

BALDOR® • RELIANCE 

Product Information Packet

ECP84106T-5

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

Part Detail							
Revision:	S	Status:	PRD/A	Change #:		Proprietary:	No
Type:	AC	Elec. Spec:	09WGT123	CD Diagram:	CD0006	Mfg Plant:	
Mech. Spec:	09G557	Layout:	09LYG557	Poles:	02	Created Date:	12-24-2014
Base:	RG	Eff. Date:	09-25-2018	Leads:	3#12		

Specs			
Catalog Number:	ECP84106T-5	Inverter Code:	Inverter Duty
Enclosure:	TEFC	KVA Code:	G
Frame:	256T	Lifting Lugs:	Standard Lifting Lugs
Frame Material:	Ductile Iron	Locked Bearing Indicator:	Locked Bearing
Output @ Frequency:	20.000 HP @ 60 HZ	Motor Lead Quantity/Wire Size:	3 @ 12 AWG
Synchronous Speed @ Frequency:	3600 RPM @ 60 HZ	Motor Lead Exit:	Ko Box
Voltage @ Frequency:	575.0 V @ 60 HZ	Motor Lead Termination:	Ring Terminals
XP Class and Group:	CLI GP A,B,C,D	Motor Type:	0954M
XP Division:	Division II	Mounting Arrangement:	F1
Agency Approvals:	UR	Power Factor:	91
	CSA EEV	Product Family:	Chem Process S/P 32-8 IEEE 841
	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
Constant Torque Speed Range:	6	Shaft Rotation:	Reversible

Current @ Voltage:	17.900 A @ 575.0 V	Shaft Slinger Indicator:	No Slinger
Design Code:	B	Speed Code:	Single Speed
Drip Cover:	No Drip Cover	Motor Standards:	NEMA
Duty Rating:	CONT	Starting Method:	Direct on line
Electrically Isolated Bearing:	Not Electrically Isolated	Thermal Device - Bearing:	NONE (OLD)
Feedback Device:	NO FEEDBACK	Thermal Device - Winding:	None
Front Face Code:	Standard	Vibration Sensor Indicator:	No Vibration Sensor
Front Shaft Indicator:	None	Winding Thermal 1:	None
Heater Indicator:	No Heater	Winding Thermal 2:	None
Insulation Class:	F	XP Temp Code:	T3

Nameplate NP3190												
STK.NO.	ECP84106T-5		P/N			ENCLOSURE	TEFC					
SPEC.	09G557T123		CC	010A	FRAME	256T		S/N				
HP	20		CLASS	F	HZ	60		ODE BRG	6309	DE BRG	6309	
RPM	3510	RPM MAX	5400		PH	3	DES	B		D.E. BRG.	45BC03X30X	
VOLT	575		KVA-CODE	G		O.D.E. BRG.	45BC03X30X					
AMP	17.9		MOTOR WEIGHT	310		GREASE	POLYREX EM					
RATING	40C AMB-CONT		MAX. KVAR	2.1		BLANK						
NEMA-NOM-EFF	91	# OF ROTOR BARS	28		SER.F.	1.15		IP	56			
G.MIN.EFF	89.5	# OF STATOR SLOTS	36		PF	91		INV.TYPE	PWM			
TEMP CODE	T3		INVERTER-TEMP-CODE	200								
TEMP =	200		C HP FR	60	C HP TO	90						
CT HZ FROM	6	CT HZ TO	60									
HTR-VOLTS			HTR-AMPS			HTR-WATTS			MAX. SPACE HEATER TEMP.			
								VT HZ FROM	3	VT HZ TO	60	

Parts List		
Part Number	Description	Quantity
SA291598	SA 09G557T123	1.000 EA
RA277721	RA 09G557T123	1.000 EA
37FN3002C02	EXFN, PLASTIC, 6.00 OD, 1.503 ID	1.000 EA
WD1000B16	T&B CX70TN TERMINAL	1.000 EA
10XN2520K06	1/4-20 X 3/8" HX HD SCREWGRADE 5, ZINC P	1.000 EA
HW1002A63	WASHER, 5/8 HI-COLLAR SPRLCKWASHER	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
10XN2520K12	1/4-20 X.75 GRD 5	4.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 EA
WD1000B16	T&B CX70TN TERMINAL	1.000 EA
10XN2520K06	1/4-20 X 3/8" HX HD SCREWGRADE 5, ZINC P	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
12CB1503P	CONDUIT BOX LID, CAST W/EPOXY PRIMER	1.000 EA
12GS1002	GASKET, CONDUIT BOX LID, NEOP	1.000 EA
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	2.000 EA
HW4601A61	INPRO SEAL #1698-A-17120-0, VBXX 309 BRG	1.000 EA
HW4500A20	1/8NPT SL PIPE PLUG	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
HW4601A61	INPRO SEAL #1698-A-17120-0, VBXX 309 BRG	1.000 EA

Parts List (continued)		
Part Number	Description	Quantity
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
09EP1118A01P	PUEP MACH, 309 BRG.INPRO SEALS-EPOXY PRI	1.000 EA
HW4500A20	1/8NPT SL PIPE PLUG	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
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	4.000 EA
XY3816A12	3/8-16 FINISHED NUT	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
MJ5004A59	ADHESIVE LOCTITE #401 SURFACE INSENSITIV	0.010 EA
HW2501G25	KEY, 3/8 SQ X 2.875	1.000 EA
MJ5001A14	DYNAPRO SEALANT, CP MTR VC#2508050 (603	0.023 EA
WD1000B49	T&B C73,RING TERMINAL 10-12 AWG 3/8 STUD	3.000 EA
09EP1118A02GP6	FREP MACH, 309 BRG. EPOXY PRIMER	1.000 EA
HW4500A21	1618BALEMITE FITTING 825 UNIVERSAL	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4002A03	#304 S.S. DRAIN FITTING, .125 NPT (.44 H	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
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4002A03	#304 S.S. DRAIN FITTING, .125 NPT (.44 H	1.000 EA
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 EA

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51XB1214A20	12-14X1.25 HXWSSLD SERTYB	1.000 EA
09FH1000GP6	FAN COVER, CAST W/EPOXY PRIMER & PAINT	1.000 EA
10XN3118K16	5/16-18 X 1' GRADE #5, STL, ZINC PLATE	2.000 EA
MJ5001A27	32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL	0.031 QT
MG1025N19	WILKOFASST, 778.50, RELIANCE BLUE-GREEN	0.050 GA
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 EA
LB1449	DIV-2/NEC WARNING LABEL	1.000 EA
LB1115N	LABEL,LIFTING DEVICE (ON ROLLS)	1.000 EA
LB1119N	WARNING LABEL	1.000 EA
LC0006	CONNECTION LABEL	1.000 EA
NP3190	SS IEEE841 INV DIV-2 UL CSA-C US EEV	1.000 EA
40PA1005	PACKAGING GROUP, 09 STD	1.000 EA
MN416A01	TAG-INSTAL-MAINT no wire (1200/bx) 5/18	1.000 EA

AC Induction Motor Performance Data

Record # 47326 - Typical performance - not guaranteed values

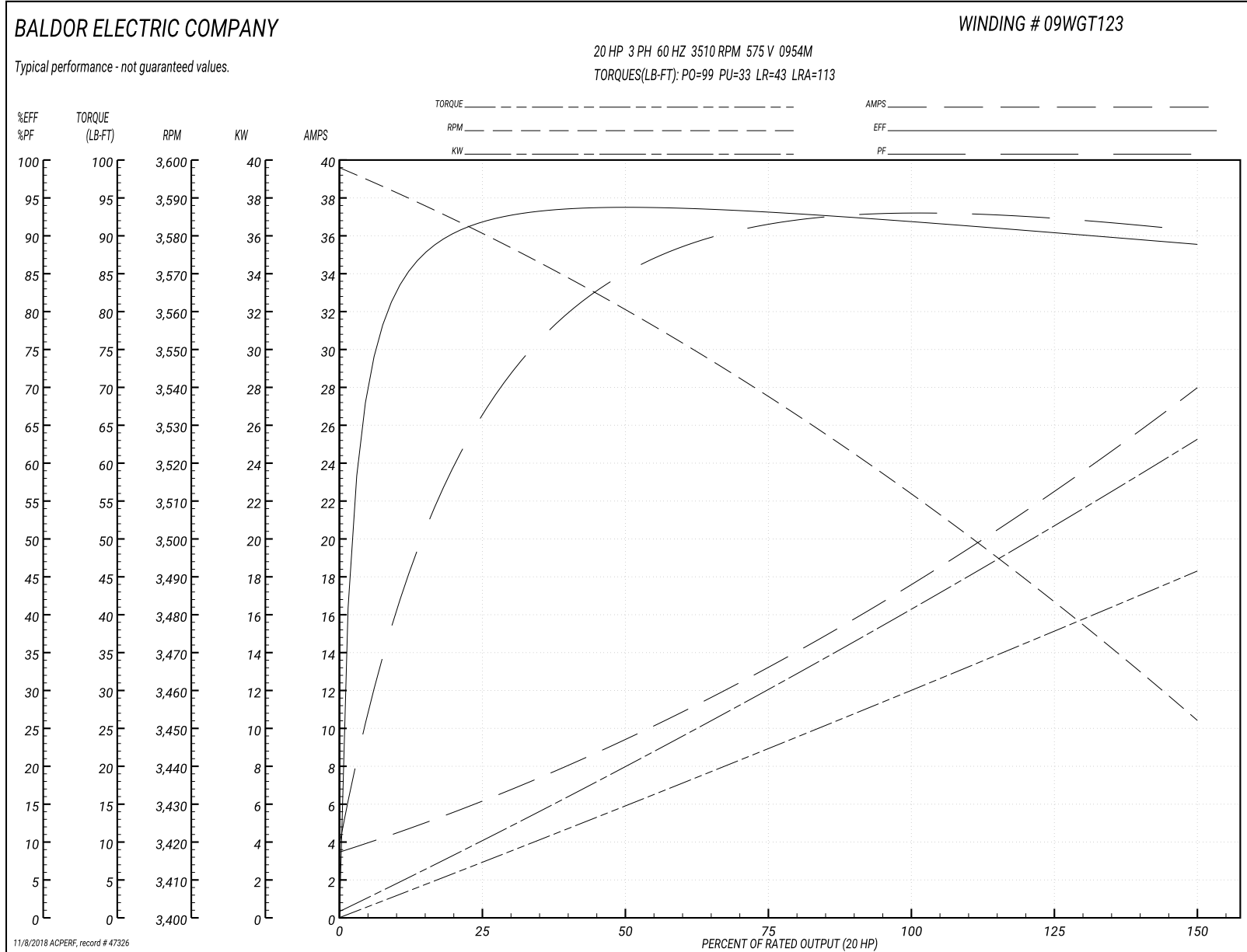
Winding: 09WGT123-R001	Type: 0954M	Enclosure: TEFC
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Nameplate Data				575 V, 60 Hz: Single Voltage Motor	
Rated Output (HP)	20			Full Load Torque	30.1 LB-FT
Volts	575			Start Configuration	direct on line
Full Load Amps	17.9			Breakdown Torque	99 LB-FT
R.P.M.	3510			Pull-up Torque	33 LB-FT
Hz	60	Phase	3	Locked-rotor Torque	43 LB-FT
NEMA Design Code	B	KVA Code	G	Starting Current	113 A
Service Factor (S.F.)	1.15			No-load Current	3.75 A
NEMA Nom. Eff.	91	Power Factor	91	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 ²

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	92.1	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



AC Induction Motor Performance Data

Record # 50588 - Typical performance - not guaranteed values

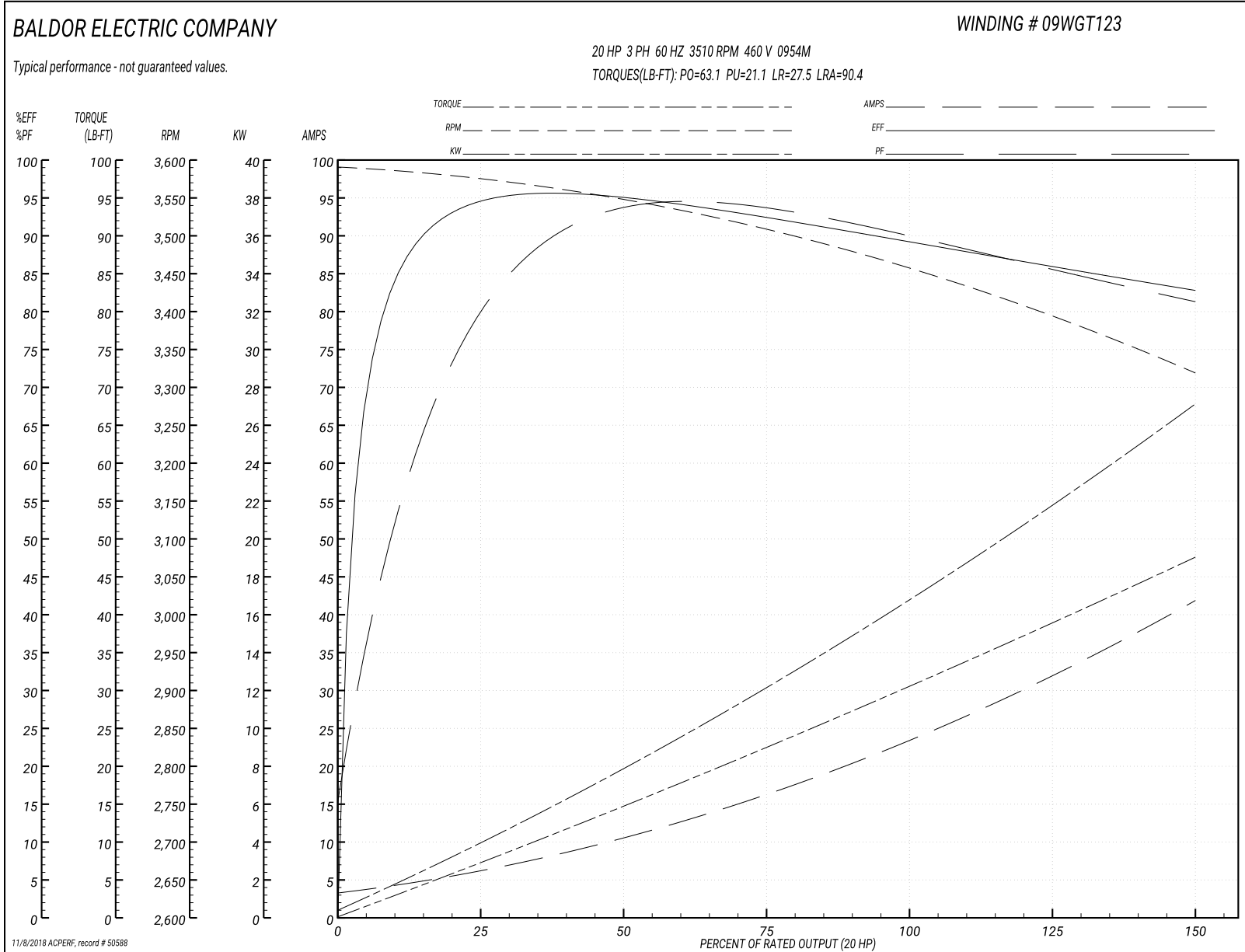
Winding: 09WGT123-R001	Type: 0954M	Enclosure: TEFC
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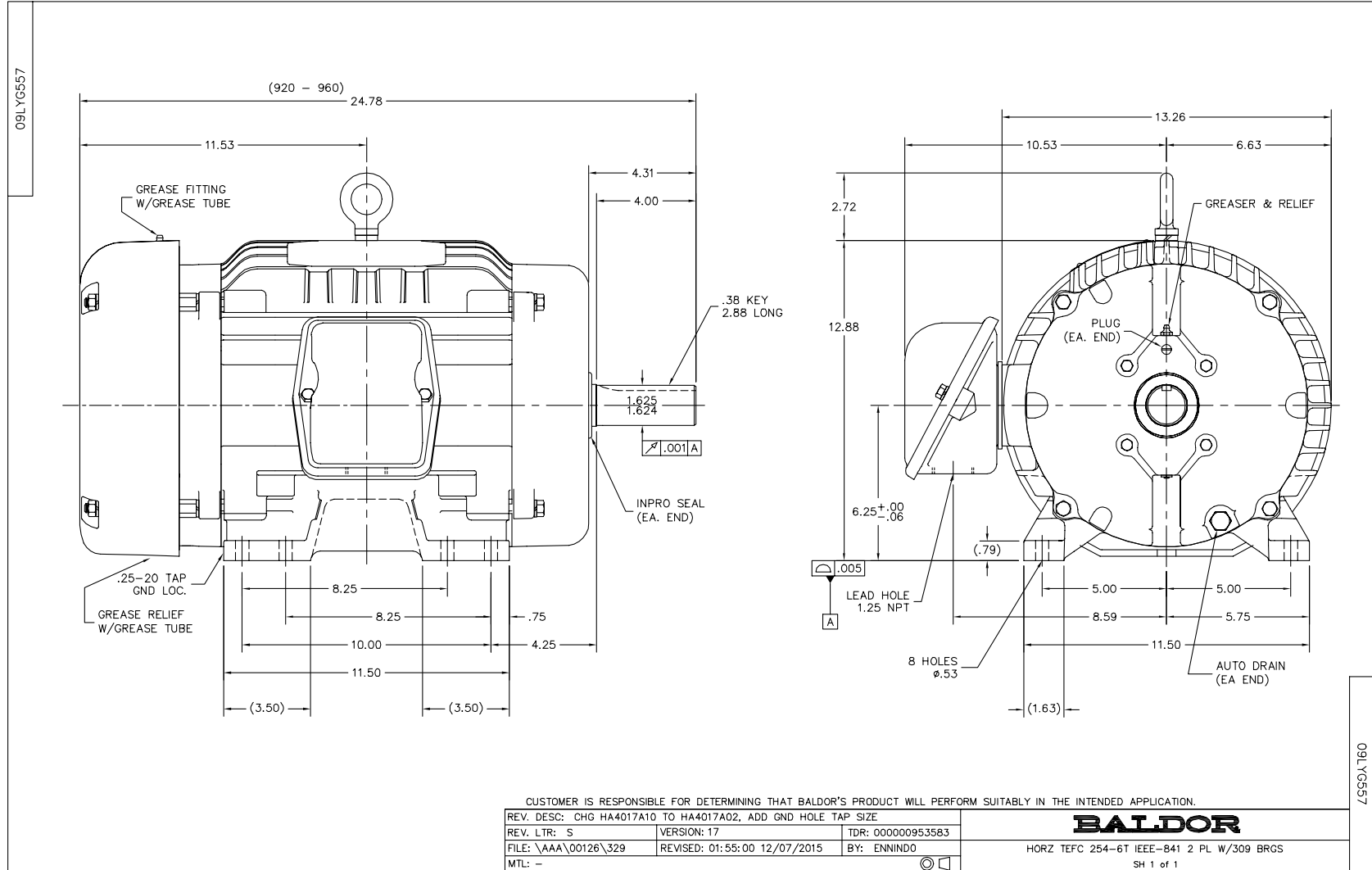
Nameplate Data				460 V, 60 Hz: Single Voltage Motor	
Rated Output (HP)	20			Full Load Torque	30.5 LB-FT
Volts	575			Start Configuration	direct on line
Full Load Amps	17.9			Breakdown Torque	63.1 LB-FT
R.P.M.	3510			Pull-up Torque	21.1 LB-FT
Hz	60	Phase	3	Locked-rotor Torque	27.5 LB-FT
NEMA Design Code	B	KVA Code	G	Starting Current	90.4 A
Service Factor (S.F.)	1.15			No-load Current	3.02 A
NEMA Nom. Eff.	91	Power Factor	91	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 ²

Load Characteristics 460 V, 60 Hz, 20 HP

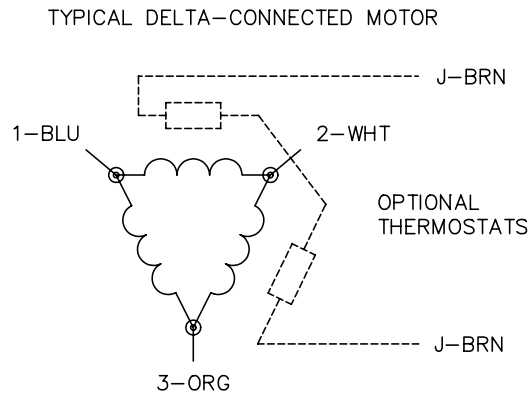
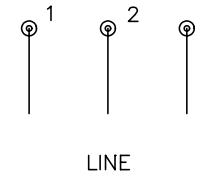
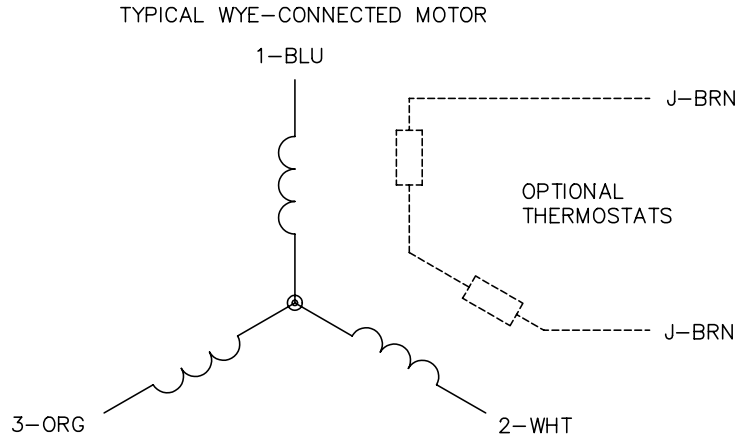
% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	83	91	92	90	87	81	88
Efficiency	92.3	93.3	91.8	90	87.1	82.2	88.3
Speed	3569	3539	3505	3464	3408	3308	3430
Line amperes	6.32	11.2	16.7	23.2	30.9	42.6	27.8

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





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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.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			
REV. LTR: D	BY: JLP	REVISED: 01/21/99 4:02	TDR: 0171435
9000D		FILE: AAA00005141	MDL: -
		MTL: -	

BALDOR ELECTRIC Co.

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

CD0006