

PRODUCT INFORMATION PACKET

Model No: TCA0151AP211GAA009

Catalog No: R436

Cast Iron Motor, 20 HP, 3 Ph, 60 Hz, 575 V, 3600 RPM, 160M Frame, TEFC



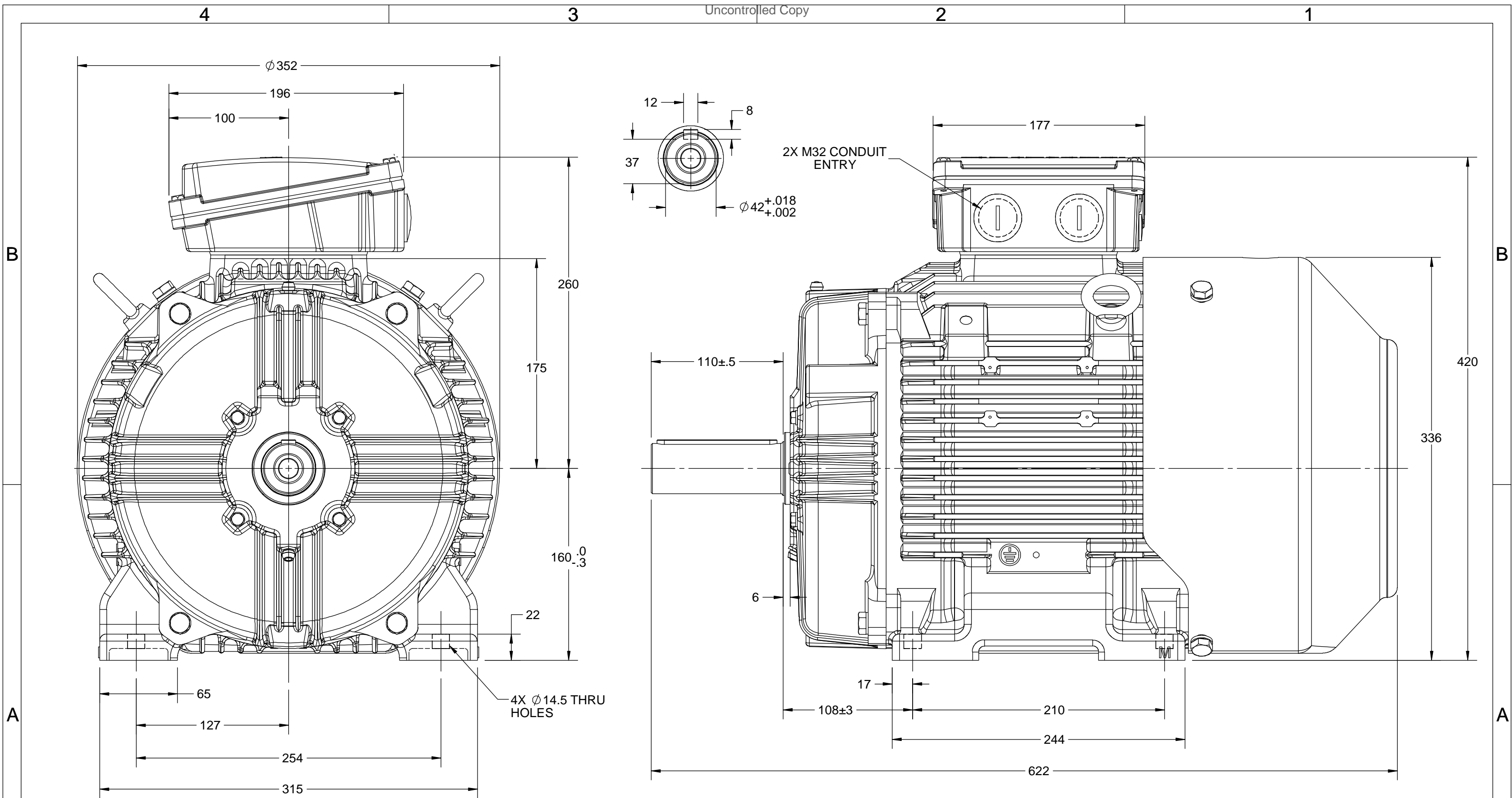
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Nameplate Specifications

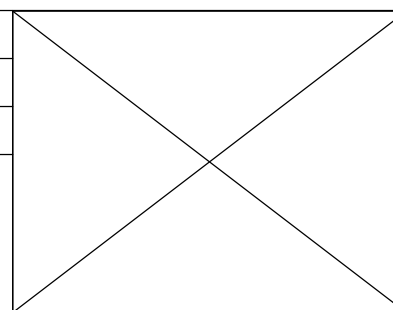
Output HP	20 Hp	Output KW	15.0 kW
Frequency	60 Hz	Voltage	575 V
Current	18.3 A	Speed	3540 rpm
Service Factor	1.15	Phase	3
Efficiency	91 %	Power Factor	91
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	G
Frame	160M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6209
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	.73 Ohms	Mounting	B3
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Overall Length	24.49 in
Frame Length	10.00 in	Shaft Diameter	1.654 in
Shaft Extension	4.33 in	Assembly/Box Mounting	F3
Inverter Load	CONSTANT 2:1/VARIABLE 10:1		
Connection Drawing	8442000685	Outline Drawing	SS208563

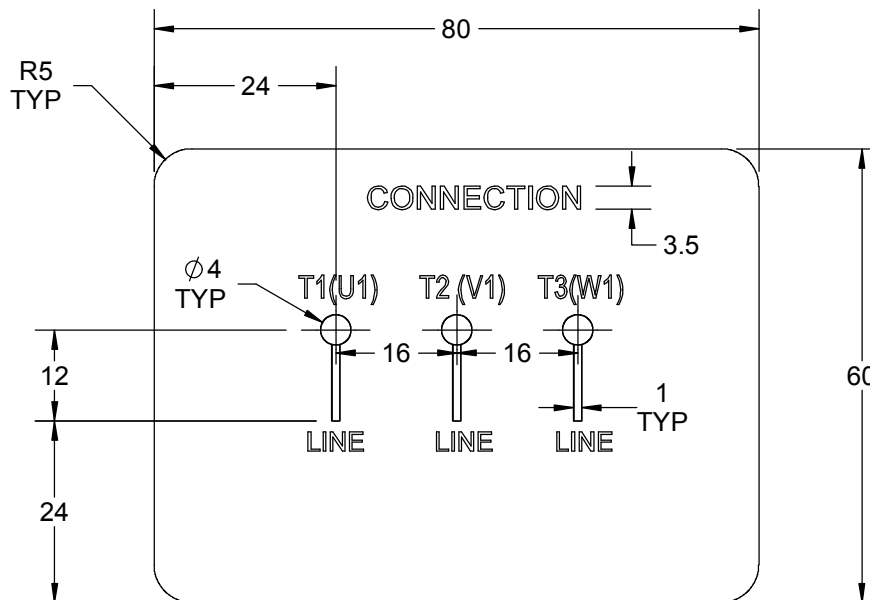


DRAWING REVISION A	REVISION BY LK	DATE 05/12/2018
ECO ECO-0157830	APPROVED BY JAY	DATE 05/12/2018
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DRAWN BY LK	marathon™ Motors	
DATE 05/12/2018		
APPROVED BY JAY	DESCRIPTION OUTLINE IEC-160M-B3-MTG MOTOR TYPE : TEFC-CAST IRON	
DATE 05/12/2018	MATERIAL	PROCESS/FINISH
REFERENCE	SIZE B	DRAWING NUMBER SS208563
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-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		DRAWN BY A. KEETHA	Regal Beloit America, Inc.	
ECO ECO-0171114	APPROVED BY SN	DATE 25/07/2019		DATE 24/07/2019		
ECO DESCRIPTION NEW DRAWING RELEASE				APPROVED BY SN	DESCRIPTION CONNECTION DIAGRAM 3 LEAD CONNECTION	
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				REFERENCE	THIRD ANGLE PROJECTION	SIZE A



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

DATA VOLTS: 575

CERTIFICATION DATA SHEET

CUSTOMER: _____
ORDER #: _____
CONN. DIAGRAM: 8442000685
OUTLINE: SS208563
WINDING: IE3L1602202 NONE 3
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: TCA0151AP211GAA009
CAT #: R436
CUSTOMER PART #: _____
MOUNTING: F3

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
20	14.9	3600	3540	160M	TEFC	TCA 160MC02	G	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV.(Ft.)
3	60	575	18.3	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	91.0	3/4 LD EFF	91.0	1/2 LD EFF	91.3	GTD EFF	ELECT. TYPE
F.L. PF	91.0	3/4 LD PF	88.0	1/2 LD PF	82.0	89.7	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)
29.7 LB-FT	114	47.2 LB-FT 159%	76.7 LB-FT 258%	80

SOUND PRESSURE @ 3 FT.	SOUND	POWER	ROTOR WK ²	MAX. LOAD WK ²	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
75 dBA	84 dBA		1.59 LB-FT ²	1.59 LB-FT ²	7 SEC.	2	146	KG.

***** SUPPLEMENTAL INFORMATION *****

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAIN
STANDARD	STANDARD	B3	HORIZONTAL	NO	NONE	NO	NONE	BLUE (ENAMEL)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE	POLYREX EM	STANDARD IEC	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
BALL	BALL						
6309	6209						

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
1.108	0.450	2.458	2.355	101.517	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: 11/10/2020	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

TCA0151AP211GAA009

Date: 5/29/2019
Customer:
Attention:

Submittal

Submitted by: Fareeda Dudekula

Data @ 575 V

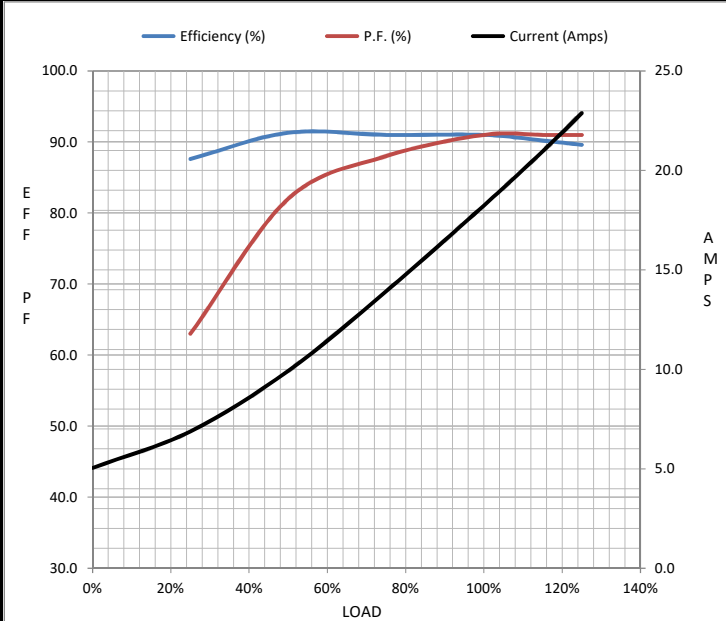
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	5.0	6.9	9.9	13.9	18.2	21.0	22.9	114
Torque (ft-lb)	0.00	7.3	14.7	22.1	29.7	34.2	37.3	47.2
RPM	3600	3586	3572	3558	3540	3,532	3524	0
Efficiency (%)		87.6	91.3	91.0	91.0	90.2	89.6	
P.F. (%)	9.0	63.0	82.0	88.0	91.0	91.0	91.0	63.4

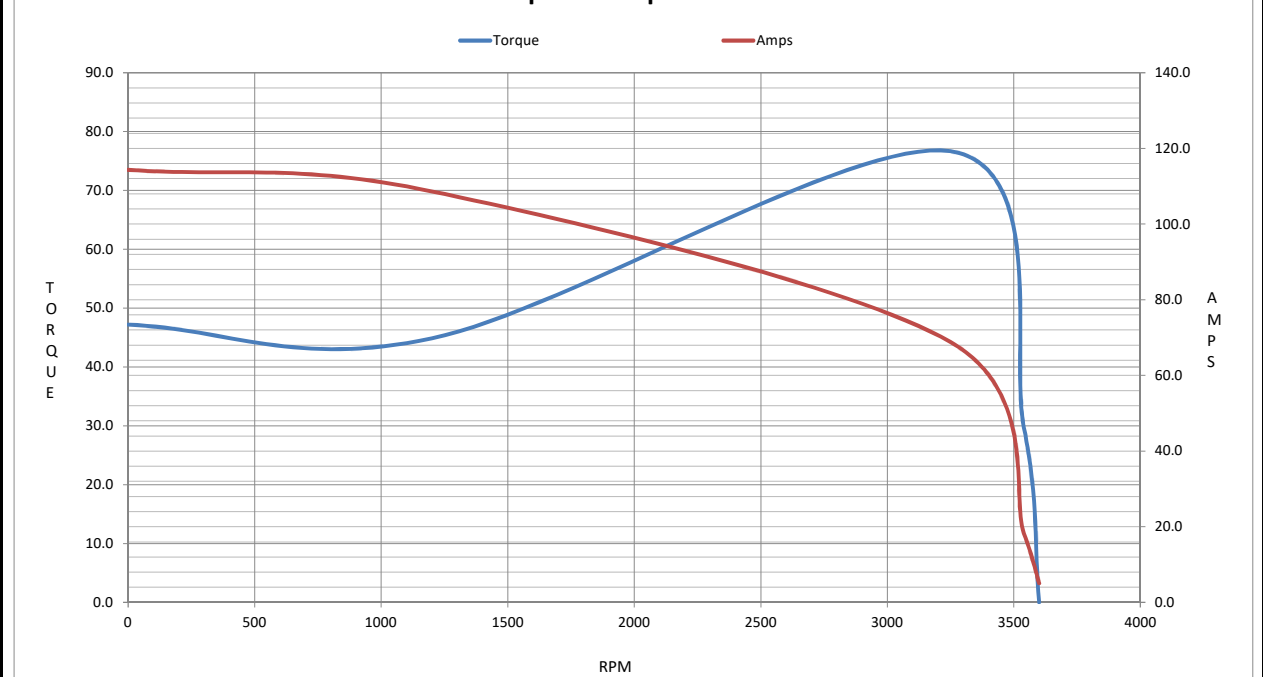
Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1200	3250	3540	3600
Current (Amps)	114	109	68.8	18.2	5.0
Torque (ft-lb)	47.2	44.9	76.7	29.7	0.00

Information Block				
HP	20.0			
Sync. RPM	3600			
Frame	160			
Enclosure	TEFC			
Construction	TCA 160MC02			
Voltage	575 V			
Frequency	60 Hz			
Design	N			
LR Code letter	G			
Service Factor	1.15			
Temp Rise @ FL	80 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	3,300 feet			
Rotor/Shaft wk ²	1.59 Lb-Ft ²			
Ref Wdg	IE3L1602202 NONE			
Sound Pressure @ 1M	75 dBA			
VFD Rating	CONSTANT 2:1/VARIABLE 10:1			
Outline Dwg	SS208563			
Conn. Diag	8442000677			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.7090	0.2880	1.5730	1.5070	64.9710



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 : TCA0151AP211GAA009

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

Catalog No : R436

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