

SUBMITTAL DATA SHEET

30 RT (H,Y)VAHR360B31S (Consists of one (H,Y)VAHR120B31S, one (H,Y)VAHR096B31S and 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

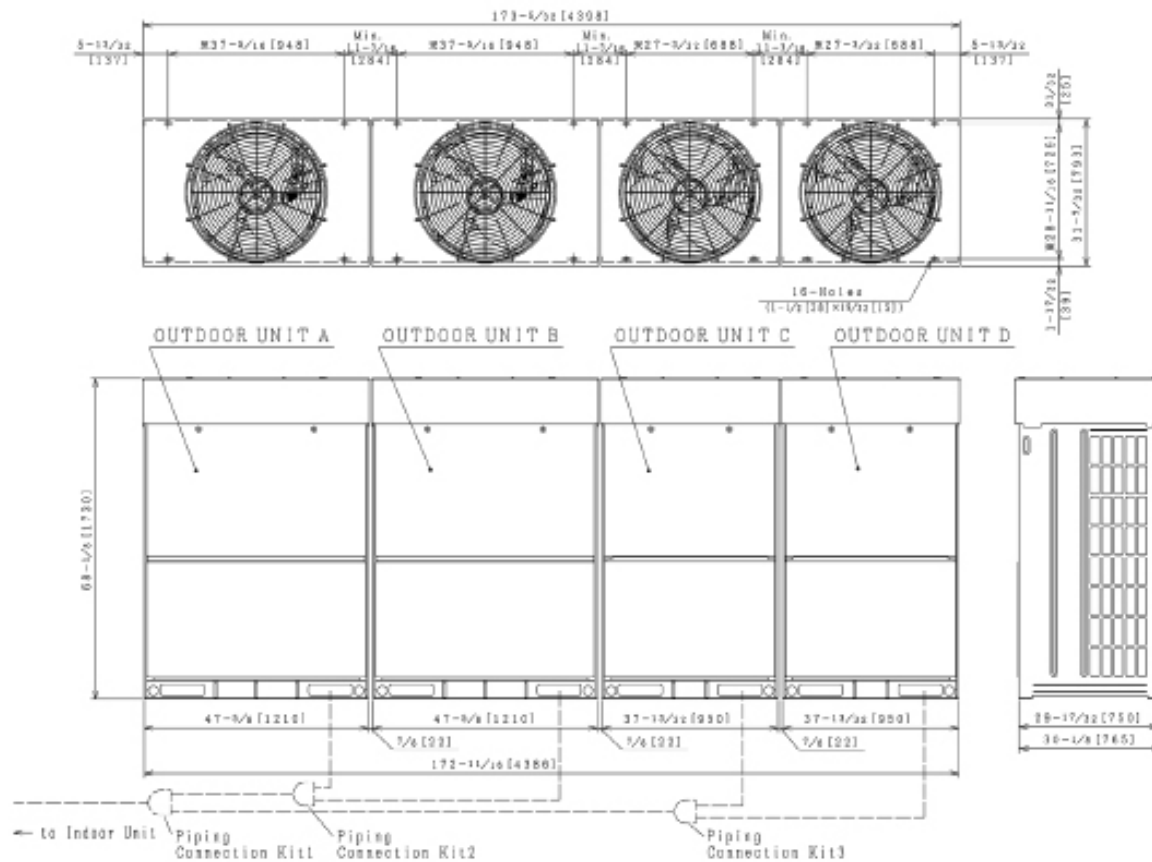
NOTES:

- *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 | | | Quad Units | |
|---|---|---------------|-----------------------|---------------------------------------|-----------|
| | Ton | | | 30RT (10RT+8RT+6RT+6RT) | |
| Model (combination) | | | | (H,Y)VAHR360B31S | |
| Model (individual) | Unit A | | | (H,Y)VAHR120B31S | |
| | Unit B | | | (H,Y)VAHR096B31S | |
| | Unit C | | | (H,Y)VAHR072B31S | |
| | Unit D | | | (H,Y)VAHR072B31S | |
| Power Supply | | | | 208/230V/ 3PH 60Hz | |
| Cooling * ¹ | Capacity | Btu/h | (kW) | 342000 | (100.3) |
| | EER | Btu/Wh | (W/W) | 9.50 | (2.79) |
| | Power input | kW | | 36.00 | |
| | Current input | A (208V/230V) | | 111.0 | 100.4 |
| | IEER | Btu/Wh | (W/W) | 18.50 | (5.43) |
| 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) | 386000 | (113.2) |
| | COP | W/W | | 3.88 | |
| | Power input | kW | | 29.18 | |
| | Current input | A (208V/230V) | | 90.0 | 81.4 |
| Heating Low * ¹ | Capacity | Btu/h | (kW) | 284000 | 83.3 |
| | COP | W/W | | 2.46 | |
| 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) | 27.60 | (8.09) |
| Cabinet Color (Munsell Code) | | | | 2.5Y 8/2 | |
| Outer Dimensions | Height | in | (mm) | 68-1/8 | (1730) |
| | Width | in | (mm) | 173-5/32 | (4398) |
| | Depth | in | (mm) | 31-7/32 | (793) |
| Package Dimensions | Height | in | (mm) | - | - |
| | Width | in | (mm) | - | - |
| | Depth | in | (mm) | - | - |
| Weight | Net | lbs | (kg) | 2542 | (1153) |
| | Gross | lbs | (kg) | 2750 | (1247) |
| Connection Ratio | Total Indoor Unit Capacity | % | | 135 - 65 | |
| | Max. (Recommendation) indoor units/system | | | 64 (38) | |
| Heat Exchanger | Type | | | Multi-Pass Cross-Finned Tube | |
| | Material | | | Anti-corrosion/Cu-Al | |
| Compressor | Type | Inverter | DA65PHD x 4 | | |
| | | Fix Speed | E655DH x 2 | | |
| | Motor Output(Pole) | kW (Pole) | | 6.0(6)+4.4(2) | |
| | | | | 4.8(6)+4.4(2) | |
| | Start Method | — | | inverter | |
| | Operation Range | % | | 5~100 | |
| Crank Case Heater | Refrigeration Oil Type | — | | FVC68D | |
| | | W x Q'ty | | 40.8 (230V) x 12 | |
| Fan | Type | — | | Propeller Fan | |
| | Motor Output(Pole) | kW (Pole) | | 1.2(10) x 2+0.75(8) x 2 | |
| | Quantity | Q'ty | | 4 | |
| | Air Flow Rate | cfm | (m ³ /min) | 7413+6884 | (210+195) |
| | | | | 6884+617 | +195+175 |
| | External static pressure * ³ | in.WG | (Pa) | 0 (0) | |
| Electrical | Drive | | | Direct-drive | |
| | 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) | | 68 | (63) |
| | Heating | dB(A) | | 68 | |
| 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) | 20.9+18.7 | (9.5+8.5) |
| Refrigeration Oil | | | | +16.1+16.1 | |
| | Charge amount | gal/Unit | (L/Unit) | 2.1+2.1+1.6 | (7.9+7.9) |
| Defrost Method | | | | +1.6 | |
| | | | | +6.0+6.0 | |
| Main Refrigerant Piping (Heat Recovery) | Reversed Refrigerant cycle | | | | |
| | Gas Line (High/Low) | in | (mm) | 1-5/8 | (41.28) |
| | Gas Line (High/Low) | in | (mm) | 1-3/8 | (34.93) |
| | | | | | |
| | Liquid Line | in | (mm) | 3/4 | (19.05) |

System Dimensions

Heat Recovery Type Model:
(H,Y)VAHR360B31S



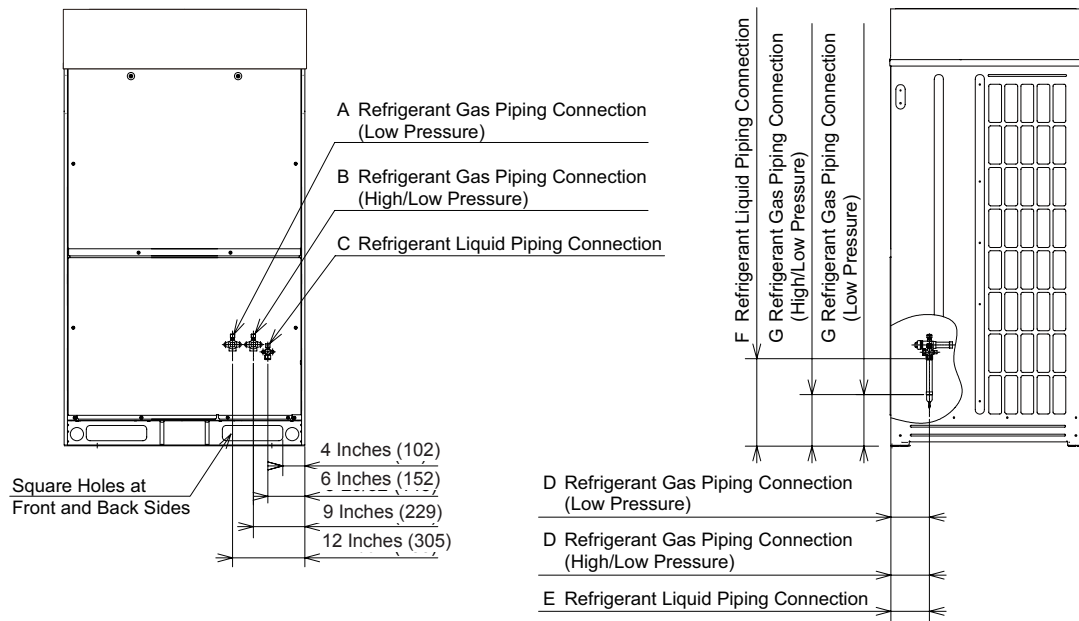
| Outdoor Unit Model | Combination of Base Unit Models | | | |
|--------------------|---------------------------------|--------------------|--------------------|--------------------|
| | OUTDOOR UNIT A | OUTDOOR UNIT B | OUTDOOR UNIT C | OUTDOOR UNIT D |
| (H, Y) VAHR360B31S | (H, Y) VAHR096B31S | (H, Y) VAHR096B31S | (H, Y) VAHR072B31S | (H, Y) VAHR072B31S |
| (H, Y) VAHR360B41S | (H, Y) VAHR096B41S | (H, Y) VAHR096B41S | (H, Y) VAHR072B41S | (H, Y) VAHR072B41S |
| (H, Y) VAHR360B31S | (H, Y) VAHR120B31S | (H, Y) VAHR096B31S | (H, Y) VAHR072B31S | (H, Y) VAHR072B31S |
| (H, Y) VAHR360B41S | (H, Y) VAHR120B41S | (H, Y) VAHR096B41S | (H, Y) VAHR072B41S | (H, Y) VAHR072B41S |

NOTES:

- Make sure that the outdoor unit A is placed on the indoor unit side.
Arrange the outdoor units according to the capacity, A&B&C&D.
- Check "Installation Manual" for the piping connection kit and piping connection size.
- This drawing shows that there is 7/8 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 1-31/32 inch [50mm] is required.
- The dimensions marked with M indicates the mounting pitch dimension for anchor bolts.
- The width of outer dimension and anchor bolt mounting position are changed by clearance between the base units.

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