

# PRODUCT INFORMATION PACKET

Model No: 213THTS8038

Catalog No: Y565

Blue Max® Inverter Duty Encoder Motor, 7.50 HP, 3 Ph, 60 Hz, 230/460 V, 1800 RPM, 213TC Frame, TENV



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### Nameplate Specifications

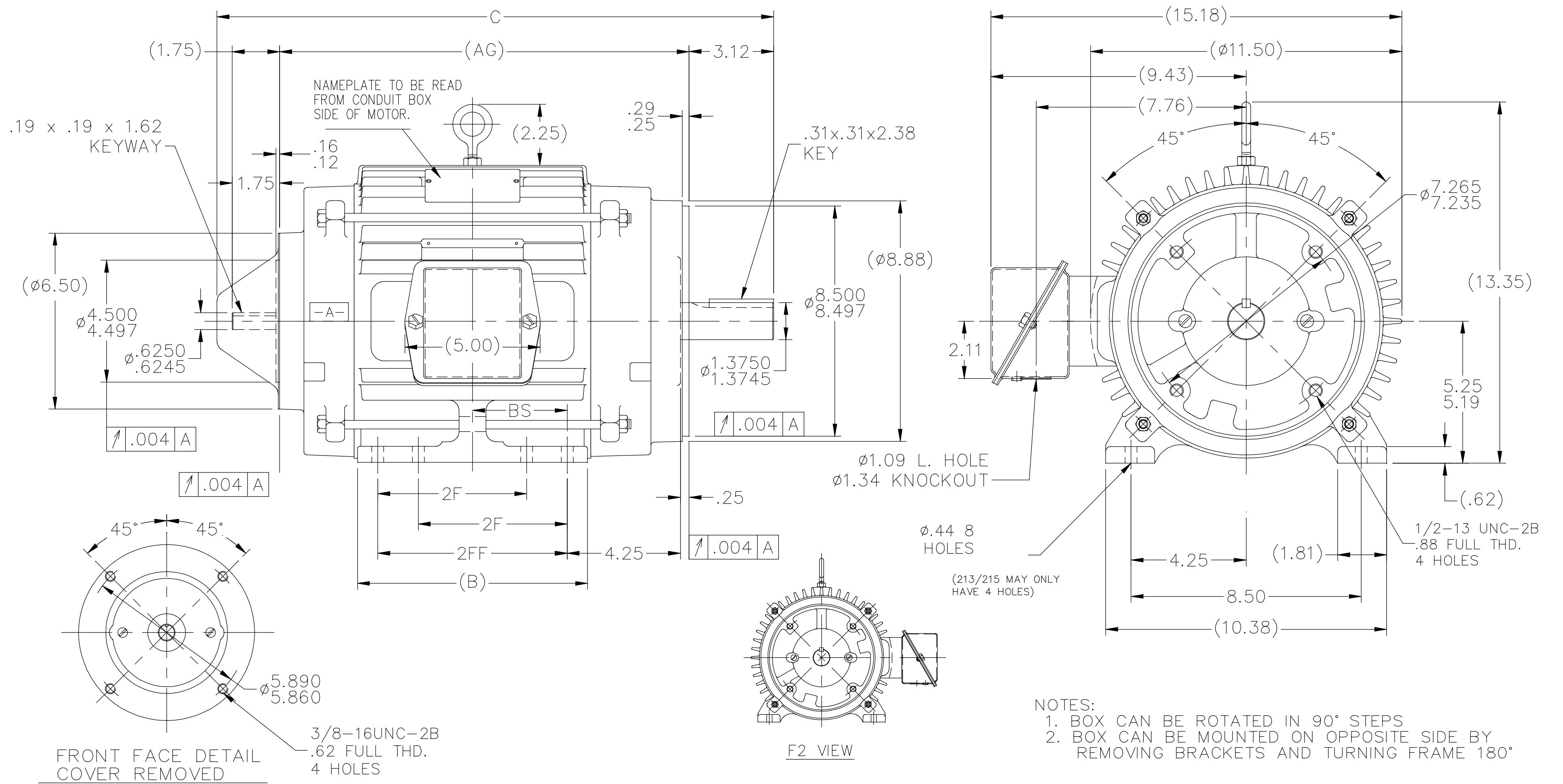
|                        |                    |                            |                                        |
|------------------------|--------------------|----------------------------|----------------------------------------|
| Phase                  | <b>3</b>           | Output HP                  | <b>7.50 Hp</b>                         |
| Output KW              | <b>5.6 kW</b>      | Voltage                    | <b>230/460 V</b>                       |
| Speed                  | <b>1775 rpm</b>    | Service Factor             | <b>1.0</b>                             |
| Frame                  | <b>213TC</b>       | Enclosure                  | <b>Totally Enclosed Non Ventilated</b> |
| Thermal Protection     | <b>Thermostat</b>  | Efficiency                 | <b>90.2 %</b>                          |
| Ambient Temperature    | <b>40 °C</b>       | Frequency                  | <b>60 Hz</b>                           |
| Current                | <b>21.0/10.5 A</b> | Power Factor               | <b>75</b>                              |
| Duty                   | <b>Continuous</b>  | Insulation Class           | <b>H</b>                               |
| Design Code            | <b>INV</b>         | KVA Code                   | <b>L</b>                               |
| Drive End Bearing Size | <b>6309</b>        | Opp Drive End Bearing Size | <b>6207</b>                            |
| UL                     | <b>Recognized</b>  | CSA                        | <b>Y</b>                               |
| CE                     | <b>Y</b>           | IP Code                    | <b>43</b>                              |
| Number of Speeds       | <b>1</b>           |                            |                                        |

### Technical Specifications

|                       |                                    |                       |                      |
|-----------------------|------------------------------------|-----------------------|----------------------|
| Electrical Type       | <b>Squirrel Cage Inverter Duty</b> | Starting Method       | <b>Inverter Only</b> |
| Poles                 | <b>4</b>                           | Rotation              | <b>Reversible</b>    |
| Resistance Main       | <b>3.25 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>Cast Iron</b>     |
| Shaft Type            | <b>T</b>                           | Overall Length        | <b>20.56 in</b>      |
| Frame Length          | <b>8.75 in</b>                     | Shaft Diameter        | <b>1.375 in</b>      |
| Shaft Extension       | <b>3.12 in</b>                     | Assembly/Box Mounting | <b>F1/F2 CAPABLE</b> |
| Inverter Load         | <b>CONSTANT 2000:1</b>             |                       |                      |
| Connection Drawing    | <b>A-EE7308T</b>                   | Outline Drawing       | <b>B-SS87557-875</b> |

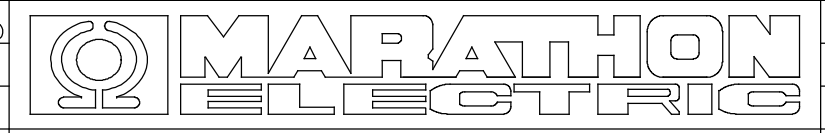


SS87557



| NO.                                                                                                                                                                                                                              | REVISION                                  | BY & DATE      | CHK   | ANG                         | FINISH                                   | PREV       |                  |         |             |      |    |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------|-------|-----------------------------|------------------------------------------|------------|------------------|---------|-------------|------|----|------|
| 10                                                                                                                                                                                                                               | ADDED F2 VIEW                             | UD 06/17/13    | ST    | TOLERANCES UNLESS SPECIFIED |                                          |            |                  |         |             |      |    |      |
| 9                                                                                                                                                                                                                                | UPDATED DRAWING                           | TJW 04/30/2007 |       | DEC. INCHES                 |                                          |            |                  |         |             |      |    |      |
| 8                                                                                                                                                                                                                                | ADDED MTG TO CHART CN46049                | RJW 04-08-2005 | ML    | .X ±.1                      |                                          |            |                  |         |             |      |    |      |
| 7                                                                                                                                                                                                                                | CHANGED 2F & 2FF DELETED 2FFF             | RJW 10-26-2004 | ML    | .XX ±.03                    | TITLE OUTLINE                            | SCALE 9=32 |                  |         |             |      |    |      |
| 6                                                                                                                                                                                                                                | ADDED 2F DIMENSION TO DASH -1000 CN 32737 | TAT 07-01-2004 | ML    | .XXX ±.005                  | 215TC FR. - TENV - DBL 'C' FACE AND EXT. | REF        |                  |         |             |      |    |      |
| 5                                                                                                                                                                                                                                | ADDED KEYWAY TO FRONT EXT. CN 2920-169    | CAV 02-21-2000 | .XXXX | ±.0005                      | MAT'L                                    | FMF        |                  |         |             |      |    |      |
| 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 ss87557 | SIZE    | DRAWING NO. | PAGE | OF | REV. |
|                                                                                                                                                                                                                                  |                                           |                |       |                             |                                          | DIST LB    | B                | SS87557 | 10          |      |    |      |

| DASH | FRAME   | B    | C     | AG    | 2F   | 2FF  | BS   | MTG   |
|------|---------|------|-------|-------|------|------|------|-------|
| 725  | 213/5TC | 7.00 | 19.06 | 13.62 | -    | 5.50 | 2.75 | F1/F2 |
| 875  | 213/5TC | 8.50 | 20.56 | 15.12 | 5.50 | 7.00 | 3.50 | F1/F2 |
| 1000 | 215TC   | 9.75 | 21.81 | 16.37 | 7.00 | 8.25 | 4.12 | F1/F2 |



**HIGH VOLTAGE**



**THREE PHASE  
DUAL VOLTAGE MOTOR**

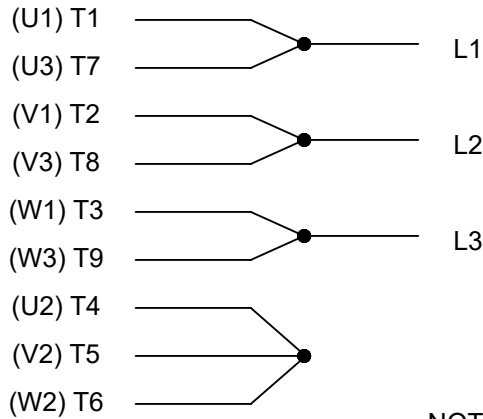
THERMO-PROTECTORS  
CONNECTED IN SERIES



**VIEW OF TERMINAL END**

**NOTE FOR FACTORY USE ONLY:  
TO SURGE TEST FOR COMMON CONNECT:  
HIGH VOLT: CONNECT P1 TO T1  
THEN P2 TO L1  
LOW VOLT: CONNECT P1 TO T1 & T7,  
THEN P2 TO L1**

**LOW VOLTAGE**



**NOTE: LEAD'S COLOR CAN BE YELLOW OR WHITE FOR MT2 PLANT**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |                           |                           |                           |                                     |                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------|---------------------------|---------------------------|-------------------------------------|---------------------------------------------|
| DRAWING REVISION<br><b>T</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | REVISION BY<br><b>ZR</b> | DATE<br><b>01-14-2019</b> |                           | DRAWN BY<br><b>SMC</b>    | Regal Beloit America, Inc.          |                                             |
| ECO<br><b>ECO-0159915</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | APPROVED BY<br><b>DR</b> | DATE<br><b>01-15-2019</b> |                           | DATE<br><b>05-13-1992</b> |                                     | DESCRIPTION<br><b>CONN DIAGRAM-INTERNAL</b> |
| ECO DESCRIPTION<br><b>ADDED TERMINAL CONNECTION DIAGRAM</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                           |                           | APPROVED BY<br><b>TB</b>  | <b>3 PHASE - DUAL VOLTAGE MOTOR</b> |                                             |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |                           |                           |                           |                                     | REFERENCE<br><b>EE7308/EE7300</b>           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |                           | THIRD ANGLE<br>PROJECTION |                           |                                     |                                             |

CERTIFICATION DATA SHEET

Model#: 213THTS8038 BP WINDING#: K2134188 NONE 1  
 CONN. DIAGRAM: A-EE7308T ASSEMBLY: F1/F2 CAPABLE  
 OUTLINE: B-SS87557-875

TYPICAL MOTOR PERFORMANCE DATA

| HP    | KW   | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|-------|------|-----------|----------|-------|-----------|----------|--------|
| 7 1/2 | 5.60 | 1800      | 1775     | 213TC | TENV      | L        | INV    |

| PH | Hz | VOLTS   | FL AMPS | START TYPE    | DUTY       | INSL | S.F | AMB°C | ELEVATION |
|----|----|---------|---------|---------------|------------|------|-----|-------|-----------|
| 3  | 60 | 230/460 | 21/10,5 | INVERTER ONLY | CONTINUOUS | H4   | 1.0 | 40    | 3300      |

| FULL LOAD EFF: 90.2 | 3/4 LOAD EFF: 90.2 | 1/2 LOAD EFF: 88.5 | GTD. EFF | ELEC. TYPE       | NO LOAD AMPS |
|---------------------|--------------------|--------------------|----------|------------------|--------------|
| FULL LOAD PF: 75    | 3/4 LOAD PF: 68    | 1/2 LOAD PF: 55.5  | 88.5     | SQ CAGE INV DUTY | 11.6 / 5.8   |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE  | B.D. TORQUE  | F.L. RISE°C |
|-------------|-------------------|--------------|--------------|-------------|
| 22.2 LB-FT  | 182 / 91          | 80 LB-FT 360 | 94 LB-FT 423 | 85          |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2   | MAX. WK^2 | SAFE STALL TIME | STARTS /HOUR | APPROX. MOTOR WGT |
|------------------------|-------------|--------------|-----------|-----------------|--------------|-------------------|
| 62 dBA                 | 72 dBA      | 1.05 LB-FT^2 | 0 LB-FT^2 | 0 SEC.          | 0            | 212 LBS.          |

EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

| R1      | R2      | X1      | X2     | XM     |
|---------|---------|---------|--------|--------|
| 0.57456 | 0.46116 | 1.94292 | 2.9862 | 43.848 |

| RM     | ZREF | XR  | TD     | TD0  |
|--------|------|-----|--------|------|
| 1814.4 | 37.8 | 4.1 | 0.0145 | 0.27 |

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

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT         |
|-----------------|------------------|------------|-------------|-------------|--------------------|------------|---------|---------------|
| C-FACE          | BRAKE OR ENCODER | RIGID      | HORIZONTAL  | FALSE       | NONE               | FALSE      | NONE    | BLUE (ENAMEL) |

| BEARINGS |      | GREASE     | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL          | FRAME MATERIAL |
|----------|------|------------|------------|------------|-------------|-------------------------|----------------|
| DE       | OPE  |            |            |            |             |                         |                |
| BALL     | BALL | POLYREX EM | T          | NONE       | NONE        | 1045 HOT ROLLED (C-204) | CAST IRON      |
| 6309     | 6207 |            |            |            |             |                         |                |

| THERMO-PROTECTORS |            |          |          | THERMISTORS | CONTROL | SPACE /n HEATERS |
|-------------------|------------|----------|----------|-------------|---------|------------------|
| THERMOSTATS       | PROTECTORS | WDG RTDs | BRG RTDs |             |         |                  |
| TSTATS (N/C)      | NOT        | NONE     | NONE     | NONE        | FALSE   | NONE VOLTS       |

If Inverter equals NONE, contact factory for further information

|                                                                           |
|---------------------------------------------------------------------------|
| INVERTER TORQUE: CONSTANT 2000:1<br>INV. HP SPEED RANGE: 2.0 X BASE SPEED |
| ENCODER: PROVISIONS ONLY<br>NORTHSTAR ST56<br>NONE NONE PPR               |
| BRAKE: PROVISIONS ONLY NONE<br>NONE P/N NONE                              |

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|            |        |         |  |
|------------|--------|---------|--|
| NONE       | NONE   |         |  |
| NONE FT-LB | NONE V | NONE Hz |  |

DATE: 06/21/2017 10:55:22 AM  
FORM 3531 REV.3 02/07/99  
\*\* Subject to change without notice.

Data Sheet

Date: 6/29/2017

213THTS8038

Customer: \_\_\_\_\_



Attention: \_\_\_\_\_

Submittal

Submitted by: FAREEDA DUDEKULA

Data @ 460 V

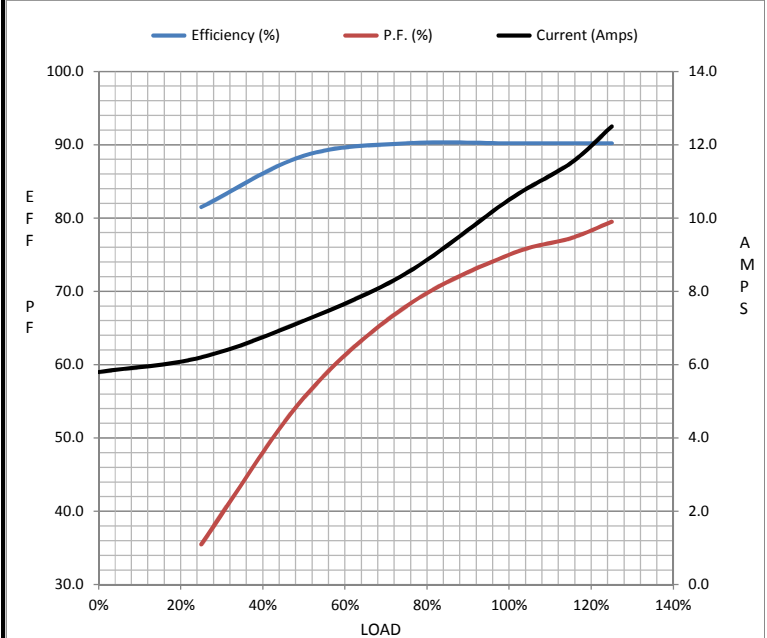
Motor Load Data

| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |
|----------------|------|------|------|------|------|-------|------|------|
| Current (Amps) | 5.8  | 6.2  | 7.2  | 8.5  | 10.5 | 11.5  | 12.5 | 91.0 |
| Torque (ft-lb) | 0.00 | 5.5  | 11.0 | 16.6 | 22.2 | 25.1  | 28.0 | 80.0 |
| RPM            | 1800 | 1795 | 1788 | 1782 | 1775 | 1,772 | 1768 | 0    |
| Efficiency (%) |      | 81.5 | 88.5 | 90.2 | 90.2 | 90.2  | 90.2 |      |
| P.F. (%)       | 6.5  | 35.5 | 55.5 | 68.0 | 75.0 | 77.3  | 79.5 | 44.5 |

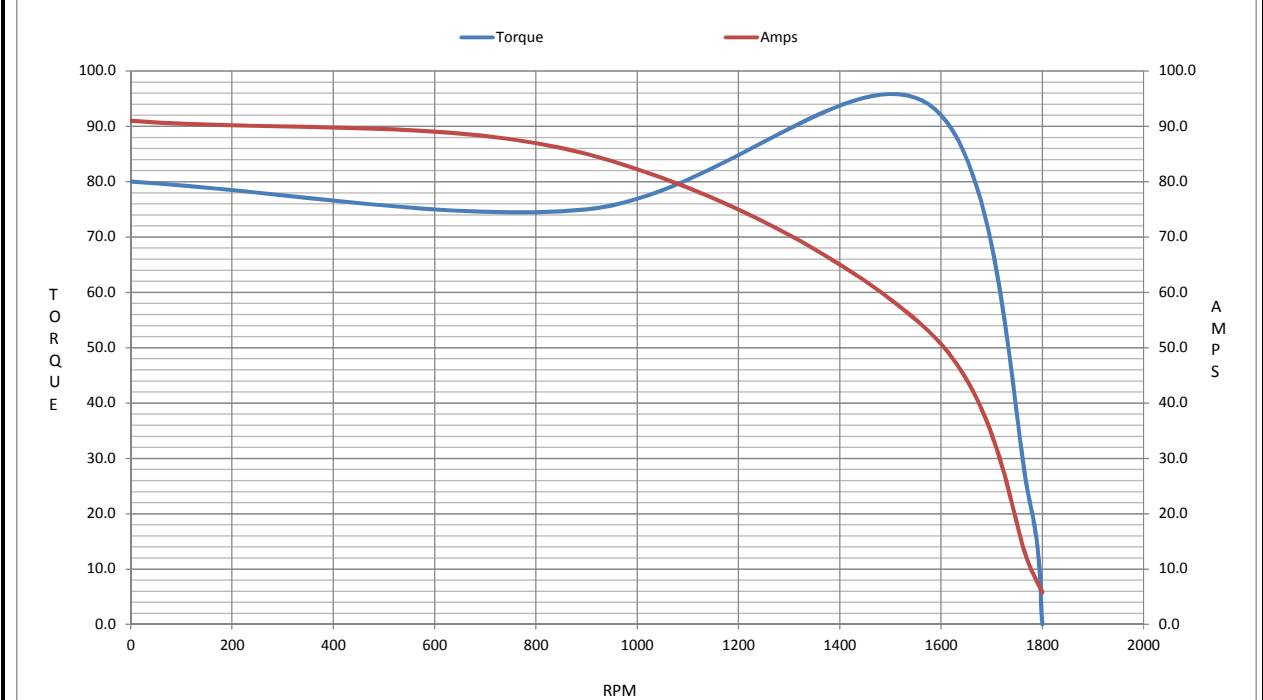
Motor Speed Data

|                | LR   | Pull-Up | BD   | Rated | Idle |
|----------------|------|---------|------|-------|------|
| Speed (RPM)    | 0    | 900     | 1575 | 1775  | 1800 |
| Current (Amps) | 91.0 | 85.0    | 53.0 | 10.5  | 5.8  |
| Torque (ft-lb) | 80.0 | 75.0    | 94.0 | 22.2  | 0.00 |

| Information Block           |                         |        |        |         |
|-----------------------------|-------------------------|--------|--------|---------|
| HP                          | 7.5                     |        |        |         |
| Sync. RPM                   | 1800                    |        |        |         |
| Frame                       | 213                     |        |        |         |
| Enclosure                   | TENV                    |        |        |         |
| Construction                | TTN                     |        |        |         |
| Voltage                     | 230/460 V               |        |        |         |
| Frequency                   | 60 Hz                   |        |        |         |
| Design                      | A                       |        |        |         |
| LR Code letter              | L                       |        |        |         |
| Service Factor              | 1.15                    |        |        |         |
| Temp Rise @ FL              | 85 °C                   |        |        |         |
| Duty                        | CONT                    |        |        |         |
| Ambient                     | 40 °C                   |        |        |         |
| Elevation                   | 1,000 feet              |        |        |         |
| Rotor/Shaft wk <sup>2</sup> | 1.05 Lb-Ft <sup>2</sup> |        |        |         |
| Ref Wdg                     | K2134188 NONE           |        |        |         |
| Sound Pressure @ 1M         | 62 dBA                  |        |        |         |
| VFD Rating                  | CONSTANT 2000:1         |        |        |         |
| Outline Dwg                 | B-SS87557-875           |        |        |         |
| Conn. Diag                  | A-EE7308T               |        |        |         |
| Additional Specifications:  |                         |        |        |         |
| 0                           |                         |        |        |         |
| 0                           |                         |        |        |         |
| EQUIV CKT (OHMS / PHASE)    |                         |        |        |         |
| R1                          | R2                      | X1     | X2     | Xm      |
| 0.5750                      | 0.4610                  | 1.9430 | 2.9860 | 43.8480 |



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 : 213THTS8038

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

Catalog No : Y565

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 08/31/2024

**CE 24**