

ARE NOW

DAIKIN COMFORT TECHNOLOGIES NORTHEAST

Pre-Startup Checklist

VRV & SkyAir

General

	Yes	No	NA
I have read the installation and operation manuals provided by the manufacturer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have been issued the VRV Web Xpress.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is Safety Course required before entering job site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What safety gear is needed on site? Hard Hat <input type="checkbox"/> Safety Glasses <input type="checkbox"/> Steel Toe Boots <input type="checkbox"/> Safety Vest <input type="checkbox"/> None <input type="checkbox"/>			
List any additional information needed regarding startup and or access to the job site.			

Outdoor Units

	Yes	No	NA
Have the shipping brackets/plates been removed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the outside unit been properly secured and supported according to manufacture specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the unit been installed with the proper clearances?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has drainage of the unit been taken into consideration?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If applicable, has local snow level averages been taken into consideration in outdoor unit location?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you checked the outdoor unit for oil leaks? If there are any oil leaks, try to repair them. If repairing is unsuccessful, call your local dealer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you checked the inside of the unit for damaged components or crushed pipes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you checked the inside of the unit for refrigerant leaks? If there is a leak, try to repair it. If repairing is unsuccessful, call your local dealer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you visually checked the control box and the inside of the unit for loose connections or damaged electrical components?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Outdoor Units (cont.)	Yes	No	NA
Have you checked the power supply voltage on the unit disconnect? The voltage must correspond to the voltage on the data plate of the unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you checked that the ground wires have been connected properly and that the ground terminals are tightened? (Torque values on page 5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you checked that a insulation resistance of 2MΩ or more is attained using a megger tester by applying a voltage of 500V DC between power terminals and ground?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you checked that the fuses, circuit breakers, or the locally installed protection devices are of the size and type specified in the manual? Be sure that neither fuse nor a protection device has been bypassed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If Water-Cooled Outdoor Unit	Yes	No	NA
Have you inspected the water strainer at the inlet piping of the outside unit. Clean it if dirty.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the piping work been installed according to this document and the applicable legislation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Make sure the following components are installed in their correct places:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Water Strainer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Air Purge Valve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Automatic Water Supply Valve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Expansion Tank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you made sure the water circuit is filled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are you sure that the calculated water flow rate can be achieved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Indoor Units / Branch Selector Boxes	Yes	No	NA
Has this equipment been installed according to manufacturers guidelines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the unit properly installed to avoid any abnormal noises or vibrations when starting up the unit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has equipment been installed free of obstructions for serviceability?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the field wiring been installed according to the instructions described in the manual, wiring diagram and applicable legislation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you checked the power supply voltage on the local supply panel? The voltage must correspond to the voltage on the data plate of the unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you checked that the ground wires have been connected properly and that the ground terminals have been tightened properly? (Torque values on page 5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If using ducted fan coil units, has all the duct work been completed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have all the condensate drain lines been installed and properly supported according to manufacture specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are external condensate pumps being used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, has the condensate pump safety switch been connected to the indoor unit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are air filters installed on air inlet of indoor units?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have branch selector boxes been wired for line voltage and control wiring according to manufacture specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you checked that the air inlet and outlet of the unit are not obstructed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you checked all flare connections have been torqued according to specifications? (Torque values on page 5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you made sure all refrigerant piping and flare connections are insulated properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Miscellaneous	Yes	No	NA
Has this equipment been installed according to manufacturers guidelines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have all the control wiring connections been made?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What type of wire was installed (stranded/non-stranded, shielded/non-shielded, gauge and number of wires)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have all the remote controls been installed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there remote sensors installed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If new construction, is the building being supplied with temporary power?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	Yes	No	NA
Refrigerant Piping			
Has the piping been installed in accordance with Daikin installation guidelines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has all refrigeration piping been insulated according to local code regulations and/or manufacturer's specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the refrigeration piping been pressure tested and leak checked?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are any FXTQ fan coils installed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the system has been pressure tested, what was the amount of pressure applied? psig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What was the duration of the pressure test? hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are Refnets and Branch Kits installed to manufacturer's specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are Stop Valves installed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have all the Stop Valves been opened?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Be sure the correct pipe sizes are installed and that the insulation is properly installed.			
Has the refrigeration piping been triple evacuated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How many Microns was the system evacuated to? microns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How long was the evacuation held? hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the total liquid line length been calculated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
List the total liquid line length only:			
1/4" O.D. <input type="text"/> Ft.	3/8" O.D. <input type="text"/> Ft.	1/2" O.D. <input type="text"/> Ft.	
5/8" O.D. <input type="text"/> Ft.	3/4" O.D. <input type="text"/> Ft.	7/8" O.D. <input type="text"/> Ft.	
Has the additional refrigerant charge been calculated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the charge was calculated, what was the additional charge added?	<input type="text"/> lbs	<input type="text"/> oz.	
The amount of refrigerant to be added to the unit shall be written on the included "Added Refrigerant" plate and attached to the rear side of the front cover.			

I hereby certify that all items on this list have been checked and that all the information is correct.

I further verify that the job is ready for startup. I realize that if upon arrival to the startup the job is not ready that I will be subject to additional fees.

Name	Signature	Date

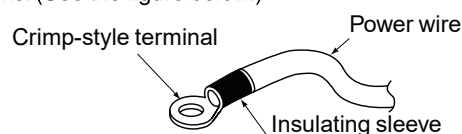
DAIKIN COMFORT TECHNOLOGIES NORTHEAST

Installation Manual References

Ground Wire Torque Specifications

⚠ CAUTION

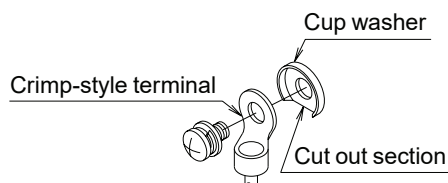
- Be sure to use crimp-style terminal with insulating sleeves for connections. (See the figure below.)



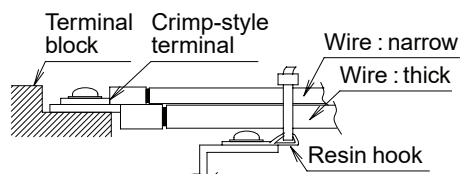
- For wiring, use the designated power wire and connect firmly, then secure to prevent outside pressure being exerted on the terminal board.
- Use an appropriate screwdriver for tightening the terminal screws. A screwdriver with a small head will strip the head and make proper tightening impossible.
- Over-tightening the terminal screws may break them. See the following table for the tightening torque of the terminal screws.

Screw size	Tightening torque
M8 Power terminal	4.20-5.09 ft·lbf (5.7-6.9 N·m)
M8 Ground terminal	7.15-8.63 ft·lbf (9.7-8.63 N·m)

- When pulling the ground wire out, wire it so that it comes through the cut out section of the cup washer. (See the figure below.) An improper ground connection may prevent a good ground from being achieved.



- When 2 wires are connected to a single terminal, connect them so that the rear sides of the crimp contacts face each other. Also, make sure the thinner wire is on top, securing the 2 wires simultaneously to the resin hook using the included clamp (1).



⚠ NOTE

- Do not connect the power wiring to terminals for the transmission wiring. Doing so would destroy the entire system.
- When connecting wires to the terminal block on the printed circuit board, too much heat or tightening could damage the printed circuit board. Attach with care.

See the table below for the tightening torque of the transmission wiring terminals.

Screw size	Tightening torque
M3.5 (A1P)	0.59-0.71 ft·lbf (0.8-0.97 N·m)

- Transmission wiring (about the symbol 1-2, see the foregoing figure) should be done within the following limitations.

Flare Nut Torque Specifications

1/4"	10.4 – 12.7 ft lb	15.7 ± 1.5 N·m
3/8"	24.1 – 29.4 ft lb	36.3 ± 3.6 N·m
1/2"	36.5 – 44.5 ft lb	54.9 ± 5.4 N·m
5/8"	45.6 – 55.6 ft lb	68.6 ± 6.8 N·m