

# PRODUCT INFORMATION PACKET

Model No: TCA0032AE221GAA009

Catalog No: R252

Cast Iron Motor, 4 & 3 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 1800 & 1500 RPM, 100L Frame, TEFC



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### Nameplate Specifications

Phase	<b>3</b>	Output HP	<b>4 &amp; 3 Hp</b>
Output KW	<b>3.0 &amp; 2.2 kW</b>	Voltage	<b>230/460 &amp; 200/400 V</b>
Speed	<b>1765 &amp; 1470 rpm</b>	Service Factor	<b>1.15 &amp; 1.15</b>
Frame	<b>100L</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>No Protection</b>	Efficiency	<b>89.5 &amp; 86.7 %</b>
Ambient Temperature	<b>40 °C</b>	Frequency	<b>60 &amp; 50 Hz</b>
Current	<b>10.4/5.2 &amp; 9.2/4.6 A</b>	Power Factor	<b>81</b>
Duty	<b>Continuous</b>	Insulation Class	<b>F</b>
Design Code	<b>N (IEC)</b>	KVA Code	<b>L</b>
Drive End Bearing Size	<b>6206</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>4</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>3.18 Ohms</b>	Mounting	<b>Round</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>15.67 in</b>
Frame Length	<b>7.87 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>SS600216A</b>



4

3

Uncontrolled Copy

2

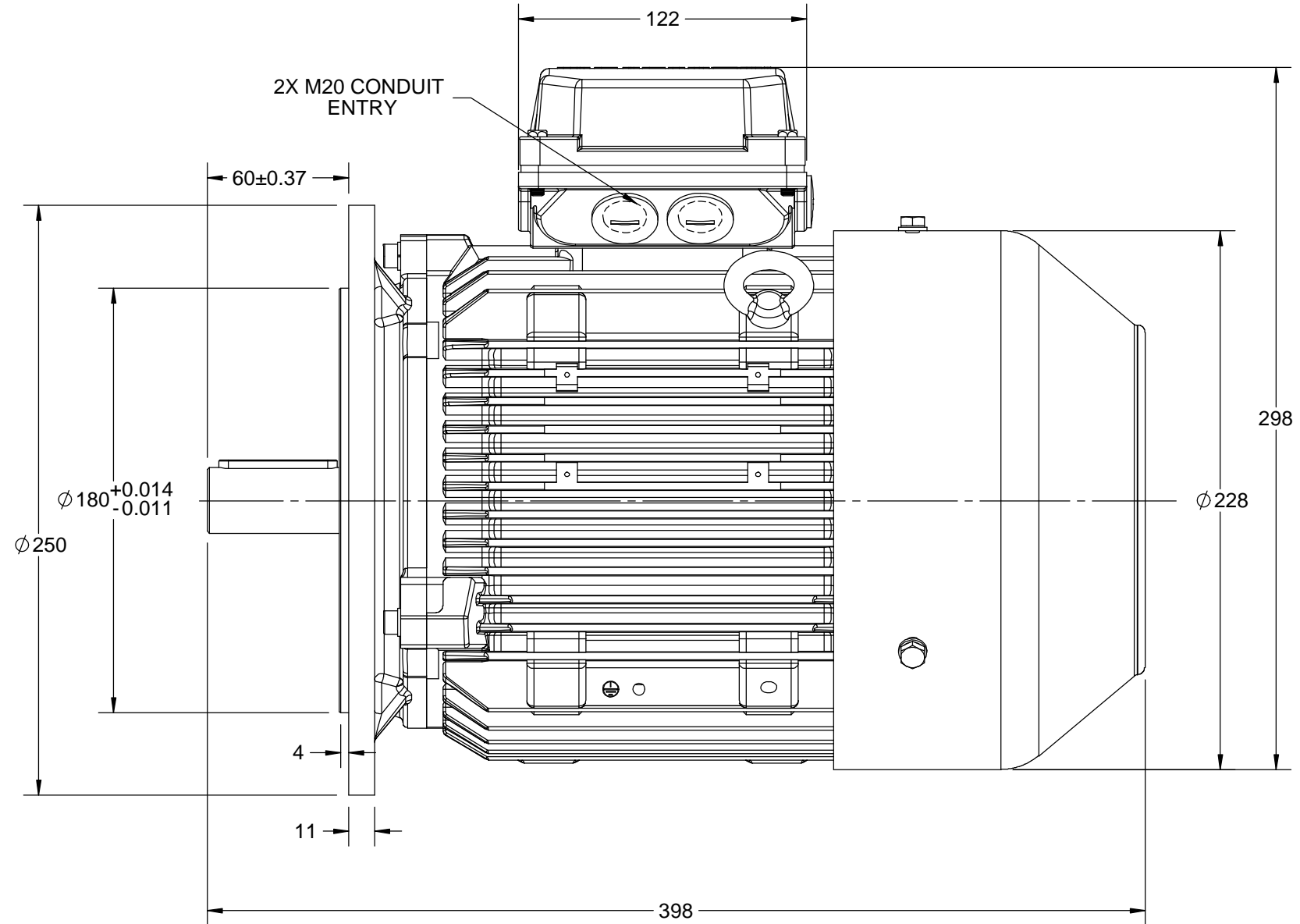
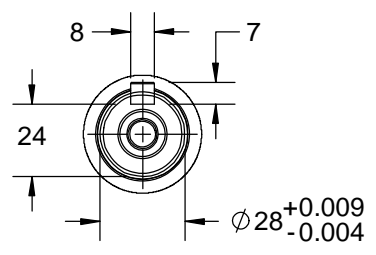
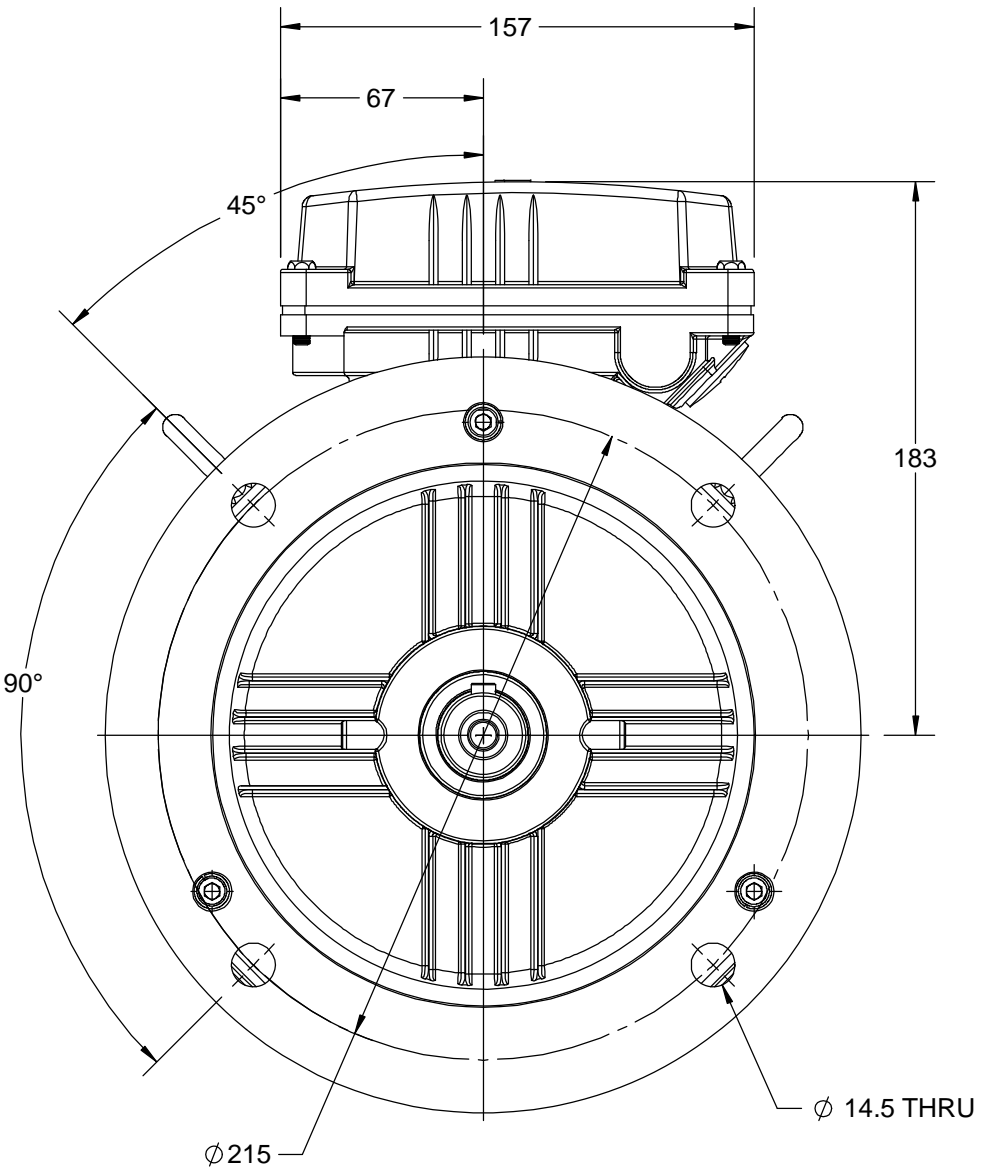
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B

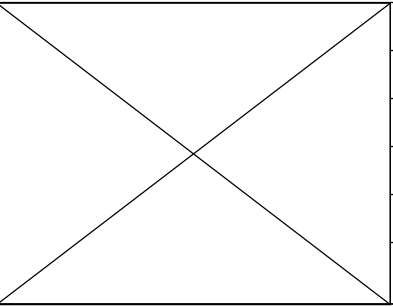
B

A

A



DRAWING REVISION A	REVISION BY NIV	DATE 10/12/2018
ECO ECO-0157171	APPROVED BY JAY	DATE 10/12/2018
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DRAWN BY NIV	
DATE 10/12/2018	
APPROVED BY JAY	
DATE 10/12/2018	
REFERENCE	DESCRIPTION <b>OUTLINE</b> IEC-100 FR.- B5 MOTOR TYPE: TEFC-CAST IRON
THIRD ANGLE PROJECTION	MATERIAL
SIZE B	PROCESS/FINISH
DRAWING NUMBER SS600216A	SHEET 1 OF 1

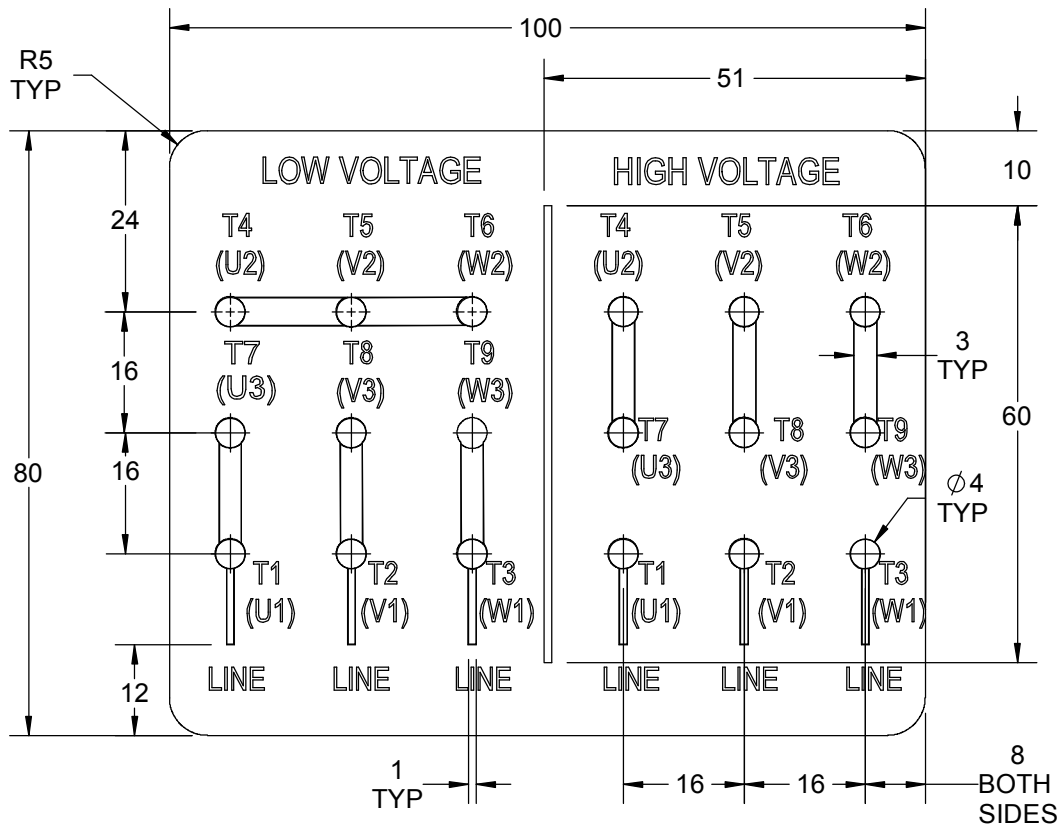
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3

2

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>	Regal Beloit America, Inc.	
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: SS600216A  
WINDING: IE3L1004202 NONE 1  
SPEED: \_\_\_\_\_

CUSTOMER P.O. #: \_\_\_\_\_  
REFERENCE MODEL #: TCA0032AE221GAA009  
CAT #: R252  
CUSTOMER PART #: \_\_\_\_\_  
MOUNTING: F3

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
4	3.0	1800	1765	100L	TEFC	TCA 100LB04	L	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV.(Ft.)
3	60/50	230/460#200/400	10.4/5.2&9.2/4.6	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	89.5	3/4 LD EFF	89.5	1/2 LD EFF	86.3	GTD EFF	ELECT. TYPE
F.L. PF	81.0	3/4 LD PF	75.0	1/2 LD PF	64.0	87.9	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)
11.9 LB-FT	48.9	35.4 LB-FT 297%	41.8 LB-FT 351%	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	49 KG.

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

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
FF-FLANGE-215	STANDARD	ROUND	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
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
1.986	1.135	3.191	5.744	108.708	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 HZ:
FORM: 3531 REV_4 2/27/06	UL: V - LI,ME-INS,CONST UL REC



Data Sheet

TCA0032AE221GAA009

Date: 5/30/2019  
Customer:  
Attention:

Submittal

Submitted by: Fareeda Dudekula

Data @ 460 V

Motor Load Data

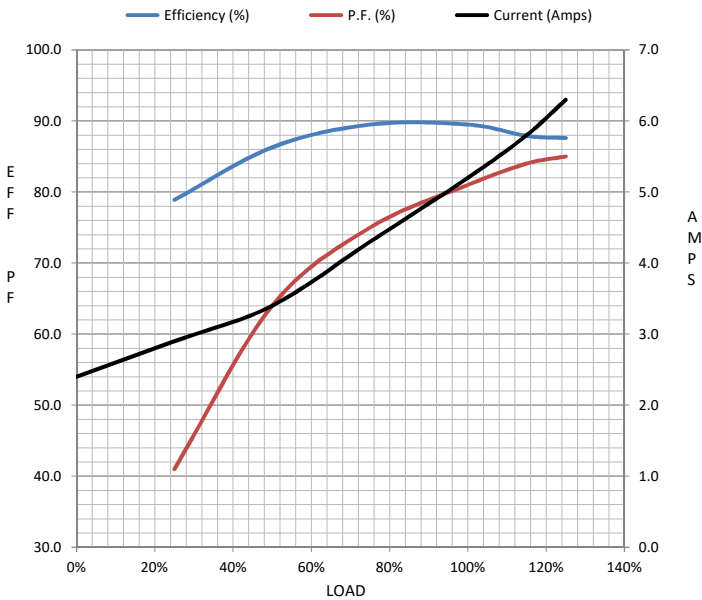
Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	2.40	2.90	3.4	4.3	5.2	5.8	6.3	48.9
Torque (ft-lb)	0.00	2.90	5.9	8.9	11.9	13.8	15.0	35.4
RPM	1800	1791	1782	1773	1765	1,757	1753	0
Efficiency (%)		78.9	86.3	89.5	89.5	87.9	87.6	
P.F. (%)	10.0	41.0	64.0	75.0	81.0	84.0	85.0	63.4

Motor Speed Data

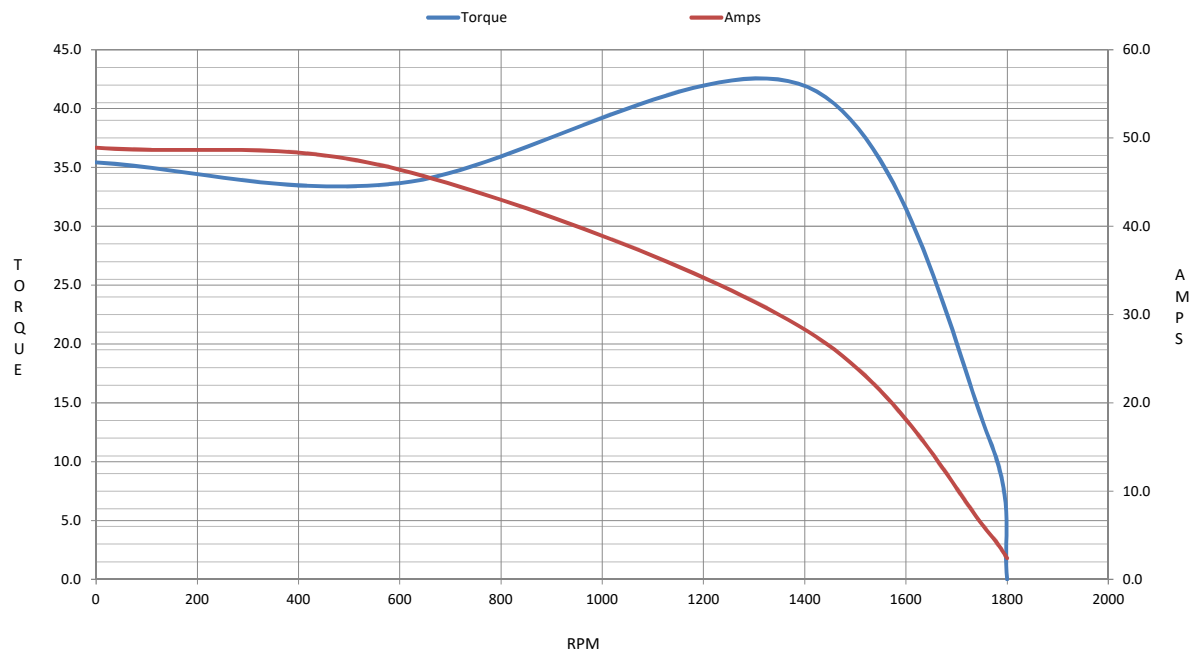
	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1406	1765	1800
Current (Amps)	48.9	46.4	28.1	5.2	2.40
Torque (ft-lb)	35.4	33.7	41.8	11.9	0.00

Information Block

HP	4.0			
Sync. RPM	1800			
Frame	100			
Enclosure	TEFC			
Construction	TCA 100LB04			
Voltage	230/460#200/400 V			
Frequency	60 Hz			
Design	N			
LR Code letter	L			
Service Factor	1.15			
Temp Rise @ FL	80 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	3,300 feet			
Rotor/Shaft wk <sup>2</sup>	0.34 Lb-Ft <sup>2</sup>			
Ref Wdg	IE3L1004202 NONE			
Sound Pressure @ 1M	55 dBA			
VFD Rating	CONSTANT 2:1/VARIABLE 10:1			
Outline Dwg	SS600216A			
Conn. Diag	8442000675			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
1.9860	1.1350	3.1910	5.7440	108.7080



Speed - Torque Curve



IEC

## 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 : TCA0032AE221GAA009

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

Catalog No : R252

Rework No : N/A

Directives :

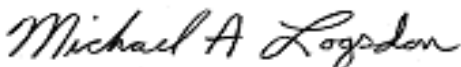
Low Voltage Directive 2014/35/EU

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**