

SyMAX™ FHP

VARIABLE SPEED PERMANENT MAGNET AC FRACTIONAL HORSEPOWER MOTOR

Designed for food machines, conveyors, agricultural machines and other commercial applications requiring a mission critical motor.

The SyMAX™ FHP motor incorporates a radial flux design which delivers high torque, high efficiency and increased power density, which help provide system maximization.

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



SyMAX™ FHP MOTOR ONLY SPECIFICATIONS

- Totally enclosed, non-ventilated (TENV)
- Ultra-Efficient™ IE4 (above NEMA premium)
- Same Torque/HP Ratings as Integrated Designs
- Three-phase input, 60 Hz
- Maximum 5000 RPM
- NEMA 48/S56/56Fr
- IP54
- With and without sensor feedback
- Embedded magnet design
- UL and cUL recognized component

SyMAX-*i*™ 48 FRAME WITH INTELLIDRIVE™ SPECIFICATIONS

- Totally enclosed, fan cooled (TEFC)
- Torque: 0-72 in-lb, 0-8.1 Nm
- 115 & 230V AC single-phase input, 60 Hz
- Maximum 3000 RPM
- 1.25 HP Max @ 115V (1.25 HP @ 1000-3000 RPM)
- 2.5 HP Max @ 230V (1 HP @ 850 RPM / 2 HP @ 1700 RPM / 2.5 HP @ 3000 RPM)
- NEMA 48Fr and S56
- IP54
- Embedded magnet design
- UL and cUL recognized component

SyMAX-*i*™ 56 FRAME WITH INTELLIDRIVE™ SPECIFICATIONS

- Totally enclosed, fan cooled (TEFC)
- Torque: 0-132 in-lb, 0-14.9 Nm
- 230 & 460V AC three-phase input, 60 Hz
- Maximum 2250 RPM
- 1/3 HP-3.6 HP (2 HP @ 1140 RPM / 3.6 HP @ 1700 RPM)
- NEMA 56Fr
- IP54
- Embedded magnet design
- UL and cUL recognized component

FEATURES

- MAX GUARD® insulation system
- Rolled-steel construction
- Constant torque or constant speed operation
- Integrated control, separate control and/or motor-only construction
- Continuous duty at 40°C ambient

BENEFITS

- Provides commercial and industrial users with the highest efficiencies available
- 200% starting torque for loaded start-up conditions at low speeds with sensed feedback
- System maximization when used to eliminate contactors, starters, current relays and gearboxes
- Lower operating temperatures
- Constant torque or constant speed control
- Durable construction provides long life in the most strenuous environments

This document contains preliminary product information that may change without notice.

MAXIMIZE ENERGY SAVINGS WITH THE NEW LINE OF ULTRA-EFFICIENT™ MOTORS

SyMAX™ FHP

SyMAX™ defines the next generation of power

SyMAX™ FHP is a permanent magnet AC (PMAC) that can be provided as a motor only or with IntelliDrive™ technology. SyMAX™ FHP incorporates a radial flux design which delivers high torque, high efficiency and increased power density, providing incredible system maximization. Due to its innovative permanent-magnet design, SyMAX™ FHP is inherently more efficient than traditional induction motors, providing the highest efficiencies available.



Designed for Mission Critical applications

The SyMAX™ FHP motor is lighter than a typical induction motor and features a totally enclosed fan-cooled (TEFC) or totally enclosed non-ventilated construction. It also features the patented MAX GUARD® insulation system which combines corona resistant magnet wire and a unique low stress winding configuration to deliver long, dependable motor life in the most strenuous environments. The motor's IP54-rated enclosure makes it ideal for industrial applications that require protection against the entry of dust, splashing water and other contaminants.

Outstanding performance

The SyMAX™ FHP motor offers outstanding performance compared to an equivalent induction motor. It has a very high torque-to-inertia ratio and offers a higher dynamic response resulting in consistent and repeatable machine performance. Its radial flux design delivers high torque providing the potential to eliminate gearboxes, sheaves and belts and chains in certain applications.

SyMAX-i™ is designed with IntelliDrive™

The SyMAX-i™ motor features IntelliDrive™ technology. An embedded electronic control system incorporating proprietary algorithms allows the power to be easily controlled while maintaining a high efficiency level.

Neo rare earth magnets for energy savings and two-year return on investment

Embedded and fully encased for long life, the SyMAX™ FHP motor's neo rare earth magnets allow for significant energy savings. These permanent magnets make the SyMAX™ FHP motor inherently more efficient than traditional induction motors and perfect for commercial and industrial machinery, pumping, air moving and other applications requiring Ultra-Efficient™ permanent-magnet high-power density.

Easy installation and operation; drive neutral

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

Demonstrated industry leadership

The SyMAX™ FHP motor is built on a foundation of time-tested variable-speed ECM technology, the same motor technology used in millions of heating and air-conditioning systems over the past 20 years.

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