

SQAF series
CENTRIFUGAL FAN

engineering data
and specifications



CINCINNATI FAN 

Since the founding of Cincinnati Fan in 1956, the company's mission has been to provide quality products at competitive prices, backed by dependable service.

This mission is carried out by specializing in the market for industrial air handling products up to 125 hp. But specialization does not mean the product line is small. Cincinnati Fan offers a wide variety of standard and customized products, production flexibility, and customer responsiveness.

CINCINNATI FAN PROVIDES

- ◆ Technical evaluation for correct performance conditions
- ◆ Review of air stream and ambient conditions that require special attention
- ◆ Selection of proper components to meet required design specifications
- ◆ Selection of proper accessories
- ◆ System analysis for proper fan design

Cincinnati Fan operates in a modern facility specifically designed for world class manufacturing enabling us to build standard products to order, including accessories, and ship within 5 to 10 working days.

With support like this, you can be sure your Cincinnati Fan product will be well-built and will provide maximum dependability and longevity.

Cincinnati Fan has over 170 experienced sales engineers across the US and Canada ready to serve your air handling needs.

SQAF SPECIFICATIONS

Radial bladed pressure blowers shall be Cincinnati Fan SQAF, Size _____, Class _____, Arrangement _____.

Capacity: _____ CFM, _____ Static Pressure at standard conditions.

Operating conditions: _____ °F, _____ feet altitude

Wheels shall have airfoil blades and are designed to meet specified conditions for each class. Wheels shall be dynamically balanced to assure smooth operation. Shafts shall be turned, ground and polished steel (or stainless steel). All fans shall be test run at the factory before shipping.

Housings shall be continuously welded and supported to prevent housing pulsation at all conditions. Inlet bell shall be designed for smooth air entrance into wheel for maximum efficiency.

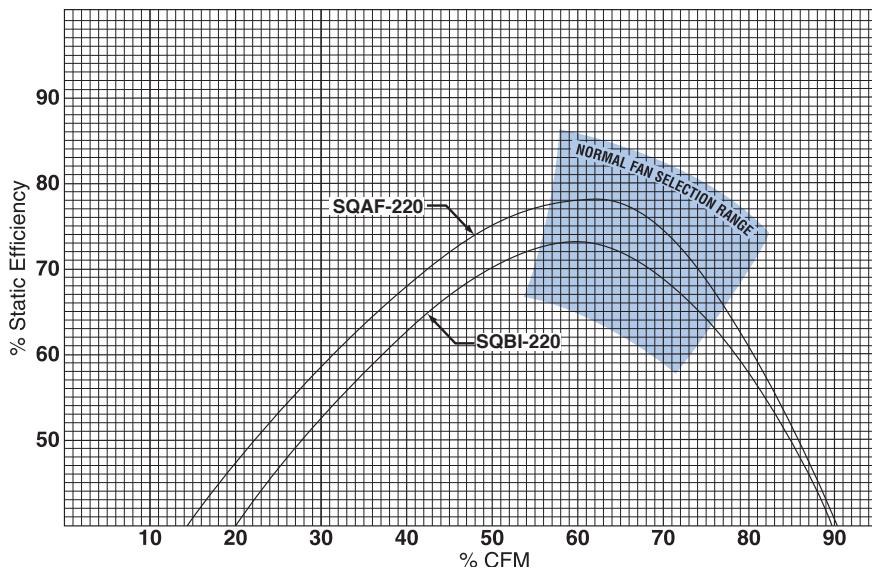
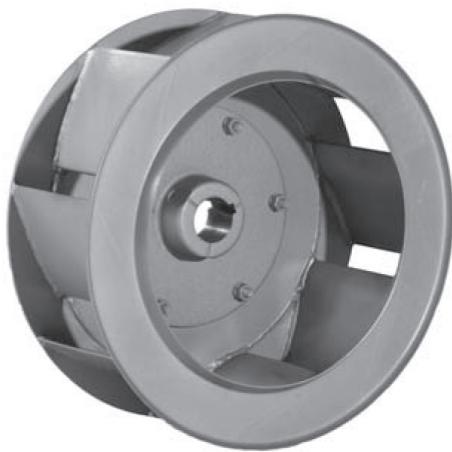
All bearings shall be grease-lubricated, heavy-duty, self-aligning ball bearing. V-belt drive shall be selected for a minimum of 1.3 times nominal horsepower.

Before painting, all steel parts shall be cleaned by detergent wash, phosphatized and painted with machine gray enamel.

The following accessories shall be included: (See page 5 for available accessories).

EFFICIENCY OF AIRFOIL WHEEL VS. BACKWARD INCLINED WHEEL

Airfoil wheels provide the highest efficiency of all centrifugal fan designs. The curve overlays at right comparing an SQAF-220 and SQBI-220 illustrates a 10% increase in static efficiency for the airfoil design versus the backward inclined design in the normal selection range. This benefit results in lower brake horse-power consumption and a reduction in sound levels of 2-6 dBA.



ADVANTAGES OF DIRECT DRIVE ARRANGEMENT 4

◆ COST

Lower initial cost plus lower maintenance cost (no v-belt drives, fan shaft or bearings to replace).

◆ RATINGS

More ratings available. All sizes offered with two wheel diameters and fan housing widths from 100% to 50% in 5% increments.

◆ COMPACT

Requires less space.

◆ MOUNTING

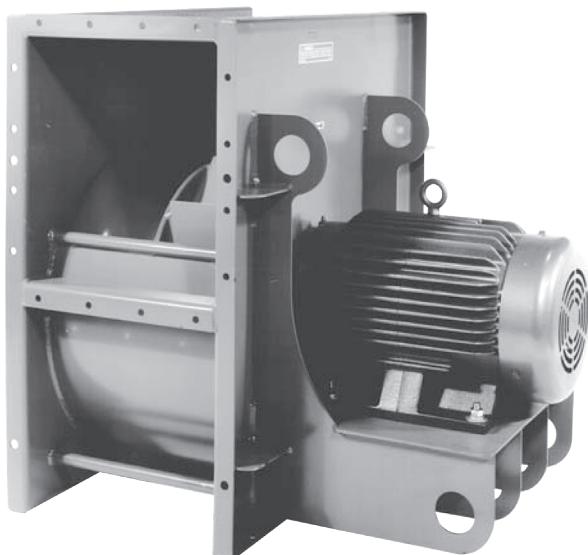
Four discharge positions and two rotations (CW or CCW) plus fans can be mounted horizontally (Maximum 600 pound motor).

◆ LESS WEIGHT

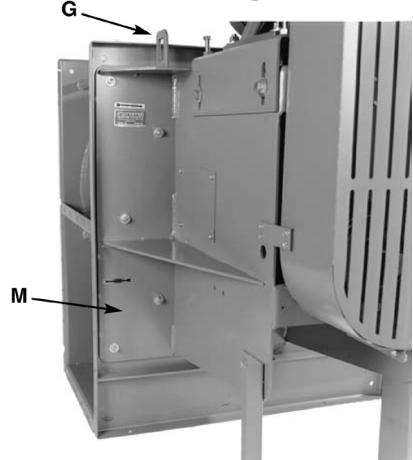
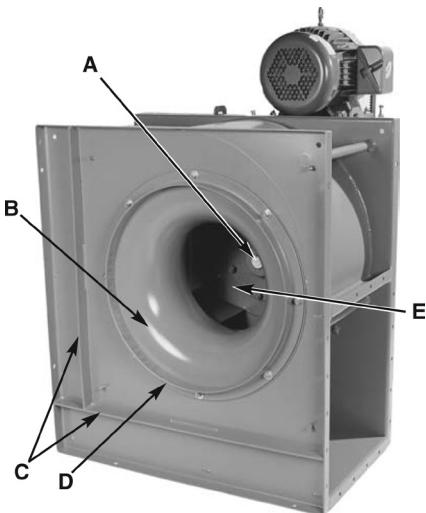
Requires less supporting structure.

◆ CONSTRUCTION

Solidly built with continuously welded housings and mounting holes in all support flanges. All fans are mechanically run tested prior to shipment to ensure the balance of the assembled unit.



ARRANGEMENT 9 FEATURES



A - Heavy-duty, cast iron wheel hub.

B - Inlet bell designed for smooth air entrance into wheel for maximum efficiency.

C - Inlet and motor side plate braces for added rigidity.

D - Slip collar inlet (optional) for ductwork connection. Flanged inlet also available. See page 5.

E - Airfoil blades fabricated of high strength steel to assure long lasting, efficient operation.

F - Steel pipe support rods between inlet and motor side plates for extra rigidity and smooth operation.

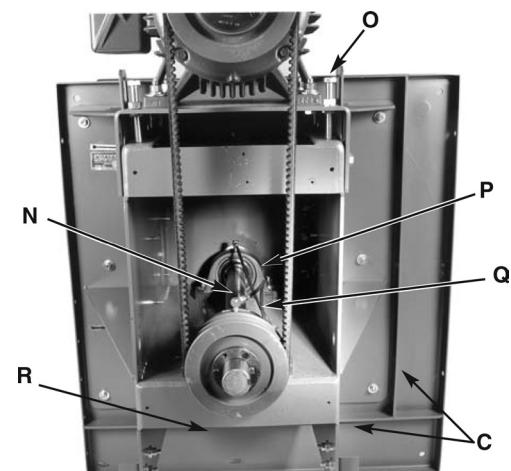
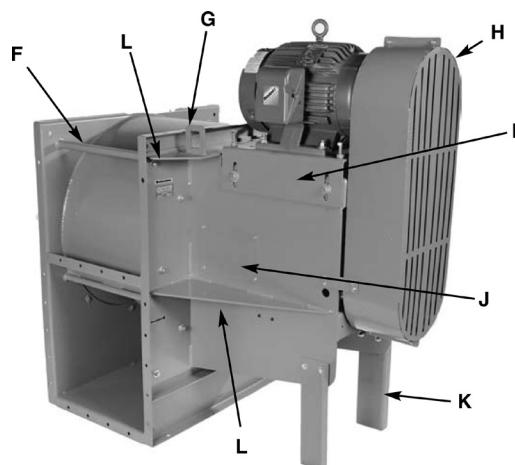
G - Lifting lugs for ease of mounting by hoist or crane in hard to reach areas.

H - Heavy-duty belt guard, painted safety yellow, Standard on arrangement 9.

I - Motor mounting base extended so fan can be built in Up Blast Discharge position with motor still on top.

J - Inboard bearing inspection opening on two sides.

K - Steel angle support legs for shipping. Remove after mounting is completed.



L - Drive side plate braces for added rigidity.

M - Drive side plate can be disconnected to rotate housing in field without removing wheel or disturbing bearings and drives. Also, entire motor/bearing support structure and wheel can be removed from installation without having to disconnect inlet and/or discharge duct work.

N - Turned, ground and polished shaft assures smooth operation. A rust preventative coating is applied prior to shipment.

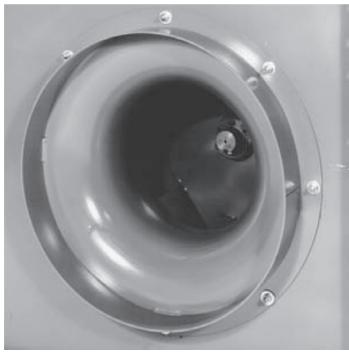
O - Four motor adjustment bolts for easy adjustment and alignment of belt tension.

P - Heavy-duty, self-aligning, relubricatable, ball bearings in cast iron pillow blocks are standard. Bearings selected for optimal performance depending on fan size and class with an L_{10} life of 30,000 hours minimum.

Q - Bearing grease lines extend to grease fittings (not shown) outside of bearing base for easy lubrication of fan bearings when needed.

R - Bearing base is heavy steel construction with supports to maximize rigidity and assure long equipment life.

OPTIONS



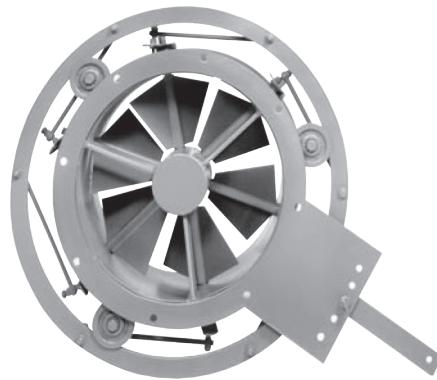
Inlet Collar

Inlet collar for slip-fit connection to duct work.



Inlet Flange

Flanged inlet for bolted connection to duct work. Flange drilled with standard hole pattern, see page 23. Undrilled flanges available at additional cost and extended delivery.



Inlet Vane Control

Inlet vane offers more efficient flow control compared to outlet damper. Manual control is standard. Automatic control is optional. Requires inlet collar and flange for mounting to fan.



Drain Connection

3/4" NPT pipe coupling with plug. Welded to lowest point on inlet side plate.



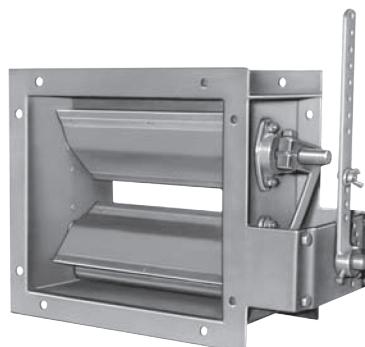
Inlet and Outlet Guard

Inlet guard is welded, formed wire. Outlet guard is expanded metal. Guards are in accordance with OSHA.



Inspection Door

Bolted or quick-release doors positioned as specified on scroll. Rubber gasket standard up to 250°F (121°C). Ceramic fiber gasket standard at temperatures above 250°F (122°C).



Outlet Damper

Outlet damper provides low cost flow control. Opposed blade manually controlled construction is standard. Also available with automatic controllers.



Shaft Seal

Teflon shaft seal good to 400°F (204°C.). Ceramic fiber gasket material with steel cover plate above 400°F (205°C.).

SPARK-RESISTANT CONSTRUCTION

For AMCA Type A or B spark resistant construction, please contact your local Cincinnati Fan sales representative.

Type C: Consists of aluminum inlet bell and aluminum plate on drive side of the fan. Maximum Temperature is the same as for high temperature construction below for each arrangement.

WARNING

The use of aluminum or aluminum alloys in the presence of steel which has been allowed to rust requires special consideration. Research by the U.S. Bureau of Mines and others has shown that aluminum impellers rubbing on rusty steel may cause high intensity sparking. The use of the above Standard in no way implies a guarantee of safety for any level of spark resistance. Spark-resistant construction also does not protect against ignition of explosive gases caused by catastrophic failure or from any airstream material that may be present in a system.

HIGH TEMPERATURE CONSTRUCTION

Standard Construction:	Arrangement 9 suitable to 300°F (149°C) Arrangement 4 suitable to 200°F (93°C)
301° to 400°F Construction:	Standard fan with heat slinger. Arrangement 9 only.
401° to 600°F Construction:	Standard fan with heat slinger, high temperature shaft seal, gasketing and paint. Arrangement 9 only.
601° to 750°F Construction:	Standard fan with heat slinger, 316 stainless steel fan shaft, high temperature shaft seal, gasketing and paint. Arrangement 9 only.

Temperature Range °F	Temperature Range °C	Maximum RPM Reduction Factor
Up to 175°	Up to 80°	0%
176° - 200°	81° - 93°	2%
201° - 300°	94° - 148°	4%
301° - 400°	150° - 204°	7%
401° - 500°	205° - 260°	11%
501° - 600°	281° - 315°	15%
601° - 700°	316° - 371°	20%
701° - 750°	372° - 398°	30%

TEMPERATURE - ALTITUDE ADJUSTMENT

Air Temperature °F	Altitude in Feet Above Sea Level										
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
0°	0.87	0.91	0.94	0.98	1.01	1.05	1.09	1.13	1.17	1.22	1.26
40°	0.94	0.98	1.02	1.06	1.10	1.14	1.19	1.23	1.28	1.32	1.36
70°	1.00	1.04	1.08	1.12	1.16	1.20	1.25	1.30	1.35	1.40	1.45
80°	1.02	1.06	1.10	1.14	1.19	1.23	1.28	1.33	1.38	1.43	1.48
100°	1.06	1.10	1.14	1.19	1.23	1.28	1.33	1.38	1.43	1.48	1.54
120°	1.09	1.14	1.18	1.23	1.28	1.32	1.38	1.43	1.48	1.53	1.58
140°	1.13	1.18	1.22	1.27	1.32	1.37	1.42	1.48	1.54	1.58	1.65
160°	1.17	1.22	1.26	1.31	1.36	1.42	1.47	1.53	1.59	1.64	1.70
180°	1.21	1.26	1.30	1.36	1.41	1.46	1.52	1.58	1.64	1.70	1.75
200°	1.25	1.29	1.34	1.40	1.45	1.51	1.57	1.63	1.69	1.75	1.81
250°	1.34	1.39	1.45	1.50	1.56	1.62	1.68	1.74	1.82	1.88	1.94
300°	1.43	1.49	1.55	1.61	1.67	1.74	1.80	1.87	1.94	2.00	2.08
350°	1.53	1.59	1.65	1.72	1.78	1.85	1.92	2.00	2.07	2.14	2.22
400°	1.62	1.69	1.75	1.82	1.89	1.96	2.04	2.12	2.20	2.27	2.35
450°	1.72	1.79	1.86	1.93	2.00	2.08	2.16	2.24	2.33	2.41	2.50
500°	1.81	1.88	1.96	2.03	2.11	2.19	2.28	2.36	2.46	2.54	2.62
550°	1.91	1.98	2.06	2.14	2.22	2.30	2.40	2.49	2.58	2.68	2.77
600°	2.00	2.08	2.16	2.24	2.33	2.42	2.50	2.61	2.71	2.80	2.90
650°	2.10	2.18	2.26	2.35	2.44	2.54	2.63	2.74	2.84	2.94	3.04
700°	2.19	2.27	2.36	2.46	2.55	2.65	2.75	2.86	2.97	3.06	3.18
750°	2.28	2.37	2.47	2.56	2.66	2.76	2.87	2.98	3.10	3.19	3.31

Fan performance tables are developed using standard air which is 70°F, 29.92" barometric pressure and .075 lb/ft² per cubic foot. Density changes resulting from temperature or barometric pressure variations (such as higher altitudes) must be corrected to standard conditions before selecting a fan based on standard performance data. Temperature and/or altitude conversion factors are used in making corrections to standard conditions.

EXAMPLE: Select a belt driven SQAF fan to deliver 7500 CFM at 8" SP at 200°F, and 7000' altitude.

Step 1 - From the table, conversion factor is 1.63

Step 2 - Correct static pressure is:

$$1.63 \times 8" \text{ SP} = 13.04" \text{ SP at standard conditions}$$

Step 3 - Check SQAF catalog for 7500 CFM at 13" SP. We select a belt driven SQAF-220 Class III at 2554 RPM and 21.79 bhp.

Step 4 - Correct the bhp for the lighter air:

$$21.79 \div 1.63 = 13.37 \text{ bhp}$$

A 15 hp motor will suffice at 200°F and 7000' but not at standard conditions. Special motor insulation may be required due to altitude.

Maximum Shaft and Bearing Speed for Belt Drive Fans
Maximum Wheel Speed and WR² (lb-ft²) for Direct Drive Fans

Fan Size	Maximum Shaft and Bearing Speed note 1				HDAF Steel Wheel note 2						SQAF Steel Wheel note 2						
					Class II		Class IIP		Class III		Class II		Class IIP		Class III		
	Class IP	Class II	Class IIP	Class III	Wheel WR ²	Maximum RPM note 3	Wheel WR ²	Maximum RPM note 3	Wheel WR ²	Maximum RPM note 3	Wheel WR ²	Maximum RPM note 3	Wheel WR ²	Maximum RPM note 3	Wheel WR ²	Maximum RPM note 3	
120	4040				2.9	5000					3.7	4624					
130	3750				4.1	4600					5.0	4251					
150	3460				5.6	4130					7.2	3890					
160	3150				7.7	3900					10.0	3670					
180	2583	2850				12.9	3810					18.1	3610				
200	2380	2740	3000			17.9	3550								25.7	3410	
220	2115	2380	2664			25.3	3200								39.2	2910	
240	1912	2110	2409			54.7	2900								66.5	2680	
270	1738	1960	2190				81.2	2550							89.6	2480	
300	1568	1790	1976					1172	2310						169.0	2180	

1 All maximum safe shaft speeds are independent of temperature.

2 All wheels are steel with a cast iron hub plate. Wheels are not available in aluminum or stainless steel.

3 For steel wheels up to 175° F (80°C). At temperatures above 175° F (80°C), the maximum safe wheel speeds must be reduced by the Maximum RPM Reduction Factors listed on page 6.

Approximate Shipping Weight Less Motor and Options lb

Fan Size	Arrangement 4			Arrangement 9			
	All Classes	Class IP - Class II	Class IIP	Class III			
120	128	231					
130	140	253					
150	162	369					
160	190	385					
180	280	513	530				
200	330	577		684			
220	380	667		774			
240	452	806		893			
270	620	1074		1134			
300	730	1239		1418			

⚠ CAUTION All fans and blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source.

Construction Gauges

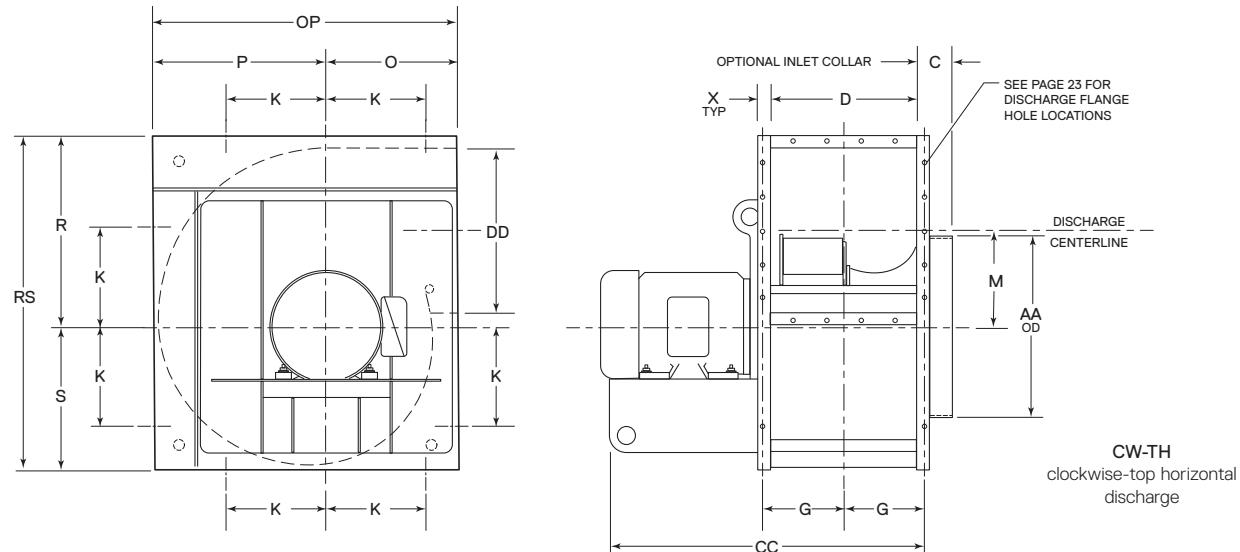
Fan Size	Arrangement 4				Arrangement 9				Arrangement 4 - Arrangement 9				
	Class	Housing	Inlet Bell	Motor Base	Class	Housing	Inlet Bell	Motor Base	Bearing Base	Shroud	Blade	Back Plate	Reinforcement Plate
120	IIP	10	14	7 - 1/4"	IIP	10	14	1/4"	1/4"	12	16	7	10
130	IIP	10	14	7 - 1/4"	IIP	10	14	1/4"	1/4"	12	16	7	10
150	IIP	10	14	7 - 1/4"	IIP	10	14	1/4"	1/4"	12	16	7	10
160	IIP	10	14	7 - 1/4"	IIP	10	14	1/4"	1/4"	12	16	7	10
180	IIP	10	14	7 - 1/4"	II - IIP	10	14	1/4"	1/4"	12	16	7	10
200	III	10	14	7 - 1/4"	II - IIP - III	10	14	1/4"	1/4"	12	16	7	10
220	III	10	14	7 - 1/4"	II - IIP - III	10	14	1/4"	1/4"	12	16	7	10
240	III	10	14	7 - 1/4"	II - IIP - III	10	14	1/4"	1/4"	12	16	7	10
270	III	7	14	7 - 1/4"	II - IIP - III	7	14	1/4"	1/4"	11	16	1/4"	10
300	III	7	14	7 - 1/4"	II - IIP	7	14	1/4"	1/4"	11	16	1/4"	1/4"
300	III	7	14	7 - 1/4"	III	1/4"	14	1/4"	1/4"	11	16	1/4"	1/4"

Direct Drive Ratings Table

CFM and bhp at Static Pressure Shown – Ratings at 70°F – .075" Density – Sea Level

7" SP CFM	8" SP bhp	9" SP CFM	10" SP bhp	11" SP CFM	12" SP bhp	13" SP CFM	14" SP bhp	Model							
<p style="text-align: center;">Note—Partial width wheels are available in 5% increments from 50% widths to 100% widths. This allows for more direct drive ratings than shown in this catalog. Direct drive fans are less expensive, less maintenance and weigh less. Contact your local Cincinnati Fan sales representative for more selections.</p>															
297†	1.13							SOAF-120							
445†	1.70														
593†	2.27														
<p style="text-align: center;"> </p>															
781†	1.71							SOAF-130							
842†	2.02	555†	1.90	114†	1.67										
1172†	2.57														
1263	3.02	832†	2.84	172†	2.50										
1562	3.43														
1684	4.03	1110	3.79	229	3.33										
<p style="text-align: center;"> </p>															
1852†	3.02	1546†	2.89	144†	1.60			SOAF-150							
1597	3.30	1337	3.26	1032	3.16	653†	3.01								
2778	4.53	2319	4.34	216	2.40										
2396	4.95	2005	4.89	1548	4.74	980	4.51								
3704	6.04	3092	5.78	288	3.20										
3194	6.61	2673	6.51	2064	6.33	1306	6.02								
<p style="text-align: center;"> </p>															
2805	4.85	2584	4.88	2310	4.81	1898	4.53	SOAF-160							
2492	5.31	2254	5.34	1988	5.32	1686	5.23								
4208	7.27	3877	7.32	3465	7.21	2847	6.79								
3738	7.97	3381	8.01	2982	7.97	2529	7.85								
5611	9.70	5169	9.75	4620	9.62	3796	9.05								
4983	10.63	4509	10.69	3976	10.63	3372	10.46								
<p style="text-align: center;"> </p>															
3905	6.52	3753	6.69	3592	6.84	3418	6.96	SOAF-180							
4654	9.17	4496	9.32	4335	9.46	4169	9.58								
5858	9.78	5630	10.04	5388	10.26	5127	10.44								
6981	13.76	6744	13.98	6502	14.19	6254	14.37								
7811	13.04	7506	13.39	7184	13.69	6838	13.92								
9309	18.35	8992	18.64	8670	18.91	8339	19.15								
<p style="text-align: center;"> </p>															
5366	9.94	5206	10.21	5042	10.45	4872	10.66	SOAF-200							
8049	14.92	7809	15.31	7563	15.67	7308	15.99								
10732	19.89	10412	20.41	10084	20.89	9744	21.33								
<p style="text-align: center;"> </p>															
<p style="text-align: center; color: red;">See additional ratings at bottom of page 10</p>															
<p style="text-align: center; color: red;">See additional ratings at bottom of page 10</p>															
5366	9.94	5206	10.21	5042	10.45	4872	10.66	4692	10.85	4501	11.00	4292	11.09	4058	11.12
8049	14.92	7809	15.31	7563	15.67	7308	15.99	7039	16.27	6751	16.49	6438	16.64	6087	16.68
10732	19.89	10412	20.41	10084	20.89	9744	21.33	9385	21.70	9002	21.99	8584	22.19	8117	22.20

ARRANGEMENT 4 — DIRECT DRIVE

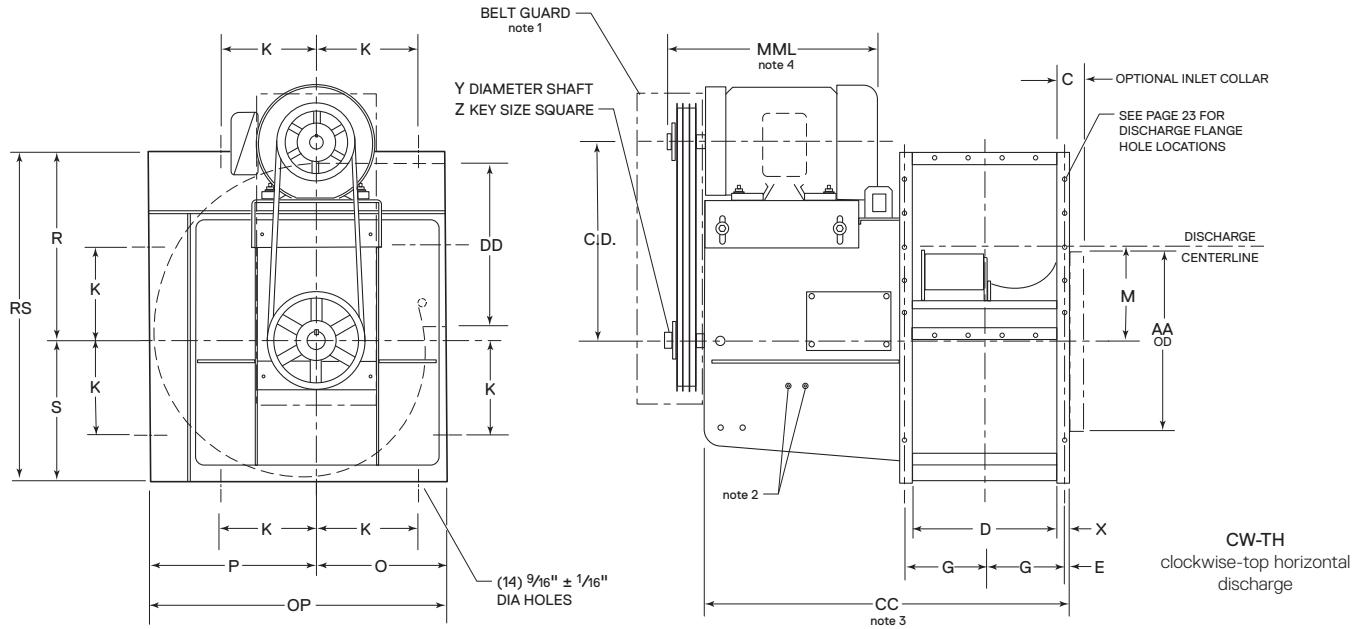


Model	Motor Frame	D	E	G	K	M	O	P	R	S	X	AA	DD
SQAF-120	143T-215T	10 11/16"	7/16"	6 1/32"	7"	6 15/16"	10"	12 1/2"	14 1/16"	10 1/2"	1 1/8"	13 7/16"	12"
SQAF-130	143T-215T	11 3/4"	7/16"	6 9/16"	7 11/16"	7 5/8"	11"	13 3/4"	15 3/8"	11 1/2"	1 1/8"	15 7/16"	13 1/4"
SQAF-150	143T-256T	13 1/16"	5/8"	7 19/16"	8 9/16"	8 1/2"	12"	15 1/4"	17 5/16"	12 3/4"	1 1/2"	16 1/16"	14 5/8"
SQAF-160	143T-256T	14 3/8"	5/8"	8 1/16"	9 3/8"	9 7/16"	13"	16 3/4"	18 15/16"	14"	1 1/2"	18 9/16"	16"
SQAF-180	143T-324T	15 7/8"	5/8"	8 13/16"	10 3/8"	10 13/16"	14 1/4"	18 1/2"	20 13/16"	15 7/16"	1 1/2"	20 9/16"	17 13/16"
SQAF-200	182T-326T	17 3/8"	5/8"	9 9/16"	11 3/4"	11 13/16"	15 1/2"	20 3/8"	22 5/8"	17"	1 1/2"	22 9/16"	19 7/16"
SQAF-220	182T-326T	19 3/8"	5/8"	10 3/16"	13 1/4"	12 11/16"	17"	22 9/16"	25"	18 7/8"	1 1/2"	24 9/16"	21 5/8"
SQAF-240	213T-256T	21 5/16"	5/8"	11 17/32"	14 3/4"	13 31/32"	18 1/2"	24 13/16"	27 3/8"	20 3/4"	1 1/2"	27 9/16"	23 13/16"
SQAF-270	213T-286T	23 1/2"	7/8"	12 7/8"	16 1/2"	15 3/8"	20 1/4"	27 1/4"	30 1/2"	22 7/8"	2"	30 9/16"	26 1/4"
SQAF-300	254T-326T	26 1/8"	7/8"	14 3/16"	18 1/2"	17 3/32"	22 1/4"	30 1/4"	33 11/16"	25 5/16"	2"	33 9/16"	29 3/16"

Model	OP	RS	CC					
			143T-145T	182T-184T	213T-215T	254T-256T	284T-286T(S)	324T-326T(S)
SQAF-120	22 1/2"	24 9/16"	24 7/16"	26 13/16"	26 15/16"			
SQAF-130	24 3/4"	26 7/8"	25 1/2"	27 7/8"	29"			
SQAF-150	27 1/4"	30 1/16"	27 3/16"	29 9/16"	30 11/16"	33 11/16"		
SQAF-160	29 3/4"	32 15/16"	28 1/2"	31"	32"	35"		
SQAF-180	32 3/4"	36 1/4"	30"	32 1/2"	32 1/2"	36 1/2"	40 1/2"	43 1/2"
SQAF-200	35 7/8"	39 5/8"	31 1/2"	34"	35"	38"	42"	45"
SQAF-220	39 9/16"	43 7/8"		36"	37"	40"	44"	47"
SQAF-240	43 5/16"	48 1/8"			38 15/16"	41 15/16"		
SQAF-270	47 1/2"	53 3/8"			41 11/16"	44 11/16"	48 11/16"	
SQAF-300	52 1/2"	59"				47 5/16"	51 5/16"	54 5/16"

Note—Dimensions are for full width housings. For partial width housings consult your Cincinnati Fan sales representative.

ARRANGEMENT 9 — BELT DRIVE



1 Belt guard is standard.

2 Extended lube-lines are standard.

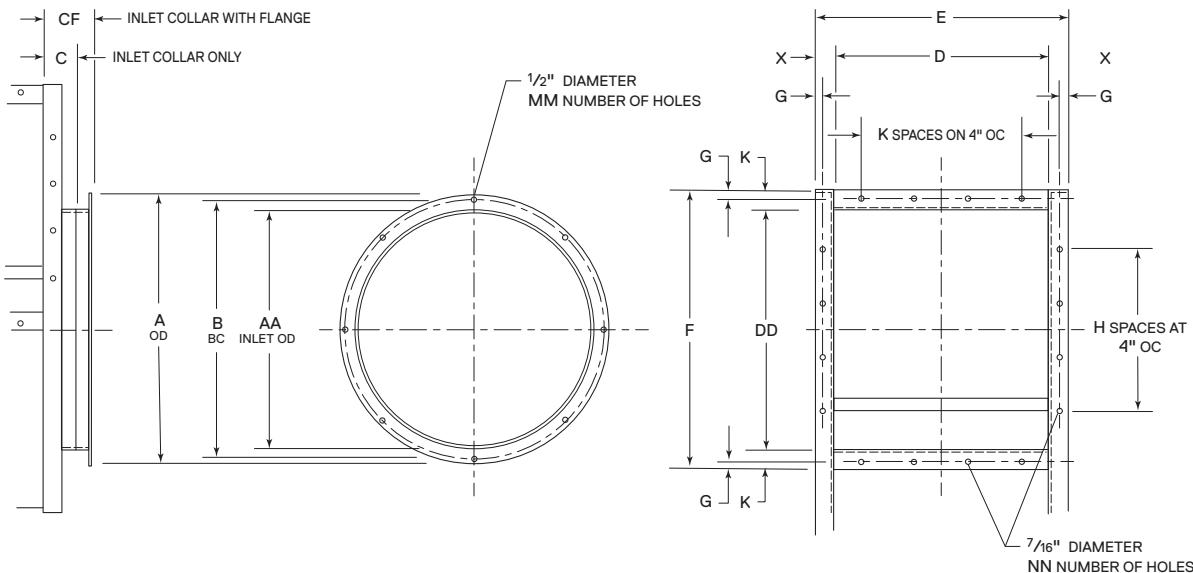
3 Add 1/8" for AMCA "C" Construction.

4 MML is maximum motor length on customer supplied motor. Motor manufacturer's C dimension cannot exceed MML without a special base.

Note—Dimension are for full width housings. For partial width housings consult your Cincinnati Fan sales representative.

Model	D	E	F	G	K	M	O	P	R	S	Y note 4		
											Class II	Class IIP	Class III
SQAF-120	10 11/16"	7/16"	4"	6 1/32"	7"	6 15/16"	10"	12 1/2"	14 1/16"	10 1/2"		1 3/16"	
SQAF-130	11 3/4"	7/16"	4"	6 9/16"	7 11/16"	7 5/8"	11"	13 3/4"	15 3/8"	11 1/2"		1 7/16"	
SQAF-150	13 1/16"	5/8"	4"	7 13/16"	8 9/16"	8 1/2"	12"	15 1/4"	17 5/16"	12 3/4"		1 7/16"	
SQAF-160	14 3/8"	5/8"	4"	8 1/16"	9 3/8"	9 7/16"	13"	16 3/4"	18 15/16"	14"	1 7/16"	1 7/16"	
SQAF-180	15 7/8"	5/8"	4 1/2"	8 13/16"	10 3/8"	10 13/16"	14 1/4"	18 1/2"	20 13/16"	15 7/16"	1 7/16"	1 11/16"	
SQAF-200	17 3/8"	5/8"	4 1/2"	9 9/16"	11 3/4"	11 13/16"	15 1/2"	20 3/8"	22 5/8"	17"	1 11/16"	1 15/16"	2 7/16"
SQAF-220	19 3/8"	5/8"	4 1/2"	10 9/16"	13 1/4"	12 11/16"	17"	22 9/16"	25"	18 7/8"	1 11/16"	1 15/16"	2 7/16"
SQAF-240	21 5/16"	5/8"	4 1/2"	11 17/32"	14 3/4"	13 31/32"	18 1/2"	24 13/16"	27 3/8"	20 3/4"	1 11/16"	1 15/16"	2 7/16"
SQAF-270	23 1/2"	7/8"	4 1/2"	12 7/8"	16 1/2"	15 3/8"	20 1/4"	27 1/4"	30 1/2"	22 7/8"	2 3/16"	2 3/16"	2 7/16"
SQAF-300	26 1/8"	7/8"	4 1/2"	14 3/16"	18 1/2"	17 3/32"	22 1/4"	30 1/4"	33 11/16"	25 5/16"	2 3/16"	2 7/16"	2 11/16"

Model	X	Z			AA	CC note 3			DD	OP	RS	MML		
		Class II	Class IIP	Class III		Class II	Class IIP	Class III				Class II	Class IIP	Class III
SQAF-120	1 1/8"		1/4"		13 7/16"		29 15/16"		12"	22 1/2"	24 9/16"		19 1/2"	
SQAF-130	1 1/8"		1/4"		15 7/16"		31"		13 1/4"	24 3/4"	26 7/8"		19 1/2"	
SQAF-150	1 1/2"		3/8"		16 9/16"		37 1/2"		14 5/8"	27 1/4"	30 1/16"		24"	
SQAF-160	1 1/2"	3/8"	3/8"		18 9/16"	38 19/16"	38 19/16"		16"	29 9/4"	32 15/16"	24"	24"	
SQAF-180	1 1/2"	3/8"	3/8"		20 9/16"	40 1/2"	40 1/2"		17 13/16"	32 3/4"	36 1/4"	24 1/2"	24 1/2"	
SQAF-200	1 1/2"	3/8"	1/2"	5/8"	22 9/16"	42"	44"	46"	19 7/16"	35 7/8"	39 5/8"	24 5/8"	27 3/4"	30 5/16"
SQAF-220	1 1/2"	3/8"	1/2"	5/8"	24 9/16"	44"	46"	48"	21 5/8"	39 9/16"	43 7/8"	24 5/8"	27 3/4"	30 5/16"
SQAF-240	1 1/2"	3/8"	1/2"	5/8"	27 1/2"	47 15/16"	49 15/16"	49 15/16"	23 13/16"	43 5/16"	48 1/8"	27 3/4"	30 5/16"	30 5/16"
SQAF-270	2"	1/2"	1/2"	5/8"	30 1/2"	53 11/16"	53 11/16"	56 7/16"	26 1/4"	47 1/2"	53 3/8"	30 5/16"	30 5/16"	32 7/8"
SQAF-300	2"	1/2"	1/2"	5/8"	33 1/2"	56 5/16"	56 5/16"	59 1/16"	29 3/16"	52 1/2"	59"	30 5/16"	30 5/16"	32 7/8"

INLET AND OUTLET FLANGES**Optional Inlet Collar and Flange**

Note—Flanges will be drilled per these dimensions unless otherwise specified.

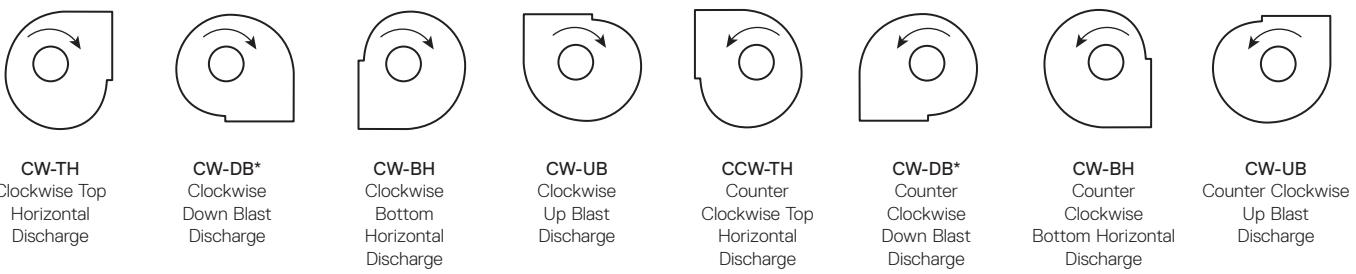
Standard Outlet Flange

Dimensions shown are for 100% width housings. Consult Cincinnati Fan for reduced width outlet flange dimensions. Outlet flange standard on all models.

Model	Inlet Collar Only		Inlet Collar with Inlet Flange					Discharge Flange								
	C	AA	A	B	AA	CF	MM	D	E	F	G	H	K	X	DD	NN
SQAF-120	1 5/8"	13 7/16"	16 3/16"	15"	13 7/16"	3 3/16"	8	10 11/16"	12 15/16"	14 1/4"	7/16"	2	2	1 1/8"	12"	12
SQAF-130	1 5/8"	15 7/16"	18 3/16"	16 1/2"	15 7/16"	3 3/16"	8	11 3/4"	14"	15 1/2"	7/16"	2	2	1 1/8"	13 1/4"	12
SQAF-150	1 5/8"	16 5/16"	19 3/16"	18 1/8"	16 9/16"	3 1/4"	8	13 1/16"	16 1/16"	17 5/8"	5/8"	3	2	1 1/2"	14 5/8"	14
SQAF-160	1 5/8"	18 9/16"	21 3/16"	20 1/8"	18 9/16"	3 1/4"	8	14 3/8"	17 3/8"	19"	5/8"	3	3	1 1/2"	16"	16
SQAF-180	1 5/8"	20 9/16"	23 3/16"	20 1/4"	20 9/16"	3 1/4"	8	15 7/8"	18 7/8"	20 13/16"	5/8"	3	3	1 1/2"	17 13/16"	16
SQAF-200	1 5/8"	22 9/16"	25 3/16"	24 1/16"	22 9/16"	3 1/4"	16	17 3/8"	20 3/8"	22 7/16"	5/8"	4	3	1 1/2"	19 7/16"	18
SQAF-220	1 5/8"	24 9/16"	27 3/16"	26 1/8"	24 9/16"	3 1/4"	16	19 3/8"	22 3/8"	24 5/8"	5/8"	4	4	1 1/2"	21 5/8"	20
SQAF-240	2 1/8"	27 9/16"	31 3/16"	29"	27 9/16"	4 1/4"	16	21 5/16"	24 5/16"	26 13/16"	5/8"	5	4	1 1/2"	23 13/16"	22
SQAF-270	2 1/8"	30 9/16"	34 3/16"	32 3/16"	30 9/16"	4 1/4"	16	23 1/2"	27 1/2"	30 1/4"	7/8"	6	5	2"	26 1/4"	26
SQAF-300	2 1/8"	33 9/16"	37 3/16"	35 3/8"	33 9/16"	4 1/4"	16	26 1/8"	30 1/8"	33 3/16"	7/8"	6	6	2"	29 3/16"	28

Eight Rotation and Discharge Positions Available.

Discharges shown are determined by viewing fan from motor or drive side





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