marathon®

Severe Duty Motors

Model No: 405TSTFCD6501
Catalog No: E613A

Severe Duty Motor, 100 HP, 3 Ph, 60 Hz, 460 V, 3600 RPM, 405TS Frame, TEFC

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Product Information Packet: Model No: 405TSTFCD6501, Catalog No: E613A Severe Duty Motor, 100 HP, 3 Ph, 60 Hz, 460 V, 3600 RPM, 405TS Frame, TEFC

Nameplate Specifications

Phase	**3**	Output HP	**100 Hp**
Output KW	**75.0 kW**	Voltage	**460 V**
Speed	**3575 r/min**	Synchronous RPM	**3600 r/min**
Service Factor	**1.15**	Frame	**405TS**
Enclosure	**Totally Enclosed Fan Cooled**	Thermal Protection	**No Protection**
Efficiency	**94.5 %**	Ambient Temperature	**40 °C**
Frequency	**60 Hz**	Current	**111.0 A**
Power Factor	**89**	Duty	**Continuous**
Insulation Class	**H**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**6314**
Opp Drive End Bearing Size	**6314**	UL	**Listed**
CSA	**Y**	CE	**Y**
IP Code	**55**	Number of Speeds	**1**
Hazardous Location	**DIVISION 2 T2B**		

Technical Specifications

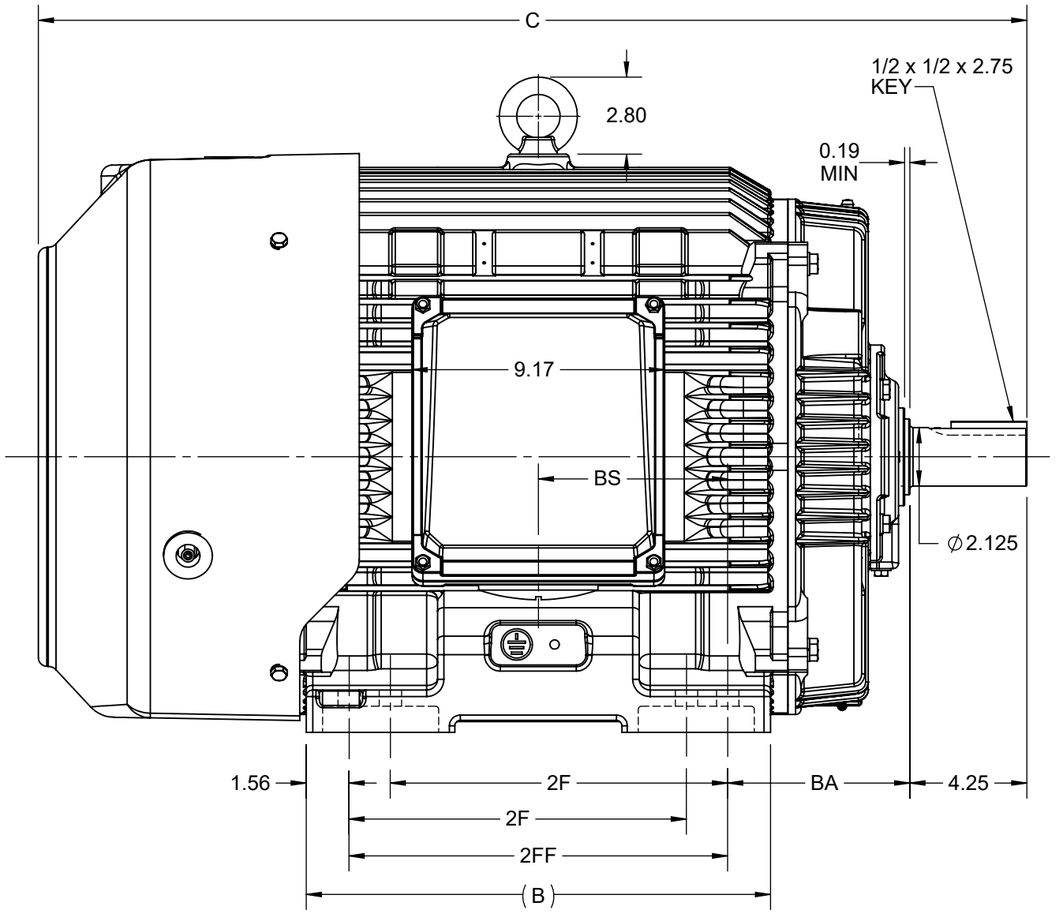
Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**2**	Rotation	**Reversible**
Resistance Main	**.056 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**TS**	Shaft Diameter	**2.125 in**
Assembly/Box Mounting	**F1/F2 Capable**	Inverter Load	**Constant 2:1/Variable 10:1**

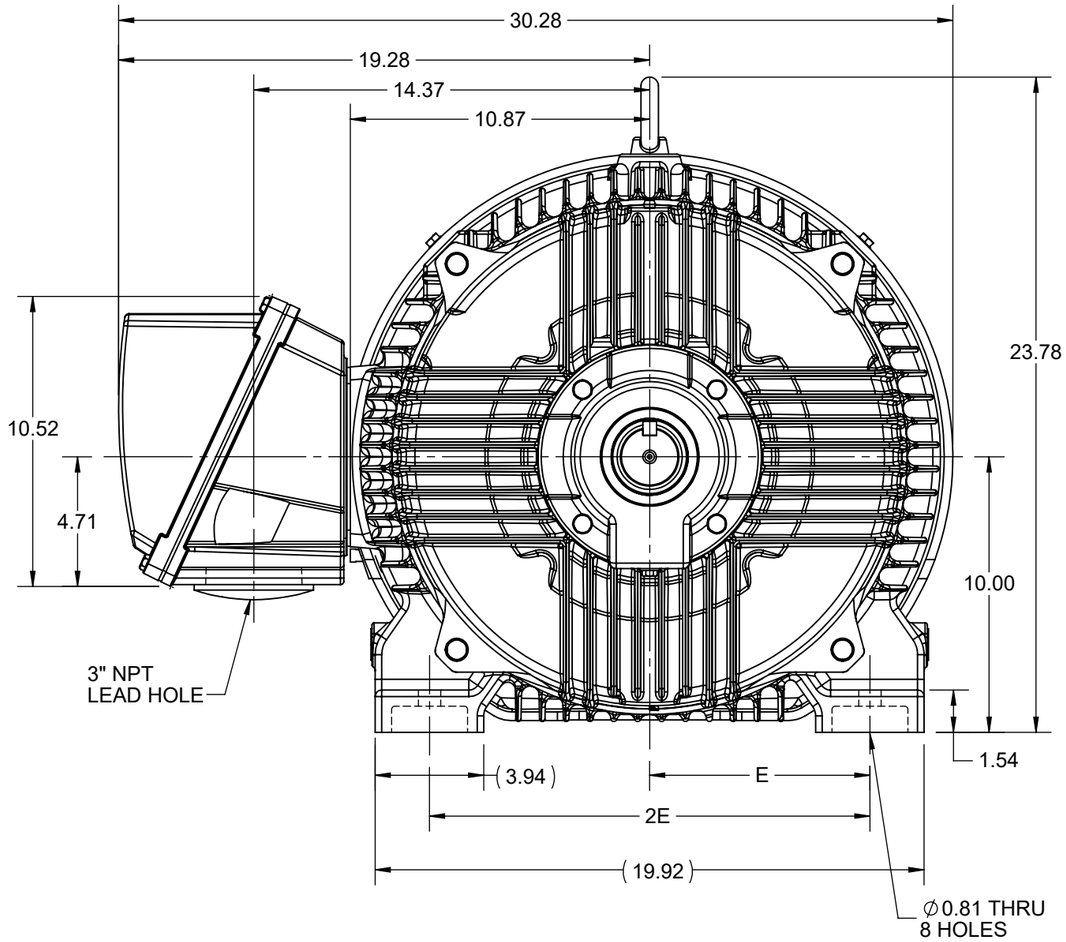
Drawings

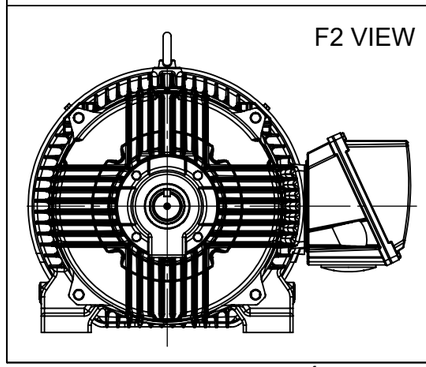
Connection Drawing	**EE7300U**	Outline Drawing	**SS557666**

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B	C	E	2E	2F	2FF	BA	BS	MOUNTING
16.85	35.88	8.00	16.00	12.25	13.75	6.62	6.87	F1 OR F2







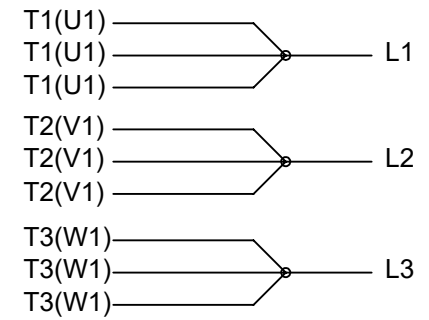
DRAWING REVISION: D	REVISION BY: SB	REV DATE/© DATE: 07/30/2025
REQUEST NUMBER: CR-0023600	APPROVED BY: SBD	DATE: 07/30/2025
REQUEST NUMBER DESCRIPTION: DRAWING TITLE BLOCK UPDATED		

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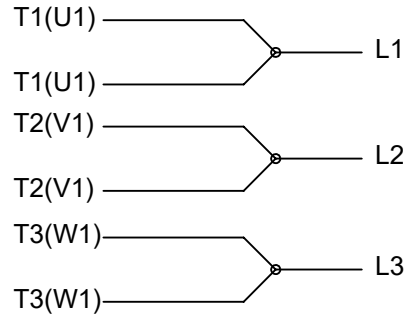
PRIMARY DIMENSIONS ARE INCH
mm DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

DRAWN BY: BISWA	marathon™	
DATE: 24/12/2018	DESCRIPTION: OUTLINE 404/405TS FR-NEMA- SD & IEEE841	
APPROVED BY: SBD		
DATE: 24/12/2018		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE: B / DRAWING NUMBER: SS557666	SHEET: 1 OF 1

IF MOTOR HAS 9 LEADS

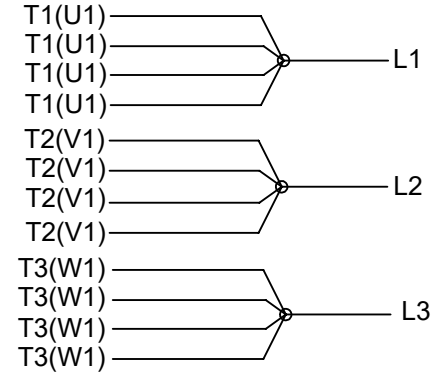


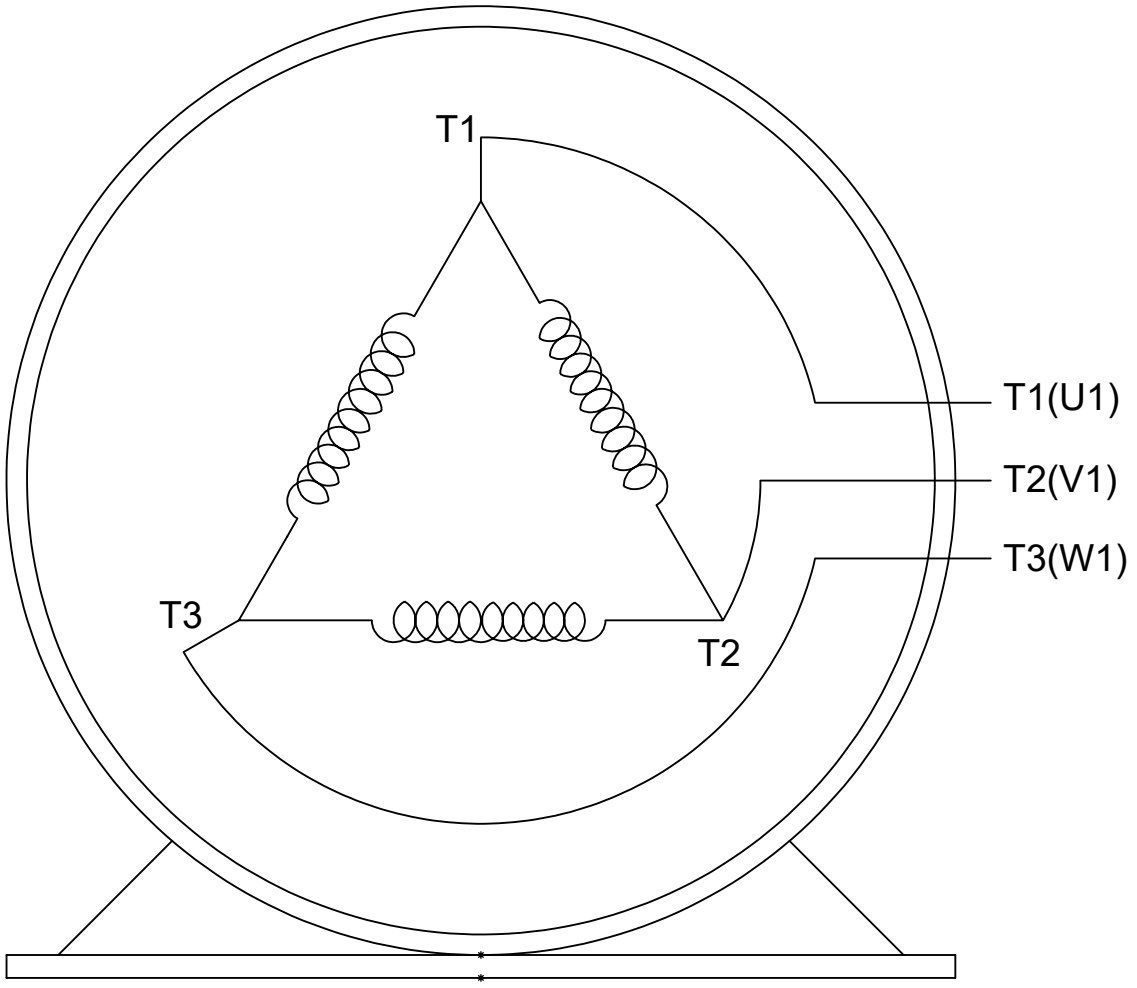
IF MOTOR HAS 6 LEADS



A-9806 DECAL IF CALLED FOR

IF MOTOR HAS 12 LEADS





VIEW OF TERMINAL END

DRAWING REVISION	REVISION BY	REV DATE/© DATE
M	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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DRAWN BY	DRS
DATE	09-27-1996
APPROVED BY	GK
DATE	09-30-1996
REFERENCE	
THIRD ANGLE PROJECTION	

marathon™

DESCRIPTION
CONN DIAGRAM-EXTERNAL
3Ø SINGLE VOLTAGE

MATERIAL	PROCESS/FINISH

SIZE	DRAWING NUMBER	SHEET
A	EE7300U	1 OF 1

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Data Sheet

Date: 3/10/2020
Customer:
Attention:
Submitted by: ANUSHA M

marathon® Motors

405TSTFCD6501

Submittal

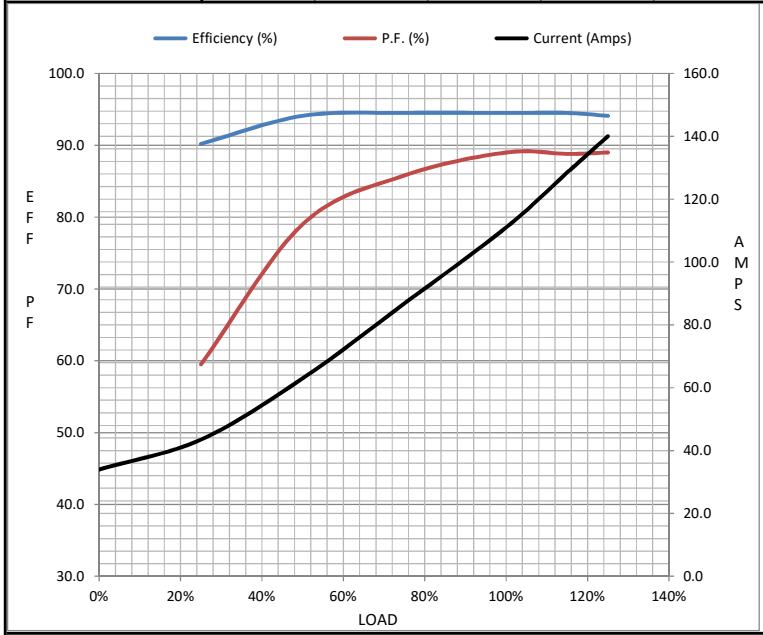
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	34.0	43.5	63.0	86.8	111	129	140	725	
Torque (ft-lb)	0.00	36.5	73.5	110	147	170	185	265	
RPM	3600	3595	3588	3582	3575	3,570	3565	0	
Efficiency (%)		90.2	94.1	94.5	94.5	94.5	94.1		
P.F. (%)	6.5	59.5	79.0	85.8	89.0	88.8	89.0	29.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3470	3575	3600
Current (Amps)	725	580	435	111	34.0
Torque (ft-lb)	265	225	427	147	0.00



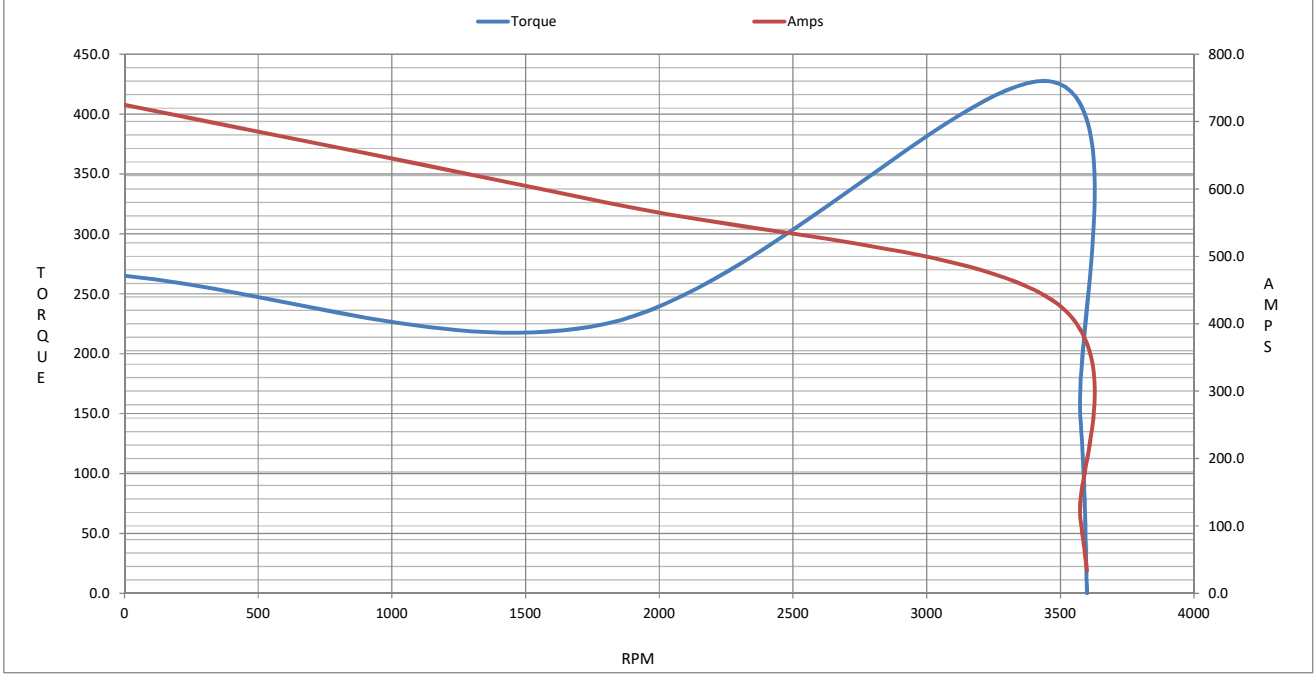
Information Block

HP	100.0
Sync. RPM	3600
Frame	405
Enclosure	TEFC
Construction	TFC
Voltage	460 V
Frequency	60 Hz
Design	B
LR Code letter	G
Service Factor	1.15
Temp Rise @ FL	65 ° C
Duty	CONT
Ambient	50 ° C
Elevation	1,000 feet
Rotor/Shaft wk²	19.0 Lb-Ft²
Ref Wdg	HE32502006 NONE
Sound Pressure @ 1M	80 dBA
VFD Rating	CONSTANT 2:1/VARIABLE 10:1
Outline Dwg	SS557666-405TS
Conn. Diag	EE7300U
Additional Specifications:	
0	
0	

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.0340	0.0170	0.2330	0.2250	7.7830

Speed -Torque Curve



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DATA VOLTS: 460

CERTIFICATION DATA SHEET

MODEL #: 405TSTFCD6501
CAT #: E613A

CONN. DIAGRAM: EE7300U
OUTLINE: SS557666-405TS
WINDING: HE32502006 NONE 1

MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
100	75	3600	3575	405TS	TEFC	TFC	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV.(Ft)
3	60	460	111	LINE OR INVERTER	CONT	H	1.15	40	3300

F.L. EFF	94.5	3/4 LD EFF	94.5	1/2 LD EFF	94.1	GTD EFF	ELECT. TYPE	
F.L. PF	89.0	3/4 LD PF	85.8	1/2 LD PF	79.0	93.6	SQ CAGE INV RATED	

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)	
147 LB-FT	725	265 LB-FT 180%	427 LB-FT 290%	65	

SOUND PRESSURE @	SOUND	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	APROX. MOTOR
80 dBA	89 dBA	19.0 LB-FT²	65 LB-FT²	15 SEC.	2	1185 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	DIVISION 2 T2B	NO	NONE	BLUE (EPOXY)

BEARINGS DE	BEARINGS ODE	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
BALL 6314	BALL 6314	POLYREX EM	TS	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)	
0.034	0.017	0.233	0.225	7.783	0.080	

If Inverter equals NONE, contact factory for further information

NOTES
*
*

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: ANUSHA M
DATE: 3/10/2020

FORM: 3531 REV_4 2/27/06
** Subject to change without notice.