

**BALDOR® • RELIANCE** 

**Product Information Packet**

**CEM3704T**

**3HP, 1160RPM, 3PH, 60HZ, 213TC, 3738M, TEFC, F1**

Part Detail							
Revision:	J	Status:	PRD/A	Change #:		Proprietary:	No
Type:	AC	Elec. Spec:	37WGS519	CD Diagram:	CD0005	Mfg Plant:	
Mech. Spec:	37G814	Layout:	37LYG814	Poles:	06	Created Date:	06-16-2010
Base:	RG	Eff. Date:	07-03-2019	Leads:	9#14		

Specs			
Catalog Number:	CEM3704T	Insulation Class:	F
Enclosure:	TEFC	Inverter Code:	Inverter Ready
Frame:	213TC	KVA Code:	L
Frame Material:	Steel	Lifting Lugs:	Standard Lifting Lugs
Output @ Frequency:	3.000 HP @ 60 HZ	Locked Bearing Indicator:	Locked Bearing
Synchronous Speed @ Frequency:	1200 RPM @ 60 HZ	Motor Lead Quantity/Wire Size:	9 @ 14 AWG
Voltage @ Frequency:	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:	3738M
XP Division:	Not Applicable	Mounting Arrangement:	F1
Agency Approvals:	UR	Power Factor:	68
	CSA EEV	Product Family:	General Purpose
	CSA	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:	Rigid	Rodent Screen:	None
Bearing Grease Type:	Polyrex EM (-20F +300F)	RoHS Status:	ROHS COMPLIANT
Blower:	None	Shaft Extension Location:	Pulley End

<b>Current @ Voltage:</b>	4.600 A @ 460.0 V	<b>Shaft Ground Indicator:</b>	No Shaft Grounding
	9.200 A @ 230.0 V	<b>Shaft Rotation:</b>	Reversible
	9.600 A @ 208.0 V	<b>Shaft Slinger Indicator:</b>	No Slinger
<b>Design Code:</b>	B	<b>Speed Code:</b>	Single Speed
<b>Drip Cover:</b>	No 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>Feedback Device:</b>	NO FEEDBACK	<b>Thermal Device - Winding:</b>	None
<b>Front Face Code:</b>	Standard	<b>Vibration Sensor Indicator:</b>	No Vibration Sensor
<b>Front Shaft Indicator:</b>	None	<b>Winding Thermal 1:</b>	None
<b>Heater Indicator:</b>	No Heater	<b>Winding Thermal 2:</b>	None

<b>Nameplate NP3441LUA</b>										
<b>CAT.NO.</b>	CEM3704T									
<b>SPEC</b>	37G814S519G1									
<b>HP</b>	3									
<b>VOLTS</b>	230/460									
<b>AMPS</b>	9.2/4.6									
<b>RPM</b>	1160									
<b>FRAME</b>	213TC				<b>HZ</b>	60			<b>PH</b>	3
<b>SF</b>	1.15		<b>CODE</b>	L	<b>DES</b>	B		<b>CLASS</b>	F	
<b>NEMA NOM. EFF</b>	89.5		<b>PF</b>	68						
<b>RATING</b>	40C AMB-CONT									
<b>CC</b>	010A				<b>USABLE AT 208V</b>					9.6
<b>ENCL</b>	TEFC		<b>SER</b>							
<b>DE</b>	6307			<b>ODE</b>	6206					
<b>VPWM INVERTER READY</b>										
<b>CT6-60H(10:1)VT3-60H(20:1</b>										
	50Hz 3HP 190/380V 10.6/5.3A									
	SF1.0									

Parts List		
Part Number	Description	Quantity
SA198865	SA 37G814S519G1	1.000 EA
RA186220	RA 37G814S519G1	1.000 EA
37FN3002C01	EXFN, PLASTIC, 6.00 OD, 1.155 ID	1.000 EA
HW3200A01	3/8-16X3/4 I-BLT WELDED F/S	1.000 EA
37CB3006	37 CB CASTING W/1.38 LEAD HOLE @ 6:00	1.000 EA
37GS1000SP	GASKET, CONDUIT BOX STD., .06 THICK LEXI	1.000 EA
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 EA
11XW1032G06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	1.000 EA
37EP3101A01	FR ENDPLATE, FOR ROUTING PURPOSES	1.000 EA
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 EA
HW5100A06	W2420-025 WVY WSHR (WB)	1.000 EA
37PE3300A01	PUEP ASSEMBLY FOR ROUTING	1.000 EA
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 EA
10XN2520A30	HEX HD CAP SCREW-STD THD-.25 X 20 THD PE	4.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 EA
XY3118A12	5/16-18 HEX NUT DIRECTIONAL SERRATION	4.000 EA
51XB1214A20	12-14X1.25 HXWSSLD SERTYB	1.000 EA
07FH4007SP	PRIMED	1.000 EA
51XW1032A06	10-32 X .38, TAPTITE II, HEX WSHR SLTD S	3.000 EA
37CB4516	LIPPED LID FOR 37 FRAME NEC KOBX	1.000 EA
37GS1008	37 GS FOR CB LID - LEXIDE	1.000 EA
51XW0832A07	8-32 X .44, TAPTITE II, HEX WSHR SLTD SE	4.000 EA
HW2501F21	KEY, 5/16 SQ X 2.375	1.000 EA
HA7000A02	KEY RETAINER RING, 1 1/8 DIA, 1 3/8 DIA	1.000 EA

<b>Parts List (continued)</b>		
<b>Part Number</b>	<b>Description</b>	<b>Quantity</b>
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 EA
LB1115N	LABEL,LIFTING DEVICE (ON ROLLS)	1.000 EA
MJ1000A02	GREASE, MOBIL POLYREX EM - 124047	0.050 LB
HA3104A17	5/16-18X13.250 T-BLT/OHIO	4.000 EA
MG1000Y03	MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,	0.028 GA
LC0005E01	CONN.DIA./WARNING LABEL (LC0005/LB1119N)	1.000 EA
NP3441LUA	ALUM SUPER-E VPWM INV READY UL CSA-EEV C	1.000 EA
G0PA1000	PKG GRP, PRINT PK1026A06	1.000 EA
MN416A01	TAG-INSTAL-MAINT no wire (2100/bx) 4/22	1.000 EA

**AC Induction Motor Performance Data**

Record # 53388

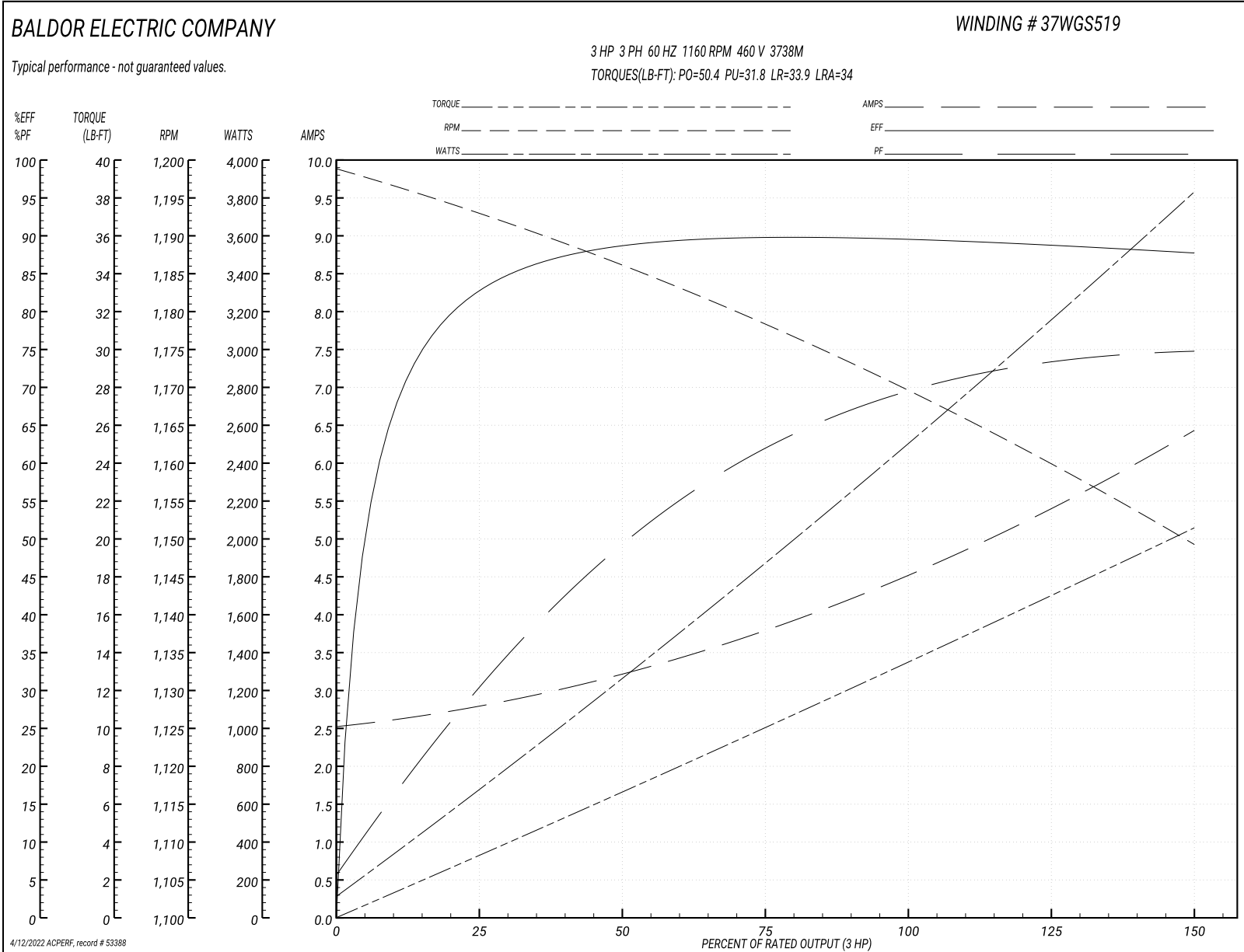
Typical performance - not guaranteed values

Winding: 37WGS519-R032		Type: 3738M	Enclosure: TEFC	
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>	
Rated Output (HP)	3	Full Load Torque	13.4 LB-FT	
Volts	230/460	Start Configuration	direct on line	
Full Load Amps	9.2/4.6	Breakdown Torque	50.4 LB-FT	
R.P.M.	1160	Pull-up Torque	31.8 LB-FT	
Hz	60 Phase	Locked-rotor Torque	33.9 LB-FT	
NEMA Design Code	B KVA Code	Starting Current	34 A	
Service Factor (S.F.)	1.15	No-load Current	2.56 A	
NEMA Nom. Eff.	89.5 Power Factor	Line-line Res. @ 25°C	2.67 Ω	
Rating - Duty	40C AMB-CONT	Temp. Rise @ Rated Load	38°C	
S.F. Amps		Temp. Rise @ S.F. Load	45°C	
		Locked-rotor Power Factor	22.9	
		Rotor inertia	0.945 LB-FT <sup>2</sup>	

**Load Characteristics 460 V, 60 Hz, 3 HP**

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	30	50	62	69	73	75	70
Efficiency	82.1	88.6	89.5	89.8	89.1	87.6	89.1
Speed	1193	1186	1178	1170	1160	1149	1166
Line amperes	2.74	3.19	3.82	4.53	5.44	6.41	5.14

Performance Graph at 460V, 60Hz, 3.0HP Typical performance - Not guaranteed values





**AC Induction Motor Performance Data**

Record # 60478

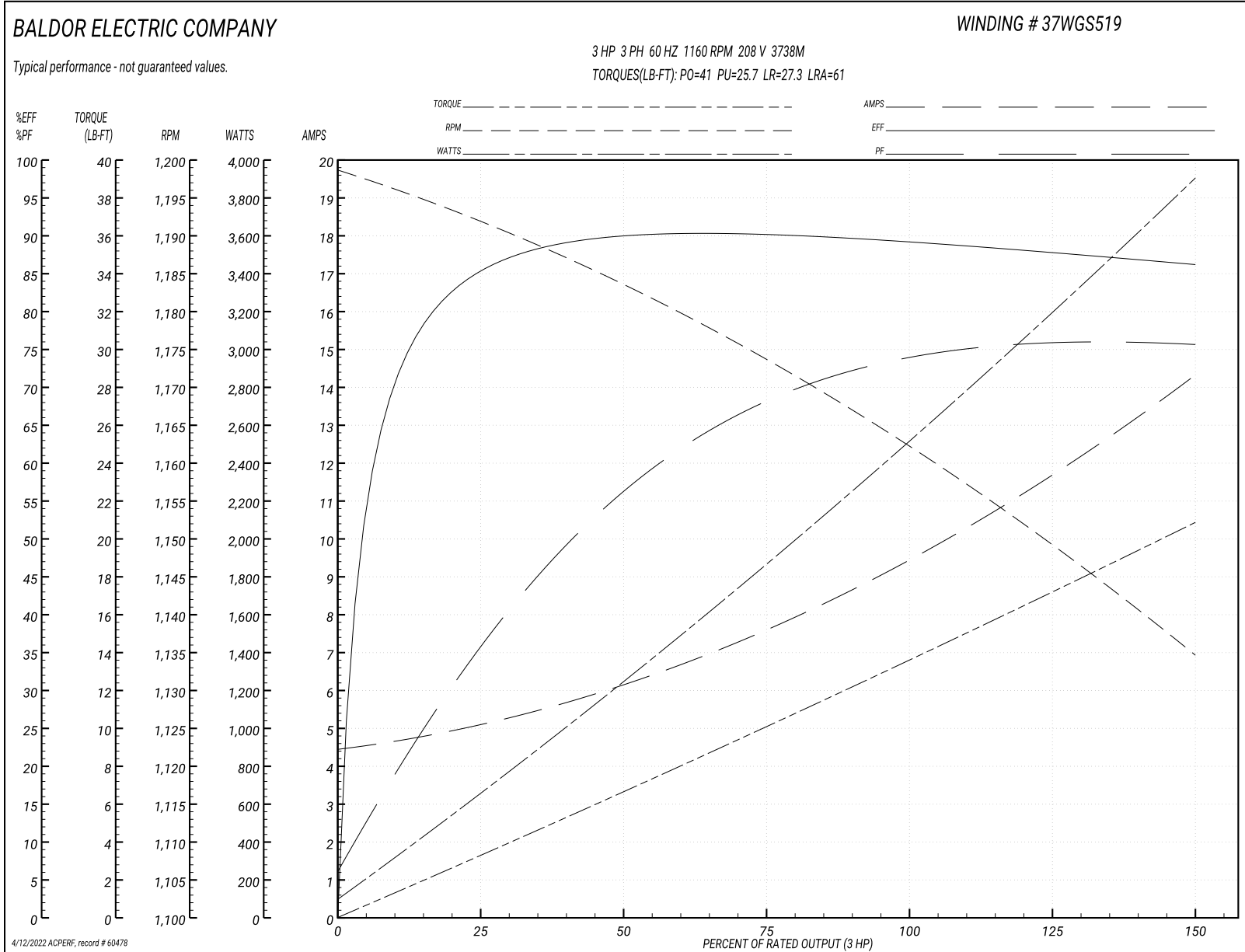
Typical performance - not guaranteed values

<b>Winding: 37WGS519-R032</b>		<b>Type: 3738M</b>		<b>Enclosure: TEFC</b>	
<b>Nameplate Data</b>			<b>208 V, 60 Hz: Low Voltage Connection</b>		
<b>Rated Output (HP)</b>		3	<b>Full Load Torque</b>		13.5 LB-FT
<b>Volts</b>		208-230/460	<b>Start Configuration</b>		direct on line
<b>Full Load Amps</b>		9.5-9.2/4.6	<b>Breakdown Torque</b>		41 LB-FT
<b>R.P.M.</b>		1160	<b>Pull-up Torque</b>		25.7 LB-FT
<b>Hz</b>	<b>60 Phase</b>	3	<b>Locked-rotor Torque</b>		27.3 LB-FT
<b>NEMA Design Code</b>	<b>B KVA Code</b>	L	<b>Starting Current</b>		61 A
<b>Service Factor (S.F.)</b>		1.15	<b>No-load Current</b>		4.52 A
<b>NEMA Nom. Eff.</b>	<b>89.5 Power Factor</b>	68	<b>Line-line Res. @ 25°C</b>		0.668 Ω
<b>Rating - Duty</b>		40C AMB-CONT	<b>Temp. Rise @ Rated Load</b>		39°C
<b>S.F. Amps</b>			<b>Temp. Rise @ S.F. Load</b>		49°C
			<b>Locked-rotor Power Factor</b>		22.9
			<b>Rotor inertia</b>		0.945 LB-FT <sup>2</sup>

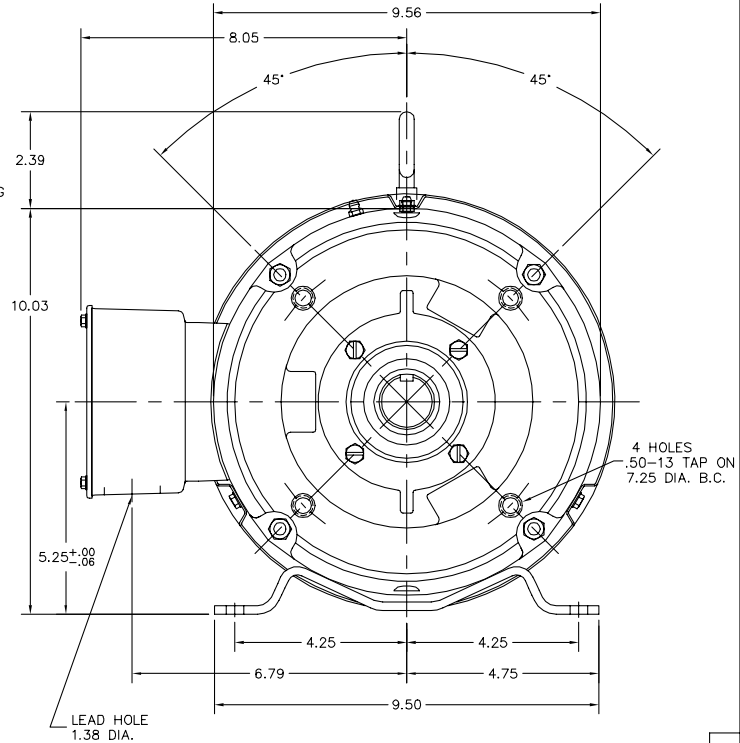
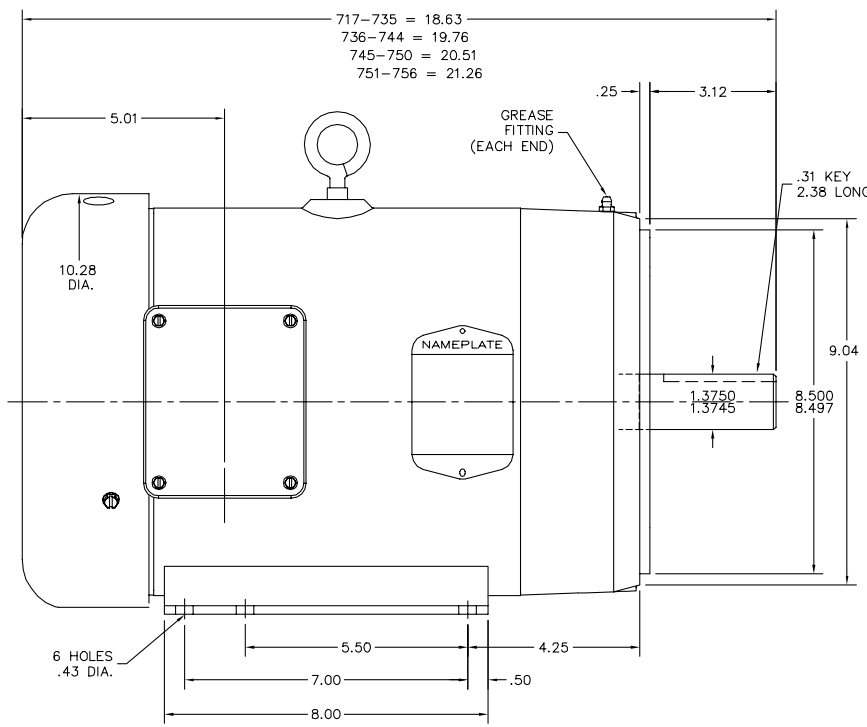
**Load Characteristics 208 V, 60 Hz, 3 HP**

<b>% of Rated Load</b>	<b>25</b>	<b>50</b>	<b>75</b>	<b>100</b>	<b>125</b>	<b>150</b>	<b>S.F.</b>
<b>Power Factor</b>	36	57	68	73	76	76	75
<b>Efficiency</b>	84.3	89.5	90.1	89.6	88	86.1	88.6
<b>Speed</b>	1192	1183	1173	1163	1150	1134	1155
<b>Line amperes</b>	4.98	6.11	7.69	9.46	11.7	14.3	10.8

Performance Graph at 208V, 60Hz, 3.0HP Typical performance - Not guaranteed values



37LYG814



37LYG814

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

REV. DESC: UPDATE LAYOUT GRAPHICS - NO DIM CHANGES		
REV. LTR: D	VERSION: 01	TDR: 000000859468
FILE: \AAA\00051\948	REVISED: 11:08:35 06/24/2014	BY: ENBRAMO
MTL: -		

**BALDOR**

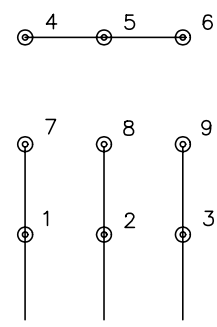
STD HORZ 213-5TC TEFC 37M W/EPACT SHOVE

SH 1 of 1

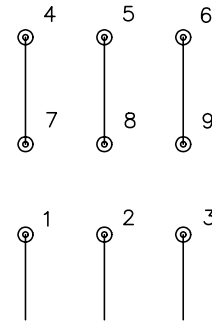
CD0005



LOW VOLTAGE  
(2Y)



HIGH VOLTAGE  
(1Y)



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
900000		FILE: AAA00005140	MDL: -
		MTL: -	

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS

CD0005