

# LINEA

Low Discharge Roof Exhausters

## TECHNICAL SPECIFICATIONS



PENNBARRY™

BULLETIN LF18

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# INTRODUCTION

## Linea Roof Exhausters

The PennBarry Linea is a high quality, low silhouette, centrifugal roof exhauster. This completely self-contained powered ventilating unit is ready for easy installation on a variety of factory-built and field-built curbs. The most significant factor that sets the PennBarry Linea apart from conventional roof ventilators is its low-line extruded aluminum housing. Crisp, clean lengths of full width blades are mitered at the corners and welded on the underside to present a clear, unbroken sweep. In addition to its clean appearance, the louver blade is designed to reduce friction and turbulence of exhausting air. The shape of the extrusion is based on aerodynamic as well as structural and weatherproof principles. Each Linea is proportioned for low discharge velocity.

Blade design and spacing have been coordinated through the large selection of unit sizes to afford maximum discharge area on all four sides as well as maximum weather protection.

Centrifugal roof exhausters are most sensitive at the point of air entry. Many manufacturers use fan wheels originally developed for utility sets and other purposes. However, there is no substitute for correct components used in their proper application. PennBarry's centrifugal wheels are specifically designed for roof exhauster use. They feature an extended inlet opening and are statically and dynamically balanced to promote quieter operation. The Linea drive assembly is suspended on rubber mountings which sound condition the Linea against vibration. All wheels are backward inclined and non-overloading. They are constructed of durable and spark resistant aluminum. This feature promotes longer bearing life and reduces motor starting torque.



*Belt Drive Linea*

### Direct Drive Units

Model: LF (VC / SC / RC)

- Static pressure up to 1.5" wg.
- Flow capacity up to 2,123 CFM

### Belt Drive Units

Model: LF (BC)

- Static pressure up to 1.5" wg.
- Flow capacity up to 19,400 CFM

# CERTIFICATIONS & LISTINGS



## AMCA Certification

PennBarry certifies that the Linea models shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

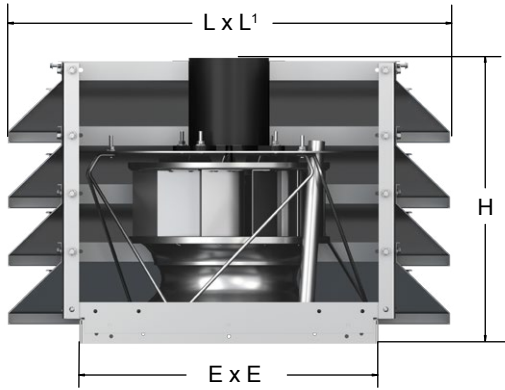


## cULus Certification

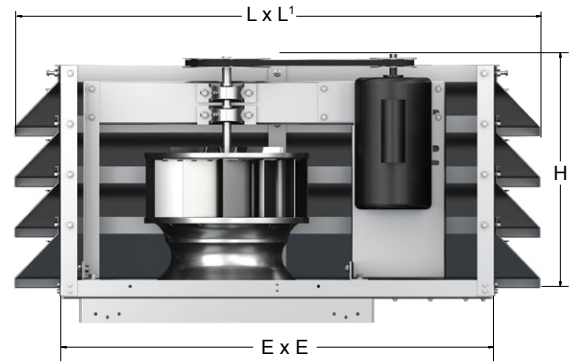
Linea roof exhausters carry the UL label,

UL705 (ZACT/ZACT7), file #E28413.

# DIMENSIONS | DIRECT & BELT DRIVE



Direct Drive



Belt Drive

## Direct Drive

| Model        | Unit Dimensions |                |    |      |
|--------------|-----------------|----------------|----|------|
|              | L               | L <sup>1</sup> | H  | E    |
| LF06VC/SC/RC | 27              | 29             | 15 | 18 ½ |
| LF12VC/SC/RC | 29              | 31             | 20 | 20 ½ |

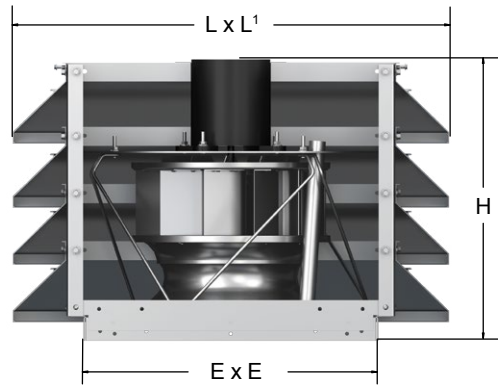
All dimensions are in inches

## Belt Drive

| Model  | Unit Dimensions |                |        |        |
|--------|-----------------|----------------|--------|--------|
|        | L               | L <sup>1</sup> | H      | E      |
| LF12BC | 33              | 45             | 19     | 24 1/2 |
| LF20BC | 37              | 49             | 23     | 28 1/2 |
| LF24BC | 42              | 60 1/2         | 23     | 33 1/2 |
| LF30BC | 45              | 63             | 27 1/2 | 36     |
| LF40BC | 53              | 79             | 31 1/2 | 44 1/2 |

All dimensions are in inches

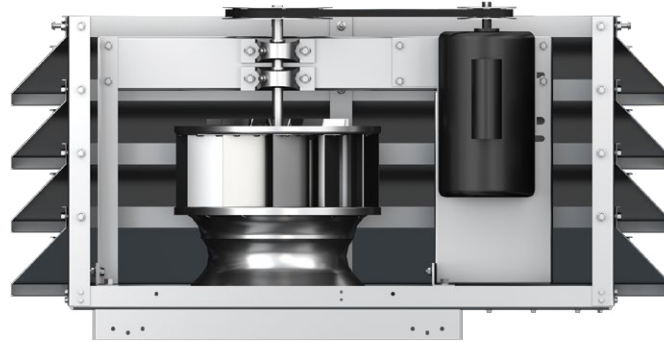
# LF06 & LF12 | DIRECT DRIVE



| Model  | HP   | Max. Watts | RPM  | Tip Speed FPM | 0.000" SP |       | 0.125" SP |       | 0.250" SP |       | 0.375" SP |       | 0.500" SP |       | 0.625" SP |       | 0.750" SP |       | 1.000" SP |       | 1.250" SP |       | 1.500" SP |       |
|--------|------|------------|------|---------------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|
|        |      |            |      |               | CFM       | Sones | CFM       | Sones | CFM       | Sones | CFM       | Sones | CFM       | Sones | CFM       | Sones | CFM       | Sones | CFM       | Sones | CFM       | Sones | CFM       | Sones |
| LF06VC | 1/25 | 131        | 1050 | 3058          | 351       | 2.3   | 182       | 2.5   | 83        | 3.5   | 38        | 4     | -         | -     | -         | -     | -         | -     | -         | -     | -         | -     | -         | -     |
| LF06SC | 1/11 | 176        | 1300 | 3786          | 505       | 3.3   | 377       | 4     | 270       | 5     | 199       | 5.6   | 139       | 6     | 98        | 6.4   | 63        | 6.7   | -         | -     | -         | -     | -         | -     |
| LF06RC | 1/7  | 240        | 1550 | 4514          | 728       | 7.4   | 620       | 7.7   | 517       | 8.1   | 426       | 8.8   | 338       | 9.1   | 239       | 8.9   | 143       | 8.8   | 48        | 8.7   | -         | -     | -         | -     |
| LF12VC | 1/6  | 472        | 1050 | 3788          | 1214      | 7.5   | 985       | 7.1   | 722       | 5.9   | 580       | 5.9   | 513       | 6.6   | 435       | 7.5   | 354       | 8.3   | -         | -     | -         | -     | -         | -     |
| LF12SC | 1/3  | 526        | 1300 | 4690          | 1830      | 10    | 1638      | 8.7   | 1426      | 7.6   | 1216      | 7.8   | 1032      | 8.2   | 895       | 8.7   | 765       | 9.3   | 573       | 9.9   | 380       | 10    | 122       | 10.5  |
| LF12RC | 1/2  | 596        | 1550 | 5592          | 2123      | 12.3  | 1952      | 10.9  | 1813      | 9.8   | 1650      | 9.6   | 1454      | 9.9   | 1289      | 10.3  | 1135      | 10.7  | 870       | 11.8  | 609       | 12    | 306       | 11.8  |

Performance shown is for installation type A: Free Inlet, Free Outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for Installation Type A: free inlet hemispherical fan sone levels. Performance ratings include the effects of screen in the airstream. For models shown on this page, the AMCA Certified Ratings Seal applies to air and sound. Watt ratings shown are for models tested at 115/1/60.

# LF12, LF20, LF24, LF30, & LF40 | BELT DRIVE



## Belt Drive Losses

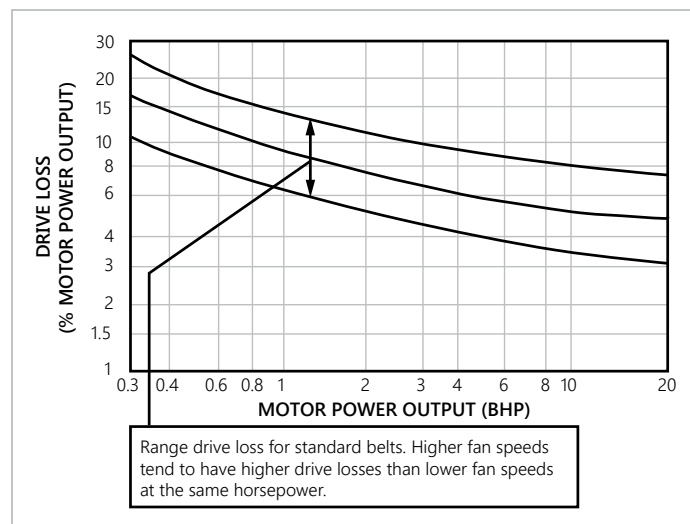
The AMCA Review Committee has developed the chart shown below for the purpose of estimating belt drive losses. To calculate total BHP (including drive losses): Find the BHP of your operating point on the x-axis on the graph below. Follow the vertical line to the curves indicating the range of drive losses. Look at the y-axis on the left and find the drive loss percentage. Calculate the total BHP by adding the drive loss to the operating point BHP. For BHP's below 0.3, use 30%.

## Belt Drive Fan Data

Linea belt drive centrifugal exhausters are available in many housing sizes. Engineers have hundreds of speed and performance ratings from which to select the correct units for their applications. The fan speeds listed are but a few of those available. Additional speed and performance values can be obtained through the use of different belt and pulley combinations.

Line drawings on this page illustrate the Linea on four different roof curb styles. Full information for the various curbs available is contained in PennBarry's Curb Bulletin.

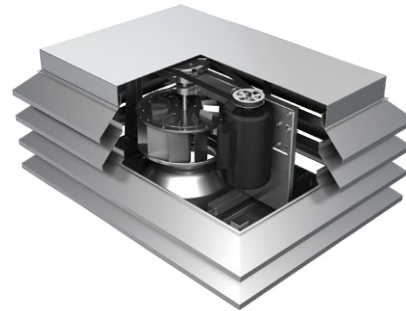
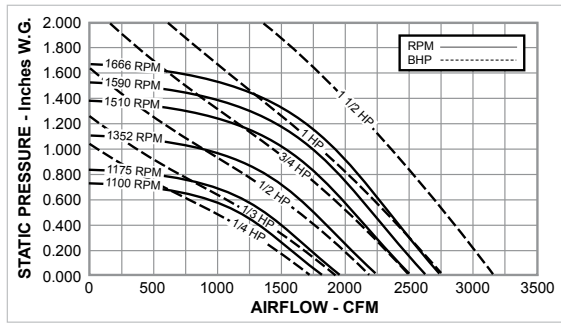
## Drive Loss Reference Chart



For totally enclosed, explosion proof, multi-speed, and all 1.0 Service Factor motors, fan BHP plus drive losses should not exceed motor rated HP.

Graph reprinted from AMCA publication 203, with the express written permission from the Air Movement and Control Association, Inc., 30 West University Drive, Arlington Heights, IL 60004-1983.

# LF12BC | BELT DRIVE



$$\text{Peak BHP} = (\text{RPM}/1626)^3$$

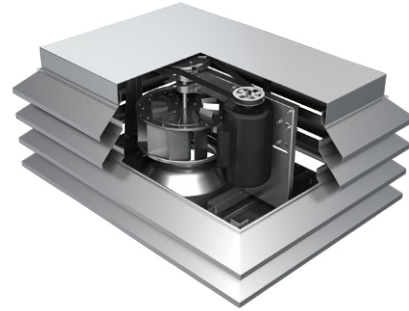
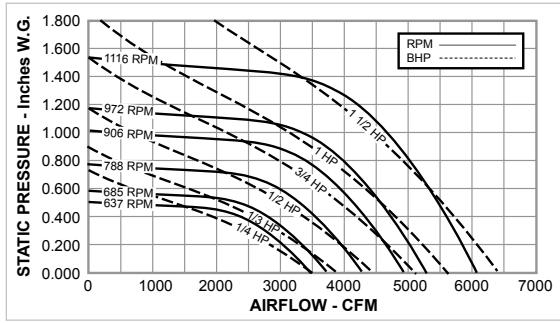
Maximum RPM = 1885

| HP   | RPM  | Tip Speed FPM | 0.000" SP |      | 0.125" SP |      | 0.250" SP |      | 0.375" SP |      | 0.500" SP |      | 0.625" SP |      | 0.750" SP |      | 0.875" SP |      | 1.000" SP |      | 1.125" SP |      |
|------|------|---------------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|
|      |      |               | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      |
|      |      |               | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  |
| 1/4  | 715  | 2580          | 1178      | 947  | 620       | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    |
|      |      |               | 5.9       | 0.08 | 5.1       | 0.08 | 4.6       | 0.08 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    |
|      | 779  | 2811          | 1284      | 1071 | 818       | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    |
|      |      |               | 7.2       | 0.10 | 6.4       | 0.11 | 5.9       | 0.11 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    |
|      | 841  | 3034          | 1386      | 1188 | 968       | 608  | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    |
|      |      |               | 8.1       | 0.13 | 7.4       | 0.14 | 7.0       | 0.14 | 6.8       | 0.13 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    |
|      | 1000 | 3608          | 1648      | 1483 | 1316      | 1115 | 835       | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    |
|      |      |               | 9.7       | 0.21 | 9.0       | 0.22 | 8.6       | 0.23 | 8.3       | 0.23 | 8.2       | 0.22 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    |
| 1078 | 3889 | 1777          | 1625      | 1470 | 1296      | 1086 | 740       | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         |      |
|      |      | 10.4          | 0.27      | 9.8  | 0.28      | 9.1  | 0.29      | 8.7  | 0.29      | 8.6  | 0.29      | 8.6  | 0.26      | -    | -         | -    | -         | -    | -         | -    | -         | -    |
| 1092 | 3940 | 1800          | 1650      | 1497 | 1327      | 1129 | 822       | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         |      |
|      |      | 10.5          | 0.28      | 9.9  | 0.29      | 9.3  | 0.30      | 8.9  | 0.30      | 8.7  | 0.30      | 8.7  | 0.28      | -    | -         | -    | -         | -    | -         | -    | -         | -    |
| 1100 | 3969 | 1813          | 1665      | 1512 | 1344      | 1152 | 865       | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         |      |
|      |      | 10.6          | 0.28      | 10.0 | 0.30      | 9.4  | 0.30      | 8.9  | 0.31      | 8.8  | 0.30      | 8.8  | 0.29      | -    | -         | -    | -         | -    | -         | -    | -         | -    |
| 1/3  | 1120 | 4041          | 1846      | 1700 | 1550      | 1388 | 1206      | 941  | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         |      |
|      |      |               | 10.8      | 0.30 | 10.2      | 0.31 | 9.7       | 0.32 | 9.2       | 0.33 | 8.9       | 0.32 | 9.0       | 0.31 | -         | -    | -         | -    | -         | -    | -         | -    |
|      | 1140 | 4113          | 1879      | 1736 | 1588      | 1431 | 1253      | 1014 | 416       | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    |           |      |
| 1175 | 4239 | 1937          | 1799      | 1654 | 1506      | 1336 | 1123      | 758  | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    |           |      |
|      |      | 11.5          | 0.35      | 10.9 | 0.36      | 10.4 | 0.37      | 10.0 | 0.37      | 9.5  | 0.37      | 9.4  | 0.37      | 9.3  | 0.33      | -    | -         | -    | -         | -    | -         |      |
| 1/2  | 1200 | 4329          | 1978      | 1843 | 1701      | 1559 | 1394      | 1199 | 923       | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    |           |      |
|      |      |               | 11.8      | 0.37 | 11.3      | 0.38 | 10.7      | 0.39 | 10.3      | 0.40 | 9.9       | 0.40 | 9.5       | 0.39 | 9.6       | 0.37 | -         | -    | -         | -    | -         |      |
|      | 1250 | 4510          | 2061      | 1932 | 1794      | 1664 | 1508      | 1343 | 1114      | 632  | -         | -    | -         | -    | -         | -    | -         | -    | -         |      |           |      |
|      | 1295 | 4672          | 2135      | 2011 | 1877      | 1751 | 1607      | 1450 | 1254      | 990  | -         | -    | -         | -    | -         | -    | -         | -    | -         |      |           |      |
|      | 1320 | 4762          | 2176      | 2054 | 1924      | 1800 | 1661      | 1508 | 1330      | 1094 | 516       | -    | -         | -    | -         | -    | -         | -    | -         |      |           |      |
|      |      |               | 13.1      | 0.49 | 12.8      | 0.51 | 12.4      | 0.52 | 12.0      | 0.52 | 11.6      | 0.53 | 11.1      | 0.53 | 10.8      | 0.52 | 11.0      | 0.51 | 10.9      | 0.38 | -         |      |
| 1352 | 4878 | 2229          | 2110      | 1983 | 1861      | 1729 | 1582      | 1426 | 1209      | 829  | -         | -    | -         | -    | -         | -    | -         | -    |           |      |           |      |
|      |      | 13.4          | 0.53      | 13.0 | 0.54      | 12.6 | 0.56      | 12.3 | 0.56      | 11.9 | 0.57      | 11.5 | 0.57      | 11.0 | 0.57      | 11.3 | 0.55      | 11.2 | 0.49      | -    |           |      |
| 3/4  | 1390 | 5015          | 2291      | 2176 | 2053      | 1933 | 1810      | 1669 | 1520      | 1327 | 1089      | -    | -         | -    | -         | -    | -         | -    |           |      |           |      |
|      |      |               | 13.7      | 0.57 | 13.4      | 0.59 | 13.0      | 0.60 | 12.7      | 0.61 | 12.3      | 0.62 | 11.9      | 0.62 | 11.5      | 0.62 | 11.6      | 0.61 | 11.7      | 0.58 | -         |      |
|      | 1420 | 5123          | 2341      | 2228 | 2108      | 1990 | 1873      | 1736 | 1591      | 1419 | 1203      | -    | -         | -    | -         | -    | -         |      |           |      |           |      |
|      | 1470 | 5304          | 2423      | 2314 | 2199      | 2084 | 1973      | 1844 | 1708      | 1567 | 1370      | 521  | -         | -    | -         | -    | -         |      |           |      |           |      |
| 1510 | 5448 | 2489          | 2383      | 2272 | 2158      | 2051 | 1930      | 1800 | 1663      | 1493 | 911       | -    | -         | -    | -         | -    | -         |      |           |      |           |      |
|      |      | 15.0          | 0.73      | 14.7 | 0.75      | 14.3 | 0.77      | 14.0 | 0.78      | 13.7 | 0.79      | 13.3 | 0.79      | 13.0 | 0.80      | 12.8 | 0.79      | 12.9 | 0.78      | 12.8 | 0.67      |      |
| 1    | 1554 | 5607          | 2562      | 2459 | 2351      | 2240 | 2135      | 2023 | 1898      | 1766 | 1625      | 1217 | -         | -    | -         | -    | -         |      |           |      |           |      |
|      |      |               | 15.6      | 0.80 | 15.2      | 0.82 | 14.9      | 0.84 | 14.6      | 0.85 | 14.3      | 0.86 | 13.9      | 0.86 | 13.6      | 0.87 | 13.3      | 0.87 | 13.2      | 0.86 | 13.5      | 0.81 |
|      | 1575 | 5682          | 2597      | 2495 | 2389      | 2279 | 2175      | 2067 | 1944      | 1815 | 1684      | 1297 | -         | -    | -         | -    |           |      |           |      |           |      |
| 1590 | 5736 | 2621          | 2520      | 2416 | 2307      | 2204 | 2099      | 1976 | 1850      | 1720 | 1354      | -    | -         | -    | -         | -    |           |      |           |      |           |      |
|      |      | 16.0          | 0.86      | 15.6 | 0.88      | 15.3 | 0.89      | 15.0 | 0.91      | 14.7 | 0.91      | 14.3 | 0.92      | 14.0 | 0.93      | 13.7 | 0.93      | 13.5 | 0.92      | 14.0 | 0.89      |      |

Performance shown is for installation type A: free inlet, free outlet. Power rating (BHP) does not include drive losses. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. Performance ratings do not include the effects of appurtenances in the airstream.



# LF20BC | BELT DRIVE



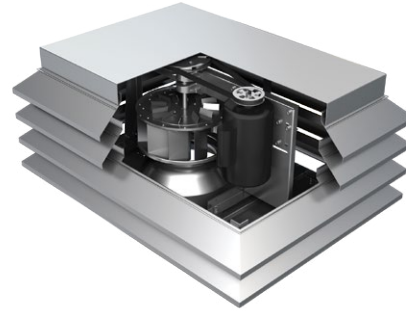
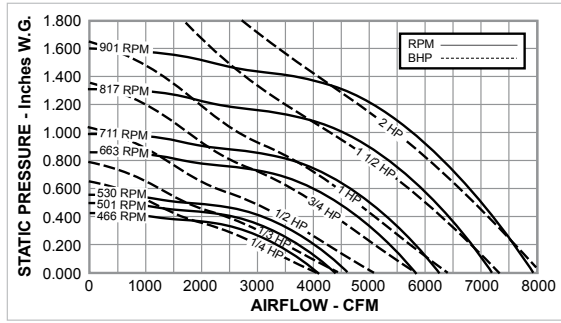
$$\text{Peak BHP} = (\text{RPM}/949)^3$$

$$\text{Maximum RPM} = 1340$$

| HP    | RPM  | Tip Speed FPM | 0.000" SP |      | 0.125" SP |      | 0.250" SP |      | 0.375" SP |      | 0.500" SP |      | 0.625" SP |      | 0.750" SP |      | 0.875" SP |      | 1.000" SP |      |       |      |
|-------|------|---------------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-------|------|
|       |      |               | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      |       |      |
|       |      |               | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones | BHP  |
| 1/4   | 410  | 2174          | 1850      | -    | 1370      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -     |      |
|       | 435  | 2306          | 3.4       | 0.06 | 3.5       | 0.07 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -     |      |
|       |      |               | 1965      | 4.0  | 0.07      | 4.0  | 0.08      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -     |      |
|       | 495  | 2624          | 2235      | 5.3  | 0.10      | 1860 | 5.4       | 0.11 | 1360      | 5.5  | 0.12      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -     |      |
|       |      |               | 2390      | 6.1  | 0.12      | 2045 | 6.1       | 0.14 | 1620      | 6.3  | 0.14      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -     |      |
|       | 586  | 3107          | 2645      | 7.3  | 0.17      | 2330 | 7.4       | 0.18 | 1975      | 7.5  | 0.19      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -     | -    |
|       |      |               | 2705      | 7.6  | 0.18      | 2405 | 7.7       | 0.19 | 2060      | 7.8  | 0.21      | 1615 | -         | -    | -         | -    | -         | -    | -         | -    | -     | -    |
|       | 637  | 3377          | 2875      | 8.4  | 0.21      | 2590 | 8.5       | 0.23 | 2285      | 8.6  | 0.24      | 1890 | -         | -    | -         | -    | -         | -    | -         | -    | -     | -    |
| 2974  |      |               | 8.7       | 0.24 | 2695      | 8.8  | 0.25      | 2405 | 8.9       | 0.27 | 2050      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -     |      |
| 1/3   | 659  | 3494          | 3024      | 8.9  | 0.25      | 2750 | 8.9       | 0.27 | 2465      | 9.0  | 0.28      | 2125 | -         | -    | -         | -    | -         | -    | -         | -    | -     |      |
|       | 670  | 3552          | 3090      | 9.1  | 0.26      | 2825 | 9.1       | 0.28 | 2550      | 9.2  | 0.29      | 2220 | -         | -    | -         | -    | -         | -    | -         | -    | -     |      |
|       |      |               | 3159      | 9.3  | 0.28      | 2900 | 9.3       | 0.30 | 2625      | 9.4  | 0.31      | 2310 | -         | -    | -         | -    | -         | -    | -         | -    | -     |      |
| 1/2   | 700  | 3711          | 3270      | 10.3 | 0.36      | 3020 | 10.4      | 0.38 | 2760      | 10.4 | 0.40      | 2465 | 9.5       | 0.33 | -         | -    | -         | -    | -         | -    | -     |      |
|       | 725  | 3844          | 3385      | 10.8 | 0.40      | 3140 | 10.8      | 0.42 | 2890      | 10.8 | 0.46      | 2615 | 10.7      | 0.47 | 2105      | -    | -         | -    | -         | -    | -     |      |
|       |      |               | 3435      | 10.1 | 0.35      | 3200 | 10.2      | 0.37 | 2955      | 10.2 | 0.39      | 2690 | 9.8       | 0.36 | -         | -    | -         | -    | -         | -    | -     |      |
|       | 750  | 3976          | 3945      | 10.3 | 0.36      | 3740 | 10.4      | 0.38 | 3530      | 10.4 | 0.42      | 3310 | 10.2      | 0.41 | 2290      | 10.4 | 0.43      | -    | -         | -    | -     | -    |
|       |      |               | 3555      | 10.8 | 0.40      | 3325 | 10.8      | 0.42 | 3090      | 10.8 | 0.46      | 2840 | 10.7      | 0.47 | 2540      | 10.7 | 0.47      | 2185 | -         | -    | -     | -    |
| 3/4   | 820  | 4347          | 3700      | 11.3 | 0.45      | 3475 | 11.3      | 0.48 | 3250      | 11.2 | 0.52      | 3015 | 11.1      | 0.53 | 2740      | 11.1 | 0.53      | -    | -         | -    | -     |      |
|       | 850  | 4506          | 3835      | 11.7 | 0.50      | 3620 | 11.7      | 0.53 | 3405      | 11.7 | 0.57      | 3180 | 11.6      | 0.58 | 2925      | 11.5 | 0.59      | -    | -         | -    | -     |      |
|       |      |               | 3945      | 12.0 | 0.55      | 3740 | 12.1      | 0.57 | 3530      | 12.1 | 0.62      | 3310 | 12.0      | 0.64 | 3075      | 11.8 | 0.64      | -    | -         | -    | -     |      |
|       | 906  | 4803          | 4085      | 12.6 | 0.61      | 3885 | 12.6      | 0.64 | 3685      | 12.7 | 0.68      | 3475 | 12.5      | 0.70 | 3260      | 12.4 | 0.71      | 3000 | 12.3      | 0.72 | -     | -    |
| 4195  |      |               | 13.1      | 0.66 | 4000      | 13.2 | 0.71      | 3805 | 13.1      | 0.73 | 3600      | 13.0 | 0.76      | 3390 | 12.8      | 0.77 | 3145      | 12.7 | 0.78      | -    | -     |      |
| 1     | 930  | 4930          | 4285      | 13.5 | 0.70      | 4095 | 13.5      | 0.73 | 3900      | 13.6 | 0.78      | 3705 | 13.4      | 0.80 | 3500      | 13.3 | 0.82      | 3270 | 13.1      | 0.83 | -     | -    |
|       | 950  | 5036          | 4385      | 14.0 | 0.75      | 4195 | 14.1      | 0.81 | 4010      | 14.1 | 0.83      | 3815 | 13.9      | 0.86 | 3620      | 13.8 | 0.87      | 3400 | 13.6      | 0.88 | 3155  | 2880 |
| 4510  |      |               | 14.8      | 0.82 | 4330      | 14.8 | 0.85      | 4145 | 14.8      | 0.88 | 3960      | 14.6 | 0.93      | 3770 | 14.5      | 0.95 | 3565      | 14.3 | 0.96      | 3330 | 3080  |      |
| 1 1/2 | 1000 | 5301          | 4690      | 15.3 | 0.92      | 4515 | 15.3      | 0.95 | 4340      | 15.8 | 1.01      | 4165 | 15.6      | 1.03 | 3980      | 15.5 | 1.06      | 3795 | 15.2      | 1.07 | 3575  | 3350 |
|       | 1040 | 5513          | 4825      | 15.8 | 1.01      | 4655 | 16.0      | 1.04 | 4485      | 16.3 | 1.07      | 4315 | 16.0      | 1.12 | 4135      | 16.3 | 1.14      | 3955 | 16.0      | 1.16 | 3755  | 3535 |
|       |      |               | 5034      | 17.0 | 1.14      | 4870 | 17.1      | 1.17 | 4705      | 17.0 | 1.20      | 4545 | 16.6      | 1.10 | 4375      | 16.5 | 1.12      | 4200 | 4030      | 3815 | 3605  |      |
|       | 1116 | 5916          | 5034      | 17.0 | 1.14      | 4870 | 17.1      | 1.17 | 4705      | 17.0 | 1.20      | 4545 | 16.6      | 1.10 | 4375      | 16.5 | 1.12      | 4200 | 4030      | 3815 | 3605  |      |

Performance shown is for installation type A: free inlet, free outlet. Power rating (BHP) does not include drive losses. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

# LF24BC | BELT DRIVE



Peak BHP = (RPM/695)<sup>3</sup>

Maximum RPM = 1037

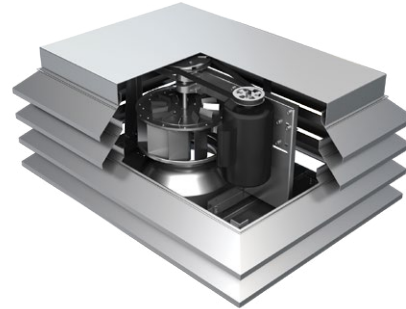
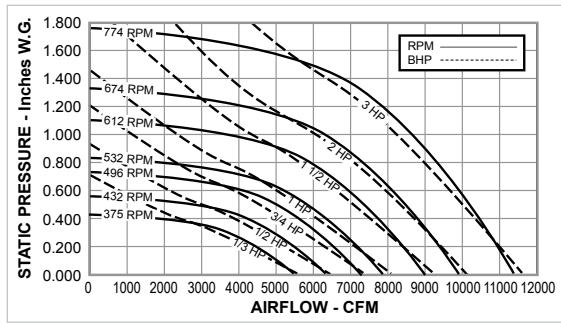
| HP   | RPM  | Tip Speed FPM | 0.000" SP |      | 0.125" SP |      | 0.250" SP |      | 0.375" SP |      | 0.500" SP |      | 0.625" SP |      | 0.750" SP |      | 0.875" SP |      | 1.000" SP |     | 1.125" SP |     |
|------|------|---------------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|-----|-----------|-----|
|      |      |               | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |     | CFM       |     |
|      |      |               | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP | Sones     | BHP |
| 1/4  | 290  | 1879          | 2552      | -    | 1627      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
|      |      |               | 4.0       | 0.06 | 2.2       | 0.07 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
|      | 315  | 2041          | 2772      | -    | 2007      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
|      |      |               | 4.7       | 0.08 | 3.3       | 0.09 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
|      | 340  | 2203          | 2992      | -    | 2328      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
|      |      |               | 5.2       | 0.10 | 4.1       | 0.12 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
|      | 360  | 2333          | 3168      | -    | 2554      | 588  | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
|      |      |               | 5.9       | 0.12 | 4.8       | 0.14 | 3.5       | 0.08 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
| 380  | 2462 | 3344          | -         | 2774 | 1491      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         |     |
|      |      | 6.7           | 0.14      | 5.6  | 0.16      | 3.8  | 0.13      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
| 430  | 2786 | 3785          | -         | 3306 | 2614      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         |     |
|      |      | 8.8           | 0.21      | 7.8  | 0.23      | 6.0  | 0.23      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
| 466  | 3019 | 4102          | -         | 3678 | 3104      | 1857 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         |     |
|      |      | 11.0          | 0.26      | 10.0 | 0.29      | 8.4  | 0.30      | 6.1  | 0.25      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
| 490  | 3175 | 4313          | -         | 3914 | 3399      | 2572 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         |     |
|      |      | 11.8          | 0.31      | 10.8 | 0.34      | 9.5  | 0.35      | 6.8  | 0.33      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
| 501  | 3246 | 4410          | -         | 4020 | 3522      | 2792 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         |     |
|      |      | 12.2          | 0.33      | 11.2 | 0.36      | 9.8  | 0.37      | 7.5  | 0.36      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
| 1/2  | 530  | 3434          | 4665      | -    | 4300      | 3842 | 3253      | 1727 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         |     |
|      |      |               | 12.7      | 0.39 | 11.7      | 0.42 | 10.3      | 0.44 | 8.6       | 0.44 | 7.5       | 0.33 | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
| 3/4  | 550  | 3564          | 4841      | -    | 4491      | 4059 | 3534      | 2649 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         |     |
|      |      |               | 13.3      | 0.43 | 12.4      | 0.47 | 11.0      | 0.49 | 9.3       | 0.49 | 7.9       | 0.46 | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
|      | 577  | 3739          | 5079      | -    | 4747      | 4348 | 3882      | 3194 | 1242      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         |     |
|      |      |               | 14.5      | 0.50 | 13.6      | 0.53 | 12.3      | 0.56 | 10.5      | 0.57 | 9.0       | 0.55 | 8.5       | 0.35 | -         | -    | -         | -    | -         | -   | -         | -   |
|      | 610  | 3953          | 5369      | -    | 5059      | 4695 | 4274      | 3726 | 2794      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         |     |
|      |      |               | 15.6      | 0.59 | 14.7      | 0.63 | 13.5      | 0.66 | 11.8      | 0.67 | 10.2      | 0.67 | 9.3       | 0.61 | -         | -    | -         | -    | -         | -   | -         | -   |
|      | 625  | 4050          | 5501      | -    | 5200      | 4851 | 4441      | 3949 | 3168      | 1078 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         | -   |
|      |      |               | 16.1      | 0.63 | 15.2      | 0.67 | 14.0      | 0.71 | 12.2      | 0.72 | 10.6      | 0.72 | 9.6       | 0.68 | 9.4       | 0.40 | -         | -    | -         | -   | -         | -   |
| 640  | 4147 | 5633          | -         | 5340 | 5006      | 4606 | 4145      | 3470 | 1673      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         |     |
|      |      | 16.4          | 0.68      | 15.5 | 0.72      | 14.3 | 0.76      | 12.6 | 0.78      | 10.9 | 0.78      | 10.2 | 0.75      | 9.7  | 0.52      | -    | -         | -    | -         | -   | -         |     |
| 663  | 4296 | 5836          | -         | 5555 | 5243      | 4857 | 4441      | 3870 | 2830      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         |     |
|      |      | 17.0          | 0.76      | 16.0 | 0.79      | 15.0 | 0.84      | 13.3 | 0.86      | 11.6 | 0.87      | 10.9 | 0.85      | 10.4 | 0.75      | -    | -         | -    | -         | -   | -         |     |
| 1    | 680  | 4406          | 5985      | -    | 5713      | 5409 | 5040      | 4657 | 4135      | 3375 | 1361      | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         |     |
|      |      |               | 17.5      | 0.82 | 16.5      | 0.85 | 15.5      | 0.90 | 13.9      | 0.93 | 12.3      | 0.94 | 11.4      | 0.92 | 10.9      | 0.88 | 10.5      | 0.55 | -         | -   | -         | -   |
|      | 700  | 4536          | 6161      | -    | 5896      | 5603 | 5254      | 4886 | 4431      | 3779 | 2226      | -    | -         | -    | -         | -    | -         | -    | -         | -   | -         |     |
| 18.2 |      |               | 0.89      | 17.3 | 0.93      | 16.3 | 0.98      | 14.7 | 1.01      | 13.1 | 1.02      | 11.9 | 1.01      | 11.6 | 0.98      | 11.2 | 0.75      | -    | -         | -   | -         |     |
| 711  | 4607 | 6258          | -         | 5997 | 5710      | 5371 | 5009      | 4575 | 3997      | 2795 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   |           |     |
|      |      | 18.6          | 0.93      | 17.7 | 0.97      | 16.7 | 1.02      | 15.1 | 1.05      | 13.5 | 1.07      | 12.2 | 1.06      | 11.9 | 1.04      | 11.7 | 0.88      | -    | -         | -   | -         |     |

# LF24BC | BELT DRIVE

| HP    | RPM  | Tip Speed FPM | 0.000" SP |      | 0.125" SP |      | 0.250" SP |      | 0.375" SP |      | 0.500" SP |      | 0.625" SP |      | 0.750" SP |      | 0.875" SP |      | 1.000" SP |      | 1.125" SP |      |       |     |
|-------|------|---------------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-------|-----|
|       |      |               | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM   |     |
|       |      |               | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones | BHP |
| 1 1/2 | 745  | 4827          | 6557      |      | 6309      |      | 6037      |      | 5728      |      | 5384      |      | 5013      |      | 4531      |      | 3859      |      | 2206      |      | -         |      |       |     |
|       |      |               | 20.0      | 1.07 | 19.3      | 1.12 | 18.4      | 1.16 | 16.7      | 1.21 | 15.0      | 1.23 | 13.5      | 1.23 | 13.0      | 1.21 | 12.9      | 1.17 | 12.6      | 0.87 | -         |      |       |     |
|       | 780  | 5054          | 6866      |      | 6628      |      | 6372      |      | 6092      |      | 5764      |      | 5434      |      | 5027      |      | 4508      |      | 3791      |      | -         |      |       |     |
|       |      |               | 21.0      | 1.23 | 21.0      | 1.28 | 19.6      | 1.33 | 18.4      | 1.37 | 16.6      | 1.40 | 15.2      | 1.41 | 14.0      | 1.40 | 13.8      | 1.38 | 13.7      | 1.31 | -         |      |       |     |
|       | 800  | 5184          | 7042      |      | 6810      |      | 6562      |      | 6298      |      | 5979      |      | 5657      |      | 5285      |      | 4822      |      | 4198      |      | -         |      |       |     |
|       |      |               | 22.0      | 1.33 | 21.0      | 1.37 | 20.0      | 1.43 | 19.3      | 1.48 | 17.5      | 1.51 | 16.0      | 1.52 | 14.6      | 1.52 | 14.2      | 1.50 | 14.1      | 1.45 | -         |      |       |     |
| 817   | 5294 | 7191          |           | 6964 |           | 6723 |           | 6470 |           | 6159 |           | 5845 |           | 5503 |           | 5084 |           | 4537 |           | 1796 |           |      |       |     |
|       |      | 22.0          | 1.41      | 22.0 | 1.46      | 21.0 | 1.51      | 19.8 | 1.57      | 18.2 | 1.60      | 16.8 | 1.62      | 15.4 | 1.62      | 14.7 | 1.60      | 14.3 | 1.57      | 14.1 | 1.00      |      |       |     |
| 2     | 860  | 5572          | 7570      |      | 7354      |      | 7129      |      | 6889      |      | 6612      |      | 6314      |      | 6015      |      | 5656      |      | 5228      |      | 3837      |      |       |     |
|       |      |               | 24.0      | 1.65 | 23.0      | 1.70 | 22.0      | 1.75 | 21.0      | 1.81 | 20.0      | 1.85 | 18.5      | 1.88 | 17.4      | 1.89 | 16.1      | 1.88 | 15.4      | 1.86 | 15.2      | 1.68 |       |     |
|       | 880  | 5702          | 7746      |      | 7535      |      | 7317      |      | 7082      |      | 6820      |      | 6530      |      | 6237      |      | 5912      |      | 5534      |      | 4401      |      |       |     |
|       |      |               | 25.0      | 1.77 | 24.0      | 1.82 | 23.0      | 1.87 | 23.0      | 1.93 | 21.0      | 1.98 | 19.7      | 2.01 | 18.4      | 2.02 | 17.0      | 2.02 | 16.1      | 2.01 | 15.6      | 1.90 |       |     |
|       | 901  | 5838          | 7931      |      | 7725      |      | 7514      |      | 7284      |      | 7038      |      | 6754      |      | 6469      |      | 6178      |      | 5809      |      | 4825      |      |       |     |
|       |      |               | 26.0      | 1.90 | 25.0      | 1.95 | 24.0      | 2.00 | 24.0      | 2.07 | 22.0      | 2.12 | 21.0      | 2.15 | 19.7      | 2.17 | 18.4      | 2.18 | 16.9      | 2.16 | 15.9      | 2.08 |       |     |

Performance shown is for installation type A: free inlet, free outlet. Power rating (BHP) does not include drive losses. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

# LF30BC | BELT DRIVE



Peak BHP =  $(\text{RPM}/521)^3$

Maximum RPM = 843

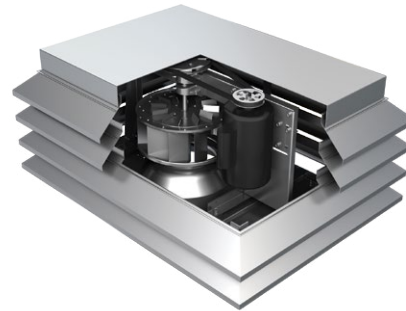
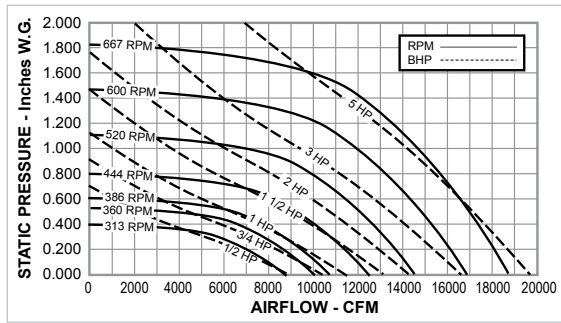
| HP    | RPM  | Tip Speed FPM | 0.000" SP |      | 0.125" SP |      | 0.250" SP |      | 0.375" SP |      | 0.500" SP |      | 0.625" SP |      | 0.750" SP |      | 1.000" SP |      | 1.125" SP |      | 1.250" SP |     |       |     |
|-------|------|---------------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|-----|-------|-----|
|       |      |               | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |     |       |     |
|       |      |               | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP | Sones | BHP |
| 1/3   | 250  | 2004          | 3670      | -    | 2536      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     |     |
|       |      |               | 4.3       | 0.09 | 3.2       | 0.11 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     | -   |
|       | 275  | 2205          | 4037      | -    | 3078      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     |     |
|       |      |               | 5.0       | 0.13 | 4.1       | 0.15 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     | -   |
|       | 300  | 2405          | 4404      | -    | 3562      | -    | 1158      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     |     |
|       |      |               | 6.0       | 0.16 | 5.1       | 0.19 | 3.2       | 0.12 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     | -   |
|       |      |               | 4991      | -    | 4271      | -    | 3248      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     | -   |
| 340   | 2726 | 4991          | -         | 4271 | -         | 3248 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   |       |     |
|       |      | 7.5           | 0.24      | 6.2  | 0.27      | 5.4  | 0.27      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     |     |
| 360   | 2886 | 5284          | -         | 4616 | -         | 3746 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   |       |     |
|       |      | 8.4           | 0.28      | 6.6  | 0.32      | 6.0  | 0.33      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     |     |
| 375   | 3007 | 5505          | -         | 4869 | -         | 4077 | -         | 2160 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   |       |     |
|       |      | 9.1           | 0.32      | 7.0  | 0.36      | 6.5  | 0.37      | 5.5  | 0.30      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     |     |
| 1/2   | 400  | 3207          | 5872      | -    | 5278      | -    | 4570      | -    | 3441      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   |       |     |
|       |      |               | 10.6      | 0.39 | 7.8       | 0.43 | 7.1       | 0.45 | 6.5       | 0.43 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     |     |
|       | 6165 | -             | 5602      | -    | 4956      | -    | 4068      | -    | 1215      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   |       |     |
| 420   | 3367 | 11.7          | 0.45      | 8.6  | 0.49      | 7.5  | 0.52      | 7.1  | 0.51      | 6.5  | 0.30      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   |       |     |
|       |      | 6341          | -         | 5795 | -         | 5178 | -         | 4368 | -         | 2396 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     |     |
| 432   | 3464 | 12.4          | 0.49      | 9.0  | 0.53      | 7.8  | 0.56      | 7.4  | 0.56      | 6.9  | 0.45      | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   |       |     |
|       |      | 6752          | -         | 6242 | -         | 5675 | -         | 5007 | -         | 3906 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     |     |
| 3/4   | 460  | 3688          | 14.1      | 0.59 | 10.2      | 0.64 | 8.3       | 0.67 | 8.1       | 0.69 | 7.7       | 0.65 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   |       |     |
|       |      |               | 7046      | -    | 6559      | -    | 6025      | -    | 5404      | -    | 4572      | -    | 2387      | -    | -         | -    | -         | -    | -         | -    | -         | -   | -     |     |
|       | 15.0 | 0.67          | 11.3      | 0.72 | 9.0       | 0.76 | 8.8       | 0.78 | 8.4       | 0.77 | 8.2       | 0.58 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   |       |     |
| 496   | 3977 | 7281          | -         | 6811 | -         | 6303 | -         | 5716 | -         | 4974 | -         | 3556 | -         | -    | -         | -    | -         | -    | -         | -    | -         | -   |       |     |
|       |      | 15.8          | 0.74      | 12.4 | 0.79      | 9.7  | 0.83      | 9.4  | 0.86      | 9.0  | 0.85      | 8.6  | 0.77      | -    | -         | -    | -         | -    | -         | -    | -         | -   |       |     |
| 1     | 520  | 4169          | 7633      | -    | 7187      | -    | 6714      | -    | 6176      | -    | 5558      | -    | 4572      | -    | 2044      | -    | -         | -    | -         | -    | -         | -   |       |     |
|       |      |               | 16.7      | 0.85 | 13.7      | 0.91 | 11.0      | 0.96 | 10.4      | 0.98 | 10.0      | 1.00 | 9.5       | 0.95 | 9.4       | 0.65 | -         | -    | -         | -    | -         | -   | -     |     |
| 532   | 4265 | 7809          | -         | 7375 | -         | 6914 | -         | 6394 | -         | 5799 | -         | 4993 | -         | 3197 | -         | -    | -         | -    | -         | -    | -         | -   |       |     |
|       |      | 17.2          | 0.91      | 14.5 | 0.97      | 11.8 | 1.02      | 11.1 | 1.05      | 10.5 | 1.06      | 10.0 | 1.04      | 9.6  | 0.88      | -    | -         | -    | -         | -    | -         | -   | -     |     |
| 1 1/2 | 570  | 4570          | 8367      | -    | 7962      | -    | 7535      | -    | 7067      | -    | 6547      | -    | 5943      | -    | 5021      | -    | 3025      | -    | -         | -    | -         | -   |       |     |
|       |      |               | 19.4      | 1.12 | 16.8      | 1.19 | 14.6      | 1.24 | 13.2      | 1.28 | 12.5      | 1.30 | 11.8      | 1.31 | 11.2      | 1.25 | 10.9      | 1.01 | -         | -    | -         | -   | -     |     |
|       | 8661 | -             | 8269      | -    | 7859      | -    | 7417      | -    | 6933      | -    | 6387      | -    | 5654      | -    | 4398      | -    | -         | -    | -         | -    | -         | -   |       |     |
|       | 20.0 | 1.24          | 18.0      | 1.31 | 15.8      | 1.37 | 14.4      | 1.41 | 13.6      | 1.44 | 12.8      | 1.45 | 12.2      | 1.42 | 11.5      | 1.31 | -         | -    | -         | -    | -         | -   |       |     |
|       | 8808 | -             | 8422      | -    | 8020      | -    | 7590      | -    | 7124      | -    | 6587      | -    | 5905      | -    | 4858      | -    | 2317      | -    | -         | -    | -         | -   |       |     |
| 612   | 4907 | 21.0          | 1.31      | 18.6 | 1.38      | 16.5 | 1.43      | 14.9 | 1.48      | 14.2 | 1.51      | 13.3 | 1.52      | 12.6 | 1.50      | 11.9 | 1.42      | 11.8 | 1.00      | -    | -         | -   |       |     |
|       |      | 8984          | -         | 8606 | -         | 8213 | -         | 7797 | -         | 7341 | -         | 6825 | -         | 6204 | -         | 5292 | -         | 3491 | -         | -    | -         | -   | -     |     |
|       |      |               | 22.0      | 1.39 | 19.3      | 1.46 | 17.3      | 1.52 | 15.7      | 1.57 | 14.9      | 1.60 | 14.0      | 1.62 | 13.2      | 1.61 | 12.5      | 1.54 | 12.2      | 1.30 | -         | -   |       |     |

# LF30BC | BELT DRIVE

| HP | RPM | Tip Speed FPM | 0.000" SP |      | 0.125" SP |      | 0.250" SP |      | 0.375" SP |      | 0.500" SP |      | 0.625" SP |      | 0.750" SP |      | 1.000" SP |      | 1.125" SP |      | 1.250" SP |      |       |     |
|----|-----|---------------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-------|-----|
|    |     |               | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM       |      | CFM   |     |
|    |     |               | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones | BHP |
| 2  | 640 | 5131          | 9395      |      | 9033      |      | 8660      |      | 8276      |      | 7841      |      | 7373      |      | 6870      |      | 6176      |      | 5142      |      | -         |      |       |     |
|    |     |               | 23.0      | 1.59 | 21.0      | 1.66 | 19.1      | 1.72 | 17.4      | 1.78 | 16.5      | 1.82 | 15.6      | 1.84 | 14.6      | 1.86 | 14.0      | 1.82 | 13.2      | 1.72 | -         |      |       |     |
|    | 660 | 5292          | 9688      |      | 9338      |      | 8978      |      | 8607      |      | 8193      |      | 7758      |      | 7270      |      | 6676      |      | 5863      |      | 1513      |      |       |     |
|    |     |               | 24.0      | 1.74 | 22.0      | 1.81 | 20.0      | 1.88 | 18.9      | 1.94 | 17.7      | 1.98 | 16.8      | 2.01 | 15.7      | 2.03 | 15.0      | 2.01 | 14.4      | 1.95 | 14.0      | 1.06 |       |     |
|    | 670 | 5372          | 9835      |      | 9490      |      | 9136      |      | 8771      |      | 8368      |      | 7949      |      | 7469      |      | 6923      |      | 6217      |      | 2509      |      |       |     |
|    |     |               | 24.0      | 1.82 | 23.0      | 1.90 | 21.0      | 1.97 | 19.6      | 2.03 | 18.4      | 2.07 | 17.4      | 2.10 | 16.3      | 2.12 | 15.5      | 2.12 | 15.0      | 2.07 | 14.3      | 1.37 |       |     |
|    | 674 | 5404          | 9894      |      | 9551      |      | 9200      |      | 8836      |      | 8438      |      | 8024      |      | 7548      |      | 7021      |      | 6344      |      | 2903      |      |       |     |
|    |     |               | 25.0      | 1.85 | 23.0      | 1.93 | 21.0      | 2.00 | 19.9      | 2.06 | 18.7      | 2.11 | 17.7      | 2.14 | 16.6      | 2.16 | 15.7      | 2.16 | 15.2      | 2.11 | 14.4      | 1.49 |       |     |
| 3  | 700 | 5612          | 10276     |      | 9945      |      | 9610      |      | 9260      |      | 8888      |      | 8490      |      | 8056      |      | 7596      |      | 6999      |      | 4941      |      |       |     |
|    |     |               | 26.0      | 2.08 | 25.0      | 2.16 | 23.0      | 2.23 | 22.0      | 2.29 | 21.0      | 2.35 | 19.6      | 2.38 | 18.4      | 2.41 | 17.1      | 2.42 | 16.5      | 2.40 | 15.5      | 2.14 |       |     |
|    | 720 | 5773          | 10569     |      | 10248     |      | 9924      |      | 9583      |      | 9232      |      | 8845      |      | 8441      |      | 7994      |      | 7492      |      | 5911      |      |       |     |
|    |     |               | 28.0      | 2.26 | 26.0      | 2.34 | 25.0      | 2.42 | 24.0      | 2.49 | 23.0      | 2.55 | 21.0      | 2.58 | 20.0      | 2.61 | 18.7      | 2.63 | 17.6      | 2.63 | 16.6      | 2.47 |       |     |
|    | 740 | 5933          | 10863     |      | 10550     |      | 10236     |      | 9905      |      | 9573      |      | 9197      |      | 8820      |      | 8388      |      | 7953      |      | 6630      |      |       |     |
|    |     |               | 29.0      | 2.45 | 28.0      | 2.54 | 26.0      | 2.62 | 25.0      | 2.69 | 24.0      | 2.75 | 23.0      | 2.79 | 21.0      | 2.83 | 20.0      | 2.85 | 18.8      | 2.87 | 17.6      | 2.75 |       |     |
|    | 774 | 6206          | 11362     |      | 11063     |      | 10764     |      | 450       |      | 10133     |      | 9789      |      | 9428      |      | 9047      |      | 8631      |      | 7609      |      |       |     |
|    |     |               | 30.0      | 2.81 | 29.0      | 2.89 | 28.0      | 2.98 | 27.0      | 3.05 | 26.0      | 3.13 | 24.0      | 3.18 | 23.0      | 3.22 | 22.0      | 3.25 | 21.0      | 3.27 | 19.3      | 3.23 |       |     |

Performance shown is for installation type A: free inlet, free outlet. Power rating (BHP) does not include drive losses. The sound ratings shown are for loudness values in fan sonas at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

# LF40BC | BELT DRIVE



Peak BHP = (RPM/378)<sup>3</sup>

Maximum RPM = 779

| HP    | RPM  | Tip Speed FPM | 0.000" SP |       | 0.125" SP |       | 0.250" SP |       | 0.375" SP |       | 0.500" SP |       | 0.625" SP |      | 0.750" SP |      | 0.875" SP |      | 1.000" SP |     | 1.125" SP |     |
|-------|------|---------------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|------|-----------|------|-----------|------|-----------|-----|-----------|-----|
|       |      |               | CFM       |       | CFM       |       | CFM       |       | CFM       |       | CFM       |       | CFM       |      | CFM       |      | CFM       |      | CFM       |     | CFM       |     |
|       |      |               | Sones     | BHP   | Sones     | BHP   | Sones     | BHP   | Sones     | BHP   | Sones     | BHP   | Sones     | BHP  | Sones     | BHP  | Sones     | BHP  | Sones     | BHP | Sones     | BHP |
| 1/2   | 210  | 2045          | 5950      |       | 4010      |       | -         |       | -         |       | -         |       | -         |      | -         |      | -         |      | -         |     | -         |     |
|       |      |               | 4.5       | 0.15  | 4.0       | 0.17  | -         |       | -         |       | -         |       | -         |      | -         |      | -         |      | -         |     | -         |     |
|       | 230  | 2239          | 6184      |       | 4669      |       | -         |       | -         |       | -         |       | -         |      | -         |      | -         |      | -         |     | -         |     |
|       |      |               | 5.4       | 0.17  | 5.0       | 0.21  | -         |       | -         |       | -         |       | -         |      | -         |      | -         |      | -         |     | -         |     |
|       | 250  | 2434          | 6722      |       | 5311      |       | -         |       | -         |       | -         |       | -         |      | -         |      | -         |      | -         |     | -         |     |
|       |      |               | 6.5       | 0.22  | 6.0       | 0.26  | -         |       | -         |       | -         |       | -         |      | -         |      | -         |      | -         |     | -         |     |
|       | 270  | 2629          | 7260      |       | 5995      |       | 4410      |       | -         |       | -         |       | -         |      | -         |      | -         |      | -         |     | -         |     |
|       |      |               | 7.3       | 0.28  | 6.7       | 0.33  | 6.2       | 0.35  | -         |       | -         |       | -         |      | -         |      | -         |      | -         |     | -         |     |
| 290   | 2823 | 7798          |           | 6680  |           | 5380  |           | -     |           | -     |           | -     |           | -    |           | -    |           | -    |           | -   |           |     |
|       |      | 8.0           | 0.35      | 6.8   | 0.40      | 6.6   | 0.44      | -     |           | -     |           | -     |           | -    |           | -    |           | -    |           | -   |           |     |
| 300   | 2921 | 8067          |           | 7018  |           | 5740  |           | -     |           | -     |           | -     |           | -    |           | -    |           | -    |           | -   |           |     |
|       |      | 8.3           | 0.38      | 6.9   | 0.44      | 6.8   | 0.48      | -     |           | -     |           | -     |           | -    |           | -    |           | -    |           | -   |           |     |
| 313   | 3047 | 8416          |           | 7450  |           | 6190  |           | 3010  |           | -     |           | -     |           | -    |           | -    |           | -    |           | -   |           |     |
|       |      | 8.8           | 0.43      | 7.0   | 0.50      | 7.0   | 0.54      | 6.5   | 0.41      | -     |           | -     |           | -    |           | -    |           | -    |           | -   |           |     |
| 3/4   | 330  | 3213          | 8873      |       | 7990      |       | 6750      |       | 5370      |       | -         |       | -         |      | -         |      | -         |      | -         |     | -         |     |
|       |      |               | 9.5       | 0.51  | 7.2       | 0.58  | 7.2       | 0.62  | 6.7       | 0.64  | -         |       | -         |      | -         |      | -         |      | -         |     | -         |     |
|       | 350  | 3408          | 9411      |       | 8585      |       | 7400      |       | 6360      |       | -         |       | -         |      | -         |      | -         |      | -         |     | -         |     |
| 10.6  |      |               | 0.61      | 7.7   | 0.68      | 7.3   | 0.72      | 7.0   | 0.77      | -     |           | -     |           | -    |           | -    |           | -    |           | -   |           |     |
| 360   | 3505 | 9680          |           | 8880  |           | 7730  |           | 6790  |           | 3300  |           | -     |           | -    |           | -    |           | -    |           | -   |           |     |
|       |      | 11.2          | 0.66      | 8.0   | 0.74      | 7.5   | 0.78      | 7.3   | 0.84      | 7.0   | 0.62      | -     |           | -    |           | -    |           | -    |           | -   |           |     |
| 1     | 370  | 3602          | 9950      |       | 9170      |       | 8070      |       | 7120      |       | 5230      |       | -         |      | -         |      | -         |      | -         |     | -         |     |
|       |      |               | 11.7      | 0.72  | 8.4       | 0.80  | 7.7       | 0.84  | 7.5       | 0.90  | 7.3       | 0.85  | -         |      | -         |      | -         |      | -         |     | -         |     |
| 386   | 3758 | 10380         |           | 9630  |           | 8630  |           | 7680  |           | 6480  |           | -     |           | -    |           | -    |           | -    |           | -   |           |     |
|       |      | 12.5          | 0.81      | 9.3   | 0.90      | 8.2   | 0.95      | 8.0   | 1.00      | 7.7   | 1.02      | -     |           | -    |           | -    |           | -    |           | -   |           |     |
| 1 1/2 | 420  | 4089          | 11293     |       | 10616     |       | 9769      |       | 8775      |       | 7970      |       | 6450      |      | -         |      | -         |      | -         |     | -         |     |
|       |      |               | 14.7      | 1.05  | 11.4      | 1.14  | 9.6       | 1.21  | 9.2       | 1.25  | 9.1       | 1.32  | 8.9       | 1.28 | -         |      | -         |      | -         |     | -         |     |
|       | 430  | 4186          | 11562     |       | 10890     |       | 10090     |       | 9100      |       | 8320      |       | 7160      |      | -         |      | -         |      | -         |     | -         |     |
| 15.3  |      |               | 1.12      | 12.1  | 1.22      | 10.1  | 1.29      | 9.6   | 1.33      | 9.4   | 1.40      | 9.2   | 1.41      | -    |           | -    |           | -    |           | -   |           |     |
| 444   | 4323 | 11939         |           | 11288 |           | 10566 |           | 9570  |           | 8780  |           | 7835  |           | 4430 |           | -    |           | -    |           | -   |           |     |
|       |      | 16.3          | 1.24      | 13.2  | 1.33      | 10.9  | 1.41      | 10.3  | 1.46      | 10.0  | 1.53      | 9.8   | 1.56      | 9.7  | 1.20      | -    |           | -    |           | -   |           |     |
| 2     | 470  | 4576          | 12638     |       | 12030     |       | 11385     |       | 10460     |       | 9670      |       | 8950      |      | 7780      |      | 3550      |      | -         |     | -         |     |
|       |      |               | 17.6      | 1.47  | 14.9      | 1.57  | 12.7      | 1.67  | 11.7      | 1.71  | 11.1      | 1.77  | 10.9      | 1.85 | 10.7      | 1.84 | 10.6      | 1.29 | -         |     | -         |     |
|       | 480  | 4673          | 12907     |       | 12326     |       | 11720     |       | 10820     |       | 9990      |       | 9290      |      | 8270      |      | 4840      |      | -         |     | -         |     |
|       |      |               | 18.2      | 1.56  | 15.6      | 1.67  | 13.6      | 1.77  | 12.4      | 1.82  | 11.5      | 1.88  | 11.4      | 1.95 | 11.2      | 1.97 | 11.0      | 1.52 | -         |     | -         |     |
|       | 489  | 4761          | 13149     |       | 12557     |       | 11965     |       | 11111     |       | 10260     |       | 9600      |      | 8700      |      | 6840      |      | -         |     | -         |     |
| 18.8  |      |               | 1.65      | 16.3  | 1.76      | 14.4  | 1.87      | 13.0  | 1.92      | 11.9  | 1.97      | 11.8  | 2.05      | 11.7 | 2.09      | 11.5 | 1.94      | -    |           | -   |           |     |
| 520   | 5063 | 13982         |           | 13430 |           | 12870 |           | 12160 |           | 11300 |           | 10626 |           | 9950 |           | 9000 |           | 6921 |           | -   |           |     |
|       |      | 21.0          | 1.99      | 18.9  | 2.10      | 16.9  | 2.22      | 15.4  | 2.29      | 14.0  | 2.34      | 13.3  | 2.41      | 13.2 | 2.50      | 13.0 | 2.50      | 12.9 | 2.29      | -   |           |     |

# LF40BC | BELT DRIVE

| HP  | RPM  | Tip Speed FPM | 0.000" SP |       | 0.125" SP |       | 0.250" SP |       | 0.375" SP |       | 0.500" SP |       | 0.625" SP |       | 0.750" SP |       | 0.875" SP |       | 1.000" SP |      | 1.125" SP |      |       |     |
|-----|------|---------------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|------|-----------|------|-------|-----|
|     |      |               | CFM       |       | CFM       |       | CFM       |       | CFM       |       | CFM       |       | CFM       |       | CFM       |       | CFM       |       | CFM       |      | CFM       |      | CFM   |     |
|     |      |               | Sones     | BHP   | Sones     | BHP   | Sones     | BHP   | Sones     | BHP   | Sones     | BHP   | Sones     | BHP   | Sones     | BHP   | Sones     | BHP   | Sones     | BHP  | Sones     | BHP  | Sones | BHP |
| 3   | 540  | 5257          | 14520     |       | 14000     |       | 13450     |       | 12810     |       | 11990     |       | 11253     |       | 10650     |       | 9946      |       | 8820      |      | -         |      |       |     |
|     |      |               | 23.0      | 2.23  | 21.0      | 2.34  | 18.8      | 2.46  | 17.0      | 2.55  | 15.6      | 2.60  | 14.4      | 2.67  | 14.3      | 2.75  | 14.2      | 2.82  | 14.0      | 2.78 | -         |      |       |     |
|     | 561  | 5462          | 15085     |       | 14570     |       | 14060     |       | 13490     |       | 12700     |       | 11930     |       | 11330     |       | 10730     |       | 9870      |      | 4070      |      |       |     |
|     |      |               | 26.0      | 2.49  | 23.0      | 2.62  | 21.0      | 2.74  | 19.0      | 2.85  | 17.6      | 2.90  | 16.1      | 2.95  | 15.7      | 3.04  | 15.6      | 3.14  | 15.5      | 3.15 | 15.1      | 2.16 |       |     |
| 600 | 5841 | 16133         |           | 15660 |           | 15170 |           | 14690 |           | 14020 |           | 13300 |           | 12600 |           | 12060 |           | 11480 |           | 9650 |           |      |       |     |
|     |      | 28.0          | 3.15      | 26.0  | 3.18      | 24.0  | 3.31      | 22.0  | 3.45      | 21.0  | 3.51      | 19.7  | 3.57      | 18.5  | 3.64      | 18.2  | 3.74      | 17.9  | 3.84      | 17.2 | 3.80      |      |       |     |
| 5   | 620  | 6036          | 16671     |       | 16220     |       | 15750     |       | 15270     |       | 14670     |       | 13960     |       | 13254     |       | 12700     |       | 12170     |      | 10680     |      |       |     |
|     |      |               | 30.0      | 3.36  | 28.0      | 3.50  | 26.0      | 3.64  | 25.0      | 3.78  | 23.0      | 3.86  | 22.0      | 3.92  | 21.0      | 3.98  | 19.8      | 4.08  | 19.5      | 4.18 | 18.6      | 4.24 |       |     |
|     | 640  | 6231          | 17200     |       | 16780     |       | 16310     |       | 15870     |       | 15330     |       | 14650     |       | 13980     |       | 13360     |       | 12850     |      | 11610     |      |       |     |
|     |      |               | 31.0      | 3.70  | 30.0      | 3.84  | 28.0      | 3.98  | 27.0      | 4.12  | 26.0      | 4.23  | 24.0      | 4.29  | 23.0      | 4.35  | 22.0      | 4.44  | 21.0      | 4.54 | 20.0      | 4.69 |       |     |
|     | 652  | 6348          | 17530     |       | 13093     |       | 16655     |       | 16220     |       | 15690     |       | 15040     |       | 14376     |       | 13750     |       | 13236     |      | 12184     |      |       |     |
|     |      |               | 32.0      | 3.92  | 31.0      | 4.06  | 29.0      | 4.20  | 28.0      | 4.34  | 27.0      | 4.46  | 26.0      | 4.53  | 24.0      | 4.59  | 23.0      | 4.66  | 23.0      | 4.77 | 21.0      | 4.97 |       |     |
|     | 667  | 6494          | 17920     |       | 17510     |       | 17090     |       | 16660     |       | 16170     |       | 15520     |       | 14890     |       | 14230     |       | 13720     |      | 12730     |      |       |     |
|     |      |               | 34.0      | 4.20  | 32.0      | 4.34  | 31.0      | 4.48  | 30.0      | 4.63  | 29.0      | 4.77  | 28.0      | 4.83  | 27.0      | 4.89  | 25.0      | 4.96  | 24.0      | 5.06 | 23.0      | 5.28 |       |     |

Performance shown is for installation type A: free inlet, free outlet. Power rating (BHP) does not include drive losses. The sound ratings shown are for loudness values in fan sonas at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

# PENNBARRY PRODUCT SOLUTIONS



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- Hooded roof axial fans
- Upblast roof axial fans
- Gravity ventilators
- Roof curbs



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- Freestanding centrifugal fans
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- Mixed flow centrifugal fans
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- Wall mounted propeller fans
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- Vane axial fans
- Bifurcator fans
- Lab exhaust



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