



## **GENERAL INSTRUCTIONS**

### **A. Assembly**

1. Locate proper fan position. Base angles on fan have holes drilled to mount stationary or resilient base as required, locate and fasten firmly in place. All components must be set level.
2. Motor and drive are then assembled in their proper relative positions, if not already assembled on fan, as determined by plans and specifications. It is important that motor pulleys and blower pulleys be properly aligned so as to allow belts to run true and straight—misalignment can result in blower noise and relatively early wearout of belts.

### **B. Pre-operation Maintenance**

1. Set screws and belts
  - a. Rotate fan impellor to check any shifting during shipment. If necessary, shift wheel position and re-tighten.
  - b. Check belt and pulley alignment.
  - c. Check tightness of set screws in blower wheel hub.
  - d. Check tightness of set screws in bearing locking collar.
  - e. Check tightness of set screws in motor and fan pulleys.
  - f. Check tightness of all frame bolts and base bolts.
  - g. Check tightness of bearing mounting bolts.
2. Belt tension. Take up or relieve tension in belts so that there is approximately 3/4" to 1" deflection under 3 pounds pressure based on 2-1/2 to 3 foot centers on drive. Adjustment of belt tension is accomplished by use of adjustable motor base.

### **C. Operation**

After pre-operational checks, unit is ready for operation.

1. Start up blower. Check rotation.
2. If blower impellor is turning wrong direction, reverse rotation per instruction furnished by motor manufacturer.

### **D. Lubrication:**

1. **Anti-friction bearings** — Specific lubrication instructions are provided on the fan housing of each fan unit manufactured by Barry Blower. Correlation with the enclosed instruction sheet is necessary, in view of the varied types and styles of anti-friction bearings used.
2. **Sleevoil Pillow Blocks** — Dodge Oil Lubricated Bearings are used on special application. Where these have been called for and furnished please refer to the attached special operating, maintenance, and lubrication sheet enclosed with these instructions.

### **E. Trouble Shooting**

1. **Reduced Air Flow**
  - a. Blower impellers operating in wrong direction.
  - b. Dirt plugged air filters.
  - c. Belt slippage or belts broken.
  - d. Overload, starter cut-out.
  - e. Dirt plugged coils.
  - f. Intake and return air dampers closed.

## **Operation and Maintenance — Type DD Utility Exhausters**

These sturdily built exhausters require but little maintenance, as they are simple in design and rugged in construction. They can operate for many months without attention—as there is little to go wrong. Service can be summarized as Follows:

**Installation:** Be sure that fan is set level, and securely fastened to supporting base. If vibration pads are included, be certain they are firmly attached to fan base, and to supporting structure. The use of canvas connections on both intake and discharge is highly recommended. Canvas used should not be stiff enough so as to transmit vibration. Be certain wheel set screws are tight. Connect motor to power line of proper voltage — checked by examining the motor nameplate, and be certain fan operates in proper direction. Direction of rotation of motor can be changed by method indicated on motor nameplate or conduit box.

**Servicing:** Motors generally used are of sleeve bearing type, and require periodic oiling. A good grade of SAE 10 lubricating oil should be inserted into the oiler connections on each end of the motor about every two months. Not more than a teaspoonful should be used, over-oiling will result in oil drip.

Periodic cleaning of the fan wheel should be done if fan operates in a very dirty atmosphere. Stiff wire brushing of the impellor blades—

### **2. Noise In Blower**

- a. Bad bearings.
  - b. Loose tie rods or blades.
  - c. Blower wheels loose on shaft, wheels rubbing on housing.
  - d. Drive pulley loose on shaft.
  - e. Foreign object located in blower wheel or blower housing.
3. Necessary action. Correct situation as found, immediately, as continued operation can shorten life of component parts & result in poor air flow and eventual general shut down of system until needed repair is made.

## **Operation and Maintenance Barry Ventilation Sets BVF-BVB-BVA**

BARRY ventilating sets are a combination of welded and bolted construction with heavy gauges of steel, except in such instances where non-ferrous metals may be specified. They are rugged in construction and require little maintenance to keep them in an efficient and effective working state.

Upon installation the unit should be checked to be certain that all bolts, mountings, etc. are tightened down fully and that set screws on fan wheel, drive pulleys, etc. are secure. Belt tension should be checked and if need be, adjusted. After wiring the fan should be checked for proper RPM, and any adjustments necessary made by changing the setting on the variable pitch motor pulley provided as standard. They should never run type BVF units until proper static pressure has been applied; to run at no static could result in over-loading the motor seriously.

Units are normally equipped with ball bearings. Specific lubrication instructions are provided on the fan housing of each fan unit manufactured by Barry Blower. Correlation with the enclosed instruction sheet is necessary, in view of the varied types and styles of anti-friction bearings used. **DO NOT OVER-LUBRICATE.**

Motors are pre-lubricated at the factory if equipped with ball bearings, and first lubrication should not be made until after approximately six months of normal operation. Suggested lubricants are Alemite No. 38 grease, Superla 2X grease, or Stanabar. Here again, do not over-lubricate prior to initial operation since they have been oiled at factory. SAE No. 10 is recommended under normal operating conditions for oil lubricated motor bearings.

Some motors may have lifetime sealed bearings, in which case no lubrication is necessary.

After installation unit should be checked for proper direction of rotation and if found to be wrong, the required change should be made.

Unit should receive periodic cleaning to assure proper and efficient operation. Locking collars on bearings should be checked for tightness, to prevent slippage of shaft in the bearing itself, and also to maintain proper wheel alignment.

Given nominal attention, these highly effective units will continue to operate year after year with a minimum of attention.

about once a year will keep the fan operating at its highest efficiency.

### **TROUBLE SHOOTING**

1. **Fan fails to start:** Check fuses or power supply. Check for loose connection in starter or at motor.
2. **Unusual noise from fan:** If of mechanical nature, check to see if set screws on fan wheel are tight. Check to see if impellor is striking fan housing — adjust if needed. If of churning air nature, check to see if either fan intake or discharge ducts are plugged or closed. If automatic louvers are included in the installation, check to see if they are operating properly, and are not stuck shut. Be sure connecting ductwork is not touching fan housing, and that canvas connections are in place.
3. **Low air movement:** Check connecting ductwork for clogging with foreign material. Check outlet dampers if used to see if stuck shut. Check fan impellor for accumulation of dirt; Clean if necessary.

In general, properly installed, and given normal attention and service, these Barry Utility Exhausters will give years of trouble free, satisfactory service.

# GENERAL TERMS AND CONDITIONS OF SALE

**General.** All orders and agreements must be in writing and are not valid unless accepted and acknowledged by Seller at Seller's home office in Minneapolis, Minnesota. No Representative of Seller has the authority, express or implied to legally bind the Seller in any manner whatever.

Buyer's assent to these terms and conditions of sale shall be presumed from Buyer's acceptance of any part of the goods to which this contract relates. Any proposals, negotiations and representations regarding this transaction made prior to the date hereof are merged herein. Seller is not bound by any terms on Buyer's order blanks which attempt to impose any conditions at variance with Seller's terms and conditions of sale which are included herein or stated on Seller's packages, invoices or technical data sheets. Seller's failure to object to provisions contained in Buyer's order blanks shall not be deemed a waiver of the provisions of Seller's terms and conditions which shall constitute the entire contract between the parties.

**Prices.** All prices are F.O.B. point of shipment and are subject to change without notice. Quotations are subject to change prior to acceptance and are valid for a period of 30 days.

**Terms of Payment.** Shipments, deliveries and performance of work shall at all times be subject to the approval of Seller's credit department. Seller may at any time decline to make a shipment or delivery or perform any work except upon receipt of payment or security or upon terms and conditions satisfactory to its credit department. Subject to such reserved right, terms of payment are as shown on the face side hereof and shall be effective from date of invoice. Cash discounts shall not be allowed on any transportation charges included in delivered prices.

**Cancellation.** All orders are subject to a cancellation charge equal to 10 per cent of the value of the order in addition to any labor and material costs expended at the time of cancellation.

**Transportation.** If transportation charges from point of origin of the shipment to a designated point are included in the prices herein named or heretofore quoted, any change in such transportation charges shall be for the account of the Buyer. Except as otherwise stated in the Seller's quotation, the Seller shall not be responsible for switching, spotting, handling, storage, demurrage or any other transportation or accessorial service, nor for any charges included in the applicable tariff freight rate from shipping point to the designated point.

**Taxes.** Any taxes which the Seller may be required to pay or collect, under any existing or future law, upon or with respect to the sale, purchase, delivery, storage, processing, use or consumption of any of the material covered hereby, including taxes upon or measured by the receipts from the sale thereof, shall be for the account of the Buyer, who shall promptly pay the amount thereof to the Seller upon demand.

**Delay.** The Seller shall be excused for any delay in performance due to acts of God, war, riot, civil disorder, embargoes, acts of civil or military authorities, fires, floods, accidents, quarantine restrictions, mill conditions, strikes, differences with workmen, delays in transportation, shortage of cars, fuel, labor or materials, or any circumstance or cause beyond the control of the Seller in the reasonable conduct of its business.

**Risk of Loss.** Risk of loss shall pass to the Buyer upon shipment by Seller.

**Inspection.** If, upon receipt by the Buyer of the material ordered, the same shall appear not to conform to the contract, Buyer shall immediately notify Seller of such condition and alleged non-conformity and afford Seller a reasonable opportunity to inspect the material. No material shall be returned to Seller without Seller's express written consent.

**Permissible Variations.** Except in the particulars specified by Buyer and expressly agreed to in writing by Seller, all material shall be produced in accordance with Seller's standard practices. All material, including that produced to meet an exact specification, shall be subject to tolerances and variations consistent with usages of the trade and regular mill practices concerning dimension, weight, straightness, section, composition and mechanical properties; normal variations in surface, internal conditions and quality; deviations from tolerances; and variations consistent with practical testing and inspection methods; and regular trade practices concerning over and under shipments.

**Buyer's Remedies.** If the material furnished to the Buyer shall fail to conform to this contract or to any express written warranty, the Seller shall replace such non-conforming material at the original point of delivery and shall furnish instructions for its disposition. Any transportation charges involved in such disposition shall be for the Buyer's account. The Buyer's exclusive and sole remedy on account or in respect of the furnishing of material that does not conform to this contract, or to any express written warranty, shall be to secure replacement thereof as aforesaid. The Seller shall not in any event be liable for the cost of any labor expended on any such material or for any special, direct, indirect, incidental or consequential damages to anyone by reason of the fact that such material does not conform to this contract or to any express written warranty.

#### Warranty.

Seller warrants to the original purchaser the equipment of its manufacture to be free from defects in material and workmanship under normal use and service. Our obligation under

this Warranty shall be limited to repairing or replacing free of cost F.O.B. factory, to such original purchaser, any part or parts of said fan which, upon Seller's examination shall disclose to its satisfaction to be defective; & providing further, that said part or parts be returned to and received by the factory, upon prior authorization, transportation charges prepaid, within one year from date of original installation or eighteen months from date of shipment from factory, whichever shall occur first, provided that Seller has been given written notice immediately upon discovery of such defect.

The obligation of Seller under this Warranty shall not include payment of any local delivery costs or removal or installation charges in connection with the repair or replacement of any defective part or parts and Seller will not assume any liability for any repairs made outside its factory without its prior written consent.

The obligation of Seller under this Warranty shall not include payment of any cost resulting from structural changes, building alterations, removal and replacement of other equipment, rigging, and handling charges, or any other charges made necessary by the repair, removal or replacement of this equipment or any part thereof.

Seller makes no warranty whatsoever with respect to motors, switches, drives, controls, etc., since they are warranted separately by their respective manufacturers. These warranties, as received, are extended to the Buyer.

Seller shall not accept any liability whatsoever until payment has been made to Him for said products and then such liability shall not exceed the cost of parts required to correct defects.

The above Warranties shall not apply to said fan or any part thereof which has been subjected to any accident caused in transit, tampered with or altered in any way, misapplication, abuse, or misuse, improper maintenance prior to or after installation, or damage by flood, fire, or Acts of God, or which has the serial numbers altered, effaced or removed.

"THE ABOVE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE ARE HEREBY DISCLAIMED AND EXCLUDED FROM THIS AGREEMENT."

**Patents.** The Seller shall indemnify the Buyer against any judgment for damages and costs which may be rendered against the Buyer in any suit brought on account of the alleged infringement of any United States patent by any product supplied by the Seller hereunder, unless made in accordance with materials, designs or specifications furnished or designated by the Buyer, in which case the Buyer shall indemnify the Seller against any judgment for damages and costs which may be rendered against the Seller in any suit brought on account of the alleged infringement of any United States patent by such product or by such materials, designs or specifications; provided that prompt written notice be given to the party from whom indemnity is sought of the bringing of the suit and that an opportunity be given such party to settle or defend it as that party may see fit and that every reasonable assistance in settling or defending it shall be rendered. Neither the Seller nor the Buyer shall in any event be liable to the other for special, indirect, incidental or consequential damages arising out of or resulting from infringement of patents.

**Compliance with Laws.** The Seller intends to comply with all laws applicable to its performance of this Agreement.

**Interpretation.** This Agreement shall be governed by and interpreted under the Uniform Commercial Code as in effect in the state from which the goods are shipped to Buyer.

**Non-Waiver by Seller.** Waiver by the Seller of a breach of any of the terms and conditions of this Agreement shall be without prejudice to its legal rights and shall not be deemed a waiver of any other breach.

**Time for Bringing Action.** Any action for breach of this Agreement must be commenced within two years after the cause of action has accrued.

**Security Interest.** Seller reserves a security interest in the goods as security for the performance of this Agreement. Notwithstanding any other terms of this Agreement, should Buyer default in the payment of the purchase price hereunder or fail to comply with this Agreement, Seller shall have the right upon Ten (10) days' written notice to remove and/or repossess the goods and to take such other action as permitted by law; it being understood that the remedies contained in this section are cumulative and in addition to all other rights and remedies of Seller under this Agreement, by operation of law or otherwise.

**METHOD OF SHIPMENT.** Seller shall ship fans as completely assembled as can be handled by carriers to the common carrier point nearest destination without permits or special rail or trailer configurations unless otherwise specified. Rail shipments will be to nearest rail siding. Seller shall not be responsible for cost to move goods from siding to job site.

Larger fans may necessitate horizontal and/or vertical splits for partial disassembly for ease of shipment. In such cases Seller shall not be responsible for cost of labor or time or loss due to the reassembly of the fans.

This warranty is a LIMITED warranty. Anything in the warranty notwithstanding, IMPLIED WARRANTIES FOR PARTICULAR PURPOSE AND MERCHANTABILITY SHALL BE LIMITED TO THE DURATION OF THE EXPRESS WARRANTY. MANUFACTURER EXPRESSLY DISCLAIMS AND EXCLUDES ANY LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY.



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