

BALDOR® • RELIANCE

Product Information Packet

ELECTRIC MOTOR WHOLESALE.COM

M50502S-4

500HP,3575RPM,3PH,60HZ,5009S,20157M,TEFC

Part Detail							
Revision:	Q	Status:	INA/A	Change #:		Proprietary:	No
Type:	AC	Prod. Type:	20157M	Elec. Spec:	20WG0359	CD Diagram:	
Enclosure:	TEFC	Mfg Plant:		Mech. Spec:	20A036	Layout:	
Frame:	5009SY	Mounting:	F1	Poles:	02	Created Date:	
Base:	RG	Rotation:	R	Insulation:	F	Eff. Date:	07-03-2009
Leads:	6#3/0	Literature:		Elec. Diagram:		Replaced By:	
Nameplate NP1035							
CAT.NO.		SPEC.	20A036-0359				
HP	500	RPM	3575	FRAME	5009SY		
HZ	60	SER.F.	1.15				
VOLTS	460	AMPS	530	PHASE	3		
ENCL	TEFC	TYPE	P				
FL EFF	96.2	FL PF	92	CL	F		
T RISE	80C	MX AMB	40C				
DESIGN	B	CODE	F	DUTY	CONT		
DE BRG	6314	ODE BRG	6314	GREASE	POLYREX EM		
WEIGHT	4700 LBS	S/N		MTG	F1		

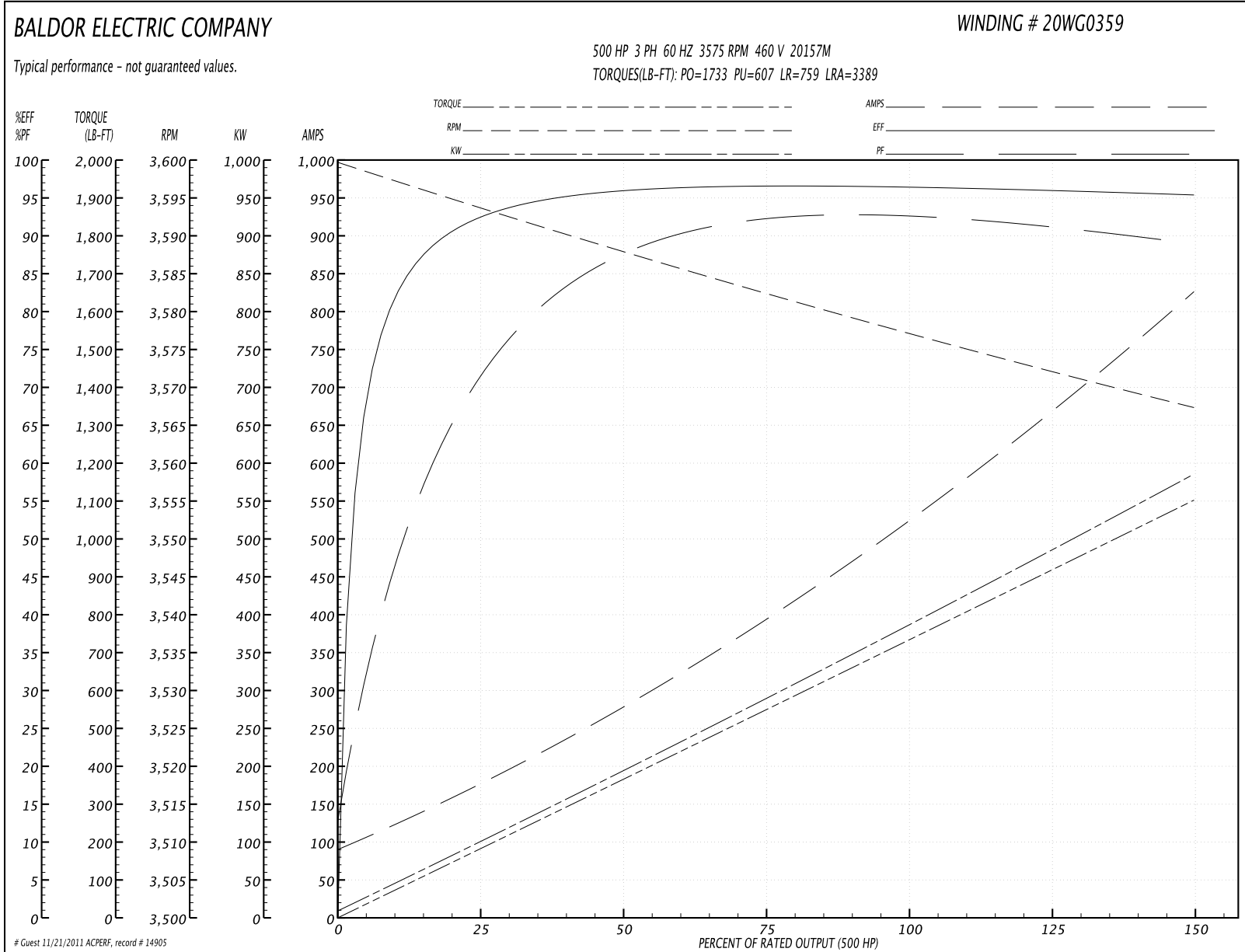
Parts List		
Part Number	Description	Quantity
SA061324	SA 20A036-0359	1.000 EA
RA055627	RA 20A036-0359	1.000 EA
10FN3001A04	EXTERNAL FAN (KENCO) X	1.000 EA
126X0001	COVER	1.000 EA
126X0002	T/BOX FRAME	1.000 EA
185X0001	GASKET C/B TO FRAME CUST.NEOPRENE RUBBER	1.000 EA
185X0002	GASKET C/B CVR TO BASE, NEOPRENE RUBBER	1.000 EA
10XN3816K16	3/8-16 X 1 HEX HD CAP GRADE 5	4.000 EA
19XN3816K16	HEX WSHR HD SCR,3/8-16X1"GR5 OR EQUIV,ZN	4.000 EA
187X0051	CAPLUG	1.000 EA
187X0023	DYKEM, GREEN, 2131A103, 8OZ. HC#9054	0.010 QT
10XN3118K08	5/16-18 X .50 GRADE #5, STL, ZINC PLATE	1.000 EA
WD1000B25	BURNDY TERMINAL L125HP	1.000 EA
106X0021	DE MACH, 314	1.000 EA
116X0005	OUTER CAP 314	1.000 EA
187X0006	PIPE NIPPLE 3/8NPT X 6"LG300 SERIES STAI	1.000 EA
187X0054	PIPE NIPPLE 1/4 NPT X 9LG300 SERIES STAI	1.000 EA
187X0004	1/4 NPT COUPLING 300 SERIES STAINLESS ST	1.000 EA
187X0007	3/8 NPT COUPLING 300 SERIES STAINLESS ST	1.000 EA
HW4001A02	3/8 HX SOC PIPE PLUG W/.75" TAPER (F/S)	1.000 EA
10XN5013K72	1/2-13X4.5 HEX HD CAP, GRADE 5	4.000 EA
10XN6311K44	5/8-11 X 2 3/4 HEX HD	6.000 EA
HW4500A42	GREASE FITTING, 1/4 N.P.TALEMITE #1627-B	1.000 EA
107X0015	ODE BRKT MACH, 314 BRG, LOCKED DE BR	1.000 EA

Parts List (continued)		
Part Number	Description	Quantity
RB1082A01	BRG CAP MACH OUTER FOR6314 BRG,W/WASHER	1.000 EA
HW4600B61	SEAL,V70A FORSH/400700 CR	1.000 EA
187X0006	PIPE NIPPLE 3/8NPT X 6"LG300 SERIES STAI	1.000 EA
187X0007	3/8 NPT COUPLING 300 SERIES STAINLESS ST	1.000 EA
HW4001A02	3/8 HX SOC PIPE PLUG W/.75" TAPER (F/S)	1.000 EA
10XN5013K72	1/2-13X4.5 HEX HD CAP, GRADE 5	4.000 EA
10XN6311K44	5/8-11 X 2 3/4 HEX HD	6.000 EA
15194-75	PIPE PLUG 3/4-14 TAPERED THREAD, ZINC PL	1.000 EA
187X0004	1/4 NPT COUPLING 300 SERIES STAINLESS ST	1.000 EA
187X0054	PIPE NIPPLE 1/4 NPT X 9LG300 SERIES STAI	1.000 EA
HW5100A17	WVY WASHER W5817-055	1.000 EA
111X0001	FAN SHROUD	1.000 EA
110X0002	GRILL	1.000 EA
10XN3816K16	3/8-16 X 1 HEX HD CAP GRADE 5	4.000 EA
19XN3816K20	HEX WSHR HD SCR,3/8-16 X 1.25 GR5 OR EQU	4.000 EA
HW4500A42	GREASE FITTING, 1/4 N.P.TALEMITE #1627-B	1.000 EA
187X0033	HOLE PLUG, NEOPRENE AC GRILL 50 DURO.	1.000 EA
HW2501F18	KEY, 5/16 SQ X 2.000	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
HW4600B61	SEAL,V70A FORSH/400700 CR	1.000 EA
187X0018	SPRING WASHER	4.000 EA
HW4500A42	GREASE FITTING, 1/4 N.P.TALEMITE #1627-B	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
HA6390A01	HOSE CLAMP FOR 3.12 DIA S.S. OR PLATED	1.000 EA

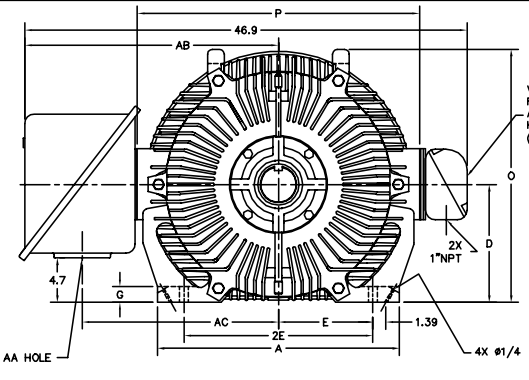
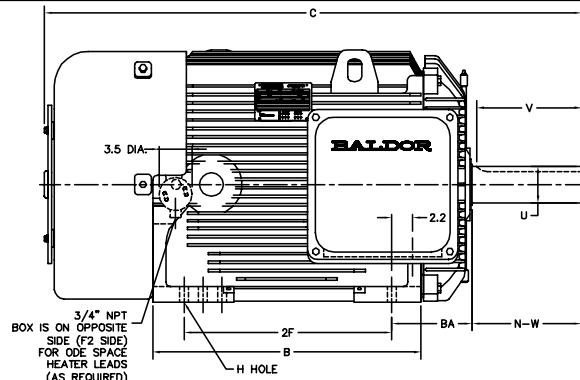
Parts List (continued)		
Part Number	Description	Quantity
18FH1005A01	BRG FAN SHROUD MACH 449 2P & 5000 2P	1.000 EA
10XN3118K32	5/16-18 X 2.00" HEX HD, GRADE 5	4.000 EA
80XN2520A06	1/4-20 X 3/8 SET SCREW	1.000 EA
HW2501J42	KEY, 5/8 SQ X 5.000	1.000 EA
LB1119	WARNING LABEL	1.000 EA
MN400	REPLACED BY MN408	1.000 EA
LB1115	LABEL,LIFTING DEVICE	1.000 EA
MG1000Y03	WILKO 689.710 GOLD PAINT SUPER E	0.001 GA
1D146-25	SCR,HX-IND-SL-WSHR H#6-32X.25, TYPE F,HA	4.000 EA
HA4001A01SP	DRAIN PLUG, PLASTIC (MICRO PLAS)	2.000 EA
MJ1000A75	GREASE, POLYREX EM EXXON	1.000 LB
MJ1000A75	GREASE, POLYREX EM EXXON	1.000 LB
18FN1003A01	EXTERNAL BEARING FAN, MACH 10" DIA.	1.000 EA
15194-75	PIPE PLUG 3/4-14 TAPERED THREAD, ZINC PL	1.000 EA
126X0006	ADAPT PLATE MACH. FOR ACCC/B W/O BOX	1.000 EA
185X0004	GASKET C/B TO FRAME ACC. NEOPRENE RUBBER	1.000 EA
10XN3816K12	3/8-16 X 3/4 HEX HD CAP GRADE 5	4.000 EA
187X0085	LABEL,BALL BRG DESIGN,RLRBRG CONV CONSUL	1.000 EA
MG1025G05	PAINT 789.201 (WILCO) DARK GRAY METALLIC	1.500 GA
NP1035	N/P SINGLE VOLT,S/E,5000,CSA,WYE-DELTA	1.000 EA
20PA1000	PKGP 5000 SKID 75X55	1.000 EA
20PA1006	5000 W/2.500 SHAFT BLOCKING KIT	1.000 EA

Performance Data at 460V, 60Hz, 500.0HP (Typical performance - Not guaranteed values)							
General Characteristics							
Full Load Torque:	735.0 LB-FT			Start Configuration:	DOL		
No-Load Current:	101.0 Amps			Break-Down Torque:	1733.0 LB-FT		
Line-line Res. @ 25°C.:	0.00531 Ohms A Ph / 0.0 Ohms B Ph			Pull-Up Torque:	607.0 LB-FT		
Temp. Rise @ Rated Load:	78 C			Locked-Rotor Torque:	759.0 LB-FT		
Temp. Rise @ S.F. Load:	95 C			Starting Current:	3389.0 Amps		
Load Characteristics							
% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor:	77.0	89.0	92.0	92.0	92.0	90.0	92.0
Efficiency:	94.3	96.2	96.4	96.2	95.9	95.5	96.0
Speed:	3593.0	3588.0	3583.0	3576.0	3573.0	3567.0	3574.0
Line Amperes:	162.0	274.0	401.0	530.0	674.0	820.0	616.4

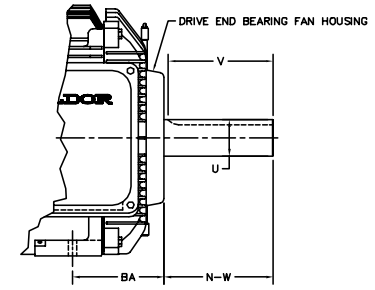
Performance Graph at 460V, 60Hz, 500.0HP Typical performance - Not guaranteed values



600X0001



VOLUME 160 CU. IN.
FOR WDG RTDS
AND DE SPACE
HEATER LEADS
(AS REQUIRED)



DETAIL A
NEMA SUFFIX 'Y' DESIGNATION,
FOR MOTORS WITH DRIVE END
BEARING COOLING FAN.

FRAME	POLES	FOOT MOUNTING				D.E. SHAFT EXTENSION						FRAME				APPROX. WEIGHT		
		BA	E	2F	G	H	N-W	V	U	KEY-SQ.	KEY-LONG	A	B	C	D		O	P
5007L	4 & 6	8.50	10.00	22.00 ⁴	1.75	.94	11.62	11.12	3.875	1.0	10.0	25.65	28.4	56.93	12.50	26.84	29.90	3600
5007LS	4 & 6	8.50	10.00	22.00 ⁴	1.75	.94	6.75	6.50	3.875	1.0	5.0	25.65	28.4	52.31	12.50	26.84	29.90	3600
5007SY	2	9.87	10.00	22.00 ⁴	1.75	.94	6.75	6.50	2.500	.625	5.0	25.65	28.4	54.03	12.50	26.84	29.90	3600
5009L	4 & 6	8.50	10.00	28.00 ⁵	1.75	.94	11.62	11.12	3.875	1.0	10.0	25.65	34.4	62.93	12.50	26.84	29.90	4700
5009LS	4 & 6	8.50	10.00	28.00 ⁵	1.75	.94	6.75	6.50	3.875	1.0	5.0	25.65	34.4	58.31	12.50	26.84	29.90	4700
5009SY	2	9.87	10.00	28.00 ⁵	1.75	.94	6.75	6.50	2.500	.625	5.0	25.65	34.4	60.03	12.50	26.84	29.90	4700
5011LY	4 & 6	9.71	10.00	36.00 ⁶	1.75	.94	11.54	11.12	3.875	1.0	10.0	25.65	42.4	72.05	12.50	26.84	29.90	5650
5011LSY	4 & 6	9.71	10.00	36.00 ⁶	1.75	.94	6.92	6.50	3.875	1.0	5.0	25.65	42.4	67.43	12.50	26.84	29.90	5650
5011SY	4 & 6	9.71	10.00	36.00 ⁶	1.75	.94	6.92	6.50	2.500	.625	5.0	25.65	42.4	67.43	12.50	26.84	29.90	5650

FRAME	POLES	CONDUIT BOX			VOLUME IN ³
		AA	AB	AC	
5007L	4 & 6	4-NPT	26.88	20.80	2100
5007LS	4 & 6	4-NPT	26.88	20.80	2100
5007SY	2	4-NPT	26.88	20.80	2100
5009L	4 & 6	4-NPT	26.88	20.80	2100
5009LS	4 & 6	4-NPT	26.88	20.80	2100
5009SY	2	4-NPT	26.88	20.80	2100
5011LY	4 & 6	4-NPT	26.88	20.80	2100
5011LSY	4 & 6	4-NPT	26.88	20.80	2100
5011SY	4 & 6	4-NPT	26.88	20.80	2100

- NOTES:**
- 1) TOLERANCE ON THE "D" DIMENSION IS +.000 / -.060 INCH.
 - 2) TOLERANCE ON THE "2E" AND "2F" DIMENSION IS +/- .030 INCH.
 - 3) TOLERANCE ON THE "U" DIMENSION IS +.000 / -.001 INCH, MAXIMUM RUN OUT IS .002 T.I.R.
 - 4) FEET ARE ALSO DRILLED FOR 5005(2F=18.00 INCH), AND 5006(2F=20.00 INCH) MOUNTINGS.
 - 5) FEET ARE ALSO DRILLED FOR 5008(2F=25.00 INCH) MOUNTINGS.
 - 6) FEET ARE ALSO DRILLED FOR 5010(2F=32.00 INCH) MOUNTINGS.
 - 7) ACCESSORY AND AUXILIARY CONDUIT BOXES ARE REQ. ONLY FOR LOW VOLTAGE LEADS (SPACE HEATERS & RTD'S LEADS ETC.).
 - 8) ALL CONDUIT BOXES CAN BE ROTATED IN 90° STEPS ON ITS OWN AXIS.
 - 9) NEMA SUFFIX 'Y' DESIGNATION MEANS MOTORS HAVE DRIVE END BEARING COOLING FAN AND HAVE NON-NEMA 'BA' DIMENSIONS. SEE DETAIL A.
 - 10) DRAWING IS FOR REFERENCE ONLY. PLEASE CONTACT BALDOR FOR A DETAILED DIMENSIONAL DRAWING OF THE SPECIFIC MOTOR YOU REQUIRE.

FOR F1 OR F2 CONDUIT BOX MOUNTING SEE SALES ORDER.

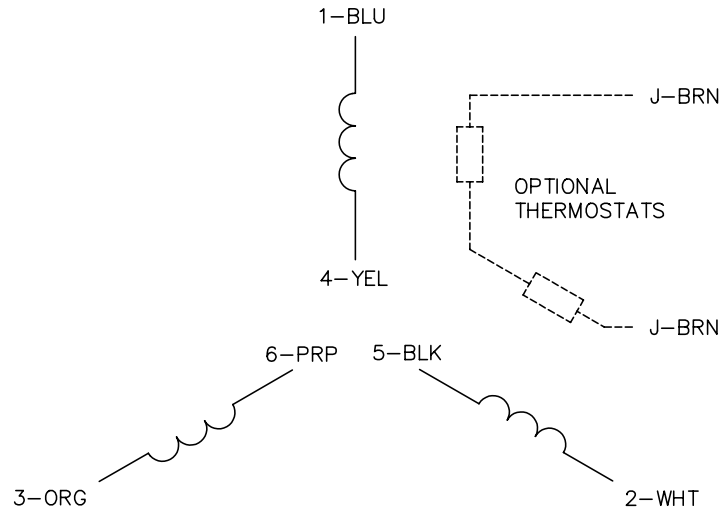
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT MOTOR PERFORMANCE IS SUITABLE IN THE APPLICATION.			
REV. DESC:	ADD BRG FAN TO APPROPRIATE FRAMES,MISC CORRECTIONS		
REV. LTR:	G	BY: BKW	REVISED: 08:47:04 10/31/2002 TDR: 278391
FILE:	CHB00000924	REF:	600X0001
MTL:	-		

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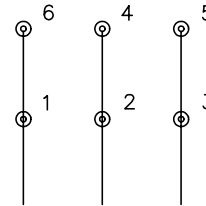
DIM SHEET: 5007,5009,5011,TEFC

1000X000

CD0382

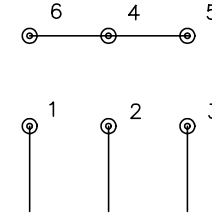


RUN CONNECTION
(1D)



LINE

START CONNECTION
(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.
5. FOR ACROSS-THE-LINE STARTING, USE 'RUN' CONNECTION.

REV. DESC: ADD NOTE 5 FOR DOL STARTING			
REV. LTR: E	BY: JLP	REVISED: 11/30/00 2:26	TDR: 0226155
CD0382		FILE: AAA00005243	REF: -
		MTL: -	

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3PH, SV, 6 LEADS, Y START/D RUN

CD0382