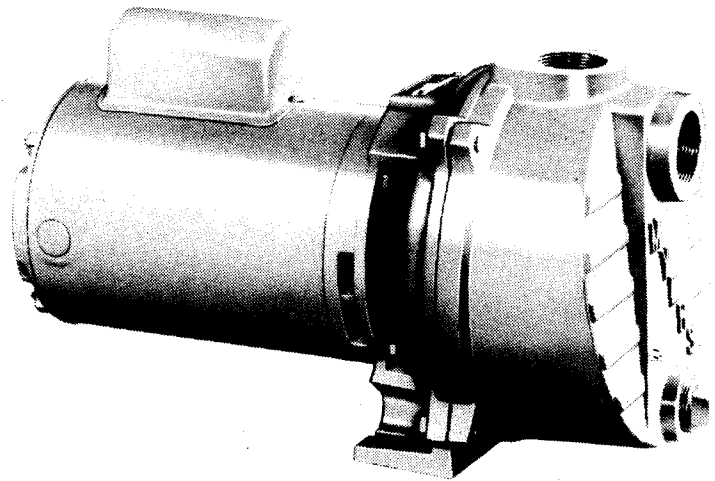


Quick Prime Installation, Maintenance & Operating Instructions



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Myers[®]

13800A685

WARNING! IMPORTANT SAFETY INSTRUCTIONS! READ CAREFULLY BEFORE INSTALLATION

⚠ WARNING



Hazardous voltage can shock, burn or cause death.

FAILURE TO FOLLOW THESE INSTRUCTIONS AND COMPLY WITH ALL CODES MAY CAUSE SERIOUS BODILY INJURY AND/OR PROPERTY DAMAGE.

⚠ 1) Before installing or servicing your pump, **BE CERTAIN THE**

PUMP POWER SOURCE IS TURNED OFF AND DISCONNECTED.

⚠ 2) All installation and electrical wiring must adhere to state and local codes. Check with appropriate community agencies, or contact your local electrical and pump professionals for help.

⚠ 3) **CALL AN ELECTRICIAN WHEN IN DOUBT.** Pump must be connected to a separate electrical circuit directly from the entrance box. There must be an appropriately sized fuse or circuit breaker in this line. Tying into existing circuits may cause circuit overloading, blown fuses, tripped circuit breakers, or a burned up motor.

⚠ 4) Do not connect pump to a power supply until the pump is grounded. For maximum safety, a ground fault interrupter should be used. **CAUTION: FAILURE TO GROUND THIS UNIT PROPERLY MAY RESULT IN SEVERE ELECTRICAL SHOCK.**

⚠ 5) **WARNING:** Reduced risk of electric shock during operation of this pump requires the provision of acceptable grounding:

a) If the means of connection to the supply-connection box is other than grounded metal conduit, ground the pump back to the service by connecting a copper conductor, at least the size of the circuit conductors supplying the pump, to the grounding screw provided within the wiring compartment.

b) This pump is provided with a means for grounding. To reduce the risk of electric shock from contact with adjacent metal parts, bond supply box to the pump-motor-grounding means and to all metal parts accessible including metal discharge pipes, and the like, by means of a clamp, a weld, or both if necessary, secured to the equipment-grounding terminal.

⚠ 2) The voltage and phase of the power supply must match the voltage and phase of the pump.

⚠ 3) Do not use an extension cord; splices must be made with an approved splice kit. Above ground joints must be made in an approved junction box.

⚠ 4) Do not work on this pump or switch while the power is on.

⚠ 5) Never operate a pump with a frayed or brittle power cord, and always protect it from sharp objects, hot surfaces, oil and chemicals. Avoid kinking the cord.

⚠ 6) Never service a motor or power cord with wet hands or while standing in or near water or damp ground.

⚠ 7) The three phase units must be wired by a qualified electrician, using an approved starter box and switching device.

⚠ 8) Do not use this pump in or near a swimming pool.

⚠ 9) Single phase motors are equipped with automatic resetting thermal protectors. The motor may restart unexpectedly causing the leads to energize or pump to turn. Three phase motors should be protected by proper, thermal and amperage protection. (Check local codes.)

⚠ 10) Check for nicks in the wire and pump insulation by using an ohm meter and checking resistance to ground before installing the pump and after installing the pump. If in doubt on the proper procedure check with a qualified electrician.

⚠ 11) Do not pump gasoline, chemicals, corrosives, or flammable liquids; they could ignite, explode, or damage the pump, causing injury and voiding the warranty.

⚠ WARNING



Hazardous fluids can cause fire, burns or death.

⚠ 17) Do not run this pump with the discharge completely closed. This will create superheated water, which could damage the seal, and shorten the life of the motor. This superheated water could also cause severe burns. Always use a pressure relief valve, set below the rating of the tank or system.

CAUTION!

⚠ 18) The following may cause severe damage to the pump and void warranty. It could also result in personal injury:

- Running the pump dry.
- Failure to protect the pump from below freezing temperatures.
- Running the pump with the discharge completely closed.
- Pumping chemicals or corrosive liquids.

⚠ 23) Never work on the pump or system without relieving the internal pressure.

⚠ 24) Do not pump water above 120° Fahrenheit.

⚠ 25) Never exceed the pressure rating of any system component.

GENERAL INSTALLATION INSTRUCTIONS

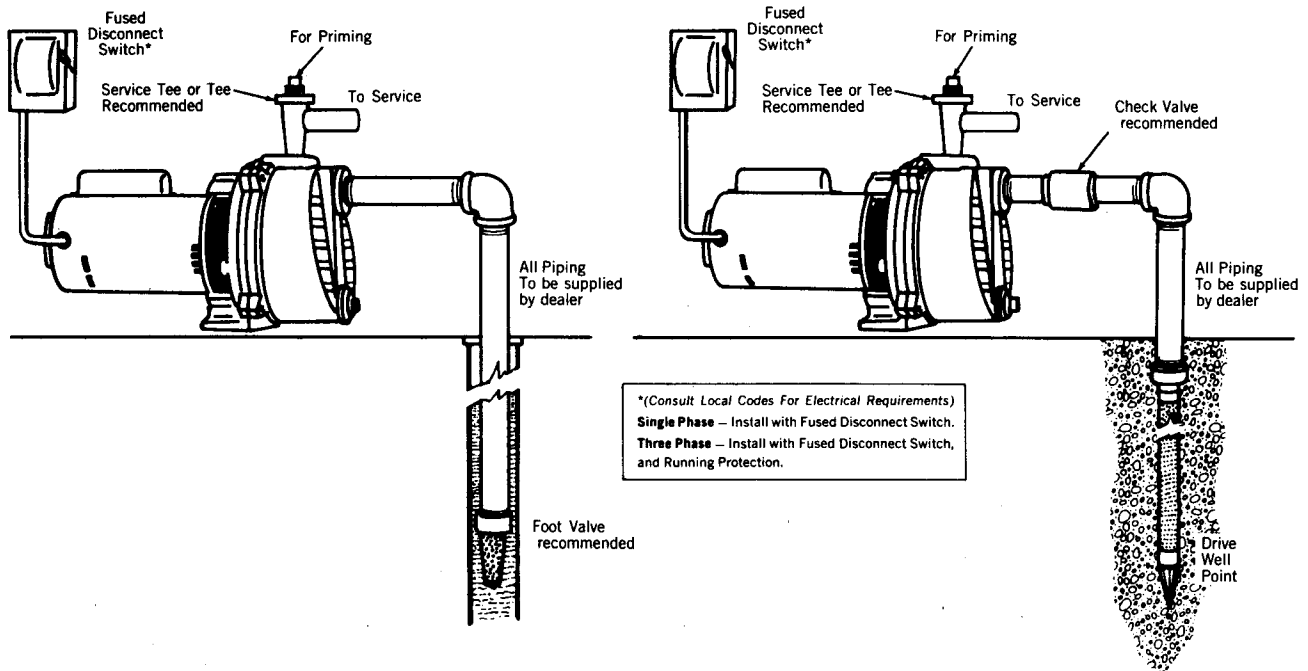
(Read Complete Instructions Carefully Before Starting Installation.)

The pump is designed to operate at total suction lifts not exceeding 25 feet.
(See selection chart.)

Keep these instructions for future service and operation reference.

SHIPPING DAMAGE: The pump carries a one-year warranty against defects in materials and workmanship. This warranty, however, does not apply to parts damaged in transit. Check the shipment carefully and report damage or shortages to the transportation company or your supplier immediately.

LOCATION: The pump should be located in an easily accessible place as close to the liquid source as possible. It should be installed in a clean, dry, and well ventilated place allowing room to inspect and service the unit. If located in a pit, the pit should be protected against flooding.



SUCTION PIPING

Do not exceed 25' total suction lift. If on an installation, excessive total suction lifts are encountered, do one or more of the following to correct this condition:

1. Locate pump nearer to liquid source.
2. Increase pump suction pipe size.
3. Simplify suction piping by elimination of valves and fittings where possible.
4. Decrease pump capacity by means dictated by the type of installation involved.

The pump case is tapped for 1 1/2" pipe. Smaller pipe can be used but at a reduction in the capacity indicated in the performance table. If the suction piping on the 3 HP unit is enlarged to 2" pipe at the elbow, the capacity will increase. On all units, the suction inlet should be at least 3' below the liquid surface at all times.

DISCHARGE PIPING

The pump case is tapped for 1 1/2" pipe. Larger or smaller pipe may be used depending upon the installation.

VOLTAGE DATA

Single phase motors as received will be wired for 230V operation. (If 115V operation is desired, alter motor connections per instructions as found on motor.) Note: The 2 and 3 HP single phase motors may be 230V only.

All three phase motors are 230/460V units. Insure that the motor connections are correct for the voltage available. (Instructions will be found on motor.)

The voltage available at the motor must be within 10% of the rated voltage. For offset installations be sure that adequate wire size is used for the size motor involved.

MOTOR GROUNDING INSTRUCTIONS

WARNING Reduced risk of electric shock during operation of this pump requires the provision of acceptable grounding. **Caution: Failure to ground this unit properly may result in severe electrical shock.** If the means of connection to the supply-connection box is other than grounded metal conduit, ground the pump back to the service by connecting a copper conductor, at least the size of the circuit conductors supplying the pump, to the grounding screw provided within the wiring compartment. NOTE: National Electric Code requires pumps be grounded at installation.

MOTOR PROTECTION

All single phase motors have built-in thermal protection, for all voltages.

Three phase motors do not have built-in thermal protection. It is highly recommended that a properly sized magnetic starter be used with all three phase motors.

All motors (single and three phase) should be equipped with a correctly fused disconnect switch to provide protection. Consult local or national electric codes for proper fuse protection based on motor data chart below.

QP MOTOR DATA

HP	PHASE	VOLTS	CODE LETTER	MAX-AMPS	LOCKED ROTOR AMPS
¾	1	115	K	13.40	52.0
	1	230	K	6.70	2.6
	3	200	M	4.00	21.8
	3	230	M	3.50	19.0
1	3	460	M	1.75	9.5
	1	115	J	15.80	68.0
	1	230	J	7.90	34.0
	3	200	L	4.60	28.8
1½	3	230	L	4.00	25.0
	3	460	L	2.00	12.5
	1	115	M	20.20	96.0
	1	230	M	10.10	48.0
2	3	200	H	6.60	31.0
	3	230	H	6.00	27.0
	3	460	H	3.00	13.5
	1	115	J	25.20	126.0
3	1	230	J	12.60	63.0
	3	200	H	7.70	39.1
	3	230	H	7.00	34.0
	3	460	H	3.50	17.0
3	1	115	G	33.20	159.0
	1	230	G	16.60	79.0
	3	200	H	10.10	60.9
	3	230	H	9.60	53.0
	3	460	H	4.80	26.5

ROTATION DATA

The pump must run in the direction of the arrow on the pump bracket – clockwise when facing the end opposite the motor shaft extension. All single phase motors are single rotation and leave the factory with the proper rotation. Three phase motors can run in either direction. At the time of installation, momentarily close the entrance switch to determine rotation; if rotation is not correct, interchange any two of the three motor leads which will reverse the rotation.

BEARING LUBRICATION DATA

If required, the instructions for maintenance lubricating of the motor bearings will be found on the individual motors.

INITIAL PRIMING

Do Not Run Pump Dry

The pump must be filled with water for the initial start. Failure to do so will result in damage to the mechanical shaft seal.

The unit is so designed that after the initial fill, the unit will automatically reprime with or without a check or foot valve in the suction line.

Fill the pump with liquid for the initial start

through the discharge opening in the top of the case. This can be done either before the discharge piping is installed or it is recommended to install

a tee above the pump and using the top of the tee for priming. Pour in approximately 3½ quarts of water. Note: It is not necessary to completely fill the pump case; in fact, if no check or foot valve is used in the suction line, it is impossible to do so. Install the discharge piping or pipe plug, if a tee is used. It is suggested that a good grade of pipe thread compound be used to eliminate the possibility of air or water leaks in the piping. The unit can now be started.

CHECK OR FOOT VALVE

It is recommended that either a check or foot valve be used in the suction line on permanent installations. This will result in instant water delivery upon starting, therefore eliminating the priming cycle time.

If the pump is to be used in conjunction with a pressure tank then a check or foot valve must be used.

FLUSHING

The unit can be back flushed periodically to remove any sand or debris that may have been pulled into the pump from the liquid source. It is not necessary to remove any piping if a tee is installed above the pump.

To back flush the unit, remove the plug in the tee (or the discharge piping if a tee is not used) and the 1" pipe plug from the lower front face of the case. Pour water into the top opening until the liquid coming from the lower front opening is clean. It is possible to scrape out any debris from the bottom of the case by reaching a wire or narrow scraper in the lower tapping in the pump case. Reinstall all pipe plugs or piping. Before returning the pump to service, it will be necessary to reprime the pump.— See Initial Priming.

DRAINING PUMP

To drain the pump, remove the plug from the discharge tee and the 1" pipe plug from the lower front face of the case. If the unit is to be inoperative for an extended period of time it is suggested that the unit be drained. Suction line should also be drained to prevent freezing.

Remove the fuses from the entrance switch to insure that the unit is not inadvertently started while drained, as damage to the shaft seal would occur.

SUCTION SCREEN

The liquid being pumped should be screened properly to prevent debris from being taken into the system.

SERVICE GUIDE

NO WATER DELIVERED

- a. Pump not properly primed. (See Priming Instructions.)
- b. Discharge system head too great; in this case, a pressure gauge at the pump discharge will show shut off pressure. (See Rating Table.)
- c. Suction lift too great; check with vacuum gauge. (See Suction Piping.) Check or foot valve, if used, may be completely plugged or suction piping may be completely plugged.
- d. Air leak in suction piping.
- e. Wrong motor rotation. (See Motor Rotation.)
- f. Shaft seal leaking under priming conditions.
- g. Motor not up to speed; check for incorrect voltage. (See Motor Voltage.)
- h. Plugged impeller.

NOT ENOUGH WATER OR PRESSURE

- a. Air leak in suction piping.
- b. Motor not up to speed; check for incorrect voltage or low voltage. (See Motor Voltage.)
- c. Discharge system head too great.
- d. Impeller, suction pipe, check or foot valve partially plugged.
- e. Wrong motor rotation. (See Motor Rotation.)
- f. Suction lift too great. (See Suction Piping.)
- g. Insufficient submergence of suction pipe. (Suction pipe inlet should be at least 3 feet below the liquid surface at all times.)
- h. Pump too small for installation involved. (Check Rating Table.)
- i. Suction piping too small causing excessive total suction lift.
- j. Air or gas entrained in liquid.
- k. Worn impeller or diffuser.

PUMP LOSES PRIME AFTER STARTING

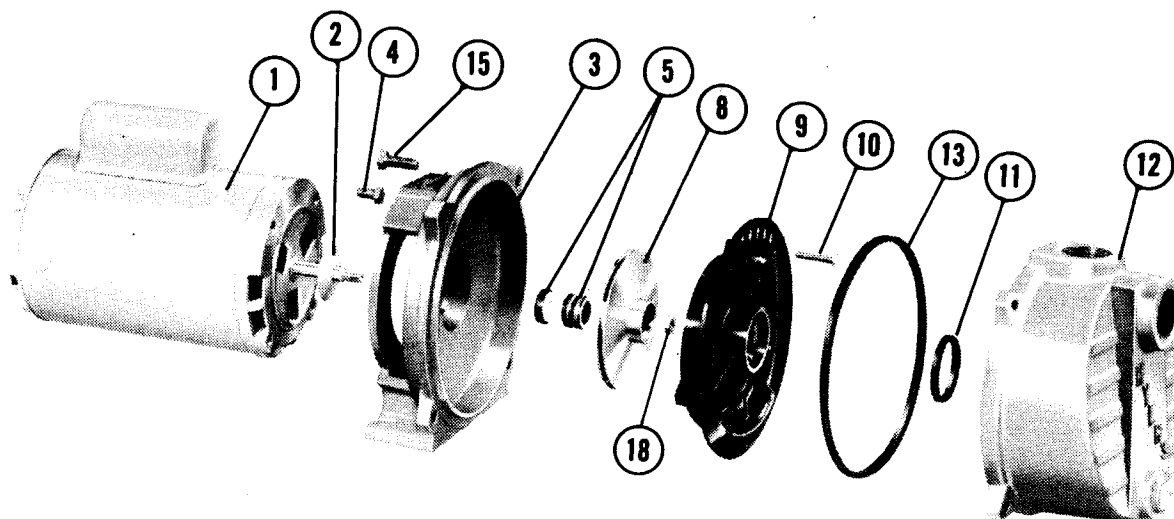
- a. Air leak in suction piping.
- b. Total suction lift too great. (See Suction Piping.)
- c. Insufficient submergence of suction pipe; check pumping water level. (The suction pipe inlet should be at least 3 feet below the liquid surface at all times.)

MOTOR OVERHEATS

- a. Check rotating element to insure that it turns freely.
- b. Low voltage at the motor. (See Motor Voltage and Motor Wiring.) Check electrical connections to insure tight contact.
- c. Poor ventilation. (See Location.)

PUMP VIBRATES OR IS NOISY

- a. Insufficient pump foundation.
- b. Excessive total suction lift.
- c. Bent shaft or worn motor bearings.
- d. Impeller partially clogged.



(THREE PHASE UNIT AS SHOWN)

The complete disassembly and reassembly instructions have been itemized for simplicity's sake.

At the discretion of the mechanic servicing the unit only those steps required to reinstate the unit to original performance need be done.

The "exploded" view above indicates all items referred to in these instructions.

Should repair parts be ordered, please furnish:

1. The part name (as indicated on the accompanying drawing).
2. The quantity required and the item part number.
3. The unit catalog and serial numbers as shown on the pump name plate.
4. The motor horsepower and phase as indicated on the motor name plate.

PUMP DISASSEMBLY INSTRUCTIONS

It is not necessary to remove the suction and discharge piping as the pump case (12) is designed so that no wear would occur which would necessitate replacing this part.

1. Drain the pump of its liquid charge. (See Draining Pump Instructions.)
2. Open the power supply switch contacts and remove fuses.
3. Disconnect the electrical wiring from the motor (1).
4. Remove the four cap screws (15) which secure the pump bracket (3) to the pump case (12).
5. The motor and bracket assembly can now be removed from the pump case by pulling horizontally away from the case. It may be necessary to use two screwdrivers — opposite each other — in the provided openings between the bracket and case bosses; pry the components apart. The motor and bracket assembly can now be taken to a more convenient location for disassembly if desired.
6. Remove the square rubber ring gasket (11) from the case inner neck.
7. Remove the three cap screws (10) that hold the diffuser in place and lift off diffuser (9).

8. If unit is three phase — hold impeller or hold the motor shaft with water pump pliers through a bracket window, and remove hex nut (18) located in the impeller eye.
9. Holding the motor shaft with pliers, through one of the bracket windows, unscrew (counter-clockwise) the impeller (8) (right hand threads).
10. The mechanical shaft seal components (5) can now be removed from the motor shaft and bracket respectively.
11. Remove the four cap screws (4) which secure the bracket to the motor; remove the bracket.
12. The deflector (2) can now be removed from the motor shaft.
13. Remove the square rubber ring gasket (13) from the bracket neck.

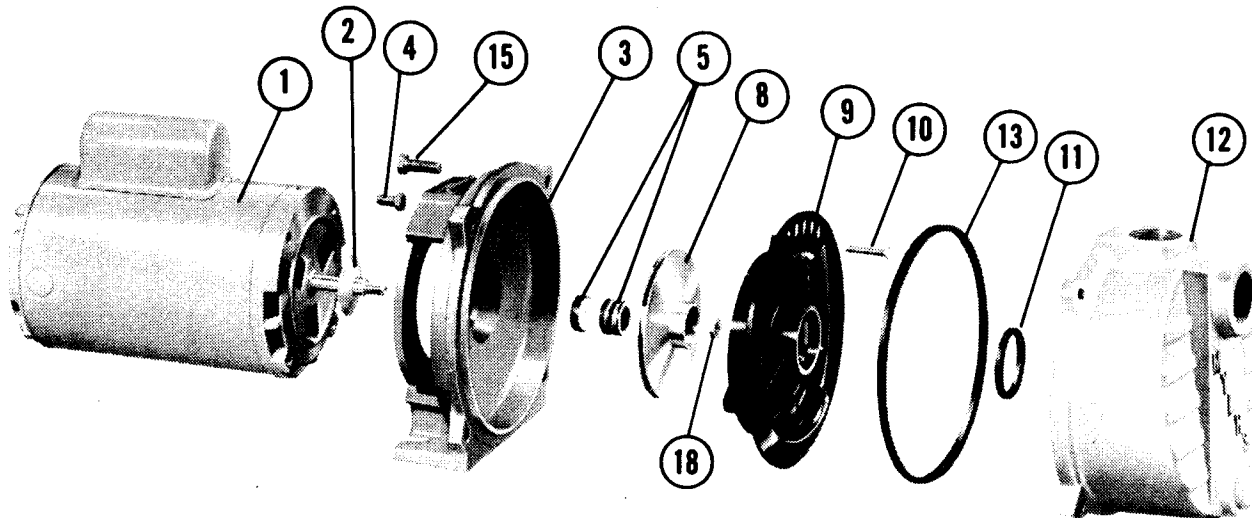
The pump is now completely dismantled into its component parts. Inspect pump parts and, if required, replace.

A new shaft seal should always be used when rebuilding a pump. All pump parts should be cleaned thoroughly before being reassembled.

PUMP ASSEMBLY INSTRUCTIONS

1. Slip deflector (2) onto the motor (1) shaft extension.
2. With motor in vertical position (shaft extension end up) place bracket onto motor face register.
3. Secure bracket to motor with four cap screws (4). Insure that the motor, when in operating position, has the shell air slots in the down position.
4. Place stationary shaft seal component (5) over pump shaft extension and seat into provided bracket bore. (Use finger pressure to press this seal component firmly and squarely until it bottoms.) Follow with the rotating seal component onto the motor shaft. Be sure the lapped sealing surface is toward the seal seat. The use of a light oil (SAE 10) on the rubber elements will facilitate assembly.
It should be emphasized that extreme cleanliness and care are required for proper seal assembly. Should the seal faces be damaged during assembly (cracked, scratched or chipped) the seal will surely leak during operation.
5. Screw the impeller (8) (right hand thread) onto the pump shaft extension until the impeller back hub butts the shaft shoulder. (The motor shaft can be held with pliers to prevent turning.)
6. If unit is three phase — install a $\frac{3}{16}$ -20 UNF Hex Jam Nut (18), 18-8 Stainless Steel (Myers Part No. 19109A70), onto the motor shaft after the impeller. Nut to be torqued

7. to 17 ft. lbs., if wrench is available. It is recommended that a locking type sealant be applied to the threads prior to assembly.
7. Place the diffuser (9) over the impeller with the diffuser volute face against the bracket, be sure the word "top" on the diffuser is in the proper position. Equally space three-.005 shims between the impeller hub and the diffuser I.D. (This will center the diffuser in relation to the impeller.) Assemble the three- $\frac{1}{4}$ " cap screws (10) and tighten alternately, so the diffuser is not pulled to one side. Snug up screws securely — do not overtighten. Remove the three shims and as the impeller is revolved it should turn freely. (Be sure the drain hole in the bottom of the diffuser is open and not plugged.)
8. Place gasket (13) over the bracket register diameter and position against the provided face.
9. Place gasket (11) over the inner neck in the pump case and place against the provided shoulder.
10. The assembly can now be re-assembled to the pump case.
11. Using four cap screws (15) secure bracket to case.
12. The motor wiring can now be connected and the unit reprimed. (See Priming Instructions.)
13. Install the previously removed fuses from the entrance switch and close the switch; the unit is now in operation again.



Catalog Numbers		H.P.	Discharge Pressure PSI	Capacity in G.P.H. for Discharge Pressure & Total Suction Lift Indicated				Pipe Sizes		Maximum Total Shutoff Head		1 & 3 Phase Approx. Wt. Lbs.
1 Phase	3 Phase			10 Ft.	15 Ft.	20 Ft.	25 Ft.	Suction	Disch.	Feet	PSI	
QP7	QP7-3	¾	20	2445	2290	2170	1995	1½"	1½"	105	45.5	58
			25	2145	2010	1855	1650					
			30	1845	1635	1390	1080					
			35	1295	905	510						
QP10	QP10-3	1	20	3075	2935	2785	2355	1½"	1½"	108	47	61
			25	2775	2610	2440	2245					
			30	2430	2250	2020	1755					
			35	1980	1660	1240	600					
QP15	QP15-3	1½	20	4300	4165	3805	3015	1½"	1½"	111	48	68
			25	3990	3750	3525	3015					
			30	3575	3300	3035	2700					
			35	3030	2620	2220	1495					
QP20	QP20-3	2	20	4735	4600	4230	3330	1½"	1½"	116	50	74
			25	4480	4290	4020	3330					
			30	4110	3815	3505	3180					
			35	3510	3175	2820	2400					
QP30	QP30-3	3	20	5580	5460	4920	3840	1½"	1½"	121	52	87
			25	5575	5460	4920	3840					
			30	5390	5135	4720	3840					
			35	4865	4400	3940	3420					
			40	4075	3550	2910	2250					
45	2875	1800										

Single phase units are dual voltage (115/230-v.) (2 & 3 hp. are 230-v. only)
 All units are loaded within the recommended service factor.
 Suction check or foot valve recommended but not required.
 Discharge pressures as shown are at the pump discharge.
 The maximum total head is at zero capacity.
 Charted capacities are based on pumping 60° F. water at sea level.

