

# PRODUCT INFORMATION PACKET



Model No: 170378.60

Catalog No: 170378.60

WATTSaver® General Purpose Motor, 40 & 30 HP, 3 Ph, 60 & 50 Hz, 208-230/460 & 190/380 V,  
1800 & 1500 RPM, 324TC Frame, DP



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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	324TC	Enclosure	Drip Proof
Thermal Protection	No Protection	Efficiency	94.1 & 94.1 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	104-96/48 & 86/43 A	Power Factor	83
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	12
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	.19 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	26.02 in
Shaft Diameter	2.125 in	Shaft Extension	5.25 in
Assembly/Box Mounting	F1/F2 CAPABLE		
Outline Drawing	SS622290	Connection Drawing	004172.01

FRAME	C	2F	L2
N324TC-4W2 ODP	26.02	10.50	13.25
N326TC-4W2 ODP	27.52	12.00	14.75

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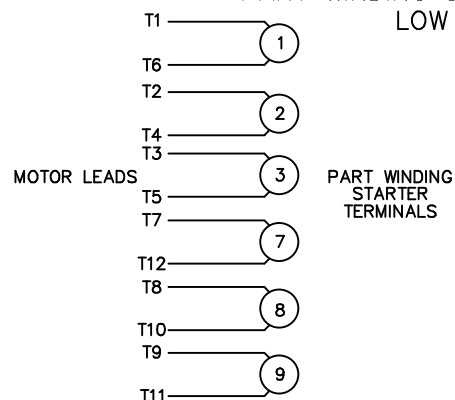
## WYE - DELTA STARTING USEABLE ON 2,4 AND 6 POLE MOTORS.

## 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.

## 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 &amp; 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
.X	±.1



ELECTRIC MOTORS  
GEARMOTORS  
AND DRIVES

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

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	

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RFP  
DIST

CAD FILE 00417201

SIZE  
A

DRAWING NO.  
004172-01

REV.  
03



# CERTIFICATION DATA SHEET

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

CATALOG #: 170378.60

CONN. DIAGRAM: 004172.01

OUTLINE: SS622290

MOUNTING: F1/F2 CAPABLE

WINDING #: T16104018 3

## 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	324TC	DP	G	B

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB°C
3	60/50	208-230/460&190/380	104-96/48&86/43	Y START D RUN OR INV	CONTINUOUS	F5	1.15/1.15	40

FULL LOAD EFF:	94.1&94.1	3/4 LOAD EFF:	94.5	1/2 LOAD EFF:	94	GTD. EFF	ELEC. TYPE
FULL LOAD PF:	83&84.1	3/4 LOAD PF:	78.5	1/2 LOAD PF:	69.5	93.6	SQ CAGE INV RATED

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
118 LB-FT	610 / 305	267 LB-FT 226 %	322 LB-FT 273 %	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	- LB-FT^2	- LB-FT^2	20 SEC.	-	581 LBS.

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

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
C-FACE	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	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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INVERTER TORQUE: CONSTANT 2:1

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 NO BRAKE Hz

## Data Sheet

Date: 1/19/2018

170378.60



Data @ 460 V

## Motor Load Data

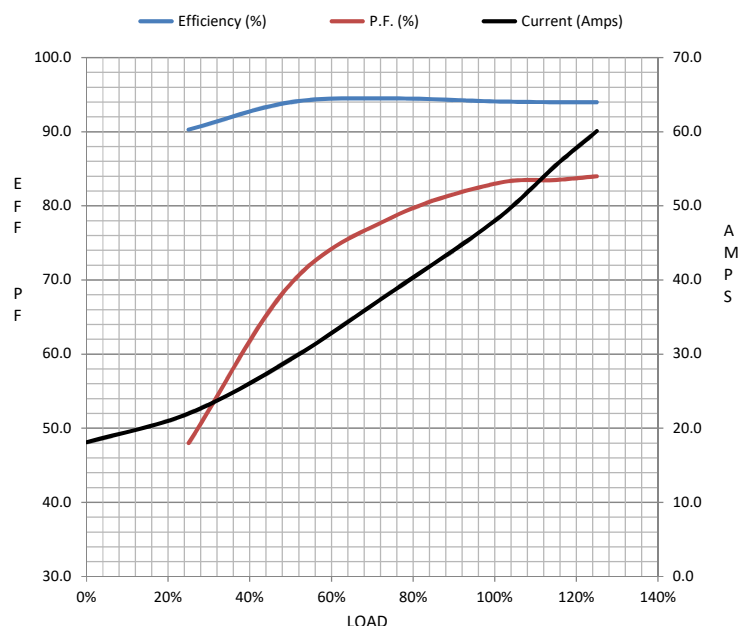
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	18.1	22.0	29.3	38.5	48.0	55.5	60.1	305	
Torque (ft-lb)	0.00	30.0	60.0	90.0	118	136	150	267	
RPM	1800	1795	1790	1785	1780	1.777	1775	0	
Efficiency (%)		90.3	94.0	94.5	94.1	94.0	94.0		
P.F. (%)	5.0	48.0	69.5	78.5	83.0	83.5	84.0	0.0	

## Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	800	1655	1780	1800
Current (Amps)	305	290	198	48.0	18.1
Torque (ft-lb)	267	227	322	118	0.00

## Information Block

HP	40.0			
Sync. RPM	1800			
Frame	324			
Enclosure	DP			
Construction	TDC			
Voltage	208-230/460#190/380	V		
Frequency	60	Hz		
Design	A			
LR Code letter	H			
Service Factor	1.15			
Temp Rise @ FL	45	° C		
Duty	CONT			
Ambient	40	° C		
Elevation	1,000	feet		
Rotor/Shaft wk²	0.00	Lb-Ft²		
Ref Wdg	T16104018 NONE			
Sound Pressure @ 1M	75	dBA		
VFD Rating	CONSTANT 2:1			
Outline Dwg	SS622290			
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

