

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0031AP211GAA009

Catalog No: R451B

Cast Iron Motor, 4 HP, 3 Ph, 60 Hz, 575 V, 3600 RPM, 100L Frame, TEFC



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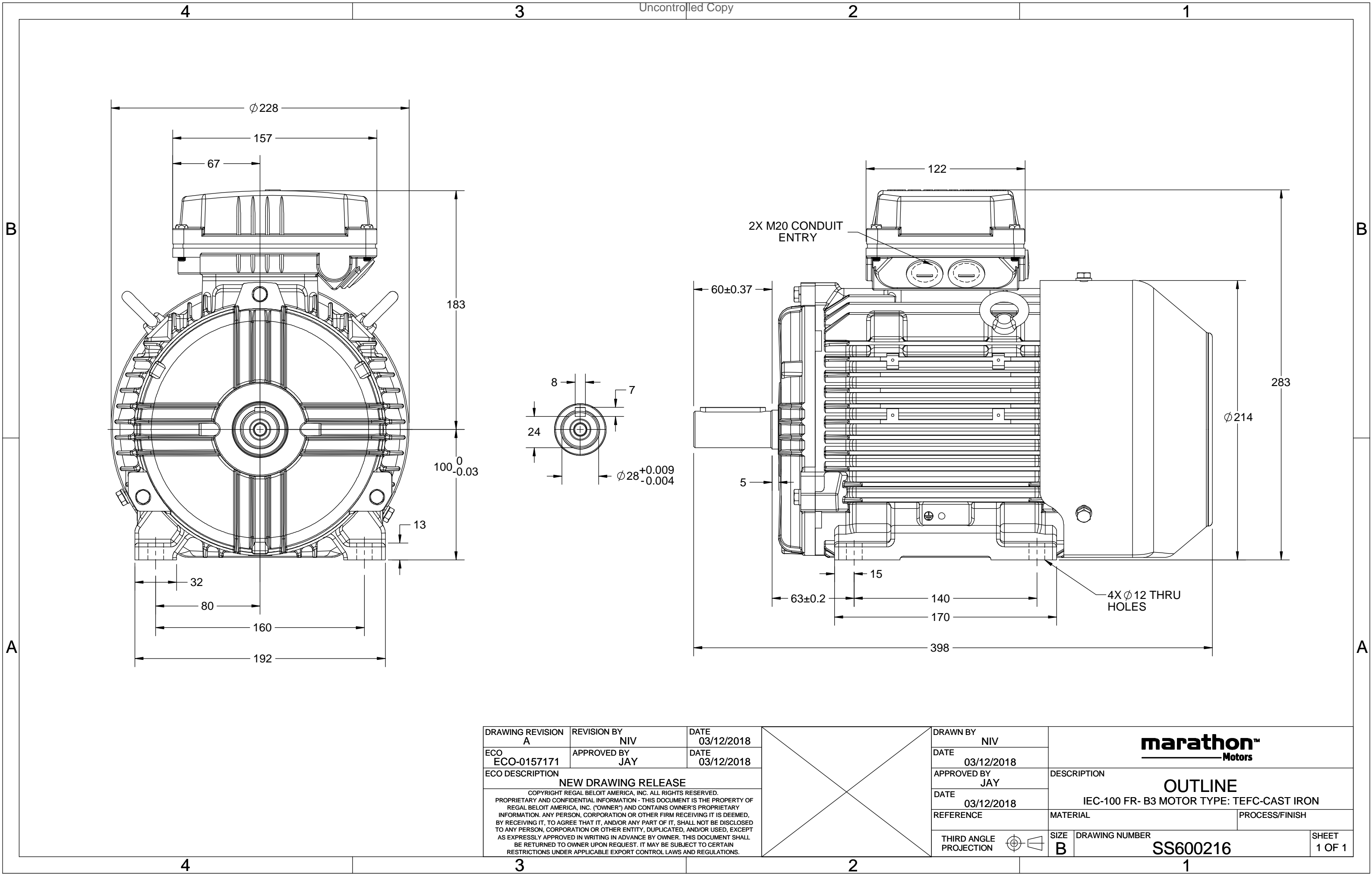
RegalRexnord

Nameplate Specifications

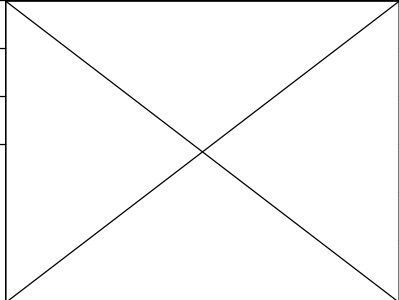
Output HP	4 Hp	Output KW	3.0 kW
Frequency	60 Hz	Voltage	575 V
Current	3.9 A	Speed	3500 rpm
Service Factor	1.15	Phase	3
Efficiency	88.5 %	Power Factor	89
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	K
Frame	100L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
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	2	Rotation	Reversible
Resistance Main	3.74 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	8442000685

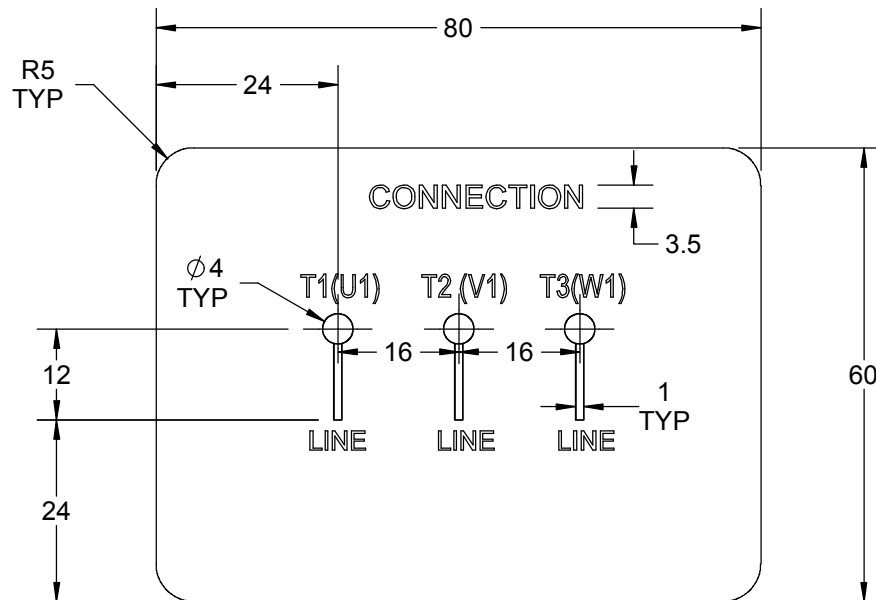


DRAWING REVISION A	REVISION BY NIV	DATE 03/12/2018
ECO ECO-0157171	APPROVED BY JAY	DATE 03/12/2018
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DRAWN BY NIV			
DATE 03/12/2018			
APPROVED BY JAY	DESCRIPTION OUTLINE		
DATE 03/12/2018	IEC-100 FR- B3 MOTOR TYPE: TEFC-CAST IRON		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION 	SIZE B	DRAWING NUMBER SS600216	SHEET 1 OF 1

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-T2 - T3 & U1-V1-W1 OF ARIAL WITH 3mm SIZE
5. OTHER LETTER FONT SIZE SHOULD BE 3.5mm.

DRAWING REVISION A	REVISION BY A. KEETHA	DATE 25/07/2019	<div></div>	DRAWN BY A. KEETHA	<div><div>REGALTM</div><div>Regal Beloit America, Inc.</div></div>		
ECO ECO-0171114	APPROVED BY SN	DATE 25/07/2019		DATE 24/07/2019	<div>DESCRIPTION</div> <div>CONNECTION DIAGRAM</div> <div>3 LEAD CONNECTION</div>		
ECO DESCRIPTION				APPROVED BY SN			
NEW DRAWING RELEASE				DATE 24/07/2019			
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				THIRD ANGLE PROJECTION	<div><div></div><div></div></div>	SIZE A	DRAWING NUMBER 8442000685



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

DATA VOLTS: 575

CERTIFICATION DATA SHEET

CUSTOMER: _____
ORDER #: _____
CONN. DIAGRAM: 8442000685
OUTLINE: SS600216
WINDING: IE3L1002201 NONE 3
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: TCA0031AP211GAA009
CAT #: R451B
CUSTOMER PART #: _____
MOUNTING: F3

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
4	3.0	3600	3500	100L	TEFC	TCA 100LA02	K	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV.(Ft.)
3	60	575	3.9	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	88.5	3/4 LD EFF	86.5	1/2 LD EFF	86.0	GTD EFF	ELECT. TYPE
F.L. PF	89.0	3/4 LD PF	84.0	1/2 LD PF	75.0	84.5	SQ CAGE INV RATED

F.L. TORQUE		LR AMPS @ 460 V	L.R. TORQUE		B.D. TORQUE		F.L. RISE (° C)		
6.0	LB-FT	36.0	19.1	LB-FT	318%	22.1	LB-FT	368%	80

SOUND PRESSURE @ 3 FT.	SOUND	POWER	ROTOR WK ²	MAX. LOAD WK ²	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
63 dBA	72 dBA		0.11 LB-FT ²	0.11 LB-FT ²	7 SEC.	2	41	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
5.713	3.809	9.695	3.289	350.231	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: 11/10/2020	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: _____



Data Sheet

TCA0031AP211GAA009

Date: 5/29/2019

Customer: _____

Attention: _____

Submitted by: Fareeda Dudekula

Submittal

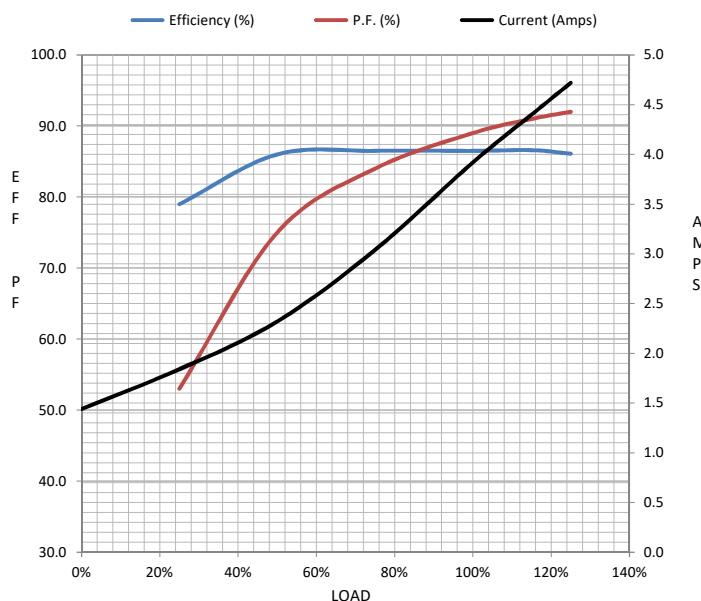
Data @ 575 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	1.44	1.84	2.32	3.0	3.9	4.4	4.7	36.0	
Torque (ft-lb)	0.00	1.50	3.0	4.5	6.0	6.9	7.6	19.1	
RPM	3600	3574	3551	3526	3500	3,482	3470	0	
Efficiency (%)		79.0	86.0	86.5	86.5	86.6	86.1		
P.F. (%)	12.0	53.0	75.0	84.0	89.0	91.0	92.0	63.4	

Motor Speed Data

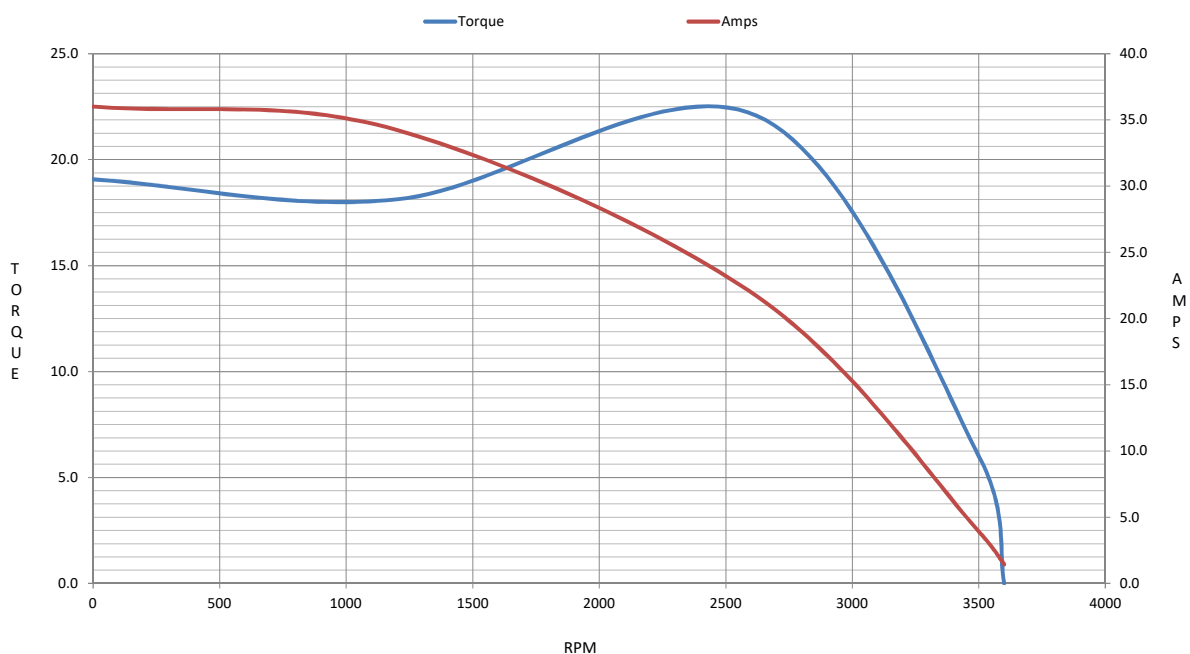
	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1200	2623	3500	3600
Current (Amps)	36.0	34.2	21.7	3.9	1.44
Torque (ft-lb)	19.1	18.1	22.1	6.0	0.00



Information Block				
HP		4.0		
Sync. RPM		3600		
Frame		100		
Enclosure		TEFC		
Construction		TCA 100LA02		
Voltage		575 V		
Frequency		60 Hz		
Design		N		
LR Code letter		K		
Service Factor		1.15		
Temp Rise @ FL		80 °C		
Duty		CONT		
Ambient		40 °C		
Elevation		3,300 feet		
Rotor/Shaft wk²		0.11 Lb-Ft²		
Ref Wdg		IE3L1002201 NONE		
Sound Pressure @ 1M		63 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
3.6560	2.4380	6.2050	2.1050	224.1480

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 : TCA0031AP211GAA009

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

Catalog No : R451B

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