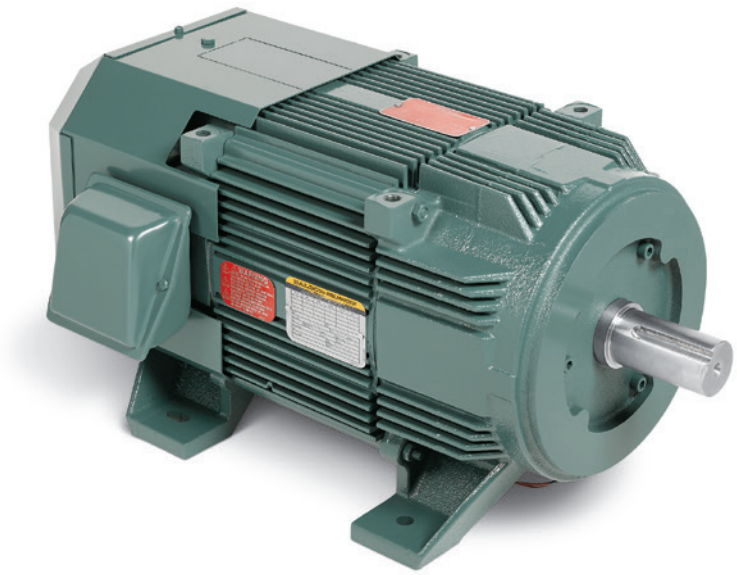
PRODUCT NOTE

RPM XE – eXtreme efficient
AC motors



Ideally suited for continuous operation on pumps and compressors, the Baldor-Reliance® RPM XE is an innovative, NEMA drop-in replacement motor which achieves leading efficiency and lower lifetime costs. This synchronous motor is unique as it starts across the line and offers IE4+ efficiencies. The motor is also capable of operating on a standard inverter without feedback.

BALDOR • RELIANCE

Sine wave power, 60/50 Hz

- Operates at synchronous speed at all loads – 1800 RPM at 60 Hz, 1500 RPM at 50 Hz
- Totally enclosed, fan cooled (TEFC), Design B, 1.15 service factor
- Class H insulation system with Class B rise
- UL certified efficiency

Inverter duty operation

- Inverter duty insulation system
- No inertia limitation when operated on inverter power
- Lower rated amps may reduce inverter size

Available options

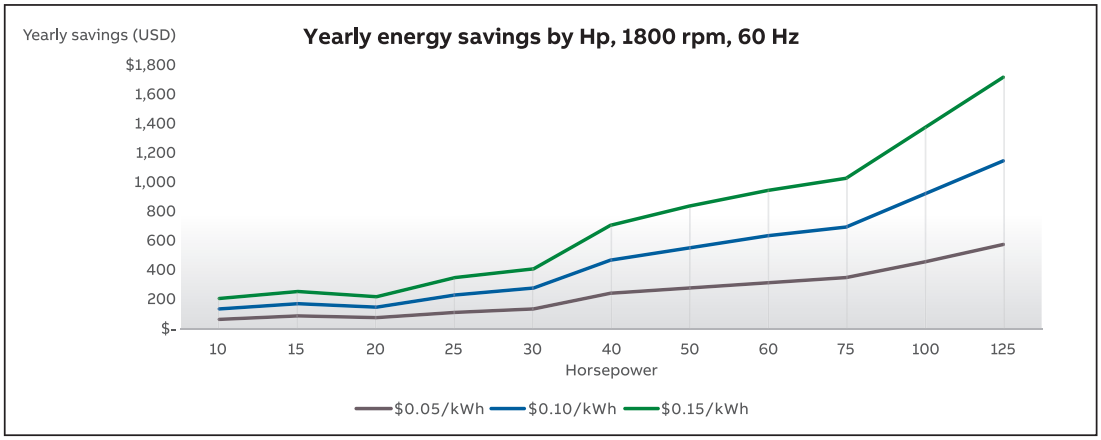
- Division 2/Zone 2, ATEX, IEC EXnA available
- 575 & 380 Volt available

For complete ratings, see the Severe Duty section in the CA501 Catalog or go to baldor.com/RPMXE

For application guidelines, please see the application guide AG-0102

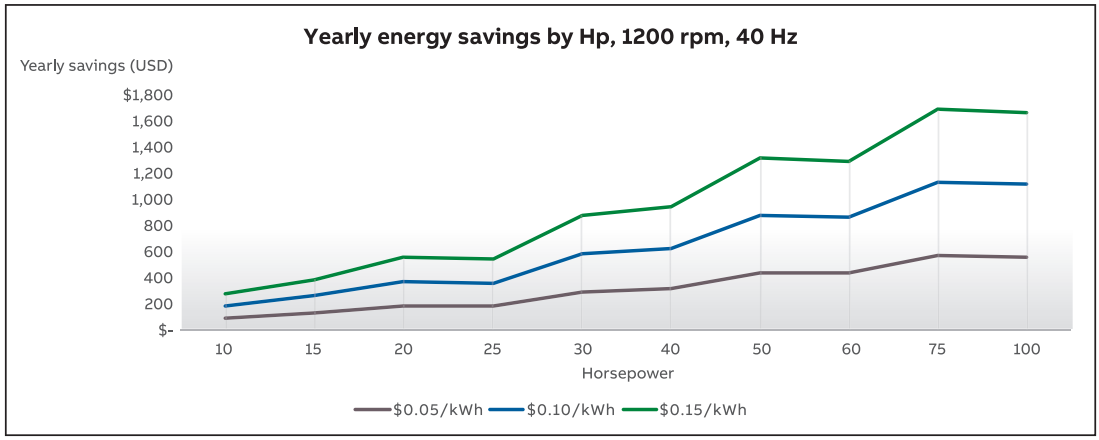
Energy savings – sine wave power

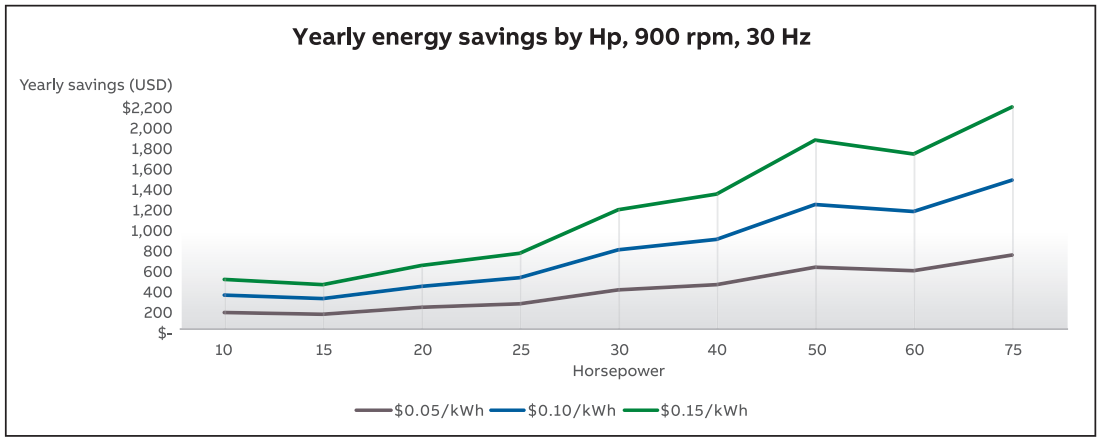
The RPM XE platform provides superior energy performance for industrial and commercial centrifugal load applications that run continuously or for long periods of time. Using advanced technology, combining starting attributes of a conventional induction motor with the high performance running characteristics of a synchronous motor, the RPM XE platform is interchangeable with today's standard induction motors.



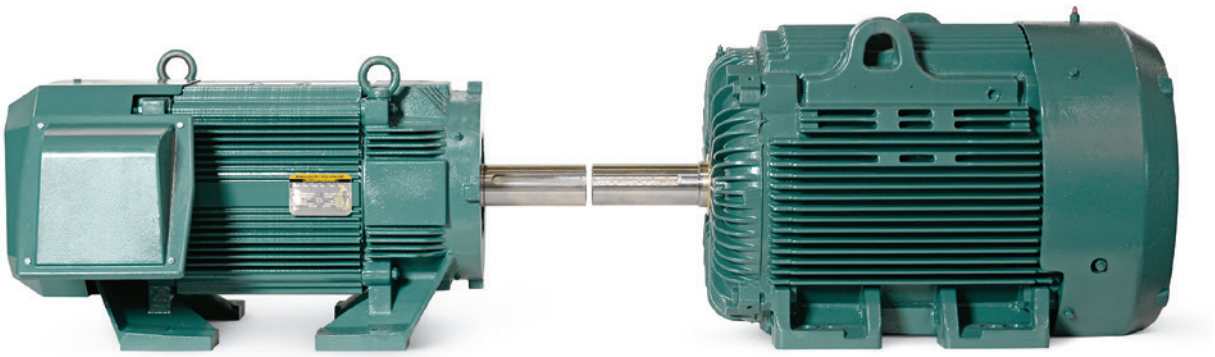
Energy savings – inverter operation

Additional energy savings can be achieved when the RPM XE motor is operated with a variable frequency drive (VFD) in scalar (V/Hz) mode. Beyond energy savings, the lower full load amps of a RPM XE motor may allow for a smaller, more cost effective VFD. See the energy savings compared to standard cage style NEMA premium efficient motor. Savings are calculated based on continuous operation at rated load.





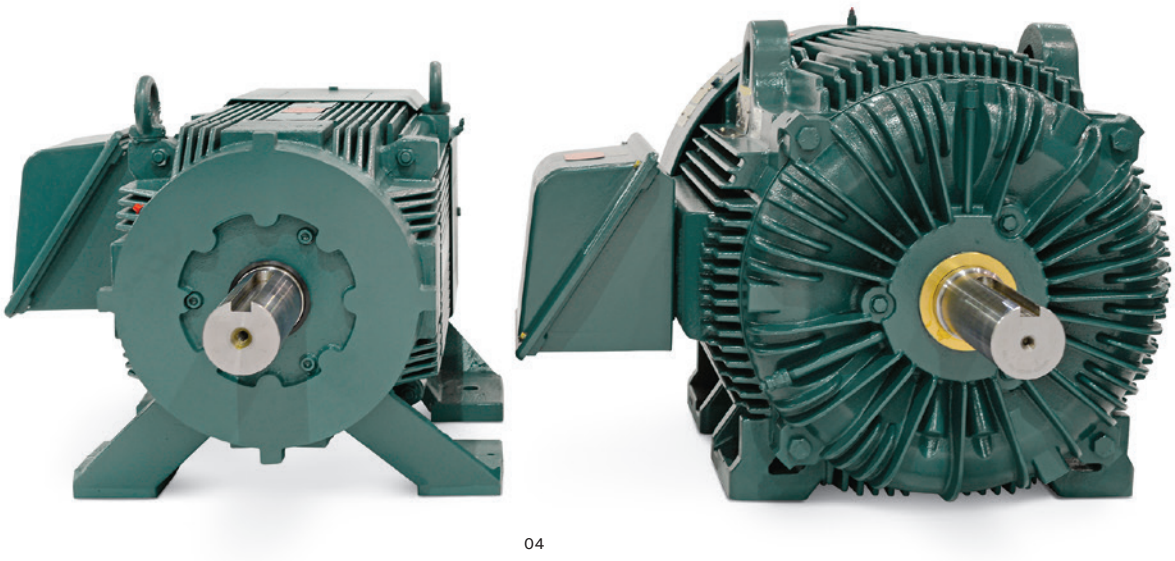
RPM XE vs Standard induction comparison



01 02

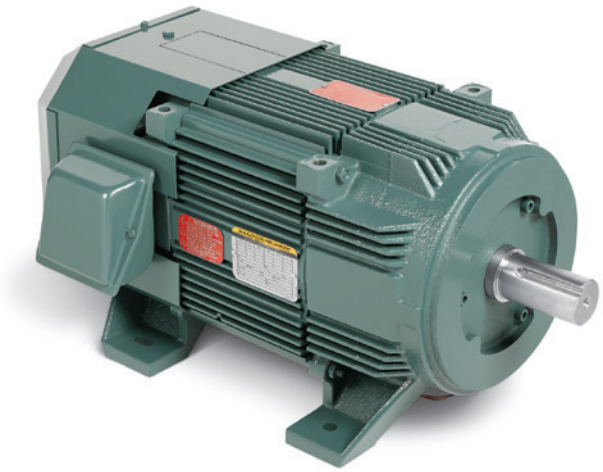
Shaft heights stay the same (horsepower equivalent) to allow retrofitting existing equipment.

—
01 RPM XE 100 Hp
—
02 Std. NEMA 100 Hp
—
03 RPM XE 100 Hp
—
04 Std. NEMA 100 Hp



03 04

RPM XE motors have standard NEMA mounting dimensions in a smaller overall size compared to their standard induction motor horsepower equivalent.



9 Advantages to variable frequency drive operation

Ideally suited for adjustable frequency power operation, there are many advantages to operating the RPM XE eXtreme efficient motor using a drive.

1. Suitable with any drive running in scalar mode achieving premium efficiency (IE3) system
2. Smooth starting performance results in reduced mechanical stress on the application providing longer life
3. Significant energy savings when running at reduced speed on centrifugal fan/pump/compressor applications based on the affinity laws
4. Reduced motor full load amps can result in a smaller drive, a reduced initial cost and a shortened payback period
5. Eliminates the need for a motor starter
6. Improved energy savings performance under light load conditions due to higher efficiency and improved power factor compared to traditional premium efficient motor designs
7. Motor runs cooler for extended motor insulation and grease life
8. Achieves NEMA inertia starting capabilities
9. Runs at true synchronous speed without any feedback device required

ABB Motors and Mechanical Inc.
5711 R.S. Boreham, Jr. Street
Fort Smith, AR 72901
Ph: 1.479.646.4711

new.abb.com/motors-generators

9AKK2018-109123 03.18