

PRODUCT INFORMATION PACKET



Model No: 170071.60

Catalog No: 170071.60

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



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Nameplate Specifications

Phase	3	Output HP	20 & 15 Hp
Output KW	14.9 & 11.2 kW	Voltage	208-230/460 & 190/380 V
Speed	1780 & 1480 rpm	Service Factor	1.15 & 1.15
Frame	256TC	Enclosure	Drip Proof
Thermal Protection	Thermostat	Efficiency	93 & 93 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	51-49/24.5 & 45/22.5 A	Power Factor	83
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	H
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6208
UL	Recognized	CSA	Y
CE	Y	IP Code	22
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	.41 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	23.03 in
Shaft Diameter	1.625 in	Shaft Extension	4 in
Assembly/Box Mounting	F1/F2 CAPABLE	Inverter Load	CONSTANT 2:1
Outline Drawing	SS622288	Connection Drawing	4172.01

Cat. No.	FRAME	C	2F	2F1	K			TOLERANCES UNLESS SPECIFIED		 ELECTRIC MOTORS GEARMOTORS AND DRIVES	DRAWN MQL 03-10-2011					
170070.60	N254TC-2W2 ODP	21.46	8.25		4			DEC.	INCHES		CHK MQL 03-10-2011					
171688.60	N256TC-2W2 ODP	23.03	10.00	8.25	6			.X	±.1		APPD SB 03-10-2011					
170175.60	N254TC-4W2 ODP	21.46	8.25		4			.XX	±.03		TITLE OUTLINE					
170071.60	N256TC-4W2 ODP	23.03	10.00	8.25	6			.XXX	±.005		N250TC FR-2,4-W2- C'FACE - ODP					
								.XXXX	±.0005	MAT'L	SCALE 1=4					
NO.						REVISION		BY & DATE		CHK ANG	±7°30"	FINISH	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 SS622288		SIZE B	DRAWING NO. SS622288	PAGE OF	REV.	
								DIST								



CERTIFICATION DATA SHEET

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

CONN. DIAGRAM: 4172.01

CATALOG #: 170071.60

OUTLINE: SS622288

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	1780&1480	256TC	DP	H	B

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB°C
3	60/50	208-230/460&190/380	51-49/24.5&45/22.5	Y START D RUN OR INV	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&82	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
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
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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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 NONE Hz

Data Sheet

Date: 2/1/2018

170071.60



Data @ 460 V

Motor Load Data

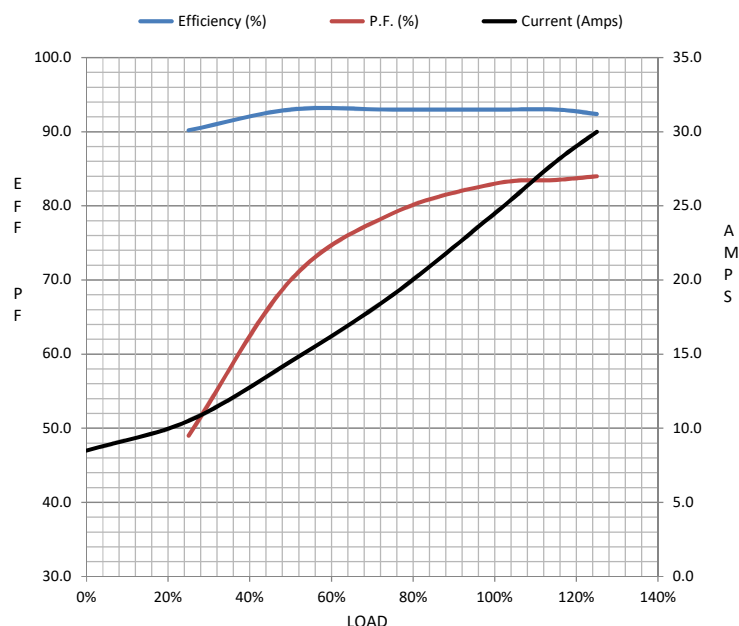
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	8.5	10.5	14.5	19.0	24.5	28.0	30.0	177	
Torque (ft-lb)	0.00	14.7	29.4	44.2	59.2	68.1	74.2	108	
RPM	1800	1795	1790	1785	1780	1.775	1.775	0	
Efficiency (%)		90.2	93.0	93.0	93.0	93.0	92.4		
P.F. (%)	5.0	49.0	70.0	79.0	83.0	83.5	84.0	36.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1675	1780	1800
Current (Amps)	177	160	100	24.5	8.5
Torque (ft-lb)	108	88.0	190	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	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	T12904023 NONE			
Sound Pressure @ 1M	74	dBa		
VFD Rating	CONSTANT 2:1			
Outline Dwg	SS622288			
Conn. Diag	4172.01			
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

