

# Process Motors



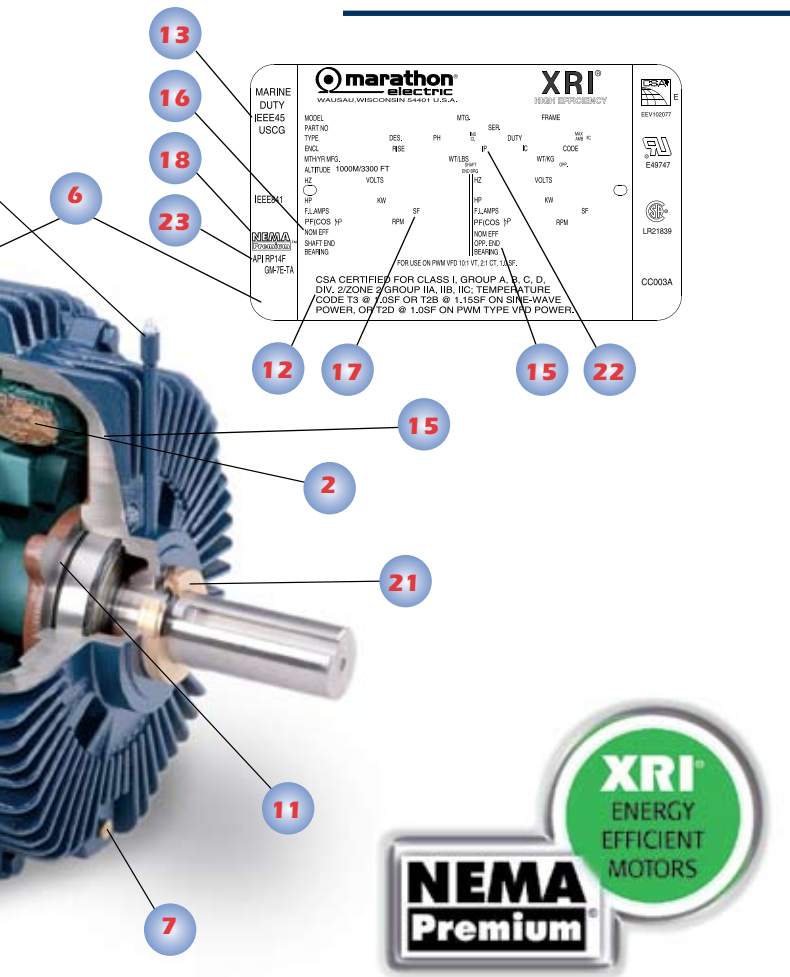
 **marathon**<sup>®</sup>  
electric

*Motors for the Long Run!*



# Applications in the Process Industries...

## 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 0.08 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.

### 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
- 19. Provisions to add stub shaft for an HS type encoder, 182T-449T, TEFC

*Three year warranty*

*Actual test and vibration data sent with each motor*

### Additional Blue Chip XRI®-841 Features

- 20. External grounding provisions
- 21. Inpro/Seal® VBX® Bearing Isolator on drive end shaft
- 22. Meets NEMA MG1-1.26.6 Waterproof specification
- 23. 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*

# The Blue Chip® Motor Group:

Motors for the Long Run!

Specifications	Features	Blue Chip	XRI	XRI-SD	XRI-841
Enclosures	TENV ▪ TEFC	✓	✓	✓	✓
Construction	Cast iron frames and end shields	✓	✓	✓	✓
Fan (External)	Non-sparking polypropylene 143T-324T			✓	✓
	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-5013LS			✓	✓
	Cast iron, 444T-449T	✓	✓		
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) (check SB300 Catalog)		✓	✓	✓
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				✓
	Provisions to add stub shaft for an HS type encoder, 182T-449T, TEFC			✓	✓
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/Sea® 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	✓	✓	✓	✓
Ground	Ground lug provision in conduit box	✓	✓	✓	✓
	External grounding provision				✓
Balance	Special balance average 0.08 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



Marathon Electric Manufacturing Corporation

100 East Randolph St. ▪ P.O. Box 8003 ▪ Wausau, Wisconsin 54402

Call: (715) 675-3311 ▪ Fax: (715) 675-8030 ▪ [www.marathonelectric.com](http://www.marathonelectric.com)

SB523/6711M/SK/6-10/1.5M-RG

Marathon Electric is a trademark of Regal Beloit Corporation.

