

# PRODUCT INFORMATION PACKET

Model No: 254THFNA8038

Catalog No: Y597

Blue Max® Inverter Duty Encoder Motor, 15 HP, 3 Ph, 60 Hz, 230/460 V, 1800 RPM, 254TC Frame, TEFC



Regal and Marathon are trademarks of Regal Rexnord Corporation or one of its affiliated companies.

©2023 Regal Rexnord Corporation, All Rights Reserved. MC017097E

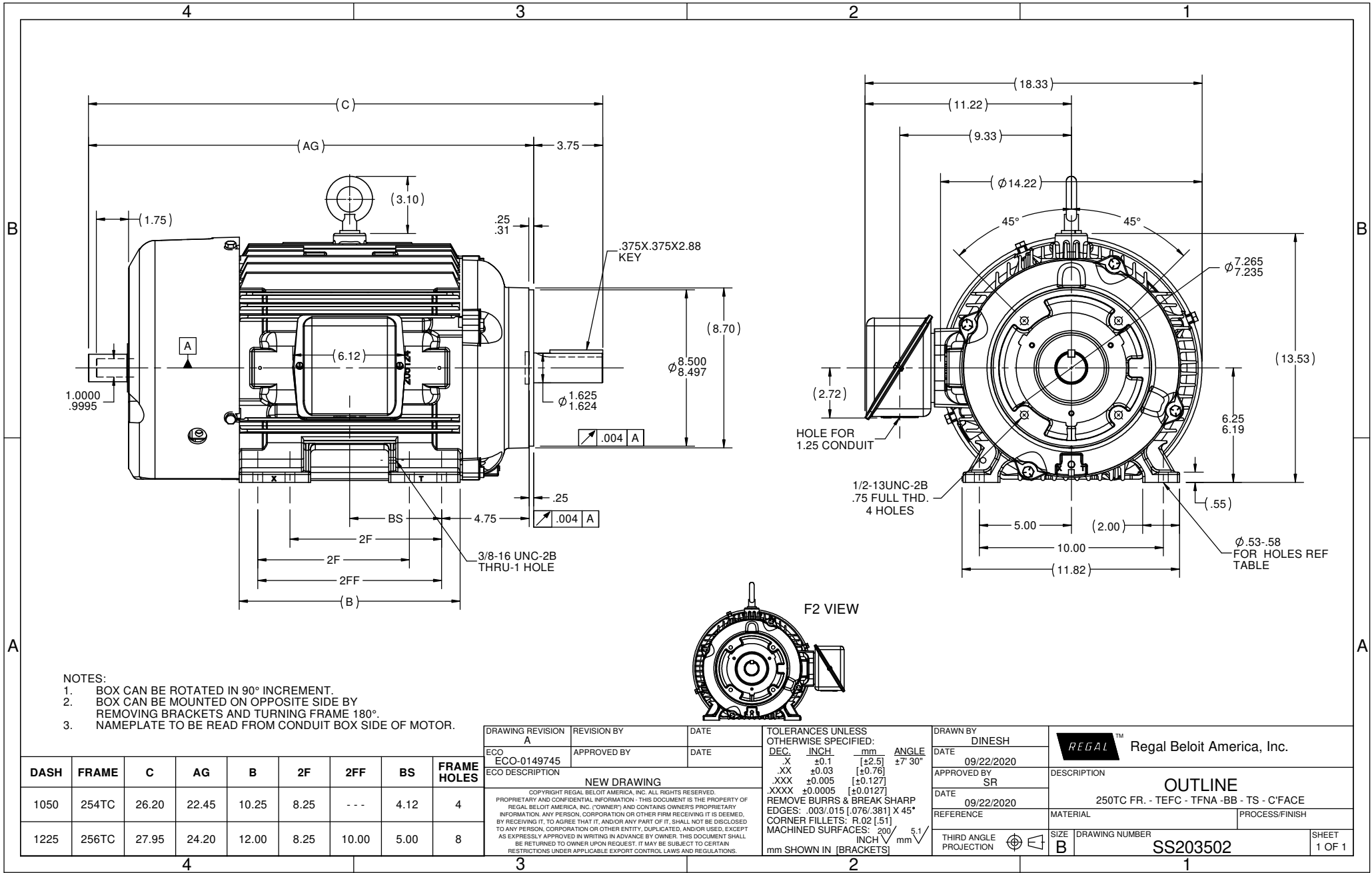
### Nameplate Specifications

Output HP	<b>15 Hp</b>	Output KW	<b>11.2 kW</b>
Frequency	<b>60 Hz</b>	Voltage	<b>230/460 V</b>
Current	<b>37.0/18.5 A</b>	Speed	<b>1765 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>90.2 %</b>	Power Factor	<b>83.5</b>
Duty	<b>Continuous</b>	Insulation Class	<b>H</b>
Design Code	<b>INV</b>	KVA Code	<b>F</b>
Frame	<b>254TC</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>Thermostat</b>	Ambient Temperature	<b>40 °C</b>
Drive End Bearing Size	<b>6309</b>	Opp Drive End Bearing Size	<b>6210</b>
UL	<b>Recognized</b>	CSA	<b>Y</b>
CE	<b>Y</b>	IP Code	<b>43</b>
Number of Speeds	<b>1</b>		

### Technical Specifications

Electrical Type	<b>Squirrel Cage Inverter Duty</b>	Starting Method	<b>Inverter Only</b>
Poles	<b>4</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>.69 Ohms</b>	Mounting	<b>Rigid Base</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>T</b>	Overall Length	<b>26.34 in</b>
Frame Length	<b>10.50 in</b>	Shaft Diameter	<b>1.625 in</b>
Shaft Extension	<b>3.75 in</b>	Assembly/Box Mounting	<b>F1/F2 CAPABLE</b>
Inverter Load	<b>CONSTANT 2000:1</b>		
Connection Drawing	<b>A-EE7308T</b>	Outline Drawing	<b>B-SS203502-1050</b>





- NOTES:  
 1. BOX CAN BE ROTATED IN 90° INCREMENT.  
 2. BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°.  
 3. NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DASH	FRAME	C	AG	B	2F	2FF	BS	FRAME HOLES
1050	254TC	26.20	22.45	10.25	8.25	---	4.12	4
1225	256TC	27.95	24.20	12.00	8.25	10.00	5.00	8

DRAWING REVISION A	REVISION BY	DATE
ECO-0149745	APPROVED BY	DATE
ECO DESCRIPTION NEW DRAWING		
<small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION. THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. ('OWNER') AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST, IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>		

TOLERANCES UNLESS OTHERWISE SPECIFIED:

DEC.	INCH	mm	ANGLE
.X	±0.1	[±2.5]	±7° 30'
.XX	±0.03	[±0.76]	
.XXX	±0.005	[±0.127]	
.XXXX	±0.0005	[±0.0127]	

REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.076/.381] X 45°  
 CORNER FILLETS: R.02 [.51]  
 MACHINED SURFACES: 200 INCH/mm 5.1  
 mm SHOWN IN [BRACKETS]

DRAWN BY DINESH	DATE 09/22/2020
APPROVED BY SR	DATE 09/22/2020
REFERENCE	THIRD ANGLE PROJECTION

Regal Beloit America, Inc.	
DESCRIPTION <b>OUTLINE</b> 250TC FR. - TEFC - TFNA - BB - TS - C'FACE	
MATERIAL	PROCESS/FINISH
SIZE B	DRAWING NUMBER SS203502
SHEET 1 OF 1	

**HIGH VOLTAGE**



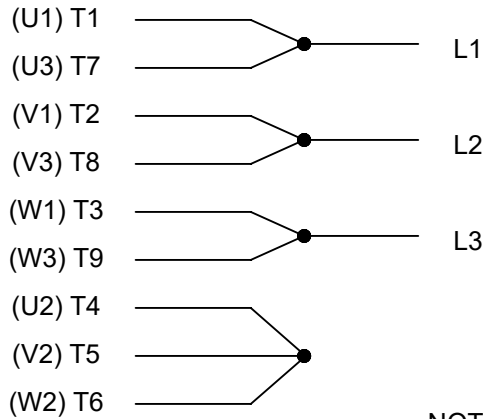
**THREE PHASE  
DUAL VOLTAGE MOTOR**

THERMO-PROTECTORS  
CONNECTED IN SERIES



NOTE FOR FACTORY USE ONLY:  
TO SURGE TEST FOR COMMON CONNECT:  
HIGH VOLT: CONNECT P1 TO T1  
THEN P2 TO L1  
LOW VOLT: CONNECT P1 TO T1 & T7,  
THEN P2 TO L1

**LOW VOLTAGE**



**VIEW OF TERMINAL END**

NOTE: LEAD'S COLOR CAN BE YELLOW OR WHITE FOR MT2 PLANT

DRAWING REVISION T	REVISION BY ZR	DATE 01-14-2019		DRAWN BY SMC	Regal Beloit America, Inc.
ECO ECO-0159915	APPROVED BY DR	DATE 01-15-2019		DATE 05-13-1992	
ECO DESCRIPTION <b>ADDED TERMINAL CONNECTION DIAGRAM</b>				APPROVED BY TB	DESCRIPTION <b>CONN DIAGRAM-INTERNAL</b> 3 PHASE - DUAL VOLTAGE MOTOR
<small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>				DATE 05-13-1992	MATERIAL
			REFERENCE EE7308/EE7300	SIZE A	DRAWING NUMBER EE7308T

CERTIFICATION DATA SHEET

Model#: 254THFNA8038 BC WINDING#: K2544134 R5 1  
 CONN. DIAGRAM: A-EE7308T ASSEMBLY: F1/F2 CAPABLE  
 OUTLINE: B-SS203502-1050

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN			
15	11.2	1800	1765	254TC	TEFC	F	INV			
PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION	
3	60	230/460	37/18.5	INVERTER ONLY	CONTINUOUS	H4	1.0	40	3300	
FULL LOAD EFF: 90.2		3/4 LOAD EFF: 90.2		1/2 LOAD EFF: 89.5		GTD. EFF		ELEC. TYPE		NO LOAD AMPS
FULL LOAD PF: 83.5		3/4 LOAD PF: 80		1/2 LOAD PF: 72		88.5		SQ CAGE INV DUTY		14 / 7
F.L. TORQUE		LOCKED ROTOR AMPS		L.R. TORQUE		B.D. TORQUE		F.L. RISE°C		
44.6 LB-FT		200 / 100		80 LB-FT 179		108 LB-FT 242		60		
SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT				
68 dBA	78 dBA	2.4 LB-FT^2	- LB-FT^2	- SEC.	-	350 LBS.				

EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

R1	R2	X1	X2	XM
0.42903	0.30618	1.44585	1.87488	35.154
RM	ZREF	XR	TD	TD0
1646.19	18.9	4.7	0.02	0.32

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

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
C-FACE	ENCODER	RIGID	HORIZONTAL	FALSE	NONE	FALSE	NONE	BLUE (ENAMEL)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
BALL	BALL						
6309	6210						

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE /n HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs	NONE	FALSE	NONE VOLTS
TSTATS (N/C)	NOT	NONE	NONE			

If Inverter equals NONE, contact factory for further information

INVERTER TORQUE: CONSTANT 2000:1
INV. HP SPEED RANGE: 1.5 X BASE SPEED
ENCODER: PROVISIONS ONLY
DYNAPAR HS35
NONE NONE PPR
BRAKE: NONE NONE
NONE P/N NONE

\*  
N  
O  
T  
E  
S  
\*

NONE	NONE	
- FT-LB	NONE V	NONE Hz

DATE: 06/23/2017 01:21:22 AM  
FORM 3531 REV.3 02/07/99  
\*\* Subject to change without notice.

Data Sheet

Date: 6/19/2017

254THFNA8038

Customer: \_\_\_\_\_



Attention: \_\_\_\_\_

Submittal

Submitted by: FAREEDA DUDEKULA

Data @ 460 V

Motor Load Data

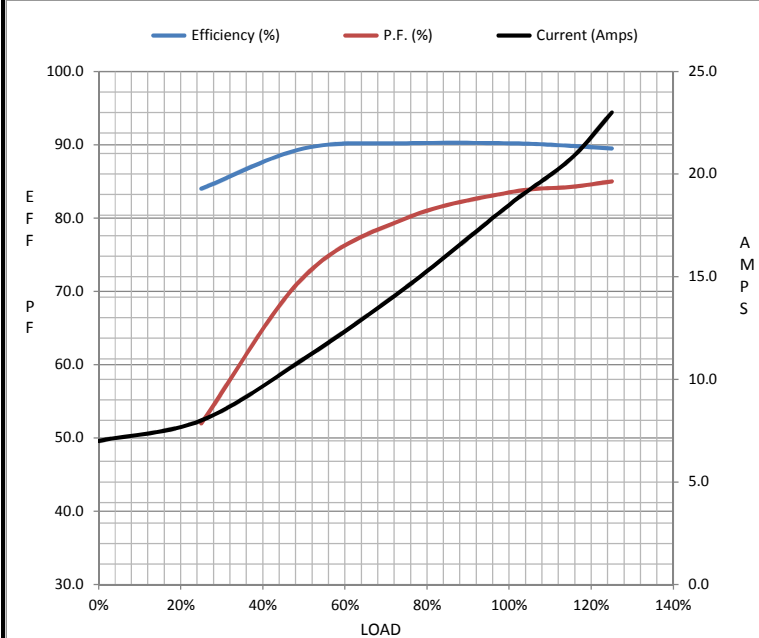
Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	7.0	8.0	11.0	14.5	18.5	20.8	23.0	100
Torque (ft-lb)	0.00	11.0	22.0	33.5	44.6	50.6	56.5	80.0
RPM	1800	1792	1784	1775	1765	1,761	1755	0
Efficiency (%)		84.0	89.5	90.2	90.2	89.9	89.5	
P.F. (%)	10.0	52.0	72.0	80.0	83.5	84.3	85.0	41.0

Motor Speed Data

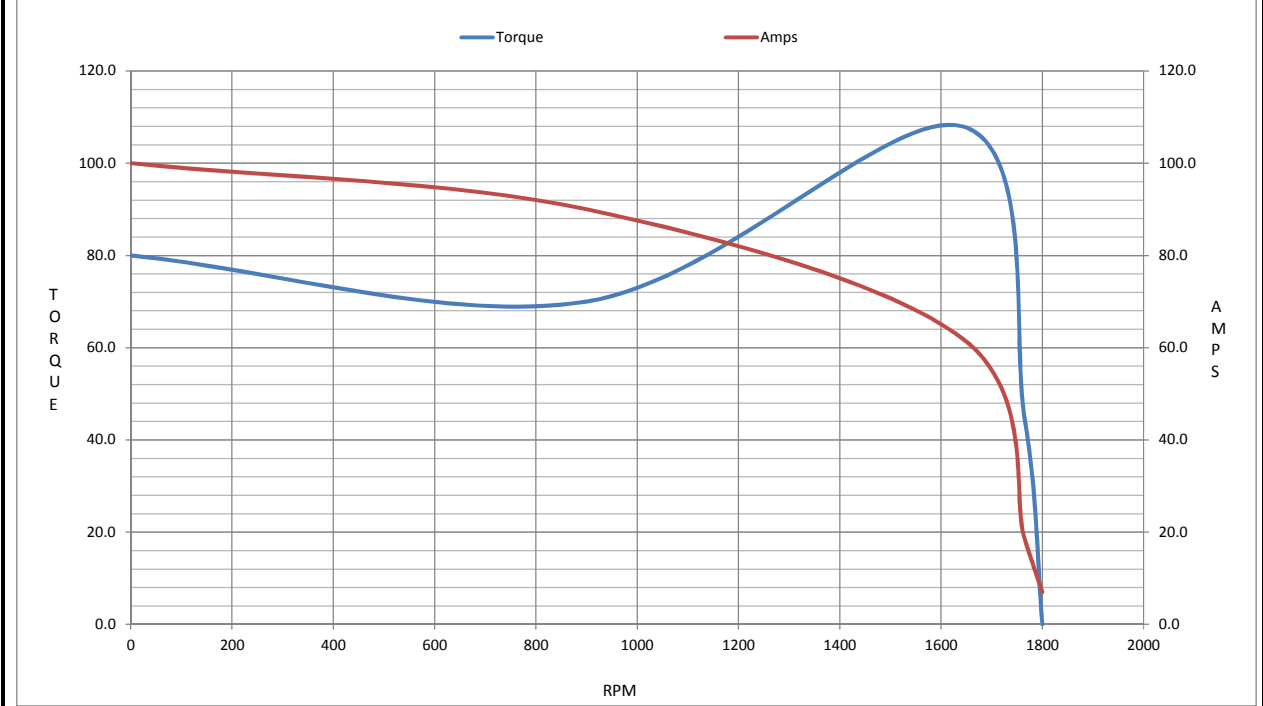
	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1642	1765	1800
Current (Amps)	100	90.0	62.0	18.5	7.0
Torque (ft-lb)	80.0	70.0	108	44.6	0.00

Information Block

HP	15.0			
Sync. RPM	1800			
Frame	254			
Enclosure	TEFC			
Construction	TFN			
Voltage	230/460 V			
Frequency	60 Hz			
Design	B			
LR Code letter	G			
Service Factor	1.0			
Temp Rise @ FL	55 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk <sup>2</sup>	2.40 Lb-Ft <sup>2</sup>			
Ref Wdg	K2544134 R5			
Sound Pressure @ 1M	68 dBA			
VFD Rating	CONSTANT 2000:1			
Outline Dwg	B-SS203502-1050			
Conn. Diag	A-EE7308T			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.4290	0.3060	1.4460	1.8750	35.1540



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 : 254THFNA8038

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

Catalog No : Y597

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**