

**BALDOR® • RELIANCE** 

**Product Information Packet**

**VHECP4106T**

**20HP,3540RPM,3PH,60HZ,256HP,0944M,TEFC**

Part Detail							
Revision:	AD	Status:	PRD/A	Change #:		Proprietary:	No
Type:	AC	Elec. Spec:	09WGY613	CD Diagram:	CD0180	Mfg Plant:	
Mech. Spec:	09G604	Layout:	09LYG604	Poles:	02	Created Date:	
Base:	N	Eff. Date:	03-10-2020	Leads:	9#12		

Specs			
Catalog Number:	VHECP4106T	Heater Indicator:	No Heater
Enclosure:	TEFC	Insulation Class:	F
Frame:	256HP	Inverter Code:	Inverter Ready
Frame Material:	Iron	KVA Code:	K
Output @ Frequency:	20.000 HP @ 60 HZ	Lifting Lugs:	Vertical Lifting Lugs
Synchronous Speed @ Frequency:	3600 RPM @ 60 HZ	Locked Bearing Indicator:	Locked Bearing
Voltage @ Frequency:	460.0 V @ 60 HZ	Motor Lead Quantity/Wire Size:	9 @ 12 AWG
	230.0 V @ 60 HZ	Motor Lead Exit:	Ko Box
XP Class and Group:	None	Motor Lead Termination:	Flying Leads
XP Division:	Not Applicable	Motor Type:	0944M
Agency Approvals:	UR	Mounting Arrangement:	F1
	CSA EEV	Power Factor:	89
	CSA	Product Family:	Super-E Chemical Processing
Auxillary Box:	No Auxillary Box	Pulley End Bearing Type:	Ball
Auxillary Box Lead Termination:	None	Pulley Face Code:	P-Base
Base Indicator:	No Mounting	Pulley Shaft Indicator:	P-Base Groove & Key
Bearing Grease Type:	Polyrex EM (-20F +300F)	Rodent Screen:	None
Blower:	None	Shaft Extension Location:	Pulley End

<b>Current @ Voltage:</b>	23.000 A @ 460.0 V	<b>Shaft Ground Indicator:</b>	No Shaft Grounding
	46.000 A @ 230.0 V	<b>Shaft Rotation:</b>	Reversible
	51.000 A @ 208.0 V	<b>Shaft Slinger Indicator:</b>	Shaft Slinger
<b>Design Code:</b>	A	<b>Speed Code:</b>	Single Speed
<b>Drip Cover:</b>	Drip Cover	<b>Motor Standards:</b>	NEMA
<b>Duty Rating:</b>	CONT	<b>Starting Method:</b>	Direct on line
<b>Electrically Isolated Bearing:</b>	Not Electrically Isolated	<b>Thermal Device - Bearing:</b>	None
<b>Enclosure Modification:</b>	Severe Duty Features	<b>Thermal Device - Winding:</b>	None
<b>Feedback Device:</b>	NO FEEDBACK	<b>Vibration Sensor Indicator:</b>	No Vibration Sensor
<b>Front Face Code:</b>	Standard	<b>Winding Thermal 1:</b>	None
<b>Front Shaft Indicator:</b>	None	<b>Winding Thermal 2:</b>	None



Parts List		
Part Number	Description	Quantity
SA123586	SA 09G604Y613G1	1.000 EA
RA114074	RA 09G604Y613G1	1.000 EA
09CB1002A13P	KOBX W/1.50 NPT LEAD HL,2.38 MTG HL PATT	1.000 EA
09GS1010	GASKET, DWG, LEADWIRE SEPERATOR	1.000 EA
10XN2520K12	1/4-20 X.75 GRD 5	4.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 EA
HA3400A33	STUD- 3/8-16 X 4.82 HEX WELKER	4.000 EA
12CB1503P	CONDUIT BOX LID, CAST W/EPOXY PRIMER	1.000 EA
12GS1002	GASKET, CONDUIT BOX LID, NEOP	1.000 EA
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 EA
10XN2520K12	1/4-20 X.75 GRD 5	1.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
HW5100A08	W3118-035 WVY WSHR (WB)	1.000 EA
10XN2520K28	1/4-20 X 1.75" HX HD SCRWGRADE 5, ZINC P	2.000 EA
10XN3118K56	5/16-18 X 3.50" HEX HD, GRADE 5	4.000 EA
09EP1505A11P	PU ENDPLATE ENCL 213 BRG 309 254-256LP,	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
10XN3816K24	3/8-16 X 1.50 HEX HD CAP SCREW, GRADE 5	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
HW4600E45	CR#20599 DBL LIP VITON SEAL 2.063 I.D.	1.000 EA
HW4600B40	V-RING SLINGER 2.000 X 2.680 X .28 VITON	1.000 EA
09FH1000A11P	FAN COVER, MACH P-BASE W/EPOXY PRIMER	1.000 EA
HW4600B44	V-RING SLINGER 1.500 X 1.810 X .28 VITON	1.000 EA

Parts List (continued)		
Part Number	Description	Quantity
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
XY3816A12	3/8-16 FINISHED NUT	4.000 EA
HA6387	SPL EYE BRACKET 309-10 FRCR. STEEL P-BAS	2.000 EA
10XN3816K20	3/8-16 X 1.25 HEX HD CAP GRADE 5	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
XY3816A12	3/8-16 FINISHED NUT	4.000 EA
09FH1500A01P	DRIP COVER, MACH W/EPOXY PRIMER	1.000 EA
10XN2520K30	STD.25X20 THD HEX HD CAP SCREW, GRADE 5	4.000 EA
HW1000A25	1/4 SAE FLAT WASHER (FS)	4.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 EA
10XN3118K16	5/16-18 X 1' GRADE #5, STL, ZINC PLATE	2.000 EA
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	2.000 EA
HW2501E18	KEY, 1/4 SQ X 2.000	1.000 EA
MJ5001A27	32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL	0.031 QT
LB1115N	LABEL,LIFTING DEVICE (ON ROLLS)	1.000 EA
LB1002N	LABEL,MARINE DUTY (ON ROLLS)	1.000 EA
LB1182	WARNING LABEL FOR MOTORS WITH EYENUTS	2.000 EA
HW4500A05	1669B ALEM/UNIV860 GR FTG X	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
MJ1000A02	GREASE, MOBIL POLYREX EM - 124047	0.080 LB
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 EA
MG1025N19	WILKOFASST, 778.50, RELIANCE BLUE-GREEN	0.050 GA

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85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 EA
MN416A01	TAG-INSTAL-MAINT no wire (1200/bx) 3/19	1.000 EA
PK6014	STEEL STRAP FOR 309-312 BASELESS MOTORS	3.000 EA
19XW3118A08	.31-18 X .50 HEX WASHER HEAD TAPTITE II	3.000 EA
09EP1100A28GP6	ENDPLATE,MACH,PRIMED, W/RELIANCE GREEN	1.000 EA
MJ5001A14	DYNAPRO SEALANT, CP MTR VC#2508050 (603	0.023 EA
37FN3002C02	EXFN, PLASTIC, 6.00 OD, 1.503 ID	1.000 EA
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 EA
51XB1214A20	12-14X1.25 HXWSSLD SERTYB	1.000 EA
LB1119N	WARNING LABEL	1.000 EA
LC0181	CONNECTION LABEL	1.000 EA
NP1260E	SS CP SUPER-E UL CSA CC	1.000 EA
40PA1014	PACKAGING GROUP, 09 NO BASE	1.000 EA

**AC Induction Motor Performance Data**

Record # 38114 - Typical performance - not guaranteed values

<b>Winding:</b> 09WGY613-R001	<b>Type:</b> 0944M	<b>Enclosure:</b> TEFC
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Nameplate Data				460 V, 60 Hz: High Voltage Connection	
Rated Output (HP)	20			Full Load Torque	29.7 LB-FT
Volts	230/460			Start Configuration	direct on line
Full Load Amps	46/23			Breakdown Torque	147 LB-FT
R.P.M.	3540			Pull-up Torque	60.6 LB-FT
Hz	60	Phase	3	Locked-rotor Torque	76.3 LB-FT
NEMA Design Code	A	KVA Code	K	Starting Current	223 A
Service Factor (S.F.)	1.15			No-load Current	8.26 A
NEMA Nom. Eff.	92.4	Power Factor	89	Line-line Res. @ 25°C	0.32708 Ω
Rating - Duty	40C AMB-CONT			Temp. Rise @ Rated Load	60°C
S.F. Amps				Temp. Rise @ S.F. Load	71°C
				Locked-rotor Power Factor	28
				Rotor inertia	1.12 LB-FT <sup>2</sup>

Load Characteristics 460 V, 60 Hz, 20 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	53	75	85	88	91	91	90
Efficiency	87.7	92.3	93.3	93.4	93	92.4	93.2
Speed	3584.9	3571.9	3557.8	3543.8	3528.7	3512.5	3535
Line amperes	9.98	13.5	17.8	22.7	27.7	33.3	25.7

Performance Graph at 460V, 60Hz, 20.0HP Typical performance - Not guaranteed values

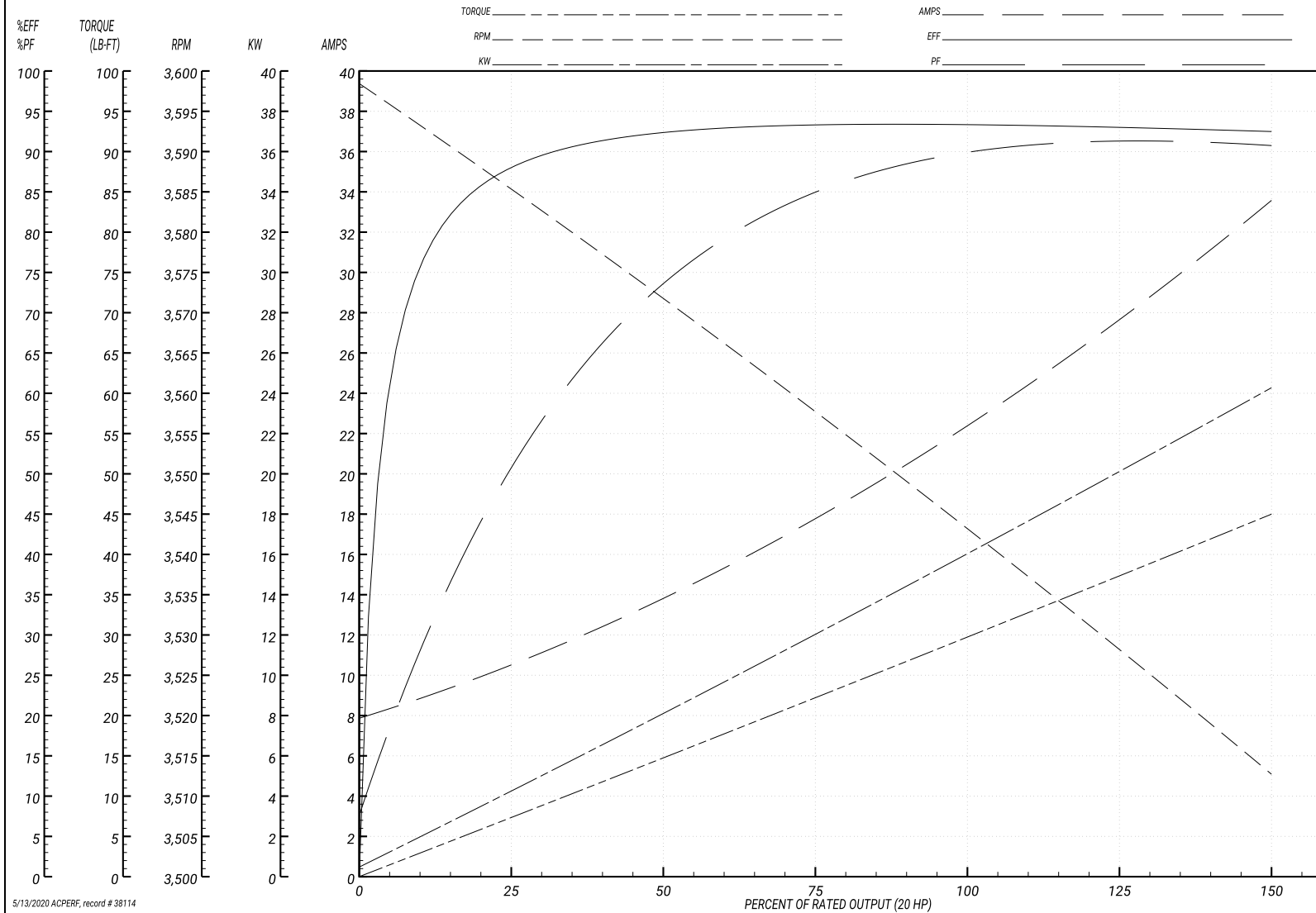
ABB Motors and Mechanical Inc.

WINDING # 09WGY613

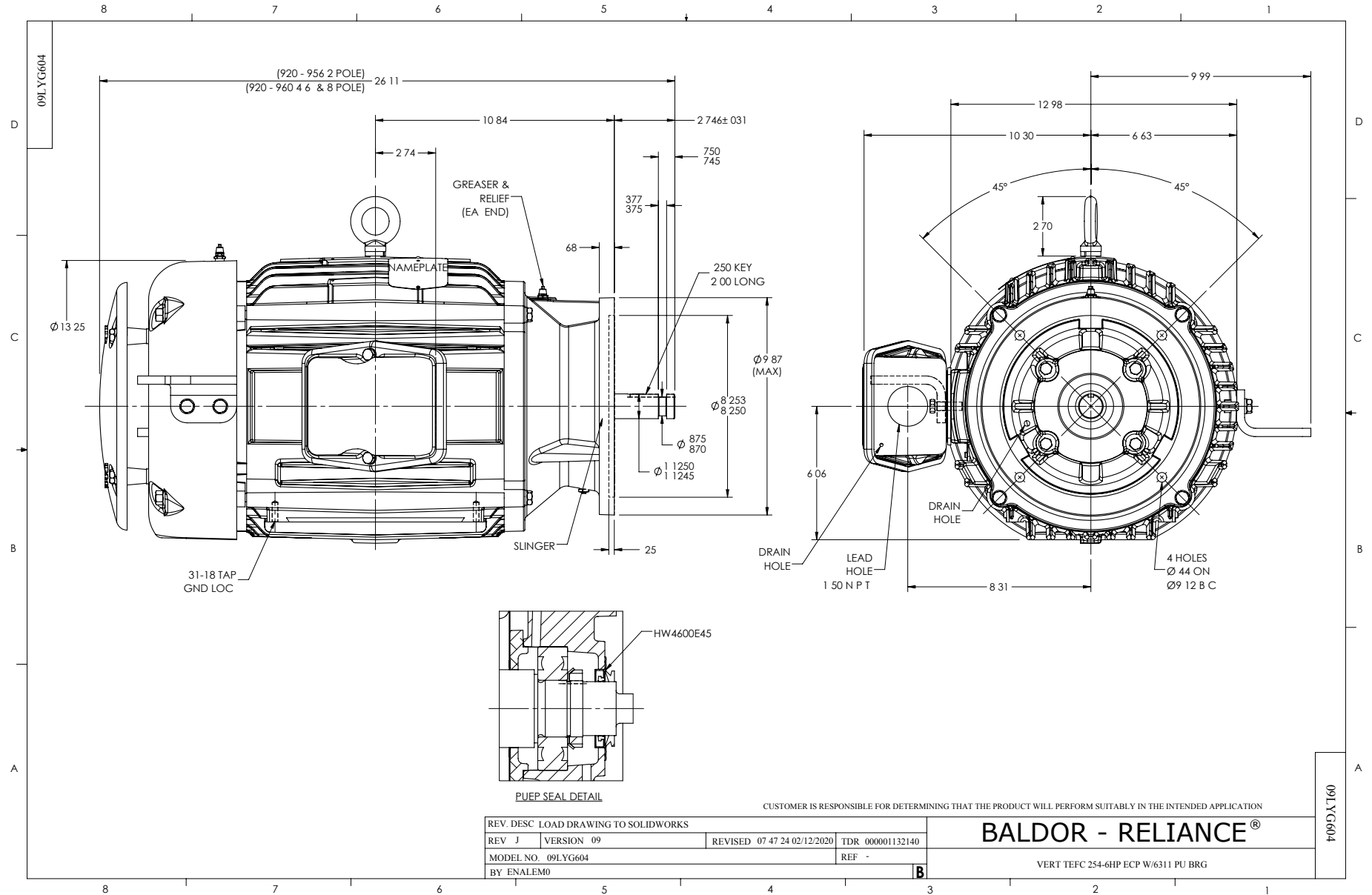
Typical performance - not guaranteed values.

20 HP 3 PH 60 HZ 3540 RPM 460 V 0944M

TORQUES(LB-FT): PO=147 PU=60.6 LR=76.3 LRA=223



5/13/2020 ACPERF, record # 38114



CD0180



LOW VOLTAGE  
(2D)



HIGH VOLTAGE  
(1D)



NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0180

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**BALDOR - RELIANCE®**

3PH, DV, 9 LEADS, DELTA CONNECTION

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