marathon®

Severe Duty Motors

Model No: 254TTFNA16568
Catalog No: U871A

Severe Duty Motor, 15 & 10 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V, 1800 RPM, 254T Frame, TEFC

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Product Information Packet: Model No: 254TTFNA16568, Catalog No: U871A Severe Duty Motor, 15 & 10 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V, 1800 RPM, 254T Frame, TEFC

Nameplate Specifications

Phase	**3**	Output HP	**15 & 10 Hp**
Output KW	**11.2 & 7.5 kW**	Voltage	**230/460 & 190/380 V**
Speed	**1775 & 1478 r/min**	Synchronous RPM	**1800 & 1500 r/min**
Service Factor	**1.15 & 1.15**	Frame	**254T**
Enclosure	**Totally Enclosed Fan Cooled**	Thermal Protection	**No Protection**
Efficiency	**92.4 & 91.7 %**	Ambient Temperature	**40 °C**
Frequency	**60 & 50 Hz**	Current	**37.5/18.8 & 31/15.5 A**
Power Factor	**81**	Duty	**Continuous**
Insulation Class	**F**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**6309**
Opp Drive End Bearing Size	**6210**	UL	**Recognized**
CSA	**Y**	CE	**Y**
IP Code	**55**	Number of Speeds	**1**

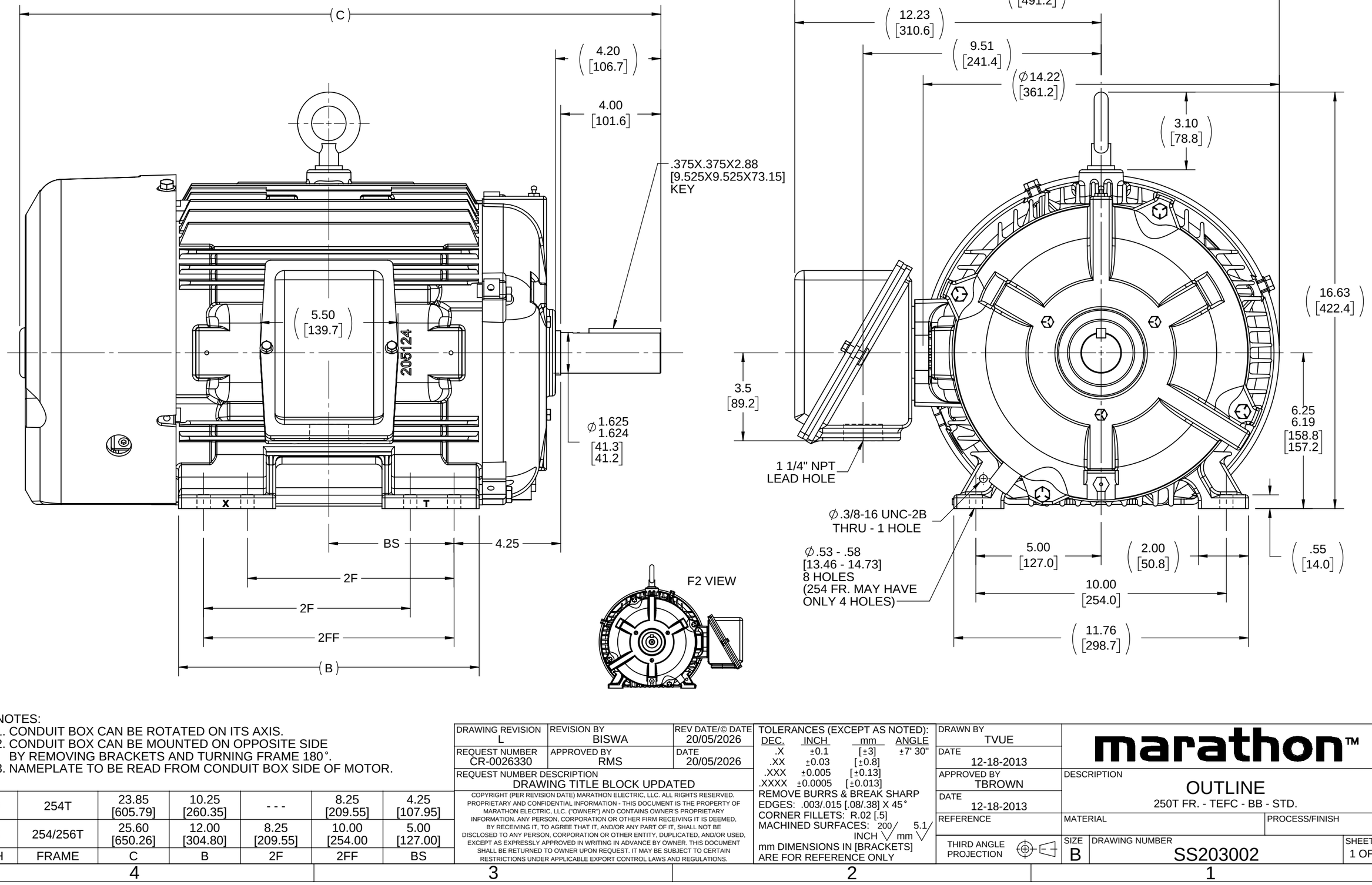
Technical Specifications

Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**4**	Rotation	**Reversible**
Resistance Main	**.649 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**T**	Overall Length	**23.65 in**
Frame Length	**10.5 in**	Shaft Diameter	**1 5/8 in**
Shaft Extension	**4.2 in**	Assembly/Box Mounting	**F1/F2 Capable**
Inverter Load	**Constant 10:1**		

Drawings

Connection Drawing	**A-EE7308**	Outline Drawing	**B-SS203002-1050**

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NOTES:
1. CONDUIT BOX CAN BE ROTATED ON ITS AXIS.
2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°.
3. NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DASH	FRAME	C	B	2F	2FF	BS
1050	254T	23.85 [605.79]	10.25 [260.35]	- - -	8.25 [209.55]	4.25 [107.95]
1225	254/256T	25.60 [650.26]	12.00 [304.80]	8.25 [209.55]	10.00 [254.00	5.00 [127.00]

DRAWING REVISION: L	REVISION BY: BISWA	REV DATE/© DATE: 20/05/2026	
REQUEST NUMBER: CR-0026330	APPROVED BY: RMS	DATE: 20/05/2026	
REQUEST NUMBER DESCRIPTION: DRAWING TITLE BLOCK UPDATED			

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TOLERANCES (EXCEPT AS NOTED):

DEC.	INCH	mm	ANGLE
.X	±0.1	[±3]	±7' 30"
.XX	±0.03	[±0.8]	
.XXX	±0.005	[±0.13]	
.XXXX	±0.0005	[±0.013]	

REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.08/.38] X 45°
CORNER FILLETS: R.02 [.5]
MACHINED SURFACES: 200 INCH / 5.1 mm
mm DIMENSIONS IN [BRACKETS] ARE FOR REFERENCE ONLY

DRAWN BY: TVUE	marathon™
DATE: 12-18-2013	
APPROVED BY: TBROWN	DESCRIPTION: OUTLINE 250T FR. - TEFC - BB - STD.
DATE: 12-18-2013	
REFERENCE	MATERIAL / PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE: B / DRAWING NUMBER: SS203002 / SHEET: 1 OF 1

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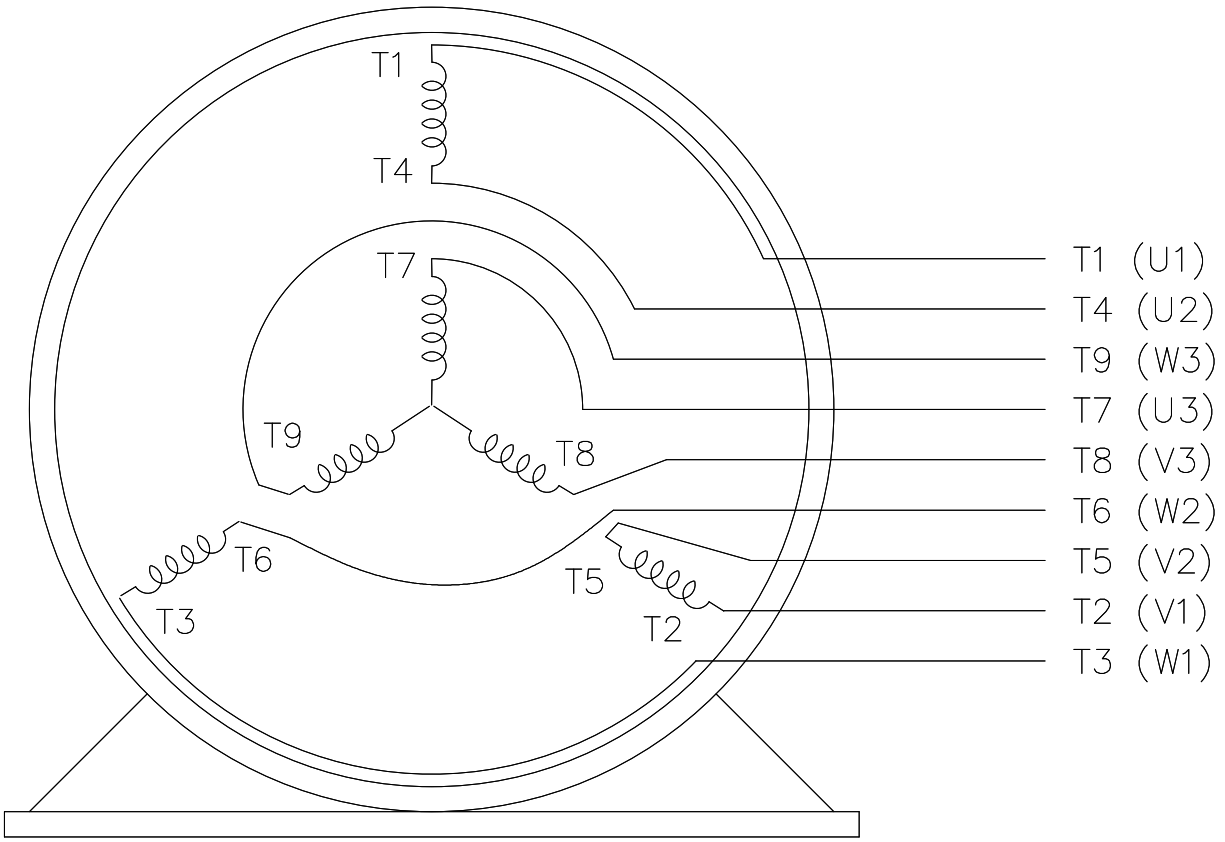
THREE PHASE
DUAL VOLTAGE MOTOR

HIGH VOLTAGE

(U1) T1 — L1
(V1) T2 — L2
(W1) T3 — L3
(U2) T4
(U3) T7
(V2) T5
(V3) T8
(W2) T6
(W3) T9

LOW VOLTAGE

(U1) T1
(U3) T7 — L1
(V1) T2
(V3) T8 — L2
(W1) T3
(W3) T9 — L3
(U2) T4
(V2) T5
(W2) T6



VIEW OF TERMINAL END

REF.
WINDING DIAGRAM

T8Y, T2Y, T2BL, T4BX, T2EC, T2G
T6BZ, T2B, T6BL, T4AV, T6B, T4B

OPTIONAL CORD CONNECTION

L1 — WHITE
L2 — RED
L3 — BLACK

DRAWING REVISION	REVISION BY	REV DATE/ © DATE
J	SB	08/01/2025
REQUEST NUMBER	APPROVED BY	DATE
CR-0023654	SBD	08/01/2025

REQUEST NUMBER DESCRIPTION
DRAWING TITLE BLOCK UPDATED

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PRIMARY DIMENSIONS ARE INCH
mm DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

DRAWN BY	RM
DATE	11/20/1990
APPROVED BY	SAS
DATE	04/24/2003
REFERENCE	
THIRD ANGLE PROJECTION	

marathon™

DESCRIPTION
CONN DIAGRAM-EXTERNAL
3Ø - DUAL VOLTAGE MOTOR

MATERIAL	PROCESS/FINISH

SIZE	DRAWING NUMBER	SHEET
A	4 of 6 EE7308	1 OF 1

Data Sheet

Date: 1/25/2019
Customer:
Attention:
Submitted by: FAREEDA DUDEKULA

marathon® Motors

254TTFNA16568

Submittal

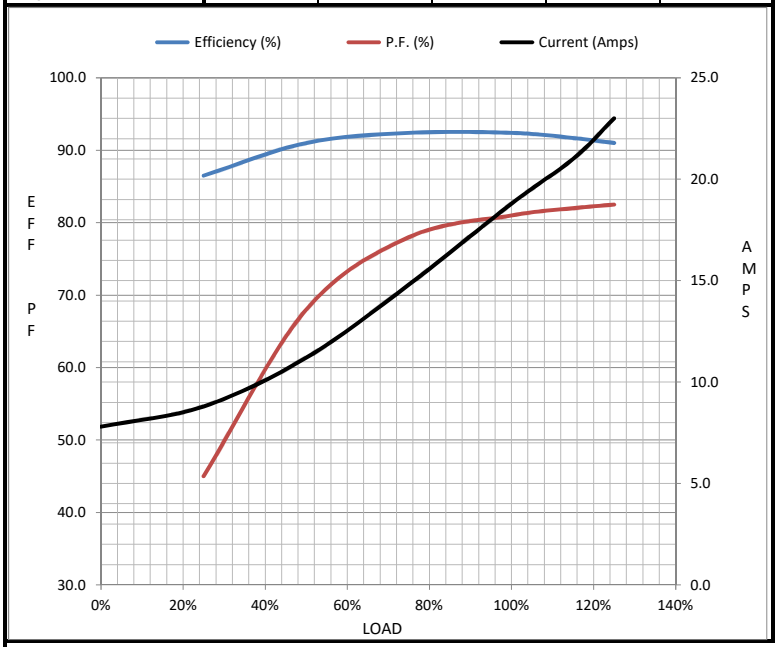
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	7.8	8.8	11.2	14.8	18.8	21.0	23.0	110	
Torque (ft-lb)	0.00	11.0	22.0	33.5	44.4	50.5	56.0	85.0	
RPM	1800	1792	1788	1780	1775	1,770	1765	0	
Efficiency (%)		86.5	91.0	92.4	92.4	91.7	91.0		
P.F. (%)	11.5	45.0	68.0	78.0	81.0	82.0	82.5	40.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1675	1775	1800
Current (Amps)	110	95.0	69.0	18.8	7.8
Torque (ft-lb)	85.0	75.0	125	44.4	0.00



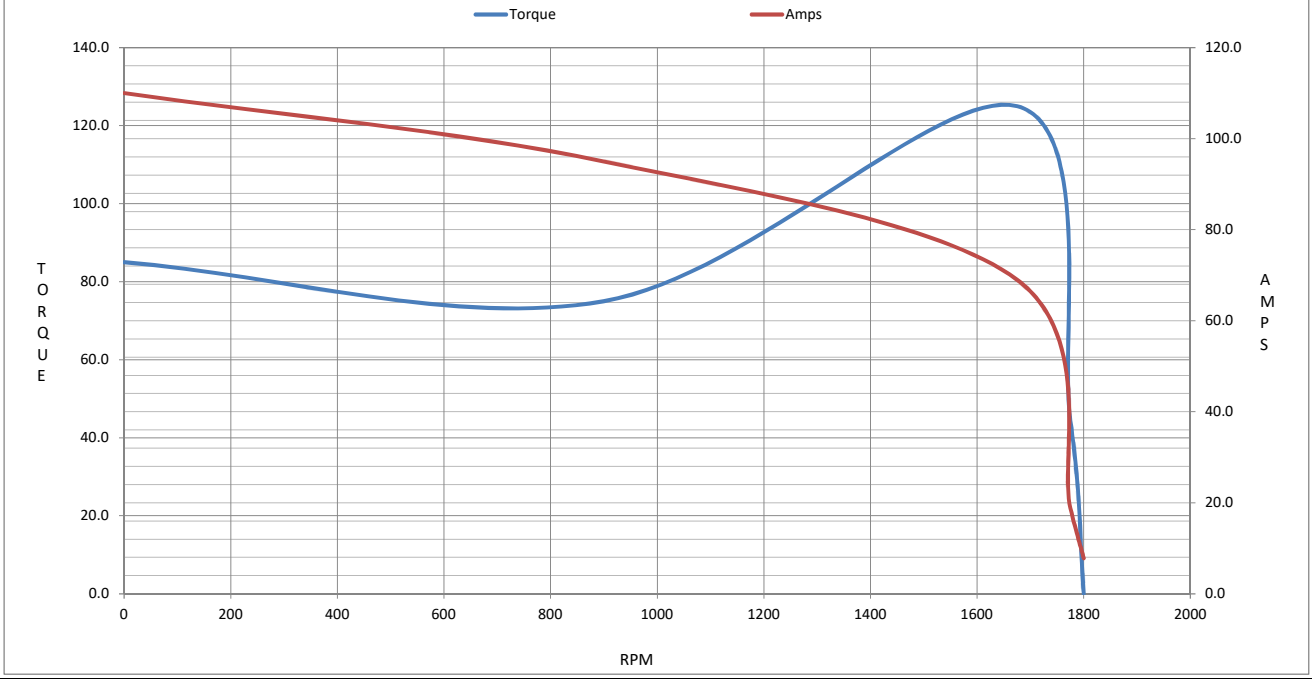
Information Block

HP	15.0	
Sync. RPM	1800	
Frame	254	
Enclosure	TEFC	
Construction	TFS	
Voltage	230/460#190/380	V
Frequency	60	Hz
Design	B	
LR Code letter	G	
Service Factor	1.15	
Temp Rise @ FL	55	° C
Duty	CONT	
Ambient	40	° C
Elevation	3,300	feet
Rotor/Shaft wk²	2.20	Lb-Ft²
Ref Wdg	K2564165 NONE	
Sound Pressure @ 1M	65	dBA
VFD Rating	CONSTANT 10:1	
Outline Dwg	B-SS203002-1050	
Conn. Diag	A-EE7308	
Additional Specifications:		
0		
0		

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.3760	0.2380	1.3510	1.7770	32.5080

Speed -Torque Curve



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CERTIFICATION DATA SHEET

Model#:	254TTFNA16568 AA	**WINDING#:**	K2564165 NONE 1
CONN. DIAGRAM:	A-EE7308	**ASSEMBLY:**	F1/F2 CAPABLE
OUTLINE:	B-SS203002-1050		

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
15&10	11.2&7.5	1800	1775&1478	254T	TEFC	G	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60/50	230/460#190/380	37.5/18.8&31/15.5	LINE OR INVERTER	CONTINUOUS	F3	1.15/1.15	40	3300

FULL LOAD EFF: 92.4&91.7	3/4 LOAD EFF: 92.4	1/2 LOAD EFF: 91	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 81&79	3/4 LOAD PF: 78	1/2 LOAD PF: 68	91.7	SQ CAGE INV RATED	15.6 / 7.8

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
44.4 LB-FT	220 / 110	85 LB-FT 191	125 LB-FT 282	55

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
65 dBA	75 dBA	2.4 LB-FT^2	110 LB-FT^2	25 SEC.	2	325 LBS.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	NONE	FALSE	NONE	BLUE (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL 6309	BALL 6210	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE /n HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
NONE	NOT	NONE	NONE	NONE	FALSE	NONE VOLTS

If Inverter equals NONE, contact factory for further information

INVERTER TORQUE: CONSTANT 10:1
INV. HP SPEED RANGE: NONE

ENCODER: NONE
NONE NONE
NONE NONE PPR

BRAKE: NONE NONE
NONE P/N NONE
NONE NONE
NONE FT-LB NONE V NONE Hz

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FORM 3531 REV.3 02/07/99
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