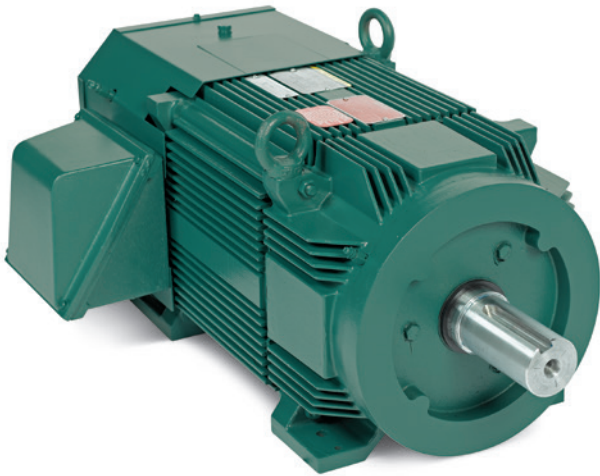


RPM XE – eXtreme Efficient AC MOTORS

APPLICATIONS

Baldor•Reliance RPM XE motors combine permanent magnet (pm) with an induction technology to achieve efficiency performance two to four bands above NEMA Premium® (IE3) efficiency on sine wave power. As a motor and drive package achieves a combine efficiency (IE3) level of performance. Available in standard NEMA frame sizes for “drop in” replacements or a power dense design, providing a solution for applications requiring premium efficiency at a lower operating cost.



RPM XE, Standard NEMA design



RPM XE, Power Dense design

STANDARD FEATURES

- Up to 4 bands beyond NEMA premium efficiency on sine wave power
- Meets NEMA premium efficiency levels as a motor and drive package
- Aluminum square finned design 10 - 20 Horsepower
- Laminated steel frame design 25 - 125 Horsepower
- Operates at true synchronous speed
- High performance inverter duty insulation system
- Totally Enclosed, Fan cooled, 1800 RPM, Design B, 1.15 SF, Class H insulation (B rise)

For ratings, please see the Severe Duty section in the CA501 catalog.

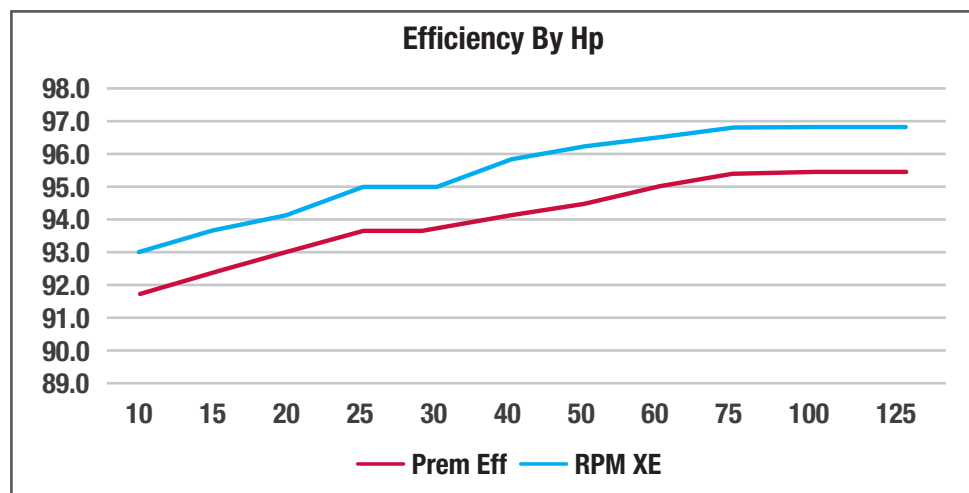
AVAILABLE FEATURES

- Division 2/Zone 2, UL and CSA certifications
- 575 Volt configurations
- ATEX, IECEx Ex nA

RPM XE – eXtreme Efficient

ENERGY SAVINGS

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.



RPM XE Nominal Efficiency vs NEMA Premium Efficiency (%)

HP	10	15	20	25	30	40	50	60	75	100	125
Prem Eff	91.7	92.4	93.0	93.6	93.6	94.1	94.5	95.0	95.4	95.4	95.4
RPM XE	93.0	93.6	94.1	95.0	95.0	95.8	96.2	96.5	96.8	96.8	96.8

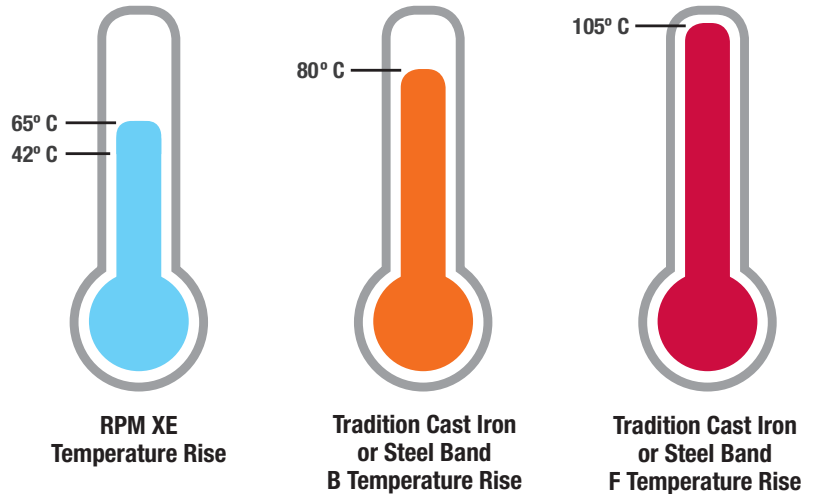
COOLER OPERATION

Laminated finned frame construction provides greater heat dissipation allowing the RPM XE platform to operate between 42° C and 65° C. The cooler operation is much lower than the typical B and F temperature rise found in traditional cast iron or steel band induction motors, resulting in longer motor life.

Thermal Chart – Temperature Rise Above Ambient

RPM XE	B RISE	F RISE
42 to 65°C	80°C	105°C

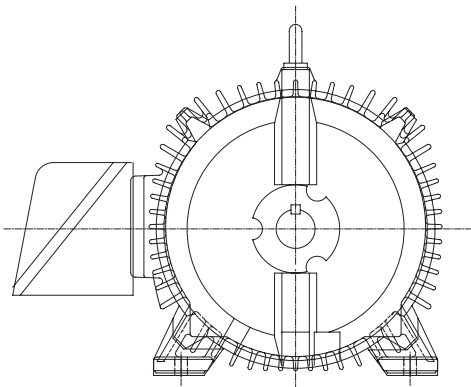
At 1.0 Service Factor



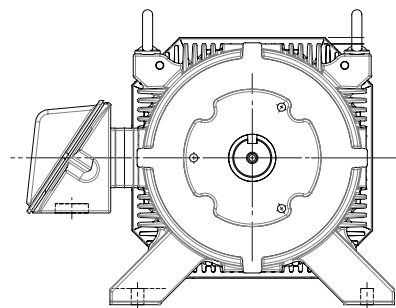
POWER DENSITY

Small and compact, RPM XE motors often fit where other motors don't and offer more horsepower per frame size. RPM XE motors are available in a power dense or standard NEMA design.

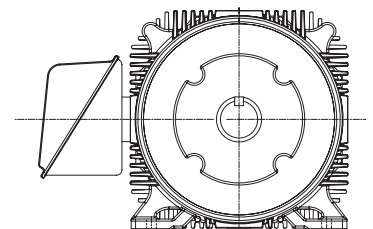
40 & 50 Hp, 1800 RPM, TEFC



Standard Induction NEMA E320T



Standard NEMA RPM XE HL320



NEW RPM-AC FL250

For more information and ratings please see the severe duty section in the CA501.

RPM XE – eXtreme Efficient

10 ADVANTAGES TO A PACKAGED SOLUTION

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

1

Ability to achieve premium efficiency (IE3) system performance as a combined motor + drive packaged solution

2

Suitable with any drive running in scalar mode

3

Smooth soft starting performance results in reduced mechanical stress on the application providing longer life

4

Significant energy savings gains when running at reduced speed on centrifugal fan/pump/compressor applications based on the affinity laws

5

Reduced motor full load amps can result in a smaller drive, a reduced premium and a shortened payback period

6

Eliminates the need for a motor starter

7

Improved energy savings performance under low load conditions due to higher efficiency and improved power factor compared to traditional premium efficient motor designs

8

Motor runs cooler for extended motor insulation and grease life

9

Achieves NEMA inertia starting capabilities

10

Runs at true synchronous speed without any feedback device required



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