

# HDBI series

CENTRIFUGAL FAN

engineering data  
and specifications



**CININNATI FAN** 

Since the founding of Cincinnati Fan in 1956, the company's mission has been to provide quality products at competitive prices, backed by depend-able service.

This mission is carried out by specializing in the market for industrial air handling products up to 125 hp. But specialization does not mean the product line is small. Cincinnati Fan offers a wide variety of standard and customized products, production flexibility, and customer responsiveness.

### CINCINNATI FAN PROVIDES

- ◆ Technical evaluation for correct performance conditions
- ◆ Review of air stream and ambient conditions that require special attention
- ◆ Selection of proper components to meet required design specifications
- ◆ Selection of proper accessories
- ◆ System analysis for proper fan design

### HDBI FEATURES

A - Backward inclined blades are fabricated of heavy-gauge, high-strength steel to assure long lasting, efficient operation.

B - Turned, ground and polished shafting assures smooth operation. A rust preventative coating is applied prior to shipment

C - Heavy-duty, self-aligning, relubricatable, ball bearings in cast-iron pillow blocks. Bearings are selected for optimal performance depending on fan size and class.

D - Bearing base is heavy steel construction with internal supports to maximize rigidity and assure long equipment life. Arrangement 1 fans can be converted to Arrangement 9 with the addition of the motor slide base.

E - Inlet side support is used to assure a vibration-free, stable housing.

F - Slip collar inlet (not shown) is used for duct work connection. Flanged inlet optional.

G - Inlet bell is designed for smooth air entrance into the wheel inlet for maximum efficiency.

H - Reversible housing provides increased configuration flexibility. Removable side plates allow the wheel to be removed from the motor or inlet side of the housing. Housings are rotatable in 45 degree increments. Wheels are not reversible. See note at right.

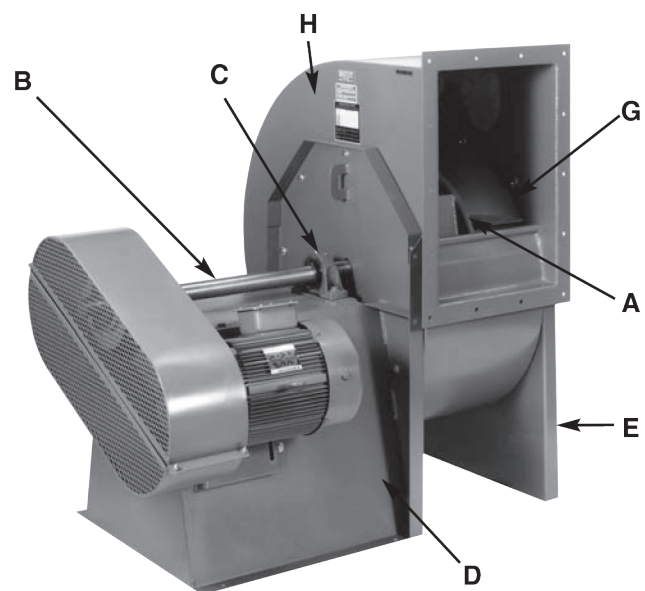
Cincinnati Fan operates in a modern facility specifically designed for world class manufacturing enabling us to build standard products to order, including accessories, and ship within 5 to 10 working days.

With support like this, you can be sure your Cincinnati Fan product will be well-built and will provide maximum dependability and longevity.

Cincinnati Fan has over 170 experienced sales engineers across the US and Canada ready to serve your air handling needs.

### EFFICIENCY OF AN AIRFOIL WHEEL VERSUS. A BACKWARD INCLINED WHEEL

Airfoil wheels provide the highest efficiency of all centrifugal fan designs. The curve overlays below comparing a HDBI-220 and a HDBI-220 illustrates a 10% increase in static efficiency for the airfoil design versus the backward inclined design in the normal selection range. This benefit results in lower brake horsepower consumption and a reduction in sound levels of 2-6 dBA.



**Note:** HDBI-330 and HDBI-360 housings are not rotatable or reversible.

**ARRANGEMENT 4 and ARRANGEMENT 4HM DIRECT DRIVE ADVANTAGES**

All sizes available in 100% to 50% widths in 5% increments

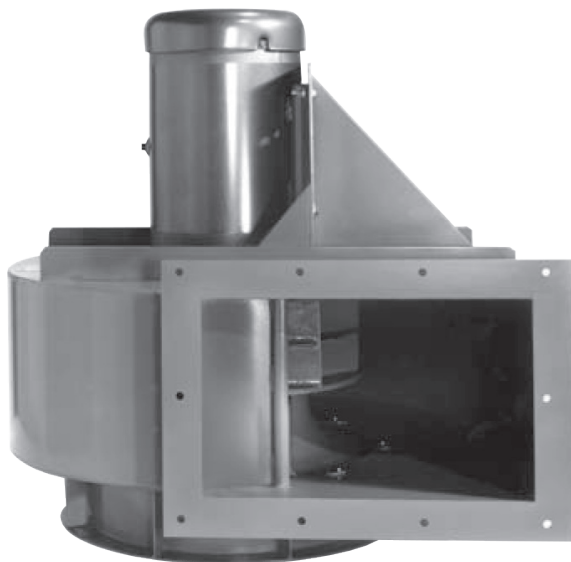


Shown with optional inlet and discharge flanges

**ADVANTAGES**

- ◆ Compact—requires less space
- ◆ Weighs Less—requires less supporting structure
- ◆ Less Maintenance—no belts or fan bearings to replace
- ◆ Less Expensive—above features result in lower first cost and lower maintenance costs
- ◆ More Ratings—the combination of several motor speeds and eleven fan widths results in a vast selection of direct drive ratings
- ◆ Temperature—good up to 200°F (93°C)

**⚠ Caution**—All fans and blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source. Read and understand operating instructions.



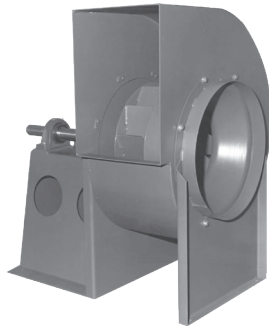
Shown with optional inlet and discharge flanges

**4HM HORIZONTAL MOUNTING OPTION**

Ideal for bag house or other equipment requiring the simplicity of a horizontally mounted fan. Motors are limited to frame 365T maximum.

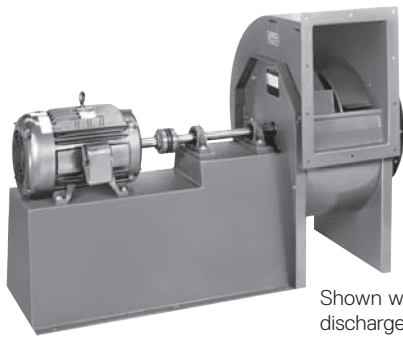
This mounting is available on all sizes. All horizontal mount housings are non-reversible. Inlet flange is optional and must be added if required. Supporting equipment must be adequate to support weights shown on page 26 plus motor weight.

## SIX STANDARD ARRANGEMENTS



### Arrangement 1 - Belt Drive

- ♦ Motor not mounted on bearing base
- ♦ Wheel mounted on fan shaft with two pillow block bearings
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design up to 750°F (398°C)



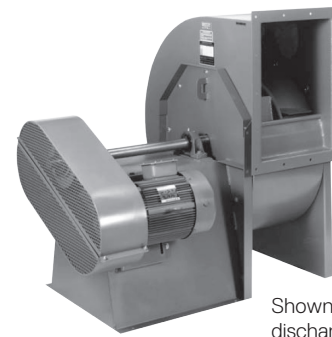
### Arrangement 4 - Direct Drive

- ♦ Motor mounted on motor base
- ♦ Wheel mounted on motor shaft
- ♦ Maximum temperature of standard design 200°F (93°C) High temperature design not available



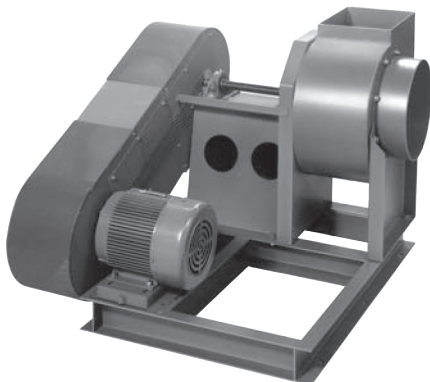
### Arrangement 8 - Direct Drive

- ♦ Motor mounted on motor base extending beyond the bearing base Shaft/coupling guard is standard—shown with guard removed
- ♦ Wheel mounted on fan shaft with two pillow block bearings
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design up to 750°F (398°C)



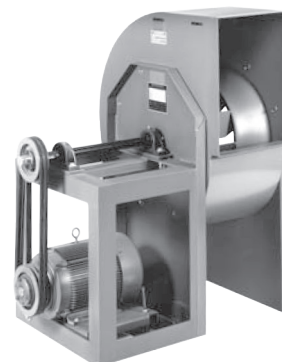
### Arrangement 9 - Belt Drive

- ♦ Motor mounted on an adjustable slide base on the side of the bearing base
- ♦ Wheel mounted on fan shaft with two pillow block bearings
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design up to 750°F (398°C)



### Arrangement 9CB - Belt Drive

- ♦ Same as Arrangement 9 except motor and fan are mounted on a common channel base
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design up to 750°F (398°C)



### Arrangement 10 - Belt Drive

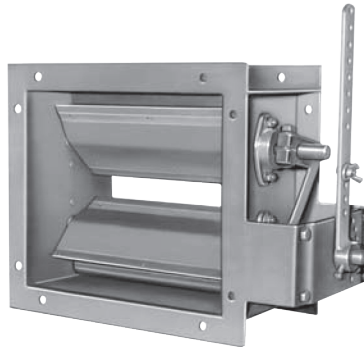
- ♦ Motor mounted on an adjustable slide base under the fan shaft Shown with weather cover removed
- ♦ Wheel mounted on fan shaft with two pillow block bearings
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design not available

## OPTIONS



### Shaft Seal

Teflon shaft seal good to 400°F (204°C). Ceramic fiber gasket material with steel cover plate above 400°F (205°C).



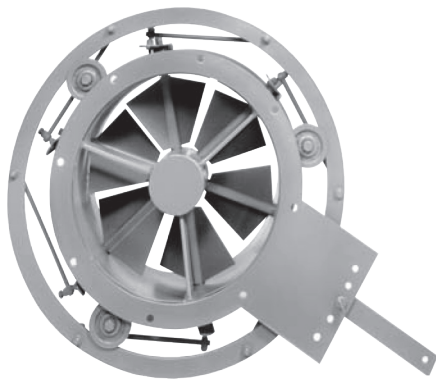
### Outlet Damper

All dampers are 1 or 2 blade. All dampers 10" deep flange to flange. Opposed blade construction is standard.



### Belt Guard

Belt guard standard on Arrangement 9 and 9CB only. Painted safety yellow.



### Inlet Vane Control

Linkage assembly is external on smaller sizes, internal on larger sizes. Inlet vane depth varies with inlet diameter. Contact your local Cincinnati Fan sales representative for dimensions.



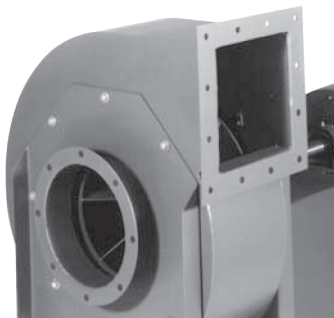
### Inspection Door

Bolted or quick-release doors positioned as specified on scroll. Rubber gasket standard up to 250°F (121°C) Ceramic fiber gasket standard at temperatures above 250°F (122°C).



### Drain Connection

3/4" pipe coupling welded to lowest point of housing. Not required on BH discharge position.



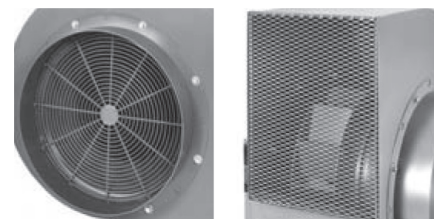
### Inlet and Outlet Flange

Flanges on inlet and outlet available where installation requires tight duct connections. Standard hole pattern furnished. Outlet flange not available on some discharge positions. Outlet flange standard on all sizes 270 through 360. See page 31 for dimensions.



### Shaft and/or Heat Slinger Guard

Guard available on Arrangement 1, 9 and 9CB. Covers bearings and shaft between fan housing and belt guard. Has extended lube lines. Standard on high temperature fans above 301°F(150°C). Painted safety yellow.



### Inlet and Outlet Guards

Ring guard on inlet and expanded metal on discharge. Meets OSHA approval.



## SPARK-RESISTANT CONSTRUCTION

**Type A:** All parts in contact with airstream are of nonferrous material. (Contact your local Cincinnati Fan sales representative).

**Type B:** Fabricated aluminum wheel and aluminum rubbing ring on motor shaft or fan shaft. Maximum Temperature 200°F (93°C) all arrangements.

**Type C:** Consists of aluminum inlet bell and aluminum plate on drive side of the fan. Maximum Temperature is the same as for high temperature construction below for each arrangement.

## HIGH TEMPERATURE CONSTRUCTION

- Standard Construction:** Arrangements 1, 8, 9, 9CB and 10 suitable to 300°F (149°C). Arrangements 4 and 4HM suitable to 200°F (93°C).
- 201° to 400°F. Construction:** Standard fan with heat slinger, slinger guard, Teflon shaft seal and extended hub on wheel. Arrangements 4 and 4HM only.
- 301° to 400°F. Construction:** Standard fan with heat slinger, fan shaft and slinger guard and Teflon shaft seal. Arrangements 1, 8, 9 and 9CB.
- 401° to 600°F Construction:** Standard fan with heat slinger, fan shaft and slinger guard, high temperature shaft seal, gaskets and paint. Arrangements 1, 8, 9 and 9CB.
- 601° to 750°F Construction:** Standard fan with high temperature bearings, heat slinger, fan shaft and slinger guard, high temperature bearings, shaft seal, gaskets and paint. Arrangements 1, 8, 9 and 9CB.

### ⚠ WARNING

The use of aluminum or aluminum alloys in the presence of steel which has been allowed to rust requires special consideration. Research by the U.S. Bureau of Mines and others has shown that aluminum impellers rubbing on rusty steel may cause high intensity sparking.

The use of the above Standard in no way implies a guarantee of safety for any level of spark resistance. Spark-resistant construction also does not protect against ignition of explosive gases caused by catastrophic failure or from any airstream material that may be present in a system.

| Wheel Size | Maximum RPM Aluminum Wheel <sup>†</sup> |
|------------|-----------------------------------------|
| 120        | 5400                                    |
| 130        | 4999                                    |
| 150        | 4712                                    |
| 160        | 4285                                    |
| 180        | 3885                                    |
| 200        | 3574                                    |
| 220        | 3550                                    |
| 240        | 2837                                    |
| 270        | 2476                                    |
| 300        | 2300                                    |
| 330        | 2300                                    |
| 360        | 1950                                    |

| Temperature Range °F | Maximum RPM Reduction Factor <sup>†</sup> |
|----------------------|-------------------------------------------|
| Up to 175°           | 0%                                        |
| 176° - 200°          | 2%                                        |
| 201° - 300°          | 4%                                        |
| 301° - 400°          | 7%                                        |
| 401° - 500°          | 11%                                       |
| 501° - 600°          | 15%                                       |
| 601° - 700°          | 20%                                       |
| 701° - 750°          | 30%                                       |

<sup>†</sup> Steel wheels only

<sup>†</sup> Up to 200°F (93°C). Consult your local Cincinnati Fan sales rep for higher temperature and/or higher RPMs

## TEMPERATURE - ALTITUDE ADJUSTMENT

| Air Temperature °F | Altitude in Feet Above Sea Level |      |      |      |      |      |      |      |      |      |       |
|--------------------|----------------------------------|------|------|------|------|------|------|------|------|------|-------|
|                    | 0                                | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 | 9000 | 10000 |
| 0°                 | 0.87                             | 0.91 | 0.94 | 0.98 | 1.01 | 1.05 | 1.09 | 1.13 | 1.17 | 1.22 | 1.26  |
| 40°                | 0.94                             | 0.98 | 1.02 | 1.06 | 1.10 | 1.14 | 1.19 | 1.23 | 1.28 | 1.32 | 1.36  |
| 70°                | 1.00                             | 1.04 | 1.08 | 1.12 | 1.16 | 1.20 | 1.25 | 1.30 | 1.35 | 1.40 | 1.45  |
| 80°                | 1.02                             | 1.06 | 1.10 | 1.14 | 1.19 | 1.23 | 1.28 | 1.33 | 1.38 | 1.43 | 1.48  |
| 100°               | 1.06                             | 1.10 | 1.14 | 1.19 | 1.23 | 1.28 | 1.33 | 1.38 | 1.43 | 1.48 | 1.54  |
| 120°               | 1.09                             | 1.14 | 1.18 | 1.23 | 1.28 | 1.32 | 1.38 | 1.43 | 1.48 | 1.53 | 1.58  |
| 140°               | 1.13                             | 1.18 | 1.22 | 1.27 | 1.32 | 1.37 | 1.42 | 1.48 | 1.54 | 1.58 | 1.65  |
| 160°               | 1.17                             | 1.22 | 1.26 | 1.31 | 1.36 | 1.42 | 1.47 | 1.53 | 1.59 | 1.64 | 1.70  |
| 180°               | 1.21                             | 1.26 | 1.30 | 1.36 | 1.41 | 1.46 | 1.52 | 1.58 | 1.64 | 1.70 | 1.75  |
| 200°               | 1.25                             | 1.29 | 1.34 | 1.40 | 1.45 | 1.51 | 1.57 | 1.63 | 1.69 | 1.75 | 1.81  |
| 250°               | 1.34                             | 1.39 | 1.45 | 1.50 | 1.56 | 1.62 | 1.68 | 1.74 | 1.82 | 1.88 | 1.94  |
| 300°               | 1.43                             | 1.49 | 1.55 | 1.61 | 1.67 | 1.74 | 1.80 | 1.87 | 1.94 | 2.00 | 2.08  |
| 350°               | 1.53                             | 1.59 | 1.65 | 1.72 | 1.78 | 1.85 | 1.92 | 2.00 | 2.07 | 2.14 | 2.22  |
| 400°               | 1.62                             | 1.69 | 1.75 | 1.82 | 1.89 | 1.96 | 2.04 | 2.12 | 2.20 | 2.27 | 2.35  |
| 450°               | 1.72                             | 1.79 | 1.86 | 1.93 | 2.00 | 2.08 | 2.16 | 2.24 | 2.33 | 2.41 | 2.50  |
| 500°               | 1.81                             | 1.88 | 1.96 | 2.03 | 2.11 | 2.19 | 2.28 | 2.36 | 2.46 | 2.54 | 2.62  |
| 550°               | 1.91                             | 1.98 | 2.06 | 2.14 | 2.22 | 2.30 | 2.40 | 2.49 | 2.58 | 2.68 | 2.77  |
| 600°               | 2.00                             | 2.08 | 2.16 | 2.24 | 2.33 | 2.42 | 2.50 | 2.61 | 2.71 | 2.80 | 2.90  |
| 650°               | 2.10                             | 2.18 | 2.26 | 2.35 | 2.44 | 2.54 | 2.63 | 2.74 | 2.84 | 2.94 | 3.04  |
| 700°               | 2.19                             | 2.27 | 2.36 | 2.46 | 2.55 | 2.65 | 2.75 | 2.86 | 2.97 | 3.06 | 3.18  |
| 750°               | 2.28                             | 2.37 | 2.47 | 2.56 | 2.66 | 2.76 | 2.87 | 2.98 | 3.10 | 3.19 | 3.31  |

Fan performance tables are developed using standard air which is 70°F, 29.92" barometric pressure and .075 lb/ft<sup>3</sup> per cubic foot. Density changes resulting from temperature or barometric pressure variations (such as higher altitudes) must be corrected to standard conditions before selecting a fan based on standard performance data. Temperature and/or altitude conversion factors are used in making corrections to standard conditions.

**EXAMPLE:** Select a belt driven HDBI-300 to deliver 8327 CFM at .5" SP at 200°F, and 7000' altitude.

Step 1 - From the table, conversion factor is 1.63.

Step 2 - Correct static pressure is:

$$1.63 \times .5" \text{ SP} = .81" \text{ SP at standard conditions.}$$

Step 3 - Check HDBI catalog for 8327 CFM at .81" SP. We select a belt driven HDBI-200 and interpolation gives 660 RPM and 1.83 bhp.

Step 4 - Correct the bhp for the lighter air:

$$1.83 \div 1.63 = 1.12 \text{ bhp.}$$

A 15 hp motor will suffice at 200°F, and 7000' but not at standard conditions. Special motor insulation may be required due to altitude.

**DIRECT DRIVE RATINGS TABLES**

CFM and bhp at Static Pressure Shown – Ratings at 70°F – .075" Density – Sea Level

| Model    | RPM  | 0" SP |       | 1" SP |       | 2" SP |       | 3" SP |       | 4" SP |       | 5" SP |       |
|----------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|          |      | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   |
| HDBI-120 | 1150 | 1143† | 0.09  |       |       |       |       |       |       |       |       |       |       |
|          | 1750 | 1740† | 0.31  | 1316† | 0.39  |       |       |       |       |       |       |       |       |
|          | 3500 | 3480† | 2.51  | 3282† | 2.67  | 3076† | 2.85  | 2861  | 3.00  | 2633  | 3.13  | 2379  | 3.20  |
| HDBI-130 | 1150 | 1540† | 0.16  |       |       |       |       |       |       |       |       |       |       |
|          | 1750 | 2344† | 0.56  | 1828† | 0.62  | 1086† | 0.59  |       |       |       |       |       |       |
|          | 3500 | 4688  | 4.50  | 4457  | 4.68  | 4227  | 4.86  | 3946  | 4.93  | 3656  | 4.99  | 3353  | 5.01  |
| HDBI-150 | 1150 | 2100† | 0.23  | 1175† | 0.28  |       |       |       |       |       |       |       |       |
|          | 1750 | 3195† | 0.82  | 2700† | 0.96  | 2070† | 1.00  |       |       |       |       |       |       |
|          | 3500 | 6385  | 6.59  | 6155  | 6.96  | 5930  | 7.28  | 5690  | 7.57  | 5405  | 7.71  | 5115  | 7.83  |
| HDBI-160 | 1150 | 2795† | 0.38  | 1875† | 0.46  |       |       |       |       |       |       |       |       |
|          | 1750 | 4250† | 1.33  | 3730  | 1.53  | 3080  | 1.61  | 2170  | 1.55  |       |       |       |       |
|          | 3500 | 8500  | 10.62 | 8250  | 11.12 | 8000  | 11.55 | 7750  | 11.98 | 7460  | 12.26 | 7140  | 12.44 |
| HDBI-180 | 1150 | 3780† | 0.69  | 2800† | 0.82  |       |       |       |       |       |       |       |       |
|          | 1750 | 5750  | 2.40  | 5195  | 2.68  | 4495  | 2.83  | 3685  | 2.87  |       |       |       |       |
|          | 3500 | 11500 | 17.58 | 11225 | 18.28 | 10945 | 18.86 | 10670 | 19.44 | 10395 | 20.02 | 10055 | 20.32 |
| HDBI-200 | 1150 | 4975† | 0.99  | 3935† | 1.17  | 2140† | 1.10  |       |       |       |       |       |       |
|          | 1750 | 7570  | 3.47  | 6960  | 3.88  | 6235  | 4.09  | 5435  | 4.23  | 4390  | 4.14  |       |       |
|          | 3500 | 15140 | 27.79 | 14830 | 28.74 | 14530 | 29.50 | 14225 | 30.27 | 13920 | 31.03 | 13620 | 31.80 |
| HDBI-220 | 1150 | 6915  | 1.65  | 5955  | 1.99  | 4720  | 2.11  |       |       |       |       |       |       |
|          | 1750 | 10520 | 5.80  | 9900  | 6.41  | 9270  | 6.89  | 8610  | 7.26  | 7755  | 7.39  | 6820  | 7.42  |
| HDBI-240 | 1150 | 9230  | 2.67  | 8185  | 3.15  | 6945  | 3.39  | 4880  | 3.26  |       |       |       |       |
|          | 1750 | 14045 | 9.39  | 13365 | 10.22 | 12680 | 10.92 | 11960 | 11.44 | 11185 | 11.85 | 10205 | 11.97 |
| HDBI-270 | 1150 | 12885 | 4.68  | 11780 | 5.34  | 10550 | 5.79  | 9010  | 5.93  |       |       |       |       |
|          | 1750 | 19605 | 16.49 | 18885 | 17.62 | 18155 | 18.53 | 17405 | 19.37 | 16575 | 20.00 | 15745 | 20.63 |
| HDBI-300 | 1150 | 17670 | 7.92  | 16450 | 8.85  | 15130 | 9.54  | 13630 | 9.98  | 11525 | 9.89  |       |       |
|          | 1750 | 26890 | 27.92 | 26095 | 29.54 | 25290 | 30.79 | 24480 | 32.04 | 23605 | 33.06 | 22680 | 33.92 |
| HDBI-330 | 1150 | 23521 | 12.76 | 22173 | 13.95 | 20784 | 15.04 | 19242 | 15.79 | 17420 | 16.13 | 14835 | 15.81 |
|          | 1750 | 35793 | 44.97 | 34907 | 46.77 | 34022 | 48.58 | 33136 | 50.38 | 32251 | 52.19 | 31254 | 53.42 |
| HDBI-360 | 1150 | 30536 | 19.72 | 29067 | 21.26 | 27597 | 22.80 | 25940 | 23.84 | 24238 | 24.79 | 22104 | 24.96 |
|          | 1750 | 46469 | 69.47 | 45503 | 71.82 | 44537 | 74.16 | 43571 | 76.51 | 42605 | 78.85 | 41629 | 81.13 |

| Model    | RPM  | 6" SP |       | 7" SP |       | 8" SP |       | 9" SP |       | 10" SP |       | 11" SP |       |
|----------|------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
|          |      | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   | CFM    | bhp   | CFM    | bhp   |
| HDBI-120 | 3500 | 2073  | 3.18  | 1578  | 2.91  |       |       |       |       |        |       |        |       |
| HDBI-130 | 3500 | 2996  | 4.96  | 2595  | 4.85  | 2172  | 4.71  |       |       |        |       |        |       |
| HDBI-150 | 3500 | 4810  | 7.94  | 4510  | 8.06  | 4140  | 8.02  | 3700  | 7.87  | 3200   | 7.66  |        |       |
| HDBI-160 | 3500 | 6820  | 12.61 | 6490  | 12.76 | 6160  | 12.90 | 5825  | 13.04 | 5360   | 12.86 | 4870   | 12.64 |
| HDBI-180 | 3500 | 9705  | 20.56 | 9350  | 20.80 | 8990  | 21.01 | 8620  | 21.20 | 8255   | 21.40 | 7885   | 21.59 |
| HDBI-200 | 3500 | 13240 | 32.13 | 12850 | 32.44 | 12465 | 32.75 | 12075 | 33.04 | 11675  | 33.30 | 11270  | 33.56 |
| HDBI-220 | 1750 | 9175  | 12.02 |       |       |       |       |       |       |        |       |        |       |
| HDBI-270 | 1750 | 14730 | 20.81 | 13625 | 20.87 | 11950 | 20.29 |       |       |        |       |        |       |
| HDBI-300 | 1750 | 21760 | 34.77 | 20685 | 35.19 | 19515 | 35.34 | 18025 | 35.05 |        |       |        |       |
| HDBI-330 | 1750 | 30240 | 54.56 | 29226 | 55.71 | 28133 | 56.57 | 26846 | 56.77 | 25560  | 56.98 | 23764  | 56.34 |
| HDBI-360 | 1150 | 19092 | 24.39 |       |       |       |       |       |       |        |       |        |       |
|          | 1750 | 40522 | 82.61 | 39416 | 84.10 | 38309 | 85.58 | 37203 | 87.06 | 35851  | 87.53 | 34448  | 87.80 |

| Model    | RPM  | 12" SP |       | 13" SP |       | 14" SP |       | 15" SP |       | 16" SP |       | 17" SP |       |
|----------|------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|          |      | CFM    | bhp   | CFM    | bhp   | CFM    | bhp   | CFM    | bhp   | CFM    | bhp   | CFM    | bhp   |
| HDBI-160 | 3500 | 4335   | 12.39 |        |       |        |       |        |       |        |       |        |       |
| HDBI-180 | 3500 | 7375   | 21.34 | 6865   | 21.08 | 6265   | 20.74 |        |       |        |       |        |       |
| HDBI-200 | 3500 | 10870  | 33.83 | 10465  | 34.09 | 9935   | 33.87 | 9375   | 33.54 | 8775   | 33.15 | 8130   | 32.70 |
| HDBI-330 | 1750 | 21713  | 55.28 |        |       |        |       |        |       |        |       |        |       |
| HDBI-360 | 1750 | 33046  | 88.06 | 31056  | 87.17 | 28817  | 85.80 |        |       |        |       |        |       |

Performance certified is for installation type B-Free inlet, ducted outlet.

† See pages 25 or 26 for minimum motor frame sizes regardless of bhp

Performance ratings do not include the effects of appurtenances (accessories).



Cincinnati Fan and Ventilator Company certifies that the HDBI Heavy Duty Backward Inclined Fans shown on this page and on pages 12 through 23 are licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

Fans are capable of operating to the maximum safe speeds shown on each performance table. These speeds permit obtaining the minimum SP/OV limits established as follows:

CLASS II - 8.5" SP at 3000 FPM to 4.25" SP at 4175 FPM.

CLASS III - 13.5" SP at 3780 FPM to 6.75" SP at 5260 FPM. \

CLASS IV - 20" SP at 4600 FPM to 10" SP at 6400 FPM

**DIRECT DRIVE RATINGS TABLES for Partial Width Fan with Two Wheel Types**

The partial width fan ratings shown on this page and on pages 9, 10 and 11 were derived from tests performed in accordance with AMCA Publication 211 and fan laws were applied to arrive at the data shown for partial width fans. However, none of the partial width fans or fans with SQBI wheels are licensed to bear the AMCA seal. All 100% width fans with HDBI wheels are licensed to bear the AMCA seal as shown on pages 7 and 12 through 23.

| Model    | RPM  | Wheel Type | Fan Width | 1" SP |       | 2" SP |       | 3" SP |       | 4" SP |       | 5" SP |       | 6" SP |       |
|----------|------|------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|          |      |            |           | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   |
| HDBI-120 | 1750 | SQBI       | 1/2       | 813†  | 0.26  | 600†  | 0.26  |       |       |       |       |       |       |       |       |
|          | 1750 | SQBI       | 3/4       | 1220† | 0.39  | 900†  | 0.40  |       |       |       |       |       |       |       |       |
|          | 1750 | HDBI       | FULL      | 1316† | 0.39  |       |       |       |       |       |       |       |       |       |       |
|          | 1750 | SQBI       | FULL      | 1627† | 0.52  | 1201† | 0.53  |       |       |       |       |       |       |       |       |
|          | 3500 | HDBI       | 1/2       | 1641† | 1.34  | 1538† | 1.42  | 1430† | 1.50  | 1316† | 1.56  | 1190† | 1.60  | 1037† | 1.59  |
|          | 3500 | SQBI       | 1/2       | 1858† | 1.87  | 1789† | 1.96  | 1712† | 2.03  | 1627† | 2.08  | 1539† | 2.13  | 1437† | 2.14  |
|          | 3500 | HDBI       | 3/4       | 2462† | 2.00  | 2307† | 2.13  | 2146† | 2.25  | 1974† | 2.35  | 1785† | 2.40  | 1555† | 2.38  |
|          | 3500 | SQBI       | 3/4       | 2788† | 2.80  | 2683† | 2.93  | 2568  | 3.04  | 2441  | 3.12  | 2309  | 3.19  | 2155  | 3.21  |
|          | 3500 | HDBI       | FULL      | 3282† | 2.67  | 3076† | 2.85  | 2861  | 3.00  | 2633  | 3.13  | 2379  | 3.20  | 2073  | 3.18  |
| HDBI-130 | 1750 | SQBI       | FULL      | 3717  | 3.73  | 3578  | 3.91  | 3424  | 4.05  | 3255  | 4.16  | 3079  | 4.26  | 2874  | 4.28  |
|          | 1750 | SQBI       | 1/2       | 1127† | 0.41  | 919†  | 0.44  | 799†  | 0.46  |       |       |       |       |       |       |
|          | 1750 | SQBI       | 3/4       | 1690† | 0.62  | 1378† | 0.65  | 1199† | 0.70  |       |       |       |       |       |       |
|          | 1750 | HDBI       | FULL      | 1828† | 0.62  | 1086† | 0.59  |       |       |       |       |       |       |       |       |
|          | 1750 | SQBI       | FULL      | 2254† | 0.83  | 1838† | 0.87  | 1599† | 0.93  |       |       |       |       |       |       |
|          | 3500 | HDBI       | 1/2       | 2278† | 2.27  | 2175† | 2.39  | 2065  | 2.46  | 1953† | 2.53  | 1820† | 2.56  | 1678† | 2.57  |
|          | 3500 | SQBI       | 1/2       | 2500  | 3.00  | 2423  | 3.12  | 2346  | 3.24  | 2254  | 3.31  | 2161  | 3.39  | 2065  | 3.45  |
|          | 3500 | HDBI       | 3/4       | 3416  | 3.41  | 3263  | 3.58  | 3098  | 3.69  | 2929  | 3.80  | 2730  | 3.84  | 2516  | 3.86  |
|          | 3500 | SQBI       | 3/4       | 3750  | 4.50  | 3635  | 4.68  | 3520  | 4.86  | 3381  | 4.97  | 3241  | 5.08  | 3097  | 5.18  |
| HDBI-150 | 3500 | HDBI       | FULL      | 4457  | 4.68  | 4227  | 4.86  | 3946  | 4.93  | 3656  | 4.99  | 3353  | 5.01  | 2996  | 4.96  |
|          | 3500 | SQBI       | FULL      | 5000  | 6.00  | 4846  | 6.24  | 4693  | 6.48  | 4508  | 6.63  | 4322  | 6.77  | 4130  | 6.90  |
|          | 1750 | SQBI       | 1/2       | 1535† | 0.66  | 1321† | 0.71  | 1040† | 0.70  |       |       |       |       |       |       |
|          | 1750 | SQBI       | 3/4       | 2303† | 1.00  | 1982† | 1.06  | 1560† | 1.05  |       |       |       |       |       |       |
|          | 1750 | HDBI       | FULL      | 2700† | 0.96  | 2070† | 1.00  |       |       |       |       |       |       |       |       |
|          | 1750 | SQBI       | FULL      | 3071† | 1.33  | 2643† | 1.41  | 2080† | 1.41  |       |       |       |       |       |       |
|          | 3500 | HDBI       | 1/2       | 3078  | 3.48  | 2965  | 3.64  | 2845  | 3.79  | 2703  | 3.86  | 2558  | 3.92  | 2405  | 3.97  |
|          | 3500 | SQBI       | 1/2       | 3355  | 4.82  | 3261  | 4.99  | 3166  | 5.15  | 3071  | 5.30  | 2967  | 5.40  | 2862  | 5.50  |
|          | 3500 | HDBI       | 3/4       | 4616  | 5.22  | 4448  | 5.46  | 4268  | 5.68  | 4054  | 5.78  | 3836  | 5.87  | 3608  | 5.96  |
| HDBI-160 | 3500 | SQBI       | 3/4       | 5033  | 7.24  | 4891  | 7.48  | 4750  | 7.72  | 4607  | 7.96  | 4451  | 8.11  | 4294  | 8.26  |
|          | 3500 | HDBI       | FULL      | 6155  | 6.96  | 5930  | 7.28  | 5690  | 7.57  | 5405  | 7.71  | 5115  | 7.83  | 4810  | 7.94  |
|          | 3500 | SQBI       | FULL      | 6710  | 9.65  | 6522  | 9.97  | 6333  | 10.30 | 6143  | 10.61 | 5934  | 10.81 | 5725  | 11.01 |
|          | 1750 | SQBI       | 1/2       | 2090† | 1.05  | 1873† | 1.13  | 1613† | 1.16  | 1183† | 1.08  |       |       |       |       |
|          | 1750 | SQBI       | 3/4       | 3136  | 1.58  | 2809  | 1.69  | 2420  | 1.73  | 1775  | 1.61  |       |       |       |       |
|          | 1750 | HDBI       | FULL      | 3730  | 1.53  | 3080  | 1.61  | 2170  | 1.55  |       |       |       |       |       |       |
|          | 1750 | SQBI       | FULL      | 4181  | 2.11  | 3746  | 2.26  | 3227  | 2.31  | 2366  | 2.15  |       |       |       |       |
|          | 3500 | HDBI       | 1/2       | 4125  | 5.56  | 4000  | 5.78  | 3875  | 5.99  | 3730  | 6.13  | 3570  | 6.22  | 3410  | 6.31  |
|          | 3500 | SQBI       | 1/2       | 4495  | 7.79  | 4390  | 8.03  | 4285  | 8.24  | 4181  | 8.44  | 4076  | 8.62  | 3969  | 8.77  |
| HDBI-180 | 3500 | HDBI       | 3/4       | 6188  | 8.34  | 6000  | 8.66  | 5813  | 8.99  | 5595  | 9.20  | 5355  | 9.33  | 5115  | 9.46  |
|          | 3500 | SQBI       | 3/4       | 6742  | 11.68 | 6584  | 12.04 | 6428  | 12.37 | 6271  | 12.66 | 6113  | 12.92 | 5953  | 13.16 |
|          | 3500 | HDBI       | FULL      | 8250  | 11.12 | 8000  | 11.55 | 7750  | 11.98 | 7460  | 12.26 | 7140  | 12.44 | 6820  | 12.61 |
|          | 3500 | SQBI       | FULL      | 8990  | 15.58 | 8779  | 16.06 | 8571  | 16.49 | 8362  | 16.88 | 8151  | 17.23 | 7937  | 17.54 |
|          | 1750 | SQBI       | 1/2       | 2871  | 1.71  | 2637  | 1.82  | 2378  | 1.89  | 2057  | 1.90  | 1489  | 1.73  |       |       |
|          | 1750 | HDBI       | 3/4       | 3896  | 1.88  | 3371  | 1.97  | 2764  | 2.00  |       |       |       |       |       |       |
|          | 1750 | SQBI       | 3/4       | 4307  | 2.56  | 3955  | 2.73  | 3567  | 2.84  | 3086  | 2.85  | 2233  | 2.59  |       |       |
|          | 1750 | HDBI       | FULL      | 5195  | 2.68  | 4495  | 2.83  | 3685  | 2.87  |       |       |       |       |       |       |
|          | 1750 | SQBI       | FULL      | 5743  | 3.42  | 5273  | 3.65  | 4756  | 3.78  | 4114  | 3.80  | 2978  | 3.45  |       |       |
| HDBI-200 | 3500 | HDBI       | 1/2       | 5613  | 9.14  | 5473  | 9.43  | 5335  | 9.72  | 5198  | 10.01 | 5028  | 10.16 | 4853  | 10.28 |
|          | 3500 | SQBI       | 1/2       | 6091  | 12.76 | 5974  | 13.09 | 5858  | 13.39 | 5743  | 13.67 | 5627  | 13.93 | 5511  | 14.17 |
|          | 3500 | HDBI       | 3/4       | 8419  | 13.71 | 8209  | 14.15 | 8003  | 14.58 | 7796  | 15.02 | 7541  | 15.24 | 7279  | 15.42 |
|          | 3500 | SQBI       | 3/4       | 9136  | 19.14 | 8961  | 19.63 | 8787  | 20.09 | 8614  | 20.51 | 8441  | 20.90 | 8267  | 21.25 |
|          | 3500 | HDBI       | FULL      | 11225 | 18.28 | 10945 | 18.86 | 10670 | 19.44 | 10395 | 20.02 | 10055 | 20.32 | 9705  | 20.56 |
|          | 3500 | SQBI       | FULL      | 12181 | 25.52 | 11947 | 26.18 | 11716 | 26.79 | 11486 | 27.35 | 11255 | 27.87 | 11022 | 28.34 |
|          | 1750 | SQBI       | 1/2       | 3934  | 2.85  | 3658  | 3.02  | 3371  | 3.16  | 3045  | 3.18  | 2612  | 3.09  | 1722  | 2.51  |
|          | 1750 | HDBI       | 3/4       | 5220  | 2.91  | 4676  | 3.07  | 4076  | 3.17  | 3293  | 3.11  |       |       |       |       |
|          | 1750 | SQBI       | 3/4       | 5901  | 4.27  | 5487  | 4.53  | 5057  | 4.74  | 4568  | 4.77  | 3918  | 4.63  | 2583  | 3.77  |
| HDBI-200 | 1750 | HDBI       | FULL      | 6960  | 3.88  | 6235  | 4.09  | 5435  | 4.23  | 4390  | 4.14  |       |       |       |       |
|          | 1750 | SQBI       | FULL      | 7868  | 5.69  | 7317  | 6.05  | 6743  | 6.33  | 6091  | 6.36  | 5224  | 6.18  | 3444  | 5.03  |
|          | 3500 | HDBI       | 1/2       | 7415  | 14.37 | 7265  | 14.75 | 7113  | 15.14 | 6960  | 15.52 | 6810  | 15.90 | 6620  | 16.07 |
|          | 3500 | SQBI       | 1/2       | 8268  | 21.53 | 8135  | 21.94 | 8001  | 22.35 | 7867  | 22.76 | 7734  | 23.17 | 7600  | 23.58 |
|          | 3500 | HDBI       | 3/4       | 11123 | 21.56 | 10898 | 22.13 | 10669 | 22.70 | 10440 | 23.27 | 10215 | 23.85 | 9930  | 24.10 |
|          | 3500 | SQBI       | 3/4       | 12403 | 32.29 | 12202 | 32.91 | 12002 | 33.52 | 11801 | 34.14 | 11601 | 34.76 | 11401 | 35.37 |
|          | 3500 | HDBI       | FULL      | 14830 | 28.74 | 14530 | 29.50 | 14225 | 30.27 | 13920 | 31.03 | 13620 | 31.80 | 13240 | 32.13 |
|          | 3500 | SQBI       | FULL      | 16537 | 43.05 | 16270 | 43.88 | 16003 | 44.70 | 15735 | 45.52 | 15468 | 46.34 | 15201 | 47.16 |

Performance certified is for installation type B-Free inlet, ducted outlet.  
Performance ratings do not include the effects of appurtenances (accessories).

† Requires a 143T frame or larger even though bhp is available in a 56 frame. See pages 25 or 26.



**DIRECT DRIVE RATINGS TABLES for Partial Width Fan with Two Wheel Types**

CFM and bhp at Static Pressure Shown – Ratings at 70°F – .075" Density – Sea Level

| 7" SP |       | 8" SP |       | 9" SP |       | 10" SP |       | 11" SP |       | 12" SP |       | 13" SP |       | 14" SP |       | Model    |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|----------|
| CFM   | bhp   | CFM   | bhp   | CFM   | bhp   | CFM    | bhp   | CFM    | bhp   | CFM    | bhp   | CFM    | bhp   | CFM    | bhp   |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       | HDBI-120 |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
| 1330† | 2.15  | 1201† | 2.11  | 1021  | 1.95  |        |       |        |       |        |       |        |       |        |       | HDBI-120 |
| 1996  | 3.22  | 1801  | 3.16  | 1532  | 2.93  |        |       |        |       |        |       |        |       |        |       |          |
| 1578  | 2.91  |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
| 2661  | 4.29  | 2402  | 4.21  | 2043  | 3.90  |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       | HDBI-130 |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
| 1951  | 3.47  | 1838  | 3.48  | 1705  | 3.45  | 1559   | 3.39  | 1347   | 3.14  |        |       |        |       |        |       |          |
| 2927  | 5.20  | 2758  | 5.22  | 2558  | 5.18  | 2339   | 5.08  | 2021   | 4.71  |        |       |        |       |        |       |          |
| 2595  | 4.85  | 2172  | 4.71  |       |       |        |       |        |       |        |       |        |       |        |       |          |
| 3903  | 6.93  | 3677  | 6.97  | 3411  | 6.91  | 3119   | 6.78  | 2695   | 6.28  |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       | HDBI-150 |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
| 2255  | 4.03  | 2070  | 4.01  |       |       |        |       |        |       |        |       |        |       |        |       |          |
| 2758  | 5.60  | 2643  | 5.66  | 2527  | 5.71  | 2406   | 5.74  | 2244   | 5.68  | 2081   | 5.62  | 1817   | 5.35  | 1086   | 4.39  |          |
| 3383  | 6.05  | 3105  | 6.02  |       |       |        |       |        |       |        |       |        |       |        |       |          |
| 4137  | 8.41  | 3965  | 8.48  | 3791  | 8.56  | 3610   | 8.61  | 3367   | 8.52  | 3121   | 8.43  | 2725   | 8.02  | 1629   | 6.58  | HDBI-160 |
| 4510  | 8.06  | 4140  | 8.02  | 3700  | 7.87  | 3200   | 7.66  |        |       |        |       |        |       |        |       |          |
| 5516  | 11.21 | 5287  | 11.31 | 5055  | 11.41 | 4813   | 11.49 | 4489   | 11.37 | 4162   | 11.24 | 3634   | 10.69 | 2173   | 8.77  |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       | HDBI-160 |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
| 3245  | 6.38  | 3080  | 6.45  | 2913  | 6.52  | 2680   | 6.43  |        |       |        |       |        |       |        |       |          |
| 3859  | 8.91  | 3746  | 9.03  | 3628  | 9.12  | 3503   | 9.20  | 3370   | 9.24  | 3227   | 9.25  | 3067   | 9.22  | 2885   | 9.14  |          |
| 4868  | 9.57  | 4620  | 9.68  | 4369  | 9.78  | 4020   | 9.65  |        |       |        |       |        |       |        |       |          |
| 5788  | 13.36 | 5618  | 13.54 | 5441  | 13.68 | 5255   | 13.79 | 5056   | 13.86 | 4840   | 13.88 | 4601   | 13.83 | 4327   | 13.70 | HDBI-180 |
| 6490  | 12.76 | 6160  | 12.90 | 5825  | 13.04 | 5360   | 12.86 | 4870   | 12.64 | 4335   | 12.39 |        |       |        |       |          |
| 7718  | 17.82 | 7491  | 18.05 | 7255  | 18.25 | 7006   | 18.39 | 6741   | 18.48 | 6453   | 18.51 | 6134   | 18.45 | 5769   | 18.27 |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       | HDBI-180 |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
| 4675  | 10.40 | 4495  | 10.51 | 4310  | 10.60 | 4128   | 10.70 | 3943   | 10.80 |        |       |        |       |        |       |          |
| 5393  | 14.39 | 5273  | 14.59 | 5150  | 14.75 | 5024   | 14.90 | 4893   | 15.03 | 4756   | 15.13 | 4612   | 15.20 | 4459   | 15.24 |          |
| 7013  | 15.60 | 6743  | 15.76 | 6465  | 15.90 | 6191   | 16.05 | 5914   | 16.19 |        |       |        |       |        |       |          |
| 8090  | 21.58 | 7910  | 21.87 | 7726  | 22.13 | 7536   | 22.36 | 7339   | 22.55 | 7134   | 22.70 | 6918   | 22.80 | 6689   | 22.86 | HDBI-200 |
| 9350  | 20.80 | 8990  | 21.01 | 8620  | 21.20 | 8255   | 21.40 | 7885   | 21.59 | 7375   | 21.34 | 6865   | 21.08 | 6265   | 20.74 |          |
| 10786 | 28.77 | 10547 | 29.16 | 10301 | 29.51 | 10048  | 29.81 | 9786   | 30.06 | 9512   | 30.26 | 9224   | 30.40 | 8918   | 30.48 |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       | HDBI-200 |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
|       |       |       |       |       |       |        |       |        |       |        |       |        |       |        |       |          |
| 6425  | 16.22 | 6323  | 16.38 | 6038  | 16.52 | 5838   | 16.65 | 5635   | 16.78 | 5425   | 16.92 | 5233   | 17.05 | 4968   | 16.94 |          |
| 7458  | 23.88 | 7317  | 24.18 | 7175  | 24.48 | 7033   | 24.78 | 6891   | 25.08 | 6743   | 25.30 | 6580   | 25.34 | 6417   | 25.38 |          |
| 9638  | 24.33 | 9349  | 24.56 | 9056  | 24.78 | 8756   | 24.98 | 8453   | 25.17 | 8153   | 25.37 | 7849   | 25.57 | 7451   | 25.40 |          |
| 11188 | 35.82 | 10975 | 36.27 | 10762 | 36.72 | 10550  | 37.17 | 10337  | 37.62 | 10115  | 37.95 | 9870   | 38.01 | 9626   | 38.07 |          |
| 12850 | 32.44 | 12465 | 32.75 | 12075 | 33.04 | 11675  | 33.30 | 11270  | 33.56 | 10870  | 33.83 | 10465  | 34.09 | 9935   | 33.87 |          |
| 14917 | 47.76 | 14364 | 48.36 | 14350 | 48.96 | 14066  | 49.56 | 13783  | 50.16 | 13487  | 50.60 | 13160  | 50.68 | 12834  | 50.76 |          |

Performance certified is for installation type B-Free inlet, ducted outlet.  
Performance ratings do not include the effects of appurtenances (accessories).

† Requires a 143T frame or larger even though bhp is available in a 56 frame. See pages 25 or 26.

**DIRECT DRIVE RATINGS TABLES for Partial Width Fan with Two Wheel Types**

The partial width fan ratings shown on this page and on pages 8, 9 and 11 were derived from tests performed in accordance with AMCA Publication 211 and fan laws were applied to arrive at the data shown for partial width fans. However, none of the partial width fans or fans with SQBI wheels are licensed to bear the AMCA seal. All 100% width fans with HDBI wheels are licensed to bear the AMCA seal as shown on pages 7 and 12 through 23.

| Model    | RPM  | Wheel Type | Fan Width | 1" SP |       | 2" SP |       | 3" SP |       | 4" SP |       | 5" SP |       | 6" SP |       |
|----------|------|------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|          |      |            |           | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   | CFM   | bhp   |
| HDBI-220 | 1750 | HDBI       | 1/2       | 4950  | 3.21  | 4635  | 3.45  | 4305  | 3.63  | 3878  | 3.70  |       |       |       |       |
|          | 1750 | SQBI       | 1/2       | 5375  | 4.43  | 5104  | 4.69  | 4777  | 4.83  | 4443  | 4.97  | 4092  | 5.07  | 3655  | 5.08  |
|          | 1750 | HDBI       | 3/4       | 7425  | 4.81  | 6953  | 5.17  | 6548  | 5.45  | 5816  | 5.54  |       |       |       |       |
|          | 1750 | SQBI       | 3/4       | 8063  | 6.65  | 7656  | 7.03  | 7166  | 7.25  | 6664  | 7.45  | 6138  | 7.60  | 5483  | 7.62  |
|          | 1750 | HDBI       | FULL      | 9900  | 6.41  | 9270  | 6.89  | 8610  | 7.26  | 7755  | 7.39  | 6820  | 7.42  |       |       |
|          | 1750 | SQBI       | FULL      | 10750 | 8.87  | 10209 | 9.37  | 9555  | 9.67  | 8886  | 9.93  | 8184  | 10.13 | 7311  | 10.16 |
|          | 3500 | HDBI       | 1/2       | 10364 | 23.77 | 10209 | 24.34 | 10054 | 24.91 | 9899  | 25.48 | 9744  | 26.05 | 9589  | 26.62 |
| HDBI-240 | 3500 | HDBI       | 3/4       | 15547 | 35.66 | 15314 | 36.51 | 15081 | 37.37 | 14849 | 38.22 | 14616 | 39.08 | 14383 | 39.94 |
|          | 3500 | SQBI       | FULL      | 20729 | 47.54 | 20419 | 48.68 | 20109 | 49.82 | 19799 | 50.97 | 19488 | 52.11 | 19178 | 53.25 |
|          | 1750 | HDBI       | 1/2       | 6683  | 5.11  | 6340  | 5.46  | 5980  | 5.72  | 5593  | 5.93  | 5103  | 5.99  |       |       |
|          | 1750 | SQBI       | 1/2       | 7250  | 7.12  | 6955  | 7.47  | 6618  | 7.72  | 6258  | 7.92  | 5884  | 8.08  | 5497  | 8.21  |
|          | 1750 | HDBI       | 3/4       | 10024 | 7.67  | 9510  | 8.19  | 8970  | 8.58  | 8389  | 8.89  | 7654  | 8.98  |       |       |
|          | 1750 | SQBI       | 3/4       | 10875 | 10.68 | 10433 | 11.20 | 9928  | 11.58 | 9388  | 11.87 | 8826  | 12.12 | 8246  | 12.32 |
|          | 1750 | HDBI       | FULL      | 13365 | 10.22 | 12680 | 10.92 | 11960 | 11.44 | 11185 | 11.85 | 10205 | 11.97 | 9175  | 12.02 |
| HDBI-270 | 1750 | SQBI       | FULL      | 14500 | 14.25 | 13911 | 14.93 | 13237 | 15.43 | 12517 | 15.83 | 11769 | 16.16 | 10995 | 16.43 |
|          | 1750 | HDBI       | 1/2       | 9443  | 8.81  | 9078  | 9.27  | 8703  | 9.69  | 8288  | 10.00 | 7873  | 10.32 | 7365  | 10.42 |
|          | 1750 | SQBI       | 1/2       | 9764  | 11.46 | 9440  | 11.92 | 9106  | 12.36 | 8709  | 12.62 | 8312  | 12.89 | 7898  | 13.10 |
|          | 1750 | HDBI       | 3/4       | 14161 | 13.22 | 13616 | 13.90 | 13054 | 14.53 | 12431 | 15.00 | 11803 | 15.47 | 11048 | 15.61 |
|          | 1750 | SQBI       | 3/4       | 14647 | 17.20 | 14161 | 17.89 | 13659 | 18.53 | 13064 | 18.93 | 12469 | 19.33 | 11848 | 19.65 |
|          | 1750 | HDBI       | FULL      | 18885 | 17.62 | 18155 | 18.53 | 17405 | 19.37 | 16575 | 20.00 | 15745 | 20.63 | 14730 | 20.81 |
|          | 1750 | SQBI       | FULL      | 19529 | 22.93 | 18881 | 23.85 | 18212 | 24.71 | 17418 | 25.24 | 16625 | 25.78 | 15797 | 26.21 |
| HDBI-300 | 1750 | HDBI       | 1/2       | 13048 | 14.77 | 12645 | 15.40 | 12240 | 16.02 | 11803 | 16.53 | 11340 | 16.96 | 10880 | 17.39 |
|          | 1750 | SQBI       | 1/2       | 13496 | 19.30 | 13136 | 19.94 | 12775 | 20.57 | 12377 | 21.08 | 11936 | 21.44 | 11495 | 21.81 |
|          | 1750 | HDBI       | 3/4       | 19571 | 22.16 | 18968 | 23.09 | 18360 | 24.03 | 17704 | 24.80 | 17010 | 25.44 | 16320 | 26.08 |
|          | 1750 | SQBI       | 3/4       | 20244 | 28.96 | 19704 | 29.91 | 19163 | 30.86 | 18565 | 31.61 | 17904 | 32.16 | 17242 | 32.71 |
|          | 1750 | HDBI       | FULL      | 26095 | 29.54 | 25290 | 30.79 | 24480 | 32.04 | 23605 | 33.06 | 22680 | 33.92 | 21760 | 34.77 |
|          | 1750 | SQBI       | FULL      | 26992 | 38.61 | 26272 | 39.87 | 25551 | 41.14 | 24754 | 42.15 | 23872 | 42.88 | 22990 | 43.61 |
|          | 1750 | HDBI       | 1/2       | 17453 | 23.38 | 17011 | 24.28 | 16568 | 25.19 | 16125 | 26.09 | 15627 | 26.71 | 15120 | 27.28 |
| HDBI-330 | 1750 | SQBI       | 1/2       | 19051 | 34.49 | 18555 | 35.13 | 18059 | 35.77 | 17538 | 36.25 | 16985 | 36.53 | 16432 | 36.81 |
|          | 1750 | HDBI       | 3/4       | 26180 | 35.07 | 25516 | 36.43 | 24852 | 37.78 | 24188 | 39.14 | 23441 | 40.07 | 22680 | 40.92 |
|          | 1750 | SQBI       | 3/4       | 28576 | 51.73 | 27832 | 52.69 | 27088 | 53.65 | 26307 | 54.38 | 25478 | 54.79 | 24648 | 55.21 |
|          | 1750 | HDBI       | FULL      | 34907 | 46.77 | 34022 | 48.58 | 33136 | 50.38 | 32251 | 52.19 | 31254 | 53.42 | 30240 | 54.56 |
|          | 1750 | SQBI       | FULL      | 38102 | 68.98 | 37110 | 70.26 | 36118 | 71.54 | 35076 | 72.50 | 33970 | 73.06 | 32864 | 73.62 |
|          | 1750 | HDBI       | 1/2       | 22751 | 35.91 | 22268 | 37.08 | 21785 | 38.25 | 21302 | 39.43 | 20814 | 40.57 | 20261 | 41.31 |
|          | 1750 | SQBI       | 1/2       | 25982 | 57.19 | 25433 | 58.06 | 24884 | 58.93 | 24336 | 59.79 | 23747 | 60.35 | 23134 | 60.73 |
| HDBI-360 | 1750 | HDBI       | 3/4       | 34127 | 53.86 | 33402 | 55.62 | 32678 | 57.38 | 31954 | 59.13 | 31221 | 60.85 | 30391 | 61.96 |
|          | 1750 | SQBI       | 3/4       | 38973 | 85.79 | 38150 | 87.09 | 37327 | 88.39 | 36504 | 89.69 | 35620 | 90.53 | 34702 | 91.10 |
|          | 1750 | HDBI       | FULL      | 45503 | 71.82 | 44537 | 74.16 | 43571 | 76.51 | 42605 | 78.85 | 41629 | 81.13 | 40522 | 82.61 |

| Model    | RPM  | Wheel Type | Fan Width | 15" SP |       | 16" SP |       | 17" SP |       | 18" SP |       | 19" SP |       | 20" SP |       |
|----------|------|------------|-----------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|          |      |            |           | CFM    | bhp   | CFM    | bhp   | CFM    | bhp   | CFM    | bhp   | CFM    | bhp   | CFM    | bhp   |
| HDBI-160 | 3600 | SQBI       | 1/2       | 2664   | 8.96  | 2366   | 8.61  |        |       |        |       |        |       |        |       |
|          | 3600 | SQBI       | 3/4       | 3996   | 13.44 | 3549   | 12.92 |        |       |        |       |        |       |        |       |
|          | 3600 | SQBI       | FULL      | 5328   | 17.92 | 4732   | 17.22 |        |       |        |       |        |       |        |       |
| HDBI-180 | 3600 | SQBI       | 1/2       | 4295   | 15.24 | 4114   | 15.18 |        |       |        |       |        |       |        |       |
|          | 3600 | SQBI       | 3/4       | 6442   | 22.86 | 6171   | 22.78 |        |       |        |       |        |       |        |       |
|          | 3600 | SQBI       | FULL      | 8589   | 30.47 | 8229   | 30.37 |        |       |        |       |        |       |        |       |
| HDBI-200 | 3600 | SQBI       | 1/2       | 6254   | 25.42 | 6091   | 25.46 | 5922   | 25.47 | 5690   | 25.21 | 5457   | 24.96 | 5224   | 24.70 |
|          | 3600 | SQBI       | 3/4       | 9381   | 38.13 | 9137   | 38.18 | 8884   | 38.20 | 8535   | 37.82 | 8185   | 37.44 | 7836   | 37.06 |
|          | 3600 | SQBI       | FULL      | 12508  | 50.83 | 12182  | 50.91 | 11845  | 50.94 | 11380  | 50.43 | 10914  | 49.92 | 10449  | 49.41 |
| HDBI-220 | 3600 | HDBI       | 1/2       | 7975   | 29.46 | 7753   | 29.55 | 7531   | 29.64 | 7309   | 29.73 | 7066   | 29.72 | 6822   | 29.70 |
|          | 3600 | HDBI       | 3/4       | 11963  | 44.19 | 11630  | 44.33 | 11297  | 44.46 | 10964  | 44.59 | 10600  | 44.58 | 10233  | 44.54 |
|          | 3600 | HDBI       | FULL      | 15951  | 58.93 | 15507  | 59.10 | 15063  | 59.28 | 14619  | 59.46 | 14133  | 59.43 | 13644  | 59.39 |
| HDBI-330 | 1750 | SQBI       | 1/2       | 8235   | 31.96 |        |       |        |       |        |       |        |       |        |       |
|          | 1750 | SQBI       | 3/4       | 12352  | 47.95 |        |       |        |       |        |       |        |       |        |       |
|          | 1750 | SQBI       | FULL      | 16470  | 63.93 |        |       |        |       |        |       |        |       |        |       |
| HDBI-360 | 1750 | SQBI       | 1/2       | 16331  | 60.33 | 15064  | 59.99 | 13619  | 59.67 | 11878  | 55.24 |        |       |        |       |
|          | 1750 | SQBI       | 3/4       | 24497  | 90.49 | 22597  | 89.99 | 20429  | 89.50 | 17817  | 82.87 |        |       |        |       |

Performance certified is for installation type B-Free inlet, ducted outlet.

Performance ratings do not include the effects of appurtenances (accessories).

CFM and bhp at Static Pressure Shown – Ratings at 70°F – .075" Density – Sea Level

See additional HDBI-330 and  
HDBI-360 ratings at bottom of page

[illegible]

# Belt Drive Ratings Table — at 70°F | .075 density | sea level

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## HDBI-120

Wheel  
Diameter - 12.25"

Outlet OD  
Size - 9.375" x 13.75"  
Area - .895 ft<sup>2</sup> ID

Inlet OD  
Size - 13.25"  
Area - .92 ft<sup>2</sup> ID

All wheels are HDBI Type  
Class II = light text face above Class III  
Class III = bold text face

| Volume<br>CFM | O.V.<br>fpm | 0" SP |      | ¼" SP |      | ½" SP |      | ¾" SP |      | 1" SP |      | 1 ½" SP |      | 2" SP       |             |
|---------------|-------------|-------|------|-------|------|-------|------|-------|------|-------|------|---------|------|-------------|-------------|
|               |             | RPM   | bhp  | RPM   | bhp  | RPM   | bhp  | RPM   | bhp  | RPM   | bhp  | RPM     | bhp  | RPM         | bhp         |
| 600           | 670         | 603   | 0.01 | 831   | 0.04 | 1011  | 0.08 | 1173  | 0.12 | 1324  | 0.16 | 1598    | 0.26 |             |             |
| 750           | 838         | 753   | 0.02 | 948   | 0.06 | 1105  | 0.10 | 1247  | 0.14 | 1380  | 0.19 | 1625    | 0.29 | 1852        | 0.41        |
| 900           | 1005        | 904   | 0.04 | 1073  | 0.09 | 1214  | 0.13 | 1341  | 0.18 | 1460  | 0.23 | 1681    | 0.34 | 1887        | 0.47        |
| 1050          | 1173        | 1055  | 0.07 | 1204  | 0.12 | 1332  | 0.17 | 1447  | 0.22 | 1556  | 0.28 | 1757    | 0.40 | 1946        | 0.53        |
| 1200          | 1341        | 1205  | 0.10 | 1339  | 0.16 | 1456  | 0.21 | 1562  | 0.28 | 1662  | 0.34 | 1848    | 0.47 | 2022        | 0.61        |
| 1350          | 1508        | 1356  | 0.15 | 1477  | 0.21 | 1584  | 0.27 | 1683  | 0.34 | 1776  | 0.41 | 1949    | 0.55 | 2112        | 0.70        |
| 1500          | 1676        | 1507  | 0.20 | 1617  | 0.27 | 1716  | 0.34 | 1809  | 0.41 | 1896  | 0.49 | 2058    | 0.64 | 2210        | 0.81        |
| 1650          | 1843        | 1657  | 0.27 | 1758  | 0.34 | 1851  | 0.42 | 1938  | 0.50 | 2019  | 0.58 | 2173    | 0.75 | 2316        | 0.92        |
| 1800          | 2011        | 1808  | 0.35 | 1901  | 0.42 | 1988  | 0.51 | 2069  | 0.59 | 2146  | 0.68 | 2292    | 0.86 | 2428        | 1.05        |
| 1950          | 2178        | 1959  | 0.44 | 2045  | 0.52 | 2126  | 0.61 | 2203  | 0.71 | 2276  | 0.80 | 2414    | 0.99 | 2544        | 1.19        |
| 2100          | 2346        | 2109  | 0.55 | 2190  | 0.64 | 2266  | 0.73 | 2339  | 0.83 | 2408  | 0.93 | 2540    | 1.14 | 2664        | 1.35        |
| 2250          | 2513        | 2260  | 0.67 | 2336  | 0.77 | 2408  | 0.87 | 2476  | 0.98 | 2542  | 1.08 | 2668    | 1.30 | 2786        | 1.53        |
| 2400          | 2681        | 2411  | 0.82 | 2482  | 0.92 | 2550  | 1.03 | 2615  | 1.14 | 2678  | 1.25 | 2798    | 1.48 | 2912        | 1.72        |
| 2550          | 2849        | 2561  | 0.98 | 2629  | 1.09 | 2693  | 1.21 | 2755  | 1.32 | 2815  | 1.44 | 2930    | 1.68 | 3039        | 1.93        |
| 2700          | 3016        | 2712  | 1.17 | 2776  | 1.28 | 2837  | 1.40 | 2896  | 1.52 | 2954  | 1.65 | 3064    | 1.90 | 3169        | 2.17        |
| 2850          | 3184        | 2863  | 1.37 | 2923  | 1.49 | 2981  | 1.62 | 3038  | 1.75 | 3093  | 1.88 | 3199    | 2.15 | 3300        | 2.42        |
| 3000          | 3351        | 3013  | 1.60 | 3071  | 1.73 | 3126  | 1.86 | 3181  | 1.99 | 3233  | 2.13 | 3335    | 2.41 | 3433        | 2.70        |
| 3150          | 3519        | 3164  | 1.85 | 3219  | 1.99 | 3272  | 2.12 | 3324  | 2.26 | 3375  | 2.41 | 3473    | 2.70 | 3567        | 3.00        |
| 3300          | 3686        | 3315  | 2.13 | 3367  | 2.27 | 3418  | 2.41 | 3468  | 2.56 | 3517  | 2.71 | 3611    | 3.01 | 3702        | 3.32        |
| 3450          | 3854        | 3465  | 2.43 | 3515  | 2.58 | 3564  | 2.73 | 3612  | 2.88 | 3659  | 3.04 | 3750    | 3.35 | 3838        | 3.68        |
| 3600          | 4022        | 3616  | 2.76 | 3664  | 2.92 | 3711  | 3.07 | 3757  | 3.23 | 3802  | 3.39 | 3890    | 3.72 | 3976        | 4.06        |
| 3750          | 4189        | 3767  | 3.12 | 3813  | 3.28 | 3858  | 3.45 | 3903  | 3.61 | 3946  | 3.78 | 4031    | 4.12 | 4114        | 4.47        |
| 3900          | 4357        | 3917  | 3.51 | 3962  | 3.68 | 4005  | 3.85 | 4048  | 4.02 | 4090  | 4.19 | 4173    | 4.55 | <b>4253</b> | <b>4.90</b> |

| Volume<br>CFM | O.V.<br>fpm | 2 ½" SP     |             | 3" SP       |             | 4" SP       |             | 5" SP       |             | 6" SP       |             | 7" SP       |             | 8" SP       |             |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|               |             | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         |
| 1050          | 1173        | 2125        | 0.68        | 2296        | 0.83        | 2617        | 1.16        | 2915        | 1.52        |             |             |             |             |             |             |
| 1200          | 1341        | 2188        | 0.76        | 2347        | 0.92        | 2648        | 1.26        | 2930        | 1.64        | 3196        | 2.04        | 3448        | 2.48        |             |             |
| 1350          | 1508        | 2266        | 0.86        | 2414        | 1.03        | 2696        | 1.39        | 2962        | 1.77        | 3216        | 2.19        | 3457        | 2.63        | 3688        | 3.10        |
| 1500          | 1676        | 2355        | 0.98        | 2494        | 1.15        | 2759        | 1.53        | 3011        | 1.93        | 3251        | 2.36        | 3481        | 2.81        | 3703        | 3.29        |
| 1650          | 1843        | 2453        | 1.10        | 2584        | 1.29        | 2834        | 1.68        | 3072        | 2.10        | 3300        | 2.54        | 3520        | 3.01        | 3732        | 3.50        |
| 1800          | 2011        | 2557        | 1.24        | 2682        | 1.44        | 2919        | 1.85        | 3145        | 2.29        | 3362        | 2.75        | 3572        | 3.23        | 3774        | 3.74        |
| 1950          | 2178        | 2667        | 1.40        | 2786        | 1.61        | 3012        | 2.04        | 3227        | 2.50        | 3434        | 2.98        | 3634        | 3.47        | 3828        | 3.99        |
| 2100          | 2346        | 2782        | 1.57        | 2895        | 1.79        | 3111        | 2.25        | 3317        | 2.72        | 3515        | 3.22        | 3706        | 3.74        | 3892        | 4.27        |
| 2250          | 2513        | 2899        | 1.76        | 3008        | 1.99        | 3216        | 2.47        | 3413        | 2.97        | 3603        | 3.49        | 3786        | 4.02        | 3965        | 4.58        |
| 2400          | 2681        | 3020        | 1.96        | 3125        | 2.21        | 3324        | 2.71        | 3514        | 3.23        | 3697        | 3.77        | 3873        | 4.33        | 4045        | 4.90        |
| 2550          | 2849        | 3144        | 2.19        | 3244        | 2.44        | 3437        | 2.97        | 3620        | 3.52        | 3796        | 4.08        | 3966        | 4.66        | 4131        | 5.25        |
| 2700          | 3016        | 3269        | 2.43        | 3367        | 2.70        | 3552        | 3.26        | 3729        | 3.83        | 3899        | 4.41        | 4063        | 5.01        | <b>4223</b> | <b>5.63</b> |
| 2850          | 3184        | 3397        | 2.70        | 3491        | 2.98        | 3671        | 3.56        | 3842        | 4.15        | 4006        | 4.76        | 4165        | 5.39        | <b>4320</b> | <b>6.02</b> |
| 3000          | 3351        | 3527        | 2.99        | 3617        | 3.28        | 3791        | 3.89        | 3957        | 4.51        | 4116        | 5.14        | <b>4271</b> | <b>5.78</b> | <b>4421</b> | <b>6.44</b> |
| 3150          | 3519        | 3657        | 3.30        | 3745        | 3.61        | 3914        | 4.24        | 4075        | 4.88        | <b>4230</b> | <b>5.54</b> | <b>4379</b> | <b>6.21</b> | <b>4525</b> | <b>6.89</b> |
| 3300          | 3686        | 3790        | 3.64        | 3875        | 3.96        | 4039        | 4.61        | <b>4195</b> | <b>5.28</b> | <b>4345</b> | <b>5.96</b> | <b>4491</b> | <b>6.66</b> | <b>4632</b> | <b>7.36</b> |
| 3450          | 3854        | 3923        | 4.01        | 4006        | 4.34        | 4165        | 5.02        | <b>4317</b> | <b>5.71</b> | <b>4463</b> | <b>6.42</b> | <b>4605</b> | <b>7.13</b> | <b>4743</b> | <b>7.86</b> |
| 3600          | 4022        | 4058        | 4.40        | 4138        | 4.74        | <b>4293</b> | <b>5.45</b> | <b>4441</b> | <b>6.16</b> | <b>4583</b> | <b>6.89</b> | <b>4721</b> | <b>7.64</b> | <b>4856</b> | <b>8.39</b> |
| 3750          | 4189        | <b>4194</b> | <b>4.82</b> | <b>4272</b> | <b>5.18</b> | <b>4422</b> | <b>5.91</b> | <b>4566</b> | <b>6.65</b> | <b>4705</b> | <b>7.40</b> | <b>4840</b> | <b>8.17</b> | <b>4971</b> | <b>8.95</b> |
| 3900          | 4357        | <b>4330</b> | <b>5.27</b> | <b>4406</b> | <b>5.64</b> | <b>4552</b> | <b>6.39</b> | <b>4693</b> | <b>7.16</b> | <b>4828</b> | <b>7.94</b> | <b>4960</b> | <b>8.73</b> |             |             |
| 4050          | 4524        | <b>4468</b> | <b>5.75</b> | <b>4542</b> | <b>6.14</b> | <b>4684</b> | <b>6.91</b> | <b>4821</b> | <b>7.71</b> | <b>4953</b> | <b>8.51</b> |             |             |             |             |
| 4200          | 4692        | <b>4606</b> | <b>6.27</b> | <b>4678</b> | <b>6.66</b> | <b>4817</b> | <b>7.46</b> | <b>4950</b> | <b>8.28</b> |             |             |             |             |             |             |

| Volume<br>CFM | O.V.<br>fpm | 9" SP       |             | 10" SP      |             | 11" SP      |             | 12" SP      |             | 13" SP      |             | 14" SP      |             |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|               |             | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         |
| 1800          | 2011        | 3971        | 4.26        | 4163        | 4.81        | <b>4349</b> | <b>5.38</b> | <b>4530</b> | <b>5.97</b> | <b>4707</b> | <b>6.59</b> | <b>4880</b> | <b>7.22</b> |
| 1950          | 2178        | 4017        | 4.54        | <b>4201</b> | <b>5.10</b> | <b>4380</b> | <b>5.68</b> | <b>4555</b> | <b>6.28</b> | <b>4727</b> | <b>6.90</b> | <b>4894</b> | <b>7.54</b> |
| 2100          | 2346        | 4073        | 4.83        | <b>4250</b> | <b>5.41</b> | <b>4423</b> | <b>6.00</b> | <b>4591</b> | <b>6.62</b> | <b>4757</b> | <b>7.25</b> | <b>4919</b> | <b>7.90</b> |
| 2250          | 2513        | 4139        | 5.15        | <b>4308</b> | <b>5.74</b> | <b>4475</b> | <b>6.35</b> | <b>4638</b> | <b>6.98</b> | <b>4798</b> | <b>7.62</b> | <b>4954</b> | <b>8.29</b> |
| 2400          | 2681        | <b>4212</b> | <b>5.49</b> | <b>4376</b> | <b>6.10</b> | <b>4536</b> | <b>6.73</b> | <b>4693</b> | <b>7.37</b> | <b>4848</b> | <b>8.03</b> |             |             |
| 2550          | 2849        | <b>4292</b> | <b>5.86</b> | <b>4450</b> | <b>6.49</b> | <b>4605</b> | <b>7.13</b> | <b>4757</b> | <b>7.79</b> | <b>4906</b> | <b>8.46</b> |             |             |
| 2700          | 3016        | <b>4379</b> | <b>6.25</b> | <b>4531</b> | <b>6.90</b> | <b>4681</b> | <b>7.56</b> | <b>4828</b> | <b>8.24</b> | <b>4972</b> | <b>8.93</b> |             |             |
| 2850          | 3184        | <b>4471</b> | <b>6.67</b> | <b>4618</b> | <b>7.34</b> | <b>4763</b> | <b>8.02</b> | <b>4905</b> | <b>8.71</b> |             |             |             |             |
| 3000          | 3351        | <b>4567</b> | <b>7.12</b> | <b>4710</b> | <b>7.80</b> | <b>4850</b> | <b>8.50</b> |             |             |             |             |             |             |
| 3150          | 3519        | <b>4667</b> | <b>7.58</b> | <b>4806</b> | <b>8.29</b> | <b>4942</b> | <b>9.01</b> |             |             |             |             |             |             |
| 3300          | 3686        | <b>4770</b> | <b>8.08</b> | <b>4906</b> | <b>8.81</b> |             |             |             |             |             |             |             |             |
| 3450          | 3854        | <b>4877</b> | <b>8.60</b> |             |             |             |             |             |             |             |             |             |             |

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR<sup>2</sup>.

**HDBI-130****Wheel**

Diameter - 13.50"

**Outlet OD**

Size - 10.38" x 15.19"

Area - 1.05 ft<sup>2</sup> ID**Inlet OD**

Size - 14.63"

Area - 1.14 ft<sup>2</sup> ID**All wheels are Class II HDBI Type**

Class II = light text face above Class III

**Class III = bold text face***Class IV = italic text face below Class III*

| Volume<br>CFM | O.V.<br>fpm | 0" SP |      | ¼" SP |      | ½" SP |      | ¾" SP |      | 1" SP |      | 1 ½" SP |      | 2" SP |      | 2 ½" SP     |             |
|---------------|-------------|-------|------|-------|------|-------|------|-------|------|-------|------|---------|------|-------|------|-------------|-------------|
|               |             | RPM   | bhp  | RPM   | bhp  | RPM   | bhp  | RPM   | bhp  | RPM   | bhp  | RPM     | bhp  | RPM   | bhp  | RPM         | bhp         |
| 900           | 857         | 672   | 0.03 | 867   | 0.08 | 1027  | 0.13 | 1167  | 0.18 | 1290  | 0.24 | 1500    | 0.37 | 1706  | 0.51 | 1892        | 0.67        |
| 1100          | 1047        | 821   | 0.06 | 986   | 0.11 | 1129  | 0.17 | 1257  | 0.23 | 1372  | 0.30 | 1579    | 0.44 | 1756  | 0.60 | 1921        | 0.76        |
| 1300          | 1238        | 971   | 0.10 | 1111  | 0.16 | 1242  | 0.22 | 1356  | 0.29 | 1465  | 0.37 | 1661    | 0.52 | 1835  | 0.69 | 1990        | 0.87        |
| 1500          | 1428        | 1120  | 0.15 | 1241  | 0.22 | 1361  | 0.29 | 1468  | 0.37 | 1565  | 0.45 | 1751    | 0.62 | 1918  | 0.81 | 2071        | 1.00        |
| 1700          | 1619        | 1269  | 0.21 | 1378  | 0.29 | 1484  | 0.37 | 1583  | 0.46 | 1677  | 0.55 | 1847    | 0.73 | 2007  | 0.93 | 2153        | 1.14        |
| 1900          | 1809        | 1419  | 0.30 | 1518  | 0.39 | 1611  | 0.48 | 1705  | 0.57 | 1792  | 0.67 | 1952    | 0.87 | 2102  | 1.08 | 2243        | 1.30        |
| 2100          | 2000        | 1568  | 0.40 | 1658  | 0.50 | 1741  | 0.60 | 1829  | 0.70 | 1911  | 0.81 | 2064    | 1.02 | 2202  | 1.25 | 2339        | 1.49        |
| 2300          | 2190        | 1717  | 0.53 | 1801  | 0.64 | 1877  | 0.74 | 1956  | 0.85 | 2034  | 0.97 | 2179    | 1.20 | 2313  | 1.44 | 2436        | 1.69        |
| 2500          | 2380        | 1866  | 0.68 | 1944  | 0.79 | 2016  | 0.91 | 2084  | 1.03 | 2159  | 1.15 | 2297    | 1.40 | 2426  | 1.66 | 2546        | 1.93        |
| 2700          | 2571        | 2016  | 0.86 | 2088  | 0.98 | 2155  | 1.10 | 2219  | 1.23 | 2286  | 1.36 | 2419    | 1.63 | 2541  | 1.91 | 2658        | 2.19        |
| 2900          | 2761        | 2165  | 1.06 | 2232  | 1.20 | 2296  | 1.33 | 2356  | 1.46 | 2415  | 1.60 | 2543    | 1.89 | 2660  | 2.18 | 2772        | 2.48        |
| 3100          | 2952        | 2314  | 1.30 | 2378  | 1.44 | 2438  | 1.58 | 2495  | 1.72 | 2550  | 1.87 | 2669    | 2.17 | 2782  | 2.48 | 2889        | 2.80        |
| 3300          | 3142        | 2464  | 1.57 | 2523  | 1.72 | 2580  | 1.87 | 2635  | 2.02 | 2687  | 2.17 | 2796    | 2.49 | 2906  | 2.82 | 3009        | 3.15        |
| 3500          | 3333        | 2613  | 1.87 | 2669  | 2.03 | 2723  | 2.19 | 2775  | 2.35 | 2826  | 2.51 | 2925    | 2.84 | 3031  | 3.19 | 3132        | 3.54        |
| 3700          | 3523        | 2762  | 2.21 | 2816  | 2.38 | 2867  | 2.54 | 2917  | 2.71 | 2965  | 2.89 | 3057    | 3.23 | 3158  | 3.59 | 3255        | 3.96        |
| 3900          | 3714        | 2912  | 2.59 | 2962  | 2.76 | 3012  | 2.94 | 3059  | 3.12 | 3105  | 3.30 | 3194    | 3.66 | 3286  | 4.04 | 3381        | 4.42        |
| 4100          | 3904        | 3061  | 3.01 | 3109  | 3.19 | 3156  | 3.38 | 3202  | 3.56 | 3246  | 3.75 | 3332    | 4.13 | 3415  | 4.52 | 3507        | 4.92        |
| 4300          | 4095        | 3210  | 3.47 | 3257  | 3.66 | 3301  | 3.86 | 3345  | 4.05 | 3388  | 4.25 | 3470    | 4.65 | 3549  | 5.05 | 3635        | 5.47        |
| 4500          | 4285        | 3360  | 3.98 | 3404  | 4.18 | 3447  | 4.38 | 3489  | 4.59 | 3530  | 4.79 | 3609    | 5.21 | 3686  | 5.63 | 3764        | 6.06        |
| 4700          | 4476        | 3509  | 4.53 | 3551  | 4.74 | 3593  | 4.95 | 3633  | 5.17 | 3673  | 5.38 | 3749    | 5.82 | 3823  | 6.25 | <b>3895</b> | <b>6.69</b> |

| Volume<br>CFM | O.V.<br>fpm | 3" SP       |             | 4" SP       |             | 5" SP       |             | 6" SP       |              | 7" SP       |              | 8" SP       |              | 9" SP       |              | 10" SP      |              |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 1500          | 1428        | 2211        | 1.20        | 2461        | 1.63        | 2708        | 2.10        | 2946        | 2.60         | 3165        | 3.12         | 3368        | 3.65         | 3560        | 4.21         | 3741        | 4.79         |
| 1700          | 1619        | 2292        | 1.36        | 2540        | 1.82        | 2760        | 2.31        | 2975        | 2.83         | 3193        | 3.38         | 3397        | 3.95         | 3588        | 4.54         | 3769        | 5.15         |
| 1900          | 1809        | 2375        | 1.54        | 2620        | 2.03        | 2839        | 2.54        | 3039        | 3.08         | 3223        | 3.65         | 3426        | 4.25         | 3617        | 4.88         | 3798        | 5.52         |
| 2100          | 2000        | 2466        | 1.73        | 2703        | 2.25        | 2920        | 2.80        | 3118        | 3.37         | 3301        | 3.96         | 3472        | 4.58         | 3646        | 5.22         | 3827        | 5.90         |
| 2300          | 2190        | 2562        | 1.95        | 2789        | 2.50        | 3002        | 3.08        | 3198        | 3.68         | 3380        | 4.30         | 3550        | 4.95         | 3711        | 5.61         | <b>3863</b> | <b>6.29</b>  |
| 2500          | 2380        | 2659        | 2.20        | 2883        | 2.78        | 3086        | 3.38        | 3281        | 4.01         | 3461        | 4.67         | 3630        | 5.34         | 3790        | 6.03         | <b>3941</b> | <b>6.75</b>  |
| 2700          | 2571        | 2767        | 2.48        | 2979        | 3.08        | 3178        | 3.71        | 3364        | 4.37         | 3543        | 5.06         | 3711        | 5.76         | <b>3870</b> | <b>6.49</b>  | <b>4021</b> | <b>7.23</b>  |
| 2900          | 2761        | 2879        | 2.78        | 3077        | 3.41        | 3274        | 4.07        | 3454        | 4.76         | 3627        | 5.47         | 3793        | 6.21         | <b>3951</b> | <b>6.96</b>  | <b>4101</b> | <b>7.74</b>  |
| 3100          | 2952        | 2993        | 3.12        | 3186        | 3.78        | 3370        | 4.46        | 3549        | 5.18         | 3716        | 5.92         | <b>3877</b> | <b>6.68</b>  | <b>4034</b> | <b>7.47</b>  | <b>4183</b> | <b>8.27</b>  |
| 3300          | 3142        | 3108        | 3.49        | 3297        | 4.18        | 3471        | 4.89        | 3645        | 5.64         | 3811        | 6.41         | <b>3966</b> | <b>7.20</b>  | <b>4117</b> | <b>8.01</b>  | <b>4265</b> | <b>8.84</b>  |
| 3500          | 3333        | 3227        | 3.89        | 3410        | 4.62        | 3581        | 5.36        | 3743        | 6.13         | <b>3906</b> | <b>6.93</b>  | <b>4060</b> | <b>7.75</b>  | <b>4207</b> | <b>8.59</b>  | <b>4349</b> | <b>9.44</b>  |
| 3700          | 3523        | 3348        | 4.33        | 3525        | 5.09        | 3692        | 5.87        | <b>3849</b> | <b>6.66</b>  | <b>4004</b> | <b>7.49</b>  | <b>4156</b> | <b>8.34</b>  | <b>4301</b> | <b>9.21</b>  | <b>4439</b> | <b>10.09</b> |
| 3900          | 3714        | 3471        | 4.81        | 3641        | 5.60        | 3806        | 6.42        | <b>3959</b> | <b>7.24</b>  | <b>4104</b> | <b>8.08</b>  | <b>4253</b> | <b>8.97</b>  | <b>4396</b> | <b>9.87</b>  | <b>4533</b> | <b>10.79</b> |
| 4100          | 3904        | 3595        | 5.33        | 3761        | 6.16        | <b>3920</b> | <b>7.00</b> | <b>4071</b> | <b>7.86</b>  | <b>4214</b> | <b>8.74</b>  | <b>4351</b> | <b>9.63</b>  | <b>4493</b> | <b>10.57</b> | <b>4629</b> | <b>11.52</b> |
| 4300          | 4095        | 3721        | 5.89        | <b>3883</b> | <b>6.76</b> | <b>4036</b> | <b>7.63</b> | <b>4185</b> | <b>8.53</b>  | <b>4325</b> | <b>9.44</b>  | <b>4459</b> | <b>10.36</b> | <b>4591</b> | <b>11.31</b> | <b>4726</b> | <b>12.29</b> |
| 4500          | 4285        | <b>3847</b> | <b>6.50</b> | <b>4006</b> | <b>7.40</b> | <b>4155</b> | <b>8.31</b> | <b>4299</b> | <b>9.24</b>  | <b>4438</b> | <b>10.18</b> | <b>4570</b> | <b>11.14</b> | <b>4696</b> | <b>12.11</b> | <i>4823</i> | <i>13.11</i> |
| 4700          | 4476        | <b>3975</b> | <b>7.15</b> | <b>4130</b> | <b>8.09</b> | <b>4276</b> | <b>9.03</b> | <b>4415</b> | <b>9.99</b>  | <b>4552</b> | <b>10.97</b> | <b>4682</b> | <b>11.96</b> | <i>4806</i> | <i>12.96</i> | <i>4926</i> | <i>13.98</i> |
| 4900          | 4666        | <b>4104</b> | <b>7.86</b> | <b>4255</b> | <b>8.82</b> | <b>4398</b> | <b>9.80</b> | <b>4534</b> | <b>10.80</b> | <b>4667</b> | <b>11.81</b> | <i>4795</i> | <i>12.83</i> | <i>4918</i> | <i>13.87</i> |             |              |
| 5100          | 4857        | <b>4234</b> | <b>8.61</b> | <b>4382</b> | <b>9.61</b> | <b>4522</b> | <b>0.63</b> | <b>4654</b> | <b>11.66</b> | <i>4783</i> | <i>12.70</i> | <i>4909</i> | <i>13.76</i> |             |              |             |              |

| Volume<br>CFM | O.V.<br>fpm | 11" SP      |              | 12" SP      |              | 13" SP      |              | 14" SP      |              | 15" SP      |              | 16" SP      |              | 17" SP      |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 1900          | 1809        | <b>3970</b> | <b>6.18</b>  | <b>4134</b> | <b>6.85</b>  | <b>4292</b> | <b>7.54</b>  | <b>4444</b> | <b>8.25</b>  | <b>4590</b> | <b>8.97</b>  | <b>4732</b> | <b>9.70</b>  |             |              |
| 2100          | 2000        | <b>3999</b> | <b>6.59</b>  | <b>4163</b> | <b>7.30</b>  | <b>4320</b> | <b>8.02</b>  | <b>4472</b> | <b>8.76</b>  | <b>4619</b> | <b>9.51</b>  | <b>4760</b> | <b>10.28</b> | <i>4898</i> | <i>11.06</i> |
| 2300          | 2190        | <b>4027</b> | <b>7.01</b>  | <b>4192</b> | <b>7.75</b>  | <b>4349</b> | <b>8.51</b>  | <b>4501</b> | <b>9.28</b>  | <b>4647</b> | <b>10.06</b> | <b>4789</b> | <b>10.86</b> | <i>4926</i> | <i>11.67</i> |
| 2500          | 2380        | <b>4086</b> | <b>7.47</b>  | <b>4224</b> | <b>8.22</b>  | <b>4378</b> | <b>9.00</b>  | <b>4530</b> | <b>9.81</b>  | <b>4676</b> | <b>10.63</b> | <i>4818</i> | <i>11.46</i> | <i>4955</i> | <i>12.30</i> |
| 2700          | 2571        | <b>4164</b> | <b>7.99</b>  | <b>4302</b> | <b>8.76</b>  | <b>4435</b> | <b>9.55</b>  | <b>4563</b> | <b>10.36</b> | <b>4705</b> | <b>11.20</b> | <i>4847</i> | <i>12.07</i> | <i>4984</i> | <i>12.95</i> |
| 2900          | 2761        | <b>4244</b> | <b>8.53</b>  | <b>4381</b> | <b>9.33</b>  | <b>4513</b> | <b>10.15</b> | <b>4641</b> | <b>10.99</b> | <i>4764</i> | <i>11.84</i> | <i>4883</i> | <i>12.70</i> |             |              |
| 3100          | 2952        | <b>4325</b> | <b>9.09</b>  | <b>4461</b> | <b>9.93</b>  | <b>4593</b> | <b>10.78</b> | <b>4719</b> | <b>11.65</b> | <i>4842</i> | <i>12.53</i> | <i>4961</i> | <i>13.42</i> |             |              |
| 3300          | 3142        | <b>4407</b> | <b>9.70</b>  | <b>4543</b> | <b>10.56</b> | <b>4673</b> | <b>11.44</b> | <i>4799</i> | <i>12.34</i> | <i>4921</i> | <i>13.25</i> |             |              |             |              |
| 3500          | 3333        | <b>4490</b> | <b>10.33</b> | <b>4625</b> | <b>11.23</b> | <i>4755</i> | <i>12.14</i> | <i>4880</i> | <i>13.07</i> |             |              |             |              |             |              |
| 3700          | 3523        | <b>4574</b> | <b>11.00</b> | <b>4708</b> | <b>11.93</b> | <i>4837</i> | <i>12.87</i> | <i>4962</i> | <i>13.83</i> |             |              |             |              |             |              |
| 3900          | 3714        | <b>4665</b> | <b>11.72</b> | <i>4792</i> | <i>12.66</i> | <i>4921</i> | <i>13.64</i> |             |              |             |              |             |              |             |              |
| 4100          | 3904        | <i>4759</i> | <i>12.48</i> | <i>4885</i> | <i>13.46</i> |             |              |             |              |             |              |             |              |             |              |

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR<sup>2</sup>.

# Belt Drive Ratings Table — at 70°F | .075 density | sea level

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## HDBI-150

### Wheel

Diameter - 15.00"

### Outlet OD

Size - 11.38" x 16.75"

Area - 1.28 ft<sup>2</sup> ID

### Inlet OD

Size - 16.13"

Area - 1.39 ft<sup>2</sup> ID

### All wheels are Class II HDBI Type

Class II = light text face above Class III

**Class III = bold text face**

*Class IV = italic text face below Class III*

| Volume<br>CFM | O.V.<br>fpm | 0" SP       |             | ¼" SP       |             | ½" SP       |             | ¾" SP       |             | 1" SP       |             | 1 ½" SP     |             | 2" SP       |             | 2 ½" SP     |             |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|               |             | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         |
| 1750          | 1367        | 959         | 0.14        | 1062        | 0.21        | 1165        | 0.29        | 1258        | 0.37        | 1341        | 0.45        | 1502        | 0.63        | 1651        | 0.83        | 1789        | 1.04        |
| 2000          | 1562        | 1096        | 0.20        | 1188        | 0.29        | 1278        | 0.37        | 1364        | 0.46        | 1444        | 0.56        | 1585        | 0.75        | 1728        | 0.96        | 1858        | 1.18        |
| 2250          | 1757        | 1233        | 0.29        | 1316        | 0.38        | 1394        | 0.48        | 1475        | 0.58        | 1550        | 0.68        | 1686        | 0.89        | 1809        | 1.12        | 1936        | 1.35        |
| 2500          | 1953        | 1370        | 0.40        | 1446        | 0.50        | 1514        | 0.61        | 1589        | 0.72        | 1659        | 0.83        | 1789        | 1.06        | 1907        | 1.30        | 2017        | 1.55        |
| 2750          | 2148        | 1507        | 0.53        | 1576        | 0.64        | 1640        | 0.76        | 1705        | 0.88        | 1772        | 1.00        | 1895        | 1.25        | 2009        | 1.50        | 2114        | 1.77        |
| 3000          | 2343        | 1644        | 0.68        | 1708        | 0.81        | 1768        | 0.93        | 1824        | 1.07        | 1887        | 1.20        | 2005        | 1.46        | 2114        | 1.74        | 2216        | 2.02        |
| 3250          | 2539        | 1781        | 0.87        | 1840        | 1.00        | 1896        | 1.14        | 1949        | 1.28        | 2003        | 1.42        | 2117        | 1.71        | 2221        | 2.00        | 2320        | 2.30        |
| 3500          | 2734        | 1918        | 1.09        | 1973        | 1.23        | 2026        | 1.38        | 2076        | 1.53        | 2124        | 1.68        | 2230        | 1.98        | 2331        | 2.30        | 2425        | 2.61        |
| 3750          | 2929        | 2055        | 1.33        | 2107        | 1.49        | 2156        | 1.65        | 2204        | 1.81        | 2249        | 1.97        | 2346        | 2.29        | 2443        | 2.62        | 2534        | 2.96        |
| 4000          | 3125        | 2192        | 1.62        | 2241        | 1.78        | 2288        | 1.95        | 2333        | 2.12        | 2376        | 2.29        | 2463        | 2.64        | 2557        | 2.99        | 2645        | 3.35        |
| 4250          | 3320        | 2329        | 1.94        | 2375        | 2.12        | 2419        | 2.29        | 2462        | 2.47        | 2504        | 2.66        | 2583        | 3.02        | 2672        | 3.39        | 2757        | 3.77        |
| 4500          | 3515        | 2466        | 2.31        | 2510        | 2.49        | 2552        | 2.68        | 2593        | 2.87        | 2632        | 3.06        | 2708        | 3.45        | 2788        | 3.84        | 2871        | 4.23        |
| 4750          | 3710        | 2603        | 2.71        | 2644        | 2.91        | 2685        | 3.10        | 2724        | 3.30        | 2761        | 3.50        | 2834        | 3.91        | 2906        | 4.33        | 2986        | 4.74        |
| 5000          | 3906        | 2740        | 3.16        | 2779        | 3.37        | 2818        | 3.58        | 2855        | 3.79        | 2891        | 4.00        | 2962        | 4.42        | 3029        | 4.86        | 3103        | 5.29        |
| 5250          | 4101        | 2877        | 3.66        | 2915        | 3.88        | 2951        | 4.09        | 2987        | 4.31        | 3022        | 4.53        | 3089        | 4.98        | 3154        | 5.44        | 3220        | 5.89        |
| 5500          | 4296        | 3014        | 4.21        | 3050        | 4.44        | 3085        | 4.66        | 3119        | 4.89        | 3153        | 5.12        | 3218        | 5.59        | 3281        | 6.06        | 3341        | 6.54        |
| 5750          | 4492        | 3151        | 4.81        | 3185        | 5.05        | 3219        | 5.28        | 3252        | 5.52        | 3284        | 5.76        | 3347        | 6.25        | 3408        | 6.74        | 3466        | 7.24        |
| 6000          | 4687        | 3288        | 5.47        | 3321        | 5.71        | 3353        | 5.96        | 3385        | 6.21        | 3416        | 6.46        | 3477        | 6.97        | <b>3535</b> | <b>7.48</b> | <b>3592</b> | <b>8.00</b> |
| 6250          | 4882        | 3425        | 6.18        | 3457        | 6.43        | 3488        | 6.69        | <b>3518</b> | <b>6.95</b> | <b>3548</b> | <b>7.21</b> | <b>3607</b> | <b>7.74</b> | <b>3664</b> | <b>8.27</b> | <b>3719</b> | <b>8.81</b> |
| 6500          | 5078        | <b>3562</b> | <b>6.95</b> | <b>3593</b> | <b>7.21</b> | <b>3623</b> | <b>7.48</b> | <b>3652</b> | <b>7.75</b> | <b>3681</b> | <b>8.02</b> | <b>3738</b> | <b>8.57</b> | <b>3793</b> | <b>9.12</b> | <b>3846</b> | <b>9.68</b> |

| Volume<br>CFM | O.V.<br>fpm | 3" SP       |              | 4" SP       |              | 5" SP       |              | 6" SP       |              | 7" SP       |              | 8" SP       |              | 9" SP       |              | 10" SP      |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 1750          | 1367        | 1917        | 1.26         | 2175        | 1.77         | 2403        | 2.33         |             |              |             |              |             |              |             |              |             |              |
| 2000          | 1562        | 1982        | 1.42         | 2210        | 1.92         | 2438        | 2.51         | 2644        | 3.14         |             |              |             |              |             |              |             |              |
| 2250          | 1757        | 2053        | 1.60         | 2273        | 2.13         | 2473        | 2.70         | 2679        | 3.35         | 2868        | 4.04         | 3045        | 4.76         |             |              |             |              |
| 2500          | 1953        | 2132        | 1.81         | 2342        | 2.36         | 2536        | 2.96         | 2714        | 3.58         | 2903        | 4.30         | 3079        | 5.05         | 3245        | 5.83         | 3402        | 6.63         |
| 2750          | 2148        | 2213        | 2.05         | 2418        | 2.63         | 2606        | 3.25         | 2782        | 3.90         | 2944        | 4.58         | 3115        | 5.34         | 3280        | 6.15         | 3437        | 6.99         |
| 3000          | 2343        | 2310        | 2.31         | 2499        | 2.93         | 2680        | 3.57         | 2851        | 4.25         | 3013        | 4.96         | 3164        | 5.70         | 3315        | 6.49         | 3472        | 7.36         |
| 3250          | 2539        | 2412        | 2.61         | 2582        | 3.25         | 2760        | 3.93         | 2924        | 4.63         | 3083        | 5.37         | 3233        | 6.14         | 3374        | 6.93         | 3509        | 7.75         |
| 3500          | 2734        | 2516        | 2.94         | 2682        | 3.62         | 2841        | 4.32         | 3004        | 5.06         | 3155        | 5.81         | 3303        | 6.61         | 3443        | 7.44         | <b>3577</b> | <b>8.28</b>  |
| 3750          | 2929        | 2621        | 3.31         | 2784        | 4.02         | 2934        | 4.75         | 3085        | 5.52         | 3235        | 6.31         | 3376        | 7.12         | <b>3514</b> | <b>7.97</b>  | <b>3647</b> | <b>8.85</b>  |
| 4000          | 3125        | 2728        | 3.71         | 2888        | 4.45         | 3034        | 5.22         | 3171        | 6.01         | 3315        | 6.84         | 3455        | 7.69         | <b>3588</b> | <b>8.55</b>  | <b>3717</b> | <b>9.45</b>  |
| 4250          | 3320        | 2838        | 4.15         | 2993        | 4.93         | 3136        | 5.73         | 3270        | 6.56         | 3397        | 7.41         | <b>3536</b> | <b>8.29</b>  | <b>3667</b> | <b>9.19</b>  | <b>3792</b> | <b>10.11</b> |
| 4500          | 3515        | 2950        | 4.63         | 3099        | 5.45         | 3240        | 6.29         | 3372        | 7.15         | 3496        | 8.03         | <b>3618</b> | <b>8.93</b>  | <b>3748</b> | <b>9.87</b>  | <b>3872</b> | <b>10.83</b> |
| 4750          | 3710        | 3063        | 5.16         | 3208        | 6.01         | 3345        | 6.89         | 3475        | 7.78         | <b>3597</b> | <b>8.70</b>  | <b>3713</b> | <b>9.63</b>  | <b>3829</b> | <b>10.59</b> | <b>3953</b> | <b>11.58</b> |
| 5000          | 3906        | 3177        | 5.73         | 3319        | 6.62         | 3452        | 7.53         | 3579        | 8.46         | <b>3699</b> | <b>9.41</b>  | <b>3814</b> | <b>10.38</b> | <b>3923</b> | <b>11.37</b> | <b>4034</b> | <b>12.38</b> |
| 5250          | 4101        | 3293        | 6.35         | 3431        | 7.28         | <b>3560</b> | <b>8.22</b>  | <b>3684</b> | <b>9.19</b>  | <b>3803</b> | <b>10.18</b> | <b>3916</b> | <b>11.18</b> | <b>4024</b> | <b>12.21</b> | <b>4127</b> | <b>13.24</b> |
| 5500          | 4296        | 3409        | 7.02         | <b>3544</b> | <b>7.99</b>  | <b>3670</b> | <b>8.97</b>  | <b>3791</b> | <b>9.97</b>  | <b>3907</b> | <b>10.99</b> | <b>4018</b> | <b>12.04</b> | <b>4125</b> | <b>13.09</b> | <b>4228</b> | <b>14.17</b> |
| 5750          | 4492        | <b>3527</b> | <b>7.74</b>  | <b>3658</b> | <b>8.75</b>  | <b>3782</b> | <b>9.77</b>  | <b>3899</b> | <b>10.80</b> | <b>4013</b> | <b>11.86</b> | <b>4123</b> | <b>12.94</b> | <b>4228</b> | <b>14.03</b> | <b>4329</b> | <b>15.14</b> |
| 6000          | 4687        | <b>3648</b> | <b>8.52</b>  | <b>3774</b> | <b>9.56</b>  | <b>3894</b> | <b>10.62</b> | <b>4009</b> | <b>11.69</b> | <b>4120</b> | <b>12.79</b> | <b>4228</b> | <b>13.90</b> | <b>4331</b> | <b>15.03</b> | <b>4431</b> | <b>16.18</b> |
| 6250          | 4882        | <b>3773</b> | <b>9.35</b>  | <b>3890</b> | <b>10.44</b> | <b>4008</b> | <b>11.53</b> | <b>4121</b> | <b>12.65</b> | <b>4229</b> | <b>13.77</b> | <b>4334</b> | <b>14.92</b> | <b>4436</b> | <b>16.09</b> | <b>4535</b> | <b>17.27</b> |
| 6500          | 5078        | <b>3899</b> | <b>10.24</b> | <b>4007</b> | <b>11.37</b> | <b>4123</b> | <b>12.51</b> | <b>4233</b> | <b>13.66</b> | <b>4339</b> | <b>14.82</b> | <b>4441</b> | <b>16.00</b> | <b>4542</b> | <b>17.20</b> | <b>4639</b> | <b>18.42</b> |

| Volume<br>CFM | O.V.<br>fpm | 11" SP      |              | 12" SP      |              | 13" SP      |              | 14" SP      |              | 15" SP      |              | 16" SP      |              | 17" SP      |              | 18" SP      |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 3000          | 2343        | <b>3621</b> | <b>8.25</b>  | <b>3763</b> | <b>9.17</b>  | <b>3899</b> | <b>10.11</b> | <b>4031</b> | <b>11.07</b> |             |              |             |              |             |              |             |              |
| 3250          | 2539        | <b>3656</b> | <b>8.66</b>  | <b>3798</b> | <b>9.61</b>  | <b>3934</b> | <b>10.58</b> | <b>4066</b> | <b>11.57</b> | <b>4192</b> | <b>12.58</b> | <b>4315</b> | <b>13.62</b> | <i>4434</i> | <i>14.68</i> |             |              |
| 3500          | 2734        | <b>3705</b> | <b>9.15</b>  | <b>3833</b> | <b>10.06</b> | <b>3970</b> | <b>11.06</b> | <b>4101</b> | <b>12.08</b> | <b>4227</b> | <b>13.13</b> | <b>4350</b> | <b>14.19</b> | <i>4469</i> | <i>15.28</i> | <i>4584</i> | <i>16.39</i> |
| 3750          | 2929        | <b>3774</b> | <b>9.75</b>  | <b>3896</b> | <b>10.67</b> | <b>4013</b> | <b>11.60</b> | <b>4136</b> | <b>12.61</b> | <b>4263</b> | <b>13.69</b> | <i>4385</i> | <i>14.78</i> | <i>4504</i> | <i>15.90</i> | <i>4619</i> | <i>17.04</i> |
| 4000          | 3125        | <b>3843</b> | <b>10.39</b> | <b>3965</b> | <b>11.34</b> | <b>4081</b> | <b>12.30</b> | <b>4194</b> | <b>13.29</b> | <b>4303</b> | <b>14.29</b> | <i>4420</i> | <i>15.39</i> | <i>4539</i> | <i>16.53</i> | <i>4654</i> | <i>17.70</i> |
| 4250          | 3320        | <b>3914</b> | <b>11.05</b> | <b>4035</b> | <b>12.04</b> | <b>4151</b> | <b>13.04</b> | <b>4263</b> | <b>14.06</b> | <i>4371</i> | <i>15.10</i> | <i>4476</i> | <i>16.15</i> | <i>4579</i> | <i>17.21</i> | <i>4690</i> | <i>18.38</i> |
| 4500          | 3515        | <b>3991</b> | <b>11.80</b> | <b>4105</b> | <b>12.78</b> | <b>4221</b> | <b>13.82</b> | <b>4332</b> | <b>14.87</b> | <i>4440</i> | <i>15.94</i> | <i>4545</i> | <i>17.02</i> | <i>4647</i> | <i>18.12</i> |             |              |
| 4750          | 3710        | <b>4071</b> | <b>12.59</b> | <b>4184</b> | <b>13.61</b> | <b>4294</b> | <b>14.64</b> | <i>4403</i> | <i>15.72</i> | <i>4510</i> | <i>16.82</i> | <i>4615</i> | <i>17.94</i> |             |              |             |              |
| 5000          | 3906        | <b>4151</b> | <b>13.43</b> | <b>4264</b> | <b>14.48</b> | <i>4373</i> | <i>15.55</i> | <i>4478</i> | <i>16.64</i> | <i>4581</i> | <i>17.74</i> | <i>4685</i> | <i>18.89</i> |             |              |             |              |
| 5250          | 4101        | <b>4233</b> | <b>14.31</b> | <b>4345</b> | <b>15.40</b> | <i>4453</i> | <i>16.51</i> | <i>4558</i> | <i>17.63</i> | <i>4659</i> | <i>18.76</i> |             |              |             |              |             |              |
| 5500          | 4296        | <b>4326</b> | <b>15.25</b> | <i>4427</i> | <i>16.37</i> | <i>4534</i> | <i>17.51</i> | <i>4638</i> | <i>18.67</i> |             |              |             |              |             |              |             |              |
| 5750          | 4492        | <i>4426</i> | <i>16.27</i> | <i>4521</i> | <i>17.40</i> | <i>4616</i> | <i>18.56</i> |             |              |             |              |             |              |             |              |             |              |
| 6000          | 4684        | <i>4528</i> | <i>17.33</i> | <i>4621</i> | <i>18.51</i> | <i>4712</i> | <i>19.70</i> |             |              |             |              |             |              |             |              |             |              |

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR<sup>2</sup>.



# Belt Drive Ratings Table — at 70°F | .075 density | sea level

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## HDBI-160

### Wheel

Diameter - 16.50"

### Outlet OD

Size - 12.50" x 18.36"

Area - 1.54 ft<sup>2</sup> ID

### Inlet OD

Size - 18.00"

Area - 1.73 ft<sup>2</sup> ID

### All wheels are Class II HDBI Type

Class II = light text face above Class III

**Class III = bold text face**

*Class IV = italic text face below Class III*

| Volume<br>CFM | O.V.<br>fpm | 0" SP |      | ½" SP |      | 1" SP       |             | 1 ½" SP     |             | 2" SP       |             | 2 ½" SP     |              | 3" SP       |              | 4" SP       |              |
|---------------|-------------|-------|------|-------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM   | bhp  | RPM   | bhp  | RPM         | bhp         | RPM         | bhp         | RPM         | bhp         | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 2100          | 1363        | 865   | 0.16 | 1054  | 0.34 | 1214        | 0.54        | 1361        | 0.76        | 1498        | 0.99        | 1622        | 1.24         | 1740        | 1.51         | 1975        | 2.14         |
| 2400          | 1558        | 988   | 0.24 | 1155  | 0.44 | 1306        | 0.66        | 1435        | 0.90        | 1566        | 1.15        | 1685        | 1.42         | 1798        | 1.70         | 2007        | 2.31         |
| 2700          | 1753        | 1112  | 0.34 | 1259  | 0.57 | 1401        | 0.81        | 1526        | 1.07        | 1639        | 1.34        | 1755        | 1.62         | 1861        | 1.92         | 2061        | 2.55         |
| 3000          | 1948        | 1235  | 0.47 | 1367  | 0.72 | 1500        | 0.99        | 1619        | 1.26        | 1726        | 1.55        | 1828        | 1.85         | 1932        | 2.17         | 2124        | 2.83         |
| 3300          | 2142        | 1359  | 0.62 | 1481  | 0.90 | 1601        | 1.19        | 1714        | 1.49        | 1818        | 1.80        | 1913        | 2.12         | 2005        | 2.45         | 2192        | 3.15         |
| 3600          | 2337        | 1482  | 0.81 | 1596  | 1.11 | 1705        | 1.42        | 1812        | 1.74        | 1912        | 2.07        | 2005        | 2.41         | 2091        | 2.77         | 2264        | 3.50         |
| 3900          | 2532        | 1606  | 1.03 | 1711  | 1.35 | 1810        | 1.69        | 1913        | 2.03        | 2008        | 2.38        | 2098        | 2.75         | 2183        | 3.12         | 2338        | 3.89         |
| 4200          | 2727        | 1729  | 1.28 | 1828  | 1.63 | 1918        | 1.99        | 2016        | 2.36        | 2107        | 2.73        | 2194        | 3.12         | 2276        | 3.51         | 2428        | 4.32         |
| 4500          | 2922        | 1853  | 1.58 | 1946  | 1.95 | 2031        | 2.34        | 2120        | 2.73        | 2208        | 3.12        | 2291        | 3.53         | 2371        | 3.94         | 2519        | 4.80         |
| 4800          | 3116        | 1976  | 1.91 | 2064  | 2.31 | 2145        | 2.72        | 2225        | 3.14        | 2310        | 3.56        | 2391        | 3.98         | 2467        | 4.42         | 2613        | 5.32         |
| 5100          | 3311        | 2100  | 2.29 | 2183  | 2.72 | 2260        | 3.15        | 2332        | 3.59        | 2414        | 4.04        | 2492        | 4.49         | 2566        | 4.94         | 2707        | 5.88         |
| 5400          | 3506        | 2223  | 2.72 | 2302  | 3.17 | 2376        | 3.63        | 2445        | 4.09        | 2519        | 4.56        | 2595        | 5.03         | 2667        | 5.51         | 2803        | 6.49         |
| 5700          | 3701        | 2347  | 3.20 | 2422  | 3.67 | 2492        | 4.15        | 2559        | 4.64        | 2625        | 5.14        | 2698        | 5.64         | 2768        | 6.14         | 2900        | 7.16         |
| 6000          | 3896        | 2471  | 3.73 | 2542  | 4.23 | 2609        | 4.73        | 2673        | 5.25        | 2735        | 5.77        | 2803        | 6.29         | 2871        | 6.81         | 3000        | 7.88         |
| 6300          | 4090        | 2594  | 4.32 | 2662  | 4.84 | 2727        | 5.37        | 2788        | 5.91        | 2848        | 6.45        | 2909        | 7.00         | 2975        | 7.55         | 3101        | 8.66         |
| 6600          | 4285        | 2718  | 4.97 | 2783  | 5.51 | 2845        | 6.07        | 2904        | 6.63        | 2962        | 7.19        | 3017        | 7.77         | 3080        | 8.34         | <b>3203</b> | <b>9.50</b>  |
| 6900          | 4480        | 2841  | 5.68 | 2903  | 6.25 | 2963        | 6.82        | 3021        | 7.41        | 3076        | 8.00        | 3130        | 8.60         | 3186        | 9.20         | <b>3306</b> | <b>10.40</b> |
| 7200          | 4675        | 2965  | 6.45 | 3024  | 7.04 | 3082        | 7.64        | 3137        | 8.25        | 3191        | 8.87        | <b>3243</b> | <b>9.19</b>  | <b>3294</b> | <b>10.12</b> | <b>3410</b> | <b>11.37</b> |
| 7500          | 4870        | 3088  | 7.29 | 3146  | 7.91 | <b>3201</b> | <b>8.53</b> | <b>3255</b> | <b>9.17</b> | <b>3307</b> | <b>9.80</b> | <b>3357</b> | <b>10.45</b> | <b>3406</b> | <b>11.10</b> | <b>3514</b> | <b>12.41</b> |

| Volume<br>CFM | O.V.<br>fpm | 5" SP       |              | 6" SP       |              | 7" SP       |              | 8" SP       |              | 9" SP       |              | 10" SP      |              | 11" SP      |              | 12" SP      |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 2100          | 1363        | 2183        | 2.81         |             |              |             |              |             |              |             |              |             |              |             |              |             |              |
| 2400          | 1558        | 2214        | 3.02         | 2401        | 3.78         |             |              |             |              |             |              |             |              |             |              |             |              |
| 2700          | 1753        | 2246        | 3.25         | 2433        | 4.04         | 2605        | 4.87         | 2765        | 5.73         |             |              |             |              |             |              |             |              |
| 3000          | 1948        | 2301        | 3.55         | 2465        | 4.31         | 2637        | 5.17         | 2797        | 6.08         | 2947        | 7.02         | 3090        | 7.99         |             |              |             |              |
| 3300          | 2142        | 2363        | 3.89         | 2523        | 4.68         | 2671        | 5.50         | 2828        | 6.43         | 2979        | 7.41         | 3121        | 8.42         | <b>3257</b> | <b>9.45</b>  | <b>3386</b> | <b>10.52</b> |
| 3600          | 2337        | 2429        | 4.28         | 2586        | 5.10         | 2733        | 5.96         | 2870        | 6.85         | 3011        | 7.81         | 3153        | 8.86         | <b>3288</b> | <b>9.93</b>  | <b>3418</b> | <b>11.04</b> |
| 3900          | 2532        | 2501        | 4.71         | 2651        | 5.55         | 2795        | 6.44         | 2932        | 7.37         | 3061        | 8.33         | 3185        | 9.31         | <b>3320</b> | <b>10.42</b> | <b>3449</b> | <b>11.56</b> |
| 4200          | 2727        | 2574        | 5.17         | 2722        | 6.06         | 2860        | 6.97         | 2995        | 7.93         | 3123        | 8.93         | <b>3245</b> | <b>9.95</b>  | <b>3361</b> | <b>10.99</b> | <b>3481</b> | <b>12.11</b> |
| 4500          | 2922        | 2656        | 5.68         | 2795        | 6.60         | 2932        | 7.56         | 3060        | 8.54         | 3186        | 9.56         | <b>3307</b> | <b>10.62</b> | <b>3423</b> | <b>11.71</b> | <b>3534</b> | <b>12.81</b> |
| 4800          | 3116        | 2746        | 6.24         | 2870        | 7.19         | 3004        | 8.19         | 3132        | 9.21         | <b>3252</b> | <b>10.25</b> | <b>3371</b> | <b>11.34</b> | <b>3486</b> | <b>12.46</b> | <b>3596</b> | <b>13.61</b> |
| 5100          | 3311        | 2838        | 6.85         | 2960        | 7.84         | 3078        | 8.86         | <b>3204</b> | <b>9.93</b>  | <b>3324</b> | <b>11.01</b> | <b>3438</b> | <b>12.12</b> | <b>3549</b> | <b>13.26</b> | <b>3659</b> | <b>14.45</b> |
| 5400          | 3506        | 2931        | 7.51         | 3052        | 8.54         | 3165        | 9.60         | <b>3278</b> | <b>10.69</b> | <b>3396</b> | <b>11.82</b> | <b>3509</b> | <b>12.97</b> | <b>3618</b> | <b>14.13</b> | <b>3723</b> | <b>15.33</b> |
| 5700          | 3701        | 3026        | 8.21         | 3144        | 9.29         | <b>3256</b> | <b>10.40</b> | <b>3361</b> | <b>11.52</b> | <b>3470</b> | <b>12.68</b> | <b>3582</b> | <b>13.87</b> | <b>3689</b> | <b>15.08</b> | <b>3793</b> | <b>16.31</b> |
| 6000          | 3896        | 3122        | 8.98         | <b>3238</b> | <b>10.10</b> | <b>3347</b> | <b>11.24</b> | <b>3452</b> | <b>12.41</b> | <b>3552</b> | <b>13.60</b> | <b>3655</b> | <b>14.82</b> | <b>3762</b> | <b>16.07</b> | <b>3865</b> | <b>17.35</b> |
| 6300          | 4090        | <b>3219</b> | <b>9.80</b>  | <b>3333</b> | <b>10.96</b> | <b>3441</b> | <b>12.15</b> | <b>3543</b> | <b>13.36</b> | <b>3642</b> | <b>14.59</b> | <b>3737</b> | <b>15.84</b> | <b>3835</b> | <b>17.12</b> | <b>3937</b> | <b>18.44</b> |
| 6600          | 4285        | <b>3318</b> | <b>10.68</b> | <b>3429</b> | <b>11.89</b> | <b>3535</b> | <b>13.12</b> | <b>3636</b> | <b>14.37</b> | <b>3733</b> | <b>15.64</b> | <b>3827</b> | <b>16.93</b> | <b>3917</b> | <b>18.24</b> | <i>4011</i> | <i>19.59</i> |
| 6900          | 4480        | <b>3419</b> | <b>11.63</b> | <b>3525</b> | <b>12.87</b> | <b>3630</b> | <b>14.15</b> | <b>3730</b> | <b>15.45</b> | <b>3826</b> | <b>16.76</b> | <b>3918</b> | <b>18.09</b> | <i>4007</i> | <i>19.45</i> | <i>4093</i> | <i>20.82</i> |
| 7200          | 4675        | <b>3520</b> | <b>12.64</b> | <b>3625</b> | <b>13.93</b> | <b>3726</b> | <b>15.25</b> | <b>3824</b> | <b>16.59</b> | <b>3919</b> | <b>17.94</b> | <i>4010</i> | <i>19.32</i> | <i>4098</i> | <i>20.71</i> | <i>4183</i> | <i>22.13</i> |
| 7500          | 4870        | <b>3622</b> | <b>13.72</b> | <b>3725</b> | <b>15.06</b> | <b>3824</b> | <b>16.41</b> | <b>3920</b> | <b>17.79</b> | <i>4013</i> | <i>19.20</i> | <i>4103</i> | <i>20.62</i> | <i>4190</i> | <i>22.05</i> | <i>4274</i> | <i>23.51</i> |

| Volume<br>CFM | O.V.<br>fpm | 13" SP      |              | 14" SP      |              | 15" SP      |              | 16" SP      |              | 17" SP      |              | 18" SP      |              | 19" SP      |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 3600          | 2337        | <b>3542</b> | <b>12.17</b> | <b>3661</b> | <b>13.33</b> |             |              |             |              |             |              |             |              |             |              |
| 3900          | 2532        | <b>3573</b> | <b>12.73</b> | <b>3693</b> | <b>13.93</b> | <b>3808</b> | <b>15.15</b> | <b>3919</b> | <b>16.40</b> | <i>4027</i> | <i>17.68</i> |             |              |             |              |
| 4200          | 2727        | <b>3605</b> | <b>13.31</b> | <b>3724</b> | <b>14.55</b> | <b>3839</b> | <b>15.81</b> | <b>3951</b> | <b>17.09</b> | <i>4059</i> | <i>18.40</i> | <i>4164</i> | <i>19.74</i> | <i>4266</i> | <i>21.09</i> |
| 4500          | 2922        | <b>3640</b> | <b>13.94</b> | <b>3756</b> | <b>15.18</b> | <b>3871</b> | <b>16.47</b> | <b>3982</b> | <b>17.80</b> | <i>4090</i> | <i>19.14</i> | <i>4195</i> | <i>20.51</i> |             |              |
| 4800          | 3116        | <b>3702</b> | <b>14.77</b> | <b>3804</b> | <b>15.96</b> | <b>3904</b> | <b>17.17</b> | <i>4014</i> | <i>18.52</i> | <i>4122</i> | <i>19.90</i> | <i>4227</i> | <i>21.31</i> |             |              |
| 5100          | 3311        | <b>3764</b> | <b>15.65</b> | <b>3866</b> | <b>16.88</b> | <i>3965</i> | <i>18.13</i> | <i>4061</i> | <i>19.39</i> | <i>4154</i> | <i>20.68</i> | <i>4259</i> | <i>22.12</i> |             |              |
| 5400          | 3506        | <b>3828</b> | <b>16.58</b> | <b>3929</b> | <b>17.84</b> | <i>4027</i> | <i>19.13</i> | <i>4123</i> | <i>20.44</i> | <i>4215</i> | <i>21.76</i> |             |              |             |              |
| 5700          | 3701        | <b>3892</b> | <b>17.55</b> | <i>3993</i> | <i>18.85</i> | <i>4090</i> | <i>20.18</i> | <i>4185</i> | <i>21.53</i> | <i>4277</i> | <i>22.89</i> |             |              |             |              |
| 6000          | 3896        | <i>3964</i> | <i>18.63</i> | <i>4059</i> | <i>19.94</i> | <i>4154</i> | <i>21.28</i> | <i>4248</i> | <i>22.67</i> |             |              |             |              |             |              |
| 6300          | 4090        | <i>4036</i> | <i>19.77</i> | <i>4131</i> | <i>21.12</i> | <i>4223</i> | <i>22.48</i> |             |              |             |              |             |              |             |              |
| 6600          | 4285        | <i>4109</i> | <i>20.97</i> | <i>4203</i> | <i>22.36</i> |             |              |             |              |             |              |             |              |             |              |
| 6900          | 4480        | <i>4182</i> | <i>22.22</i> | <i>4276</i> | <i>23.65</i> |             |              |             |              |             |              |             |              |             |              |

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR<sup>2</sup>.

# Belt Drive Ratings Table — at 70°F | .075 density | sea level

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## HDBI-180

### Wheel

Diameter - 18.25"

### Outlet OD

Size - 13.88" x 20.38"

Area - 1.90 ft<sup>2</sup> ID

### Inlet OD

Size - 20.00"

Area - 2.13 ft<sup>2</sup> ID

### All wheels are Class II HDBI Type

Class II = light text face above Class III

Class III = **bold text face**

Class IV = *italic text face below Class III*

| Volume<br>CFM | O.V.<br>fpm | 0" SP |      | ½" SP |       | 1" SP |       | 1 ½" SP     |              | 2" SP       |              | 2 ½" SP     |              | 3" SP       |              | 4" SP       |              |
|---------------|-------------|-------|------|-------|-------|-------|-------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM   | bhp  | RPM   | bhp   | RPM   | bhp   | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 2800          | 1473        | 852   | 0.28 | 1010  | 0.54  | 1150  | 0.82  | 1272        | 1.12         | 1392        | 1.46         | 1502        | 1.82         | 1605        | 2.18         | 1804        | 3.00         |
| 3200          | 1684        | 974   | 0.42 | 1112  | 0.70  | 1243  | 1.02  | 1356        | 1.35         | 1463        | 1.70         | 1568        | 2.09         | 1667        | 2.50         | 1848        | 3.33         |
| 3600          | 1894        | 1095  | 0.60 | 1217  | 0.91  | 1339  | 1.27  | 1447        | 1.62         | 1545        | 1.99         | 1640        | 2.39         | 1735        | 2.83         | 1910        | 3.74         |
| 4000          | 2105        | 1217  | 0.82 | 1328  | 1.16  | 1439  | 1.55  | 1541        | 1.95         | 1635        | 2.35         | 1722        | 2.76         | 1806        | 3.20         | 1975        | 4.19         |
| 4400          | 2315        | 1339  | 1.09 | 1441  | 1.47  | 1540  | 1.88  | 1638        | 2.32         | 1728        | 2.76         | 1812        | 3.20         | 1890        | 3.65         | 2046        | 4.65         |
| 4800          | 2526        | 1461  | 1.42 | 1556  | 1.83  | 1644  | 2.26  | 1737        | 2.73         | 1823        | 3.22         | 1904        | 3.69         | 1980        | 4.17         | 2120        | 5.17         |
| 5200          | 2736        | 1582  | 1.80 | 1671  | 2.25  | 1751  | 2.70  | 1838        | 3.21         | 1920        | 3.73         | 1998        | 4.25         | 2072        | 4.76         | 2209        | 5.81         |
| 5600          | 2947        | 1704  | 2.25 | 1787  | 2.73  | 1863  | 3.22  | 1941        | 3.74         | 2020        | 4.29         | 2094        | 4.86         | 2166        | 5.42         | 2300        | 6.53         |
| 6000          | 3157        | 1826  | 2.77 | 1903  | 3.28  | 1975  | 3.80  | 2045        | 4.34         | 2121        | 4.93         | 2193        | 5.53         | 2261        | 6.14         | 2392        | 7.32         |
| 6400          | 3368        | 1947  | 3.36 | 2021  | 3.90  | 2089  | 4.46  | 2153        | 5.02         | 2224        | 5.63         | 2294        | 6.27         | 2360        | 6.91         | 2485        | 8.19         |
| 6800          | 3578        | 2069  | 4.03 | 2138  | 4.60  | 2203  | 5.19  | 2265        | 5.79         | 2328        | 6.42         | 2395        | 7.08         | 2459        | 7.76         | 2580        | 9.13         |
| 7200          | 3789        | 2191  | 4.78 | 2256  | 5.39  | 2318  | 6.01  | 2377        | 6.64         | 2434        | 7.28         | 2498        | 7.98         | 2560        | 8.69         | 2678        | 10.14        |
| 7600          | 4000        | 2313  | 5.62 | 2375  | 6.27  | 2434  | 6.92  | 2490        | 7.58         | 2545        | 8.25         | 2602        | 8.96         | 2662        | 9.70         | 2777        | 11.22        |
| 8000          | 4210        | 2434  | 6.56 | 2494  | 7.23  | 2550  | 7.92  | 2604        | 8.62         | 2657        | 9.32         | 2707        | 10.03        | 2766        | 10.81        | 2877        | 12.39        |
| 8400          | 4421        | 2556  | 7.59 | 2613  | 8.30  | 2667  | 9.02  | 2719        | 9.75         | 2769        | 10.49        | 2818        | 11.23        | 2870        | 12.01        | <b>2978</b> | <b>13.66</b> |
| 8800          | 4631        | 2678  | 8.73 | 2732  | 9.47  | 2784  | 10.22 | 2834        | 10.99        | 2883        | 11.75        | <b>2930</b> | <b>12.53</b> | <b>2975</b> | <b>13.31</b> | <b>3080</b> | <b>15.03</b> |
| 9200          | 4842        | 2800  | 9.98 | 2851  | 10.75 | 2901  | 11.54 | <b>2950</b> | <b>12.33</b> | <b>2997</b> | <b>13.13</b> | <b>3042</b> | <b>13.94</b> | <b>3086</b> | <b>14.75</b> | <b>3184</b> | <b>16.50</b> |

| Volume<br>CFM | O.V.<br>fpm | 5" SP       |              | 6" SP       |              | 7" SP       |              | 8" SP       |              | 9" SP       |              | 10" SP      |              | 11" SP      |              | 12" SP      |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 3200          | 1684        | 2022        | 4.26         | 2192        | 5.28         | 2347        | 6.36         |             |              |             |              |             |              |             |              |             |              |
| 3600          | 1894        | 2069        | 4.68         | 2223        | 5.69         | 2378        | 6.83         | 2523        | 8.01         | 2659        | 9.23         |             |              |             |              |             |              |
| 4000          | 2105        | 2131        | 5.20         | 2275        | 6.23         | 2410        | 7.31         | 2554        | 8.55         | 2690        | 9.83         | 2819        | 11.15        | <b>2942</b> | <b>12.51</b> | <b>3059</b> | <b>13.91</b> |
| 4400          | 2315        | 2196        | 5.75         | 2337        | 6.86         | 2470        | 8.00         | 2594        | 9.17         | 2722        | 10.45        | 2850        | 11.82        | <b>2973</b> | <b>13.24</b> | <b>3090</b> | <b>14.69</b> |
| 4800          | 2526        | 2266        | 6.32         | 2402        | 7.53         | 2532        | 8.74         | 2655        | 9.97         | 2772        | 11.23        | 2882        | 12.52        | <b>3004</b> | <b>13.99</b> | <b>3121</b> | <b>15.50</b> |
| 5200          | 2736        | 2339        | 6.94         | 2472        | 8.20         | 2597        | 9.51         | 2717        | 10.83        | 2833        | 12.15        | <b>2943</b> | <b>13.51</b> | <b>3048</b> | <b>14.89</b> | <b>3152</b> | <b>16.33</b> |
| 5600          | 2947        | 2422        | 7.68         | 2544        | 8.93         | 2668        | 10.30        | 2783        | 11.71        | 2896        | 13.13        | <b>3005</b> | <b>14.55</b> | <b>3109</b> | <b>15.99</b> | <b>3209</b> | <b>17.46</b> |
| 6000          | 3157        | 2512        | 8.53         | 2623        | 9.77         | 2739        | 11.15        | 2854        | 12.62        | <b>2963</b> | <b>14.13</b> | <b>3067</b> | <b>15.65</b> | <b>3171</b> | <b>17.16</b> | <b>3271</b> | <b>18.69</b> |
| 6400          | 3368        | 2603        | 9.46         | 2713        | 10.76        | 2816        | 12.09        | <b>2926</b> | <b>13.59</b> | <b>3034</b> | <b>15.15</b> | <b>3136</b> | <b>16.75</b> | <b>3235</b> | <b>18.39</b> | <b>3333</b> | <b>19.99</b> |
| 6800          | 3578        | 2695        | 10.47        | 2803        | 11.84        | <b>2905</b> | <b>13.23</b> | <b>3001</b> | <b>14.65</b> | <b>3106</b> | <b>16.25</b> | <b>3207</b> | <b>17.91</b> | <b>3305</b> | <b>19.60</b> | <b>3399</b> | <b>21.33</b> |
| 7200          | 3789        | 2789        | 11.57        | 2895        | 13.00        | <b>2995</b> | <b>14.45</b> | <b>3090</b> | <b>15.93</b> | <b>3180</b> | <b>17.43</b> | <b>3279</b> | <b>19.13</b> | <b>3376</b> | <b>20.88</b> | <b>3469</b> | <b>22.67</b> |
| 7600          | 4000        | 2884        | 12.76        | <b>2988</b> | <b>14.25</b> | <b>3086</b> | <b>15.76</b> | <b>3179</b> | <b>17.31</b> | <b>3269</b> | <b>18.87</b> | <b>3355</b> | <b>20.46</b> | <b>3448</b> | <b>22.24</b> | <b>3541</b> | <b>24.08</b> |
| 8000          | 4210        | <b>2982</b> | <b>14.01</b> | <b>3082</b> | <b>15.60</b> | <b>3178</b> | <b>17.18</b> | <b>3270</b> | <b>18.78</b> | <b>3358</b> | <b>20.41</b> | <b>3443</b> | <b>22.05</b> | <b>3525</b> | <b>23.73</b> | <b>3613</b> | <b>25.57</b> |
| 8400          | 4421        | <b>3081</b> | <b>15.34</b> | <b>3177</b> | <b>17.05</b> | <b>3272</b> | <b>18.69</b> | <b>3363</b> | <b>20.36</b> | <b>3449</b> | <b>22.05</b> | <b>3533</b> | <b>23.76</b> | <b>3613</b> | <b>25.49</b> | <b>3691</b> | <b>27.24</b> |
| 8800          | 4631        | <b>3180</b> | <b>16.77</b> | <b>3275</b> | <b>18.55</b> | <b>3367</b> | <b>20.31</b> | <b>3456</b> | <b>22.04</b> | <b>3541</b> | <b>23.79</b> | <b>3623</b> | <b>25.57</b> | <b>3703</b> | <b>27.36</b> | <b>3780</b> | <b>29.17</b> |
| 9200          | 4842        | <b>3281</b> | <b>18.31</b> | <b>3374</b> | <b>20.16</b> | <b>3463</b> | <b>22.03</b> | <b>3550</b> | <b>23.84</b> | <b>3634</b> | <b>25.65</b> | <b>3715</b> | <b>27.49</b> | <b>3794</b> | <b>29.34</b> | <b>3870</b> | <b>31.22</b> |

| Volume<br>CFM | O.V.<br>fpm | 13" SP      |              | 14" SP      |              | 15" SP      |              | 16" SP      |              | 17" SP      |              | 18" SP      |              | 19" SP      |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 4400          | 2315        | <b>3202</b> | <b>16.19</b> | <b>3310</b> | <b>17.71</b> |             |              |             |              |             |              |             |              |             |              |
| 4800          | 2526        | <b>3233</b> | <b>17.05</b> | <b>3341</b> | <b>18.63</b> | <b>3445</b> | <b>20.24</b> | <b>3546</b> | <b>21.89</b> | <i>3644</i> | <i>23.57</i> |             |              |             |              |
| 5200          | 2736        | <b>3264</b> | <b>17.93</b> | <b>3372</b> | <b>19.57</b> | <b>3476</b> | <b>21.24</b> | <b>3577</b> | <b>22.94</b> | <i>3674</i> | <i>24.67</i> | <i>3769</i> | <i>26.44</i> | <i>3862</i> | <i>28.23</i> |
| 5600          | 2947        | <b>3306</b> | <b>18.96</b> | <b>3403</b> | <b>20.54</b> | <b>3507</b> | <b>22.26</b> | <i>3608</i> | <i>24.02</i> | <i>3706</i> | <i>25.81</i> | <i>3800</i> | <i>27.63</i> |             |              |
| 6000          | 3157        | <b>3367</b> | <b>20.25</b> | <b>3459</b> | <b>21.84</b> | <b>3548</b> | <b>23.45</b> | <i>3639</i> | <i>25.13</i> | <i>3737</i> | <i>26.98</i> | <i>3832</i> | <i>28.85</i> |             |              |
| 6400          | 3368        | <b>3428</b> | <b>21.62</b> | <b>3520</b> | <b>23.26</b> | <i>3609</i> | <i>24.93</i> | <i>3696</i> | <i>26.62</i> | <i>3780</i> | <i>28.34</i> | <i>3863</i> | <i>30.11</i> |             |              |
| 6800          | 3578        | <b>3491</b> | <b>23.05</b> | <b>3583</b> | <b>24.76</b> | <i>3671</i> | <i>26.49</i> | <i>3757</i> | <i>28.25</i> | <i>3840</i> | <i>30.02</i> |             |              |             |              |
| 7200          | 3789        | <b>3559</b> | <b>24.48</b> | <i>3646</i> | <i>26.33</i> | <i>3734</i> | <i>28.13</i> | <i>3819</i> | <i>29.95</i> |             |              |             |              |             |              |
| 7600          | 4000        | <i>3630</i> | <i>25.96</i> | <i>3716</i> | <i>27.86</i> | <i>3799</i> | <i>29.79</i> | <i>3882</i> | <i>31.73</i> |             |              |             |              |             |              |
| 8000          | 4210        | <i>3701</i> | <i>27.51</i> | <i>3787</i> | <i>29.47</i> | <i>3870</i> | <i>31.47</i> |             |              |             |              |             |              |             |              |
| 8400          | 4421        | <i>3774</i> | <i>29.14</i> | <i>3859</i> | <i>31.17</i> |             |              |             |              |             |              |             |              |             |              |
| 8800          | 4631        | <i>3855</i> | <i>31.01</i> |             |              |             |              |             |              |             |              |             |              |             |              |

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR<sup>2</sup>.

See page 27, 29 or 30 for minimum motor frame sizes regardless of bhp.

# Belt Drive Ratings Table — at 70°F | .075 density | sea level

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## HDBI-200

### Wheel

Diameter - 20.00"

### Outlet OD

Size - 15.250" x 22.38"

Area - 2.30 ft<sup>2</sup> ID

### Inlet OD

Size - 22.00"

Area - 2.58 ft<sup>2</sup> ID

### All wheels are Class II HDBI Type

Class II = light text face above Class III

**Class III = bold text face**

*Class IV = italic text face below Class III*

| Volume<br>CFM | O.V.<br>fpm | 0" SP |       | ½" SP       |              | 1" SP       |              | 1 ½" SP     |              | 2" SP       |              | 2 ½" SP     |              | 3" SP       |              | 4" SP       |              |
|---------------|-------------|-------|-------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM   | bhp   | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 4200          | 1826        | 971   | 0.59  | 1085        | 0.95         | 1199        | 1.32         | 1299        | 1.71         | 1389        | 2.12         | 1479        | 2.56         | 1566        | 3.01         | 1728        | 3.97         |
| 4600          | 2000        | 1064  | 0.78  | 1169        | 1.17         | 1274        | 1.57         | 1370        | 1.99         | 1457        | 2.43         | 1537        | 2.88         | 1620        | 3.36         | 1775        | 4.35         |
| 5000          | 2173        | 1156  | 1.00  | 1254        | 1.42         | 1350        | 1.86         | 1442        | 2.31         | 1526        | 2.77         | 1604        | 3.25         | 1677        | 3.75         | 1829        | 4.80         |
| 5400          | 2347        | 1249  | 1.26  | 1340        | 1.71         | 1428        | 2.18         | 1516        | 2.66         | 1597        | 3.16         | 1673        | 3.67         | 1744        | 4.19         | 1883        | 5.28         |
| 5800          | 2521        | 1341  | 1.56  | 1427        | 2.05         | 1507        | 2.55         | 1592        | 3.06         | 1670        | 3.58         | 1744        | 4.12         | 1813        | 4.67         | 1941        | 5.81         |
| 6200          | 2695        | 1433  | 1.91  | 1515        | 2.43         | 1588        | 2.96         | 1669        | 3.50         | 1744        | 4.05         | 1815        | 4.62         | 1883        | 5.20         | 2008        | 6.40         |
| 6600          | 2869        | 1526  | 2.30  | 1603        | 2.85         | 1673        | 3.42         | 1746        | 3.99         | 1819        | 4.57         | 1888        | 5.17         | 1954        | 5.78         | 2077        | 7.03         |
| 7000          | 3043        | 1618  | 2.75  | 1691        | 3.33         | 1758        | 3.93         | 1825        | 4.53         | 1896        | 5.15         | 1963        | 5.77         | 2026        | 6.41         | 2146        | 7.72         |
| 7400          | 3217        | 1711  | 3.25  | 1780        | 3.86         | 1844        | 4.49         | 1905        | 5.13         | 1973        | 5.77         | 2038        | 6.43         | 2100        | 7.09         | 2217        | 8.46         |
| 7800          | 3391        | 1803  | 3.80  | 1869        | 4.45         | 1931        | 5.11         | 1989        | 5.78         | 2052        | 6.46         | 2115        | 7.14         | 2175        | 7.84         | 2288        | 9.26         |
| 8200          | 3565        | 1896  | 4.42  | 1959        | 5.09         | 2018        | 5.79         | 2074        | 6.49         | 2131        | 7.21         | 2192        | 7.92         | 2251        | 8.64         | 2361        | 10.12        |
| 8600          | 3739        | 1988  | 5.09  | 2048        | 5.80         | 2105        | 6.53         | 2159        | 7.26         | 2211        | 8.01         | 2270        | 8.76         | 2327        | 9.51         | 2435        | 11.05        |
| 9000          | 3913        | 2081  | 5.84  | 2138        | 6.58         | 2193        | 7.34         | 2245        | 8.10         | 2295        | 8.89         | 2349        | 9.67         | 2405        | 10.45        | 2510        | 12.05        |
| 9400          | 4086        | 2173  | 6.65  | 2229        | 7.43         | 2281        | 8.21         | 2331        | 9.01         | 2380        | 9.83         | 2428        | 10.65        | 2483        | 11.46        | 2586        | 13.12        |
| 9800          | 4260        | 2266  | 7.54  | 2319        | 8.34         | 2370        | 9.16         | 2418        | 10.00        | 2465        | 10.84        | 2511        | 11.69        | 2561        | 12.54        | <b>2662</b> | <b>14.26</b> |
| 10200         | 4434        | 2358  | 8.50  | 2409        | 9.34         | 2458        | 10.19        | 2505        | 11.05        | 2551        | 11.93        | 2595        | 12.81        | 2641        | 13.70        | <b>2739</b> | <b>15.48</b> |
| 10600         | 4608        | 2451  | 9.54  | 2500        | 10.41        | 2547        | 11.29        | 2593        | 12.19        | 2637        | 13.09        | <b>2680</b> | <b>14.01</b> | <b>2722</b> | <b>14.94</b> | <b>2817</b> | <b>16.78</b> |
| 11000         | 4782        | 2543  | 10.66 | 2591        | 11.56        | 2637        | 12.48        | <b>2681</b> | <b>13.41</b> | <b>2724</b> | <b>14.34</b> | <b>2765</b> | <b>15.29</b> | <b>2806</b> | <b>16.25</b> | <b>2895</b> | <b>18.16</b> |
| 11400         | 4956        | 2636  | 11.87 | <b>2682</b> | <b>12.80</b> | <b>2726</b> | <b>13.75</b> | <b>2769</b> | <b>14.71</b> | <b>2811</b> | <b>15.68</b> | <b>2851</b> | <b>16.65</b> | <b>2891</b> | <b>17.64</b> | <b>2974</b> | <b>19.63</b> |

| Volume<br>CFM | O.V.<br>fpm | 5" SP       |              | 6" SP       |              | 7" SP       |              | 8" SP       |              | 9" SP       |              | 10" SP      |              | 11" SP      |              | 12" SP      |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 4200          | 1826        | 1874        | 4.99         | 2021        | 6.14         | 2163        | 7.39         | 2295        | 8.69         | 2420        | 10.05        |             |              |             |              |             |              |
| 4600          | 2000        | 1921        | 5.43         | 2053        | 6.56         | 2187        | 7.81         | 2319        | 9.16         | 2443        | 10.56        | 2560        | 12.01        | <b>2672</b> | <b>13.51</b> |             |              |
| 5000          | 2173        | 1968        | 5.91         | 2099        | 7.09         | 2221        | 8.31         | 2343        | 9.64         | 2467        | 11.09        | 2584        | 12.59        | <b>2696</b> | <b>14.13</b> | <b>2803</b> | <b>15.72</b> |
| 5400          | 2347        | 2019        | 6.44         | 2146        | 7.65         | 2267        | 8.93         | 2381        | 10.25        | 2490        | 11.63        | 2608        | 13.18        | <b>2719</b> | <b>14.77</b> | <b>2826</b> | <b>16.41</b> |
| 5800          | 2521        | 2073        | 7.02         | 2196        | 8.27         | 2315        | 9.59         | 2427        | 10.96        | 2533        | 12.37        | 2634        | 13.82        | <b>2743</b> | <b>15.43</b> | <b>2850</b> | <b>17.12</b> |
| 6200          | 2695        | 2128        | 7.64         | 2250        | 8.95         | 2364        | 10.29        | 2474        | 11.71        | 2580        | 13.18        | <b>2680</b> | <b>14.68</b> | <b>2776</b> | <b>16.21</b> | <b>2874</b> | <b>17.84</b> |
| 6600          | 2869        | 2189        | 8.32         | 2304        | 9.68         | 2417        | 11.08        | 2523        | 12.51        | 2627        | 14.03        | <b>2727</b> | <b>15.58</b> | <b>2823</b> | <b>17.17</b> | <b>2914</b> | <b>18.79</b> |
| 7000          | 3043        | 2257        | 9.07         | 2360        | 10.46        | 2471        | 11.92        | 2577        | 13.41        | <b>2676</b> | <b>14.93</b> | <b>2774</b> | <b>16.53</b> | <b>2869</b> | <b>18.17</b> | <b>2960</b> | <b>19.85</b> |
| 7400          | 3217        | 2325        | 9.87         | 2427        | 11.31        | 2526        | 12.81        | 2631        | 14.36        | <b>2729</b> | <b>15.94</b> | <b>2824</b> | <b>17.55</b> | <b>2917</b> | <b>19.23</b> | <b>3007</b> | <b>20.96</b> |
| 7800          | 3391        | 2395        | 10.73        | 2495        | 12.23        | 2588        | 13.77        | <b>2685</b> | <b>15.36</b> | <b>2784</b> | <b>17.00</b> | <b>2877</b> | <b>18.67</b> | <b>2967</b> | <b>20.36</b> | <b>3055</b> | <b>22.12</b> |
| 8200          | 3565        | 2465        | 11.65        | 2563        | 13.21        | 2656        | 14.80        | <b>2744</b> | <b>16.43</b> | <b>2838</b> | <b>18.12</b> | <b>2931</b> | <b>19.84</b> | <b>3020</b> | <b>21.59</b> | <b>3106</b> | <b>23.37</b> |
| 8600          | 3739        | 2537        | 12.63        | 2633        | 14.25        | <b>2724</b> | <b>15.90</b> | <b>2811</b> | <b>17.58</b> | <b>2894</b> | <b>19.30</b> | <b>2986</b> | <b>21.08</b> | <b>3074</b> | <b>22.89</b> | <b>3159</b> | <b>24.73</b> |
| 9000          | 3913        | 2609        | 13.68        | <b>2704</b> | <b>15.36</b> | <b>2794</b> | <b>17.07</b> | <b>2879</b> | <b>18.81</b> | <b>2961</b> | <b>20.58</b> | <b>3041</b> | <b>22.38</b> | <b>3129</b> | <b>24.25</b> | <b>3213</b> | <b>26.15</b> |
| 9400          | 4086        | <b>2682</b> | <b>14.81</b> | <b>2775</b> | <b>16.54</b> | <b>2864</b> | <b>18.31</b> | <b>2948</b> | <b>20.10</b> | <b>3029</b> | <b>21.93</b> | <b>3107</b> | <b>23.78</b> | <b>3184</b> | <b>25.68</b> | <b>3268</b> | <b>27.63</b> |
| 9800          | 4260        | <b>2757</b> | <b>16.01</b> | <b>2847</b> | <b>17.79</b> | <b>2934</b> | <b>19.62</b> | <b>3018</b> | <b>21.47</b> | <b>3098</b> | <b>23.36</b> | <b>3174</b> | <b>25.27</b> | <b>3248</b> | <b>27.21</b> | <b>3323</b> | <b>29.19</b> |
| 10200         | 4434        | <b>2832</b> | <b>17.29</b> | <b>2920</b> | <b>19.13</b> | <b>3006</b> | <b>21.01</b> | <b>3088</b> | <b>22.92</b> | <b>3167</b> | <b>24.86</b> | <b>3243</b> | <b>26.83</b> | <b>3316</b> | <b>28.82</b> | <b>3387</b> | <b>30.85</b> |
| 10600         | 4608        | <b>2908</b> | <b>18.65</b> | <b>2994</b> | <b>20.54</b> | <b>3078</b> | <b>22.48</b> | <b>3159</b> | <b>24.45</b> | <b>3237</b> | <b>26.45</b> | <b>3312</b> | <b>28.47</b> | <b>3384</b> | <b>30.52</b> | <b>3454</b> | <b>32.60</b> |
| 11000         | 4782        | <b>2985</b> | <b>20.09</b> | <b>3070</b> | <b>22.05</b> | <b>3151</b> | <b>24.03</b> | <b>3230</b> | <b>26.06</b> | <b>3307</b> | <b>28.12</b> | <b>3381</b> | <b>30.20</b> | <b>3453</b> | <b>32.31</b> | <b>3523</b> | <b>34.44</b> |
| 11400         | 4956        | <b>3062</b> | <b>21.62</b> | <b>3145</b> | <b>23.64</b> | <b>3225</b> | <b>25.68</b> | <b>3303</b> | <b>27.76</b> | <b>3379</b> | <b>29.87</b> | <b>3452</b> | <b>32.01</b> | <b>3523</b> | <b>34.18</b> | <b>3591</b> | <b>36.37</b> |

| Volume<br>CFM | O.V.<br>fpm | 13" SP      |              | 14" SP      |              | 15" SP      |              | 16" SP      |              | 17" SP |       | 18" SP |       | 19" SP |       |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|--------|-------|--------|-------|--------|-------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM    | bhp   | RPM    | bhp   | RPM    | bhp   |
| 5400          | 2347        | <b>2928</b> | <b>18.09</b> | <b>3027</b> | <b>19.81</b> | <b>3122</b> | <b>21.57</b> |             |              |        |       |        |       |        |       |
| 5800          | 2521        | <b>2952</b> | <b>18.84</b> | <b>3051</b> | <b>20.61</b> | <b>3146</b> | <b>22.42</b> | <b>3238</b> | <b>24.27</b> | 3327   | 26.15 |        |       |        |       |
| 6200          | 2695        | <b>2976</b> | <b>19.62</b> | <b>3074</b> | <b>21.43</b> | <b>3169</b> | <b>23.29</b> | <b>3261</b> | <b>25.18</b> | 3350   | 27.11 | 3437   | 29.08 | 3521   | 31.08 |
| 6600          | 2869        | <b>3002</b> | <b>20.44</b> | <b>3098</b> | <b>22.28</b> | <b>3193</b> | <b>24.18</b> | <b>3285</b> | <b>26.12</b> | 3374   | 28.10 | 3460   | 30.11 | 3545   | 32.16 |
| 7000          | 3043        | <b>3048</b> | <b>21.56</b> | <b>3133</b> | <b>23.29</b> | <b>3217</b> | <b>25.09</b> | 3309        | 27.08        | 3398   | 29.11 | 3484   | 31.17 | 3568   | 33.26 |
| 7400          | 3217        | <b>3095</b> | <b>22.72</b> | <b>3179</b> | <b>24.51</b> | <b>3260</b> | <b>26.33</b> | 3359        | 28.17        | 3421   | 30.14 | 3508   | 32.25 |        |       |
| 7800          | 3391        | <b>3142</b> | <b>23.93</b> | <b>3226</b> | <b>25.78</b> | <b>3307</b> | <b>27.65</b> | 3385        | 29.55        | 3462   | 31.48 | 3536   | 33.43 |        |       |
| 8200          | 3565        | <b>3189</b> | <b>25.20</b> | <b>3273</b> | <b>27.10</b> | 3354        | 29.03        | 3432        | 30.99        | 3508   | 32.97 |        |       |        |       |
| 8600          | 3739        | <b>3241</b> | <b>26.59</b> | 3321        | 28.48        | 3401        | 30.47        | 3479        | 32.48        | 3555   | 34.51 |        |       |        |       |
| 9000          | 3913        | 3295        | 28.07        | 3374        | 30.01        | 3450        | 31.98        | 3527        | 34.03        |        |       |        |       |        |       |
| 9400          | 4086        | 3349        | 29.61        | 3427        | 31.61        | 3503        | 33.64        |             |              |        |       |        |       |        |       |
| 9800          | 4260        | 3404        | 31.22        | 3482        | 33.28        | 3557        | 35.37        |             |              |        |       |        |       |        |       |

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR<sup>2</sup>.

See page 27, 29 or 30 for minimum motor frame sizes regardless of bhp.

# Belt Drive Ratings Table — at 70°F | .075 density | sea level

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## HDBI-220

Wheel

Diameter - 22.25"

Outlet OD

Size - 16.88" x 20.38"

Area - 2.84 ft<sup>2</sup> ID

Inlet OD

Size - 24.63"

Area - 3.24 ft<sup>2</sup> ID

All wheels are Class II HDBI Type

Class II = light text face above Class III

Class III = bold text face

Class IV = italic text face below Class III

| Volume<br>CFM | O.V.<br>fpm | 0" SP |       | ½" SP |       | 1" SP       |              | 1 ½" SP     |              | 2" SP       |              | 2 ½" SP     |              | 3" SP       |              | 4" SP       |              |
|---------------|-------------|-------|-------|-------|-------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM   | bhp   | RPM   | bhp   | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 4600          | 1619        | 765   | 0.48  | 870   | 0.85  | 962         | 1.22         | 1054        | 1.62         | 1137        | 2.04         | 1214        | 2.48         | 1299        | 2.99         | 1460        | 4.10         |
| 5200          | 1830        | 865   | 0.70  | 959   | 1.11  | 1042        | 1.52         | 1125        | 1.96         | 1204        | 2.41         | 1277        | 2.89         | 1347        | 3.38         | 1494        | 4.52         |
| 5800          | 2042        | 965   | 0.97  | 1051  | 1.43  | 1128        | 1.88         | 1199        | 2.35         | 1275        | 2.85         | 1345        | 3.36         | 1411        | 3.89         | 1534        | 4.99         |
| 6400          | 2253        | 1065  | 1.31  | 1144  | 1.80  | 1215        | 2.31         | 1281        | 2.82         | 1348        | 3.35         | 1415        | 3.90         | 1479        | 4.47         | 1597        | 5.64         |
|               |             |       |       |       |       |             |              |             |              |             |              |             |              |             |              |             |              |
| 7000          | 2464        | 1164  | 1.71  | 1237  | 2.25  | 1303        | 2.82         | 1366        | 3.36         | 1424        | 3.92         | 1488        | 4.51         | 1549        | 5.12         | 1662        | 6.37         |
| 7600          | 2676        | 1264  | 2.19  | 1332  | 2.77  | 1394        | 3.39         | 1453        | 3.98         | 1509        | 4.58         | 1561        | 5.19         | 1621        | 5.84         | 1732        | 7.17         |
| 8200          | 2887        | 1364  | 2.75  | 1427  | 3.38  | 1486        | 4.03         | 1541        | 4.69         | 1594        | 5.33         | 1645        | 5.98         | 1695        | 6.65         | 1803        | 8.06         |
| 8800          | 3098        | 1464  | 3.39  | 1523  | 4.07  | 1578        | 4.77         | 1630        | 5.48         | 1681        | 6.17         | 1730        | 6.86         | 1776        | 7.56         | 1875        | 9.03         |
|               |             |       |       |       |       |             |              |             |              |             |              |             |              |             |              |             |              |
| 9400          | 3309        | 1564  | 4.14  | 1619  | 4.86  | 1672        | 5.60         | 1721        | 6.36         | 1769        | 7.10         | 1816        | 7.83         | 1861        | 8.58         | 1949        | 10.11        |
| 10000         | 3521        | 1663  | 4.98  | 1716  | 5.75  | 1766        | 6.53         | 1813        | 7.34         | 1858        | 8.15         | 1903        | 8.92         | 1947        | 9.70         | 2029        | 11.30        |
| 10600         | 3732        | 1763  | 5.93  | 1813  | 6.75  | 1860        | 7.57         | 1906        | 8.42         | 1949        | 9.28         | 1991        | 10.12        | 2033        | 10.94        | 2113        | 12.61        |
| 11200         | 3943        | 1863  | 7.00  | 1910  | 7.85  | 1956        | 8.73         | 1999        | 9.62         | 2040        | 10.52        | 2080        | 11.43        | 2121        | 12.29        | 2198        | 14.05        |
|               |             |       |       |       |       |             |              |             |              |             |              |             |              |             |              |             |              |
| 11800         | 4154        | 1963  | 8.19  | 2008  | 9.09  | 2051        | 10.01        | 2092        | 10.94        | 2132        | 11.88        | 2171        | 12.84        | 2209        | 13.78        | 2284        | 15.61        |
| 12400         | 4366        | 2063  | 9.50  | 2106  | 10.44 | 2147        | 11.41        | 2187        | 12.38        | 2225        | 13.37        | 2262        | 14.37        | 2298        | 15.39        | <b>2371</b> | <b>17.30</b> |
| 13000         | 4577        | 2163  | 10.94 | 2204  | 11.93 | 2243        | 12.95        | 2281        | 13.96        | <b>2318</b> | <b>15.00</b> | <b>2354</b> | <b>16.04</b> | <b>2389</b> | <b>17.10</b> | <b>2459</b> | <b>19.14</b> |
| 13600         | 4788        | 2262  | 12.53 | 2302  | 13.57 | <b>2340</b> | <b>14.62</b> | <b>2376</b> | <b>15.68</b> | <b>2412</b> | <b>16.76</b> | <b>2447</b> | <b>17.85</b> | <b>2481</b> | <b>18.95</b> | <b>2547</b> | <b>21.12</b> |

| Volume<br>CFM | O.V.<br>fpm | 5" SP       |              | 6" SP       |              | 7" SP       |              | 8" SP       |              | 9" SP       |              | 10" SP      |              | 11" SP      |              | 12" SP      |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 4600          | 1619        | 1629        | 5.38         | 1782        | 6.74         | 1922        | 8.17         |             |              |             |              |             |              |             |              |             |              |
| 5200          | 1830        | 1635        | 5.78         | 1785        | 7.20         | 1926        | 8.70         | 2056        | 10.27        | 2179        | 11.90        | 2296        | 13.58        |             |              |             |              |
| 5800          | 2042        | 1669        | 6.30         | 1797        | 7.70         | 1929        | 9.24         | 2060        | 10.88        | 2183        | 12.58        | 2299        | 14.34        | <b>2410</b> | <b>16.15</b> | <b>2515</b> | <b>18.01</b> |
| 6400          | 2253        | 1706        | 6.87         | 1831        | 8.33         | 1948        | 9.87         | 2064        | 11.49        | 2186        | 13.27        | 2303        | 15.10        | <b>2413</b> | <b>16.98</b> | <b>2519</b> | <b>18.91</b> |
|               |             |             |              |             |              |             |              |             |              |             |              |             |              |             |              |             |              |
| 7000          | 2464        | 1769        | 7.67         | 1868        | 9.02         | 1983        | 10.61        | 2092        | 12.28        | 2195        | 13.99        | <b>2306</b> | <b>15.86</b> | <b>2417</b> | <b>17.82</b> | <b>2522</b> | <b>19.83</b> |
| 7600          | 2676        | 1833        | 8.54         | 1930        | 9.97         | 2021        | 11.43        | 2127        | 13.14        | 2229        | 14.93        | <b>2326</b> | <b>16.76</b> | <b>2420</b> | <b>18.66</b> | <b>2526</b> | <b>20.74</b> |
| 8200          | 2887        | 1902        | 9.51         | 1994        | 11.00        | 2084        | 12.54        | 2169        | 14.12        | 2264        | 15.91        | <b>2360</b> | <b>17.82</b> | <b>2453</b> | <b>19.78</b> | <b>2541</b> | <b>21.78</b> |
| 8800          | 3098        | 1972        | 10.56        | 2062        | 12.13        | 2148        | 13.75        | 2232        | 15.40        | <b>2311</b> | <b>17.09</b> | <b>2395</b> | <b>18.92</b> | <b>2487</b> | <b>20.96</b> | <b>2575</b> | <b>23.03</b> |
|               |             |             |              |             |              |             |              |             |              |             |              |             |              |             |              |             |              |
| 9400          | 3309        | 2044        | 11.72        | 2132        | 13.36        | 2215        | 15.05        | 2296        | 16.78        | <b>2374</b> | <b>18.54</b> | <b>2449</b> | <b>20.34</b> | <b>2522</b> | <b>22.19</b> | <b>2610</b> | <b>24.34</b> |
| 10000         | 3521        | 2116        | 12.97        | 2203        | 14.70        | 2285        | 16.46        | <b>2362</b> | <b>18.26</b> | <b>2438</b> | <b>20.10</b> | <b>2512</b> | <b>21.97</b> | <b>2583</b> | <b>23.87</b> | <b>2652</b> | <b>25.81</b> |
| 10600         | 3732        | 2190        | 14.34        | 2275        | 16.15        | <b>2356</b> | <b>17.99</b> | <b>2432</b> | <b>19.86</b> | <b>2505</b> | <b>21.77</b> | <b>2576</b> | <b>23.71</b> | <b>2647</b> | <b>25.70</b> | <b>2714</b> | <b>27.70</b> |
| 11200         | 3943        | 2271        | 15.84        | <b>2348</b> | <b>17.71</b> | <b>2427</b> | <b>19.63</b> | <b>2503</b> | <b>21.58</b> | <b>2575</b> | <b>23.57</b> | <b>2644</b> | <b>25.58</b> | <b>2711</b> | <b>27.63</b> | <b>2778</b> | <b>29.72</b> |
|               |             |             |              |             |              |             |              |             |              |             |              |             |              |             |              |             |              |
| 11800         | 4154        | <b>2355</b> | <b>17.48</b> | <b>2422</b> | <b>19.39</b> | <b>2500</b> | <b>21.39</b> | <b>2574</b> | <b>23.42</b> | <b>2645</b> | <b>25.49</b> | <b>2713</b> | <b>27.58</b> | <b>2779</b> | <b>29.70</b> | <b>2843</b> | <b>31.86</b> |
| 12400         | 4366        | <b>2440</b> | <b>19.25</b> | <b>2506</b> | <b>21.24</b> | <b>2574</b> | <b>23.28</b> | <b>2646</b> | <b>25.40</b> | <b>2716</b> | <b>27.54</b> | <b>2784</b> | <b>29.71</b> | <b>2848</b> | <b>31.91</b> | <b>2911</b> | <b>34.14</b> |
| 13000         | 4577        | <b>2526</b> | <b>21.17</b> | <b>2590</b> | <b>23.23</b> | <b>2652</b> | <b>25.33</b> | <b>2720</b> | <b>27.50</b> | <b>2789</b> | <b>29.73</b> | <b>2855</b> | <b>31.98</b> | <b>2919</b> | <b>34.26</b> | <b>2981</b> | <b>36.56</b> |
| 13600         | 4788        | <b>2613</b> | <b>23.23</b> | <b>2675</b> | <b>25.37</b> | <b>2735</b> | <b>27.54</b> | <b>2794</b> | <b>29.75</b> | <b>2862</b> | <b>32.06</b> | <b>2927</b> | <b>34.39</b> | <b>2990</b> | <b>36.75</b> | <b>3051</b> | <b>39.13</b> |

| Volume<br>CFM | O.V.<br>fpm | 13" SP      |              | 14" SP      |              | 15" SP      |              | 16" SP |       | 17" SP |       | 18" SP |       | 19" SP |       | 20" SP |       |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM    | bhp   | RPM    | bhp   | RPM    | bhp   | RPM    | bhp   | RPM    | bhp   |
| 6400          | 2253        | <b>2620</b> | <b>20.90</b> | <b>2718</b> | <b>22.93</b> | <b>2812</b> | <b>25.01</b> |        |       |        |       |        |       |        |       |        |       |
| 7000          | 2464        | <b>2624</b> | <b>21.88</b> | <b>2721</b> | <b>23.99</b> | <b>2815</b> | <b>26.14</b> | 2906   | 28.33 | 2994   | 30.57 | 3080   | 32.85 |        |       |        |       |
| 7600          | 2676        | <b>2627</b> | <b>22.88</b> | <b>2725</b> | <b>25.05</b> | <b>2819</b> | <b>27.28</b> | 2910   | 29.55 | 2998   | 31.86 | 3084   | 34.21 | 3167   | 36.60 | 3248   | 39.03 |
| 8200          | 2887        | <b>2631</b> | <b>23.87</b> | <b>2728</b> | <b>26.13</b> | <b>2822</b> | <b>28.42</b> | 2913   | 30.76 | 3001   | 33.15 | 3087   | 35.57 | 3170   | 38.04 | 3251   | 40.54 |
|               |             |             |              |             |              |             |              |        |       |        |       |        |       |        |       |        |       |
| 8800          | 3098        | <b>2660</b> | <b>25.15</b> | <b>2741</b> | <b>27.31</b> | 2826        | 29.57        | 2917   | 31.99 | 3005   | 34.45 | 3091   | 36.94 | 3174   | 39.48 | 3255   | 42.06 |
| 9400          | 3309        | <b>2694</b> | <b>26.53</b> | <b>2775</b> | <b>28.76</b> | 2854        | 31.03        | 2930   | 33.34 | 3008   | 35.75 | 3094   | 38.32 | 3177   | 40.93 | 3258   | 43.59 |
| 10000         | 3521        | <b>2729</b> | <b>27.97</b> | <b>2810</b> | <b>30.28</b> | 2888        | 32.62        | 2964   | 35.00 | 3038   | 37.42 | 3109   | 39.88 | 3181   | 42.39 | 3262   | 45.12 |
| 10600         | 3732        | <b>2780</b> | <b>29.74</b> | 2845        | 31.85        | 2923        | 34.27        | 2999   | 36.72 | 3072   | 39.22 | 3144   | 41.75 | 3213   | 44.31 | 3281   | 46.90 |
|               |             |             |              |             |              |             |              |        |       |        |       |        |       |        |       |        |       |
| 11200         | 3943        | 2843        | 31.83        | 2906        | 33.98        | 2967        | 36.14        | 3034   | 38.51 | 3107   | 41.08 | 3178   | 43.68 | 3248   | 46.32 | 3315   | 48.99 |
| 11800         | 4154        | 2907        | 34.05        | 2969        | 36.27        | 3029        | 38.51        | 3088   | 40.78 | 3145   | 43.07 | 3213   | 45.68 | 3282   | 48.39 | 3350   | 51.14 |
| 12400         | 4366        | 2972        | 36.40        | 3033        | 38.69        | 3093        | 41.01        | 3151   | 43.36 | 3208   | 45.73 | 3263   | 48.12 | 3318   | 50.54 | 3385   | 53.36 |
| 13000         | 4577        | 3041        | 38.90        | 3099        | 41.25        | 3157        | 43.65        | 3215   | 46.07 | 3271   | 48.51 | 3326   | 50.98 | 3380   | 53.48 | 3433   | 55.99 |
|               |             |             |              |             |              |             |              |        |       |        |       |        |       |        |       |        |       |
| 13600         | 4788        | 3110        | 41.54        | 3168        | 43.98        | 3224        | 46.44        | 3280   | 48.92 | 3335   | 51.45 | 3390   | 53.99 | 3443   | 56.56 |        |       |

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR<sup>2</sup>.

See page 27, 29 or 30 for minimum motor frame sizes regardless of bhp.

# Belt Drive Ratings Table — at 70°F | .075 density | sea level

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## HDBI-240

### Wheel

Diameter - 24.50"

### Outlet OD

Size - 18.56" x 27.38"

Area - 3.45 ft<sup>2</sup> ID

### Inlet OD

Size - 27.00"

Area - 3.90 ft<sup>2</sup> ID

### All wheels are Class II HDBI Type

Class II = light text face above Class III

Class III = **bold text face**

Class IV = *italic text face below Class III*

| Volume<br>CFM | O.V.<br>fpm | 0" SP |       | ¼" SP |       | ½" SP |       | ¾" SP |       | 1" SP |       | 1 ½" SP |       | 2" SP       |              | 2 ½" SP     |              |
|---------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|-------|-------------|--------------|-------------|--------------|
|               |             | RPM   | bhp   | RPM   | bhp   | RPM   | bhp   | RPM   | bhp   | RPM   | bhp   | RPM     | bhp   | RPM         | bhp          | RPM         | bhp          |
| 5000          | 1449        | 623   | 0.42  | 678   | 0.62  | 727   | 0.82  | 772   | 1.02  | 821   | 1.23  | 908     | 1.68  | 987         | 2.16         | 1073        | 2.71         |
| 5800          | 1681        | 723   | 0.66  | 771   | 0.89  | 814   | 1.12  | 856   | 1.34  | 894   | 1.58  | 977     | 2.08  | 1051        | 2.60         | 1120        | 3.15         |
| 6600          | 1913        | 822   | 0.97  | 865   | 1.23  | 905   | 1.49  | 942   | 1.75  | 978   | 2.01  | 1049    | 2.56  | 1120        | 3.13         | 1184        | 3.73         |
| 7400          | 2144        | 922   | 1.37  | 961   | 1.66  | 997   | 1.95  | 1030  | 2.25  | 1064  | 2.54  | 1125    | 3.12  | 1191        | 3.75         | 1254        | 4.40         |
|               |             |       |       |       |       |       |       |       |       |       |       |         |       |             |              |             |              |
| 8200          | 2376        | 1022  | 1.87  | 1057  | 2.18  | 1090  | 2.51  | 1121  | 2.83  | 1152  | 3.16  | 1210    | 3.80  | 1264        | 4.46         | 1325        | 5.16         |
| 9000          | 2608        | 1121  | 2.47  | 1154  | 2.81  | 1184  | 3.17  | 1213  | 3.52  | 1241  | 3.89  | 1296    | 4.59  | 1347        | 5.30         | 1398        | 6.04         |
| 9800          | 2840        | 1221  | 3.19  | 1251  | 3.56  | 1279  | 3.95  | 1307  | 4.33  | 1333  | 4.73  | 1384    | 5.50  | 1433        | 6.27         | 1479        | 7.05         |
| 10600         | 3072        | 1321  | 4.04  | 1348  | 4.44  | 1375  | 4.85  | 1400  | 5.27  | 1425  | 5.69  | 1472    | 6.55  | 1519        | 7.37         | 1563        | 8.20         |
|               |             |       |       |       |       |       |       |       |       |       |       |         |       |             |              |             |              |
| 11400         | 3304        | 1420  | 5.02  | 1446  | 5.45  | 1471  | 5.90  | 1495  | 6.34  | 1518  | 6.79  | 1563    | 7.71  | 1607        | 8.61         | 1649        | 9.50         |
| 12200         | 3536        | 1520  | 6.15  | 1544  | 6.62  | 1568  | 7.09  | 1590  | 7.56  | 1612  | 8.04  | 1655    | 9.02  | 1696        | 10.01        | 1737        | 10.95        |
| 13000         | 3768        | 1620  | 7.45  | 1642  | 7.94  | 1665  | 8.44  | 1686  | 8.95  | 1707  | 9.45  | 1748    | 10.49 | 1786        | 11.54        | 1825        | 12.57        |
| 13800         | 4000        | 1719  | 8.91  | 1741  | 9.43  | 1762  | 9.96  | 1782  | 10.50 | 1802  | 11.04 | 1841    | 12.13 | 1878        | 13.23        | 1914        | 14.36        |
|               |             |       |       |       |       |       |       |       |       |       |       |         |       |             |              |             |              |
| 14600         | 4231        | 1819  | 10.55 | 1839  | 11.10 | 1859  | 11.66 | 1879  | 12.22 | 1898  | 12.79 | 1935    | 13.94 | 1970        | 15.11        | 2005        | 16.29        |
| 15400         | 4463        | 1919  | 12.38 | 1938  | 12.96 | 1957  | 13.55 | 1975  | 14.15 | 1994  | 14.74 | 2029    | 15.95 | 2063        | 17.18        | 2096        | 18.41        |
| 16200         | 4695        | 2019  | 14.41 | 2037  | 15.02 | 2055  | 15.64 | 2072  | 16.26 | 2090  | 16.89 | 2124    | 18.16 | <b>2157</b> | <b>19.44</b> | <b>2189</b> | <b>20.75</b> |

| Volume<br>CFM | O.V.<br>fpm | 3" SP       |              | 4" SP       |              | 5" SP       |              | 6" SP       |              | 7" SP       |              | 8" SP       |              | 9" SP       |              | 10" SP      |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 5000          | 1449        | 1155        | 3.32         | 1317        | 4.60         |             |              |             |              |             |              |             |              |             |              |             |              |
| 5800          | 1681        | 1190        | 3.75         | 1335        | 5.12         | 1475        | 6.59         | 1608        | 8.13         |             |              |             |              |             |              |             |              |
| 6600          | 1913        | 1246        | 4.34         | 1369        | 5.70         | 1497        | 7.26         | 1620        | 8.91         | 1742        | 10.62        | 1855        | 12.39        |             |              |             |              |
| 7400          | 2144        | 1312        | 5.06         | 1422        | 6.44         | 1532        | 7.98         | 1648        | 9.72         | 1754        | 11.54        | 1867        | 13.43        | 1974        | 15.36        | 2074        | 17.35        |
|               |             |             |              |             |              |             |              |             |              |             |              |             |              |             |              |             |              |
| 8200          | 2376        | 1381        | 5.88         | 1486        | 7.36         | 1584        | 8.91         | 1682        | 10.59        | 1788        | 12.51        | 1888        | 14.49        | 1986        | 16.54        | 2086        | 18.64        |
| 9000          | 2608        | 1453        | 6.81         | 1554        | 8.39         | 1648        | 10.03        | 1736        | 11.74        | 1823        | 13.54        | 1922        | 15.62        | 2015        | 17.76        | 2103        | 19.96        |
| 9800          | 2840        | 1526        | 7.85         | 1625        | 9.54         | 1715        | 11.29        | 1800        | 13.09        | 1882        | 14.94        | 1958        | 16.83        | 2050        | 19.06        | <b>2138</b> | <b>21.36</b> |
| 10600         | 3072        | 1606        | 9.05         | 1696        | 10.83        | 1785        | 12.68        | 1867        | 14.57        | 1945        | 16.52        | 2021        | 18.52        | 2093        | 20.56        | <b>2172</b> | <b>22.82</b> |
|               |             |             |              |             |              |             |              |             |              |             |              |             |              |             |              |             |              |
| 11400         | 3304        | 1690        | 10.40        | 1770        | 12.25        | 1856        | 14.20        | 1936        | 16.20        | 2012        | 18.25        | 2085        | 20.35        | <b>2156</b> | <b>22.49</b> | <b>2224</b> | <b>24.67</b> |
| 12200         | 3536        | 1776        | 11.90        | 1850        | 13.84        | 1929        | 15.88        | 2007        | 17.99        | 2082        | 20.14        | <b>2152</b> | <b>22.33</b> | <b>2220</b> | <b>24.57</b> | <b>2288</b> | <b>26.85</b> |
| 13000         | 3768        | 1862        | 13.57        | 1934        | 15.62        | 2002        | 17.72        | 2079        | 19.94        | <b>2152</b> | <b>22.19</b> | <b>2222</b> | <b>24.49</b> | <b>2288</b> | <b>26.82</b> | <b>2352</b> | <b>29.20</b> |
| 13800         | 4000        | 1950        | 15.42        | 2020        | 17.58        | 2085        | 19.77        | <b>2153</b> | <b>22.05</b> | <b>2224</b> | <b>24.41</b> | <b>2292</b> | <b>26.82</b> | <b>2357</b> | <b>29.25</b> | <b>2420</b> | <b>31.73</b> |
|               |             |             |              |             |              |             |              |             |              |             |              |             |              |             |              |             |              |
| 14600         | 4231        | 2039        | 17.46        | 2106        | 19.72        | <b>2169</b> | <b>22.02</b> | <b>2230</b> | <b>24.37</b> | <b>2297</b> | <b>26.82</b> | <b>2364</b> | <b>29.33</b> | <b>2428</b> | <b>31.87</b> | <b>2490</b> | <b>34.45</b> |
| 15400         | 4463        | 2129        | 19.67        | <b>2193</b> | <b>22.06</b> | <b>2255</b> | <b>24.47</b> | <b>2314</b> | <b>26.92</b> | <b>2371</b> | <b>29.41</b> | <b>2436</b> | <b>32.03</b> | <b>2500</b> | <b>34.68</b> | <b>2560</b> | <b>37.37</b> |
| 16200         | 4695        | <b>2220</b> | <b>22.05</b> | <b>2281</b> | <b>24.62</b> | <b>2341</b> | <b>27.13</b> | <b>2398</b> | <b>29.68</b> | <b>2454</b> | <b>32.28</b> | <b>2510</b> | <b>34.94</b> | 2572        | 37.70        | 2632        | 40.49        |

| Volume<br>CFM | O.V.<br>fpm | 11" SP      |              | 12" SP      |              | 13" SP      |              | 14" SP      |              | 15" SP      |              | 16" SP |       | 17" SP |       | 18" SP |       |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|--------|-------|--------|-------|--------|-------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM    | bhp   | RPM    | bhp   | RPM    | bhp   |
| 8200          | 2376        | <b>2182</b> | <b>20.79</b> | <b>2274</b> | <b>22.99</b> | <b>2361</b> | <b>25.23</b> |             |              |             |              |        |       |        |       |        |       |
| 9000          | 2608        | <b>2194</b> | <b>22.23</b> | <b>2286</b> | <b>24.54</b> | <b>2374</b> | <b>26.90</b> | <b>2458</b> | <b>29.29</b> | <b>2539</b> | <b>31.73</b> | 2618   | 34.21 |        |       |        |       |
| 9800          | 2840        | <b>2221</b> | <b>23.71</b> | <b>2302</b> | <b>26.12</b> | <b>2386</b> | <b>28.59</b> | <b>2470</b> | <b>31.10</b> | <b>2552</b> | <b>33.66</b> | 2630   | 36.25 | 2707   | 38.88 | 2781   | 41.54 |
| 10600         | 3072        | <b>2256</b> | <b>25.28</b> | <b>2336</b> | <b>27.78</b> | <b>2413</b> | <b>30.34</b> | <b>2487</b> | <b>32.95</b> | <b>2564</b> | <b>35.62</b> | 2643   | 38.32 | 2719   | 41.07 | 2793   | 43.85 |
|               |             |             |              |             |              |             |              |             |              |             |              |        |       |        |       |        |       |
| 11400         | 3304        | <b>2291</b> | <b>26.91</b> | <b>2370</b> | <b>29.52</b> | <b>2447</b> | <b>32.18</b> | <b>2521</b> | <b>34.89</b> | 2592        | 37.65        | 2661   | 40.45 | 2731   | 43.30 | 2805   | 46.19 |
| 12200         | 3536        | <b>2352</b> | <b>29.17</b> | <b>2414</b> | <b>31.53</b> | <b>2482</b> | <b>34.10</b> | <b>2555</b> | <b>36.91</b> | 2627        | 39.77        | 2695   | 42.66 | 2762   | 45.61 | 2827   | 48.59 |
| 13000         | 3768        | <b>2416</b> | <b>31.62</b> | <b>2477</b> | <b>34.08</b> | <b>2536</b> | <b>36.57</b> | 2594        | 39.10        | 2661        | 41.97        | 2730   | 44.97 | 2797   | 48.01 |        |       |
| 13800         | 4000        | <b>2480</b> | <b>34.24</b> | <b>2541</b> | <b>36.80</b> | 2599        | 39.40        | 2656        | 42.02        | 2711        | 44.68        | 2765   | 47.37 | 2831   | 50.51 |        |       |
|               |             |             |              |             |              |             |              |             |              |             |              |        |       |        |       |        |       |
| 14600         | 4231        | <b>2549</b> | <b>37.07</b> | 2606        | 39.72        | 2664        | 42.41        | 2720        | 45.14        | 2774        | 47.90        | 2828   | 50.69 |        |       |        |       |

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR<sup>2</sup>.

See page 27, 29 or 30 for minimum motor frame sizes regardless of bhp.



# Belt Drive Ratings Table — at 70°F | .075 density | sea level

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## HDBI-270

### Wheel

Diameter - 27.00"

### Outlet OD

Size - 20.44" x 30.13"

Area - 4.19 ft<sup>2</sup> ID

### Inlet OD

Size - 30.00"

Area - 4.83 ft<sup>2</sup> ID

### All wheels are Class II HDBI Type

Class II = light text face above Class III

**Class III = bold text face**

*Class IV = italic text face below Class III*

| Volume<br>CFM | O.V.<br>fpm | 0" SP |       | 1/4" SP |       | 1/2" SP |       | 3/4" SP |       | 1" SP |       | 1 1/2" SP   |              | 2" SP       |              |
|---------------|-------------|-------|-------|---------|-------|---------|-------|---------|-------|-------|-------|-------------|--------------|-------------|--------------|
|               |             | RPM   | bhp   | RPM     | bhp   | RPM     | bhp   | RPM     | bhp   | RPM   | bhp   | RPM         | bhp          | RPM         | bhp          |
| 5600          | 1336        | 500   | 0.38  | 551     | 0.59  | 599     | 0.81  | 644     | 1.04  | 688   | 1.27  | 777         | 1.80         |             |              |
| 6400          | 1527        | 571   | 0.57  | 617     | 0.81  | 660     | 1.06  | 700     | 1.31  | 739   | 1.57  | 814         | 2.11         | 894         | 2.73         |
| 7200          | 1718        | 643   | 0.82  | 684     | 1.08  | 722     | 1.36  | 760     | 1.63  | 794   | 1.92  | 865         | 2.51         | 932         | 3.14         |
| 8000          | 1909        | 714   | 1.12  | 752     | 1.41  | 786     | 1.72  | 821     | 2.02  | 853   | 2.33  | 916         | 2.98         | 978         | 3.64         |
|               |             |       |       |         |       |         |       |         |       |       |       |             |              |             |              |
| 8800          | 2100        | 786   | 1.49  | 820     | 1.81  | 852     | 2.14  | 883     | 2.48  | 914   | 2.82  | 971         | 3.51         | 1029        | 4.23         |
| 9600          | 2291        | 857   | 1.94  | 889     | 2.29  | 919     | 2.64  | 947     | 3.01  | 975   | 3.38  | 1030        | 4.12         | 1082        | 4.90         |
| 10400         | 2482        | 928   | 2.46  | 958     | 2.84  | 986     | 3.23  | 1012    | 3.62  | 1038  | 4.02  | 1091        | 4.82         | 1139        | 5.64         |
| 11200         | 2673        | 1000  | 3.07  | 1027    | 3.48  | 1054    | 3.89  | 1079    | 4.32  | 1103  | 4.75  | 1152        | 5.60         | 1198        | 6.48         |
|               |             |       |       |         |       |         |       |         |       |       |       |             |              |             |              |
| 12000         | 2863        | 1071  | 3.78  | 1097    | 4.22  | 1122    | 4.66  | 1145    | 5.11  | 1168  | 5.56  | 1213        | 6.48         | 1259        | 7.41         |
| 12800         | 3054        | 1143  | 4.59  | 1167    | 5.05  | 1190    | 5.52  | 1213    | 6.00  | 1234  | 6.48  | 1276        | 7.47         | 1320        | 8.44         |
| 13600         | 3245        | 1214  | 5.50  | 1237    | 5.99  | 1259    | 6.49  | 1280    | 7.00  | 1301  | 7.51  | 1341        | 8.55         | 1381        | 9.59         |
| 14400         | 3436        | 1285  | 6.53  | 1307    | 7.05  | 1328    | 7.58  | 1348    | 8.11  | 1368  | 8.65  | 1406        | 9.75         | 1444        | 10.85        |
|               |             |       |       |         |       |         |       |         |       |       |       |             |              |             |              |
| 15200         | 3627        | 1357  | 7.68  | 1377    | 8.23  | 1397    | 8.79  | 1417    | 9.35  | 1436  | 9.92  | 1472        | 11.06        | 1507        | 12.24        |
| 16000         | 3818        | 1428  | 8.96  | 1448    | 9.54  | 1467    | 10.12 | 1485    | 10.71 | 1504  | 11.31 | 1539        | 12.51        | 1572        | 13.74        |
| 16800         | 4009        | 1500  | 10.38 | 1518    | 10.98 | 1537    | 11.59 | 1554    | 12.21 | 1572  | 12.83 | 1605        | 14.09        | 1638        | 15.37        |
| 17600         | 4200        | 1571  | 11.93 | 1589    | 12.56 | 1606    | 13.20 | 1623    | 13.85 | 1640  | 14.50 | 1673        | 15.81        | 1704        | 17.15        |
|               |             |       |       |         |       |         |       |         |       |       |       |             |              |             |              |
| 18400         | 4391        | 1642  | 13.63 | 1660    | 14.28 | 1676    | 14.96 | 1693    | 15.63 | 1709  | 16.31 | 1740        | 17.68        | 1770        | 19.07        |
| 19200         | 4582        | 1714  | 15.49 | 1730    | 16.17 | 1746    | 16.87 | 1762    | 17.58 | 1778  | 18.28 | 1808        | 19.71        | 1837        | 21.15        |
| 20000         | 4773        | 1785  | 17.50 | 1801    | 18.21 | 1816    | 18.95 | 1832    | 19.68 | 1847  | 20.41 | <b>1876</b> | <b>21.89</b> | <b>1904</b> | <b>23.39</b> |

| Volume<br>CFM | O.V.<br>fpm | 2 1/2" SP   |              | 3" SP       |              | 4" SP       |              | 5" SP       |              | 6" SP       |              | 7" SP       |              | 8" SP       |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 8000          | 1909        | 1039        | 4.36         | 1103        | 5.14         |             |              |             |              |             |              |             |              |             |              |
| 8800          | 2100        | 1085        | 4.97         | 1140        | 5.76         | 1253        | 7.50         |             |              |             |              |             |              |             |              |
| 9600          | 2291        | 1136        | 5.69         | 1186        | 6.49         | 1290        | 8.28         | 1390        | 10.20        |             |              |             |              |             |              |
| 10400         | 2482        | 1187        | 6.48         | 1237        | 7.34         | 1328        | 9.12         | 1427        | 11.15        | 1518        | 13.25        |             |              |             |              |
|               |             |             |              |             |              |             |              |             |              |             |              |             |              |             |              |
| 11200         | 2673        | 1242        | 7.37         | 1288        | 8.28         | 1376        | 10.15        | 1464        | 12.17        | 1554        | 14.37        | 1638        | 16.64        |             |              |
| 12000         | 2863        | 1301        | 8.35         | 1341        | 9.32         | 1427        | 11.29        | 1506        | 13.32        | 1591        | 15.58        | 1674        | 17.95        | 1752        | 20.38        |
| 12800         | 3054        | 1361        | 9.44         | 1400        | 10.46        | 1479        | 12.54        | 1557        | 14.67        | 1629        | 16.86        | 1711        | 19.34        | 1789        | 21.87        |
| 13600         | 3245        | 1421        | 10.64        | 1459        | 11.70        | 1531        | 13.89        | 1607        | 16.13        | 1678        | 18.41        | 1749        | 20.82        | 1826        | 23.46        |
|               |             |             |              |             |              |             |              |             |              |             |              |             |              |             |              |
| 14400         | 3436        | 1482        | 11.95        | 1519        | 13.07        | 1588        | 15.36        | 1659        | 17.70        | 1729        | 20.09        | 1795        | 22.53        | <b>1863</b> | <b>25.13</b> |
| 15200         | 3627        | 1544        | 13.39        | 1580        | 14.56        | 1647        | 16.95        | 1712        | 19.40        | 1780        | 21.89        | 1845        | 24.43        | <b>1907</b> | <b>27.02</b> |
| 16000         | 3818        | 1606        | 14.96        | 1641        | 16.18        | 1707        | 18.67        | 1769        | 21.22        | 1832        | 23.83        | <b>1896</b> | <b>26.47</b> | <b>1957</b> | <b>29.16</b> |
| 16800         | 4009        | 1669        | 16.67        | 1703        | 17.95        | 1767        | 20.54        | 1827        | 23.19        | <b>1885</b> | <b>25.90</b> | <b>1948</b> | <b>28.64</b> | <b>2008</b> | <b>31.43</b> |
|               |             |             |              |             |              |             |              |             |              |             |              |             |              |             |              |
| 17600         | 4200        | 1734        | 18.50        | 1765        | 19.85        | 1828        | 22.55        | <b>1887</b> | <b>25.30</b> | <b>1943</b> | <b>28.11</b> | <b>2000</b> | <b>30.96</b> | <b>2059</b> | <b>33.86</b> |
| 18400         | 4391        | 1800        | 20.48        | 1828        | 21.90        | <b>1889</b> | <b>24.71</b> | <b>1947</b> | <b>27.56</b> | <b>2002</b> | <b>30.47</b> | <b>2054</b> | <b>33.43</b> | <b>2111</b> | <b>36.43</b> |
| 19200         | 4582        | <b>1866</b> | <b>22.61</b> | <b>1893</b> | <b>24.09</b> | <b>1951</b> | <b>27.03</b> | <b>2007</b> | <b>29.99</b> | <b>2061</b> | <b>33.00</b> | <b>2112</b> | <b>36.06</b> | <b>2163</b> | <b>39.16</b> |
| 20000         | 4773        | <b>1932</b> | <b>24.91</b> | <b>1959</b> | <b>26.44</b> | <b>2013</b> | <b>29.51</b> | <b>2068</b> | <b>32.57</b> | <b>2121</b> | <b>35.69</b> | <b>2171</b> | <b>38.85</b> | <b>2220</b> | <b>42.06</b> |

| Volume<br>CFM | O.V.<br>fpm | 9" SP       |              | 10" SP      |              | 11" SP      |              | 12" SP      |              | 13" SP      |              | 14" SP |       | 15" SP |       |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|--------|-------|--------|-------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM    | bhp   | RPM    | bhp   |
| 12800         | 3054        | <b>1862</b> | <b>24.46</b> |             |              |             |              |             |              |             |              |        |       |        |       |
| 13600         | 3245        | <b>1898</b> | <b>26.15</b> | <b>1967</b> | <b>28.90</b> |             |              |             |              |             |              |        |       |        |       |
| 14400         | 3436        | <b>1935</b> | <b>27.93</b> | <b>2004</b> | <b>30.78</b> | <b>2070</b> | <b>33.69</b> |             |              |             |              |        |       |        |       |
| 15200         | 3627        | <b>1973</b> | <b>29.81</b> | <b>2041</b> | <b>32.77</b> | <b>2106</b> | <b>35.77</b> | <b>2169</b> | <b>38.83</b> | <b>2229</b> | <b>41.93</b> |        |       |        |       |
|               |             |             |              |             |              |             |              |             |              |             |              |        |       |        |       |
| 16000         | 3818        | <b>2015</b> | <b>31.89</b> | <b>2078</b> | <b>34.85</b> | <b>2143</b> | <b>37.97</b> | <b>2206</b> | <b>41.13</b> | 2266        | 44.33        | 2324   | 47.58 |        |       |
| 16800         | 4009        | <b>2065</b> | <b>34.27</b> | <b>2120</b> | <b>37.14</b> | <b>2181</b> | <b>40.27</b> | <b>2243</b> | <b>43.53</b> | 2302        | 46.84        | 2360   | 50.19 | 2416   | 53.59 |
| 17600         | 4200        | <b>2115</b> | <b>36.79</b> | <b>2170</b> | <b>39.77</b> | <b>2222</b> | <b>42.78</b> | 2280        | 46.05        | 2339        | 49.47        | 2397   | 52.93 | 2453   | 56.42 |
| 18400         | 4391        | <b>2167</b> | <b>39.47</b> | <b>2220</b> | <b>42.54</b> | 2272        | 45.66        | 2322        | 48.81        | 2377        | 52.21        | 2434   | 55.78 |        |       |
|               |             |             |              |             |              |             |              |             |              |             |              |        |       |        |       |
| 19200         | 4582        | <b>2218</b> | <b>42.31</b> | 2271        | 45.48        | 2322        | 48.70        | 2372        | 51.95        | 2420        | 55.24        | 2472   | 58.75 |        |       |
| 20000         | 4773        | 2271        | 45.31        | 2323        | 48.59        | 2373        | 51.91        | 2422        | 55.26        | 2470        | 58.65        |        |       |        |       |

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR<sup>2</sup>.

See page 27, 29 or 30 for minimum motor frame sizes regardless of bhp.



# Belt Drive Ratings Table — at 70°F | .075 density | sea level

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## HDBI-300

### Wheel

Diameter - 30.00"

### Outlet OD

Size - 22.75" x 33.56"

Area - 5.20 ft<sup>2</sup> ID

### Inlet OD

Size - 33.50"

Area - 6.12 ft<sup>2</sup> ID

### All wheels are Class II HDBI Type

Class II = light text face above Class III

**Class III = bold text face**

*Class IV = italic text face below Class III*

| Volume<br>CFM | O.V.<br>fpm | 0" SP |       | 1/4" SP |       | 1/2" SP |       | 3/4" SP |       | 1" SP       |              | 1 1/2" SP   |              | 2" SP       |              |
|---------------|-------------|-------|-------|---------|-------|---------|-------|---------|-------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM   | bhp   | RPM     | bhp   | RPM     | bhp   | RPM     | bhp   | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 8000          | 1538        | 521   | 0.74  | 561     | 1.03  | 599     | 1.34  | 635     | 1.65  | 670         | 1.97         | 737         | 2.65         | 808         | 3.42         |
| 9000          | 1730        | 586   | 1.05  | 622     | 1.38  | 656     | 1.72  | 690     | 2.07  | 721         | 2.42         | 783         | 3.16         | 842         | 3.94         |
| 10000         | 1923        | 651   | 1.44  | 684     | 1.80  | 715     | 2.18  | 745     | 2.56  | 775         | 2.95         | 830         | 3.75         | 886         | 4.58         |
| 11000         | 2115        | 716   | 1.91  | 747     | 2.31  | 775     | 2.73  | 802     | 3.15  | 830         | 3.57         | 881         | 4.43         | 933         | 5.33         |
| 12000         | 2307        | 781   | 2.48  | 809     | 2.92  | 836     | 3.36  | 861     | 3.82  | 886         | 4.28         | 935         | 5.21         | 981         | 6.17         |
| 13000         | 2500        | 846   | 3.15  | 872     | 3.63  | 897     | 4.11  | 921     | 4.60  | 943         | 5.10         | 990         | 6.10         | 1034        | 7.12         |
| 14000         | 2692        | 911   | 3.94  | 936     | 4.45  | 959     | 4.96  | 981     | 5.49  | 1003        | 6.03         | 1046        | 7.10         | 1088        | 8.18         |
| 15000         | 2884        | 976   | 4.85  | 999     | 5.39  | 1021    | 5.94  | 1042    | 6.50  | 1062        | 7.07         | 1103        | 8.22         | 1143        | 9.37         |
| 16000         | 3076        | 1041  | 5.88  | 1063    | 6.46  | 1084    | 7.05  | 1104    | 7.64  | 1123        | 8.25         | 1160        | 9.48         | 1199        | 10.69        |
| 17000         | 3269        | 1106  | 7.05  | 1127    | 7.67  | 1146    | 8.29  | 1165    | 8.92  | 1184        | 9.56         | 1219        | 10.86        | 1255        | 12.16        |
| 18000         | 3461        | 1171  | 8.37  | 1191    | 9.02  | 1209    | 9.68  | 1227    | 10.35 | 1245        | 11.02        | 1279        | 12.38        | 1312        | 13.77        |
| 19000         | 3653        | 1236  | 9.85  | 1255    | 10.53 | 1272    | 11.22 | 1290    | 11.93 | 1307        | 12.63        | 1339        | 14.07        | 1370        | 15.53        |
| 20000         | 3846        | 1302  | 11.49 | 1319    | 12.20 | 1336    | 12.94 | 1352    | 13.67 | 1368        | 14.41        | 1400        | 15.91        | 1430        | 17.44        |
| 21000         | 4038        | 1367  | 13.30 | 1383    | 14.05 | 1399    | 14.82 | 1415    | 15.58 | 1431        | 16.36        | 1461        | 17.93        | 1490        | 19.53        |
| 22000         | 4230        | 1432  | 15.29 | 1448    | 16.07 | 1463    | 16.88 | 1478    | 17.68 | 1493        | 18.49        | 1522        | 20.14        | 1550        | 21.80        |
| 23000         | 4423        | 1497  | 17.47 | 1512    | 18.29 | 1527    | 19.13 | 1541    | 19.97 | 1556        | 20.82        | 1584        | 22.53        | 1611        | 24.26        |
| 24000         | 4615        | 1562  | 19.85 | 1576    | 20.69 | 1591    | 21.58 | 1605    | 22.46 | 1618        | 23.34        | 1645        | 25.12        | 1672        | 26.92        |
| 25000         | 4807        | 1627  | 22.43 | 1641    | 23.33 | 1655    | 24.23 | 1668    | 25.15 | <b>1681</b> | <b>26.07</b> | <b>1707</b> | <b>27.92</b> | <b>1733</b> | <b>29.78</b> |

| Volume<br>CFM | O.V.<br>fpm | 2 1/2" SP   |              | 3" SP       |              | 4" SP       |              | 5" SP       |              | 6" SP       |              | 7" SP       |              | 8" SP       |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 10000         | 1923        | 939         | 5.46         | 997         | 6.44         |             |              |             |              |             |              |             |              |             |              |
| 11000         | 2115        | 982         | 6.25         | 1031        | 7.22         | 1133        | 9.38         |             |              |             |              |             |              |             |              |
| 12000         | 2307        | 1029        | 7.16         | 1074        | 8.17         | 1166        | 10.37        | 1256        | 12.76        |             |              |             |              |             |              |
| 13000         | 2500        | 1076        | 8.17         | 1120        | 9.24         | 1201        | 11.45        | 1290        | 13.96        | 1371        | 16.58        |             |              |             |              |
| 14000         | 2692        | 1127        | 9.30         | 1167        | 10.44        | 1247        | 12.77        | 1324        | 15.26        | 1405        | 18.00        | 1480        | 20.82        |             |              |
| 15000         | 2884        | 1181        | 10.55        | 1217        | 11.75        | 1293        | 14.21        | 1364        | 16.75        | 1439        | 19.52        | 1513        | 22.47        | 1583        | 25.50        |
| 16000         | 3076        | 1235        | 11.93        | 1270        | 13.20        | 1340        | 15.79        | 1410        | 18.45        | 1475        | 21.19        | 1547        | 24.23        | 1616        | 27.39        |
| 17000         | 3269        | 1290        | 13.46        | 1324        | 14.79        | 1388        | 17.51        | 1456        | 20.30        | 1520        | 23.16        | 1581        | 26.10        | 1650        | 29.39        |
| 18000         | 3461        | 1346        | 15.14        | 1379        | 16.53        | 1441        | 19.38        | 1504        | 22.30        | 1566        | 25.28        | 1625        | 28.33        | <b>1684</b> | <b>31.51</b> |
| 19000         | 3653        | 1403        | 16.97        | 1435        | 18.43        | 1495        | 21.40        | 1552        | 24.45        | 1613        | 27.57        | 1671        | 30.74        | <b>1727</b> | <b>33.97</b> |
| 20000         | 3846        | 1460        | 18.98        | 1491        | 20.50        | 1549        | 23.60        | 1605        | 26.78        | 1661        | 30.02        | <b>1718</b> | <b>33.32</b> | <b>1772</b> | <b>36.68</b> |
| 21000         | 4038        | 1518        | 21.15        | 1547        | 22.75        | 1604        | 25.98        | 1658        | 29.28        | <b>1710</b> | <b>32.65</b> | <b>1765</b> | <b>36.08</b> | <b>1819</b> | <b>39.56</b> |
| 22000         | 4230        | 1577        | 23.49        | 1604        | 25.18        | 1660        | 28.54        | <b>1713</b> | <b>31.97</b> | <b>1763</b> | <b>35.46</b> | <b>1813</b> | <b>39.02</b> | <b>1866</b> | <b>42.64</b> |
| 23000         | 4423        | 1637        | 26.01        | 1662        | 27.79        | <b>1716</b> | <b>31.29</b> | <b>1767</b> | <b>34.85</b> | <b>1817</b> | <b>38.48</b> | <b>1863</b> | <b>42.16</b> | <b>1913</b> | <b>45.90</b> |
| 24000         | 4615        | <b>1697</b> | <b>28.74</b> | <b>1722</b> | <b>30.58</b> | <b>1772</b> | <b>34.25</b> | <b>1823</b> | <b>37.94</b> | <b>1871</b> | <b>41.69</b> | <b>1917</b> | <b>45.50</b> | <b>1961</b> | <b>49.37</b> |
| 25000         | 4807        | <b>1757</b> | <b>31.68</b> | <b>1781</b> | <b>33.59</b> | <b>1829</b> | <b>37.42</b> | <b>1878</b> | <b>41.24</b> | <b>1925</b> | <b>45.12</b> | <b>1971</b> | <b>49.06</b> | <b>2014</b> | <b>53.05</b> |

| Volume<br>CFM | O.V.<br>fpm | 9" SP       |              | 10" SP      |              | 11" SP      |              | 12" SP      |              | 13" SP      |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 15000         | 2884        | <b>1693</b> | <b>29.09</b> |             |              |             |              |             |              |             |              |
| 16000         | 3076        | <b>1682</b> | <b>30.61</b> |             |              |             |              |             |              |             |              |
| 17000         | 3269        | <b>1715</b> | <b>32.75</b> | <b>1778</b> | <b>36.17</b> |             |              |             |              |             |              |
| 18000         | 3461        | <b>1749</b> | <b>35.00</b> | <b>1811</b> | <b>38.55</b> | <b>1870</b> | <b>42.16</b> |             |              |             |              |
| 19000         | 3653        | <b>1783</b> | <b>37.37</b> | <b>1845</b> | <b>41.06</b> | <b>1903</b> | <b>44.80</b> | <b>1960</b> | <b>48.60</b> | <b>2014</b> | <b>52.46</b> |
| 20000         | 3846        | <b>1824</b> | <b>40.09</b> | <b>1879</b> | <b>43.70</b> | <b>1937</b> | <b>47.57</b> | <b>1993</b> | <b>51.51</b> | <b>2047</b> | <b>55.49</b> |
| 21000         | 4038        | <b>1870</b> | <b>43.10</b> | <b>1919</b> | <b>46.68</b> | <b>1971</b> | <b>50.48</b> | <b>2027</b> | <b>54.55</b> | <i>2081</i> | <i>58.67</i> |
| 22000         | 4230        | <b>1916</b> | <b>46.30</b> | <b>1965</b> | <b>50.01</b> | <b>2012</b> | <b>53.77</b> | <b>2061</b> | <b>57.74</b> | <i>2115</i> | <i>61.99</i> |
| 23000         | 4423        | <b>1963</b> | <b>49.69</b> | <b>2011</b> | <b>53.53</b> | <b>2057</b> | <b>57.42</b> | <i>2102</i> | <i>61.35</i> | <i>2149</i> | <i>65.46</i> |
| 24000         | 4615        | <b>2010</b> | <b>53.29</b> | <b>2058</b> | <b>57.26</b> | <i>2104</i> | <i>61.27</i> | <i>2148</i> | <i>65.33</i> | <i>2191</i> | <i>69.43</i> |
| 25000         | 4807        | <b>2058</b> | <b>57.11</b> | <i>2105</i> | <i>61.20</i> | <i>2150</i> | <i>65.34</i> | <i>2194</i> | <i>69.53</i> | <i>2237</i> | <i>73.75</i> |

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR<sup>2</sup>.

See page 27, 29 or 30 for minimum motor frame sizes regardless of bhp.

**HDBI-330****Wheel**

Diameter - 33.00"

**Outlet OD**

Size - 24.88" x 36.88"

Area - 6.20 ft<sup>2</sup> ID**Inlet OD**

Size - 36.75"

Area - 7.20 ft<sup>2</sup> ID**All wheels are Class II HDBI Type**

Class II = light text face above Class III

**Class III = bold text face***Class IV = italic text face below Class III*

| Volume<br>CFM | O.V.<br>fpm | 0" SP       |              | 1" SP       |              | 2" SP       |              | 3" SP       |              | 4" SP       |              | 5" SP       |              | 6" SP       |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 12000         | 1935        | 587         | 1.69         | 700         | 3.51         | 812         | 5.67         | 911         | 7.94         |             |              |             |              |             |              |
| 13000         | 2096        | 636         | 2.15         | 742         | 4.11         | 843         | 6.34         | 943         | 8.92         | 1025        | 11.19        |             |              |             |              |
| 14000         | 2258        | 684         | 2.69         | 784         | 4.79         | 875         | 7.06         | 973         | 9.78         | 1057        | 12.40        | 1130        | 14.87        |             |              |
| 15000         | 2419        | 733         | 3.31         | 826         | 5.56         | 910         | 7.91         | 1004        | 10.72        | 1088        | 13.72        | 1161        | 16.33        |             |              |
| 16000         | 2580        | 782         | 4.02         | 869         | 6.41         | 951         | 8.89         | 1035        | 11.72        | 1118        | 14.86        | 1192        | 17.89        | 1258        | 20.69        |
| 17000         | 2741        | 831         | 4.82         | 914         | 7.35         | 991         | 9.97         | 1067        | 12.81        | 1149        | 16.09        | 1224        | 19.50        | 1289        | 22.51        |
| 18000         | 2903        | 880         | 5.72         | 959         | 8.39         | 1033        | 11.15        | 1100        | 14.01        | 1180        | 17.40        | 1254        | 20.94        | 1321        | 24.45        |
| 19000         | 3064        | 929         | 6.73         | 1004        | 9.54         | 1074        | 12.45        | 1140        | 15.43        | 1212        | 18.79        | 1284        | 22.47        | 1352        | 26.27        |
| 20000         | 3225        | 978         | 7.84         | 1050        | 10.80        | 1117        | 13.85        | 1181        | 16.97        | 1243        | 20.28        | 1315        | 24.10        | 1382        | 28.03        |
| 21000         | 3387        | 1027        | 9.08         | 1096        | 12.17        | 1159        | 15.38        | 1222        | 18.62        | 1279        | 21.97        | 1347        | 25.83        | 1413        | 29.90        |
| 22000         | 3548        | 1076        | 10.44        | 1142        | 13.67        | 1202        | 17.03        | 1263        | 20.41        | 1319        | 23.88        | 1379        | 27.66        | 1444        | 31.87        |
| 23000         | 3709        | 1125        | 11.93        | 1188        | 15.30        | 1246        | 18.81        | 1305        | 22.32        | 1360        | 25.92        | 1411        | 29.61        | 1475        | 33.94        |
| 24000         | 3870        | 1173        | 13.56        | 1235        | 17.07        | 1291        | 20.71        | 1347        | 24.38        | 1400        | 28.10        | 1451        | 31.92        | <b>1507</b> | <b>36.14</b> |
| 25000         | 4032        | 1222        | 15.32        | 1281        | 18.97        | 1336        | 22.75        | 1389        | 26.58        | 1442        | 30.43        | 1491        | 34.38        | <b>1539</b> | <b>38.45</b> |
| 26000         | 4193        | 1271        | 17.23        | 1328        | 21.03        | 1381        | 24.94        | 1432        | 28.93        | 1483        | 32.92        | <b>1532</b> | <b>36.99</b> | <b>1578</b> | <b>41.14</b> |
| 27000         | 4354        | 1320        | 19.30        | 1375        | 23.23        | 1426        | 27.29        | 1475        | 31.44        | <b>1525</b> | <b>35.55</b> | <b>1573</b> | <b>39.75</b> | <b>1618</b> | <b>44.03</b> |
| 28000         | 4516        | 1369        | 21.53        | 1422        | 25.60        | 1472        | 29.79        | <b>1519</b> | <b>34.09</b> | <b>1567</b> | <b>38.35</b> | <b>1614</b> | <b>42.68</b> | <b>1658</b> | <b>47.09</b> |
| 29000         | 4677        | 1418        | 23.92        | 1469        | 28.13        | <b>1518</b> | <b>32.46</b> | <b>1563</b> | <b>36.89</b> | <b>1610</b> | <b>41.32</b> | <b>1655</b> | <b>45.78</b> | <b>1699</b> | <b>50.31</b> |
| 30000         | 4838        | 1467        | 26.48        | <b>1517</b> | <b>30.84</b> | <b>1564</b> | <b>35.30</b> | <b>1608</b> | <b>39.87</b> | <b>1652</b> | <b>44.47</b> | <b>1697</b> | <b>49.05</b> | <b>1740</b> | <b>53.72</b> |
| 31000         | 5000        | <b>1516</b> | <b>29.21</b> | <b>1564</b> | <b>33.71</b> | <b>1610</b> | <b>38.32</b> | <b>1653</b> | <b>43.02</b> | <b>1695</b> | <b>47.79</b> | <b>1739</b> | <b>52.51</b> | <b>1781</b> | <b>57.30</b> |
| 32000         | 5161        | <b>1565</b> | <b>32.13</b> | <b>1612</b> | <b>36.77</b> | <b>1656</b> | <b>41.52</b> | <b>1698</b> | <b>46.36</b> | <b>1739</b> | <b>51.28</b> | <b>1782</b> | <b>56.15</b> | <b>1823</b> | <b>61.07</b> |
| 33000         | 5322        | <b>1613</b> | <b>35.24</b> | <b>1659</b> | <b>40.02</b> | <b>1702</b> | <b>44.91</b> | <b>1744</b> | <b>49.88</b> | <b>1783</b> | <b>54.95</b> | <b>1824</b> | <b>59.99</b> | <b>1865</b> | <b>65.04</b> |
| 34000         | 5483        | <b>1662</b> | <b>38.54</b> | <b>1707</b> | <b>43.47</b> | <b>1749</b> | <b>48.49</b> | <b>1789</b> | <b>53.60</b> | <b>1828</b> | <b>58.80</b> | <b>1867</b> | <b>64.02</b> | <b>1907</b> | <b>69.20</b> |

| Volume<br>CFM | O.V.<br>fpm | 7" SP       |              | 8" SP       |              | 9" SP       |              | 10" SP      |              | 11" SP      |              | 12" SP      |               | 13" SP      |               |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|---------------|-------------|---------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp           | RPM         | bhp           |
| 17000         | 2741        | 1350        | 25.50        |             |              |             |              |             |              |             |              |             |               |             |               |
| 18000         | 2903        | 1381        | 27.58        | 1438        | 30.76        |             |              |             |              |             |              |             |               |             |               |
| 19000         | 3064        | 1413        | 29.79        | 1469        | 33.10        | <b>1522</b> | <b>36.47</b> |             |              |             |              |             |               |             |               |
| 20000         | 3225        | 1445        | 32.07        | 1500        | 35.59        | <b>1553</b> | <b>39.09</b> | <b>1604</b> | <b>42.63</b> |             |              |             |               |             |               |
| 21000         | 3387        | 1475        | 34.07        | <b>1532</b> | <b>38.22</b> | <b>1585</b> | <b>41.86</b> | <b>1635</b> | <b>45.54</b> | <b>1683</b> | <b>49.26</b> |             |               |             |               |
| 22000         | 3548        | <b>1505</b> | <b>36.17</b> | <b>1563</b> | <b>40.58</b> | <b>1617</b> | <b>44.78</b> | <b>1666</b> | <b>48.60</b> | <b>1714</b> | <b>52.45</b> | <b>1760</b> | <b>56.35</b>  |             |               |
| 23000         | 3709        | <b>1536</b> | <b>38.39</b> | <b>1593</b> | <b>42.93</b> | <b>1648</b> | <b>47.57</b> | <b>1698</b> | <b>51.82</b> | <b>1745</b> | <b>55.81</b> | <b>1791</b> | <b>59.84</b>  | <b>1835</b> | <b>63.92</b>  |
| 24000         | 3870        | <b>1567</b> | <b>40.72</b> | <b>1624</b> | <b>45.40</b> | <b>1678</b> | <b>50.17</b> | <b>1729</b> | <b>55.03</b> | <b>1777</b> | <b>59.34</b> | <b>1822</b> | <b>63.51</b>  | <b>1866</b> | <b>67.72</b>  |
| 25000         | 4032        | <b>1598</b> | <b>43.17</b> | <b>1655</b> | <b>47.98</b> | <b>1708</b> | <b>52.89</b> | <b>1759</b> | <b>57.88</b> | <b>1809</b> | <b>62.96</b> | <b>1854</b> | <b>67.35</b>  | <b>1897</b> | <b>71.69</b>  |
| 26000         | 4193        | <b>1630</b> | <b>45.74</b> | <b>1686</b> | <b>50.69</b> | <b>1739</b> | <b>55.73</b> | <b>1790</b> | <b>60.86</b> | <b>1839</b> | <b>66.08</b> | <b>1886</b> | <b>71.37</b>  | <b>1929</b> | <b>75.85</b>  |
| 27000         | 4354        | <b>1662</b> | <b>48.44</b> | <b>1717</b> | <b>53.53</b> | <b>1770</b> | <b>58.71</b> | <b>1821</b> | <b>63.97</b> | <b>1869</b> | <b>69.32</b> | <b>1916</b> | <b>74.75</b>  | <b>1961</b> | <b>80.20</b>  |
| 28000         | 4516        | <b>1701</b> | <b>51.57</b> | <b>1749</b> | <b>56.50</b> | <b>1801</b> | <b>61.82</b> | <b>1852</b> | <b>67.22</b> | <b>1900</b> | <b>72.70</b> | <b>1946</b> | <b>78.26</b>  | <b>1991</b> | <b>83.90</b>  |
| 29000         | 4677        | <b>1741</b> | <b>54.92</b> | <b>1781</b> | <b>59.61</b> | <b>1833</b> | <b>65.07</b> | <b>1883</b> | <b>70.61</b> | <b>1930</b> | <b>76.22</b> | <b>1977</b> | <b>81.92</b>  | <b>2021</b> | <b>87.69</b>  |
| 30000         | 4838        | <b>1781</b> | <b>58.45</b> | <b>1821</b> | <b>63.25</b> | <b>1865</b> | <b>68.46</b> | <b>1914</b> | <b>74.14</b> | <b>1962</b> | <b>79.89</b> | <b>2007</b> | <b>85.72</b>  | <b>2052</b> | <b>91.63</b>  |
| 31000         | 5000        | <b>1822</b> | <b>62.16</b> | <b>1861</b> | <b>67.09</b> | <b>1899</b> | <b>72.08</b> | <b>1946</b> | <b>77.82</b> | <b>1993</b> | <b>83.71</b> | <b>2038</b> | <b>89.68</b>  | <b>2082</b> | <b>95.72</b>  |
| 32000         | 5161        | <b>1863</b> | <b>66.06</b> | <b>1901</b> | <b>71.11</b> | <b>1939</b> | <b>76.24</b> | <b>1978</b> | <b>81.65</b> | <b>2025</b> | <b>87.68</b> | <b>2070</b> | <b>93.78</b>  | <b>2113</b> | <b>99.96</b>  |
| 33000         | 5322        | <b>1904</b> | <b>70.15</b> | <b>1942</b> | <b>75.34</b> | <b>1979</b> | <b>80.58</b> | <b>2014</b> | <b>85.89</b> | <b>2057</b> | <b>91.81</b> | <b>2101</b> | <b>98.05</b>  | <b>2145</b> | <b>104.36</b> |
| 34000         | 5483        | <b>1946</b> | <b>74.45</b> | <b>1983</b> | <b>79.76</b> | <b>2019</b> | <b>85.13</b> | <b>2054</b> | <b>90.57</b> | <b>2089</b> | <b>96.09</b> | <b>2133</b> | <b>102.48</b> | <b>2176</b> | <b>108.93</b> |

| Volume<br>CFM | O.V.<br>fpm | 14" SP |        | 15" SP |        | 16" SP |        | 17" SP |        | 18" SP |        | 19" SP |        |
|---------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|               |             | RPM    | bhp    | RPM    | bhp    | RPM    | bhp    | RPM    | bhp    | RPM    | bhp    | RPM    | bhp    |
| 24000         | 3870        | 1908   | 71.96  |        |        |        |        |        |        |        |        |        |        |
| 25000         | 4032        | 1939   | 76.07  | 1980   | 80.49  | 2020   | 84.94  |        |        |        |        |        |        |
| 26000         | 4193        | 1971   | 80.37  | 2011   | 84.92  | 2050   | 89.50  | 2089   | 94.13  |        |        |        |        |
| 27000         | 4354        | 2002   | 84.85  | 2042   | 89.54  | 2082   | 94.26  | 2120   | 99.02  | 2157   | 103.81 |        |        |
| 28000         | 4516        | 2034   | 89.53  | 2074   | 94.36  | 2113   | 99.22  | 2151   | 104.11 | 2188   | 109.04 | 2224   | 113.99 |
| 29000         | 4677        | 2064   | 93.54  | 2106   | 99.38  | 2145   | 104.38 | 2182   | 109.41 | 2219   | 114.47 | 2255   | 119.56 |
| 30000         | 4838        | 2095   | 97.61  | 2136   | 103.66 | 2177   | 109.75 | 2214   | 114.92 | 2251   | 120.12 | 2286   | 125.35 |
| 31000         | 5000        | 2125   | 101.83 | 2166   | 108.02 | 2207   | 114.27 | 2246   | 120.60 | 2283   | 125.99 |        |        |
| 32000         | 5161        | 2156   | 106.21 | 2197   | 112.53 | 2237   | 118.92 | 2276   | 125.38 |        |        |        |        |
| 33000         | 5322        | 2187   | 110.75 | 2228   | 117.20 | 2267   | 123.73 |        |        |        |        |        |        |
| 34000         | 5483        | 2218   | 115.45 | 2259   | 122.04 | 2298   | 128.70 |        |        |        |        |        |        |

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR<sup>2</sup>.

See page 28 and 30 for minimum motor frame sizes regardless of bhp. HDBI-330 has a fixed housing and is not rotatable in the field.

**HDBI-360****Wheel**

Diameter - 36.00"

**Outlet OD**

Size - 27.25" x 40.25"

Area - 7.50 ft<sup>2</sup> ID**Inlet OD**

Size - 40.00"

Area - 8.10 ft<sup>2</sup> ID**All wheels are Class II HDBI Type**

Class II = light text face above Class III

**Class III = bold text face***Class IV = italic text face below Class III*

| Volume<br>CFM | O.V.<br>fpm | 0" SP       |              | 1" SP       |              | 2" SP       |              | 3" SP       |              | 4" SP       |              | 5" SP       |              | 6" SP       |              |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          | RPM         | bhp          |
| 24000         | 3200        | 904         | 9.57         | 969         | 13.11        | 1030        | 16.78        | 1089        | 20.51        | 1143        | 24.37        | 1201        | 28.32        | 1254        | 32.38        |
| 25000         | 3333        | 941         | 10.82        | 1005        | 14.50        | 1063        | 18.32        | 1120        | 22.18        | 1173        | 26.16        | 1228        | 30.25        | 1281        | 34.43        |
| 26000         | 3466        | 979         | 12.17        | 1040        | 15.99        | 1096        | 19.96        | 1152        | 23.95        | 1204        | 28.06        | 1255        | 32.28        | 1307        | 36.58        |
| 27000         | 3600        | 1017        | 13.63        | 1076        | 17.59        | 1130        | 21.71        | 1184        | 25.83        | 1235        | 30.07        | 1283        | 34.42        | 1335        | 38.85        |
| 28000         | 3733        | 1054        | 15.20        | 1112        | 19.30        | 1164        | 23.55        | 1216        | 27.84        | 1266        | 32.20        | 1313        | 36.67        | 1362        | 41.24        |
| 29000         | 3866        | 1092        | 16.89        | 1148        | 21.13        | 1198        | 25.52        | 1249        | 29.95        | 1298        | 34.45        | 1343        | 39.04        | <b>1389</b> | <b>43.74</b> |
| 30000         | 4000        | 1130        | 18.69        | 1184        | 23.08        | 1233        | 27.61        | 1281        | 32.20        | 1329        | 36.82        | 1375        | 41.54        | <b>1417</b> | <b>46.37</b> |
| 31000         | 4133        | 1167        | 20.63        | 1220        | 25.15        | 1268        | 29.82        | 1314        | 34.57        | 1361        | 39.32        | <b>1406</b> | <b>44.17</b> | <b>1448</b> | <b>49.12</b> |
| 32000         | 4266        | 1205        | 22.69        | 1256        | 27.35        | 1303        | 32.16        | 1347        | 37.07        | <b>1394</b> | <b>41.95</b> | <b>1437</b> | <b>46.93</b> | <b>1479</b> | <b>52.01</b> |
| 33000         | 4400        | 1243        | 24.88        | 1292        | 29.69        | 1338        | 34.63        | <b>1381</b> | <b>39.70</b> | <b>1426</b> | <b>44.72</b> | <b>1469</b> | <b>49.83</b> | <b>1510</b> | <b>55.03</b> |
| 34000         | 4533        | 1280        | 27.21        | 1328        | 32.16        | 1373        | 37.24        | <b>1415</b> | <b>42.44</b> | <b>1459</b> | <b>47.63</b> | <b>1501</b> | <b>52.87</b> | <b>1541</b> | <b>58.20</b> |
| 35000         | 4666        | 1318        | 29.68        | 1365        | 34.77        | <b>1408</b> | <b>39.99</b> | <b>1450</b> | <b>45.33</b> | <b>1491</b> | <b>50.69</b> | <b>1533</b> | <b>56.05</b> | <b>1573</b> | <b>61.51</b> |
| 36000         | 4800        | 1356        | 32.30        | <b>1401</b> | <b>37.53</b> | <b>1444</b> | <b>42.89</b> | <b>1484</b> | <b>48.36</b> | <b>1524</b> | <b>53.89</b> | <b>1565</b> | <b>59.39</b> | <b>1605</b> | <b>64.97</b> |
| 37000         | 4933        | <b>1393</b> | <b>35.07</b> | <b>1438</b> | <b>40.44</b> | <b>1479</b> | <b>45.94</b> | <b>1519</b> | <b>51.55</b> | <b>1557</b> | <b>57.24</b> | <b>1598</b> | <b>62.87</b> | <b>1636</b> | <b>68.59</b> |
| 38000         | 5066        | <b>1431</b> | <b>37.99</b> | <b>1474</b> | <b>43.50</b> | <b>1515</b> | <b>49.14</b> | <b>1554</b> | <b>54.89</b> | <b>1591</b> | <b>60.74</b> | <b>1630</b> | <b>66.52</b> | <b>1668</b> | <b>72.36</b> |
| 39000         | 5200        | <b>1469</b> | <b>41.07</b> | <b>1511</b> | <b>46.73</b> | <b>1551</b> | <b>52.50</b> | <b>1589</b> | <b>58.39</b> | <b>1625</b> | <b>64.37</b> | <b>1663</b> | <b>70.32</b> | <b>1701</b> | <b>76.30</b> |
| 40000         | 5333        | <b>1506</b> | <b>44.31</b> | <b>1548</b> | <b>50.11</b> | <b>1587</b> | <b>56.02</b> | <b>1624</b> | <b>62.04</b> | <b>1660</b> | <b>68.17</b> | <b>1696</b> | <b>74.29</b> | <b>1733</b> | <b>80.40</b> |
| 41000         | 5466        | <b>1544</b> | <b>47.72</b> | <b>1584</b> | <b>53.65</b> | <b>1623</b> | <b>59.72</b> | <b>1659</b> | <b>65.87</b> | <b>1694</b> | <b>72.13</b> | <b>1729</b> | <b>78.43</b> | <b>1766</b> | <b>84.67</b> |

| Volume<br>CFM | O.V.<br>fpm | 7" SP       |              | 8" SP       |              | 9" SP       |               | 10" SP      |               | 11" SP      |               | 12" SP      |               | 13" SP      |               |
|---------------|-------------|-------------|--------------|-------------|--------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|
|               |             | RPM         | bhp          | RPM         | bhp          | RPM         | bhp           | RPM         | bhp           | RPM         | bhp           | RPM         | bhp           | RPM         | bhp           |
| 24000         | 3200        | 1308        | 36.67        | 1366        | 41.34        | <b>1420</b> | <b>46.11</b>  | <b>1472</b> | <b>50.98</b>  |             |               |             |               |             |               |
| 25000         | 3333        | 1330        | 38.70        | <b>1385</b> | <b>43.40</b> | <b>1440</b> | <b>48.31</b>  | <b>1491</b> | <b>53.30</b>  | <b>1541</b> | <b>58.38</b>  |             |               |             |               |
| 26000         | 3466        | 1357        | 40.98        | <b>1405</b> | <b>45.55</b> | <b>1459</b> | <b>50.58</b>  | <b>1511</b> | <b>55.71</b>  | <b>1560</b> | <b>60.92</b>  | <b>1607</b> | <b>66.22</b>  |             |               |
| 27000         | 3600        | <b>1383</b> | <b>43.38</b> | <b>1429</b> | <b>47.98</b> | <b>1479</b> | <b>52.94</b>  | <b>1530</b> | <b>58.20</b>  | <b>1579</b> | <b>63.55</b>  | <b>1626</b> | <b>68.98</b>  | <b>1672</b> | <b>74.49</b>  |
| 28000         | 3733        | <b>1410</b> | <b>45.89</b> | <b>1456</b> | <b>50.62</b> | <b>1499</b> | <b>55.43</b>  | <b>1550</b> | <b>60.79</b>  | <b>1599</b> | <b>66.26</b>  | <b>1646</b> | <b>71.82</b>  | <b>1691</b> | <b>77.46</b>  |
| 29000         | 3866        | <b>1437</b> | <b>48.52</b> | <b>1482</b> | <b>53.38</b> | <b>1526</b> | <b>58.31</b>  | <b>1570</b> | <b>63.47</b>  | <b>1618</b> | <b>69.08</b>  | <b>1665</b> | <b>74.77</b>  | <b>1710</b> | <b>80.54</b>  |
| 30000         | 4000        | <b>1464</b> | <b>51.28</b> | <b>1509</b> | <b>56.26</b> | <b>1552</b> | <b>61.32</b>  | <b>1593</b> | <b>66.45</b>  | <b>1638</b> | <b>71.98</b>  | <b>1685</b> | <b>77.81</b>  | <b>1729</b> | <b>83.71</b>  |
| 31000         | 4133        | <b>1492</b> | <b>54.16</b> | <b>1536</b> | <b>59.27</b> | <b>1579</b> | <b>64.46</b>  | <b>1619</b> | <b>69.72</b>  | <b>1659</b> | <b>75.05</b>  | <b>1704</b> | <b>80.95</b>  | <b>1749</b> | <b>86.98</b>  |
| 32000         | 4266        | <b>1519</b> | <b>57.17</b> | <b>1563</b> | <b>62.42</b> | <b>1606</b> | <b>67.73</b>  | <b>1646</b> | <b>73.12</b>  | <b>1685</b> | <b>78.57</b>  | <b>1724</b> | <b>84.19</b>  | <b>1769</b> | <b>90.36</b>  |
| 33000         | 4400        | <b>1549</b> | <b>60.32</b> | <b>1591</b> | <b>65.70</b> | <b>1633</b> | <b>71.14</b>  | <b>1673</b> | <b>76.66</b>  | <b>1711</b> | <b>82.24</b>  | <b>1749</b> | <b>87.88</b>  | <b>1788</b> | <b>93.84</b>  |
| 34000         | 4533        | <b>1580</b> | <b>63.62</b> | <b>1619</b> | <b>69.12</b> | <b>1660</b> | <b>74.69</b>  | <b>1700</b> | <b>80.33</b>  | <b>1738</b> | <b>86.04</b>  | <b>1775</b> | <b>91.81</b>  | <b>1811</b> | <b>97.65</b>  |
| 35000         | 4666        | <b>1611</b> | <b>67.05</b> | <b>1648</b> | <b>72.68</b> | <b>1687</b> | <b>78.39</b>  | <b>1727</b> | <b>84.16</b>  | <b>1765</b> | <b>89.99</b>  | <b>1802</b> | <b>95.89</b>  | <b>1837</b> | <b>101.85</b> |
| 36000         | 4800        | <b>1642</b> | <b>70.64</b> | <b>1678</b> | <b>76.40</b> | <b>1715</b> | <b>82.23</b>  | <b>1754</b> | <b>88.13</b>  | <b>1792</b> | <b>94.09</b>  | <b>1828</b> | <b>100.12</b> | <b>1864</b> | <b>106.20</b> |
| 37000         | 4933        | <b>1673</b> | <b>74.39</b> | <b>1709</b> | <b>80.27</b> | <b>1744</b> | <b>86.23</b>  | <b>1782</b> | <b>92.26</b>  | <b>1819</b> | <b>98.35</b>  | <b>1855</b> | <b>104.50</b> | <b>1890</b> | <b>110.71</b> |
| 38000         | 5066        | <b>1705</b> | <b>78.29</b> | <b>1740</b> | <b>84.29</b> | <b>1774</b> | <b>90.38</b>  | <b>1809</b> | <b>96.54</b>  | <b>1846</b> | <b>102.76</b> | <b>1882</b> | <b>109.04</b> | <b>1917</b> | <b>115.38</b> |
| 39000         | 5200        | <b>1737</b> | <b>82.35</b> | <b>1772</b> | <b>88.49</b> | <b>1805</b> | <b>94.70</b>  | <b>1838</b> | <b>100.98</b> | <b>1874</b> | <b>107.34</b> | <b>1910</b> | <b>113.75</b> | <b>1944</b> | <b>120.22</b> |
| 40000         | 5333        | <b>1769</b> | <b>86.58</b> | <b>1803</b> | <b>92.84</b> | <b>1836</b> | <b>99.18</b>  | <b>1869</b> | <b>105.59</b> | <b>1902</b> | <b>112.08</b> | <b>1937</b> | <b>118.62</b> | <b>1971</b> | <b>125.22</b> |
| 41000         | 5466        | <b>1801</b> | <b>90.99</b> | <b>1835</b> | <b>97.38</b> | <b>1868</b> | <b>103.84</b> | <b>1900</b> | <b>110.37</b> | <b>1931</b> | <b>116.98</b> | <b>1965</b> | <b>123.66</b> | <b>1999</b> | <b>130.39</b> |

| Volume<br>CFM | O.V.<br>fpm | 14" SP      |               | 15" SP      |               | 16" SP      |               | 17" SP      |               |
|---------------|-------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|
|               |             | RPM         | bhp           | RPM         | bhp           | RPM         | bhp           | RPM         | bhp           |
| 28000         | 3733        | <b>1734</b> | <b>83.18</b>  |             |               |             |               |             |               |
| 29000         | 3866        | <b>1754</b> | <b>86.39</b>  | <b>1796</b> | <b>92.31</b>  |             |               |             |               |
| 30000         | 4000        | <b>1773</b> | <b>89.69</b>  | <b>1815</b> | <b>95.74</b>  | <b>1855</b> | <b>101.87</b> |             |               |
| 31000         | 4133        | <b>1792</b> | <b>93.09</b>  | <b>1834</b> | <b>99.28</b>  | <b>1875</b> | <b>105.54</b> | <b>1914</b> | <b>111.86</b> |
| 32000         | 4266        | <b>1812</b> | <b>96.60</b>  | <b>1853</b> | <b>102.92</b> | <b>1894</b> | <b>109.30</b> | <b>1933</b> | <b>115.76</b> |
| 33000         | 4400        | <b>1831</b> | <b>100.22</b> | <b>1873</b> | <b>106.66</b> | <b>1913</b> | <b>113.18</b> | <b>1952</b> | <b>119.77</b> |
| 34000         | 4533        | <b>1851</b> | <b>103.94</b> | <b>1892</b> | <b>110.52</b> | <b>1933</b> | <b>117.17</b> | <b>1972</b> | <b>123.89</b> |
| 35000         | 4666        | <b>1872</b> | <b>107.87</b> | <b>1912</b> | <b>114.49</b> | <b>1952</b> | <b>121.28</b> | <b>1991</b> | <b>128.13</b> |
| 36000         | 4800        | <b>1898</b> | <b>112.36</b> | <b>1932</b> | <b>118.58</b> | <b>1972</b> | <b>125.50</b> | <b>2011</b> | <b>132.48</b> |

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 24 for maximum wheel RPM and WR<sup>2</sup>.

See page 28 and 30 for minimum motor frame sizes regardless of bhp. HDBI-360 has a fixed housing and is not rotatable in the field.

## Maximum Shaft and Bearing Speed for Belt Drive Fans

### Maximum Wheel Speed and $WR^2$ (lb-ft<sup>2</sup>) for Direct Drive Fans

| Fan Size | Maximum Shaft and Bearing Speed |           |          | HDBI Steel Wheel note 1 |             |                       |             |                       |             | SQBI Steel Wheel note 1 |             |                       |             | Aluminum Wheel note 2 |             |
|----------|---------------------------------|-----------|----------|-------------------------|-------------|-----------------------|-------------|-----------------------|-------------|-------------------------|-------------|-----------------------|-------------|-----------------------|-------------|
|          |                                 |           |          | Class II                |             | Class III             |             | Class IV              |             | Class II                |             | Class III             |             |                       |             |
|          | Class II                        | Class III | Class IV | Wheel WR <sup>2</sup>   | Maximum RPM | Wheel WR <sup>2</sup> | Maximum RPM | Wheel WR <sup>2</sup> | Maximum RPM | Wheel WR <sup>2</sup>   | Maximum RPM | Wheel WR <sup>2</sup> | Maximum RPM | Wheel WR <sup>2</sup> | Maximum RPM |
| 120      | 4189                            | 4985      |          | 2.8                     | 4380        | 2.8                   | 5400        |                       |             | 3.9                     | 4065        | 4.1                   | 5000        | 1.2                   | 5400        |
| 130      | 3834                            | 4738      | 4999     | 4.2                     | 3900        |                       |             | 4.2                   | 4999        | 5.3                     | 3750        | 5.7                   | 4700        | 1.7                   | 4999        |
| 150      | 3513                            | 4357      | 4712     | 5.9                     | 3513        |                       |             | 5.9                   | 4712        | 8.1                     | 3050        | 8.3                   | 4117        | 2.5                   | 4712        |
| 160      | 3195                            | 3961      | 4285     | 9.0                     | 3195        |                       |             | 9.9                   | 4285        | 11.7                    | 3042        | 12.4                  | 3724        | 4.2                   | 4285        |
| 180      | 2903                            | 3591      | 3885     | 13.9                    | 2903        |                       |             | 15.0                  | 3885        | 16.2                    | 2593        | 17.1                  | 3600        | 6.7                   | 3885        |
| 200      | 2661                            | 3285      | 3574     | 19.0                    | 2661        |                       |             | 20.8                  | 3574        | 24.6                    | 2380        | 26.5                  | 3550        | 9.8                   | 3574        |
| 220      | 2304                            | 2824      | 3447     | 26.1                    | 2304        |                       |             | 29.1                  | 3550        | 36.3                    | 2115        | 39.6                  | 3160        | 14.7                  | 3550        |
| 240      | 2132                            | 2565      | 2837     | 54.6                    | 2132        |                       |             | 58.2                  | 2837        |                         |             | 63.3                  | 2740        | 26.5                  | 2837        |
| 270      | 1854                            | 2262      | 2476     |                         |             |                       |             | 89.9                  | 2476        |                         |             | 108.3                 | 2493        | 45.9                  | 2476        |
| 300      | 1680                            | 2075      | 2300     |                         |             |                       |             | 130.2                 | 2300        |                         |             | 165.0                 | 2243        | 64.3                  | 2300        |
| 330      | 1500                            | 1880      | 2300     |                         |             |                       |             | 193.6                 | 2300        |                         |             | 244.2                 | 1935        | 130.0                 | 2300        |
| 360      | 1380                            | 1735      | 1950     |                         |             |                       |             | 255.8                 | 1950        |                         |             | 349.6                 | 1750        | 176.0                 | 1950        |

- 1 For steel wheels up to 175°F (80°C).  
 2 For aluminum wheels up to 200°F (93°C). All aluminum wheels are HDBI type, Class IV construction.

#### Approximate Shipping Weight Less Motor and Options

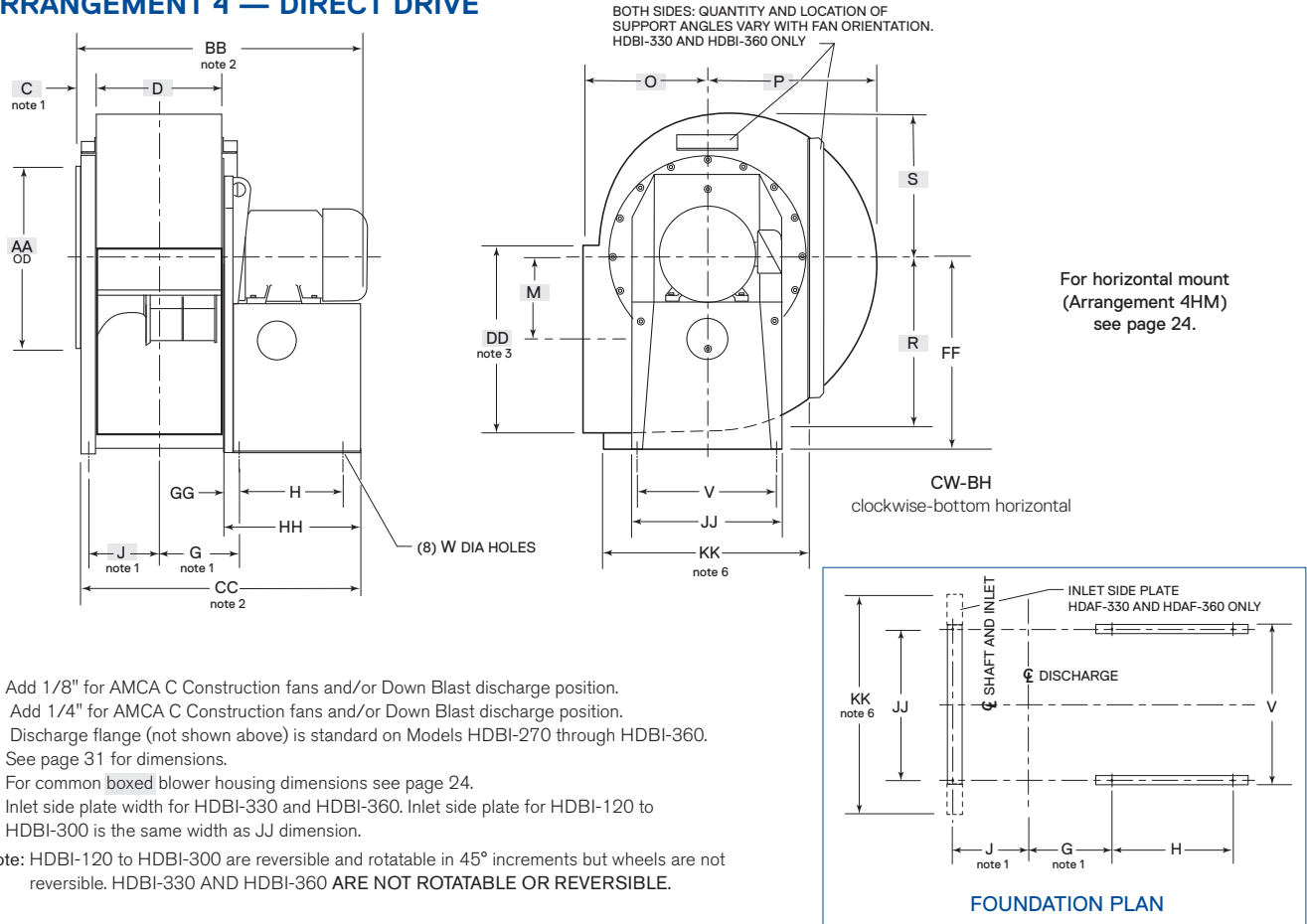
| Fan Size | Arrangement 1 |           | Arrangement 4 |           | Arrangement 4HM |           | Arrangement 8 |           | Arrangement 9 |           | Arrangement 9CB |           | Arrangement 10 |           |
|----------|---------------|-----------|---------------|-----------|-----------------|-----------|---------------|-----------|---------------|-----------|-----------------|-----------|----------------|-----------|
|          | Class II      | Class III | Class II      | Class III | Class II        | Class III | Class II      | Class III | Class II      | Class III | Class II        | Class III | Class II       | Class III |
| 180      | 350           | 360       | 300           | 310       | 270             | 280       | 380           | 390       | 380           | 390       | 500             | 510       | 390            | 400       |
| 200      | 390           | 410       | 350           | 360       | 320             | 330       | 430           | 450       | 430           | 450       | 560             | 580       | 430            | 450       |
| 220      | 470           | 500       | 430           | 440       | 390             | 400       | 520           | 540       | 530           | 550       | 660             | 680       | 530            | 550       |
| 240      | 610           | 620       | 550           | 555       | 450             | 455       | 670           | 690       | 660           | 670       | 800             | 810       | 620            | 630       |
| 270      | 740           | 750       | 690           | 695       | 550             | 555       | 820           | 840       | 800           | 810       | 960             | 970       | 760            | 770       |
| 300      | 910           | 945       | 840           | 845       | 640             | 645       | 1000          | 1000      | 970           | 1005      | 1130            | 1165      | 900            | 930       |
| 330      | 1200          | 1320      | 1090          | 1090      | 940             |           |               |           | 1260          | 1380      | 1420            | 1560      |                |           |
| 360      | 1410          | 1600      | 1390          | 1430      | 1100            |           |               |           | 1470          | 1660      | 1650            | 1840      |                |           |

Note — Blower housing dimensions common to all Blower Arrangements

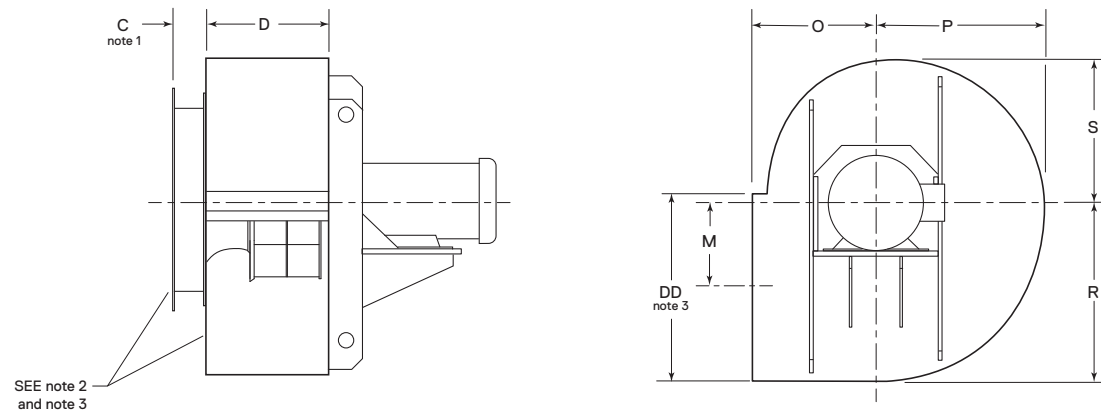
| Model     | C note 1 | D note 2 - note 3 | J note 1 - note 2 | M        | O note 3  | P         | R         | S        | AA      | DD note 3 |
|-----------|----------|-------------------|-------------------|----------|-----------|-----------|-----------|----------|---------|-----------|
| HDBI-120  | 4 1/16"  | 9 3/8"            | 5 3/4"            | 6 3/16"  | 9 15/16"  | 12 3/8"   | 13"       | 10 3/8"  | 13 1/4" | 13 3/4"   |
| HDBI-130  | 4 1/16"  | 10 3/8"           | 6 1/4"            | 6 13/16" | 10 13/16" | 13 3/4"   | 14 7/16"  | 11 9/16" | 14 5/8" | 15 1/4"   |
| HDBI-150  | 4 1/16"  | 11 3/8"           | 6 3/4"            | 7 9/16"  | 11 3/4"   | 15 3/16"  | 15 15/16" | 12 3/4"  | 16 1/8" | 16 13/16" |
| HDBI-160  | 4 1/16"  | 12 1/2"           | 7 5/16"           | 8 5/16"  | 12 11/16" | 16 11/16" | 17 1/2"   | 14"      | 18"     | 18 7/16"  |
| HDBI-180  | 4 1/16"  | 13 7/8"           | 8"                | 9 1/4"   | 13 13/16" | 18 7/16"  | 19 7/16"  | 15 1/2"  | 20"     | 20 3/8"   |
| HDBI-200  | 4 1/16"  | 15 1/4"           | 8 11/16"          | 10 1/16" | 14 15/16" | 20 1/4"   | 21 1/4"   | 17"      | 22"     | 22 3/8"   |
| HDBI-220  | 4 1/16"  | 16 7/8"           | 9 1/2"            | 11 3/16" | 16 3/8"   | 22 1/2"   | 23 5/8"   | 18 7/8"  | 24 5/8" | 24 7/8"   |
| HDBI-240  | 6 1/16"  | 18 9/16"          | 10 3/8"           | 12 5/16" | 18 13/16" | 24 3/4"   | 26"       | 20 3/4"  | 27"     | 27 3/8"   |
| HDBI-270  | 6 1/16"  | 20 7/16"          | 11 5/16"          | 13 9/16" | 20 5/8"   | 27 1/4"   | 28 5/8"   | 22 7/8"  | 30"     | 30 1/16"  |
| HDBI-300  | 6 1/16"  | 22 3/4"           | 12 7/16"          | 15 1/8"  | 22 5/8"   | 30 3/8"   | 31 7/8"   | 25 1/2"  | 33 1/2" | 33 9/16"  |
| HDBI-330* | 3 1/4"   | 24 7/8"           | 14 1/2"           | 16 3/16" | 24 11/16" | 33 3/8"   | 35"       | 28"      | 36 3/4" | 36 7/8"   |
| HDBI-360* | 3 1/4"   | 27 1/4"           | 15 11/16"         | 18 1/8"  | 27 3/16"  | 36 1/2"   | 38 1/4"   | 30 1/2"  | 40"     | 40 1/4"   |

\*HDBI-330 and 360 have fixed housings and are not rotatable in the field.

- 1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.  
 2 Dimensions shown are for 100% width housings. For partial width housings contact your local Cincinnati Fan sales representative.  
 3 Discharge flange is standard on Models HDBI-270 through HDBI-360. See page 31 for dimensions

**ARRANGEMENT 4 — DIRECT DRIVE**

| Model    | Motor Frame | G<br>note 1 | H       | V       | W     | BB<br>note 2 | CC<br>note 2 | FF      | GG     | HH      | JJ      | KK<br>note 6 |
|----------|-------------|-------------|---------|---------|-------|--------------|--------------|---------|--------|---------|---------|--------------|
| HDBI-120 | 142T-184T   | 7 1/16"     | 5 1/2"  | 14"     | 9/16" | 24 15/16"    | 22 15/16"    | 15 1/2" | 3"     | 11 1/2" | 16"     |              |
| HDBI-130 | 143T-215T   | 8 3/16"     | 7 5/8"  | 15 3/4" | 9/16" | 28 1/16"     | 26 1/16"     | 16 5/8" | 3"     | 13 5/8" | 17 3/4" |              |
| HDBI-150 | 143T-215T   | 8 1/16"     | 7 5/8"  | 17 1/4" | 9/16" | 29 1/16"     | 27 1/16"     | 18 1/8" | 3"     | 13 5/8" | 19 1/4" |              |
|          | 254T-256T   | 8 1/16"     | 16"     | 17 1/4" | 9/16" | 37 7/16"     | 35 7/16"     | 18 1/8" | 3"     | 22"     | 19 1/4" |              |
| HDBI-160 | 143T-184T   | 9 1/4"      | 7 5/8"  | 19 1/8" | 9/16" | 30 3/8"      | 28 3/8"      | 19 3/4" | 3"     | 13 5/8" | 21 1/8" |              |
|          | 213T-256T   | 9 1/4"      | 17"     | 19 1/8" | 9/16" | 39 3/8"      | 37 3/8"      | 19 3/4" | 3"     | 23"     | 21 1/8" |              |
| HDBI-180 | 143T-215T   | 9 15/16"    | 8 3/8"  | 21 1/2" | 9/16" | 32 5/16"     | 30 5/16"     | 22 3/4" | 3"     | 14 3/8" | 23 1/2" |              |
|          | 254T-286T   | 9 15/16"    | 18 1/2" | 21 1/2" | 9/16" | 42 7/16"     | 40 7/16"     | 22 3/4" | 3"     | 24 1/2" | 23 1/2" |              |
|          | 324T-326T   | 9 15/16"    | 21"     | 21 1/2" | 9/16" | 44 15/16"    | 42 15/16"    | 22 3/4" | 3"     | 27"     | 23 1/2" |              |
| HDBI-200 | 182T-256T   | 10 5/8"     | 11 1/2" | 23 1/2" | 9/16" | 36 13/16"    | 34 13/16"    | 23 1/2" | 3"     | 17 1/2" | 25 1/2" |              |
|          | 284T-286T   | 10 5/8"     | 18 1/2" | 23 1/2" | 9/16" | 43 13/16"    | 41 13/16"    | 23 1/2" | 3"     | 24 1/2" | 25 1/2" |              |
|          | 324T-326T   | 10 5/8"     | 21"     | 23 1/2" | 9/16" | 46 5/16"     | 44 5/16"     | 23 1/2" | 3"     | 27"     | 25 1/2" |              |
| HDBI-220 | 182T-256T   | 11 7/16"    | 11 1/2" | 26 1/8" | 9/16" | 38 7/16"     | 36 7/16"     | 26 1/4" | 3"     | 17 1/2" | 28 1/8" |              |
|          | 284T-326T   | 11 7/16"    | 21"     | 26 1/8" | 9/16" | 47 15/16"    | 45 15/16"    | 26 1/4" | 3"     | 27"     | 28 1/8" |              |
| HDBI-240 | 213T-256T   | 12 5/16"    | 11 1/2" | 28 1/4" | 9/16" | 42 1/8"      | 38 1/8"      | 28 1/2" | 3"     | 17 1/2" | 30 3/4" |              |
|          | 284T-326T   | 12 5/16"    | 21"     | 28 1/4" | 9/16" | 51 5/8"      | 47 5/8"      | 28 1/2" | 3"     | 27"     | 30 3/4" |              |
| HDBI-270 | 213T-256T   | 13 1/4"     | 11 1/2" | 31"     | 9/16" | 44"          | 40"          | 31 1/4" | 3"     | 17 1/2" | 33 3/4" |              |
|          | 284T-326T   | 13 1/4"     | 21"     | 31"     | 9/16" | 53 1/2"      | 49 1/2"      | 31 1/4" | 3"     | 27"     | 33 3/4" |              |
| HDBI-300 | 213T-256T   | 14 3/8"     | 11 1/2" | 34 1/4" | 9/16" | 46 5/16"     | 42 5/16"     | 34 1/2" | 3"     | 17 1/2" | 37 1/4" |              |
|          | 284T-326T   | 14 3/8"     | 21"     | 34 1/4" | 9/16" | 55 13/16"    | 51 13/16"    | 34 1/2" | 3"     | 27"     | 37 1/4" |              |
| HDBI-330 | 284T-326T   | 15 15/16"   | 20"     | 28"     | 3/4"  | 55 1/8"      | 54 15/16"    | 38 3/4" | 3 1/2" | 27"     | 30"     | 41 3/4"      |
|          | 364T-405T   | 5 15/16"    | 25"     | 28"     | 3/4"  | 60 1/8"      | 59 15/16"    | 38 3/4" | 3 1/2" | 32"     | 30"     | 41 3/4"      |
|          | 444T        | 5 15/16"    | 29"     | 28"     | 3/4"  | 64 1/8"      | 63 5/16"     | 38 3/4" | 3 1/2" | 36"     | 30"     | 41 3/4"      |
| HDBI-360 | 284T-326T   | 17 1/8"     | 20"     | 31"     | 3/4"  | 57 1/2"      | 57 5/16"     | 42"     | 3 1/2" | 27"     | 33"     | 45"          |
|          | 364T-405T   | 17 1/8"     | 25"     | 31"     | 3/4"  | 62 1/2"      | 62 5/16"     | 42"     | 3 1/2" | 32"     | 33"     | 45"          |
|          | 444T        | 17 1/8"     | 29"     | 31"     | 3/4"  | 66 1/2"      | 66 5/16"     | 42"     | 3 1/2" | 36"     | 33"     | 45"          |

**ARRANGEMENT 4HM — DIRECT DRIVE**

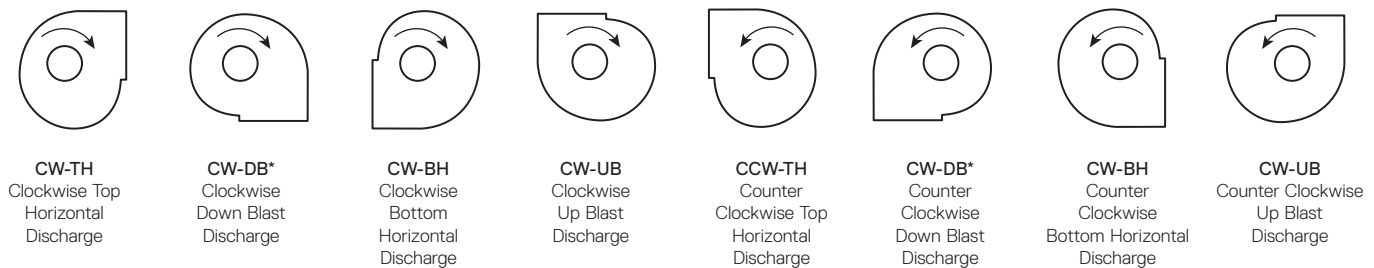
- 1 Add 1/8" for AMCA "C" Construction. Includes optional inlet flange.
- 2 Optional inlet flange may be added to assist in fan installation. See page 31 for flange dimensions.
- 3 Discharge flange is optional on Models HDBI-120 and HDBI-240 and is standard on Models HDBI-270 and HDBI-300. See page 31 for flange dimensions.

- 4 Dimensions are for 100% width housings. For partial width housings, contact your local Cincinnati Fan sales representative

| Model    | Motor Frame | C<br>note 1 | D        | M        | O         | P         | R         | S        | DD<br>note 3 | Shipping Weight<br>less motor lb |
|----------|-------------|-------------|----------|----------|-----------|-----------|-----------|----------|--------------|----------------------------------|
| HDBI-120 | 143T-184T   | 4 1/4"      | 9 3/8"   | 6 3/16"  | 9 15/16"  | 12 3/8"   | 13"       | 10 3/8"  | 13 3/4"      | 150                              |
| HDBI-130 | 143T-215T   | 4 1/4"      | 10 3/8"  | 6 13/16" | 10 13/16" | 13 3/4"   | 14 7/16"  | 11 9/16" | 15 1/4"      | 170                              |
| HDBI-150 | 143T-215T   | 4 1/4"      | 11 3/8"  | 7 9/16"  | 11 3/4"   | 15 3/16"  | 15 15/16" | 12 3/4"  | 16 13/16"    | 190                              |
| HDBI-160 | 143T-256T   | 4 1/4"      | 12 1/2"  | 8 3/16"  | 12 11/16" | 16 11/16" | 17 1/2"   | 14"      | 18 7/16"     | 210                              |
| HDBI-180 | 143T-326T   | 4 1/4"      | 13 7/8"  | 9 1/4"   | 13 13/16" | 18 7/16"  | 19 7/16"  | 15 1/2"  | 20 3/8"      | 270                              |
| HDBI-200 | 182T-326T   | 4 1/4"      | 15 1/4"  | 10 1/16" | 14 15/16" | 20 1/4"   | 21 1/4"   | 17"      | 22 3/8"      | 320                              |
| HDBI-220 | 182T-326T   | 4 1/4"      | 16 7/8"  | 11 3/16" | 16 3/8"   | 22 1/2"   | 23 5/8"   | 18 7/8"  | 24 7/8"      | 390                              |
| HDBI-240 | 213T-326T   | 6 1/4"      | 18 9/16" | 12 9/16" | 18 13/16" | 24 3/4"   | 26"       | 20 3/4"  | 27 3/8"      | 450                              |
| HDBI-270 | 213T-326T   | 6 1/4"      | 20 7/16" | 13 9/16" | 20 5/8"   | 27 1/4"   | 28 5/8"   | 22 7/8"  | 30 1/16"     | 550                              |
| HDBI-300 | 213T-326T   | 6 1/4"      | 22 3/4"  | 15 1/8"  | 22 5/8"   | 30 3/8"   | 31 7/8"   | 25 1/2"  | 33 9/16"     | 640                              |
| HDBI-330 | 284T-365T   | 6 1/8"      | 24 7/8"  | 16 9/16" | 24 11/16" | 33 3/8"   | 35"       | 28"      | 36 7/8"      | 940                              |
| HDBI-360 | 284T-365T   | 6 1/8"      | 27 1/4"  | 18 1/8"  | 27 3/16"  | 36 1/2"   | 38 1/4"   | 30 1/2"  | 40 1/4"      | 1100                             |

**Sixteen Discharge Positions Available. 45° Discharge Positions Not shown†**

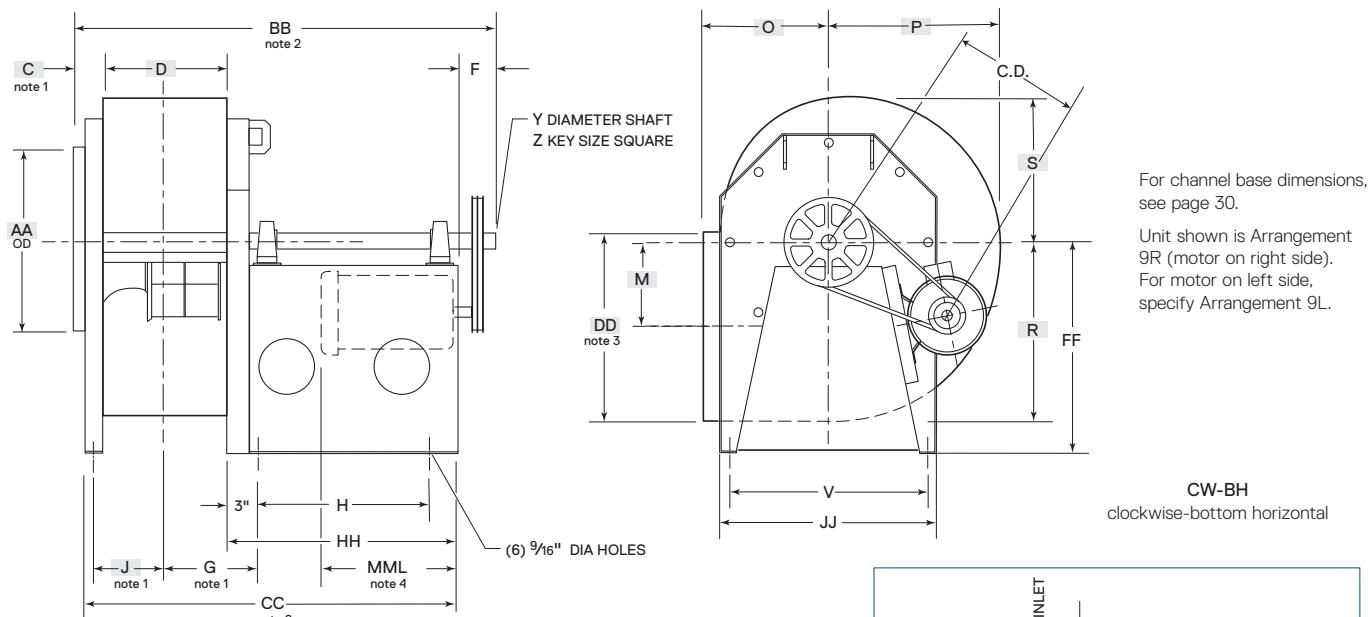
Discharges shown are determined by viewing fan from motor or drive side



\*Not available on models HDBI-270 through HDBI-360 or any models with discharge flange option without special discharge extension. For arrangements 9CB units, contact your local Cincinnati sales representative.

† See (\*) on page 31



**ARRANGEMENT 1 AND 9 — BELT DRIVE** specify 9R or 9L

- 1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.
- 2 Add 1/4" for AMCA C Construction fans and/or Down Blast discharge position.
- 3 Discharge flange (not shown above) is standard on Models HDBI-270 through HDBI-360. See page 31 for dimensions.
- 4 **MML** is maximum motor length on customer supplied motor. Motor manufacturers **C** dimension cannot exceed **MML** without a special base.
- 5 For common boxed blower housing dimensions see page 22.

Note: Housings are reversible and rotatable in 45° increments but wheels are not reversible.

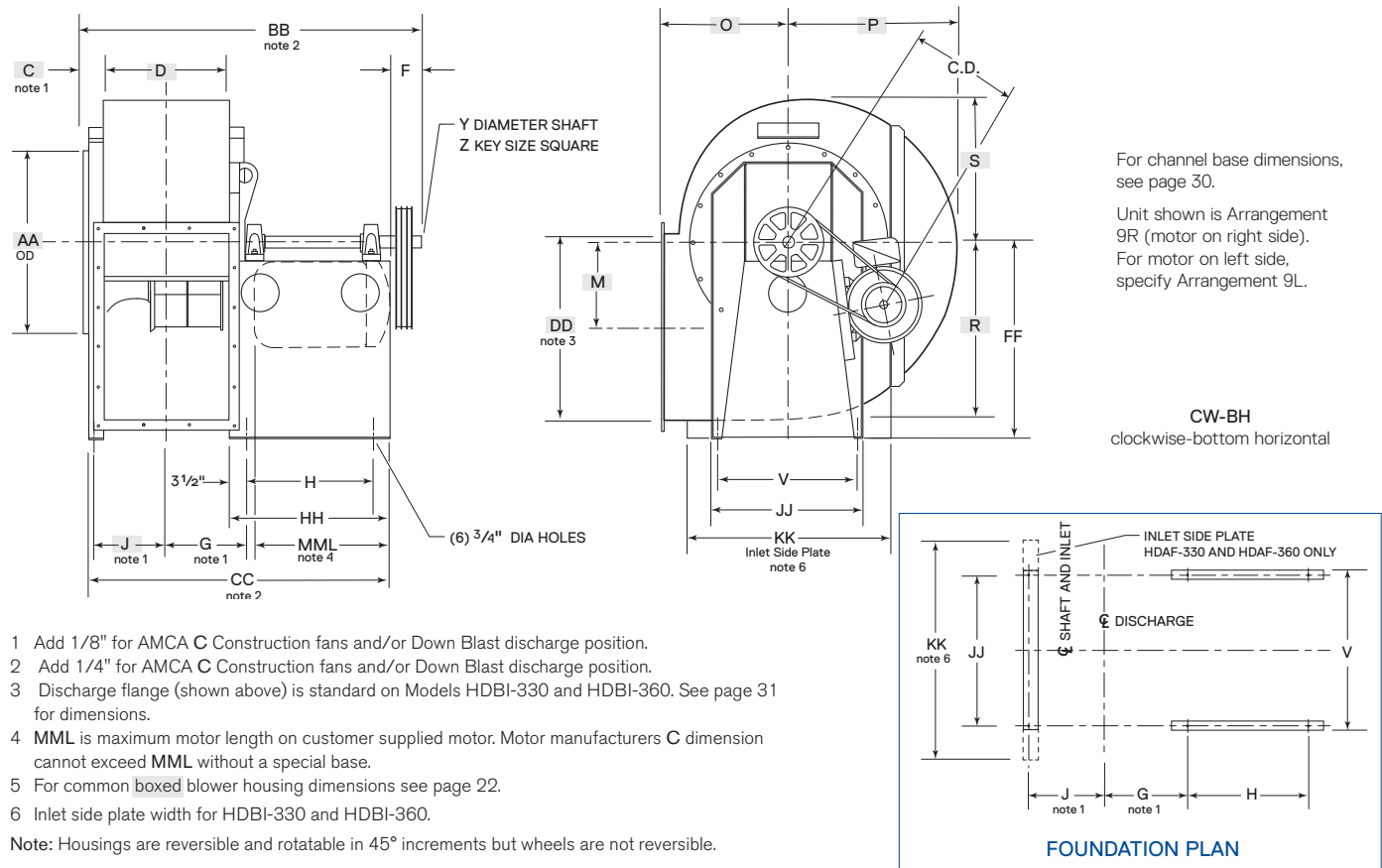
**CAUTION** All fans and blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source.

| Model    | Motor Frame | F  | G<br>note 1 | H       | V       | Y        |          |          | Z     |        |       | BB<br>note 2 | CC<br>note 2 | FF      | HH      | JJ      | MML<br>note 4 |
|----------|-------------|----|-------------|---------|---------|----------|----------|----------|-------|--------|-------|--------------|--------------|---------|---------|---------|---------------|
|          |             |    |             |         |         | CL II    | CL III   | CL IV    | CL II | CL III | CL IV |              |              |         |         |         |               |
| HDBI-120 | 56-215T     | 4" | 7 11/16"    | 12 3/4" | 14"     | 1 3/16"  | 1 3/16"  |          | 1/4"  | 1/4"   |       | 36 3/16"     | 30 3/16"     | 15 1/2" | 18 3/4" | 16"     | 19 3/8"       |
| HDBI-130 | 56-256T     | 4" | 8 3/16"     | 17"     | 15 3/4" | 1 3/16"  | 1 7/16"  | 1 7/16"  | 1/4"  | 3/8"   | 3/8"  | 41 7/16"     | 35 7/16"     | 16 5/8" | 23"     | 17 3/4" | 24 1/4"       |
| HDBI-150 | 56-256T     | 4" | 8 11/16"    | 17"     | 17 1/4" | 1 7/16"  | 1 11/16" | 1 11/16" | 3/8"  | 3/8"   | 3/8"  | 42 7/16"     | 36 7/16"     | 18 1/8" | 23"     | 19 1/4" | 24 1/4"       |
| HDBI-160 | 56-256T     | 4" | 9 1/4"      | 17"     | 19 1/8" | 1 7/16"  | 1 11/16" | 1 15/16" | 3/8"  | 3/8"   | 1/2"  | 43 9/16"     | 37 9/16"     | 19 3/4" | 23"     | 21 1/8" | 24 1/4"       |
| HDBI-180 | 145T-286T   | 4" | 9 15/16"    | 18 1/2" | 21 1/2" | 1 7/16"  | 1 11/16" | 1 15/16" | 3/8"  | 3/8"   | 1/2"  | 46 7/16"     | 40 7/16"     | 22 3/4" | 24 1/2" | 23 1/2" | 26 3/8"       |
| HDBI-200 | 145T-286T   | 4" | 10 5/8"     | 18 1/2" | 23 1/2" | 1 7/16"  | 1 15/16" | 2 3/16"  | 3/8"  | 1/2"   | 1/2"  | 47 13/16"    | 41 13/16"    | 23 1/2" | 24 1/2" | 25 1/2" | 26 3/8"       |
| HDBI-220 | 145T-324T   | 5" | 11 7/16"    | 21"     | 26 1/8" | 1 7/16"  | 1 15/16" | 2 3/16"  | 3/8"  | 1/2"   | 1/2"  | 52 15/16"    | 45 15/16"    | 26 1/4" | 27"     | 28 1/8" | 29 1/2"       |
| HDBI-240 | 145T-324T   | 6" | 12 5/16"    | 21"     | 28 1/4" | 1 11/16" | 2 3/16"  | 2 3/16"  | 3/8"  | 1/2"   | 1/2"  | 57 5/16"     | 47 5/16"     | 28 1/2" | 27"     | 30 3/4" | 29 1/2"       |
| HDBI-270 | 182T-324T   | 6" | 13 1/4"     | 21"     | 31"     | 1 11/16" | 2 3/16"  | 2 3/16"  | 3/8"  | 1/2"   | 5/8"  | 59 1/2"      | 49 1/2"      | 31 1/4" | 27"     | 33 3/4" | 29 1/2"       |
| HDBI-300 | 182T-324T   | 6" | 14 3/8"     | 24 3/4" | 34 1/4" | 1 15/16" | 2 7/16"  | 2 7/16"  | 1/2"  | 5/8"   | 5/8"  | 65 9/16"     | 55 9/16"     | 34 1/2" | 30 3/4" | 37 1/4" | 30 1/4"       |

C.D. Belt Center Distance

| Model    | 56-145T   |           | 182T-184T |           | 213T-215T |           | 254T-256T |           | 284T-286T |           | 324T-326T |          | 364T      |         |
|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|---------|
|          | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max      | Min       | Max     |
| HDBI-120 | 11 3/16"  | 12 3/4"   | 12 1/8"   | 13 1/2"   | 12 5/16"  | 13 11/16" |           |           |           |           |           |          |           |         |
| HDBI-130 | 11 1/8"   | 12 11/16" | 12 13/16" | 14 3/8"   | 13 1/8"   | 14 11/16" | 13 7/16"  | 14 13/16" |           |           |           |          |           |         |
| HDBI-150 | 11 5/8"   | 13 3/16"  | 13 7/16"  | 14 15/16" | 13 7/8"   | 15 5/8"   | 14 5/16"  | 16"       |           |           |           |          |           |         |
| HDBI-160 | 12 3/16"  | 13 11/16" | 14"       | 15 1/2"   | 15 1/8"   | 17 3/16"  | 15 11/16" | 17 5/8"   |           |           |           |          |           |         |
| HDBI-180 | 12 7/8"   | 14 3/8"   | 14 9/16"  | 16 1/16"  | 15 13/16" | 17 11/16" | 17 1/2"   | 19 11/16" | 17 13/16" | 19 3/16"  |           |          |           |         |
| HDBI-200 | 12 5/8"   | 14 1/4"   | 14 1/4"   | 15 7/8"   | 15 5/8"   | 17 1/2"   | 17 1/4"   | 19 9/16"  | 18 1/8"   | 20 13/16" |           |          |           |         |
| HDBI-220 | 13 9/16"  | 15 1/16"  | 15 3/16"  | 16 5/16"  | 16 7/16"  | 18 3/16"  | 18 1/8"   | 20 1/4"   | 19 1/4"   | 21 3/4"   | 20 3/4"   | 22 9/16" |           |         |
| HDBI-240 | 13 11/16" | 15 3/16"  | 15 7/16"  | 16 15/16" | 16 11/16" | 18 9/16"  | 18 1/2"   | 20 11/16" | 19 7/16"  | 22"       | 21 5/16"  | 24 3/8"  |           |         |
| HDBI-270 |           |           | 16"       | 17 1/2"   | 17 5/16"  | 19 3/16"  | 19"       | 21 1/4"   | 20 1/16"  | 22 11/16" | 21 15/16" | 25 1/16" |           |         |
| HDBI-300 |           |           | 15 15/16" | 17 5/16"  | 17 15/16" | 19 1/4"   | 19 9/16"  | 21 1/16"  | 20 5/8"   | 23 1/8"   | 22 7/16"  | 25 1/2"  | 23 15/16" | 27 3/8" |

## ARRANGEMENT 1 AND 9 — BELT DRIVE specify 9R or 9L HDBI-330 HDBI-360



| Model    | Motor Frame | F  | G<br>note 1 | H   | V   | Y       |          |          | Z      |        |       | BB<br>note 2 | CC<br>note 2 | FF      | HH  | JJ  | KK<br>note 6 | MML<br>note 4 |
|----------|-------------|----|-------------|-----|-----|---------|----------|----------|--------|--------|-------|--------------|--------------|---------|-----|-----|--------------|---------------|
|          |             |    |             |     |     | CL II   | CL III   | CL IV    | CL II  | CL III | CL IV |              |              |         |     |     |              |               |
| HDBI-330 | 182T-365T   | 6" | 15 15/16"   | 25" | 28" | 2 3/16" | 2 7/16"  | 2 11/16" | 1 1/2" | 5/8"   | 5/8"  | 66 1/8"      | 59 15/16"    | 38 3/4" | 32" | 30" | 41 3/4"      | 33"           |
| HDBI-360 | 182T-365T   | 6" | 17 1/8"     | 25" | 31" | 2 7/16" | 2 11/16" | 2 15/16" | 5/8"   | 5/8"   | 3/4"  | 68 1/2"      | 62 5/16"     | 42"     | 32" | 33" | 45"          | 33"           |

C.D. Belt Center Distance

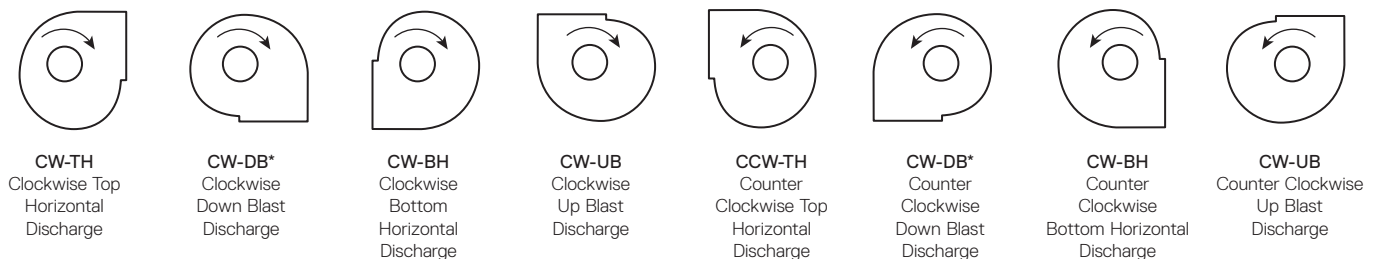
| Motor Frame | Class II - Class III |          | Motor Frame | Class II - Class III |           |
|-------------|----------------------|----------|-------------|----------------------|-----------|
|             | Min                  | Max      |             | Min                  | Max       |
| 182T-184T   | 17 9/16"             | 18 5/8"  | 284T-286T   | 21 9/16"             | 23 11/16" |
| 213T-215T   | 18 7/8"              | 20 5/16" | 324T-326T   | 23 1/2"              | 26 1/16"  |
| 254T-256T   | 20 9/16"             | 22 5/16" | 364T-365T   | 24 15/16"            | 28"       |

C.D. Belt Center Distance

| Motor Frame | Class IV |          | Motor Frame | Class IV |           |
|-------------|----------|----------|-------------|----------|-----------|
|             | Min      | Max      |             | Min      | Max       |
| 182T-184T   | 17 7/8"  | 19 3/16" | 284T-286T   | 22 1/8"  | 24 5/16"  |
| 213T-215T   | 19 3/16" | 20 7/8"  | 324T-326T   | 24"      | 26 11/16" |
| 254T-256T   | 21 1/16" | 22 7/8"  | 364T-365T   | 25 3/8"  | 28 5/8"   |

## Sixteen Discharge Positions Available. 45° Discharge Positions Not shown†

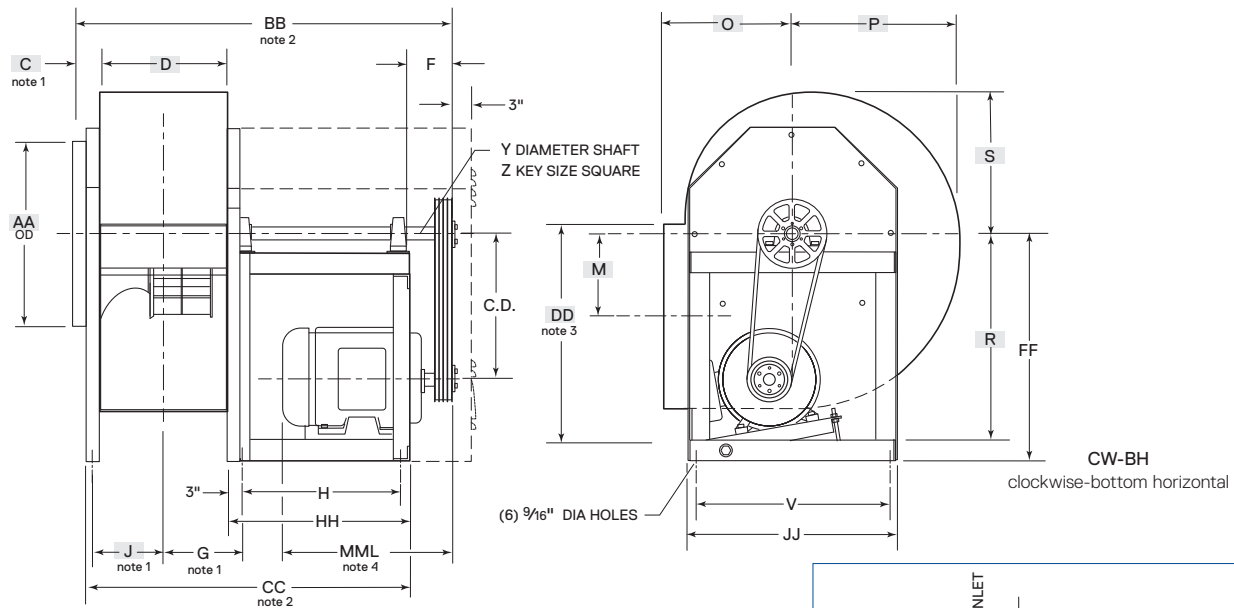
Discharges shown are determined by viewing fan from motor or drive side



\*Not available on models HDBI-270 through HDBI-360 or any models with discharge flange option without special discharge extension.  
For arrangements 9CB units, contact your local Cincinnati sales representative.

† See (\*) on page 31

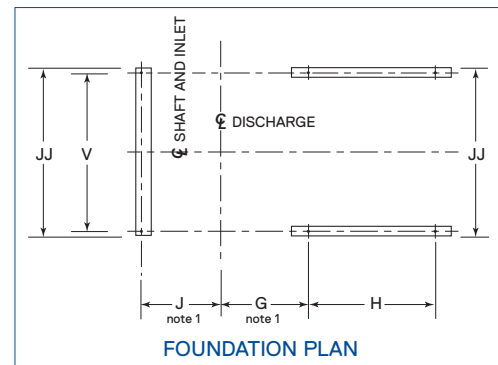
## ARRANGEMENT 10 — BELT DRIVE



- 1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.
- 2 Add 1/4" for AMCA C Construction fans and/or Down Blast discharge position.
- 3 Discharge flange (not shown above) is standard on Models HDBI-270 through HDBI-360. See page 31 for dimensions.
- 4 MML is maximum motor length on customer supplied motor. Motor manufacturers C dimension cannot exceed MML without a special base.
- 5 HDBI-330 and HDBI-360 are not available in Arrangement 10.
- 6 For common boxed blower housing dimensions see page 24.

Note: Housings are reversible and rotatable in 45° increments but wheels are not reversible.

**CAUTION** All fans and blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source.

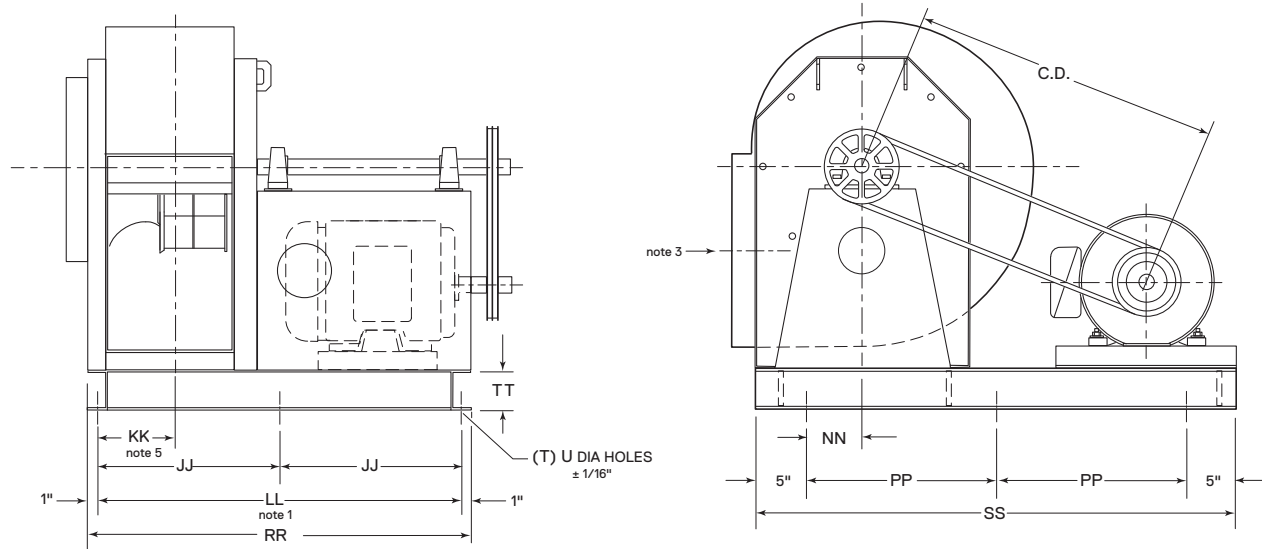


| Model    | Motor Frame | F       | G<br>note 1 | H       | V       | Y        |          |          | Z     |        |       | BB<br>note 2 | CC<br>note 2 | FF      | HH        | JJ      | MML<br>note 4 |
|----------|-------------|---------|-------------|---------|---------|----------|----------|----------|-------|--------|-------|--------------|--------------|---------|-----------|---------|---------------|
|          |             |         |             |         |         | CL II    | CL III   | CL IV    | CL II | CL III | CL IV |              |              |         |           |         |               |
| HDBI-120 | 56-184T     | 4 1/8"  | 7 11/16"    | 12 3/4" | 14"     | 1 3/16"  | 1 3/16"  |          | 1/4"  | 1/4"   |       | 36 3/16"     | 30 3/16"     | 15 1/2" | 18 5/8"   | 16"     | 18 7/16"      |
| HDBI-130 | 56-184T     | 4 1/8"  | 8 3/16"     | 17"     | 15 3/4" | 1 3/16"  | 1 7/16"  | 1 7/16"  | 1/4"  | 3/8"   | 3/8"  | 41 7/16"     | 35 5/16"     | 16 5/8" | 22 7/8"   | 17 3/4" | 23 1/8"       |
| HDBI-150 | 56-215T     | 4 1/8"  | 8 11/16"    | 17"     | 17 1/4" | 1 7/16"  | 1 11/16" | 1 11/16" | 3/8"  | 3/8"   | 3/8"  | 42 7/16"     | 36 5/16"     | 18 1/8" | 22 7/8"   | 19 1/4" | 24 1/4"       |
| HDBI-160 | 56-215T     | 4 1/8"  | 9 1/4"      | 17"     | 19 1/8" | 1 7/16"  | 1 11/16" | 1 15/16" | 3/8"  | 3/8"   | 1/2"  | 43 9/16"     | 37 7/16"     | 19 3/4" | 22 7/8"   | 21 1/8" | 24 1/4"       |
| HDBI-180 | 56-256T     | 4 1/8"  | 9 15/16"    | 18 1/2" | 21 1/2" | 1 7/16"  | 1 11/16" | 1 15/16" | 3/8"  | 3/8"   | 1/2"  | 46 7/16"     | 40 5/16"     | 22 3/4" | 24 3/8"   | 23 1/2" | 26 5/8"       |
| HDBI-200 | 56-256T     | 4 1/8"  | 10 5/8"     | 18 1/2" | 23 1/2" | 1 7/16"  | 1 15/16" | 2 3/16"  | 3/8"  | 1/2"   | 1/2"  | 47 13/16"    | 41 11/16"    | 23 1/2" | 24 3/8"   | 25 1/2" | 26 5/8"       |
| HDBI-220 | 145T-286T   | 5 1/8"  | 11 7/16"    | 21"     | 26 1/8" | 1 7/16"  | 1 15/16" | 2 3/16"  | 3/8"  | 1/2"   | 1/2"  | 52 15/16"    | 45 13/16"    | 26 1/4" | 26 7/8"   | 28 1/8" | 29 3/4"       |
| HDBI-240 | 145T-324T   | 6 3/16" | 12 5/16"    | 21"     | 28 1/4" | 1 11/16" | 2 3/16"  | 2 3/16"  | 3/8"  | 1/2"   | 1/2"  | 57 5/8"      | 47 7/16"     | 28 1/2" | 26 13/16" | 30 3/4" | 29 5/8"       |
| HDBI-270 | 182T-324T   | 6 3/16" | 13 1/4"     | 21"     | 31"     | 1 11/16" | 2 3/16"  | 2 7/16"  | 3/8"  | 1/2"   | 5/8"  | 59 1/2"      | 49 5/16"     | 31 1/4" | 26 13/16" | 33 3/4" | 29 5/8"       |
| HDBI-300 | 182T-324T   | 6 3/16" | 14 3/8"     | 24 3/4" | 34 1/4" | 1 15/16" | 2 7/16"  | 2 7/16"  | 1/2"  | 5/8"   | 5/8"  | 65 9/16"     | 65 9/16"     | 34 1/2" | 30 9/16"  | 37 1/4" | 33 3/8"       |

C.D. Belt Center Distance

| Model    | 56      |         | 143T-145T |         | 182T-184T |         | 213T-215T |         | 254T-256T |         | 284T-286T |         | 324T    |         |
|----------|---------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|---------|---------|
|          | Min     | Max     | Min       | Max     | Min       | Max     | Min       | Max     | Min       | Max     | Min       | Max     | Min     | Max     |
| HDBI-120 | 8 1/16" | 10"     | 8 1/8"    | 10"     | 7 1/2"    | 9"      |           |         |           |         |           |         |         |         |
| HDBI-130 | 9 1/4"  | 11 1/8" | 9 1/4"    | 11 1/8" | 8 3/8"    | 10 1/8" |           |         |           |         |           |         |         |         |
| HDBI-150 | 10"     | 12 1/8" | 10"       | 12 1/8" | 9 1/8"    | 11 1/8" | 8 3/8"    | 10 3/8" |           |         |           |         |         |         |
| HDBI-160 | 11 5/8" | 13 5/8" | 11 5/8"   | 13 5/8" | 10 5/8"   | 12 5/8" | 10"       | 11 7/8" |           |         |           |         |         |         |
| HDBI-180 | 14"     | 16 1/8" | 14"       | 16 1/8" | 12 3/4"   | 15 1/8" | 12"       | 14 3/8" | 11 1/8"   | 13 3/8" |           |         |         |         |
| HDBI-200 | 14 3/4" | 16 7/8" | 14 3/4"   | 16 7/8" | 13 1/2"   | 15 7/8" | 12 3/4"   | 15 7/8" | 11"       | 13"     |           |         |         |         |
| HDBI-220 |         |         | 17"       | 19 3/4" | 16 1/8"   | 18 5/8" | 15 3/8"   | 17 7/8" | 14 3/8"   | 16 7/8" | 13 3/4"   | 16 1/4" |         |         |
| HDBI-240 |         |         | 19 1/4"   | 22"     | 18 1/4"   | 21"     | 17 5/8"   | 20 1/8" | 16 5/8"   | 19 1/8" | 15 7/8"   | 18 3/8" | 14 7/8" | 17 3/8" |
| HDBI-270 |         |         |           |         | 21"       | 23 3/4" | 20 3/8"   | 22 7/8" | 19 3/8"   | 21 7/8" | 18 5/8"   | 21 1/8" | 17 5/8" | 20 1/8" |
| HDBI-300 |         |         |           |         | 24 1/4"   | 26 7/8" | 23 1/2"   | 26 1/8" | 22 1/2"   | 25 1/8" | 21 7/8"   | 24 3/8" | 20 7/8" | 23 3/8" |

## ARRANGEMENT 9RCB OR 9LCB CHANNEL BASE — BELT DRIVE



- 3 Discharge flange (not shown above) is standard on Models HDBI-270 through HDBI-360. See page 31 for dimensions.  
 5 Subtract 1/8" for AMCA C Construction.

Unit shown is Arrangement 9RCB (motor on right side).  
 For motor on left side, specify Arrangement 9LCB.

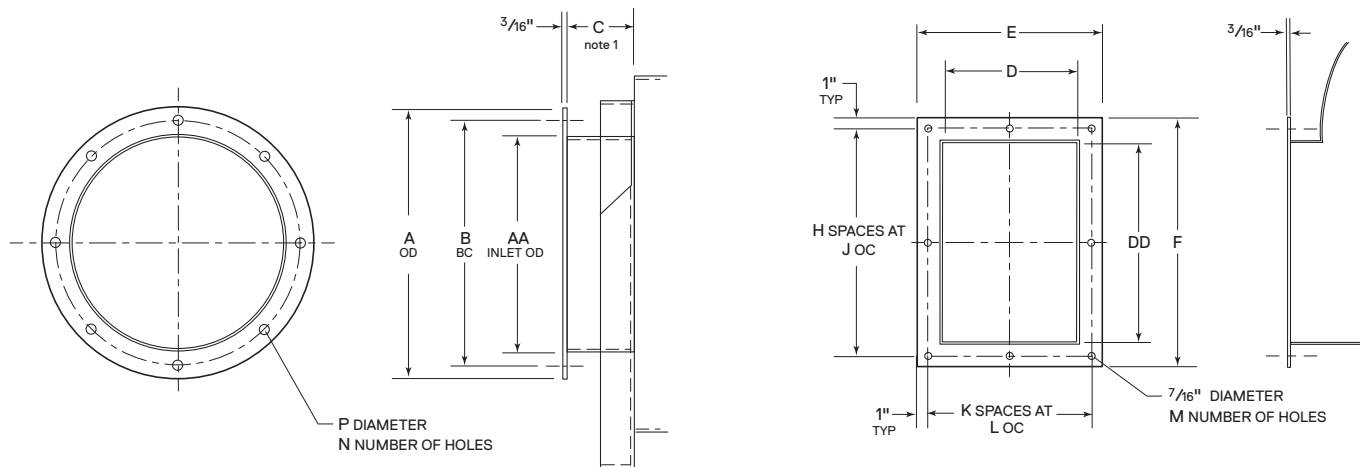
Channel base arrangements not available with Down Blast or 45°  
 Bottom Angular Down Discharge fan positions.

| Model    | Motor Frame | T | U     | KK<br>note 5 | JJ        | LL        | NN      | PP        | RR        | SS        | TT | Shipping Weight (less motor) lb |        |       |
|----------|-------------|---|-------|--------------|-----------|-----------|---------|-----------|-----------|-----------|----|---------------------------------|--------|-------|
|          |             |   |       |              |           |           |         |           |           |           |    | CL II                           | CL III | CL IV |
| HDBI-120 | 184T-215T   | 6 | 9/16" | 5 3/4"       |           | 28 3/16"  | 3"      | 13 15/32" | 30 3/16"  | 36 15/16" | 4" | 260                             | 265    |       |
| HDBI-130 | 184T-256T   | 6 | 9/16" | 6 1/4"       |           | 33 7/16"  | 3 7/8"  | 15 13/32" | 35 7/16"  | 41 5/8"   | 4" | 300                             | 305    | 310   |
| HDBI-150 | 184T-284T   | 6 | 9/16" | 6 3/4"       |           | 34 7/16"  | 4 5/8"  | 17 3/4"   | 36 7/16"  | 45 1/2"   | 4" | 350                             | 350    | 360   |
| HDBI-160 | 184T-286T   | 6 | 9/16" | 7 5/16"      |           | 35 9/16"  | 5 9/16" | 18 11/16" | 37 9/16"  | 47 3/8"   | 4" | 400                             | 400    | 410   |
| HDBI-180 | 184T-324T   | 6 | 9/16" | 8"           |           | 38 7/16"  | 6 3/4"  | 21 3/16"  | 40 7/16"  | 52 3/8"   | 6" | 510                             | 510    | 520   |
| HDBI-200 | 254T-324T   | 6 | 9/16" | 8 11/16"     |           | 39 13/16" | 7 3/4"  | 22 3/16"  | 41 13/16" | 54 3/8"   | 6" | 580                             | 580    | 590   |
| HDBI-220 | 254T-364T   | 6 | 9/16" | 9 1/2"       |           | 43 15/16" | 9 1/8"  | 26 11/16" | 45 15/16" | 63 3/8"   | 6" | 680                             | 680    | 690   |
| HDBI-240 | 254T-364T   | 6 | 9/16" | 10 11/32"    |           | 48 1/8"   | 10 3/8" | 28"       | 50 1/8"   | 66"       | 6" | 810                             | 810    | 820   |
| HDBI-270 | 254T-364T   | 6 | 9/16" | 11 9/32"     |           | 50"       | 11 7/8" | 29 1/2"   | 52"       | 69"       | 6" | 970                             | 970    | 980   |
| HDBI-300 | 254T-405T   | 6 | 9/16" | 12 7/16"     |           | 56 1/16"  | 13 5/8" | 31 1/4"   | 58 1/16"  | 72 1/2"   | 6" | 1165                            | 1165   | 1170  |
| HDBI-330 | 254T-444T   | 8 | 3/4"  | 14 1/2"      | 30 7/32"  | 60 7/16"  | 10"     | 32 11/16" | 62 7/16"  | 75 3/8"   | 6" | 1560                            | 1560   | 1760  |
| HDBI-360 | 254T-444T   | 8 | 3/4"  | 15 11/16"    | 31 13/32" | 62 13/16" | 11 1/2" | 32 11/16" | 64 13/16" | 75 3/8"   | 6" | 1840                            | 1840   | 1910  |

## C.D. Belt Center Distance

| Model    | 184T    |           | 213T-215T |           | 254T-256T |           | 284T-286T |           | 324T-326T |           | 364T-386T |           | 404T-405T |           | 444T     |           |
|----------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|
|          | Min     | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min      | Max       |
| HDBI-120 | 23 5/8" | 25 7/8"   | 21 15/16" | 24 11/16" |           |           |           |           |           |           |           |           |           |           |          |           |
| HDBI-130 | 27 1/2" | 29 5/8"   | 25 7/8"   | 28 5/8"   | 23 15/16" | 27 3/16"  |           |           |           |           |           |           |           |           |          |           |
| HDBI-150 | 31"     | 33"       | 29 5/16"  | 32 1/8"   | 27 3/8"   | 30 5/8"   | 25 15/16" | 29 11/16" |           |           |           |           |           |           |          |           |
| HDBI-160 | 32 5/8" | 34 13/16" | 30 7/8"   | 33 9/16"  | 28 7/8"   | 32 1/16"  | 27 7/16"  | 31 1/16"  |           |           |           |           |           |           |          |           |
| HDBI-180 | 37 1/4" | 23 5/8"   | 35 5/8"   | 38 1/4"   | 33 5/8"   | 35 11/16" | 32 1/8"   | 35 3/4"   | 29 13/16" | 34 1/8"   |           |           |           |           |          |           |
| HDBI-200 |         |           |           |           | 34 13/16" | 37 15/16" | 33 3/8"   | 36 15/16" | 31 1/16"  | 35 5/16"  |           |           |           |           |          |           |
| HDBI-220 |         |           |           |           | 42 15/16" | 40 1/16"  | 41 1/2"   | 45 1/8"   | 39 3/16"  | 43 1/2"   | 37 3/16"  | 42 3/16"  |           |           |          |           |
| HDBI-240 |         |           |           |           | 45 1/8"   | 48 3/16"  | 43 11/16" | 47 3/16"  | 41 5/16"  | 45 9/16"  | 39 5/16"  | 44 1/4"   |           |           |          |           |
| HDBI-270 |         |           |           |           | 47 3/4"   | 50 3/4"   | 46 1/4"   | 49 3/4"   | 43 15/16" | 48 1/8"   | 41 15/16" | 46 3/4"   |           |           |          |           |
| HDBI-300 |         |           |           |           | 50 7/8"   | 53 13/16" | 49 7/16"  | 52 13/16" | 47 1/16"  | 51 1/8"   | 45 1/16"  | 49 3/4"   | 42 7/16"  | 47 13/16" |          |           |
| HDBI-330 |         |           |           |           | 58 5/8"   | 61 9/16"  | 57 3/16"  | 60 1/2"   | 54 13/16" | 58 13/16" | 52 13/16" | 57 7/16"  | 53 1/8"   | 58 13/16" | 51 9/16" | 57 11/16" |
| HDBI-360 |         |           |           |           | 59 3/16"  | 62"       | 57 3/4"   | 60 15/16" | 55 5/16"  | 59 3/16"  | 53 5/16"  | 57 13/16" | 53 1/2"   | 59"       | 51 7/8"  | 57 13/16" |

## INLET AND OUTLET FLANGES



1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.

**Note:** Flanges will be drilled unless otherwise specified.

Outlet flange is not available on Down Blast, Top Angular Down or Bottom Angular Down fan discharge positions for any models without a discharge extension. Outlet flange is standard on all HDBI-270 through HDBI-360.

Dimensions shown in table are for 100% width housings. For partial width housings contact your local Cincinnati Fan sales representative.

| Model     | A       | B         | C**<br>note 1 | D**      | E         | F         | H | J        | K | L        | M  | N  | P     | AA**    | DD**      |
|-----------|---------|-----------|---------------|----------|-----------|-----------|---|----------|---|----------|----|----|-------|---------|-----------|
| HDBI-120  | 16"     | 14 3/8"   | 4 1/16"       | 9 3/8"   | 13 3/8"   | 17 11/16" | 2 | 7 27/32" | 2 | 5 11/16" | 8  | 8  | 7/16" | 13 1/4" | 13 3/4"   |
| HDBI-130  | 17 3/8" | 15 15/16" | 4 1/16"       | 10 3/8"  | 14 3/8"   | 19 3/16"  | 2 | 8 19/32" | 2 | 6 3/16"  | 8  | 8  | 7/16" | 14 5/8" | 15 1/4"   |
| HDBI-150  | 19 1/4" | 17 1/2"   | 4 1/16"       | 11 3/8"  | 15 3/8"   | 20 3/4"   | 3 | 6 1/4"   | 2 | 6 11/16" | 10 | 8  | 7/16" | 16 1/8" | 16 13/16" |
| HDBI-160  | 21 1/8" | 19 3/8"   | 4 1/16"       | 12 1/2"  | 16 1/2"   | 22 7/16"  | 3 | 6 13/16" | 2 | 7 1/4"   | 10 | 8  | 7/16" | 18"     | 18 7/16"  |
| HDBI-180  | 23 1/2" | 21 1/2"   | 4 1/16"       | 13 7/8"  | 17 7/8"   | 24 1/2"   | 3 | 7 1/2"   | 2 | 7 15/16" | 10 | 12 | 7/16" | 20"     | 20 3/8"   |
| HDBI-200  | 25 1/2" | 23 1/2"   | 4 1/16"       | 15 1/4"  | 19 1/4"   | 26 3/8"   | 3 | 8 1/8"   | 3 | 5 3/4"   | 12 | 12 | 7/16" | 22"     | 22 3/8"   |
| HDBI-220  | 28 1/8" | 26 1/8"   | 4 1/16"       | 16 7/8"  | 20 15/16" | 28 7/8"   | 4 | 6 23/32" | 3 | 6 5/16"  | 14 | 12 | 7/16" | 24 5/8" | 24 7/8"   |
| HDBI-240  | 30 3/4" | 28 3/4"   | 6 1/16"       | 18 9/16" | 22 5/8"   | 31 3/8"   | 4 | 7 11/32" | 3 | 6 7/8"   | 14 | 16 | 7/16" | 27"     | 27 3/8"   |
| HDBI-270  | 33 3/4" | 31 5/8"   | 6 1/16"       | 21 7/16" | 24 1/2"   | 34 1/8"   | 4 | 8 1/32"  | 3 | 7 1/2"   | 14 | 16 | 7/16" | 30"     | 30 1/16"  |
| HDBI-300  | 37 1/4" | 35 1/4"   | 6 1/16"       | 22 3/4"  | 25 3/4"   | 37 5/8"   | 5 | 7 1/8"   | 3 | 8 1/4"   | 16 | 16 | 7/16" | 33 1/2" | 33 9/16"  |
| HDBI-330* | 40 3/8" | 38 3/4"   | 6 1/16"       | 24 7/8"  | 28 7/8"   | 40 7/8"   | 7 | 5 9/16"  | 5 | 5 3/8"   | 24 | 16 | 1/2"  | 36 3/4" | 36 7/8"   |
| HDBI-360* | 43 5/8" | 42"       | 6 1/16"       | 27 1/4"  | 31 1/4"   | 44 1/4"   | 7 | 6 1/32"  | 5 | 5 27/32" | 24 | 16 | 1/2"  | 40"     | 40 1/4"   |

\* HDBI-330 and HDBI-360 have fixed housings and are not rotatable in the field.

\*\* Dimensions C, D, AA and DD are  $\pm 1/8"$

