

# **BACKWARD INCLINED (BI) BELT-DRIVEN BLOWERS**

## Operation and Maintenance Instructions

### **INSPECTION:**

Upon receiving, check at once for any damage or missing parts. Check blower wheel to see that it rotates freely. Report any damage to carrier.

### **INSTALLATION:**

For mounting, inlet and outlet dimensions see Backward Inclined (BI) Blower catalog.

BI blowers are normally supplied with the discharge in the bottom horizontal (BH) position, however this may be changed to any eight different positions by removing the cap screws holding the scroll housing to frame assembly and inlet support assembly. Upon rotating the inlet support frame for the proper discharge, check that the inlet cone is centered in the wheel opening before replacing cap screws. Replace scroll housing on opposite side to frame assembly.

Blower should be installed on a rigid flat foundation with flexible connections to inlet and outlet discharge when attached to duct work. If foundation is not level, shim where necessary and secure unit.

When unit is mounted, check all cap screws and setscrews. See that the wheel is clear of inlet cone and rotates freely.

After installation, exposed inlet or discharge must be guarded.

### **V- BELT DRIVES:**

V-Belt drives will provide long life with proper care. Blower pulleys should be aligned and the motor fastened securely to motor plate provided in frame assembly. Motor shaft should be aligned so that it is parallel to blower shaft. Adjustment of belt should be made so that a  $\frac{3}{4}$ " deflection is obtained with finger pressure in the middle of the belt between pulleys.

However, belts must be tight enough to prevent slippage when motor is started. To adjust the speed of the blower, remove belt and loosen the adjustable flange of the variable pitch motor sheave, turn flange to increase or decrease space between flanges. When retightening set screw be sure it is setting with the flat part of the hub. When adjusting two-groove variable pitch sheaves, both sides must be adjusted the same number of turns, otherwise slippage is induced, wearing belts rapidly.

### **ELECTRICAL CONNECTION: A qualified electrician should do all electrical work.**

Use flexible conduit to motor in order to prevent the transmission of vibration. Motor should be installed in accordance with local ordinance codes and motor

wiring diagrams. If motor does not have a thermal overload protection, this should be provided. Blower unit should be started to check rotation of blower wheel to verify that it is rotating toward the discharge opening. Check amperage draw with the nameplate rating on motor. If motor is overloaded, reduce blower speed by adjusting variable pitch motor sheave.

**Bodily injury may occur if the unit is serviced without disconnecting the energy source.**

#### **BALL BEARINGS:**

All BI blowers are equipped with self-aligning ball bearing pillow blocks. On size 24BI and smaller, the standard bearings are packed at the factory and require no further lubrication. On model 27BI and larger, the pillow blocks are equipped with grease fittings to permit adding lubricant, however under normal conditions no greasing should be required during the first 1 to 2 years of operation.

Periodic inspection of the blower should include:

1. Checking wheel to see that it is not accumulating a layer of grease or dirt.
2. Checking belts to see that they are not frayed or showing signs of failure and that tension is proper.

#### **INSPECTION AFTER INITIAL START UP PERIOD:**

Once the blower has been in operation for several days, check and retighten the setscrews on the bearings and on the drive sheaves. This will ensure long bearing and shaft life. Check & adjust drive belts.

**Be sure that drive cover is securely replaced to insure that the exposed drives and shaft will not be a hazard.**

#### **WARRANTY**

Company warrants that each blower manufactured by the Company shall be free from defects in material and workmanship under normal use and service for a period eighteen (18) months from the date of shipment or twelve (12) months from date of original installation, "whichever occurs first." If it appears within the warranty period that the blower does not meet the warranties specified above and the purchaser notifies the Company promptly, the Company agrees to remedy any such defect, at the Company's option, either by repairing any defective parts or by furnishing at the Company's factory, a repair or replacement part.

This warranty shall not apply to any equipment which has been repaired or altered in any way so as, in the Company's judgment, to affect its performance or reliability, nor which has been improperly installed or subject to misuse, negligence or accident. This warranty does not apply to electric motors, which however, carry warranty of the motor manufacturer. Warranty does not apply to drive belts.

This warranty is expressed in lieu of all other warranties expressed or implied, and of all other obligations or liabilities on the Company's part. The Company neither assumes, nor authorizes any representative or other persons to assume for it, any other liability in connection with the sale of its equipment.