marathon®

Severe Duty Motors

Model No: 445THFCD9106
Catalog No: W603A

Severe Duty Motor, 100 HP, 3 Ph, 60 Hz, 460 V, 900 RPM, 445T Frame, TEFC

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Product Information Packet: Model No: 445THFCD9106, Catalog No: W603A Severe Duty Motor, 100 HP, 3 Ph, 60 Hz, 460 V, 900 RPM, 445T Frame, TEFC

Nameplate Specifications

Phase	**3**	Output HP	**100 Hp**
Output KW	**75.0 kW**	Voltage	**460 V**
Speed	**890 r/min**	Synchronous RPM	**900 r/min**
Service Factor	**1.15**	Frame	**445T**
Enclosure	**Totally Enclosed Fan Cooled**	Thermal Protection	**No Protection**
Efficiency	**93.6 %**	Ambient Temperature	**40 °C**
Frequency	**60 Hz**	Current	**123.0 A**
Power Factor	**80.8**	Duty	**Continuous**
Insulation Class	**H**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**6319**
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

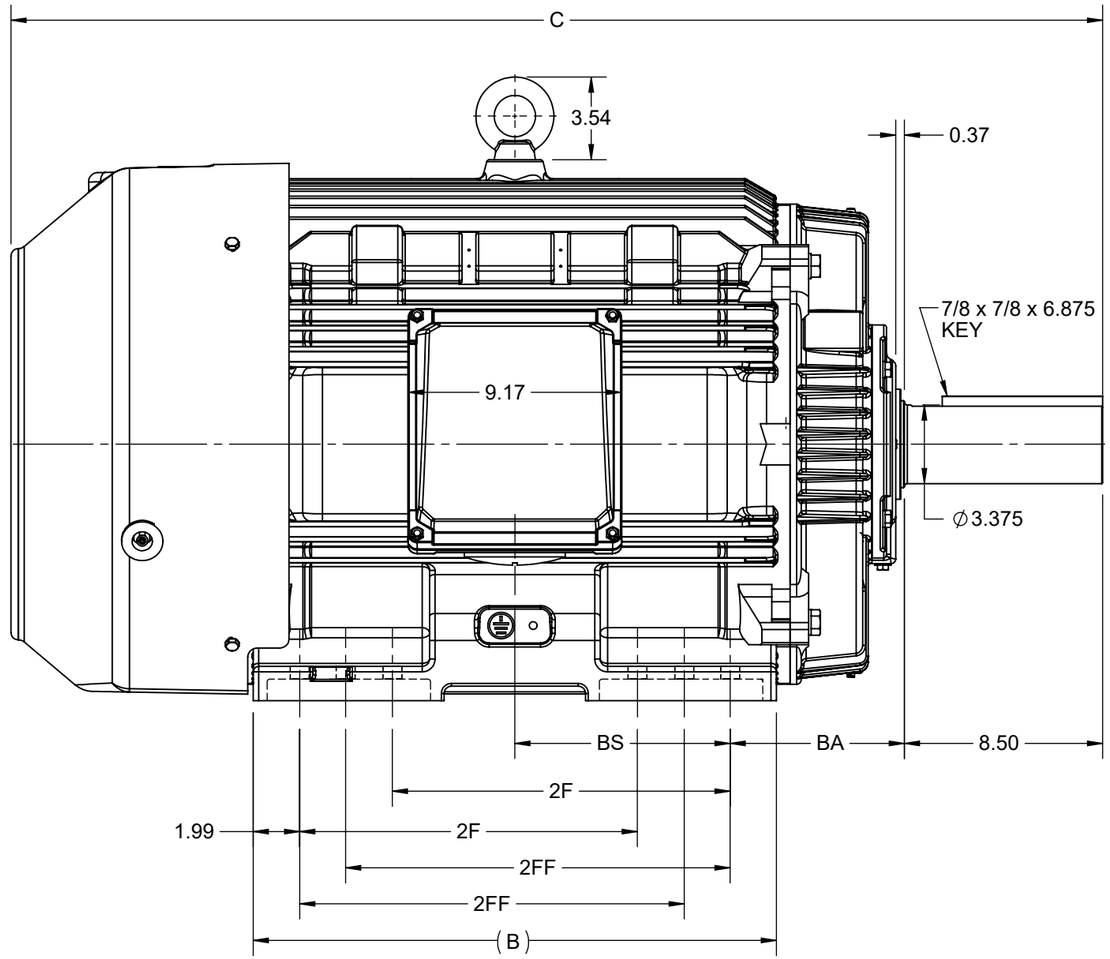
Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**8**	Rotation	**Reversible**
Resistance Main	**.0447 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**T**	Shaft Diameter	**3.375 in**
Assembly/Box Mounting	**F1/F2 Capable**	Inverter Load	**Constant 2:1/Variable 10:1**

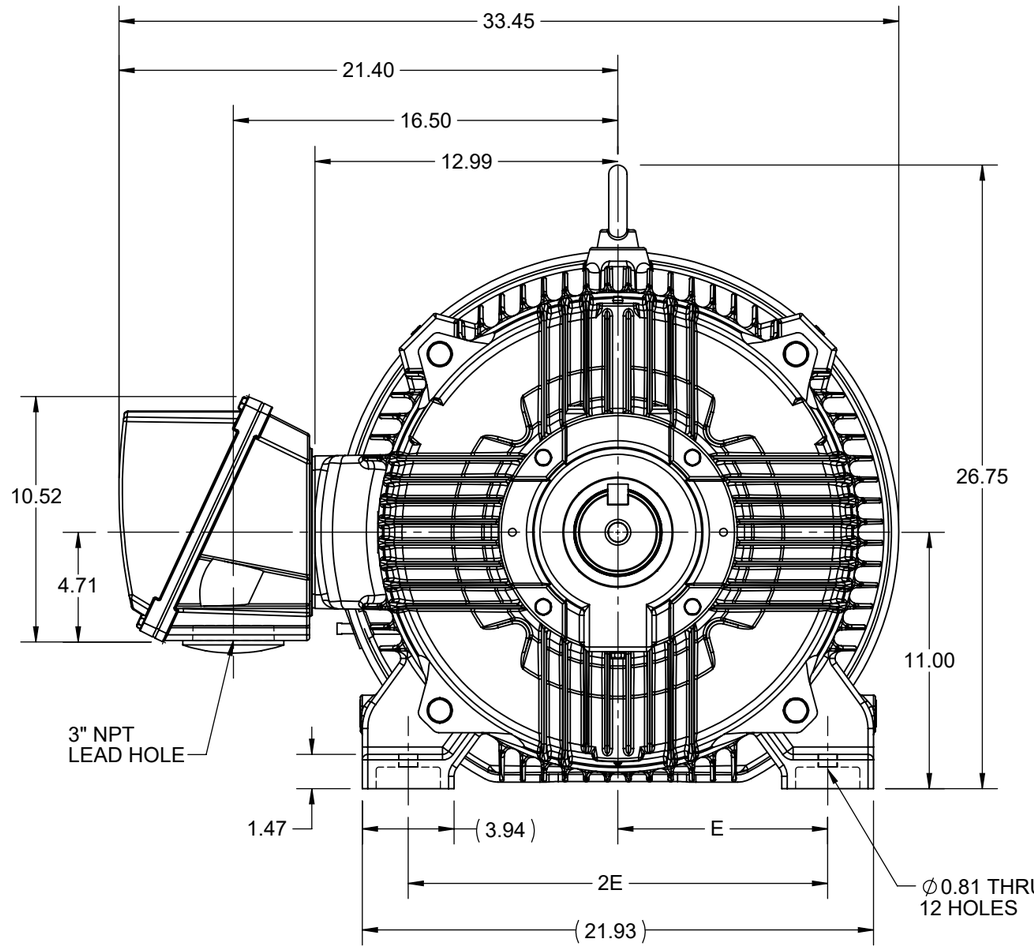
Drawings

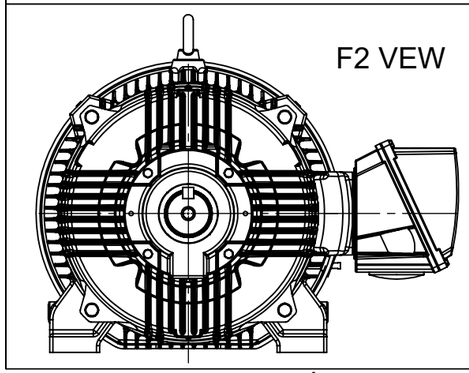
Connection Drawing	**EE7300U**	Outline Drawing	**SS557668**

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B	C	E	2E	2F	2FF	BA	BS	MOUNTING
22.44	46.83	9.00	18.00	14.50	16.50	7.50	9.24	F1 OR F2







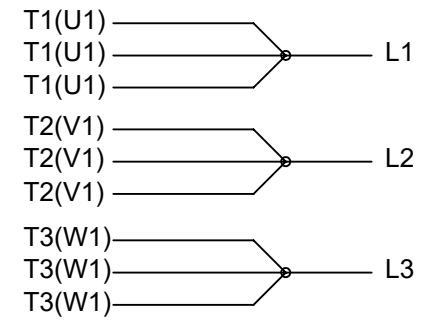
DRAWING REVISION: D	REVISION BY: SB	REV DATE/© DATE: 07/23/2025
REQUEST NUMBER: CR-0023556	APPROVED BY: SBD	DATE: 07/23/2025
REQUEST NUMBER DESCRIPTION: DRAWING TITLE BLOCK UPDATED		

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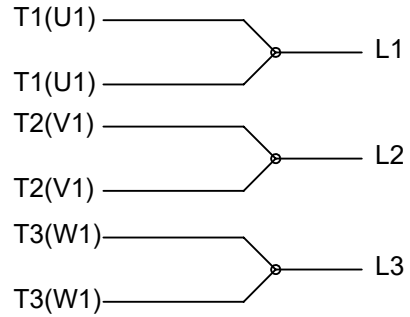
PRIMARY DIMENSIONS ARE INCH
mm DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

DRAWN BY: BISWA	marathon™	
DATE: 24/12/2018	DESCRIPTION: OUTLINE 444/445T FR-NEMA-SD & IEEE841	
APPROVED BY: SBD		
DATE: 24/12/2018		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE: B / DRAWING NUMBER: SS557668	SHEET: 1 OF 1

IF MOTOR HAS 9 LEADS

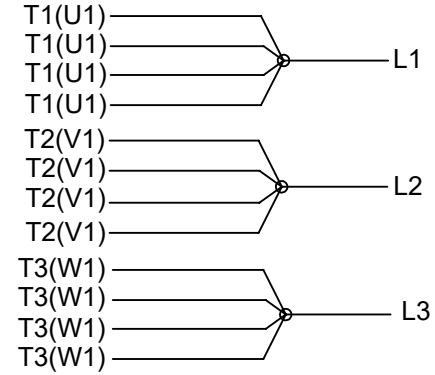


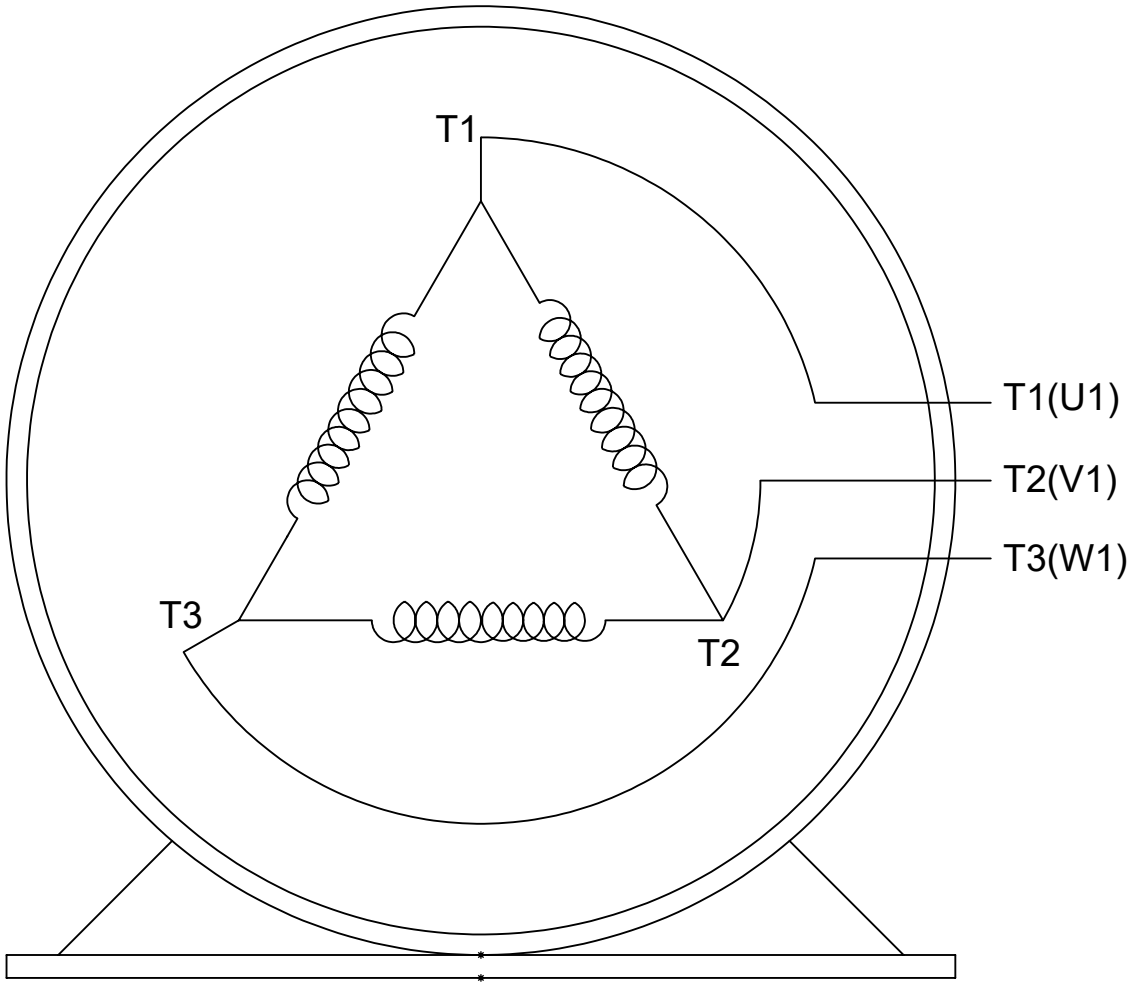
IF MOTOR HAS 6 LEADS



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

Data Sheet

Date: 3/9/2021
Customer:
Attention:
Submitted by:

marathon® Motors

445THFCD9106

Submittal

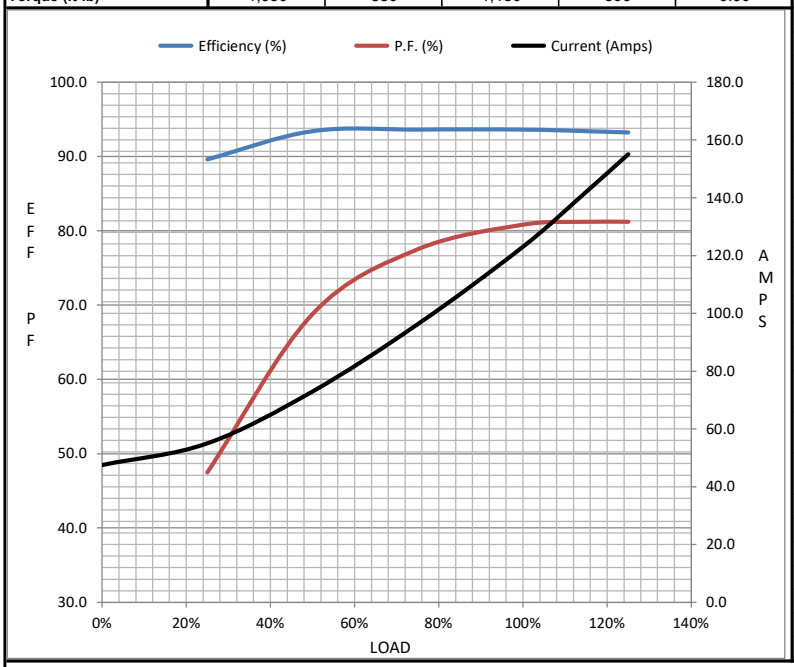
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	47.5	55.0	73.0	96.2	123	142	155	700	
Torque (ft-lb)	0.00	145	295	440	590	680	740	1,050	
RPM	900	898	895	892	890	888	885	0	
Efficiency (%)		89.6	93.4	93.6	93.6	93.4	93.2		
P.F. (%)	5.2	47.5	68.8	77.5	80.8	81.2	81.2	32.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	450	860	890	900
Current (Amps)	700	542	342	123	47.5
Torque (ft-lb)	1,050	880	1,180	590	0.00



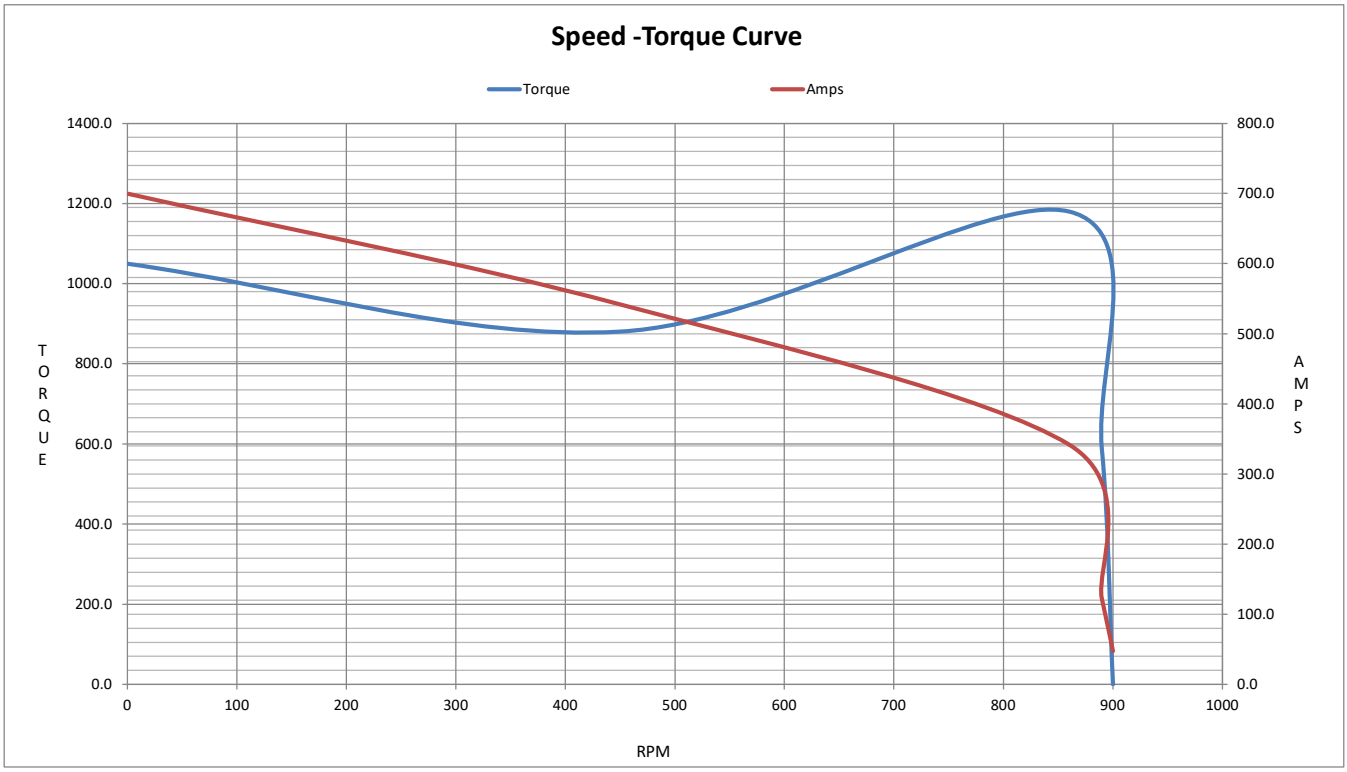
Information Block

HP	100.0	
Sync. RPM	900	
Frame	445	
Enclosure	TEFC	
Construction	TFN	
Voltage	460	V
Frequency	60	Hz
Design	B	
LR Code letter	G	
Service Factor	1.15	
Temp Rise @ FL	70	° C
Duty	CONT	
Ambient	40	° C
Elevation	3,300	feet
Rotor/Shaft wk²	107	Lb-Ft²
Ref Wdg	HA32808003 NONE	
Sound Pressure @ 1M	72	dBA
VFD Rating	CONSTANT 2:1/VARIABLE 10:1	
Outline Dwg	SS557668	
Conn. Diag	EE7300U	
Additional Specifications:		
0		
0		

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.0280	0.0230	0.2210	0.4310	5.6330

Speed -Torque Curve



P.O. BOX 8003
WAUSAU, WI 54401-8003
PH. 715-675-3311

marathon® Motors

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER:
ORDER #:
CONN. DIAGRAM: EE7300U
OUTLINE: SS557668
WINDING: HA32808003 NONE 1
SPEED:

CUSTOMER P.O. #:
REFERENCE MODEL #: 445THFCD9106
CAT #: W603A
CUSTOMER PART #:
MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
100	75	900	890	445T	TEFC	TFN	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB(° C)	ELEV.(Ft.)
3	60	460	123	LINE OR INVERTER	CONT	H	1.15	40	3300

F.L. EFF	93.6	3/4 LD EFF	93.6	1/2 LD EFF	93.4	GTD EFF	ELECT. TYPE
F.L. PF	80.8	3/4 LD PF	77.5	1/2 LD PF	68.8	93.0	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)
590 LB-FT	700	1,050 LB-FT 178%	1,180 LB-FT 200%	70

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	APROX. MOTOR WGT
72 dBA	81 dBA	107 LB-FT²	- LB-FT²	52 SEC.	0	2048 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	BALL	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
6319	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)	FLOAT
0.028	0.023	0.221	0.431	5.633	0.080	ODE

*
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:

UL: NO LETTER - ME,WUXI TEFC BLUEWHALE CLASS 1 DIV. 2 UL LISTED

PREPARED BY: 0
DATE: 3/9/2021

FORM: 3531 REV_4 2/27/06