

## BDU-HP

### CENTRIFUGAL UPBLAST HIGH PRESSURE BELT DRIVE FANS



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- Air Volume: 200 – 22,000 cfm
- Maximum SP: 5" wg. @ standard air density

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#### FEATURES & BENEFITS

- A wide variety of motors are available to meet specific application needs.
- Heavy duty construction, durable and weather resistant.
- Non-overloading backward inclined wheels, blades and inlets fabricated from aluminum.
- Wall mount applications, units up to 24" nominal wheel can be wall mounted.
- 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.
- Standard emergency disconnect switch.

#### OPTIONS

- Gravity Damper. (UL 705 Only)
- Motorized Damper. (UL 705 Only)
- Wall Mount Sleeve.
- Roof Curb. (Vented & Non-Vented)
- Grease Collection Box.
- Bird Screen. (UL 705 Only)
- Base Hinging Kit or Hinged Sub Base. (for NFPA96 compliance)

- Extra Set of V-Belts
- Combination package that includes a supply fan mounted on the same roof curb.

## **DRAWINGS**

Submittal Drawing - High Pressure - UL 705 - General Ventilation  
Submittal Drawing - High Pressure - UL 762 - Kitchen Ventilation  
Duct Mounting Drawing  
Exhaust Fan Through Wall Mount  
Exploded Parts Detail  
Grease Box Installation Drawing  
Hinge Kit Drawing  
Wall Mount Drawing  
Windband Extension

## **OPERATION & INSTALLATION MANUALS**

Operation & Installation Manual  
Operation & Installation Manual (Spanish)  
Operation & Installation Manual (French)

## **ADDITIONAL INFORMATION**

Frequently Asked Fan Questions  
Motor Information  
Performance Data  
Request Product Information  
Written Specification

## **CERTIFICATIONS**

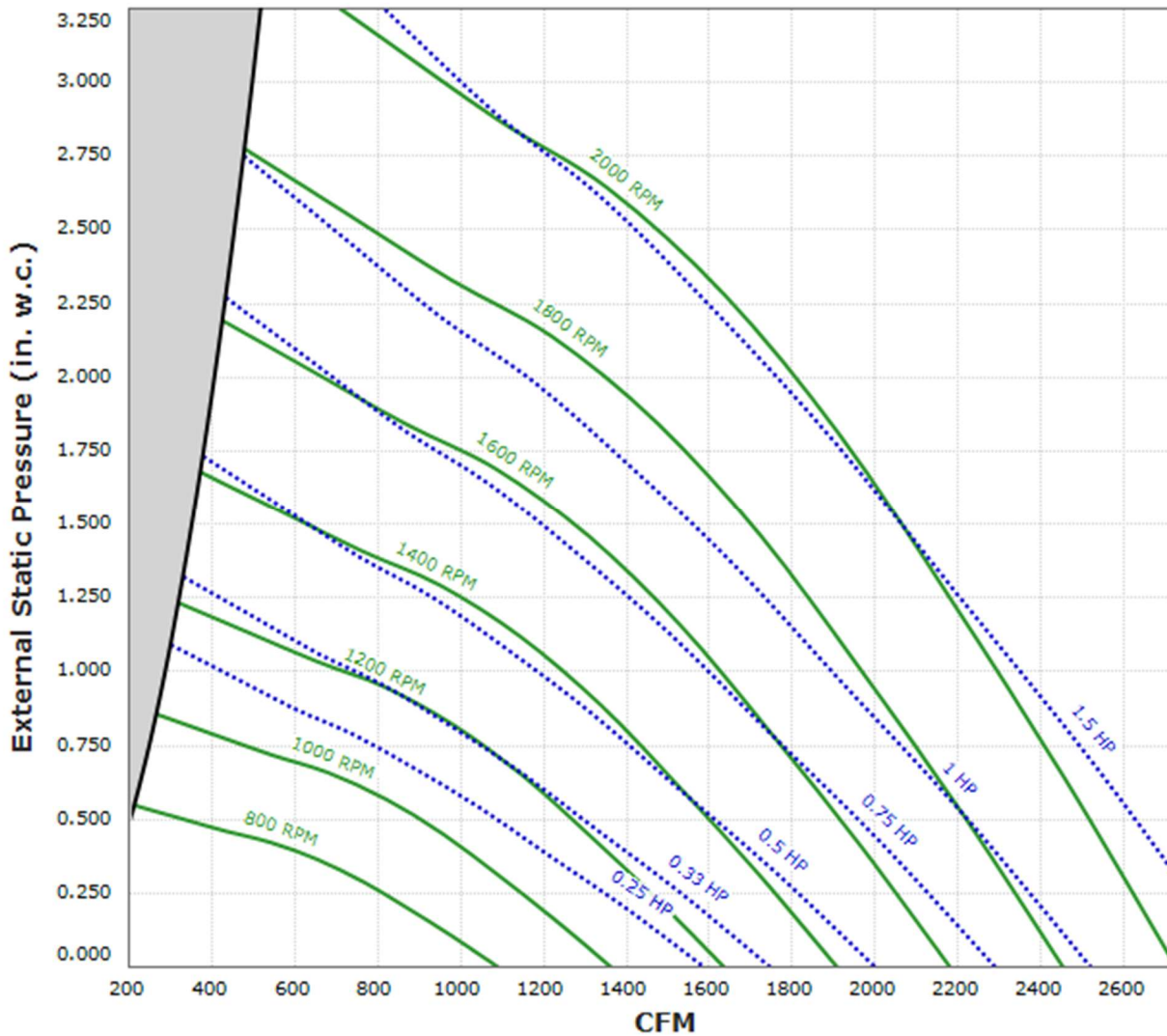


FloAire certifies that Models BDU15HP thru BDU36HP shown herein are licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and Publication 311, and comply with the requirements of the AMCA Certified Rating Program.

Models BDU15HP thru BDU36HP are ETL Listed under file numbers 3049729-001 and 3049729-002 and comply with UL705 (electrical) and UL762 Standards and CSA Std C22.2, No 113.

Catalog #112F  
June 2016

## BDU15HP Performance Curve



**Max Sizeable RPM = 2000 RPM. Curve shown extended beyond this point for reference only.**

Performance shown is certified for Installation Type A: Free inlet, Free outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) does not include transmission losses.

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## BDU15HP

CF M	Static Pressure in Inches W.G.											
	0.000	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750
	RPM Sone/ BHP	RPM Sone/ BHP	RPM Sone/ BHP	RPM Sone/ BHP	RPM Sone/ BHP	RPM Sone/ BHP	RPM Sone/ BHP	RPM Sone/ BHP	RPM Sone/ BHP	RPM Sone/ BHP	RPM Sone/ BHP	RPM Sone/ BHP
12 00	880 6.1 / 0.11	1032 8.1 / 0.20	1156 10.1 / 0.29	1271 12.3 / 0.39	1378 13.2 / 0.51	1480 12.7 / 0.63	1575 13.3 / 0.76	1664 14.1 / 0.89	1749 15.1 / 1.03	1832 16.6 / 1.18	1911 18.3 / 1.33	1987 19.7 / 1.48
14 00	1027 8.3 / 0.17	1162 10.7 / 0.27	1275 12.9 / 0.38	1378 14.2 / 0.49	1475 13.8 / 0.62	1568 13.8 / 0.75	1657 14.2 / 0.88	1741 15.0 / 1.02	1823 15.9 / 1.17	1902 16.8 / 1.33	1977 17.8 / 1.49	
16 00	1174 11.2 / 0.26	1296 13.8 / 0.37	1399 14.7 / 0.49	1493 14.1 / 0.62	1581 15.4 / 0.75	1667 15.7 / 0.89	1749 15.9 / 1.03	1829 16.4 / 1.19	1905 17.0 / 1.34			
18 00	1321 14.8 / 0.36	1432 14.8 / 0.49	1525 15.4 / 0.62	1613 16.2 / 0.76	1695 16.4 / 0.91	1773 17.5 / 1.05	1852 18.2 / 1.21	1925 18.4 / 1.37				
20 00	1467 15.7 / 0.50	1569 16.7 / 0.64	1656 17.5 / 0.79	1738 18.4 / 0.94	1815 18.6 / 1.09	1889 18.9 / 1.25	1959 20 / 1.42					
22 00	1613 18.6 / 0.66	1708 19.0 / 0.82	1790 19.8 / 0.98	1866 21 / 1.14	1938 22 / 1.31							
24 00	1760 21 / 0.86	1848 21 / 1.03	1925 22 / 1.21	1997 23 / 1.38								
26 00	1906 23 / 1.10	1989 24 / 1.28										

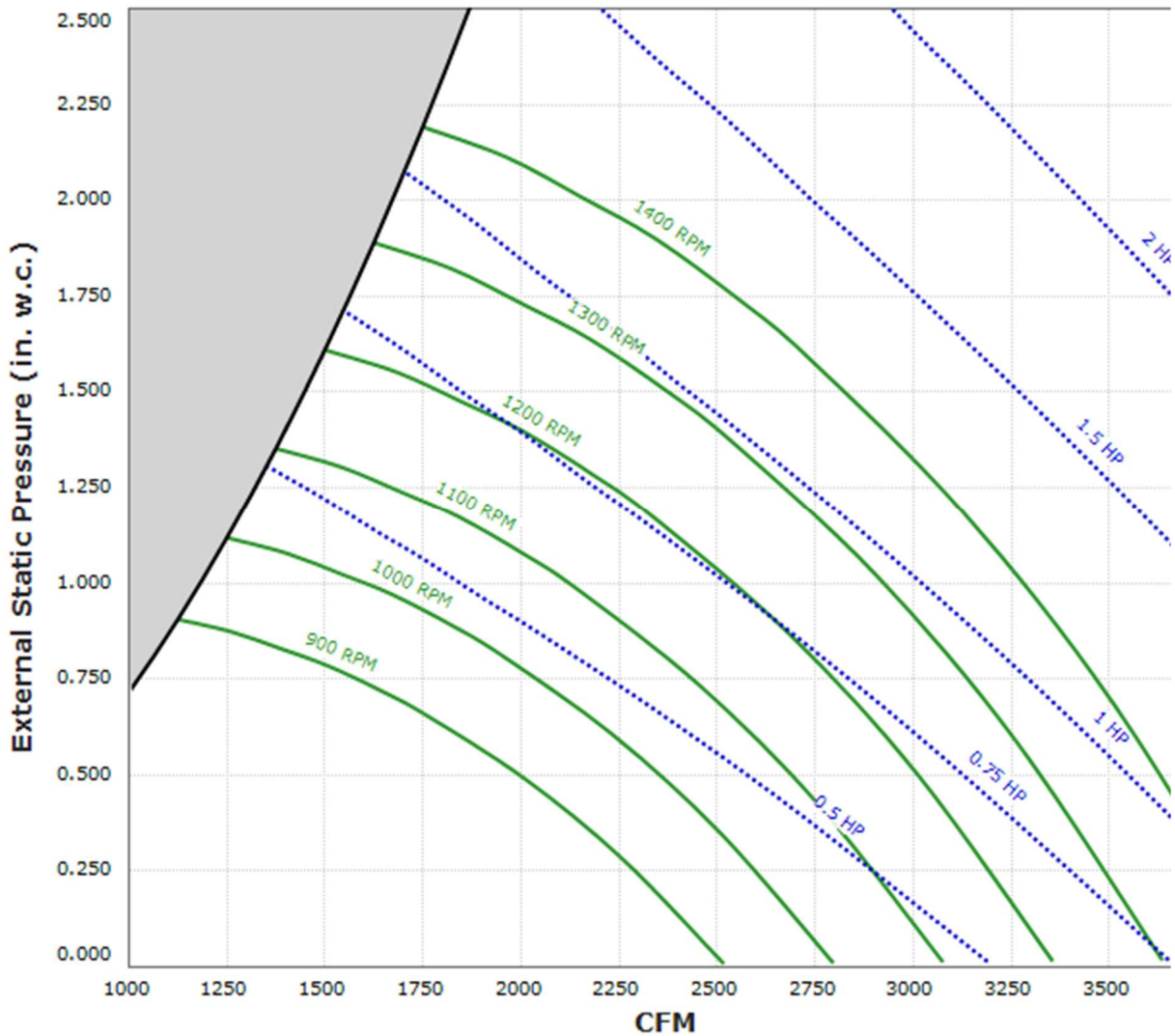
**Max Sizeable RPM = 2000 RPM. Table shown extended beyond this point for reference only.**

Performance shown is certified for Installation Type A: Free inlet, Free outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) does not include transmission losses. The sound ratings shown are loudness values in fan sones at 5 ft (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation Type A: Free inlet hemispherical sone levels.

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June 2016

## BDU18HP Performance Curve



**Max Sizeable RPM = 1400 RPM. Curve shown extended beyond this point for reference only.**

Performance shown is certified for Installation Type A: Free inlet, Free outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) does not include transmission losses.

Catalog #112F

June 2016

## BDU18HP

CFM	Static Pressure in Inches W.G.						
	0.000	0.250	0.500	0.750	1.000	1.250	1.500
	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP
2750	983 11.6 / 0.32	1049 12.1 / 0.44	1118 13.3 / 0.57	1186 14.4 / 0.71	1253 15.0 / 0.86	1318 14.2 / 1.01	1381 13.7 / 1.17
3000	1073 13.7 / 0.42	1133 14.1 / 0.54	1196 15.1 / 0.68	1259 16.2 / 0.83	1321 14.8 / 0.99	1382 14.5 / 1.15	
3250	1162 15.8 / 0.53	1217 16.2 / 0.66	1276 16.4 / 0.82	1334 16.4 / 0.97	1391 15.9 / 1.14		
3500	1251 18.1 / 0.66	1302 16.9 / 0.80	1356 17.0 / 0.96				
3750	1341 17.1 / 0.81	1387 17.5 / 0.96					

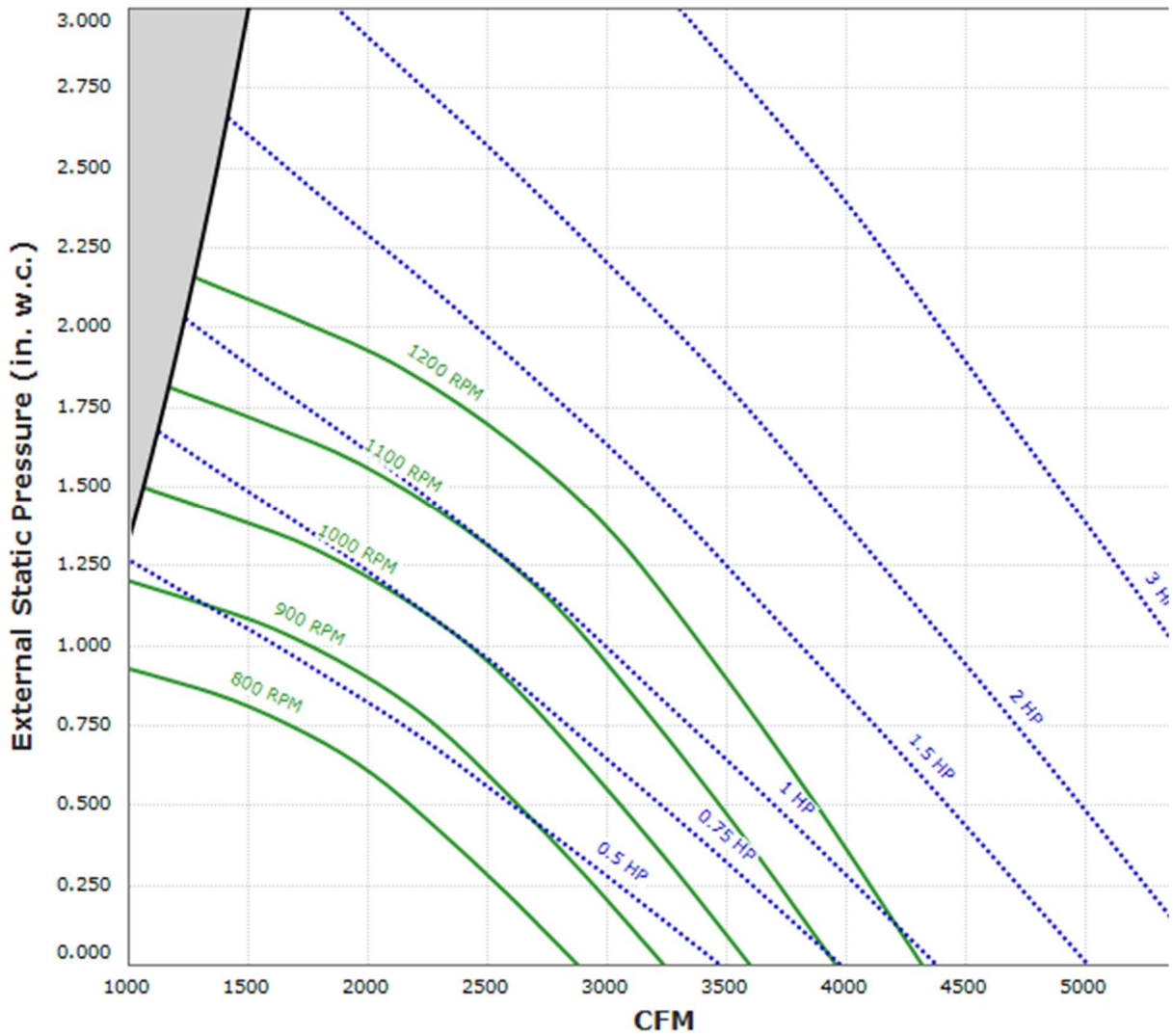
**Max Sizeable RPM = 1400 RPM. Table shown extended beyond this point for reference only.**

Performance shown is certified for Installation Type A: Free inlet, Free outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) does not include transmission losses. The sound ratings shown are loudness values in fan sones at 5 ft (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation Type A: Free inlet hemispherical sone levels.

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## BDU20HP Performance Curve



**Max Sizeable RPM = 1200 RPM. Curve shown extended beyond this point for reference only.**

Performance shown is certified for Installation Type A: Free inlet, Free outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) does not include transmission losses.

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## BDU20HP

CFM	Static Pressure in Inches W.G.					
	0.000	0.250	0.500	0.750	1.000	1.250
	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP
3000	834 11.4 / 0.32	915 12.9 / 0.48	985 14.0 / 0.65	1050 14.9 / 0.82	1112 16.0 / 1.00	1173 16.0 / 1.19
3500	973 15.3 / 0.51	1045 16.9 / 0.70	1107 18.3 / 0.89	1165 17.3 / 1.08		
4000	1112 19.8 / 0.76	1176 19.8 / 0.98				

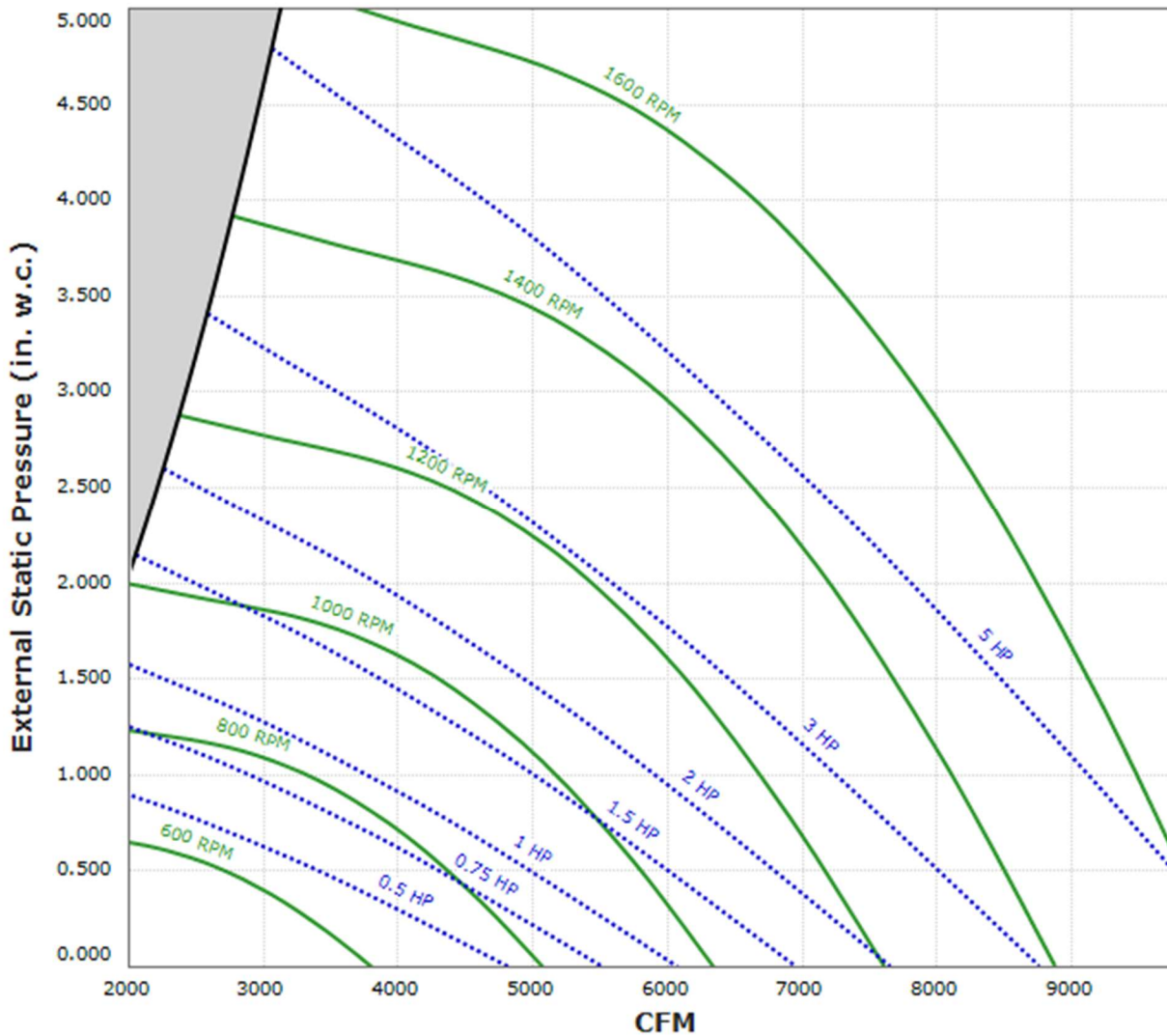
**Max Sizeable RPM = 1200 RPM. Table shown extended beyond this point for reference only.**

Performance shown is certified for Installation Type A: Free inlet, Free outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) does not include transmission losses. The sound ratings shown are loudness values in fan sones at 5 ft (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation Type A: Free inlet hemispherical sone levels.

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## BDU24HP Performance Curve



**Max Sizeable RPM = 1300 RPM. Curve shown extended beyond this point for reference only.**

Performance shown is certified for Installation Type A: Free inlet, Free outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) does not include transmission losses.

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## BDU24HP

CFM	Static Pressure in Inches W.G.						
	0.000	0.500	1.000	1.500	2.000	2.500	3.000
	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP
4000	631 10.8 / 0.29	751 13.2 / 0.65	864 15.9 / 1.08	974 21 / 1.55	1080 20 / 2.07	1180 21 / 2.64	1275 22 / 3.24
5000	789 16.3 / 0.56	886 17.7 / 1.01	978 21 / 1.50	1069 21 / 2.03	1158 21 / 2.61	1245 22 / 3.23	
6000	947 19.8 / 0.97	1029 22 / 1.49	1107 24 / 2.06	1183 24 / 2.66	1259 25 / 3.30		
7000	1104 24 / 1.53	1175 27 / 2.14	1243 27 / 2.78				
8000	1262 29 / 2.29						

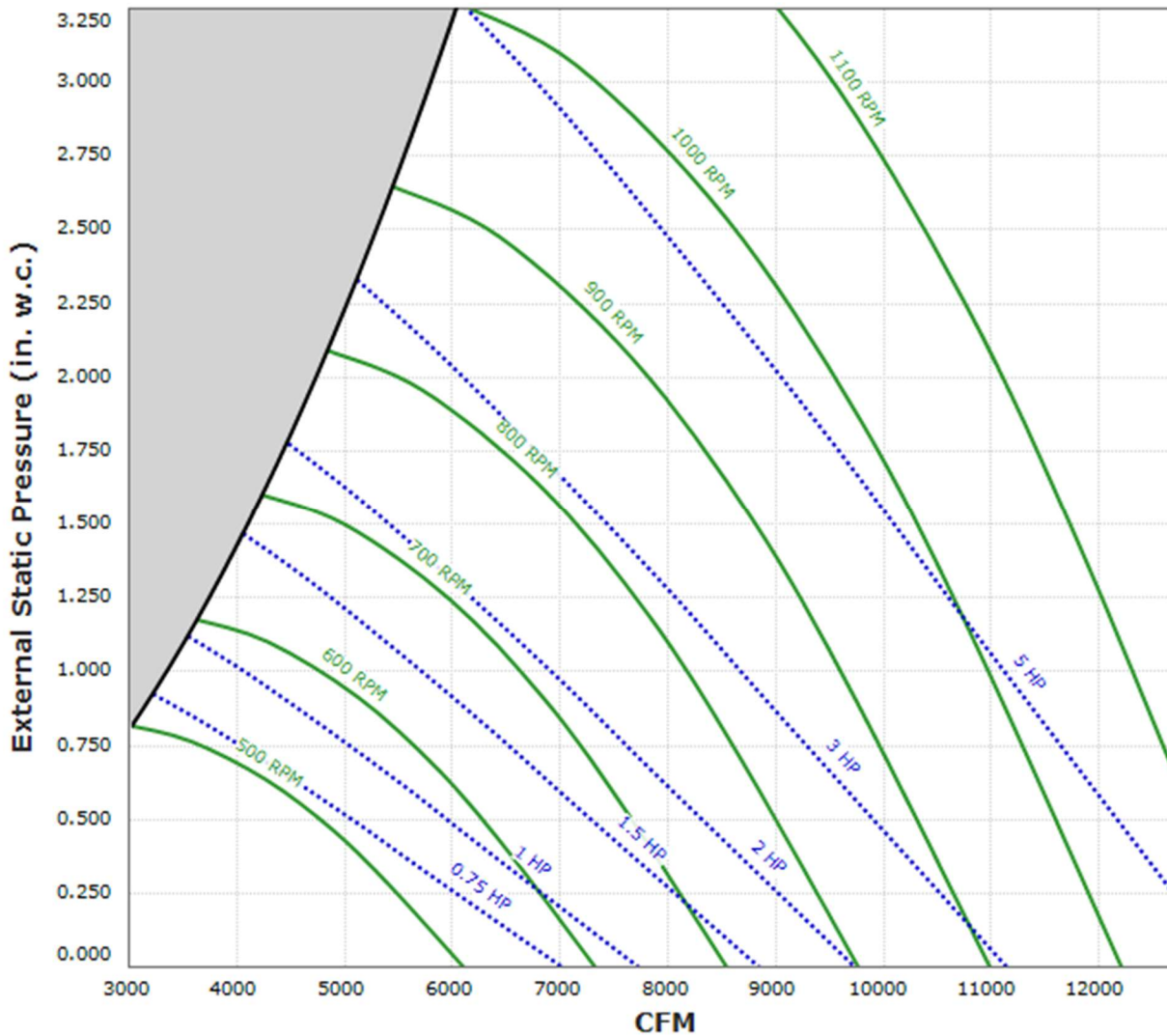
**Max Sizeable RPM = 1300 RPM. Table shown extended beyond this point for reference only.**

Performance shown is certified for Installation Type A: Free inlet, Free outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) does not include transmission losses. The sound ratings shown are loudness values in fan sones at 5 ft (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation Type A: Free inlet hemispherical sone levels.

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## BDU30HP Performance Curve



**Max Sizeable RPM = 950 RPM. Curve shown extended beyond this point for reference only.**

Performance shown is certified for Installation Type A: Free inlet, Free outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) does not include transmission losses.

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## BDU30HP

CF M	Static Pressure in Inches W.G.										
	0.000	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500
	RPM Sone/B HP	RPM Sone/B HP	RPM Sone/B HP	RPM Sone/B HP	RPM Sone/B HP	RPM Sone/B HP	RPM Sone/B HP	RPM Sone/B HP	RPM Sone/B HP	RPM Sone/B HP	RPM Sone/B HP
700 0	573 12.9 / 0.74	614 14.5 / 1.06	652 14.8 / 1.38	687 14.6 / 1.70	722 15.5 / 2.04	757 16.2 / 2.39	792 15.4 / 2.75	826 16.0 / 3.13	859 16.4 / 3.52	892 17.0 / 3.91	925 18.4 / 4.32
800 0	655 16.0 / 1.11	692 17.4 / 1.48	725 17.2 / 1.84	757 18.2 / 2.20	788 17.3 / 2.57	819 18.1 / 2.96	849 18.5 / 3.35	880 16.7 / 3.76	910 17.7 / 4.18	939 18.9 / 4.61	
900 0	737 19.0 / 1.58	770 20 / 2.00	800 19.6 / 2.40	829 20 / 2.81	857 21 / 3.22	885 19.0 / 3.64	912 20 / 4.06	939 21 / 4.50			
100 00	819 22 / 2.17	849 23 / 2.63	877 23 / 3.09	903 22 / 3.54	929 23 / 3.99						
110 00	901 24 / 2.88	928 26 / 3.40									

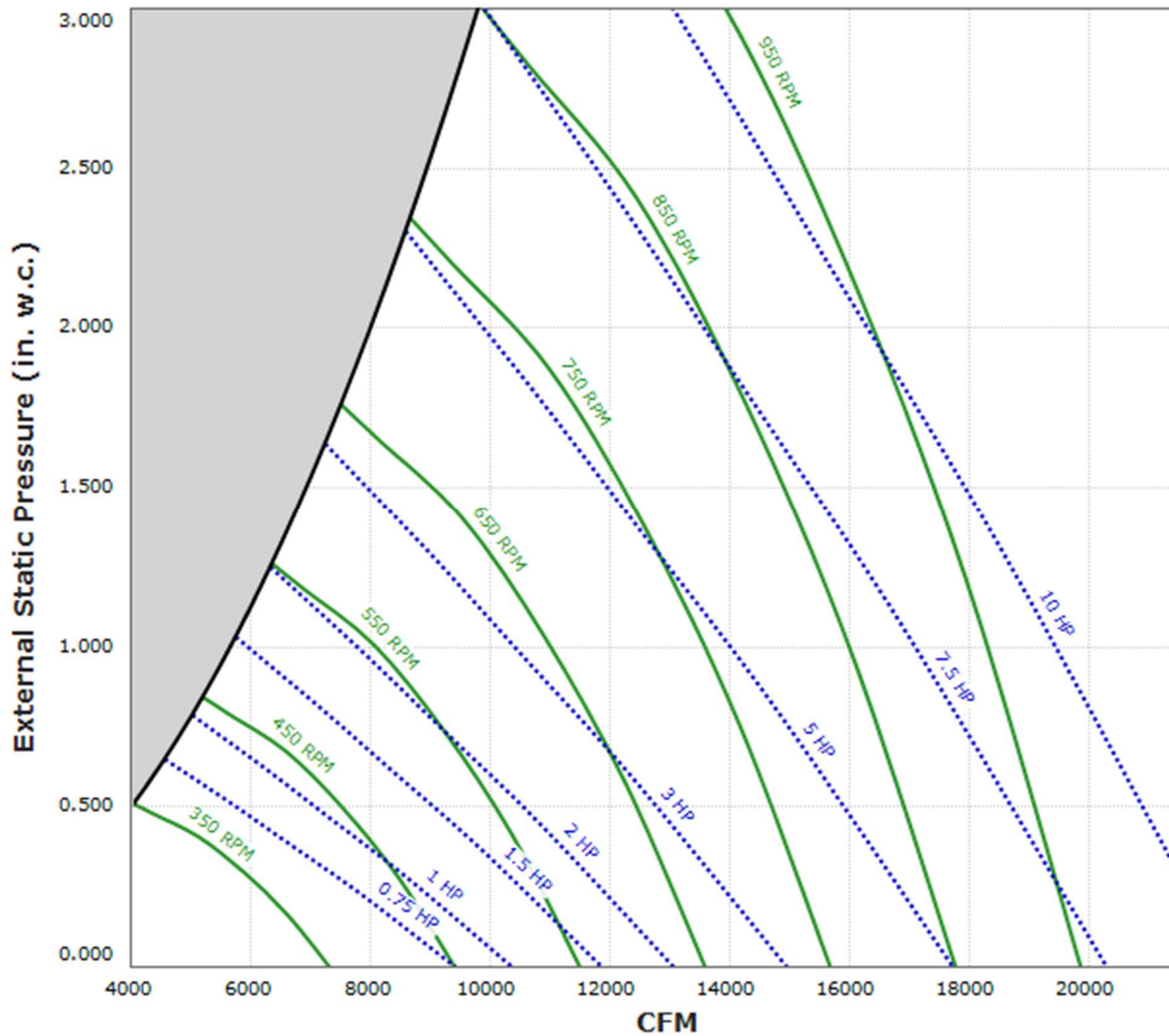
**Max Sizeable RPM = 950 RPM. Table shown extended beyond this point for reference only.**

Performance shown is certified for Installation Type A: Free inlet, Free outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) does not include transmission losses. The sound ratings shown are loudness values in fan sones at 5 ft (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation Type A: Free inlet hemispherical sone levels.

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## BDU36HP Performance Curve



**Max Sizeable RPM = 700 RPM. Curve shown extended beyond this point for reference only.**

Performance shown is certified for Installation Type A: Free inlet, Free outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) does not include transmission losses.

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## BDU36HP

CFM	Static Pressure in Inches W.G.			
	0.000	0.500	1.000	1.500
	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP	RPM Sone/BHP
10000	478 14.4 / 0.90	547 16.5 / 1.81	613 17.1 / 2.81	676 18.0 / 3.90
12000	574 19.7 / 1.55	631 18.9 / 2.62	687 21 / 3.78	
14000	670 23 / 2.46			

**Max Sizeable RPM = 700 RPM. Table shown extended beyond this point for reference only.**

Performance shown is certified for Installation Type A: Free inlet, Free outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) does not include transmission losses. The sound ratings shown are loudness values in fan sones at 5 ft (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation Type A: Free inlet hemispherical sone levels.

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