

MARCH

INSTRUCTIONS AND REPAIR PARTS FOR MODELS DP-6T-MD, TE-6T-MD AND TE-6K-MD

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MODEL DP-6T-MD
ASS'Y. P/N 153-002-01

PUMP CONSTRUCTION & SERVICING

March "Orbital" Magnetic Drive Pumps eliminate the conventional shaft seals found in most pumps. This means that there is no rotating shaft or seal to wear and allow the liquid being pumped to leak out. The only seal in the pump is a stationary Viton "O" ring seal between the Cover and the Pump Housing.

The pump can be serviced with the use of a screwdriver. The only moving part, in the pump other than the motor, is the Impeller-Magnet Assembly which rotates on a stationary ceramic spindle an up against a ceramic thrust washer. These are the only parts that might wear, and may require replacement. See the Repair Parts List for replacement parts.

ELECTRICAL AND OPERATION

The D.P. pump has a Drip Proof motor, 115/230 volts, 50/60 cycle, 1 phase, 3450 r.p.m. rated as continuous duty. At 115 volts the motor draws 8.8 amps and at 230 volts draws 4.4 amps at full load. A junction box is located on the rear of the motor for making the electric hook up. The wiring instructions are located on the motor label or on the junction box cover.

The motor is thermal overload protected and has U.L. yellow card recognition.

We rely on the liquid being pumped to lubricate the Impeller-Magnet assembly spinning on the stationary ceramic spindle. If the pump is run dry for longer than 30 seconds, the Impeller may "freeze" onto the spindle. The direction of motor rotation should be clockwise looking into the inlet of the pump. A carbon bushing will enable dry running for a longer period.

Totally enclosed explosion proof and 3 phase motors are available upon special order.

PUMP MATERIALS

All plastic parts of the pump are molded out of Ryton R4® Polypropylene, or Kynar®. The stationary spindle and Thrust Washers are made of porcelain ceramic. The "O" ring for the housing is Viton rubber. The bushing in the Impeller Assembly is a molded Carbon/Teflon/Ryton material. There are no other materials in contact with the solution. Contact the factory for other materials that are available and if you are uncertain of the material compatibility with your specific solution. U.L. recognition on pump is for water only. For pumping liquids other than water contact the factory.

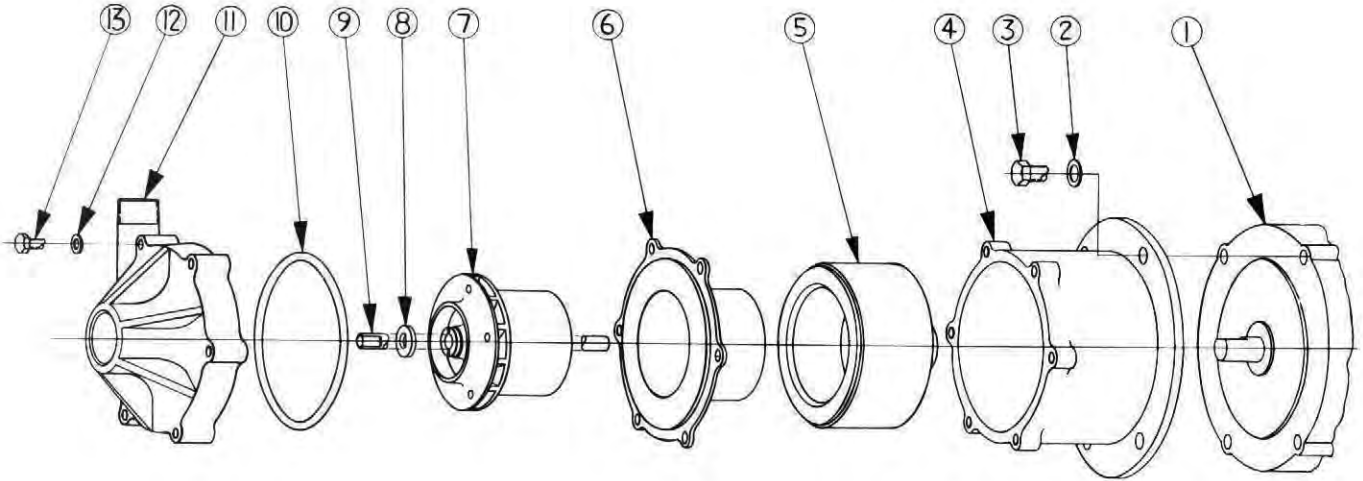
RATINGS AND SPECIFICATIONS

MODEL NO.	CONNECTORS		ELECTRICAL			G.P.M. AT LISTED HEAD						PSI GAGE	DIMENSIONS			PACK WT.
	INLET	OUTLET	HP	WATTS	AMPS	3 FT.	10 FT.	20 FT.	30 FT.	40 FT.	45 FT.		HT.	WD.	LG.	
DP-6T/K-MD	1" FPT	¾" MPT	½	620	8.8/4.4	36	34	30	25	16.5	1	19.6	8 ¼	8 ¼	15 ¼	28 lbs.



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NOTE: WHEN REPLACING IMPELLER BUSHINGS IN THE FIELD, THE PLASTIC BUSHINGS MUST BE BORED TO SIZE AFTER THEY HAVE BEEN PRESSED INTO THE IMPELLER. BORE TO .379/.381 INCHES I.D. THE CARBON AND CERAMIC BUSHINGS ARE TO FINISHED SIZE AND DO NOT REQUIRE BORING AFTER ASSEMBLY.

REPAIR PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QUANTITY
1	Motor, Drip Proof, 115/230 Volt, 1 Phase, ½ H.P.	153-027-10	1
1	Motor, Totally Enc., 115/230 Volt, 1 Phase, ½ H.P.	153-019-10	1
2	⅝ O.D. Stainless Bracket Washer	155-019-10	4
3	⅝ Stainless Hex. Bracket Screw	155-017-10	4
4	Motor-Pump Connecting Bracket (Ryton)	153-001-10	1
5	Drive Magnet Assembly	153-035-01	1
6A	Impeller Magnet Housing w/Rear Thrust Washer (Ryton)	153-005-01	1
6B	Impeller Magnet Housing w/Rear Thrust Washer (Kynar)	153-041-01	1
7A	Impeller Magnet Ass'y. w/Ryton Bushing (Polypropylene)	153-003-04	1
7B	Impeller Magnet Ass'y. w/Carbon Bushing (Kynar)	153-043-05	1
8	Ceramic Thrust Washer	155-009-10	1
9	Ceramic Spindle	153-007-10	1
10	4 ⁷ / ₁₆ O.D. "O" Ring (Viton)	153-015-10	1
11A	Pump Housing (Ryton)	153-002-10	1
11B	Pump Housing (Kynar)	153-042-10	1
12	½ O.D. Housing Stainless Washer	155-021-10	6
13	¼ Stainless Hex. Housing Screw	153-011-10	6
	Rear Ceramic Thrust Washer	155-064-10	1

Contact factory for other materials/or parts not listed on standard pumps. When ordering parts specify serial number of pump that parts are to be used on.

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. On all other solutions contact factory for written warranty. See March Application Questionnaire 750-130-10 for additional warranty information.

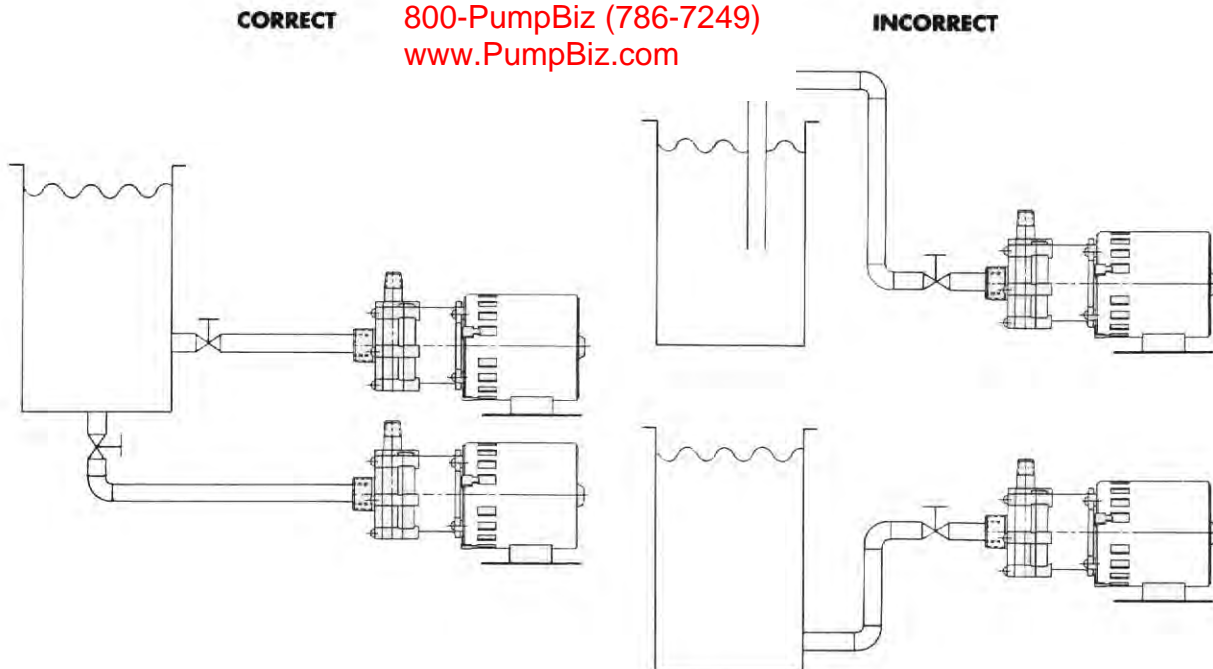
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GENERAL INSTALLATION INSTRUCTIONS

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 and as low as possible. Suction must be flooded. 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 and preferably one size larger than pump suction. Liquid supply vessel should not have a pipe size smaller than the pump suction and then increased to pump suction size.
4. Piping and valving 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. Available NPSH should exceed 120% of pump required NPSH. Contact a March Distributor for pump requirements.
7. Suction velocity should not exceed 6.5 feet per second. Viscous and hot liquids will have an effect on velocity.
8. If reducers or increasers are necessary, caution is to be used as to proper installation so as not to trap air.
9. 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.
10. Ball valves may be installed on the suction side to allow maintenance and service. NEVER use the valve to limit flow into the pump.
11. Negative suction or suction lift is not recommended and should not be used. See illustration below:

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12. 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.

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 manufacturers nameplate instruction.

OPERATION

1. Check pump for proper rotation by allowing fluid into the pump and turning power to motor on and off in a quick manner. If motor is not rotating in proper rotation, the leads should be changed to conform to motor manufacturer's nameplate. Improper rotation reduces capacity.

—CAUTION—

2. Do not run pump without liquid. Be sure liquid is in the pump. 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 (crack).
5. Observe all connection for leaks. If leaks occur, close all valves and repair all leaks before further operation.
6. Start motor.
7. Open discharge valve gradually until desired flow and pressure is attained.

—CAUTION—

IF DISCHARGE VALVE ON START UP IS WIDE OPEN, DECOUPLING COULD 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 could cause the liquid to rise in temperature which could 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. Electrical operation is also critical. High or low voltage could have an affect on pump performance. Caution—Do not operate the motor at varied voltages, without contacting a March Distributor first.

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