

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0151AE271GAA009

Catalog No: R636

Cast Iron Motor, 20 & 15 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 3600 & 3000 RPM, 160M Frame,
TEFC



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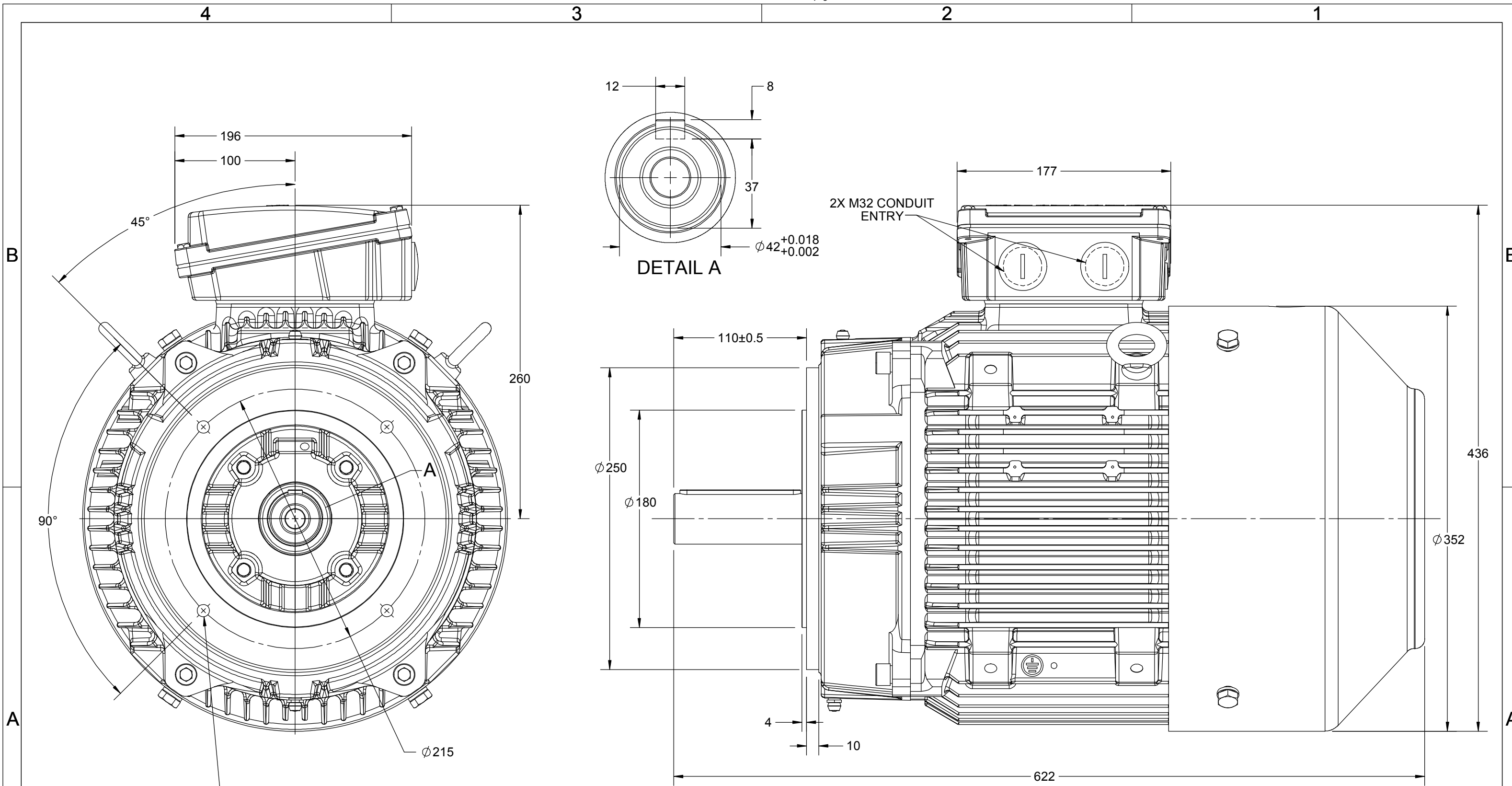
RegalRexnord

Nameplate Specifications

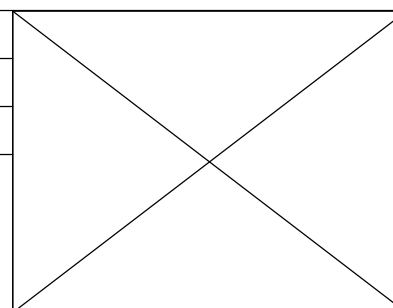
Phase	3	Output HP	20 & 15 Hp
Output KW	15.0 & 11.0 kW	Voltage	230/460 & 200/400 V
Speed	3540 & 2950 rpm	Service Factor	1.15 & 1.15
Frame	160M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	91 & 91.2 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	45.5/22.8 & 39/19.5 A	Power Factor	91
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	G
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	Round
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		
Outline Drawing	SS620904	Connection Drawing	8442000715



DRAWING REVISION A	REVISION BY MSH	DATE 11/02/2019
ECO ECO-0161495	APPROVED BY JAY	DATE 11/02/2019
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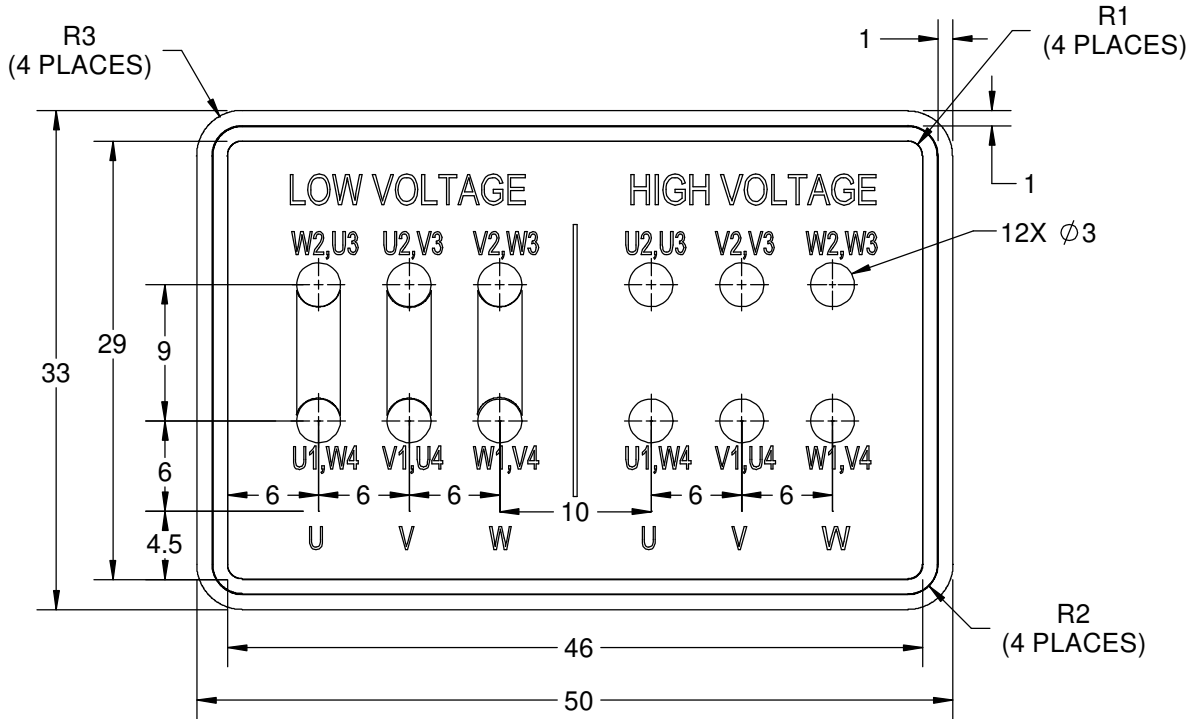


DRAWN BY MSH	marathon™ Motors	
DATE 11/02/2019		
APPROVED BY JAY	DESCRIPTION OUTLINE IEC-160M-B14A, MOTOR TYPE: NA-TEFC-CAST IRON	
DATE 11/02/2019	MATERIAL	PROCESS/FINISH
REFERENCE	SIZE B	DRAWING NUMBER SS620904
THIRD ANGLE PROJECTION		SHEET 1 OF 1

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DRAWING REVISION A	REVISION BY S.MUDDA	DATE 16/11/2020
ECO ECO-0194685	APPROVED BY SUMANTA	DATE 16/11/2020
ECO DESCRIPTION NEW DRAWING		

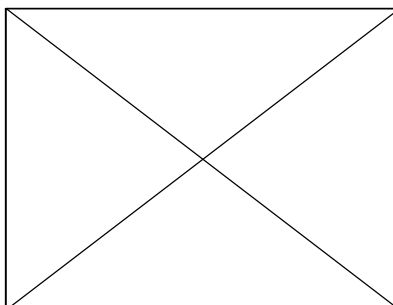
GEOMETRIC TOLERANCE		
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



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 : T1-T12 & U1-U4,V1-V4& W1-W4 OF ARIAL WITH 3mm SIZE
5. OTHER LETTER FONT SIZE SHOULD BE 3.5mm.

8WD.442.2017



DRAWN BY S.MUDDA	DESCRIPTION CONN DIAGRAM-NAMEPLATE	
	MATERIAL	
	PROCESS/FINISH	
	SIZE A	DRAWING NUMBER 8442000715
	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: 8442000677
OUTLINE: SS620904
WINDING: IE3L1602202 NONE 1
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: TCA0151AE271GAA009
CAT #: R636
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	60/50	230/460#200/400	45.5/22.8&39/19.5	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	143	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	148 KG.

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

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAIN
FT-FLANGE-215	STANDARD	ROUND	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
0.454	0.184	1.007	0.964	41.582	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
	FT-LB: NA
	VOLTAGE: NONE
	HZ: _____
	UL: V - LI,ME-INS,CONST UL REC

FORM: 3531 REV_4 2/27/06



Data Sheet

TCA0151AE271GAA009

Date: 5/30/2019
Customer: _____
Attention: _____

Submittal

Submitted by: Fareeda Dudekula

Data @ 460 V

Motor Load Data

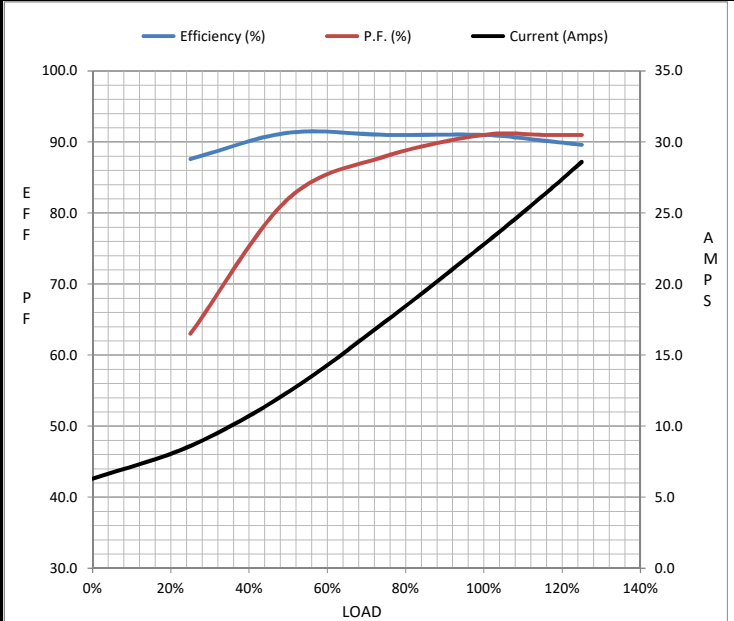
Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	6.3	8.6	12.4	17.4	22.8	26.2	28.6	143
Torque (ft-lb)	0.00	7.3	14.7	22.1	29.7	34.2	37.3	47.2
RPM	3600	3586	3572	3558	3540	3,532	3524	0
Efficiency (%)		87.6	91.3	91.0	91.0	90.2	89.6	
P.F. (%)	9.0	63.0	82.0	88.0	91.0	91.0	91.0	63.4

Motor Speed Data

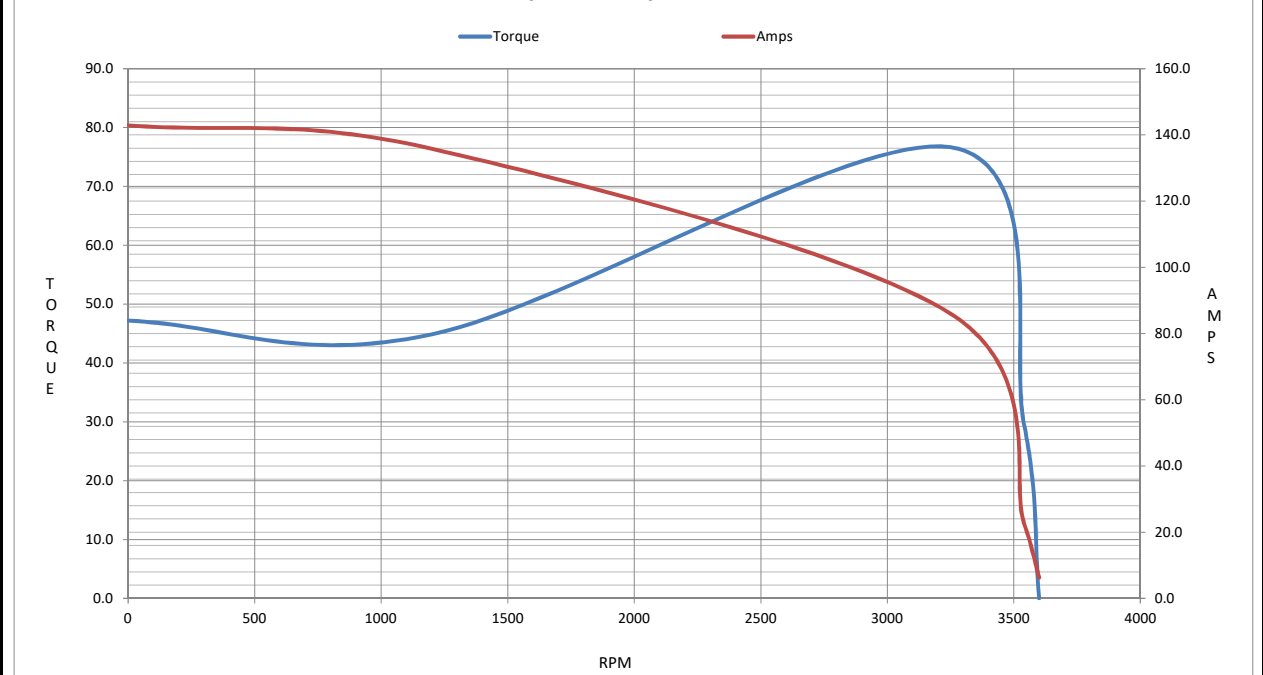
	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1200	3250	3540	3600
Current (Amps)	143	136	86.0	22.8	6.3
Torque (ft-lb)	47.2	44.9	76.7	29.7	0.00

Information Block

HP	20.0			
Sync. RPM	3600			
Frame	160			
Enclosure	TEFC			
Construction	TCA 160MC02			
Voltage	230/460#200/400 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	SS620904			
Conn. Diag	8442000677			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.4540	0.1840	1.0070	0.9640	41.5820



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 : TCA0151AE271GAA009

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

Catalog No : R636

Rework No : N/A

Directives :

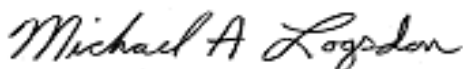
Low Voltage Directive 2014/35/EU

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