

PRODUCT INFORMATION PACKET

Model No: 286THFCD8086

Catalog No: Y582A

Blue Max® Inverter Duty Encoder Motor, 20 HP, 3 Ph, 60 Hz, 230/460 V, 1200 RPM, 286TC Frame,
TEBC-AXIAL



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Nameplate Specifications

Output HP	20 Hp	Output KW	14.9 kW
Frequency	60 Hz	Voltage	230/460 V
Current	51.0/25.5 A	Speed	1180 rpm
Service Factor	1	Phase	3
Efficiency	91.4 %	Power Factor	77
Duty	Continuous	Insulation Class	H
Design Code	INV	KVA Code	J
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	6	Rotation	Reversible
Resistance Main	.505 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
Outline Drawing	SS621113-200	Connection Drawing	EE7308T

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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
<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	PROCESS/FINISH
			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: HA31806012 NONE 2
 SPEED: _____

CUSTOMER P.O. #: _____
 REFERENCE MODEL #: 286THFCD8086
 CAT #: Y582A
 CUSTOMER PART #: _____
 MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
20	14.9	1200	1180	286TC	TEBC-AXIAL	TBC	J	INV

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60	230/460	51/25.5	INVERTER ONLY	CONT	H	1.15	40	3300

F.L. EFF	3/4 LD EFF	1/2 LD EFF	GTD EFF	ELECT. TYPE
91.4	91.7	60.0	90.2	SQ CAGE INV DUTY
F.L. PF	3/4 LD PF	1/2 LD PF		
77.0	72.5			

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (°C)
89.0 LB-FT	204	152 LB-FT	295 LB-FT	68
		171%	331%	

SOUND PRESSURE @ 3 FT.	POWER	ROTOR WK ²	MAX. LOAD WK ²	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
65 dBA	74 dBA	1.539 LB-FT ²	50 LB-FT ²	20 SEC.	2	435 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
0.315	0.174	0.964	1.078	19.412	0.150	ODE

NOTES	INVERTER TORQUE: CONSTANT 2000:1 INV. HP SPEED RANGE: 1.5 X BASE SPEED					
	ENCODER: NONE					
	NONE					
	NONE PPR					

PREPARED BY: _____	BRAKE: NONE
DATE: 9/27/2021	NONE NONE
	FT-LB: NA
	VOLTAGE: NONE
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: _____



286THFCD8086

Submittal

Data @ 460 V

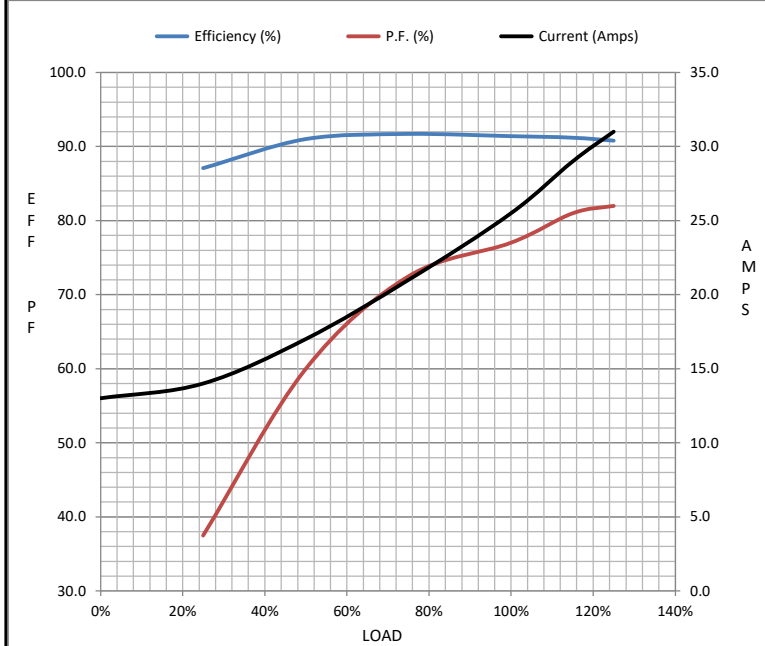
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	13.0	14.0	17.0	21.0	25.5	29.0	31.0	204
Torque (ft-lb)	0.00	22.0	44.0	66.5	89.0	103	112	152
RPM	1200	1195	1190	1185	1180	1,178	1175	0
Efficiency (%)		87.1	91.0	91.7	91.4	91.2	90.8	
P.F. (%)	4.5	37.5	60.0	72.5	77.0	81.0	82.0	41.0

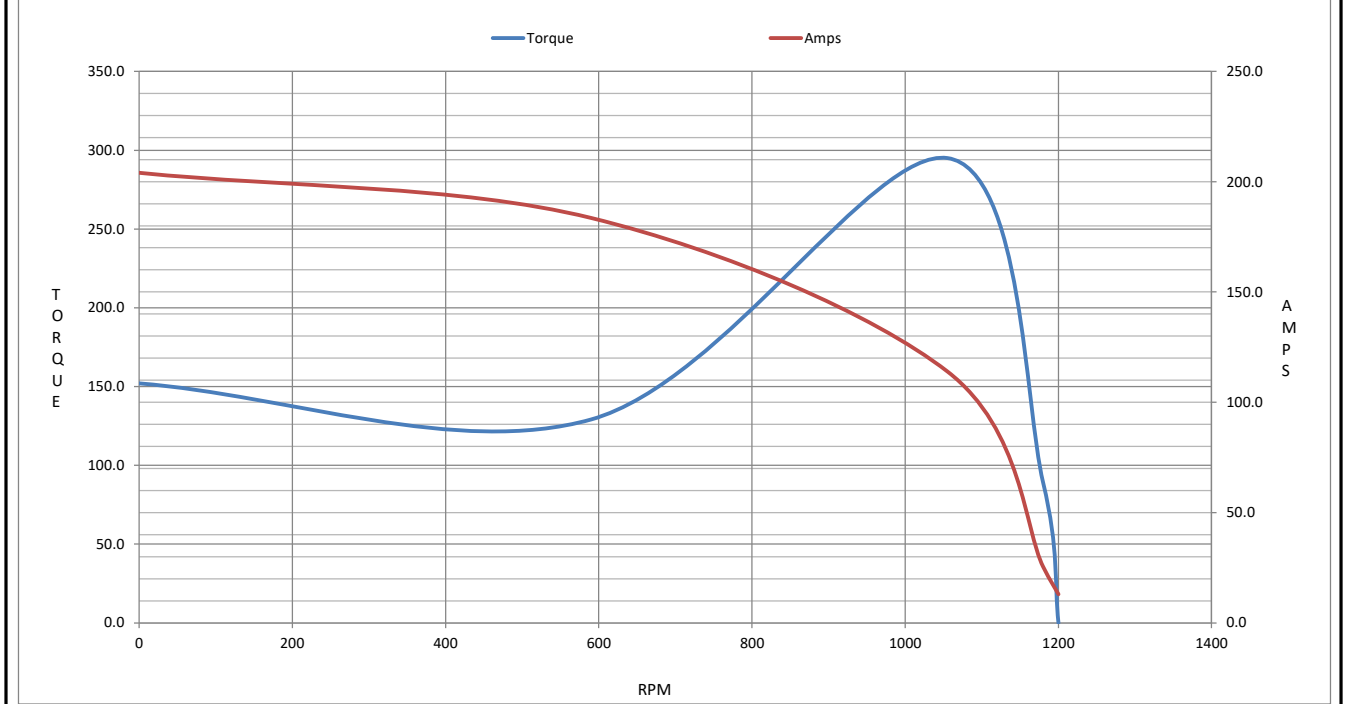
Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	590	1055	1180	1200
Current (Amps)	204	184	114	25.5	13.0
Torque (ft-lb)	152	129	295	89.0	0.00

Information Block				
HP	20.0			
Sync. RPM	1200			
Frame	286			
Enclosure	TEBC-AXIAL			
Construction	TBC			
Voltage	230/460 V			
Frequency	60 Hz			
Design	INV			
LR Code letter	J			
Service Factor	1.15			
Temp Rise @ FL	68 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	3,300 feet			
Rotor/Shaft wk ²	1,539 Lb-F ²			
Ref Wdg	HA31806012 NONE			
Sound Pressure @ 1M	65 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
0.3150	0.1740	0.9640	1.0780	19.4120



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 : 286THFCD8086

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

Catalog No : Y582A

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

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