

**TURNING AIR INTO SOLUTIONS.**

Fan & Blower

**Twin City**



## **SQUARE INLINE CENTRIFUGAL FANS**

**DSI | BSI**

**CATALOG 4205  
February 2017**

# SQUARE INLINE CENTRIFUGAL FANS

## Overview

DSI | BSI



DSI  
Direct Drive

Now Available with



see page 8

Fan & Blower

**Twin City**



All DSI and BSI models are UL/cUL 705 listed, for electrical, File No. E158680.



Twin City Fan & Blower certifies that the Models DSI and BSI 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 AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



Fan Efficiency Grade (FEG) certification applies to Model DSI Sizes 135A, 135AE, 150A, 150AE, 150AN, 150ANE, 165A, 165AE, 165AN and 165ANE and Model BSI, Sizes 080A, 090A, 100A, 120A, 120AHP, 135A, 135AHP, 150A, 150AHP, 165A, 165AHP, 180A, 180AHP, 210A, 210AHP, 225A, 225AHP, 245A, 245AHP, 270A, 270AHP, 300A, 300AHP, 330A, 330AHP, 365A, 365AHP, 402A, 402AHP.

Twin City Fan & Blower's Model DSI direct drive and Model BSI belt driven square inline fans are specifically designed for duct applications handling relatively clean air, including supply, exhaust and return air systems. These fans offer high efficiency and quiet operation in a compact design that can be mounted in any position (horizontal, vertical or angular). Duct collars are provided for easy mounting without the need for square to round duct transitions. The units can be easily serviced through the side access panels without removing duct connections.

Square inline centrifugal units feature high efficient, non-overloading, backward inclined centrifugal wheels precisely matched to a spun venturi. All wheels are statically and dynamically balanced. Units are manufactured under strict quality assurance standards to insure cataloged performance and years of maintenance-free operation. Square inline fans are not intended for outdoor applications.

### Typical Applications Include

General HVAC (exhaust, filtration, return and supply, air of commercial buildings), Air Pollution Control, Airport Exhaust, Automotive, Fertilizer, Food & Beverage, Laboratory Exhaust, Metal & Mineral Processing, Office Exhaust, Restroom Exhaust, Warehouse Exhaust and Water Treatment

### Wheel Types

Backward Inclined

### Optional Construction

Spark Resistant Construction (Type A, B, and C), Easy Access Construction

### Certifications

AMCA Sound/Air and FEG, UL 705 Listed for Electrical, OSHPD Seismic Preapproval per OSP-0271-10



For complete product performance, drawings, and available accessories, download Fan Selector at [tcf.com](http://tcf.com).



# SQUARE INLINE CENTRIFUGAL FANS

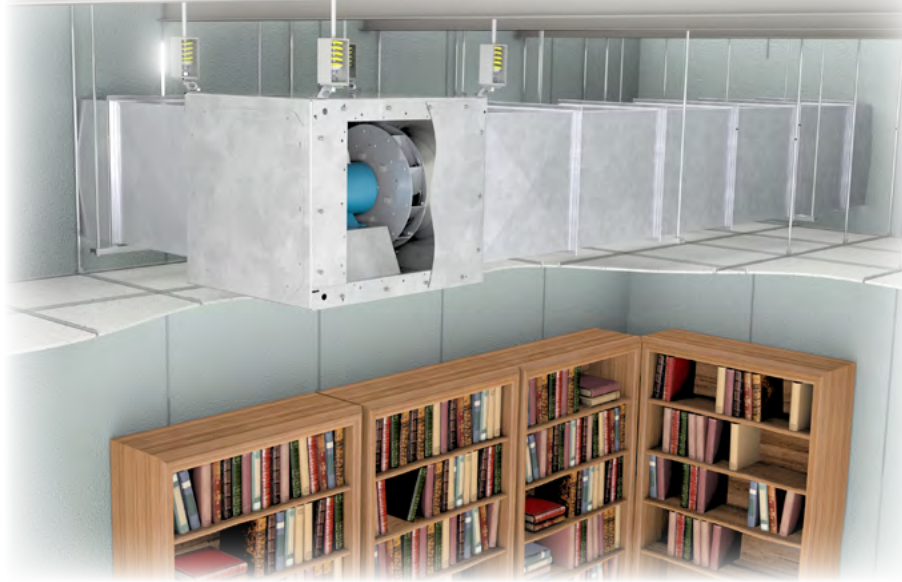
## Overview

DSI | BSI



### Model DSI

Available in 10 sizes from 080 through 165  
Airflow to 5,800 CFM  
Static pressure to 2" w.g.



General HVAC  
(90 Degree Turn)



### Model BSI

Available in 29 sizes from 080 through 402  
Airflow to 27,400 CFM  
Static pressure to 3.5" w.g.



General HVAC  
(Straight Inline)

# CONSTRUCTION FEATURES

**Housings** - Housing assembly features heavy-gauge galvanized steel construction

**Removable Side Panels** - Removable side panels provide easy access for service and maintenance without the need to remove duct connections. Complete removal of the power assembly is also possible through side access panels. Side panels can provide a 90-degree side discharge. Requires optional side discharge accessory.

**Duct Collars** - Duct collars provide ready attachment to ductwork and eliminate the need for square to round duct transitions.

**Belt Tube/Bearing Cover** - Constructed of heavy gauge galvanized steel, the belt tube and bearing cover enclose the belts, fan sheave and bearings within the airstream (Model BSI).

**Drive Frame** - Motor and drive frame are constructed of heavy gauge galvanized steel. The pivoting motor base makes for simple belt tensioning (Model BSI).

**Wheel** - Backward inclined non-overloading, all-aluminum wheel and hub statically and dynamically balanced to assure long life and quiet operation.

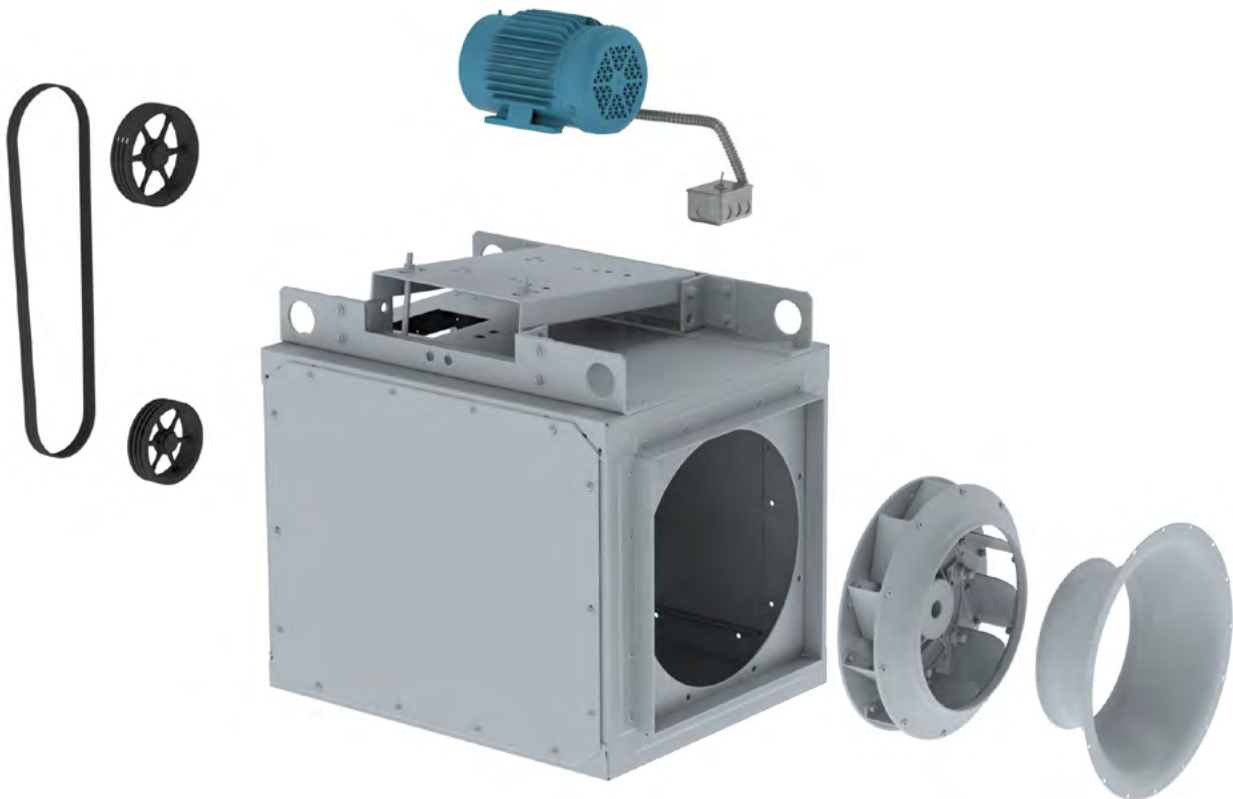
**Mounting Brackets** - Galvanized steel mounting brackets for easy mounting in horizontal or vertical position.

**Pulleys** - Heavy-duty cast iron adjustable pulleys to permit speed variation (Model BSI).

**Shaft** - Precision ground and polished with a first critical speed of at least 125% of the fan's maximum operating speed (Model BSI).

**Bearings** - All models are furnished with prelubricated cast iron pillow block bearings with zerk fittings, designed for an average life (L-50) of 500,000 hours or more at maximum cataloged operating speeds (Model BSI).

**Disconnect Switch** - Mounted and prewired NEMA 1 disconnect switch provided as standard for servicing the unit without the danger of an accidental start.





# DISCONNECT SWITCHES

Disconnect switches provide positive electrical shutoff during fan cleaning or maintenance.

## **NEMA 1 Disconnect Switch (Standard)**

A NEMA 1 disconnect switch is available shipped loose for field mounting and wiring or factory mounted and wired with ODP or TEFC motors.



NEMA 1 Disconnect Switch

## **NEMA 3R Disconnect Switch**

A NEMA 3R, rain proof, disconnect is available shipped loose for field mounting and wiring or factory mounted and wired externally.



NEMA 3R Disconnect Switch

## **NEMA 4 Disconnect Switch**

A NEMA 4, water and dust tight, disconnect is available shipped loose for field mounting and wiring or factory mounted and wired externally.



NEMA 4 Disconnect Switch

## **NEMA 7/9 Disconnect Switch**

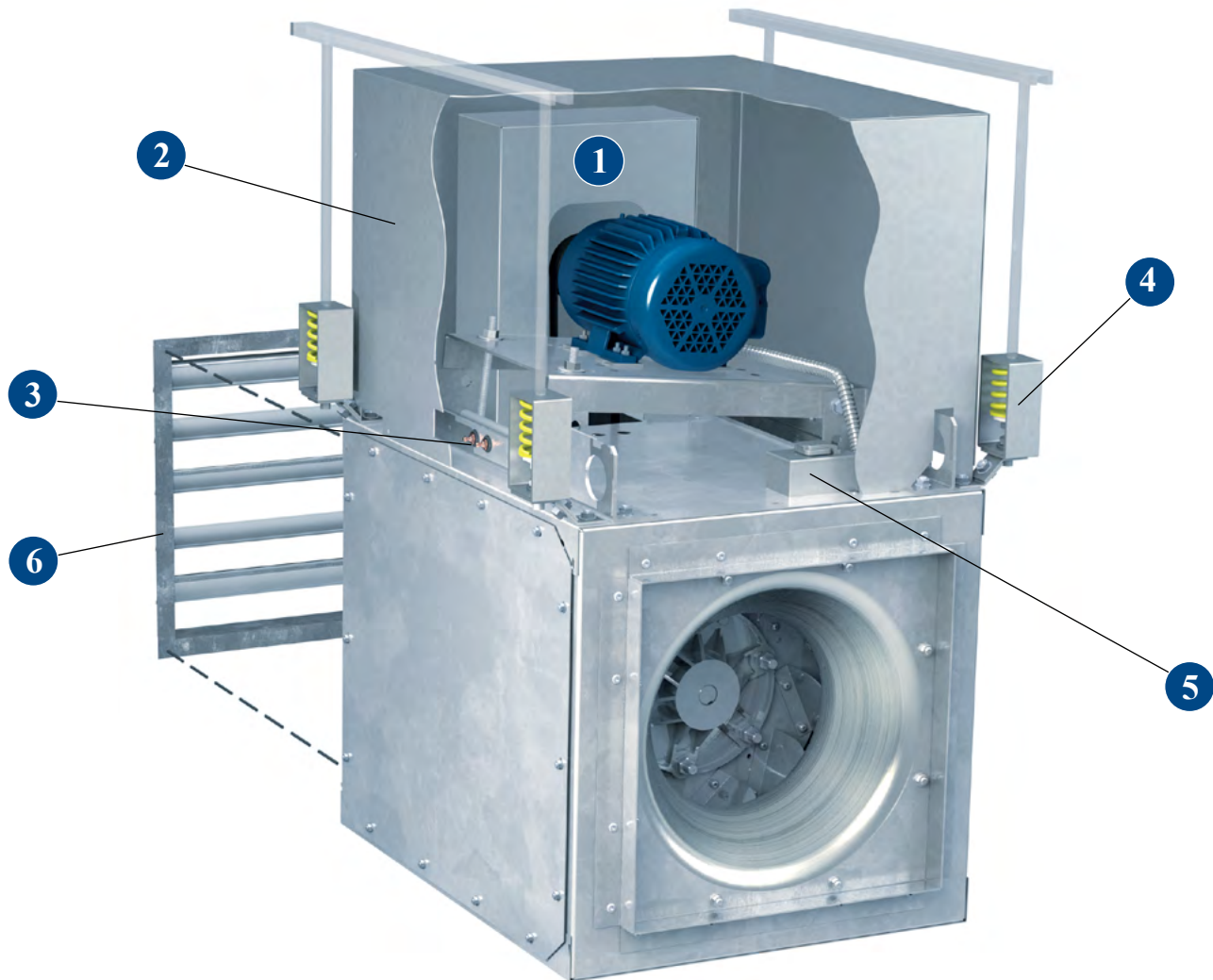
A NEMA 7/9 disconnect switch is recommended on fans with explosion proof motors. The NEMA 7/9 switch is designed for use with fans operating in hazardous environments. Available shipped loose for field mounting and wiring. (Not shown.)



DSI  
Direct Drive

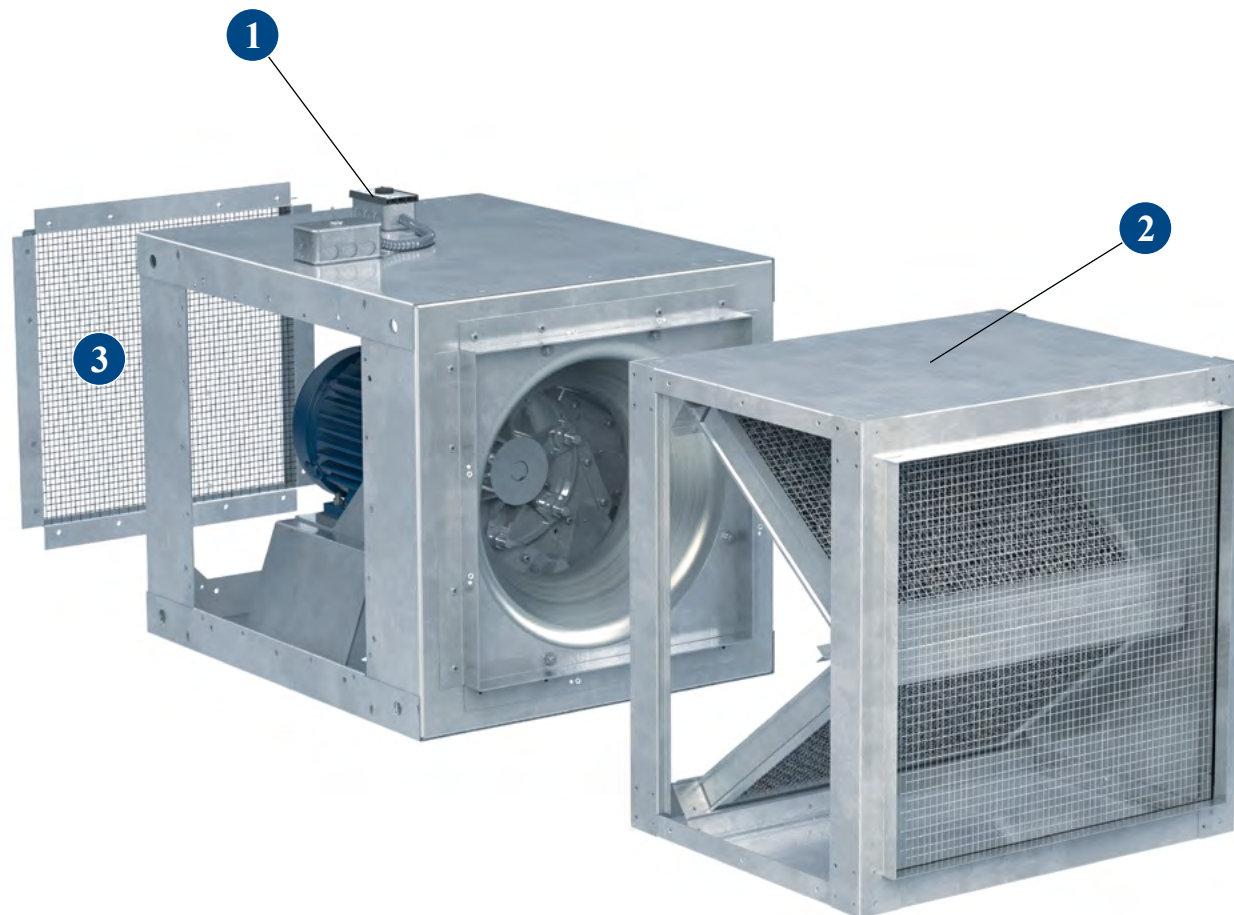
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# OPTIONS/ACCESSORIES



- 1 Belt Guard** is a formed galvanized steel guard available to cover the drive assembly on Model BSI. Belt guard is offered in lieu of motor cover.
  - 2 Motor Cover** is a formed galvanized steel cover available on Model BSI to completely cover the motor and drives. Motor cover serves as OSHA belt guard.
  - 3 Extended Lube Lines** Exterior mounting zerk fittings are available with lines to the fan shaft bearings (Model BSI) for relubrication from outside the unit.
  - 4 Vibration Isolators** Spring or neoprene type vibration isolators are available for ceiling suspended or floor mounted installations.
  - 5 NEMA 3R** rain proof safety disconnect switch is available for positive electrical shutoff of the fan and the protection of service personnel.
  - 6 Backdraft Dampers**, with automatic or motorized operation, feature felt-edged damper blades for quiet operation. Damper frames are constructed of galvanized steel and blades are constructed of 26-gauge aluminum. All dampers ship loose for field mounting in ductwork.
- Motorized dampers are recommended for low CFM applications to assure unrestricted airflow. Motorized dampers are available with 115, 208, 230, 460, 575 or 24 volt service. End switches are available. See dimensional data for sizing.





**1 Variable Speed Control** Variable speed control is an optional accessory on all DSI models, to allow the adjustment of airflow for system balancing. Variable speed controllers are solid-state (Tri-ac) design and are designed to start the motor on high speed for better startup characteristics. Variable speed controls can be shipped separately, factory installed, or field installed on the unit at a later date. Motor must be ODP 115V, PSC or shaded pole type.

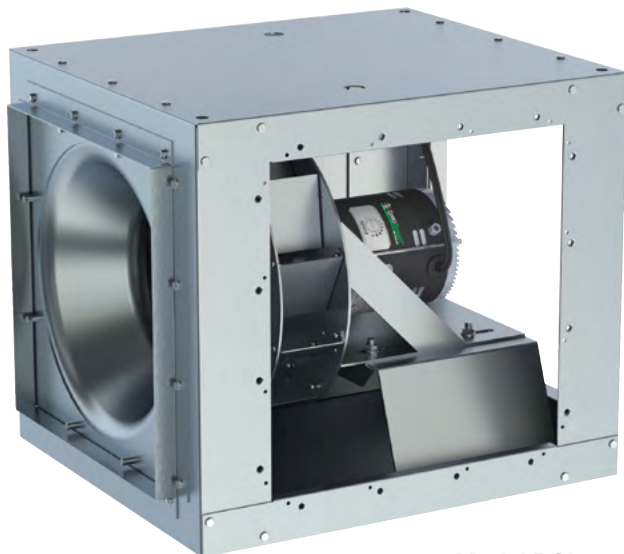
**2 Filter Box** A filter box containing two inch aluminum wire mesh, removable and washable filters is available for attachment to the fan inlet side. The filter box is constructed of galvanized steel, with duct collars for easy mounting and removable side panels for easy filter cleaning or replacement. Disposable paper filters are also available. One inch filters are available on either type. For filter box pressure drops contact factory. See page 26 for dimensional data.

**3 Outlet Guard** Inlet and outlet guards are available for all models. Guards mount inside the unit and do not interfere with the attachment of ductwork.

#### Other Accessories Include:

- Special Coatings
- Insulated Housings
- Aluminum Construction
- Stainless Steel Hardware
- NEMA 4 & 7/9 Disconnect Switches

# ELECTRONICALLY COMMUTATED MOTORS



Model DSI  
With GridSmart™ EC Motor

Fan & Blower  
**Twin City**

Twin City Fan & Blower offers its own line of custom engineered Electronically Commutated (EC) motors. Electronic commutation is the latest motor technology to be used in direct drive fans. Also known in the industry as Brush Free or Brushless DC, the EC motors utilize an electronic circuit board to control the functionality of the motor. The motor operates off of single phase AC power, which is converted to DC power within the motor's circuitry. TCF has motor options available for 115V, 208-230V or 277V single phase electrical power. The result is a highly efficient motor, even at part load, with an expanded speed control range and a variety of speed control options from which to choose. EC motors are available in ODP, TENV and TEFC enclosures.



## Benefits

- Efficiencies up to 85%
- Constant efficiency as the motor speed is varied
- Up to 66% energy savings over traditional PSC motors
- Performance range comparable to a belt drive fan with reduced maintenance benefits of a direct drive fan
- 80% usable turndown range as compared with 40% maximum on PSC motors
- Soft start gives fans smooth, quiet start
- Lower operating temperatures result in longer life and reduces energy consumption
- Heavy-duty ball bearings are permanently lubricated
- Elimination of VFD results in lower initial cost

## EC Motor Options

### 1/6HP to 1HP

- 1/6HP: 115V, single phase
- 1/4HP – 1HP: 115V, 208-230V, 277V, single phase
- ODP or TENV Enclosure
- Motor mounted speed control dial as standard
- 0-10VDC control leads as standard
- Available with remote mounted speed control dial

### 1HP & 2HP

- 1HP: 115V, 208-230V, single phase
- 2HP: 208-230V, single phase
- TEFC enclosure (totally enclosed fan cooled)
- Available with motor mounted speed dial or 0-10VDC control lead



1HP & 2HP  
GridSmart™ EC Motors



1/6HP to 1HP  
GridSmart™ EC Motors



# SIDE DISCHARGE OPTIONS

Side discharge kits (including panels, mounting collars, and necessary hardware) are available to provide 1-way, 2-way, or 3-way discharges. This option provides exceptional adaptability for any installation, as well as avoiding the system effect of disrupted airflow when the ductwork has to take a 90-degree turn.

## Configurations

OPTION	FIGURE	CONFIGURATION
Standard	A	Rear
1-Way	B	Left
	C	Right
2-Way	D	Left and Right
	E	Left and Rear
	F	Right and Rear
3-Way	G	Left, Right and Rear

**NOTE:** Performance will change depending on the position of the discharge. See correction factor table below. Percentages based on (inline) cataloged performance, but are not AMCA certified. Always check BHP when selecting motor HP and fan size.

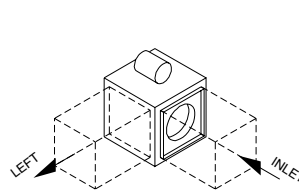


FIG. B

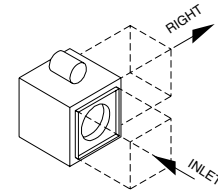


FIG. C

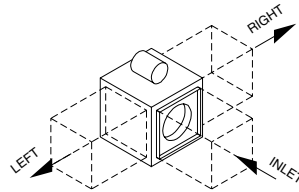


FIG. D

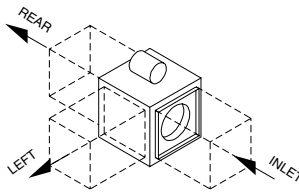


FIG. E

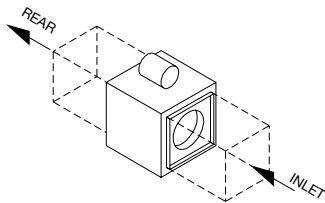


Fig. A

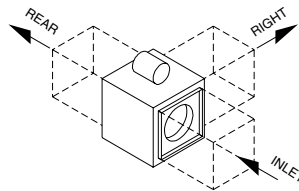


FIG. F

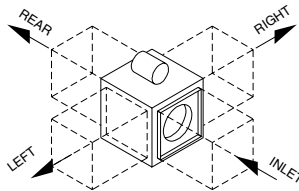


FIG. G

## Performance Correction Factors

DISCHARGE	0.50" SP		1.00" SP		1.50" SP		2.00" SP		AVG.	
	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
1-Way	110.7%	113.0%	114.0%	110.8%	115.8%	108.5%	120.0%	102.3%	115.1%	108.7%
2-Way	114.7%	106.5%	118.1%	109.7%	120.3%	112.4%	126.8%	114.0%	120.0%	110.7%
3-Way	113.2%	105.9%	117.4%	109.7%	121.6%	113.0%	127.1%	114.0%	119.8%	110.7%

**NOTE:** The performance correction factors shown above are not licensed to bear the AMCA Certified Ratings Seal.

## Duct Openings

MODEL BSI	MODEL DSI	LEFT AND RIGHT DISCHARGE			REAR DISCHARGE/INLET		
		DUCT COLLAR		DUCT SIZE REQUIRED	DUCT COLLAR		DUCT SIZE REQUIRED
		WIDTH	HEIGHT		WIDTH	HEIGHT	
080	080	11.88	11.88	12 x 12	11.88	11.88	12 x 12
090	090	11.88	11.88	12 x 12	11.88	11.88	12 x 12
100	100	13.88	13.88	14 x 14	13.88	13.88	14 x 14
120	120	15.88	15.88	16 x 16	15.88	15.88	16 x 16
135	135	17.88	17.88	18 x 18	17.88	17.88	18 x 18
150	150	19.88	19.88	20 x 20	19.88	19.88	20 x 20
165	165	22.88	22.88	23 x 23	22.88	22.88	23 x 23
180	—	23.88	23.88	24 x 24	23.88	23.88	24 x 24
210	—	27.88	27.88	28 x 28	27.88	27.88	28 x 28
225	—	25.88	28.88	26 x 29	29.88	29.88	30 x 30
245	—	27.88	31.88	28 x 32	32.88	32.88	33 x 33
270	—	29.88	33.88	30 x 34	35.88	35.88	36 x 36
300	—	29.88	37.88	30 x 38	39.88	39.88	40 x 40
330	—	31.88	39.88	32 x 40	43.88	43.88	44 x 44
365	—	32.88	41.88	33 x 42	45.88	45.88	46 x 46
402	—	34.88	46.88	35 x 47	51.88	51.88	52 x 52

**NOTE:** Damper size should be 1/8" less than duct size required, or same size as duct collar.

# PERFORMANCE DATA

## DSI – 60 Hz

EC MOTOR		PSC MOTOR		RPM	MAX. BHP	STATIC PRESSURE (INCHES W.G.)												FAN EFF. GRADE
SIZE	MTR HP	SIZE	MTR HP			0	0.125	0.25	0.375	0.50	0.625	0.75	1.00	1.25	1.50	1.75	2.00	
						CFM SONE												
080AE	1/6	080A	1/8	860	0.01	323 4.2	247 3.4										N/A	
			1/8	1160	0.03	436 7.4	382 6.3	321 6.1	232 5.5									
			1/8	1650	0.10	620 10.4	583 10.4	545 8.7	505 8.0	459 8.6	403 8.3	335 7.3						
		---	---	1750	0.12	658 10.9	623 10.9	587 9.5	550 8.8	510 9.0	461 9.1	405 8.0						
090AE	1/4	090A	1/8	860	0.02	495 5.9	390 4.4										N/A	
			1/8	1160	0.05	668 9.8	592 8.2	510 7.9	401 6.4									
			1/8	1650	0.14	950 13.0	897 13.0	843 11.2	789 10.3	729 11.1	660 10.7	578 8.5						
		---	---	1750	0.17	1008 13.7	958 13.7	907 12.3	856 11.3	803 11.4	742 11.8	673 10.9						
100AE	1/2	100A	1/8	860	0.04	787 7.8	666 6.0	520 6.2									N/A	
			1/8	1160	0.11	1061 13.3	973 12.1	882 10.0	780 10.9	651 9.0								
			1/3	1750	0.36	1601 17.8	1543 17.8	1484 17.6	1424 15.9	1365 14.7	1303 14.8	1236 15.6	1083 14.9	877 11.7				
120AE	3/4	120A	1/8	860	0.07	1047 5.8	951 5.3	830 5.1	586 4.3								N/A	
			1/4	1160	0.18	1413 9.3	1344 9.3	1268 8.1	1183 7.7	1079 8.3	923 6.9							
			3/4	1750	0.63	2132 17.9	2087 17.9	2041 17.9	1993 17.7	1942 16.5	1889 15.5	1834 14.8	1709 15.6	1551 16.1	1288 14.2			
135ANE	3/4	135AN	1/8	860	0.08	1041 6.9	941 6.2	819 5.5	670 5.2								N/A	
			1/4	1160	0.20	1404 11.4	1332 11.4	1254 9.6	1165 8.4	1070 9.1	962 9.1	823 7.9						
			3/4	1750	0.69	2118 17.8	2071 17.8	2024 17.8	1974 17.8	1922 16.9	1867 15.7	1808 15.4	1685 15.9	1554 16.6	1401 14.8	1203 14.6		899 14.6
Outlet Area: 3.22 ft²																		
135AE	1, 2	135A	1/4	860	0.13	1437 7.1	1331 6.7	1208 5.9	1041 6.1								FEG56	
			1/2	1160	0.31	1938 11.2	1862 11.2	1780 10.7	1691 9.4	1591 9.4	1471 10.0	1306 8.9						
			1*	1750	1.07	2924 22	2875 22	2824 22	2771 22	2717 21	2660 20	2601 19.0	2476 18.3	2334 19.4	2161 19.6	1918 17.5		
Outlet Area: 3.90 ft²																		
150ANE	1, 2	150AN	1/4	860	0.13	1385 8.2	1277 7.9	1150 6.3	1005 6.9	810 5.9							FEG53	
			1/2	1160	0.32	1868 13.7	1790 13.7	1707 12.1	1615 10.5	1513 10.1	1407 11.0	1288 11.0	940 9.5					
			1*	1750	1.11	2818 21	2767 21	2715 21	2662 21	2606 20	2549 19.6	2488 18.6	2359 18.0	2221 19.2	2077 19.7	1913 18.5		1713 17.2
Outlet Area: 3.90 ft²																		
150AE	1	150A	1/4	860	0.20	1913 8.5	1798 8.5	1668 7.1	1513 7.5	1286 6.7							FEG56	
			1/2	1160	0.50	2580 13.5	2497 13.5	2409 13.3	2315 11.9	2213 11.3	2099 11.4	1965 12.1	1514 10.0					
	1	1 1/2*	1200	0.55	2669 20	2589 20	2504 20	2414 20	2317 19.3	2212 18.2	2091 17.5	1742 17.2		18.3	17.0			
			1750	1.72	3892 26	3838 26	3783 26	3726 26	3667 26	3607 25	3545 24	3414 22	3273 22	3116 22	2931 23	2699 22		
Outlet Area: 4.83 ft²																		
165ANE	1**	165AN	1/4	860	0.23	2094 7.7	1953 7.6	1805 6.9	1647 7.2	1472 7.3	1248 7.2						FEG60	
			1/2	1160	0.56	2825 12.4	2721 12.4	2615 12.0	2506 11.4	2394 11.0	2277 11.2	2155 12.0	1877 11.2	1457 11.3				
	2		2*	1750	1.93	4261 22	4193 22	4124 22	4054 22	3984 21	3912 21	3840 21	3694 20	3543 20	3386 21	3223 22		3048 23
Outlet Area: 4.83 ft²																		
165AE	1	165A	1/2	860	0.33	2898 10.1	2683 9.9	2499 8.9	2323 9.2	2069 9.4	1773 8.2						FEG60	
			1	1160	0.81	3909 16.5	3744 16.5	3592 15.6	3452 14.7	3327 14.2	3199 14.8	3044 15.7	2640 13.7	2152 13.5				
	2	3*	1500	1.76	5055 24	4925 24	4802 24	4684 23	4571 22	4465 21	4368 21	4174 21	3941 22	3637 22	3310 19.2	2935 19.8		
			1750	2.8	5898 30	5786 30	5678 30	5574 30	5473 29	5375 28	5281 27	5109 26	4945 26	4769 27	4552 28	4289 27		

\* Designates motors that cannot be used with speed controller.  
EC Motor is an Electronically Commutated Motor.  
PSC Motor is a Permanent Split Capacitor Motor.

\*\* Performance available with 1 HP 1160 RPM ECODP motors or 1 HP 1750 RPM ECTEFC motors. 1160 RPM maximum.

### NOTES:

1. Performance certified is for Installation Type B: Free inlet, ducted outlet.
2. Performance ratings do not include the effects of appurtenances (accessories).
3. The sound ratings shown are loudness values in fan sones at 1.5m (5 ft.) in a hemispherical free field calculated per AMCA International Standard 301.
4. Values shown are for Installation Type B: free inlet hemispherical sone levels.



## BSI 080A

Outlet Area = 1.17 ft<sup>2</sup>

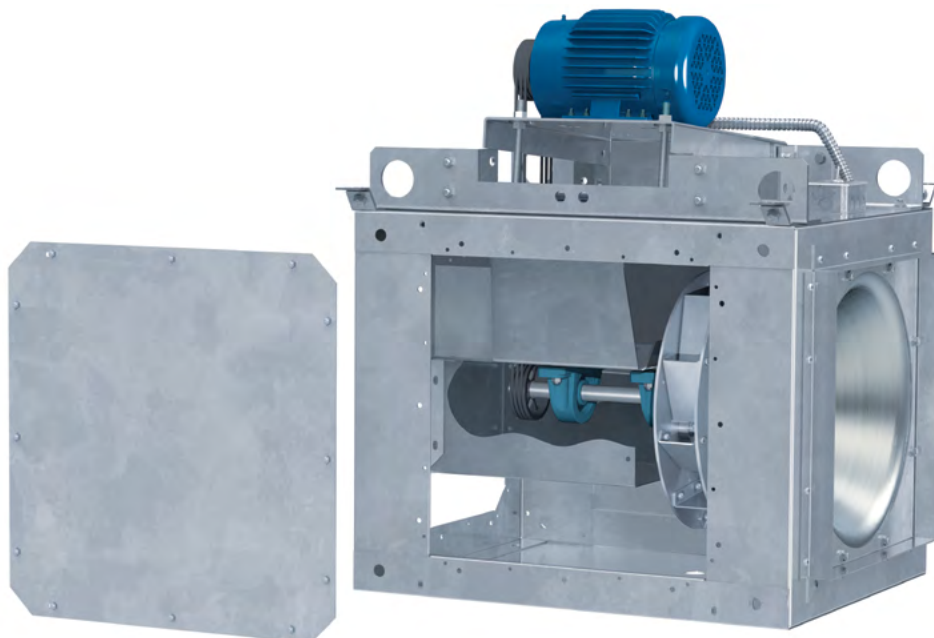
Fan Efficiency Grade: FEG50

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125		0.25		0.50		0.75		1.00		1.25		1.50	
		CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP
1/4	850	241	0.01	3.1											
	1050	333	0.03	4.6	261	0.03	4.7								
	1250	419	0.04	6.6	363	0.04	5.9								
	1450	502	0.06	9.0	455	0.07	7.3	349	0.07	7.5					
	1650	584	0.09	11.0	542	0.10	9.1	457	0.10	9.2	344	0.10	7.8		
	1850	664	0.13	11.8	627	0.14	11.0	552	0.14	9.9	470	0.13	9.1		
	2050	744	0.18	13.9	710	0.19	12.8	643	0.19	11.7	574	0.18	10.6		
	2250	823	0.24	15.6	792	0.25	13.0	730	0.26	13.8	669	0.26	13.2	416	
	2375	872	0.28	16.8	843	0.29	14.3	784	0.30	14.8	726	0.30	15.2	516	390
	2500	921	0.32	18.3	893	0.34	16.0	837	0.35	15.6	783	0.35	16.5	597	509
1/2	2660	984	0.39	20	957	0.40	18.4	904	0.41	16.7	853	0.42	16.4	689	620
	2860	1062	0.48	23	1037	0.50	21	988	0.51	19.6	940	0.52	18.6	793	737
	3060	1139	0.59	26	1116	0.61	25	1070	0.62	23	1025	0.63	21	889	842
3/4	3260	1217	0.71	29	1195	0.73	29	1152	0.74	25	1109	0.77	23	939	894
	3425	1281	0.82	33	1260	0.84	32	1218	0.86	29	1177	0.88	25	1016	975
1	3590	1344	0.94	35	1324	0.95	35	1285	0.98	33	1246	1.00	30	1131	1092

MAXIMUM MOTOR FRAME SIZE: 145T

### NOTES:

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



Fan & Blower  
**Twin City**

# PERFORMANCE DATA

## BSI 090A

Outlet Area = 1.62 ft<sup>2</sup>

Fan Efficiency Grade: FEG60

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.75	3.25		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM		
		BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone
1/4	1450	752		697		562									
		0.09	9.0	0.09	8.2	0.10	8.8								
	1650	869		822		715		576							
		0.13	11.1	0.13	10.6	0.14	10.1	0.14	10.9						
1/3	1850	984		944		854		748		608					
		0.18	13.2	0.18	13.3	0.19	12.0	0.20	12.8	0.20	12.4				
	2015	1079		1042		962		872		764		616			
		0.23	14.8	0.23	14.8	0.25	13.5	0.26	13.1	0.26	14.4	0.25	12.7		
1/2	2120	1139		1104		1029		946		851		734		505	
		0.27	15.8	0.27	15.8	0.28	14.4	0.30	13.9	0.30	14.8	0.30	14.8	0.27	13.2
	2230	1201		1168		1099		1022		935		835		703	
		0.31	16.8	0.31	16.8	0.33	15.9	0.34	14.7	0.35	15.5	0.35	16.2	0.35	14.1
3/4	2390	1292		1262		1197		1128		1052		967		868	
		0.38	17.9	0.38	17.9	0.40	17.6	0.41	16.3	0.43	16.3	0.43	17.3	0.44	17.3
	2550	1382		1354		1295		1231		1163		1088		1004	
		0.46	19.8	0.47	19.8	0.48	19.6	0.49	18.7	0.51	17.9	0.52	18.4	0.53	19.4
1	2735	1487		1460		1406		1348		1286		1220		1149	
		0.56	22	0.57	22	0.59	22	0.60	21	0.62	20	0.63	20	0.65	21
	2920	1591		1566		1515		1462		1406		1347		1283	
		0.69	25	0.69	25	0.71	25	0.73	24	0.74	23	0.76	22	0.78	22
1	3060	1669		1646		1598		1547		1495		1440		1381	
		0.79	26	0.80	26	0.81	26	0.83	26	0.85	25	0.87	24	0.88	24
	3205	1750		1728		1682		1635		1585		1534		1480	
		0.90	28	0.91	28	0.93	28	0.95	28	0.97	27	0.99	26	1.01	26

MAXIMUM MOTOR FRAME SIZE: 145T

## BSI 100A

Outlet Area = 2.20 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125	0.25	0.375	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM		
		BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone
1/4	1025	816		716		592									
		0.07	6.8	0.07	6.2	0.07	6.9								
	1275	1053		981		899		806							
		0.13	9.9	0.13	9.1	0.14	8.7	0.14	9.5						
1/3	1465	1229		1169		1103		1030		859					
		0.19	12.3	0.20	12.1	0.20	11.2	0.21	10.8	0.22	12.1				
	1565	1321		1265		1205		1140		992		790			
		0.23	13.7	0.24	13.7	0.25	12.8	0.25	12.2	0.26	13.1	0.26	12.7		
1/2	1645	1394		1341		1285		1225		1090		924			
		0.27	15.0	0.28	14.5	0.28	13.9	0.29	13.2	0.30	13.9	0.31	14.3		
	1725	1467		1417		1364		1308		1184		1038		833	
		0.31	16.0	0.32	16.0	0.33	15.4	0.33	14.5	0.35	14.4	0.35	15.6	0.34	14.4
3/4	1850	1580		1534		1485		1434		1324		1199		1049	
		0.38	17.9	0.39	17.9	0.40	17.1	0.41	16.3	0.42	15.5	0.43	16.7	0.44	17.5
	1980	1697		1654		1610		1563		1463		1353		1229	
		0.47	19.2	0.47	19.2	0.48	19.0	0.49	18.3	0.51	17.2	0.53	17.3	0.53	18.8
1	2120	1823		1783		1742		1699		1609		1510		1403	
		0.57	21	0.58	21	0.59	20	0.60	20	0.62	19.2	0.64	18.6	0.65	19.5
	2255	1944		1906		1868		1829		1746		1656		1560	
		0.68	22	0.69	22	0.70	22	0.71	22	0.74	21	0.76	19.9	0.77	19.9
1	2370	2046		2011		1975		1938		1860		1777		1689	
		0.79	24	0.80	24	0.81	24	0.83	24	0.85	23	0.87	22	0.89	22
	2480	2145		2111		2077		2041		1968		1891		1808	
		0.91	25	0.92	25	0.93	25	0.94	25	0.96	24	0.99	23	1.01	23

MAXIMUM MOTOR FRAME SIZE: 145T

### NOTES:

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



## BSI 120A

Outlet Area = 2.67 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125	0.25	0.375	0.50	0.625	0.75	1.00	1.25	1.50	1.75	2.00	2.25		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1/4	700	716	489												
		0.04   3.5	0.04   3.0												
	900	990	880	710											
		0.08   6.2	0.09   6.0	0.09   5.7											
1/3	1100	1252	1166	1074	944	748									
		0.15   9.2	0.16   7.9	0.16   8.0	0.16   8.5	0.15   6.8									
	1290	1495	1423	1349	1271	1169	1041								
		0.24   11.6	0.25   10.9	0.25   10.0	0.26   10.1	0.26   10.8	0.26   10.3								
1/2	1355	1578	1509	1439	1367	1282	1172								
		0.27   12.5	0.28   11.9	0.29   10.9	0.30   10.7	0.30   11.3	0.30   11.6								
	1420	1660	1595	1528	1461	1387	1293	1040							
		0.31   13.6	0.32   13.0	0.33   11.8	0.34   11.6	0.35   11.7	0.35   12.4	0.34   10.5							
3/4	1525	1792	1732	1670	1607	1543	1471	1275							
		0.39   14.9	0.40   14.9	0.41   13.9	0.42   13.1	0.43   12.8	0.43   13.4	0.43   13.6							
	1630	1923	1867	1810	1751	1693	1631	1476	1267						
		0.47   16.7	0.48   16.7	0.49   15.8	0.50   14.5	0.51   14.3	0.52   14.3	0.53   15.2	0.52   13.9						
1	1750	2072	2020	1968	1913	1859	1804	1681	1514	1302					
		0.58   18.6	0.59   18.6	0.61   17.7	0.62   16.8	0.63   15.8	0.64   15.6	0.65   16.4	0.65   16.6	0.64   14.6					
	1865	2215	2166	2117	2067	2016	1965	1858	1726	1556	1337				
		0.70   21	0.71   21	0.73   20	0.74   19.4	0.75   18.3	0.76   17.6	0.78   17.6	0.79   18.7	0.79   18.3	0.77   15.3				
1 1/2	1955	2326	2280	2233	2186	2137	2089	1990	1877	1731	1557	1285			
		0.80   22	0.82   22	0.83   22	0.85   22	0.86   20	0.87   19.4	0.90   18.9	0.91   19.5	0.91   20	0.9   19.3	0.86   16.3			
	2045	2437	2393	2349	2304	2258	2211	2118	2017	1894	1741	1564			
		0.92   24	0.93   24	0.95   24	0.97   23	0.98   22	0.99   22	1.02   20	1.04   21	1.05   22	1.04   22	1.03   19.4			
1 1/2	2195	2622	2582	2540	2498	2456	2413	2326	2238	2140	2022	1879	1718		
		1.13   26	1.15   26	1.17   26	1.18   26	1.20   25	1.22   25	1.24   23	1.27   22	1.29   23	1.29   24	1.29   24	1.28   22		
	2345	2807	2769	2730	2691	2652	2612	2531	2450	2365	2271	2159	2026		
		1.38   30	1.40   30	1.42   30	1.43   30	1.45   29	1.47   28	1.50   26	1.53   25	1.55   25	1.57   25	1.58   27	1.57   27		

MAXIMUM MOTOR FRAME SIZE: 145T

## BSI 120AHP

Outlet Area = 2.67 ft<sup>2</sup>

Fan Efficiency Grade: FEG53

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1/4	1240	586													
		0.15   7.6													
	1450	921	720												
		0.26   10.7	0.24   9.6												
1/3	1525	1020	855												
		0.30   11.3	0.30   10.9												
	1600	1112	963	754											
		0.34   11.8	0.35   12.2	0.32   10.8											
1/2	1720	1249	1125	978											
		0.42   13.1	0.43   13.6	0.43   13.1											
	1840	1378	1275	1146	1004										
		0.51   14.4	0.52   14.4	0.53   15.3	0.52   14.2										
3/4	1970	1513	1424	1318	1193	1055									
		0.62   16.9	0.63   16.0	0.64   16.4	0.64   16.6	0.63   15.2									
	2105	1650	1571	1482	1375	1257	1126								
		0.75   19.3	0.77   18.0	0.78   17.5	0.79   18.4	0.79   18.2	0.77   17.0								
1	2210	1755	1681	1601	1509	1401	1287	1153							
		0.86   21	0.88   20	0.90   19.0	0.91   19.2	0.91   20	0.91   19.8	0.88   17.8							
	2315	1858	1788	1715	1634	1539	1433	1323	1187						
		0.98   24	1.00   21	1.02   20	1.04   20	1.05   21	1.05   21	1.04   21	1.01   18.9						
1 1/2	2485	2024	1960	1894	1824	1747	1658	1560	1459	1348	1184				
		1.21   27	1.23   25	1.25   24	1.27   23	1.28   23	1.29   23	1.30   24	1.29   24	1.28   22	1.19   21				
	2655	2187	2128	2067	2005	1938	1866	1784	1692	1598	1501	1384	1206		
		1.46   30	1.49   29	1.51   27	1.53   26	1.55   25	1.56   25	1.58   26	1.58   26	1.58   26	1.57   25	1.53   23	1.4   23		

MAXIMUM MOTOR FRAME SIZE: 145T

### NOTES:

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

# PERFORMANCE DATA

## BSI 135A

Outlet Area = 3.22 ft<sup>2</sup>

Fan Efficiency Grade: FEG53

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125	0.25	0.375	0.50	0.625	0.75	1.00	1.25	1.50	1.75	2.00	2.25		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1/4	900	1386	1268	1120	894										
		0.14   8.0	0.15   7.1	0.15   7.7	0.15   6.1										
1/4	1075	1696	1599	1500	1380	1217									
		0.23   11.0	0.24   9.8	0.25   9.4	0.26   10.0	0.26   9.8									
1/3	1130	1792	1700	1607	1503	1365	1192								
		0.27   11.8	0.28   10.8	0.29   10.1	0.30   10.3	0.30   10.9	0.29   9.6								
1/3	1190	1897	1810	1721	1629	1515	1367								
		0.31   12.6	0.33   12.0	0.34   10.9	0.34   10.9	0.35   11.7	0.35   11.4								
1/2	1280	2053	1973	1890	1807	1716	1602	1292							
		0.39   13.9	0.40   13.4	0.41   12.4	0.42   12.0	0.43   12.2	0.43   13.0	0.42   10.8							
1/2	1370	2208	2133	2057	1980	1901	1811	1568							
		0.47   15.4	0.49   15.4	0.50   14.4	0.51   13.3	0.52   13.2	0.53   14.0	0.53   14.1							
3/4	1465	2370	2301	2231	2158	2086	2010	1818	1559						
		0.58   17.0	0.59   17.0	0.61   16.0	0.62   15.0	0.63   14.8	0.64   14.8	0.65   15.8	0.64   14.3						
3/4	1565	2541	2477	2411	2344	2277	2208	2054	1843	1572					
		0.70   19.0	0.72   19.0	0.73   18.3	0.75   17.2	0.76   16.5	0.77   16.2	0.79   17.2	0.79   17.3	0.77   14.8					
1	1640	2669	2608	2545	2482	2417	2353	2215	2038	1813					
		0.81   20	0.82   20	0.84   20	0.86   19.1	0.87   18.1	0.88   17.4	0.91   17.6	0.91   18.9	0.9   17.7					
1	1720	2805	2747	2687	2627	2566	2504	2378	2229	2034	1801				
		0.93   22	0.95   22	0.96   22	0.98   21	1.00   19.8	1.01   19.1	1.04   18.6	1.05   19.7	1.05   19.9	1.04   18.1				
1 1/2	1845	3017	2963	2908	2852	2795	2738	2623	2500	2350	2163	1946			
		1.14   25	1.16   25	1.18   25	1.20   24	1.22   23	1.23   22	1.27   21	1.29   21	1.30   22	1.29   22	1.28   21			
1 1/2	1970	3228	3178	3127	3075	3022	2969	2862	2752	2632	2484	2305	2105		
		1.39   27	1.41   27	1.43   27	1.45   27	1.47   26	1.49   25	1.52   24	1.55   23	1.58   24	1.58   25	1.58   24	1.56   23		

MAXIMUM MOTOR FRAME SIZE: 145T

## BSI 135AHP

Outlet Area = 3.22 ft<sup>2</sup>

Fan Efficiency Grade: FEG53

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1/4	1050	1116	899												
		0.16   8.5	0.17   8.1												
1/4	1200	1321	1161	937											
		0.23   11.4	0.24   9.3	0.25   9.5											
1/3	1275	1421	1276	1081	789										
		0.28   12.6	0.29   10.1	0.30   10.8	0.26   9.7										
1/3	1350	1520	1387	1219	1007										
		0.33   14.0	0.34   11.5	0.35   11.7	0.35   11.0										
1/2	1450	1651	1529	1390	1206	966									
		0.40   15.5	0.42   13.2	0.43   12.4	0.44   13.0	0.41   11.6									
1/2	1550	1780	1668	1546	1392	1212									
		0.49   17.2	0.51   15.0	0.52   13.6	0.53   14.4	0.53   13.9									
3/4	1655	1915	1812	1701	1573	1412	1237								
		0.59   19.0	0.61   17.4	0.63   15.2	0.64   15.2	0.65   16.0	0.64   14.6								
3/4	1765	2055	1959	1858	1747	1613	1457	1283							
		0.71   21	0.74   19.7	0.76   17.6	0.77   16.2	0.78   17.1	0.79   17.2	0.77   15.5							
1	1855	2169	2079	1983	1882	1767	1625	1475	1286						
		0.82   22	0.85   21	0.87   19.1	0.89   18.0	0.91   17.6	0.91   18.4	0.91   18.2	0.87   16.4						
1	1945	2282	2197	2107	2013	1910	1788	1646	1501	1294					
		0.94   24	0.97   23	1.00   21	1.02   19.4	1.04   18.6	1.05   19.5	1.05   19.9	1.04   19.3	0.98   17.8					
1 1/2	2085	2458	2379	2297	2211	2121	2021	1903	1771	1637	1470				
		1.16   26	1.19   26	1.22   24	1.24   22	1.26   21	1.28   21	1.29   22	1.30   22	1.29   22	1.25   19.7				
1 1/2	2225	2633	2560	2484	2405	2323	2236	2139	2027	1903	1779	1639	1423		
		1.40   29	1.44   29	1.47   27	1.50   26	1.52   24	1.54   23	1.56   23	1.57   24	1.57   24	1.57   24	1.55   23	1.43   22		

MAXIMUM MOTOR FRAME SIZE: 145T

### NOTES:

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



## BSI 150A

Outlet Area = 3.90 ft<sup>2</sup>

Fan Efficiency Grade: FEG53

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125	0.25	0.375	0.50	0.625	0.75	1.00	1.25	1.50	1.75	2.00	2.25		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1/4	825	1693	1552	1378	1115										
		0.17   8.2	0.18   7.3	0.19   7.9	0.18   6.6										
1/3	920	1918	1793	1660	1481	1235									
		0.24   10.2	0.25   9.1	0.26   8.7	0.26   9.5	0.25   7.7									
1/2	1020	2035	1917	1795	1646	1444									
		0.28   10.9	0.29   9.9	0.30   9.3	0.30   10.1	0.30   9.8									
3/4	1095	2152	2040	1925	1798	1626	1410								
		0.32   11.7	0.33   11.1	0.34   10.1	0.35   10.7	0.35   10.9	0.35   9.8								
1	1170	2326	2222	2116	2006	1874	1701								
		0.39   13.2	0.41   12.6	0.42   11.5	0.43   11.4	0.44   12.3	0.44   12.4								
1 1/2	1250	2498	2402	2303	2203	2094	1959	1593							
		0.48   14.6	0.49   14.2	0.51   13.0	0.52   12.5	0.53   12.9	0.53   13.4	0.52   11.7							
2	1335	2682	2592	2500	2407	2311	2204	1913							
		0.58   16.2	0.60   15.8	0.61   14.8	0.63   14.0	0.64   13.6	0.65   14.3	0.65   14.7							
3	1400	2876	2792	2707	2620	2532	2440	2209	1898						
		0.70   18.0	0.72   18.0	0.74   17.1	0.76   15.8	0.77   15.3	0.78   15.3	0.79   16.7	0.78   15.1						
4	1465	3024	2944	2863	2780	2697	2613	2416	2147	1771					
		0.81   18.8	0.83   18.8	0.85   18.5	0.87   17.5	0.88   16.8	0.90   16.1	0.91   17.3	0.91   17.3	0.88   14.4					
5	1570	3171	3096	3019	2940	2860	2781	2607	2377	2090					
		0.93   20	0.95   20	0.97   20	0.99   19.0	1.00   18.1	1.02   17.7	1.04   17.7	1.05   18.9	1.03   17.2					
6	1680	3409	3339	3267	3195	3120	3046	2894	2715	2483	2206				
		1.14   23	1.16   23	1.18   23	1.20   22	1.22   20	1.24   19.8	1.27   19.4	1.29   21	1.29   21	1.27   18.9				
7	1760	3657	3592	3525	3458	3389	3320	3181	3032	2851	2625	2365			
		1.39   25	1.41   25	1.44   25	1.46   25	1.48   24	1.50   22	1.54   21	1.57   21	1.58   23	1.57   23	1.56   21			
8	1845	3837	3775	3712	3648	3583	3517	3385	3248	3094	2903	2676	2412		
		1.59   27	1.62   27	1.64   27	1.67   27	1.69   25	1.71   24	1.75   23	1.79   23	1.81   24	1.82   25	1.81   24	1.78   21		
9		4028	3969	3909	3848	3787	3724	3598	3471	3334	3174	2979	2758		
		1.83   29	1.86   29	1.89   29	1.91   29	1.94   28	1.96   27	2.00   25	2.04   25	2.08   25	2.09   26	2.09   27	2.08   26		

MAXIMUM MOTOR FRAME SIZE: 184T

## BSI 150AHP

Outlet Area = 3.90 ft<sup>2</sup>

Fan Efficiency Grade: FEG53

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1/3	950	1078													
		0.20   8.3													
1/2	1140	1505	1261												
		0.34   10.4	0.34   10.8												
3/4	1230	1682	1481	1226											
		0.42   11.9	0.43   12.0	0.42   11.5											
1	1320	1853	1684	1465	1175										
		0.51   13.6	0.52   12.8	0.53   13.6	0.49   11.9										
1 1/2	1415	2029	1881	1698	1482										
		0.62   15.9	0.64   14.4	0.65   14.8	0.65   14.5										
2	1510	2201	2067	1914	1723	1512									
		0.75   17.8	0.77   16.1	0.79   15.5	0.79   16.5	0.78   15.6									
3	1585	2335	2210	2073	1906	1714	1484								
		0.86   19.6	0.88   17.9	0.90   16.9	0.92   17.5	0.92   17.6	0.88   15.6								
4	1660	2468	2350	2224	2078	1902	1715	1444							
		0.98   21	1.01   19.0	1.03   18.0	1.05   18.1	1.05   19.0	1.05   17.8	0.97   16.6							
5	1780	2679	2570	2457	2333	2189	2023	1848	1615						
		1.20   24	1.23   22	1.26   20	1.28   19.4	1.29   20	1.30   21	1.29   19.9	1.23   18.4						
6	1900	2887	2787	2682	2573	2453	2313	2155	1992	1794					
		1.45   27	1.48   25	1.51   23	1.54   22	1.56   22	1.58   22	1.58   23	1.57   22	1.53   20					
7	1995	3050	2956	2858	2756	2648	2527	2387	2235	2079	1889				
		1.67   29	1.71   27	1.74   26	1.77   24	1.79   23	1.81   23	1.83   25	1.83   25	1.82   24	1.77   22				
8	2090	3213	3123	3031	2935	2835	2728	2607	2469	2324	2175	1995	1721		
		1.91   31	1.95   29	1.99   28	2.02   26	2.05   25	2.07   25	2.09   25	2.10   26	2.10   26	2.09   26	2.04   24	1.86   24		

MAXIMUM MOTOR FRAME SIZE: 184T

### NOTES:

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

# PERFORMANCE DATA

## BSI 165A

Outlet Area = 4.83 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125	0.25	0.375	0.50	0.625	0.75	1.00	1.25	1.50	1.75	2.00	2.25		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1/3	800	2314	2167	1981	1706										
		0.24   10.3	0.26   9.0	0.27   7.9	0.26   8.4										
1/2	875	2555	2426	2274	2079	1809									
		0.32   12.1	0.33   10.8	0.35   9.5	0.35   9.4	0.35   9.7									
3/4	940	2762	2646	2513	2353	2141	1889								
		0.39   13.3	0.41   12.8	0.42   11.3	0.43   10.3	0.43   10.9	0.43   10.7								
1	1005	2968	2861	2742	2605	2442	2218								
		0.47   14.9	0.49   14.4	0.51   13.0	0.52   11.8	0.53   11.7	0.53   12.2								
1 1/2	1075	3188	3090	2983	2864	2726	2561	2127							
		0.57   16.2	0.60   16.1	0.62   15.1	0.63   13.9	0.64   13.1	0.65   13.1	0.64   13.0							
2	1150	3423	3333	3236	3130	3012	2877	2508	2066						
		0.70   18.1	0.72   18.1	0.75   17.4	0.77   15.9	0.78   15.0	0.79   14.3	0.79   15.0	0.76   13.8						
3	1205	3595	3510	3419	3321	3213	3093	2787	2395						
		0.80   19.4	0.83   19.5	0.85   18.7	0.88   17.8	0.89   16.2	0.90   15.7	0.91   15.8	0.9   15.3						
4	1260	3766	3686	3600	3508	3409	3300	3040	2672	2265					
		0.91   21	0.94   21	0.97   20	0.99   19.0	1.01   18.2	1.03   17.2	1.04   16.7	1.03   17.1	1   15.2					
5	1350	4046	3972	3893	3810	3722	3627	3410	3129	2775	2352				
		1.12   23	1.15   23	1.18   23	1.21   22	1.23   20	1.25   19.6	1.28   18.3	1.28   19.1	1.27   18.6	1.22   16.9				
6	1445	4341	4272	4200	4124	4045	3961	3774	3553	3259	2931	2531			
		1.37   25	1.40   25	1.43   25	1.46   24	1.49   24	1.52   23	1.55   21	1.57   20	1.57   21	1.55   20	1.5   18.0			
7	1520	4573	4508	4440	4369	4295	4218	4049	3854	3621	3310	3007			
		1.59   27	1.62   27	1.66   27	1.69   27	1.72   26	1.75   25	1.79   23	1.82   22	1.83   22	1.82   23	1.81   21			
8	1590	4789	4727	4663	4596	4527	4455	4299	4123	3921	3667	3360	3071		
		1.81   28	1.85   28	1.89   28	1.92   28	1.95   28	1.98   27	2.04   25	2.07   24	2.09   23	2.1   24	2.08   24	2.06   22		
9	1705	5144	5087	5027	4966	4903	4838	4699	4547	4377	4184	3946	3658		
		2.23   32	2.27   32	2.31   32	2.35   32	2.38   32	2.42   32	2.48   30	2.53   28	2.56   27	2.58   26	2.59   27	2.57   27		
10	1820	5499	5445	5390	5333	5275	5216	5090	4955	4807	4644	4461	4241		
		2.70   36	2.75   36	2.79   36	2.83   36	2.87   36	2.91   36	2.98   34	3.04   32	3.09   31	3.12   29	3.14   29	3.15   30		

MAXIMUM MOTOR FRAME SIZE: 145T

## BSI 165AHP

Outlet Area = 4.83 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1/2	1000	1620	1053												
		0.37   9.2	0.33   8.2												
3/4	1130	2070	1776	1294											
		0.53   10.6	0.53   10.6	0.49   9.7											
1	1210	2322	2071	1764											
		0.65   11.3	0.65   12.1	0.65   10.5											
2	1290	2564	2342	2088	1758										
		0.78   12.3	0.79   12.8	0.79   12.7	0.78   11.5										
3	1350	2741	2535	2306	2039	1631									
		0.88   13.3	0.90   13.0	0.91   13.9	0.91   12.9	0.86   12.4									
4	1415	2928	2736	2529	2294	2009	1498								
		1.01   14.4	1.03   13.8	1.04   14.2	1.05   14.5	1.04   13.0	0.93   13.0								
5	1520	3222	3051	2867	2669	2446	2182	1769							
		1.24   16.7	1.27   15.2	1.29   15.2	1.30   16.1	1.30   15.7	1.29   14.5	1.21   14.6							
6	1620	3495	3341	3175	2998	2808	2597	2351	1995						
		1.48   18.9	1.52   17.0	1.54   16.2	1.56   16.8	1.57   17.2	1.57   17.2	1.56   15.7	1.49   15.7						
7	1700	3710	3567	3413	3250	3077	2890	2684	2443	2099					
		1.69   20	1.74   18.9	1.77   17.9	1.79   17.4	1.81   18.0	1.81   18.6	1.82   18.2	1.8   16.7	1.72   16.8					
8	1785	3936	3803	3660	3509	3350	3182	3000	2802	2572	2254				
		1.94   23	1.99   21	2.03   19.3	2.06   18.9	2.09   18.9	2.10   19.3	2.10   19.6	2.10   19.0	2.09   17.9	2.01   18.0				
9	1920	4289	4169	4042	3907	3766	3618	3464	3299	3121	2928	2697	2382		
		2.39   26	2.45   24	2.50   23	2.54   21	2.57   20	2.59   20	2.61   21	2.61   22	2.62   22	2.62   20	2.59   19.7	2.49   19.7		
10	2040	4600	4489	4373	4250	4122	3988	3849	3704	3551	3388	3214	3020		
		2.84   28	2.91   27	2.97   25	3.01   24	3.05   23	3.08   22	3.11   22	3.13   23	3.13   24	3.14   24	3.14   23	3.13   22		

MAXIMUM MOTOR FRAME SIZE: 145T

### NOTES:

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

## BSI 180A

Outlet Area = 5.82 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125		0.25		0.375		0.50		0.625		0.75		1.00	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
1/3	675	2544	0.23	2342	0.25	2060	0.25	1671	0.25						
	750	2864	0.32	2695	0.34	2485	0.35	2184	0.35	1830	0.34				
1/2	810	3117	0.40	2966	0.42	2788	0.43	2564	0.44	1892	0.43				
	865	3347	0.48	3209	0.50	3052	0.52	2864	0.53	2317	0.53				
3/4	925	3597	0.58	3470	0.61	3330	0.63	3168	0.65	2718	0.65				
	985	3845	0.70	3728	0.73	3601	0.75	3458	0.77	3100	0.78	2583	0.79	13.9	0.78
1	1035	4052	0.81	3942	0.84	3823	0.86	3693	0.89	3546	0.91	3378	0.91	15.0	0.91
	1085	4257	0.92	4153	0.96	4042	0.99	3922	1.01	3789	1.03	3640	1.05	16.0	1.05
1 1/2	1160	4565	1.12	4469	1.16	4367	1.19	4259	1.22	4142	1.25	4013	1.27	18.1	1.28
	1240	4892	1.37	4803	1.41	4710	1.44	4611	1.48	4507	1.51	4394	1.53	19.2	1.57
2	1300	5137	1.57	5053	1.61	4965	1.65	4873	1.69	4775	1.72	4672	1.75	21	1.81
	1365	5402	1.82	5322	1.86	5239	1.90	5153	1.94	5062	1.97	4967	2.01	23	2.06
3	1460	5789	2.22	5715	2.26	5638	2.31	5559	2.35	5476	2.39	5390	2.43	25	2.49
	1560	6195	2.70	6126	2.74	6055	2.79	5982	2.84	5906	2.88	5828	2.92	28	3.00

MAXIMUM MOTOR FRAME SIZE: 184T

## BSI 180AHP

Outlet Area = 5.82 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.75		1.00		1.25		1.50		1.75		2.00		2.25	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
1/2	875	1753	0.39	1785	0.41										
	970	2218	0.53	2179	0.55	1645	0.62	10.5	0.66						
3/4	1040	2524	0.65	2492	0.67	2124	0.78	11.0	0.79						
	1105	2793	0.78	2739	0.81	2422	0.88	11.9	0.91						
1	1160	3013	0.89	2974	0.91	2691	0.98	12.7	1.01						
	1215	3227	1.02	3179	1.04	2854	1.10	13.0	1.12						
1 1/2	1300	3549	1.24	3322	1.26	3075	1.32	13.8	1.34						
	1390	3881	1.49	3676	1.53	3456	1.57	15.4	1.56						
2	1460	4133	1.71	3944	1.76	3740	1.81	16.4	1.82						
	1530	4381	1.96	4206	2.01	4016	2.07	18.0	2.09						
3	1640	4766	2.38	4608	2.44	4438	2.53	19.8	2.55						
	1750	5145	2.86	5000	2.93	4847	3.04	22	3.08						

MAXIMUM MOTOR FRAME SIZE: 184T

### NOTES:

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



# PERFORMANCE DATA

## BSI 210A

Outlet Area = 7.18 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125	0.25	0.375	0.50	0.625	0.75	1.00	1.25	1.50	1.75	2.00	2.25		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1/3	550	2810	2508	2029											
		0.22   7.5	0.23   6.2	0.23   6.4											
1/2	630	3286	3052	2745	2297										
		0.32   10.0	0.34   8.4	0.35   7.8	0.35   8.1										
3/4	675	3550	3340	3082	2711	2274									
		0.39   11.3	0.42   9.9	0.43   8.8	0.43   9.2	0.42   9.1									
1	720	3811	3621	3396	3109	2710									
		0.47   12.7	0.50   11.5	0.52   10.1	0.52   9.9	0.52   10.3									
1 1/2	770	4099	3926	3728	3490	3173	2798								
		0.58   14.3	0.60   13.4	0.63   11.6	0.64   10.8	0.64   11.4	0.63   11.3								
2	825	4415	4256	4080	3877	3635	3304								
		0.70   16.2	0.73   15.3	0.76   13.9	0.78   12.5	0.79   12.3	0.79   12.8								
3	865	4643	4494	4330	4146	3932	3667	2998							
		0.81   17.3	0.84   16.8	0.87   15.4	0.89   14.0	0.91   13.2	0.91   13.6	0.89   13.7							
4	905	4871	4730	4577	4408	4215	3992	3376							
		0.92   18.6	0.96   18.3	0.99   16.7	1.01   15.4	1.03   14.6	1.04   14.1	1.03   15.0							
5	970	5239	5110	4971	4821	4655	4468	3977	3382						
		1.13   20	1.17   20	1.20   19.6	1.23   18.0	1.26   16.8	1.27   15.9	1.28   16.7	1.26   16.3						
6	1040	5635	5516	5389	5254	5109	4949	4570	4031	3454					
		1.38   22	1.43   22	1.47   22	1.50   21	1.53   19.9	1.56   18.3	1.58   17.9	1.57   18.4	1.53   17.6					
7	1090	5917	5804	5685	5559	5424	5279	4944	4497	3967					
		1.59   24	1.63   24	1.68   24	1.71   23	1.75   22	1.78   20	1.81   19.1	1.82   20	1.80   19.6					
8	1140	6198	6091	5978	5860	5735	5601	5299	4929	4423	3922				
		1.81   26	1.86   26	1.90   25	1.95   25	1.99   24	2.02   23	2.06   21	2.08   21	2.07   22	2.04   20				
9	1225	6675	6576	6473	6366	6253	6135	5875	5573	5200	4719	4258			
		2.24   28	2.29   28	2.34   28	2.39   28	2.43   27	2.47   26	2.53   24	2.57   23	2.58   23	2.56   23	2.53   22			
10	1305	7123	7031	6935	6836	6733	6626	6395	6135	5835	5458	5003	4573		
		2.70   30	2.75   30	2.81   30	2.86   30	2.91   30	2.95   29	3.03   27	3.09   26	3.12   25	3.12   26	3.10   26	3.07   24		

MAXIMUM MOTOR FRAME SIZE: 184T

## BSI 210AHP

Outlet Area = 7.18 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1/2	700	2665	2166												
		0.33   7.3	0.34   7.4												
3/4	810	3208	2816	2338											
		0.49   10.0	0.52   8.8	0.53   9.3											
1	865	3471	3118	2702	2144										
		0.59   11.3	0.63   10.0	0.64   10.6	0.63   9.5										
1 1/2	925	3755	3435	3066	2628	1894									
		0.72   12.9	0.76   11.7	0.78   11.7	0.79   11.6	0.72   10.6									
2	970	3966	3668	3325	2934	2424									
		0.82   14.0	0.87   12.6	0.90   12.2	0.91   13.0	0.89   11.5									
3	1015	4175	3895	3576	3221	2798	2102								
		0.93   14.9	0.99   13.9	1.02   13.0	1.04   13.8	1.04   12.6	0.96   12.2								
4	1090	4521	4267	3982	3668	3316	2895	2164							
		1.15   16.7	1.21   15.8	1.26   14.3	1.28   14.3	1.29   15.1	1.28   13.2	1.17   13.2							
5	1165	4864	4630	4374	4091	3785	3440	3024	2309						
		1.39   18.3	1.46   17.4	1.52   16.3	1.55   15.5	1.57   16.3	1.58   16.4	1.56   14.8	1.42   14.4						
6	1220	5115	4894	4654	4391	4109	3800	3450	2999						
		1.59   19.4	1.66   18.8	1.73   17.6	1.77   16.6	1.80   16.7	1.81   17.5	1.81   16.7	1.77   15.5						
7	1280	5387	5178	4955	4711	4449	4169	3860	3510	3037					
		1.82   21	1.91   21	1.98   19.0	2.03   17.9	2.06   17.6	2.08   18.5	2.09   18.7	2.09   17.2	2.02   16.6					
8	1370	5793	5600	5396	5178	4942	4693	4428	4137	3815	3412	2776			
		2.22   23	2.31   23	2.39   22	2.46   20	2.50   19.1	2.54   19.1	2.55   20	2.56   20	2.56   19.1	2.52   18.4	2.34   18.4			
9	1465	6220	6041	5854	5656	5445	5220	4985	4736	4466	4172	3830	3361		
		2.70   25	2.80   25	2.89   24	2.97   23	3.03   21	3.07   21	3.11   21	3.12   22	3.13   22	3.13   21	3.11   19.8	3   19.9		

MAXIMUM MOTOR FRAME SIZE: 184T

### NOTES:

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

## BSI 225A

Outlet Area = 8.03 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125		0.25		0.375		0.50		0.625		0.75		1.00	
		CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/3	450	3358		2784											
		0.21	5.5	0.22	5.7										
1/2	520	4017		3578		3008									
		0.32	7.5	0.34	7.0	0.35	7.5								
3/4	560	4384		3994		3518		2870							
		0.40	8.7	0.42	8.1	0.43	8.7	0.42	7.5						
1	600	4746		4395		3981		3467		2620					
		0.48	9.9	0.51	8.9	0.53	9.3	0.53	9.5	0.49	8.0				
1 1/2	640	5105		4783		4416		3982		3436					
		0.58	11.1	0.61	10.1	0.63	9.9	0.65	10.7	0.63	9.7				
2	685	5505		5211		4883		4509		4065		3500			
		0.71	12.1	0.74	11.5	0.77	10.9	0.79	11.6	0.79	11.6	0.77	10.3		
3	720	5814		5538		5235		4896		4506		4041			
		0.82	13.1	0.85	12.8	0.89	11.8	0.91	11.9	0.92	12.6	0.91	12.5		
4	750	6078		5816		5531		5215		4861		4448			
		0.92	14.1	0.96	13.9	0.99	12.6	1.02	12.6	1.04	13.3	1.04	13.5		
5	810	6603		6364		6109		5831		5528		5190		4353	
		1.15	15.6	1.19	15.6	1.23	14.3	1.27	13.6	1.29	13.8	1.31	14.6	1.29	13.9
6	865	7081		6861		6626		6376		6106		5813		5123	
		1.39	16.8	1.44	16.8	1.49	15.9	1.52	14.7	1.56	14.7	1.58	15.3	1.59	15.9
7	910	7472		7263		7044		6812		6564		6297		5691	
		1.61	17.9	1.67	17.9	1.72	17.2	1.76	15.8	1.79	15.5	1.82	15.5	1.86	16.9
8	950	7817		7619		7411		7193		6961		6714		6163	
		1.83	18.4	1.89	18.4	1.94	18.3	1.99	16.9	2.03	16.5	2.06	16.0	2.10	17.4
9	1025	8464		8282		8093		7895		7689		7471		6996	
		2.29	19.9	2.35	19.9	2.41	19.9	2.46	19.0	2.51	18.4	2.55	17.8	2.62	17.9
10	1085	8980		8809		8632		8448		8258		8058		7629	
		2.71	21	2.77	21	2.84	21	2.89	21	2.95	20	3.00	19.4	3.07	18.8
11	1185	9837		9682		9522		9358		9188		9012		8641	
		3.51	23	3.59	23	3.66	23	3.72	23	3.78	23	3.84	22	3.94	21
12	1285	10692		10550		10404		10255		10101		9944		9615	
		4.47	26	4.55	26	4.62	26	4.70	26	4.77	26	4.83	25	4.95	24

MAXIMUM MOTOR FRAME SIZE: 215T

## BSI 225AHP

Outlet Area = 8.03 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.75		1.00		1.25		1.50		1.75		2.00		2.25	
		CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
3/4	725	2733													
		0.62	9.1												
1	785	3288		2568											
		0.79	10.8	0.76	9.7										
1 1/2	820	3625		2986											
		0.91	11.5	0.89	10.9										
2	860	3982		3369		2599									
		1.04	11.8	1.04	11.8	0.98	11.1								
3	920	4451		3927		3372		2337							
		1.26	12.6	1.28	13.4	1.26	12.9	1.12	12.1						
4	985	4919		4530		3981		3446		2228					
		1.52	14.0	1.56	14.3	1.57	14.8	1.53	13.7	1.30	12.9				
5	1035	5266		4933		4453		3956		3349					
		1.75	15.0	1.80	15.0	1.82	16.0	1.81	15.6	1.74	14.5				
6	1085	5606		5306		4923		4416		3953		3238			
		1.99	15.9	2.05	15.8	2.09	16.8	2.09	17.0	2.06	16.3	1.95	15.4		
7	1160	6108		5838		5537		5130		4660		4227		3590	
		2.40	17.9	2.47	17.5	2.53	17.5	2.56	18.6	2.56	18.6	2.52	17.6	2.42	16.9
8	1240	6635		6387		6126		5826		5417		4981		4580	
		2.91	19.9	2.98	19.5	3.05	18.8	3.11	19.7	3.13	20	3.12	20	3.09	19.6
9	1355	7378		7156		6927		6687		6417		6069		5651	
		3.75	24	3.83	22	3.90	22	3.98	22	4.05	22	4.08	24	4.08	24
10	1470	8110		7910		7702		7490		7268		7025		6731	
		4.74	27	4.82	26	4.91	26	5.00	25	5.08	25	5.15	25	5.20	26

MAXIMUM MOTOR FRAME SIZE: 215T

### NOTES:

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

# PERFORMANCE DATA

## BSI 245A

Outlet Area = 9.77 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125	0.25	0.375	0.50	0.625	0.75	1.00	1.25	1.50	1.75	2.00	2.25		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1/2	475	4748	4292	3692											
		0.41   8.3	0.44   7.3	0.44   7.6											
3/4	505	5097	4686	4171	3523										
		0.49   9.4	0.52   8.0	0.53   8.6	0.52   7.8										
1	540	5500	5129	4684	4122	3387									
		0.59   10.3	0.63   9.4	0.65   9.1	0.65   9.4	0.61   7.7									
1 1/2	575	5900	5561	5166	4690	4122									
		0.70   11.5	0.75   10.6	0.77   9.8	0.79   10.5	0.78   9.9									
2	600	6183	5864	5498	5070	4545	3946								
		0.79   12.3	0.84   11.4	0.87   10.5	0.89   11.1	0.89   11.4	0.86   9.6								
2 1/2	630	6522	6222	5886	5499	5040	4517								
		0.91   13.3	0.97   12.7	1.00   11.8	1.02   11.5	1.03   12.3	1.02   11.7								
3	675	7027	6752	6452	6113	5729	5275								
		1.12   14.4	1.17   13.9	1.22   12.9	1.25   12.2	1.27   13.0	1.27   13.3								
3 1/2	725	7585	7334	7063	6765	6434	6062	5173							
		1.37   15.8	1.44   15.8	1.49   14.4	1.53   13.8	1.55   13.8	1.57   14.7	1.56   14.1							
4	760	7974	7736	7483	7208	6906	6572	5767	4638						
		1.57   16.6	1.64   16.2	1.70   15.6	1.75   14.7	1.78   14.5	1.80   14.9	1.81   15.9	1.67   13.6						
4 1/2	795	8362	8136	7898	7642	7364	7059	6345	5506						
		1.79   17.1	1.87   17.1	1.93   16.9	1.98   16.3	2.02   15.5	2.05   15.6	2.08   16.8	2.04   16.0						
5	850	8969	8761	8542	8310	8062	7795	7191	6453	5615					
		2.18   18.3	2.26   18.3	2.33   18.4	2.39   17.6	2.44   16.9	2.48   16.9	2.53   17.7	2.53   18.0	2.45   16.9					
5 1/2	910	9630	9437	9236	9025	8803	8566	8042	7429	6712	5866				
		2.66   19.8	2.75   19.8	2.83   19.6	2.90   19.0	2.96   18.8	3.01   18.3	3.08   18.0	3.11   19.3	3.10   19.5	2.97   18.2				
6	995	10563	10389	10208	10020	9825	9620	9177	8680	8109	7454	6764			
		3.46   21	3.56   21	3.65   21	3.73   21	3.81   21	3.87   20	3.97   20	4.03   20	4.07   22	4.06   22	3.97   22			
6 1/2	1080	11494	11334	11170	11000	10825	10644	10259	9835	9368	8841	8244	7629		
		4.41   25	4.51   25	4.61   25	4.71   25	4.79   24	4.87   23	5.01   23	5.10   22	5.16   23	5.20   25	5.20   25	5.13   25	5.13   25	5.13   25
7	1160	12367	12220	12068	11913	11753	11589	11244	10871	10466	10026	9536	8986		
		5.45   28	5.56   28	5.67   28	5.77   28	5.87   27	5.96   27	6.13   26	6.25   25	6.34   25	6.40   26	6.45   27	6.45   28	6.45   28	6.45   28
7 1/2	1235	13185	13047	12906	12762	12614	12462	12147	11812	11451	11063	10646	10186		
		6.56   30	6.68   30	6.79   30	6.91   30	7.01   30	7.12   30	7.30   29	7.46   28	7.58   28	7.66   28	7.73   28	7.78   30	7.78   30	7.78   30

MAXIMUM MOTOR FRAME SIZE: 215T

## BSI 245AHP

Outlet Area = 9.77 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1	650	3332													
		0.74   9.8													
1 1/2	730	4232	3570												
		1.04   12.0	1.05   10.9												
2	780	4731	4208	3435											
		1.26   12.7	1.29   13.1	1.25   11.5											
2 1/2	835	5257	4806	4248	3404										
		1.52   13.3	1.56   14.6	1.58   14.2	1.48   12.6										
3	875	5627	5210	4739	4092										
		1.73   14.3	1.78   15.4	1.81   16.0	1.79   13.9										
3 1/2	915	5989	5602	5179	4658	3927									
		1.96   15.2	2.02   16.0	2.06   17.1	2.08   16.5	2.00   14.8									
4	980	6566	6218	5842	5432	4920	4231								
		2.37   17.2	2.45   17.4	2.51   18.6	2.54   19.2	2.55   18.0	2.46   16.5								
4 1/2	1050	7176	6857	6523	6165	5773	5292	4667							
		2.87   19.8	2.96   18.9	3.04   19.7	3.10   21	3.13   21	3.13   20	3.06   18.6							
5	1150	8030	7743	7450	7143	6818	6472	6075	5585	4976					
		3.70   24	3.81   22	3.91   22	3.99   23	4.06   24	4.10   25	4.12   24	4.1   23	3.98   22					
5 1/2	1245	8828	8566	8300	8027	7743	7443	7131	6788	6386	5901	5317			
		4.62   27	4.76   26	4.87   25	4.97   25	5.06   25	5.13   26	5.19   28	5.23   28	5.23   27	5.18   25	5.02   24			
6	1335	9575	9332	9086	8837	8581	8315	8038	7750	7443	7100	6698	6226		
		5.63   30	5.78   30	5.92   28	6.04   28	6.14   28	6.23   28	6.31   30	6.38   30	6.43   30	6.45   31	6.44   29	6.37   27		
6 1/2	1425	10314	10089	9860	9628	9394	9154	8905	8646	8380	8102	7801	7462		
		6.77   34	6.94   34	7.10   33	7.24   32	7.36   31	7.47   31	7.57   31	7.66   32	7.73   33	7.79   34	7.83   34	7.85   34		

MAXIMUM MOTOR FRAME SIZE: 215T

### NOTES:

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



## BSI 270A

Outlet Area = 11.11 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125	0.25	0.375	0.50	0.625	0.75	1.00	1.25	1.50	1.75	2.00	2.25		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1/2	375	5140	4357												
		0.36   9.2	0.38   7.0												
3/4	420	5895	5263	4470											
		0.49   11.6	0.52   8.5	0.53   8.7											
1	450	6387	5839	5140	4277										
		0.60   12.6	0.64   10.4	0.65   10.0	0.64   8.2										
1 1/2	480	6874	6390	5762	5043										
		0.72   14.1	0.77   12.9	0.79   10.3	0.79   10.6										
2	500	7196	6744	6162	5507	4690									
		0.82   15.0	0.86   14.2	0.89   11.5	0.89   11.8	0.87   9.5									
3	525	7595	7178	6653	6050	5356									
		0.94   14.7	0.99   15.5	1.02   12.5	1.03   12.2	1.02   11.7									
4	565	8230	7855	7409	6869	6290	5614								
		1.16   16.0	1.21   16.0	1.26   14.8	1.28   13.4	1.29   13.9	1.27   12.8								
5	605	8861	8519	8130	7659	7140	6578								
		1.42   17.5	1.47   17.5	1.53   17.3	1.56   15.2	1.58   14.8	1.58   15.6								
6	635	9332	9010	8653	8232	7746	7240	6008							
		1.63   18.7	1.69   18.7	1.75   19.3	1.79   16.9	1.82   16.0	1.83   16.4	1.79   14.1							
7	665	9801	9498	9166	8786	8340	7867	6798							
		1.87   20	1.93   20	1.99   20	2.04   18.9	2.08   17.3	2.10   17.3	2.08   17.0							
8	710	10502	10223	9921	9589	9204	8772	7853	6719						
		2.26   22	2.33   22	2.40   22	2.46   22	2.51   19.9	2.54   19.0	2.56   20	2.50   17.0						
9	760	11278	11021	10746	10450	10122	9746	8922	7999	6755					
		2.76   23	2.84   23	2.91   23	2.98   23	3.04   22	3.08   21	3.14   21	3.12   22	2.98   17.4					
10	830	12361	12128	11884	11624	11347	11042	10330	9564	8702	7635				
		3.58   26	3.67   26	3.75   26	3.83   26	3.90   26	3.96   25	4.05   24	4.09   25	4.06   24	3.95   20				
11	900	13440	13228	13007	12775	12531	12272	11678	10994	10281	9482	8555			
		4.55   30	4.64   30	4.73   30	4.82   30	4.90   30	4.98   30	5.10   27	5.18   27	5.21   29	5.18   28	5.09   24			
12	965	14439	14243	14040	13829	13608	13376	12869	12272	11625	10952	10205	9365		
		5.59   33	5.69   33	5.79   33	5.89   33	5.98   33	6.06   33	6.21   32	6.33   31	6.40   30	6.42   31	6.39   31	6.31   28		
13	1030	15437	15254	15066	14872	14670	14460	14011	13499	12916	12307	11673	10978		
		6.78   37	6.89   37	7.00   37	7.10   37	7.20   37	7.30   37	7.47   36	7.62   35	7.73   33	7.79   34	7.81   36	7.78   34		

MAXIMUM MOTOR FRAME SIZE: 215T

## BSI 270AHP

Outlet Area = 11.11 ft<sup>2</sup>

Fan Efficiency Grade: FEG60

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1	530	2972													
		0.64   7.7													
1 1/2	605	4674													
		1.04   10.1													
2	650	5444	4515												
		1.29   12.2	1.28   11.1												
3	695	6139	5335	4251											
		1.56   13.6	1.58   12.5	1.50   12.5											
4	730	6631	5941	5113											
		1.80   14.0	1.83   14.4	1.81   13.4											
5	760	7032	6440	5666	4611										
		2.02   14.7	2.06   15.8	2.06   14.2	1.96   14.3										
6	815	7744	7269	6623	5891	4762									
		2.47   17.0	2.51   17.0	2.55   17.1	2.53   15.9	2.37   16.4									
7	870	8438	8020	7519	6861	6171	5040								
		2.98   19.0	3.04   18.4	3.08   19.0	3.11   18.8	3.07   17.7	2.88   18.1								
8	950	9431	9055	8663	8189	7589	6965	6216							
		3.83   23	3.91   21	3.96   21	4.01   22	4.05   22	4.02   20	3.92   21							
9	1030	10411	10061	9714	9345	8905	8362	7784	7184	6276					
		4.81   26	4.93   25	5.01   24	5.06   23	5.11   25	5.15   25	5.15   23	5.08   23	4.88   23					
10	1105	11318	10989	10666	10340	9990	9580	9082	8541	8004	7374	6259			
		5.87   29	6.02   28	6.13   27	6.20   26	6.25   26	6.31   27	6.36   27	6.36   26	6.32   25	6.2   26	5.84   26			
11	1185	12275	11969	11663	11363	11057	10731	10357	9911	9411	8912	8398	7756		
		7.15   33	7.33   33	7.48   31	7.58   30	7.65   29	7.70   29	7.76   30	7.82   31	7.85   30	7.83   28	7.76   29	7.61   29		

MAXIMUM MOTOR FRAME SIZE: 215T

### NOTES:

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

# PERFORMANCE DATA

## BSI 300A

Outlet Area = 13.44 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125	0.25	0.375	0.50	0.625	0.75	1.00	1.25	1.50	1.75	2.00	2.25		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1	400	7531	6837	5958	4778										
		0.68   12.9	0.72   10.2	0.74   9.8	0.70   7.3										
1 1/2	450	8610	8054	7336	6527	5478									
		0.96   14.9	1.01   14.3	1.04   11.4	1.05   11.8	1.01   9.0									
2	480	9248	8747	8121	7397	6570									
		1.15   16.8	1.21   16.8	1.25   13.4	1.27   13.2	1.26   12.7									
3	515	9988	9535	8999	8348	7651	6839								
		1.42   17.5	1.48   17.5	1.53   15.9	1.56   14.2	1.57   14.4	1.55   13.4								
5	540	10513	10088	9602	9007	8363	7650								
		1.62   18.5	1.69   18.5	1.75   18.0	1.79   15.2	1.81   15.3	1.80   15.5								
7 1/2	565	11035	10636	10188	9651	9045	8406	6721							
		1.85   19.2	1.93   19.2	1.99   19.3	2.04   16.8	2.07   15.7	2.08   16.6	1.98   12.8							
1	605	11869	11502	11101	10642	10104	9532	8240							
		2.26   21	2.34   21	2.42   21	2.48   20	2.52   18.2	2.55   17.7	2.53   17.3							
1 1/2	645	12698	12360	11994	11592	11126	10602	9488	8112						
		2.73   23	2.82   23	2.90   23	2.97   23	3.03   20	3.07   19.6	3.09   20	3.01   17.4						
2	710	14040	13739	13418	13074	12700	12273	11316	10274	9019					
		3.62   26	3.72   26	3.81   26	3.89   26	3.97   26	4.03   24	4.11   23	4.11   24	4.03   20					
3	770	15274	14999	14711	14406	14081	13729	12903	12002	11016	9858				
		4.60   28	4.71   28	4.81   28	4.90   28	4.99   28	5.07   28	5.19   25	5.25   27	5.24   27	5.15   24				
5	825	16402	16148	15883	15606	15314	15005	14300	13484	12632	11690	10607			
		5.64   31	5.76   31	5.87   31	5.97   31	6.07   31	6.16   31	6.32   30	6.42   28	6.47   30	6.44   29	6.34   26			
7 1/2	880	17527	17291	17046	16791	16525	16247	15636	14919	14139	13330	12435	11429		
		6.83   34	6.95   34	7.07   34	7.19   34	7.30   34	7.40   34	7.59   32	7.73   32	7.82   31	7.85   33	7.81   33	7.71   30		

MAXIMUM MOTOR FRAME SIZE: 215T

## BSI 300AHP

Outlet Area = 13.44 ft<sup>2</sup>

Fan Efficiency Grade: FEG60

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1	390	2715													
		0.40   5.6													
1 1/2	515	6049	4817												
		1.02   9.6	1.02   8.8												
2	550	6697	5656												
		1.24   10.5	1.26   10.3												
3	590	7396	6568	5439											
		1.52   12.1	1.55   12.5	1.54   11.2											
5	620	7905	7196	6180	4525										
		1.75   13.6	1.79   13.9	1.81   12.0	1.63   12.3										
7 1/2	650	8407	7773	6876	5807										
		2.00   15.4	2.05   14.1	2.09   14.4	2.04   13.6										
1	700	9233	8668	7984	7069	5958									
		2.47   18.2	2.54   15.7	2.59   16.7	2.60   15.1	2.51   15.2									
1 1/2	745	9968	9440	8872	8107	7228	5967								
		2.95   21	3.04   17.5	3.09   17.6	3.14   18.0	3.12   16.2	2.96   16.8								
2	810	11018	10527	10039	9480	8742	7935	6942							
		3.73   23	3.87   21	3.94   19.4	3.99   20	4.04   20	4.02   18.6	3.89   19.5							
3	880	12133	11679	11233	10774	10241	9558	8815	8022	6584					
		4.71   25	4.89   25	5.00   23	5.06   22	5.12   23	5.17   23	5.17   22	5.08   22	4.73   22					
5	945	13157	12737	12316	11901	11464	10951	10314	9620	8917	7959				
		5.77   28	5.98   28	6.13   26	6.22   25	6.28   25	6.35   26	6.40   26	6.41   24	6.34   24	6.15   25				
7 1/2	1010	14173	13782	13386	12997	12605	12188	11702	11112	10461	9818	9087	7869		
		6.97   30	7.21   30	7.40   30	7.53   27	7.61   27	7.68   27	7.75   28	7.81   28	7.83   28	7.78   26	7.66   26	7.28   27		

MAXIMUM MOTOR FRAME SIZE: 215T

### NOTES:

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

## BSI 330A

Outlet Area = 16.46 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125	0.25	0.375	0.50	0.625	0.75	1.00	1.25	1.50	1.75	2.00	2.25		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1	310	7663	6517	4805											
		0.54   8.7	0.57   6.7	0.53   5.4											
1 1/2	380	9752	8983	7994	6823										
		0.96   14.0	1.02   12.2	1.05   10.7	1.03   9.9										
2	405	10479	9795	8908	7908	6582									
		1.16   15.6	1.22   14.9	1.26   11.9	1.26   12.3	1.21   9.4									
3	435	11343	10732	9970	9088	8082									
		1.42   17.6	1.49   17.6	1.55   14.0	1.57   13.7	1.56   13.3									
5	455	11916	11343	10654	9829	8932	7858								
		1.62   18.7	1.70   18.7	1.76   15.7	1.79   14.1	1.79   14.8	1.76   12.4								
7 1/2	475	12485	11946	11318	10550	9727	8787								
		1.84   19.3	1.92   19.3	1.98   17.6	2.03   15.4	2.04   15.6	2.02   15.1								
10	510	13477	12987	12438	11779	11036	10251	8162							
		2.26   21	2.35   21	2.42   21	2.49   17.5	2.52   16.8	2.53   17.2	2.40   13.2							
15	545	14463	14013	13519	12954	12290	11588	9992							
		2.74   22	2.84   22	2.93   22	3.00   21	3.05   18.5	3.08   18.3	3.05   18.0							
20	600	16005	15606	15176	14708	14175	13569	12272	10750						
		3.63   25	3.74   25	3.84   25	3.94   25	4.01   23	4.07   21	4.12   21	4.06   20						
25	650	17401	17037	16652	16240	15792	15286	14137	12898	11434					
		4.60   28	4.72   28	4.83   28	4.94   28	5.03   28	5.11   26	5.21   23	5.23   25	5.15   22					
30	700	18792	18458	18108	17737	17344	16918	15920	14826	13637	12250				
		5.72   32	5.85   32	5.98   32	6.09   32	6.20   32	6.30   30	6.45   27	6.53   27	6.52   28	6.42   25				
35	745	20040	19729	19405	19065	18707	18329	17465	16464	15420	14263	12932			
		6.88   34	7.02   34	7.15   34	7.28   34	7.40   34	7.52   34	7.71   30	7.83   29	7.88   31	7.84   31	7.73   27			
40	780	21010	20714	20407	20088	19753	19401	18623	17707	16728	15697	14538	13186		
		7.88   35	8.03   35	8.17   35	8.31   35	8.44   35	8.56   35	8.78   33	8.93   32	9.03   32	9.04   33	8.97   32	8.8   28		
45	820	22116	21837	21547	21247	20935	20610	19907	19089	18175	17235	16226	15099		
		9.14   38	9.29   38	9.44   38	9.59   38	9.73   38	9.86   38	10.11   36	10.30   35	10.43   34	10.50   35	10.49   36	10.41   34		

MAXIMUM MOTOR FRAME SIZE: 256T

## BSI 330AHP

Outlet Area = 16.46 ft<sup>2</sup>

Fan Efficiency Grade: FEG60

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1 1/2	440	4716													
		1.00   8.4													
2	500	7005	4831												
		1.57   10.7	1.40   10.3												
3	525	7782	6329												
		1.82   12.4	1.78   11.2												
4	550	8512	7221												
		2.08   13.3	2.08   11.9												
5	590	9567	8485	7198											
		2.54   14.6	2.58   15.0	2.53   13.8											
6	630	10536	9686	8557	7137										
		3.07   16.4	3.12   16.9	3.14   15.3	3.01   15.6										
7 1/2	690	11923	11264	10413	9369	8178									
		3.99   19.5	4.05   18.7	4.12   19.8	4.12   17.7	4.01   17.8									
8	745	13162	12577	11928	11082	10111	9053								
		4.97   23	5.06   21	5.12   21	5.19   22	5.19   19.8	5.08   20								
9	800	14385	13842	13285	12645	11827	10922	9976	8380						
		6.07   27	6.21   24	6.29   23	6.36   24	6.43   24	6.43   22	6.34   22	5.98   23						
10	855	15596	15081	14573	14039	13413	12637	11787	10930	9770					
		7.33   29	7.51   27	7.62   26	7.70   25	7.78   27	7.85   27	7.85   25	7.78   25	7.54   25					
11	900	16576	16084	15602	15113	14583	13953	13193	12386	11574	10550	8575			
		8.46   31	8.69   31	8.84   28	8.93   27	9.01   28	9.10   29	9.16   29	9.16   27	9.08   26	8.87   27	8.12   26			
12	940	17440	16970	16504	16043	15562	15027	14386	13638	12867	12088	11130	9424		
		9.57   33	9.82   33	10.01   31	10.13   30	10.21   30	10.30   30	10.39   32	10.44   30	10.43   29	10.35   28	10.14   29	9.5   29		

MAXIMUM MOTOR FRAME SIZE: 256T

### NOTES:

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



# PERFORMANCE DATA

## BSI 365A

Outlet Area = 17.36 ft<sup>2</sup>

Fan Efficiency Grade: FEG53

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125		0.25		0.375		0.50		0.625		0.75		0.875	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
		Sone		Sone		Sone		Sone		Sone		Sone		Sone	
1	240	7252	0.43	5314	0.41										
		4.2		4.0											
1 1/2	320	10451	0.98	9423	1.01	8064	1.01								
		8.7		7.7		8.3									
2	345	11407	1.21	10491	1.26	9375	1.28	7885	1.23						
		10.6		9.2		9.8		8.7							
3	370	12351	1.48	11523	1.55	10562	1.57	9338	1.57						
		12.1		11.1		11.0		11.6							
4	385	12914	1.67	12129	1.73	11237	1.77	10145	1.71	8770					
		13.2		12.3		11.6		12.4		11.0					
5	405	13659	1.93	12926	2.01	12107	2.05	11150	2.06	9953					
		14.3		13.8		12.9		13.6		13.5					
6	435	14771	2.38	14101	2.46	13368	2.52	12548	2.56	11578	10406				
		15.9		15.7		14.5		14.5		14.5					
7	465	15875	2.89	15258	2.99	14592	3.06	13866	3.12	13049	12081	10956			
		17.3		17.3		16.1		15.6		16.6		15.7			
8	505	17338	3.68	16779	3.79	16185	3.88	15548	3.98	14857	14087	13194	12173		
		19.9		19.9		19.4		18.0		18.1		19.0	3.94	17.9	
9	550	18976	4.72	18469	4.85	17937	4.96	17374	5.05	16777	16135	15430	14633	12747	
		23		23		21		21		19.9		21	5.17	18.8	
10	590	20425	5.81	19957	6.07	19470	6.18	18959	6.27	18422	17854	17248	16591	15040	13163
		25		25		24		23		22		22	6.37	23	6.11
11	630	21870	7.05	21435	7.20	20984	7.34	20516	7.46	20027	19515	18977	18407	17121	15565
		29		29		27		26		25		24	7.73	25	7.71
12	660	22951	8.09	22538	8.25	22111	8.40	21669	8.53	21211	20733	20235	19712	18566	17212
		31		31		31		31		29		27	8.87	25	8.92
13	695	24210	9.43	23820	9.60	23418	9.76	23003	9.90	22575	22131	21671	21192	20163	18996
		34		34		34		34		33		31	10.25	29	10.31

MAXIMUM MOTOR FRAME SIZE: 256T

## BSI 365AHP

Outlet Area = 17.36 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.25		0.50		0.75		1.00		1.25		1.50		1.75	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
		Sone		Sone		Sone		Sone		Sone		Sone		Sone	
1 1/2	380	8578	1.10	7022	1.15										
		8.6		8.9											
2	420	9743	1.47	8471	1.54	6844	1.56								
		11.0		10.3		10.9									
3	440	10320	1.67	9147	1.75	7646	1.80								
		12.3		10.9		12.0									
4	460	10895	1.90	9791	1.99	8397	2.04	6313	1.82						
		13.7		11.2		12.5		12.5							
5	495	11892	2.33	10869	2.46	9691	2.53	8320	2.56	14.3					
		15.5		13.1		13.6		14.3							
6	530	12878	2.82	11913	3.00	10907	3.07	9652	3.13	15.4					
		17.9		14.6		14.6		15.4		14.9					
7	575	14135	3.55	13229	3.78	12355	3.88	11313	3.96	17.0					
		21		17.4		16.0		17.0		17.0					
8	625	15519	4.50	14674	4.79	13874	5.02	13026	5.10	19.3					
		23		20		18.3		18.1		18.1					
9	670	16756	5.49	15964	5.83	15204	6.03	14454	6.22	21					
		26		24		21		20		21					
10	720	18122	6.74	17382	7.13	16660	7.41	15970	7.55	23					
		30		28		25		23		23					
11	755	19074	7.72	18366	8.15	17671	8.47	17008	8.65	25					
		32		31		28		26		25					
12	790	20023	8.80	19345	9.27	18677	9.62	18034	9.86	29					
		35		34		31		29		28					

MAXIMUM MOTOR FRAME SIZE: 256T

### NOTES:

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

## BSI 402A

Outlet Area = 21.20 ft<sup>2</sup>

Fan Efficiency Grade: FEG53

HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.125	0.25	0.375	0.50	0.625	0.75	0.875	1.00	1.125	1.25	1.50	1.75		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1 1/2	290	12803	11551	9898											
		1.20   8.6	1.25   7.5	1.25   8.1											
2	310	13837	12708	11321	9460										
		1.45   10.3	1.51   8.9	1.53   9.4	1.47   8.2										
3	325	14605	13550	12305	10677										
		1.67   11.1	1.74   10.1	1.76   10.1	1.74   10.2										
5	340	15368	14377	13238	11810	9946									
		1.90   12.4	1.98   11.4	2.01   11.1	2.01   11.5	1.90   10.1									
7 1/2	365	16630	15729	14722	13542	12064									
		2.33   14.5	2.43   13.5	2.48   12.7	2.50   13.4	2.47   13.4									
10	390	17882	17054	16146	15127	13911	12447								
		2.83   16.1	2.94   15.8	3.01   14.7	3.04   14.6	3.05   15.5	2.98   14.5								
15	430	19870	19136	18347	17491	16540	15433	14130	12574						
		3.76   19.1	3.89   19.1	3.99   17.6	4.05   16.7	4.07   17.3	4.08   17.8	4.03   17.4	3.85   15.8						
20	465	21599	20929	20220	19462	18644	17742	16707	15514	14190					
		4.73   22	4.88   22	4.99   20	5.08   19.1	5.13   18.7	5.15   19.2	5.16   20	5.12   19.8	4.96   17.8					
25	500	23319	22703	22057	21374	20649	19871	19021	18061	16972	15788				
		5.86   24	6.02   24	6.15   23	6.27   22	6.34   21	6.38   21	6.41   22	6.42   23	6.39   22	6.26   20				
30	535	25032	24462	23867	23245	22591	21900	21163	20365	19476	18483	16212			
		7.15   27	7.32   27	7.48   27	7.61   25	7.72   24	7.78   23	7.82   23	7.85   23	7.87   25	7.84   24	7.54   21			
35	555	26009	25462	24893	24300	23679	23028	22340	21604	20804	19915	17876			
		7.97   28	8.15   28	8.31   28	8.46   27	8.58   25	8.66   25	8.71   24	8.75   24	8.77   25	8.78   25	8.62   24			
40	585	27471	26955	26421	25867	25290	24689	24060	23396	22690	21928	20169	18133		
		9.31   30	9.50   30	9.68   30	9.84   30	9.98   28	10.09   27	10.17   26	10.21   26	10.25   26	10.27   27	10.25   27	9.95   24		

MAXIMUM MOTOR FRAME SIZE: 256T

## BSI 402AHP

Outlet Area = 21.20 ft<sup>2</sup>

Fan Efficiency Grade: FEG56

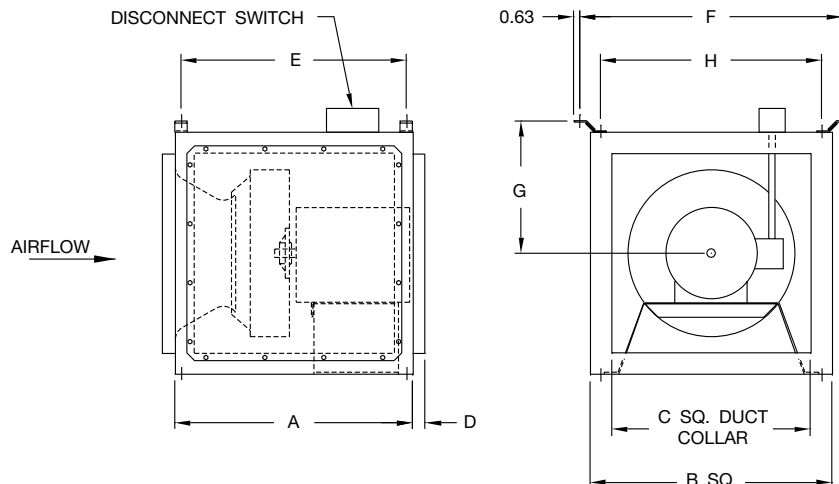
HP	RPM	STATIC PRESSURE (INCHES W.G.)													
		0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25		
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
		BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone	BHP Sone
1 1/2	300	6115													
		0.91   6.6													
2	355	9151													
		1.55   9.6													
3	370	9886	7706												
		1.74   10.2	1.73   10.7												
5	390	10821	8929												
		2.02   10.8	2.07   12.0												
7 1/2	420	12135	10463	8217											
		2.50   12.2	2.57   13.2	2.40   13.4											
10	445	13174	11713	10021											
		2.95   13.2	3.04   14.1	3.07   14.3											
15	490	14984	13808	12337	10775										
		3.90   15.7	3.99   15.3	4.08   16.7	4.09   16.3										
20	530	16559	15516	14303	12888	11382									
		4.88   18.7	5.00   17.1	5.11   17.7	5.17   18.5	5.14   17.8									
25	570	18119	17148	16129	14901	13583	12127								
		6.00   22	6.18   19.2	6.28   19.1	6.39   20	6.45   20	6.38   19.0								
30	605	19474	18544	17626	16575	15355	14125	12645							
		7.09   24	7.33   22	7.45   21	7.57   22	7.67   22	7.72   21	7.56   20							
35	640	20817	19924	19066	18152	17082	15903	14747	13278						
		8.30   28	8.61   24	8.77   22	8.88   22	9.01   24	9.09   24	9.14   23	8.91   22						
40	670	21960	21097	20275	19437	18492	17412	16282	15169	13598					
		9.45   30	9.81   27	10.01   25	10.13   24	10.26   25	10.38   26	10.45   26	10.49   24	10.06   23					
45	715	23663	22847	22062	21294	20488	19572	18551	17490	16459	15234	12566			
		11.35   35	11.79   31	12.07   28	12.23   28	12.35   28	12.50   28	12.62   30	12.69   28	12.75   27	12.59   26	10.93   26			
50	765	25541	24774	24023	23303	22582	21815	20953	20004	19011	18045	17034	15602		
		13.74   40	14.25   36	14.63   34	14.87   32	15.01   31	15.15   31	15.31   32	15.44   34	15.53   33	15.59   32	15.59   30	15.03   30		

MAXIMUM MOTOR FRAME SIZE: 256T

### NOTES:

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

## Model DSI, Direct Drive



MODEL DSI	EC MOTOR SIZES	A	B	C	D	E	F	G	H	DAMPER SIZE	AVG. SHIP WT. (LBS.)	SIDE DISCHARGE SIZE
080A	080AE	19.00	15.33	11.88	1.00	16.50	19.50	8.63	13.56	12.00 x 12.00	93	11.88 x 11.88
090A	090AE	19.00	15.33	11.88	1.00	16.50	19.50	8.63	13.56	12.00 x 12.00	96	11.88 x 11.88
100A	100AE	20.50	17.81	13.88	1.00	19.00	21.06	10.38	16.00	14.00 x 14.00	106	13.88 x 13.88
120A	120AE	21.50	19.38	15.88	1.00	20.00	22.06	11.13	17.00	16.00 x 16.00	127	15.88 x 15.88
135A/135AN	135AE/ANE	23.00	21.56	17.88	1.00	21.50	24.25	12.19	19.16	18.00 x 18.00	132	17.88 x 17.88
150A/150AN	150AE/ANE	24.00	23.82	19.88	1.00	22.50	26.38	13.29	21.31	20.00 x 20.00	157	19.88 x 19.88
165A/165AN	165AE/ANE	26.00	26.50	22.88	1.00	24.50	29.06	14.64	24.00	23.00 x 23.00	167	22.88 x 22.88

### Notes:

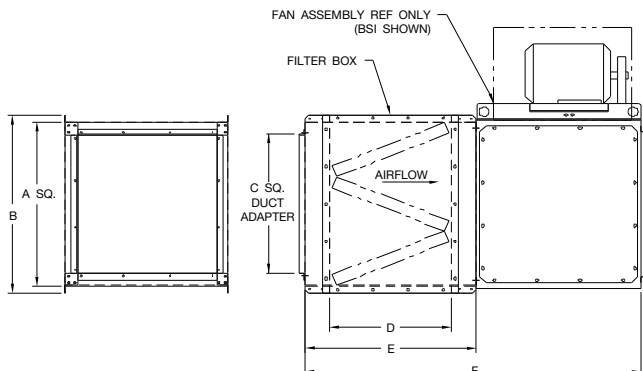
1. All figures are in inches unless noted otherwise.
2. Average ship weight is for fan and motor assembly.
3. Dimensions are not to be used for construction.

D-4210J

## Filter Box Assembly

SIZE	A SQ.	B	C	D	E	F	FILTER SIZE	FILTER QTY.	AVG. SHIP WT. (LBS.)
080/090	16.00	18.50	11.88	21.44	28.38	47.38	25x16x2	1	99
100	18.06	20.56	13.88	19.88	26.75	47.25	25x16x2	1	113
120/120HP	19.62	22.12	15.88	24.50	31.38	52.88	25x16x2	2	148
135/135HP	21.75	24.25	17.88	24.00	32.00	55.00	25x20x2	2	181
150/150HP	23.94	26.44	19.88	23.75	32.00	56.00	25x20x2	2	200
165/165HP	26.62	29.12	22.88	19.56	28.00	54.00	25x20x2	3	203
180/180HP	29.12	31.62	23.88	19.25	26.50	55.00	25x20x2	3	220
210/210HP	32.44	34.94	27.88	21.00	31.00	63.00	25x16x2	4	290
225/225HP	34.25	36.75	29.88	24.00	33.00	67.00	25x16x2	6	397
245/245HP	37.75	40.25	32.88	18.88	30.00	56.50	25x20x2	2	439
							25x16x2	2	
							25x20x2	6	
270/270HP	40.25	42.75	35.88	23.00	33.00	72.00	25x20x2	6	568
300/300HP	44.25	46.75	39.88	24.00	33.00	74.50	25x20x2	8	654
330/330HP	48.94	51.44	43.88	23.50	34.00	79.50	25x16x2	12	842
365/365HP	50.25	52.75	45.88	19.75	30.50	77.38	25x20x2	12	850
402/402HP	55.50	58.00	51.88	24.75	36.00	88.00	25x20x2	12	1150
							25x16x2	6	

D-4205-1

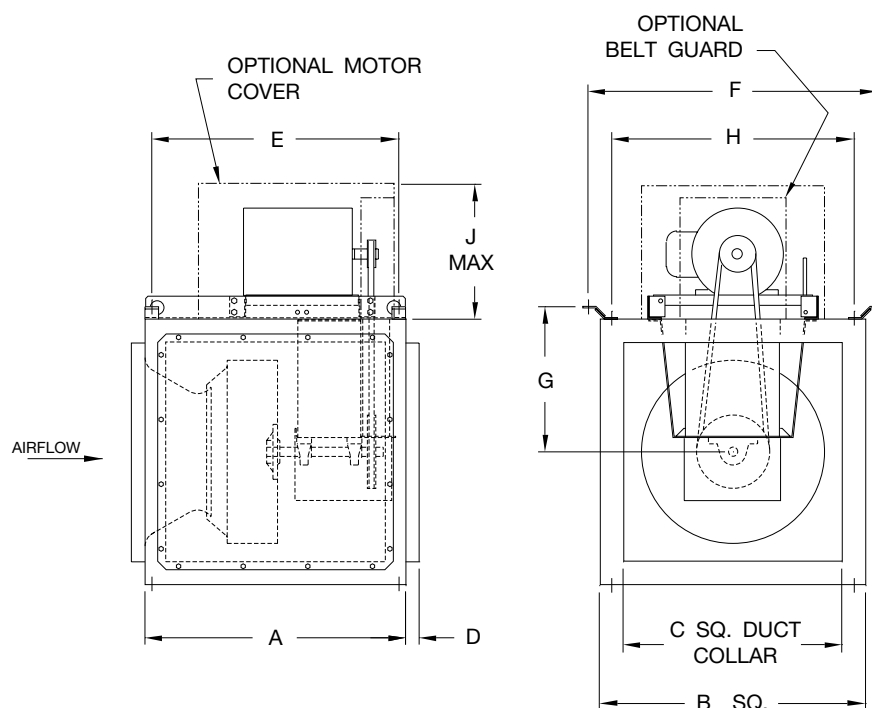


### Notes:

1. All figures are in inches unless noted otherwise.
2. Filter box option is shipped separately for field installation.
3. For filter box information, see page 7.



## Model BSI, Belt Driven



MODEL BSI	A	B	C	D	E	F	G	H	J	DAMPER SIZE	AVG. SHIP WT. (LBS.)	SIDE DISCHARGE SIZE
080A	19.00	15.33	11.88	1.00	16.50	19.50	8.63	13.56	12.00	12.00 x 12.00	93	11.88 x 11.88
090A	19.00	15.33	11.88	1.00	16.50	19.50	8.63	13.56	12.00	12.00 x 12.00	96	11.88 x 11.88
100A	20.50	17.81	13.88	1.00	19.00	21.06	10.38	16.00	12.00	14.00 x 14.00	106	13.88 x 13.88
120A/120AHP	21.50	19.38	15.88	1.00	20.00	22.06	11.13	17.00	12.00	16.00 x 16.00	127	15.88 x 15.88
135A/135AHP	23.00	21.56	17.88	1.00	21.50	24.25	12.19	19.16	12.75	18.00 x 18.00	132	17.88 x 17.88
150A/150AHP	24.00	23.82	19.88	1.00	22.50	26.38	13.29	21.31	12.75	20.00 x 20.00	157	19.88 x 19.88
165A/165AHP	26.00	26.50	22.88	1.00	24.50	29.06	14.64	24.00	14.56	23.00 x 23.00	167	22.88 x 22.88
180A/180AHP	28.50	29.00	23.88	1.50	27.00	31.56	15.89	26.50	16.25	24.00 x 24.00	193	23.88 x 23.88
210A/210AHP	32.00	32.34	27.88	1.50	30.50	35.06	17.54	30.00	16.25	28.00 x 28.00	223	27.88 x 27.88
225A/225AHP	34.00	34.00	29.88	1.50	32.50	36.89	18.45	31.81	18.50	30.00 x 30.00	287	25.88 x 28.88
245A/245AHP	36.50	37.50	32.88	1.50	35.00	40.38	20.20	35.31	18.50	33.00 x 33.00	352	27.88 x 31.88
270A/270AHP	39.00	40.13	35.88	1.50	37.50	43.00	21.45	37.88	20.00	36.00 x 36.00	394	29.88 x 33.88
300A/300AHP	41.50	44.13	39.88	1.50	39.50	47.62	23.83	41.88	20.00	40.00 x 40.00	442	29.88 x 37.88
330A/330AHP	45.50	48.81	43.88	1.50	43.50	52.31	26.19	46.56	20.00	44.00 x 44.00	554	31.88 x 39.88
365A/365AHP	48.50	50.13	45.88	1.50	46.50	53.63	26.84	47.88	20.00	46.00 x 46.00	665	32.88 x 41.88
402A/402AHP	52.00	55.25	51.88	1.50	50.00	58.88	29.47	53.13	20.00	52.00 x 52.00	743	34.88 x 46.88

D-4205J

### Notes:

1. All figures are in inches unless noted otherwise.
2. Average ship weight is for fan and motor assembly.
3. Dimensions are not to be used for construction.

# TYPICAL SPECIFICATIONS



**Model**  
**DSI**

Supply or exhaust fans shall be of the direct drive model DSI centrifugal square inline type, as manufactured by Twin City Fan, Minneapolis, Minnesota.

**PERFORMANCE** — Performance ratings shall conform to AMCA Standard 205 (fan efficiency grade), 211 (air performance) and 311 (sound performance). Fans shall be tested in accordance with ANSI/AMCA Standard 210 (air performance) and 300 (sound performance) in an AMCA accredited laboratory. Fans shall be licensed to bear the AMCA certified ratings seal for both sound and air, and fan efficiency grade (FEG). Model DSI shall be UL 705 listed.

**CONSTRUCTION** — Unit exterior shall be constructed of heavy gauge galvanized steel. The fan housing shall be square in shape and readily attachable to building ductwork. Unit side panels shall be removable for easy access for maintenance and service. The power assembly shall be removable as a complete module through the side access panel. Fan housings shall have universal mounting brackets to accommodate horizontal or vertical installations. Fans shall bear a permanently attached nameplate displaying model and serial number of the unit for future identification.

**WHEEL** — Fan wheels shall be of the non-overloading centrifugal backward inclined type, constructed of aluminum and containing a matching inlet venturi for optimum unit performance. Wheels shall be statically and dynamically balanced.

**MOTOR** — Motors shall be of the heavy-duty ball bearing type, closely matched to the fan load. A disconnect switch shall be factory installed and wired to the fan motor as standard. All motors shall be UL recognized.

**ACCESSORIES** — When specified, accessories such as backdraft damper, belt guard, motor cover, insulated housing, vibration isolators, side discharge, remote lubrication lines, inlet and outlet guards, special coatings, and filter box option shall be provided by Twin City Fan to maintain one source responsibility.

**FACTORY RUN TEST** — All fans prior to shipment shall be completely assembled and test run as a unit at operating speed or maximum RPM allowed for the particular construction type. Each wheel shall be statically and dynamically balanced in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. Balance readings shall be taken by electronic type equipment in the axial, vertical, and horizontal directions. Records shall be maintained and a written copy shall be available upon request.

**GUARANTEE** — The manufacturer shall guarantee the workmanship and materials for its DSI Square Inline Fans for at least one (1) year from startup or eighteen (18) months from ship date, whichever occurs first.



# TYPICAL SPECIFICATIONS

## Model

BSI



Supply or exhaust fans shall be of the belt driven model BSI centrifugal square inline type, as manufactured by Twin City Fan, Minneapolis, Minnesota.

**PERFORMANCE** — Performance ratings shall conform to AMCA Standard 205 (fan efficiency grade), 211 (air performance) and 311 (sound performance). Fans shall be tested in accordance with ANSI/AMCA Standard 210 (air performance) and 300 (sound performance) in an AMCA accredited laboratory. Fans shall be licensed to bear the AMCA certified ratings seal for both sound and air, and fan efficiency grade (FEG). Model BSI shall be UL 705 listed. Fans shall bear a permanently attached nameplate displaying model and serial number of the unit for future identification.

**CONSTRUCTION** — Unit exterior shall be constructed of heavy gauge galvanized steel. The fan housing shall be square in shape and readily attachable to building ductwork. Unit side panels shall be removable for easy access for maintenance and service. The power assembly shall be removable as a complete module through the side access panel. Fan housings shall have universal mounting brackets to accommodate horizontal or vertical installations.

**WHEEL** — Fan wheels shall be of the non-overloading centrifugal backward inclined type, constructed of aluminum and containing a matching inlet venturi for optimum unit performance. Wheels shall be statically and dynamically balanced.

**SHAFT** — Fan shafts shall be precision ground and polished. Shafts shall have a first critical speed of at least 125% of the fan's maximum operating speed.

**BEARINGS** — Bearings shall be of the one-piece, pillow block type with relubricable zerk fittings. Bearings shall be designed for air handling service with a minimum L-10 life in excess of 100,000 hours; L-50 500,000 hours at the maximum cataloged operating speed. Bearing mounting plate shall have self-aligning tabs for exact locating and alignment of bearings.

**DRIVE** — Drives shall be sized for a minimum of 150% of driven horsepower. Machined, cast iron motor sheaves shall be adjustable for final system balancing. The belt and pillow block ball bearings shall be protected from the airstream by an enclosure.

**MOTOR** — Motors shall be of the heavy-duty ball bearing type, closely matched to the fan load. A disconnect switch shall be factory installed and wired to the fan motor as standard. Motor shall be mounted on the outside of the unit, isolated from the airstream. All motors shall be UL recognized.

**ACCESSORIES** — When specified, accessories such as backdraft damper, belt guard, motor cover, insulated housing, vibration isolators, side discharge, remote lubrication lines, inlet and outlet guards, special coatings, and filter box option shall be provided by Twin City Fan to maintain one source responsibility.

**FACTORY RUN TEST** — All fans prior to shipment shall be completely assembled and test run as a unit at operating speed or maximum RPM allowed for the particular construction type. Each wheel shall be statically and dynamically balanced in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. Balance readings shall be taken by electronic type equipment in the axial, vertical, and horizontal directions on each of the bearings. Records shall be maintained and a written copy shall be available upon request.

**GUARANTEE** — The manufacturer shall guarantee the workmanship and materials for its BSI Square Inline Fans for at least one (1) year from startup or eighteen (18) months from ship date, whichever occurs first.



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