

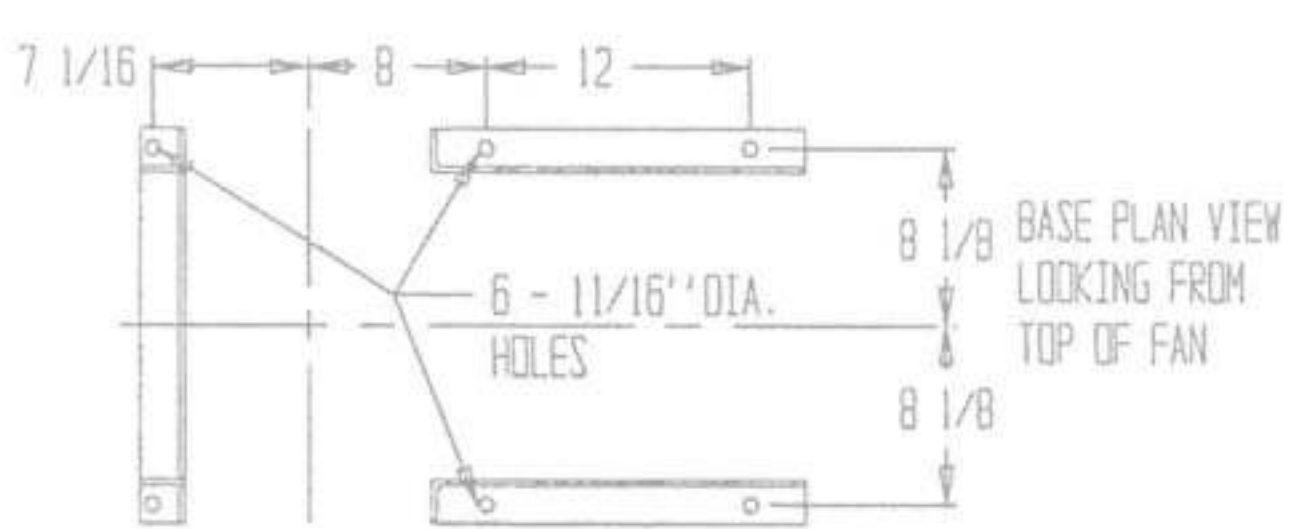
**MURPHY LTD**

**N. R.**

**INDUSTRIAL**

**EXHAUST**

**FANS**



# BUILT FOR YEARS OF SERVICE

**N. R. Murphy** industrial exhaust fans are designed and built for years of trouble-free service.

Our wheel and fan arrangement designs are based on years of experience in manufacturing exhaust fans for all types of Canadian industry. The designs are versatile for use in many different dust control and air handling applications. All of our specifications are tested and proven reliable.

Every Murphy fan is manufactured to these exacting design specifications using the best of materials. The fan housing is constructed with heavy gauge steel and braced with steel angles. The scroll wrap is continuously welded to the side plates for a rugged and dust-tight casing. Heavy-duty, self-aligning pillow block bearings are securely fastened to a strong plate pedestal.

Our industrial exhaust fans all have balanced wheels - carefully designed, tested and manufactured for maximum performance. Each wheel is statically and dynamically balanced for smooth operation.

The result is industrial exhaust fans that are built to last - and last they have. Today, Murphy fans are working reliably in a wide range of applications - either attached to Murphy dust collectors, used separately for air and material handling or installed to replace other fans.



**Arrangement 4 Industrial Exhauster**

## FANS IN STOCK FOR FAST DELIVERY

At N. R. Murphy, we know that fast delivery of fans can be critical to an air or material handling installation. Sometimes, as in the case of breakdowns, a totally new fan unit is required right away. Delays can be very costly.

To help our customers with crucial delivery problems, we carry a large inventory of complete fan units. Our most popular designs, arrangements and sizes are fully built and ready for immediate delivery.

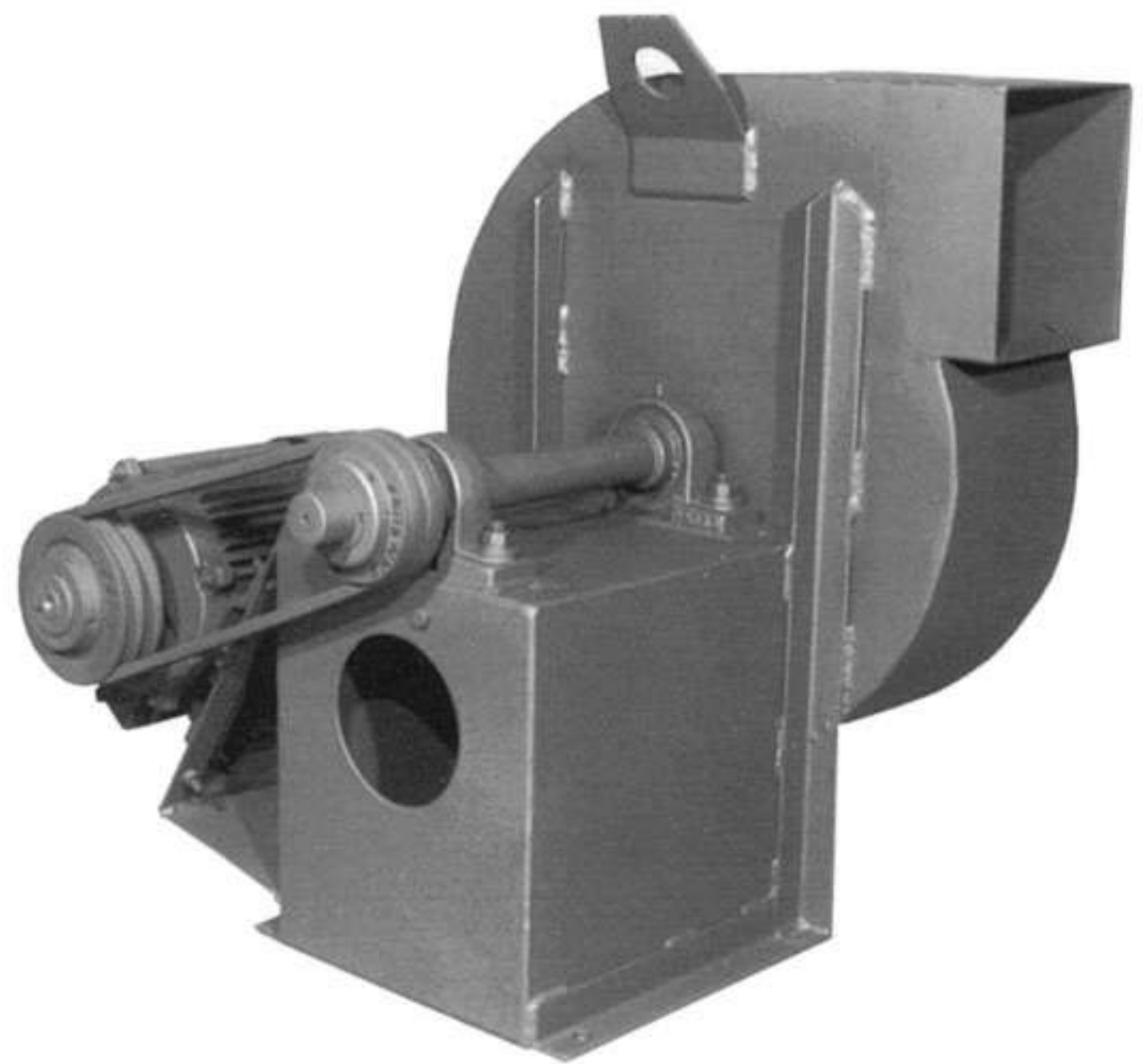
Even when the fan required is unusual and not available from stock, we can modify an existing fan or build one specially - in time to meet your need. In addition, we maintain a full parts inventory for emergency repairs.

No other fan manufacturer can serve you faster.

## SPECIFICATION STANDARDS

All Murphy standard industrial exhaust fans are capable of handling air up to 600°F (except for arrangement #4). When higher temperatures are encountered, please consult with our fan experts.

Proper air volumes and pressures can be selected from the appropriate fan charts which are based on standard air at 0.075 density (29.92 HG barometer, 70°F).



**Arrangement 9 Industrial Exhauster**

# INDUSTRIAL EXHAUST FAN WHEELS

There are four basic wheel types available with N. R. Murphy exhaust fans:

- EH for heavy duty material handling
- EHL for light duty material handling
- EM-1 for light duty material handling
- EA-1 for air handling

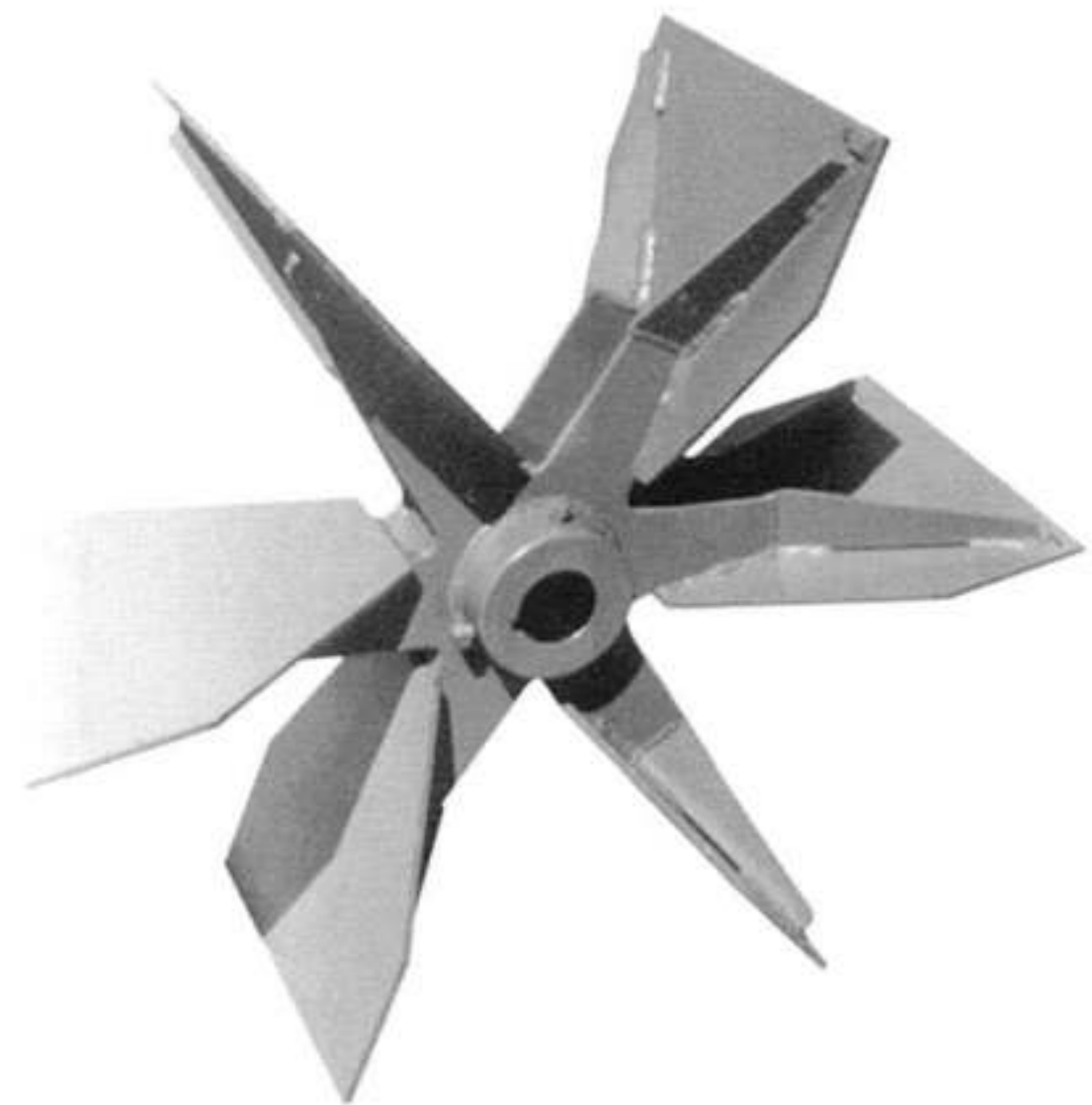
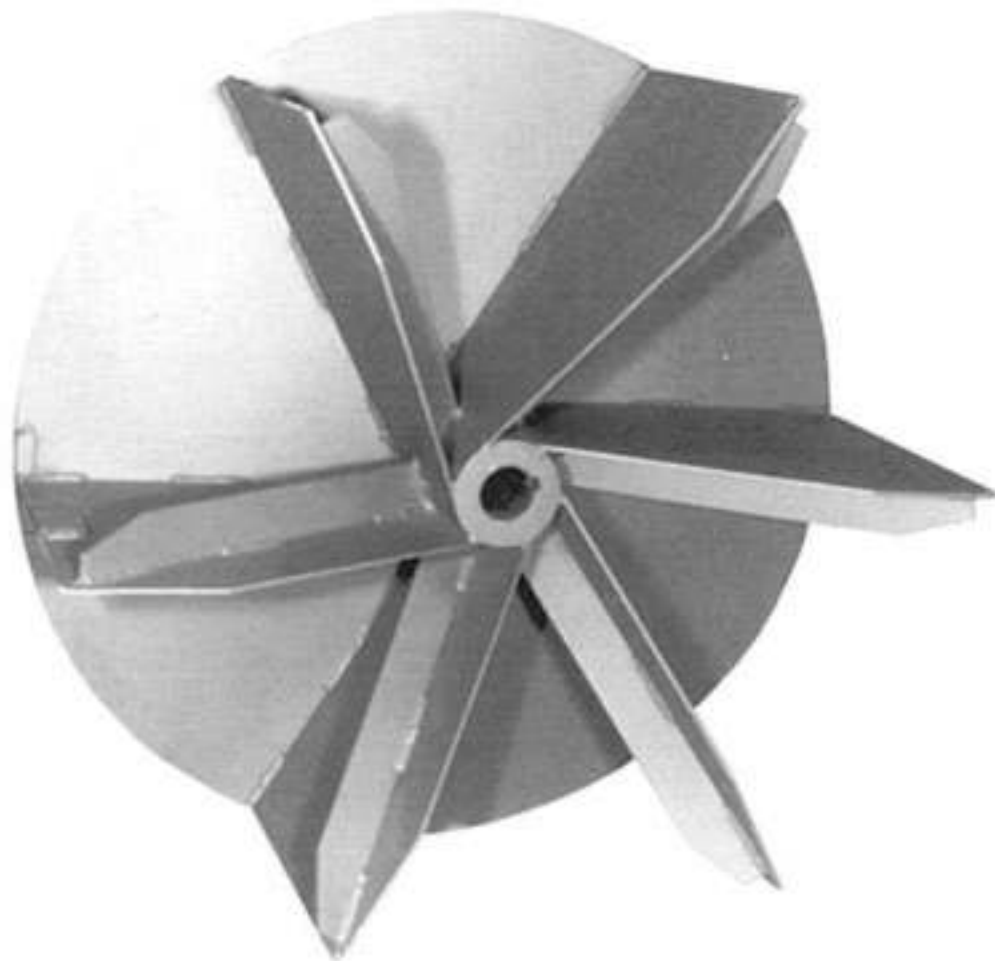
The following descriptions should help you choose the proper wheel for your needs. If you have any questions or problems, please contact our fan experts for advice.

## Heavy Material Handling Wheel – EH

This open wheel is designed for most industrial material handling requirements. It is accurately fabricated from extra heavy steel plate to withstand severe shock and abrasion in high volume material applications.

Typical applications would be for handling air containing small wood blocks, knots, silage, (paper trim incorporating a nose cone into the design) or similar materials.

The EHL wheel, of the same design as the EH-1, is constructed for standard industrial material handling requirements.



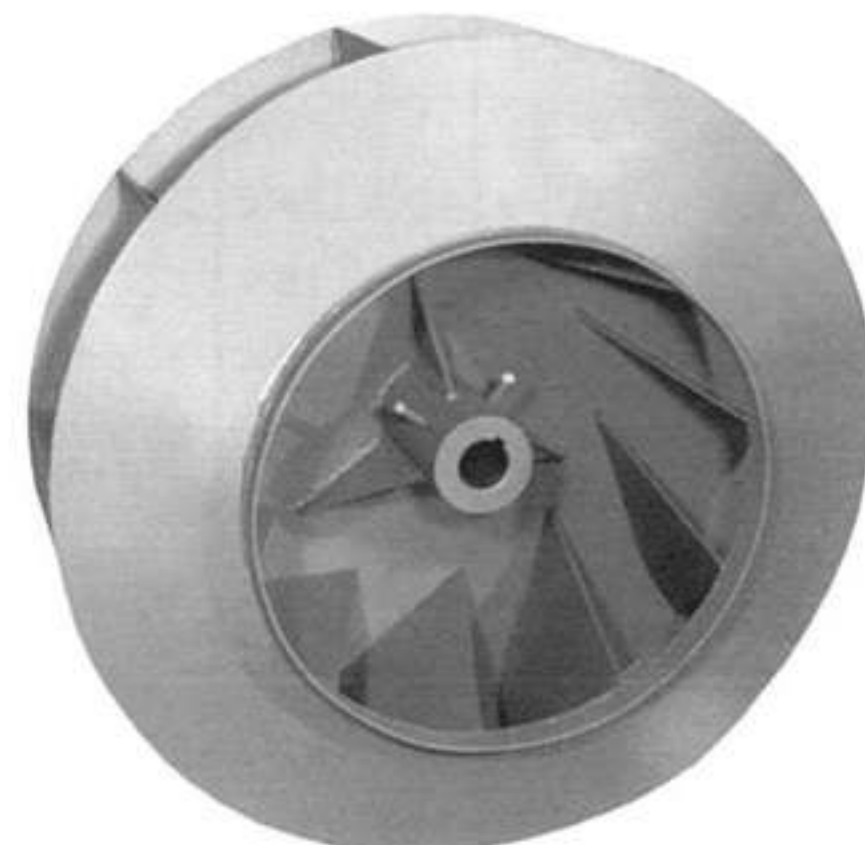
## Material Handling Wheel – EM-1

This wheel is similar to the open design EH, but has a back plate to prevent long, fibrous or stringy materials like wood shavings from wrapping around the blades. The EM-1 wheel with slightly higher efficiency than the EH design is widely used for sawdust chips or similar material. The back plate and individual blade supports add extra rigidity and strength to the wheel.

## Air Handling Wheel – EA-1

The air handling wheel EA-1 is ideal for the efficient handling of relatively clean air. It features a backward inclined, radial tipped design with a coned shroud and back plate for added rigidity and strength. The air flow is guided by the controlled inlet clearance. Wheel EA-1 has the highest efficiency of our four wheel designs.

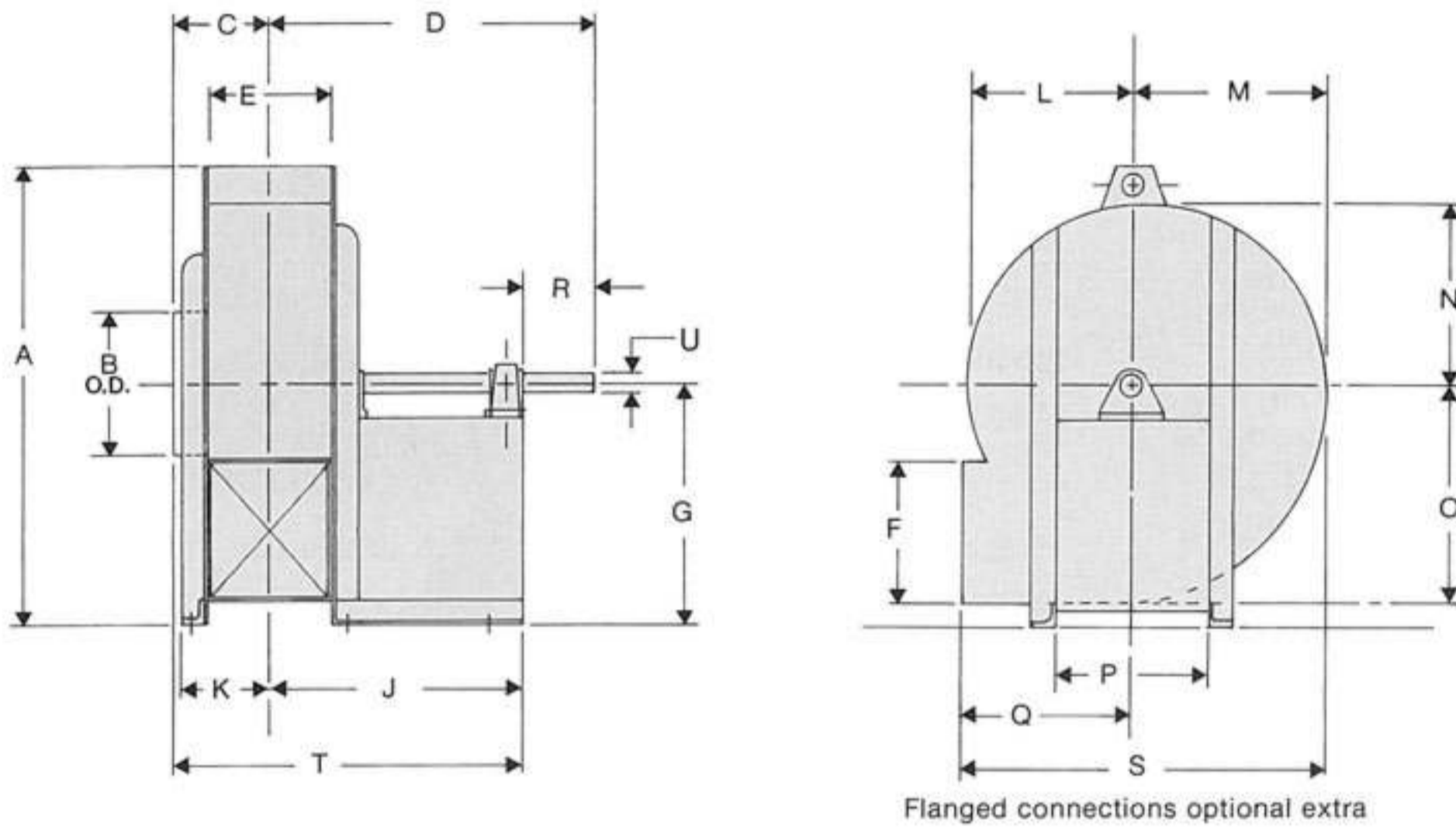
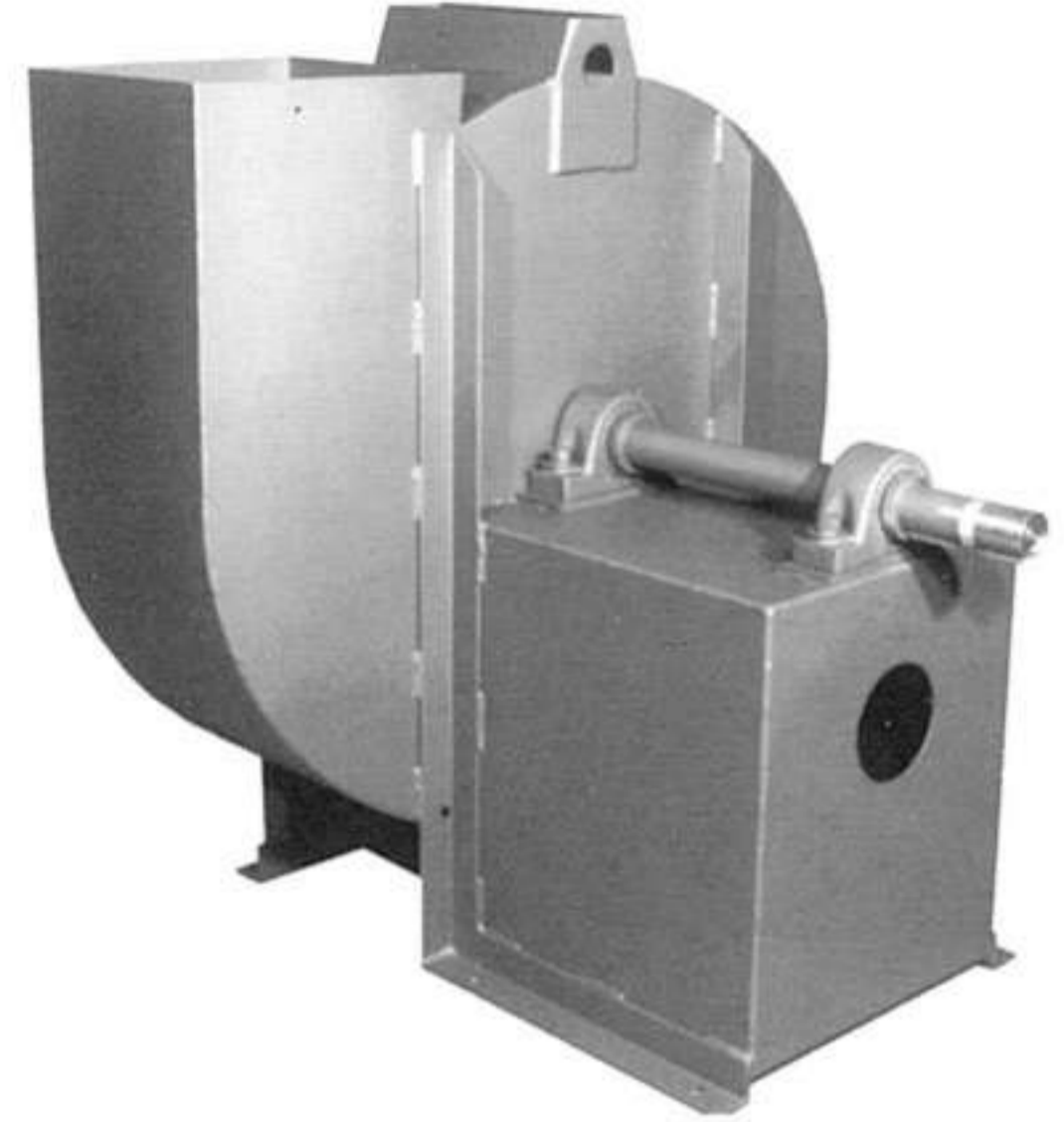
This wheel is used extensively for pulling air through filters or separators. It should not be used for handling materials.



# FAN ARRANGEMENT SPECIFICATIONS

## Arrangement #1

This arrangement (bare fan less motor and drives) is very popular for most applications due to the flexibility and the versatility of discharge positions at time of manufacture. The heavy shaft of this arrangement is supported by heavy duty bearings mounted on a strong, fabricated steel base. This arrangement is suitable for those wanting to mount their own motor and drives.



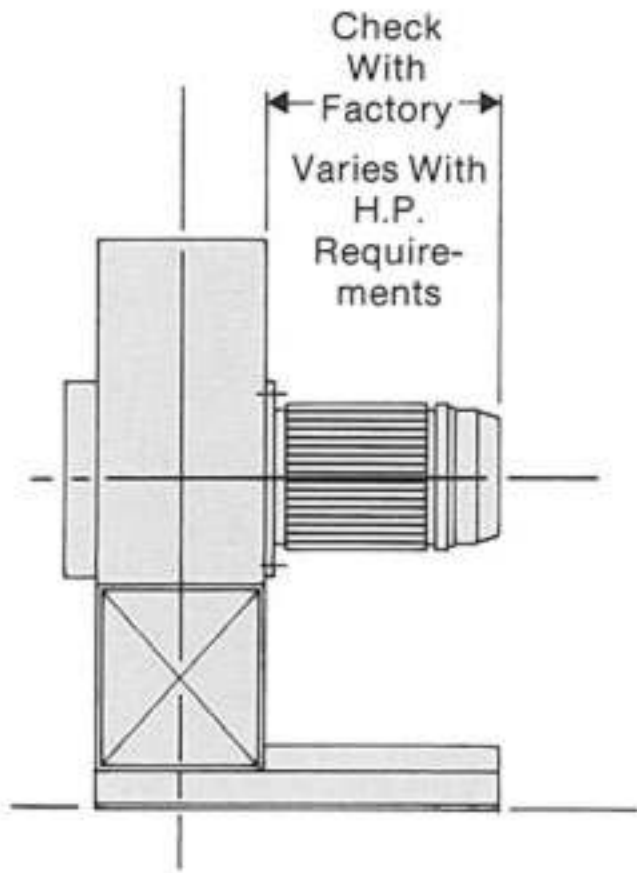
## Dimensions Table for Arrangements 1, 4 & 9

Weights shown are for Arrangement 1 fans. Dimensions (in inches) are not to be used for construction.

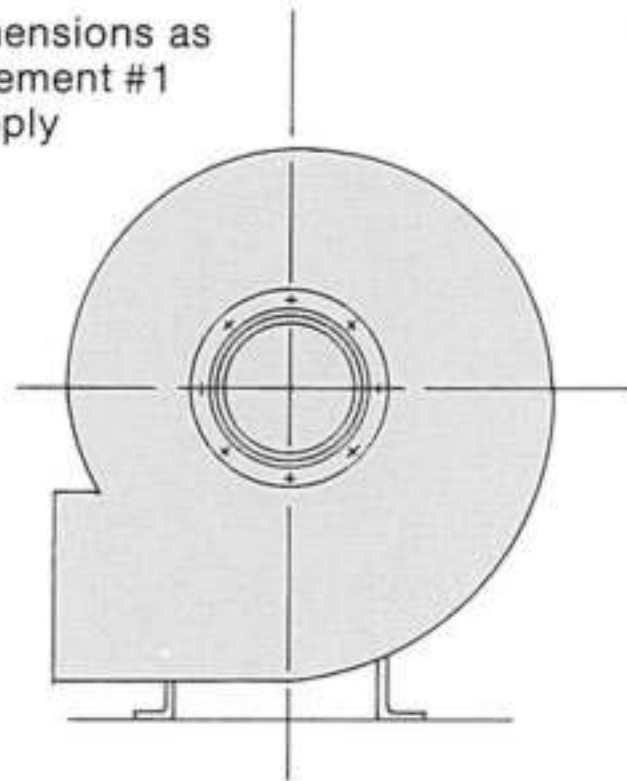
| Fan Size | A                              | B  | C                                | D                                | E                              | F                              | G                              | J                                | K                               | L                              | M                              | N                              | O                              | P                               | Q                              | R                               | S                              | T                              | U                               |                                 | Approx Weight Lbs |
|----------|--------------------------------|----|----------------------------------|----------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------------------|---------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|--------------------------------|---------------------------------|---------------------------------|-------------------|
|          |                                |    |                                  |                                  |                                |                                |                                |                                  |                                 |                                |                                |                                |                                |                                 |                                |                                 |                                |                                | STD                             | H.D                             |                   |
| 7        | 27 <sup>1</sup> / <sub>8</sub> | 7  | 5 <sup>1</sup> / <sub>16</sub>   | 19 <sup>1</sup> / <sub>4</sub>   | 6 <sup>1</sup> / <sub>8</sub>  | 6 <sup>3</sup> / <sub>4</sub>  | 15 <sup>1</sup> / <sub>2</sub> | 15 <sup>1</sup> / <sub>16</sub>  | —                               | 8                              | 9 <sup>5</sup> / <sub>8</sub>  | 8 <sup>5</sup> / <sub>8</sub>  | 10 <sup>3</sup> / <sub>8</sub> | 9 <sup>3</sup> / <sub>4</sub>   | 8 <sup>3</sup> / <sub>8</sub>  | 4 <sup>3</sup> / <sub>16</sub>  | 19 <sup>7</sup> / <sub>8</sub> | 20 <sup>1</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>8</sub>   | 1 <sup>7</sup> / <sub>16</sub>  | 185               |
| 9        | 31 <sup>1</sup> / <sub>8</sub> | 9  | 5 <sup>7</sup> / <sub>8</sub>    | 22                               | 7 <sup>3</sup> / <sub>4</sub>  | 8 <sup>1</sup> / <sub>2</sub>  | 17                             | 17 <sup>7</sup> / <sub>8</sub>   | —                               | 10 <sup>1</sup> / <sub>8</sub> | 12 <sup>1</sup> / <sub>8</sub> | 11 <sup>1</sup> / <sub>8</sub> | 13 <sup>3</sup> / <sub>8</sub> | 11 <sup>1</sup> / <sub>2</sub>  | 10 <sup>1</sup> / <sub>2</sub> | 4 <sup>1</sup> / <sub>8</sub>   | 24 <sup>3</sup> / <sub>8</sub> | 23 <sup>3</sup> / <sub>4</sub> | 1 <sup>3</sup> / <sub>8</sub>   | 1 <sup>11</sup> / <sub>16</sub> | 240               |
| 11       | 35                             | 11 | 7 <sup>3</sup> / <sub>16</sub>   | 24 <sup>9</sup> / <sub>16</sub>  | 9 <sup>3</sup> / <sub>8</sub>  | 10 <sup>5</sup> / <sub>8</sub> | 18 <sup>1</sup> / <sub>2</sub> | 19 <sup>3</sup> / <sub>16</sub>  | 6 <sup>13</sup> / <sub>16</sub> | 12 <sup>1</sup> / <sub>4</sub> | 14 <sup>3</sup> / <sub>4</sub> | 13 <sup>1</sup> / <sub>2</sub> | 16 <sup>1</sup> / <sub>2</sub> | 11 <sup>1</sup> / <sub>2</sub>  | 13                             | 5 <sup>3</sup> / <sub>8</sub>   | 27 <sup>3</sup> / <sub>4</sub> | 26 <sup>3</sup> / <sub>8</sub> | 1 <sup>11</sup> / <sub>16</sub> | 1 <sup>11</sup> / <sub>16</sub> | 300               |
| 13       | 40 <sup>1</sup> / <sub>2</sub> | 13 | 8 <sup>3</sup> / <sub>8</sub>    | 28 <sup>1</sup> / <sub>2</sub>   | 11                             | 12 <sup>5</sup> / <sub>8</sub> | 21 <sup>1</sup> / <sub>2</sub> | 22 <sup>1</sup> / <sub>2</sub>   | 7 <sup>5</sup> / <sub>8</sub>   | 14 <sup>3</sup> / <sub>8</sub> | 17 <sup>3</sup> / <sub>8</sub> | 16                             | 19 <sup>1</sup> / <sub>2</sub> | 14                              | 15                             | 6                               | 32 <sup>3</sup> / <sub>8</sub> | 30 <sup>7</sup> / <sub>8</sub> | 1 <sup>11</sup> / <sub>16</sub> | 1 <sup>15</sup> / <sub>16</sub> | 425               |
| 15       | 45 <sup>7</sup> / <sub>8</sub> | 15 | 9 <sup>9</sup> / <sub>16</sub>   | 31 <sup>11</sup> / <sub>16</sub> | 12 <sup>5</sup> / <sub>8</sub> | 14 <sup>1</sup> / <sub>2</sub> | 24 <sup>1</sup> / <sub>2</sub> | 25 <sup>5</sup> / <sub>16</sub>  | 8 <sup>7</sup> / <sub>16</sub>  | 16 <sup>5</sup> / <sub>8</sub> | 20                             | 18 <sup>3</sup> / <sub>8</sub> | 22 <sup>1</sup> / <sub>2</sub> | 17 <sup>1</sup> / <sub>2</sub>  | 17 <sup>1</sup> / <sub>4</sub> | 6 <sup>3</sup> / <sub>8</sub>   | 37 <sup>1</sup> / <sub>4</sub> | 34 <sup>7</sup> / <sub>8</sub> | 1 <sup>11</sup> / <sub>16</sub> | 1 <sup>15</sup> / <sub>16</sub> | 570               |
| 17       | 51 <sup>3</sup> / <sub>8</sub> | 17 | 10 <sup>13</sup> / <sub>16</sub> | 35 <sup>5</sup> / <sub>16</sub>  | 14 <sup>3</sup> / <sub>8</sub> | 16 <sup>1</sup> / <sub>4</sub> | 27 <sup>1</sup> / <sub>2</sub> | 27 <sup>15</sup> / <sub>16</sub> | 9 <sup>13</sup> / <sub>16</sub> | 18 <sup>3</sup> / <sub>4</sub> | 22 <sup>5</sup> / <sub>8</sub> | 20 <sup>7</sup> / <sub>8</sub> | 25 <sup>3</sup> / <sub>8</sub> | 21 <sup>1</sup> / <sub>4</sub>  | 19 <sup>1</sup> / <sub>2</sub> | 7 <sup>3</sup> / <sub>8</sub>   | 42 <sup>1</sup> / <sub>8</sub> | 38 <sup>3</sup> / <sub>4</sub> | 1 <sup>15</sup> / <sub>16</sub> | 2 <sup>3</sup> / <sub>16</sub>  | 800               |
| 19       | 56 <sup>5</sup> / <sub>8</sub> | 19 | 12                               | 39 <sup>1</sup> / <sub>4</sub>   | 16                             | 18 <sup>1</sup> / <sub>4</sub> | 30 <sup>1</sup> / <sub>2</sub> | 31                               | 10 <sup>5</sup> / <sub>8</sub>  | 20 <sup>7</sup> / <sub>8</sub> | 25 <sup>1</sup> / <sub>8</sub> | 23 <sup>1</sup> / <sub>8</sub> | 28 <sup>3</sup> / <sub>8</sub> | 23 <sup>1</sup> / <sub>4</sub>  | 21 <sup>1</sup> / <sub>2</sub> | 8 <sup>1</sup> / <sub>4</sub>   | 46 <sup>5</sup> / <sub>8</sub> | 43                             | 2 <sup>3</sup> / <sub>16</sub>  | 2 <sup>7</sup> / <sub>16</sub>  | 920               |
| 21       | 62 <sup>1</sup> / <sub>8</sub> | 21 | 13 <sup>1</sup> / <sub>16</sub>  | 41 <sup>7</sup> / <sub>8</sub>   | 17 <sup>5</sup> / <sub>8</sub> | 20 <sup>1</sup> / <sub>8</sub> | 33 <sup>1</sup> / <sub>2</sub> | 32 <sup>13</sup> / <sub>16</sub> | 11 <sup>7</sup> / <sub>16</sub> | 23 <sup>1</sup> / <sub>8</sub> | 27 <sup>3</sup> / <sub>4</sub> | 25 <sup>5</sup> / <sub>8</sub> | 31 <sup>1</sup> / <sub>4</sub> | 25 <sup>3</sup> / <sub>4</sub>  | 24                             | 9 <sup>1</sup> / <sub>16</sub>  | 51 <sup>3</sup> / <sub>4</sub> | 45 <sup>7</sup> / <sub>8</sub> | 2 <sup>7</sup> / <sub>16</sub>  | 2 <sup>11</sup> / <sub>16</sub> | 1225              |
| 23       | 67 <sup>5</sup> / <sub>8</sub> | 23 | 14 <sup>1</sup> / <sub>8</sub>   | 44 <sup>9</sup> / <sub>16</sub>  | 19 <sup>1</sup> / <sub>4</sub> | 22 <sup>1</sup> / <sub>8</sub> | 36 <sup>1</sup> / <sub>2</sub> | 35 <sup>1</sup> / <sub>8</sub>   | 12 <sup>3</sup> / <sub>4</sub>  | 25 <sup>1</sup> / <sub>4</sub> | 30 <sup>1</sup> / <sub>2</sub> | 28 <sup>1</sup> / <sub>8</sub> | 34 <sup>1</sup> / <sub>4</sub> | 27 <sup>1</sup> / <sub>4</sub>  | 26                             | 9 <sup>7</sup> / <sub>16</sub>  | 56 <sup>1</sup> / <sub>2</sub> | 49 <sup>1</sup> / <sub>4</sub> | 2 <sup>11</sup> / <sub>16</sub> | 2 <sup>15</sup> / <sub>16</sub> | 1440              |
| 26       | 75 <sup>5</sup> / <sub>8</sub> | 26 | 15 <sup>11</sup> / <sub>16</sub> | 49 <sup>15</sup> / <sub>16</sub> | 21 <sup>3</sup> / <sub>4</sub> | 24 <sup>7</sup> / <sub>8</sub> | 41                             | 39 <sup>15</sup> / <sub>16</sub> | 14 <sup>1</sup> / <sub>8</sub>  | 28 <sup>3</sup> / <sub>8</sub> | 34 <sup>3</sup> / <sub>8</sub> | 31 <sup>5</sup> / <sub>8</sub> | 38 <sup>5</sup> / <sub>8</sub> | 27 <sup>1</sup> / <sub>4</sub>  | 29                             | 10                              | 63 <sup>3</sup> / <sub>8</sub> | 55 <sup>5</sup> / <sub>8</sub> | 2 <sup>11</sup> / <sub>16</sub> | 3 <sup>7</sup> / <sub>16</sub>  | 2000              |
| 29       | 84 <sup>3</sup> / <sub>8</sub> | 29 | 17 <sup>3</sup> / <sub>16</sub>  | 53 <sup>3</sup> / <sub>16</sub>  | 24 <sup>3</sup> / <sub>8</sub> | 27 <sup>3</sup> / <sub>4</sub> | 46                             | 42 <sup>11</sup> / <sub>16</sub> | 15 <sup>3</sup> / <sub>8</sub>  | 31 <sup>7</sup> / <sub>8</sub> | 38 <sup>3</sup> / <sub>8</sub> | 35 <sup>3</sup> / <sub>8</sub> | 43 <sup>1</sup> / <sub>8</sub> | 31 <sup>1</sup> / <sub>4</sub>  | 32 <sup>1</sup> / <sub>2</sub> | 10 <sup>1</sup> / <sub>2</sub>  | 70 <sup>7</sup> / <sub>8</sub> | 59 <sup>7</sup> / <sub>8</sub> | 3 <sup>3</sup> / <sub>16</sub>  | 3 <sup>7</sup> / <sub>16</sub>  | 2500              |
| 33       | 95 <sup>1</sup> / <sub>4</sub> | 33 | 19 <sup>11</sup> / <sub>16</sub> | 59 <sup>1</sup> / <sub>8</sub>   | 27 <sup>7</sup> / <sub>8</sub> | 31 <sup>3</sup> / <sub>8</sub> | 52                             | 46 <sup>15</sup> / <sub>16</sub> | 18 <sup>1</sup> / <sub>8</sub>  | 36 <sup>1</sup> / <sub>4</sub> | 43 <sup>3</sup> / <sub>4</sub> | 40 <sup>1</sup> / <sub>4</sub> | 49 <sup>1</sup> / <sub>8</sub> | 34 <sup>3</sup> / <sub>16</sub> | 37                             | 12 <sup>3</sup> / <sub>16</sub> | 80 <sup>3</sup> / <sub>4</sub> | 66 <sup>5</sup> / <sub>8</sub> | 3 <sup>7</sup> / <sub>16</sub>  | 3 <sup>15</sup> / <sub>16</sub> | 3300              |
| 37       | 106                            | 37 | 23                               | 63 <sup>1</sup> / <sub>2</sub>   | 31                             | 34 <sup>7</sup> / <sub>8</sub> | 58                             | 50 <sup>1</sup> / <sub>2</sub>   | 20 <sup>3</sup> / <sub>4</sub>  | 40 <sup>1</sup> / <sub>2</sub> | 48 <sup>7</sup> / <sub>8</sub> | 45                             | 55                             | 38 <sup>1</sup> / <sub>2</sub>  | 41 <sup>1</sup> / <sub>2</sub> | 13                              | 90 <sup>3</sup> / <sub>8</sub> | 73 <sup>1</sup> / <sub>2</sub> | 3 <sup>15</sup> / <sub>16</sub> | 4 <sup>3</sup> / <sub>16</sub>  | 4600              |

## Arrangement #4

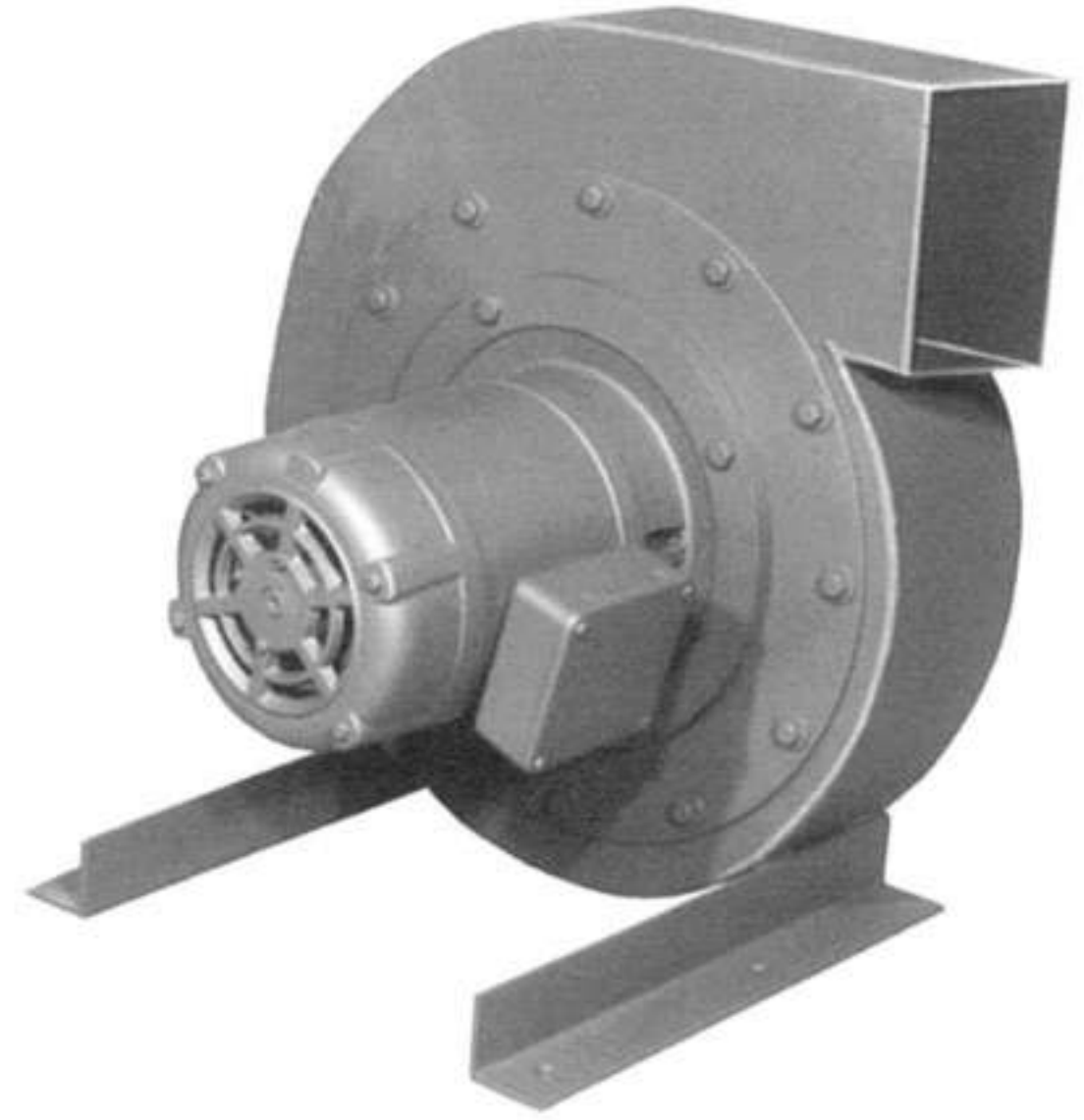
The fan wheel is mounted directly on the motor shaft for this direct drive arrangement. These compact, inexpensive units are available with single or three phase motors.



All dimensions as arrangement #1 that apply

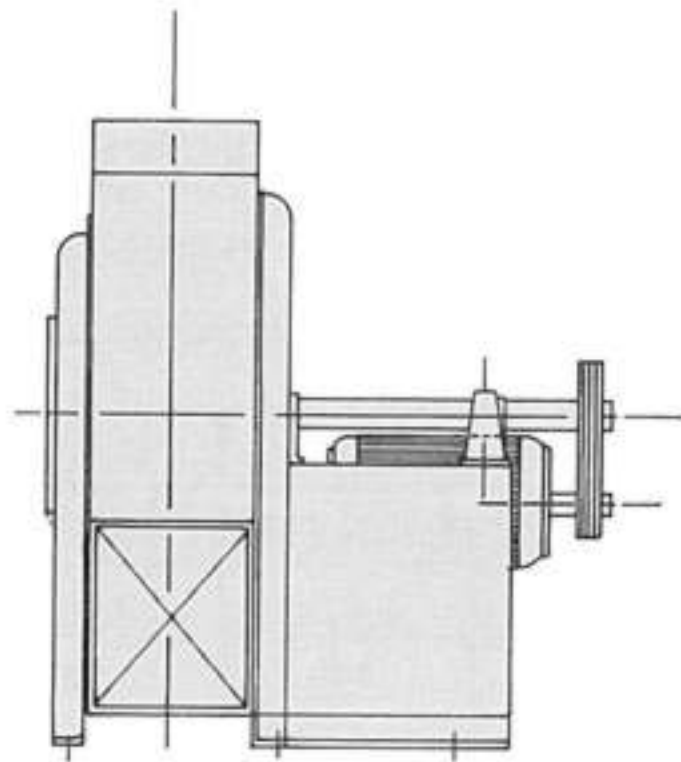


Flanged connections optional extra

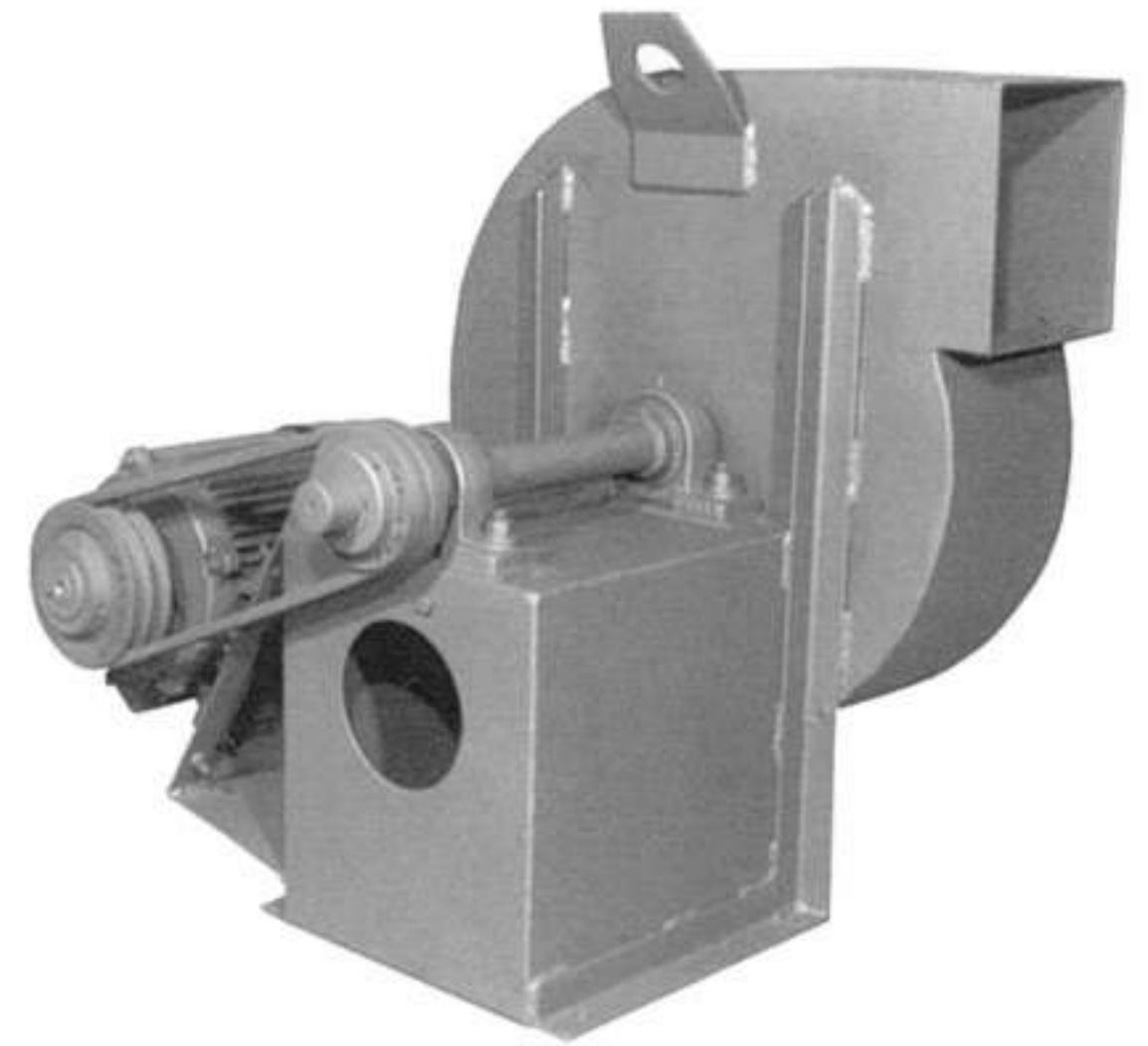
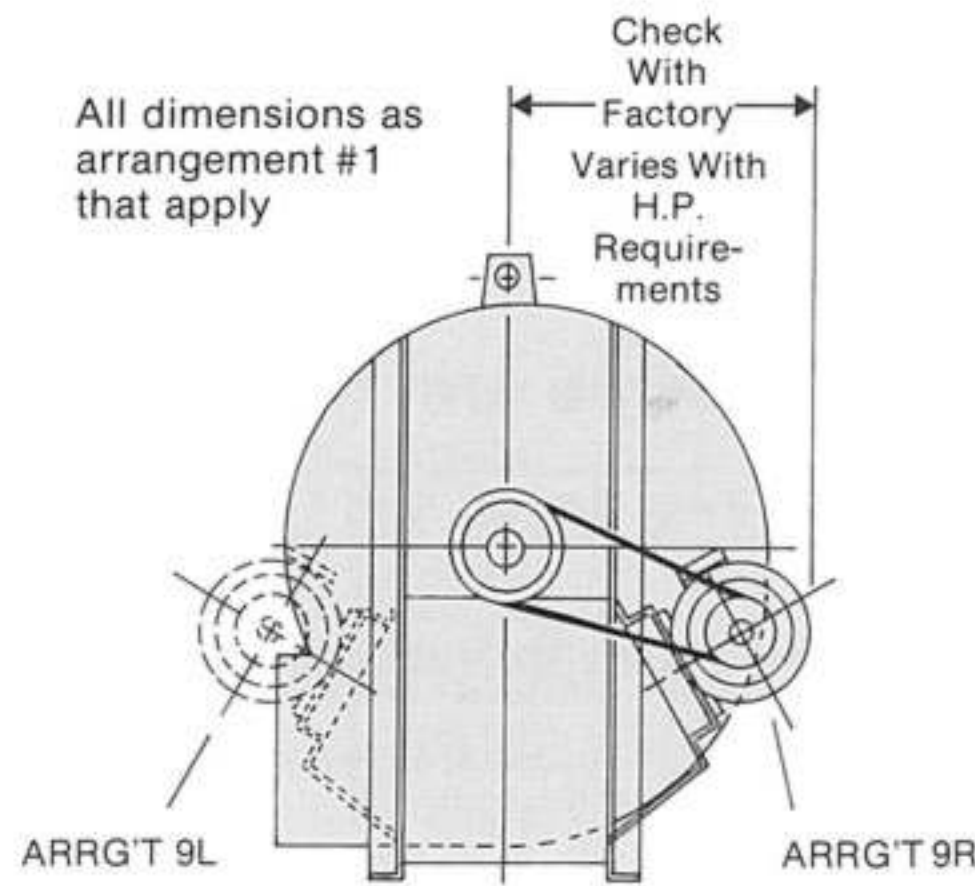


## Arrangement #9

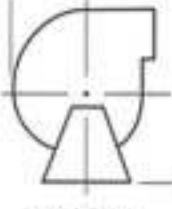
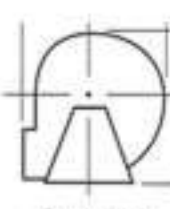
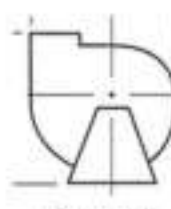


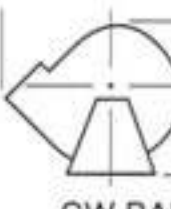
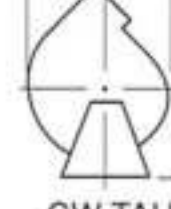
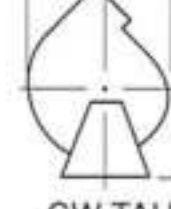
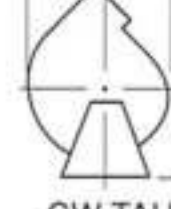
An adjustable motor mount featured on this arrangement provides a compact grouping of motor, drive belt and fan. The v-belt drive permits a wide variety of fan speeds. This arrangement has the same rugged construction as Arrangement #1 with the addition of the motor mount attached to the pedestal. The motor can be mounted on either side of the pedestal, or in a similar manner depending on the size of the motor required. Please check with our fan experts for overall dimensions.

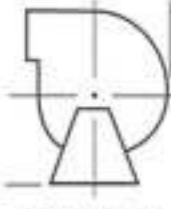
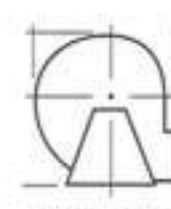
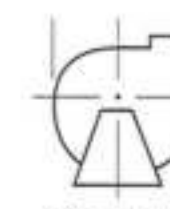








All dimensions as arrangement #1 that apply



## FAN DISCHARGES Designated from Drive Side

| Clockwise Rotations |  |  |  |
|---------------------|---|---|---|
|                     |   | CW TH<br>Top Horizontal   | CW BH<br>Bottom Horizontal  |
| Clockwise Rotations |  |  |  |
|                     |   | CW TAD<br>Down Blast  | CW TAD<br>Top Angular Down  |
| Clockwise Rotations |  |  |  |
|                     |   | CW TAU<br>Top Angular Up  | CW TAU<br>Top Angular Up  |

| Counter Clockwise Rotations |  |  |  |
|-----------------------------|---|---|---|
|                             |   | CCW TH<br>Top Horizontal  | CCW BH<br>Bottom Horizontal   |
| Counter Clockwise Rotations |  |  |  |
|                             |   | CCW TAD<br>Down Blast   | CCW TAD<br>Top Angular Down   |
| Counter Clockwise Rotations |  |  |  |
|                             |   | CCW TAU<br>Top Angular Up   | CCW TAU<br>Top Angular Up   |

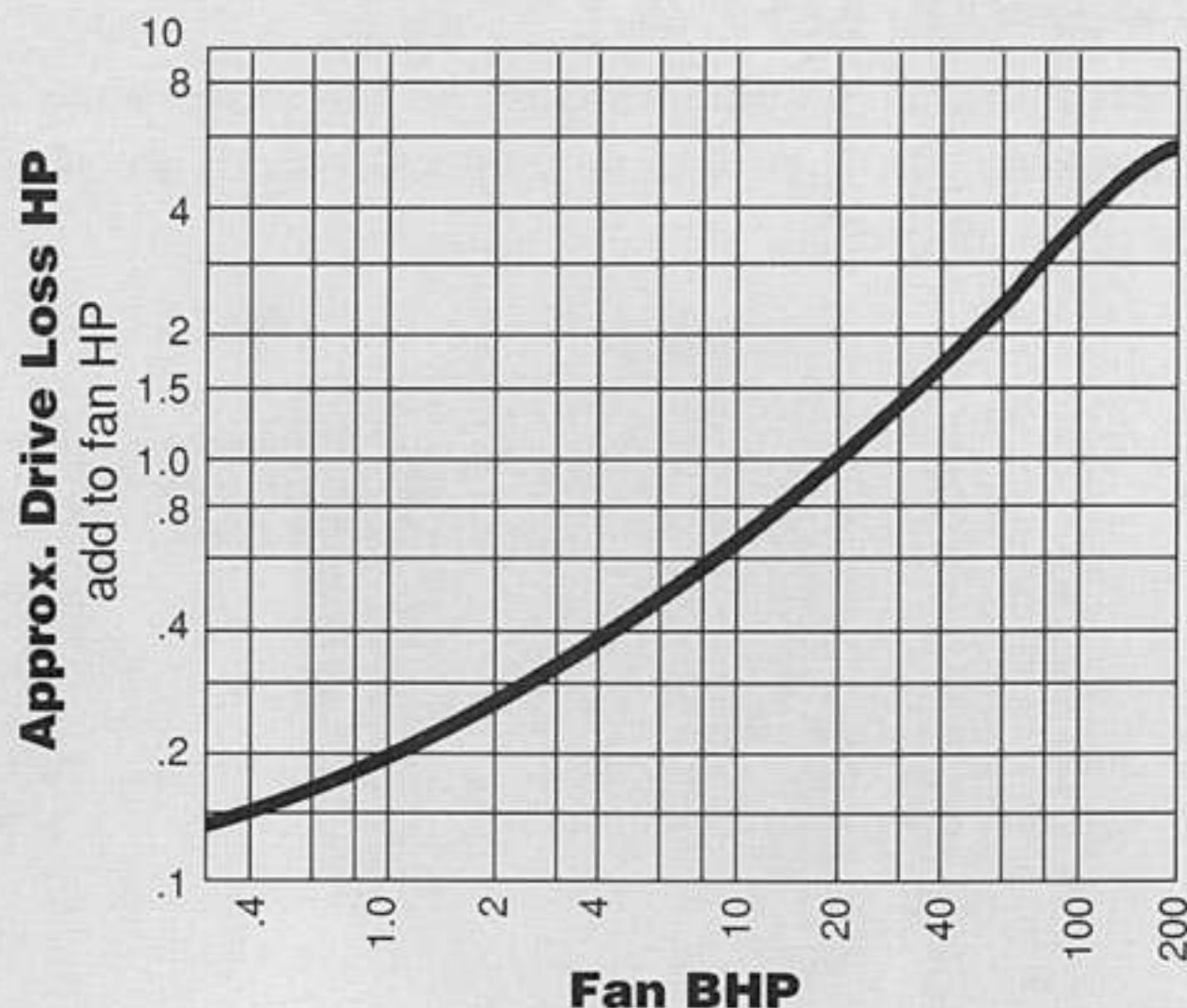
Angular Discharges at 45°

## V-belt Drive Losses

Our published fan brake horsepowers do not include for V-belt drive losses. Before selecting motor size, an allowance should be made for this drive loss.

### Example:

|   |         |
|---|---------|
| Fan BHP - from performance charts             | 41 H.P. |
| Approx Drive Loss - from chart shown at right | 2 H.P.  |
| Approx., total horsepower                     | 43      |
| Use 50 H.P. motor                             |         |



## Elevated Temperature and Altitude:

Performance ratings listed on the Fan Charts page are based on standard air at 70°F and 29.92 inches barometric pressure and weighing 0.075 pounds per cubic foot. When air temperatures other than 70°F and/or altitude other than sea level is involved, it is necessary to correct catalogue ratings for fan speed and horsepower.

**Example:** Assume an industrial fan with EA-11 wheel for:

2900 cfm  
 4500 max. O.V.  
 6" SP  
 200° E  
 5000 altitude

### Proceed as follows:

- Density factor from table below = 0.668
- Performance table static pressure = 6" ÷ 0.668 = 9"
- From performance table: EA-1 Size 11

|     |   |      |
|-----|---|------|
| cfm | = | 2904 |
| SP  | = | 9"   |
| rpm | = | 2286 |
| bhp | = | 6.07 |
- Correct performance table SP and bhp as follows:
 

|         |   |                     |
|---------|---|---------------------|
| Fan cfm | = | 2904                |
| Fan SP  | = | 9" x 0.668 = 6"     |
| Fan rpm | = | 2286                |
| Fan bhp | = | 6.07 x 0.668 = 4.05 |

## Air Density Factors for Various Temperatures and Altitude:

| Air Temp. °F | Altitude in Feet Above Sea Level      |       |       |       |       |       |       |       |       |       |       |
|--------------|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|              | 0                                     | 1000  | 2000  | 3000  | 4000  | 5000  | 6000  | 7000  | 8000  | 9000  | 10000 |
|              | Barometric Pressure in Inches Mercury |       |       |       |       |       |       |       |       |       |       |
|              | 29.92                                 | 28.86 | 27.82 | 26.81 | 25.84 | 24.89 | 23.89 | 23.09 | 22.22 | 21.38 | 20.58 |
| -30°         | 1.234                                 | 1.191 | 1.15  | 1.105 | 1.066 | 1.028 | .987  | .956  | .914  | .883  | .847  |
| -20°         | 1.204                                 | 1.16  | 1.12  | 1.08  | 1.04  | 1.00  | .965  | .930  | .895  | .860  | .828  |
| 0°           | 1.152                                 | 1.10  | 1.07  | 1.03  | .995  | .958  | .923  | .888  | .856  | .822  | .792  |
| 70°          | 1.000                                 | .964  | .930  | .896  | .864  | .832  | .801  | .772  | .743  | .714  | .688  |
| 100°         | .946                                  | .912  | .880  | .848  | .818  | .787  | .758  | .730  | .703  | .676  | .651  |
| 150°         | .869                                  | .838  | .808  | .770  | .751  | .723  | .696  | .671  | .646  | .620  | .598  |
| 200°         | .803                                  | .774  | .747  | .720  | .694  | .668  | .643  | .620  | .596  | .573  | .552  |
| 250°         | .747                                  | .720  | .694  | .669  | .645  | .622  | .598  | .576  | .555  | .533  | .514  |
| 300°         | .697                                  | .672  | .648  | .624  | .604  | .580  | .558  | .538  | .518  | .498  | .480  |
| 350°         | .654                                  | .631  | .608  | .586  | .565  | .544  | .524  | .505  | .486  | .467  | .450  |
| 400°         | .616                                  | .594  | .573  | .552  | .532  | .513  | .493  | .476  | .458  | .440  | .424  |
| 450°         | .582                                  | .561  | .542  | .522  | .503  | .484  | .466  | .449  | .433  | .416  | .401  |
| 500°         | .552                                  | .532  | .513  | .495  | .477  | .459  | .442  | .426  | .410  | .394  | .380  |
| 550°         | .525                                  | .506  | .488  | .470  | .454  | .437  | .421  | .405  | .390  | .375  | .361  |
| 600°         | .500                                  | .482  | .465  | .448  | .432  | .416  | .400  | .386  | .372  | .352  | .344  |

# INDUSTRIAL EXHAUST FANS

## Accessories:

### Cleanout Doors:

Cleanout doors are available to provide easy access to the fan wheel housing interior for inspection and cleaning. Each door is gasketed, shaped and mounted flush with the interior of the housing to give a smooth and dust tight fit.

### Cooling Discs:

Cooling discs may be added for applications where high temperatures will be encountered. The cooling disc is a small fan mounted on the fan shaft between the outer fan casing and the inner fan bearing. These discs are designed to reduce heat conduction from the shaft to the bearing.

### Other Accessories:

- ◆ all-weather cowls
- ◆ shaft seals
- ◆ special metals
- ◆ special coating
- ◆ scroll drain
- ◆ flanged inlet and outlet
- ◆ multi louvre discharge volume control damper
- ◆ belt guard
- ◆ motor weather hood
- ◆ radiation shields for high temperature fans
- ◆ silencers
- ◆ anti vibration isolation bases

# INDUSTRIAL EXHAUST FANS

## Optional Construction:

### Heavy Abrasive Materials:

N. R. Murphy can provide extra heavy housing and wheel construction with oversized shaft and bearings for applications where large concentrations of heavy abrasive materials are present.

### Spark Resistance:

For spark resistant requirements the following constructions are available.

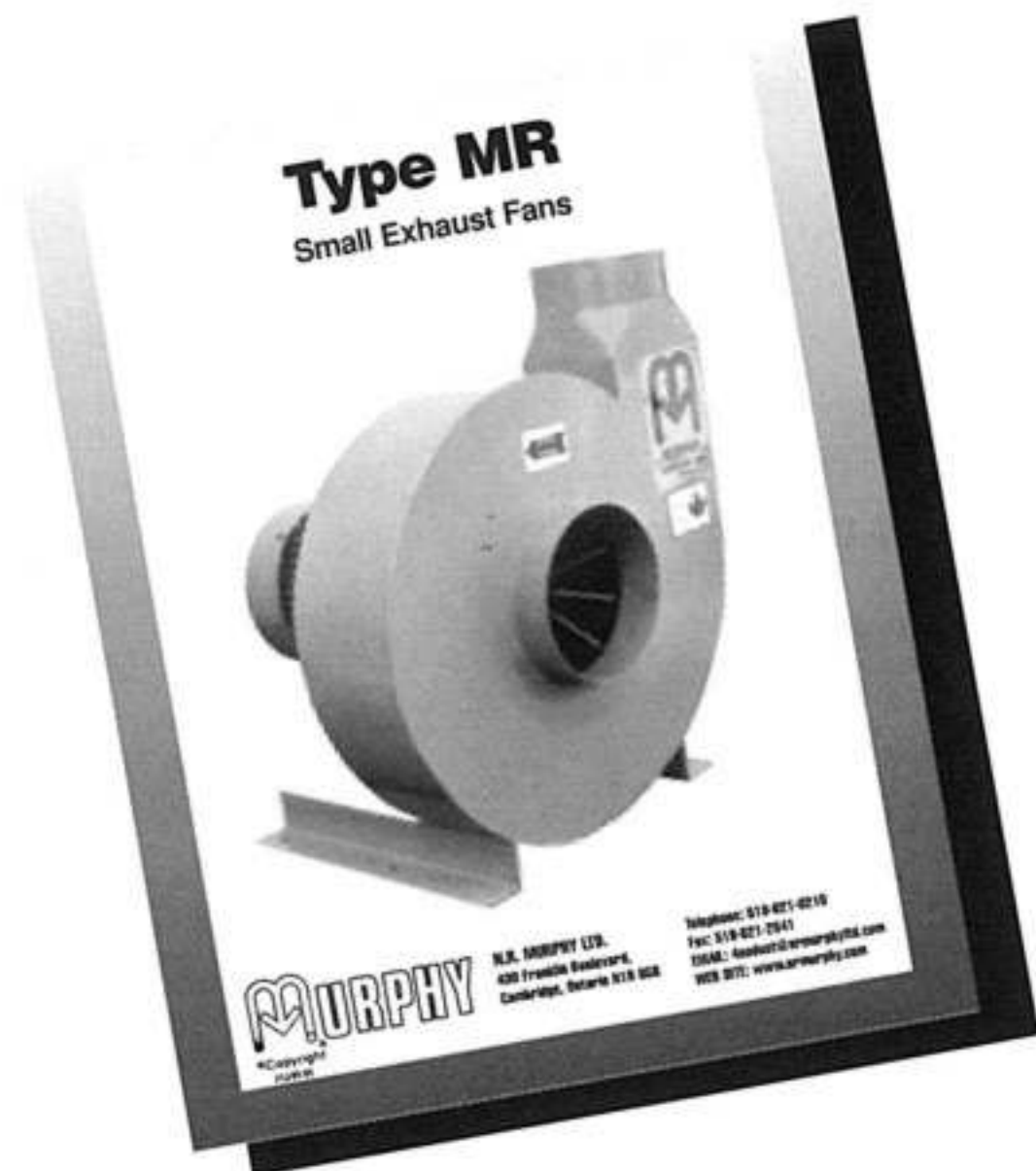
**TYPE A:** All parts of the fan in contact with the air or gas being handled are made of non-ferrous material.

**TYPE B:** The fan has an entirely non-ferrous wheel and non-ferrous ring around the opening through which the shaft passes.

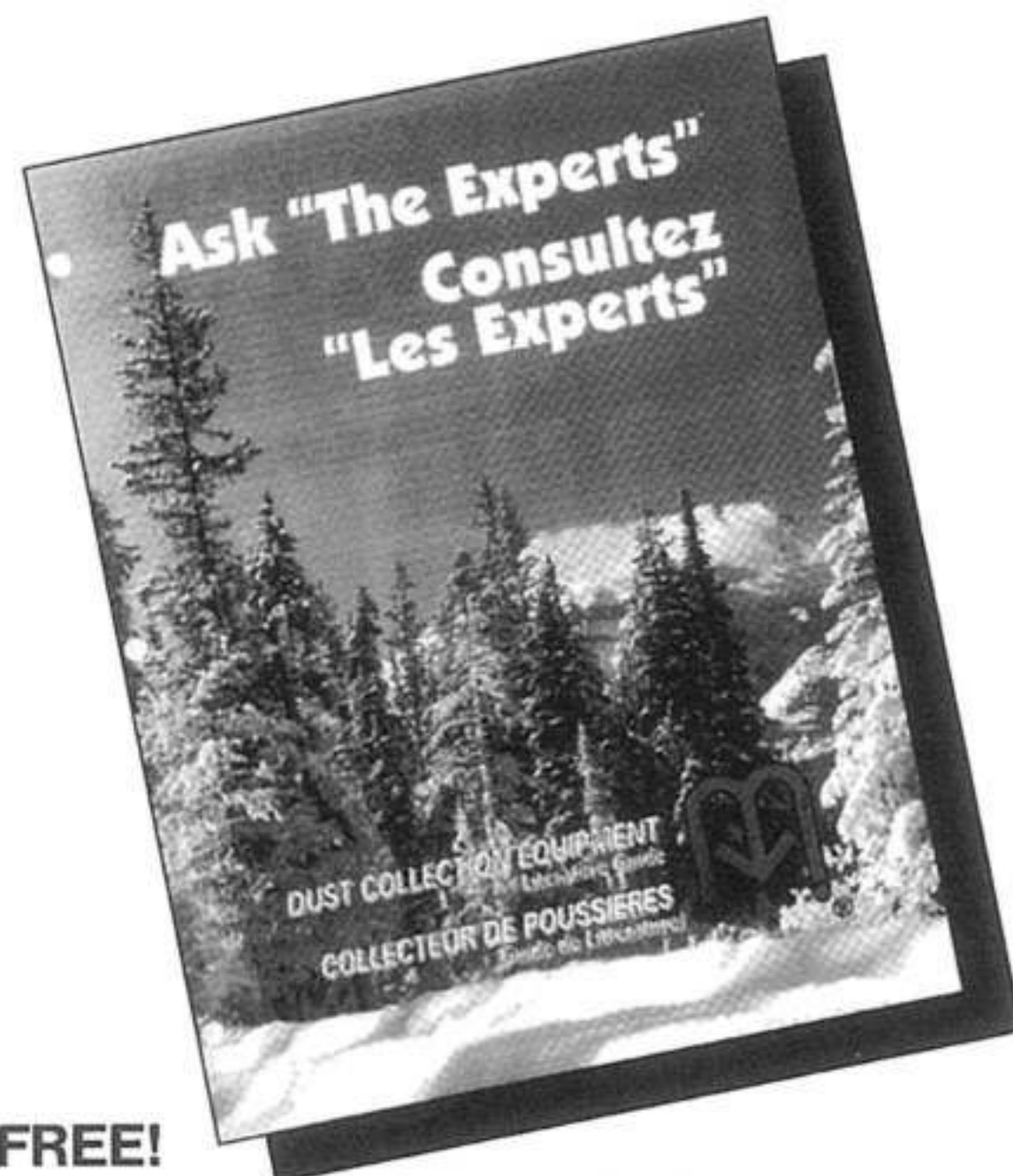
**TYPE C:** The fan is constructed so that a shift in the wheel or shaft will not permit two ferrous parts of the fan to rub or strike.

Please note that the bearings will not be placed in the air or gas stream. The user must electrically ground all fan parts.

# Dust Collection Equipment



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