



# Building Up

## Get Revved About Motors!

All fan motors are not created equal. Choosing the right motor for a home's heating, ventilation and cooling (HVAC) system can make a huge difference in energy efficiency, operating costs, comfort and indoor air quality.



The Evergreen™ replacement ECM by Genteq®.

rely on permanent split capacitor (PSC) motors to operate fans and blowers. PSC motors essentially have three speeds and are not often used in constant fan mode due to airflow noise and cost of operation.

In contrast, energy-efficient ECMs have built-in constant airflow or constant torque controls, maintaining energy efficiency. In addition, a forced air furnace equipped with an ECM can operate with as little as 80 Watts of electricity (less than a standard light bulb) in constant fan mode, lowering annual energy usage and reducing operating costs.

“The key consumer benefits are energy savings, improved airflow control for consistent temperatures throughout the home, and quiet, constant fan operation,” said Christopher Mohalley, Genteq® certified master ECM trainer. “Homeowners can run the fan continuously at a low cost and take year-round advantage of indoor air quality products, such as high efficiency air filters and ultraviolet lights.”

ECM technology has been used in HVAC equipment for more than 20 years, but has advanced in recent years thanks to government tax credits and growing consumer demand for home energy efficiency. HVAC original equipment manufacturers (OEMs) integrate ECMs into their full line of heating and cooling systems. Companies like Genteq® have developed ECM replacement motors that can be retrofitted into existing HVAC systems.

“I think ECM fans will become the industry standard,” said Joe Randall, co-owner and president of Randall Brothers Heating and Air Conditioning, Inc., **continued**

One versatile product gaining ground in the HVAC industry is the electronically commutated motor (ECM). Integrated with new forced air furnaces or air handling systems on heat pumps or electric thermal storage units, ECMs offer many advantages over motors traditionally used in these applications.

ECMs are not your grandfather's motors. Conventional HVAC systems

## A Message from ...

New home construction and remodeling season is in full force, and we hope you and all area builders and contractors are staying busy and integrating energy efficiency into your projects. Technologies continuously advance, and Minnesota Power's Conservation Improvement Program (CIP), Power of One®, can help you stay ahead of the curve.

Our Participating Contractor Network continues to grow as more trade allies participate in program and product training, such as recent sessions on retrofitting heating, ventilation and air conditioning (HVAC) equipment with energy-efficient electronically commutated motors (ECMs). This issue of Building Up focuses on ECM technology and its multiple benefits to your customers and your bottom line. Remember to tell your customers that the ECM is inside.

We also have heightened the standards for Minnesota Power's Triple E New Construction program and created an interactive online tool—The Pyramid of Conservation: New Construction Version—as a roadmap to achieving these rigorous standards. Start by visiting [www.mnpower.com/TripleE](http://www.mnpower.com/TripleE).

Have a successful summer and continue to build your business on energy efficiency.

... the CIP Team

“I think ECM fans will become the industry standard. Thanks to education and program incentives, we now use them almost exclusively and recommend them to our customers.” Joe Randall, Randall Brothers Heating and Air Conditioning, Inc.





cont. and a 2010 Minnesota Power High Performer Contractor. “Thanks to education and program incentives, we now use them almost exclusively and recommend them to our customers.”

Rebates are available through Minnesota Power for qualified installations of both new integrated ECM applications and ECM replacement motors on existing furnaces. They must be installed by participating contractors that have completed training in ECM benefits, applications and proper installation. Minnesota Power and Genteq® recently held ECM training sessions in Duluth and Grand Rapids. Contact Andrea Dobbert at 1-800-677-8423 (opt. 2) for information on required contractor training to participate in the ECM replacement motor program.

“Minnesota Power has stepped up to the plate in promoting energy-efficient technologies and providing the proper training,” Randall said. “It continues to raise the bar in our industry, and the specialized training and rebates play a huge role in our company’s success.”

## Building a New Home? Know the New Triple E Standards!



Minnesota Power has updated its Triple E New Construction standards to help you build homes that are even more energy efficient, durable, comfortable, healthy

and marketable. Visit [www.mnpower.com/TripleE](http://www.mnpower.com/TripleE) to download a copy of the Triple E New Construction Guide. The new guide includes multiple changes to insulation R-value requirements for attics, walls, foundations, rim joists and slabs, plus updated standards for windows, heating, cooling, ventilation, air tightness and appliances. You also will find the *Pyramid of Conservation: New Construction Version*, an online interactive tool that will help you achieve Triple E certification and get up to \$2,000 in rebates for electrically heated homes.

## UPDATE

### Home Energy Analysis Plus Building Diagnostics

Understanding how your home uses energy is the first step toward wise energy-efficient improvements. Minnesota Power recently launched a Home Energy Analysis with Building Diagnostics program to help homeowners maximize their energy dollars. Customers begin by completing Your Home Energy Report online at [www.mnpower.com/portal](http://www.mnpower.com/portal). If it suggests a Home Energy Analysis, customers may request an in-home energy analysis with a qualified energy auditor. Homes with severe drafts, window condensation, ice dams and other symptoms might be candidates for Building Diagnostics. These include blower door testing and infrared thermal scans. Rebates are available for some services completed by program- and product-trained contractors. Watch for more information in future issues and online at [www.mnpower.com/HEA](http://www.mnpower.com/HEA).

## Featured Incentives

**EDUCATE YOUR CUSTOMERS** about Minnesota Power’s conservation incentives and build your business on energy efficiency:

### Some of the Heating and Cooling System Rebates include:

- » **Combo: New forced air furnace with integrated electronically commutated motor (ECM) and central air conditioning (CAC); not available with any other offer—\$375 rebate**
- » **New forced air furnace with integrated variable speed ECM—\$200 rebate**
- » **Replacement of existing PSC fan motor with a qualifying ECM in forced air furnace—\$100 rebate**
- » **Combo: Forced air ground source heat pump system (open or closed) with an air handler integrated ECM—Standard \$100-\$200 per ton GSHP rebate, plus \$200 rebate for ECM**
- » **Qualifying mini split ductless ASHP in homes with electricity as primary heat source—\$500 rebate**

Visit [www.mnpower.com/foundmoney](http://www.mnpower.com/foundmoney) for more information on rebates and energy-saving tools to help your customers make energy-saving investments and build your reputation as a business committed to delivering the benefits of energy efficiency.

## Contact Information



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