

# **BALDOR**® • **RELIANCE**

## **Product Information Packet**

# **CEM4400TS**

**100HP, 1785RPM, 3PH, 60HZ, 405TSC, TEFC, F1**

| Part Detail |         |                |         |             |           |               |                |
|-------------|---------|----------------|---------|-------------|-----------|---------------|----------------|
| Revision:   | A       | Status:        | PRD/A   | Change #:   |           | Proprietary:  | No             |
| Type:       | AC      | Prod. Type:    | A40064M | Elec. Spec: | A40WG0692 | CD Diagram:   | 416820-002     |
| Enclosure:  | TEFC    | Mfg Plant:     |         | Mech. Spec: |           | Layout:       | 611740-003-SH1 |
| Frame:      | 405TSC  | Mounting:      | F1      | Poles:      | 04        | Created Date: | 08-08-2014     |
| Base:       |         | Rotation:      | R       | Insulation: | B         | Eff. Date:    | 09-26-2016     |
| Leads:      | 3#2,6#4 |                |         |             |           | Replaced By:  |                |
| Literature: |         | Elec. Diagram: |         |             |           |               |                |

|                   |  |
|-------------------|--|
| Nameplate NP2496L |  |
| MOBIL POLYREX EM  |  |
|                   |  |

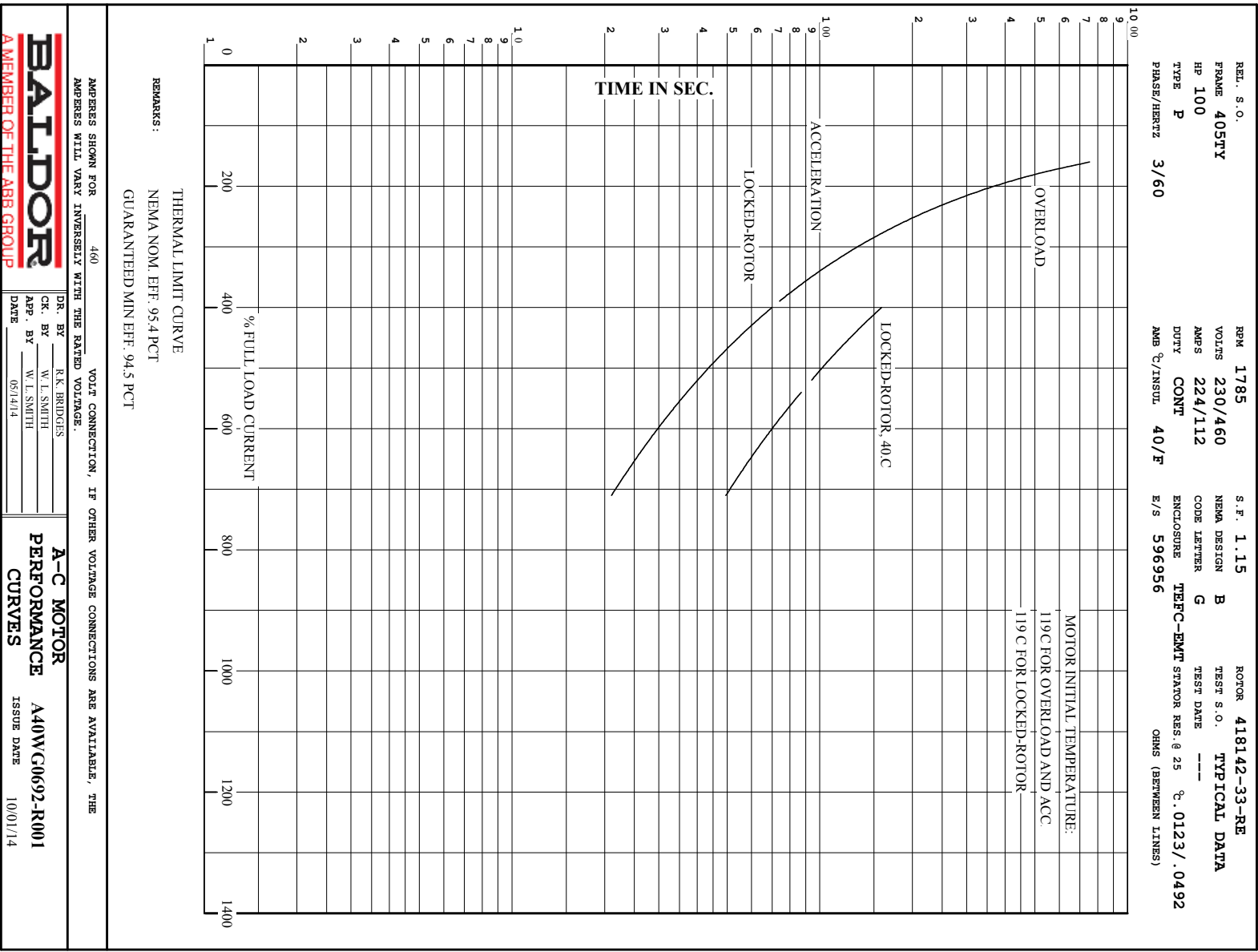
| Nameplate NP2383L       |            |      |         |               |               |         |                       |        |             |   |
|-------------------------|------------|------|---------|---------------|---------------|---------|-----------------------|--------|-------------|---|
| CAT.NO.                 | CEM4400TS  |      |         | SPEC NO.      | A40-6214-0692 |         |                       |        |             |   |
| HP                      | 100        | AMPS | 224/112 |               | VOLTS         | 230/460 |                       | DESIGN | B           |   |
| FRAME                   | 405TSC     | RPM  | 1785    | HZ            | 60            | AMB     | 40                    | SF     | 1.15        |   |
| DRIVE END BEARING       | 80BC03J30X |      |         | PHASE         | 3             | DUTY    | CONT                  |        | INSUL.CLASS | F |
| OPP D.E. BEARING        | 80BC03J30X |      |         | TYPE          | P             | ENCL    | TEFC                  | CODE   | G           |   |
| SER.NO.                 |            |      |         | POWER FACTOR  | 87            |         | NEMA-NOM-EFFICIENCY   | 95.4   |             |   |
| NEMA NOM/CSA QUOTED EFF |            |      |         | MAX CORR KVAR | 18            |         | GUARANTEED EFFICIENCY | 94.5   |             |   |
|                         |            |      |         | MOTOR WEIGHT  | 1326          |         |                       |        |             |   |

| Parts List  |                                       |          |
|-------------|---------------------------------------|----------|
| Part Number | Description                           | Quantity |
| SA285085    | SA A40-6214-0692                      | 1.000 EA |
| RA271342    | RA A40-6214-0692                      | 1.000 EA |
| 421948032   | LABEL, MYLAR                          | 1.000 EA |
| NP2496L     | MOTOR LUBE NAMEPLATE                  | 1.000 EA |
| 000613006PU | N/P (RELEASE QTY 10,000) UL CSA LABEL | 1.000 EA |
| 000692000VD | LABEL WARNING                         | 1.000 EA |
| NP2383L     | SUPER-E ,SS, CC, CSA-C US, CSA EEV    | 1.000 EA |
| 089412051B  | BRKT 400 089412051WCD                 | 1.000 EA |
| 415072001B  | CLAMP                                 | 1.000 EA |
| 083198006A  | FANCV-PLASTIC400 KB@45                | 1.000 EA |
| 034180012DA | KEY 1X4X1/4X1-1/2 L                   | 1.000 EA |
| 078548001R  | FAN KB 234/150 (84) 400               | 1.000 EA |
| 004824015A  | GREASE POLYREX EM                     | 0.880 LB |
| 032018016EK | HHCS 5/8-11X2 PLATED                  | 4.000 EA |
| 032018010CK | HHCS 3/8-16X1-1/4 PLTD.               | 4.000 EA |
| 032018030CK | HHCS 3/8-16X3-3/4 PLATED              | 3.000 EA |
| 415096002A  | CPLG 1/8 HEX TYPE                     | 1.000 EA |
| 410700000DA | WAVY SPRING WASHER                    | 1.000 EA |
| 035000001G  | GREASE RELIEF FITTING, ALEMITE 317400 | 1.000 EA |
| 034000014AB | WSH ID.406 OD.812 TH.065              | 4.000 EA |
| 034530060AB | P/NIP 1/8X7-1/2 GALV.                 | 1.000 EA |
| 034690001AB | SQHDPLG, COND                         | 1.000 EA |
| 034600001AA | BUSH 1/4TO1/8 BLACK                   | 1.000 EA |
| 034690001AB | SQHDPLG, COND                         | 1.000 EA |

| Parts List (continued) |   |          |
|------------------------|---|----------|
| Part Number            | Description                             | Quantity |
| 034600001AA            | BUSH 1/4TO1/8 BLACK                     | 1.000 EA |
| 089412062A             | BRKT 400 089416053WCD                   | 1.000 EA |
| 032018016EK            | HHCS 5/8-11X2 PLATED                    | 4.000 EA |
| 032018032CK            | HHCS 3/8-16X4 PLATED                    | 3.000 EA |
| 035000001G             | GREASE RELIEF FITTING, ALEMITE 317400   | 1.000 EA |
| 077176000L             | C/BOX, PAINTED 360-400                  | 1.000 EA |
| 077176001A             | CBOXC, PAINTED 360-400                  | 1.000 EA |
| 043292000AJ            | GASK 320-400                            | 1.000 EA |
| 402731001A             | GASK 360-440                            | 1.000 EA |
| 418150003A             | GREASE FITTING CAP                      | 1.000 EA |
| 032018005AK            | HHCS 1/4-20X5/8 PLATED                  | 4.000 EA |
| 032018008CK            | HHCS 3/8-16X1L PLATED                   | 4.000 EA |
| 035000001A             | ALFTG 1/8" 1610-BL                      | 1.000 EA |
| 415000103D             | T/LUG #4AWG-1/0AWG W/HOLE FOR .250 BOLT | 1.000 EA |
| 406099000A             | PLUG - FAN COVER 320-440                | 1.000 EA |
| 033512004LB            | HHTTS 1/4-20X1/2 PLTD.                  | 1.000 EA |
| 048977006C             | GRFTG - XP                              | 1.000 EA |
| 035000001A             | ALFTG 1/8" 1610-BL                      | 1.000 EA |
| 418150003A             | GREASE FITTING CAP                      | 1.000 EA |
| MG1000Y03              | MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,     | 1.000 GA |
| 033775004EA            | DRSCR #6-1/4 304 S.S.                   | 2.000 EA |
| 034180022GA            | KEY 1/2X1/2X2-3/4 L                     | 1.000 EA |
| 604797045              | STD. 400 FRAME SKID                     | 1.000 EA |
| 032510024D             | CARRIAGE BOLT - 444                     | 2.000 EA |

Product Information Packet: CEM4400TS - 100HP,1785RPM,3PH,60HZ,405TSC,TEFC,F1

|             |                          |          |
|-------------|--------------------------|----------|
| 034001014AB | FLAT WASHER 3/8"PLATED   | 2.000 EA |
| 034001016AB | WSHR .562ID 1.375OD .109 | 2.000 EA |
| 033300014AC | HEX NUT, SHIPPING - 400  | 2.000 EA |
| 604797003C  | SHIPPING BAG             | 1.000 EA |



**BALDOR**  
A MEMBER OF THE ABB GROUP

DR. BY R. K. BRIDGES  
CK. BY W. L. SMITH  
APP. BY W. L. SMITH  
DATE 05/14/14

**A-C MOTOR PERFORMANCE CURVES**  
A40W/C0692-R001  
ISSUE DATE 10/01/14

|           |              |                   |           |  |             |          |
|-----------|--------------|-------------------|-----------|--|-------------|----------|
| REL. S.O. | FRAME        | HP                | TYPE      | PHASE/HERTZ                                | RPM         | VOLTS    |
|           | 405TY        | 100               | P         | 3/60                                       | 1785        | 230/460  |
| AMPS      | DUTY         | AMB °C/<br>INSUL. | S.F.      | NEMA DESIGN                                | CODE LETTER | ENCL.    |
| 224/112   | CONT         | 40/F              | 1.15      | B  | G           | TEFC-EMT |
| E/S       | ROTOR        | TEST S.O.         | TEST DATE | STATOR RES. @25 °C<br>(OHMS BETWEEN LINES) |             |          |
| 596956    | 418142-33-RE | ---               | ---       | .0123/.0492                                |             |          |

PERFORMANCE

| LOAD    | HP   | AMPERES | RPM  | POWER FACTOR % | EFFICIENCY % |
|---------|------|---------|------|----------------|--------------|
| NO LOAD | 0    | 28.6    | 1800 | 5.49           | 0            |
| 1/4     | 25.0 | 39.2    | 1796 | 64.3           | 93.0         |
| 2/4     | 50.0 | 59.5    | 1792 | 82.5           | 95.4         |
| 3/4     | 75.0 | 84.6    | 1788 | 86.7           | 95.7         |
| 4/4     | 100  | 112     | 1783 | 87.4           | 95.4         |
| 5/4     | 125  | 141     | 1778 | 87.3           | 94.9         |

SPEED TORQUE

|              | RPM  | TORQUE % FULL LOAD | TORQUE LB.-FT. | AMPERES |
|--------------|------|--------------------|----------------|---------|
| LOCKED ROTOR | 0    | 151                | 445            | 725     |
| PULL UP      | 360  | 136                | 400            | 706     |
| BREAKDOWN    | 1721 | 250                | 735            | 382     |
| FULL LOAD    | 1783 | 100                | 295            | 112     |

AMPERES SHOWN FOR 460. VOLT CONNECTION. IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE

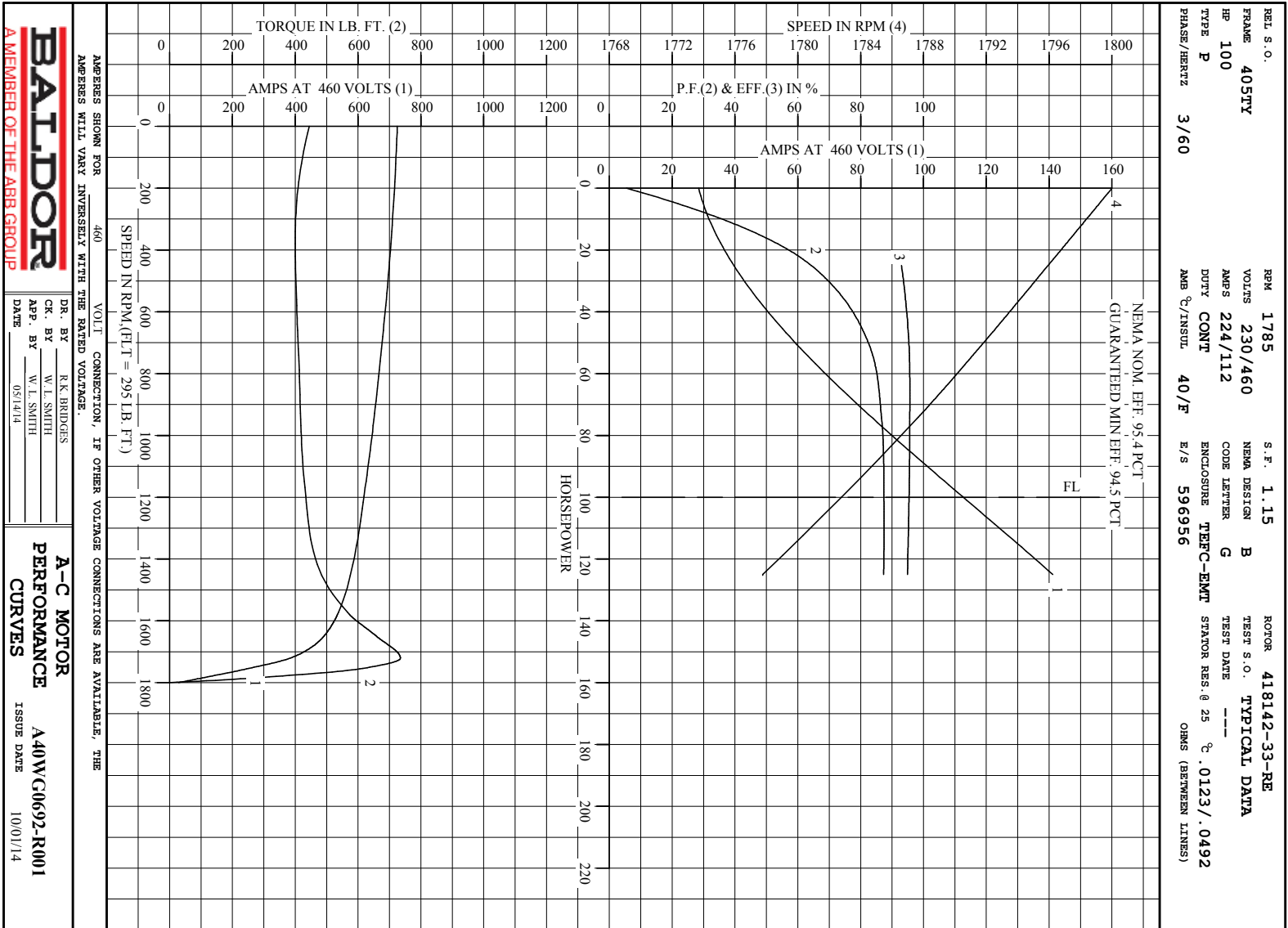
REMARKS: TYPICAL DATA  
NEMA NOM. EFF. 95.4 PCT  
GUARANTEED MIN EFF. 94.5 PCT



DR. BY R.K. BRIDGES  
CR. BY W.L. SMITH  
APP. BY W.L. SMITH  
DATE 05/14/14

A-C MOTOR PERFORMANCE DATA  
A40WG0692-R001  
ISSUE DATE 10/01/14

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DR. BY                      R. K. BRIDGES  
 CK. BY                      W. L. SMITH  
 APP. BY                      W. L. SMITH  
 DATE                      05/14/14

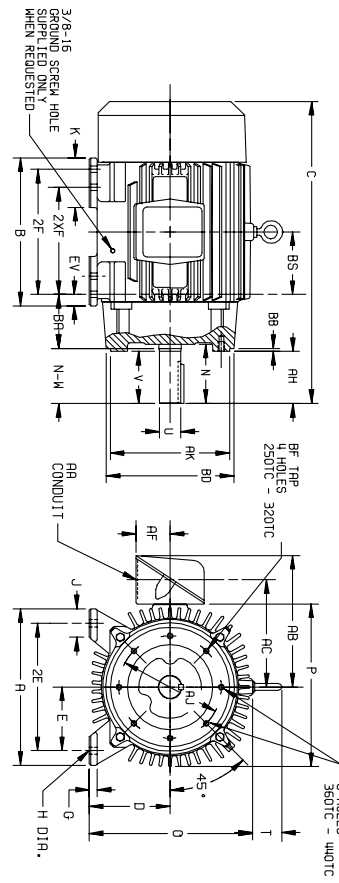
**A-C MOTOR**  
**PERFORMANCE**  
**CURVES**  
 A40WC0692-R001  
 ISSUE DATE 10/01/14

Printed on 9/18/15 15:36 @ bengap01.baldor.com

611740-003-SHI

# DUTY MASTER ALTERNATING CURRENT MOTORS

ENCLOSURE: TOTALLY ENCLOSED  
SQUIREL-CAGE INDUCTION  
MOUNTING: FOOT, NEMA "C" FACE  
FRAMES 250TC THRU 440TC  
COOLING: FAN COOLED



DIMENSIONS ARE IN INCHES. SEE SHEET 2 FOR DIMENSIONS IN MILLIMETERS

| FRAME       | A     | D(2)  | E    | G    | H    | J    | K    | EV   | O     | P     | T    | AA    | AB    | AC    | AD     | AE   | BA    | BB     | BD     | BF  | WHS DEPTH | AJ     | AK |
|-------------|-------|-------|------|------|------|------|------|------|-------|-------|------|-------|-------|-------|--------|------|-------|--------|--------|-----|-----------|--------|----|
| 254TC-256TC | 12.50 | 6.25  | 5.00 | .75  | 1.56 | 2.50 | ---  | 1.00 | 13.25 | 13.25 | 4.44 | 1-1/4 | 10.75 | 8.75  | 2.50   | 4.75 | 2.5   | 9.00   | 1/2-13 | 7.5 | 7.25      | 8.500  |    |
| 254TC-266TC | 13.75 | 7.00  | 5.50 | .75  | 1.56 | 2.50 | ---  | 1.00 | 14.75 | 14.88 | 2.44 | 1-1/4 | 12.75 | 10.00 | 3.19   | 4.75 | 2.5   | 11.25  | 1/2-13 | 7.5 | 9.00      | 10.500 |    |
| 284TC       | 15.50 | 8.00  | 6.25 | .88  | 1.69 | 2.75 | 4.50 | ---  | 15.19 | 15.44 | 4.28 | 5.25  | 2.5   | 13.12 | 5/8-11 | 9.4  | 11.00 | 12.500 |        |     |           |        |    |
| 284TC       | 17.00 | 9.00  | 7.00 | .88  | 1.69 | 2.75 | 3.88 | 1.38 | 18.50 | 19.50 | 2.94 | 3     | 18.06 | 14.00 | 5.38   | 5.88 | 2.5   | 13.00  | 5/8-11 | 9.4 | 11.00     | 12.500 |    |
| 404TC-405TC | 19.00 | 10.00 | 8.00 | 1.12 | .81  | 3.25 | 4.62 | 1.13 | 21.31 | 22.50 | 2.94 | 3     | 19.31 | 15.28 | 5.38   | 6.62 | 2.5   | 13.12  | 5/8-11 | 9.4 | 11.00     | 12.500 |    |
| 444TC-445TC | 21.00 | 11.00 | 9.00 | 1.12 | .81  | 3.25 | 5.25 | 1.25 | 23.38 | 25.25 | 3.25 | 3     | 23.38 | 18.12 | 6.50   | 7.50 | 2.5   | 16.75  | 5/8-11 | 9.4 | 14.00     | 16.000 |    |

| FRAME | SIZE  | C    | BS    | B     | ZF    | (4) 2XF | N    | AH    | N-W(7) | U(3) | V    | SO   | LGTH  | WEIGHT (LBS.) |
|-------|-------|------|-------|-------|-------|---------|------|-------|--------|------|------|------|-------|---------------|
| 254TC | 25.06 | 5.00 | 12.00 | ---   | 8.25  | 4.06    | 3.75 | 4.00  | 1.625  | 3.75 | 3.75 | 2.88 | 3.15  | 3.15          |
| 256TC | 25.06 | 5.00 | 12.00 | 10.00 | ---   | 4.06    | 3.75 | 4.00  | 1.625  | 3.75 | 3.75 | 2.88 | 3.25  | 3.25          |
| 284TC | 27.44 | 5.50 | 13.00 | ---   | 9.50  | 5.00    | 4.38 | 4.62  | 1.875  | 4.38 | 5.00 | 3.25 | 4.45  | 4.45          |
| 284TC | 26.06 | 5.50 | 13.00 | ---   | 9.50  | 5.00    | 3.25 | 1.625 | 3.00   | 3.75 | 1.88 | 4.45 | 4.45  | 4.45          |
| 286TC | 27.44 | 5.50 | 13.00 | 11.00 | ---   | 5.00    | 4.38 | 4.62  | 1.875  | 4.38 | 5.00 | 3.25 | 4.60  | 4.60          |
| 286TC | 26.06 | 5.50 | 13.00 | 11.00 | ---   | 5.00    | 3.25 | 1.625 | 3.00   | 3.75 | 1.88 | 4.60 | 4.60  | 4.60          |
| 324TC | 30.44 | 6.00 | 14.75 | ---   | 10.50 | 5.62    | 5.00 | 5.25  | 2.125  | 5.00 | 5.00 | 3.88 | 5.55  | 5.55          |
| 324TC | 30.44 | 6.00 | 14.75 | ---   | 10.50 | 5.62    | 5.00 | 5.25  | 2.125  | 5.00 | 5.00 | 3.88 | 5.55  | 5.55          |
| 326TC | 30.44 | 6.00 | 14.75 | 12.00 | ---   | 5.62    | 5.00 | 5.25  | 2.125  | 5.00 | 5.00 | 3.88 | 5.95  | 5.95          |
| 326TC | 28.94 | 6.00 | 14.75 | 12.00 | ---   | 5.62    | 5.00 | 5.25  | 2.125  | 5.00 | 5.00 | 3.88 | 5.95  | 5.95          |
| 364TC | 33.44 | 6.12 | 15.00 | ---   | 11.25 | 6.25    | 5.88 | 2.375 | 2.375  | 5.62 | 6.25 | 4.25 | 8.15  | 8.15          |
| 364TC | 31.71 | 6.12 | 15.00 | ---   | 11.25 | 6.25    | 5.88 | 2.375 | 1.875  | 5.62 | 6.25 | 2.00 | 8.09  | 8.09          |
| 365TC | 33.44 | 6.12 | 15.00 | 12.25 | ---   | 6.25    | 5.88 | 2.375 | 3.50   | 5.62 | 6.25 | 4.25 | 8.55  | 8.55          |
| 365TC | 31.71 | 6.12 | 15.00 | 12.25 | ---   | 6.25    | 5.88 | 2.375 | 3.50   | 5.62 | 6.25 | 2.00 | 8.49  | 8.49          |
| 404TC | 35.31 | 6.88 | 16.00 | ---   | 12.25 | 7.50    | 7.00 | 4.25  | 2.125  | 4.00 | 5.00 | 3.75 | 11.65 | 11.65         |
| 404TC | 35.31 | 6.88 | 16.00 | ---   | 12.25 | 7.50    | 7.00 | 4.25  | 2.125  | 4.00 | 5.00 | 3.75 | 11.65 | 11.65         |
| 405TC | 35.31 | 6.88 | 16.00 | 13.75 | ---   | 7.50    | 7.00 | 4.25  | 2.125  | 4.00 | 5.00 | 3.75 | 11.96 | 11.96         |
| 405TC | 35.31 | 6.88 | 16.00 | 13.75 | ---   | 7.50    | 7.00 | 4.25  | 2.125  | 4.00 | 5.00 | 3.75 | 11.96 | 11.96         |
| 444TC | 44.62 | 8.25 | 19.00 | ---   | 14.50 | 8.94    | 8.25 | 8.50  | 3.375  | 8.25 | 8.75 | 6.88 | 16.08 | 16.08         |
| 444TC | 44.62 | 8.25 | 19.00 | ---   | 14.50 | 8.94    | 8.25 | 8.50  | 3.375  | 8.25 | 8.75 | 6.88 | 16.08 | 16.08         |
| 445TC | 44.62 | 8.25 | 19.00 | 16.50 | ---   | 8.94    | 8.25 | 8.50  | 3.375  | 8.25 | 8.75 | 6.88 | 17.98 | 17.98         |
| 445TC | 40.88 | 8.25 | 19.00 | 16.50 | ---   | 8.94    | 8.25 | 8.50  | 3.375  | 8.25 | 8.75 | 6.88 | 17.98 | 17.98         |

- (1) SPECIAL DIMENSIONS APPLYING TO THIS ORDER ON THIS LINE.
  - (2) "D" VARIES  
250TC - 320TC +.00, -.03  
360TC - 440TC +.00, -.06  
HP TO 1.625 DIA. +.000, -.0005
  - (3) "U" VARIES  
1.625 AND LARGER +.000, -.001.
  - (4) ALL FRAMES HAVE EIGHT MOUNTING HOLES FOR DUAL MOUNTING.
  - (5) MOTOR WEIGHTS MAY VARY BY 1% DEPENDING UPON RATING.
  - (6) "AK" VARIES  
250TC - 280TC +.000, -.003  
320TC - 440TC +.000, -.005
  - (7) "N," "W" VARIES +.00, -.25.
- CONDUIT BOX LOCATED ON OPPOSITE SIDE WHEN F=2-W-1, W=4-N-S-W-7, OR C=1 MOUNTING IS SPECIFIED.

IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.

MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF STD. SHAFT EXTENSION IS .002 T.I.R. UP TO AND INCLUDING 1.625 DIA. AND .003 T.I.R. 1.625 DIA. TO 5 INCH DIA.

FACE RUNOUT AND ECCENTRICITY  
250TC - 280TC INCL. .004 MAX. T.I.R.  
320TC - 440TC INCL. .007 MAX. T.I.R.

FRAME \_\_\_\_\_ TYPE \_\_\_\_\_ CERTIFIED FOR \_\_\_\_\_  
ORDER \_\_\_\_\_ ITEM \_\_\_\_\_ HP \_\_\_\_\_ RPM \_\_\_\_\_ PH \_\_\_\_\_ HZ \_\_\_\_\_ VOLTS \_\_\_\_\_  
RELIANCE SALES ORDER \_\_\_\_\_ APPROVED BY \_\_\_\_\_ DATE \_\_\_\_\_

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT MOTOR PERFORMANCE IS SUITABLE IN THE APPLICATION.

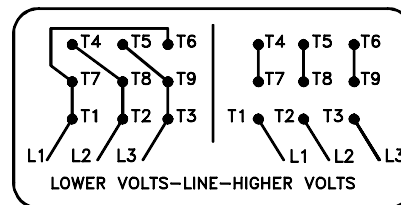
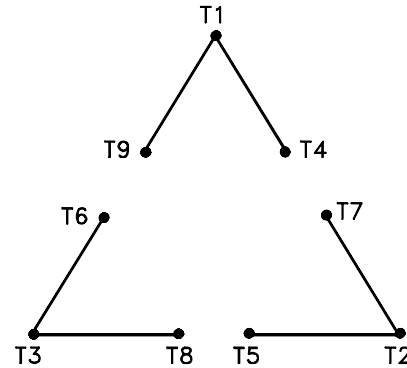
|                                  |                              |                   |
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| REV. LTR: A                      | REVISED: 09:15:38 08/28/2007 | BY: RAGRHX        |
| FILE: \RAG\00003\380             |                              |                   |
| MTL: -                           |                              |                   |

**Baldor • Dodge • Reliance**

DIM SHEET 250TC THRU 440TC

416820-002

A-C MOTOR  
 CONNECTION DIAGRAM  
 STANDARD 9 LEAD DELTA-CONNECTED



(N.P. 1575-B)

416820-002

|                                      |                              |                   |
|--------------------------------------|------------------------------|-------------------|
| REV. DESC: LOADED TO BUS, C/R 335225 |                              |                   |
| REV. LTR: -                          | VERSION: 00                  | TDR: 000000538207 |
| FILE: \MGA\00000\661                 | REVISED: 10:47:51 04/30/2010 |                   |
| MTL: -                               | BY: RAGRA                    |                   |

**BALDOR**

CONN DIAG - STANDARD 9 LEAD, DELTA-CONNECTED

SH 1 of 1

Marketing maintained PDF of MN408:

<http://www.baldor.com/support/Literature/Load.ashx/MN408?ManNumber=MN408>

Marketing maintained PDF of MN416:

<http://www.baldor.com/support/Literature/Load.ashx/MN416?ManNumber=MN416>