Centrifugal Roof Supply Fan

Model SAF

Belt Drive

GREENHECK

Building Value in Air.

BUILDING VALUE IN AIR.

August
2016

Model SAF - Supply Air Fan

Model Comparison

Model	Location		Mounting					Airflow				Application								Drive Type		Impeller Type			Performance	
	Outdoor	Indoor	Roof Curb	Base/Floor	Hanging	Wall	Ceiling Mounted	Exhaust	Supply	Reversible	Recirculate	General/Clean Air	Contaminated Air	Spark Resistant	Grease (UL 762)	Smoke Control (UL)	High Wind (150 mph)	High Temp (above 200°F)	Seismic Certification	Belt	Direct	Centrifugal	Propeller/Axial	Mixed Flow	Maximum Volume (cfm)	Maximum Static Pressure (in. wg)
SAF	✓		✓						✓			✓								✓		✓			14,000	3.5

Greenheck Fan Corporation certifies that the model SAF fans shown herein is 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. The certified ratings for model SAF are shown on pages 7 thru 11.

SAF models are Listed for electrical (UL/cUL 705) File No. E40001.

Greenheck's Model SAF is a roof mounted supply air fan designed to provide non-tempered, filtered make-up air. These belt drive fans are available in five sizes.

- Double-width forward-curved centrifugal wheel results in high efficiency and low sound levels.
- Performance ranging from 820 cfm (1,393 m^3/hr) to 14,000 cfm (23,786 m^3/hr) with up to 3.5 in. wg (869 Pa) of static pressure.
- Permanent washable aluminum filters result in many years of reliable use.
- Performance as cataloged is assured. All fan sizes have been tested in an AMCA Accredited Laboratory and are licensed to bear the AMCA Sound and Air Performance Seal.
- Fan components are subjected to extensive life testing, assuring you the fans will provide many years of reliable performance.

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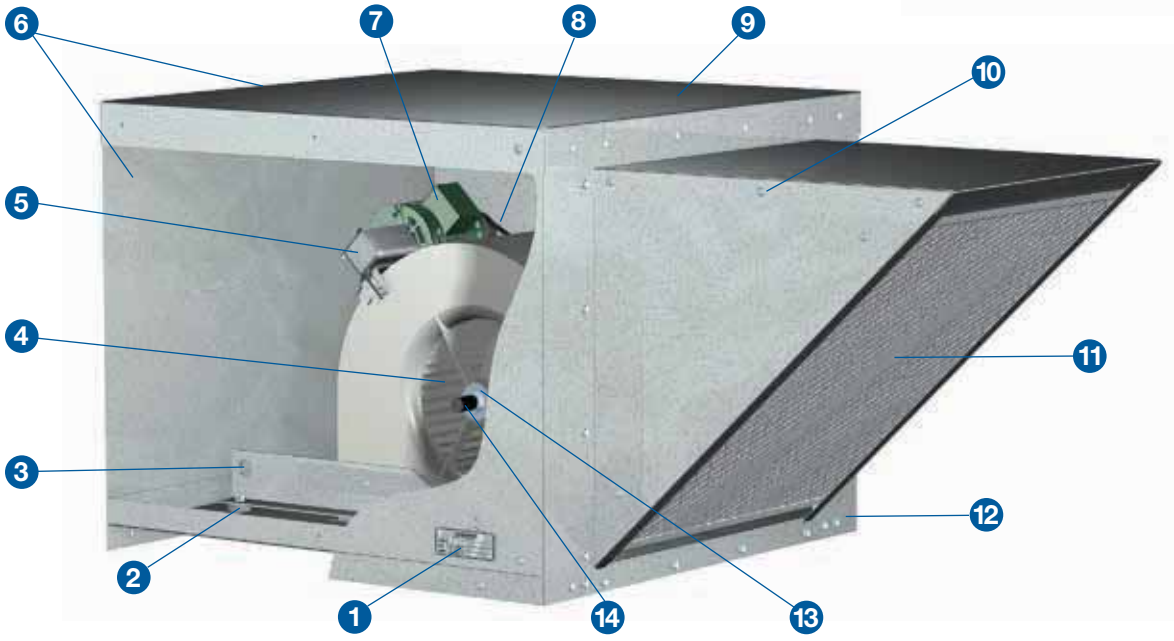
Standard Construction Features



1. **Nameplate** - Permanent stamped aluminum plate for exact model and serial identification.

2. **Vibration Isolation** - Isolators support the drive frame and blower assembly for long life and minimal sound transmission into the building.

3. **Lifting Lugs** - Various lifting points located on the drive frame to provide easy lifting.

4. **Steel Wheel** - Double-width/double-inlet forward-curved wheel is statically and dynamically balanced and constructed of heavy gauge galvanized steel.

5. **Disconnect Switch** - NEMA-1 switch is factory mounted and wiring is provided from the motor as standard (other switches are available.) All wiring and electrical components comply with the National Electrical Codes® (NEC) and are either UL Listed or Recognized.

6. **Access Panels** - Cover and side access panels are easily removed for access to motor compartment and drive assembly.

7. **Motor** - Carefully matched to the fan load to provide years of trouble-free operation.

8. **Drive Assembly** - Belts, pulleys and keys are oversized 150% of driven horsepower. Machined cast pulleys are adjustable for final system balancing. Belts are static free and oil resistant.

9. **Housing** - Fan housing and cover are constructed of heavy gauge galvanized steel.

10. **Fasteners** - Galvanized weather resistant fasteners are used to secure both top and side access panels.

11. **Filters** - Permanent, washable aluminum one-inch filters are standard. Filter racks are designed to allow filters to slide out easily.

12. **Curb Cap** - Curb cap has prepunched mounting holes to ensure correct attachment to the roof curb.

13. **Bearings** - Bearings are permanently sealed and lubricated, 100% factory tested and designed specifically for air handling applications with a minimum L_{50} life in excess of 200,000 hours.

14. **Fan Shaft** - Fan shaft is precision ground, polished and sized so the first critical speed is at least 25% over maximum operating speed.

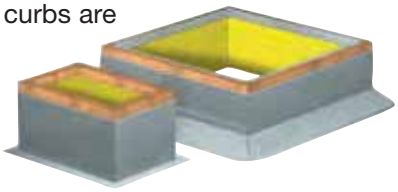
Blower Outlet - Blower outlet is flanged to provide built-in duct adapter for mounting of ductwork directly to the fan base.

Belt Tension - Pivoting mount with screw adjustment is provided on the drive frame for ease of maintaining belt tension.

Options and Accessories

Roof Curbs

Prefabricated roof curbs reduce installation time and costs by ensuring compatibility between the fan, the curb and roof opening. All curbs are insulated. A wide variety of roof curbs are available, including: flanged, pitched and sound-absorbing.



Curb Extension

Extensions raise the fan discharge above the roof line and provide an accessible mounting location for dampers. Insect screen bases, constructed with a removable fine mesh, are recommended for applications where insect entry must be prevented.

Curb Seal

Rubber seal between fan and curb is available to ensure proper sealing when attached to a curb.

Disconnect Switches

A wide selection of NEMA rated switches are available for positive electrical shutoff and safety, including: general, dust-tight, rainproof and corrosion-resistant. Optional switches ship loose with unit.

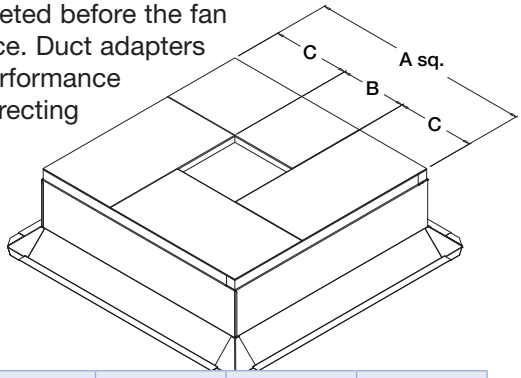
Motor Starters

The fundamental function of a motor starter is to protect the motor from damage that can occur from overheating. With a Greenheck motor starter you will be provided with the best motor protection available.

Specific model components may include: Real-time current monitoring technology, physical interface, overload protection, disconnect, magnetic contactor, NEMA-1 or NEMA-3R steel enclosures and pre-engineered easy system integration. For complete information on specific Greenheck Motor Starter models refer to greenheck.com, Motor Starter page.

Duct Adapters

Duct adapters fit over the roof curb and support the top of the duct allowing ductwork to be completed before the fan is set in place. Duct adapters also limit performance losses by directing airflow into the duct.



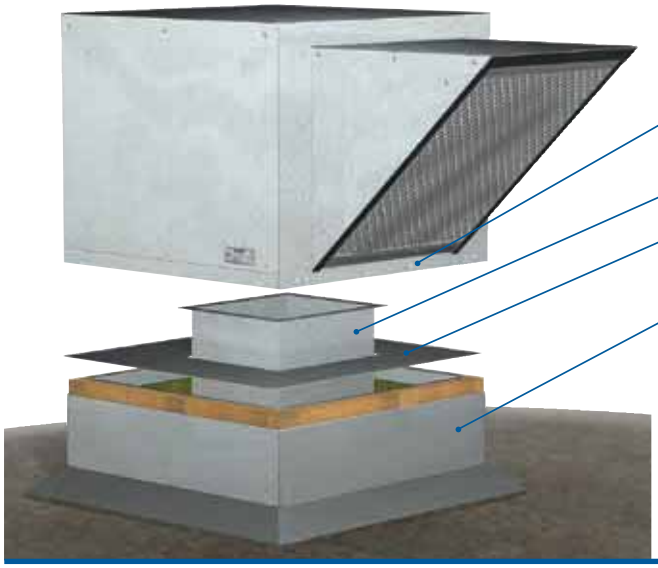
Fan Size	A	B	C
110	28½ *(724)*	14¼ *(362)*	7⅛ *(181)*
112	32½ *(826)*	18¼ *(464)*	7⅛ *(181)*
115	32½ *(826)*	24¼ *(616)*	4⅛ *(105)*
118	38½ *(978)*	30¼ *(768)*	4⅛ *(105)*
120	44½ *(1130)*	36¼ *(921)*	4⅛ *(105)*

All dimensions in inches *(millimeters)*.

Dampers

Designed to prevent outside air from entering back into the building when fan is off. Flangeless intake dampers are designed for horizontal mounting inside ductwork. Includes either gravity or motorized dampers. Damper sizes are shown on each performance data page.

Typical Installation



Prepunched mounting holes and 2½ inch skirt to aid in installation

Ductwork (by others)

Duct adapter (optional) allows ductwork to be completed prior to setting unit on curb

Roof curb

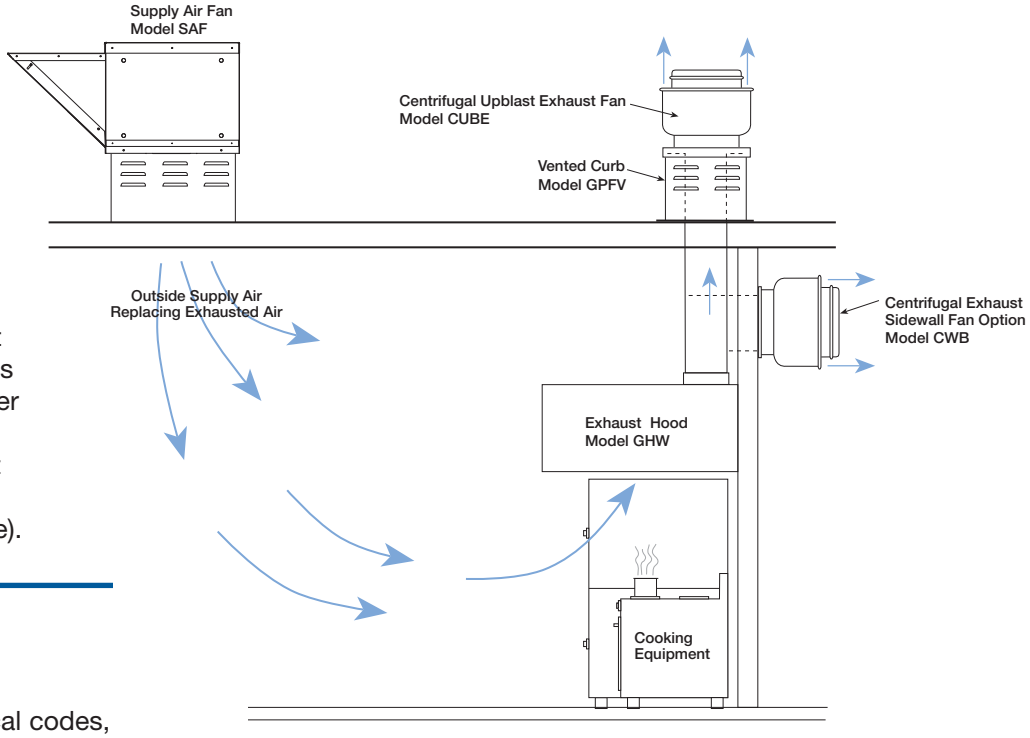
Roof opening dimensions can be found with the dimensional data on the performance pages.

Note: In cases where extreme snow depths may be encountered, a curb extension may be required to raise unit or condensation pans may be required in ductwork.

Commercial Kitchen Ventilation

This drawing shows a typical commercial kitchen ventilation system that consists of a roof mounted upblast exhaust fan and a supply fan.

Exhaust fan variations include sidewall exhaust fan (also shown) when penetrating the roof is not practical. A utility blower is recommended when higher static pressure capability is required to pull exhaust through long duct runs (typically 3 stories or more).



Fan Sizing

Exhaust

When not specified by local codes, the following guidelines may be used to determine the minimum kitchen hood exhaust cfm. Some local codes require 100 cfm/ft^2 of hood area for wall style hoods.

Supply

Recommended supply airflow is 90% of exhaust cfm. The remaining 10% of supply air will be drawn from areas adjacent to the kitchen, which helps prevent undesirable kitchen odors from drifting into areas such as the dining room.

Duty Level	Type of Cooking Equipment	cfm/ft^2 of Hood
Light	Oven, Range, Kettle	50
Medium	Fryer, Griddle	75
Heavy	Charbroiler, Electric Broiler	100
Static pressure typically ranges from 0.625 to 1.0 in. for one story buildings.		

NFPA Considerations

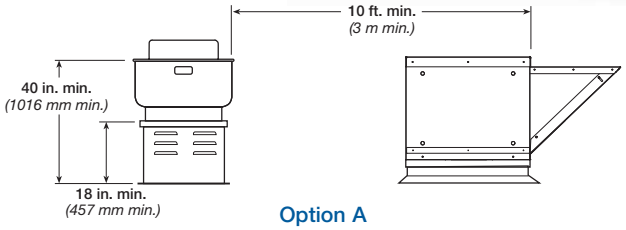
The National Fire Protection Association specifies minimum distance criteria for restaurant exhaust and supply fans:

Option A

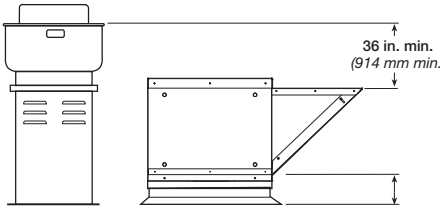
1. Roof deck to top of exhaust fan windband:
   40 inches *(1016 mm)* minimum
2. Roof deck to top of curb:
   18 inches *(457 mm)* minimum
3. Supply fan intake:
   10 feet *(3048 mm)* minimum from all exhaust fans

Option B

For applications where the 10 feet *(3048 mm)* horizontal distance cannot be met, vertical separation between exhaust and supply must be at least 36 inches *(914 mm)*.



Option A



Option B

Service

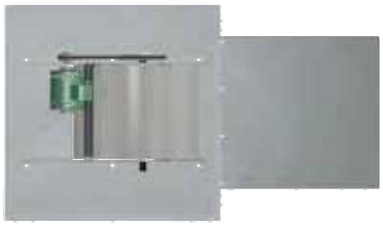
Filtered supply fans require regular inspection and cleaning (or replacement) of filters to ensure high efficiency and performance. The model SAF is designed to provide easy access to filters and other components through a convenient removable hood cover.

Removable Hood Cover

Removal of the hood cover allows easy access to all fan components for inspection, cleaning, and service.

Weather Resistant Fasteners

Easy to remove galvanized fasteners keep the hood cover secured.



Serviceability

The internal drive components are easy to reach and service with the hood removed.

Filter Removal

Filter racks are designed so filters can easily slide out for cleaning or replacement.

Model Number Code

The model number system is designed to completely identify the fan. The of the model number is determined by the size and performance selected from the following pages.

SAF - 110 - 7

MODEL CONFIGURATION
SAF - Belt Drive Supply

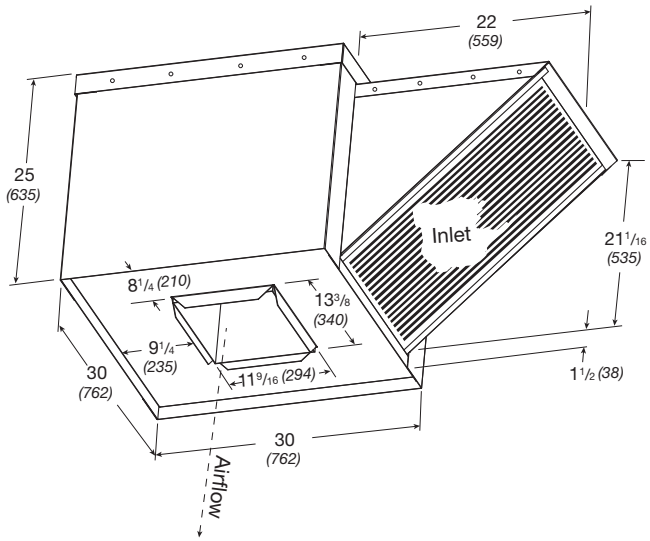
FAN SIZE
110 through 120

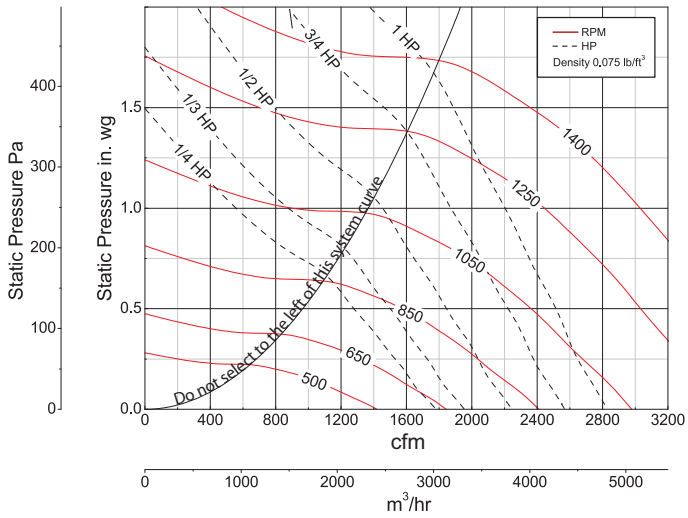
NOMINAL WHEEL DIAMETER IN INCHES

MOTOR HP

7 = 3/4	30 = 3	50 = 5
4 = 1/4	10 = 1	75 = 7½
3 = 1/3	15 = 1½	100 = 10
5 = 1/2	20 = 2	

SAF-110





Damper Size = 14 x 14 *(355 x 355)*
Roof Opening = 16½ x 16½ *(419 x 419)*
Curb Cap Thickness = 0.052 *(1)*
^Approximate Unit Weight = 181 lb. *(82 kg)*

All dimensions in inches *(millimeters)*.
^Weight shown is largest cataloged Open Drip Proof motor.

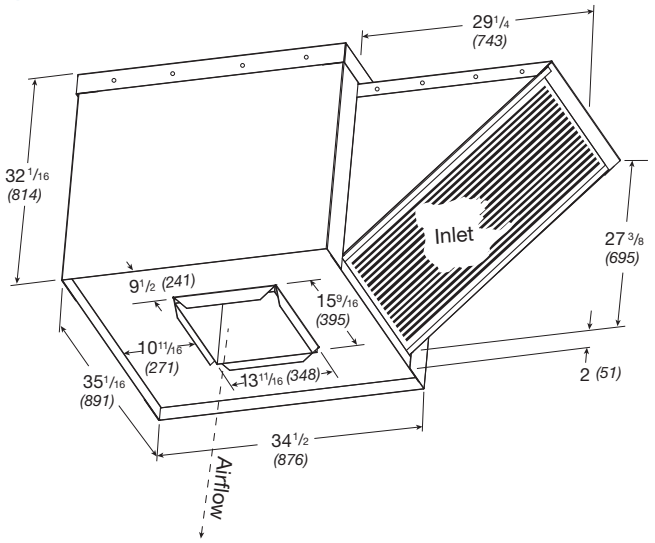
Model Number	Fan CFM		Static Pressure in inches wg									
			0.125	0.25	0.375	0.5	0.625	0.75	1	1.125	1.25	1.5
SAF-110	820	RPM	432	549								
		BHP	0.05	0.08								
		Sones	11.4	11.9								
	1000	RPM	476	579	672	755						
		BHP	0.07	0.11	0.14	0.17						
		Sones	10.0	11.7	11.3	10.5						
	1180	RPM	525	616	701	780	850					
		BHP	0.11	0.14	0.18	0.22	0.26					
		Sones	10.5	11.2	11.5	11.2	11.2					
	1360	RPM	577	660	736	809	878	941				
		BHP	0.15	0.19	0.23	0.28	0.32	0.37				
		Sones	11.2	11.0	11.4	11.4	11.8	12.7				
	1540	RPM	632	707	777	844	908	969	1082	1134	1192	
		BHP	0.21	0.25	0.30	0.35	0.40	0.45	0.55	0.60	0.66	
		Sones	12.0	11.7	11.7	11.8	12.7	13.7	15.2	18.3	19.5	
	1720	RPM	688	757	822	883	943	1001	1110	1162	1210	1307
		BHP	0.28	0.33	0.38	0.43	0.48	0.54	0.65	0.71	0.77	0.89
		Sones	13.1	12.8	12.4	12.8	13.9	14.9	17.9	18.9	19.9	22
	1900	RPM	745	809	870	927	982	1036	1140	1189	1238	1328
		BHP	0.37	0.42	0.48	0.53	0.59	0.65	0.77	0.83	0.90	1.02
		Sones	14.2	14.1	13.7	14.5	15.4	16.4	18.6	19.5	20	23
	2080	RPM	802	864	920	974	1026	1075	1174	1221	1266	
		BHP	0.47	0.53	0.59	0.65	0.71	0.77	0.90	0.97	1.04	
		Sones	15.5	15.7	15.9	16.5	17.3	18.2	20	21	21	
	2260	RPM	859	920	971	1023	1071	1119	1210			
		BHP	0.59	0.66	0.71	0.78	0.85	0.92	1.05			
		Sones	16.9	17.6	18.1	18.6	19.4	21	22			
	2440	RPM	918	976	1025	1073	1120					
		BHP	0.72	0.80	0.87	0.94	1.01					
		Sones	18.8	19.6	20	21	22					
	2620	RPM	977	1032	1080							
		BHP	0.88	0.97	1.04							
		Sones	21	22	23							

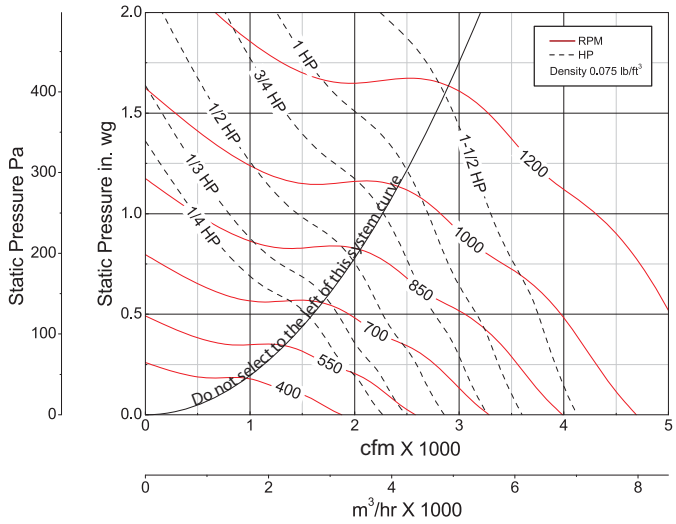
MAXIMUM RPM = 1400
TIP SPEED = RPM x 2.91
MAXIMUM MOTOR FRAME SIZE = 145T
AVERAGE OUTLET VELOCITY = CFM/1.07

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings include the effects of a filter.

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: ducted outlet hemispherical sone levels. Ratings do not include the effect of duct end correction.

SAF-112





Damper Size = 18 x 18 *(457 x 457)*
Roof Opening = 20 1/2 x 20 1/2 *(521 x 521)*
Curb Cap Thickness = 0.052 *(1)*
^Approximate Unit Weight = 244 lb. *(111 kg)*

All dimensions in inches *(millimeters)*.
^Weight shown is largest cataloged Open Drip Proof motor.

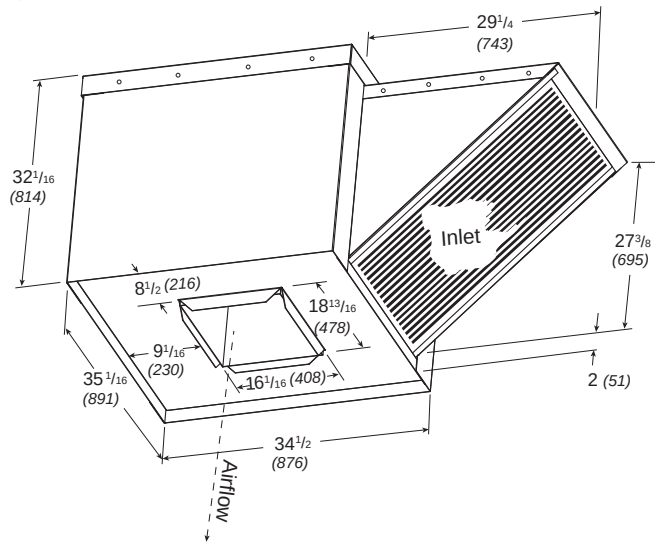
Model Number	Fan CFM		Static Pressure in inches wg									
			0.125	0.25	0.375	0.5	0.625	0.75	1	1.125	1.25	1.5
SAF-112	1250	RPM	390	483								
		BHP	0.08	0.11								
		Sones	12.8	12.6								
	1500	RPM	422	513	590							
		BHP	0.11	0.15	0.20							
		Sones	12.2	12.5	11.8							
	1750	RPM	459	549	616	682						
		BHP	0.16	0.21	0.26	0.31						
		Sones	12.7	12.7	12.1	14.0						
	2000	RPM	503	580	652	708	766	824				
		BHP	0.22	0.28	0.34	0.39	0.45	0.51				
		Sones	13.6	13.6	14.2	15.7	17.6	18.3				
	2250	RPM	549	615	685	745	794	844				
		BHP	0.30	0.36	0.43	0.49	0.55	0.61				
		Sones	14.6	14.9	16.6	17.8	19.1	18.9				
	2500	RPM	598	653	717	779	830	874	967	1013		
		BHP	0.40	0.46	0.53	0.61	0.68	0.74	0.89	0.97		
		Sones	15.8	17.0	18.8	19.7	19.8	19.6	20	21		
	2750	RPM	647	698	753	810	865	911	990	1034	1077	
		BHP	0.52	0.58	0.66	0.74	0.82	0.90	1.04	1.12	1.21	
		Sones	17.7	19.9	21	21	21	21	22	23	25	
	3000	RPM	697	743	790	843	897	947	1026	1062	1098	1179
		BHP	0.66	0.73	0.80	0.89	0.99	1.08	1.23	1.31	1.39	1.58
		Sones	20	21	23	22	22	22	24	25	26	31
	3250	RPM	748	790	833	880	928	978	1063	1098		
		BHP	0.83	0.90	0.98	1.07	1.16	1.27	1.45	1.54		
		Sones	22	23	24	24	24	24	26	27		
	3500	RPM	798	839	878	918	964	1009				
		BHP	1.02	1.10	1.18	1.26	1.37	1.48				
		Sones	24	25	25	25	26	27				
	3750	RPM	849	888	924	962						
		BHP	1.24	1.33	1.41	1.50						
		Sones	26	27	27	28						

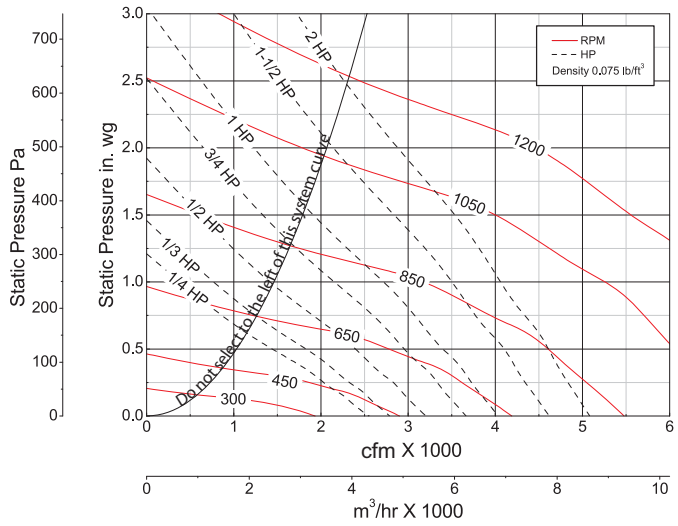
MAXIMUM RPM = 1200
TIP SPEED = RPM x 3.30
MAXIMUM MOTOR FRAME SIZE = 145T
AVERAGE OUTLET VELOCITY = CFM/1.48

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings include the effects of a filter.

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: ducted outlet hemispherical sone levels. Ratings do not include the effect of duct end correction.

SAF-115





Damper Size = 24 x 24 *(610 x 610)*
Roof Opening = 26 1/2 x 26 1/2 *(673 x 673)*
Curb Cap Thickness = 0.052 *(1)*
^Approximate Unit Weight = 263 lb. *(119 kg)*

All dimensions in inches *(millimeters)*.
^Weight shown is largest cataloged Open Drip Proof motor.

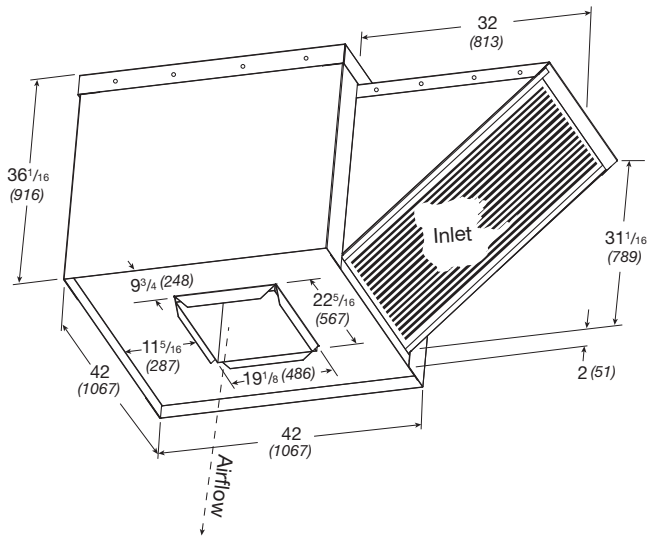
Model Number	Fan CFM		Static Pressure in inches wg									
			0.125	0.25	0.5	0.75	1	1.25	1.5	1.75	2	2.25
SAF-115	1300	RPM	316	407	546	654						
		BHP	0.07	0.12	0.23	0.34						
		Sones	7.6	8.9	9.7	12.0						
	1650	RPM	351	430	565	672	763	844				
		BHP	0.12	0.17	0.29	0.43	0.58	0.73				
		Sones	6.3	9.2	10.3	13.3	15.5	16.7				
	2000	RPM	387	463	586	691	781	861	934	1000		
		BHP	0.18	0.24	0.38	0.53	0.70	0.87	1.05	1.23		
		Sones	6.8	9.0	11.1	14.1	15.8	17.1	18.3	19.6		
	2350	RPM	432	498	610	712	800	879	952	1018	1080	1139
		BHP	0.26	0.34	0.48	0.65	0.83	1.03	1.23	1.44	1.64	1.85
		Sones	8.5	9.7	12.2	14.9	16.3	17.5	18.8	20	21	23
	2700	RPM	479	534	642	734	821	898	970	1037	1098	1157
		BHP	0.38	0.45	0.63	0.80	1.00	1.20	1.43	1.66	1.89	2.12
		Sones	10.3	11.2	13.9	15.7	16.9	18.0	19.3	21	22	23
	3050	RPM	528	574	676	763	843	920	989	1055		
		BHP	0.52	0.60	0.80	0.99	1.19	1.42	1.64	1.89		
		Sones	12.9	13.9	15.6	17.4	18.1	18.6	19.9	21		
	3400	RPM	577	621	712	795	870	942	1011			
		BHP	0.70	0.79	1.00	1.21	1.43	1.66	1.91			
		Sones	16.0	16.5	17.9	19.1	19.9	21	21			
	3750	RPM	627	669	748	830	902	968				
		BHP	0.91	1.02	1.23	1.48	1.71	1.95				
		Sones	19.0	18.6	20	21	22	23				
	4100	RPM	677	717	785	866	935					
		BHP	1.17	1.29	1.50	1.78	2.04					
		Sones	22	21	22	23	24					
	4450	RPM	729	765	830	902						
		BHP	1.47	1.60	1.84	2.12						
		Sones	23	23	24	25						
	4800	RPM	780	815								
		BHP	1.82	1.96								
		Sones	26	26								

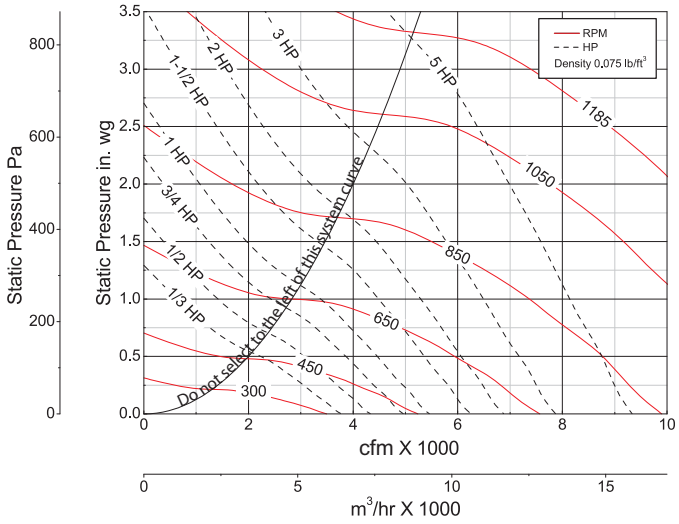
MAXIMUM RPM = 1200
TIP SPEED = RPM x 4.06
MAXIMUM MOTOR FRAME SIZE = 145T
AVERAGE OUTLET VELOCITY = CFM/2.09

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings include the effects of a filter.

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: ducted outlet hemispherical sone levels. Ratings do not include the effect of duct end correction.

SAF-118





Damper Size = 30 x 30 *(762 x 762)*
Roof Opening = 32 1/2 x 32 1/2 *(826 x 826)*
Curb Cap Thickness = 0.064 *(2)*
^Approximate Unit Weight = 494 lb. *(224 kg)*

All dimensions in inches *(millimeters)*.
^Weight shown is largest cataloged Open Drip Proof motor.

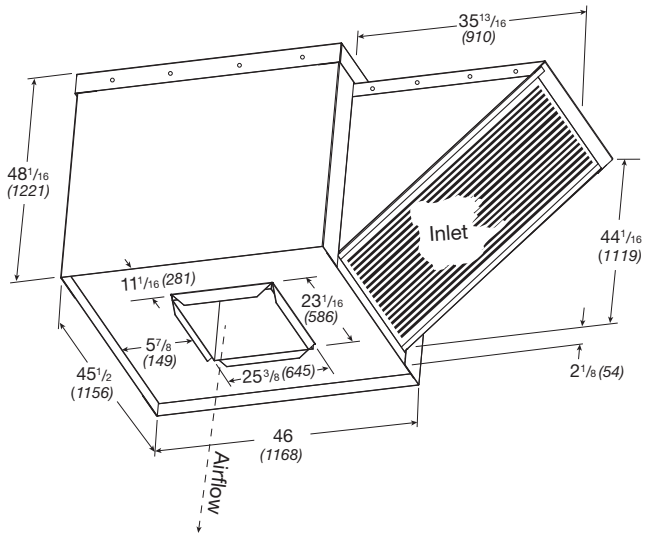
Model Number	Fan CFM		Static Pressure in inches wg									
			0.125	0.25	0.5	0.75	1	1.5	2	2.5	2.75	3
SAF-118	2500	RPM	294	359	466	564						
		BHP	0.16	0.23	0.37	0.57						
		Sones	6.9	9.4	9.8	11.5						
	3100	RPM	334	390	488	572	654					
		BHP	0.26	0.34	0.51	0.70	0.93					
		Sones	8.3	8.6	10.8	12.2	15.8					
	3700	RPM	376	426	516	594	664	800				
		BHP	0.41	0.50	0.70	0.91	1.12	1.67				
		Sones	10.3	10.1	11.9	13.3	17.0	24				
	4300	RPM	419	466	547	621	688	807	924			
		BHP	0.60	0.71	0.93	1.16	1.41	1.93	2.59			
		Sones	12.5	12.0	13.1	14.6	19.1	23	24			
	4900	RPM	466	508	582	651	713	828	932	1034	1081	1127
		BHP	0.85	0.98	1.23	1.48	1.75	2.32	2.93	3.69	4.07	4.46
		Sones	14.8	14.5	15.6	17.5	21	23	24	24	25	25
	5500	RPM	514	550	620	684	743	851	949	1042	1089	1134
		BHP	1.17	1.31	1.59	1.87	2.16	2.77	3.42	4.12	4.54	4.96
		Sones	17.2	17.2	19.1	22	23	23	24	25	25	26
	6100	RPM	563	594	661	719	775	878	973	1059	1100	
		BHP	1.57	1.70	2.03	2.34	2.64	3.31	4.01	4.73	5.08	
		Sones	20	20	22	24	26	25	25	26	26	
	6700	RPM	613	640	702	757	810	908	998			
		BHP	2.05	2.19	2.54	2.88	3.23	3.93	4.65			
		Sones	24	24	24	27	28	28	29			
	7300	RPM	662	688	744	797	846	939				
		BHP	2.61	2.78	3.15	3.53	3.89	4.63				
		Sones	27	27	27	31	30	30				
	7900	RPM	711	737	787	839	885					
		BHP	3.27	3.46	3.84	4.26	4.66					
		Sones	30	30	31	32	33					
	8500	RPM	760	786	831	880						
		BHP	4.04	4.26	4.64	5.10						
		Sones	33	34	35	36						

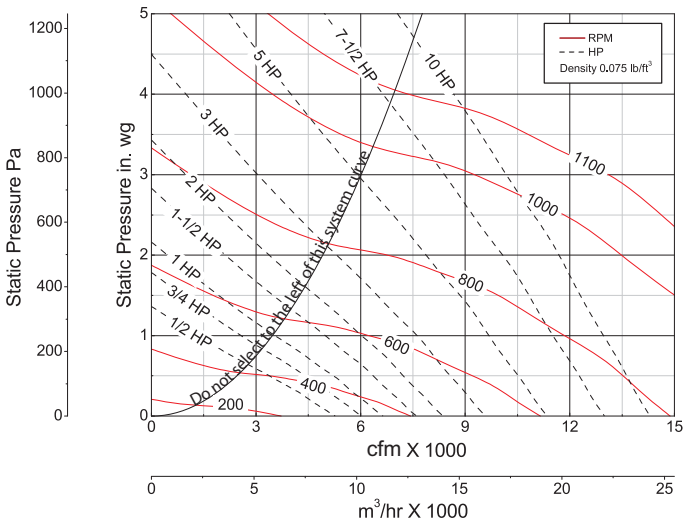
MAXIMUM RPM = 1185
TIP SPEED = RPM x 4.85
MAXIMUM MOTOR FRAME SIZE = 215T
AVERAGE OUTLET VELOCITY = CFM/2.96

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings include the effects of a filter.

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: ducted outlet hemispherical sone levels. Ratings do not include the effect of duct end correction.

SAF-120





Damper Size = 36 x 36 *(914 x 914)*
Roof Opening = 38 1/2 x 38 1/2 *(978 x 978)*
Curb Cap Thickness = 0.064 *(2)*
^Approximate Unit Weight = 716 lb. *(325 kg)*

All dimensions in inches *(millimeters)*.
^Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Fan CFM		Static Pressure in inches wg									
			0.125	0.25	0.5	1	1.25	1.5	2	2.5	3	3.5
SAF-120	4000	RPM	275	325	414	553	612					
		BHP	0.32	0.41	0.64	1.15	1.41					
		Sones	15.0	13.2	15.0	16.8	19.2					
	5000	RPM	317	363	440	570	627	679	773			
		BHP	0.55	0.67	0.93	1.51	1.83	2.16	2.82			
		Sones	17.6	15.5	17.0	18.9	21	23	29			
	6000	RPM	363	403	472	594	647	695	788	871		
		BHP	0.88	1.04	1.33	2.00	2.35	2.69	3.48	4.28		
		Sones	17.8	19.6	17.8	21	22	25	30	39		
	7000	RPM	412	446	510	620	672	719	804	885	960	1029
		BHP	1.35	1.52	1.86	2.59	2.98	3.40	4.20	5.12	6.05	6.97
		Sones	19.8	22	20	23	25	27	31	39	53	80
	8000	RPM	462	491	550	649	698	744	828	903	975	1044
		BHP	1.95	2.14	2.55	3.31	3.76	4.21	5.15	6.06	7.08	8.14
		Sones	23	23	24	25	28	30	33	40	51	73
	9000	RPM	513	538	591	687	728	772	853	928	995	1060
		BHP	2.72	2.93	3.38	4.27	4.68	5.19	6.20	7.27	8.3	9.38
		Sones	26	26	27	29	31	32	37	41	49	66
	10000	RPM	564	588	635	726	766	803	880	952	1020	
		BHP	3.68	3.92	4.40	5.39	5.88	6.35	7.45	8.58	9.77	
		Sones	30	29	30	34	35	36	41	47	51	
	11000	RPM	616	638	680	765	804	840	908	979		
		BHP	4.84	5.11	5.63	6.74	7.26	7.8	8.85	10.12		
		Sones	33	33	35	38	39	41	47	53		
	12000	RPM	668	689	725	806	844	879				
		BHP	6.22	6.52	7.06	8.29	8.89	9.46				
		Sones	38	39	40	43	45	47				
	13000	RPM	720	740	774	848						
		BHP	7.85	8.18	8.78	10.07						
		Sones	44	45	46	49						
	14000	RPM	772	791								
		BHP	9.75	10.11								
		Sones	49	51								

MAXIMUM RPM = 1100
TIP SPEED = RPM x 5.37
MAXIMUM MOTOR FRAME SIZE = 215T
AVERAGE OUTLET VELOCITY = CFM/4.06

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings include the effects of a filter.

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: ducted outlet hemispherical sone levels. Ratings do not include the effect of duct end correction.

Typical Specifications

Roof mounted, non-tempered, filtered, make-up air units shall be of the belt-driven, double-width/double-inlet, forward-curved, centrifugal blower type.

Housing shall be of square design and constructed of heavy-gauge galvanized steel. The cover shall be adequately sized to prevent rain and snow from entering the building and constructed of heavy-gauge galvanized steel.

Curb caps shall have prepunched mounting holes.

Permanent washable one-inch filters shall be provided.

Fan wheels shall be of the forward-curved type, constructed of heavy-gauge galvanized steel, and statically and dynamically balanced to ensure smooth, vibration free operation.

Motors shall be permanently lubricated, heavy-duty, ball bearing type carefully matched to the fan load and furnished at the specified voltage, phase and enclosure.

The fan shaft shall be ground and polished steel mounted in heavy-duty, sealed ball bearings. Bearings shall be selected for a minimum L_{50} life in excess of 200,000 hours at maximum cataloged operating speeds.

Pulleys shall be of the fully machined cast iron type, keyed and securely attached to the wheel and motor shafts. Motor sheaves shall be adjustable for final system balancing. Drives shall be sized for a minimum of 150% of driven horsepower. The entire fan and motor assembly shall be mounted on vibration isolators to prevent noise transmission into the building.

Fans shall bear the AMCA Certified Ratings Seal for Sound and Air Performance.

Fans shall be model SAF as manufactured by Greenheck Fan Corporation of Schofield, Wisconsin, USA.

Building Value in Air

Greenheck delivers value to mechanical engineers by helping them solve virtually any air quality challenges their clients face with a comprehensive selection of top quality, innovative air-related equipment. We offer extra value to contractors by providing easy-to-install, competitively priced, reliable products that arrive on time. And building owners and occupants value the energy efficiency, low maintenance and quiet dependable operation they experience long after the construction project ends.

Our Commitment

As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.

Specific Greenheck product warranties are located on greenheck.com within the product area tabs and in the Library under Warranties.

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