

PRODUCT INFORMATION PACKET

Model No: 286TTFNA6576

Catalog No: E639

20 HP Severe Duty Motor, 3 phase, 1200 RPM, 460 V, 286T Frame, TEFC
Severe Duty Motors



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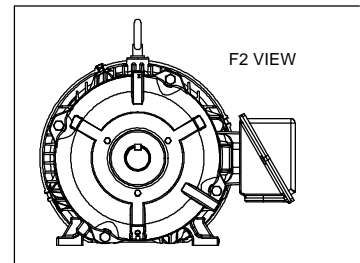
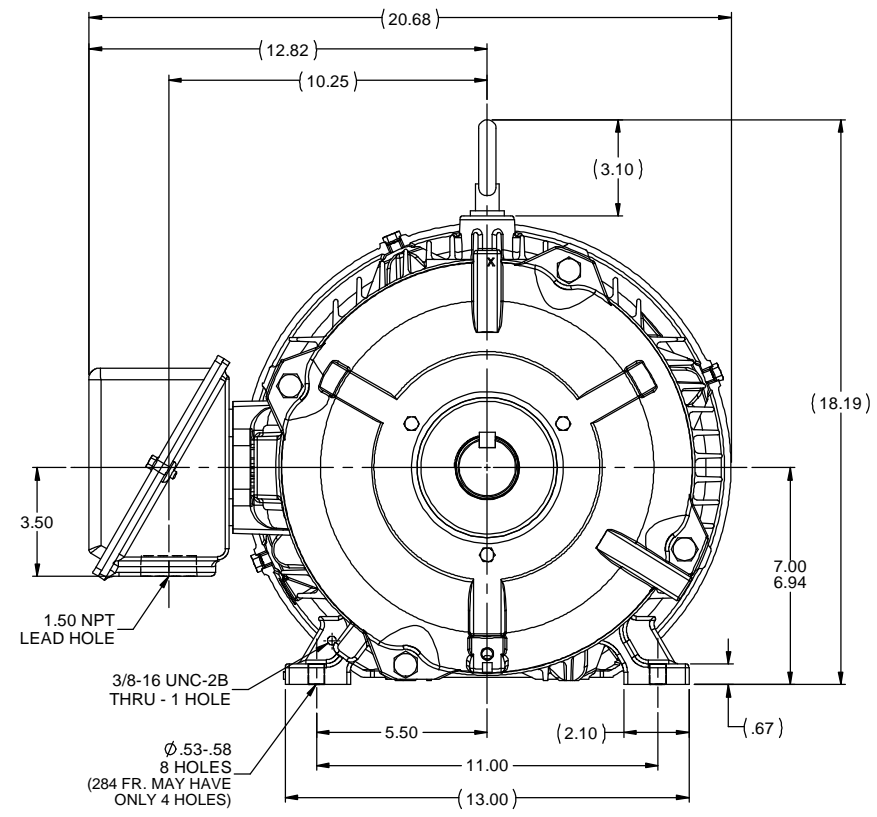
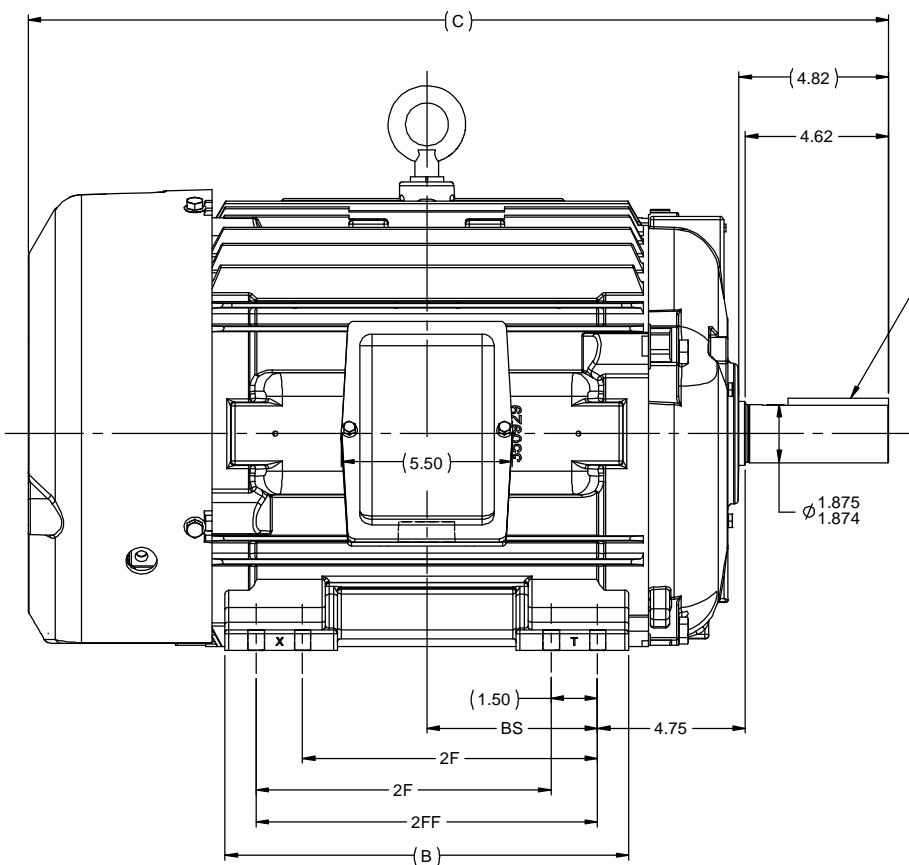
Nameplate Specifications

| | | | |
|------------------------|-------------------|----------------------------|------------------------------------|
| Output HP | 20 Hp | Output KW | 14.9 kW |
| Frequency | 60 Hz | Voltage | 460 V |
| Current | 26.8 A | Speed | 1175 rpm |
| Service Factor | 1.15 | Phase | 3 |
| Efficiency | 91.7 % | Power Factor | 76 |
| Duty | Continuous | Insulation Class | F |
| Design Code | B | KVA Code | G |
| Frame | 286T | Enclosure | Totally Enclosed Fan Cooled |
| Thermal Protection | No | Ambient Temperature | 40 °C |
| Drive End Bearing Size | 6311 | Opp Drive End Bearing Size | 6210 |
| 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 | 6 | Rotation | Reversible |
| Resistance Main | .385 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 | 27.71 in |
| Frame Length | 14.25 in | Shaft Diameter | 1.875 in |
| Shaft Extension | 4.82 in | Assembly/Box Mounting | F1/F2 Capable |
| Connection Drawing | A-EE7300 | Outline Drawing | B-SS311057-1425 |

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- NOTES:
1. CONDUIT BOX CAN BE ROTATED 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.

| | | | | | | |
|-------------|--------------|----------|----------|-----------|------------|-----------|
| 1275 | 284T | 26.21 | 12.50 | 9.50 | --- | 4.75 |
| 1425 | 284/286T | 27.71 | 13.00 | 9.50 | 11.00 | 5.50 |
| DASH | FRAME | C | B | 2F | 2FF | BS |

| | | TOLERANCES UNLESS SPECIFIED | | marathon [®] electric | | DRAWN CAV 10-18-2000 | |
|----|--------------------------------------|-----------------------------|----------|--------------------------------|----------------------------------|----------------------|--------------------------|
| | | DEC | INCHES | | | CHK ML 10-18-2000 | APPR BW 10-18-2000 |
| 4 | UPDATED TO NEW FRAME DESIGN MU106205 | MSG 08-22-2012 | MSG x | ±.1 | | | |
| 3 | REDRAWN IN AUTOCAD - NO CHANGE | TAT 06-29-2004 | ML xx | ±.03 | TITLE OUTLINE - TEFC - TGN | | SCALE 1:4 |
| 2 | ADDED NOTE 3 MU35810 | DAH 02-06-2001 | ML xxx | ±.005 | 280T FR. - BB - STD - 12.50 LAM. | | REF |
| 1 | NEW DRAWING MU34031 | MSG 08-23-2012 | ML xxxxx | ±.0005 | MATL | | FMF MU34031 |
| NO | REVISION | BY & DATE | CHK LANG | ±1/2° | FINISH | | PAGE OF |
| | | | | | PREV | | |
| | | | | | RFP 10-18-2000 | | SIZE DRAWING NO |
| | | | | | NETWORK FILE NAME SS311057 | | B SS311057 |
| | | | | | | | REV |
| | | | | | | | 4 |

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

**TO REVERSE ROTATION:
INTERCHANGE ANY TWO
LINE LEAD CONNECTIONS.**

TERMINAL BLOCK WHEN SPECIFIED



VIEW OF TERMINAL END

**IF MOTOR HAS
6 LEADS**

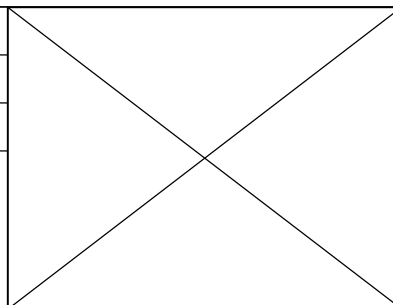


A-9806 DECAL

**OPTIONAL CORD
CONNECTION**



| | | |
|---|---------------------------|---------------------------|
| 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 | |

CERTIFICATION DATA SHEET

Model#: 286TTFNA6576 AA
CONN. DIAGRAM: A-EE7300
OUTLINE: B-SS311057-1425

WINDING#: 286654 NONE 7
ASSEMBLY: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

| HP | KW | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|----|------|-----------|----------|-------|-----------|----------|--------|
| 20 | 14.9 | 1200 | 1175 | 286T | TEFC | G | B |

| PH | Hz | VOLTS | FL AMPS | START TYPE | DUTY | INSL | S.F | AMB°C | ELEVATION |
|----|----|-------|---------|------------------|------------|------|------|-------|-----------|
| 3 | 60 | 460 | 26.8 | LINE OR INVERTER | CONTINUOUS | F3 | 1.15 | 40 | 3300 |

| FULL LOAD EFF: 91.7 | 3/4 LOAD EFF: 91.7 | 1/2 LOAD EFF: 91.7 | GTD. EFF | ELEC. TYPE | NO LOAD AMPS |
|---------------------|--------------------|--------------------|----------|-------------------|--------------|
| FULL LOAD PF: 76 | 3/4 LOAD PF: 70.5 | 1/2 LOAD PF: 59.5 | 91 | SQ CAGE INV RATED | 12.5 |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE | B.D. TORQUE | F.L. RISE°C |
|-------------|-------------------|---------------|---------------|-------------|
| 89 LB-FT | 145 | 157 LB-FT 176 | 238 LB-FT 267 | 60 |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2 | MAX. WK^2 | SAFE STALL TIME | STARTS /HOUR | APPROX. MOTOR WGT |
|------------------------|-------------|-------------|-------------|-----------------|--------------|-------------------|
| 56 dBA | 66 dBA | 4.8 LB-FT^2 | 350 LB-FT^2 | 20 SEC. | 2 | 550 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 | POLYREX EM | T | NONE | NONE | 1045 HOT ROLLED (C-204) | CAST IRON |
| 6311 | 6210 | | | | | | |

| 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

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|---|
| INVERTER TORQUE: CONSTANT 20:1 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 |

DATE: 06/21/2017 10:19:00 AM
 FORM 3531 REV.3 02/07/99
 ** Subject to change without notice.

Data Sheet

Date: 20-06-2017
 Customer: _____
 Attention: _____
 Submitted by: FAREEDA DUDEKULA



286TFNA6576

Submittal

Data @ 460 V

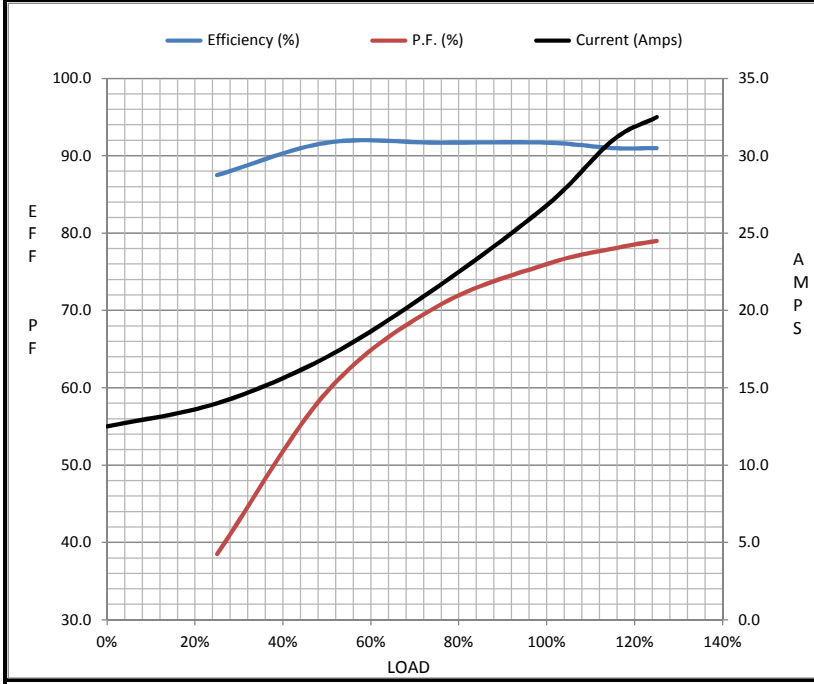
Motor Load Data

| Load | 0% | 25% | 50% | 75% | 100% | 115% | 125% | LR |
|----------------|------|------|------|------|------|-------|------|------|
| Current (Amps) | 12.5 | 14.0 | 17.0 | 21.5 | 26.8 | 31.0 | 32.5 | 145 |
| Torque (ft-lb) | 0.00 | 22.0 | 44.0 | 66.5 | 89.0 | 103 | 112 | 157 |
| RPM | 1200 | 1195 | 1190 | 1180 | 1175 | 1,170 | 1167 | 0 |
| Efficiency (%) | | 87.5 | 91.7 | 91.7 | 91.7 | 91.0 | 91.0 | |
| P.F. (%) | 20.5 | 38.5 | 59.5 | 70.5 | 76.0 | 78.0 | 79.0 | 36.0 |

Motor Speed Data

| | LR | Pull-Up | BD | Rated | Idle |
|----------------|-----|---------|------|-------|------|
| Speed (RPM) | 0 | 600 | 1070 | 1175 | 1200 |
| Current (Amps) | 145 | 135 | 93.5 | 26.8 | 12.5 |
| Torque (ft-lb) | 157 | 152 | 238 | 89.0 | 0.00 |

| Information Block | | | | |
|-----------------------------|------------------------|--------|--------|---------|
| HP | 20.0 | | | |
| Sync. RPM | 1200 | | | |
| Frame | 286 | | | |
| Enclosure | TEFC | | | |
| Construction | TFN | | | |
| Voltage | 460 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 | 1,000 feet | | | |
| Rotor/Shaft wk ² | 4.8 Lb-Ft ² | | | |
| Ref Wdg | 286654 NONE | | | |
| Sound Pressure @ 1M | 56 dBA | | | |
| VFD Rating | CONSTANT 20:1 | | | |
| Outline Dwg | B-SS311057-1425 | | | |
| Conn. Diag | A-EE7300 | | | |
| Additional Specifications: | | | | |
| 0 | | | | |
| 365THFS8036 | | | | |
| EQUIV CKT (OHMS / PHASE) | | | | |
| R1 | R2 | X1 | X2 | Xm |
| 0.2340 | 0.2470 | 1.2520 | 1.2730 | 19.2130 |



Speed - Torque Curve

