marathon®

Severe Duty Motors

Model No: 405THFS19101
Catalog No: W590

Severe Duty Motor, 60 HP, 3 Ph, 60 Hz, 460 V, 900 RPM, 405T Frame, TEFC

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Product Information Packet: Model No: 405THFS19101, Catalog No: W590 Severe Duty Motor, 60 HP, 3 Ph, 60 Hz, 460 V, 900 RPM, 405T Frame, TEFC

Nameplate Specifications

Phase	**3**	Output HP	**60 Hp**
Output KW	**45.0 kW**	Voltage	**460 V**
Speed	**890 r/min**	Synchronous RPM	**900 r/min**
Service Factor	**1.15**	Frame	**405T**
Enclosure	**Totally Enclosed Fan Cooled**	Thermal Protection	**No Protection**
Efficiency	**93 %**	Ambient Temperature	**40 °C**
Frequency	**60 Hz**	Current	**82.0 A**
Power Factor	**74**	Duty	**Continuous**
Insulation Class	**F**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**6316**
Opp Drive End Bearing Size	**6313**	UL	**Recognized**
CSA	**Y**	CE	**Y**
IP Code	**56**	Number of Speeds	**1**
Hazardous Location	**DIVISION 2 T2B**		

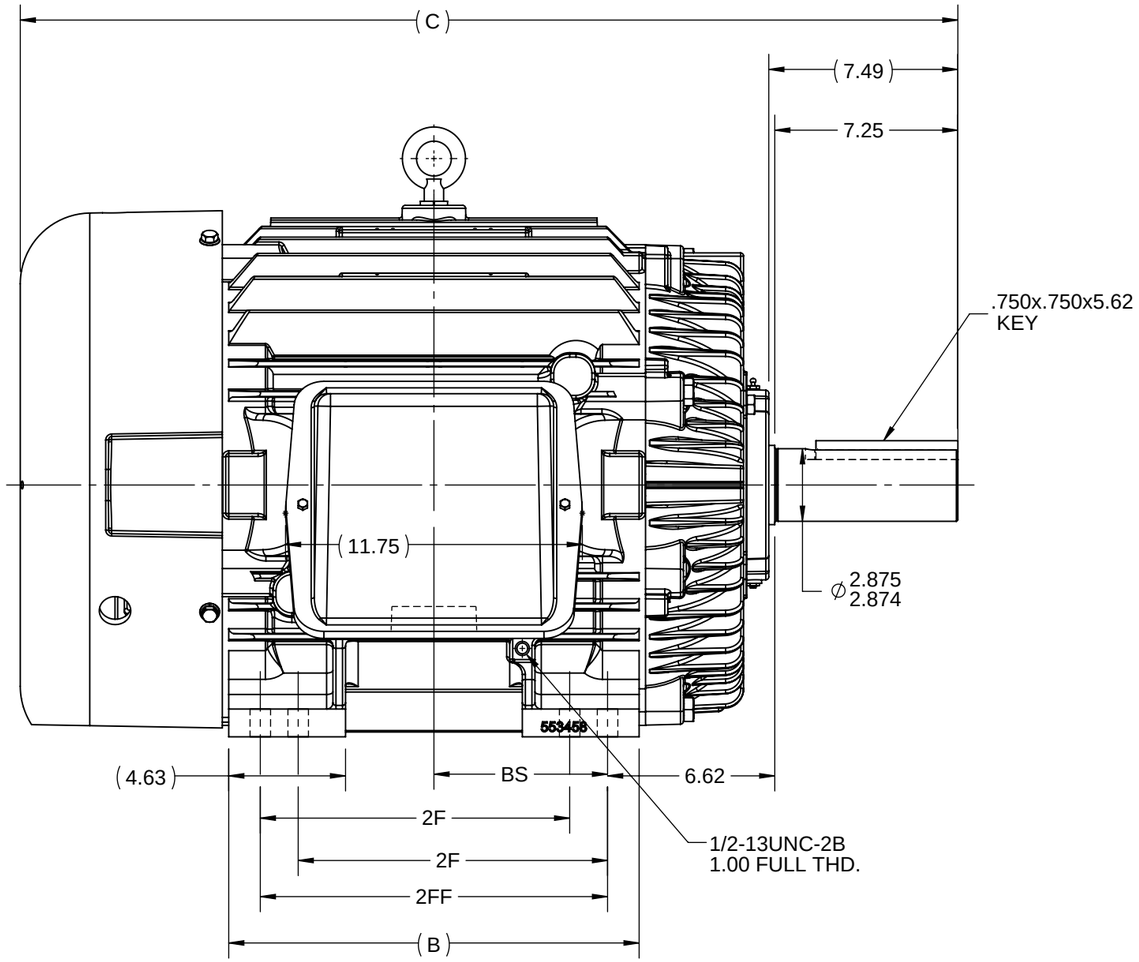
Technical Specifications

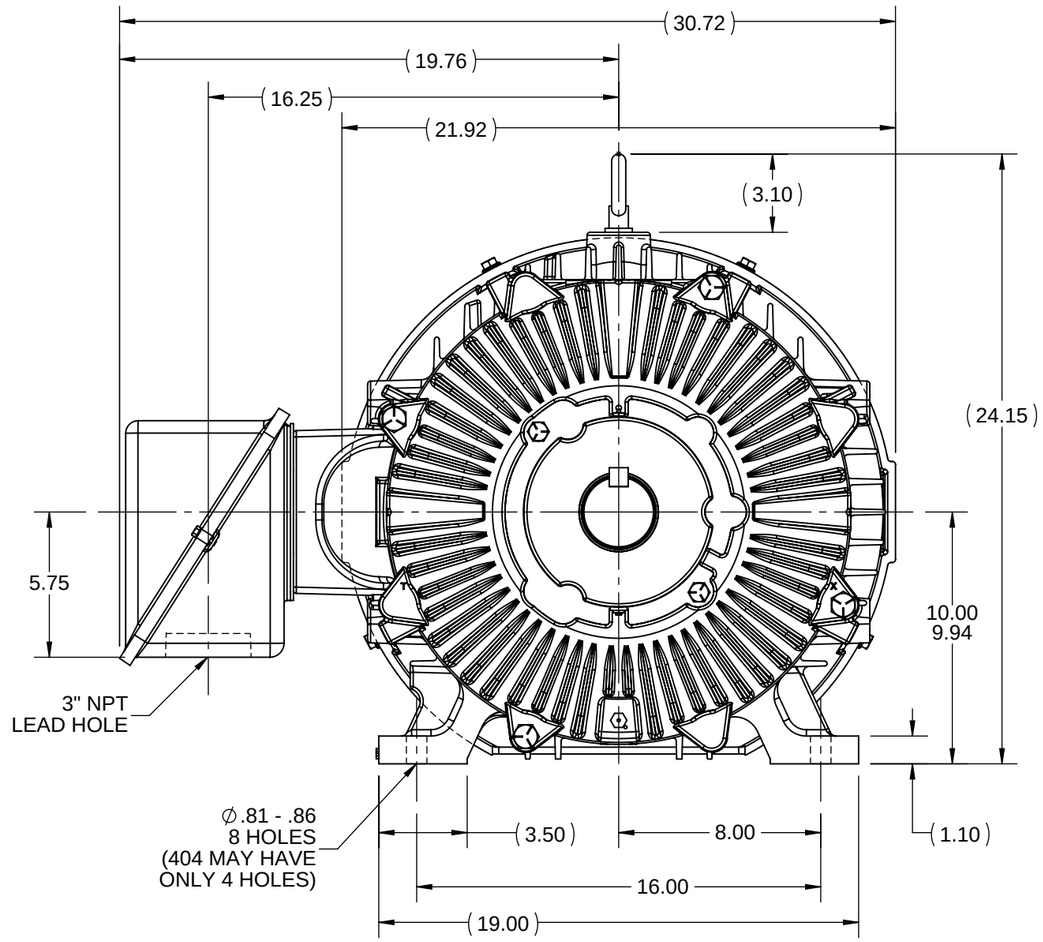
Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**8**	Rotation	**Reversible**
Resistance Main	**.113 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**T**	Overall Length	**37.14 in**
Frame Length	**16.75 in**	Shaft Diameter	**2 7/8 in**
Shaft Extension	**7.25 in**	Assembly/Box Mounting	**F1/F2 Capable**
Inverter Load	**Constant 20:1**		

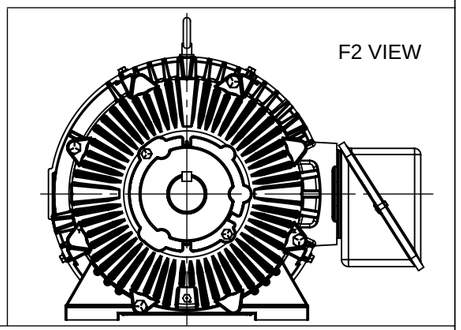
Drawings

Connection Drawing	**A-EE7300**	Outline Drawing	**B-SS508591-1675**

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NOTES:
1. BOX CAN BE ROTATED IN 90° STEPS.
2. BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°.
3. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DASH	FRAME	B	C	2F	2FF	BS
1525	404T	14.75	35.63	12.25	- - -	6.12
1675	404/405T	16.25	37.13	12.25	13.75	6.88

DRAWING REVISION: D	REVISION BY: SB	REV DATE/© DATE: 06/09/2026
REQUEST NUMBER: CR-0026536	APPROVED BY: RMS	DATE: 06/09/2026
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	TLB
DATE	05-23-1988
APPROVED BY	GK
DATE	05-23-1988
REFERENCE	
MATERIAL	
PROCESS/FINISH	
THIRD ANGLE PROJECTION	
SIZE	B
DRAWING NUMBER	SS508591
SHEET	1 OF 1

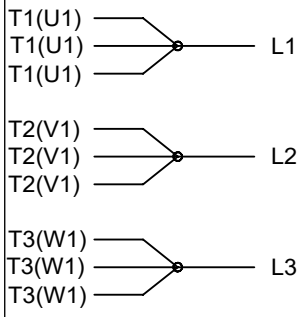
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DESCRIPTION
OUTLINE
400T FR.-TEFC-TAPPED LEAD HOLE

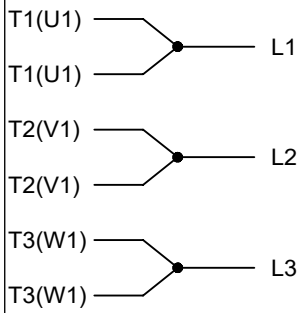
THREE PHASE - SINGLE VOLTAGE
MOTOR - CONDUIT BOX @ 'A'

TO REVERSE ROTATION:
INTERCHANGE ANY TWO LINE
LEAD CONNECTIONS

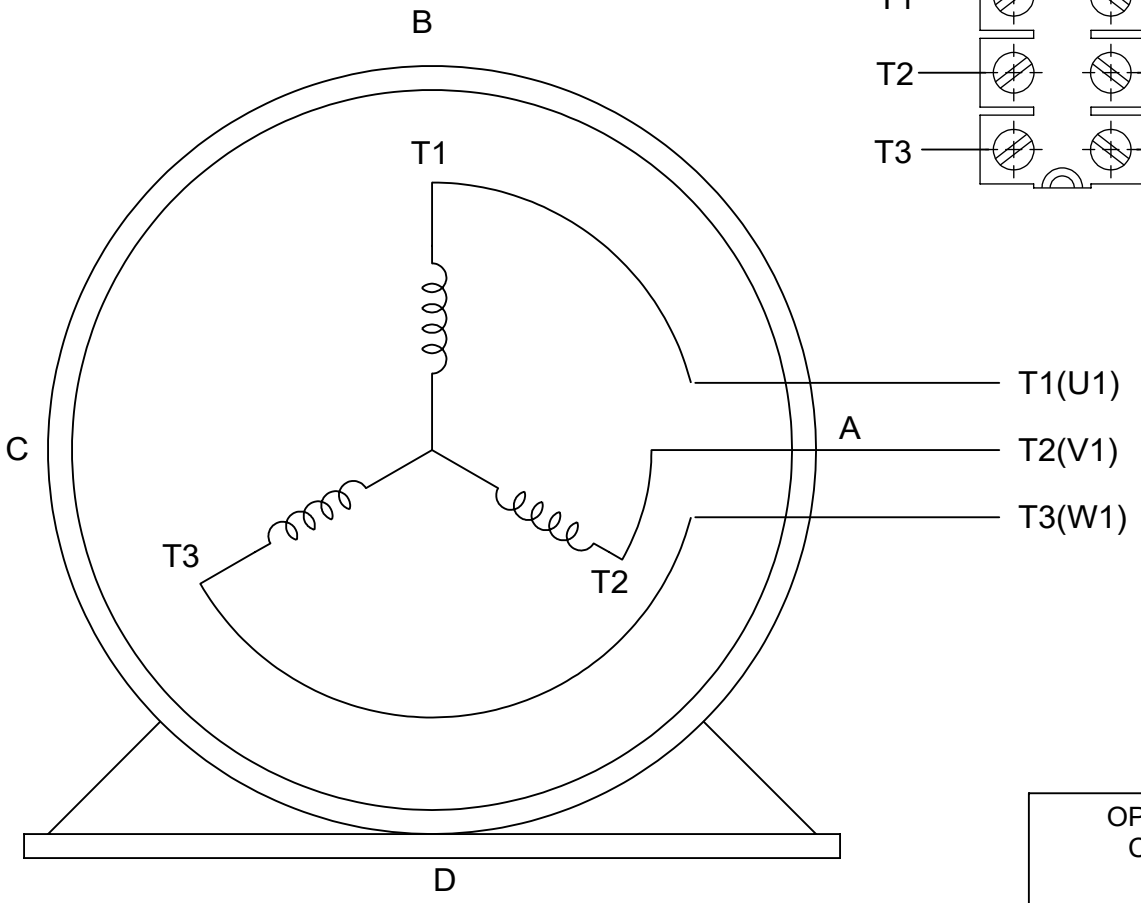
IF MOTOR HAS
9 LEADS



IF MOTOR HAS
6 LEADS



A-9806 DECAL



VIEW OF TERMINAL END

TERMINAL BLOCK WHEN SPECIFIED

OPTIONAL CORD
CONNECTION

L1	WHITE
L2	RED
L3	BLACK

DRAWING REVISION: AD	REVISION BY: SB	REV DATE/© DATE: 08/01/2025
REQUEST NUMBER: CR-0023654	APPROVED BY: SBD	DATE: 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: DA	
DATE: 03-26-1993	
APPROVED BY: TB	
DATE: 03-26-1993	
REFERENCE	
THIRD ANGLE PROJECTION	

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DESCRIPTION
CONNECTION DIAGRAM
EXTERNAL - SINGLE VOLTAGE - 3Ø MOTOR

MATERIAL	PROCESS/FINISH

SIZE	DRAWING NUMBER	SHEET
A	EE7300	1 OF 1

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Data Sheet

Date: 15-06-2017
Customer:
Attention:
Submitted by: FAREEDA DUDEKULA

marathon® electric

405THFS19101

Submittal

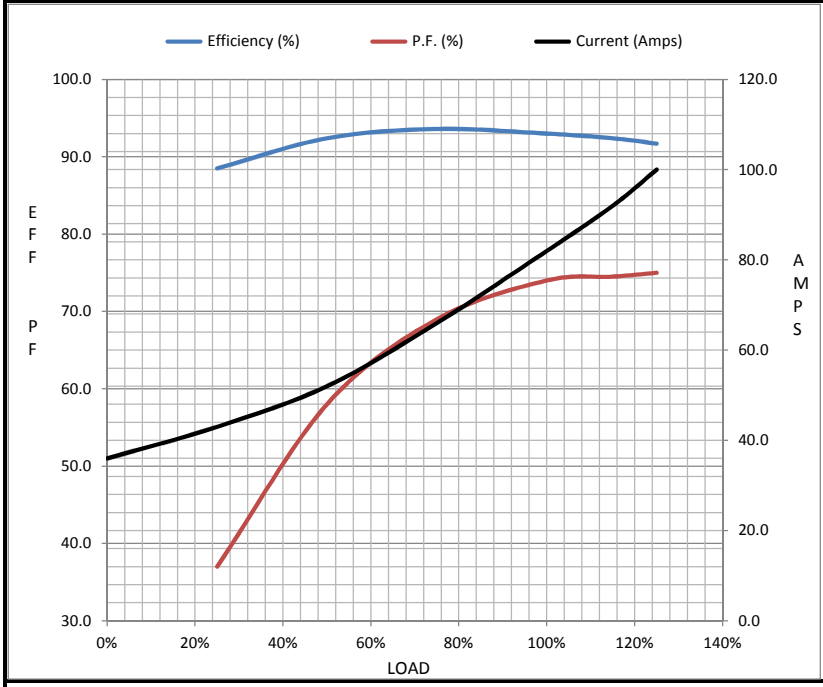
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	36.0	43.0	52.0	66.0	82.0	92.0	100	435	
Torque (ft-lb)	0.00	88.0	176	265	355	409	445	625	
RPM	900	896	894	892	890	886	884	0	
Efficiency (%)		88.5	92.4	93.6	93.0	92.4	91.7		
P.F. (%)	5.0	37.0	58.0	69.0	74.0	74.5	75.0	36.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	850	890	900
Current (Amps)	435	355	250	82.0	36.0
Torque (ft-lb)	625	525	825	355	0.00



Information Block

HP	60.0
Sync. RPM	900
Frame	405
Enclosure	TEFC
Construction	TFS
Voltage	460 V
Frequency	60 Hz
Design	B
LR Code letter	G
Service Factor	1.15
Temp Rise @ FL	60 ° C
Duty	CONT
Ambient	40 ° C
Elevation	1,000 feet
Rotor/Shaft wk²	40.8 Lb-Ft²
Ref Wdg	T405819 R2
Sound Pressure @ 1M	72 dBA
VFD Rating	CONSTANT 20:1
Outline Dwg	B-SS508591-1675
Conn. Diag	A-EE7300

Additional Specifications:

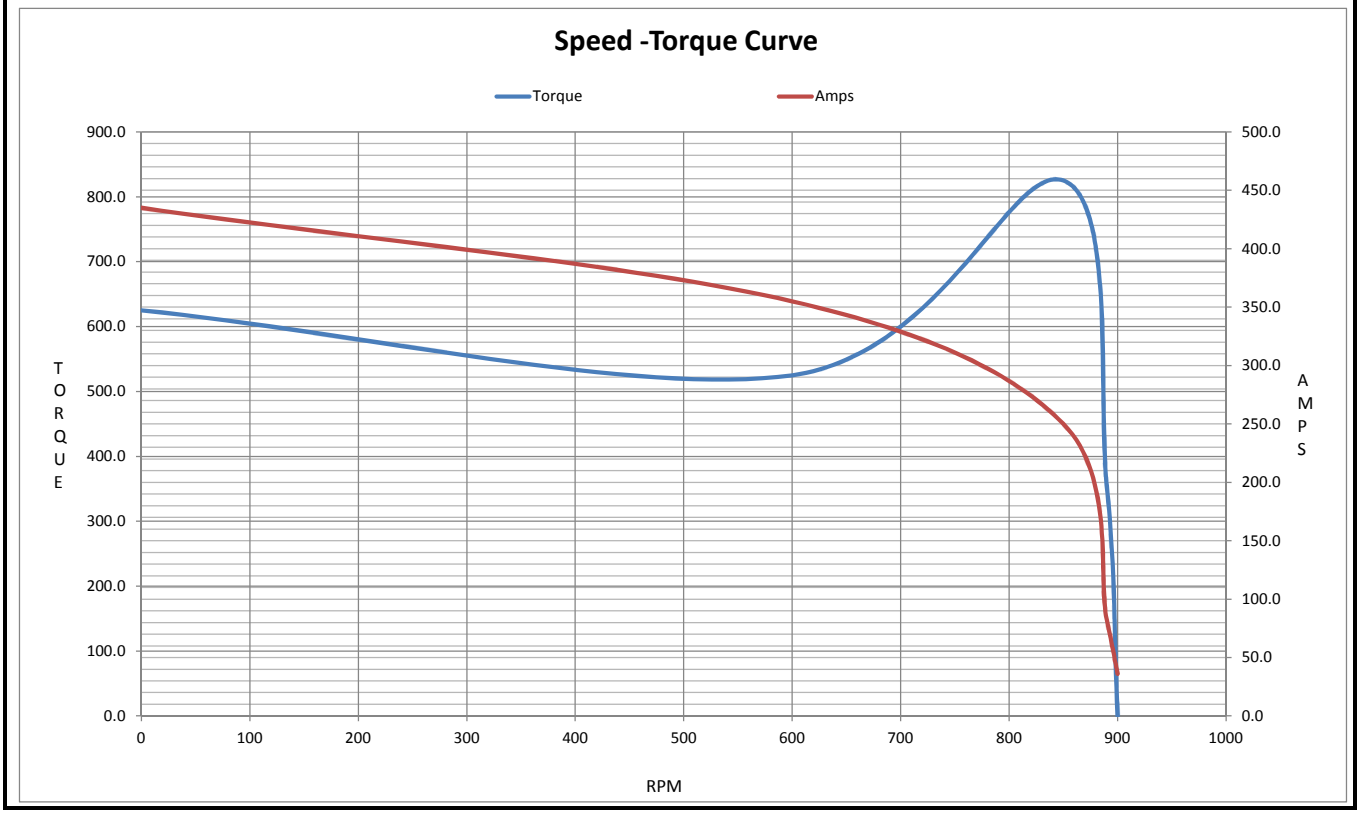
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365THFS8036

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.0680	0.0410	0.3980	0.7280	5.9080

Speed -Torque Curve



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CERTIFICATION DATA SHEET

Model#:	405THFS19101 AN	**WINDING#:**	T405819 R2 3
CONN. DIAGRAM:	A-EE7300	**ASSEMBLY:**	F1/F2 CAPABLE
OUTLINE:	B-SS508591-1675		

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
60	45	900	890	405T	TEFC	G	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60	460	82	LINE OR INVERTER	CONTINUOUS	F1	1.15	40	3300

FULL LOAD EFF: 93	3/4 LOAD EFF: 93.6	1/2 LOAD EFF: 92.4	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 74	3/4 LOAD PF: 69	1/2 LOAD PF: 58	92.4	SQ CAGE INV RATED	36

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
355 LB-FT	435	625 LB-FT 176	825 LB-FT 230	60

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
72 dBA	82 dBA	40.8 LB-FT^2	- LB-FT^2	20 SEC.	-	1400 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	DIVISION 2 T2B	FALSE	NONE	BLUE (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL 6316	BALL 6313	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 20:1
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

*
NOTES
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DATE: 06/21/2017 08:10:34 AM
FORM 3531 REV.3 02/07/99
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