

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: 405TSHFS9001

Catalog No: W598

100 HP Severe Duty Motor, 3 phase, 3600 RPM, 460 V, 405TS Frame, TEFC
Severe Duty Motors



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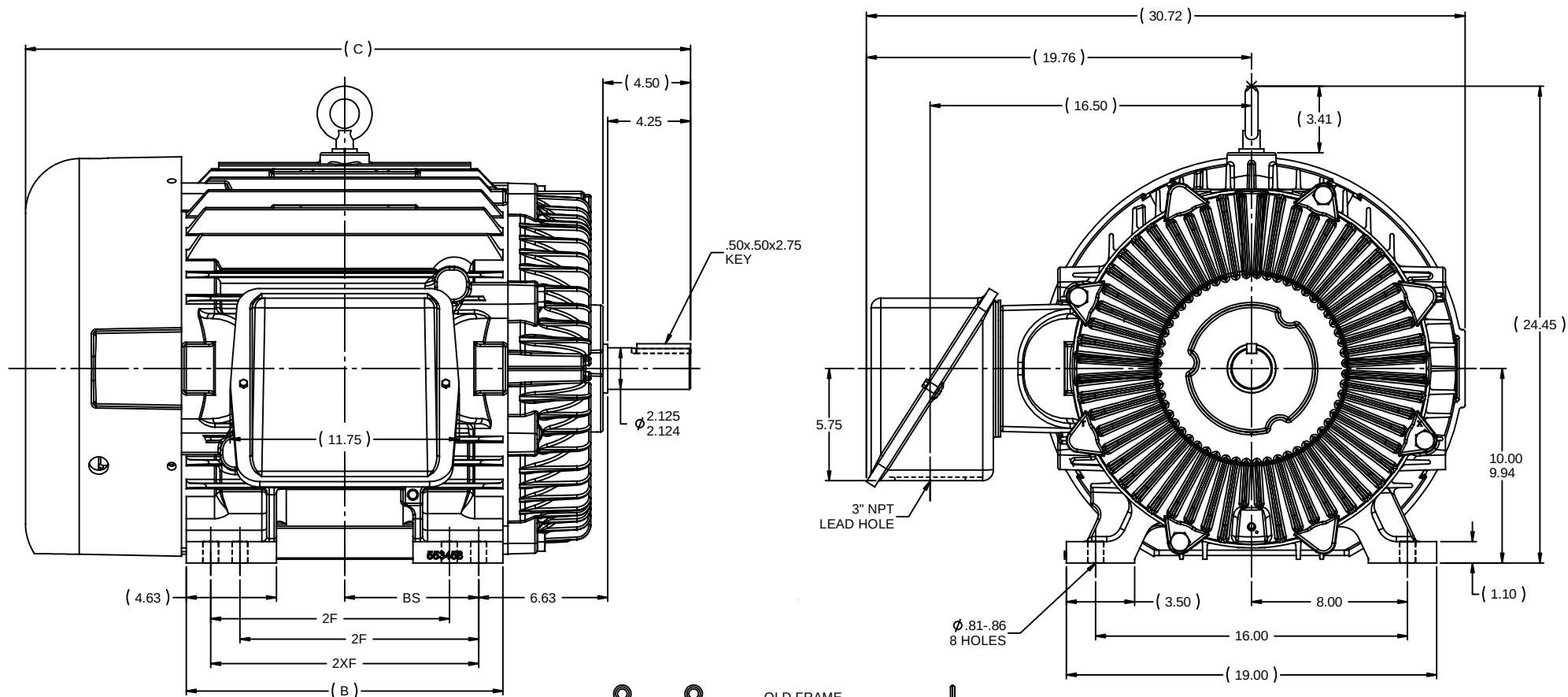
RegalRexnord

Nameplate Specifications

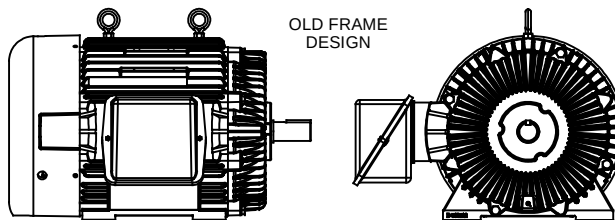
Output HP	100 Hp	Output KW	75.0 kW
Frequency	60 Hz	Voltage	460 V
Current	108.0 A	Speed	3565 rpm
Service Factor	1.15	Phase	3
Efficiency	95 %	Power Factor	91.5
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Frame	405TS	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No	Ambient Temperature	40 °C
Drive End Bearing Size	6313	Opp Drive End Bearing Size	6313
UL	Recognized	CSA	Y
CE	Y	IP Code	56
Number of Speeds	1		

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	2	Rotation	Reversible
Resistance Main	.051 Ohms	Mounting	Rigid Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	TS	Overall Length	34.13 in
Frame Length	16.75 in	Shaft Diameter	2.125 in
Shaft Extension	4.5 in	Assembly/Box Mounting	F1/F2 Capable
Inverter Load	CONSTANT 10:1		
Connection Drawing	A-EE7300U	Outline Drawing	B-SS509125-1675



- 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.

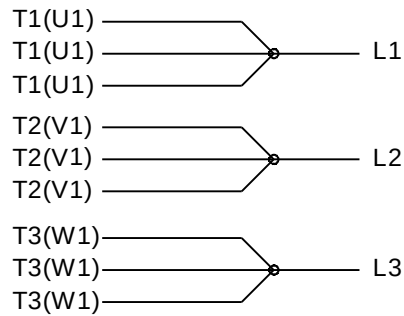


OLD FRAME DESIGN

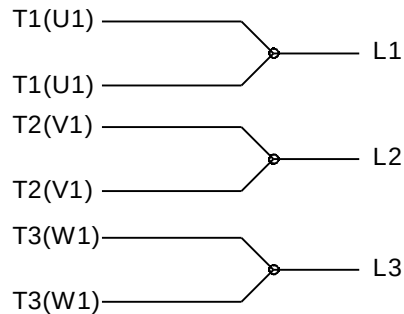
DASH	FRAME	B	C	BS	2F	2XF
1525	404TS	14.75	32.63	6.12	12.25	---
1675	404/405TS	16.25	34.13	6.88	12.25	13.75

REVISION				TOLERANCES UNLESS SPECIFIED		MARATHON ELECTRIC	DRAWN TLB 05-19-1988	
NO	REVISION	BY & DATE	CHK	ANG	±		CHK	FG 05-20-1988
8	REDRAWN IN SOLIDWORKS W/ L.W. FRAME MU98878	EDK 11/29/2010	MH	DEC	INCHES	TITLE OUTLINE 400TS/US FR. - TEFC - STD.	APPR	ML 05-22-1998
7	UPDATED FRAME & ADDED 404 INFO CN27430	KL 10-25-2005	X		±1		SCALE	1:5
6	REDRAWN IN AUTOCAD	TAT 06-29-2004	XX		±.03		REF	
5	ADDED NEMA 'O' DIM.	MRB 09-12-1996	XXX		±.005		FMF	
4	REDRAWN ON CADD	TLB 05-19-1988	XXXX		±.0005		PAGE	OF
THIRD ANGLE PROJECTION				RFP	PREV	SIZE	DRAWING NO	REV
				NETWORK FILE NAME SS509125		B	SS509125	8

IF MOTOR HAS 9 LEADS

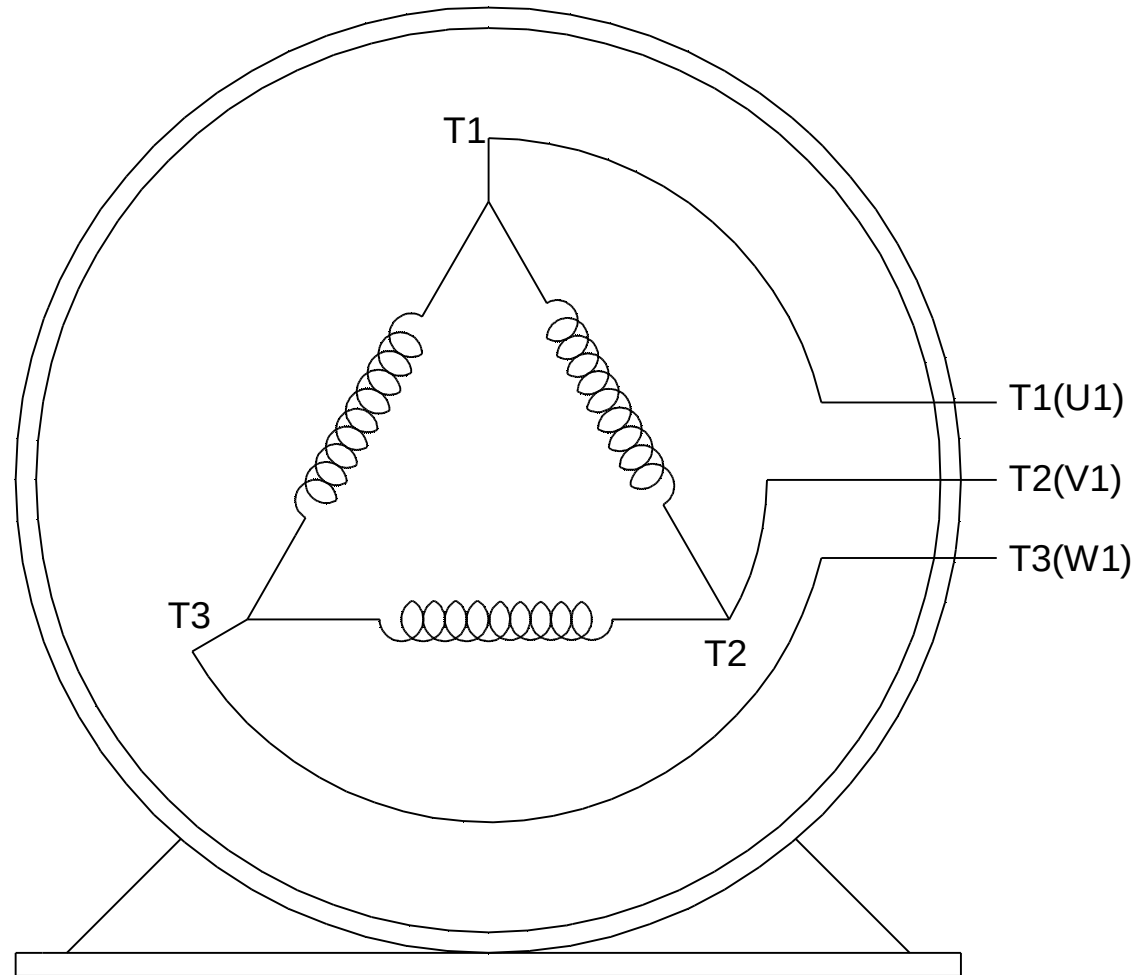
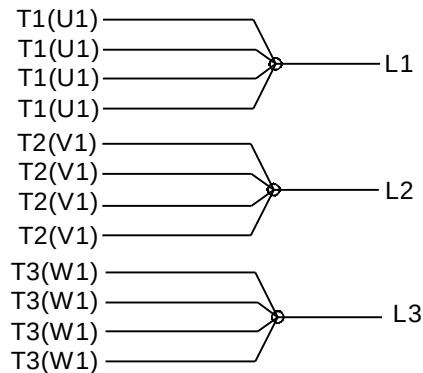


IF MOTOR HAS 6 LEADS



A-9806 DECAL IF CALLED FOR

IF MOTOR HAS 12 LEADS



VIEW OF TERMINAL END

DRAWING REVISION L	REVISION BY AJW	DATE 05-04-2015	TOLERANCES UNLESS OTHERWISE SPECIFIED: DEC. INCH. mm ANGLE .X ±0.1 [±2.5] ±7' 30" .XX ±0.02 [±0.51] 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 5.1 mm mm SHOWN IN [BRACKETS]	DRAWN BY DRS	REGALTM Regal Beloit America, Inc.	DESCRIPTION CONN DIAGRAM-EXTERNAL 3Ø SINDLE VOLTAGE				
ECO ECO-0077067	APPROVED BY EWH	DATE 05-05-2015		DATE 09-27-1996						
ECO DESCRIPTION UPDATED TO SOLIDWORKS				APPROVED BY GK	MATERIAL PROCESS/FINISH					
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				REFERENCE	SIZE A				DRAWING NUMBER EE7300U	SHEET 1 OF 1
			THIRD ANGLE PROJECTION							

CERTIFICATION DATA SHEET

Model#: 405TSHFS9001 BT
 CONN. DIAGRAM: A-EE7300U
 OUTLINE: B-SS509125-1675

WINDING#: T405247 NONE 1
 ASSEMBLY: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
100	75	3600	3565	405TS	TEFC	G	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60	460	108	LINE OR INVERTER	CONTINUOUS	F1	1.15	40	3300

FULL LOAD EFF: 95	3/4 LOAD EFF: 95	1/2 LOAD EFF: 94.5	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 91.5	3/4 LOAD PF: 90.5	1/2 LOAD PF: 86	94.5	SQ CAGE INV RATED	24

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
147 LB-FT	725	230 LB-FT 156	410 LB-FT 279	70

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
78 dBA	88 dBA	16.5 LB-FT^2	65 LB-FT^2	15 SEC.	2	1300 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	DIVISION 2 T2B	FALSE	NONE	BLUE (EPOXY)

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

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE /n HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
NONE	NOT	NONE	NONE	NONE	FALSE	NONE VOLTS

If Inverter equals NONE, contact factory for further information

* N O T E S *	INVERTER TORQUE: CONSTANT 10:1			
	INV. HP SPEED RANGE: NONE			
	ENCODER: NONE			
	NONE NONE			
	NONE NONE PPR			
	BRAKE: NONE NONE			
	NONE P/N NONE			
	NONE NONE			
	NONE FT-LB		NONE V	
			NONE Hz	

DATE: 06/21/2017 08:18:30 AM
 FORM 3531 REV.3 02/07/99
 ** Subject to change without notice.

Data Sheet

Date: 6/29/2017

Customer: _____

Attention: _____

Submitted by: FAREEDA DUDEKULA



405TSHFS9001

Submittal

Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	24.0	36.0	57.5	81.5	108	124	135	725	
Torque (ft-lb)	0.00	36.5	73.5	110	147	170	185	230	
RPM	3600	3592	3582	3572	3565	3,560	3555	0	
Efficiency (%)		91.7	94.5	95.0	95.0	95.0	94.5		
P.F. (%)	7.5	71.0	86.0	90.5	91.5	91.5	91.5	31.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle																																					
Speed (RPM)	0	1800	3415	3565	3600																																					
Current (Amps)	725	650	425	108	24.0																																					
Torque (ft-lb)	230	200	410	147	0.00																																					
Efficiency (%) P.F. (%) Current (Amps) <table><thead><tr><th>LOAD</th><th>Efficiency (%)</th><th>P.F. (%)</th><th>Current (Amps)</th></tr></thead><tbody><tr><td>0%</td><td></td><td></td><td>40.0</td></tr><tr><td>20%</td><td>91.5</td><td>71.0</td><td>45.0</td></tr><tr><td>40%</td><td>93.5</td><td>88.0</td><td>50.0</td></tr><tr><td>60%</td><td>94.5</td><td>92.0</td><td>60.0</td></tr><tr><td>80%</td><td>94.8</td><td>94.0</td><td>70.0</td></tr><tr><td>100%</td><td>94.8</td><td>95.0</td><td>80.0</td></tr><tr><td>120%</td><td>94.5</td><td>95.0</td><td>90.0</td></tr></tbody></table>						LOAD	Efficiency (%)	P.F. (%)	Current (Amps)	0%			40.0	20%	91.5	71.0	45.0	40%	93.5	88.0	50.0	60%	94.5	92.0	60.0	80%	94.8	94.0	70.0	100%	94.8	95.0	80.0	120%	94.5	95.0	90.0	Information Block				
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						HP		100.0																																		
						Sync. RPM		3600																																		
						Frame		405																																		
						Enclosure		TEFC																																		
						Construction		TFS																																		
						Voltage		460 V																																		
						Frequency		60 Hz																																		
						Design		A																																		
						LR Code letter		G																																		
						Service Factor		1.15																																		
						Temp Rise @ FL		70 ° C																																		
						Duty		CONT																																		
						Ambient		40 ° C																																		
						Elevation		1,000 feet																																		
Rotor/Shaft wk²		16.5 Lb-Ft²																																								
Ref Wdg		T405247 NONE																																								
Sound Pressure @ 1M		78 dBA																																								
VFD Rating		CONSTANT 10:1																																								
Outline Dwg		B-SS509125-1675																																								
Conn. Diag		A-EE7300U																																								
Additional Specifications:																																										
0																																										
0																																										
EQUIV CKT (OHMS / PHASE)																																										
R1	R2	X1	X2	Xm																																						
0.0390	0.0240	0.2690	0.2040	10.8200																																						

Speed -Torque Curve

