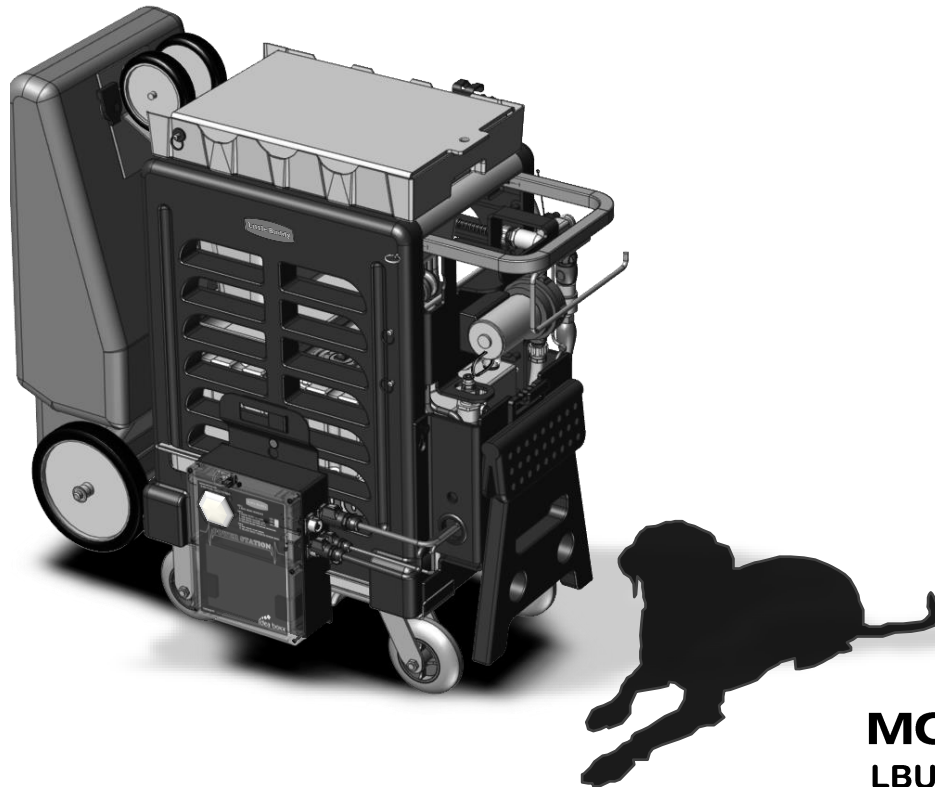


Sr. Little Buddy™

Operators Manual



MODEL:
LBUDDYSR

Hydra Rinse® Mobile System enables cleaning and sanitizing everything...naturally.

for all food dispensing equipment and more!

HYDRA RINSE®

CLEANS SIMPLE. SAFE. QUICK.

Complete for service reference information regarding your Hydra Rinse® product:

Model Number: _____

Serial Number: _____

Food Dispensing Equipment

Model Number(s): _____

IMPORTANT MESSAGE TO END USER REGARDING POWER CONSUMPTION:



Once powered on, Little Buddy™ Sr. is always consuming power. Turn off system immediately following use to conserve energy. This is also true after the system limits the water pump from operating due to low voltage limits (**Section 15**). Always turn the system power off immediately following use to ensure optimal power management!

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LBUDDYSR

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Hydra Rinse, LLC 7870 Lehigh Crossing Suite 1, Victor New York 14564

Toll Free: 844-233-6349

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Section 1: Preparation Guidelines

The information provided is to ensure that your LBUDDYSR meets factory tested Performance.

Requirements



No additional tools or fasteners are required for proper assembly/dis-assembly of your LBUDDYSR; attaching features are all inclusive.

Care should be taken when assembling/dis-assembling LBUDDYSR to ensure proper performance and operation.

- Only LBUDDYSR trained personnel should operate this device.
- Only trained LBUDDYSR end users should make any necessary component replacements.

Note: *LBUDDYSR is engineered to work exclusively with LEXX™ Liquid Sanitizer and Cleaner Concentrate.*

Protective Measures



Never submerge any of the electrical components into any liquid. This product was manufactured and designed to meet IP65 standards:

- 6: Totally protected from dust contaminates.
- 5: Protected against low pressure jetting from water in all directions, limited ingress permitted.

Site Pre-requisite



Water supply must be from a municipal water source, having a sanitary pH value of ~7.0-8.0.

Municipal Water Connection



Recommended outlet water temperature 110°F (43.3°C) but less than 120°F (48.9°C); Default: 112.5°F (44.7°C).

NOTE: Sustained operating temperatures equal to or greater than 120°F (48.9°C) can damage the unit.

Section 2: Operator Introduction

The following Hydra Rinse® product: LBUDDYSR has been carefully engineered and manufactured to reduce the amount of time and labor required to clean equipment that has limited to no access to resources necessary for proper maintenance i.e., water source, drain, sink, etc.

To the Operator

Careful maintenance and operation of this unit will ensure product quality and consistent performance. Please refer to maintenance schedule in (Section 18).

Important Message for users of the Hydra Rinse® Cleaning and Sanitizing System

When using LBUDDYSR in conjunction with the Hydra Rinse® Cleaning and Sanitizing System for Soft Serve Ice Cream Machines:



For optimal results, follow the cleaning and sanitizing procedures outlined in Sections 12 and 13 of the Hydra Rinse® Cleaning and Sanitizing System for your specific Hydra Rinse® System without **"Interruption"**

NOTE: Soft serve machines must never be allowed to freeze the cleaning and sanitizing solution. When the freezing/product mix chamber(s) becomes filled with cleaning and/or sanitizing solution, then allowed to freeze, permanent damage can and most likely will occur to the machine making it inoperable. So, when asked to place the machine into **"Wash/Clean Mode"** during the auto cleaning and/or sanitizing process of the Hydra Rinse® System, be sure to never freeze the cleaning and/or sanitizing solution.

State Considerations:

(Included) with every LBUDDYSR is a LEXX™ pH Test Strip Kit. The test strip is used for measuring the acceptable range of pH for proper sanitization (strip should indicate less than 3.5pH).

For States requiring a total citric acid concentration (grams/Liter) semi-quantitative measurement (**Sold separately**). Use QUANTOFIX® Total acid part no. 91353 (Strip should indicate between 2.0-2.5 g/L)

Note: *Warranty is valid if authorized LBUDDYSR parts are acquired from an authorized LBUDDYSR Distributor/Reseller along with service work being performed by a trained LBUDDYSR end user. Hydra Rinse® reserves any right to deny warranty claims on device or parts if unofficial LBUDDYSR components were installed in the unit. This also applies to any modifications that fall out of the scope of factory recommendations, apparent abuse, or neglect.*

Note: *LBUDDYSR is under continuous research and engineering; any improvements to our product will lead to information changes within this manual and are subject to change without notice (www.hydrarinse.com).*



Battery Disposal:

LBUDDYSR is powered by a Gruber Power Series 58AGPS-12-18-P (12V18AH)

- **Do Not** place in fire or incinerator.
- **Do Not** dispose in refuse.
- **Do** remember to recycle in accordance with local regulations.



Gruber Battery Recycling - Extension 377
Monday - Friday (7AM to 5PM) MST
Purchasing@Gruber.com
Toll Free: 1-800-658-5883

Section 3: Safety



Implementation with any one of our products require a thorough understanding of factory recommendations; complete knowledge of this Operators Manual is recommended.

Important Message



Failures to adhere to the listed safety precautions may result in severe personal injury or even death. Personal, unauthorized service or repairs to this unit may result in inadvertent damages, and excessive service repair expenses if the end user is not professionally trained.

Visual Inspection



As a good practice, please take time to periodically inspect components for unforeseeable issues that may arise due to wear or damage (e.g., Water lines, supply hoses). Hoses can be an obstacle resulting in tripping and/or falling hazards that result in injury. Always work carefully around hoses avoiding injury to anyone within direct and/or indirect contact.

Water can wreak havoc with compromised systems, especially with unprotected surroundings like electrical receptacles that are unprotected by ground fault circuit interruption (GFCI). Worn out extension cords can lead to electrical shock when exposed to water.

Water/ Temperature



Water temperatures above 120°F (48.9°C) is not recommended; burns will occur from over exposure.

Batteries



Ensure battery is completely dry before inserting into the LBUDDYSR Power Station

Never change or remove the battery when water is present. Find a dry, clean area when replacing battery. Since the LBUDDYSR is always around water, never substitute the Gruber Power Series 58AGPS-12-18-P for any other type of rechargeable battery i.e., li-ion.

If water enters the LBUDDYSR Power Station, discontinue usage immediately. Allow unit to air dry for 2 to 3 hours. If unit fails to operate correctly, replacement will be required; this failure is not covered under warranty.

Little Buddy™ Sr. Mobile Wand

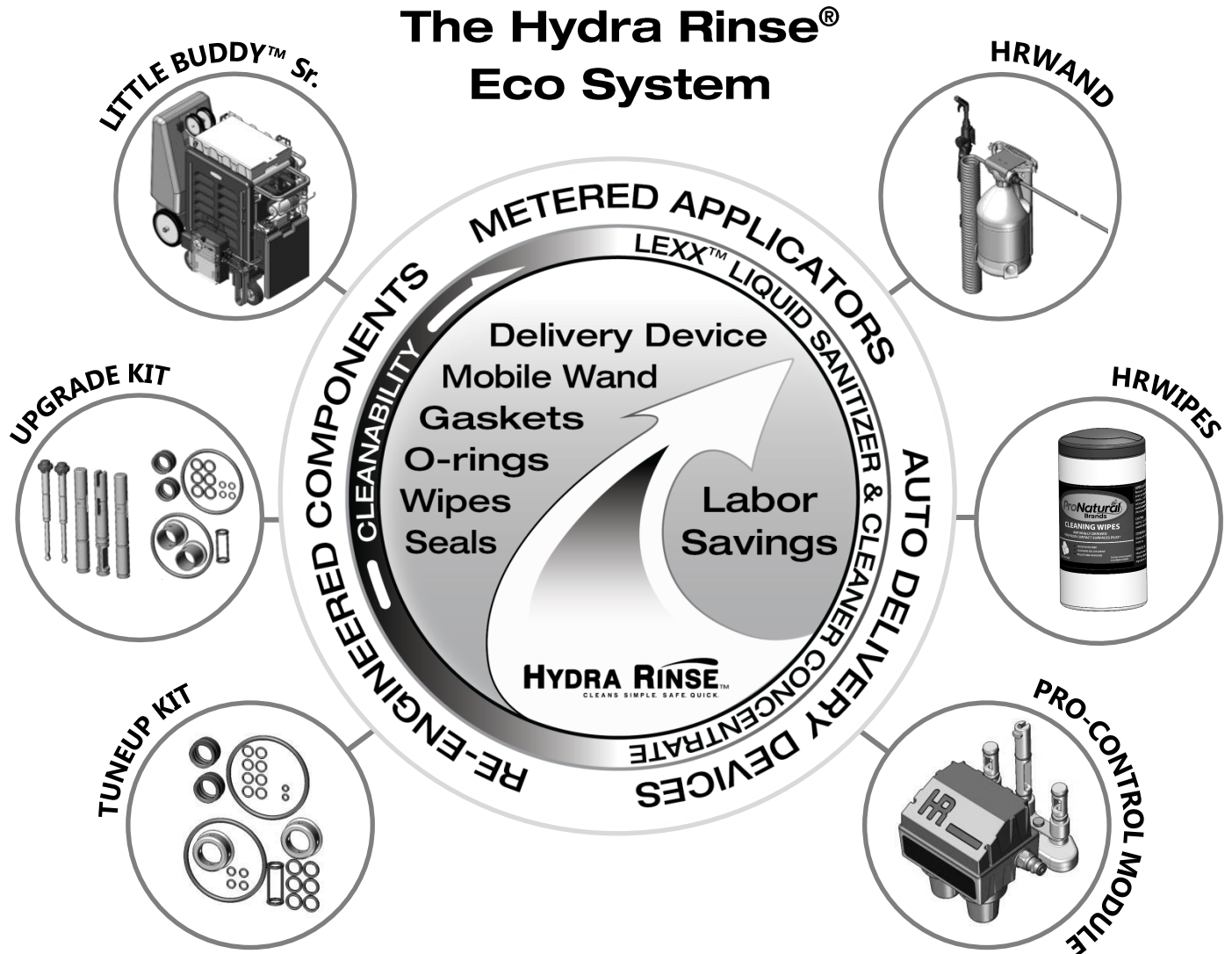
Never directly point the wand at anyone, for any reason. Never insert the Wand Tip into any orifice and/or opening of any electrically powered food equipment that may allow direct access to electrical circuitry/components. When possible, always power off equipment before servicing to avoid electrocution/damage to device.



Attention CA Residents:
Prop 65 Warning. This product can expose you to chemicals including BPA, and lead which are known to the State of California to cause cancer, birth defects, or other reproductive harm. For more information, go to www.p65warnings.ca.gov

Section 4: Product Introduction

Little Buddy™ Sr. is the latest edition to the Hydra Rinse® Eco System. Please be sure you have all the right components before you begin to clean and sanitize with our system:



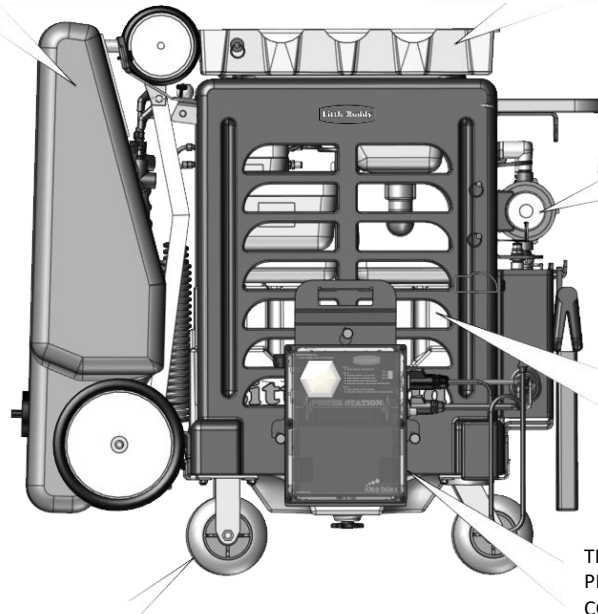
Ask your participating Dealer for more information about Hydra Rinse® products and their applications.

Section 5: Basic Overview

○ KEY FACTS ABOUT YOUR LITTLE BUDDY™ Sr.

16 US GALLON DETACHABLE WASTE TOTE
(UPGRADEABLE TO 25 US GALLONS)

SANITIZING SINK WITH EXPANDABLE
WORKSPACE FOR WASH AND RINSE
CATCH BINS



12VDC WATER DIAPHRAGM PUMP OPTIMIZED
FOR THE HYDRA RINSE® CLEANING AND
SANITIZING SYSTEM

ON-BOARD 15 US GALLON FRESHWATER
TANK WITH WATER LEVEL SENSOR AND
AUTO SHUT-OFF

THE POWER STATION HAS A REAL-TIME
PROPORTIONAL CONTROLLER TO INTELLIGENTLY
CONTROL AND INFORM
(18 Ah BATTERY ENSURES SUSTAINED PERFORMANCE)

6" NON-MARKING CASTERS FOR
SMOOTH TRAVELING

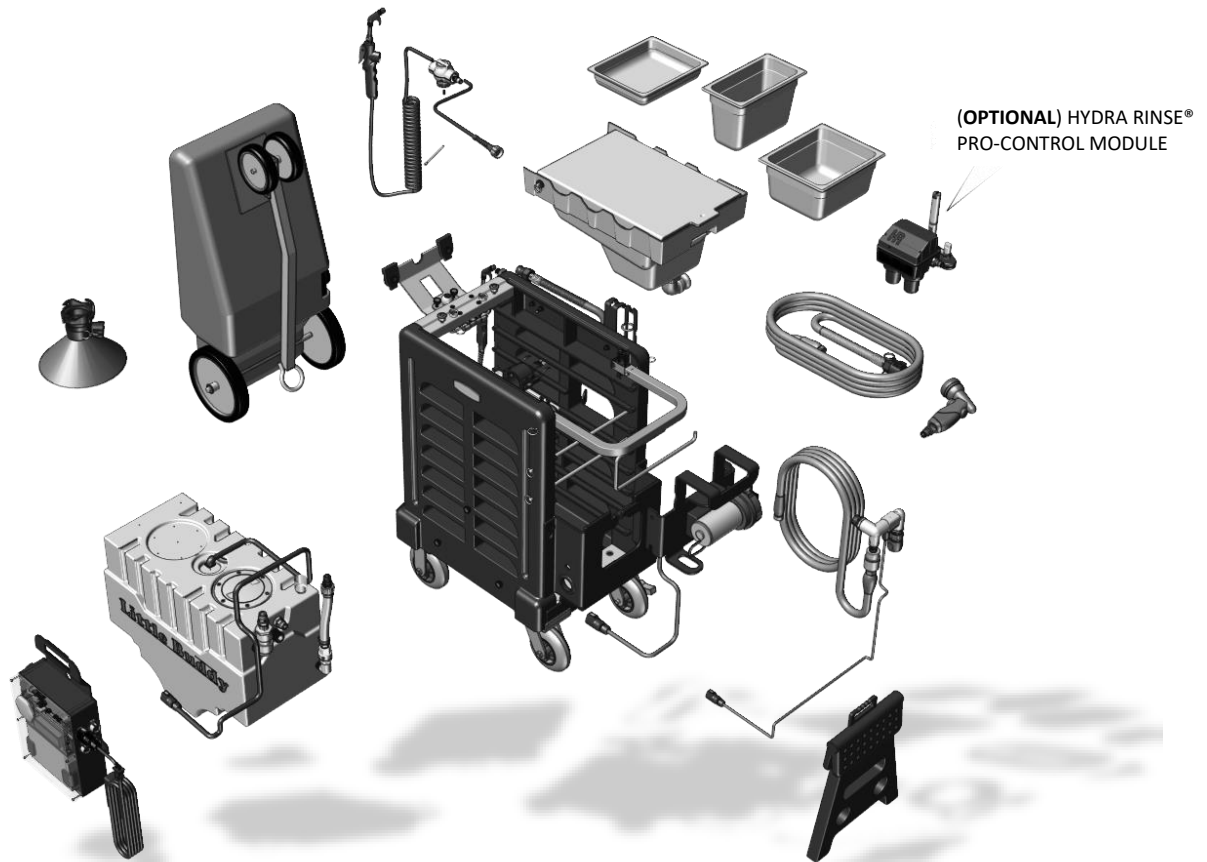
(OPTIONAL PNEUMATIC WHEELS
AVAILABLE)

○ Since Little Buddy's conception in 2014, the mobile 3-bay system has taken on many forms. For the past year and a half, end-users have beta tested the entire system helping to fine tune the most important features into the smallest modular footprint possible. In less than 5 minutes, the entire Hydra Rinse® Mobile System (Little Buddy™ Sr.) can be disassembled without the use of one single tool. Little Buddy™ Sr. has big plans for your cleaning and sanitizing endeavors.

- **EVERYTHING IS MODULAR & CUSTOMER REPLACEABLE, WHICH ENABLES YOU TO FIX AND RECONFIGURE YOUR LITTLE BUDDY™ Sr.**
- **16 US GALLON DETACHABLE WASTE TOTE INCREASES EFFICIENCY (INSPIRED BY STATE HEALTH DEPARTMENTS)**
- **6" CASTERS ALLOW FOR MOBILITY OVER LARGE GAPS AND IMPERFECTIONS**
- **POWER STATION MAXIMIZES PERFORMANCE, WHILE MINIMIZING BATTERY CONSUMPTION (i.e., THERE'S ENOUGH POWER TO CLEAN MORE THAN 3 COMPLETE KIOSKS. LIKE WAY MORE!)**
- **15 US GALLON FRESHWATER TANK (14.4 US GALLONS ACTUAL VOLUME) INCLUDES AN AUTO-FILL VALVE AND WATER LEVEL SENSOR (USED TO INCREASE BATTERY LIFE BY SHUTTING DOWN THE SYSTEM SO THAT THE PUMP WILL NOT RUN IF IT CAN'T REACH THE REQUIRED 50 PSI OUTPUT PRESSURE)**
- **12VDC 5 CHAMBER DIAPHRAGM WATER PUMP (ABLE TO RUN DRY WITHOUT DAMAGE)**

Section 5: Basic Overview

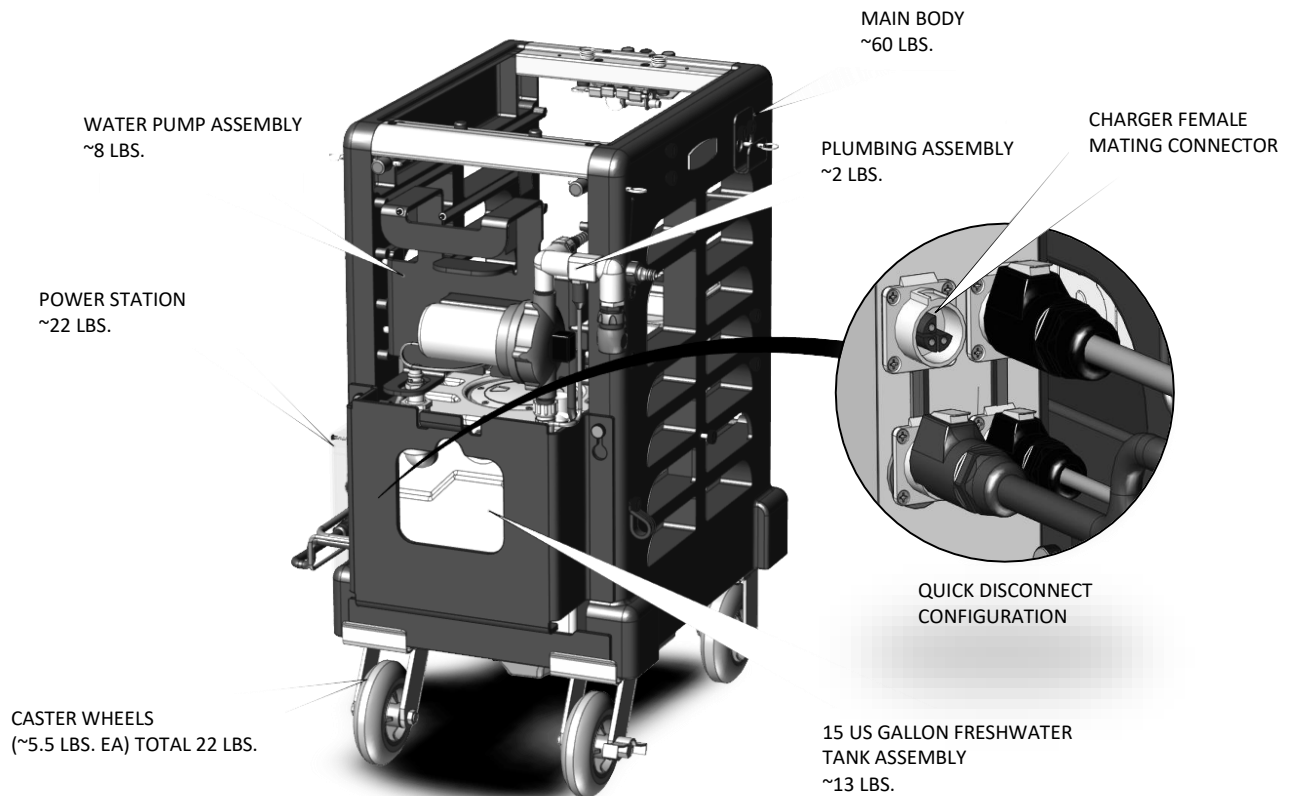
● MODULAR DESIGN



● Little Buddy's modular design enables easy end user serviceability: The way to service Little Buddy™ Sr. is by disconnecting a worn-out component and simply replacing it with a new one. The entire system can be broken down without any tools into individual components, even further than what we show you here. This means that everything can be cleaned, serviced, and transported at the component level.

Section 5: Basic Overview

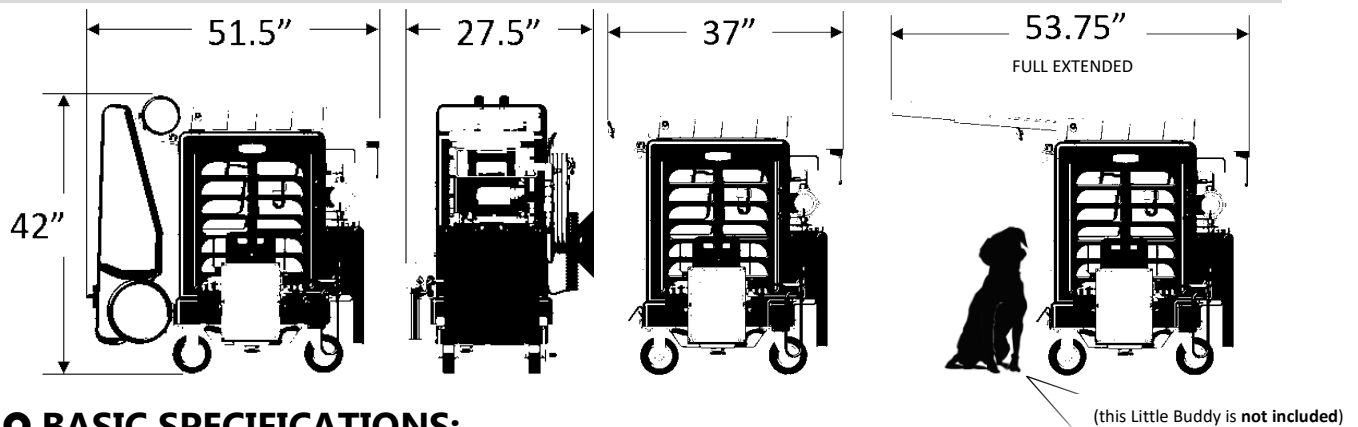
RECOMMENDED LEVEL OF TEARDOWN



Although Little Buddy's modular design allows the system to be broken all the way down to the Main Body, which includes casters (weighing 82 lbs.), it is recommended to minimize the number of times the electrical connectors are physically connected/disconnected.

Our recommendation is "NOT" to take the system apart all the way down to the main body every time you need to transport, but to only remove enough components to make Little Buddy™ Sr. more manageable to lift if need be. The above image represents roughly 127 lbs.

Section 6: Basic Specs



○ BASIC SPECIFICATIONS:

DIMENSIONS: [51.5" L] X [27.5" W] X [42" H] (Fully assembled with waste tote)

- Fully extended workspace three-bay sink system [53.75" L]

TOTAL WEIGHT: ~207 lbs. (Fully assembled)

BASIC CONSTRUCTION: Food Grade Polypropylene, ABS, Polystyrene, Stainless Steel, Anodized Aluminum

CASTERS: 6" Non-marking/optional pneumatic rubber tires (45-48 psi recommended)

- Smooth and quiet operation (Note: Possible marking with optional pneumatic tires if left wet and idle for extended periods of time. Recommend parking cart on a throw rug)

POWER SOURCE: 12VDC 18-Ah lead rechargeable battery [58AGPS-12-18-P (12V18AH)]

CHARGER: 12 Volt, 4.0 Amp Maintainer 4000 Battery Trickle Charger.

- Requires a standard 110-120VAC 15AMP outlet

PUMP: 12VDC Diaphragm Pump

- Max Pressure: 50+/- 1 psi accuracy (regulated by our proprietary Power Station Integrated Smart Controller)
- Water Output: will vary based on application (system has been tuned to produce 3-3.25 GPM)

HOSES: Legacy™ Brand Flexzilla® high quality grade products

- 10' 5/8" freshwater supply hose (Legacy™ NFZG64 6-pattern adjustable spray nozzle **included**)
- 5' 5/8" freshwater fill/priming hose (Used to fill freshwater tank and prime pump)
- 9' 5/8" waste hose
- 15' 5/8" bypass drain hose (included when purchased with the Hydra Rinse® Cleaning and Sanitizing System for soft serve ice cream machines)

THREE-BAY SINK: The three-bay sink: 1/2 size x 2-1/2" deep catch bin, 1/3-Size x 6" deep catch bin and a 1/2-Size x 6" deep catch bin (does not include the sink)

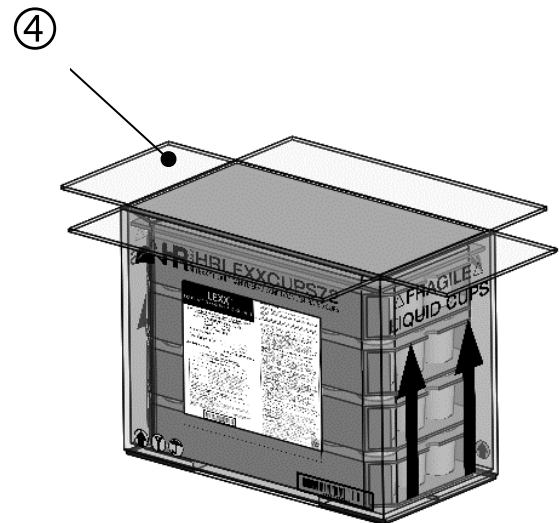
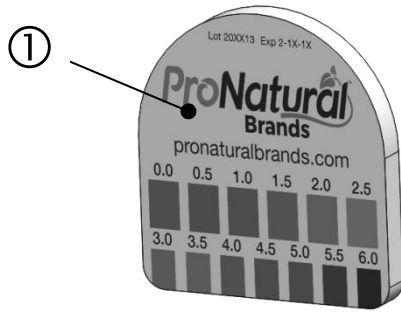
FRESHWATER TANK: 15 US Gallon (Actual volume 14.4 US Gallons); auto-fill set to ~13.25 US Gallons

WASTE TANK: 16 US Gallon Tote-Along Portable Waste Tank

WAND: Little Buddy™ Sr. Mobile Wand (Dispenses LEXX™ Liquid Sanitizer and Cleaner Concentrate)

- 15' Flexzilla High Temp Polyurethane Recoil Hose
- Automatically mixes LEXX™ at the proper concentration (1/4 GPM, doubles as a faucet for the sink)

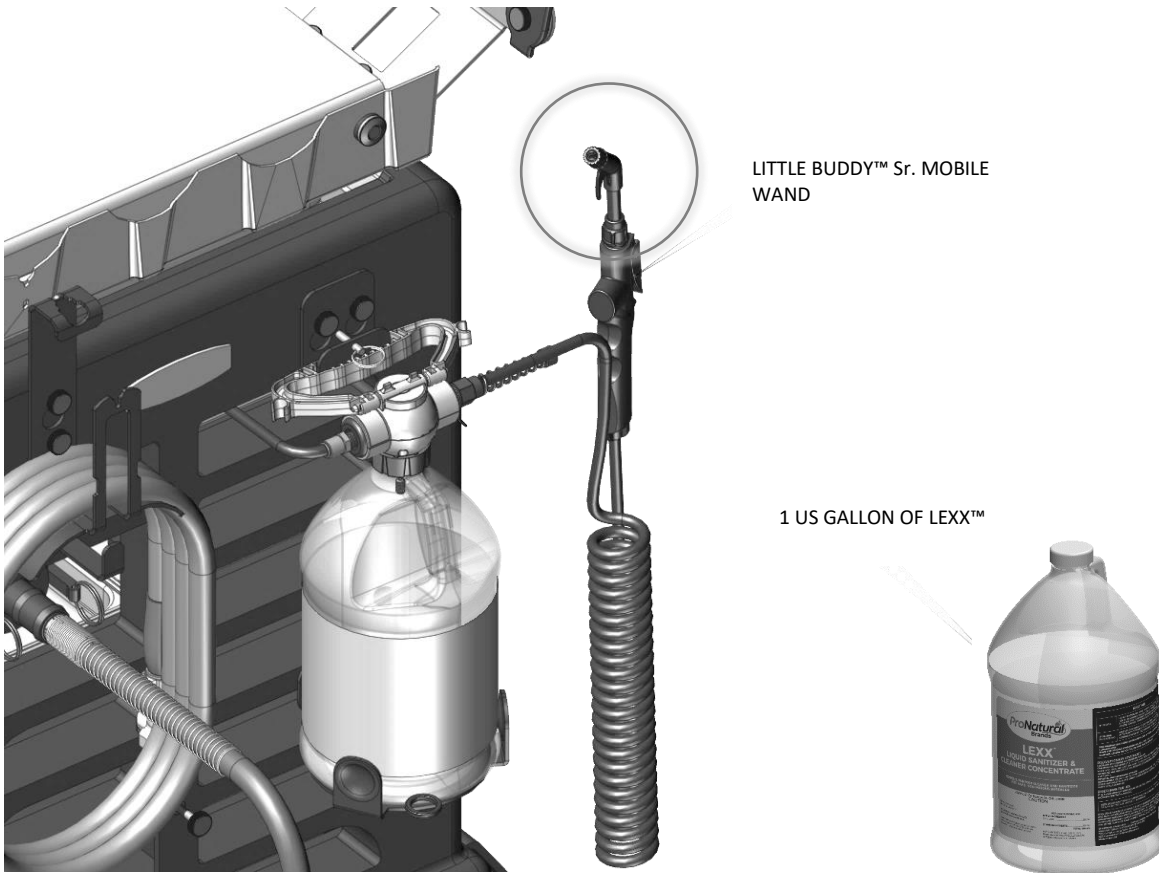
Section 7: Little Buddy™ Sr. Consumable Items



IMAGES FOR ILLUSTRATION ONLY

Item:	Description:
01	LEXX™ pH TEST STRIPS
02	PRONATURAL® CLEANING WIPES
03	LEXX™ LIQUID SANITIZER AND CLEANER CONCENTRATE
04	LEXX™ CUPS FOR THE HYDRA RINSE® PRO-CONTROL MODULE

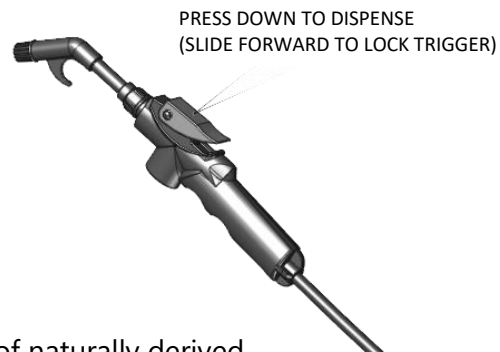
Section 8: Wand Sanitizer/Cleaner Application



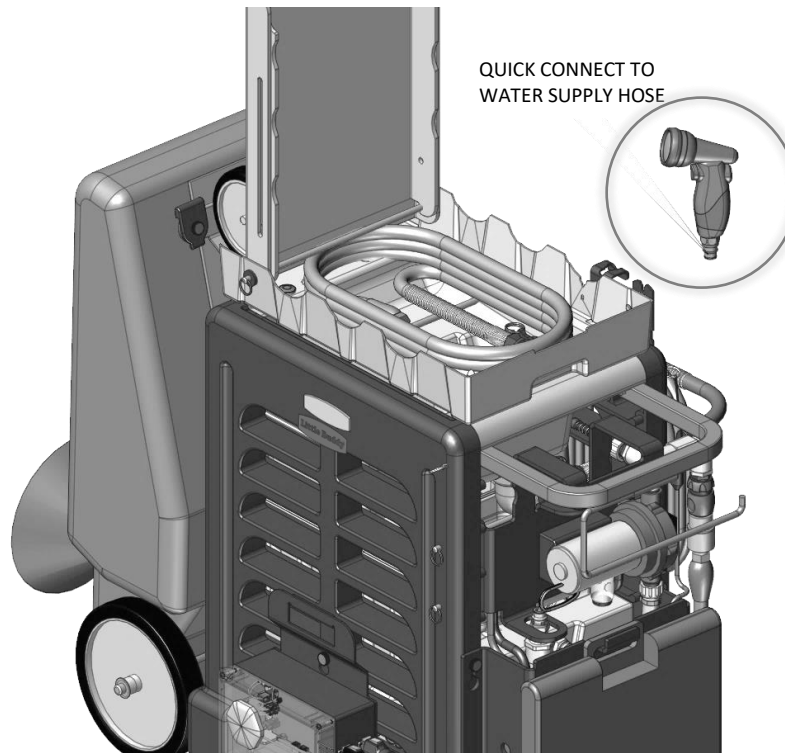
● The Little Buddy™ Sr. Mobile Wand: The wand will be used for dispensing, while properly diluting LEXX™ sanitizer/cleaner concentrate. The 1 US Gallon container of LEXX™ directly attaches to the wand metering assembly.

NOTE: The wand will also double as a faucet for the sink. The wand dispenses solution at 1/4 gallon per minute (GPM).

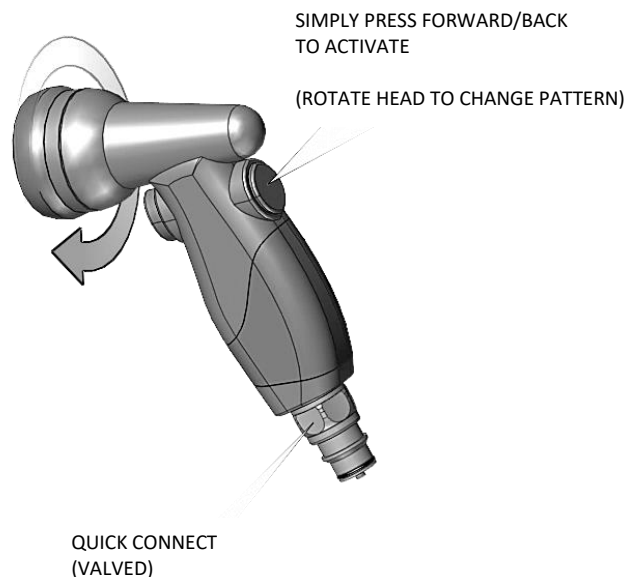
● LEXX™ Liquid Sanitizer and Cleaner is comprised of naturally derived ingredients and kills the top 5 pathogens in less than 1 minute; it is naturally derived and less toxic than other chlorine and QUAT based sanitizers. There is no residual smell and does not require rinsing after sanitizing (NSF® D2 Listed); LEXX™ also prevents milkstone.



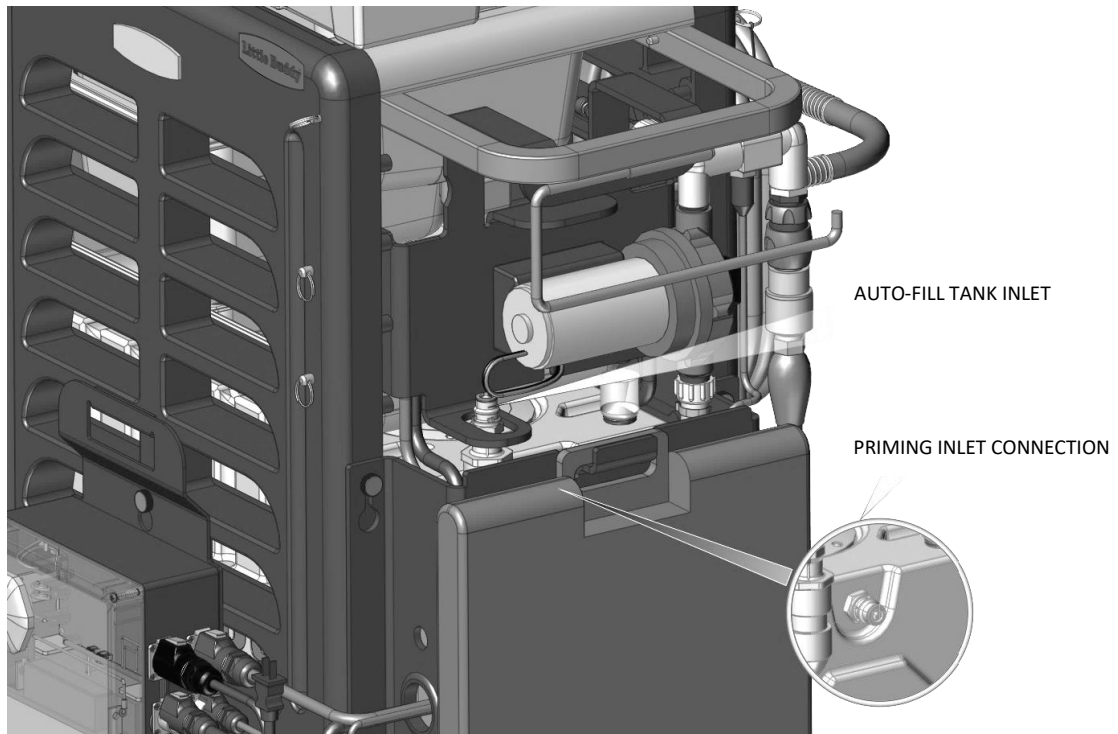
Section 9: Fresh water Application



● Little Buddy™ Sr. is a proud B2B partner with Legacy™ products. The NFZG64 6-pattern adjustable spray nozzle will releasably connect directly to the 10' Flexzilla® water supply hose. This lightweight adjustable spray nozzle is just one facet of the Flexzilla® line of high-quality products integrated into the Little Buddy™ Sr. System for delivery of freshwater applications i.e., filling rinse catch bin.



Section 10: Water Source



● WATER SOURCE:

State Health departments require the use of fresh water. Little Buddy™ Sr. uses mating quick connections to not only limit how fresh water is added, they truly make filling the freshwater tank way more efficient. The freshwater inlet has an auto-fill valve.

NOTE: Do not leave unmonitored. Immediately disconnect once flow has stopped. The valve is designed to weep over time (25 minutes before seepage from tank occurs).

Install the pressure regulator/quick connect to any municipal water source that has a mating 3/4 male GHT connection. Next, plug in the mating male end from the 5' freshwater supply hose; the connection swivels, alleviating any potential kinks during use.

FLEXZILLA® QUICK CONNECT

FLOJET 30 PSI REGULATOR

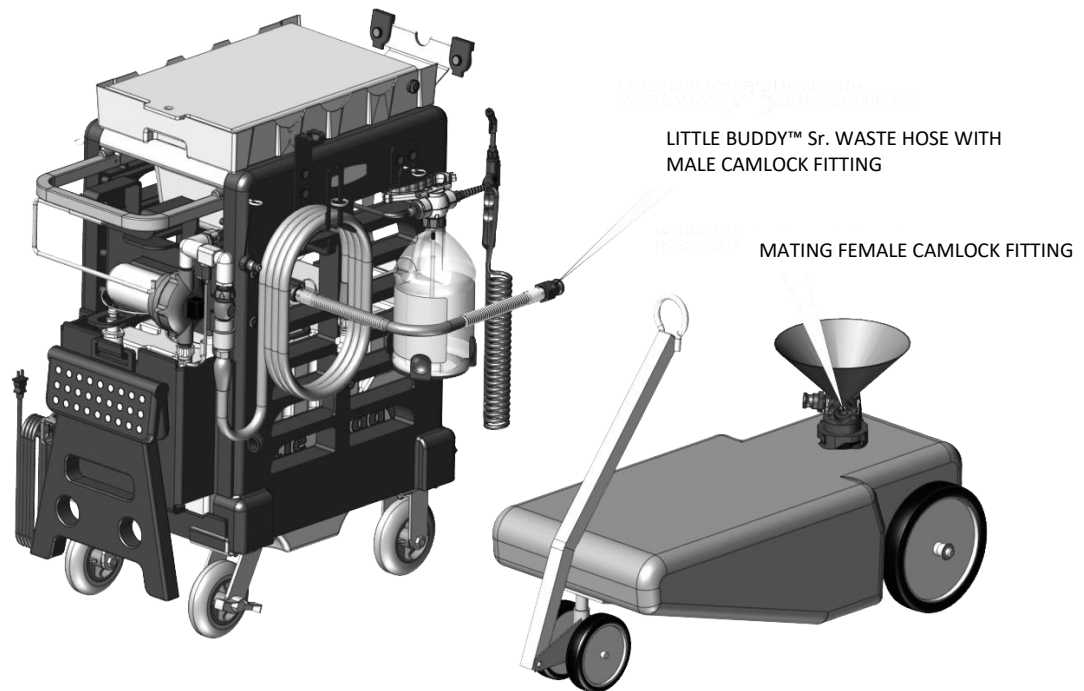
FLEXZILLA® GARDEN HOSE
(DEDICATED FOR FILLING FRESHWATER TANK/PRIMING PUMP)

FEMALE QUICK CONNECT
(VALVED)

The female Quick Connect on the opposite end of the 5' freshwater supply hose simply plugs directly into the 15 US Gallon freshwater tank inlet (use the auto-fill inlet for unmonitored filling).

NOTE: The dedicated fresh water supply hose will also be used for priming the system.

Section 11: Drain Source



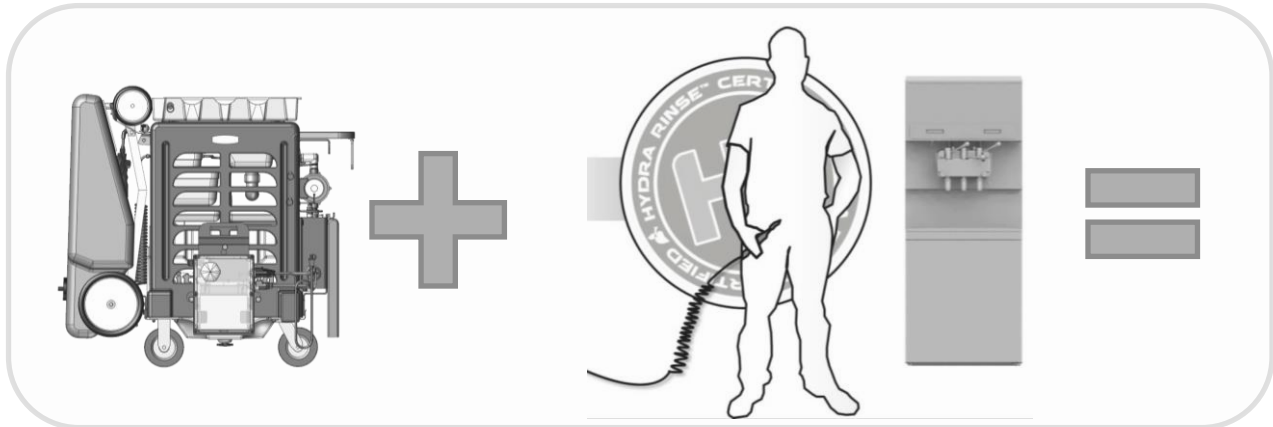
● DRAIN SOURCE:

State health departments require that the waste/gray water tank be separate from the freshwater tank to eliminate the possibility of cross contamination. The 16 US Gallon Waste Tote that comes with the Little Buddy™ Sr. System is our version of a mobile detachable waste tank.

The releasable waste hose connects the sink directly to the waste tote. There is no need for maneuvering the entire system to simply discard waste. This feature makes the 4-wheeler Barker Tote an inseparable component to the modular experience.

NOTE: You can upgrade the 16-gallon tote to a 25-gallon 4-Wheeler Barker Tote (**sold separately**) if deemed necessary.

Section 12: Upgrade Components



If Little Buddy™ Sr. is being used to power the Hydra Rinse® Cleaning and Sanitizing System for soft serve ice cream machines, it is imperative that each soft serve ice cream machine is equipped with the appropriate Hydra Rinse® Upgrade Kit. If you are a Reis & Irvy's franchisee, these kits should be provided with the purchase of your kiosk; if you do not have these kits, please contact Reis & Irvy's.

NOTE: If you are not a Reis & Irvy's franchisee, please contact us directly to purchase these kits.



IMAGE FOR ILLUSTRATION ONLY

● UPGRADE COMPONENTS:

Be sure to upgrade every soft serve ice cream machine that is intended for cleaning and sanitizing with the Hydra Rinse® System (www.hydrarinse.com); upgraded components are specific for every soft serve ice cream machine variant.

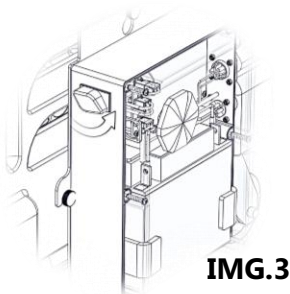
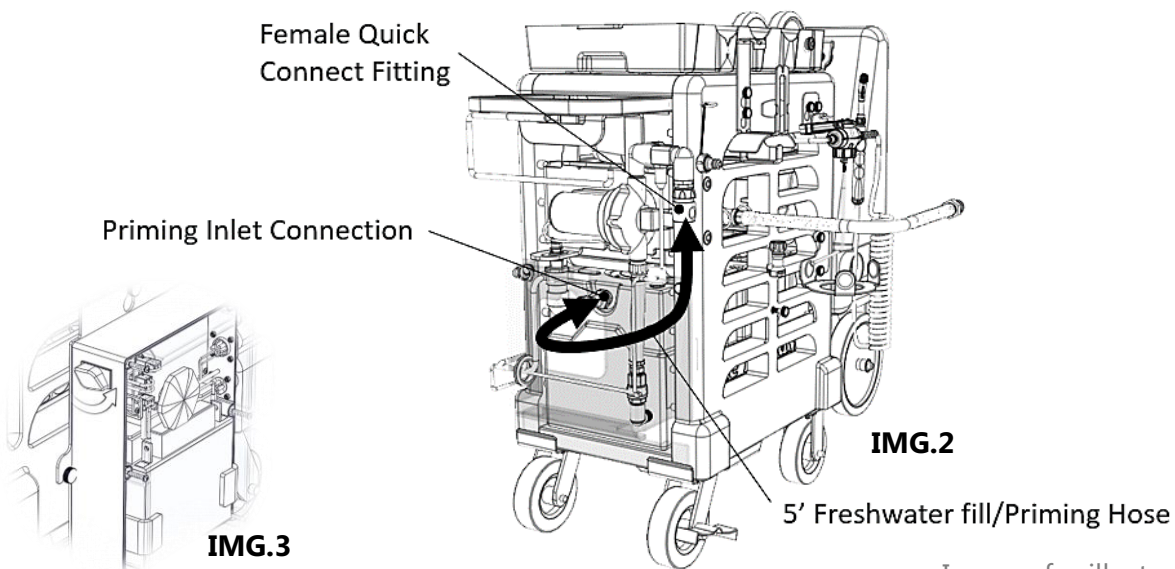
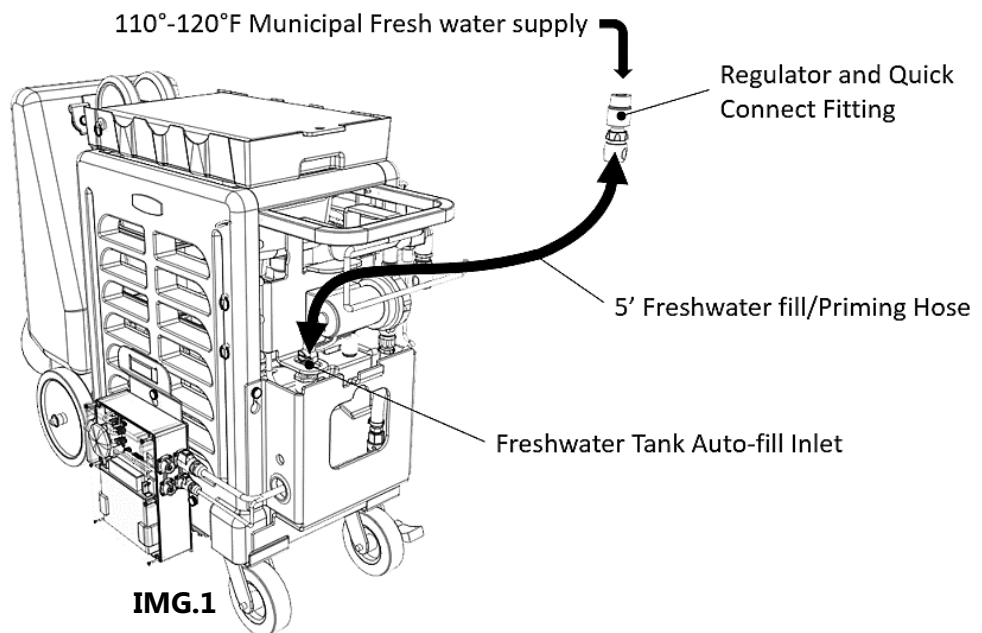
Installation of these upgrade components allows the Hydra Rinse® System to perform the cleaning and sanitizing process efficiently; a requirement for the Little Buddy™ Sr. System.

NOTE: Food safe lube will no longer be applied to many of the illustrated components. Refer to your Hydra Rinse® Cleaning and Sanitizing System Operators Manual for more detail.

Section 13: Using Little Buddy™ Sr. with Hydra Rinse®

Here is a Simplified Example of Using Little Buddy™ Sr. with the Hydra Rinse® System

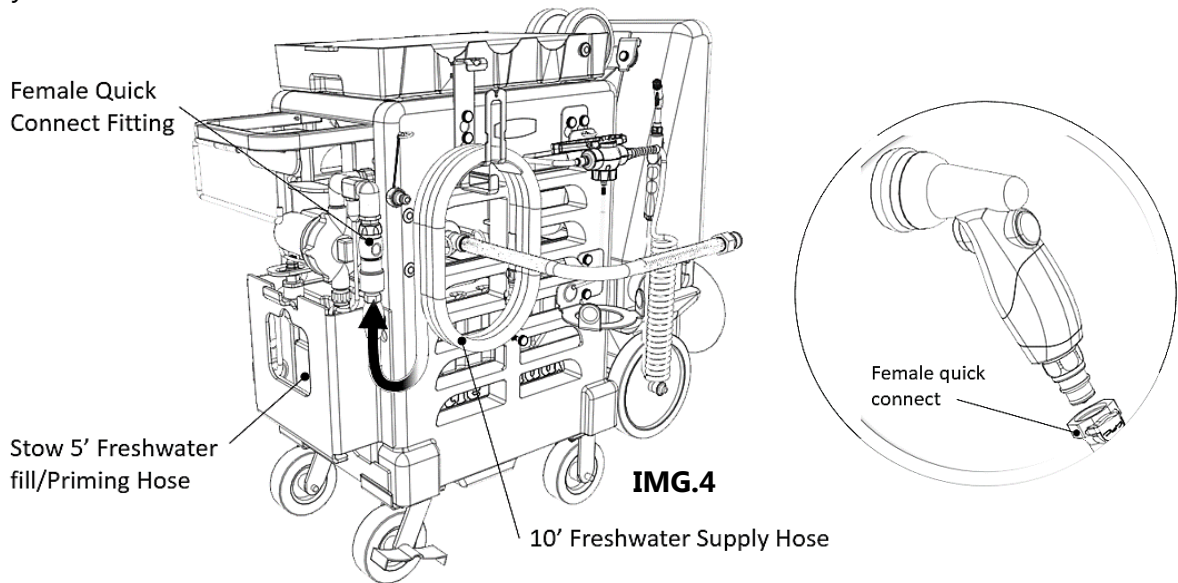
Connect the 5' freshwater fill/priming hose to a water source temperature of ~110°-120°F/(43.3°-48.9°C). Connect the female quick connect end to the freshwater auto-fill inlet and turn water source on **IMG.1**. When the freshwater tank is full, turn water source off, and move the female quick connect end from the auto-fill inlet over to the priming inlet connection. Disconnect the quick connect at the water source and plug it into the female quick connect fitting on the plumbing assembly (pump) **IMG.2**. Turn the power on for 15 seconds **IMG.3**; allow the pump and assembly to prime. After the 15 seconds has elapsed, turn off the power. Disconnect the freshwater fill/priming hose from the plumbing assembly and freshwater tank; stow the hose for safe keeping. Do not forget to remove the regulator and quick connect fitting at the water source.



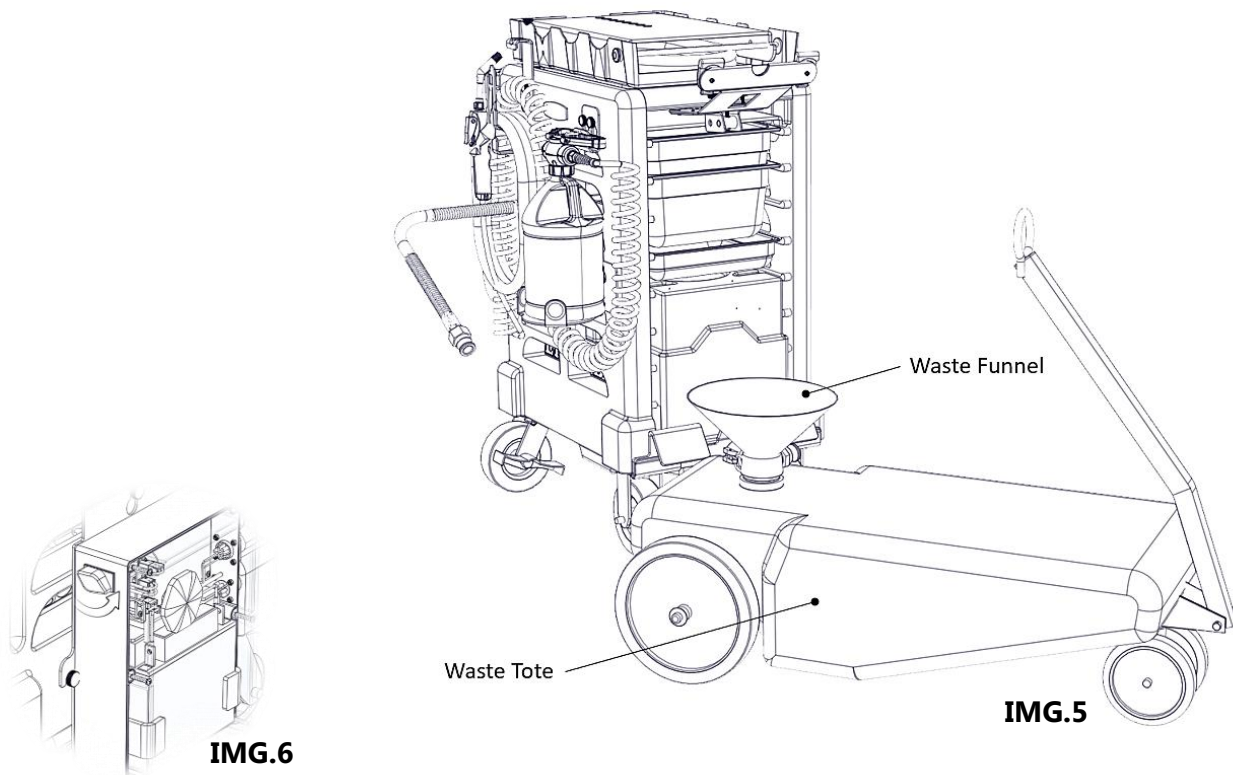
Images for illustration only

Section 13: Using Little Buddy™ Sr. with Hydra Rinse®

- Connect the 10' freshwater supply hose to the plumbing assembly and attach the adjustable sprayer nozzle **IMG.4**.



- Position Little Buddy™ Sr. and the portable waste tote where you would like in respect to the cleaning area **IMG.5**. Turn on the power (Little Buddy™ Sr. Power Station **IMG.6**) and reposition the waste funnel to the top of the waste tote.



Images for illustration only

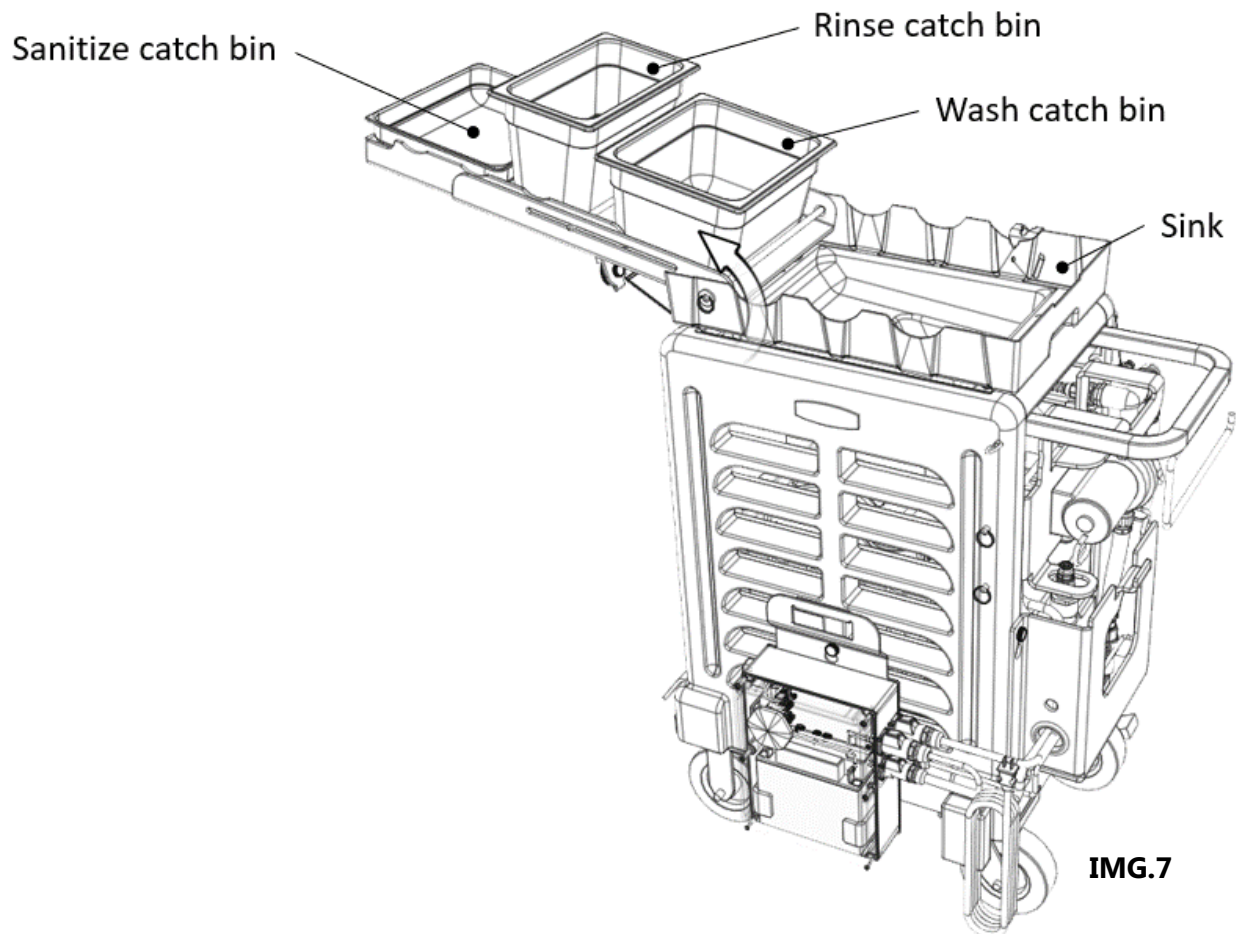
Section 13: Using Little Buddy™ Sr. with Hydra Rinse®

● Fold out the Expandable Workspace and reposition the catch bins accordingly from left to right **IMG.7**: You have flexibility based on what works best for you.

1. 1/2 size x 2-1/2" deep (farthest from catch sink, used for sanitized parts)
2. 1/3 size x 6" deep (middle, used for washing dirty parts)
3. 1/2 size x 6" deep (closest to the catch sink, used for rinsing parts)

or as illustrated

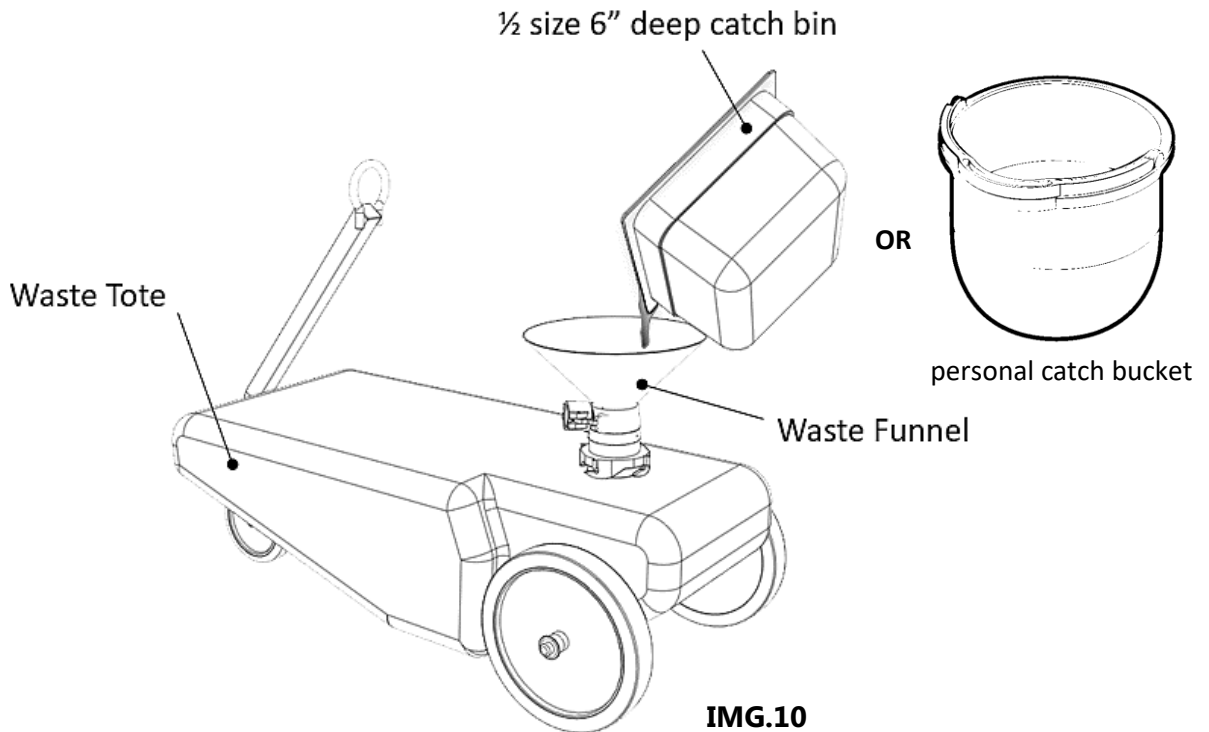
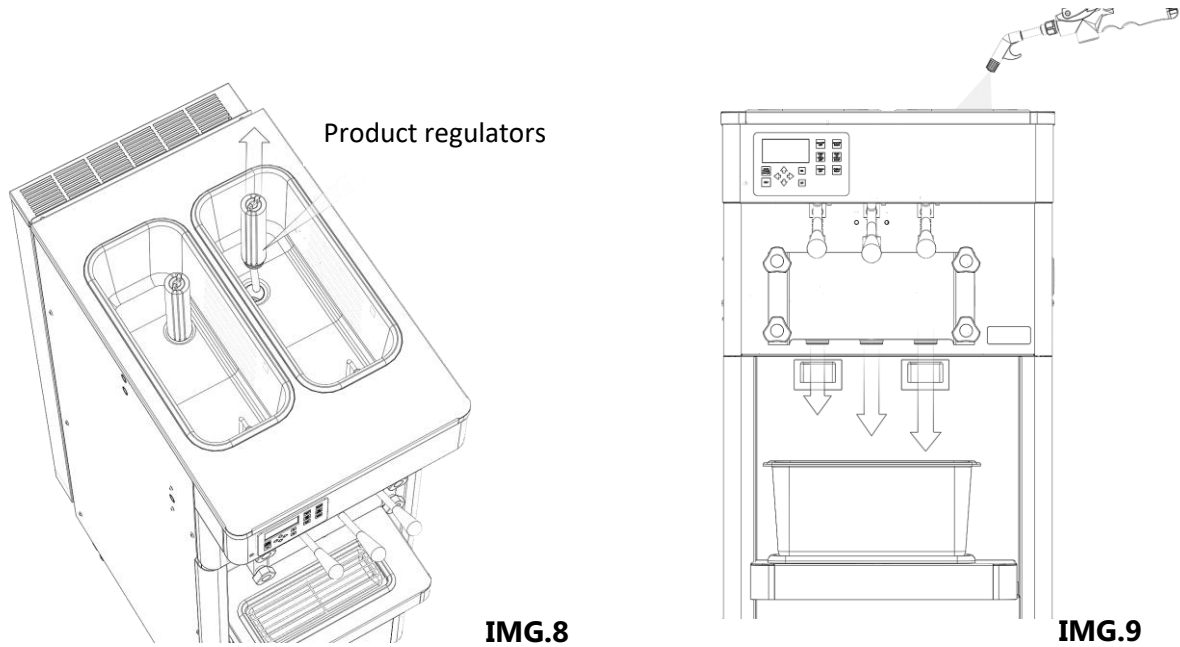
1. 1/2 size x 2-1/2" deep (farthest from catch sink, used for sanitized parts)
2. 1/3 size x 6" deep (middle, used for rinsing dirty parts)
3. 1/2 size x 6" deep (closest to the catch sink, used for washing parts)



Images for illustration only

Section 13: Using Little Buddy™ Sr. with Hydra Rinse®

● Remove machine feed tubes/product regulator(s) **IMG.8** and drain machine using a 1/2 size x 6" deep catch bin or personal catch bucket **IMG.9** and transfer the waste to the tote via the waste funnel **IMG.10**.

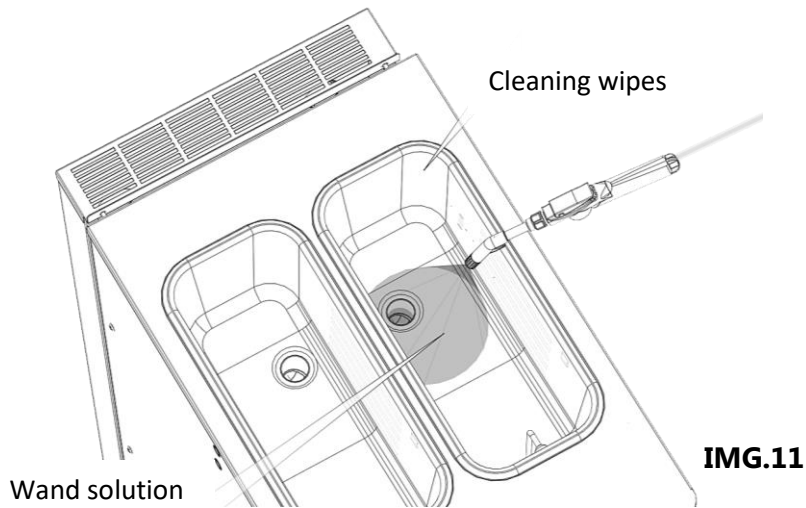


NOTE: DO NOT POUR USED PRODUCT MIX (WASTE) INTO THE CATCH SINK

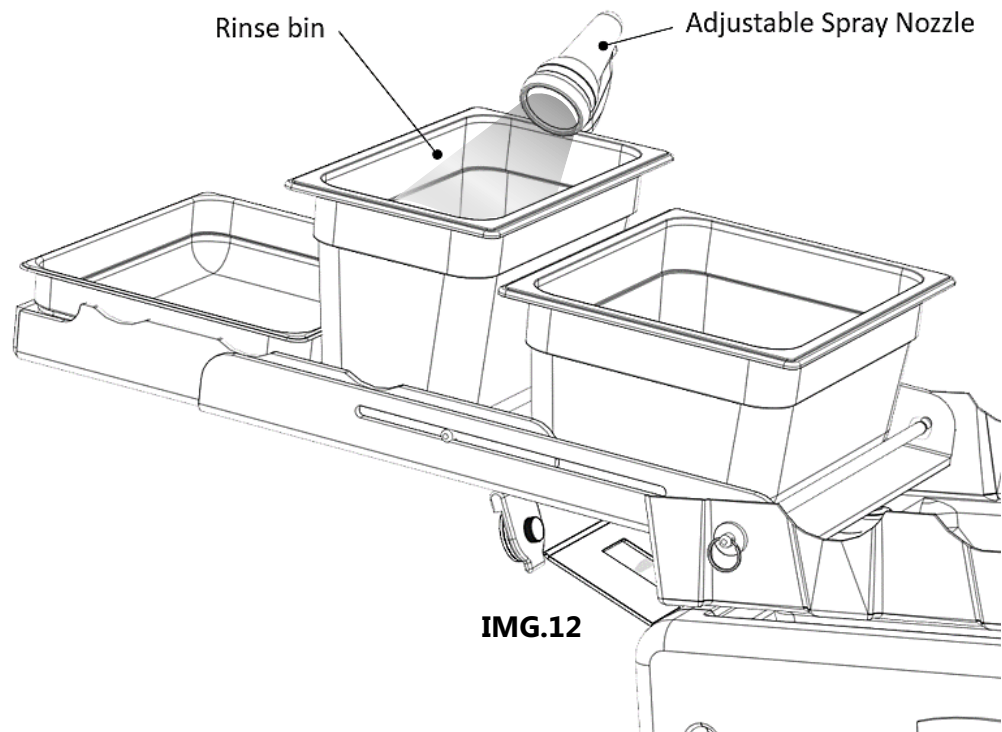
Images for illustration only

Section 13: Using Little Buddy™ Sr. with Hydra Rinse®

- Using the wand, cleaning wipes and OEM brushes: Clean the top hopper(s), while filling the freezing cylinder(s)/barrel(s) with wand solution for the pre-wash cycle. Place machine in clean/wash mode for 2-3 minutes **IMG.11**.



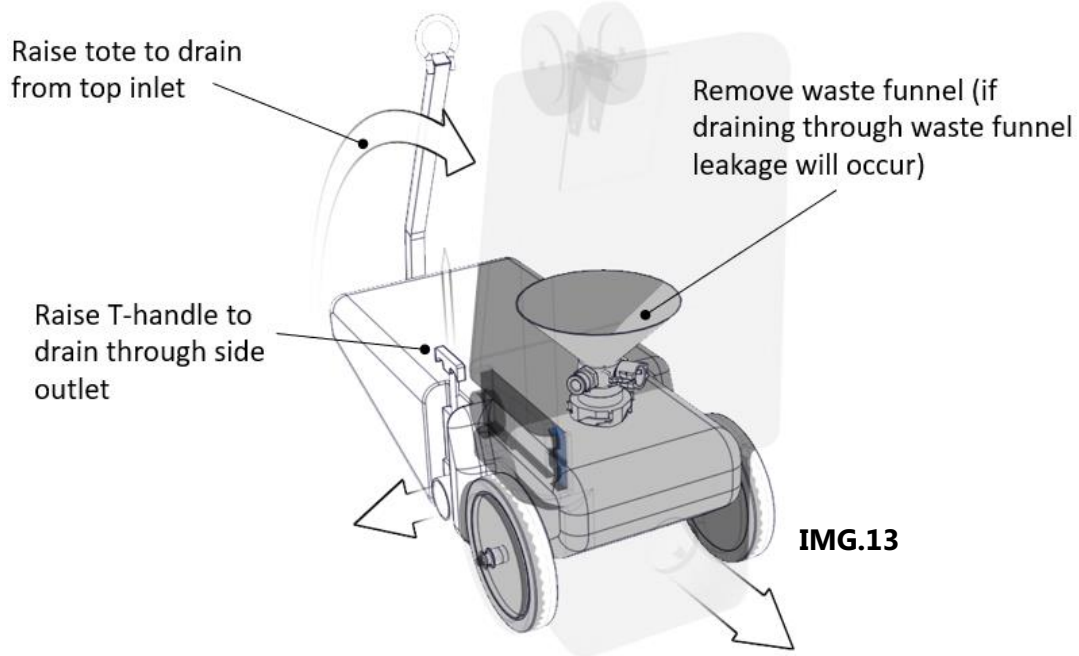
- Fill the rinse bin half full with water from the adjustable spray nozzle **IMG.12**.



Images for illustration only

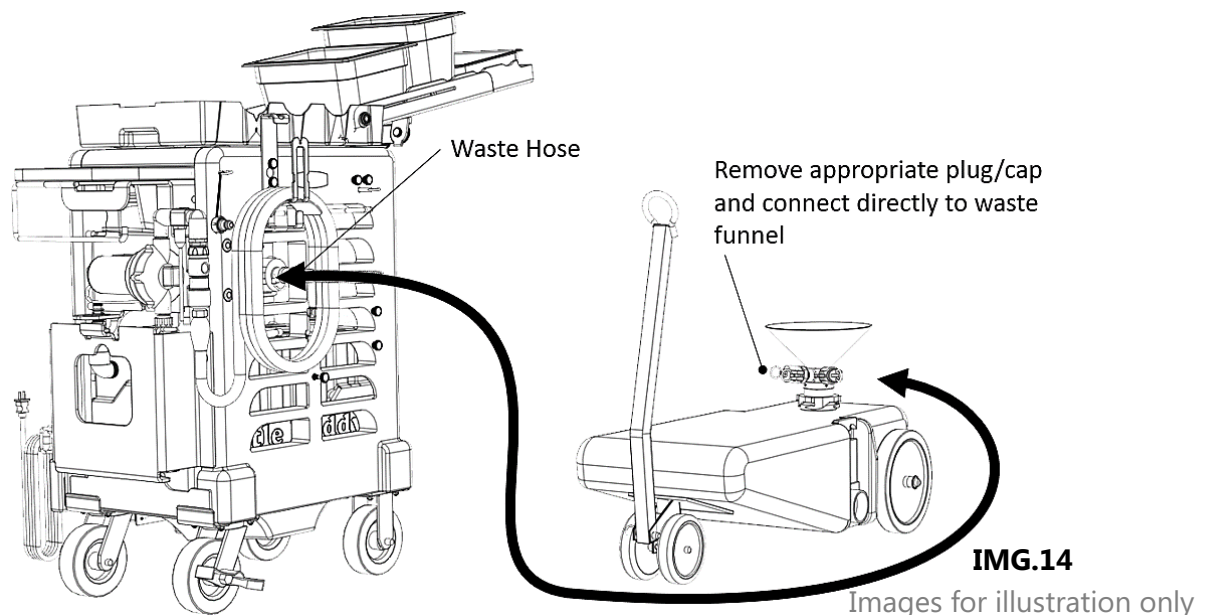
Section 13: Using Little Buddy™ Sr. with Hydra Rinse®

● After pre-wash cycle has completed, drain pre-wash solution from machine. Once again, directly transfer the waste to the tote via the waste funnel. Next, transport the waste tote to a suitable drain source and empty all product mix/gray water **IMG.13**.



NOTE: NOT EMPTYING WASTE TOTE PRIOR TO PERFORMING THE AUTO PORTION OF THE HYDRA RINSE® PROCESS MAY CAUSE OVERFILLING OF THE WASTE TOTE.

● After returning the waste tote, connect the catch sink waste hose from the the catch sink to the appropriate waste funnel camlock fitting **IMG.14**.



Section 13: Using Little Buddy™ Sr. with Hydra Rinse®

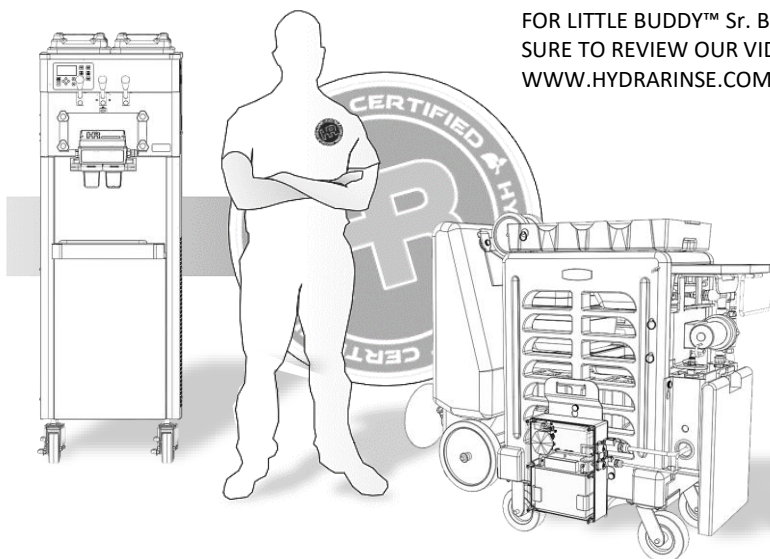
● At this point, follow the Hydra Rinse® Cleaning and Sanitizing Process for your particular Machine model.

Hydra Rinse® Operators Manual



● Concluding the Hydra Rinse® Process, use all the tools at your disposal to tidy up the Little Buddy™, and its components.

● Before moving the waste tote, remove all hoses and reinstall the camlock cap and plug to the waste funnel fittings accordingly. Finally, transport the waste tote to a suitable drain source and empty all gray water. Pack up Little Buddy™ Sr. for your next adventure.



FOR LITTLE BUDDY™ Sr. BEST PRACTICES BE SURE TO REVIEW OUR VIDEO LIBRARY AT WWW.HYDRARINSE.COM



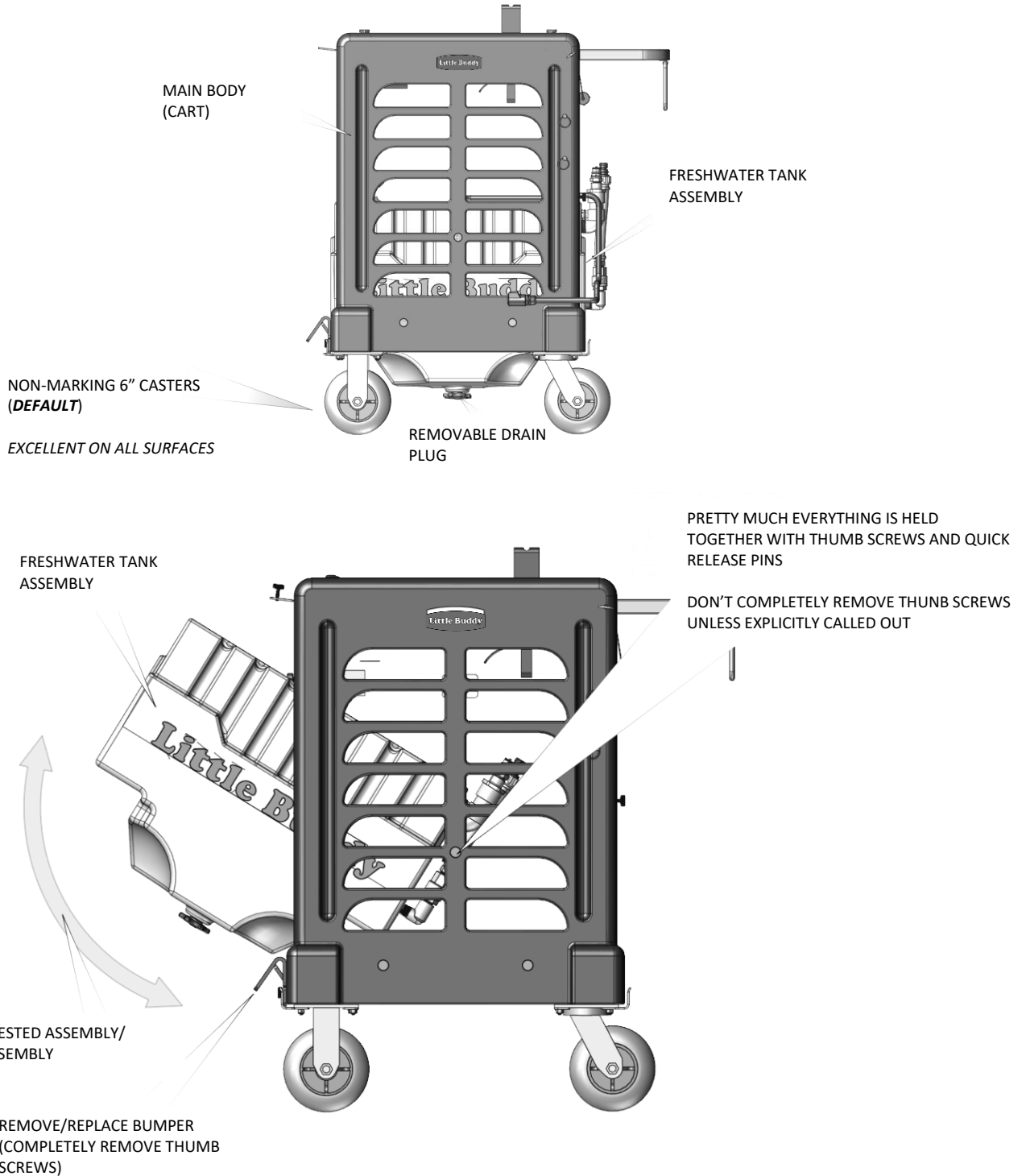
Little Buddy™ Sr. is always consuming power. Turn off system immediately following use to conserve energy.

Images for illustration only

Section 14: Details of the Hydra Rinse® Mobile System

● Assembly/Disassembly of Little Buddy™ Sr.

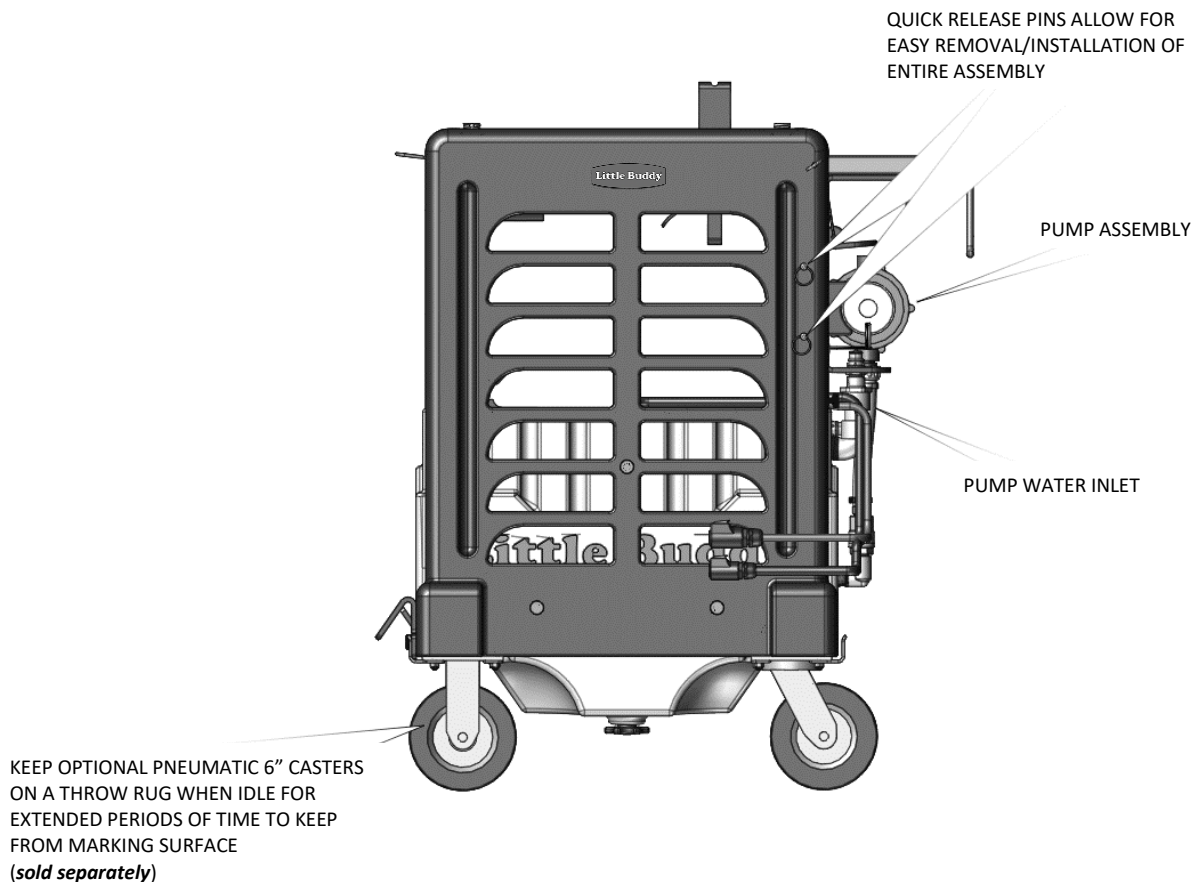
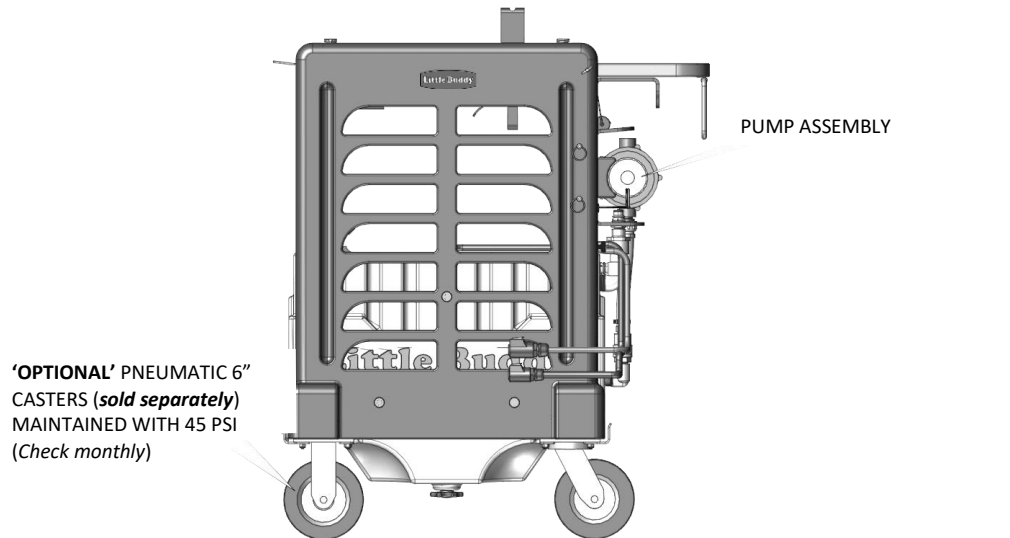
- Install/Remove Freshwater Tank Assembly



Section 14: Details of the Hydra Rinse® Mobile System

● Assembly/Disassembly of Little Buddy™ Sr.

- Install/Remove Pump Assembly



Section 14: Details of the Hydra Rinse® Mobile System

● Assembly/Disassembly of Little Buddy™ Sr.

- Install/Remove Pump Assembly Continued

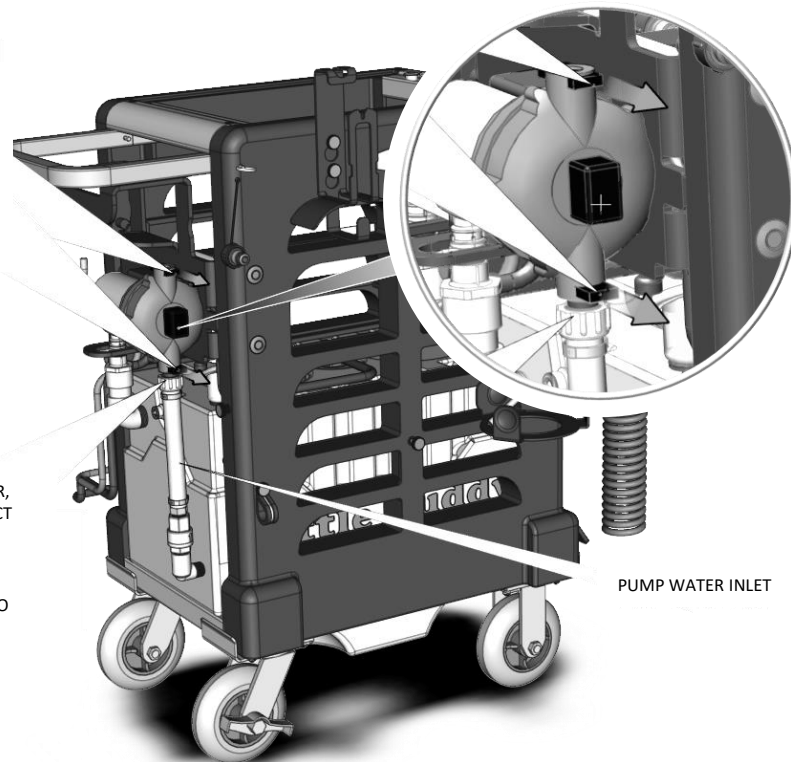
THE PUMP HAS TWO QUICK ATTACHMENT FITTINGS:

- ONE FOR THE INLET WATER SUPPLY
- ONE FOR THE OUTLET WATER SUPPLY

SLIDE THE FITTINGS FORWARD AND BACK TO QUICKLY RELEASE/SECURE THE WATER LINES

IF NEEDED TO MAKE THE PUMP REMOVAL EASIER, FIRST REMOVE THE WATER INLET QUICK CONNECT FROM THE PUMP BEFORE REMOVING THE PUMP ASSEMBLY FROM THE CART

REPLACE THE PUMP ASSEMBLY AND SECURE IT TO THE CART BEFORE SECURING THE WATER INLET TO THE PUMP



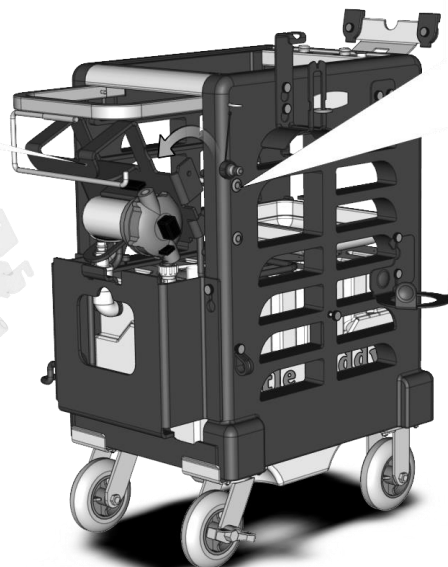
PULL PIN OUTWARD



PRESS QUICK RELEASE LATCH AND PULL OUT TOP RELEASE PIN FROM MOUNTING HOLES

TILT PUMP ASSEMBLY OUTWARD TO REMOVE

TO INSTALL REVERSE STEPS



Section 14: Details of the Hydra Rinse® Mobile System

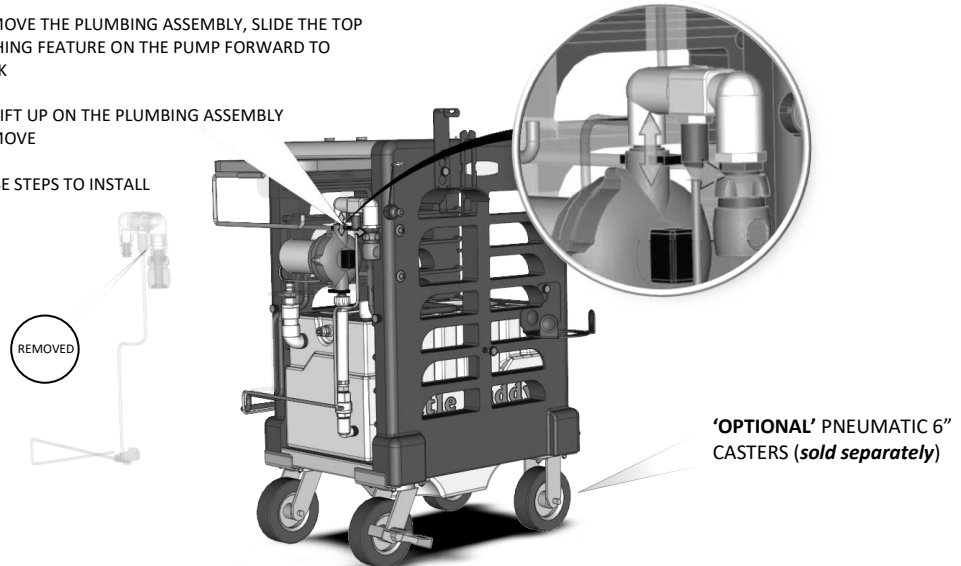
● Assembly/Disassembly of Little Buddy™ Sr.

- Install/Remove Plumbing Assembly

TO REMOVE THE PLUMBING ASSEMBLY, SLIDE THE TOP ATTACHING FEATURE ON THE PUMP FORWARD TO UNLOCK

NEXT, LIFT UP ON THE PLUMBING ASSEMBLY TO REMOVE

REVERSE STEPS TO INSTALL



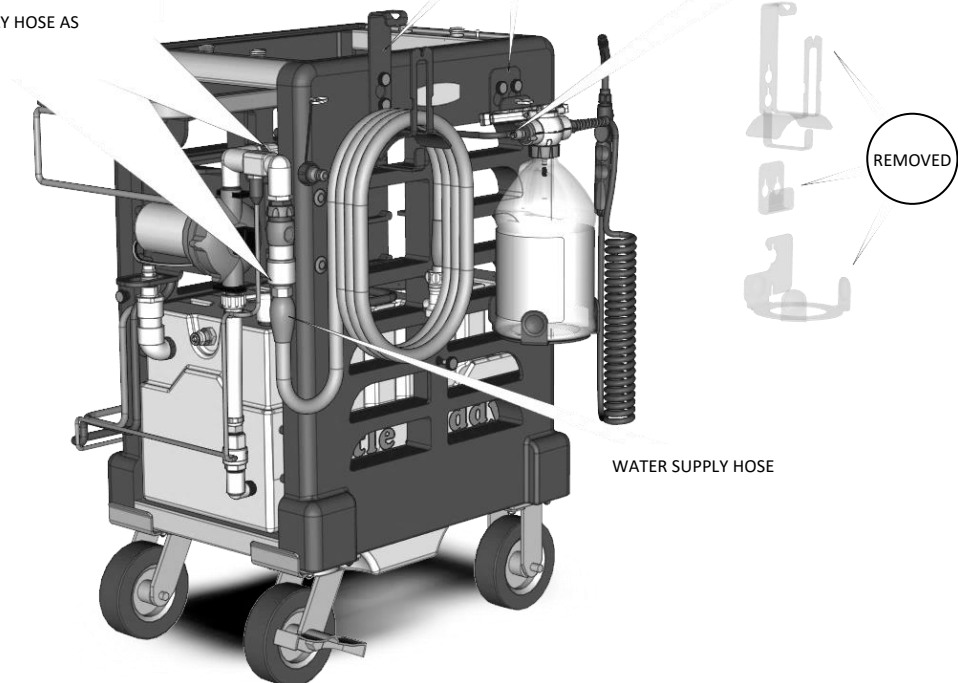
ATTACH BOTH THE WAND AND WATER SUPPLY HOSE TO THE PLUMBING ASSEMBLY

INSERT THE WAND SUPPLY HOSE INTO THE WAND PUSH-TO-CONNECT FITTING AND SECURE TO THE TOP MOUNTING BRACKET

DO THE SAME FOR THE WATER SUPPLY HOSE AS ILLUSTRATED

ALL BRACKETS ARE REMOVEABLE

WAND PUSH-TO-CONNECT FITTING



Section 14: Details of the Hydra Rinse® Mobile System

● Assembly/Disassembly of Little Buddy™ Sr.

- Install/Remove Step Stool, Freshwater Fill/Priming Hose Mounting Bracket

STEP STOOL, FRESHWATER FILL/PRIMING HOSE MOUNTING BRACKET

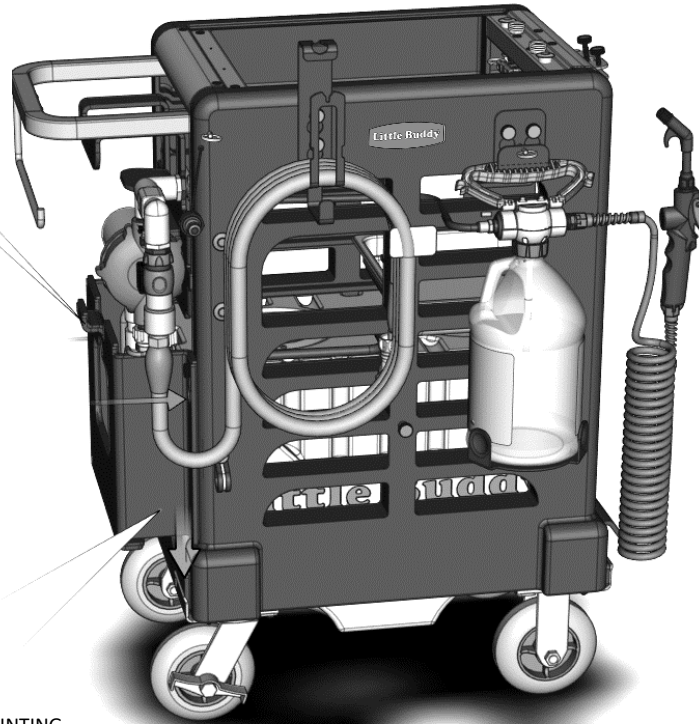
FEED ALL WIRE HARNESSES THROUGH 2" RUBBER GROMMETT

REMOVED

SLIDE BRACKET OVER THUMB SCREWS

PUSH DOWNWARD TO SECURE INTO MOUNTING BRACKETS

TIGHTEN THUMB SCREWS TO SECURE INTO PLACE



QUICK RELEASE PINS

PUSH/PULL HANDLE IS REMOVEABLE

REMOVED



PAPER TOWEL HOLDER

FOLDING STEP STOOL THAT CAN SECURELY HANG FROM THE MOUNTING BRACKET (**COLOR MAY VARY**)

FEED ALL WIRE HARNESSES THROUGH THIS 2" RUBBER GROMMETT

Section 14: Details of the Hydra Rinse® Mobile System

● Assembly/Disassembly of Little Buddy™ Sr.

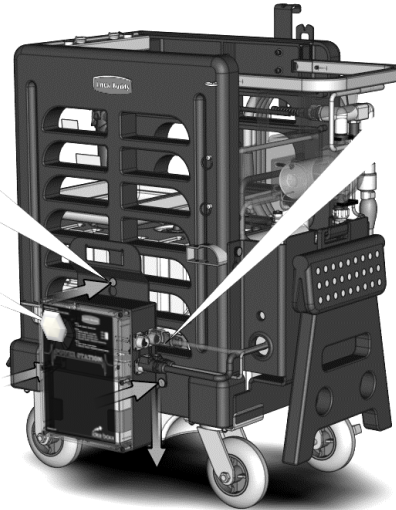
- Install/Remove Little Buddy® Sr. Power Station

SLIDE MOUNTING BRACKET OVER THUMB SCREWS AND THEN SLIDE DOWNWARD

TIGHTEN SIDE THUMB SCREWS FIRST, THEN TOP

LITTLE BUDDY™ Sr. POWER STATION

REMOVED



PLUG/UNPLUG ALL HARNESSES INTO/FROM THEIR RESPECTIVE POSITIONS

ALL CONNECTORS ARE SIZE SPECIFIC

BATTERY CHARGER

MUST BE UNPLUGGED FOR SYSTEM TO OPERATE (SAFETY FIRST!)

POWER SWITCH ON/OFF (RESETS ANY ERRORS)

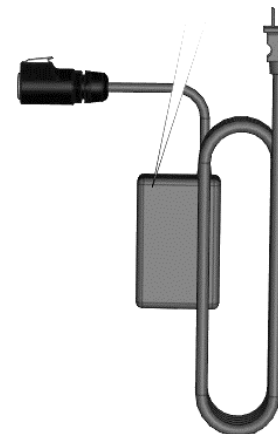
QUICK ELECTRICAL DISCONNECTS:

- WATER SENSOR
- PRESSURE SENSOR
- WATER PUMP
- BATTERY CHARGER

SMART CHARGER MANAGES BATTERY LIFE



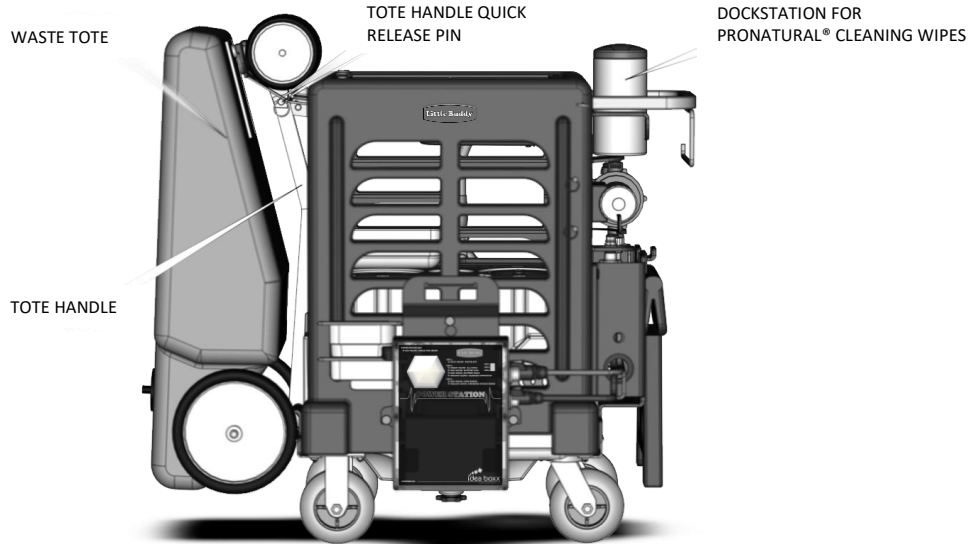
ERROR CODES PRINTED ON POWER STATION FRONT COVER (LED FUNCTION CODES)



Section 14: Details of the Hydra Rinse® Mobile System

● Assembly/Disassembly of Little Buddy™ Sr.

- Install/Remove Waste Tote



TO REMOVE WASTE TOTE, FIRST PULL OUT THE TOTE HANDLE QUICK RELEASE PIN, REPOSITIONING THE TOTE HANDLE TO THE HANDLE DOCKSTATION

ONCE HANDLE HAS BEEN REMOVED AND SECURED INTO PLACE WITH THE HANDLE QUICK RELEASE PIN, LIFT STRAIGHT UP ON THE TOTE USING BOTH WHEELS

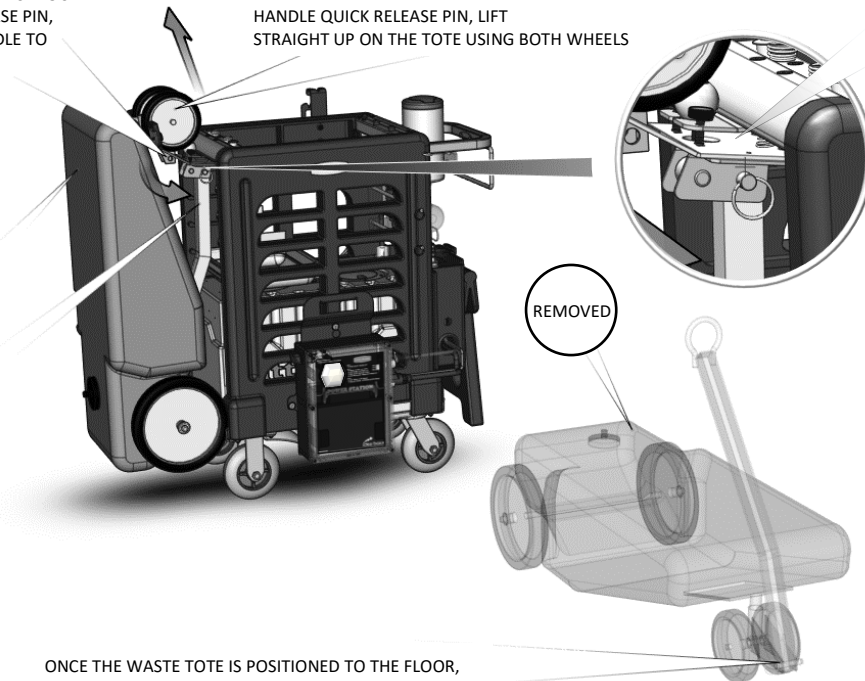
TOTE HANDLE DOCKSTATION

REPURPOSE THE HANDLE QUICK RELEASE PIN

ONLY INSERT HALFWAY

WASTE TOTE

TOTE HANDLE



ONCE THE WASTE TOTE IS POSITIONED TO THE FLOOR, INSTALL THE TOTE HANDLE AND SECURE IT WITH THE HANDLE QUICK RELEASE PIN

Section 14: Details of the Hydra Rinse® Mobile System

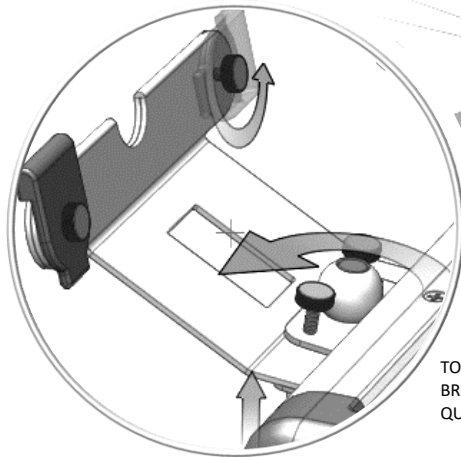
● Assembly/Disassembly of Little Buddy™ Sr.

- Install/Remove Waste Tote Continued

THUMB SCREWS LOCK TOTE MOUNTING BRACKET IN POSITION

COURSE ADJUSTMENT INCREASE/DECREASE EXPANDABLE WORKSPACE HEIGHT

TOTE MOUNTING BRACKET ALSO BECOMES AN ADJUSTABLE SUPPORT FOR EXPANDABLE WORKSPACE



TOTE MOUNTING BRACKET QUICK RELEASE PIN

FINE ADJUSTMENT ROUND KNOB

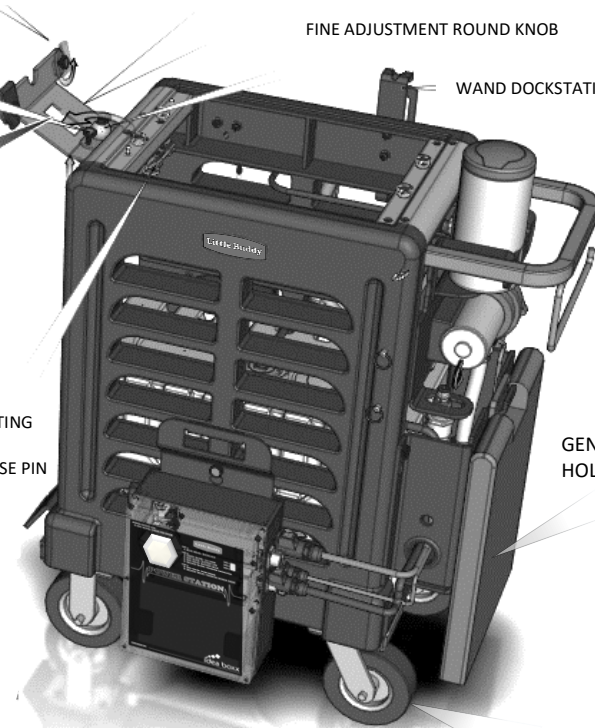
WAND DOCKSTATION

GENERIC PLACE HOLDER FOR STOOL

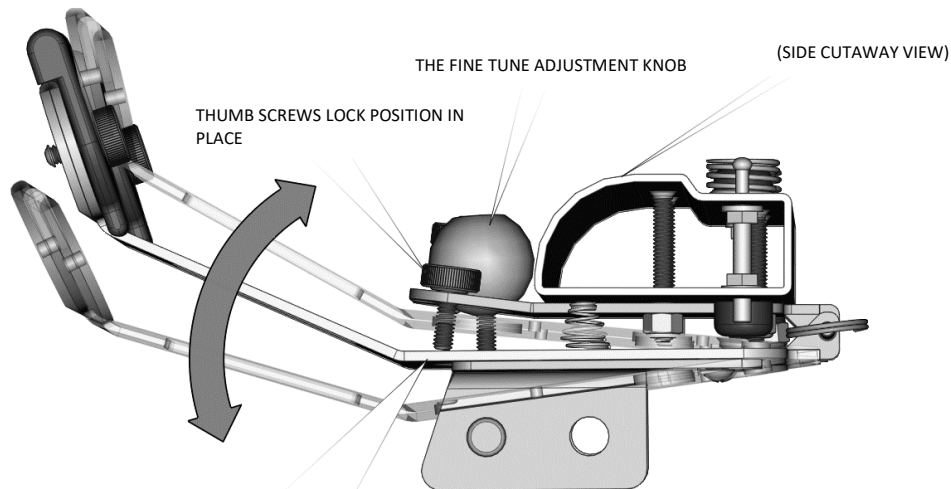
THE REMOVEABLE TOTE MOUNTING BRACKET HAS A LOT GOING ON. IF YOUR EXPANDABLE WORKSPACE NEEDS ADJUSTING TO STAY TILTED TOWARDS THE SINK

THE IDENTIFIED FEATURES ASSOCIATED WITH THE TOTE MOUNTING BRACKET ALLOW YOU TO MAKE THOSE ADJUSTMENTS

(EXPANDABLE WORKSPACE PRESENTED LATER)



'OPTIONAL' PNEUMATIC 6" CASTERS (sold separately)



THE FINE TUNE ADJUSTMENT KNOB

(SIDE CUTAWAY VIEW)

THUMB SCREWS LOCK POSITION IN PLACE

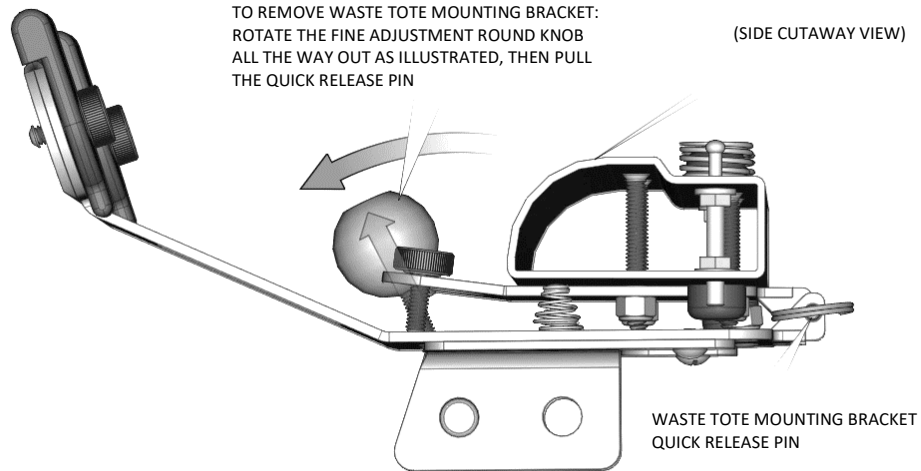
WHEN DOCKING AND TRANSPORTING THE WASTE TOTE, ENSURE TO POSITION THE MOUNTING BRACKET AS ILLUSTRATED WITH THE LOCKING THUMB SCREWS ACTIVELY HOLDING DOWN THE BRACKET IN PLACE

THE WASTE TOTE WILL NOT DOCK IF THE MOUNTING BRACKET IS FULLY ELEVATED

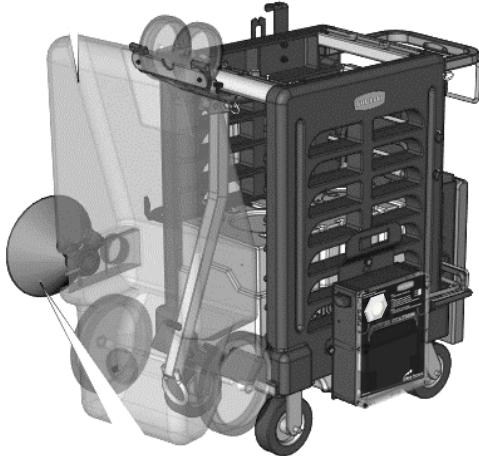
Section 14: Details of the Hydra Rinse® Mobile System

● Assembly/Disassembly of Little Buddy™ Sr.

- Install/Remove Waste Tote Continued

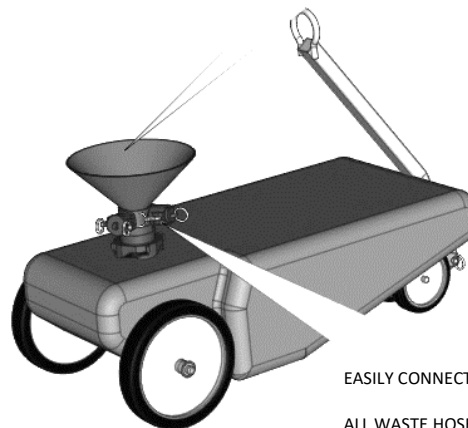


WASTE TOTE



THE WASTE FUNNEL CAN STOW ON THE WASTE TOTE

ALWAYS POUR WASTE PRODUCT MIX DIRECTLY INTO WASTE TOTE AND NEVER INTO THE SINK



EASILY CONNECTS TO THE WASTE TOTE

ALL WASTE HOSES ATTACH WITH CAMLOCK CONNECTORS

Section 14: Details of the Hydra Rinse® Mobile System

● Assembly/Disassembly of Little Buddy™ Sr.

- Install/Remove Sink

QUICK LATCH
FEATURES

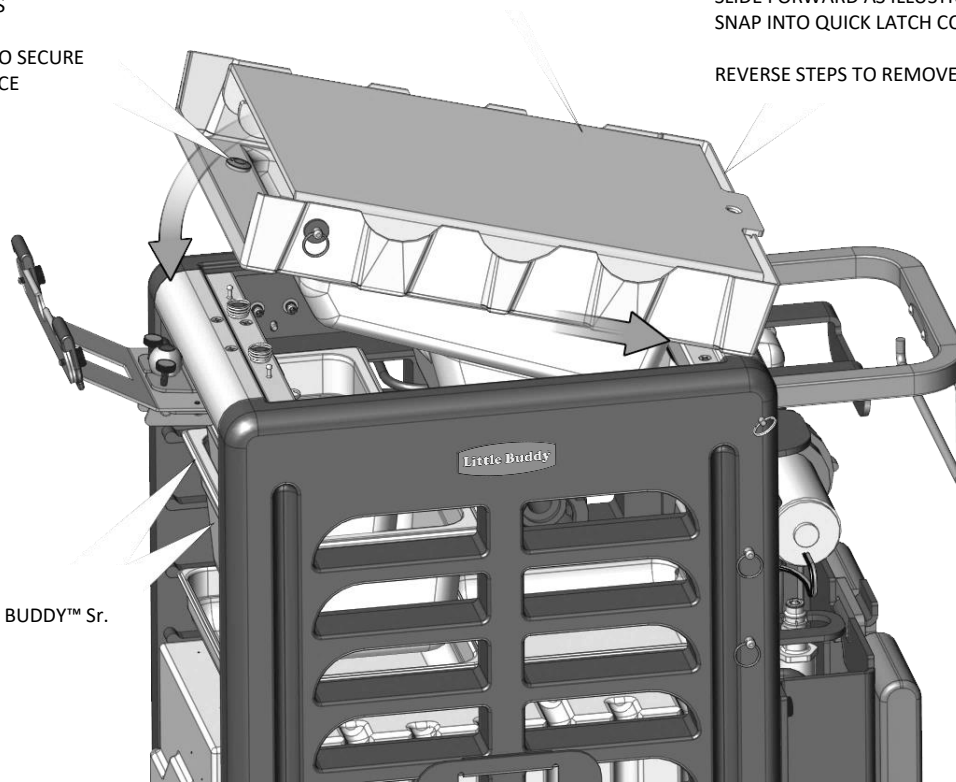
“CLICK” TO SECURE
INTO PLACE

EXPANDABLE WORKSPACE

REMOVEABLE SINK:

SLIDE FORWARD AS ILLUSTRATED AND
SNAP INTO QUICK LATCH CONNECTORS

REVERSE STEPS TO REMOVE



CATCH BINS
EASILY STOW INSIDE LITTLE BUDDY™ Sr.

(USED WITH EXPANDABLE
WORKING SPACE)

SANITIZED CATCH BAY

RINSE CATCH BAY

WASH CATCH BAY

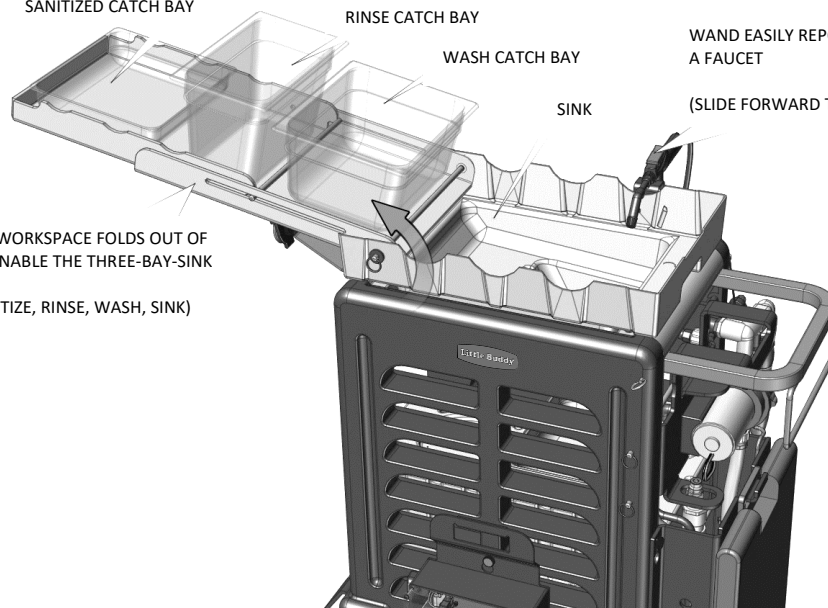
SINK

WAND EASILY REPOSITIONS INTO
A FAUCET

(SLIDE FORWARD TO LOCK TRIGGER)

EXPANDABLE WORKSPACE FOLDS OUT OF
THE SINK TO ENABLE THE THREE-BAY-SINK

Suggest: (SANITIZE, RINSE, WASH, SINK)



NOTE: Do not place heavy weighted catch bays or components towards the extended end of the expandable workspace. The light weight inner and outer trays are made from ABS plastic, and may become stressed if overloaded.

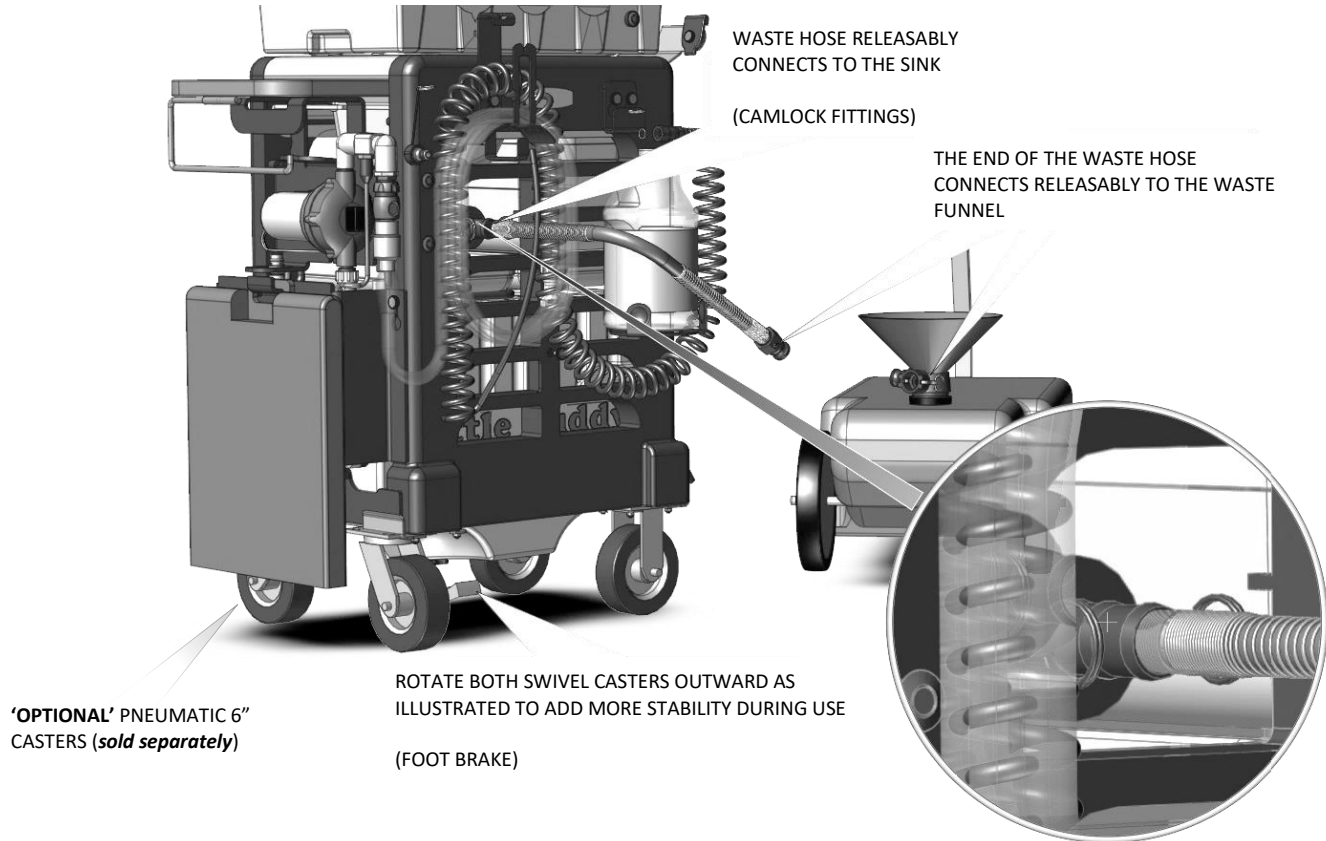
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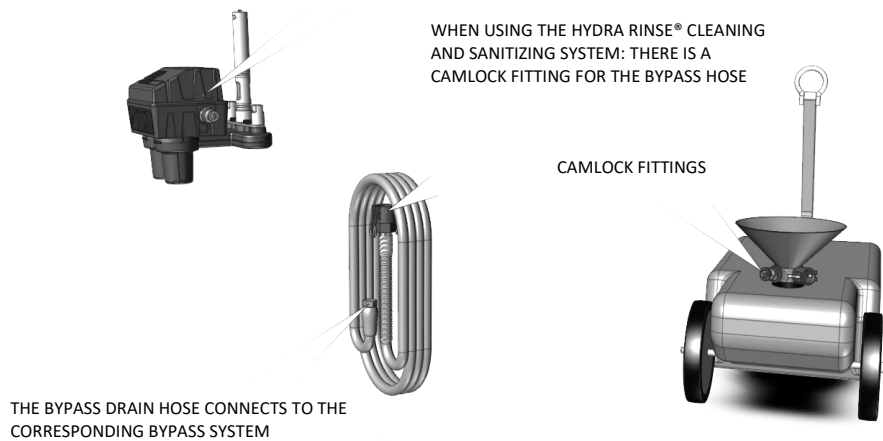
Section 14: Details of the Hydra Rinse® Mobile System

● Assembly/Disassembly of Little Buddy™ Sr.

- Install/Remove Waste Hose



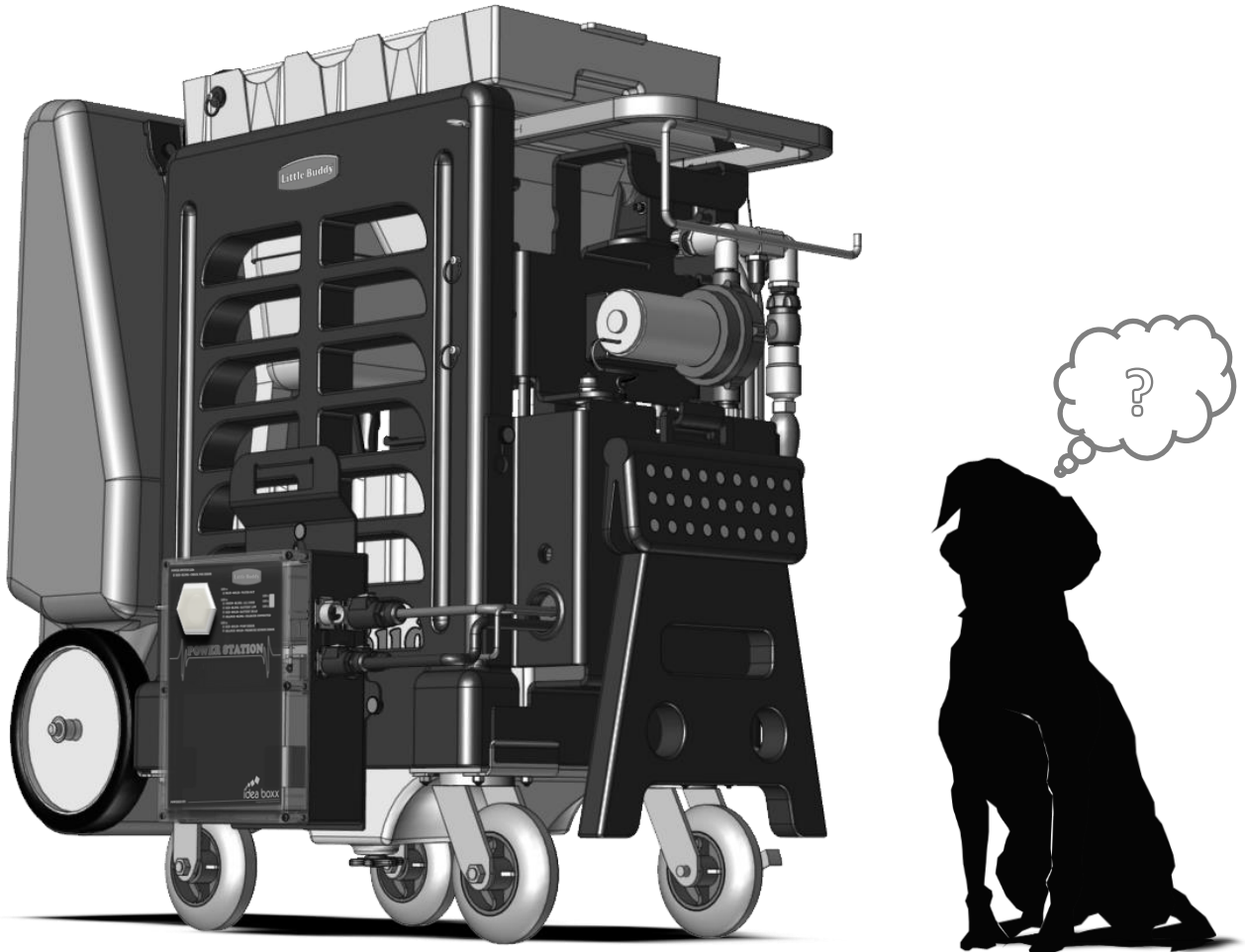
THE HYDRA RINSE® PRO-CONTROL MODULE IS A COMPONENT OF THE HYDRA RINSE® CLEANING AND SANITIZING SYSTEM



Section 14: Details of the Hydra Rinse® Mobile System

● Assembly/Disassembly of Little Buddy™ Sr.

- Basic Details of The Little Buddy™ Sr. Assembly Concluded



Little Buddy™ Sr. may never replace Mankind's best friend, but it will make mobile cleaning a whole lot more convenient!

Things to remember: (Little Buddy™ Sr. best practices video(s) at www.hydrarinse.com)

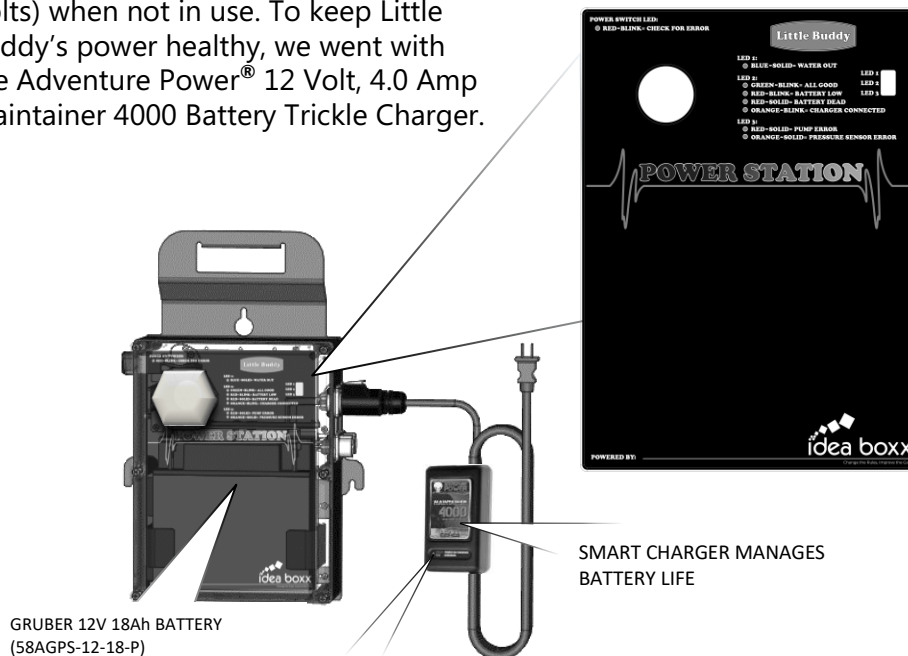
- Always ensure to replace the protective covers over the female electrical connectors when exposed, and never let the male ends contact any type of fluids when disconnected.
- Leave thumb screws in place when spraying down the system, periodically remove to brush threads
- Try and alleviate line pressure when connecting/disconnecting hoses and spray nozzles i.e., have the spray nozzle open when connecting, relieve wand by pulling trigger to the open position before removing; this makes things easier to work with.
- Always drain and release any water pressure from hoses before stowing
- Always work drain lines back towards the waste funnel/tote before removing
- Always drain the freshwater tank after every use.

Section 15: In-depth Understanding

Things you should know

It's imperative to know the state of your battery before going mobile. The 12V 18-Ah lead rechargeable battery is recommended to be at full charge (13.6 Volts) when not in use. To keep Little Buddy's power healthy, we went with the Adventure Power® 12 Volt, 4.0 Amp Maintainer 4000 Battery Trickle Charger.

LED2:
(ORANGE WHILE CHARGER
IS PLUGGED IN)



Adventure Power® LED Indicators:

Red: Constant Current Charge (Fast Charge)

Orange: Constant Voltage Charge

Green: Battery Fully Charged (Float/Maintaining Stage)

Three Stage Charge Cycle:

Smart Charger: an integrated circuit monitors and controls both the output voltage and current of the charger through three separate charge states.

- A high current, fast charge state: battery charges at 2,000 mA fast charger current rate until the battery voltage reaches 14.6 volts.
- A topping charge state: battery charges at 14.6 volts constant voltage and current begins to taper until current is less than 500 mA.
- A precision float charge state: the charger changes to the float state and holds the battery voltage at 13.6 volts continuous. This allows the charger to remain connected to the batteries during periods of non-use, keeping the batteries in the state of full charge.

Return to Bulk charge: should the battery voltage drop to 13.0 volts; the charger will return to the bulk charge stage (Reference: <https://www.gruberpower.com/12-volt-4-amp-charger>).

NOTE: Typical charge time from dead battery (Power Station will not operate cart) is 4 hours. Charger may begin an audible "CLICKING" prior to leaving bulk charge mode, this is normal.

Section 15: In-depth Understanding

● Things you should know

- Power Station Integrated Smart Controller

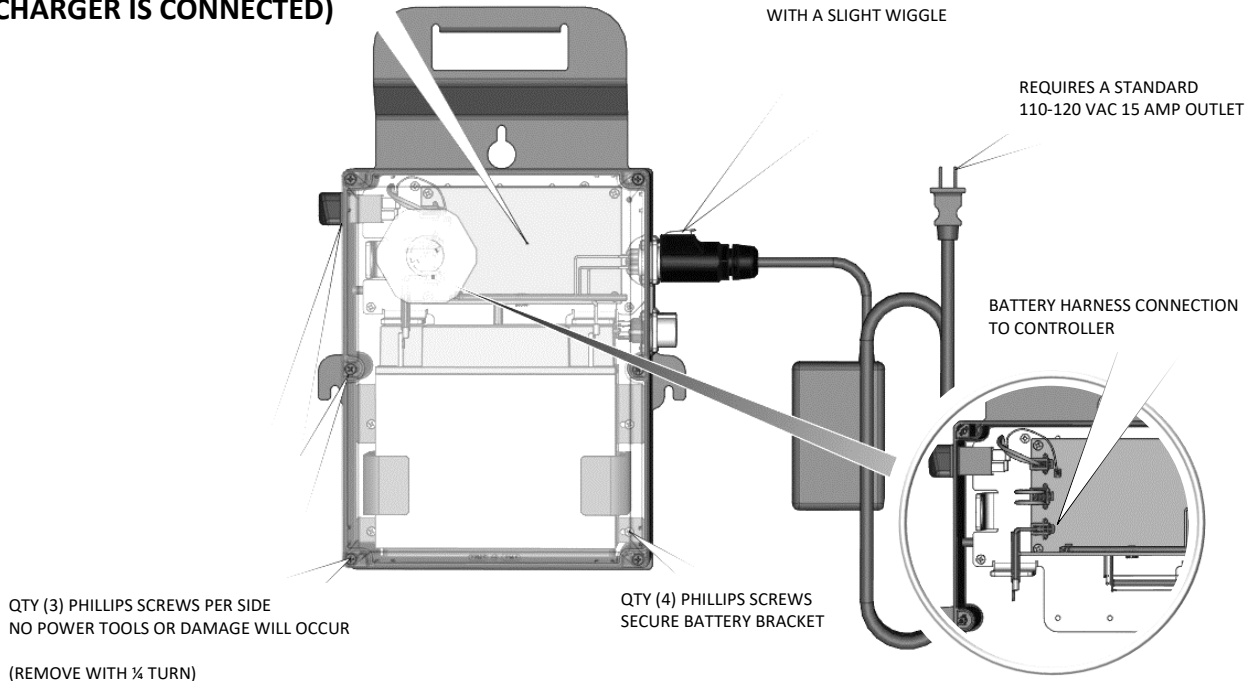
INTEGRATED SMART CONTROLLER

(SYSTEM WILL NOT OPERATE WHILE CHARGER IS CONNECTED)

HEAVY DUTY/HIGH CURRENT 3 PIN IP67 CIRCULAR CONNECTOR

DEPRESS BUTTON WHILE PULLING WITH A SLIGHT WIGGLE

REQUIRES A STANDARD 110-120 VAC 15 AMP OUTLET



Power Station Integrated Smart Controller:

The integrated Smart Controller will never allow the battery to reach a critically lower operating voltage, so no worries about running the system hard; water pump shuts down at ~11.0 volts. This means your battery life will live up to its warranty if you remember to power down the system. If you allow the system to keep running for an extended period after the system has entered auto shutdown, you will continue to discharge more than 0.4 amps/hr., causing possible degradation to the battery life; so, when in doubt, power out!

The Smart Controller ensures extended battery life by limiting power to the water pump: when the system runs out of water and is incapable of reaching 50 PSI for multiple reasons, the controller will alert the user through audible beeps and visual LED signals (**Section 17**); there's additional LED user feedback for unplugged connectors, bad sensors, and battery life.

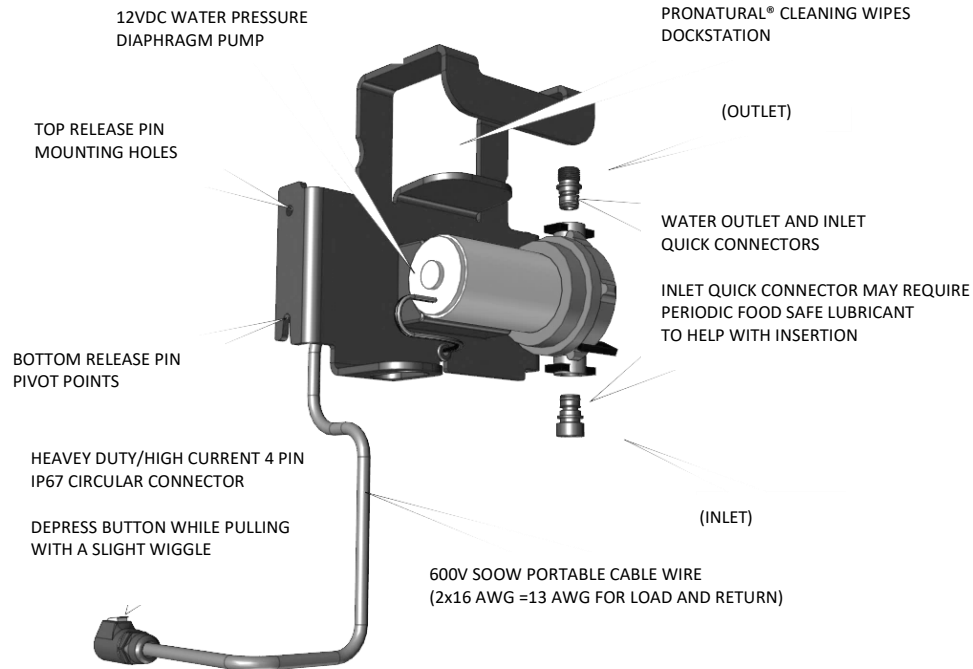
The OEM water pump is no longer controlled by its onboard pressure switch. It is controlled by an in-line pressure sensor, which allows for a real-time PID controller to operate the pump within a +/- 1 PSI accuracy for the best operating performance possible. The system runs so smooth, you will have a hard time hearing the pump running during low flow dispensing applications, i.e., wand dispensing at ¼ GPM.

NOTE: If the Smart Controller senses unoptimized flow rates for predetermined output pressures, the smart controller will self-prime the pump/system in real time to alleviate any potential cavitation within the pump head (system priming of water pump discussed next).

Section 15: In-depth Understanding

Things you should know

- 12VDC Water Pressure Diaphragm Pump Assembly



12VDC Water Pressure Diaphragm Pump Assembly:

The 12VDC Water Pressure Diaphragm pump is a heavy-duty five-chamber diaphragm water pump that provides high flow. The pump can run dry without damage; this is a big deal.

This pump is capable of self-priming, that is if you are not using the “Water-miser”; the Water-miser will be discussed later in this section. We created the Water-miser precision orifice adaptor to do just that “Miser water”. It leverages the pump head cavitation during low flow applications, which cuts the power consumption in half; this is a big deal for mobile applications.

Manual Priming Pump: With ample water in the tank, you can prime the system by first removing the $\frac{3}{4}$ FGHT quick connector from the 5’ freshwater fill/priming hose, followed by inserting the male quick connector directly into the plumbing assembly. Connect the opposite end (female connector) to the freshwater tank’s manual fill/prime inlet connector. Turn the Power Station on and allow the pump to purge all the air out of the system for 15 seconds; immediately disconnect from the freshwater tank once time has expired to conserve energy; stow hose accordingly.

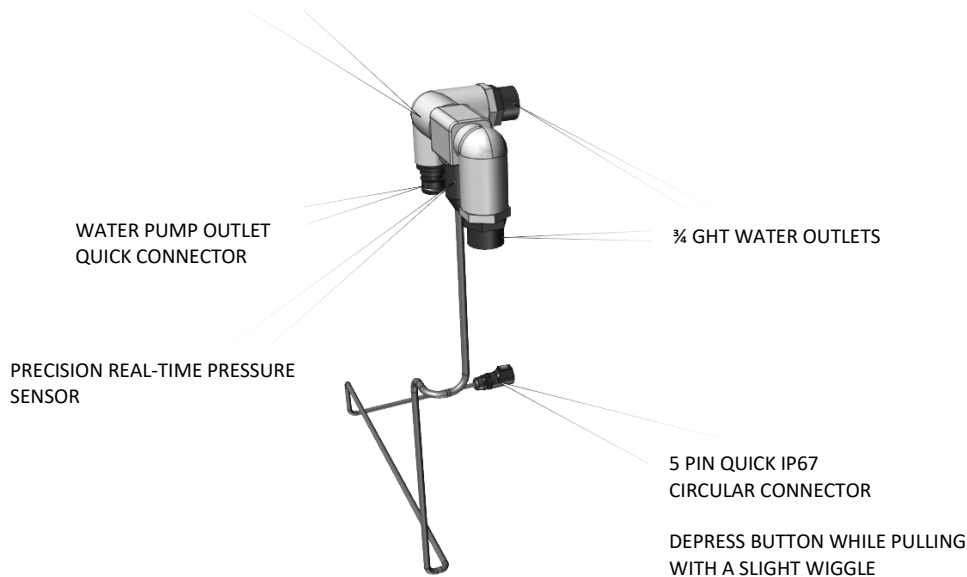
NOTE: If the 4 Pin connector is disconnected from the Power Station, the third LED will illuminate solid Red with an audible beep indicating there is a pump error. Never allow the open/disconnected connectors (male or female) to contact water (not covered under warranty).

Section 15: In-depth Understanding

● Things you should know

- Plumbing Assembly

PVC MAXIMUM OPERATING TEMPERATURE 140°F (60°C)
(DEFAULT RECOMMENDED WATER TEMPERATURE 112°F (44.4°C))



Plumbing Assembly:

The PVC Plumbing Assembly is compact and designed to be modular. The Water Pump Outlet Quick Connector as previously discussed allows for the plumbing assembly to be releasably connected to the water pump outlet. The two 3/4 GHT Male Adaptors allow for standard garden hose connections.

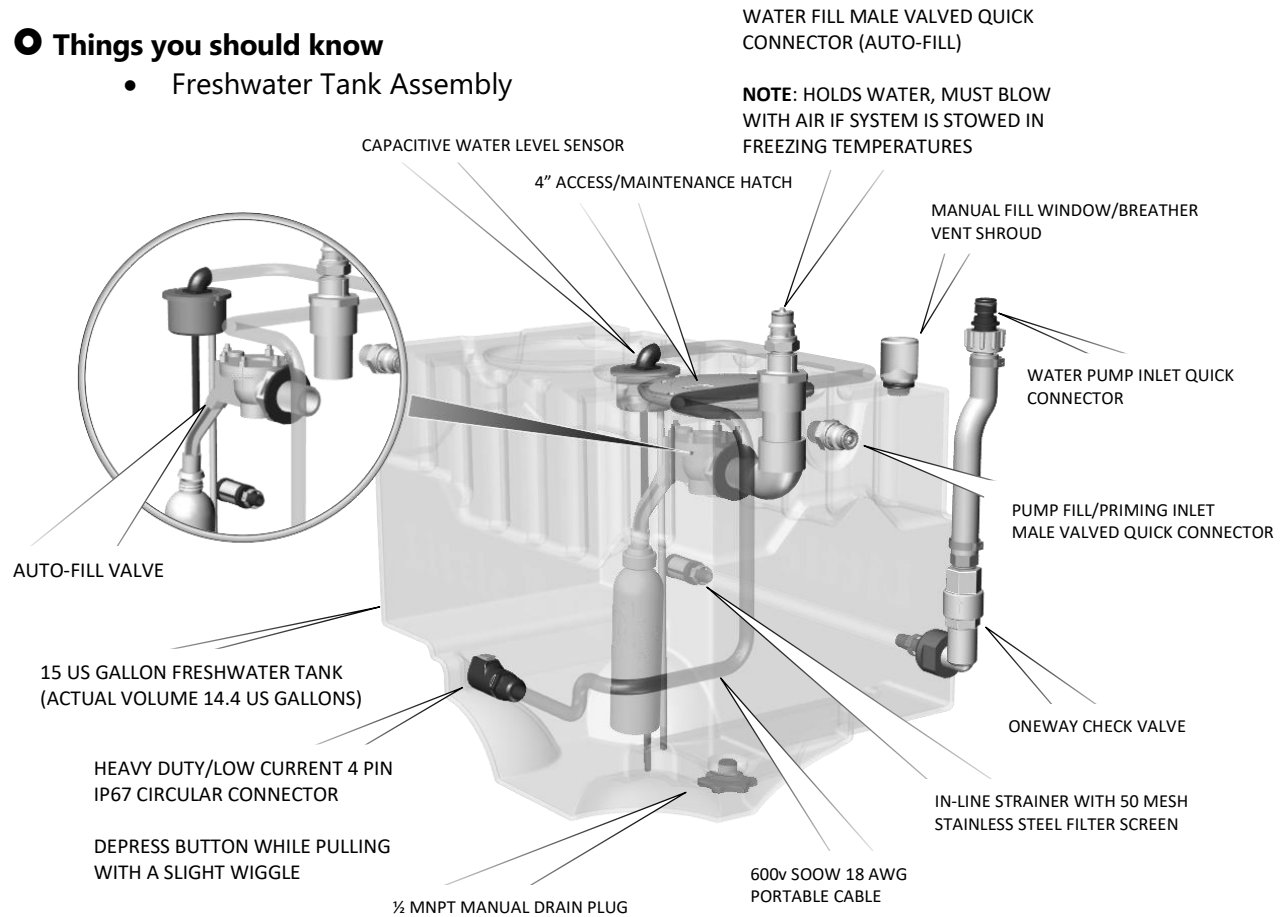
Embedded within the plumbing assembly is a precision real time pressure sensor. The pressure sensor relays pertinent information about the physical environment back to the smart controller so that the water pump can be proportionally controlled to a precise 50 PSI output; accuracy is within +/- 1 PSI of set point. At power-up, if the system cannot reach pressure and the freshwater tank is empty, the system will error out; the first LED will blink Blue with an audible beep. All these features were added to help maximize battery life by minimizing unnecessary pump power consumption.

NOTE: If the 5 Pin connector is disconnected from the Power Station, the third LED will illuminate solid Orange with an audible beep indicating there is a pressure sensor error. Never allow the open/disconnected connectors (male or female) to contact water (not covered under warranty).

Section 15: In-depth Understanding

Things you should know

- Freshwater Tank Assembly



Freshwater Tank Assembly:

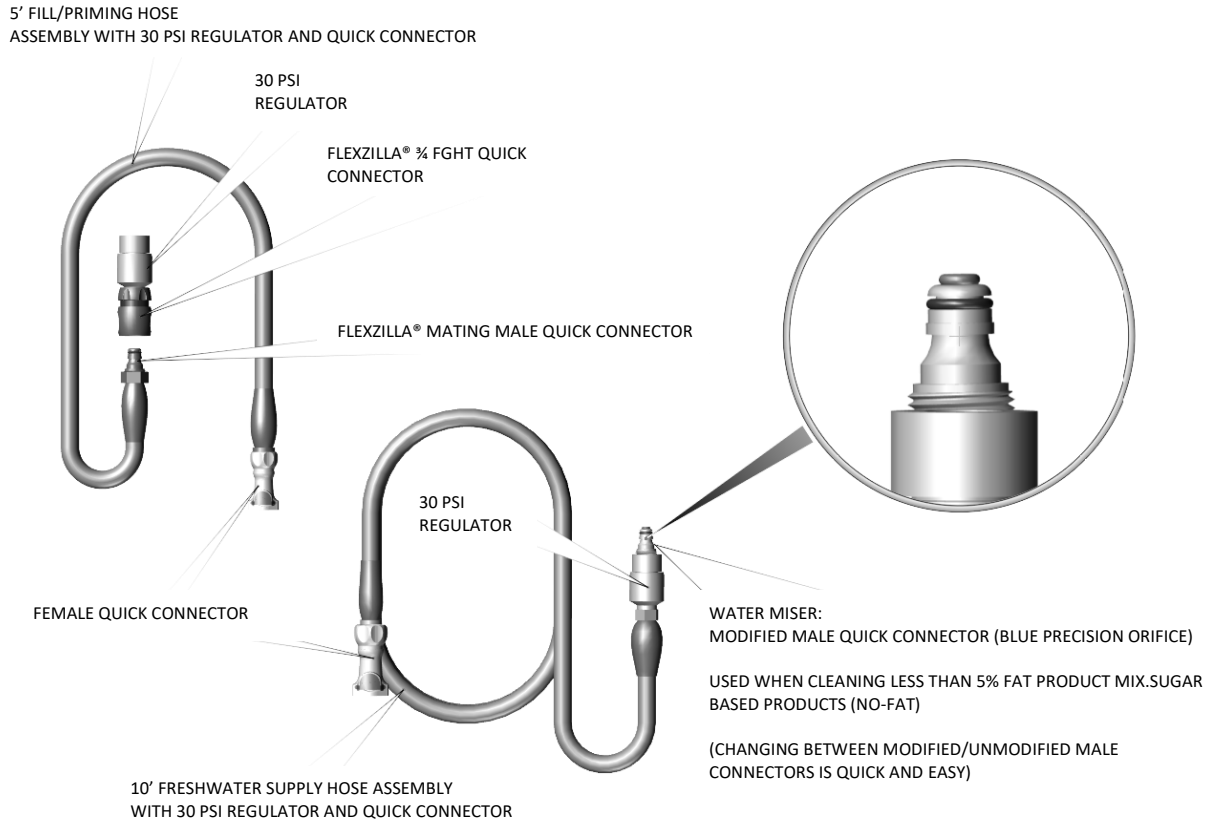
- The 15 US Gallon freshwater tank is made of durable food safe light weight polystyrene (Actual fluid volume 14.4 US Gallons).
- The integrated capacitive water level sensor detects the presence/absence of water.
- Use the 4" maintenance hatch to access the in-line strainer for periodic cleaning of the mesh screen and the inner tank.
- Filling the tank: the auto-fill valve will shut off just under 13.5 US Gallons. The auto-fill valve has a slight weep, so **do not** leave the freshwater supply hose connected to a pressurized water source for any extended period if you do not intend on using the system right away (this feature is intended to discourage permanent connections; eventually water will begin to spill out of the tank after roughly 25 minutes if the system remains idle).
- If you need all 14.4 US Gallons for consumption (full tank), you can manually fill the tank by overriding the auto-fill inlet. Just reposition the freshwater supply hose connector to the fill/priming inlet: while the tank is filling, visually observe the Breather Vent Cover, which will begin to rapidly fill, requiring immediate disconnection of the freshwater supply hose (roughly 20 seconds additional manual time to cap off tank).

NOTE: If the 4 Pin connector is disconnected from the Power Station, the first LED will illuminate Blue only if the pump is unable to reach pressure at any given time, otherwise the system will function until the tank is physically depleted of water. Never allow the open/disconnected connectors (male or female) to contact water (not covered under warranty).

Section 15: In-depth Understanding

Things you should know

- Water Supply Hose Assemblies and their Functions



Water Supply Hose Assemblies and Their Functions:

It's important to know your hoses and their specific purposes: the 5' fill/priming hose assembly is used to properly fill the freshwater tank and prime the system; the ¾ FGHT quick connector allows the hose assembly to quickly adapt to any standard male ¾ GHT fitment. The 10' freshwater hose assembly is used exclusively for working with the system i.e., delivering water.

NOTE: Never try to prime the system with the 10' Water Supply Hose Assembly if it's equipped with the Water-miser; the system will not prime correctly, which may reduce flow rates for high demand applications.

Section 15: In-depth Understanding

Things you should know

- Water-miser vs. Standard Connector

WATER-MISER PRECISION ORIFICE:

- USE WITH PRODUCT MIX HAVING 5% FAT CONTENT OR LESS
- SUGAR BASED PRODUCTS WITH NO FAT CONTENT



STANDARD MALE QUICK CONNECTOR:

- USE WITH PRODUCT MIX HAVING GREATER THAN 5% FAT CONTENT
- MAXIMUM FLOW APPLICATIONS



Water-miser vs. Standard Connector:

The Water-miser gives you the cleaning performance that you need without consuming more water than necessary. The "Blue" precision orifice restricts the pump's flow rate (GPM). If you are cleaning soft serve ice cream machines with the Hydra Rinse® System, and you know the fat content is less than 5%, use the Water-miser. It will leave you with an extra 1.5-2 US Gallons of water to do other things with i.e., cleaning up catch bins, brushes, etc. On average, the Hydra Rinse® Process will consume roughly 8-12 US Gallons of water when using the "Standard Male Quick Connector"; having a few extra gallons of water to clean up with is not a bad thing; after cleaning a few times with Little Buddy™, Sr. you will learn fast how important it is to minimize your water consumption; implement the Water-miser if applicable.

One negative impact about the Water-miser is the potential of inefficiently priming the system with a hose that has the Water-miser connected to it. Because of this possible scenario, never put the Water-miser on the 5' fill/priming hose assembly; it should be designated for filling the freshwater tank and priming the system only.

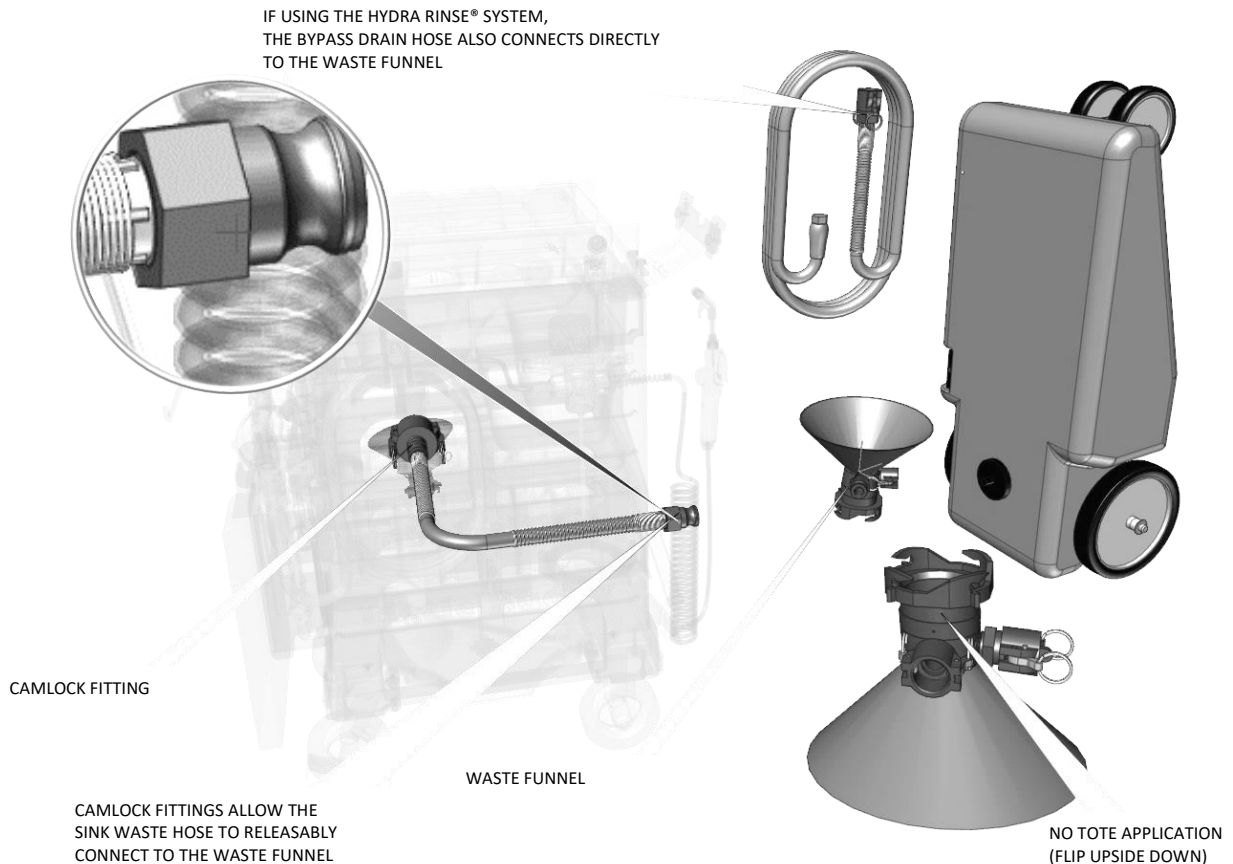
NOTE: In case the system is primed using the wrong hose assembly, there is a control function that checks to see if the pump is running at the correct flow rate when under high demand (greater than 3 GPM). If for any reason this criterion is met, the Power Station Integrated Smart Controller will attempt to prime the system for you, but there will always be a time when this automated functionality will not fully optimize the flow rate. This is not a huge deal, but something to be aware of as a user.

NOTE: To ensuring your system is always primed correctly, only perform the priming procedure with the "Standard Male Quick Connector", which comes equipped on the 5' fill/priming hose assembly.

Section 15: In-depth Understanding

Things you should know

- Detachable Waste Hose



Detachable Waste Hose:

The waste hose releasably connect to the sink and the waste funnel. The waste funnel comes with end caps over the camlock fittings so that you can use it for multiple configurations. For instance, if you are not using a tote, you can use the waste funnel upside down over a floor drain, or place it in a bucket, etc. If you can secure the end of the waste hose without the use of the waste funnel, you can place it in anything you need for managing the gray water; the sky is the limit.

If you are using the Hydra Rinse® System, there is a camlock fitting designated on the waste funnel for the Hydra Rinse® Bypass Drain Hose.

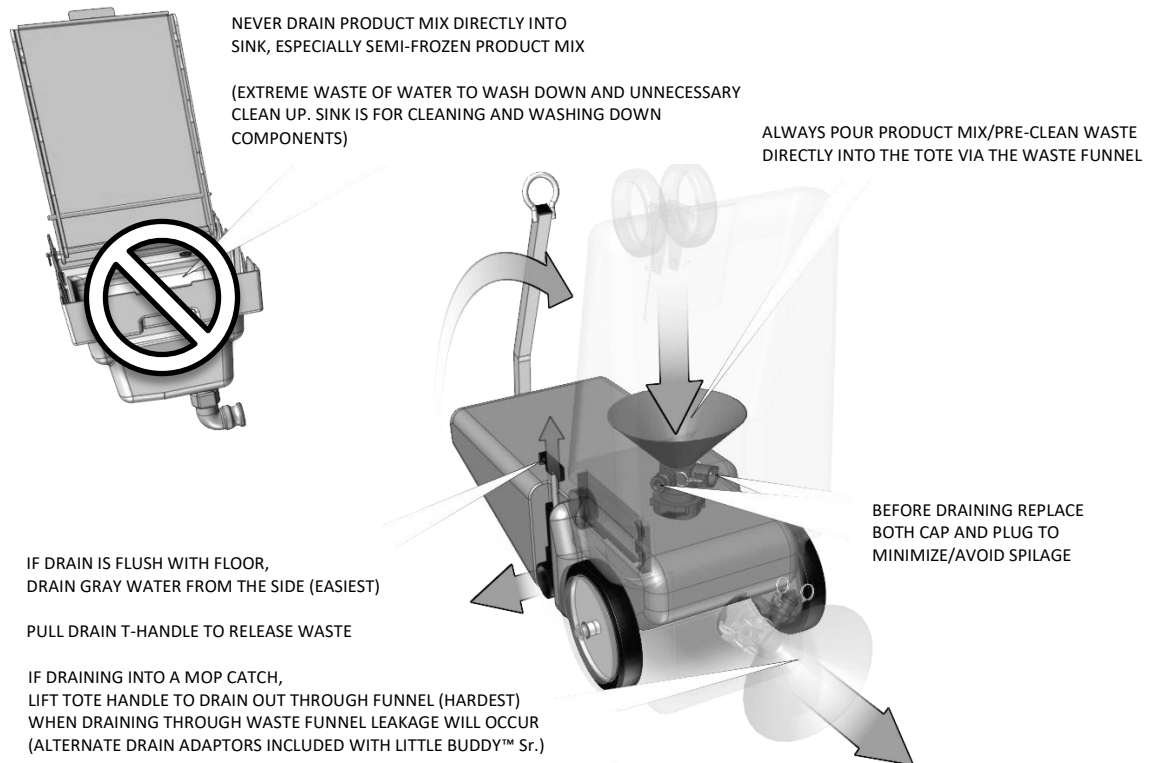
Hoses are a necessary evil. Managing a hose is key to unwanted spillage. Whenever disconnecting a hose, always disconnect from the Little Buddy™ Sr. first. Keep the disconnected end upward and walk the hose back towards the drain source while coiling, this will remove most of the residual fluid from the hose itself.

NOTE: If you are draining into an existing drain source that is unreachable, you can extend the length of the waste hose by obtaining the female camlock fitting to create your own hose extension (<https://www.mcmaster.com/5535K64>).

Section 15: In-depth Understanding

Things you should know

- Detachable Waste Tote



Detachable Waste Tote:

The Detachable Waste Tote is a nice feature of the Little Buddy™ Sr. System. The default system comes with a Barker "4-WHEEL TOTE ALONGS" 16 US Gallon variant; you could obtain a 25 US Gallon version if you want to minimize the number of trips to the drain. To keep things as compact as possible, the 16 US Gallon variant works perfectly. The way to make it work for soft serve ice cream machines is as follows: you never know the volume of product mix that may still reside within the mix reservoirs, it can vary with sales (some smart machines do let you know a head of time). The best practice is to first drain all unused mix manually from the machine directly into the tote. Perform any pre-cleaning cycles and drain those directly into the tote also; this could add up to 10 US Gallons of waste alone. Leave Little Buddy™ Sr. setup, and simply transport the waste to a suitable drain source and discard accordingly.

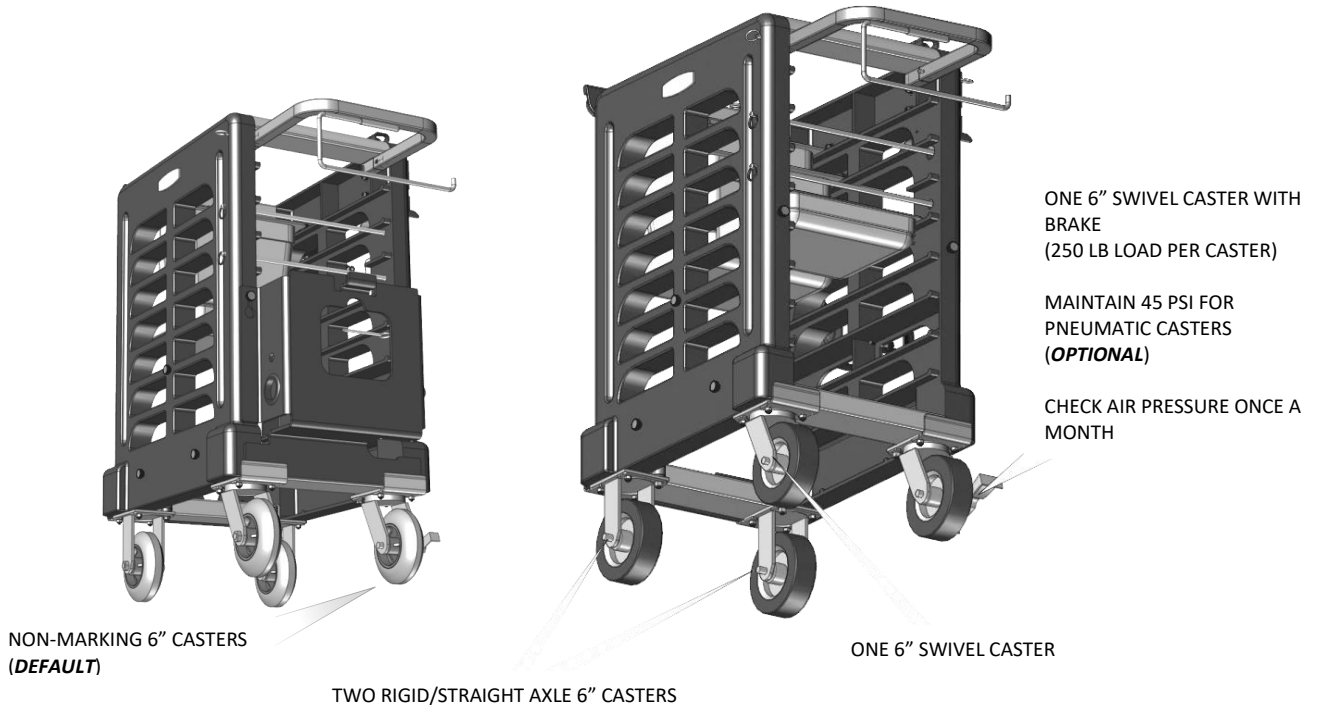
Upon your return, connect all drain lines to the tote via the waste funnel. You now know the remaining amount of gray water that will enter the waste tote will be no more than the amount of available freshwater (14.4 US Gallons max); therefore, you only need a 16 US Gallon waste tote. But, if two trips are too many, you can simply acquire a Barker 25 US Gallon variant (<https://www.rvpartscountry.com/Barker-Tote-Along-Portable-Holding-Tank-25-Gallon.html>), Little Buddy™ Sr. will support the larger tote as designed; the modular design has its advantages.

NOTE: Waste management is a big deal when cleaning with a mobile system, ensure to be diligent to avoid unnecessary/costly mishaps i.e., overfilling.

Section 15: In-depth Understanding

● Things you should know

- 6" Pneumatic Casters



6" Non-marking/Pneumatic Casters:

Non-marking casters require minimal maintenance and work well on all surfaces, and pneumatic casters (*optional*) make road travel a whole lot smoother; quieter too. But pneumatic wheels also make maintenance a little more imperative. Anything with an air tube will eventually require adding air to properly function. If you purchase the optional pneumatic casters, and the Little Buddy™ Sr. becomes sluggish and hard to push, most likely you need air in the tires. Keep the tire pressure at 45 PSI (**Do Not exceed 48 PSI**), and you will have no issues. Check pressure at minimum once a month.

Each caster can carry 250 lbs. of load, so no issues with durability. Each caster has grease fittings, so once a year re-apply some grease. Casters are sourced through Service Casters (<https://shop.servicecaster.com/>). If you ever need a replacement tire or tube:

TUBE:

- Part No: SCC-FPN150-TUBE

TIRE:

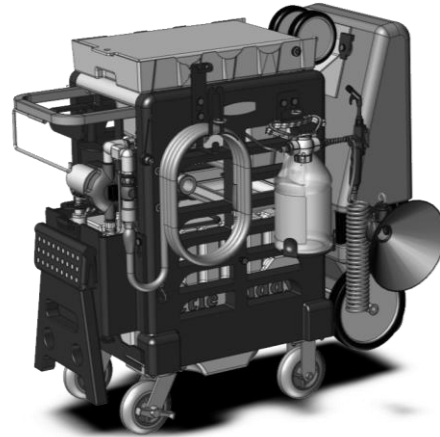
- Part No: SCC-FPN150-TIRE

Pneumatic soft rubber tires: if soft rubber tires are left idle for long periods of time, they can leave marks on certain surfaces. For this unpredictable reason, keep little Buddy™ Sr. parked on a throw rug if leaving marks is a concern; each caster mounting plate/bolt pattern is an industry standard. Replacing/upgrading these casters for non-marking wheels is a possible option.

NOTE: After adding air, always replace the valve stem air cap to ensure serviceability and life of the casters.

Section 16: Troubleshooting Guide 1 of 2

● Little Buddy™ Sr. does have a lot going on. Here is a simplified troubleshooting guide to help you with some of the basic things that could give you interrupted service.



Problem:	Potential Cause:	Potential Solution:
Power Station beeps with flashing LEDs when powered up	<ul style="list-style-type: none"> Failed initialization verification check list 	<ul style="list-style-type: none"> Review Error Codes (Section 17) Attempt to correct issue, Power off/on to clear error
Pump won't stop running	<ul style="list-style-type: none"> Pump needs to be primed, excessive air in the system Potential air mixing with the water input to pump 	<ul style="list-style-type: none"> Prime system (Section 15, page 36) Check for worn and/or loose-fitting on the water input side of the pump
Pump stopped running while dispensing water	<ul style="list-style-type: none"> Tank is out of water Pump is thermally protected and may have exceeded 200°F (93.3°C) 	<ul style="list-style-type: none"> Refill tank, Power off/on to clear error Pump may have overheated. Wait for it to cool down, if it fails to properly work, replace pump
Power Station is beeping, but system keeps running	<ul style="list-style-type: none"> Battery is running low 	<ul style="list-style-type: none"> Charge system as soon as possible
Power Station will not run pump, but LED is blinking orange	<ul style="list-style-type: none"> The charger is plugged in 	<ul style="list-style-type: none"> Unplug the charger
Pump is not fully supplying enough water	<ul style="list-style-type: none"> Water Pump input is taking in air 	<ul style="list-style-type: none"> Check in-line strainer cap is tight (inside freshwater tank), tighten loose clamps, fittings Replace 15 US Gallon Freshwater Tank Assembly.

TABLE CONTINUED →

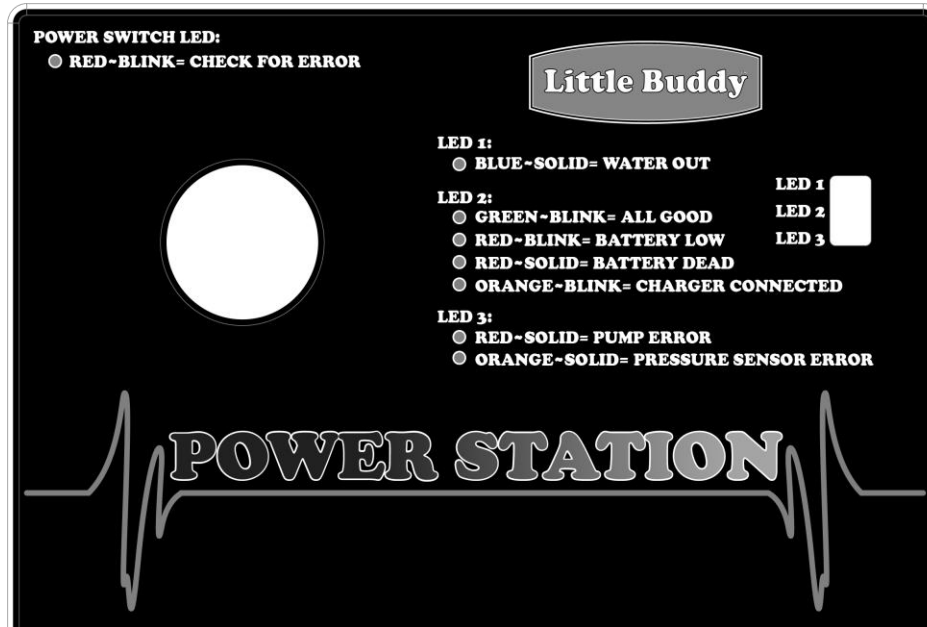
Section 16: Troubleshooting Guide 2 of 2

Problem:	Potential Cause:	Potential Solution:
Leaks	<ul style="list-style-type: none"> Worn O-ring seals/poor connections 	<ul style="list-style-type: none"> Replace O-rings and tighten fittings
Pump stops and starts during use	<ul style="list-style-type: none"> System was not primed correctly, and the Power Station Integrated Smart Controller is trying to optimize the flow rate 	<ul style="list-style-type: none"> Stop and properly prime the pump/system (Section 15, page 36), or ignore (system automatically makes two attempts to reach maximum flow rate)
Wand is not spraying evenly	<ul style="list-style-type: none"> Tip may be contaminated Water Pump input is taking in air 	<ul style="list-style-type: none"> Perform cleaning procedure per wand operator's manual Check in-line strainer cap is tight (inside freshwater tank), tighten loose clamps, fittings. Replace 15 US Gallon Freshwater Tank Assembly.
Quick connectors are hard to push together	<ul style="list-style-type: none"> Worn out O-rings 	<ul style="list-style-type: none"> Try wetting with ProNatural® Cleaning Wipes prior to connecting Replace O-rings if difficulty persists
Cart is difficult to push	<ul style="list-style-type: none"> Optional pneumatic wheel(s) air pressure is low (less than 45 PSI) 	<ul style="list-style-type: none"> Ensure tire pressure is between 45-48 PSI
Pump will not stop pumping causing high pressure, pump, and hoses leak	<ul style="list-style-type: none"> Bad pressure sensor 	<ul style="list-style-type: none"> Replace plumbing assembly
Power on, but no power	<ul style="list-style-type: none"> Check for blown/loose fuse on the Power Station Integrated Smart Controller (15 AMP) Bad battery Power Station Integrated Smart Controller is bad 	<ul style="list-style-type: none"> Replace blown fuse (automotive type)/ensure fuse is properly seated. Replace battery Call technical support
Battery is not charging	<ul style="list-style-type: none"> Check for blown/loose fuse on the Power Station Integrated Smart Controller (5 AMP) Bad Charger/connection 	<ul style="list-style-type: none"> Replace blown fuse (automotive type)/ensure fuse is properly seated. Replace charger/worn connectors
No longer capable of running the system for long period of time	<ul style="list-style-type: none"> Battery have lost its ability to fully recharge Bad Cell(s) 	<ul style="list-style-type: none"> Replace battery Do not continue to try charging as battery may explode

NOTE: The IP67 circular connectors are tested to function up to 1200 disconnects. If intermittent issues arise, service may be required to replace the male and/or female connectors to resolve the problem.

Section 17: Power Station LEDs 1 of 2

● Process Codes:



LEDs are the communication portal between end users and the Power Station Integrated Smart Controller.

= LED Blink,
 = LED On,
 = LED Off

PROCESS CODES: Power Button LED Illuminated (SOLID)					
<u>LED 1</u>	<u>LED 2</u>	<u>LED 3</u>	<u>BEEP</u>	<u>DESCRIPTION</u>	<u>ACTION</u>
	 GREEN			Heartbeat of Power Station	• All is good
	 RED		Pulsating beep every 3 second	Low Battery warning	• Charge battery as soon as possible. Note: you must turn off the power station at this point. If left on for an extended period in this state, you will degrade the performance of the battery life by over discharging.
	 ORANGE			Charger is plugged into the Power Station, while the power is enabled	• Disconnect charger for use. Note: Charger can either be connected to a 110-wall receptacle or not. This process code does not mean the system is being charged, it simply means the charger is connected to the Power Station.

TABLE CONTINUED →

Section 17: Power Station LEDs 2 of 2

● Error Codes:



LEDs are the communication portal between end users and the Power Station Integrated Smart Controller.

= LED Blink,
 = LED On,
 = LED Off

ERROR CODES: Power Button LED Illuminated (BLINKING)					
<u>LED 1</u>	<u>LED 2</u>	<u>LED 3</u>	<u>BEEP</u>	<u>DESCRIPTION</u>	<u>ACTION</u>
			Pulsating beep every second	Freshwater tank is empty/Water level sensor connector reading error	<ul style="list-style-type: none"> • Fill tank with water • Plug-in connector • Check for worn connector pins • Power OFF/ON the Power Station to reset error
			Pulsating beep every second	Pump connector reading error	<ul style="list-style-type: none"> • Plug-in connector • Check for worn connector pins • Power OFF/ON the Power Station to reset error
			Pulsating beep every second	Pressure sensor connector reading error	<ul style="list-style-type: none"> • Plug-in connector • Check for worn connector pins • Power OFF/ON the Power Station to reset error
			Pulsating beep every second	Battery has reached operating limit	<ul style="list-style-type: none"> • Battery must be charged

Section 18: Maintenance Schedule

Item:	Description:	Maintenance:	Notes:
1	Casters	<ul style="list-style-type: none"> • Check air pressure monthly • Grease fittings once a year 	<ul style="list-style-type: none"> • Set Value 45-48 PSI
2	Battery	<ul style="list-style-type: none"> • Charge after every use. Keep on charger (trickle charge) during long idle periods to ensure battery life 	<ul style="list-style-type: none"> • Intelligent charger will ensure battery performance (13.6VDC)
3	Freshwater tank	<ul style="list-style-type: none"> • Sanitize every 3-6 months using LEXX™ Sanitizer and Cleaner Concentrate 	<ul style="list-style-type: none"> • Mix ratio 1:128
4	Waste tote	<ul style="list-style-type: none"> • After every use to avoid foul odors. Waste tote should be rinsed and sanitized with clean water and wand after every use. 	<ul style="list-style-type: none"> • Do not rinse after applying LEXX™ sanitizer to allow for deep cleaning
5	Little Buddy™ Sr.	<ul style="list-style-type: none"> **Clean/wipe down after every use to avoid accumulation of soiling and to avoid transferring contamination from the cart to the task at hand (full teardown 3-6 months) • O-ring seals as deemed necessary 	<ul style="list-style-type: none"> • Use the wand and ProNatural® Cleaning Wipes to keep things super clean. Stay away from corrosive cleaning and sanitizing products.
6	Freshwater delivery system	<ul style="list-style-type: none"> • Do not leave water in the system. After use drain immediately. • Do not allow the system to freeze with water in any portion of the freshwater delivery system, which includes hoses. • Clean in-line strainer (inside freshwater tank) 	<ul style="list-style-type: none"> • Manual Drain plug makes draining quick and easy • (Long term storage) Disconnect pump from water inlet and run dry for 15 seconds. Disconnect and manually drain all components individually before stowing • Inspect and flush clean every 6 months

**Do not use a pressure washer on the water pump or power station. Ensure all electrical connectors never encounter water (not covered under warranty)

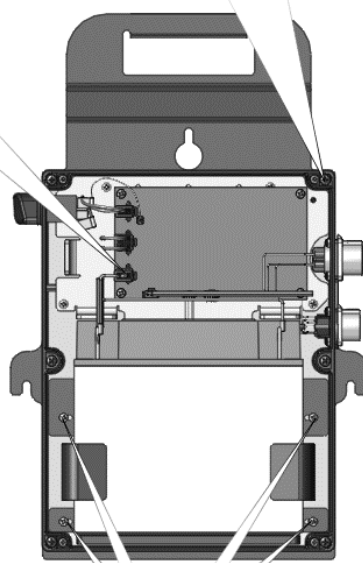
NOTE: You can use Little Buddy's wand to maintain the cleanliness of the system. The wand will not exert any unnecessary pressure to the components.

Section 19: Battery Installation/Replacement

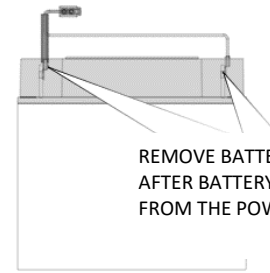
REMOVE (QTY 6) POWER STATION COVER
PHILLIPS SCREWS

NO POWER TOOLS OR YOU WILL DESTROY
THE ¼-TURN QUICK RELEASE FASTENERS

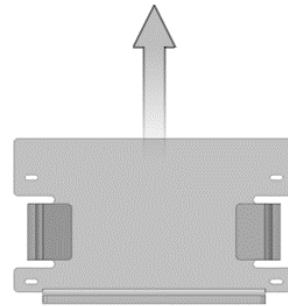
DISCONNECT BATTERY TERMINAL
BEFORE REMOVING BATTERY BRACKET



(QTY 4) BATTERY BRACKET MOUNTING SCREWS



REMOVE BATTERY HARNESS
AFTER BATTERY HAS BEEN REMOVED
FROM THE POWER STATION



NOTE: NO POWER TOOLS OR DAMAGE WILL OCCUR.

Replace battery with a GRUBER 12 VDC 18-Ah BATTERY (58AGPS-12-18-P)

- Ensure your environment is completely dry before continuing
- Remove Power Station top cover (6 Phillips Screws) by hand only!
- Disconnect the battery harness from the Power Station Smart Integrated Controller
- Loosen the (QTY 4) mounting bracket Phillips Screws. The mounting bracket is thick enough to retain the mounting screws if you do not fully remove them, this will help when re-installing.
- Remove Battery Bracket/Battery/Battery Harness from the Power Station and then slide the battery out of the battery mounting bracket.
- Carefully remove the battery harness from the battery terminals.

Reverse steps to install the new battery.

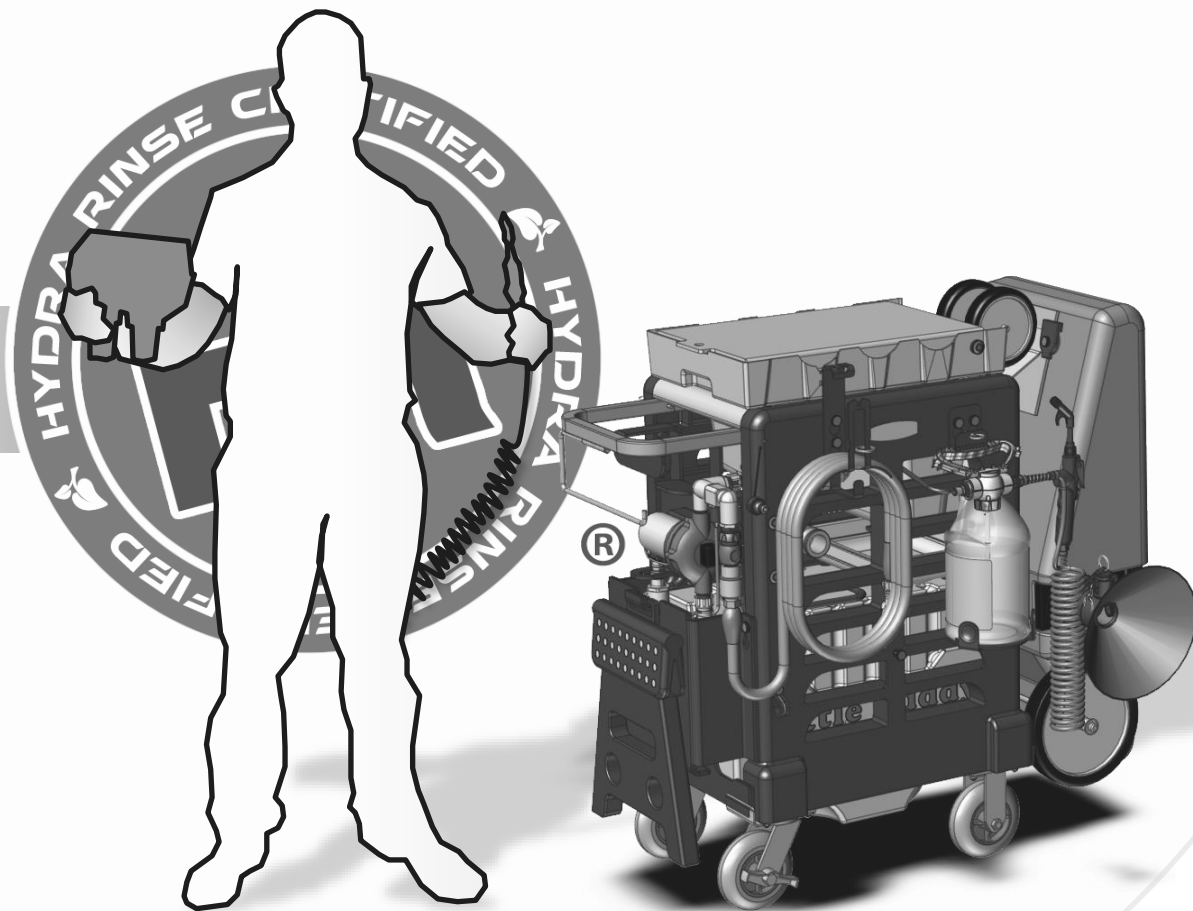
NOTE: If degradation of cycle time (run time of pump before low battery warning) is noticeable, it's time for a new battery.

Section 20: Replacement Components

FOR REPLACEMENT COMPONENTS, ADDITIONAL
INFORMATION, SUPPORT, AND VIDEOS FOR YOUR
HYDRA RINSE® PRODUCTS PLEASE VISIT

WWW.HYDRARINSE.COM

OR CONTACT YOUR LOCAL HYDRA RINSE® DEALER



Section 21: Warranty

The Seller warrants that the **LBUDDYSR** will operate or substantially perform within the published specifications and be free from material and workmanship defects, when subjected to normal, proper, and intended usage by properly trained personnel. Please visit www.hydrarinse.com for warranty registration.

Seller agrees during the Warranty Period, to repair or replace, at Seller's option, defective item(s) to allow the **LBUDDYSR** to operate or substantially perform within the published specifications; provided the Buyer (a) promptly notifies the Seller in writing when the defect is discovered, and provides Seller the product model, serial number and details of the warranty claim; and (b) after Seller's review, Seller will provide Buyer with service data and/or a Return Merchandise Authorization ("RMA"), which may include product-specific handling instructions. At that time, the Buyer may return the defective item(s) to Seller with all return shipping costs paid by Seller. The Seller has the option to use new or refurbished replacement parts for warranty work. All replaced parts become the property of Seller. Shipment to Buyer of repaired or replacement parts/equipment will be made in accordance with the Seller's delivery policy.

The Seller has no obligation to make repairs, replacements or corrections, in whole or in part, as the result of: (i) normal wear and tear; (ii) accident, disaster or force majeure; (iii) the Buyer's misuse of the **LBUDDYSR** or the Buyer's negligence; (iv) use of the **LBUDDYSR** in a manner for which it was not designed or intended; (v) external causes such as, but not limited to, power failure or electrical power surges; (vi) improper storage or handling of the **LBUDDYSR** by Buyer; or (vii) use of the **LBUDDYSR** in combination with equipment not purchased directly from the Seller.

Any installation, maintenance, repair, service, relocation or alteration, or other tampering with, the **LBUDDYSR** performed by any individual or entity other than the Seller/Professional trained end user, without Seller's prior approval, or any use of replacement parts not supplied by Seller, shall immediately void and cancel this warranty. This warranty entitles you to specific rights, and you may also have other rights, which differ from state to state. No other warranties shall apply.

Section 22: Appendix A

LEXX™ pH Solution Measurement ProNatural® Brands pH Test Strip (HR-KT-0054)

Inspection Process:

1. Creating Test Solution:

Hydra Rinse® Pro-control:

After the completion of the Hydra Rinse® Pro-control cycle, drain LEXX™ solution from machine into a clean emptied catch bucket for collecting test solution (do not add used LEXX™ Cups to the drained solution in catch bucket)

Wand:

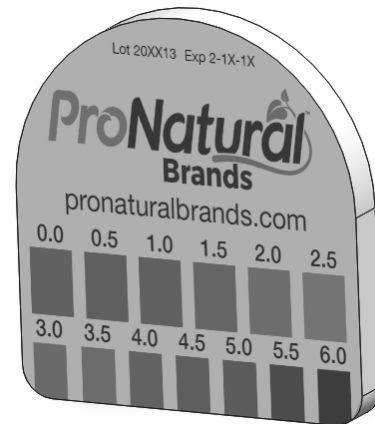
Allow solution to freely dispense into a catch bucket for a minimum of 30 seconds. Next collect at least 8 fl. oz. of solution into a clean emptied cup for collecting test solution.

2. Taking Measurement:

Submerge test strip (~2 inches in length from roll) in solution for 2 seconds. Compare wetted test strip immediately to the color scale.

3. Results:

Test strip should indicate ≤ 3.5 pH for an acceptable reading when testing with a LEXX™ pH Test Strip.

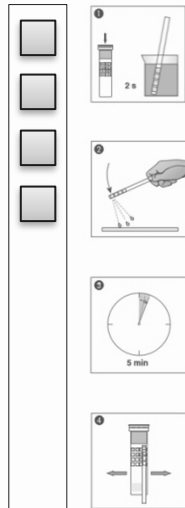


Section 22: Appendix A

LEXX™ Total Acid Concentration (grams/Liter) Semi-quantitative Measurement (Sold separately)

QUANTOFIX® Total acid (Part no. 91353)

Inspection Process:



1. Creating Test Solution:

Hydra Rinse® Pro-control:

After the completion of the Hydra Rinse® Pro-control cycle, drain LEXX™ solution from machine into a clean emptied catch bucket for collecting test solution (do not add used LEXX™ Cups to the drained solution in catch bucket)

Wand:

Allow solution to freely dispense into a catch bucket for a minimum of 30 seconds. Next collect at least 8 fl. oz. of solution into a clean emptied cup for collecting test solution.

2. Taking Measurement:

Follow the instructions supplied with the QUANTOFIX® product to obtain the semi-quantitative total acid content.

3. Results:

Test strip should indicate between:
2.0-2.5 g/L



QUANTOFIX® Total acid

en

Description:
QUANTOFIX® Total acid are test strips for semi-quantitative determination of the total acid content. The total acid content is expressed as g of citric acid per L. QUANTOFIX® Total acid test strips are also suitable for reflectometric evaluation using the QUANTOFIX® Relax (REF 913 46).

Pack content:
1 aluminium can with 100 test strips

Measurement range

Visually

2-5 g/L citric acid

Color gradations:
0 - 2.0 - 2.5 - 3.0 - 3.5

General indication:

Always withdraw

drawal. Do not

Instructions:

1. Dip

2. Stir

3. Wait

4. Read

5. Dispose

6. Storage

Avoid exposing

age temperature

If stored properly, the

test strips are

stable for 12

months.

Do not use

expired test

strips.

Dispose of

used test

strips in a

designated

container.

Do not

recycle.

Storage:

Avoid exposing

age temperature

If stored properly, the

test strips are

stable for 12

months.

Do not use

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Dispose of

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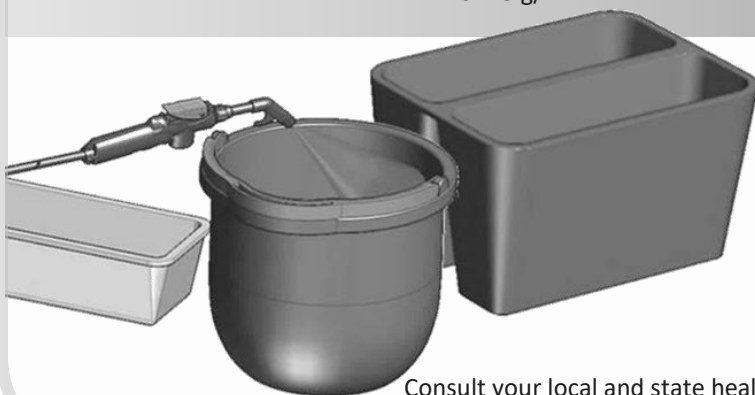
strips.

Dispose of

used test

strips in a

designated



Consult your local and state health codes for your requirements

*Recommend purchasing from CTL Scientific. Toll-Free: 888-686-3454



Standardizing Innovation

101-9700 D