

# PRODUCT INFORMATION PACKET

Model No: 449THFS8036

Catalog No: Y579

Blue Max® Inverter Duty Encoder Motor, 250 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 449T Frame, TEFC



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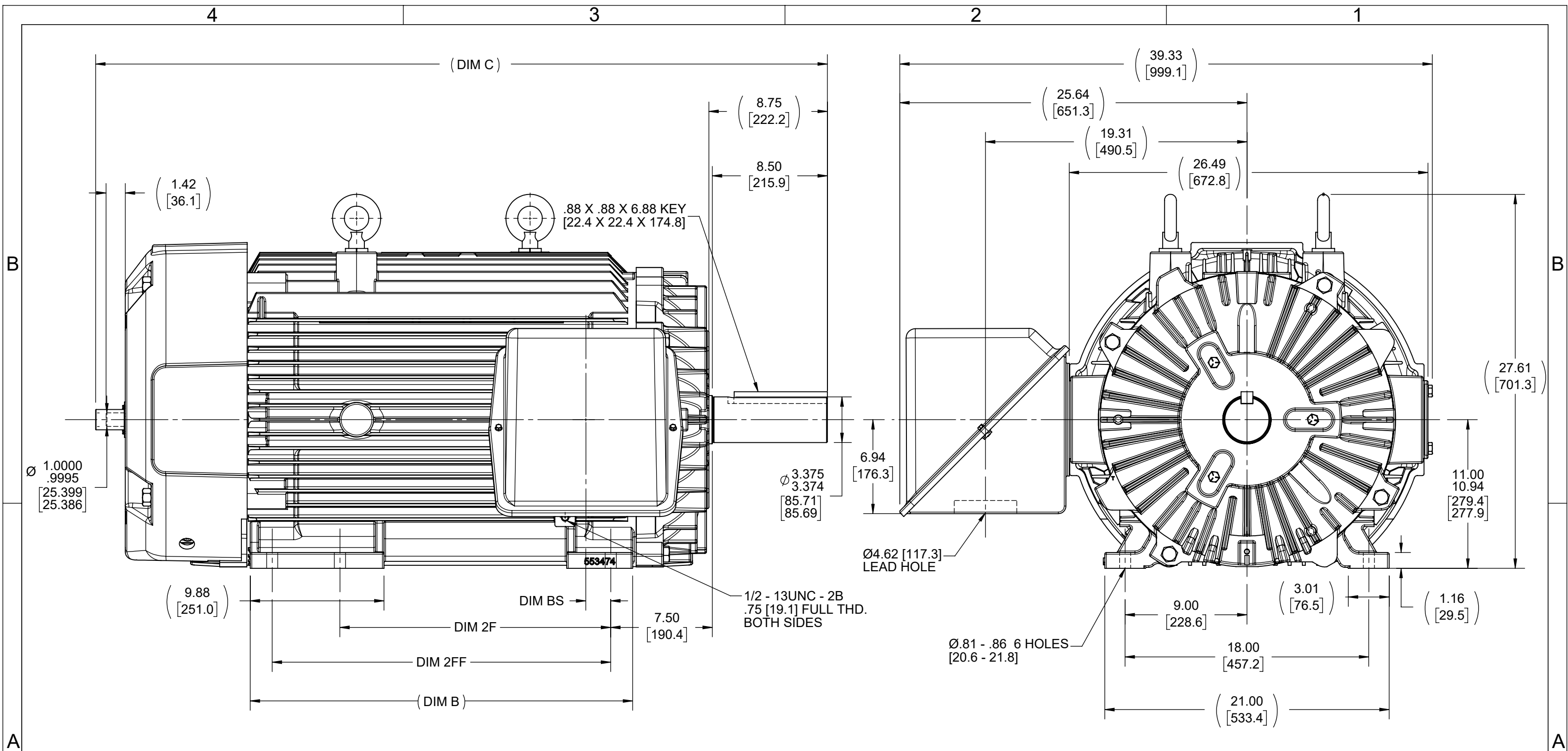
### Nameplate Specifications

Phase	<b>3</b>	Output HP	<b>250 Hp</b>
Output KW	<b>187.0 kW</b>	Voltage	<b>460 V</b>
Speed	<b>1788 rpm</b>	Service Factor	<b>1</b>
Frame	<b>449T</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>Thermostat</b>	Efficiency	<b>95 %</b>
Ambient Temperature	<b>40 °C</b>	Frequency	<b>60 Hz</b>
Current	<b>280.0 A</b>	Power Factor	<b>89</b>
Duty	<b>Continuous</b>	Insulation Class	<b>H</b>
Design Code	<b>INV</b>	KVA Code	<b>J</b>
Drive End Bearing Size	<b>6319</b>	Opp Drive End Bearing Size	<b>6318</b>
UL	<b>Recognized</b>	CSA	<b>Y</b>
CE	<b>Y</b>	IP Code	<b>43</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>.011 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>	Overall Length	<b>54.03 in</b>
Frame Length	<b>28.75 in</b>	Shaft Diameter	<b>3.375 in</b>
Shaft Extension	<b>8.75 in</b>	Assembly/Box Mounting	<b>F1/F2 CAPABLE</b>
Inverter Load	<b>CONSTANT 20:1</b>		
Outline Drawing	<b>B-SS555991-2875</b>	Connection Drawing	<b>A-EE7300S</b>





**NOTE:**  
 1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS.  
 2. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF THE MOTOR.

**ENGINEERING CERTIFIED DRAWING**

NOTE: THIS MOTOR HAS PROVISION FOR HS35 ENCODER

DASH	FRAME	DIM B	DIM C	DIM 2F	DIM 2FF	DIM BS
2875	447T	28.25 [717.6]	54.03 [1372.4]	20.00 [508.0]	NA	1.84 [46.7]
2875	449T	28.25 [717.6]	54.03 [1372.4]	NA	25.00 [635.0]	1.84 [46.7]

DRAWING REVISION	REVISION BY	REV DATE/© DATE
B	SC	12/20/2021
ECO CR-0006007	APPROVED BY SC	DATE 12/20/2021
ECO DESCRIPTION ADDED ENGINEERING CERTIFIED DRAWING:CR-0006007		

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**TOLERANCES (EXCEPT AS NOTED):**

DEC.	INCH	mm	ANGLE
.X	±0.1	[±3]	±7° 30"
.XX	±0.03	[±0.8]	
.XXX	±0.005	[±0.13]	
.XXXX	±0.0005	[±0.013]	

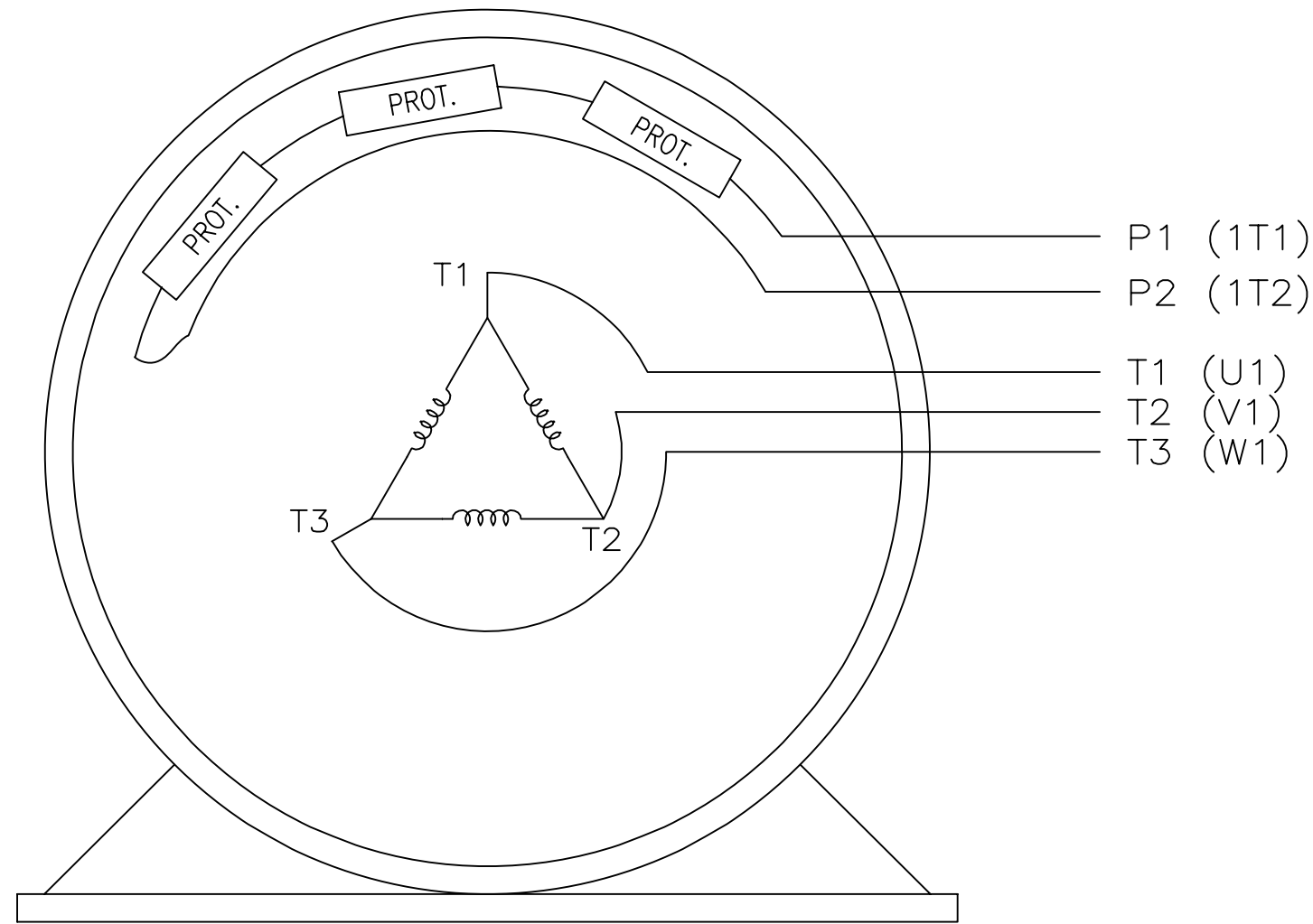
REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [08/.38] X 45°  
 CORNER FILLETS: R.02 [5]  
 MACHINED SURFACES: 200 INCH/mm 5.1  
 mm DIMENSIONS IN [BRACKETS] ARE FOR REFERENCE ONLY

DRAWN BY W. JOERGER	Regal Beloit America, Inc.
DATE 12-19-2013	
APPROVED BY E. HEIL	
DATE 12-19-2013	
REFERENCE	DESCRIPTION <b>OUTLINE</b> TEFC - 447/449T FR.
THIRD ANGLE PROJECTION	MATERIAL
	PROCESS/FINISH
	SIZE <b>B</b>
	DRAWING NUMBER <b>SS555991</b>
	SHEET 1 OF 1

EE7300S

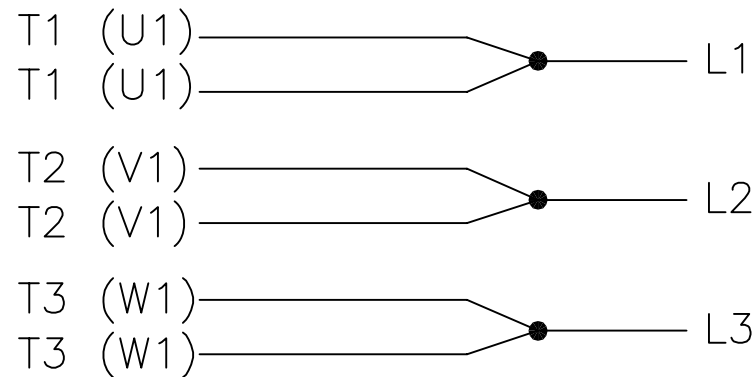
THREE PHASE – SINGLE VOLTAGE MOTOR

TO REVERSE ROTATION:  
INTERCHANGE ANY TWO LINE  
LEAD CONNECTIONS



VIEW OF TERMINAL END

IF MOTOR HAS MULTIPLE  
T'S PER LEAD CONNECT  
TOGETHER LIKE T'S



A-9806 DECAL

NO.	REVISION	BY & DATE	CHK	TOLERANCES UNLESS SPECIFIED			REGAL-BELOIT CORPORATION	DRAWN KL 12-15-1999	
				DEC.	INCHES				
F	UPDATED TITLE BLOCK	HV 02-27-2014	EWB	.X	±	-	REGAL-BELOIT CORPORATION	CHK DJK 12-15-1999	
3	REMOVED "N.C." FROM PROT.'S MU61770	JJB 08-02-2010		.XX	±	-	TITLE CONNECTION DIAGRAM – EXTERNAL SINGLE VOLTAGE 3Ø MOTOR	APPD DJK 12-15-1999	
2	ADDED IEC MARKINGS MU61770	KL 09-16-2004	EAB	.XXX	±	-		SCALE 1=1	
1	NEW DRAWING	KL 12-16-1999		.XXXX	±	-	MAT'L.	REF	
				ANG	±	-	FINISH	FMF	
			RFP				CAD FILE ee7300s	PREV	
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT – DO NOT SCALE THIS PRINT				DIST WA-LB-SB			SIZE A	DRAWING NO. EE7300S	PAGE OF REV. F

**CERTIFICATION DATA SHEET**

**Model#:** 449THFS8036 AE      **WINDING#:** T449465 NONE 1  
**CONN. DIAGRAM:** A-EE7300S      **ASSEMBLY:** F1/F2 CAPABLE  
**OUTLINE:** B-SS555991-2875

**TYPICAL MOTOR PERFORMANCE DATA**

<b>HP</b>	<b>KW</b>	<b>SYNC. RPM</b>	<b>F.L. RPM</b>	<b>FRAME</b>	<b>ENCLOSURE</b>	<b>KVA CODE</b>	<b>DESIGN</b>		
250	187	1800	1788	447/449T	TEFC	J	INV		
<b>PH</b>	<b>Hz</b>	<b>VOLTS</b>	<b>FL AMPS</b>	<b>START TYPE</b>	<b>DUTY</b>	<b>INSL</b>	<b>S.F</b>	<b>AMB°C</b>	<b>ELEVATION</b>
3	60	460	280	INVERTER ONLY	CONTINUOUS	H1	1.0	40	3300
<b>FULL LOAD EFF: 95</b>		<b>3/4 LOAD EFF: 95</b>	<b>1/2 LOAD EFF: 93.6</b>	<b>GTD. EFF</b>	<b>ELEC. TYPE</b>	<b>NO LOAD AMPS</b>			
<b>FULL LOAD PF: 89</b>		<b>3/4 LOAD PF: 85</b>	<b>1/2 LOAD PF: 78</b>	94.5	SQ CAGE INV DUTY	85			
<b>F.L. TORQUE</b>		<b>LOCKED ROTOR AMPS</b>	<b>L.R. TORQUE</b>	<b>B.D. TORQUE</b>	<b>F.L. RISE°C</b>				
734 LB-FT		2450	1250 LB-FT 170	2500 LB-FT 341	60				
<b>SOUND PRESSURE @ 3 FT.</b>	<b>SOUND POWER</b>	<b>ROTOR WK^2</b>	<b>MAX. WK^2</b>	<b>SAFE STALL TIME</b>	<b>STARTS /HOUR</b>	<b>APPROX. MOTOR WGT</b>			
85 dBA	95 dBA	81 LB-FT^2	- LB-FT^2	- SEC.	-	2700 LBS.			

**EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)**

<b>R1</b>	<b>R2</b>	<b>X1</b>	<b>X2</b>	<b>XM</b>
0.009576	0.006612	0.093024	0.077292	2.9982
<b>RM</b>	<b>ZREF</b>	<b>XR</b>	<b>TD</b>	<b>TD0</b>
140.22	1.14	9	0.0525	1.245

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

<b>DE BRACKET TYPE</b>	<b>ODE BRACKET TYPE</b>	<b>MOUNT TYPE</b>	<b>ORIENTATION</b>	<b>SEVERE DUTY</b>	<b>HAZARDOUS LOCATION</b>	<b>DRIP COVER</b>	<b>SCREENS</b>	<b>PAINT</b>
STANDARD	ENCODER	RIGID	HORIZONTAL	FALSE	NONE	FALSE	NONE	BLUE (ENAMEL)

<b>BEARINGS</b>		<b>GREASE</b>	<b>SHAFT TYPE</b>	<b>SPECIAL DE</b>	<b>SPECIAL ODE</b>	<b>SHAFT MATERIAL</b>	<b>FRAME MATERIAL</b>
<b>DE</b>	<b>OPE</b>	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
BALL	BALL						
6319	6318						

<b>THERMO-PROTECTORS</b>				<b>THERMISTORS</b>	<b>CONTROL</b>	<b>SPACE /n HEATERS</b>
<b>THERMOSTATS</b>	<b>PROTECTORS</b>	<b>WDG RTDs</b>	<b>BRG RTDs</b>	NONE	FALSE	NONE VOLTS
TSTATS (N/C)	NOT	NONE	NONE			

If Inverter equals NONE, contact factory for further information

INVERTER TORQUE: CONSTANT 20:1 INV. HP SPEED RANGE: 1.5 X BASE SPEED
ENCODER: PROVISIONS ONLY NONE NONE NONE NONE PPR
BRAKE: NONE NONE NONE P/N NONE

\*  
N  
O  
T  
E  
S  
\*

NONE	NONE		
NONE FT-LB	NONE V	NONE Hz	

DATE: 06/21/2017 06:37:56 AM  
FORM 3531 REV.3 02/07/99  
\*\* Subject to change without notice.

Data Sheet

Date: 19-06-2017  
 Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Submitted by: FAREEDA DUDEKULA



449THFS8036

Submittal

Data @ 460 V

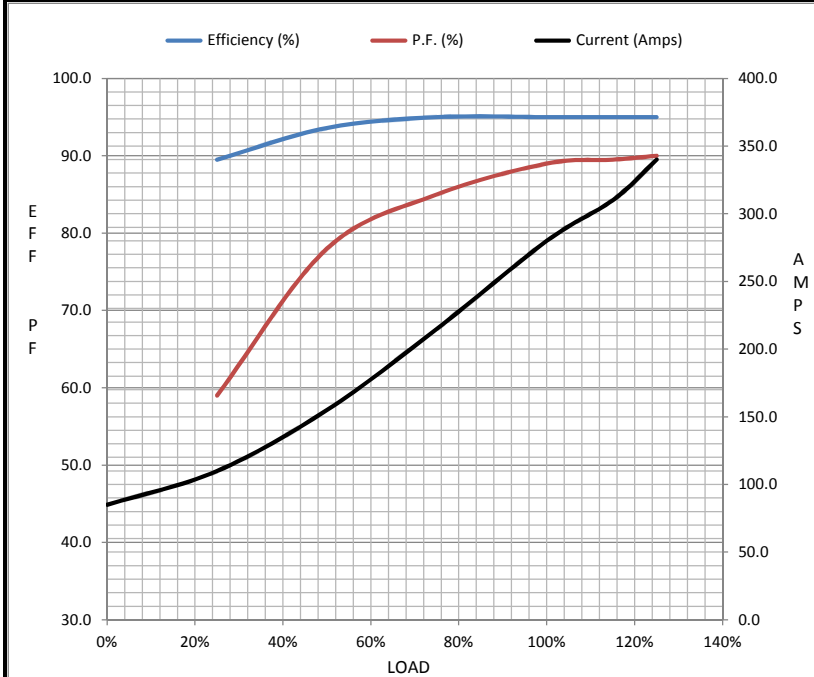
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	85.0	110	155	215	280	310	340	2,450
Torque (ft-lb)	0.00	183	366	550	734	827	920	1,250
RPM	1800	1796	1794	1790	1788	1,786	1784	0
Efficiency (%)		89.5	93.6	95.0	95.0	95.0	95.0	
P.F. (%)	7.0	59.0	78.0	85.0	89.0	89.5	90.0	22.0

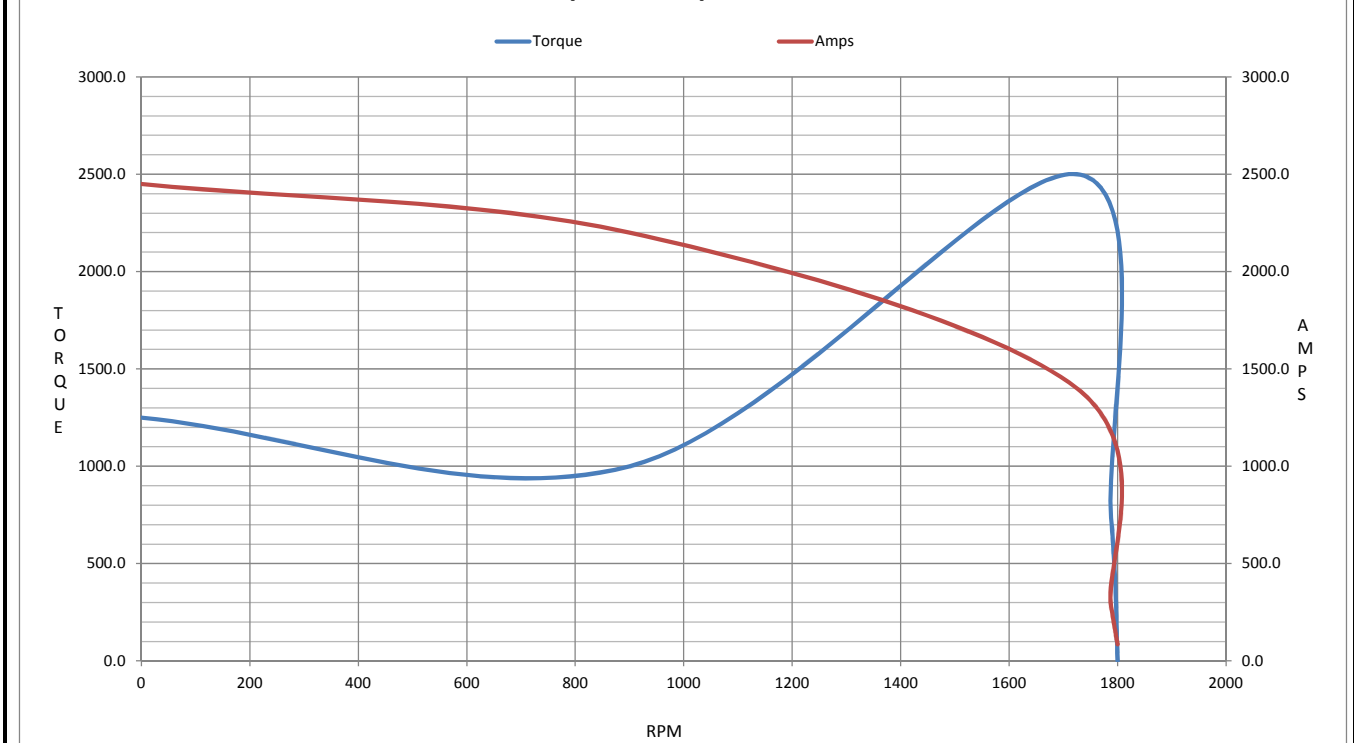
Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1725	1788	1800
Current (Amps)	2,450	2,200	1,400	280	85.0
Torque (ft-lb)	1,250	1,000	2,500	734	0.00

Information Block				
HP	250.0			
Sync. RPM	1800			
Frame	449			
Enclosure	TEFC			
Construction	TFN			
Voltage	460 V			
Frequency	60 Hz			
Design	A			
LR Code letter	J			
Service Factor	1.0			
Temp Rise @ FL	60 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	1,000 feet			
Rotor/Shaft wk <sup>2</sup>	81.0 Lb-Ft <sup>2</sup>			
Ref Wdg	T449465 NONE			
Sound Pressure @ 1M	85 dBA			
VFD Rating	CONSTANT 20:1			
Outline Dwg	B-SS555991-2875			
Conn. Diag	A-EE7300S			
Additional Specifications:				
0				
365THFS8036				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0100	0.0070	0.0930	0.0770	2.9980



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 : 449THFS8036

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

Catalog No : Y579

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**