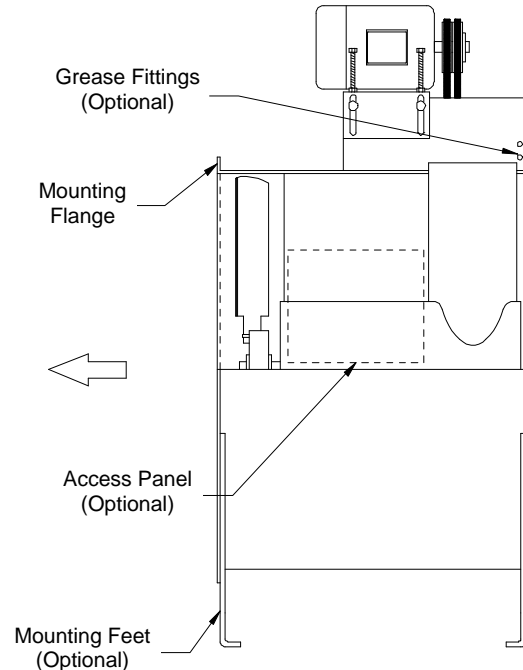


# Installation Instructions for Type TBC, TDC, TEBC, TEBH, TEDH Duct Fans

OPERATION AND MAINTENANCE INSTRUCTIONS -- REVERSE SIDE

- 1. Pre-Installation Check of Fan.** Before installation of an American Coolair fan, a careful check should be made for shipping damage which may affect operation of the unit. If damage is found, file a claim immediately with delivering carrier. On belt drive units, pulley alignment and belt tension should be checked (see paragraph 2 under Operation and Maintenance). Before connecting to power source, make sure propeller turns freely without striking duct or any foreign object. Check motor nameplate to be sure correct phase and voltage are being used. Check wiring diagram to make sure proper connection are made for the electrical service being applied. Note direction arrow adjacent to propeller and make sure rotation is correct when power is connected.



TYPE TB DUCT FAN  
(Cutaway View)

- 2. Installation Procedures.**
  - (a) Duct Connections.** The American Coolair duct fan has flanged ends for convenient mounting directly to the duct work. Flexible connections or transition pieces may be utilized.
  - (b) Motor Position and Wiring.** From an operating standpoint, the American Coolair duct fan and motor may be mounted in any position. For convenience in wiring and service, the motor should be readily accessible.
  - (c) Mounting Feet (Optional Accessory).** If duct fan is not adequately supported by duct work or otherwise, mounting feet should be utilized. Type and location of mounts furnished will be based on customer's information as to type of support (floor or ceiling) available.

**NOTE:** All local, state and federal codes should be checked to make sure all wiring, guarding and intended usage of the fan unit(s) comply with all applicable codes. The proper type, class of fan and motor should be used for air being handled, such as explosive or hazardous air mixtures.



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# Operation and Maintenance Instructions for Type TBC, TDC, TEBC, TEBH, TEDH Duct Fans

## INSTALLATION INSTRUCTIONS -- REVERSE SIDE

**1. Fan Cleaning and Adjustment.** The entire fan assembly should be cleaned as necessary to remove accumulated dust, dirt and other foreign matter, which may collect on the blades or other parts. Access to fan through duct work is essential for proper cleaning. An optional access panel on fan may be furnished. If so, removal of this panel allows limited access to fan for inspection, cleaning and lubrication of motor on direct drive models. On belt drive models, belt(s) should be inspected and tension adjusted (see below). Belt alignment should also be checked to avoid excessive wear and premature failure. This same inspection of belts and adjustment of tension should be made after the first 24-48 hours of usage following installation. If rust or corrosion is found anywhere on the fan, the affected area should be thoroughly cleaned and refinished.

**2. Belt Replacement, Tension and Adjustment.**

(a) To change belt(s), loosen motor bracket bolts and tension adjustment bolts and remove belt(s) from motor and fan pulleys. Install new belt(s) and adjust as indicated below. When replacing belt(s), do not roll new belts(s) over pulleys under tension. This practice can damage the belt(s) severely.

(b) To tension belt(s), place a finger midway between the motor pulley and fan pulley and push belt(s) inward about 1/2" (at approximately 5 lb. force) for proper tension. To adjust tension, loosen motor bracket bolts and use tension adjustments bolts to obtain correct belt tension. Be sure to retighten motor bracket bolts to maintain proper belt tension. Recheck alignment of belts between motor pulley and fan pulley. **CAUTION:** Use of tension adjustments bolts makes it easy to over tighten belt(s). When this occurs, belt(s), motor and fan bearings will soon fail. Do not over tension.

**3. Blade Pitch Adjustment.** AMERICAN COOLAIR DOES NOT RECOMMEND FIELD ADJUSTMENT OF BLADE PITCH ON TYPE T FANS. Blade pitch is fixed on TEDH/TEBH fans. Blade pitch is factory set for specified performance with standard motor fully loaded on TDC,TBC,TEBC fans. Air volume may be adjusted through a change in blade pitch. Any change in blade pitch will affect motor load. *Contact your American Coolair representative before making any field adjustment of the blade pitch on these propellers.*

**4. Adjustment of Fan Speed and Air Volume.** On belt drive models with a variable pitch motor pulley, fan speed and air flow are easily regulated. *Motor*

*capacity must be carefully checked before any increase in fan speed is made. Motor capacity must be carefully checked before any increase in fan speed is made.*

**5. Lubrication.** Fan bearings on belt drive models are factory lubricated for extended service. External grease fittings for fan bearings are standard on all belt drive models. Relubrication annually or more frequently is recommended. For best results, use Shell Alvania No. 3 lubricant or equivalent. For lubrication of electric motors, see instructions supplied by motor manufacturer.

**6. Repair Parts.**

(a) **Belts.** Replacement belts for belt drive units are standard V-belts used on industrial machines. Replacements may be obtained through local industrial supply houses. If more than one belt is used on the fan, be sure to replace with matched sets. To install belt(s), see instructions above for belt replacement.

(b) **Blades.** If one or more propeller blades are damaged, it is recommended that the entire propeller be replaced or removed and returned to the factory for repairs. If an unbalanced condition develops, thoroughly clean blades to remove dirt or other foreign matter. If unbalance still exists, treat as blade damage and replace or return to factory for repairs.

(c) **Bearings.** Replacement pillow block bearings may be obtained through local industrial supply houses.

(d) **Motor.** Motor repairs should be performed only by an authorized motor repair station. Contact the motor manufacturer or American Coolair for location of repair station.

**Caution:** *Do not return damaged or defective parts to American Coolair without prior authorization. If repairs under warranty are claimed, see warranty terms in American Coolair catalog or contact the factory in Jacksonville, Florida. Claims for warranty repairs to electric motors should be made direct to the motor manufacturer.*



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