

# PRODUCT INFORMATION PACKET

marathon®  
Motors

Model No: 254THTCD8071

Catalog No: Y992A

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



Regal and Marathon are trademarks of Regal Rexnord Corporation or one of its affiliated companies.  
©2022 Regal Rexnord Corporation, All Rights Reserved. MC017097E

RegalRexnord



### Nameplate Specifications

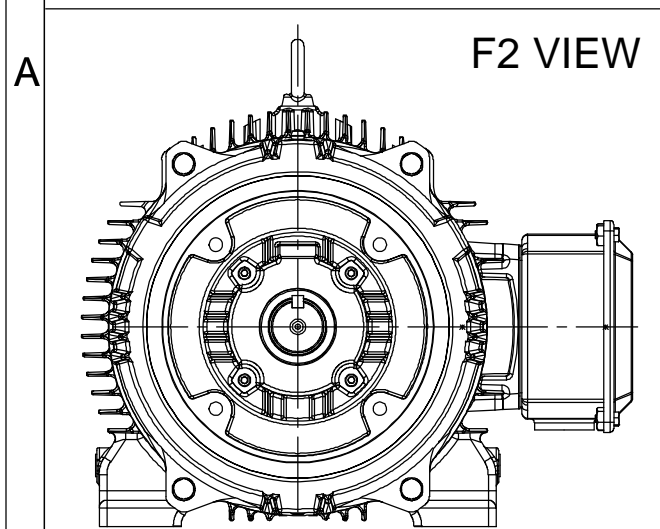
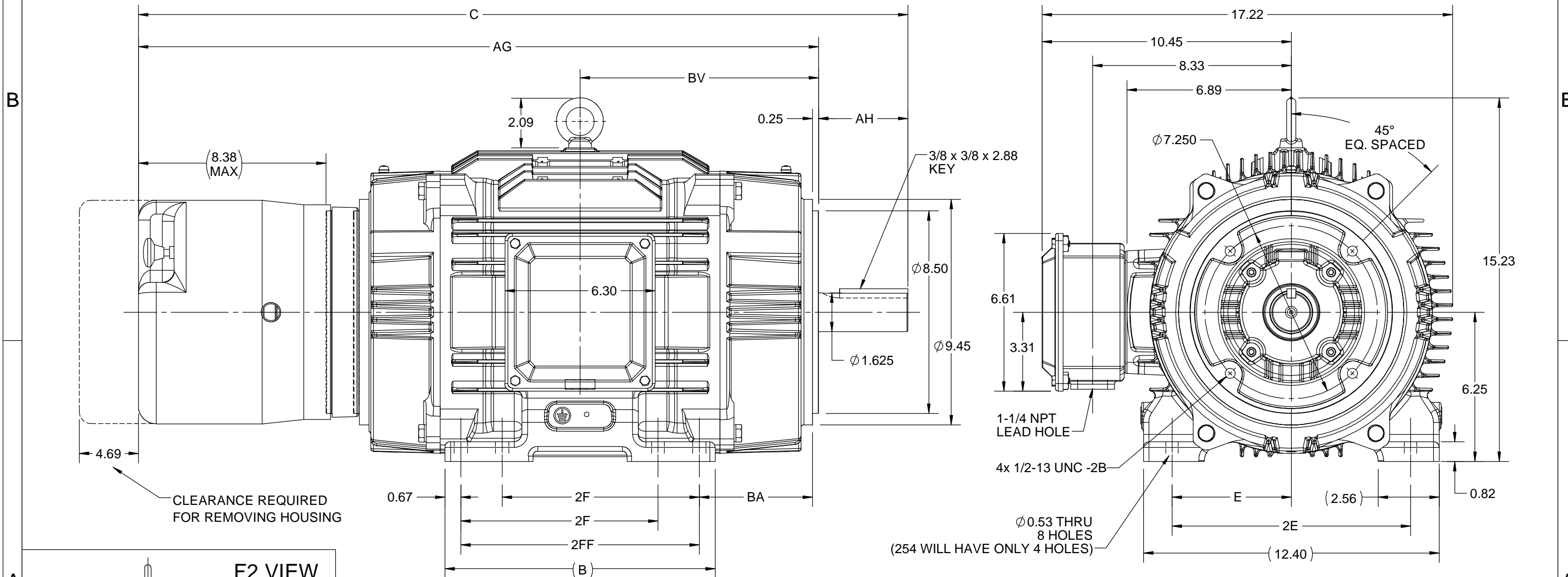
Output HP	15 Hp	Output KW	11.2 kW
Frequency	60 Hz	Voltage	230/460 V
Current	35.0/17.5 A	Speed	1777 rpm
Service Factor	1	Phase	3
Efficiency	92.9 %	Power Factor	85.7
Duty	Continuous	Insulation Class	H
Design Code	INV	KVA Code	L
Frame	254TC	Enclosure	Totally Enclosed Non Ventilated
Thermal Protection	Thermostat	Ambient Temperature	40 °C
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6309
UL	Recognized	CSA	Y
CE	Y	IP Code	55
Number of Speeds	1		

### Technical Specifications

Electrical Type	Squirrel Cage Inverter Duty	Starting Method	Inverter Only
Poles	4	Rotation	Reversible
Resistance Main	.0493 Ohms	Mounting	Rigid Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	T	Shaft Diameter	1.625 in
Assembly/Box Mounting	F1/F2 CAPABLE	Inverter Load	CONSTANT 2000:1
Connection Drawing	EE7308T	Outline Drawing	SS209622-100

This is an uncontrolled document once printed or downloaded and is subject to change without notice. Date Created:11/30/2022

DASH NO.	4		3					2		1		
	B	C	E	2E	2F	2FF	AG	AH	BA	BV	MOUNTING	FRAME
100	9.60	30.55	5.00	10.00	---	8.25	26.78	3.75	4.75	9.14	F1 OR F2	254TC
200	11.34	32.28			8.25	10.00	28.53			10.00		254/256TC



DRAWING REVISION B	REVISION BY BISWA	REV DATE/© DATE 29-10-2020
ECO ECO-0193836	APPROVED BY GNK	DATE 29-10-2020
DRAWING UPDATED		
<small>COPYRIGHT (PER REVISION DATE) 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>		

PRIMARY DIMENSIONS ARE INCH  
mm DIMENSIONS IN [BRACKETS]  
ARE FOR REFERENCE ONLY

DRAWN BY VS	Regal Beloit America, Inc.
DATE 29-06-2020	
APPROVED BY SBD	DESCRIPTION <b>OUTLINE</b>
DATE 29-06-2020	254/256TC NEMA TENV-BRAKE (STEARNS BR & SL85 TACH)
REFERENCE	MATERIAL
THIRD ANGLE PROJECTION	PROCESS/FINISH
SIZE B	DRAWING NUMBER <b>SS209622</b>
	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 ADDED TERMINAL CONNECTION DIAGRAM				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	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: SS209622-100  
 WINDING: HA31604029 NONE 2  
 SPEED: \_\_\_\_\_

CUSTOMER P.O. #:  
 REFERENCE MODEL #: 254THCD8071  
 CAT #: Y992A  
 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	1777	254TC	TENV	TTC	L	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	92.9	3/4 LD EFF	92.8	1/2 LD EFF	91.7	GTD EFF	ELECT. TYPE
F.L. PF	85.7	3/4 LD PF	81.0	1/2 LD PF	70.8	91.5	SQ CAGE INV DUTY

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (°C)
44.4 LB-FT	165	84.0 LB-FT	189%	179 LB-FT 403%

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		0.637 LB-FT <sup>2</sup>	30 LB-FT <sup>2</sup>	30 SEC.	2	290 LB.	

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

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

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

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
0.299	0.206	1.316	1.112	35.74	0.150	ODE

* N O T E S *	INVERTER TORQUE: CONSTANT 2000:1 INV. HP SPEED RANGE: 2.0 X BASE SPEED				
	ENCODER: NORTHSTAR SL85 NONE NONE PPR				

PREPARED BY:	DATE: 9/27/2021	BRAKE: STEARNS 87,000 NEMA 2
		FT-LB: 75
		VOLTAGE: 208-230/460-190/380 HZ:
FORM: 3531 REV. 4 2/27/06		UL: V-INS, CONST, OVERHEAT PRT DEV UL REC

Data Sheet

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



254THTCD8071

Submittal

Data @ 460 V

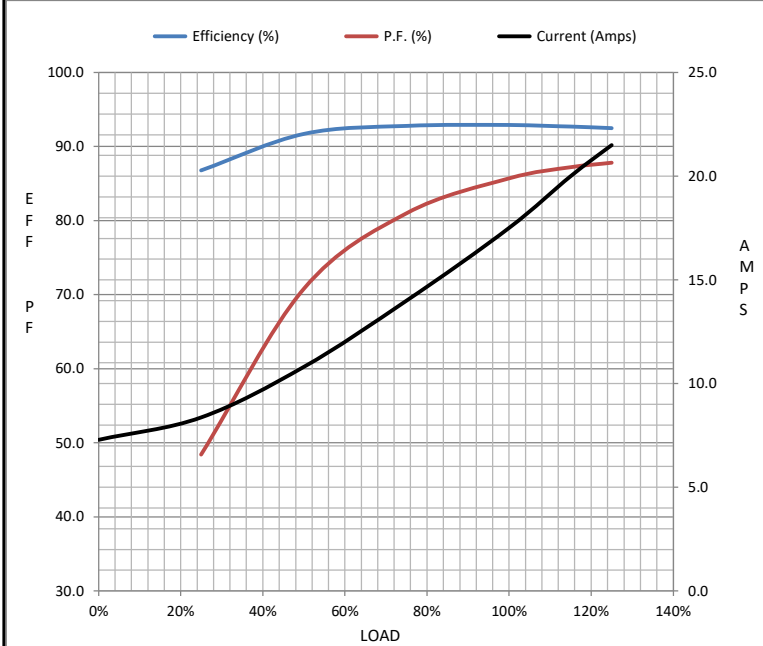
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	7.3	8.4	10.8	14.0	17.5	20.0	21.5	165
Torque (ft-lb)	0.00	11.0	22.0	33.2	44.4	51.1	55.6	84.0
RPM	1800	1794	1789	1783	1777	1,773	1770	0
Efficiency (%)		86.8	91.7	92.8	92.9	92.7	92.5	
P.F. (%)	6.9	48.4	70.8	81.0	85.7	87.2	87.8	33.0

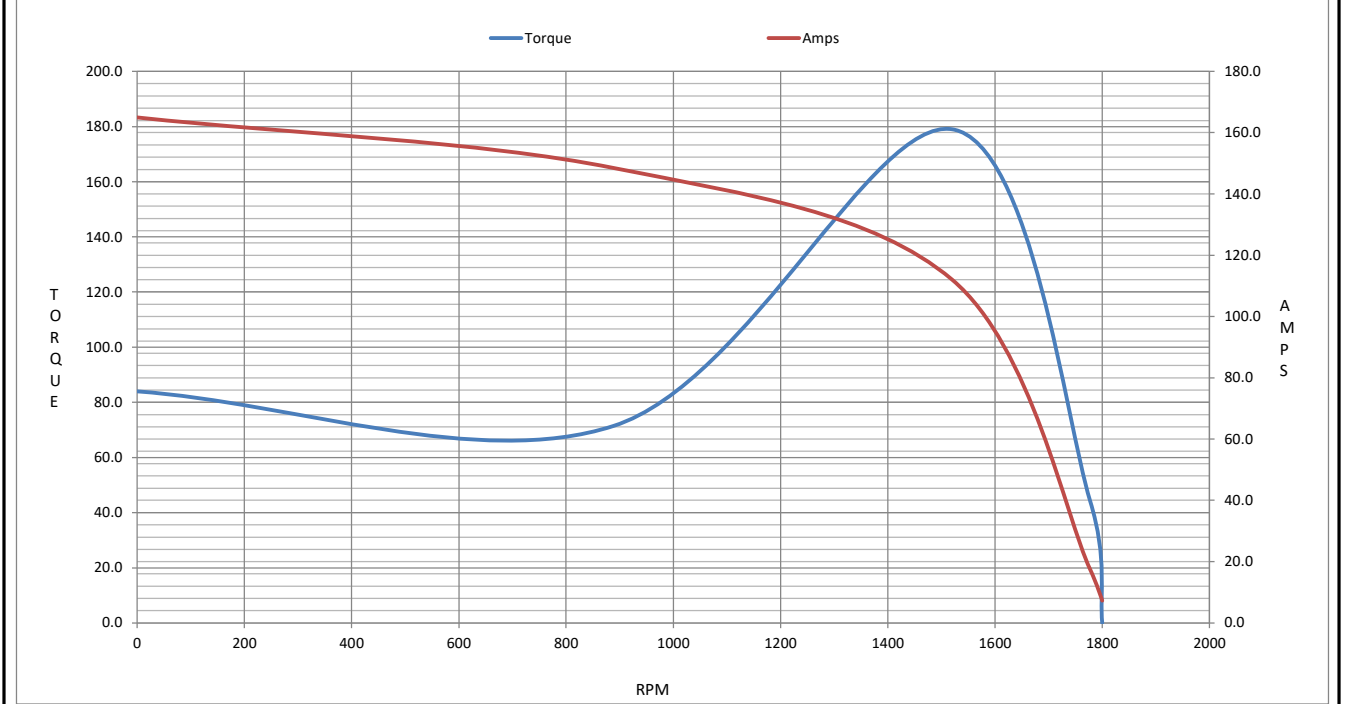
Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	889	1520	1777	1800
Current (Amps)	165	149	112	17.5	7.3
Torque (ft-lb)	84.0	71.4	179	44.4	0.00

Information Block				
HP	15.0			
Sync. RPM	1800			
Frame	254			
Enclosure	TENV			
Construction	TTC			
Voltage	230/460 V			
Frequency	60 Hz			
Design	INV			
LR Code letter	L			
Service Factor	1.0			
Temp Rise @ FL	105 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	3,300 feet			
Rotor/Shaft wk <sup>2</sup>	0.637 Lb-F <sup>2</sup>			
Ref Wdg	HA31604029 NONE			
Sound Pressure @ 1M	62 dBA			
VFD Rating	CONSTANT 2000:1			
Outline Dwg	SS209622-100			
Conn. Diag	EE7308T			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.2990	0.2060	1.3160	1.1120	35.7400



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 : 254THTCD8071

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

Catalog No : Y992A

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**