

PRODUCT INFORMATION PACKET



Model No: 171782.60

Catalog No: 171782.60

Severe Duty Motor, 30 & 25 HP, 3 Ph, 60 & 50 Hz, 208-230/460 & 190/380 V, 1800 & 1500 RPM,
286T Frame, TEFC



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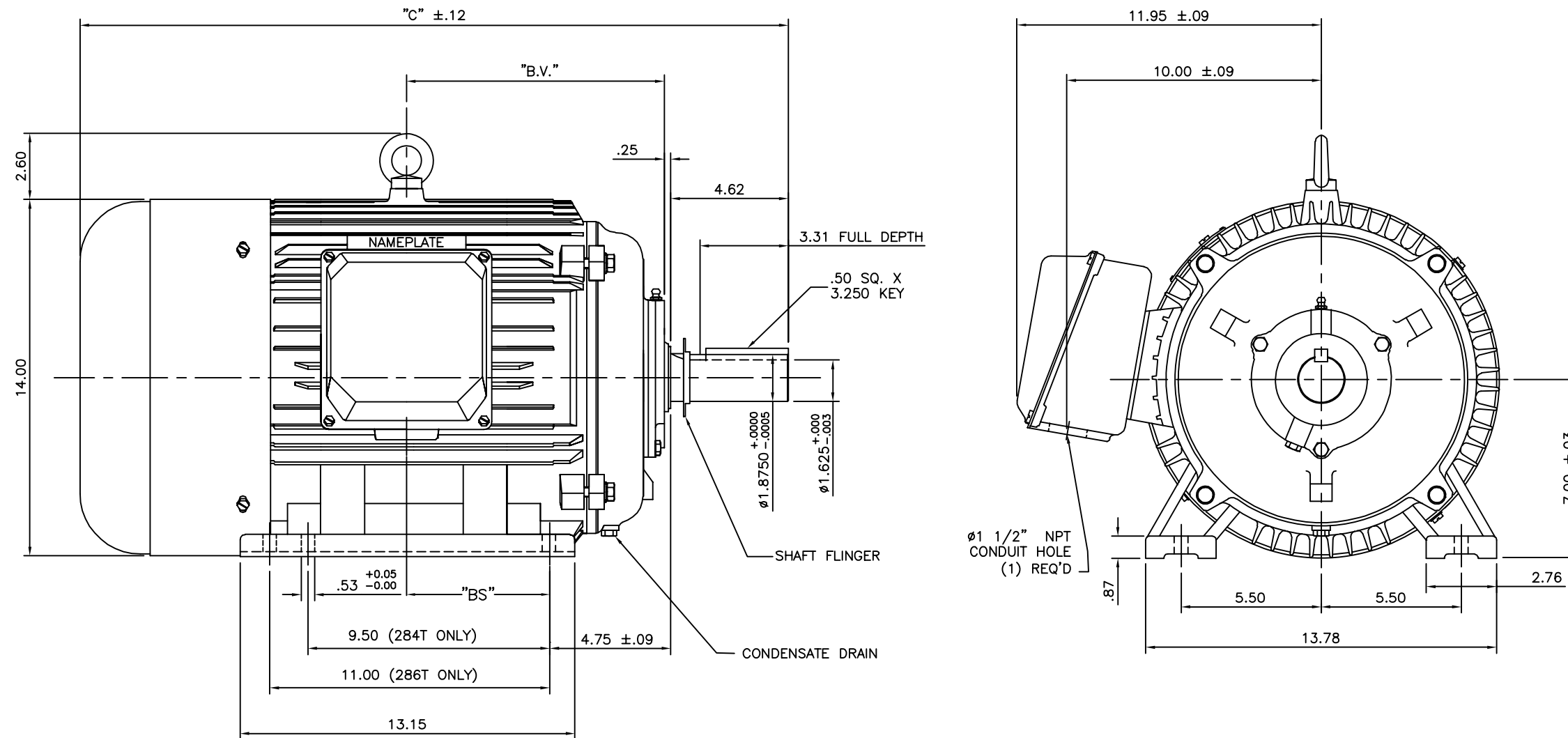
Nameplate Specifications

| | | | |
|------------------------|----------------------|----------------------------|-----------------------------|
| Phase | 3 | Output HP | 30 & 25 Hp |
| Output KW | 22.4 & 18.7 kW | Voltage | 208-230/460 & 190/380 V |
| Speed | 1770 & 1480 rpm | Service Factor | 1.15 & 1.15 |
| Frame | 286T | Enclosure | Totally Enclosed Fan Cooled |
| Thermal Protection | No Protection | Efficiency | 94.1 & 93 % |
| Ambient Temperature | 40 °C | Frequency | 60 & 50 Hz |
| Current | 77-70/35 & 71/35.5 A | Power Factor | 85 |
| Duty | Continuous | Insulation Class | F |
| Design Code | B | KVA Code | H |
| Drive End Bearing Size | 6311 | Opp Drive End Bearing Size | 6309 |
| UL | Recognized | CSA | Y |
| CE | Y | IP Code | 55 |
| Number of Speeds | 1 | | |

Technical Specifications

| | | | |
|-----------------------|------------------------------|-------------------|---------------------------------|
| Electrical Type | Squirrel Cage Inverter Rated | Starting Method | Wye Start Delta Run Or Inverter |
| Poles | 4 | Rotation | Reversible |
| Resistance Main | .052 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 | 27.83 in |
| Shaft Diameter | 1.875 in | Shaft Extension | 4.62 in |
| Assembly/Box Mounting | F1/F2 CAPABLE | | |
| Connection Drawing | 00417203 | Outline Drawing | 16953960-286T |

169539-60



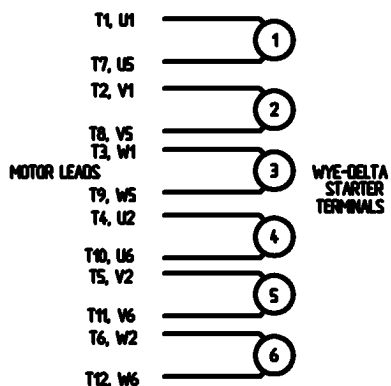
NOTE: 286T HAS 6 MTG. HOLES, USING 284T AND 286T LOCATIONS

| FRAME DESIGN | "C" | "BV" | "BS" |
|--------------|-------|-------|------|
| 284T | 26.26 | 9.65 | |
| 286T | 27.83 | 10.43 | 5.51 |

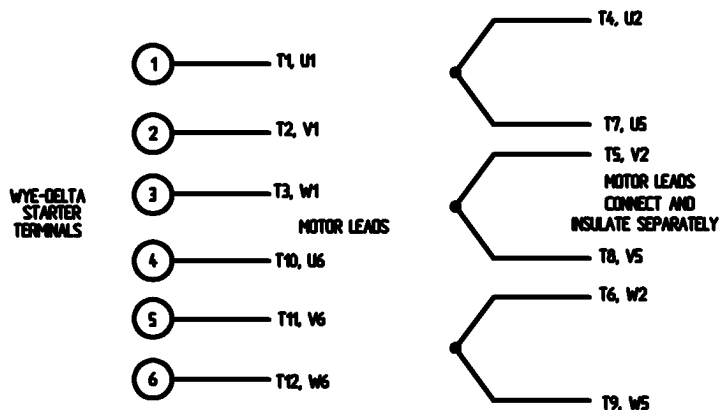
| TOLERANCES UNLESS SPECIFIED | | REGAL REGAL-BELOIT CORPORATION | | DRAWN CJK 07/16/01 | |
|--|----------------------------------|--------------------------------|---------------|--------------------------------------|-------------------------------|
| DEC. | INCHES | | | CHK | |
| .X | ±.1 | | | APPD | |
| 03 | ECO-0048910, REVISED 'BA' DIM. | RFH 04/04/14 | EH .XX ±.03 | TITLE OUTLINE-280T FRAME, TEFC-RIGID | |
| 02 | REDRAWN TO CURRENT CAD STANDARDS | CJK 07/13/99 | .XXX ±.005 | NEW CONDUIT BOX | |
| 01 | ADDED HOLE FOR 286T BASE | JJK 11/01/01 | .XXX ±.0005 | MAT'L. CAST IRON | |
| NO. | REVISION | BY & DATE | CHK ANG ±1/2' | FINISH | |
| THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT | | | RFP | CAD FILE | SIZE DRAWING NO. PAGE OF REV. |
| | | | DIST | A | 169539-60 03 |

WYE - DELTA STARTING USEABLE ON 2,4 AND 6 POLE MOTORS.

LOW VOLTAGE CONNECTION

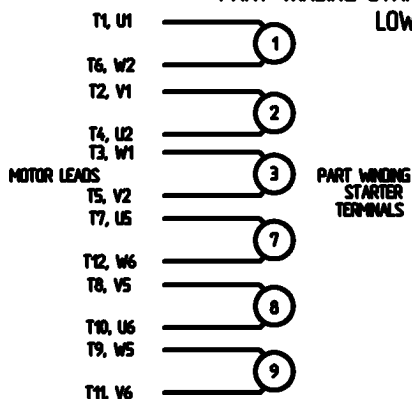


HIGH VOLTAGE CONNECTION



REFER TO THE WYE-DELTA STARTER CONNECTION INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

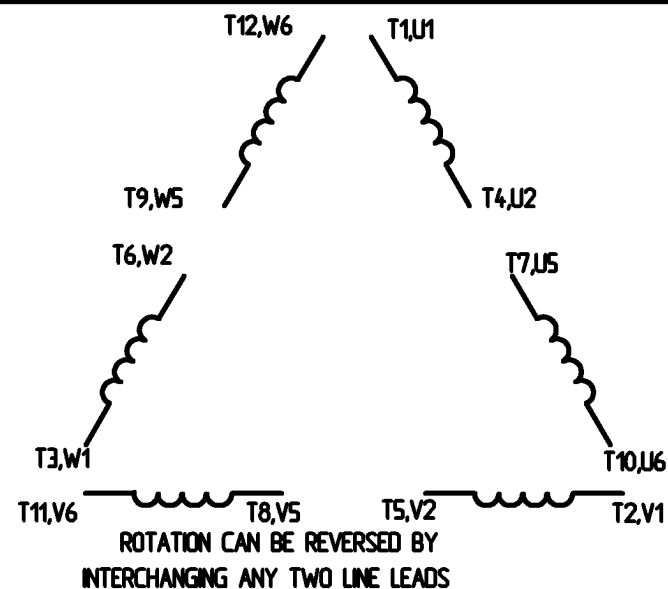
PART WINDING START USABLE ON 4 & 6 POLE MOTORS
LOW VOLTAGE CONNECTION ONLY



REFER TO THE PART WINDING STARTER INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

REFER TO THE CUTLER - HAMMER OR EQUIV. FOR PROPER SELECTION OF OVERLOAD HEATER COILS.

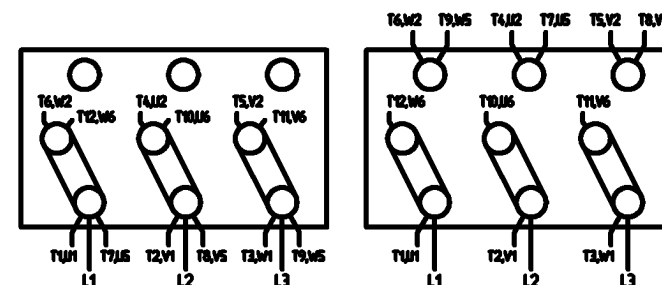
LINE LEADS



12 LEAD DELTA CONNECTION ACROSS THE LINE START
(FOR Y START DELTA RUN, REMOVE THE JUMPERS)

LOW VOLTAGE
MUST BE REWIRED
AS SHOWN

HIGH VOLTAGE
FACTORY WIRED FOR HIGH
VOLTAGE AS SHOWN



| | | | | | | | | | |
|---|----------|-----------|-----|-----------------------------|----------|---|-------|--------------|------|
| | | | | TOLERANCES UNLESS SPECIFIED | | LEESON ELECTRIC MOTORS GEARMOTORS AND DRIVES | DRAWN | CJW 08/28/02 | |
| | | | | DEC. | INCHES | | CHK | | |
| | | | | X | + .1 | TITLE DELTA - WYE CONNECTION DIAGRAM IEC CAST IRON MOTORS | APPO | | |
| | | | | XX | + .01 | | SCALE | 1:1 | |
| | | | | XXX | + .005 | | REF | | |
| | | | | XXXX | + .0005 | | FMF | | |
| NO. | REVISION | BY & DATE | CHK | ANG | + 1/2° | FINISH | PREV | | |
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| | | | | DST | | | A | 004172-03 | |

ERROR: syntaxerror
OFFENDING COMMAND: --nostringval--

STACK:

/CB
-dictionary-
/Pscript_WinNT_Compat
-dictionary-



CERTIFICATION DATA SHEET

**1051 CHEYENNE AVE.
GRAFTON, WI 53024
PH. 262-377-8810**

CATALOG #: 171782.60

CONN. DIAGRAM: 00417203

OUTLINE: 16953960-286T

MOUNTING: F1/F2 CAPABLE

WINDING #: T14504006 3

TYPICAL MOTOR PERFORMANCE DATA

| HP | kW | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|-------|-----------|-----------|-----------|-------|-----------|----------|--------|
| 30&25 | 22.4&18.7 | 1800 | 1770&1480 | 286T | TEFC | H | B |

| PH | Hz | VOLTS | AMPS | START TYPE | DUTY | INSL | S.F. | AMB°C |
|----|-------|---------------------|------------------|----------------------|------------|------|-----------|-------|
| 3 | 60/50 | 208-230/460&190/380 | 77-70/35&71/35.5 | Y START D RUN OR INV | CONTINUOUS | F5 | 1.15/1.15 | 40 |

| FULL LOAD EFF: | 94.1&93 | 3/4 LOAD EFF: | 93.6 | 1/2 LOAD EFF: | 93 | GTD. EFF | | ELEC. TYPE | |
|----------------|---------|---------------|------|---------------|------|----------|--|-------------------|--|
| FULL LOAD PF: | 85&85.7 | 3/4 LOAD PF: | 81.4 | 1/2 LOAD PF: | 71.7 | 93 | | SQ CAGE INV RATED | |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE | B.D. TORQUE | F.L. RISE°C |
|-------------|-------------------|-----------------|-----------------|-------------|
| 89 LB-FT | 480 / 240 | 172 LB-FT 193 % | 247 LB-FT 278 % | 46 |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2 | MAX. WK^2 | SAFE STALL TIME | STARTS / HOUR | APPROX. MOTOR WGT |
|------------------------|-------------|-------------|-----------|-----------------|---------------|-------------------|
| 75 dBA | 85 dBA | 4.7 LB-FT^2 | - LB-FT^2 | 20 SEC. | 2 | 432 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 | NONE | FALSE | NONE | GREEN (EPOXY) |

| BEARINGS | | GREASE | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL | FRAME MATERIAL |
|----------|------|------------|------------|------------|-------------|-------------------|----------------|
| DE | ODE | | | | | | |
| BALL | BALL | POLYREX EM | T | NONE | NONE | AISI 1045 (C-240) | CAST IRON |
| 6311 | 6309 | | | | | | |

| THERMO-PROTECTORS | | | | THERMISTORS | CONTROL | SPACE HEATERS |
|-------------------|------------|----------|----------|-------------|---------|---------------|
| THERMOSTATS | PROTECTORS | WDG RTDs | BRG RTDs | | | |
| NONE | NOT | NONE | NONE | NONE | FALSE | NONE VOLTS |

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| |
|--|
| INVERTER TORQUE: VARIABLE 10:1 |
| 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 |

Data Sheet

Date: 1/19/2018

171782.60



Data @ **460 V**

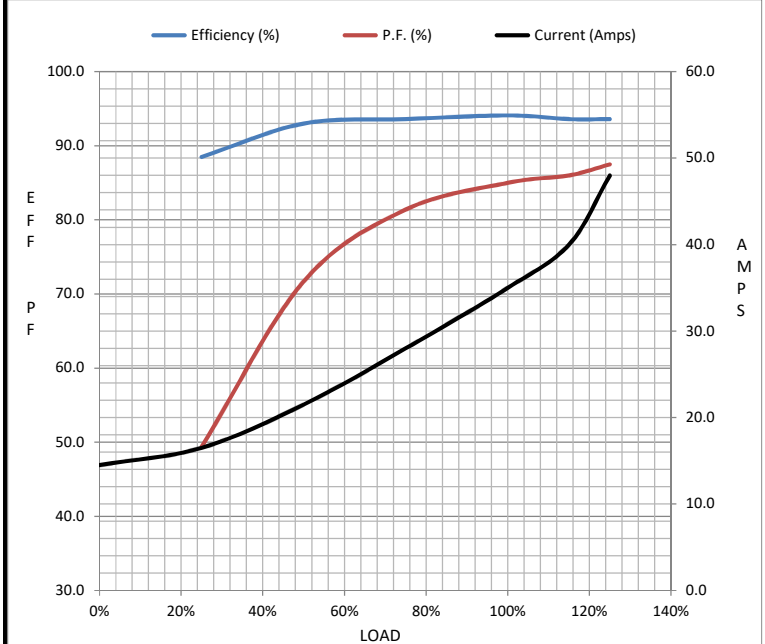
Motor Load Data

| Load | 0% | 25% | 50% | 75% | 100% | 115% | 125% | LR |
|----------------|------|------|------|------|------|-------|------|-----|
| Current (Amps) | 14.5 | 16.5 | 21.5 | 28.0 | 35.0 | 40.0 | 48.0 | 240 |
| Torque (ft-lb) | 0.00 | 21.9 | 44.1 | 66.4 | 89.0 | 103 | 112 | 172 |
| RPM | 1800 | 1792 | 1783 | 1775 | 1770 | 1,767 | 1762 | 0 |
| Efficiency (%) | | 88.5 | 93.0 | 93.6 | 94.1 | 93.6 | 93.6 | |
| P.F. (%) | 5.7 | 49.4 | 71.7 | 81.4 | 85.0 | 86.0 | 87.5 | 0.0 |

Motor Speed Data

| | LR | Pull-Up | BD | Rated | Idle |
|----------------|-----|---------|------|-------|------|
| Speed (RPM) | 0 | 900 | 1700 | 1770 | 1800 |
| Current (Amps) | 240 | 215 | 150 | 35.0 | 14.5 |
| Torque (ft-lb) | 172 | 155 | 247 | 89.0 | 0.00 |

| Information Block | | | | |
|-----------------------------|------------------------|--------|--------|--------|
| HP | 30.0 | | | |
| Sync. RPM | 1800 | | | |
| Frame | 286 | | | |
| Enclosure | TEFC | | | |
| Construction | TFC | | | |
| Voltage | 208-230/460#190/380 V | | | |
| Frequency | 60 Hz | | | |
| Design | A | | | |
| LR Code letter | H | | | |
| Service Factor | 1.15 | | | |
| Temp Rise @ FL | 46 °C | | | |
| Duty | CONT | | | |
| Ambient | 40 °C | | | |
| Elevation | 1,000 feet | | | |
| Rotor/Shaft wk ² | 4.7 Lb-Ft ² | | | |
| Ref Wdg | T14504006 NONE | | | |
| Sound Pressure @ 1M | 75 dBA | | | |
| VFD Rating | VARIABLE 10:1 | | | |
| Outline Dwg | 16953960 | | | |
| Conn. Diag | 00417203 | | | |
| Additional Specifications: | | | | |
| 0 | | | | |
| 0 | | | | |
| EQUIV CKT (OHMS / PHASE) | | | | |
| R1 | R2 | X1 | X2 | Xm |
| 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |



Speed - Torque Curve

