

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: 284TSTGN6503

Catalog No: E546

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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RegalRexnord

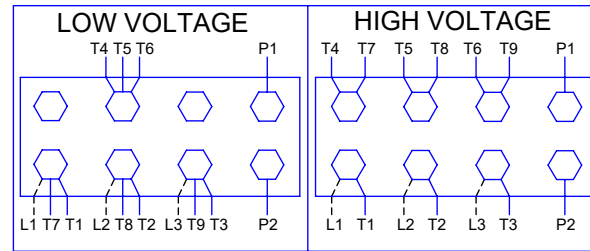
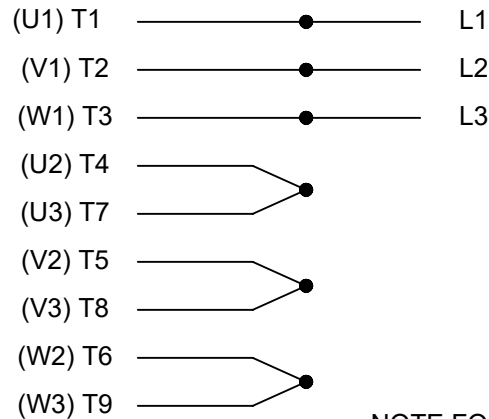
Nameplate Specifications

| | | | |
|------------------------|-----------------------------|----------------------------|--|
| Phase | 3 | Output HP | 25 & 20 Hp |
| Output KW | 18.7 & 14.9 kW | Voltage | 230/460 & 190/380 V |
| Speed | 3558 & 2960 rpm | Service Factor | 1.15 & 1.15 |
| Frame | 284TS | Enclosure | Explosion Proof Fan cooled |
| Thermal Protection | Thermostat | Efficiency | 93 & 92.4 % |
| Ambient Temperature | 40 °C | Frequency | 60 & 50 Hz |
| Current | 57.5/28.8 & 56/28 A | Power Factor | 87.5 |
| Duty | Continuous | Insulation Class | F |
| Design Code | B | KVA Code | G |
| Drive End Bearing Size | 6311 | Opp Drive End Bearing Size | 6210 |
| UL | UL Listed And CSA Certified | CSA | Y |
| CE | N | IP Code | 54 |
| Number of Speeds | 1 | Hazardous Location | DIV 1 EXP PROOF CL I GR CD CL II GR FG T3B |

Technical Specifications

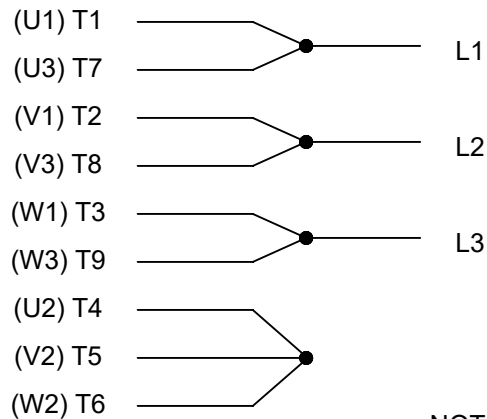
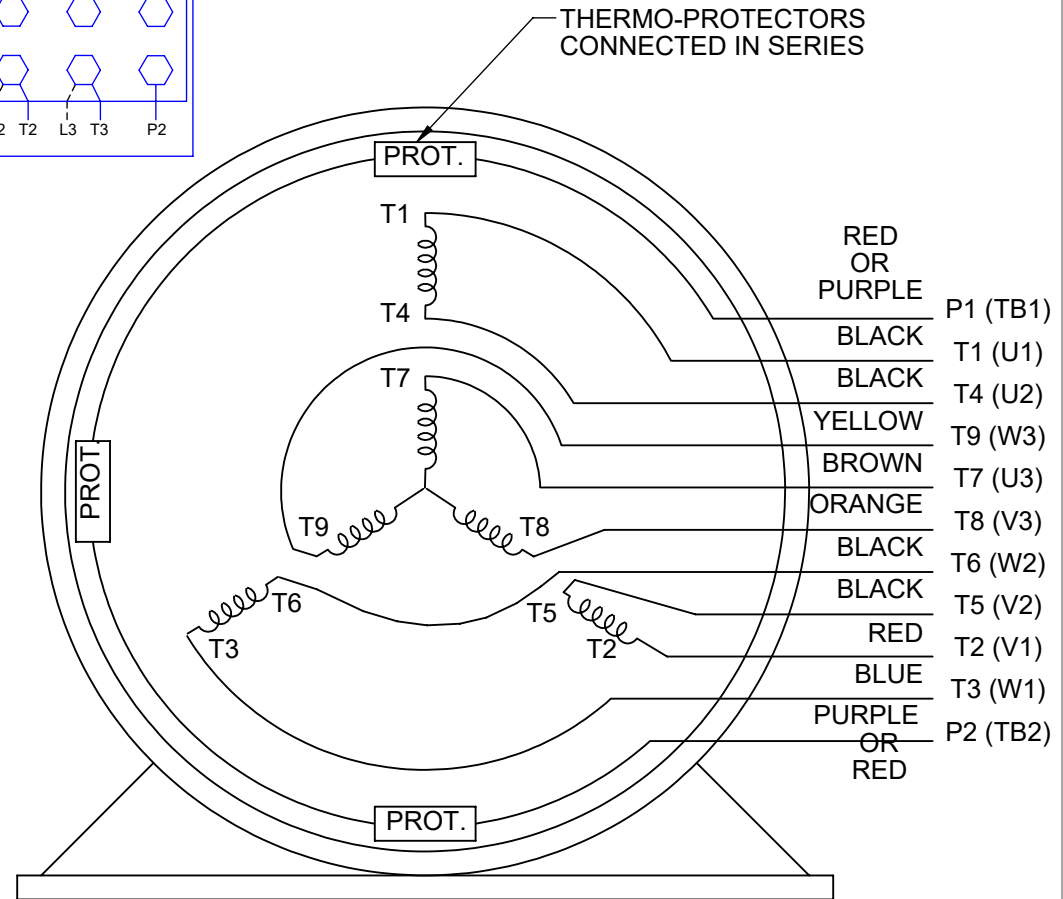
| | | | |
|-----------------------|------------------------------|-----------------------|------------------|
| Electrical Type | Squirrel Cage Inverter Rated | Starting Method | Line Or Inverter |
| Poles | 2 | Rotation | Reversible |
| Resistance Main | .0833 Ohms | Mounting | Rigid Base |
| Motor Orientation | Horizontal | Drive End Bearing | Ball |
| Opp Drive End Bearing | Ball | Frame Material | Cast Iron |
| Shaft Type | TS | Overall Length | 24.97 in |
| Frame Length | 12.75 in | Shaft Diameter | 1.625 in |
| Shaft Extension | 3.44 in | Assembly/Box Mounting | F1 ONLY |
| Inverter Load | CONSTANT 10:1 | | |
| Connection Drawing | A-EE7308T | Outline Drawing | B-SS311004-1275 |

HIGH VOLTAGE



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

THREE PHASE
DUAL VOLTAGE MOTOR

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 |
| ECO ECO-0159915 | APPROVED BY DR | DATE 01-15-2019 |

ECO DESCRIPTION
ADDED TERMINAL CONNECTION DIAGRAM

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| |
|----------------------------|
| DRAWN BY SMC |
| DATE 05-13-1992 |
| APPROVED BY TB |
| DATE 05-13-1992 |
| REFERENCE EE7308/EE7300 |

THIRD ANGLE
PROJECTION

Regal Beloit America, Inc.

DESCRIPTION

CONN DIAGRAM-INTERNAL
3 PHASE - DUAL VOLTAGE MOTOR

MATERIAL

PROCESS/FINISH

SIZE
A

DRAWING NUMBER

EE7308T

SHEET
1 OF 1

CERTIFICATION DATA SHEET

Model#: 284TSTGN6503 CC
CONN. DIAGRAM: A-EE7308T
OUTLINE: B-SS311004-1275

WINDING#: K284282 NONE 1
ASSEMBLY: F1 ONLY

TYPICAL MOTOR PERFORMANCE DATA

| HP | KW | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|-------|-----------|-----------|-----------|-------|-----------|----------|--------|
| 25&20 | 18.7&14.9 | 3600 | 3558&2960 | 284TS | EPFC | G | B |

| PH | Hz | VOLTS | FL AMPS | START TYPE | DUTY | INSL | S.F | AMB°C | ELEVATION |
|----|-------|---------------------|---------------------|---------------------|----------------|------|-----------|-------|-----------|
| 3 | 60/50 | 230/460#190/ 380 | 57.5/28.8&56/ 28 | LINE OR INVERTER | CONTINUOU S | F3 | 1.15/1.15 | 40 | 3300 |

| | | | | | |
|---------------------------|------------------|--------------------|----------|-------------------|--------------|
| FULL LOAD EFF: 93&92.4 | 3/4 LOAD EFF: 93 | 1/2 LOAD EFF: 92.4 | GTD. EFF | ELEC. TYPE | NO LOAD AMPS |
| FULL LOAD PF: 87.5&88 | 3/4 LOAD PF: 84 | 1/2 LOAD PF: 76 | 92.4 | SQ CAGE INV RATED | 20 / 10 |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE | B.D. TORQUE | F.L. RISE°C |
|-------------|-------------------|--------------|---------------|-------------|
| 37 LB-FT | 364 / 182 | 50 LB-FT 135 | 103 LB-FT 278 | 65 |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2 | MAX. WK^2 | SAFE STALL TIME | STARTS /HOUR | APPROX. MOTOR WGT |
|---------------------------|-------------|-------------|------------|-----------------|-----------------|----------------------|
| 72 dBA | 82 dBA | 2.3 LB-FT^2 | 32 LB-FT^2 | 20 SEC. | 2 | 400 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 | EXP PROOF CL I GR C&D CL II GR F&G T3B | FALSE | NONE | BLUE (EPOXY) |

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

| THERMO-PROTECTORS | | | | THERMISTORS | CONTROL | SPACE /n HEATERS |
|-------------------|------------|----------|----------|-------------|---------|------------------|
| THERMOSTATS | PROTECTORS | WDG RTDs | BRG RTDs | | | |
| TSTATS (N/C) | 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: 1.5 X BASE SPEED |
| | ENCODER: NONE NONE NONE NONE NONE PPR |
| | BRAKE: NONE NONE NONE P/N NONE NONE NONE - FT-LB NONE V NONE Hz |
| | |

DATE: 06/21/2017 10:50:39 AM
 FORM 3531 REV.3 02/07/99

** Subject to change without notice.

Data Sheet

Date: 19-06-2017

Customer:

Attention:

Submitted by: FAREEDA DUDEKULA



284TSTGN6503

Submittal

Data @ 460 V

Motor Load Data

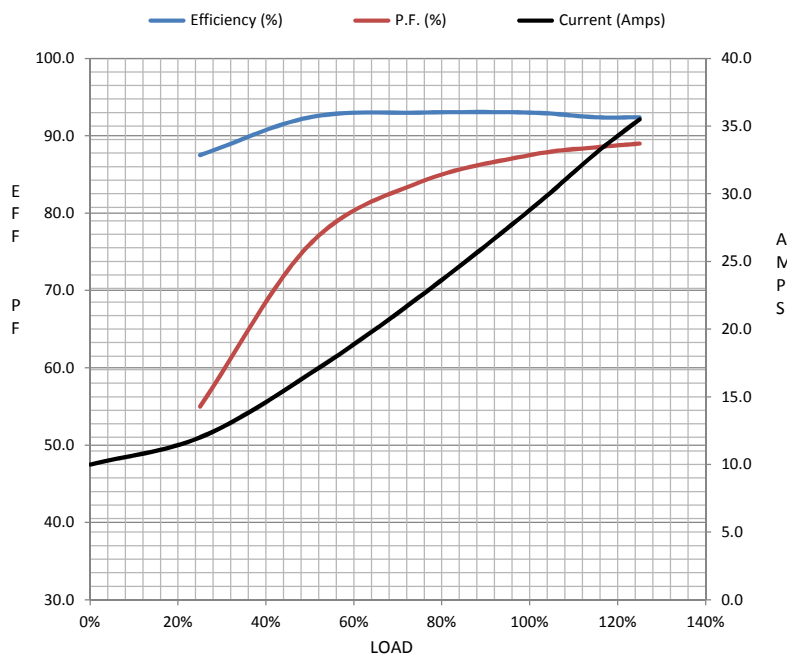
| Load | 0% | 25% | 50% | 75% | 100% | 115% | 125% | LR | |
|----------------|------|------|------|------|------|-------|------|------|--|
| Current (Amps) | 10.0 | 12.0 | 16.7 | 22.4 | 28.8 | 33.0 | 35.5 | 182 | |
| Torque (ft-lb) | 0.00 | 9.0 | 18.5 | 27.5 | 37.0 | 42.0 | 46.5 | 50.0 | |
| RPM | 3600 | 3590 | 3580 | 3570 | 3558 | 3,550 | 3545 | 0 | |
| Efficiency (%) | | 87.5 | 92.4 | 93.0 | 93.0 | 92.4 | 92.4 | | |
| P.F. (%) | 6.0 | 55.0 | 76.0 | 84.0 | 87.5 | 88.5 | 89.0 | 31.0 | |

Motor Speed Data

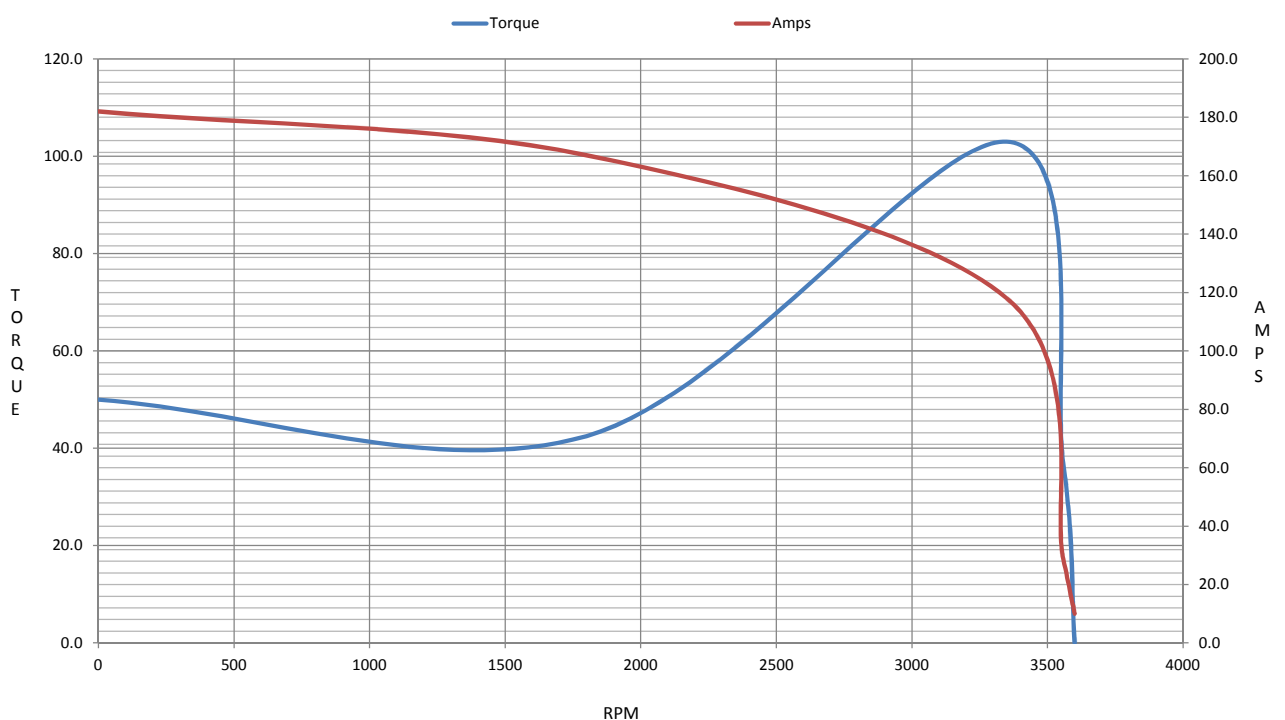
| | LR | Pull-Up | BD | Rated | Idle |
|----------------|------|---------|------|-------|------|
| Speed (RPM) | 0 | 1800 | 3350 | 3558 | 3600 |
| Current (Amps) | 182 | 167 | 118 | 28.8 | 10.0 |
| Torque (ft-lb) | 50.0 | 42.5 | 103 | 37.0 | 0.00 |

Information Block

| | | | | |
|----------------------------|------------------|--------|--------|--------|
| HP | 25.0 | | | |
| Sync. RPM | 3600 | | | |
| Frame | 284 | | | |
| Enclosure | TEFC | | | |
| Construction | TFN | | | |
| Voltage | 230/460#190/38(V | | | |
| Frequency | 60 Hz | | | |
| Design | A | | | |
| LR Code letter | G | | | |
| Service Factor | 1.15 | | | |
| Temp Rise @ FL | 65 ° C | | | |
| Duty | CONT | | | |
| Ambient | 40 ° C | | | |
| Elevation | 1,000 feet | | | |
| Rotor/Shaft wk² | 2.30 Lb-Ft² | | | |
| Ref Wdg | K284282 NONE | | | |
| Sound Pressure @ 1M | 72 dBA | | | |
| VFD Rating | CONSTANT 10:1 | | | |
| Outline Dwg | B-SS311004-1275 | | | |
| Conn. Diag | A-EE7308T | | | |
| Additional Specifications: | | | | |
| 0 | | | | |
| 365THFS8036 | | | | |
| EQUIV CKT (OHMS / PHASE) | | | | |
| R1 | R2 | X1 | X2 | Xm |
| 0.0600 | 0.0280 | 0.2450 | 0.1600 | 6.9010 |



Speed -Torque Curve



CERTIFICATE OF COMPLIANCE

Certificate Number 20220325- E12044
Report Reference E12044-19991213
Issue Date 2022-MARCH-25

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 284TSTGN6503 (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

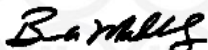
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Bruce Mahrenholz, Director North American Certification Program

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