



**IM-165**  
April 2005

## General Installation, Operation and Maintenance Instructions For Aerovent Products

# Centaxial Fans Direct and Belt Driven

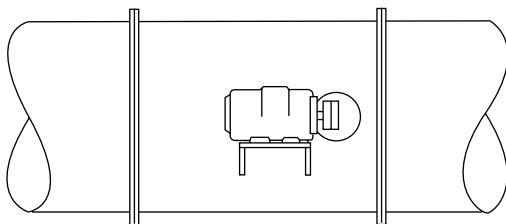
Aerovent Centaxial fans are designed for continuous duty in air-moving systems handling clean air. As a general rule, these fans are designed to be installed in any position. However, larger fans and fans with high horsepower loading may not be suitable for vertical installation. It is advisable to check with the factory to determine if vertical installation is satisfactory.

Upon receipt of equipment, inspect the fan and its accessories for possible damage in shipment. Make certain the wheel rotates without binding. Never lift the Centaxial fan by its motor, fan wheel or shaft. Lifting eyes are provided for this purpose.

If the unit is not to be put in operation for a period of time and is to be stored, the following precautions should be observed:

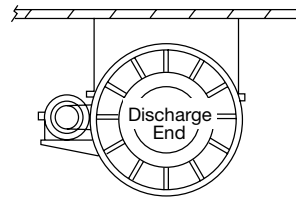
1. Select a clean, dry location to prevent rust.
2. For outside storage, protect against the elements by covering the inlet and outlet of the fan.
3. Make certain bearings are filled with grease. (See General Installation and Maintenance Manual IM-100 for lubrication procedure.)
4. Keep motors dry and clean.
5. Periodically inspect unit to see if conditions are present which could cause damage.

### Mounting Arrangements

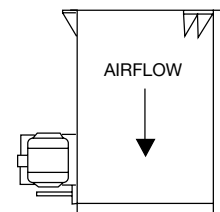


#### Duct Mounted

The mounting flanges on the Centaxial fan are capable of supporting the fan in ductwork and are of the same size at the inlet and outlet for easy installation in a straight-line duct system. However, the ducts must be structurally sufficient to support the load. The following bolt sizes are required when mounting fan to duct:  $\frac{3}{8}$ " on sizes 12 through 44;  $\frac{1}{2}$ " on sizes 49 and larger.

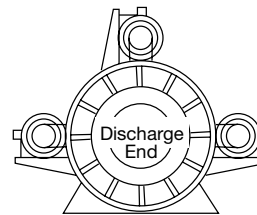


Horizontal - Ceiling

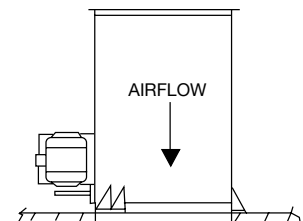


Vertical - Ceiling

When suspending the fan from overhead with rods or other arrangements, support of the load should be accomplished by means of diagonal bracing to prevent side sway. Welded construction of the support should be used rather than bolted due to the loosening of bolts by vibration.



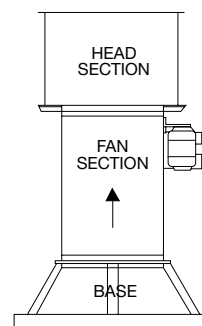
Horizontal - Floor



Vertical - Floor

A concrete foundation should be provided for mounting the centaxial fan on the floor. The size of the fan will determine the size of the foundation. The concrete base should extend approximately 6" beyond the outline of the fan and should have a weight capable of supporting the unit. Anchor bolts should be provided for bolting to the foundation.

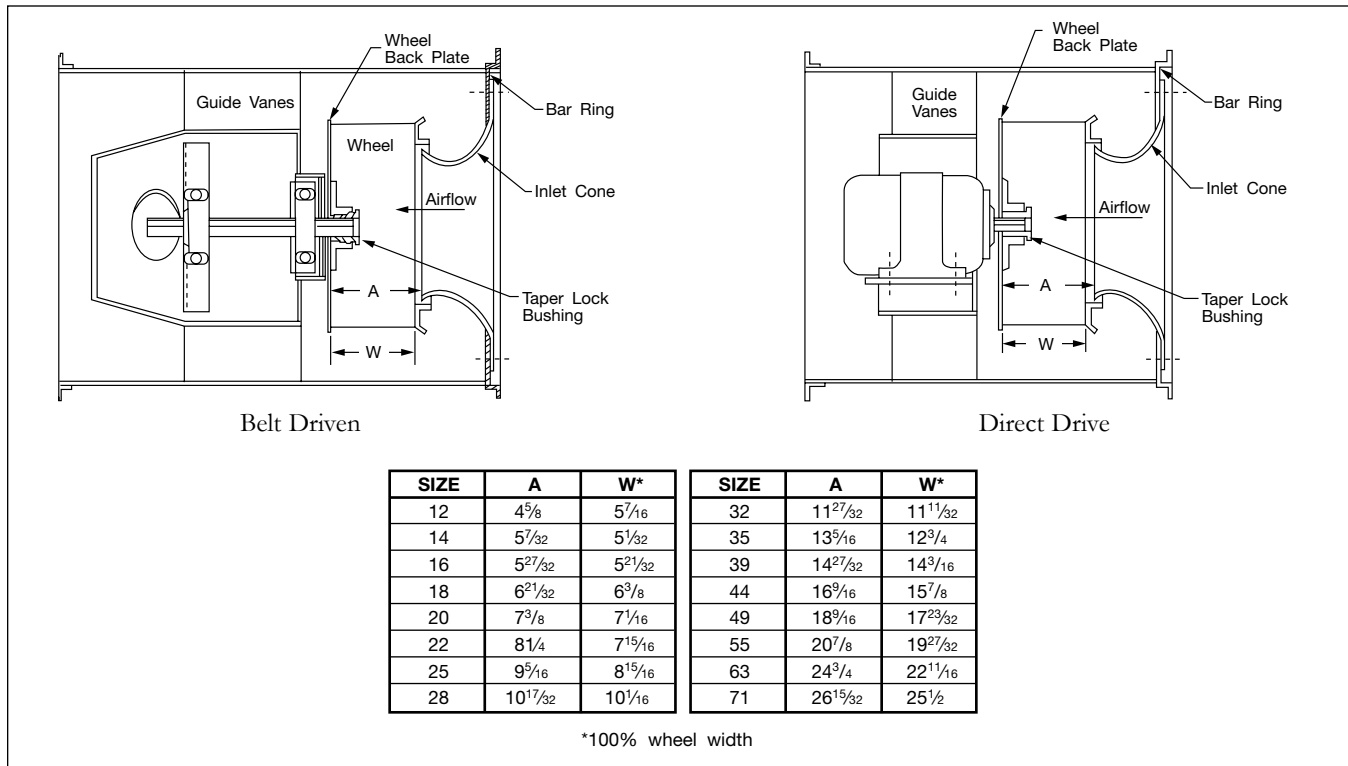
### Roof Ventilator



Where the centaxial fan is to be mounted as part of a roof ventilator assembly, caulking must be done after assembly between flanges of the head section and fan section and base. Guy wire bracing is required on all large size units to prevent side sway.

See IM 120 for further instructions regarding roof ventilator installation.

All dimensions in inches.



“A” dimension (inlet cone to wheel back plate) must be held. This dimension is critical to fan performance. “A” dimension shown is based on 100% wheel width and must be adjusted if wheel furnished is other than 100% full width.

## General Maintenance

A regular fan maintenance schedule should be established to include the following:

1. **Fan Wheel:** The fan wheel in a centaxial fan must be kept reasonably clean if it is to perform properly. Where dirt build-up is slight, very little unbalance can result. Air heavily laden with grease and dirt will deposit a great deal on impeller blades. Conditions should be observed and cleaning performed as required for smooth fan operation and, in the case of grease, removal of this type of fire hazard.

One problem that often develops is the unbalance which occurs when particles of dirt and grease are thrown from the blades. This unbalance condition will naturally cause excessive wear and noise. If the wheel shows excessive wear, it should be replaced.

Cleaning of the wheel should be accomplished, if possible, without removing it from the shaft. If the fan is

furnished with an access door, the wheel can be cleaned through this opening. If no door is supplied, then the inlet cone must be removed to expose the wheel. If for some reason the wheel is removed from the shaft, take note of the “A” dimension called out in the chart above. This dimension must be held if proper performance is to be maintained.

2. **V-Belt Drive:** Check V-belt drive for proper alignment and tension. (See General Installation and Maintenance Manual IM-100.)
3. **Fan Bearings:** Lubricate the bearings as detailed in the ball bearing lubrication instructions in the General Installation and Maintenance Manual (IM-100).
4. **Screws and Bolts:** Check tightness of all screws and bolts throughout the assembly.



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