



34800 BENNETT FRASER MI  
(800) 293-8240  
[WWW.MPPUMPS.COM](http://WWW.MPPUMPS.COM)

# FMX 100

## STAINLESS STEEL CENTRIFUGAL PUMP

### INSTALLATION, OPERATION, AND REPAIR MANUAL

Model FMX100 is a high performance self priming 316 stainless steel centrifugal pump. The pump is ideal for marine, industrial, agricultural or commercial application where suction lift is required.

The FMX100 model features all 316 stainless steel components for superior corrosion resistance when pumping chemical compounds. A carbon/ ceramic/ viton T-6 Seal is standard. Ports are 1" NPT with a 1/4" NPT fill port. The FMX100 is capable of 17 ft . suction lift (3450 RPM).



#### GENERAL SAFETY INFORMATION:

THE FOLLOWING WARNINGS ARE USED TO NOTIFY AND ADVISE THE USER OF THIS PRODUCT OF PROCEDURES THAT MAY BE DANGEROUS TO THE USER OR RESULT IN DAMAGE TO THE PRODUCT.

THIS BULLETIN MUST BE READ COMPLETELY BEFORE INSTALLING , OPERATING, OR SERVICING THE PUMP.

- **DO NOT** perform service or maintenance when the pumping system is pressurized. Injury or death may occur.
- **DO NOT** operate the pump in a manner that was not intended to be used.
- **DO NOT** mount the pump such that high piping loads exist on the pump flanges, or in a rigid piping system that does not allow the pipe to expand and cause the pump to be strained.
- **DO NOT** continue to operate the pumping system when a known leak exists.
- **DO NOT** continue to operate the pump when unusual noise or vibration occurs.
- **DO NOT** continue to operate beyond the pressure or temperature limits stated in the product literature.
- **DO NOT** allow severe temperature changes to occur in a short time period within the pumping system.

#### INSTALLATION:

For optimum performance, place the pump as close to the liquid as possible to minimize suction lift. For best results, the pump should be installed no more than 15 feet above the liquid supply. The motor is splash resistant, not submersible, and should be located in a dry environment.



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**Piping /Mounting:**

The pump inlet is 1" NPT pipe connections. Use pipe sealant on the threads. Do not rigid mount both of the flanges and the base to avoid mounting tolerance that may distort the motor base. Install the pump with the shaft in a horizontal direction. Never install the pump with the motor below the pump.

**Electrical:**

The motor must be protected from over current by using a fuse or circuit breaker . See NEC code for the proper minimum wire size for each voltage application. Make sure that the pump has the proper voltage rating to match the installation power. Do not use or install if the voltage on the label is different than the installation. All the wire connections must be secure and sealed to protect against arcing.

**Operation:**

The FMX100 is a self priming centrifugal pump and only requires priming prior to its initial start up. This is accomplished by removing the fill plug and filling the pump housing with liquid. The pump will retain sufficient liquid for self priming thereafter.

**Repair and Maintenance:**

The pump has a carbon/ceramic seal that may last several thousand hours based upon application. If the motor is replaced, the mechanical seal should be replaced. A seal that leaks will show leakage between the pump adapter and the electric motor. Extreme leakage could damage the motor bearings and contaminate the inside of the electric motor if left unchecked. Replace any worn or damaged parts.

**DISASSEMBLY / ASSEMBLY INSTRUCTIONS:****1. Stationary Seal Disassembly**

From the back side of the adapter # 5, press the stationary seal # 6 out of the adapter.

**2. Rotating Seal Disassembly**

With a flat head screw driver you can pry under the seal seat to remove it.

**1. Stationary Seal Assembly**

Using an arbor press with a 1-1/2" pipe , press the stationary side of the seal # 6 into adapter # 5 until the lip of the seal bottoms out in the adapter.

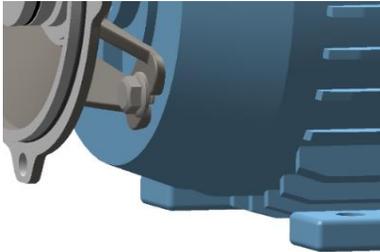
**2. Rotating Seal Assembly**

A light lubricant may be used to aid the assembly. Using the arbor press with a plastic press tool, press the rotating side of the seal smooth side up until it bottoms out on the impeller.



### **3. Adapter Assembly**

Place adapter onto electric motor or pedestal pilot. Use a 10mm wrench to tighten (4) # 15 capscrews. Install # 9 O-ring onto the # 5 adapter.



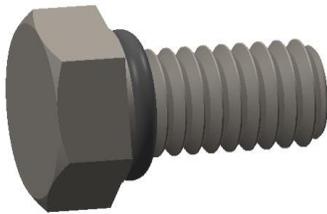
### **6.Flapper Assembly**

Install #12 washer into # 7 flapper and then install flapper as shown onto the # 1 housing.



### **4. Impeller Bolt Assembly**

Install # 8 O-ring onto the # 16 impeller capscrew as shown. Place a drop of medium strength thread lock on the end of the impeller capscrew.



### **7.Suction Cover Assembly**

Place the # 3 suction cover onto the housing. Using a 7/16" socket, tighten ( 6-9 ft. lbs. ) (4) # 14 capscrews with the (4) # 17 lock washers.



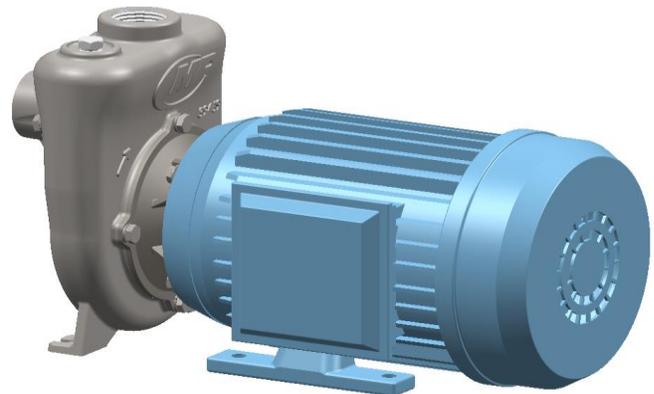
### **5. Impeller Assembly**

While securing the motor shaft at the rear of the motor to prevent it from rotating, place the impeller over shaft and push down to compress the seal. Align capscrew and impeller hex and hand tighten. With 13mm socket finish tightening the impeller.



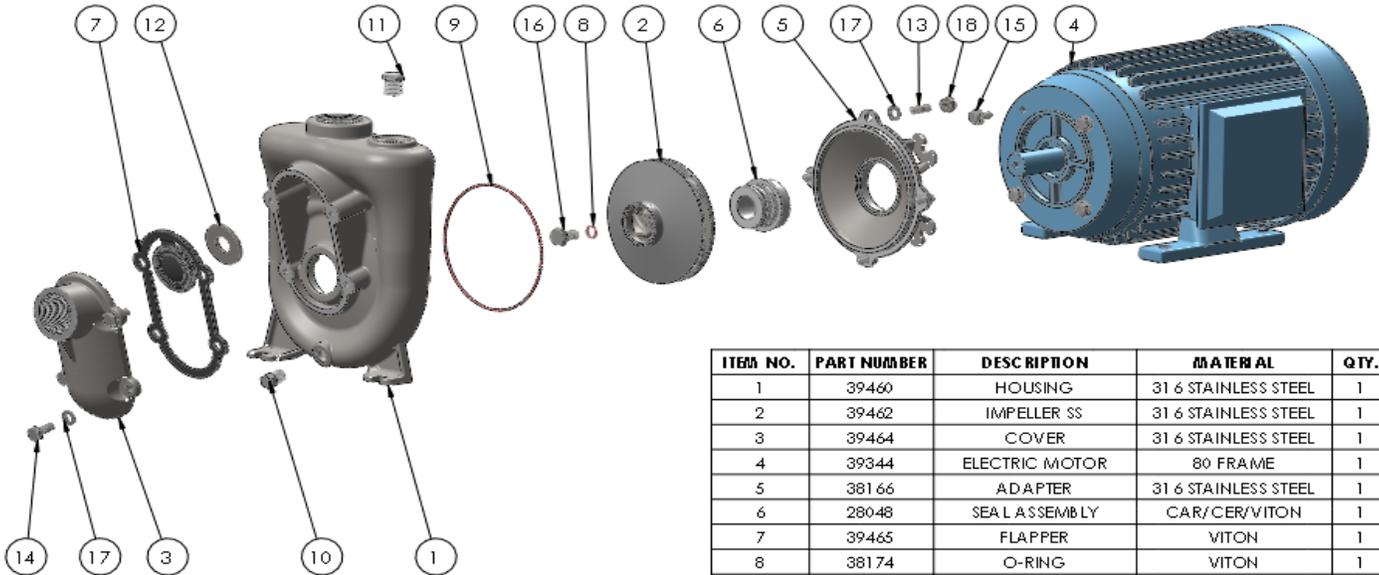
### **8.Housing Assembly**

Using a 9/16" socket, tighten # 11 fill plug. Using the 7/16" socket tighten the # 10 drain plug. Install housing over the pilot and install (4) # 18 hexnuts and # 17 lock washers.





39467



ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	QTY.
1	39460	HOUSING	31 6 STAINLESS STEEL	1
2	39462	IMPELLER SS	31 6 STAINLESS STEEL	1
3	39464	COVER	31 6 STAINLESS STEEL	1
4	39344	ELECTRIC MOTOR	80 FRAME	1
5	381 66	ADAPTER	31 6 STAINLESS STEEL	1
6	28048	SEA L ASSEMBLY	CAR/CER/VITON	1
7	39465	FLAPPER	VITON	1
8	381 74	O-RING	VITON	1
9	381 73	O-RING	VITON	1
10	21255	PIPE PLUG 1/8" NPT	31 6 STAINLESS STEEL	1
11	21267	PIPE PLUG HH 1/4 NPT	31 6 STAINLESS STEEL	1
12	39589	WASHER	31 6 STAINLESS STEEL	1
13	30802	STUD SS:1/4-20X.67	31 6 STAINLESS STEEL	4
14	35039	CAPSCREW 1/4-20X5/8	31 6 STAINLESS STEEL	4
15	38185	CAPSCREW HEX FLANGE	STEEL	4
16	39204	CAPSCREW M8X1.25	31 6 STAINLESS STEEL	1
17	33564	LOCKWASHER 1/4"	304 STAINLESS STEEL	8
18	21241	HEXNUT 1/4-20	304 STAINLESS STEEL	4

G		UNITED STATES OF AMERICA		MP PUMPS, INC.	
F		31 6 STAINLESS STEEL		31 6 STAINLESS STEEL	
D		DO NOT SCALE		S.S. 10/15/16 D.D.	
A ENC. VIS.		ST 4/13/15 J.M.		FMX 100 SS: 3/4-3 IEC80	
B				39467	

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