

# THE HANDLER<sup>®</sup> IV OPERATOR'S MANUAL



**POLYWEST<sup>®</sup>**  
liquid handling products

WINNIPEG • SASKATOON • EDMONTON  
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mix it   
move it  
store it

# The Handler IV Batch and Induction Tank

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## WARRANTY

Polywest Ltd. products are warranted for one year from date of purchase against defects in material and workmanship and to perform according to specifications when such products are properly assembled, installed, used, and maintained. Warranty is granted to original owner only.

Our obligation under this warranty is limited to repairing or replacing, at our option, and excluding pumps, within 12 months of the retail delivery date. This obligation shall not include any transportation charges or costs, or any liabilities for direct, indirect or consequential damage or delay.

### Warranty Limited or Void

Any use for purposes other than those for which the product was designed, operation beyond rated capacity, substitution of parts not approved by Polywest Ltd., or alteration or repair by others in such manner as in our judgement affects the product materially and adversely shall void this warranty.

Warranty does not apply to any machine or part which has been repaired or altered in any way that in the company's judgement, affects its reliability, or which has been subject to misuse, negligence or accident.

Furthermore, component parts, equipment, accessories and items not fabricated by Polywest Ltd. are warranted only to the extent of the original manufacturer's warranty.

The gas and diesel engines, electric and hydraulic motors that are included with our pumps are warranted by the engine manufacturer, not by Polywest Ltd. Please refer all engine warranties to the authorized engine dealer near you.

Polywest Ltd. reserves the right to make improvement changes on any of our products without notice.

### Warranty Claims Procedure

1. A warranty claim form must be completed at your Handler Dealer.
2. Defective parts for which a warranty claim is made must be returned to the dealer within 15 days from the claim date.

**Polywest Ltd.**  
Batch and induction tank

**Warranty Registration Form & Inspection Report**

**Warranty Registration**

This form must be filled out by the dealer and signed by both the dealer and the customer at the time of delivery.

Customers Name \_\_\_\_\_

Address \_\_\_\_\_

City, State, Code \_\_\_\_\_

Phone Number (\_\_\_\_) \_\_\_\_\_

Deliver Date \_\_\_\_\_

Serial Number of Unit \_\_\_\_\_

Dealer Name \_\_\_\_\_

Address \_\_\_\_\_

City, State, Code \_\_\_\_\_

Phone Number (\_\_\_\_) \_\_\_\_\_

Check One:

Comercial Use: \_\_\_\_\_

Farm Use: \_\_\_\_\_

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**Dealer Inspection Report**

**Safety**

\_\_\_\_\_ Frame Fasteners Tight

\_\_\_\_\_ Chemical Hoses Tight

\_\_\_\_\_ Engine Has Oil

\_\_\_\_\_ All Decals Installed

\_\_\_\_\_ Review Operating & Safety Instructions

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I have thoroughly instructed the buyer on the above described equipment and the customer at the time of which reveiw included the Operator's Manual content, equipment care, adjustments, safe operation and appliclable warranty policy.

Date \_\_\_\_\_

Dealer's Rep. Signature \_\_\_\_\_

The above equipment and operator's Manual have been received by me and I have been thoroughly instructed as to care, adjustments, safe operation and appliclable warranty policy.

Date \_\_\_\_\_

Owner's Signature \_\_\_\_\_





# 1. INTRODUCTION

Congratulations on your choice of a Polywest Ltd. Handler IV batch and induction tank.

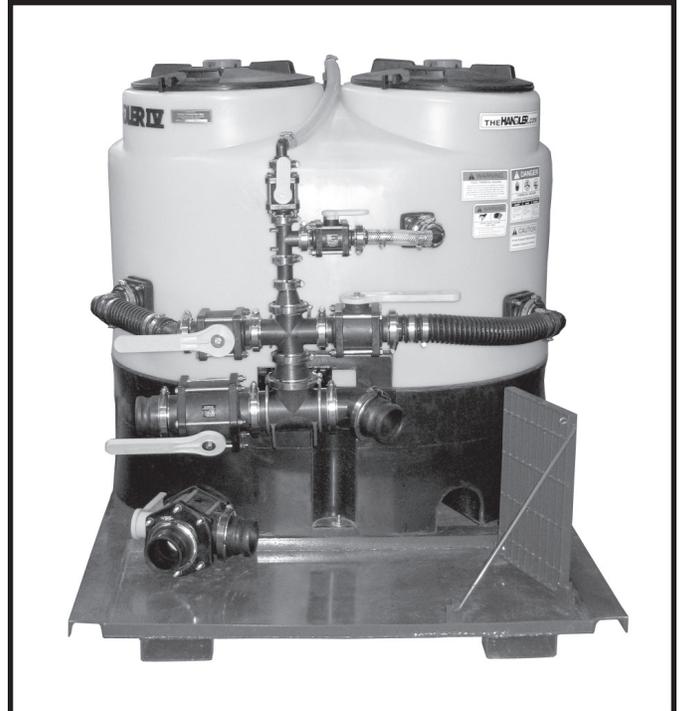
Safe, efficient and trouble-free operation of your Handler IV requires that you and anyone else who will be operating or maintaining the batch and induction system, read and understand the safety, operation, maintenance and troubleshooting information contained in the Operator's Manual

Keep this manual handy for frequent reference and to pass on to new operators or owners.



## Operator Orientation

The directions left, right, front, and rear as mentioned throughout this manual, are as seen from the operator's position facing the front of the Handler tank. With the proper orientation, the Handler name will be visible on the side of the left manhole.



## 2. SAFETY

### Safety Alert Symbol



Why is SAFETY important to you?

This safety Alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**

The Safety Alert symbol identifies important safety messages on the Polywest Ltd. Handler IV batch and induction tank. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instruction in the safety message.

### 3 BIG REASONS

Accidents Disable and Kill

Accidents Cost

Accidents can be Avoided

### SIGNAL WORDS

Note the use of the signal words **DANGER, WARNING, and CAUTION** with the safety messages. The appropriate word for each message has been selected using the following guidelines:

	<b>DANGER</b>
AN IMMEDIATE AND SPECIFIC HAZARD WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH IF THE PROPER PRECAUTIONS ARE NOT TAKEN	

	<b>WARNING</b>
A SPECIFIC HAZARD OR UNSAFE PRACTICE WHICH COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH IF PROPER PRECAUTIONS ARE NOT TAKEN.	

	<b>CAUTION</b>
UNSAFE PRACTICES WHICH COULD RESULT IN PERSONAL INJURY IF PROPER PRACTICES ARE NOT TAKEN, OR AS A REMINDER OF GOOD SAFETY PRACTICES.	

# GENERAL SAFETY

**YOU** are responsible for the SAFE operation and maintenance of your Polywest Ltd. Handler IV batch and induction tank. Ensure that you and anyone else who is going to operate, maintain, or work around the Handler IV batch and induction tank be familiar with the operating and maintenance procedures, and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alert you to all good safety practices while operating the Handler.

Remember **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain the **EVERYONE** operating this machine is familiar with the procedures recommended and follows safety precautions. Remember, most accidents can be prevented. Do not risk injury or death by ignoring good safety practises.

Handler owners must give operating instructions to operators or employees before allowing them to operate the Handler. Continue doing this on a annual basis.

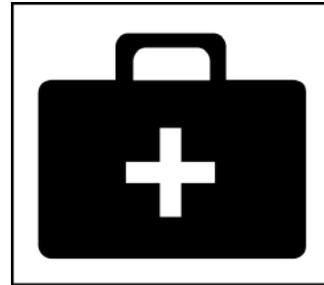
The most important safety device on this equipment is a SAFE operator. It is the operator's responsibility to read and understand ALL safety and operating instructions in the manual and to follow them. All accidents can be avoided.

A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injuries or death.

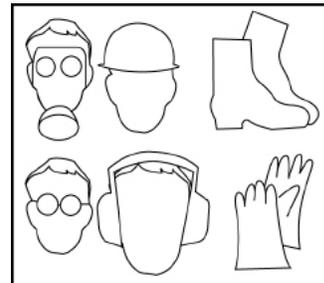
Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.

**Think SAFETY! Work SAFELY!**

- 1 Read and understand the operator's Manual and all safety signs before operating, maintaining, adjusting, or unplugging the Handler.
- 2 Only trained competent persons shall use the Handler. An untrained operator is not qualified to use the tank.



- 3 Have a first aid kit available should the need arise and know how to use it.



- 4 Wear appropriate protective gear. This list could include, but is not limited to:

- A hard hat
- Protective shoes with slip resistant soles
- Rubber or neoprene gloves
- Wet weather gear
- Hearing protection
- Respirator or filter mask

- Before starting, read chemical manufacturers' warnings, instructions and procedures and follow them exactly.
- Post the Poison Control Emergency telephone number for your area on sprayer before using agricultural chemicals. The appropriate number can be found in the inside of your telephone book. Have container label handy when seeking medical attention.
- Review all safety related instructions with all personnel annually.
- Do not put hands into the Handler when adding product.
- Wear safety goggles, rubber gloves and protective clothing whenever working with the Handler or on a machine or a component containing toxic products. Keep all shields and guards in place when operating.

## Safety Decals

- 1 Keep safety decals and signs clean and legible at all times.
- 2 Replace safety decals that are missing or have become illegible.
- 3 Replaced parts must have current safety decal.
- 4 Safety decals or signs are available from your dealer parts department.

## How to Install Safety Decals

- 1 Be sure that the installation area is clean and dry.
- 2 Decide on the exact position before you remove the backing paper.
- 3 Remove the smallest portion of the split backing paper.
- 4 Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.
- 5 Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
- 6 Smaller pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.

### 3. SAFETY DECAL LOCATIONS

The types of decals on the equipment are shown in the illustrations below. Location is depicted on the photograph below. Good safety requires that you familiarize yourself with the various safety decals, the type of warning and the area, or the particular function related to that area that requires your safety awareness.

Think SAFETY! Work SAFELY!



Figure 3.1 Safety Decal Location

**⚠ WARNING**

**TOXIC CHEMICAL HAZARD**

Agricultural chemicals can be dangerous. Improper selection or use can seriously injure persons, animals, plants, soil, or other property. **BE SAFE:** Select the right chemical for the job. Handle it with care. Follow the instructions on the container label and instructions from the equipment manufacturer.

**⚠ WARNING**

**SHARP OBJECT HAZARD  
KEEP AWAY.**

To prevent serious injury or death from sharp object:

- ❶ Keep hands out of tank.
- ❷ Do not puncture or cut hands or arms.
- ❸ Keep lid closed when not using.

**⚠ DANGER**

**CHEMICAL HAZARD  
TO PREVENT SERIOUS INJURY OR DEATH**

WEAR RUBBER GLOVES	DON'T BREATHE VAPOR	DON'T INJECT CHEMICAL
<ul style="list-style-type: none"> <li>• Do not allow chemical or solution to touch skin. Some can be absorbed through the skin.</li> <li>• Wear rubber gloves and protective gear at all times.</li> </ul>	<ul style="list-style-type: none"> <li>• Stay away from chemical splash and vapor. Keep others away.</li> <li>• Do not breathe vapor.</li> <li>• Wear proper respirator when working with chemicals.</li> </ul>	<ul style="list-style-type: none"> <li>• Chemicals can be toxic. If in eyes or mouth, read chemical manufacturer's instructions and follow exactly.</li> <li>• Seek medical attention immediately.</li> <li>• A poison control number is normally inside the front cover of your telephone book.</li> </ul>

**⚠ CAUTION**

**Do Not Transport While Handler Contains Chemical or Product.**

# 4. ASSEMBLY & INSTALLATION

## ABOUT YOUR HANDLER

### **Model Type**

You have purchased a free standing Handler IV batch and induction tank. All components required to install the unit are included in the package, except for the fittings used to join the Handler tank to the existing sprayer lines. Purchase these from your dealer, as the size may vary between make and model of sprayer.

### **Valve System**

Each Handler IV batch and induction tank has been equipped with a plumbing package valve system. The user is able to puncture and rinse product jugs while all the time delivering water and product to the sprayer. Identify precisely the model type and valve system you have purchased before you begin assembly and installation.

### **Plumbing Line Diameter**

Your Handler IV batch and induction tank is equipped with a 3" diameter main plumbing line.

The Handler IV comes preassembled, please proceed to Section 5, Operation.

## 5. OPERATION

### TO THE NEW OPERATOR OR OWNER

**It is the responsibility of the owner or operator to read and understand this manual, the sprayer manual and the chemical container label before starting. Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the environment.**

Many features incorporated into this equipment are the result of suggestions made by customers like you. Read the manual carefully to learn how to operate the machine safely, and how to set it to provide maximum efficiency. By following the operating instructions in conjunction with a good maintenance program, your Handler will provide many years of trouble-free service.

### OPERATING SAFETY



**WARNING**  
**BE ALERT**

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- 1 Read and understand the Operator's Manual and all safety signs before operating, maintaining, adjusting or unplugging the Handler.
- 2 Read chemical manufactures' warnings, instructions, and procedures before starting and follow them exactly.
- 3 Do not put hands into the Handler when adding chemicals.
- 4 Wear safety goggles, rubber gloves and protective clothing whenever working with the Handler or on a machine or a component containing toxic chemicals.
- 5 Keep all shields and guards in place hen operating.
- 6 Clear the area of all bystanders, especially children, before starting.
- 7 Review safety instructions annually.

### HOW THE SYSTEM WORKS

The handler consists of a plastic tank mounted near or on a sprayer or other water source unit, and a valve system plumbed for adding product to the machine. A patented knife system is located inside the handler tank to puncture and split open the bottom of the product container

Fresh water enters the bottom of the container from a line through the side of the eductor tank. Valves in the plumbing control the removal of the product and rinse mixture from the tank and allow fresh water to enter for rinsing the unit.

Mixing and removal of product from the handler unit is accomplished using the plumbing package system utilizing a pump.



**WARNING**  
**BE ALERT**

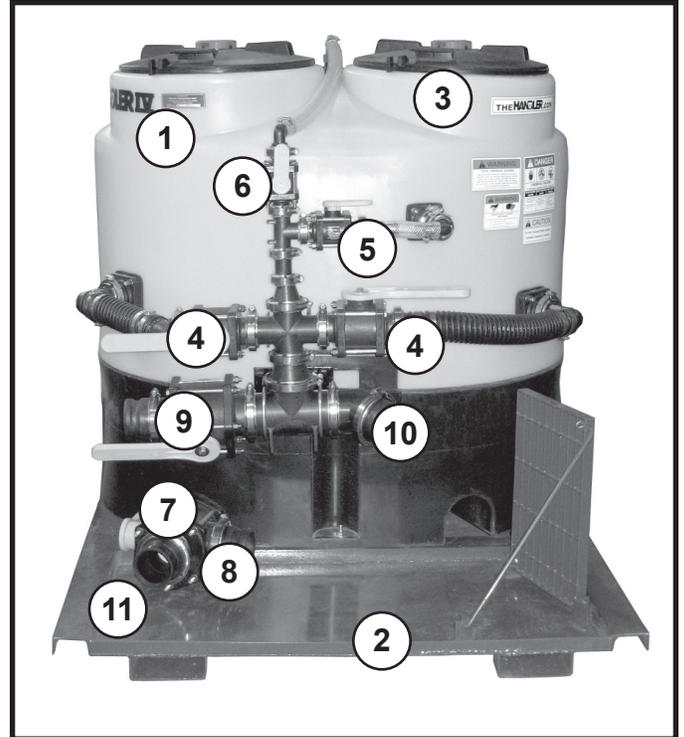
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When using a gas or diesil engine always check fuel and oil level before starting the engine.

Read manufacturer's owner manual for further instruction on use and maintenance of engine.

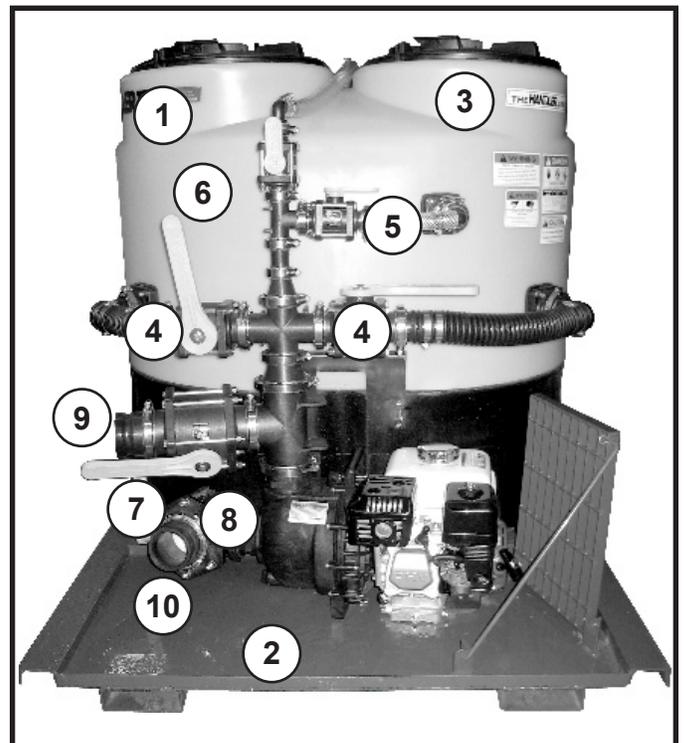
## Handler IV (Customer Supplied Pump)

- 1 Handler Tank
- 2 Mounting Frame
- 3 Handler Knife (Inside Tank - Not shown)
- 4 Agitation Valves
- 5 Jug Rinse Valve
- 6 Tank Rinse Valve
- 7 Suction Line (Under Tank)
- 8 Suction Valve
- 9 Discharge Port (To Sprayer)
- 10 Induction Port (From Pump)
- 11 Fresh Water Inlet



## Handler IV (with Pump Installed)

- 1 Handler Tank
- 2 Mounting Subframe
- 3 Handler Knife (Inside Tank - Not shown)
- 4 Agitation Valves
- 5 Jug Rinse Valve
- 6 Tank Rinse Valve
- 7 Suction Line (Under Tank)
- 8 Suction Valve
- 9 Discharge Port (To Sprayer)
- 10 Fresh Water Inlet



# BREAK IN

Although there are no operational restrictions on the handler when used for the first time, it is recommended that the following mechanical items be checked:

## A) Functional Check

After the Handler has been installed, a complete functional check should be done to verify that the plumbing has been properly connected and there are no leaks. Before adding product to the system, run the system as if adding product during operation, but using only water. Open and close each valve to simulate the complete operation of product removing and container rinsing.

### NOTE

Place a used, clean product container in the handler to direct the stream of water back into the tank.

Check all fitting and connections for leaks. Stop all leaks by tightening fittings or disassembling and applying a thread sealant to the threads. Do not use product unless all leaks have been stopped.

## B) After adding 5 and 50 containers of product:

- 1 Re-torque all mounting fasteners
- 2 Check plumbing for leaks. Stop all leaks by tightening fittings or disassembling and applying a thread sealant to the threads.

## PRE-OPERATION CHECKLIST

Efficient and safe operation of the Handler requires that each operator reads and understands the operating procedures and all related safety precautions outlined in this section. A pre-operational checklist is provided for the operator. It is important for both personal safety and maintaining the good mechanical condition of the Handler that this checklist be followed.

Before using the Handler and each time thereafter the following areas should be checked off:

- 1 Check that your personal protective gear is in good condition.
- 2 Review the warnings and instructions on the product container label.
- 3 Check the plumbing for leaks. Repair all leaks before starting.
- 4 Review and follow the Pre-Operation checklist for the sprayer.

## OPERATION

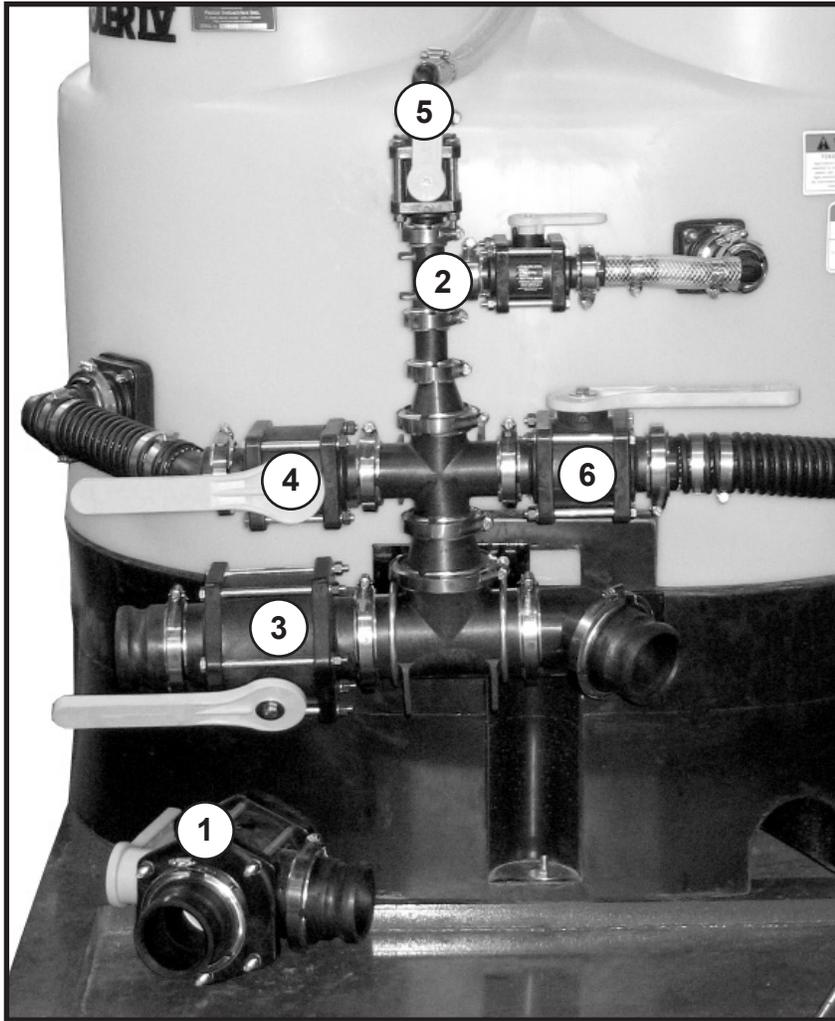
The Handler IV can be adapted for use on any existing sprayer or water supply vehicle. It may be used for adding liquid, dry product, or solupacks. The capability of your water supply source and the type of valve system you have chosen to purchase with your Handler IV Batch and Induction tank will determine the installation configuration and the operating procedures. Carefully review the section that applies to your particular system.



**BE ALERT**

## CAUTION

- 1 Wear appropriate personal protective gear whenever working with the Handler or around toxic chemicals.
- 2 Read and follow warnings and instructions on chemical container label.
- 3 Do not place hands into Handler tank at any time.
- 4 Review Sprayer Manual before starting.



## PLUMBING PACKAGE OPERATION (Customer to Supply Pump)

### A) Liquid Containers

1 Close all valves and open right lid (knife side). (See Fig. 5.2)

2 With all valves closed except suction valve - Valve #1 (draw from nurse tank position), start nurse pump to draw fresh water from supply tank. (See Fig 5.3)

3 Place container into tank and puncture. Push the container down with consistent and even force to cut the bottom of the container and to allow it to drain. Drainage and rinsing is faster if one or more sides of the container are cut into while puncturing. (Se Fig. 5.4)

4 Open Valve #2 (jug rinse valve) to rinse container (See Fig 5.5). Repeat until container is thoroughly rinsed. Then close valve #2 and remove container.

Repeat Steps #3 and #4 until all containers have been rinsed.

5 Close all lids and open valve #5 (rotoflush valve) to rinse Handler tank (See Fig. 5.6). When rinsing is complete, close valve #5 to stop water flow into Handler tank.



Figure 5.2 Knife system inside tank



Figure 5.5 Jug Rinse Valve

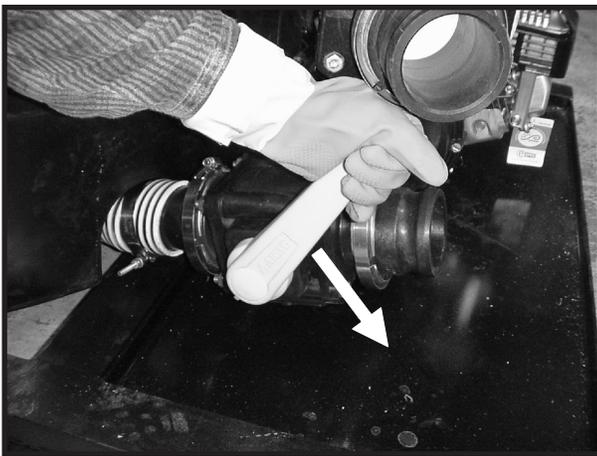


Figure 5.3 Suction Valve - drawing from nurse tank position



Figure 5.6 RotoFlush Valve



Figure 5.4 Puncture Jug

6 Open valve #1 (suction valve) to allow mixture to be drawn from Handler tank. (See Fig. 5.7)

7 Open Valve #3 (discharge valve) to allow mixture to be delivered to sprayer. (See Fig. 5.8)

Repeat Steps #5 to #7 as necessary to rinse tank.

8 To fill remainder of tank (if applicable), open suction valve (Valve #1) to “draw from nurse tank position”, and open (or keep open) valve #3 (discharge valve).

9 When desired sprayer tank volume is achieved, close valve #3 and move valve #1 to off position and turn off pump.



Figure 5.7 Suction Valve Drawing from the Handler

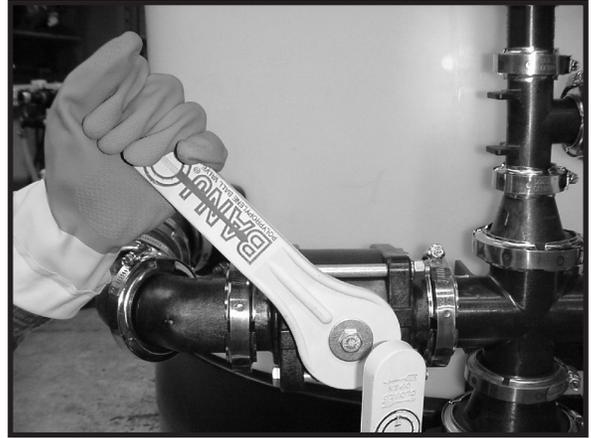


Figure 5.9 Left Agitation Valve

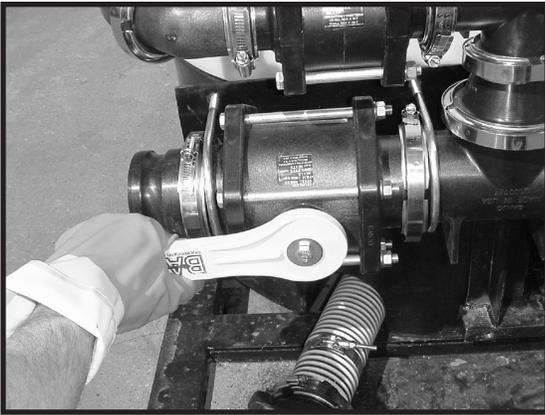


Figure 5.8 Open Position



Figure 5.10 Right Agitation Valve

### B) Mixing Dry and Packaged Products, recirculation Instructions for Both Liquid and Dry Products

- 1 Close all valves and open left lid (no knife in opening).
- 2 With all Valves Closed, start nurse pump.
- 3 Turn three-way valve (valve #1) so it is drawing water from nurse tank. (Fig 5.3)
- 4 Open one or both valves #4 & #6 (agitation valves) and fill Handler tank with appropriate amount of water to mix product. (Fig. 5.9 & 5.10)
- 5 Slowly pour product into Handler tank.

Hint: Use left opening to prevent contamination of knife.

6 Turn valve #1 (suction valve) to “draw from Handler tank position”. (Fig. 5.7)

7 Adjust agitation by adjusting agitation valve(s) (valves #4 & #6) and/or adjusting pump motor speed if gasoline engine driven (Fig. 5.9 & 5.10)

### Note

Agitation jets can be adjusted downwards or both to the rear depending on operator preference and the type of product being mixed (See fig. 5.11)

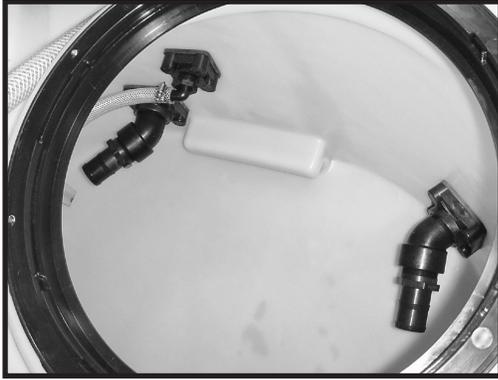


Figure 5.11 Agitation Jets (Inside Tank)

## PLUMBING SYSTEM OPERATION (with pump installed)

Ensure pump engine oil level is full before operation.

- Please use same instructions as “Plumbing Package Operation”.

8 Once the desired mixture is achieved, close agitation valve(s) to prevent continued recirculation.

9 Open valve #3 (discharge valve) to send Handler tank contents to sprayer tank. (See Fig 5.8)

10 Close valve #3 once tank is filled to desired level or all product has been delivered.

11 Turn valve #1 (three way valve on suction side of system) to “off position”

12 Turn off pump. If tank rinsing is desired then continue to the next step.

13 To rinse lines and tank, turn valve #1 on to draw from nurse tank.

14 Start pump.

15 Open agitation valves (valves #4 & #6), and flush the lines.

16 Close agitation valve(s) and open rotoflush valve (valve #5) to flush inside of tank. (See Fig. 5.6)

17 Once the inside of the tank is flushed then close rotoflush valve and turn three-way ball valve (valve #1) so it draws from the Handler tank.

18 Open valve #3 (discharge valve) and send rinsate to sprayer tank.

19 Repeat steps #13 to #18 as necessary to rinse tank.

## 6. TROUBLE SHOOTING

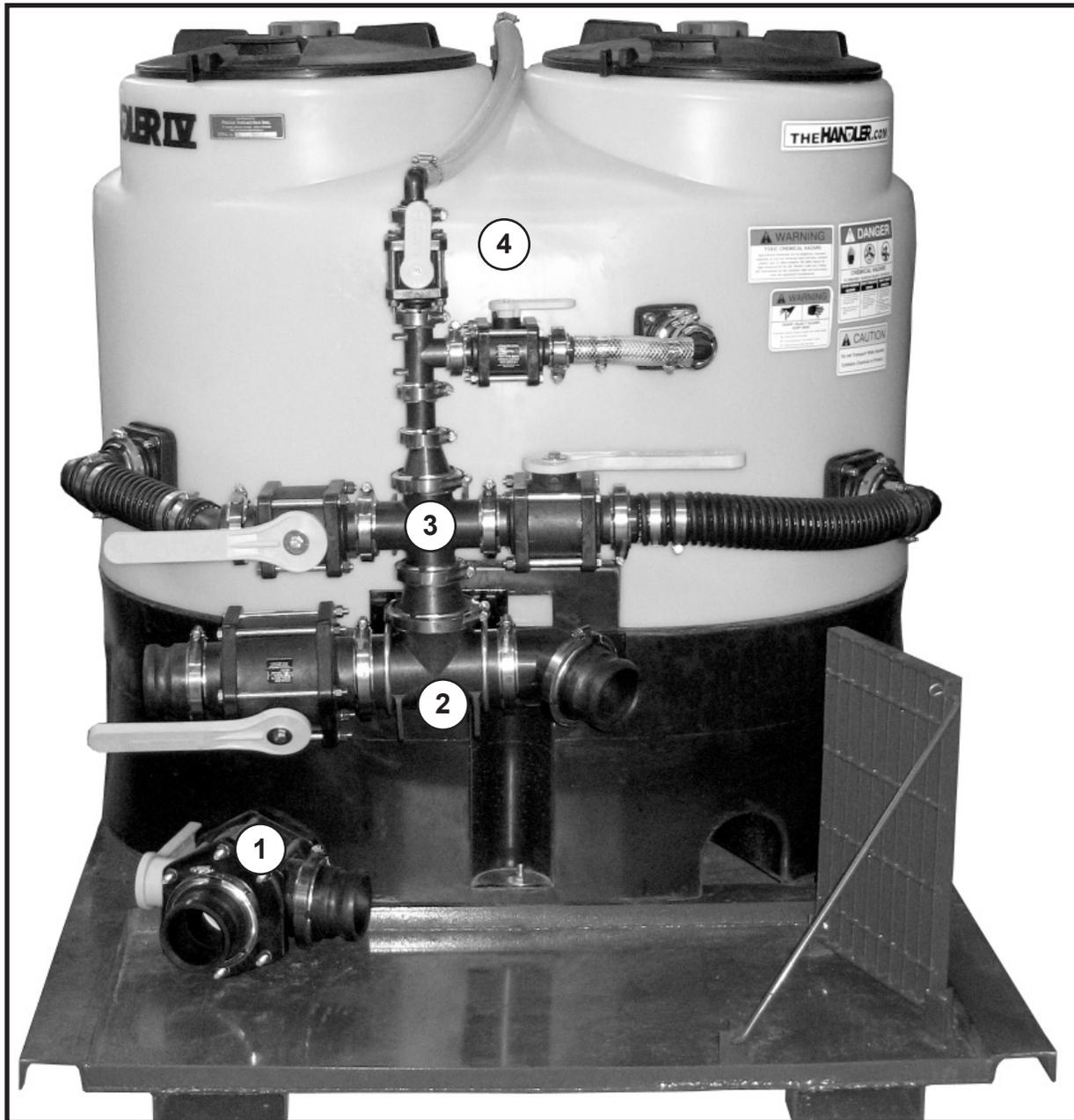
The Polywest Ltd. batch and induction tank is a simple product adding system that employs either a suction or plumbing system to place product into your sprayer tank. It is a convenient and reliable system which requires minimal maintenance.

The following troubleshooting section list many of the problems you may encounter. It defines the possible

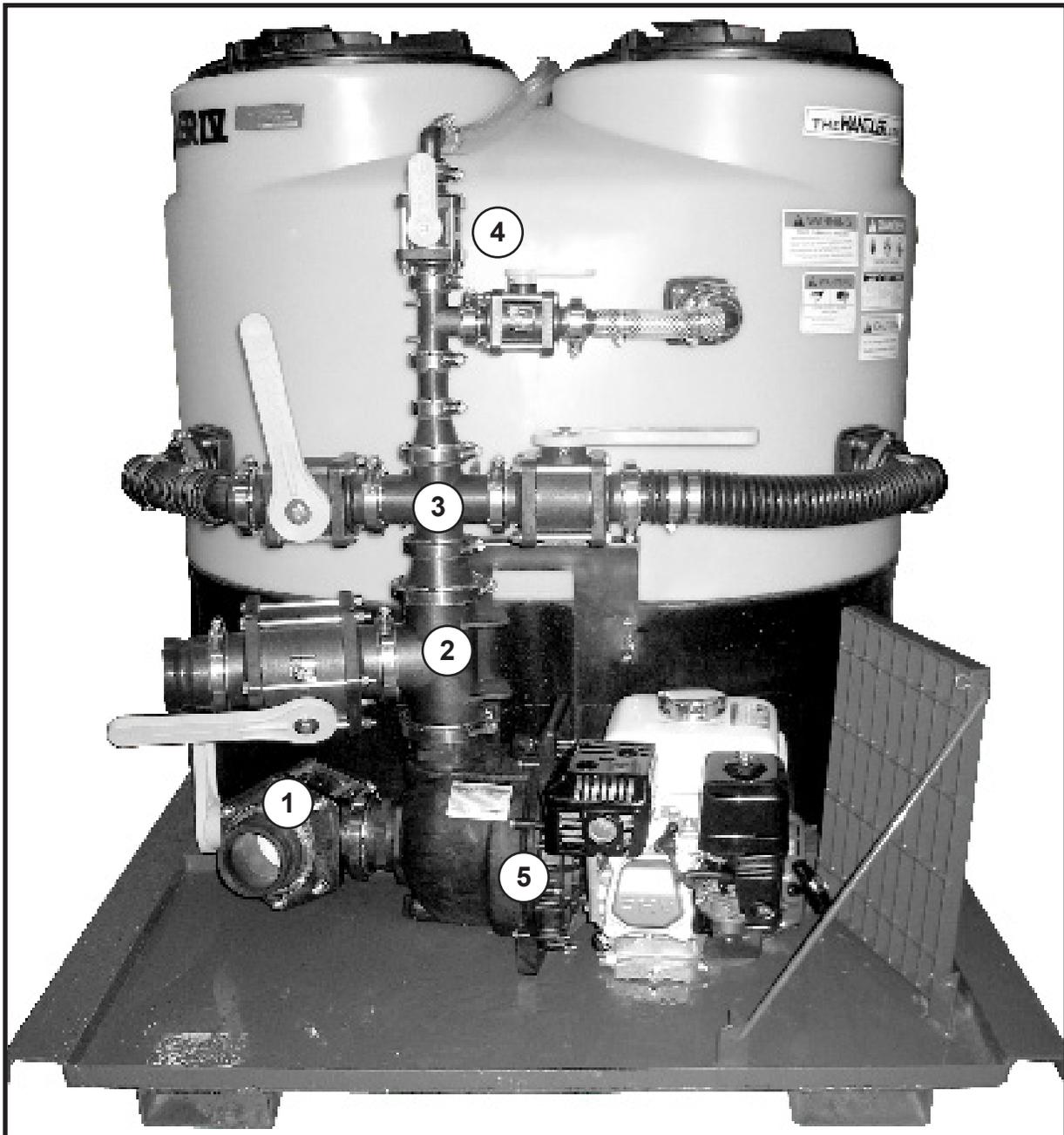
causes and presents solutions to the problems. If you have a different problem, even after having read through this troubleshooting section, please call you local Handler dealer or the factory. Before you call, please have this Operator's Manual as well as the model type and operating system you have purchased available for reference.

Problem	Cause	Solution
Venturi Won't Suck	Improper installation of venturi.	Check to make sure the venturi has been installed in the proper direction and ensure that the nozzle of the venturi is in place.
	Improper line size.	Check to make sure the discharge line is large enough to accommodate the flow of the mixture. Discharge line should be no smaller than the size of the fitting on the venturi. (1 1/2" or 2" depending on the model.)
	Obstructions in the lines.	Check to see if there are obstructions in the line after the venturi. This can be done by running a hose directly from venturi to the top of the sprayer tank, bypassing all of the sprayer plumbing.
Venturi is sucking, but mixture is not drawn in to sprayer tank.	Improper fittings.	If venturi is sucking properly, check all fittings to make sure they are not smaller than the hose size being used. Tees and elbows will add to back pressure created after the venturi, so avoid the use of elbows and tees where possible.
Jugs won't puncture properly.	Dull blade.	Sharpen the knife assembly by removing the assembly and securing it with a vice or on a table. Sharpen with hand file or grinder.
Product is splashing.	Improper handling of jugs.	Don't force jug onto knife assembly. Apply constant, even pressure.
	Dull blade.	Sharpen knife assembly by removing the assembly and sharpening with hand file of grinder.

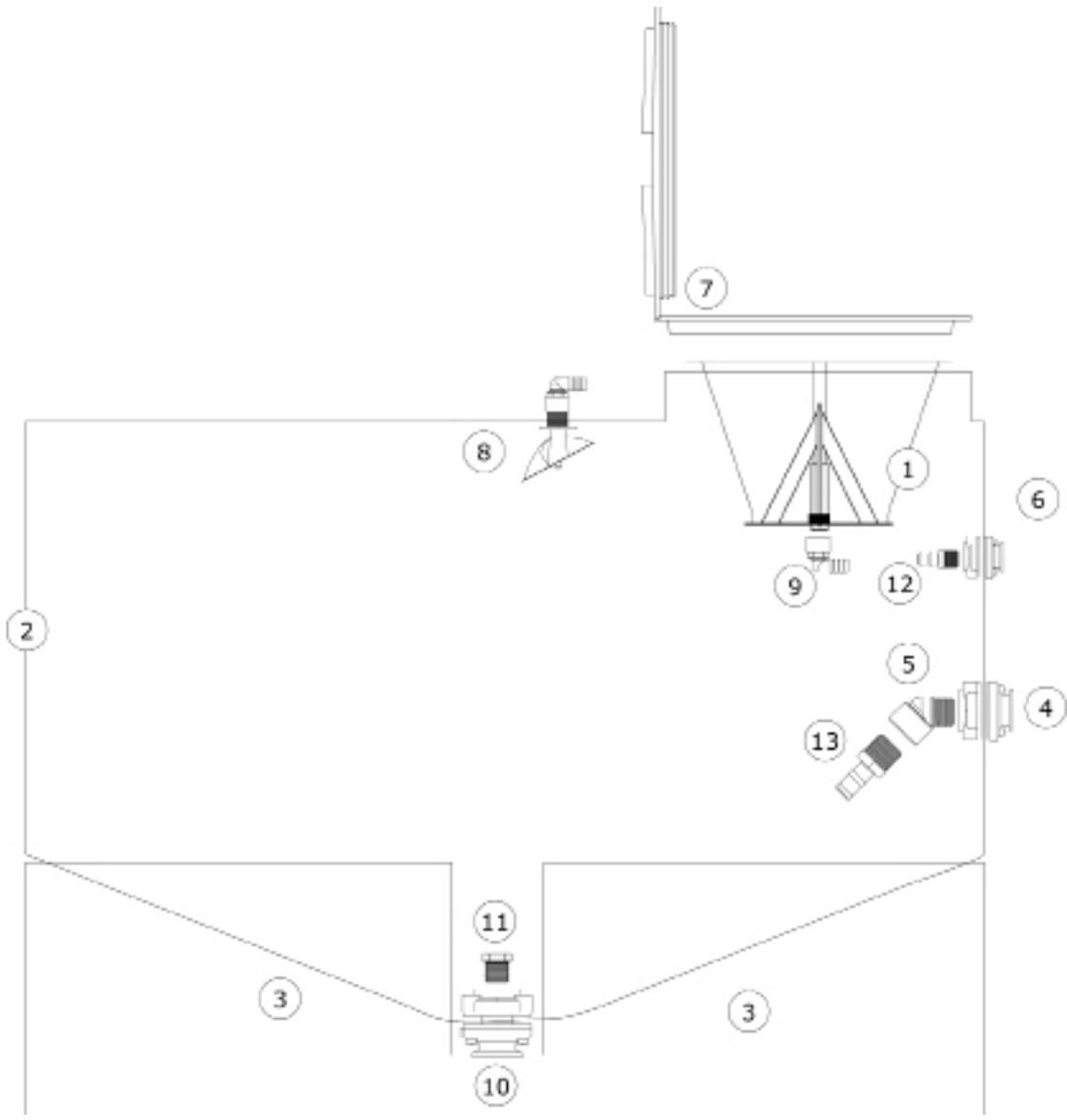
Problem	Cause	Solution
<p>Suction line is drawing air.</p> <p>Clogged suction lines.</p> <p>Leaking at manifold fitting.</p> <p>Leaking at threaded fitting.</p> <p>Leaking at hose barbs.</p>	<p style="text-align: center;"><b>Plumbing Package</b></p> <p>Incorrect valve setting.</p>	<p>Reduce suction from sprayer tank by partially closing the valve. This will regulate the speed at which product mixture is drawn from the Handler.</p>
	<p style="text-align: center;"><b>Dry Product Mixing</b></p> <p>Granular product is insufficiently dissolved.</p>	<p>Force water back into the venturi by opening bypass valve. This allows water to back up into the Handler tank and dislodge the obstruction.</p>
	<p>Loose clamp, no gasket, wrong gasket, damaged gasket, misaligned fitting.</p>	<p>Check clamp for tightness, tighten if necessary. Check for gasket, size, and condition. Install or replace gasket as required. Align fittings before clamping.</p>
	<p>Not tight enough or needs sealant.</p>	<p>Tighten fitting. Take fittings apart, apply sealant. Reassemble and tighten.</p>
	<p>Loose clamp.</p>	<p>Tighten clamps.</p>



Item	Part Number	Description	Quantity	Item	Part Number	Description	Quantity
<b>3" Plumbing</b>				<b>Section 1</b>			
1	54-79350	3" EPDM Hose	2.5FT	3	25-FC220	2" Worm Screw Clamp	8
1	25-MV300BL	3" Manifold 3-Way Ball Valve	1	3	25-200G	2" EPDM Gasket	8
1	25-V25153138BL	1 3/8" 3 Way Handle Offset	1	3	54-79250	2" EPDM Hose	2.5FT
1	25-V25153SH	Short Handle for Ball Valve	1	3	53-75632	2" Gear Clamp SS	8
1&2	25-FC300	3" Worm Screw Clamp	8	<b>1" Plumbing</b>			
1&2	25-300G	3" EPDM Gasket	8	4	25-M100CPG	1" Manifold Coupler	2
1&2	25-M300A	3" Manifold x 3" Male Adapter	4	4	25-M100TEE	1" Manifold Tee	1
<b>Section 2</b>				4	25-MV100CF	1" Manifold Ball Valve	2
2	25-MV300CF	3" Manifold Ball Valve	1	4	25-M100BRB	1" Manifold x HB	1
2	25-M300TEE	3" Manifold Tee	1	4	25-M100BRB90	1" Manifold x 90° HB	2
2	25-M300CPG45	3" Manifold 45° Coupler	1	4	25-FC100	1" Worm Screw Clamp	8
2	25-M300220CPG	3" x 2" Manifold Coupler	1	4	25-M100G	1" EPDM Gasket	8
<b>Section 3</b>				4	54-79210	1" Clear Braided PVC Hose	3FT
3	25-M220CR	2" Manifold Cross	1	4	53-75612	1" Gear Clamp SS	4
3	25-MV220CF	2" Manifold Ball Valve	2	4	25-MBF220	2" Manifold Bolted Bulkhead	2
3	25-M220BRB45	2" Manifold x 45° HB	1	4	25-MBF100	1" Manifold Bolted Bulkhead	1
3	25-M220BRB90	2" Manifold x 90° HB	2	4	86-H4PFB	3" Mounting Bracket	1
3	25-M220BRB	2" Manifold x HB	1	4	67-UB038-400	4" 3.8 Munting U-Bolt	2
3	25-M220100CPG	2" x 1" Manifold Coupler	1	4	49-PWRF-15	RotaFlush tank flush	1



Item	Part Number	Description	Quantity	Item	Part Number	Description	Quantity
<b>3" Plumbing</b>				<b>Section 1</b>			
1	25-MV300BL	3" Manifold 3-Way Ball Valve	1	3	25-FC220	2" Worm Screw Clamp	8
1	25-V25153138BL	1 3/8" 3 Way Handle Offset	1	3	25-200G	2" EPDM Gasket	8
1	25-V25153SH	Short Handle for Ball Valve	1	3	54-79250	2" EPDM Hose	2.5FT
1&2	25-FC300	3" Worm Screw Clamp	7	3	53-75632	2" Gear Clamp SS	8
1&2	25-300G	3" EPDM Gasket	7	<b>1" Plumbing</b>			
1&2	25-M300A	3" Manifold x 3" Male Adapter	2	<b>Section 4</b>			
<b>Section 2</b>				4	25-M100CPG	1" Manifold Coupler	2
2	25-MV300CF	3" Manifold Ball Valve	1	4	25-M100TEE	1" Manifold Tee	1
2	25-M300TEE	3" Manifold Tee	1	4	25-MV100CF	1" Manifold Ball Valve	2
1&2	25-M300MPT	3" Manifold x MPT	2	4	25-M100BRB	1" Manifold x 90° HB	1
2	25-M300220CPG	3" x 2" Manifold Coupler	1	4	25-M100BRB90	1" Manifold x 90° HB	2
<b>2" Plumbing</b>				4	25-FC100	1" Worm Screw Clamp	8
<b>Section 3</b>				4	25-M100G	1" EPDM Gasket	8
3	25-M220CR	2" Manifold Cross	1	4	54-79210	1" Clear Braided PVC Hose	3FT
3	25-MV220CF	2" Manifold Ball Valve	2	4	53-75612	1" Gear Clamp SS	4
3	25-M220BRB45	2" Manifold x 45° HB	1	4	25-MBF220	2" Manifold Bolted Bulkhead	2
3	25-M220BRB90	2" Manifold x 90° HB	2	4	25-MBF100	1" Manifold Bolted Bulkhead	1
3	25-M220BRB	2" Manifold x HB	1	4	49-PWRF-15	RotaFlush Tank Flush	1
3	25-M220100CPG	2" x 1" Manifold Coupler	1	<b>Pump</b>			
				5	60-56530	3" 6.5 HP Honda Driven Pump	1



<b>Item</b>	<b>Part Number</b>	<b>Description</b>	<b>Quantity</b>
1	85-HKNIFE	Handler Knife	1
2	86-H4T250	230 US Gallon Tank	1
3	86-H4T250STAND	Handler 4 Stand	2
4	25-MBF220	2" FPTxFlange Bolted Bulkhead	2
5	25-SL200-54	2" MPTxFPT 45° Street Elbow	2
6	25-MBF100	1' FPTxFlange Bolted Bulkhead	1
7	49-62532	15" Hinged Vented Lid	2
8	49-PWRF-15	RotoFlush Tank Flush	1
9	30-60974PHK	3/4" FPT x 90° HB with Drain	1
10	25-MBF300BD	3" FPT x Flange Bolted Bottom Drain Bulkhead	1
11	25-PLUG300	3" MPT Plug	1
12	25-HB100-075	1" MPT x 3/4" Hose Barb	1
13	25-HB200	2" MPT x Hose Barb	2

## 6. SPECIFICATIONS

- Tank: Polyethylene, cone bottom.
- Capacity: 230 US gallons or 870 liters.
- Subframe: Steel
- Fittings: fiberglass filled polypropylene
- Hose: braided clear PVC (pressure side) or EPDM suction (suction side of system).
- Clamps: all stainless steel.
- Lid: two 15" diameter, polypropylene, hinged.
- Height: 44" with lid on (not including steel subframe), 48" with steel subframe.
- Width: 47"
- Length: 56" (tank only, no plumbing attached), 76" with steel subframe and plumbing attached.

NOTE: Specifications subject to change without notice.