

PRODUCT INFORMATION PACKET

Model No: 286THFCD8028

Catalog No: Y570A

Blue Max® Inverter Duty Encoder Motor, 30 HP, 3 Ph, 60 Hz, 230/460 V, 1800 RPM, 286T Frame, TEFC



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Nameplate Specifications

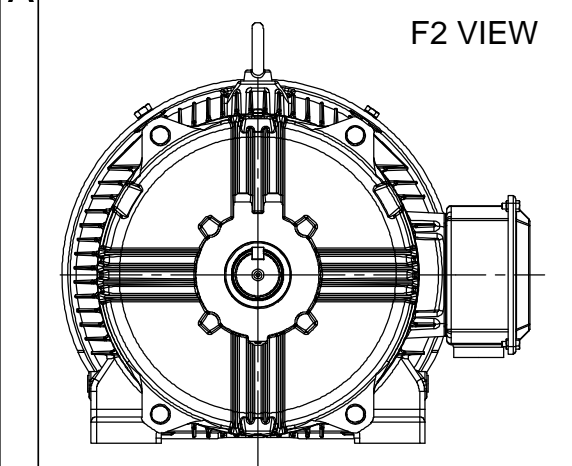
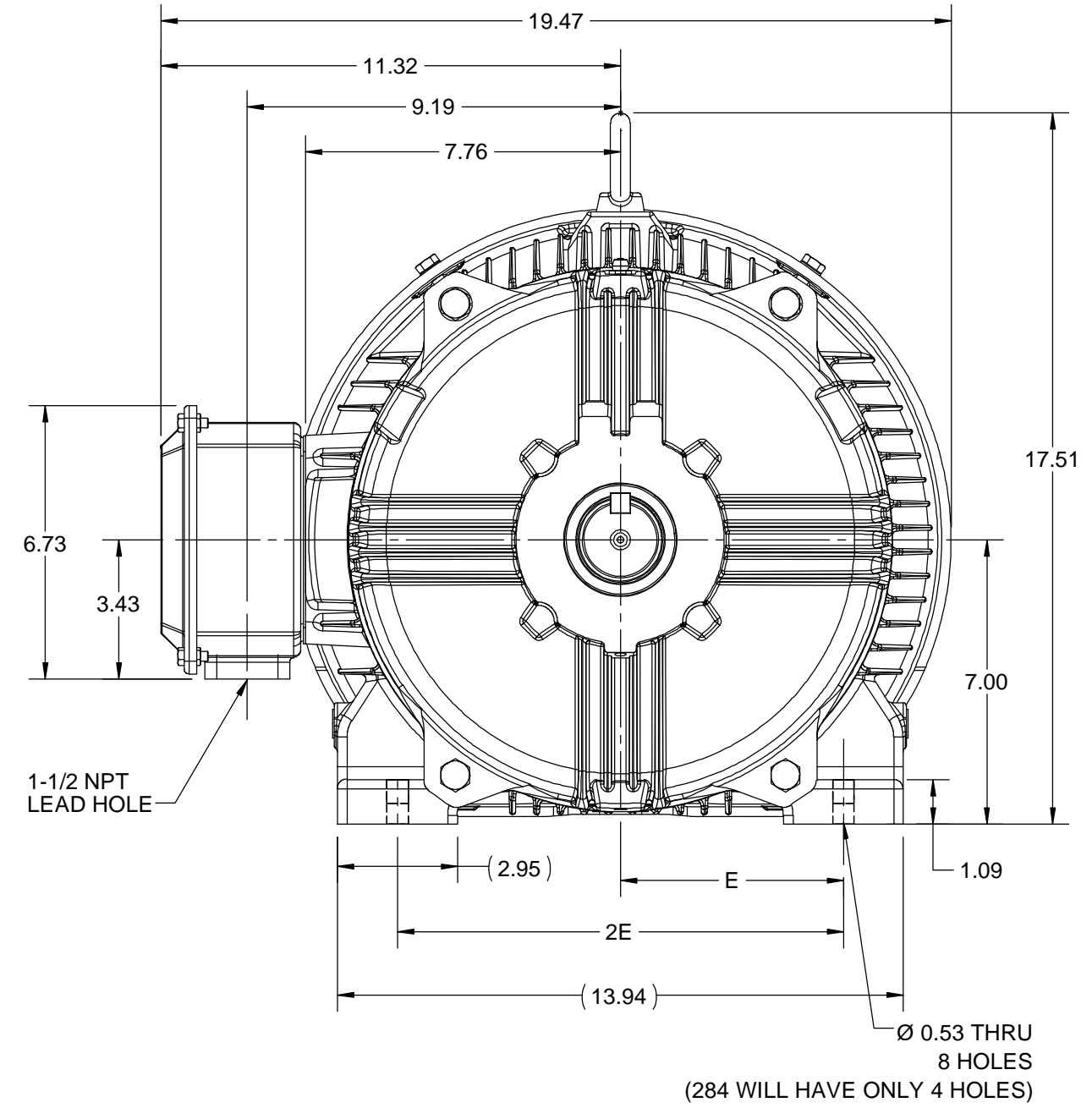
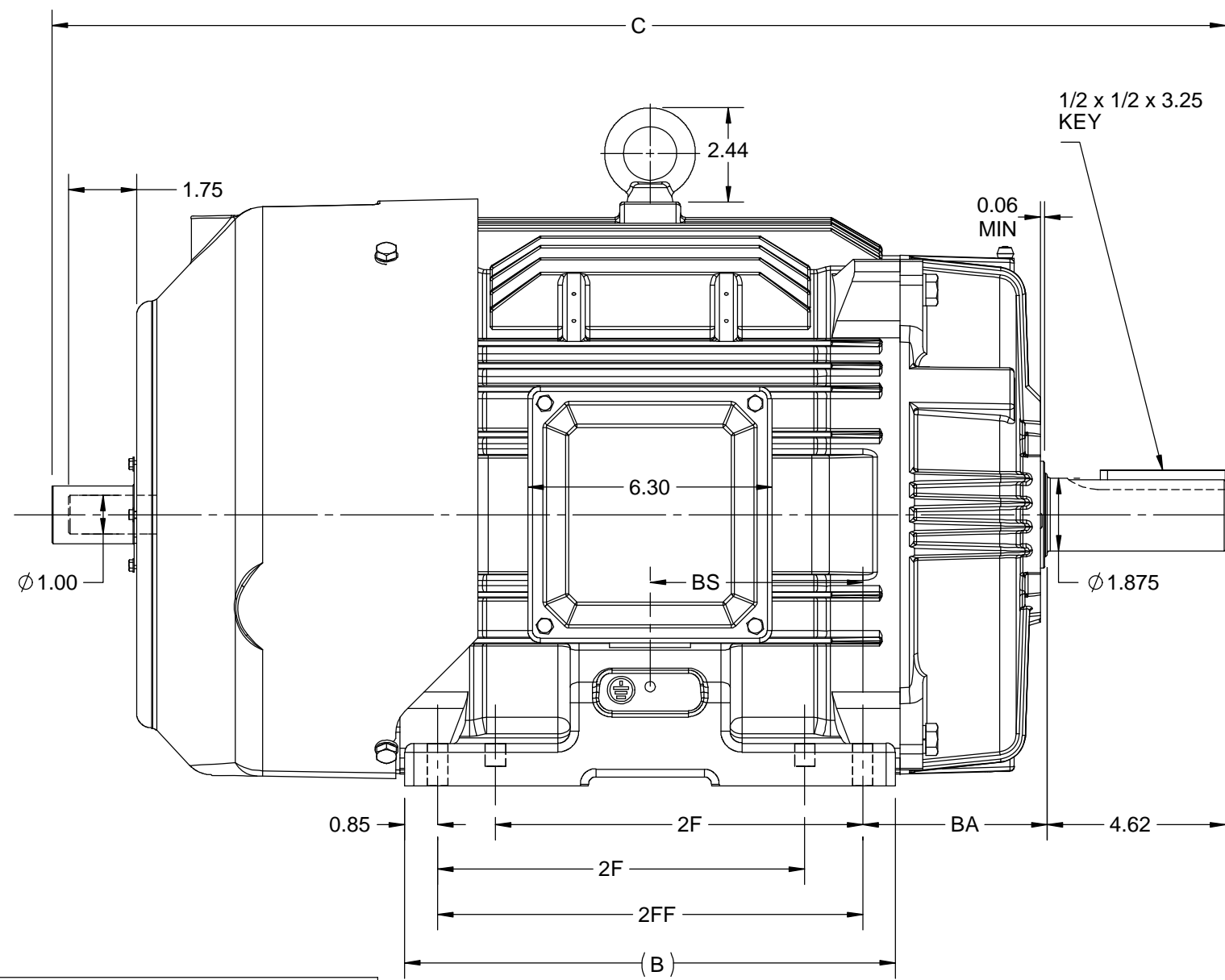
| | | | |
|------------------------|--------------------|----------------------------|------------------------------------|
| Output HP | 30 Hp | Output KW | 22.4 kW |
| Frequency | 60 Hz | Voltage | 230/460 V |
| Current | 70.5/35.5 A | Speed | 1776 rpm |
| Service Factor | 1 | Phase | 3 |
| Efficiency | 93.6 % | Power Factor | 85 |
| Duty | Continuous | Insulation Class | H |
| Design Code | INV | KVA Code | K |
| Frame | 286T | Enclosure | Totally Enclosed Fan Cooled |
| Thermal Protection | Thermostat | Ambient Temperature | 40 °C |
| Drive End Bearing Size | 6311 | Opp Drive End Bearing Size | 6211 |
| UL | Recognized | CSA | Y |
| CE | Y | IP Code | 55 |
| Number of Speeds | 1 | | |

Technical Specifications

| | | | |
|-----------------------|------------------------------------|-------------------|------------------------|
| Electrical Type | Squirrel Cage Inverter Duty | Starting Method | Inverter Only |
| Poles | 4 | Rotation | Reversible |
| Resistance Main | .248 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 | 1.875 in |
| Assembly/Box Mounting | F1/F2 CAPABLE | Inverter Load | CONSTANT 2000:1 |
| Connection Drawing | EE7308T | Outline Drawing | SS313098-200 |

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| DASH NO. | 4 | | 3 | | | | MOUNTING | FRAME | | |
|----------|-------|-------|------|-------|------|-------|----------|-------|----------|------|
| | B | C | E | 2E | 2F | 2FF | | | BA | BS |
| 100 | 10.83 | 28.83 | 5.50 | 11.00 | --- | 9.50 | 4.75 | 4.75 | F1 OR F2 | 284T |
| 200 | 12.68 | 30.33 | | | 9.50 | 11.00 | | | | 5.50 |



| | | |
|---|--------------------|-------------------------------|
| DRAWING REVISION C | REVISION BY VS | REV DATE/© DATE 27-10-2020 |
| ECO ECO-0192938 | APPROVED BY GNK | DATE 27-10-2020 |
| DRAWING UPDATED | | |
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PRIMARY DIMENSIONS ARE INCH
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| | |
|------------------------|--------------------|
| DRAWN BY VS | DATE 29-05-2020 |
| APPROVED BY SBD | DATE 29-05-2020 |
| REFERENCE | |
| THIRD ANGLE PROJECTION | |

| | |
|---|-----------------------------------|
| REGAL Regal Beloit America, Inc. | |
| DESCRIPTION OUTLINE 284/286T FR-TEFC-CAST IRON-TACH MTG. | |
| MATERIAL | PROCESS/FINISH |
| SIZE B | DRAWING NUMBER SS313098 |
| | SHEET 1 OF 1 |

HIGH VOLTAGE



**THREE PHASE
DUAL VOLTAGE MOTOR**

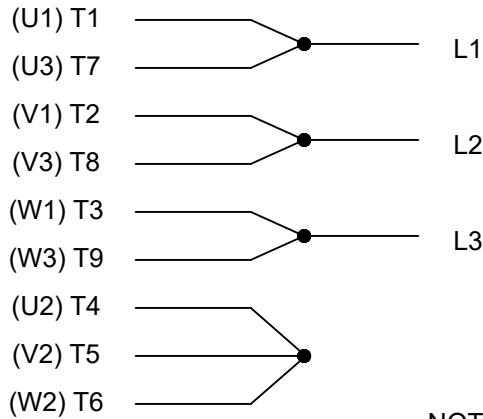
THERMO-PROTECTORS
CONNECTED IN SERIES



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 T | REVISION BY ZR | DATE 01-14-2019 | | DRAWN BY SMC | Regal Beloit America, Inc. |
| ECO ECO-0159915 | APPROVED BY DR | DATE 01-15-2019 | | DATE 05-13-1992 | |
| ECO DESCRIPTION ADDED TERMINAL CONNECTION DIAGRAM | | | | APPROVED BY TB | DESCRIPTION CONN DIAGRAM-INTERNAL 3 PHASE - DUAL VOLTAGE MOTOR |
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| | | | REFERENCE EE7308/EE7300 | SIZE A | DRAWING NUMBER EE7308T |
| | | | THIRD ANGLE PROJECTION | | |



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

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER:
ORDER #: _____
CONN. DIAGRAM: EE7308T
OUTLINE: SS313098-200
WINDING: HA31804026 NONE 2
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: 286THFCD8028
CAT #: Y570A
CUSTOMER PART #: _____
MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

| HP | KW | SYNC RPM | FL RPM | FRAME | ENCLOSURE | TYPE | KVA CODE | DESIGN |
|----|------|----------|--------|-------|-----------|------|----------|--------|
| 30 | 22.4 | 1800 | 1776 | 286T | TEFC | TFS | K | INV |

| PH | HZ | VOLTS | AMPS | START TYPE | DUTY | INSL | S.F. | AMB | ELEV. |
|----|----|---------|-----------|---------------|------|------|------|-----|-------|
| 3 | 60 | 230/460 | 70.5/35.5 | INVERTER ONLY | CONT | H | 1.15 | 40 | 3300 |

| F.L. EFF | 3/4 LD EFF | 1/2 LD EFF | GTD EFF | ELECT. TYPE |
|----------|------------|------------|---------|------------------|
| 93.6 | 93.7 | 93.1 | 93.0 | SQ CAGE INV DUTY |
| F.L. PF | 3/4 LD PF | 1/2 LD PF | | |
| 85.0 | 79.9 | 68.9 | | |

| F.L. TORQUE | LR AMPS @ 460 V | L.R. TORQUE | B.D. TORQUE | F.L. RISE (°C) |
|-------------|-----------------|-------------|-------------|----------------|
| 88.6 LB-FT | 303 | 146 LB-FT | 333 LB-FT | 63 |
| | | 165% | 376% | |

| SOUND PRESSURE @ 3 FT. | POWER | ROTOR WK ² | MAX. LOAD WK ² | SAFE STALL TIME | STARTS/HOUR | APROX. | MOTOR WGT |
|------------------------|--------|--------------------------|---------------------------|-----------------|-------------|---------|-----------|
| 62 dBA | 71 dBA | 1.194 LB-FT ² | 45 LB-FT ² | 20 SEC. | 2 | 450 LB. | |

***** SUPPLEMENTAL INFORMATION *****

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

| DE | ODE | GREASE | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL | FRAME MATERIAL |
|------|------|------------|------------|------------|-------------|-------------------------|----------------|
| BALL | BALL | POLYREX EM | T | NONE | NONE | 1045 HOT ROLLED (C-204) | CAST IRON |
| 6311 | 6211 | | | | | | |

| THERMOSTATS | PROTECTORS | WDG RTD's | BRG RTD's | THERMISTORS | CONTROL | SPACE HEATERS |
|--------------|------------|-----------|-----------|-------------|---------|---------------|
| TSTATS (NIC) | 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 |
|--------------|--------------|--------------|--------------|--------------|--------------------|-------|
| 0.155 | 0.107 | 0.671 | 0.605 | 17.577 | 0.150 | ODE |

| | | | | | | |
|---------------------------------|---|--|--|--|--|--|
| * N O T E S * | INVERTER TORQUE: CONSTANT 2000:1 INV. HP SPEED RANGE: 2.0 X BASE SPEED | | | | | |
| | ENCODER: NONE | | | | | |
| | NONE | | | | | |
| | NONE PPR | | | | | |

| | |
|---------------------------|---|
| PREPARED BY: _____ | BRAKE: NONE |
| DATE: 9/27/2021 | NONE NONE |
| | FT-LB: NA |
| | VOLTAGE: NONE |
| FORM: 3531 REV. 4 2/27/06 | UL: V-INS, CONST, OVERHEAT PRT DEV UL REC |

Data Sheet

Date: 9/27/2021
 Customer: _____
 Attention: _____
 Submitted by: _____



286THFCD8028

Submittal

Data @ 460 V

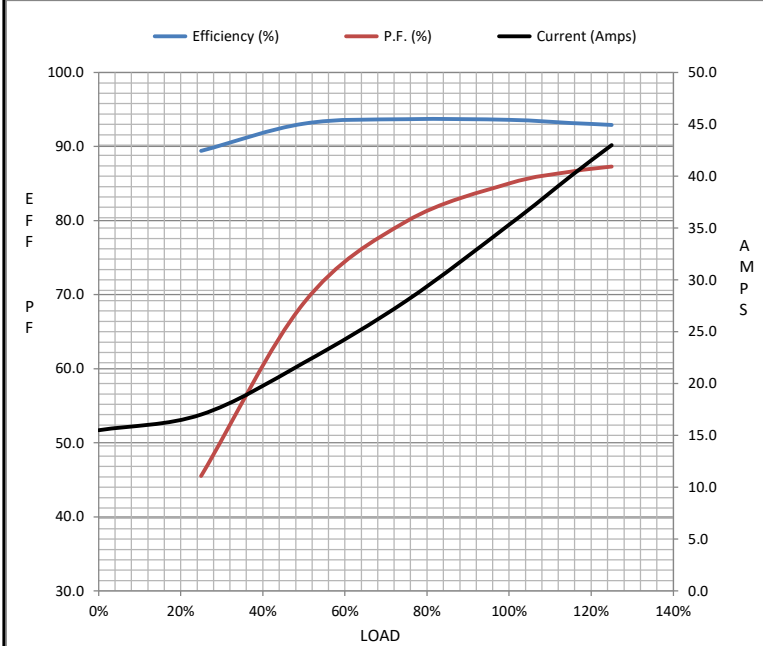
Motor Load Data

| Load | 0% | 25% | 50% | 75% | 100% | 115% | 125% | LR |
|----------------|------|------|------|------|------|-------|------|------|
| Current (Amps) | 15.5 | 17.0 | 22.0 | 28.0 | 35.3 | 40.0 | 43.0 | 303 |
| Torque (ft-lb) | 0.00 | 22.0 | 44.0 | 66.0 | 88.6 | 102 | 111 | 146 |
| RPM | 1800 | 1794 | 1788 | 1782 | 1776 | 1,772 | 1769 | 0 |
| Efficiency (%) | | 89.4 | 93.1 | 93.7 | 93.6 | 93.2 | 92.9 | |
| P.F. (%) | 4.6 | 45.5 | 68.9 | 79.9 | 85.0 | 86.6 | 87.3 | 32.8 |

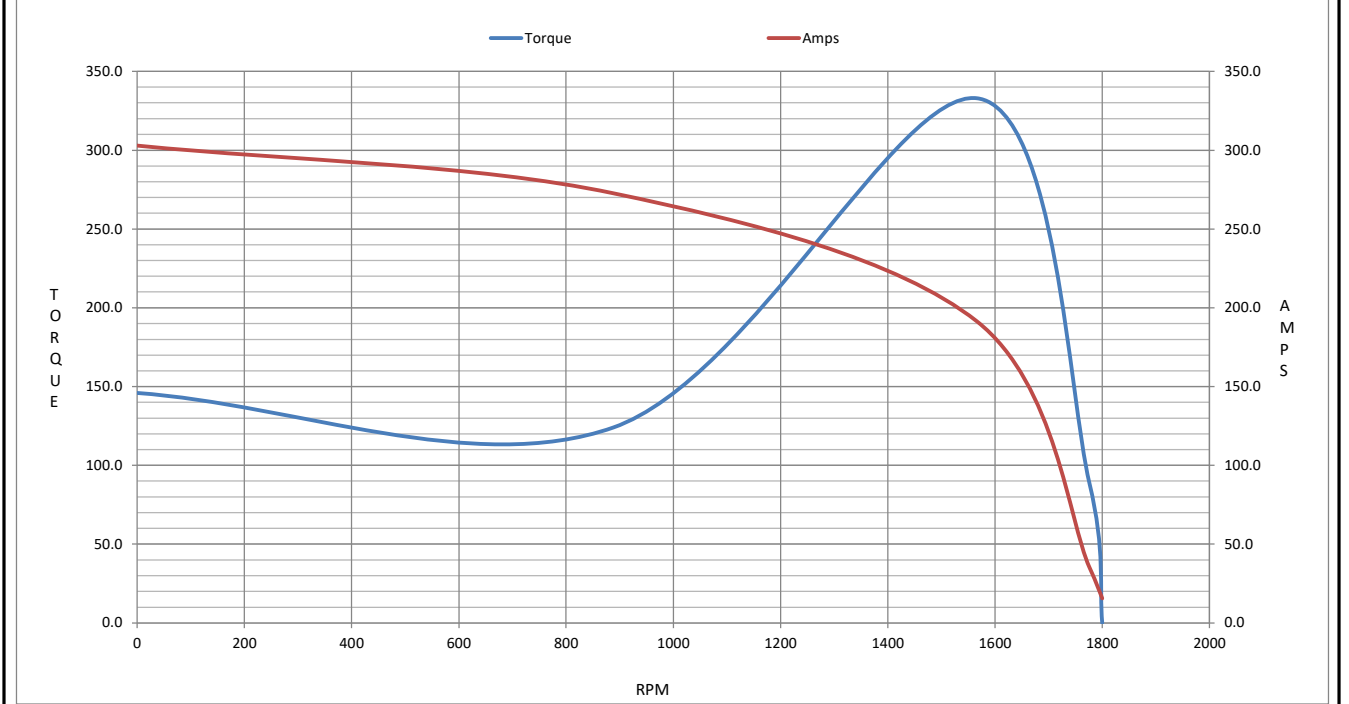
Motor Speed Data

| | LR | Pull-Up | BD | Rated | Idle |
|----------------|-----|---------|------|-------|------|
| Speed (RPM) | 0 | 888 | 1566 | 1776 | 1800 |
| Current (Amps) | 303 | 273 | 192 | 35.3 | 15.5 |
| Torque (ft-lb) | 146 | 124 | 333 | 88.6 | 0.00 |

| Information Block | | | | |
|-----------------------------|-------------------------|--------|--------|---------|
| HP | 30.0 | | | |
| Sync. RPM | 1800 | | | |
| Frame | 286 | | | |
| Enclosure | TEFC | | | |
| Construction | TFS | | | |
| Voltage | 230/460 V | | | |
| Frequency | 60 Hz | | | |
| Design | INV | | | |
| LR Code letter | K | | | |
| Service Factor | 1.15 | | | |
| Temp Rise @ FL | 63 ° C | | | |
| Duty | CONT | | | |
| Ambient | 40 ° C | | | |
| Elevation | 3,300 feet | | | |
| Rotor/Shaft wk ² | 1.194 Lb-F ² | | | |
| Ref Wdg | HA31804026 NONE | | | |
| Sound Pressure @ 1M | 62 dBA | | | |
| VFD Rating | CONSTANT 2000:1 | | | |
| Outline Dwg | SS313098-200 | | | |
| Conn. Diag | EE7308T | | | |
| Additional Specifications: | | | | |
| 0 | | | | |
| 0 | | | | |
| EQUIV CKT (OHMS / PHASE) | | | | |
| R1 | R2 | X1 | X2 | Xm |
| 0.1550 | 0.1070 | 0.6710 | 0.6050 | 17.5770 |



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 : 286THFCD8028

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

Catalog No : Y570A

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