

# PRODUCT INFORMATION PACKET



Model No: 171785.60

Catalog No: 171785.60

Severe Duty Motor, 40 & 30 HP, 3 Ph, 60 & 50 Hz, 208-230/460 & 190/380 V, 1800 & 1500 RPM,  
324T Frame, TEFC



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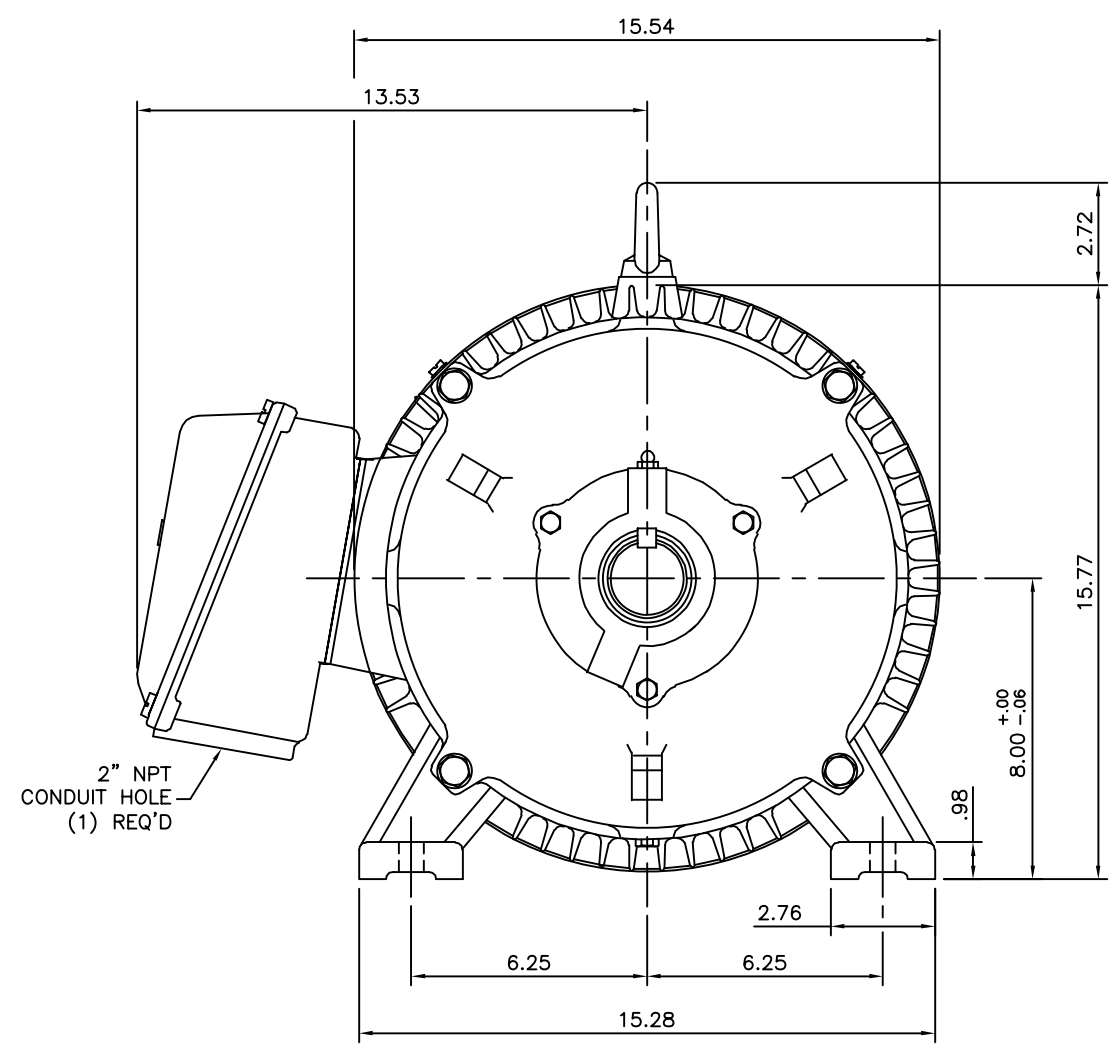
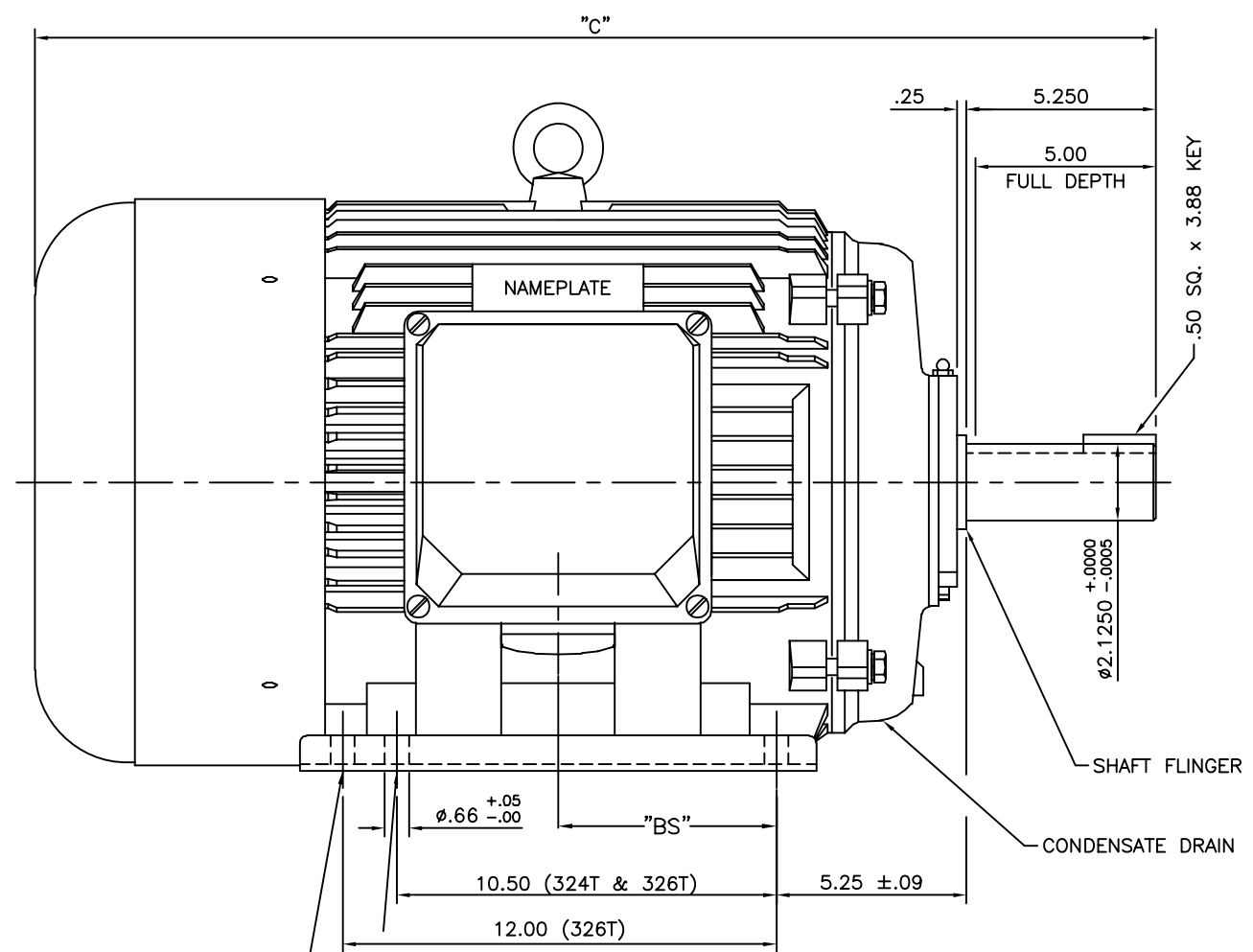
### Nameplate Specifications

Phase	3	Output HP	40 & 30 Hp
Output KW	30.0 & 22.4 kW	Voltage	208-230/460 & 190/380 V
Speed	1780 & 1480 rpm	Service Factor	1.15 & 1.15
Frame	324T	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	94.1 & 93 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	100-92/46 & 84/42 A	Power Factor	86
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	55
Number of Speeds	1	Hazardous Location	DIVISION 2

### Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Wye Start Delta Run Or Inverter
Poles	4	Rotation	Reversible
Resistance Main	.042 Ohms	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/F2 CAPABLE		
Connection Drawing	00417203	Outline Drawing	16954160LE

169541-60LE



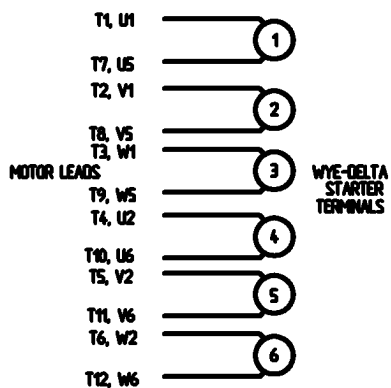
FRAME DESIGN	"C"	"BS"
324T	29.53	5.30
326T	31.02	6.00

(6) HOLES REQ'D 326T FRAME  
(4) HOLES REQ'D 324T FRAME

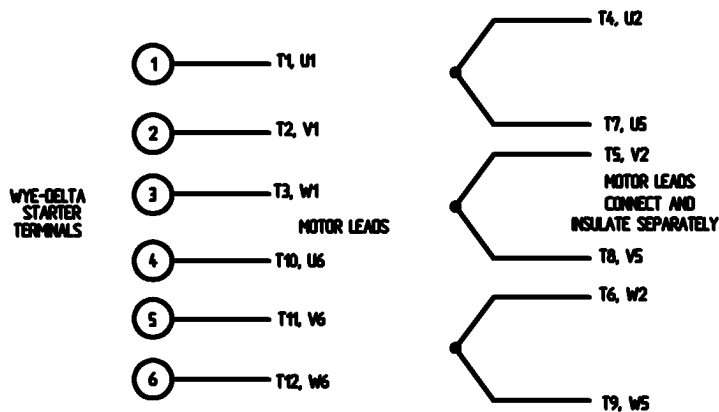
		TOLERANCES UNLESS SPECIFIED		REGAL REGAL-BELOIT CORPORATION		DRAWN JJK 03/29/99	
		DEC.	INCHES			CHK	
		.X	±.1			APPD PG 03/31/99	
		.XX	±.03	TITLE OUTLINE - 320T FRAME		SCALE N/A	
		.XXX	±.005	TEFC - RIDIG		REF 169504	
1	ADDED "BS" DIM. AND UPDATED TITLE BLOCK ECO-00	RFH	04/07/2014	EH	.XXXX	±.0005	MAT'L. CAST IRON
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 16954160LE		SIZE
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						A 169541-60LE 1	

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

LOW VOLTAGE CONNECTION

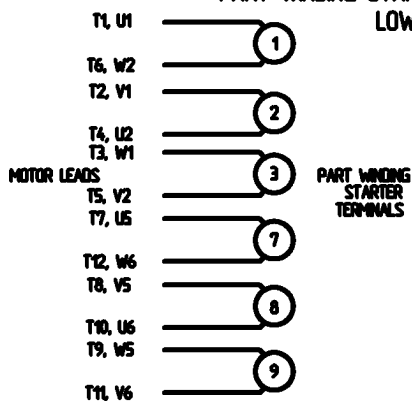


HIGH VOLTAGE CONNECTION



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

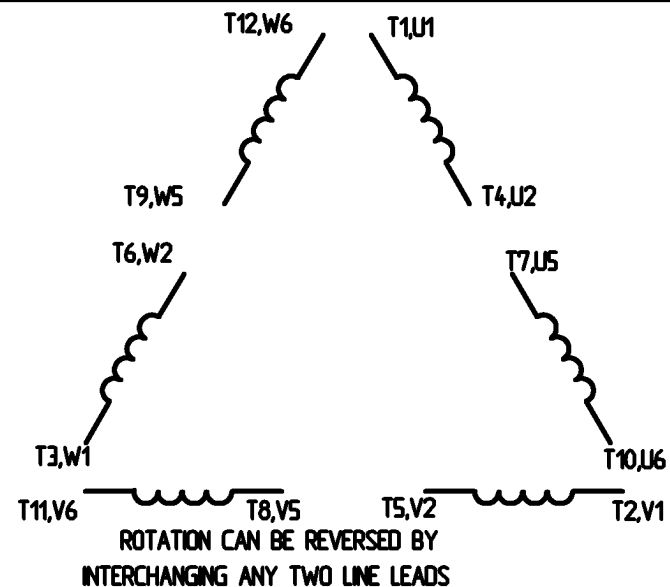
PART WINDING START USABLE ON 4 & 6 POLE MOTORS  
LOW VOLTAGE CONNECTION ONLY



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.

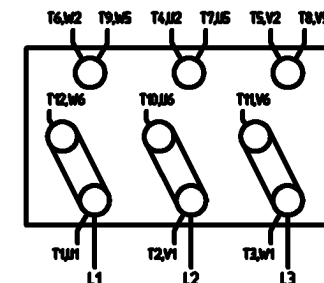
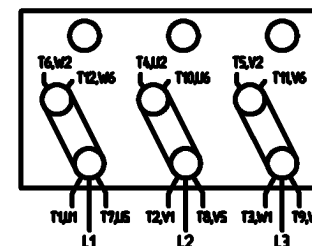
LINE LEADS



12 LEAD DELTA CONNECTION ACROSS THE LINE START  
(FOR Y START DELTA RUN, REMOVE THE JUMPERS)

LOW VOLTAGE  
MUST BE REWIRED  
AS SHOWN

HIGH VOLTAGE  
FACTORY WIRED FOR HIGH  
VOLTAGE AS SHOWN



				TOLERANCES UNLESS SPECIFIED		<b>LEESON</b> ELECTRIC MOTORS GEARMOTORS AND DRIVES	DRAWN C/W 08/28/02
				DEC.	INCHES		CHK
				X	+ .1	TITLE DELTA - WYE CONNECTION DIAGRAM IEC CAST IRON MOTORS	APPO
				XX	+ .01		SCALE 1:1
				XXX	+ .005	MATERIAL	REF
				XXXX	+ .0005		FINISH
NO.	REVISION	BY & DATE	CHK	ANG	+ 1/2°	PREV	
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				DST			DRAWING NO. 004172-03
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ERROR: syntaxerror  
OFFENDING COMMAND: --nostringval--

STACK:

/CB  
-dictionary-  
/Pscript\_WinNT\_Compat  
-dictionary-



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

CATALOG #: 171785.60

CONN. DIAGRAM: 00417203

OUTLINE: 16954160LE

MOUNTING: F1/F2 CAPABLE

WINDING #: T16104005 FR 3 A

**TYPICAL MOTOR PERFORMANCE DATA**

HP	kW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
40&30	30.0&22.4	1800	1780&1480	324T	TEFC	G	B

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB°C
3	60/50	208-230/460&190/380	100-92/46&84/42	Y START D RUN OR INV	CONTINUOUS	F5	1.15/1.15	40

FULL LOAD EFF:	94.1&93	3/4 LOAD EFF:	95	1/2 LOAD EFF:	95.1	GTD. EFF		ELEC. TYPE
FULL LOAD PF:	86&87	3/4 LOAD PF:	82.9	1/2 LOAD PF:	74.9	-		SQ CAGE INV RATED

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
118.6 LB-FT	580 / 290	224.2 LB-FT 190 %	348 LB-FT 295 %	58.3

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
- dBA	- dBA	6.32 LB-FT^2	- LB-FT^2	20 SEC.	2	534 LBS.

**\*\*\* SUPPLEMENTAL INFORMATION \*\*\***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	DIVISION 2	FALSE	NONE	GREEN (EPOXY)

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
6312	6312						

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

\*  
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O  
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E

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

Data Sheet

Date: 1/22/2018

171785.60



Data @ 460 V

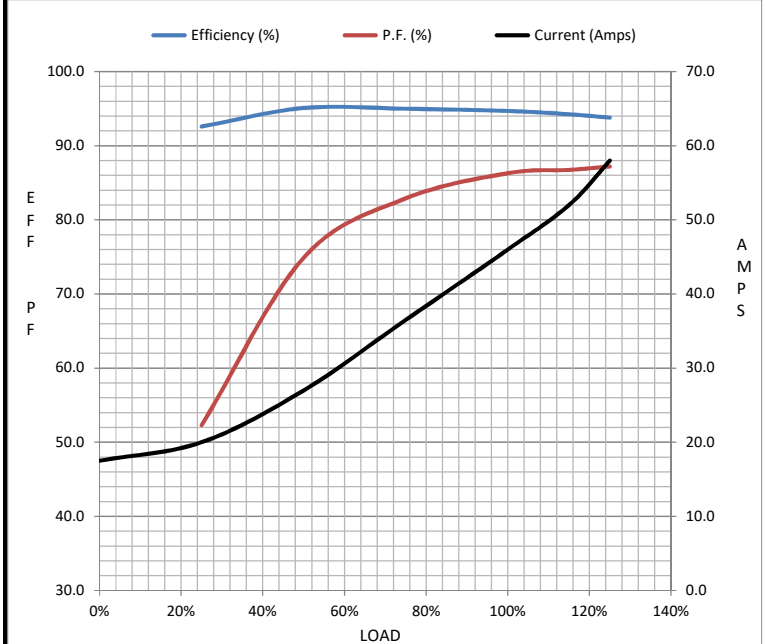
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	17.5	20.0	27.0	36.5	46.0	52.0	58.0	290
Torque (ft-lb)	0.00	30.3	60.3	90.3	119	134	150	224
RPM	1800	1795	1790	1784	1778	1.776	1772	0
Efficiency (%)		92.6	95.1	95.0	94.7	94.3	93.8	
P.F. (%)	4.8	52.3	74.9	82.9	86.3	86.8	87.2	0.0

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1656	1778	1800
Current (Amps)	290	267	174	46.0	17.5
Torque (ft-lb)	224	195	348	119	0.00

Information Block				
HP	40.0			
Sync. RPM	1800			
Frame	324			
Enclosure	TEFC			
Construction	TFC			
Voltage	208-230/460#190/380 V			
Frequency	60 Hz			
Design	A			
LR Code letter	G			
Service Factor	1.15			
Temp Rise @ FL	58 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk <sup>2</sup>	6.3 Lb-Ft <sup>2</sup>			
Ref Wdg	T16104005 FR			
Sound Pressure @ 1M	999 dBA			
VFD Rating	VARIABLE 10:1			
Outline Dwg	16954160LE			
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

