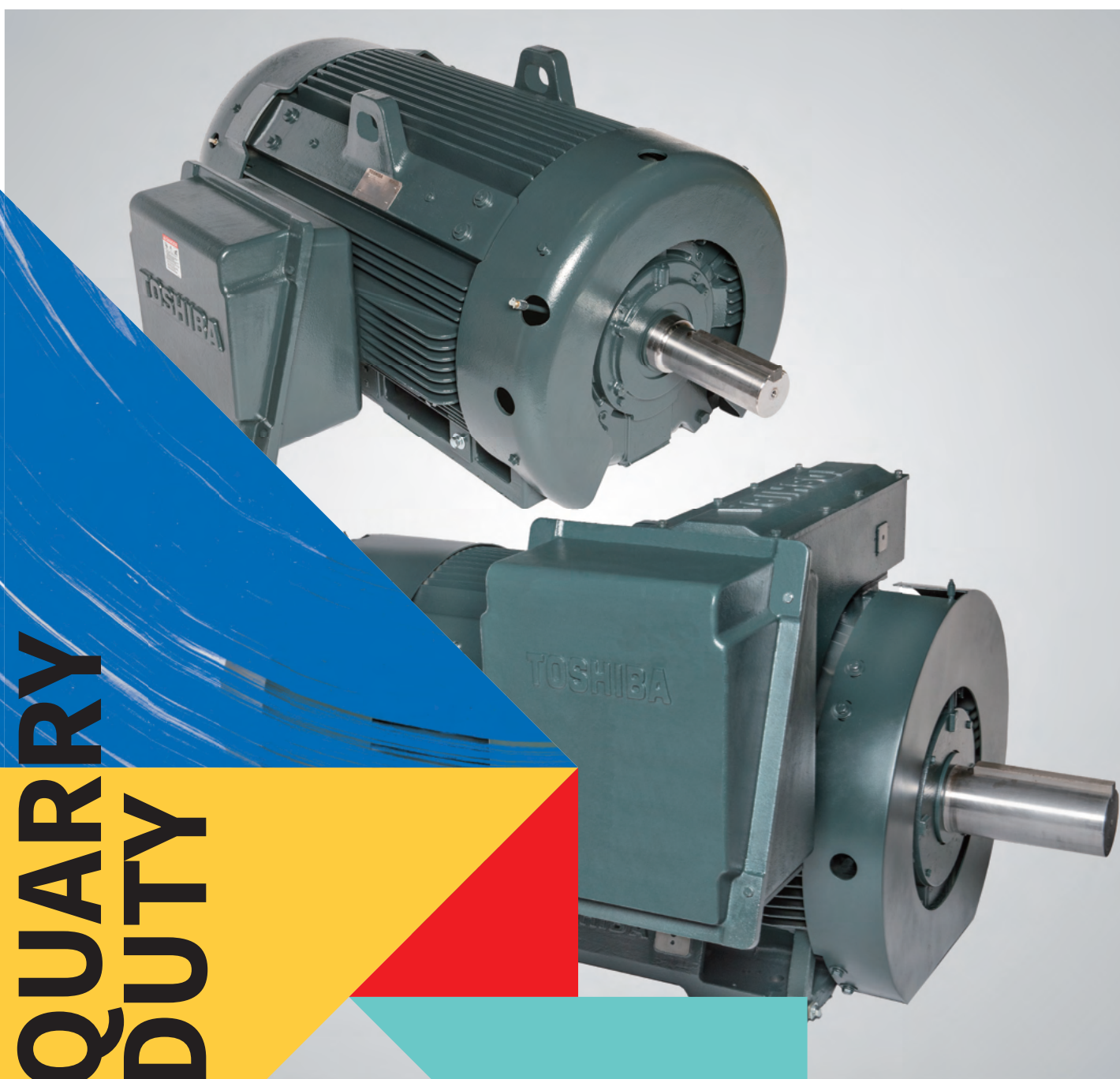


# TOSHIBA

LOW VOLTAGE MOTORS

## EQP Global<sup>®</sup> QD



**QUARRY  
DUTY**

# BUILT FOR MINING AND AGGREGATE INDUSTRY APPLICATIONS

Providing exceptional high-starting torques, Toshiba's EQP Global QD motor ("Quarry Duty motor") utilizes a totally enclosed fan cooled design, oversized superior-grade bearings, and shafts built with high strength steel to withstand the harsh environments. These key features allow these Quarry Duty motors to provide outstanding reliability, performance, and efficiency for the toughest applications in the aggregate & cement and mining & mineral industries.



Superior Performance	The motor delivers high-starting torques combined with high-breakdown torques, which allows it to be used in a wide variety of applications.
Insulation System	Designed for aggressive overloads, the motor offers a 1.25 SF (1.15 SF for frames 400 and larger*) with large thermal margins for extended life and reliability.
Low Vibration	A motor vibration level of 0.1 inches/second, which exceeds applicable NEMA MG1 requirements, results in motor stability and durability by prolonging motor life and helping to reduce downtime.
Ingress Protection	Utilizing a totally enclosed fan cooled design combined with a v-ring or shaft slinger seals, the motor has an IP55 rating, which helps prevent motor operation interference from humidity, dust, dirt, and other contaminants present in the environment.
Inverter Duty Rated*	The motor is designed for use with an adjustable speed drive, which can lead to energy savings when the motor is run at optimum speed. The insulation system is designed to meet NEMA MG1 Part 31 requirements (Inverter Duty).

## GENERAL FEATURES

- 5 TO 750 HP
- 1.25SF Frames 184-365T; 1.15SF Frames 405T and Larger\*
- Frame Size 184T through S/B587
- IP55 Rated
- NEMA Premium® or High Efficiency
- Hardware ASTM Grade 5 Frames 184T- S447T; ASTM Grade 8 on S/B449, 505UZ and S/B587

\*Except for 750 HP, which has 1.00 SF

## CONSTRUCTION

- Cast Iron Frame and Bearing Brackets
- Dual-Drilled with Multi-Mount Capabilities on Most Frames (See Appendix B in Industrial Catalog)
- Shaft Material AISI 1045 Frames 184T- 405T; AISI 4142 High Strength Steel Frames S444T-S/B587



## BEARINGS

- Oversized 300 Series Bearings on DE & ODE; Roller Bearings on Frames S444T and Larger
- Sealed Bearings Frames 184T - 256T; Regreasable Bearings on Frames 284T and Larger
- L-10 100,000 Hours Direct Coupled; L-10 40,000 Hours Belted
- Load Side Locked Bearing on Frames 213T-405T. Roller Bearing on 444T Frame and Larger With Bearing Lock Nuts on Both Ends



## INDUSTRIES SERVED

- Mining & Minerals
- Aggregate & Cement
- Chemical
- Pulp & Paper
- Oil & Gas

## APPLICATIONS

- Conveyors
- Crushers
- Compressors
- Mills
- Fans
- Pumps
- Screens
- Centrifuges

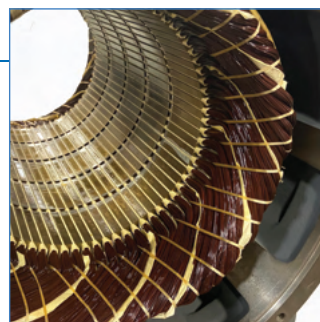
## TERMINAL BOX

- Cast-Iron Construction
- Two 3-Inch NPT Conduit Openings on Frames 505 and Larger
- UL® Grounding Lug Provision
- Rotatable 90° Increments
- Lead Seal Gasket
- S/B587 Easy Field Modification for F1, F2, F3



## INSULATION

- Low-Loss Electrical Steel
- Phase Paper & Coil Bracing on DE & ODE
- Inverter Rated Magnet Wire Can Withstand 2000V Peak and Rise Time of 0.1 μs
- Exceeds Applicable NEMA MG1 Part 31 Requirements\*
- Class F System with Class H Magnet Wire and Varnish



## OPTIONAL FEATURES

- Insulated Bearings
- C or D Flanges
- Cast Iron Fan Covers
- Severe Duty Drip Covers
- Tropicalized Winding Varnish
- Fungus-Proof Protective Coating
- Shaft Grounding Devices
- Thermal Protection (RTDs, Thermostats, Thermistors)
- Space Heaters
- Auxiliary Boxes (F1 and F2 locations)

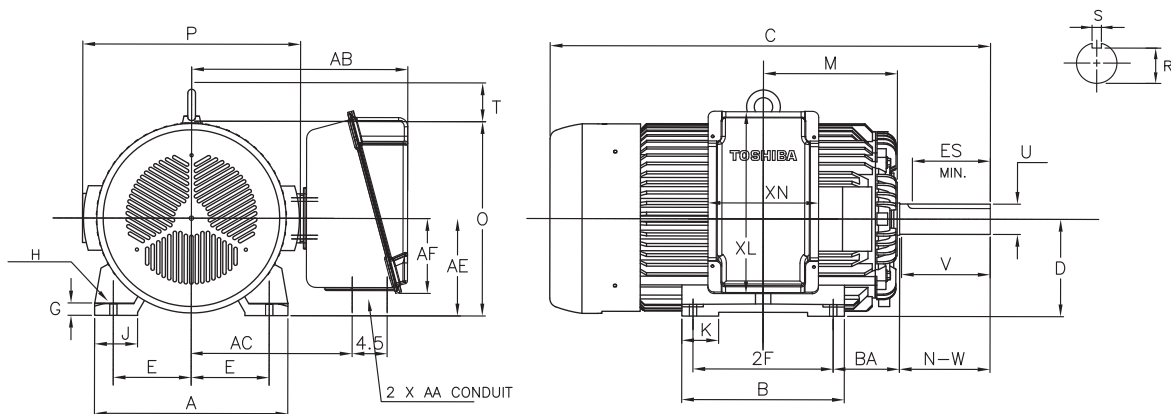
## TESTING

- 100% No-Load Commercial Test
- Vibration Test on Frames S444T and Larger
- Commercial Test Report with Vibration Data Supplied with Frames S444T and Larger

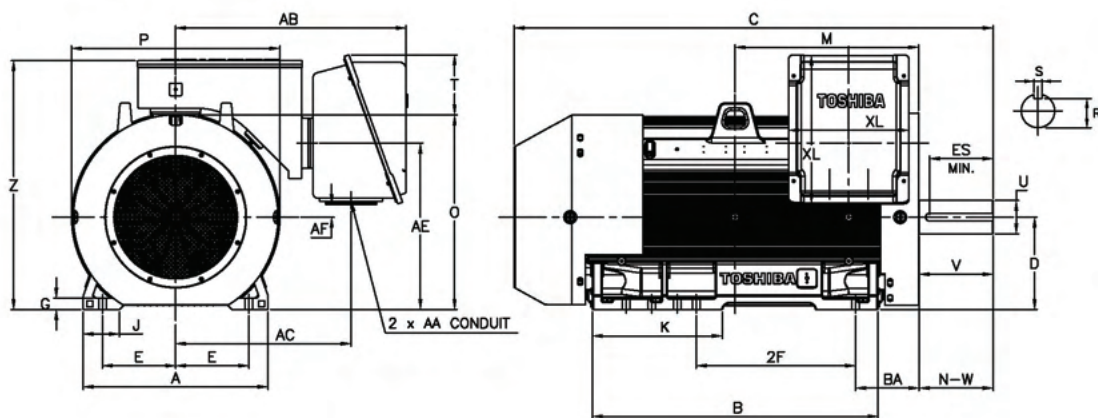


# HIGH TORQUE MOTORS WITH SUPERIOR RELIABILITY

## 505UZ Frame



## S586/7 and B587/8/9/10 Frames



Frame	Motor Dimensions											
	A	B	C	D	G	J	K	M	O	P	T	Z
505UZ	24.9	20.9	56.5	12.5	1.5	5.6	4.8	17.3	24.7	28.0	5.2	-
S586/7LQ	29.0	34.5	63.4	14.5	1.6	5.7	11.3	22.9	30.6	32.7	9.3	39.2
S586/7L	29.0	34.5	63.4	14.5	1.6	5.7	11.3	22.9	30.6	32.7	9.3	39.2
B587/8/9/10LL	29.0	45.0	75.2	14.5	1.78	5.7	20.4	28.8	30.6	32.7	9.3	39.2
B587/8/9/10LQ	29.0	45.0	75.2	14.5	1.78	5.7	20.4	28.8	30.6	32.7	9.3	39.2

Frame	Conduit Box						
	AA [NPT]	AB	AC	AE	AF	XL	XN
505UZ	3.00	27.7	20.5	12.5	9.5	23.3	14.2
S586/7LQ/L	3.00	36.2	27.5	26.1	1.97	23.5	18.9
B587/8/9/10LL/LQ	3.00	36.2	27.5	26.1	1.97	23.5	18.9

Frame	Mounting				Shaft Extension			Key Seat			Bearings	
	E	2F	H	BA	N-W	V	U	R	S	ES	LS ROLLER	OS BALL
505UZ	10	18.0	0.94	8.5	11.62	11.38	3.875	3.309	1.00	10.00	NU322C3	6318C3
S586/7LQ	11.5	22.0/25.0	1.19	10.0	11.625	11.56	4.375	3.817	1.00	10.00	NU324C3	6320C3
S586/7L	11.5	22.0/25.0	1.19	10.0	11.625	11.56	3.875	3.309	1.00	10.00	NU322C3	6320C3
B587/8/9/10LL	11.5	25/28/32/36	1.19	10.0	11.625	11.56	5.25	4.55	1.00	10.00	NU328C3	6320C3
B587/8/9/10LQ	11.5	25/28/32/36	1.19	10.0	11.625	11.56	4.375	3.817	1.00	10.00	NU324C3	6320C3

Voltage	RPM	HP	Frame	Model Number	S.F.	FLA	LRA	LRT %	BDT %
460	1800	5HP	184T	0054QDAB41A-P	1.25	6.4	54	290	310
		7.5HP	213T	Y754QDAB41A-P	1.25	9.8	67	270	340
		10HP	215T	0104QDAB41A-P	1.25	13.6	96	290	240
		15HP	254T	0154QDAB41A-P	1.25	21	127	290	280
		20HP	256T	0204QDAB41A-P	1.25	25	160	260	280
		25HP	284T	0254QDAB41A-P	1.25	30	215	230	240
		30HP	286T	0304QDAB41A-P	1.25	39	287	260	330
		40HP	324T	0404QDAB41A-P	1.25	49	383	215	235
		50HP	326T	0504QDAB41A-P	1.25	62	494	240	250
		60HP	364T	0604QDAB41A-P	1.25	70	548	200	270
		75HP	365T	0754QDAB41A-P	1.25	87	736	210	360
		100	405T	1004QDAB41A-P*	1.15	115	790	215	310
		125	S444T	1254QDAB41A-PR	1.15	143	1092	230	310
		150	S445T	1504QDAB41A-PR	1.15	170	1235	210	310
		200	S447T	2004QDAB41A-PR	1.15	232	1606	210	270
		250	S05UZ	2504QDAB41-R	1.15	288	2057	285	285
		250	S449T	2504QDSB41A-R	1.15	295	2071	220	270
		300	S587LQ	3004QDSB41A-R	1.15	344	2440	210	285
		300	S449T	3004QDSB41A-RF	1.15	356	2416	215	260
		350	S587LQ	3504QDSB41A-R	1.15	400	2746	200	275
		350	B449T	3504QDSB41A-RF	1.15	410	2826	220	260
		400	S587LQ	4004QDSB41A-R	1.15	458	3101	200	275
		400	B449T	4004QDSB41A-RF	1.15	473	3179	215	255
		450HP	S587LQ	4504QDSB41A-R	1.15	512	3466	200	270
		500HP	B587LL	5004QDSB41A-R	1.15	589	4455	220	345
	600HP	B587LL	6004QDSB31A-R	1.15	709	5193	215	335	
	700HP	B587LL	7004QDSB31A-R	1.15	829	6015	215	335	
	750HP	B587LL	7504QDSB31A-R	1.0	898	6672	225	345	
	5HP	215T	0056QDAB41A-P	1.25	6.9	54	270	345	
	7.5HP	254T	Y756QDAB41A-P	1.25	9.8	67	270	340	
	10HP	256T	0106QDAB41A-P	1.25	14	88	250	275	
	15HP	284T	0156QDAB41A-P	1.25	19.8	126	240	260	
	20HP	286T	0206QDAB41A-P	1.25	25	166	255	275	
	25HP	324T	0256QDAB41A-P	1.25	31	194	245	290	
	30HP	326T	0306QDAB41A-P	1.25	37	236	220	265	
	40HP	364T	0406QDAB41A-P	1.25	48	333	240	245	
	50HP	365T	0506QDAB41A-P	1.25	59	449	245	280	
	60	404T	0606QDAB41A-P	1.15	75	489	205	245	
	75	405T	0756QDAB41A-P	1.15	94	614	205	245	
	100	S444T	1006QDAB41A-PR	1.15	121	958	195	315	
	125	S445T	1256QDAB41A-PR	1.15	154	1213	200	315	
	150	S447T	1506QDAB41A-PR	1.15	184	1433	205	305	
	200	S05UZ	2006QDAB41-R	1.15	235	1450	210	225	
	200	S449T	2006QDSB41A-R	1.15	243	1723	245	265	
	250	S587LQ	2506QDSB41A-R	1.15	313	2203	190	295	
250	S449T	2506QDSB41A-RF	1.15	303	2130	245	265		
300	S587LQ	3006QDSB41A-R	1.15	377	2650	195	295		
300	B449T	3006QDSB41A-RF	1.15	362	2545	245	265		
350	S587LQ	3506QDSB41A-R	1.15	443	3118	195	300		
350	B449T	3506QDSB41A-RF	1.15	429	2999	245	265		
400HP	S587LQ	4006QDSB41A-R	1.15	514	3527	195	295		
450HP	B587LL	4506QDSB41A-R	1.15	564	3860	210	310		
500HP	B587LL	5006QDSB41A-R	1.15	635	4396	215	315		
600HP	B587LL	6006QDSB31A-R	1.15	773	5079	210	305		
200HP	S587LQ	2008QDSB41A-R				Contact Factory			
250HP	S587LQ	2508QDSB41A-R				Contact Factory			
300HP	S587LQ	3008QDSB41A-R				Contact Factory			
350HP	S587LQ	3508QDSB41A-R				Contact Factory			
400HP	B587LL	4008QDSB41A-R				Contact Factory			
450HP	B587LL	4508QDSB41A-R				Contact Factory			
500HP	B587LL	5008QDSB41A-R				Contact Factory			

\*Also available with roller bearing on the drive end.

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