

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: 405TTFS6538

Catalog No: E681

100 HP Severe Duty Motor, 3 phase, 1800 RPM, 575 V, 405T Frame, TEFC  
Severe Duty Motors



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**RegalRexnord**

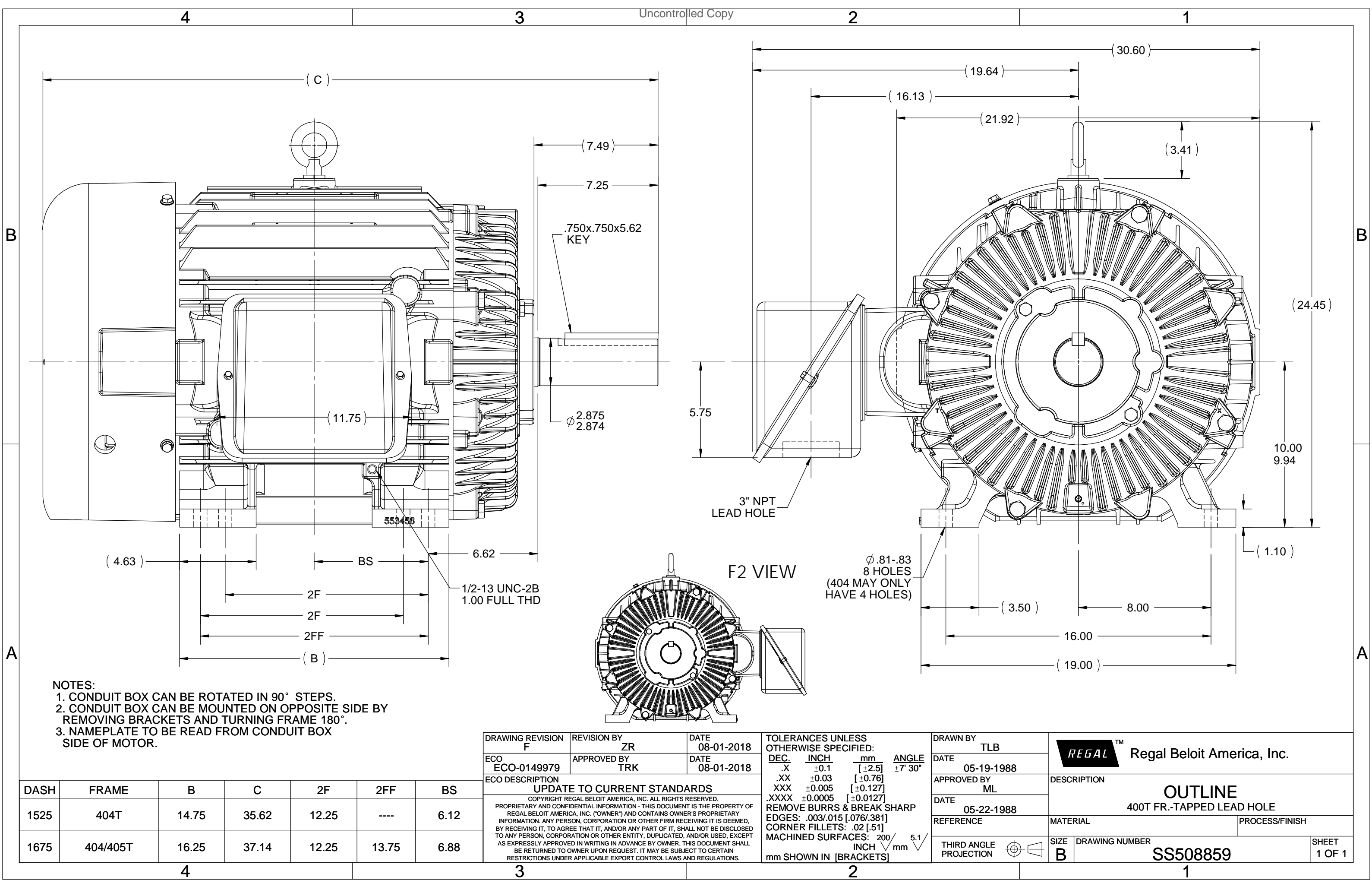
**Nameplate Specifications**

Output HP	100 Hp	Output KW	75.0 kW
Frequency	60 Hz	Voltage	575 V
Current	90.5 A	Speed	1780 rpm
Service Factor	1.15	Phase	3
Efficiency	95.4 %	Power Factor	87
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	F
Frame	405T	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No	Ambient Temperature	40 °C
Drive End Bearing Size	6316	Opp Drive End Bearing Size	6313
UL	Recognized	CSA	Y
CE	Y	IP Code	54
Number of Speeds	1		

**Technical Specifications**

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	4	Rotation	Reversible
Resistance Main	.054 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	37.14 in
Frame Length	16.75 in	Shaft Diameter	2.875 in
Shaft Extension	7.5 in	Assembly/Box Mounting	F1/F2 Capable
Outline Drawing	B-SS508859-1675	Connection Drawing	A-EE7300

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# THREE PHASE - SINGLE VOLTAGE MOTOR - CONDUIT BOX @ 'A'

TO REVERSE ROTATION:  
INTERCHANGE ANY TWO  
LINE LEAD CONNECTIONS.

## TERMINAL BLOCK WHEN SPECIFIED



### IF MOTOR HAS 6 LEADS



A-9806 DECAL

### OPTIONAL CORD CONNECTION



## VIEW OF TERMINAL END

DRAWING REVISION AB	REVISION BY JJB	DATE 06-27-2017
ECO ECO-0125361	APPROVED BY TB	DATE 06-27-2017
ECO DESCRIPTION UPDATED TO CURRENT STANDARDS		
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DRAWN BY DA
DATE 03-26-1993
APPROVED BY TB
DATE 03-26-1993
REFERENCE
THIRD ANGLE PROJECTION



Regal Beloit America, Inc.

DESCRIPTION  
**CONNECTION DIAGRAM**  
EXTERNAL - SINGLE VOLTAGE - 3Ø MOTOR

MATERIAL PROCESS/FINISH

SIZE A	DRAWING NUMBER EE7300	SHEET 1 OF 1
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## CERTIFICATION DATA SHEET

Model#: 405TTFS6538 BU  
 CONN. DIAGRAM: A-EE7300  
 OUTLINE: B-SS508859-1675

WINDING#: T405472 NONE 13  
 ASSEMBLY: F1/F2 CAPABLE

## TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
100	75	1800	1780	405T	TEFC	F	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60	575	90.5	LINE OR INVERTER	CONTINUOUS	F1	1.15	40	3300

FULL LOAD EFF: 95.4	3/4 LOAD EFF: 95.8	1/2 LOAD EFF: 95.8	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 87	3/4 LOAD PF: 86	1/2 LOAD PF: 81.5	95	SQ CAGE INV RATED	22.4

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
295 LB-FT	540	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	DIVISION 2 T2B	FALSE	NONE	BLUE (EPOXY)

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			
NONE	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: 1.5 X BASE SPEED

ENCODER: NONE  
 NONE NONE  
 NONE NONE PPR

BRAKE: NONE NONE  
 NONE P/N NONE  
 NONE NONE  
 NONE FT-LB NONE V NONE Hz

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DATE: 06/22/2017 01:03:17 AM  
 FORM 3531 REV.3 02/07/99  
 \*\* Subject to change without notice.

## Data Sheet

Date: 6/20/2017

Customer:

Attention:

Submitted by: FAREEDA DUDEKULA



405TFS6538

Submittal

Data @ 575 V

## Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	22.4	31.2	48.0	67.6	90.4	104	114	540	
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)	540	488	296	90.4	22.4					
Torque (ft-lb)	445	400	715	295	0.00					
<div><div>Efficiency (%)</div><div>P.F. (%)</div><div>Current (Amps)</div></div> <div>EFFICIENCY (%)</div> <div>P.F. (%)</div> <div>CURRENT (AMPS)</div> <div>LOAD</div>						Information Block				
						HP		100.0		
						Sync. RPM		1800		
						Frame		405		
						Enclosure		TEFC		
						Construction		TFS		
						Voltage		575 V		
						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-SS508859-1675								
Conn. Diag		A-EE7300								
Additional Specifications:										
0										
0										
EQUIV CKT (OHMS / PHASE)										
R1		R2		X1		X2		Xm		
0.0670		0.0440		0.4660		0.4350		14.3780		

## Speed -Torque Curve

