

# PRODUCT INFORMATION PACKET



Model No: 170006.60

Catalog No: 170006.60

WATTSaver® General Purpose Motor, 20 & 15 HP, 3 Ph, 60 & 50 Hz, 208-230/460 & 190/380 V,  
1800 & 1500 RPM, 256T Frame, DP



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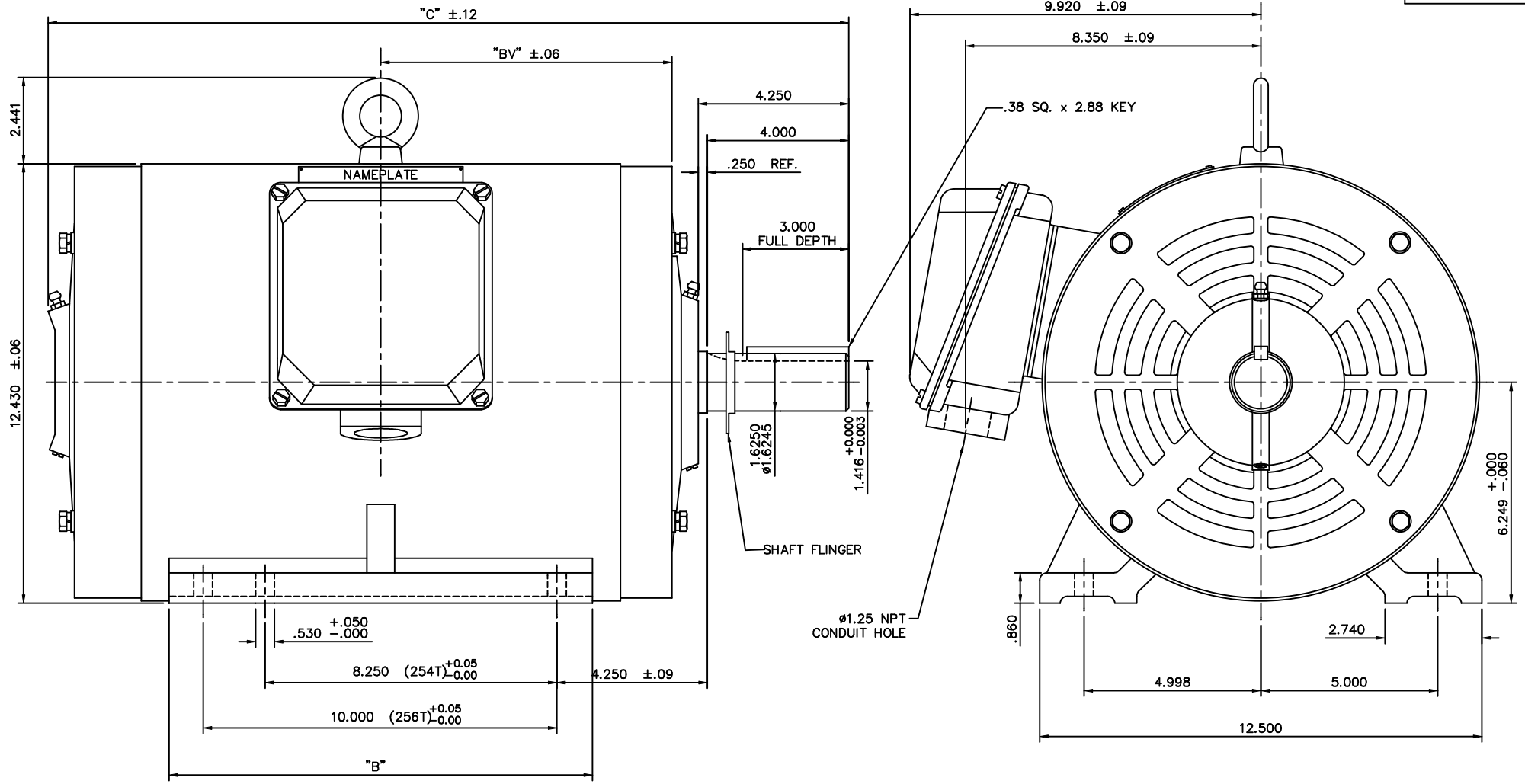


### Nameplate Specifications

Phase	<b>3</b>	Output HP	<b>20 &amp; 15 Hp</b>
Output KW	<b>14.9 &amp; 11.2 kW</b>	Voltage	<b>208-230/460 &amp; 190/380 V</b>
Speed	<b>1775 &amp; 1480 rpm</b>	Service Factor	<b>1.15 &amp; 1.15</b>
Frame	<b>256T</b>	Enclosure	<b>Drip Proof</b>
Thermal Protection	<b>Thermostat</b>	Efficiency	<b>93 &amp; 93 %</b>
Ambient Temperature	<b>40 °C</b>	Frequency	<b>60 &amp; 50 Hz</b>
Current	<b>55-51/25.5 &amp; 47/23.5 A</b>	Power Factor	<b>83</b>
Duty	<b>Continuous</b>	Insulation Class	<b>F</b>
Design Code	<b>B</b>	KVA Code	<b>F</b>
Drive End Bearing Size	<b>6309</b>	Opp Drive End Bearing Size	<b>6208</b>
UL	<b>Recognized</b>	CSA	<b>Y</b>
CE	<b>N</b>	IP Code	<b>22</b>
Number of Speeds	<b>1</b>		

### Technical Specifications

Electrical Type	<b>Squirrel Cage Inverter Rated</b>	Starting Method	<b>Line Or Inverter</b>
Poles	<b>4</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>.41 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>T</b>	Overall Length	<b>22.60 in</b>
Shaft Diameter	<b>1.625 in</b>	Shaft Extension	<b>4 in</b>
Assembly/Box Mounting	<b>F1/F2 CAPABLE</b>		
Outline Drawing	<b>16955160-256T</b>	Connection Drawing	<b>004172.01</b>



NOTE: 256T HAS 6 MTG. HOLES, USING BOTH 254T AND 256T "2F" LOCATIONS.

FRAME	"C"	"BV"	"B"
254T	20.94	8.23	10.25
256T	22.60	9.06	12.00

				TOLERANCES UNLESS SPECIFIED			ELECTRIC MOTORS GEARMOTORS AND DRIVES		DRAWN DRZ 05/23/01	
				DEC.	INCHES		CHK	APPD	SCALE	3-8
				.XX	±.03	TITLE		OUTLINE 250T FRAME		
				.XXX	±.005	TITLE		ODP, RIGID MOUNT, NEW CON-BOX		
A	REVISED TO NEW BORDER FORMAT			DWF	12/14/01	MAT'L		CAST IRON		
NO.	REVISION			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	Drawing8	SIZE	DRAWING NO.
						DIST	B	169551-60	REV. A	

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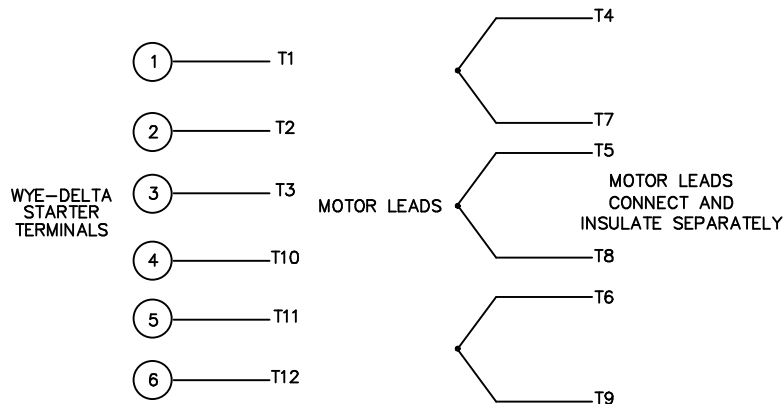
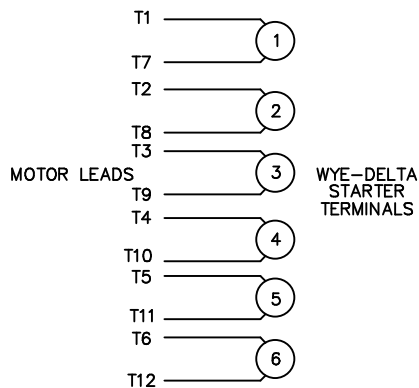
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/Pscript_WinNT_Compat  
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WYE - DELTA STARTING USEABLE ON 2,4 AND 6 POLE MOTORS.

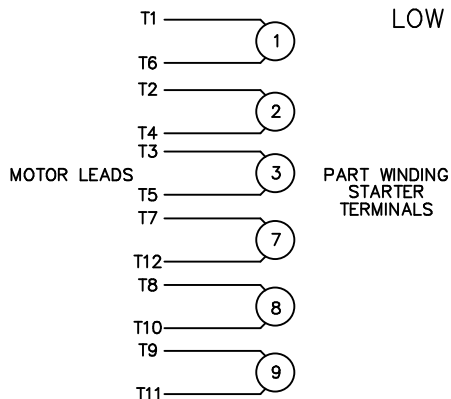
LOW VOLTAGE CONNECTION

HIGH VOLTAGE CONNECTION



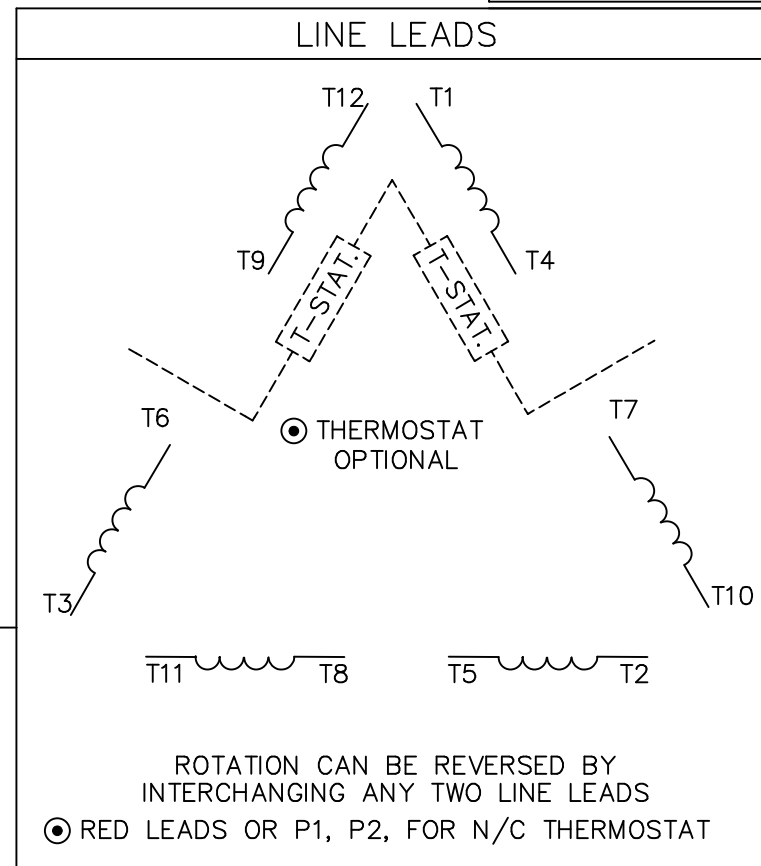
REFER TO THE WYE-DELTA STARTER CONNECTION INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

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.



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		ELECTRIC MOTORS GEARMOTORS AND DRIVES	DRAWN	WLV 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



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

CATALOG #: 170006.60

CONN. DIAGRAM: 004172.01

OUTLINE: 16955160-256T

MOUNTING: F1/F2 CAPABLE

WINDING #: T12904023 3

**TYPICAL MOTOR PERFORMANCE DATA**

HP	kW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
20&15	14.9&11.2	1800	1775&1480	256T	DP	F	B

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB°C
3	60/50	208-230/460&190/380	55-51/25.5&47/23.5	LINE OR INVERTER	CONTINUOUS	F5	1.15/1.15	40

FULL LOAD EFF:	93&93	3/4 LOAD EFF:	93	1/2 LOAD EFF:	93	GTD. EFF		ELEC. TYPE	
FULL LOAD PF:	83&78.3	3/4 LOAD PF:	79	1/2 LOAD PF:	70	92.4		SQ CAGE INV RATED	

F.L. TORQUE	LOCKED ROTOR AMPS	L,R. TORQUE	B,D. TORQUE	F.L. RISE°C
59.2 LB-FT	280 / 140	108 LB-FT 182 %	190 LB-FT 320 %	45

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
74 dBA	84 dBA	0 LB-FT^2	0 LB-FT^2	20 SEC.	2	350 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
6309	6208						

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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E  
S

<b>INVERTER TORQUE:</b> CONSTANT 2:1
<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: 1/17/2018

170006.60



Data @ 460 V

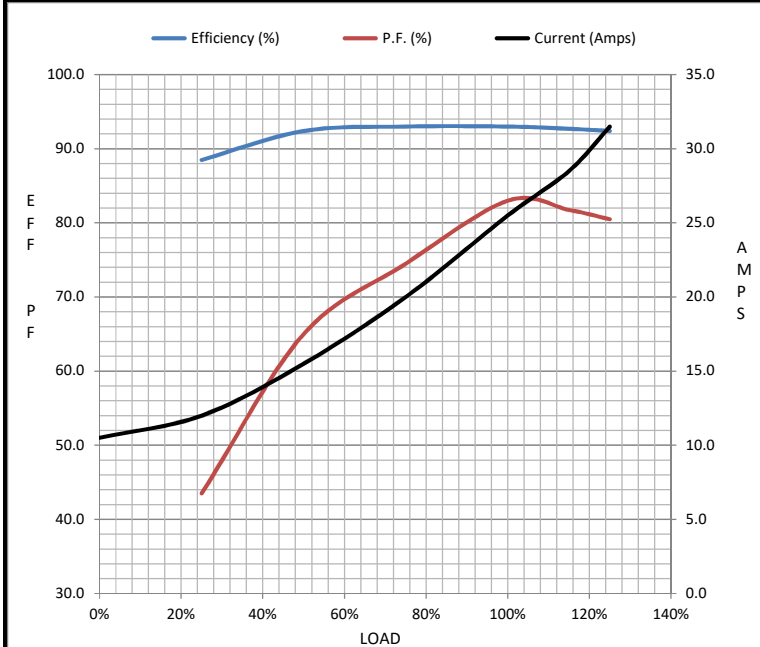
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	10.5	12.0	15.5	20.0	25.5	28.5	31.5	139
Torque (ft-lb)	0.00	14.7	29.4	44.2	59.2	66.7	74.2	106
RPM	1800	1795	1790	1780	1775	1.773	1770	0
Efficiency (%)		88.5	92.4	93.0	93.0	92.7	92.4	
P.F. (%)	5.0	43.5	65.0	74.5	83.0	81.8	80.5	0.0

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1000	1670	1775	1800
Current (Amps)	139	132	88.0	25.5	10.5
Torque (ft-lb)	106	90.0	172	59.2	0.00

Information Block				
HP	20.0			
Sync. RPM	1800			
Frame	256			
Enclosure	DP			
Construction	TDC			
Voltage	208-230/460#190/380 V			
Frequency	60 Hz			
Design	B			
LR Code letter	F			
Service Factor	1.15			
Temp Rise @ FL	40 °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	T12904023 DR			
Sound Pressure @ 1M	999 dBA			
VFD Rating	CONSTANT 2:1			
Outline Dwg	16955160			
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

