

BALDOR® • ***RELIANCE***

Product Information Packet

ZDFRPM21204C

20HP, 1750RPM, 3PH, 60HZ, 2162C, TEFC, FOOT

| Part Detail | | | | | | | |
|-------------|----|-------------|------------|-------------|------------|---------------|------------|
| Revision: | - | Status: | PRD/A | Change #: | | Proprietary: | No |
| Type: | AC | Elec. Spec: | L3308A | CD Diagram: | 422927-001 | Mfg Plant: | |
| Mech. Spec: | | Layout: | 617517-023 | Poles: | 04 | Created Date: | 04-10-2015 |
| Base: | | Eff. Date: | 04-13-2015 | Leads: | | | |

| Specs | | | |
|--------------------------------|---------------------|--|--|
| Catalog Number: | ZDFRPM21204C | | |
| Enclosure: | TEFC | | |
| Frame: | FL2162C | | |
| Frame Material: | Exposed Laminations | | |
| Output @ Frequency: | 20.000 HP @ 60 HZ | | |
| Synchronous Speed @ Frequency: | 1800 RPM @ 60 HZ | | |
| Voltage @ Frequency: | 460.0 V @ 60 HZ | | |
| Agency Approvals: | CCSA US | | |
| | UR | | |
| Auxillary Box: | No Auxillary Box | | |
| Base Indicator: | Rigid | | |
| Bearing Grease Type: | No Grease | | |
| Current @ Voltage: | 27.000 A @ 460.0 V | | |
| Duty Rating: | CONT | | |
| Feedback Device: | TACHOMETER | | |
| Frame Prefix: | FL | | |
| Heater Indicator: | No Heater | | |
| Insulation Class: | H | | |

| | | | |
|----------------------------------|----------------------------|--|--|
| Mounting Arrangement: | TP | | |
| Product Family: | General Industrial | | |
| Pulley End Bearing Type: | Ball | | |
| Pulley Face Code: | C-Face | | |
| Shaft Ground Indicator: | No Shaft Grounding | | |
| Shaft Rotation: | Reversible | | |
| Motor Standards: | NEMA | | |
| Thermal Device - Bearing: | None | | |
| Thermal Device - Winding: | Normally Closed Thermostat | | |

| Nameplate 000613006NN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|--|----------------|-------------|----------------|--------------|-------|-----------|-------|-----------|----------|-----------|------|----|------|----|------|----|-----|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | <table border="1"> <thead> <tr> <th>DUTY</th> <th>HP</th> <th>RPM</th> <th>AMPS</th> <th>VOLTS</th> <th>HZ</th> </tr> </thead> <tbody> <tr> <td>CONT</td> <td>20</td> <td>1775</td> <td>27</td> <td>460</td> <td>60</td> </tr> <tr> <td>CONT</td> <td>20</td> <td>3545</td> <td>25</td> <td>460</td> <td>120</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | DUTY | HP | RPM | AMPS | VOLTS | HZ | CONT | 20 | 1775 | 27 | 460 | 60 | CONT | 20 | 3545 | 25 | 460 | 120 | | | | | | | | | | | | | | |
| DUTY | HP | RPM | AMPS | VOLTS | HZ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONT | 20 | 1775 | 27 | 460 | 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONT | 20 | 3545 | 25 | 460 | 120 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAT.NO. | ZDFRPM21204C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SER.NO. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PH. | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DESIGN NO. | L3308A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S.F. | 1.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENCL MOD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>SPEC. NO.</th> <th>FR</th> <th>MAX SAFE SPEED</th> <th>TYPE</th> <th>INSUL</th> <th>AMB.</th> <th>ENCL.</th> <th>MIN. AMB.</th> </tr> </thead> <tbody> <tr> <td>P21T0400</td> <td>FL 2162CZ</td> <td>5000</td> <td></td> <td>H</td> <td>40</td> <td>TEFC</td> <td>0</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | SPEC. NO. | FR | MAX SAFE SPEED | TYPE | INSUL | AMB. | ENCL. | MIN. AMB. | P21T0400 | FL 2162CZ | 5000 | | H | 40 | TEFC | 0 | | | | | | | | | | | | | | | | |
| SPEC. NO. | FR | MAX SAFE SPEED | TYPE | INSUL | AMB. | ENCL. | MIN. AMB. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P21T0400 | FL 2162CZ | 5000 | | H | 40 | TEFC | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>D.E. BRG.</th> <th>O.D.E. BRG.</th> </tr> </thead> <tbody> <tr> <td>50BC03JPP30A</td> <td>45BC02JPP30A</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table> | D.E. BRG. | O.D.E. BRG. | 50BC03JPP30A | 45BC02JPP30A | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D.E. BRG. | O.D.E. BRG. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50BC03JPP30A | 45BC02JPP30A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

REL. S.O. - VOLTS 460 ENCLOSURE TEFC WYE CONN EQ CKT OHMS PER PHASE
 FRAME FL2162 AMPS 27 MAX SAFE RPM 5000 (AT BASE RATING, 25 °C)
 HP 20 DUTY CONT 15 IM (AMPS) R1 .179 X1 .845
 BASE SPEED 1775 S.F. 1.0 P.F.@NL/FL .066/.777 R2 .122 X2 1.09
 PHASE/HERTZ 3/60 AMB °C/INSUL 40/H WK² (LB-FT²) 1.92 XM 18.1

RATED FULL LOAD DATA

| | RPM | HP | TORQUE LB-FT | FUND VOLTS | FREQ-HZ | AMPS |
|------------|------|------|-----------------|---------------|---------|------|
| BASE SPEED | 1774 | 20.0 | 59 | 460 | 60 | 26.9 |
| MAX SPEED | 3543 | 20.0 | 30 | 460 | 120 | 24.4 |
| MIN SPEED | 0 | 0 | 59 | 13.8 | .874 | 26.9 |

LOAD PERFORMANCE AT BASE SPEED

| | RPM | HP | TORQUE LB-FT | FUND VOLTS | FREQ-HZ | AMPS |
|-----------|------|------|-----------------|---------------|---------|------|
| NO LOAD | 1800 | 0 | 0 | 460 | 60 | 14.4 |
| 1/4 | 1794 | 5.01 | 15 | 460 | 60 | 15.7 |
| 1/2 | 1787 | 10.0 | 29 | 460 | 60 | 18.6 |
| 3/4 | 1781 | 15.0 | 44 | 460 | 60 | 22.4 |
| FULL LOAD | 1774 | 20.0 | 59 | 460 | 60 | 26.9 |
| O/L | 1742 | 39.3 | 119 | 460 | 60 | 48.5 |

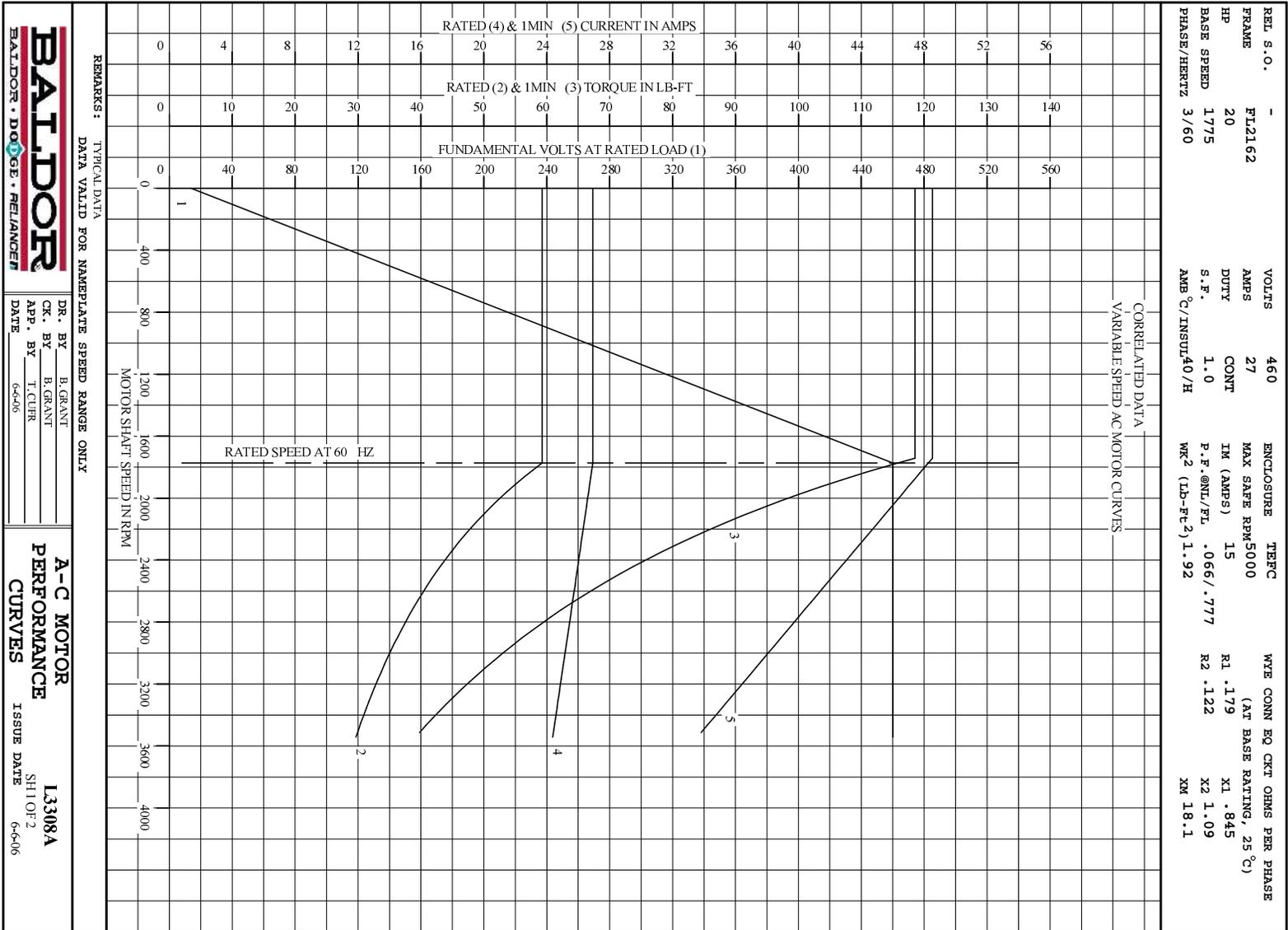
BLOWER DATA

| VOLTS | PH/HZ | FL AMPS | LR AMPS | FRAME | CFM |
|-------|-------|---------|---------|-------|-----|
| | | | | | |

REMARKS: TYPICAL DATA
CORRELATED DATA

| | | |
|---|----------------------------------|--|
|  | DR. BY B. GRANT | A-C MOTOR PERFORMANCE DATA L3308A ISSUE DATE 6-6-06 |
| | CK. BY T. CUER APP. BY 6-6-06 | |

1



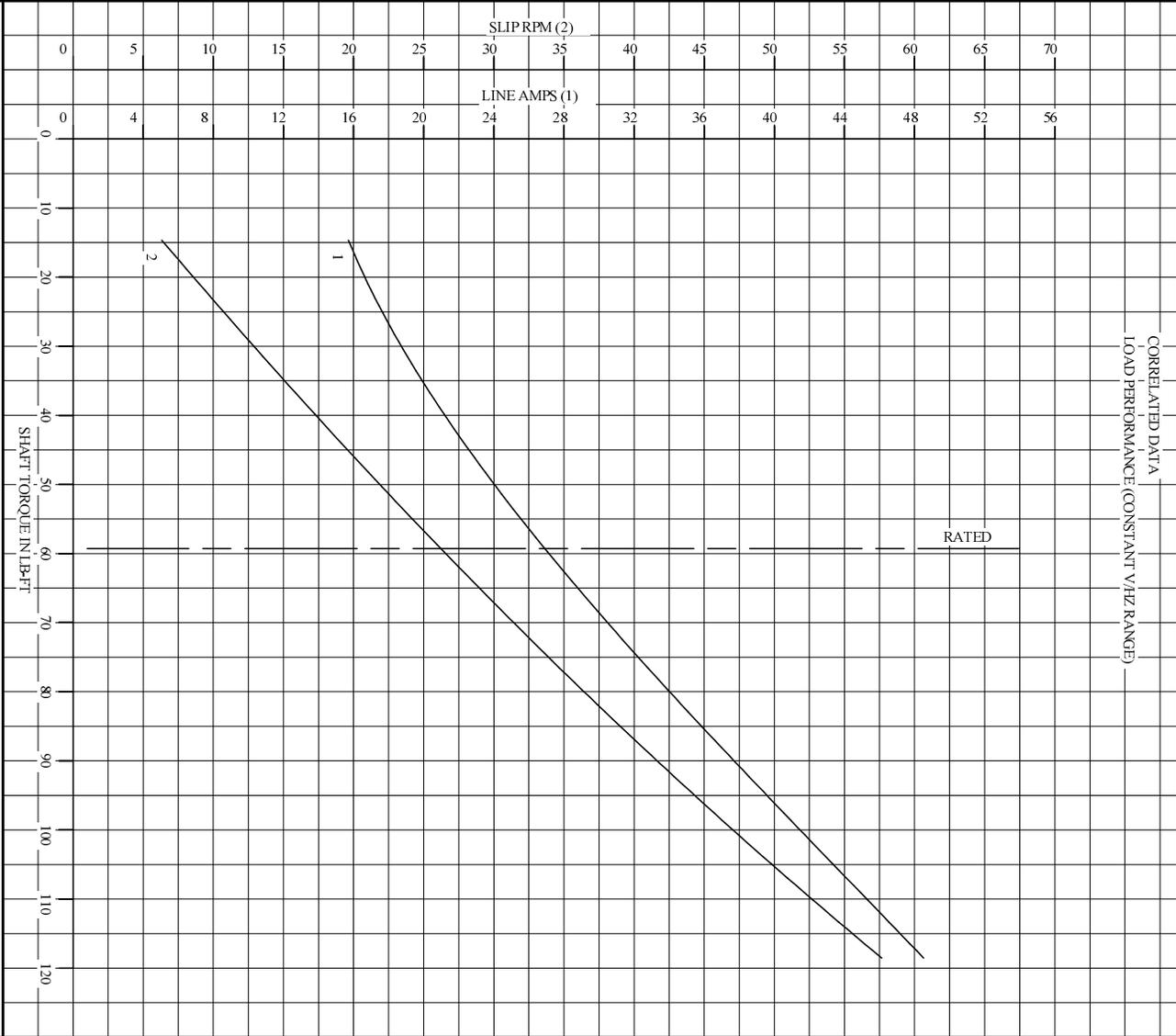
BALDOR
BALDOR • DOUGLASS • RELIANCE

DR. BY B. GRANT
CK. BY B. GRANT
APP. BY T. CURR
DATE 6-6-06

A-C MOTOR PERFORMANCE CURVES
L3308A
SH 1 OF 2
ISSUE DATE 6-6-06

1

| | | | | | | |
|-------------|--------|-------------|------|---------------------------------------|-----------|--------------------------------|
| REL S.O. | - | VOLTS | 460 | ENCLOSURE | TEFC | WYE CONN EQ CKT OHMS PER PHASE |
| FRAME | FL2162 | AMPS | 27 | MAX SAFE RPM | 5000 | (AT BASE RATING, 25°C) |
| HP | 20 | DUTY | CONT | IM (AMPS) | 15 | R1 .179 X1 .845 |
| BASE SPEED | 1775 | S.F. | 1.0 | P.F.@NL/FL | .066/.777 | R2 .122 X2 1.09 |
| PHASE/HERTZ | 3/60 | AMB C/INSUL | 40/H | WK ² (LB-FC ²) | 1.92 | XN 18.1 |



REMARKS: TYPICAL DATA
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY

| | | | |
|---|---------|----------|---|
| BALDOR BALDOR • DOUG • RELIANCE | DR. BY | B. GRANT | A-C MOTOR PERFORMANCE CURVES |
| | CK. BY | T. CURR | |
| | APP. BY | 6-6-06 | ISSUE DATE |
| | DATE | 6-6-06 | |

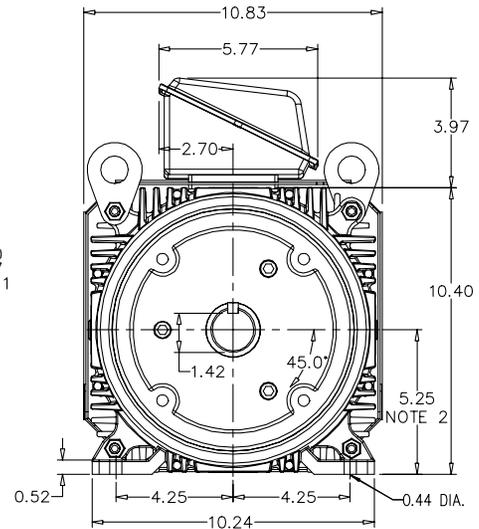
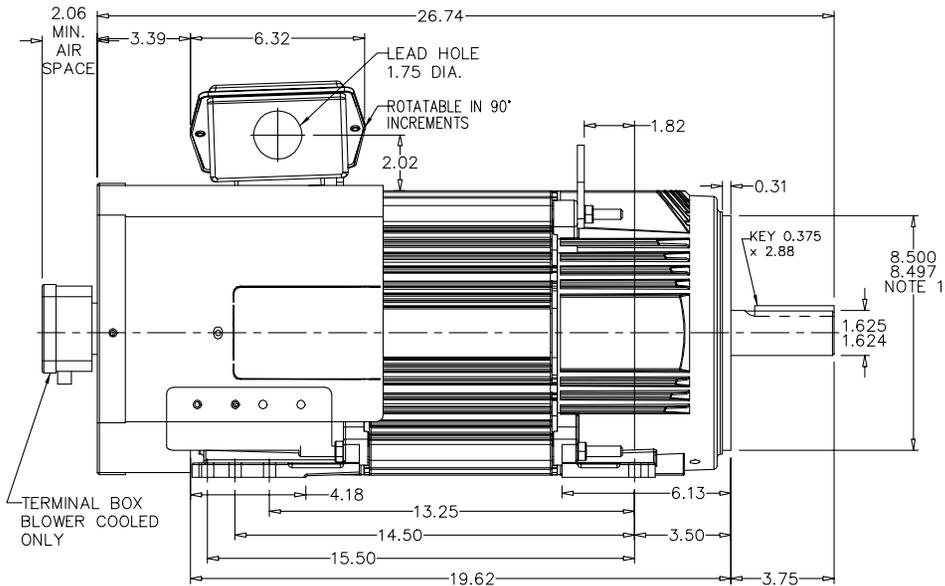
L3308A
SH20F2
6-6-06

617517-023

RPM-AC FINNED FRAME VARIABLE SPEED ALTERNATING
CURRENT MOTOR
FL2162CZ

ENCLOSURE: TOTALLY ENCLOSED
MOUNTING: FOOT / NEMA 250TC C-FACE
DRIVE METHOD: COUPLED OR BELTED

COOLING: BLOWER COOLED or
FAN COOLED
ACCESSORIES: PROVISIONS FOR
TACHOMETER MOUNTING
ONLY WHEN SPECIFIED



NOTE 1: C-FACE & TACHOMETER MOUNTING
1/2-13 TAP, 1.00 DEEP, ON A 7.25 DIA. BOLT CIRCLE
FACE RUNOUT AND ECCENTRICITY 0.004 MAX. T.I.R.

NOTE 2: SHAFT HEIGHT WILL NOT BE EXCEEDED
SHIMS UP TO 0.03 INCHES IN THICKNESS ARE USUALLY
REQUIRED FOR COUPLED OR GREARED MACHINES

TERMINAL BOX MAY BE LOCATED F1 OR F2 IF SPECIFIED
61 AMP STEEL TERMINAL BOX SHOWN
REFER TO 616779-50 FOR SPECIFIED TERMINAL BOX DIMENSIONS
REFER TO 616779-55 FOR SPECIFIED TACHOMETER DIMENSIONS

MOTOR WEIGHT: 290 LBS. (MAY VARY 15%)
DIMENSIONS ARE IN INCHES SCALE: 1.00

617517-023

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THIS PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

| | | |
|---------------------------------|------------------------------|-------------------|
| REV. DESC: CHANGE DE KEY LENGTH | VERSION: 02 | TDR: 000001013340 |
| REV. LTR: B | REVISED: 08:10:49 01/26/2017 | BY: RGGWT |
| FILE: \RGG\00003\195 | | |
| MTL: - | | |

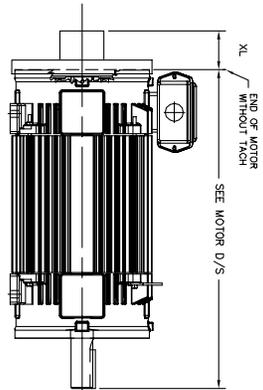
BALDOR
DIM SHT RPMAC TEBC/FC FL2162CZ FT MT PROV FOR TACH
SH 1 of 1

RPM AC TACHOMETER DIMENSIONS
 NEMA FRAMES FL180 thru FL440 and IEC FRAMES FDL112 thru FDL280
 DIMENSIONS ARE IN INCHES(mm)

616779-055

DPTV, DPSV, TEPV, TESV, TENV & TEAO-PB
 IC06, IC17, IC37, IC410, & IC416-PB

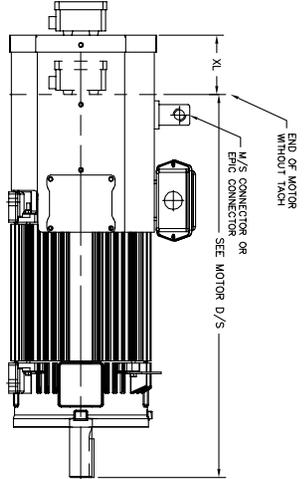
| TACH. MODEL | XL Inche(st/mm) | LBS. |
|---------------------|-----------------|------|
| BEL PB DYNAPAR H335 | 2.88 (74) | 5 |
| DYNAPAR H20 * | 7.50(191)MAX | 10 |
| NORTHSTAR H335M | 3.31 (84) | 10 |
| NORTHSTAR ST67 | 2.88 (74) | 5 |
| DYNAPAR H36 | 10.56 (268) | 40 |
| AVTRON M3 BR M4 | 3.62 (.92) | 10 |
| TAMAGAWA TSS013(X1) | 6.00 (152) | 10 |
| NORTHSTAR ST65 | 2.88 (74) | 5 |
| NORTHSTAR ST85 | 2.00 (.51) | 5 |
| BEL H38B | 10.19 (259) | 15 |
| TAMAGAWA TS2151 | 2.64 (67) | 15 |
| BEL H35 | 7.50 (191) | 15 |
| DYNAPAR H320 | 2.00 (.50) | 5 |
| DYNAPAR X23 | 12.88 (327) | 10 |
| STIEGMANN SRK25 | 7.25 (184.4) | 10 |
| NORTHSTAR H3035 | 3.00 (.76) | 10 |
| HEIDENHAIN EGN425 | 2.5 (63.5) | 5 |
| AVTRON H335M | 4.19 (106.4) | 5 |
| HEIDENHAIN ERN480 | 5.00 (76.2) | 5 |
| DYNAPAR H025 | 7.00 (177.8) | 10 |
| DYNAPAR H22 | 3.62 (92.1) | 5 |
| AVTRON H285 | 2.54 (64.5) | 9 |
| AVTRON A1830 | 2.54 (64.5) | 9 |
| AVTRON A1536 | 4.50 (115) | 15 |
| HS1258 | 3.30 (84) | 5 |
| HS1258 | 3.30 (84) | 5 |
| NORTHSTAR P18 | 3.25 (83) | 15 |
| DYNAPAR H4625 | 5.88 (150) | 10 |
| AVTRON A1435 | 9.50 (241) | 18 |
| AVTRON A1532 | 1.93 (49) | .7 |



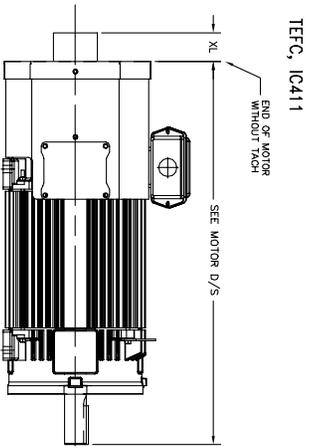
* THIS DIMENSION INCLUDES COVER FOR X/T MOTOR.

TEAO-BC, IC416-BC
 EXCLUDES NEMA FRAMES FL320 THRU FL440
 AND
 IEC FRAMES FDL200 THRU FDL280

| TACH. MODEL | XL Inche(st/mm) | LBS. |
|-------------------------|-----------------|------|
| BEL PB DYNAPAR H335 | 4.50 (115) | 10 |
| DYNAPAR H20 | 4.50 (115) | 15 |
| AVTRON M3 BR M4 | 4.50 (115) | 10 |
| NORTHSTAR H335M | 4.50 (115) | 15 |
| NORTHSTAR ST65 | 4.50 (115) | 10 |
| NORTHSTAR ST67 | 4.50 (115) | 10 |
| NORTHSTAR ST85 | 4.50 (115) | 5 |
| TAMAGAWA TSS008, TSS013 | 4.50 (115) | 10 |
| DYNAPAR H320 | 4.50 (115) | 15 |
| STIEGMANN SRK25 | 4.50 (115) | 10 |
| STIEGMANN SRV/SR150 | 4.50 (115) | 3 |
| STIEGMANN SR350 | 4.50 (115) | 15 |
| H250 & H252 | 4.50 (115) | 15 |
| AVTRON H335M | 4.50 (115) | 10 |
| AVTRON A1835 | 4.50 (115) | 10 |
| AVTRON H35 | 4.50 (115) | 5 |
| AVTRON H367 | 4.50 (115) | 10 |
| HS138 | 4.50 (115) | 5 |
| TS2014 | 4.50 (115) | 10 |
| AVTRON H345 | 4.50 (115) | 15 |
| DYNAPAR H3038M | 4.50 (115) | 15 |
| AVTRON A1532 | 4.50 (115) | .7 |



| TACH. MODEL | XL Inche(st/mm) | LBS. |
|---------------------|-----------------|------|
| BEL H335 | 2.88 (74) | 7 |
| NORTHSTAR H335M | 3.31 (84) | 10 |
| DYNAPAR H20 | 3.75 (95) | 15 |
| DYNAPAR H335, H3038 | 2.88 (74) | 7 |
| H20(X1) | 9.75 (248) | 35 |
| EMAS | 7.90 (201) | 35 |
| AVTRON H335M | 4.19 (106) | 2 |
| STIEGMANN SRK50 | 3.75 (95) | 1 |
| DYNAPAR H320 | 2.00 (.51) | 1 |
| NORTHSTAR H3035 | 2.81 (71) | 2 |
| NORTHSTAR H3038 | 3.30 (84) | 5 |
| AVTRON A1532 | 1.93 (49) | .7 |



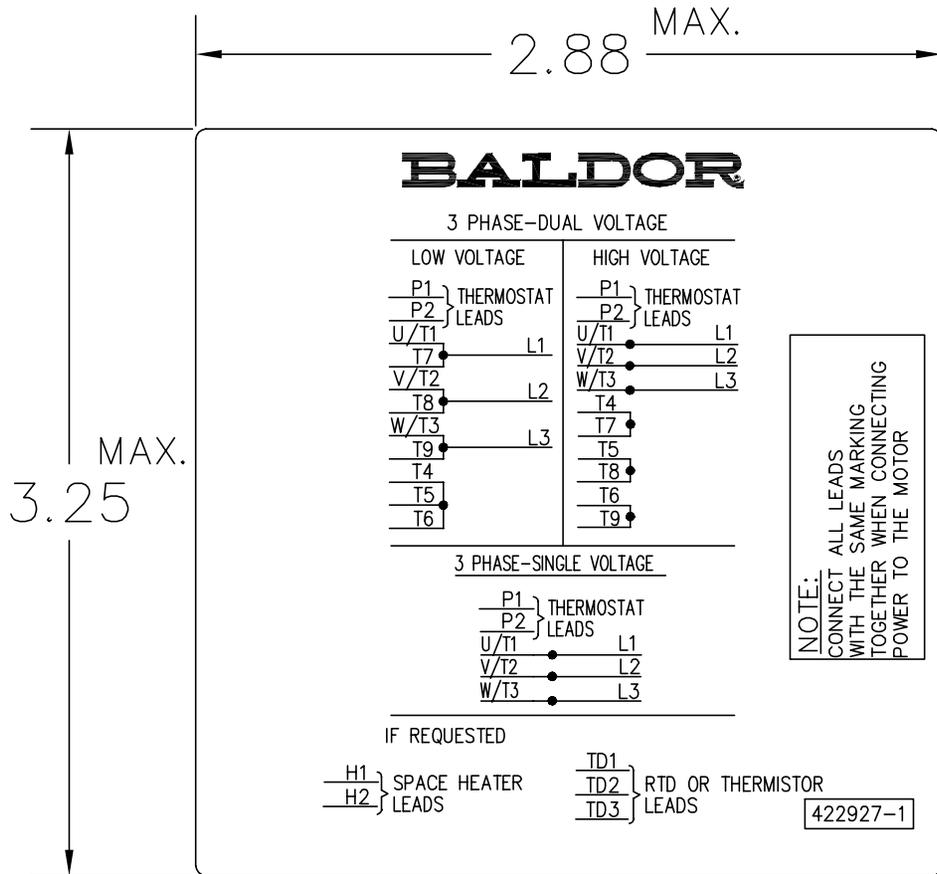
950-671919

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

| | | |
|---|------------------------------|-------------------|
| REV. DESC: REVISE "EXCLUDES" NOTE ON TEAO-BC MOTORS | VERSION: 22 | TDR: 000001040214 |
| REV. LTR: X | FILE: \RGG\00003\694 | BY: RGGWT |
| MTL: - | REVISED: 01:53:13 08/18/2017 | |

BALDOR
 DIM SHT TACH DIM NEMA FL180 - FL440 IEC FDL112 - FDL280
 SH 1 of 1

422927-001



NOTE:
DATA TO BE SIZED
SO THAT IT FITS INTO
MATERIAL DECAL
DIMENSIONS. MAKE
LETTERS & NUMBERS
AS LARGE AS POSSIBLE.

MATERIAL: CERAMATIC DGF-P4
PERMA GRIP ADHESIVE

ALL LETTERS, NUMBERS
AND LINES TO BE BLACK
ON WHITE BACKGROUND.

422927-001

| | | |
|---|------------------------------|------------------|
| REV. DESC: CHANGE BACKGROUND COLOR FROM GOLD TO WHITE | | |
| REV. LTR: B | VERSION: 02 | TDR: 00000788708 |
| FILE: \RGG\00000\203 | REVISED: 08:09:29 03/04/2013 | |
| MTL: - | BY: RGGWT | |

BALDOR

EXTERNAL CONNECTION LABEL

SH 1 of 1