

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: 184TTFW16012

Catalog No: C204C

XRI® General Purpose General Purpose Motor, 5 & 3 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V,  
3600 & 3000 RPM, 184TC Frame, TEFC



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**RegalRexnord**

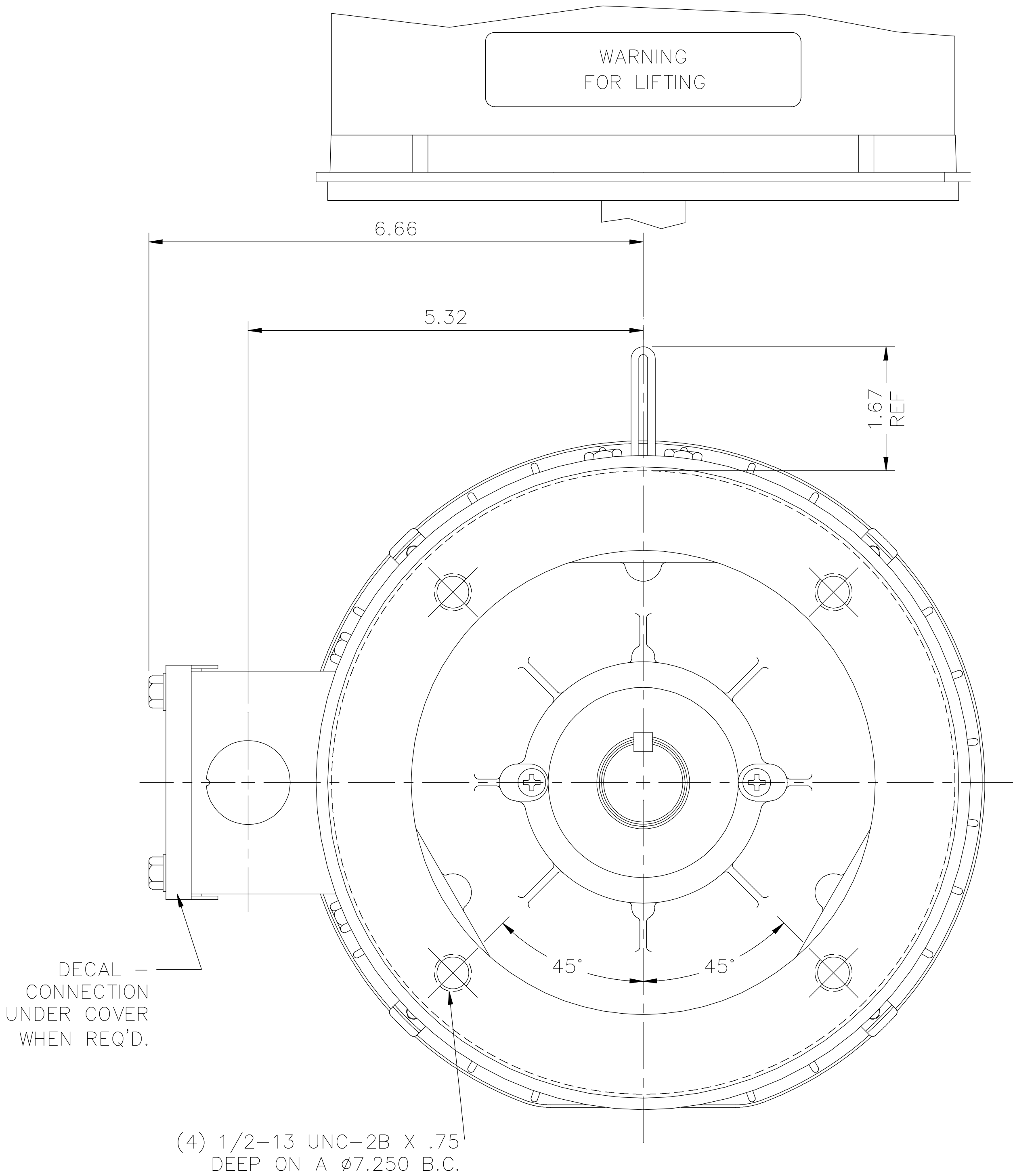
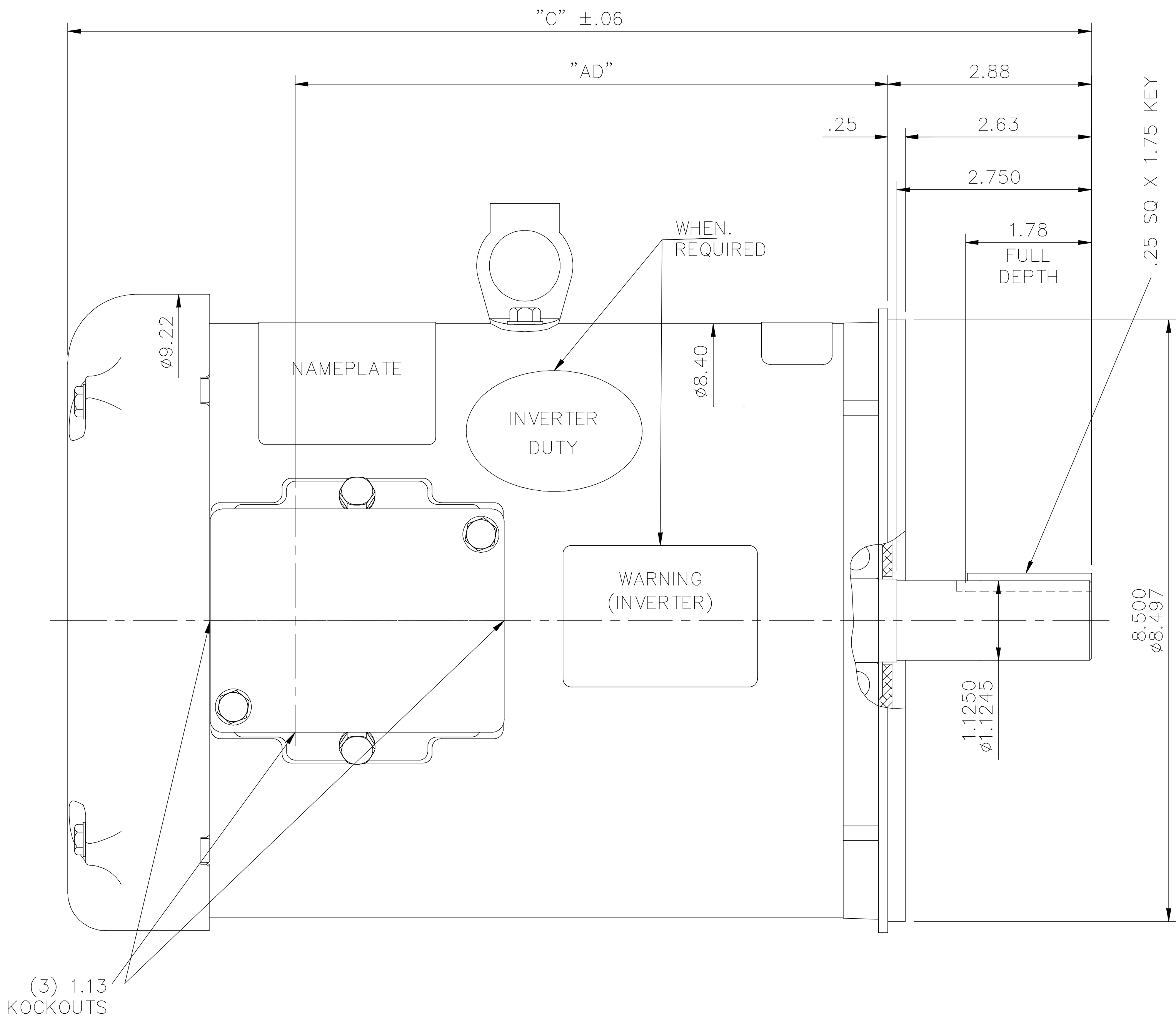
### Nameplate Specifications

|                        |                  |                            |                             |
|------------------------|------------------|----------------------------|-----------------------------|
| Phase                  | 3                | Output HP                  | 5 & 3 Hp                    |
| Output KW              | 3.7 & 2.2 kW     | Voltage                    | 230/460 & 190/380 V         |
| Speed                  | 3495 & 2920 rpm  | Service Factor             | 1.15 & 1.0                  |
| Frame                  | 184TC            | Enclosure                  | Totally Enclosed Fan Cooled |
| Thermal Protection     | No Protection    | Efficiency                 | 88.5 & 87.5 %               |
| Ambient Temperature    | 40 °C            | Frequency                  | 60 & 50 Hz                  |
| Current                | 12/6 & 9.2/4.6 A | Power Factor               | 89.5                        |
| Duty                   | Continuous       | Insulation Class           | F                           |
| Design Code            | B                | KVA Code                   | J                           |
| Drive End Bearing Size | 6206             | Opp Drive End Bearing Size | 6205                        |
| 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                 | 2                            | Rotation              | Reversible       |
| Mounting              | Round                        | Motor Orientation     | Horizontal       |
| Drive End Bearing     | Ball                         | Opp Drive End Bearing | Ball             |
| Frame Material        | Rolled Steel                 | Shaft Type            | T                |
| Overall Length        | 14.97 in                     | Frame Length          | 9.50 in          |
| Shaft Diameter        | 1.125 in                     | Shaft Extension       | 2.88 in          |
| Assembly/Box Mounting | F1 ONLY                      | Inverter Load         | CONSTANT 2:1     |
| Connection Drawing    | 005010.01ME                  | Outline Drawing       | 035570-950       |

035570



GASKETS THROUGHOUT  
MAXIMUM FACE RUNOUT TO BE .004 T.I.R.  
MAXIMUM PILOT ECCENTRICITY TO BE .004 T.I.R.  
PERMISSIBLE SHAFT RUNOUT TO BE .002 T.I.R.

| DASH NO. | "C"   | "AD"  |
|----------|-------|-------|
| 750      | 12.97 | 6.88  |
| 800      | 13.47 | 7.38  |
| 850      | 13.97 | 7.88  |
| 900      | 14.47 | 8.38  |
| 950      | 14.97 | 8.88  |
| 1000     | 15.47 | 9.38  |
| 1050     | 15.97 | 9.88  |
| 1100     | 16.47 | 10.38 |
| 1150     | 16.97 | 10.88 |

|   |                      |              |          |                             |                 |   |  |        |                    |        |
|---|----------------------|--------------|----------|-----------------------------|-----------------|---|--|--------|--------------------|--------|
|   |                      |              | ST       | TOLERANCES UNLESS SPECIFIED |                 |  |  |        | DRAWN VV 09/17/07  |        |
|   |                      |              |          | DEC.                        | INCHES          |   |  |        | CHK YS 09/17/07    |        |
|   |                      |              |          | .X                          | ±.1             | TITLE<br>OUTLINE – 180TC FRAME<br>TEFC – "C" FACE                                     |  |        | APPD               |        |
|   |                      |              |          | .XX                         | ±.03            |   |  |        | SCALE 1=2          |        |
|   |                      |              |          | .XXX                        | ±.005           |   |  |        | REF 035537         |        |
| F   | LABELS ADDED PER ECO | SD 8/12/2019 |          | .XXXX                       | ±.0005          | MAT'L. GENERAL PURPOSE  |  |        | FMF                |        |
| NO.   | REVISION             | BY & DATE    | CHK      | ANG                         | ±1/2"           | FINISH  |  |        | PREV               |        |
| 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<br>THIS IS AN ELECTRONICALLY GENERATED DOCUMENT – DO NOT SCALE THIS PRINT |                      |              | RFP      |                             | CAD FILE 035570 |   |  | SIZE B | DRAWING NO. 035570 | REV. F |
|   |                      |              | DIST NLV |                             |                 |   |  |        |                    |        |

VIEW FROM OUTSIDE OF MOTOR AT SWITCH END.



## LINE LEADS



| VOLTAGE | L1    | L2    | L3    | JOIN & INSULATE               |
|---------|-------|-------|-------|-------------------------------|
| HIGH    | T1    | T2    | T3    | (T4,T7)<br>(T5,T8)<br>(T6,T9) |
| LOW     | T1,T7 | T2,T8 | T3,T9 | T4,T5,T6                      |

TOLERANCES  
UNLESS SPECIFIED

DEC. INCHES

.X ±.1

.XX ±.01

.XXX ±.005

.XXXX ±.0005

ANG ±1/2"

MARATHON  
ELECTRIC

DRAWN RDW 04/12/02

CHK

APPD

SCALE 1=1

REF FIG.2-51

FMF

PREV

TITLE  
EXTERNAL WIRING DIAGRAM  
3 PHASE W/O PROTECTOR

MAT'L. DECAL - 004014

FINISH

NO. REVISION

BY &amp; DATE

CHK

ANG

±1/2"

FINISH

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RFP 04/12/02

DIST

CAD FILE 00501001ME

SIZE

A

DRAWING NO.

005010-01ME

REV.

## CERTIFICATION DATA SHEET

Model#: 184TTFW16012 AA  
 CONN. DIAGRAM: 005010.01ME  
 OUTLINE: 035570-950

WINDING#: T82103 R1 3  
 ASSEMBLY: F1 ONLY

## TYPICAL MOTOR PERFORMANCE DATA

| HP  | KW        | SYNC. RPM | F.L. RPM  | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|-----|-----------|-----------|-----------|-------|-----------|----------|--------|
| 5&3 | 3.70&2.24 | 3600      | 3495&2920 | 184TC | 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 | 12/6&9.2/4.6 | LINE OR<br>INVERTER | CONTINUOU<br>S | F4   | 1.15/1.0 | 40    | 3300      |

|                             |                    |                    |          |                   |              |
|-----------------------------|--------------------|--------------------|----------|-------------------|--------------|
| FULL LOAD EFF:<br>88.5&87.5 | 3/4 LOAD EFF: 89.1 | 1/2 LOAD EFF: 87.9 | GTD. EFF | ELEC. TYPE        | NO LOAD AMPS |
| FULL LOAD PF:<br>89.5&86    | 3/4 LOAD PF: 87.5  | 1/2 LOAD PF: 81.1  | 86.2     | SQ CAGE INV RATED | 3.4 / 1.7    |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE  | B.D. TORQUE  | F.L. RISE°C |
|-------------|-------------------|--------------|--------------|-------------|
| 7.5 LB-FT   | 92 / 46           | 16 LB-FT 213 | 26 LB-FT 347 | 55          |

| SOUND PRESSURE<br>@ 3 FT. | SOUND POWER | ROTOR WK^2  | MAX. WK^2  | SAFE STALL TIME | STARTS<br>/HOUR | APPROX. MOTOR<br>WGT |
|---------------------------|-------------|-------------|------------|-----------------|-----------------|----------------------|
| 75 dBA                    | 85 dBA      | 0.3 LB-FT^2 | 13 LB-FT^2 | 15 SEC.         | 2               | 125 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            |
|--------------------|---------------------|---------------|-------------|----------------|-----------------------|---------------|---------|------------------|
| C-FACE             | STANDARD            | ROUND         | 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        | AISI 1045 (C-240) | ROLLED STEEL      |
| 6206     | 6205 |            |            |            |             |                   |                   |

| 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

\*  
N  
O  
T  
E  
S  
\*

|                               |
|-------------------------------|
| INVERTER TORQUE: CONSTANT 2:1 |
| 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 07:30:14 AM  
 FORM 3531 REV.3 02/07/99  
 \*\* Subject to change without notice.

## Data Sheet

Date: 16-06-2017

Customer:

Attention:

Submitted by: FAREEDA DUDEKULA



184TTFW16012

Submittal

Data @ 460 V

## Motor Load Data

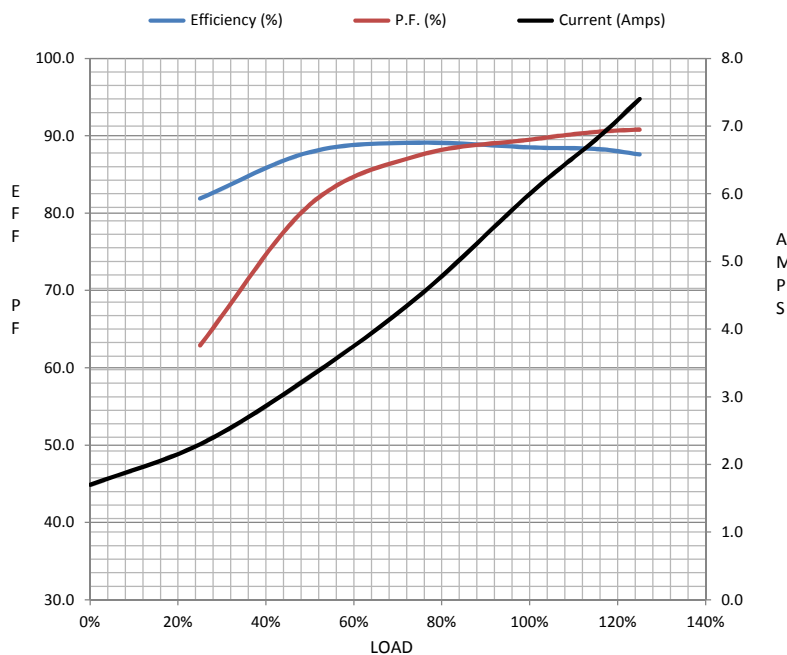
| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |  |
|----------------|------|------|------|------|------|-------|------|------|--|
| Current (Amps) | 1.70 | 2.30 | 3.3  | 4.5  | 6.0  | 6.8   | 7.4  | 46.0 |  |
| Torque (ft-lb) | 0.00 | 1.80 | 3.7  | 5.6  | 7.5  | 8.7   | 9.5  | 16.0 |  |
| RPM            | 3600 | 3576 | 3551 | 3526 | 3495 | 3,477 | 3463 | 0    |  |
| Efficiency (%) |      | 81.9 | 87.9 | 89.1 | 88.5 | 88.3  | 87.6 |      |  |
| P.F. (%)       | 12.5 | 62.9 | 81.1 | 87.5 | 89.5 | 90.5  | 90.8 | 45.5 |  |

## Motor Speed Data

|                | LR   | Pull-Up | BD   | Rated | Idle |
|----------------|------|---------|------|-------|------|
| Speed (RPM)    | 0    | 170     | 2850 | 3495  | 3600 |
| Current (Amps) | 46.0 | 47.0    | 30.0 | 6.0   | 1.70 |
| Torque (ft-lb) | 16.0 | 15.5    | 26.0 | 7.5   | 0.00 |

## Information Block

|                            |                   |        |        |          |
|----------------------------|-------------------|--------|--------|----------|
| HP                         | 5.0               |        |        |          |
| Sync. RPM                  | 3600              |        |        |          |
| Frame                      | 180               |        |        |          |
| Enclosure                  | TEFC              |        |        |          |
| Construction               | TFW               |        |        |          |
| Voltage                    | 230/460#190/38( V |        |        |          |
| Frequency                  | 60 Hz             |        |        |          |
| Design                     | B                 |        |        |          |
| LR Code letter             | J                 |        |        |          |
| Service Factor             | 1.15              |        |        |          |
| Temp Rise @ FL             | 55 ° C            |        |        |          |
| Duty                       | CONT              |        |        |          |
| Ambient                    | 40 ° C            |        |        |          |
| Elevation                  | 1,000 feet        |        |        |          |
| Rotor/Shaft wk²            | 0.30 Lb-Ft²       |        |        |          |
| Ref Wdg                    | T82103 R1         |        |        |          |
| Sound Pressure @ 1M        | 75 dBA            |        |        |          |
| VFD Rating                 | CONSTANT 2:1      |        |        |          |
| Outline Dwg                | 035570-950        |        |        |          |
| Conn. Diag                 | 005010.01ME       |        |        |          |
| Additional Specifications: |                   |        |        |          |
| 0                          |                   |        |        |          |
| 365THFS8036                |                   |        |        |          |
| EQUIV CKT (OHMS / PHASE)   |                   |        |        |          |
| R1                         | R2                | X1     | X2     | Xm       |
| 1.3920                     | 1.1300            | 4.8110 | 1.8460 | 124.9600 |



## Speed -Torque Curve

