

BALDOR® • RELIANCE

Product Information Packet

EM58706LR-2340

700HP,1196RPM,3PH,60HZ,5810,A58296M,TEFC

Part Detail							
Revision:	B	Status:	PRD/A	Change #:		Proprietary:	No
Type:	AC	Prod. Type:	A58296M	Elec. Spec:	A58WG6310	CD Diagram:	416820-004
Enclosure:	TEFC	Mfg Plant:		Mech. Spec:		Layout:	616151-163
Frame:	5810	Mounting:	F1	Poles:	06	Created Date:	02-26-2016
Base:		Rotation:	R	Insulation:	F	Eff. Date:	11-21-2016
Leads:	6#2 4824-6-P					Replaced By:	
Literature:		Elec. Diagram:					

Nameplate NP3131

ENERGY EFFICIENT			SERIAL NO.		
CATALOG NO.	EM58706LR-2340		SPEC NO.	KEM58706LR2340A	
HP	700	RPM	1196	FRAME	G5810LR
VOLTS	2300/4000		F.L. AMPS	159/91.7	PHASE
F.L.EFF.	96.2	F.L.P.F.	85	MOTOR WEIGHT	10000
DESIGN	-	NEMA CODE	G	MAX AMBIENT	40
	115	C RISE/	RES	AT	
D.E. BRG.	130RU03M30X26		O.D.E. BRG.	120BC02J30X	
WDG. THERMAL	100 OHM PLATINUM		QTY.	6	
LUBE	POLYREX EM				
VOLTS	120/240	AMPS	4.08/2.04	WATTS	490/490
CERTIFICATE OF COMP NO.	LR52580				

Parts List		
Part Number	Description	Quantity
SA315899	SA KEM58706LR2340A	1.000 EA
RA303441	RA KEM58706LR2340A	1.000 EA
482406002P	02 AWG,UL3499,BLACK,7.5kV,BELDEN#37502	52.000 FT
419512002A	ID TAG, ROLL LAC	0.002 RL
041009000FC	EXT LEAD LUG TYCO #321600	6.000 EA
041009038J	INT. LEAD LUG- AMP 36948	6.000 EA
001767000CC	N/P	1.000 EA
000692000SC	N/P	5.000 EA
046024000LA	SILVER BRAZING FILLER	552.000 OZ
482406001P	01 AWG,UL3499,BLACK,7.5kV,BELDEN#37501	12.000 FT
606800016D	RTD LAC	7.000 EA
069306003B	CABLE TIE 14 T&B L14509C	9.000 EA
482413004Y	#4 SLEEVING (GREEN) PER FT	12.000 FT
424731025AA	HEATER LAC	2.000 EA
419512012SG	LABELS, HEAT SHRINK SET	1.000 EA
616144042R	INNER CAP BE INSUL ENGLISH	1.000 EA
032018004BK	HHCS 5/16-18X1/2 PLATED	4.000 EA
035051024AA	W-24 LOCKWASHER	1.000 EA
616144052R	INNER CAP BE	1.000 EA
034017013AB	LCKW 5/16 STD. PLATED	8.000 EA
616145006X	THERM.BARR.B/ECAP	1.000 EA
T-0346-51	HALF KEY BALANCE 004600044CJ	1.000 EA
415915007D	GASKET	1.000 EA
036150030NA	SKHD SSCR;STAT;BT-G508	4.000 EA

Parts List (continued)		
Part Number	Description	Quantity
034692001AB	HCSPP 1/8" PLATED	2.000 EA
419512012RC	Lead Markers H1, H2, H3 & ZH4.	1.000 EA
034017013AB	LCKW 5/16 STD. PLATED	4.000 EA
034017013AB	LCKW 5/16 STD. PLATED	4.000 EA
807460054XA	ENDPLATE	1.000 EA
807452033A	BRACKET INS. ENGLISH	1.000 EA
033102013AB	NUT 5/16-18 PLATED	4.000 EA
034630002AJ	PP CPLG ODE	1.000 EA
032018036CK	HHCS 3/8-16X4-1/2 PLTD.	4.000 EA
035000001AB	ALFTG CAT.NO.1627-B PLTD	1.000 EA
807461004B	FAN COVER FE	1.000 EA
034530063CB	PP NIPP ODE GRS DR	1.000 EA
034530087BB	PP NIP ODE GRS FL	1.000 EA
034630003AJ	PP CPLG DE GRS DR	1.000 EA
034000016AB	WSHR .531ID 1.062OD .095	5.000 EA
032130024HB	HSHCS 1-8X3" PLATED	5.000 EA
035000001F	RELIEF FTG. G/DRN	1.000 EA
417526003A	BRG SPACER NU224	1.000 EA
034600002AB	BUSH,DE BRKT	1.000 EA
032375004HB	SLRHMS 8-32X1/2 PLATED	2.000 EA
415915001A	GASK, LAC	7.000 FT
033050001F	IBOLT	2.000 EA
034017028AB	LCKW 1 1/4 ZINC PL STEEL	2.000 EA
482413004Y	#4 SLEEVING (GREEN) PER FT	30.000 FT

482415000A	GREASE (MOBIL POLYREX EM)	3.025 LB
034186032GA	1/2 SQ X 4.0 KEY	1.000 EA
034017014AB	LCKW 3/8 STD. PLATED	5.000 EA
049843019E	PLTE NNN 049843049WCA	1.000 EA
065774015A	TBRD 180-280	1.000 EA
075458000AF	CONDUIT BOX	1.000 EA
415917004A	N/P	1.000 EA
482413003Y	#3 SLEEVING (GREEN)	3.000 FT
032018006AK	HHCS 1/4-20X3/4L PLATED	4.000 EA
034530022HB	1-1/2 X 2.75 PPNIP	1.000 EA
049843019G	PLTE 320 049843048WCA	1.000 EA
071421043G	C/BOX WDG RTD	1.000 EA
032375005HB	RHMS 8-32X5/8L PLATED	8.000 EA
032018007CK	HHCS 3/8-16X7/8L PLATED	4.000 EA
034530022HB	1-1/2 X 2.75 PPNIP	1.000 EA
403938055A	GASK, TBOX MTG, LAC	2.000 EA
041009003F	TERMINAL LUG	4.000 EA
032018005CK	HHCS; 3/8X5/8	5.000 EA
705547082R	FAN, LAC	1.000 EA
403938027E	GASK, LAC	1.000 EA
041009003D	T & B LUG (A116)	18.000 EA
803076026A	SPACER TERM. BOX, ENGLISH	1.000 EA
032018016DK	HHCS 1/2-13X2L PLTD.	4.000 EA
709239014A	INLET BAFFLE	1.000 EA
412043012A	PLUG	2.000 EA
412043012C	PLUG - 210	1.000 EA

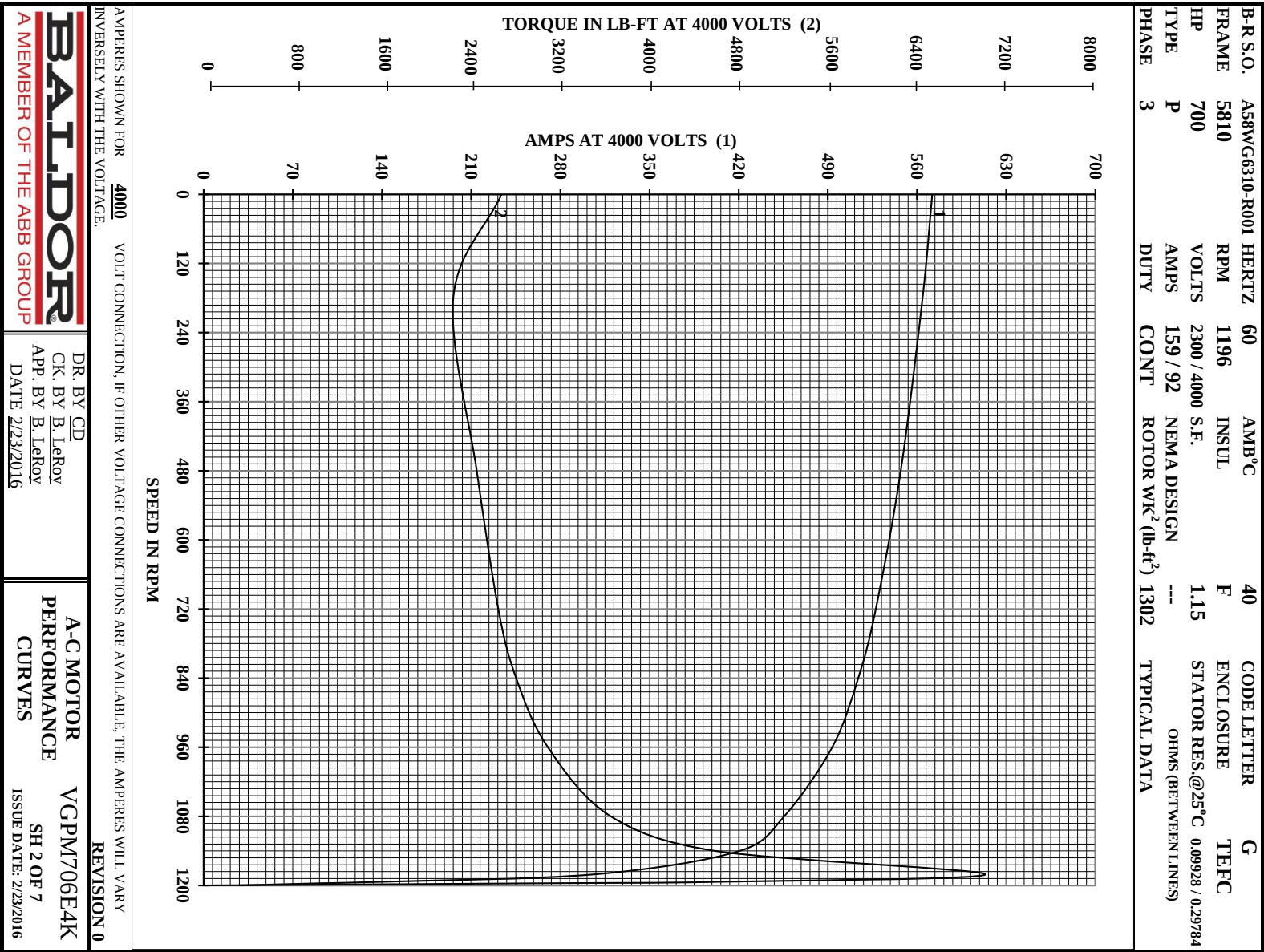
Product Information Packet: EM58706LR-2340 - 700HP,1196RPM,3PH,60HZ,5810,A58296M,TEFC

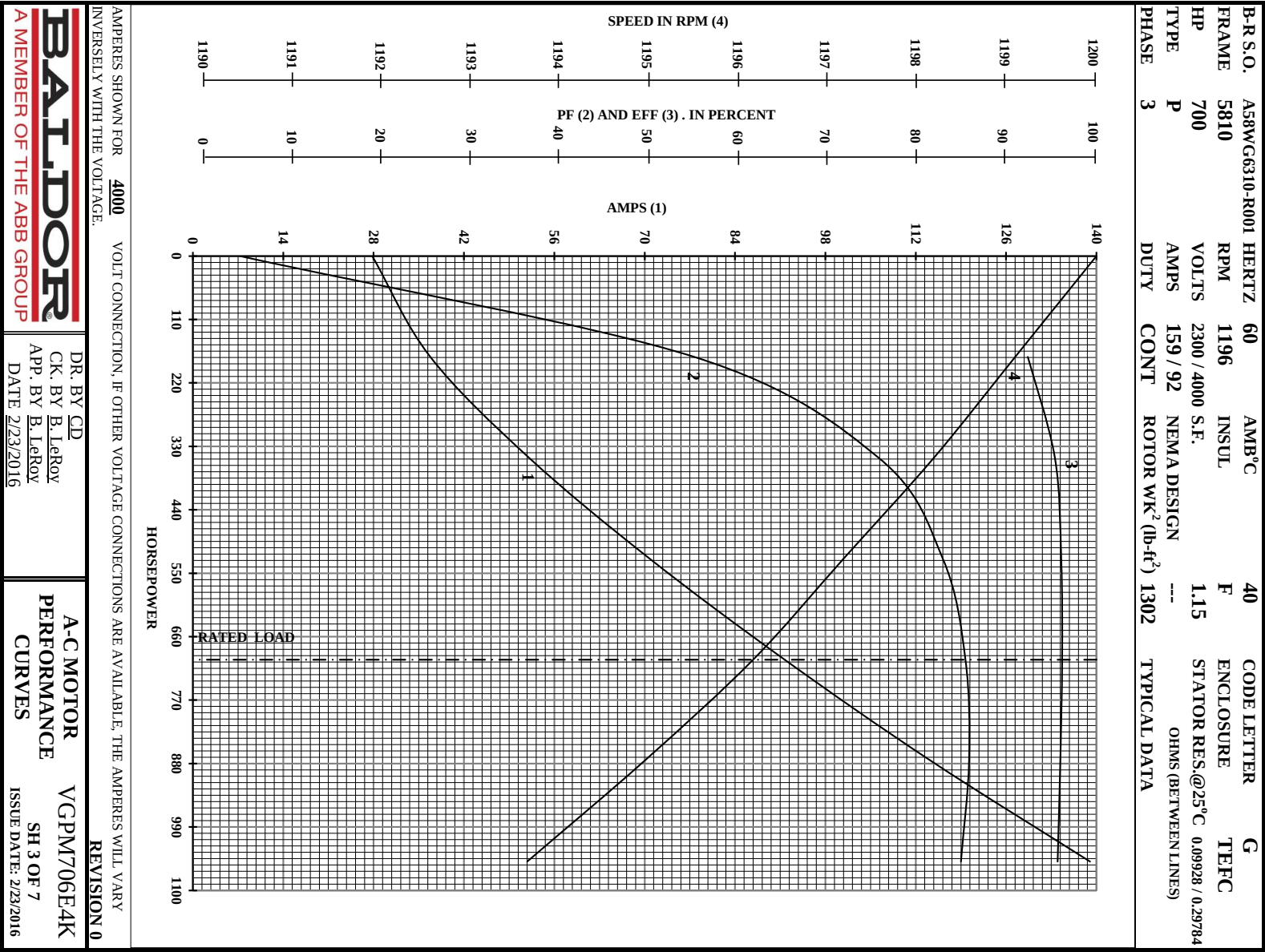
034690004AB	PPLG 1/2" PLATED	2.000 EA
034690004AB	PPLG 1/2" PLATED	2.000 EA
004793040A	BUTT SPLICE SPHTR	2.000 EA
419512012SG	LABELS, HEAT SHRINK SET	1.000 EA
034692001AB	HCSPP 1/8" PLATED	2.000 EA
034690004AB	PPLG 1/2" PLATED	4.000 EA
034691008AB	1 1/2 PIPE PLUG- BIN STOCK	2.000 EA
034690002AB	"unbulked" PPLG 1/4" PLTD.	4.000 EA
807453029A	BRACKET BE G40/5810 NU326	1.000 EA
032018034CK	3/8-16 X 4.25 HHCS	4.000 EA
035000001AB	ALFTG CAT.NO.1627-B PLTD	1.000 EA
032018008AK	HHCS 1/4-20X1 PLATED	4.000 EA
710607002A	THRM BARER,BRKT	1.000 EA
034530051CB	3/8 X 6.38 P NIPPLE 52CB	1.000 EA
034630002AJ	PP CPLG ODE	1.000 EA
034630003AJ	PP CPLG DE GRS DR	1.000 EA
034017014AB	LCKW 3/8 STD. PLATED	4.000 EA
412043012C	PLUG - 210	2.000 EA
032130024HB	HSHCS 1-8X3" PLATED	5.000 EA
034530076BB	1/4 X 9.5 PIPE NIPPLES	1.000 EA
035000001F	RELIEF FTG. G/DRN	1.000 EA
034017012AB	LCKW 1/4 STD. PLATED	4.000 EA
415045002W	SLGR V-RING 4.53-4.92	1.000 EA
034600002AB	BUSH,DE BRKT	1.000 EA
415916013L	T/BLK S/HTR LAC	2.000 EA
803077012B	AIR DEFL B/E BRKT W/VIB PROV	1.000 EA

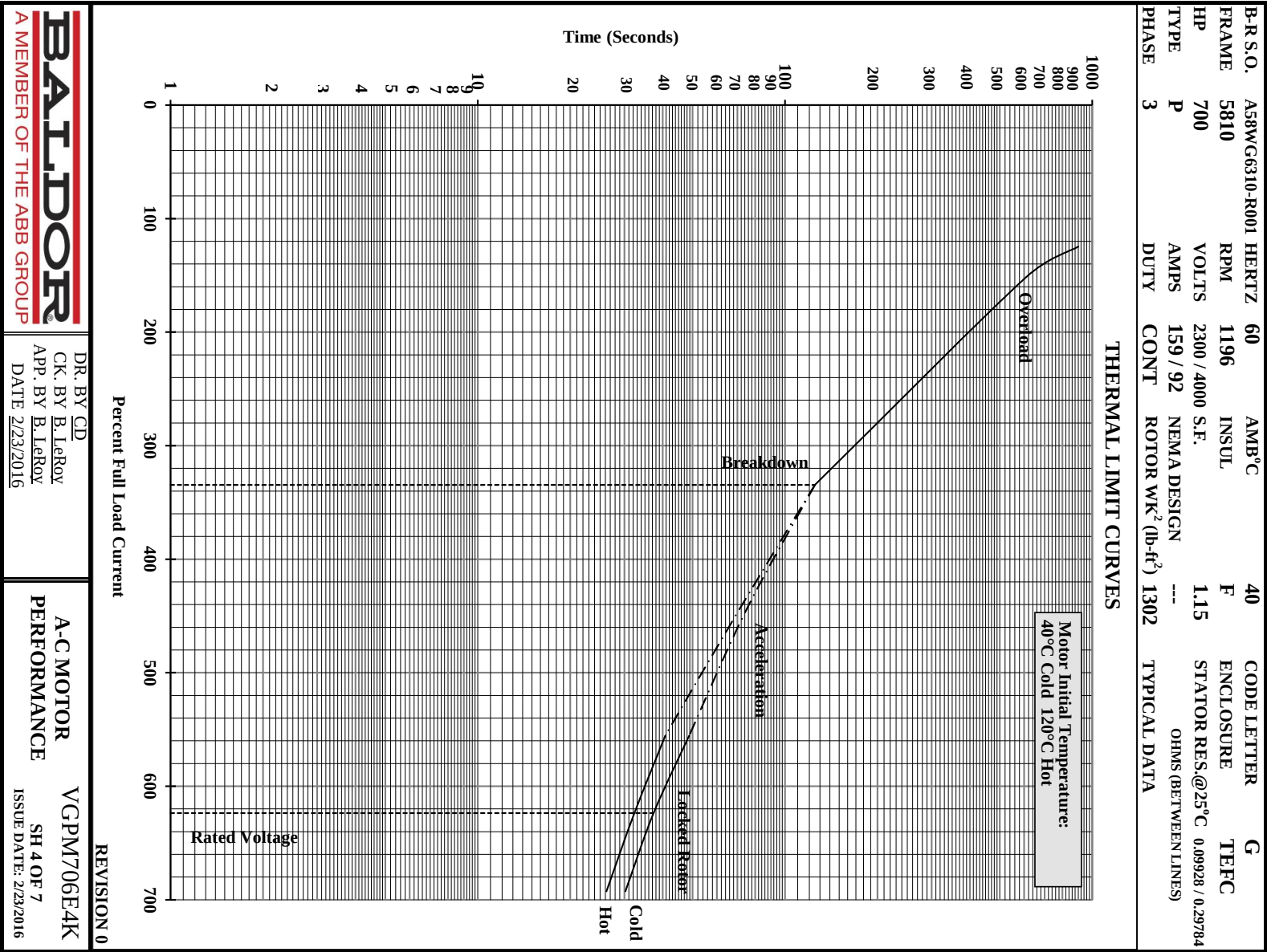
032018008CK	HHCS 3/8-16X1L PLATED	4.000 EA
034000012AB	WSHR 1/4 STD. PLATED	4.000 EA
415915007E	GASKET	1.000 EA
415915007A	GASKET, LAC	1.000 EA
034000016AB	WSHR .531ID 1.062OD .095	4.000 EA
032018014DK	HHCS 1/2-13X1-3/4 PLTD	4.000 EA
034017012AB	LCKW 1/4 STD. PLATED	2.000 EA
033512004LB	HHTTS 1/4-20X1/2 PLTD.	2.000 EA
032018005AK	HHCS 1/4-20X5/8 PLATED	2.000 EA
615368005A	BRACE,TERM. BOX	1.000 EA
705500325R	TERMINAL BOX WELDMENT 20X25X14	1.000 EA
418199008B	N/P	1.000 EA
402558004A	BRDRN- added to b/s 5/31	1.000 EA
419306099B	N/P - MAKE IN ASSEMBLY	1.000 EA
419306099A	N/P - MAKE IN ASSEMBLY	1.000 EA
419306099AG	N/P - MAKE IN ASSEMBLY	1.000 EA
034691004AB	1/2 PIPE PLUG	2.000 EA
406673000F	PPLG	1.000 EA
406673000B	PPLG	1.000 EA
412027034A	SUPPORT(T.B.) - G512	1.000 EA
415917001A	RTD TAG	4.000 EA
415916013C	T/BLK S/HTR LAC	1.000 EA
075459000A	C/BOX CVR W75459	1.000 EA
032130006AB	HSHCS 1/4-20X3/4L PLTD.	2.000 EA
065564000A	GASKET	1.000 EA
071422000A	C/BOX W 071422000	1.000 EA

047993000B	GASKET LAC	1.000 EA
032130007AB	HXSCHCS C/B CVR-449	10.000 EA
MP1011A01	4 MIL X 12FT X 100 FT POLYETHYLENE	0.100 RL
PK5006A10	WOOD BASE SHIPPING BASE G5012	1.000 EA
034180064LA	KEY DRV END EXT	1.000 EA
NP3131	"BALDOR ONLY" INDUSTRIAL MOTOR, SS,	1.000 EA
PK4110A11	SHAFT BLOCKING	1.000 EA
406255394A	N/P	1.000 EA
LB1532	BALDOR LABEL, 12.00 LONG X 2.00 HIGH	2.000 EA
000692000EF	CAUTION LABEL	1.000 EA
MG1200G96	POLANE S PLUS – MED. CHARCOAL METALLIC	1.000 GA
609911002E	COVER (C/BOX) - G510	1.000 EA
033775004EA	DRSCR #6-1/4 304 S.S.	8.000 EA
000692000CL	N/P	1.000 EA
000692000FR	WARNING, HIGH VOLTAGE LABEL	1.000 EA
406255121B	N/P	1.000 EA
406991001SL	INSTRUCTION MANUAL	1.000 EA

BALDOR-RELIANCE		FRAME	HP	TYPE	PHASE	HERTZ	RPM
SALES ORDER							
A58WG6310-R001		5810	700	P	3	60	1196
VOLTS	AMPS	DUTY	AMB°C	INSUL.	S.F.	NEMA DESIGN	
2300 / 4000	159 / 92	CONT	40	F	1.15	---	
CODE LETTER	ENCL.	ROTOR WK ² (lb-ft ²)	STATOR RES.@25°C OHMS (BETWEEN LINES)		TYPICAL DATA		
G	TEFC	1302	0.09928 / 0.29784				
PERFORMANCE							
LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY		
NO LOAD	0	27.8	1200	5.2	0.0		
1/4	175	36.8	1199	55.5	92.4		
2/4	350	52.1	1198	75.9	95.4		
3/4	525	70.8	1197	83.0	96.1		
4/4	700	91.7	1196	85.5	96.2		
5/4	875	114.3	1195	85.9	96.0		
6/4	1050	139.0	1194	85.0	95.7		
SPEED TORQUE							
	RPM	TORQUE % FULL LOAD	TORQUE LB-FT	AMPERES			
LOCKED ROTOR	0	87	2672	571.9			
PULL UP	180	73	2239	564.3			
BREAKDOWN	1181	231	7086	306.8			
FULL LOAD	1196	100	3073	91.7			
AMPERES SHOWN FOR 4000 VOLT CONNECTION(S). IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE VOLTAGE.							
REVISION 0							
BALDOR A MEMBER OF THE ABB GROUP		DR. BY CD CK. BY B. LeRoy APP. BY B. LeRoy DATE 2/23/2016		A-C MOTOR VGPMT706E4K PERFORMANCE SH 1 OF 7 ISSUE DATE: 2/23/2016			





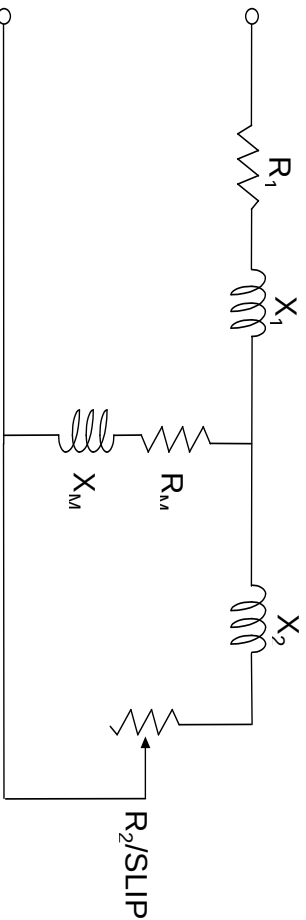


B-R-S.O.	A58W/G6310-R001	HERTZ	60	AMB°C	40	CODE LETTER	G
FRAME	5810	RPM	1196	INSUL.	F	ENCLOSURE	TEFC
HP	700	VOLTS	2300 / 4000	S.F.	1.15	STATOR RES. @ 25°C	0.09928 / 0.29784
TYPE	P	AMPS	159 / 92	NEMA DESIGN	---	OHMS (BETWEEN LINES)	
PHASE	3	DUTY	CONT	ROTOR WK ² (lb-ft ²)	1302	TYPICAL DATA	

EQUIVALENT CIRCUIT DATA

(Per Unit, Per Phase)

FULL LOAD				LOCKED ROTOR			
R_1	0.00636	X_1	0.07387	R_1	0.00552	X_1	0.06286
R_2	0.00277	X_2	0.12076	R_2	0.01617	X_2	0.06713
R_M	0.09558	X_M	2.64798	R_M	0.18567	X_M	2.35300
BASE OHMS				BASE VOLTS			
				2309			
SC Time Constant				$X'' = X_s$			
				0.124 Sec			
OC Time Constant				X/R Ratio			
				2.651 Sec			
				17.03			



Parallel Equivalent

FL R_M ' pu	73.45610	LR R_M ' pu	30.00529
FL X_M ' pu	2.65143	LR X_M ' pu	2.36765

R_1 = Stator dc resistance
 R_2 = Rotor resistance
 R_M = Core loss resistance
 SC = Short circuit
 OC = Open circuit
 X_1 = Stator leakage reactance
 X_2 = Rotor leakage reactance
 X_M = Magnetizing reactance
 FL = Full load
 LR = Locked rotor

 $X'' = X_s$ = Subtransient reactance

REVISION 0

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 DR. BY CD
 CK. BY B. LeRoy
 APP. BY B. LeRoy
 DATE 2/23/2016

 A-C MOTOR
 PERFORMANCE
 CURVES

 VCPM706E4K
 SH 5 OF 7
 ISSUE DATE: 2/23/2016

B-R.S.O.	A58W/G6310-R001	HERTZ	60	AMB°C	40	CODE LETTER	G
FRAME	5810	RPM	1196	INSUL.	F	ENCLOSURE	TEFC
HP	700	VOLTS	2300 / 4000	S.F.	1.15	STATOR RES.@25°C	0.09928 / 0.29784
TYPE	P	AMPS	159 / 92	NEMA DESIGN	---	OHMS (BETWEEN LINES)	
PHASE	3	DUTY	CONT	ROTOR WK ² (lb-ft ²)	1302	TYPICAL DATA	

Recommended Winding and Bearing Temperatures

Stator Winding	Class B	Class F
Maximum Running Total Temperature	130 °C	155 °C
Alarm Total Temperature	135 °C	160 °C
Trip Total Temperature	145 °C	170 °C

Sleeve Bearings - Oil Lubricated	Bearing	Oil
Typical Running Total Temperature	93 °C	60 °C
Alarm Total Temperature	96 °C	70 °C
Trip Total Temperature	98 °C	75 °C

Anti-Friction Bearings - Grease Lubricated	Bearing	Grease
Typical Running Total Temperature	90 °C	80 °C
Alarm Total Temperature	110 °C	100 °C
Trip Total Temperature	120 °C	110 °C

Recommended Vibration Settings for Standard Motors

Speed (rpm)	Shaft Vibration (mils)		Bracket Vibration (mils)	
	Alarm	Shutdown	Alarm	Shutdown
3600	2.50	3.00	1.00	1.50
1800	3.00	3.50	2.00	2.50
1200	3.00	3.50	2.00	2.50
900 & Lower	3.00	3.50	2.00	2.50
	Bracket Vibration (in/sec pk)			
	Alarm		Shutdown	
All Speeds			0.20*	0.30*

* 0 to 1000 Hz Spectrum

REVISION 0

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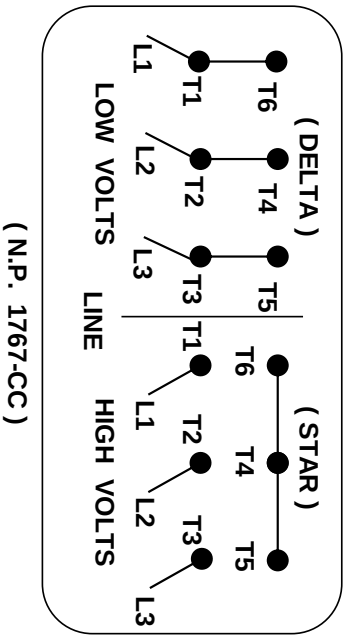
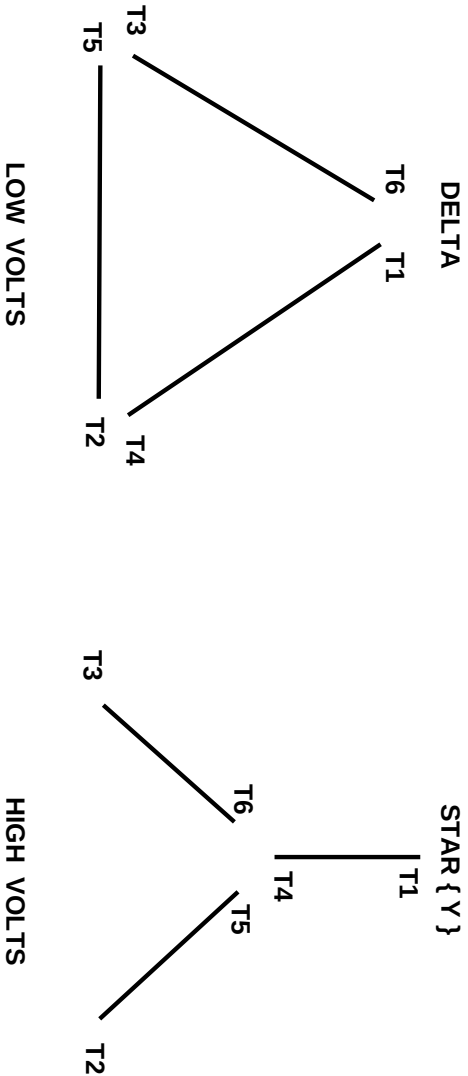
 DR. BY CD
 CK. BY B. LeRoy
 APP. BY B. LeRoy
 DATE 2/23/2016

 A-C MOTOR PERFORMANCE CURVES
 VGPM706E4K
 SH 6 OF 7
 ISSUE DATE: 2/23/2016

B-R.S.O.	A58W/G6310-R001	HERTZ	60	AMB°C	40	CODE LETTER	G
FRAME	5810	RPM	1196	INSUL.	F	ENCLOSURE	TEFC
HP	700	VOLTS	2300 / 4000	S.F.	1.15	STATOR RES.@25°C	0.06928 / 0.29784
TYPE	P	AMPS	159 / 92	NEMA DESIGN	---	OHMS (BETWEEN LINES)	
PHASE	3	DUTY	CONT	ROTOR WK ² (lb-ft ²)	1302	TYPICAL DATA	

A-C MOTOR
CONNECTION DIAGRAM

STANDARD 6 LEAD (DELTA / STAR { Y } CONNECTED)
DUAL VOLTAGE (LOW VOLTS / HIGH VOLTS)



BALDOR A MEMBER OF THE ABB GROUP	DR. BY CD CK. BY B. LeRoy APP. BY B. LeRoy DATE 2/23/2016	A-C MOTOR PERFORMANCE CURVES	VGPM706E4K SH 7 OF 7 ISSUE DATE: 2/23/2016
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REVISION 0

GENERAL PURPOSE STOCK ALTERNATING CURRENT MOTORS

ENCLOSURE: TOTALLY ENCLOSED

SQUIRREL-CAGE INDUCTION

1200 RPM (MAX)

FRAME G5810L/LR

(FIELD CONVERTIBLE COUPLE/BELT)

INCLUDES 5809 FRAME MOUNTING HOLES

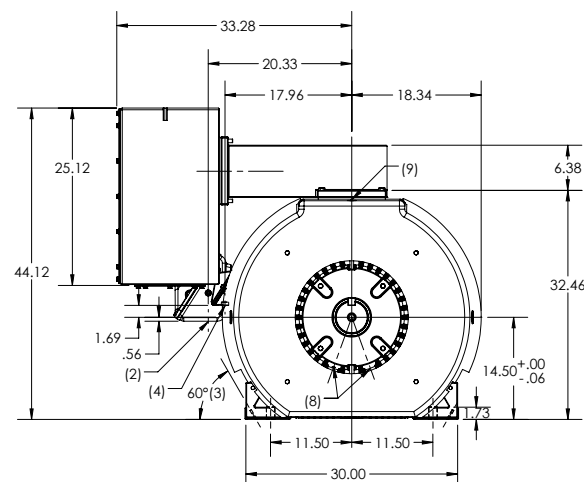
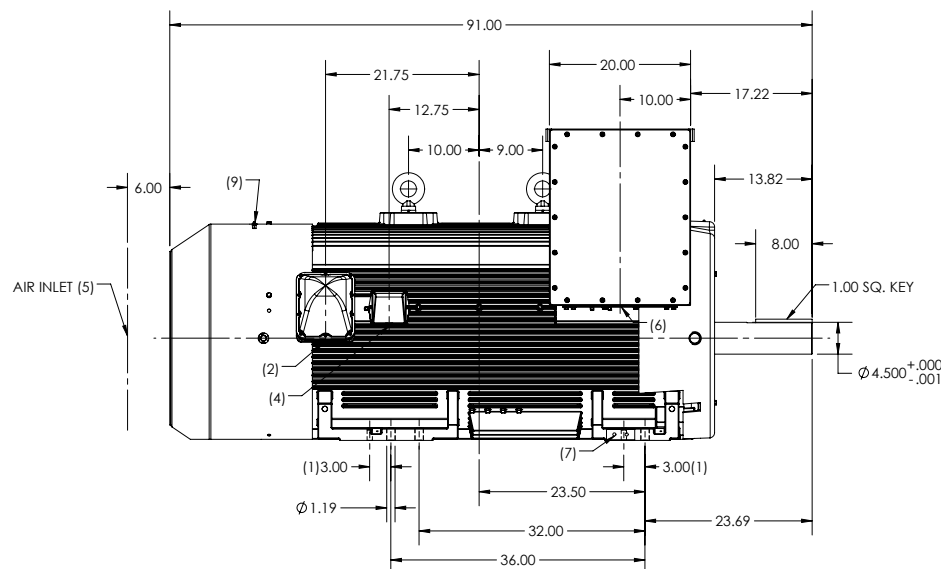
COOLING: FAN COOLED

ANTI-FRICTION BEARINGS

ENGLISH HARDWARE

OVERSIZED MAIN CONDUIT BOX

MOUNTING: HORIZ. (FOOT) MOUNT



- 1) FOUR 3/4-10 JACKSCREW HOLES.
- 2) 2.0" N.P.T. FOR WINDING TEMPERATURE DETECTOR LEADS.
- 3) 1/4" HOLE FOR DOWEL PINS. ONE EACH FOOT.
- 4) 3/4" N.P.T. FOR MOTOR SPACE HEATER LEADS.
- 5) WALL OR OBSTRUCTION MUST NOT ENCR OACH ON AIR INLET SPACE.
- 6) CUSTOMER TO PROVIDE HOLE FOR MOTOR POWER LEADS.
- 7) TWO GROUND PADS DIAGONALLY OPPOSITE EACH OTHER, TAPPED 1/2-13
- 8) 1/8 N.P.T. PROVISIONS FOR BEARING TEMPERATURE DETECTOR.
- 9) GREASE POINT

CATALOG #'S
 M58606LR-2340
 M58706LR-2340
 M58706L-4
 M58706LR-4

WEIGHT (LBS) = 10,000 (MAXIMUM)

DIMENSIONS ARE IN INCHES

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 SHAFT IS .003 T.I.R.

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

REV. DESC: NEW

REV: - VERSION: 00 REVISED: 11/37/13 10/28/2016 TDR: 000001001391

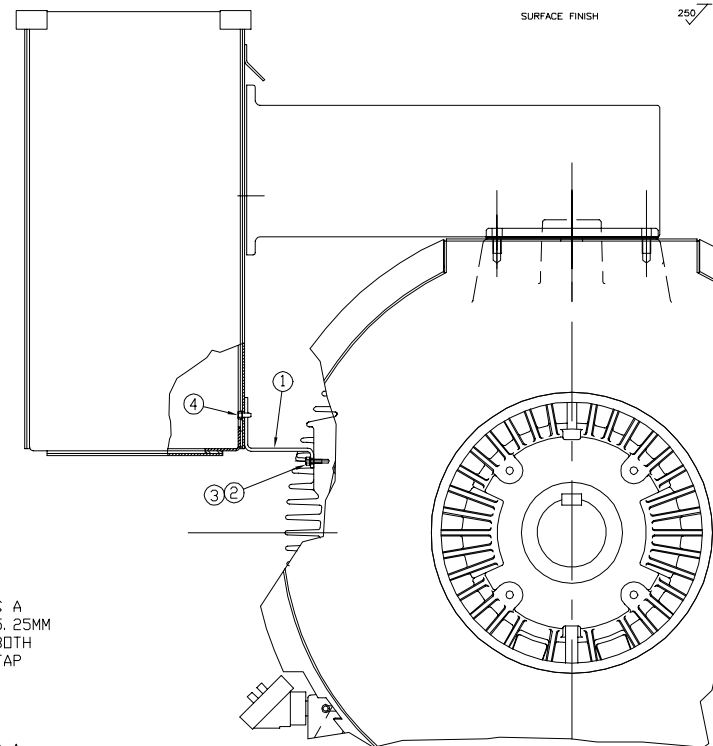
MODEL NO. 616151-163 REF: -

BY: RAGTBM

Material: -

BALDOR

G5810,TEFC,S/N,BLTD,1200,A/F,F1,20X25X14,U=4.500,XBA=23.69



1. MOUNT TERM. BOX BRACE TO FRAME WITH
HARDWARE SPECIFIED ON BOM.
2. RTV SELF TAPPING BOLTS ON GROUP 'S' ONLY

2	33512-04-LB	4	HMC 1/4-20 TAPTITE		
2	34017-12-AB	3	LCKW 1/4 STD.		
2	32018-05-AK	2	HMC 1/4-20X5/8		
2	36010-12-HB	4	HMC M6-1.0 TAPTITE		
2	36610-8-AB	3	LCKW M6		
2	36000-16-HB	2	HMC M6-1.0 X 12MM LG		
1	1 615368-5-A	1	BRACE		
S	R	NAME	SYM. OR ITEM	SIZE OR CASTING NO.	#6024--
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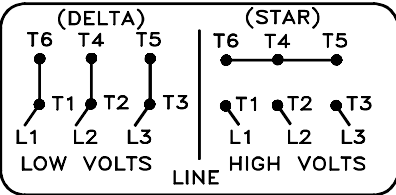
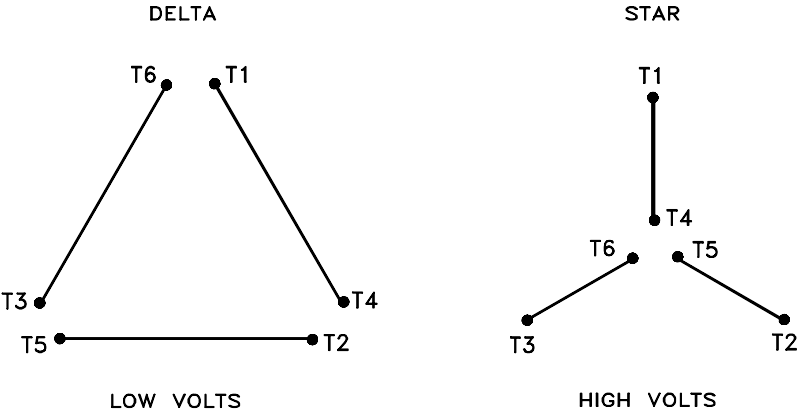
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MTL: -		

BALDOR

ASSEMBLY G40/5810 LAC TEFC T-BDX BRACE
SH 1 of 1

416820-004

A-C MOTOR
CONNECTION DIAGRAM
STANDARD 6 LEAD (DELTA/STAR CONNECTED)
DUAL VOLTAGE (LOW VOLTS/HIGH VOLTS)



(N.P. 1767-CC)

416820-004

REV. DESC: ADDED CLASSIFICATONS		
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MTL: -		BY: RAGRA

BALDOR

A-C MOTOR CONNECTION DIAGRAM
SH 1 of 1