

**FS3QX0\*\*UN00AAAA**  
**Slim Line Ducted Fan Coil Without Plenum**  
**Sizes 012 thru 060**



# Installation Instructions



**NOTE:** Read the entire instruction manual before starting installation.


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## SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause death, personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory-authorized kits or accessories when modifying this product. Refer to individual instructions packaged with kits or accessories when installing.

Follow all safety codes. Wear safety glasses, protective clothing, and work gloves. Use quenching cloth for brazing operations. Have a fire extinguisher available. Read these instructions thoroughly and follow all warning or cautions included in literature and attached to the unit. Consult local building codes

Recognize safety information. This is the safety alert symbol . When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury. Understand the signal words **DANGER**, **WARNING**, and **CAUTION**. These words are used with the safety alert symbol. **DANGER** identifies the most serious hazards which **will** result in severe personal injury or death. **WARNING** signifies hazards which **could** result in personal injury or death. **CAUTION** is used to identify unsafe practices, which **may** result in minor personal injury or product and property damage. **NOTE** is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

## **WARNING**

### ELECTRICAL OPERATION HAZARD

Failure to follow this warning could result in personal injury or death.

Before installing or servicing unit, always turn off all power to unit. There may be more than one disconnect switch. Turn off accessory heater power if applicable. Lock out and tag switch with a suitable warning label.

## **WARNING**

### EXPLOSION HAZARD

Failure to follow this warning could result in death, serious personal injury, and/or property damage.

Never use air or gases containing oxygen for leak testing or operating refrigerant compressors. Pressurized mixtures of air or gases containing oxygen can lead to an explosion.

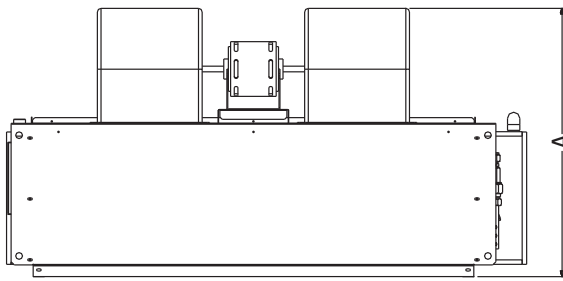


## **CAUTION**

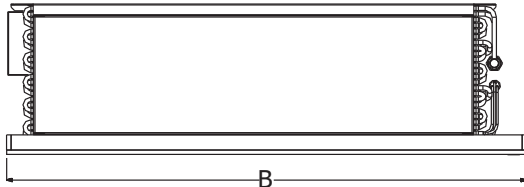
### CUT HAZARD

Failure to follow this caution may result in personal injury.

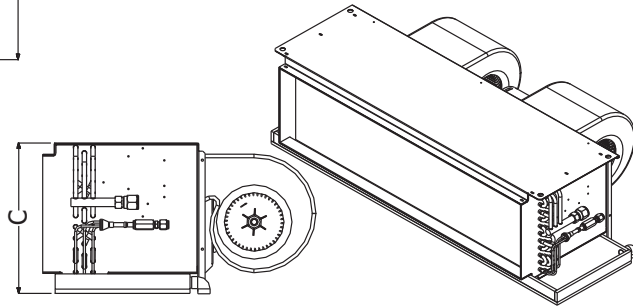
Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing and gloves when handling parts.



model	A	B	C
FS3QX012UN00AAAA	540	723	233
FS3QX018UN00AAAA	540	888	233
FS3QX024UN00AAAA	540	1142	233
FS3QX030UN00AAAA	555	1142	284
FS3QX036UN00AAAA	600	1142	335
FS3QX048UN00AAAA	632	1142	386
FS3QX060UN00AAAA	666	1346	386



Front View



Side View

Fig. 1 - Dimensional Drawing

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## INSTALLATION

### INITIAL CHECK

- To avoid damage, the unit should not be removed from its carton until final location is reached.
- Inspect unit for shipping damage and file a claim with the transport agency if necessary.
- Check the following fields of electrical work:
  - Proper size of fuses and wire.
  - Correct wiring connections and grounding as specified by local electrical codes.
  - Check supply voltage, which must be within the limits shown on the nameplate.
- Check for proper condensate flow.
- Be sure piping insulation is adequate.
- Confirm there is no obstruction to the air flow for indoor and outdoor units.
- Check for sufficient clearances for servicing of the units.

### LOCATION & MOUNTING

- The units should be installed horizontally.
- Prepare the unit mounting such that the unit is sufficiently supported.

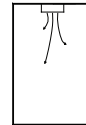


Fig. 2 - Unit Mounting Locations

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- When mounting the indoor unit on the ceiling, select a location that allows the air current to circulate evenly throughout the room.

GOOD LOCATION  
EVENLY COOLED



BAD LOCATION OBLIQUE-LINE  
AREA ARE NOT WELL-COOLED

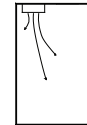


Fig. 3 - Air Circulation

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### REFRIGERANT PIPING

- Connections to the indoor unit are flare.
  - Make flare joints for both suction and liquid lines.
  - To provide concentric seating of tube on fitting, as well as prevent leakage, ensure tube and fittings are aligned with one another before tightening nut.
- The liquid line and suction line should run according to the piping design shown in Fig. 4.
- Brazing should be performed with a constant purge of nitrogen through the piping. This is to keep the inner tube clean.
- Insulate suction and liquid lines separately to prevent sweating.
- Use two spanners to make the flare nut connection to the indoor unit.

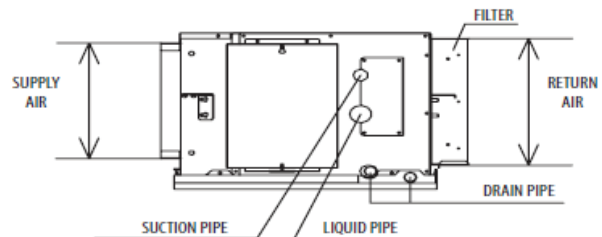


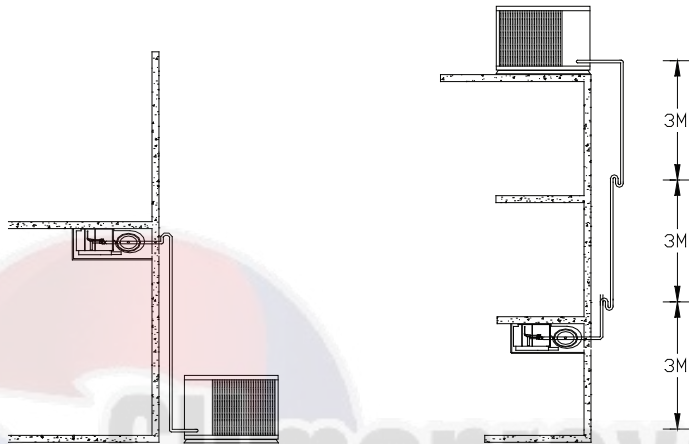
Fig. 4 - Unit Piping Locations

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**Table 1 – PERMISSIBLE PIPING FOR RECOMMENDED COMBINATIONS**

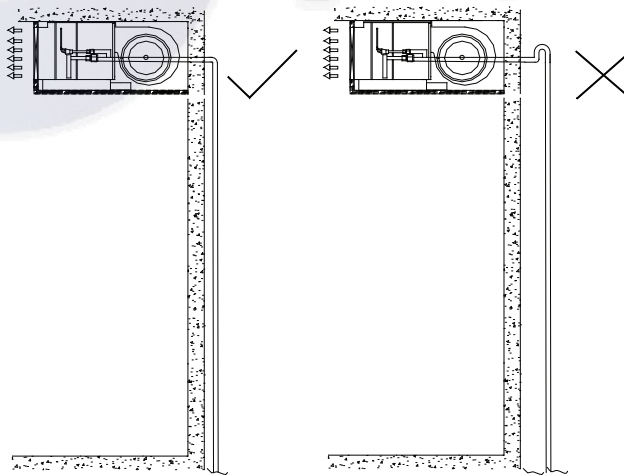
Pipe Limitation and Recommendation for Charging with R-22						
BTU/HR	Piping Between Indoor and Outdoor Units			Pipe Size O.D. (Inch)		R-22 Extra Charge For Pipe Length Greater Than 5m (Gram/m)
	Height Difference		Piping Length (One Way)	Liquid	Vapor	
	Height (Condenser Above Fan Coil)	Height (Condenser Under Fan Coil)				
10,000-12,000	15 m	10 m	20 m	1/4	1/2	30
16,000-33,000	20 m	15 m	30 m	3/8	5/8	60
36,000-48,000	25 m	20 m	35 m	3/8	3/4	70
	25 m	20 m	55 m	3/8	7/8	80
56,000-62,000	25 m	20 m	35 m	1/2	3/4	120
	25 m	20 m	50 m	1/2	7/8	120
	25 m	20 m	60 m	1/2	1-1/8	120

**NOTE:** REFER TO THE CARRIER LONG LINE LENGTH APPLICATION GUIDELINE FOR PIPE LIMITATION AND RECOMMENDATIONS FOR CHARGING R-410A.



**Fig. 5 - Refrigerant Pipe Trap Locations**

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**Fig. 6 - Condensate Drain Slope**

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**CONDENSATE DRAIN**

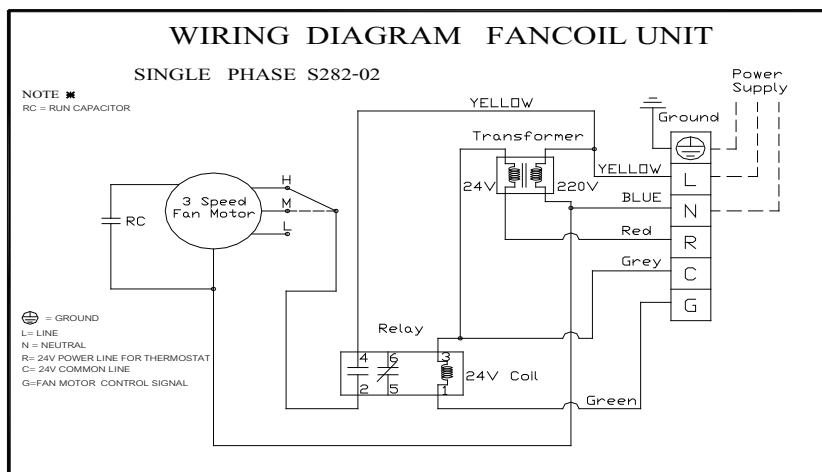
1. The unit should be reasonably levelled and pitched toward the drain to ensure proper drainage.
2. Piping Material
  - a. Soft vinyl chloride pipe , 22 mm nominal pipe size
  - b. Hard vinyl chloride (PVC) coupling, 22 mm nominal pipe size
3. Connect the soft / hard vinyl chloride pipe to the coupling. (See Fig. 6.)

4. The indoor unit uses gravity to help draining; therefore, the piping outside of the unit should slope downward.

**WIRING**

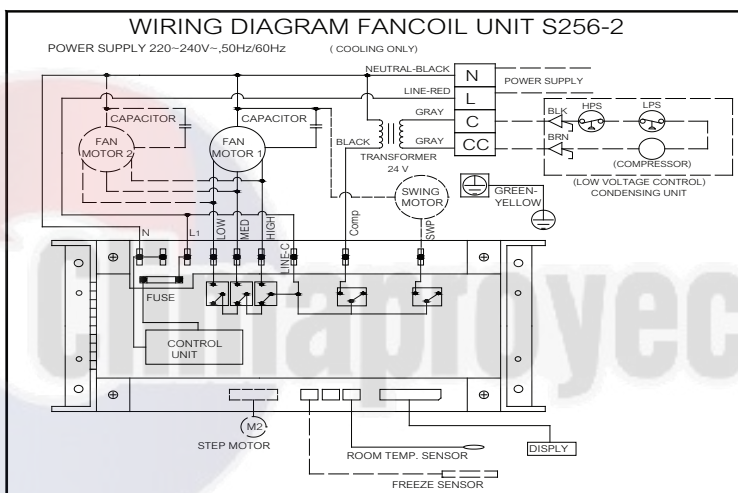
1. Power must be supplied from a dedicated power outlet.
2. Wiring should be made in accordance with applicable local codes.
3. Ground both indoor and outdoor units.
4. Check for correct terminal correspondence between indoor unit and outdoor unit.

# WIRING DIAGRAMS



**Fig. 7 - Without Control Connection Diagram**

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**Fig. 8 - Wired and Wireless Remote Control Connection Diagram**

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## TROUBLESHOOTING

Check the following before contacting the service personnel.  
If the problem with the unit persists after troubleshooting, please contact your local dealer.

Problem	Cause
No operation	<ul style="list-style-type: none"> <li>•Damage in electrical wire</li> <li>•Switch is off</li> <li>•Breaker is off</li> <li>•Power Supply</li> </ul>
Air Conditioner runs, but air is not cool	<ul style="list-style-type: none"> <li>•Pre-set temperature</li> <li>•Sunlight is directly entering the room</li> <li>•Doors and windows are open</li> <li>•Obstructions to the air-discharge louver</li> <li>•Blower wheel for debris</li> <li>•Air filter is dirty</li> </ul>
Vapor or mist coming out of the unit while it is running	<ul style="list-style-type: none"> <li>•The hot air in the room mixes with the cool air, which causes vapor</li> </ul>