

# PRODUCT INFORMATION PACKET

Model No: 284TSTGCD6503

Catalog No: E546A

Hazardous Duty® Explosion Proof Motor, 25 & 20 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V,  
3600 & 3000 RPM, 284TS Frame, EPFC



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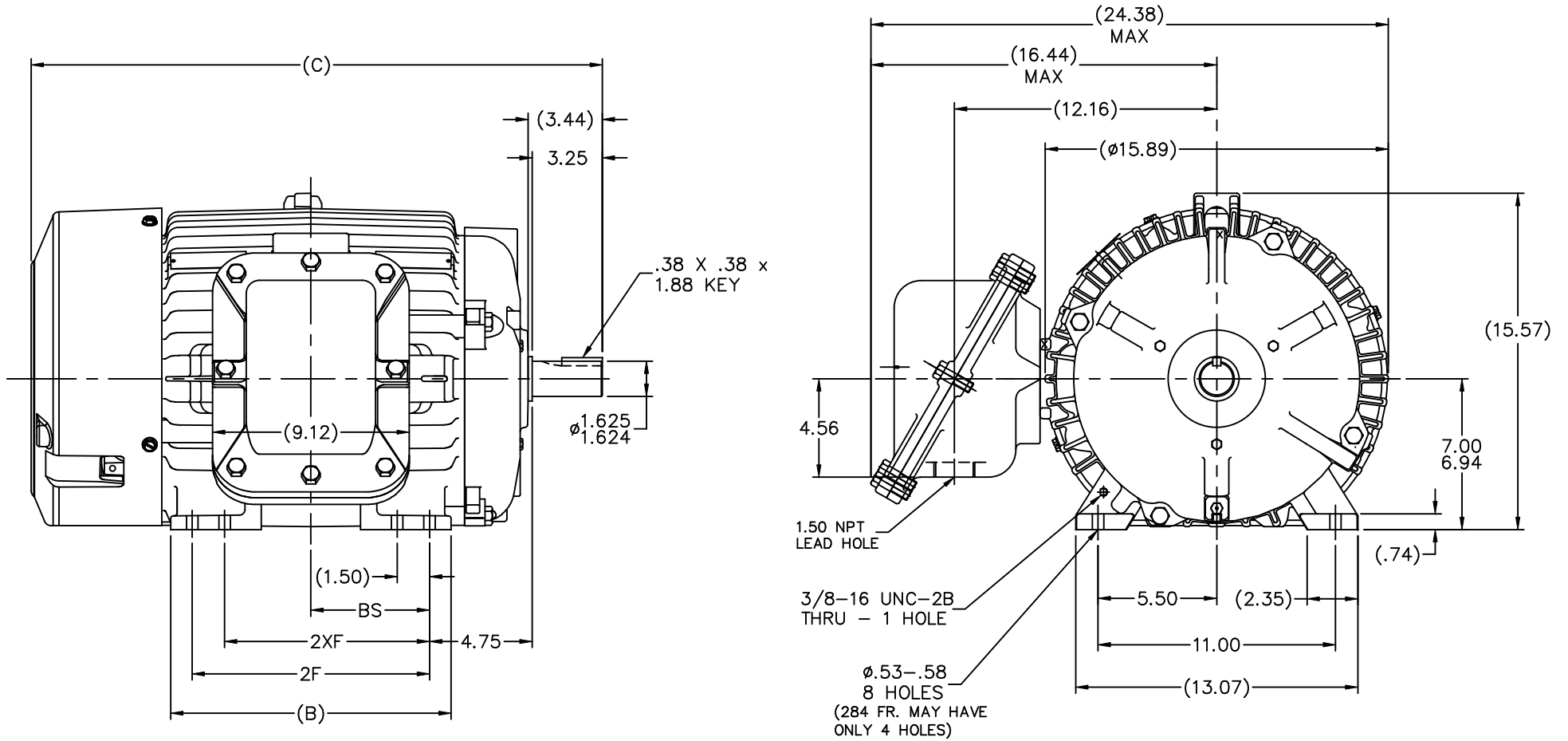
### Nameplate Specifications

Phase	<b>3</b>	Output HP	<b>25 &amp; 20 Hp</b>
Output KW	<b>18.7 &amp; 14.9 kW</b>	Voltage	<b>230/460 &amp; 190/380 V</b>
Speed	<b>3555 &amp; 2955 rpm</b>	Service Factor	<b>1.15 &amp; 1.15</b>
Frame	<b>284TS</b>	Enclosure	<b>Explosion Proof Fan cooled</b>
Thermal Protection	<b>Thermostat</b>	Efficiency	<b>91.7 &amp; 91 %</b>
Ambient Temperature	<b>40 °C</b>	Frequency	<b>60 &amp; 50 Hz</b>
Current	<b>60/30 &amp; 58/29 A</b>	Power Factor	<b>86</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>6311</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 T3B</b>

### Technical Specifications

Electrical Type	<b>Squirrel Cage Inverter Rated</b>	Starting Method	<b>Line Or Inverter</b>
Poles	<b>2</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>.395 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>TS</b>	Shaft Diameter	<b>1.625 in</b>
Assembly/Box Mounting	<b>F1 ONLY</b>	Inverter Load	<b>CONSTANT 10:1/VARIABLE 10:1</b>
Connection Drawing	<b>EE7308AD</b>	Outline Drawing	<b>SS311004-1275</b>

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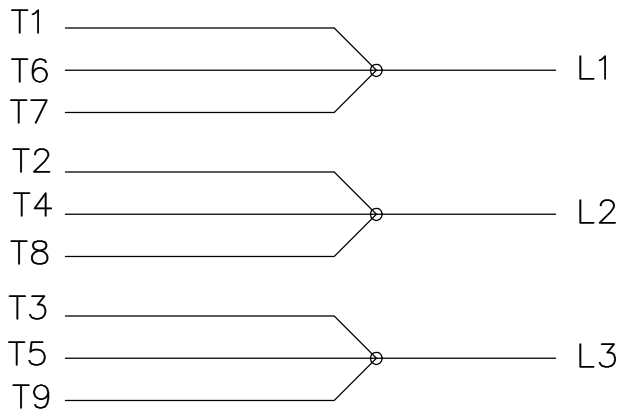


- NOTES:  
 1. BOX CAN ONLY BE ROTATED CLOCKWISE UP TO 270° FROM ITS ORIGINAL POSITION.  
 2. NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

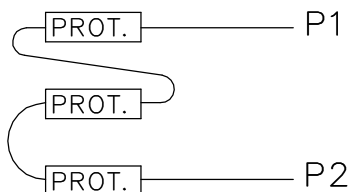
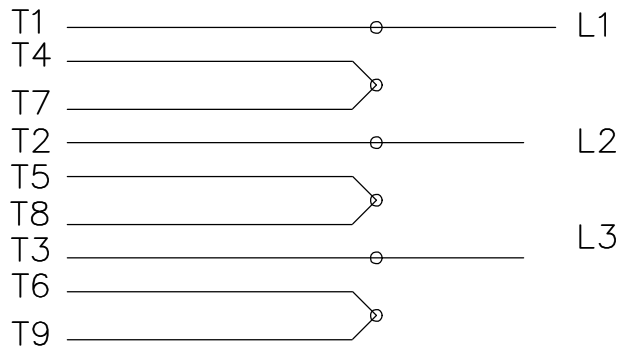
DASH	FRAME	B	C	2F	2XF	BS
1275	284TS	12.50	24.97	9.50		4.75
1425	286TS	13.00	26.47	11.00	9.50	5.50

		TOLERANCES UNLESS SPECIFIED		MARATHON ELECTRIC		DRAWN DA 03-12-1999			
NO.	REVISION	BY & DATE	CHK	ANG	FINISH	PREV			
4	REDRAWN IN AUTOCAD	TAT 07-06-2004	ML	DEC.	INCHES		CHK ML 04-14-1999		
3	REV'D 'C' BOX GEOMETRY PER CAST. CHANGE CN 29010	DRS 01-31-2000		.X	±.1		APPD SW 04-14-1999		
2	REVISED 'C' DIMENSION FOR C.I. FAN GUARD	DA 07-12-1999		.XX	±.03		SCALE 7-32		
	REVISED CONDUIT BOX CN 2400-235			.XXX	±.005		REF		
1	NEW DRAWING - DES/DEV	DA 04-14-1999		.XXXX	±.0005		FMF		
				ANG	±7'30"		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 ss311004		
						DIST LB-BR	SIZE B	DRAWING NO. SS311004	PAGE OF 4

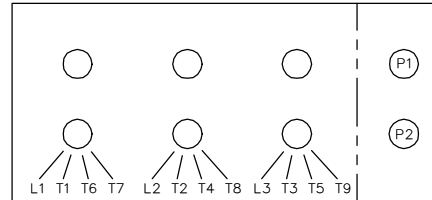
LOW VOLTAGE



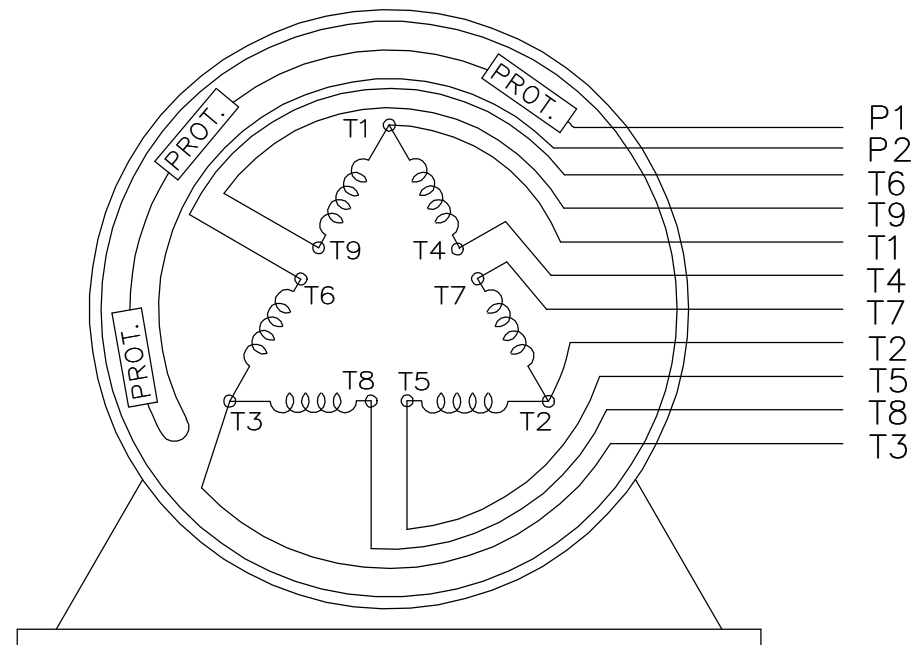
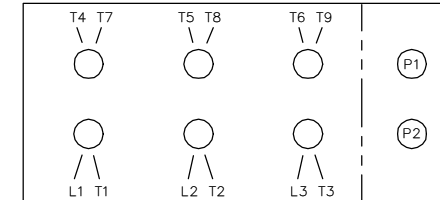
HIGH VOLTAGE



LOW VOLTAGE



HIGH VOLTAGE



VIEW OF TERMINAL END

WHEN MORE THAN ONE PROT. IS USED; PROT. ARE CONNECTED IN SERIES

DRAWING REVISION <b>L</b>	REVISION BY <b>JP</b>	REV DATE/© DATE <b>06-21-2019</b>	TOLERANCES (EXCEPT AS NOTED): DEC.    INCH    mm    ANGLE .X    ±0.1    [±3]    ±7° 30" .XX    ±0.02    [±0.5] .XXX    ±0.005    [±0.13] .XXXX    ±0.0005    [±0.013]	DRAWN BY <b>MJD</b>	Regal Beloit America, Inc.
ECO <b>ECO-0168744</b>	APPROVED BY <b>MH</b>	DATE <b>06-21-2019</b>		DATE <b>12-19-1997</b>	
ECO DESCRIPTION <b>UPDATED TO CURRENT STANDARDS</b>			REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.08/.38] X 45° CORNER FILLETS: R.02 [.5] MACHINED SURFACES: 200/ 5.1 INCH/mm	APPROVED BY <b>GK</b>	DESCRIPTION <b>CONN DIAGRAM-EXTERNAL</b>
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			SIZE <b>A</b>	DRAWING NUMBER <b>EE7308AD</b>	SHEET <b>1 OF 1</b>



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

DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

CUSTOMER:  
 ORDER #: \_\_\_\_\_  
 CONN. DIAGRAM: EE7308AD  
 OUTLINE: B-SS311004-1275  
 WINDING: HA31802004 NONE 2  
 SPEED: \_\_\_\_\_

CUSTOMER P.O. #: \_\_\_\_\_  
 REFERENCE MODEL #: 284TSTGCD6503  
 CAT #: E546A  
 CUSTOMER PART #: \_\_\_\_\_  
 MOUNTING: F1 ONLY

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
25	18.7	3600	3555	284TS	EPFC	TFC	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60/50	230/460#190/380	60/30&58/29	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	91.7	3/4 LD EFF	91.7	1/2 LD EFF	91.0	GTD EFF	ELECT. TYPE
F.L. PF	86.0	3/4 LD PF	82.0	1/2 LD PF	73.5	91.0	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (°C)
37.0 LB-FT	181	65.0 LB-FT	176%	94.0 LB-FT 254%

SOUND PRESSURE @ 3 FT.	SOUND	POWER	ROTOR WK <sup>2</sup>	MAX. LOAD WK <sup>2</sup>	SAFE STALL TIME	STARTS/HOUR	APPROX.	MOTOR WGT
75 dBA	84 dBA		2.90 LB-FT <sup>2</sup>	30 LB-FT <sup>2</sup>	20 SEC.	2	460	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	ROOF CL I GR C&D CL II	NO	NONE	BLUE - RAL 5003 (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE						
BALL	BALL	POLYREX EM	TS	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
6311	6210						

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
0.261	0.113	0.826	0.864	24.381	0.080	ODE

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

PREPARED BY: _____	BRAKE: NONE
DATE: 8/30/2021	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: 8/30/2021  
 Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Submitted by: \_\_\_\_\_



284TSTGCD6503

Submittal

Data @ **460** V

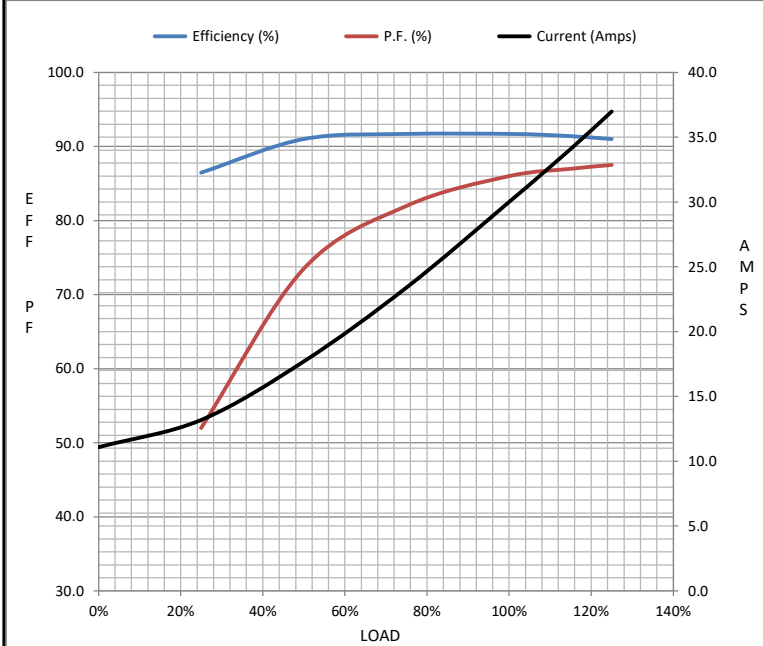
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	11.1	13.2	17.7	23.4	30.0	34.1	37.0	181
Torque (ft-lb)	0.00	9.2	18.5	27.5	37.0	42.5	46.3	65.0
RPM	3600	3588	3578	3565	3555	3,546	3540	0
Efficiency (%)		86.5	91.0	91.7	91.7	91.4	91.0	
P.F. (%)	8.0	52.0	73.5	82.0	86.0	87.0	87.5	35.0

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3330	3555	3600
Current (Amps)	181	166	105	30.0	11.1
Torque (ft-lb)	65.0	56.0	94.0	37.0	0.00

Information Block				
HP	25.0			
Sync. RPM	3600			
Frame	284			
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	55 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	3,300 feet			
Rotor/Shaft wk <sup>2</sup>	2.90 Lb-Ft <sup>2</sup>			
Ref Wdg	HA31802004 NONE			
Sound Pressure @ 1M	75 dBA			
VFD Rating	CONSTANT 10:1			
Outline Dwg	B-SS311004-1275			
Conn. Diag	EE7308AD			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.2610	0.1130	0.8260	0.8640	24.3810



Speed - Torque Curve

