



EC MOTORS AND FANS

Our ECR2 motor is designed to be a drop-in replacement for shaded pole motors in commercial refrigeration and uses $\frac{2}{3}$ less power than shaded pole motors making the motor up to 70% energy efficient. ECR2 motors have a design life of 10 years and offer near silent operation. The motor is also available in a integrated axial fan assemblies featuring patented 3D sculpted blades to guide the air gently with reduced edge noise.

Advanced Refrigeration Motors

East West manufactures over two million motors each year. Our motors business unit specializes in designing custom motors geared specifically to any customer application.



LET'S START A CONVERSATION

We offer motor solutions from our catalog of products, or we'll partner with you to develop semi- to fully customized designs that meet both cost and performance requirements. No matter how unique the project, East West can help you solve it.

THE ECR2 SERIES

Get the most advanced refrigeration motor. Using a smart-control programming device, an ECR2 can be programmed to cover multiple SKUs that allows for customization of power range, dual voltage, variable speed, and other behaviors such as reversibility or two-speed operation.

The ECR2 is used in bottle coolers, reach-in display cases, vending machines, under counter cabinets, and other refrigerated equipment. Key ECR2 features include:

- High efficiency – up to 70%
- High power factor – up to 0.95
- RoHS and REACH compliant
- SKU reduction – reduces inventory and boots economies of scale
- Highly reliable – design life L10 of 90,000 hours

INTEGRATED FAN PACK

Our axial fan assemblies allow a single product to supply the required airflow for any application at high efficiency. Benefits for using axial fan assemblies include aerodynamic blade and basket, high efficiency, and low noise.

ECR2 Series

Our premier EC Motor for Refrigeration

TYPICAL APPLICATIONS

- Bottle coolers
- Vending machines
- Heat pump water heaters
- Reach-in display cases
- Other refrigeration equipment

KEY FEATURES

- High efficiency—up to 70%
- High power factor—up to 0.95
- RoHs & REACH compliant
- SKU reduction—reduces inventory & boosts economies of scale
- Highly reliable—design life L10 of 90,000 hours



MOTOR SERIES SPECIFICATIONS

Speed Options	3-speed, reversible or timed reverse options
EMC Protection	4000 V (per EN61000-6-2)
Noise	SWL 37 dBA @ 1300 RPM (per ISO1680)
Insulation	Class A (105°C)
Motor Protection	Electronic protection, locked rotor, automatic thermal derating
Refrigerant Compatibility	HFC, CO2 and hydrocarbon (per IEC60335-2-89 Annex BB)
ATEX (EX)	IEC 60079-15 Group 2, Category 3G
IP rating	IP67 (wash-down duty)
Operating Range	-30°C to +50°C (-22°F to +122°F)
Storage Temp. Range	-40°C to +80°C (-40°F to +176°F)
Approvals	CE   RoHS 

ECR2 13W MOTOR SPECIFICATIONS

Dual Voltage	115/230 VAC, 100-240 VAC, 50/60 Hz (all models)
Output Power	13 W max.
Speed Range	300 to 2400 RPM
Max. Efficiency	70%
Weight	0.54 kg (1.2lb)
Max. Input Current	0.10 A (@ 230 VAC) 0.20 A (@ 115 VAC)
Power Factor	Up to 0.95 depending on load and voltage

ECR2+ 26W MOTOR SPECIFICATIONS

Dual Voltage	115/230 VAC, 100-240 VAC, 50/60 Hz (all models)
Output Power	26 W max.
Speed Range	300 to 2300 RPM
Max. Efficiency	74%
Weight	0.69 kg (1.5lb)
Max. Input Current	0.35A (@115 VAC)
Power Factor	Up to 0.96 depending on load and voltage

ECR2 13W SUITABLE FANS

Speed	150MM (6") 172MM (7")	200mm (8")				230mm (9")			254mm (10")	
	All Pitches	22°	28°	34°	40°	22°	28°	19°	22°	28°
1300 rpm	+	+	+	+	+-	+	+	+	+	+-
1550 rpm	+	+	+	+	+-	+	+-	+-	+-	-
1800 rpm	+	+	+	+-	-	+-	-	-	-	-

ECR2+ 26W SUITABLE FANS

Speed	200mm (8")	230mm (9")			254mm (10")		
	34°	22°	28°	34°	22°	28°	34°
1300 rpm	+	+	+	+	+	+	+-
1550 rpm	+	+	+	+	+	+	-
1800 rpm	+	+	+	-	+	+-	-
2100 rpm	+	+	+-	-	+-	-	-

Achieve rated rpm
 Does not achieve rated rpm
 May not achieve rated rpm at all back pressures

SCS

Refrigeration Controller



KEY BENEFITS

- Advanced refrigeration controls
- Energy saving
- Smart connectivity
- Commercial performance
- Asset management
- Technical diagnostics
- Digital engagement

CONTROLLER SPECIFICATIONS

Input Voltage Range	90-240 VAC 50/60 Hz
IP Rating	Front panel IP68 (back IPx5)
Max. Power Consumption	3.5W
Relay ratings	1x UL: 7.2FLA & 34.8LRA, IEC: 8A 1x UL: 3A, IEC: 3A 2 x 0.4A (triac solid state)
Low Voltage Output Ratings	1 x 5Vdc 100mA 4 x 0-24Vdc, 1A per channel*
EMC Protection	4000V (per EN61000-6-2)
Refrigerant Compatibility	HFC, CO ₂ , Hydrocarbon (per IEC 60335-2-89)
Operating Temperature Range	IEC -20°C to +55°C (-4°F to +131°F) UL -20°C to +50°C (-4°F to +122°F)
Storage Temperature Range	-40°C to +80°C (-40°F to +176°F)
Weight	130g (4.6oz)
Storage Temp. Range	-40°C to +80°C (-40°F to +176°F)
Weight	0.86 kg (1.9 lb)

ECF2

Our EC Fan Assembly for Refrigeration



TYPICAL APPLICATIONS

- Bottle coolers
- Vending machines
- Heat pump water heaters
- Reach-in display cases
- Other refrigeration equipment

KEY FEATURES

- High efficiency—up to 70%
- High power factor—up to 0.95
- RoHs & REACH compliant
- SKU reduction—reduces inventory & boosts economies of scale
- Highly reliable—design life L10 of 90,000 hours

MOTOR SPECIFICATIONS

Dual Voltage	115/230 VAC, 100-240 VAC, 50/60 Hz (all models)
Output Power	0–13 W max.
CFM Range	0–355 CFM (3 speed programmable)
Speed Range	300–1800 RPM field programmable in 50 RPM increments
Speed Options	3-speed, reversible or timed reverse options
Max. Input Power	20.5 W
Max. Input Current	0.10 A (@ 230 V) 0.20 A (@ 115 V)
Power Factor	Up to 0.95 depending on load and voltage
EMC Protection	4000 V (per EN61000-6-2)
Insulation	Class A (105°C)
Motor Protection	Electronic protection, locked rotor, automatic thermal derating
Refrigerant Compatibility	HFC, CO2 and hydrocarbon (per IEC60335-2-89 Annex BB)
ATEX (EX)	IEC 60079-15 Group 2, Category 3G
IP rating	IP67 (wash-down duty)
Operating Range	-30°C to +50°C (-22°F to +122°F)
Storage Temp. Range	-40°C to +80°C (-40°F to +176°F)
Weight	0.86 kg (1.9 lb)
Approvals	CE   RoHS 