

Saving Energy in American Supermarkets



BENEFITS

- Saves about \$20,000 and 200,000 kWh annually¹
- Payback periods as short as 3 months

APPLICATIONS

- Commercial refrigerators, freezers and refrigerators-freezers

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 Wellington®

Saving Generation for the Next Generation



Saving Energy in American Supermarkets

Energy production and usage have become a main focus of environmental, political and economic debates across the United States. Supermarkets have one of the highest rates of energy consumption per square foot (62.5 kWh and average cost \$4.84 per square foot) of all commercial and industrial sectors and, together with grocery stores, use close to \$4 billion a year of electricity².

Because refrigeration alone accounts for over 35% of the energy consumed in a typical supermarket³, it has become the object of increasingly stringent legislation targeting the vast energy saving potential of commercial refrigerators and freezers.

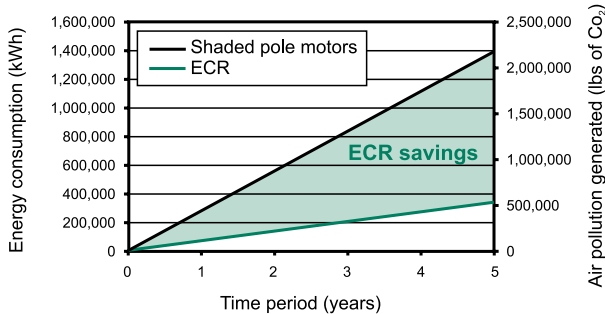
Energy savings

A “typical” American supermarket has about 400 shaded pole motors in commercial refrigerators and freezers running 100% of the time.

The efficiency rate of these motors is in the order of 15%. This means that 85% of their energy consumption is transferred as waste heat to the environment, and has to be removed or cooled down again by the refrigeration and air conditioning system, causing additional consumption of energy.

ECR motors instead have efficiency rates up to 65% that dramatically reduce motor direct energy consumption, and yield additional energy savings by producing minimal waste heat.

“Typical” American supermarket energy consumption. ECR vs shaded pole motors⁴



The ECR series allows supermarkets to significantly reduce their environmental impact, and transition to ecological products while lowering financial costs.

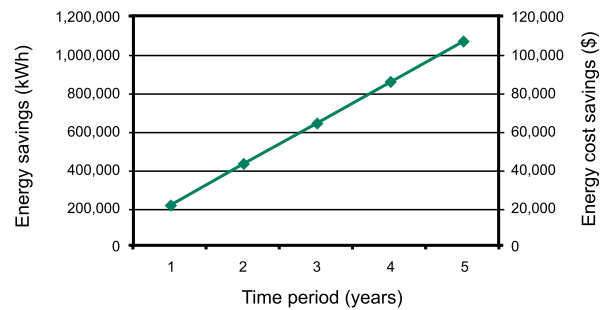
A “typical” American supermarket running ECR motors would reduce carbon emissions by about 1.5 million lbs over a five year period: the equivalent of taking 130 cars off the road⁵. For a supermarket chain, this means potentially saving billions of lbs of carbon emissions, or taking the equivalent of hundreds of thousands of cars off the road.

Cost savings

ECR motors reduce the overall cost of energy for American supermarkets not only by reducing energy consumption, but also by providing significant demand charge savings.

Supermarket electricity charges are based on two measures: consumption and demand. Consumption charges are calculated based on how much electricity (kWh) a supermarket consumes in a month. Demand charges are based on peak electricity demand and represent a significant percentage of a supermarket electricity bill.

“Typical” American supermarket savings with ECR motors⁶



Wellington’s ECR motors and fans were developed as energy saving replacements of shaded pole motors used in commercial refrigerators and freezers.

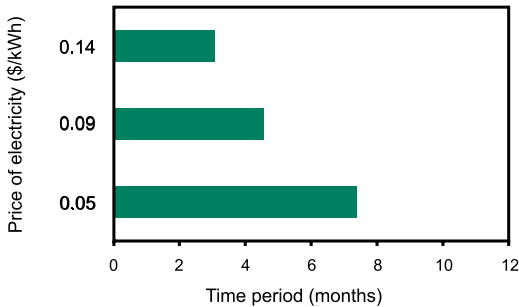
¹ For a “typical” American supermarket using 400 motors, running 100% of the time, and price of electricity 0.09 \$/kWh. Demand charge savings are included.
² United States Environmental Protection Agency (EPA). www.epa.gov
³ www.epa.gov
⁴ For a “typical” American supermarket using 400 motors, running 100% of the time.
⁵ Energy Star energy savings calculator. www.energystar.gov

Payback period

ECR motors and fans have very short payback periods due to:

- high direct motor energy savings
- waste heat savings
- demand charge savings
- low maintenance and service cost

ECR motors payback period⁷



With short payback periods and high energy savings the ECR series allows American supermarkets to lower financial costs while preserving energy.

Product features

ECR motors are electronically commutated (ECM), brushless DC motors. Top quality electronics and design make ECR motors extremely efficient, quiet and reliable.

Extremely low levels of noise and vibration are achieved with our unique low torque ripple motor design. In a supermarket, this means a significantly quieter environment.

Long design life and reliability are the result of Wellington’s moisture proof patented design, and allow maintenance and service cost savings.

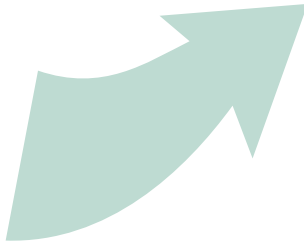
Drop in replacement of shaded pole motors

Our motors use the same mounting systems as shaded pole motors and are provided with a plug in connection for easy, fast replacement. They also fit the same fan blades and accessories as traditional shaded pole motors. ECR fans are available in all standard sizes and pitches.

ECR standard features make it easy to replace traditional shaded pole motors in new and existing commercial refrigerators and freezers, with no need for costly adjustments.



8 inch axial fan (shaded pole motor)



Drop in replacement



8 inch ECR axial fan

⁶ For a “typical” American supermarket using 400 motors, running 100% of the time, and price of electricity 0.09 \$/kWh. Demand charge savings are included.
⁷ Payback period calculation includes reduced maintenance and service cost, and demand charge savings.

Wellington has made a strong commitment to providing standard and custom design solutions that will lower your financial costs while preserving key natural resources.

For information about our full line of products and our “Total Integration” custom design service, call our **toll free number 888 786 4153** or visit us on our website at **www.wdttl.com**.

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