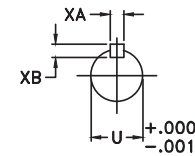
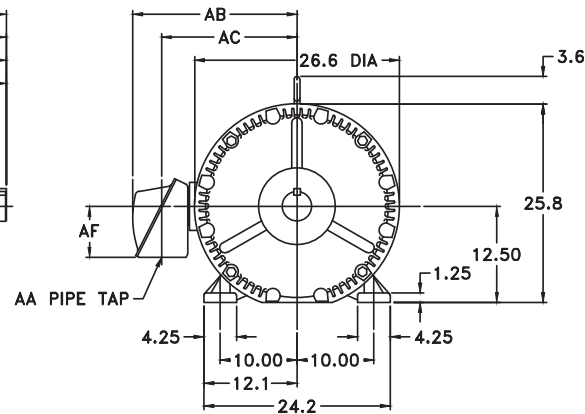
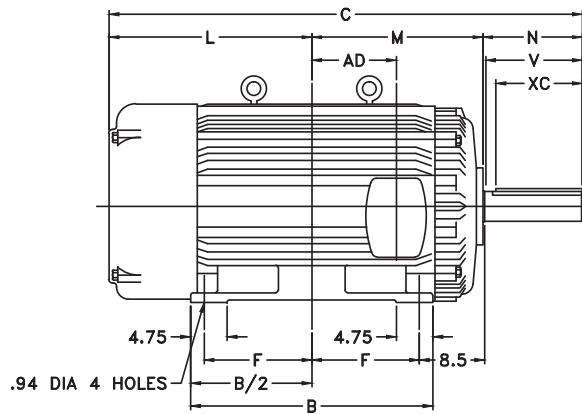


TYPE HS SQUIRREL CAGE INDUCTION MOTOR
ENCLOSURE - TOTALLY ENCLOSED FAN COOLED
AND EXPLOSION PROOF
BEARING - ANTI-FRICTION

- NOTES
 A- THIS DRAWING IS NOT TO BE REGARDED AS INDICATING EXACT DETAILS OF CONSTRUCTION. IT IS PROPERLY DIMENSIONED FOR ERECTION PURPOSES ONLY.
 B- MOUNTING BOLTS, DOWELS AND COUPLING NOT SUPPLIED BY TOSHIBA UNLESS SPECIFICALLY ORDERED.
 C- WHEN MOUNTING MOTOR, SHIM COMPLETE FOOT PAD AREA.
 D- ANTI-FRICTION BEARINGS MUST BE GREASED WHILE MOTOR IS RUNNING.
 E- FOR MOUNTING OF MOTOR USE .875-9 THD/INCH HOLD DOWN BOLTS.
 F- NON DRIVE END BEARING INSULATED.



END VIEW OF SHAFT

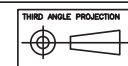
FRAME SIZE	REAR SHAFT EXTENSION				N	V	B	C	F	L	M	AD	RECOMMENDED COUPLING BORE		APPROX WEIGHT
	U	KEY SIZE											MIN.	MAX.	
		XA	XB	XC											
506U	3.375	.875	.875	8.00	9.94	9.50	23.5	50.56	10.00	22.38	18.25	7.0	.....	.....	2625
506US	2.375	.625	.625	3.00	4.69	4.25	23.5	45.31	10.00	22.38	18.25	7.0	2.3730	2.3740	2575
506E	2.875	.625	.625	3.75	5.06	4.62	23.5	45.69	10.00	22.38	18.25	7.0	2.8730	2.8740	2575
506Z	3.875	.875	.875	11.25	12.94	12.56	23.5	53.56	10.00	22.38	18.25	7.0	.....	.....	2630
509U	3.375	.875	.875	8.00	9.94	9.50	31.5	58.56	14.00	26.38	22.25	11.0	.....	.....	3325
509US	2.375	.625	.625	3.00	4.69	4.25	31.5	53.31	14.00	26.38	22.25	11.0	2.3730	2.3740	3275
509E	2.875	.625	.625	3.75	5.06	4.62	31.5	53.69	14.00	26.38	22.25	11.0	2.8730	2.8740	3275
509Z	3.875	.875	.875	11.25	12.94	12.56	31.5	61.56	14.00	26.38	22.25	11.0	.....	.....	3325

CONDUIT BOX							
FAN COOLED - STANDARD				EXPLOSION PROOF			
AA	AB	AC	AF	AA	AB	AC	AF
3.00	21.38	17.62	6.63	3.00	22.06	17.44	7.00
FAN COOLED - ALTERNATE							
3.50	25.38	19.50	9.38				

THESE DIMENSIONS ARE PREPARED IN ACCORDANCE WITH THE NORMAL AND ACCEPTED STANDARDS OF THE ELECTRICAL INDUSTRY FOR THE PURPOSES OF OBTAINING CUSTOMER APPROVAL. AS PART OF THE MANUFACTURING OR PRODUCTION PROCESS, ANY USE OR COMPARISON OF THE DIMENSIONS OF THE CUSTOMER (OTHER THAN FOR GRANTING APPROVAL) SHALL BE THE SOLE RESPONSIBILITY OF THE CUSTOMER.

STANDARD
REVISIONS
1

PRELIMINARY SHAFT AND MOUNTING ONLY
 G.O. _____ S.O. _____ CUST. ORDER _____
 CUST. _____
 RATING _____
 PER: _____ DATE _____
 TOSHIBA INDUSTRIAL PRODUCTS CANADA, STONEY CREEK



THESE DIMENSIONS ARE PREPARED IN ACCORDANCE WITH THE NORMAL AND ACCEPTED STANDARDS OF THE ELECTRICAL INDUSTRY FOR THE PURPOSES OF OBTAINING CUSTOMER APPROVAL. AS PART OF THE MANUFACTURING OR PRODUCTION PROCESS, ANY USE OR COMPARISON OF THE DIMENSIONS OF THE CUSTOMER (OTHER THAN FOR GRANTING APPROVAL) SHALL BE THE SOLE RESPONSIBILITY OF THE CUSTOMER.

TOSHIBA INDUSTRIAL PRODUCTS CANADA

TITLE TYPE HS MOTOR FRAME 500
OUTLINE - TEFC/TEXP ENCLOSURE

SCALE: N.T.S.

DATE OF SHEET

CHG'D BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 APPROVED BY: _____ DATE: _____

E10D117



Issued Date

Transmit #

Issued By

Issued Rev

TYPICAL MOTOR PERFORMANCE DATA

Model: 2503XPAL11F-C

HP	kW	Pole	FL RPM	Frame	Voltage	Hz	Phase	FL Amps
250 hp	186 kW	2	3563 rpm	509US	4160 V	60	3	29.6 A
Enclosure	IP	Ins. Class	S.F.	Duty	NEMA Nom. Eff.	NEMA Design	kVA Code	Ambient (°C)
TEXP	55	F	1.15	Cont.	93.9	B	F	40

Load	HP	kW	Amperes	Efficiency (%)	Power Factor (%)
Full Load	250	186	29.6	93.9	93.6
¾ Load	187.5	140	22.4	93.4	93.0
½ Load	125	93	15.6	91.9	90.2
¼ Load	62.5	47			
No Load			5.8		13.1
Locked Rotor			190.3		21.7

Torque				Rotor wk ² Inertia (lb-ft ²)
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	
370	111	111	282	75

Safe Stall Time(s)		Sound Pressure dB(A) @ 1M	Bearings*		Approx. Motor Weight (lbs)
Cold	Hot		DE	NDE	
34	30	-	6313Z-C3	6313Z-C3	3500

*Bearings are the only recommended spare part(s).

Motor Options:

Customer	
Customer PO	
Sales Order	
Project #	

Tag:

All characteristics are average expected values.

TOSHIBA INTERNATIONAL CORPORATION · HOUSTON, TEXAS U.S.A.

Engineering		Doc. Written By		Doc.# / Rev	
Engr. Date		Doc. Approved By		Doc. Issued	



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Issued Rev

NAMEPLATE DATA

Model: 2503XPAL11F-C

HP	kW	Pole	FL RPM	Frame	Voltage	Hz	Phase	FL Amps
250	186.4225	2	3563	509US	4160	60	3	29.56
Enclosure	IP	Ins. Class	S.F.	Duty	NEMA Nom. Eff.	NEMA Design	kVA Code	Ambient (°C)
TEXP	55	F	1.15	Cont.	93.9	B	F	40

Type: HSB

Form:

Drive End Bearing: 6313Z-C3

Non-Drive End Bearing: 6313Z-C3

Power Factor: 93.6

Max Safe RPM:

Comments 1:

Comments 2:

Comments 3:

Comments 4:

Customer

Customer PO

Sales Order

Project #

Tag:

All characteristics are average expected values.

TOSHIBA INTERNATIONAL CORPORATION · HOUSTON, TEXAS U.S.A.

Engineering

Doc. Written By

D. Suarez

Doc.# / Rev

MPCF-1120 / 0

Engr. Date

Doc. Approved By

M. Campbell

Doc. Issued

6/8/2011



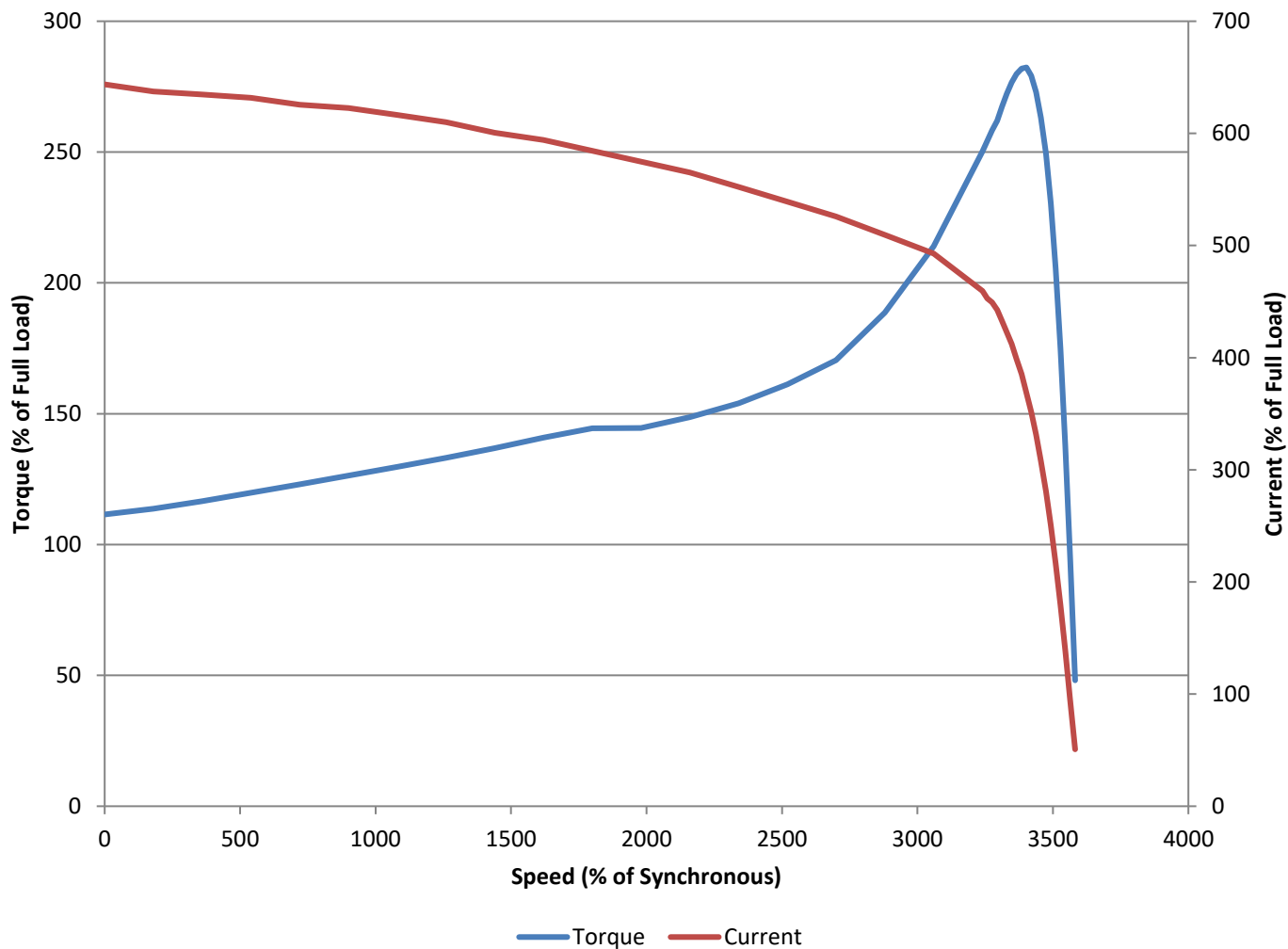
Issued Date		Transmit #	
Issued By		Issued Rev	

SPEED TORQUE/CURRENT CURVE

Model: 2503XPAL11F-C

HP	kW	Pole	FL RPM	Frame	Voltage	Hz	Phase	FL Amps
250	186.4225	2	3563	509US	4160	60	3	29.56
Enclosure	IP	Ins. Class	S.F.	Duty	NEMA Nom. Eff.	NEMA Design	kVA Code	Ambient (°C)
TEXP	55	F	1.15	Cont.	93.9	B	F	40
Locked Rotor Amps	Rotor wk ² Inertia (lb-ft ²)	Torque						Break Down (%)
		Full Load (lb-ft)	Locked Rotor (%)	Pull Up (%)				
194.16	75	369.84	111.4626866	111.4626866			282.3443651	

Design Values



Customer		wk ² Load Inertia (lb-ft ²)		
Customer PO			Load Type	
Sales Order			Voltage (%)	100
Project #			Accel. Time	

Tag:

All characteristics are average expected values.

TOSHIBA INTERNATIONAL CORPORATION · HOUSTON, TEXAS U.S.A.

Engineering		Doc. Written By	D. Suarez	Doc.# / Rev	MPCF-1121/0
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Issued Date

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Issued By

Issued Rev

SPARE PARTS LIST*

Model: 2503XPAL11F-C

HP	kW	Pole	FL RPM	Frame	Voltage	Hz	Phase	FL Amps
250	186.4225	2	3563	509US	4160	60	3	29.56
Enclosure	IP	Ins. Class	S.F.	Duty	NEMA Nom. Eff.	NEMA Design	kVA Code	Ambient (°C)
TEXP	55	F	1.15	Cont.	93.9	B	F	40

Bearings DE 6313Z-C3

Bearings NDE 6313Z-C3

*Bearings are the only recommended spare part(s).

Other than the grease used for regreasable bearings and the oil used for oil-lubricated bearings, Toshiba advises that there are no "use" parts. The only insurance spares that Toshiba suggests for these squirrel-cage induction motors are industry-standard and commercially available off-the-shelf bearings as noted above.

Motor components such as terminal boxes, fan covers and other machined parts are available on special request. In these cases, please advise our order entry department of the model and serial numbers found on the motor nameplate and a description of the needed components. With this information they will be able to furnish the current part number, price and availability.

Note: Our internal part numbers are subject to change without notice and are not published.

Customer	
Customer PO	
Sales Order	
Project #	

Tag:

All characteristics are average expected values.

TOSHIBA INTERNATIONAL CORPORATION · HOUSTON, TEXAS U.S.A.

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