Btu/Wh (W/W)	20.80 (6.10)
Cooling Operating Range *2	Indoor	F WB (°C WB)	59(15)~73(23)
	Outdoor	F DB (°C DB)	14(-10)~118(48)*1,*2
	Capacity	Btu/h (kW)	129000 (37.8)
Heating High *1	COP	W/W	3.74
	Power input	kW	10.12
	Current input	A (208V/230V)	31.2 (28.2)
Heating Low *1	Capacity	Btu/h (kW)	89000 (26.1)
	COP	W/W	2.36
	Indoor	F DB (°C DB)	59(15)~80(27)
Heating Operating Range *2	Outdoor	F WB (°C WB)	-4(-20)~59(15)
	SCHE	Btu/Wh (W/W)	26.80 (7.86)
Cabinet Color (Munsell Code)		2.5Y 8/2	
Outer Dimensions	Height	in (mm)	68-1/8 (1730)
	Width	in (mm)	48-1/8 (1222)
	Depth	in (mm)	31-7/32 (793)
Package Dimensions	Height	in (mm)	74-1/4 (1886)
	Width	in (mm)	50-7/8 (1292)
	Depth	in (mm)	34-1/32 (864)
Weight	Net	lbs (kg)	732 (332)
	Gross	lbs (kg)	789 (358)
Connection Ratio	Tota Indoor Unit Capacity	%	130 ~ 60
	Max. (Recommendation) indoor units/system		25 (16)
Heat Exchanger	Type		Multi-Pass Cross-Finned Tube
	Material		Anti-corrosion/Cu-Al
Compressor	Type	Inverter	DA65PHD x 1
	Fix Speed		E655DH x 1
	Motor Output(Pole)	kW (Pole)	6.0(6)+4.4(2)
	Start Method	—	inverter
	Operation Range	%	15~100
	Refrigeration Oil Type	—	FVC68D
Crank Case Heater		W x Q'ty	40.8 (230V) x 4
Fan	Type	—	Propeller Fan
	Motor Output(Pole)	kW (Pole)	1.2(10)
	Quantity	Q'ty	1
	Air Flow Rate	cfm (m³/min)	7413 (210)
	External static pressure *3	in.WG (Pa)	0 (0)
	Drive		Direct-drive
Electrical	Min Circuit Amps	A	56/50
	Recommended Fuse/Breaker Size	A	80/70
	Maximum Fuse Size	A	80/70
	Type-Qty		AWG18-2
Control	Maximum length	Ft (m)	3,280 (1000)
	Cooling (Night-Shift)	dB(A)	64 (57)
Sound Pressure Level	Heating	dB(A)	64
Protection devices	Cycle		High pressure switch at 4.15 (601 psi)
	Inverter		Over-current protection
	Compressor		Over-heat protection
	PCB		Over-current protection
Refrigerant	Type-Qty	—	R410A
	Charge amount	lb (kg)	20.9 (9.5)
Refrigeration Oil	Charge amount	gal/Unit (L/Unit)	2.1 (7.9)
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)	1/2 (12.7)

System Dimensions

Heat Recovery Type Model:
(H,Y)VAHR120B31S

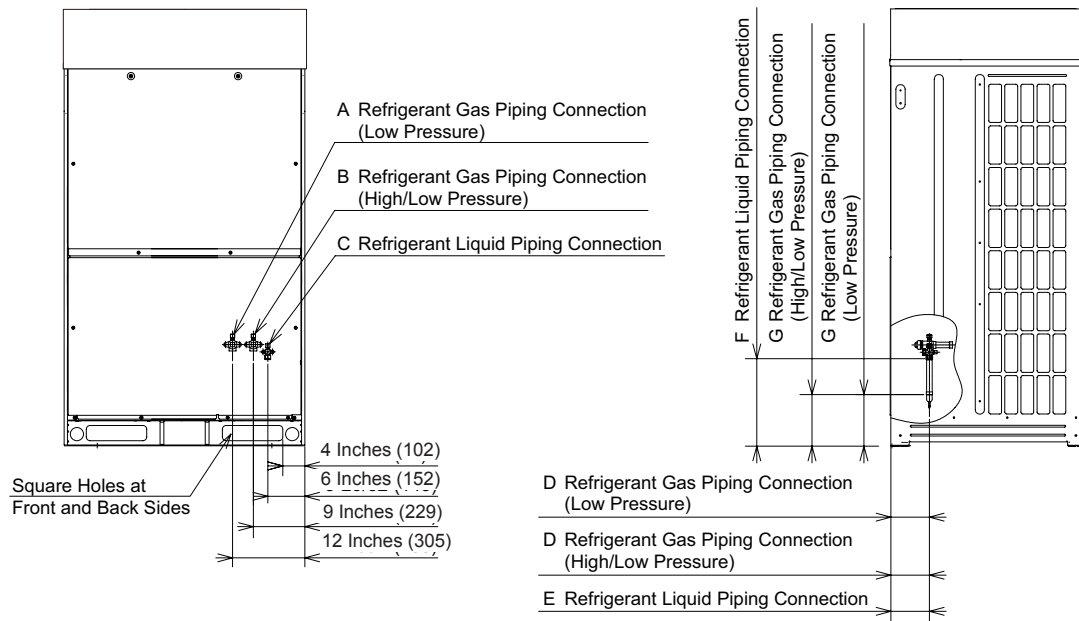


NOTES:

1. Drain water is discharged from the unit during the operation.
 - ① Choose a place where well drainage is available. Provide a groove for drain.
 - ② Do not provide an upward slope from the unit to avoid reverse flow of the drain. Provide a second drainpan under the outdoor unit. to collect drain water securely.
 - ③ Do not use the drain boss (optional) in a cold area. (Drain water in the drain pipe may be frozen and the drain pipe may crack.)
2. The dimensions marked with ※ indicates the mounting pitch dimension for anchor bolts.

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.

Figure 6.2 Refrigerant Piping Connection



version 201606