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# Vertical Pump Motors

**Model No:** 445TTDN16032
**Catalog No:** M762

Vertical Pump Motor, 250 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 445HPV Frame, DP

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# Product Information Packet: Model No: 445TTDN16032, Catalog No: M762  Vertical Pump Motor, 250 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 445HPV Frame, DP

## Nameplate Specifications

| | | | |
|---|---|---|---|
| Phase | **3** | Output HP | **250 Hp** |
| Output KW | **187.0 kW** | Voltage | **460 V** |
| Speed | **1784 r/min** | Synchronous RPM | **1800 r/min** |
| Service Factor | **1.15** | Frame | **445HPV** |
| Enclosure | **Drip Proof** | Thermal Protection | **No Protection** |
| Efficiency | **95.8 %** | Ambient Temperature | **40 °C** |
| Frequency | **60 Hz** | Current | **282.0 A** |
| Power Factor | **86** | Duty | **Continuous** |
| Insulation Class | **F** | Design Code | **B** |
| KVA Code | **F** | Drive End Bearing Size | **6318** |
| Opp Drive End Bearing Size | **7316** | UL | **Recognized** |
| CSA | **Y** | CE | **Y** |
| IP Code | **22** | Number of Speeds | **1** |

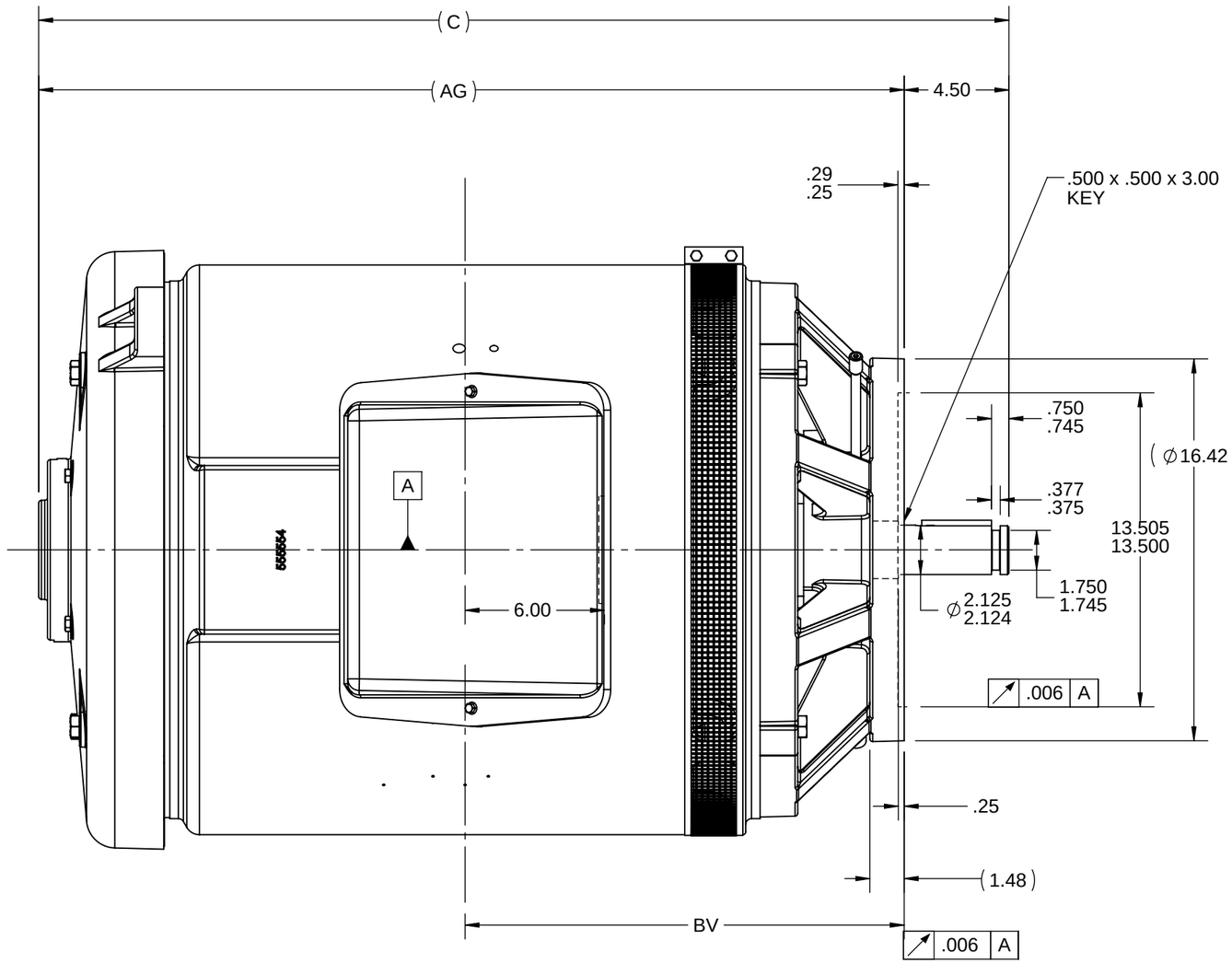
## Technical Specifications

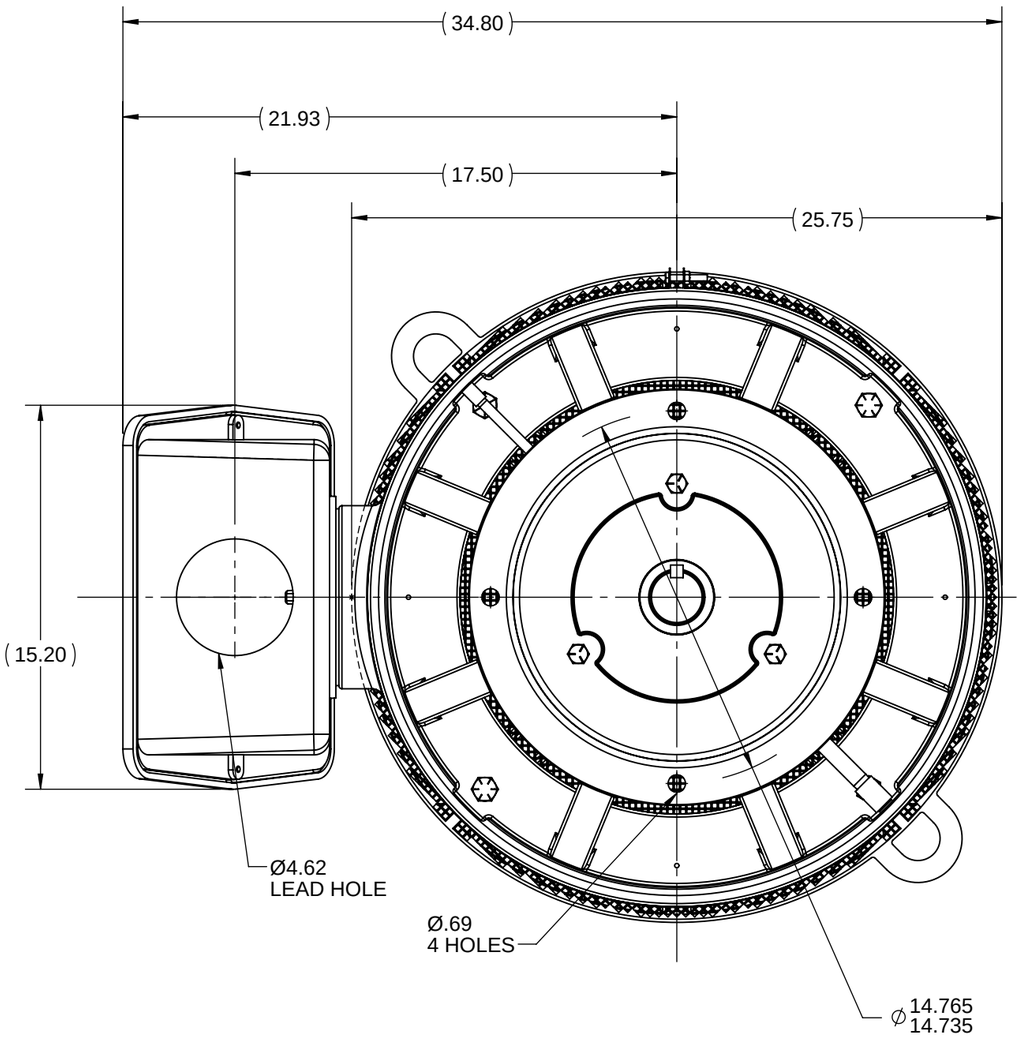
| | | | |
|---|---|---|---|
| Electrical Type | **Squirrel Cage Induction Run** | Starting Method | **Across The Line** |
| Poles | **4** | Rotation | **Reversible** |
| Resistance Main | **.019 O** | Mounting | **Round** |
| Motor Orientation | **Shaft Down** | Drive End Bearing | **Ball** |
| Opp Drive End Bearing | **Duplex Tandem Angular Contact** | Frame Material | **Cast Iron** |
| Shaft Type | **HP** | Overall Length | **41.72 in** |
| Frame Length | **25.38 in** | Shaft Diameter | **2 1/8 in** |
| Shaft Extension | **4.5 in** | Assembly/Box Mounting | **F1/F2 Capable** |

## Drawings

| | | | |
|---|---|---|---|
| Connection Drawing | **EE7300U** | Outline Drawing | **SS555833-2538** |

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NOTES:
1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS
2. NAMEPLATES TO BE READ FROM SHAFT EXTENSION END OF MOTOR

| DASH | FRAME | C | AG | BV |
|---|---|---|---|---|
| 2538 | 444/5PV | 41.72 | 37.22 | 18.88 |

| | | |
|---|---|---|
| DRAWING REVISION: D | REVISION BY: SV | REV DATE/© DATE: 05/22/2026 |
| REQUEST NUMBER: CR-0026372 | APPROVED BY: RMS | DATE: 05/22/2026 |
| REQUEST NUMBER DESCRIPTION: DRAWING TITLE BLOCK UPDATED | | |

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TOLERANCES (EXCEPT AS NOTED):

| DEC. | INCH | mm | ANGLE |
|---|---|---|---|
| .X | ±0.1 | [±3] | ±0.5° |
| .XX | ±0.01 | [±0.3] | |
| .XXX | ±0.005 | [±0.13] | |
| .XXXX | ±0.0005 | [±0.013] | |

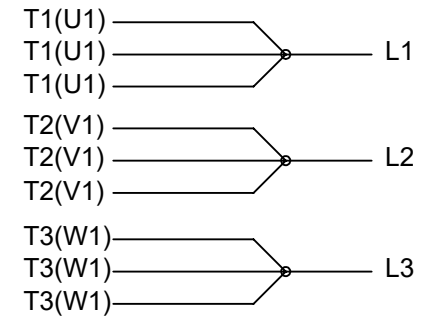
REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.08/.38] X 45°
CORNER FILLETS: R.02 [.5]
MACHINED SURFACES: 125/ 3.2/ INCH mm
mm DIMENSIONS IN [BRACKETS] ARE FOR REFERENCE ONLY

| | |
|---|---|
| DRAWN BY: TJW | |
| DATE: 07-16-2013 | |
| APPROVED BY: DJK | |
| DATE: 07-19-2013 | |
| REFERENCE | MATERIAL / PROCESS/FINISH |
| THIRD ANGLE PROJECTION | SIZE: B / DRAWING NUMBER: SS555833 / SHEET: 1 OF 1 |

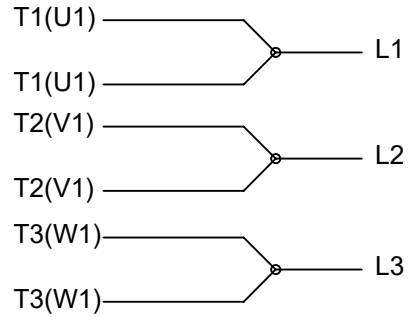
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DESCRIPTION: OUTLINE
444/5PV FR. -DR.PR. -P'BASE

IF MOTOR HAS 9 LEADS

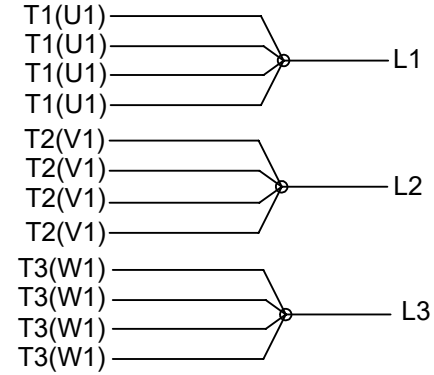


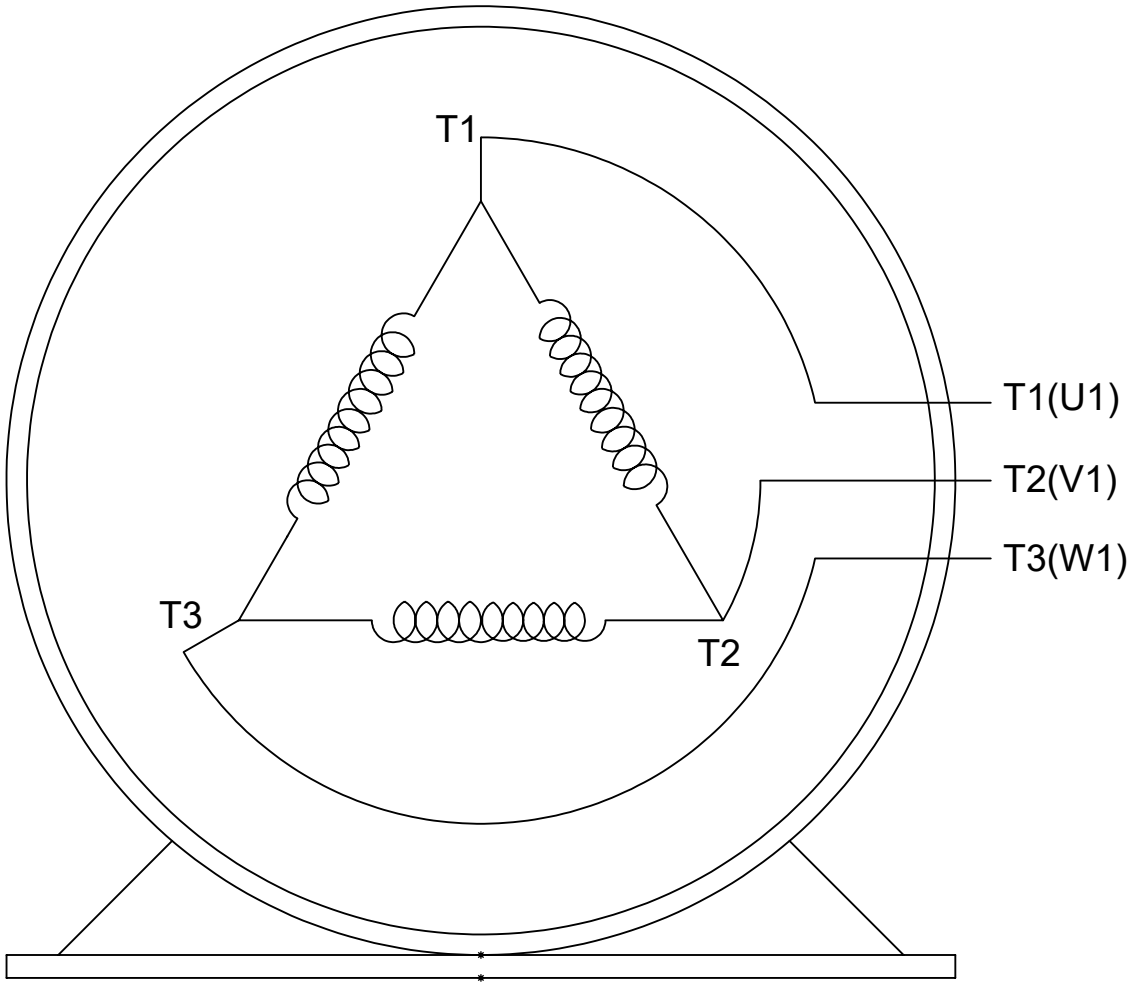

IF MOTOR HAS 6 LEADS




A-9806 DECAL IF CALLED FOR

IF MOTOR HAS 12 LEADS




VIEW OF TERMINAL END

| DRAWING REVISION | REVISION BY | REV DATE/© DATE |
|---|---|---|
| M | SB | 08/01/2025 |
| REQUEST NUMBER | APPROVED BY | DATE |
| CR-0023654 | SBD | 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 | DRS |
| DATE | 09-27-1996 |
| APPROVED BY | GK |
| DATE | 09-30-1996 |
| REFERENCE | |
| THIRD ANGLE PROJECTION | |

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DESCRIPTION
CONN DIAGRAM-EXTERNAL
3Ø SINGLE VOLTAGE

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

| SIZE | DRAWING NUMBER | SHEET |
|---|---|---|
| A | EE7300U | 1 OF 1 |

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# Data Sheet

**Date:** 6/29/2017
**Customer:**
**Attention:**
**Submitted by:** FAREEDA DUDEKULA

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445TTDN16032

**Submittal**

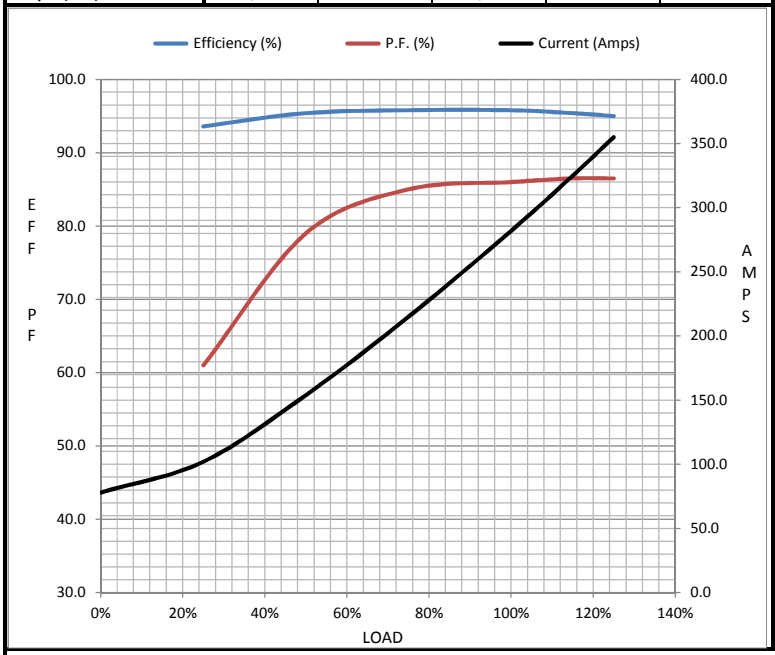
Data @ 460 V

## Motor Load Data

| Load | 0% | 25% | 50% | 75% | 100% | 115% | 125% | LR | |
|---|---|---|---|---|---|---|---|---|---|
| Current (Amps) | 78.0 | 102 | 154 | 215 | 282 | 325 | 355 | 1,575 | |
| Torque (ft-lb) | 0.00 | 183 | 366 | 551 | 736 | 848 | 923 | 1,050 | |
| RPM | 1800 | 1796 | 1792 | 1788 | 1784 | 1,780 | 1778 | 0 | |
| Efficiency (%) | | 93.6 | 95.4 | 95.8 | 95.8 | 95.4 | 95.0 | | |
| P.F. (%) | 4.0 | 61.0 | 79.0 | 85.0 | 86.0 | 86.5 | 86.5 | 27.0 | |

## Motor Speed Data

| | LR | Pull-Up | BD | Rated | Idle |
|---|---|---|---|---|---|
| Speed (RPM) | 0 | 900 | 1725 | 1784 | 1800 |
| Current (Amps) | 1,575 | 1,400 | 890 | 282 | 78.0 |
| Torque (ft-lb) | 1,050 | 850 | 1,550 | 736 | 0.00 |



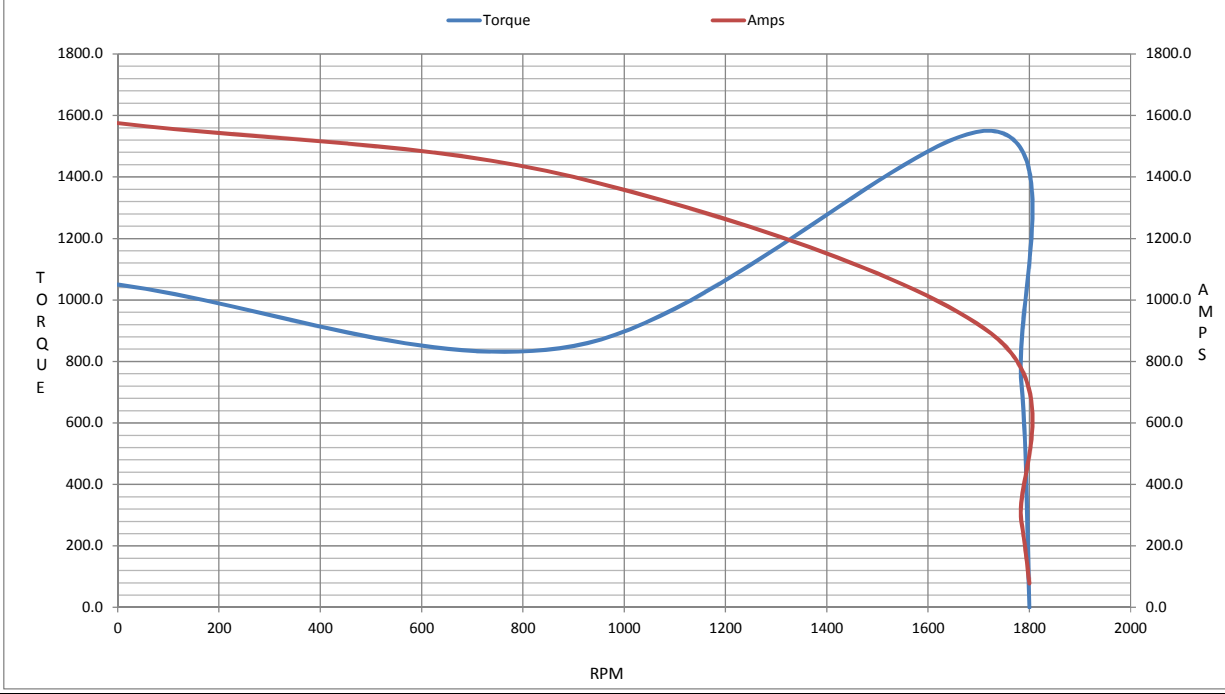

## Information Block

| | |
|---|---|
| HP | 250.0 |
| Sync. RPM | 1800 |
| Frame | 445 |
| Enclosure | DP |
| Construction | TDN |
| Voltage | 460 V |
| Frequency | 60 Hz |
| Design | B |
| LR Code letter | F |
| Service Factor | 1.15 |
| Temp Rise @ FL | 65 ° C |
| Duty | CONT |
| Ambient | 40 ° C |
| Elevation | 1,000 feet |
| Rotor/Shaft wk² | 53.0 Lb-Ft² |
| Ref Wdg | T4454242 NONE |
| Sound Pressure @ 1M | 82 dBA |
| VFD Rating | NONE |
| Outline Dwg | B-SS555833-2538 |
| Conn. Diag | A-EE7300U |
| Additional Specifications: | |
| 0 | |
| 0 | |

EQUIV CKT (OHMS / PHASE)

| R1 | R2 | X1 | X2 | Xm |
|---|---|---|---|---|
| 0.0150 | 0.0090 | 0.1200 | 0.1190 | 3.3660 |

## Speed -Torque Curve



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## CERTIFICATION DATA SHEET

| | | | |
|---|---|---|---|
| **Model#:** | 445TTDN16032 AA | **WINDING#:** | T4454242 NONE 1 |
| **CONN. DIAGRAM:** | A-EE7300U | **ASSEMBLY:** | F1/F2 CAPABLE |
| **OUTLINE:** | B-SS555833-2538 | | |

### TYPICAL MOTOR PERFORMANCE DATA

| HP | KW | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|---|---|---|---|---|---|---|---|
| 250 | 187 | 1800 | 1784 | 445HPV | DP | F | B |

| PH | Hz | VOLTS | FL AMPS | START TYPE | DUTY | INSL | S.F | AMB°C | ELEVATION |
|---|---|---|---|---|---|---|---|---|---|
| 3 | 60 | 460 | 282 | ACROSS THE LINE | CONTINUOUS | F1 | 1.15 | 40 | 3300 |

| FULL LOAD EFF: 95.8 | 3/4 LOAD EFF: 95.8 | 1/2 LOAD EFF: 95.4 | GTD. EFF | ELEC. TYPE | NO LOAD AMPS |
|---|---|---|---|---|---|
| FULL LOAD PF: 86 | 3/4 LOAD PF: 85 | 1/2 LOAD PF: 79 | 95 | SQ CAGE IND RUN | 78 |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE | B.D. TORQUE | F.L. RISE°C |
|---|---|---|---|---|
| 736 LB-FT | 1575 | 1050 LB-FT 142 | 1550 LB-FT 215 | 65 |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2 | MAX. WK^2 | SAFE STALL TIME | STARTS /HOUR | APPROX. MOTOR WGT |
|---|---|---|---|---|---|---|
| 82 dBA | 92 dBA | 53 LB-FT^2 | - LB-FT^2 | 15 SEC. | - | 2050 LBS. |

### *** SUPPLEMENTAL INFORMATION ***

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT |
|---|---|---|---|---|---|---|---|---|
| P-BASE | STANDARD | ROUND | SHAFT DOWN | FALSE | NONE | TRUE | RODENT | BLUE (ENAMEL) |

| BEARINGS | | GREASE | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL | FRAME MATERIAL |
|---|---|---|---|---|---|---|---|
| DE | OPE | | | | | | |
| BALL | DUPLEX TANDEM ANGULAR CONTACT | POLYREX EM | HP | NONE | NONE | 1045 HOT ROLLED (C-204) | CAST IRON |
| 6318 | 7316 2 | | | | | | |

| 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

INVERTER TORQUE: NONE
INV. HP SPEED RANGE: NONE

ENCODER: NONE
NONE NONE
NONE NONE PPR

BRAKE: NONE NONE
NONE P/N NONE
NONE NONE
NONE FT-LB NONE V NONE Hz

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DATE: 06/21/2017 05:40:30 AM
FORM 3531 REV.3 02/07/99

** Subject to change without notice.