

# PRODUCT INFORMATION PACKET

Model No: 405TTFS16004

Catalog No: M920B

Vertical Pump Motor, 100 HP, 3 Ph, 60 Hz, 230/460 V, 3600 RPM, 405HPV Frame, TEFC



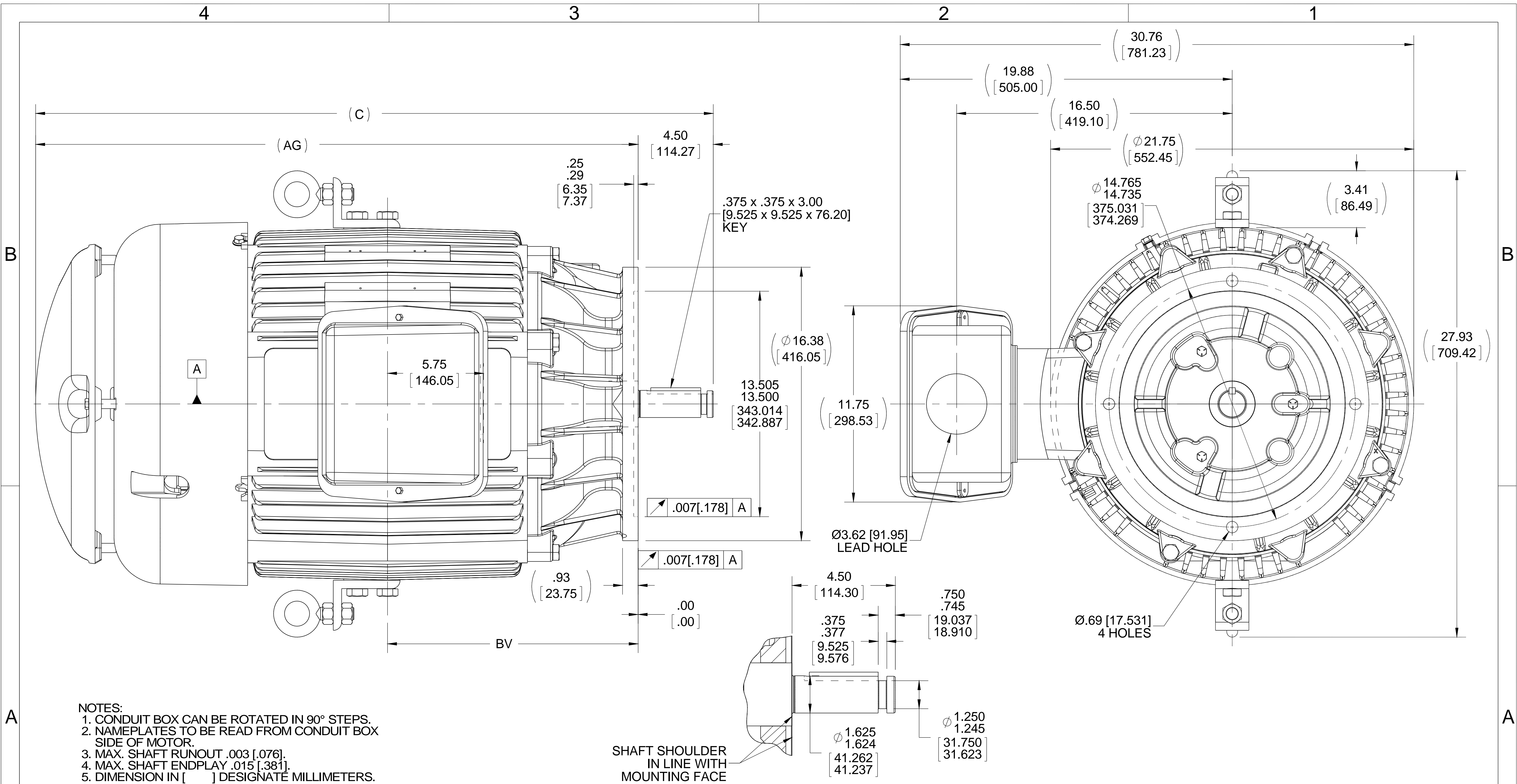
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### Nameplate Specifications

Output HP	100 Hp	Output KW	75.0 kW
Frequency	60 Hz	Voltage	230/460 V
Current	224.0/112.0 A	Speed	3565 rpm
Service Factor	1.15	Phase	3
Efficiency	94.1 %	Power Factor	89
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Frame	405HPV	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6312	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 Induction Run	Starting Method	Across The Line
Poles	2	Rotation	Reversible
Resistance Main	.06 Ohms	Mounting	Round
Motor Orientation	Shaft Down	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	HP	Overall Length	40.58 in
Frame Length	16.75 in	Shaft Diameter	1.625 in
Shaft Extension	4.50 in	Assembly/Box Mounting	F1/F2 CAPABLE
Connection Drawing	A-EE7308K	Outline Drawing	B-SS508404-1675



- NOTES:  
 1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS.  
 2. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.  
 3. MAX. SHAFT RUNOUT .003 [.076].  
 4. MAX. SHAFT ENDPLAY .015 [.381].  
 5. DIMENSION IN [ ] DESIGNATE MILLIMETERS.

DETAIL OF SHAFT EXTENSION

<b>DASH</b>	<b>FRAME</b>	<b>C</b>	<b>AG</b>	<b>BV</b>
1675	400HPV	40.58 [1030.73]	36.08 [916.43]	15.00 [381.00]

DRAWING REVISION <b>G</b>	REVISION BY <b>JJB</b>	DATE 09-08-2016
ECO ECO-0104950	APPROVED BY <b>JHA</b>	DATE 09-08-2016
ECO DESCRIPTION <b>UPDATED TO CURRENT STANDARDS</b>		
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TOLERANCES UNLESS OTHERWISE SPECIFIED:			
<b>DEC.</b>	<b>INCH</b>	<b>mm</b>	<b>ANGLE</b>
.X	±0.1	[±2.5]	±7° 30"
.XX	±0.03	[±0.76]	
.XXX	±0.005	[±0.127]	
.XXXX	±0.0005	[±0.0127]	
REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.076/.381] X 45° CORNER FILLETS: R.02 [.51] MACHINED SURFACES: 200 INCH/mm 5.1 mm SHOWN IN [BRACKETS]			

DRAWN BY <b>DD</b>
DATE 04-28-1993
APPROVED BY <b>TB</b>
DATE 04-30-1993
REFERENCE
THIRD ANGLE PROJECTION

<b>REGAL</b> ™ Regal Beloit America, Inc.	
DESCRIPTION <b>OUTLINE</b>	
400HPV FR. - TEFC - 'P'--BASE - VERT. - SPL. EXT.	
MATERIAL	PROCESS/FINISH
SIZE <b>B</b>	DRAWING NUMBER <b>SS508404</b>
SHEET 1 OF 1	

LOW VOLTAGE



HIGH VOLTAGE



VIEW OF TERMINAL END

				TOLERANCES UNLESS SPECIFIED		 REGAL - BELOIT CORPORATION	DRAWN PGK 06-04-1997						
NO.	REVISION	BY & DATE	CHK	ANG	±		UNIT	CHK	ML 06-05-1997				
E	CORRECTED IEC MARKINGS ECD-0111208	WGJ 01-23-2017	EMH	DEC.		INCHES							
D	RE-DRAWN WITH REGAL LOGO ECD-0110493	WGJ 09-30-2016	EMH	.X	±.1			APPD GK 06-15-1997					
8	ADDED IEC DESIGNATIONS MU95020	TJW 4/30/2010	MJS	.XX	±.02		TITLE	SCALE					
7	REVISD HIGH VOLTAGE L2 WAS L3 CN52600-354	MRB 09-21-1998		.XXX	±.005		CONNECTION DIAGRAM	REF					
6	REDRAWN ON CADD	PGK 06-05-1997		.XXXX	±.0005		DELTA CON. - 3Ø - 9 LEADS	FMF					
					±7'30"		MAT'L.	PREV					
							FINISH						
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							RFP	CAD FILE EE7308K	SIZE	DRAWING NO.	PAGE	OF	REV.
							DIST		A	EE7308K			E



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

DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

CUSTOMER: \_\_\_\_\_ CUSTOMER P.O. #: \_\_\_\_\_  
 ORDER #: \_\_\_\_\_ REFERENCE MODEL #: 405TTFS16004  
 CONN. DIAGRAM: A-EE7308K CAT #: M920A  
 OUTLINE: B-SS508404-1675 CUSTOMER PART #: \_\_\_\_\_  
 WINDING: T405251 NONE 3 MOUNTING: F1/F2 CAPABLE  
 SPEED: \_\_\_\_\_

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
100	75	3600	3565	405HPV	TEFC	TFS	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60	230/460	224/112	ACROSS THE LINE	CONT	F	1.15	40	3300

F.L. EFF	94.1	3/4 LD EFF	94.1	1/2 LD EFF	93.6	GTD EFF	93.0	ELECT. TYPE	SQ CAGE IND RUN
F.L. PF	89.0	3/4 LD PF	87.0	1/2 LD PF	82.0				

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (°C)
148 LB-FT	720	200 LB-FT 135%	400 LB-FT 270%	75

@ 3 FT.	POWER	ROTOR WK <sup>2</sup>	MAX. LOAD WK <sup>2</sup>	SAFE STALL TIME	STARTS/HOUR	MOTOR WGT
80 dBA	89 dBA	14.2 LB-FT <sup>2</sup>	0 LB-FT <sup>2</sup>	15 SEC.	0	1150 LB.

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

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
P-BASE	STANDARD	ROUND	SHAFT DOWN	NO	NONE	YES	NONE	BLUE (ENAMEL)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE	POLYREX EM	HP	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
BALL	BALL						
6312	6313						

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE HEATERS
NONE	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
0.038	0.024	0.287	0.175	9.105	0.150	ODE

* N O T E S *	INVERTER TORQUE: NONE INV. HP SPEED RANGE: NONE					
	ENCODER: NONE NONE NONE					
	NONE PPR					
	BRAKE: NONE NONE					
	FT-LB: NA VOLTAGE: NONE HZ:					

PREPARED BY: FAREEDA DUDEKULA  
 DATE: 9/11/2018  
 FORM: 3531 REV\_4 2/27/06  
 UL: V-INS, CONST UL REC

Data Sheet

405TTFS16004

Date: 12/3/2018  
 Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Submitted by: FAREEDA DUDEKULA



Submittal

Data @ 460 V

Motor Load Data

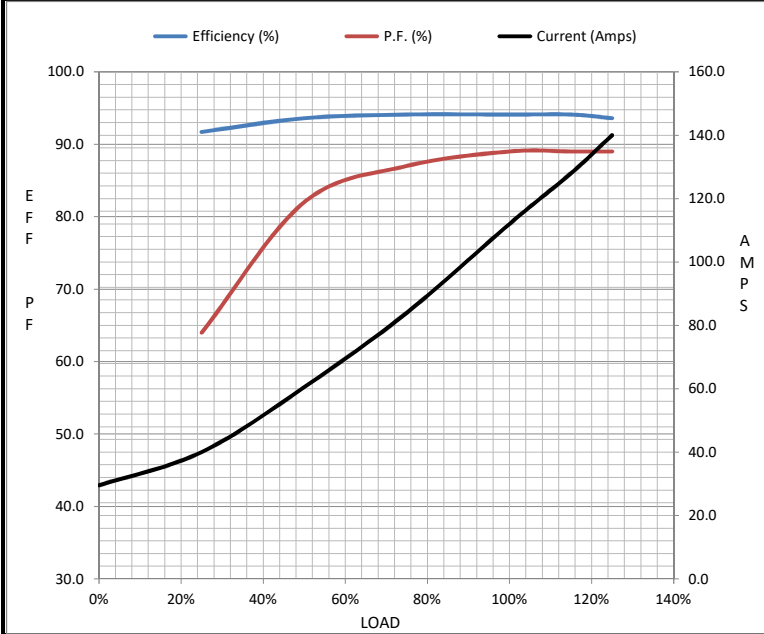
Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	29.5	40.0	60.5	84.0	112	128	140	720
Torque (ft-lb)	0.00	36.5	73.5	111	148	170	185	200
RPM	3600	3590	3582	3575	3565	3,560	3555	0
Efficiency (%)		91.7	93.6	94.1	94.1	94.1	93.6	
P.F. (%)	6.5	64.0	82.0	87.0	89.0	89.0	89.0	26.0

Motor Speed Data

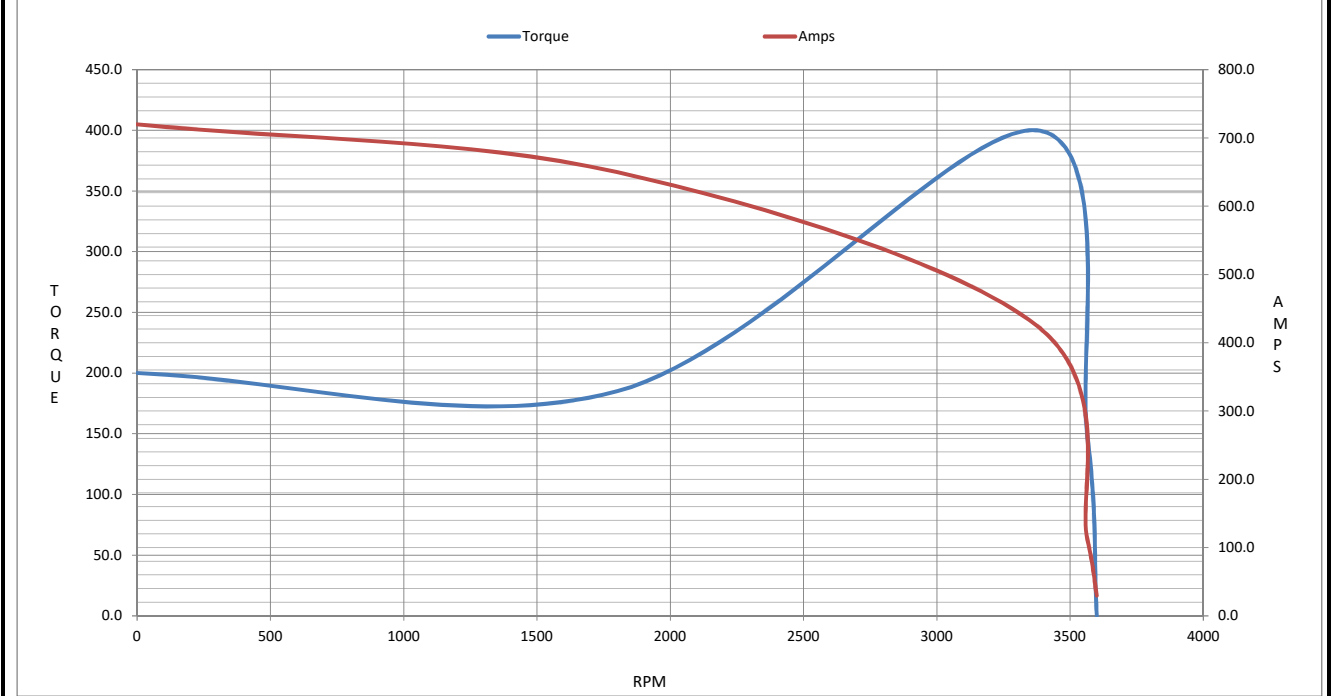
	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3375	3565	3600
Current (Amps)	720	650	425	112	29.5
Torque (ft-lb)	200	185	400	148	0.00

Information Block

HP	100.0			
Sync. RPM	3600			
Frame	405			
Enclosure	TEFC			
Construction	TFS			
Voltage	230/460 V			
Frequency	60 Hz			
Design	A			
LR Code letter	G			
Service Factor	1.15			
Temp Rise @ FL	75 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk <sup>2</sup>	14.2 Lb-Ft <sup>2</sup>			
Ref Wdg	T405251 NONE			
Sound Pressure @ 1M	80 dBA			
VFD Rating	NONE			
Outline Dwg	B-SS508404-1675			
Conn. Diag	A-EE7308K			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0380	0.0240	0.2870	0.1750	9.1050



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 : 405TTFS16004

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

Catalog No : M920B

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**