

# PRODUCT INFORMATION PACKET

marathon®  
Motors

Model No: 256TTGCD6505

Catalog No: C500

Hazardous Duty® Explosion Proof Motor, 20 & 15 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V,  
3600 & 3000 RPM, 256TC Frame, EPFC



Regal and Marathon are trademarks of Regal Rexnord Corporation or one of its affiliated companies.

©2023 Regal Rexnord Corporation, All Rights Reserved. MC017097E

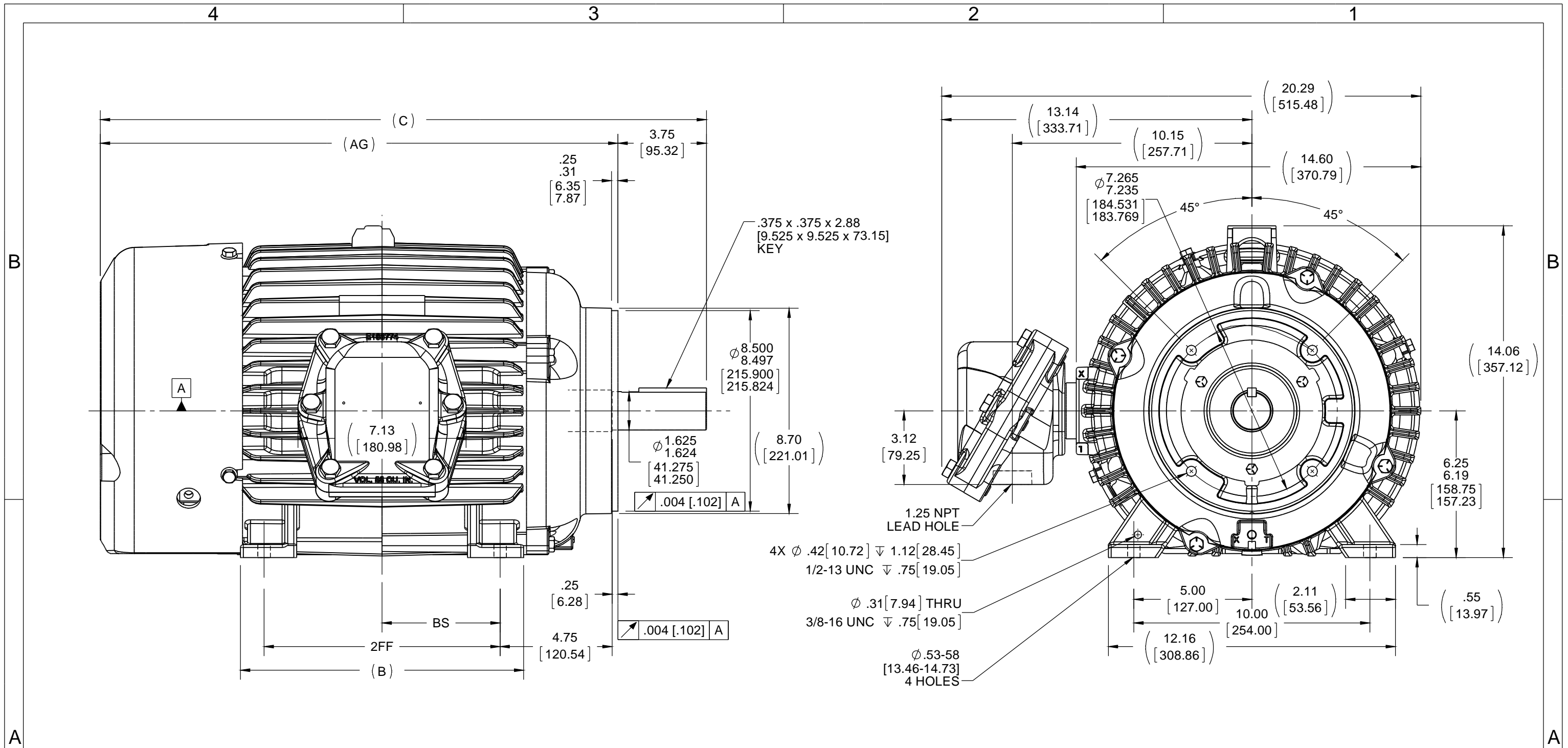
RegalRexnord

### Nameplate Specifications

Phase	<b>3</b>	Output HP	<b>20 &amp; 15 Hp</b>
Output KW	<b>14.9 &amp; 11.2 kW</b>	Voltage	<b>230/460 &amp; 190/380 V</b>
Speed	<b>3540 &amp; 2945 rpm</b>	Service Factor	<b>1.0 &amp; 1.0</b>
Frame	<b>256TC</b>	Enclosure	<b>Explosion Proof Fan cooled</b>
Thermal Protection	<b>Thermostat</b>	Efficiency	<b>91 &amp; 90.2 %</b>
Ambient Temperature	<b>50 °C</b>	Frequency	<b>60 &amp; 50 Hz</b>
Current	<b>47.5/23.7 &amp; 43.5/21.7 A</b>	Power Factor	<b>87.5</b>
Duty	<b>Continuous</b>	Insulation Class	<b>F</b>
Design Code	<b>B</b>	KVA Code	<b>G</b>
Drive End Bearing Size	<b>6309</b>	Opp Drive End Bearing Size	<b>6210</b>
UL	<b>UL Listed And CSA Certified</b>	CSA	<b>Y</b>
CE	<b>N</b>	IP Code	<b>54</b>
Number of Speeds	<b>1</b>	Hazardous Location	<b>DIV 1 EXP PROOF CL I GR CD CL II GR FG T3C</b>

### Technical Specifications

Electrical Type	<b>Squirrel Cage Induction Run</b>	Starting Method	<b>Across The Line</b>
Poles	<b>2</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>.546 Ohms</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>	Shaft Diameter	<b>1.625 in</b>
Assembly/Box Mounting	<b>F1 ONLY</b>		
Connection Drawing	<b>EE7308T</b>	Outline Drawing	<b>SS203036-1225</b>

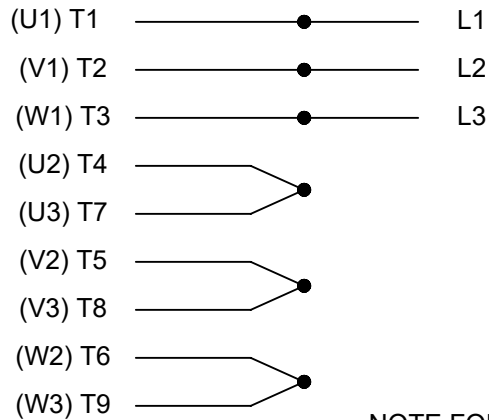


- NOTES:  
 1. CONDUIT BOX CAN ONLY BE ROTATED CLOCKWISE UP TO 270° FROM ITS ORIGINAL POSITION.  
 2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°.  
 3. NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DASH	FRAME	B	C	2F	2FF	BS	AG
1050	254TC	10.25 [260.35]	23.93 [607.82]	---	8.25 [209.55]	4.12 [104.65]	20.18 [512.57]
1225	256TC	12.00 [304.80]	25.68 [652.27]	---	10.00 [254.00]	5.00 [127.00]	21.93 [557.02]

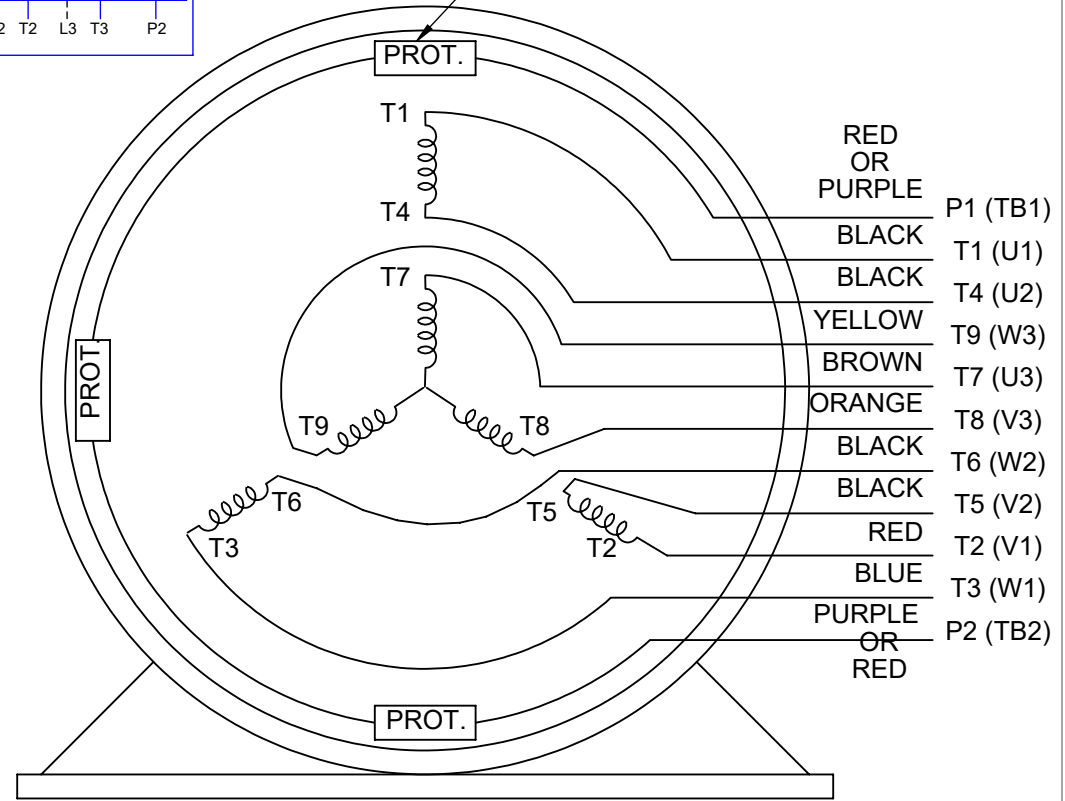
DRAWING REVISION A	REVISION BY	DATE	TOLERANCES UNLESS OTHERWISE SPECIFIED: DEC. INCH mm ANGLE .X ±0.1 [±2.5] ±7° 30" .XX ±0.03 [±0.76] .XXX ±0.005 [±0.127] .XXXX ±0.0005 [±0.0127]	DRAWN BY JWO	Regal Beloit America, Inc.	
ECO-0069925	APPROVED BY	DATE	REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [0.076/.381] CORNER FILLETS: .02 [0.51] MACHINED SURFACES: 200 INCH mm 5.1 mm SHOWN IN [BRACKETS]	DATE 01-27-2015		
ECO DESCRIPTION NMR-0076993, MU119210			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.	APPROVED BY TB	DESCRIPTION <b>OUTLINE</b> 250T FR. - EXP. PR. - TGN - C'FACE	
				DATE 01-27-2015	MATERIAL	PROCESS/FINISH
				REFERENCE	THIRD ANGLE PROJECTION	SIZE B
				DRAWING NUMBER <b>SS203036</b>	SHEET 1 OF 1	

**HIGH VOLTAGE**



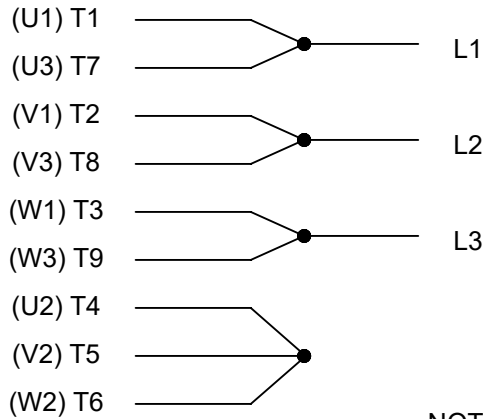
**THREE PHASE  
DUAL VOLTAGE MOTOR**

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 <b>ADDED TERMINAL CONNECTION DIAGRAM</b>				APPROVED BY TB	DESCRIPTION <b>CONN DIAGRAM-INTERNAL</b> 3 PHASE - DUAL VOLTAGE MOTOR
<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 05-13-1992	MATERIAL	PROCESS/FINISH
			REFERENCE EE7308/EE7300	SIZE A	DRAWING NUMBER EE7308T
			THIRD ANGLE PROJECTION		



P.O. BOX 8003  
 WAUSAU, WI 54401-8003  
 PH. 715-675-3311

DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

CUSTOMER:  
 ORDER #: \_\_\_\_\_  
 CONN. DIAGRAM: EE7308T  
 OUTLINE: SS203036-1225  
 WINDING: HA31602007 NONE 6  
 SPEED: \_\_\_\_\_

CUSTOMER P.O. #: \_\_\_\_\_  
 REFERENCE MODEL #: 256TTGCD6505  
 CAT #: C500  
 CUSTOMER PART #: \_\_\_\_\_  
 MOUNTING: F1 ONLY

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
20	14.9	3600	3540	256TC	EPFC	TFC	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60/50	230/460#190/380	47.5/23.7&43.5/21.7	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	91.0	3/4 LD EFF	91.0	1/2 LD EFF	89.5	GTD EFF	ELECT. TYPE
F.L. PF	87.5	3/4 LD PF	84.0	1/2 LD PF	76.5	90.2	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (°C)
29.7 LB-FT	143	49.0 LB-FT	165%	74.0 LB-FT 249%

SOUND PRESSURE @ 3 FT.	SOUND	POWER	ROTOR WK <sup>2</sup>	MAX. LOAD WK <sup>2</sup>	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
75 dBA	84 dBA		1.35 LB-FT <sup>2</sup>	25 LB-FT <sup>2</sup>	20 SEC.	2	435 LB.	

**\*\*\* SUPPLEMENTAL INFORMATION \*\*\***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
C-FACE	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	PROOF CL I GR CD CL II	NO	NONE	BLUE - RAL 5003 (EPOXY)

DE	ODE	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
BALL 6309	BALL 6210	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE HEATERS
TSTATS (NIC)	NOT	NONE	NONE	NONE	FALSE	NA

R1 (ohms/ph)	R2 (ohms/ph)	X1 (ohms/ph)	X2 (ohms/ph)	Xm (ohms/ph)	VIBRATION (in/sec)	FLOAT
0.362	0.192	1.122	0.937	33.938	0.080	ODE

NOTES	INVERTER TORQUE: CONSTANT 10:1 INV. HP SPEED RANGE: NONE					
	ENCODER: NONE					
	NONE					
	NONE PPR					

PREPARED BY: _____	BRAKE: NONE
DATE: 10/29/2021	NONE NONE
	FT-LB: NA
	VOLTAGE: NONE HZ:
FORM: 3531 REV. 4 2/27/06	UL: NO LETTER - ALL BRANDS-UL LISTED AND CSA CERTIFIED DIV. 1 XP MOTORS

Data Sheet

Date: 10/29/2021  
 Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Submitted by: \_\_\_\_\_



256TTGCD6505

Submittal

Data @ 460 V

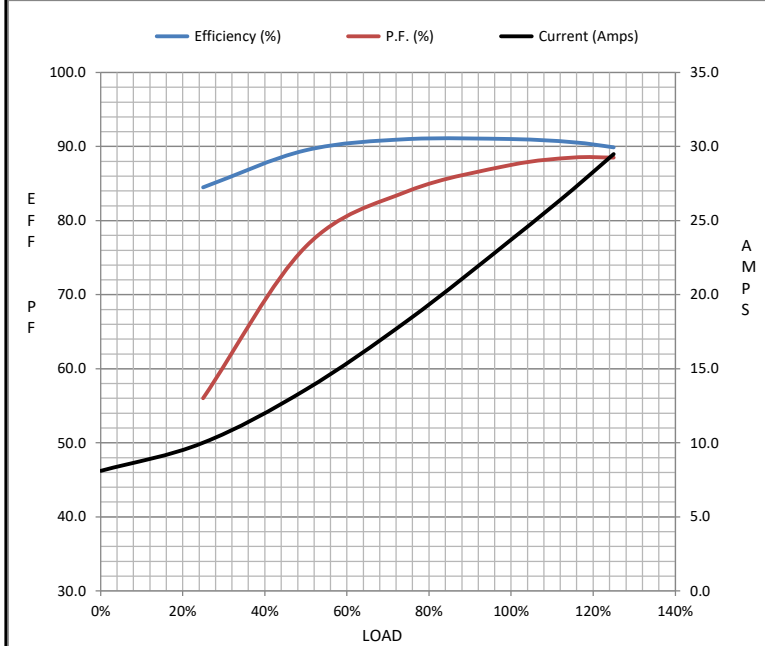
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	8.1	10.0	13.6	18.3	23.7	27.1	29.5	143
Torque (ft-lb)	0.00	7.3	14.7	22.0	29.7	34.0	37.0	49.0
RPM	3600	3585	3570	3555	3540	3,530	3522	0
Efficiency (%)		84.5	89.5	91.0	91.0	90.6	89.9	
P.F. (%)	9.0	56.0	76.5	84.0	87.5	88.5	88.5	38.0

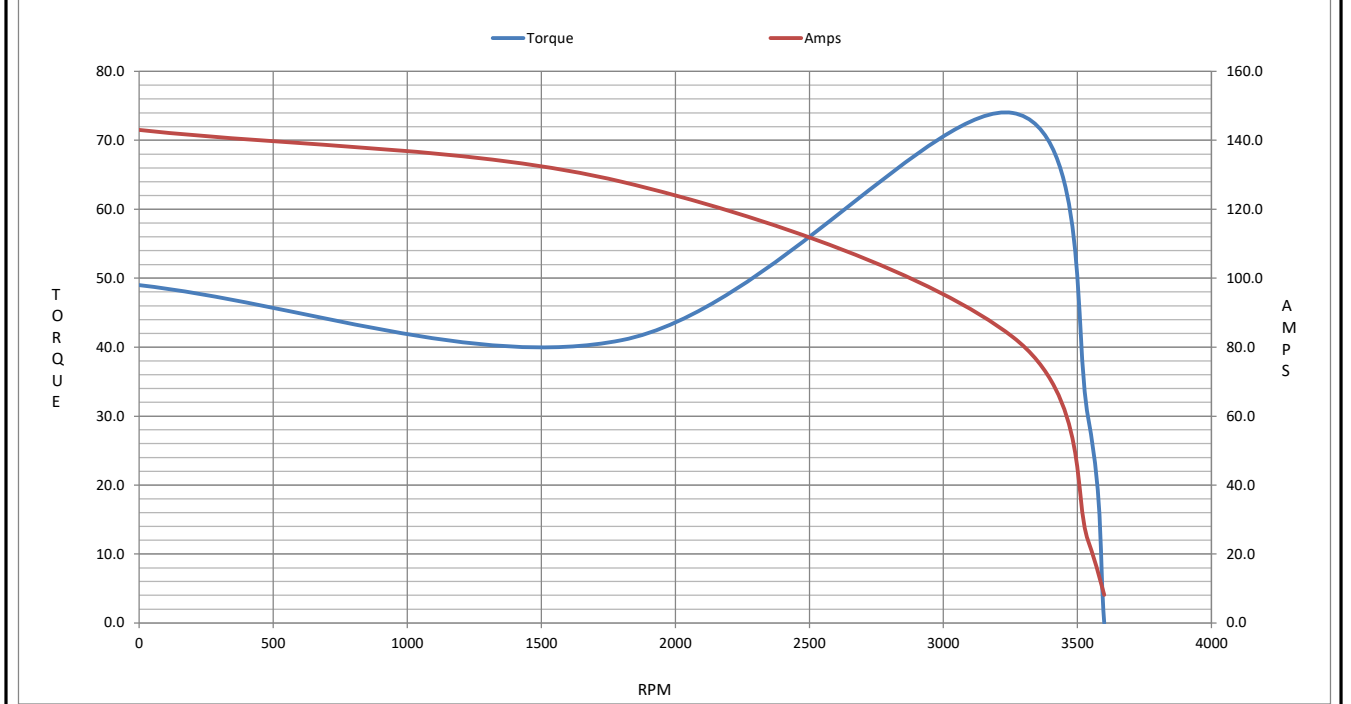
Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3258	3540	3600
Current (Amps)	143	128	83.0	23.7	8.1
Torque (ft-lb)	49.0	41.0	74.0	29.7	0.00

Information Block				
HP	20.0			
Sync. RPM	3600			
Frame	256			
Enclosure	EPFC			
Construction	TFC			
Voltage	230/460#190/380 V			
Frequency	60 Hz			
Design	B			
LR Code letter	G			
Service Factor	1.15			
Temp Rise @ FL	60 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	3,300 feet			
Rotor/Shaft wk <sup>2</sup>	1.35 Lb-F <sup>2</sup>			
Ref Wdg	HA31602007 NONE			
Sound Pressure @ 1M	75 dBA			
VFD Rating	CONSTANT 10:1			
Outline Dwg	SS203036-1225			
Conn. Diag	EE7308T			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.3620	0.1920	1.1220	0.9370	33.9380



Speed - Torque Curve





# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20220314- E12044  
**Report Reference** E12044-19950413  
**Issue Date** 2022-MARCH-14

**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 256TTGCD6505 (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

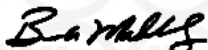
**Additional Information:** See the UL Online Certifications Directory at <https://iq.ulprospector.com> for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>

