

PRODUCT INFORMATION PACKET



Model No: 171639.60
Catalog No: 171639.60
Severe Duty Motor, 20 & 15 HP, 3 Ph, 60 & 50 Hz, 208-230/460 & 190/380 V, 1200 & 1000 RPM,
286T Frame, TEFC



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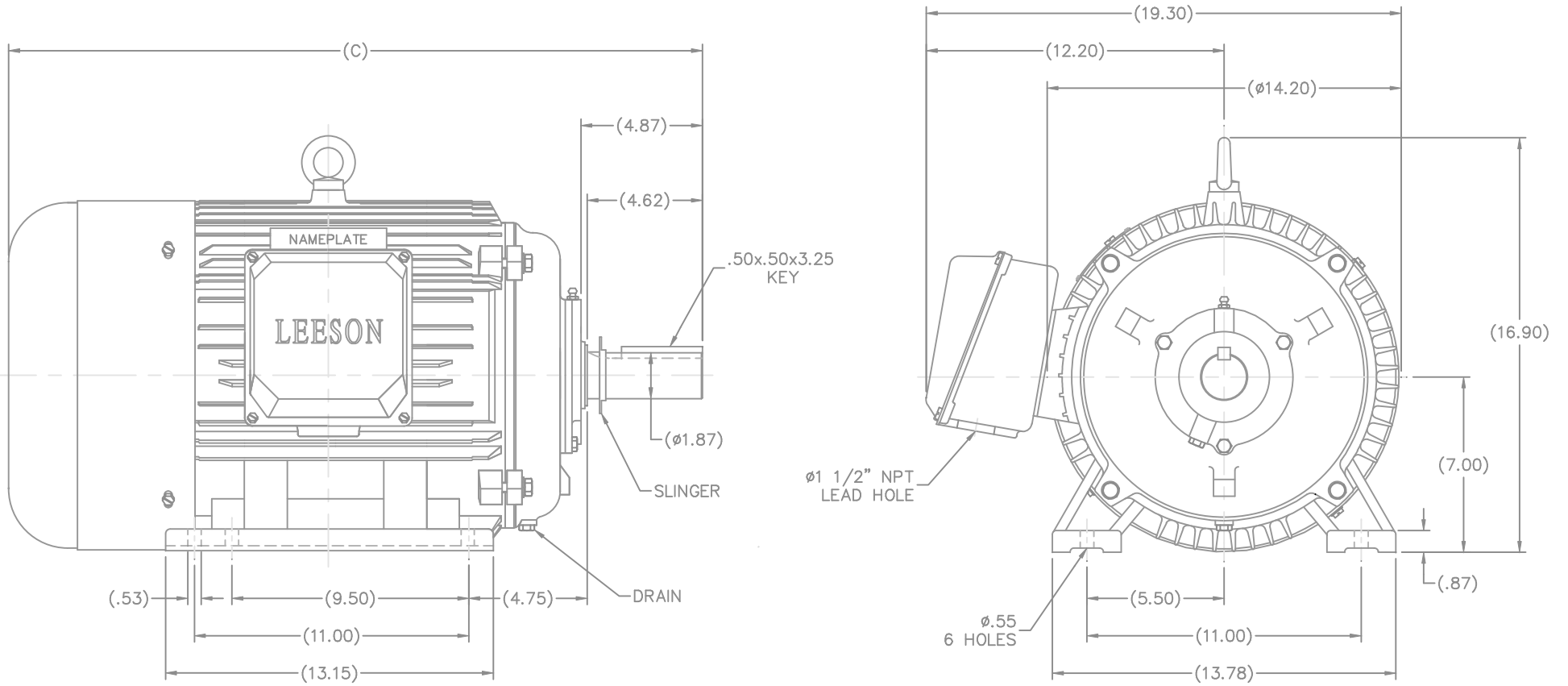
Nameplate Specifications

Phase	3	Output HP	20 & 15 Hp
Output KW	14.9 & 11.2 kW	Voltage	208-230/460 & 190/380 V
Speed	1185 & 980 rpm	Service Factor	1.15 & 1.15
Frame	286T	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	92.4 & 91.7 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	58-54/27 & 48/24 A	Power Factor	75
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Drive End Bearing Size	6311	Opp Drive End Bearing Size	6309
UL	Recognized	CSA	Y
CE	Y	IP Code	55
Number of Speeds	1		

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Wye Start Delta Run Or Inverter
Poles	6	Rotation	Reversible
Mounting	Rigid Base	Motor Orientation	Horizontal
Drive End Bearing	Ball	Opp Drive End Bearing	Ball
Frame Material	Cast Iron	Shaft Type	T
Overall Length	27.68 in	Shaft Diameter	1.875 in
Shaft Extension	4.62 in	Assembly/Box Mounting	F1/F2 CAPABLE
Outline Drawing	SS622142LE	Connection Drawing	00417201

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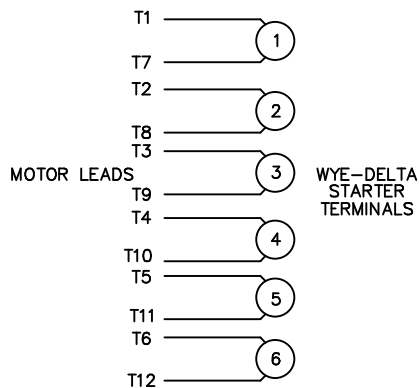
286T	27.68
FRAME	C

		TOLERANCES UNLESS SPECIFIED		LEESON	ELECTRIC MOTORS GEARMOTORS AND DRIVES	DRAWN
		DEC.	INCHES			MSG 06-02-2006
		.X	±.1			CHK ML 06-04-2006
		.XX	±.03	TITLE	OUTLINE	APPD SB 06-08-2006
		.XXX	±.005		286T FR. - TEFC	SCALE 1=4
		.XXXX	±.0005	MAT'L		REF
NO.	REVISION	BY & DATE	CHK ANG ±.730"	FINISH	171639.60	FMF HEBEI
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 ss622142le	PREV
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						REV.

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

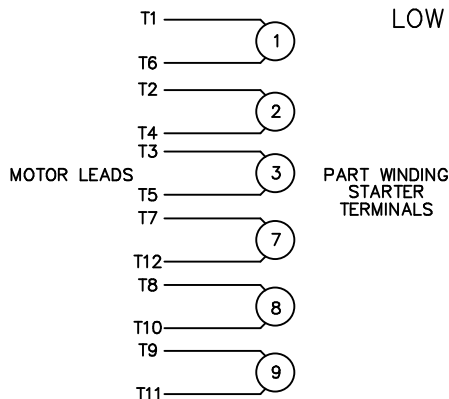
LOW VOLTAGE CONNECTION

HIGH VOLTAGE CONNECTION



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

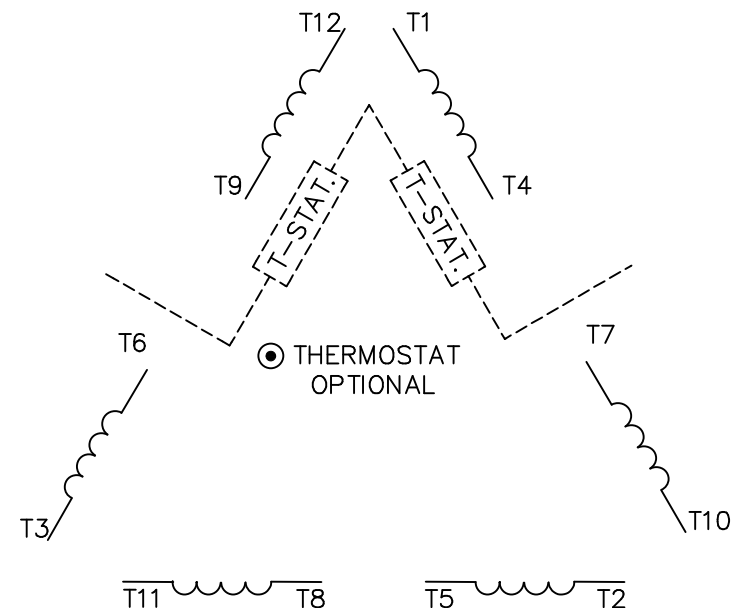
PART WINDING START USABLE ON 4 & 6 POLE MOTORS
LOW VOLTAGE CONNECTION ONLY



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



CERTIFICATION DATA SHEET

**1051 CHEYENNE AVE.
GRAFTON, WI 53024
PH. 262-377-8810**

CATALOG #: 171639.60

CONN. DIAGRAM: 00417201

OUTLINE: SS622142LE

MOUNTING: F1/F2 CAPABLE

WINDING #: T14506013 FR 3

TYPICAL MOTOR PERFORMANCE DATA

HP	kW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
20&15	14.9&11.2	1200	1185&980	286T	TEFC	G	B

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB°C
3	60/50	208-230/460&190/380	58-54/27&48/24	Y START D RUN OR INV	CONTINUOUS	F5	1.25/1.15	40

FULL LOAD EFF:	92.4&91.7	3/4 LOAD EFF:	92.4	1/2 LOAD EFF:	91	GTD. EFF		ELEC. TYPE	
FULL LOAD PF:	75&77.6	3/4 LOAD PF:	70	1/2 LOAD PF:	59.2	91		SQ CAGE INV RATED	

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
88 LB-FT	290 / 145	142 LB-FT 160 %	230 LB-FT 260 %	55

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
55.5 dBA	65.5 dBA	6.64 LB-FT^2	6.6 LB-FT^2	15 SEC.	2	400 LBS.

***** SUPPLEMENTAL INFORMATION *****

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	TRUE	NONE	FALSE	NONE	BLUE (ENAMEL)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE						
BALL	BALL	POLYREX EM	T	NONE	NONE	AISI 1045 (C-240)	CAST IRON
NONE	NONE						

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
NONE	NOT	NONE	NONE	NONE	FALSE	NONE VOLTS

*
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S

INVERTER TORQUE: CONSTANT 10:1
INV. HP SPEED RANGE: NONE
ENCODER: NONE
NONE NONE
NONE NONE PPR
BRAKE: NONE NONE
NONE P/N NONE
NONE NONE
NONE FT-LB NONE V NONE Hz

Data Sheet

Date: 1/19/2018

171639.60



Data @ **460 V**

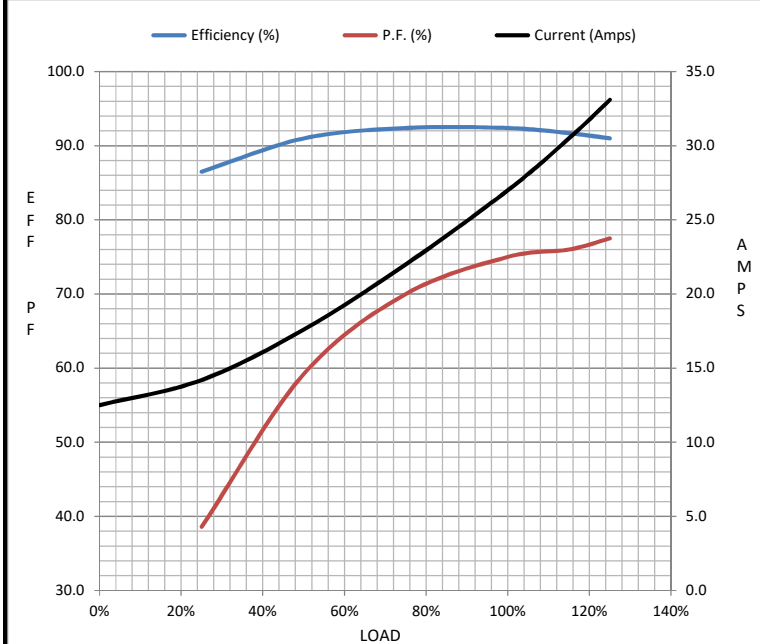
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	12.5	14.2	17.6	22.0	27.0	30.5	33.1	145
Torque (ft-lb)	0.00	22.0	45.0	67.0	88.0	103	112	142
RPM	1200	1197	1192	1190	1185	1,180	1180	0
Efficiency (%)		86.5	91.0	92.4	92.4	91.7	91.0	
P.F. (%)	5.1	38.6	59.2	70.0	75.0	76.0	77.5	0.0

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	850	1110	1185	1200
Current (Amps)	145	135	99.0	27.0	12.5
Torque (ft-lb)	142	123	230	88.0	0.00

Information Block				
HP	20.0			
Sync. RPM	1200			
Frame	286			
Enclosure	TEFC			
Construction	TFC			
Voltage	208-230/460#190/380 V			
Frequency	60 Hz			
Design	B			
LR Code letter	G			
Service Factor	1.15			
Temp Rise @ FL	55 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk ²	6.6 Lb-Ft ²			
Ref Wdg	T14506013 FR			
Sound Pressure @ 1M	56 dBA			
VFD Rating	CONSTANT 10:1			
Outline Dwg	SS622142LE			
Conn. Diag	00417201			
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

