

# ECR 85/95

## Walk-in Coolers ECM Motor Fans

ENERGY SAVING REPLACEMENT FOR SHADED POLE AND PSC INDUCTION MOTORS

Electronically commutated 3.3 inch motors for walk-in coolers. ECR 85/95 have the same exterior design and accessories of shaded pole and PSC motors, but much higher efficiency.



Use  
**65%**  
less  
energy

Motor Type	Voltage V	Frequency Hz	Speed RPM	Output Power W	Approvals Available
ECR95	115	60	1550	50	UL, cUL
ECR85	230	50-60	1550	50	UL, cUL

### FEATURES:

- Electronically commutated (ECM)
- Comply with walk-in coolers legislation
- High efficiency
- Moisture resistant
- Payback < 1 year
- Rebates available across the U.S.
- 2 Speed

### APPLICATIONS:

- Walk-in coolers and freezers
- Other condenser and evaporator applications

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**ESTORE:** [www.wdtlstore.com](http://www.wdtlstore.com)

## Drop in Replacement of Shaded Pole and PSC Motors

- Match shaded pole and PSC motor fans airflow
- Standard mounting systems
- Standard accessories range
- Lyall plug

### Speed

User defined speed or standard 1550 RPM (ECR 85/95), factory preset speed.

### Direction of Rotation

ECR 85/95 are available CW, CCW and reversible.

## Benefits

### Energy Saving

Much higher efficiency than shaded pole and PSC motors. Motor “cool” operation means less heat in the walk-in cooler. Energy savings of ~ 65%.

### Moisture and Dust Protection

ECR 85/95 are IP42 motors designed to operate in a high moisture environment. We achieve superior moisture resistance with the following construction features:

- Plastic motor body and plastic components
- Electronic control protected against moisture
- No laminations
- Fully enclosed ball bearings

### Electronic Control Safety Features

ECR 85/95 fully integrated electronic controls are provided with safety features for longer motor life and improved reliability.

### Bearings

Fully enclosed, long life ball bearings mean that motor can be mounted in any position.

### Inventory

ECR 85/95 replace a wide range of shaded pole and PSC motors, reducing inventory.

### Materials

ECR 85/95 are built using 30% less copper and 80% less steel for a greener, more affordable electronically commutated (ECM) solution.

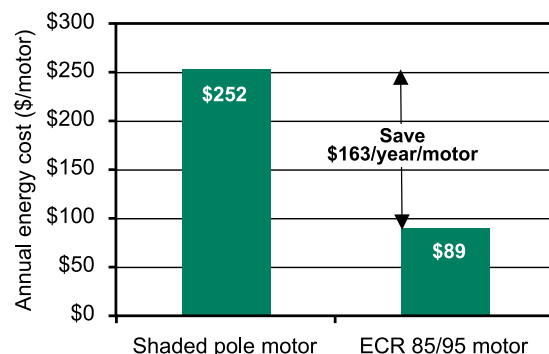
## ECR vs Shaded Pole Evaporator Motor Comparison

The efficiency rate of shaded pole motors used in walk-in cooler evaporators is in the order of 25%. A hard-to-believe 75% of the energy used by the motors is released as waste heat inside the walk-in cooler and has to be cooled down by the system’s condensing unit.

ECR 85/95 instead have much higher efficiency and run “cool”. This means that, not only they dramatically reduce direct energy consumption, but also yield additional energy saving at the condensing unit level.

On average, for every two watts saved in the evaporator with ECR, an additional watt is saved at the condensing unit level, for a total saving of three watts.

### Energy Cost Savings. Shaded Pole vs ECR 85/95<sup>1</sup>



### 2 Speed Additional Savings

ECR 85/95 50W 2 speed motors can be used to reduce power consumption and thermal losses in walk-in coolers, by switching the fan to low speed when the evaporator is not in a cooling cycle. Fan power consumption is proportional to fan speed cubed, so during compressor-off periods a fan running continuously at part speed uses less power than one running intermittently at full speed, and much less power than one running continuously at full speed.

### Store Energy and Cost Savings with ECR 85/95<sup>2</sup>

Store Type	Number of Evaporator Motors	Energy Savings (kWh/year)	Cost Savings (\$/year)
Supermarket	46	62,658	7,521
Convenience Store	16	21,794	2,616
Restaurant	10	13,621	1,635

<sup>1</sup> Condenser unit level savings included. Price of electricity 0.12 \$/kWh.

<sup>2</sup> Savings are in comparison to shaded pole motors and include condenser unit level savings. Price of electricity 0.12 \$/kWh.