Centrifugal Ceiling Exhaust and Inline Cabinet Fans

Models SP and CSP

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Great things come in small packages, as do our **SP** ceiling exhaust fan and **CSP** inline cabinet fan models. Be assured when you buy any Greenheck product, it is a quality product at a **competitive price**. Plus, we guarantee our SP and CSP fans with a **three-year warranty**. We are your market leader for the most comprehensive ceiling and cabinet fan line in the market.

Typical Installations

- Multifamily housing
- Hotels
- Hospitals
- Schools
- Bathrooms
- Storage rooms

Benefits

- Industry leading sound levels
- Compact size
- Wide range of performance
- Available with EC motors for higher efficiency and more controllability
- Helps maintain acceptable Indoor Air Quality

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Ceiling and Cabinet Fans

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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)	Belt	Direct	Centrifugal	Propeller/Axial	Mixed Flow	Maximum Volume (cfm)	Maximum Static Pressure (in. wg)
SP		✓			✓	✓	✓	✓				✓								✓	✓			1,600	1
CSP		✓			✓			✓	✓			✓								✓	✓			3,800	1

SP fans are designed for ceiling mounted exhaust applications.

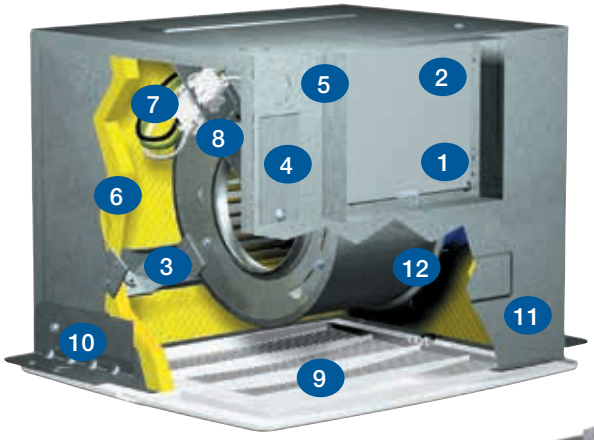
CSP fans are designed for inline supply or exhaust applications.

Model		Level of Construction	Description	Profile min. height	Sound min. sones	Air Volume max. cfm	UL Listing
Ceiling Fans	SP	VG	**Premium Plus Fan:** Highest performing energy efficient fan	7 inches *(178 mm)*	<0.3	110 cfm (187 m^3/hr)	UL/cUL Listed for above bathtub/ shower with GFCI branch protected circuit (sizes 110 and 80 only)
	SP	A-VG	**Premium Constant CFM Ceiling Fan:** 3 speed cfm selection	9 inches *(229 mm)*	<0.3	130 cfm (220 m^3/hr)	UL/cUL Listed for above bathtub/ shower with GFCI branch protected circuit
	SP	A	**Premium Ceiling Fan:** Widest selection to meet sound requirements. Select sizes available with Vari-Green motor.	9 inches *(229 mm)*	<0.3	1,600 cfm (2718 m^3/hr)	UL/cUL Listed for above bathtub/ shower with GFCI branch protected circuit (Sizes A390 and smaller)
	SP	B	**Deluxe Ceiling Fan:** Compact to fit most applications with quiet operation	7 inches *(178 mm)*	0.8	200 cfm (340 m^3/hr)	UL/cUL Listed for above bathtub/ shower with GFCI branch protected circuit
	SP	L	**Low Profile Ceiling Fan:** Designed to fit in 2x4 wall construction	3⅝ inches *(86 mm)*	1.0	84 cfm	UL/cUL Listed for above bathtub/ shower with GFCI branch protected circuit.
	SP	C	**Economy Ceiling Fan:** Designed for light commercial applications	3⅝ inches *(86 mm)*	3.0	50 cfm (85 m^3/hr)	UL Listed
Inline Fans	CSP	A	**Premium Inline Fan:** Widest selection and industry-leading low sound. Select sizes available with Vari-Green motor.	9 inches *(229 mm)*	0.8	3,775 cfm (6414 m^3/hr)	UL/cUL Listed
	CSP	B	**Deluxe Inline Fan:** Compact design to fit in small remote spaces	7 inches *(178 mm)*	1.5	185 cfm (314 m^3/hr)	UL/cUL Listed

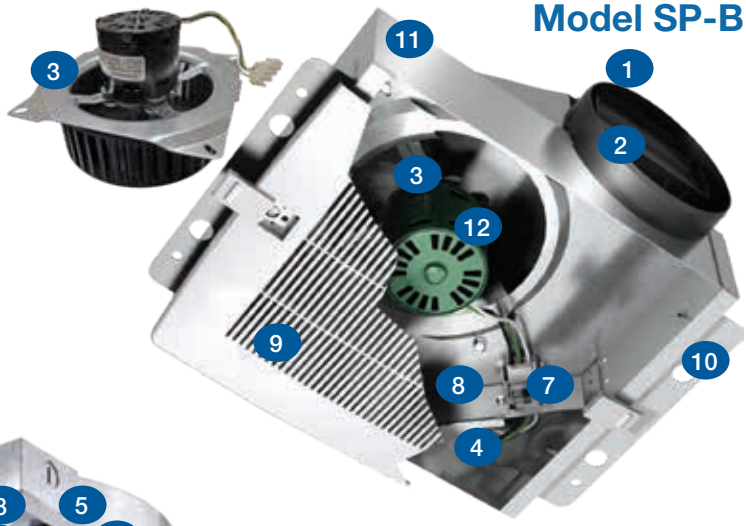
All dimensions are in inches *(millimeters)*

Standard Construction Features

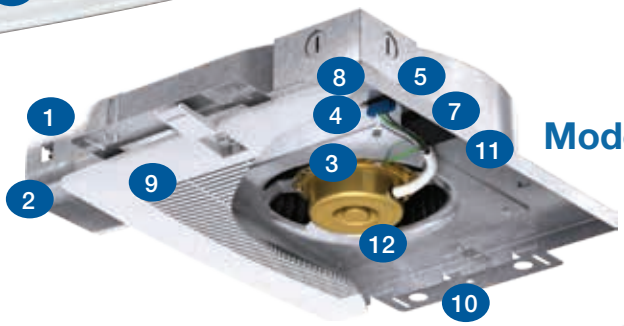
Model SP-A and SP-A-VG



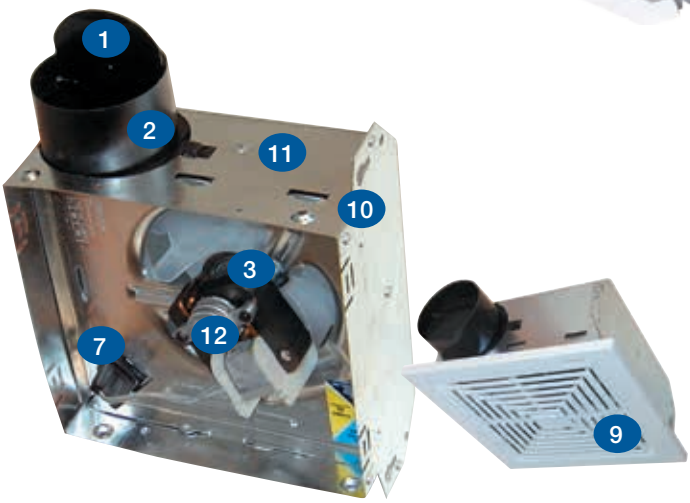
Model SP-B



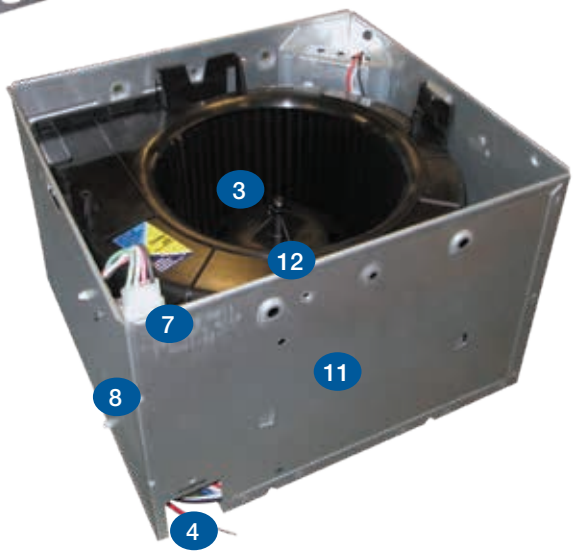
Model SP-L



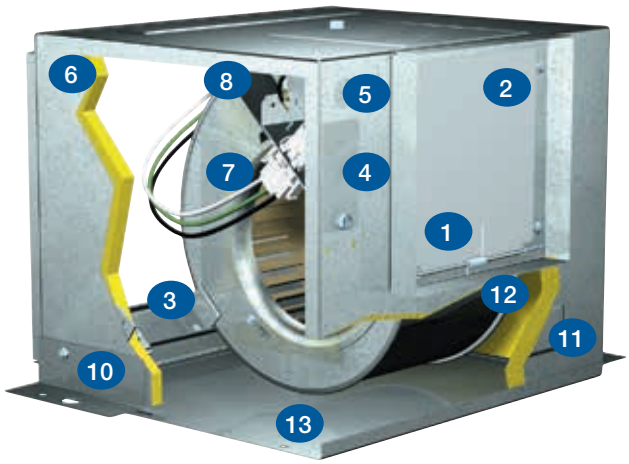
Model SP-C



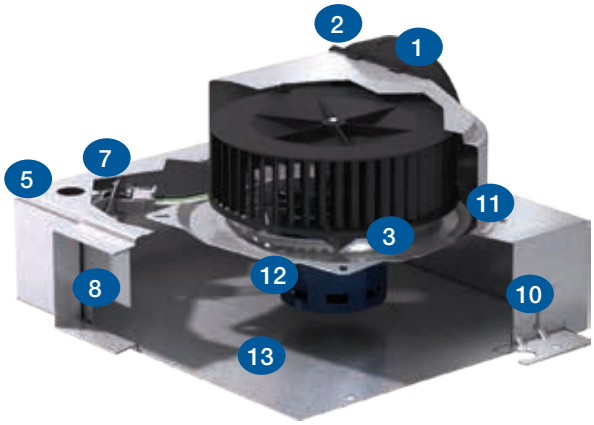
Model SP-VG



Model CSP-A



Model CSP-B



Standard Construction Features

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Number and Description			Specific Features for Each Model						
			SP-VG	SP-A	SP-B	SP-C	SP-L	CSP-A	CSP-B
1	Backdraft Damper	Durable plastic to reduce backdrafts		50-90	✓	✓	✓		✓
		Aluminium to reduce backdrafts	✓	110-1550				✓	
2	Outlet	Round - For quick and easy connections	✓	50-90 50-90-VG 90-130-VG	✓	✓			✓
		Square - For quick and easy connections		110-1550				✓	
		Oval - Metal construction for increased fire resistance					✓		
3	Power Pack	Removes quickly for maintenance/replacement		✓	✓	✓	✓	✓	✓
		Includes conversion from horizontal to vertical discharge		✓				✓	
4	Electrical Access	Vertical electrical access to eliminate drilling holes		✓	✓		Ceiling	✓	✓
		Horizontal electrical access					Wall		
		External electrical access to save installation time	✓	✓				✓	
5	Electrical Knockouts	Eliminates drilling holes (horizontal or vertical)	✓	✓	✓	✓	✓	✓	✓
6	Acoustic Insulation	Absorbs sound		✓				✓	
7	Disconnect	Servicing is quick and safe	✓	✓	✓	✓	✓	✓	✓
8	Electrical Junction Box	Large for easy wiring	✓	✓	✓	✓	✓	✓	✓
9	Grille	Concealed attachment screws securely fasten grille to housing for quiet, rattle free operation		✓	✓		✓		
10	Mounting Brackets	Adjustable for multiple installation conditions	✓	✓	✓	✓		✓	✓
		Integral for quick installation				✓	✓		
11	Housing	Embossed galvanized steel for rigidity	✓	✓	✓	✓	✓	✓	✓
		A low profile for height restricted areas	✓		✓	✓	✓		✓
12	Motors	Motors are compatible for use with speed controls and have thermal overload protection Domestic & International • 50 cycle, 220v or 240v • 60 cycle, 115v, 208v, 220v, 230v, & 277v options *(See CAPS or pg. 6 for availability)*	60 cycle, 115v only	✓	✓	60 cycle, 115v only	60 cycle, 115v only	✓	✓
13	Access Panel	Gain easy access to internal components once installed	✓	✓	✓	✓	✓	✓	✓
	Exclusive Electrical Wiring Feature	Electrical access cover located on the housing exterior. This feature permits external wiring without removing the power assembly, saving installation time and cost. Available on models SP-A and CSP-A.							
	Double-Wide Fans	Available for applications requiring 700 cfm or greater. Double-wide fans have two double-width forward-curved wheels, which are housed in separate scrolls, and driven by a single motor. Available on models SP-A and CSP-A. 							
	Vertical Discharge	Exhaust outlet duct installed in the optional vertical position. The power assembly must be rotated to match the duct adapter position. Available on SP-A and CSP-A models. 							

Power Ratings and Certifications

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Available Motor Voltage and Cycle Ratings						
Power Rating V/Hz						
Models Available (X)	115V/ 60Hz	115V/ 50Hz	220-240V/ 50Hz	220-240V/ 60Hz	277V	Vari-Green Motor Option
SP-A50	x	x	x	x		x
SP-A70	x	x	x	x		x
SP-A90	x	x	x	x		x
SP-A110	x	x	x	x	x	x
SP-A125	x				x	
SP-A130	x	x	x	x		x
SP-A190	x		x	x	x	
SP-A200	x					
SP-A250	x					
SP-A290	x		x	x		
SP-A390	x	x	x	x		
SP-A410	x					
SP-A510	x		x	x		x
SP-A510-VG	x	x				
SP-A700	x					
SP-A710	x					x
SP-A710-VG	x	x				
SP-A780	x		x	x		
SP-A900	x					
SP-A1050	x		x	x		
SP-A1410	x					
SP-A1550	x		x	x		
SP-B50	x					
SP-B70	x					
SP-B80	x					
SP-B90	x		x	x		
SP-B110	x		x	x	x	
SP-B150	x		x	x	x	
SP-B200	x		x	x	x	
SP-L50	x					
SP-L80	x					

*Note: All motors are rated for continuous use except model SP-A50.

Greenheck Fan Corporation certifies that the SP models 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. The SP models are not AMCA certified with 50 hertz motors.

Products that earn the ENERGY STAR® prevent greenhouse gas emissions by meeting strict energy efficiency guidelines set by the U.S. Environmental Protection Agency and the U.S. Department of Energy.

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Fans that are ENERGY STAR certified include: SP-A70, SP-A90, SP-A110, SP-A125, SP-A190, SP-A200, SP-A250, SP-B70, SP-B80, SP-B90, SP-L50, SP-L80, SP-80-VG, SP-80L-VG, SP-110-VG, SP-110L-VG, SP-A50-90-VG, SP-A90-130-VG, SP-A510-VG and SP-A710-VG

Available Motor Voltage and Cycle Ratings						
Power Rating V/Hz						
Models Available (X)	115V/ 60Hz	115V/ 50Hz	220-240V/ 50Hz	220-240V/ 60Hz	277V	Vari-Green Motor Option
SP-C50*	x					
SP-80	x					x
SP-80L	x					x
SP-110	x					x
SP-110L	x					x
CSP-A110	x		x	x	x	
CSP-A125	x				x	
CSP-A190	x		x	x	x	
CSP-A200	x					
CSP-A250	x					
CSP-A290	x		x	x		
CSP-A390	x	x	x	x		
CSP-A410	x					
CSP-A510	x		x	x		x
CSP-A700	x					
CSP-A710	x					x
CSP-A780	x		x	x		
CSP-A900	x					
CSP-A1050	x		x	x		
CSP-A1410	x					
CSP-A1550	x		x	x		
CSP-A1750	x					
CSP-A2150	x					
CSP-A3600	x		x	x		
CSP-B110	x		x	x	x	
CSP-B150	x		x	x	x	
CSP-B200	x		x	x	x	

*Note: All motors are rated for continuous use except model SP-A50.

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c UL us LISTED

Models SP and CSP are listed electric fans (UL/cUL 507). Ceiling Exhaust Fans are also UL Listed for above bathtub/ shower with GFCI branch protected circuit. File no. E33599. Note: SP/CSP fans are rated for direct contact with insulation.

VARI-GREEN by GREENHECK

Vari-Green® Motor

EC Motor Technology Information & Advantages - Greenheck's Vari-Green (VG) Electronically Commutated (EC) motor combines motor technology, controllability and energy-efficiency into one single low maintenance unit and is the industry's first fully controllable motor. The EC motor operates on AC power that is converted to DC – providing more efficient motor operation as compared to an AC operation. The controllability of the Vari-Green motor allows communication compatibility with a variable volume system. This allows speed adjustment of the motor to meet the needs of the system to exhaust air as needed and reduce over-exhausting conditioned air.

Available Vari-Green Controls and Models

Controls	Models					
	SP-80(L)-VG	SP-110(L)-VG	SP-A 50-90-VG	SP-A 90-130-VG	SP/CSP-A510-VG	SP/CSP-A710-VG
VOC					X	X
Temperature/ Humidity					X	X
Two-Speed					X	X
Remote Dial					X	X
Touch Remote					X	X
Constant Pressure					X	X
Transformer					X	X
Built-in Time Delay	X	X				
Built-in Two Speed	X	X				
Constant Airflow	X	X	X	X	X	X
0-10V DC					X	X
CFM Speed Selector			X	X		

See Greenheck's Vari-Green Motor and Vari-Green Controls brochures for more information.

Vari-Green® Controls

Air Quality – Control a Vari-Green motor via changes in Volatile Organic Compounds (VOC's). VOC's are gasses that are emitted from humans, building materials, perfumes, foods, and furniture off-gassing. Range is 0-2000 CO_2 ppm equivalent.

- Institutional facilities – Schools, court houses, hospitals; bathrooms, waiting rooms, cafeterias.
- Commercial buildings – Offices, conference rooms, bathrooms, break rooms.

Air Quality – Control a Vari-Green motor via changes in temperature, humidity, or both. Range is 32° to 120°F and 0 to 100% relative humidity.

- Multifamily structures – Apartments, condos, hotels; bathrooms, utility rooms.
- Commercial buildings – Office buildings; offices, conference rooms, utility rooms, bathrooms.

Transformer - Provides 24V power from the existing line voltage at the fan to the Vari-Green motor and controls. Dual voltage primary (120/240V) transformer provided with the fan.

Remote Dial or Touch Remote - Allows the user to manually adjust a fan's speed from a remote location and mounts to a wall using a 2x4 junction box. The 24VDC transformer, described above, is included with all orders. A wall cover plate is supplied.

- The Touch Remote includes a countdown timer to automatically turn the fan off after 10, 30, 60 or 90 minutes.
- Recommended for use in commercial buildings and restaurants.

Two-Speed Control with Integral Transformer - Control allows motor RPM to be set at two independent speeds (high or low). Meets minimum airflow requirements with the ability to bump up to high speed or meet maximum airflow requirements or reset to low speed for energy conservation.

Constant Pressure Control - Control Vari-Green motor via static (variable volume) or velocity (constant CFM) pressure on the inlet or outlet side of the fan. Optional, one or two, duct or room probes for use in:

- Multifamily structures - Apartments, condos, hotels; dryers, residential kitchens and bathrooms.
- Institutional facilities - Schools, prisons, multistory office buildings; bathrooms.

CFM Speed Selector - SP-A50-90-VG and SP-A90-130-VG utilize an internal switch to set the fan to run at one of three speeds. User to set 3-position switch to desired airflow.

Sound and Fan Selection
Things to know when sound is critical

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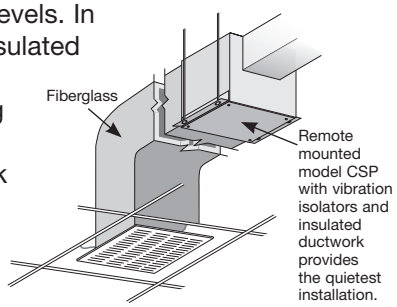
Sound Data
The sound data shown in this catalog has been presented to aid the system designer in selecting a fan which will meet the desired sound criteria. Sone levels have been included on the performance pages to provide a means of quickly evaluating the relative loudness of a fan selection.

What is a sone?
Sones are an internationally recognized unit of loudness. In practical terms, the loudness of one sone is equivalent to the sound of a quiet refrigerator measured from five feet away in an acoustically average room. A sone is a single number rating, indicating the inlet noise derived from the eight audible octave bands. Sones are a linear measurement of sound level. For example, a sound level of 10 sones is twice as loud as 5 sones.

Can radiated noise increase sound levels?
Radiated noise from fan housings can cause unacceptable sound levels on any brand of fan. The size of these fans allows them to be placed in areas where this noise will be transmitted to the conditioned space through walls or ceilings. Where possible, cabinet fans should be located in remote parts of the ventilation system.

Where should an SP or CSP fan be used?
Model SP and CSP fans are designed for the lowest possible sound levels. Forward-curved wheels, insulated housings and vibration isolators between the motor and housing contribute to quiet, efficient operation. Applied and installed as recommended, SP and CSP sound levels will fall well within the ranges shown in the Suggested Limits for Room Loudness chart. For applications where sound levels are critical, a remote mounted CSP with ductboard is recommended. Placement of SP and CSP fans should take into account the desired sound level at the location of the listener.

The compact size of the SP and CSP fans provides the system designer greater flexibility in locating these fans for lowest sound levels. In critical sound areas, insulated ductwork, flexible duct connections, or placing the fan in a remote section of the ductwork (away from the critical area) offers the best means of meeting desired sound levels.



Why are low sound levels important?
The main application of a ceiling exhaust fan under 200 cfm is typically to exhaust odor and humid air from a bathroom. If a bathroom fan is excessively loud, the occupant will seldom use it. Lack of proper ventilation may lead to a variety of concerns including damage to finishes, walls, ceilings and even health issues. Greenheck is proud to offer some of the quietest fans on the market.

Why is Indoor Air Quality (IAQ) important?
According to the United States Environmental Protection Agency (EPA), the concentration of some pollutants are often 2 to 5 times higher indoors than outdoors. The average American spends approximately 90% of their time indoors, so IAQ is extremely important. Poor moisture control may lead to mold and mildew issues that may cause health concerns. Seemingly harmless items such as building materials, personal care items and cleaning agents may contribute to poor IAQ. Greenheck ceiling exhaust fans are guaranteed to effectively exhaust moisture and odors from your bathroom.

Suggested Limits for Room Loudness

Sones	dBA	
1.3-4	32-48	Private homes (rural and suburban)
1.7-5	36-51	Conference rooms
2-6	38-54	Hotel rooms, libraries, movie theatres, executive offices
2.5-8	41-58	Schools and classrooms, hospital wards and operating rooms
3-9	44-60	Court rooms, museums, apartment houses, private homes (urban)
4-2	48-64	Restaurants, lobbies, general open offices, banks
5-15	51-67	Corridors and halls, cocktail lounges, washrooms and toilets
7-21	56-72	Hotel kitchens and laundries, supermarkets

Reprinted from AMCA Publication 302 (Application of Sone Ratings for Non-ducted Air Moving Devices, with room-sone-dBA correlations) with the written permission from AMCA International, Inc., 30 West University Drive, Arlington Heights, IL 60004-1893.

NOTE: Values above are for room loudness and are not sound ratings. Room loudness is the resulting level in a conditioned space after the acoustical qualities of the room have been accounted for.

When room sound levels are critical, such as in executive offices, conference rooms, hospital operating rooms, and school study areas, a CSP fan is the best choice. Shown here is a comparison of SP and CSP fans of the same size, with equal performance in typical installations. The CSP shows lower sone values.

Model	CFM	WG	FRPM	Sones
SP-A410	405	1/8	1000	3.0
CSP-A410	403	1/8	1000	1.5

Sone value on CSP is with insulated inlet duct.

ENERGY STAR®
Codes and Standards

ENERGY STAR® is a market-based partnership formed to reduce greenhouse gas emissions through energy efficiency and make it easier for consumers to identify energy-efficient products that offer savings, performance, features, and comfort.

To earn the ENERGY STAR label, products must meet strict energy-efficient standards set by the U.S. Environmental Protection Agency (EPA) for energy consumption, air and sound performance. Fan models that are ENERGY STAR certified are identified in this catalog.

Note: ENERGY STAR *is only for products 500 cfm or less.*

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Products that earn the ENERGY STAR® prevent greenhouse gas emissions by meeting strict energy efficiency guidelines set by the U.S. Environmental Protection Agency and the U.S. Department of Energy.

Fans that are ENERGY STAR certified include: SP-A70, SP-A90, SP-A110, SP-A125, SP-A190, SP-A200, SP-A250, SP-B70, SP-B80, SP-B90, SP-L50, SP-L80, SP-80-VG, SP-80L-VG, SP-110-VG, SP-110L-VG, SP-A50-90-VG, SP-A90-130-VG, SP-A510-VG and SP-A710-VG

Codes and Standards

ASHRAE 62.2 sets the minimum Indoor Air Quality (IAQ) standards in commercial and residential buildings. This standard can be used as the basis for model codes (IRC and ICC). The current version of this standard sets minimum ventilation rates. Select Greenheck fans are able to provide low speed continuous ventilation and cycle to high speed upon activation of a switch or a sensor.

California Title 24 states that each bathroom shall be mechanically ventilated and shall comply with the following: Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control. Humidity controls shall be capable of adjustment between a relative humidity range of less than or equal to 50 percent to a maximum of 80 percent.

Multiple Greenheck ceiling exhaust fans can be used to comply with these latest codes and standards.

Model Number Code

The model number code system is designed to completely identify the fan. The remainder of the model code is determined by the size and performance of the fan.

SP - A 50 FL - VG

Model
- SP - Silent Partner
- CSP - Cabinet Silent Partner

Level of Construction
- A - Premium unit; lowest sound, insulated housing
- B - Deluxe unit; low sound, low profile
- C - Economy unit; inexpensive

No letter designation identifies model as Premium Plus with a Vari-Green motor

- L - Low Profile, ceiling/wall mounted

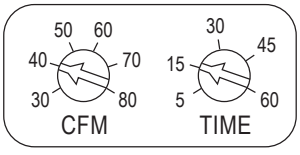
Nominal cfm at 0.10 inches static pressure

Light Options
- LED - Fan/Light (LED) Combination
- FL - Fan/Light (Fluorescent) Combination

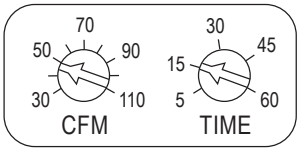
Vari-Green®
- EC Motor Option

Controls for Model SP Fans with Vari-Green Motor

Models SP-VG, page 10, utilize Vari-Green electronically commutated motors. These constant cfm motors are two speed capable. Fans can run at a continuous low speed and switch to high speed on demand. The SP-VG fans include a built-in time delay.



SP-80(L)-VG user-adjustable controls



SP-110(L)-VG user-adjustable controls

These Greenheck fan models can be used to comply with the following: ASHRAE 62.2, California Title 24 and Washington State Energy Code.

Models SP-A-VG, page 11, utilize Greenheck's Vari-Green electronically commutated motors. These constant cfm motors are controlled by a 3-position switch in the fan housing and allow the fan to run at one of three airflows.

Model SP-VG
Premium Ceiling Exhaust Fan

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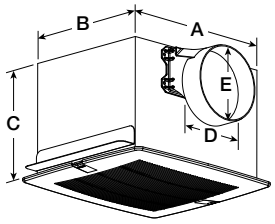
Model SP-VG

Model SP-VG Dimensions

Model	A	B	C	D	E	Designer Grille	Unit Weight
80(L)	11⅜ *(289)*	10½ *(267)*	7 ⅝ *(194)*	–	4 *(102)*	14 x 13 *(356 x 330)*	12 *(5)*
110(L)	11⅜ *(289)*	10½ *(267)*	7 ⅝ *(194)*	6 *(152)*	–	14 x 13 *(356 x 330)*	12 *(5)*

All dimensions are in inches (millimeters) and weight in pounds (kilograms).
Outlet connection width is 1 in. (25 mm). Mounting bracket width is 1½ in. (38 mm).
For complete dimensional information, see CAPS submittal drawings.

SP-VG 80, 110



ENERGY STAR
2100 HVI CERTIFIED
amca WORLDWIDE CERTIFIED RATINGS SOUND AND AIR PERFORMANCE
AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.
c UL us LISTED

*Amp and Watt draw is approximate and may vary based on motor manufacturer. Below performance is for 115V.

Model SP-VG Performance

Model	ENERGY STAR®	HVI	RPM	Amps*	Max. Input Watts*		CFM / Static Pressure in Inches wg									
							0	0.1	0.125	0.25	0.375	0.5	0.625	0.75	0.875	1.0
SP-80(L)-VG	☆	✦	935	0.1	6.1	CFM	80	80	80	80	78	66	38			
						Sones	<0.3	<0.3	<0.3	0.6	1.4	2.2	3.0			
SP-110(L)-VG	☆	✦	940	0.2	8.4	CFM	110	110	110	109	100	62	28			
						Sones	<0.3	<0.3	<0.3	1.4	2.3	3.0	3.6			

Performance certified is for model SP exhaust for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft damper. Speed (rpm) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in spherical fan sones at 5 ft (1.5m) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for installation type B: free inlet spherical fan sone levels.

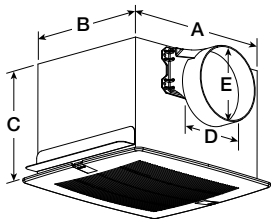
Model SP-A-VG

Model SP-A-VG Dimensions

Model	A	B	C	D	E	Designer Grille	Decorative Grille	Unit Weight
SP-A50-90-VG	13¼ *(337)*	10⅝ *(270)*	9 *(229)*	6 *(152)*		14⅞ x 13¼ *(378 x 337)*	15¼ *(387)* square	12 *(5)*
SP-A90-130-VG								

All dimensions are in inches (millimeters) and weight in pounds (kilograms).
Outlet connection width is 1 in. (25 mm). Mounting bracket width is 1½ in. (38 mm).
For complete dimensional information, see CAPS submittal drawings.

SP-A50-90-VG
SP-A90-130-VG



ENERGY STAR

AMCA WORLDWIDE CERTIFIED RATINGS — SOUND AND AIR PERFORMANCE — AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.

c UL us LISTED

*Amp and Watt draw is approximate and may vary based on motor manufacturer. Below performance is for 115V.

Model SP-A-VG Performance

Model	ENERGY STAR®	CFM Selection	RPM	Max Amps*	Max Watts*		CFM/Static Pressure in Inches wg								
							0	0.1	0.125	0.25	0.375	0.5	0.625	0.75	0.875
SP-A50-90-VG	☆	50	808	0.29	22.1	CFM	50	50	50	50	50	50	50	50	50
						Sones	<0.3	<0.3	0.6	0.7	1.5	2.0	2.0	2.5	2.5
						CFM/Watt*	56.5	20.7	17.3	9.9	6.5	5.4	4.0	3.4	2.9
						Watts*	1.2	3.2	3.7	5.5	8.3	10.9	14.3	17.9	21.7
		70	838	0.30	23.3	CFM	70	70	70	70	70	70	70	70	66
						Sones	<0.3	<0.3	0.4	0.9	1.4	2.0	2.0	3.0	2.5
						CFM/Watt*	56.2	19.7	17.4	10.4	7.2	5.4	4.2	3.5	3.0
						Watts*	1.6	4.3	4.8	7.6	10.8	14.3	17.7	22.1	22.1
		90	887	0.31	24.1	CFM	90	90	90	90	90	90	90	82	71
						Sones	<0.3	0.5	0.6	1.0	1.5	2.0	2.0	2.5	2.5
						CFM/Watt*	28.7	18.1	15.4	10.4	7.0	5.4	4.5	3.6	3.2
						Watts*	3.8	5.6	6.5	9.3	13.4	17.8	21.6	22.5	22.3
SP-A90-130-VG	☆	90	887	0.31	24.1	CFM	90	90	90	90	90	90	90	82	71
						Sones	<0.3	0.5	0.6	1.0	1.5	2.0	2.0	2.5	2.5
						CFM/Watt*	28.7	18.1	15.4	10.4	7.0	5.4	4.5	3.6	3.2
						Watts*	3.8	5.6	6.5	9.3	13.4	17.8	21.6	22.5	22.3
		110	960	0.31	24.2	CFM	110	110	110	110	110	110	102.5	82	67
						Sones	0.4	0.9	0.8	1.3	1.5	2.5	2.5	2.5	2.5
						CFM/Watt*	22.7	14.7	13.3	9.4	6.9	5.3	4.4	3.5	3.1
						Watts*	5.6	8.4	9.1	12.7	17.0	22.1	23.4	23.4	22.2
		130	1041	0.32	24.2	CFM	130	130	130	130	130	122.7	99.1	80.8	63.7
						Sones	1.2	1.4	1.5	2.0	2.5	3.0	2.5	2.5	2.5
						CFM/Watt*	16.2	12.0	11.1	8.5	6.2	5.1	4.2	3.4	3.0
						Watts*	9.1	11.7	12.7	16.4	22.4	23.9	23.5	23.5	22.4

Performance certified is for model SP exhaust for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft damper. Speed (rpm) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in spherical fan sones at 5 ft (1.5m) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for installation type B: free inlet spherical fan sone levels.

Model SP-A
Premium Ceiling Exhaust Fan

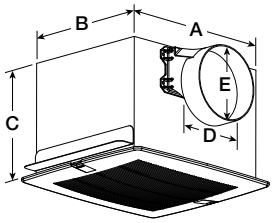
GREENHECK
Building Value in Air.

Model SP-A Dimensions

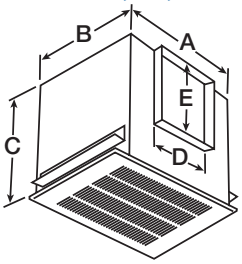
Model	A	B	C	D	E	Designer Grille	Decorative Grille	Unit Weight
50, 70, 90	13¼ (337)	10⅝ (270)	9 (229)	6 (152)		14⅞ x 13¼ (378 x 337)	15¼ (387) square	12 (5)
110, 125, 190	13¼ (337)	10⅝ (270)	9 (229)	8 (203)	6 (152)			17 (8)
200, 250, 290, 390	14 (356)	11⅞ (302)	11¼ (286)	8 (203)	8 (203)			24 (11)
410, 510, 510-VG, 710-VG	18 (457)	14⅜ (365)	14½ (368)	8 (203)	8 (203)	19⅜ x 16⅜ (492 x 416)	—	31 (14)
700	23⅝ (600)	11⅝ (295)	11⅝ (295)	19½ (495)	8 (203)	25⅛ x 13½ (638 x 343)		34 (15)
710, 780	18 (457)	14⅜ (365)	14½ (368)	10 (254)	8 (203)	19⅜ x 16⅜ (492 x 416)		34 (15)
900, 1050, 1410, 1550	23¾ (603)	14⅜ (365)	14½ (368)	17 7/16 (443)	8 (203)	25 x 16⅜ (635 x 416)		56 (25)

All dimensions are in inches (millimeters) and weight in pounds (kilograms).
Outlet connection width is 1 in. (25 mm). Mounting bracket width is 1½ in. (38 mm).
For complete dimensional information, see CAPS submittal drawings.

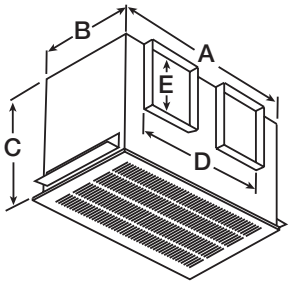
SP-A 50-90



SP-A 110-510, 510-VG, 710-VG, 710, 780



SP-A 700, 900-1550



ENERGY STAR
amca WORLDWIDE CERTIFIED RATINGS SOUND AND AIR PERFORMANCE
2100 HVI CERTIFIED
c UL US LISTED

Model SP-A
Premium Ceiling Exhaust Fan

GREENHECK
Building Value in Air.

◆Continuous Ventilation Compatible: Low speed continous operation is adjustable from 30 cfm to full rated fan speed
*Amp and Watt draw is approximate and may vary based on motor manufacturer. Below performance is for 115V.

Model SP-A Performance

Model	ENERGY STAR®	HVI	Continuous Ventilation Compatible	RPM	Amps*	Max. Input Watts*		CFM / Static Pressure in Inches wg									
								0	0.1	0.125	0.25	0.375	0.5	0.625	0.75	0.875	1.0
SP-A50		✦		790	0.33	25.9	CFM	89	66	61	31						
							Sones	0.4	0.6	0.6	0.9						
SP-A70	☆			790	0.14	15.6	CFM	88	74	71	54						
							Sones	<0.3	<0.3	<0.3	<0.3						
							CFM/Watt*	5.64	4.97	4.83	4.12						
							Watts*	15.6	14.9	14.7	13.1						
SP-A90	☆	✦	◆	870	0.14	16.9	CFM	114	101	98	80						
							Sones	<0.3	<0.3	<0.3	0.4						
							CFM/Watt*	6.75	6.20	6.95	5.33						
							Watts*	16.9	16.3	14.1	15						
SP-A110	☆		◆	950	0.16	19.4	CFM	130	119	115	98						
							Sones	<0.3	<0.3	<0.3	0.5						
							CFM/Watt*	6.70	6.33	6.15	5.54						
							Watts*	19.4	18.8	18.7	17.7						
SP-A125	☆			1010	0.19	23	CFM	144	130	127	109						
							Sones	0.4	0.4	0.4	0.6						
							CFM/Watt*	6.26	5.73	5.62	5.00						
							Watts*	23.0	22.7	22.6	21.8						
SP-A190	☆			1400	0.45	54.2	CFM	229	214	210	186	156					
							Sones	2.5	2.0	2.0	2.0	1.5					
							CFM/Watt*	4.23	4.08	4.05	3.78	3.36					
							Watts*	54.2	52.5	51.9	49.2	46.4					
SP-A200	☆			900	0.47	56.1	CFM	267	246	242	224	199	162	109	68		
							Sones	2.0	2.0	2.0	2.5	3.0	3.5	4.0	4.5		
							CFM/Watt*	4.76	4.42	4.34	4.10	3.75	3.19	2.29	1.49		
							Watts*	56.1	55.7	55.7	54.7	53.1	50.8	47.6	45.7		
SP-A250	☆			1000	0.56	67	CFM	294	274	271	250	230	201	147	92		
							Sones	2.5	2.5	2.5	3.0	3.5	4.0	5.0	5.0		
							CFM/Watt*	4.39	4.18	4.12	3.89	3.67	3.36	2.65	1.80		
							Watts*	67.0	65.6	65.8	64.2	62.6	59.8	55.4	51.2		
SP-A290				1050	0.72	80.7	CFM	315	293	287	257	231	207	175	124		
							Sones	2.5	2.5	2.5	3.0	3.0	3.5	3.5	4.5		
SP-A390				1350	1.34	135	CFM	410	395	391	368	345	325	307	279		
							Sones	4.5	4.5	4.5	4.5	5.0	5.0	5.5	5.5		
SP-A410				1000	1.74	121	CFM	443	413	405	351	306					
							Sones	3.5	3.0	3.0	3.0	3.5					
SP-A510				1070	3.30	224	CFM	557	512	501	439	392	325				
							Sones	5.0	4.5	4.5	4.5	4.5	4.0				
SP-A510-VG				850	0.75	49.1	CFM	399	354	341	255						
							Sones	4.5	4.0	3.9	3.4						
				1275	2.40	155	CFM	604	583	576	540	495	443	377			
							Sones	7.9	7.7	7.7	7.3	7.0	6.8	6.4			
SP-A700				1100	3.20	350	CFM	757	730	723	700	679	649	613	560	494	396
							Sones	5.0	5.0	5.0	5.5	5.5	6.0	6.0	6.5	6.5	6.5
SP-A710				1080	4.40	285	CFM	752	714	701	653	588	486	320			
							Sones	6.0	6.0	6.0	6.0	6.0	5.5	5.5			
SP-A710-VG				925	0.96	60.4	CFM	441	410	397	327						
							Sones	4.5	4.3	4.2	4.0						
				1450	3.39	230	CFM	709	685	677	656	621	580	534	483	399	
							Sones	9.6	9.4	9.2	9.0	8.7	8.6	8.3	8.1	7.8	
SP-A780				1600	3.30	348	CFM	812	782	775	741	704	665	625	581		
							Sones	8.5	8.5	8.5	8.0	8.0	8.0	8.0	8.0		
SP-A900				950	4.00	285	CFM	955	907	896	841	773	701				
							Sones	4.0	5.0	5.0	5.0	5.0	5.0				
SP-A1050				1095	6.30	420	CFM	1125	1059	1043	964	885	796	662			
							Sones	6.0	6.0	6.0	6.0	5.5	5.5	5.5			
SP-A1410				1450	7.40	786	CFM	1455	1415	1404	1353	1307	1262	1218	1174		
							Sones	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		
SP-A1550				1610	8.60	818	CFM	1607	1558	1558	1506	1449	1407	1369	1323		
							Sones	10.5	10.0	10.0	10.0	10.0	10.5	11.5	13.0		

Performance certified is for model SP exhaust for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft damper. Speed (rpm) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in spherical fan sones at 5 ft (1.5m) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for installation type B: free inlet spherical fan sone levels.

Model SP-B and SP-C
Deluxe and Standard Ceiling Exhaust Fan

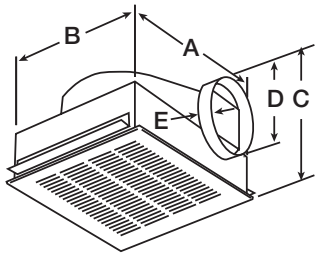
GREENHECK
Building Value in Air.

Model SP-B

Model SP-B Dimensions

Model	A	B	C*	D	E	Designer Grille	Decorative Grille	Unit Weight
50, 70, 80	13⅞ (352)	11½ (292)	7 (179)	6 (152)	1¼ (32)	14⅞ x 13¼ (378 x 337)	15¼ (387) square	9 (4)
90, 110, 150, 200	13⅞ (352)	11½ (292)	7 (179)	6 (152)	1¼ (32)			10 (5)

All dimensions are in inches (millimeters) and weight in pounds (kilograms). Mounting bracket width is 1½ in. (38 mm). For complete dimensional information, see CAPS submittal drawings.



◆Continuous Ventilation Compatible: Low speed continous operation is adjustable from 30 cfm to full rated fan speed
*Amp and Watt draw is approximate and may vary based on motor manufacturer. Below performance is for 115V.

Model SP-B Performance

Model	ENERGY STAR®	HVI	Continuous Ventilation Compatible	RPM	Amps*	Max. Input Watts*		CFM / Static Pressure in Inches wg									
								0	0.1	0.125	0.25	0.375	0.5	0.625	0.75	0.875	1.0
SP-B50		✦	◆	625	0.50	37.8	CFM	67	54	51	40	29					
							Sones	1.2	1.4	1.4	2.0	3.0					
SP-B70	☆	✦		675	0.16	17.1	CFM	89	75	71	54	35					
							Sones	0.8	0.8	0.9	1.4	2.0					
							CFM/Watt*	5.20	4.46	4.25	3.27	2.27					
							Watts*	17.10	16.80	16.70	16.50	15.41					
SP-B80	☆	✦	◆	900	0.16	18.6	CFM	94	81	77	62	46					
							Sones	0.8	0.9	0.9	1.3	2.0					
							CFM/Watt*	5.05	4.40	4.21	3.44	2.71					
							Watts*	18.60	18.40	18.30	18.00	16.95					
SP-B90	☆	✦		700	0.18	21.1	CFM	104	92	89	72	57					
							Sones	1.0	1.0	1.0	1.5	2.0					
							CFM/Watt*	4.93	4.40	4.24	3.48	2.88					
							Watts*	21.10	20.90	21.00	20.70	19.77					
SP-B110		✦	◆	950	1.14	80.2	CFM	133	114	110	97	95	94	91	85	72	50
							Sones	1.5	1.5	1.5	2.0	2.0	2.0	3.0	3.5	4.0	4.5
SP-B150				1050	1.70	128	CFM	160	156	155	154	152	149	147	138	123	92
							Sones	2.5	2.5	2.5	3.0	3.5	3.5	4.0	4.5	4.5	5.0
SP-B200				1100	2.20	172	CFM	197	195	194	191	187	184	181	166	151	128
							Sones	3.5	4.0	4.0	4.5	4.5	5.0	5.0	5.5	5.5	5.5

Performance certified is for model SP exhaust for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft damper. Speed (rpm) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in spherical fan sones at 5 ft (1.5m) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for installation type B: free inlet spherical fan sone levels.

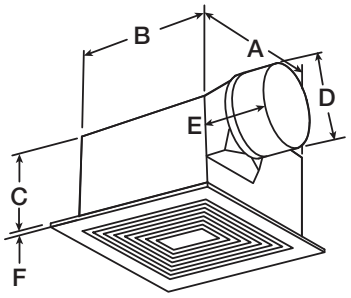
Model SP-C

Model SP-C Dimensions

Model	A	B	C	D	E	F	Decorative Grille	Unit Weight
50	7½ (191)	7½ (191)	3⅝ (92)	3 (76)	1⅝ (41)	1/2 (13)	9¼ x 9 (235 x 229)	5 (2)

All dimensions are in inches (millimeters) and weight in pounds (kilograms). For complete dimensional information, see CAPS submittal drawings.

*Note: Amp draw is approximate and may vary based on motor manufacturer.



Model SP-C Performance

Model	HVI	RPM	Amps*	Watts		CFM / Static Pressure in Inches wg						
						0	0.1	0.125	0.25	0.375	0.5	0.625
SP-C50	✦	1680	0.80	46	CFM	52	49	49	47	44	38	29
					Sones	3.0	3.0	3.0	3.0	3.5	4.0	4.0

Performance certified is for model SP exhaust for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft damper. Speed (rpm) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in spherical fan sones at 5 ft (1.5m) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for installation type B: free inlet spherical fan sone levels.

Model SP-L and CSP-B
Deluxe Inline Cabinet Fan

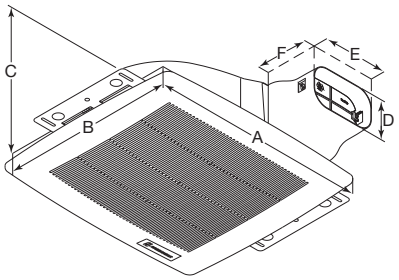
GREENHECK
Building Value in Air.

Model SP-L

Model SP-L Dimensions

Model	A	B	C	D	E	F	Designer Grille	Unit Weight
50, 80	13⅞ (352)	11½ (292)	3⅝ (92)	2⅝ (67)	4 7/16 (113)	3⅜ (86)	14⅞ x 13¼ (378 x 337)	9.5 (4)

All dimensions are in inches (millimeters) and weight in pounds (kilograms).
For complete dimensional information, see CAPS submittal drawings.



*Note: Amp and watt draw is approximate and may vary based on motor manufacturer. Below performance is for 115V.

Model SP-L Performance

Model	ENERGY STAR®	HVI	RPM	Amps*	Max. Input Watts*		CFM / Static Pressure in Inches wg						
							0	0.1	0.125	0.25	0.375	0.5	0.625
SP-L50	☆	✦	800	0.17	17.8	CFM	62	53	51	41	31	19	
						Sones	1.0	1.2	1.3	2.0	3.0	3.5	
						CFM/Watts	3.48	2.99	2.91	2.38	1.85	1.15	
						Watts	17.8	17.7	17.5	17.2	16.8	16.5	
SP-L80	☆	✦	850	0.23	26.8	CFM	86	78	76	67	57	46	33
						Sones	1.5	2.0	2.0	2.0	2.5	3.5	4.0
						CFM/Watts	3.21	2.92	2.85	2.54	2.19	1.78	1.30
						Watts	26.8	26.7	26.7	26.4	26.0	25.8	25.4

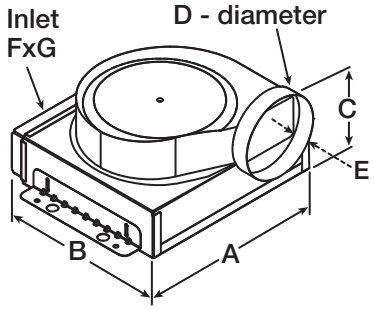
Performance certified is for model SP exhaust for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft damper. Speed (rpm) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in spherical fan sones at 5 ft (1.5m) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for installation type B: free inlet spherical fan sone levels.

Model CSP-B

Model CSP-B Dimensions

Model	A	B	C	D	E	F	G	Unit Weight
110, 150, 200	13⅞ (352)	11½ (292)	7 (178)	6 (152)	1¼ (32)	13½ (260)	3¼ (83)	10¼ (5)

All dimensions are in inches (millimeters) and weight in pounds (kilograms).
Inlet connection width is 1 inch (25 mm). Mounting bracket width is 1½ in. (38 mm).
For complete dimensional information, see CAPS submittal drawings.



*Amp and Watt draw is approximate and may vary based on motor manufacturer. Below performance is for 115V.

Model CSP-B Performance

Model	RPM	Amps*	Max. Input Watts*		CFM / Static Pressure in Inches wg							
					0	0.1	0.125	0.25	0.375	0.5	0.625	0.75
CSP-B110	950	1.14	80	CFM	103	100	100	98	97	96	94	86
				Sones	1.5	1.5	1.5	2.0	2.0	2.0	2.5	2.5
				Watts*	92.3	92.2	92.2	92.1	92.0	92.0	91.9	91.4
CSP-B150	1050	1.70	129	CFM	151	150	149	148	144	146	142	135
				Sones	2.0	2.0	2.0	2.0	2.5	2.5	3.0	3.0
				Watts*	145.0	145.0	145.0	145.0	144.9	144.9	144.9	144.7
CSP-B200	1100	2.20	173	CFM	186	184	184	182	181	179	175	170
				Sones	3.0	3.0	3.0	3.0	3.5	3.5	3.5	3.5
				Watts*	183.0	182.4	182.4	181.8	181.5	180.9	179.7	178.2

Performance certified is for model CSP inline for installation type D: Ducted inlet, Ducted outlet. Performance ratings include the effects of a backdraft damper. Speed (rpm) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in spherical fan sones at 5 ft (1.5m) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for installation type D: ducted inlet spherical fan sone levels. Ratings do not include the effect of duct end correction. Ratings are based on 10 ft of insulated duct.

Model CSP-A
Premium Inline Cabinet Fan

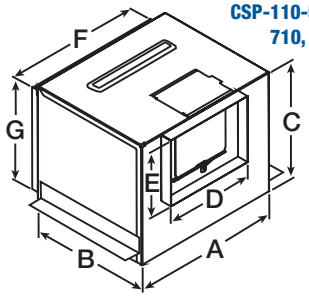
GREENHECK
Building Value in Air.

Model CSP-A Dimensions

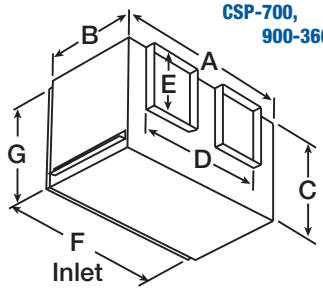
Model	A	B	C	D	E	F	G	Unit Weight
110, 125, 190	13¼ (337)	10⅝ (270)	9 (229)	8 (203)	6 (152)	12 (305)	9¼ (235)	16 (7)
200, 250, 290, 390	14 (356)	11⅞ (302)	11¼ (286)	8 (203)	8 (203)	12⅞ (327)	10 (254)	23 (10)
410, 510, 510-VG, 710-VG	18 (457)	14⅜ (365)	14½ (368)	8 (203)	8 (203)	16⅞ (429)	13¼ (337)	36 (16)
700	23⅝ (600)	11⅝ (295)	11⅝ (295)	19½ (495)	8 (203)	22⅝ (575)	10½ (267)	34 (15)
710, 780	18 (457)	14⅜ (365)	14½ (368)	10 (254)	8 (203)	16⅞ (429)	13¼ (337)	36 (16)
900, 1050, 1410, 1550	23¾ (603)	14⅜ (365)	14½ (368)	17 7/16 (443)	8 (203)	22⅝ (575)	13¼ (337)	59 (27)
1750, 2150	35 (889)	14¾ (375)	14¾ (375)	28 (711)	6 (152)	32¾ (832)	13 (330)	68 (31)
3600	45½ (1156)	16½ (419)	16½ (419)	40 (1016)	11 (279)	43¼ (1099)	14⅝ (371)	122 (55)

All dimensions are in inches (millimeters) and weight in pounds (kilograms). Inlet and outlet connection widths are 1 in. (25 mm). Mounting bracket width is 1½ in. (38 mm).
For complete dimensional information, see CAPS submittal drawings.

CSP-110-510, 510-VG, 710, 710-VG, 780



CSP-700, 900-3600



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Model CSP-A
Premium Inline Cabinet Fan

GREENHECK
Building Value in Air.

*Amp and Watt draw is approximate and may vary based on motor manufacturer. Below performance is for 115V.

Model CSP-A Performance

Model	RPM	Amps*	Max. Input Watts*		CFM / Static Pressure in Inches wg									
					0	0.1	0.125	0.25	0.375	0.5	0.625	0.75	0.875	1.0
CSP-A110	950	0.62	20	CFM	124	112	110	102	77					
				Sones	0.8	0.8	0.8	0.9	0.9					
				Watts*	20.3	20.0	19.9	19.7	18.4					
CSP-A125	1100	0.63	23	CFM	138	126	124	114	91					
				Sones	1.1	1.1	1.1	1.0	1.2					
				Watts*	22.5	22.3	22.2	22.1	21.3					
CSP-A190	1400	1.10	55	CFM	215	202	198	180	159	121				
				Sones	2.0	1.5	2.0	2.0	2.5	2.5				
				Watts*	55.1	54.1	53.7	51.9	49.8	46.0				
CSP-A200	900	0.43	58	CFM	254	231	226	203	178	145	109	70		
				Sones	0.6	0.4	0.5	0.9	1.0	1.3	1.5	1.5		
				Watts*	57.9	57.3	57.1	56.1	54.6	52.5	50.3	48.0		
CSP-A250	1000	0.79	67	CFM	266	246	241	221	205	187	165	132		
				Sones	0.9	1.0	1.0	2.0	2.5	3.0	2.5	2.5		
				Watts*	66.5	65.6	65.4	64.0	62.7	61.2	59.4	56.6		
CSP-A290	1050	0.71	102	CFM	318	299	292	265	248	229	201	144		
				Sones	1.1	1.2	1.3	2.0	2.5	3.5	3.0	3.0		
				Watts*	102.2	100.9	100.4	98.3	96.9	95.0	90.5	81.3		
CSP-A390	1350	1.33	161	CFM	412	400	397	382	363	339	324	309		
				Sones	2.0	2.0	2.0	2.5	3.0	4.0	4.5	4.5		
				Watts*	160.8	158.5	157.9	152.4	147.9	141.8	135.4	130.0		
CSP-A410	1000	1.87	132	CFM	447	441	403	364	317	217				
				Sones	1.5	1.5	1.5	2.0	2.0	2.0				
				Watts*	132.2	131.7	128.7	125.6	120.5	112.4				
CSP-A510	1070	3.11	218	CFM	545	514	506	464	405	324				
				Sones	2.5	2.0	2.0	2.0	2.0	2.5				
				Watts*	218.2	214.3	213.3	207.0	196.4	182.8				
CSP-A510-VG	850	0.86	55	CFM	428	358	338	238						
				Sones	0.8	0.6	0.5	0.3						
				Watts*	54.8	48.9	47.0	35.8						
	1275	2.40	160	CFM	621	590	583	540	479	414	328			
				Sones	1.5	1.4	1.4	1.3	1.2	1.5	1.7			
				Watts*	154.4	159.6	160.1	156.1	140.7	123.1	99.9			
CSP-A700	1100	3.20	352	CFM	766	755	752	739	726	702	678	635	549	418
				Sones	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.5	4.0
				Watts*	352.1	350.7	350.3	348.7	346.3	340.7	332.6	315.5	289.1	256.1
CSP-A710	1080	4.40	333	CFM	737	698	688	635	567	475	334			
				Sones	2.5	2.5	2.5	2.5	2.0	2.0	2.0			
				Watts*	332.5	324.1	322.0	310.8	295.8	277.4	255.2			
CSP-A710-VG	925	1.08	68	CFM	470	415	405	322						
				Sones	0.6	0.4	0.4	0.4						
				Watts*	67.8	61.2	60.6	49.0						
	1450	3.51	236	CFM	730	699	690	654	622	574	514	446	349	
				Sones	2.2	2.1	2.1	2.0	1.9	2.1	2.4	2.7	2.8	
				Watts*	236.0	234.2	231.4	223.1	218.9	200.8	180.0	156.8	119.9	
CSP-A780	1600	3.77	496	CFM	813	784	777	742	707	672	638	603	567	527
				Sones	3.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	3.5
				Watts*	496.4	493.0	492.2	488.0	467.5	453.1	441.8	423.1	407.2	
CSP-A900	950	4.87	335	CFM	908	852	841	782	715	631				
				Sones	1.4	1.4	1.4	2.0	2.5	3.0				
				Watts*	335.0	288.6	286.0	272.7	259.9	245.5				
CSP-A1050	1095	6.65	469	CFM	1182	1110	1093	1013	922	832	743			
				Sones	2.5	2.5	2.5	2.5	2.5	2.5	2.5			
				Watts*	468.8	455.9	453.3	440.8	424.9	411.0	399.2			
CSP-A1410	1450	7.80	871	CFM	1584	1543	1533	1483	1439	1395	1345	1293	1238	1181
				Sones	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0
				Watts*	870.8	837.9	829.9	788.2	751.0	728.3	696.3	661.8	628.8	595.9
CSP-A1550	1610	8.32	913	CFM	1672	1618	1604	1543	1484	1427	1367	1307	1240	1172
				Sones	5.0	4.5	4.5	4.5	4.5	4.0	4.0	4.5	4.5	4.5
				Watts*	912.8	877.4	868.4	829.3	802.9	778.0	744.3	710.7	679.1	647.4
CSP-A1750	1130	6.60	600	CFM	1842	1768	1749	1619	1464	1284	1032	772	484	
				Sones	5.0	5.0	5.0	4.5	4.0	4.0	3.5	3.0	3.0	
				Watts*	599.8	570.5	563.0	515.0	470.9	420.3	366.1	317.2	276.5	
CSP-A2150	1100	7.80	761	CFM	2249	2175	2156	2044	1900	1701	1424	1114		
				Sones	5.0	4.5	4.5	4.0	4.0	4.0	3.0	3.0		
				Watts*	760.8	731.5	724.0	679.7	622.7	544.0	459.7	382.3		
CSP-A3600	1100	7.10	1314	CFM	3778	3653	3622	3460	3280	3091	2844	2551	2232	1750
				Sones	5.0	5.0	5.0	5.0	4.5	4.0	4.0	4.0	3.5	3.5
				Watts*	1313.7	1253.3	1238.3	1160.0	1084.0	1041.5	971.1	871.9	766.5	649.5

Performance certified is for model CSP inline for installation type D: Ducted inlet, Ducted outlet. Performance ratings include the effects of a backdraft damper. Speed (rpm) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in spherical fan sones at 5 ft (1.5m) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for installation type D: ducted inlet spherical fan sone levels. Ratings do not include the effect of duct end correction. Ratings are based on 10 ft of insulated duct.

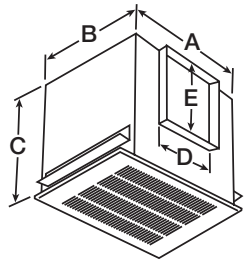
Model SP
50 Cycle Performance

GREENHECK
Building Value in Air.

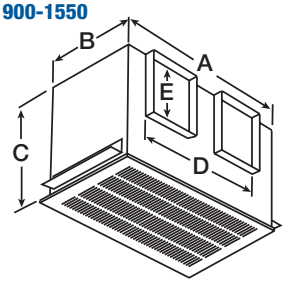
For uses in countries with 50 cycle (50 Hz) power, Greenheck offers the same reliability and performance for ceiling mounted exhaust fans model SP.

- Same dimensions and outlet options
- Performance shown in 50 cycle RPMs
- Full-line of grille and discharge accessories available

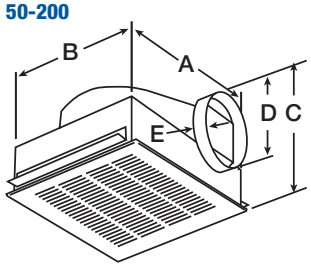
SP-A 110-510, 510-VG, 710, 710-VG, 780



SP-A (double-wide) 700, 900-1550



SP-B 50-200



Model SP Dimensions

SP-A	A	B	C	D	E	Designer Grille	Decorative Grille	Unit Weight
110, 125, 190	13¼ (337)	10⅝ (270)	9 (229)	8 (203)	6 (152)	14⅞ x 13¼ (378 x 337)	15¼ (387) square	17 (8)
200, 250, 290, 390	14 (356)	11⅞ (302)	11¼ (286)	8 (203)	8 (203)			24 (11)
410, 510, 510-VG, 710-VG	18 (457)	14⅜ (365)	14½ (368)	8 (203)	8 (203)	19⅜ x 16⅜ (492 x 416)	—	31 (14)
710, 780	18 (457)	14⅜ (365)	14½ (368)	10 (254)	8 (203)	19⅜ x 16⅜ (492 x 416)		34 (15)
900, 1050, 1410, 1550	23¾ (603)	14⅜ (365)	14½ (368)	18¾ (476)	8 (203)	25 x 16⅜ (635 x 416)		56 (25)

Outlet connection width is 1 in. (25 mm). Mounting bracket width is 1½ in. (38 mm).

SP-B	A	B	C	D	E	Designer Grille	Decorative Grille	Unit Weight
50, 70, 80	13⅞ (352)	11½ (292)	7 (178)	6 (152)	1¼ (32)	14⅞ x 13¼ (378 x 337)	15¼ (387) square	9 (4)
90, 110, 150, 200	13⅞ (352)	11½ (292)	7 (152)	6 (152)	1¼ (32)	14⅞ x 13¼ (378 x 337)		10 (5)

All dimensions are in inches (millimeters) and weight in pounds (kilograms). Mounting bracket width is 1½ in. (38 mm). For complete dimensional information, see CAPS submittal drawings.

*Note: Amp and Watt draw is approximate and may vary based on motor manufacturer. Below performance is for 220-240V.

Model SP 50 Cycle Performance

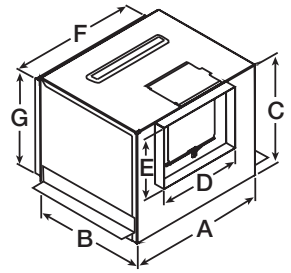
Model (50 Hertz Motor)	RPM	Amps*	Max. Input Watts*		CFM / Static Pressure in Inches of wg							
					0.000	0.050	0.100	0.125	0.150	0.250	0.375	0.500
SP-A110	950	0.29	49	CFM	119	115	110	106	103	88		
				Sones	1.3	1.3	1.2	1.2	1.3	1.6		
SP-A190	1400	0.65	113	CFM	216	206	197	192	187	167	133	
				Sones	3.2	3.0	2.8	2.9	2.9	3.1	3.4	
SP-A290	1050	0.36	81	CFM	329	315	302	296	290	262	222	164
				Sones	3.2	3.3	3.3	3.3	3.4	3.7	4.0	4.9
SP-A390	1350	0.67	135	CFM	410	402	395	392	387	368	345	325
				Sones	5.4	5.4	5.4	5.4	5.5	5.7	6.0	6.3
SP-A510	900	1.65	224	CFM	447	425	400	388	376	315	159	
				Sones	3.7	3.5	3.3	3.3	3.3	3.1	2.6	
SP-A510-VG	850	0.75	49	CFM	399	375	354	341	320	255		
				Sones	4.5	4.3	4.0	3.9	3.7	3.4		
	1275	2.40	155	CFM	604	595	583	576	567	540	495	443
				Sones	7.9	7.8	7.7	7.7	7.5	7.3	7.0	6.8
SP-A710-VG	925	0.96	60	CFM	441	425	410	397	379	327		
				Sones	4.5	4.4	4.3	4.2	4.2	4.0		
	1450	3.39	230	CFM	709	697	685	677	671	656	621	580
				Sones	9.6	9.5	9.4	9.2	9.2	9.0	8.7	8.6
SP-A780	1334	1.65	348	CFM	677	659	642	633	625	591	544	493
				Sones	8.8	8.9	8.8	8.7	8.6	8.2	8.1	8.1
SP-A1050	950	3.15	420	CFM	990	945	905	886	867	769	531	
				Sones	7.2	7.0	6.8	6.8	6.8	6.6	6.5	
SP-A1550	1340	4.3	818	CFM	1337	1314	1290	1279	1266	1211	1161	1112
				Sones	11.1	10.7	10.6	10.6	10.6	10.5	11.6	13.5
SP-B90	700	0.325	50	CFM	102	97	92	88	86	75	59	45
				Sones	1.9	2.2	2.6	2.7	2.7	3.0	3.6	4.1
SP-B110	950	0.57	80	CFM	133	124	114	110	107	97	95	94
				Sones	2.0	2.0	2.1	2.2	2.2	2.4	2.7	2.8
SP-B150	1050	0.85	129	CFM	160	158	156	155	155	154	152	149
				Sones	3.0	3.1	3.3	3.3	3.4	3.7	4.3	4.5
SP-B200	1100	1.1	173	CFM	197	196	195	194	194	191	187	184
				Sones	4.4	4.7	4.6	4.7	4.9	5.1	5.6	5.8

Model CSP
50 Cycle Performance

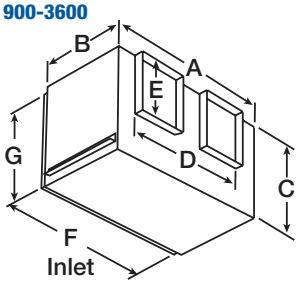
For uses in countries with 50 cycle (50 Hz) power, Greenheck offers the same reliability and performance for inline cabinet fans model CSP.

- Same dimensions and outlet options
- Performance shown in 50 cycle RPMs
- Full line of discharge accessories available

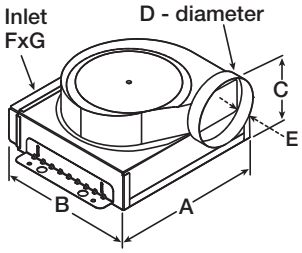
CSP-A 110-510, 510-VG, 710, 710-VG, 780



CSP-A (double wide) 700, 900-3600



CSP-B



Model CSP Dimensions

CSP-A	A	B	C	D	E	F	G	Unit Weight
110, 125, 190	13¼ (337)	10⅝ (270)	9 (229)	8 (203)	6 (152)	12 (305)	9 (235)	16 (7)
200, 250, 290, 390	14 (356)	11⅞ (302)	11¼ (286)	8 (203)	8 (203)	12⅞ (327)	10 (254)	23 (10)
410, 510, 510-VG, 710-VG	18 (457)	14⅜ (365)	14½ (368)	8 (203)	8 (203)	16⅞ (429)	13¼ (337)	36 (16)
700	23⅝ (600)	11⅝ (295)	11⅝ (295)	19½ (495)	8 (203)	22⅝ (575)	10½ (267)	34 (15)
710, 780	18 (457)	14⅜ (365)	14½ (368)	10 (254)	8 (203)	16⅞ (429)	13¼ (337)	36 (16)
900, 1050, 1410, 1550	23¾ (603)	14⅜ (365)	14½ (368)	18¾ (476)	8 (203)	22⅝ (575)	13¼ (337)	59 (27)
1750, 2150	35 (889)	14¾ (375)	14¾ (375)	28 (711)	6 (152)	32¾ (832)	13 (330)	68 (31)
3600	45½ (1156)	16½ (419)	16½ (419)	40 (1016)	11 (279)	43¼ (1099)	14⅝ (371)	122 (55)
CSP-B	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**Unit Weight**
110, 150, 200	13⅞ (352)	11½ (292)	7 (178)	6 (152)	1¼ (32)	10¼ (260)	3¼ (83)	10¼ (5)

All dimensions are in inches (millimeters) and weight in pounds (kilograms). Inlet and outlet connection widths are 1 in. (25 mm). Mounting bracket width is 1½ in. (38 mm). For complete dimensional information, see CAPS submittal drawings.

*Note: Amp and Watt draw is approximate and may vary based on motor manufacturer. Below performance is for 220-240V.

Model CSP 50 Cycle Performance

Model (50 Hertz Motor)	RPM	Amps*	Max Input Watts*		CFM / Static Pressure in Inches of wg								
					0.000	0.050	0.100	0.125	0.150	0.250	0.375	0.500	0.625
CSP-A110	950	0.31	51	CFM	124	116	112	110	109	102	77		
				Sones	1.1	1.1	1.1	1.1	1.1	1.3	1.3		
CSP-A190	1400	0.55	100	CFM	215	202	198	180	159	121			
				Sones	2.3	2.0	2.2	2.7	2.9	3.0			
CSP-A390	1350	0.67	144	CFM	412	400	397	382	363	339	324	309	
				Sones	2.8	2.7	2.8	3.2	3.7	4.7	5.5	6.5	
CSP-A510-VG	850	0.86	55	CFM	428	393	358	338	313	238			
				Sones	0.8	0.7	0.6	0.5	0.5	0.3			
	1275	2.40	160	CFM	621	605	590	583	572	540	479	414	328
				Sones	1.5	1.5	1.4	1.4	1.4	1.3	1.2	1.5	1.7
CSP-A710-VG	925	1.08	68	CFM	470	443	415	405	384	322			
				Sones	0.6	0.5	0.4	0.4	0.4	0.4			
	1450	3.51	236	CFM	730	715	699	690	681	654	622	574	514
				Sones	2.2	2.2	2.1	2.1	2.1	2.0	1.9	2.1	2.4
CSP-A780	1334	1.89	405	CFM	685	656	648	609	562	520	481		
				Sones	5.0	4.9	4.8	4.7	4.6	4.7	4.9		
CSP-A1050	950	3.33	455	CFM	1079	1031	982	957	934	841	655		
				Sones	6.3	6.3	6.0	5.9	5.9	6.0	5.5		
CSP-A1550	1340	4.16	830	CFM	1391	1326	1311	1240	1171	1098	1019	929	
				Sones	7.5	7.4	7.4	7.3	7.4	7.3	7.3	7.2	
CSP-B110	950	0.57	80	CFM	103	102	100	99	99	98	97	96	93
				Sones	2.0	1.9	2.0	2.1	2.1	2.3	2.6	2.7	3.1
CSP-B150	1050	0.85	129	CFM	151	150	149	149	149	148	148	145	142
				Sones	2.5	2.7	2.7	2.7	2.7	2.9	3.1	3.4	3.6
CSP-B200	1100	1.1	173	CFM	186	185	184	183	183	182	180	178	175
				Sones	3.4	3.7	3.6	3.7	3.7	4.0	4.1	4.1	4.3

Wheel Options

Greenheck's ceiling and cabinet fans (models SP and CSP) deliver high performance from a forward-curved wheel. The forward-curved wheel design offers both high-efficiency and low sound. Fan wheels are constructed of polypropylene or steel as standard, and most models offer an aluminum wheel option.

- Level A models utilize steel or polypropylene (standard) wheel construction depending on size.
- Level B and L models are standard with a polypropylene wheel.

Polypropylene

Steel

Aluminum

SP-B Replacement Power Packs

Save installation and down time by replacing the entire power pack instead of individual components. Available as a replacement part on all current and previous SP-B models.

Contractor 4 Packs

Save installation time and labor by installing the housing first, then installing the internal components after the sheetrocking, plastering and finishing is done. Housings are packaged in one box, power assemblies and grilles are packaged in another box. Components are shipped to coincide with the phase of your project. (Model SP-B and SP-L series).

Grille Options

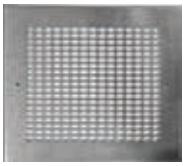
Designer (Standard)

Available in white polystyrene finish, with optional motion humidity or combination sensors. All optional sensors have time delay functionality as standard. Available on A50-A390 and B50-B200. *No grille mounted sensors available on the SP-L50 and SP-L80.*

Aluminum

White enamel finish standard for models A410-A1550. Optional for models A50-A390 and B50-B200.

Stainless Steel

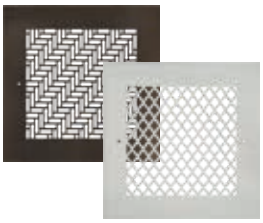


Polished stainless steel finish optional for models A50-A390 and B50-B200.

Decorative

White plastic finish, with or without light, motion detector with time delay. Optional for models A50-A390 and B50-B200.

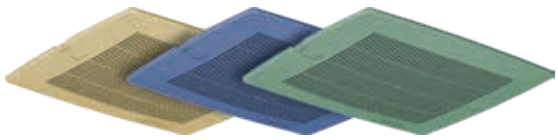
Architectural Grilles



Aluminum, powder coated paint. Available on A50-A390 and B50-200.

Custom

Molded polystyrene available in an array of colors. Includes all the same accessory options as the standard grilles. For more information on the many ways this grille option can be used, please contact your Greenheck representative.



Customized Grille Lens

Lenses can be customized with formed shapes or logos. Contact your Greenheck representative for details.

Lighted Grille Options

Greenheck's fan and light combinations include either a prismatic or a frosted lens and either compact fluorescent or LED lamps. Our unique light box is manufactured with a reflective material to increase the light given off by either type of lamp. *UL Listed for above bathtub and showers with GFCI branch protected circuit.*

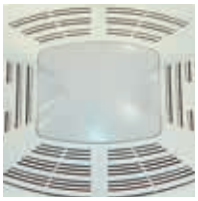
Model SP-A, sizes 50 - 390
Model SP-B, sizes 50 - 200

Note: When selecting a lighted grille it will add height to the fan assembly. See CAPS drawings for exact values.

Prismatic Lens

The prismatic lens design provides approximately 25% more light than a traditional frosted lens. The lens may be easily removed to replace light bulbs.

Frosted Lens



The frosted lens option is a traditional design which lets approximately 80% of light through the lens. The lens may be easily removed to replace light bulbs.

Note: Compact Fluorescent light bulbs are ENERGY STAR® *certified. Not all fan/lighted grille options are* ENERGY STAR® *certified. See CAPS for availability.*

Compact Fluorescent Lamps (CFL)

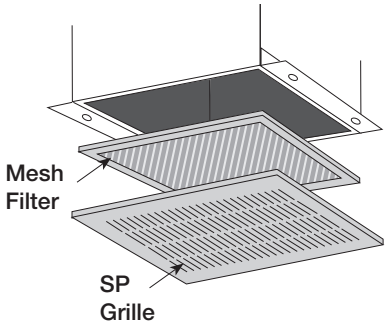
- GU24 Base
- 25,000 hour average rated life
- Complies with UL 1993 End-of-Life requirements
- Replacement bulbs can be found wherever standard light bulbs and fixtures are sold

LED

- GU24 Base
- 25,000 hour life
- Reflective light box
- 85% more efficient than incandescent

Filters

Fans used in most applications will collect airborne dirt on wheels and motors over time, even where air is not excessively dirty. Accumulations of dirt on the fan wheel will sharply reduce performance and cause imbalance. Dirt buildup on the motor can cause it to overheat. All of these conditions will shorten the life of the fan. To help reduce this accumulation, washable aluminum mesh filters are available to trap dirt before it enters the fan. These filters should be regularly cleaned to maintain performance. The Filter Loss Chart below shows the effect the filter will have on performance. To determine the added resistance, divide the desired cfm by the filter area (ft^2). This will give ft/min. Use this with the filter loss chart to get the added resistance. Filters reduce sound levels, in addition to reducing dirt accumulations on the motor and wheel.

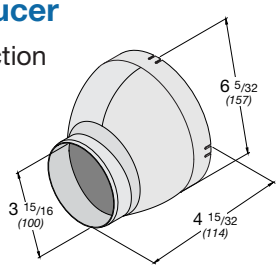


Filter Loss Chart			
SP Model	Filter Model		Filter Area (ft^2)
	Designer Grille	*Metal Grille	
SP-A50 - A190	F-200	F-210	0.739
SP-B50 - B200, A200 - A390	F-200	F-220	0.911
SP-A410 - A510, SP-A510-VG, SP-A710 - A780, SP-A710-VG	NA	F-250	1.518
SP-A900 - A155	NA	F-260	2.078

*Aluminium or Stainless Steel Grille.

Transition Duct Reducer

- Durable plastic construction

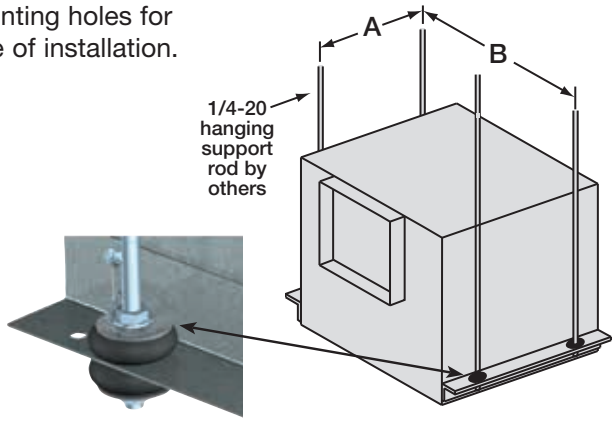


Model	For use with sizes:
473324* 6x4 Reducer	B50-B200
	A50-A90
	A110-A190
481734 4x3 Reducer	L50, L80

All dimensions shown in inches *(millimeters)*.
*Used in conjunction with RDC-6 for SP model sizes A110 thru A190

Hanging Vibration Isolators

Vibration isolator kits are available for suspended installations. Kits include all hardware necessary to mount one unit, with the exception of 1/4-20 threaded rod to be supplied by others. Fan mounting brackets include prepunched mounting holes for ease of installation.

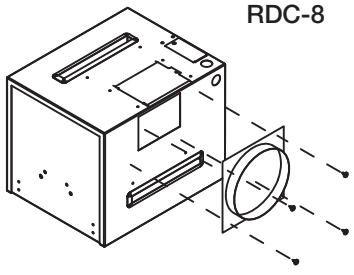


Unit Size	A	B
B50-B200	4½ *(114)*	15⅝ *(397)*
A50-A190	5½ *(140)*	15 *(381)*
A200-A390	6¾ *(171)*	15¾ *(400)*
A410, A510, A510-VG, A710, A710-VG, A780	9¼ *(235)*	19¾ *(502)*
A700	5½ *(140)*	25⅜ *(645)*
A900, A1050, A1410, A1550	9¼ *(235)*	25½ *(648)*
A1750, A2150	9¼ *(235)*	36¾ *(933)*
A3600	9¼ *(235)*	47¼ *(1200)*

All dimensions shown in inches *(millimeters)*.

Model RDC - Round Duct Connector

- Replaces the standard square discharge duct connector and damper
- Uses existing mounting holes
- RDC-6 includes a damper (polypropylene construction)



- RDC-8 does not include a damper (galvanized construction)

Model	Use with sizes:	Diameter
RDC-6	A110-A190	6 *(152)*
RDC-8	A200-A510	8 *(203)*

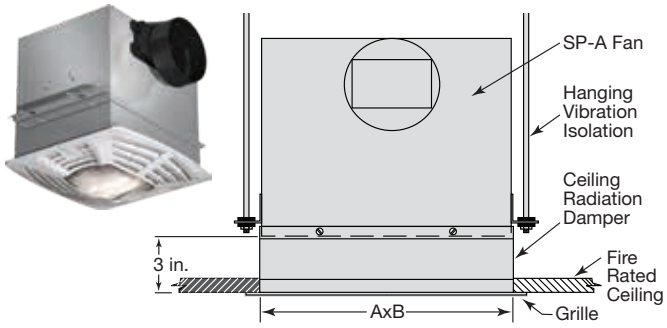
All dimensions shown in inches *(millimeters)*.

Ceiling Radiation Damper

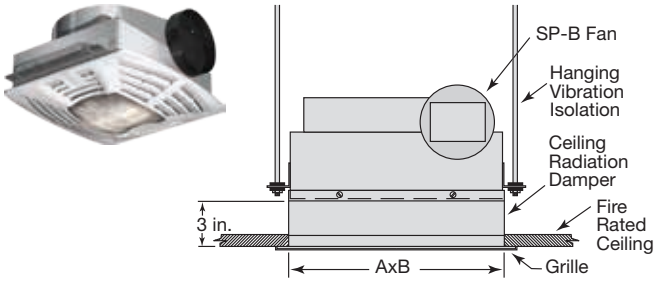
The National Fire Protection Association (NFPA) Standard 90A requires openings in fire rated ceiling assemblies to be protected by appropriately rated ceiling radiation dampers. As a result, many local codes require fans installed in fire rated ceilings to be protected by dampers which are insulated against both heat and flame.

Greenheck's ceiling radiation dampers are also Warnock Hersey Listed to go into a one hour combustible (wood) installation. Greenheck's UL/cUL Classified ceiling radiation dampers are rated for three hours of fire resistance in a steel/concrete installation.

Model SP-A

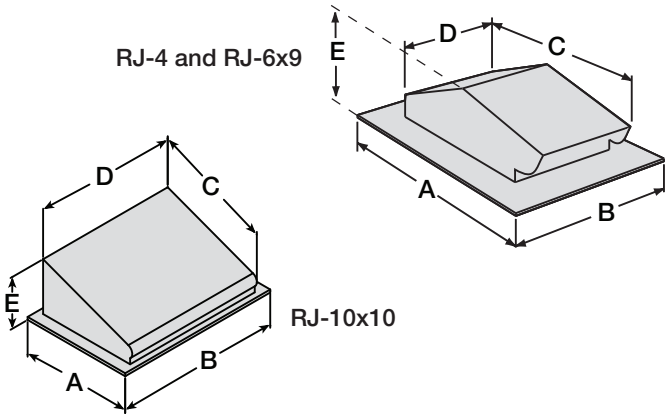


Model SP-B



SP Model	CRD	Length (A)	Width (B)	Height	UL	W.H.
A50 - A190	310	13½ *(343)*	11⅛ *(283)*	3 *(76)*	310 310L	310
B50 - B200 A200 - A390	320	14⅜ *(365)*	12¼ *(311)*	3 *(76)*	320 320L	320
A410 - A510 A510-VG, A710 - A780 A710-VG	350	18 7/16 *(468)*	14 15/16 *(379)*	3 *(76)*	350	350
A700	700	24 3/16 *(614)*	12¼ *(311)*	3 *(76)*	700	NA
A900 - A1550	360	24 3/16 *(614)*	14 15/16 *(379)*	3 *(76)*	360	360

All dimensions shown in inches *(millimeters)*. Add an "L" to all CRD models if fan & light combo is used. *CRD is approximately 1/4 inch (6 mm) larger than housing dimension. (See Installation, Operation and Maintenance Manual).

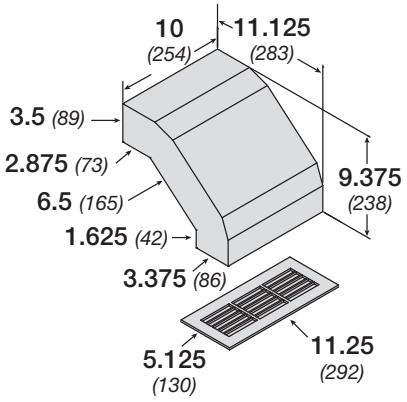


Model RJ - Pitched Roof Cap

- Steel construction with black enamel finish
- Integral flashing flange
- Built-in birdscreen and damper

Model	Use for sizes:	A	B	C	D	E	Throat
RJ-4	80, 80L, C50, B50-B80, L50, L80	11 *(279)*	9¼ *(235)*	8¼ *(210)*	5 5/16 *(135)*	4½ *(114)*	4 *(102)* diameter
RJ-6x9	110, 100L, B90-B200, A50-A390	18¾ *(476)*	14¼ *(362)*	14½ *(368)*	10⅜ *(264)*	6½ *(165)*	6 x 9 *(152 x 229)*
RJ-10x10	A410-A1050 A510-VG, A710-VG	18½ *(470)*	27½ *(699)*	15¾ *(400)*	23⅝ *(600)*	9½ *(241)*	10 x 10 *(254 x 254)*

All dimensions shown in inches *(millimeters)*.



All dimensions shown in inches *(millimeters)*.

Model EL-10x3 - Elbow Discharge with Grille

- Designed for installation under roof eaves
- Black epoxy finish (elbow and grille)
- Built-in damper
- SP and CSP sizes 50-290

Electrical Accessories

Dehumidistat

Dehumidistats are available as a wall mount switch or integrated to the fan. Each sensor automatically detects excess humidity to help control condensation.

Wall switch:

- Rated for 120V, 3A, 1/6 HP
- UL Listed

Integrated switch to fan:

- Available on 115V
  - SP-A50 thru SP-A390
  - SP-B50 thru SP-B200

Speed Controls

Speed controls may be used on model SP and CSP fans for manual adjustment of the fan's performance (for final system balancing) or to control the fan's output in confined spaces, such as conference or meeting rooms. The fan can be adjusted to 60% of design airflow with a speed control. This reduction in airflow and fan speed is also accompanied by a reduction in noise level. Solid state speed controls are available for a range of applications up to 15 amps. Speed controls can be used to operate more than one fan if the combined total amperage of the fans does not exceed the control rating.

Internal Mounting

SPEED CONTROL INTERNAL AND/OR EXTERNAL MOUNTING OPTIONS

Model Voltage Rating Amp Rating	FAN SIZES																							
	50	70	80	90	110	125	150	190	200	250	290	390	410	510	700	710	780	900	1050	1410	1550	1750	2150	3600
6WSSC 115 - 127V 6 Amp	I/E	I/E	I/E	I/E	I/E	I/E	I/E	I/E	I/E	I/E	I/E	I/E	I/E	I/E	I/E	I/E	I/E	I/E	NA	NA	NA	NA	NA	NA
10WSSC 115 - 127V 10 Amp	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	NA
15WSSC 115 - 127V 15 Amp	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	NA
5W240 220 - 240V 5 Amp	NA	NA	NA	*I/E	I/E	NA	I/E	I/E	*I/E	NA	I/E	I/E	NA	I/E	NA	NA	I/E	NA	I/E	NA	I/E	NA	NA	NA
8WSSC 220 - 240V 8 Amp	NA	NA	NA	*E	E	NA	E	E	*E	NA	E	E	NA	E	NA	NA	E	NA	E	NA	E	NA	NA	NA
5W277 227V 5 Amp	NA	NA	NA	NA	I/E	I/E	I/E	I/E	*I/E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KEY:	E = External mounted only													I/E = Available Internal and External Mounted										
	* Only available on the B-series (A-series is not available)													NA = Not available										

NOTES: Speed controllers are not available for 208V applications.
SP-C50 speed controller is shipped loose only.
All speed controller options listed in table are UL Listed.
Handy box sizes are 2x4 for all options above except 10WSSC and 15WSSC, which are 4x4.
Speed controller is not compatible with SP-A50-90-VG and SP-A90-130-VG

Thermostat

Reverse Acting

Adjustable for temperature ranges between 30°F to 110°F (-1°C to 43°C), 120V, 16 amp

Cooling

When the temperature in the space rises above the set point of 50°F to 90°F (10°C to 32°C) the contacts close and the thermostat will signal the fan to come on in order to exhaust air from the space.

- UL Approved
- CSA Certified
- 120V, 22 Amps

Electrical Accessories

Switches

Switches may be used on model SP and CSP fans to enable manual control of your fan or fan and light combination.

1 Function

Single pole rocker switch assembly

- Rated for 120-277V, 15A
- UL Listed

1 Function with Pilot Light

Single pole light combination switch assembly

- Rated for 120V, 15A
- UL Listed

2 Function

Two single pole combination switch assembly

- Rated for 120V, 15A
- UL Listed

Time Delay Switch

Time delay switches save energy by automatically turning off equipment. They may be used with SP and CSP fans or fan and light combinations for extended operating time of fan. Time delay switches act in the same manner as a standard switch, however, there is a delay of 10 to 60 minutes after the fan has been turned off.

Minimum Ventilation Control

This control contains a microprocessor that monitors the operation of the fan to make sure that the space is receiving the correct amount of ventilation per ASHRAE 62.2

- 120V, 2.5A
- UL Listed

Note: *All switch covers are standard white. Other colors available upon request.*

Motion Detectors

Motion detectors may be used with SP and CSP fans or fan and light combinations. Motion detectors use a passive infrared motion detector to automatically turn the fan on when a change in motion is sensed. They have a viewing area of 180 degrees, however they must be placed in the line-of-sight.

Grille Mounted

Available on models up through size SP-A390 and SP-B200.

- Rated for 115V
- UL Listed

Wall Mounted

For use on fan or lights. Available shipped loose.

- Rated for 115V
- UL Listed
- Requires 2x4 handy box
- Time delay can be set for 30 seconds to 30 minutes in 5 minute increments

Firestat

- 120V, 8 Amp to 120V, 4 Amp capacities
- Max element temperature of 350°F (177°C)
- Type II – 5 inch insertion
- Type III – 11½ inch insertion

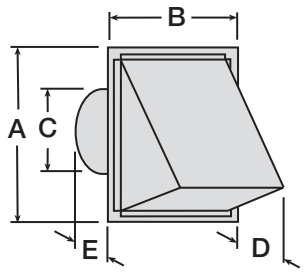
Transformers

Transformers are available for applications requiring voltage reduction. Selection is based on motor amperage. All transformers are shipped loose. See performance pages for motor amp ratings.

Models	Voltage Ratings	Amp Ratings
T-2.0	230/277V to 115	2.0 Amps
T-4.3	230/277V to 115	4.3 Amps
T-6.5	230/277V to 115	6.5 Amps
T-8.6	230/277V to 115	8.6 Amps

Model WC - Hooded Wall Cap
(Round Connection)

- Aluminum construction - aluminum finish
- For outside wall applications
- Built-in birdscreen (not available on WC-4) and damper

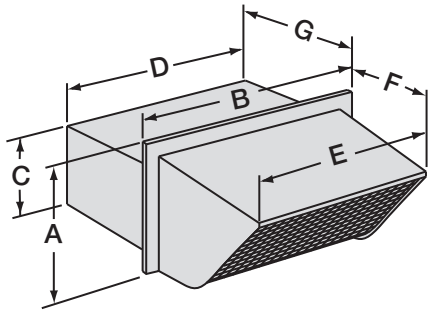


Model	Recommended Sizes	A	B	C	D	E
WC-4	C50, L50, L80	6½ *(165)*	6 *(152)*	4 *(101)*	4 *(101)*	5 *(127)*
WC-6	B50-B200, 80, 80L A50-A190, 110, 100L	8 *(203)*	8 *(203)*	6 *(152)*	4⅛ *(105)*	5 *(127)*
WC-8	A200-A510	11 *(279)*	11 *(279)*	8 *(203)*	5⅛ *(130)*	3½ *(89)*

All dimensions shown in inches *(millimeters)*.

Model WC - Hooded Wall Cap
(Square or Rectangular Connections)

- Steel construction with black enamel finish
- For outside wall applications
- Built-in birdscreen and damper

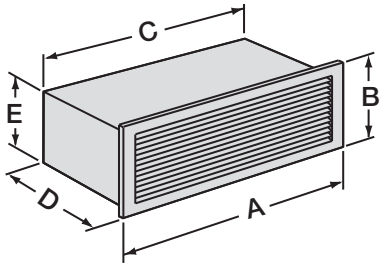


Model	Recommended Sizes	A	B	C	D	E	F	G
WC-10x3	50-290	5½ *(140)*	12¾ *(324)*	3½ *(89)*	10¼ *(260)*	11⅛ *(283)*	4¼ *(108)*	5 *(127)*
WC-8x8	200-510	10¼ *(260)*	10¼ *(260)*	8¼ *(210)*	8¼ *(210)*	8¼ *(210)*	6¾ *(171)*	5 *(127)*
WC-18x8	700-1550	10¼ *(260)*	20¼ *(514)*	8¼ *(210)*	18¼ *(464)*	18¼ *(464)*	6¾ *(171)*	5 *(127)*

All dimensions shown in inches *(millimeters)*.

Model WL - Wall Louvered Discharge

- Anodized aluminum grille
- Built-in damper
- Not recommended for exterior applications exposed to severe weather conditions. An external wall louver is recommended for such applications.

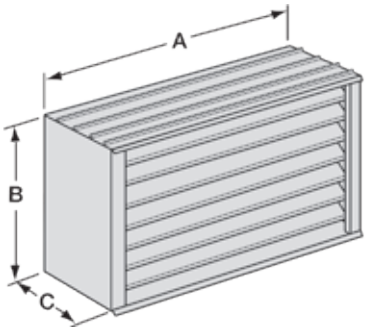


Model	Recommended Sizes	A	B	C	D	E
WL-10x3	50-290	12 *(305)*	5¼ *(133)*	10 *(254)*	7¾ *(197)*	3½ *(89)*
WL-18x6	390-1550	19¾ *(502)*	8 *(203)*	18 *(457)*	9 *(229)*	6 *(152)*

All dimensions shown in inches *(millimeters)*.

Model BVE - Brick Vent

- Designed for installation in masonry walls
- Anodized aluminum construction
- Built-in aluminum mesh insect screen

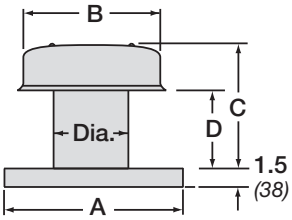


Model	Recommended Sizes	A	B	C
BVE808	50-290	8⅛ *(206)*	7¾ *(197)*	4 *(102)*
BVE128	390-510	12 *(305)*	7¾ *(197)*	4 *(102)*
BVE157	700-1050	15⅝ *(397)*	7¾ *(197)*	4 *(102)*

All dimensions shown in inches *(millimeters)*.

Model RCC-7 - Curb Cap

- Weathertight aluminum construction
- Integral birdscreen
- Built-in curb cap
- Requires roof curb

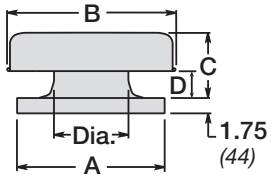


Model	For all sizes:	A	B	C	D	Throat Dia.
RCC-7	50-390	15 *(381)*	12 *(305)*	10 *(254)*	6⅜ *(162)*	7 *(178)*

All dimensions shown in inches *(millimeters)*.

Model GRS - Curb Cap

- All aluminum exterior construction
- Galvanized steel internal supports
- Integral birdscreen
- Built-in curb cap
- Requires roof curb

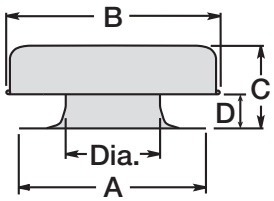


Model	For all sizes:	A	B	C	D	Throat Dia.
GRS-10	410-710	19 *(483)*	20½ *(521)*	7¾ *(197)*	2 *(51)*	10¼ *(260)*
GRS-12	780-1050	22 *(559)*	29 *(737)*	10 *(254)*	3½ *(89)*	12¼ *(311)*
GRS-16	1410-2150	26 *(660)*	29 *(737)*	11 *(279)*	4¼ *(108)*	16⅝ *(414)*
GRS-20	3600	30 *(762)*	35½ *(902)*	11¼ *(286)*	3¾ *(95)*	20⅝ *(516)*

All dimensions shown in inches *(millimeters)*.

Model GRSF - Flashing Flange

- All aluminum exterior construction
- Galvanized steel internal supports
- Integral birdscreen
- Built-in flashing flange

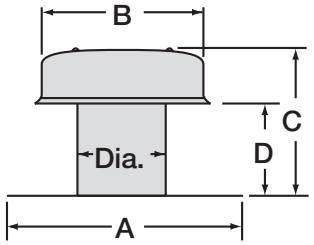


Model	For all sizes:	A	B	C	D	Throat Dia.
GRSF-10	410-710	23 *(584)*	20½ *(521)*	7¾ *(197)*	2 *(51)*	10¼ *(260)*
GRSF-12	780-1050	26 *(660)*	29 *(737)*	10 *(254)*	3½ *(89)*	12¼ *(311)*
GRSF-16	1410-2150	30 *(762)*	29 *(737)*	11 *(279)*	4¼ *(108)*	16⅝ *(414)*
GRSF-20	3600	34 *(864)*	35½ *(902)*	11¼ *(286)*	3¾ *(95)*	20⅝ *(516)*

All dimensions shown in inches *(millimeters)*.

Model RFC-7 - Flashing Flange

- Weathertight aluminum construction
- Integral birdscreen
- Built-in flashing flange

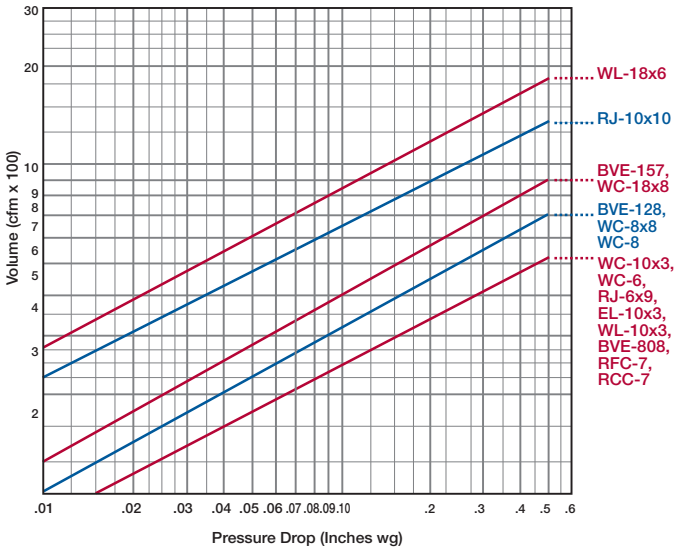


Model	For all sizes:	A	B	C	D	Throat Dia.
RFC-7	50-390	18 *(457)*	12 *(305)*	10 *(254)*	6⅜ *(162)*	7 *(178)*

All dimensions shown in inches *(millimeters)*.

Accessory Pressure Drops

The chart to the right can be used with all of the discharge accessories shown on pages 23, 26 and 27. Specific pressure drop values for these accessories must be included in total system calculations for proper fan selection.



Above accessories tested with 4 feet of inlet duct

Specifications
Vari-Green®

Vari-Green Motor

Motor to be an electronic commutation (EC) motor specifically designed for fan applications. AC induction type motors are not acceptable. Examples of unacceptable motors are: Shaded Pole, Permanent Split Capacitor (PSC), Split Phase, Capacitor Start and 3 phase induction type motors. Motors shall be permanently lubricated with heavy-duty ball bearings to match the fan load and prewired to the specific voltage and phase. Internal motor circuitry shall convert AC power supplied to the fan to DC power to operate the motor. Motor shall be speed controllable down to 20% of full speed (80% turndown). Speed shall be controlled by either a potentiometer dial mounted on the motor or by a 0-10 VDC signal. Motor shall be a minimum of 85% efficient at all speeds.

Vari-Green Control - Remote Dial

Remote Dial shall be a Vari-Green Control specifically designed to provide 0-10 volt DC signal to Greenheck's Vari-Green Motor.

Vari-Green Control - Two Speed

Two speed control shall be a Vari-Green Control specifically designed to allow the Vari-Green Motor to operate at two discrete speeds. Two speed control shall include two dials that may be set at any point between 0 and 10 volts DC and an integral transformer capable of reducing 115/208-240 volt AC power to 24 volt AC power.

Vari-Green Control – Indoor Air Quality – Temperature / Humidity

Control to be a packaged indoor air quality control designed to regulate fan speed based on level of temperature and/or relative humidity in a space. Control shall include a Proportional Integral Derivative (PID) feedback loop and shall have labeled terminal strips for easy wiring. Fan shall be direct drive including an electronic commutation (EC) Vari-Green Motor. Control package shall be Vari-Green Indoor Air Quality – Temperature / Humidity Control.

Vari-Green Control – Indoor Air Quality – VOC (Volatile Organic Compound)

Control to be a packaged indoor air quality control designed to regulate fan speed based on level of VOC concentration in a space. Control shall include a Proportional Integral Derivative (PID) feedback loop and shall have labeled terminal strips for easy wiring. Fan shall be direct drive including an electronic commutation (EC) Vari-Green Motor. Control package shall be Vari-Green Indoor Air Quality – VOC Control.

Vari-Green Control – Constant Pressure

Control to be a packaged constant pressure control designed to regulate fan speed based on demand. Control shall include a Proportional Integral Derivative (PID) feedback loop and shall have all components prewired to labeled terminal strips for easy wiring. System shall include the appropriate pressure tap and preset pressure transducer. Fan shall be direct drive including an electronic commutation (EC) Vari-Green Motor. Control package shall be Vari-Green Constant Pressure Control.

Indoor installations shall include pressure tap (duct or room) and control box with integral pressure transducer.

Outdoor installations shall include duct pressure tap, pressure transducer, and control box. Control box shall be prewired and in a NEMA-3R weather tight enclosure for mounting outdoors near the fan location.

LEED information

Greenheck became one of the first manufacturers in the Air Movement and Control industry to join the LEED/green movement when they joined the United States Green Building Council (USGBC) in 2005. Greenheck has been actively researching qualification requirements for our products to meet LEED credits and prerequisites.

The Vari-Green® motor significantly helps qualification efforts for the Energy and Atmosphere credits and prerequisites; specifically credit one, Optimize Energy Performance and prerequisite two, Minimum Energy Performance.

Vari-Green®
Model Specifications

Models SP-A50-90-VG and SP-A90-130-VG

Ceiling mounted exhaust fans shall be of the centrifugal direct drive type. The fan housing shall be constructed of heavy-gauge galvanized steel. The housing interior shall be lined with 0.5 inch acoustical insulation. The outlet duct collar shall include a plastic backdraft damper. Outlet shall be adaptable for horizontal or vertical discharge. The designer grille for sizes SP-A50 through SP-A390 shall be constructed of high-impact polystyrene.

The access for wiring shall be external. The motor disconnect shall be internal and of the plug-in type. The motor shall be mounted on vibration isolators. The fan wheel shall be of the forward-curved centrifugal type and dynamically balanced. The fan shall have a rocker switch with 3 cfm settings located internally. For the SP-A50-90-VG the settings are 50, 70, and 90 cfm. For the SP-A90-130-VG the settings are 90, 110, and 130 cfm. The fan will come preset at 70 cfm for the SP-A50-90-VG and 110 cfm for the SP-A90-130-VG. Upon installation, the switch shall be selected to the desired CFM. All fans shall bear the AMCA Certified Ratings program AMCA Sound and Air Performance seal and shall be UL/cUL Listed. Ceiling or wall mount fans shall be model SP as manufactured by Greenheck Fan Corporation, Schofield, Wisconsin.

Complete specifications, in Construction Specifications Institute (CSI) format, are available on greenheck.com.

Model Specifications

Models SP-A50 thru A1550

Ceiling mounted exhaust fans shall be of the centrifugal direct drive type. The fan housing shall be constructed of heavy-gauge galvanized steel. The housing interior shall be lined with 0.5 inch (13 mm) acoustical insulation. The outlet duct collar shall include a polypropylene backdraft damper on SP-A50 - SP-A90 and a spring loaded aluminum backdraft damper on SP-A110 and larger. Outlet shall be adaptable for horizontal or vertical discharge. The designer grille for sizes SP-A50 through SP-A390 shall be constructed of high-impact polystyrene and for sizes SP-A410 through SP-A1550, the grille shall be constructed of aluminum. Grilles shall be non-yellowing.

The access for wiring shall be external. The motor disconnect shall be internal and of the plug-in type. The motor shall be mounted on vibration isolators. The fan wheel shall be of the forward-curved centrifugal type and dynamically balanced. All fans shall bear the AMCA Certified Ratings program AMCA Sound and Air Performance seal and shall be UL/cUL Listed. Ceiling fans shall be model SP as manufactured by Greenheck Fan Corporation, Schofield, Wisconsin.

Model SP-A fans with 50 hertz motors are not AMCA certified.

Model SP-80(L)-VG, SP-110(L)-VG

Ceiling mounted exhaust fans shall be of the centrifugal direct drive type with an EC motor and overload protection. The fan housing shall be constructed of galvanized steel and have a low profile housing. The outlet duct collar shall have an aluminum backdraft damper. The fan shall be capable of built-in two-speed operation with a time delay.

The access for wiring shall be external. The motor disconnect shall be internal and of the plug-in type. The fan wheel shall be of the forward-curved centrifugal type and dynamically balanced. All fans shall bear the AMCA Certified Ratings program AMCA Sound and Air Performance Seal and shall be UL/cUL Listed.

Models SP-B50, B70, B80, B90, B110, B150, and B200

Ceiling mounted exhaust fans shall be of the centrifugal direct drive type. The fan housing shall be constructed of galvanized steel. The polypropylene duct collar shall be 6 inches (152 mm) in diameter and shall include a backdraft damper. The designer grille shall be constructed of non-yellowing high-impact polystyrene and attached to the housing with hidden attachment screws. The access for wiring shall be internal. The motor disconnect shall be internal and of the plug-in type.

The motor shall be mounted on vibration isolators. The fan wheel shall be of the forward-curved centrifugal type, constructed of calcium carbonate filled polypropylene and dynamically balanced. All fans shall bear the AMCA Certified Ratings program AMCA Sound and Air Performance Seal and shall be UL/cUL Listed. Ceiling fans shall be model SP-B50, B70, B80, B90, B110, B150 or B200 as manufactured by Greenheck Fan Corporation, Schofield, Wisconsin.

Model SP-B fans with 50 hertz motors are not AMCA certified.

Model Specifications

Model SP-C50

Ceiling mounted exhaust fans shall be of the centrifugal direct drive type. The fan housing shall be constructed of galvanized steel. The polypropylene duct collar shall be a sleeve for ease of connection to 3-inch (76 mm) and 4-inch (102 mm) round ductwork and shall include a backdraft damper. The grille shall be constructed of non-yellowing high-impact polystyrene and attached to the housing with torsion springs.

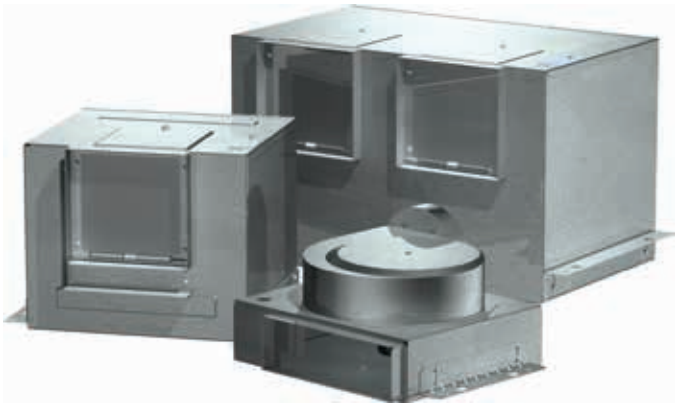
The wheels shall be constructed of high-strength polymer. The access for wiring shall be easily accessible internally. The motor disconnect shall be internal and of the plug-in type. All fans shall bear the AMCA Certified Ratings program AMCA Sound and Air Performance seal. Model SP-C50 shall be UL Listed. Fans shall be model SP-C50 as supplied by Greenheck Fan Corporation, Schofield, Wisconsin.

Model SP-C fans with 50 hertz motors are not AMCA certified.

Model SP-L50 and SP-L80

Wall or ceiling mounted exhaust fans shall be of the centrifugal direct drive type. The fan housing shall be constructed of galvanized steel. The galvanized duct collar shall be sized to fit a 4-inch diameter duct and shall include a backdraft damper. The grille shall be constructed of non-yellowing high-impact polystyrene and attached to the housing with hidden attachment screws. The access for wiring shall be internal. The motor disconnect shall be internal and of the plug-in type.

The fan wheel shall be of the forward-curved centrifugal type, constructed of calcium carbonate filled polypropylene and dynamically balanced. All fans shall bear the AMCA Certified Ratings program AMCA Sound and Air Performance Seal, shall be UL/cUL Listed and shall be Energy Star 4.0 qualified. Wall or ceiling mount fans shall be model SP-L50 or L80 as manufactured by Greenheck Fan Corporation, Schofield, Wisconsin.



Models CSP-A110 thru A3600

Duct mounted exhaust, supply or return air fans shall be of the centrifugal direct drive type. The fan housing shall be constructed of heavy-gauge galvanized steel. The housing interior shall be lined with 0.5 inch (13 mm) acoustical insulation. The outlet duct collar shall include an aluminum backdraft damper and shall be adaptable for horizontal or vertical discharge. The access for wiring shall be external. The motor disconnect shall be internal and of the plug-in type.

The motor shall be mounted on vibration isolators. The fan wheel shall be of the forward-curved centrifugal type and dynamically balanced. All fans shall bear the AMCA Certified Ratings program AMCA Air Performance Seal and shall be UL/cUL Listed. Ceiling fans shall be model CSP as manufactured by Greenheck Fan Corporation, Schofield, Wisconsin.

Model CSP-A fans with 50 hertz motors are not AMCA certified.

Models CSP-B110, B150 and B200

Duct mounted exhaust, supply or return air fans shall be of the centrifugal direct drive type. The fan housing shall be constructed of galvanized steel. The polypropylene duct collar shall be 6 inch (152 mm) in diameter to accept 6-inch (152 mm) round ductwork and shall include a backdraft damper. The access for wiring shall be internal. The motor disconnect shall be internal and of the plug-in type.

The motor shall be mounted on vibration isolators. The fan wheel shall be of the forward-curved centrifugal type, constructed of calcium carbonate filled polypropylene and dynamically balanced. All fans shall bear the AMCA Certified Ratings program AMCA Air Performance Seal and shall be UL/cUL Listed. Ceiling fans shall be model CSP-B110, B150 or B200 as manufactured by Greenheck Fan Corporation, Schofield, Wisconsin.

Model CSP-B fans with 50 hertz motors are not AMCA certified.

Design and Selection Support

Enjoy Greenheck's extraordinary service, before, during and after the sale.

Greenheck offers added value to our wide selection of top performing, energy-efficient products by providing several unique Greenheck service programs.

Our Quick Delivery Program ensures shipment of our in-stock products within 24 hours of placing your order. Our Quick Build made-to-order products can be produced in 1-3-5-10-15 or 25-day production cycles, depending upon their complexity.

Greenheck's free Computer Aided Product Selection program (CAPS), rated by many as the best in the industry, helps you conveniently and efficiently select the right products for the challenge at hand.

Greenheck has been Green for a long time! Our energy-saving products and ongoing corporate commitment to sustainability can help you qualify for LEED credits.

Our 3D service allows you to download, at no charge, easy-to-use AutoDesk® Revit® 3D drawings for many of our ventilation products.

Find out more about these special Greenheck services at greenheck.com

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.

U.S. GREEN BUILDING COUNCIL MEMBER

Prepared to Support Green Building Efforts

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