

**BALDOR® • RELIANCE** 

**Product Information Packet**

**VEM4106T**

**20HP,3520RPM,3PH,60HZ,256TC,0936M,TEFC,F**

Part Detail							
Revision:	L	Status:	PRD/A	Change #:		Proprietary:	No
Type:	AC	Elec. Spec:	09WGZ601	CD Diagram:	CD0005	Mfg Plant:	
Mech. Spec:	09C103	Layout:	09LYC103	Poles:	02	Created Date:	04-22-2015
Base:	N	Eff. Date:	06-20-2018	Leads:	9#12		

Specs			
Catalog Number:	VEM4106T	Heater Indicator:	No Heater
Enclosure:	TEFC	Insulation Class:	F
Frame:	256TC	Inverter Code:	Inverter Ready
Frame Material:	Iron	KVA Code:	H
Output @ Frequency:	20.000 HP @ 60 HZ	Lifting Lugs:	Standard Lifting Lugs
Synchronous Speed @ Frequency:	3600 RPM @ 60 HZ	Locked Bearing Indicator:	Locked Bearing
Voltage @ Frequency:	208.0 V @ 60 HZ	Motor Lead Quantity/Wire Size:	9 @ 12 AWG
	460.0 V @ 60 HZ	Motor Lead Exit:	Ko Box
	230.0 V @ 60 HZ	Motor Lead Termination:	Flying Leads
XP Class and Group:	None	Motor Type:	0936M
XP Division:	Not Applicable	Mounting Arrangement:	F1
Agency Approvals:	CSA	Power Factor:	89
	CSA EEV	Product Family:	General Purpose
	UR	Pulley End Bearing Type:	Ball
Auxillary Box:	No Auxillary Box	Pulley Face Code:	C-Face
Auxillary Box Lead Termination:	None	Pulley Shaft Indicator:	Standard
Base Indicator:	No Mounting	Rodent Screen:	None
Bearing Grease Type:	Polyrex EM (-20F +300F)	Shaft Extension Location:	Pulley End

<b>Blower:</b>	None	<b>Shaft Ground Indicator:</b>	No Shaft Grounding
<b>Current @ Voltage:</b>	50.000 A @ 208.0 V	<b>Shaft Rotation:</b>	Reversible
	46.000 A @ 230.0 V	<b>Shaft Slinger Indicator:</b>	Shaft Slinger
	23.000 A @ 460.0 V	<b>Speed Code:</b>	Single Speed
<b>Design Code:</b>	A	<b>Motor Standards:</b>	NEMA
<b>Drip Cover:</b>	No Drip Cover	<b>Starting Method:</b>	Direct on line
<b>Duty Rating:</b>	CONT	<b>Thermal Device - Bearing:</b>	None
<b>Electrically Isolated Bearing:</b>	Not Electrically Isolated	<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

<b>Nameplate NP3441LUA</b>										
<b>CAT.NO.</b>	VEM4106T									
<b>SPEC</b>	09C103Z601G2									
<b>HP</b>	20									
<b>VOLTS</b>	208-230/460									
<b>AMPS</b>	50-46/23									
<b>RPM</b>	3520									
<b>FRAME</b>	256TC				<b>HZ</b>	60			<b>PH</b>	3
<b>SF</b>	1.15		<b>CODE</b>	H	<b>DES</b>	A		<b>CLASS</b>	F	
<b>NEMA NOM. EFF</b>	91		<b>PF</b>	89						
<b>RATING</b>	40C AMB-CONT									
<b>CC</b>	010A				<b>USABLE AT 208V</b>					
<b>ENCL</b>	TEFC		<b>SER</b>							
<b>DE</b>	6309			<b>ODE</b>	6208					
<b>VPWM INVERTER READY</b>										
<b>CT6-60H(10:1)VT3-60H(20:1)</b>										
	50Hz 20HP 190/380V 56/28A								SF1.0	

Parts List		
Part Number	Description	Quantity
SA299745	SA 09C103Z601G2	1.000 EA
RA286775	RA 09C103Z601G2	1.000 EA
37FN3002C02	EXFN, PLASTIC, 6.00 OD, 1.503 ID	1.000 EA
HW1002A63	0ASHER, 5/8 HI-COLLAR SPRLCKWASHER	1.000 EA
09CB3002SP	CB W/1.38 LEAD HOLE FOR 37, 39, 307 & 30	1.000 EA
09GS1000SP	GASKET-CONDUIT BOX, 1/16 THICK LEXIDE	1.000 EA
10XN2520K12	1/4-20 X.75 GRD 5	2.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	2.000 EA
WD1000B16	T&B CX70TN TERMINAL	1.000 EA
59XW2520G07	.25-20X.44,HEX SER WSHR,TAPTITE 2,GREEN	1.000 EA
09EP1100A194	ENDPLATE, MACH	1.000 EA
XY3816A12	3/8-16 FINISHED NUT	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 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
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	2.000 EA
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	4.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 EA
09EP1300A155	PUEP MACH W/309 BRG & "O" DRAIN, SLINGER	1.000 EA
HW4600B44	V-RING SLINGER 1.500 X 1.810 X .28 VITON	1.000 EA
HA3113A02	THRUBOLT 3/8-16 X 16.750	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
09FH4000SP	309 FH	1.000 EA
HA2081A05	SPACER TUBE, 309 FAN HSG, 2.00 LONG	4.000 EA

Parts List (continued)		
Part Number	Description	Quantity
XY3816A12	3/8-16 FINISHED NUT	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
09CB3501SP	CONDUIT BOX LID FOR 09CB3001 & 09CB3002	1.000 EA
09GS1013SP	09 GS FOR 09CB3501 LID - LEXIDE	1.000 EA
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 EA
HW2501G25	KEY, 3/8 SQ X 2.875	1.000 EA
LB1115N	LABEL,LIFTING DEVICE (ON ROLLS)	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
HW4500A05	1669B ALEM/UNIV860 GR FTG X	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
HA4066A01	PUSH IN T-DRAIN FITTING (BLACK)	1.000 EA
MJ1000A02	GREASE, POLYREX EM EXXON (USe 4824-15A)	0.080 LB
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
HA4066A01	PUSH IN T-DRAIN FITTING (BLACK)	1.000 EA
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 EA
51XB1214A20	12-14X1.25 HXWSSLD SERTYB	1.000 EA
MG1000Y03	MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,	0.050 GA
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 EA
LB1119N	WARNING LABEL	1.000 EA
LC0005	CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING	1.000 EA

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NP3441LUA	ALUM SUPER-E VPWM INV READY UL CSA-EEV C	1.000 EA
40PA1017	PACKAGING GROUP, 09 VERT LARGE FLANGE	1.000 EA
MN416A01	TAG-INSTAL-MAINT no wire (1200/bx) 5/18	1.000 EA
FE-0000013	ZRTG FE ASSEMBLY	1.000 EA

**AC Induction Motor Performance Data**

Record # 57538 - Typical performance - not guaranteed values

<b>Winding:</b> 09WGZ601-R004	<b>Type:</b> 0936M	<b>Enclosure:</b> TEFC
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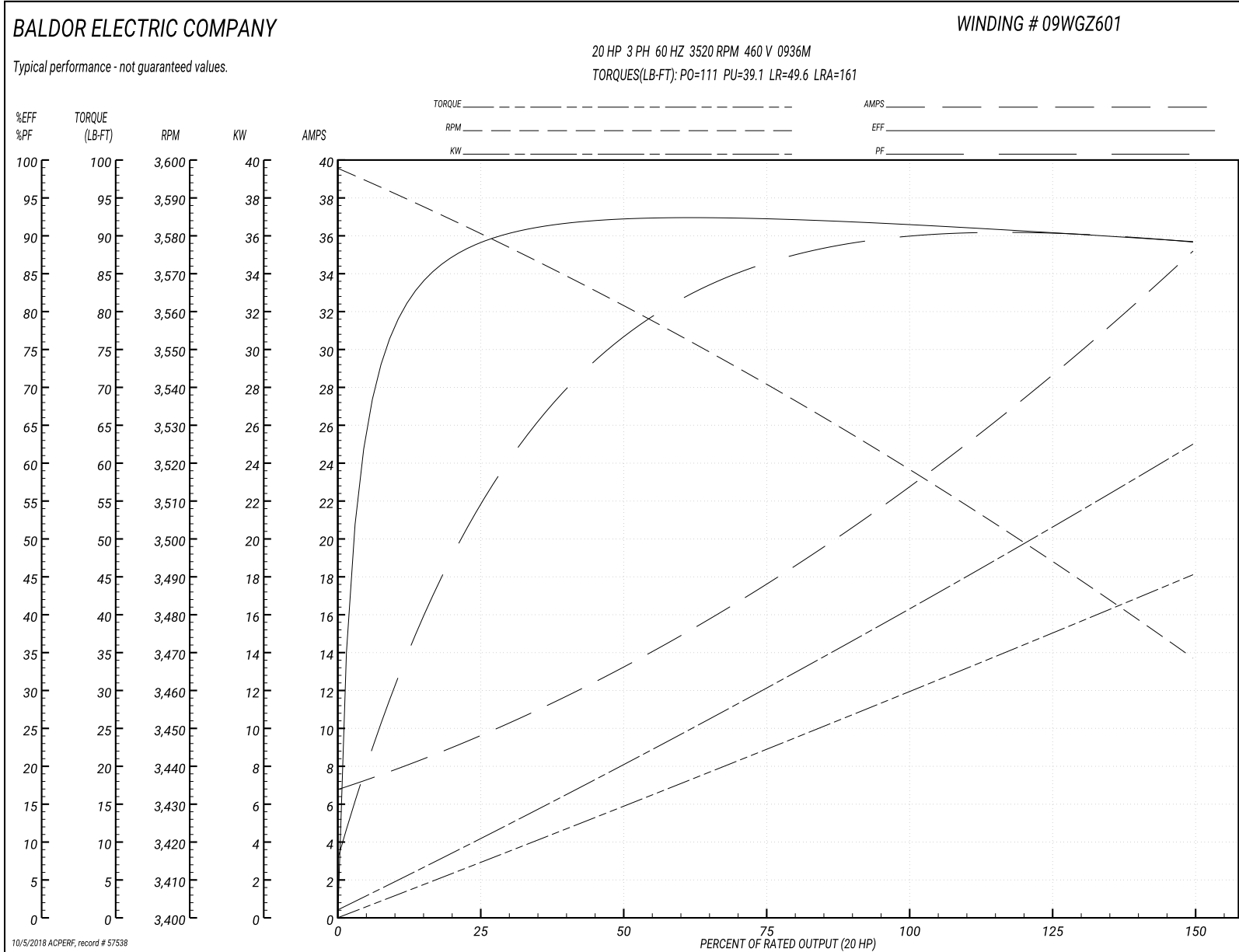
Nameplate Data				460 V, 60 Hz: High Voltage Connection	
Rated Output (HP)	20			Full Load Torque	29.6 LB-FT
Volts	208-230/460			Start Configuration	direct on line
Full Load Amps	50-46/23			Breakdown Torque	111 LB-FT
R.P.M.	3520			Pull-up Torque	39.1 LB-FT
Hz	60	Phase	3	Locked-rotor Torque	49.6 LB-FT
NEMA Design Code	A	KVA Code	H	Starting Current	161 A
Service Factor (S.F.)	1.15			No-load Current	7.17 A
NEMA Nom. Eff.	91	Power Factor	89	Line-line Res. @ 25°C	0.47592 Ω
Rating - Duty	40C AMB-CONT			Temp. Rise @ Rated Load	76°C
S.F. Amps				Temp. Rise @ S.F. Load	95°C
				Locked-rotor Power Factor	29
				Rotor inertia	0.92 LB-FT <sup>2</sup>

Load Characteristics 460 V, 60 Hz, 20 HP

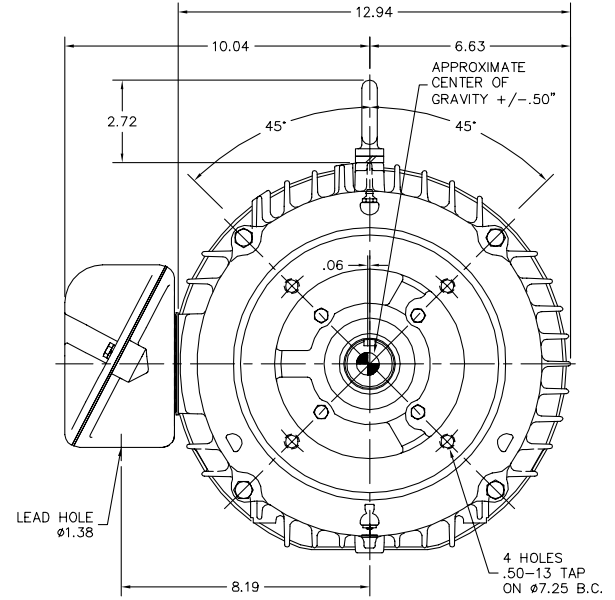
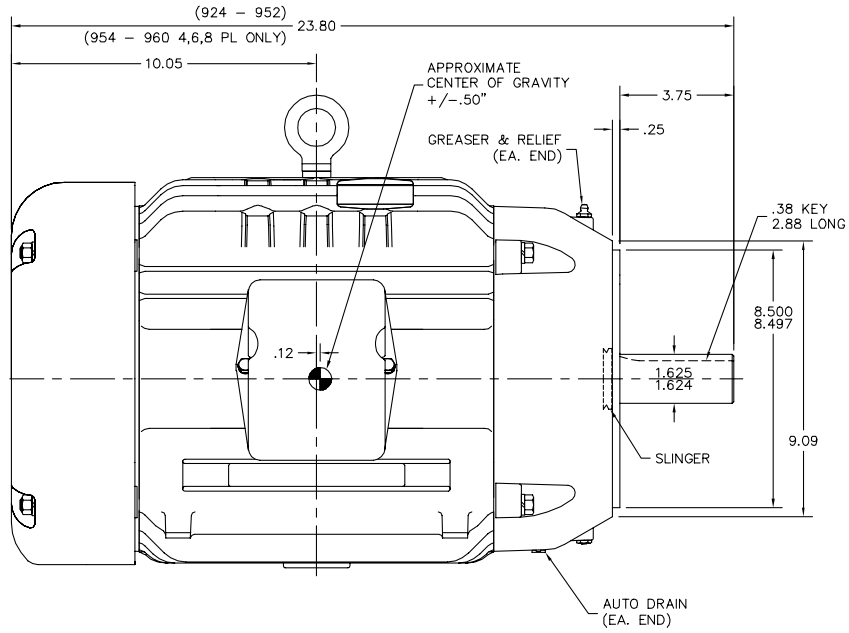
% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	58	78	86	89	90	90	90
Efficiency	88.9	92.2	92.4	91.7	90.7	89.2	91.1
Speed	3579.6	3561.5	3541.3	3519.5	3495.4	3467.8	3505
Line amperes	9	13	17.7	22.9	28.6	35	26.3



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



09LYC103



09LYC103

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

REV. DESC: ADD COG PER CUSTOMER REQUEST	VERSION: 07	TDR: 00000989917
REV. LTR: L	REVISED: 02:01:02 07/26/2016	BY: USODDIL
FILE: \AAA\00027\486		
MTL: -		

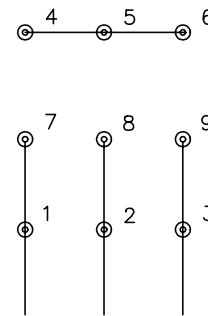
**BALDOR**

VERT TEFC 254-6TC  
SH 1 of 1

CD0005

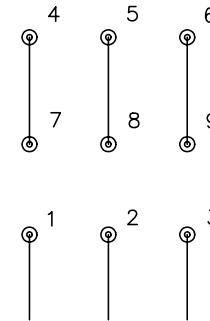


LOW VOLTAGE  
(2Y)



LINE

HIGH VOLTAGE  
(1Y)



LINE

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.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS

REV. LTR: E BY: JLP

REVISED: 01/19/99 10:15

TDR: 0171435

9000D

FILE: AAA00005140

MDL: -

MTL: -

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS

CD0005

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