

END VIEW OF SHAFT

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

NOTES

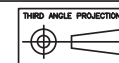
- A- THIS DRAWING IS NOT TO BE REGARDED AS INDICATING EXACT DETAILS OF CONSTRUCTION. IT IS PROPERLY DIMENSIONED FOR ERECTION PURPOSES ONLY.
- B- MOUNTING BOLTS, DOWELS AND COUPLING NOT SUPPLIED BY TOSHIBA UNLESS SPECIFICALLY ORDERED.
- C- WHEN MOUNTING MOTOR, SHIM COMPLETE FOOT PAD AREA.
- D- ANTI-FRICTION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

DEVICES

FRAME SIZE	REAR SHAFT EXTENSION						RECOMMENDED COUPLING BORE		APPROX WEIGHT
	U	KEY SIZE			N	V	C	L	
		XA	XB	XC					
D509US	2.375	.625	.625	3.00	4.69	4.25	54.31	27.38	2.3730 2.3740 4000
D509E	2.875	.625	.625	3.75	5.12	4.62	54.75	27.38	2.8730 2.8740 4000
D509G	4.125	.875	.875	10.25	11.25	10.75	60.88	27.38 4000
D509H	5.000	1.250	1.250	11.00	13.25	12.75	62.88	27.38 4000
H509US	2.375	.625	.625	3.00	4.69	4.25	59.81	32.88	2.3730 2.3740 5000
H509E	2.875	.625	.625	3.75	5.12	4.62	60.25	32.88	2.8730 2.8740 5000
H509G	4.125	.875	.875	10.25	11.25	10.75	66.38	32.88 5000
H509H	5.000	1.250	1.250	11.00	13.25	12.75	68.38	32.88 5000

CONDUIT BOX							
FAN COOLED - STANDARD				EXPLOSION PROOF			
AA	AB	AC	AF	AA	AB	AC	AF
3.00	24.38	20.62	6.63	3.00	25.06	20.44	7.00
FAN COOLED - ALTERNATE							
3.50	28.38	22.50	9.38				

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TOSHIBA INDUSTRIAL PRODUCTS CANADA

TITLE TYPE HS MOTOR FRAME D509/H509

OUTLINE - TEFC/TEXP ENCLOSURE

DRAWING IN HAND SCALE: N.T.S. SHEET: 1 OF 1

DATE: 1/25/99

DESIGNED BY: N.WEST

CHECKED BY: []

DATE: []

DESIGNED BY: []

CHECKED BY: []

DATE: []

E10D118

STANDARD
1
REVISIONS

TOSHIBA

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TYPICAL MOTOR PERFORMANCE DATA

Model: 3503XPAL11F-C

HP	kW	Pole	FL RPM	Frame	Voltage	Hz	Phase	FL Amps
350 hp	261 kW	2	3569 rpm	H509US	4000 V	60	3	42.7 A
Enclosure	IP	Ins. Class	S.F.	Duty	NEMA Nom. Eff.	NEMA Design	kVA Code	Ambient (°C)
TEXP	55	F	1.15	Cont.	94.4	B	G	40

Load	HP	kW	Amperes	Efficiency (%)	Power Factor (%)
Full Load	350	261	42.7	94.4	93.8
¾ Load	262.5	196	32.4	93.8	93.0
½ Load	175	130	22.7	92.4	89.6
¼ Load	87.5	65			
No Load			8.9		11.3
Locked Rotor			287.4		19.3

Torque				Rotor wk² Inertia (lb-ft²)
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	
517	95	95	271	108

Safe Stall Time(s)		Sound Pressure dB(A) @ 1M	Bearings*		Approx. Motor Weight (lbs)
Cold	Hot		DE	NDE	
36	33	-	6313Z-C3	6313Z-C3	5000

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

Motor Options:

Customer	
Customer PO	
Sales Order	
Project #	

Tag:

All characteristics are average expected values.

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NAMEPLATE DATA

Model: 3503XPAL11F-C

HP	kW	Pole	FL RPM	Frame	Voltage	Hz	Phase	FL Amps
350	260.9915	2	3569	H509US	4000	60	3	42.74
Enclosure	IP	Ins. Class	S.F.	Duty	NEMA Nom. Eff.	NEMA Design	kVA Code	Ambient (°C)
TEXP	55	F	1.15	Cont.	94.4	B	G	40

Type: HSB

Form:

Drive End Bearing: 6313Z-C3

Non-Drive End Bearing: 6313Z-C3

Power Factor: 93.8

Max Safe RPM:

Comments 1:

Comments 2:

Comments 3:

Comments 4:

Customer

Customer PO

Sales Order

Project #

Tag:

All characteristics are average expected values.

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Engineering

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D. Suarez

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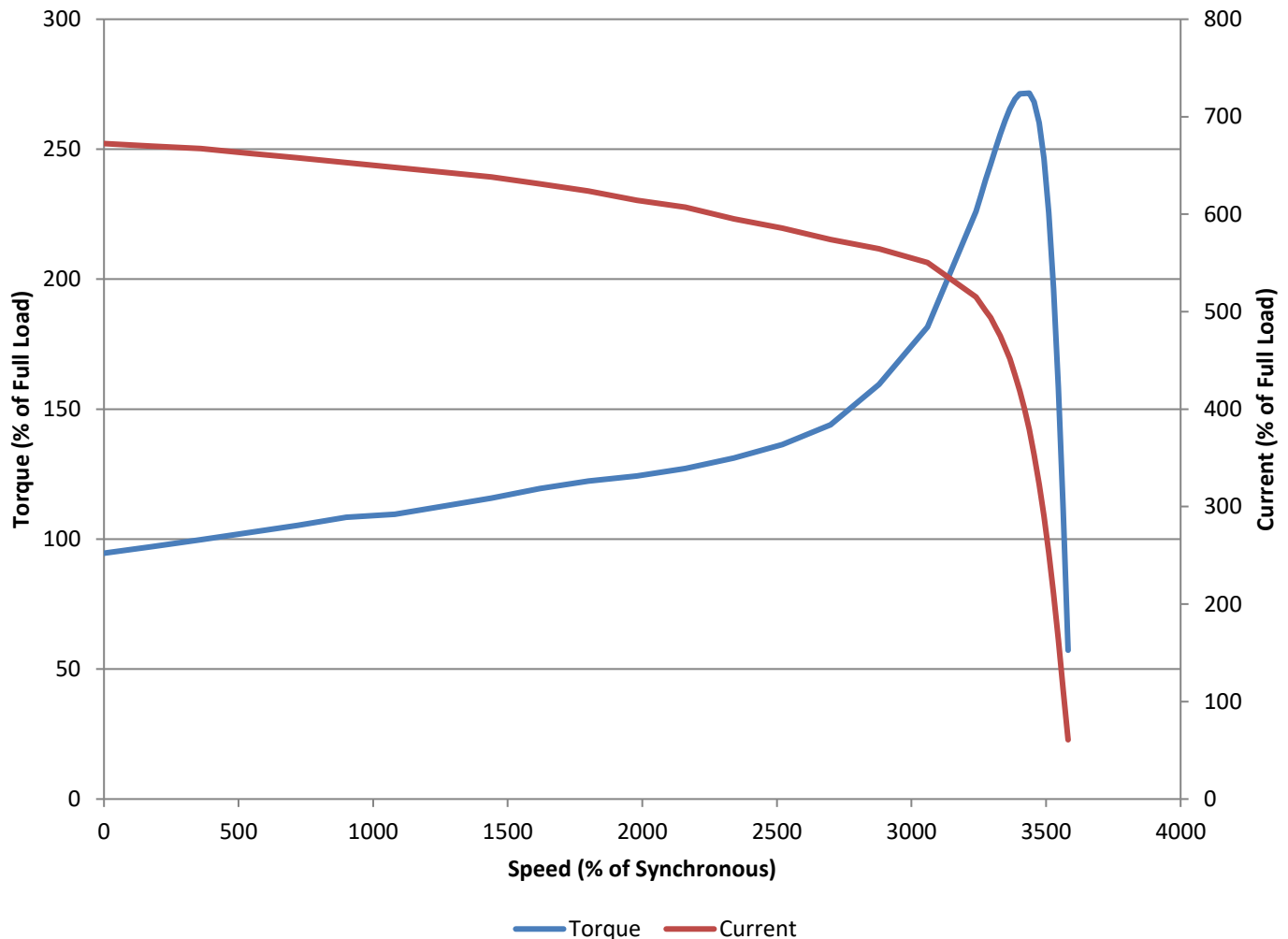
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SPEED TORQUE/CURRENT CURVE

Model: 3503XPAL11F-C

HP	kW	Pole	FL RPM	Frame	Voltage	Hz	Phase	FL Amps
350	260.9915	2	3569	H509US	4000	60	3	42.74
Enclosure	IP	Ins. Class	S.F.	Duty	NEMA Nom. Eff.	NEMA Design	kVA Code	Ambient (°C)
TEXP	55	F	1.15	Cont.	94.4	B	G	40
Locked Rotor Amps	Rotor wk ² Inertia (lb-ft ²)	Torque						
		Full Load (lb-ft)	Locked Rotor (%)		Pull Up (%)		Break Down (%)	
287.41	108	516.94	94.55704724		94.55704724		271.4655859	

Design Values



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

100

Tag:

All characteristics are average expected values.

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SPARE PARTS LIST*

Model: 3503XPAL11F-C

HP	kW	Pole	FL RPM	Frame	Voltage	Hz	Phase	FL Amps
350	260.9915	2	3569	H509US	4000	60	3	42.74
Enclosure	IP	Ins. Class	S.F.	Duty	NEMA Nom. Eff.	NEMA Design	kVA Code	Ambient (°C)
TEXP	55	F	1.15	Cont.	94.4	B	G	40

Bearings DE	6313Z-C3
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Bearings NDE	6313Z-C3
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*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.

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