

# Installation Instructions

## For Type CRBCA - CRDA - CUBA - CUDA - UDCA - CWBA - CWDA Centrifugal Ventilators

OPERATION AND MAINTENANCE INSTRUCTIONS -- REVERSE SIDE

### PRE-INSTALLATION CHECK

Before installation, a careful inspection of the units should be made to detect any concealed shipping damage. If damage is found, contact and file a claim with the delivering carrier. On the belt driven units, pulley alignment and belt tension should be checked prior to start-up (see the reverse for further information). Before connecting to the power source, check to make sure that the wheel turns freely without striking anything. CHECK TO MAKE SURE THAT THE DATA ON THE MOTOR NAMEPLATE AGREES WITH THE ELECTRICAL SERVICE THAT IS GOING TO BE APPLIED, DOUBLE CHECKING VOLTAGE AND PHASE. Also, check the wiring diagram to make sure that proper connections are made for the electrical service being applied. Note direction arrow for correct wheel rotation when power is applied. If a backdraft damper is being used, make sure that it is installed with sufficient clearance and that it functions properly when the unit is energized.

### INSTALLATION

When installing the fan, make the following checks:

- 1a. For roof ventilators, be sure that the fan is mounted on a rigid, level foundation, preferably a prefabricated roof curb.
- 1b. For wall ventilators, be sure that the fan is mounted with the cooling tube pointing down. The fan should be mounted to a smooth, flat surface. Caulk the perimeter of the fan/wall mating point for weather-tight operation.
2. Turn the fan wheel by hand to make sure that it turns freely.
3. For belt drive units, make certain that the shaft bolts are secure and that the sheaves are at right angles to the shaft.
4. Make certain that all motor mounting bolts are secure.
5. Give a short, supervised running test after tightening down all foundation bolts.

### WHEELS

All wheels are computer balanced at the factory. Under particularly dirty conditions, materials may adhere to the fan wheel. The wheel should be checked and cleaned periodically since this could cause a build-up of material causing the wheel to become unbalanced.

ALUMINUM WHEELS ARE LIMITED TO 300° F. Motors may have lower limits. Check with the factory before exposing these fans to elevated temperature.

### MOUNTING BACKDRAFT DAMPER

If a backdraft damper is being used, check all dimensions to be sure that the damper will fit into the proposed location. All dampers must be installed so that the blades open in the same direction as the air flow.

### MOUNTING FLANGE OPTION (CWBA AND CWDA MODELS ONLY)

If a mounting flange is being supplied, first mount the flange to the bottom of the fan housing using the hardware included. Then attach the flange to the wall. Hardware for this is not supplied.

### LIMITED WARRANTY

In the sale of its products, American Coolair Corporation agrees to correct, by repairs or replacement, any defects in workmanship or material that may develop under proper and normal use during a period of one year from the date of shipment from the factory. Any product or part proving, upon American Coolair's examination, to be defective during limited warranty period will be repaired or replaced, at American Coolair's option, f.o.b. factory, without charge.

Deterioration due to wear caused by chemicals, abrasive action or excessive heat shall not constitute defects.

Motors are guaranteed only to the extent of the manufacturer's warranty.

American Coolair's limited warranty does not apply to any of its products or parts that have been subject to accidental damage, misuse by the user, unauthorized alterations, improper installation or electrical wiring, or lack of proper lubrication or other service requirements established by American Coolair.

Repairs or replacements provided under the above terms shall constitute fulfillment of all American Coolair's obligations with respect to limited warranty.

THIS LIMITED WARRANTY STATED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, STATUTORY OR IMPLIED, INCLUDING WITHOUT LIMITATION THAT OF MERCHANTABILITY AND FITNESS. NO LIABILITY FOR REINSTALLATION COST OR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY NATURE IS ASSUMED OR SHALL BE IMPOSED UPON AMERICAN COOLAIR.

### **WARNING**

### **CAUTION**



**DO NOT** INSTALL FAN WITH MOVING PARTS WITHIN 8 FEET OF FLOOR OR GRADE LEVEL WITHOUT A GUARD THAT COMPLIES WITH OSHA REGULATIONS. **DO NOT** USE UNLESS ELECTRICAL WIRING COMPLIES WITH ALL APPLICABLE CODES. **DO NOT** WIRE WITHOUT PROVIDING FOR A POWER SOURCE DISCONNECT AT THE FAN ITSELF. **DO NOT** SERVICE EXCEPT BY A QUALIFIED MAINTENANCE TECHNICIAN AND ONLY AFTER DISCONNECTING THE POWER SOURCE. FAILURE TO OBSERVE THESE PRECAUTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.

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## CLEANING AND ADJUSTMENT

The entire fan should be cleaned as necessary to remove accumulated grease, dirt and other foreign matter which may collect on the blades and other parts. For grease extraction units, the wheel should be thoroughly cleaned every two to three months, and the grease trough, drain and container should be checked and emptied as required to prevent grease overflow, as often as every two weeks for heavy grease applications. Belts should be inspected and tension adjusted (see below). Check for belt misalignment which will cause excessive wear and premature failure. This same inspection of belts and adjustment of tension should be made frequently during the first 24-48 hours of operation after installation. If rust or corrosion is found anywhere on the fan, the affected areas should be thoroughly cleaned and refinished.

## BELT REPLACEMENT, TENSION AND ADJUSTMENT -- BELT DRIVE UNITS ONLY

1. For convenient access to the unit, remove the roof section.
2. To install a new belt, loosen the belt tension bolt and nut. Hold the fan motor securely and remove the swivel pin from the motor and swivel brackets. Set motor safely aside. While supporting the wheel assembly from falling, loosen and remove the two (2) bolts/nuts holding the shaft to the support frame. Remove the old belt from the wheel assembly by slipping it off and over the shaft. Slip the new belt over the shaft and reattach the shaft to the support frame. Position the motor with its shaft near the wheel assembly disc and thread the belt around the motor pulley. Return the motor to its original position so that the holes in the motor and swivel brackets are aligned and replace the swivel pin. Thread the new belt into the V-groove of the disc on the wheel assembly.
3. Adjust the belt tension and re-tighten the tension bolt/nut (see following paragraph). Check belt alignment between the fan and motor pulley.
4. To check the belt tension, push belt inward about 1/8" to 1/4" at approximately 5 lb. force for proper tension. Ideal tension is the lowest tension at which the belt will not slip under peak load conditions. Keep belts free from foreign material which may cause slippage. Make periodic belt and drive inspection and re-tension when slippage occurs.

**CAUTION: DO NOT THREAD THE NEW BELT ONTO THE PULLEYS UNDER TENSION. THIS WILL CAUSE DAMAGE TO THE BELT.**

**CAUTION: USE OF TENSION ADJUSTMENT BOLT MAKES IT EASY TO OVER TIGHTEN BELT. WHEN THIS OCCURS, BELTS OR BEARINGS CAN FAIL IN A SHORT PERIOD OF TIME. DO NOT OVER TENSION.**

## LUBRICATION

On the belt drive models, fan bearings are permanently lubricated. Relubrication as a part of normal maintenance is not necessary. For lubrication of electric motor, see instructions by motor manufacturer.

## REPAIR PARTS

1. Belts — Belts are standard V-belts used on industrial machines and replacements can be obtained through local industrial supply houses. Make sure the replacement belts are the same section (3L, 4L, A, AX) and length as the original belts. See previous instructions for belt replacement.
2. Blades — If one or more of the blades on the wheel is damaged, the entire wheel assembly will need to be replaced.
3. Bearings — Field replacement of fan bearings is not recommended. If bearings are damaged, the entire wheel assembly will need to be replaced.
4. Motors — Motor repairs should only be performed by an authorized motor repair facility. Contact either the motor manufacturer or American Coolair Corporation for locations.

**CAUTION: DO NOT RETURN DAMAGED OR DEFECTIVE PARTS TO AMERICAN COOLAIR CORPORATION WITHOUT PRIOR AUTHORIZATION. IF REPAIRS UNDER WARRANTY ARE CLAIMED, SEE WARRANTY TERMS ON THE REVERSE OF THIS PAGE. CLAIMS FOR WARRANTY REPAIRS REGARDING THE MOTOR SHOULD BE MADE DIRECTLY WITH THE MOTOR MANUFACTURER.**



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