PRODUCT INFORMATION PACKET

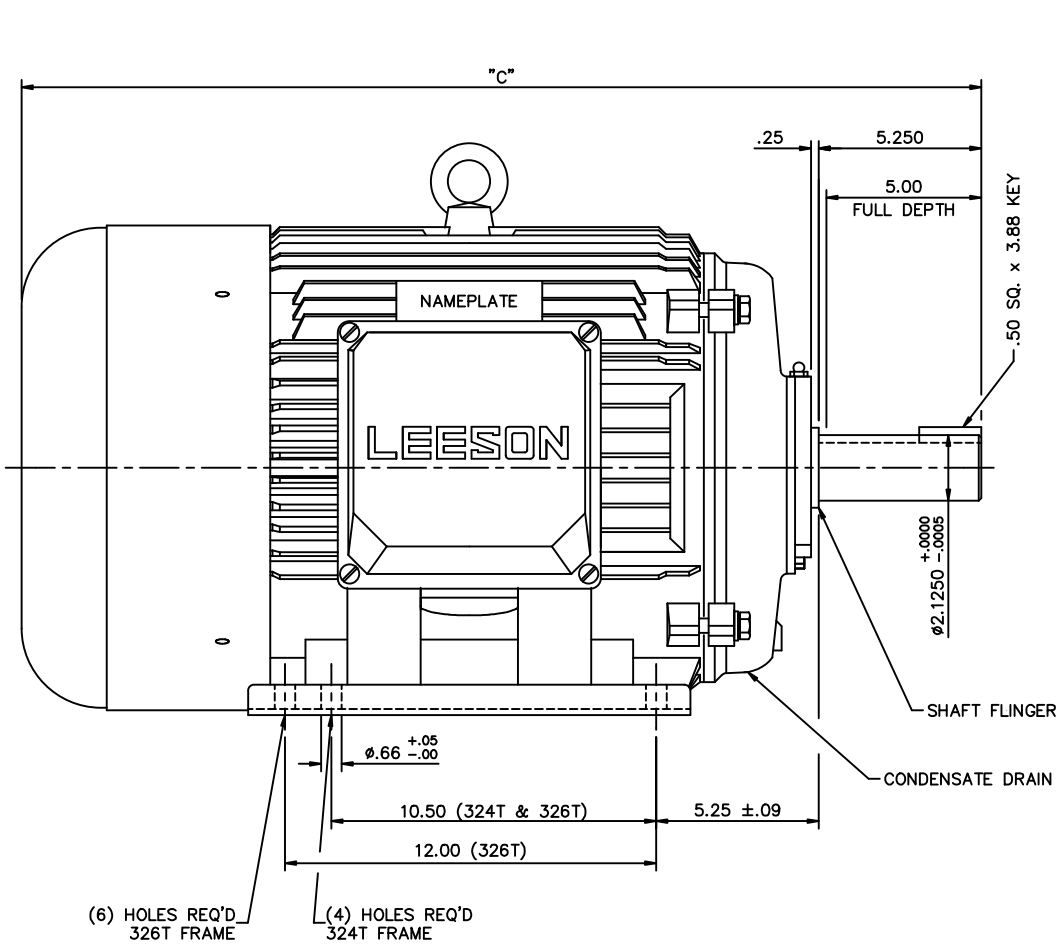
Model No: 170003.60
Catalog No: 170003.60
WATTSAVER® General Purpose Motor, 25 & 20 HP, 3 Ph, 60 & 50 Hz, 208-230/460 & 190/380 V, 1200 & 1000 RPM, 324T Frame, TEFC

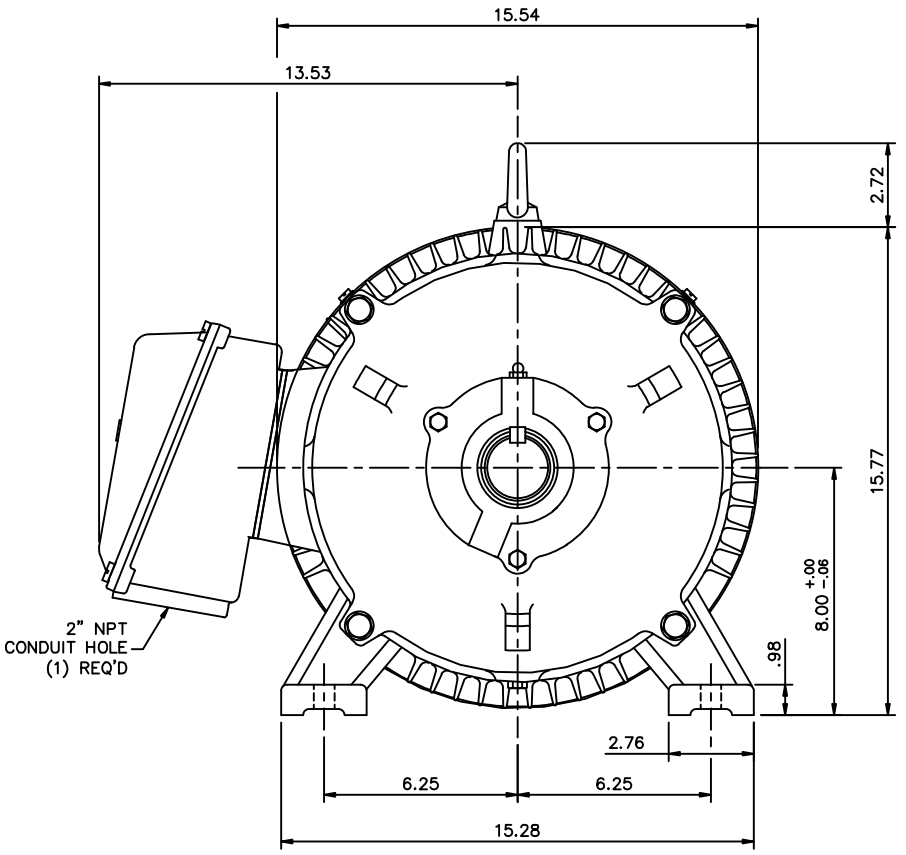
Nameplate Specifications

Phase	3	Output HP	25 & 20 Hp
Output KW	18.7 & 14.9 kW	Voltage	208-230/460 & 190/380 V
Speed	1190 & 990 rpm	Service Factor	1.15 & 1.15
Frame	324T	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	93.6 & 92.4 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	72-66/33 & 62/31 A	Power Factor	76
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Drive End Bearing Size	6312	Opp Drive End Bearing Size	6312
UL	Recognized	CSA	Y
CE	Y	IP Code	43
Number of Speeds	1		

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line 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	29.53 in	Shaft Diameter	2.125 in
Shaft Extension	5.25 in	Assembly/Box Mounting	F1 ONLY
Inverter Load	CONSTANT 10:1		
Outline Drawing	16954160	Connection Drawing	004172.01



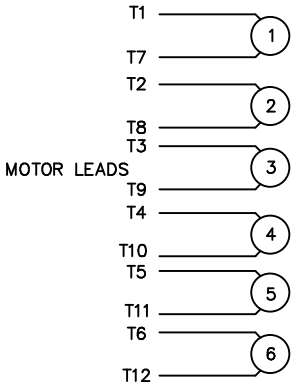


FRAME DESIGN	"C"
324T	29.53
326T	31.02

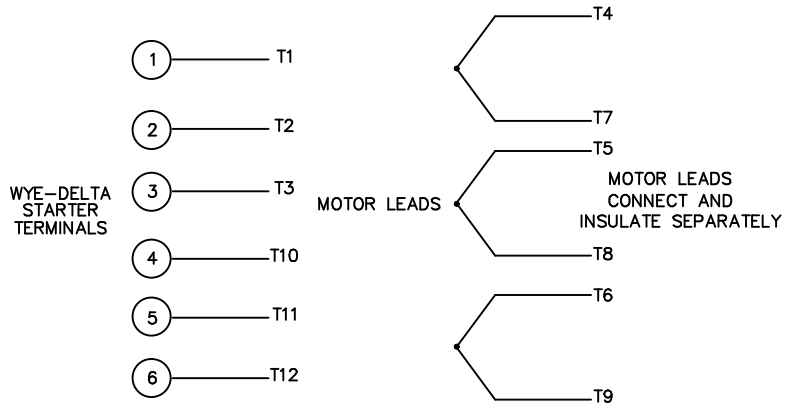
				TOLERANCES UNLESS OTHERWISE SPECIFIED		LEESON ELECTRIC CORPORATION			
				DECIMALS					
				.00	± .06	DRAWN JJK 03/29/99	TITLE	OUTLINE – 320T FRAME TEFC – RIGID	
				.000	± .005	CH'K'D.			
01	ADDED HOLES FOR 326T BASE	JJK	07/13/99	.0000	± .0005	APPR. PG 03/31/99	MAT'L.	CAST IRON	
NO.	REVISION	BY	DATE	FRACTIONS	± 1/64	SCALE 1=4			
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				ANGLES	± 1/2°	REF. 169504	FINISH	SIZE B	DRAWING NO. 169541-60
				INCH/MM		FMF			

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

LOW VOLTAGE CONNECTION

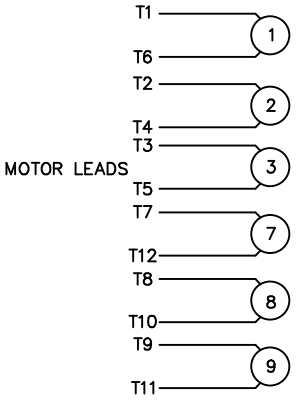


HIGH VOLTAGE CONNECTION



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

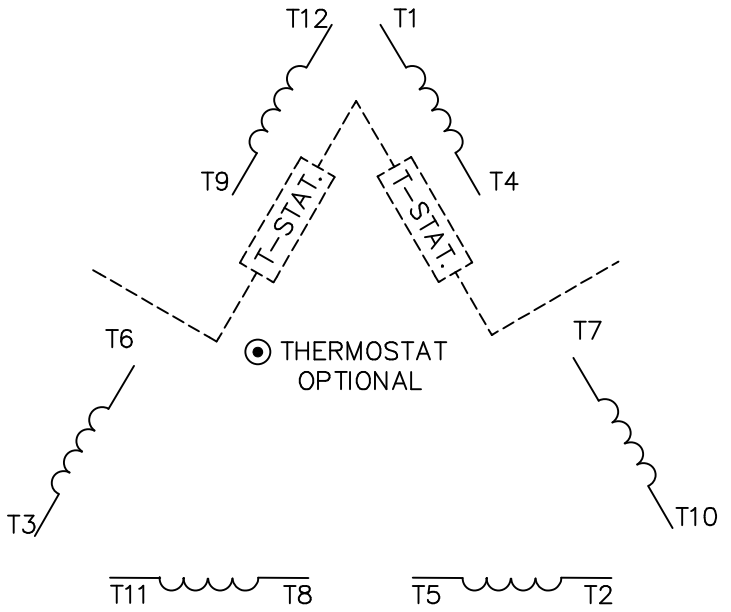
PART WINDING START USABLE ON 4 & 6 POLE MOTORS
LOW VOLTAGE CONNECTION ONLY



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	

NO.	REVISION	BY & DATE	CHK
03	REV'D LOW VOLTAGE CONN. LEADS PER ELEC.	BJB 06/07/00	
02	ADDED T–STAT. NOTES PER ELECTRICAL	KMM 06/02/98	
01	REDRAWN TO CAD	DBT 06/02/97	

TOLERANCES UNLESS SPECIFIED

DEC.	INCHES
.X	±.1
.XX	±.01
.XXX	±.005
.XXXX	±.0005
ANG	±1/2°

LEESON ELECTRIC MOTORS GEARMOTORS AND DRIVES

TITLE DELTA – WYE CONNECTION DIAGRAM

MAT'L.

FINISH

CAD FILE 00417201

RFP

DIST

DRAWN	WLW 09/08/77
CHK	RPB 09/12/77
APPD	JCW 09/12/77
SCALE	1=1
REF	
FMF	
PREV	

SIZE A | DRAWING NO. 004172–01 | REV. 03

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LEESON

CERTIFICATION DATA SHEET

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

CATALOG #: 170003.60

CONN. DIAGRAM: 004172.01

OUTLINE: 16954160

MOUNTING: F1 ONLY

WINDING #: T16106011 FR 3

TYPICAL MOTOR PERFORMANCE DATA

HP	kW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
25&20	18.7&14.9	1200	1190&990	324T	TEFC	G	B

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB°C
3	60/50	208-230/460&190/380	72-66/33&62/31	LINE OR INVERTER	CONTINUOUS	F5	1.15/1.15	40

FULL LOAD EFF:	93.6&92.4	3/4 LOAD EFF:	93.6	1/2 LOAD EFF:	92.4	GTD. EFF	ELEC. TYPE
FULL LOAD PF:	76&78	3/4 LOAD PF:	72	1/2 LOAD PF:	62	92.4	SQ CAGE INV RATED

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
111 LB-FT	364 / 182	193 LB-FT 175 %	260 LB-FT 235 %	45

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
70 dBA	80 dBA	- LB-FT^2	- LB-FT^2	15 SEC.	2	490 LBS.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	FALSE	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	1045 HOT ROLLED (C-204)	CAST IRON
6312	6312						

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
TSTATS (N/C)	NOT	NONE	NONE	NONE	FALSE	NONE VOLTS

NOTES

*

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

8/6/2018

Data Sheet

Date: 1/22/2018 **170003.60**

LEESON

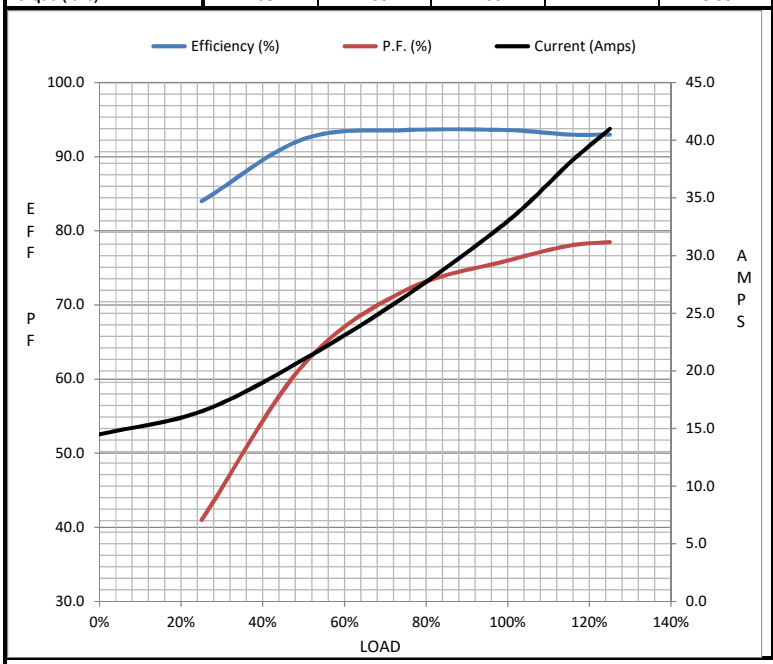
Data @ **460** **V**

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	14.5	16.5	21.0	26.5	33.0	38.0	41.0	182	
Torque (ft-lb)	0.00	27.0	56.0	84.0	111	128	141	193	
RPM	1200	1198	1195	1192	1190	1,188	1185	0	
Efficiency (%)		84.0	92.4	93.6	93.6	93.0	93.0		
P.F. (%)	5.8	41.0	62.0	72.0	76.0	78.0	78.5	0.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1100	1190	1200
Current (Amps)	182	175	135	33.0	14.5
Torque (ft-lb)	193	180	260	111	0.00



Information Block

HP	25.0	
Sync. RPM	1200	
Frame	200	
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	48	° C
Duty	CONT	
Ambient	40	° C
Elevation	1,000	feet
Rotor/Shaft wk²	0.00	Lb-Ft²
Ref Wdg	T16106011 FR	
Sound Pressure @ 1M	70	dBA
VFD Rating	CONSTANT 10:1	
Outline Dwg	16954160	
Conn. Diag	004172.01	
Additional Specifications:		
0		
0		

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.0000	0.0000	0.0000	0.0000	0.0000