

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: TCA0033AE271GAA009

Catalog No: R653

Cast Iron Motor, 4 & 3 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 1200 & 1000 RPM, 132S Frame, TEFC



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**RegalRexnord**

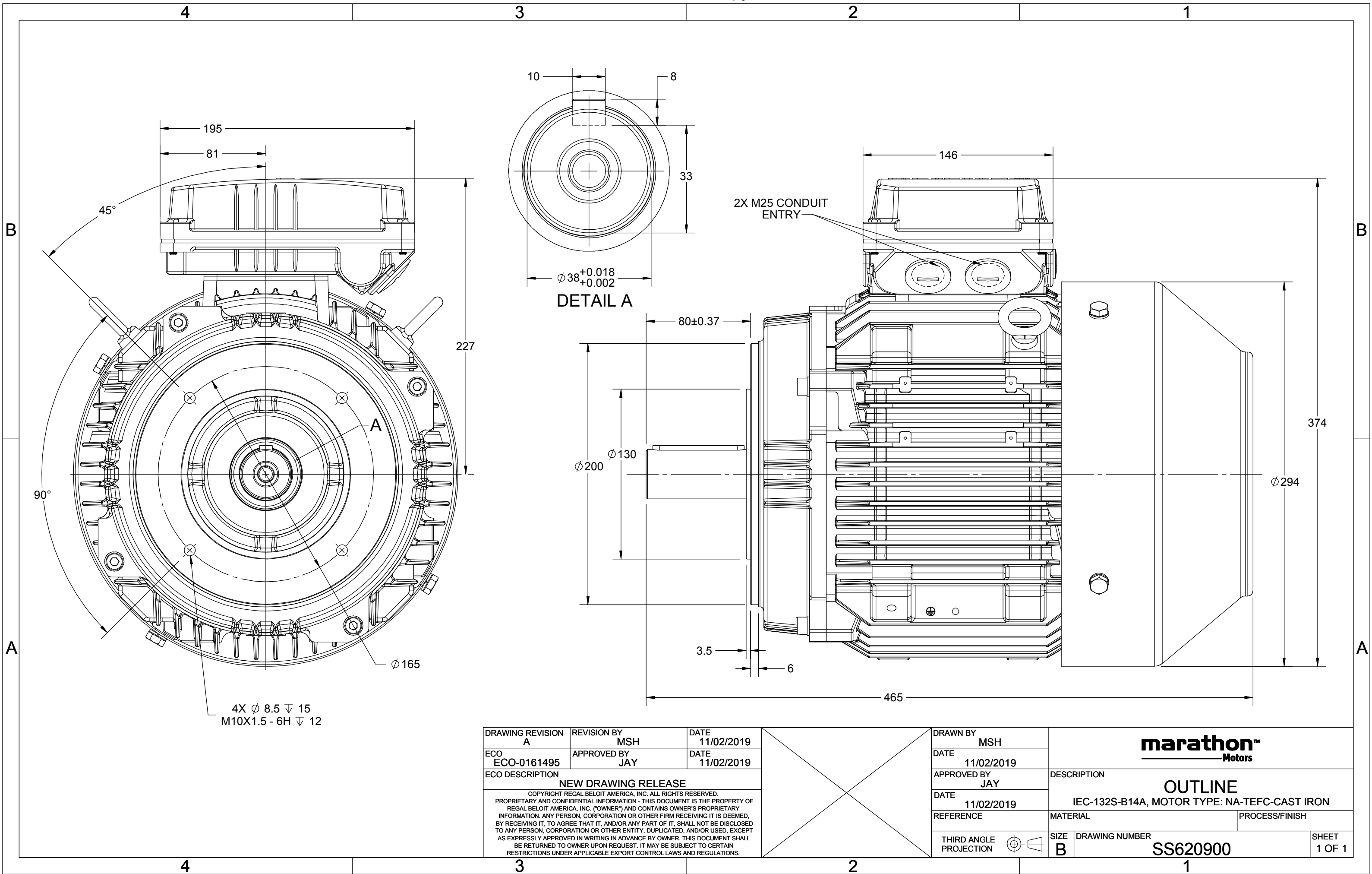
## Nameplate Specifications

Phase	3	Output HP	4 & 3 Hp
Output KW	3.0 & 2.2 kW	Voltage	230/460 & 200/400 V
Speed	1180 & 980 rpm	Service Factor	1.15 & 1.15
Frame	132S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	89.5 & 84.3 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	11.6/5.8 & 10.4/5.2 A	Power Factor	73
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	J
Drive End Bearing Size	6308	Opp Drive End Bearing Size	6208
UL	Recognized	CSA	N
CE	Y	IP Code	55
Number of Speeds	1	Efficiency Class	IE3

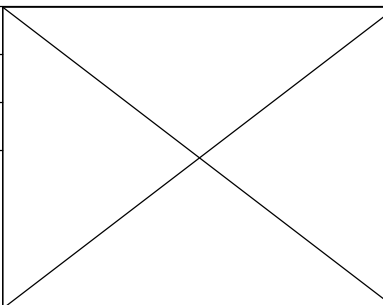


## Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	6	Rotation	Reversible
Resistance Main	2.75 Ohms	Mounting	Round
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Overall Length	18.31 in
Frame Length	7.95 in	Shaft Diameter	1.496 in
Shaft Extension	3.15 in	Assembly/Box Mounting	F3
Inverter Load	CONSTANT 2:1/VARIABLE 10:1		
Connection Drawing	8442000729	Outline Drawing	SS620900





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					
	DATE 11/02/2019					
	APPROVED BY JAY	DESCRIPTION				
	DATE 11/02/2019	OUTLINE				
		IEC-132S-B14A, MOTOR TYPE: NA-TEFC-CAST IRON				
	REFERENCE	MATERIAL			PROCESS/FINISH	
	THIRD ANGLE PROJECTION		SIZE B	DRAWING NUMBER SS620900		

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DRAWING REVISION  
A  
ECO  
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ECO DESCRIPTION

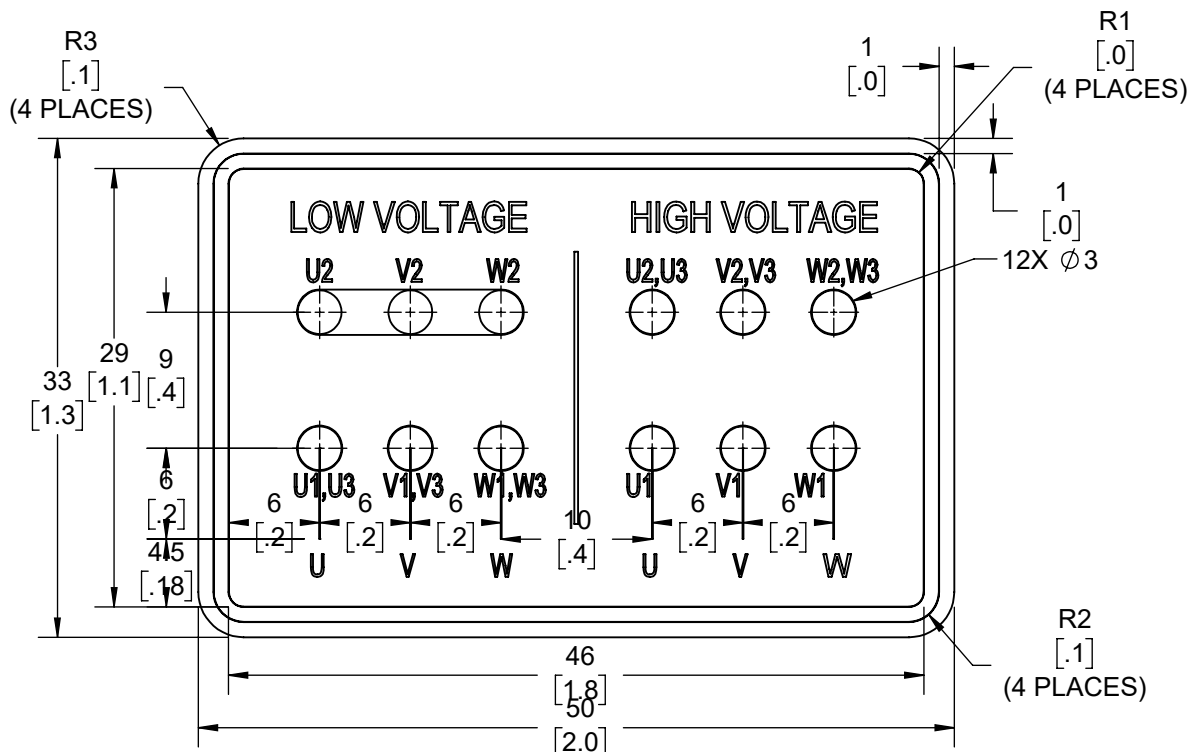
REVISION BY  
LK  
APPROVED BY  
JAY

REV DATE/© DATE  
30/6/2021  
DATE  
30/6/2021

NEW DRAWING

# GEOMETRIC TOLERANCE

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



## NOTES:

1. PRESSURE-SENSITIVE ADHESIVE COATED PAPER ON THE BACK OF SELF-ADHESIVE.
2. AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS BLACK.
3. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE BY THE TABLE.
4. LEAD TERMINAL MARKINGS FONT SIZE : U1-U3, V1-V3 AND W1-W3 OF ARIAL WITH 3mm SIZE
5. OTHER LETTER FONT SIZE SHOULD BE 3.5mm.

PRIMARY DIMENSIONS ARE mm  
INCH DIMENSIONS IN [BRACKETS]  
ARE FOR REFERENCE ONLY

DRAWN BY  
LK  
DATE  
30/6/2021  
APPROVED BY  
JAY  
DATE  
30/6/2021  
REFERENCE

THIRD ANGLE  
PROJECTION



Regal Beloit America, Inc.

DESCRIPTION

**CONN DIAGRAM-NAMEPLATE**  
9LEADS - STAR CONNECTION

MATERIAL

REFER NOTES

PROCESS/FINISH

SIZE  
A

DRAWING NUMBER

**8442000729**

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: SS620900  
WINDING: IE3L1326201 NONE 1  
SPEED: \_\_\_\_\_

CUSTOMER P.O. #: \_\_\_\_\_  
REFERENCE MODEL #: TCA0033AE271GAA009  
CAT #: R653  
CUSTOMER PART #: \_\_\_\_\_  
MOUNTING: F3

### TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
4	3.0	1200	1180	132S	TEFC	TCA 132SA06	J	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (* C)	ELEV.(Ft.)
3	60/50	230/460#200/400	11.6/5.8&10.4/5.2	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	89.5	3/4 LD EFF	89.5	1/2 LD EFF	86.8	GTD EFF	ELECT. TYPE
F.L. PF	73.0	3/4 LD PF	64.0	1/2 LD PF	53.0	87.9	SQ CAGE INV RATED

F.L. TORQUE		LR AMPS @ 460 V		L.R. TORQUE		B.D. TORQUE		F.L. RISE (° C)			
17.9	LB-FT	37.7		38.9	LB-FT	217%	51.4	LB-FT	287%	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
65 dBA	74 dBA		1.17 LB-FT <sup>2</sup>	1.17 LB-FT <sup>2</sup>	15 SEC.	2	77	KG.

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

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAIN
FT-FLANGE-165	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
6308 6208							

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
1.702	0.993	5.177	4.538	78.145	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
		NONE PPR

PREPARED BY: _____ DATE: 11/16/2020	BRAKE: NONE NONE NONE	FT-LB: NA VOLTAGE: NONE	HZ: _____ UL: V - LI,ME-INS,CONST UL REC
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FORM: 3531 REV\_4 2/27/06



## Data Sheet

TCA0033AE271GAA009

Date: 5/30/2019

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

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

Submitted by: Fareeda Dudekula

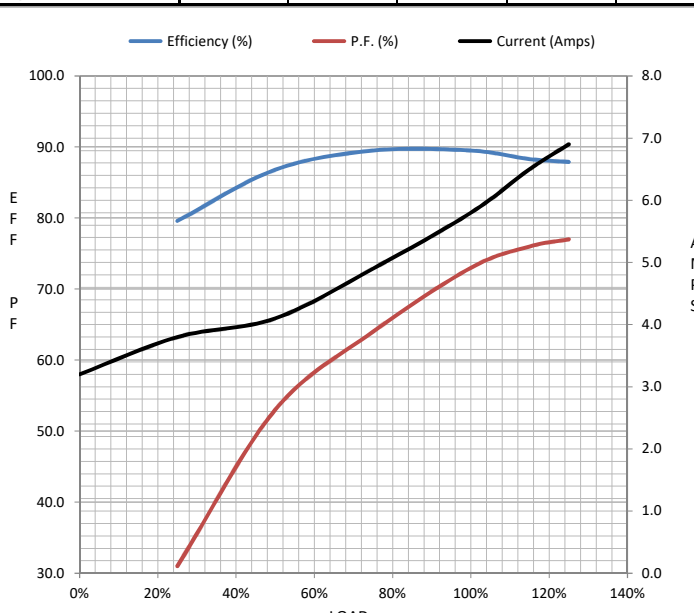
Submittal

Data @ 460 V

## Motor Load Data

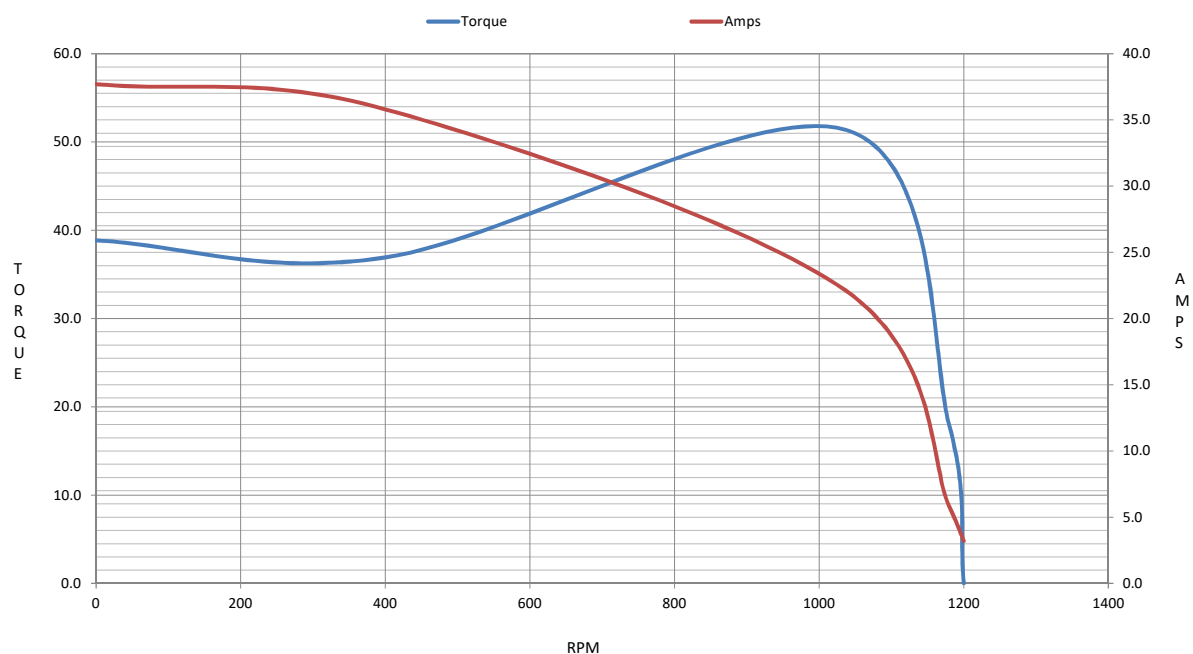
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	3.2	3.8	4.1	4.9	5.8	6.5	6.9	37.7	
Torque (ft-lb)	0.00	4.4	8.8	13.3	17.9	20.6	22.4	38.9	
RPM	1200	1195	1190	1184	1180	1,174	1172	0	
Efficiency (%)		79.6	86.8	89.5	89.5	88.3	87.9		
P.F. (%)	7.0	31.0	53.0	64.0	73.0	76.0	77.0	63.4	

## Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle					
Speed (RPM)	0	400	1037	1180	1200					
Current (Amps)	37.7	35.8	22.1	5.8	3.2					
Torque (ft-lb)	38.9	36.9	51.4	17.9	0.00					
<div><div>Efficiency (%)</div><div>P.F. (%)</div><div>Current (Amps)</div></div> 						Information Block				
						HP		4.0		
						Sync. RPM		1200		
						Frame		132		
						Enclosure		TEFC		
						Construction		TCA 132SA06		
						Voltage		230/460#200/400 V		
						Frequency		60 Hz		
						Design		N		
						LR Code letter		J		
						Service Factor		1.15		
						Temp Rise @ FL		80 °C		
						Duty		CONT		
						Ambient		40 °C		
						Elevation		3,300 feet		
						Rotor/Shaft wk²		1.17 Lb-Ft²		
						Ref Wdg		IE3L1326201 NONE		
Sound Pressure @ 1M		65 dBA								
VFD Rating		CONSTANT 2:1/VARIABLE 10:1								
Outline Dwg		SS620900								
Conn. Diag		8442000675								
Additional Specifications:										
0										
0										
EQUIV CKT (OHMS / PHASE)										
R1		R2		X1		X2		Xm		
1.7020		0.9930		5.1770		4.5380		78.1450		

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 : TCA0033AE271GAA009

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

Catalog No : R653

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**