



GE ECM

By Regal-Beloit

News from

FOR IMMEDIATE RELEASE: March 29, 2006

For further information contact:

Bob Floyd
Floyd & Partners
260-469-3090
bob@floydandpartners.com

GE ECM Introduces the X13 Motor -- the Successor to PSC Motor Technology, Offers up to 200% greater efficiency.

2006 ACCA Annual Conference, San Jose, CA-- GE ECM by REGAL-BELOIT has unveiled its new high-efficiency residential HVAC blower motor designed to replace conventional PSC motor technology. Appropriately named **X13**, the new motor was created to help manufacturers meet recent federal regulations that mandated efficiency ratings of 13 SEER or better in all new air conditioners and heat pumps.

"Manufacturers turned to us for help in meeting the demands of the 13 SEER efficiency mandate," said Paul Selking, Industry Leader for Residential ECM Products. "In response, we created the X13, the brand name we've given to a new category of high-efficiency motors we refer to as **Standard ECM.**"

Because GE ECM anticipates greater efficiency requirements in the future, the company anticipates that X13 technology will eventually replace the older PSC motors.

“PSC motors have been the workhorse of the HVAC industry for 50 years. We expect, however, that within the next 10 years the standard ECM X13 will take its place,” he said.

Standard ECM X13 Yields Up to 200% Greater Efficiency

The new motor, which is based on previous generations of proven ECM technology, offers significantly greater operating efficiency. For example, in constant-fan mode, the X13 offers up to 200% greater efficiency than a conventional PSC motor and up to 33% greater efficiency at rated operating speed.

This superior performance is in part due to the X13's brushless DC design, which is inherently more efficient over a wide speed range than a PSC design. The other key is X13's permanent-magnet rotor, which, unlike a PSC with its conventional rotor, does not require current to be induced across the air gap between the rotor and stator -- a characteristic that results in efficiency losses as heat. In addition, a PSC is designed to operate most efficiently only at its rated speed, so its efficiency falls off dramatically at anything less than rated speed.

To understand the difference better, refer to the enclosed **Motor Comparison Chart**, which shows performance at a typical operating point. It reveals that even when operating in optimal conditions, PSC is at best 60% efficient, while the X13 is 80% efficient. The difference is even more striking at lower speeds, where the X13 maintains a high level of efficiency, while the PSC drops off dramatically. In constant-fan mode, for instance, the X13 uses an average of 110 watts, while the PSC uses an average of 360 watts.

"X13 provides an easy way for manufacturers to update their systems to 13 SEER energy standards, in many cases without having to increase coil sizes," said

Selking. "For some, the X13 has become the standard in every package unit where cabinet sizes are fixed and premium features are not required."

To date every major manufacturer has incorporated the X13 into its systems to create a new generation of high-efficiency residential HVAC systems.

A New Category of Motors

The introduction of X13 means manufacturers now have three categories of motors to work with when developing residential HVAC products: the conventional PSC, the new X13 standard ECM, and the 2.3/2.5* premium ECM (see the enclosed **Motor Comparison Chart** for details).

1. The PSC category is characterized by: a minimal speed range, the ability to select one to five discreet speed taps, no field-programmable features (e.g. delays, ramps) and the lowest operating efficiencies.

2. The standard ECM is similar in function to a PSC with its minimal speed range, the ability to select one to five discreet taps, and no field-programmable features. What distinguishes it from PSC is its **improved efficiency profile** as described above.

3. The premium ECM motor has three features of that distinguish it from standard ECM and PSC technology:

A. Wide Speed Range -- a 2.3/2.5 premium ECM motor has a wider range of 200 to 1500 RPM, which can be employed for functions such as better humidity control and reduced temperature stratification in constant fan;

* The ECM 2.5 refers to the premium ECM motor technology equipped with serial communication capability.

B. Climate Profiles -- a programming feature that allows the airflow profile to be set to automatically adjust to the humidity (or lack thereof) of the local climate; and

C. Constant Airflow -- the patented technology that allows the 2.3/2.5 to maintain a programmed level of airflow over a wide range of static pressure without the need for external sensors.

Proven Technology

The new X13 comes from proven GE ECM technology. Its brushless-DC, permanent-magnet design was derived from the premium ECM's 20-year legacy of success with millions of commercial and residential installations worldwide.

For more information and other ECM product support, contractors can go to:
www.thedealertools.com

GE ECM by REGAL-BELOIT is the residential HVAC industry leader in ECM technology.

REGAL-BELOIT CORPORATION (NYSE:RBC) is a leading manufacturer of mechanical and electrical motion control and power generation products serving markets throughout the world.

REGAL-BELOIT is headquartered in Beloit, Wisconsin, and has manufacturing, sales, and service facilities throughout the United States, Canada, Mexico, Europe and Asia. For more information, visit the company's website at www.theDealerToolbox.com.

#