

# PRODUCT INFORMATION PACKET

Model No: 213THTCD8071

Catalog No: Y990A

Blue Max® Inverter Duty Encoder Motor, 7.50 HP, 3 Ph, 60 Hz, 230/460 V, 1800 RPM, 213TC Frame, TENV



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### Nameplate Specifications

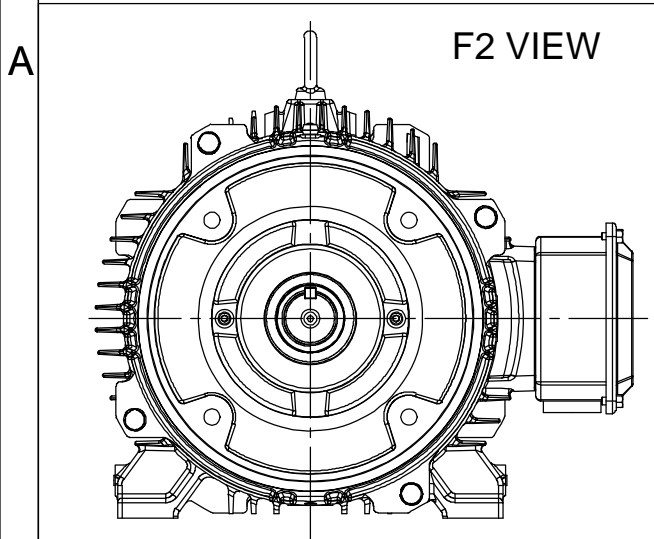
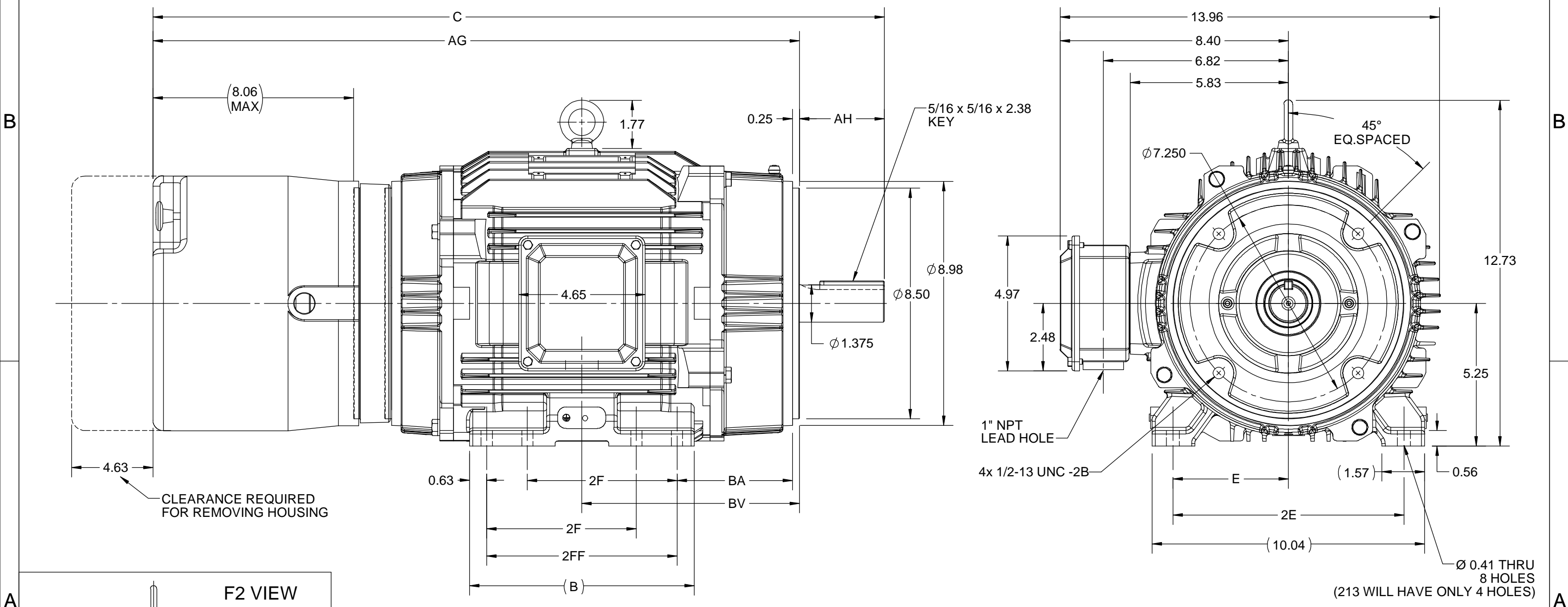
Output HP	<b>7.50 Hp</b>	Output KW	<b>5.6 kW</b>
Frequency	<b>60 Hz</b>	Voltage	<b>230/460 V</b>
Current	<b>20.0/10.0 A</b>	Speed	<b>1770 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>90.6 %</b>	Power Factor	<b>78</b>
Duty	<b>Continuous</b>	Insulation Class	<b>H</b>
Design Code	<b>INV</b>	KVA Code	<b>L</b>
Frame	<b>213TC</b>	Enclosure	<b>Totally Enclosed Non Ventilated</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>6308</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>1.142 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>1.375 in</b>
Assembly/Box Mounting	<b>F1/F2 CAPABLE</b>	Inverter Load	<b>CONSTANT 2000:1</b>
Outline Drawing	<b>SS810152-100</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	6.76	24.42	4.25	8.50	---	5.50	22.30	3.12	4.25	7.26	F1 OR F2	213TC
200	8.26	26.92			5.50	7.00	23.80			8.00		213/215TC



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

DRAWN BY VS
DATE 26-06-2020
APPROVED BY SBD
DATE 26-06-2020
REFERENCE
THIRD ANGLE PROJECTION

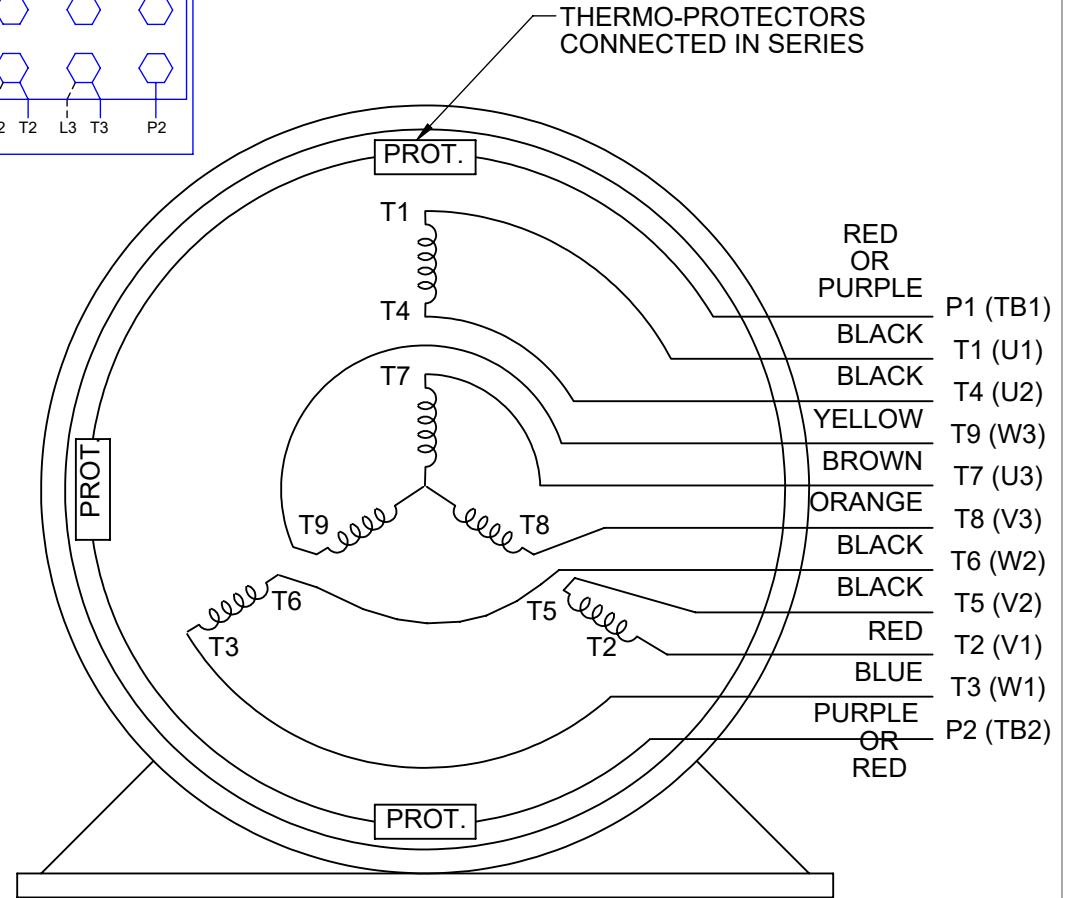
<b>REGAL</b> Regal Beloit America, Inc.	
DESCRIPTION <b>OUTLINE</b>	
213/215TC NEMA TENV-BRAKE (STEARNS BR & SL85 TACH)	
MATERIAL	PROCESS/FINISH
SIZE B	DRAWING NUMBER SS810152
SHEET 1 OF 1	

**HIGH VOLTAGE**



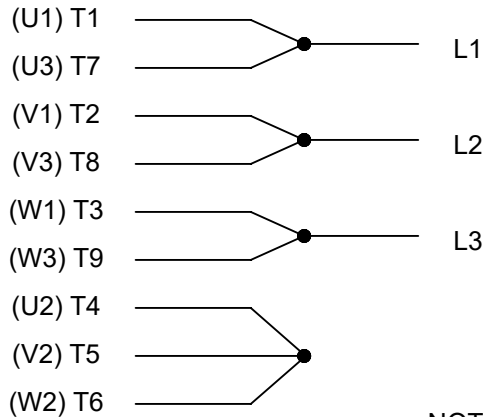
**THREE PHASE  
DUAL VOLTAGE MOTOR**

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
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			REFERENCE EE7308/EE7300	SIZE A	DRAWING NUMBER EE7308T



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

DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

CUSTOMER:  
 ORDER #: \_\_\_\_\_  
 CONN. DIAGRAM: EE7308T  
 OUTLINE: SS810152-100  
 WINDING: HA31324027 NONE 2  
 SPEED: \_\_\_\_\_

CUSTOMER P.O. #: \_\_\_\_\_  
 REFERENCE MODEL #: 213THTCD8071  
 CAT #: Y990A  
 CUSTOMER PART #: \_\_\_\_\_  
 MOUNTING: F1/F2 CAPABLE

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
7.5	5.6	1800	1770	213TC	TENV	TTC	L	INV

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60	230/460	20/10	INVERTER ONLY	CONT	H	1.15	40	3300

F.L. EFF	3/4 LD EFF	1/2 LD EFF	GTD EFF	ELECT. TYPE
90.6	90.4	88.5	89.9	SQ CAGE INV DUTY
F.L. PF 78.0	3/4 LD PF 71.5	1/2 LD PF 59.0		

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (°C)
22.2 LB-FT	85.0	55.8 LB-FT	86.7 LB-FT	105
		251%	391%	

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		0.238 LB-FT <sup>2</sup>	20 LB-FT <sup>2</sup>	30 SEC.	2	185 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 6308	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
0.711	0.469	2.533	2.639	50.325	0.150	ODE

NOTES	INVERTER TORQUE: CONSTANT 2000:1	
	INV. HP SPEED RANGE: 2.0 X BASE SPEED	
	ENCODER: NORTHSTAR	
	SL85 NONE PPR	

PREPARED BY: _____	BRAKE: STEARNS	
DATE: 9/27/2021	87,000 NEMA 2	
	FT-LB: 35	
	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: 7/26/2022  
 Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Submitted by: \_\_\_\_\_



213THTCD8071

Submittal

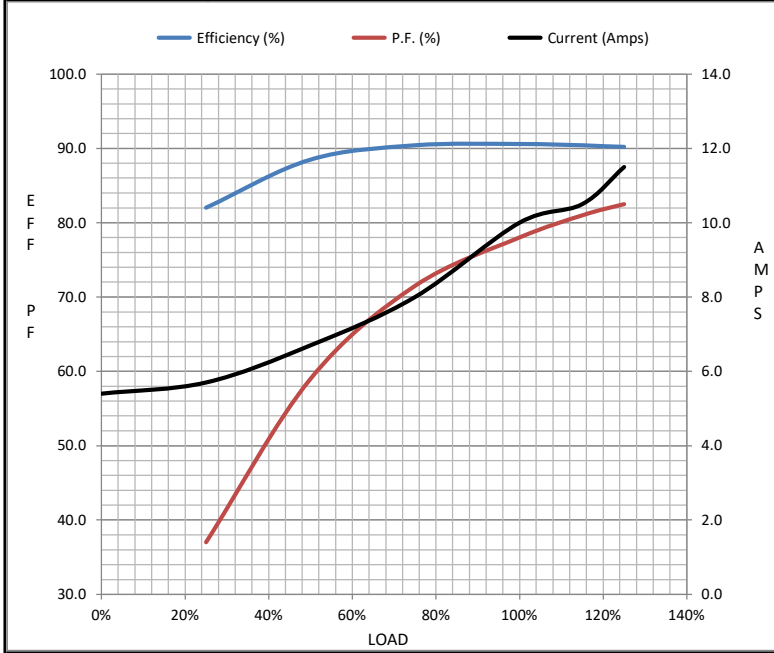
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	5.4	5.7	6.7	8.0	10.0	10.5	11.5	85.0
Torque (ft-lb)	0.00	5.5	11.0	16.6	22.2	25.7	27.9	55.8
RPM	1800	1793	1785	1780	1770	1,767	1762	0
Efficiency (%)		82.0	88.5	90.4	90.6	90.4	90.2	
P.F. (%)	6.5	37.0	59.0	71.5	78.0	81.0	82.5	42.5

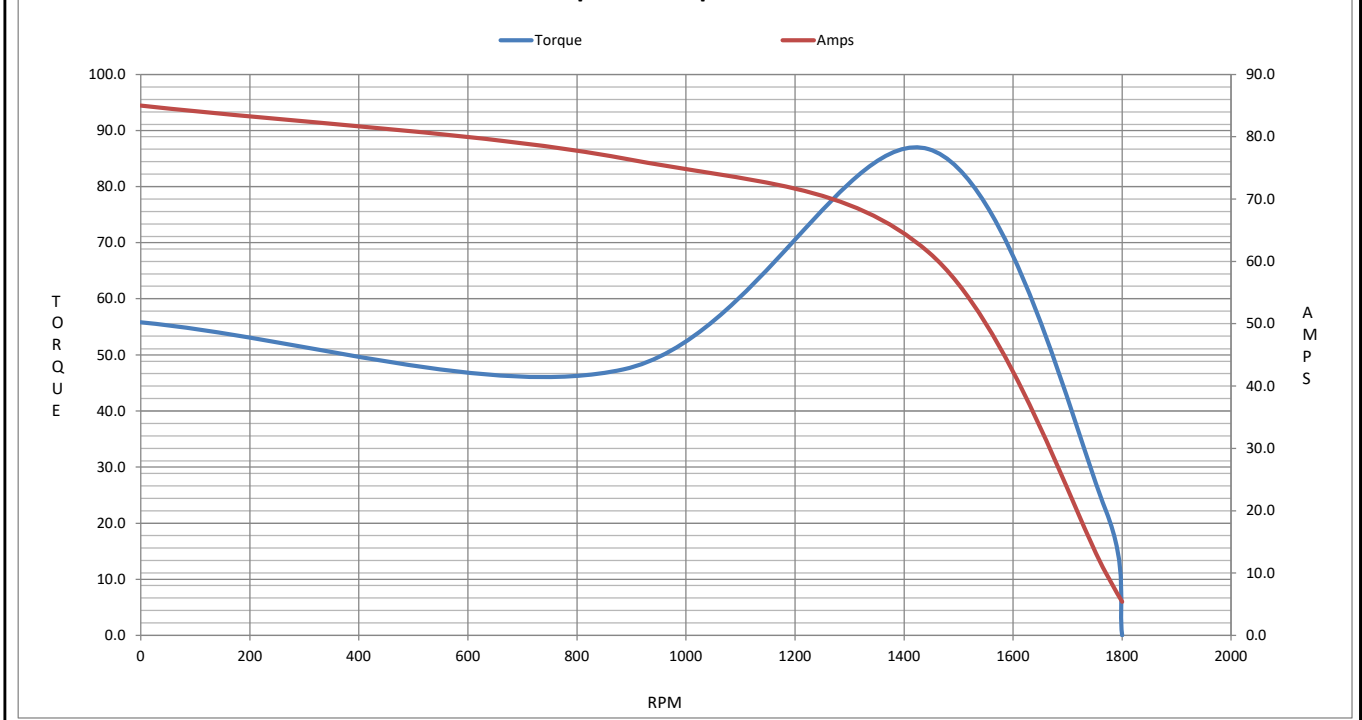
Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle	Information Block	
Speed (RPM)	0	885	1445	1770	1800	HP	7.5
Current (Amps)	85.0	76.5	61.5	10.0	5.4	Sync. RPM	1800
Torque (ft-lb)	55.8	47.4	86.7	22.2	0.00	Frame	213



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>	1.00 Lb-Ft <sup>2</sup>			
Ref Wdg	HA31324027 NONE			
Sound Pressure @ 1M	62 dBA			
VFD Rating	CONSTANT 2000:1			
Outline Dwg				
Conn. Diag	EE7308T			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.7110	0.4690	2.5330	2.6390	50.3250

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 : 213THTCD8071

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

Catalog No : Y990A

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**