

BALDOR® • RELIANCE 

Product Information Packet

ELECTRIC MOTOR CO

FDEM4400T

100HP, 1785RPM, 3PH, 60HZ, 405T, A40064M, TEFC

Part Detail							
Revision:	E	Status:	PRD/A	Change #:		Proprietary:	No
Type:	AC	Elec. Spec:	A40WG0251	CD Diagram:	416820-002	Mfg Plant:	
Mech. Spec:		Layout:	617429-012	Poles:	04	Created Date:	02-27-2014
Base:		Eff. Date:	09-07-2016	Leads:	3#2,6#4		

Specs			
Catalog Number:	FDEM4400T	Feedback Device:	NO FEEDBACK
Enclosure:	TEFC	Heater Indicator:	No Heater
Frame:	405T	Insulation Class:	F
Frame Material:	Iron	Inverter Code:	Inverter Ready
Output @ Frequency:	100.000 HP @ 60 HZ	KVA Code:	G
Synchronous Speed @ Frequency:	1800 RPM @ 60 HZ	Lifting Lugs:	Standard Lifting Lugs
Voltage @ Frequency:	230.0 V @ 60 HZ	Motor Lead Quantity/Wire Size:	3 @ 2 AWG
	460.0 V @ 60 HZ	Motor Type:	A40064M
XP Class and Group:	None	Mounting Arrangement:	F1
XP Division:	Not Applicable	Power Factor:	87
Agency Approvals:	CCSA US	Pulley End Bearing Type:	Ball
	CSA EEV	Pulley Face Code:	Standard
Auxillary Box:	No Auxillary Box	Shaft Ground Indicator:	No Shaft Grounding
Base Indicator:	Rigid	Shaft Rotation:	Reversible
Bearing Grease Type:	Polyrex EM (-20F +300F)	Shaft Slinger Indicator:	Shaft Slinger
Current @ Voltage:	112.000 A @ 460.0 V	Speed Code:	Single Speed
	224.000 A @ 230.0 V	Motor Standards:	NEMA
Design Code:	B	Starting Method:	Direct on line

Drip Cover:	No Drip Cover	Thermal Device - Bearing:	None
Duty Rating:	CONT	Thermal Device - Winding:	None

Nameplate NP3159L										
SPEC NO.	A40-4964-0251			CAT.NO.	FDEM4400T			FRAME	405T	
HP	100	VOLTS	230/460		PHASE	3	DESIGN	B	TYPE	P
RPM	1785	AMPS	224/112		HZ	60	AMB	40	SF	1.15
DRIVE END BEARING	80BC03JGG30A		DUTY	CONT		INSUL.CLASS	F			
OPP D.E. BEARING	80BC03JGG30A		ENCL	TEFC		CODE	G			
SER.NO.				POWER FACTOR	87		NEMA-NOM-EFFICIENCY	95.4		
						MAX CORR KVAR	18		GUARANTEED EFFICIENCY	94.5
						NEMA NOM/CSA QUOTED EFF				
						MOTOR WEIGHT	1326			

Parts List		
Part Number	Description	Quantity
SA278005	SA A40-4964-0251	1.000 EA
RA264551	RA A40-4964-0251	1.000 EA
000613006PU	N/P (RELEASE QTY 10,000) UL CSA LABEL	1.000 EA
000692000VD	LABEL WARNING	1.000 EA
000692000FF	N/P	1.000 EA
NP3159L	SUPER-E FARM DUTY, SS, CC, CSA-C US,	1.000 EA
421948032	LABEL, MYLAR	1.000 EA
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
034180012DA	KEY 1X4X1/4X1-1/2 L	1.000 EA
034530056BB	P/NIP 1/4X7 SCHED 40	1.000 EA
034631002AB	BUSH 1/4 TO 1/8 PLTD.	1.000 EA
034690001AB	1/8" NPT SQHDPLG	1.000 EA
034692005AA	P PLUG 3/4"BLK.	1.000 EA
034690001AB	1/8" NPT SQHDPLG	1.000 EA
078548001R	FAN KB 234/150 (84) 400	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
032018020EK	HHCS 5/8-11X2-1/2 PLTD.	4.000 EA
032018024CK	HHCS 3/8-16X3 PLTD.	3.000 EA

Parts List (continued)		
Part Number	Description	Quantity
034690002AB	PPLG 1/4" PLTD.	1.000 EA
034690001AB	1/8" NPT SQHDPLG	1.000 EA
089412501B	G400 MACHD 6316 FT MNT BRKT LIP SEAL	1.000 EA
032018005AK	HHCS 1/4-20X5/8 PLATED	4.000 EA
032018008CK	HHCS 3/8-16X1L PLATED	4.000 EA
033512004LB	HHTTS 1/4-20X1/2 PLTD.	1.000 EA
043292000AJ	GASK 320-400	1.000 EA
077176000L	C/BOX, 360-400	1.000 EA
077176001A	CBOXC, PAINTED 360-400	1.000 EA
402731001A	GASK 360-440	1.000 EA
406099000A	PLUG - FAN COVER 320-440	1.000 EA
415000103D	T/LUG #4AWG-1/0AWG W/HOLE FOR .250 BOLT	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
PK5004A02	WOOD BASE 40X32 STACK 2X4 RUNNER	1.000 EA
415028001AA	SEAL - 400 (FOR C-FACE & D-FLANGE BRKT)	1.000 EA
423709011C	WASHER	3.000 EA
415045002B	SLGR	1.000 EA
000692000CY	N/P	1.000 EA
034690001AB	1/8" NPT SQHDPLG	1.000 EA
MG1025C02	WILKOFASST SG, 787.105, TAN	0.375 GA
004824015A	GREASE POLYREX EM	1.000 LB

REL. S.O.	FRAME	HP	TYPE	PHASE/HERTZ	RPM	VOLTS
	405T	100	P	3/60	1785	230/460
AMPS	DUTY	AMB °C/ INSUL.	S.F.	NEMA DESIGN	CODE LETTER	ENCL.
224/112	CONT	40/F	1.15	B	G	TEFC
E/S	ROTOR	TEST S.O.	TEST DATE	STATOR RES. @25 °C 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

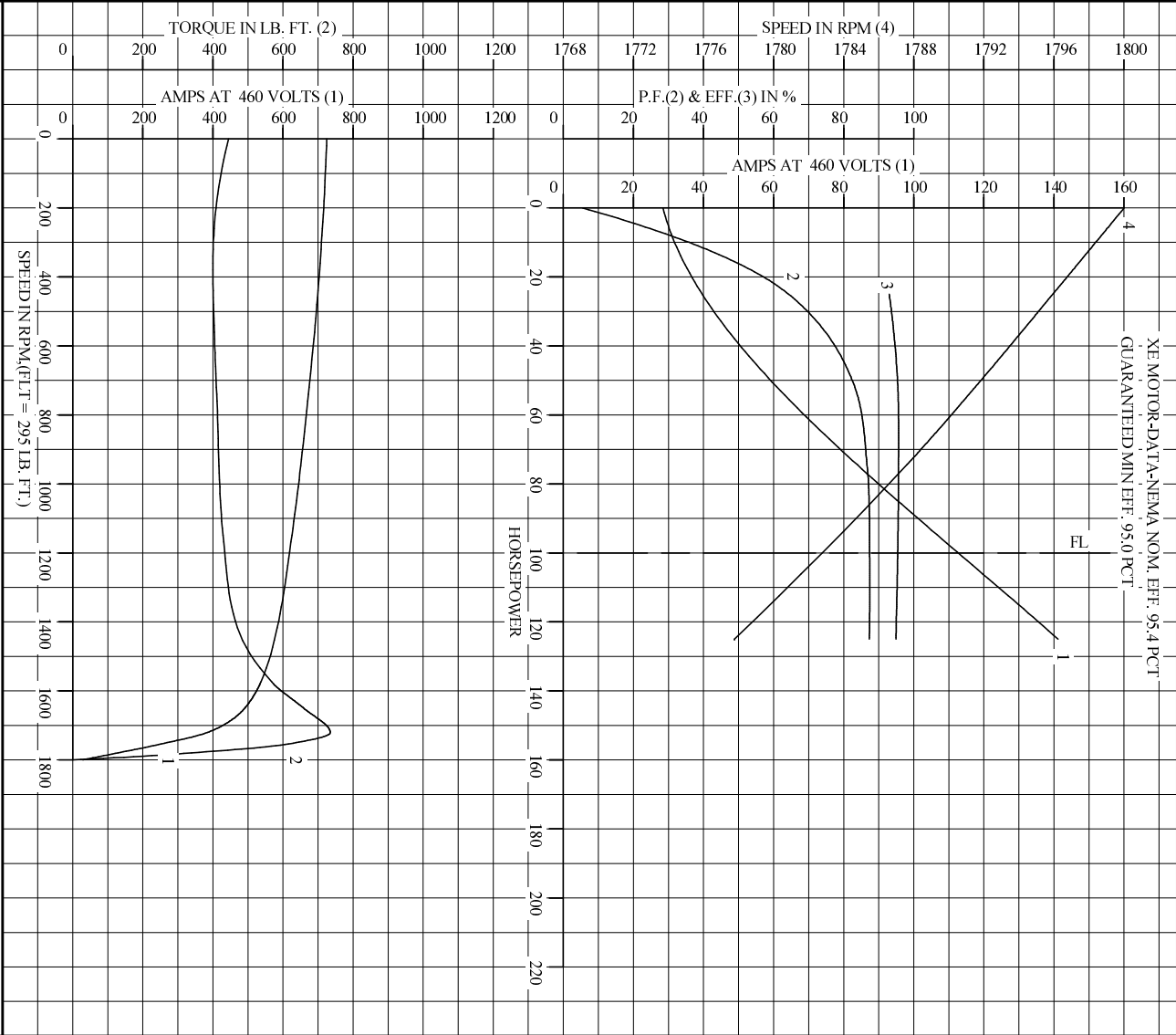
	RPM	TORQUE % FULL LOAD	TORQUE LB.-FT.	AMPERES
LOCKED ROTOR	0	151	445	725
PULL UP	360	136	400	706
BREAKDOWN	1721	250	735	382
FULL LOAD	1783	100	295	112

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

REMARKS: TYPICAL DATA
 XE MOTOR-DATA-NEMA NOM. EFF. 95.4 PCT
 GUARANTEED MIN EFF. 95.0 PCT

BALDOR	DR. BY J.J.HARRISON	A-C MOTOR	
	CK. BY W.L.SMITH		PERFORMANCE DATA
	APP. BY W.L.SMITH		ISSUE DATE 12/15/10
DATE 07/26/04			

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



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

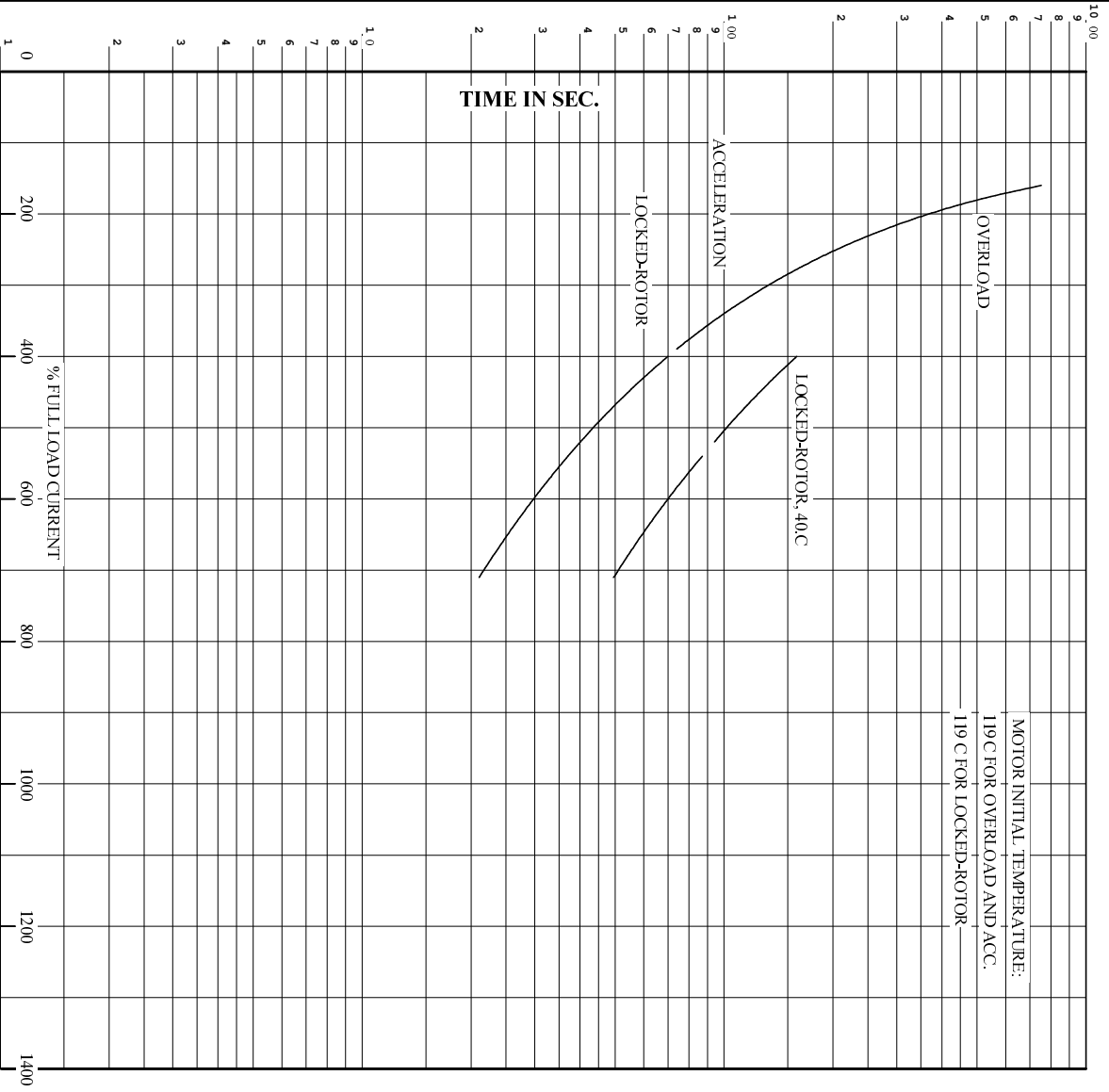
BALDOR

DR. BY J.HARRISON
 CK. BY W.L.SMITH
 APP. BY W.L.SMITH
 DATE 07/26/04

A-C MOTOR PERFORMANCE CURVES A40W/G0251-R001
 ISSUE DATE 12/15/10

Printed on 12/15/10 16:31 @ psecs-motoreng

RET. S.O. RPM 1785 S.F. 1.15 ROTOR 418142-33-RE
 FRAME 405T VOLTS 230/460 NEMA DESIGN B TEST S.O. TYPICAL DATA
 HP 100 AMPS 224/112 CODE LETTER G TEST DATE ---
 TYPE P DUTY CONT ENCLOSURE TEFC STATOR RES. @ 25 C. 0.123/.0492
 PHASE/HERTZ 3/60 AMB C/INSUL 40/F E/S 596956 OHMS (BETWEEN LINES)



REMARKS: THERMAL LIMIT CURVE
 XE MOTOR-DATA-NEMA NOM. EFF. 95.4 PCT
 GUARANTEED MIN EFF. 95.0 PCT

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



DR. BY J.HARRISON
 CK. BY W.L. SMITH
 App. BY W.L. SMITH
 DATE 07/26/04

A-C MOTOR
PERFORMANCE
CURVES
A40WG0251-R001
 ISSUE DATE 12/15/10

617429-012

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

ENCLOSURE: TOTALLY ENCLOSED

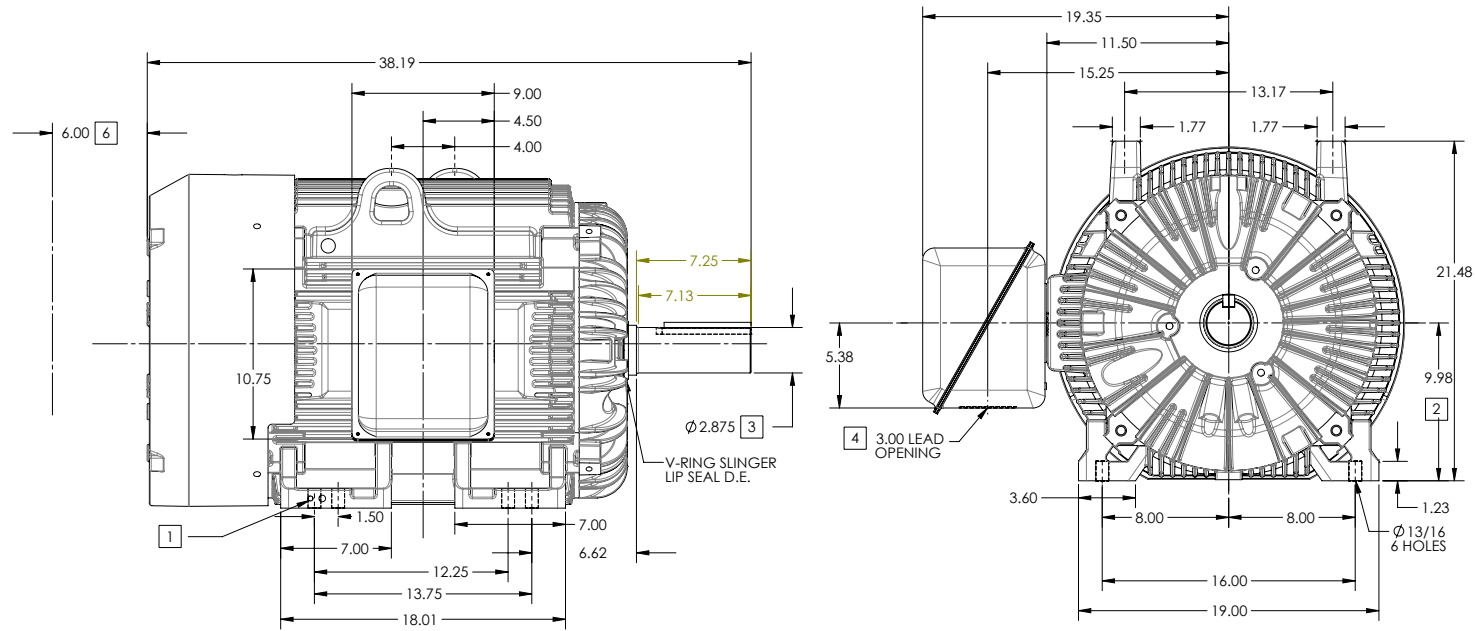
FRAME G405T ABOVE NEMA RATINGS

COOLING: FAN COOLED

MOUNTING: FOOT

INCLUDES 404T FRAME MOUNTING HOLES

STANDARD INDUSTRIAL ENCLOSURE



1. GROUND HOLES QTY 1 1/2-13 TAP; QTY 1 3/8-16 TAP
2. VARIES +.00,-.06
3. VARIES +.00,-.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 NOT ENCROACH ON AIR INLET

[5] WEIGHT (LBS): 1350

CONDUIT BOX LOCATED ON OPPOSITE SIDE WHEN F-1. 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.

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

Z10-627219

REV. DESC. NEW ISSUE	VERSION: 00	REVISED: 04/05/02 03/14/2014	TDR: 00000841378
MODEL NO. 617429-012			REF:
BY: RAGGDM	Material:		

BALDOR

G405T-404T STD - FOOTED - STD ENCL F1 LIPSEAL V-SLG D.E.

617429-012

617429-012

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

ENCLOSURE: TOTALLY ENCLOSED

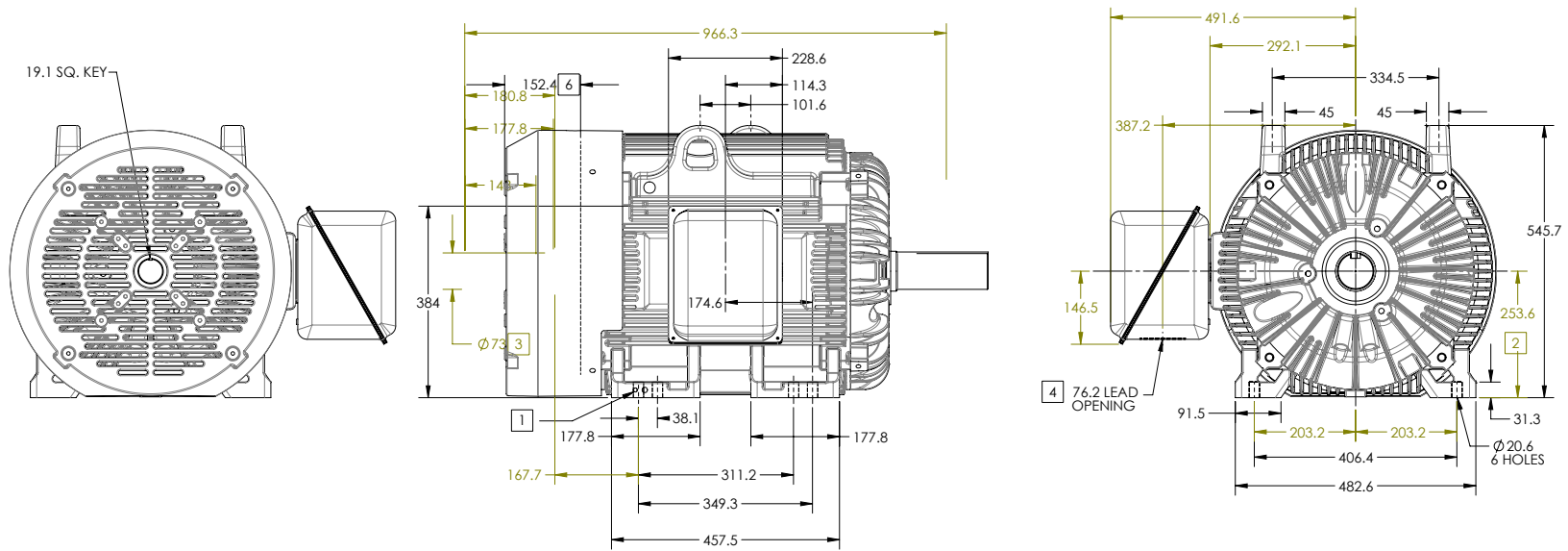
FRAME G405T ABOVE NEMA RATINGS

COOLING: FAN COOLED

MOUNTING: FOOT

INCLUDES 404T FRAME MOUNTING HOLES

STANDARD INDUSTRIAL ENCLOSURE



1. GROUND HOLES QTY 1 1/2-13 TAP; QTY 1 3/8-16 TAP
2. VARIES +0,-1.5
3. VARIES +.00,-.03
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 NOT ENCROACH ON AIR INLET

[5] WEIGHT (KGS): 620

CONDUIT BOX LOCATED ON OPPOSITE SIDE WHEN F-1.
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.

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

Z10*627219

REV. DESC-NEW ISSUE	VERSION: 00	REVISED-04/05/02 03/14/2014	TDR: 00000841378
MODEL NO. 617429-012	REF:		
BY: RAGGDM	Material:		

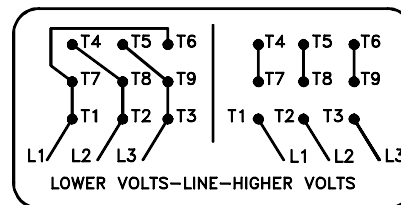
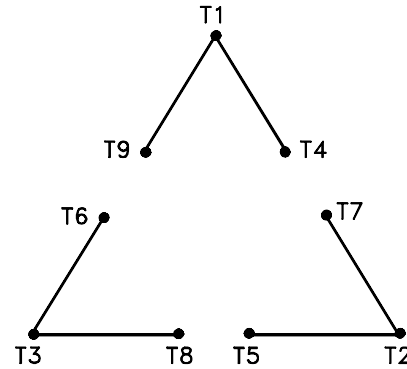
BALDOR

G405T-404T STD - FOOTED - STD ENCL F1 LIPSEAL V-SLG D.E.

617429-012

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

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

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