

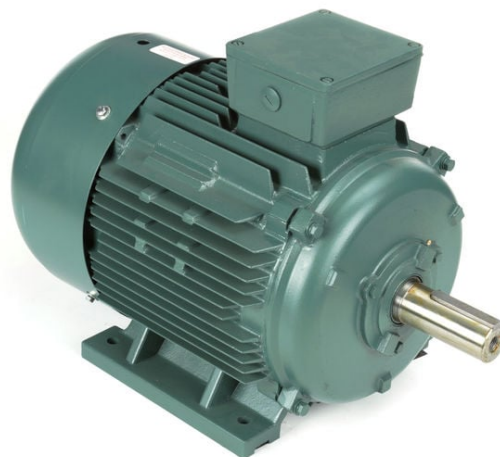
# PRODUCT INFORMATION PACKET



Model No: 193418.60

Catalog No: 193418.60

..60HP/45kW..1200RPM.DF280.TEFC.230/460V.3PH.60HZ.CONT.40C..B3 RIGID.....IEC METRIC.....



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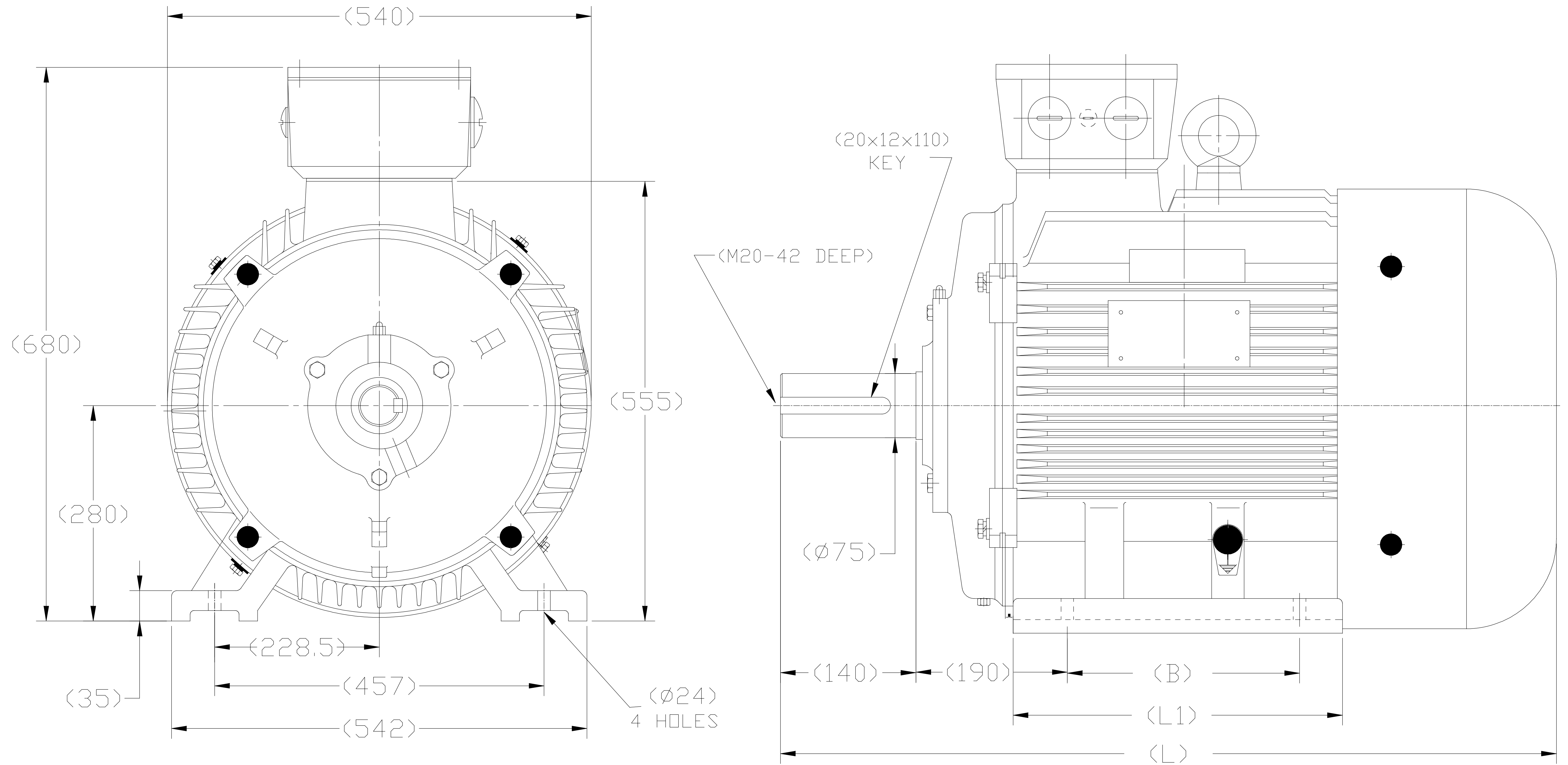
### Nameplate Specifications

Phase	<b>3</b>	Output HP	<b>60 &amp; 50 Hp</b>
Output KW	<b>45.0 &amp; 37.0 kW</b>	Voltage	<b>230/460 &amp; 200/400 V</b>
Speed	<b>1194 &amp; 995 rpm</b>	Service Factor	<b>1.15 &amp; 1.15</b>
Frame	<b>280S</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>Thermostat</b>	Efficiency	<b>95 &amp; 94.5 %</b>
Ambient Temperature	<b>40 °C</b>	Frequency	<b>60 &amp; 50 Hz</b>
Current	<b>152/76 &amp; 152/76 A</b>	Power Factor	<b>77</b>
Duty	<b>Continuous</b>	Insulation Class	<b>F</b>
Design Code	<b>B</b>	KVA Code	<b>H</b>
Drive End Bearing Size	<b>6317</b>	Opp Drive End Bearing Size	<b>6314</b>
UL	<b>Recognized</b>	CSA	<b>Y</b>
CE	<b>Y</b>	IP Code	<b>55</b>
Number of Speeds	<b>1</b>		

### Technical Specifications

Electrical Type	<b>Squirrel Cage Inverter Rated</b>	Starting Method	<b>Part Wdg Start &amp; Wye Start Delta Run Or Inverter</b>
Poles	<b>6</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>0 Ohms</b>	Mounting	<b>Rigid Base</b>
Motor Orientation	<b>Horizontal</b>	Drive End Bearing	<b>Ball</b>
Opp Drive End Bearing	<b>Ball</b>	Frame Material	<b>Cast Iron</b>
Shaft Type	<b>IEC</b>	Assembly/Box Mounting	<b>F3</b>
Connection Drawing	<b>004172.01</b>	Outline Drawing	<b>SS622382</b>

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DRAWING MAY NOT BE TO SCALE

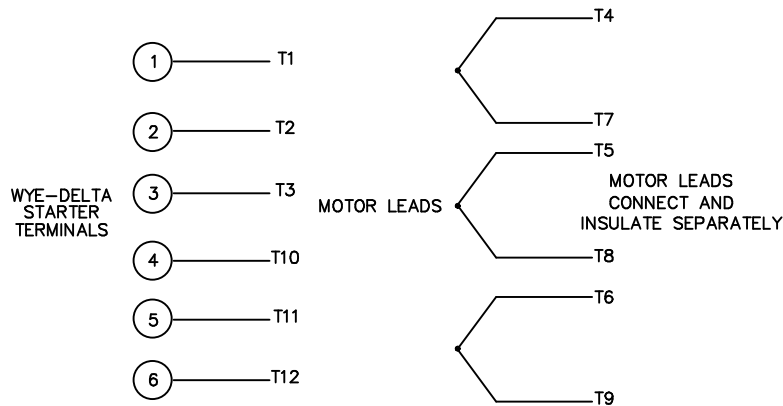
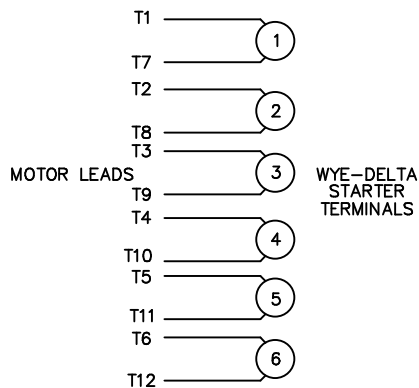
FRAME	B	L1	L
DF280S-6R	368	485	975
DF280M-6R	419	536	1026

		TOLERANCES UNLESS SPECIFIED		REGAL REGAL-BELOIT CORPORATION		DRAWN MOL 09-11-2012	
		DEC.	INCHES			CHK	
		.X	±.1			APPD	
		.XX	±.03	TITLE		SCALE	
		.XXX	±.005	DF280S,M-6R-PREMIUM		REF R502,R505	
C	REMOVED MARATHON PART NUMBERS ECD-0186668	WGJ	5-18-20	BW	.XXXX	±.0005	MAT'L.
NO.	REVISION	BY & DATE	CHK	ANG	±1/2	FINISH	PREV
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT				RFP	CAD FILE	SS622382	SIZE DRAWING NO.
				DIST			B SS622382 C
							REV. C

WYE - DELTA STARTING USEABLE ON 2,4 AND 6 POLE MOTORS.

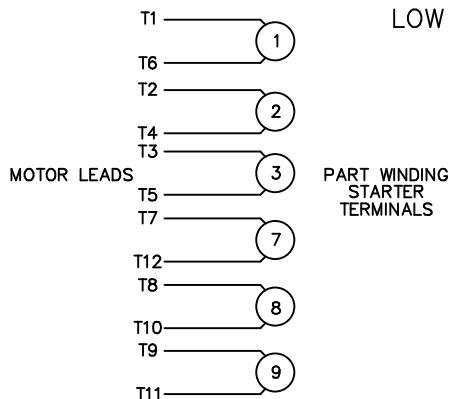
LOW VOLTAGE CONNECTION

HIGH VOLTAGE CONNECTION



REFER TO THE WYE-DELTA STARTER CONNECTION INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

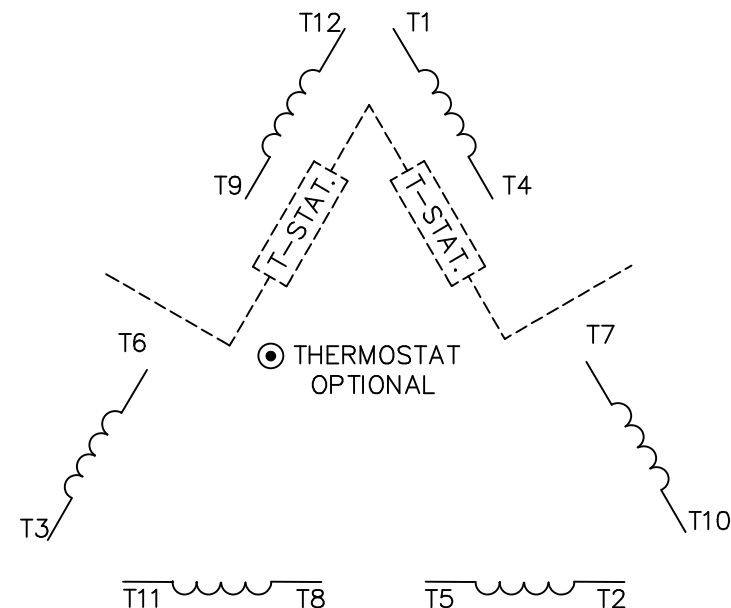
PART WINDING START USABLE ON 4 & 6 POLE MOTORS  
LOW VOLTAGE CONNECTION ONLY



REFER TO THE PART WINDING STARTER INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

REFER TO THE CUTLER - HAMMER OR EQUIV. FOR PROPER SELECTION OF OVERLOAD HEATER COILS.

LINE LEADS



ROTATION CAN BE REVERSED BY INTERCHANGING ANY TWO LINE LEADS  
● RED LEADS OR P1, P2, FOR N/C THERMOSTAT

ACROSS THE LINE START & RUN

	LINE 1	LINE 2	LINE 3	JOIN & INSULATE SEPARATELY
HIGH VOLT	T1, T12	T2, T10	T3, T11	(T4, T7) (T5, T8) (T6, T9)
LOW VOLT	T1, T6 T7, T12	T2, T4 T8, T10	T3, T5 T9, T11	

TOLERANCES UNLESS SPECIFIED  
DEC. INCHES



ELECTRIC MOTORS  
GEARMOTORS  
AND DRIVES

DRAWN WLW 09/08/77  
CHK RPB 09/12/77  
APPD JCW 09/12/77

NO.	REVISION	BY & DATE	CHK	ANG	±1/2"
03	REV'D LOW VOLTAGE CONN. LEADS PER ELEC.	BJB 06/07/00	.XX	±.01	
02	ADDED T-STAT. NOTES PER ELECTRICAL	KMM 06/02/98	.XXX	±.005	
01	REDRAWN TO CAD	DBT 06/02/97	.XXXX	±.0005	

TITLE	DELTA - WYE CONNECTION DIAGRAM
MAT'L.	
FINISH	

SCALE	1=1
REF	
FMF	
PREV	

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RFP	CAD FILE	00417201	SIZE	DRAWING NO.	REV.
DIST			A	004172-01	03



1051 CHEYENNE AVE.  
GRAFTON, WI 53024  
PH. 262-277-8810

DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

CONN. DIAGRAM: 00417203  
OUTLINE: SS622382  
WINDING: T22806017

CAT #: 193418.60

NONE 3

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
60	45	1200	1194	280S	TEFC	TFC	H	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60/50	230/460#200/400	152/76&152/76	PWS & YDRUN OR INV	CONT	F	1.15	40	3300

F.L. EFF	95.0	3/4 LD EFF	95.0	1/2 LD EFF	94.1	GTD EFF	ELECT. TYPE
F.L. PF	77.0	3/4 LD PF	72.0	1/2 LD PF	61.0	94.1	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)
264 LB-FT	500	520 LB-FT 197%	920 LB-FT 348%	45

PRESSURE @ 3	SOUND	POWER	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	MOTOR WGT
55 dBA	64 dBA		0.00 LB-FT²	0 LB-FT²	25 SEC.	2	0 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	WATTSAVER

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE	POLYREX EM	STANDARD IEC	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
BALL	BALL						
6317	6314						

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	0	0	0	0	0.080	ODE

* N O T E S *	INVERTER TORQUE: CONSTANT 2:1 INV. HP SPEED RANGE: 1.5 X BASE SPEED					
	ENCODER: NONE NONE NONE					
	BRAKE: NONE NONE NONE					
	FT-LB: NA VOLTAGE: NONE					
	HZ: NONE PPR					

DATE:	8/29/2018	UL: Y-(LEESON UL REC)
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Data Sheet

Date: 8/29/2018

193418.60



Data @ **460 V**

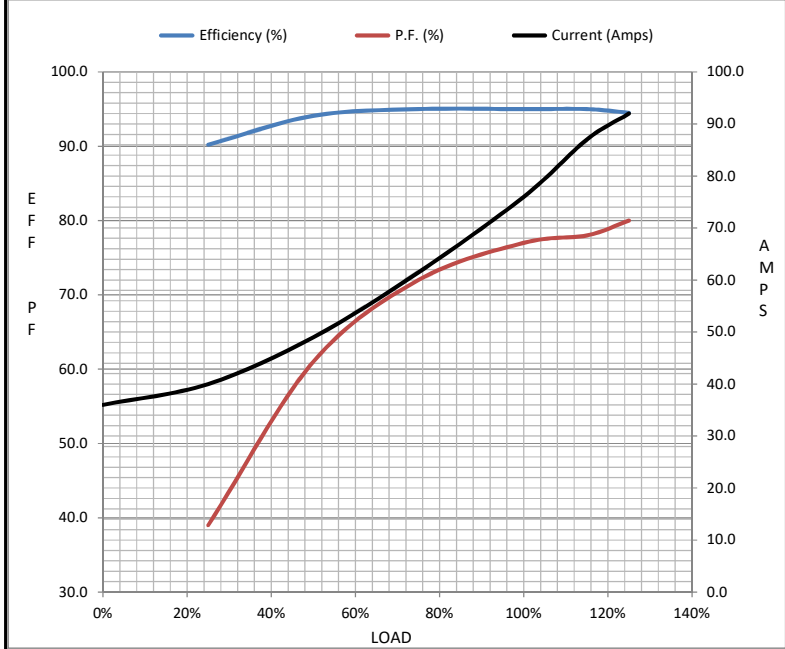
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	36.0	40.0	49.0	61.5	76.0	87.0	92.0	500
Torque (ft-lb)	0.00	66.0	132	198	264	304	330	520
RPM	1200	1198	1197	1196	1194	1,193	1192	0
Efficiency (%)		90.2	94.1	95.0	95.0	95.0	94.5	
P.F. (%)	4.0	39.0	61.0	72.0	77.0	78.0	80.0	31.0

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1150	1194	1200
Current (Amps)	500	450	300	76.0	36.0
Torque (ft-lb)	520	450	920	264	0.00

Information Block				
HP	60.0			
Sync. RPM	1200			
Frame	444			
Enclosure	TEFC			
Construction	TFC			
Voltage	230/460#200/400 V			
Frequency	60 Hz			
Design	A			
LR Code letter	H			
Service Factor	1.15			
Temp Rise @ FL	45 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	1,000 feet			
Rotor/Shaft wk <sup>2</sup>	0.00 Lb-Ft <sup>2</sup>			
Ref Wdg	T22806017 NONE			
Sound Pressure @ 1M	55 dBA			
VFD Rating	CONSTANT 2:1			
Outline Dwg	SS622382			
Conn. Diag	00417203			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0000	0.0000	0.0000	0.0000	0.0000



Speed - Torque Curve

