

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA2P23AE271GAA009

Catalog No: R623

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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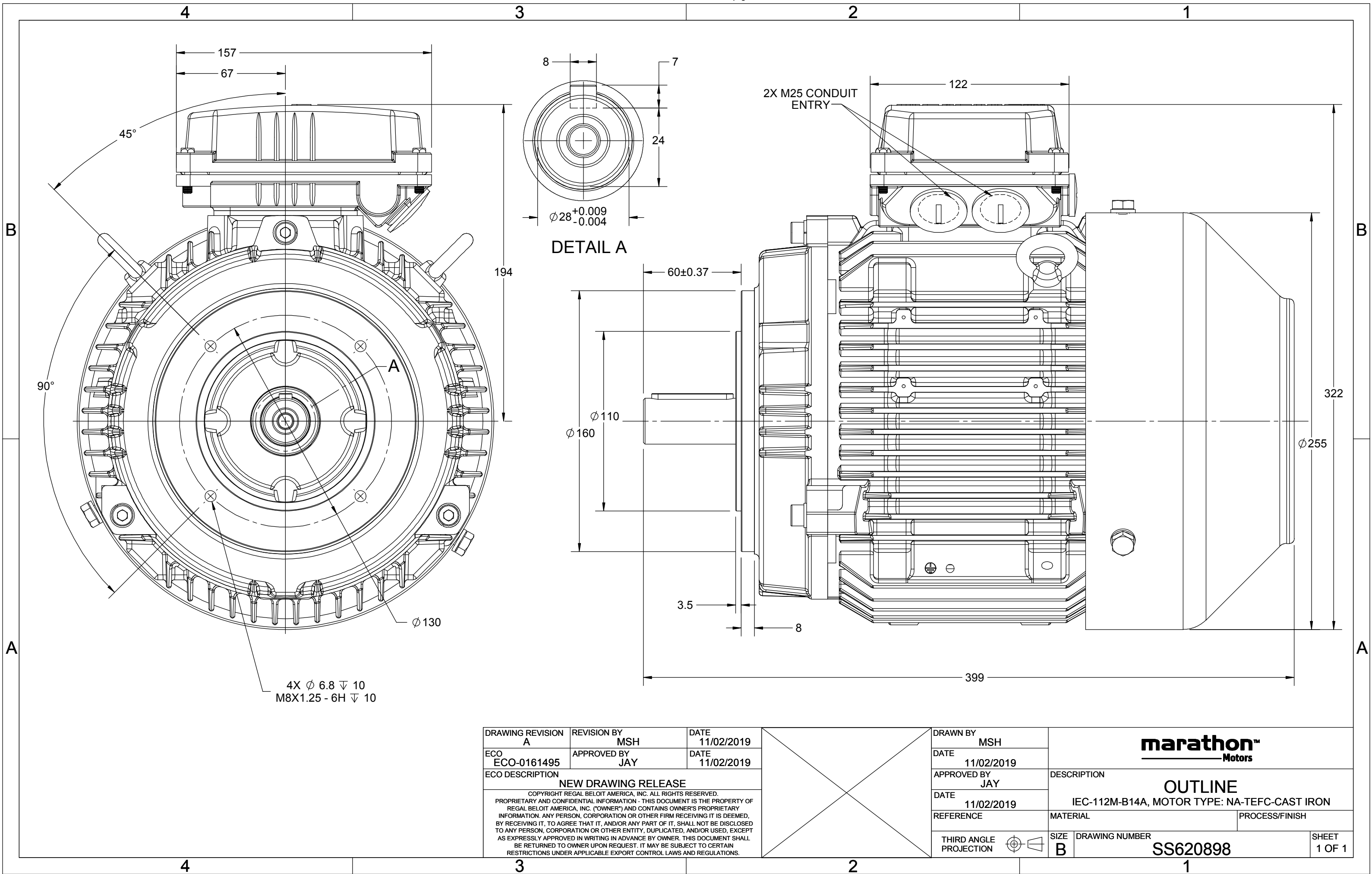
RegalRexnord

Nameplate Specifications

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

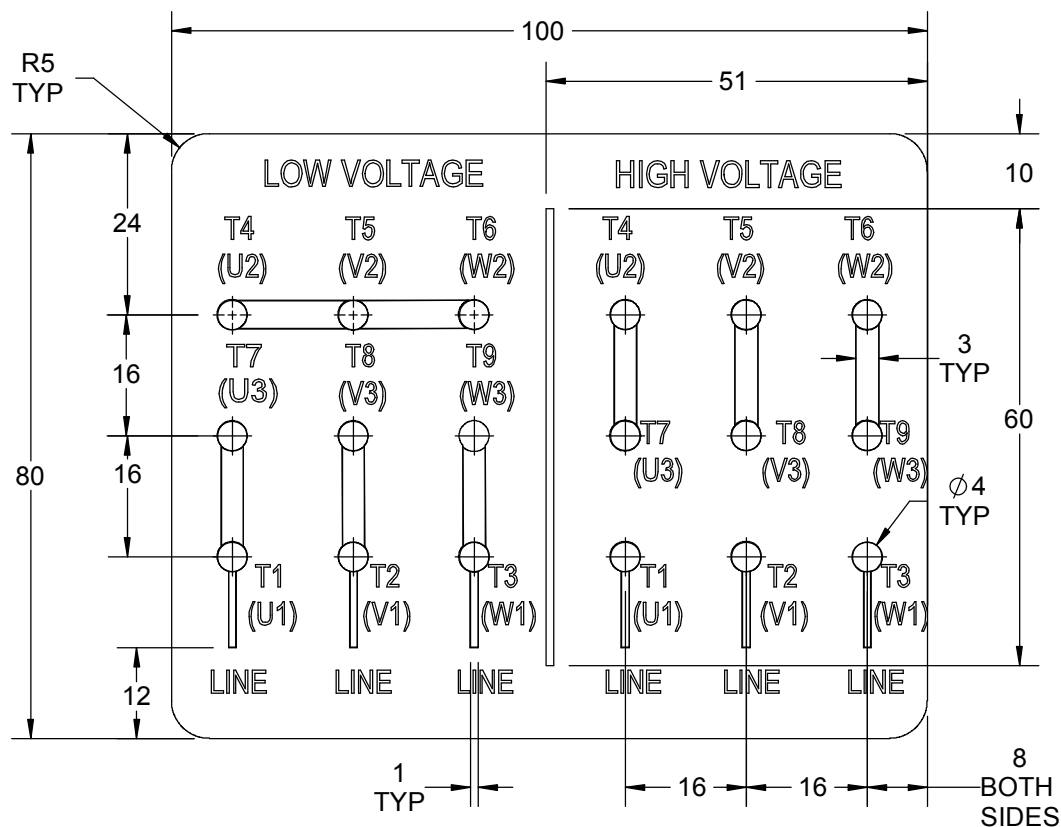
Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	6	Rotation	Reversible
Resistance Main	3.31 Ohms	Mounting	Round
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Overall Length	15.71 in
Frame Length	6.85 in	Shaft Diameter	1.102 in
Shaft Extension	2.36 in	Assembly/Box Mounting	F3
Inverter Load	CONSTANT 2:1/VARIABLE 10:1		
Connection Drawing	8442000675	Outline Drawing	SS620898



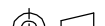


DRAWING REVISION A	REVISION BY MSH	DATE 11/02/2019
ECO ECO-0161495	APPROVED BY JAY	DATE 11/02/2019
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DRAWN BY MSH	marathon™ Motors		
DATE 11/02/2019			
APPROVED BY JAY	DESCRIPTION OUTLINE		
DATE 11/02/2019	IEC-112M-B14A, MOTOR TYPE: NA-TEFC-CAST IRON		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER SS620898	SHEET 1 OF 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								
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							DATE 29/01/2019								
							REFERENCE		MATERIAL		PROCESS/FINISH				
						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: SS620898
WINDING: IE3L1126201 NONE 1
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: TCA2P23AE271GAA009
CAT #: R623
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 ²	MAX. LOAD WK ²	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
55 dBA	64 dBA	0.50 LB-FT ²	0.5 LB-FT ²	15 SEC.	2	58	KG.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAIN
FT-FLANGE-130	STANDARD	ROUND	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
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

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

REGAL®

Data Sheet

TCA2P23AE271GAA009

Date: 5/30/2019

Customer: _____

Attention: _____

Submitted by: Fareeda Dudekula

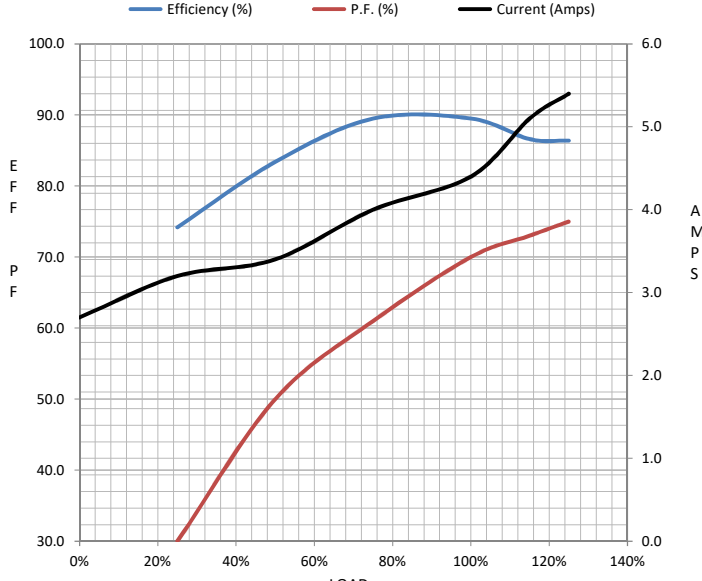
Submittal

Data @ 460 V

Motor Load Data

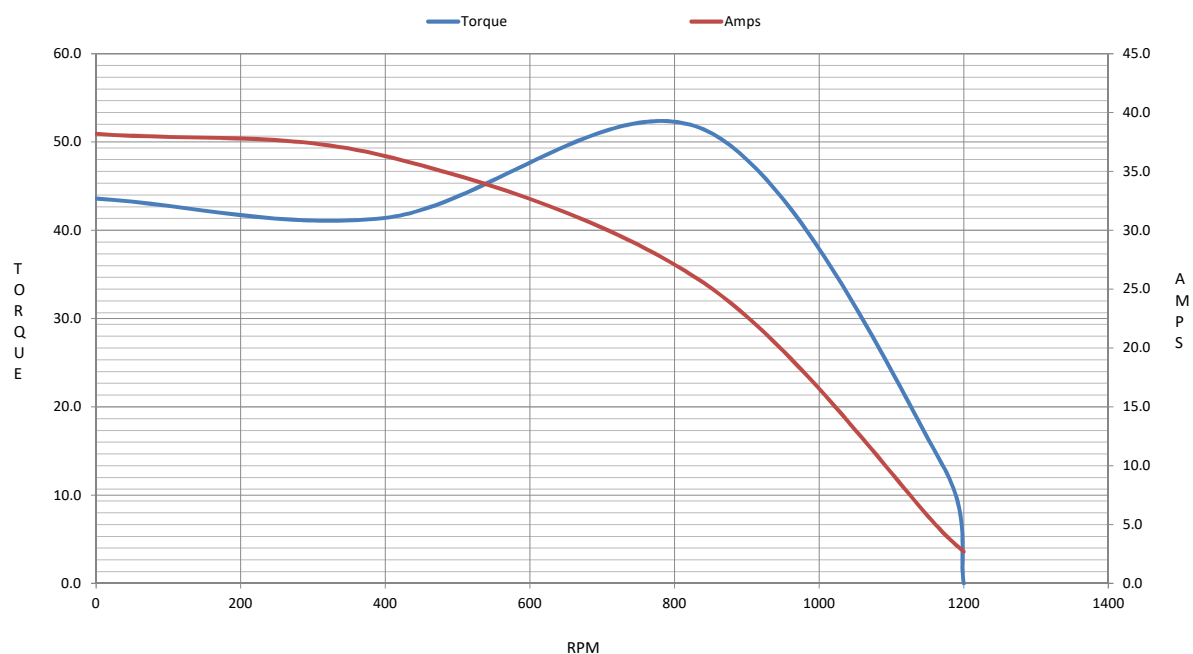
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	2.70	3.2	3.4	4.0	4.4	5.1	5.4	38.2	
Torque (ft-lb)	0.00	3.3	6.6	10.0	13.5	15.6	17.0	43.6	
RPM	1200	1193	1186	1179	1170	1,167	1164	0	
Efficiency (%)		74.2	83.4	89.5	89.5	86.6	86.4		
P.F. (%)	9.0	30.0	50.0	61.0	70.0	73.0	75.0	63.4	

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																																																												
<div><div>— Efficiency (%) — P.F. (%) — 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>1200</td></tr><tr><td>Frame</td><td>112</td></tr><tr><td>Enclosure</td><td>TEFC</td></tr><tr><td>Construction</td><td>TCA 112M06</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>0.50 Lb-Ft²</td></tr><tr><td>Ref Wdg</td><td>IE3L1126201 NONE</td></tr><tr><td>Sound Pressure @ 1M</td><td>62 dBA</td></tr><tr><td>VFD Rating</td><td>CONSTANT 2:1/VARIABLE 10:1</td></tr><tr><td>Outline Dwg</td><td>SS620898</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>1.9860</td><td>1.7020</td><td>6.1460</td><td>7.4690</td><td>94.4540</td></tr></table>						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 wk²	0.50 Lb-Ft²	Ref Wdg	IE3L1126201 NONE	Sound Pressure @ 1M	62 dBA	VFD Rating	CONSTANT 2:1/VARIABLE 10:1	Outline Dwg	SS620898	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
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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 : TCA2P23AE271GAA009

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

Catalog No : R623

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