marathon®

Severe Duty Motors

Model No: 445THFCD9087
Catalog No: W614A

Severe Duty Motor, 150 HP, 3 Ph, 60 Hz, 460 V, 1200 RPM, 445T Frame, TEFC

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Product Information Packet: Model No: 445THFCD9087, Catalog No: W614A Severe Duty Motor, 150 HP, 3 Ph, 60 Hz, 460 V, 1200 RPM, 445T Frame, TEFC

Nameplate Specifications

Phase	**3**	Output HP	**150 Hp**
Output KW	**112.0 kW**	Voltage	**460 V**
Speed	**1190 r/min**	Synchronous RPM	**1200 r/min**
Service Factor	**1.15**	Frame	**445T**
Enclosure	**Totally Enclosed Fan Cooled**	Thermal Protection	**No Protection**
Efficiency	**95.8 %**	Ambient Temperature	**40 °C**
Frequency	**60 Hz**	Current	**171.0 A**
Power Factor	**86**	Duty	**Continuous**
Insulation Class	**H**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**NU319**
Opp Drive End Bearing Size	**6317**	UL	**Listed**
CSA	**Y**	CE	**Y**
IP Code	**56**	Number of Speeds	**1**
Hazardous Location	**DIVISION 2 T2B**		

Technical Specifications

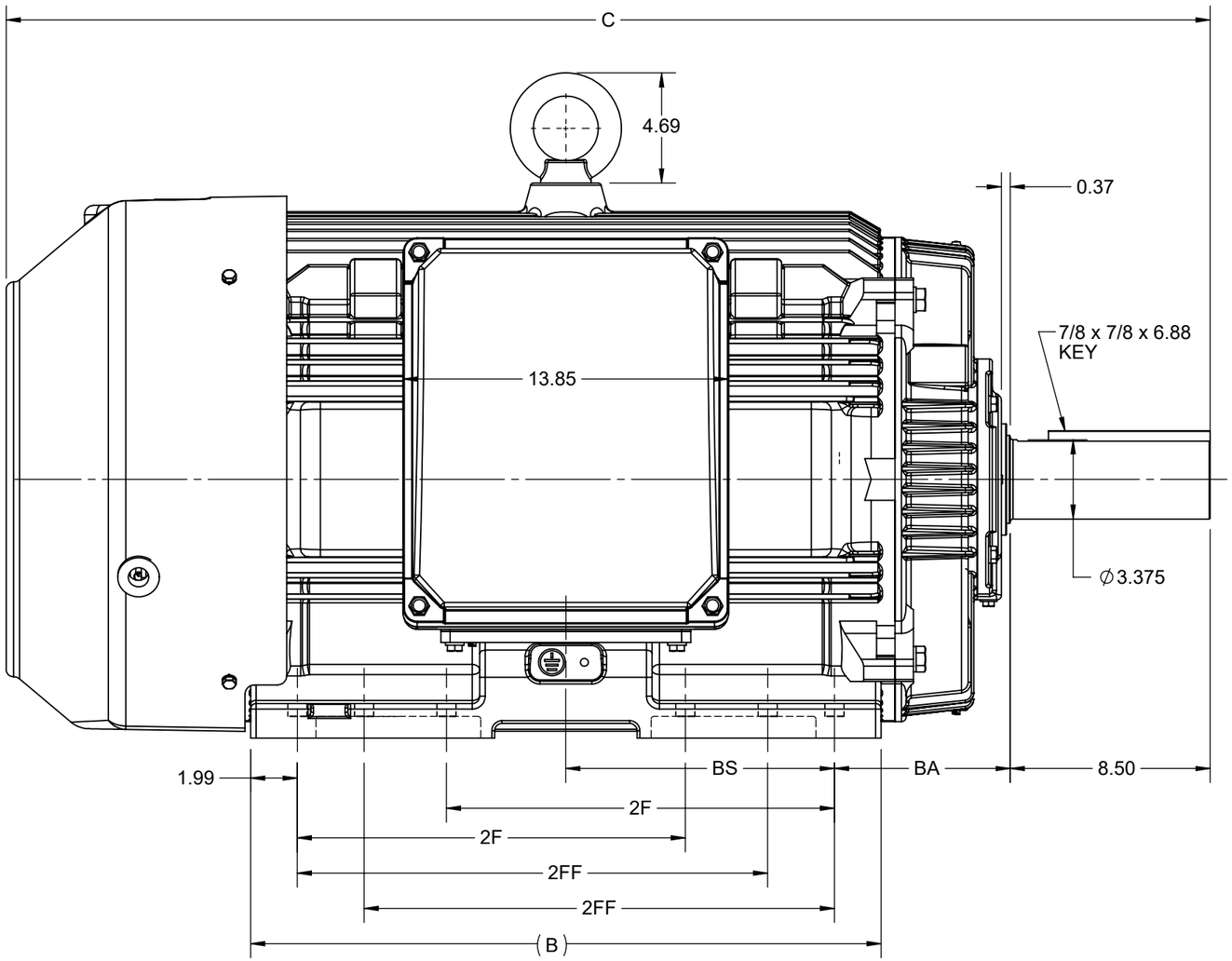
Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**6**	Rotation	**Reversible**
Resistance Main	**.0223 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Roller**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**T**	Shaft Diameter	**3.375 in**
Assembly/Box Mounting	**F1/F2 Capable**	Inverter Load	**Constant 2:1/Variable 10:1**

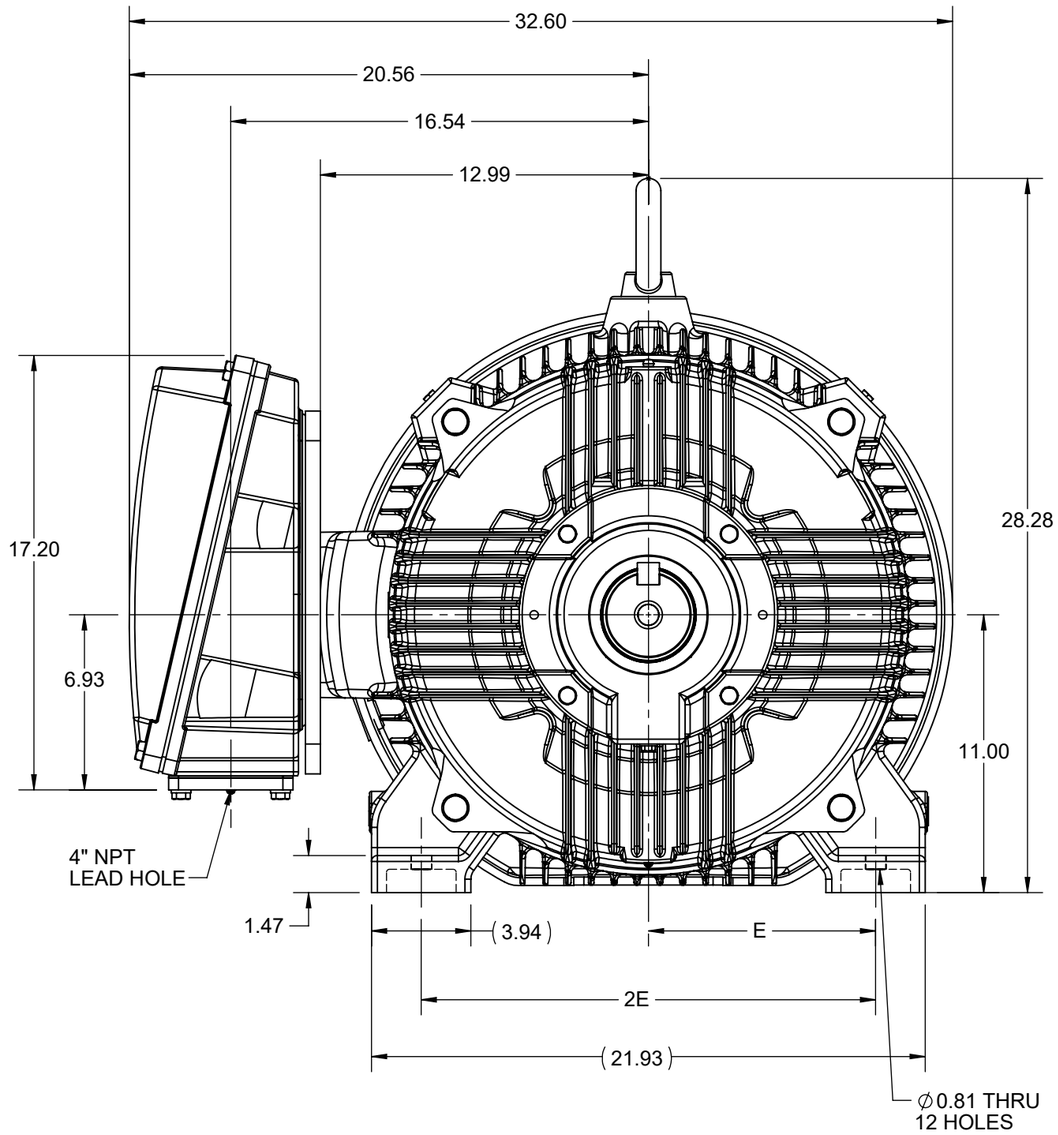
Drawings

Connection Drawing	**EE7300U**	Outline Drawing	**SS557888**

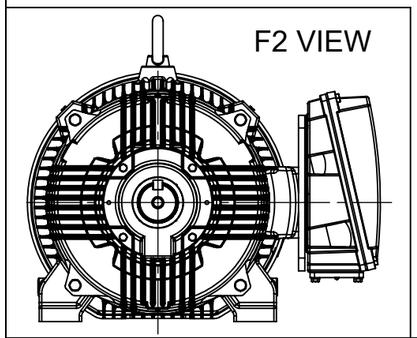
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B	C	E	2E	2F	2FF	BA	BS	MOUNTING
26.81	51.20	9.00	18.00	16.50	20.00	7.50	11.42	F1 OR F2





F2 VIEW



DRAWING REVISION	REVISION BY	REV DATE/© DATE
D	SB	07/24/2025
REQUEST NUMBER	APPROVED BY	DATE
CR-0023556	SBD	07/24/2025

REQUEST NUMBER DESCRIPTION
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DATE	23/05/2019
APPROVED BY	SBD
DATE	23/05/2019
REFERENCE	

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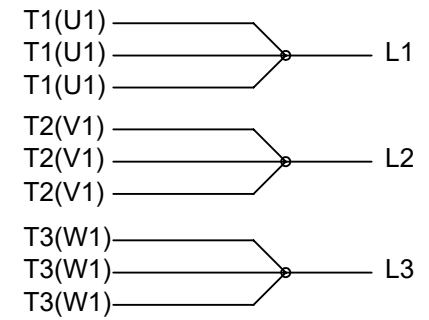
DESCRIPTION
OUTLINE
445/447T FR-NEMA-SD & IEEE841

MATERIAL | PROCESS/FINISH

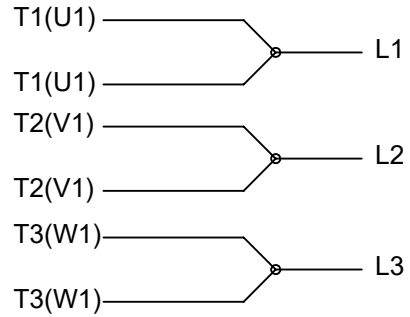
THIRD ANGLE PROJECTION

SIZE	DRAWING NUMBER	SHEET
B	SS557888	1 OF 1

IF MOTOR HAS 9 LEADS

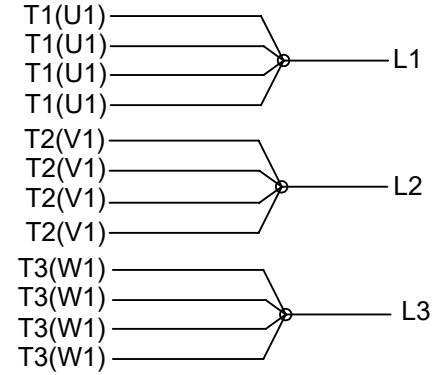


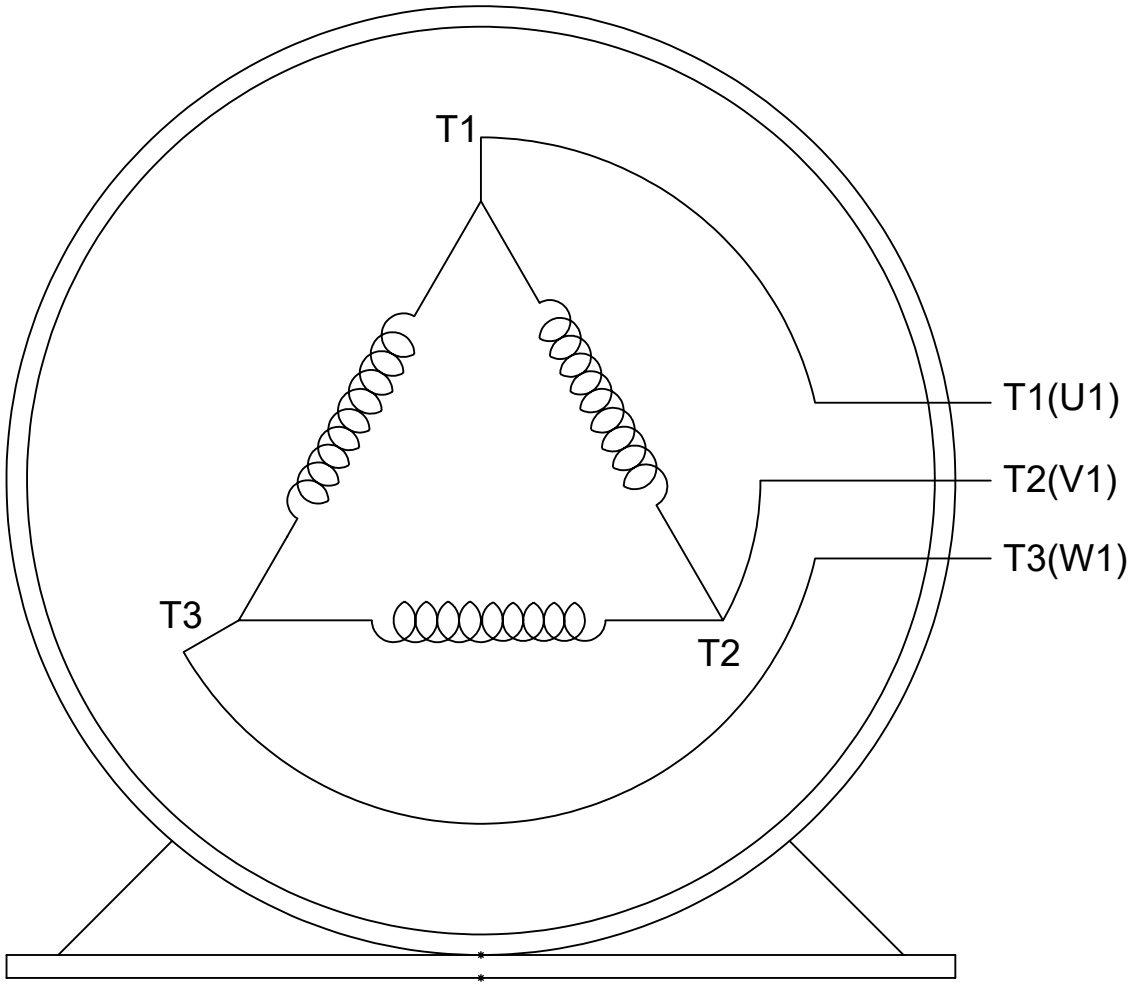
IF MOTOR HAS 6 LEADS



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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DATE	09-27-1996
APPROVED BY	GK
DATE	09-30-1996
REFERENCE	
THIRD ANGLE PROJECTION	

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DESCRIPTION
CONN DIAGRAM-EXTERNAL
3Ø SINGLE VOLTAGE

MATERIAL	PROCESS/FINISH

SIZE	DRAWING NUMBER	SHEET
A	EE7300U	1 OF 1

Data Sheet

Date: 6/3/2020
Customer:
Attention:
Submitted by:

marathon® Motors

445THFCD9087

Submittal

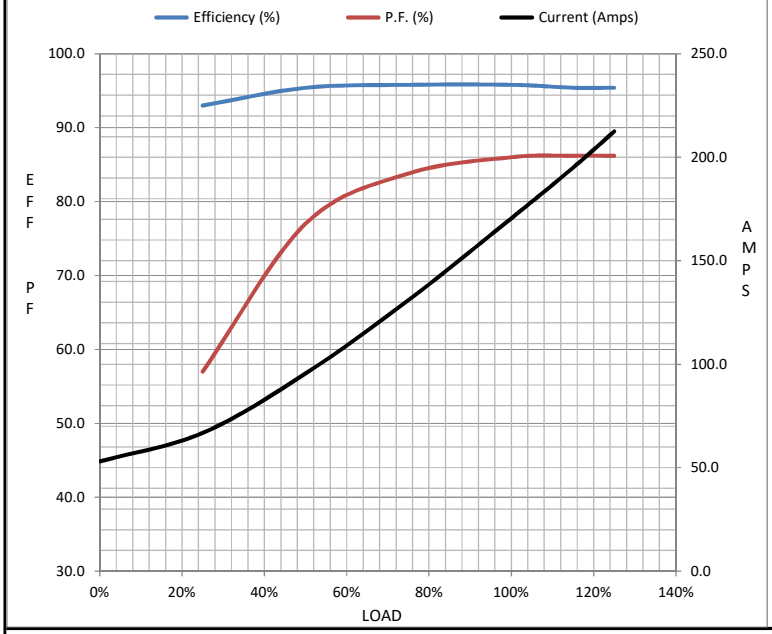
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	53.0	66.8	95.5	131	171	195	213	1,085	
Torque (ft-lb)	0.00	165	330	495	662	760	830	1,192	
RPM	1200	1198	1195	1192	1190	1,188	1188	0	
Efficiency (%)		93.0	95.4	95.8	95.8	95.4	95.4		
P.F. (%)	5.0	57.0	77.0	83.8	86.0	86.2	86.2	30.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1158	1190	1200
Current (Amps)	1,085	870	612	171	53.0
Torque (ft-lb)	1,192	1,020	1,757	662	0.00

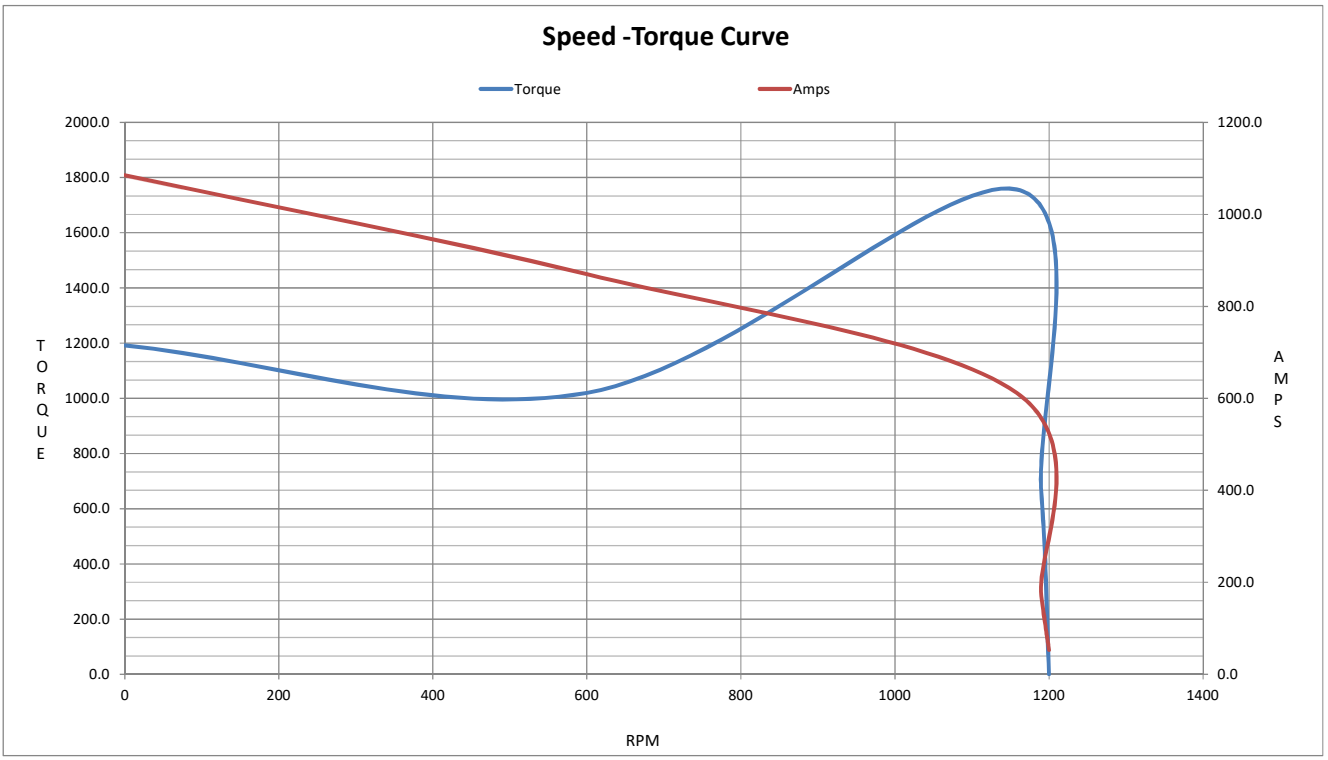


Information Block

HP	150.0	
Sync. RPM	1200	
Frame	160L	
Enclosure	TEFC	
Construction	TFC	
Voltage	460	V
Frequency	60	Hz
Design	N	
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	138	Lb-Ft²
Ref Wdg	HA32806007 NONE	
Sound Pressure @ 1M	75	dBA
VFD Rating	CONSTANT 2:1/VARIABLE 10:1	
Outline Dwg	037898-912	
Conn. Diag	EE7300U	
Additional Specifications:		
0		
0		

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.0140	0.0130	0.1370	0.2270	4.9520



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DATA VOLTS: 460

CERTIFICATION DATA SHEET

REFERENCE MODEL #: 445THFCD9087
CONN. DIAGRAM: EE7300U
CAT #: W614A
OUTLINE: SS557888
WINDING: HA32806007 NONE 5
MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
150	112	1200	1190	445T	TEFC	TFC	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB(° C)	ELEV.(Ft)
3	60	460	171	LINE OR INVERTER	CONT	H	1.15	40	3300

F.L. EFF	95.8	3/4 LD EFF	95.8	1/2 LD EFF	95.4	GTD EFF	ELECT. TYPE
F.L. PF	86.0	3/4 LD PF	83.8	1/2 LD PF	77.0	95.4	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)	
662 LB-FT	1,085	1,192 LB-FT 180%	1,757 LB-FT 265%	65	

SOUND PRESSURE	SOUND	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
75 dBA	84 dBA	138 LB-FT²	1500 LB-FT²	25 SEC.	2	2404	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
ROLLER	BALL	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
NU319	6317						

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)	
0.014	0.013	0.137	0.227	4.952	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: 6/3/2020
** Subject to change without notice.
FORM: 3531 REV_4 2/27/06