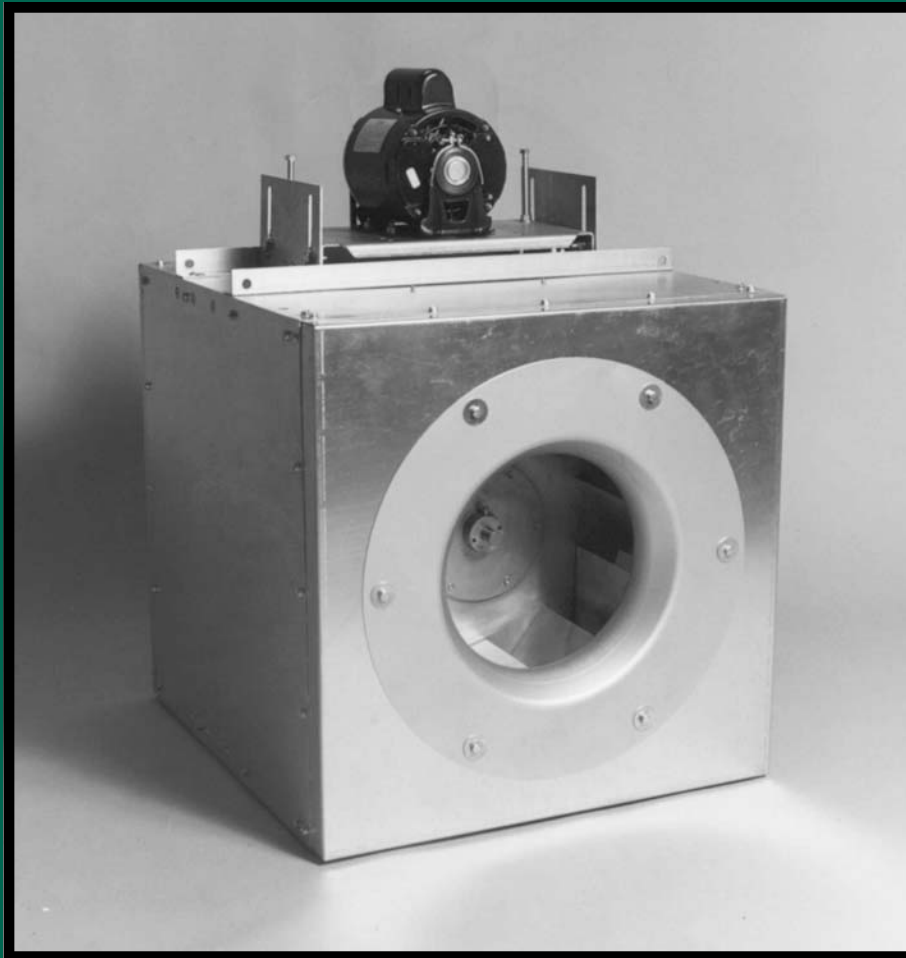




AMERICAN COOLAIR CORPORATION

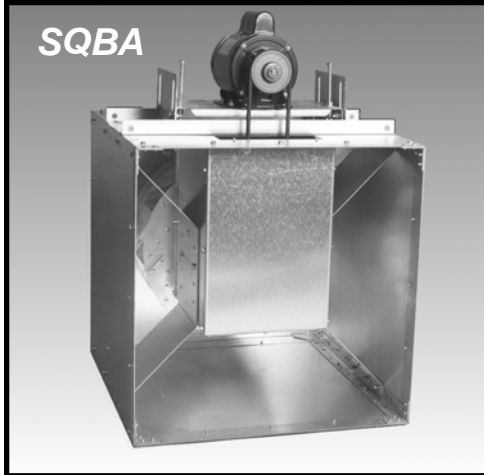


Square In-Line Centrifugal Fans

**TYPE SQBA - BELT DRIVE
TYPE SQDA - DIRECT DRIVE**

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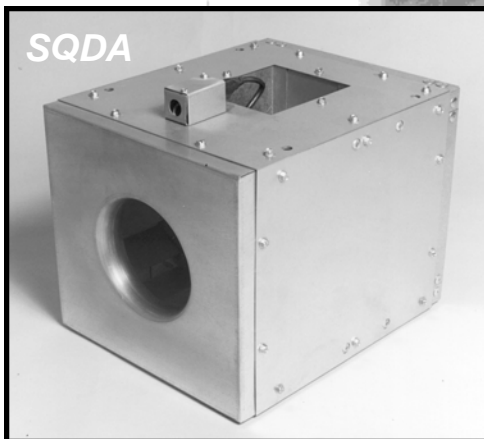
BELT DRIVE FANS



*Sizes 06 to 44
Flow rates from
115 to 31,491 CFM
and 3" Static Pressure*

SQBA

- Dimensional Data 3
- Fan Description 4
- Performance - 06 5
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*Sizes 06 to 18
Flow rates from
175 to 4,014 CFM
and 1.25" Static Pressure*

DIRECT DRIVE FANS

SQDA

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STANDARD FEATURES

SQBA AND SQDA UNITS

Rigid internal cross bracing system properly supports drive.

Out-of-airstream open drip-proof motors are isolated for protection from exhaust airstream.

Three side panels are removable for total access to internal components.

Aluminum centrifugal wheel is a non-overloading, backward-inclined design and is computer balanced.

Overlapping wheel and deep-spun venturi minimize noise and air turbulence, increasing efficiency.

Permanently affixed wheel balance weights assure vibration-free operation.

Galvanized outer skin protects against corrosion and matches common duct material.

AMCA Seal assures certified rating of air and sound performance.

UL Listed for Standard 705.

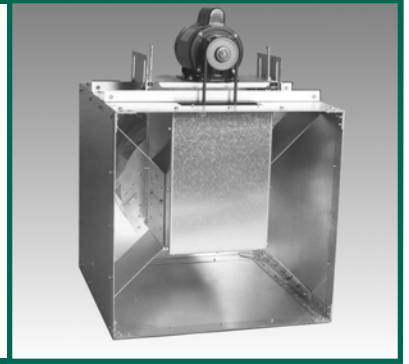
SQBA

Safety disconnect switch is an available option.

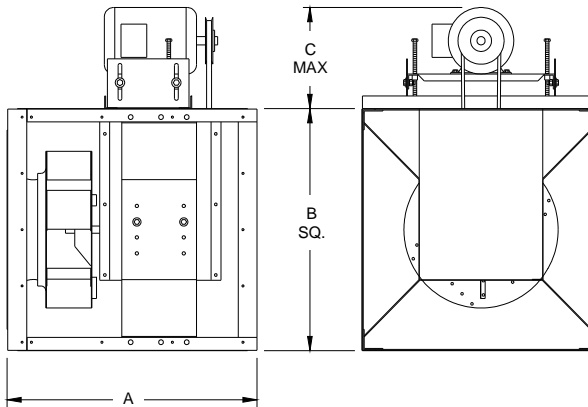
Belt drive with adjustable motor pulley for flexibility to match operating requirements.

Heavy duty pillow-block ball bearings with cast iron housing are self-aligning and relubricable.

Adjustable motor base facilitates maintenance of belt tension.



SQBA Dimensions



SIZE	A	B	C
06-10	17	14	10 ³ / ₄
12	25 ³ / ₄	18	16 ⁵ / ₈
13	26 ³ / ₈	20	16 ⁵ / ₈
15	27 ⁷ / ₈	23	16 ⁵ / ₈
16	27 ³ / ₈	25 ¹ / ₂	16 ⁵ / ₈
18	27 ¹ / ₄	28 ¹ / ₂	16 ⁵ / ₈
20	28 ³ / ₄	30 ¹ / ₂	16 ⁵ / ₈
24	36 ⁵ / ₈	36 ¹ / ₂	16 ³ / ₄
30	39 ¹ / ₄	45 ¹ / ₂	17 ⁵ / ₈
36	42 ⁵ / ₈	56	17 ⁵ / ₈
44	46 ⁷ / ₈	68	17 ⁵ / ₈

Dimensions in inches

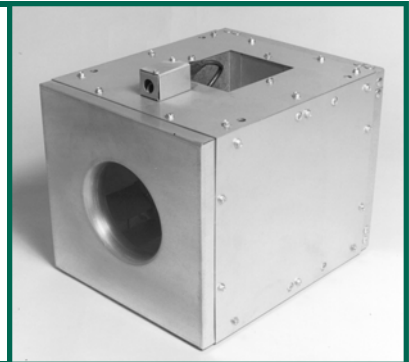
SQDA

Disconnect device with factory mounted and wired junction box is standard.

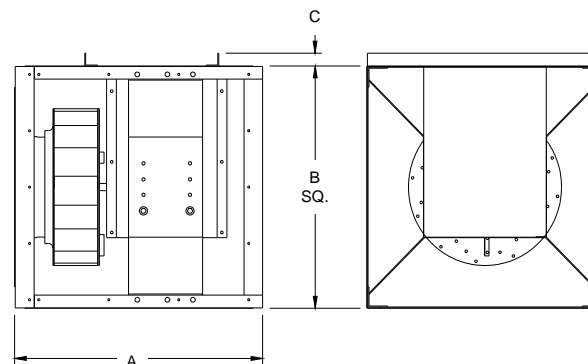
Direct-drive assembly reduces maintenance and operating costs.

Variable speed control is available on most models.

Drive compartment isolates motor from airstream.



SQDA Dimensions



SIZE	A	B	C
06-10	17	14	--
12	25 ³ / ₄	18	1 ³ / ₈
13	26 ³ / ₈	20	1 ³ / ₈
15	27 ⁷ / ₈	23	1 ³ / ₈
16	27 ³ / ₈	25 ¹ / ₂	1 ³ / ₈
18	27 ¹ / ₄	28 ¹ / ₂	1 ³ / ₈

Dimensions in inches

SQBA

Belt Drive Square In-Line Fans

Applications

The SQBA units are quiet, dependable in-line centrifugal fans recommended for a wide range of general exhaust applications where low, medium and high ranges of air volume and pressure are specified, in both ducted and non-ducted ventilation systems. Applications include virtually all types of light manufacturing, commercial and institutional buildings such as shopping centers, hospitals, schools, hotels, office and apartment buildings, warehouses, airports, bus terminals and many others.

Designed for easy positioning and quick installation, the versatile Square In-Line can be located inside equipment rooms, in ceiling spaces or as parts of O.E.M. equipment.

The advantages of an SQBA belt-drive unit over a direct-drive in-line fan include quieter operation, adjustable performance to suit operating needs and availability of larger volume units.

Construction

SQBA models feature a housing of durable mill galvanized outer "skin" over a rigid frame which is designed to provide an attractive finish, yet be a rigid unit to resist severe installation and handling conditions commonly encountered. Three of the four sides of the unit are removable, providing access to the internal parts for inspection and maintenance without disturbing the framework.

The overlapping deep-spun venturi minimizes air turbulence and increases efficiency. The aluminum centrifugal wheel is a non-overloading, backward-inclined type, selected for low noise levels. The wheels are computer balanced on state-of-the-art equipment.

The SQBA wheel is secured to a machined aluminum hub with a line bore, which eliminates the need for bushings.

Drive Mechanism

The SQBA utilizes a standard V-belt drive design with variable pitch cast iron motor pulley for adjusting fan speed. The drive shaft is turned, ground and polished. All components are out of the airstream. The motor support is adjustable for proper tensioning.

Bearings

Heavy duty pillow-block bearings with cast iron housing are self-aligning and relubricable.

Motors

The standard motor for SQBA models is open drip-proof construction, located out of the airstream. Totally enclosed, energy efficient, two-speed and explosion-proof motors may also be available. Motor enclosure may affect UL Listing. All motor brands are recognized and serviced nationwide.



Type SQBA ventilators are Listed by Underwriters Laboratory Inc. to US and Canadian safety standards.



American Coolair Corporation, ILG Industries certifies that the Type SQBA PRVs 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.

Guide Specifications

Duct mounted square in-line fans shall be of the SQBA centrifugal type as manufactured by ILG Industries of American Coolair Corporation (individual models to be listed in fan schedule). Units shall bear the AMCA Certified Ratings Seal for air and sound performance. Housing and rigid frame of the fans to be galvanized steel, with wheel and venturi overlapping for efficient operation. Three sides of the unit are to be removable for access to the inside fan components and drive.

Drive mechanism shall incorporate a V-belt drive with cast iron motor pulley. Drive shaft shall be turned, ground and polished. The centrifugal wheel shall be heavy gauge aluminum with backward-inclined, non-overloading blades and be computer balanced.

Bearings shall be self-aligning and have fittings for relubrication.

Motor shall be open drip-proof construction, NEMA design B with minimum service factor of 1.15. Adjustable motor pulley shall be provided to allow for field adjustment and system balance. Motor shall be mounted on an adjustable steel mounting bracket. Motor shall be mounted to allow easy access to the cast iron variable pitch drive pulley.

(Safety disconnect switch, backdraft damper, epoxy coating and other accessories shall be listed in the fan schedule.)

SQBA10 Performance Data

CFM at Static Pressure																RPM Range				RPM					
0.00		.125		.250		.375		.500		.625		.750		1.00		1.25		1.50			Motor HP				
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone		BHP	Sone	1/4 D1	1/4 D2	1/4 D3
452		376		312																					986
0.02	3.7	0.02	3.6	0.02	3.2																				
475		403		351																					1035
0.02	4.1	0.02	4.0	0.03	3.6																				
497		431		378																					1085
0.02	4.5	0.03	4.4	0.03	4.1																				
520		458		402																					1134
0.03	4.9	0.03	4.8	0.03	4.6																				
537		478		419		303																			1171
0.03	5.2	0.03	5.2	0.04	5.0	0.03	4.5																		
565		511		449		407																			1232
0.03	5.9	0.04	5.9	0.04	5.6	0.04	5.1																		
593		542		480		445																			1294
0.04	6.4	0.04	6.4	0.05	6.2	0.05	5.8																		
621		573		511		475		355																	1355
0.04	6.9	0.05	6.9	0.05	6.9	0.06	6.5	0.05	6.2																
650		604		544		505		465																	1417
0.05	7.6	0.05	7.6	0.06	7.6	0.06	7.3	0.07	6.9																
678		635		578		536		505																	1479
0.06	8.2	0.06	8.2	0.07	8.2	0.07	8.0	0.08	7.7																
706		664		612		566		537		446															1540
0.06	8.8	0.07	8.9	0.08	8.9	0.08	8.9	0.09	8.4	0.08	8.2														
735		695		647		597		567		534															1602
0.07	9.6	0.08	9.6	0.08	9.6	0.09	9.7	0.09	9.3	0.10	9.0														
762		724		680		628		597		570		441													1663
0.08	10.2	0.09	10.3	0.09	10.3	0.10	10.5	0.10	10.1	0.11	9.7	0.10	9.6												
791		754		713		660		627		602		561													1725
0.09	10.9	0.10	11.0	0.10	10.9	0.11	11.1	0.11	10.9	0.12	10.4	0.12	10.2												
819		784		745		694		657		632		605													1787
0.10	11.6	0.11	11.7	0.11	11.7	0.12	11.7	0.13	11.6	0.13	11.2	0.14	10.8												
847		813		776		728		688		662		638													1848
0.11	12.3	0.12	12.4	0.12	12.4	0.13	12.4	0.14	12.4	0.14	12.0	0.15	11.6												
876		843		807		763		720		692		669		491											1910
0.12	13.0	0.13	13.1	0.14	13.1	0.14	13.1	0.15	13.1	0.16	12.8	0.16	12.4	0.15	11.9										
904		872		838		797		752		722		699		622											1971
0.14	13.7	0.14	13.8	0.15	13.8	0.16	13.8	0.16	13.8	0.17	13.6	0.18	13.2	0.18	12.6										
932		901		869		831		785		752		729		679											2033
0.15	14.4	0.15	14.6	0.16	14.6	0.17	14.5	0.18	14.6	0.18	14.5	0.19	14.0	0.20	13.3										
961		931		899		864		819		784		759		716											2095
0.16	15.3	0.17	15.4	0.18	15.5	0.18	15.4	0.19	15.4	0.20	15.3	0.21	15.0	0.22	14.1										
989		959		929		896		853		815		789		748		586									2156
0.18	16.2	0.18	16.3	0.19	16.4	0.20	16.4	0.21	16.3	0.22	16.2	0.22	15.9	0.23	15.0	0.22	14.5								
1017		989		959		928		888		848		820		779		715									2218
0.19	17.1	0.20	17.2	0.21	17.3	0.22	17.4	0.23	17.3	0.23	17.0	0.24	16.8	0.25	16.0	0.26	15.3								
1045		1018		989		959		923		881		851		809		764		500							2280
0.21	18.1	0.22	18.2	0.22	18.3	0.23	18.4	0.24	18.3	0.25	18.1	0.26	17.8	0.27	16.9	0.28	16.1	0.23	15.8						
1073		1047		1019		990		956		915		882		838		800		604							2341
0.23	19.1	0.23	19.2	0.24	19.3	0.25	19.4	0.26	19.4	0.27	19.2	0.28	18.8	0.29	18.0	0.30	17.0	0.28	16.7						

Performance certified is for Type B: free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories)

Power ratings (BHP) do not include transmission losses. Bearing losses are included.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation Type B: free inlet fan sone levels.

SQBA12 Performance Data

CFM at Static Pressure																				RPM Range Motor HP						RPM	
.125		.250		.375		.500		.750		1.00		1.50		2.00		2.50		3.00		1/4	1/3	1/2	3/4	1	1½		
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone						
985		889		788		661																				1078	
0.10	6.5	0.11	6.2	0.11	6.2	0.11	6.0																				
1042		953		860		746																					1132
0.11	7.1	0.12	6.7	0.13	6.9	0.13	6.6																				
1155		1080		993		904		682																			1240
0.15	8.5	0.16	7.9	0.17	8.1	0.17	8.0	0.17	7.4																		
1211		1142		1058		976		769																			1294
0.16	9.3	0.18	8.6	0.19	8.7	0.19	8.8	0.19	8.3																		
1323		1261		1186		1111		937		736																	1402
0.21	10.8	0.22	10.2	0.23	10.0	0.24	10.3	0.25	9.9	0.24	9.1																
1378		1318		1249		1175		1017		826																	1455
0.23	11.7	0.25	11.1	0.26	10.7	0.27	10.9	0.28	10.7	0.27	10.2																
1434		1376		1312		1239		1093		911																	1509
0.26	12.6	0.27	12.0	0.28	11.4	0.29	11.6	0.31	11.6	0.30	11.1																
1489		1433		1373		1303		1166		995																	1563
0.28	13.3	0.30	12.8	0.31	12.1	0.32	12.2	0.34	12.4	0.34	11.8																
1545		1490		1434		1367		1236		1079																	1617
0.31	14.1	0.33	13.6	0.34	13.0	0.36	12.9	0.37	13.1	0.38	12.7																
1601		1547		1494		1431		1304		1161		812															1671
0.34	14.8	0.36	14.4	0.38	13.9	0.39	13.7	0.41	13.9	0.42	13.5	0.40	12.2														
1656		1603		1553		1494		1370		1238		916															1725
0.38	15.6	0.39	15.2	0.41	14.7	0.43	14.5	0.45	14.7	0.46	14.5	0.45	13.1														
1711		1660		1611		1557		1435		1312		1007															1779
0.41	16.6	0.43	16.1	0.45	15.6	0.46	15.3	0.49	15.5	0.50	15.4	0.49	14.3														
1767		1716		1669		1618		1499		1384		1092															1833
0.45	17.5	0.47	17.1	0.49	16.5	0.50	16.1	0.53	16.3	0.55	16.4	0.54	15.4														
1822		1772		1727		1678		1564		1453		1177															1887
0.49	18.3	0.51	18.0	0.53	17.5	0.55	17.1	0.57	17.0	0.59	17.3	0.60	16.4														
1932		1884		1841		1797		1692		1586		1344		1063													1995
0.57	20	0.60	19.9	0.62	19.5	0.64	19.0	0.67	18.6	0.69	19.0	0.71	18.3	0.69	16.9												
1987		1939		1896		1854		1754		1650		1424		1152													2048
0.62	21	0.64	21	0.66	20	0.68	19.9	0.72	19.4	0.74	19.8	0.77	19.3	0.75	18.3												
2042		1995		1953		1912		1818		1714		1501		1238													2102
0.67	22	0.69	22	0.71	21	0.74	21	0.77	20	0.80	21	0.83	20	0.82	19.5												
2097		2050		2009		1969		1880		1778		1576		1323													2156
0.72	23	0.74	23	0.77	22	0.79	22	0.83	21	0.86	21	0.89	22	0.89	21												
2152		2106		2065		2027		1942		1842		1649		1407		1151											2210
0.77	24	0.80	24	0.82	23	0.85	23	0.89	22	0.92	22	0.96	23	0.96	22	0.94	20										
2207		2162		2121		2084		2003		1906		1719		1491		1246											2264
0.83	25	0.86	25	0.88	25	0.90	24	0.95	23	0.98	23	1.03	24	1.04	22.6	1.02	22										
2261		2217		2178		2140		2063		1970		1788		1574		1334											2318
0.89	26	0.92	26	0.94	26	0.97	25	1.01	24	1.05	24	1.10	25	1.11	24	1.10	23										
2383		2340		2302		2266		2195		2111		1936		1749		1522		1292									2438
1.03	28	1.06	28	1.09	28	1.11	28	1.16	27	1.20	26	1.26	27	1.29	26	1.29	26	1.26	24								
2446		2404		2366		2331		2262		2183		2010		1835		1619		1398									2500
1.11	30	1.14	30	1.17	29	1.19	29	1.25	28	1.29	27	1.35	28	1.39	28	1.39	27	1.37	26								
2510		2469		2431		2396		2330		2255		2086		1919		1716		1499									2563
1.20	31	1.23	31	1.25	31	1.28	30	1.34	29	1.38	28	1.45	29	1.50	29	1.50	28	1.48	27								

Performance certified is for Type B: free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).

Power ratings (BHP) do not include transmission losses. Bearing losses are included.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation Type B: free inlet fan sone levels.

SQBA15 Performance Data

CFM at Static Pressure																			RPM Range Motor HP						RPM		
.125		.250		.375		.500		.750		1.00		1.50		2.00		2.50		3.00		1/3	1/2	3/4	1	1½		2	
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone								
2042		1942		1837		1712		1410																		1119	
0.27	12.1	0.29	11.2	0.31	10.7	0.32	9.9	0.32	8.7																		
2136		2040		1942		1827		1548		1210																1166	
0.30	13.0	0.32	12.1	0.34	11.6	0.35	10.8	0.37	9.6	0.36	8.9																
2228		2135		2042		1937		1678		1378																1212	
0.34	13.9	0.36	13.0	0.38	12.5	0.39	11.9	0.41	10.5	0.41	9.9																
2322		2232		2144		2046		1807		1528																1259	
0.38	14.8	0.40	13.9	0.42	13.4	0.44	12.9	0.46	11.5	0.46	11.0																
2413		2326		2241		2150		1929		1666																1305	
0.42	15.8	0.44	14.8	0.46	14.3	0.48	14.1	0.51	12.6	0.51	12.2																
2507		2422		2340		2255		2050		1803																1352	
0.46	16.8	0.49	15.8	0.51	15.2	0.53	15.1	0.56	13.8	0.57	13.4																
2600		2518		2438		2357		2167		1936																1399	
0.51	17.8	0.53	16.9	0.56	16.2	0.58	16.1	0.61	15.1	0.63	14.5																
2784		2706		2631		2557		2390		2188		1713														1492	
0.61	19.8	0.64	18.9	0.67	18.3	0.69	18.0	0.73	17.7	0.76	16.7	0.77	16.0														
2876		2800		2728		2656		2499		2311		1862														1539	
0.67	21	0.70	20	0.73	19.3	0.76	19.0	0.80	19.0	0.83	17.8	0.84	17.3														
2967		2893		2822		2752		2604		2427		2001														1585	
0.73	22	0.76	21	0.79	20	0.82	19.9	0.87	20.3	0.90	19.0	0.92	18.7														
3059		2987		2918		2850		2709		2543		2139		1632												1632	
0.80	23	0.83	22	0.86	21	0.89	21	0.94	22	0.97	20	1.01	20	0.98	19.1												
3150		3079		3011		2946		2810		2654		2271		1825												1678	
0.87	24	0.90	23	0.93	22	0.96	22	1.01	23	1.05	22	1.09	21	1.09	21												
3291		3223		3158		3094		2966		2823		2472		2065												1750	
0.98	26	1.01	25	1.04	24	1.08	24	1.14	24	1.18	24	1.23	23	1.24	23												
3383		3317		3253		3191		3067		2931		2600		2211												1797	
1.06	27	1.09	27	1.12	26	1.16	25	1.22	25	1.27	26	1.33	24	1.34	24												
3569		3505		3444		3385		3268		3144		2848		2492		2097										1892	
1.23	29	1.27	29	1.30	28	1.34	27	1.40	27	1.46	28	1.53	26	1.57	26	1.57	25										
3661		3599		3539		3480		3366		3248		2967		2627		2253										1939	
1.32	30	1.36	30	1.39	29	1.43	28	1.50	28	1.56	28	1.64	26	1.68	27	1.69	26										
3753		3692		3633		3576		3464		3350		3084		2759		2401		1924								1986	
1.42	31	1.46	31	1.49	30	1.53	29	1.60	28	1.67	29	1.76	27	1.80	27	1.81	27	1.75	26								
3846		3787		3729		3673		3564		3453		3200		2891		2547		2155									2034
1.52	32	1.56	32	1.60	31	1.64	30	1.71	29	1.78	30	1.88	29	1.93	28	1.95	28	1.94	27								

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

SQBA16 Performance Data

CFM at Static Pressure																RPM Range					RPM			
.125		.250		.375		.500		.750		1.00		1.50		2.00		2.50		3.00		Motor HP				
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/2	3/4	1	1½	2
1991	1868	1730	1495																					807
0.20	9.6	0.21	8.6	0.23	7.8	0.23	7.6																	
2096	1973	1858	1644																					844
0.23	10.5	0.24	9.4	0.26	8.5	0.26	8.3																	
2202	2078	1974	1794																					881
0.26	11.4	0.27	10.3	0.29	9.3	0.30	8.9																	
2307	2182	2084	1945	1483																				918
0.29	12.1	0.31	11.2	0.32	10.1	0.33	9.5	0.32	8.9															
2410	2284	2189	2076	1682																				954
0.32	12.9	0.34	12.1	0.36	11.0	0.37	10.2	0.37	9.6															
2515	2388	2295	2198	1841																				991
0.36	13.9	0.38	13.0	0.40	11.8	0.41	11.0	0.42	10.3															
2620	2493	2400	2311	1991	1447																			1028
0.40	14.8	0.42	14.0	0.44	12.8	0.45	11.8	0.47	11.0	0.43	10.3													
2722	2595	2502	2418	2136	1740																			1064
0.44	15.7	0.46	15.0	0.48	13.9	0.50	12.7	0.52	11.8	0.50	11.0													
2827	2701	2607	2526	2289	1939																			1101
0.48	16.6	0.51	16.0	0.53	15.0	0.55	13.7	0.58	12.7	0.57	12.0													
2931	2806	2711	2632	2434	2100																			1138
0.53	17.6	0.56	17.0	0.58	16.1	0.60	14.9	0.63	13.7	0.64	13.1													
3033	2909	2813	2735	2562	2247																			1174
0.58	18.6	0.61	18.0	0.63	17.2	0.65	16.1	0.69	14.8	0.70	14.3													
3137	3014	2917	2840	2683	2395																			1211
0.64	19.6	0.67	19.1	0.69	18.2	0.71	17.4	0.75	16.1	0.77	15.5													
3240	3120	3022	2944	2798	2546																			1248
0.69	21	0.72	20	0.75	19.4	0.78	18.7	0.82	17.3	0.84	16.1													
3344	3225	3127	3049	2908	2698	1996																		1285
0.76	22	0.79	21	0.82	21	0.84	20	0.88	18.8	0.92	17.9	0.87	16.8											
3497	3382	3283	3204	3069	2905	2335																		1340
0.85	23	0.89	23	0.92	23	0.95	22	0.99	21	1.03	19.8	1.03	18.8											
3603	3490	3392	3311	3179	3033	2506																		1378
0.93	25	0.96	25	0.99	24	1.02	24	1.07	23	1.11	21	1.13	20											
3706	3596	3497	3416	3284	3151	2659																		1415
1.00	26	1.04	26	1.07	26	1.10	26	1.15	24	1.19	23	1.23	22											
3809	3701	3603	3521	3390	3263	2808	2032																	1452
1.08	28	1.12	28	1.15	28	1.18	27	1.24	26	1.28	25	1.33	23	1.20	23									
3911	3806	3708	3626	3494	3374	2957	2347																	1489
1.16	30	1.20	30	1.24	30	1.27	29	1.33	28	1.37	27	1.43	25	1.36	25									
4017	3913	3817	3734	3602	3485	3112	2593																	1527
1.25	31	1.29	31	1.33	31	1.36	31	1.42	30	1.47	28	1.54	26	1.51	25									
4119	4018	3922	3839	3706	3592	3265	2774																	1564
1.34	32	1.38	32	1.42	32	1.46	32	1.52	31	1.57	29	1.65	27	1.64	26									
4221	4122	4028	3944	3810	3699	3411	2935																	1601
1.44	33	1.48	33	1.52	33	1.56	33	1.62	32	1.68	30	1.76	28	1.77	27									
4323	4226	4133	4050	3915	3804	3547	3087	2396																1638
1.54	34	1.58	34	1.62	34	1.66	34	1.73	33	1.78	32	1.88	29	1.91	28	1.76	28							
4428	4333	4242	4158	4022	3912	3676	3240	2707																1676
1.65	35	1.69	35	1.73	35	1.77	35	1.84	34	1.90	33	2.00	30	2.04	30	1.96	29							

Performance certified is for Type B: free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories)

Power ratings (BHP) do not include transmission losses. Bearing losses are included.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation Type B: free inlet fan sone levels.

SQBA18 Performance Data

CFM at Static Pressure																				RPM Range Motor HP						RPM	
.125		.250		.375		.500		.750		1.00		1.50		2.00		2.50		3.00		1/2	3/4	1	1½	2	3		
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone						
2423		2252		2031		1807																				734	
0.23	6.6	0.25	6.3	0.27	5.8	0.27	5.4																				
2561		2403		2202		1984																				771	
0.26	7.2	0.28	6.9	0.30	6.6	0.31	6.1																				
2695		2546		2364		2155																				807	
0.30	7.9	0.32	7.5	0.34	7.2	0.36	6.7																				
2831		2690		2526		2329		1939																		844	
0.34	8.5	0.36	8.2	0.39	8.0	0.40	7.5	0.41	6.8																		
2967		2833		2683		2500		2126																		881	
0.38	9.3	0.41	8.9	0.43	8.7	0.45	8.3	0.47	7.4																		
3103		2975		2836		2668		2305																		918	
0.43	10.0	0.46	9.7	0.48	9.4	0.51	9.1	0.53	8.1																		
3235		3111		2982		2828		2477		2122																954	
0.48	10.7	0.51	10.3	0.54	10.1	0.56	9.9	0.59	8.9	0.59	8.4																
3369		3251		3128		2987		2652		2324																991	
0.53	11.5	0.56	11.1	0.59	10.9	0.62	10.6	0.66	9.7	0.67	9.0																
3504		3390		3273		3143		2826		2507																1028	
0.59	12.3	0.62	11.9	0.66	11.7	0.68	11.5	0.73	10.7	0.75	9.7																
3635		3524		3412		3291		2993		2680																1064	
0.65	13.1	0.69	12.7	0.72	12.4	0.75	12.3	0.80	11.6	0.82	10.7																
3769		3662		3554		3440		3163		2857																1101	
0.72	13.9	0.76	13.5	0.79	13.2	0.82	13.1	0.88	12.6	0.91	11.6																
3902		3799		3695		3587		3329		3033																1138	
0.79	14.8	0.83	14.4	0.87	14.1	0.90	13.9	0.96	13.5	1.00	12.7																
4032		3932		3832		3729		3488		3202		2632														1174	
0.86	15.6	0.91	15.2	0.94	14.9	0.98	14.7	1.04	14.3	1.09	13.6	1.10	12.2														
4230		4134		4039		3942		3723		3458		2923														1229	
0.99	16.8	1.03	16.3	1.07	16.0	1.11	15.8	1.18	15.4	1.24	14.8	1.27	13.3														
4364		4270		4177		4084		3878		3628		3104														1266	
1.08	17.5	1.12	17.0	1.17	16.7	1.20	16.5	1.28	16.2	1.34	15.7	1.39	14.2														
4497		4406		4316		4225		4030		3795		3282														1303	
1.17	18.3	1.22	17.8	1.26	17.5	1.30	17.2	1.38	16.9	1.45	16.5	1.52	15.2														
4629		4541		4453		4365		4180		3959		3459		2943												1340	
1.27	19.1	1.32	18.6	1.37	18.2	1.41	18.0	1.49	17.7	1.56	17.3	1.64	16.2	1.63	15.1												
4766		4680		4594		4509		4331		4124		3640		3164												1378	
1.38	20	1.43	19.5	1.48	19.1	1.52	18.8	1.60	18.5	1.68	18.1	1.78	17.1	1.79	15.9												
4898		4814		4731		4648		4477		4282		3814		3355												1415	
1.49	21	1.54	20	1.59	20	1.64	19.7	1.72	19.3	1.80	19.0	1.92	18.1	1.94	16.8												
5031		4949		4868		4787		4622		4437		3988		3536												1452	
1.61	22	1.66	21	1.71	21	1.76	21	1.85	20	1.93	19.8	2.06	19.1	2.10	17.7												
5163		5083		5004		4925		4765		4590		4160		3715		3227										1489	
1.73	23	1.79	22	1.84	22	1.89	22	1.98	21	2.06	21	2.21	20.0	2.26	18.7	2.22	18.1										
5263		5185		5107		5029		4873		4704		4289		3849		3406										1517	
1.83	23	1.88	23	1.94	23	1.99	22	2.08	22	2.17	21	2.32	20.7	2.39	19.5	2.38	18.6										
5402		5326		5250		5174		5023		4861		4468		4036		3619										1556	
1.97	24	2.03	24	2.08	24	2.14	23	2.23	23	2.32	22	2.49	22	2.57	20.7	2.58	19.5										
5538		5463		5389		5315		5168		5013		4639		4216		3810										1594	
2.11	25	2.17	25	2.23	24	2.29	24	2.39	24	2.48	23	2.65	23	2.75	22	2.78	21										
5677		5604		5532		5460		5316		5166		4813		4400		4000		3549								1633	
2.27	26	2.33	26	2.39	25	2.45	25	2.55	25	2.65	24	2.83	24	2.95	23	2.99	22	2.93	21								

Performance certified is for Type B: free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).

Power ratings (BHP) do not include transmission losses. Bearing losses are included.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation Type B: free inlet fan sone levels.

SQBA24 Performance Data

CFM at Static Pressure																				RPM Range Motor HP							RPM	
.125		.250		.375		.500		.750		1.00		1.25		1.50		2.00		2.50		1/2	3/4	1	1½	2	3	5		
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone							
4389		4038		3538																							567	
0.34	6.6	0.36	6.1	0.38	5.5																							
4830		4504		4146		3413																					616	
0.43	7.6	0.46	7.2	0.48	6.7	0.47	6.0																					
5055		4737		4413		3878																					641	
0.49	8.2	0.51	7.8	0.53	7.4	0.54	6.7																					
5813		5518		5248		4947		3292																			726	
0.70	10.5	0.72	10.1	0.75	9.7	0.78	9.2	0.73	8.0																			
6256		5972		5717		5458		4598																			776	
0.85	11.9	0.88	11.5	0.91	11.1	0.94	10.7	0.96	9.4																			
6513		6235		5986		5741		5049		2849																	805	
0.95	12.8	0.97	12.4	1.00	12.0	1.04	11.6	1.08	10.4	0.92	9.9																	
6997		6731		6492		6265		5738		4553																	860	
1.16	14.6	1.18	14.2	1.21	13.8	1.24	13.4	1.31	12.4	1.27	11.1																	
7261		7000		6766		6546		6068		5203																	890	
1.28	15.6	1.31	15.1	1.33	14.7	1.37	14.4	1.44	13.5	1.45	12.1																	
7533		7278		7048		6834		6390		5707																	921	
1.42	16.6	1.44	16.1	1.47	15.7	1.51	15.4	1.58	14.6	1.62	13.3																	
7805		7555		7329		7120		6700		6132		4803															952	
1.57	17.6	1.59	17.1	1.62	16.7	1.65	16.3	1.73	15.5	1.78	14.4	1.70	13.2															
8067		7823		7601		7395		6993		6499		5567															982	
1.72	18.5	1.74	18.1	1.77	17.6	1.81	17.2	1.88	16.5	1.95	15.4	1.93	14.1															
8338		8099		7881		7679		7291		6848		6123		4200													1013	
1.89	19.5	1.91	19.0	1.94	18.6	1.97	18.2	2.05	17.5	2.13	16.6	2.14	15.2	1.93	14.5													
8661		8428		8214		8016		7642		7240		6667		5484													1050	
2.10	21	2.12	20	2.15	19.7	2.18	19.3	2.27	18.6	2.35	17.9	2.39	16.7	2.31	15.4													
8896		8667		8457		8261		7895		7515		7015		6124													1077	
2.27	22	2.29	21	2.32	21	2.35	20	2.43	19.5	2.52	18.8	2.58	17.7	2.55	16.3													
9131		8906		8699		8506		8147		7783		7337		6614													1104	
2.44	23	2.46	22	2.49	22	2.52	21	2.61	20	2.69	19.7	2.77	18.8	2.77	17.4													
9365		9145		8941		8750		8397		8047		7639		7034													1131	
2.63	23	2.64	23	2.67	22	2.71	22	2.79	21	2.88	21	2.96	19.8	2.99	18.6													
9600		9383		9182		8994		8646		8307		7929		7407													1158	
2.82	24	2.84	24	2.86	23	2.90	23	2.98	22	3.07	22	3.16	21	3.21	19.7													
9895		9683		9486		9301		8959		8631		8280		7833		5626											1192	
3.07	26	3.09	25	3.12	24	3.15	24	3.23	23	3.33	23	3.42	22	3.49	21	3.27	19.0											
10112		9903		9708		9526		9188		8867		8530		8124		6460											1217	
3.27	26	3.29	26	3.31	25	3.35	25	3.43	24	3.53	23	3.62	23	3.70	22	3.61	19.8											
10337		10131		9940		9760		9426		9111		8787		8413		7059											1243	
3.48	27	3.50	27	3.53	26	3.56	26	3.64	25	3.74	24	3.84	24	3.93	23	3.92	21											
10553		10351		10162		9984		9654		9344		9030		8680		7523											1268	
3.70	28	3.71	28	3.74	27	3.77	27	3.85	26	3.95	25	4.06	25	4.15	24	4.20	22											
10770		10571		10384		10208		9881		9576		9271		8939		7928											1293	
3.92	29	3.94	29	3.96	28	3.99	28	4.08	27	4.17	26	4.28	26	4.38	25	4.47	23											
10994		10798		10614		10440		10117		9817		9519		9203		8307		5775									1319	
4.16	30	4.18	30	4.20	29	4.23	29	4.32	28	4.41	27	4.52	27	4.62	26	4.75	24	4.33	23									
11210		11017		10836		10664		10344		10047		9756		9452		8643		6713									1344	
4.40	31	4.42	31	4.44	30	4.47	30	4.56	29	4.65	28	4.76	28	4.87	27	5.02	25	4.77	24									

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

SQBA30 Performance Data

CFM at Static Pressure																RPM Range							RPM				
.125		.250		.375		.500		.750		1.00		1.25		1.50		2.00		2.50		Motor HP							
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	3/4	1	1½	2	3	5	7½	
5949		5416		4187																						422	
0.37	5.7	0.41	5.3	0.41	4.5																						
6258		5766		4959																							441
0.42	6.2	0.46	5.9	0.49	5.0																						
6564		6106		5470																							460
0.47	6.7	0.52	6.4	0.55	5.6																						
7173		6766		6273		5326																					498
0.59	7.9	0.64	7.6	0.69	7.0	0.69	6.3																				
7649		7275		6841		6241																					528
0.70	8.9	0.75	8.6	0.80	8.1	0.84	7.3																				
7964		7609		7204		6693																					548
0.78	9.6	0.83	9.3	0.88	8.9	0.93	8.0																				
8295		7957		7578		7124																					569
0.87	10.4	0.92	10.0	0.98	9.7	1.03	9.0																				
8984		8677		8340		7960		6644																			613
1.08	12.3	1.14	11.8	1.19	11.5	1.25	11.0	1.29	9.2																		
9311		9017		8696		8341		7316																			634
1.19	13.2	1.25	12.7	1.31	12.3	1.37	12.0	1.45	10.1																		
9701		9420		9116		8785		7931																			659
1.33	14.2	1.39	13.8	1.45	13.4	1.52	13.1	1.62	11.3																		
10011		9740		9450		9134		8362	6174																		679
1.45	15.1	1.52	14.6	1.58	14.3	1.64	14.0	1.76	12.4	1.67	10.9																
10337		10075		9796		9496		8787	7353																		700
1.59	16.0	1.65	15.5	1.72	15.2	1.78	14.9	1.91	13.6	1.90	11.8																
10631		10378		10109		9820		9155	8061																		719
1.72	16.8	1.78	16.3	1.85	15.9	1.92	15.6	2.05	14.6	2.10	12.7																
11233		10995		10744		10477		9881	9091	6794																	758
2.00	18.4	2.07	17.9	2.14	17.5	2.21	17.2	2.36	16.5	2.47	14.8	2.31	13.6														
11542		11311		11068		10811		10243	9530	8015																	778
2.16	19.2	2.23	18.7	2.31	18.3	2.38	18.0	2.52	17.4	2.65	15.9	2.60	14.5														
11896		11673		11438		11192		10652	10002	8919																	801
2.36	20	2.43	19.8	2.50	19.3	2.58	18.9	2.73	18.3	2.87	17.1	2.90	15.6														
12466		12253		12031		11799		11298	10720	9943	8030																838
2.69	22	2.77	22	2.84	21	2.92	21	3.08	20	3.23	19.0	3.34	17.5	3.18	16.5												
13034		12831		12621		12402		11932	11405	10763	9687																875
3.06	24	3.14	23	3.22	23	3.30	22	3.46	22	3.62	21	3.77	19.5	3.78	18.2												
13601		13408		13208		13000		12558	12071	11507	10746																912
3.46	26	3.54	25	3.62	24	3.70	24	3.87	23	4.05	23	4.21	22	4.31	20												
13893		13704		13508		13306		12876	12407	11872	11194																931
3.67	27	3.76	26	3.84	25	3.93	25	4.10	24	4.27	24	4.44	23	4.58	21												
14321		14139		13950		13755		13343	12896	12398	11800	8614															959
4.01	28	4.09	27	4.18	27	4.27	26	4.45	26	4.63	25	4.81	24	4.96	23	4.68	21										
14582		14402		14217		14026		13624	13190	12710	12148	9744															976
4.22	29	4.31	28	4.40	28	4.49	27	4.67	26	4.85	26	5.03	25	5.20	24	5.08	22										
15102		14929		14751		14568		14184	13772	13324	12817	11173															1010
4.67	31	4.76	30	4.86	29	4.95	29	5.13	28	5.32	28	5.51	27	5.70	26	5.81	23										
15606		15439		15268		15092		14723	14331	13908	13441	12152															1043
5.14	33	5.23	32	5.33	31	5.42	31	5.61	30	5.81	29	6.01	29	6.20	28	6.45	25										
16125		15964		15799		15629		15276	14901	14501	14066	12970	10040														1077
5.65	35	5.75	34	5.85	33	5.94	33	6.14	32	6.34	31	6.55	31	6.75	30	7.08	27	6.70	26								

Performance certified is for Type B: free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories)

Power ratings (BHP) do not include transmission losses. Bearing losses are included.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation Type B: free inlet fan sone levels.

SQDA

Direct Drive Square In-Line Fans

Applications

The SQDA units are quiet, dependable in-line centrifugal fans recommended for a wide range of general exhaust applications where low to medium ranges of air volume and pressure are specified, in both ducted and non-ducted ventilation systems. Applications include virtually all types of light manufacturing, commercial and institutional buildings such as shopping centers, hospitals, schools, hotels, office and apartment buildings, warehouses, airports, bus terminals and many others.

Designed for easy positioning and quick installation, the versatile Square In-Line can be located inside equipment rooms, in ceiling spaces or as parts of O.E.M. equipment.

The advantages of a SQDA direct-drive over a belt-drive in-line unit include lower maintenance requirements, reduced risks of lower performance levels as a result of loosened belts, and lower operating costs.

Construction

SQDA models feature a housing of durable mill galvanized outer "skin" over a rigid frame which is designed to provide an attractive finish, yet be a rigid unit to resist severe installation and handling conditions commonly encountered. Three of the four sides of the unit are removable, providing access to the internal parts for inspection and maintenance without disturbing the framework.

The overlapping deep-spun venturi minimizes air turbulence and increases efficiency. The aluminum centrifugal wheel is a non-overloading, backward-inclined type, selected for low noise levels. Backplate fins draw cool air through the motor compartment. The wheels are computer balanced on state-of-the-art equipment.

The SQDA wheel is secured to a machined aluminum hub with a line bore, which eliminates the need for bushings.

Drive Mechanism

SQDA models have all the advantages of a direct-drive assembly. There are no belts, bearings or pulleys to consume power or require maintenance.

Motors

The standard motor for most SQDA models is open construction, located out of the airstream. Totally enclosed, energy efficient, two-speed and explosion-proof motors may also be available. Motor enclosure may affect UL Listing. All motor brands are recognized and serviced nationwide.



Type SQDA ventilators are Listed by Underwriters Laboratory Inc. to US and Canadian safety standards.



American Coolair Corporation, ILG Industries certifies that the Type SQDA PRVs 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.

Guide Specifications

Duct mounted square in-line fans shall be of the SQDA centrifugal type as manufactured by ILG Industries of American Coolair Corporation (individual models to be listed in fan schedule). Units shall bear the AMCA Certified Ratings Seal for air and sound performance. Housing and rigid frame of the fans to be galvanized steel, with wheel and venturi overlapping for efficient operation. Three sides of the unit are to be removable for access to the inside fan components and drive.

Drive construction shall be of the direct-drive design. The line bore hub shall be mounted onto the backplate of the centrifugal wheel. The centrifugal wheel shall be heavy gauge aluminum with backward -inclined, non-overloading blades and be computer balanced.

Motor shall be open construction, NEMA design B. The unit shall be equipped with a safety disconnect device. Optional variable speed control on most models allows for field adjustment and system balance.

(Backdraft damper, epoxy coating and other accessories shall be listed in the fan schedule.)

SQDA06 - SQDA12 Performance Data

SQDA06																Motor HP	Speed Controllable	RPM		
CFM at Static Pressure																				
0.00		.125		.250		.375		.500		.625		.750		1.00		1.25				
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone			
298		242		175														1/25	Yes	1100
0.02	4.2	0.02	3.6	0.02	3.1															
434		406		358		313		268										1/13	Yes	1600
0.06	8.5	0.06	8.2	0.07	7.9	0.07	7.4	0.07	7.1											
447		421		375		331		289										1/10	Yes	1650
0.07	9.0	0.07	8.7	0.07	8.4	0.07	7.9	0.07	7.6											
474		450		409		365		327		282								1/4	Yes (ESM)	1750
0.08	9.9	0.08	9.6	0.09	9.4	0.09	9.0	0.09	8.6	0.09	8.4									

SQDA08																Motor HP	Speed Controllable	RPM		
CFM at Static Pressure																				
0.00		.125		.250		.375		.500		.625		.750		1.00		1.25				
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone			
412		365		303														1/25	Yes	1100
0.02	4.3	0.02	4.0	0.03	3.8															
580		548		514		479		425										1/13	Yes	1550
0.06	8.5	0.06	8.3	0.07	8.0	0.07	7.7	0.07	7.7											
609		577		546		512		470										1/10	Yes	1625
0.07	9.3	0.07	9.1	0.07	8.8	0.08	8.5	0.08	8.5											
655		626		598		566		534		485								1/4	Yes (ESM)	1750
0.09	10.6	0.09	10.5	0.09	10.2	0.10	9.9	0.10	9.7	0.10	9.6									

SQDA10																Motor HP	Speed Controllable	RPM		
CFM at Static Pressure																				
0.00		.125		.250		.375		.500		.625		.750		1.00		1.25				
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone			
504		439		385														1/25	Yes	1100
0.02	4.6	0.03	4.5	0.03	4.2															
688		645		590		546		516										1/13	Yes	1500
0.06	8.4	0.06	8.4	0.07	8.4	0.08	8.3	0.08	7.9											
722		681		632		583		554										1/10	Yes	1575
0.07	9.3	0.07	9.3	0.08	9.3	0.09	9.3	0.09	8.9											
802		766		726		674		639		614		581						1/4	Yes (ESM)	1750
0.10	11.2	0.10	11.3	0.11	11.2	0.11	11.3	0.12	11.2	0.12	10.7	0.13	10.5							

SQDA12																Motor HP	Speed Controllable	RPM		
CFM at Static Pressure																				
0.00		.125		.250		.375		.500		.625		.750		1.00		1.25				
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone			
1022		928		826		713												1/8	Yes	1025
0.07	6.3	0.09	5.9	0.09	5.7	0.10	5.5													
1721		1656		1603		1553		1494		1430		1370		1238		1078		1/2	No	1725
0.36	15.9	0.38	15.6	0.39	15.2	0.41	14.7	0.43	14.5	0.44	14.6	0.45	14.7	0.46	14.5	0.46	14.0			
1746		1682		1630		1580		1523		1460		1400		1273		1117		1/2	Yes (ESM)	1750
0.37	16.3	0.39	16.1	0.41	15.6	0.43	15.1	0.44	14.9	0.45	14.9	0.47	15.1	0.48	14.9	0.48	14.4			

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

SQDA13 - SQDA18 Performance Data

SQDA13																CFM at Static Pressure			Motor HP	Speed Controllable	RPM
0.00		.125		.250		.375		.500		.625		.750		1.00		1.25					
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone				
1594		1503		1407		1304		1189										1/5	Yes	1125	
0.16	9.6	0.17	8.8	0.19	8.3	0.20	7.9	0.20	7.7									3/4	No	1750	
2479		2422		2363		2303		2242		2178		2114		1976		1825					
0.60	19.8	0.62	19.1	0.64	18.5	0.66	18.0	0.68	17.6	0.70	17.4	0.72	17.2	0.75	16.9	0.77	16.7				
2479		2422		2363		2303		2242		2178		2114		1976		1825		1	Yes (ESM)	1750	
0.60	19.8	0.62	19.1	0.64	18.5	0.66	18.0	0.68	17.6	0.70	17.4	0.72	17.2	0.75	16.9	0.77	16.7				

SQDA15																CFM at Static Pressure			Motor HP	Speed Controllable	RPM
0.00		.125		.250		.375		.500		.625		.750		1.00		1.25					
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone				
2065		1954		1850		1737		1600		1443								1/3	Yes	1075	
0.22	12.7	0.24	11.3	0.26	10.4	0.27	10.0	0.28	9.0	0.29	8.4							1	Yes (ESM)	1575	
3026		2947		2873		2801		2731		2659		2581		2402		2195					
0.69	23	0.72	22	0.75	21	0.78	20	0.81	20	0.83	20	0.85	20	0.88	18.8	0.90	18.5				
3314		3242		3173		3107		3043		2978		2912		2765		2595		1	No	1725	
0.91	26	0.94	25	0.97	25	1.00	24	1.03	23	1.06	23	1.09	24	1.14	23	1.16	22				

SQDA16																CFM at Static Pressure			Motor HP	Speed Controllable	RPM
0.00		.125		.250		.375		.500		.625		.750		1.00		1.25					
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone				
2226		2042		1919		1794		1568										1/2	No	825	
0.19	10.4	0.21	10.1	0.23	9.0	0.24	8.2	0.24	7.9									1	No	1140	
3077		2937		2812		2717		2638		2556		2442		2108		1540					
0.51	18.0	0.53	17.7	0.56	17.0	0.58	16.1	0.60	14.9	0.62	14.2	0.64	13.8	0.64	13.2	0.58	12.5				

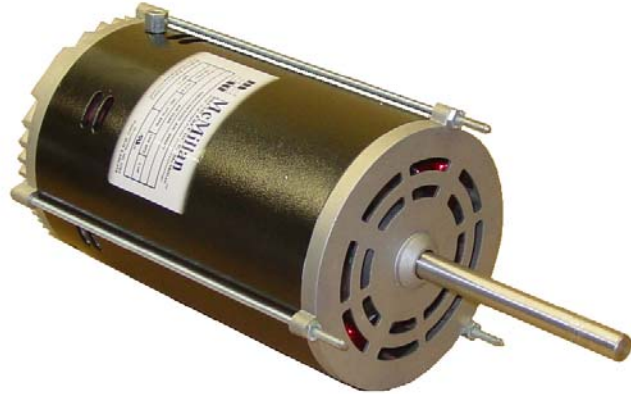
SQDA18																CFM at Static Pressure			Motor HP	Speed Controllable	RPM
0.00		.125		.250		.375		.500		.625		.750		1.00		1.25					
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone				
2905		2761		2616		2444		2240		2041		1830						1/2	No	825	
0.28	8.9	0.32	8.2	0.34	7.9	0.36	7.6	0.38	7.1	0.39	6.7	0.38	6.5					1	No	1140	
4014		3910		3806		3703		3595		3475		3338		3042		2757					
0.75	15.4	0.79	14.8	0.83	14.4	0.87	14.1	0.90	13.9	0.94	13.8	0.97	13.6	1.01	12.7	1.02	11.9				

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EnergySaver Motors

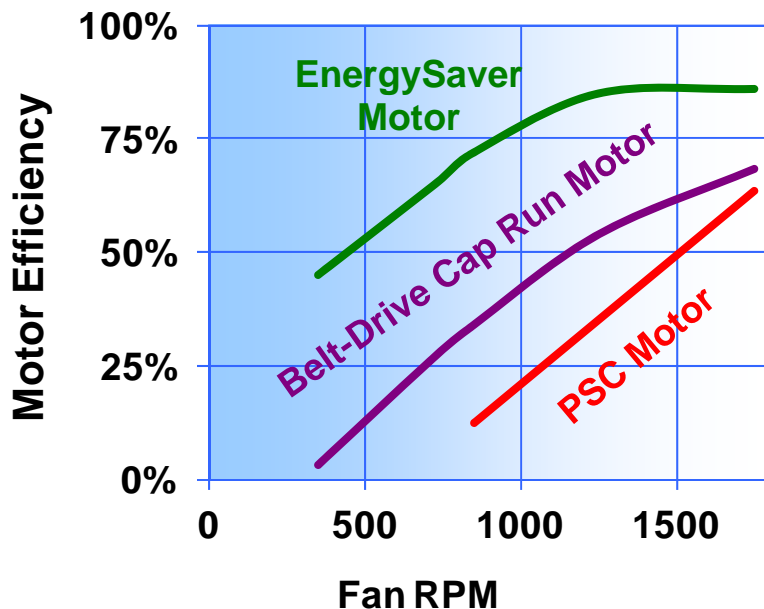
American Coolair is proud to introduce our new line of *EnergySaver* motors. These electronically commutated (EC) motors are controllable to 20% of nameplate speed and provide premium efficiency throughout their speed range.

When compared to the standard permanent split capacitor (PSC) motors, *EnergySaver* motors can provide energy savings of 50% or more! Each *EnergySaver* motor comes standard with a manual speed controller on the unit. An optional dial speed controller can be specified and shipped loose for remote field mounting.



Most *EnergySaver* motors may also be specified for use with either a variable pressure control (VPC) or variable temperature control (VTC). The VPC features a remotely mounted pressure sensor which is connected to the motor controller. Motor speed is then automatically adjusted based on the system status as indicated by the pressure sensor. Once set and tuned for the system, the VPC allows for fully automated ventilation control. The VTC connects the motor to a thermostat to control the fan speed based on air temperature.

EnergySaver motors are available for SQDA06 - SQDA15.



Data based on Size 12 fans using 1/2 HP, 1750 RPM motors

- Available on SQDA 06-15
- Electronically commutated, super-efficient motors
- Standard manual or optional automated speed control from 100% down to 20% of motor nameplate speed
- Up to 50% in energy savings

Installation

Most SQBA and SQDA in-line centrifugal fans are shipped fully assembled and ready for installation. Always inspect equipment for transit damage before accepting delivery to assure a valid claim. Special handling and storage procedures are required if unit is to remain idle for a long time prior to installation.

Placement

For convenience in wiring and service, it is recommended that the fans be installed so that the motor is easily accessible. In addition, belt-driven units should be accessibly installed for maintenance and servicing of belts, bearings, and pulleys.

Mounting

SQBA and SQDA in-line centrifugal fans may be mounted in any orientation within a system of ductwork. All fans should be rigidly mounted in such a manner that the unit is adequately supported by either the ductwork or by ceiling/floor supports.

The SQBA and SQDA units are designed with slip-fit duct connectors as standard. Flexible duct connections or transition pieces may be used in mounting the fan. However, make sure that proper duct design is maintained so as not to obstruct airflow. For ease of installation, mounting flanges and round duct connectors are available. See pages 22-23.

Inspection

- **Check centrifugal wheel** for free rotation.
- **Check belt** for proper tension. (SQBA)
- **Check bearings** for proper and secure locking to drive shaft. (SQBA)
- **Check motor and fan sheave faces** for proper alignment. (SQBA)
- **Check circuit phase, voltage and wiring connection** against that shown on motor nameplate.
- **Check direction of fan rotation** for proper air flow.
- **After one week of operation, check belt** for proper tension. (SQBA)

Maintenance

Units should be checked monthly for the first two or three months and periodically thereafter. On all SQBA and SQDA units, three of the four side panels are removable for ease in cleaning and maintenance.

Cleaning and Adjustment

Units should be cleaned periodically to remove accumulated dust, dirt, and other foreign matter which may collect on the blades or other parts. Fans should be checked for eroded parts which should be replaced to avoid structural damage and possible failure.

On belt drive units, belt wear, tension, and alignment should be checked. Note that belt and/or pulley misalignment will cause excessive belt wear and premature failure. This check of the drive components should be made frequently during the first 24-48 hours of the fan's operation.

Lubrication

Proper lubrication is the most important maintenance requirement. Fan bearings on belt drive units should be lubricated annually or more frequently depending on usage and operating conditions. For best results, use a #2 consistency lithium base grease such as Shell Alvania #2 lubricant or equivalent.

Motor bearings should be lubricated according to the motor manufacturer's instructions.

Adjustment of Variable Pitch Pulley and Belt (SQBA)

Variable pitch pulley may be adjusted within catalog RPM range to alter performance. However, adjustment beyond catalog RPM range may cause motor overload and possible premature motor failure. Pulley alignment and belt tension should be adjusted if necessary. Inspection every 6 to 12 months is recommended.

WARNING



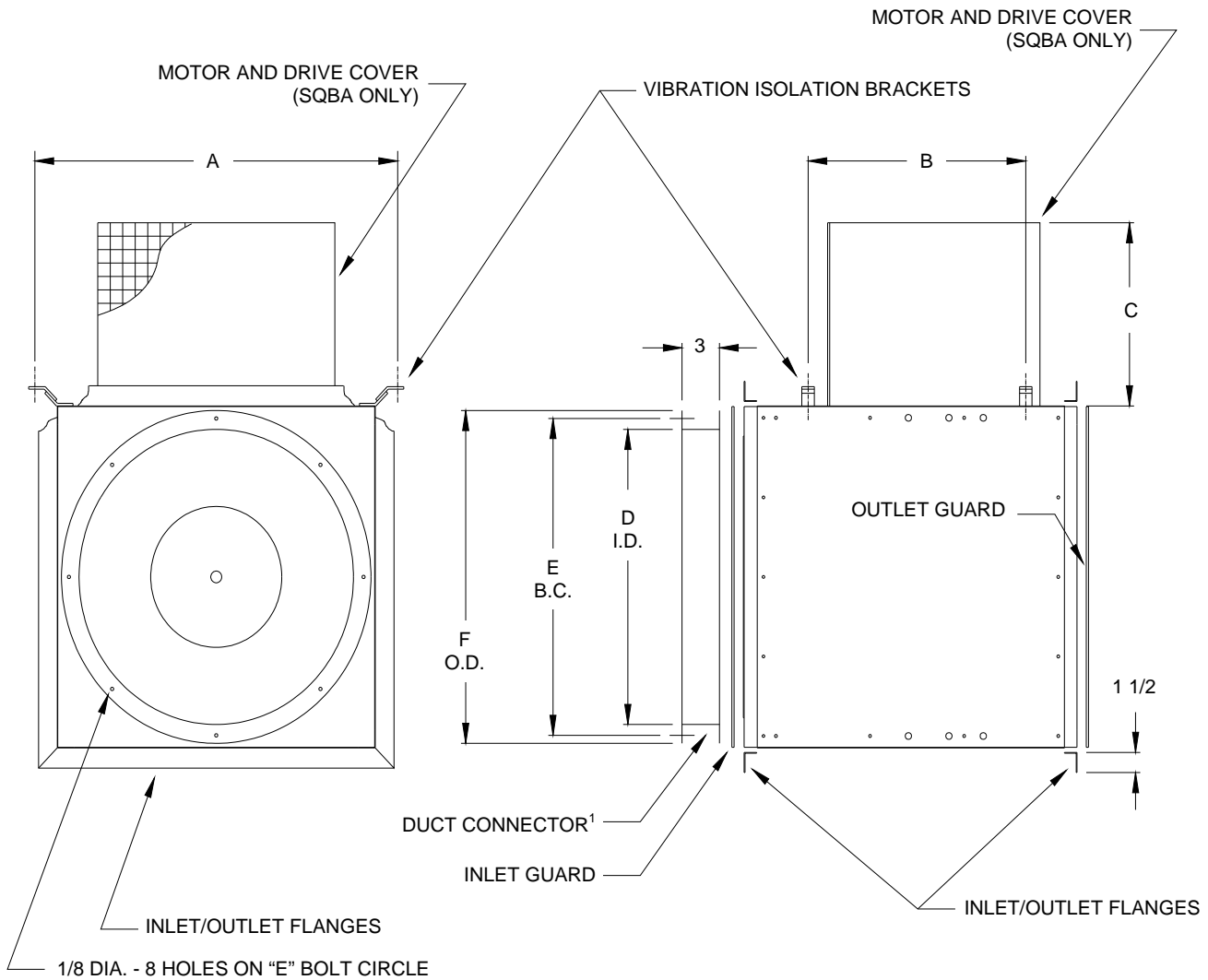
CAUTION

DO NOT INSTALL FAN WITH MOVING PARTS WITHIN 8 FEET OF FLOOR OR GRADE LEVEL WITHOUT A GUARD THAT COMPLIES WITH OSHA REGULATIONS. **DO NOT** USE UNLESS ELECTRICAL WIRING COMPLIES WITH ALL APPLICABLE CODES. **DO NOT** WIRE WITHOUT PROVIDING FOR A POWER SOURCE DISCONNECT AT THE FAN ITSELF. **DO NOT** SERVICE EXCEPT BY A QUALIFIED MAINTENANCE TECHNICIAN AND ONLY AFTER DISCONNECTING THE POWER SOURCE. FAILURE TO OBSERVE THESE PRECAUTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.

To convert air performance (CFM and SP) and power (BHP) to metric units, multiply CFM x .000472 to obtain cubic meters per second (m³/s). Multiply SP x 248.36 to obtain pascals (Pa). Multiply BHP x .7457 to obtain kilowatts (kW).

Example: 3904 CFM x .000472 = 1.8427 m³/s
0.125 SP x 248.36 = 31.05 Pa
0.886 BHP x .7457 = 0.661 kW

SQBA and SQDA Accessory Details



Unit	A	B	C ²	D ¹	E ¹	F ¹
SQDA06, SQDA08, SQDA10	17 5/8	10	—	—	—	—
SQBA06, SQBA08, SQBA10	17 5/8	10	11 3/4	—	—	—
SQBA12, SQDA12	21 9/16	17 13/16	17 3/4	—	—	—
SQBA13, SQDA13	23 9/16	17 7/16	17 3/4	—	—	—
SQBA15, SQDA15	26 9/16	18 13/16	17 3/4	18	19 5/8	20 13/16
SQBA16, SQDA16	29 1/16	17 7/16	17 3/4	22	23 5/8	24 13/16
SQBA18, SQDA18	32 1/16	18 13/16	17 3/4	22	23 5/8	24 13/16
SQBA20	34 1/16	19 3/4	17 3/4	22	23 5/8	24 13/16
SQBA24	40	26 3/4	18 3/4	26	27 5/8	28 13/16
SQBA30	49	29 7/16	18 3/4	36	37 11/16	38 7/8
SQBA36	59 1/2	32 13/16	18 3/4	36	37 11/16	38 7/8
SQBA44	71 1/2	37 1/4	18 3/4	45	46 11/16	47 7/8

1 -- The duct connector accessory is not available on unit sizes 13 and smaller.
 2 -- Motor and drive cover dimensions apply to type SQBA fans only.

SQBA and SQDA Options and Accessories

Inlet and Outlet Flanges

Heavy gauge galvanized steel flanges are available to simplify duct attachment.

Inlet and Outlet Guards

Both inlet and outlet guards are available to prevent the entry of foreign material into the fan.

Special Motors

Two-speed, totally enclosed, energy efficient and explosion-proof motors for hazardous locations may be available for many models. Motor enclosure may affect UL listing.

Energy Saver (electronically commutated) motors are available for SQDA fans, sizes 06 through 15. These motors are controllable to 20% of nameplate speed and provide premium efficiency throughout their speed range. For more information see Pg. 20.

Backdraft Dampers

Gravity or motor operated backdraft dampers are available. They are aluminum construction and designed for duct installation.

Drive Guard

A heavy gauge steel and PVC coated wire mesh guard is available to protect the drive components on SQBA units.

Protective Coatings

Fan units are not recommended for exhausting air of a corrosive nature. However, special protective coatings are available where units may be exposed to corrosive conditions. Parts requiring painting are processed through the American Coolair five-stage pretreatment system prior to the application of any coatings to insure maximum finish adhesion. These parts use a thermosetting epoxy powder paint with an average thickness of 3 mils and baked at 400° F to a smooth, hard continuous finish. Consult your ILG Industries representative for available coatings.

Vibration Isolators

Vibration isolators reduce sound and vibration transmission to the fan support structure. Isolators are available in spring type for hanging installations, and rubber-in-shear type for bottom mounting.

Duct Connector

Round duct connector is available on some SQBA and SQDA units to accommodate round duct attachment.

Variable Inlet Vanes

Variable Inlet Vanes (VIV) are available for controlling air flow in an efficient manner.

Internal Insulation

One inch thick insulation on the interior of the fan housing for both sound attenuation and prevention of condensation.

Safety Disconnects

Safety disconnects cut power to motor for servicing of unit. A disconnect switch is an accessory available on SQBA units, and is shipped loose for field installation. An optional wiring harness is available to connect the motor to the switch at the junction box. All SQDA units have a disconnect device with a factory mounted and wired junction box as standard.

Motor and Drive Cover

Combination motor cover and drive guard made of heavy gauge galvanized steel and PVC coated wire is available to protect both the motor and drive components on SQBA units.

Speed Controller (for select SQDA models only)

Solid state speed controller provides capability to change performance and speed ranging from 50% to 100% of fan capacity. This permits adjustment for fine tuning and balancing the ventilation system (see performance tables).

SQBA Specification Checklist

- General in-line units for low, medium, and high ranges of air volume and pressure in commercial, institutional, and light manufacturing buildings.
- Centrifugal design with advantages of compact, attractive appearance, quiet operation, and performance against higher static pressures.
- Variable pitch motor pulley allows for speed adjustment.
- Motor base is adjustable to provide proper belt tension and alignment.
- Galvanized steel exterior over galvanized steel frame provides a high degree of rigidity.
- Deep-spun, overlapping, one-piece venturi minimizes noise, reduces air turbulence and improves efficiency.
- Aluminum centrifugal wheel is quiet, non-overloading, backward-inclined design and is computer balanced.
- Standard open drip-proof motor is out of the airstream for protection.
- Heavy duty pillow-block bearings with cast iron housing are self-aligning and relubricable.
- AMCA Seal assures certified rating of sound and air performance.

SQDA Specification Checklist

- General in-line units for low to medium ranges of air volume and pressure in commercial, institutional, and light manufacturing buildings.
- Centrifugal design with advantages of compact, attractive appearance, quiet operation, and performance against higher static pressures.
- Direct-drive advantages of minimal maintenance and operating costs.
- Galvanized steel exterior over galvanized steel frame provides a high degree of rigidity.
- Deep-spun, overlapping, one piece venturi minimizes noise, reduces air turbulence, and improves efficiency.
- Aluminum centrifugal wheel is quiet, non-overloading, backward-inclined design and is computer balanced.
- Standard open motor is out of the airstream for protection.
- Safety disconnect device allows power to be cut for servicing of the unit.
- Fans are factory run and tested prior to shipment to ensure dependable operation.
- AMCA Seal assures certified rating of sound and air performance.

Limited Warranty

In the sale of its products, American Coolair Corporation agrees to correct, by repairs or replacement, any defects in workmanship or material that may develop under proper and normal use during the period of one year from the date of shipment from the factory. Any product or part proving, upon American Coolair's examination, to be defective during limited warranty period will be repaired or replaced, at American Coolair's option, f.o.b. factory, without charge.

Deterioration or wear caused by chemicals, abrasive action or excessive heat shall not constitute defects.

Motors are guaranteed only to the extent of the manufacturer's warranty. American Coolair's limited warranty does not apply to any of its products or parts that have been subject to accidental damage, misuse by the user, unauthorized alterations, improper installation or electrical wiring, or lack of proper lubrication or other service requirements as established by American Coolair.

Repairs or replacements provided under the above terms shall constitute fulfillment of all American Coolair's obligations with respect to limited warranty.

THE LIMITED WARRANTY STATED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, STATUTORY OR IMPLIED, INCLUDING WITHOUT LIMITATION THAT OF MERCHANTABILITY AND FITNESS.

NO LIABILITY FOR REINSTALLATION COST OR FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY NATURE IS ASSUMED OR SHALL BE IMPOSED UPON AMERICAN COOLAIR.



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