

**Submittal Data: TVRF-OC72KHP/220V** 72,000 BTU/h VRF Condenser Heat Pump

|                  |  |      |
|------------------|--|------|
| Job Name         | Location   | Date |
| Purchaser        | Engineer   |      |
| Submitted To     | For <input type="checkbox"/> Reference <input type="checkbox"/> Approval <input type="checkbox"/> Construction |      |
| Unit Designation | Schedule No.   |      |

- GENERAL FEATURES**
- Sensorless DC Inverter Fan Motor
  - Compact Design
  - Non-Polar CAN Technology for Improved Communication Efficiency
  - Increased Energy Savings through Higher Efficiency
  - Fast Start-up in Heating Mode
  - Patented 2 Stage Oil Separation Technology & Improved Oil Return Control Technology
  - Smaller Impact on Power Grid
  - Allows for Flexible Installation



**Performance**

|                                  |                    |  |
|----------------------------------|--------------------|--|
| <b>US Ton</b>                    | 6                  |  |
| <b>Cooling</b>                   |                    |  |
| Rated Capacity                   | 69,000 BTU/h       |  |
|                                  | 20.2 kW            |  |
| EER                              | 13.65              |  |
| <b>Heating</b>                   |                    |  |
| Rated Capacity                   | 77,000 BTU/h       |  |
|                                  | 22.5 kW            |  |
| COP                              | 14.72              |  |
| <b>Capacity Modulation Range</b> | 10 ~ 100 %         |  |
| <b>Operating Range</b>           |                    |  |
| Cooling (Min-Max)                | 23~126°F (-5~52°C) |  |
| Heating (Min-Max)                | -4~75°F (-20~24°C) |  |

**Electrical & Power Supply**

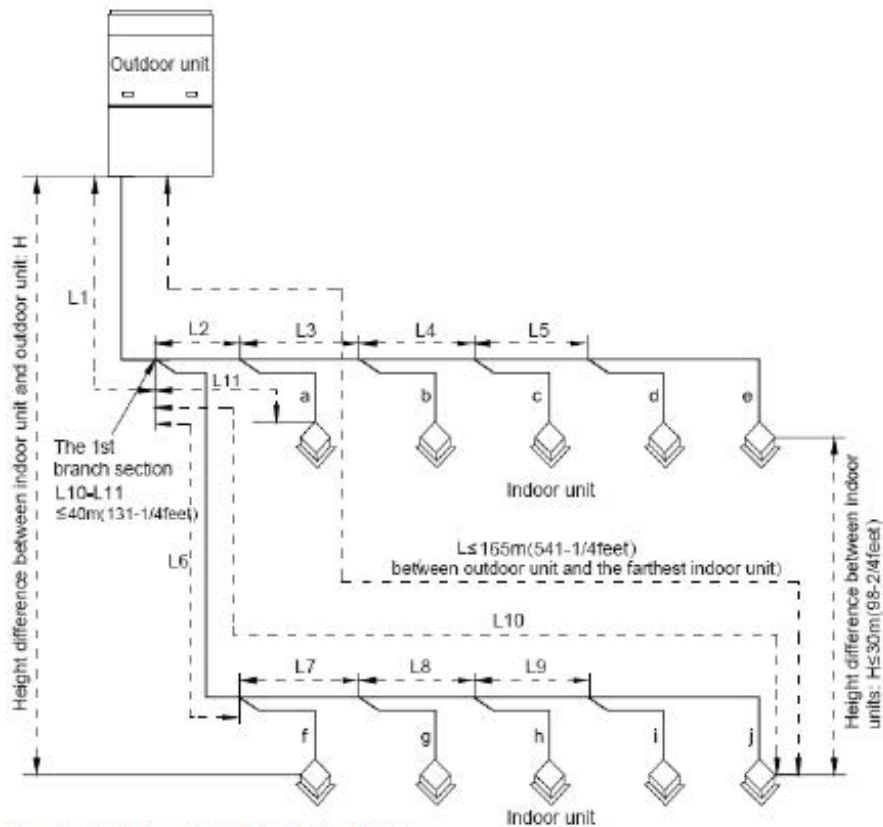
|                            |                           |
|----------------------------|---------------------------|
| Normal Operational Voltage | 208/230 V, 3 Phase, 60 Hz |
| MCA                        | 30 A                      |
| MOCP/Breaker Size          | 60 A                      |

**Unit Data**

|                                 |  |                         |
|---------------------------------|--|-------------------------|
| <b>Fan</b>                      |  |                         |
| Type x Qty                      |  | Propeller x 1           |
| Output Power                    |  | 750 W                   |
| <b>Airflow</b>                  |  | 6709 CFM                |
|                                 |  | 11400 m <sup>3</sup> /h |
| <b>ESP</b>                      |  | 82 Pa                   |
| <b>Compressor</b>               |  |                         |
| Type x Qty                      |  | Inverter Scroll x 1     |
| <b>Sound Pressure Level</b>     |  | 61 dB(A)                |
| <b>Indoor Units</b>             |  |                         |
| Max Qty                         |  | 16                      |
| Total Capacity                  |  | 50 - 135 %              |
| <b>Dimensions &amp; Weights</b> |  |                         |
| Unit Dimensions (WxHxD)         |  | 36.61x63.19x30.12-in    |
| Weight (Net/Gross)              |  | 496/518 LBS             |

**Refrigerant and Piping**

|                             |  |          |
|-----------------------------|--|----------|
| Refrigerant Type            |  | R410A    |
| Refrigerant Charge          |  | 236.3 oz |
| Gas Pipe Size (OD)          |  | 7/8-in   |
| Liquid Pipe Size (OD)       |  | 3/8-in   |
| Oil Pipe Size (OD)          |  | 3/8-in   |
| Connection Method           |  | Flared   |
| MAX Refrigerant Pipe Length |  | 541-ft   |
| MIN Refrigerant Pipe Length |  | 10-ft    |



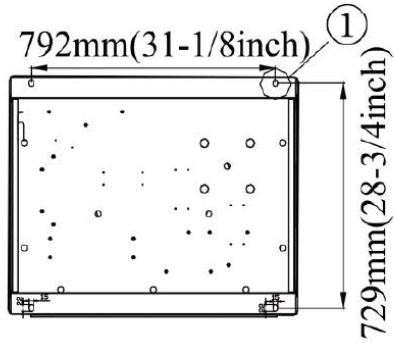
L10: Length from the first branch to the farthest IDU;  
 L11: Length from the first branch to the nearest IDU;  
 Equivalent length of branch of IDU is 0.5m.

| R410A Refrigerant System  |                       | Allowable Value<br>m(feet) | Fitting Pipe                     |
|---|-----------------------|----------------------------|----------------------------------|
| Total length (actual length) of fitting pipe  |                       | 1000(3280-3/4)             | $L1+L2+L3+L4+...+L9+a+b+...+i+j$ |
| Length of farthest fitting pipe m(feet)   | Actual length         | 165(541-1/4)               | $L1+L6+L7+L8+L9+j$               |
|   | Equivalent length     | 190(623-1/4)               |                                  |
| Difference between the pipe length from the first branch of IDU to the farthest IDU and the pipe length from the first branch of IDU to the nearest IDU |                       | 40(131-1/4)                | $L10-L11$                        |
| Equivalent length from the first branch to the furthest piping (1)  |                       | 40(131-1/4)                | $L6+L7+L8+L9+j$                  |
| Height difference between outdoor unit and indoor unit  | Outdoor unit at upper | 50(164)                    | —                                |
|   | Outdoor unit at lower | 90(295-1/4)                | —                                |
| Height difference between indoor units  |                       | 30(98-2/4)                 | —                                |
| Maximum length of Main pipe(2)  |                       | 90(295-1/4)                | L1                               |
| From IDU to its nearest branch (3)  |                       | 10(32-3/4)                 | a,b,c,d,e,f,g,h,i,j              |

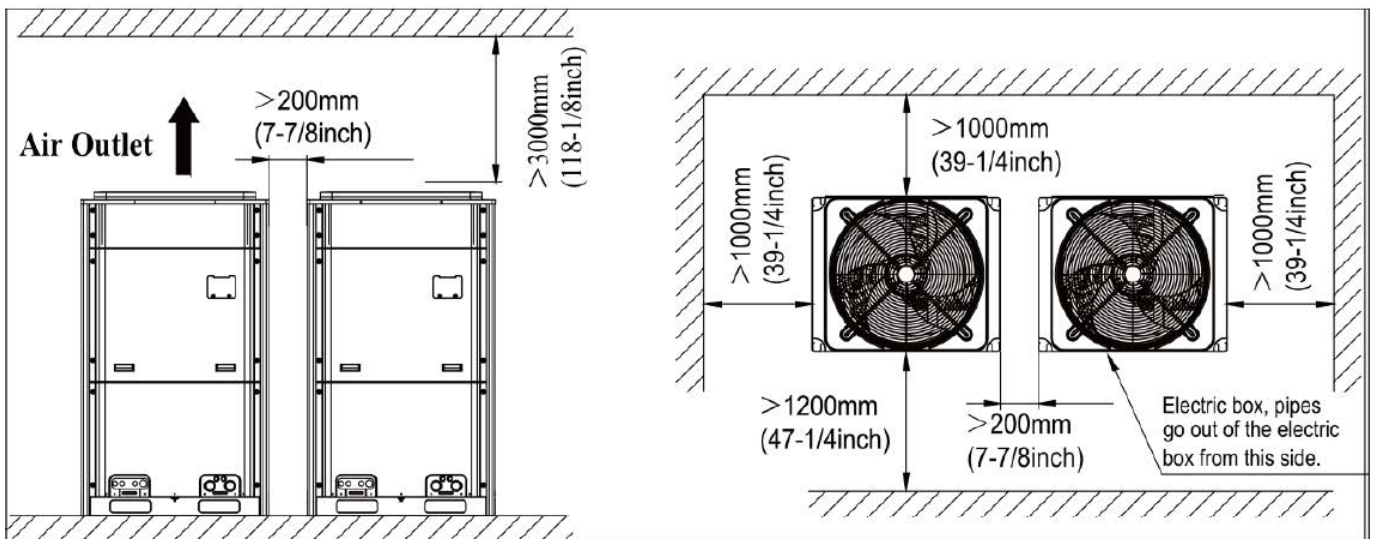
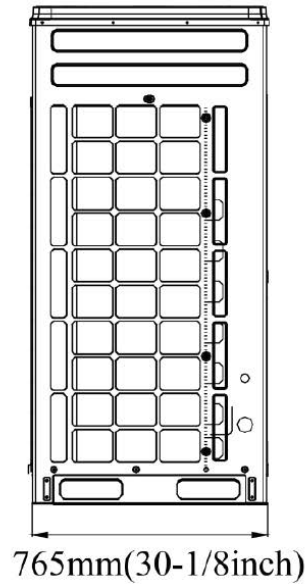
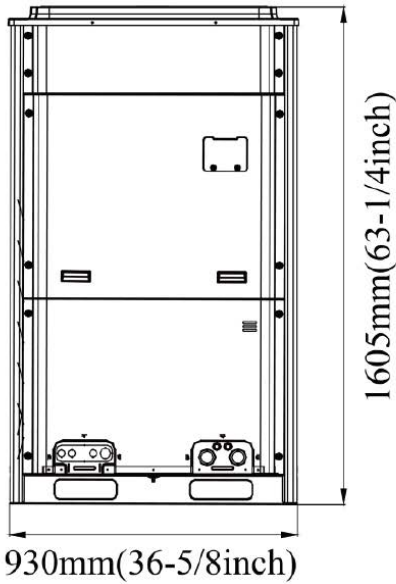
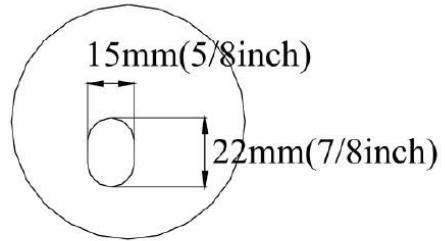
**Notices:**

- Normally, the pipe length from the first branch of IDU to the farthest IDU is 40m(131-1/4feet). Under the following conditions, the length can reach 90m(295-1/4feet).
  - Actual length of pipe in total:  $L1+L2 \times 2+L3 \times 2+L4 \times 2+...+L9 \times 2+a+b+...+i+j \leq 1000m(3280-3/4feet)$ .
  - Length between each IDU and its nearest branch a, b, c, d, e, f, g, h, i, j  $\leq 40m(131-1/4feet)$ .
  - Difference between the pipe length from the first branch of IDU to the farthest IDU and the pipe length from the first branch of IDU to the nearest IDU:  $L10-L11 \leq 40m(131-1/4feet)$ .
- When the maximum length of the main pipe from ODU to the first branch of IDU is  $\geq 90m(295-1/4feet)$ , then adjust the pipe size of the gas pipe and liquid pipe of main pipe according to the following table.

## DIMENSIONAL SPECIFICATIONS



### ① Installation hole



**Notes:**

1. Recommended Interconnecting Cable Type Stranded Bare Copper Conductors THHN 600V Wire
2. Power wiring cable size must comply with applicable national and local codes.
3. Test conditions are based on AHRI 210/240.

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