marathon®

Severe Duty Motors

Model No: 405THFCD9036
Catalog No: W600A

Severe Duty Motor, 100 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 405T Frame, TEFC

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Product Information Packet: Model No: 405THFCD9036, Catalog No: W600A Severe Duty Motor, 100 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 405T Frame, TEFC

Nameplate Specifications

Phase	**3**	Output HP	**100 Hp**
Output KW	**75.0 kW**	Voltage	**460 V**
Speed	**1785 r/min**	Synchronous RPM	**1800 r/min**
Service Factor	**1.15**	Frame	**405T**
Enclosure	**Totally Enclosed Fan Cooled**	Thermal Protection	**No Protection**
Efficiency	**95.4 %**	Ambient Temperature	**40 °C**
Frequency	**60 Hz**	Current	**113.0 A**
Power Factor	**87**	Duty	**Continuous**
Insulation Class	**H**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**6316**
Opp Drive End Bearing Size	**6314**	UL	**Listed**
CSA	**Y**	CE	**Y**
IP Code	**56**	Number of Speeds	**1**
Hazardous Location	**DIVISION 2 T2B**		

Technical Specifications

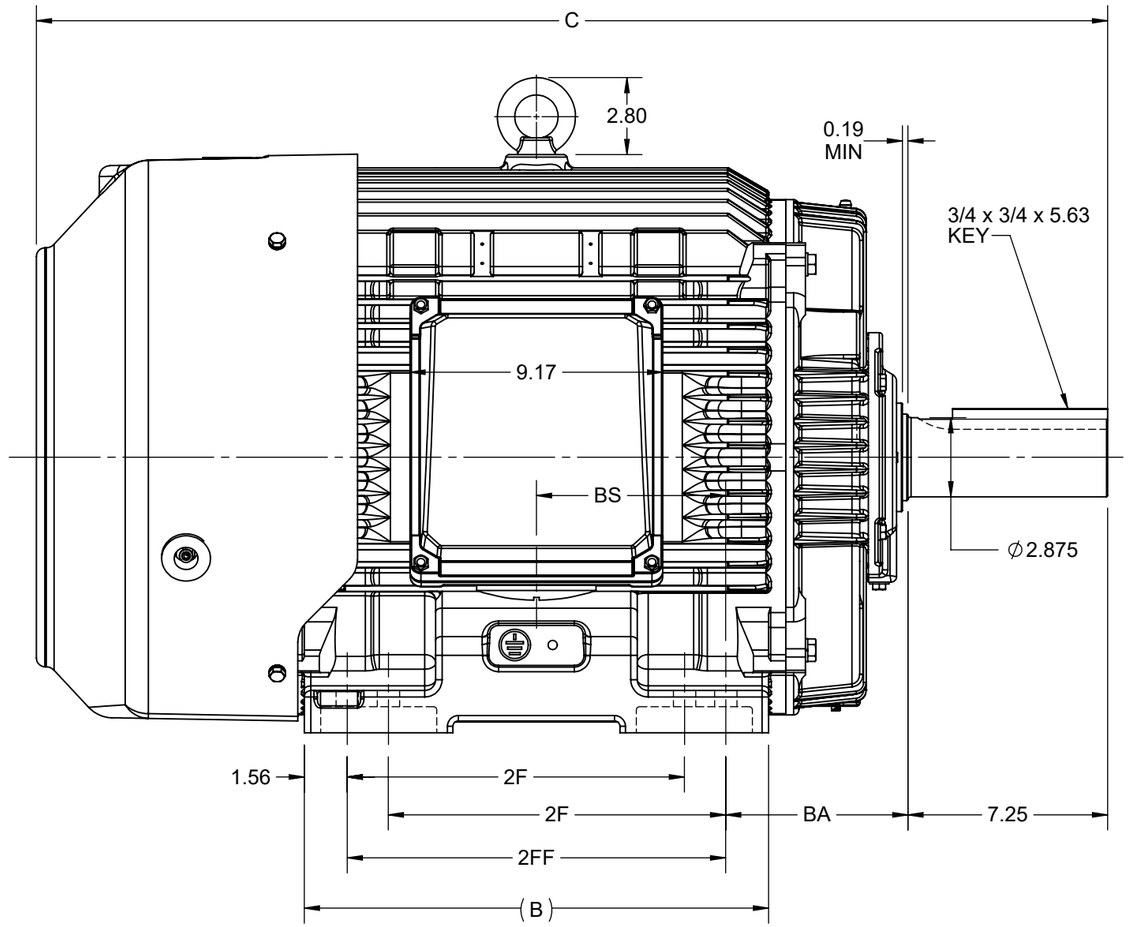
Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**4**	Rotation	**Reversible**
Resistance Main	**.0555 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**T**	Shaft Diameter	**2.875 in**
Assembly/Box Mounting	**F1/F2 Capable**	Inverter Load	**Constant 2:1/Variable 10:1**

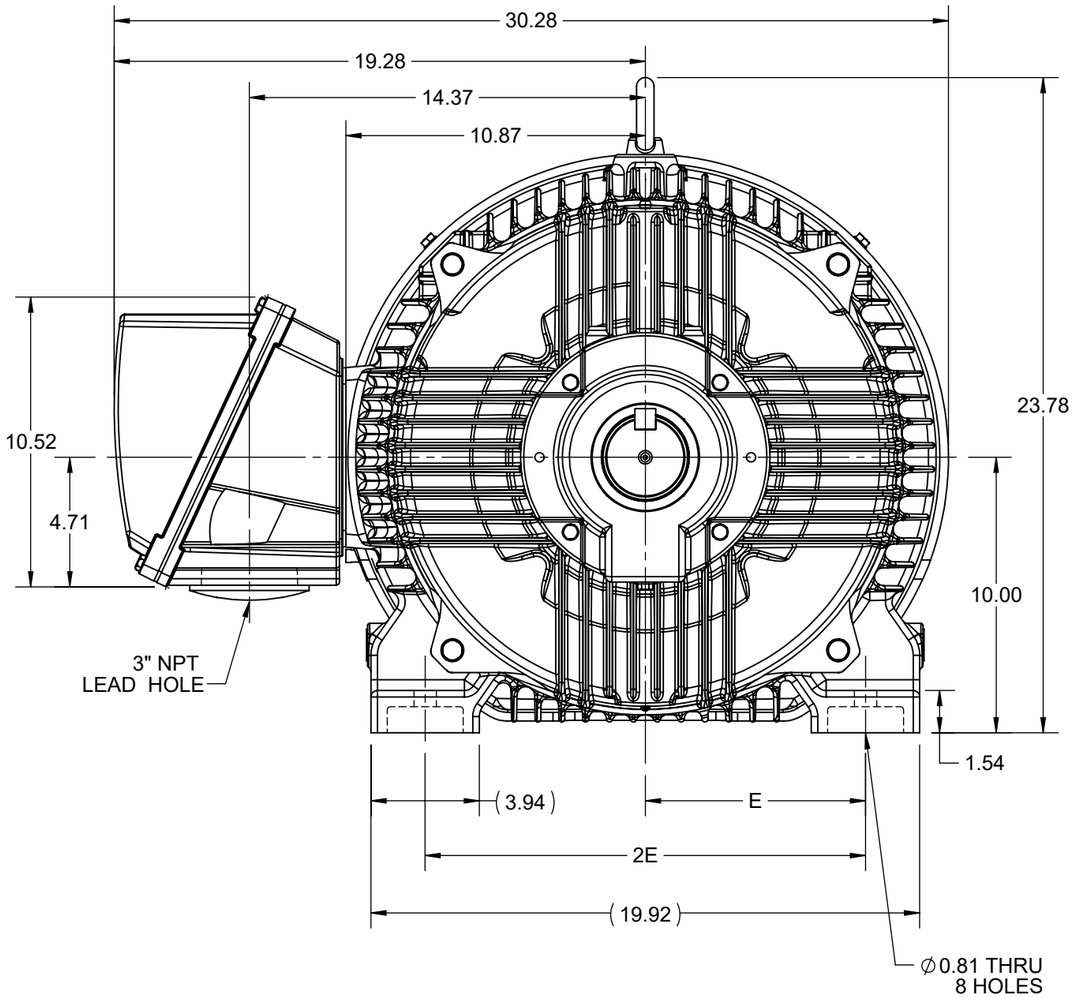
Drawings

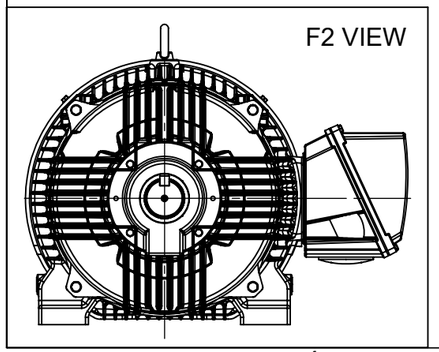
Connection Drawing	**EE7300U**	Outline Drawing	**SS557665**

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B	C	E	2E	2F	2FF	BA	BS	MOUNTING
16.85	38.88	8.00	16.00	12.25	13.75	6.62	6.87	F1 OR F2







DRAWING REVISION	REVISION BY	REV DATE/© DATE
D	SB	07/23/2025
REQUEST NUMBER	APPROVED BY	DATE
CR-0023556	SBD	07/23/2025

REQUEST NUMBER DESCRIPTION
DRAWING TITLE BLOCK UPDATED

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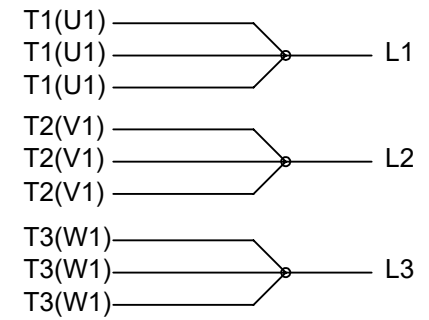
PRIMARY DIMENSIONS ARE INCH
mm DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

DRAWN BY	DESCRIPTION	
BISWA	OUTLINE	
DATE	404/405T FR-SD & IEEE841	
12/24/2018		
APPROVED BY	MATERIAL	PROCESS/FINISH
SBD		
DATE		
12/24/2018		
REFERENCE		

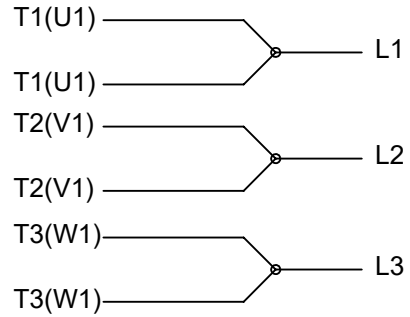
THIRD ANGLE PROJECTION

SIZE	DRAWING NUMBER	SHEET
B	SS557665	1 OF 1

IF MOTOR HAS 9 LEADS

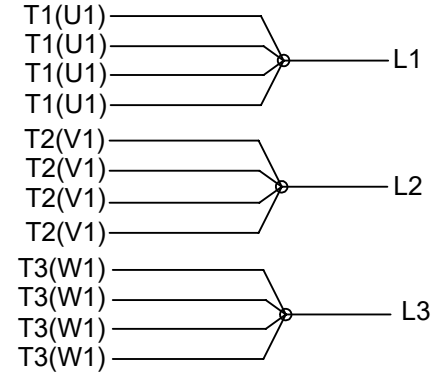


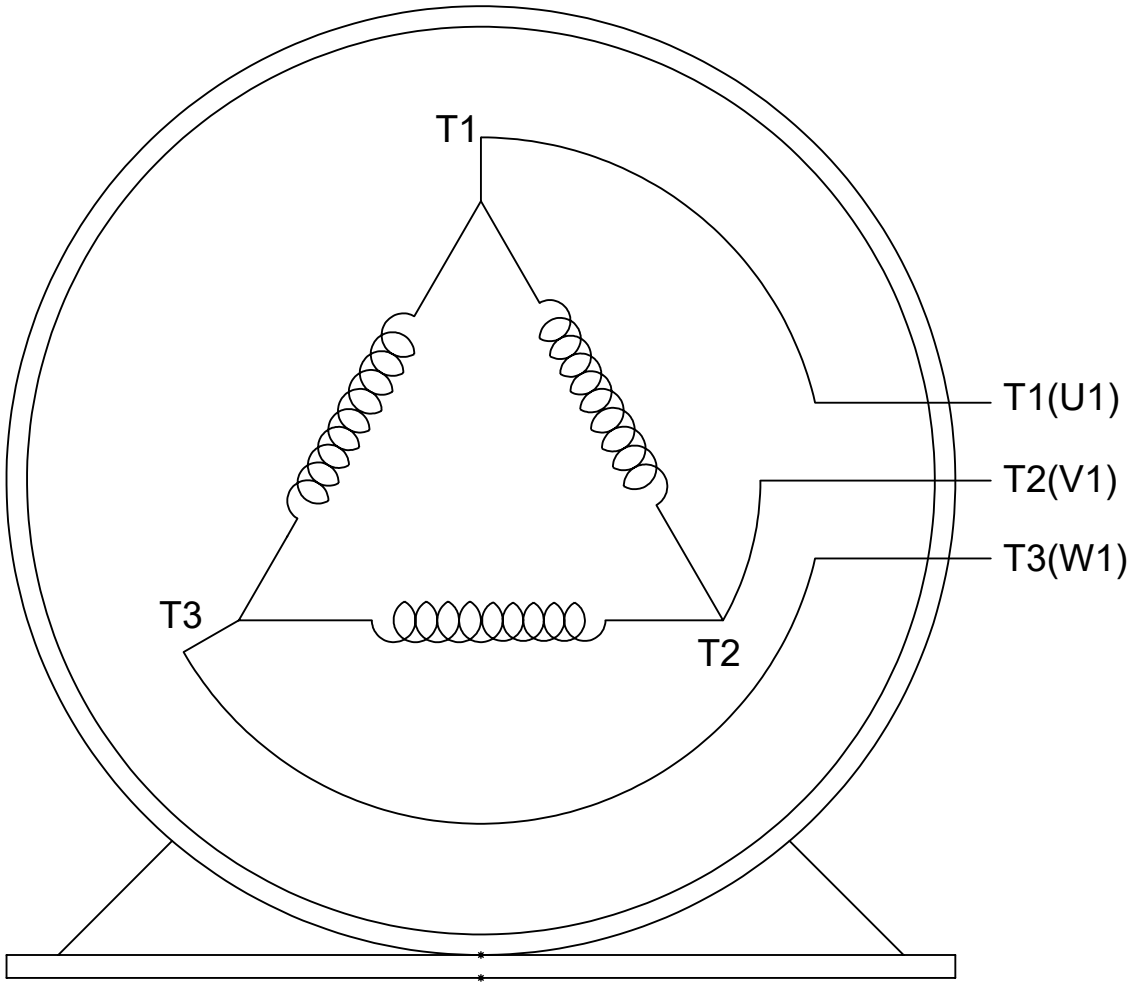
IF MOTOR HAS 6 LEADS



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

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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

Data Sheet

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

marathon® Motors

405THFCD9036

Submittal

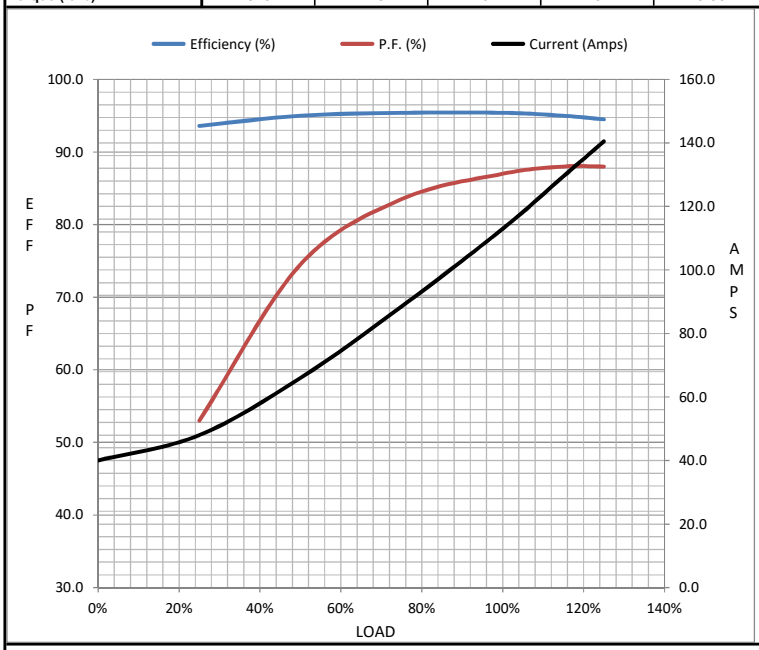
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	40.0	48.0	66.0	88.5	113	130	141	725	
Torque (ft-lb)	0.00	73.0	147	220	294	339	370	529	
RPM	1800	1796	1792	1790	1785	1,782	1780	0	
Efficiency (%)		93.6	95.0	95.4	95.4	95.0	94.5		
P.F. (%)	4.5	53.0	74.5	83.5	87.0	88.0	88.0	32.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1735	1785	1800
Current (Amps)	725	580	410	113	40.0
Torque (ft-lb)	529	445	764	294	0.00



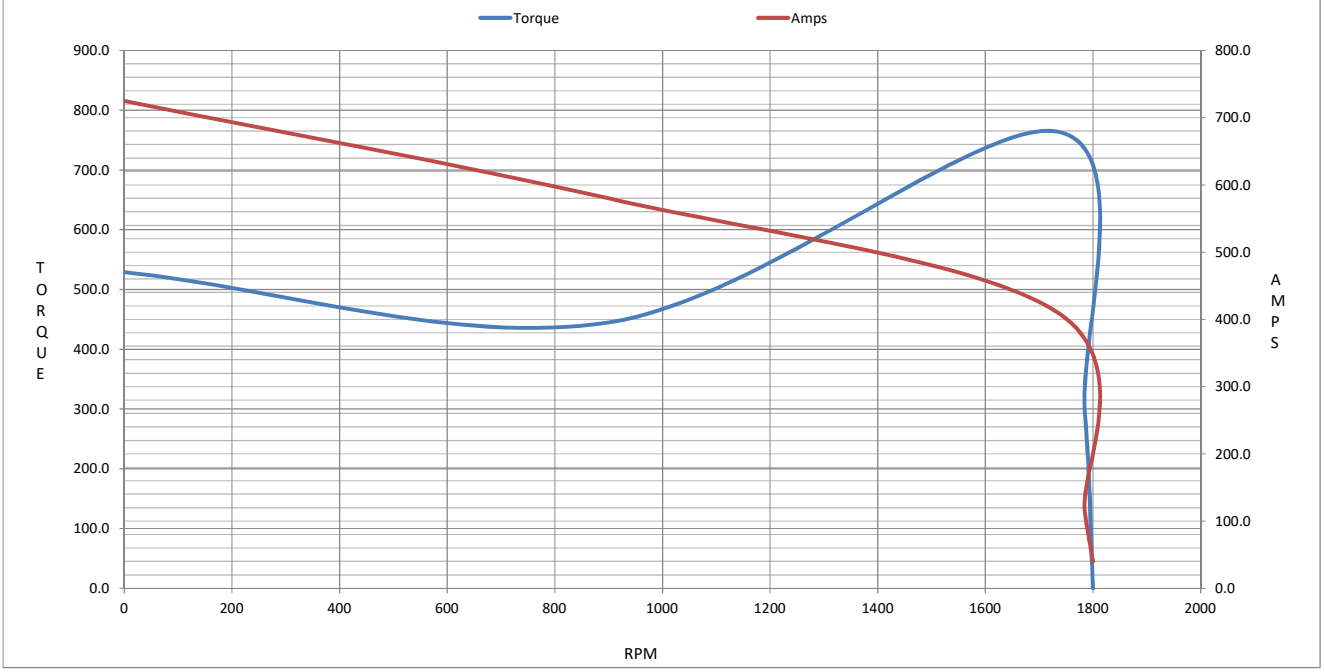
Information Block

HP	100.0	
Sync. RPM	1800	
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	40	° C
Elevation	3,300	feet
Rotor/Shaft wk²	35.0	Lb-Ft²
Ref Wdg	HA32504006 NONE	
Sound Pressure @ 1M	75	dBA
VFD Rating	CONSTANT 2:1/VARIABLE 10:1	
Outline Dwg	SS557665-405T	
Conn. Diag	EE7300U	
Additional Specifications:		
0		
0		

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.0330	0.0200	0.1700	0.2840	6.5320

Speed -Torque Curve



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DATA VOLTS: 460

CERTIFICATION DATA SHEET

REFERENCE MODEL #: 405THFCD9036
CONN. DIAGRAM: EE7300U **CAT #:** W600A
OUTLINE: SS557665-405T
WINDING: HA32504006 NONE 1 **MOUNTING:** F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
100	75	1800	1785	405T	TEFC	TFC	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV. (Ft)
3	60	460	113	LINE OR INVERTER	CONT	H	1.15	40	3300

F.L. EFF	95.4	3/4 LD EFF	95.4	1/2 LD EFF	95.0	GTD EFF	ELECT. TYPE	
F.L. PF	87.0	3/4 LD PF	83.5	1/2 LD PF	74.5	95.0	SQ CAGE INV RATED	

F.L. TORQUE	LR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)	
294 LB-FT	725	529 LB-FT 180%	764 LB-FT 260%	65	

SOUND PRESSURE	SOUND	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	APROX.
75 dBA	84 dBA	35.0 LB-FT²	575 LB-FT²	25 SEC.	2	1295 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 6316	BALL 6314	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)	
0.033	0.02	0.17	0.284	6.532	0.080	

*
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
** Subject to change without notice.