

# Inverter (Vector) Duty Motors

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**Model No:** 445THFCD8046

**Catalog No:** Y519A

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Inverter (Vector) Duty Motor, 150 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 445T Frame, TEBC-AXIAL

**Product Information Packet: Model No: 445THFCD8046, Catalog No: Y519A Inverter (Vector) Duty Motor, 150 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 445T Frame, TEBC-AXIAL**

### Nameplate Specifications

|                            |                                               |                        |                   |
|----------------------------|-----------------------------------------------|------------------------|-------------------|
| Phase                      | <b>3</b>                                      | Output HP              | <b>150 Hp</b>     |
| Output KW                  | <b>112.0 kW</b>                               | Voltage                | <b>460 V</b>      |
| Speed                      | <b>1788 r/min</b>                             | Synchronous RPM        | <b>1800 r/min</b> |
| Service Factor             | <b>1.00</b>                                   | Frame                  | <b>445T</b>       |
| Enclosure                  | <b>Totally Enclosed Blower cooled - Axial</b> | Thermal Protection     | <b>Thermostat</b> |
| Efficiency                 | <b>95.4 %</b>                                 | Ambient Temperature    | <b>40 °C</b>      |
| Frequency                  | <b>60 Hz</b>                                  | Current                | <b>161.0 A</b>    |
| Power Factor               | <b>91</b>                                     | Duty                   | <b>Continuous</b> |
| Insulation Class           | <b>H</b>                                      | Design Code            | <b>INV</b>        |
| KVA Code                   | <b>H</b>                                      | Drive End Bearing Size | <b>6319</b>       |
| Opp Drive End Bearing Size | <b>6317</b>                                   | UL                     | <b>Recognized</b> |
| CSA                        | <b>Y</b>                                      | CE                     | <b>Y</b>          |
| IP Code                    | <b>55</b>                                     | Number of Speeds       | <b>1</b>          |

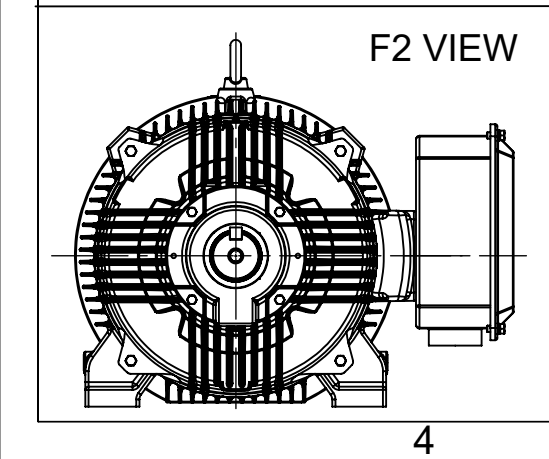
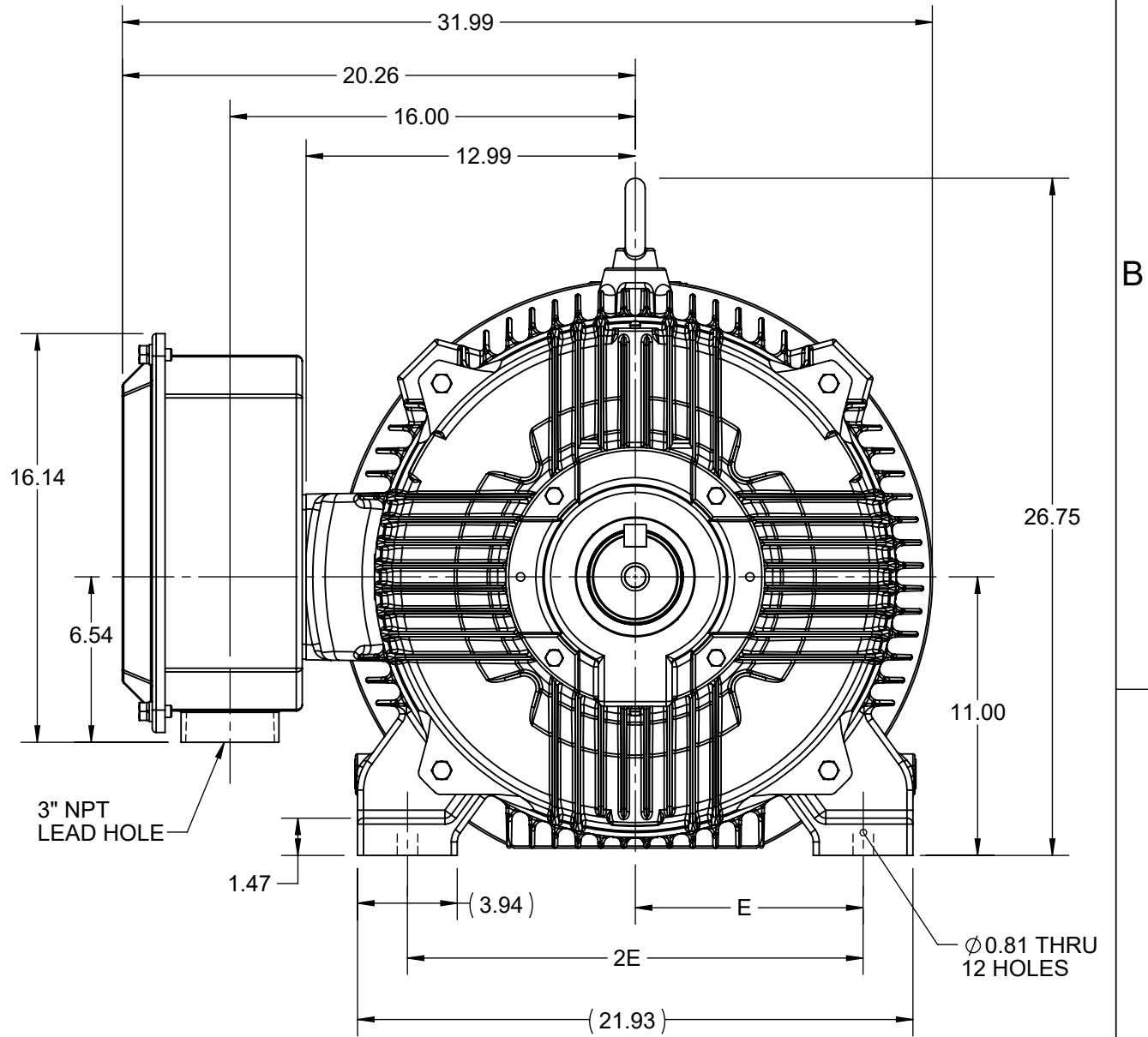
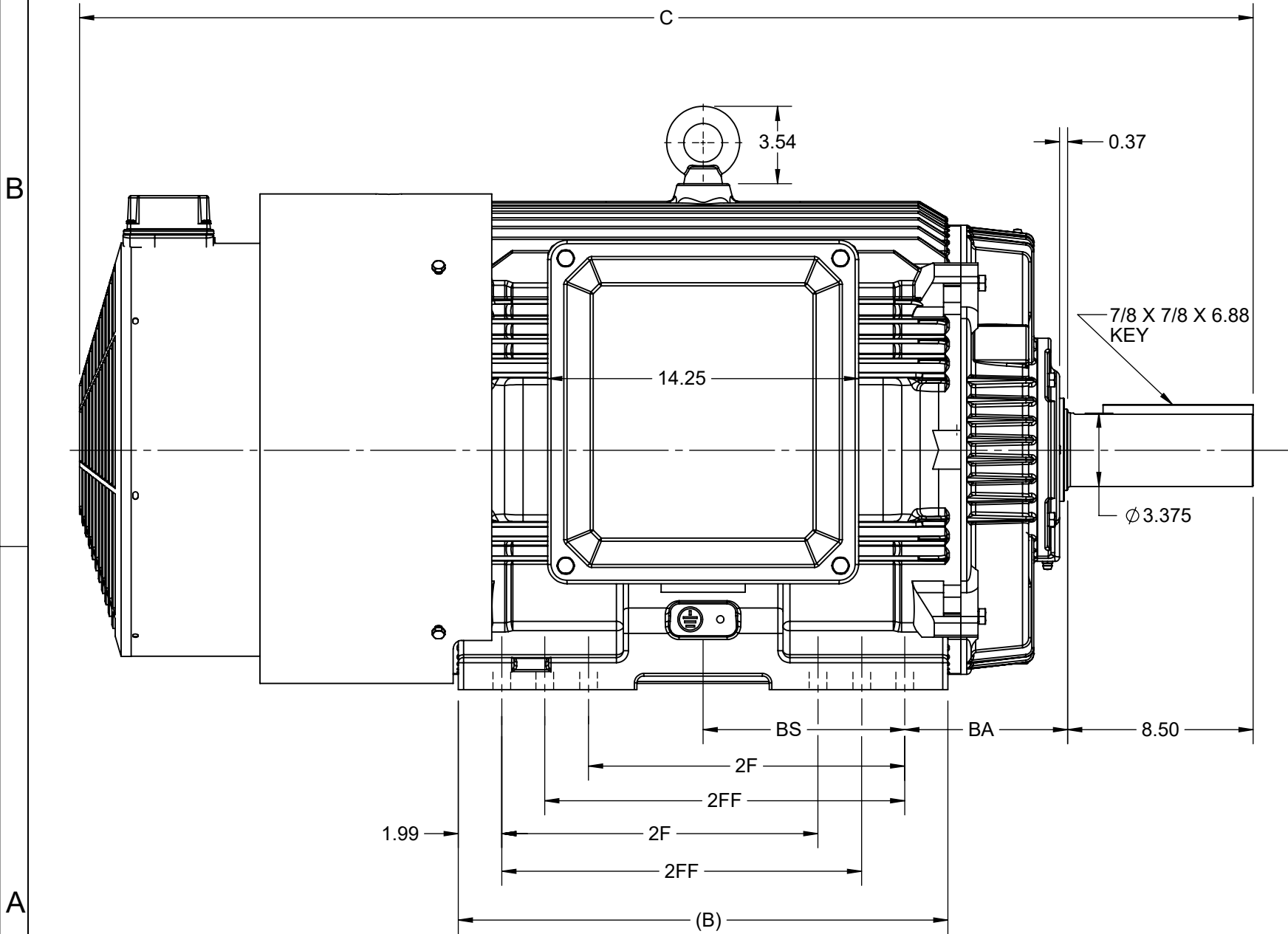
### Technical Specifications

|                       |                                    |                   |                        |
|-----------------------|------------------------------------|-------------------|------------------------|
| Electrical Type       | <b>Squirrel Cage Inverter Duty</b> | Starting Method   | <b>Inverter Only</b>   |
| Poles                 | <b>4</b>                           | Rotation          | <b>Reversible</b>      |
| Resistance Main       | <b>.0332 O</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>3.375 in</b>        |
| Assembly/Box Mounting | <b>F1/F2 Capable</b>               | Inverter Load     | <b>Constant 2000:1</b> |

### Drawings

|                    |                |                 |                 |
|--------------------|----------------|-----------------|-----------------|
| Connection Drawing | <b>EE7300T</b> | Outline Drawing | <b>SS621119</b> |
|--------------------|----------------|-----------------|-----------------|

| 4     |       |      |       |       |       | 3    |      |          | 2 |  | 1 |  |
|-------|-------|------|-------|-------|-------|------|------|----------|---|--|---|--|
| B     | C     | E    | 2E    | 2F    | 2FF   | BA   | BS   | MOUNTING |   |  |   |  |
| 22.44 | 53.80 | 9.00 | 18.00 | 14.50 | 16.50 | 7.50 | 9.24 | F1 OR F2 |   |  |   |  |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------|
| DRAWING REVISION<br>B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | REVISION BY<br>SB  | REV DATE/© DATE<br>08/13/2025 |
| REQUEST NUMBER<br>CR-0023600                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | APPROVED BY<br>SBD | DATE<br>08/13/2025            |
| REQUEST NUMBER DESCRIPTION<br>DRAWING TITLE BLOCK UPDATED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |                               |
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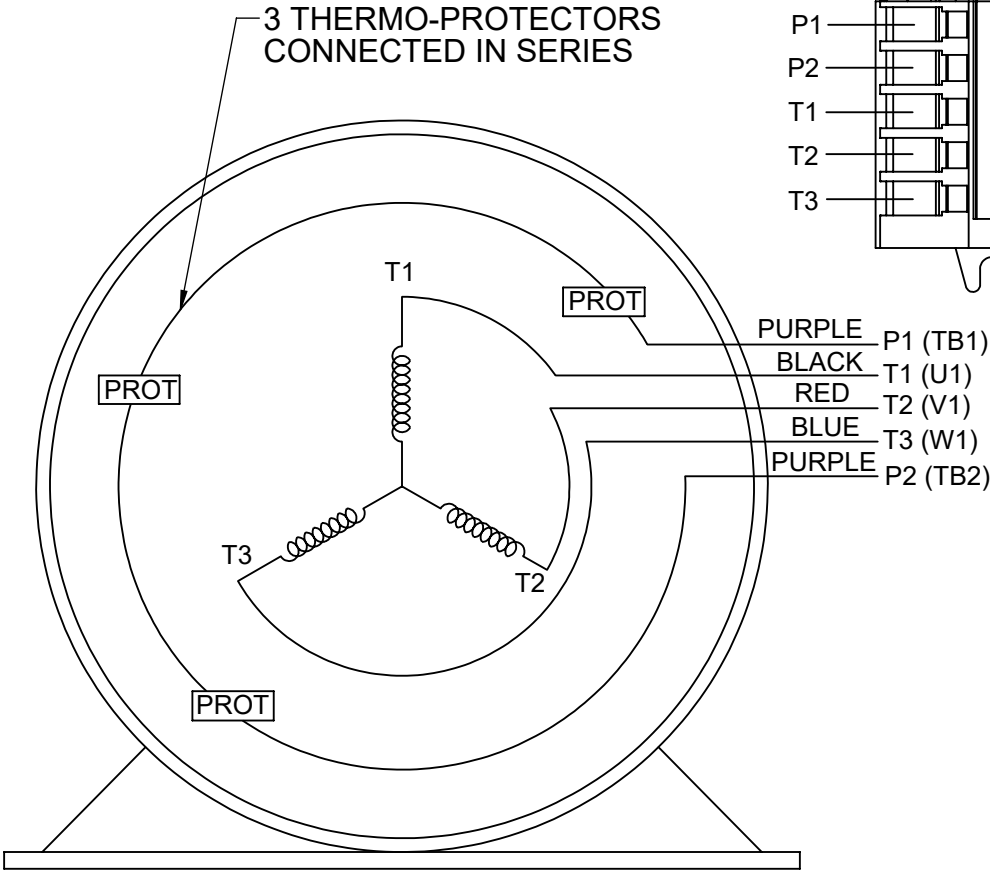
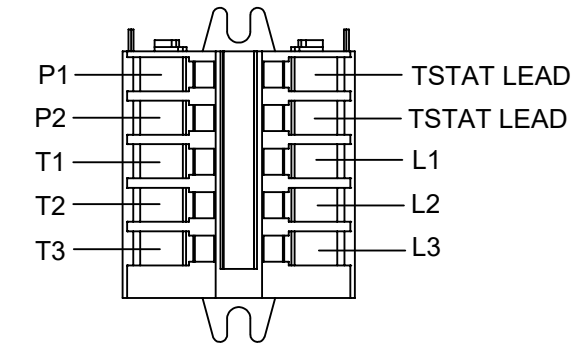
|                           |                                                                     |                            |                 |
|---------------------------|---------------------------------------------------------------------|----------------------------|-----------------|
| DRAWN BY<br>BISWA         | <b>marathon™</b>                                                    |                            |                 |
| DATE<br>02/03/2021        |                                                                     |                            |                 |
| APPROVED BY<br>SBD        | DESCRIPTION<br><b>OUTLINE</b><br>444/445T FR-NEMA-TEBC AXIAL BLOWER |                            |                 |
| DATE<br>16/12/2020        |                                                                     |                            |                 |
| REFERENCE                 | MATERIAL                                                            | PROCESS/FINISH             |                 |
| THIRD ANGLE<br>PROJECTION | SIZE<br>B                                                           | DRAWING NUMBER<br>SS621119 | SHEET<br>1 OF 1 |

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

TO REVERSE ROTATION:  
INTERCHANGE ANY TWO LINE  
LEAD CONNECTIONS

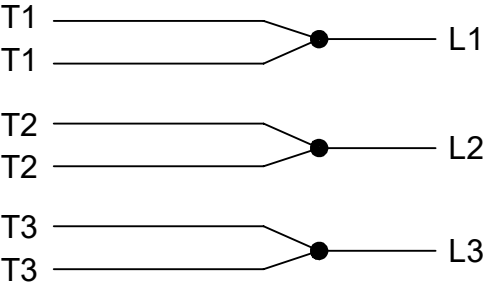
NOTE FOR FACTORY USE ONLY:  
TO SURGE TEST:  
FOR 3 LEAD COMMON CONNECT:  
CONNECT P1 TO T1 THEN P2 TO L1  
FOR 6 LEAD COMMON CONNECT:  
CONNECT P1 TO BOTH T1  
THEN P2 TO L1

TERMINAL BLOCK WHEN SPECIFIED



T2BM  
T6AW  
T6AL  
T6Z  
T4EG  
T4BF  
T8A  
T6H  
T6A  
T4AX  
T4A  
T2A  
T2F

IF MOTOR HAS MULTIPLE  
T'S PER LEAD CONNECT  
TOGETHER LIKE T'S



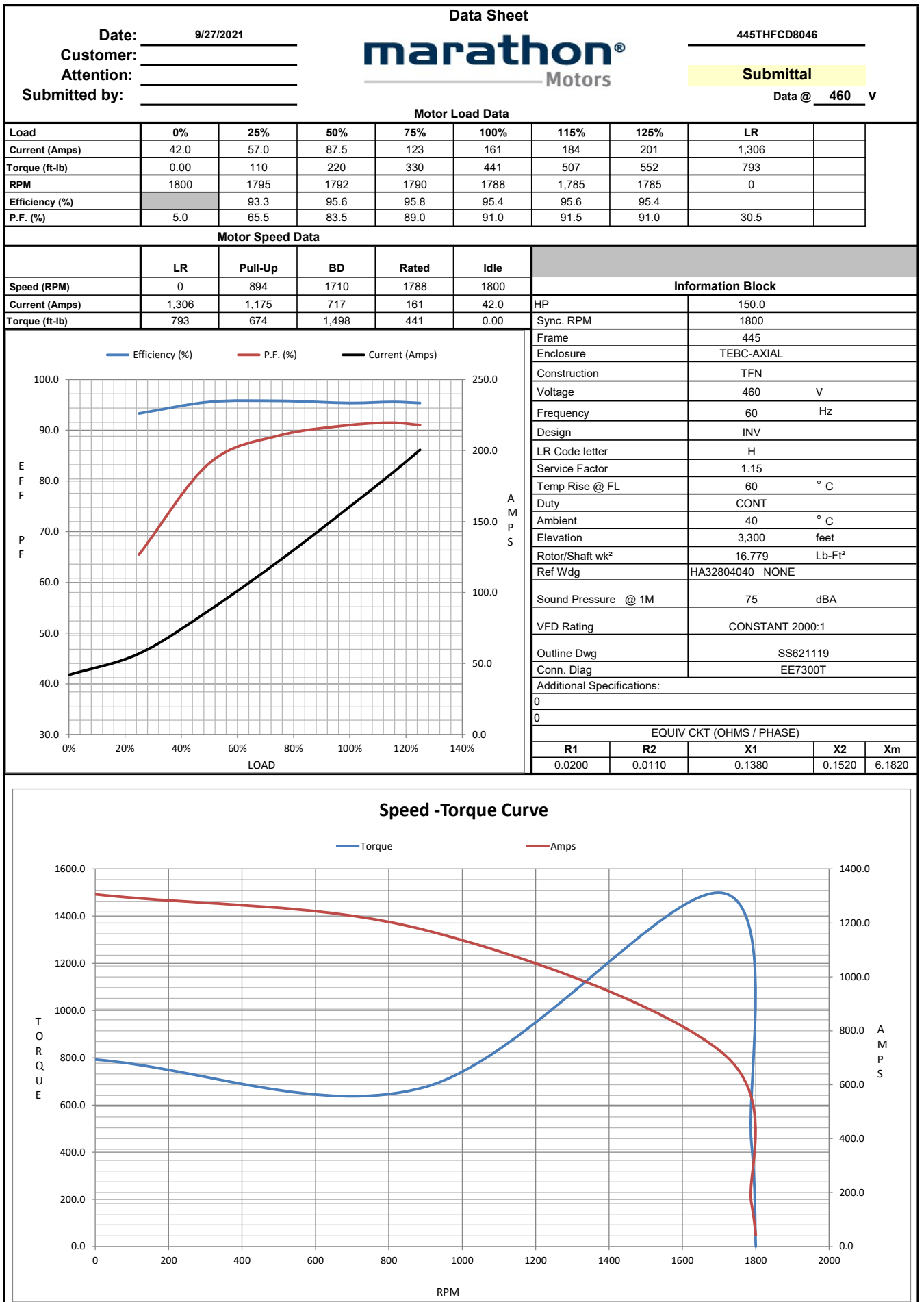
A-9806 DECAL

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------|
| DRAWING REVISION<br>AC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | REVISION BY<br>SB  | REV DATE/© DATE<br>08/01/2025 |
| REQUEST NUMBER<br>CR-0023654                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | APPROVED BY<br>SBD | DATE<br>08/01/2025            |
| REQUEST NUMBER DESCRIPTION<br>DRAWING TITLE BLOCK UPDATED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |                               |
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|                           |
|---------------------------|
| DRAWN BY<br>LZ            |
| DATE<br>01-04-1994        |
| APPROVED BY<br>GK         |
| DATE<br>01-20-1994        |
| REFERENCE                 |
| THIRD ANGLE<br>PROJECTION |

|                                                                             |                           |                 |
|-----------------------------------------------------------------------------|---------------------------|-----------------|
| <b>marathon™</b>                                                            |                           |                 |
| DESCRIPTION<br>CONN DIAGRAM-EXTERNAL<br>3Ø-SINGLE VOLT-MOTOR WITH PROTECTOR |                           |                 |
| MATERIAL                                                                    | PROCESS/FINISH            |                 |
| SIZE<br>A                                                                   | DRAWING NUMBER<br>EE7300T | SHEET<br>1 OF 1 |





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

DATA VOLTS: 460

### CERTIFICATION DATA SHEET

**CUSTOMER:****ORDER #:****CONN. DIAGRAM:****OUTLINE:****WINDING:****SPEED:**

EE7300T

SS621119

HA32804040 NONE 1

**CUSTOMER P.O. #:****REFERENCE MODEL #:****CAT #:****CUSTOMER PART #:****MOUNTING:**

### TYPICAL MOTOR PERFORMANCE DATA

| HP  | KW  | SYNC RPM | FL RPM | FRAME | ENCLOSURE  | TYPE | KVA CODE | DESIGN |
|-----|-----|----------|--------|-------|------------|------|----------|--------|
| 150 | 112 | 1800     | 1788   | 445T  | TEBC-AXIAL | TFN  | H        | INV    |

| PH | HZ | VOLTS | AMPS | START TYPE    | DUTY | INSL | S.F. | AMB | ELEV. |
|----|----|-------|------|---------------|------|------|------|-----|-------|
| 3  | 60 | 460   | 161  | INVERTER ONLY | CONT | H    | 1.15 | 40  | 3300  |

|          |      |            |      |            |      |         |                  |
|----------|------|------------|------|------------|------|---------|------------------|
| F.L. EFF | 95.4 | 3/4 LD EFF | 95.8 | 1/2 LD EFF | 95.6 | GTD EFF | ELECT. TYPE      |
| F.L. PF  | 91.0 | 3/4 LD PF  | 89.0 | 1/2 LD PF  | 83.5 | 95.0    | SQ CAGE INV DUTY |

|             |                 |             |             |                 |
|-------------|-----------------|-------------|-------------|-----------------|
| F.L. TORQUE | LR AMPS @ 460 V | L.R. TORQUE | B.D. TORQUE | F.L. RISE (° C) |
| 441 LB-FT   | 1,306           | 793 LB-FT   | 1,498 LB-FT | 60              |

|                        |        |       |                           |                           |                 |             |         |           |
|------------------------|--------|-------|---------------------------|---------------------------|-----------------|-------------|---------|-----------|
| 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 |       | 16.779 LB-FT <sup>2</sup> | 220 LB-FT <sup>2</sup>    | 30 SEC.         | 2           | 1820    | LB.       |

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

|                 |                  |            |                   |             |                    |            |         |               |
|-----------------|------------------|------------|-------------------|-------------|--------------------|------------|---------|---------------|
| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | MOTOR ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT         |
| STANDARD        | ENCODER          | RIGID      | HORIZONTAL        | NO          | NONE               | NO         | NONE    | BLUE (ENAMEL) |

|           |            |            |            |             |                         |          |                |
|-----------|------------|------------|------------|-------------|-------------------------|----------|----------------|
| BEARINGS  | GREASE     | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT                   | MATERIAL | FRAME MATERIAL |
| DE ODE    |            |            |            |             |                         |          |                |
| BALL BALL | POLYREX EM | T          | NONE       | NONE        | 1045 HOT ROLLED (C-204) |          | CAST IRON      |
| 6319 6317 |            |            |            |             |                         |          |                |

|              |            |           |           |             |         |       |         |
|--------------|------------|-----------|-----------|-------------|---------|-------|---------|
| THERMOSTATS  | PROTECTORS | WDG RTD's | BRG RTD's | THERMISTORS | CONTROL | SPACE | HEATERS |
| TSTATS (N/C) | 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 |
| 0.02         | 0.011        | 0.138        | 0.152        | 6.182        | 0.150              | ODE   |

|                                 |                                                                           |  |
|---------------------------------|---------------------------------------------------------------------------|--|
| *<br>N<br>O<br>T<br>E<br>s<br>* | INVERTER TORQUE: CONSTANT 2000:1<br>INV. HP SPEED RANGE: 1.5 X BASE SPEED |  |
|                                 | ENCODER: NONE<br>NONE<br>NONE                                             |  |
|                                 | BRAKE: NONE<br>NONE<br>NONE                                               |  |
|                                 | FT-LB: NA<br>VOLTAGE: NONE                                                |  |
|                                 | UL: V-INS, CONST, OVERHEAT PRT DEV UL REC                                 |  |

PREPARED BY: \_\_\_\_\_  
DATE: 9/27/2021

FORM: 3531 REV\_4 2/27/06