



## Installation and Operation Manual

**Models: CPS5, CPWH5, CPW4, CPW5**  
Submersible Sump/Effluent/Sewage Pump

Thank you for purchasing this **CHAMPION PUMP!** The CPS5/CPWH5 pumps are heavy duty cast iron ½ HP sump/effluent pumps. The CPW4R and CPW5 models are heavy duty cast iron 4/10HP and ½ HP, respectively, sewage pumps capable of full 2" solids. We back these **Champion** products with **Champion** service and a **Champion** attitude. Please read, save, and follow these instructions to ensure **Champion** performance.

### BEFORE OPERATION – Important Product and Safety Information – **WARNINGS** – Personal Injury and/or property damage could result if not adhered to.

- ! Risk of Electric Shock – Fatal electric shock could occur. Always disconnect the power source before attempting to install, service, relocate or check the pump. Never touch pump, pump motor, water, or discharge piping when pump is connected to electrical power. Never enter a wet or flooded area, basement, basin, etc. that is in contact with the pump or electrical circuit before power supply has been disconnected.
- ! Pump has not been investigated for use in swimming pool areas or any area that might reasonably expect aquatic, animal, or human entrance. Precautions should be taken to prevent such entrance during use.
- ! Connect only to a properly grounded, grounding type receptacle. Use of a ground fault circuit interrupter (GFCI) is required for maximum safety.
- ! All wiring must be performed by qualified electrician in accordance with all local and national electric code.
- ! When power source or supply is turned off (in open position) a lock and tag out should be used to prevent accidental power application or activation.
- ! Do not use extension cord or cut off grounding pin. Should be installed on separate 15 AMP circuit breaker.
- ! Use only with a properly sized (input AMPS, volts, HP) motor controller.
- ! Do not use to pump flammable/explosive liquids such as gasoline, fuel oil, kerosene, and /or chemicals, salt water, etc.
- ! Do not use pump in an explosive atmosphere or classified as hazardous per NEC, ANSI/NFPA 70.
- ! Make sure pump is on hard level bottom in sump, do not set directly on earth, gravel, or other debris. This could cause excessive wear or possible jamming and flooding.
- ! Make sure pump is secure in basin and piping is firmly supported so that pump cannot move, not allowing liquid level switch to interfere with basin all or other obstacle preventing proper operation. Flooding or overheating could occur if not prevented.

- ! All basins or sumps must have covers and installed to meet health and plumbing codes with proper sealing and venting. Before opening or entering sump safety precautions per OSHA requirements should be strictly adhered.

## General Information

These pump models are offered without a liquid level motor control switch (manual models) or with attached switches. The manual versions need a liquid level switch for proper operation in the basin. **Champion** pump liquid level vertical switch 13-0001-1000 (10'), 13-0032-1001 (20') or float switch 13-0001-1001 (10'), 13-0002-1001 (20') is recommended. These control switches easily mount to the discharge piping and are adjustable for different basin and liquid levels. Pump plug is plugged into back of piggyback receptacle on switch cord.

Models with attached vertical or float factory preset liquid level switches are:

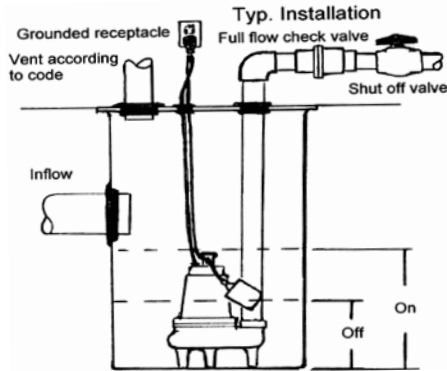
Pump	Min. basin dia.	On level	Off level
CPS5V, CPWH5V	12"	8 1/8"	4"
CPW4RV, CPW5V	18"	9 7/8"	5 3/4"
CPS5A, CPWH5A	14"	17"	10"
CPW4RA, CPW5A	18"	17 3/4"	10 3/4"

CPS5, CPWH5 -- Max. solid size -- 1.5 inch

CPW4/5 -- Max. solid size -- 2.0 inch **NOTE:** All pump discharge sizes – 2 NPT

## Sump/Effluent/Sewage Installation

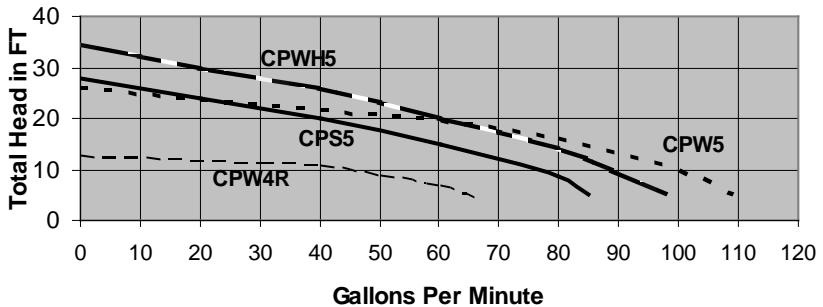
1. Provide proper sump basin size. A larger size is recommended as it allows more reserve, and reduced switching.
2. Make sure level control switch has full motion without possible interference or hang up.
3. Make sure pump is on solid, clean, debris free base.
4. Schedule 40 PVC pipe is recommended, check local code. Hand tighten piping into pump. Install a union or other means of separating discharge line for easy pump removal.
5. A full flow check valve is recommended just above or in place of the union to prevent water backflow. Connect additional piping as needed to direct discharge to desired location. Keep piping as short as possible with minimum number of turns. Secure piping.
6. A ball or gate valve is recommended after the check valve to prevent backflow when removal is necessary.
7. In effluent and sewage applications, check with health and plumbing codes for proper basin size, sealing, and venting requirements.
8. In sewage applications, pumps should not be installed where sludge can build up
9. An audible high water alarm, such as CP Model 1035944 should be installed for additional protection.
10. Check pump system for proper operation once installed and power connected by filling basin with water.



## Maintenance and Troubleshooting

Symptom	Possible Cause(s)	Corrective Action
Pump will not start or run	<ol style="list-style-type: none"> <li>1. Blown fuse, trip breaker</li> <li>2. Low line voltage</li> <li>3. Defective motor</li> <li>4. Defective float switch</li> <li>5. Impeller bound</li> <li>6. Float obstructed, low water</li> </ol>	<ol style="list-style-type: none"> <li>1. If blown, replace with proper sized fuse or reset breaker.</li> <li>2. If voltage is under 108 volts, check wiring size.</li> <li>3. Replace pump</li> <li>4. Replace float switch</li> <li>5. If impeller will not turn, remove housing and remove blockage</li> <li>6. Make sure float moves freely up and down, check level</li> </ol>
Pump starts and stops too often	<ol style="list-style-type: none"> <li>1. Backflow of water from piping</li> <li>2. Faulty float switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Install or replace check valve</li> <li>2. Replace float switch</li> </ol>
Pump will not shut off or thermal protector turns off	<ol style="list-style-type: none"> <li>1. Defective float switch</li> <li>2. Obstacle in piping, valve shut</li> <li>3. Float obstructed</li> <li>4. Low line voltage</li> <li>5. Too many appliances on circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace float switch</li> <li>2. Remove pump and clean pump and piping, open valve</li> <li>3. Make sure float move freely up and down</li> <li>4. If voltage is under 108 volts, check wiring size</li> <li>5. Install pump on dedicated circuit. <b>IMPORTANT:</b> Do not use extension cord to power pump</li> </ol>
Pump operates but delivers little or no water	<ol style="list-style-type: none"> <li>1. Plugged impeller</li> <li>2. Check valve installed backwards, or faulty</li> <li>3. Pump air locked</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean out impeller</li> <li>2. Reverse position of check valve, or replace</li> <li>3. Drill 1/8" hole in discharge between pump and check valve</li> </ol>

## CHAMPION PUMP PUMP PERFORMANCE CURVE



## Product Warranty

**Date of Manufacture and Warranty Tag is on pump cord.**

**LIMITED WARRANTY:** We warrant to our immediate customer and to the ultimate consumer that products of our manufacture will be free of defects in material and workmanship under normal use and service for one year (12 months) from the date of installation, or 18 months from the date of manufacture, whichever ever comes first. We will repair or replace, at our option, to the original purchaser any part or parts of our product found upon our examination to be defective. Please call Champion Pump Company, Inc. (419-281-4500) for instructions. Be prepared to provide the model number, the date code and/or serial number and proof of the date installed when exercising this warranty. Warranty tag (Required) is on the pump power cord. All transportation charges on products or parts submitted for repair or replacement must be paid by purchaser. This limited warranty does not cover products which have been damaged as a result of accident, abuse, misuse, neglect, improper installation, improper maintenance, or failure to operate in accordance with Champion Pump Company, Inc. written instructions. **UNDER NO CIRCUMSTANCES WILL WE BE RESPONSIBLE FOR ANY OTHER DIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOST PROFITS, LOST INCOME, LABOR CHARGES, DELAYS IN PRODUCTION, IDLE PRODUCTION WHICH DAMAGES ARE CAUSED BY ANY DEFECTS IN MATERIAL AND/OR WORKMANSHIP AND/OR DAMAGE OR DELAYS IN SHIPMENT. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTY, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusions or limitations of incidental or consequential damages, so the above limitations might not apply to you. This limited warranty gives you legal rights, and you may also have other legal rights which vary from state to state.