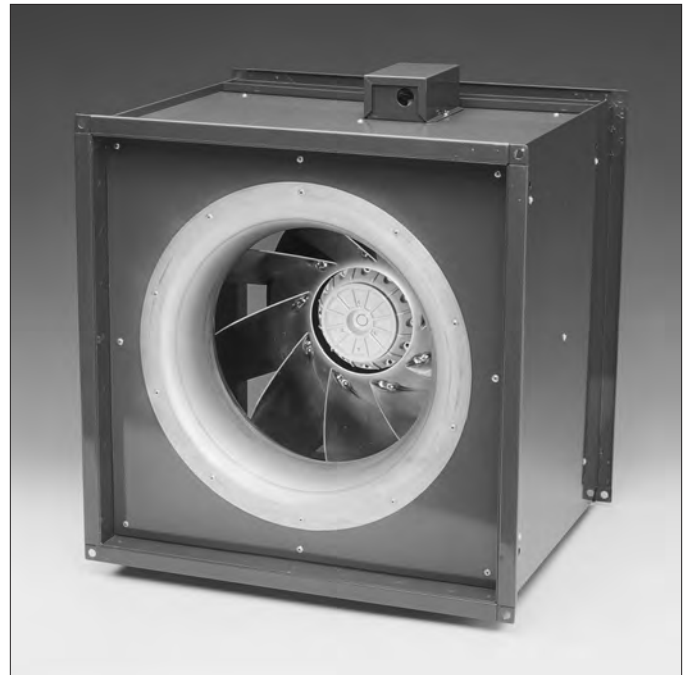




Fantech

Installation Instructions for Model FSD



Installation

1. The compactness and adaptability of the FSD Series fans permit easy installation. The fans are shipped fully assembled and can be mounted at any angle. For various mounting, see figures on the following page.
2. Because this unit has rotating parts, safety precautions should be exercised during all phases of installation, operation and maintenance.
3. **CAUTION:** "For General Ventilation Use Only. Do Not Use To Exhaust Hazardous Or Explosive Material and Vapors."
4. Remove unit from package and inspect within 15 days after receipt. If damaged, report damage to carrier. Do Not operate this unit with visible damage to the blower or impeller assembly.
5. **CAUTION:** "This unit has an unguarded impeller. Do not use in locations readily accessible to people or animals."
WEAR HAND PROTECTION AND STAY CLEAR OF SHARP EDGES!
6. Screen guards must be installed when fan will be within reach of personnel, within (7) feet of the working area, or when advisable for safety.
7. **PLEASE** read the entire manual before installing.

Warnings

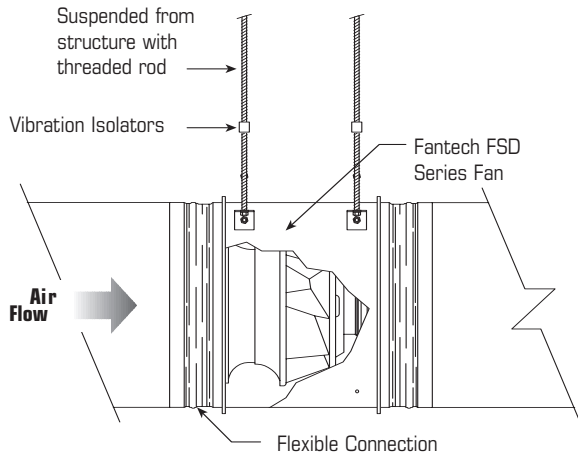
DO NOT CONNECT POWER SUPPLY until fan is completely installed. Make sure electrical service to the fan is locked in "OFF" position.

1. All fans are suitable for use with solid-state speed control. Three phase units must be wired through a motor contactor.
2. **WARNING! TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS - OBSERVE THE FOLLOWING:**
 - a. Use this unit in the manner intended by the manufacturer. If you have any questions, contact your manufacturer's representative or contact us directly.
 - b. **CAUTION:** Before installation, servicing or cleaning unit, switch power off at service panel and lock the service disconnection means to prevent power from being switched on accidentally. When the service disconnection means cannot be locked, securely fasten a prominent warning device, such as tag, to the panel.
 - c. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
 - d. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent back drafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Association (NFPA), and the American Society for Heating Refrigeration and Air-Conditioning Engineers (ASHRAE), and the local code authorities.
 - e. When cutting or drilling into wall and ceiling, do not damage electrical wiring and other hidden utilities.
 - f. Ducted fans must always be vented to the outdoors.
 - g. If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Circuit Interrupter) - protected branch circuit.
 - h. NEVER place a switch where it can be reached from a tub or shower.
3. **WARNING!** Check voltage at the fan to see if it corresponds to the motor name plate.

WARNING

Before installation, servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.

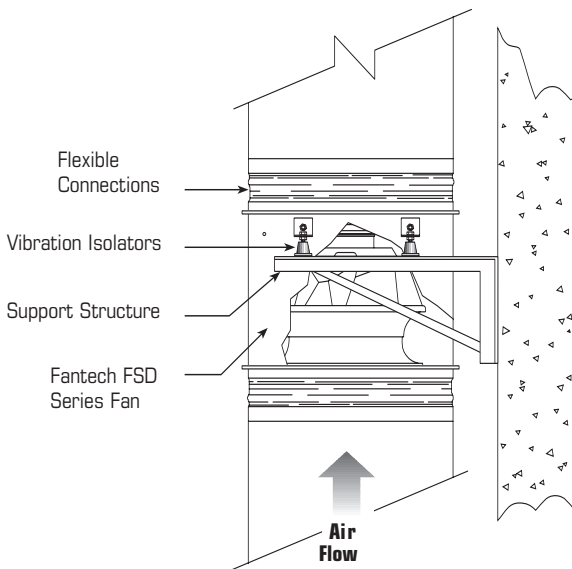
Mounting Illustration 1



Please follow all applicable codes when installing this unit.

1. Determine the fan location and preferred mounting method.
2. If needed, install the included mounting bracket on fan. Be sure to use all four brackets and plug any unused holes.
3. Place fan in position and support with temporary fixture.
4. Connect fan to support structure. Vibration isolation mounts (supplied by others) are recommended.
5. Once fan is secure, temporary fixture can be removed.
6. Make duct connections. Flexible connectors (supplied by others) are recommended.
7. Make electrical connections according to the appropriate diagram on the next page.

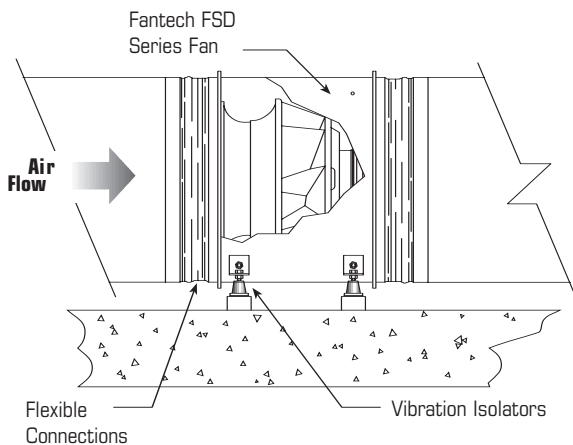
Mounting Illustration 2



Please follow all applicable codes when installing this unit.

1. Determine the fan location and preferred mounting method.
2. If needed, install the included mounting bracket on fan. Be sure to use all four brackets and plug any unused holes.
3. Place fan in position and support with temporary fixture.
4. Connect fan to support structure. Vibration isolation mounts (supplied by others) are recommended.
5. Once fan is secure, temporary fixture can be removed.
6. Make duct connections. Flexible connectors (supplied by others) are recommended.
7. Make electrical connections according to the appropriate diagram on the next page.

Mounting Illustration 3

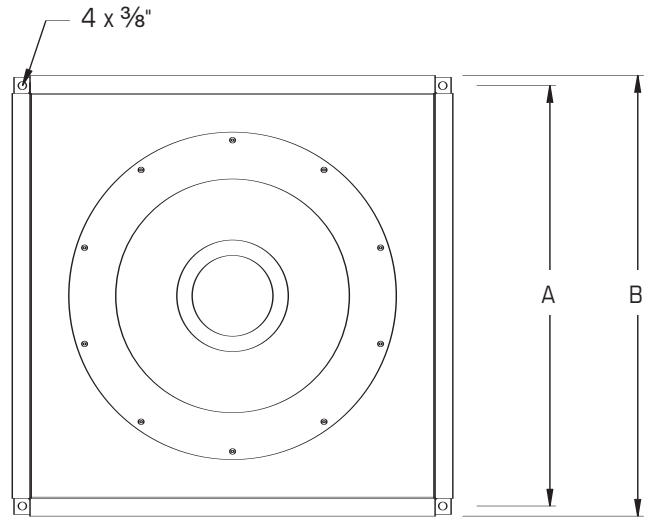
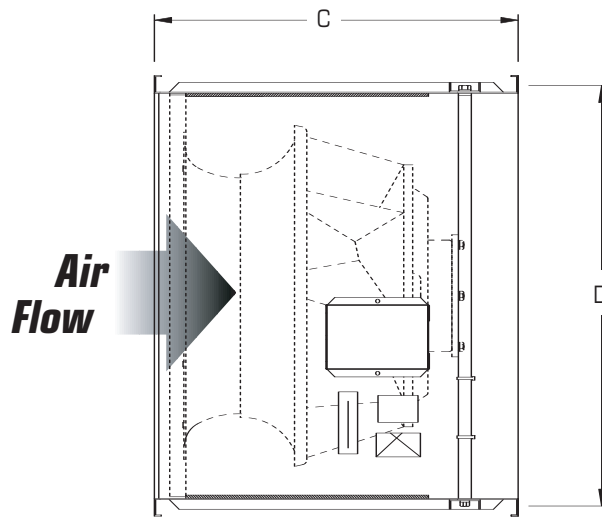


Please follow all applicable codes when installing this unit.

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2. If needed, install the included mounting bracket on fan. Be sure to use all four brackets and plug any unused holes.
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5. Once fan is secure, temporary fixture can be removed.
6. Make duct connections. Flexible connectors (supplied by others) are recommended.
7. Make electrical connections according to the appropriate diagram on the next page.

Please Note: Vibration Mounts and Hardware are not supplied with fan. FC Clamps are sold separately.

Dimensions and Wiring (Models FSD 18, 20, 22, 26)



Dimensional Data

Model	A	B	C	D	Weight
FSD 18	17 5/8	19 3/8	15 3/4	18 1/2	55 lbs.
FSD 20	19 3/4	21 1/2	17 3/4	20 5/8	65 lbs.
FSD 22	21 1/2	23 3/8	19	22 1/2	95 lbs.
FSD 26	26	27 3/4	20	26 7/8	135 lbs.

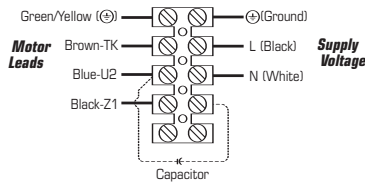
All dimensions in inches.

115/230 Volt Single Phase Fans

Wiring schematic for 4 lead motors, single phase

Notes:

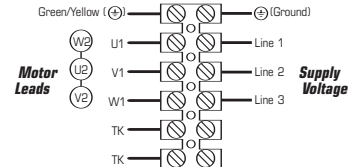
- All leads are color coded as well as identified with an Alpha/Alpha or Alpha / Numeric code (i.e. TK or Z2). This code may be shown as a band on the wire or on a schematic on the motor hub. Colors should be verified against code band. If code band and color do not correspond to schematics above, wire according to the code on the band.
- Color of capacitor leads may be reversed. Fan operation will not be affected.



460 Volt Three Phase Fan

Notes:

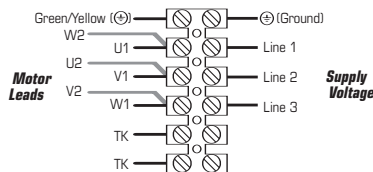
- Contactor should be used. Control coil should be wired in series with motor thermal contacts (TK leads) as shown in diagram to provide thermal motor protection.
- All leads are color coded as well as identified with a band containing an Alpha/Alpha or Alpha/Numeric code (i.e. TK or Z2). Colors should be verified against code band. If code band and color do not correspond to schematics above, wire according to the code on the band.



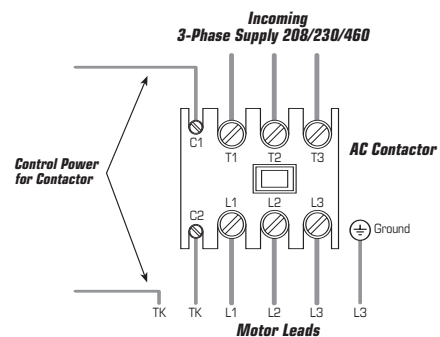
230 Volt Three Phase Fan

Notes:

- Contactor should be used. Control coil should be wired in series with motor thermal contacts (TK leads) as shown in diagram to provide thermal motor protection.
- All leads are color coded as well as identified with a band containing an Alpha/Alpha or Alpha/Numeric code (i.e. TK or Z2). Colors should be verified against code band. If code band and color do not correspond to schematics above, wire according to the code on the band.



Contactor for 3-Phase Fans, 208-230/460v



Three (3) Year Warranty

This warranty supersedes all prior warranties

FANTECH, INC will repair or replace any part which has a factory defect in workmanship or material. Product may need to be returned to the FANTECH factory, together with a copy of the bill of sale and identified with RMA number.

THE FOLLOWING WARRANTIES DO NOT APPLY:

- a) To damages from shipping, either concealed or visible;
- b) To damages resulting from improper wiring or installation;
- c) To damages or failure caused by Acts of God, or resulting from improper consumer procedures such as
 - 1) improper maintenance,
 - 2) misuse, abuse, abnormal use, or accident and
 - 3) incorrect electrical voltage or current;
- d) To removal of or any alteration to the Fantech label, control number or date of manufacture;
- e) To any other warranty, expressed, implied or written, and to any consequential or incidental damages, loss of property, revenues, or profit or costs of removal, or reinstallation, for any breach of warranty.

WARRANTY VALIDATION

The end user must keep a copy of the Bill of Sale to verify purchase date. Valid proof of the date of installation may also serve as a verification of commencement of warranty period.

FANTECH RETURN POLICY

Claims for damages or shortages must be reported within ten (10) days of receipt of product(s). For any product(s) received damaged by the forwarding agent.

THE FOLLOWING INSTRUCTIONS MUST BE FOLLOWED:

1. For product delivered by UPS:
 - a) Concealed Damages: Keep all cartons. Call UPS for an inspection and notify Fantech immediately.
 - b) Visible Damages: Save all cartons and file complaint directly with UPS.
2. For product delivered via a common carrier: File damaged goods claim directly with the freight company.
3. Shortages: Sign only for the total number of pieces received and call Fantech immediately.

FOR FACTORY RETURN

Product(s) returned without authorization will not be accepted. Fantech will not accept the return of any special, non-stock, obsolete or unsaleable product(s). Fantech may, at its option, accept return of salable product(s) subject to a 25% restocking charge.

1. No product(s) will be accepted without a Return Materials Authorization (RMA) number. This number can be obtained by calling Fantech, Inc. at 800-747-1762. Please have Bill of Sale or proof of date of installation available.
2. RMA must be clearly marked on outside of carton or delivery will be refused. All product(s) must be returned freight prepaid.
3. Product(s) will be repaired/replaced and shipped back to buyer; no credit will be issued.
4. Any out of warranty product will be evaluated and buyer will be notified of cost; repair cost will be charged to customer; buyer will be responsible for return freight or product may be returned without action, to the buyer, freight collect.
No credit will be issued.

Limitation of Warranty and Liability

This warranty does not apply to any FANTECH product or part which has failed as a result of faulty installation or abuse, incorrect electrical connections or alterations made by others, or use under abnormal operating conditions or misapplication of the product or parts. We will not approve payment for any repair not made by us or our authorized agent without prior written consent. The foregoing shall constitute our sole and exclusive warranty and our sole exclusive liability, and is in lieu of any other warranties, whether written, oral, implied or statutory. There are no warranties which extend beyond the description on the page hereof. In no event, whether as a result of breach of contract, or warranty or alleged negligence, defect incorrect advice or other causes, shall FANTECH be liable for special or consequential damages, including, but not limited to, loss of profits or revenue, loss of use of equipment or any other associated equipment, cost of capital, cost of substitute equipment, facilities or services, downtime costs, or claims of customers of purchase for such damages. FANTECH neither assumes or authorizes any person to assume for it any other liability in connection with the sale of product(s) or part(s). Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages so the above limitations and exclusions may not apply to you.

FANTECH, INC. products are designed and manufactured to provide reliable performance, but they are not guaranteed to be 100% free from

Warning

defects. Even reliable products will experience occasional failures and this possibility should be recognized by the user. If these products are used in a life support ventilation system where failure could result in loss or injury, the user should provide adequate backup ventilation, supplementary natural ventilation, failure alarm system, or acknowledge willingness to accept the risk of such loss or injury.



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