

marathon™

— Motors

Blue Chip® Crusher
Duty Motors

SB535



A Regal Brand

REGAL

BLUE CHIP® CRUSHER DUTY MOTORS FOR AGGREGATE APPLICATIONS



Our **Blue Chip® Crusher Duty** motor is built tough for the toughest environments and applications in the aggregate industry. Totally enclosed cast iron construction protects against moisture, dust, and other contaminants, thus prolonging life and reducing unnecessary downtime.

Rugged die cast aluminum rotors are precision balanced. This reduces overall system vibrations, thereby increasing equipment longevity. All models meet or exceed NEMA Premium Efficiencies.

Our cool running bearings are designed to meet the IEEE 841 standard of 26,300 hours for NEMA belted loads.

THE MARATHON INSULATION SYSTEM CREATES UNEQUALLED PERFORMANCE...

Our **Blue Chip® Crusher Duty** motors extends the motor's winding life by using a Class F insulation system designed to operate with a Class B temperature rise at full load. Consequently, a motor that operates cooler has a prolonged life.

Our insulation system incorporates additional coil bracing with two dips and bakes of 100% solids insulating varnish for additional durability and long life.

AN ADVANCED BEARING SYSTEM FOR RELIABLE PERFORMANCE...

The bearing system used in the **Blue Chip® Crusher Duty** motor has been designed and engineered

for continuous, reliable performance and easy maintenance. An oversize roller bearing is offered as standard on the drive end.

Our bearing system incorporates a high temperature urea based grease for dependable operation along with grease inlet and relief fittings for ease of maintenance. The seals are Axial Surface Seal (50-200HP) and Inpro® Smart Ring Plus (250-500HP) are rotating shaft seals, that prevent entry of contaminants into the bearings. A preload bearing spring is mounted on the nondrive end to offset creepage and reduce wear. Internal bearing caps are provided for added protection.

DESIGNED FOR AGGREGATE APPLICATIONS...

The **Blue Chip® Crusher Duty** motor is specifically designed for crusher applications such as cone, jaw, roller crushers, impactors, and pulverizers. The **Blue Chip® Crusher Duty** motor is a TEFC severe duty design suitable for across the line, wye-delta, part winding, or inverter start.

The **Blue Chip® Crusher Duty** motor has NEMA Design C torques for hard starting loads. A 4140 shaft steel is used for added strength for severe belted loads.

Consult the product features chart on the back cover for more indepth specifications.

- Features:
- Meets or exceeds NEMA Premium® efficiencies
 - Blue Chip® quality, 100% cast iron construction for rigidity and reduced vibration
 - 4140 high strength steel for belted applications
 - NEMA Design C, extra high starting and breakdown torque design
 - Roller Bearing on Drive End for belted loads
 - Suitable for use on a VFD. 10:1 Variable Torque and 10:1 Constant Torque
 - 1.15 Service Factor on sinewave, 1.0 Service Factor on IGBT power
 - Suitable for across the line, wye-delta, part winding, or inverter start.
 - IP55 rating, enclosure protection against dust and water jets.
 - 80 C rise at rated load
 - Class F insulation
 - Axial Surface Seal (50-200HP) and Inpro® Smart Ring Plus on the 250HP model, rotating shaft seals on each end of shaft
 - External epoxy paint
 - Brass drain and breather
 - UL recognized, CSA Certified, and CE Mark

HP	RPM	VOLTS	FRAME	CAT NO.	MODEL NO.	STOCK	MULT. SYMB.	NOM. EFF.	F.L. AMPS	WEIGHT	"C" DIM.	FOOT NOTES
50	1800	230/460	326T	Y818A	326TTFC6633	*	E4	94.5	116/58	875	33.86	YD
	1200	230/460	365T	Y840A	365TTFC6683	*	E4	94.1	120/60	1067	38.39	YD
60	1800	230/460	364T	Y819A	364TTFC6633	*	E4	95.0	138/69	1000	36.61	YD
	1200	230/460	404T	Y850A	404TTFC6683	*	E4	94.5	144/72	1340	42.72	YD
75	1800	230/460	365T	Y820A	365TTFC6633	*	E4	95.4	172/86	1235	38.39	YD
	1200	230/460	405T	Y852A	405TTFC6683	*	E4	94.5	178/89	1455	42.72	YD
100	1800	230/460	405T	Y822B	405TTFC6633	*	E4	95.4	228/114	1463	42.72	YD
	1200	460	444T	Y851A	444TTFC6683	*	E4	95.0	114	2061	50.79	YD
125	1800	460	444T	Y824A	444TTFC6633	*	E4	95.4	140	1980	50.79	YD
	1200	460	445T	Y853A	445TTFC6683	*	E4	95.0	142	2155	50.79	YD
150	1800	460	445T	Y826B	445TTFC6633	*	E4	95.8	165	2140	50.79	YD
	1200	460	447T	Y854A	447TTFC6683	*	E4	95.8	170	2543	55.91	YD
200	1800	460	447T	Y828A	447TTFC6633	*	E4	96.2	225	2175	55.91	YD
	1200	460	449T	Y855B	449TTFC6683	*	E4	95.8	228	2610	55.91	YD
250	1800	460	449T	Y856A	449TTFS36633	*	E4	96.2	282	2924	51.84	YD

Blue shaded areas are Cast Iron Frames

Catalog numbers (Cat No.) highlighted in bold blue have efficiency levels that meet EISA requirements

BLUE CHIP® CRUSHER DUTY MOTORS FOR AGGREGATE APPLICATIONS

Specifications	Features
Enclosure	TEFC severe duty for outdoor environments
Construction	Cast iron frame and end shields ensure rigidity
Fan (External)	Polypropylene material will not corrode
Fan Guard	Cast iron, heavy duty service
Conduit Box	Cast iron with NPT threaded entry
Bearings	Regreasable roller bearing on drive end and deep groove Conrad ball bearings on non-drive end
Bearing Caps	Cast iron forms a generously sized lubricant cavity
Drains	Corrosion resistant brass drain and breathers, one per end, allowing condensation to escape
Ingress Protection	IP55 rating, enclosure protection against dust and water jets.
Stock Ratings	50 to 250HP, 3/60/460V, 4 and 6 pole - NEMA Premium Efficiency
Build Up Ratings	3 to 500HP, 3/60/460V, 4, 6, and 8 pole - NEMA Premium Efficiency
Leads	12 leads for wye-delta, part winding, inverter or across the line starting
Temperature Rise	80° C at rated load, well below the insulation thermal limit
Service Factor	1.15 for overload capability, 1.0 Service Factor on IGBT power
Inverter Rating	Up to 20:1 Variable Torque and 10:1 Constant Torque
Insulation	Class F temperature rating and non-hygroscopic. Optional Max Guard insulation system (build-up ratings only)
Varnish System	100% solids, polyester based system • Resilient, less prone to cracking
Nameplate	Stainless steel, does not corrode, stays legible
Seals	Axial Surface Seal (50-200HP) and Inpro® Smart Ring Plus (250-500HP), rotating shaft seals on each end of shaft Internal and external corrosion resistant epoxy
Hardware	Corrosion resistant hex head hardware
Ground	Ground lug in the conduit box and on frame
Torque - Stock	NEMA Design C, extra high starting and breakdown torque design
Torque - Build Up	NEMA Design A, exceeds NEMA Design C torques
Shaft Material	4140 high strength steel for belted applications
Rotors	Die Cast Aluminum ensures even thermal distribution
Laminations	Low loss electrical grade steel allows motor to run efficiently
Lubrication	Urea based for temperature range -30° C to 150° C
Finish Paint	Two part high solids epoxy holds up to harsh outdoor environments
Mounting	Floor mounted F-1 or F-2 • Available for wall mounting W-6 or W-7

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