



INSTALLATION, OPERATION AND MAINTENANCE MANUAL FOR FADE, TABE & THDAB

READ & SAVE THESE INSTRUCTIONS!

READ THESE INSTRUCTIONS COMPLETELY BEFORE INSTALLING THE FAN AND SAVE THE INSTRUCTIONS FOR FUTURE REFERENCE. IT IS RECOMMENDED THAT THESE FANS BE INSTALLED BY LICENSED PROFESSIONAL TRADESPERSONS.

Upon receiving the unit, check for any damage and report it immediately to the shipper. Also insure all accessory items are accounted for.

Move fan to desired location and determine the method by which the fan is to be mounted as shown in the illustrations below. Optional Wall Housings and Wall Mounting Collars provide a convenient means of mounting sidewall fans while maintaining the proper distance between the propeller and damper.

Attach the fan by inserting a suitable fastener through each of the pre-punched mounting holes in the fan panel. Care should be taken not to bend or distort the fan panel or damage drive components during installation. belt-drive fans mounted direct to walls will require suitable attachment holes drilled around the perimeter of the fan panel.

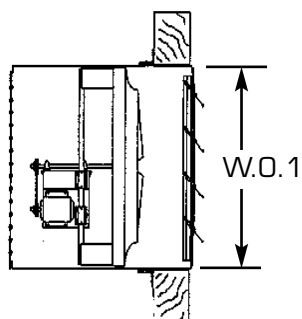
The motor voltage and amperage must be checked for compatibility with the electrical supply. Supply wiring to the unit must be properly fused and conform to local and national electrical codes.

TYPICAL INSTALLATIONS

Wall opening size and propeller-to-damper distance are two important dimensions for fan installation. Fans mounted to the wall require a different opening (W.O.) than those mounted in wall housings or wall collars. Propeller-to-damper distance is important to reduce turbulence and damper flutter which may lead to premature damper failure.

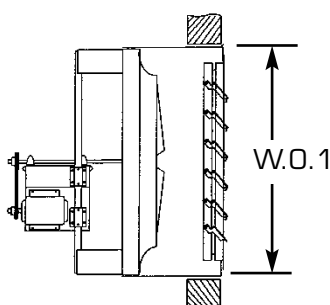
Illustrations #1 and #2 show the wall opening (W.O.1) required for installations with either wall housing or a wall collar. Illustration #3 shows the recommended wall opening (W.O.2) and the minimum (M) distance suggested between the fan and damper for direct to wall installations. *Additional support or bracing (by others) may be required to support mounted fans.*

WALL OPENING REQUIREMENTS



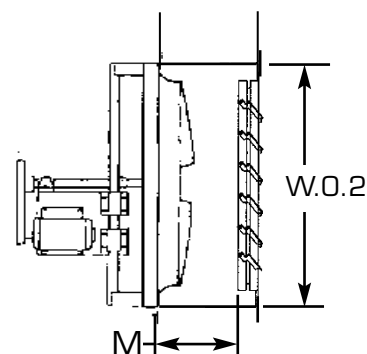
#1

Wall Housing Installation



#2

Wall Collar Installation



#3

Direct to Wall Installation

Fan Model	FADE	TABE	THDAB	W.O. 1 Sq	Damper Sq	W.O. 2 Sq	Damper Sq	Minimum Distance
8				N/A	N/A	9 1/2	9	6
10				N/A	N/A	11	10	7
12				21 1/2	18	13 1/2	12	7
14				21 1/2	18	16 1/2	16	8
16				24 1/2	21	18 1/2	18	9
18				24 1/2	21	21 1/2	21	9
20				26 1/2	21	21 1/2	21	10
22				32 1/2	26	26 1/2	26	11
25				32 1/2	26	26 1/2	26	12
		20		25 1/2	20	22	20	10
		24	24	31 1/2	26	28	26	11
		30	30	37 1/2	32	34	32	14
		36	36	43 1/2	38	40	38	14
		42	42	49 1/2	44	46	44	15
		48	48	55 1/2	50	52	50	16
		54	54	61 1/2	56	58	56	19
		60	60	67 1/2	62	64	62	20
			72	81 1/2	76	78	76	26

PRE-STARTING CHECKS

Check all fasteners and set-screws for tightness, this is especially important for bearing set-screws.

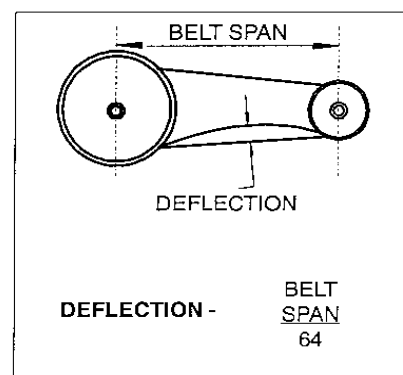
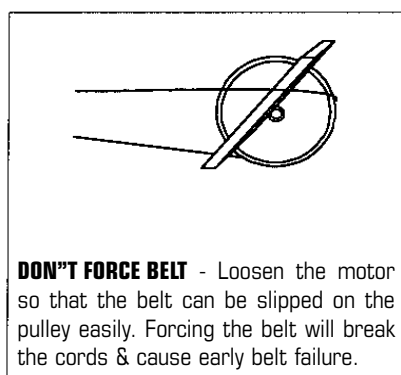
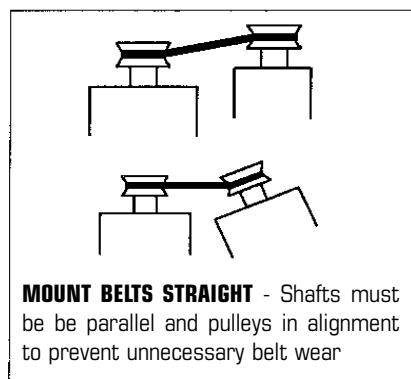
The propeller should rotate freely and not rub on the fan panel venturi. Rotation should be in the same direction as the decal affixed to the unit. For 3-phase installations, fan rotation can be reversed by simply interchanging any two of the three electrical supply leads. For single phase installations follow the wiring diagram located on the motor. *See page 4 for special wiring instructions for models FADE.*

BELT-DRIVE FANS

The adjustable motor pulley is preset at the factory for the specified fan RPM. Fan speed can be increased by closing or decreased by opening the adjustable pulley. Two-groove or three-groove variable pitch pulleys must be adjusted an equal number of turns open or closed. Any increase in the fan speed represents a substantial increase in the horsepower required from the motor. Always check the motor load amperage and compare it to the name plate rating when changing fan speed.

BELTS

Proper tensioning and alignment of belts will give years of trouble free service. The proper tension for operating a V-belt is the lowest tension at which the belts will not slip at peak loading conditions. For initial tensioning, the proper belt deflection half way between pulley centers is $\frac{1}{64}$ " for each inch of belt span. Check belt tension two times during the first 24 hours of operation and periodically thereafter. To adjust belt tension, loosen the four fasten-



ers (two each side of the motor plate) and slide the motor away from the fan shaft until proper belt tension is achieved.

It is very important that the drive pulleys remain in proper alignment after adjustments are made. Misalignment of pulleys will result in premature belt wear, noise, vibration and power loss.

BEARINGS (BELT-DRIVE FANS ONLY)

All Fantech belt-drive fans have self-aligning cast iron pillow block type bearings with re-lube fittings of the air handler type, L50 200,000 hour average life. Bearings should be inspected at periodic intervals. Locking collars and set-screws in addition to fasteners attaching the bearings to the bearing plate or mounting frame, must be checked for tightness. Selection of the correct bearing grease and lubrication intervals depends on several things. Extreme high or low temperatures, dirty or damp conditions and vibration exceeding 1 or 2 mils are all things that will require more frequent lubrication or special greases. For standard servicing, use good quality lithium based grease that conforms to NLGI grade 2 consistency.

With the unit running, add grease very slowly with a manual grease gun until a slight bead of grease forms at the seal. Be careful not to unseat the seal by over lubricating or using excessive pressure.

MOTORS

The motor bearings should be lubricated at the intervals recommended by the motor manufacturer in accordance with the instructions printed on the motor plate. **DO NOT OVER LUBRICATE.** Many fractional horsepower motors have sealed for life bearings and do not require lubrication. Motors on the FADE series are sealed for life and require no maintenance.

REMOVAL OF DIRT AND DUST

Dirt clogs cooling openings on the motor housing, contaminates bearing lubricant and collects on propeller blades causing severe imbalance if left unchecked. The exterior surfaces of the motor, fan panel and propeller should be thoroughly cleaned periodically. Use caution and do not allow water or solvents to enter the motor or bearings. Under no circumstances should motors or bearings be sprayed with steam or water.

WARRANTY LIMITATION OF LIABILITY.

Fantech warrants fans to be free from defects in design, materials and workmanship (exclusive of abrasion, corrosion or erosion) for two (2)* years from date of shipment to the original buyer of a product from Fantech or Fantech's authorized distributor or the date of notification of readiness to ship. Motor warranty is one (1) year. In order to claim the benefit of this warranty, buyer must notify Fantech in writing of the claimed defect within ten (10) days after discovering it and return this equipment or parts to the factory with transportation prepaid. In the event of on-site repair, no service technician will be dispatched until manufacturer receives your written purchase order. If any of the following conditions exist, the warranty will be null and void: (1) Buyer has permitted other persons not approved or authorized by manufacturer to alter, adjust, replace or repair the equipment or any part thereof. (2) Buyer has not followed instructions or other directions given in the contract documents or our maintenance manual. (3) When breakage or other loss or damage is the result of any negligence, misuse or fault on the part of any operator or other person not under our supervision or control. (4) The defect is the result of designs or drawings made, furnished or specified by others. (5) In the case of goods not manufactured or supplied by the manufacturer as part of a contract, manufacturer shall only be liable to the same extent that our supplier is to manufacturer, not to exceed any liability manufacturer would have for warranty on our own equipment. (6) Buyer has not paid in full any invoices submitted to buyer which are due for payment. (7) Unusual wear and tear of the equipment.

* (3) years on FADE Series

Statements relating to the product, its use or installation made prior to the execution of the agreement, are not warranties except to the extent that the contrary is expressly set forth herein. It is understood that such statements were not intended to, and did not, form a part of the agreement; they were merely made in the course of negotiations of the parties.

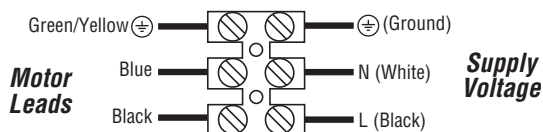
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WARRANTY VALIDATION - The user must keep a copy of bill of sale to verify purchase date. These warranties give you specific legal rights and are subject to any applicable consumer protection legislation. You may have additional rights that vary from state to state.

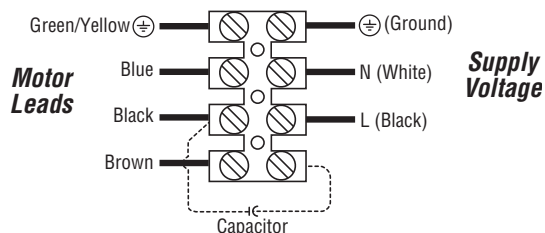
TROUBLESHOOTING		
PROBLEM	CAUSE	CORRECTIVE ACTION
Reduced Airflow	System resistance is too high	Check backdraft damper for proper operation. Remove obstructions in ductwork. Clean dirty filters. Check for adequate supply air for exhaust fans or exhaust air for supply fans.
	Fan too close to damper	Increase distance between fan and damper.
	Unit running backwards	See pre-starting checks.
	Fan speed too low	Increase fan speed.
	Excessive dirt on propeller V-belt-drive	Clean propeller
	Bearings	Tighten bearing collars and set-screws. Lubricate bearings. Replace defective bearings.
	V-belt-drive	Tighten pulleys on motor and fan shaft. Adjust belt tension. Align pulleys. Replace worn belts or pulleys.
Excessive Noise	Excessive vibration	Clean all dirt build-up from propeller. Check all set-screws and fasteners for tightness. Check for worn bearings. Correct propeller imbalance. Check for loose damper, guards, housing or ductwork.
	Defective Motor	Replace motor.

WIRING DIAGRAM FOR FADE SERIES

Models: FADE 8-4 115 Volt Single Phase Fans



Models: FADE 10-4, 12-4, 14-4, 16-4 120 Volt Single Phase Fans



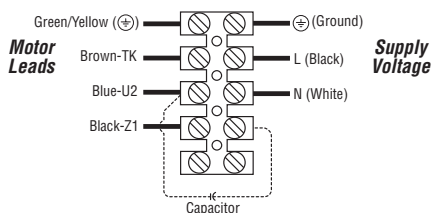
Models: FADE 18-4, 20-4, 22-6, 25-6

115 Volt Single Phase Fans

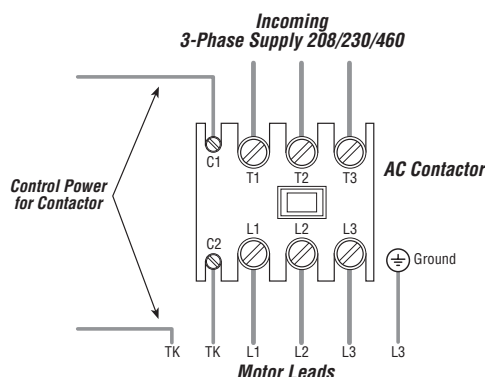
Wiring schematic for 4 lead motors, single phase

Notes:

1. 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.
2. Color of capacitor leads may be reversed. Fan operation will not be affected.



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

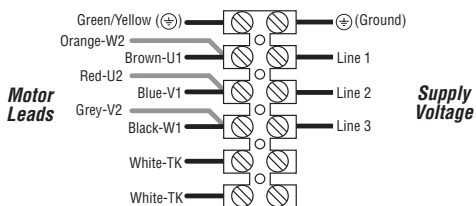


230 Volt Three Phase Fans

Models: FADE 20-4, 22-6, 25-6 (Dual voltage)

Notes:

1. 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.
2. 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.



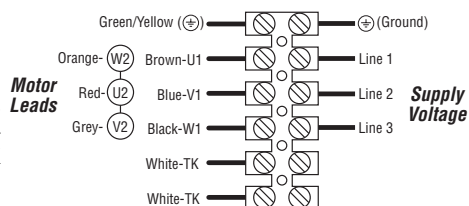
460 Volt Three Phase Fans

Models: FADE 20-4, 22-6, 25-6 (Dual voltage)

Important note: For 460 volt operation, Orange (W2), Red (U2) and Grey (V2) wires must be spliced together.

Notes:

1. 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.
2. 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.



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