

# PRODUCT INFORMATION PACKET

Model No: 284THTNA7036  
Catalog No: Y567  
25,1800,TENV,284TC,3/60/575  
1000:1 Speed Ratio



Regal and Marathon are trademarks of Regal Beloit Corporation or one of its affiliated companies.  
©2018 Regal Beloit Corporation, All Rights Reserved. MC017097E





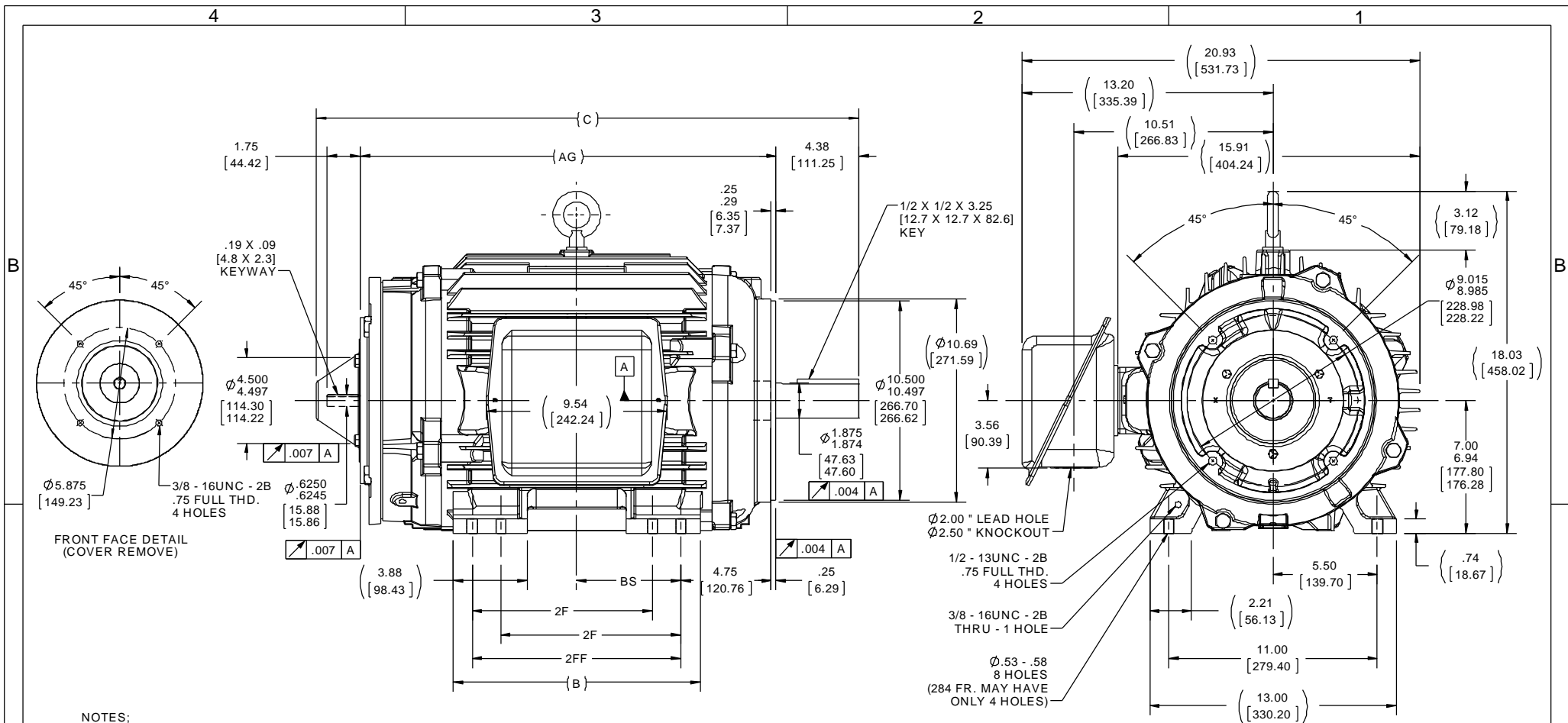
### Nameplate Specifications

|                            |               |                        |                   |
|----------------------------|---------------|------------------------|-------------------|
| Output HP                  | <b>25 Hp</b>  | Output KW              | <b>18.7 kW</b>    |
| Frequency                  | <b>60 Hz</b>  | Voltage                | <b>575 V</b>      |
| Current                    | <b>24.8 A</b> | Speed                  | <b>1770 rpm</b>   |
| Service Factor             | <b>1</b>      | Phase                  | <b>3</b>          |
| Efficiency                 | <b>93.6 %</b> | Duty                   | <b>CONTINUOUS</b> |
| Insulation Class           | <b>F</b>      | Design Code            | <b>INV</b>        |
| KVA Code                   | <b>K</b>      | Frame                  | <b>284TC</b>      |
| Enclosure                  | <b>TENV</b>   | Overload Protector     | <b>NOT</b>        |
| Ambient Temperature        | <b>40 °C</b>  | Drive End Bearing Size | <b>6311</b>       |
| Opp Drive End Bearing Size | <b>6311</b>   | UL                     | <b>Recognized</b> |
| CSA                        | <b>Y</b>      | CE                     | <b>Y</b>          |
| IP Code                    | <b>43</b>     |                        |                   |

### Technical Specifications

|                       |                         |                       |                      |
|-----------------------|-------------------------|-----------------------|----------------------|
| Electrical Type       | <b>SQ CAGE INV DUTY</b> | Starting Method       | <b>INVERTER ONLY</b> |
| Poles                 | <b>4</b>                | Rotation              | <b>REV</b>           |
| Mounting              | <b>RIGID</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>27.08 in</b>         | Frame Length          | <b>12.75 in</b>      |
| Shaft Diameter        | <b>1.88 in</b>          | Shaft Extension       | <b>4.37 in</b>       |
| Assembly/Box Mounting | <b>F1/F2 CAPABLE</b>    |                       |                      |
| Outline Drawing       | <b>B-SS311154-1275</b>  | Connection Diagram    | <b>A-EE7300T</b>     |

This is an uncontrolled document once printed or downloaded and is subject to change without notice. Date Created: 04/05/2018



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

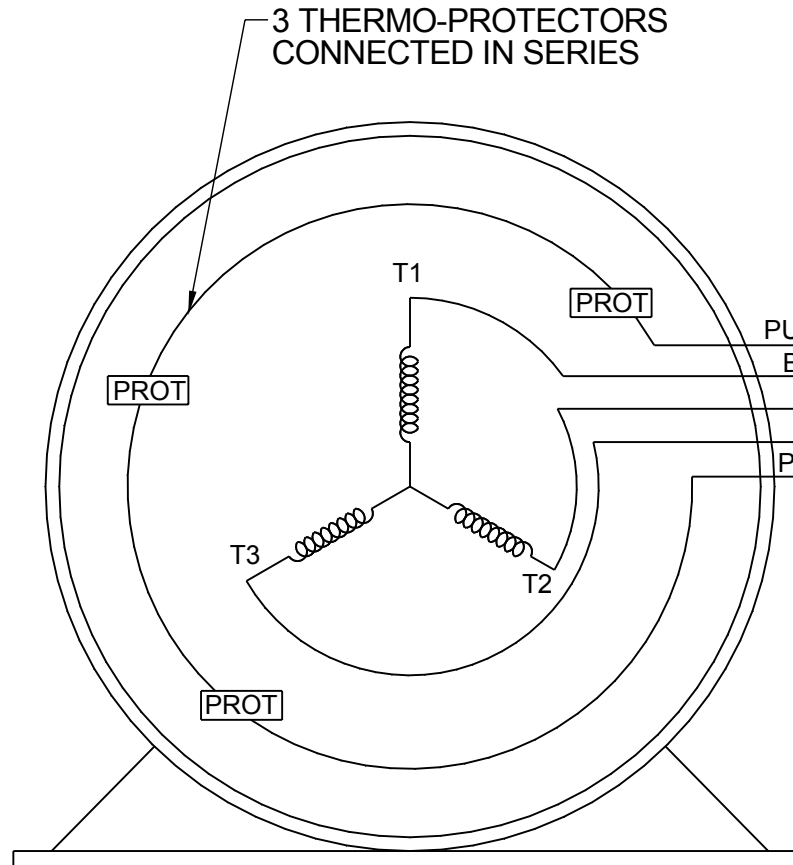
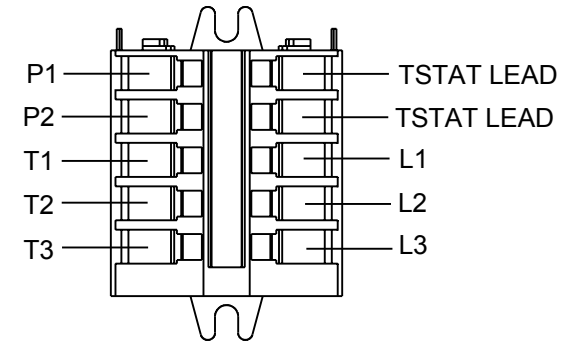
| DRAWING REVISION  |               |               |                |              |               |               |                | TOLERANCES UNLESS OTHERWISE SPECIFIED:                 |      |    |       | DRAWN BY                |                | REGAL™ Regal Beloit America, Inc.                                       |
|---|---------------|---------------|----------------|--------------|---------------|---------------|----------------|--|------|----|-------|-------------------------|----------------|---|
| E   |               |               |                |              |               |               |                | DEC.   | INCH | mm | ANGLE | MSG                     |                |   |
| ECO MU115852  |               |               |                |              |               |               |                | APPROVED BY TBROWN                                     |      |    |       | DATE 04-30-2001         |                | DESCRIPTION<br><b>OUTLINE</b><br>280TC FR. - TENV - C'FACE - 12.50 LAM. |
| ECO DESCRIPTION   |               |               |                |              |               |               |                | DATE 12-03-2013  |      |    |       | APPROVED BY TBROWN      |                |   |
| UPDATED FRAME AND TITLE BLOCK   |               |               |                |              |               |               |                | DATE 12-04-2013  |      |    |       | DATE 05-03-2001         |                | MATERIAL  |
| COPYRIGHT 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. |               |               |                |              |               |               |                | REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [076/.381] |      |    |       | PROCESS/FINISH MU115852 |                |   |
| DASH  | FRAME         | B             | C              | 2F           | 2FF           | BS            | AG             | MACHINED SURFACES: 200 INCH/mm 5.1                     |      |    |       | SIZE B                  | DRAWING NUMBER | SHEET 1 OF 1  |
| 1275  | 284TC         | 12.50 [317.5] | 27.08 [687.83] | ---          | 9.50 [241.3]  | 4.75 [120.65] | 20.40 [518.16] | mm SHOWN IN [BRACKETS]                                 |      |    |       | SS311154                |                |   |
| 1425  | 284TC / 286TC | 13.00 [330.2] | 28.58 [725.93] | 9.50 [241.3] | 11.00 [279.4] | 5.50 [139.7]  | 21.90 [556.26] |  |      |    |       |                         |                |   |

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

**TO REVERSE ROTATION:  
INTERCHANGE ANY TWO LINE  
LEAD CONNECTIONS**

**NOTE FOR FACTORY USE ONLY:  
TO SURGE TEST:  
FOR 3 LEAD COMMON CONNECT:  
CONNECT P1 TO T1 THEN P2 TO L1  
FOR 6 LEAD COMMON CONNECT:  
CONNECT P1 TO BOTH T1  
THEN P2 TO L1**

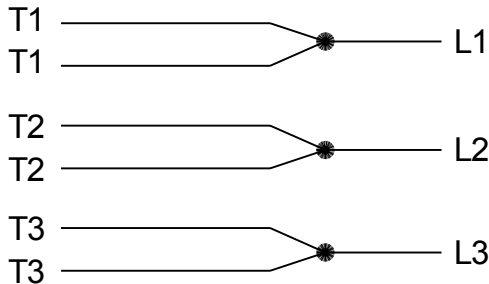
TERMINAL BLOCK WHEN SPECIFIED



- PURPLE P1 (TB1)
- BLACK T1 (U1)
- RED T2 (V1)
- BLUE T3 (W1)
- PURPLE P2 (TB2)

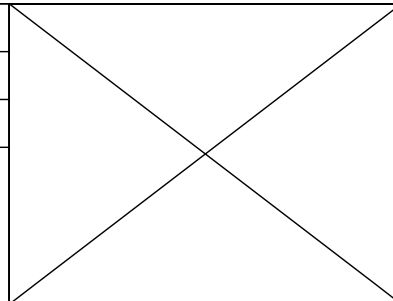
- T2BM
- T6AW
- T6AL
- T6Z
- T4EG
- T4BF
- T8A
- T6H
- T6A
- T4AX
- T4A
- T2A
- T2F

**IF MOTOR HAS MULTIPLE  
T'S PER LEAD CONNECT  
TOGETHER LIKE T'S**



**A-9806 DECAL**

|   |                      |                    |
|---|----------------------|--------------------|
| DRAWING REVISION<br>AB  | REVISION BY<br>AJW   | DATE<br>07-17-2015 |
| ECO<br>ECO-0081632  | APPROVED BY<br>T.VUE | DATE<br>07-17-2015 |
| ECO DESCRIPTION<br>REV'D IEC MARKINGS PER IEC-60034-8   |                      |                    |
| <small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED.<br/>PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF<br/>REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY<br/>INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED,<br/>BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED<br/>TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT<br/>AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL<br/>BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN<br/>RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small> |                      |                    |



|                           |  |                                  |
|---------------------------|--|----------------------------------|
| DRAWN BY<br>LZ            | Regal Beloit America, Inc.   |                                  |
| DATE<br>01-04-1994        |  |                                  |
| APPROVED BY<br>GK         | DESCRIPTION<br><b>CONN DIAGRAM-EXTERNAL</b><br>3Ø-SINGLE VOLT-MOTOR WITH PROTECTOR |                                  |
| DATE<br>01-20-1994        | MATERIAL   |                                  |
| REFERENCE                 | PROCESS/FINISH   |                                  |
| THIRD ANGLE<br>PROJECTION | SIZE<br><b>A</b>   | DRAWING NUMBER<br><b>EE7300T</b> |
|                           |  | SHEET<br>1 OF 1                  |

**CERTIFICATION DATA SHEET**

**Model#:** 284THNA7036 BB      **WINDING#:** K2844139 R2 3  
**CONN. DIAGRAM:** A-EE7300T      **ASSEMBLY:** F1/F2 CAPABLE  
**OUTLINE:** B-SS311154-1275

**TYPICAL MOTOR PERFORMANCE DATA**

| HP | KW   | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|----|------|-----------|----------|-------|-----------|----------|--------|
| 25 | 18.7 | 1800      | 1770     | 284TC | TENV      | K        | INV    |

| PH | Hz | VOLTS | FL AMPS | START TYPE    | DUTY       | INSL | S.F | AMB°C | ELEVATION |
|----|----|-------|---------|---------------|------------|------|-----|-------|-----------|
| 3  | 60 | 575   | 24.8    | INVERTER ONLY | CONTINUOUS | F3   | 1.0 | 40    | 3300      |

| FULL LOAD EFF: 93.6 | 3/4 LOAD EFF: 94.1 | 1/2 LOAD EFF: 93 | GTD. EFF | ELEC. TYPE       | NO LOAD AMPS |
|---------------------|--------------------|------------------|----------|------------------|--------------|
| FULL LOAD PF: 80    | 3/4 LOAD PF: 74    | 1/2 LOAD PF: 62  | 92.4     | SQ CAGE INV DUTY | 11.2         |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE   | B.D. TORQUE   | F.L. RISE°C |
|-------------|-------------------|---------------|---------------|-------------|
| 74.2 LB-FT  | 224               | 163 LB-FT 220 | 330 LB-FT 445 | 96          |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2  | MAX. WK^2 | SAFE STALL TIME | STARTS /HOUR | APPROX. MOTOR WGT |
|------------------------|-------------|-------------|-----------|-----------------|--------------|-------------------|
| 62 dBA                 | 72 dBA      | 4.4 LB-FT^2 | - LB-FT^2 | - SEC.          | -            | 475 LBS.          |

**EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)**

| R1     | R2     | X1     | X2     | XM     |
|--------|--------|--------|--------|--------|
| 0.1425 | 0.1596 | 0.7239 | 0.6783 | 13.965 |

| RM     | ZREF | XR  | TD    | TD0  |
|--------|------|-----|-------|------|
| 1413.6 | 11.4 | 5.5 | 0.012 | 0.24 |

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

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

| BEARINGS |      | GREASE     | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL          | FRAME MATERIAL |
|----------|------|------------|------------|------------|-------------|-------------------------|----------------|
| DE       | OPE  | POLYREX EM | T          | NONE       | NONE        | 1045 HOT ROLLED (C-204) | CAST IRON      |
| BALL     | BALL |            |            |            |             |                         |                |
| 6311     | 6311 |            |            |            |             |                         |                |

| 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 1000:1      |
| INV. HP SPEED RANGE: 2.0 X BASE SPEED |
| ENCODER: PROVISIONS ONLY              |
| NORTHSTAR ST56                        |
| NONE NONE PPR                         |
| BRAKE: PROVISIONS ONLY NONE           |
| NONE P/N NONE                         |

\*  
N  
O  
T  
E  
S  
\*

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

DATE: 06/23/2017 07:36:56 AM  
FORM 3531 REV.3 02/07/99  
\*\* Subject to change without notice.

Data Sheet

Date: 29-06-2017  
 Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Submitted by: FAREEDA DUDEKULA



284HTNA7036

Submittal  
 Data @ 575 V

Motor Load Data

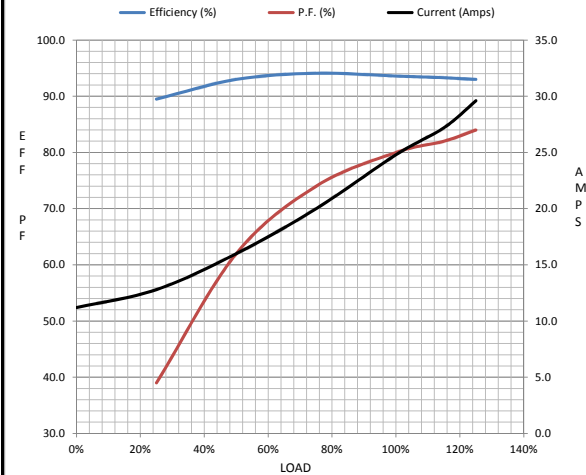
| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |
|----------------|------|------|------|------|------|-------|------|------|
| Current (Amps) | 11.2 | 12.8 | 16.0 | 20.0 | 24.8 | 27.2  | 29.6 | 224  |
| Torque (ft-lb) | 0.00 | 18.5 | 36.8 | 55.5 | 74.2 | 83.7  | 93.2 | 163  |
| RPM            | 1800 | 1792 | 1785 | 1778 | 1770 | 1,766 | 1760 | 0    |
| Efficiency (%) |      | 89.5 | 93.0 | 94.1 | 93.6 | 93.3  | 93.0 |      |
| P.F. (%)       | 3.0  | 39.0 | 62.0 | 74.0 | 80.0 | 82.0  | 84.0 | 31.0 |

Motor Speed Data

|                | LR  | Pull-Up | BD   | Rated | Idle |
|----------------|-----|---------|------|-------|------|
| Speed (RPM)    | 0   | 900     | 1585 | 1770  | 1800 |
| Current (Amps) | 224 | 200     | 144  | 24.8  | 11.2 |
| Torque (ft-lb) | 163 | 125     | 330  | 74.2  | 0.00 |

Information Block

|                             |                        |        |        |         |
|-----------------------------|------------------------|--------|--------|---------|
| HP                          | 25.0                   |        |        |         |
| Sync. RPM                   | 1800                   |        |        |         |
| Frame                       | 284                    |        |        |         |
| Enclosure                   | TENV                   |        |        |         |
| Construction                | TTN                    |        |        |         |
| Voltage                     | 575 V                  |        |        |         |
| Frequency                   | 60 Hz                  |        |        |         |
| Design                      | A                      |        |        |         |
| LR Code letter              | K                      |        |        |         |
| Service Factor              | 1.0                    |        |        |         |
| Temp Rise @ FL              | 96 ° C                 |        |        |         |
| Duty                        | CONT                   |        |        |         |
| Ambient                     | 40 ° C                 |        |        |         |
| Elevation                   | 1,000 feet             |        |        |         |
| Rotor/Shaft wk <sup>2</sup> | 4.4 Lb-Ft <sup>2</sup> |        |        |         |
| Ref Wdg                     | K2844139 R2            |        |        |         |
| Sound Pressure @ 1M         | 62 dBA                 |        |        |         |
| VFD Rating                  | CONSTANT 1000:1        |        |        |         |
| Outline Dwg                 | B-SS311154-1275        |        |        |         |
| Conn. Diag                  | A-EE7300T              |        |        |         |
| Additional Specifications:  |                        |        |        |         |
| 0                           |                        |        |        |         |
| 365THFS8036                 |                        |        |        |         |
| EQUIV CKT (OHMS / PHASE)    |                        |        |        |         |
| R1                          | R2                     | X1     | X2     | Xm      |
| 0.2230                      | 0.2490                 | 1.1310 | 1.0600 | 21.8200 |



Speed -Torque Curve

