

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: 405THFS8046

Catalog No: Y517

Blue Max® Inverter Duty Encoder Motor, 100 HP, 3 Ph, 60 Hz, 230/460 V, 1800 RPM, 405TC Frame,
TEBC-AXIAL



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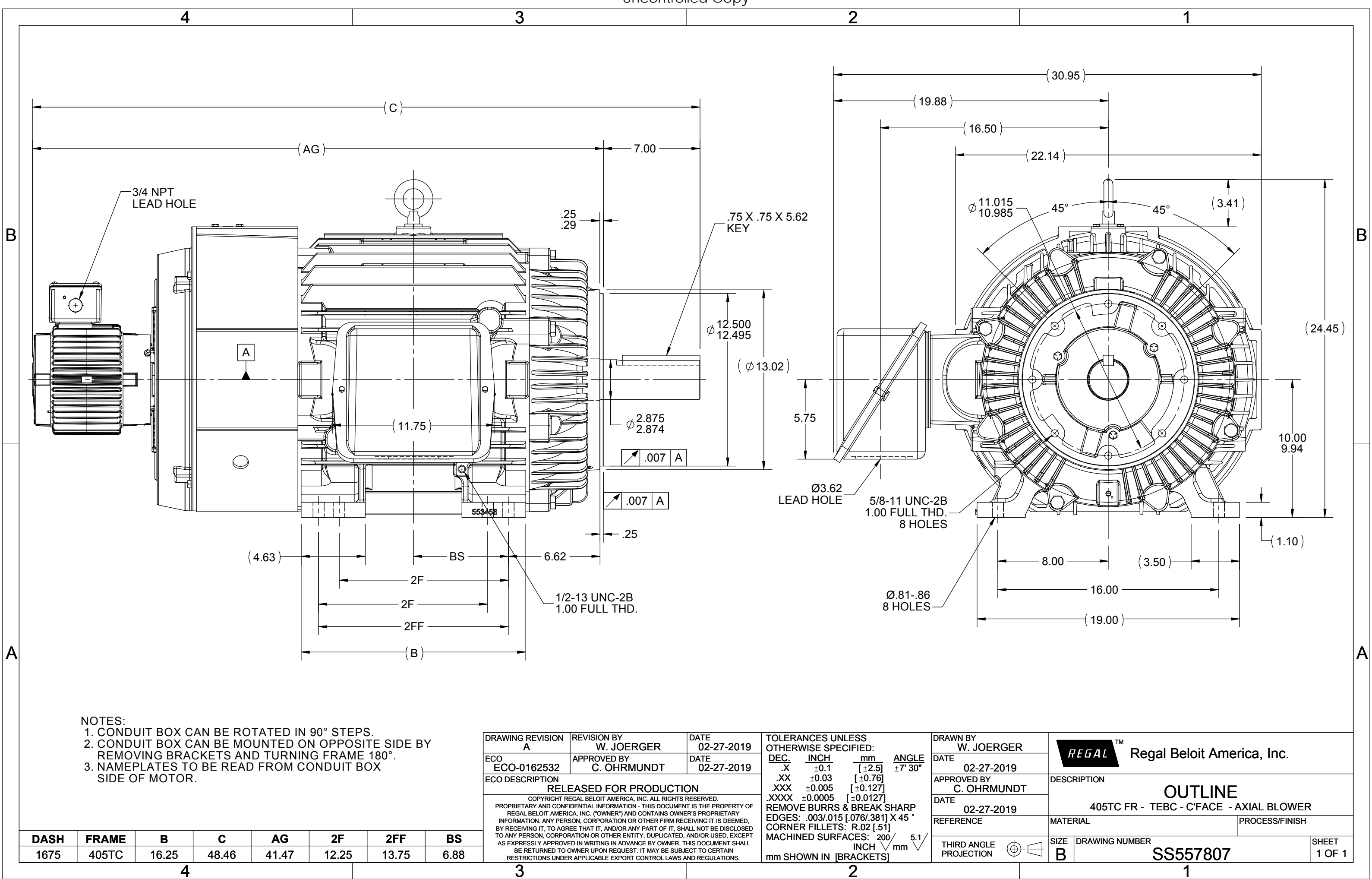
RegalRexnord

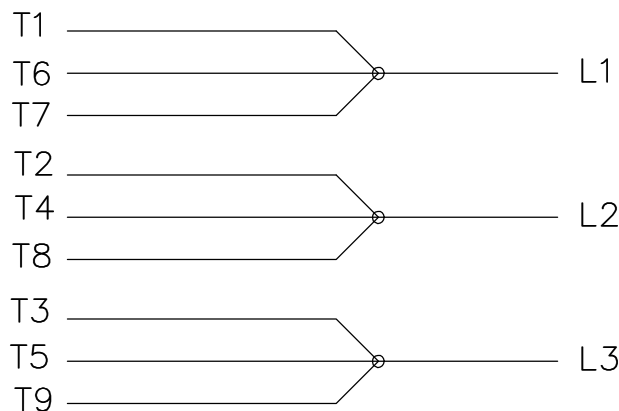
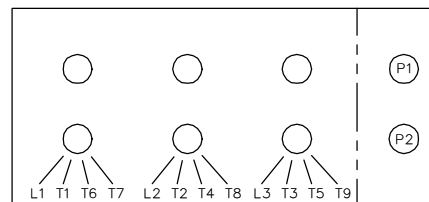
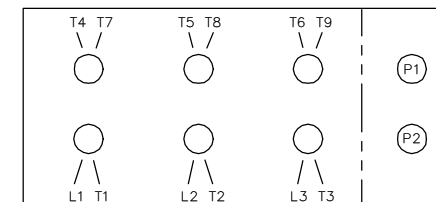
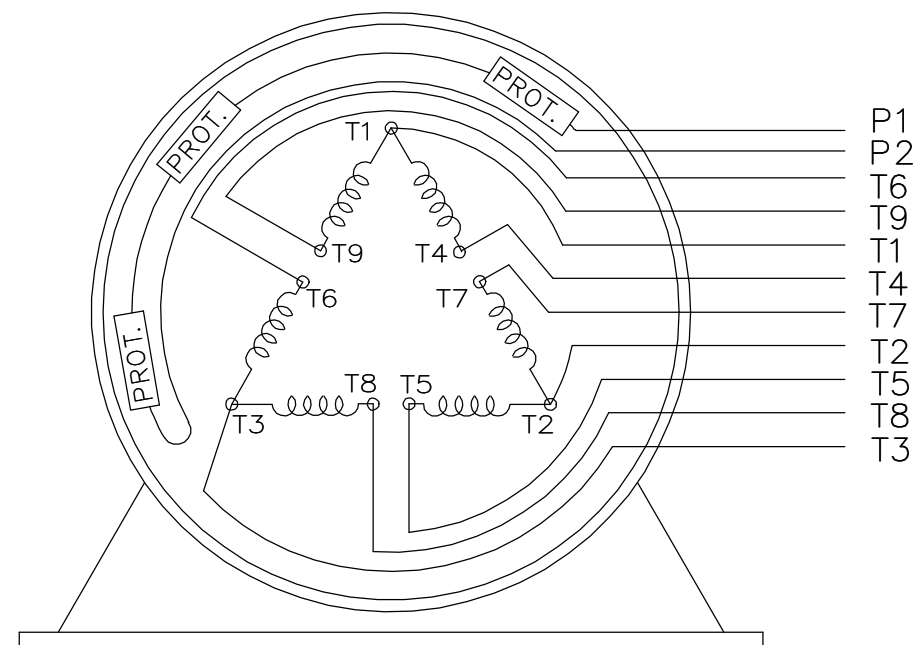
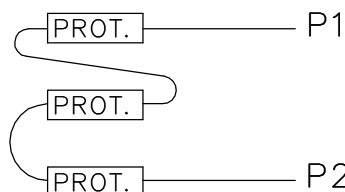
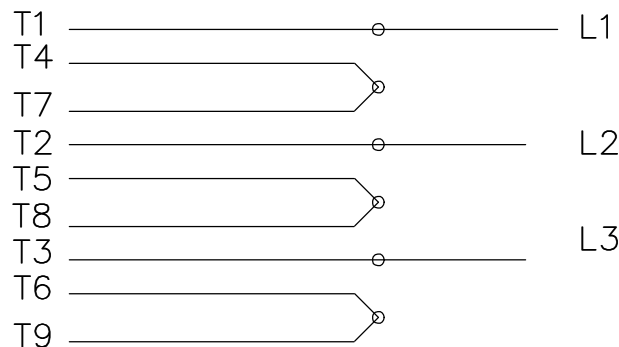
Nameplate Specifications

Phase	3	Output HP	100 Hp
Output KW	75.0 kW	Voltage	230/460 V
Speed	1785 rpm	Service Factor	1
Frame	405TC	Enclosure	Totally Enclosed Blower cooled - Axial
Thermal Protection	Thermostat	Efficiency	94.5 %
Ambient Temperature	40 °C	Frequency	60 Hz
Current	230.0/115.0 A	Power Factor	86.5
Duty	Continuous	Insulation Class	H
Design Code	INV	KVA Code	J
Drive End Bearing Size	6316	Opp Drive End Bearing Size	6313
UL	Recognized	CSA	Y
CE	Y	IP Code	43
Number of Speeds	1		


Technical Specifications

Electrical Type	Squirrel Cage Inverter Duty	Starting Method	Inverter Only
Poles	4	Rotation	Reversible
Resistance Main	.046 Ohms	Mounting	Rigid Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	T	Overall Length	49.72 in
Frame Length	16.75 in	Shaft Diameter	2.875 in
Shaft Extension	7 in	Assembly/Box Mounting	F1/F2 CAPABLE
Inverter Load	CONSTANT 2000:1		
Connection Drawing	A-EE7308AD	Outline Drawing	SS557807-1675



LOW VOLTAGELOW VOLTAGEHIGH VOLTAGEHIGH VOLTAGEVIEW OF TERMINAL END

WHEN MORE THAN ONE PROT. IS USED; PROT. ARE CONNECTED IN SERIES

DRAWING REVISION L	REVISION BY JP	REV DATE/© DATE 06-21-2019	TOLERANCES (EXCEPT AS NOTED):				DRAWN BY MJD		<div> Regal Beloit America, Inc.</div>		
ECO ECO-0168744	APPROVED BY MH	DATE 06-21-2019	DEC.	INCH	mm	ANGLE	DATE 12-19-1997				
ECO DESCRIPTION UPDATED TO CURRENT STANDARDS			.X	±0.1	[±3]	±7° 30"	APPROVED BY GK	DESCRIPTION CONN DIAGRAM-EXTERNAL			
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			.XXX	±0.005	[±0.13]		REFERENCE	MATERIAL		PROCESS/FINISH	
			.XXXX	±0.0005	[±0.013]		THIRD ANGLE PROJECTION	SIZE A	DRAWING NUMBER EE7308AD		SHEET 1 OF 1
			REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.08/.38] X 45 °								
			CORNER FILLETS: R.02 [.5]								
			MACHINED SURFACES: 200/ 5.1								
			mm DIMENSIONS IN [BRACKETS] ARE FOR REFERENCE ONLY								

CERTIFICATION DATA SHEET

Model#: 405THFS8046 BR
CONN. DIAGRAM: A-EE7308AD
OUTLINE: B-SS518552-1675

WINDING#: T4054115 R1 1
ASSEMBLY: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
100	75	1800	1785	405TC	TEBC-AXIAL	J	INV

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60	230/460	230/115	INVERTER ONLY	CONTINUOUS	H1	1.0	40	3300

FULL LOAD EFF: 94.5	3/4 LOAD EFF: 94.1	1/2 LOAD EFF: 93	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 86.5	3/4 LOAD PF: 83	1/2 LOAD PF: 75	93	SQ CAGE INV DUTY	76 / 38

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
295 LB-FT	1800 / 900	585 LB-FT 198	900 LB-FT 305	60

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
85 dBA	95 dBA	27 LB-FT^2	- LB-FT^2	- SEC.	-	1529 LBS.

EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

R1	R2	X1	X2	XM
0.03408	0.021016	0.236288	0.219248	6.816

RM	ZREF	XR	TD	TD0
332.28	2.84	5.7	0.0347	0.895

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
C-FACE	ENCODER	RIGID	HORIZONTAL	FALSE	NONE	FALSE	NONE	BLUE (ENAMEL)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL	BALL						
6316	6313	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON

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

If Inverter equals NONE, contact factory for further information

INVERTER TORQUE: CONSTANT 2000:1 INV. HP SPEED RANGE: 1.5 X BASE SPEED
ENCODER: PROVISIONS ONLY NORTHSTAR ST56 NONE NONE PPR
BRAKE: NONE NONE NONE P/N NONE

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NONE	NONE	
NONE FT-LB	NONE V	NONE Hz

DATE: 06/21/2017 08:12:56 AM
FORM 3531 REV.3 02/07/99
** Subject to change without notice.

Data Sheet

Date: 20-06-2017

Customer:

Attention:

Submitted by: FAREEDA DUDEKULA



405THFS8046

Submittal

Data @ 460 V

Motor Load Data

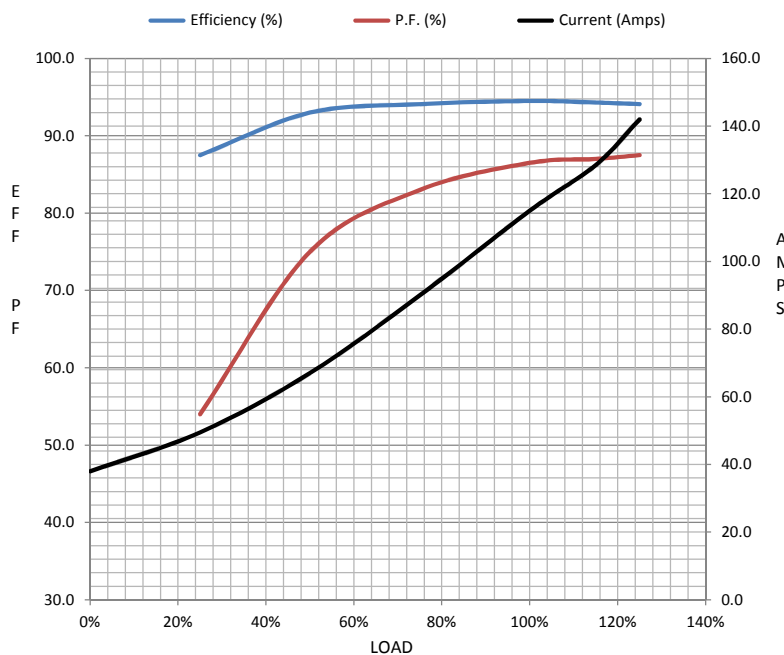
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	38.0	49.5	67.0	90.0	115	129	142	900	
Torque (ft-lb)	0.00	73.0	147	220	295	333	370	585	
RPM	1800	1796	1792	1788	1785	1,783	1780	0	
Efficiency (%)		87.5	93.0	94.1	94.5	94.3	94.1		
P.F. (%)	8.5	54.0	75.0	83.0	86.5	87.0	87.5	30.5	

Motor Speed Data

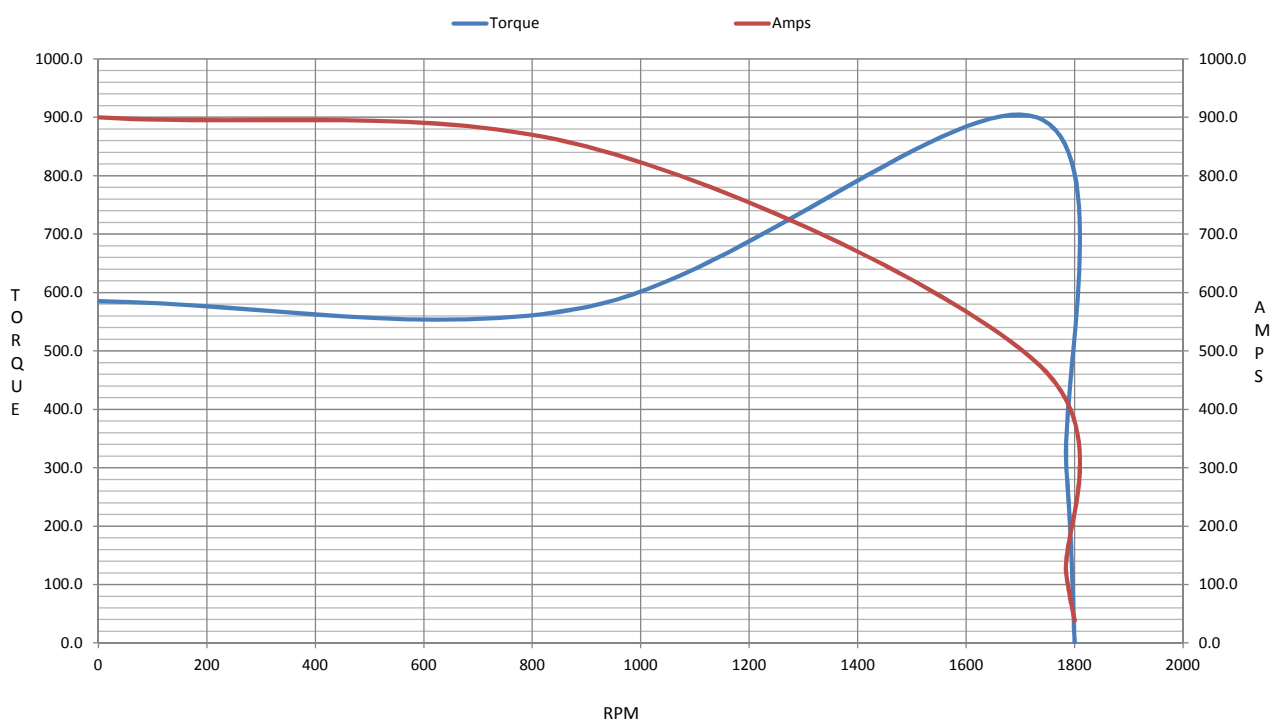
	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1730	1785	1800
Current (Amps)	900	850	480	115	38.0
Torque (ft-lb)	585	575	900	295	0.00

Information Block

HP	100.0			
Sync. RPM	1800			
Frame	405			
Enclosure	TEBC			
Construction	TBS			
Voltage	230/460 V			
Frequency	60 Hz			
Design	A			
LR Code letter	J			
Service Factor	1.15			
Temp Rise @ FL	60 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	1,000 feet			
Rotor/Shaft wk ²	27.0 Lb-Ft ²			
Ref Wdg	T4054115 R1			
Sound Pressure @ 1M	85 dBA			
VFD Rating	CONSTANT 2000:1			
Outline Dwg	B-SS518552-1675			
Conn. Diag	A-EE7308AD			
Additional Specifications:				
0				
365THFS8036				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0340	0.0210	0.2360	0.2190	6.8160



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 : 405THFS8046

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

Catalog No : Y517

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