

PRODUCT INFORMATION PACKET

Model No: 405TTGS6589

Catalog No: E577

Hazardous Duty® Explosion Proof Motor, 75 HP, 3 Ph, 60 Hz, 230/460 V, 1200 RPM, 405T Frame, EPFC



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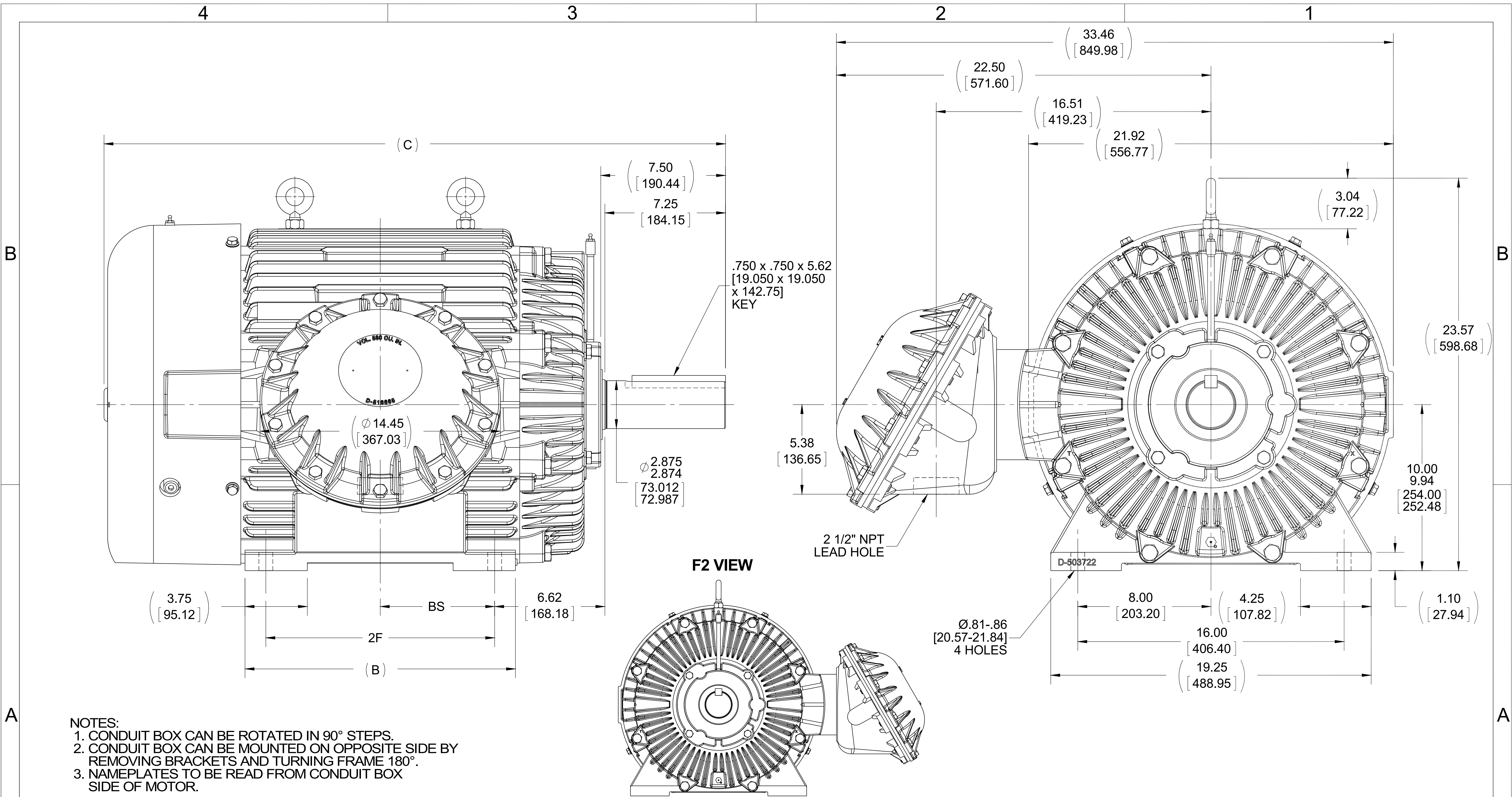
Nameplate Specifications

Phase	3	Output HP	75 Hp
Output KW	56.0 kW	Voltage	230/460 V
Speed	1185 rpm	Service Factor	1.15
Frame	405T	Enclosure	Explosion Proof Fan cooled
Thermal Protection	Thermostat	Efficiency	94.5 %
Ambient Temperature	40 °C	Frequency	60 Hz
Current	180.0/90.0 A	Power Factor	83
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Drive End Bearing Size	6316	Opp Drive End Bearing Size	6313
UL	UL Listed And CSA Certified	CSA	Y
CE	N	IP Code	54
Number of Speeds	1	Hazardous Location	DIV 1 EXP PROOF CL I GR CD CL II GR FG T3B

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	6	Rotation	Reversible
Resistance Main	.092 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	37.75 in
Frame Length	16.75 in	Shaft Diameter	2.875 in
Shaft Extension	7.5 in	Assembly/Box Mounting	F1 ONLY
Inverter Load	CONSTANT 2:1/VARIABLE 10:1		
Outline Drawing	B-SS518936-1675	Connection Drawing	A-EE7308T

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- NOTES:**
1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS.
 2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°.
 3. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DASH	FRAME	B	C	2F	BS
1525	404T	14.75 [374.65]	35.85 [910.59]	12.25 [311.15]	6.12 [155.45]
1675	405T	16.25 [412.75]	37.35 [948.69]	13.75 [349.25]	6.88 [174.75]

DRAWING REVISION
E

REVISION BY
JJB

DATE
02-19-2016

APPROVED BY
JHA

DATE
02-19-2016

ECO
ECO-0091102

ECO DESCRIPTION
UPDATED TO CURRENT STANDARDS

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TOLERANCES UNLESS OTHERWISE SPECIFIED:

DEC.	INCH	mm	ANGLE
.X	± 0.1	[± 2.5]	$\pm 7' 30''$
.XX	± 0.03	[± 0.76]	
.XXX	± 0.005	[± 0.127]	
.XXXX	± 0.0005	[± 0.0127]	

REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [0.076/.381] X 45° CORNER FILLETS: R.02 [0.51] MACHINED SURFACES: 200 INCH $\sqrt{5.1}$ mm $\sqrt{5.1}$ mm SHOWN IN [BRACKETS]

DRAWN BY
MSG

DATE
03-06-2002

APPROVED BY
JES

DATE
03-20-2002

REFERENCE

THIRD ANGLE PROJECTION

REGAL™ Regal Beloit America, Inc.

DESCRIPTION
400T FR. - TEFC - EXP. PR. - (STD.)

OUTLINE

MATERIAL

PROCESS/FINISH

SIZE
B

DRAWING NUMBER
SS518936

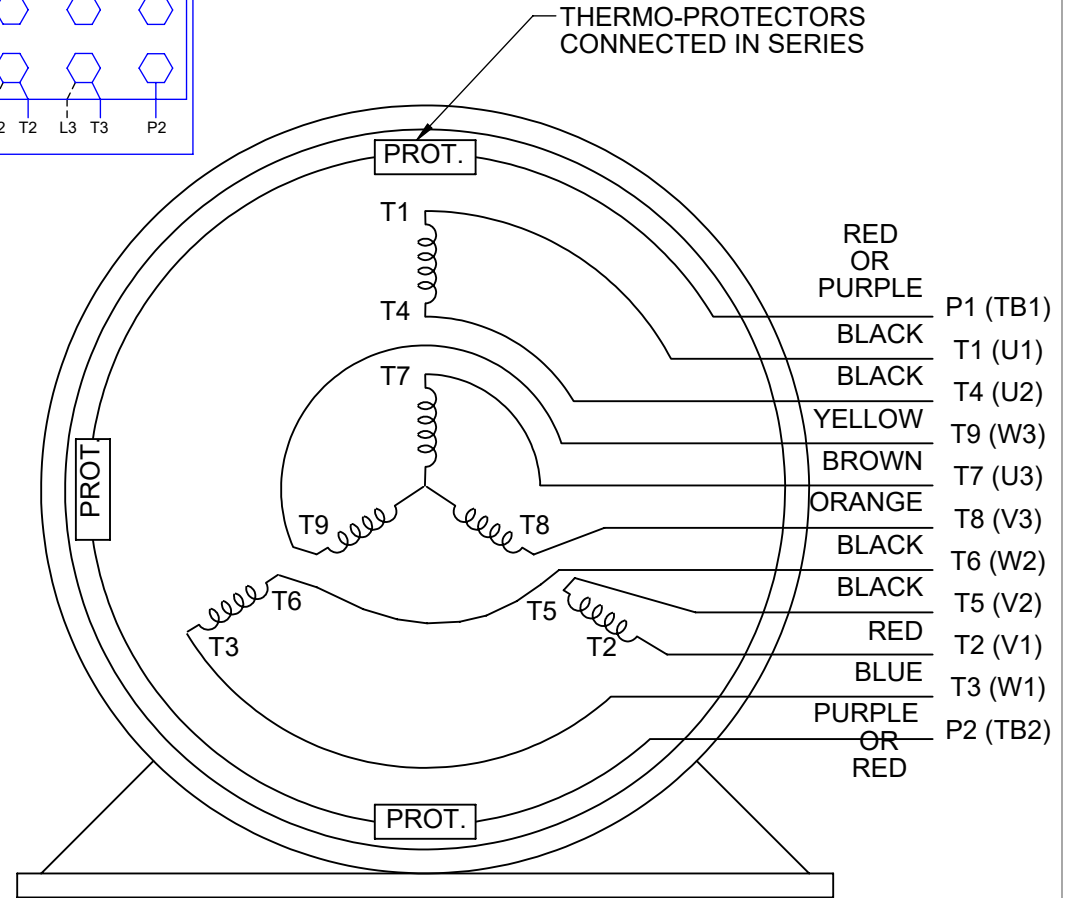
SHEET
1 OF 1

HIGH VOLTAGE



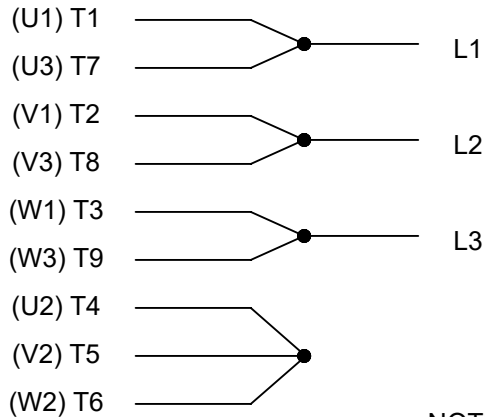
**THREE PHASE
DUAL VOLTAGE MOTOR**

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 ADDED TERMINAL CONNECTION DIAGRAM				APPROVED BY TB	DESCRIPTION CONN DIAGRAM-INTERNAL 3 PHASE - DUAL VOLTAGE MOTOR
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			REFERENCE EE7308/EE7300	SIZE A	DRAWING NUMBER EE7308T
			THIRD ANGLE PROJECTION		

CERTIFICATION DATA SHEET

Model#: 405TTGS6589 AR WINDING#: T405642 NONE 1
 CONN. DIAGRAM: A-EE7308T ASSEMBLY: F1 ONLY
 OUTLINE: B-SS518936-1675

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
75	56	1200	1185	405T	EPFC	G	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60	230/460	180/90	LINE OR INVERTER	CONTINUOUS	F1	1.15	40	3300

FULL LOAD EFF: 94.5	3/4 LOAD EFF: 95	1/2 LOAD EFF: 94.5	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 83	3/4 LOAD PF: 79	1/2 LOAD PF: 71	94.1	SQ CAGE INV RATED	60 / 30

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
333 LB-FT	1070 / 535	650 LB-FT 195	750 LB-FT 225	75

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
68 dBA	78 dBA	38 LB-FT^2	1200 LB-FT^2	25 SEC.	2	1350 LBS.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	EXP PROOF CL I GR C&D CL II GR F&G T3B	FALSE	NONE	BLUE (EPOXY)

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

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

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INVERTER TORQUE: CONSTANT 2:1
INV. HP SPEED RANGE: 1.5 X BASE SPEED
ENCODER: NONE
NONE NONE
NONE NONE PPR
BRAKE: NONE NONE
NONE P/N NONE
NONE NONE
- FT-LB NONE V NONE Hz

DATE: 06/22/2017 01:07:00 AM
 FORM 3531 REV.3 02/07/99
 ** Subject to change without notice.

Data Sheet

Date: 6/19/2017

Customer: _____

Attention: _____

Submitted by: FAREEDA DUDEKULA



405TTGS6589

Submittal

Data @ 460 V

Motor Load Data

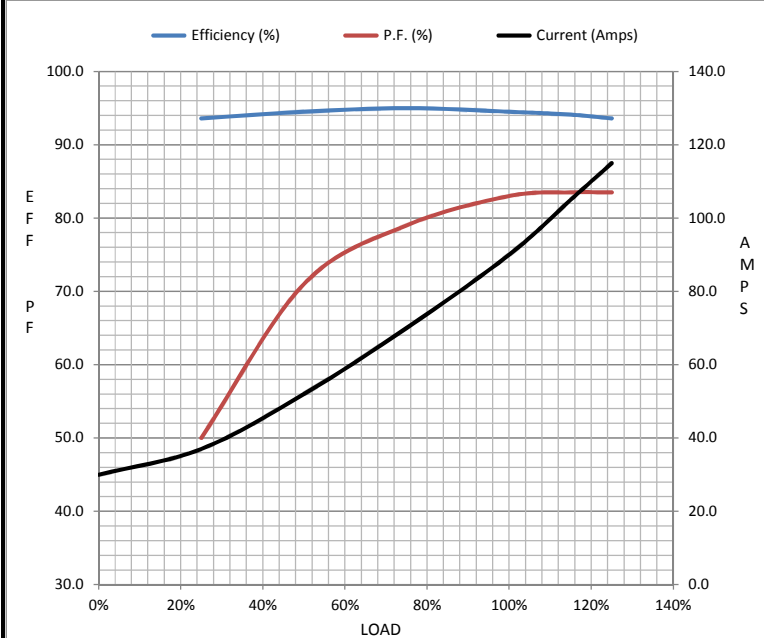
Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	30.0	37.0	52.0	70.0	90.0	105	115	535
Torque (ft-lb)	0.00	82.5	165	248	333	385	417	650
RPM	1200	1196	1192	1188	1185	1,180	1175	0
Efficiency (%)		93.6	94.5	95.0	94.5	94.1	93.6	
P.F. (%)	4.0	50.0	71.0	79.0	83.0	83.5	83.5	37.0

Motor Speed Data

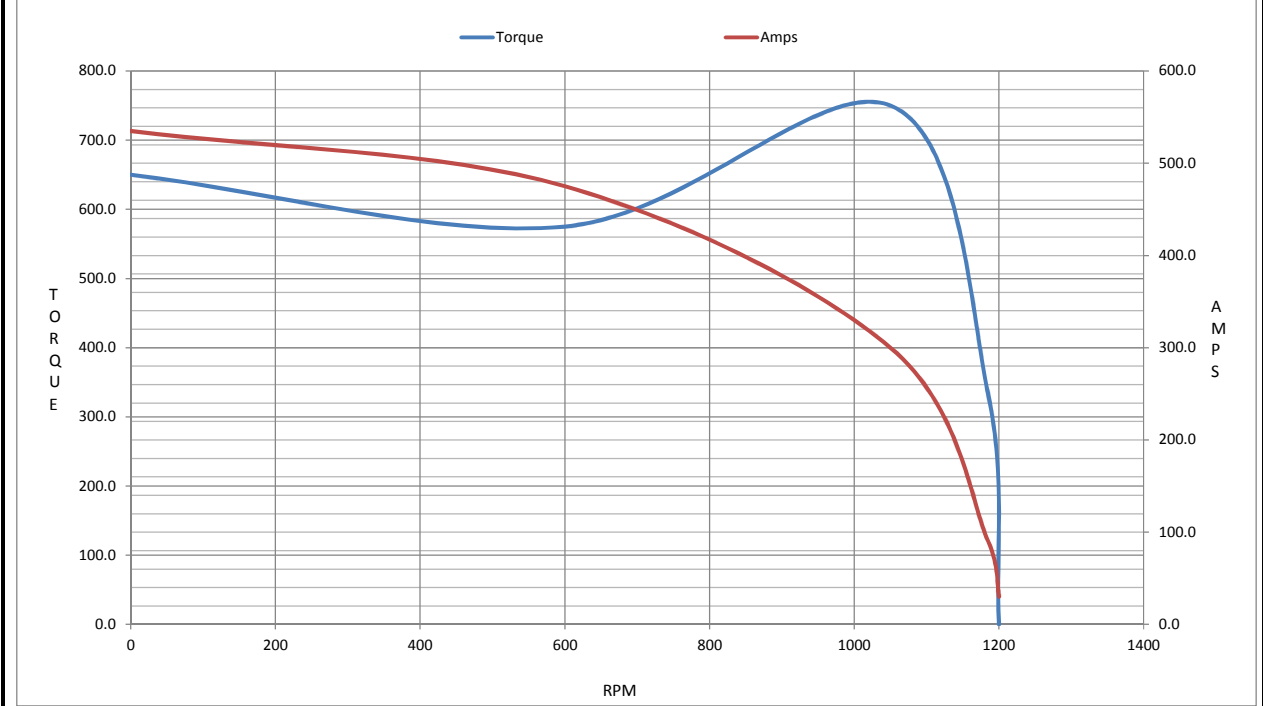
	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1050	1185	1200
Current (Amps)	535	475	300	90.0	30.0
Torque (ft-lb)	650	575	750	333	0.00

Information Block

HP	75.0			
Sync. RPM	1200			
Frame	405			
Enclosure	TEFC			
Construction	TFS			
Voltage	230/460 V			
Frequency	60 Hz			
Design	B			
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 ²	38.0 Lb-Ft ²			
Ref Wdg	T405642 NONE			
Sound Pressure @ 1M	68 dBA			
VFD Rating	CONSTANT 2:1			
Outline Dwg	B-SS518936-1675			
Conn. Diag	A-EE7308T			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0680	0.0420	0.3250	0.5070	8.7320



Speed -Torque Curve



CERTIFICATE OF COMPLIANCE

Certificate Number 20220524- E12044
Report Reference E12044-19750529
Issue Date 2022-MAY-24

Issued to: REGAL BELOIT AMERICA INC
1946 W COOK RD
FORT WAYNE IN 46818

Tradename: Marathon

**This certificate confirms that
representative samples of**

MOTORS FOR USE IN HAZARDOUS LOCATIONS
Electric motors for use in hazardous locations; Class I,
Groups C and D; Class II, Groups F and G; Inclusive of
Model Number 405TTGS6589 (may have prefix and/or
suffix characters).

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 674 - Electric Motors and Generators for Use in Division
1 Hazardous (Classified) Locations,
CSA C22.2 No. 145, Electric Motors and Generators for
Use in Hazardous (Classified) Locations

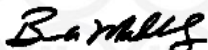
Additional Information: See the UL Online Certifications Directory at
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This is to certify that representative samples of the product as specified on this certificate were tested
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Bruce Mahrenholz, Director North American Certification Program

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