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Severe Duty Motors

Model No: 324TTFCD16860
Catalog No: E624A-P

Severe Duty Motor, 40 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 324T Frame, TEFC

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Product Information Packet: Model No: 324TTFCD16860, Catalog No: E624A-P Severe Duty Motor, 40 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 324T Frame, TEFC

Nameplate Specifications

Phase	**3**	Output HP	**40 Hp**
Output KW	**30.0 kW**	Voltage	**460 V**
Speed	**1782 r/min**	Synchronous RPM	**1800 r/min**
Service Factor	**1.15**	Frame	**324T**
Enclosure	**Totally Enclosed Fan Cooled**	Thermal Protection	**No Protection**
Efficiency	**94.1 %**	Ambient Temperature	**40 °C**
Frequency	**60 Hz**	Current	**47.5 A**
Power Factor	**84**	Duty	**Continuous**
Insulation Class	**H**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**6312**
Opp Drive End Bearing Size	**6212**	UL	**Recognized**
CSA	**Y**	CE	**Y**
IP Code	**55**	Number of Speeds	**1**

Technical Specifications

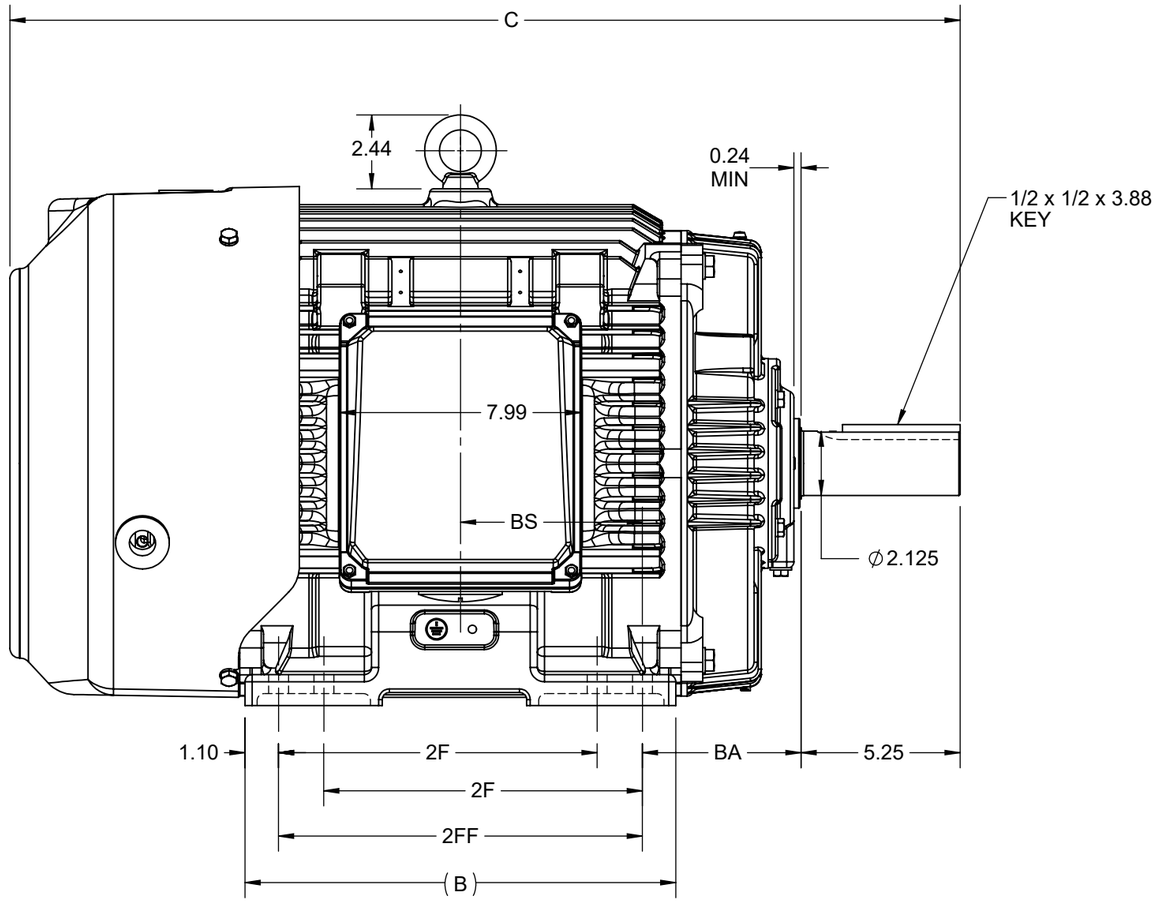
Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**4**	Rotation	**Reversible**
Resistance Main	**.18 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**T**	Shaft Diameter	**2.125 in**
Assembly/Box Mounting	**F1/F2 Capable**	Inverter Load	**Constant 2:1/Variable 10:1**

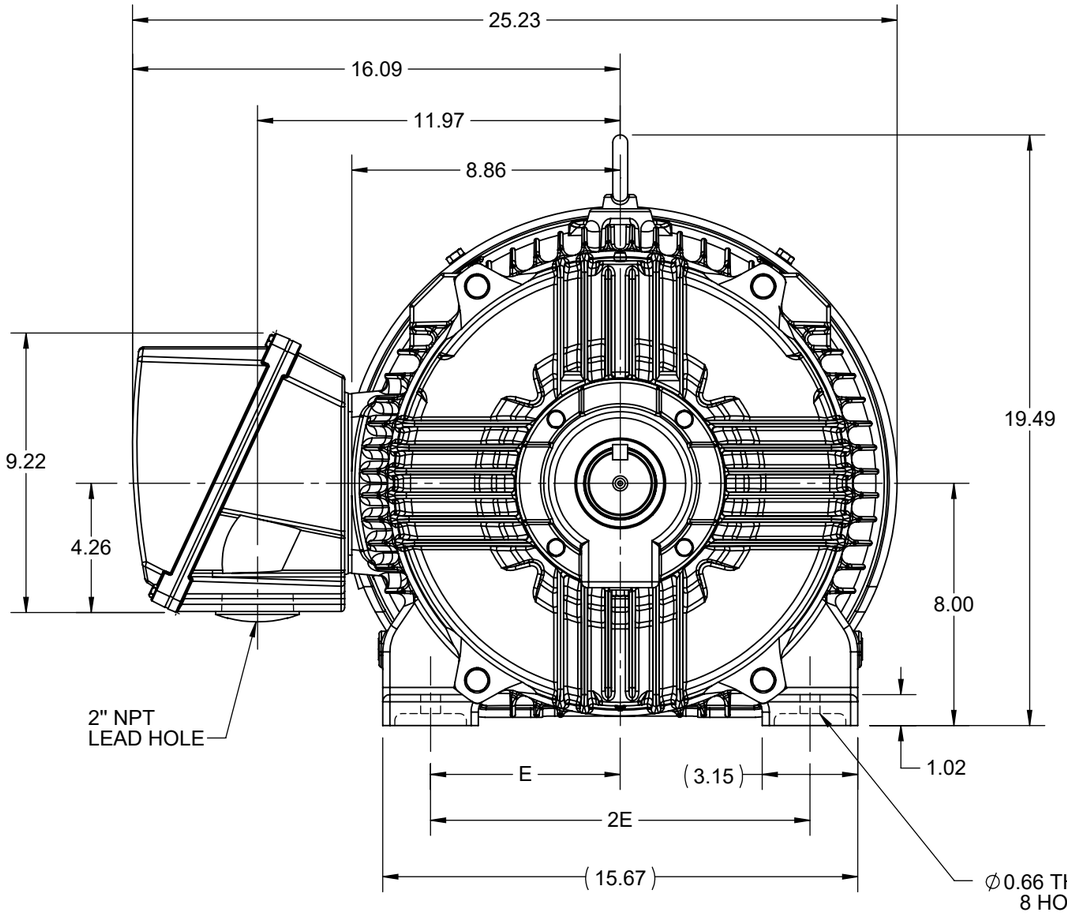
Drawings

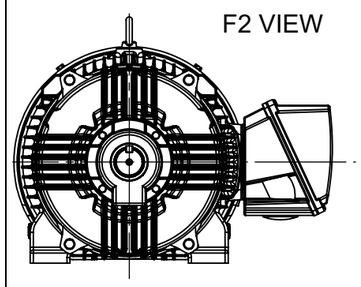
Connection Drawing	**EE7300**	Outline Drawing	**SS312939-100**

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DASH NO.	B	C	E	2E	2F	2FF	BA	BS	MOUNTING	FRAME
100	12.71	29.85	6.25	12.50	---	10.50	5.25	5.25	F1 OR F2	324T
200	14.21	31.35			10.50	12.00		6.00		324/326T







DRAWING REVISION	REVISION BY	REV DATE/© DATE
E	SB	08/11/2025
REQUEST NUMBER	APPROVED BY	DATE
CR-0023556	SBD	08/11/2025

REQUEST NUMBER DESCRIPTION
DRAWING TITLE BLOCK UPDATED

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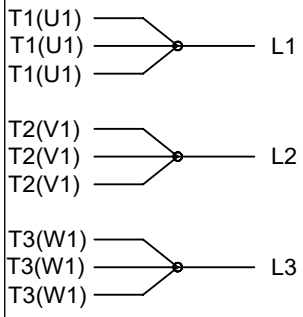
DRAWN BY	DESCRIPTION
BISWA	OUTLINE
DATE	324/326T FR-NEMA-SD & IEEE841
24/12/2018	
APPROVED BY	
SBD	
DATE	
24/12/2018	
REFERENCE	MATERIAL / PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER SS312939 / SHEET 1 OF 1

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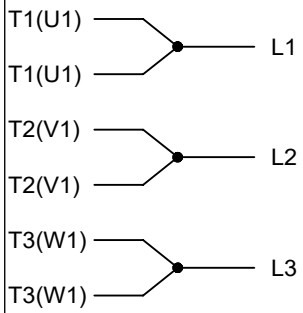
THREE PHASE - SINGLE VOLTAGE
MOTOR - CONDUIT BOX @ 'A'

TO REVERSE ROTATION:
INTERCHANGE ANY TWO LINE
LEAD CONNECTIONS

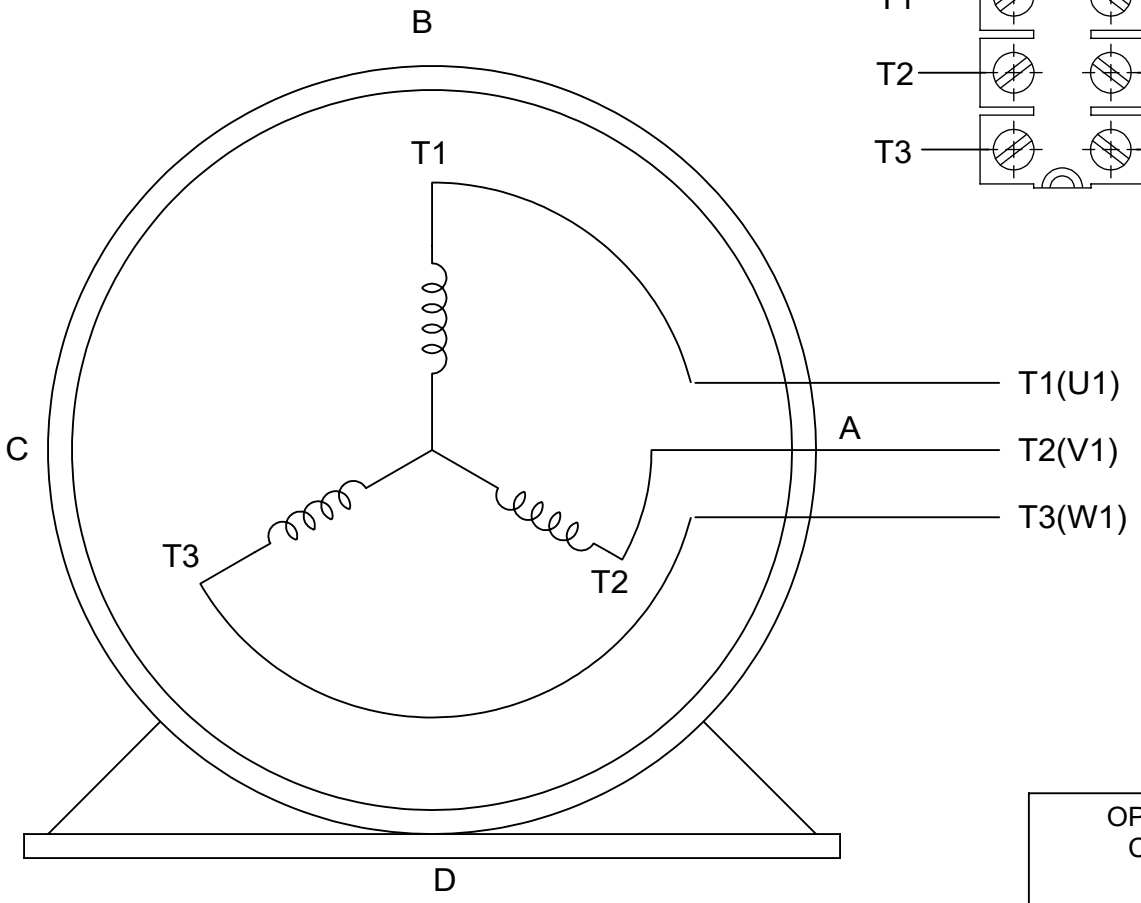
IF MOTOR HAS
9 LEADS



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

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DRAWN BY: DA	
DATE: 03-26-1993	
APPROVED BY: TB	
DATE: 03-26-1993	
REFERENCE	
THIRD ANGLE PROJECTION	

marathon™

DESCRIPTION
CONNECTION DIAGRAM
EXTERNAL - SINGLE VOLTAGE - 3Ø MOTOR

MATERIAL	PROCESS/FINISH

SIZE	DRAWING NUMBER	SHEET
A	EE7300	1 OF 1

Data Sheet

Date: 5/6/2020
Customer:
Attention:
Submitted by:

marathon® Motors

324TTFCD16860

Submittal

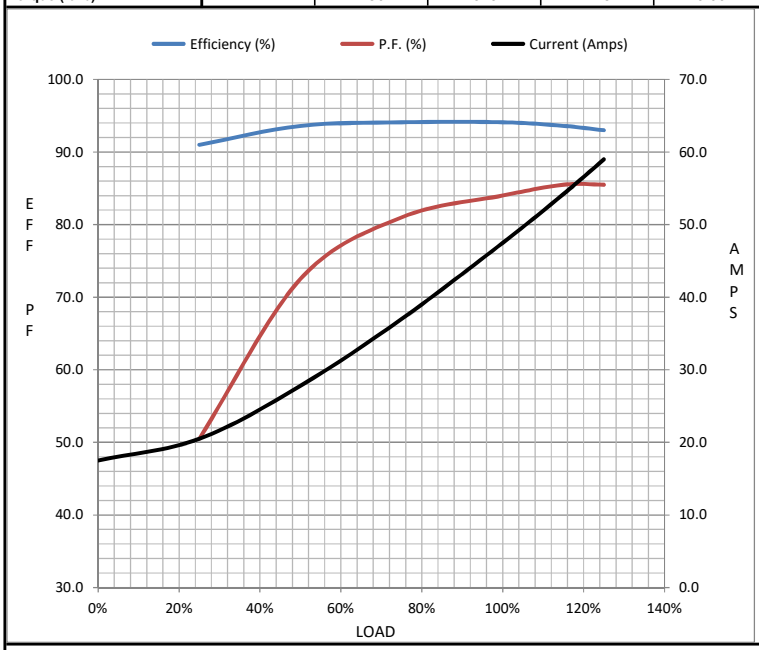
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	17.5	20.5	27.8	37.0	47.5	54.2	59.0	290	
Torque (ft-lb)	0.00	29.3	58.5	88.3	118	136	149	212	
RPM	1800	1795	1790	1788	1782	1,780	1778	0	
Efficiency (%)		91.0	93.6	94.1	94.1	93.6	93.0		
P.F. (%)	5.0	50.5	72.5	81.0	84.0	85.5	85.5	32.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1710	1782	1800
Current (Amps)	290	230	170	47.5	17.5
Torque (ft-lb)	212	180	313	118	0.00



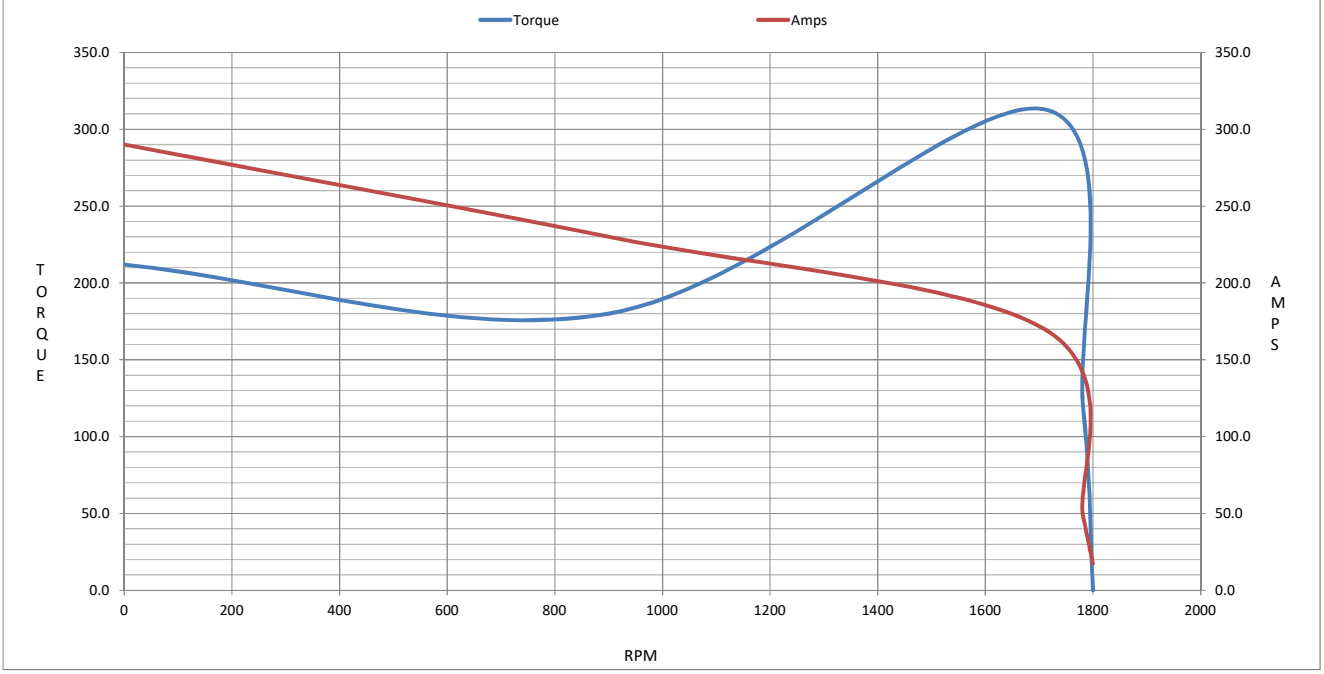
Information Block

HP	40.0	
Sync. RPM	1800	
Frame	324	
Enclosure	TEFC	
Construction	TFC	
Voltage	460	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	11.2	Lb-Ft²
Ref Wdg	HA32004007 NONE	
Sound Pressure @ 1M	72	dBA
VFD Rating	CONSTANT 2:1/VARIABLE 10:1	
Outline Dwg	SS312939	
Conn. Diag	EE7300	
Additional Specifications:		
0		
0		

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.1130	0.0610	0.4680	0.8300	15.3850

Speed -Torque Curve



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DATA VOLTS: 460

CERTIFICATION DATA SHEET

REFERENCE MODEL #: 324TTFCD16860
CONN. DIAGRAM: EE7300 **CAT #:** E624A-P
OUTLINE: SS312939
WINDING: HA32004007 NONE 5 **MOUNTING:** F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
40	30	1800	1782	324T	TEFC	TFC	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV. (Ft)
3	60	460	47.5	LINE OR INVERTER	CONT	H	1.15	40	3300

F.L. EFF	94.1	3/4 LD EFF	94.1	1/2 LD EFF	93.6	GTD EFF	ELECT. TYPE
F.L. PF	84.0	3/4 LD PF	81.0	1/2 LD PF	72.5	93.6	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)
118 LB-FT	290	212 LB-FT 180%	313 LB-FT 265%	55

SOUND PRESSURE	SOUND	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	APROX.
72 dBA	81 dBA	11.2 LB-FT²	275 LB-FT²	20 SEC.	2	657 LB.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	NONE	NO	NONE	BLUE (EPOXY)

BEARINGS DE	BEARINGS ODE	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
BALL 6312	BALL 6212	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE HEATERS
NONE	NOT	NONE	NONE	NONE	FALSE	NA

R1 (ohms/ph)	R2 (ohms/ph)	X1 (ohms/ph)	X2 (ohms/ph)	Xm (ohms/ph)	VIBRATION (in/sec)	FLOAT
0.113	0.061	0.468	0.83	15.385	0.080	ODE

* NOTES *

If Inverter equals NONE, contact factory for further information
INVERTER TORQUE: CONSTANT 2:1/VARIABLE 10:1
INV. HP SPEED RANGE: NONE

ENCODER: NONE
NONE
NONE NONE **PPR**

BRAKE: NONE
NONE NONE
FT-LB: NA
VOLTAGE: NONE **HZ:**

PREPARED BY:
DATE: 5/13/2020

FORM: 3531 REV_4 2/27/06
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