marathon®

# Severe Duty Motors

**Model No:** 284TTFCD16851
**Catalog No:** E622A-P

Severe Duty Motor, 25 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 284T Frame, TEFC

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## Product Information Packet: Model No: 284TTFCD16851, Catalog No: E622A-P  Severe Duty Motor, 25 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 284T Frame, TEFC

### Nameplate Specifications

| | | | |
|---|---|---|---|
| Phase | **3** | Output HP | **25 Hp** |
| Output KW | **18.7 kW** | Voltage | **460 V** |
| Speed | **1772 r/min** | Synchronous RPM | **1800 r/min** |
| Service Factor | **1.15** | Frame | **284T** |
| Enclosure | **Totally Enclosed Fan Cooled** | Thermal Protection | **No Protection** |
| Efficiency | **93.6 %** | Ambient Temperature | **40 °C** |
| Frequency | **60 Hz** | Current | **30.0 A** |
| Power Factor | **83** | Duty | **Continuous** |
| Insulation Class | **H** | Design Code | **B** |
| KVA Code | **G** | Drive End Bearing Size | **6311** |
| Opp Drive End Bearing Size | **6211** | UL | **Recognized** |
| CSA | **Y** | CE | **Y** |
| IP Code | **55** | Number of Speeds | **1** |

### Technical Specifications

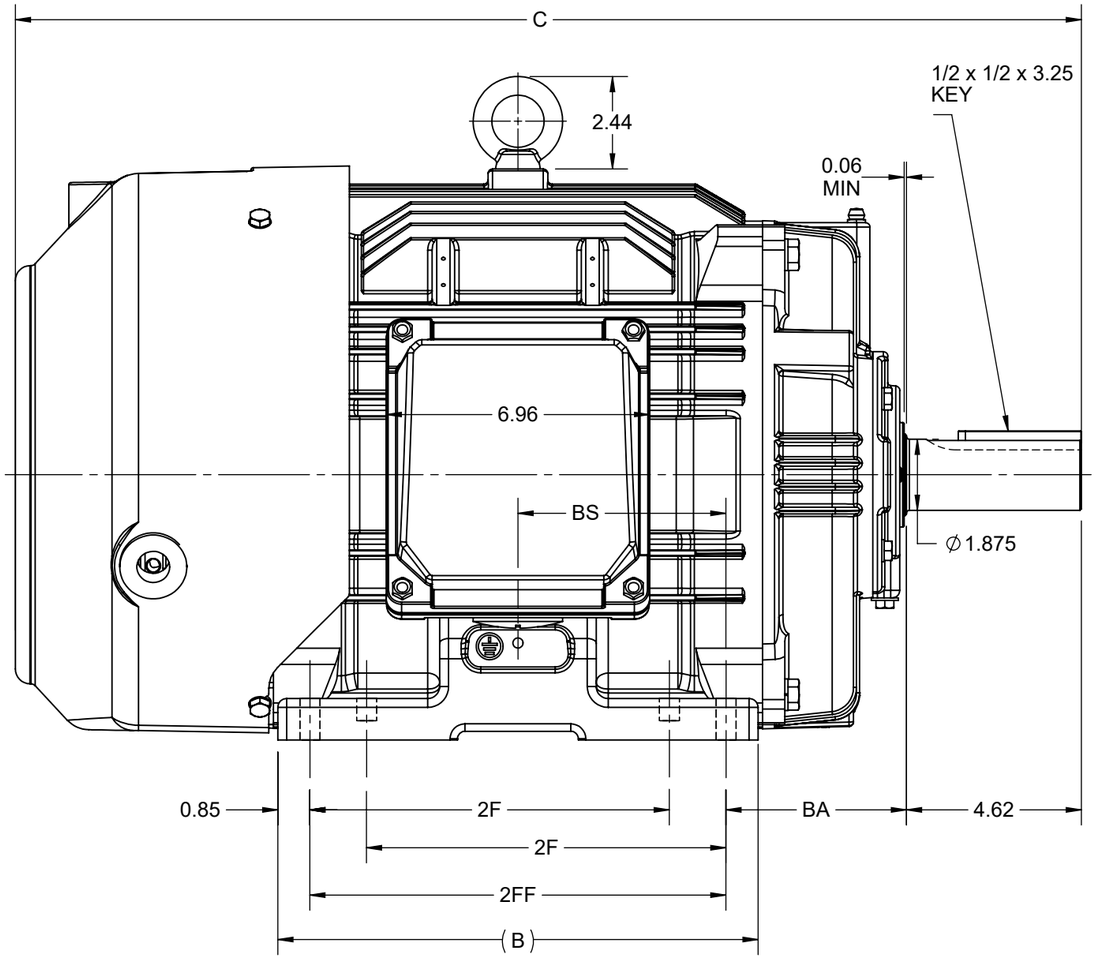
| | | | |
|---|---|---|---|
| Electrical Type | **Squirrel Cage Inverter Rated** | Starting Method | **Line Or Inverter** |
| Poles | **4** | Rotation | **Reversible** |
| Resistance Main | **.2988 O** | Mounting | **Rigid Base** |
| Motor Orientation | **Horizontal** | Drive End Bearing | **Ball** |
| Opp Drive End Bearing | **Ball** | Frame Material | **Cast Iron** |
| Shaft Type | **T** | Shaft Diameter | **1.875 in** |
| Assembly/Box Mounting | **F1/F2 Capable** | Inverter Load | **Constant 20:1/Variable 20:1** |

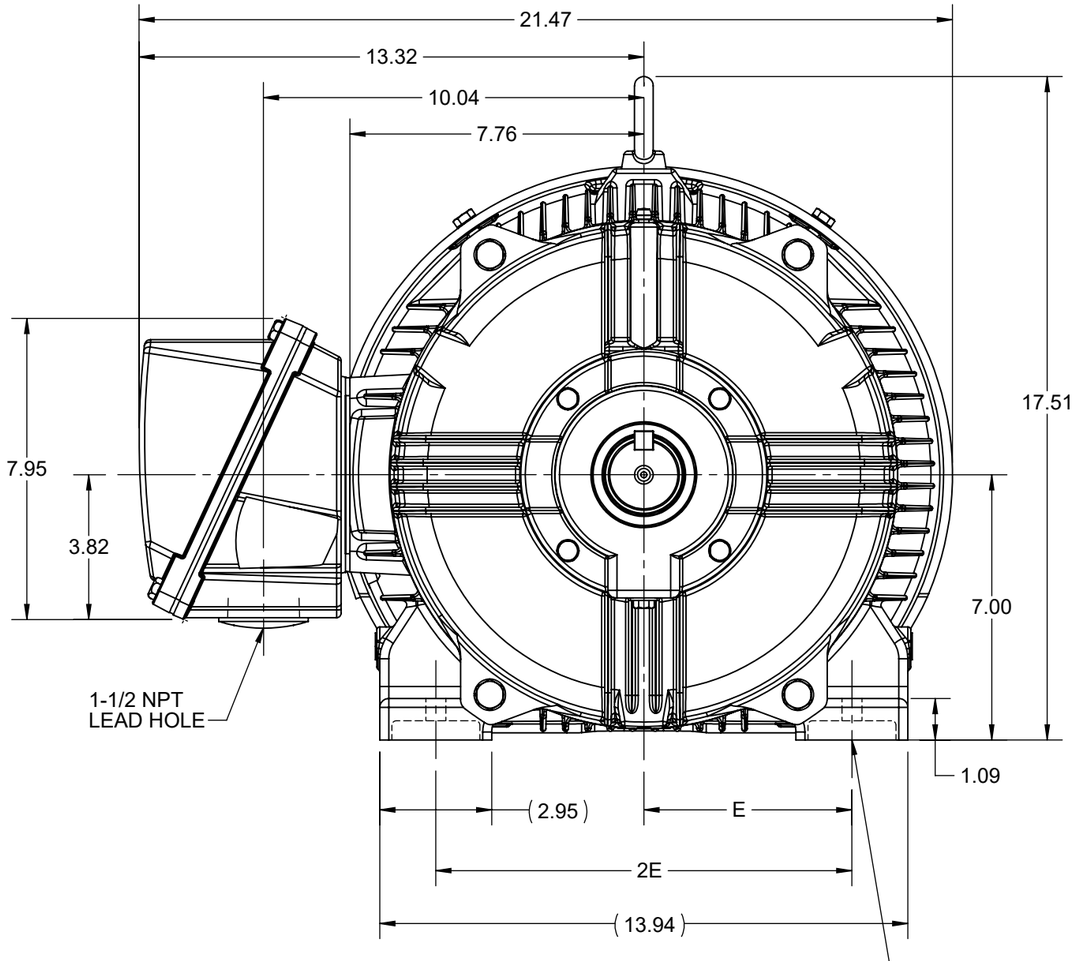
### Drawings

| | | | |
|---|---|---|---|
| Connection Drawing | **EE7300** | Outline Drawing | **SS312942-100** |

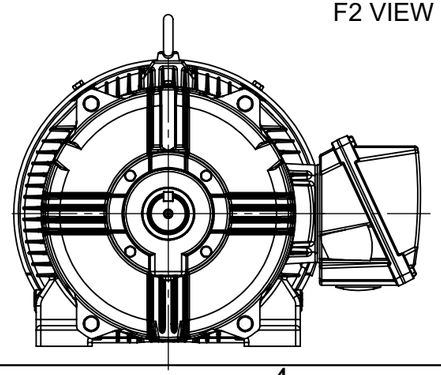
This is an uncontrolled document once printed or downloaded and is subject to change without notice. Date Created: 14/10/2026

| DASH NO. | B | C | E | 2E | 2F | 2FF | BA | BS | MOUNTING | FRAME |
|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 10.83 | 26.64 | 5.50 | 11.00 | --- | 9.50 | 4.75 | 4.75 | F1 OR F2 | 284T |
| 200 | 12.68 | 28.14 | | | 9.50 | 11.00 | | 5.50 | | 284/286T |




F2 VIEW



| | | |
|---|---|---|
| DRAWING REVISION: E | REVISION BY: SB | REV DATE/© DATE: 07/23/2025 |
| REQUEST NUMBER: CR-0023556 | APPROVED BY: SBD | DATE: 07/23/2025 |
| REQUEST NUMBER DESCRIPTION: DRAWING TITLE BLOCK UPDATED | | |

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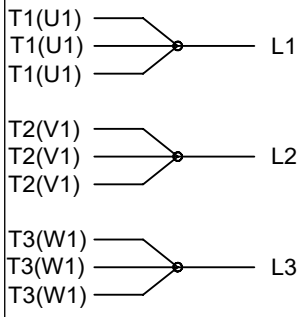
PRIMARY DIMENSIONS ARE INCH
mm DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

| | | |
|---|---|---|
| DRAWN BY: BISWA | marathon™ | |
| DATE: 24/12/2018 | DESCRIPTION: OUTLINE<br>284/286T FR-NEMA-SD & IEEE841 | |
| APPROVED BY: SBD | | |
| DATE: 24/12/2018 | | |
| REFERENCE | MATERIAL | PROCESS/FINISH |
| THIRD ANGLE PROJECTION | SIZE: B / DRAWING NUMBER: SS312942 | SHEET: 1 OF 1 |

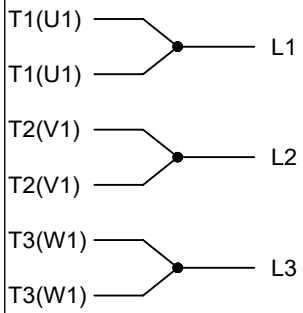
THREE PHASE - SINGLE VOLTAGE
MOTOR - CONDUIT BOX @ 'A'

TO REVERSE ROTATION:
INTERCHANGE ANY TWO LINE
LEAD CONNECTIONS

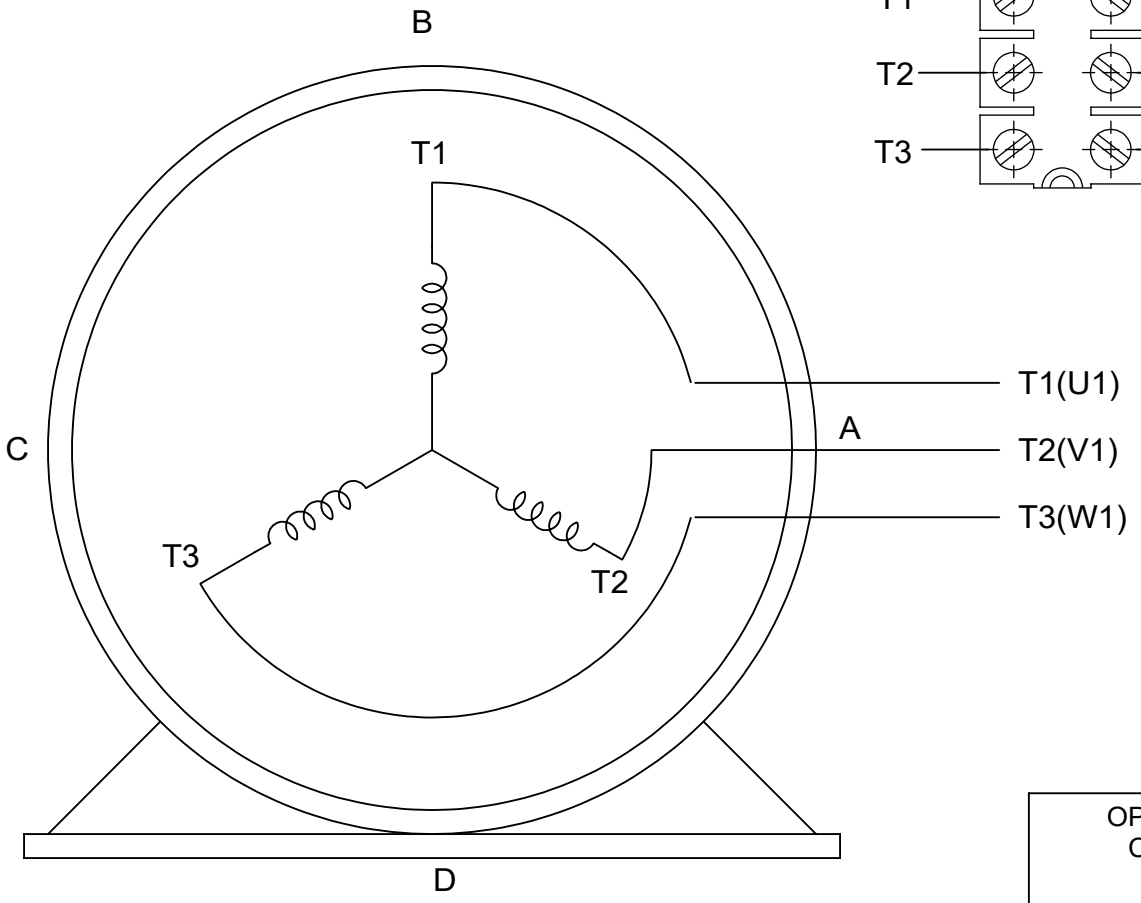
IF MOTOR HAS
9 LEADS




IF MOTOR HAS
6 LEADS




A-9806 DECAL




VIEW OF TERMINAL END

TERMINAL BLOCK WHEN SPECIFIED




OPTIONAL CORD
CONNECTION

| | |
|---|---|
| L1 | WHITE |
| L2 | RED |
| L3 | BLACK |

| | | |
|---|---|---|
| DRAWING REVISION: AD | REVISION BY: SB | REV DATE/© DATE: 08/01/2025 |
| REQUEST NUMBER: CR-0023654 | APPROVED BY: SBD | DATE: 08/01/2025 |

REQUEST NUMBER DESCRIPTION
DRAWING TITLE BLOCK UPDATED

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PRIMARY DIMENSIONS ARE INCH
mm DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

| | |
|---|---|
| DRAWN BY: DA | |
| DATE: 03-26-1993 | |
| APPROVED BY: TB | |
| DATE: 03-26-1993 | |
| REFERENCE | |
| THIRD ANGLE PROJECTION | |

marathon™

DESCRIPTION
CONNECTION DIAGRAM
EXTERNAL - SINGLE VOLTAGE - 3Ø MOTOR

| MATERIAL | PROCESS/FINISH |
|---|---|

| SIZE | DRAWING NUMBER | SHEET |
|---|---|---|
| A | EE7300 | 1 OF 1 |

# Data Sheet

Date: 5/6/2020
Customer:
Attention:
Submitted by:

marathon® Motors

284TTFCD16851

**Submittal**

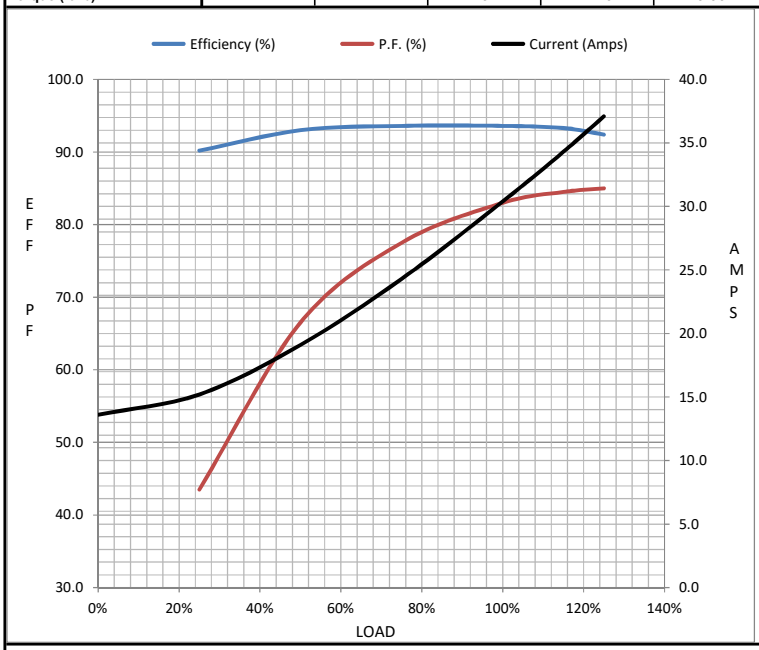
Data @ 460 V

## Motor Load Data

| Load | 0% | 25% | 50% | 75% | 100% | 115% | 125% | LR | |
|---|---|---|---|---|---|---|---|---|---|
| Current (Amps) | 13.6 | 15.2 | 19.1 | 24.3 | 30.4 | 34.3 | 37.1 | 182 | |
| Torque (ft-lb) | 0.00 | 18.3 | 36.7 | 55.2 | 74.0 | 85.2 | 93.0 | 144 | |
| RPM | 1800 | 1795 | 1788 | 1782 | 1775 | 1,772 | 1770 | 0 | |
| Efficiency (%) | | 90.2 | 93.0 | 93.6 | 93.6 | 93.3 | 92.4 | | |
| P.F. (%) | 5.0 | 43.5 | 66.5 | 77.5 | 83.0 | 84.5 | 85.0 | 36.0 | |

## Motor Speed Data

| | LR | Pull-Up | BD | Rated | Idle |
|---|---|---|---|---|---|
| Speed (RPM) | 0 | 900 | 1630 | 1775 | 1800 |
| Current (Amps) | 182 | 150 | 110 | 30.4 | 13.6 |
| Torque (ft-lb) | 144 | 122 | 192 | 74.0 | 0.00 |



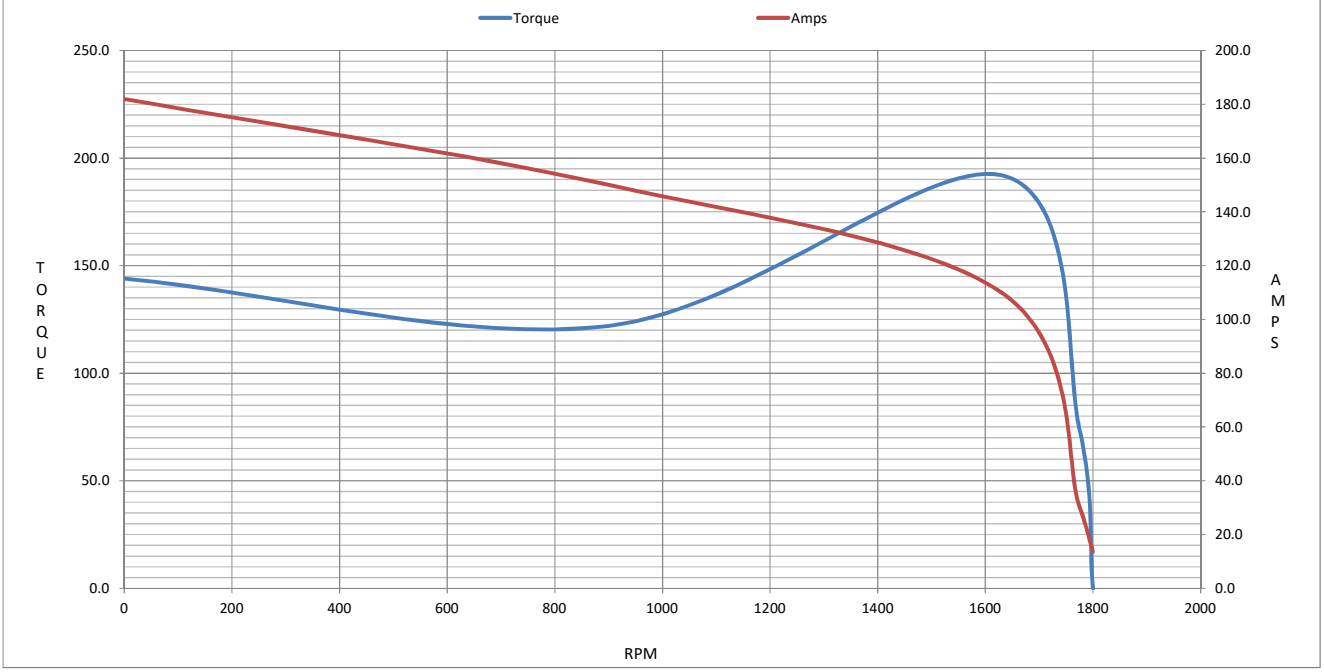

## Information Block

| | | |
|---|---|---|
| HP | 25.0 | |
| Sync. RPM | 1800 | |
| Frame | 284 | |
| Enclosure | TEFC | |
| Construction | TFC | |
| Voltage | 460 | 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 wk² | 5.2 | Lb-Ft² |
| Ref Wdg | HA31804007 NONE | |
| Sound Pressure @ 1M | 75 | dBA |
| VFD Rating | CONSTANT 10:1/VARIABLE 10:1 | |
| Outline Dwg | SS312942 | |
| Conn. Diag | EE7300 | |
| Additional Specifications: | | |
| 0 | | |
| 0 | | |

EQUIV CKT (OHMS / PHASE)

| R1 | R2 | X1 | X2 | Xm |
|---|---|---|---|---|
| 0.2000 | 0.1250 | 0.7420 | 0.9720 | 19.4360 |

## Speed -Torque Curve



Uncontrolled Copy

marathon® Motors

**DATA VOLTS:** 460

## CERTIFICATION DATA SHEET

**REFERENCE MODEL #:** 284TTFCD16851
**CONN. DIAGRAM:** EE7300 **CAT #:** E622A-P
**OUTLINE:** SS312942
**WINDING:** HA31804007 NONE 8 **MOUNTING:** F1/F2 CAPABLE

### TYPICAL MOTOR PERFORMANCE DATA

| HP | KW | SYNC RPM | FL RPM | FRAME | ENCLOSURE | TYPE | KVA CODE | DESIGN |
|---|---|---|---|---|---|---|---|---|
| 25 | 18.7 | 1800 | 1775 | 284T | TEFC | TFC | G | B |

| PH | HZ | VOLTS | AMPS | START TYPE | DUTY | INSL | S.F. | AMB (° C) | ELEV. (Ft) |
|---|---|---|---|---|---|---|---|---|---|
| 3 | 60 | 460 | 30.5 | LINE OR INVERTER | CONT | H | 1.15 | 40 | 3300 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| F.L. EFF | 93.6 | 3/4 LD EFF | 93.6 | 1/2 LD EFF | 93.0 | GTD EFF | ELECT. TYPE |
| F.L. PF | 83.0 | 3/4 LD PF | 77.5 | 1/2 LD PF | 66.5 | 93.0 | SQ CAGE INV RATED |

| F.L. TORQUE | LR AMPS | L.R. TORQUE | B.D. TORQUE | F.L. RISE (° C) | |
|---|---|---|---|---|---|
| 74.0 LB-FT | 182 | 144 LB-FT 195% | 192 LB-FT 259% | 55 | |

| SOUND PRESSURE | SOUND | ROTOR WK² | MAX. LOAD WK² | SAFE STALL TIME | STARTS/HOUR | APROX. |
|---|---|---|---|---|---|---|
| 75 dBA | 84 dBA | 5.2 LB-FT² | 175 LB-FT² | 20 SEC. | 2 | 494 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 | NONE | NO | NONE | BLUE (EPOXY) |

| BEARINGS DE | BEARINGS ODE | GREASE | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL | FRAME MATERIAL |
|---|---|---|---|---|---|---|---|
| BALL | BALL | POLYREX EM | T | NONE | NONE | 1045 HOT ROLLED (C-204) | CAST IRON |
| 6311 | 6211 | | | | | | |

| THERMOSTATS | PROTECTORS | WDG RTD's | BRG RTD's | THERMISTORS | CONTROL | SPACE HEATERS |
|---|---|---|---|---|---|---|
| NONE | 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 |
|---|---|---|---|---|---|---|
| 0.2 | 0.125 | 0.742 | 0.972 | 19.436 | 0.080 | ODE |

* NOTES *

If Inverter equals NONE, contact factory for further information
**INVERTER TORQUE:** CONSTANT 10:1/VARIABLE 10:1
**INV. HP SPEED RANGE:** NONE

**ENCODER:** NONE
NONE
NONE NONE **PPR**

**BRAKE:** NONE
NONE NONE
**FT-LB:** NA
**VOLTAGE:** NONE **HZ:**

**PREPARED BY:**
**DATE:** 5/13/2020

FORM: 3531 REV_4 2/27/06
** Subject to change without notice.