

PRODUCT INFORMATION PACKET

Model No: 405TTFC6538

Catalog No: E681A

XRI®-SD Severe Duty Motor, 100 HP, 3 Ph, 60 Hz, 575 V, 1800 RPM, 405T Frame, TEFC



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Nameplate Specifications

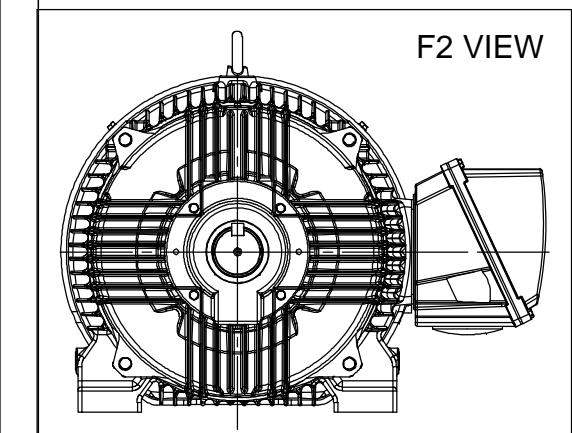
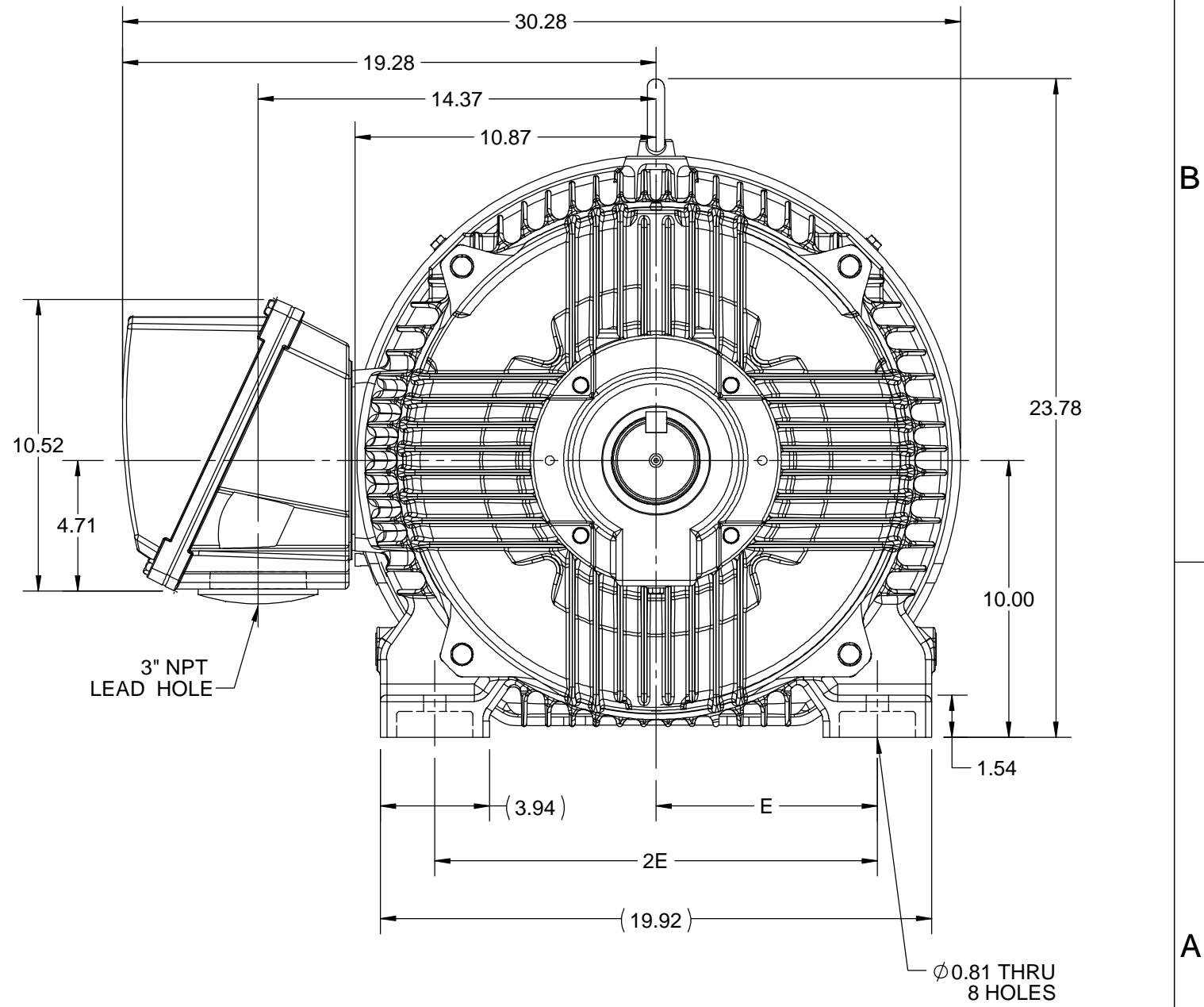
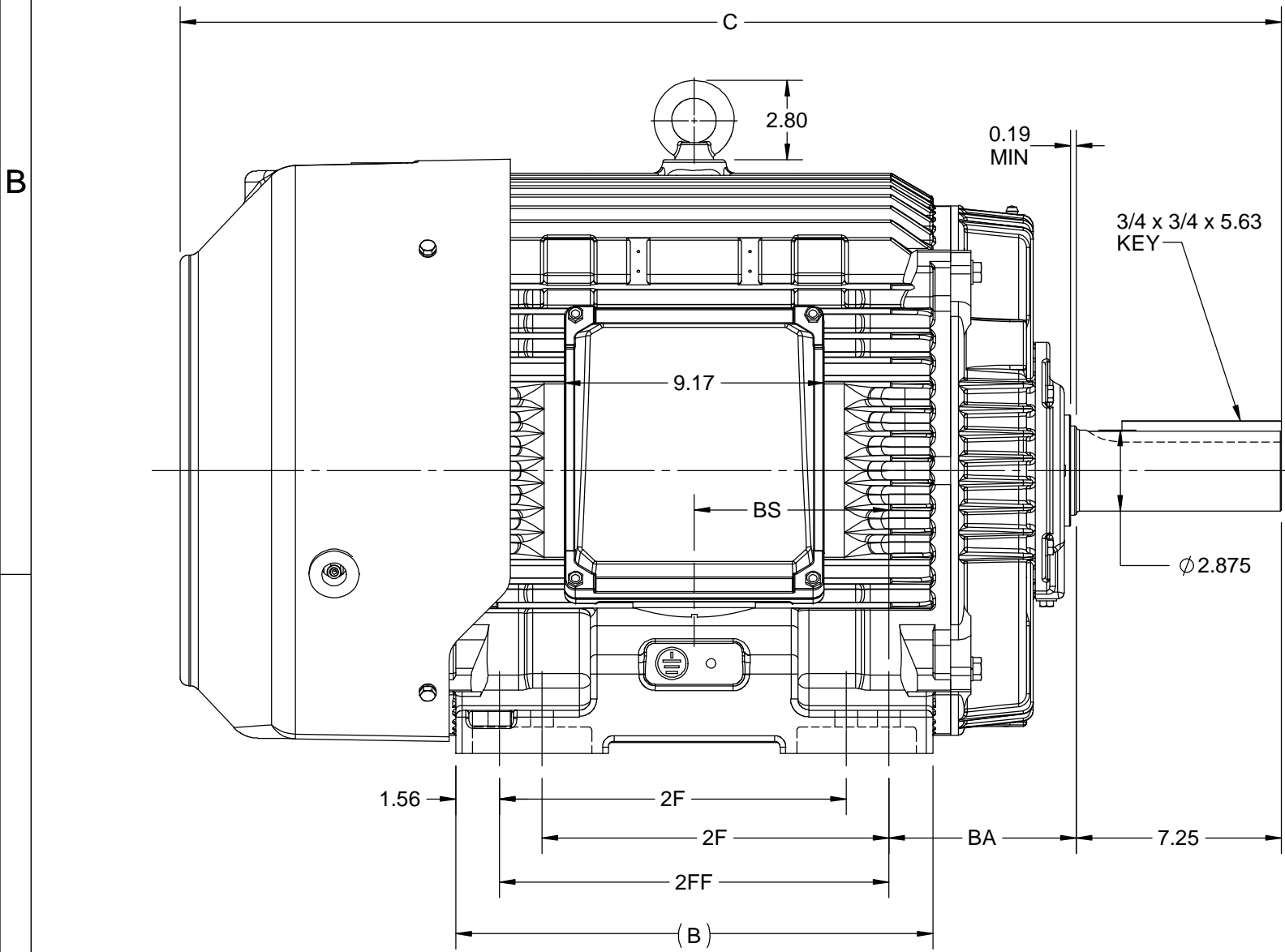
| | | | |
|------------------------|----------------------|----------------------------|------------------------------------|
| Phase | 3 | Output HP | 100 Hp |
| Output KW | 75.0 kW | Voltage | 575 V |
| Speed | 1785 rpm | Service Factor | 1.15 |
| Frame | 405T | Enclosure | Totally Enclosed Fan Cooled |
| Thermal Protection | No Protection | Efficiency | 95.4 % |
| Ambient Temperature | 40 °C | Frequency | 60 Hz |
| Current | 90.5 A | Power Factor | 87 |
| Duty | Continuous | Insulation Class | H |
| Design Code | B | KVA Code | G |
| Drive End Bearing Size | 6316 | Opp Drive End Bearing Size | 6314 |
| UL | Listed | CSA | Y |
| CE | Y | IP Code | 55 |
| Number of Speeds | 1 | Hazardous Location | DIVISION 2 T2B |

Technical Specifications

| | | | |
|-----------------------|-------------------------------------|-------------------|-----------------------------------|
| Electrical Type | Squirrel Cage Inverter Rated | Starting Method | Line Or Inverter |
| Poles | 4 | Rotation | Reversible |
| Resistance Main | .0555 Ohms | Mounting | Rigid Base |
| Motor Orientation | Horizontal | Drive End Bearing | Ball |
| Opp Drive End Bearing | Ball | Frame Material | Cast Iron |
| Shaft Type | T | Shaft Diameter | 2.875 in |
| Assembly/Box Mounting | F1/F2 CAPABLE | Inverter Load | CONSTANT 2:1/VARIABLE 10:1 |
| Connection Drawing | EE7300 | Outline Drawing | SS557665 |

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| | | | | | | | | | |
|-------|-------|------|-------|-------|-------|------|------|----------|---|
| | 4 | | | 3 | | | 2 | | 1 |
| B | C | E | 2E | 2F | 2FF | BA | BS | MOUNTING | |
| 16.85 | 38.88 | 8.00 | 16.00 | 12.25 | 13.75 | 6.62 | 6.87 | F1 OR F2 | |



| | | |
|---|--------------------|-------------------------------|
| DRAWING REVISION C | REVISION BY VS | REV DATE/© DATE 25-11-2020 |
| ECO ECO-0195088 | APPROVED BY GNK | DATE 25-11-2020 |
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|------------------------|---|
| DRAWN BY BISWA | Regal Beloit America, Inc. |
| DATE 12/24/2018 | |
| APPROVED BY SBD | DESCRIPTION OUTLINE 404/405T FR-SD & IEEE841 |
| DATE 12/24/2018 | MATERIAL |
| REFERENCE | PROCESS/FINISH |
| THIRD ANGLE PROJECTION | SIZE B |
| | DRAWING NUMBER SS557665 |
| | SHEET 1 OF 1 |

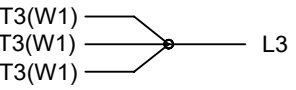
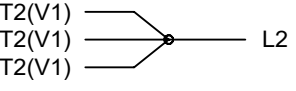
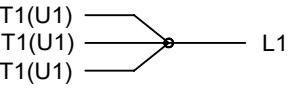
THREE PHASE - SINGLE VOLTAGE
MOTOR - CONDUIT BOX @ 'A'

TERMINAL BLOCK WHEN SPECIFIED

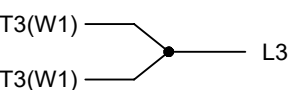
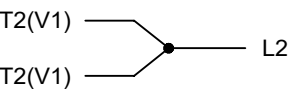
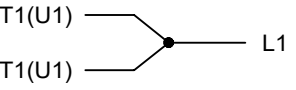
TO REVERSE ROTATION:
INTERCHANGE ANY TWO LINE
LEAD CONNECTIONS



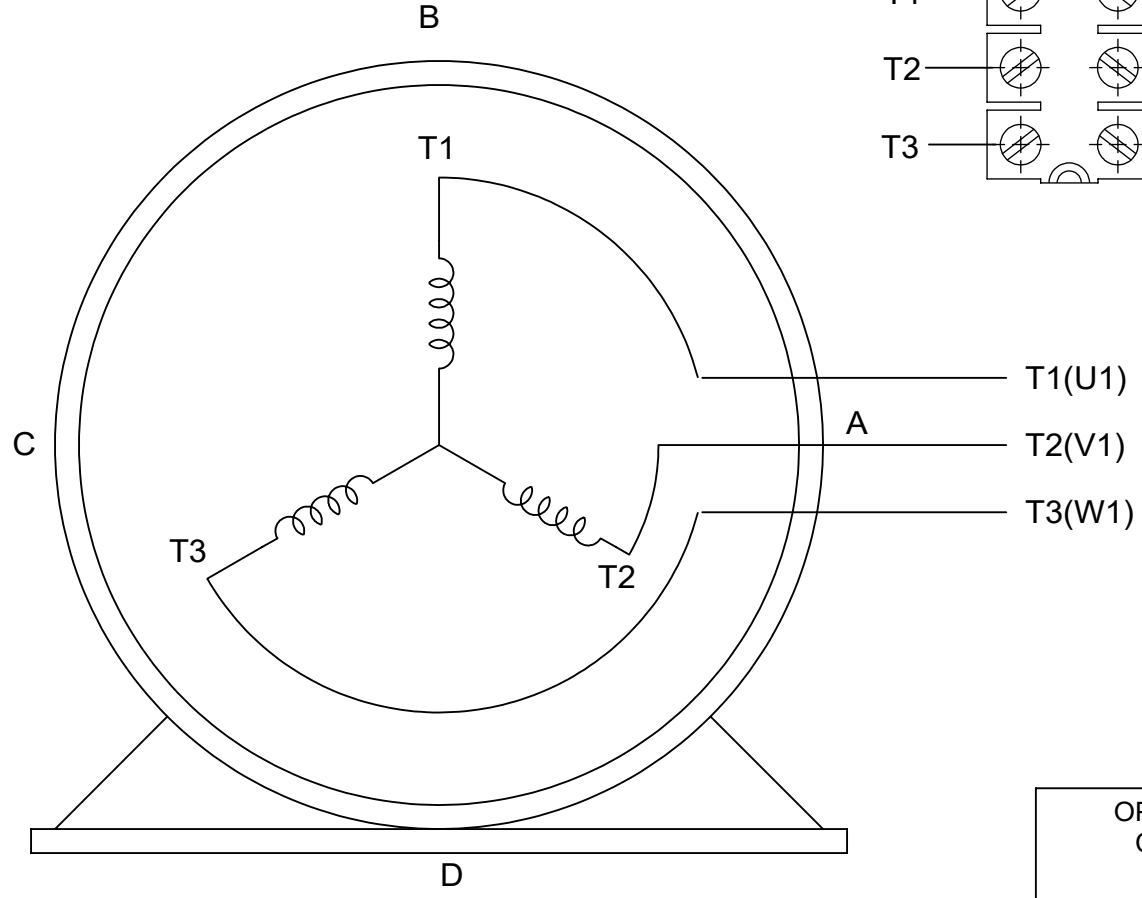
IF MOTOR HAS
9 LEADS



IF MOTOR HAS
6 LEADS



A-9806 DECAL



VIEW OF TERMINAL END

| OPTIONAL CORD CONNECTION | |
|--------------------------|-------|
| L1 | WHITE |
| L2 | RED |
| L3 | BLACK |

| | | |
|------------------------|-------------------|-------------------------------|
| DRAWING REVISION AC | REVISION BY BS | REV DATE/© DATE 26/07/2022 |
|------------------------|-------------------|-------------------------------|

| | | |
|------------------------------|-------------------|--------------------|
| REQUEST NUMBER CR-0010402 | APPROVED BY SN | DATE 26/07/2022 |
|------------------------------|-------------------|--------------------|

REQUEST NUMBER DESCRIPTION
DRAWING UPDATED

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| DRAWN BY DA |
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| DATE 03-26-1993 |
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| APPROVED BY TB |
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| DATE 03-26-1993 |
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|-----------|
| REFERENCE |
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Regal Rexnord Regal Beloit America, Inc.

DESCRIPTION
CONNECTION DIAGRAM
EXTERNAL - SINGLE VOLTAGE - 3Ø MOTOR

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

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| | |
|------------------------|--|
| THIRD ANGLE PROJECTION | |
|------------------------|--|

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



DATA VOLTS: 575

CERTIFICATION DATA SHEET

CONN. DIAGRAM: EE7300
 REFERENCE MODEL #: 405TTFCD6538
 OUTLINE: SS557665-405T CAT #: E681A
 WINDING: HE32504006 NONE 3 MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

| HP | KW | SYNC RPM | FL RPM | FRAME | ENCLOSURE | TYPE | KVA CODE | DESIGN | |
|--|--|--------------|-------------------|---------------------|--------------------|-------------------------|-------------------|--------------|------------|
| 100 | 75 | 1800 | 1785 | 405T | TEFC | TFC | G | B | |
| PH | HZ | VOLTS | AMPS | START TYPE | DUTY | INSL | S.F. | AMB (° C) | ELEV. (Ft) |
| 3 | 60 | 575 | 90.5 | LINE OR INVERTER | CONT | H | 1.15 | 40 | 3300 |
| F.L. EFF | 95.4 | 3/4 LD EFF | 95.4 | 1/2 LD EFF | 95.0 | GTD EFF | ELECT. TYPE | | |
| F.L. PF | 87.0 | 3/4 LD PF | 83.5 | 1/2 LD PF | 74.5 | 95.0 | SQ CAGE INV RATED | | |
| F.L. TORQUE | LR AMPS | L.R. TORQUE | | B.D. TORQUE | | F.L. RISE (° C) | | | |
| 294 LB-FT | 580 | 529 LB-FT | 180% | 764 LB-FT | 260% | 65 | | | |
| SOUND PRESSURE | SOUND | ROTOR WK² | MAX. LOAD WK² | SAFE STALL TIME | STARTS/HOUR | APROX. | | | |
| 75 dBA | 84 dBA | 35.0 LB-FT² | 575 LB-FT² | 25 SEC. | 2 | 1295 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 | DIVISION 2 T2B | NO | NONE | BLUE (EPOXY) | |
| BEARINGS | | GREASE | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL | FRAME MATERIAL | | |
| DE | ODE | POLYREX EM | T | NONE | NONE | 1045 HOT ROLLED (C-204) | CAST IRON | | |
| BALL 6316 | BALL 6314 | | | | | | | | |
| 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 | | |
| 0.0796875 | 0.0484375 | 0.415625 | 0.69375 | 15.946875 | 0.080 | | ODE | | |
| * N O T E S * | If Inverter equals NONE, contact factory for further information | | | | | | | | |
| | INVERTER TORQUE: CONSTANT 2:1/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. | | | | | | | | | |

Data Sheet

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



405TTFCD6538

Submittal

Data @ 575 V

Motor Load Data

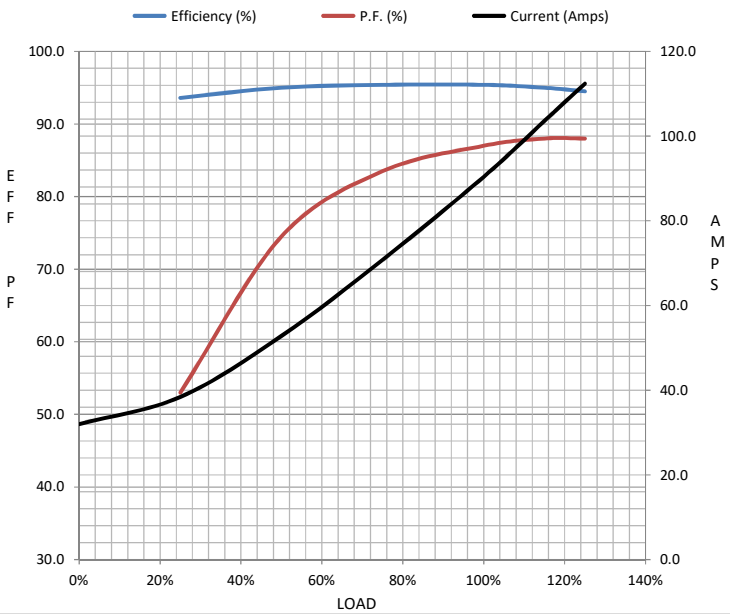
| Load | 0% | 25% | 50% | 75% | 100% | 115% | 125% | LR |
|----------------|------|------|------|------|------|-------|------|------|
| Current (Amps) | 32.0 | 38.4 | 52.8 | 70.8 | 90.4 | 104 | 112 | 580 |
| Torque (ft-lb) | 0.00 | 73.0 | 147 | 220 | 294 | 339 | 370 | 529 |
| RPM | 1800 | 1796 | 1792 | 1790 | 1785 | 1,782 | 1780 | 0 |
| Efficiency (%) | | 93.6 | 95.0 | 95.4 | 95.4 | 95.0 | 94.5 | |
| P.F. (%) | 4.5 | 53.0 | 74.5 | 83.5 | 87.0 | 88.0 | 88.0 | 32.0 |

Motor Speed Data

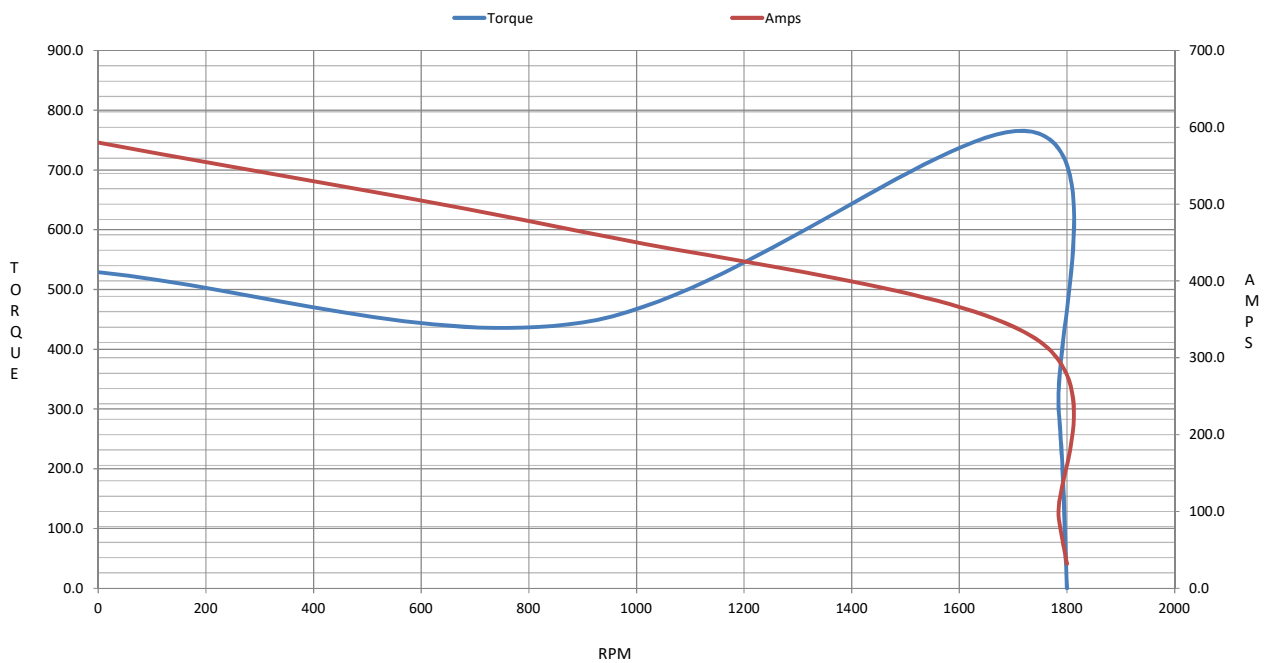
| | LR | Pull-Up | BD | Rated | Idle |
|----------------|-----|---------|------|-------|------|
| Speed (RPM) | 0 | 900 | 1735 | 1785 | 1800 |
| Current (Amps) | 580 | 464 | 328 | 90.4 | 32.0 |
| Torque (ft-lb) | 529 | 445 | 764 | 294 | 0.00 |

Information Block

| | | | | |
|-----------------------------|----------------------------|--------|--------|---------|
| HP | 100.0 | | | |
| Sync. RPM | 1800 | | | |
| Frame | 405 | | | |
| Enclosure | TEFC | | | |
| Construction | TFC | | | |
| Voltage | 575 V | | | |
| Frequency | 60 Hz | | | |
| Design | B | | | |
| LR Code letter | G | | | |
| Service Factor | 1.15 | | | |
| Temp Rise @ FL | 65 ° C | | | |
| Duty | CONT | | | |
| Ambient | 40 ° C | | | |
| Elevation | 3,300 feet | | | |
| Rotor/Shaft wk ² | 35.0 Lb-Ft ² | | | |
| Ref Wdg | HE32504006 NONE | | | |
| Sound Pressure @ 1M | 75 dBA | | | |
| VFD Rating | CONSTANT 2:1/VARIABLE 10:1 | | | |
| Outline Dwg | SS557665-405T | | | |
| Conn. Diag | EE7300 | | | |
| Additional Specifications: | | | | |
| 0 | | | | |
| 0 | | | | |
| EQUIV CKT (OHMS / PHASE) | | | | |
| R1 | R2 | X1 | X2 | Xm |
| 0.0510 | 0.0310 | 0.2660 | 0.4440 | 10.2060 |



Speed -Torque Curve



EC Declaration of Conformity

The undersigned representing
the manufacturer:

Regal Beloit America
100 East Randolph St.
Wausau, WI 54401

and the authorized representative
established within the Community:

Marathon Electric UK
6F Thistleton Road Ind. Estate
Market Overton
Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : 405TTFCD6538

(Model No. may contain prefix and/or suffix characters)

Catalog No : E681A

Rework No : N/A

Directives :

Low Voltage Directive 2014/35/EU

Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010)

EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

Authorized Representative:



Michael A. Logsdon
Vice President, Technology

Authorized Representative in the Community:



Julian Clark
Marketing Engineer

Created on 09/01/2022

CE 22