

# PRODUCT INFORMATION PACKET



Model No: 824584.00

Catalog No: 824584.00

20 HP Definite Purpose HVAC HVAC/R Motor, 3 phase, 900 RPM, 460 V, 324T Frame, TEAO  
Definite Purpose Motors



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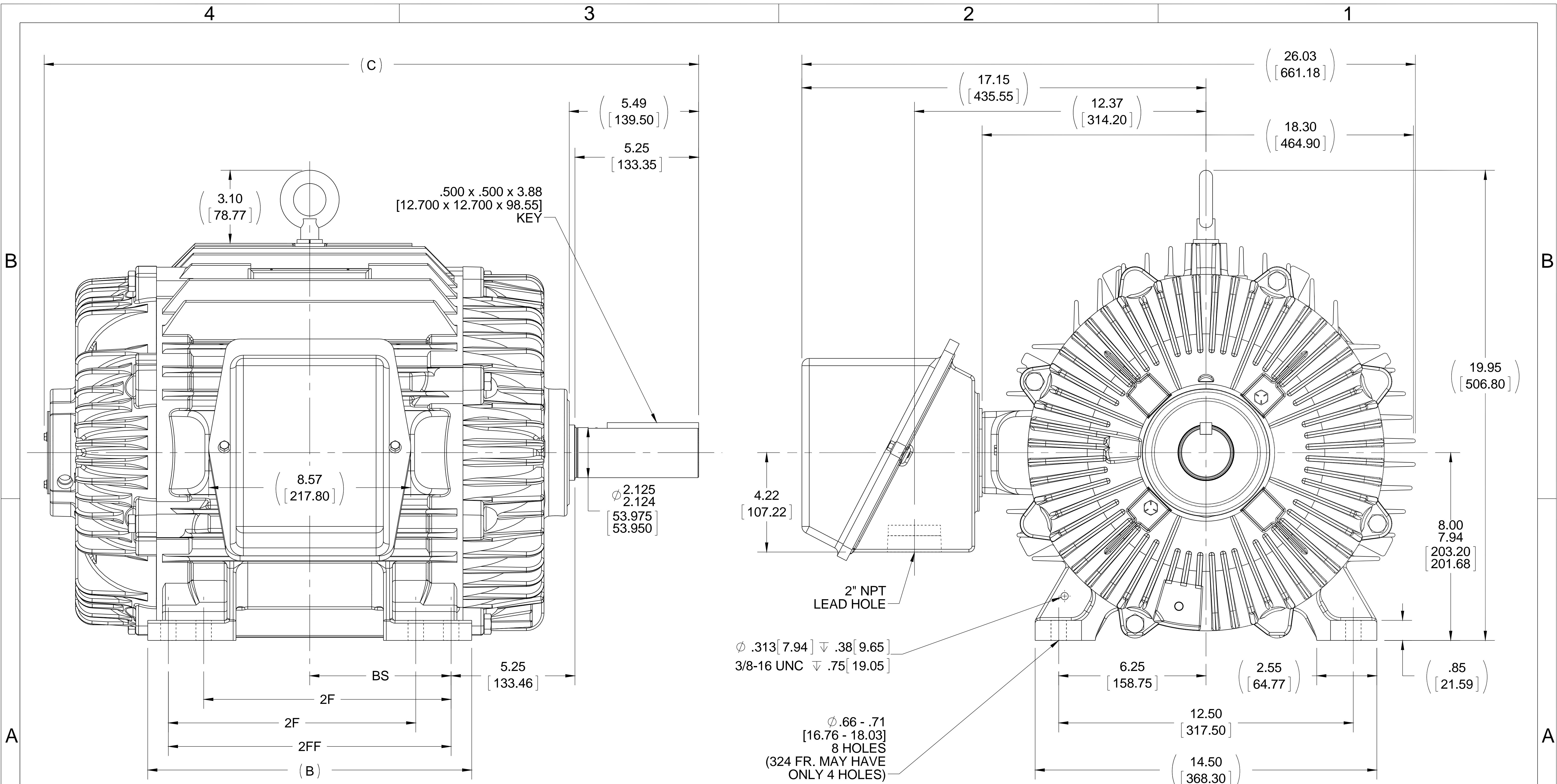
### Nameplate Specifications

Output HP	<b>20 Hp</b>	Output KW	<b>14.9 kW</b>
Frequency	<b>60 Hz</b>	Voltage	<b>460 V</b>
Current	<b>29.5 A</b>	Speed	<b>882 rpm</b>
Service Factor	<b>1.15</b>	Phase	<b>3</b>
Efficiency	<b>90.2 %</b>	Power Factor	<b>70</b>
Duty	<b>Continuous</b>	Insulation Class	<b>H</b>
Design Code	<b>B</b>	KVA Code	<b>F</b>
Frame	<b>324T</b>	Enclosure	<b>Totally Enclosed Air Over</b>
Thermal Protection	<b>No</b>	Ambient Temperature	<b>90 °C</b>
Drive End Bearing Size	<b>6312</b>	Opp Drive End Bearing Size	<b>6311</b>
UL	<b>Recognized</b>	CSA	<b>Y</b>
CE	<b>Y</b>	IP Code	<b>54</b>
Number of Speeds	<b>1</b>		

### Technical Specifications

Electrical Type	<b>Squirrel Cage Inverter Rated</b>	Starting Method	<b>Line Or Inverter</b>
Poles	<b>8</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>.365 Ohms</b>	Mounting	<b>Rigid Base</b>
Motor Orientation	<b>Horizontal</b>	Drive End Bearing	<b>Ball / Heat Stabilized</b>
Opp Drive End Bearing	<b>Ball / Heat Stabilized</b>	Frame Material	<b>Cast Iron</b>
Shaft Type	<b>T</b>	Overall Length	<b>27.77 in</b>
Frame Length	<b>13.00 in</b>	Shaft Diameter	<b>2.125 in</b>
Shaft Extension	<b>5.25 in</b>	Assembly/Box Mounting	<b>F1/F2 CAPABLE</b>
Inverter Load	<b>VARIABLE 20:1</b>		
Outline Drawing	<b>B-SS301011-1300</b>	Connection Drawing	<b>A-EE7300T-LE</b>





- NOTES:  
 1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS.  
 2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE BY REMOVING BRACKETS AND TURNING FRAME 180°.  
 3. NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DASH	FRAME	B	C	2F	2FF	BS
1150	324T	13.00 [330.20]	26.27 [667.26]	---	10.50 [266.70]	5.25 [133.35]
1300	324T/ 326T	13.75 [349.25]	27.77 [705.36]	10.50 [266.70]	12.00 [304.80]	6.00 [152.40]

DRAWING REVISION F	REVISION BY J. OTTO	DATE 06-27-2016
ECO ECO-0102388	APPROVED BY T. VUE	DATE 06-28-2016
ECO DESCRIPTION NMR-0106886, MU123088		
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TOLERANCES UNLESS OTHERWISE SPECIFIED:

DEC.	INCH	mm	ANGLE
.X	±0.1	[±2.5]	±7° 30"
.XX	±0.03	[±0.76]	
.XXX	±0.005	[±0.127]	
.XXXX	±0.0005	[±0.0127]	

REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [0.076/.381] X 45°  
 CORNER FILLETS: R.02 [0.51]  
 MACHINED SURFACES: 200 INCH/mm 5.1  
 mm SHOWN IN [BRACKETS]

DRAWN BY CAV
DATE 08-29-2000
APPROVED BY DD
DATE 08-30-2000
REFERENCE
THIRD ANGLE PROJECTION

<b>REGAL</b> ™ Regal Beloit America, Inc.	
DESCRIPTION <b>OUTLINE</b> 320T FR. - TEAO - TENV - 14.25 LAM.	
MATERIAL	PROCESS/FINISH
SIZE <b>B</b>	DRAWING NUMBER <b>SS301011</b>
	SHEET 1 OF 1

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

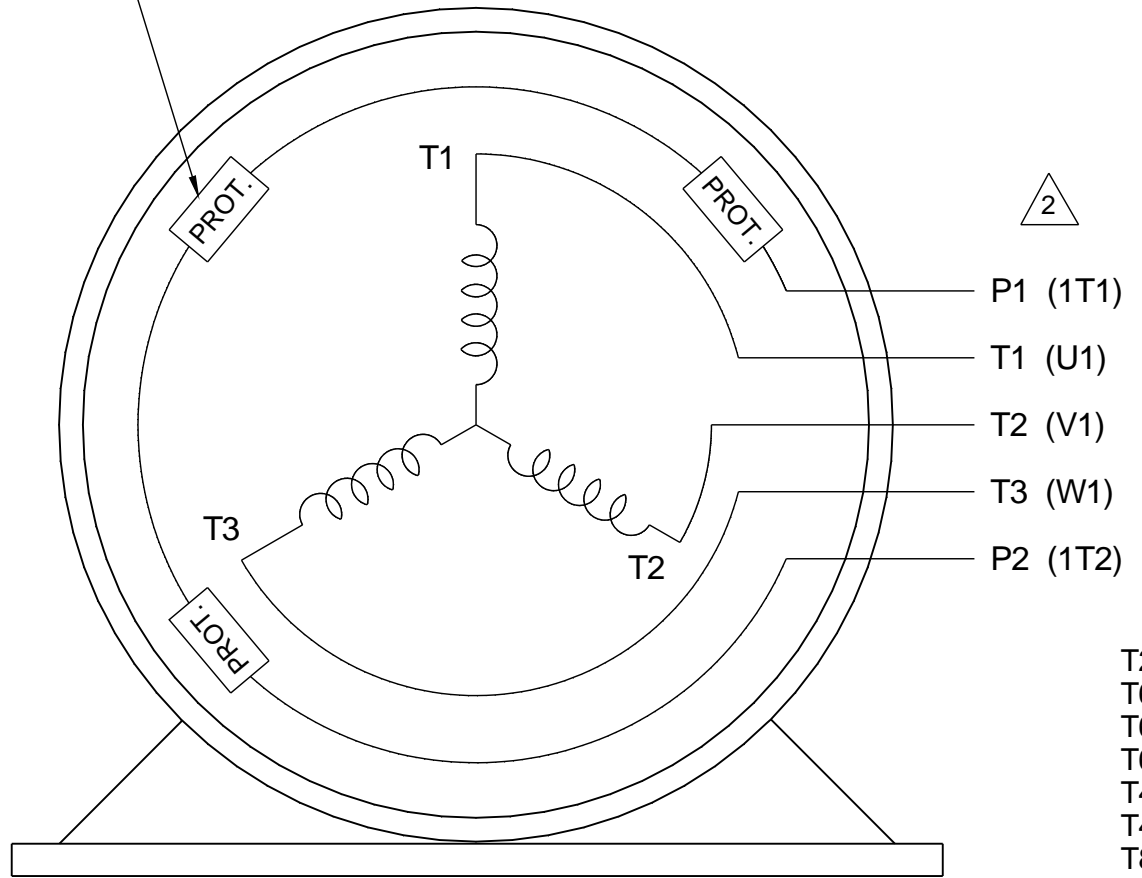
3 THERMO - PROTECTORS  
CONNECTED IN SERIES

TO REVERSE ROTATION:  
INTERCHANGE ANY TWO LINE  
LEAD CONNECTIONS

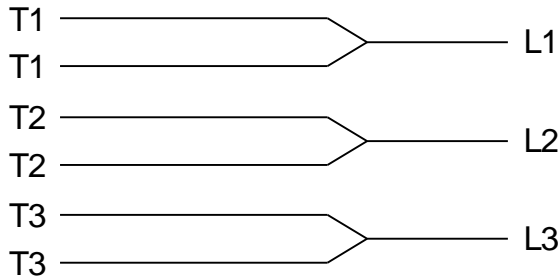
**NOTE FOR FACTORY USE ONLY:**

TO SURGE TEST:

FOR 3 LEAD COMMON CONNECT:  
CONNECT P1 TO T1, THEN P2 TO L1  
FOR 6 LEAD COMMON CONNECT:  
CONNECT P1 TO BOTH T1  
THEN P2 TO L1



IF MOTOR HAS MULTIPLE T'S PER LEAD  
CONNECT TOGETHER LIKE T'S

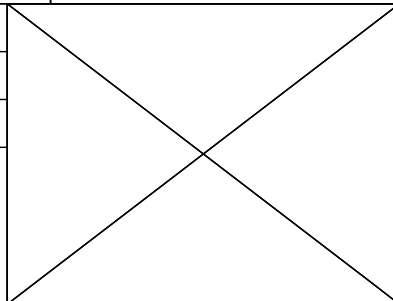


A-9806 DECAL

- T2BM
- T6AW
- T6AL
- T6Z
- T4EG
- T4BF
- T8A
- T6H
- T6A
- T4AX
- T4A
- T2A
- T2F

VIEW OF TERMINAL END

DRAWING REVISION E	REVISION BY MSG	DATE 10-19-2016
ECO ECO-0111093	APPROVED BY TB	DATE 10-19-2016
ECO DESCRIPTION REDRAWN - REVISED TEXT		
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DRAWN BY NJS
DATE 05-15-2002
APPROVED BY ML
DATE 05-20-2002
REFERENCE
THIRD ANGLE PROJECTION



ELECTRIC MOTORS  
GEARMOTORS  
AND DRIVES

DESCRIPTION <b>CONNECTION DIAGRAM</b>	
3 PHASE - SINGLE VOLT - MOTOR WITH PROTECTORS	
MATERIAL	PROCESS/FINISH
SIZE A	DRAWING NUMBER EE7300T-LE
SHEET 1 OF 1	

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



DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

CONN. DIAGRAM A-EE7300T-LE  
 OUTLINE: B-SS301011-1300  
 WINDING: 324824

CAT #: 824584.00

NONE 1

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
20	14.9	900	882	324T	TEAO	TTN	F	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60	460	29.5	LINE OR INVERTER	CONT	H	1.15	90	3300

F.L. EFF	90.2	3/4 LD EFF	90.2	1/2 LD EFF	89.5	GTD EFF	ELECT. TYPE
F.L. PF	70.0	3/4 LD PF	64.0	1/2 LD PF	52.0	89.5	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (°C)
119 LB-FT	135	160 LB-FT 134%	245 LB-FT 206%	0

PRESSURE @	POWER	ROTOR WK <sup>2</sup>	MAX. LOAD WK <sup>2</sup>	SAFE STALL TIME	STARTS/HOUR	MOTOR WGT
999 dBA	1008 dBA	9.0 LB-FT <sup>2</sup>	0 LB-FT <sup>2</sup>	20 SEC.	0	675 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	UM SEVERE	NONE	NO	NONE	BLUE (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE	DC 44M	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
EAT STA	EAT STA						
6312	6311						

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE HEATERS
STATS CLH (N/C)	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
0.249	0.185	1.633	1.377	15.762	0.080	ODE

* N O T E S *	INVERTER TORQUE: VARIABLE 20:1 INV. HP SPEED RANGE: NONE	
	ENCODER: NONE NONE NONE	
	NONE PPR	
	BRAKE: NONE NONE	

DATE: 1/31/2018	NONE NONE FT-LB: NA VOLTAGE: NONE HZ: UL: Y-(LEESON UL REC)
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Data Sheet

Date: 1/31/2018

824584.00



Data @ **460 V**

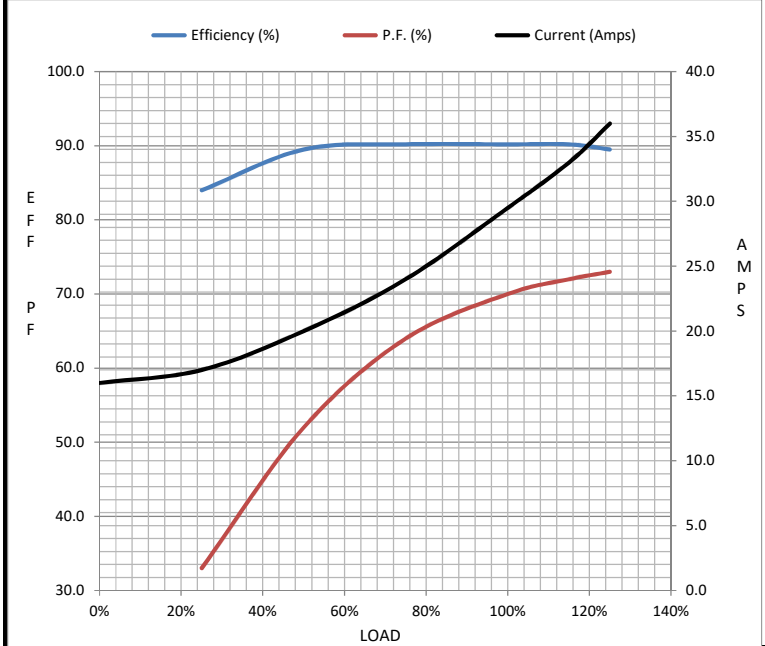
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	16.0	17.0	20.0	24.0	29.5	33.0	36.0	135
Torque (ft-lb)	0.00	29.5	59.0	89.0	119	138	150	160
RPM	900	895	892	888	882	880	875	0
Efficiency (%)		84.0	89.5	90.2	90.2	90.2	89.5	
P.F. (%)	5.0	33.0	52.0	64.0	70.0	72.0	73.0	30.0

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	450	825	882	900
Current (Amps)	135	115	80.0	29.5	16.0
Torque (ft-lb)	160	140	245	119	0.00

Information Block				
HP	20.0			
Sync. RPM	900			
Frame	326			
Enclosure	TEAO			
Construction	TTN			
Voltage	460 V			
Frequency	60 Hz			
Design	B			
LR Code letter	F			
Service Factor	1.15			
Temp Rise @ FL	0 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk <sup>2</sup>	9.0 Lb-Ft <sup>2</sup>			
Ref Wdg	324824 NONE			
Sound Pressure @ 1M	999 dBA			
VFD Rating	VARIABLE 20:1			
Outline Dwg	B-SS301011-1300			
Conn. Diag	A-EE7300T-LE			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.2490	0.1850	1.6330	1.3770	15.7620



Speed - Torque Curve

