

# PRODUCT INFORMATION PACKET

**marathon**<sup>®</sup>  
Motors

Model No: 405TTGS6548  
Catalog No: E594  
100,1800,EPFC,405T,3/60/230/460  
Explosion Proof



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**REGAL**<sup>®</sup>



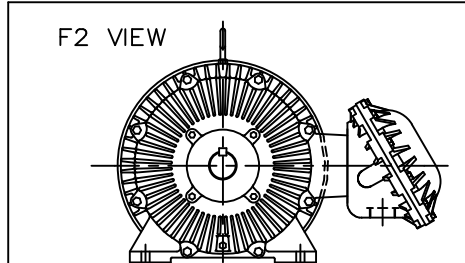
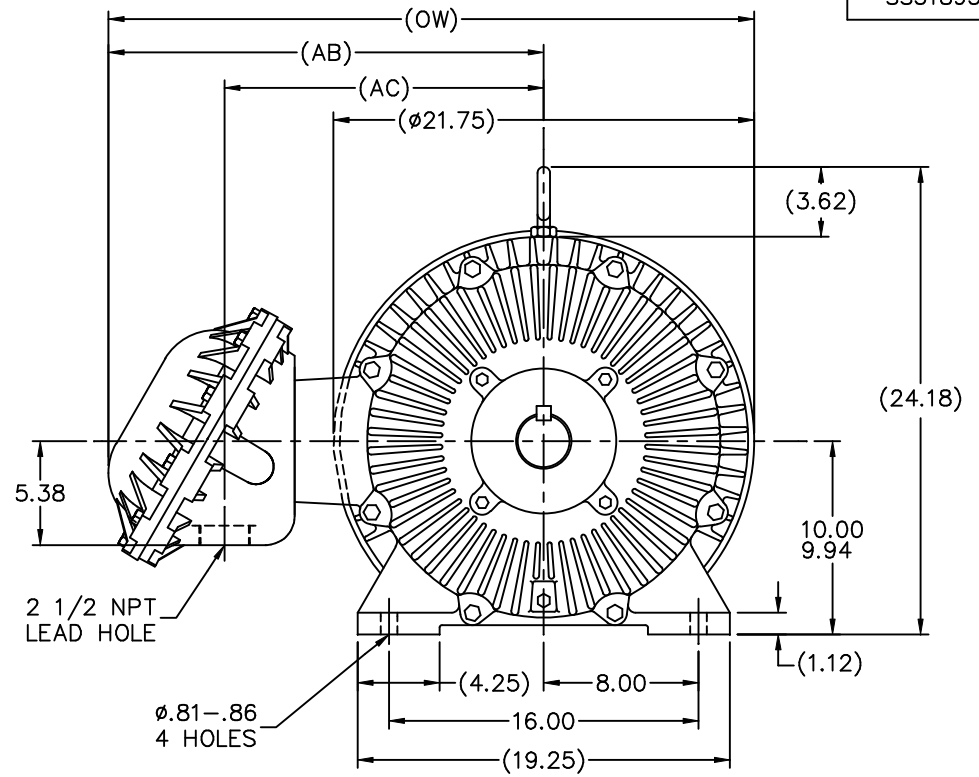
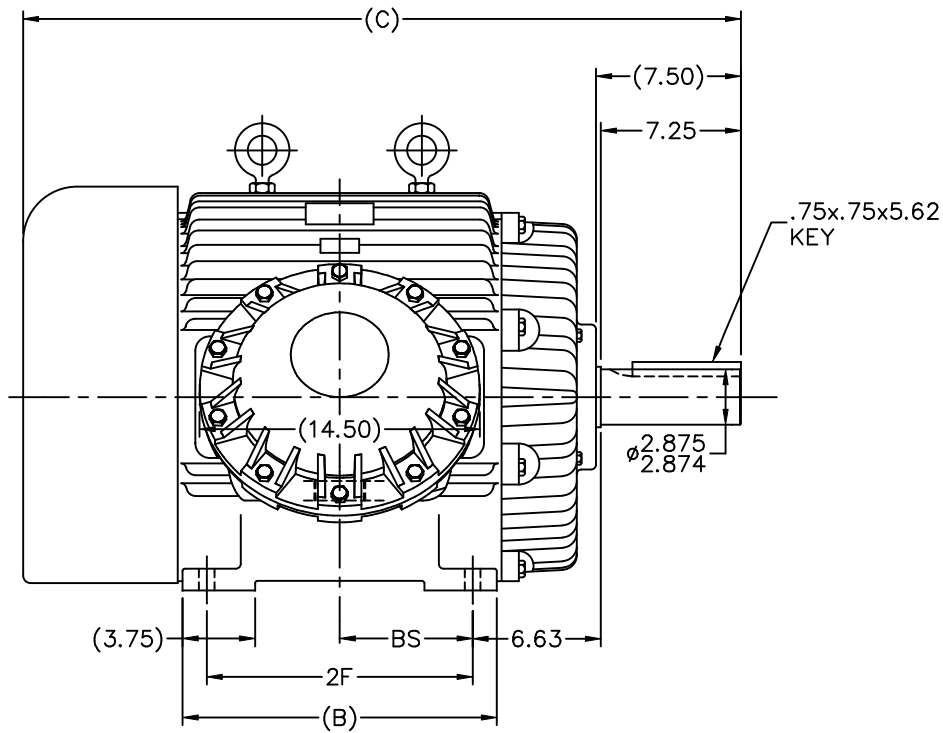
### Nameplate Specifications

Output HP	<b>100 Hp</b>	Output KW	<b>75.0 kW</b>
Frequency	<b>60 Hz</b>	Voltage	<b>230/460 V</b>
Current	<b>226.0/113.0 A</b>	Speed	<b>1780 rpm</b>
Service Factor	<b>1.15</b>	Phase	<b>3</b>
Efficiency	<b>95.4 %</b>	Duty	<b>Continuous</b>
Insulation Class	<b>F</b>	Design Code	<b>B</b>
KVA Code	<b>F</b>	Frame	<b>405T</b>
Enclosure	<b>Explosion Proof Fan cooled</b>	Overload Protector	<b>No</b>
Ambient Temperature	<b>40 °C</b>	Drive End Bearing Size	<b>6316</b>
Opp Drive End Bearing Size	<b>6313</b>	UL	<b>No</b>
CSA	<b>N</b>	CE	<b>N</b>
IP Code	<b>54</b>		

### Technical Specifications

Electrical Type	<b>Squirrel Cage Inverter Rated</b>	Starting Method	<b>Line Or Inverter</b>
Poles	<b>4</b>	Rotation	<b>Reversible</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>37.12 in</b>	Frame Length	<b>16.75 in</b>
Shaft Diameter	<b>2.875 in</b>	Shaft Extension	<b>7.5 in</b>
Assembly/Box Mounting	<b>F1 Only</b>		
Outline Drawing	<b>B-SS518936-1675</b>	Connection Diagram	<b>A-EE7308T</b>

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NOTES:

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

DASH	FRAME	B	C	2F	AB	AC	BS	OW
1525	404T	14.75	35.62	12.25	21.50	15.50	6.12	32.38
1675	405T	16.25	37.12	13.75	22.50	16.50	6.88	33.38

		TOLERANCES UNLESS SPECIFIED		MARATHON ELECTRIC		DRAWN MSG 03-06-2002	
		DEC.	INCHES			CHK	JHL 03-19-2002
3	UPDATED DRAWING	RJW	04-19-2007	.XX	$\pm .03$	TITLE	OUTLINE
2	REDRAWN IN AUTOCAD	TAT	08-20-2004	.XXX	$\pm .005$	400T FR. - EXP. PR. - (STD.)	
1	NEW DRAWING	CN 34593	MSG 03-20-2002	JHL	$\pm .0005$	MATL	
NO.	REVISION	BY & DATE		CHK	ANG	FINISH	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				RFP		CAD FILE	ss518936
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## HIGH VOLTAGE



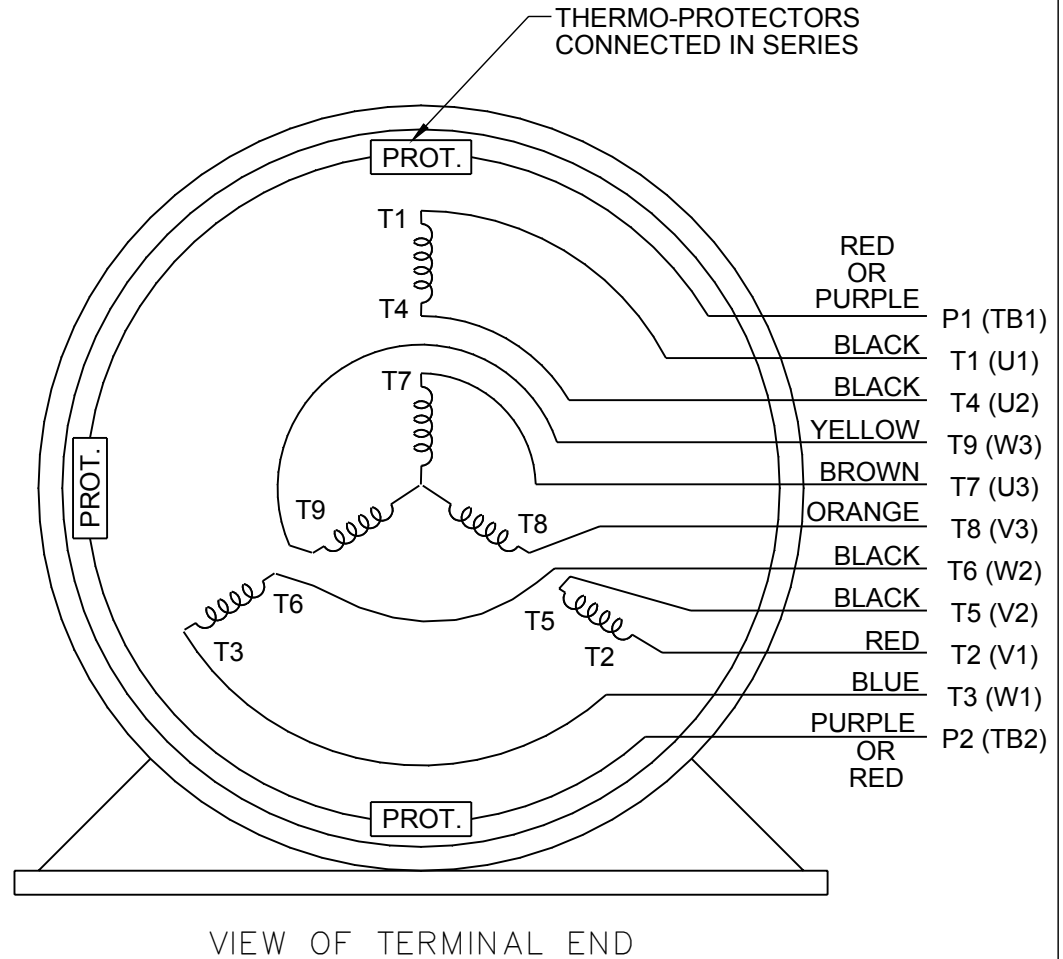
**NOTE FOR FACTORY USE ONLY:  
 TO SURGE TEST FOR COMMON CONNECT:  
 HIGH VOLT: CONNECT P1 TO T1  
 THEN P2 TO L1  
 LOW VOLT: CONNECT P1 TO T1 & T7,  
 THEN P2 TO L1**

## LOW VOLTAGE



**NOTE: LEAD'S COLOR CAN BE YELLOW OR WHITE FOR MT2 PLANT**

## THREE PHASE DUAL VOLTAGE MOTOR



DRAWING REVISION <b>R</b>	REVISION BY <b>AJW</b>	DATE <b>07-17-2015</b>		DRAWN BY <b>SMC</b>	Regal Beloit America, Inc.
ECO <b>ECO-0081632</b>	APPROVED BY <b>T. VUE</b>	DATE <b>07-17-2015</b>		DATE <b>05-13-1992</b>	
ECO DESCRIPTION <b>REV'D IEC NOTATIONS PER IEC 60034-8</b>				APPROVED BY <b>TB</b>	DESCRIPTION <b>CONN DIAGRAM-INTERNAL</b>
<small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED.                  PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF                  REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY                  INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED,                  BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED                  TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT                  AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL                  BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN                  RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>				DATE <b>05-13-1992</b>	<b>3 PHASE - DUAL VOLTAGE MOTOR</b>
			REFERENCE <b>EE7308/EE7300</b>	MATERIAL	PROCESS/FINISH
			THIRD ANGLE PROJECTION	SIZE <b>A</b>	DRAWING NUMBER <b>EE7308T</b>

**CERTIFICATION DATA SHEET**

**Model#:** 405TTGS6548 BN      **WINDING#:** T405472 NONE 2  
**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
100&75	75&56	1800	1780&1485	405T	EPFC	F	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60/50	230/460#190/ 380	226/113&204/ 102	LINE OR INVERTER	CONTINUOU S	F1	1.15/1.15	40	3300

FULL LOAD EFF: 95.4&95.8	3/4 LOAD EFF: 95.8	1/2 LOAD EFF: 95.8	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 87&87	3/4 LOAD PF: 86	1/2 LOAD PF: 81.5	95	SQ CAGE INV RATED	56 / 28

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
295 LB-FT	1350 / 675	445 LB-FT 151	715 LB-FT 242	75

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
72 dBA	82 dBA	27 LB-FT^2	550 LB-FT^2	25 SEC.	2	1400 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 T3C	FALSE	NONE	BLUE (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL 6316	BALL 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 2:1
INV. HP SPEED RANGE: NONE
ENCODER: NONE
NONE NONE
NONE NONE PPR
BRAKE: NONE NONE
NONE P/N NONE
NONE NONE
- FT-LB NONE V NONE Hz

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DATE: 06/22/2017 01:06:08 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



405TTGS6548

Submittal

Data @ 460 V

Motor Load Data

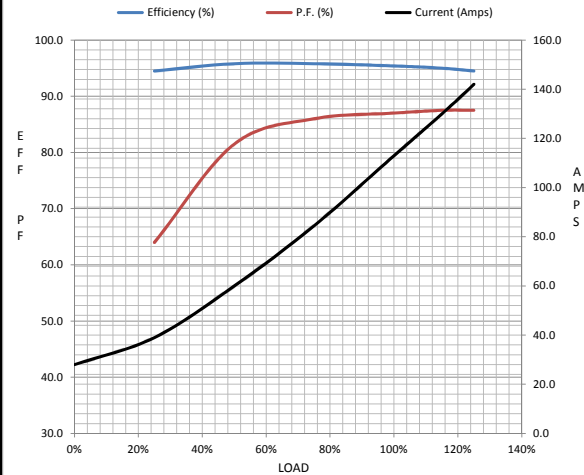
Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	28.0	39.0	60.0	84.5	113	130	142	675
Torque (ft-lb)	0.00	73.0	147	221	295	341	370	445
RPM	1800	1795	1790	1785	1780	1,775	1770	0
Efficiency (%)		94.5	95.8	95.8	95.4	95.0	94.5	
P.F. (%)	4.5	64.0	81.5	86.0	87.0	87.5	87.5	28.0

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1675	1780	1800
Current (Amps)	675	610	370	113	28.0
Torque (ft-lb)	445	400	715	295	0.00

Information Block

HP	100.0			
Sync. RPM	1800			
Frame	405			
Enclosure	TEFC			
Construction	TFS			
Voltage	30/460#190/38V			
Frequency	60 Hz			
Design	B			
LR Code letter	F			
Service Factor	1.15			
Temp Rise @ FL	75 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	1,000 feet			
Rotor/Shaft wk <sup>2</sup>	27.0 Lb-Ft <sup>2</sup>			
Ref Wdg	T405472 NONE			
Sound Pressure @ 1M	72 dBA			
VFD Rating	CONSTANT 2:1			
Outline Dwg	B-SS518936-1675			
Conn. Diag	A-EE7308T			
Additional Specifications:				
0				
365THFS8036				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0430	0.0280	0.2980	0.2780	9.2020



Speed -Torque Curve

