

ABB BALDOR RELIANCE III

Customer information packet

ZDVSM44304T-4

300HP, 1790-2685RPM, 3PH, 60-90HZ, 449T, A441

Class - None

Division - Not Applicable

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

Parts List

Part number	Description	Quantity
SA254364	SA P44G4017	1.000 ea
RA241172	RA P44G4017	1.000 ea
000692000FF	N/P	1.000 ea
000692000VD	LABEL WARNING	1.000 ea
000613007HV	N/P BALDOR VSMMASTER, CURUS	1.000 ea
421948051	LABEL, MYLAR	1.000 ea
412118006A	DRAIN	2.000 ea
004824015A	GREASE POLYREX EM	1.160 lb
032018008CK	HHCS 3/8-16X1L PLATED	4.000 ea
032018020FK	HHCS 3/4-10X2-1/2 PLTD.	4.000 ea
032018030DK	HHCS 1/2-13X3-3/4 PLTD.	3.000 ea
032620016LA	SOCKET SET SCREW-449	3.000 ea
032018030DK	HHCS 1/2-13X3-3/4 PLTD.	3.000 ea
034017014AB	LCKW 3/8 STD. PLATED	4.000 ea
034180014DA	KEY 1/4X1/4X1-3/4 L	1.000 ea
034530072AB	P/NIP 1/8X9"L Threaded both ends	1.000 ea
035000001A	ALFTG 1/8" 1610-BL	1.000 ea
034690002AB	PPLG 1/4" PLTD.	1.000 ea
034690005AB	PPLG 3/4 PLATED	2.000 ea
089490099A	G28 BRKT 089490098WCA KB	1.000 ea
702618004T	FAN KB 182/70 (112) 440	1.000 ea
083199082A	G28 FAN COVER MACHINING SHORT VERSION	1.000 ea
089490099A	G28 BRKT 089490098WCA KB	1.000 ea
410700004A	WSHR	1.000 ea
415072001B	CLAMP	1.000 ea
415096002A	CPLG 1/8 HEX TYPE	1.000 ea
032018004BK	HHCS 5/16-18X1/2 PLATED	3.000 ea
032018006BK	HHCS 5/16-18X3/4 PLATED	3.000 ea
702623022A	G28 AIR DEFLECTOR DRIVE END -- PLASTIC	1.000 ea
032018020FK	HHCS 3/4-10X2-1/2 PLTD.	4.000 ea
034017013AB	LCKW 5/16 STD. PLATED	3.000 ea

034530072AB	P/NIP 1/8X9"L Threaded both ends	1.000 ea
035000001A	ALFTG 1/8" 1610-BL	1.000 ea
034690002AB	PPLG 1/4" PLTD.	1.000 ea
415096002A	CPLG 1/8 HEX TYPE	1.000 ea
418151014G	RETAIN RING	1.000 ea
702623013A	THERMAL BARRIER -- G28 -- BRACKET MTD	1.000 ea
032018008DK	HHCS 1/2-13X1 PLATED	4.000 ea
415915007G	GASK, LAC	1.000 ft
033512006LB	HHTTS 1/4-20X3/4 PLTD.	8.000 ea
406056008A	GASKET, TERBD 440	1.000 ea
406099000A	PLUG - FAN COVER 320-440	1.000 ea
418153001A	GASK 440	1.000 ea
415000115H	T/LUG #2AWG-4/0AWG	1.000 ea
032018005DL	1/2-13 X 5/8 SILICON BRONZE HHCS	1.000 ea
702658001B	+C/BOX, PAINTED 440	1.000 ea
702658002A	+C/BOX CVR, PAINTED 440	1.000 ea
611712053RY	TACH & HARDWARE KIT	1.000 ea
033775004EA	DRSCR #6-1/4 304 S.S.	2.000 ea
034180054KA	7/8 SQ X 6.75 KEY	1.000 ea
PK5005A01	WOODEN BASE 449, 60 X 41-1/2	1.000 ea
MG1025N19	WILKO 778.50 BLUE GREEN - 55 GAL DRUMS	0.400 ga

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

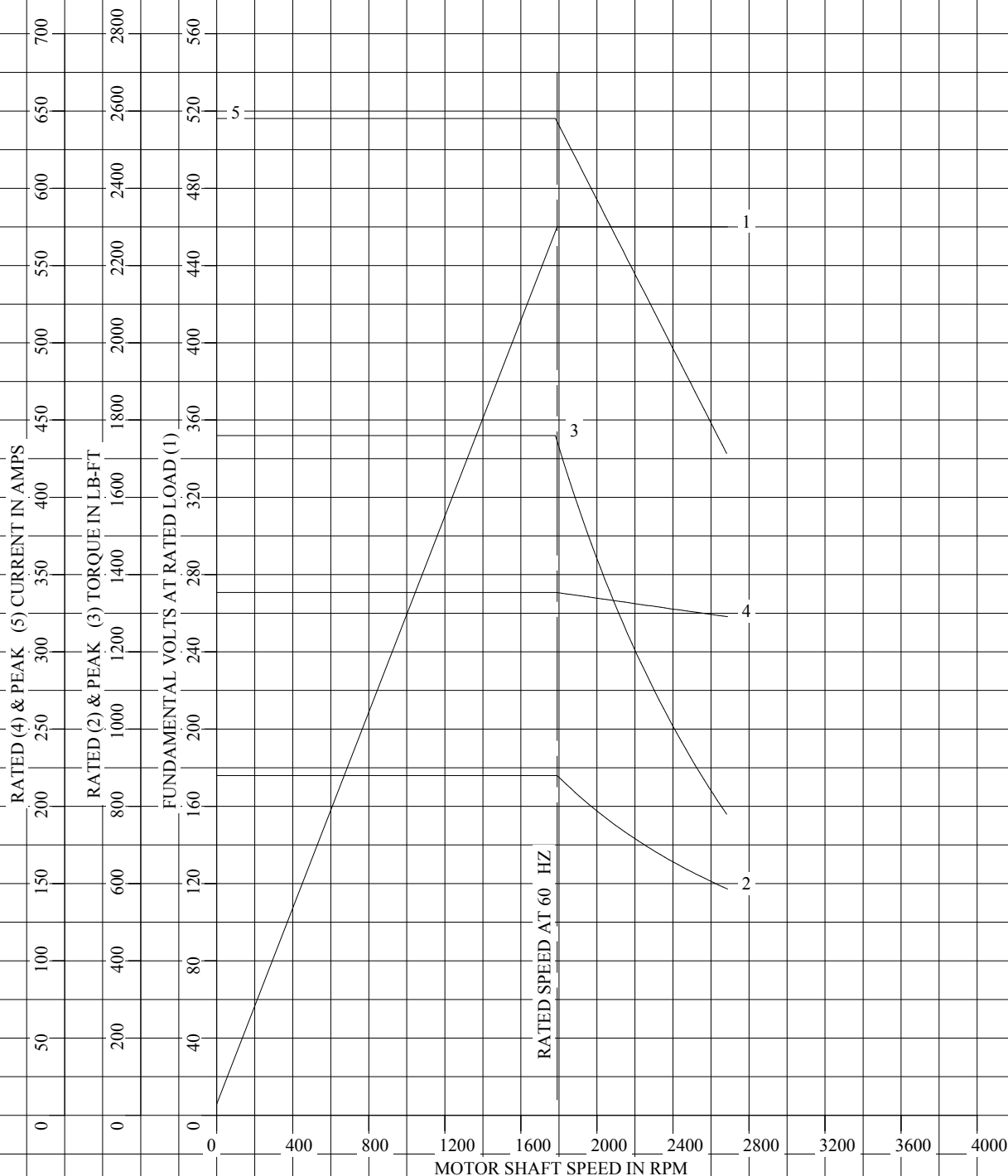
BALDOR

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

A-C MOTOR
PERFORMANCE DATA A44WG0622-R002
ISSUE DATE 12/17/10

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	

VECTOR PWM INVERTER DUTY
VARIABLE SPEED AC MOTOR CURVES



REMARKS: TYPICAL DATA
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY

BALDOR

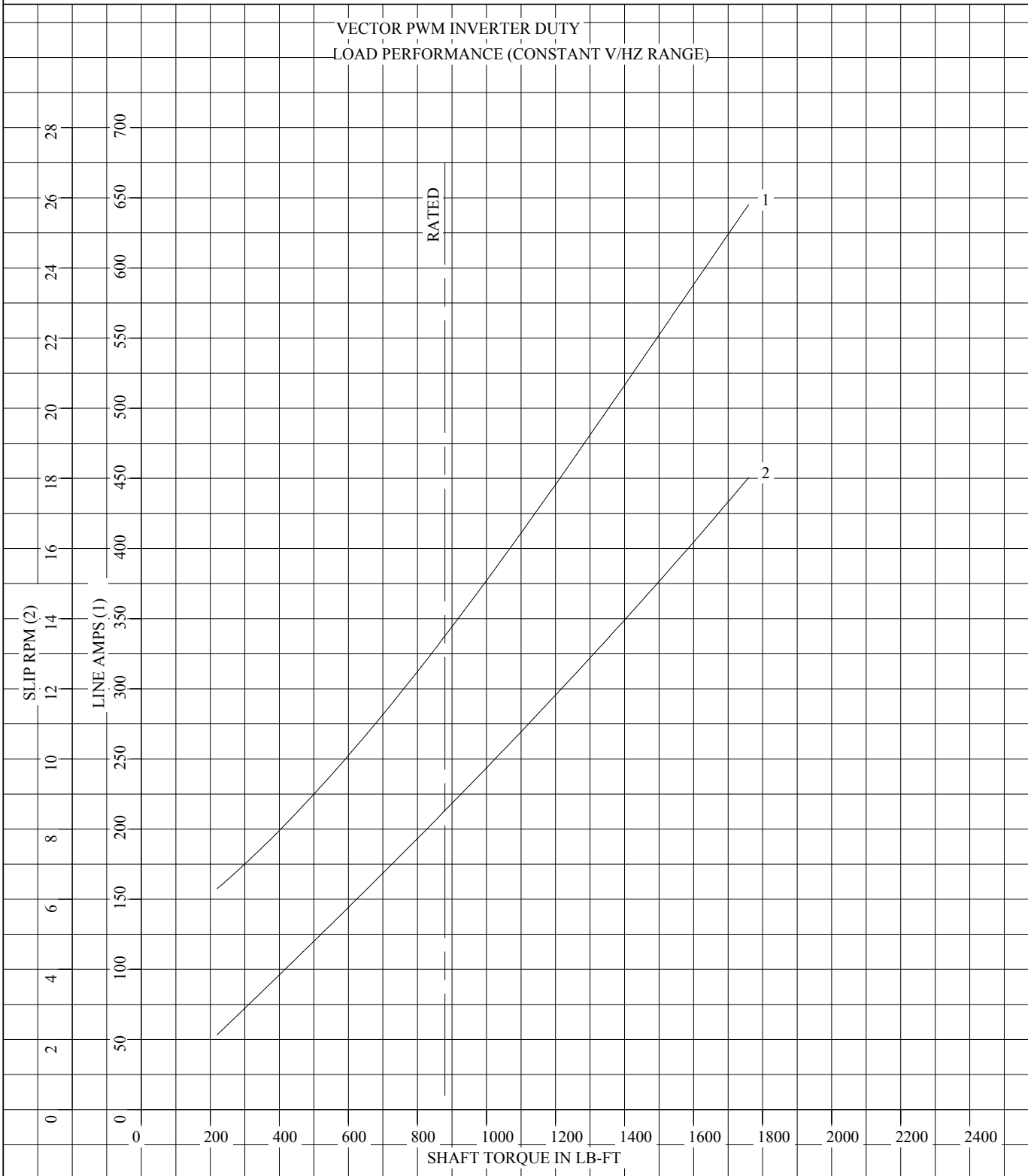
DR. BY J.J.HARRISON
CK. BY W. L. SMITH
APP. BY W. L. SMITH
DATE 08/17/04

**A-C MOTOR
PERFORMANCE
CURVES**

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

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	

VECTOR PWM INVERTER DUTY LOAD PERFORMANCE (CONSTANT V/HZ RANGE)



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 2 OF 2
ISSUE DATE 12/17/10

DUTY MASTER ALTERNATING CURRENT MOTORS

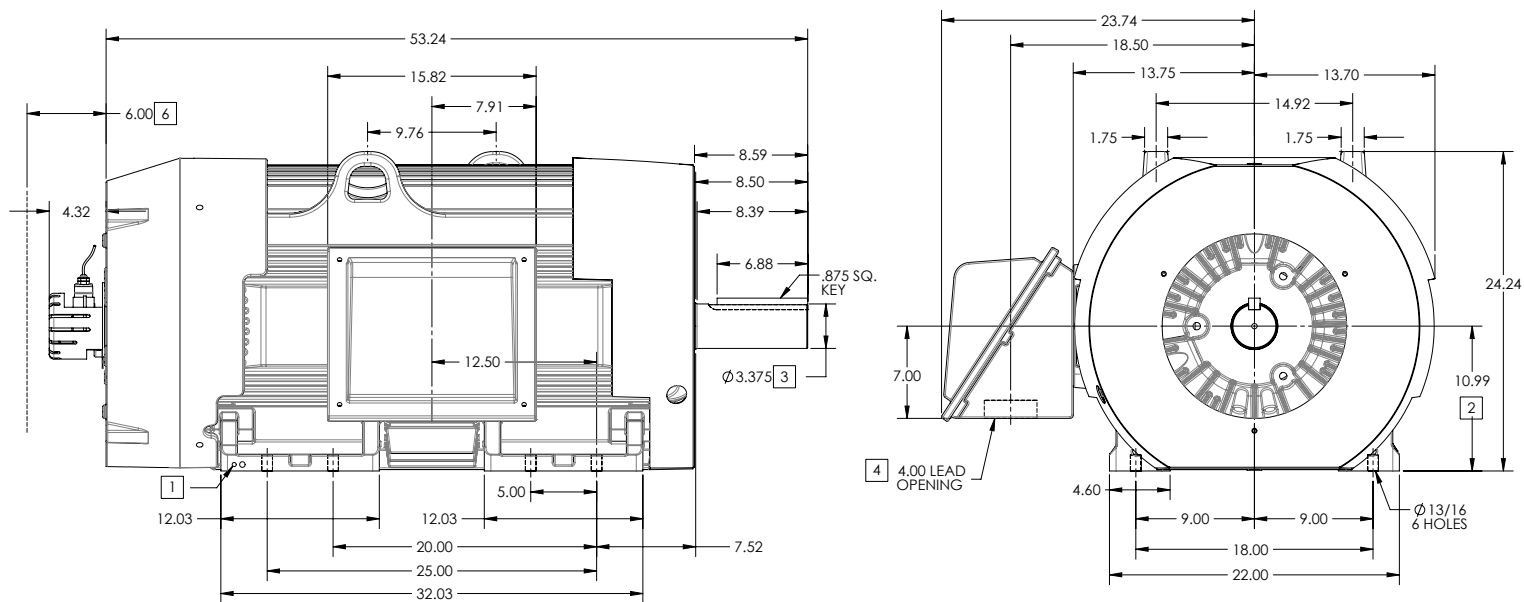
SQUIRREL-CAGE INDUCTION

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 1.5% 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

0107-17119

REV. DESC: INITIAL RELEASE			
REV: -	VERSION: 00	REVISED: 03-29-24 08/24/2012	TDR: 00000761412
MODEL NO. 617427-070			
BY: MGH/MZ2			

BALDOR

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

617427-070

DUTY MASTER ALTERNATING CURRENT MOTORS

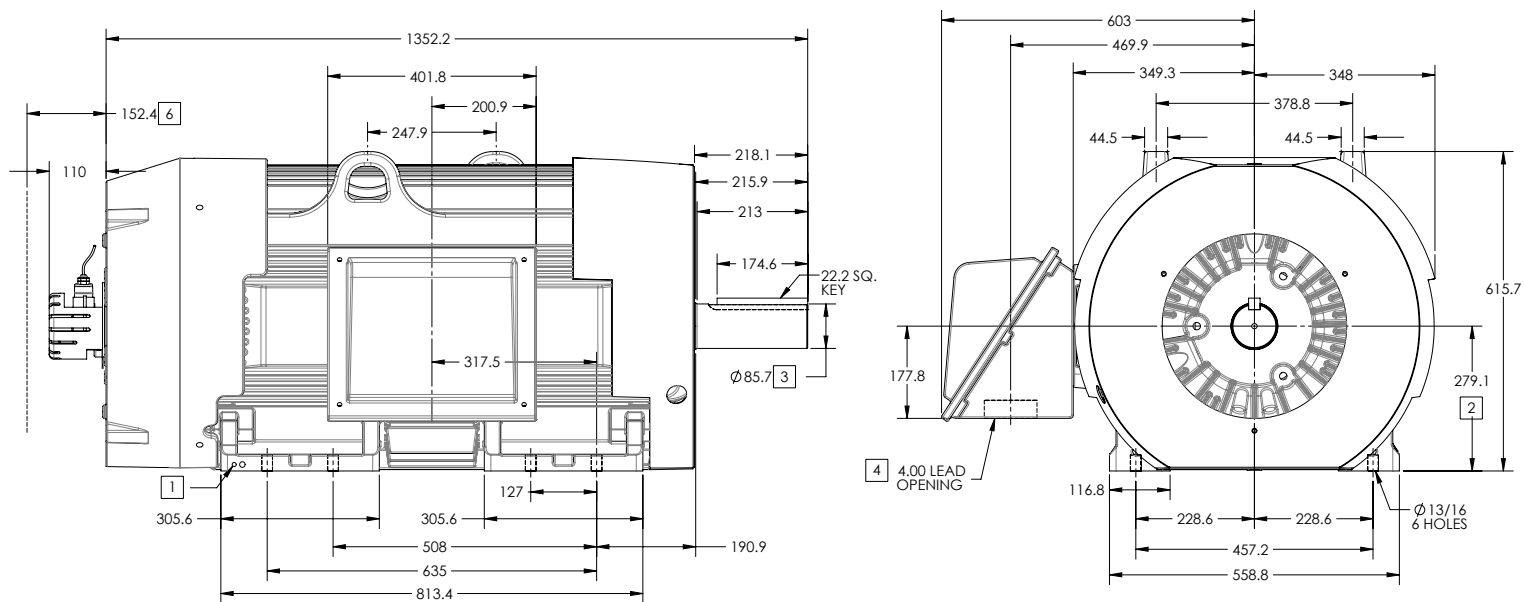
SQUIRREL-CAGE INDUCTION

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 1.5% 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

0107-2747119

REV. DESC: INITIAL RELEASE	VERSION: 00	REVISED: 03-29-24 08/24/2012	TDR: 00000761412
MODEL NO. 617427-070	BY: MGHUMZ2		

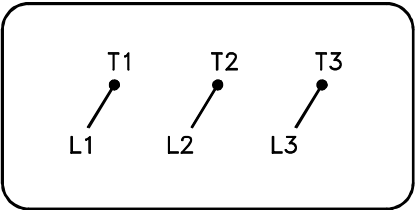
BALDOR

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		
REV. LTR: -	VERSION: 00	TDR: 000000538207
FILE: \MGA\00000\682		REVISED: 11: 54: 06 04/30/2010
MTL: -		BY: RAGRA

BALDOR

CONN DIAG - STANDARD 3 LEAD
SH 1 of 1