

# PRODUCT INFORMATION PACKET

Model No: 254THFCD8038

Catalog No: Y597A

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



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### Nameplate Specifications

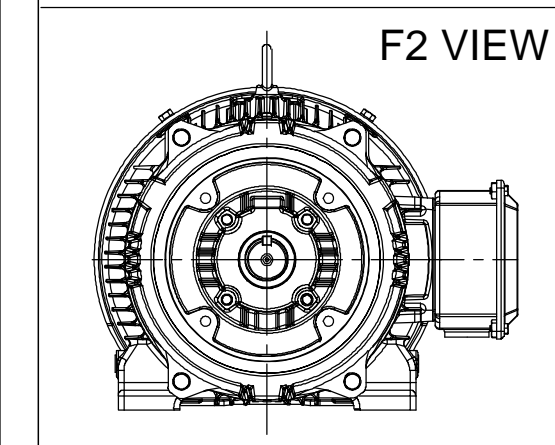
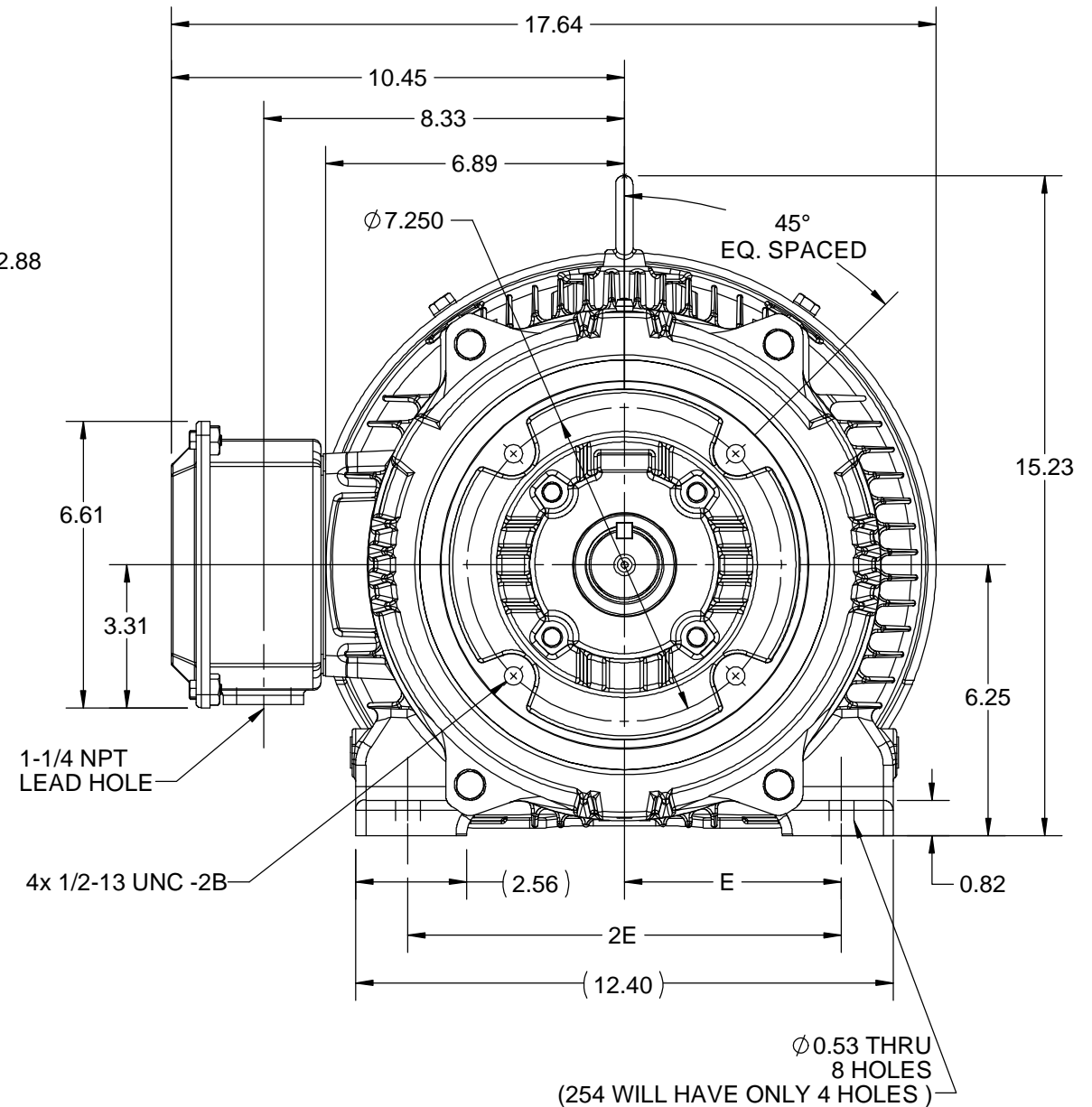
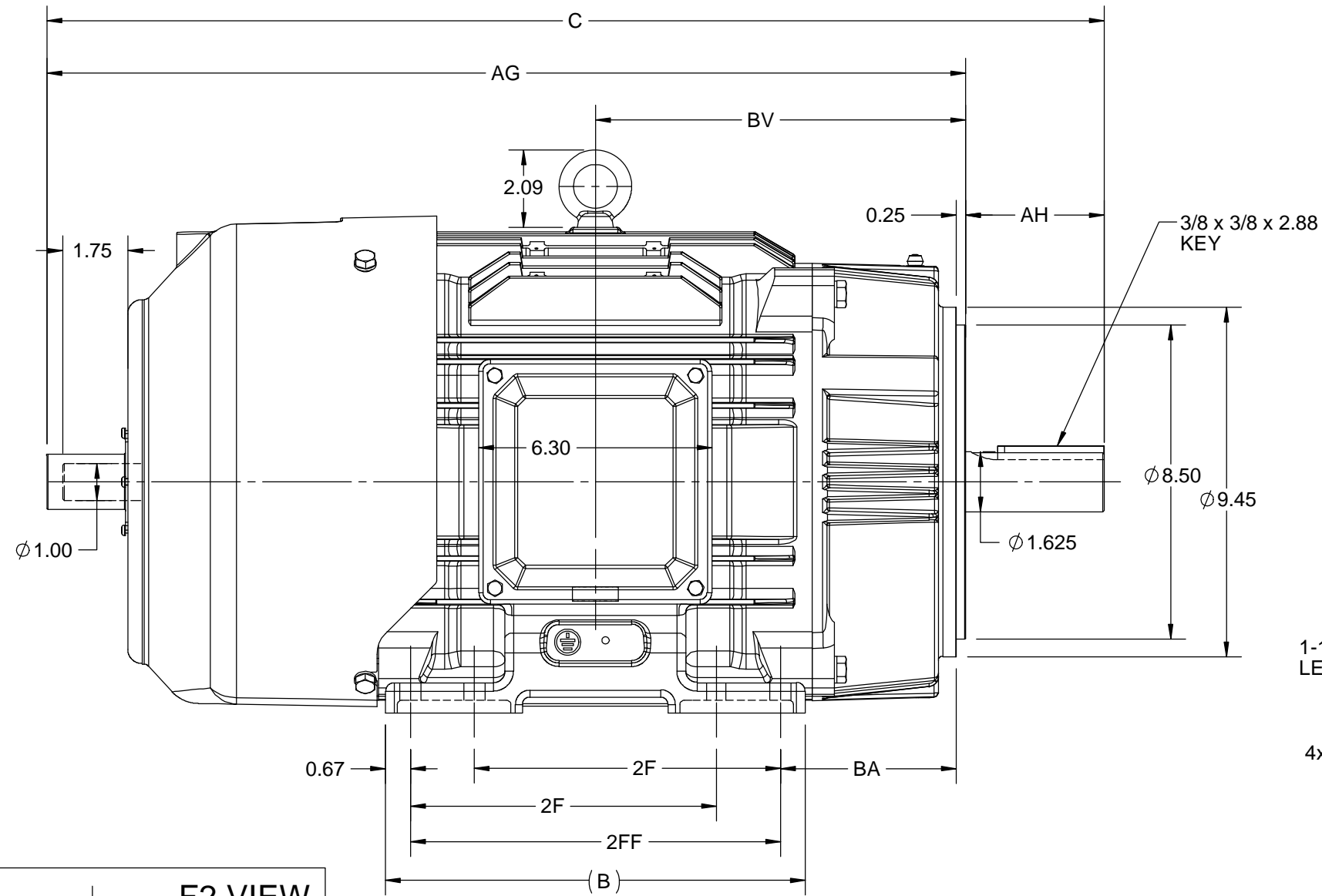
Output HP	<b>15 Hp</b>	Output KW	<b>11.2 kW</b>
Frequency	<b>60 Hz</b>	Voltage	<b>230/460 V</b>
Current	<b>35.0/17.5 A</b>	Speed	<b>1767 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>91.5 %</b>	Power Factor	<b>88.4</b>
Duty	<b>Continuous</b>	Insulation Class	<b>H</b>
Design Code	<b>INV</b>	KVA Code	<b>H</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>6209</b>
UL	<b>Recognized</b>	CSA	<b>Y</b>
CE	<b>Y</b>	IP Code	<b>55</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>.684 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>	Shaft Diameter	<b>1.625 in</b>
Assembly/Box Mounting	<b>F1/F2 CAPABLE</b>	Inverter Load	<b>CONSTANT 2000:1</b>
Outline Drawing	<b>SS209619-100</b>	Connection Drawing	<b>EE7308T</b>

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DASH NO.	4			3						2		1
	B	C	E	2E	2F	2FF	AG	AH	BA	BV	MOUNTING	FRAME
100	9.60	26.85	5.00	10.00	---	8.25	23.10	3.75	4.75	9.14	F1 OR F2	254TC
200	11.34	28.58			8.25	10.00	24.83			10.00		254/256TC

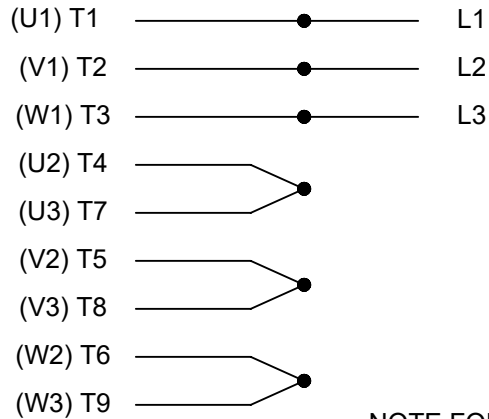


DRAWING REVISION B	REVISION BY BISWA	REV DATE/© DATE 15-09-2020
ECO ECO-0192056	APPROVED BY SBD	DATE 15-09-2020
ECO DESCRIPTION		
DRAWING UPDATED		
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PRIMARY DIMENSIONS ARE INCH  
mm DIMENSIONS IN [BRACKETS]  
ARE FOR REFERENCE ONLY

DRAWN BY VS	Regal Beloit America, Inc.
DATE 08-06-2020	
APPROVED BY SBD	DESCRIPTION <b>OUTLINE</b> 254/256TC FR-TEFC-CAST IRON-TACH MTG.
DATE 08-06-2020	MATERIAL
REFERENCE	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B
	DRAWING NUMBER <b>SS209619</b>
	SHEET 1 OF 1

**HIGH VOLTAGE**



**THREE PHASE  
DUAL VOLTAGE MOTOR**

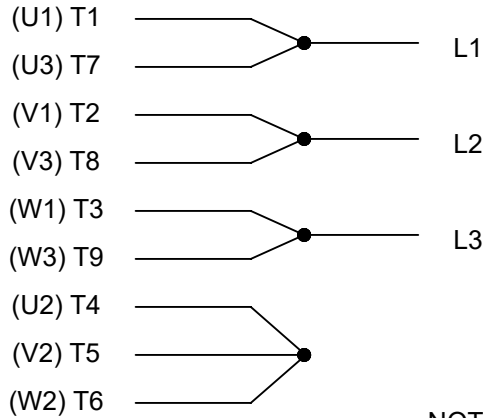
THERMO-PROTECTORS  
CONNECTED IN SERIES



- RED OR PURPLE P1 (TB1)
- BLACK T1 (U1)
- BLACK T4 (U2)
- YELLOW T9 (W3)
- BROWN T7 (U3)
- ORANGE T8 (V3)
- BLACK T6 (W2)
- BLACK T5 (V2)
- RED T2 (V1)
- BLUE T3 (W1)
- PURPLE OR RED P2 (TB2)

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
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			REFERENCE EE7308/EE7300	THIRD ANGLE PROJECTION	SIZE A



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

DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

CUSTOMER:  
ORDER #: \_\_\_\_\_  
CONN. DIAGRAM: EE7308T  
OUTLINE: SS209619-100  
WINDING: HA31604032 NONE 2  
SPEED: \_\_\_\_\_

CUSTOMER P.O. #: \_\_\_\_\_  
REFERENCE MODEL #: 254THFCD8038  
CAT #: Y597A  
CUSTOMER PART #: \_\_\_\_\_  
MOUNTING: F1/F2 CAPABLE

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
15	11.2	1800	1767	254TC	TEFC	TFS	H	INV

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60	230/460	35/17.5	INVERTER ONLY	CONT	H	1.15	40	3300

F.L. EFF	91.5	3/4 LD EFF	92.3	1/2 LD EFF	91.9	GTD EFF	ELECT. TYPE
F.L. PF	88.4	3/4 LD PF	85.8	1/2 LD PF	78.7	91.0	SQ CAGE INV DUTY

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (°C)
44.6 LB-FT	115	57.0 LB-FT	125 LB-FT 280%	60

SOUND PRESSURE @ 3 FT.	SOUND	POWER	ROTOR WK <sup>2</sup>	MAX. LOAD WK <sup>2</sup>	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
62 dBA	71 dBA		0.579 LB-FT <sup>2</sup>	30 LB-FT <sup>2</sup>	30 SEC.	2	300	LB.

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

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
C-FACE	ENCODER	RIGID	HORIZONTAL	NO	NONE	YES	NONE	BLUE (ENAMEL)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE	POLYREX EM	T	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
TSTATS (NIC)	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
0.427	0.282	1.759	1.418	47.653	0.150	ODE

NOTES	INVERTER TORQUE: CONSTANT 2000:1 INV. HP SPEED RANGE: 1.5 X BASE SPEED					
	ENCODER: DYNAPAR HS35 NONE					
	BRAKE: NONE NONE					
	FT-LB: NA VOLTAGE: NONE					

PREPARED BY: _____	BRAKE: NONE	FT-LB: NA	VOLTAGE: NONE	HZ: _____
DATE: 9/27/2021	UL: V-INS, CONST, OVERHEAT PRT DEV UL REC			

FORM: 3531 REV\_4 2/27/06

Data Sheet

Date: 9/27/2021  
 Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Submitted by: \_\_\_\_\_



254THFCD8038

Submittal

Data @ 460 V

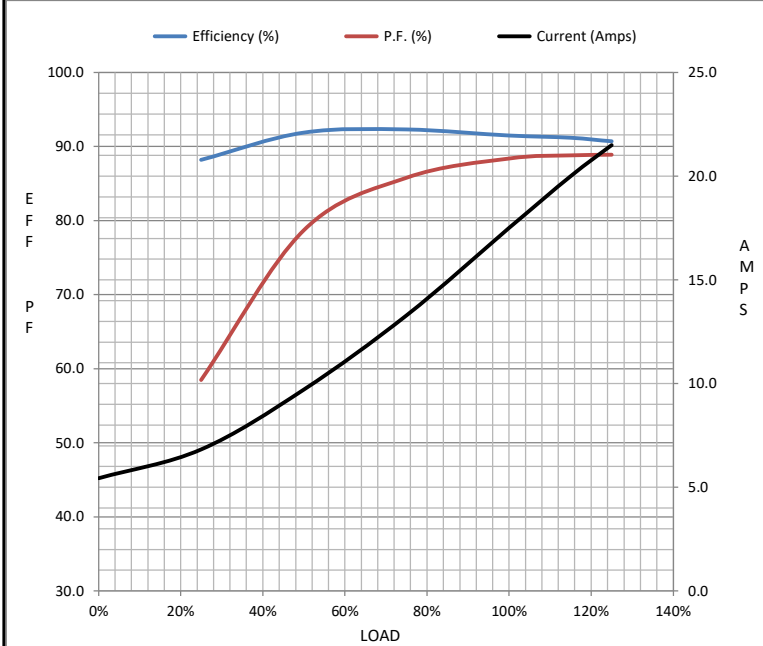
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	5.4	6.8	9.7	13.3	17.5	20.0	21.5	115
Torque (ft-lb)	0.00	11.0	22.0	33.2	44.6	51.4	56.1	57.0
RPM	1800	1792	1784	1776	1767	1,761	1756	0
Efficiency (%)		88.2	91.9	92.3	91.5	91.2	90.7	
P.F. (%)	7.8	58.5	78.7	85.8	88.4	88.8	88.9	32.5

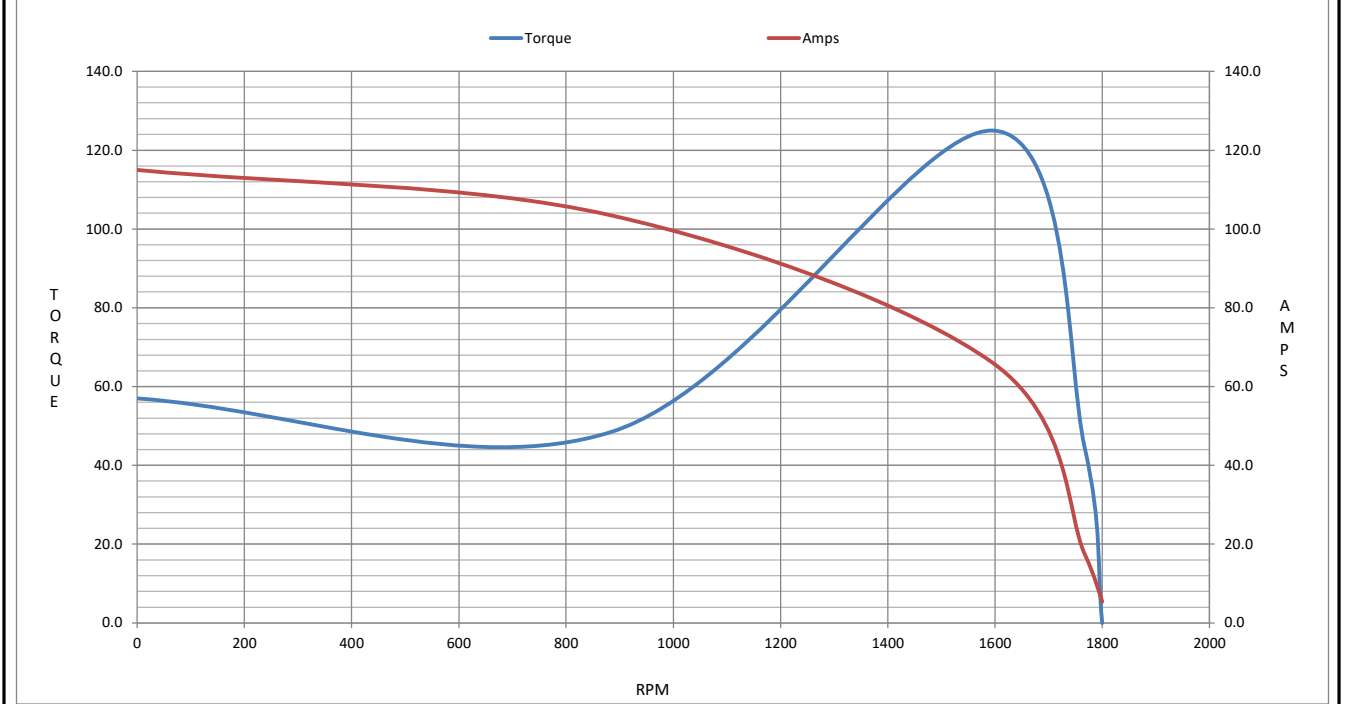
Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	884	1596	1767	1800
Current (Amps)	115	104	66.0	17.5	5.4
Torque (ft-lb)	57.0	48.5	125	44.6	0.00

Information Block				
HP	15.0			
Sync. RPM	1800			
Frame	254			
Enclosure	TEFC			
Construction	TFS			
Voltage	230/460 V			
Frequency	60 Hz			
Design	INV			
LR Code letter	H			
Service Factor	1.15			
Temp Rise @ FL	60 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	3,300 feet			
Rotor/Shaft wk <sup>2</sup>	0.579 Lb-F <sup>2</sup>			
Ref Wdg	HA31604032 NONE			
Sound Pressure @ 1M	62 dBA			
VFD Rating	CONSTANT 2000:1			
Outline Dwg	SS209619-100			
Conn. Diag	EE7308T			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.4270	0.2820	1.7590	1.4180	47.6530



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 : 254THFCD8038

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

Catalog No : Y597A

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**