

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: TCA2P22AE211GAA009

Catalog No: R322B

Cast Iron Motor, 3 & 2 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 1800 & 1500 RPM, 100L Frame, TEFC



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**RegalRexnord**

## Nameplate Specifications

Phase	3	Output HP	3 & 2 Hp
Output KW	2.2 & 1.5 kW	Voltage	230/460 & 200/400 V
Speed	1770 & 1475 rpm	Service Factor	1.15 & 1.15
Frame	100L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	89.5 & 85.3 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	7.8/3.9 & 7/3.5 A	Power Factor	80
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	M
Drive End Bearing Size	6206	Opp Drive End Bearing Size	6206
UL	Recognized	CSA	N
CE	Y	IP Code	55
Number of Speeds	1	Efficiency Class	IE3

## Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	4	Rotation	Reversible
Resistance Main	3.79 Ohms	Mounting	B3
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Overall Length	15.67 in
Frame Length	7.87 in	Shaft Diameter	1.102 in
Shaft Extension	2.36 in	Assembly/Box Mounting	F3
Inverter Load	CONSTANT 2:1/VARIABLE 10:1		
Outline Drawing	SS600216	Connection Drawing	8442000675



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3

Uncontrolled Copy

2

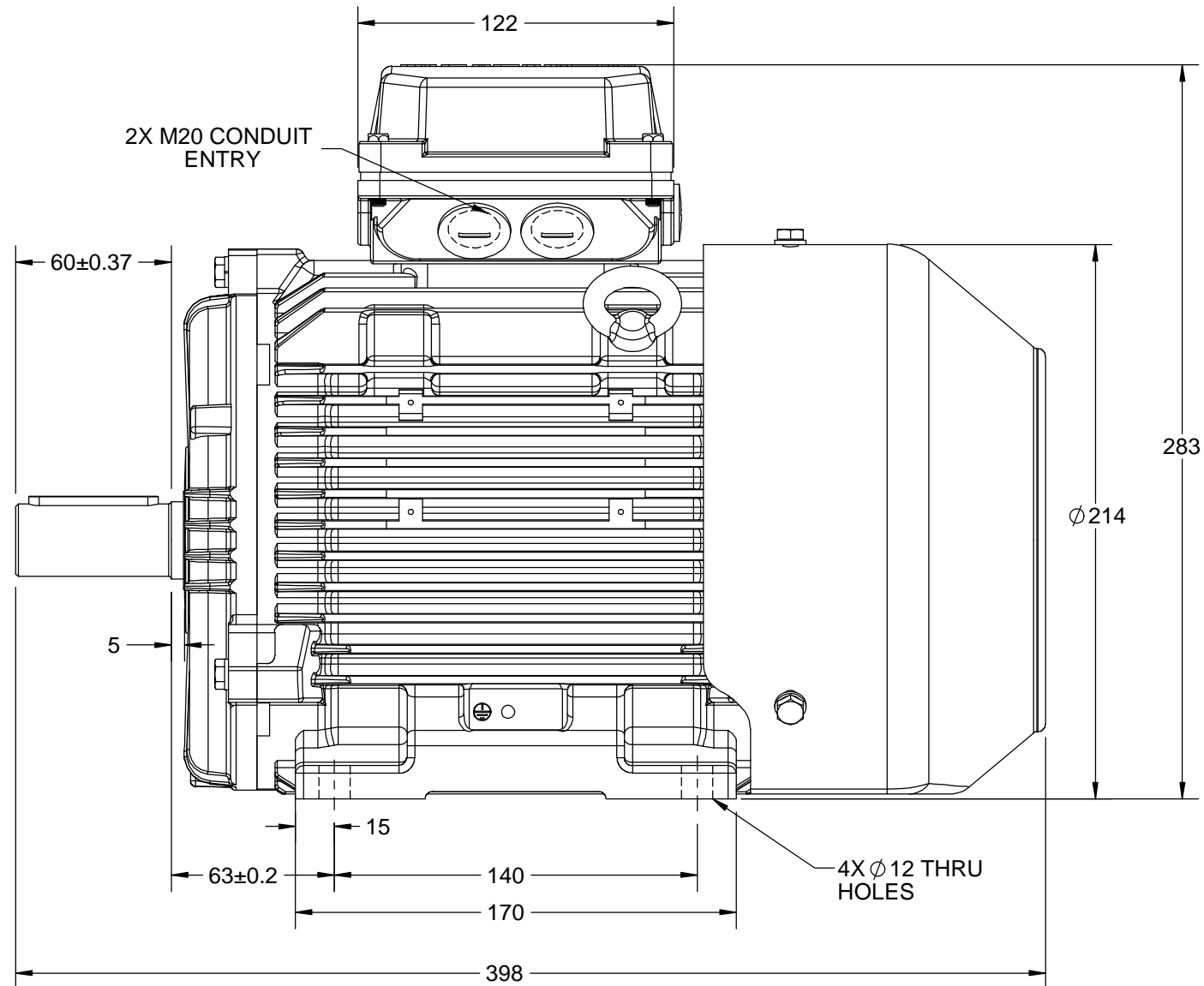
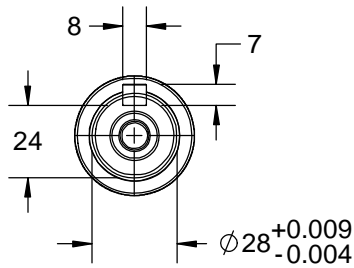
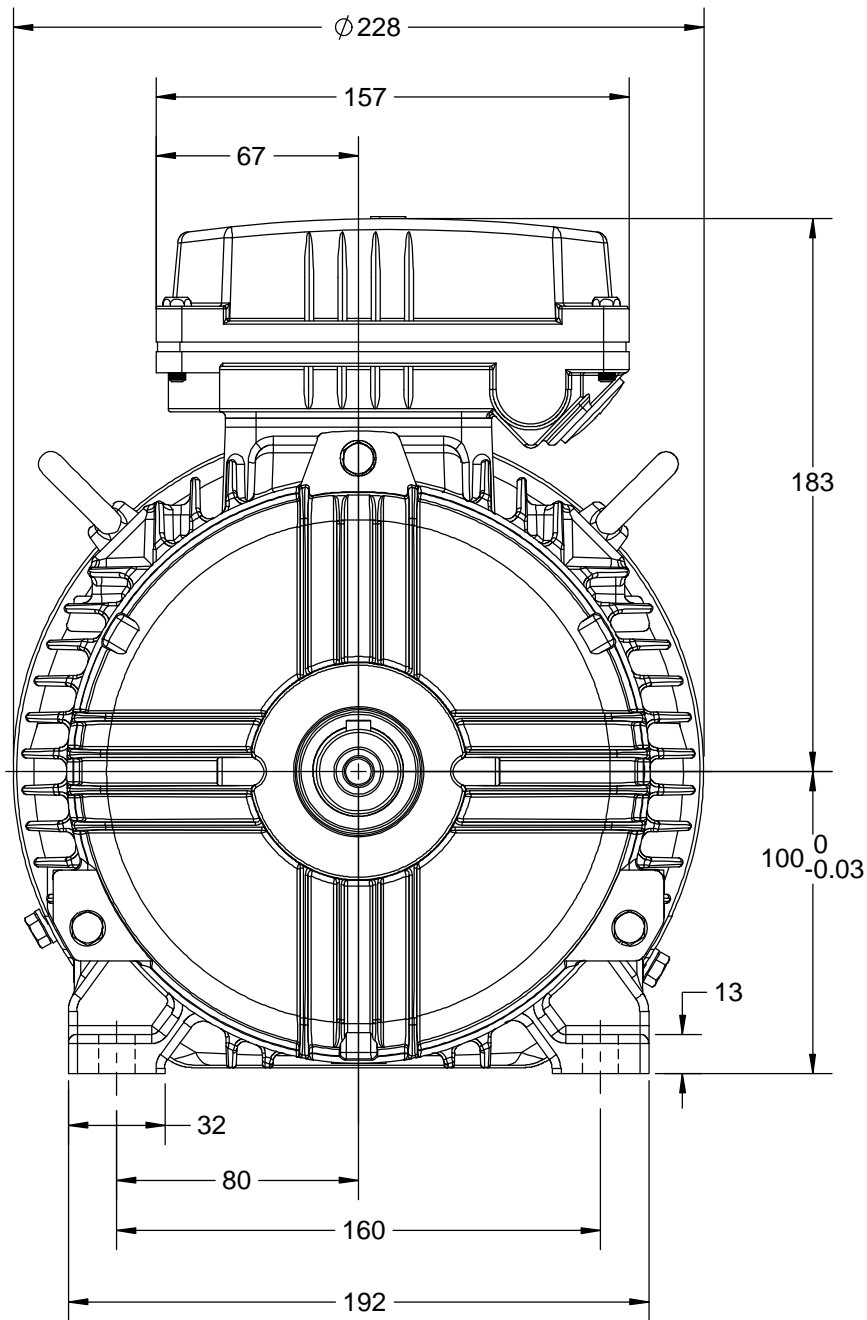
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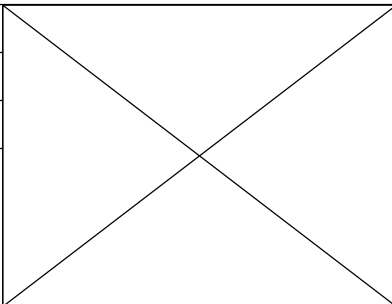
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DRAWING REVISION A	REVISION BY NIV	DATE 03/12/2018
ECO ECO-0157171	APPROVED BY JAY	DATE 03/12/2018
ECO DESCRIPTION NEW DRAWING RELEASE COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.		



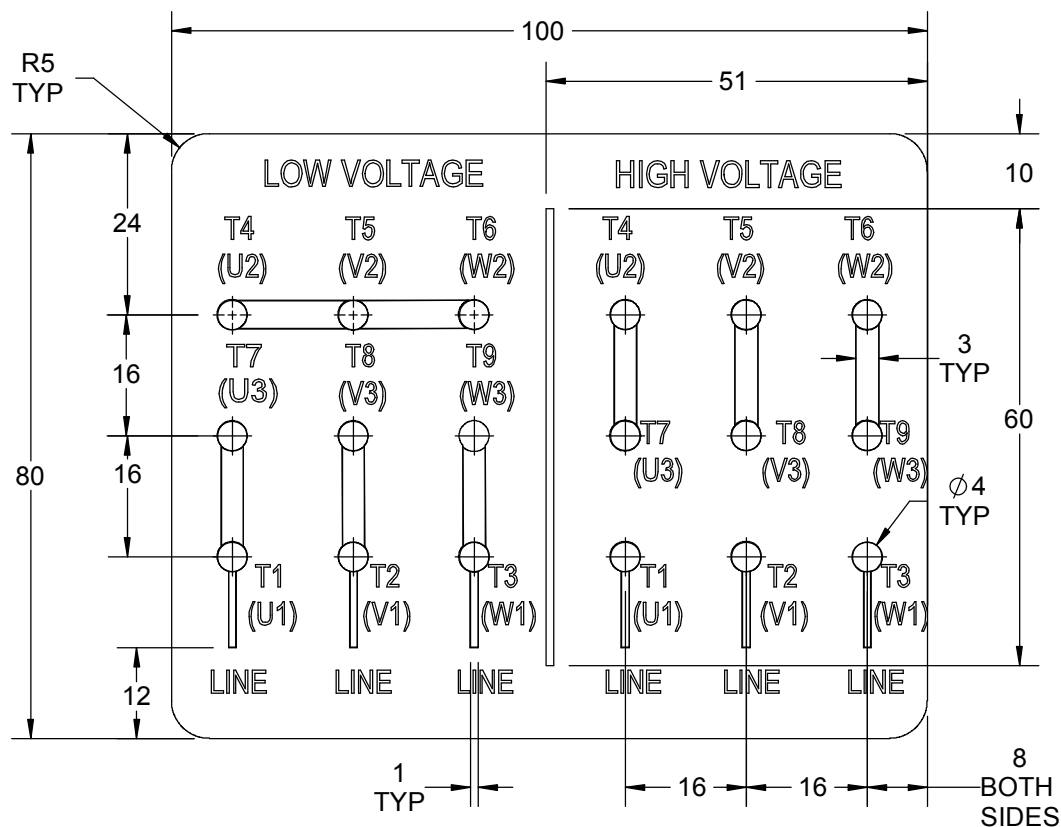
DRAWN BY NIV	<b>marathon™</b> Motors		
DATE 03/12/2018			
APPROVED BY JAY	DESCRIPTION OUTLINE		
DATE 03/12/2018	IEC-100 FR- B3 MOTOR TYPE: TEFC-CAST IRON		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER SS600216	SHEET 1 OF 1

4

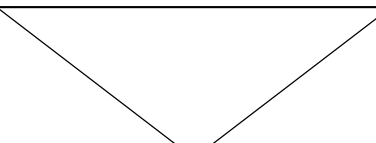


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2

1



1. PRESSURE-SENSITIVE ADHESIVE TAPE COATED WITH ANTI-ADHESIVE.
2. YELLOW COLOR BACK GROUND LETTERS WILL BE BLACK.
3. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE BY THE TABLE.
4. LEAD TERMINAL MARKINGS FONT SIZE : T1-T12 & U1-U4,V1-V4& W1-W4 OF ARIAL WITH 3mm SIZE.
5. OTHER LETTER FONT SIZE SHOULD BE 3.5mm.

DRAWING REVISION B		REVISION BY NIV		DATE 05/03/2019			DRAWN BY NIV		 Regal Beloit America, Inc.						
ECO ECO-0162986		APPROVED BY JAY		DATE 05/03/2019			DATE 29/01/2019		<div>DESCRIPTION</div> <div>CONNECTION DIAGRAM</div> <div>9 LEADS- STAR CONNECTON</div>						
ECO DESCRIPTION							APPROVED BY JAY								
DATE 29/01/2019							REFERENCE						MATERIAL		PROCESS/FINISH
<div>UPDATED DRAWING</div> <div>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</div>							THIRD ANGLE PROJECTION				SIZE A		DRAWING NUMBER 8442000675		SHEET 1 OF 1



P.O. BOX 8003  
WAUSAU, WI 54401-8003  
PH. 715-675-3311

DATA VOLTS: 460

### CERTIFICATION DATA SHEET

CUSTOMER: \_\_\_\_\_  
ORDER #: \_\_\_\_\_  
CONN. DIAGRAM: 8442000675  
OUTLINE: SS600216  
WINDING: IE3L1004201 NONE 1  
SPEED: \_\_\_\_\_

CUSTOMER P.O. #: \_\_\_\_\_  
REFERENCE MODEL #: TCA2P22AE211GAA009  
CAT #: R322B  
CUSTOMER PART #: \_\_\_\_\_  
MOUNTING: F3

### TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
3	2.2	1800	1770	100L	TEFC	TCA 100LA04	M	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (* C)	ELEV.(Ft.)
3	60/50	230/460#200/400	7.8/3.9&7/3.5	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	89.5	3/4 LD EFF	89.5	1/2 LD EFF	85.3	GTD EFF	ELECT. TYPE
F.L. PF	80.0	3/4 LD PF	73.0	1/2 LD PF	62.0	87.9	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (* C)
8.9 LB-FT	39.0	26.8 LB-FT 301%	33.7 LB-FT 379%	80

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK <sup>2</sup>	MAX. LOAD WK <sup>2</sup>	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
55 dBA	64 dBA	0.34 LB-FT <sup>2</sup>	0.34 LB-FT <sup>2</sup>	10 SEC.	2	44	KG.

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

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	B3	HORIZONTAL	NO	NONE	NO	NONE	BLUE (ENAMEL)

BEARINGS	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE ODE						
BALL BALL	POLYREX EM	STANDARD IEC	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
6206 6206						

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE HEATERS
NONE	NOT	NONE	NONE	NONE	FALSE	NA

R1 (ohms/ph)	R2 (ohms/ph)	X1 (ohms/ph)	X2 (ohms/ph)	Xm (ohms/ph)	VIBRATION (in/sec)	FLOAT
2.364	1.418	3.782	7.469	133.030	0.150	ODE

* N O T E S *					INVERTER TORQUE: CONSTANT 2:1/VARIABLE 10:1
					INV. HP SPEED RANGE: NONE
					ENCODER: NONE
					NONE
					NONE PPR

PREPARED BY: _____	BRAKE: NONE
DATE: 11/16/2020	NONE
	FT-LB: NA
	VOLTAGE: NONE
FORM: 3531 REV_4 2/27/06	UL: V - LI,ME-INS,CONST UL REC

REGAL

## Data Sheet

TCA2P22AE211GAA009

Date: 5/28/2019

Customer: \_\_\_\_\_

Attention: \_\_\_\_\_

Submitted by: Fareeda Dudekula

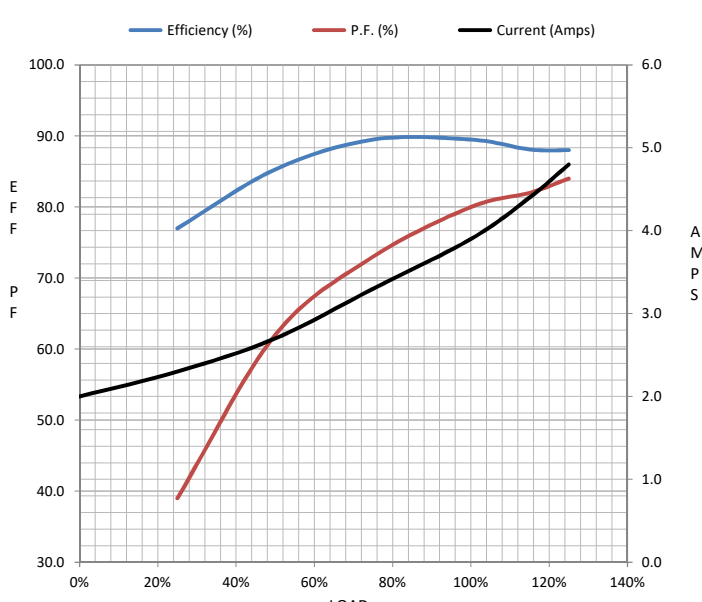
Submittal

Data @ 460 V

## Motor Load Data

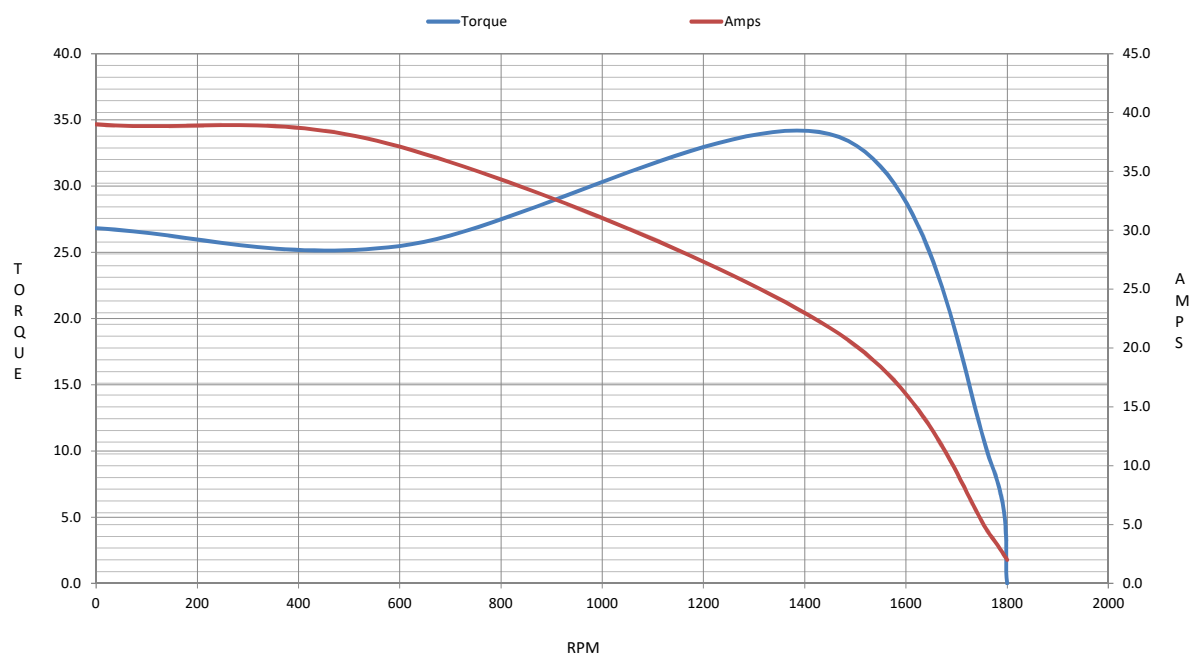
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	2.00	2.30	2.70	3.3	3.9	4.4	4.8	39.0	
Torque (ft-lb)	0.00	2.20	4.4	6.6	8.9	10.3	11.2	26.8	
RPM	1800	1792	1784	1776	1770	1,762	1759	0	
Efficiency (%)		77.0	85.3	89.5	89.5	88.1	88.0		
P.F. (%)	10.0	39.0	62.0	73.0	80.0	82.0	84.0	63.4	

## Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle																																																												
Speed (RPM)	0	600	1468	1770	1800																																																												
Current (Amps)	39.0	37.1	21.2	3.9	2.00																																																												
Torque (ft-lb)	26.8	25.5	33.7	8.9	0.00																																																												
<div><div>— Efficiency (%)</div><div>— P.F. (%)</div><div>— Current (Amps)</div></div> <table><tr><td colspan="2">Information Block</td></tr><tr><td>HP</td><td>3.0</td></tr><tr><td>Sync. RPM</td><td>1800</td></tr><tr><td>Frame</td><td>100</td></tr><tr><td>Enclosure</td><td>TEFC</td></tr><tr><td>Construction</td><td>TCA 100LA04</td></tr><tr><td>Voltage</td><td>230/460#200/400 V</td></tr><tr><td>Frequency</td><td>60 Hz</td></tr><tr><td>Design</td><td>N</td></tr><tr><td>LR Code letter</td><td>M</td></tr><tr><td>Service Factor</td><td>1.15</td></tr><tr><td>Temp Rise @ FL</td><td>80 °C</td></tr><tr><td>Duty</td><td>CONT</td></tr><tr><td>Ambient</td><td>40 °C</td></tr><tr><td>Elevation</td><td>3,300 feet</td></tr><tr><td>Rotor/Shaft wk²</td><td>0.34 Lb-Ft²</td></tr><tr><td>Ref Wdg</td><td>IE3L1004201 NONE</td></tr><tr><td>Sound Pressure @ 1M</td><td>55 dBA</td></tr><tr><td>VFD Rating</td><td>CONSTANT 2:1/VARIABLE 10:1</td></tr><tr><td>Outline Dwg</td><td>SS600216</td></tr><tr><td>Conn. Diag</td><td>8442000675</td></tr><tr><td colspan="2">Additional Specifications:</td></tr><tr><td colspan="2">0</td></tr><tr><td colspan="2">0</td></tr><tr><td colspan="2">EQUIV CKT (OHMS / PHASE)</td></tr><tr><td>R1</td><td>R2</td><td>X1</td><td>X2</td><td>Xm</td></tr><tr><td>2.3640</td><td>1.4180</td><td>3.7820</td><td>7.4690</td><td>133.0300</td></tr></table>						Information Block		HP	3.0	Sync. RPM	1800	Frame	100	Enclosure	TEFC	Construction	TCA 100LA04	Voltage	230/460#200/400 V	Frequency	60 Hz	Design	N	LR Code letter	M	Service Factor	1.15	Temp Rise @ FL	80 °C	Duty	CONT	Ambient	40 °C	Elevation	3,300 feet	Rotor/Shaft wk²	0.34 Lb-Ft²	Ref Wdg	IE3L1004201 NONE	Sound Pressure @ 1M	55 dBA	VFD Rating	CONSTANT 2:1/VARIABLE 10:1	Outline Dwg	SS600216	Conn. Diag	8442000675	Additional Specifications:		0		0		EQUIV CKT (OHMS / PHASE)		R1	R2	X1	X2	Xm	2.3640	1.4180	3.7820	7.4690	133.0300
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IEC

## 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 : TCA2P22AE211GAA009

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

Catalog No : R322B

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**