

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: 184TTFN16056

Catalog No: E202-P

XRI® General Purpose General Purpose Motor, 5 & 3 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V,  
1800 & 1500 RPM, 184T Frame, TEFC



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**RegalRexnord**

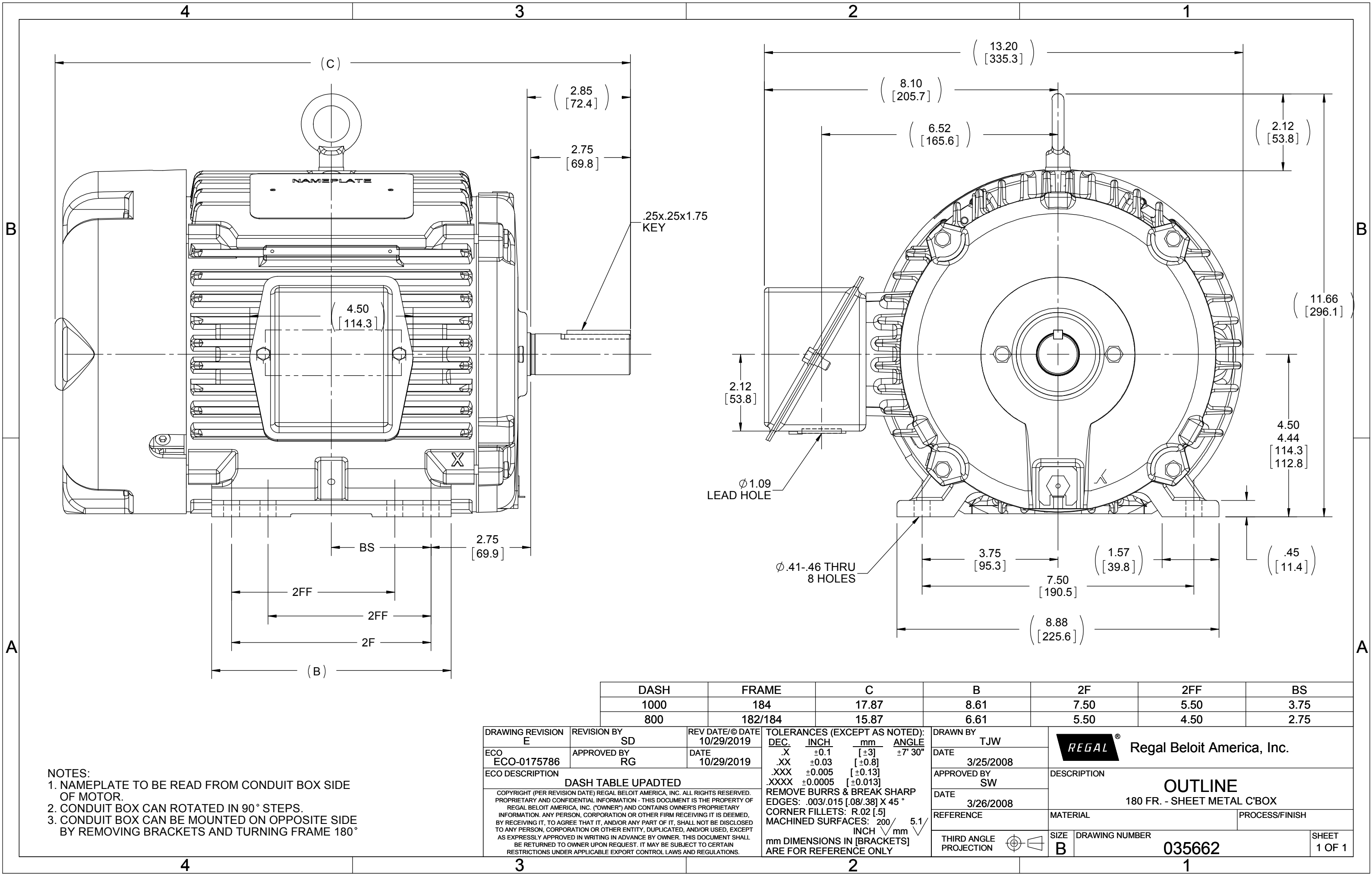
## Nameplate Specifications

|                        |                      |                            |                             |
|------------------------|----------------------|----------------------------|-----------------------------|
| Phase                  | 3                    | Output HP                  | 5 & 3 Hp                    |
| Output KW              | 3.7 & 2.2 kW         | Voltage                    | 230/460 & 190/380 V         |
| Speed                  | 1755 & 1465 rpm      | Service Factor             | 1.15 & 1.15                 |
| Frame                  | 184T                 | Enclosure                  | Totally Enclosed Fan Cooled |
| Thermal Protection     | No Protection        | Efficiency                 | 90.2 & 90.2 %               |
| Ambient Temperature    | 40 °C                | Frequency                  | 60 & 50 Hz                  |
| Current                | 12.4/6.2 & 9.6/4.8 A | Power Factor               | 83.5                        |
| Duty                   | Continuous           | Insulation Class           | F                           |
| Design Code            | B                    | KVA Code                   | J                           |
| Drive End Bearing Size | 6206                 | Opp Drive End Bearing Size | 6206                        |
| UL                     | Recognized           | CSA                        | Y                           |
| CE                     | Y                    | IP Code                    | 43                          |
| Number of Speeds       | 1                    |                            |                             |

## Technical Specifications

|                       |                              |                       |                  |
|-----------------------|------------------------------|-----------------------|------------------|
| Electrical Type       | Squirrel Cage Inverter Rated | Starting Method       | Line Or Inverter |
| Poles                 | 4                            | Rotation              | Reversible       |
| Resistance Main       | 2.62 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        | 17.87 in         |
| Frame Length          | 10.00 in                     | Shaft Diameter        | 1.125 in         |
| Shaft Extension       | 2.85 in                      | Assembly/Box Mounting | F1/F2 CAPABLE    |
| Inverter Load         | CONSTANT 20:1                |                       |                  |
| Connection Drawing    | EE7308                       | Outline Drawing       | 035662-1000      |






NOTES:  
1. NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.  
2. CONDUIT BOX CAN ROTATED IN 90° STEPS.  
3. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°

|   |                   |                               |  |  |  |  |                        |   |                          |                 |
|---|-------------------|-------------------------------|--|--|--|--|------------------------|---|--------------------------|-----------------|
| DRAWING REVISION<br>E   | REVISION BY<br>SD | REV DATE/© DATE<br>10/29/2019 | TOLERANCES (EXCEPT AS NOTED):<br>DEC. INCH mm ANGLE<br>.X ±0.1 [±3] ±7° 30"<br>.XX ±0.03 [±0.8]<br>.XXX ±0.005 [±0.13]<br>.XXXX ±0.0005 [±0.013]<br>REMOVE BURRS & BREAK SHARP<br>EDGES: .003/.015 [.08/.38] X 45°<br>CORNER FILLETS: R.02 [.5]<br>MACHINED SURFACES: 200 INCH/mm 5.1<br>mm DIMENSIONS IN [BRACKETS]<br>ARE FOR REFERENCE ONLY |  |  |  | DRAWN BY<br>TJW        | <div>REGAL®</div> Regal Beloit America, Inc.          |                          |                 |
| ECO<br>ECO-0175786  | APPROVED BY<br>RG | DATE<br>10/29/2019            |  |  |  |  | DATE<br>3/25/2008      |   |                          |                 |
| ECO DESCRIPTION<br>DASH TABLE UPADTED<br>COPYRIGHT (PER REVISION DATE) REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS. |                   |                               | DATE<br>3/26/2008  |  |  |  | APPROVED BY<br>SW      | DESCRIPTION<br>OUTLINE<br>180 FR. - SHEET METAL C'BOX |                          |                 |
|   |                   |                               | REFERENCE  |  |  |  | THIRD ANGLE PROJECTION | MATERIAL  | PROCESS/FINISH           |                 |
|   |                   |                               |  |  |  |  |                        | SIZE<br>B   | DRAWING NUMBER<br>035662 | SHEET<br>1 OF 1 |



|  |  |                |         |                                |                 |   |          |                          |
|--|--|----------------|---------|--------------------------------|-----------------|---|----------|--------------------------|
|  |  |                |         | TOLERANCES<br>UNLESS SPECIFIED |                 |  <b>Regal Beloit America, Inc.</b> | DRAWN RM | 11/20/1990               |
| 5  | CHG TO REGAL LOGO                              | SL 09/10/2015  | AB      | DEC.                           | INCHES          |   | CHK ML   | 11/21/1990               |
| 4  | REVISED IEC NOTATIONS                          | MSG 11/15/2011 | CMN     | .X                             | ±.1             |   | APPD SAS | 04/24/2003               |
| 3  | ADDED IEC NOTATIONS... (U1), (V1) ETC. MU95194 | MSG 5/10/2010  | MJS     | .XX                            | ±.02            |   | SCALE    | 1=1                      |
| 2  | ADDED THE OPTIONAL CORD CONNECTION MU46318     | RDH 04/24/2003 | DRS     | .XXX                           | ±.005           | TITLE CONNECTION DIAGRAM<br>3ø – DUAL VOLTAGE MOTOR   |          | REF                      |
| 1  | REDRAWN  | RM 11/20/1990  |         | .XXXX                          | ±.0005          | MAT'L.  |          | FMF                      |
| NO.  | REVISION                                       | BY & DATE      | CHK     | ANG                            | ±7"30"          | FINISH  |          | PREV                     |
| THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT<br>IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED<br>THIS IS AN ELECTRONICALLY GENERATED DOCUMENT – DO NOT SCALE THIS PRINT |  |                | RFP     |                                | CAD FILE ee7308 |   | SIZE     | DRAWING NO. PAGE OF REV. |
|  |  |                | DIST WP |                                |                 |   | A        | EE7308                   |

## CERTIFICATION DATA SHEET

Model#: 184TTFN16056 AA  
 CONN. DIAGRAM: EE7308  
 OUTLINE: 035662-1000

WINDING#: K1844215 NONE 1  
 ASSEMBLY: F1/F2 CAPABLE

## TYPICAL MOTOR PERFORMANCE DATA

| HP  | KW        | SYNC. RPM | F.L. RPM  | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|-----|-----------|-----------|-----------|-------|-----------|----------|--------|
| 5&3 | 3.70&2.24 | 1800      | 1755&1465 | 184T  | TEFC      | J        | B      |

| PH | Hz    | VOLTS               | FL AMPS              | START TYPE          | DUTY           | INSL | S.F       | AMB°C | ELEVATION |
|----|-------|---------------------|----------------------|---------------------|----------------|------|-----------|-------|-----------|
| 3  | 60/50 | 230/460#190/<br>380 | 12.4/6.2&9.6/4<br>.8 | LINE OR<br>INVERTER | CONTINUOU<br>S | F3   | 1.15/1.15 | 40    | 3300      |

|                             |                    |                    |          |                   |              |
|-----------------------------|--------------------|--------------------|----------|-------------------|--------------|
| FULL LOAD EFF:<br>90.2&90.2 | 3/4 LOAD EFF: 90.2 | 1/2 LOAD EFF: 90.2 | GTD. EFF | ELEC. TYPE        | NO LOAD AMPS |
| FULL LOAD PF:<br>83.5&79    | 3/4 LOAD PF: 78.5  | 1/2 LOAD PF: 70    | 89.5     | SQ CAGE INV RATED | 5.6 / 2.8    |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE    | B.D. TORQUE  | F.L. RISE°C |
|-------------|-------------------|----------------|--------------|-------------|
| 15 LB-FT    | 92 / 46           | 34.5 LB-FT 230 | 45 LB-FT 300 | 50          |

| SOUND PRESSURE<br>@ 3 FT. | SOUND POWER | ROTOR WK^2  | MAX. WK^2  | SAFE STALL TIME | STARTS<br>/HOUR | APPROX. MOTOR<br>WGT |
|---------------------------|-------------|-------------|------------|-----------------|-----------------|----------------------|
| 62 dBA                    | 72 dBA      | 0.5 LB-FT^2 | 50 LB-FT^2 | 25 SEC.         | 2               | 130 LBS.             |

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

| DE BRACKET<br>TYPE | ODE BRACKET<br>TYPE | MOUNT<br>TYPE | ORIENTATION | SEVERE<br>DUTY | HAZARDOUS<br>LOCATION | DRIP<br>COVER | SCREENS | PAINT            |
|--------------------|---------------------|---------------|-------------|----------------|-----------------------|---------------|---------|------------------|
| STANDARD           | STANDARD            | RIGID         | HORIZONTAL  | FALSE          | NONE                  | FALSE         | NONE    | BLUE<br>(ENAMEL) |

| BEARINGS |      | GREASE     | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT<br>MATERIAL              | FRAME<br>MATERIAL |
|----------|------|------------|------------|------------|-------------|--------------------------------|-------------------|
| DE       | OPE  |            |            |            |             |                                |                   |
| BALL     | BALL | POLYREX EM | T          | NONE       | NONE        | 1144<br>STRESSPROOF<br>(C-223) | CAST IRON         |
| 6206     | 6206 |            |            |            |             |                                |                   |

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

If Inverter equals NONE, contact factory for further information

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|                                |        |         |
|--------------------------------|--------|---------|
| INVERTER TORQUE: CONSTANT 20:1 |        |         |
| 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 |

DATE: 06/28/2017 07:21:42 AM  
 FORM 3531 REV.3 02/07/99  
 \*\* Subject to change without notice.



## Data Sheet

Date: 6/29/2017

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

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

Submitted by: FAREEDA DUDEKULA



184TTFN16056

Submittal

Data @ 460 V

## Motor Load Data

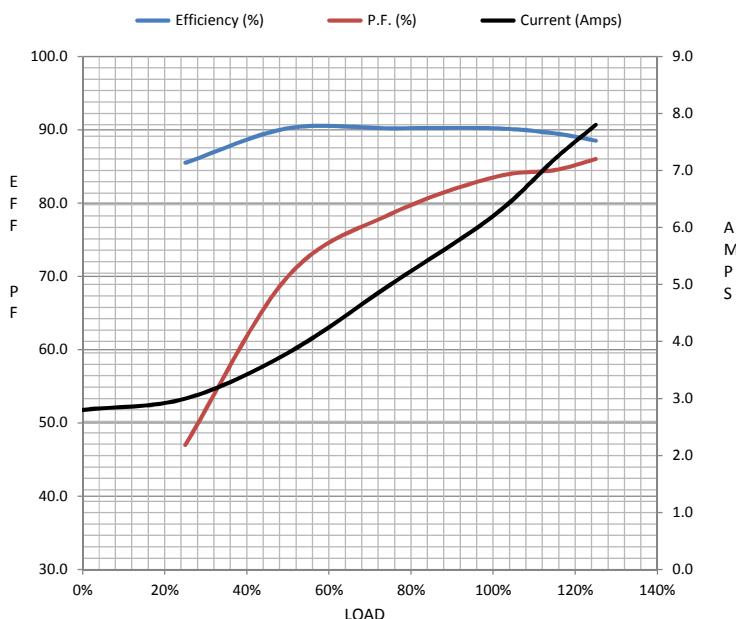
| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |  |
|----------------|------|------|------|------|------|-------|------|------|--|
| Current (Amps) | 2.80 | 3.0  | 3.8  | 5.0  | 6.2  | 7.2   | 7.8  | 46.0 |  |
| Torque (ft-lb) | 0.00 | 3.7  | 7.4  | 11.5 | 15.0 | 17.5  | 19.0 | 34.5 |  |
| RPM            | 1800 | 1790 | 1780 | 1765 | 1755 | 1,745 | 1740 | 0    |  |
| Efficiency (%) |      | 85.5 | 90.2 | 90.2 | 90.2 | 89.5  | 88.5 |      |  |
| P.F. (%)       | 6.5  | 47.0 | 70.0 | 78.5 | 83.5 | 84.5  | 86.0 | 48.0 |  |

## Motor Speed Data

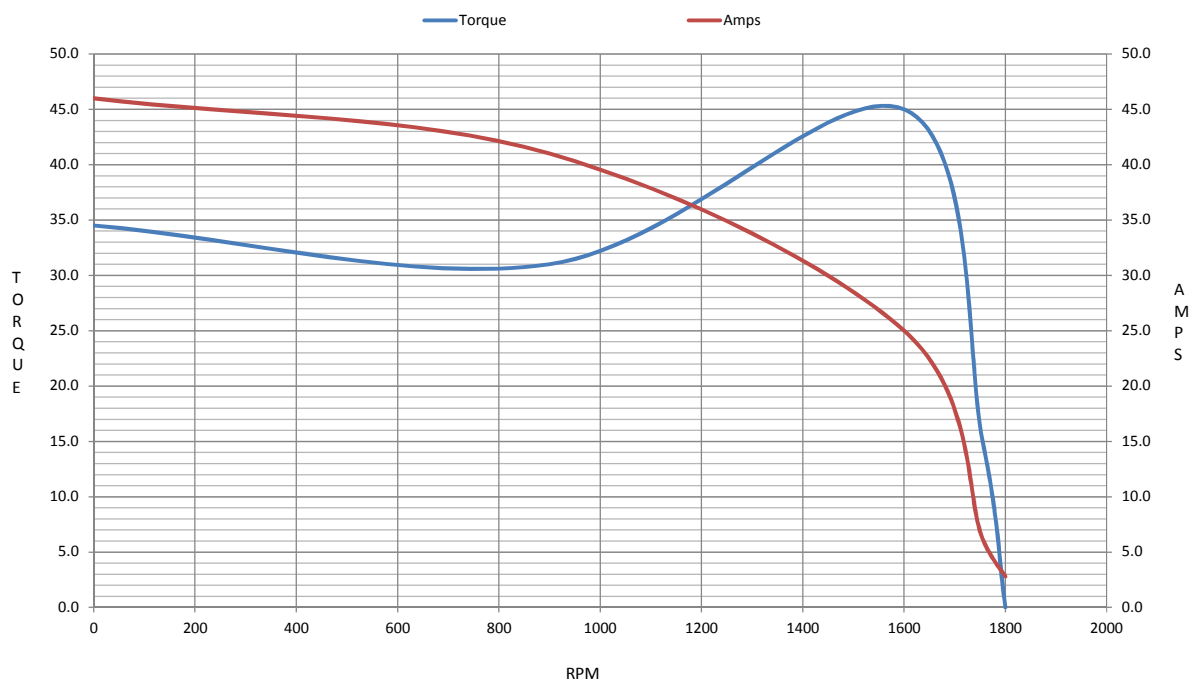
|                | LR   | Pull-Up | BD   | Rated | Idle |
|----------------|------|---------|------|-------|------|
| Speed (RPM)    | 0    | 900     | 1600 | 1755  | 1800 |
| Current (Amps) | 46.0 | 41.0    | 25.0 | 6.2   | 2.80 |
| Torque (ft-lb) | 34.5 | 31.0    | 45.0 | 15.0  | 0.00 |

## Information Block

|                             |                         |        |        |          |
|-----------------------------|-------------------------|--------|--------|----------|
| HP                          | 5.0                     |        |        |          |
| Sync. RPM                   | 1800                    |        |        |          |
| Frame                       | 184                     |        |        |          |
| Enclosure                   | TEFC                    |        |        |          |
| Construction                | TFN                     |        |        |          |
| Voltage                     | 3-230/460#190/V         |        |        |          |
| Frequency                   | 60 Hz                   |        |        |          |
| Design                      | B                       |        |        |          |
| LR Code letter              | J                       |        |        |          |
| Service Factor              | 1.15                    |        |        |          |
| Temp Rise @ FL              | 50 ° C                  |        |        |          |
| Duty                        | CONT                    |        |        |          |
| Ambient                     | 40 ° C                  |        |        |          |
| Elevation                   | 1,000 feet              |        |        |          |
| Rotor/Shaft wk <sup>2</sup> | 0.50 Lb-Ft <sup>2</sup> |        |        |          |
| Ref Wdg                     | K1844215 NONE           |        |        |          |
| Sound Pressure @ 1M         | 62 dBA                  |        |        |          |
| VFD Rating                  | CONSTANT 20:1           |        |        |          |
| Outline Dwg                 | 035662-1000             |        |        |          |
| Conn. Diag                  | EE7308                  |        |        |          |
| Additional Specifications:  |                         |        |        |          |
| 0                           |                         |        |        |          |
| 0                           |                         |        |        |          |
| EQUIV CKT (OHMS / PHASE)    |                         |        |        |          |
| R1                          | R2                      | X1     | X2     | Xm       |
| 1.5080                      | 1.1280                  | 3.6910 | 5.6930 | 104.3280 |



## 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 : 184TTFN16056

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

Catalog No : E202-P

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**