

PowerFlo Hydration Units



PowerFlo 50™

Parts List/Assembly Instructions/Users Guide

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



Owner's Manual

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

This page left intentionally blank

Table of Contents

I. Parts and Assembly	(pages 4-12)
II. Maintenance/Storage	(pages 13-17)
III. Commonly Replaced Parts	(pages 17-19)
IV. Troubleshooting Guide	(page 20)
V. Frequently Asked Questions.	(page 21)
VI. Reconditioning Program	(page 22)
VII. Warnings(page 23)

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

Parts List and Assembly

PowerFlo50™

*****PLEASE READ ALL INSTRUCTIONS CAREFULLY AND THOROUGHLY***
BEFORE BEGINNING ASSEMBLY**

Please be sure all parts listed below are included in your package before beginning assembly.

Figure (1)



Figure (2)



Figure (3)

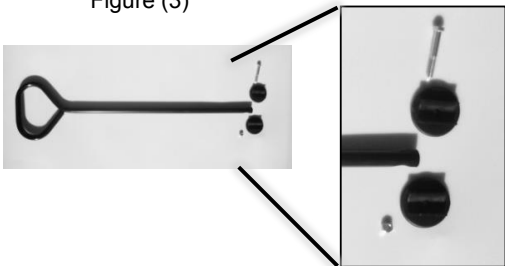


Figure (4)



Figure (5)



Figure (6)



Figure (7)

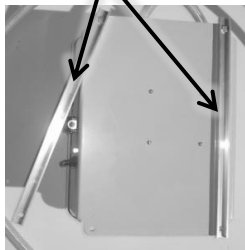


Figure (8)



Figure (9)

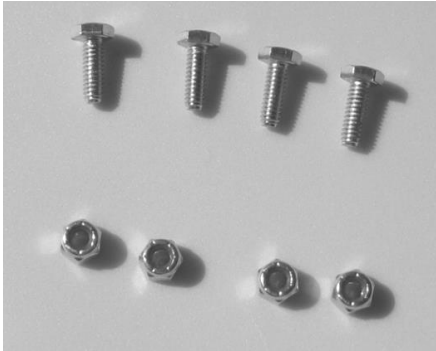


Figure (10)

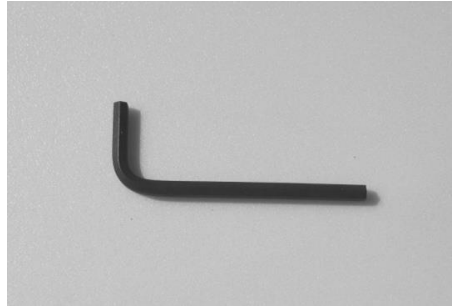


Figure (11)

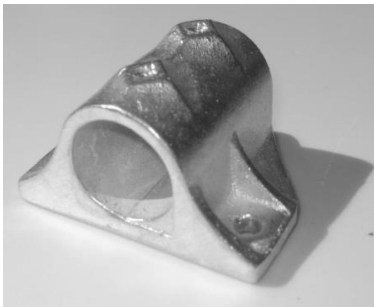


Figure (12)



Figure (13)



Figure (14)



Figure (15)



Figure (16)



Assembly Instructions

You should have three boxes for a complete unit - (Figure 1). Contents are as follows:

- 4 wheel cart - (Figure 2)
- Handle assembly (handle, two spacers, bolt, lock nut) – (Figure 3.)
- 2 Aluminum support pipes – (Figure 4.)
- Manifold assembly w/ 6 hoses/ 6 valves - (Figure 5)
- Cabinet- (Figure 6.)
- Cabinet mounts (attached to back of cabinet) – (Figure 7)
- Zip Ties – (Figure 8)
- 4 bolts, and 4 nuts (in zip closed plastic bag) – inside the cabinet - (Figure 9)
- Allen wrench – (Figure 10)
- Aluminum support pipe mount – (Figure 11)
- Tank Drain- (Figure 12)
- 2 tie-down straps – (Figure 13)
- Battery charger – (Figure 14)
- Optional Charger cord – (Figure 15)
- Battery and harness – (Figure 16)
- Instructions
- Fuse (extra inside cabinet door)

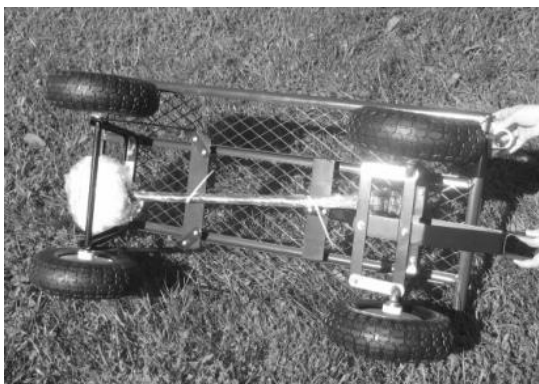
Additional tools needed: 2- 7/16" open end wrenches, large adjustable wrench, and a regular screwdriver.

Please read these instructions carefully before attempting assembly.

******IMPORTANT: Some steps require you to tighten a fitting hand tight only. This is to avoid damage to the plastic components. Tightening a plastic connection with a wrench will not ordinarily stop a leak, but it will almost always cause damage. Cramer Products will not replace under warranty any parts damaged by over tightening.******

Cart Handle

- Remove and unwrap handle assembly from underneath cart.



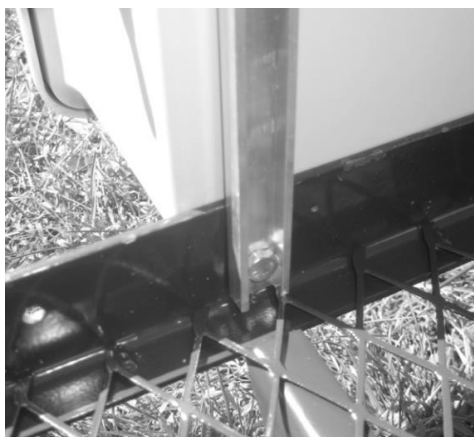
- Remove bolt and nut from bottom of handle holding the plastic washers against the handle.
- Place this assembly between the forked section of the steering tongue on the cart lining up the holes.



- Install long bolt through tongue, washers, and handle.
- Install nut and tighten assembly just enough so handle can stay up on its own.

PowerFlo Pump Cabinet

- On the rear of the cart opposite the handle locate two holes drilled toward the center of the cart side rail.
- Line up the elongated holes on the mounting tabs at the bottom of the cabinet with the holes in the cart ***slipping the rail of the cart between the aluminum mounting strip and the rear of the cabinet.***
- Install two 1/4-20 x 3/4" bolts through the metal strip, cart rail, and cabinet mounting tab with the bolt heads on the cabinet side and the locking nuts on the inside of the aluminum support side just as they are on the upper part of the cabinet (already attached). Tighten securely.



Manifold Assembly

- Locate aluminum support bracket (one is already attached to the front of the cart)
- Install bracket to the back of the cart with two 1/4 x 3/4" bolts and locknuts (see front bracket for proper orientation) and tighten securely.



- Locate the two aluminum poles and place one end of the pole in each mounting bracket on the front and rear rail of the cart.
- Loosen the set screws in the bracket with the supplied allen wrench until the pole slips all the way to the bottom of the bracket.



- Tighten set screws securely against the pole with the allen wrench.
- Locate manifold with attached hoses.

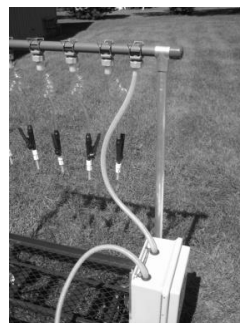
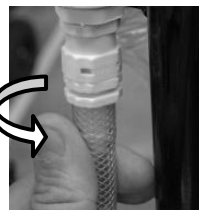
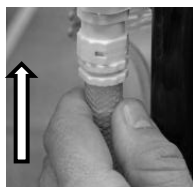
- Install the manifold on the poles inserting the brackets onto the poles.

*****NOTE*** The inlet supply connector (the one with no hose attached) must be toward the rear of the cart opposite the cart handle!**

- Loosen the set screws in the brackets with the allen wrench so the manifold slips all the way over the poles.



- Tighten set screws securely.



- To connect the fitting from supply hose to the manifold, insert connector, push up and rotate ¼ turn to lock.
- Locate two plastic ties and secure the supply hose to the rail **taking care not to tighten them too much and kink the supply hose!**
- The excess plastic ends of the wire ties can be cut off with scissors if desired.

Tank Assembly

- Locate and unwrap tank.
- Remove plastic plug from drain outlet.

*****Important*** Rinse inside of tank with a hose to remove any plastic shavings draining water through the outlet!**

- Place the tank on the cart with the bottom outlet towards the handle.
- Locate plastic faucet and screw faucet into the tank.
- Using an adjustable wrench, tighten faucet assembly into tank fitting stopping when tight and valve points down. ***** Caution! Do not over tighten!*****
- Push tank all the way onto cart.
- Install straps over the tank in the ridge areas of the tank tightening the straps securely.
- Place loose ends of the straps up under the top strap of the tank so they won't drag the ground.



- Take the supply tube from the cabinet and insert it all the way into tank until it reaches the bottom taking care not to kink the hose. Wet the hose to make insertion easier.



Battery Installation

- Unwrap battery and charger unit.
- Plug wire harness (included with battery) onto battery posts.

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



If power is not available where the unit is stored, see alternate charging method below.

- Place battery into cabinet by swinging the foam battery holder toward you placing battery to the rear of the cabinet underneath the hoses and close the foam holder against it.
- Plug battery harness into socket inside the cabinet.
- Close and latch door.



- Plug charger into a 120 volt outlet and plug charger into the charger port in the upper right hand side above the valves.
- The light on the charger will glow yellow when the battery is plugged in and change to green when fully charged.
- If the charger light glows red, check the battery connections to be sure they are not reversed.
- Charge battery until green light on charger lights (1-6 hours).
- Unit is now ready to be filled with water and put in use.

Battery and Fuse Holders

The battery harness includes two fuse holders with fuses (under the caps) to provide protection in the case of accidental shorting. If this fuse needs replacement, use only a 10-amp automotive mini fuse. Use of a higher amperage fuse may cause damage in the case of a short circuit. The PowerFlo 50™ unit is shipped with a spare fuse on the inside of the cabinet door.



The battery provided with your PowerFlo 50™ 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 the PowerFlo 50™ unit, but it is best to recharge the battery before initial use.

Recharge the battery after each day's use for the unit to work 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 hose valves are turned off when not in use. Do not allow unit to run dry with an empty tank, causing battery to discharge prematurely and damaging the pump.

Recharging the Battery

- This unit comes with 2 charging options (A and B) please see below *
- OPTION A Quick Charging “In cabinet” (**Recommended figure 1**)**



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

- 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 50™ 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, remove protective cover, 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)



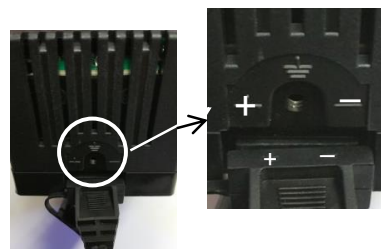
Figure 1



Figure 2



Figure 3



ENLARGED



Figure 5

Figure 4

- 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 harness 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 place battery in unit behind the battery pad and plug the battery harness into the cabinet connector. The unit is now ready for use.

Draining Instructions

Draining your PowerFlo unit may be accomplished through two methods.

- Open the drain valve and allow the water to drain from the tank.
- Remove cap, un-strap and remove tank from cart and tip it over.

*****WARNING*****If cart is still attached damage may occur inside the cabinet and to the manifold. Do not tip cart! Damages incurred from improper use are not covered by your manufacturer's warranty.

Cleaning and Storing

***** Note: PowerFlo 50™ should be stored in a climate-controlled area. If this is not possible, see winterizing instructions. *****

A filter is installed at the pump intake valve to prolong the life of the components 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:

- Unscrew cap from the filter (right side of pump).



- Pull out screen to inspect and clean.
- Place screen back in filter and reassemble in reverse order making sure the cap is tight.



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

Sanitizing the System

The unit may be disinfected without disassembly as follows:

- Mix 10 gallons of water and 13 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 chlorine or 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. Refill 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

Charge your battery and store at room temperature. If the PowerFlo 50™ unit will be stored where it will be exposed to freezing temperatures, the unit must be winterized. There are two methods for winterizing. Choose the method that is best for your situation.

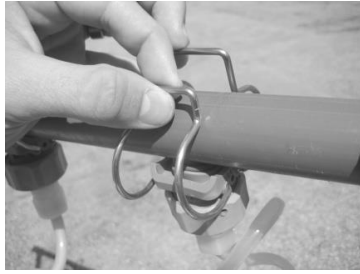
Dry method:

- The "Dry Method" of winterizing requires draining the water from the entire system. Because of the check valve mechanism built into the pump, blowing air into the lines will not remove the water from the pump.

For best results:

- Drain tank thoroughly and remove intake hose from tank. Invert tank and allow to air dry in a clean environment before replacing cap.

- Remove all seven hoses from the manifold by releasing the clamps draining the manifold.



- Drain the water from each of the supply hoses by opening the valves (squeeze the handle) while allowing the water to drain through the nozzle. Be certain that all the water is allowed to drain from each hose.
- Drain the supply hose by removing the nut on the pump allowing all the water to drain out.



- Turn the pump on, allowing the pump to drain any remaining water. This takes a few seconds. A towel or rag can be used to catch this water. **DO NOT RUN PUMP DRY FOR EXTENDED TIME.**
- After removing the water from the system and lines are dry, re-attach all lines and store for the winter. Leave cabinet door open to dry out.

***** Note that if any water remains in the unit and it is exposed to freezing temperatures, damage will 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, available at most hardware stores, for this purpose.******

- Drain tank thoroughly and wipe dry with a towel.
- Insert the supply hose (the hose that goes into the tank) into a fresh gallon jug of RV type antifreeze.

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

- With the unit near a sink or floor drain, turn the unit on and open one of the valves. Keep open until the water has been flushed and antifreeze is coming out of the valve.
- Repeat step 3 on each of the other five valves. This ensures that the antifreeze protects all lines, the manifold, the pump and the filter.

Preparing The Unit For Use After Storage

- If the unit has been stored dry, follow the sanitizing instructions.
- If the unit has been 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 instructions.

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

026008- Powerflo Replacement Battery and Harness



026013- Replacement Switch



026009- Replacement Battery Charger with Cord



026017- Replacement Valves Set of 4



026010- Replacement Pump



026018- Powerflo Wiring Harness



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

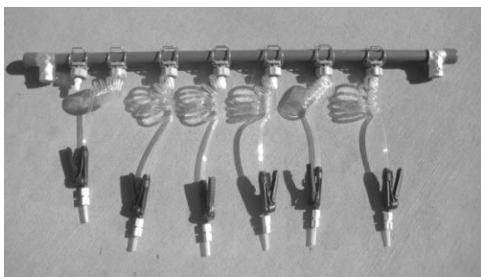
026011- Replacement Valve



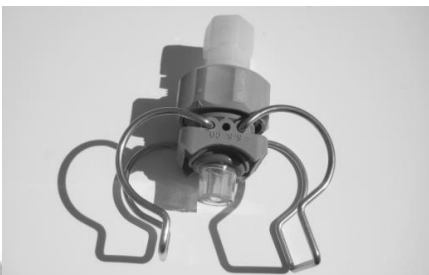
026019- Replacement Filter Assembly



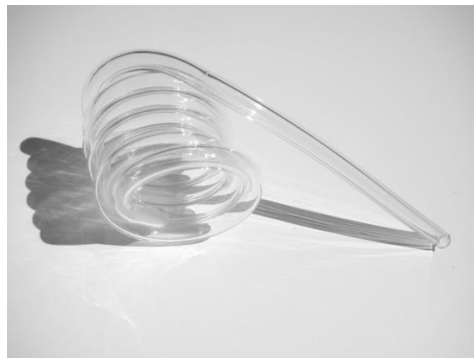
028013- PF 50 Replacement Manifold W/Valves and Coiled Hoses



028002- PF 50 Clamp W/Nylon Tube Fitting



029003- 2.5' Single Coiled Hose



028004- PF 50 Pull Strap Replacement qty (1)

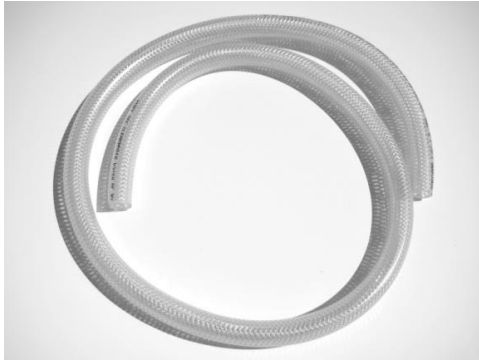


028006- PF 50 Supply Hose Clamp



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

028007- PF 50 Manifold Supply Line



028012- PF 50 Control Box Assembly (with charger and battery)



028009- PF 50 Replacement Wheel qty (1 ea.)



028014- PF 50 Braided Suction Hose (tank hose)



028017- PF 50 Cart Undercarriage Assembly
(no wheels)

Troubleshooting

Problem	Solution
Unit Will Not Turn On	<ul style="list-style-type: none"> ▪ The pump is not making any noise when switch is turned on. <ul style="list-style-type: none"> ○ Check to make sure battery is charged. ○ Check in-line fuses on wiring harness <ul style="list-style-type: none"> ○ Replace if needed. ○ Check to make sure electrical connections are secure ○ If these steps do not generate results please contact customer service 1-800-345-2231. ▪ Pump is running but no water flow. <ul style="list-style-type: none"> ○ Check lines for pinches or kinks. ○ Remove and clean filter, tighten cap. ○ Open two valves to allow air to escape. ○ If there is still no water pressure please contact customer service to order replacement parts.
Leaking Valves	<ul style="list-style-type: none"> ▪ Check threads at connections for cracks caused by over-tightening. If no cracks make sure that all connections are tight (hand tight) and try the unit again.
Leaking Manifold	<ul style="list-style-type: none"> ▪ If a leak is on a threaded part, tighten the fitting finger tight. ▪ Check for cracks in the fittings and around the hose connections. ▪ If a leak is between the glued parts, contact customer service.
Flat Tire	<ul style="list-style-type: none"> ▪ Air up tire (do not exceed 30 PSI). If significant pressure loss occurs within 24 hours check for punctures or cracks. ▪ If under warranty contact customer service for warranty repair.
Pump Back Plate Broken	<ul style="list-style-type: none"> ▪ Must be replaced...contact customer service.

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 1.5hrs 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 battery hooked up will shorten battery life.
What do the lights on the battery charger mean?	RED - Wiring is incorrect. If light is still red once wires are connected correctly, the battery, wire harness and the charger should be returned. Call Customer Service for repair or for replacement. Green - Battery is fully charged Yellow - Battery is still charging
What if the battery moves about in the cabinet while transporting?	As long as the battery doesn't turn over in transit there should be no damage. Make sure the cabinet is closed securely and that the battery is in its proper place before loading the unit into your vehicle. Also be sure the unit is secured so that there is no possibility of tipping or falling.

Cramer Products PowerFlo 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.
- 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.
- New battery and harness.

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:

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 Prices:

\$200.00	PowerFlo 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 - 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 those parts listed on the Program 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.

Affix the reconditioning authorization 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 Avenue
Akron, Ohio 44310
Stock Number 028000*

For customer assistance, please call 1.800.345.2231

This page left intentionally blank