

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: 286THFCD8038

Catalog No: Y512A

Blue Max® Inverter Duty Encoder Motor, 30 HP, 3 Ph, 60 Hz, 230/460 V, 1800 RPM, 286TC Frame,
TEBC-AXIAL



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RegalRexnord



Nameplate Specifications

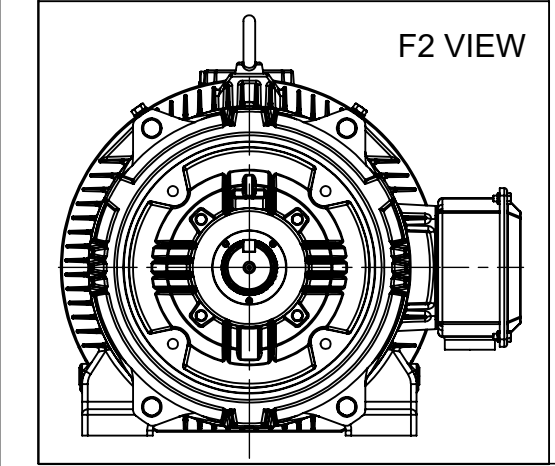
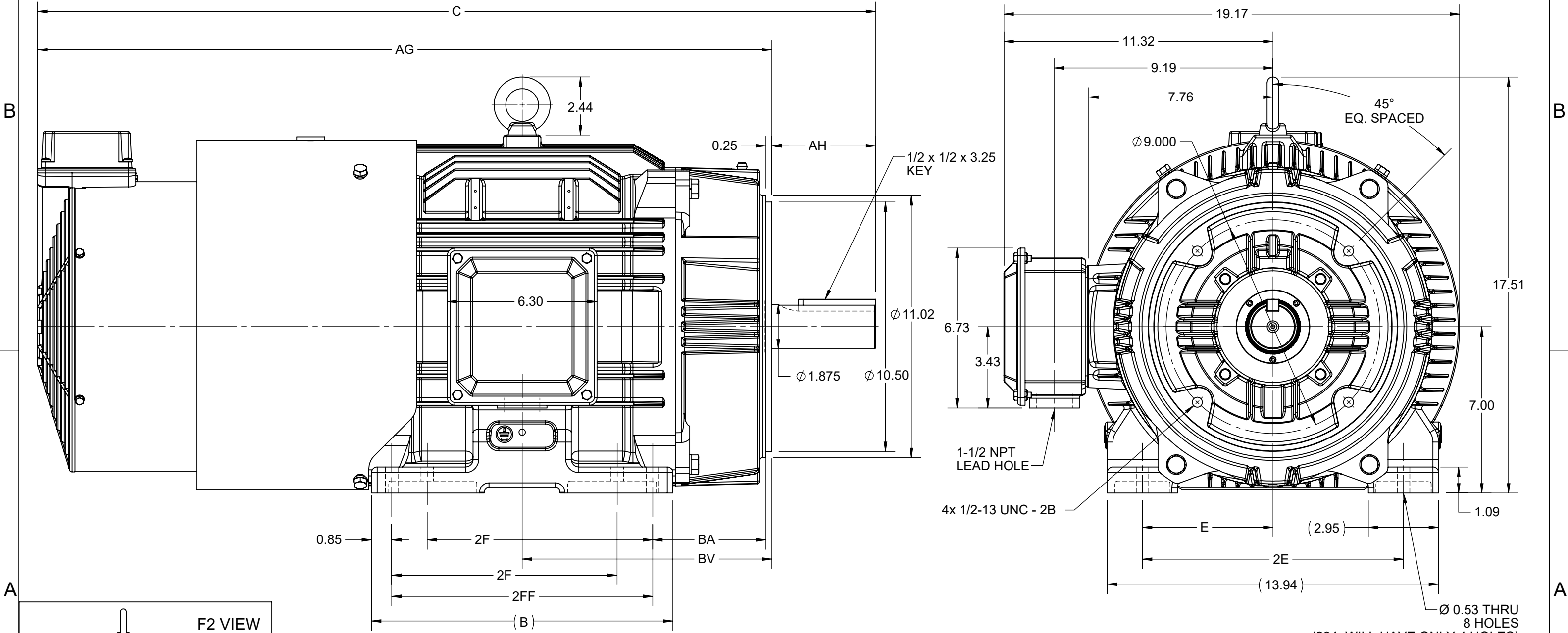
Output HP	30 Hp	Output KW	22.4 kW
Frequency	60 Hz	Voltage	230/460 V
Current	70.5/35.5 A	Speed	1776 rpm
Service Factor	1	Phase	3
Efficiency	93.6 %	Power Factor	85
Duty	Continuous	Insulation Class	H
Design Code	INV	KVA Code	K
Frame	286TC	Enclosure	Totally Enclosed Blower cooled - Axial
Thermal Protection	Thermostat	Ambient Temperature	40 °C
Drive End Bearing Size	6311	Opp Drive End Bearing Size	6211
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	.248 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	1.875 in
Assembly/Box Mounting	F1/F2 CAPABLE	Inverter Load	CONSTANT 2000:1
Connection Drawing	EE7308T	Outline Drawing	SS621113-200

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DASH NO.	4				3				2			1
	B	C	E	2E	2F	2FF	AG	AH	BA	BV	MOUNTING	FRAME
100	10.83	33.77	5.50	11.00	---	9.50	29.40	4.38	4.75	9.76	F1 OR F2	284TC
200	12.68	35.27			9.50	11.00	30.90			10.50		284/286TC



DRAWING REVISION A	REVISION BY BISWA	REV DATE/© DATE 24/12/2020
ECO CR-0000329	APPROVED BY SBD	DATE 24/12/2020
ECO DESCRIPTION NEW DRAWING RELEASE 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.		

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ARE FOR REFERENCE ONLY

DRAWN BY BISWA	Regal Beloit America, Inc.
DATE 15/12/2020	
APPROVED BY SBD	DESCRIPTION OUTLINE 284/286TC FR-NEMA-TEBC AXIAL BLOWER
DATE 15/12/2020	MATERIAL PROCESS/FINISH
REFERENCE	SIZE B
THIRD ANGLE PROJECTION	DRAWING NUMBER SS621113
	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 CONN DIAGRAM-INTERNAL 3 PHASE - DUAL VOLTAGE MOTOR
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			REFERENCE EE7308/EE7300	SIZE A	DRAWING NUMBER EE7308T
			THIRD ANGLE PROJECTION		



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

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER:
ORDER #: _____
CONN. DIAGRAM: EE7308T
OUTLINE: SS621113-200
WINDING: HA31804026 NONE 2
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: 286THFCD8038
CAT #: Y512A
CUSTOMER PART #: _____
MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
30	22.4	1800	1776	286TC	TEBC-AXIAL	TFS	K	INV

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60	230/460	70.5/35.5	INVERTER ONLY	CONT	H	1.15	40	3300

F.L. EFF	3/4 LD EFF	1/2 LD EFF	GTD EFF	ELECT. TYPE
93.6	93.7	93.1	93.0	SQ CAGE INV DUTY
F.L. PF	3/4 LD PF	1/2 LD PF		
85.0	79.9	68.9		

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (°C)
88.6 LB-FT	303	146 LB-FT	333 LB-FT	63
		165%	376%	

SOUND PRESSURE @ 3 FT.	POWER	ROTOR WK ²	MAX. LOAD WK ²	SAFE STALL TIME	STARTS/HOUR	APPROX. MOTOR WGT
62 dBA	71 dBA	4.78 LB-FT ²	40 LB-FT ²	25 SEC.	2	452 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	NO	NONE	BLUE (ENAMEL)

DE	ODE	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
BALL	BALL	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
6311	6211						

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
0.155	0.107	0.671	0.605	17.577	0.150	ODE

* N O T E S *	INVERTER TORQUE: CONSTANT 2000:1 INV. HP SPEED RANGE: 1.5 X BASE SPEED					
	ENCODER: NONE					
	NONE					
	NONE PPR					

PREPARED BY: _____	BRAKE: NONE
DATE: 11/17/2021	NONE NONE
	FT-LB: NA
	VOLTAGE: NONE
	HZ: _____
FORM: 3531 REV. 4 2/27/06	UL: V-INS, CONST, OVERHEAT PRT DEV UL REC

Data Sheet

Date: 11/17/2021
 Customer: _____
 Attention: _____
 Submitted by: _____



286THFCD8038

Submittal

Data @ 460 V

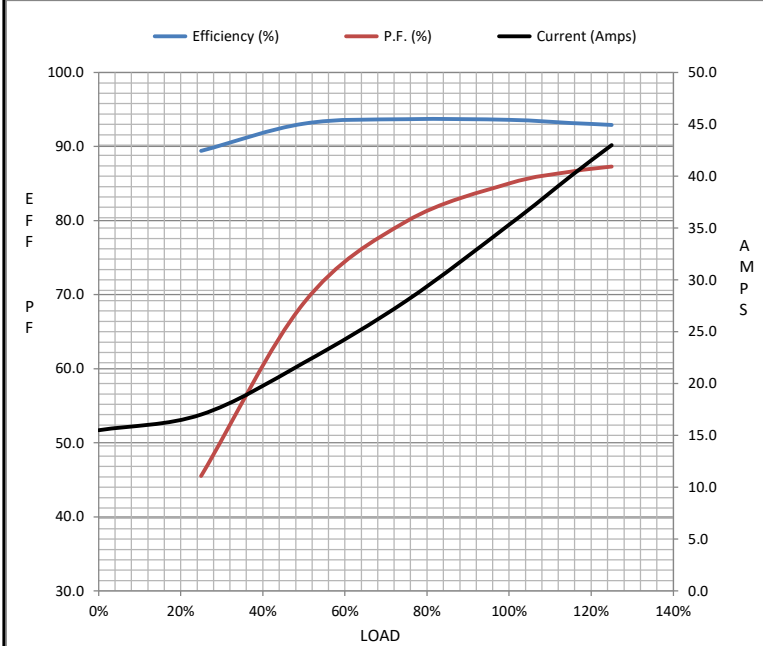
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	15.5	17.0	22.0	28.0	35.3	40.0	43.0	303
Torque (ft-lb)	0.00	22.0	44.0	66.0	88.6	102	111	146
RPM	1800	1794	1788	1782	1776	1,772	1769	0
Efficiency (%)		89.4	93.1	93.7	93.6	93.2	92.9	
P.F. (%)	4.6	45.5	68.9	79.9	85.0	86.6	87.3	32.8

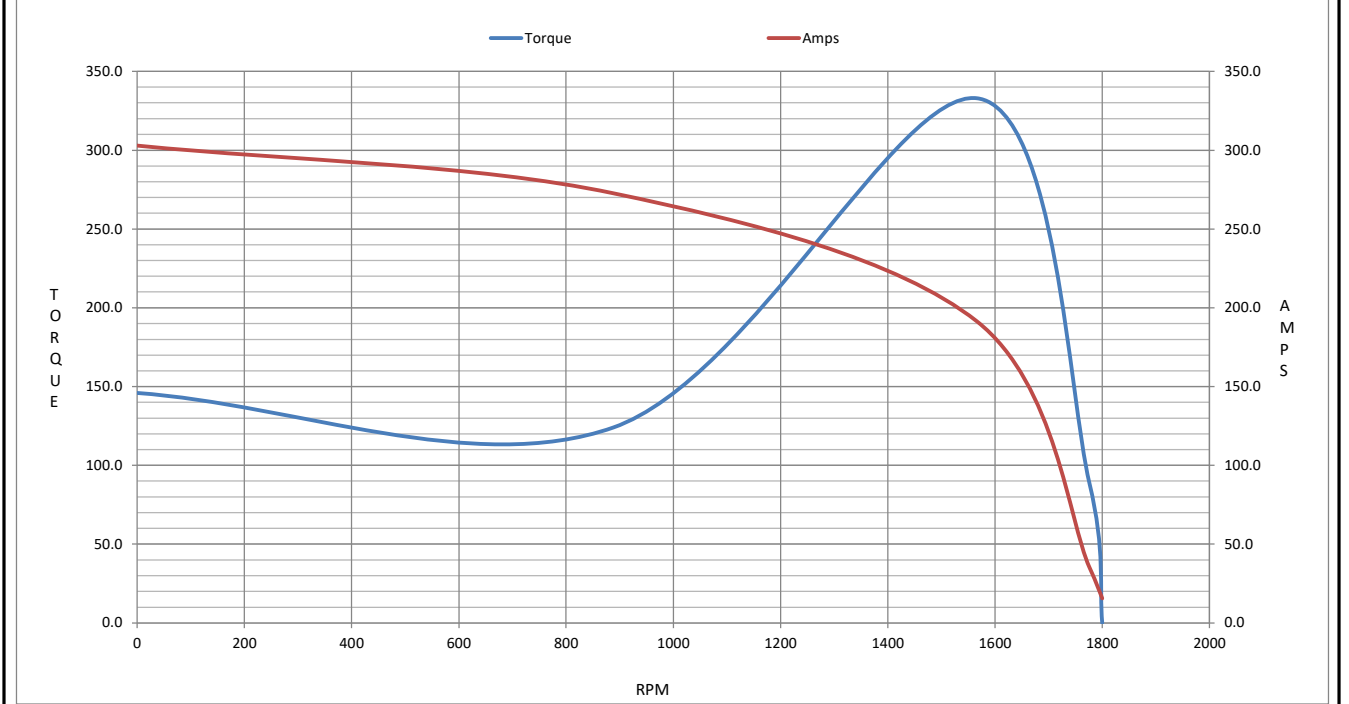
Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	888	1566	1776	1800
Current (Amps)	303	273	192	35.3	15.5
Torque (ft-lb)	146	124	333	88.6	0.00

Information Block				
HP	30.0			
Sync. RPM	1800			
Frame	286			
Enclosure	TEBC-AXIAL			
Construction	TFS			
Voltage	230/460 V			
Frequency	60 Hz			
Design	INV			
LR Code letter	K			
Service Factor	1.15			
Temp Rise @ FL	63 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	3,300 feet			
Rotor/Shaft wk ²	4.78 Lb-F ²			
Ref Wdg	HA31804026 NONE			
Sound Pressure @ 1M	62 dBA			
VFD Rating	CONSTANT 2000:1			
Outline Dwg	SS621113-200			
Conn. Diag	EE7308T			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.1550	0.1070	0.6710	0.6050	17.5770



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 : 286THFCD8038

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

Catalog No : Y512A

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