

PRODUCT INFORMATION PACKET



Model No: 103020.00

Catalog No: 103020.00

WATTS AVER® General Purpose Motor, 0.50 & 0.50 HP, 3 Ph, 60 & 50 Hz, 208-230/460 & 190/380 V, 1800 & 1500 RPM, S56 Frame, TEFC



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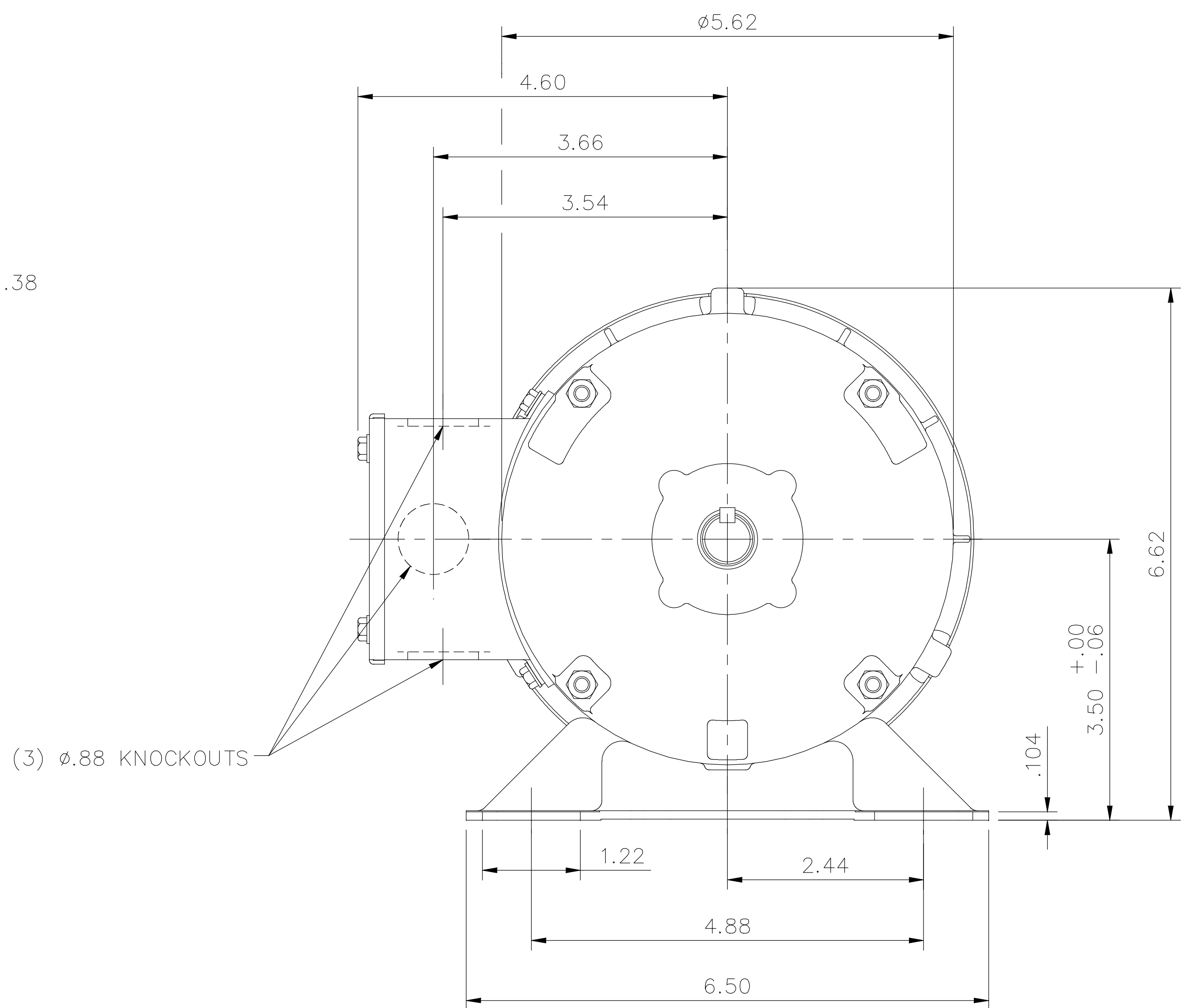
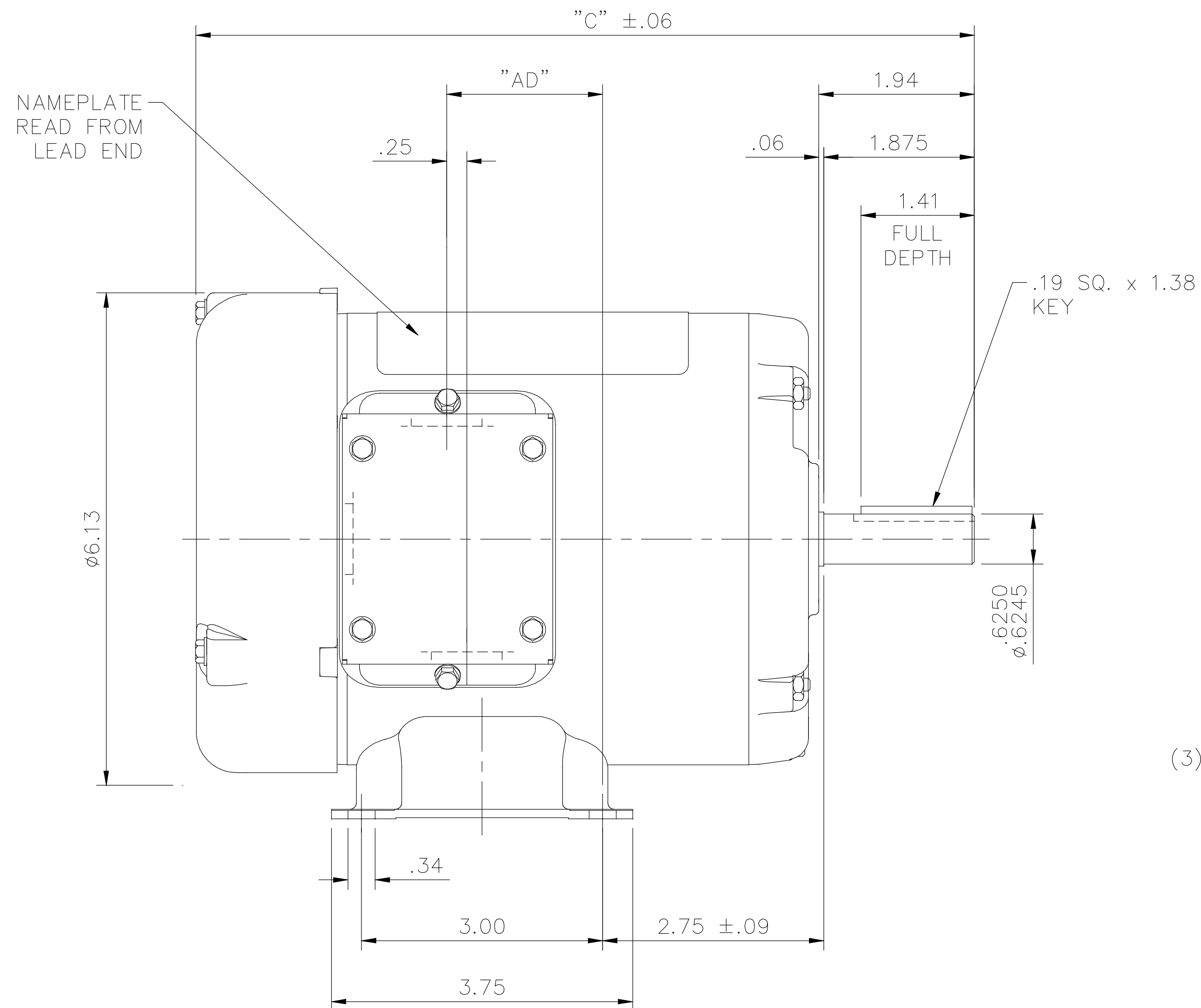


Nameplate Specifications

Phase	3	Output HP	0.50 & 0.50 Hp
Output KW	0.37 & 0.37 kW	Voltage	208-230/460 & 190/380 V
Speed	1725 & 1425 rpm	Service Factor	1.25 & 1.25
Frame	S56	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	Thermostat	Efficiency	77 & 77 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	1.8-1.8/.9 & 2/1 A	Power Factor	69
Duty	Continuous	Insulation Class	F
Design Code	NO DESIGN CODE	KVA Code	M
Drive End Bearing Size	6203	Opp Drive End Bearing Size	6203
UL	Recognized	CSA	Y
CE	Y	IP Code	43
Number of Speeds	1		

Technical Specifications

Electrical Type	Squirrel Cage Induction Run	Starting Method	Across The Line
Poles	4	Rotation	Reversible
Resistance Main	9.166 Ohms	Mounting	Rigid Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Rolled Steel
Shaft Type	NEMA 56	Overall Length	10.69 in
Frame Length	6.00 in	Shaft Diameter	0.625 in
Shaft Extension	1.88 in	Assembly/Box Mounting	F1 ONLY
Outline Drawing	031632-600	Connection Drawing	005010.20

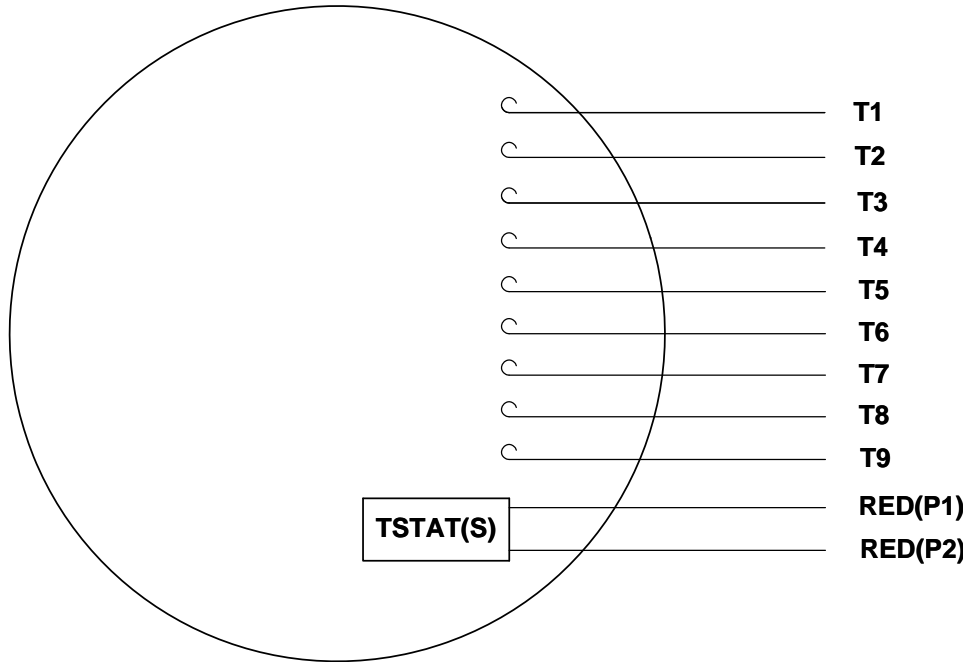


DASH NO.	"C"	"AD"
500	9.69	1.94
525	9.94	2.19
550	10.19	2.44
575	10.44	2.69
600	10.69	2.94
625	10.94	3.19
650	11.19	3.44
675	11.44	3.69

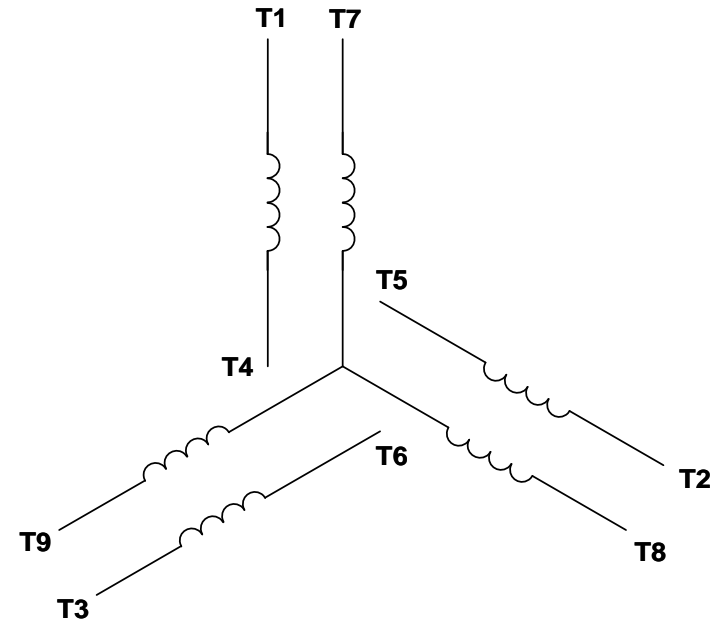
GASKETS THROUGHOUT

				TOLERANCES UNLESS OTHERWISE SPECIFIED			LEESON ELECTRIC CORPORATION						
				DEC.	INCHES	METRIC	DRAWN PG 5/30/01		TITLE OUTLINE - S56 FRAME RIGID MOUNT - TEFC				
				.X	±.1	±2.5	APPR.		MAT'L. 3 PHASE				
A	ADDED NAMEPLATE ORIENTATION			DS	04/05/18	PVR	.XXX	±.005	±.127	R.F.P.			
NO.	REVISION			BY & DATE	CH'K'D.	.XXXX	±.0005	±.0127	SCALE	1=2			
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							FRACTIONS	±1/64	REF.	030391	FINISH	REV. A	DRAWING NO. 031632
							ANGLES	±1/2°	FMF	101078			

VIEW FROM OUTSIDE OF MOTOR AT SWITCH END. Uncontrolled Copy



LINE LEADS



VOLTAGE	L1	L2	L3	JOIN & INSULATE
HIGH	T1	T2	T3	(T4,T7) (T5,T8) (T6,T9)
LOW	T1,T7	T2,T8	T3,T9	T4,T5,T6

DRAWING REVISION **G** REVISION BY **MVG** DATE **04/05/2017**

ECO **ECO-0121253** APPROVED BY **SM** DATE **04/05/2017**

ECO DESCRIPTION
ADDED P1 & P2 FOR TSTAT

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TOLERANCES UNLESS OTHERWISE SPECIFIED:

DEC.	INCH	mm	ANGLE
.X	±0.1	[±2.5]	±0.5°
.XX	±0.01	[±0.25]	
.XXX	±0.005	[±0.127]	
.XXXX	±0.0005	[±0.0127]	

REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.076/.381] X 45°
CORNER FILLETS: R.02 [.51]
MACHINED SURFACES: 125/3.2 INCH/mm
mm SHOWN IN [BRACKETS]

DRAWN BY **DBT 12/16/97**

DATE

APPROVED BY **KH 12/17/97**

DATE

REFERENCE

THIRD ANGLE PROJECTION



DESCRIPTION
CONN DIAGRAM-EXTERNAL
3 PHASE WITH PROTECTOR

MATERIAL **DECAL - 004014 (TSTAT) - 080582** PROCESS/FINISH **STOCK**

SIZE **A** DRAWING NUMBER **00501020** SHEET **1 OF 1**



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

CERTIFICATION DATA SHEET

CONN. DIAGRAM: 005010.20

CATALOG #: 103020.00

OUTLINE: 031632-600

MOUNTING: F1 ONLY

WINDING #: TE48453 FR 3 F

TYPICAL MOTOR PERFORMANCE DATA

HP	kW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
1/2&1/2	0.37&0.37	1800	1725&1425	S56	TEFC	M	NO DESIGN CODE

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB°C
3	60/50	208-230/460&190/380	1.8-1.8/.9&2/1	ACROSS THE LINE	CONTINUOUS	F3	1.25/1.25	40

FULL LOAD EFF:	77&77	3/4 LOAD EFF:	73.8	1/2 LOAD EFF:	66.9	GTD. EFF	ELEC. TYPE
FULL LOAD PF:	69&74.7	3/4 LOAD PF:	60.1	1/2 LOAD PF:	47.9	0	SQ CAGE IND RUN

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
24 OZ-FT	12.6 / 6.3	91.4 OZ-FT 381 %	98 OZ-FT 408 %	39

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
0 dBA	10 dBA	0.053 LB-FT^2	0 LB-FT^2	10 SEC.	0	- 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	GREEN - LEESON WATTS AVER

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE						
BALL	BALL	MULTEMP SRL	STANDARD 56	NONE	NONE	1144 STRESSPROOF (C-223)	ROLLED STEEL
6203	6203						

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
TSTATS (N/C)	AUTOMATIC	NONE	NONE	NONE	FALSE	NONE VOLTS

*
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S

INVERTER TORQUE: NONE
INV. HP SPEED RANGE: NONE
ENCODER: NONE
NONE NONE
NONE NONE PPR
BRAKE: NONE NONE
NONE P/N NONE
NONE NONE
FT-LB NONE V NONE Hz

Data Sheet

Date: 1/24/2018

103020.00



Data @ 460 V

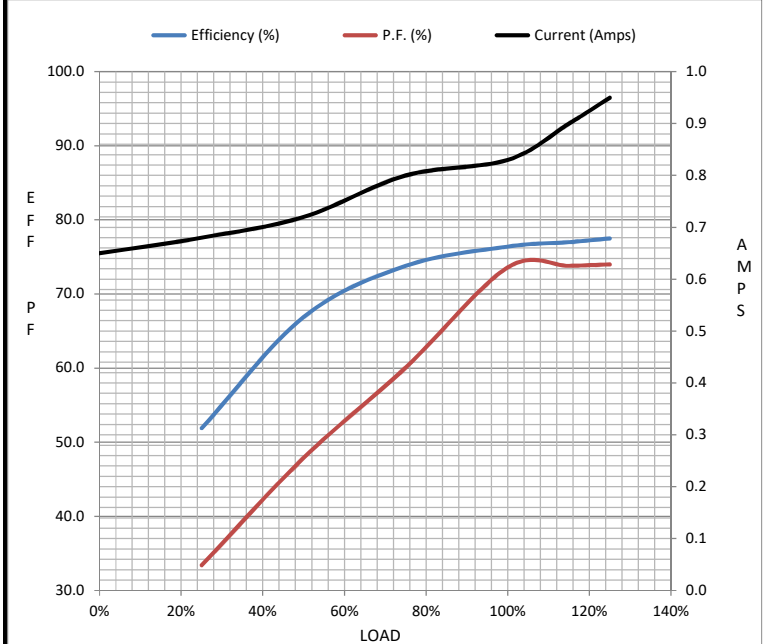
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	0.65	0.68	0.72	0.80	0.83	0.90	0.95	6.3
Torque (ft-lb)	0.00	94.5	186	289	383	415	450	1,459
RPM	1800	1787	1774	1760	1747	1,740	1737	0
Efficiency (%)		51.9	66.9	73.8	76.4	77.0	77.5	
P.F. (%)	23.4	33.4	47.9	60.1	73.6	73.8	74.0	0.0

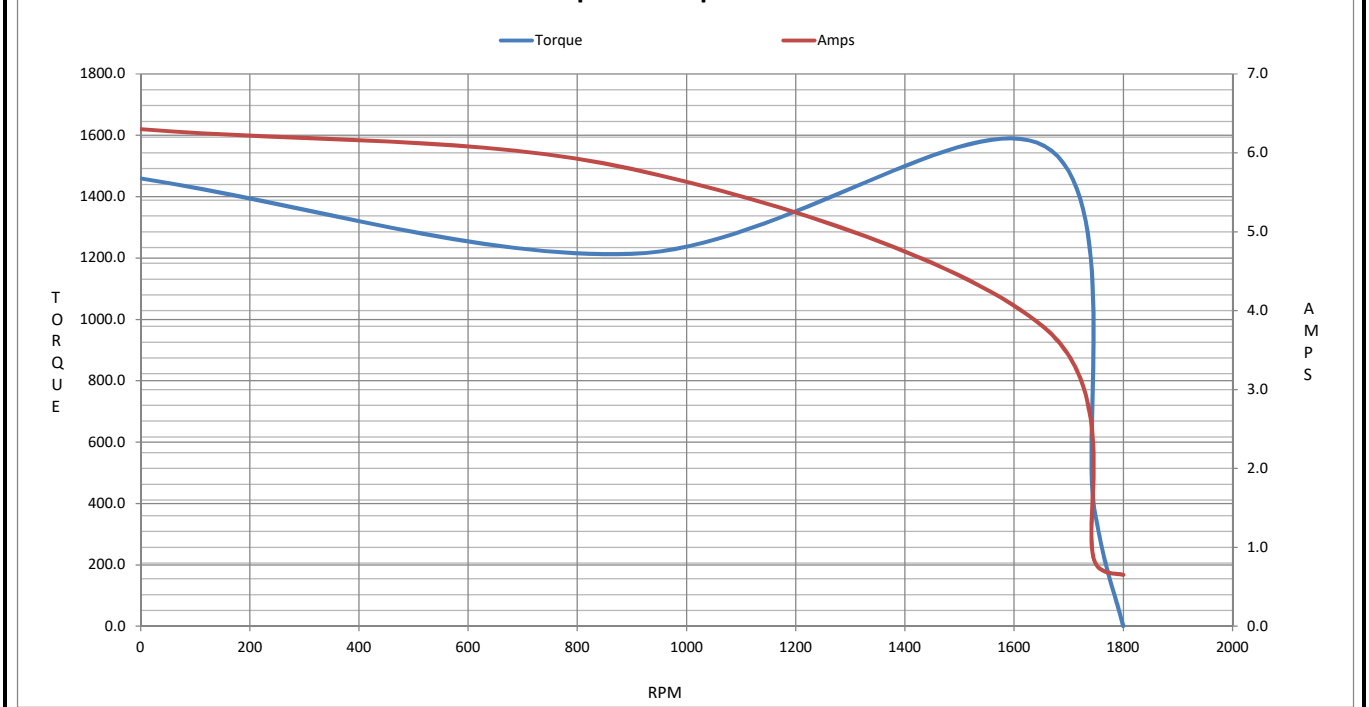
Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1656	1747	1800
Current (Amps)	6.3	5.8	3.8	0.83	0.65
Torque (ft-lb)	1,459	1,213	1,565	383	0.00

Information Block				
HP	0.5			
Sync. RPM	1800			
Frame	48			
Enclosure	TEFC			
Construction	NA			
Voltage	208-230/460#190/380 V			
Frequency	60 Hz			
Design	B			
LR Code letter	M			
Service Factor	1.15			
Temp Rise @ FL	39 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk ²	0.05 Lb-Ft ²			
Ref Wdg	TE48453 FR			
Sound Pressure @ 1M	0 dBA			
VFD Rating	NONE			
Outline Dwg	031632-600			
Conn. Diag	005010.20			
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



EC Declaration of Conformity

The undersigned representing
the manufacturer:

Regal Beloit America
100 East Randolph St.
Wausau, WI 54401

and the authorized representative
established within the Community:

Marathon Electric UK
6F Thistleton Road Ind. Estate
Market Overton
Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : 103020.00

(Model No. may contain prefix and/or suffix characters)

Catalog No : 103020.00

Rework No : N/A

Directives :

Low Voltage Directive 2014/35/EU

Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010)

EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

Authorized Representative:



Michael A. Logsdon
Vice President, Technology

Authorized Representative in the Community:



Julian Clark
Marketing Engineer

Created on 09/01/2022

CE 22