

# PRODUCT INFORMATION PACKET

marathon®  
Motors

Model No: TCA2P23AE211GAA009

Catalog No: R323B

Cast Iron Motor, 3 & 2 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 1200 & 1000 RPM, 112M Frame, TEFC



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RegalRexnord

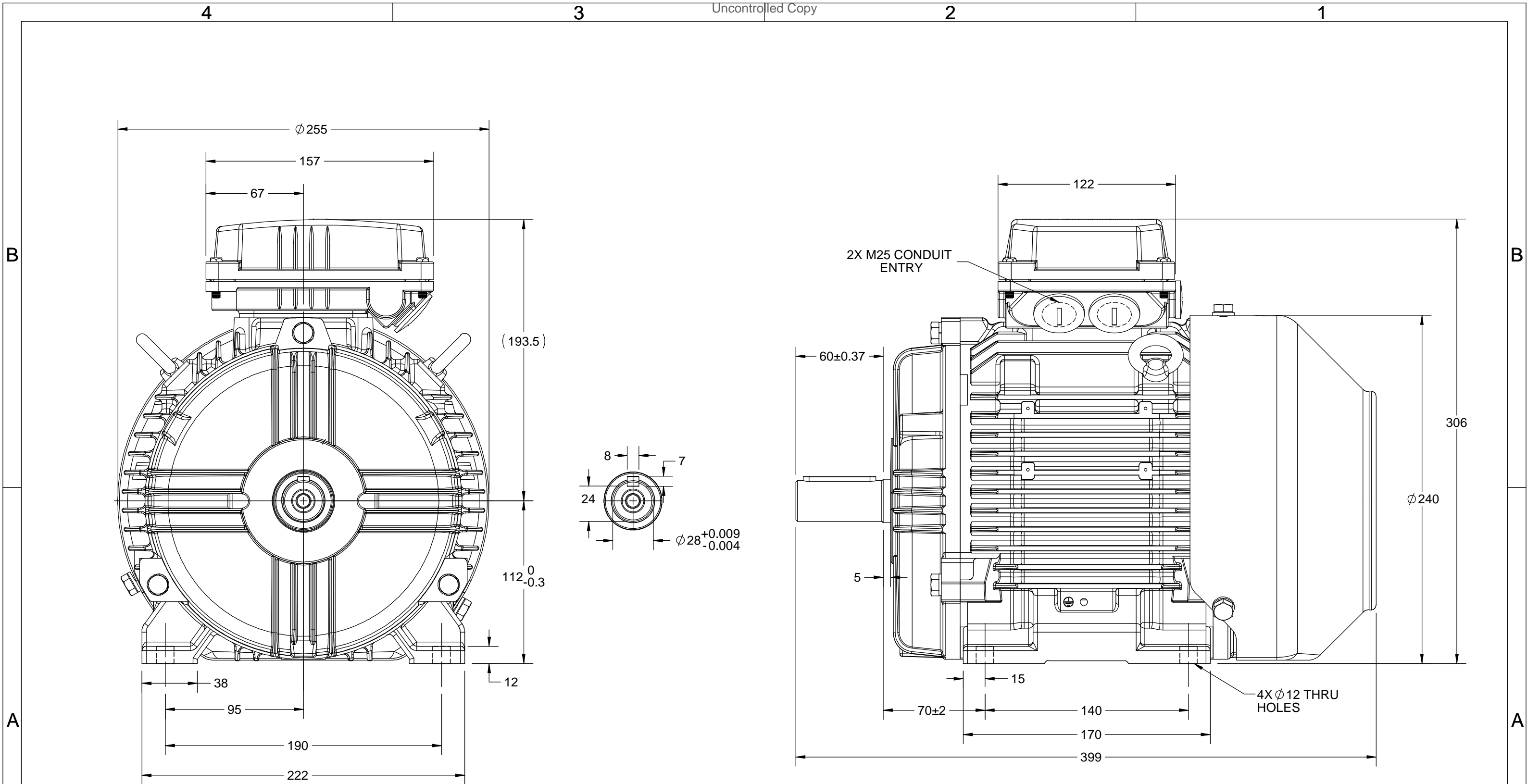
### Nameplate Specifications

Phase	<b>3</b>	Output HP	<b>3 &amp; 2 Hp</b>
Output KW	<b>2.2 &amp; 1.5 kW</b>	Voltage	<b>230/460 &amp; 200/400 V</b>
Speed	<b>1170 &amp; 980 rpm</b>	Service Factor	<b>1.15 &amp; 1.15</b>
Frame	<b>112M</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>No Protection</b>	Efficiency	<b>89.5 &amp; 82.5 %</b>
Ambient Temperature	<b>40 °C</b>	Frequency	<b>60 &amp; 50 Hz</b>
Current	<b>8.8/4.4 &amp; 8.2/4.1 A</b>	Power Factor	<b>70</b>
Duty	<b>Continuous</b>	Insulation Class	<b>F</b>
Design Code	<b>N (IEC)</b>	KVA Code	<b>M</b>
Drive End Bearing Size	<b>6306</b>	Opp Drive End Bearing Size	<b>6206</b>
UL	<b>Recognized</b>	CSA	<b>N</b>
CE	<b>Y</b>	IP Code	<b>55</b>
Number of Speeds	<b>1</b>	Efficiency Class	<b>IE3</b>

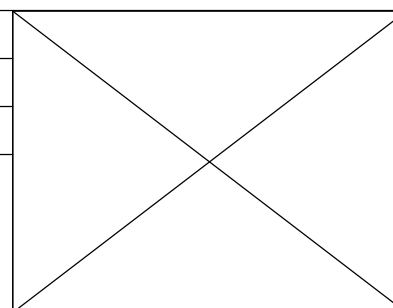
### Technical Specifications

Electrical Type	<b>Squirrel Cage Inverter Rated</b>	Starting Method	<b>Line Or Inverter</b>
Poles	<b>6</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>3.31 Ohms</b>	Mounting	<b>B3</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>IEC</b>	Overall Length	<b>15.71 in</b>
Frame Length	<b>6.85 in</b>	Shaft Diameter	<b>1.102 in</b>
Shaft Extension	<b>2.36 in</b>	Assembly/Box Mounting	<b>F3</b>
Inverter Load	<b>CONSTANT 2:1/VARIABLE 10:1</b>		
Connection Drawing	<b>8442000675</b>	Outline Drawing	<b>SS600217</b>



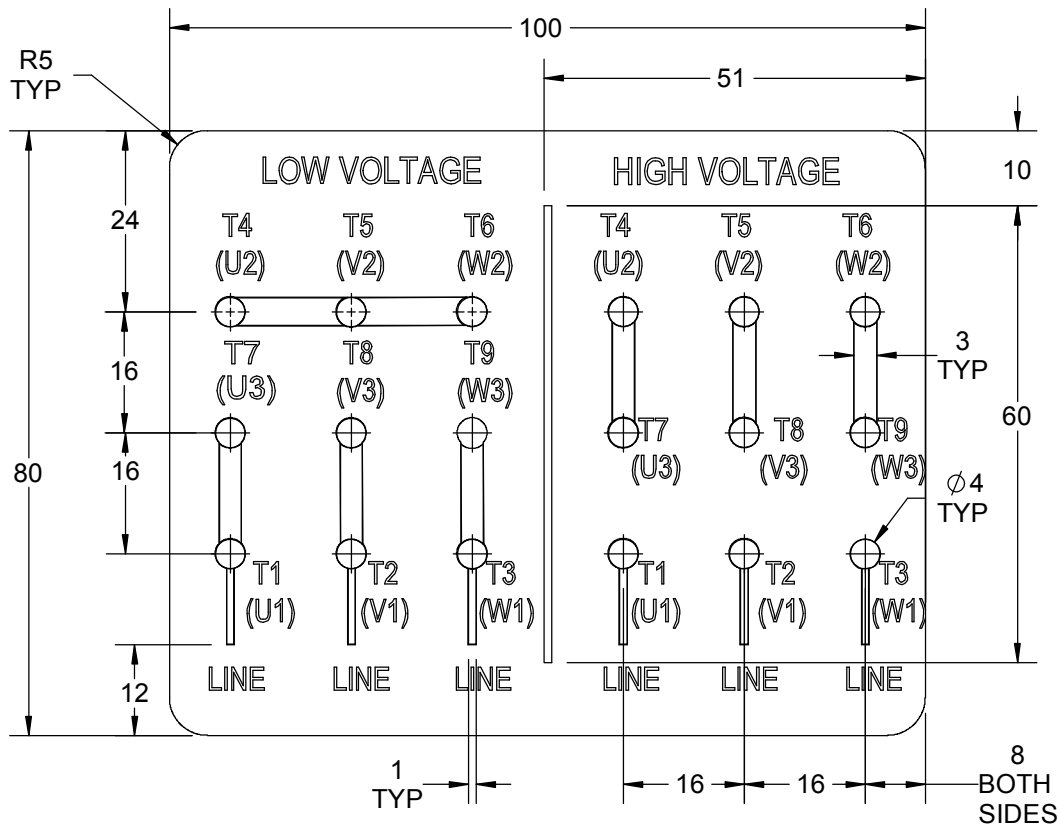


DRAWING REVISION A	REVISION BY NIV	DATE 04/12/2018
ECO ECO-0157171	APPROVED BY JAY	DATE 04/12/2018
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DRAWN BY NIV	<b>marathon™ Motors</b>	
DATE 04/12/2018		
APPROVED BY JAY	DESCRIPTION <b>OUTLINE</b> IEC-112 FR- B3 MOTOR TYPE : TEFC-CAST IRON	
DATE 04/12/2018	MATERIAL	PROCESS/FINISH
REFERENCE	SIZE <b>B</b>	DRAWING NUMBER <b>SS600217</b>
THIRD ANGLE PROJECTION	SHEET 1 OF 1	

GENERAL TOLERANCE		
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



**NOTES:**

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>B</b>	REVISION BY <b>NIV</b>	DATE <b>05/03/2019</b>		DRAWN BY <b>NIV</b>	<b>Regal Beloit America, Inc.</b>	
ECO <b>ECO-0162986</b>	APPROVED BY <b>JAY</b>	DATE <b>05/03/2019</b>		DATE <b>29/01/2019</b>		
ECO DESCRIPTION <b>UPDATED DRAWING</b>				APPROVED BY <b>JAY</b>	DESCRIPTION <b>CONNECTION DIAGRAM</b> 9 LEADS- STAR CONNECTOR	
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				REFERENCE	SIZE <b>A</b>	DRAWING NUMBER <b>8442000675</b>



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

DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

CUSTOMER: \_\_\_\_\_  
ORDER #: \_\_\_\_\_  
CONN. DIAGRAM: 8442000675  
OUTLINE: SS600217  
WINDING: IE3L1126201 NONE 1  
SPEED: \_\_\_\_\_

CUSTOMER P.O. #: \_\_\_\_\_  
REFERENCE MODEL #: TCA2P23AE211GAA009  
CAT #: R323B  
CUSTOMER PART #: \_\_\_\_\_  
MOUNTING: F3

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
3	2.2	1200	1170	112M	TEFC	TCA 112MA06	M	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV.(Ft.)
3	60/50	230/460#200/400	8.8/4.4&8.2/4.1	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	89.5	3/4 LD EFF	89.5	1/2 LD EFF	83.4	GTD EFF	ELECT. TYPE
F.L. PF	70.0	3/4 LD PF	61.0	1/2 LD PF	50.0	87.9	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)
13.5 LB-FT	38.2	43.6 LB-FT 323%	51.4 LB-FT 381%	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	0.50 LB-FT <sup>2</sup>	0.5 LB-FT <sup>2</sup>	15 SEC.	2	58 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 BALL	ODE BALL	POLYREX EM	STANDARD IEC	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
6306	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
1.986	1.702	6.146	7.469	94.454	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					
	BRAKE: NONE					

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



**Data Sheet**

TCA2P23AE211GAA009

Date: 5/28/2019  
Customer: \_\_\_\_\_  
Attention: \_\_\_\_\_

**Submittal**

Submitted by: Fareeda Dudekula

Data @ **460 V**

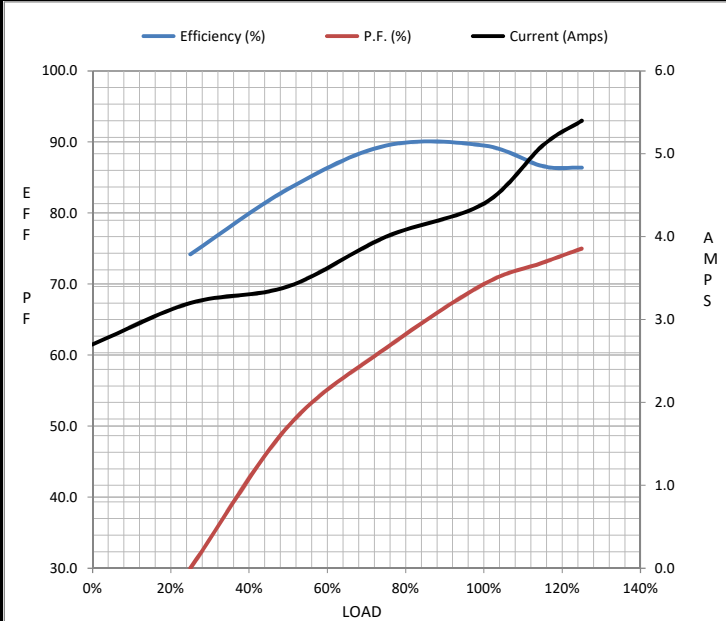
**Motor Load Data**

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	2.70	3.2	3.4	4.0	4.4	5.1	5.4	38.2
Torque (ft-lb)	0.00	3.3	6.6	10.0	13.5	15.6	17.0	43.6
RPM	1200	1193	1186	1179	1170	1,167	1164	0
Efficiency (%)		74.2	83.4	89.5	89.5	86.6	86.4	
P.F. (%)	9.0	30.0	50.0	61.0	70.0	73.0	75.0	63.4

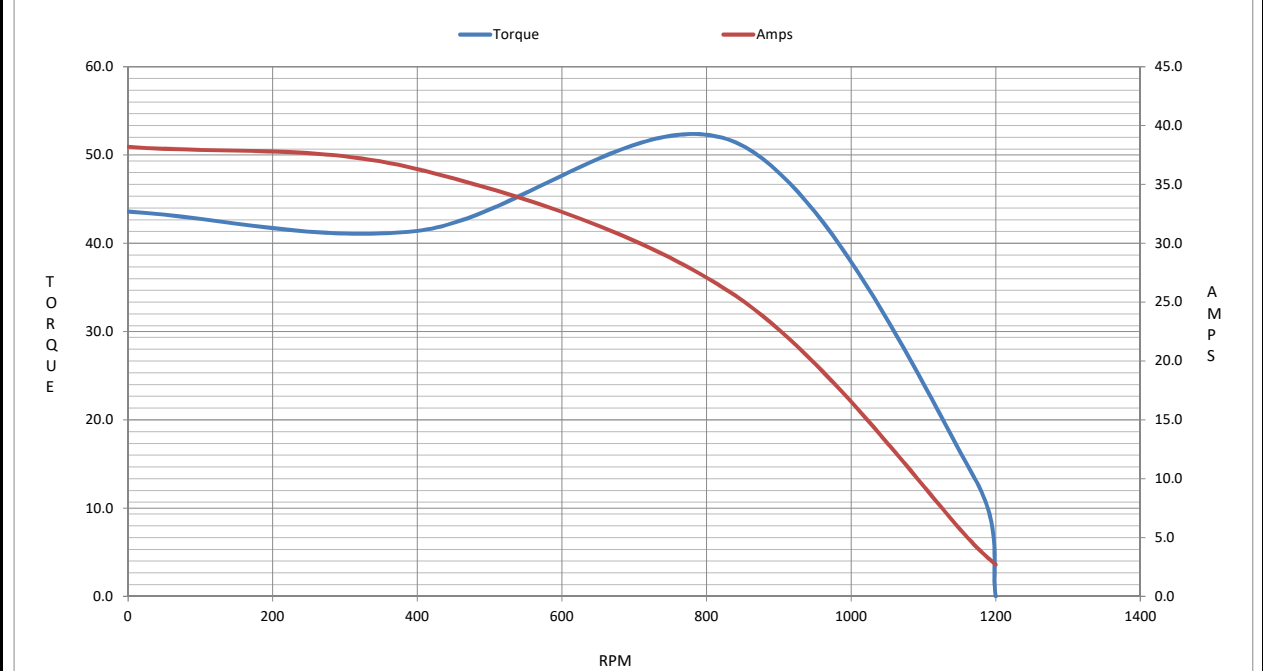
**Motor Speed Data**

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	400	841	1170	1200
Current (Amps)	38.2	36.3	25.5	4.4	2.70
Torque (ft-lb)	43.6	41.4	51.4	13.5	0.00

Information Block				
HP	3.0			
Sync. RPM	1200			
Frame	112			
Enclosure	TEFC			
Construction	TCA 112M06			
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 wk <sup>2</sup>	0.50 Lb-Ft <sup>2</sup>			
Ref Wdg	IE3L1126201 NONE			
Sound Pressure @ 1M	62 dBA			
VFD Rating	CONSTANT 2:1/VARIABLE 10:1			
Outline Dwg	SS600217			
Conn. Diag	8442000675			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
1.9860	1.7020	6.1460	7.4690	94.4540



**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 : TCA2P23AE211GAA009

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

Catalog No : R323B

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**