

# Vari-Green® Motor

EFFICIENT | RELIABLE | CONTROLLABLE

[greenheck.com/vari-green](http://greenheck.com/vari-green)

## Start saving now

— with the low-cost, easy to control, electronically commutated (EC) 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.



- > ENERGY SAVINGS
- > MAXIMIZE EFFICIENCY
- > ENERGY STAR QUALIFIED

# Vari-Green® Motor



## The future of air movement

Greenheck's EC Vari-Green (VG) motor combines motor technology, controllability and energy-efficiency into one single low-maintenance unit and is the industry's first fully controllable motor.

### Better than a Permanent Split Capacitor (PSC)

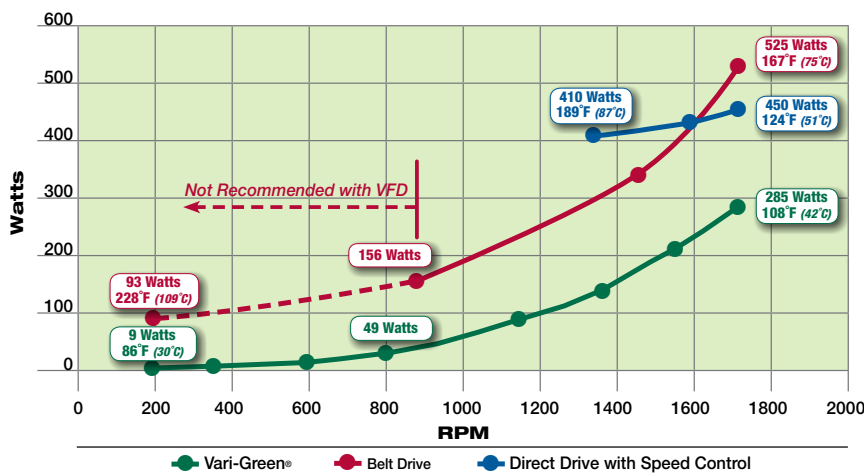
- Plug in potentiometer for speed control
- 80% usable turndown vs. 30%
- No speed controller to wire
- 20%-70% energy savings
- Full speed range for better adjustment

### More efficient than belts

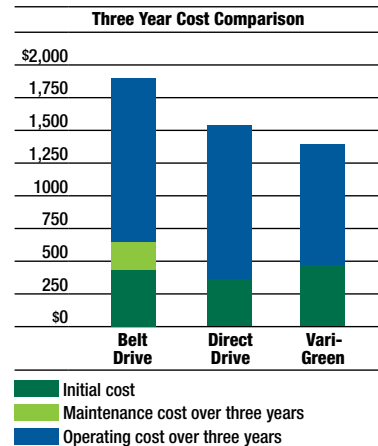
- Plug in potentiometer for speed control
- No belt and pulley losses
- Higher efficiency motor
- Comparable upfront cost
- No maintenance required

### Drive is integrated into the fan

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



### Constant Volume Life Cycle Analysis



Analysis is based on operating costs for a period of three years where the fans operate continuously at 1725 rpm, 24/7, with an energy rate of \$0.10 kWh. Maintenance on the belt drive motor is estimated at \$65/yr. Note: Example is based on a relative cost. Use and installation variables may produce different results.

## Reliability

With industry-leading technology comes a new standard in motor reliability.

- Motor life is greater since the motor runs cooler at lower speeds
- No voltage or current spikes as in VFD controlled induction motors

## Electronic Commutation

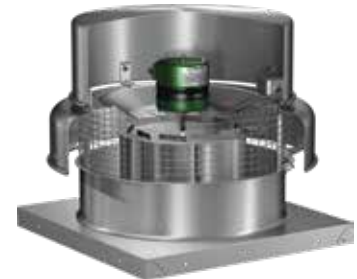
Electronic commutation uses electronic circuitry to control the motor's functions.

- Solid-state circuitry controls the output of power and the speed of rotation
- Internal circuitry converts AC voltage to DC voltage for increased efficiencies and offers full control over speed



*Belt Drive*

*Vari-Green Motor*



Motor Information				
HP	RPM	Voltage	Hz	Phase
1/15	1725	115, 208-240	50/60	1
1/10	1725	115, 208-240, 277	50/60	1
1/6	1725	115, 208-240, 277	50/60	1
1/4	1725	115, 208-240, 277	50/60	1
1/2	1725	115, 208-240, 277	50/60	1
3/4	1725	115, 208-240, 277	50/60	1
1	1750	115, 208-240, 277	50/60	1
1	1750	208-240, 380-480	50/60	3
2	1750	208-240	50/60	1
2	1750	208-240, 380-480	50/60	3
3	1750	208-240	50/60	1
3	1750	208-240, 380-480	50/60	3
5	1750	208-240, 380-480	50/60	3
7 1/2	1750	380-480	50/60	3
10	1750	380-480	50/60	3

Models Available with Vari-Green Motors	
Model	Motor HP's
AER	1/4 - 10
SE1	1/15 - 1
SE2	1/6 - 2
RDU	1 - 5
RE/RS	1 - 5
RCE/RCS	1 - 5
G	1/15 - 3
GB	1 - 10
CUE	1/15 - 7 1/2
CUBE	1 - 10
USF-100	1/4 - 5
APD/APM/APH	1 - 10
HPA	1 - 10
OPA	1 - 10
QEID / QEIDFJ	1 - 7 1/2 / 1
SQ	1/15 - 10
SP/CSP	1/15 - 1

## Vari-Green® Advantages

> EFFICIENT > RELIABLE > CONTROLLABLE

# Vari-Green® Motor

## Innovative, Energy Efficient

Greenheck's Vari-Green motor has revolutionized HVAC power technology making efficiency, reliability and cost-savings possible while preserving the environment.

Vari-Green motors are used widely on Greenheck products.

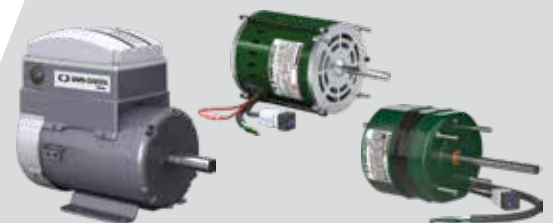


### Vari-Green Motor Specification

Motor shall be an electronic commutation (EC) motor or three phase AC induction motor with drive specifically designed for fan applications. Single phase AC induction type motors are not acceptable. Examples of unacceptable motors are: shaded pole, single-phase permanent split capacitor (PSC), split phase and capacitor start motors. Motors shall be prewired to the specific voltage and phase. Motor shall be speed controllable by either a potentiometer dial mounted on the motor or by a 0-10 VDC signal. Motor shall be a minimum of 85%.

### 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 videos at [greenheck.com/library](http://greenheck.com/library).



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