



34800 BENNETT, FRASER, MI
(800) 563-8006
WWW.MPPUMPS.COM

FMX75

STAINLESS STEEL CENTRIFUGAL PUMP

INSTALLATION, OPERATION, AND REPAIR MANUAL

Model FMX75 is a high performance, self priming, 316 stainless steel centrifugal pump. The pump is ideal for marine, industrial, agricultural or commercial applications where suction lift is required.

The FMX75 model features all 316 stainless steel components for superior corrosion resistance when pumping chemical compounds. A carbon/ceramic/ Viton bellows seal is standard. Ports are 3/4" NPT with a 1/8" NPT fill port. The FMX75 is capable of 12 ft. suction lift (3450 RPM).



Pump shown with 115V motor

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 which it 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 10 feet above the liquid supply. The motor is splash resistant, not submersible, and should be located in a dry environment.



John M. Ellsworth Co., Inc.

P.O. Box 240072
8700 West Bradley Road
Milwaukee, WI 53224

800-333-3331 **PHONE**

info@jmesales.com **E-MAIL**
www.JMEsales.com **WEB**

Piping /Mounting:

The pump inlet is 3/4" 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.

Operation:

The FMX75 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.

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.

Repair and Maintenance:

The pump has a carbon/ceramic seal that may last several thousand hours based upon the 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.

ASSEMBLY INSTRUCTIONS:

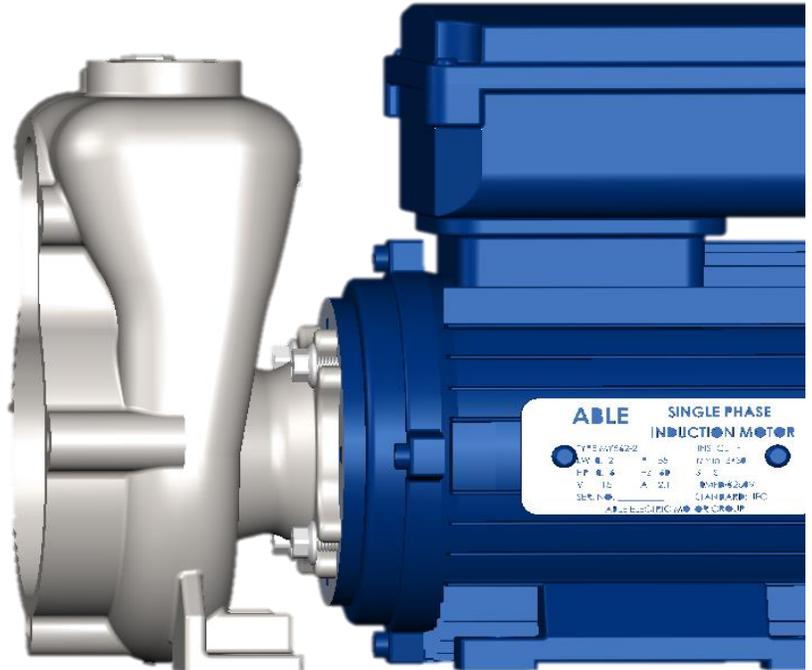
1. Stationary Seal Assembly

From the suction side of the housing # 3, press the stationary seal # 2 into the adapter. Make sure this seal face is sitting flush with the bottom of the bore in the housing.



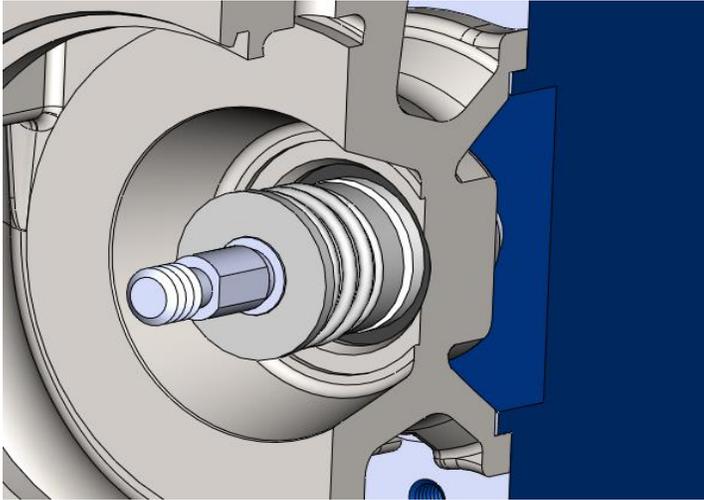
2. Housing to electric motor Assembly

Slide the housing onto the electric motor #7 pilot. With a 8mm open wrench, tighten the four #5 capscrews.(6-9 ft lbs)



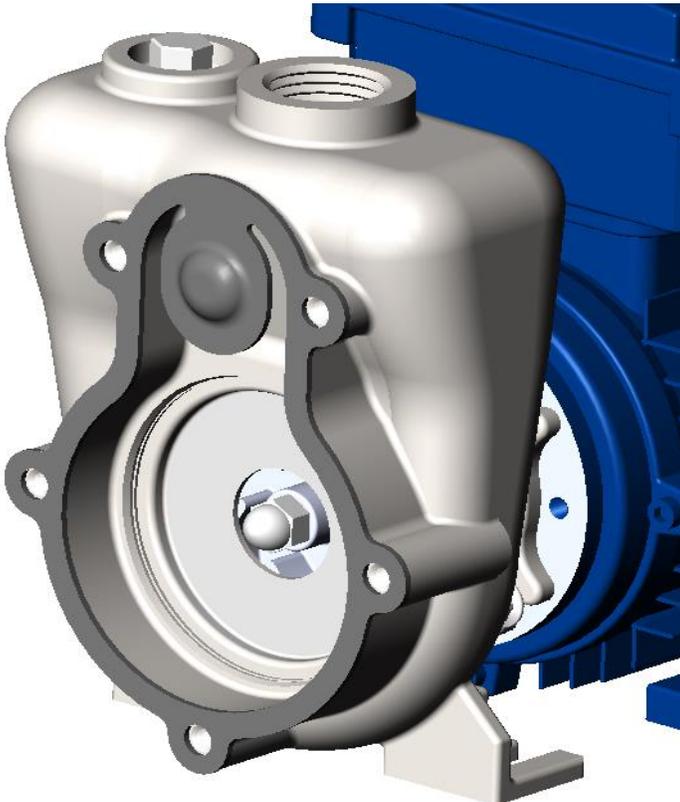
3. Rotating Seal Assembly

Place the rotating portion of the seal onto the shaft of the electric motor or pedestal pilot. Carbon faces the ceramic as shown.



5. Wear Plate / Flapper Assembly

Place wear plate #13 into the housing as shown. Install #12 snap ring into the groove to secure wear plate to the housing. Place flapper #11 with dimple out as shown.



4. Impeller Assembly

Align the flats of the impeller #1 with that of the electric motor. Press down on the impeller and tighten acorn nut #14 by hand. Place screw driver between a blade and the cutwater of the housing to stop rotation. With a 7/16" socket, tighten the acorn nut the rest of the way. (6-9 ft-lbs)

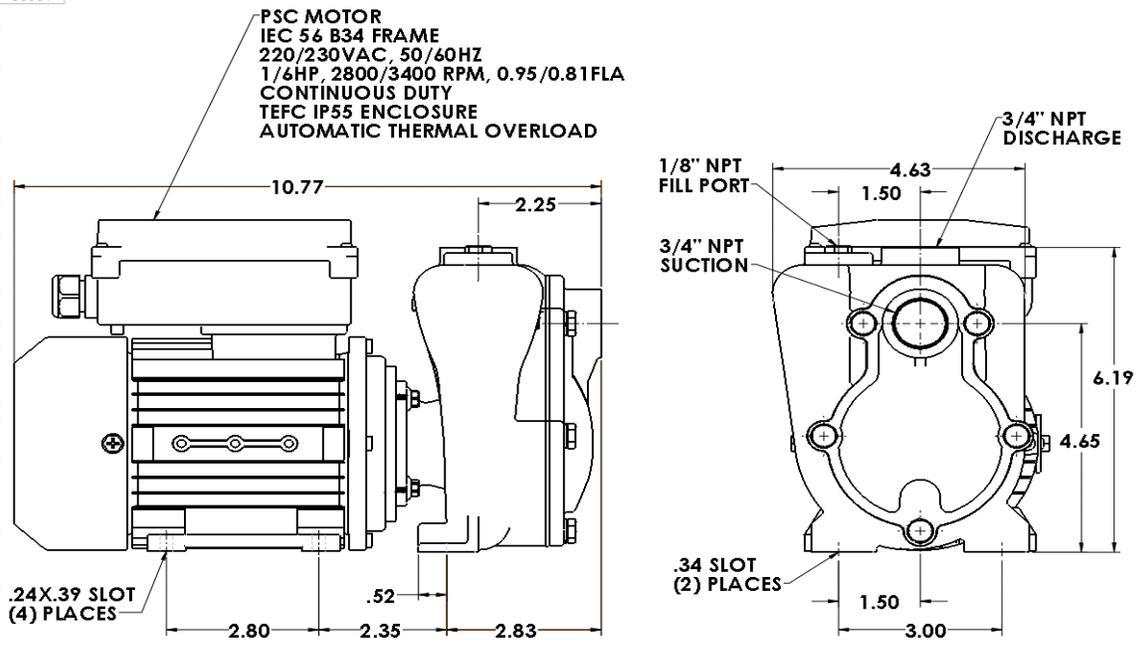


6. Suction Cover Assembly

Place the #10 suction cover onto the housing. Using a 7/16" socket, tighten (6-9 ft. lbs.) (5) #8 capscrews with the (5) #9 lock washers.



35851



NOT TO SCALE
 ALL DIMENSIONS ARE IN INCHES
 UNLESS OTHERWISE SPECIFIED
 TOLERANCES ARE:
 FRACTIONS DECIMALS
 .0005 .0005
 .001 .001
 .005 .005
 .010 .010
 .030 .030
 .060 .060
 .125 .125
 .250 .250
 .500 .500
 1.000 1.000
 2.000 2.000
 4.000 4.000
 8.000 8.000
 16.000 16.000
 32.000 32.000
 64.000 64.000
 128.000 128.000
 256.000 256.000
 512.000 512.000
 1024.000 1024.000
 2048.000 2048.000
 4096.000 4096.000
 8192.000 8192.000
 16384.000 16384.000
 32768.000 32768.000
 65536.000 65536.000
 131072.000 131072.000
 262144.000 262144.000
 524288.000 524288.000
 1048576.000 1048576.000
 2097152.000 2097152.000
 4194304.000 4194304.000
 8388608.000 8388608.000
 16777216.000 16777216.000
 33554432.000 33554432.000
 67108864.000 67108864.000
 134217728.000 134217728.000
 268435456.000 268435456.000
 536870912.000 536870912.000
 1073741824.000 1073741824.000
 2147483648.000 2147483648.000
 4294967296.000 4294967296.000
 8589934592.000 8589934592.000
 17179869184.000 17179869184.000
 34359738368.000 34359738368.000
 68719476736.000 68719476736.000
 137438953472.000 137438953472.000
 274877906944.000 274877906944.000
 549755813888.000 549755813888.000
 1099511627776.000 1099511627776.000
 2199023255552.000 2199023255552.000
 4398046511104.000 4398046511104.000
 8796093022208.000 8796093022208.000
 17592186044416.000 17592186044416.000
 35184372088832.000 35184372088832.000
 70368744177664.000 70368744177664.000
 140737488355328.000 140737488355328.000
 281474976710656.000 281474976710656.000
 562949953421312.000 562949953421312.000
 1125899906842624.000 1125899906842624.000
 2251799813685248.000 2251799813685248.000
 4503599627370496.000 4503599627370496.000
 9007199254740992.000 9007199254740992.000
 18014398509481984.000 18014398509481984.000
 36028797018963968.000 36028797018963968.000
 72057594037927936.000 72057594037927936.000
 144115188075855872.000 144115188075855872.000
 288230376151711744.000 288230376151711744.000
 576460752303423488.000 576460752303423488.000
 1152921504606846976.000 1152921504606846976.000
 2305843009213693952.000 2305843009213693952.000
 4611686018427387904.000 4611686018427387904.000
 9223372036854775808.000 9223372036854775808.000
 18446744073709551616.000 18446744073709551616.000
 36893488147419103232.000 36893488147419103232.000
 73786976294838206464.000 73786976294838206464.000
 147573952589676412928.000 147573952589676412928.000
 295147905179352825856.000 295147905179352825856.000
 590295810358705651712.000 590295810358705651712.000
 1180591620717411303424.000 1180591620717411303424.000
 2361183241434822606848.000 2361183241434822606848.000
 4722366482869645213696.000 4722366482869645213696.000
 9444732965739290427392.000 9444732965739290427392.000
 18889465931478580854784.000 18889465931478580854784.000
 37778931862957161709568.000 37778931862957161709568.000
 75557863725914323419136.000 75557863725914323419136.000
 151115727451828646838272.000 151115727451828646838272.000
 302231454903657293676544.000 302231454903657293676544.000
 604462909807314587353088.000 604462909807314587353088.000
 1208925819614629174706176.000 1208925819614629174706176.000
 2417851639229258349412352.000 2417851639229258349412352.000
 4835703278458516698824704.000 4835703278458516698824704.000
 9671406556917033397649408.000 9671406556917033397649408.000
 19342813113834066795298816.000 19342813113834066795298816.000
 38685626227668133590597632.000 38685626227668133590597632.000
 77371252455336267181195264.000 77371252455336267181195264.000
 154742504910672534362390528.000 154742504910672534362390528.000
 309485009821345068724781056.000 309485009821345068724781056.000
 618970019642690137449562112.000 618970019642690137449562112.000
 1237940039285380274899124224.000 1237940039285380274899124224.000
 2475880078570760549798248448.000 2475880078570760549798248448.000
 4951760157141521099596496896.000 4951760157141521099596496896.000
 9903520314283042199192993792.000 9903520314283042199192993792.000
 19807040628566084398385987584.000 19807040628566084398385987584.000
 39614081257132168796771975168.000 39614081257132168796771975168.000
 79228162514264337593543950336.000 79228162514264337593543950336.000
 158456325028528675187087900672.000 158456325028528675187087900672.000
 316912650057057350374175801344.000 316912650057057350374175801344.000
 633825300114114700748351602688.000 633825300114114700748351602688.000
 1267650600228229401496703205376.000 1267650600228229401496703205376.000
 2535301200456458802993406410752.000 2535301200456458802993406410752.000
 5070602400912917605986812821504.000 5070602400912917605986812821504.000
 10141204801825835211973625643008.000 10141204801825835211973625643008.000
 20282409603651670423947251286016.000 20282409603651670423947251286016.000
 40564819207303340847894502572032.000 40564819207303340847894502572032.000
 81129638414606681695789005144064.000 81129638414606681695789005144064.000
 162259276832213363391578010288128.000 162259276832213363391578010288128.000
 324518553664426726783156020576256.000 324518553664426726783156020576256.000
 649037107328853453566312041152512.000 649037107328853453566312041152512.000
 1298074214657067007132624082305024.000 1298074214657067007132624082305024.000
 2596148429314134014265248164610048.000 2596148429314134014265248164610048.000
 5192296858628268028530496329220096.000 5192296858628268028530496329220096.000
 10384593717256536057060992658440192.000 10384593717256536057060992658440192.000
 20769187434513072114121985316880384.000 20769187434513072114121985316880384.000
 41538374869026144228243970633760768.000 41538374869026144228243970633760768.000
 83076749738052288456487941267521536.000 83076749738052288456487941267521536.000
 16615349947610457691297588253503072.000 16615349947610457691297588253503072.000
 33230699895220915382595175107006144.000 33230699895220915382595175107006144.000
 66461399790441830765190350214012288.000 66461399790441830765190350214012288.000
 13292279958088366153038070042824576.000 13292279958088366153038070042824576.000
 26584559916176732306076140085649152.000 26584559916176732306076140085649152.000
 53169119832353464612152280171298304.000 53169119832353464612152280171298304.000
 106338239664706929224304560342596608.000 106338239664706929224304560342596608.000
 212676479329413858448609120685193216.000 212676479329413858448609120685193216.000
 425352958658827716897218241373786432.000 425352958658827716897218241373786432.000
 850705917317655433794436482747572864.000 850705917317655433794436482747572864.000
 1701411834635310867588872845495145728.000 1701411834635310867588872845495145728.000
 3402823669270621735177745690990291456.000 3402823669270621735177745690990291456.000
 6805647338541243470355491381980582912.000 6805647338541243470355491381980582912.000
 13611294677082486940710982763961165824.000 13611294677082486940710982763961165824.000
 27222589354164973881421965527922331648.000 27222589354164973881421965527922331648.000
 54445178708329947762843931055844663296.000 54445178708329947762843931055844663296.000
 10889035741665989552568786211168932608.000 10889035741665989552568786211168932608.000
 21778071483331979105137572422337865216.000 21778071483331979105137572422337865216.000
 43556142966663958210275144844675730432.000 43556142966663958210275144844675730432.000
 8711228593332791642055028968935146064.000 8711228593332791642055028968935146064.000
 174224571866655832841100579378702921216.000 174224571866655832841100579378702921216.000
 348449143733311665682201158757405842432.000 348449143733311665682201158757405842432.000
 696898287466623331364402317514811688848.000 696898287466623331364402317514811688848.000
 139379657493324666272880463502963737792.000 139379657493324666272880463502963737792.000
 278759314986649332545760927005935475584.000 278759314986649332545760927005935475584.000
 55751862997329866509152185401187115168.000 55751862997329866509152185401187115168.000
 111503725994659733018304370802374230336.000 111503725994659733018304370802374230336.000
 223007451989319466036608741604748460672.000 223007451989319466036608741604748460672.000
 446014903978638932073217483209496921344.000 446014903978638932073217483209496921344.000
 892029807957277864146434966418993842688.000 892029807957277864146434966418993842688.000
 178405961591455572829286993283798765376.000 178405961591455572829286993283798765376.000
 35681192318291114565857398656759750752.000 35681192318291114565857398656759750752.000
 71362384636582229131714797313519501504.000 71362384636582229131714797313519501504.000
 142724769273164458263429594627039003008.000 142724769273164458263429594627039003008.000
 285449538546328916526859189254078006016.000 285449538546328916526859189254078006016.000
 570899077092657833053718378508156012032.000 570899077092657833053718378508156012032.000
 1141798154185315666107436757016312024064.000 1141798154185315666107436757016312024064.000
 2283596308370631332214873514032644048128.000 2283596308370631332214873514032644048128.000
 4567192616741262664429747028065288096256.000 4567192616741262664429747028065288096256.000
 9134385233482525328859494056130577172512.000 9134385233482525328859494056130577172512.000
 182687704669650506577189881122615544448.000 182687704669650506577189881122615544448.000
 365375409339301013154379762245231088896.000 365375409339301013154379762245231088896.000
 730750818678602026308759524490462177792.000 730750818678602026308759524490462177792.000
 146150163735720405261751904998092435584.000 146150163735720405261751904998092435584.000
 292300327471440810523503809996184871168.000 292300327471440810523503809996184871168.000
 584600654942881621047007619992369743336.000 584600654942881621047007619992369743336.000
 1169201309885763242094015239964739486672.000 1169201309885763242094015239964739486672.000
 2338402619771526484188030479929478973344.000 2338402619771526484188030479929478973344.000
 4676805239543052968376060959858957866688.000 4676805239543052968376060959858957866688.000
 9353610479086105936752121919717915733376.000 9353610479086105936752121919717915733376.000
 18707220958172211873504243839435831466752.000 18707220958172211873504243839435831466752.000
 37414441916344423747008487678871662933504.000 37414441916344423747008487678871662933504.000
 74828883832688847494016975357743325867008.000 74828883832688847494016975357743325867008.000
 149657767665377694988033950715486651734016.000 149657767665377694988033950715486651734016.000
 29931553533075538997606790143097330268032.000 29931553533075538997606790143097330268032.000
 59863107066151077995213580286194660536064.000 59863107066151077995213580286194660536064.000
 119726214132302155990427160572389321121216.000 119726214132302155990427160572389321121216.000
 239452428264604311980854321144778642224256.000 239452428264604311980854321144778642224256.000
 478904856529208623961708642289557284444512.000 478904856529208623961708642289557284444512.000
 95780971305841724792341728457911478888864.000 95780971305841724792341728457911478888864.000
 191561942611683449584683456915822957777728.000 191561942611683449584683456915822957777728.000
 383123885223366899169366913831645955555552.000 383123885223366899169366913831645955555552.000
 76624777044673379833873382766329191111104.000 76624777044673379833873382766329191111104.000
 153249554089346759667746765532658382222208.000 153249554089346759667746765532658382222208.000
 306499108178693519335493531065316764444416.000 306499108178693519335493531065316764444416.000
 612998216357387038670987062130633528888832.000 612998216357387038670987062130633528888832.000
 122599643271477407734197412426127057777664.000 122599643271477407734197412426127057777664