

ABB BALDOR RELIANCE III

Customer information packet

ZDVSM4400T-4

100HP, 1785-2680RPM, 3PH, 60-90HZ, 405T, A400

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	405T
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	100.000 HP @ 90 HZ 100.000 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	112.000 A @ 460.0 V 115.000 A @ 460.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	94.1 %
Feedback Device	ENCODER
Heater Indicator	No Heater
High Voltage Full Load Amps	112.0 a
Insulation Class	F
Inverter Code	Inverter Duty
KVA Code	L

Part Detail

Revision	K
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	A40WG0296
Layout	617429-200
Eff. date	07-09-2026
CD Diagram	416820-036
Poles	04
Leads	3#1
Proprietary	False
Created date	07-19-2013

Lifting Lugs	Standard Lifting Lugs
Max Speed	3600 rpm
Motor Lead Quantity/Wire Size	3 @ 1 AWG
Motor Standards	NEMA
Motor Type	A40064M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	42.40 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	1785 rpm 2680 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	Normally Closed Thermostat

Nameplate

000613007HV										
CAT NO	ZDVSM4400T-4			SPEC NO.	P40G3941					
SER.NO.				FRAME	405T					
	HP	RPM	VOLTS	AMPS		HZ	TYPE	P		
BASE	100	1785	460	115		60	SF	1.00		
MAX	100	2680	460	112.		90	INSUL.CLASS		F	
DRIVE END BEARING	80BC03J30X		CONSTANT TORQUE			DUTY	CONT		AMB	40
OPP D.E. BEARING	80BC03J30X		1000:1		ENCL	TEFC	PHASE	3		
DESIGN NO.	A40WG0296-R002		FLUX AMPS		37.8		VPWM INVERTER READY			
MAX SPEED/RPM	3600		OVERTEMP PROT		2	WK2	26.07		POLES	4 WEIGHT

Parts List

Part number	Description	Quantity
SA267731	SA P40G3941	1.000 ea
RA254401	RA P40G3941	1.000 ea
000613006PU	N/P (RELEASE QTY 10,000) UL CSA LABEL	1.000 ea
000613007HV	N/P BALDOR VSMMASTER, CURUS	1.000 ea
000692000FF	N/P	1.000 ea
000692000VD	LABEL WARNING	1.000 ea
412118006A	DRAIN	2.000 ea
004824015A	GREASE POLYREX EM	0.884 lb
032018008CK	HHCS 3/8-16X1L PLATED	4.000 ea
032018020EK	HHCS 5/8-11X2-1/2 PLTD.	4.000 ea
032018024CK	HHCS 3/8-16X3 PLTD.	3.000 ea
034000014AB	WSH ID.406 OD.812 TH.065	4.000 ea
034180008DA	KEY 1/4X1/4X1 L (shipping)	1.000 ea
034530052AB	P/NIP 1/8X6-1/2 Zinc	1.000 ea
034530056BB	P/NIP 1/4X7 SCHED 40	1.000 ea
034631002AB	BUSH 1/4 TO 1/8 PLTD.	1.000 ea
035000001A	ALFTG 1/8" 1610-BL	1.000 ea
034690001AB	1/8" NPT SQHDPLG	1.000 ea
078549001DA	FAN 400 078549001F	1.000 ea
083198101A	G400 STD FAN COVER MACHINING	1.000 ea
089412501A	BRKT FTMT G400 FIN MACH 6316 89412500WCA	1.000 ea
410700000DA	WAVY SPRING WASHER	1.000 ea
415072001B	CLAMP	1.000 ea
034692005AA	P PLUG 3/4"BLK.	1.000 ea
415096002A	CPLG 1/8 HEX TYPE	1.000 ea
032018020EK	HHCS 5/8-11X2-1/2 PLTD.	4.000 ea
032018024CK	HHCS 3/8-16X3 PLTD.	3.000 ea
035000001A	ALFTG 1/8" 1610-BL	1.000 ea
034690002AB	PPLG 1/4" PLTD.	1.000 ea
089412501A	BRKT FTMT G400 FIN MACH 6316 89412500WCA	1.000 ea
032018005AK	HHCS 1/4-20X5/8 PLATED	4.000 ea

032018008CK	HHCS 3/8-16X1L PLATED	4.000 ea
043292000AJ	GASK 320-400	1.000 ea
077176000L	C/BOX, PAINTED 440	1.000 ea
077176001A	CBOX Cover 360-400	1.000 ea
402731001A	GASK 360-440	1.000 ea
415000115H	T/LUG #2AWG-4/0AWG	1.000 ea
611712053RY	TACH & HARDWARE KIT	1.000 ea
418150003A	GREASE FITTING CAP	1.000 ea
418150003A	GREASE FITTING CAP	1.000 ea
033775004EA	DRSCR #6-1/4 304 S.S.	2.000 ea
034180044JA	KEY 3/4X3/4X5-1/2 L	1.000 ea
MG1025N19	WILKO 778.50 BLUE GREEN - 55 GAL DRUMS	0.375 ga
004824003CBY	WILKO PAINT 060.02 - ACTIVATOR	0.063 ga
421948051	LABEL, MYLAR	1.000 ea
032018005DL	1/2-13 X 5/8 SILICON BRONZE HHCS	1.000 ea
604797045	STD. 400 FRAME SKID	1.000 ea
604799003C	PLASTIC BAG 42X32X46	1.000 ea

REL S.O.	-	VOLTS	460	ENCLOSURE	TEFC	WYE CONN EQ CKT OHMS PER PHASE		
FRAME	405T	AMPS	115	MAX SAFE RPM	3600	(AT BASE RATING, 25 °C)		
HP	100	DUTY	CONT	IM (AMPS)	37.8	R1	.0193	X1 .194
BASE SPEED	1785	S.F.	1.0	P.F.@NL/FL	9.5/86.4	R2	.0142	X2 .185
PHASE/HERTZ	3/60	AMB °C/INSUL	40/F	WK ² (Lb-Ft ²)	26.07			XM 5.85

RATED FULL LOAD DATA

	RPM	HP	TORQUE LB-FT	FUND VOLTS	FREQ-HZ	AMPS
BASE SPEED	1786	100	294	460	60	115
MAX SPEED	2678	100	196	460	90	112
MIN SPEED	0	0	294	9.60	.460	115

LOAD PERFORMANCE AT BASE SPEED

	RPM	HP	TORQUE LB-FT	FUND VOLTS	FREQ-HZ	AMPS
NO LOAD	1800	0	0	460	60	37.8
1/4	1796	25.0	73	460	60	52.9
1/2	1793	50.1	147	460	60	70.5
3/4	1790	75.0	220	460	60	91.5
FULL LOAD	1786	100	294	460	60	115
O/L	1779	149	441	460	60	167

REMARKS: CALCULATED DATA
VECTOR PWM INVERTER DUTY

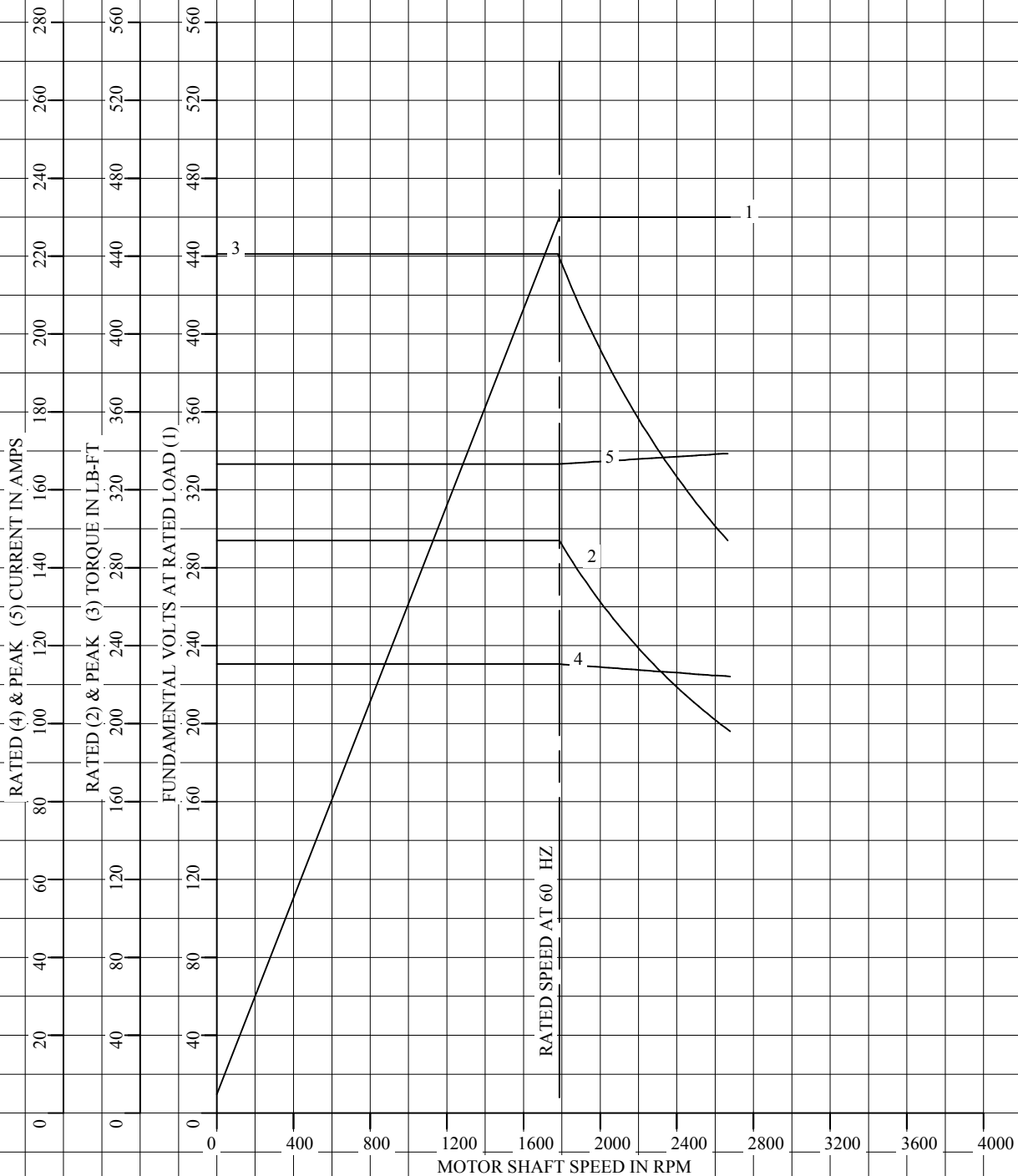


DR. BY M. ORDERS
CK. BY J. TSAO
APP. BY J. TSAO
DATE 06/04/14

**A-C MOTOR
PERFORMANCE DATA**
A40WG0296-R002
ISSUE DATE 06/04/14

REL S.O.	-	VOLTS	460	ENCLOSURE	TEFC	WYE CONN	EQ	CKT	OHMS	PER PHASE
FRAME	405T	AMPS	115	MAX SAFE RPM	3600	(AT BASE RATING, 25 °C)				
HP	100	DUTY	CONT	IM (AMPS)	37.8	R1	.0193	X1	.194	
BASE SPEED	1785	S.F.	1.0	P.F. @NL/FL	9.5/86.4	R2	.0142	X2	.185	
PHASE/HERTZ	3/60	AMB °C/INSUL	40/F	WK ² (Lb-Ft ²)	26.07			XM	5.85	

VECTOR PWM INVERTER DUTY
VARIABLE SPEED AC MOTOR CURVES



REMARKS: CALCULATED DATA
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



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DATE 06/04/14

**A-C MOTOR
PERFORMANCE
CURVES**

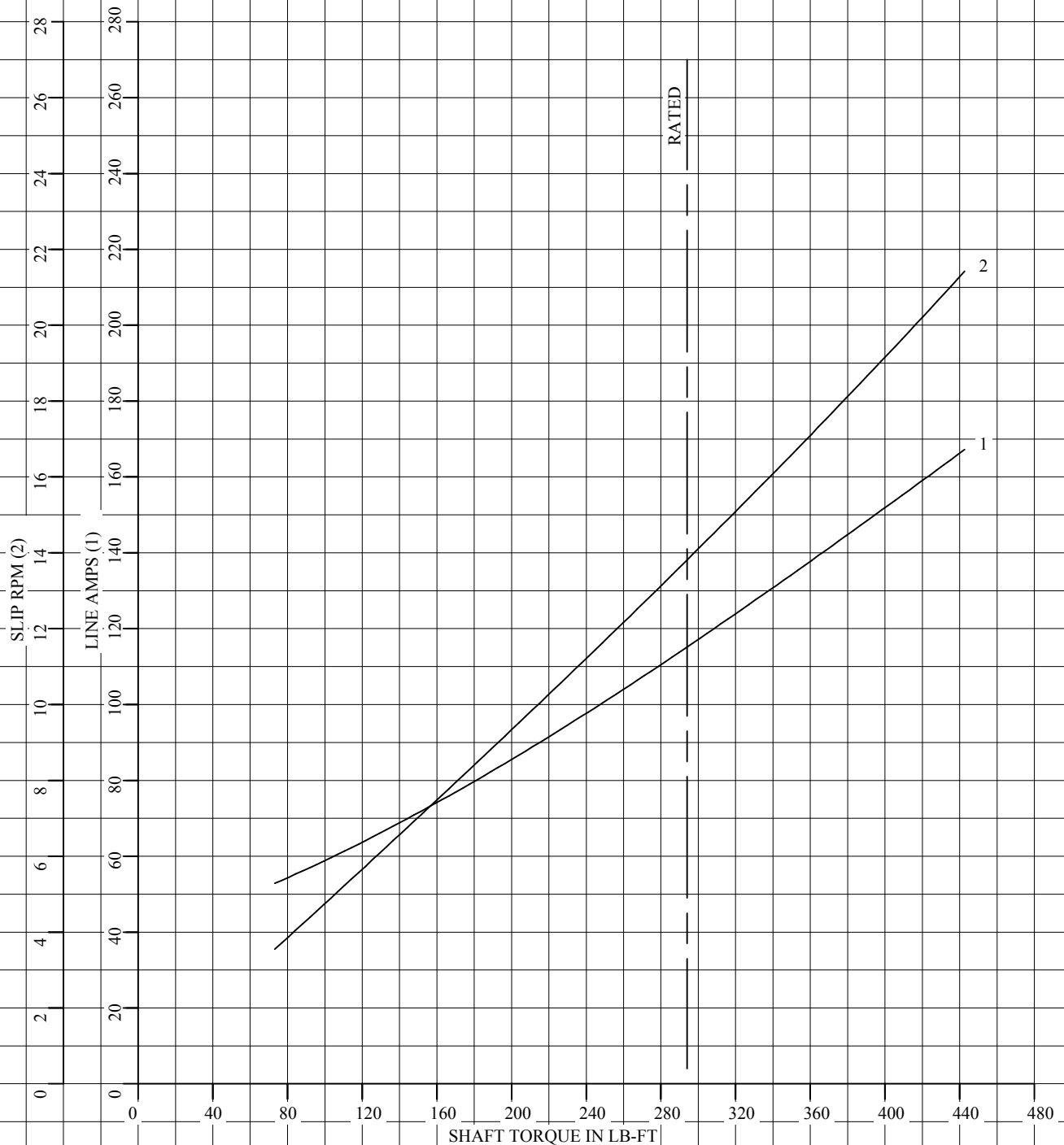
A40WG0296-R002

SH 1 OF 2
ISSUE DATE 06/04/14

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REL S.O.	-	VOLTS	460	ENCLOSURE	TEFC	WYE CONN	EQ	CKT	OHMS	PER PHASE
FRAME	405T	AMPS	115	MAX SAFE RPM	3600	(AT BASE RATING, 25 °C)				
HP	100	DUTY	CONT	IM (AMPS)	37.8	R1	.0193	X1	.194	
BASE SPEED	1785	S.F.	1.0	P.F. @NL/FL	9.5/86.4	R2	.0142	X2	.185	
PHASE/HERTZ	3/60	AMB °C/INSUL	40/F	WK ² (Lb-Ft ²)	26.07			XM	5.85	

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



REMARKS: CALCULATED DATA
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



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CK. BY J. TSAO
APP. BY J. TSAO
DATE 06/04/14

**A-C MOTOR
PERFORMANCE
CURVES**

A40WG0296-R002

SH 2 OF 2
ISSUE DATE 06/04/14

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

ENCLOSURE: TOTALLY ENCLOSED

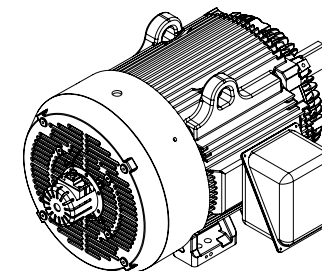
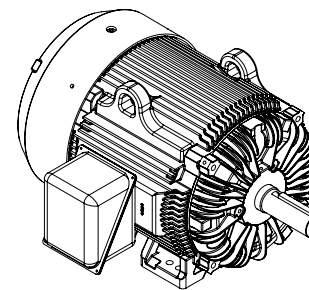
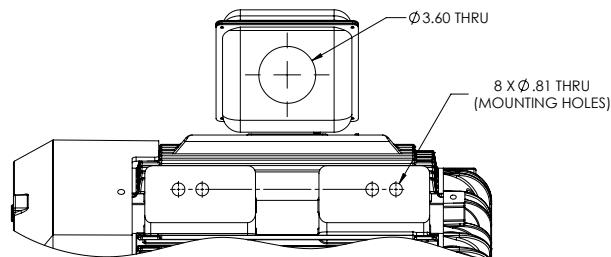
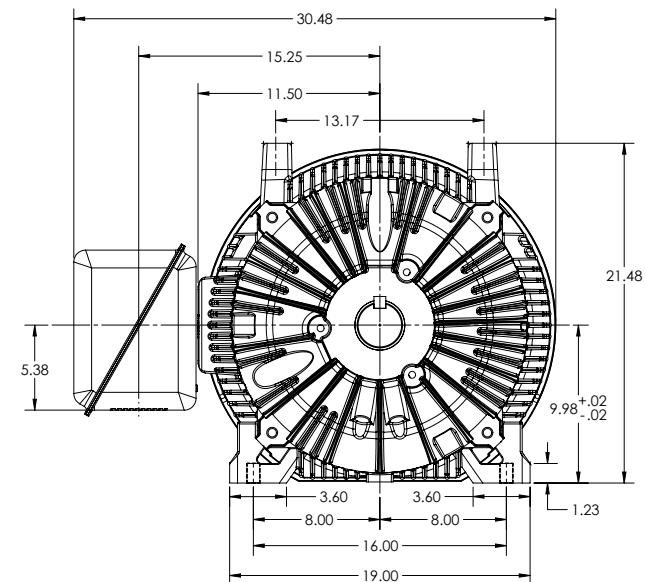
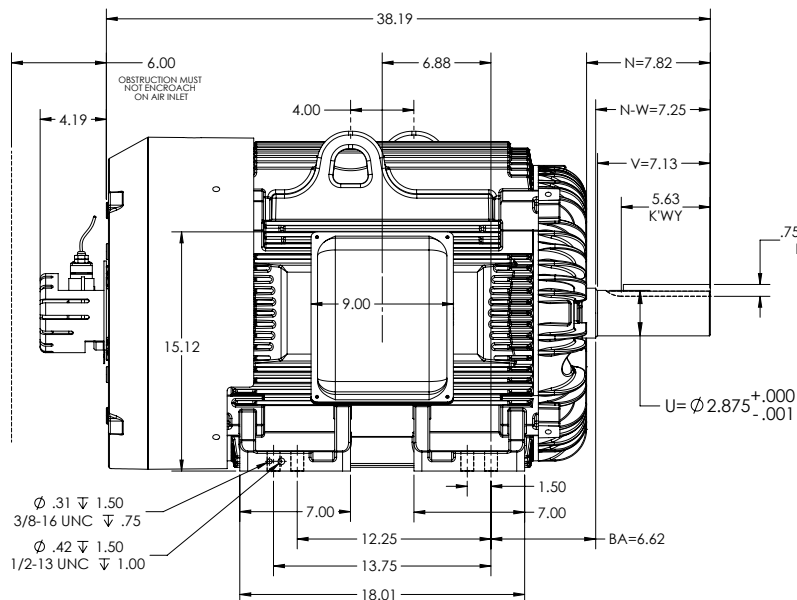
FRAME G405T ABOVE NEMA RATINGS

COOLING: FAN COOLED

MOUNTING: FOOT F-1

INCLUDES 404T FRAME MOUNTING HOLES
AND HS-35 ENCODER

STANDARD INDUSTRIAL/ ZDVSM ENCLOSURE



WEIGHT (LBS) : 1350 / WEIGHT MAY VARY 15% DEPENDING ON RATING

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

00C-62P-119

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.

REV. DESC: UPDATING FOOT HOLES FROM 6 TO 8

REV: C VERSION: 03

REVISED: 10-52-36 12/08/2017

TDR: 000001053673

MODEL NO. 617429-200

REF: -

BY: RAGRA

Material: -

BALDOR

G405T-404T STD - FOOTED - STANDARD INDUSTRIAL/ZDVSM - ENCODER

617429-200

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

ENCLOSURE: TOTALLY ENCLOSED

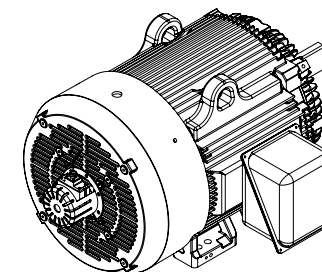
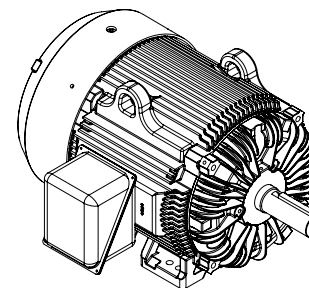
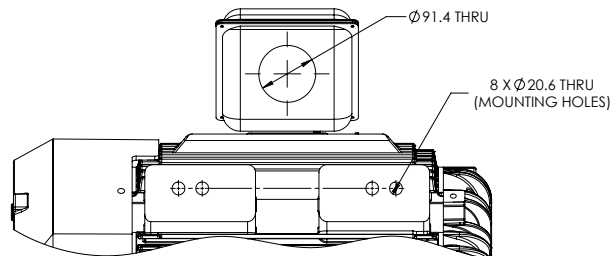
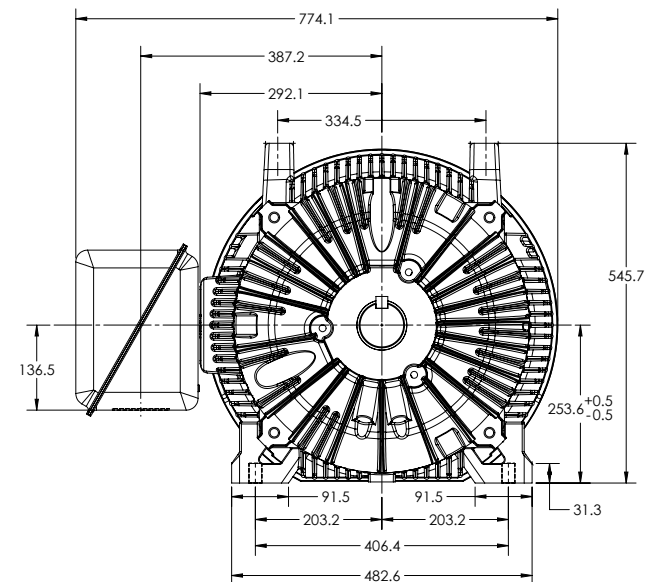
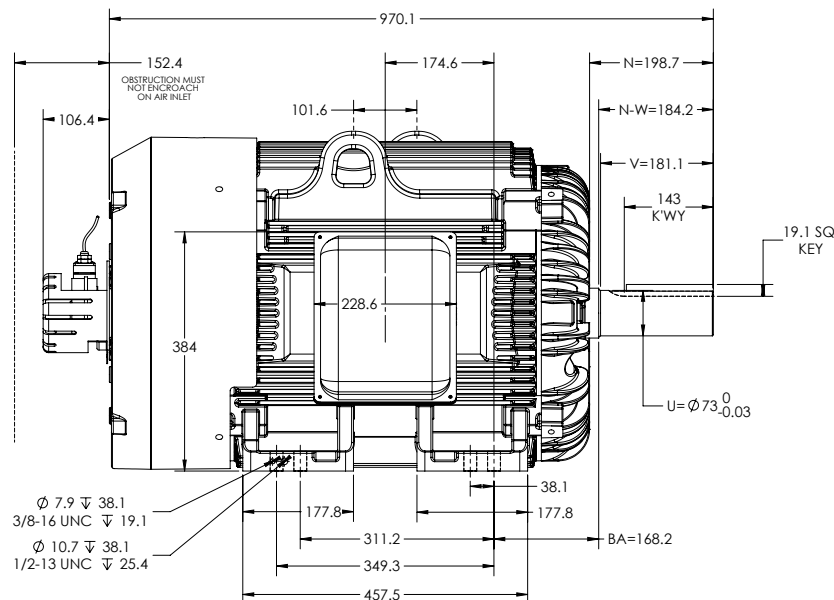
FRAME G405T ABOVE NEMA RATINGS

COOLING: FAN COOLED

MOUNTING: FOOT F-1

INCLUDES 404T FRAME MOUNTING HOLES
AND HS-35 ENCODER

STANDARD INDUSTRIAL/ ZDVSM ENCLOSURE



WEIGHT (KGS) : 620 / WEIGHT MAY VARY 15% DEPENDING ON RATING

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

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.

REV. DESC: UPDATING FOOT HOLES FROM 6 TO 8	REVISED: 10-52-36 12/08/2017	TDR: 000001053673
REV: C	VERSION: 03	REF: -
MODEL NO. 617429-200	BY: RAGRA	Material: -

BALDOR

G405T-404T STD - FOOTED - STANDARD INDUSTRIAL/ZDVSM - ENCODER

617429-200

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