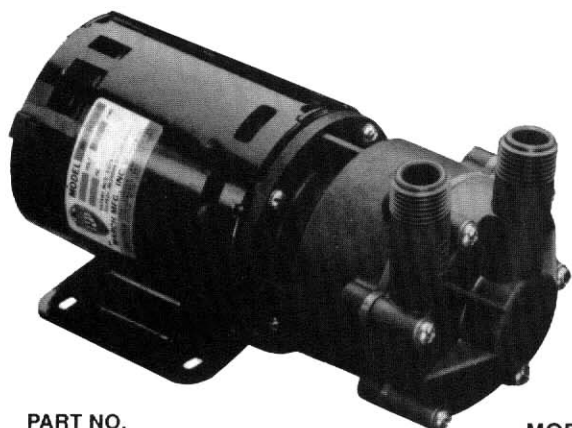
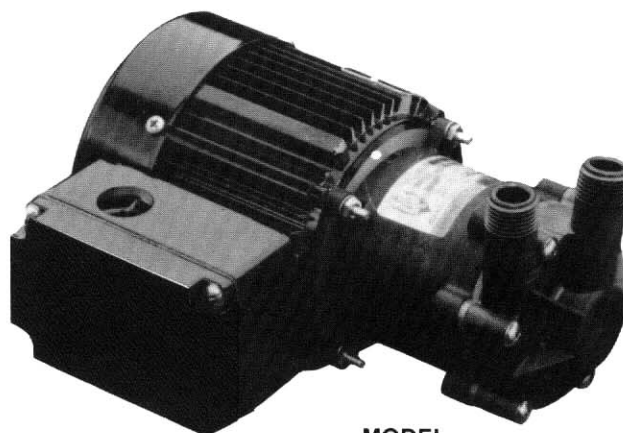


MARCH

INSTRUCTIONS AND REPAIR PARTS FOR MDX-MT3, TE-MDX-MT3 AND TE-MDK-MT3 "METL-LESS" PUMPS



PART NO.
135-036-01, 115 VOLT
135-037-01, 230 VOLT
MODEL
MDX-MT3
WITH OPEN, FAN-COOLED
MOTOR, 115 VOLT OR 230 VOLTS



MODEL
TE-MDX-MT3
WITH TOTALLY ENCLOSED MOTOR
AND CONDUIT BOX
MULTI-VOLTAGE
PART NO.
135-088-01

PUMP CONSTRUCTION AND SERVICING

March "ORBITAL" Magnetic Drive Pumps eliminate the conventional shaft seals found in most pumps. This means that there is no rotating seal to wear and allow the liquid being pumped to leak out. There are only two areas in this type construction that rotate and could wear out. One area is the motor shaft and bearings. The second area is the impeller-magnet assembly rotating on a stationary spindle, and hence these are the only two areas where wearing can occur.

All parts can be easily serviced and replaced in the field if necessary with the use of a screwdriver. See the Repair Parts List for necessary replacement items.

All ratings are based on pumping water. Depending on the pumping conditions, some liquids heavier than water may cause the magnetic coupling to slip. Contact the factory if this occurs for special instructions. The inlet and outlet ports are 1/2" M.P.T. threads.

PUMP MATERIALS

The 3 plastic parts in contact with the liquid are molded out of Ryton®, or Kynar® Plastic. The motor bracket is molded out of glass filled Polypropylene on the TE-MDX-MT3, and black glass filled Noryl on the MDX-MT3. The "O" ring gasket is Viton® "A" rubber. The stationary spindle and thrust washer are chemical resistant ceramic. Contact the factory for other materials available on special order.

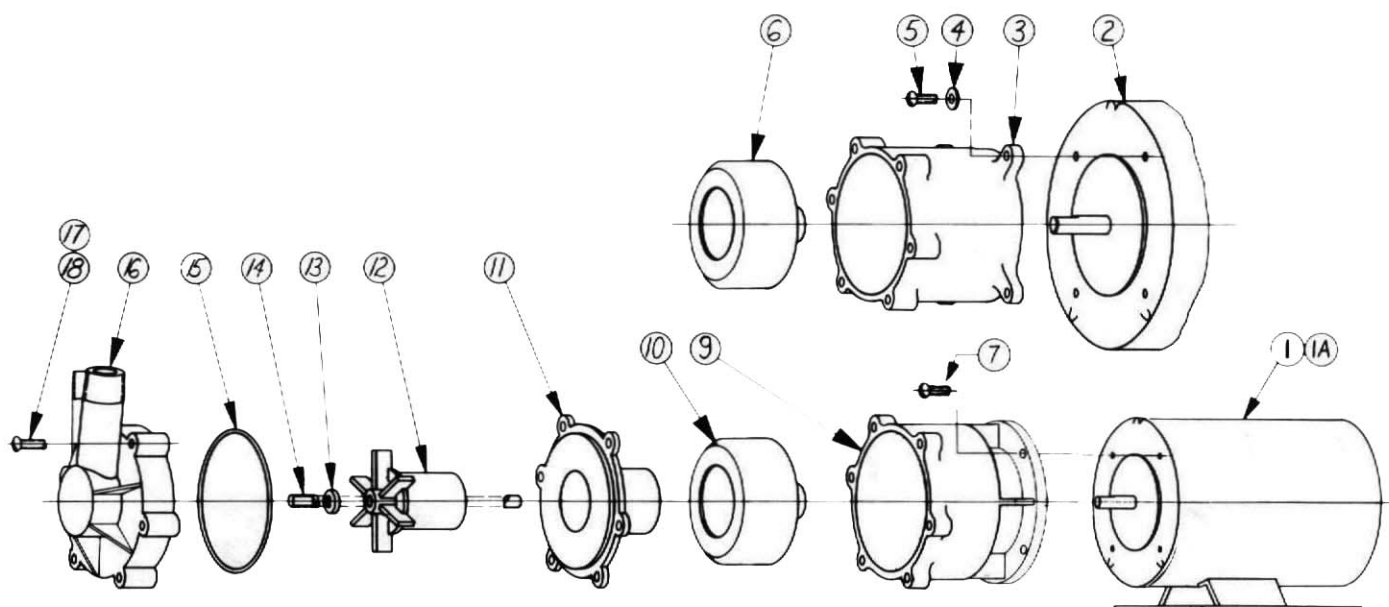
ELECTRICAL CONNECTIONS AND RUNNING DRY

The MDX-MT3 motor is 115 volt, 50/60 cycle, 1 phase A.C. — 230 volt motors are available.

The TE-MDX-MT3 motor is totally enclosed, 115/230 volt, 50/60 cycle, 1 phase A.C. See wiring instructions packed with each pump. Both motors are U.L. recognized. The pumps should not be run dry for more than 30 seconds as the plastic impeller will squeal and may bind on the stationary spindle.

"METL-LESS" PUMP SPECIFICATIONS

MODEL NO.	RPM @ 115v	MOTOR			DIMENSIONS			MAX PSI	MAX HEAD	GALLONS PER MIN.					WEIGHT PACKED
		H.P.	WATTS	AMPS	HT.	WD.	LG.			1 FT.	3 FT.	6 FT.	9 FT.	15 FT.	
TE-MDX/MDK-MT3	3450	1/15	130	.86/.43	5 1/4"	4 3/8"	9 1/2"	7.6 Lbs.	17.5 Ft.	10.0	9.5	8.7	7.7	4.2	10 Lbs.
MDX-MT3*	3000	1/25	110	1.35	4 7/8"	3 5/8"	8 5/8"	7.0 Lbs.	16 Ft.	8.0	7.2	6.4	5.5	2.0	6 1/2 Lbs.



REPAIR PARTS LIST

ITEM	DESCRIPTION	FOR PUMP	PART NUMBER	QUANT. REQ'D.
1	Motor, 115 Volt, 50/60 Hz	MDX-MT-3	135-114-10	1
1A	Motor, 230 Volt, 50/60 Hz	MDX-MT-3	135-136-10	1
2	Motor, 115/230 Volt, 50/60 Hz Totally Enclosed	TE-MDX-MT-3	135-080-10	1
3	Motor Bracket	TE-MDX-MT-3	135-089-10	1
4	#8 I.D. Washer	MDX-MT-3	135-016-10	4
5	Motor Bracket Screws #8-32	TE-MDX-MT-3	150-015-10	4
6	Drive Magnet Assem.	TE-MDX-MT-3	130-043-03	1
7	Motor Bracket Screws #8-32	MDX-MT-3	135-169-10	4
9	Motor Bracket	MDX-MT-3	135-135-10	1
10	Drive Magnet Assem.	MDX-MT-3	130-043-01	1
11A	Impeller Magnet Housing (Ryton®)	BOTH	135-087-10	1
11B	Impeller Magnet Housing (Kynar®)	BOTH	135-153-10	1
12A	Impeller Magnet Assem. (Ryton®)	BOTH	135-113-02	1
12B	Impeller Magnet Assem. (Kynar®)	BOTH	135-154-02	1
13	Ceramic Thrust Washer	BOTH	130-028-10	1
14	Ceramic Spindle	BOTH	130-024-10	1
15	Housing "O" Ring — Viton®	BOTH	135-046-10	1
16A	Pump Housing (Ryton®)	BOTH	135-088-10	1
16B	Pump Housing (Kynar®)	BOTH	135-152-10	1
17	Pump Housing Screws #10-32	MDX-MT-3	802-010-10	6
18	Pump Housing Screws #10-32	TE-MDX-MT-3	823-008-10	6

WARRANTY

March pumps are guaranteed only against defects in workmanship or material for a period of one year from date of manufacture, pumping water. For all other solutions contact factory for prior written approval of warranty, before pump is installed. See March Pump Application Questionnaire 750-130-10 for additional warranty information.



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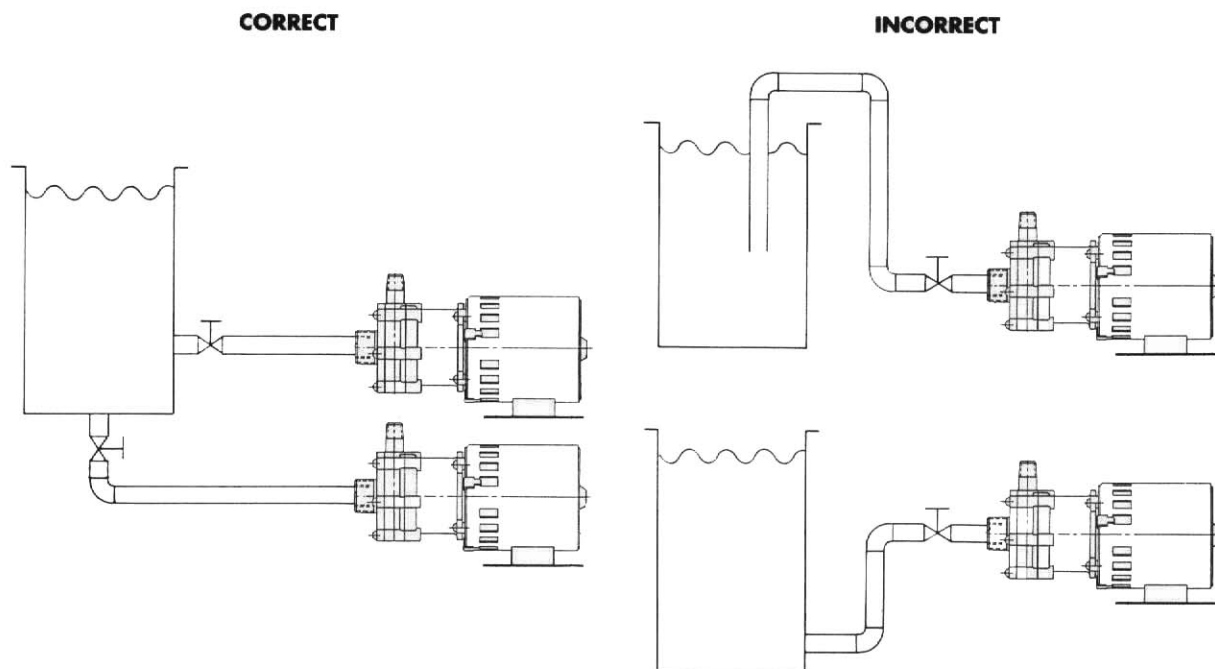
www.marchpump.com

135-108-10R9

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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:



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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P/N 750-404-10 Rev 2