

PRODUCT INFORMATION PACKET

Model No: 810087.00

Catalog No: 810087.00

Encoder Motors, TEBC - Axial, 100 HP, 3 Ph, 60 Hz, 230/460 V, 1785 RPM, 405TC Frame



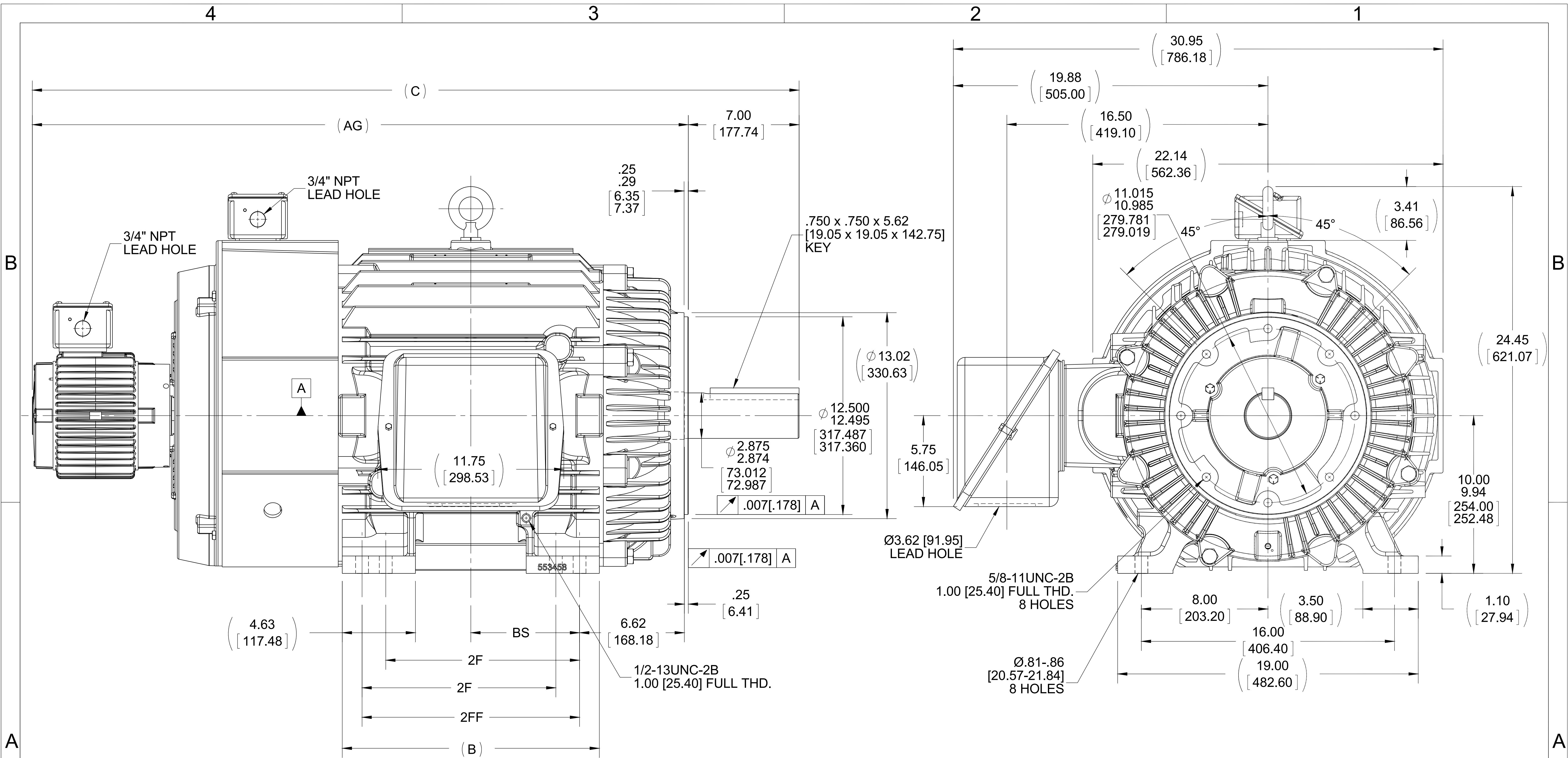
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Nameplate Specifications

| | | | |
|------------------------|----------------------|----------------------------|---|
| Output HP | 100 Hp | Output KW | 75.0 kW |
| Frequency | 60 Hz | Voltage | 230/460 V |
| Current | 230.0/115.0 A | Speed | 1785 rpm |
| Service Factor | 1 | Phase | 3 |
| Efficiency | 94.5 % | Power Factor | 86.5 |
| Duty | Continuous | Insulation Class | H |
| Design Code | INV | KVA Code | J |
| Frame | 405TC | Enclosure | Totally Enclosed Blower cooled - Axial |
| Thermal Protection | No Protection | Ambient Temperature | 40 °C |
| Drive End Bearing Size | 6316 | Opp Drive End Bearing Size | 6313 |
| UL | Recognized | CSA | Y |
| CE | Y | IP Code | 43 |
| Number of Speeds | 1 | | |

Technical Specifications

| | | | |
|-----------------------|------------------------------------|-----------------------|----------------------|
| Electrical Type | Squirrel Cage Inverter Duty | Starting Method | Inverter Only |
| Poles | 4 | Rotation | Reversible |
| Resistance Main | .046 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 | 48.46 in |
| Frame Length | 16.75 in | Shaft Diameter | 2.875 in |
| Shaft Extension | 7.25 in | Assembly/Box Mounting | F1/F2 CAPABLE |
| Inverter Load | CONSTANT 2000:1 | | |
| Connection Drawing | A-EE7308AD-LE | Outline Drawing | SS515605-1675 |



- NOTES:
 1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS.
 2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°.
 3. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.
 4. DIMENSION IN [] DESIGNATE MILLIMETERS.

| | | |
|---|--------------------|--------------------|
| DRAWING REVISION C | REVISION BY JJB | DATE 08-03-2015 |
| ECO ECO-0082585 | APPROVED BY JHA | DATE 08-03-2015 |
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TOLERANCES UNLESS OTHERWISE SPECIFIED:

| DEC. | INCH | mm | ANGLE |
|-------|---------|-----------|---------|
| .X | ±0.1 | [±2.5] | ±7° 30" |
| .XX | ±0.03 | [±0.76] | |
| .XXX | ±0.005 | [±0.127] | |
| .XXXX | ±0.0005 | [±0.0127] | |

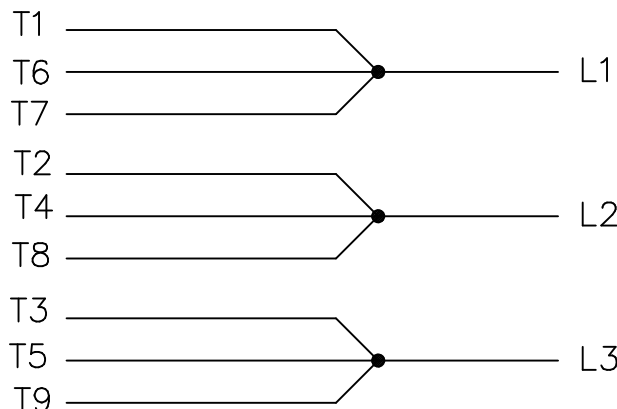
REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [0.076/.381] X 45°
 CORNER FILLETS: R.02 [51]
 MACHINED SURFACES: 200 INCH/mm 5.1
 mm SHOWN IN [BRACKETS]

| |
|------------------------|
| DRAWN BY DJK |
| DATE 07-11-1996 |
| APPROVED BY TB |
| DATE 07-11-1996 |
| REFERENCE |
| THIRD ANGLE PROJECTION |

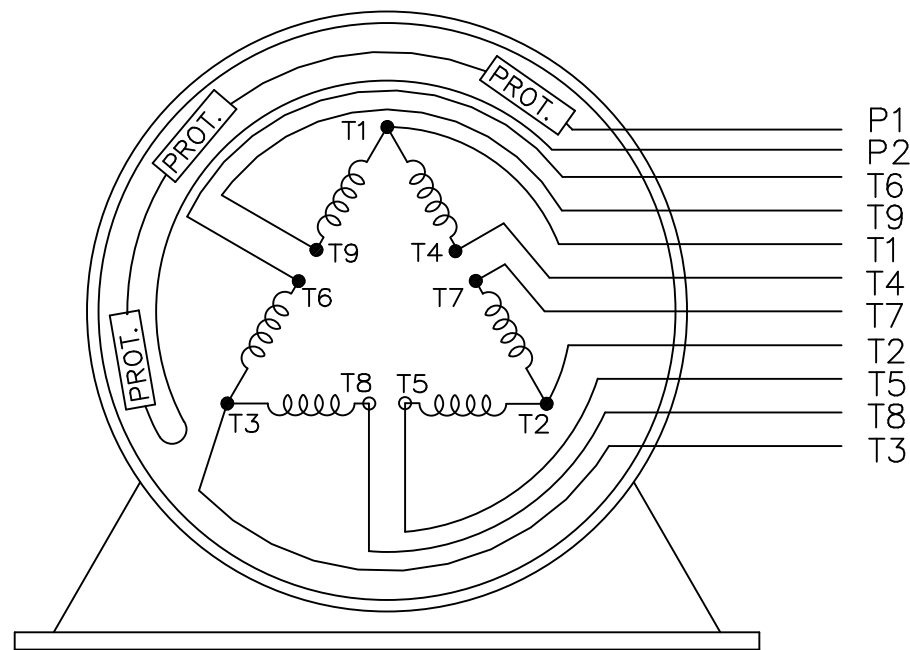
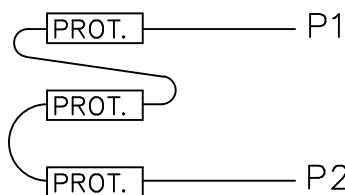
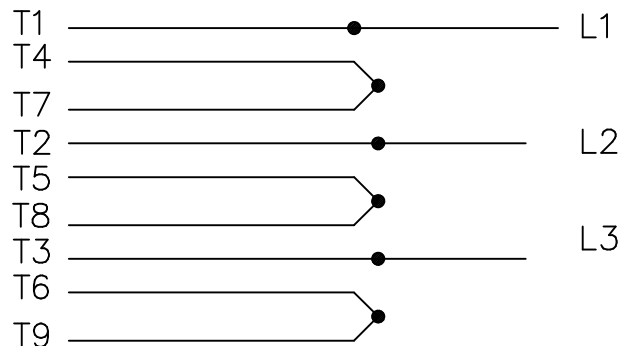
| | |
|--|-----------------------------------|
| REGAL ™ Regal Beloit America, Inc. | |
| DESCRIPTION OUTLINE 405TC FR - TEBC - C'FACE - AXIAL BLOWER | |
| MATERIAL | PROCESS/FINISH |
| SIZE B | DRAWING NUMBER SS515605 |
| SHEET 1 OF 1 | |

| DASH | FRAME | B | C | AG | 2F | 2FF | BS |
|------|-------|-------------------|--------------------|--------------------|-------------------|-------------------|------------------|
| 1675 | 405TC | 16.25 [412.75] | 48.46 [1230.88] | 41.47 [1053.34] | 12.25 [311.15] | 13.75 [349.25] | 6.88 [174.75] |


LOW VOLTAGE



HIGH VOLTAGE



WHEN MORE THAN ONE PROT. IS USED; PROT. ARE CONNECTED IN SERIES

| | | | | TOLERANCES UNLESS SPECIFIED | |  ELECTRIC MOTORS GEARMOTORS AND DRIVES | DRAWN NJS 05-15-2002 | | |
|--|--|----------------|-----|-----------------------------|----------------------|---|----------------------|---------------------|------|
| | | | | DEC. | INCHES | | CHK | ML 05-20-2002 | |
| | | | | .X | ±.1 | | APPD | TB 05-20-2002 | |
| | | | | .XX | ±.02 | TITLE CONNECTION DIAGRAM | SCALE | | |
| 2 | HIGH VOLT. SCHEMATIC WAS L1, L3, & L3 CN 32724 | DRS 06-12-2004 | ML | .XXX | ±.005 | 3Ø - WITH PROTECTORS | REF | | |
| 1 | NEW DRAWING CN 35132 | NJS 05-20-2002 | TB | .XXXX | ±.0005 | MAT'L. | FMF | | |
| NO. | REVISION | BY & DATE | CHK | ANG | ±7'30" | FINISH | PREV | | |
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| | | | | DIST | WA-LB | A | EE7308AD-LE | 2 | |

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



DATA VOLTS: 460

CERTIFICATION DATA SHEET

CONN. DIAGRAM: A-EE7308AD-LE
OUTLINE: B-SS51852LE-1675
WINDING: T4054115

CAT #: 810087.00

R1 1

TYPICAL MOTOR PERFORMANCE DATA

| HP | KW | SYNC RPM | FL RPM | FRAME | ENCLOSURE | TYPE | KVA CODE | DESIGN |
|-----|----|----------|--------|-------|-----------|------|----------|--------|
| 100 | 75 | 1800 | 1785 | 405TC | TEBC | TBS | J | INF |

| PH | HZ | VOLTS | AMPS | START TYPE | DUTY | INSL | S.F. | AMB | ELEV. |
|----|----|---------|---------|---------------|------|------|------|-----|-------|
| 3 | 60 | 230/460 | 230/115 | INVERTER ONLY | CONT | H | 1.15 | 40 | 3300 |

| F.L. EFF | 94.5 | 3/4 LD EFF | 94.1 | 1/2 LD EFF | 93.0 | GTD EFF | 93.0 | ELECT. TYPE | SQ CAGE INV DUTY |
|----------|------|------------|------|------------|------|---------|------|-------------|------------------|
| F.L. PF | 86.5 | 3/4 LD PF | 83.0 | 1/2 LD PF | 75.0 | | | | |

| F.L. TORQUE | LR AMPS @ 460 V | L.R. TORQUE | B.D. TORQUE | F.L. RISE (°C) |
|-------------|-----------------|----------------|----------------|----------------|
| 295 LB-FT | 900 | 585 LB-FT 198% | 900 LB-FT 305% | 60 |

| PRESSURE @ 3 | POWER | ROTOR WK² | MAX. LOAD WK² | SAFE STALL TIME | STARTS/HOUR | MOTOR WGT |
|--------------|--------|-------------|---------------|-----------------|-------------|-----------|
| 85 dBA | 94 dBA | 27.0 LB-FT² | 0 LB-FT² | 0 SEC. | 0 | 1450 LB. |

*** SUPPLEMENTAL INFORMATION ***

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | MOTOR ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT |
|-----------------|------------------|------------|-------------------|-------------|--------------------|------------|---------|--------------------|
| C-FACE | ENCODER | RIGID | HORIZONTAL | NO | NONE | NO | NONE | JE - LEESON (ENAM) |

| 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 |
| 6316 | 6313 | | | | | | |

| 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 |
|--------------|--------------|--------------|--------------|--------------|--------------------|-------|
| 0.034 | 0.021 | 0.236 | 0.219 | 6.816 | 0.150 | ODE |

| | | |
|---------------------------------|---|--|
| * N O T E S * | INVERTER TORQUE: CONSTANT 2000:1 INV. HP SPEED RANGE: 1.5 X BASE SPEED | |
| | ENCODER: NORTHSTAR ST56 NONE | |
| | NONE PPR | |
| | BRAKE: NONE NONE NONE | |
| | FT-LB: NA VOLTAGE: NONE HZ: | |

DATE: 1/31/2018

UL: Y-(LEESON UL REC)

Data Sheet

Date: 1/31/2018

810087.00



Data @ 460 V

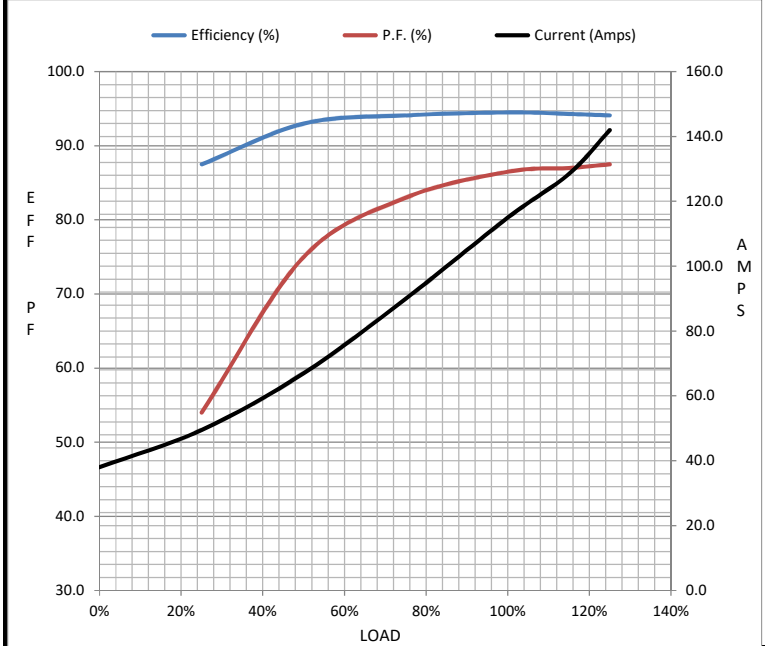
Motor Load Data

| Load | 0% | 25% | 50% | 75% | 100% | 115% | 125% | LR |
|----------------|------|------|------|------|------|-------|------|------|
| Current (Amps) | 38.0 | 49.5 | 67.0 | 90.0 | 115 | 129 | 142 | 900 |
| Torque (ft-lb) | 0.00 | 73.0 | 147 | 220 | 295 | 333 | 370 | 585 |
| RPM | 1800 | 1796 | 1792 | 1788 | 1785 | 1.783 | 1780 | 0 |
| Efficiency (%) | | 87.5 | 93.0 | 94.1 | 94.5 | 94.3 | 94.1 | |
| P.F. (%) | 8.5 | 54.0 | 75.0 | 83.0 | 86.5 | 87.0 | 87.5 | 30.5 |

Motor Speed Data

| | LR | Pull-Up | BD | Rated | Idle |
|----------------|-----|---------|------|-------|------|
| Speed (RPM) | 0 | 900 | 1730 | 1785 | 1800 |
| Current (Amps) | 900 | 850 | 480 | 115 | 38.0 |
| Torque (ft-lb) | 585 | 575 | 900 | 295 | 0.00 |

| Information Block | | | | |
|-----------------------------|-------------------------|--------|--------|--------|
| HP | 100.0 | | | |
| Sync. RPM | 1800 | | | |
| Frame | 405 | | | |
| Enclosure | TEBC | | | |
| Construction | TBS | | | |
| Voltage | 230/460 V | | | |
| Frequency | 60 Hz | | | |
| Design | A | | | |
| LR Code letter | J | | | |
| Service Factor | 1.15 | | | |
| Temp Rise @ FL | 60 °C | | | |
| Duty | CONT | | | |
| Ambient | 40 °C | | | |
| Elevation | 1,000 feet | | | |
| Rotor/Shaft wk ² | 27.0 Lb-Ft ² | | | |
| Ref Wdg | T4054115 R1 | | | |
| Sound Pressure @ 1M | 85 dBA | | | |
| VFD Rating | CONSTANT 2000:1 | | | |
| Outline Dwg | B-SS518552LE-1675 | | | |
| Conn. Diag | A-EE7308AD-LE | | | |
| Additional Specifications: | | | | |
| 0 | | | | |
| 0 | | | | |
| EQUIV CKT (OHMS / PHASE) | | | | |
| R1 | R2 | X1 | X2 | Xm |
| 0.0340 | 0.0210 | 0.2360 | 0.2190 | 6.8160 |



Speed - Torque Curve

