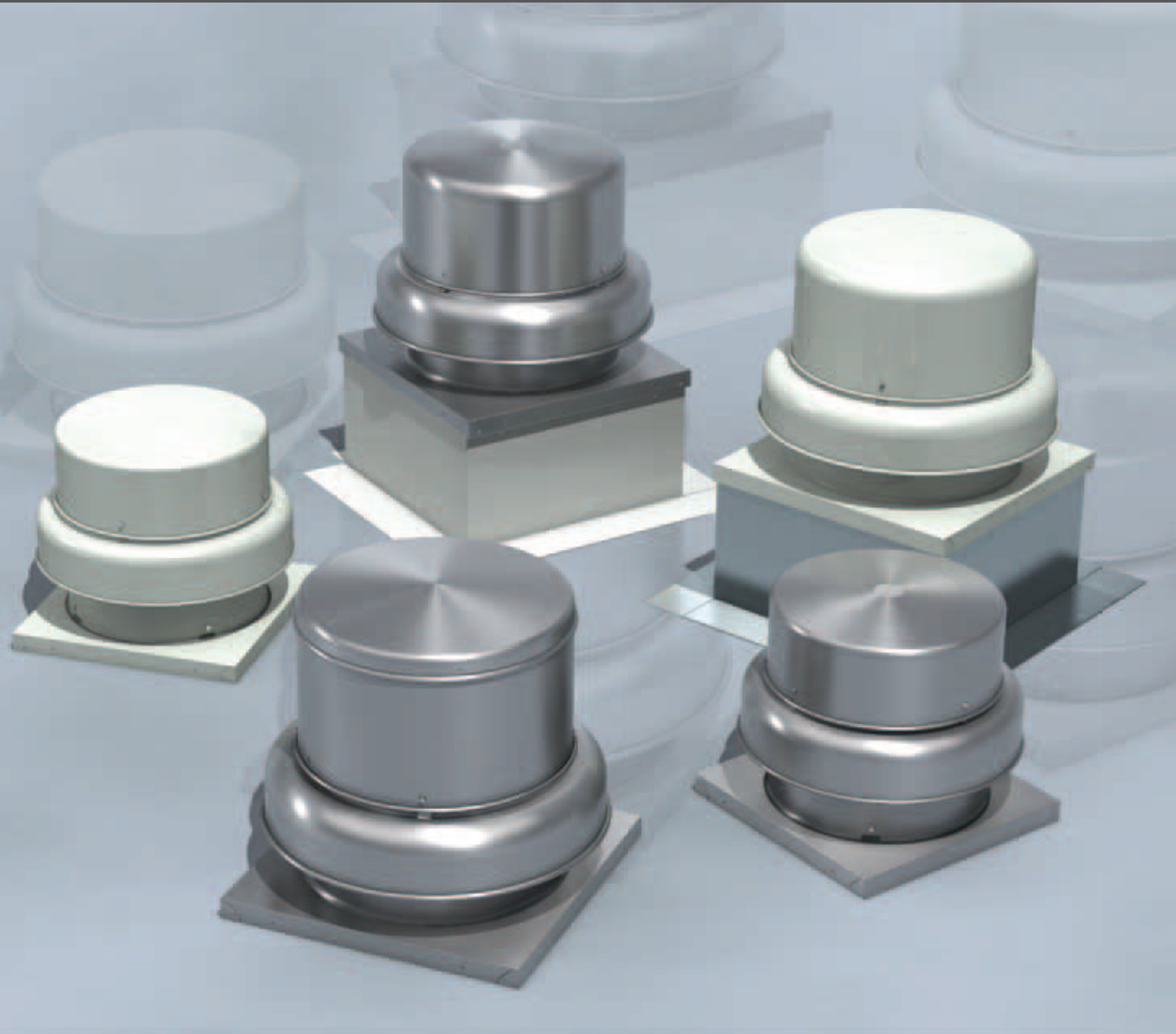


# Centrifugal Roof Downblast Exhaust Fans

- General Clean Air
- Light Contaminants
- Seismic
- High Wind

Models G



BUILDING VALUE IN AIR.

 **GREENHECK**  
Building Value in Air.

July  
2009

# Centrifugal Roof Exhaust Fans

## Spun Aluminum • Downblast



Greenheck models G and GB centrifugal roof exhaust fans provide the industry's best performance and durability for general clean air applications.

- Broadest performance in the industry, up to 3.25 in. wg (810 Pa) and 45,000 cfm (76,500 m<sup>3</sup>/hr).
- Most advanced motor cooling of any fan in its class.
- Performance as cataloged is assured. All fan sizes are tested in our AMCA Accredited Laboratory, and all models are licensed to bear the AMCA sound and air performance seals.
- UL Listed for electrical.\*
- Greenheck subjects these products to extensive life testing, assuring you that the fans will provide years of reliable performance.




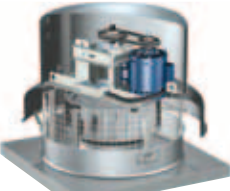
Greenheck Fan Corporation certifies that the Models G, and GB fans shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. The certified ratings for Models G, and GB are shown on pages 17 to 55.



G and GB models are listed for electrical (UL/cUL 705) File no. E40001

*\*UL/cUL is optional and must be specified*

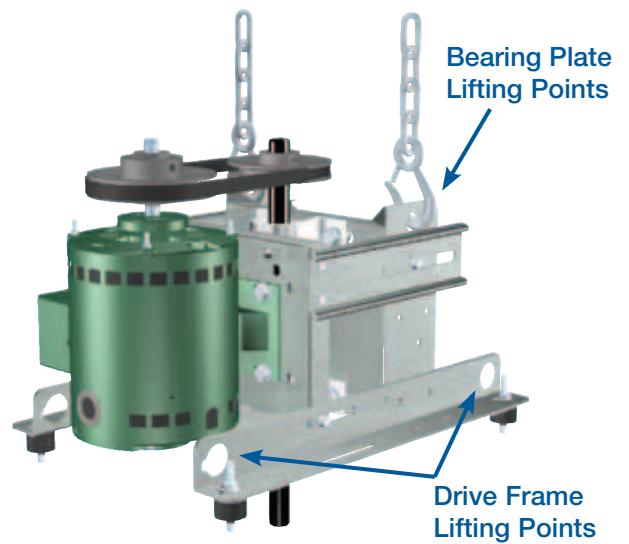
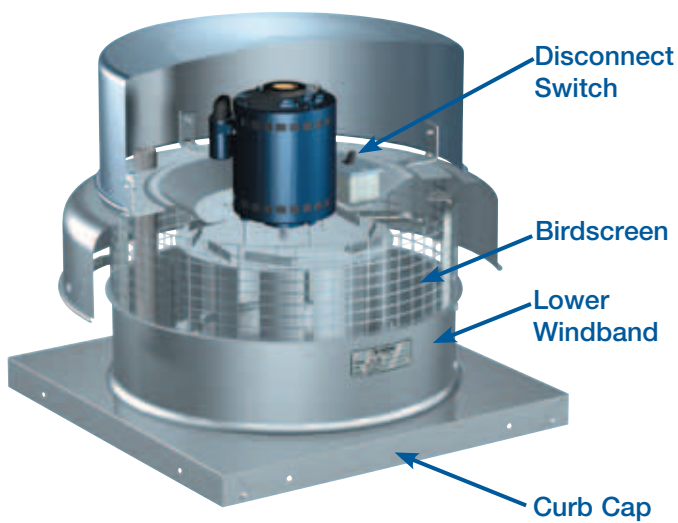
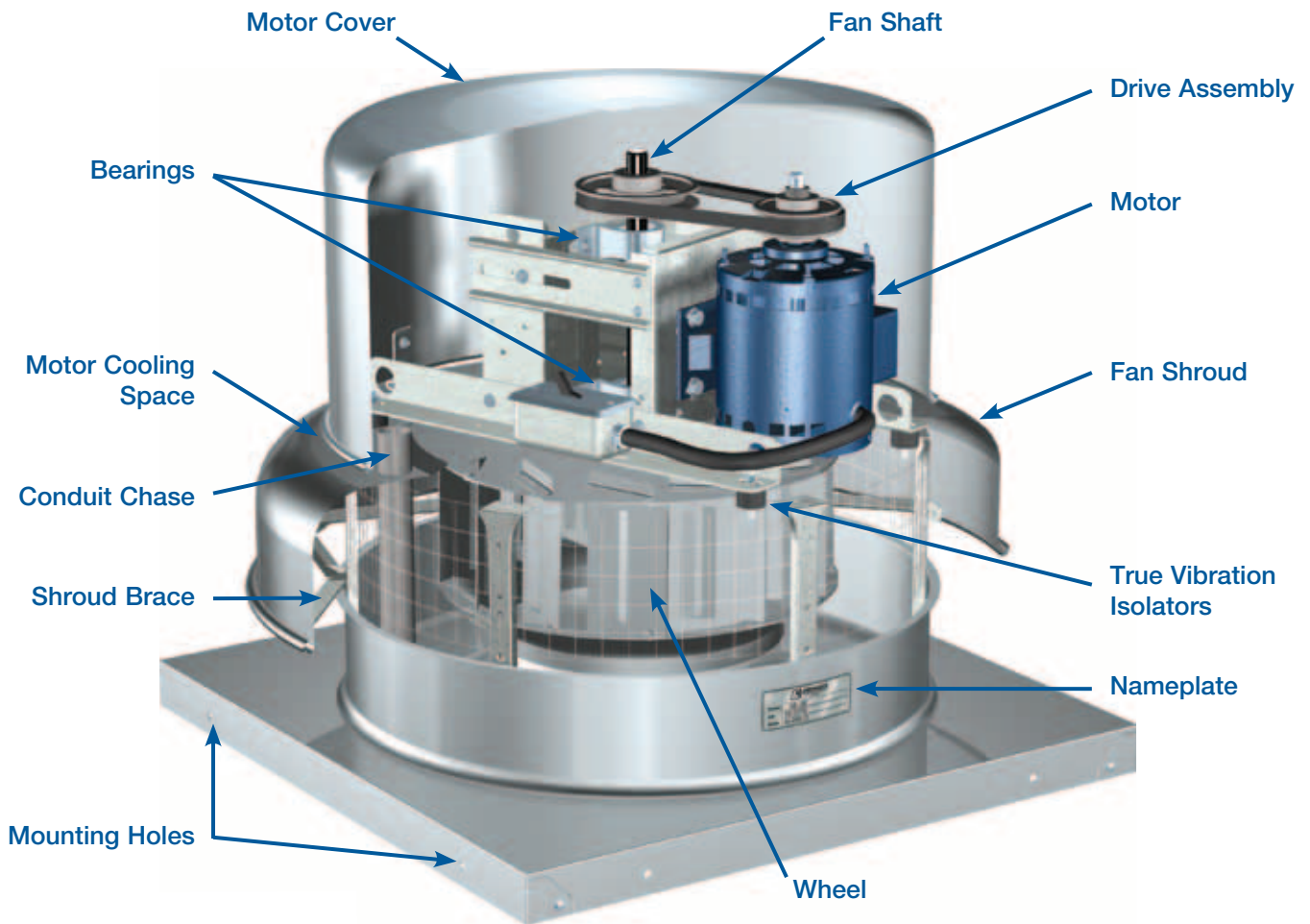
### Model Comparison

Model		Mounting	Airflow	Application			Drive Type		Performance	
		Roof Curb	Exhaust	General/Clean Air	Maximum Operating Temperature	High Wind (150 mph)	Belt	Direct	Maximum Volume cfm (m <sup>3</sup> /hr)	Maximum Static Pressure in. wg (Pascals)
	G	✓	✓	✓	130°F (54°C)	✓		✓	4,300 (7,306)	1.0 (249)
	GB	✓	✓	✓	180°F (82°C)	✓	✓		44,700 (75,946)	3.25 (810)

Standard Construction Features		G and GB
Wheel	An aluminum, backward-inclined, non-overloading centrifugal wheel is utilized to generate high-efficiency and minimal sound. Wheel cones are carefully matched to the venturi for maximum efficiency. Each wheel is robotically welded and statically and dynamically balanced for long life and quiet operation.	✓
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 Electric Code (NEC) and are either UL Listed or Recognized.	✓
Fan Shaft	Precisely sized, ground and polished so the first critical speed is at least 25% over the maximum operating speed. Where the shaft makes contact with bearings, close tolerances result in longer bearing life.	✓
Bearings	100% factory tested and designed specifically for air handling applications with a minimum L <sub>10</sub> life in excess of 100,000 hours (L <sub>50</sub> life of 500,000 hours).	✓
Motor	Carefully matched to the fan load and is mounted out of the airstream.	✓
Motor Cover	Constructed of aluminum, machine-punched, and attached with stainless steel hardware for easy removal and access to motor compartment and drive assembly.	✓
Motor Cooling	Cooling fins located on top of the fan wheel draw outside air through a large space between the fan shroud and the motor cover directly into the motor compartment. Positive motor cooling with fresh air results in maximum motor life.	✓
Lifting Points	Various lifting points are located on the drive frame and bearing plate (on select sizes).	✓
True Vibration Isolation	Vibration isolators, with no metal-to-metal contact, support the drive assembly and wheel for long life and quiet operation.	✓
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.	✓
Lower Windband	Heavy-gauge aluminum with formed edges for added strength and provides weather resistance.	✓
Curb Cap	Curb cap (with integral deep spun venturi) is constructed of aluminum and is one-piece for a weather-tight fit.	✓
Internal Conduit Chase	A large diameter conduit for installing electrical wiring through the curb cap into the motor compartment.	✓
Nameplate	Permanent stamped aluminum plate for exact model and serial number identification.	✓
Galvanized Birdscreen	Rigid wire protects the fan discharge from birds and small objects.	✓
Fan Shroud	One-piece, heavy-gauge aluminum with a rolled bead for extra strength directs exhaust air downward.	✓
Mounting Holes	Curb cap has prepunched mounting holes to ensure correct attachment to the roof.	✓
Internal Supports	Heavy-gauge supports and bracing are added for additional strength to withstand a wind of 150 mph (61 psf).	✓*
Roof Curb	High-wind load fans are certified with one of two Greenheck high-wind roof curbs. Standard 12-inch (305 mm) in height GPF curb has a 5-inch (127 mm) flashing flange. Roof curbs ship separate for field installation with attachment details provided.	✓*

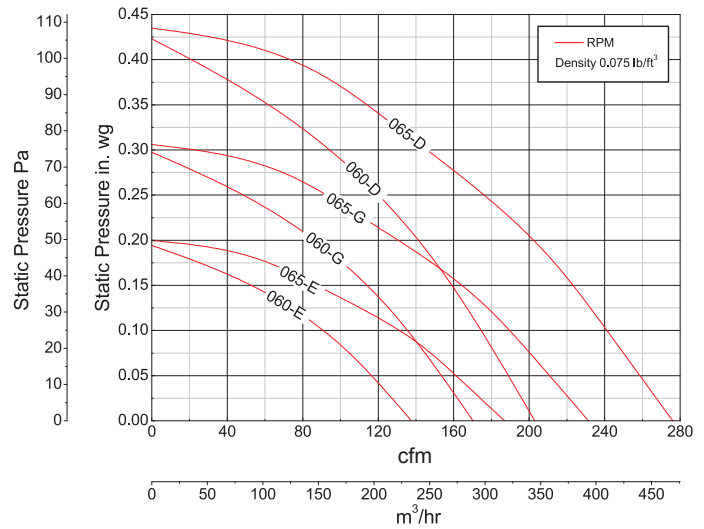
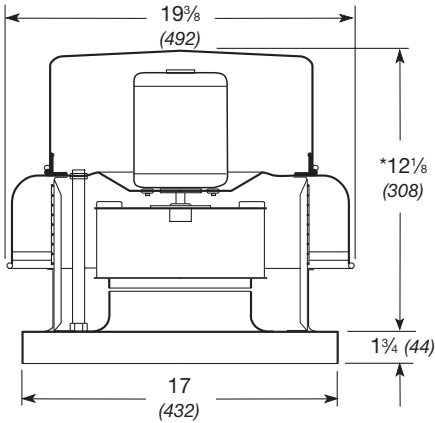
\* Applicable to fans with high wind option only.

# Standard Construction Features Models G and GB





# Roof Downblast - Direct Drive G-060 and G-065



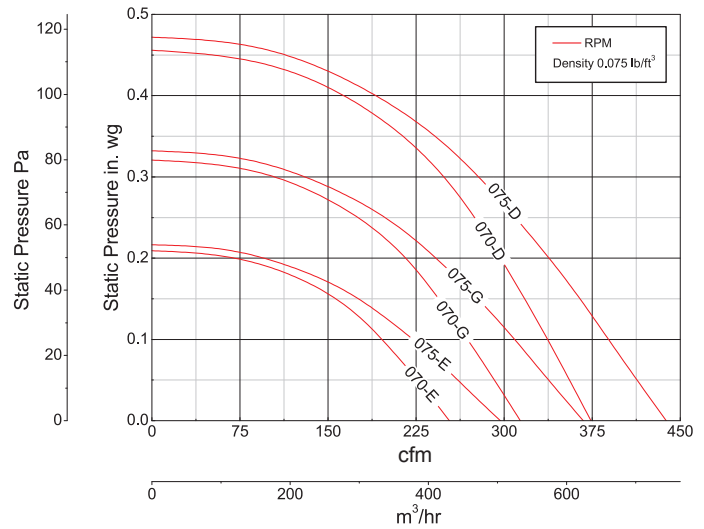
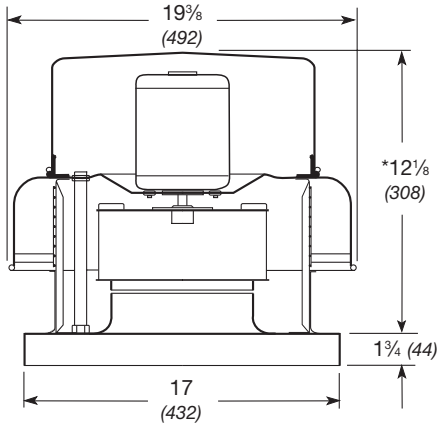
- Damper Size = 18 x 18 (457 x 457)
- Roof Opening = 20½ x 20½ (521 x 521)
- Shroud Thickness = 0.064 (1.6)
- Motor Cover Thickness = 0.040 (1.0)
- Curb Cap Thickness = 0.064 (1.6)
- ^Approximate Unit Weight = 142 lb. (64 kg)

All dimensions in inches (millimeters). \*May be greater depending on motor.  
^Weight shown is largest cataloged Open Drip-Proof motor.

Model Number	Motor HP	Fan RPM		Static Pressure in Inches wg										
				0	0.05	0.1	0.125	0.15	0.2	0.25	0.3	0.375	0.4	
060-E	1/200	1050	CFM	138	116	90	73	53						
			BHP	0.00	0.00	0.01	0.01	0.01						
			Sones	1.7	1.7	1.7	1.7	1.7						
060-G	1/100	1300	CFM	170	153	135	125	113	85					
			BHP	0.01	0.01	0.01	0.01	0.01	0.01					
			Sones	2.9	2.8	2.8	2.7	2.7	2.6					
060-D	1/60	1550	CFM	203	188	173	166	158	140	120	92			
			BHP	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.2			
			Sones	4.2	3.9	3.8	3.8	3.8	3.7	3.7	3.6			
065-E	1/100	1050	CFM	187	161	130	110	87						
			BHP	0.01	0.01	0.01	0.01	0.01						
			Sones	2.2	2.1	1.9	1.8	1.7						
065-G	1/60	1300	CFM	231	211	189	178	163	130	92				
			BHP	0.01	0.01	0.01	0.01	0.01	0.01	0.01				
			Sones	3.2	3.1	3.0	2.9	2.9	2.8	2.7				
065-D	1/30	1550	CFM	276	259	241	232	223	201	176	145	96		
			BHP	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
			Sones	4.9	4.6	4.5	4.5	4.4	4.3	4.3	4.1	4.0		

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

# Roof Downblast - Direct Drive G-070 and G-075



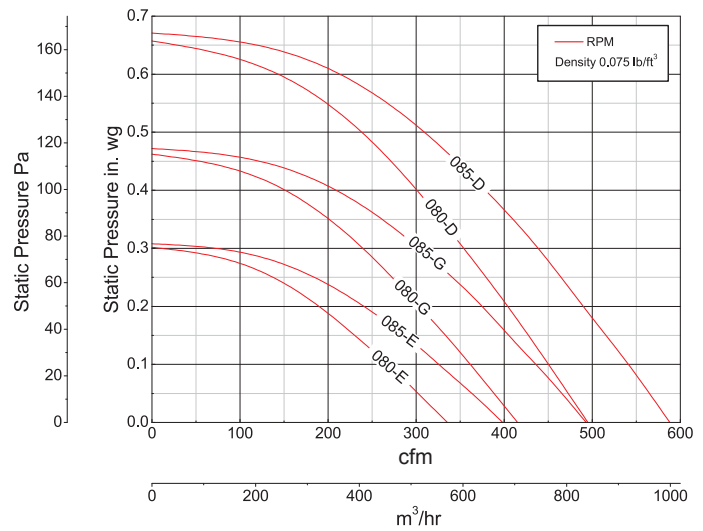
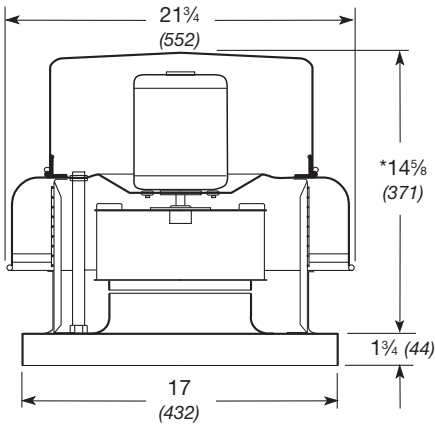
Damper Size = 18 x 18 (457 x 457)  
 Roof Opening = 20½ x 20½ (521 x 521)  
 Shroud Thickness = 0.064 (1.6)  
 Motor Cover Thickness = 0.040 (1.0)  
 Curb Cap Thickness = 0.064 (1.6)  
 ^Approximate Unit Weight = 142 lb. (64 kg)

All dimensions in inches (millimeters). \*May be greater depending on motor.  
 ^Weight shown is largest cataloged Open Drip-Proof motor.

Model Number	Motor HP	Fan RPM		Static Pressure in Inches wg										
				0	0.05	0.1	0.125	0.15	0.2	0.25	0.3	0.375	0.4	
070-E	1/100	1050	CFM	253	226	195	179	152						
			BHP	0.01	0.01	0.01	0.01	0.01						
			Sones	2.7	2.1	1.7	1.5	1.2						
070-G	1/60	1300	CFM	314	292	269	257	244	214	171				
			BHP	0.01	0.1	0.02	0.02	0.02	0.02	0.02				
			Sones	4.1	3.7	3.4	3.3	3.2	2.9	2.6				
070-D	1/30	1550	CFM	374	356	337	327	317	297	274	244	190		
			BHP	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03		
			Sones	5.6	5.4	5.2	5.2	5.1	4.9	4.7	4.5	4.1		
075-E	1/80	1050	CFM	297	260	222	200	176						
			BHP	0.01	0.01	0.01	0.01	0.01						
			Sones	3.6	3.1	2.9	2.8	2.6						
075-G	1/50	1300	CFM	367	338	309	293	277	241	195				
			BHP	0.02	0.02	0.02	0.02	0.02	0.02	0.02				
			Sones	4.1	3.9	3.7	3.7	3.7	3.6	3.5				
075-D	1/25	1550	CFM	438	413	389	377	364	337	309	277	214		
			BHP	0.03	0.03	0.3	0.04	0.04	0.04	0.04	0.04	0.04	0.03	
			Sones	6.1	5.8	5.6	5.4	5.3	5.1	4.9	4.9	4.8		

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

# Roof Downblast - Direct Drive G-080 and G-085



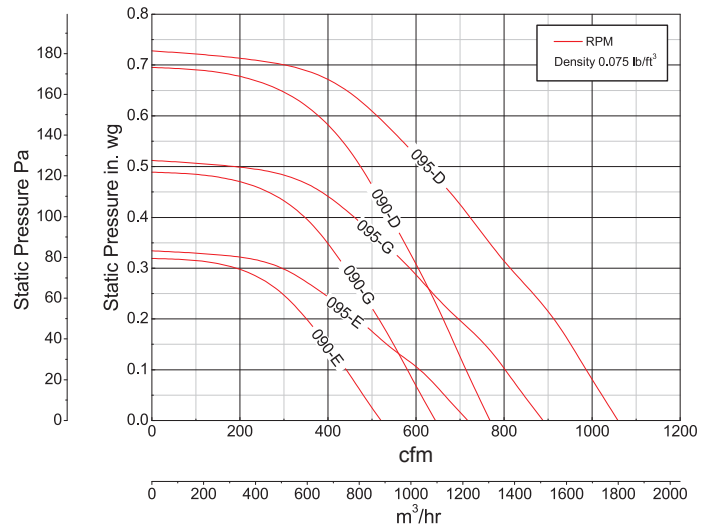
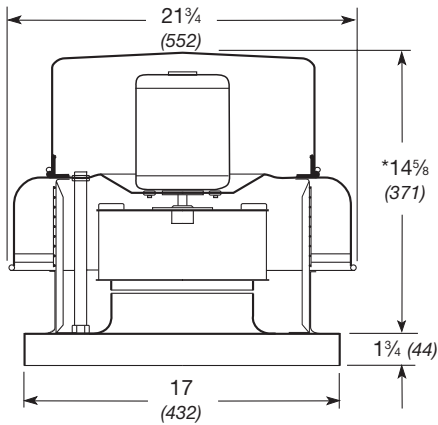
Damper Size = 18 x 18 (457 x 457)  
 Roof Opening = 20½ x 20½ (521 x 521)  
 Shroud Thickness = 0.064 (1.6)  
 Motor Cover Thickness = 0.040 (1.0)  
 Curb Cap Thickness = 0.064 (1.6)  
 ^Approximate Unit Weight = 142 lb. (64 kg)

All dimensions in inches (millimeters). \*May be greater depending on motor.  
 ^Weight shown is largest cataloged Open Drip-Proof motor.

Model Number	Motor HP	Fan RPM		Static Pressure in Inches wg										
				0	0.1	0.125	0.15	0.2	0.25	0.3	0.375	0.5	0.625	
080-E	1/40	1050	CFM	335	268	249	230	189	134					
			BHP	0.01	0.02	0.02	0.02	0.02	0.02					
			Sones	3.8	3.7	3.6	3.7	3.9	4.2					
080-G	1/30	1300	CFM	415	361	348	333	303	272	239	174			
			BHP	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03		
			Sones	5.4	5.4	5.4	5.4	5.4	5.5	5.6	5.9			
080-D	1/20	1550	CFM	495	450	439	427	404	379	354	314	237		
			BHP	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.06		
			Sones	7.3	7.3	7.3	7.3	7.3	7.2	7.3	7.3	7.6		
085-E	1/40	1050	CFM	398	326	307	286	240	179					
			BHP	0.01	0.02	0.02	0.02	0.02	0.02					
			Sones	4.0	3.9	3.9	3.9	4.1	4.3					
085-G	1/30	1300	CFM	493	436	420	405	375	340	302	233			
			BHP	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04		
			Sones	5.5	5.3	5.3	5.3	5.3	5.3	5.4	5.5			
085-D	1/20	1550	CFM	588	541	528	515	490	464	439	394	308	168	
			BHP	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	
			Sones	7.6	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.6	8.1	

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

# Roof Downblast - Direct Drive G-090 and G-095



- Damper Size = 18 x 18 (457 x 457)
- Roof Opening = 20½ x 20½ (521 x 521)
- Shroud Thickness = 0.064 (1.6)
- Motor Cover Thickness = 0.040 (1.0)
- Curb Cap Thickness = 0.064 (1.6)
- ^Approximate Unit Weight = 142 lb. (64 kg)

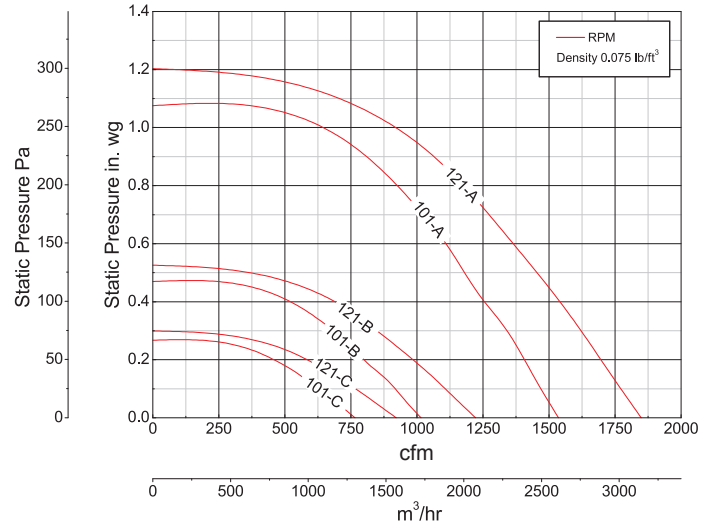
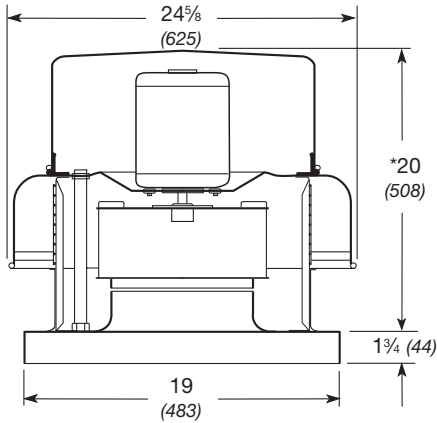
All dimensions in inches (millimeters). \*May be greater depending on motor.  
^Weight shown is largest cataloged Open Drip-Proof motor.

Model Number	Motor HP	Fan RPM		Static Pressure in Inches wg										
				0	0.1	0.125	0.15	0.2	0.25	0.3	0.375	0.5	0.625	
090-E	1/40	1050	CFM	520	441	420	398	351	293					
			BHP	0.01	0.02	0.02	0.02	0.02	0.02					
			Sones	4.0	3.9	3.9	4.0	4.1	4.2					
090-G	1/25	1300	CFM	644	580	565	549	515	478	440	373			
			BHP	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05			
			Sones	5.4	5.4	5.4	5.4	5.4	5.5	5.5	5.6			
090-D	1/15	1550	CFM	768	714	701	688	662	633	605	557	473	338	
			BHP	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.08	0.07	
			Sones	7.6	7.5	7.5	7.5	7.5	7.4	7.4	7.4	7.4	7.4	
095-E	1/30	1050	CFM	717	606	570	534	468	389	290				
			BHP	0.03	0.03	0.04	0.04	0.04	0.04	0.03				
			Sones	5.4	4.5	4.5	4.5	4.4	4.5	4.6				
095-G	1/12	1300	CFM	888	802	780	754	695	640	586	493	184		
			BHP	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.05		
			Sones	7.6	6.8	6.7	6.6	6.5	6.4	6.4	6.4	6.8		
095-D	1/8	1550	CFM	1059	987	969	950	912	863	814	745	623	474	
			BHP	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.12	0.12	0.11	
			Sones	9.6	9.4	9.3	9.2	9.0	8.8	8.7	8.7	8.7	8.7	

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



# Roof Downblast - Direct Drive G-101 and G-121



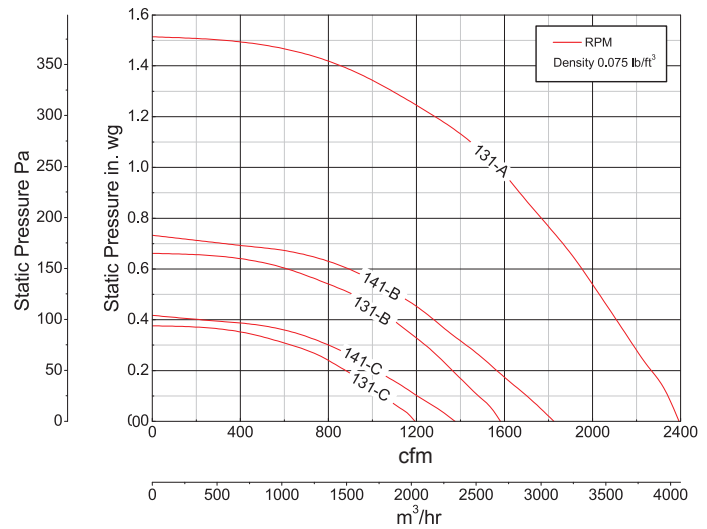
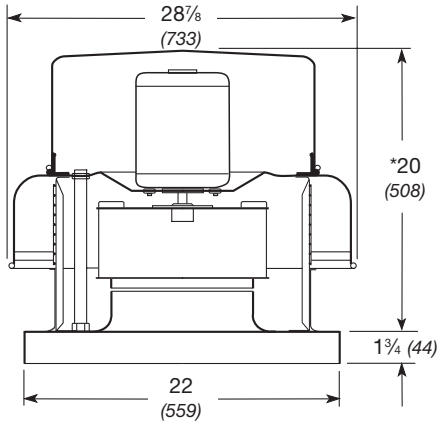
Damper Size = 18 x 18 (457 x 457)  
 Roof Opening = 20½ x 20½ (521 x 521)  
 Shroud Thickness = 0.064 (1.6)  
 Motor Cover Thickness = 0.040 (1.0)  
 Curb Cap Thickness = 0.064 (1.6)  
 ^Approximate Unit Weight = 142 lb. (64 kg)

All dimensions in inches (millimeters). \*May be greater depending on motor.  
 ^Weight shown is largest cataloged Open Drip-Proof motor.

Model Number	Motor HP	Fan RPM		Static Pressure in Inches wg										
				0	0.1	0.125	0.25	0.3	0.375	0.5	0.625	0.75	1	
101-C	1/8	860	CFM	766	625	588								
			BHP	0.02	0.03	0.03								
			Sones	4.3	4.2	4.2								
101-B	1/6	1140	CFM	1015	917	893	747	683	569					
			BHP	0.05	0.06	0.06	0.06	0.06	0.06					
			Sones	7.1	7.0	7.0	6.8	6.8	6.6					
101-A	1/4	1725	CFM	1536	1470	1454	1374	1340	1277	1181	1086	974		
			BHP	0.17	0.18	0.19	0.20	0.20	0.20	0.21	0.22	0.22		
			Sones	12.1	11.9	11.8	11.6	11.5	11.3	11.2	11.3	11.7		
121-C	1/8	860	CFM	922	767	723	450							
			BHP	0.03	0.03	0.04	0.04							
			Sones	5.6	5.2	5.2	5.2							
121-B	1/6	1140	CFM	1222	1107	1078	918	848	734	335				
			BHP	0.06	0.07	0.07	0.08	0.09	0.09	0.07				
			Sones	8.1	7.9	7.9	7.8	7.8	8.1	9.8				
121-A	1/4	1725	CFM	1849	1772	1753	1659	1621	1560	1453	1341	1223	911	
			BHP	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.3	0.29	
			Sones	14.1	14.0	13.9	13.8	13.6	13.4	13.4	13.4	13.4	13.4	14.1

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

# Roof Downblast - Direct Drive G-131 and G-141



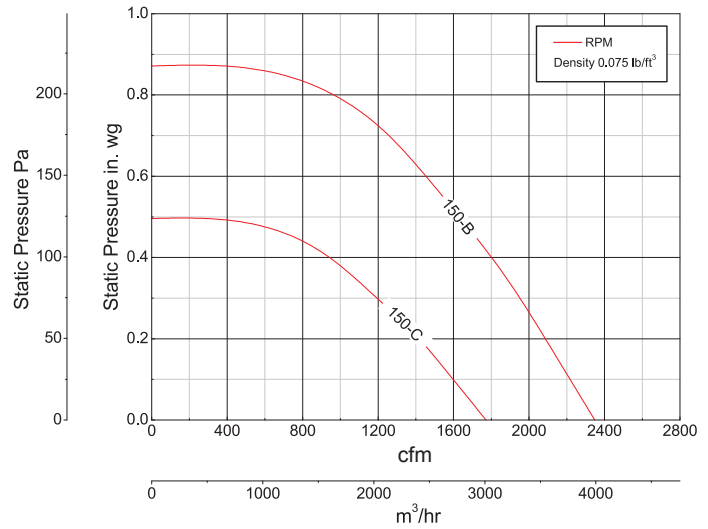
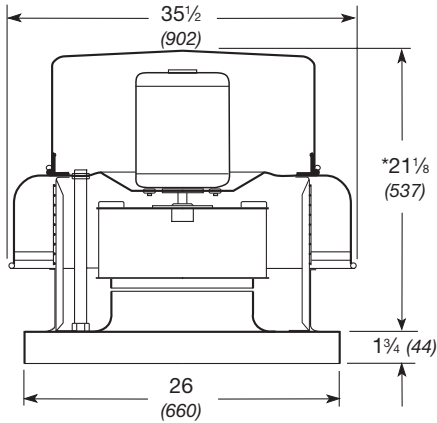
Damper Size = 18 x 18 (457 x 457)  
 Roof Opening = 20½ x 20½ (521 x 521)  
 Shroud Thickness = 0.064 (1.6)  
 Motor Cover Thickness = 0.040 (1.0)  
 Curb Cap Thickness = 0.064 (1.6)  
 ^Approximate Unit Weight = 142 lb. (64 kg)

All dimensions in inches (millimeters). \*May be greater depending on motor.  
 ^Weight shown is largest cataloged Open Drip-Proof motor.

Model Number	Motor HP	Fan RPM		Static Pressure in Inches wg										
				0	0.1	0.125	0.25	0.3	0.375	0.5	0.625	0.75	1	
131-C	1/8	860	CFM	1193	1050	1011	771	626						
			BHP	0.04	0.049	0.051	0.056	0.055						
			Sones	6.5	6.1	6.0	5.9	5.9						
131-B	1/6	1140	CFM	1581	1482	1452	1304	1239	1130	889				
			BHP	0.094	0.105	0.108	0.12	0.123	0.13	0.129				
			Sones	9.9	9.8	9.7	9.4	9.2	9.0	8.8				
131-A	1/2	1725	CFM	2393	2340	2327	2225	2186	2127	2030	1931	1817	1555	
			BHP	0.325	0.339	0.342	0.366	0.376	0.389	0.407	0.423	0.426	0.453	
			Sones	19.2	18.9	18.9	18.4	18.4	18.2	18.1	18.1	17.8	17.4	
141-C	1/8	860	CFM	1376	1205	1161	919	798	489					
			BHP	0.055	0.064	0.066	0.074	0.074	0.063					
			Sones	6.8	6.6	6.5	6.4	6.6	8.0					
141-B	1/6	1140	CFM	1824	1701	1667	1498	1425	1314	1113	794			
			BHP	0.129	0.141	0.144	0.158	0.163	0.17	0.175	0.158			
			Sones	10.4	10.4	10.3	9.8	9.5	9.1	8.7	8.4			

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

# Roof Downblast - Direct Drive G-150



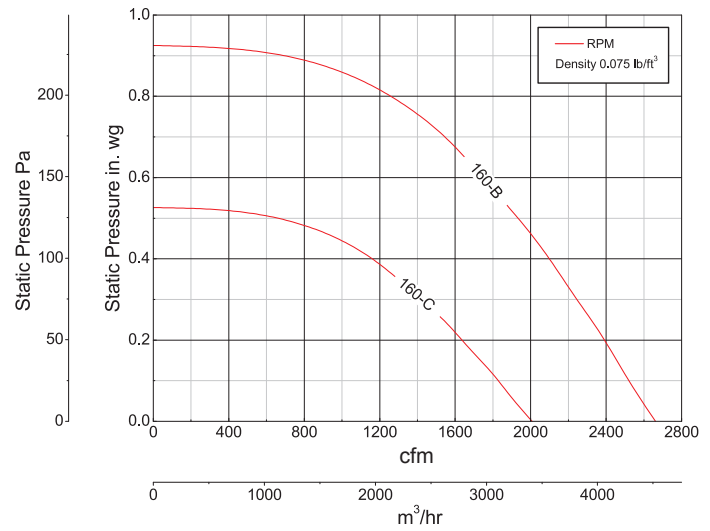
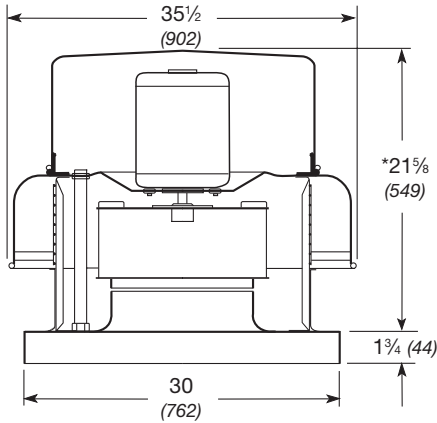
- Damper Size = 18 x 18 (457 x 457)
- Roof Opening = 20½ x 20½ (521 x 521)
- Shroud Thickness = 0.064 (1.6)
- Motor Cover Thickness = 0.040 (1.0)
- Curb Cap Thickness = 0.064 (1.6)
- ^Approximate Unit Weight = 142 lb. (64 kg)

All dimensions in inches (millimeters). \*May be greater depending on motor.  
^Weight shown is largest cataloged Open Drip-Proof motor.

Model Number	Motor HP	Fan RPM		Static Pressure in Inches wg										
				0	0.1	0.125	0.2	0.25	0.3	0.375	.5	.625	.75	
150-C	1/8	860	CFM	1772	1598	1553	1415	1304	1194	1005				
			BHP	0.09	0.09	0.10	0.12	0.12	0.13	0.13				
			Sones	7.9	7.8	7.8	7.5	7.4	7.5	7.7				
150-B	1/4	1140	CFM	2349	2217	2185	2085	2017	1949	1836	1628	1397	1114	
			BHP	0.21	0.21	0.21	0.21	0.23	0.25	0.27	0.29	0.29	0.28	
			Sones	11.7	11.6	11.6	11.3	11.1	11.0	10.9	11.2	11.8	12.8	

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

# Roof Downblast - Direct Drive G-160



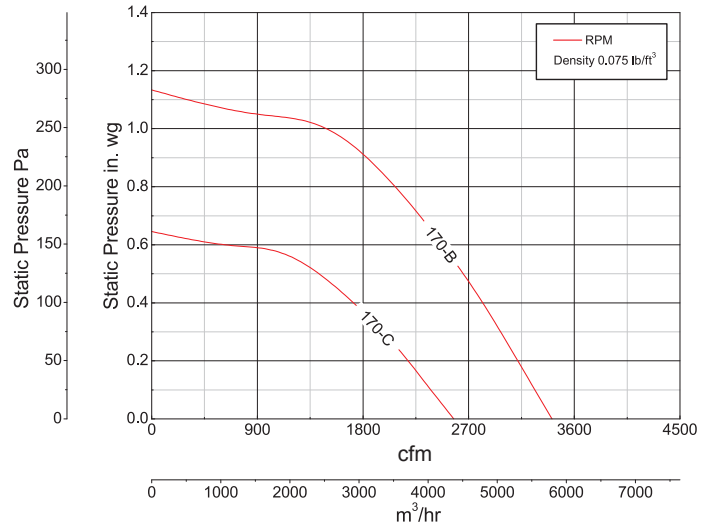
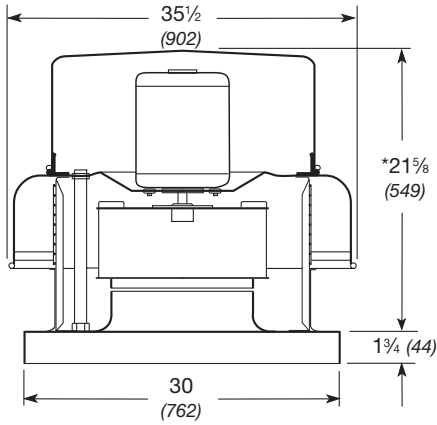
- Damper Size = 18 x 18 (457 x 457)
- Roof Opening = 20½ x 20½ (521 x 521)
- Shroud Thickness = 0.064 (1.6)
- Motor Cover Thickness = 0.040 (1.0)
- Curb Cap Thickness = 0.064 (1.6)
- ^Approximate Unit Weight = 142 lb. (64 kg)

All dimensions in inches (millimeters). \*May be greater depending on motor.  
^Weight shown is largest cataloged Open Drip-Proof motor.

Model Number	Motor HP	Fan RPM		Static Pressure in Inches wg										
				0	0.1	0.125	0.2	0.25	0.3	0.375	.5	.625	.75	
160-C	1/8	860	CFM	2008	1828	1784	1637	1535	1421	1230				
			BHP	0.10	0.11	0.12	0.13	0.13	0.13	0.14				
			Sones	8.0	7.7	7.7	7.5	7.4	7.3	7.3				
160-B	1/3	1140	CFM	2662	2521	2489	2392	2319	2245	2135	1933	1697	1411	
			BHP	0.23	0.25	0.25	0.27	0.28	0.28	0.29	0.31	0.32	0.32	
			Sones	13.6	13.4	13.4	13.3	13.1	13.1	13.1	12.9	12.7	12.6	

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

# Roof Downblast - Direct Drive G-170



- Damper Size = 18 x 18 (457 x 457)
- Roof Opening = 20½ x 20½ (521 x 521)
- Shroud Thickness = 0.064 (1.6)
- Motor Cover Thickness = 0.040 (1.0)
- Curb Cap Thickness = 0.064 (1.6)
- ^Approximate Unit Weight = 142 lb. (64 kg)

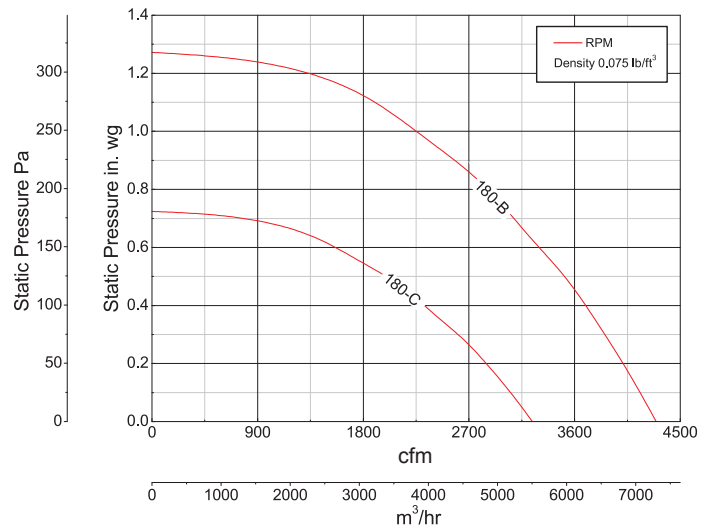
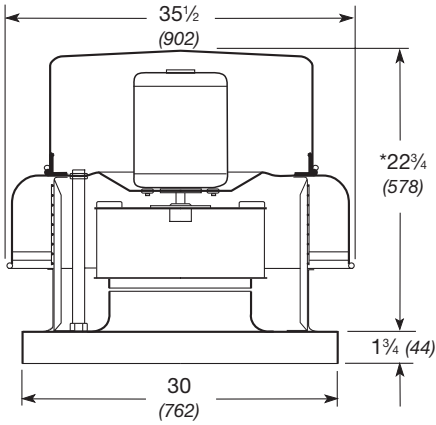
All dimensions in inches (millimeters). \*May be greater depending on motor.  
^Weight shown is largest cataloged Open Drip-Proof motor.

Model Number	Motor HP	Fan RPM		Static Pressure in Inches wg									
				0	0.1	0.125	0.25	0.3	0.375	0.5	0.625	0.75	1
170-C	1/4	860	CFM	2572	2379	2330	2077	1961	1782	1416			
			BHP	0.172	0.187	0.191	0.208	0.214	0.223	0.228			
			Sones	9.7	9.6	9.5	9.2	9.1	9.1	9.1			
170-B	1/2	1140	CFM	3409	3263	3227	3043	2969	2857	2647	2428	2181	1457
			BHP	0.4	0.421	0.426	0.45	0.46	0.473	0.494	0.514	0.532	0.488
			Sones	16.3	16.2	16.2	16.1	16.1	16.1	16.1	16.1	16.1	16.1

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



# Roof Downblast - Direct Drive G-180



- Damper Size = 18 x 18 (457 x 457)
- Roof Opening = 20½ x 20½ (521 x 521)
- Shroud Thickness = 0.064 (1.6)
- Motor Cover Thickness = 0.040 (1.0)
- Curb Cap Thickness = 0.064 (1.6)
- ^Approximate Unit Weight = 142 lb. (64 kg)

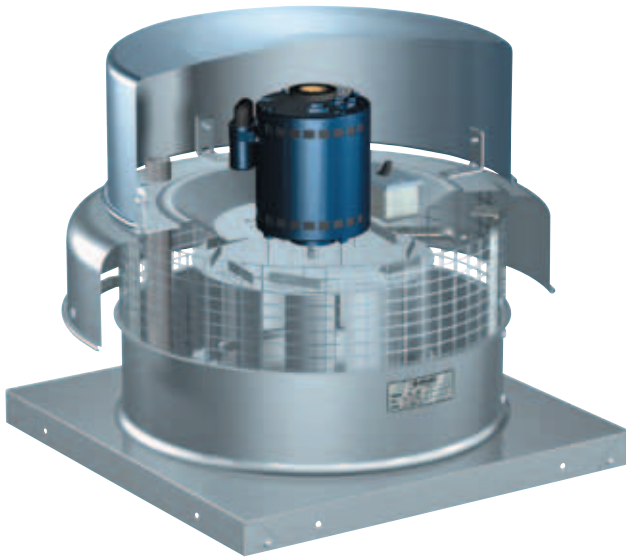
All dimensions in inches (millimeters). \*May be greater depending on motor.  
^Weight shown is largest cataloged Open Drip-Proof motor.

Model Number	Motor HP	Fan RPM		Static Pressure in Inches wg									
				0	0.1	0.125	0.25	0.3	0.375	0.5	0.625	0.75	1
180-C	1/3	860	CFM	3240	3053	3002	2733	2603	2390	1978	1438		
			BHP	0.24	0.262	0.268	0.296	0.306	0.321	0.332	0.316		
			Sones	12.1	12.4	12.4	12.5	12.5	12.3	11.9	11.9		
180-B	3/4	1140	CFM	4295	4156	4121	3933	3855	3731	3509	3241	2971	2246
			BHP	0.559	0.589	0.596	0.634	0.649	0.671	0.707	0.74	0.771	0.759
			Sones	19.5	19.4	19.4	19.3	19.5	19.7	19.8	20	20	21

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

# Direct Drive Specifications

## Model G



Spun aluminum downblast exhaust fans shall be direct drive-type. These fans are specifically designed for roof mounted applications exhausting relatively clean air. Performance capabilities range up to 4,300 cfm (7,306 m<sup>3</sup>/hr) and 1 in. wg (249 Pa) of static pressure. The maximum continuous operating temperature shall be 180°F (82°C). Model G fans are available in sixteen sizes with nominal wheel diameters ranging from 7 to 18 inches (178 to 457 mm) (060-180 unit sizes).

Each fan shall bear a permanently affixed manufacturer's engraved metal nameplate containing the model number and individual serial number.

All fans shall bear the AMCA Sound and Air Performance seal.

The fan wheel shall be centrifugal non-overloading backward-inclined, constructed of aluminum and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced in accordance to AMCA Standard 204-05.

For models G-060 through G-090, fan shall have sleeve bearing motors, carefully matched to the fan load, and furnished at specified voltage, phase and enclosure. For models G-095 through G-180, motors shall be heavy-duty ball bearing-type, carefully matched to the fan load, and furnished at

the specified voltage, phase and enclosure. Models G-060 through G-095 have three speed motors as standard. Motors shall be mounted on true vibration isolators, out of the airstream. Fresh air for motor cooling shall be drawn into the motor compartment from an area free of discharge contaminants. Motors shall be readily accessible for maintenance. True vibration isolators shall be double-studded with no metal-to-metal contact. Each vibration isolator shall be sized to match the weight of each fan.

The fan housing shall consist of the motor cover, shroud, curb cap and lower windband, and shall be constructed of heavy-gauge aluminum. Housing shall have a rigid internal support structure and leakproof design. The fan shroud shall be one-piece with a rolled bead for extra strength which directs exhaust air downward. The lower windband shall be one-piece with formed edges for added strength and the curb cap shall include prepunched mounting holes to ensure correct attachment to the roof.

A disconnect switch is a positive electrical shutoff and shall be wired from the fan motor to a junction box installed within the motor compartment. Factory standard shall be a NEMA-1 disconnect switch with other NEMA rated options also available. Disconnect switches shall be factory mounted and/or shipped loose for field mounting.

Options and accessories shall include: curb extension, curb seal, dampers, finishes, hinge kit, hinge base, pressure probe, roof curbs, and tie-down points.

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

# High Wind and Hurricane Direct Drive Specifications

## Model G



Spun aluminum downblast exhaust fans shall be direct drive-type. These fans are specifically designed for roof mounted applications exhausting relatively clean air. Performance capabilities range up to 4,300 cfm (7,306  $m^3/hr$ ) and 1 in. wg (249 Pa) of static pressure. The maximum continuous operating temperature shall be 180°F (82°C). Model G fans are available in sixteen sizes with nominal wheel diameters ranging from 7 to 18 inches (178 to 457 mm) (060-180 unit sizes).

Each fan shall bear a permanently affixed manufacturer's engraved metal nameplate containing the model number and individual serial number.

All fans shall bear the AMCA Sound and Air Performance seal.

The fan wheel shall be centrifugal non-overloading backward-inclined, constructed of aluminum and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced in accordance to AMCA Standard 204-05.

For models G-060 through G-090, fan shall have sleeve bearing motors, carefully matched to the fan load, and furnished at specified voltage, phase and enclosure. For models G-095 through G-180, motors shall be heavy-duty ball bearing-type, carefully matched to the fan load, and furnished at the specified voltage, phase and enclosure. Models G-060 through G-095 have three speed motors as standard. Motors shall be mounted on true vibration isolators, out of the airstream. Fresh air for motor cooling shall be drawn into the motor compartment

from an area free of discharge contaminants. Motors shall be readily accessible for maintenance. True vibration isolators shall be double-studded with no metal-to-metal contact. Each vibration isolator shall be sized to match the weight of each fan.

The fan housing shall consist of the motor cover, shroud, curb cap and lower windband, and shall be constructed of heavy-gauge aluminum. Housing shall have a rigid internal support structure and leakproof design. The fan shroud shall be one-piece with a rolled bead for extra strength which directs exhaust air downward. The lower windband shall be one-piece with formed edges for added strength and the curb cap shall include prepunched mounting holes to ensure correct attachment to the roof.

A disconnect switch is a positive electrical shutoff and shall be wired from the fan motor to a junction box installed within the motor compartment. Factory standard shall be a NEMA-1 disconnect switch with other NEMA rated options also available. Disconnect switches shall be factory mounted and/or shipped loose for field mounting.

Fans shall meet all Greenheck wind load standards and shall contain the following third-party certifications:

- Miami-Dade NOA# 08-0519.02
- Licensed P.E. calculations shall be available for fan per ASCE 7-02 Minimum Design Loads for Buildings and Other Structures for exposure Class C, 60 foot building height, and a type II building.
- Fan shall be tested in accordance with ASTM E-330-02 Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference and Florida Building Code Test Protocol TAS-201, 202 and 203 at the ASCE 7-02 calculated design load.
- Licensed P.E. calculations for attachment of fan to curb shall be available for ASCE 7-02 determined design pressure.
- All calculations and testing shall be done by a state licensed P.E., and a certified test lab.

Fans shall be Greenheck model G with high wind resistant construction option and manufactured by Greenheck Fan Corporation in Schofield, Wisconsin, USA.