

**BALDOR® • RELIANCE** 

**Product Information Packet**

**ECP4106T-5**

**20HP,3510RPM,3PH,60HZ,256T,0954M,TEFC,F1**

Part Detail							
Revision:	Z	Status:	PRD/A	Change #:		Proprietary:	No
Type:	AC	Elec. Spec:	09WGT123	CD Diagram:	CD0006	Mfg Plant:	
Mech. Spec:	09J371	Layout:	09LYJ371	Poles:	02	Created Date:	12-24-2014
Base:	RG	Eff. Date:	04-05-2022	Leads:	3#12		

Specs			
Catalog Number:	ECP4106T-5	Insulation Class:	F
Enclosure:	TEFC	Inverter Code:	Inverter Duty
Frame:	256T	KVA Code:	G
Frame Material:	Iron	Lifting Lugs:	Standard Lifting Lugs
Output @ Frequency:	20.000 HP @ 60 HZ	Locked Bearing Indicator:	Locked Bearing
Synchronous Speed @ Frequency:	3600 RPM @ 60 HZ	Motor Lead Quantity/Wire Size:	3 @ 12 AWG
Voltage @ Frequency:	575.0 V @ 60 HZ	Motor Lead Exit:	Ko Box
XP Class and Group:	CLI GP A,B,C,D	Motor Lead Termination:	Flying Leads
XP Division:	Division II	Motor Type:	0954M
Agency Approvals:	CSA EEV	Mounting Arrangement:	F1
	UR	Power Factor:	91
	CSA	Product Family:	Super-E Chemical Processing
	CCSA US	Pulley End Bearing Type:	Ball
Auxillary Box:	No Auxillary Box	Pulley Face Code:	Standard
Auxillary Box Lead Termination:	None	Pulley Shaft Indicator:	Standard
Base Indicator:	Rigid	Rodent Screen:	None
Bearing Grease Type:	Polyrex EM (-20F +300F)	Shaft Extension Location:	Pulley End
Blower:	None	Shaft Ground Indicator:	No Shaft Grounding

<b>Constant Torque Speed Range:</b>	6	<b>Shaft Rotation:</b>	Reversible
<b>Current @ Voltage:</b>	17.900 A @ 575.0 V	<b>Shaft Slinger Indicator:</b>	Shaft 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>XP Temp Code:</b>	T3

<b>Nameplate NP3995ABBL</b>											
CAT # ECP4106T-5			SER			CC 010A					
SPEC 09J371T123G1			RATING 40C AMB-CONT								
HZ	VOLTS		AMPS		RPM	HP	CODE	SF	DES	PF	NEMA NOM. EFF
60	575		17.9		3510	20	G	1.15	B	91 %	91 %
										%	%
PH 3	CL F	MAX RPM 5400		MAX CORR KVAR 2.1		USABLE AT 208V					
IP55	FR 256T	ENCL TEFC		DE BRG 6309		ODE BRG 6309					
GREASE POLYREX EM						MTR WT 310		LBS			
USABLE AT											
CL I DIV 2 GRPS A,B,C,D				CL I ZONE 2 GRPS				IIA, IIB, IIC		TEMP T 200 C	
1.0 SF ON PWM INVERTER				POWER		INV TEMP CL 200 C					
CHP 60-90	HZ 1.5:1	CT 0-60		HZ 1000:1		VT 0-60		HZ 1000:1			
SPACE HEATER LEADS H1-H2:						TIE LIKE NUMBERS TOGETHER					
V	A	W		MAX SPACE HEATER TEMP							

Parts List		
Part Number	Description	Quantity
SA291597	SA 09J371T123G1	1.000 EA
RA277720	RA 09J371T123G1	1.000 EA
37FN3002C02	EXFN, PLASTIC, 6.00 OD, 1.503 ID	1.000 EA
09CB1002A12P	KOBX W/1.25 NPT LEAD HOLE & 2.38 MTG HOL	1.000 EA
09GS1010	GASKET, DWG, LEADWIRE SEPERATOR	1.000 EA
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	4.000 EA
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 EA
10XN2520K08	1/4-20 X .50 GRADE #5, STL, ZINC PLATE	1.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	1.000 EA
HA3400A39	STUD- 3/8-16 X 6.44 OAL HEX	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
HW4600B44	V-RING SLINGER 1.500 X 1.810 X .28 VITON	1.000 EA
HW4600B44	V-RING SLINGER 1.500 X 1.810 X .28 VITON	1.000 EA
HA4017A08	.125X3.50 GREASER EXTEN.	1.000 EA
HA4017A02	.125X2.50 GREASER EXTENS.F/S	1.000 EA
HW4019A01	PIPE COUPLING 1/8 NPT,STEEL,ZINC COATING	1.000 EA
HW4500A20	1/8NPT SL PIPE PLUG	1.000 EA
HW5100A11	W3917-042 WVY WSHR (WB)	1.000 EA
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	4.000 EA
09FH1000P	FAN COVER, CAST W/EPOXY PRIMER	1.000 EA
09EP1118A38P	PUEP MACH,309 BRG,PLS GRSR,RLF,EPOXY PRI	1.000 EA
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
HW4500A20	1/8NPT SL PIPE PLUG	1.000 EA

Parts List (continued)		
Part Number	Description	Quantity
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	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
12CB1503P	CONDUIT BOX LID, CAST W/EPOXY PRIMER	1.000 EA
12GS1002	GASKET, CONDUIT BOX LID, NEOP	1.000 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
HW2501G25	KEY, 3/8 SQ X 2.875	1.000 EA
MJ5001A27	32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL	0.031 QT
MJ5002A01	SILICON RUBBER SEALANT, 732CL 10.3 OZ TU	0.033 EA
09EP1118A37LP5	FREP MACH, 309 BRG. EPOXY PRIMER	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HW4500A21	1618BALEMITE FITTING 825 UNIVERSAL	1.000 EA
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
MJ1000A02	GREASE, MOBIL POLYREX EM - 124047	0.080 LB
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 EA
MG1025N19	WILKOFAS, 778.50, RELIANCE BLUE-GREEN	0.050 GA
MJ5002A01	SILICON RUBBER SEALANT, 732CL 10.3 OZ TU	0.025 EA
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 EA

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LB1115N	LABEL,LIFTING DEVICE (ON ROLLS)	1.000 EA
NP3995ABBL	SS SUPER-E SD XEX CLI DIV2 UR CSA-C-US E	1.000 EA
40PA1005	PACKAGING GROUP, 09 STD	1.000 EA
MN416A01	TAG-INSTAL-MAINT no wire (2100/bx) 4/22	1.000 EA
LD7020D03	LEAD SET, 12AWG, 3 LEAD, 20" LONG LEADS	1.000 EA

**AC Induction Motor Performance Data**

Record # 50588

Typical performance - not guaranteed values

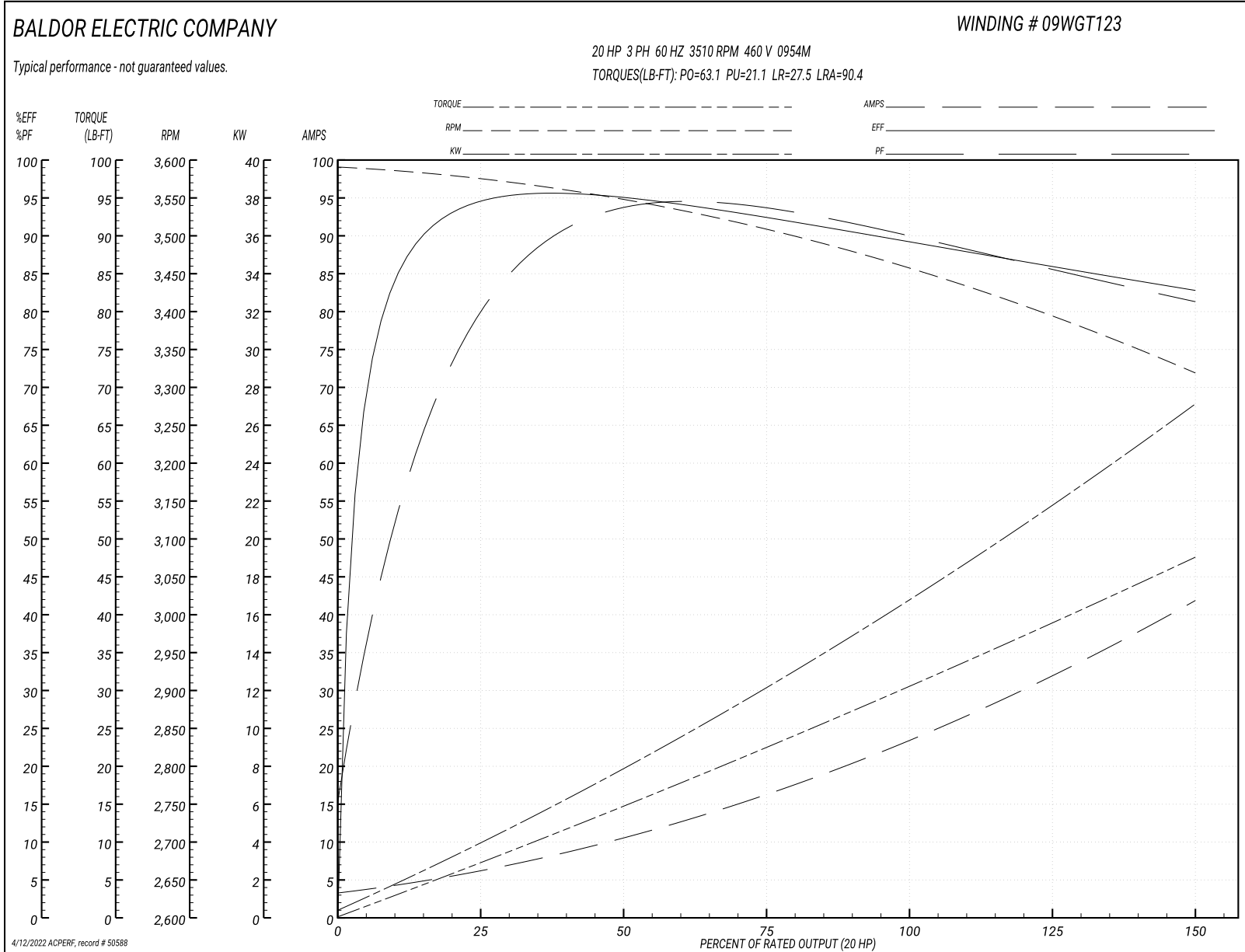
Winding: 09WGT123-R001		Type: 0954M	Enclosure: TEFC
<b>Nameplate Data</b>		<b>460 V, 60 Hz: Single Voltage Motor</b>	
Rated Output (HP)	20	Full Load Torque	30.5 LB-FT
Volts	575	Start Configuration	direct on line
Full Load Amps	17.9	Breakdown Torque	63.1 LB-FT
R.P.M.	3510	Pull-up Torque	21.1 LB-FT
Hz	60 Phase	Locked-rotor Torque	27.5 LB-FT
NEMA Design Code	B KVA Code	Starting Current	90.4 A
Service Factor (S.F.)	1.15	No-load Current	3.02 A
NEMA Nom. Eff.	91 Power Factor	Line-line Res. @ 25°C	0.683 Ω
Rating - Duty	40C AMB-CONT	Temp. Rise @ Rated Load	95°C
S.F. Amps		Temp. Rise @ S.F. Load	130°C
		Locked-rotor Power Factor	26.7
		Rotor inertia	1.38 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	83	91	92	90	87	81	88
Efficiency	92.3	93.3	91.8	90	87.1	82.2	88.3
Speed	3569	3539	3505	3464	3408	3308	3430
Line amperes	6.32	11.2	16.7	23.2	30.9	42.6	27.8



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



**AC Induction Motor Performance Data**

Record # 92413

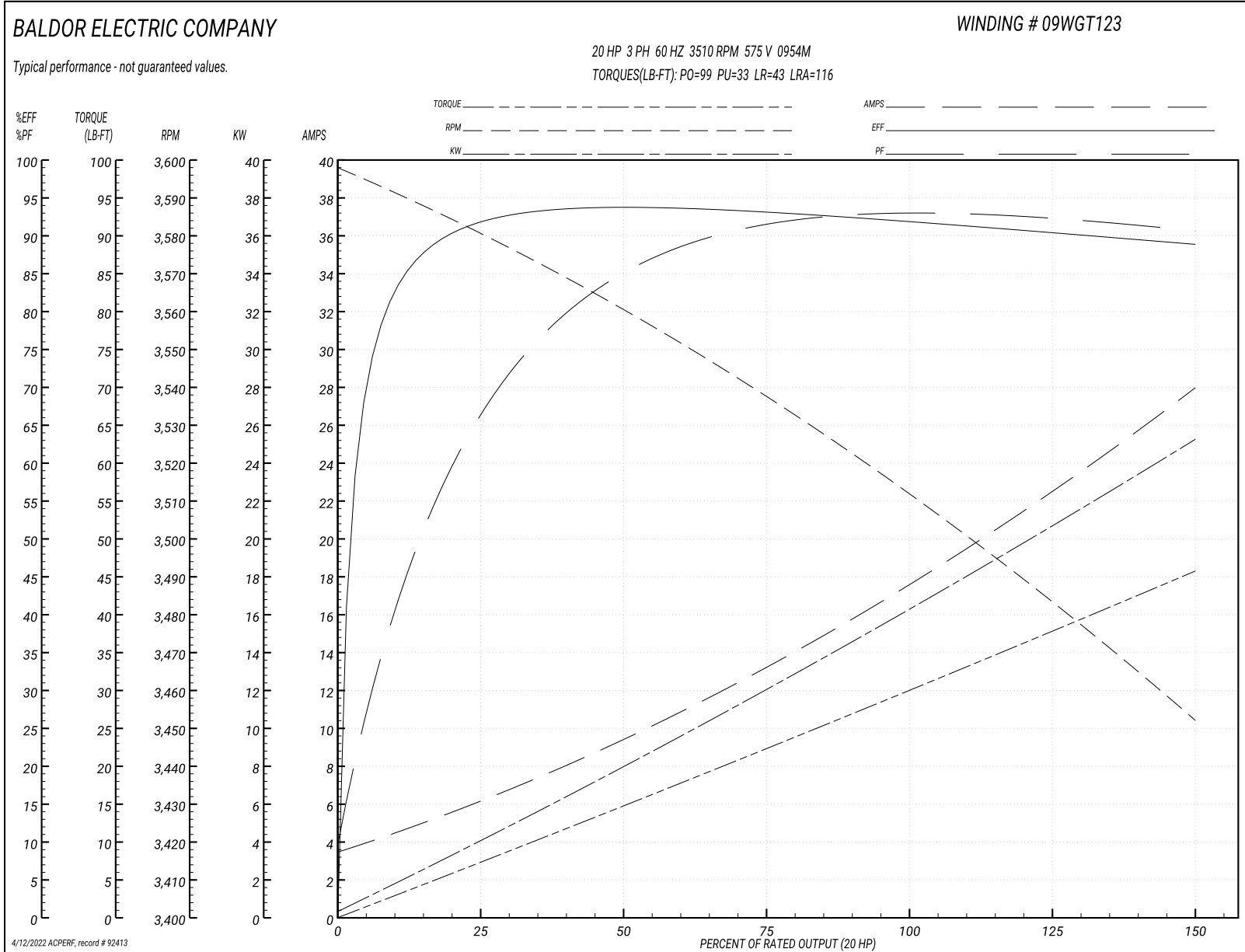
Typical performance - not guaranteed values

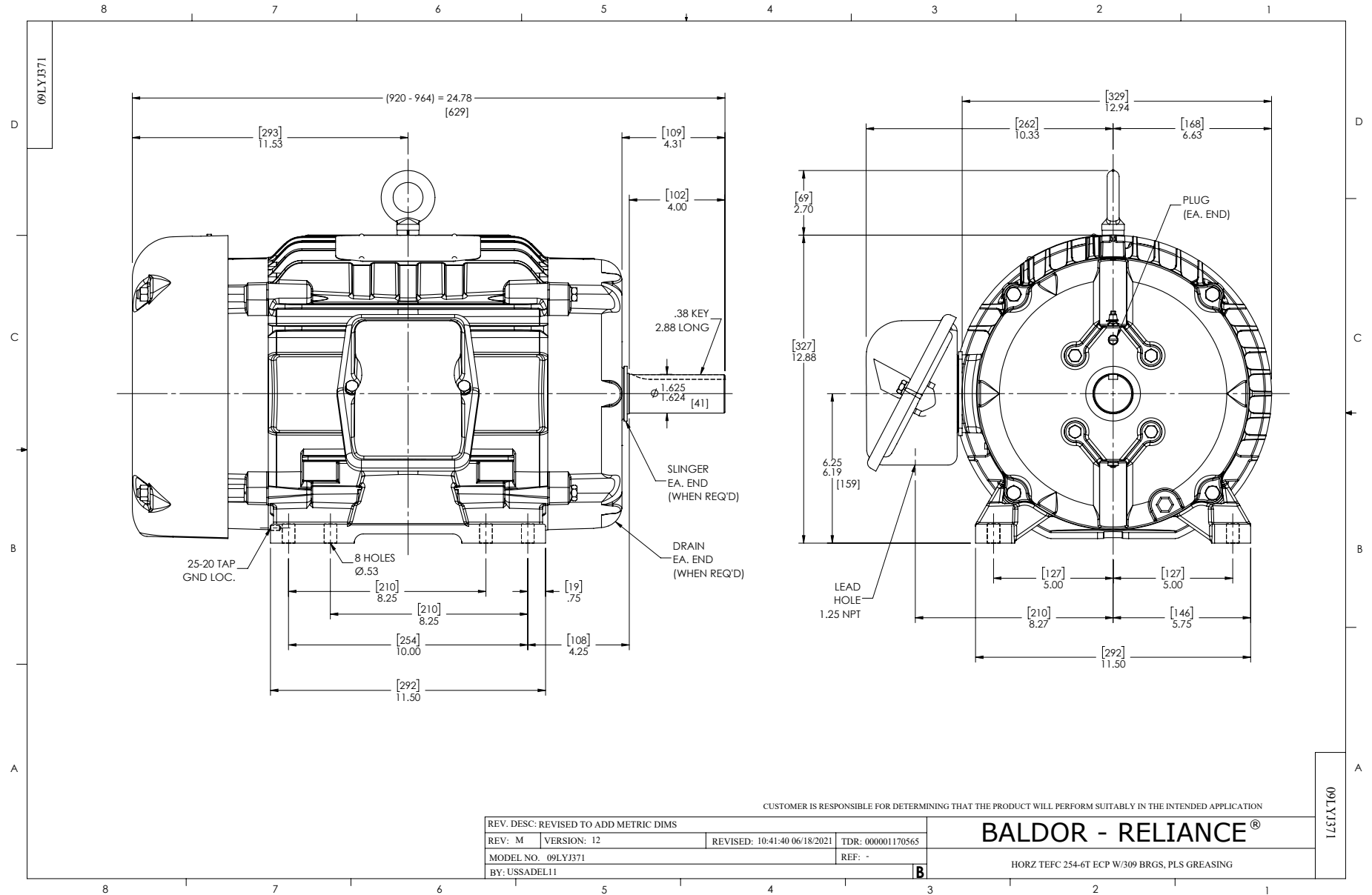
Winding: 09WGT123-R001		Type: 0954M	Enclosure: TEFC
<b>Nameplate Data</b>		<b>575 V, 60 Hz: Single Voltage Motor</b>	
Rated Output (HP)	20	Full Load Torque	30.1 LB-FT
Volts	575	Start Configuration	direct on line
Full Load Amps	17.9	Breakdown Torque	99 LB-FT
R.P.M.	3510	Pull-up Torque	33 LB-FT
Hz	60 Phase	Locked-rotor Torque	43 LB-FT
NEMA Design Code	B KVA Code	Starting Current	116 A
Service Factor (S.F.)	1.15	No-load Current	3.75 A
NEMA Nom. Eff.	91 Power Factor	Line-line Res. @ 25°C	0.683 Ω
Rating - Duty	40C AMB-CONT	Temp. Rise @ Rated Load	68°C
S.F. Amps		Temp. Rise @ S.F. Load	86°C
		Locked-rotor Power Factor	26.7
		Rotor inertia	1.38 lb-ft <sup>2</sup>

**Load Characteristics 575 V, 60 Hz, 20 HP**

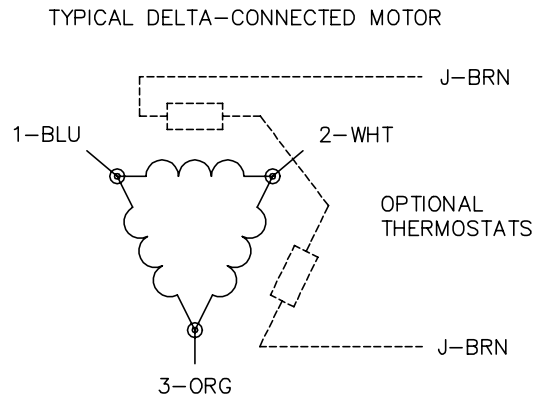
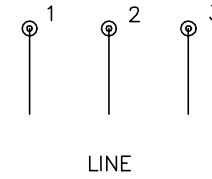
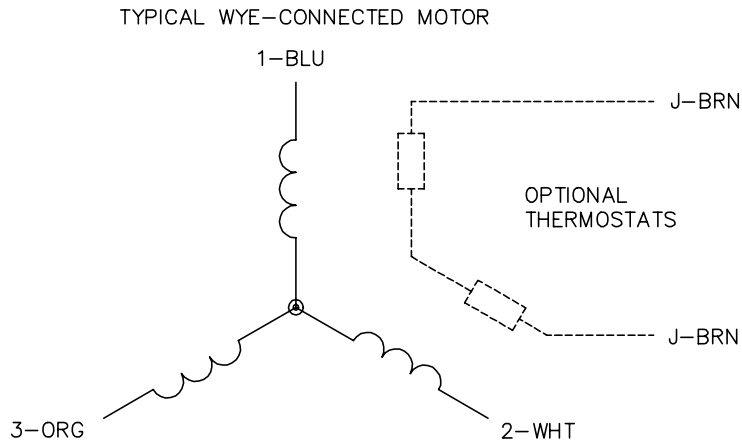
% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	73	87	91	91	92	91	93
Efficiency	91.4	93.4	93	91	90.6	88.8	91.6
Speed	3579	3559	3537	3513	3484	3451	3520
Line amperes	5.87	9.39	13.3	17.9	22.7	27.8	20.3

Performance Graph at 575V, 60Hz, 20.0HP Typical performance - Not guaranteed values





CD0006



NOTES:

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

CD0006

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REV. LTR: E	VERSION: 01	TDR: 000001099922
FILE: \AAA\00005\141	REVISED: 10:24:49 02/19/2019	BY: ENBRIRO
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**BALDOR - RELIANCE®**

3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

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