

# **PowerFlo Hydration Units**



**PowerFlo 20 PRO™**

**Parts List/Assembly Instructions/Users Guide**

**\*\*\*PLEASE READ ALL INSTRUCTIONS CAREFULLY AND THOROUGHLY\*\*\***



Owner's Manual

**(Please check to make sure and locate all parts before assembly.)**

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**(Please ensure to locate all parts before assembly.)**

## Parts List and Assembly

### PowerFlo 20 PRO™

\*\*\*PLEASE READ ALL INSTRUCTIONS THOROUGHLY AND ENSURE ALL PARTS LISTED BELOW ARE INCLUDED BEFORE BEGINNING ASSEMBLY\*\*\*

Figure (1)

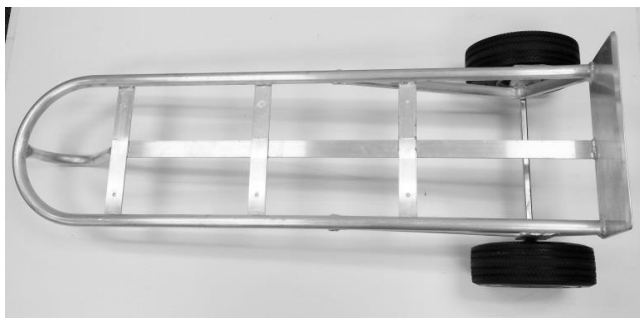


Figure (2)



Figure (3)



Figure (4)



Figure (5)



Figure (6)



Figure (7)



## Assembly Instructions

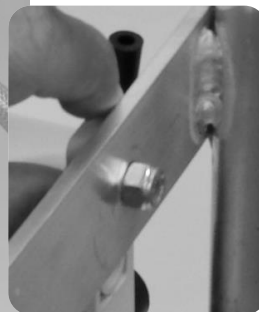
You should have two large boxes for a complete unit. Contents of the larger box is as follows:

- One 2-wheeled PRO hand truck - (Figure 1)
- 20 gal tank - (Figure 2)
- Cabinet and hose assembly - (Figure 3)
- Battery charger pack and counter charging adapter - (Figure 4)
- Battery - (Figure 5)
- (4) mounting tabs with (4)  $\frac{1}{4}$  x 20 hex bolts, (4) nuts, (in zip plastic bag) inside the cabinet - (Figure 6)
- Strap - (Figure 7)
- Instructions
- Fuse (extra inside cabinet door)

### **Assembly:**

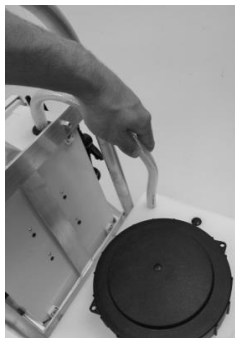
#### Cabinet Installation

- Lay the cart down on a clean dry surface with the foot plate facing down.
- Use the screws included in the mounting kit bag to attach the mounting tabs to the back of the cabinet as shown below (left). Attach cabinet to the rear of the hand truck using the mounting tabs (Figure 6) and screws provided.
- Position the cabinet so the four elongated holes on the mounting tabs (Figure 6) match up with the pre-drilled holes in the crossbars on the hand truck. Insert the  $\frac{1}{4}$  x 20 bolts (Figure 6) into each hole through cabinet and hand truck, install lock nut (Figure 6). Tighten all four bolt assemblies. **\*\*\*Note: Do not over tighten.\*\*\***



## Tank Installation

- Place the tank on the foot of the cart with the hole in the top on the right side looking at the unit from the front.
- Take the braided suction hose, bring it over the top strap on the cart and start it through the hole pushing it into the tank until it is at or near the bottom of the tank. Wetting the hose with water will help in the process.



- Locate the strap and wrap it around the unit aligned just below the cabinet.
- Pull the strap tight and tuck the excess bit between the tightened portion and the tank.

**\*\*\*It is recommended that the system is flushed with at least 10 gallons of potable water before being used for the first time.\*\*\***

## Battery Installation

- Unwrap battery and charger unit.
- Open front of cabinet and swing the battery pad out.
- Install Wire Harness on Battery. (Red lead to red post)
- Place Battery behind the pad.
- Swing the battery pad back in securing the battery in place.



**\*\*\*IMPORTANT: The RED wire with the fuse goes on the red terminal and the BLACK wire with fuse connects to the black terminal.\*\*\***

- Plug wire harness into unit. Close and latch door.
- Plug the charger into a 120 volt outlet.
- Take the charging plug and insert it all the way into the upper right side charging port of the cabinet located behind the valves.
- The light on the charger will glow yellow when the battery is securely plugged in and change to green when fully charged.
- If the charger light glows red, remove charger plug from the unit and check the battery connections to be sure the red wire is on the red terminal.
- Charge battery until the green light on the charger lights (1 to 4 hours).

## Operating Instructions

**\*\*\*Important: Sanitize the system before using it for drinking. See sanitizing instructions.\*\*\***

- Make sure the unit is off.
- After sanitizing the unit, fill the cooler with fresh water.
- Close the lid of the cooler and turn on the unit.
- The pump will cycle on until the manifold and the hoses are primed. The pump will then shut off. (If pump does not prime and shut off, open one of the hose valves to allow trapped air to be expelled from system.)
- Open each of the hose valves to allow water to flow. Pump will operate to maintain water pressure. Closing the last valve will shut the pump off.

**\*\*\*Important: If cooler is allowed to empty completely during use, the pump will not shut off automatically and damages to the unit can result. \*\*\***

### Charger, Battery and Fuse Holder



The battery harness inside the unit includes two fuse holders (under the caps) and 10-amp fast blow automotive type mini fuses to provide protection in case the pump locks up. If these fuses need replacement, use only a 10-amp fast blow automotive mini fuse. Use of a higher amperage fuse may cause damage in the case of a short circuit or pump problem. The PowerFlo 20 PRO™ unit is shipped with a spare fuse on the inside of the cabinet door.

The battery provided with your PowerFlo 20 PRO™ Hydration System is a rechargeable, sealed lead-acid battery. The capacity of this battery is 12V – 7.0 A.H. The battery should have a full or nearly full charge when you receive your unit, but it is best to charge the battery before initial use.

Recharge the battery after each day of use so the unit works at its optimal level. The battery charger has an automatic safety shut-off to prevent your battery from over charging. A fully charged battery should last through a practice as long as the pump is not continuously running. To prevent continuous running of the unit, be certain drinking valves are turned off when not in use. Do not allow unit to run dry with an empty tank, causing the battery to discharge prematurely and possibly damaging the battery or the pump.



**Recharging the Battery** \* This unit comes with 2 charging options (A and B) please see below \*



**Warning:** In order to prevent accidental injury, open door while charging battery.

### **OPTION A Quick Charging “In cabinet” (\*\*recommended\*\*)**

- The battery is left in the cabinet while charging. This is the ideal charging scenario to protect your internal wires from undue wear and tear.
- Plug the charger into a 125 Volt outlet and insert the charging plug into the unit charging port located on the upper right side of the cabinet behind the drinking nozzles.
- Observe the charging light. If a yellow light appears, the battery is charging. If a red light appears, unplug the charger from the outlet and check that the battery leads are connected to the battery correctly. The red wire always goes to the red post on the battery.
- When the light is green, the battery is at full capacity. Disconnect the charger from the unit and unplug the charger from the wall socket.

\*\*\*Note: Due to the self-discharge characteristics of this type of battery, it is imperative that it is fully charged. We recommend charging your PowerFlo 20 PRO™ battery immediately before use and at least every 3 months during the off-season storage. Do not subject batteries to freezing temperatures. Failure to keep your battery fully charged will reduce battery useful life.\*\*\*

### **OPTION B “Bench/Counter” Charging**

- Using this charging method allows for removal of the battery and charging at another location.
- In order to use this charging option you must first make the proper adjustment to your charger setup.
  - Charging system stock setup has the Option A adapter installed for the quick charging system as seen in figure 1.
  - To use the Bench charging option find the bench charging adapter (see figure 2).
  - With the charger unplugged from the unit and the wall socket, loosen the two holding screws shown in figure 3 and remove the Quick Charge adapter.
  - Replace the quick charging adapter with the Bench adapter.
  - It is important to ensure that the (+) and (-) signs align properly as seen in figure 4.
  - Tighten the screws and replace cover and your charger is now ready to use in bench charging. (Fig 5)



Fig. 1



Fig 2



Fig. 3



Fig. 4

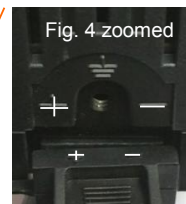


Fig. 4 zoomed



Fig. 5

- Now that the Bench charging adapter has been installed you are ready to begin bench charging.
- Disconnect battery from the cabinet by unplugging the harness from inside the unit.
- Take the battery out and place it in your charging location.
- Plug the battery connection into the charger cord plug.
- Plug the charger into a 120 volt wall outlet.
- Observe the charging light. If a yellow light appears, the battery is charging. If a red light appears, unplug the charger from the outlet and check that the battery leads are connected to the battery correctly. The red wire always goes to the red post on the battery. If still red, check the cord leads on the charger (fig. 4) to make sure positive post is under positive screw.
- When the light is green, the battery is at full capacity. Disconnect the charger and replace battery in unit by plugging the battery connector into the cabinet connector.

## Draining Instructions

Draining your PowerFlo 20 PRO™ unit may be accomplished through two methods.

- Open the valves and allow them to pump out left over water.
- Remove drain assembly cap.

## Maintenance and Storage

**\*\*\*Note: Store the PowerFlo 20 PRO™ in a climate-controlled area. See winterizing instructions if impossible to store this way.\*\*\***

A filter is installed at the pump intake port to prolong the life of the pump and for added health and safety of the user. This filter should be inspected and cleaned periodically during normal use and maintenance. A dirty filter can cause unit not to work. To remove the filter for inspection:

1. Unscrew cap of filter (on the right side of pump).
2. Inspect and clean screen by rinsing in hot water.
3. Place the cap back onto the filter body and screw cap back onto filter making sure the cap is tight.

**\*\*\* Important: Do not run unit without filter properly installed. Unit damage can occur and void warranty. \*\*\***





## Sanitizing the System

All of the hose connections and valves may be removed from the unit for cleaning if desired.

The unit may be disinfected without disassembly as follows:

- Mix 10 gallons of water and 5 oz. of common household bleach in the tank.
- Turn on unit and open all of the hose valves and let the unit run until a distinct odor of bleach is detected. Then shut off all hose valves.
- The standard solution must have one (1) hour of contact time to disinfect completely.
- When the contact time is complete, open the hose valves and drain the tank. Completely fill the tank with potable water and purge the system by turning on all the hose valves and allowing the tank to drain. Remember to turn the pump off when the tank is empty to prevent damage to the pump.
- Be sure to recharge the battery.

## Winterizing

If the PowerFlo 20 PRO™ unit will be stored where it will be exposed to freezing temperatures, then it must be winterized. There are two methods, choose the method that is best for your situation.

The "Dry Method" of winterizing requires draining the water from the entire system. Because a check valve mechanism is built into the pump, blowing air into the suction line will not remove the water. For best results:

1. Drain tank and remove intake hose from tank. Invert tank removing excess water and allow to air dry in a clean environment before replacing cap.
2. Turn on the pump and drain the water from each of the drinking valves by holding the valves open (squeeze the handle) while allowing the suction hose (removed from the tank) to drain. Ensure that all the water is allowed to drain from each hose by squeezing and releasing each valve several times in turn. DO NOT RUN PUMP DRY FOR EXTENDED PERIOD OF TIME.
3. After removing the water from the system, wipe down the outside of each hose, valve and the cabinet.
4. Remove the filter cap and clean screen, wipe out the interior of the filter and replace the cap and tighten the cap securely onto the filter body.
5. It is best to leave the cabinet door open during storage to allow the cabinet to dry out.
6. Charge your battery storing it at room temperature.

**\*\*\*Note: If any water remains in the unit and it is exposed to freezing temperatures, damage can occur.\*\*\***

The "RV Antifreeze Method" of winterizing is a more positive way to prepare your unit for storage in freezing conditions. Important: Use only RV type antifreeze sold specially for use in potable water systems. It is available at most hardware stores for this purpose.

1. Drain tank and remove intake hose from tank. Invert tank removing excess water and allow to air dry in a clean environment before replacing cap.
2. Insert the supply hose (the hose that goes into the tank) into a fresh gallon jug of RV type antifreeze.
3. With the unit near a sink or floor drain, turn the unit on and open one of the valves. Keep open until the water is flushed and antifreeze is coming out of the valve.
4. Repeat step 3 on each of the other five valves. This ensures that the antifreeze protects all lines, the pump and the filter.
5. Remove the suction line from the jug of solution allowing the excess to drain back into the jug.
6. Remove filter cap and clean screen, wipe out the interior of the filter and replace the cap and tighten the cap securely onto the filter body.
7. It is best to leave the cabinet door open during storage to allow the cabinet to dry out.
8. Charge your battery storing it at room temperature.

**\*\*\*Warning: Do not use automotive antifreeze to winterize this system. Such solutions are highly toxic. Ingestion may cause serious injury or death.\*\*\***

## Preparing the unit for use after storage:

If it was stored dry, follow the "Sanitizing the System" procedure outlined above. If it was stored with RV antifreeze, fill the tank with clean tap water, insert the suction hose into the tank and run the unit opening each valve until all antifreeze is eliminated and only clear water flows from each valve. Then follow the "Sanitizing the System" instructions above.

### **Common Replacement Parts** (for full list of replacement parts, contact customer service)

026008- Powerflo Replacement Battery



026013 - Replacement Switch



024007- Replacement Battery Charger with cord



026011- Replacement Valve



026010- Replacement Pump



026019- Replacement Filter Assembly

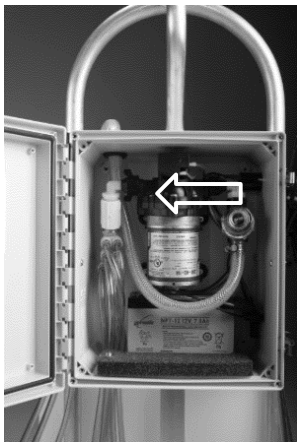


968200 Wire Harness



## **Common Replacement Parts** (for full list of replacement parts, contact customer service)

024002- PowerFlo 20 Manifold



024001- PowerFlo 20 Pro Control Box Assembly (with Charger and Battery)



968529- PowerFlo 20 Pro Wheel qty (1 ea.)



029005- PowerFlo 20 Braided Suction Hose



029011- PowerFlo 20 Tank



## Troubleshooting

Problem	Solution
Unit Will Not Turn On	<ul style="list-style-type: none"> <li>▪ The pump is not making any noise when switch is turned on. <ul style="list-style-type: none"> <li>○ Check to make sure battery is charged.</li> <li>○ Check in-line fuses on wiring harness. <ul style="list-style-type: none"> <li>○ Replace if needed.</li> </ul> </li> <li>○ Check to make sure electrical connections are secure. <ul style="list-style-type: none"> <li>○ If these steps do not generate results please contact customer service at 1-800-345-2231</li> </ul> </li> </ul> </li> <li>▪ Pump is running but no water flow. <ul style="list-style-type: none"> <li>○ Check line for pinches or kinks.</li> <li>○ Remove and clean filter. Make sure filter cap is tight.</li> <li>○ Open valves to let air out of system.</li> <li>○ If there is still no water pressure please contact customer service to order replacement parts.</li> </ul> </li> </ul>
Leaking Valves	<ul style="list-style-type: none"> <li>▪ Check threads at connections for cracks caused by over-tightening. If no cracks, ensure all connections are tight (hand tight) and try the unit again.</li> </ul>
Leaking Manifold	<ul style="list-style-type: none"> <li>▪ Ensure hoses are fully pushed into fittings.</li> <li>▪ Check for cracks or breaks.</li> <li>▪ Contact customer service for further instruction.</li> </ul>

## Frequently Asked Questions

Question	Answer
May I use fluid other than water in my PowerFlo unit?	No, it is not recommended that you use anything other than water through these units.
How long does the battery last when fully charged?	A fully charged battery should last through a practice. If you have more than one practice in a 24 hour period, it is recommended that you purchase extra batteries to suit your needs. The pump will last for 1.5 hours of "continuous use" depending on the environment in which it is operated.
Can I damage the battery if it charges too long?	Yes, the battery charger has an auto shut-off to prevent from overcharging, but leaving it hooked up will shorten the life.
What do the lights on the battery charger mean?	<p>RED - Wiring is incorrect.</p> <ul style="list-style-type: none"> <li>▪ If light is still red once wires are connected correctly, call Customer Service to return the battery and charger for repair or replacement.</li> </ul> <p>GREEN - Battery is fully charged.</p> <p>YELLOW - Battery is still charging.</p>
What if the battery moves about in the cabinet while transporting?	As long as the battery does not turn over in transit, there should be no damage. Ensure the cabinet is closed securely and the battery is in its proper place before loading the unit into your vehicle. Also, ensure the unit is secured so that there is no possibility of tipping or falling.

## Cramer Products PowerFlo 20 PRO™ Reconditioning Program

(All parts and services provided by Cramer manufacturing personnel)

### Ten Point Reconditioning Service Program:

- Inspect drinking system and determine if any parts need replacement.
- Check complete system for leaks in the manifold, valves, hoses and nozzles.
- Inspect and repair all wiring.
- Inspect and clean filter (replace if necessary).
- Check charger performance.
- Check pump performance.
- Clean and sanitize entire drinking system.
- Dry winterization.
- Certify drinking system against manufacturer's defects for a one year guarantee.
- Submitting unit for reconditioning authorizes Cramer Products to replace up to \$50.00 for necessary replacement parts without approval from the customer. Customer will be called if replacement parts exceed \$50.00 in costs.

### BONUS FEATURES:

There is a 10% discount off school list price for any replacement parts.

Backed by Cramer Product's 100% satisfaction guarantee on all parts and labor against manufacturers defects.

School Price:

\$200.00	PowerFlo 10 Reconditioning
\$250.00	PowerFlo 20 Reconditioning
\$250.00	PowerFlo 20 PRO Reconditioning
\$250.00	PowerFlo 50 Reconditioning

**Note:** No services will be performed without an authorized purchase order number.

**Freight program:** Customer pays freight in and Cramer pays freight out.

**Program deadlines:** \*\*\*Please allow 60-day turnaround time on all units.\*\*\*

### Shipping instructions:

Contact Cramer via email (info@cramersportsmed.com) or by phone (800-345-2231) to request a Reconditioning Program Authorization Form and shipping label.

Do not send your entire unit in for reconditioning. Return only the parts described on the Authorization Form. Contact customer service for shipping instructions.

**\*\*\*DO NOT RETURN any parts other than instructed to send by Cramer customer service. Cramer Products will not pay return freight on carts, tanks or other non-reconditionable parts.\*\*\***

Include a completed Reconditioning Program Authorization Form with purchase order number in the return box and affix its label to the outside of the box before shipping.

## **WARNING**

*This is not a toy. All users of this system should be instructed not to point spouts at any person. The pressure of the water could be great and cause injury. Do not rewire electrical components. Do not use hand truck to move any object except the PowerFlo™ Hydration System. This system is designed only for the use with potable water. Do not use for pumping non-potable products.*

*Please keep these instructions for further reference. If you have any questions or problems with your PowerFlo™ Hydration System, please call our customer service department at 1.800.345.2231 between 8:00 A.M. and 5:00 P.M. CST.*

*Manufactured by  
The Hygenic Corporation  
1245 Home Ave.  
Akron, Ohio 44310  
Stock Number 029000*

*For customer assistance, please call 1.800.345.2231*



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