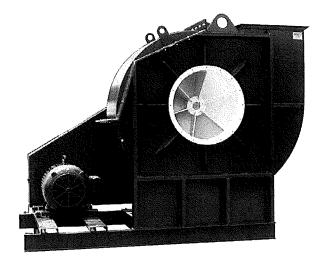
# **Series 200 Blowers**

Features • Drive Methods • Material Specifications • Arrangements Blower Mounting Assembly • Bolt Tightening Sequence • Accessories

Custom engineered systems to fit your needs, entire new systems or additions to your existing systems to expand or improve your up time.

Trim Collection Systems • Balers
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# CENTRIFUGAL FANS DESIGNED FOR INDUSTRIAL MATERIAL HANDLING APPLICATIONS

### **STANDARD FEATURES**

**Welded construction** – provides rigidity for rugged industrial applications. In smaller sizes, welded housing and bases are bolted together so that housing can be unbolted and rotated to other discharge position in the field.

**Rotatable and reversible** – series 200 blowers can be rotated in the field to achieve various discharges.

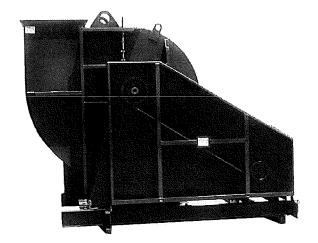
**Lifting lugs** – on all blower sizes for ease of handling.

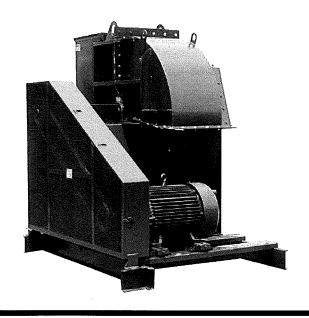
**Flanged inlets and outlets** – with holes on all fans (see page 17 for standard hole locations) slip connections available as an option.

**Bearing** – ball or spherical roller bearing selected for extended service life over full catalog range.

**Shafting** – turned, ground, and polishing shafting is straightened to close tolerance to minimize "run out" and ensure smooth operation.

**Precise balancing** – series 200 blower wheels are dynamically balanced before final assembly, after assembly, all fans are test-run at as-ordered operating speed.





### **SERIES 200 BLOWERS**

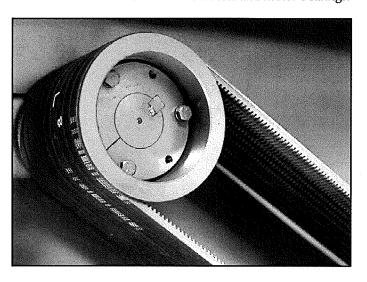


### **DRIVE METHODS**

### **Belt Drive**

The use of standard V-belt drive flexibility in fan performance by changing sheaves and belts.

In the lower horsepower ranges, V-belts drive selection is relatively simple, but as horsepower requirements increase, V-belt drive selection becomes more complicated and requires more consideration of the drive's effect on fan and motor bearings.



Although there are exceptions to every rule, there are a few general recommendations to remember:

- 3600 RPM motors are not generally recommended for belt drives above 20 H.P.
- 1800 RPM motors are not recommended for belt drives above 300 H.P.
- 3. All motors 125 H.P. and larger, which are to be used with belt driven fans, require that the motor manufacturer:
  - a. Recommend the minimum diameter motor sheaves which may be used.
  - b. Recommend the maximum diameter motor sheaves which may be used.

With the above information from the motor manufacturer, the drive can be selected.

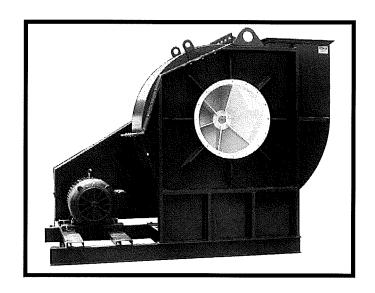
| FAN<br>SIZE | MAX. FRAME<br>SIZE |
|-------------|--------------------|
| 209         | 215T               |
| 211         | 286T               |
| 213         | 326T               |
| 215         | 326T               |
| 217         | 326T               |
| 219         | 405T               |
| 221         | 405T               |
| 223         | 405T               |
| 226         | 405T               |
| 229         | 447T               |
| 233         | 447T               |
| 237         | 447T               |

# MATERIAL SPECIFICATIONS FOR STANDARD STEEL FANS

### **U.S. Standard Steel Gauge to 7 Gauge – Dimensions (Inches)**

| FAN  | BARE FAN     | HOUSING |        |        | BEARING BASE |      | SHAFT DIADES | DACK DLATE |            |
|------|--------------|---------|--------|--------|--------------|------|--------------|------------|------------|
| SIZE | WEIGHT (lbs) | SIDES   | PLATES | SCROLL | SIDES        | BASE | DIA.         | BLADES     | BACK PLATE |
| 209  | 290          | 7       | 10     | 7      | 7            | 10   | 1 11/16      | 1/4        | 1/4        |
| 211  | 472          | 7       | 10     | 7      | 7            | 10   | 1 11/16      | 1/4        | 1/4        |
| 213  | 664          | 7       | 10     | 7      | 7            | 10   | 1 15/16      | 3/8        | 3/8        |
| 215  | 930          | 7       | 10     | 7      | 7            | 10   | 2 3/16       | 3/8        | 3/8        |
| 217  | 1139         | 7       | 10     | 7      | 7            | 10   | 2 7/16       | 3/8        | 3/8        |
| 219  | 1431         | 7       | 10     | 7      | 7            | 10   | 2 11/16      | 3/8        | 3/8        |
| 221  | 1711         | 7       | 7      | 7      | 7            | 7    | 2 11/16      | 3/8        | 3/8        |
| 223  | 2061         | 7       | 7      | 7      | 7            | 7    | 2 15/16      | 3/8        | 3/8        |
| 226  | 2316         | 7       | 7      | 7      | 7            | 7    | 3 7/16       | 3/8        | 3/8        |
| 229  | 3115         | 1/4     | 7      | 1/4    | 1/4          | 1/4  | 3 15/16      | 3/8        | 3/8        |
| 233  | 3790         | 1/4     | 7      | 1/4    | 1/4          | 1/4  | 3 15/16      | 3/8        | 3/8        |
| 237  | 5132         | 1/4     | 1/4    | 1/4    | 1/4          | 1/4  | 4 7/16       | 3/8        | 3/8        |

- 1. All Sheet and Plate Steel is AISI 1017.
- 2. Wheel Hubs are Fabricated Steel.
- 3. Shafting is AISI 1040 Turned, Ground, Polished, and Straightened.
- 4. Alternate Materials or Coatings may Require Changes in Specifications.



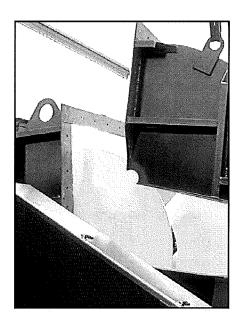
## **Arrangement 5 with Unitary Base**

Complete motor and drive information is necessary when ordering (see maximum motor frame chart on page 8).

Maximum temperatures: standard fan  $-300^{\circ}$ F., with shaft cooler and heat shield  $-600^{\circ}$ F.

## **SERIES 200 BLOWERS**

#### **BOLT TIGHTENING SEQUENCE BLOWER MOUNTING ASSEMBLY FIRST BASE CHANNEL BOLT BOLT** FLAT WASHER **BEVEL WASHER** BASE ANGLE **SECOND PLATE** PLATE RUBBER **RUBBER** PLATE **PLATE** GRATE **GRATE PLATE** PLATE FLAT WASHER FLAT WASHER LOCK WASHER LOCK WASHER **THIRD** NUT NUT



#### **SPLIT HOUSING**

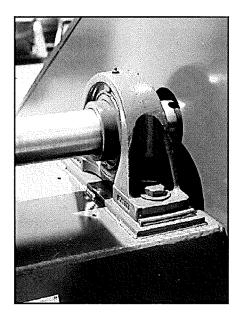
- Sizes 219 and larger are available with horizontally split housings
- Bars are welded to housing for bolting sections together
- Fans with split housing are not rotatable or reversible

#### TYPE A:

- available on Top Horizontal, Bottom Horizontal, Up Blast, Down Blast, and Top Angular Up fans
- horizontal split allows removal of section without disturbing inlet
- · outlet must be disconnected on Up Blast and Top Angular Fans

#### TYPE B:

- available on Top Angular Down and Bottom Angular Up fans
- · Pie-shaped section is removable without disturbing inlet or outlet



#### SHAFT SEAL

#### Felt Shaft Seal:

- Felt seal element encased between housing drive side and metal retaining disc
- · Felt insert may be easily split for field installation and maintenance
- Suitable for operation up to 300°F.

#### **Ceramic Felt Shaft Seal:**

- (7) ceramic felt seal elements encased between metal backing plate and retaining disc
- Elements may be easily split for field installation and maintenance
- Best suited for 301°F. to 1000°F. operation