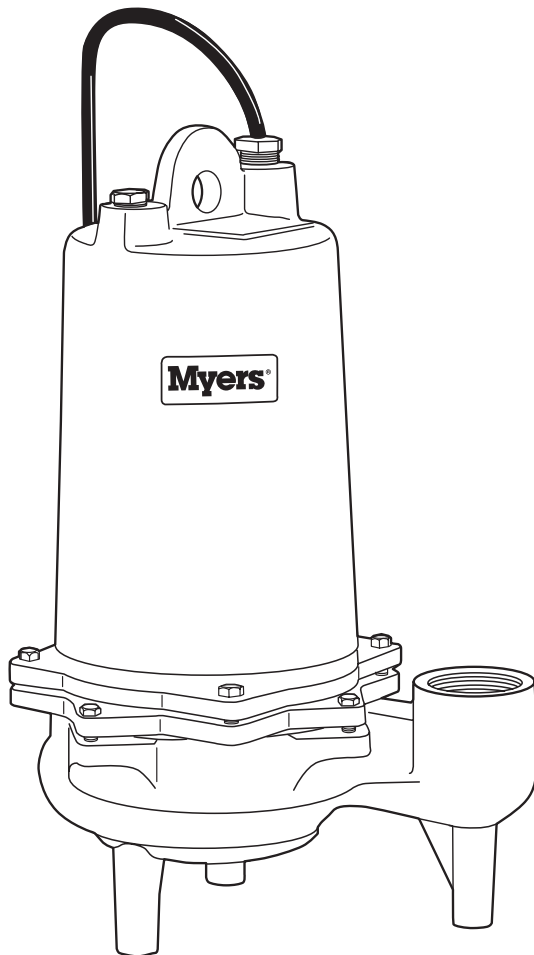




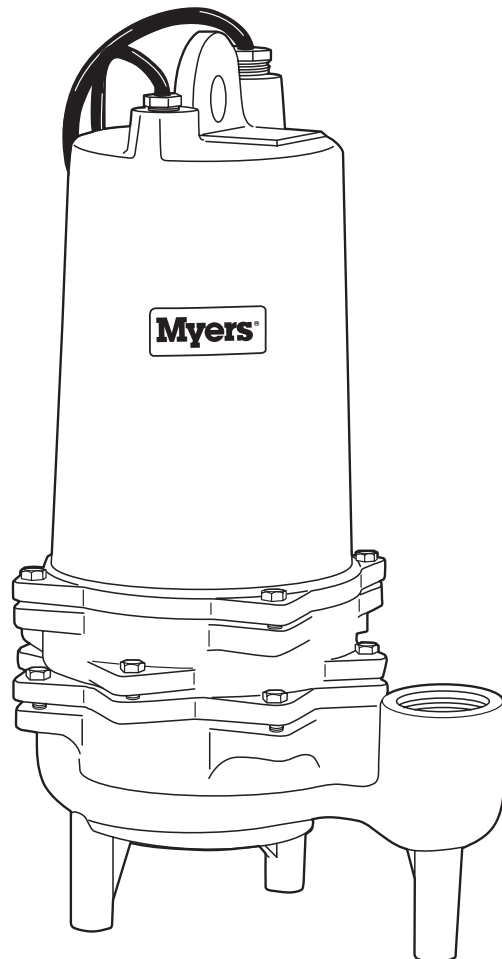
Myers®
Pentair Water

MWH50 - MW200 Series ME33 - ME150 Series Submersible Sump Effluent & Sewage Pumps

Single and double seal. Single and three phase power.



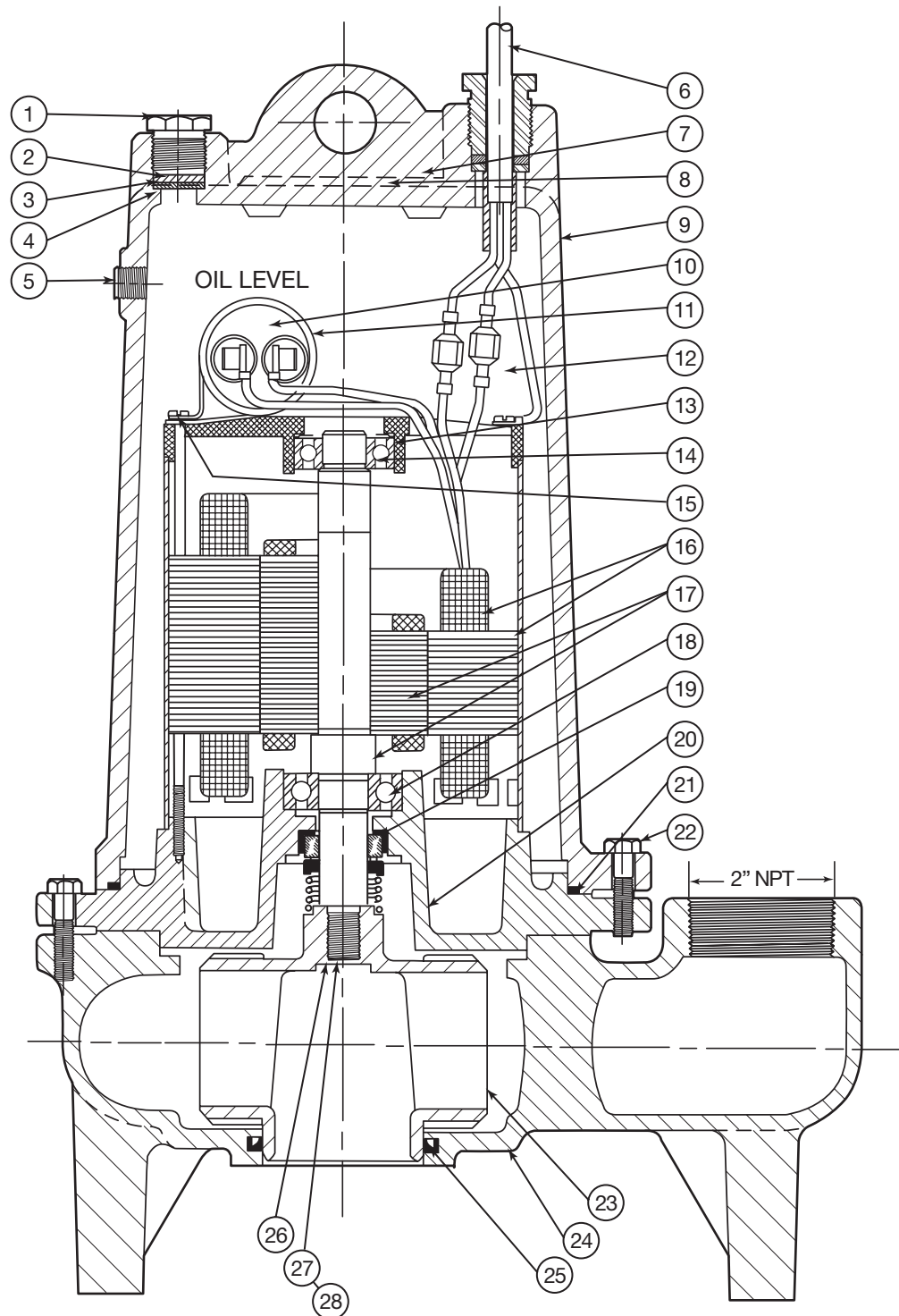
SINGLE SEAL PUMP
ME33S, ME50S, ME75S
ME100S, ME150S,
MWH50, MW100,
MW150, MW200



DOUBLE SEAL PUMP
ME33D, ME50D, ME75D
ME100D, ME150D,
MWH50D, MW100D,
MW150D, MW200D

Installation and Service Manual

TYPICAL SECTION DRAWING FOR ME/MW33-200 SINGLE SEAL PUMPS



SINGLE SEAL REPAIR PARTS LIST 3MW SERIES 3450 & 1750 RPM

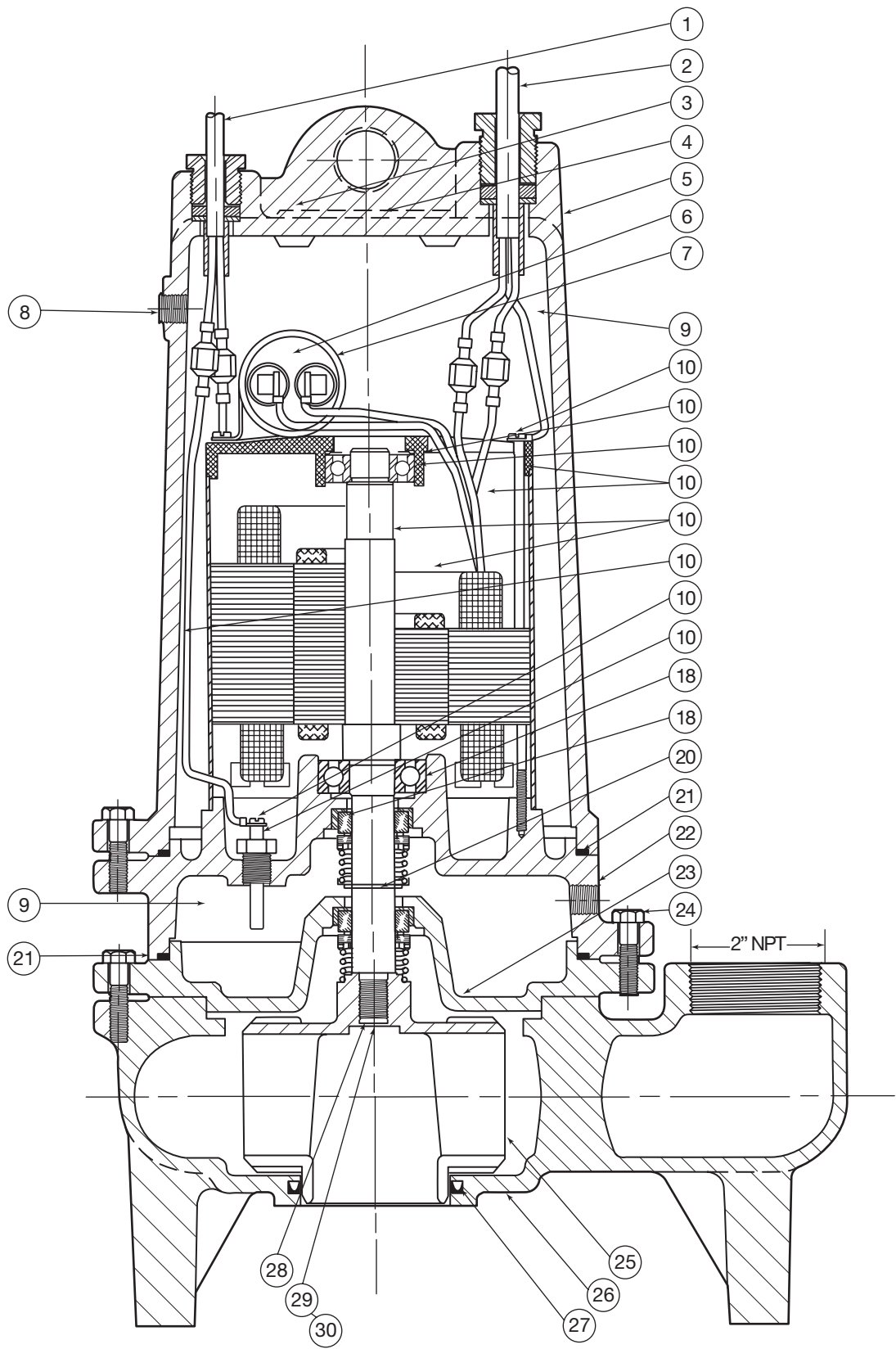
Ref. No.	Description	No. Req'd	Part Numbers
1	Nut, cord plug, solid	1	25341A002
2	Washer, 1/32" Thk.	1	05030A234
3	Gasket, Rubber	1	05014A193
4	Washer, 3/32" Thk.	1	05030A235
5	Plug, 1/4" pipe	1	05022A009
6	Cord, Power	1	See Chart
7	Screw, drive	2	05160A004
8	Name Plate, blank, 1 Ph	1	25488A000
8	Name Plate, blank, 3 Ph	1	25499A000
9	Housing, Motor	1	25327D000
10	Capacitor (1Ph only)	1	See Chart
11	Clip, capacitor (1 Ph only)	1	See Chart
12	Oil, Transformer (5 gal.)	.8-1 gal	11009A006
12A	Connectors (3 Ph only)	3-6	15781A001
13	Washer, bearing	1	19331A005
14	Bearing, ball, upper	1	08565A013
15	Screw, st, #10 x 3/8	2	09822A032

Ref. No.	Description	No. Req'd	Part Numbers
16 & 17	Stator, Rotor shaft with shell	1	See Chart
18	Bearing, ball, lower	1	08565A022
19	Seal, shaft	1	25370A000
20	Plate, brg & seal	1	25367D000
21	Gasket, tetraseal, 7x6-3/4x1/8	1	05014A181
22	Screw, cap, 5/16 x 1-1/4	8	19100A012
23	Impeller, plastic (std. series)	1	See Chart
23	Impeller, brass ("B" series)	1	See Chart
24	Case, volute (ME33-50)	1	25357D000
24	Case, volute (ME75-150)	1	25331D000
24	Case, volute (MWH5-200)	1	26057D000
25	Cup, U, HUVA (ME33-150)	1	22835A005
25	Cup, U, HUVA (MWH50-200)	1	22835A009
26	Washer, Impeller Retainer	1	05030A242
27	Screw, Machine #10 x 3/8	1	06106A042
28	Sealant (Grade 271 Loctite)	1	14550A001

Unit manufactured prior to Aug-2007 contact factory for repair parts.

Item Number			6	6	10	11	16 & 17	23	23	23	23
HP	Volts	PH	Power Cord W/Plug	Power Cord No Plug	Capacitor	Capacitor Clip	Stator Rotor & Shaft Ass'y	ME Impeller Plastic	ME Impeller Brass	MWH Impeller DI	MWH Impeller Brass
1/2	115	1	25338B004	25338B006	23839A000	20333A006	25484D100	25333B025	25348B121	26029B013	26029B113
1/2	208	1		25338B006	23839A000	20333A006	25484D101	25333B025	25348B121	26029B013	26029B113
1/2	230	1	25338B005	25338B006	23839A000	20333A006	25484D101	25333B025	25348B121	26029B013	26029B113
1/2	208	3		25338B006			25484D102	25333B025	25348B121	26029B013	26029B113
1/2	230	3		25338B006			25484D102	25333B025	25348B121	26029B013	26029B113
1/2	460	3		25338B006			25484D102	25333B025	25348B121	26029B013	26029B113
1/2	575	3		25338B006			25484D103	25333B025	25348B121	26029B013	26029B113
3/4	115	1	25338B000	25338B002	23839A000	20333A006	25484D100	25348B020	25348B120		
3/4	208	1		25338B002	23839A000	20333A006	25484D101	25348B020	25348B120		
3/4	230	1	25338B001	25338B002	23839A000	20333A006	25484D101	25348B020	25348B120		
3/4	208	3		25338B003			25484D102	25348B020	25348B120		
3/4	230	3		25338B003			25484D102	25348B020	25348B120		
3/4	460	3		25338B003			25484D102	25348B020	25348B120		
3/4	575	3		25338B003			25484D103	25348B020	25348B120		
1	208	1		25338A002	23838A000	20333A004	25484D104	25348B010	25348B110	26029B012	26029B112
1	230	1	25338B001	25338A002	23838A000	20333A004	25484D105	25348B010	25348B110	26029B012	26029B112
1	208	3		25338B003			25484D106	25348B010	25348B110	26029B012	26029B112
1	230	3		25338B003			25484D106	25348B010	25348B110	26029B012	26029B112
1	460	3		25338B003			25484D106	25348B010	25348B110	26029B012	26029B112
1	575	3		25338B003			25484D107	25348B010	25348B110	26029B012	26029B112
1 1/2	208	1		25338B002	23838A000	20333A004	25484D104	25348B000	25348B100	26029B011	26029B111
1 1/2	230	1	25338B001	25338B002	23838A000	20333A004	25484D105	25348B000	25348B100	26029B011	26029B111
1 1/2	208	3		25338B003			25484D106	25348B000	25348B100	26029B011	26029B111
1 1/2	230	3		25338B003			25484D106	25348B000	25348B100	26029B011	26029B111
1 1/2	460	3		25338B003			25484D106	25348B000	25348B100	26029B011	26029B111
1 1/2	575	3		25338B003			25484D106	25348B000	25348B100	26029B011	26029B111
2	208	1		25338B009	23839A000	20333A006	25484D108			26029B000	26029B100
2	230	1		25338B009	26520A000	20333A006	25484D109			26029B000	26029B100
2	208	3		25338B008			25484D110			26029B000	26029B100
2	230	3		25338B008			25484D111			26029B000	26029B100
2	460	3		25338B003			25484D111			26029B000	26029B100
2	575	3		25338B003			25484D112			26029B000	26029B100

TYPICAL SECTION DRAWING FOR ME/MW33-200 DOUBLE SEAL PUMPS



DOUBLE SEAL REPAIR PARTS LIST ME & MWH SERIES

Ref. No.	Description	No. Req'd	Part Numbers
1	Cord, Sensor	1	25339B000
2	Cord, Power	1	See Chart
3	Screw, drive	2	05160A004
4	Name Plate, blank, 1 Ph	1	25488A000
4	Name Plate, blank, 3 Ph	1	25499A000
5	Housing, Motor	1	25327D000
6	Capacitor (1Ph only)	1	See Chart
7	Clip, capacitor (1 Ph only)	1	See Chart
8	Plug, 1/4" pipe	1	05022A009
9	Oil, Transformer (5 gal.)	1.12 gal	11009A006
9A	Connectors (3 Ph only)	3-6	15781A001
10	Screw, st, #10 x 3/8	2	09822A032
11	Washer, bearing	1	19331A005
12	Bearing, ball, upper	1	08565A013
13 & 14	Stator, Rotor shaft with shell	1	See Chart
15	Wire, electrode	2	21792A004
16	Screw, #6 x 1/4	2	05434A025
17	Seal Probe	2	25343A000

Ref. No.	Description	No. Req'd	Part Numbers
18	Bearing, ball, lower	1	08565A022
19	Seal, shaft	1	25370A000
20	Ring, retaining	2	12558A021
20	Ring, retaining	1	12558A033
21	Gasket, tetraseal, 7x6-3/4x1/8	2	05014A181
22	Housing seal	1	25369D000
23	Plate, bottom	1	25368D000
24	Screw, cap 5/16 x 1-1/4	12	19100A012
25	Impeller, plastic (std. series)	1	See Chart
25	Impeller, brass ("B" series)	1	See Chart
26	Case, volute (ME33-50)	1	25357D000
26	Case, volute (ME75-150)	1	25331D000
26	Case, volute (MWH5-200)	1	26057D000
27	Cup, U, HUVA (ME33-150)	1	22835A005
27	Cup, U, HUVA (MWH50-200)	1	22835A009
28	Washer, Impeller Retainer	1	05030A242
29	Screw, Machine #10 x 3/8	1	06106A042
30	Sealant (Grade 271 Loctite)	1	14550A001

Unit manufactured prior to Aug-2007 contact factory for repair parts.

Item Number			2	2	6	7	13 & 14	25	25	25	25
HP	Volts	PH	Power Cord W/Plug	Power Cord No Plug	Capacitor	Capacitor Clip	Stator Rotor & Shaft Ass'y	ME Impeller Plastic	ME Impeller Brass	MWH Impeller DI	MWH Impeller Brass
1/2	115	1	25338B004	25338B006	23839A000	20333A006	25484D200	25333B025	25348B121	26029B013	26029B113
1/2	208	1		25338B006	23839A000	20333A006	25484D201	25333B025	25348B121	26029B013	26029B113
1/2	230	1	25338B005	25338B006	23839A000	20333A006	25484D201	25333B025	25348B121	26029B013	26029B113
1/2	208	3		25338B003			25484D202	25333B025	25348B121	26029B013	26029B113
1/2	230	3		25338B003			25484D202	25333B025	25348B121	26029B013	26029B113
1/2	460	3		25338B003			25484D202	25333B025	25348B121	26029B013	26029B113
1/2	575	3		25338B003			25484D203	25333B025	25348B121	26029B013	26029B113
3/4	115	1	25338B002	25338B002	23839A000	20333A006	25484D200	25348B020	25348B120		
3/4	208	1		25338B002	23839A000	20333A006	25484D201	25348B020	25348B120		
3/4	230	1	25338B001	25338B002	23839A000	20333A006	25484D201	25348B020	25348B120		
3/4	208	3		25338B003			25484D202	25348B020	25348B120		
3/4	230	3		25338B003			25484D202	25348B020	25348B120		
3/4	460	3		25338B003			25484D202	25348B020	25348B120		
3/4	575	3		25338B003			25484D203	25348B020	25348B120		
1	208	1		25338B002	23838A000	20333A004	25484D204	25348B010	25348B110	26029B012	26029B112
1	230	1	25338B001	25338B002	23838A000	20333A004	25484D205	25348B010	25348B110	26029B012	26029B112
1	208	3		25338B003			25484D206	25348B010	25348B110	26029B012	26029B112
1	230	3		25338B003			25484D206	25348B010	25348B110	26029B012	26029B112
1	460	3		25338B003			25484D206	25348B010	25348B110	26029B012	26029B112
1	575	3		25338B003			25484D207	25348B010	25348B110	26029B012	26029B112
1 1/2	208	1		25338B002	23838A000	20333A004	25484D204	25348B000	25348B100	26029B011	26029B111
1 1/2	230	1	25338B001	25338B002	23838A000	20333A004	25484D205	25348B000	25348B100	26029B011	26029B111
1 1/2	208	3		25338B003			25484D206	25348B000	25348B100	26029B011	26029B111
1 1/2	230	3		25338B003			25484D206	25348B000	25348B100	26029B011	26029B111
1 1/2	460	3		25338B003			25484D206	25348B000	25348B100	26029B011	26029B111
1 1/2	575	3		25338B003			25484D207	25348B000	25348B100	26029B011	26029B111
2	208	1		25338B009	23839A000	20333A006	25484D208			26029B000	26029B100
2	230	1		25338B009	26520A000	20333A006	25484D209			26029B000	26029B100
2	208	3		25338B008			25484D210			26029B000	26029B100
2	230	3		25338B008			25484D211			26029B000	26029B100
2	460	3		25338B003			25484D211			26029B000	26029B100
2	575	3		25338B003			25484D212			26029B000	26029B100

GENERAL DESCRIPTION AND APPLICATION

Myers ME and MW series pumps are available in both a single seal design and double seal design with leak detector. The ME33-150 models are designed for Effluent dosing, Septic Tank Effluent Pumping (S.T.E.P.) or normal sump and general dewatering applications where higher pressure is required. These units are designed to handle $\frac{3}{4}$ " spherical solids. The MWH50-MW200 models are designed for raw sewage applications and can pass 2" spherical solids. These units can also be used for sump and general dewatering applications where larger solids capabilities are required.

When used in Effluent dosing or S.T.E.P. applications, the pump must be installed in a separate tank or compartment at the discharger side of the septic tank. **NEVER INSTALL PUMP IN MAIN TANK WHERE SLUDGE COLLECTS.**

These pumps are available in single phase and three phase, and either in single seal or double seal with seal leak detector. All three phase units, all double seal units and all duplex installations must be used with a control box. All power cords and seal leak detector cords are 20 feet long.

The ME model impellers are enclosed two vane type to handle $\frac{3}{4}$ " spherical solids and are available made of engineered thermoplastic or cast brass. All pumps have a 2" NPT discharge tapping.

The MW model impellers are enclosed two vane non-clog style, designed to handle 2" spherical solids. The MW pumps are available with standard cast iron or optional cast brass impellers.

These pumps are NOT for use in swimming pools or fountains.

AIR LOCKING

A sump pump is said to be air locked if water traps air in the pump and it cannot get out, thus preventing the pump from operating.

In installation of this type a $\frac{1}{8}$ " hole should be drilled in the discharge pipe below the check valve. The check valve should be 12 to 18 inches above pump discharge. Do not put check valve directly into pump discharge opening.

PACKAGING

Each pump is packaged separately in a carton marked with a catalog number and Myers engineering number.

LEVEL CONTROLS

All pumps must use sealed level control switches for automatic operation. MLC and MFLC controls have sealed switches that are 1 HP rated at 230 volts. ALC and AWS-1 controls have sealed mechanical switches that are rated 2 HP at 230 volts.

Simplex single phase pumps can be made automatic by attaching MFLC or MLC controls to the pump. These switches have a fixed draw off level of 8 to 10 inches and can be used up to 1 HP. For higher horsepower ratings two mercury switches (or SMNO) controls with a magnetic starter can be used. Simplex systems may also use on/off pilot mercury control switches with control box and magnetic starter. The ALC and AWS-1 controls can be used for simplex single phase pumps with ratings up to 2 HP. All duplex systems must use pilot mercury control switches with control box and magnetic starters. Plug-in cords can be used on all the single phase pumps with a single seal (does not have a seal leak detector). This cord has a GROUND pin that plugs into a grounded receptacle. The grounded receptacle cannot be used in the wet sump or basin due to DANGER of current leakage. Sealed junction boxes must be used in wet sumps or basins to make connections to motor cord. The AWS-1 control also acts as a sealed junction box for connecting power cord to pump cord.

DOUBLE SEAL PUMPS

All pumps in this series "ME—D" or "MW—D" have two seals with an oil chamber between the seals so that the seal faces of both the lower and upper seals are oil lubricated for longer life and greater protection against water leaking into the motor windings. These double seal units are all made with a seal leak detector.

The leak detector in the oil seal chamber detects any water leakage into the chamber and turns on a red signal light in the control panel. Pumps should be removed from the sump and seals replaced after the seal light shows in the panel. Control panels must be used for pumps having the seal leak detectors, and seal leak detectors must be wired as illustrated in these instructions.

DESIGN OF PRESSURE SEWER SYSTEMS

MYERS has available complete computer SOFTWARE for designing PRESSURE SEWER SYSTEMS. This gives pipe sizes to use and gives exact flow from any pump or group of pumps in the system when operating simultaneously. This design DISK for IBM or COMPATIBLE computers is available to engineers on request.

MOTOR TYPE

Motors are $\frac{3}{4}$ frame, 1/3 – 2HP single or three phase, 60 Hertz, 3450 R.P.M. with class B insulation. All single phase motors are permanent split-capacitor (PSC) type with built-in on-winding overload protection and do not require a start switch or start relay. The three phase pump motors require a magnetic starter with 3 leg overload protection. All motors have upper and lower ball bearings and all are oil-cooled and lubricated.

SAFETY WARNINGS

WARNING: Risk of electric shock. Pumps with a single seal are supplied with a grounding conductor and grounding-type attachment plug on the power cord. To reduce the risk of electric shock, be certain that it is connected only to a properly grounded, grounding-type receptacle. **DO NOT** cut off ground pin or use an adapter fitting. **DO NOT** use an extension cord with this pump. Entire plug may be cut off if a control panel is used. All double seal pumps, all duplex installations and all three phase pumps require a control box.

When wiring this pump follow all local electrical and safety codes and ordinances as well as the most recent National Electric Code (NEC-ANSI/NFPA 70).

All pumps have a GROUND WIRE that is connected to a screw in the metal motor housing. This wire goes to the receptacle or control box which must be connected to a good outside GROUND such as a metal water pipe or GROUND STAKE driven at least 8 feet into the ground.

When overload current protection is provided by installer:

USE WITH APPROVED MOTOR CONTROL THAT MATCHES MOTOR INPUT IN FULL LOAD AMPERES WITH OVERLOAD ELEMENT(S) SELECTED OR ADJUSTED IN ACCORDANCE WITH CONTROL INSTRUCTIONS. (UTILISER UNDEMARREUR APPROUVE CONVENANT AU COURANT A PLEINE CHARGE DU MOTEUR ET DONT LES ELEMENTS THERMIQUES SONT REGLES OU CHOISIS CONFORMEMENT AUX INSTRUCTIONS QUI L'ACCOMPAGNENT).

When motor has built-in overload protection:

USE WITH APPROVED MOTOR CONTROL THAT MATCHES MOTOR INPUT IN FULL LOAD AMPERES. (UTILISER UN DEMARREUR APPROUVE CONVENANT AU COURANT A PLEINE CHARGE DU MOTEUR).

INSTALLATION

WARNING: Basin or tank must be vented in accordance with local plumbing codes. These pumps are not designed for and **CANNOT** be installed in locations classified as hazardous in accordance with the National Electric Code ANSI/NFPA 70.

CAUTION: Never enter pump chamber after sewage or effluent has been in basin. Sewage water can give off methane, hydrogen sulfide and other gases which are highly poisonous.

For this reason, Myers recommends installing the ME series effluent pumps with a quick removal system. The quick removal system may be a union or Cam-lok coupling if the pipe or discharge hose is within reach from the surface, or a rail system type quick disconnect on deeper installations. See installation drawings for suggested installation.

The dosing tank or pumping chamber must be constructed of corrosion resistant materials and must be capable of withstanding all anticipated internal and external loads. It also must not allow infiltration or exfiltration. The tank must have provisions for anti-buoyancy. Access holes or covers must be of adequate size and be accessible from the surface to allow for installation and maintenance of the system. Access covers must be lockable or heavy enough to prevent easy access by unauthorized personnel. The pumping chamber holding capacity should be selected to allow for emergency conditions.

The discharge pipe must be the same size as the pump discharge (2 inches) or larger. In order to insure sufficient fluid velocity to prevent any residual solids from collecting in the discharge pipe, it is recommended that a minimum flow of 2 feet per second be maintained. (21 GPM through 2" pipe and 46 GPM through 3" pipe). It is recommended that PVC or equal pipe is used for corrosion resistance. A full flow (ball or gate) shut off valve must be installed to prevent back flow of effluent if the pump must be removed for service. A check valve must be installed on pressure sewer systems and on other systems where conditions allow to prevent backflow and to reduce wear on the pump system.

A high water alarm must be installed on a separate circuit from the pump circuit. The alarm should have the ability to be tested for proper operation.

SPECIAL INSTRUCTIONS FOR THREE PHASE PUMPS

- (1) F.E. Myers recommends three phase pumps to be installed by qualified personnel. **CAUTION: Risk of electric shock. Do not remove cord and strain relief. Do not connect conduit to pump.**
- (2) Three phase pumps are always installed with control boxes having magnetic starters with 3 leg overload protection. **DO NOT TRY TO RUN THREE PHASE PUMPS DIRECTLY ACROSS THE LINE.**
- (3) **To Connect Pump:** Run wire from pump to the bottom of control box or appropriate junction box suitable for enclosing splice connections. A hole must be cut into the control box for the wires. With power to control box off, connect green (ground) line to ground lug. Connect black (power) wires to power lead terminals. Note: for a typical CE style control box, these terminals are marked M1, M2 and M3. Make sure that all wires are inside control box and not in a position to be pinched or shorted when the door is closed.
- (4) All three phase motors can run either direction. ROTATION can be changed by interchanging any two line leads at magnetic starter. **BE SURE CIRCUIT BREAKER IS OFF BEFORE MAKING THIS CHANGE.**

To find if rotation is correct operate pumps and check delivery operation. If flow and head is low (refer to pump curves shown in this manual) the rotation is wrong. With duplex pumps, check operation of both pumps.

- (5) All pump impellers, either single or three phase, must turn counterclockwise when looking into pump inlet. If uncertain of rotation, TURN OFF POWER and lift pump from basin with cord connected and lay pump on side so impeller can be seen. Turn on power and start pump using hand position of H-O-A switch. Turn on and off fast so that coast of impeller can be seen. **NEVER PUT HAND OR FINGERS ON THE IMPELLER.** Interchange any two l line leads at the magnetic starter to change rotation.

POINTS TO CHECK IF PUMP DOES NOT RUN OR DOES NOT RUN PROPERLY

- (1) **Pump does not run or start when water is up in tank.**
- (a) Check for blown fuse or tripper circuit breaker.
 - (b) Check for defective level switch.
 - (c) Where control panel is used be sure H-O-A switch is in the AUTO position. If it does not run, turn switch to the HAND position and if the pump runs then the trouble is in the automatic electrical system. Have an ELECTRICIAN make electrical checks.
 - (d) Check for burned out motor. Occasionally lightning can damage a motor even with lightning protection.
 - (e) Where plug-in cords are used be sure contact blades are clean and making good contact. **DO NOT USE PLUG-IN CORDS INSIDE A SUMP OR WET WELL.**
 - (f) Level control ball or weight may be stuck on side of basin. Be sure it floats freely.

(2) Pump runs but does not deliver flow.

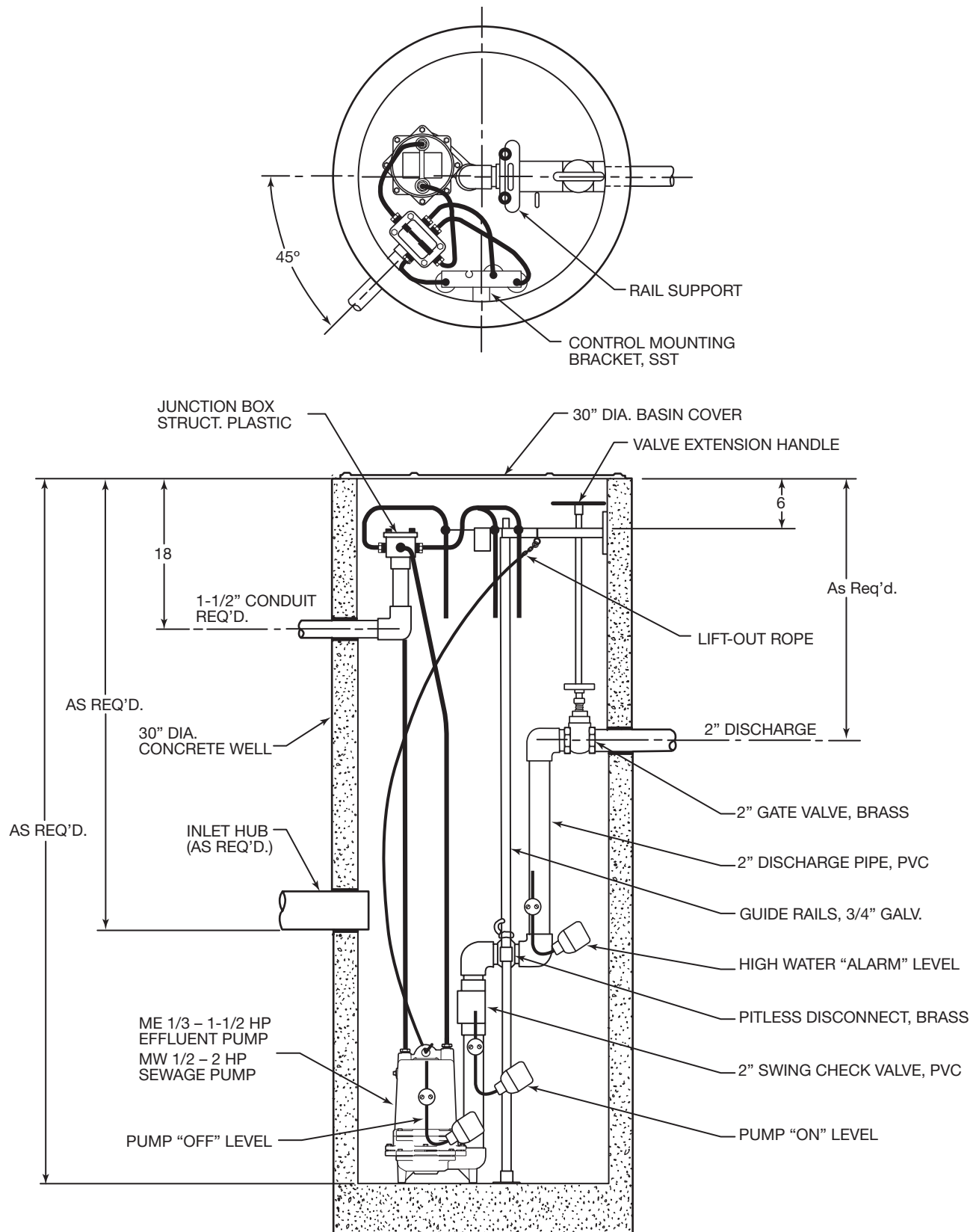
- (a) Check air lock. Start and stop pump several times; if this does not help it may be necessary to loosen a union in the discharge line to relieve air lock.
- (b) Check valve may be installed backwards. Check flow arrow on valve body. Check shut-off valve. It may be closed.
- (c) Check vertical elevation. It may be higher than pump can develop. (See pump curve).
- (d) Pump inlet may be plugged. Remove pump to check.

CAUTION: ALWAYS UNPLUG POWER CORDS OR TURN OFF ALL MAIN AND BRANCH CIRCUIT BREAKERS BEFORE DOING ANY WORK ON THE PUMP. If control panel is remote from pump, disconnect lead wires to motor so that no one can turn the circuit breaker back on. If motor is three phase, mark the leads so they can be replaced in the same order.

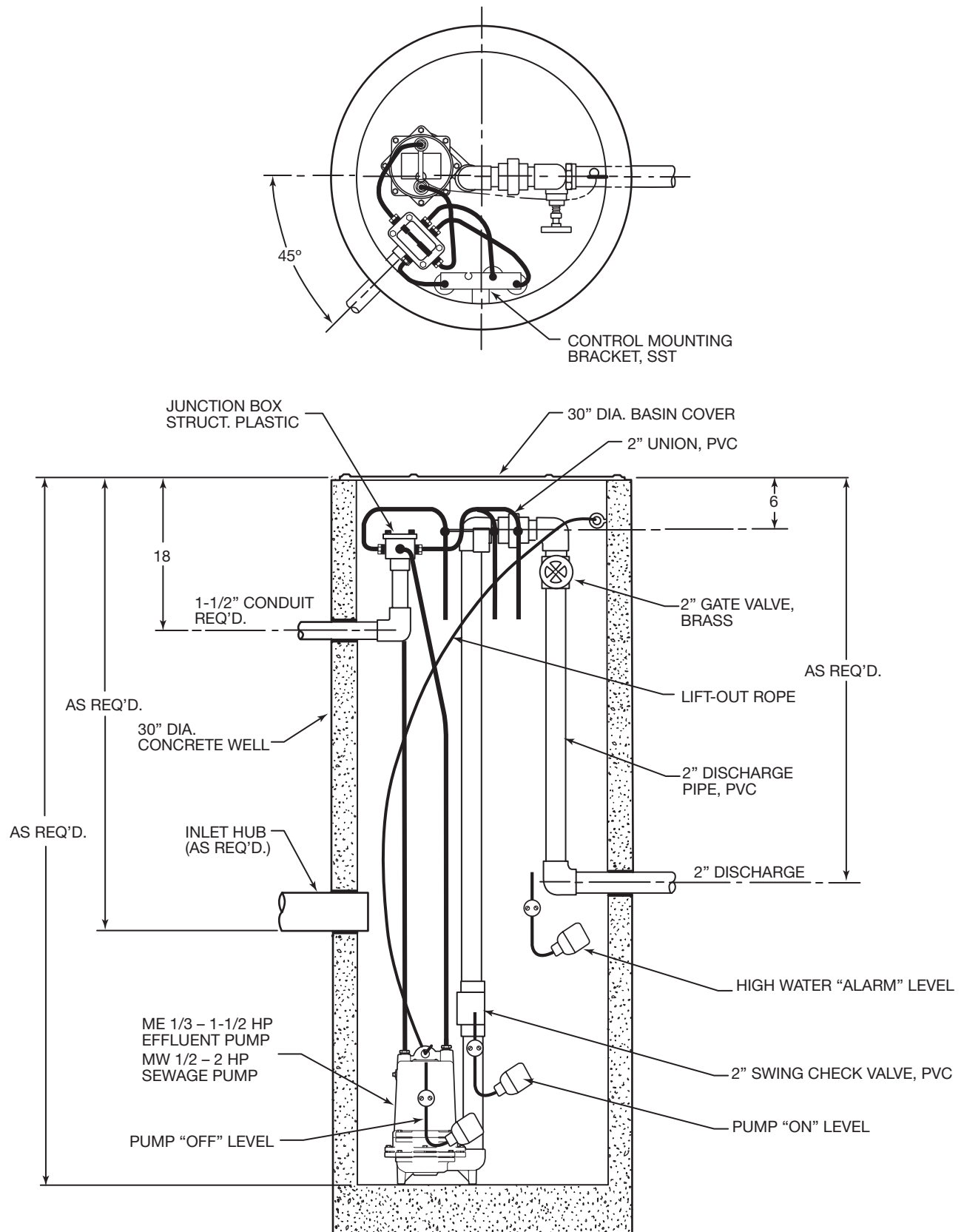
BEFORE DISMANTLING PUMP FOR REPLACEMENT OF PARTS

Clean pump thoroughly. Knock off all scale and deposits. Use sandblast if possible. Submerge complete unit in Clorox solution for one hour before taking apart.

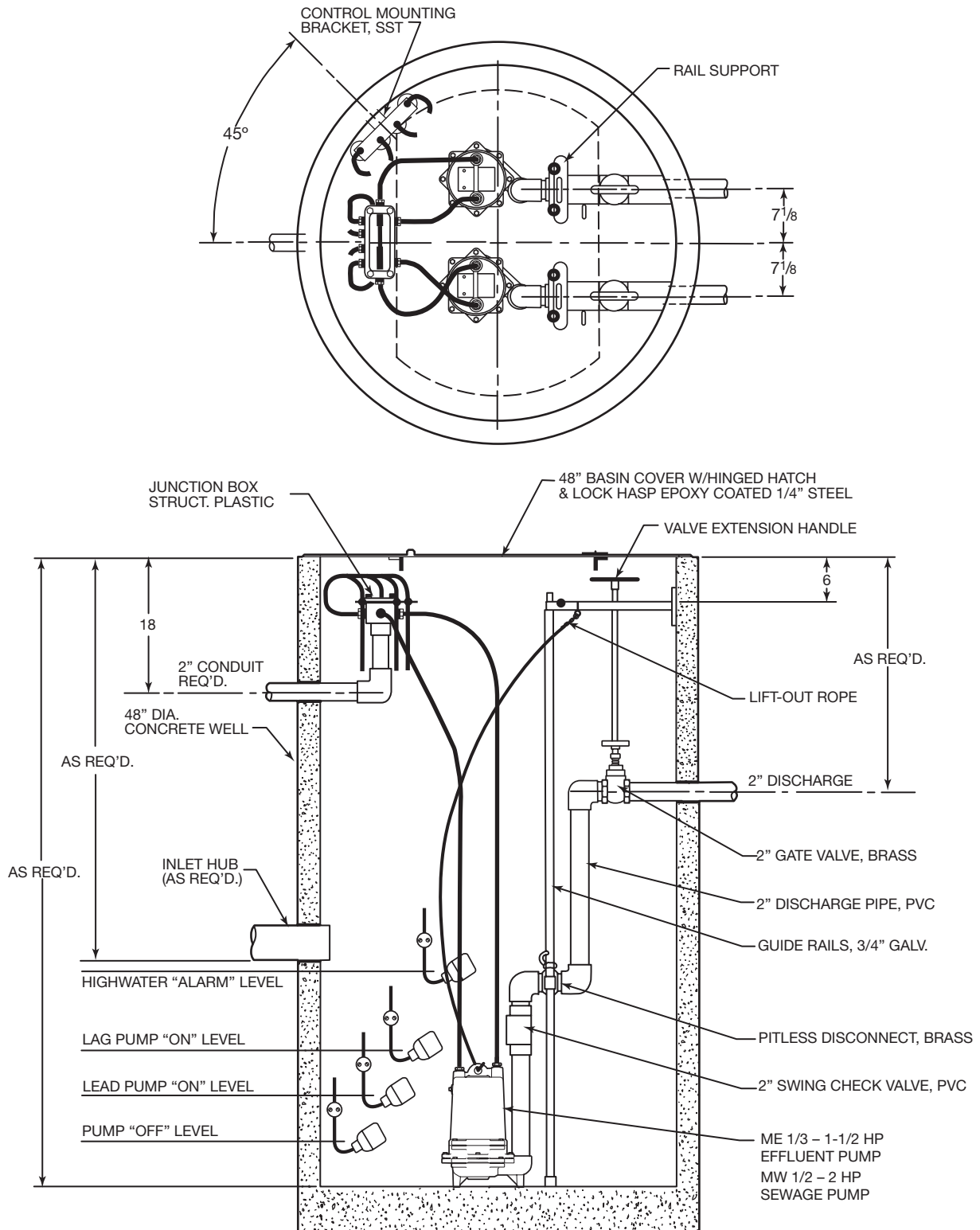
30" DIAMETER SIMPLEX ME/MW 1/3 – 2 HP



30" DIAMETER SIMPLEX UNION SYSTEM ME/MW 1/3 - 2 HP



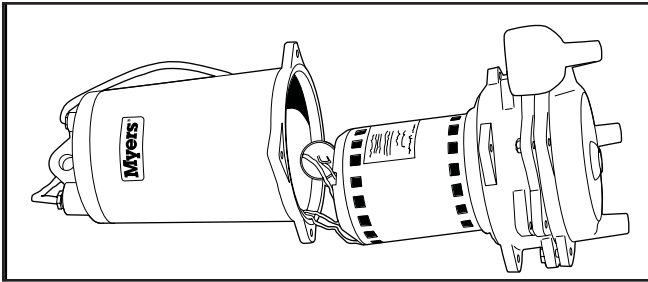
48" DIAMETER DUPLEX ME/MW 1/3 – 2 HP



TO REPLACE CAPACITORS ONLY

All of the single phase motors are of the permanent split capacitor type and have no relays or starting switch. They have only a starting capacitor that is in the circuit for both starting and running conditions.

- (1) Remove oil fill plug near the top of the motor and pour the oil out.
- (2) Loosen the pug nuts around the cords until they are loose enough to push the cords down inside of the motor housing.
- (3) Remove the four bolts from the motor housing and bump the housing with a plastic hammer to loosen. Lay the pump on its side.
- (4) Remove the housing carefully to be sure that enough cord is pushed into the housing to create no tension on the cords.
- (5) Slide motor housing up far enough to expose the capacitor and to be able to lay the housing down.



- (6) Disconnect wiring from capacitor and loosen capacitor clamp and slide out capacitor. Replace with new capacitor, tighten and re-connect. Wiring diagram is given in these instructions.
- (7) Check all wiring connectors to be sure they are secure.
- (8) Be sure tetraseal gasket is in place.
- (9) Slide motor housing back onto pump while pulling the cords out slowly. Assemble the motor housing with the four bolts.
- (10) Re-assemble cord nuts. Be sure washers are seated and cords are pulled up to stop against the washers. Tighten nuts securely.
- (11) Put pump upright and refill motor with Myers submersible motor oil. DO NOT OVER FILL WITH OIL. With pump upright fill oil to bottom of oil fill tapping. Replace oil fill plug.
- (12) Be sure pump turns freely before connecting to power. Turn pump on side and turn impeller, using screwdriver in slotted shaft. Plug pump into receptacle to test operation. Pump must run quiet and free of vibration.

TO REPLACE POWER CORD AND/OR SEAL LEAK DETECTOR CORD

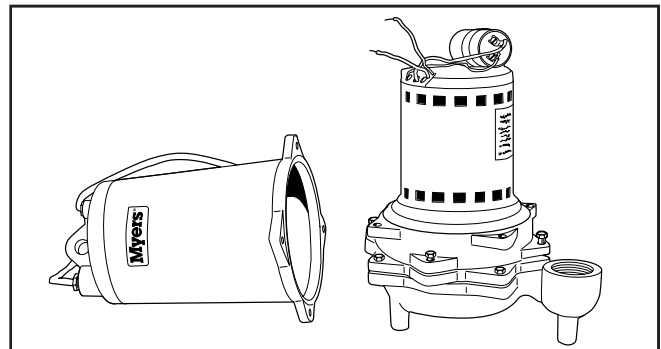
- (1) Remove motor housing as described above. Disconnect the push-together terminals and remove the ground screw from the power cord if being replaced.
- (2) Completely unscrew cord bushing to be replaced

and remove cord assembly from housing. Be sure remaining terminals are secure on the wires.

- (3) Replace with proper cord with fittings. Push cord into the motor housing far enough to make proper connections. Reconnect ground wire if replacing power cord and securely connect the wires correctly. See wiring diagram in these instructions.
- (4) Assemble cords and motor housing as described in "Capacitor Replacement". Fill with oil as noted and be sure pump turns freely before connecting to power.

TO REPLACE MOTOR STATOR AND SHELL

- (1) Remove motor housing as described above.
- (2) Disconnect all leads from power and seal leak cords and ground wire and set pump upright.
- (3) Loosen the four long screw holding the motor and remove slowly. If unit has seal leak probes, be sure to feed the wires through the slots as the motor is being removed.
- (4) Either remove previous capacitor and clamp from old motor and assemble onto new stator and shell or replace with a new capacitor and assemble the two capacitor leads per wiring diagram.
- (5) Position bearing spring washer on top of upper ball bearing. (Fig. 1 -3 HP as shown in Figure 1).
- (6) Tighten terminal screws of seal leak probes and feed wires through the motor slots.

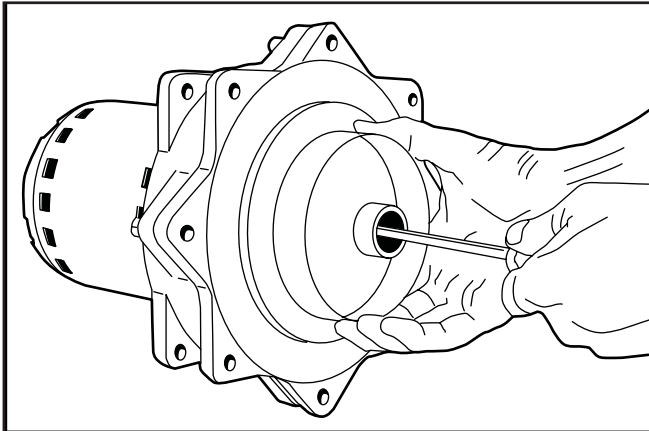


- (7) Position the "stator with shell" into place and line up screws with the bosses and tighten the (4) long screws. Extend probe wires out through the slots. Lay unit down in line with motor housing.
- (8) Be sure pump turns freely with screwdriver in impeller end of shaft.
- (9) Reconnect all terminals securely per wiring diagram.
- (10) Be sure tetraseal gasket is in place.
- (11) Reassemble motor housing and fill with oil as noted above in capacitor replacement.

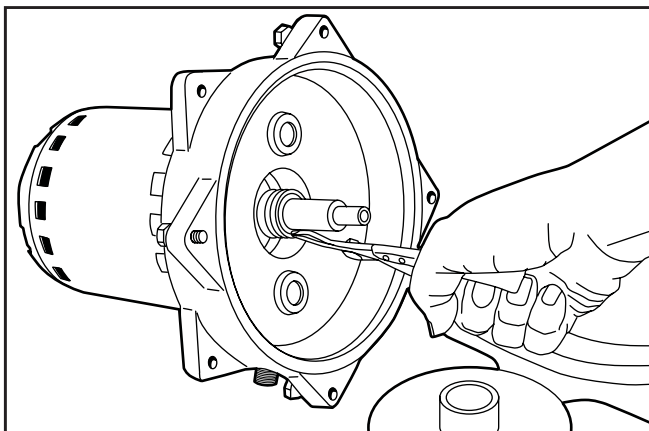
NOTE: On three phase motors always check unit for proper rotation. With pump on its side apply power by turning on, then off, quickly. Impeller must turn counter-clockwise when looking into the impeller inlet. If not, interchange any two leads in the control box.

SHAFT SEAL REPLACEMENT

- (1) Remove plugs in motor housing and in seal housing (for double seal units) and drain oil.
- (2) Remove four bolts holding the volute case and bump with a plastic hammer to loosen and remove case.



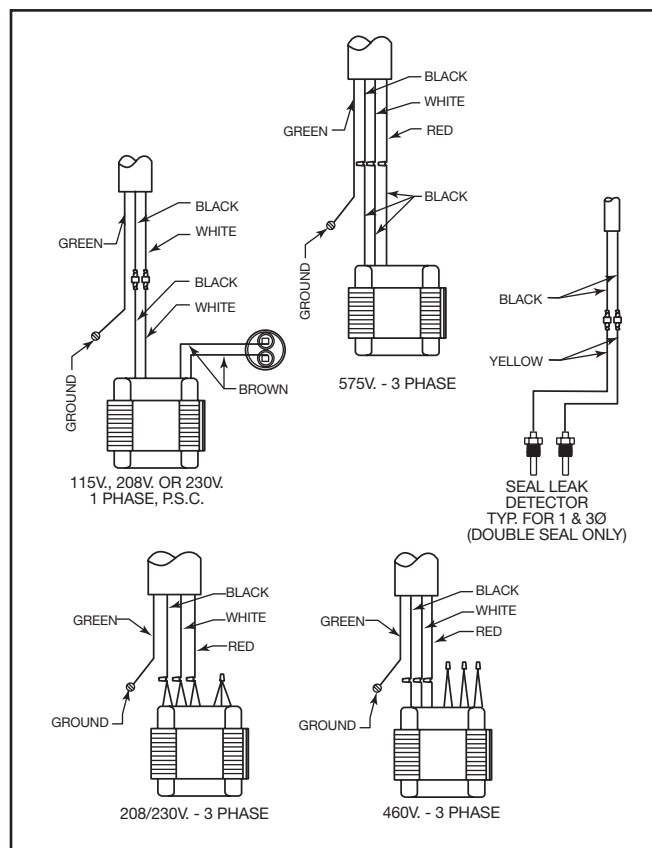
- (3) Hold impeller and unscrew impeller locking screw. Turn counterclockwise to loosen.
- (4) Pry off seal bellows and ceramic seat. Break seats if necessary to get out since they must be replaced with new parts.
- (5) NEVER USE OLD SEAL PARTS. USE ONLY COMPLETELY NEW SEALS. (Do not use seal spring retainer plate on single seal pump or lower seal of double seal pump.)
- (6) For single seal pumps or if only replacing the lower seal of a double seal pump, it is not necessary to disassemble further. On a double seal pump, it is not necessary to drain oil out of the motor housing, just the seal housing.
- (7) On a double seal pump, to remove the upper seal, remove four bolts holding the bottom plate and remove bottom plate.



- (8) Remove snap ring with snap ring pliers. Pry off upper seal bellows and ceramic seat.

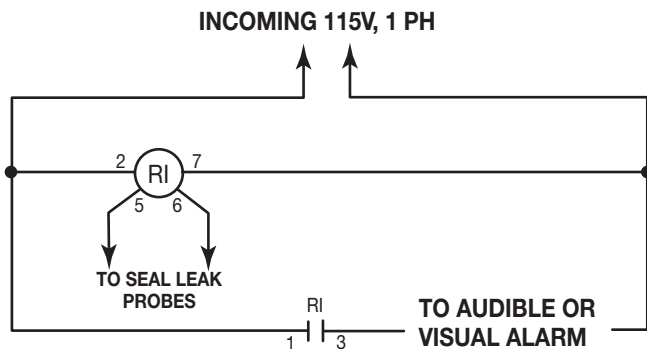
- (9) If no water has entered motor housing (check winding with ohmmeter or megger) wipe seal chambers thoroughly and replace seals. (Use seal retainer plate on upper seal only; do not use on lower seal.) Clean seal faces and use light on face before installing bellows part of seal.
- (10) Check HUVA cup seal in volute case inlet. If worn, replace.
- (11) Be sure tetraseal gasket is in position (replace if worn) and reassemble.
- (12) Replace oil in motor housing and seal chamber. Use only Myers submersible oil.
- (13) Be sure pump turns freely before connecting to power. After connecting, check for proper rotation noted under "Stator Replacement".

WIRING DIAGRAM



3 PHASE DUAL VOLTAGE WINDING

VOLTAGE	LEADS			
	BLACK	WHITE	RED	TOGETHER
208 & 230	1 & 7	2 & 8	3 & 9	4 & 5 & 6
460	1	2	3	4 & 7, 5 & 8, 6 & 9



MOISTURE SENSOR SEAL PROBE CIRCUIT

Relay - SSAC Inc. #LLC44A5A

Socket - Standard 8-pin plug-in type

If Myers panel is used see below.

Pumps: ME33D-11,
ME50D-11,
ME75D-11

Required Panel:

CMEP(SL)-11S, -11SW, -11D, or -11DW

Pumps: ME33D-01, ME33D-21,
ME50D-01, ME50D-21,
ME75D-01, ME75D-21,
ME100D-01, ME100D-21,
ME150D-01, ME150D-21,
MWH50D-01, MWH50D-21,
MW100D-01, MW100D-21,
MW150D-01, MW150D-21,
MW200D-01, MW200D-21

Required Panel:

CMEP(SL)-21S, -21SW, -21D, or -21DW

Pumps: ME33D-03, ME33D-23,
ME50D-03, ME50D-23,
ME75D-03, ME75D-23,
ME100D-03, ME100D-23,
ME150D-03, ME150D-23,
MWH50D-03, MWH50D-23,
MW100D-03, MW100D-23,
MW150D-03, MW150D-23,
MW200D-03, MW200D-23

Required Panel:

CMEP(SL)-23S, -23SW, -23D, or -23DW

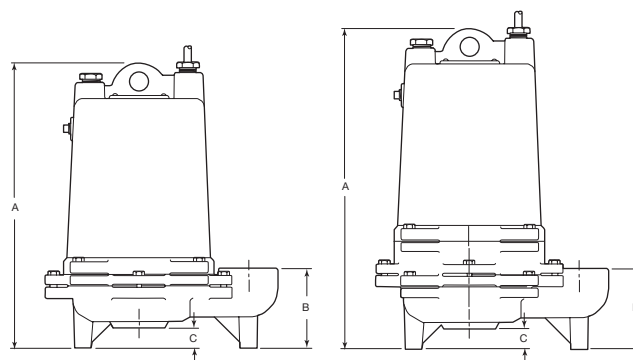
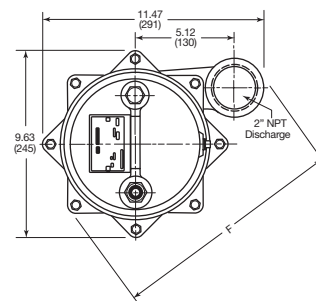
Pumps: ME33D-43,
ME50D-43,
ME75D-43,
ME100D-43,
ME150D-43,
MWH50D-43,
MW100D-43,
MW150D-43,
MW200D-43

Required Panel:

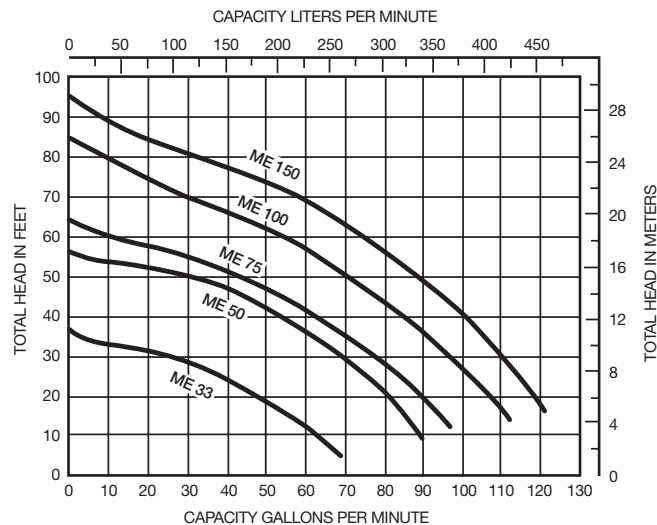
CMEP(SL)-43S, -43SW, -43D, or -43DW

ME SERIES DIMENSIONS

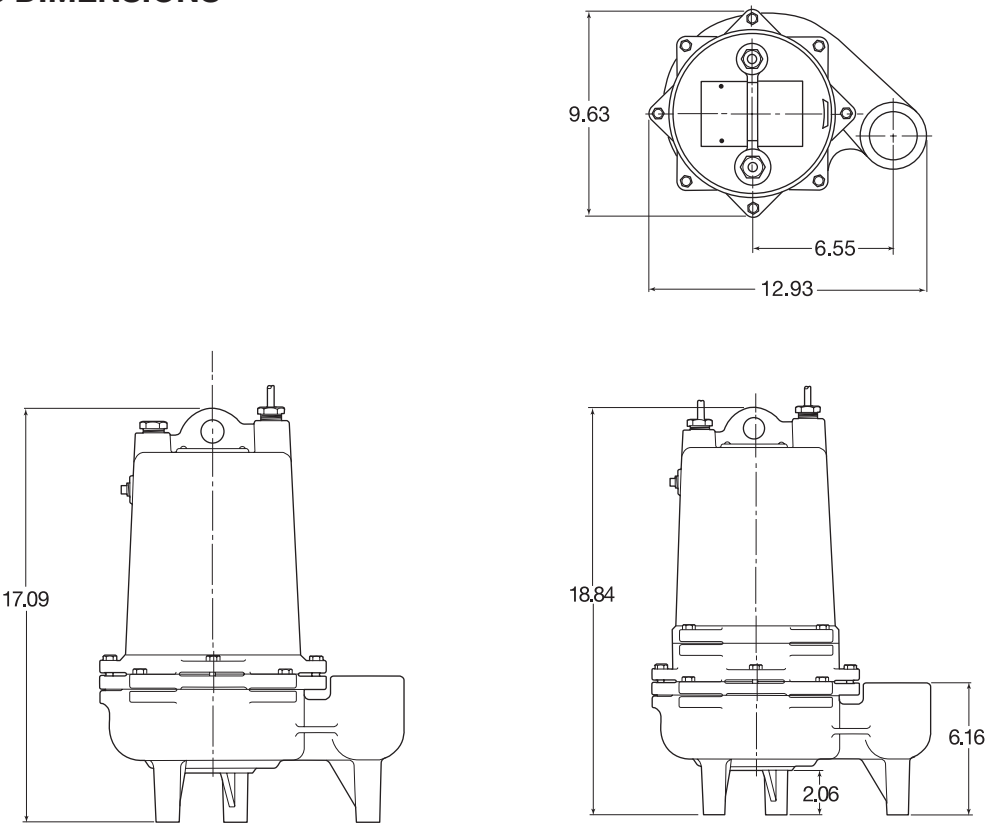
Model Series	Inches (millimeters)			
	A	B	C	F
ME33S & ME50S	16.8 (427)	4.09 (104)	1.03 (26)	12.13 (308)
ME33D & ME50D	18.6 (472)	4.09 (104)	1.03 (26)	12.13 (308)
ME75S, ME100S, ME150S	16.8 (427)	4.0 (102)	1.06 (27)	12.5 (318)
ME75D, ME100D, ME150D	18.6 (472)	4.0 (102)	1.06 (27)	12.5 (318)



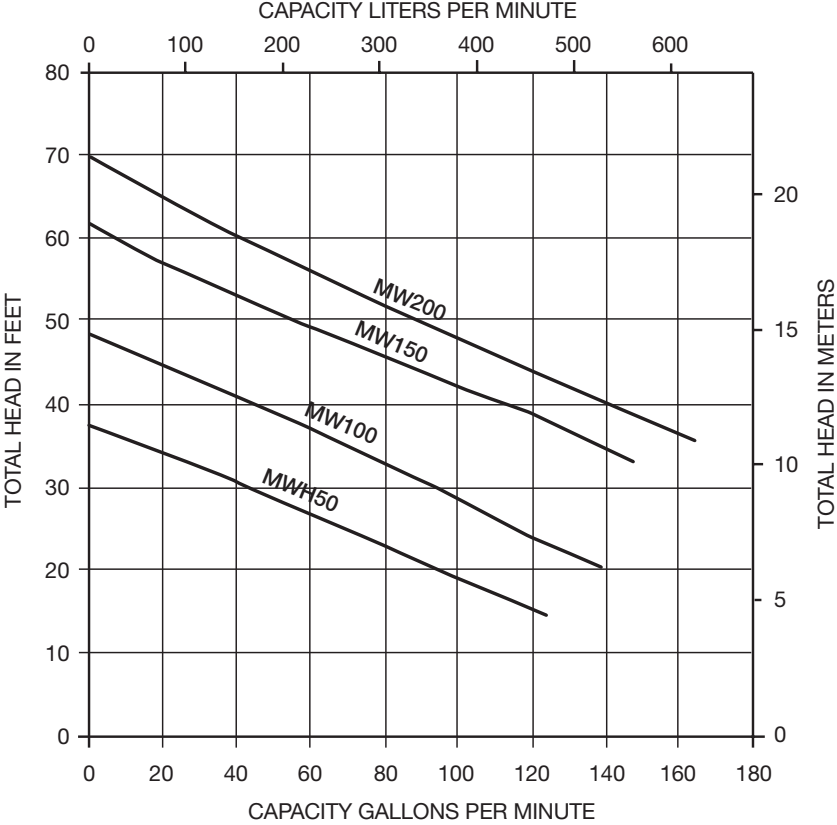
ME PERFORMANCE CURVE



MW SERIES DIMENSIONS



MW PERFORMANCE CURVE



MOTOR DATA CHART

H.P.	SPEED	VOLTS	PHASE	STACK HEIGHT	WINDING RESISTANCE IN OHMS			MAX. AMPS	LOCKED ROTOR AMPS
					MAIN BLACK TO WHITE	START - 1Ø BRN. TO BRN. OR PURPLE	WHITE TO RED		
						BLACK TO RED - 3Ø			
ME SERIES									
1/3	3450	115	1	1-1/4	2.4	20.5	-	8.4	13.5
1/3	3450	208/230	1	1-1/4	11.4	7.0	-	4.7/4.2	6.7
1/3	3450	208/230	3	1-1/4	15.8	15.8	15.8	2.4/2.2	10.8
1/3	3450	460	3	1-1/4	63.2	63.2	63.2	1.1	5.4
1/3	3450	575	3	1-1/4	98.8	98.8	98.8	0.9	4.3
1/2	3450	115	1	1-5/8	.9/8	14.7	-	12.1	29.6
1/2	3450	208	1	1-5/8			-	6.7	16.5
1/2	3450	230	1	1-5/8	9.8	19.7	-	6.0	15.0
1/2	3450	208/230	3	1-5/8	11.3	11.3	11.3	3.5/3.2	12.8
1/2	3450	460	3	1-5/8	45.4	45.4	45.4	1.6	6.4
1/2	3450	575	3	1-5/8	71.0	71.0	71.0	1.3	5.1
3/4	3450	115	1	2-1/4	.85	4.9	-	13.8	30.4
3/4	3450	208/230	1	2-1/4	4.5	12.0	-	7.6/6.9	16.2
3/4	3450	208/230	3	2	7.6	7.6	7.6	5.2/4.7	20.2
3/4	3450	460	3	2	30.1	30.1	30.1	2.3	10.1
3/4	3450	575	3	2	47.0	47.0	47.0	1.9	8.1
1	3450	208	1	2-3/4			-	10.3	21.0
1	3450	230	1	2-3/4	3.0/2.6	16/14	-	9.3	19.0
1	3450	208/230	3	2-1/2	5.3	5.3	5.3	6.6/6.0	29.0
1	3450	460	3	2-1/2	21.2	21.2	21.2	3.0	14.5
1	3450	575	3	2-1/2	33.1	33.1	33.1	2.4	11.6
1-1/2	3450	208	1	2-3/4			-	14.1	
1-1/2	3450	230	1	2-3/4	2.4	12.0	-	12.8	23.0
1-1/2	3450	208/230	3	2-3/4	4.5	4.5	4.5	8.8/8.0	30.0
1-1/2	3450	460	3	2-3/4	16.0	16.0	16.0	4.0	15.0
1-1/2	3450	575	3	2-3/4	25.0	25.0	25.0	3.2	12.0
MW SERIES									
1/2	3450	208	1	2-1/4	4.5	12.0	-	7.6	16.2
1/2	3450	230	1	2-1/4	4.5	12.0	-	6.9	16.2
1/2	3450	208	3	2	7.6	7.6	7.6	5.2	20.2
1/2	3450	230	3	2	7.6	7.6	7.6	4.7	20.2
1/2	3450	460	3	2	30.1	30.1	30.1	2.3	10.1
1/2	3450	575	3	2	47.0	47.0	47.0	1.9	8.1
1	3450	208	1	2-3/4	2.2	11.5	-	10.3	21.0
1	3450	230	1	2-3/4	2.8	15.0	-	9.3	19.0
1	3450	208	3	2-1/2	5.3	5.3	5.3	6.6	29.0
1	3450	230	3	2-1/2	5.3	5.3	5.3	6.0	29.0
1	3450	460	3	2-1/2	21.2	21.2	21.2	3.0	14.5
1	3450	575	3	2-1/2	33.1	33.1	33.1	2.4	11.6
1-1/2	3450	208	1	2-3/4	2.1	9.3	-	14.8	39.9
1-1/2	3450	230	1	2-3/4	1.6	7.4	-	12.8	33.4
1-1/2	3450	208	3	2-3/4	4.5	4.5	4.5	7.7	30.0
1-1/2	3450	230	3	2-3/4	4.5	4.5	4.5	7.0	30.0
1-1/2	3450	460	3	2-3/4	18.0	18.0	18.0	3.5	15.0
1-1/2	3450	575	3	2-3/4	28.0	28.0	28.0	2.8	12.0
2	3450	208	1	2-3/4	2.1	9.3	-	15.3	39.9
2	3450	230	1	2-3/4	1.6	7.4	-	13.1	33.4
2	3450	208	3	2-3/4	4.5	4.5	4.5	8.5	30.0
2	3450	230	3	2-3/4	4.5	4.5	4.5	7.7	30.0
2	3450	460	3	2-3/4	18.0	18.0	18.0	3.9	15.0
2	3450	575	3	2-3/4	28.0	28.0	28.0	3.1	12.0

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal grey lines across its entire surface, typical of notebook or primary writing paper. There are no margins, text, or other markings present.

STANDARD LIMITED WARRANTY

Myers warrants its products against defects in material and workmanship for a period of 12 months from the date of shipment from Myers or 18 months from the manufacturing date, whichever occurs first - provided that such products are used in compliance with the requirements of the Myers catalog and technical manuals for use in pumping raw sewage, municipal wastewater or similar, abrasive free non-corrosive liquids.

During the warranty period and subject to the conditions set forth, Myers, at its discretion, will repair or replace to the original user, the parts which prove defective in materials and workmanship. Myers reserves the right to change or improve its products or any portions thereof without being obligated to provide such a change or improvement for prior sold and/or shipped units.

Start-up reports and electrical schematics may be required to support warranty claims. Warranty is effective only if Myers authorized control panels are used. All seal fail and heat sensing devices must be hooked up, functional and monitored or this warranty will be void. Myers will only cover the lower seal and labor thereof for all dual seal pumps. Under no circumstance will Myers be responsible for the cost of field labor, travel expenses, rented equipment, removal/reinstallation costs or freight expenses to and from the factory or an authorized Myers service facility.

This limited warranty will not apply: (a) to defects or malfunctions resulting from failure to properly install, operate or maintain the unit in accordance with the printed instructions provided; (b) to failures resulting from abuse, accident or negligence; (c) to normal maintenance services and parts used in connection with such service; (d) to units which are not installed in accordance with applicable local codes, ordinances and good trade practices; (e) if the unit is moved from its original installation location; (f) if unit is used for purposes other than for what it is designed and manufactured; (g) to any unit which has been repaired or altered by anyone other than Myers or an authorized Myers service provider; (h) to any unit which has been repaired using non factory specified/OEM parts.

Warranty Exclusions: MYERS MAKES NO EXPRESS OR IMPLIED WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. MYERS SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE.

Liability Limitation: IN NO EVENT SHALL MYERS BE LIABLE OR RESPONSIBLE FOR CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES RESULTING FROM OR RELATED IN ANY MANNER TO ANY MYERS PRODUCT OR PARTS THEREOF. PERSONAL INJURY AND/OR PROPERTY DAMAGE MAY RESULT FROM IMPROPER INSTALLATION. MYERS DISCLAIMS ALL LIABILITY, INCLUDING LIABILITY UNDER THIS WARRANTY, FOR IMPROPER INSTALLATION. MYERS RECOMMENDS INSTALLATION BY PROFESSIONALS.

Some states do not permit some or all of the above warranty limitations or the exclusion or limitation of incidental or consequential damages and therefore such limitations may not apply to you. No warranties or representations at any time made by any representatives of Myers shall vary or expand the provision hereof.



1101 Myers Parkway
Ashland, Ohio 44805-1969
419-289-1144
www.femyers.com

START-UP REPORT

Distributor: _____ Order No.: _____
Installing Contractor: _____ Phone: _____
Sales Contact: _____ Phone: _____
Customer: _____
Location: _____

1. SYSTEM INFORMATION

Size of Wet Well: _____ Manufacturer: _____
Discharge from Bottom of Basin: _____ Discharge Location: _____
Inlet from Bottom of Basin: _____ Inlet Location: _____
Type of Check Valves: _____ Type of Piping: _____
Does System Have Suction Gauges? ☐ Yes ☐ No Suction Pressure Reading: _____
Does System Have Discharge Gauges? ☐ Yes ☐ No Discharge Pressure Reading: _____
Liquid Being Pumped: _____ Temperature (F°): _____ Pct. of Solid (%): _____
Is a Sketch or Photograph of System Available? ☐ Yes ☐ No *If So, Please Attach.*
Any Additional Comments on System: _____

2. ELECTRICAL INFORMATION

Control Panel Part Number: _____ Panel Rated Amps: _____
Manufacturer: _____ Voltage: _____ Phase: _____
Heater Size: _____ Location of Panel to Wet Well: _____
Incoming Line Voltage: _____ Actual? _____
Voltage to Pumps: _____ Actual? _____
Type of Junction Box: _____ Manufacturer of Junction Box: _____
Are Floats Installed in Wet Well? ☐ Yes ☐ No Are Floats Set to Engineer's Specs? ☐ Yes ☐ No
Are Floats Wired for Proper Sequencing? ☐ Yes ☐ No Are Heat Sensors Hooked Up? ☐ Yes ☐ No
Is the Seal Leak Detection Hooked Up? ☐ Yes ☐ No
Any Additional Comments on Electrical: _____

3. PUMP INFORMATION

Type of Pump: _____ Serial Number of Pump: _____
Voltage of Pump: _____ Phase: _____ RPM: _____ Amps: _____
Impeller Size: _____ C.O.S. TDH: _____ GPM: _____
Voltage Supplied from Panel: _____ Actual? _____
Actual Amperage (All Phases): Phase 1 Amps: _____ Phase 2 Amps: _____ Phase 3 Amps: _____
Define the Rotation of the Pump: ☐ Clockwise ☐ Counterclockwise
Method Used to Check Rotation: ☐ Viewed from the Top ☐ Viewed from the Bottom
Any Additional Comments on Pumps: _____

4. ACKNOWLEDGE

Acknowledge that all information is accurate and proper procedures have been followed.

Customer: _____ Date: _____
Start-up Technician: _____ Date: _____

Send to Warranty Manager, 1101 Myers Parkway, Ashland, OH 44805

or Fax to 419-207-3344

or email to startupreport@femyers.com

or submit online at <http://forms.pentairliterature.com/startupform/startupform.asp?type=m>