ABB BALDOR RELIANCE

# Customer information packet

## ZDVSM44304T-4

300HP, 1790-2685RPM, 3PH, 60-90HZ, 449T, A441
Class - None
Division - Not Applicable

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 449T |
| **Frame Material** | Iron |
| **Frequency** | 60.00 Hz |
| | 90.00 Hz |
| **Haz Area Class and Group** | None |
| **Haz Area Division** | Not Applicable |
| **Motor Letter Type** | Three Phase |
| **Output @ Frequency** | 300.000 HP @ 90 HZ |
| | 300.000 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 1800 RPM @ 60 HZ |
| **Voltage @ Frequency** | 460.0 V @ 60 HZ |
| | 460.0 V @ 90 HZ |
| **Agency Approvals** | CCSA US |
| **Ambient Temperature** | 40 °C |
| **Auxiliary Box** | NO AUXILLARY BOX |
| **Base Indicator** | Rigid |
| **Bearing Grease Type** | Polyrex EM (-20F +300F) |
| **Constant Torque Speed Range** | 1000:1 |
| **Current @ Voltage** | 322.000 A @ 460.0 V |
| | 338.000 A @ 460.0 V |
| **Design Code** | A |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 96.2 % |
| **Feedback Device** | ENCODER |
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 322.0 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Duty |
| **KVA Code** | M |

## Part Detail

| | |
|---|---|
| **Revision** | K |
| **Type** | AC |
| **Mech. spec.** | |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | A44WG0622 |
| **Layout** | 617427-070 |
| **Eff. date** | 09-25-2025 |
| **CD Diagram** | 416820-036 |
| **Poles** | 04 |
| **Leads** | 3#1 (04 per group) |
| **Proprietary** | False |
| **Created date** | 08-27-2012 |

| | |
|---|---|
| **Lifting Lugs** | Standard Lifting Lugs |
| **Max Speed** | 3600 rpm |
| **Motor Lead Quantity/Wire Size** | 12 @ 1 AWG |
| **Motor Standards** | NEMA |
| **Motor Type** | A44160M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 4 |
| **Overall Length** | 56.66 IN |
| **Power Factor** | 86 |
| **Pulley End Bearing Type** | Ball |
| **Pulley Face Code** | Standard |
| **Service Factor** | 1.00 |
| **Shaft Ground Indicator** | No Shaft Grounding |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | No Slinger |
| **Speed** | 1790 rpm |
| | 2685 rpm |
| **Speed Code** | Single Speed |
| **Starting Method** | Direct on line |
| **Thermal Device - Bearing** | None |
| **Thermal Device - Winding** | None |

**Nameplate**

**000613007HV**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CAT NO** | ZDVSM44304T-4 | | **SPEC NO.** | P44G4017 | | | | | | | | |
| **SER.NO.** | | | **FRAME** | 449T | | | | | | | | |
| | **HP** | **RPM** | **VOLTS** | **AMPS** | **HZ** | **TYPE** | P | | | | | |
| **BASE** | 300 | 1790 | 460 | 338 | 60 | **SF** | 1.00 | | | | | |
| **MAX** | 300 | 2685 | 460 | 322 | 90 | **INSUL.CLASS** | F | | | | | |
| **DRIVE END BEARING** | 90BC03J30X | | **CONSTANT TORQUE** | | **DUTY** | CONT | **AMB** | 40 | | | | |
| **OPP D.E. BEARING** | 6318C3VL0241 | | 1000:1 | **ENCL** | TEFC | **PHASE** | 3 | | | | | |
| **DESIGN NO.** | A44WG0622-R002 | | **FLUX AMPS** | 116 | | **VPWM INVERTER READY** | | | | | | |
| **MAX SPEED/RPM** | 3600 | | **OVERTEMP PROT** | 2 | **WK2** | 105 | **POLES** | 4 | **WEIGHT** | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| REL S.O. | – | VOLTS | 460 | ENCLOSURE | TEFC | WYE CONN EQ CKT OHMS PER PHASE | | | |
| FRAME | 449T | AMPS | 338 | MAX SAFE RPM | 3600 | (AT BASE RATING, 25 °C) | | | |
| HP | 300 | DUTY | CONT | IM (AMPS) | 116 | R1 | .00400 | X1 | .0537 |
| BASE SPEED | 1790 | S.F. | 1.00 | P.F.@NL/FL | .047/.863 | R2 | .00288 | X2 | .0606 |
| PHASE/HERTZ | 3/60 | AMB °C/INSUL | 40/F | $WK^2$ ($Lb-Ft^2$) | 105.12 | | | XM | 1.93 |

## RATED FULL LOAD DATA

| | RPM | HP | TORQUE LB-FT | FUND VOLTS | FREQ-HZ | AMPS |
|---|---|---|---|---|---|---|
| BASE SPEED | 1791 | 300 | 880 | 460 | 60 | 338 |
| MAX SPEED | 2687 | 300 | 586 | 460 | 90 | 323 |
| MIN SPEED | 0 | 0 | 880 | 5.83 | .284 | 338 |

## LOAD PERFORMANCE AT BASE SPEED

| | RPM | HP | TORQUE LB-FT | FUND VOLTS | FREQ-HZ | AMPS |
|---|---|---|---|---|---|---|
| NO LOAD | 1800 | 0 | 0 | 460 | 60 | 116 |
| 1/4 | 1798 | 75.2 | 220 | 460 | 60 | 158 |
| 1/2 | 1796 | 150 | 439 | 460 | 60 | 208 |
| 3/4 | 1794 | 225 | 659 | 460 | 60 | 269 |
| FULL LOAD | 1791 | 300 | 880 | 460 | 60 | 338 |
| O/L | 1782 | 597 | 1760 | 460 | 60 | 645 |

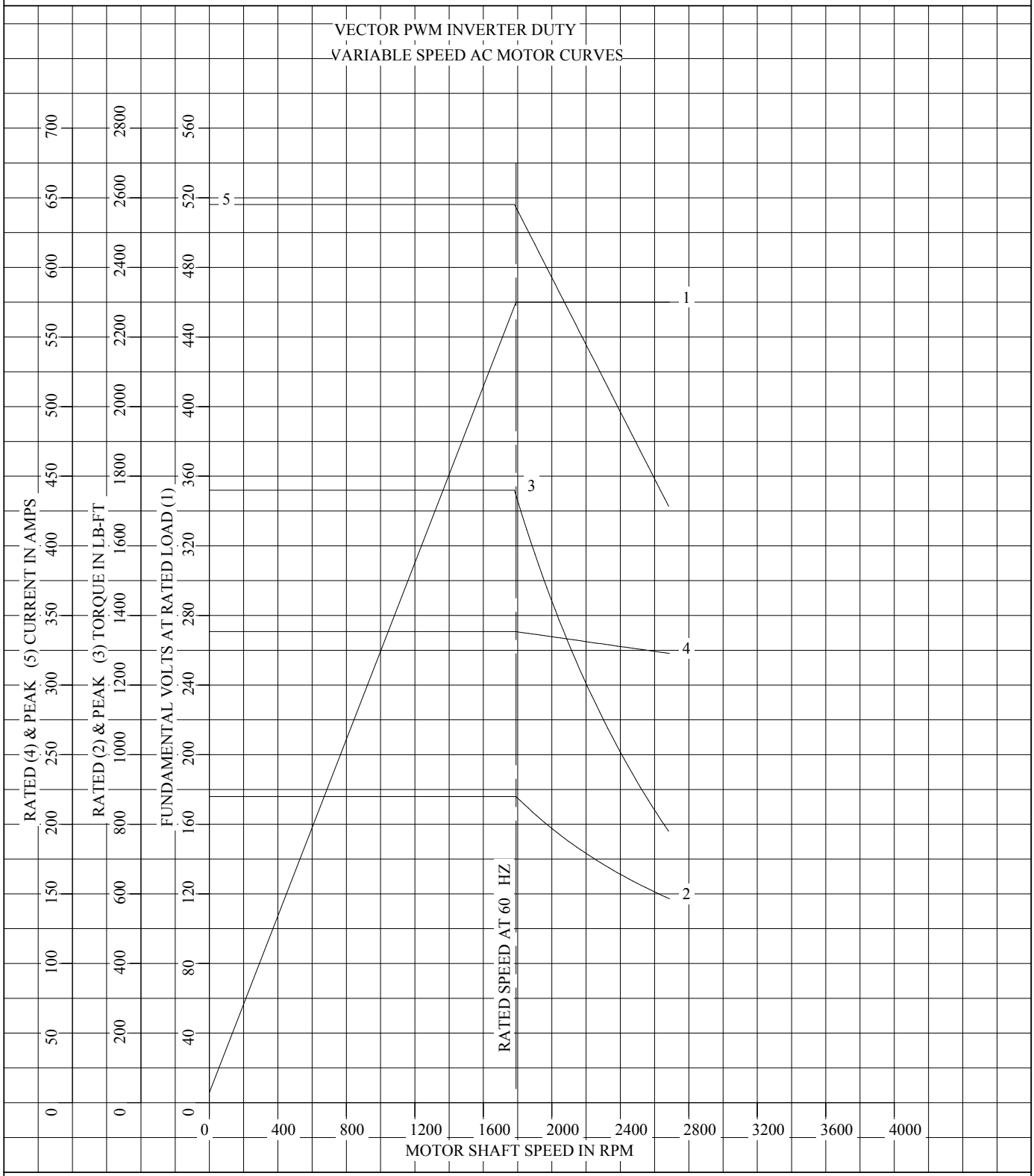
| BLOWER DATA | VOLTS | PH/HZ | FL AMPS | LR AMPS | FRAME | CFM |
|---|---|---|---|---|---|---|
| | | | | | | |

REMARKS: TYPICAL DATA
VECTOR PWM INVERTER DUTY

| | | | |
|---|---|---|---|
| BALDOR | DR. BY J.J.HARRISON<br>CK. BY W. L. SMITH<br>APP. BY W. L. SMITH<br>DATE 08/17/04 | A-C MOTOR PERFORMANCE DATA | A44WG0622-R002<br>ISSUE DATE 12/17/10 |


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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| REL S.O. | – | VOLTS | 460 | ENCLOSURE | TEFC | WYE CONN EQ CKT OHMS PER PHASE (AT BASE RATING, 25 °C) | |
| FRAME | 449T | AMPS | 338 | MAX SAFE RPM | 3600 | | |
| HP | 300 | DUTY | CONT | IM (AMPS) | 116 | R1 .00400 | X1 .0537 |
| BASE SPEED | 1790 | S.F. | 1.00 | P.F.@NL/FL | .047/.863 | R2 .00288 | X2 .0606 |
| PHASE/HERTZ | 3/60 | AMB °C/INSUL | 40/F | WK² (Lb-Ft²) | 105.12 | | XM 1.93 |




**REMARKS:** TYPICAL DATA
**DATA VALID FOR NAMEPLATE SPEED RANGE ONLY**

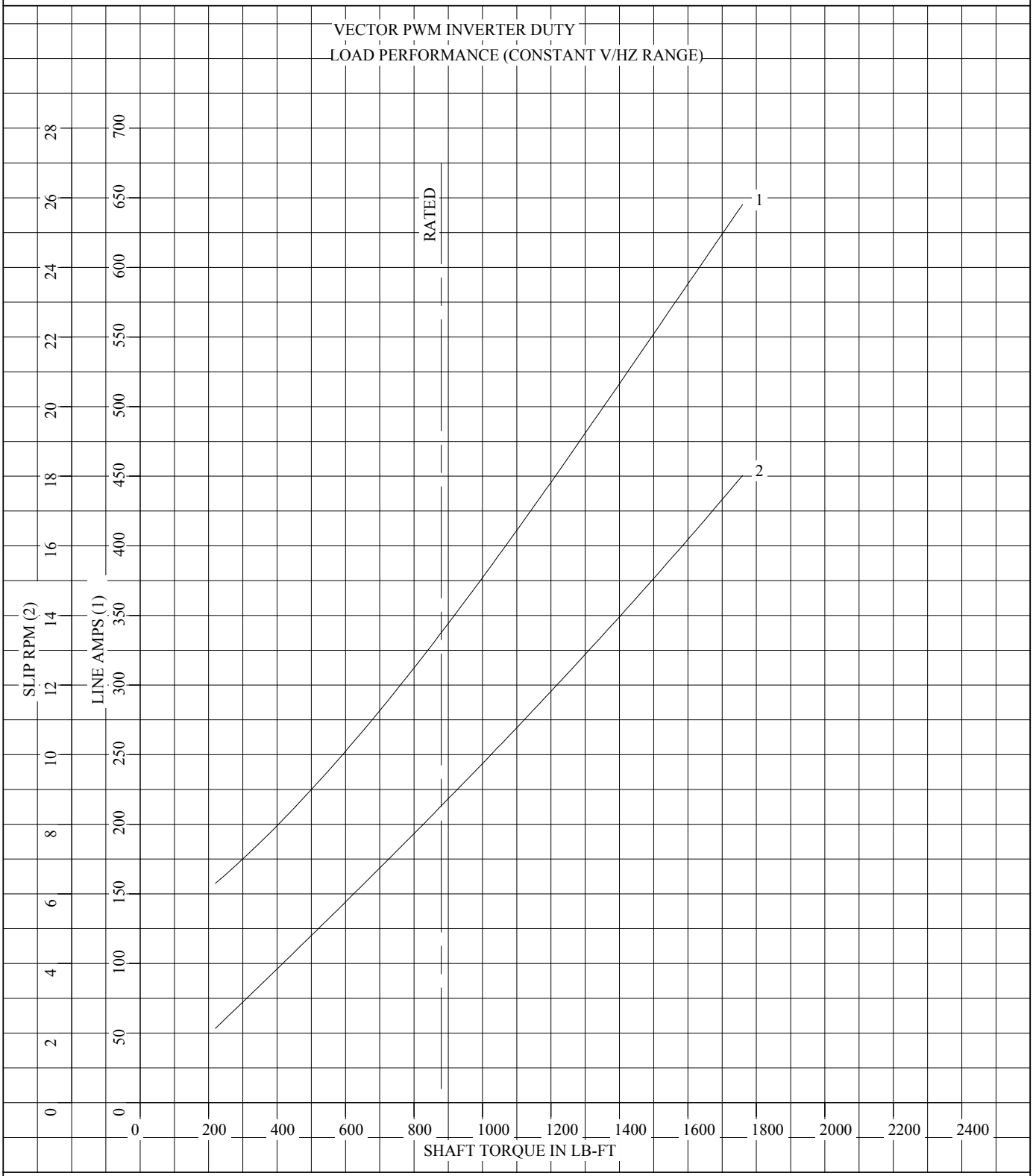
BALDOR

| | |
|---|---|
| DR. BY | J.J.HARRISON |
| CK. BY | W. L. SMITH |
| APP. BY | W. L. SMITH |
| DATE | 08/17/04 |

**A–C MOTOR PERFORMANCE CURVES**

**A44WG0622-R002**
SH 1 OF 2
ISSUE DATE 12/17/10

| | | | | | | | |
|---|---|---|---|---|---|---|---|
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**A–C MOTOR PERFORMANCE CURVES**

**A44WG0622-R002**

SH 2 OF 2

ISSUE DATE 12/17/10

617427-070

# DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

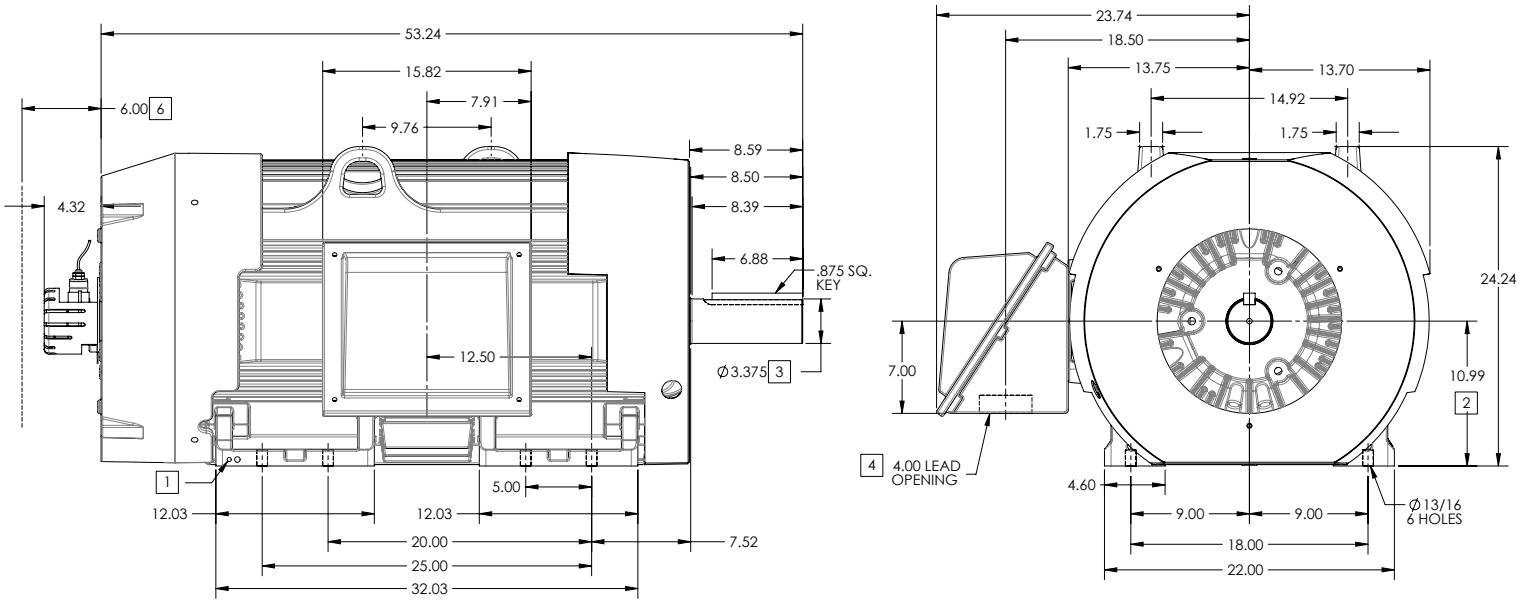
ENCLOSURE: TOTALLY ENCLOSED

FRAME 449T ABOVE NEMA RATINGS (1800 RPM MAX)

COOLING: FAN COOLED

MOUNTING: FOOT

INCLUDES 447T FRAME MOUNTING HOLES
WITH BEI HS-35 ENCODER




1. GROUND HOLES QTY 1 1/2-13 TAP; QTY 1 3/8-16 TAP
2. VARIES +.00,-.06
3. VARIES +.000,-.001
4. ON STANDARD MOTORS THIS IS CONDUIT SIZE. ON XT AND CORROSION PROOF MOTOR THIS IS PIPE TAP.
5. MOTOR WEIGHTS MAY VARY BY 15% DEPENDING ON RATING.
6. OBSTRUCTION MUST NO ENCROACH ON AIR INLET

CONDUIT BOX LOCATED ON OPPOSITE SIDE WHEN F-2.
IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.
MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF STANDARD SHAFT EXTENSION IS .003" T.I.R. TO 5 INCH DIA.

5 WEIGHT (LBS): 3080

DRIVE END AIR DEFLECTOR IS ONLY INCLUDED WHEN NECESSARY.

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

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

SHEET NUMBER 1 OF 2

617427-070

| | | | |
|---|---|---|---|
| REV. DESC: INITIAL RELEASE | | | |
| REV: - | VERSION: 00 | REVISED: 03:39:24 08/24/2012 | TDR: 000000761412 |
| MODEL NO. 617427-070 | | | |
| BY: MGHJMZ2 | | | C |

BALDOR

G449T/447T STD – FOOTED – SIDE/CENTER C/B BEI HS-35 ENCODER

617427-070

617427-070

# DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

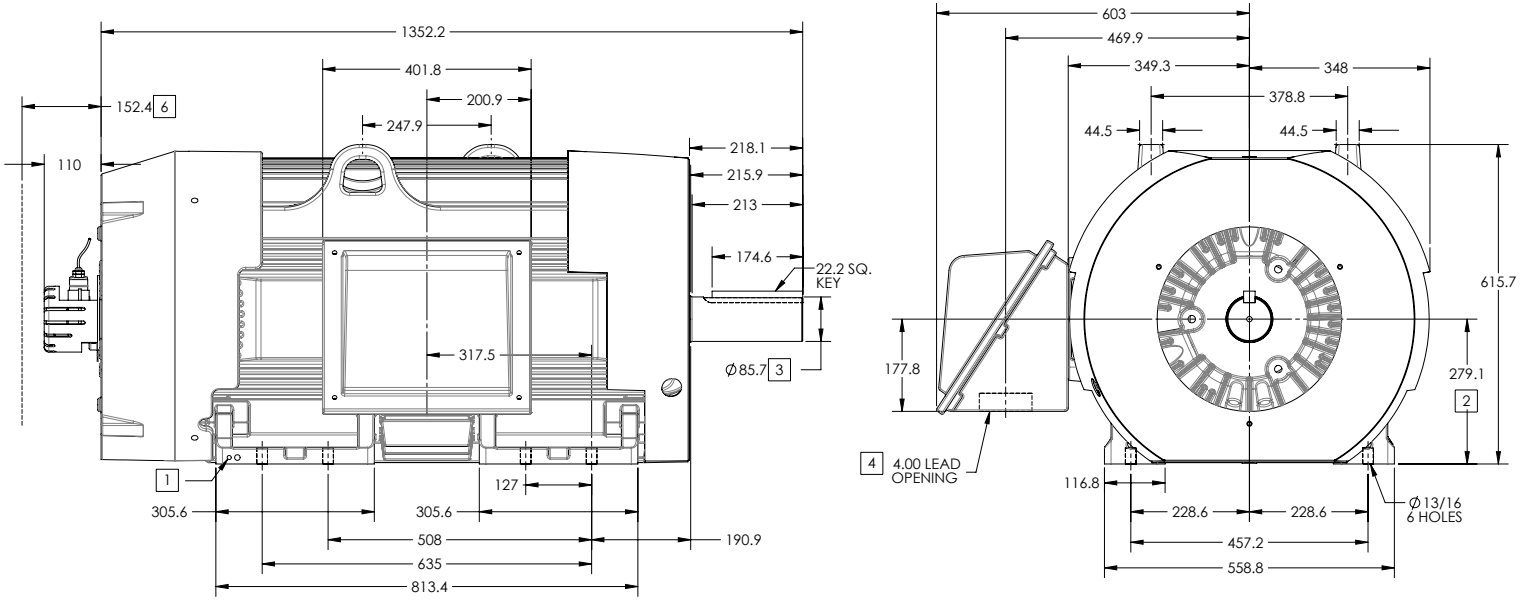
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MOUNTING: FOOT

INCLUDES 447T FRAME MOUNTING HOLES
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2. VARIES +.00,-.06
3. VARIES +.000,-.001
4. ON STANDARD MOTORS THIS IS CONDUIT SIZE. ON XT AND CORROSION PROOF MOTOR THIS IS PIPE TAP.
5. MOTOR WEIGHTS MAY VARY BY 15% DEPENDING ON RATING.
6. OBSTRUCTION MUST NO ENCROACH ON AIR INLET

CONDUIT BOX LOCATED ON OPPOSITE SIDE WHEN F-2.
IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.
MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF STANDARD SHAFT EXTENSION IS .08 MM T.I.R. TO 127 MM DIA.

5 WEIGHT (KGS): 1400

DRIVE END AIR DEFLECTOR IS ONLY INCLUDED WHEN NECESSARY.

DIMENSIONS ARE IN MILLIMETERS; SEE SHEET 1 FOR DIMENSIONS IN INCHES

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

SHEET NUMBER 2 OF 2

617427-070

| | | | |
|---|---|---|---|
| REV. DESC: INITIAL RELEASE | | | |
| REV: - | VERSION: 00 | REVISED: 03:39:24 08/24/2012 | TDR: 000000761412 |
| MODEL NO. 617427-070 | | | |
| BY: MGHJMZ2 | | | |

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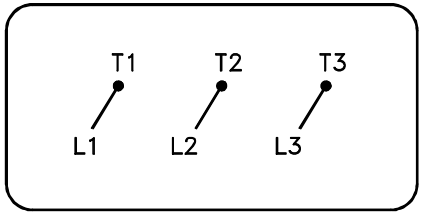
BALDOR

G449T/447T STD – FOOTED – SIDE/CENTER C/B BEI HS-35 ENCODER

617427-070

416820–036

# A–C MOTOR
# CONNECTION DIAGRAM
## STANDARD 3 LEAD CONNECTED




(N.P. 1575–BA)

416820–036

| | | | |
|---|---|---|---|
| REV. DESC: LOADED TO BUS, C/R 335225 | | | BALDOR |
| REV. LTR: – | VERSION: 00 | TDR: 000000538207 | |
| FILE: \MGA\00000\682 | | REVISED: 11:54:06 04/30/2010 | CONN DIAG – STANDARD 3 LEAD |
| MTL: – | | BY: RAGRA | SH 1 of 1 |