

DEFINING THE NEXT GENERATION OF POWER...



Since 1913, Marathon Electric has developed a reputation for conservative motor designs and highly engineered products used in a vast array of commercial and industrial applications around the world.

Today, Marathon Electric builds on our legacy of innovation and efficient motor designs with the introduction of a brand new science – Magnology™, the joining of magnetics and motors into a single leading technology. This science allows for unparalleled power densities, unprecedented performance and unmatched efficiencies.

Our use of Magnology™ has led to the motor industry's first axial and radial flux motors - imPulse® and imPower®- used in pumping applications. The newest permanent magnet series, SyMAX™ also offers unique solutions for today's demanding and mission-critical applications.

Our Founding Principles:

- Serve customers according to their needs
- Produce the most efficient and long-lasting motors
- Commit to new technology and research
- Expand and diversify into new markets



**THE NEXT GENERATION OF ULTRA-EFFICIENT™ PERFORMANCE MATCHED™
PERMANENT MAGNET MOTORS DESIGNED FOR MISSION CRITICAL APPLICATIONS**

SyMAX™

The SyMAX™ series of permanent magnet motors incorporates a radial flux design which delivers high torque, high efficiency and increased power density, providing incredible system maximization and the potential to eliminate sheaves and belts, gearboxes and chains in certain applications. Due to its innovative permanent magnet design, it is inherently more efficient than traditional induction motors, providing the highest efficiencies available. What's packed into this family of motors sets the bar for the industry.

- **HIGHEST EFFICIENCIES AVAILABLE:** IE4 with at least 15 percent fewer losses than the equivalent NEMA Premium motor
- **CONSTANT TORQUE:** Constant torque over variable speed application
- **HIGH SYSTEM EFFICIENCY:** SyMAX™ offers incredible system efficiency when used to eliminate power transmission devices
- **LOWER OPERATING TEMPERATURES**
- **MAX GUARD® INSULATION SYSTEM:** SyMAX™ features the patented MAX GUARD® insulation system for long motor life in the most strenuous environments
- **IP54-IP56 RATED ENCLOSURES:** IP54+ rated enclosures makes SyMAX™ perfect for applications in industries that require a higher degree of protection against the entry of dust, water and other contaminants



SyMAX™ FHP

SyMAX™ FHP is designed as a drop-in replacement for an equivalent induction motor and can be used with other constant speed and torque drives.

Product Range: NEMA 45/56 Frame
 Technology: PMAC Radial
 Application: Variable speed
 Efficiency: Ultra-Efficient™
 Industries: Food equipment
 Conveyors
 Agricultural machinery
 Fans and blowers
 Industrial machinery

Available: NOW!



SyMAX™-i FHP

SyMAX™-i features IntelliDrive™ technology, an embedded electronic control system incorporates proprietary algorithms allowing the power to be easily controlled while maintaining a high efficiency level.

Product Range: NEMA 48/56 Frame
 Technology: PMAC Radial
 Application: Variable speed
 Efficiency: Ultra-Efficient™
 Industries: Pumping
 Conveyors
 Agricultural machinery
 Machine Tools
 Commercial equipment

Available: 4th Quarter 2011



SyMAX™ IHP

SyMAX™ IHP is designed as a drop-in replacement for an equivalent induction motor and is Performance Matched™ with today's state-of-the-art PWM permanent magnet drives.

Product Range: 182-286T Frame
 Technology: PMAC Radial
 Application: Variable speed
 Efficiency: IE4 Ultra-Efficient™
 Industries: Compressors
 Pumping
 Material handling
 Mixers
 Fans and blowers
 Industrial machinery

Available: NOW!

