

National Resource Management DATA SHEET

NRM ARKTIC 59 Evaporator Fan Replacement Motor

NRM's evaporator fan replacement motor, the ARKTIC 59, is a high-efficient commercial refrigeration motor manufactured by Regal-Beloit. The ARKTIC 59 offers up to 65% greater efficiency than a shaded-pole motor, and up to 40% greater efficiency than a PSC motor. Designed specifically for evaporator fan use in walk-in coolers and freezers, the 1/15 HP motor is a form-fitting, drop-in replacement for typical 3.3-inch motors. The ARKTIC 59 offers many features that ensure reliability, both within the motor and in the refrigeration system as a whole. For example, the motor's ability to contribute less heat into the refrigeration cycle means better long-term equipment reliability because there is less stress on all of the system components. The ARKTIC 59 is single phase and available in two voltages, 200-240V and 100-120V and is UL approved.



NRM Model Numbers

ME59-1CWSE1U

100-120 Volt CW-SE

ME59-1CCSE1U

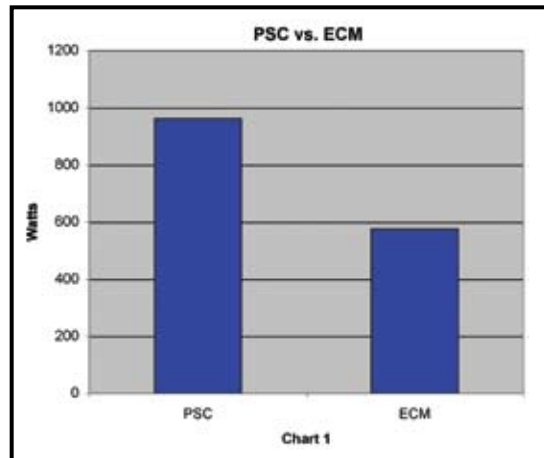
100-120 Volt CCW-SE

ME59-2CWSE1U

200-240 Volt CW-SE

ME59-2CCSE1U

200-240 Volt CCW-SE



The ECM's power consumption is significantly lower than comparable PSC and shaded pole motors. Chart 1 compares the performance of 7 PSC motors and 7 ECM's in an evaporator coil of a walk-in cooler. Chart 2 compares 6 Shaded Pole motors to 6 ECM's in an evaporator coil of a walk-in cooler. As each graph shows, the ECM's use 43% less energy than a PSC motor and 67% less than a Shaded Pole motor.

The overall savings from the ECM are further amplified since there is less heat from the motor introduced into the refrigerated space. In the application from Chart 1, each ECM saved 630 kWh per year more than a PSC motor. The annual savings for each ECM in Chart 2 is 1,072 kWh compared to a Shaded Pole motor.

