

# **Myers®**

**Pentair Pump Group**

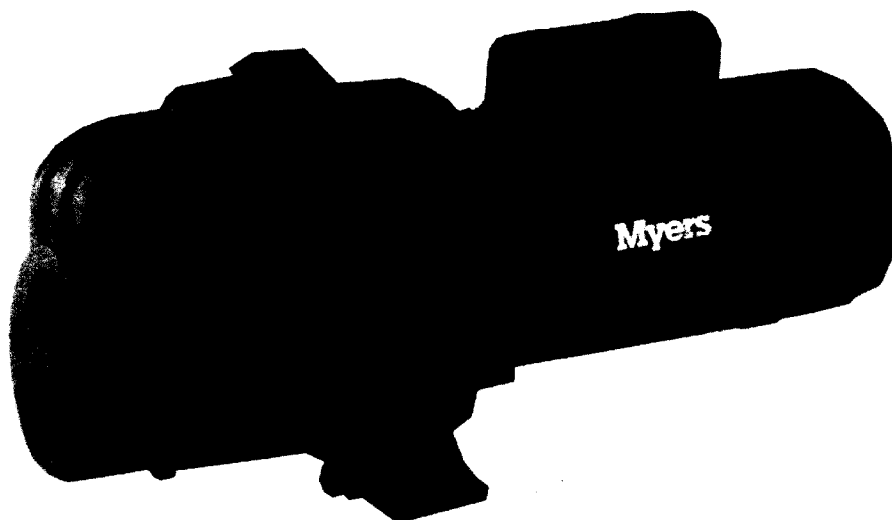
## **Two Stage Centrifugal**

**Safety Instructions**

**Operation and Maintenance Instructions  
and Parts List**

**(Models 2C100, 2C100PE, 2C150, 2C150PE, 2C200, 2C200PE)**

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**WARNING! IMPORTANT SAFETY INSTRUCTIONS! READ CAREFULLY BEFORE INSTALLATION.** This manual contains important information for the safe use of this product. Read this manual completely before using this product and refer to it often for continued safe product use. **DO NOT THROW AWAY OR LOSE THIS MANUAL.** Keep it in a safe place so that you may refer to it often.

**⚠ WARNING**



Hazardous voltage can shock, burn or cause death

**FAILURE TO FOLLOW THESE INSTRUCTIONS AND COMPLY WITH ALL CODES MAY CAUSE SERIOUS BODILY INJURY, DEATH 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.

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

⚠ 7) Do not use an extension cord; Above ground joints must be made in an approved junction box.

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

⚠ 9) 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.

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

⚠ 11) Do not use this pump in or near a swimming pool, pond, lake or river.

⚠ 12) Single phase motors are equipped with automatic resetting thermal protectors. The motor may restart unexpectedly causing the leads to energize or pump to turn.

⚠ 13) 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.

⚠ 14) 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.

⚠ 15) Do not run this pump with the discharge completely closed, as 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.

⚠ 16) 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.

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

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

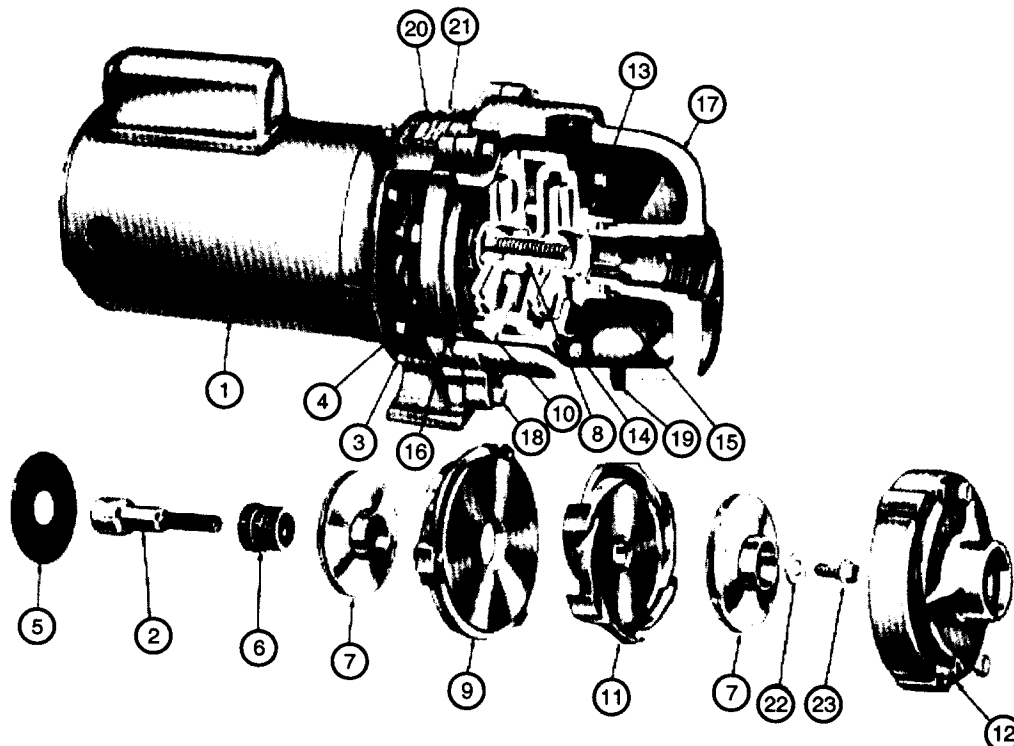
⚠ 19) Never exceed the pressure rating of any system component.

## 2C CENTRIFUGAL PUMP PARTS LIST

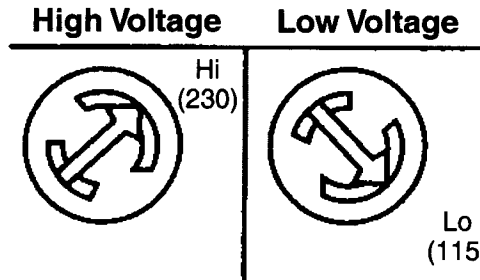
Catalog Number		2C100 2C100PE†		2C150 2C150PE†		2C200 2C200PE†	
Horsepower		1		1½		2	
Hertz		60		60		60	
Ref. No.	Description	No. Req.	Part No.	No. Req.	Part No.	No. Req.	Part No.
1	Motor - 3450 rpm, 1 ph, 230 volt	1	11578A000 (none for 2C100PE)	1	11708A000 (none for 2C150PE)	1	13229A000 (none for 2C200PE)
2	Shaft w/set screws long headless hex, electroplated, for shaft	1	14458A005	1	14458A005	1	14458A005
3	Bracket, motor	1	12523D001	1	14447D001	1	14447D001
4	Cap Screw, ¾"-16NC, 7/8" long	4	19101A008*	4	19101A008*	4	19101A008*
5	Deflector, rubber	1	05059A318	1	05059A318	1	05059A318
6	Rotary Seal, for shaft	1	21181A017	1	21181A017	1	21181A017
7	Impeller	2	14327B001	2	14573B000	2	14328A000
8	Spacer Sleeve	1	14489A000	1	14489A000	1	14489A000
9	Diffuser	1	14490C001	1	14491C001	1	14492C001
10	Gasket, diffuser	1	06470A021	1	06470A022	1	06470A023
11	Crossover, diffuser	1	14493C000	1	14494C000	1	14495C000
12	Diffuser Housing	1	14496C001	1	14497C001	1	14498C001
13	Cap Screw, ¼"-20NC, 1½" long	2	19099A014*	2	19099A014*	2	19099A014*
14	Cap Screw, ¼"-20NC, 2¾" long	3	19099A016*	3	19099A016*	3	19099A016*
15	"O" Ring, 1½" ID x 1¾" OD x 1/8" thick	1	05876A007	1	05876A007	1	05876A007
16	Gasket	1	05059A332	1	05059A354	1	05059A354
17	Case	1	14438D002	1	14448D002	1	14448D002
18	Cap Screw, ¾"-16NC x 1¼" long	4	19101A020*	4	19101A020*	4	19101A020*
19	Pipe Plug, 1/8" NPT	1	05022A004*	1	05022A004*	1	05022A004*
	Myers Emblem, vinyl	1	14742A000	1	14742A000	1	14742A000
20	Nameplate	1	19193A000	1	19193A000	1	19193A000
21	Drive Screw, nameplate	2	05160A001	2	05160A001	2	05160A001
22	Impeller Retaining Washer	1	23387A000	1	23387A000	1	23387A000
23	Socket Head Cap Screw, ¼"-28NF x ¾" long	1	06106A004*	1	06106A004*	1	06106A004*

† Models 2C100PE, 2C150PE and 2C200PE are pump end units only, do not contain motors.

\* Standard hardware items which can be purchased locally



**Inside Cover - Voltage selector at rear of motor.**  
Pull selector - rotate - reinsert.



Pump Model	HP	Volts	Name Plate Amps	Service Factor Amps	Locked Rotor Amps	Fast Acting Fuse	Slow Acting Fuse	Circuit Breaker	Max. Wire Length Using AWG Size			
									#14	#12	#10	#8
2C100	1	115	14.2	17.0	78	30	25	30	65	105	230	370
		230	7.1	8.5	39	15	15	15	260	400	920	1480
2C150	1½	115	15.8	19.8	95	40	25	30	50	80	125	200
		230	7.9	9.9	47	20	15	20	200	320	500	800
2C200	2	115	19.2	22.6	116	40	40	40	40	65	105	165
		230	9.6	11.3	58	20	20	25	160	260	420	660

## GENERAL INFORMATION

### 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.

### DRAINING PUMP

To drain the pump, remove the plug from the discharge tee and the ¼" 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.

## GENERAL SERVICING INSTRUCTIONS

### REPLACING MECHANICAL SEAL

1. The seal used on all units is  $\frac{3}{4}$ " size.
2. This seal is made in two parts.
  - a. Synthetic rubber bellows, stainless steel spring, drive ferrule with rubber ring and carbon seal ring.
  - b. Stationary ceramic seal ring mounted in synthetic rubber cup.
3. Always replace both bellows and stationary ceramic seat. **DO NOT USE OLD STATIONARY SEAT WITH NEW BELLOW'S SEAL.**
4. Old ceramic ring can be removed from housing by cracking with a chisel or screw driver without removing the pump shaft.
5. Housing and shaft must be clean and free of sand and dirt before replacing new seal. Wash parts with clean water.
6. Place stationary ceramic seat into housing. Press in with fingers only.
7. Place bellows unit on shaft, carbon ring toward ceramic seat, and press into position with fingers.
8. Do not use oil on seal faces as oil picks up dirt particles. Dirt on seal faces can cause failure.

### HOW TO DISMANTLE

1. All pump parts can be removed from case without disturbing piping.
2. Remove case bolts and pry bracket from pump.
3. Remove 3 bolts from diffuser housing.
4. Tighten two back-off screws to force housing from first stage diffuser. Work alternately on screws to force evenly without binding.
5. Hold pump shaft and unscrew first impeller. **(RIGHT HAND THREAD - CCW FACING IMPELLER TO REMOVE.)**
6. Remove first stage diffuser vane plate.

7. Hold pump shaft and unscrew second impeller. Use pliers, if necessary. File any plier cuts smooth on impeller eye surface. **(RIGHT HAND THREAD - CCW FACING IMPELLER TO REMOVE.)**
8. Seal can now be removed, if necessary.
9. If motor must be replaced, set shaft for seal spacing of  $\frac{23}{32}$ " from seal seat face to shank on shaft. (See Fig. 14).
10. When replacing housing casting always use new gasket between housing and first diffuser vane plate. Be sure holding pin in housing is correctly set to go between vane. This pin prevents diffuser from turning.
11. After pump is assembled and three holding screws are tightened, pump shaft must turn freely by hand before unit is placed in case.
12. If pump is not free, loosen three screws slightly and tap housing lightly until shaft turns freely, then retighten screws.
13. Rubber "O" ring must be in place in case before reassembling pump unit into case.
14. Replace case gasket if old one is torn or dried out.

### LUBRICATION

1. No lubrication is needed on pump.
2. Motor ball bearings are sufficiently lubricated for the life of the unit.

## TROUBLESHOOTING CHECKLIST

Problem	Checking Procedure
<b>Pump will not prime</b>	<ol style="list-style-type: none"> <li>1. Stop motor and fill case with water.</li> <li>2. Make sure suction line has no leaks, and that it slopes gradually from pump to well with no high or low spots.</li> <li>3. Make sure pump shaft turns clockwise when viewed from motor end opposite shaft.</li> <li>4. Check for plugged inlet.</li> <li>5. Make sure the foot valve is not sitting in sand or mud, and that it is not stuck shut.</li> </ol>
<b>Pump delivers water for a period of time then stops pumping.</b>	<ol style="list-style-type: none"> <li>1. Make sure the water level is not drawing below the foot valve. Use a water-level tester while pump is operating.</li> <li>2. Check for plugged impeller parts.</li> </ol>
<b>Pump does not deliver rated capacity</b>	<ol style="list-style-type: none"> <li>1. Check pump for wear or partial plugging.</li> <li>2. Check pressure gauge. It may be defective, resulting in false readings.</li> </ol>
<b>Motor overheats and shuts off (overload).</b>	<ol style="list-style-type: none"> <li>1. Make sure motor is properly wired for the correct voltage. (See Electrical Information on pages 3-4.)</li> <li>2. Make sure wire is properly sized. (See chart on page 4.)</li> <li>3. Make sure the impeller is not rubbing against the pump case.</li> </ol>
<b>Motor fails or does not operate properly</b>	<ol style="list-style-type: none"> <li>1. If within warranty, return pump/motor unit to place of purchase (with proof of purchase) for repair or exchange, if necessary.</li> </ol>

**Myers**  
Pentair Pump Group

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