

SynRA™

Synchronous Reluctance Motor with Aluminum Cage



Specifications

Horsepower: 1-15 HP

Voltage: 200, 230, 460, 575

Speeds: 500-4500 RPM

Modes: Variable Torque Load

Construction: UNIMOUNT®, STEEL EDGE®

Enclosure: TEFC, Open (OAO and ODP)

Efficiency: IE4 and IE5

Shaft Grounding: AEGIS® SGR



Product Overview and Features

SynRA™ optimizes motor performance by utilizing Synchronous Reluctance technology. It features an aluminum cage, a unique design characteristic that allows the motor to start like an asynchronous induction motor and transition to synchronous operation. Benefits include no RPM slip, higher peak efficiency, and a flat efficiency curve.

SynRA™ products can operate with a V/Hz drive as well as multiple SynRA™ motors can run on a single drive. This unique design gives the freedom to replace components individually instead of the entire system, leading to a lower cost of maintenance.

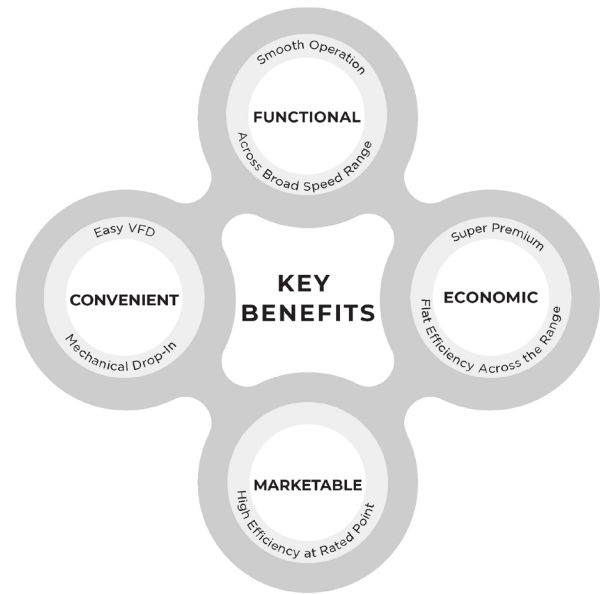
The unit's magnet-free design allows for easy programming and compatibility with existing variable frequency drives (VFDs). A model fully integrated with Nidec's ID300 PerfectSpeed™ is currently available. When paired with this integrated drive, the SynRA™ motor achieves the industry-leading efficiencies of IE4 and IE5. Any current US MOTORS® mounting configuration can be built using our SynRA™ technology.

SynRA™ The Easy Solution:

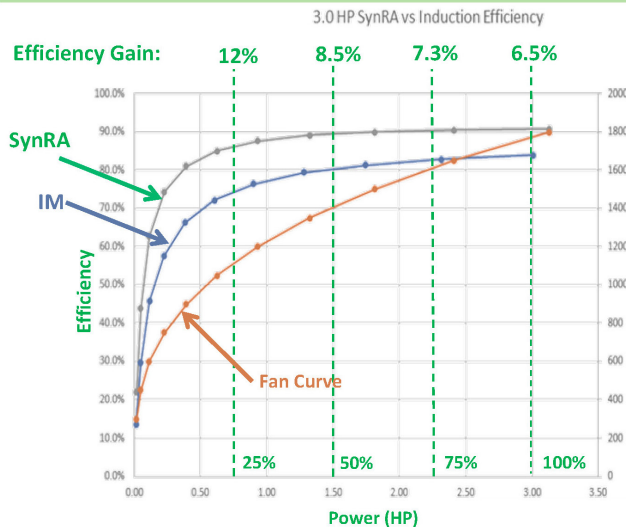
- The performance of permanent magnet motors with the simplicity and service-friendliness of induction motors
- The functionality of permanent magnet motors but capable of operation with V/Hz drives
- Magnet-free design enables simple maintenance
- 40% lower energy losses compared to IE3 motors when both are operated on a VFD
- Increased reliability and prolonged motor life with lower winding temperatures and bearing temperatures
- No need for mechanical modification making it a perfect solution for retrofits of traditional induction motors

SynRA™ Key Benefits:

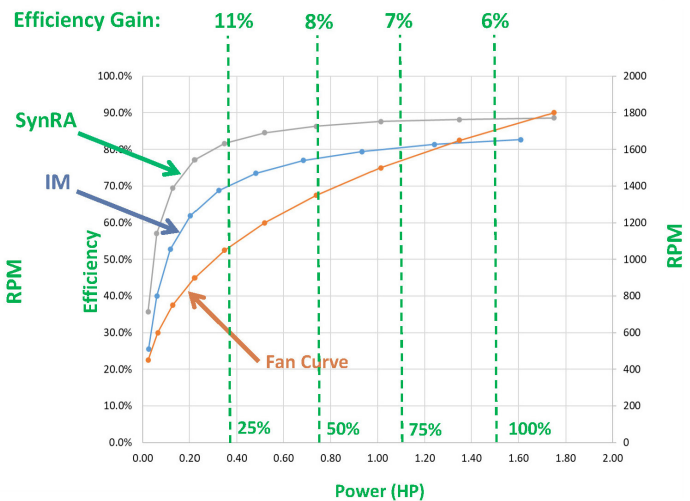
- Superior Electrical Performance
 - IE4 and IE5 peak efficiency performance
 - Flat efficiency curve achieves higher efficiency at slower speeds
 - Synchronous Performance capable of utilizing a V/Hz drive
 - Robustness and high reliability proven mechanical construction
 - A worldwide service organization (Express Availability, 2-year warranty, before and after sales support)
- Ideal for Variable Torque Inverter Driven Applications:
 - Capable of replacing existing induction installations on VFDs in all Variable Torque Applications
 - Shared benefits of induction (V/Hz drives, starting) and Synchronous (Efficiency, peak and area under curve)



3HP SynRA vs. Induction Efficiency



1.5HP SynRA vs. Induction Efficiency



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