MARCH PUMPS

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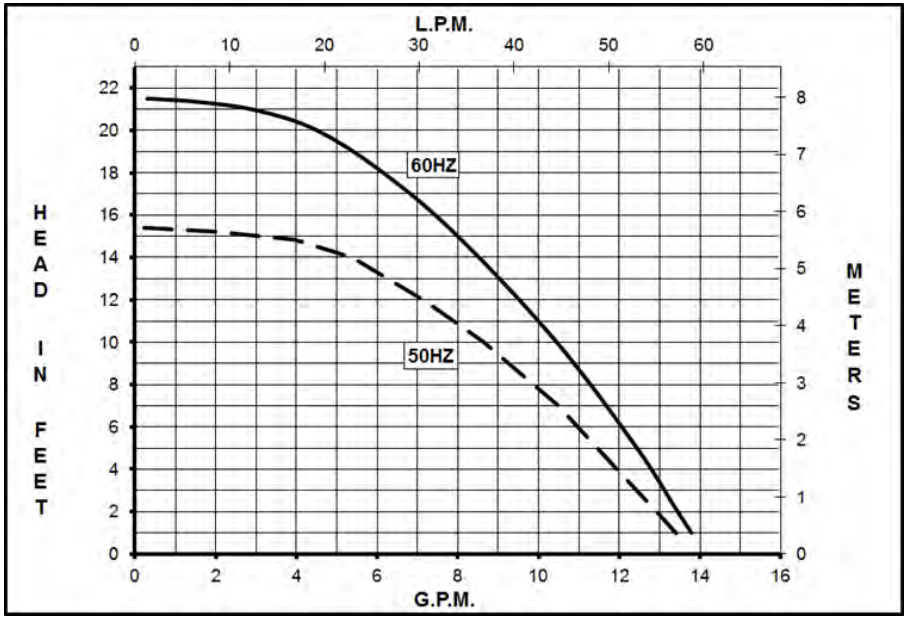
PHONE: (847) 729-5300 - FAX: (847) 729-7062
WWW.MARCHPUMP.COM

AC-4C-MD, AC-4A-MD, BC-4C-MD, BC-4A-MD



DESCRIPTION: Series 4 are centrifugal magnetic drive pumps, eliminating the need for a shaft seal. Pumps can be serviced with a screwdriver. See the parts list for a breakdown of parts.

OPERATION: Pumps are not self-priming, lack a suction lift, and thus require a **flooded suction**. Pumps **cannot be run dry** because the impeller requires the liquid being pumped for lubrication. For liquids with a specific gravity greater than water, have a higher viscosity, or for elevated temperatures, a trimmed impeller may be necessary. For application assistance, contact March Pump.

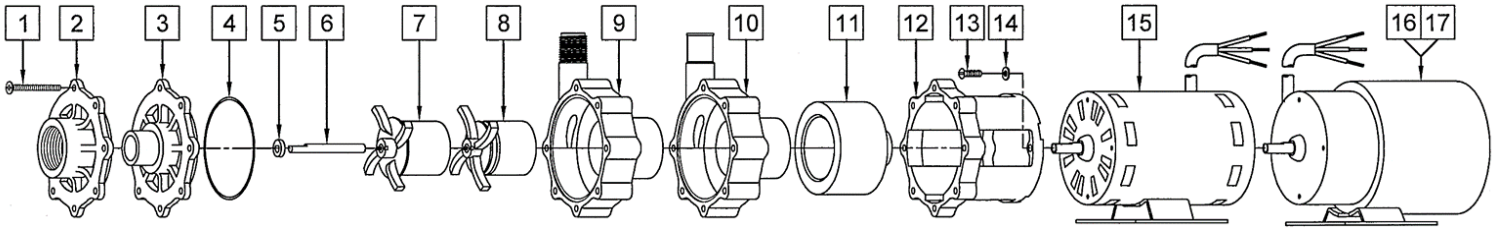
ELECTRICAL: AC models have an Air Cooled Motor. BC models have a Blast Cooled Motor and they have an encapsulated impeller magnet. Motors are available in different electrical configurations such as 115 V 50/60 Hz, or 230 V 50/60 Hz, 1 phase. Motors have a 3 ft. (0.9 m) cord. All models have U.L. listed motors, which are rated for continuous duty.

MODEL ABBREVIATIONS: C: Threaded Inlet/Outlet, A: Smooth Inlet/Outlet

Specifications		AC-4C-MD	AC-4A-MD	BC-4C-MD	BC-4A-MD
Product	115V	0145-0010-0100	0145-0052-1000	0145-0010-0400	0145-0048-0200
	230V			0145-0010-0500	0145-0048-0100
Inlet-Outlet		1”FPT-1/2”MPT	1”OD-3/4”OD	1”FPT-1/2”MPT	1”OD-3/4”OD
Max Internal Pressure		50PSI (344 kPa)	50PSI (344 kPa)	50PSI (344kPa)	50PSI (344 kPa)
Max Liquid Temperature		190F (87C)	190F (87C)	190F (87C)	190F (87C)

	60Hz											50Hz											
	Max Flow		Max Head			Electrical						Max Flow		Max Head			Electrical						Packed Weight
Model	GPM	LPM	FT	PSI	M	Ph	Voltage	AMPS	HP	kW	RPM	GPM	LPM	Feet	PSI	M	Ph	Voltage	AMPS	HP	kW	RPM	Pounds
AC-4C-MD	14	53	21.5	9.3	6.55	1	115	1.75	1/12	0.062	3450	13.2	50	15.4	6.7	4.7	1	115	1.75	1/12	0.062	2850	3.65
AC-4A-MD	14	53	21.5	9.3	6.55	1	115	1.75	1/12	0.062	3450	13.2	50	15.4	6.7	4.7	1	115	1.75	1/12	0.062	2850	3.65
BC-4C-MD	14	53	21.5	9.3	6.55	1	115 or 230	1.9 or 0.75	1/10 or 1/12	0.075 or 0.062	3450	13.2	50	15.4	6.7	4.7	1	115 or 230	1.9 or 0.75	1/10 or 1/12	0.075 or 0.062	2850	3.69
BC-4A-MD	14	53	21.5	9.3	6.55	1	115 or 230	1.9 or 0.75	1/10 or 1/12	0.075 or 0.062	3450	13.2	50	15.4	6.7	4.7	1	115 or 230	1.9 or 0.75	1/10 or 1/12	0.075 or 0.062	2850	3.69

All specifications & data are based on pumping water & are intended as a guideline only. Specifications may vary with different motors.



NOTE: When attaching the Drive Magnet to the motor shaft, position the face of the Drive Magnet 1/16 inch below the face of the Motor Bracket.

AC-4C-MD				**AC-4A-MD**			
Item	Part Number	QTY REQ	Description	Item	Part Number	QTY REQ	Description
1	0150-0021-1000	7	#8-32 x 1-3/4"LG. Screw (Stainless Steel)	1	0150-0021-1000	7	#8-32 x 1-3/4"LG. Screw (Stainless Steel)
2	0150-0032-1000	1	Cover with 1"FPT Inlet (Polypropylene)	3	0150-0150-1000	1	Cover with 1" OD Inlet (Polypropylene)
4	0750-0987-1000	1	0.078" CS x 2.834"ID O-Ring (Buna N)	4	0750-0987-1000	1	0.078" CS x 2.834"ID O-Ring (Buna N)
5	0130-0028-1000	1	Thrust Washer (Ceramic)	5	0130-0028-1000	1	Thrust Washer (Ceramic)
6	0130-0024-1000	1	Shaft (Ceramic)	6	0130-0024-1000	1	Shaft (Ceramic)
8	0145-0011-0100	1	Bare Magnet Impeller (Polypropylene and Magnet)	8	0145-0011-0100	1	Bare Magnet Impeller (Polypropylene and Magnet)
9	0150-0031-0100	1	Rear Housing with 1/2" MPT Outlet and Thrust Washer	10	0150-0159-0100	1	Rear Housing with 3/4"OD Outlet and Thrust Washer
11	0145-0027-0100	1	Drive Magnet	11	0145-0027-0100	1	Drive Magnet
12	0145-0010-1000	1	Motor Bracket (Plastic)	12	0145-0010-1000	1	Motor Bracket (Plastic)
13	0618-0027-1000	4	#8-32 x 5/8 Lg. Screw (Stainless Steel)	13	0618-0027-1000	4	#8-32 x 5/8 Lg. Screw (Stainless Steel)
14	0858-0004-1000	4	#8 Washer Flat (Stainless Steel)	14	0858-0004-1000	4	#8 Washer Flat (Stainless Steel)
15	0145-0012-1000	1	AC Motor, 115V, 50/60Hz	15	0145-0012-1000	1	AC Motor, 115V, 50/60Hz
W	0145-0045-0200	1	Wet End Kit (Items: 1,2, 4, 5, 6, 8, 9)				
BC-4C-MD				**BC-4A-MD**			
1	0150-0021-1000	7	#8-32 x 1-3/4"LG. Screw (Stainless Steel)	1	0150-0021-1000	7	#8-32 x 1-3/4"LG. Screw (Stainless Steel)
2	0150-0032-1000	1	Cover with 1"FPT Inlet (Polypropylene)	3	0150-0150-1000	1	Cover with 1" OD Inlet (Polypropylene)
4	0750-0986-1000	1	0.078" CS x 2.834" ID "O" Ring (Viton)	4	0750-0986-1000	1	0.078" CS x 2.834" ID "O" Ring (Viton)
5	0130-0028-1000	1	Thrust Washer (Ceramic)	5	0130-0028-1000	1	Thrust Washer (Ceramic)
6	0130-0024-1000	1	Shaft (Ceramic)	6	0130-0024-1000	1	Shaft (Ceramic)
7	0145-0033-0200	1	Encapsulated Impeller (Polypropylene)	7	0145-0033-0200	1	Encapsulated Impeller (Polypropylene)
9	0150-0031-0100	1	Rear Housing with 1/2" MPT Outlet and Thrust Washer (Polypropylene/Ceramic)	10	0150-0159-0100	1	Rear Housing with 3/4"OD Outlet and Thrust Washer (Polypropylene/Ceramic)
11	0145-0027-0100	1	Drive Magnet	11	0145-0027-0100	1	Drive Magnet
12	0145-0010-1000	1	Motor Bracket (Plastic)	12	0145-0010-1000	1	Motor Bracket (Plastic)
13	0618-0027-1000	4	#8-32 x 5/8 Lg. Screw (Stainless Steel)	13	0618-0027-1000	4	#8-32 x 5/8 Lg. Screw (Stainless Steel)
14	0858-0004-1000	4	#8 Washer Flat (Stainless Steel)	14	0858-0004-1000	4	#8 Washer Flat (Stainless Steel)
16	0145-0035-1000	1	BC Motor, 115V, 50/60Hz	16	0145-0035-1000	1	BC Motor, 115V, 50/60Hz
17	0145-0036-1000	1	BC Motor, 230V, 50/60Hz	17	0145-0036-1000	1	BC Motor, 230V, 50/60Hz
W	0145-0046-0200	1	Wet End Kit (Items: 1, 2, 4, 5, 6, 7, 9)				

NOTE: Contact Factory for other materials and/or parts not listed. Special voltage motors are available upon special order.

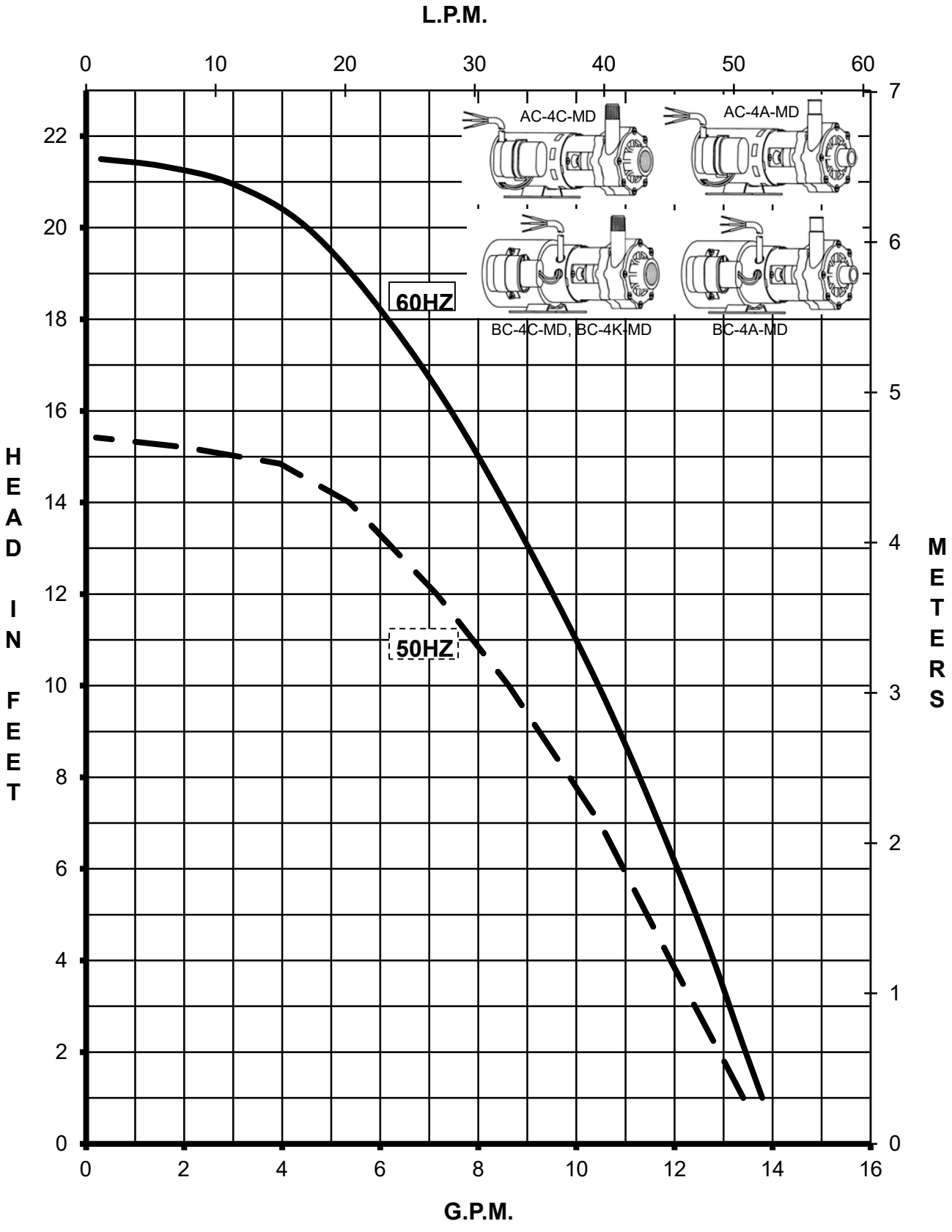
Materials in Contact with Solution: AC: Polypropylene, Ceramic, Buna N, Ceramic Magnet. **BC**: Polypropylene, Ceramic, Viton

LIMITED WARRANTY: March pumps are guaranteed only against defects in workmanship or materials for a period of one year from date of manufacture pumping water. For the complete warranty and to register online go to www.marchpump.com/warranty-registration

MARCH PUMPS

AC-4C-MD, AC-4A-MD
BC-4C-MD, BC-4A-MD, BC-4K-MD

(115V 50/60HZ) (230V 50/60HZ)

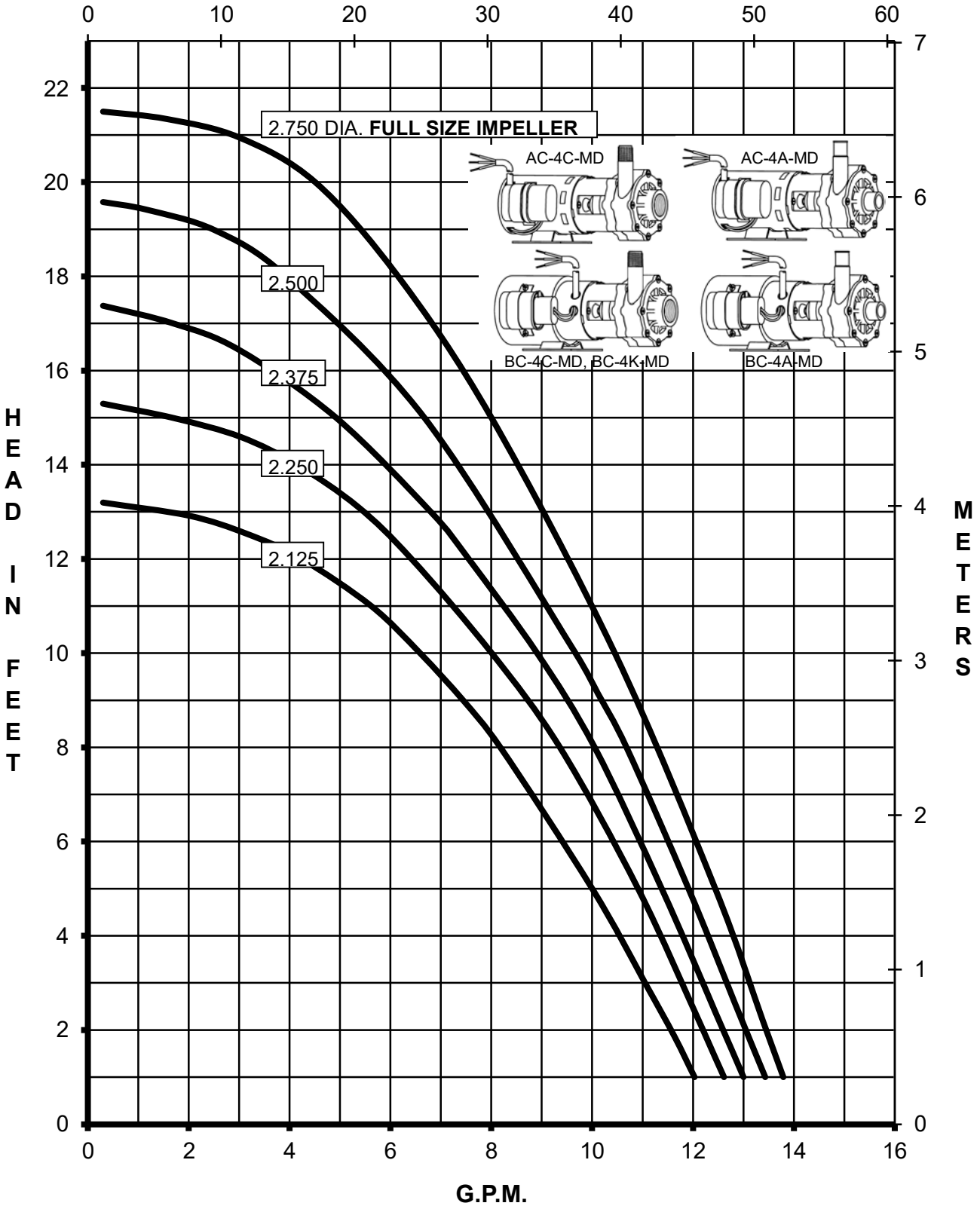


MARCH PUMPS

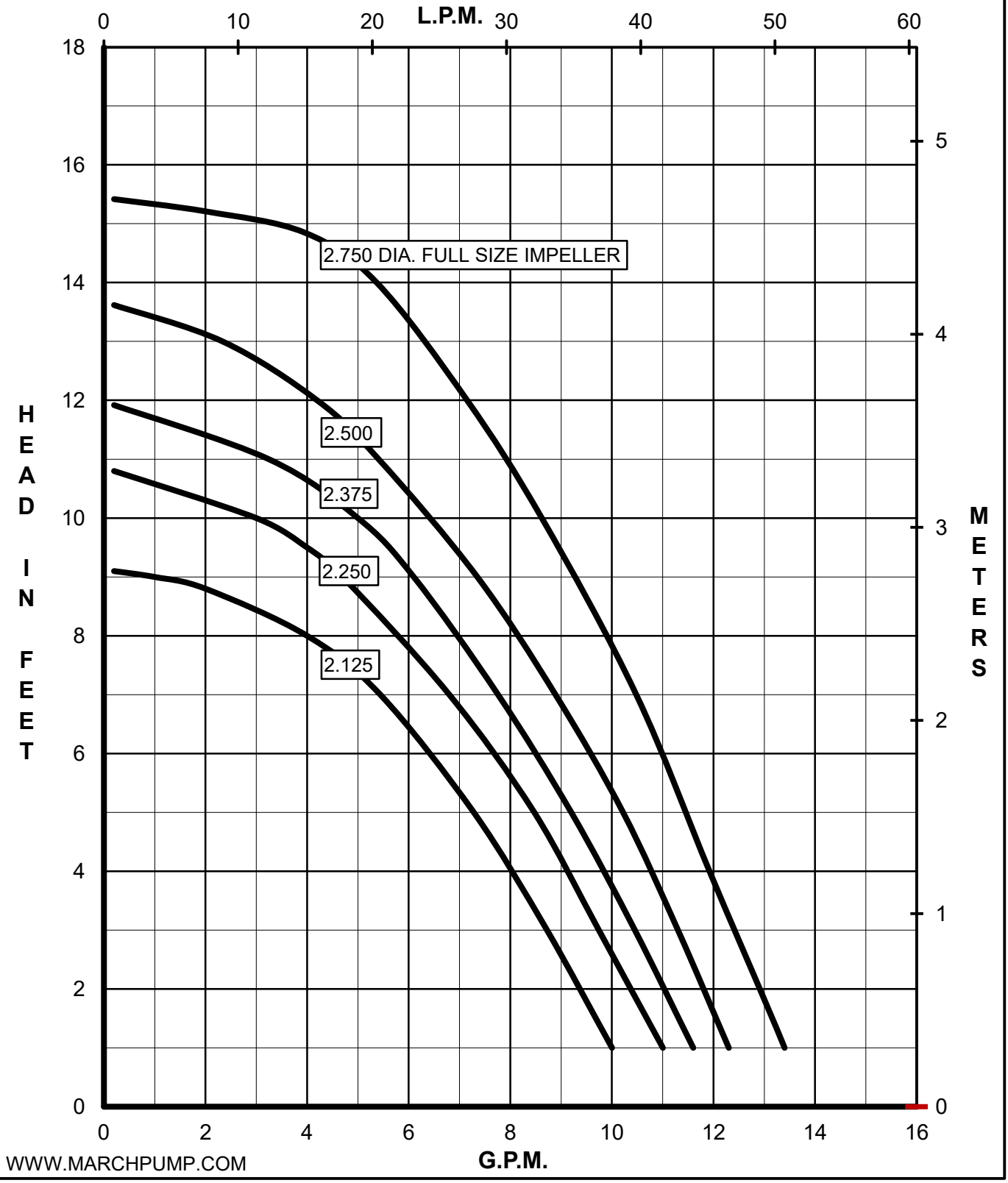
AC-4C-MD
AC-4A-MD
BC-4C-MD
BC-4A-MD
BC-4K-MD

TRIM CURVES
60HZ

L.P.M.



Model	Hz				
AC-4C-MD	50				
AC-4A-MD					
BC-4C-MD					
BC-4A-MD					
BC-4K-MD					
Impeller Trim Curves 50Hz					



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GENERAL INSTALLATION SELF-PRIMING PUMPS

1. The Pump should be mounted horizontally on a foundation and secured by Anchor Bolts.
2. Install the pump as near to the suction source. When using an elbow, valve, etc., the suction must have straight piping in length at least five (5) times the diameter of the pipe.
3. Suction piping should not be smaller than the pump suction size.
4. Piping and valves should be independently supported. Do not allow the pump to support the weight of the piping.
5. All suction piping should be direct and short as possible with as little bending as possible. Excessive bending and pump suction length will lead to flow distortion and pump cavitation.
6. Suction velocity should not exceed 6.5 feet per second. Viscous and hot liquids will have an effect on velocity.
7. If reducers or increasers are necessary, caution is to be used so as not to trap air.
8. Use a vacuum gauge in the suction line and it should be as close as possible to the pump suction. This is for monitoring the performance of the pump while in operation.
9. Valves may be installed on the suction side to allow maintenance and service. NEVER use the valve to limit flow into the pump.
10. Suction Pressure: Systems utilizing high suction pressure where a pump is used to boost system pressure is of concern. Be sure that the pressures do not exceed that of pump design, otherwise severe damage and possible operator injury could result.
11. If checking the system for leaks with air, do not exceed 20 PSI.

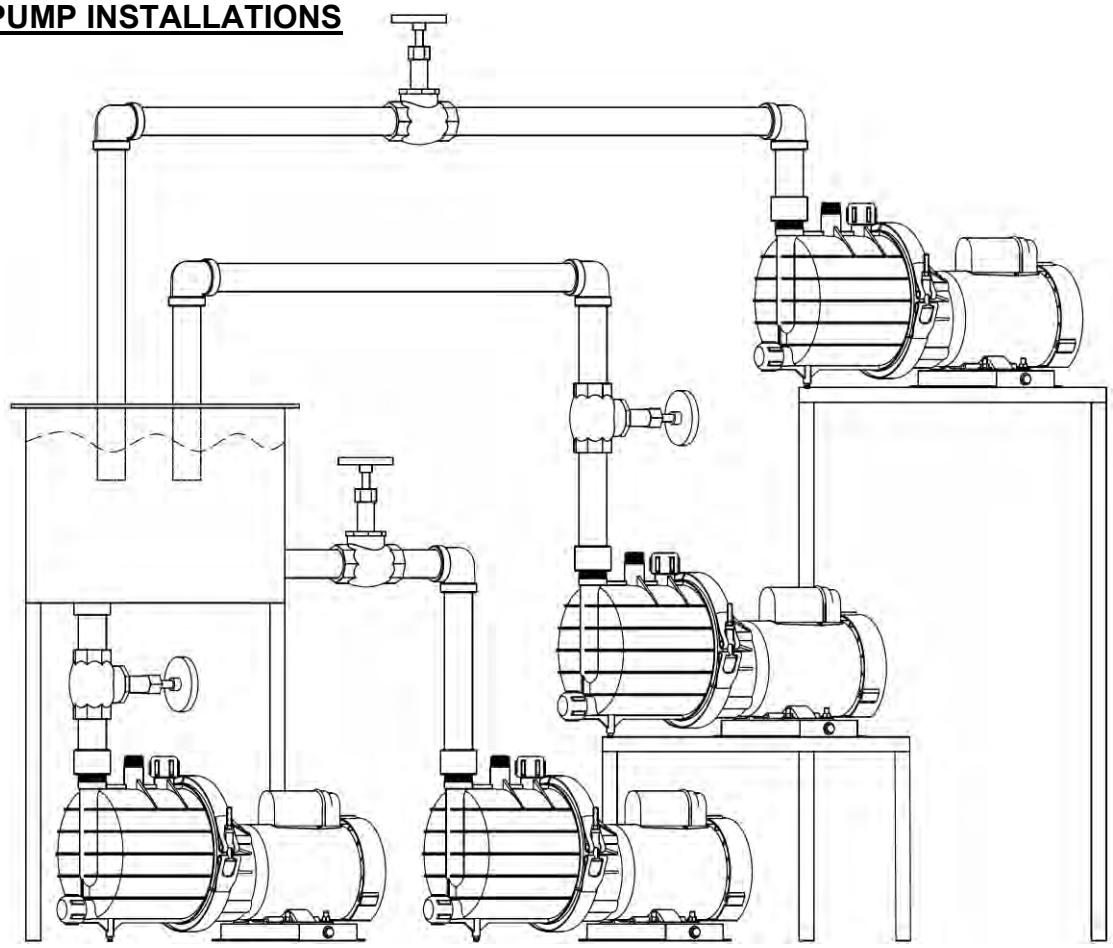
DISCHARGE

1. All discharge piping size should be determined by flow velocity which should not exceed 15 feet per second.
2. A Throttling Valve should be installed for flow and pressure control. Caution—Location of check valves on long discharge piping, high static discharge of 50 feet or more and two or more pumps used on the same common piping.
3. Install Discharge Pressure Gauge to monitor performance during operation.
4. Connect electrical power to the motor in accordance with motor manufacture's nameplate instructions.

OPERATION

1. Priming container and pump must be filled completely with liquid before turning pump on.
   750 self-priming container holds approximately one gallon of liquid.
   Pump SP-TE-7-MD container holds approximately 1.75 gallons of liquid.
   Pump SP-TE-8P-MD container holds approximately 1.75 gallons of liquid.
2. Do not run pump without liquid. If pump is run dry, excessive heat will occur damaging internal parts and could result in operator injury.
3. Open suction valve completely.
4. Open discharge valve slightly.
5. Observe all connections for leaks. If leaks occur, close all valves and repair all leaks before further operation.
6. Start motor and check for proper rotation.
7. Open discharge valve gradually until desired flow and pressure is attained.

TYPICAL PUMP INSTALLATIONS



—CAUTION—

IF DISCHARGE VALVE IS WIDE OPEN ON START UP, DECOUPLING CAN OCCUR OR MOTOR OVERLOAD IS POSSIBLE

8. Operating the pump for excessive periods of time at shut off (discharge valve fully closed) or at near shut off conditions can cause the liquid to rise in temperature which can cause failure of internal parts and failure of pump.
9. Flow rates should be controlled by the discharge valve only, never by the suction valve.
10. If using variable speed do not exceed the max internal pressure of the pump. If decreasing speed priming time will increase.

—OPERATING PERFORMACE NOTES—

—Altitude—

For every thousand feet, the maximum suction lift is decreased by a multiplier of 0.06.
2500 Feet: 0.88 of maximum suction lift.
4500 Feet: 0.76 of maximum suction lift.
6500 Feet: 0.64 of maximum suction lift.

—Specific Gravity—

The specific gravity will affect the maximum suction lift. The higher the specific gravity the less the maximum suction lift will be.
Divide the specific gravity by the maximum suction. For example, if the pump's maximum suction lift is 20 feet, and the specific gravity is 1.5, then the equation is
20/1.5= 13.33 Feet. The 13.33 Feet is the maximum suction lift.

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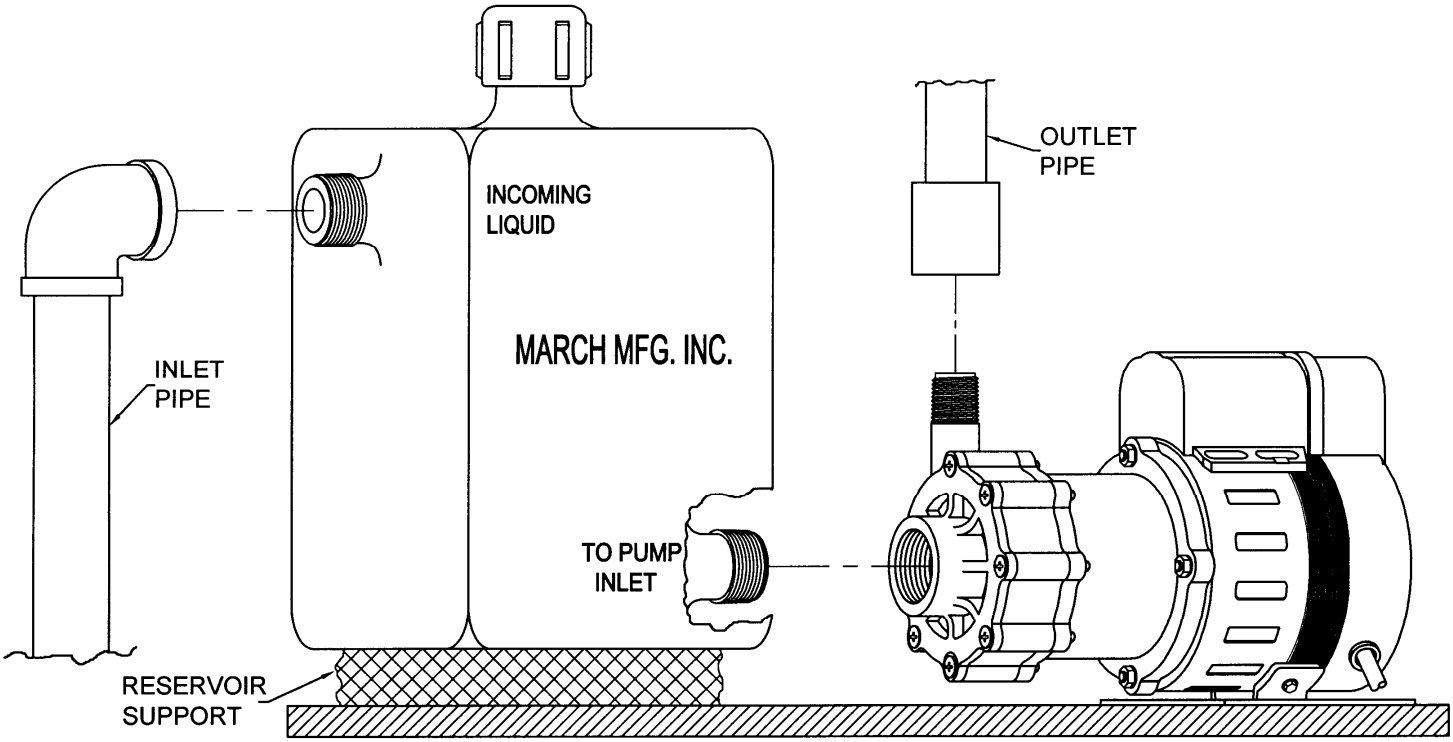
750 SELF PRIMING RESERVOIR P/N 0750-0227-0100



USED ON THE FOLLOWING PUMP MODELS:
SERIES 4: AC-4C-MD, BC-4C-MD, BC-4K-MD
SERIES 5: AC-5C-MD, TE-5C-MD, TE-5K-MD
For use on other models, contact the factory or a distributor.

MAXIMUM LENGTH OF INLET PIPE:
10 FEET (3 METERS) Based on ambient water, 1" I.D. pipe, one 90° elbow, & on 60 Hz current.

INSTALLATION INSTRUCTIONS: The Reservoir has 1 inch male tapered pipe threads on all ports. The threaded port on the Reservoir farthest from the Filler Cap can be screwed directly into the inlet port of the pump. Attach a 1 inch pipe to the top port of the Reservoir, or a 1" pipe to 1" barb hose fitting and 1" I.D. tubing from the Reservoir to the liquid tank. The maximum suction length of the inlet pipe combining both vertical and horizontal lengths should not exceed 10 feet (3 meters). If used for a permanent installation, secure the pump at its base and provide a support under the Reservoir to prevent sagging of the plastic Reservoir and piping system. Connect 3/4" or smaller pipe or plastic tubing to the outlet port of the pump. The pipe or tubing should extend up beyond the height of the Filler Cap on the Reservoir before starting the horizontal run.

OPERATION:
1. After the Reservoir is attached to the pump and the piping is hooked up, unscrew the Filler Cap on the Reservoir and add approximately one gallon of liquid. When finished adding liquid, replace the Filler Cap and tighten securely to prevent air leakage through the Cap. Make sure that all pipe connections to the pump and Reservoir (inlet and outlet) are secure, then start up the pump.
2. During the first few minutes there will be air trapped in the Reservoir and the piping. This air must purge itself before the full rated performance of the pump will be achieved. If the air does not purge itself, then check for air leakage at the various pipe and Reservoir connections. The longer the length of the inlet pipe, the longer it will take to purge the air. At the maximum length, the air may never fully purge out of the system.
3. When the pump is shut off, it is possible that the system will siphon the liquid out of Reservoir. If this occurs, it is necessary to refill the Reservoir before starting up again. If the liquid remains in the Reservoir, then it is not necessary to refill before restarting.
4. Liquids with water like characteristics will function as described. Liquids with higher specific gravities and viscosities may not provide satisfactory results. Determine the acceptability of the Reservoir for a specific liquid and piping situation.

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SPARE PARTS		
ITEM	DESCRIPTION	PART #
1	Self-Priming Reservoir	0750-0227-0100
2	Reservoir (Polyethylene)	0750-0227-1000
3	Filler cap (Polypropylene)	0155-0182-1000

SPECIFICATIONS		750 Priming Reservoir
Inlet - Outlet		1" MPT - 1" MPT
Filler Port		1" MPT
Liquid Capacity		1 US Gallons
		3.7 Liters
Max Internal Pressure		25 psi / 1.7 bar
Max Liquid Temperature		130°F / 54°C
Part Weight		1.5 lbs / 0.68 kg
Overall Unit Size (H x W x L)	Inches	11.28 x 6.13 x 8.77
	cm	28.6 x 15.5 x 22.2