

# PRODUCT INFORMATION PACKET

marathon®  
Motors

Model No: TCA0222AE221GAA009

Catalog No: R243

Cast Iron Motor, 30 & 25 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 1800 & 1500 RPM, 180L Frame,  
TEFC



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RegalRexnord

### Nameplate Specifications

Phase	3	Output HP	30 & 25 Hp
Output KW	22.0 & 18.5 kW	Voltage	230/460 & 200/400 V
Speed	1780 & 1480 rpm	Service Factor	1.15 & 1.15
Frame	180L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	93.6 & 92.6 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	72/36 & 70/35 A	Power Factor	83
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	H
Drive End Bearing Size	6311	Opp Drive End Bearing Size	6211
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	4	Rotation	Reversible
Resistance Main	.3 Ohms	Mounting	Round
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Overall Length	29.53 in
Frame Length	14.41 in	Shaft Diameter	1.890 in
Shaft Extension	4.33 in	Assembly/Box Mounting	F3
Inverter Load	CONSTANT 2:1/VARIABLE 10:1		
Connection Drawing	8442000715	Outline Drawing	SS312998A



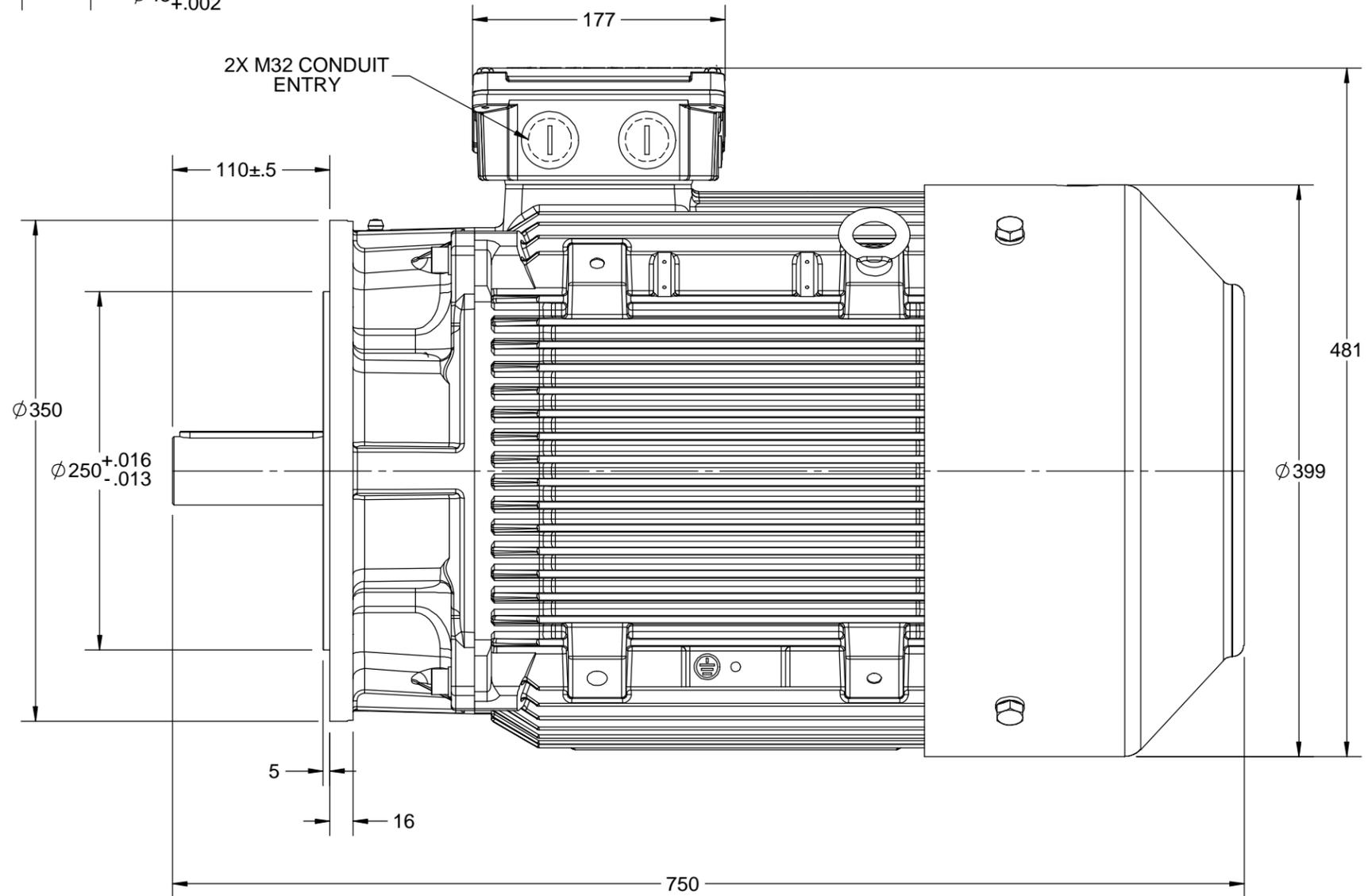
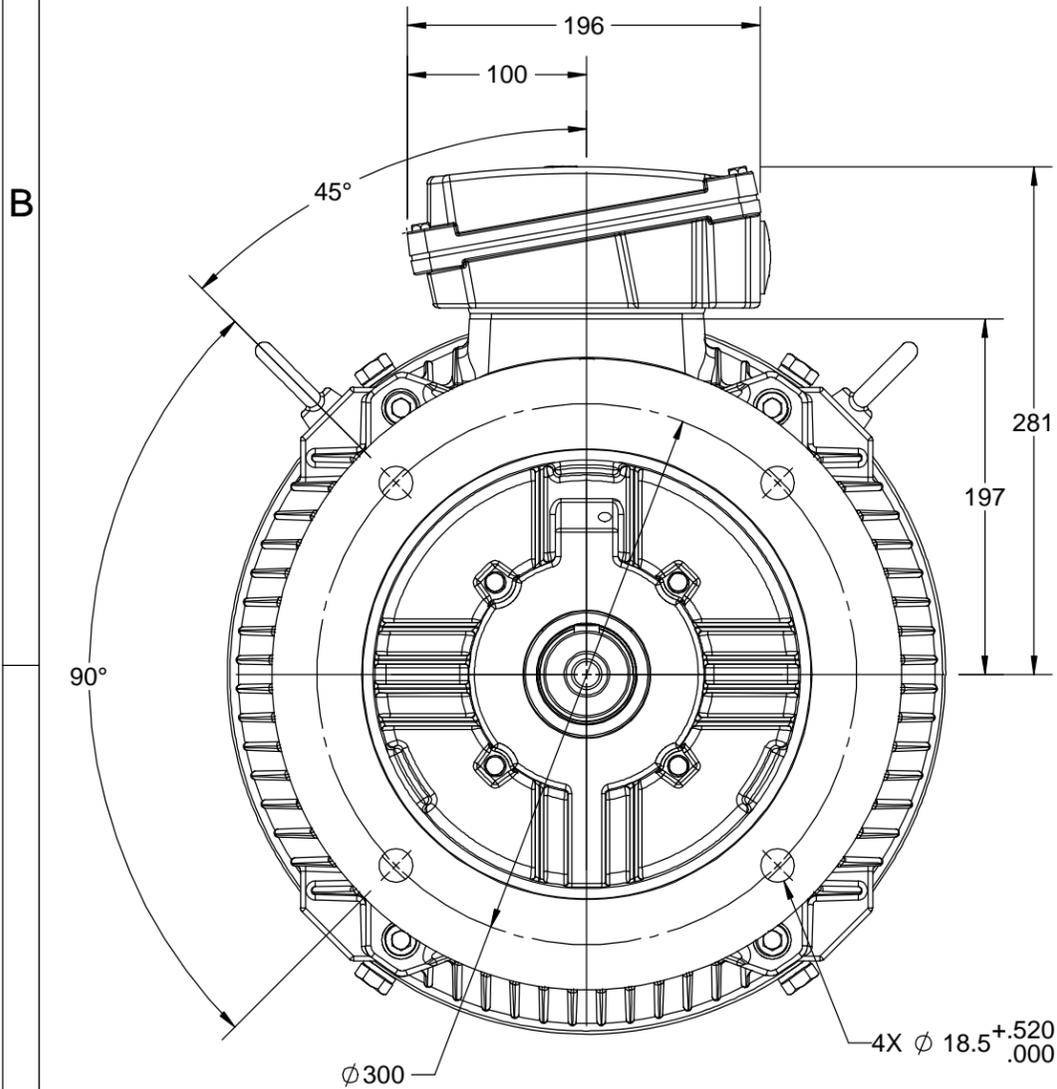
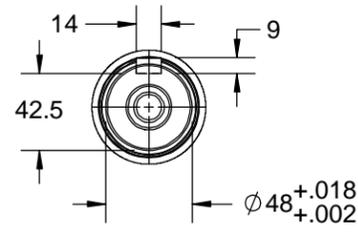
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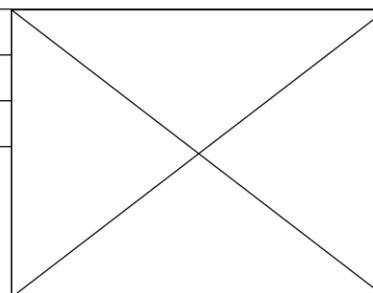
A

A

B

B

DRAWING REVISION B	REVISION BY LK	DATE 11/12/2018
ECO ECO-0157171	APPROVED BY JAY	DATE 11/12/2018
ECO DESCRIPTION UPDATED TEMPLATE		
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DRAWN BY LK
DATE 10/12/2018
APPROVED BY JAY
DATE 10/12/2018
REFERENCE
THIRD ANGLE PROJECTION

<b>marathon™ Motors</b>	
<b>OUTLINE</b>	
IEC-180L-B5 MOTOR TYPE: TEFC-CAST IRON	
MATERIAL	PROCESS/FINISH
SIZE B	DRAWING NUMBER SS312998A
SHEET 1 OF 1	

4

3

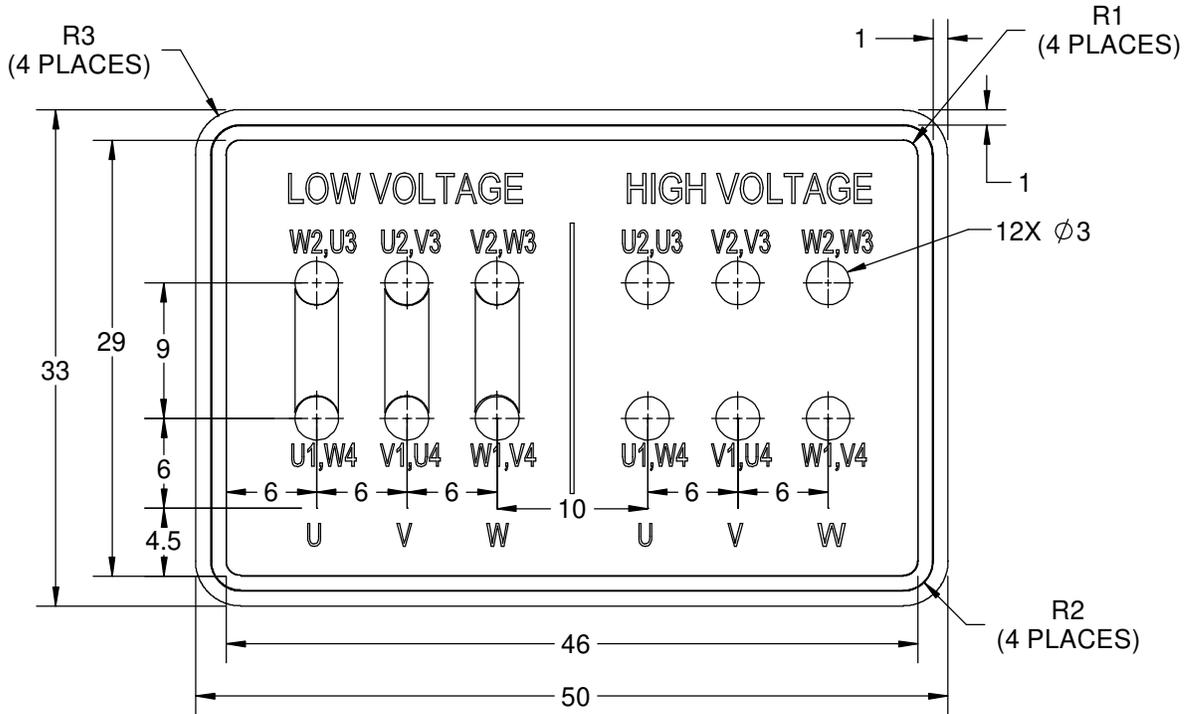
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DRAWING REVISION <b>A</b>	REVISION BY <b>S.MUDDA</b>	DATE <b>16/11/2020</b>
ECO <b>ECO-0194685</b>	APPROVED BY <b>SUMANTA</b>	DATE <b>16/11/2020</b>
ECO DESCRIPTION <b>NEW DRAWING</b>		

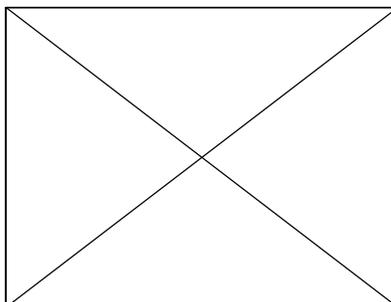
GEOMETRIC TOLERANCE		
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



**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 <b>S.MUDDA</b>	DESCRIPTION <b>CONN DIAGRAM-NAMEPLATE</b>	
	MATERIAL	
	PROCESS/FINISH	
	SIZE <b>A</b>	DRAWING NUMBER <b>8442000715</b>
	SHEET <b>1 OF 1</b>	



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

DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

CUSTOMER: \_\_\_\_\_  
ORDER #: \_\_\_\_\_  
CONN. DIAGRAM: 8442000677  
OUTLINE: SS312998A  
WINDING: IE3L1804202 NONE 1  
SPEED: \_\_\_\_\_

CUSTOMER P.O. #: \_\_\_\_\_  
REFERENCE MODEL #: TCA0222AE221GAA009  
CAT #: R243  
CUSTOMER PART #: \_\_\_\_\_  
MOUNTING: F3

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
30	22.4	1800	1780	180L	TEFC	TCA 180LA04	H	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV.(Ft.)
3	60/50	230/460#200/400	72/36&70/35	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	93.6	3/4 LD EFF	93.6	1/2 LD EFF	93.0	GTD EFF	ELECT. TYPE
F.L. PF	83.0	3/4 LD PF	77.0	1/2 LD PF	66.0	92.6	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)
88.6 LB-FT	262	201 LB-FT	227%	269 LB-FT 304%

SOUND PRESSURE @ 3 FT.	SOUND	POWER	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
68 dBA	77 dBA		5.9 LB-FT²	5.9 LB-FT²	12 SEC.	2	260	KG.

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

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
FF-FLANGE-300	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						
6311	6211						

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
0.189	0.095	0.501	0.756	16.584	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	NONE
DATE: 11/16/2020	FT-LB: NA	NONE
	VOLTAGE: NONE	HZ:
FORM: 3531 REV_4 2/27/06	UL: V - LI,ME-INS,CONST UL REC	



Data Sheet

TCA0222AE221GAA009

Date: 5/30/2019  
Customer:  
Attention:

Submittal

Submitted by: Fareeda Dudekula

Data @ 460 V

Motor Load Data

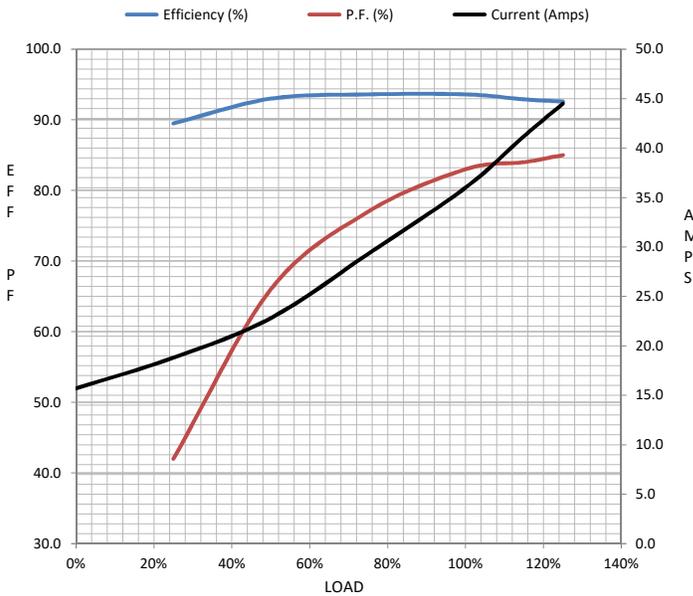
Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	15.7	18.8	22.8	29.3	36.0	41.2	44.5	262
Torque (ft-lb)	0.00	22.0	44.0	66.2	88.6	102	111	201
RPM	1800	1795	1790	1784	1780	1,775	1772	0
Efficiency (%)		89.5	93.0	93.6	93.6	92.9	92.6	
P.F. (%)	5.0	42.0	66.0	77.0	83.0	84.0	85.0	63.4

Motor Speed Data

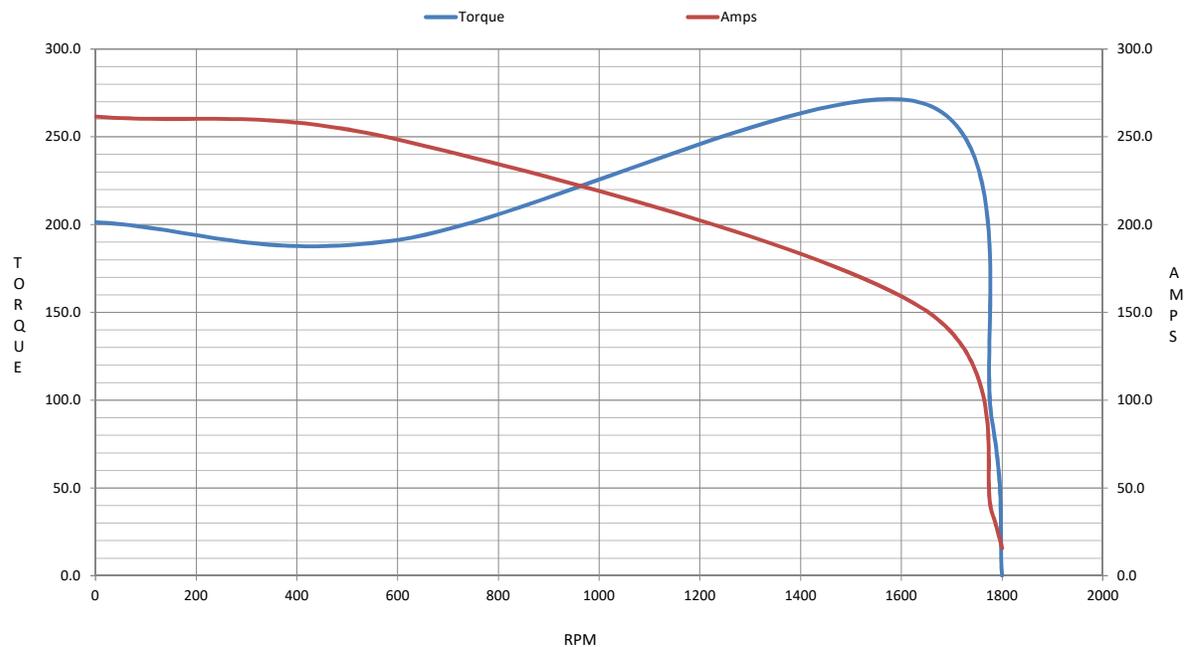
	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1642	1780	1800
Current (Amps)	262	248	152	36.0	15.7
Torque (ft-lb)	201	191	269	88.6	0.00

Information Block

HP	30.0			
Sync. RPM	1800			
Frame	180			
Enclosure	TEFC			
Construction	TCA 180LA04			
Voltage	230/460#200/400 V			
Frequency	60 Hz			
Design	N			
LR Code letter	H			
Service Factor	1.15			
Temp Rise @ FL	80 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	3,300 feet			
Rotor/Shaft wk <sup>2</sup>	5.9 Lb-Ft <sup>2</sup>			
Ref Wdg	IE3L1804202 NONE			
Sound Pressure @ 1M	68 dBA			
VFD Rating	CONSTANT 2:1/VARIABLE 10:1			
Outline Dwg	SS312998A			
Conn. Diag	8442000677			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.1890	0.0950	0.5010	0.7560	16.5840



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 : TCA0222AE221GAA009

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

Catalog No : R243

Rework No : N/A

Directives :

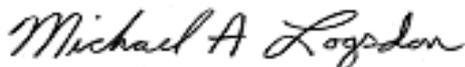
Low Voltage Directive 2014/35/EU

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**