

# BDU Belt Drive

## Centrifugal Upblast Fans



### Features & Benefits

- Complete range of motors available to meet specific application needs
- Heavy duty construction, durable and weather resistant
- Non-overloading backward inclined wheels, blades and inlets fabricated from 3003-H14 aluminum
- Wall mount applications; units up to 24" wheel can be wall mounted up to 2 hp
- Forced fresh air through the motor compartment cools motor and ensures long motor life
- Quick release latches allow for easy access to motor compartment
- Variable pitch motor pulley allows for field adjustment and system balancing
- High efficiency combined with low tip speeds result in quiet operation
- External disconnect switch
- Fully welded, leak-proof grease drain
- Vibration isolation

### Options

- Gravity Damper (UL 705 only)
- Motorized Damper (UL 705 only)
- Wall Mount Sleeve
- Bird Screen (UL 705 only)
- Grease Collection Box
- Roof Curb (vented & non vented)
- Base Hinging Kit  
(for NFPA96 compliance)

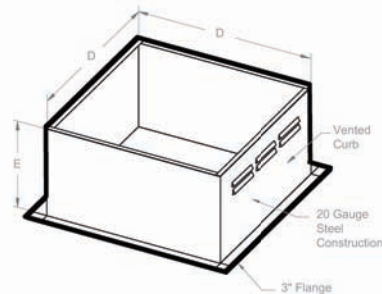
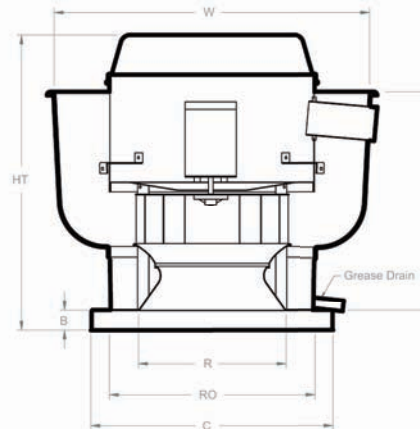
### Certifications



FloAir certifies that Models BDU11 thru BDU36 shown herein are licensed to bear the AMCA seal. The ratings shown are based on tests & procedures performed in accordance with AMCA Publication 211 and Publication 311, and comply with the requirements of the AMCA Certified Ratings Program.



Models BDU11 thru BDU36 are ETL Listed and comply with UL705 (electrical) and UL762 Standards and CSA Std. C22.2, No. 113.



### Measurements

| MODEL | HT      | W       | B | C      | D      | E  | F       | R      | RO | Weight Lbs | Damper Sq. |
|-------|---------|---------|---|--------|--------|----|---------|--------|----|------------|------------|
| BDU11 | 25 1/4  | 27 1/4  | 2 | 21     | 19 1/2 | 22 | 18 1/2  | 12 1/8 | 16 | 105        | 15         |
| BDU13 | 27 1/4  | 30 1/4  | 2 | 21     | 19 1/2 | 20 | 21 1/2  | 13 1/4 | 16 | 120        | 15         |
| BDU15 | 30 1/2  | 33 3/4  | 2 | 24 3/4 | 23     | 20 | 23      | 14 7/8 | 20 | 140        | 19         |
| BDU18 | 33 3/4  | 39 3/8  | 2 | 28     | 26 1/2 | 20 | 23 1/2  | 16 1/2 | 24 | 190        | 23         |
| BDU20 | 33 3/8  | 38 7/8  | 2 | 28     | 26 1/2 | 20 | 29 1/2  | 18     | 24 | 195        | 23         |
| BDU24 | 37 1/2  | 43 3/8  | 2 | 33     | 31 1/2 | 20 | 30 5/8  | 23 7/8 | 28 | 270        | 27         |
| BDU30 | 40      | 52 3/4  | 2 | 40     | 38 1/2 | 20 | 33 1/2  | 24     | 36 | 410        | 35         |
| BDU36 | 49 9/16 | 63 7/16 | 2 | 44     | 43     | 20 | 43 7/16 | 25 1/4 | 40 | 470        | 39         |

### Motor Availability

| HP    | Single Phase |         | Three Phase |         |
|-------|--------------|---------|-------------|---------|
|       | Open         | 2 Speed | Open        | 2 Speed |
| 1/4   | +            | na      | na          | na      |
| 1/3   | +            | na      | na          | na      |
| 1/2   | +            | +       | +           | +       |
| 3/4   | +            | +       | +           | +       |
| 1     | +            | +       | +           | +       |
| 1 1/2 | +            | na      | +           | +       |
| 2     | +            | na      | +           | +       |
| 3     | +            | na      | +           | +       |
| 5     | na           | na      | +           | +       |
| 7 1/2 | na           | na      | +           | +       |

### Motor Frame

| Model | Largest Frame |
|-------|---------------|
| BDU11 | 56            |
| BDU13 | 56            |
| BDU15 | 145T          |
| BDU18 | 145T          |
| BDU20 | 145T          |
| BDU24 | 182T          |
| BDU30 | 182T          |
| BDU36 | 213T          |

**BHP** (Brake Horsepower): The actual power developed by a motor as measured by the force applied to a shaft or flywheel.

| Performance |      | 0.00" sp            | 0.25" sp            | 0.50" sp            | 0.75" sp            | 1.00" sp            | 1.25" sp            | 1.50" sp            | 1.75" sp            | 2.00" sp            |
|-------------|------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| MODEL       | CFM  | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     |
| BDU11       | 800  | 900<br>3.4 / 0.05   | 1062<br>4.5 / 0.09  | 1242<br>4.9 / 0.14  | 1391<br>6.4 / 0.19  | 1527<br>10.4 / 0.25 |                     |                     |                     |                     |
| BDU11       | 1000 | 1038<br>4.7 / 0.07  | 1235<br>6.1 / 0.13  | 1397<br>7.6 / 0.20  | 1536<br>11.7 / 0.26 | 1658<br>12.3 / 0.33 | 1773<br>13 / 0.40   | 1883<br>13.5 / 0.48 |                     |                     |
| BDU11       | 1200 | 1246<br>6.1 / 0.13  | 1413<br>8.9 / 0.20  | 1560<br>12.9 / 0.27 | 1693<br>14.1 / 0.35 | 1807<br>14.8 / 0.43 |                     |                     |                     |                     |
| BDU11       | 1400 | 1454<br>11.6 / 0.20 | 1600<br>14 / 0.28   | 1733<br>15.3 / 0.37 | 1854<br>16.4 / 0.45 |                     |                     |                     |                     |                     |
| BDU11       | 1600 | 1661<br>15 / 0.30   | 1790<br>16.4 / 0.39 | 1912<br>16 / 0.49   |                     |                     |                     |                     |                     |                     |
| BDU11       | 1800 | 1869<br>17.8 / 0.43 |                     |                     |                     |                     |                     |                     |                     |                     |
| BDU13       | 1200 | 800<br>5.7 / 0.07   | 909<br>6.8 / 0.12   | 1045<br>8.9 / 0.18  | 1180<br>11.4 / 0.26 | 1311<br>12.6 / 0.34 | 1442<br>15.2 / 0.43 |                     |                     |                     |
| BDU13       | 1400 | 896<br>8.3 / 0.09   | 1017<br>10.1 / 0.16 | 1135<br>12.6 / 0.23 | 1252<br>12.1 / 0.31 | 1367<br>14.4 / 0.40 | 1480<br>15.7 / 0.50 |                     |                     |                     |
| BDU13       | 1600 | 1024<br>11.1 / 0.14 | 1131<br>13.1 / 0.21 | 1235<br>13.9 / 0.29 | 1338<br>14.9 / 0.38 | 1439<br>15.8 / 0.48 |                     |                     |                     |                     |
| BDU13       | 1800 | 1152<br>14.4 / 0.20 | 1247<br>14.6 / 0.28 | 1340<br>15.4 / 0.37 | 1432<br>16.6 / 0.46 |                     |                     |                     |                     |                     |
| BDU13       | 2000 | 1280<br>14.8 / 0.28 | 1366<br>17.1 / 0.36 | 1450<br>17.9 / 0.46 |                     |                     |                     |                     |                     |                     |
| BDU13       | 2200 | 1408<br>18.7 / 0.37 | 1486<br>19.4 / 0.46 |                     |                     |                     |                     |                     |                     |                     |
| BDU13       | 2400 | 1536<br>21 / 0.48   |                     |                     |                     |                     |                     |                     |                     |                     |
| BDU15       | 1600 | 700<br>5.1 / 0.09   | 779<br>6.5 / 0.14   | 911<br>8.3 / 0.23   | 1034<br>9.6 / 0.32  | 1151<br>12.6 / 0.43 | 1263<br>14.7 / 0.55 |                     |                     |                     |
| BDU15       | 1800 | 719<br>6.9 / 0.10   | 844<br>9.2 / 0.18   | 964<br>10.4 / 0.27  | 1077<br>10.8 / 0.37 | 1184<br>12.5 / 0.49 | 1288<br>14.8 / 0.61 | 1389<br>15.4 / 0.74 | 1486<br>16.5 / 0.89 |                     |
| BDU15       | 2000 | 798<br>8.7 / 0.13   | 912<br>10.7 / 0.22  | 1021<br>10.2 / 0.32 | 1125<br>13.2 / 0.43 | 1225<br>13.6 / 0.55 | 1322<br>14.9 / 0.68 | 1415<br>15.6 / 0.81 | 1507<br>16.7 / 0.96 |                     |
| BDU15       | 2200 | 878<br>10.2 / 0.18  | 981<br>12.2 / 0.27  | 1083<br>12.6 / 0.38 | 1180<br>14 / 0.50   | 1272<br>15.9 / 0.62 | 1362<br>15.8 / 0.75 | 1449<br>16 / 0.89   |                     |                     |
| BDU15       | 2400 | 958<br>11.6 / 0.23  | 1053<br>12.4 / 0.33 | 1146<br>14.3 / 0.45 | 1236<br>15.4 / 0.57 | 1324<br>17.5 / 0.70 | 1408<br>17.3 / 0.84 | 1490<br>17.1 / 0.98 |                     |                     |
| BDU15       | 2600 | 1038<br>12 / 0.29   | 1125<br>14.3 / 0.40 | 1212<br>15.1 / 0.52 | 1297<br>17.5 / 0.65 | 1379<br>18.6 / 0.79 | 1458<br>19.6 / 0.94 |                     |                     |                     |
| BDU15       | 2800 | 1118<br>14.1 / 0.36 | 1199<br>15.5 / 0.48 | 1280<br>18.1 / 0.61 | 1359<br>18.7 / 0.75 | 1436<br>19.7 / 0.89 |                     |                     |                     |                     |
| BDU15       | 3000 | 1198<br>15.5 / 0.44 | 1273<br>19.1 / 0.57 | 1349<br>19.7 / 0.71 | 1424<br>20 / 0.85   | 1496<br>21 / 1.00   |                     |                     |                     |                     |
| BDU15       | 3200 | 1277<br>19.4 / 0.54 | 1348<br>21 / 0.67   | 1419<br>21 / 0.82   | 1490<br>22 / 0.97   |                     |                     |                     |                     |                     |
| BDU15       | 3400 | 1357<br>21 / 0.65   | 1423<br>22 / 0.79   | 1491<br>23 / 0.94   |                     |                     |                     |                     |                     |                     |
| BDU15       | 3600 | 1437<br>22 / 0.77   | 1499<br>24 / 0.92   |                     |                     |                     |                     |                     |                     |                     |
| BDU15       | 3800 | 1516<br>24 / 0.90   |                     |                     |                     |                     |                     |                     |                     |                     |
| BDU18       | 1500 | 400<br>2.2 / 0.04   | 534<br>3.6 / 0.11   | 655<br>5.6 / 0.19   |                     |                     |                     |                     |                     |                     |
| BDU18       | 2000 | 524<br>4.2 / 0.09   | 638<br>6 / 0.18     | 733<br>7.7 / 0.28   | 822<br>9 / 0.39     |                     |                     |                     |                     |                     |
| BDU18       | 2500 | 655<br>7.4 / 0.17   | 750<br>9.5 / 0.28   | 833<br>10.3 / 0.40  | 907<br>11 / 0.52    | 978<br>11.6 / 0.66  | 1050<br>12.2 / 0.80 |                     |                     |                     |
| BDU18       | 3000 | 786<br>11.2 / 0.29  | 866<br>12.2 / 0.42  | 940<br>12.8 / 0.56  | 1007<br>13 / 0.70   | 1069<br>12.5 / 0.85 | 1129<br>13.8 / 1.01 | 1188<br>15 / 1.17   | 1248<br>16.1 / 1.35 | 1310<br>17.3 / 1.55 |
| BDU18       | 3500 | 916<br>13.9 / 0.46  | 986<br>14.8 / 0.61  | 1052<br>14.6 / 0.77 | 1113<br>15.1 / 0.94 | 1170<br>16.4 / 1.10 | 1224<br>17.6 / 1.27 | 1276<br>18 / 1.45   | 1327<br>18.5 / 1.64 | 1377<br>19 / 1.83   |
| BDU18       | 4000 | 1047<br>15.6 / 0.69 | 1108<br>17.1 / 0.86 | 1168<br>17.7 / 1.04 | 1224<br>19.4 / 1.23 | 1276<br>20 / 1.41   | 1326<br>20 / 1.60   | 1374<br>21 / 1.80   | 1420<br>21 / 2.00   |                     |
| BDU18       | 4500 | 1178<br>19 / 0.98   | 1232<br>21 / 1.18   | 1286<br>22 / 1.38   | 1337<br>22 / 1.58   | 1386<br>23 / 1.79   | 1433<br>24 / 2.00   |                     |                     |                     |
| BDU18       | 5000 | 1309<br>24 / 1.35   | 1358<br>24 / 1.56   | 1406<br>25 / 1.78   |                     |                     |                     |                     |                     |                     |
| BDU18       | 5500 | 1440<br>27 / 1.80   |                     |                     |                     |                     |                     |                     |                     |                     |
| BDU20       | 2200 | 400<br>3 / 0.06     | 518<br>4.4 / 0.16   | 632<br>6.1 / 0.29   |                     |                     |                     |                     |                     |                     |
| BDU20       | 2700 | 490<br>4.8 / 0.12   | 584<br>6.2 / 0.23   | 684<br>8 / 0.38     | 774<br>9.5 / 0.53   | 862<br>11.3 / 0.70  |                     |                     |                     |                     |
| BDU20       | 3200 | 581<br>6.9 / 0.20   | 657<br>8.3 / 0.33   | 744<br>10.3 / 0.49  | 825<br>10.5 / 0.66  | 902<br>12.2 / 0.84  | 976<br>14 / 1.03    | 1050<br>15.4 / 1.24 |                     |                     |
| BDU20       | 3700 | 672<br>9.6 / 0.31   | 735<br>11 / 0.46    | 810<br>11.5 / 0.63  | 884<br>12.4 / 0.82  | 954<br>13.5 / 1.02  | 1020<br>15 / 1.23   | 1085<br>16.1 / 1.44 | 1148<br>17.6 / 1.67 | 1212<br>19.7 / 1.92 |
| BDU20       | 4200 | 763<br>12.5 / 0.45  | 817<br>12.5 / 0.61  | 881<br>13.5 / 0.80  | 947<br>14.7 / 1.01  | 1012<br>16 / 1.22   | 1073<br>16.6 / 1.45 | 1132<br>17.5 / 1.69 | 1189<br>19 / 1.93   |                     |
| BDU20       | 4700 | 853<br>14.4 / 0.63  | 901<br>15.8 / 0.81  | 956<br>16.2 / 1.01  | 1015<br>17.2 / 1.23 | 1074<br>17.7 / 1.47 | 1131<br>18.7 / 1.71 | 1187<br>20 / 1.97   |                     |                     |
| BDU20       | 5200 | 944<br>17.3 / 0.85  | 986<br>19 / 1.05    | 1034<br>18.9 / 1.27 | 1087<br>19.1 / 1.50 | 1141<br>20 / 1.75   |                     |                     |                     |                     |
| BDU20       | 5700 | 1035<br>21 / 1.12   | 1073<br>21 / 1.34   | 1115<br>21 / 1.57   | 1162<br>22 / 1.82   |                     |                     |                     |                     |                     |
| BDU20       | 6200 | 1126<br>24 / 1.44   | 1160<br>24 / 1.68   | 1199<br>25 / 1.93   |                     |                     |                     |                     |                     |                     |
| BDU20       | 6700 | 1217<br>28 / 1.82   |                     |                     |                     |                     |                     |                     |                     |                     |

Performance shown is for installation Type A: Free Inlet, Free Outlet. Power Rating (BHP) does not include Drive Losses. Performance Ratings do not include the effects of appurtenances in the air stream. The Sound Ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standards 301. Values shown are for installation Type A: Free inlet fan sone levels. The AMCA Certified Ratings Sound Seal applies to Sone Ratings only.

**BHP** (Brake Horsepower): The actual power developed by a motor as measured by the force applied to a shaft or flywheel.

| Performance |       | 0.00 sp            | 0.25 sp             | 0.50 sp             | 0.75 sp             | 1.00 sp             | 1.25 sp             | 1.50 sp             | 1.75 sp             | 2.00 sp             |
|-------------|-------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| MODEL       | CFM   | RPM<br>Sone/BHP    | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     | RPM<br>Sone/BHP     |
| BDU24       | 3500  | 413<br>6.4 / 0.20  | 502<br>8.2 / 0.41   | 581<br>9.3 / 0.64   | 650<br>11.5 / 0.89  | 712<br>13.4 / 1.15  |                     |                     |                     |                     |
| BDU24       | 4500  | 530<br>9.6 / 0.43  | 602<br>11.3 / 0.69  | 668<br>12.9 / 0.97  | 729<br>13.8 / 1.26  | 785<br>14.9 / 1.57  | 838<br>15.8 / 1.90  | 887<br>16.8 / 2.24  | 933<br>18.1 / 2.59  |                     |
| BDU24       | 5500  | 648<br>13.4 / 0.79 | 708<br>14.7 / 1.10  | 764<br>16.0 / 1.43  | 817<br>16.3 / 1.77  | 868<br>17.3 / 2.13  | 915<br>17.5 / 2.50  | 961<br>19.1 / 2.88  | 1004<br>21.0 / 3.28 | 1045<br>23.0 / 3.68 |
| BDU24       | 6500  | 766<br>17.0 / 1.30 | 818<br>18.0 / 1.67  | 866<br>18.1 / 2.05  | 912<br>19.2 / 2.44  | 957<br>19.4 / 2.85  | 1000<br>21.0 / 3.27 | 1042<br>23.0 / 3.70 | 1083<br>24.0 / 4.14 | 1121<br>26.0 / 4.59 |
| BDU24       | 7500  | 884<br>19.8 / 2.00 | 930<br>22.0 / 2.42  | 972<br>22.0 / 2.85  | 1013<br>23.0 / 3.29 | 1053<br>25.0 / 3.75 | 1092<br>27.0 / 4.22 | 1130<br>27.0 / 4.70 |                     |                     |
| BDU24       | 8500  | 1002<br>25 / 2.91  | 1042<br>27.0 / 3.39 | 1081<br>28.0 / 3.87 | 1117<br>29.0 / 4.37 | 1153<br>31.0 / 4.87 |                     |                     |                     |                     |
| BDU24       | 9500  | 1119<br>32 / 4.06  | 1156<br>35.0 / 4.59 |                     |                     |                     |                     |                     |                     |                     |
| BDU30       | 5000  | 321<br>4.8 / 0.23  | 381<br>5.7 / 0.44   | 441<br>7 / 0.69     | 497<br>8.8 / 0.96   |                     |                     |                     |                     |                     |
| BDU30       | 6000  | 385<br>7 / 0.39    | 433<br>7.8 / 0.65   | 487<br>9.1 / 0.93   | 535<br>10.2 / 1.23  | 582<br>11.4 / 1.55  | 629<br>13 / 1.90    |                     |                     |                     |
| BDU30       | 7000  | 449<br>9.7 / 0.62  | 489<br>10.4 / 0.91  | 536<br>11.2 / 1.23  | 580<br>11.6 / 1.57  | 621<br>12.7 / 1.92  | 661<br>13.8 / 2.29  | 701<br>15 / 2.69    | 741<br>16 / 3.10    |                     |
| BDU30       | 8000  | 513<br>12.8 / 0.93 | 546<br>12.9 / 1.25  | 587<br>12.8 / 1.61  | 628<br>13.4 / 1.99  | 666<br>14.7 / 2.38  | 702<br>15 / 2.78    | 737<br>15.9 / 3.19  | 772<br>16.8 / 3.63  | 807<br>17.8 / 4.08  |
| BDU30       | 9000  | 577<br>14 / 1.32   | 606<br>15.1 / 1.68  | 641<br>14.6 / 2.07  | 677<br>15.7 / 2.49  | 713<br>16.3 / 2.92  | 747<br>17.5 / 3.36  | 779<br>17 / 3.80    | 811<br>17.9 / 4.27  | 842<br>19.2 / 4.74  |
| BDU30       | 10000 | 641<br>16.4 / 1.81 | 666<br>17.3 / 2.21  | 697<br>17.8 / 2.63  | 729<br>17.3 / 3.09  | 762<br>18.3 / 3.56  | 794<br>19.2 / 4.03  | 825<br>20 / 4.52    |                     |                     |
| BDU30       | 11000 | 705<br>18.8 / 2.41 | 728<br>19.6 / 2.84  | 754<br>21 / 3.30    | 783<br>19 / 3.79    | 814<br>19.9 / 4.30  | 843<br>22 / 4.82    |                     |                     |                     |
| BDU30       | 12000 | 769<br>21 / 3.13   | 790<br>22 / 3.60    | 813<br>23 / 4.09    | 839<br>24 / 4.62    |                     |                     |                     |                     |                     |
| BDU30       | 13000 | 833<br>27 / 3.98   | 852<br>27 / 4.48    |                     |                     |                     |                     |                     |                     |                     |
| BDU30       | 14000 | 897<br>30 / 4.97   |                     |                     |                     |                     |                     |                     |                     |                     |
| BDU36       | 10000 | 338<br>8.1 / 0.58  | 381<br>9.3 / 1.02   | 426<br>10.5 / 1.52  | 470<br>11.7 / 2.05  | 514<br>13.6 / 2.62  | 558<br>15.4 / 3.23  | 602<br>17.1 / 3.88  | 645<br>18.8 / 4.58  | 687<br>20 / 5.31    |
| BDU36       | 12000 | 406<br>11.8 / 1.00 | 441<br>12.7 / 1.51  | 478<br>13.1 / 2.09  | 515<br>14.1 / 2.70  | 552<br>15.2 / 3.34  | 589<br>16.6 / 4.01  | 626<br>18.1 / 4.71  | 663<br>19.4 / 5.44  | 699<br>21 / 6.20    |
| BDU36       | 14000 | 474<br>15 / 1.59   | 504<br>15.9 / 2.17  | 535<br>17.2 / 2.82  | 567<br>17.5 / 3.51  | 598<br>18.5 / 4.23  | 630<br>18.2 / 4.97  | 662<br>19.3 / 5.73  | 694<br>20 / 6.52    | 725<br>23 / 7.33    |
| BDU36       | 16000 | 541<br>18.7 / 2.37 | 567<br>20 / 3.02    | 594<br>20 / 3.74    | 622<br>21 / 4.51    | 650<br>22 / 5.30    | 677<br>23 / 6.12    | 705<br>24 / 6.96    |                     |                     |
| BDU36       | 18000 | 609<br>23 / 3.37   | 632<br>24 / 4.10    | 656<br>23 / 4.89    | 680<br>25 / 5.73    | 705<br>26 / 6.60    | 729<br>27 / 7.49    |                     |                     |                     |
| BDU36       | 20000 | 676                | 697                 | 719                 | 740                 |                     |                     |                     |                     |                     |

Performance shown is for installation Type A, Free Inlet, Free Outlet. Power Rating (BHP) does not include Drive Losses. Performance Ratings do not include the effects of appurtenances in the air stream. The Sound Ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standards 301. Values shown are for installation Type A; Free inlet fan sone levels. The AMCA Certified Ratings Sound Seal applies to Sone Ratings only.