Process Motors

Featuring XRI ENERGY EFFICIENT MOTORS NEMA Premium

MARATHON® ELECTRIC

Motors for the Long Run!

Motors

That Run the Toughest App

Blue Chip® Motors...

Blue Chip® efficiencies meet the Energy Policy Act *(EPACT)* energy levels and are tested to IEEE standard 112 test method B.

Our Blue Chip® motors combine an optimum design that features low-loss electrical grade laminations, 100% copper windings, a precision air gap, and non-hygroscopic class F insulation through 445T and class H on 449T frame. The 230/460 and 460 volt motors are dual nameplated for 190/380 or 380 volt; 50Hz performance at the next lower horsepower.

Blue Chip® motors incorporate a 1.15 service factor, shielded oversized ball bearings, and cast iron frames and end shields.

The Blue Chip® motors are available in totally enclosed non-vent construction in 140 frame and totally enclosed fan cooled construction in 180 through 440 frame. They are available in stock from 1 horsepower through 350 horsepower.

Blue Chip XRI® Ultra High Efficiency Motors...

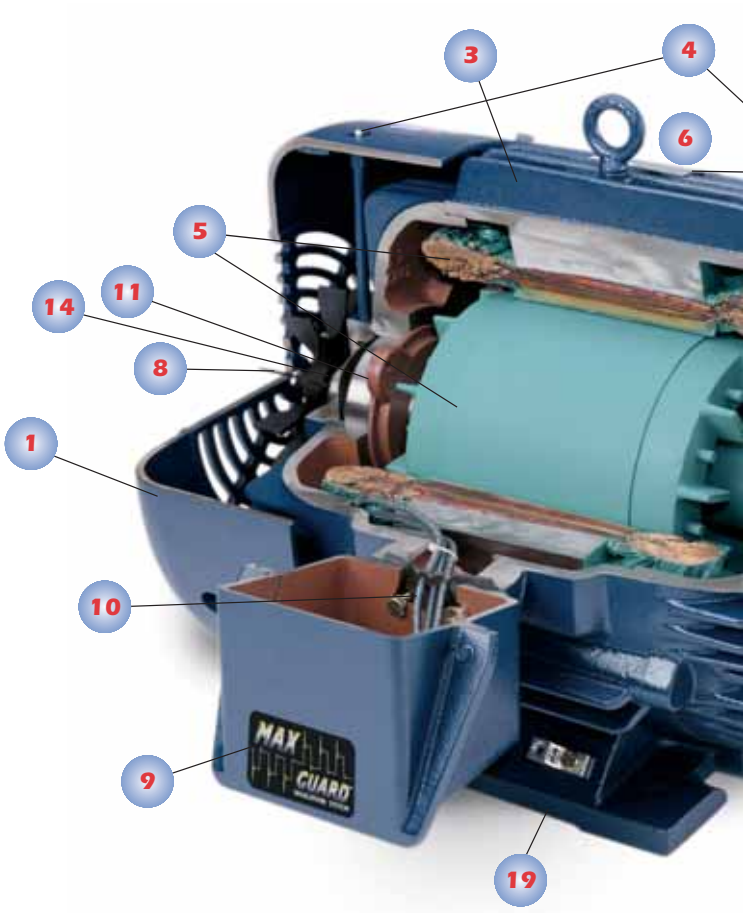
Our Blue Chip XRI® Ultra High efficiency motors offer an all cast iron frame and end shields that provide the necessary strength and corrosion resistance for the most demanding industrial applications.

The Blue Chip XRI® incorporates 100% copper windings that offer lower resistance and lower temperature rise for higher overall efficiency.

Low-loss electrical grade steel laminations and longer stack lengths in the rotor and stator reduce electrical losses and improve heat transfer by lowering flux density and increasing cooling capacity.

Shielded oversized ball bearings add to the Blue Chip XRI®'s reliability when applied in the toughest environments. A large grease reservoir and bearing pre-load spring on the opposite drive end increase the motor's dependability.

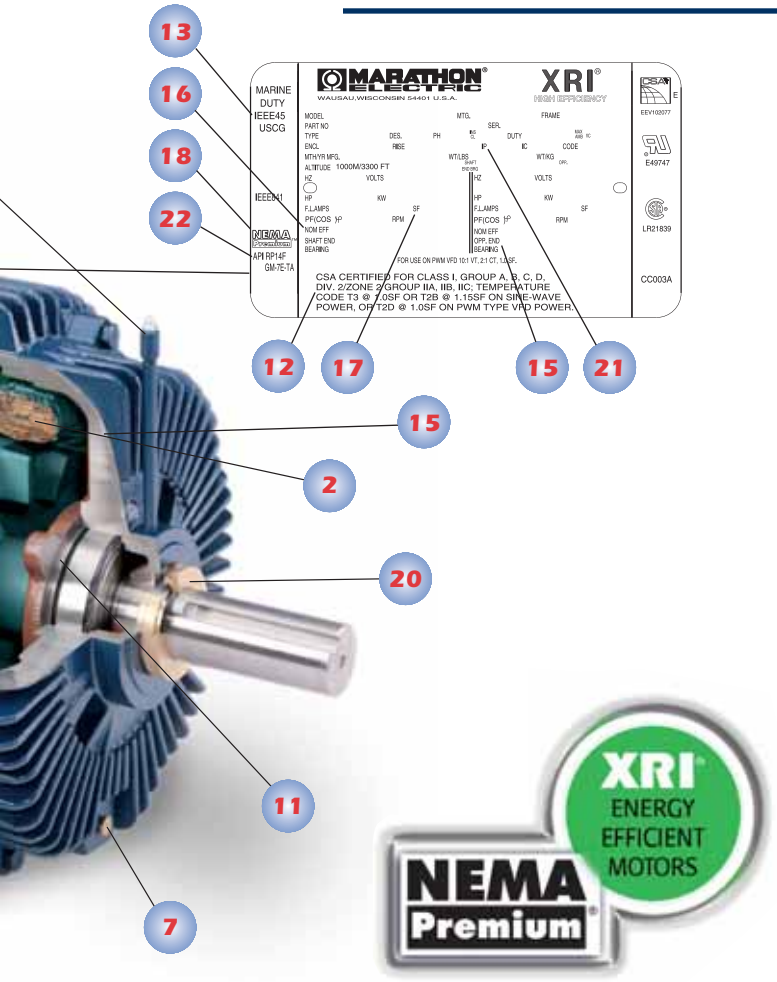
The Blue Chip XRI® family is available from 3/4 through 450 horsepower and boasts one of the highest overall efficiency levels in the motor industry. Marathon's XRI motors meet NEMA Premium® efficiency levels, providing an e**X**tra **R**eturn on **I**nvestment to customers. XRI motors have an efficiency guarantee of one index below nominal full load efficiencies.



Blue Chip XRI®-SD Features

1. Heavy duty cast iron frame, end shields and fan guard
2. 100% copper windings with non-hygroscopic class F insulation, class B temperature rise at service factor
3. Epoxy painted exterior for superior corrosion protection
4. Extended grease tubes for regreasing without disassembly
5. Epoxy coated rotor and stator for internal corrosion protection
6. Stainless steel nameplate
7. Brass drain with breather
8. Non-sparking external cooling fan
9. Oversized, gasketed cast iron conduit box with NPT threaded lead exit and internal grounding provisions
10. Permanently marked leads with lead separator
11. Oversized bearings with bearing caps *(254T-449T)* L-10 life of 150,000 hours for direct coupled loads, 26,280 hours for belted applications
12. Division 2, CSA Certified, Class I Groups A, B, C & D, Temperature code T2B on nameplate
13. Meets IEEE45 USCG Marine Duty, IP54 Construction
14. **MAX GUARD® Insulation System**

olications in the Process Industries...



Blue Chip XRI®-SD Features

15. AFBMA bearing identification on nameplate
16. Guaranteed efficiency is one index below nominal full load efficiency
17. 1.25 Service factor (sine wave) available up through 40 HP
18. Meets NEMA Premium® efficiency levels

Three year warranty

Actual test and vibration data sent with each motor

Additional Blue Chip XRI®-841 Features

19. External grounding provisions
20. Inpro/Seal® VBX® Bearing Isolator on drive end shaft
21. Meets NEMA MG1-1.26.6 Waterproof specification
22. Meets Marine Duty API RP14F for offshore platforms, IP56 Construction

Five year warranty

Actual test data plus two additional vibration tests are supplied with each motors

Blue Chip XRI®-Severe Duty Motors...

The Blue Chip XRI®-SD motors build upon the outstanding features of our Blue Chip XRI® Ultra High efficiency motors. The Blue Chip XRI®-SD motors are engineered, designed, and individually tested to meet the toughest motor applications that the process industries have to offer. The motor incorporates all cast iron construction; frame, fan guard, conduit box, and end shields along with high efficiencies and a premium design that reduce motor losses while increasing motor life and reliability.

The Blue Chip XRI®-SD motors have internal and external epoxy protection for additional corrosion resistance, a lead separator, and an extended grease inlet on both ends, providing a maintenance friendly product.

Marathon's Blue Chip XRI®-SD motor offers a much lower vibration level than the NEMA vibration standard of .15 inches per second velocity. The Blue Chip XRI®-SD is precision balanced to an average vibration of 0.03 inches per second. Every motor is subjected to a complete vibration analysis, the results are tabulated and shipped with each unit.

Blue Chip XRI®-841 Motors...

Our Blue Chip XRI®-841 motor exceeds the industry's toughest motor standard in the IEEE standard 841, while simultaneously beating the competition hands down when comparing energy efficiency levels.

The Blue Chip XRI®-841 motor is an ultra high efficient motor that meets NEMA Premium® efficiency levels. The Blue Chip XRI®-841 incorporates 100% copper windings, copper-to-copper connections, low-loss electrical grade steel laminations, precision balancing, and epoxy coatings along with a low temperature rise that ensures superior performance in the harshest environments.

All totally enclosed non-vent motors are constructed with Inpro/Seal® VBX® Bearing Isolators on the shaft end while all totally enclosed fan cooled motors have the Inpro/Seals® on both the shaft end and non-drive end. This standard feature prevents bearing contamination and premature failure.

Our MAX GUARD® insulation system combines corona-resistant magnet wire and a unique "low stress" winding configuration with uncompromised quality standards to deliver long, dependable motor life.

The Blue Chip® Motor Group:

Motors for the Long Run!

Specifications	Features	Blue Chip	XRI	XRI-SD	XRI-841
Enclosures	143-145T frame TENV ▪ 182T-449T frame TEFC	✓	✓	✓	✓
Construction	Cast iron frames and end shields	✓	✓	✓	✓
Fan (External)	Non-sparking polypropylene			✓	✓
	Non-sparking polypropylene 364T-449T	✓	✓		
Fan Guard	Cast iron			✓	✓
	Polypropylene 182T-286T ▪ Cast iron 324T-449T	✓	✓		
Conduit Box	Steel 143T-326T ▪ Cast iron 364T-449T	✓	✓		
	Cast iron, oversized, fully gasketed with NPT threaded opening			✓	✓
Bearings & Lubrication	Shielded ball bearings ▪ Select ratings above 125 HP have roller bearing on drive-end ▪ C-3 fit with premium Mobil Polyrex EM grease (-30°C to +150°C)	✓	✓	✓	✓
	Zerk fittings			✓	✓
	Extended grease tubes for regreasing without disassembly			✓	✓
Bearing Caps	Cast iron, 254T-449T frame			✓	✓
	Cast iron, 444T-449T frame	✓	✓		
Drains	Corrosion resistant brass drain and breather			✓	✓
	Drilled and tapped hole		✓		
	Drain hole 143T-326T ▪ Drilled and tapped hole 364T-449T	✓			
Slinger	Molded neoprene slinger on shaft end	✓	✓	✓	
Voltage	230/460 volt through 100 HP ▪ 460 volt - 125 HP & above	✓	✓		
	575 volt available ▪ 230/460 volt available	✓	✓	✓	
	460 volt or 575 volt, 3 leads			✓	✓
Leads	Lead lugs standard 364T frame and larger	✓	✓	✓	✓
	Permanently marked leads with lead separator			✓	✓
Service Factor (Sine Wave)	1.15	✓	✓	✓	✓
	1.25 (through 40 HP)		✓	✓	✓
Insulation	Non-hygroscopic class F insulation ▪ 449T class H insulation	✓	✓		
	MAX GUARD®			✓	✓
Inverter Duty	Rated for 10:1 VT or 20:1 CT VFD		✓	✓	✓
	Nameplated for 10:1 VT, 2:1 CT or 10:1 CT VFD				✓
Nameplate	Stainless steel - includes NEMA nom. eff., power factor	✓	✓	✓	✓
	AFBMA bearing identification plate			✓	✓
Marine Duty	Meets IEEE45 and USCG			✓	✓
	Meets API RP14F for offshore platforms				✓
Agency Listings	UL recognized file no. E49747 and CSA certified	✓	✓	✓	✓
Division 2	CSA certification nameplate, Class I Groups A, B, C, & D, Temperature code: T2B			✓	✓
Seals	Inpro/Seal® VBX® Bearing Isolators on drive end of TENV and on both ends of TEFC				✓
Epoxy Finish	Internal and external corrosion resistant epoxy			✓	✓
Hardware	Corrosion resistant zinc dichromate plated hex head hardware ▪ Lifting provisions, 182T-449T frame	✓	✓	✓	✓
Ground	Ground lug provision in conduit box	✓	✓	✓	✓
	External grounding provision				✓
Balance	Special balance average .03 in/sec			✓	✓
Warranty	24 mo. from date of first use.,30 mo. from date of manufacture	✓			
	36 mo. from date of first use.,42 mo. from date of manufacture		✓	✓	
	60 mo. from date of first use.,66 mo. from date of manufacture				✓
	Optional extended warranty			✓	✓
Motor Testing	Actual short commercial test data supplied with each motor		✓		
	Actual short commercial test data plus max. vibration test supplied with each motor			✓	
	Actual short commercial test data plus 2 additional vibration tests are supplied with each motor				✓

Blue Chip®

Meets EPACT and Canadian NRCAN

Blue Chip XRI® - Ultra High

✪ *Meets NEMA Premium® Levels*

Blue Chip XRI® - Severe Duty

✪ *Meets NEMA Premium® Levels*

Blue Chip XRI®-841

Meets IEEE 841 Motor Specifications

✪ *Meets NEMA Premium® Levels*

For more information contact :

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ELECTRICAL APPARATUS SERVICE ASSOCIATION EASA

Power Transmission Distributors Association

NEMA Member

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