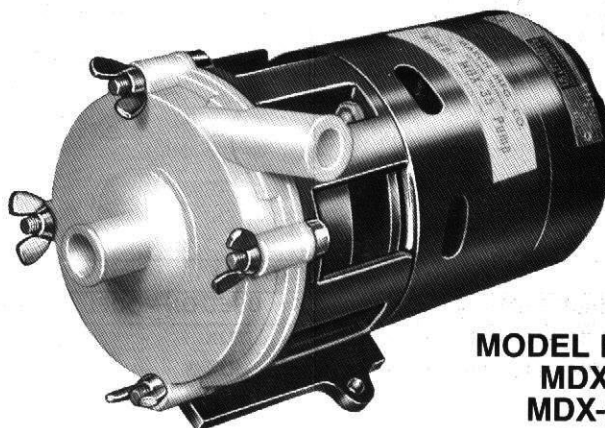


MARCH

INSTRUCTIONS & REPAIR PARTS FOR MODELS MDX AND MDX-3



**MODEL NOS.
MDX
MDX-3**

PUMP CONSTRUCTION

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 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. By removing the 4 wing nuts, the entire pump can be disassembled. See the Repair Parts List for necessary replacement items.

PUMP MATERIALS

The plastic parts are molded out of glass filled polypropylene. The spindle housing 802-043-10 is molded carbon filled PVDF plastic. The "O" rings are Buna N rubber. On the 3450 rpm pumps there is a type 316 stainless thrust screw and plastic thrust washer. The magnet is a glazed ceramic. For materials other than standard, and for plastic encapsulated impeller magnets, contact the factory.

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ELECTRICAL CONNECTIONS AND RUNNING DRY

The motors are 115 volt, 50/60 Hz, 1 phase A.C.—230 volt motors are available. Motors are all thermal overload protected and are UL recognized. The pumps should not be run dry for more than 60 seconds as the plastic impeller will squeal and bind onto the stationary spindle. The black and white lead should be connected to your power source. The green lead must be connected to the ground.

Model No.	CONNECTORS		ELECTRICAL					G.P.H. AT LISTED HEAD						Max. Head	P.S.I. Gage	DIMENSIONS			Pack Wt.
	Inlet	Outlet	R.P.M.	Hz.	H.P.	Watts	Amps.	1 Ft.	3 Ft.	6 Ft.	9 Ft.	12 Ft.	15 Ft.			Ht.	Wd.	Lg.	
MDX	½" or ⅝" O.D. Smooth	½" or ⅝" O.D. Smooth	1750	50-60 Hz.	1/55	64	.85	360	300	210	0	0	0	7 Ft.	3.1 Lbs.	5"	3¾"	7¼	5½ Lbs.
MDX-3	½" or ⅝" O.D. Smooth	½" or ⅝" O.D. Smooth	3500	50-60 Hz.	1/25	108	1.35	510	480	420	360	300	240	19 Ft.	8.3 Lbs.	5"	3¾"	7½"	6 Lbs.

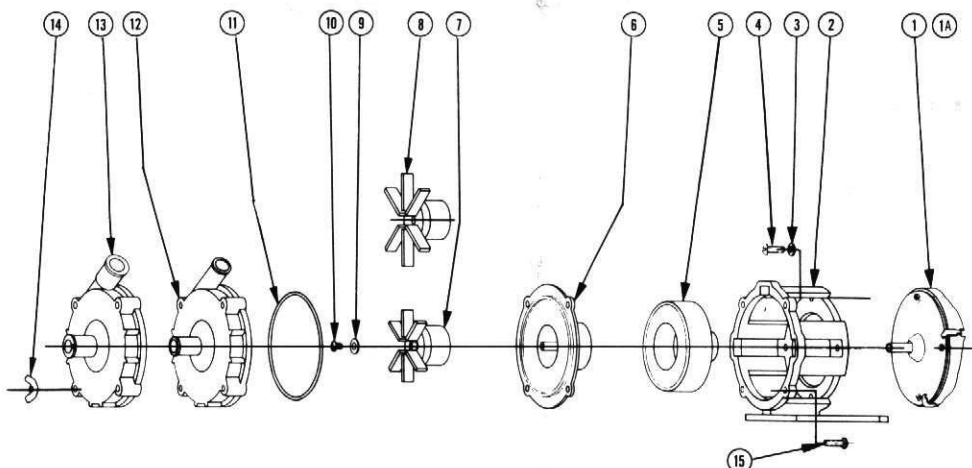


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MFG., INC. Sales Offices in Principal Cities

1819 Pickwick Ave. • Glenview, Illinois 60025-5793
Phone (847) 729-5300 FAX (847) 729-7062

135-107-10 R10



REPAIR PARTS LIST				
ITEM	DESCRIPTION	USED ON MODEL	PART NUMBER	QTY.
1	Motor—1750 RPM—115 Volts—50/60 Hz	MDX	135-109-10	1
1A	Motor—3500 RPM—115 Volts—50/60 Hz	MDX-3	135-036-10	1
2	Motor Bracket	All	135-006-10	1
3	#8 Int. Lock Washer	All	620-010-10	4
4	#8-32 x 1/2 Lg. Round Head Screw	All	150-015-10	4
5	Drive Magnet Assembly (Molded)	All	135-126-01	1
6	Shaft Housing	MDX/MDX-3	802-043-10	1
7	Impeller & Magnet Assem. (3.500 RPM)	MDX-3	135-043-01	1
8	Impeller & Magnet Assem. (1.750 RPM)	MDX	135-026-01	1
9	#8 I.D. x 7/16 O.D. Flat Washer	MDX-3	802-057-10	1
10	#8-32 x 1/4 Lg. Rd. Hd. Screw	MDX-3	135-042-10	1
11	2-7/8 I.D. x 1/16 Thk, "O" Ring Buna	MDX/MDX-3	135-007-10	1
12	Pump Housing 9/16 O.D. Inlet & 17/32 Outlet	MDX/MDX-3	135-118-10	1
13	Pump Housing 5/8 O.D. Inlet & Outlet	MDX/MDX-3	135-117-10	1
14	#10-32 Wing Nut	All	135-012-10	4
15	#10-32 x 1-1/4" Lg. Phillips Hd. Mach. Screw	MDX/MDX-3	802-010-10	4

LIMITED WARRANTY

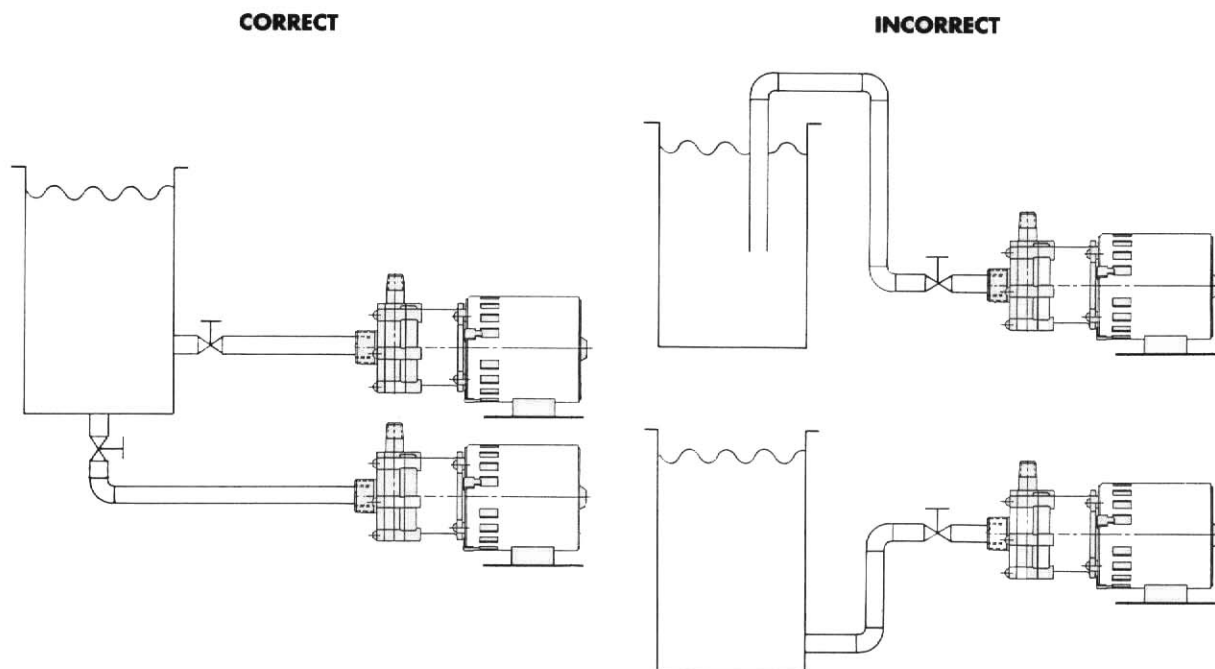
March pumps are warranted to the original user against defects in workmanship and materials under normal use for a period of 12 months when used on room temperature water. See complete March limited warranty statement on card F4109 which is packed with this pump.

MARCH MANUFACTURING, INC.
 2819 PICKWICK AVE., GLENVIEW, ILLINOIS 60025-5793 U.S.A.

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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