

Submittal Data: TVRF-OC120KHP/220V 120,000 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

US Ton		10
Cooling		
Rated Capacity	114,000 BTU/h	
	33.4 kW	
EER		12.82
Heating		
Rated Capacity	129,000 BTU/h	
	37.8 kW	
COP		13.83
Capacity Modulation Range		10 ~ 100 %
Operating Range		
Cooling (Min-Max)	23~126°F (-5~52°C)	
Heating (Min-Max)	-4~75°F (-20~24°C)	

Electrical & Power Supply

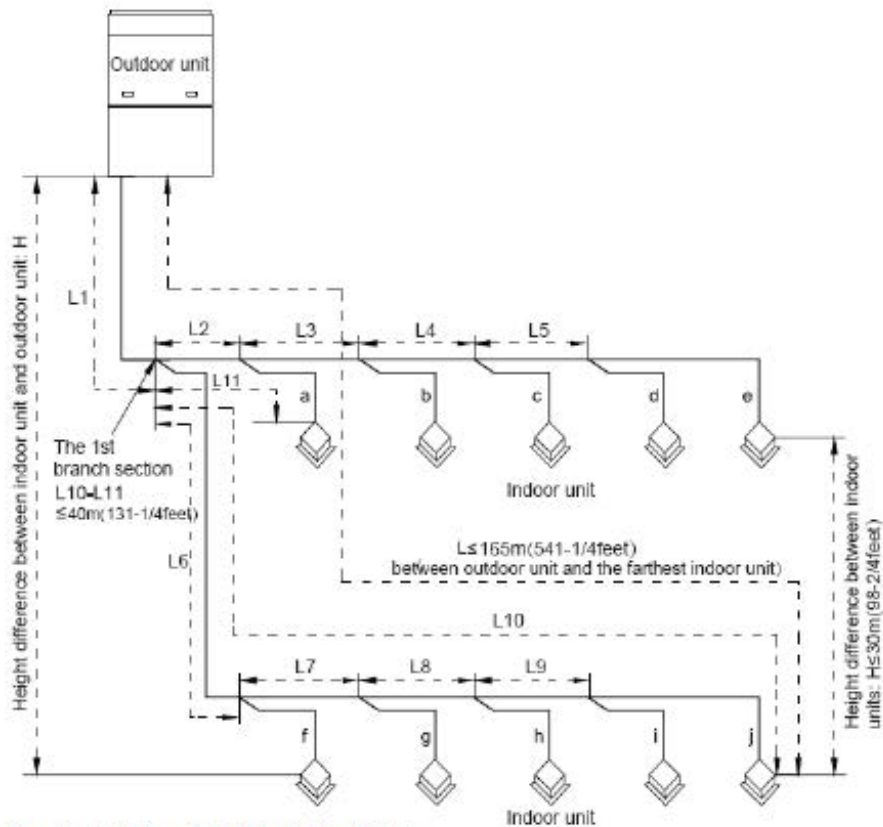
Normal Operational Voltage	208/230 V, 3 Phase, 60 Hz
MCA	74 A
MOCP/Breaker Size	100 A

Unit Data

Fan		
Type x Qty		Propeller x 2
Output Power		750 W
Airflow		
		8239 CFM
		14000 m³/h
ESP		82 Pa
Compressor		
Type x Qty		Inverter Scroll x 2
Sound Pressure Level		63 dB(A)
Indoor Units		
Max Qty		23
Total Capacity		50 - 135 %
Dimensions & Weights		
Unit Dimensions (WxHxD)		52.76×63.19×30.12-in
Weight (Net/Gross)		794/827 LBS

Refrigerant and Piping

Refrigerant Type	R410A
Refrigerant Charge	345.7 oz
Gas Pipe Size (OD)	1-in
Liquid Pipe Size (OD)	1/2-in
Oil Pipe Size (OD)	3/8-in
Connection Method	Flared
MAX Refrigerant Pipe Length	541-ft
MIN Refrigerant Pipe Length	10-ft



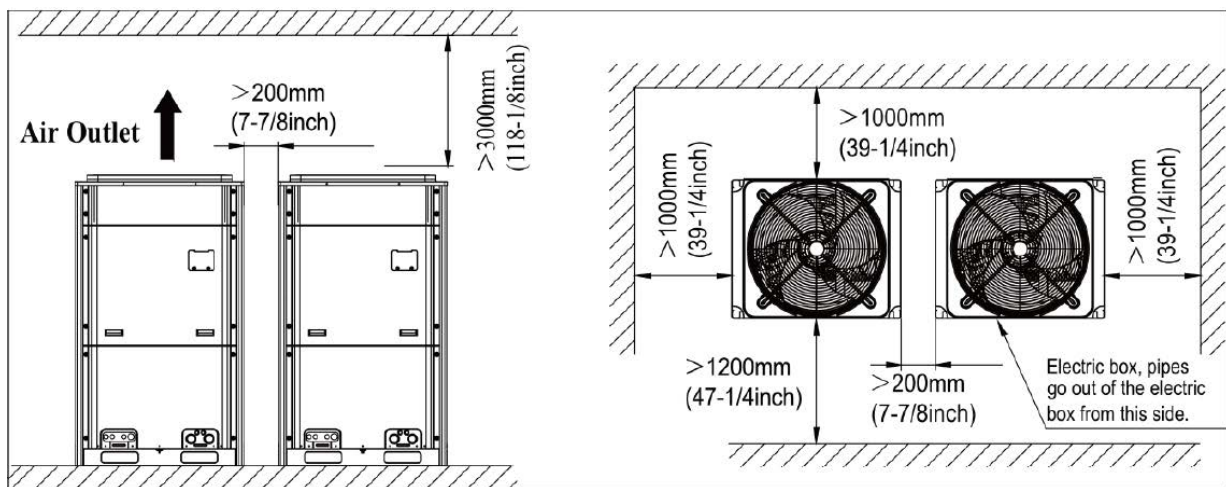
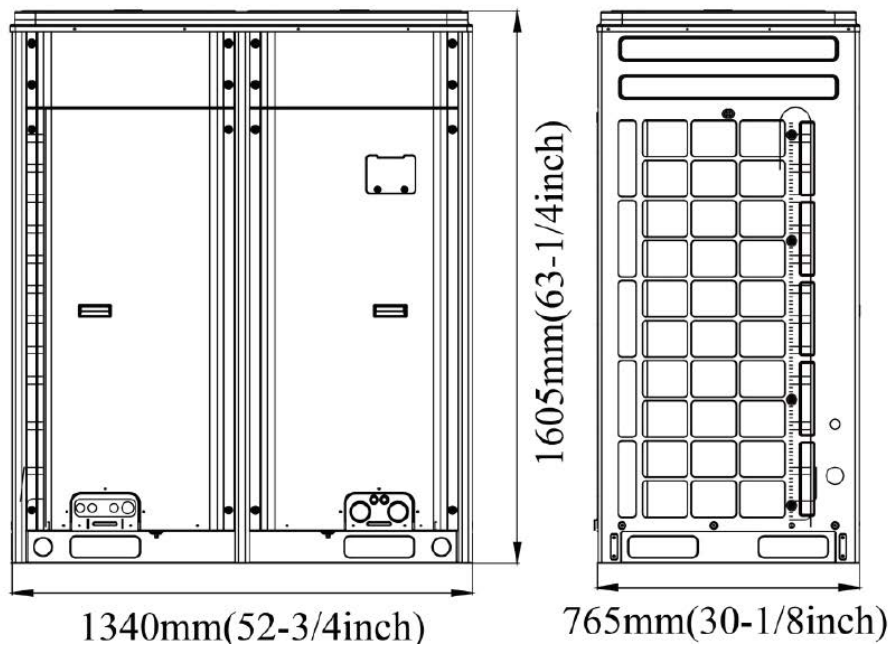
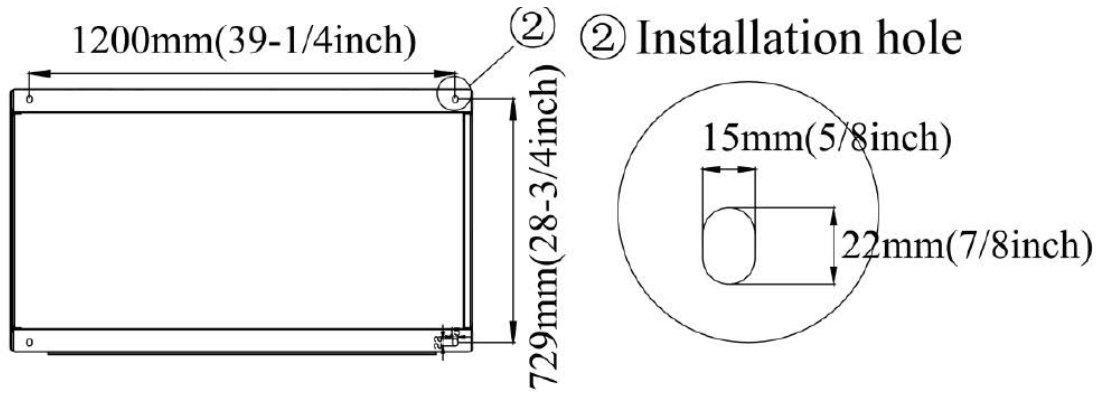
L10: Length from the first branch to the farthest IDU;
 L11: Length from the first branch to the nearest IDU;
 Equivalent length of branch of IDU is 0.5m.

R410A Refrigerant System		Allowable Value 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



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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