

PRODUCT INFORMATION PACKET



Model No: 170011.60

Catalog No: 170011.60

WATTSaver® General Purpose Motor, 25 & 20 HP, 3 Ph, 60 & 50 Hz, 208-230/460 & 190/380 V,
1800 & 1500 RPM, 284T Frame, TEFC



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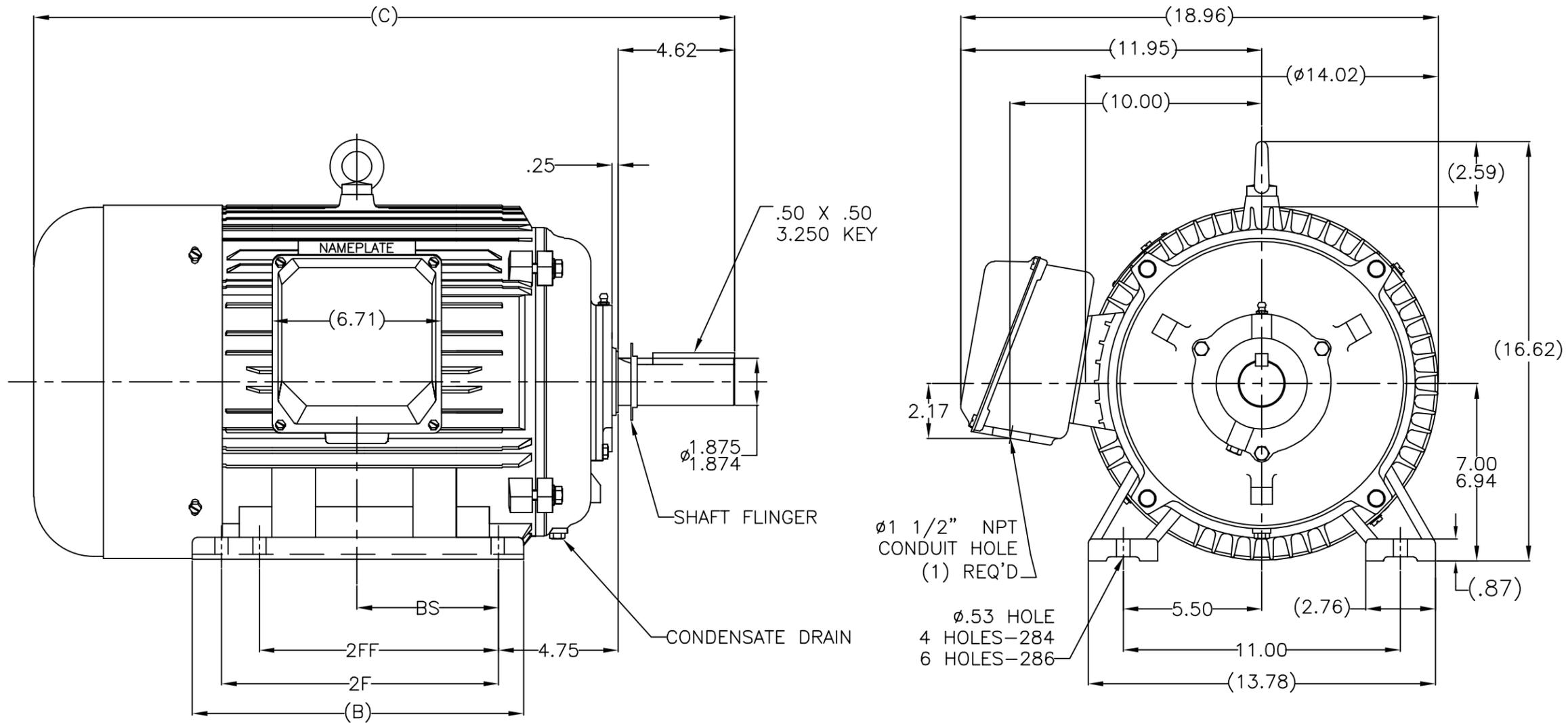
Nameplate Specifications

Phase	3	Output HP	25 & 20 Hp
Output KW	18.7 & 14.9 kW	Voltage	208-230/460 & 190/380 V
Speed	1782 & 1480 rpm	Service Factor	1.15 & 1.15
Frame	284T	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	93 & 93 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	66-58.5/29.3 & 60/30 A	Power Factor	78
Duty	Continuous	Insulation Class	F
Design Code	A	KVA Code	H
Drive End Bearing Size	6311	Opp Drive End Bearing Size	6309
UL	Recognized	CSA	Y
CE	Y	IP Code	43
Number of Speeds	1		

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Wye Start Delta Run Or Inverter
Poles	4	Rotation	Reversible
Resistance Main	.058 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	27.83 in
Shaft Diameter	1.875 in	Shaft Extension	4.62 in
Assembly/Box Mounting	F1/F2 CAPABLE		
Outline Drawing	16953960LE-284T	Connection Drawing	004172.01

169539-60LE



NOTE:
1. NAMEPLATE TO READ FROM CONDUIT BOX SIDE OF MOTOR.

FRAME	C	B	BS	2F	2FF
284T	26.26	11.61	5.30	9.50	X
286T	27.83	13.11	5.63	11.00	9.50

NO.	REVISION	BY & DATE	CHK	ANG	FINISH	PREV
6	UPDATED TITLE BLOCK AND TABLE ECO-0048910	RFH 04/04/2014	EH			DRAWN CJK 07/16/2001
5	RE-ISSUE, ADDED "LE" SUFFIX TO DRAWING NO.	MSG 09/23/2005	ML	DEC.	INCHES	CHK
4	REVISE TABLE DIM. FOR CORRECT 2F/2FF CN29200-302	CTO 06/25/2003	ML	.X	±.1	APPD
3	REV. 9.50 FROM 286 ONLY TO 284 PER CN 29200-302	CTO 06/09/2003	SB	.XX	±.03	SCALE N/A
2	REDRAWN TO CURRENT CAD STANDARDS	CJK 11/01/2001		.XXX	±.005	REF
1	ADDED HOLE FOR 286T BASE	JJK 07/13/1999		.XXXX	±.0005	FMF
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 16953960LE	SIZE A
				DIST		DRAWING NO. 169539-60LE
						PAGE 1 OF 1
						REV. 6

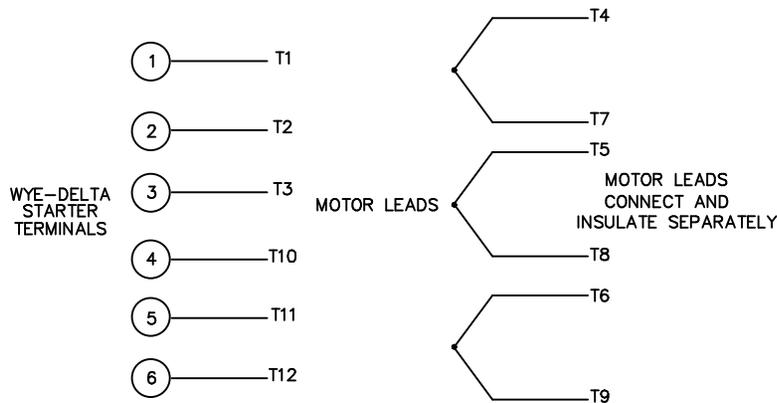
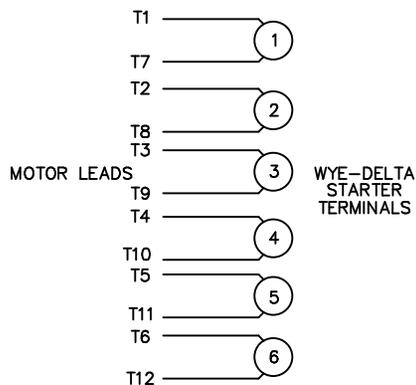


TITLE OUTLINE - NEW CONDUIT BOX
280T FR. - TEFC - RIGID

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

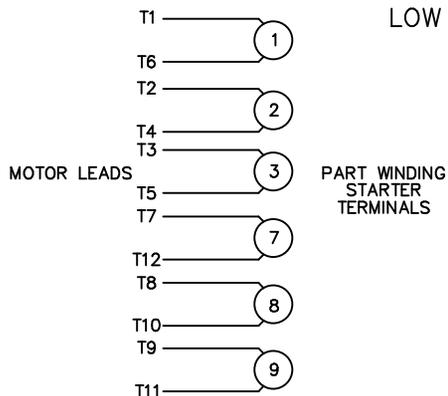
LOW VOLTAGE CONNECTION

HIGH VOLTAGE CONNECTION



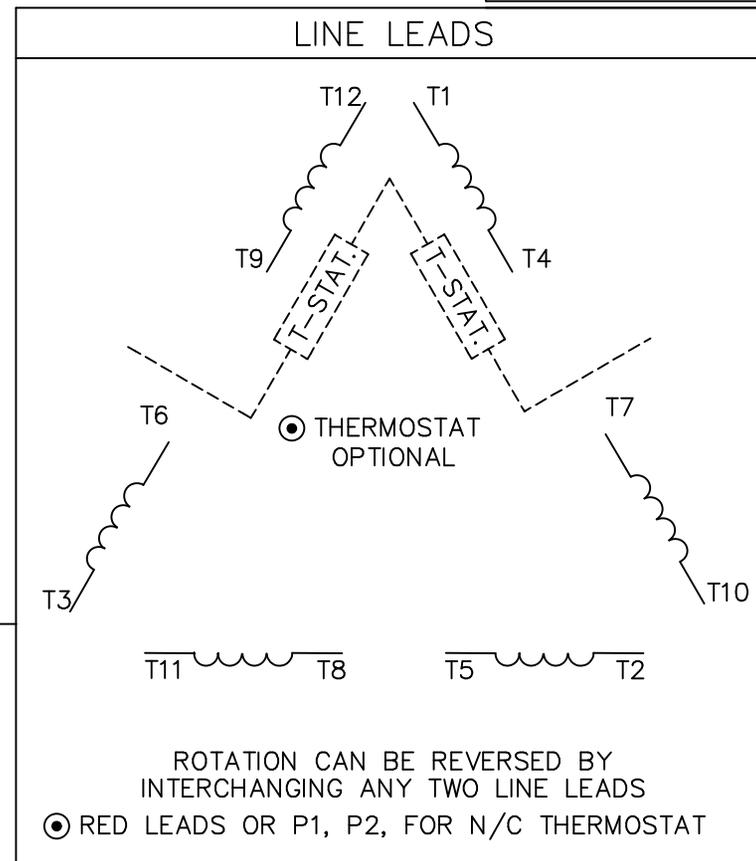
REFER TO THE WYE-DELTA STARTER CONNECTION INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

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.



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		ELECTRIC MOTORS GEARMOTORS AND DRIVES	DRAWN WLW 09/08/77		
				DEC.	INCHES		CHK RPB 09/12/77		
				.X	±.1		APPD JCW 09/12/77		
03	REV'D LOW VOLTAGE CONN. LEADS PER ELEC.	BJB 06/07/00	.XX	±.01	TITLE	DELTA - WYE CONNECTION DIAGRAM	SCALE	1=1	
02	ADDED T-STAT. NOTES PER ELECTRICAL	KMM 06/02/98	.XXX	±.005			REF		
01	REDRAWN TO CAD	DBT 06/02/97	.XXXX	±.0005	MAT'L.		FMF		
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	00417201	SIZE	DRAWING NO.	REV.
				DIST			A	004172-01	03



CERTIFICATION DATA SHEET

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

CATALOG #: 170011.60

CONN. DIAGRAM: 004172.01

OUTLINE: 16953960LE-284T

MOUNTING: F1/F2 CAPABLE

WINDING #: T14504005 3

TYPICAL MOTOR PERFORMANCE DATA

HP	kW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
25&20	18.7&14.9	1800	1782&1480	284T	TEFC	H	A

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB°C
3	60/50	208-230/460&190/380	66-58.5/29.3&60/30	Y START D RUN OR INV	CONTINUOUS	F5	1.15/1.15	40

FULL LOAD EFF:	93&93	3/4 LOAD EFF:	94.1	1/2 LOAD EFF:	93.6	GTD. EFF	ELEC. TYPE
FULL LOAD PF:	78&80.5	3/4 LOAD PF:	80	1/2 LOAD PF:	69	92.4	SQ CAGE INV RATED

F.L. TORQUE	LOCKED ROTOR AMPS	L,R. TORQUE	B,D. TORQUE	F.L. RISE°C
73.5 LB-FT	400 / 200	145 LB-FT 197 %	225 LB-FT 306 %	45

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
75 dBA	85 dBA	4.23 LB-FT^2	- LB-FT^2	20 SEC.	2	394 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
6311	6309						

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
TSTATS (N/C)	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

170011.60



Data @ 460 V

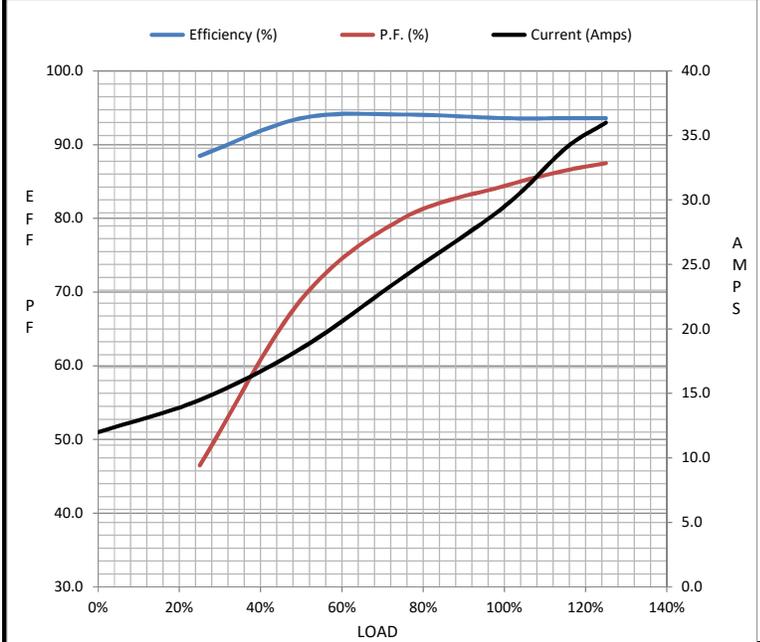
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	12.0	14.5	18.5	24.0	29.5	34.0	36.0	200
Torque (ft-lb)	0.00	18.6	37.5	56.0	73.5	84.5	93.5	145
RPM	1800	1792	1783	1775	1770	1.767	1762	0
Efficiency (%)		88.5	93.6	94.1	93.6	93.6	93.6	
P.F. (%)	5.5	46.5	69.0	80.0	84.4	86.5	87.5	0.0

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1700	1770	1800
Current (Amps)	200	180	130	29.5	12.0
Torque (ft-lb)	145	130	225	73.5	0.00

Information Block				
HP	25.0			
Sync. RPM	1800			
Frame	284			
Enclosure	TEFC			
Construction	TFC			
Voltage	208-230/460#190/380 V			
Frequency	60 Hz			
Design	A			
LR Code letter	H			
Service Factor	1.15			
Temp Rise @ FL	44 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk ²	4.2 Lb-Ft ²			
Ref Wdg	T14504005 NONE			
Sound Pressure @ 1M	75 dBA			
VFD Rating	CONSTANT 10:1			
Outline Dwg	16953960LE			
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



Speed - Torque Curve

