

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: 405THFCD9086

Catalog No: W596A

XRI®-841 Severe Duty Motor, 75 HP, 3 Ph, 60 Hz, 460 V, 1200 RPM, 405T Frame, TEFC



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RegalRexnord



Nameplate Specifications

Output HP	75 Hp	Output KW	56.0 kW
Frequency	60 Hz	Voltage	460 V
Current	89.0 A	Speed	1188 rpm
Service Factor	1.15	Phase	3
Efficiency	94.5 %	Power Factor	83.5
Duty	Continuous	Insulation Class	H
Design Code	B	KVA Code	G
Frame	405T	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6316	Opp Drive End Bearing Size	6314
UL	Listed	CSA	Y
CE	Y	IP Code	56
Hazardous Location	DIVISION 2 T2B	Number of Speeds	1

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	6	Rotation	Reversible
Resistance Main	.0904 Ohms	Mounting	Rigid Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	T	Shaft Diameter	2.875 in
Assembly/Box Mounting	F1/F2 CAPABLE	Inverter Load	CONSTANT 2:1/VARIABLE 10:1
Outline Drawing	SS557665	Connection Drawing	EE7300

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	4			3				2		1	
B	C	E	2E	2F	2FF	BA	BS	MOUNTING			
16.85	38.88	8.00	16.00	12.25	13.75	6.62	6.87	F1 OR F2			



DRAWING REVISION C	REVISION BY VS	REV DATE/© DATE 25-11-2020
ECO ECO-0195088	APPROVED BY GNK	DATE 25-11-2020
ECO DESCRIPTION DRAWING UPDATED		
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DRAWN BY BISWA	Regal Beloit America, Inc.
DATE 12/24/2018	
APPROVED BY SBD	DESCRIPTION OUTLINE 404/405T FR-SD & IEEE841
DATE 12/24/2018	MATERIAL
REFERENCE	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B
	DRAWING NUMBER SS557665
	SHEET 1 OF 1

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

TERMINAL BLOCK WHEN SPECIFIED

TO REVERSE ROTATION:
INTERCHANGE ANY TWO LINE
LEAD CONNECTIONS



VIEW OF TERMINAL END

OPTIONAL CORD CONNECTION

L1	WHITE
L2	RED
L3	BLACK

DRAWING REVISION AC	REVISION BY BS	REV DATE/© DATE 26/07/2022
REQUEST NUMBER CR-0010402	APPROVED BY SN	DATE 26/07/2022
REQUEST NUMBER DESCRIPTION DRAWING UPDATED		
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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	



DATA VOLTS: 460

CERTIFICATION DATA SHEET

CONN. DIAGRAM: EE7300
 OUTLINE: SS557665-405T
 WINDING: HE32506005 NONE 4

MODEL #: 405THFCD9086
 CAT #: W596A
 MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN	
75	56	1200	1188	405T	TEFC	TFC	G	B	
PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV.(Ft)
3	60	460	89	LINE OR INVERTER	CONT	H	1.15	40	3300
F.L. EFF	94.5	3/4 LD EFF	94.5	1/2 LD EFF	94.1	GTD EFF	94.1	ELECT. TYPE	
F.L. PF	83.5	3/4 LD PF	79.5	1/2 LD PF	70.5	SQ CAGE INV RATED			
F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE		B.D. TORQUE		F.L. RISE (° C)			
332 LB-FT	542	646 LB-FT	195%	844 LB-FT	254%	65			
SOUND PRESSURE @	SOUND	ROTOR WK ²	MAX. LOAD WK ²	SAFE STALL TIME	STARTS/HOUR	APROX. MOTOR			
68 dBA	77 dBA	50.0 LB-FT ²	1200 LB-FT ²	25 SEC.	2	1381	LB.		

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	DIVISION 2 T2B	NO	NONE	BLUE (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
BALL	BALL						
6316	6314						

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)
0.057	0.028	0.246	0.442	7.56	0.080

If Inverter equals NONE, contact factory for further information

* N O T E S *	INVERTER TORQUE: VARIABLE 10:1 INV. HP SPEED RANGE: NONE				
	ENCODER: NONE NONE NONE PPR				
	BRAKE: NONE NONE NONE FT-LB: NA VOLTAGE: NONE HZ:				
	PREPARED BY: ANUSHA M DATE: 3/10/2020 FORM: 3531 REV_4 2/27/06 ** Subject to change without notice.				

Data Sheet

405THFCD9086

Date: 3/10/2020
 Customer: _____
 Attention: _____
 Submitted by: ANUSHA M



Submittal

Data @ 460 V

Motor Load Data

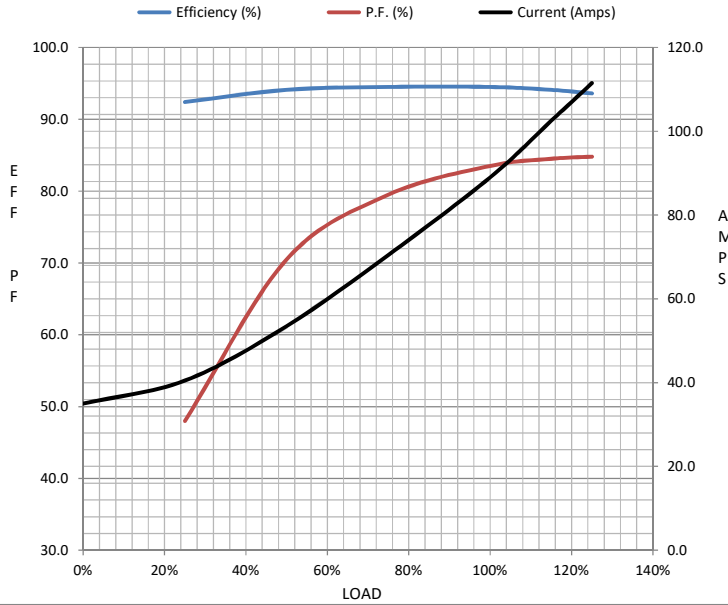
Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	35.0	40.5	53.5	70.5	89.0	103	112	542
Torque (ft-lb)	0.00	82.5	165	248	332	382	416	646
RPM	1200	1196	1195	1192	1188	1,188	1185	0
Efficiency (%)		92.4	94.1	94.5	94.5	94.1	93.6	
P.F. (%)	4.5	48.0	70.5	79.5	83.5	84.5	84.8	37.0

Motor Speed Data

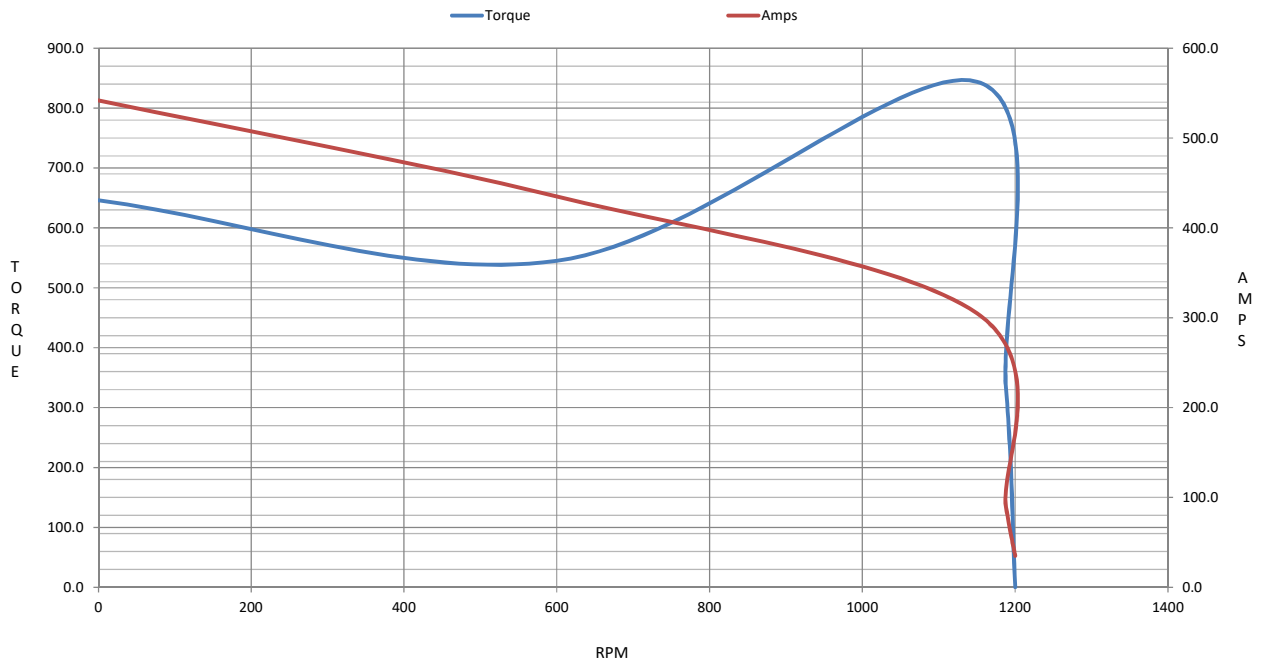
	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1150	1188	1200
Current (Amps)	542	435	305	89.0	35.0
Torque (ft-lb)	646	545	844	332	0.00

Information Block

HP	75.0			
Sync. RPM	1200			
Frame	405			
Enclosure	TEFC			
Construction	TFC			
Voltage	460 V			
Frequency	60 Hz			
Design	B			
LR Code letter	G			
Service Factor	1.15			
Temp Rise @ FL	65 °C			
Duty	CONT			
Ambient	50 °C			
Elevation	1,000 feet			
Rotor/Shaft wk ²	50.0 Lb-Ft ²			
Ref Wdg	HE32506005 NONE			
Sound Pressure @ 1M	68 dBA			
VFD Rating	VARIABLE 10:1			
Outline Dwg	SS557665-405T			
Conn. Diag	EE7300			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0570	0.0280	0.2460	0.4420	7.5600



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 : 405THFCD9086

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

Catalog No : W596A

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