

# Vari-Green Motor

ELECTRICALLY COMMUTATED | CONTROLLABLE | EFFICIENT

Start saving now — with the new, low-cost, easy to control, electronically-commutated motor that offers high reliability and low maintenance.

The Greenheck Vari-Green motor blends technology, controllability and energy-efficiency into a low maintenance package that is changing the way the industry designs, specifies and operates air movement equipment.



 **GREENHECK**  
Building Value in Air.



Greenheck  
**GREEN**

Supporting Green Building  
Initiatives Worldwide



# Vari-Green Motor

THE FUTURE OF AIR MOVEMENT

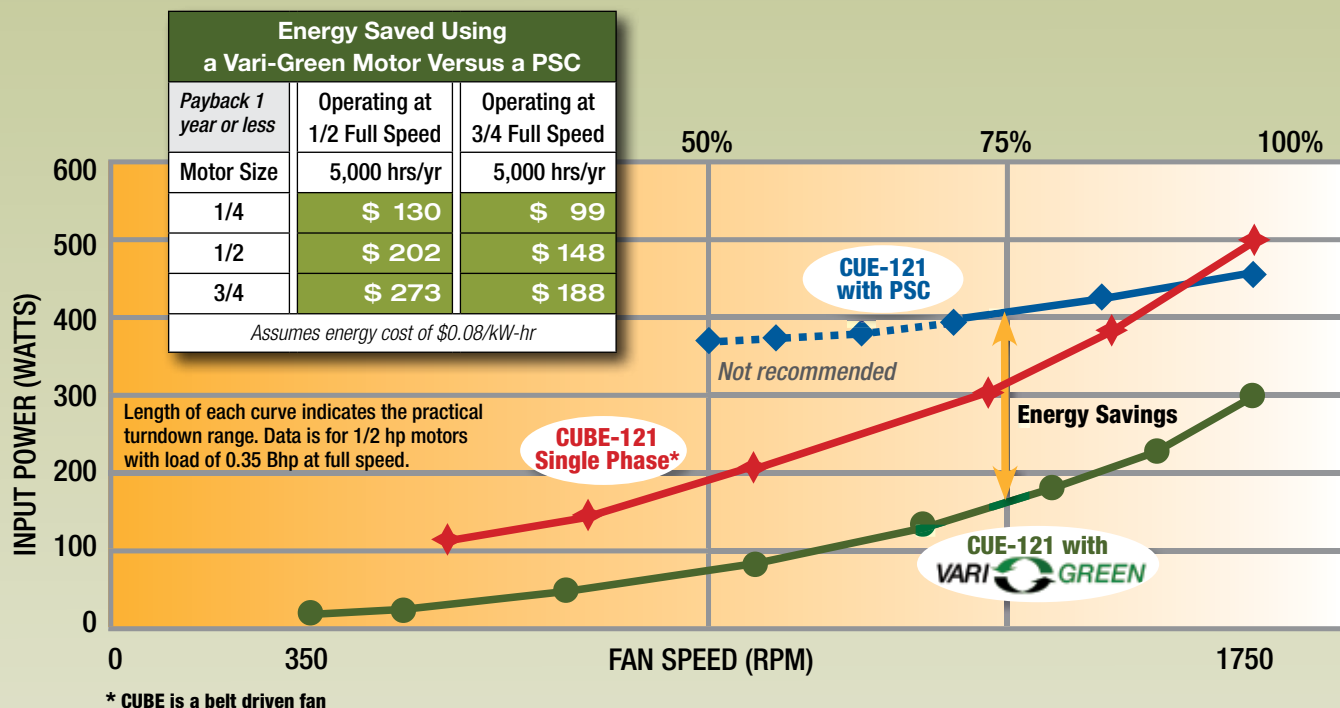


Greenheck's new high-efficiency Vari-Green motor is ideal for specification on Greenheck centrifugal fans, rooftop and sidewall exhaust fans, and inline exhaust and supply fans.



## Advantages

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### Better than a PSC

- Potentiometer dial pre-mounted on motor for speed control
- 80% usable turndown vs. 30%
- No speed controller to wire
- 20%-70% energy savings
- Full speed range for better adjustment

### More Efficient than Belts

- Potentiometer dial pre-mounted on motor for speed control
- No belt and pulley losses
- Higher efficiency motor
- 40% energy savings
- Lower up-front cost
- No maintenance required

### Easier than VFDs

- 0-10 volt control wires pre-installed in motor
- No VFD to buy or install
- 30% energy savings
- Lower up-front cost
- Eliminates stray current and carrier frequencies



## Speed Control Options

- 1 Motor mounted dial
- 2 Control wire inputs (0-10V)
- 3 Remote mounted dial

Direct Drive Fan Models Available with Vari-Green Motors	Models	Location					Mounting			Airflow		Application		Performance			
		Outdoor	Indoor	Base/Floor	Hanging	Wall	Exhaust	Supply	General/Clean Air	Contaminated Air	Maximum Volume (cfm)	Maximum Static Pressure (in. wg)	AMCA Sound & Air	UL/cUL 705 Listed	Maximum Fan Size		
CENTRIFUGAL EXHAUST	G	✓					✓		✓				2,875	1.5	✓	✓	143
CENTRIFUGAL UPBLAST & SIDEWALL EXHAUST	CUE	✓					✓		✓	✓			5,000	2.25	✓	✓	180
	CW	✓				✓	✓		✓	✓					✓	✓	
INLINE EXHAUST & SUPPLY	SQ		✓	✓	✓		✓	✓	✓	✓			2,400	1.375	✓	✓	160

### Reliability

With industry leading technology comes a new standard in motor reliability

- No shaft grounding required regardless of the turndown
- Bearing life is greater since the motor runs cooler the further it is turned down
- No voltage or current spikes as in VFD controlled motors

### Electronic Commutation

Electronic commutation uses electronic circuitry to control the motor's functions:

Solid state circuitry controls the output of power and the speed of rotation

Internal circuitry converts 115 volt single phase AC power to DC voltage for increased efficiencies and full controllability of speed

### Motor and Fan Sizes

Vari-Green motors come in three fractional horsepowers; 1/4, 1/2, 3/4 and are available in both 50 and 60 Hz power on models G, CUE, CW, and SQ.





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**green** – It's not just what we make.  
It's where we work. How we work. Who we are.

## LEED

Greenheck is driving the fan industry in the Green Building and LEED charge. As one of the first manufacturers in the air movement industry to join the United States Green Building Council in 2005, we have been actively researching how our products can be applied. This commitment to the green movement continues with product development that qualifies within the LEED rating system – it's prerequisites and credits. The Vari-Green motor is equipped to play a large role in the green building movement, specifically Prerequisite Two; Minimum Energy Performance and Credit One; Optimize Energy Performance.

## EC Motor Specification

Motor to be a DC electronic commutation type motor (ECM) 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 pre-wired 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 at the motor or by a 0-10 VDC signal. Motor shall be a minimum of 85% efficient at all speeds.

**for better air** – specify Greenheck fans.

To learn more about the Vari-Green Motor, contact your nearby Greenheck representative or visit our Web site to view the video at [greenheck.com/library](http://greenheck.com/library).



*Prepared to Support  
Green Building Efforts*

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