

# PRODUCT INFORMATION PACKET

Model No: 213TTDBD16038

Catalog No: C438

Brake Motor, 7.50 & 5 HP, 3 Ph, 60 & 50 Hz, 208-230/460 & 190/380 V, 1800 & 1500 RPM, 213TC Frame,  
DP



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### Nameplate Specifications

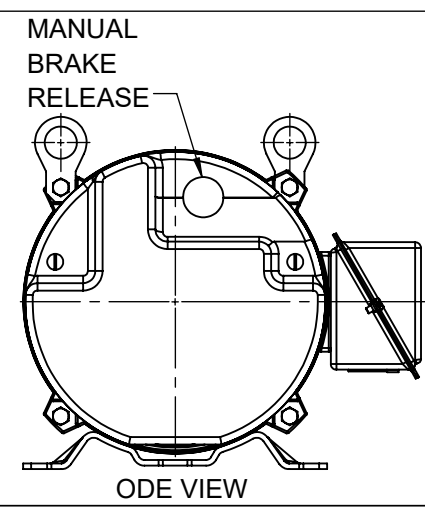
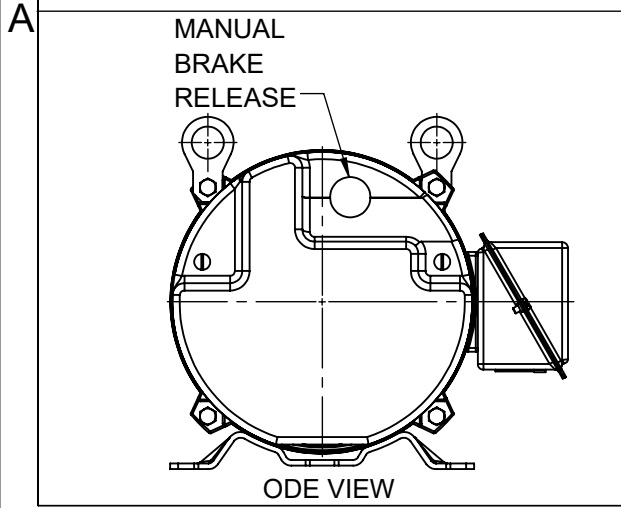
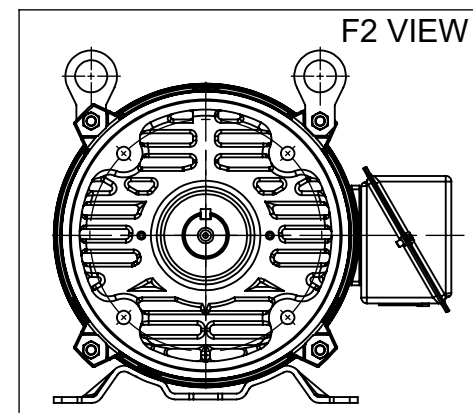
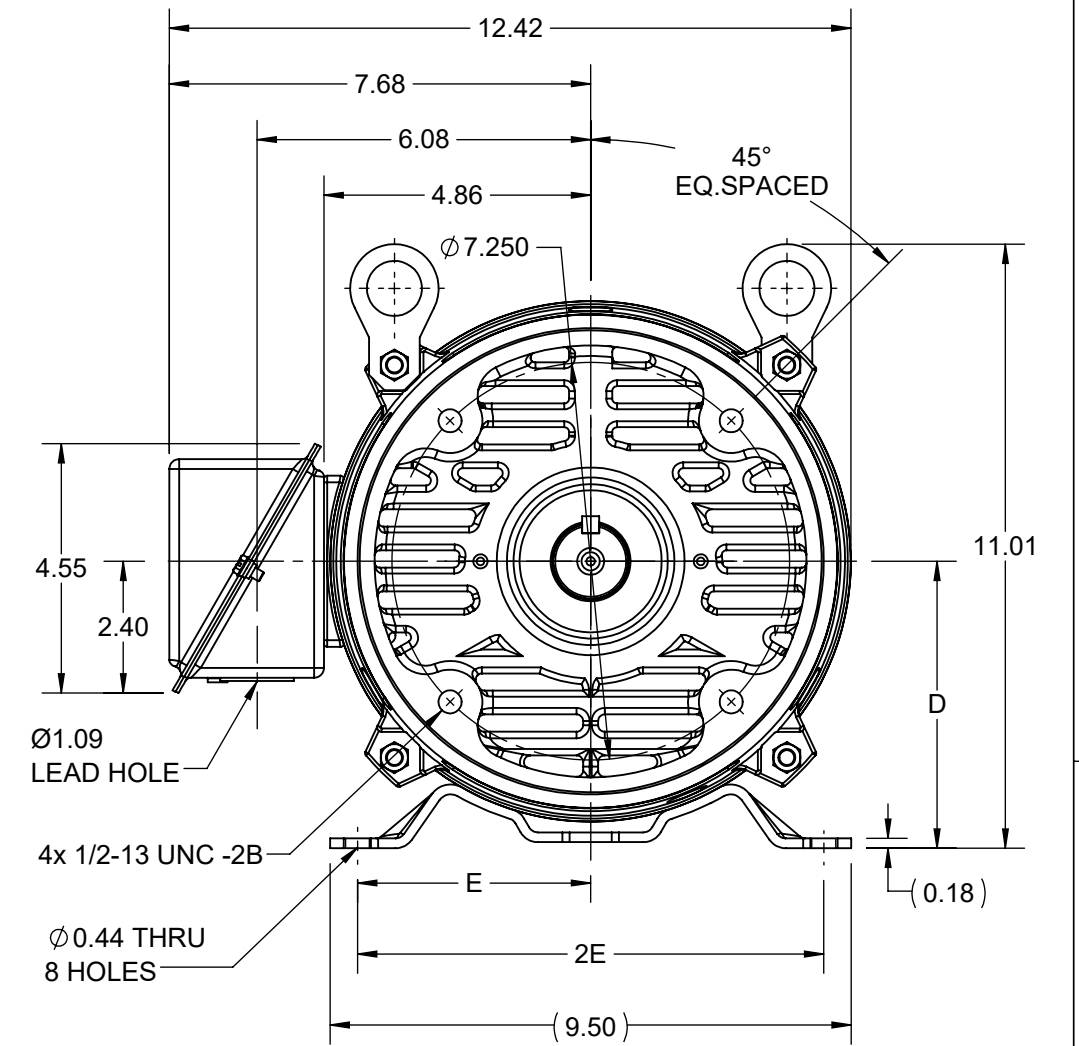
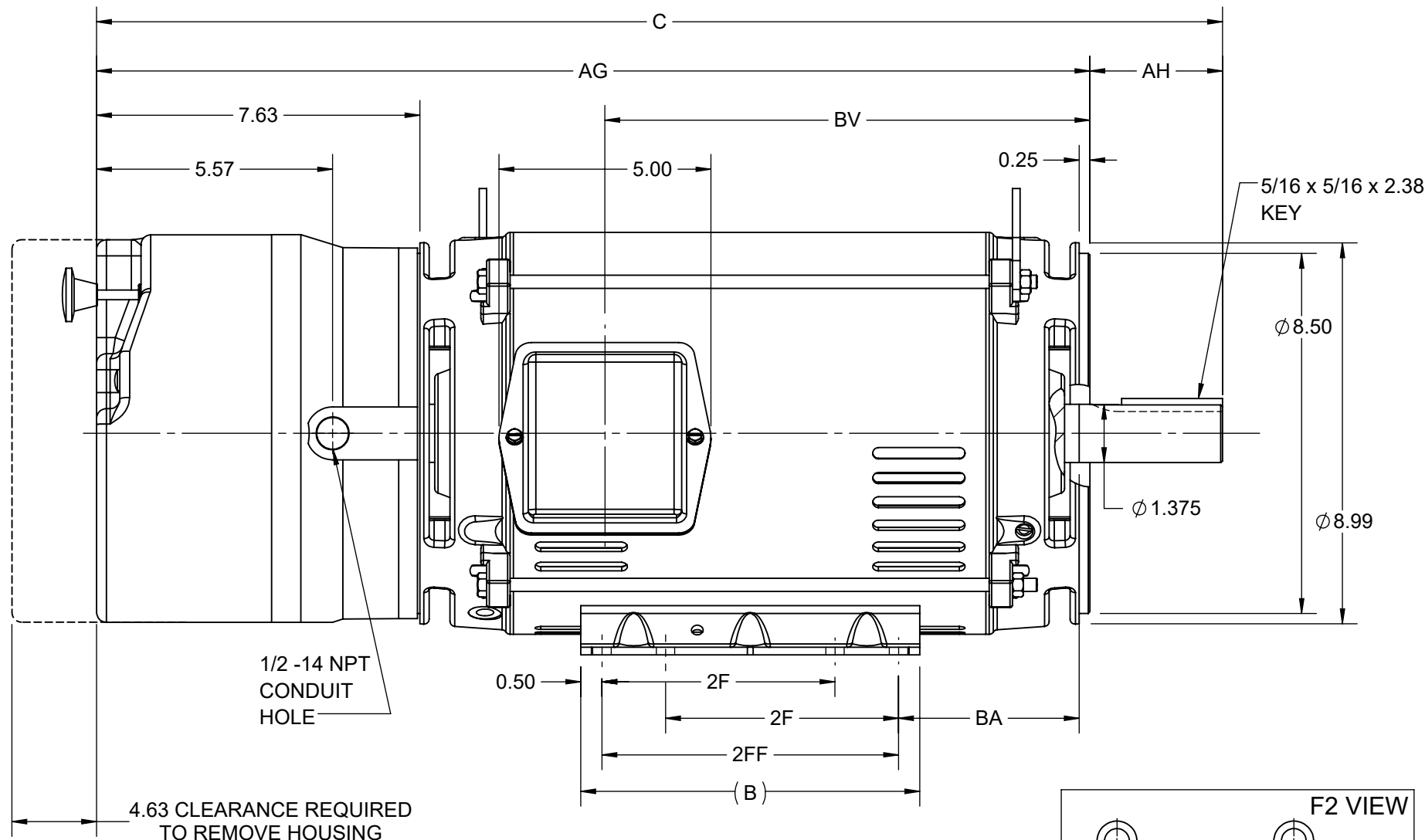
|                        |                                       |                            |                                    |
|------------------------|---------------------------------------|----------------------------|------------------------------------|
| Phase                  | <b>3</b>                              | Output HP                  | <b>7.50 &amp; 5 Hp</b>             |
| Output KW              | <b>5.6 &amp; 3.7 kW</b>               | Voltage                    | <b>208-230/460 &amp; 190/380 V</b> |
| Speed                  | <b>1766 &amp; 1472 rpm</b>            | Service Factor             | <b>1.15 &amp; 1.15</b>             |
| Frame                  | <b>213TC</b>                          | Enclosure                  | <b>Drip Proof</b>                  |
| Thermal Protection     | <b>No Protection</b>                  | Efficiency                 | <b>91 &amp; 90.2 %</b>             |
| Ambient Temperature    | <b>40 °C</b>                          | Frequency                  | <b>60 &amp; 50 Hz</b>              |
| Current                | <b>21.2-19.8/9.9 &amp; 16.8/8.4 A</b> | Power Factor               | <b>79</b>                          |
| Duty                   | <b>Continuous</b>                     | Insulation Class           | <b>F</b>                           |
| Design Code            | <b>B</b>                              | KVA Code                   | <b>H</b>                           |
| Drive End Bearing Size | <b>6307</b>                           | Opp Drive End Bearing Size | <b>6307</b>                        |
| UL                     | <b>Recognized</b>                     | CSA                        | <b>Y</b>                           |
| CE                     | <b>Y</b>                              | IP Code                    | <b>22</b>                          |
| Number of Speeds       | <b>1</b>                              |                            |                                    |

### Technical Specifications

|                       |                                    |                    |                        |
|-----------------------|------------------------------------|--------------------|------------------------|
| Electrical Type       | <b>Squirrel Cage Induction Run</b> | Starting Method    | <b>Across The Line</b> |
| Poles                 | <b>4</b>                           | Rotation           | <b>Reversible</b>      |
| Resistance Main       | <b>1.698 Ohms</b>                  | Mounting           | <b>Rigid Base</b>      |
| Motor Orientation     | <b>Horizontal</b>                  | Drive End Bearing  | <b>Ball</b>            |
| Opp Drive End Bearing | <b>Ball</b>                        | Frame Material     | <b>Rolled Steel</b>    |
| Shaft Type            | <b>T</b>                           | Shaft Diameter     | <b>1.375 in</b>        |
| Assembly/Box Mounting | <b>F1/F2 CAPABLE</b>               |                    |                        |
| Outline Drawing       | <b>SS621186</b>                    | Connection Drawing | <b>EE7308</b>          |

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|      |       |      |      |      |      |      |       |      |      |       |          |   |
|------|-------|------|------|------|------|------|-------|------|------|-------|----------|---|
| 4    |       |      |      | 3    |      |      |       | 2    |      |       |          | 1 |
| B    | C     | D    | E    | 2E   | 2F   | 2FF  | AG    | AH   | BA   | BV    | MOUNTING |   |
| 8.00 | 26.57 | 5.25 | 4.25 | 8.50 | 5.50 | 7.00 | 23.44 | 3.12 | 4.25 | 11.45 | F1 OR F2 |   |



|   |                       |                               |
|---|-----------------------|-------------------------------|
| DRAWING REVISION<br>C   | REVISION BY<br>GOPI J | REV DATE/© DATE<br>10/05/2022 |
| REQUEST NUMBER<br>CR-0008840  | APPROVED BY<br>GNK    | DATE<br>10/05/2022            |
| REQUEST NUMBER DESCRIPTION<br>FRAME AND CONDUIT BOX PART # UPDATED AS PER CR  |                       |                               |
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PRIMARY DIMENSIONS ARE INCH  
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|                        |
|------------------------|
| DRAWN BY<br>VS         |
| DATE<br>04/06/2021     |
| APPROVED BY<br>ANUSHA  |
| DATE<br>04/06/2021     |
| REFERENCE              |
| THIRD ANGLE PROJECTION |

|  |                                   |
|--|-----------------------------------|
| <b>Regal Rexnord</b> Regal Beloit America, Inc.          |                                   |
| DESCRIPTION<br><b>OUTLINE</b>                            |                                   |
| 213/215TC FR NEMA ODP RS BRAKE ( STEARNS 87,000 SERIES ) |                                   |
| MATERIAL   | PROCESS/FINISH                    |
| SIZE<br><b>B</b>   | DRAWING NUMBER<br><b>SS621186</b> |
|  | SHEET<br>1 OF 1                   |

EE7308

THREE PHASE  
DUAL VOLTAGE MOTOR



VIEW OF TERMINAL END

REF.  
WINDING DIAGRAM

T8Y, T2Y, T2BL, T4BX, T2EC, T2G  
T6BZ, T2B, T6BL, T4AV, T6B, T4B

OPTIONAL CORD  
CONNECTION

L1 — WHITE  
L2 — RED  
L3 — BLACK

| NO.  |  | REVISION |            | BY & DATE |       | CHK    |  | ANG |  | FINISH      |        | PREV |      |
|--|--|----------|------------|-----------|-------|--------|--|-----|--|-------------|--------|------|------|
| 5  | CHG TO REGAL LOGO                              | SL       | 09/10/2015 | AB        |       |        |  |     |  |             |        |      |      |
| 4  | REVISED IEC NOTATIONS                          | MSG      | 11/15/2011 | CMN       | .X    | ±.1    |  |     |  |             |        |      |      |
| 3  | ADDED IEC NOTATIONS... (U1), (V1) ETC. MU95194 | MSG      | 5/10/2010  | MJS       | .XX   | ±.02   |  |     |  |             |        |      |      |
| 2  | ADDED THE OPTIONAL CORD CONNECTION MU46318     | RDH      | 04/24/2003 | DRS       | .XXX  | ±.005  |  |     |  |             |        |      |      |
| 1  | REDRAWN  | RM       | 11/20/1990 |           | .XXXX | ±.0005 |  |     |  |             |        |      |      |
| 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      |            |           |       |        |  |     |  |             |        |      |      |
|  |  | DIST     | WP         |           |       |        |  |     |  |             |        |      |      |
|  |  |          |            |           |       |        |  |     |  | CAD FILE    | ee7308 | SIZE | A    |
|  |  |          |            |           |       |        |  |     |  | DRAWING NO. | EE7308 | PAGE | OF   |
|  |  |          |            |           |       |        |  |     |  |             |        |      | REV. |
|  |  |          |            |           |       |        |  |     |  |             |        |      | 5    |

**REGAL**™ Regal Beloit America, Inc. DRAWN RM 11/20/1990  
CHK ML 11/21/1990  
APPD SAS 04/24/2003

TITLE CONNECTION DIAGRAM  
3Ø - DUAL VOLTAGE MOTOR  
SCALE 1=1  
REF  
FMF



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

DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

CUSTOMER:  
 ORDER #:  
 CONN. DIAGRAM: EE7308  
 OUTLINE: SS621186  
 WINDING: HA31324018 NONE 2  
 SPEED: \_\_\_\_\_

CUSTOMER P.O. #:  
 REFERENCE MODEL #: 213TTDBD16038  
 CAT #: C438  
 CUSTOMER PART #:  
 MOUNTING: F1/F2 CAPABLE

**TYPICAL MOTOR PERFORMANCE DATA**

| HP  | KW  | SYNC RPM | FL RPM | FRAME | ENCLOSURE | TYPE | KVA CODE | DESIGN |
|-----|-----|----------|--------|-------|-----------|------|----------|--------|
| 7.5 | 5.6 | 1800     | 1766   | 213TC | DP        | TDB  | H        | B      |

| PH | HZ    | VOLTS               | AMPS                   | START TYPE      | DUTY | INSL | S.F. | AMB | ELEV. |
|----|-------|---------------------|------------------------|-----------------|------|------|------|-----|-------|
| 3  | 60/50 | 208-230/460#190/380 | 21.2-19.8/9.9#16.8/8.4 | ACROSS THE LINE | CONT | F    | 1.15 | 40  | 3300  |

| F.L. EFF | 91.0 | 3/4 LD EFF | 91.5 | 1/2 LD EFF | 90.0 | GTD EFF | ELECT. TYPE     |
|----------|------|------------|------|------------|------|---------|-----------------|
| F.L. PF  | 77.3 | 3/4 LD PF  | 72.2 | 1/2 LD PF  | 60.8 | 90.2    | SQ CAGE IND RUN |

| F.L. TORQUE | LR AMPS @ 460 V | L.R. TORQUE | B.D. TORQUE | F.L. RISE (°C)  |
|-------------|-----------------|-------------|-------------|-----------------|
| 22.3 LB-FT  | 60.0            | 49.7 LB-FT  | 223%        | 72.4 LB-FT 325% |

| SOUND PRESSURE @ 3 FT. | SOUND  | POWER | ROTOR WK <sup>2</sup>  | MAX. LOAD WK <sup>2</sup> | SAFE STALL TIME | STARTS/HOUR | APROX.  | MOTOR WGT |
|------------------------|--------|-------|------------------------|---------------------------|-----------------|-------------|---------|-----------|
| 47 dBA                 | 56 dBA |       | 9.8 LB-FT <sup>2</sup> | 50 LB-FT <sup>2</sup>     | 20 SEC.         | 2           | 135 LB. |           |

**\*\*\* SUPPLEMENTAL INFORMATION \*\*\***

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | MOTOR ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT         |
|-----------------|------------------|------------|-------------------|-------------|--------------------|------------|---------|---------------|
| C-FACE          | BRAKE            | RIGID      | HORIZONTAL        | NO          | NONE               | YES        | NONE    | BLUE (ENAMEL) |

| 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) | ROLLED STEEL   |
| 6307     | 6307 |            |            |            |             |                         |                |

| 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 |
|--------------|--------------|--------------|--------------|--------------|--------------------|-------|
| 1.005        | 0.556        | 2.88         | 3.13         | 54.545       | 0.150              | ODE   |

|       |                           |  |  |  |  |  |
|-------|---------------------------|--|--|--|--|--|
| NOTES | INVERTER TORQUE: NONE     |  |  |  |  |  |
|       | INV. HP SPEED RANGE: NONE |  |  |  |  |  |
|       | ENCODER: NONE             |  |  |  |  |  |
|       | NONE PPR                  |  |  |  |  |  |

|                           |                  |                                |           |        |
|---------------------------|------------------|--------------------------------|-----------|--------|
| PREPARED BY:              | DATE: 10/29/2021 | BRAKE: STEARNS                 | FT-LB: 35 | NEMA 2 |
|                           |                  | VOLTAGE: 230/460-190/380       | HZ:       |        |
| FORM: 3531 REV. 4 2/27/06 |                  | UL: V - LI-ME-INS.CONST UL REC |           |        |

Data Sheet

Date: 10/29/2021  
 Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Submitted by: \_\_\_\_\_



213TTDBD16038

Submittal

Data @ **460** V

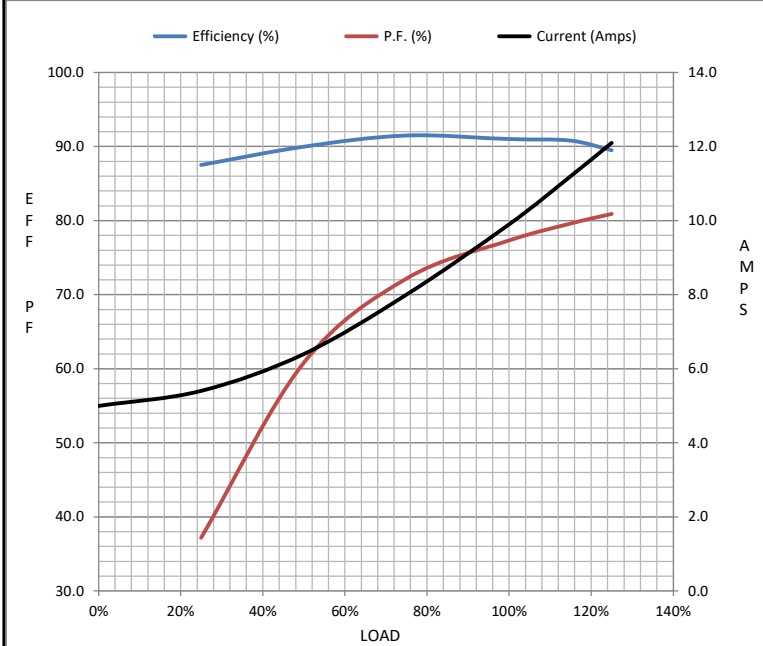
Motor Load Data

| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |
|----------------|------|------|------|------|------|-------|------|------|
| Current (Amps) | 5.0  | 5.4  | 6.4  | 8.0  | 9.9  | 11.2  | 12.1 | 60.0 |
| Torque (ft-lb) | 0.00 | 5.5  | 11.0 | 16.7 | 22.3 | 25.8  | 28.0 | 49.7 |
| RPM            | 1800 | 1792 | 1785 | 1775 | 1766 | 1,760 | 1755 | 0    |
| Efficiency (%) |      | 87.5 | 90.0 | 91.5 | 91.0 | 90.8  | 89.5 |      |
| P.F. (%)       | 11.3 | 37.2 | 60.8 | 72.2 | 77.3 | 79.6  | 80.9 | 45.0 |

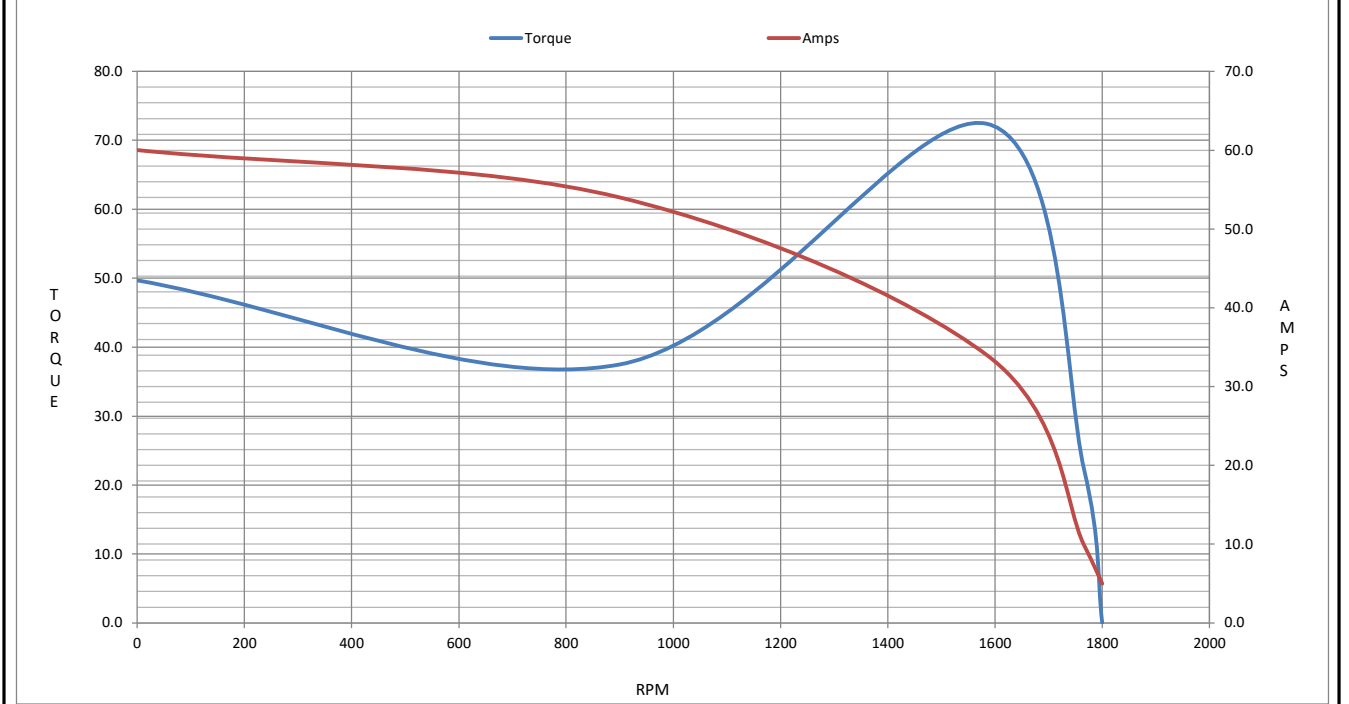
Motor Speed Data

|                | LR   | Pull-Up | BD   | Rated | Idle |
|----------------|------|---------|------|-------|------|
| Speed (RPM)    | 0    | 900     | 1585 | 1766  | 1800 |
| Current (Amps) | 60.0 | 54.0    | 34.0 | 9.9   | 5.0  |
| Torque (ft-lb) | 49.7 | 37.5    | 72.4 | 22.3  | 0.00 |

| Information Block           |                       |        |        |         |
|-----------------------------|-----------------------|--------|--------|---------|
| HP                          | 7.5                   |        |        |         |
| Sync. RPM                   | 1800                  |        |        |         |
| Frame                       | 213                   |        |        |         |
| Enclosure                   | DP                    |        |        |         |
| Construction                | TDB                   |        |        |         |
| Voltage                     | 208-230/460#190/380 V |        |        |         |
| Frequency                   | 60 Hz                 |        |        |         |
| Design                      | B                     |        |        |         |
| LR Code letter              | H                     |        |        |         |
| Service Factor              | 1.15                  |        |        |         |
| Temp Rise @ FL              | 40 ° C                |        |        |         |
| Duty                        | CONT                  |        |        |         |
| Ambient                     | 40 ° C                |        |        |         |
| Elevation                   | 3,300 feet            |        |        |         |
| Rotor/Shaft wk <sup>2</sup> | 9.8 Lb-F <sup>2</sup> |        |        |         |
| Ref Wdg                     | HA31324018 NONE       |        |        |         |
| Sound Pressure @ 1M         | 47 dBA                |        |        |         |
| VFD Rating                  | NONE                  |        |        |         |
| Outline Dwg                 | SS621186              |        |        |         |
| Conn. Diag                  | EE7308                |        |        |         |
| Additional Specifications:  |                       |        |        |         |
| 0                           |                       |        |        |         |
| 0                           |                       |        |        |         |
| EQUIV CKT (OHMS / PHASE)    |                       |        |        |         |
| R1                          | R2                    | X1     | X2     | Xm      |
| 1.0050                      | 0.5560                | 2.8800 | 3.1300 | 54.5450 |



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 : 213TTDBD16038

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

Catalog No : C438

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**