



INDUSTRIAL PROCESS AND  
COMMERCIAL VENTILATION SYSTEMS

# SQUARE INLINE CENTRIFUGAL FANS

DSI | BSI



# SQUARE INLINE CENTRIFUGAL FANS



## Overview

DSI | BSI



DSI  
Direct Drive

Now Available with



see page 8



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 impellers precisely matched to a spun venturi. All impellers 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

### Impeller Types

Backward Inclined

### Optional Construction

Spark Resistant Construction (Type 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 our Fan Selector program at [tcf.com](http://tcf.com).

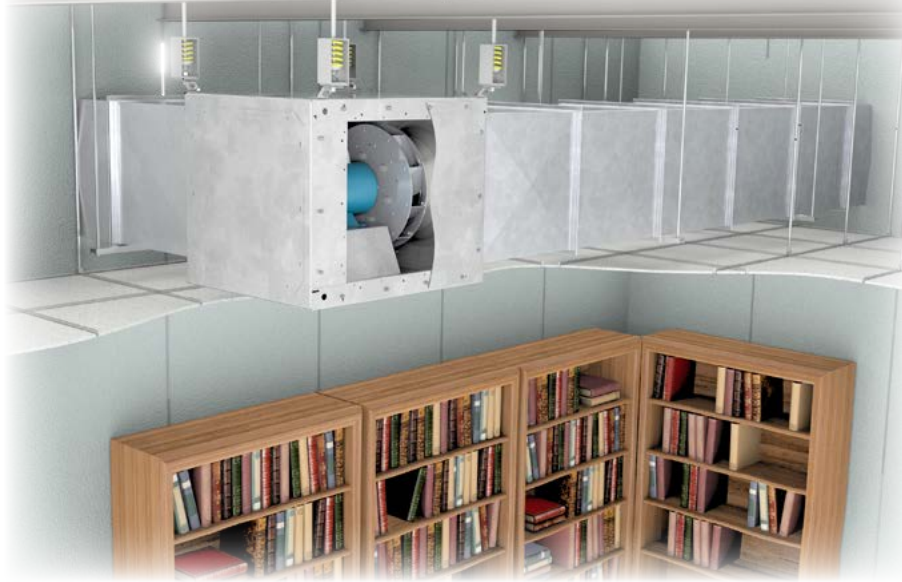
## Overview

DSI | BSI

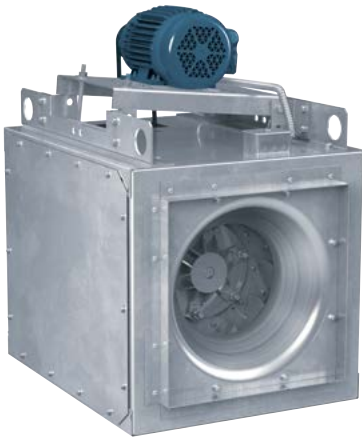


### Model DSI

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)



**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).

**Impeller** - Backward inclined non-overloading, all-aluminum impeller 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 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

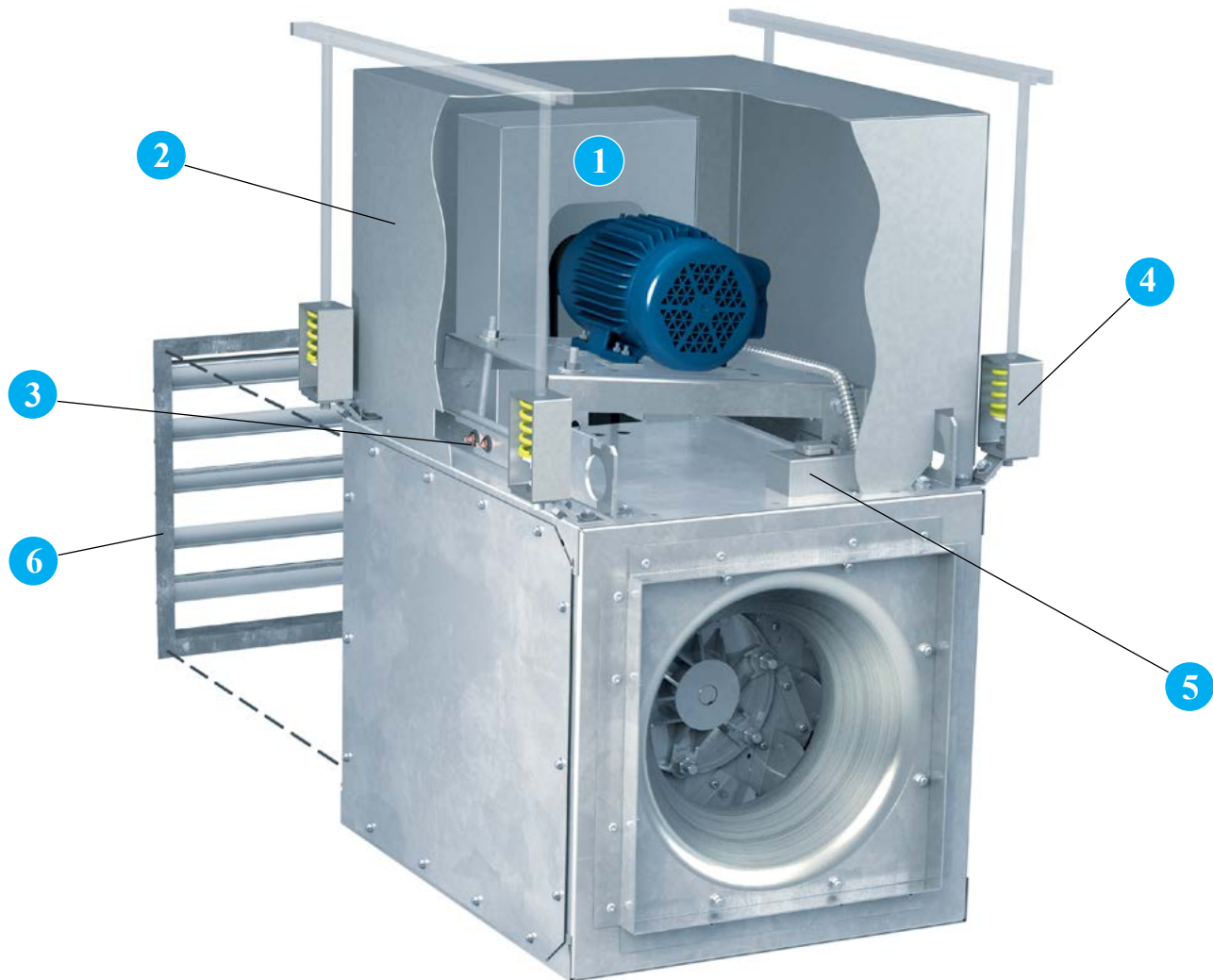
### **NEMA 7/9 Disconnect Switch**

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





**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.

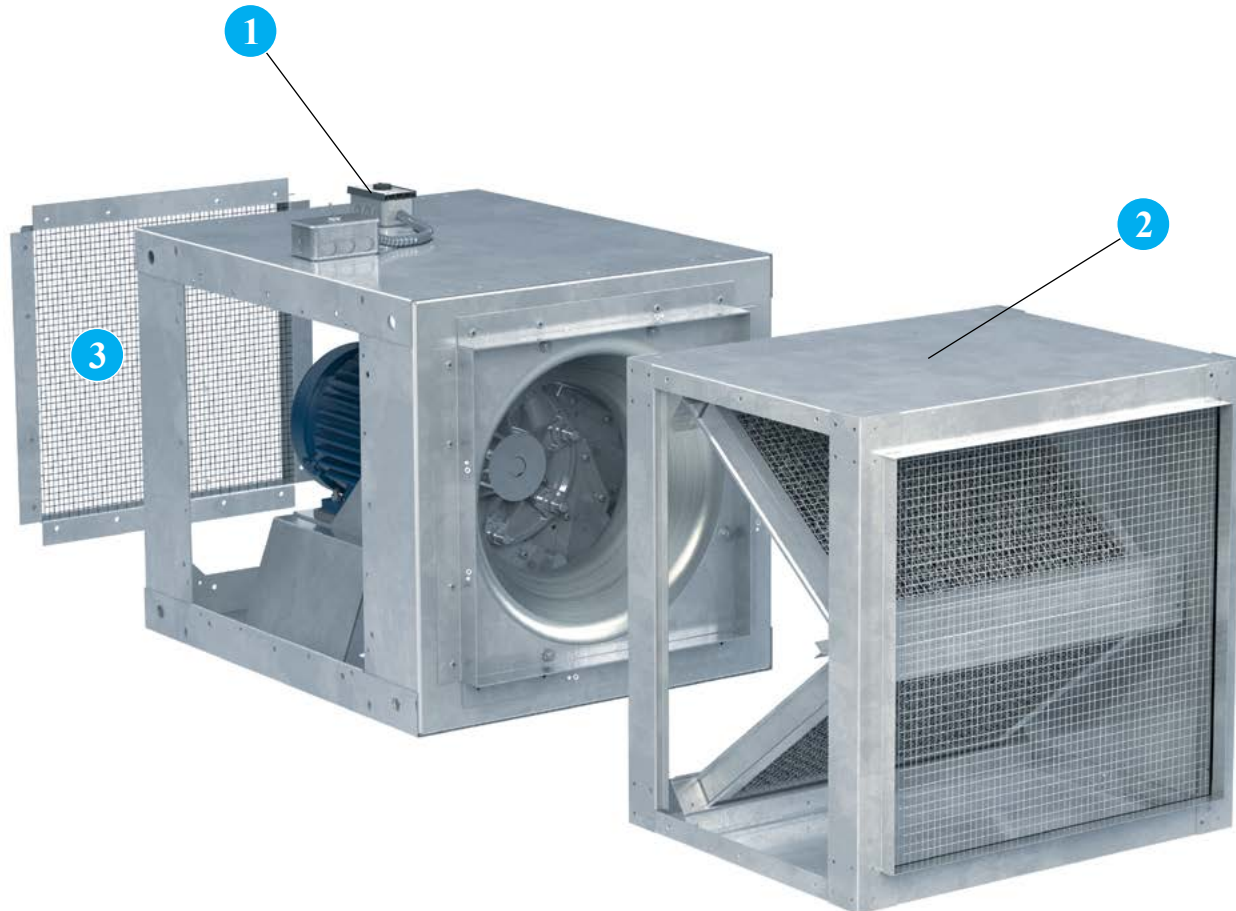
**3 Extended Lube Lines** Exterior mounting zerk fittings are available with lines to the fan shaft bearings (Model BSI) for relubrication from outside the unit.

**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.

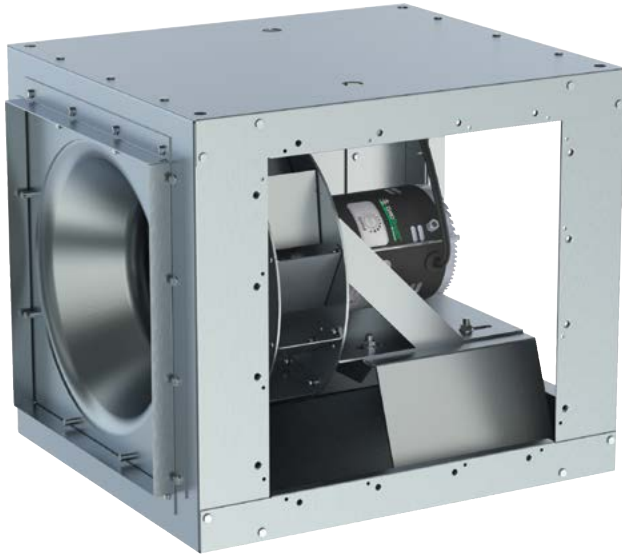
**2 Filter Box** A filter box containing two inch aluminum wire mesh, removable and washable filters is available for attachment to the fan inlet side. The filter box is constructed of galvanized steel, with duct collars for easy mounting and removable side panels for easy filter cleaning or replacement. 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

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.

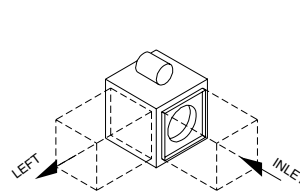


FIG. B

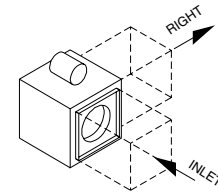


FIG. C

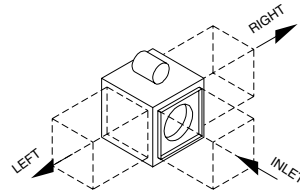


FIG. D

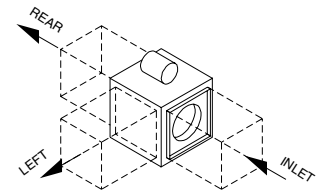


FIG. E

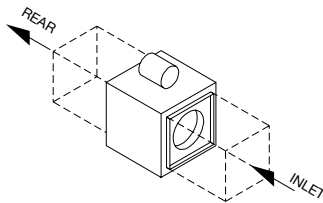


Fig. A

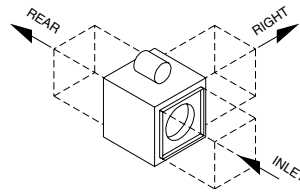


FIG. F

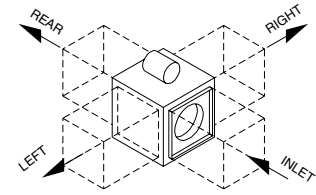


FIG. G

## 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.

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	
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		
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	
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					
	2	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		
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		
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>

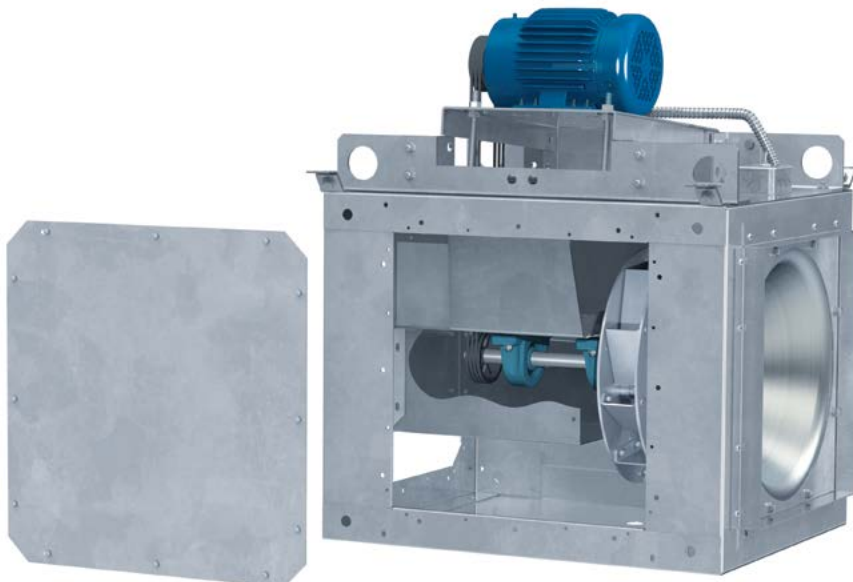
Fan Efficiency Grade: FEG50

HP	RPM	STATIC PRESSURE (INCHES W.G.)																							
		0.125		0.25		0.50		0.75		1.00		1.25		1.50		1.75		2.00		2.25		2.50		3.00	
		CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/4	850	241																							
		0.01	3.1																						
	1050	333		261																					
		0.03	4.6	0.03	4.7																				
	1250	419		363																					
		0.04	6.6	0.04	5.9																				
	1450	502		455		349																			
		0.06	9.0	0.07	7.3	0.07	7.5																		
	1650	584		542		457		344																	
		0.09	11.0	0.10	9.1	0.10	9.2	0.10	7.8																
	1850	664		627		552		470		352															
		0.13	11.8	0.14	11.0	0.14	9.9	0.14	10.7	0.13	9.1														
2050	744		710		643		574		493		376														
	0.18	13.9	0.18	12.8	0.19	11.2	0.19	12.2	0.19	11.7	0.18	10.6													
2250	823		792		730		669		604		525		416												
	0.24	15.6	0.24	15.1	0.25	13.0	0.26	13.0	0.26	14.2	0.26	13.2	0.24	12.3											
1/3	2375	872		843		784		726		667		599		516		390									
		0.28	16.8	0.28	16.8	0.29	14.3	0.30	13.8	0.30	14.8	0.30	15.2	0.30	13.0	0.27	13.3								
2500	921		893		837		783		727		667		597		509										
	0.32	18.3	0.33	18.3	0.34	16.0	0.35	15.1	0.35	15.6	0.35	16.5	0.35	15.8	0.34	14.3									
1/2	2660	984		957		904		853		801		748		689		620		534							
		0.39	20	0.39	20	0.40	18.4	0.41	16.7	0.42	16.4	0.43	18.1	0.43	18.3	0.42	16.8	0.41	16.0						
2860	1062		1037		988		940		892		843		793		737		673		597						
	0.48	23	0.49	23	0.50	21	0.51	19.6	0.52	18.6	0.53	19.1	0.53	20	0.53	21	0.52	19.1	0.51	17.5					
3/4	3060	1139		1116		1070		1025		980		935		889		842		789		730		576			
		0.59	26	0.59	26	0.61	25	0.62	23	0.63	21	0.64	21	0.65	21	0.65	22	0.65	23	0.64	21	0.61	19.4		
3260	1217		1195		1152		1109		1067		1025		982		939		894		845		729		559		
	0.71	29	0.72	29	0.73	29	0.74	25	0.76	24	0.77	23	0.77	23	0.78	24	0.79	25	0.79	25	0.77	22	0.72	22	
1	3425	1281		1260		1218		1177		1137		1097		1057		1016		975		932		833		708	
		0.82	33	0.83	33	0.84	32	0.86	29	0.87	26	0.88	25	0.89	24	0.90	25	0.91	26	0.91	27	0.91	26	0.87	23
3590	1344		1324		1285		1246		1207		1169		1131		1092		1053		1013		926		823		
	0.94	35	0.95	35	0.97	35	0.98	33	1.00	30	1.01	28	1.02	27	1.03	27	1.03	27	1.05	29	1.05	29	1.03	26	

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 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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/4	1450	752	9.0	697	8.2	562	8.8																		
	1650	869	11.1	822	10.6	715	10.1	576	10.9																
		984	13.2	944	13.3	854	12.0	748	12.8	608	12.4														
	2015	1079	14.8	1042	14.8	962	13.5	872	13.1	764	14.4	616	12.7												
1/3	2120	1139	15.8	1104	15.8	1029	14.4	946	13.9	851	14.8	734	13.2	505											
	2230	1201	16.8	1168	16.8	1099	15.9	1022	14.7	935	15.5	835	14.1	703											
1/2	2390	1292	17.9	1262	17.9	1197	17.6	1128	16.3	1052	17.3	967	17.3	868	16.6	736	14.4								
	2550	1382	19.8	1354	19.8	1295	19.6	1231	18.7	1163	19.4	1088	18.6	1004	18.6	908	16.0	781							
3/4	2735	1487	22	1460	22	1406	22	1348	21	1286	22	1220	22	1149	22	1069	21	979	18.4	866	17.3	646			
	2920	1591	25	1566	25	1515	25	1462	24	1406	24	1347	24	1283	24	1215	24	1140	23	1056	21	956			
1	3060	1669	26	1646	26	1598	26	1547	25	1495	25	1440	24	1381	24	1319	24	1251	25	1178	25	1097	25	863	21
	3205	1750	28	1728	28	1682	28	1635	28	1585	28	1534	26	1480	26	1422	26	1361	28	1296	28	1224	28	1055	28
		1820	28	1798	28	1752	28	1705	28	1655	27	1604	26	1550	26	1492	26	1434	27	1366	28	1284	28	1101	28

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.)																							
		0.13		0.25		0.38		0.50		0.75		1.00		1.25		1.50		1.75		2.00		2.25		2.50	
		CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/4	1025	816	6.8	716	6.2	592	6.9																		
	1275	1053	9.9	981	9.1	899	8.7	806	9.5																
		1229	12.3	1169	12.1	1103	11.2	1030	10.8	859	12.1														
	1565	1321	13.7	1265	13.7	1205	12.8	1140	12.2	992	13.1	790	12.7												
1/3	1645	1394	15.0	1341	14.5	1285	13.9	1225	13.2	1090	13.9	924	14.3												
	1725	1467	16.0	1417	16.0	1364	15.4	1308	14.5	1184	14.4	833	14.4												
1/2	1850	1580	17.9	1534	17.9	1485	17.1	1434	16.3	1324	16.7	1199	17.5	1049	16.1	818									
	1980	1697	19.2	1654	19.2	1610	18.3	1563	17.2	1463	18.8	1353	18.1	1229	16.8	825									
3/4	2120	1823	21	1783	21	1742	20	1699	20	1609	19.5	1510	20	1403	19.1	1281	17.9	894							
	2255	1944	22	1906	22	1868	22	1829	22	1746	21	1656	21	1560	21	1455	21	1366	21	1192	19.9	970	18.1		
1	2370	2046	24	2011	24	1975	24	1938	23	1860	22	1777	22	1689	22	1593	23	1489	22	1371	22	1226	20	999	19.3
	2480	2145	25	2111	25	2077	25	2041	24	1968	24	1891	23	1808	23	1720	24	1626	24	1522	24	1405	24	1259	21

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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/4	700	716	3.5	489	3.0																				
	900	990	6.2	880	6.0	710	5.7																		
		1252	1166	1074	944	748																			
	1100	1495	12.5	1423	10.9	1349	10.0	1271	10.1	1169	10.8	1041	10.3												
1578		13.6	1509	13.0	1439	11.8	1367	11.6	1282	11.7	1172	11.6													
1/3	1355	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	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										
1/2	1525	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	0.47	16.7	0.48	16.7	0.49	15.8	0.50	14.5	0.51	14.3	0.51	14.3	0.53	15.2	0.52	13.9								
3/4	1750	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	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	1955	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	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	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	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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/2	1240	586	7.6																						
	1450	921	10.7	720	9.6																				
1/3	1525	1020	11.3	855	10.9																				
	1600	1112	11.8	963	12.2	754	10.8																		
1/2	1720	1249	13.1	1125	13.6	978	13.1																		
	1840	1378	14.4	1275	14.4	1146	14.2	1004	14.2																
3/4	1970	1513	16.9	1424	16.0	1318	16.4	1193	16.6	1055	15.2														
	2105	1650	19.3	1571	18.0	1482	18.4	1375	18.2	1257	17.0	1126	17.0												
1	2210	1755	21	1681	20	1601	20	1509	20	1401	20	1287	19.8	1153	17.8										
	2315	1858	24	1788	21	1715	21	1634	21	1539	21	1433	21	1323	21	1187	18.9								
1 1/2	2485	2024	27	1960	25	1894	24	1824	23	1747	23	1658	23	1560	22	1459	21	1348	21	1184	21				
	2655	2187	30	2128	29	2067	27	2005	26	1938	26	1866	26	1784	26	1692	25	1598	25	1501	25	1384	23	1206	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 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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/4	900	1386	8.0	1268	7.1	1120	6.1	894																	
	1075	1696	11.0	1599	9.8	1500	9.4	1380	10.0	1217	9.8														
1/3	1130	1792	11.8	1700	10.8	1607	10.1	1503	10.3	1365	10.9	1192	9.6												
	1190	1897	12.6	1810	12.0	1721	10.9	1629	10.9	1515	11.7	1367	11.4												
1/2	1280	2053	13.9	1973	13.4	1890	12.4	1807	12.0	1716	12.2	1602	13.0	1292	10.8										
	1370	2208	15.4	2133	15.4	2057	14.4	1980	13.3	1901	13.2	1811	14.0	1568	14.1										
3/4	1465	2370	17.0	2301	17.0	2231	16.0	2158	15.0	2086	14.8	2010	14.8	1818	15.8	1559	14.3								
	1565	2541	19.0	2477	19.0	2411	18.3	2344	17.2	2277	16.5	2208	16.2	2054	17.2	1843	17.3	1572	14.8						
1	1640	2669	20	2608	20	2545	19.1	2482	18.1	2417	17.4	2353	17.6	2215	18.9	2038	17.7	1813	17.7						
	1720	2805	22	2747	22	2687	21	2627	19.8	2566	19.1	2504	18.6	2378	19.7	2229	19.9	2034	18.1	1801	18.1				
1 1/2	1845	3017	25	2963	25	2908	24	2852	23	2795	22	2738	21	2623	21	2500	22	2350	21	2163	21	1946	21		
	1970	3228	27	3178	27	3127	27	3075	26	3022	25	2969	24	2862	23	2752	23	2632	23	2484	23	2305	23	2105	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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/4	1050	1116	8.5	899	8.1																				
	1200	1321	11.4	1161	9.3	937	9.5																		
1/3	1275	1421	12.6	1276	10.1	1081	10.8	789	9.7																
	1350	1520	14.0	1387	11.5	1219	11.7	1007	11.0																
1/2	1450	1651	15.5	1529	13.2	1390	12.4	1206	13.0	966	11.6														
	1550	1780	17.2	1668	15.0	1546	13.6	1392	14.4	1212	13.9														
3/4	1655	1915	19.0	1812	17.4	1701	15.2	1573	16.0	1412	14.6	1237	14.6												
	1765	2055	21	1959	19.7	1858	17.6	1747	16.2	1613	17.1	1457	15.5	1283	15.5										
1	1855	2169	22	2079	21	1983	19.1	1882	18.0	1767	17.6	1625	18.2	1475	16.4	1286	16.4								
	1945	2282	24	2197	23	2107	21	2013	19.4	1910	18.6	1788	19.9	1646	17.8	1501	17.8	1294	17.8						
1 1/2	2085	2458	26	2379	26	2297	24	2211	22	2121	21	2021	22	1903	22	1771	22	1637	22	1470	22				
	2225	2633	29	2560	29	2484	27	2405	26	2323	24	2236	23	2139	23	2027	23	1903	23	1779	23	1639	23	1423	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 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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/4	825	1693	1552	1378	1115																				
	920	1918	1793	1660	1481	1235																			
1/3	970	2035	1917	1795	1646	1444																			
	1020	2152	2040	1925	1798	1626	1410																		
1/2	1095	2326	2222	2116	2006	1874	1701																		
	1170	2498	2402	2303	2203	2094	1959	1593																	
3/4	1250	2682	2592	2500	2407	2311	2204	1913																	
	1335	2876	2792	2707	2620	2532	2440	2209	1898																
1	1400	3024	2944	2863	2780	2697	2613	2416	2147	1771															
	1465	3171	3096	3019	2940	2860	2781	2607	2377	2090															
1 1/2	1570	3409	3339	3267	3195	3120	3046	2894	2715	2483	2206														
	1680	3657	3592	3525	3458	3389	3320	3181	3032	2851	2625	2365													
2	1760	3837	3775	3712	3648	3583	3517	3385	3248	3094	2903	2676	2412												
	1845	4028	3969	3909	3848	3787	3724	3598	3471	3334	3174	2979	2758												

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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/3	950	1078																							
	1140	1505	1261																						
1/2	1230	1682	1481	1226																					
	1320	1853	1684	1465	1175																				
3/4	1415	2029	1881	1698	1482																				
	1510	2201	2067	1914	1723	1512																			
1	1585	2335	2210	2073	1906	1714	1484																		
	1660	2468	2350	2224	2078	1902	1715	1444																	
1 1/2	1780	2679	2570	2457	2333	2189	2023	1848	1615																
	1900	2887	2787	2682	2573	2453	2313	2155	1992	1794															
2	1995	3050	2956	2858	2756	2648	2527	2387	2235	2079	1889														
	2090	3213	3123	3031	2935	2835	2728	2607	2469	2324	2175	1995	1721												

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 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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/3	810	2636	10.1	2420	7.9	2167	8	1919	8.6	1441	8.2														
	875	2876	11.5	2690	9.6	2450	8.6	2238	9.6	1965	9.6	1403	9.4												
1/2	940	3114	13.1	2948	11.4	2737	9.7	2522	10.2	2324	11	2029	10.5												
	1000	3332	14.2	3180	13.1	2998	11.5	2783	10.8	2598	11.7	2394	11.9												
3/4	1075	3602	16.1	3464	15.2	3308	13.4	3115	12.3	2924	12.3	2756	12.7	2269											
	1145	3853	17.5	3726	17	3586	15.6	3420	14.1	3230	14.7	3062	13.8	2031											
1	1205	4067	18.6	3948	18.6	3819	17.1	3672	15.8	3496	14.5	3322	15.9	3016	14.5	2559									
	1260	4263	19.8	4150	19.7	4029	18.9	3896	17.3	3737	16	3564	16.7	3265	16.4	2290	15.2								
1 1/2	1355	4600	22	4497	22	4387	21	4269	20	4137	18.9	3984	17.9	3678	19.2	3408	18.1	3040	16.9	2406					
	1445	4919	24	4823	24	4722	23	4615	22	4500	21	4369	20	4071	19.2	3809	18.9	3545	18	3162	2529				
2	1520	5183	26	5093	26	4998	25	4898	24	4792	23	4678	21	4404	21	4134	20	3896	19	3616	3207	2508			
	1590	5430	28	5344	28	5254	27	5161	26	5062	25	4957	24	4710	23	4439	22	4204	21	3970	3667	3234			
3	1705	5834	30	5755	30	5673	29	5587	28	5498	27	5404	26	5197	25	4948	24	4702	23	4487	4269	3997			
	1780	6098	34	6022	34	5944	33	5863	32	5778	31	5691	30	5502	29	5276	28	5032	27	4812	4609	4392			

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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/2	1000	1620	9.2	1053	8.2																				
	1130	2070	10.6	1776	10.6	1294	9.7																		
3/4	1210	2322	11.3	2071	12.1	1764	10.5																		
	1290	2564	12.3	2342	12.8	2088	12.7	1758	11.5																
1	1350	2741	13.3	2535	13.0	2306	13.9	2039	12.9	1631	12.4														
	1415	2928	14.4	2736	13.8	2529	14.2	2294	14.5	2009	13.0	1498	13.0												
1 1/2	1520	3222	16.7	3051	15.2	2867	15.2	2669	16.1	2446	15.7	2182	14.6	1769	14.6										
	1620	3495	18.9	3341	17.0	3175	16.2	2998	16.8	2808	17.2	2597	15.7	2351	15.7	1995	14.9	1995	15.7						
2	1700	3710	20	3567	18.9	3413	17.9	3250	17.4	3077	18.0	2890	18.6	2684	18.2	2443	16.7	2099	16.8						
	1785	3936	23	3803	21	3660	19.3	3509	18.9	3350	19.3	3182	19.6	3000	19.0	2802	17.9	2572	18.0	2254					
3	1920	4289	26	4169	24	4042	23	3907	21	3766	20	3618	21	3464	22	3299	22	3121	20	2928	2697	2382			
	2040	4600	28	4489	27	4373	25	4250	24	4122	23	3988	22	3849	23	3704	24	3551	24	3388	3214	3020			

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		1.25		1.50		1.75		2.00		2.25	
		CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/3	675	2849	8.4	2536	6.6	2228	7.4	1733	7.3																
	730	3121	10	2854	7.9	2550	8	2237	8.6	1565	8.2														
1/2	785	3389	11.4	3159	9.5	2864	8.6	2607	9.5	2243	9.5														
	840	3654	13	3449	11.2	3184	9.6	2928	10.2	2673	10.9	2267	10.6												
3/4	900	3941	14.6	3756	13.1	3529	11.3	3270	10.9	3048	11.7	2784	12												
	960	4227	16.1	4056	15.1	3861	13.3	3619	12.2	3393	12.4	3184	13.2	2512	13.2										
1	1010	4463	17.2	4304	16.5	4126	14.7	3909	13.3	3678	13.2	3479	14.3	2985	14.3										
	1055	4675	18.3	4525	17.8	4359	16.4	4164	14.8	3939	14.1	3736	14.3	3329	14.7	2586	14.7								
1 1/2	1135	5051	20	4913	19.9	4764	18.9	4600	17.3	4403	15.9	4194	15.8	3835	17	3385	17.1	2510	16						
	1210	5401	22	5274	22	5138	21	4991	20	4824	18.4	4631	17.4	4267	18.1	3927	19.1	3418	17.5						
2	1275	5704	24	5585	24	5458	24	5322	22	5175	21	5004	19.5	4638	18.9	4323	20	3954	21	3378	18.3				
	1330	5960	25	5846	25	5726	25	5599	24	5463	23	5310	21	4956	21	4640	22	4331	21	3897	21	3210	19.5		
3	1430	6424	28	6319	28	6210	28	6095	27	5973	26	5844	25	5537	24	5211	24	4929	24	4636	24	4235	23	3654	21
	1525	6864	30	6767	30	6665	30	6560	29	6449	29	6333	28	6072	27	5763	26	5471	26	5211	26	4932	25	4560	25

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		2.50		2.75		3.00		3.25		3.50	
		CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/2	875	1753	8.3																						
	970	2218	10.4	1785	9.4																				
3/4	1040	2524	11.2	2179	11.3	1645	10.5																		
	1105	2793	11.8	2492	12.6	2124	11.0																		
1	1160	3013	12.7	2739	13.4	2422	13.0	1982	11.9																
	1215	3227	13.6	2974	13.6	2691	14.4	2354	12.7	1778	12.7														
1 1/2	1300	3549	15.4	3322	14.7	3075	15.5	2799	15.7	2468	13.8	1915	13.8												
	1390	3881	17.4	3676	16.1	3456	17.0	3219	17.0	2954	16.8	2640	15.4	2155	15.4										
2	1460	4133	19.1	3944	17.8	3740	17.0	3524	17.2	3288	18.1	3027	17.5	2710	16.4	2217	16.4								
	1530	4381	21	4206	19.1	4016	18.2	3816	18.0	3603	19.1	3371	19.4	3114	18.3	2797	17.6	2311	17.5						
3	1640	4766	24	4608	22	4438	21	4258	20	4070	19.8	3871	20	3657	21	3423	20	3157	18.9	2800	18.9	2202	18.9		
	1750	5145	26	5000	24	4847	23	4685	22	4515	21	4338	21	4152	23	3953	22	3740	22	3507	21	3226	21	2843	21

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.

**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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/3	550	3133	6.8	2689	6	2192	6.4																		
	610	3549	8.6	3165	6.9	2785	7.7	2195	7.4																
1/2	660	3889	10.2	3563	8.3	3187	8.3	2808	9	2042	8.6														
	700	4157	11.5	3868	9.5	3500	8.8	3179	9.6	2704	9.7														
3/4	755	4523	13.4	4268	11.4	3940	10	3624	10.4	3308	11	2804	11.1												
	805	4852	15.1	4621	13.4	4337	11.4	4016	10.9	3740	12.1	3405	12.4												
1	845	5114	16.3	4898	15	4645	13	4335	12	4058	12.5	3787	13.2	2802	13.2										
	885	5375	17.4	5172	16.2	4942	14.5	4656	13	4372	13.2	4122	14.1	3415	14.3										
1 1/2	950	5797	19.2	5612	18.6	5407	16.9	5167	15.5	4888	14.3	4637	14.9	4137	16	3231	16.1								
	1010	6185	21	6013	21	5826	19.4	5619	17.7	5369	16	5109	16	4663	17.3	4072	17.3								
2	1065	6540	22	6378	22	6205	21	6017	19.9	5799	18.1	5551	17.1	5103	18.2	4652	19.2	3927	18.2						
	1115	6861	24	6708	24	6545	22	6371	20	6177	19.1	5950	19.1	5495	19.3	5096	20	4560	19.3	3650					
3	1200	7406	26	7265	26	7118	24	6961	22	6793	20	6606	19.1	6170	20	5779	20	5400	20	4875	19.3	4057			
	1275	7885	29	7754	29	7617	26	7473	24	7321	22	7159	21	6771	22	6367	23	6018	23	5644	21	5120	21	4343	
		2.78	29	2.82	29	2.86	29	2.89	28	2.93	27	2.96	26	3.03	23	3.08	23	3.12	24	3.13	25	3.09	24	2.94	23

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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1/2	700	2665	7.3	2166	7.4																				
	810	3208	10.0	2816	8.8	2338	9.3																		
3/4	865	3471	11.3	3118	10.0	2702	10.6	2144	9.5																
	925	3755	12.9	3435	11.7	3066	11.7	2628	11.6	1894	10.6														
1	970	3966	14.0	3668	12.6	3325	12.2	2934	13.0	2424	11.5														
	1015	4175	14.9	3895	13.9	3576	13.0	3221	13.8	2798	12.6	2102	12.6												
1 1/2	1090	4521	16.7	4267	15.8	3982	14.3	3668	14.3	3316	15.1	2895	13.2	2164	13.2										
	1165	4864	18.3	4630	17.4	4374	16.3	4091	15.5	3785	16.3	3440	16.4	3024	14.8	2309	14.4								
2	1220	5115	19.4	4894	18.8	4654	17.6	4391	16.6	4109	16.7	3800	17.5	3450	16.7	2999	15.5								
	1280	5387	21	5178	21	4955	19.0	4711	17.9	4449	17.6	4169	18.5	3860	18.7	3510	17.2	3037	16.6						
3	1370	5793	23	5600	23	5396	22	5178	20	4942	19.1	4693	19.1	4428	20	4137	19.1	3815	18.4	3412	18.4	2776			
	1465	6220	25	6041	25	5854	24	5656	23	5445	21	5220	21	4985	21	4736	22	4466	21	4172	21	3830	19.8	3361	19.9
		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 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	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone
1/2	475	4748	0.41	4292	8.3	3692	0.44																		
	505	5097	0.49	4686	9.4	4171	0.52	3523	7.8																
3/4	540	5500	0.59	5129	10.3	4684	0.65	4122	9.4	3387	0.65														
	575	5900	0.70	5561	11.5	5166	0.77	4690	10.6	4122	0.79	3387	9.9												
1	600	6183	0.79	5864	12.3	5498	0.87	5070	11.4	3946	0.89	4545	9.6												
	630	6522	0.91	6222	13.3	5886	1.00	5499	12.7	5040	1.02	4517	11.7												
1 1/2	675	7027	1.12	6752	14.4	6452	1.22	6113	13.9	5729	1.25	5275	12.2												
	725	7585	1.37	7334	15.8	7063	1.49	6765	14.4	6434	1.53	5173	13.8	1.57	14.7	1.56	14.1								
2	760	7974	1.57	7736	16.6	7483	1.70	7208	15.6	6906	1.78	6572	14.5	5767	1.80	4638	1.81	13.6	1.67						
	795	8362	1.79	8136	17.1	7898	1.93	7642	16.9	7364	2.02	7059	16.3	6345	2.05	5506	2.08	16.8	2.04						
3	850	8969	2.18	8761	18.3	8542	2.33	8310	17.6	8062	2.44	7795	16.9	7191	2.53	6453	2.53	18.0	2.45	16.9					
	910	9630	2.66	9437	19.8	9236	2.83	9025	19.0	8803	2.96	8606	18.8	8042	3.01	7429	3.08	18.0	3.11	19.3	3.10	19.5	2.97	18.2	
5	995	10563	3.46	10389	21	10208	3.65	10020	21	9825	3.81	9620	21	9177	4.03	8680	4.07	22	4.06	22	3.97	22	6764		
	1080	11494	4.41	11334	25	11170	4.61	11000	25	10825	4.79	10644	25	10259	5.01	9835	5.16	23	9368	23	5.20	25	8841	8244	7629
7 1/2	1160	12367	5.45	12220	28	12068	5.67	11913	28	11753	5.87	11589	27	11244	6.13	10871	6.25	25	10466	25	6.34	25	10026	9536	8986
	1235	13185	6.56	13047	30	12906	6.79	12762	30	12614	7.01	12462	30	12147	7.30	11812	7.46	28	11451	28	7.58	28	11063	10646	10186

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	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone
1	650	3332	0.74																						
	730	4232	1.04	3570	12.0																				
1 1/2	780	4731	1.26	4208	12.7	3435	1.29		13.1		1.25		11.5												
	835	5257	1.52	4806	13.3	4248	1.56	3404	14.6		1.58	12.6	1.48												
2	875	5627	1.73	5210	14.3	4739	1.78	4092	15.4		1.81	16.0	1.79	13.9											
	915	5989	1.96	5602	15.2	5179	2.02	4658	16.0	3927	2.06	17.1	2.08	16.5	2.00	14.8									
3	980	6566	2.37	6218	17.2	5842	2.45	5432	17.4	4920	2.51	18.6	2.54	19.2	2.55	18.0	2.46	16.5							
	1050	7176	2.87	6857	19.8	6523	2.96	6165	18.9	5773	3.04	19.7	3.10	21	3.13	20	3.13	18.6	3.06						
5	1150	8030	3.70	7743	24	7450	3.81	7143	22	6818	3.91	22	3.99	23	4.06	24	4.10	25	4.12	24	4.1	23	3.98	22	
	1245	8828	4.62	8566	27	8300	4.76	8027	26	7743	4.87	25	4.97	25	5.06	25	5.13	26	5.19	28	5.23	28	5.23	27	5.18
7 1/2	1335	9575	5.63	9332	30	9086	5.78	8837	28	8581	5.92	28	6.04	28	6.14	28	6.23	28	6.31	30	6.38	30	6.43	30	6.45
	1425	10314	6.77	10089	34	9860	6.94	9628	33	9394	7.10	33	7.24	32	7.36	31	7.47	31	7.57	31	7.66	32	7.73	33	7.79

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 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	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone
1	400	7531	0.68	6837	12.9	5958	0.72	4778	9.8																
	450	8610	0.96	8054	14.9	7336	1.01	6527	11.8	5478	9.0														
1½	480	9248	1.15	8747	16.8	8121	1.21	7397	13.2	6570	12.7														
	515	9988	1.42	9535	17.5	8999	1.48	8348	15.9	7651	14.4	6839	13.4												
2	540	10513	1.62	10088	18.5	9602	1.69	9007	18.0	8363	15.2	7650	15.5												
	565	11035	1.85	10636	19.2	10188	1.93	9651	19.3	9045	16.8	8406	17.7	6721	12.8										
3	605	11869	2.26	11502	21	11101	2.34	10642	21	10104	20	9532	18.2	8240	17.3										
	645	12698	2.73	12360	23	11994	2.82	11592	23	11126	20	10602	19.6	9488	17.4	8112	17.4								
5	710	14040	3.62	13739	26	13418	3.72	13074	26	12700	26	12273	24	11316	23	10274	24	9019	20						
	770	15274	4.60	14999	28	14711	4.71	14406	28	14081	28	13729	25	12903	25	12002	27	11016	24	9858					
7½	825	16402	5.64	16148	31	15883	5.76	15606	31	15314	31	15005	30	14300	28	13484	30	12632	29	11690	26	10607			
	880	17527	6.83	17291	34	17046	6.95	16791	34	16525	34	16247	32	15636	32	14919	32	14139	33	13330	30	12435	27	11429	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	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone	CFM	BHP	CFM	Sone
1	390	2715	0.40																						
	515	6049	1.02	4817	9.6																				
1½	550	6697	1.24	5656	10.5																				
	590	7396	1.52	6568	12.5	5439	1.55																		
2	620	7905	1.75	7196	13.6	6180	1.79	4525	13.9																
	650	8407	2.00	7773	15.4	6876	2.05	5807	14.1																
3	700	9233	2.47	8668	18.2	7984	2.54	5958	15.7																
	745	9968	2.95	9440	17.5	8872	3.09	7228	16.7	5967	15.1														
5	810	11018	3.73	10527	23	10039	3.87	8742	19.4	6942	19.5														
	880	12133	4.71	11679	25	11233	4.89	9558	23	8815	22	8022	22	6584	22										
7½	945	13157	5.77	12737	28	12316	5.00	11901	26	11464	25	10951	24	10314	24	9620	24	8917	25	7959					
	1010	14173	6.97	13782	30	13386	7.21	12997	30	12605	27	12188	27	11702	28	11112	28	10461	28	9818	26	9087	26	7869	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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1	310	7663	6.51	4805																					
	380	9752	8.98	7994	6823																				
1 1/2	405	10479	9.75	8908	7908	6582																			
	435	11343	10.73	9970	9088	8082																			
2	455	11916	11.34	10654	9829	8932	7858																		
	475	12485	11.94	11318	10550	9727	8787																		
3	510	13477	12.98	12438	11779	11036	10251	8162																	
	545	14463	14.03	13519	12954	12290	11588	9992																	
5	600	16005	15.60	15176	14708	14175	13569	12272	10750																
	650	17401	17.03	16652	16240	15792	15286	14137	12898	11434															
7 1/2	700	18792	18.45	18108	17737	17344	16918	15920	14826	13637	12250														
	745	20040	19.29	19405	19065	18707	18329	17465	16464	15420	14263	12932													
10	780	21010	20.71	20407	20088	19753	19401	18623	17707	16728	15697	14538	13186												
	820	22116	21.83	21547	21247	20935	20610	19907	19089	18175	17235	16226	15099												

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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1 1/2	440	4716																							
	500	7005	4.83																						
2	525	7782	6.32																						
	550	8512	7.22																						
3	590	9567	8.45	7198																					
	630	10536	9.66	8557	7137																				
5	690	11923	11.26	10413	9369	8178																			
	745	13162	12.57	11928	11082	10111	9053																		
7 1/2	800	14385	13.82	13285	12645	11827	10922	9976	8380																
	855	15596	15.08	14573	14039	13413	12637	11787	10930	9770															
10	900	16576	16.08	15602	15113	14583	13953	13193	12386	11574	10550	8575													
	940	17440	16.97	16504	16043	15562	15027	14386	13638	12867	12088	11130	9424												

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.

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		1.00		1.25		1.50		1.75		2.00	
		CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1	240	7252		5314																					
		0.43	4.2	0.41	4.0																				
1	320	10451		9423		8064																			
		0.98	8.7	1.01	7.7	1.01	8.3																		
1 1/2	345	11407		10491		9375		7885																	
		1.21	10.6	1.26	9.2	1.28	9.8	1.23	8.7																
1 1/2	370	12351		11523		10562		9338																	
		1.48	12.1	1.55	11.1	1.57	11.0	1.57	11.6																
2	385	12914		12129		11237		10145		8770															
		1.67	13.2	1.73	12.3	1.77	11.6	1.77	12.4	1.71	11.0														
2	405	13659		12926		12107		11150		9953															
		1.93	14.3	2.01	13.8	2.05	12.9	2.06	13.6	2.04	13.5														
3	435	14771		14101		13368		12548		11578		10406													
		2.38	15.9	2.46	15.7	2.52	14.5	2.55	14.5	2.56	15.4	2.51	14.5												
3	465	15875		15258		14592		13866		13049		12081		10956											
		2.89	17.3	2.99	17.3	3.06	16.1	3.10	15.6	3.12	16.5	3.12	16.6	3.06	15.7										
5	505	17338		16779		16185		15548		14857		14087		13194		12173									
		3.68	19.9	3.79	19.9	3.88	19.4	3.95	18.0	3.98	17.9	4.00	18.1	4.00	19.0	3.94	17.9								
5	550	18976		18469		17937		17374		16777		16135		15430		14633		12747							
		4.72	23	4.85	23	4.96	23	5.05	21	5.11	19.9	5.14	19.7	5.16	21	5.17	21	5.03	18.8						
7 1/2	590	20425		19957		19470		18959		18422		17854		17248		16591		15040		13163					
		5.81	25	5.95	25	6.07	25	6.18	24	6.27	23	6.32	22	6.35	22	6.37	23	6.37	23	6.11	20				
7 1/2	630	21870		21435		20984		20516		20027		19515		18977		18407		17121		15565		13694			
		7.05	29	7.20	29	7.34	29	7.46	27	7.57	26	7.65	25	7.70	24	7.73	23	7.77	25	7.71	25	7.34	21		
10	660	22951		22538		22111		21669		21211		20733		20235		19712		18566		17212		15635			
		8.09	31	8.25	31	8.40	31	8.53	31	8.65	29	8.75	27	8.82	27	8.87	25	8.92	26	8.93	27	8.75	25		
10	695	24210		23820		23418		23003		22575		22131		21671		21192		20163		18996		17625		16081	
		9.43	34	9.60	34	9.76	34	9.90	34	10.04	33	10.15	31	10.25	29	10.31	29	10.39	29	10.43	30	10.40	29	10.14	26

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		2.00		2.25		2.50		2.75		3.00	
		CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1 1/2	380	8578		7022																					
		1.10	8.6	1.15	8.9																				
1 1/2	420	9743		8471		6844																			
		1.47	11.0	1.54	10.3	1.56	10.9																		
2	440	10320		9147		7646																			
		1.67	12.3	1.75	10.9	1.80	12.0																		
2	460	10895		9791		8397		6313																	
		1.90	13.7	1.99	11.2	2.04	12.5	1.82	12.5																
3	495	11892		10869		9691		8320																	
		2.33	15.5	2.46	13.1	2.53	13.6	2.56	14.3																
3	530	12878		11913		10907		9652		8246															
		2.82	17.9	3.00	14.6	3.07	14.6	3.13	15.4	3.09	14.9														
5	575	14135		13229		12355		11313		10134		8699													
		3.55	21	3.78	17.4	3.88	16.0	3.96	17.0	4.01	17.0	3.87	16.2												
5	625	15519		14674		13874		13026		12001		10917		9638											
		4.50	23	4.79	20	4.93	18.3	5.02	18.1	5.10	19.3	5.15	18.6	5.04	17.3										
7 1/2	670	16756		15964		15204		14454		13598		12604		11599		10408									
		5.49	26	5.83	24	6.03	21	6.13	20	6.22	21	6.30	21	6.35	21	6.23	19.3								
7 1/2	720	18122		17382		16660		15970		15249		14414		13477		12542		11517		9203					
		6.74	30	7.13	28	7.41	25	7.55	23	7.64	23	7.75	24	7.83	25	7.87	24	7.82	22	6.71	22				
10	755	19074		18366		17671		17008		16343		15607		14763		13855		12971		11949		9636			
		7.72	32	8.15	31	8.47	28	8.65	26	8.76	25	8.86	25	8.97	27	9.04	27	9.08	26	8.99	24	7.74	24		
10	790	20023		19345		18677		18034		17406		16745		15995		15159		14291		13446		12438		10227	
		8.80	35	9.27	34	9.62	31	9.86	29	9.99	28	10.09	28	10.21	28	10.31	30	10.36	29	10.41	27	10.28	26	8.91	26

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.



**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	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1 1/2	290	12803	8.6	11551	7.5	9898	8.1																		
	310	13837	10.3	12708	8.9	11321	9.4	9460	8.2																
2	325	14605	11.1	13550	10.1	12305	10.2	10677																	
	340	15368	12.4	14377	11.4	13238	11.5	11810	10.1	9946															
3	365	16630	14.5	15729	13.5	14722	13.4	13542	12.447	12064															
	390	17882	16.1	17054	15.8	16146	14.6	15127	14.5	13911															
5	430	19870	19.1	19136	19.1	18347	17.6	17491	16.7	16540	15.5	15433	14.5	14130	13.4	12574									
	465	21599	22	20929	22	20220	20	19462	19.1	18644	18.7	17742	17.8	16707	17.2	15514	15.8	14190							
7 1/2	500	23319	24	22703	24	22057	23	21374	22	20649	21	19871	21	19021	20	18061	19.2	16972	17.8	15788					
	535	25032	27	24462	27	23867	27	23245	25	22591	24	21900	23	21163	23	20365	23	19476	23	18483	21	16212			
10	555	26009	28	25462	28	24893	28	24300	27	23679	26	23028	25	22340	24	21604	24	20804	24	19915	24	17876			
	585	27471	30	26955	30	26421	30	25867	29	25290	28	24689	27	24060	26	23396	26	22690	26	21928	26	20169	24	18133	

MAXIMUM MOTOR FRAME SIZE: 256T

**BSI 402AHP**

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

Fan Efficiency Grade: FEG56

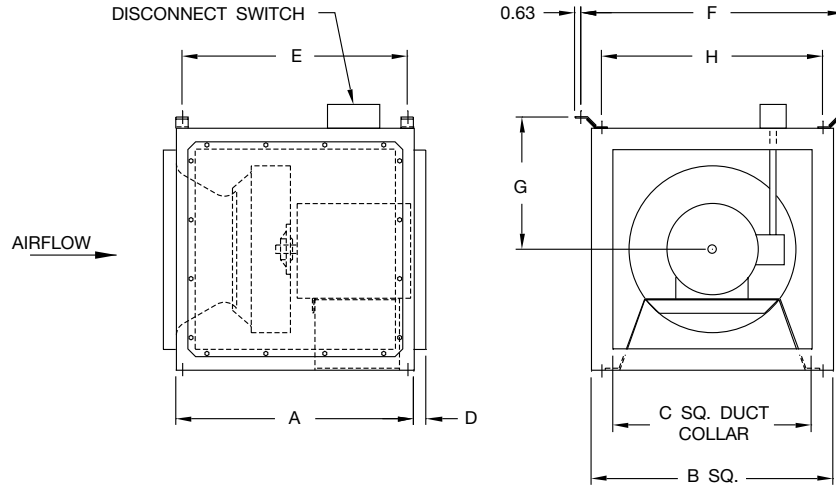
HP	RPM	STATIC PRESSURE (INCHES W.G.)																							
		0.50		0.75		1.00		1.25		1.50		1.75		2.00		2.25		2.50		2.75		3.00		3.25	
		CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone
1 1/2	300	6115																							
	355	9151	6.6																						
2	370	9886	10.2	7706	10.7																				
	390	10821	12.0	8929	12.0																				
3	420	12135	13.2	10463	13.2	8217	13.4																		
	445	13174	14.1	11713	14.1	10021	14.3																		
5	490	14984	15.3	13808	15.3	12337	16.3	10775	16.3																
	530	16559	17.8	15516	17.1	14303	17.7	12888	18.5	11382	17.8														
7 1/2	570	18119	19.2	17148	19.2	16129	19.1	14901	19.0	13583	19.0	12127													
	605	19474	22	18544	22	17626	21	16575	22	15355	21	14125	20	12645											
10	640	20817	24	19924	24	19066	22	18152	22	17082	21	15903	20	14747	19	13278									
	670	21960	28	21097	28	20275	28	19437	28	18492	24	17412	24	16282	23	15169	22	13598							
15	715	23663	30	22847	30	22062	28	21294	28	20488	26	19572	26	18551	24	17490	24	16459	23	15234	23	12566			
	765	11.35	35	11.79	31	12.07	28	12.23	28	12.35	28	12.50	28	12.62	28	12.69	28	12.75	27	12.59	26	10.93	26		

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:**

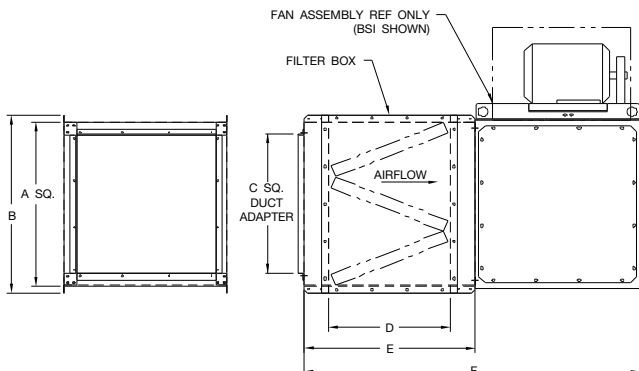
1. All figures are in inches unless noted otherwise.
2. Average ship weight is for fan and motor assembly.
3. Dimensions are not to be used for construction.

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	
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	

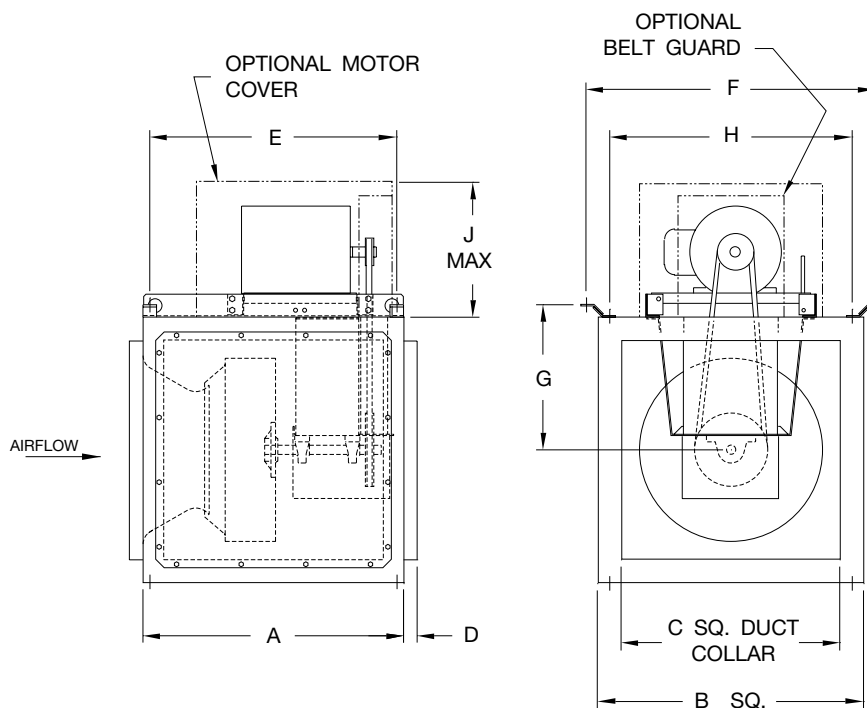
D-4205-1



**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.





## 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.

**IMPELLER** — Fan impellers shall be of the non-overloading centrifugal backward inclined type, constructed of aluminum and containing a matching inlet venturi for optimum unit performance. Impellers 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 impeller 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.





## 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.

**IMPELLER** — Fan impellers shall be of the non-overloading centrifugal backward inclined type, constructed of aluminum and containing a matching inlet venturi for optimum unit performance. Impellers 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 impeller 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.

# INDUSTRIAL PROCESS AND COMMERCIAL VENTILATION SYSTEMS

CENTRIFUGAL FANS | UTILITY SETS | PLENUM & PLUG FANS | INLINE CENTRIFUGAL FANS  
MIXED FLOW FANS | TUBEAXIAL & VANEAXIAL FANS | WALL MOUNTED FANS | ROOF VENTILATORS  
CENTRIFUGAL ROOF & WALL EXHAUSTERS | CEILING VENTILATORS | GRAVITY VENTILATORS | DUCT BLOWERS  
RADIAL BLADED FANS | RADIAL TIP FANS | HIGH EFFICIENCY INDUSTRIAL FANS | PRESSURE BLOWERS  
LABORATORY EXHAUST FANS | FILTERED SUPPLY FANS | MANCOOLERS | FIBERGLASS FANS | CUSTOM FANS



**TWIN CITY FAN & BLOWER**  
**[WWW.TCF.COM](http://WWW.TCF.COM)**

5959 TRENTON LANE N | MINNEAPOLIS, MN 55442 | PHONE: 763-551-7600 | FAX: 763-551-7601

©2004-2018 Twin City Fan Companies, Ltd., Minneapolis, MN. All rights reserved. Catalog illustrations cover the general appearance of Twin City Fan & Blower products at the time of publication and we reserve the right to make changes in design and construction at any time without notice.