

# KARTWASHER

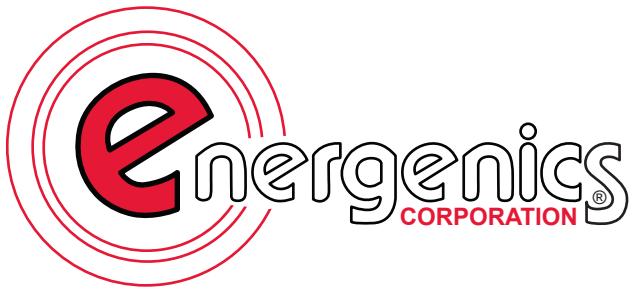
**Installation and Operation Manual  
Quaternary Ammonium (QUAT) (IDEC)**



**energenics**  
CORPORATION®



**ADVANCED DISINFECTION  
TECHNOLOGY**



1470 Don Street  
Naples, FL 34104  
(800) 944.1711  
[www.energenics.com](http://www.energenics.com)

## **PART 1:**

### **INSTALLATION & UTILITY CONNECTION REQUIREMENTS QUATERNARY AMMONIUM (QUAT) CHAMBER**

## **PART 2:**

### **IDEC DISPLAY - QUAT KARTWASHER OPERATING AND PROGRAMMING INSTRUCTIONS**

# PART 1

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## INSTALLATION & UTILITY CONNECTION REQUIREMENTS QUATERNARY AMMONIUM (QUAT) CHAMBER

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## CHAMBER UNLOADING & INSTALLATION

Your Chamber is shipped fully assembled and ready for your predetermined floor or pit placement. **Follow these directions:**

### **\*DO NOT SIGN BILL OF LADING UNTIL INSPECTED\***

1. Unwrap Chamber and inspect for damage during shipping.
2. The Chamber should be picked up with a forklift using long forks (60" minimum). If this type of forklift is not available, the Chamber should be carefully removed from the truck by other means. **Use caution not to damage fiberglass base beams.**
3. Lift the Chamber to unbolt the wood securing it to the shipping pallet. Remove the pallet and any plywood under the Chamber.
4. Slowly lower the Chamber onto the floor.

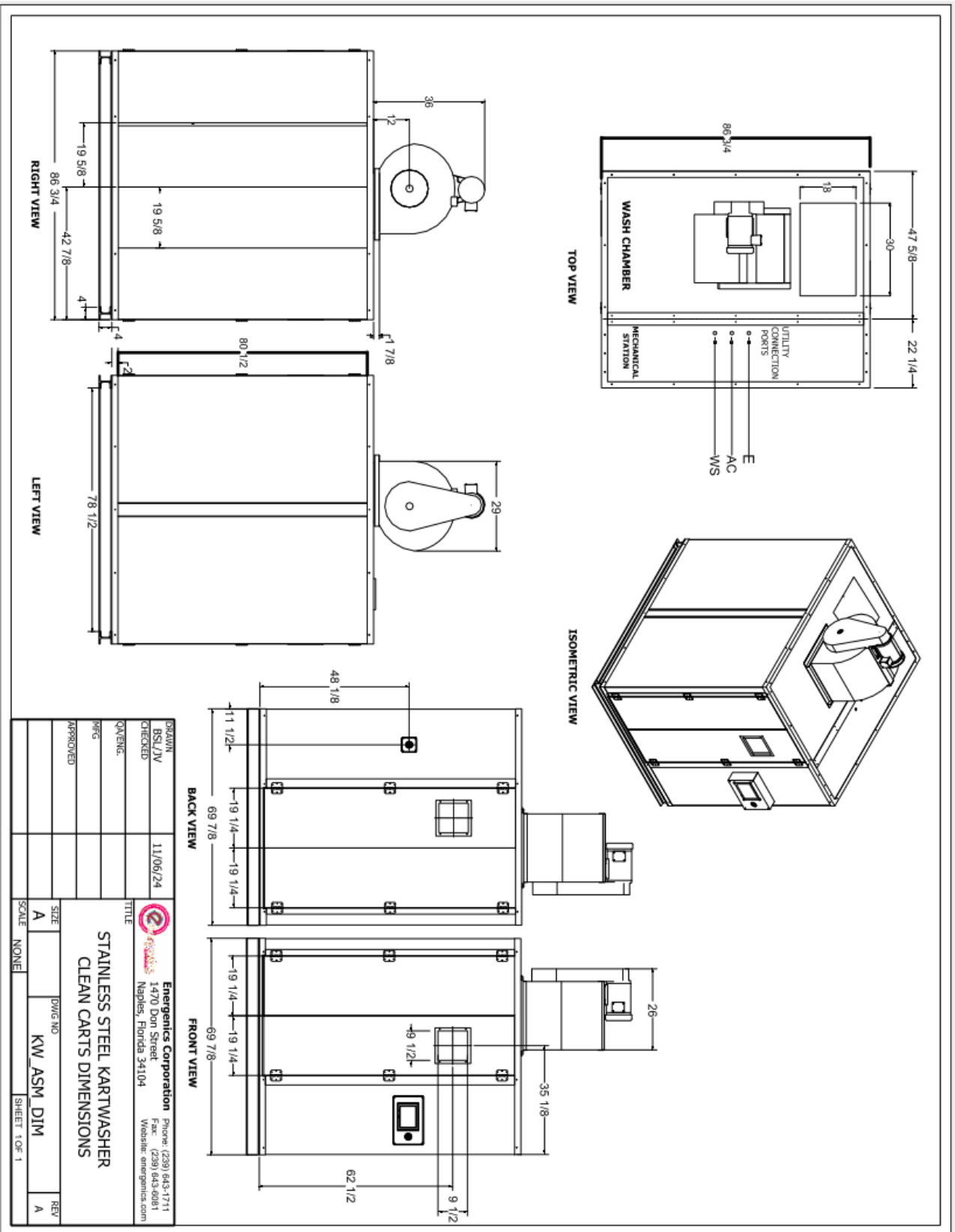
### **Floor Installation**

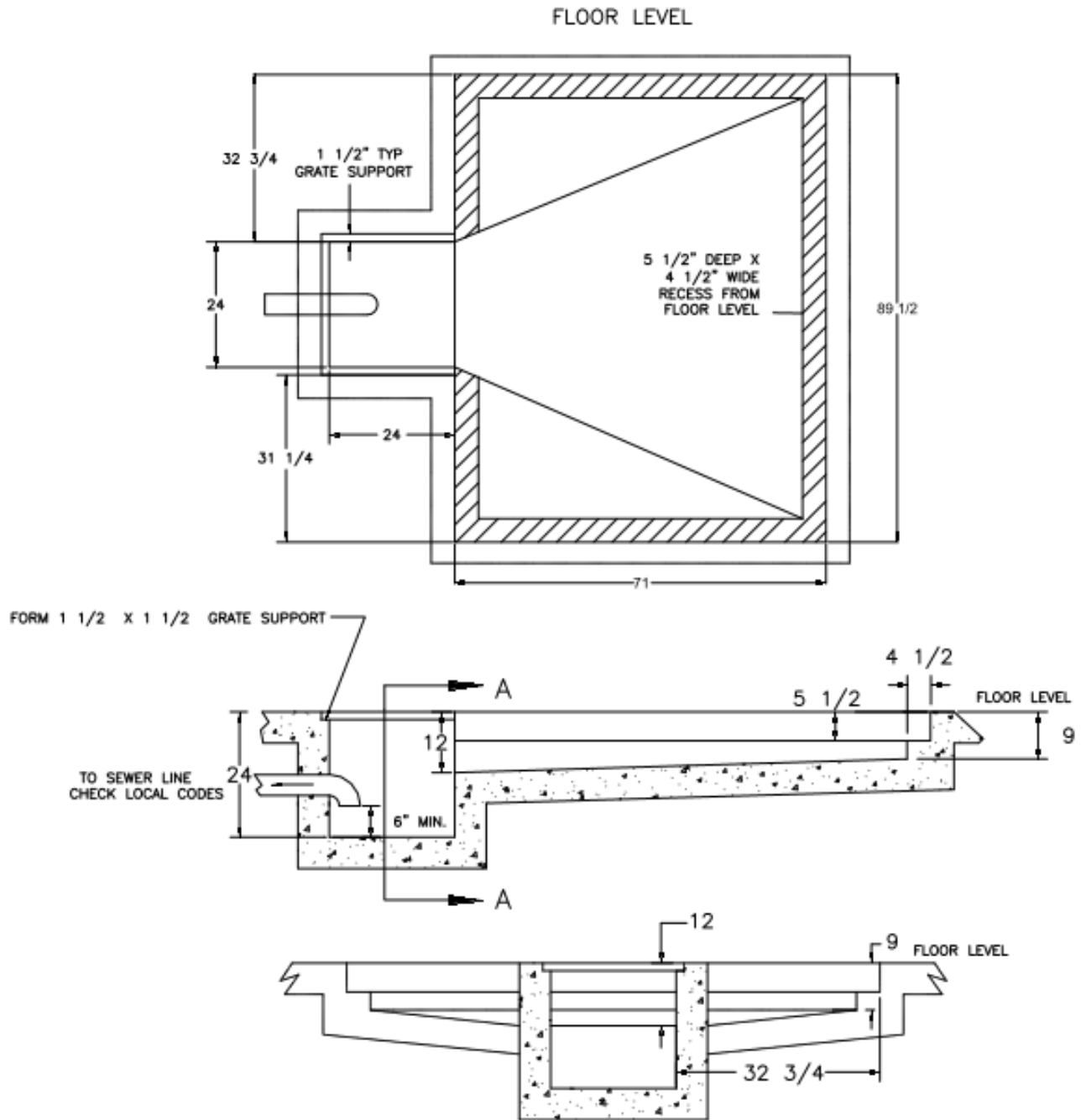
1. Ensure Chamber is facing desired direction. Slide Chamber into final position (use wood between the Chamber frame and forks for added protection).
2. Mount to the floor in 4-8 places using appropriate fasteners per floor type.
3. Install 2 (supplied) yellow exit posts approximately 4" past the trailing edge of each door on the discharge side of the Chamber.
4. **Mount sensors on yellow exit post side closest to the Chamber to avoid damage from discharged carts.** Installed sensors will ensure the cart is completely clear of the doors before beginning a new cycle. (See Page 9)

5. Mount entrance and exit ramps on models with built in sump option. Ensure the exit ramp is flush to the floor level for smooth exit of carts.

## **Pit Installation**

1. Ensure the Chamber is facing the desired direction. Remove the shipping blocks.
2. Employ appropriate rigging techniques and personnel to carefully lower the Chamber into the prepared pit. (See Page 7)
3. Install (2) yellow exit posts (supplied) approximately 4" past the trailing edge of each door on the discharge side of the Chamber.
4. **On side closest to the Chamber (to avoid damage from discharged carts), mount photo-eye sensors on yellow exit posts.** Sensor installation is required to ensure a cart has completely cleared the exit doors before unit will begin a new cycle. (See Page 9)

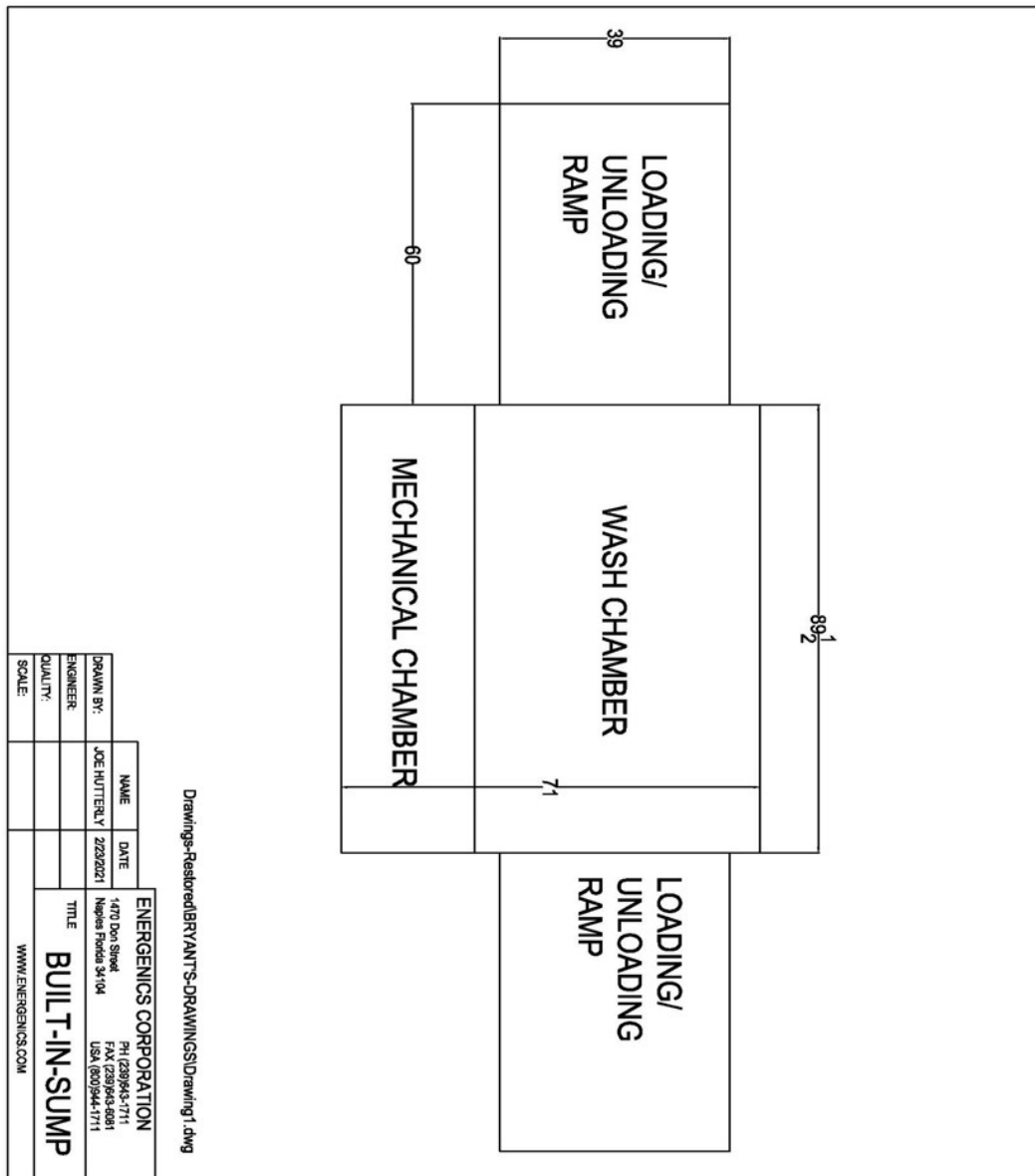




# SECTION A-A

DRAWN T. MORGAN	12/18/95	 <b>Energenics Corporation</b> 1470 Don Street Naples, Florida 34104 Phone: (239) 643-1711 Fax: (239) 643-6681 Website: energenics.com		<b>SS 4" KARTWASHER PIT &amp; SUMP DETAIL</b>	
CHECKED					
QA/ENG.		TITLE			
PRG					
APPROVED					
REVISED JV	11/06/24	SIZE A	DWG NO SS_KW_PIT&SUMP	REV B	
		SCALE NONE	SHEET 1 OF 1		

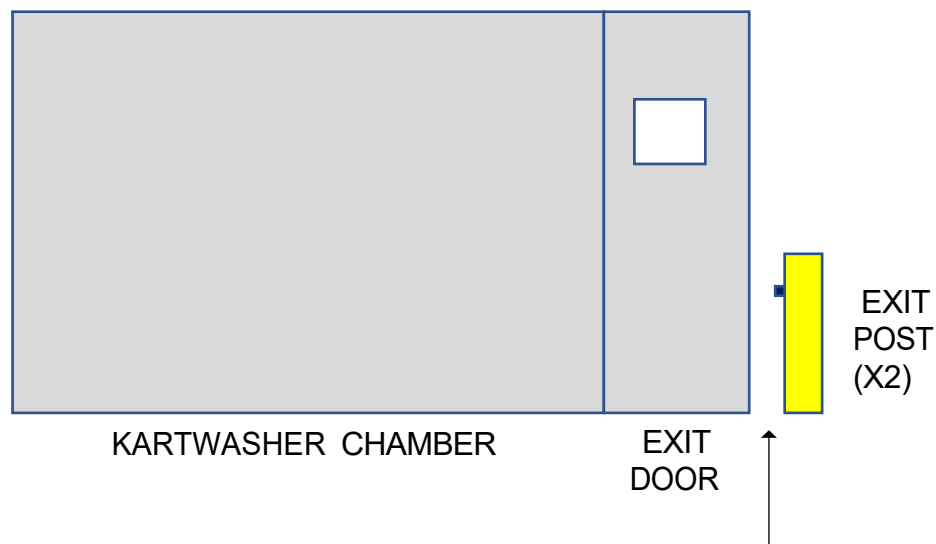
## BUILT-IN SUMP WITH LOADING / UNLOADING RAMPS



**\*This configuration allows the Chamber to be placed on the surface of a finished floor. A 1-inch piece of PVC coupling is installed under each loading / unloading ramp (required) for draining. Use one end for draining and cap the opposite side. The built-in sump allows for relocation of the unit for future growth.**

## EXIT POST AND SENSOR PLACEMENT

1. Position exit posts (supplied) approximately 4-inches past the trailing edge of the open exit door edge.
2. Posts must be installed equidistant from exit door edge so that photo-eye sensors are equally positioned.
3. Mount photo-eye sensors on the side of post nearest the Kartwasher to avoid exiting cart damage.
4. Secure post positioning with appropriate fasteners.



- POST APPROX. 4" FROM DOOR
- SENSOR ON DOOR SIDE OF POST
- POST AND SENSOR PLACEMENT IDENTICAL EACH SIDE

## UTILITY REQUIREMENTS

**Failure to comply with utility requirements may result in:**

- Damage to the machine
- Incurred travel expenses of factory technician(s)
- Voided warranty



## **CHEMICAL PUMP SETTINGS**

**To attain an accurate chemical pump setting of your selected chemical disinfectant, have the chemical supply company representative set the dilution ratio as required per that specific chemical.**

## **WATER SUPPLY REQUIREMENTS**

**Connect a dedicated fresh water supply line with:**

- **Minimum 35 psi supply line to water hold tank**
- **3/8" supplied connection**
- **Maximum supplied water temperature of 140°**  
(high temp. water package (max 180°) available as an added option)

## COMPRESSED AIR SUPPLY REQUIREMENTS

1. The Chamber requires a 1/2" compressed air supply line.
2. Connect filtered, dried compressed air with a constant pressure no lower than 80 psi and no higher than 100 psi.

\*If supplied air pressure is below 80 psi, the cart floor will not properly lift to eject the cart. If air pressure is above 100 psi, premature failure of the solenoid valves will occur. These are not covered under the standard warranty.



### **Regulated Pressures:**

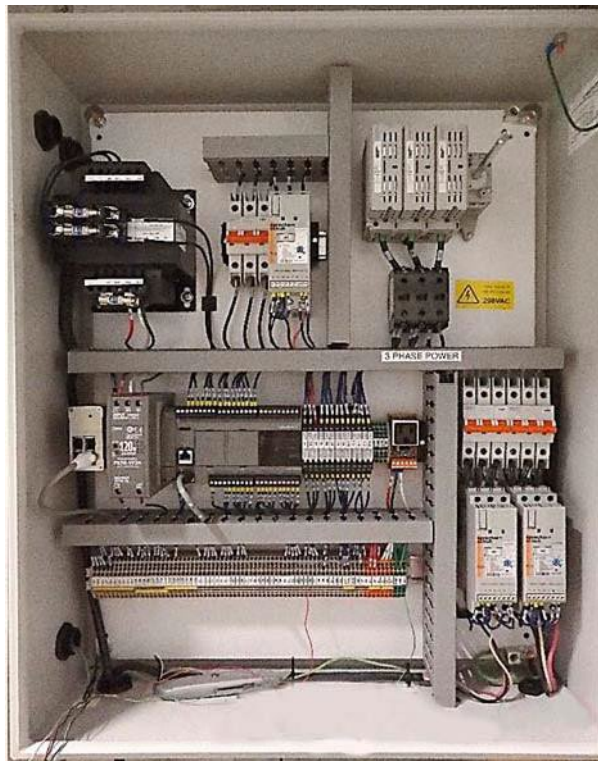
Upper (80 psi) - Ejector Bags and Stop Pin

Lower (20 psi) - Doors

## **ELECTRICAL SUPPLY REQUIREMENTS (CONTROL PANEL)**

1. Connect dedicated 240/60/3 (26.8 FLA) or 480/60/3 (13.4 FLA) wiring from building power source.

**\*Breaker size to be determined by local electrical codes and installers.**



**240/60/3 26.8 FLA**

**480/60/3 13.4 FLA**

**INSTALLATION IS NOW COMPLETE**

**TO OPERATE AND TO SELECT OR  
CHANGE CYCLE SETTINGS, REFER TO  
ENERGENICS KARTWASHER  
OPERATION MANUAL (PART 2)**

# PART 2

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1470 Don Street \* Naples, Florida 34104

Customer Service:

(800)944-1711

## **OPERATING AND PROGRAMMING INSTRUCTIONS FOR QUAT-IDEAL DISPLAY KARTWASHER**

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## PRIOR TO START UP

1. Open dedicated water supply valve (facility).
2. Verify air supply valve is opened (facility).

\*Constant filtered, dried compressed air with pressure > 80 psi and < 100 psi. In the Mechanical Chamber, check that the first air pressure regulator is set to 80 psi and the second regulator is set to 20 psi.

3. Turn on main power disconnect (facility).
4. Turn the power disconnect switch handle, located on the front exterior of the Kartwasher control cabinet, to the ON position.
5. Ensure Emergency Stop pushbuttons are pulled.

**THE KARTWASHER IS NOW READY FOR OPERATION!**



**PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:**

Before servicing or in case of an emergency, stop cycle by pressing one of the Emergency Stop pushbuttons.

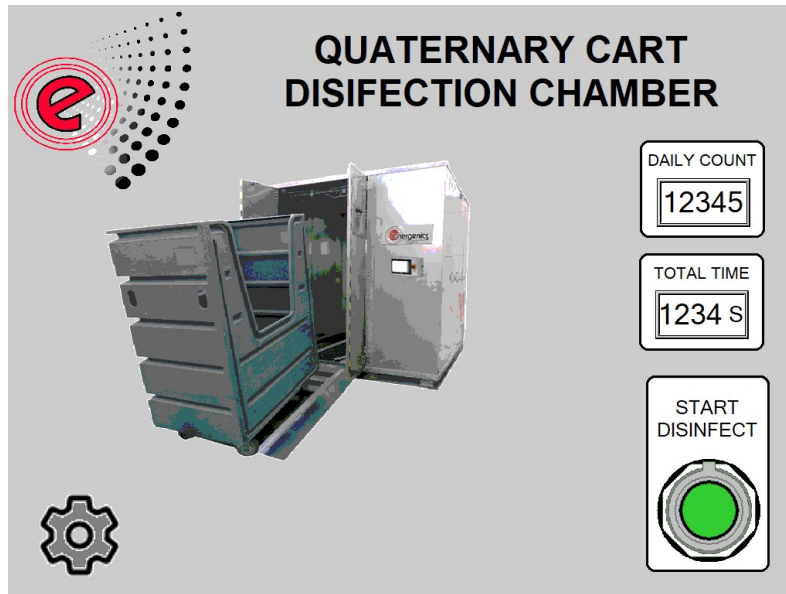
## SEQUENCE PROGRAMMING PROCEDURE

The Kartwasher is equipped with a PLC (Programmable Logic Controller) that runs pre-programmed operating cycles for processing the carts, including an additional pre-wash cycle. The default settings for each sequence are listed below and can be customized to meet specific operational needs.

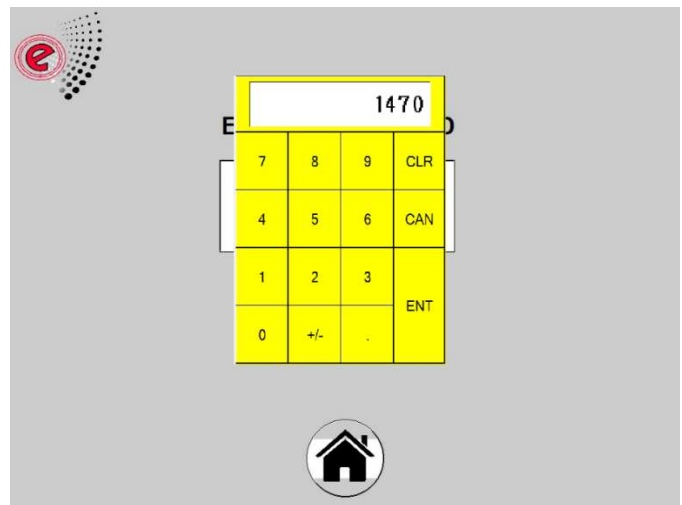
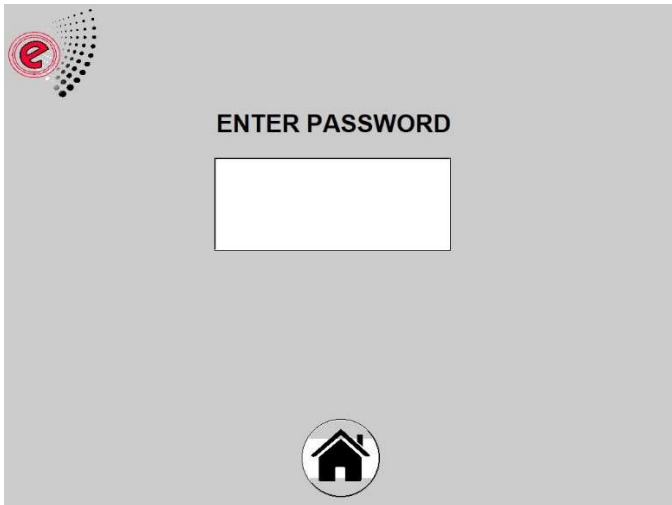
### DEFAULT CYCLE SETTINGS

Pre-wash Cycle	0 seconds
Disinfect Cycle	15 seconds
Drain Cycle	5 seconds
Dry Cycle (blower)	90 seconds
Cart Exit	5 seconds

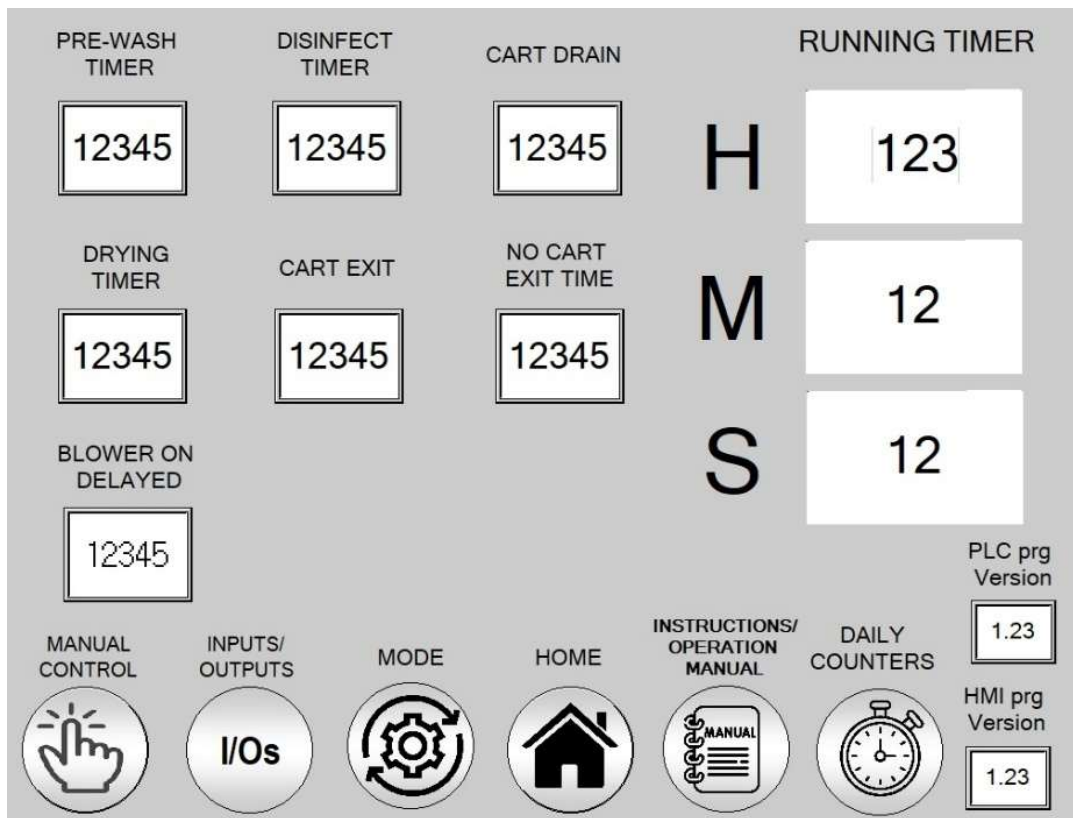
Before operating the machine or making any adjustments to the sequences or modes of operation, access the SETTINGS screen from the main menu by following the steps outlined below.



1. On the Home screen, press the Settings button 



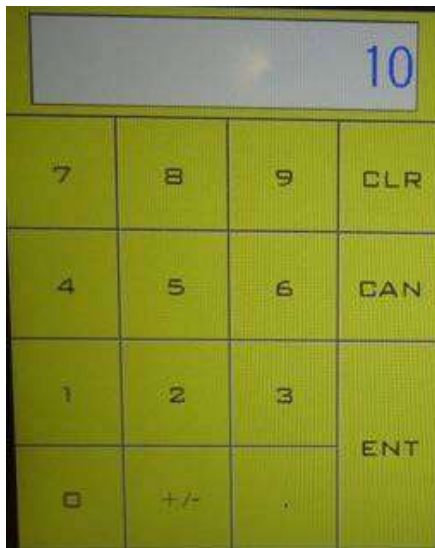
2. Tap on the Password Screen to enter the password type 1470 and press the ENT button



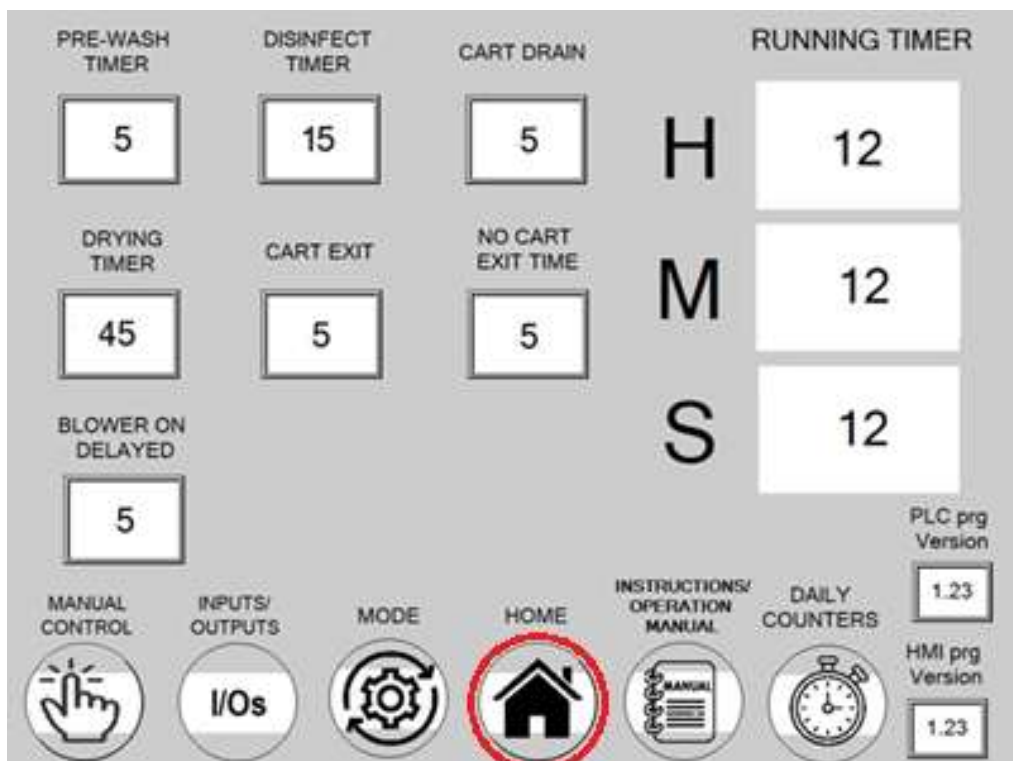
**SETTINGS SCREEN**

4. Tap in the designated box to change the desired timer

NOTE: All timers are set in seconds

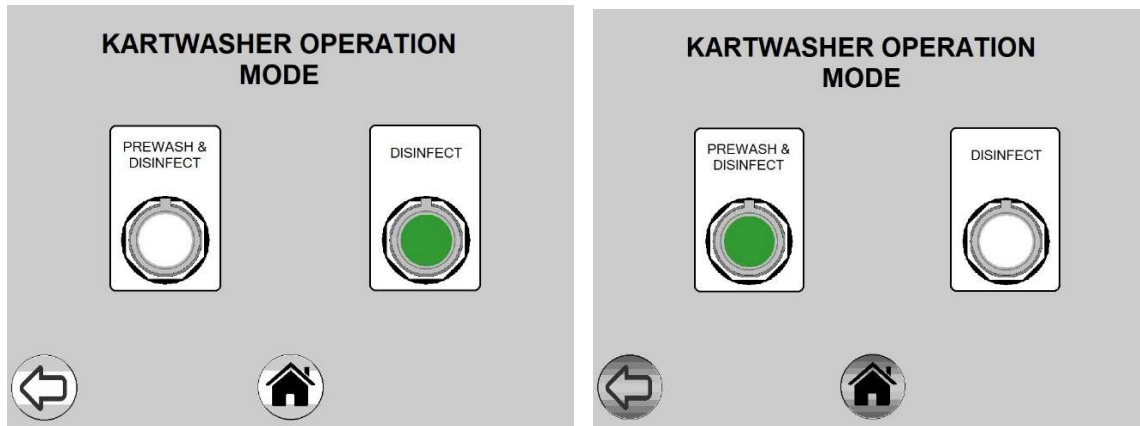


5.Type the new value and press the ENT button



Once all the timers are set correctly, exit to Main screen at any time by pressing the HOME button.

## OPERATION MODE



This screen can be accessed through the Settings screen by pressing the MODE button.

The standard kartwasher performs four sequences to complete a full cycle: Disinfect, Drain, Dry, and Eject.

For this standard mode, the operation mode must be set to DISINFECT — the corresponding button will be highlighted green when selected.

If your system includes the optional Pre-Wash feature, an additional sequence is performed prior to the Disinfect stage. To enable this feature, the system is equipped with an additional tank, pump, and nozzle halo specifically dedicated to the Pre-Wash process.

When using the Pre-Wash feature, the operation mode must be set to PRE-WASH/DISINFECT — this button will also be highlighted green when selected.

## DAILY COUNTERS

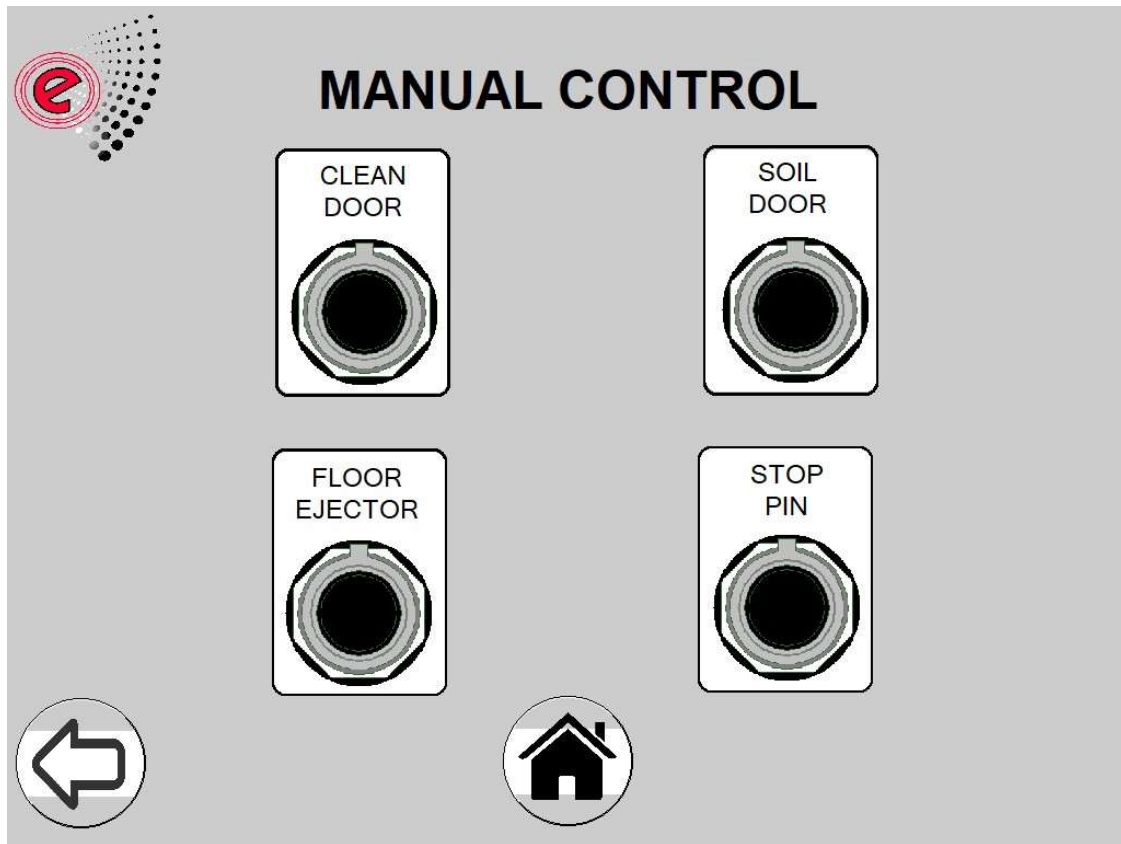
Mar./20/2025 Thu. 07:53						
SUN	MON	TUE	WED	THU	FRI	SAT
123	123	123	123	123	123	123
<div></div>						
SUN	MON	TUE	WED	THU	FRI	SAT
123	123	123	123	123	123	123
HOLD FOR 5 SEC TO RESET DAILY COUNTER			HOLD FOR 5 SEC TO RESET ALL COUNTER			

This screen can be accessed through the Settings screen by pressing the Daily Counters button.

This screen displays the daily cycle count for the last two weeks. A green indicator below the counter box highlights the current day of the week.

To reset the counter, you have two options: reset the current daily counter or reset all counters. To select an option, press and hold the desired button for 5 seconds.

## MANUAL CONTROL



This screen can be accessed through the Settings screen by pressing the MANUAL CONTROL button. (It is intended for troubleshooting purposes only)

### **To perform Manual Control Operations:**

1. Press the desired door button to activate. Press it again to deactivate.
2. Press the "Stop Pin" button to disengage the floor wheel stop pin.
3. Press the "Floor Ejector" to raise the floor.

NOTE: When a button is pressed, it will turn red to indicate activation. Press it again to deactivate, and it will return to black.  
Ensure all buttons are deactivated before leaving this screen.

## INPUTS / OUTPUTS STATUS SCREEN



This screen can be accessed through the Settings screen by pressing the INPUTS/OUTPUTS button.

This screen is intended to give operators real-time visibility into what the system is sensing and how it's responding. It allows users to see the current state of inputs like sensors, switches, or safety devices, as well as outputs like pumps, solenoids, or alarms.

During troubleshooting or maintenance, use this I/O status screen in conjunction with the Cycle Status Indicator table below to quickly identify issues such as a failed sensor or an output that isn't activating as expected.

CYCLE STATUS INDICATOR TABLE		
SEQUENCE	ACTIVE INPUTS	ACTIVE OUTPUTS
LOAD	6,7	NONE
START	6,7	6
PRE-WASH	6,10,16	2,15,16
DISINFECT	6,10,14	4,6,10,15,16
RINSE	6,10	6,10,15,16
DRAIN	6,10	15,16
DRY	6,10	5,6,10,15,16
EJECT	5,10	6,7,10,11,15,16

## INPUTS SECTION

**Input 2: E-Stop** - Illuminates when any E-Stop buttons are depressed

**Input 3: Wash Tank Level** - Illuminates when sanitizer / detergent tank level is low.

**Input 4: Chemical Tank Level** - Illuminates when rinse agent tank level is low. (Not applicable to HOCL models)

**Input 5: Clean Door Open** - Illuminates when clean door is open.

**Input 6: Clean Door Closed** - Illuminates when clean door is closed.

**Input 7: Soil Door Open** - Illuminates when soiled door is open.

**Input 10: Soil Door Closed** - Illuminates when soil door is closed.

**Input 11: Cart Exit Sensor** - Illuminates when cart passes the sensor mounted on the clean side posts.

**Input 12: Cart in Sensor-** Illuminates when cart passes the sensor mounted inside the chamber by the clean doors.

**Input 13: Water Tank Level Low** - Illuminates when water level is low in the storage tank.

**Input 14: Water Pump Contact** - Illuminates when Disinfect pump contactor is engaged.

**Input 15: Blower Contact** - Illuminates when blower contactor is engaged.

**Input 16: Blower Contact** - Illuminates when pre-wash pump contactor is engaged.

## **OUTPUTS SECTION**

**Output 2: Pre-wash Pump** - Illuminates when pre-wash pump is engaged. (Available only on models with this option).

**Output 3: Chamber Light** - Illuminates when wash chamber light is on.

**Output 4: Disinfect Pump** - Illuminates when water pump is on.

**Output 5: Blower** - Illuminates when drying blower is on.

**Output 6: Soil Door** - Illuminates when "soil-side" door is closed.

**Output 7: Clean Door** - Illuminates when "clean-side" door is closed.

**Output 10: Air Bag Valve** - Illuminates when floor is raised / tilted.

**Output 11: Stop Pin** - Illuminates when wheel stop pin is engaged.

**Output 12: Spare**

**Output 13:** Spare

**Output 14: Chemical Pump Relay:** Illuminates when chemical pump is operating.

**Output 15: Beacon Light** - Illuminates when open "clean-side" door beacon

and siren are operating. (VA spec'd models only).

**Output 16: UV Light** - Activates when a signal is sent to turn on the UV light.

**Output 17:** Spare

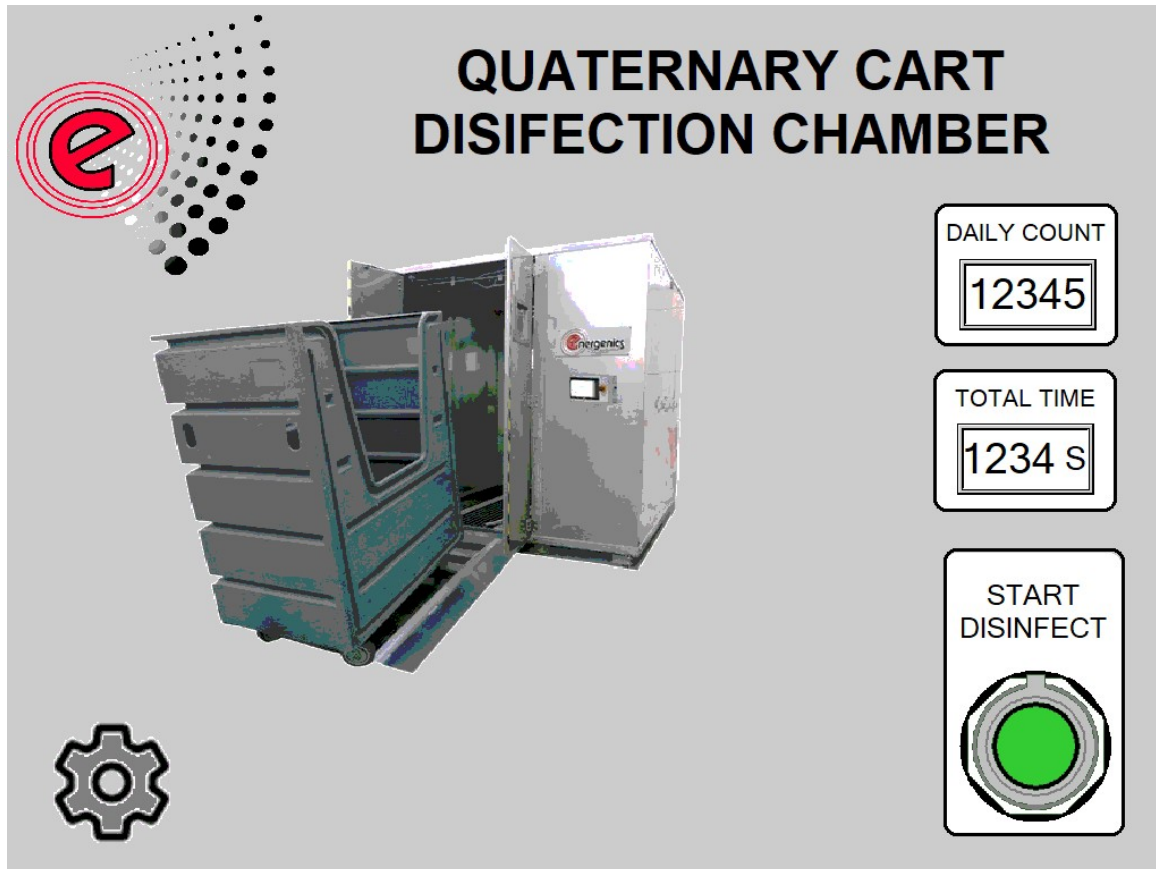
## INSTRUCTIONS/OPERATION MANUAL



This screen can be accessed through the Settings menu by pressing the INSTRUCTION MANUAL button, which opens an electronic version of this manual.

# CYCLE START SEQUENCE OF OPERATION

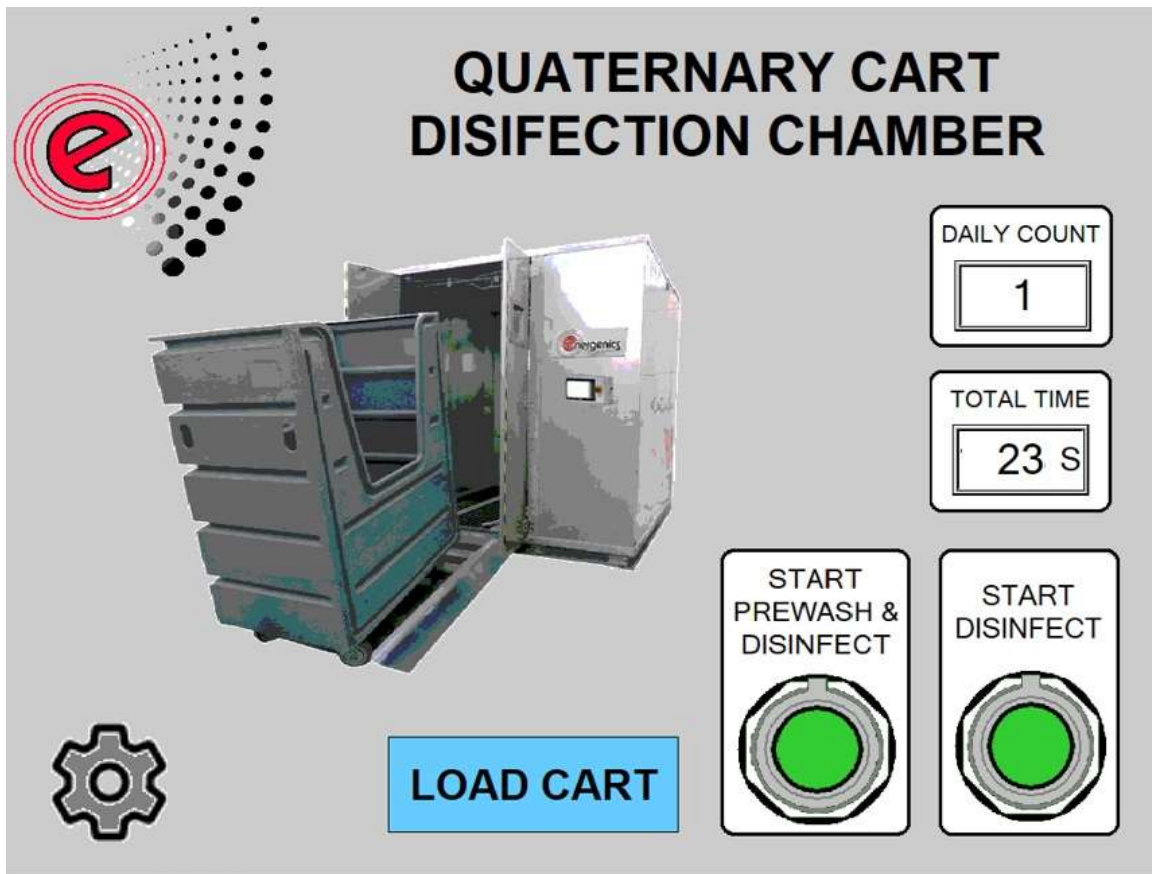
## LOAD SEQUENCE



**The Kartwasher is prepared to operate. Operator should:**

1. Completely load the cart into the wash/disinfect chamber.
2. Ensure front wheel is resting against the eject pin located on the floor.
3. Observe door open/close clearance.

## START SEQUENCE



**A cart has been loaded into the Kartwasher and is ready for disinfection.**

Press green "START" button to begin cycle.

NOTE: If the Kartwasher is equipped with the "Prewash" option package, you would have 2 modes of operation to choose from: "Disinfect" and/or "Wash/Disinfect" as shown in figure 2.

## PRE-WASH SEQUENCE



The Pre-wash Sequence has started and will process the inside and outside of the cart. Total time remaining for cycle completion is shown in the "TIME LEFT" box and is measured in seconds.

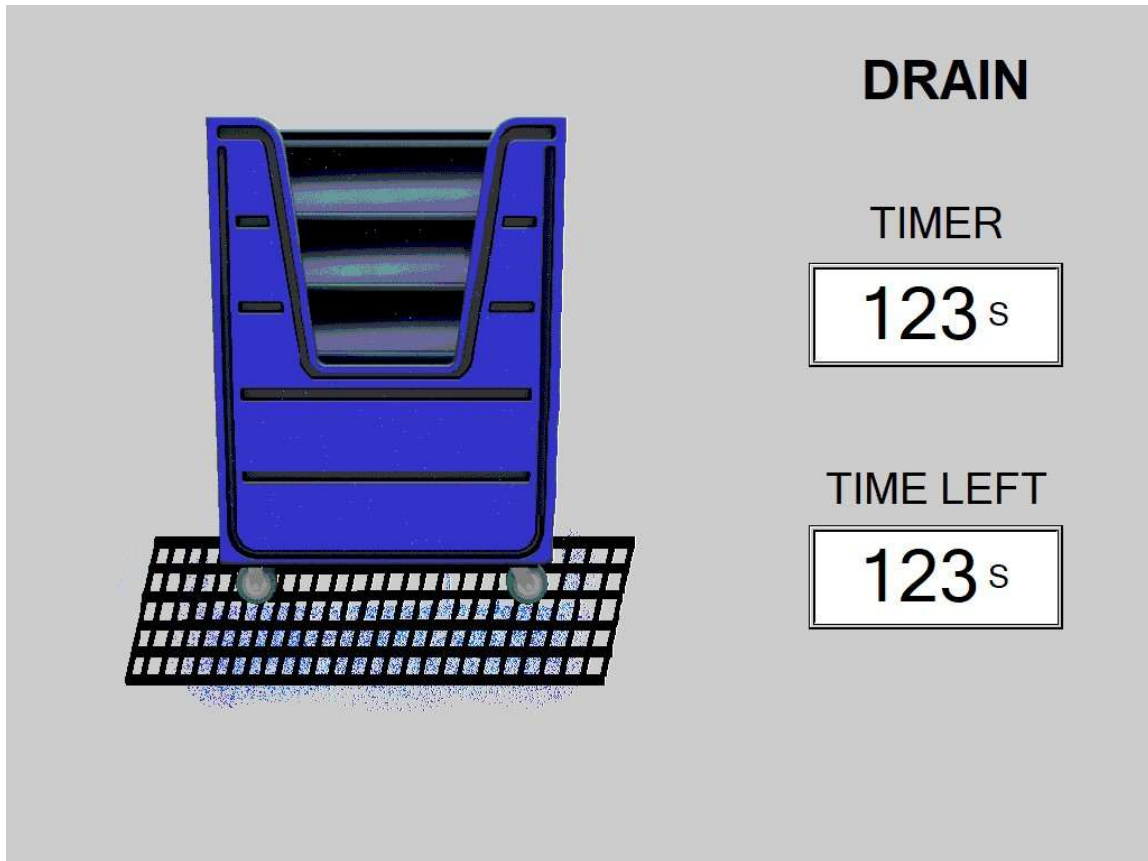
NOTE: The pre-wash screen appears only if the Kartwasher is equipped with the 'Pre-wash' option package and the 'Pre-Wash & Disinfect' mode is selected on the Operation Mode screen.

## DISINFECT SEQUENCE



The Disinfect Sequence has started and will process the inside and outside of the cart. Total time remaining for cycle completion is shown in the "TIME LEFT" box and is measured in seconds.

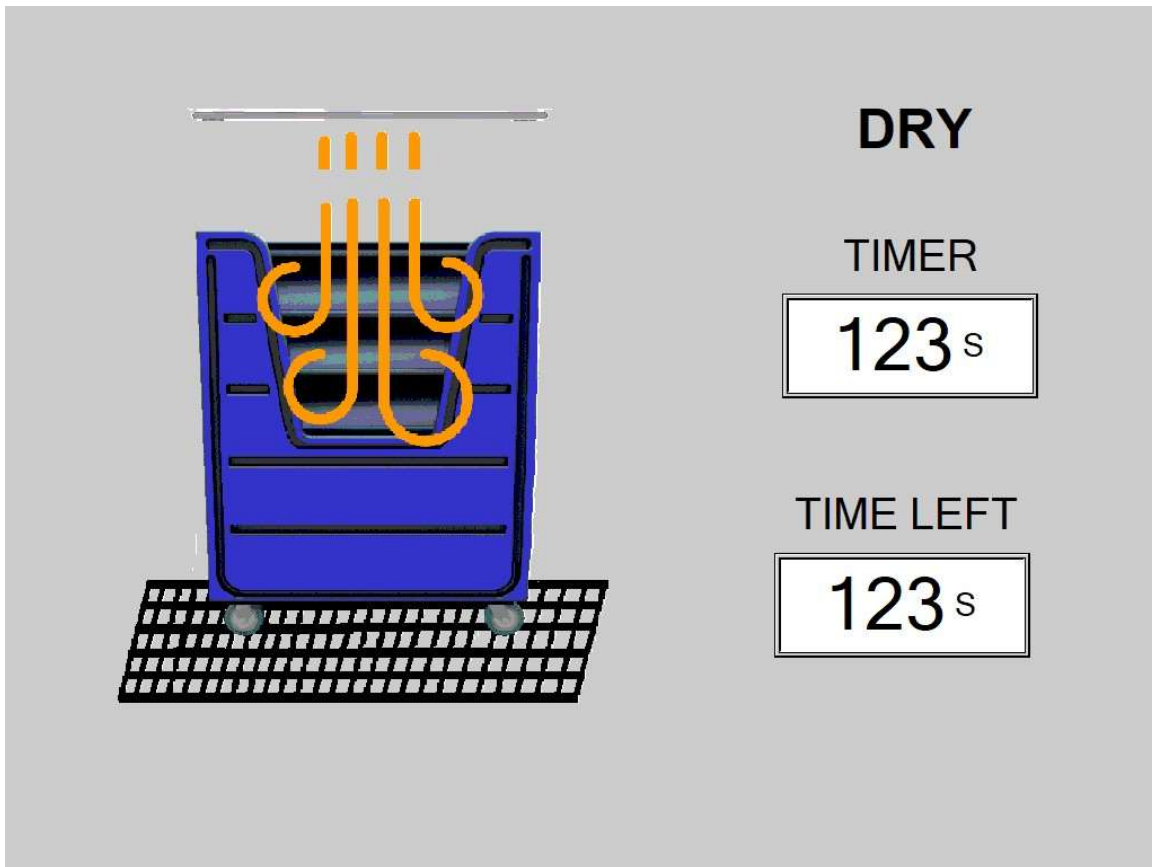
## DRAIN SEQUENCE



The Drain Sequence will begin following the Disinfect Cycle. The drain sequence will tilt the cart allowing water inside to exit through manufacturer placed drain holes in the cart bottom. Total time remaining for cycle completion is shown in the "TIME LEFT" box and is measured in seconds.

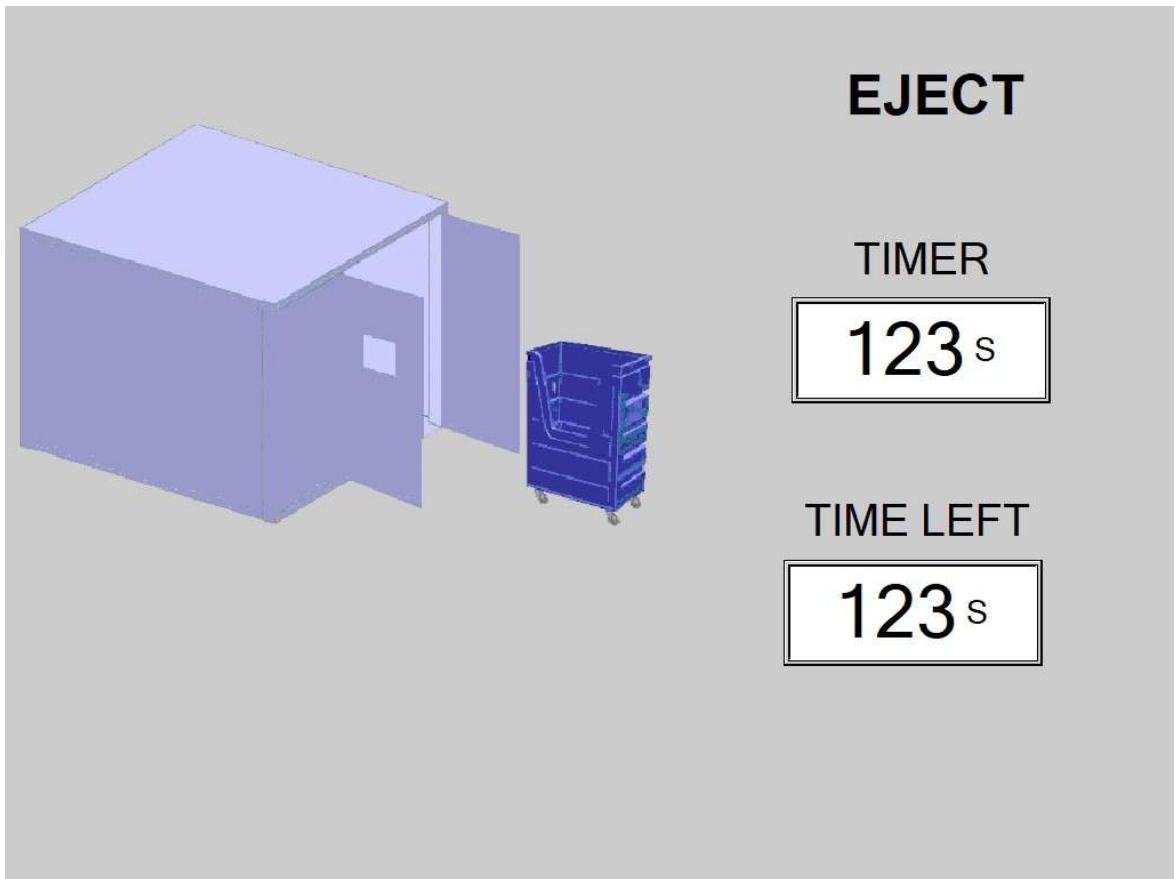
NOTE: If there are no drain holes in the cart, 1/2" holes should be drilled in each corner of the base.

## DRY SEQUENCE



The Dry Sequence has started. During the Dry Cycle, the cart will remain tilted to allow excess water to drain through the holes in the cart bottom. Cycle time remaining for the drying process is shown in the "TIME LEFT" box and is measured in seconds.

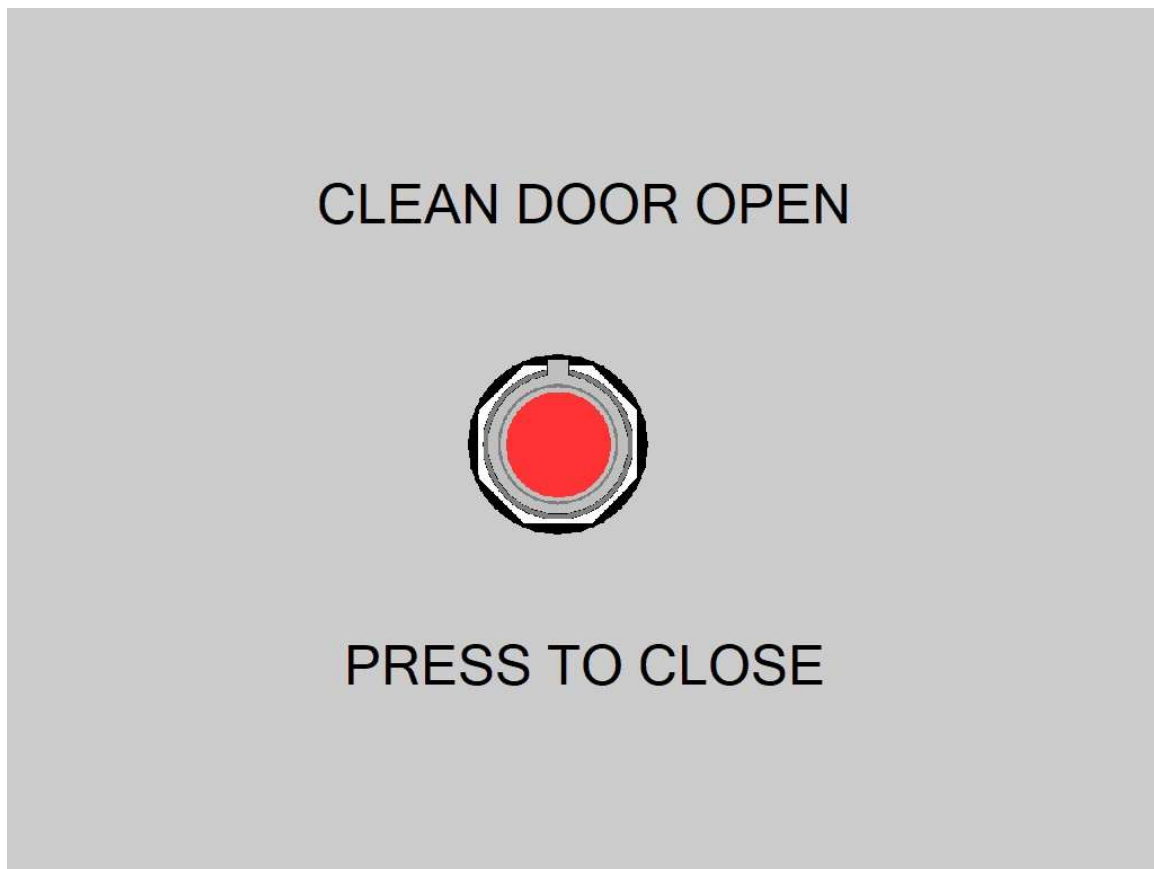
## EJECT SEQUENCE



The Eject Sequence has started. The "clean-side" door opens and the wheel-stop pin releases the cart to exit the wash chamber. After the cart is fully ejected past the photo-eye sensors mounted on the yellow exit posts, the "clean-side" door will close allowing the "soil- side" door to open to setup a new wash sequence.

**NOTE:** If a cart has not completely passed the exit post sensors—indicating the unit is ready for a new cycle—the exit door will not close, and the entry door will not open. If the cart is not detected within the time set by the "No Cart Exit Time" timer (configured in the Settings screen), the following screen will appear,

prompting the operator to manually to close the clean door and reset the Kartwasher for a new cycle.



## ALARM SCREENS



This screen appears when any Emergency Stop button has been pressed or activated, and the Kartwasher immediately stops all operations.



This screen appears when the disinfectant level in the tank is low. The Kartwasher immediately stops all operations to prevent running the pump dry.



This screen appears when the water level in the water tank is low. The Kartwasher immediately stops all operations to prevent the pump from running dry.



This screen appears when the fluid level in the chemical tank is low. The Kartwasher immediately stops all operations to prevent the pump from running dry.



This screen appears when the controller detects a malfunction during the cycle and shuts down the operation of the kartwasher.

## **MAINTENANCE**

Your Energenics Disinfection Chamber is designed for low maintenance and long life. All maintenance items are assessable at floor level.

### **ROUTINE MONITORING:**

Indicator alerts on the control screen notify operators to adverse operating conditions involving pH and water temperature.

The electric photo-eye on exit posts should be kept clean from dirt and debris. They should be wiped off with a clean cloth as needed.

### **MONTHLY:**

Check, remove, and clean wash chamber spray nozzles.

### **QUARTERLY:**

Periodically test the Emergency Stop buttons to ensure operating safety.

Check the door air cylinders and auto ejector cylinder.

### **ANNUALLY:**

Check water tank float and float seals.

Inside the washing compartment, inspect the caulking around the base between the fiberglass and aluminum. Re-caulk if necessary, to prevent water from entering between the aluminum flange and the fiberglass panel.

## LIMITED WARRANTY & DISCLAIMER STANDARD CONDITIONS OF SALES

Energenics Corporation (herein called Energenics) warrants to the original purchaser, & to the original purchaser alone, its products to be free from defects in material and workmanship under normal use & service for a period of twenty-four (24) months from the date of shipment. Energenics' obligations under this warranty shall be limited solely to the repair or replacement of such parts, which Energenics examination shall disclose to Energenics satisfaction to have been thus defective & to the shipment of the repaired or replacement part or parts to the original purchaser F.O.B. point of shipment. In no event shall Energenics be liable for any consequential, incidental or special damages of any kind caused by the defect. The Warranty set forth shall not apply to & Energenics shall not be responsible for any equipment or part, which has been repaired or altered in any way, regardless of how or why the part was altered or repaired nor for any equipment or part, which has been subjected to the negligence or accident, improper use or care, nor for equipment or part with respect to which Energenics instructions relating to installation, maintenance, or use have not been followed. This limited warranty is expressly made in lieu of all other warranties, expressed or implied, and in lieu of all other obligations or liabilities on the part of Energenics.

The purchaser by acceptance of the delivery of any part or product from Energenics agrees to indemnify Energenics & to hold it harmless against any liability, which may arise if the part or product received is mis-applied, improperly installed, improperly maintained, misused or abused, altered or rendered partially or totally inoperative due to any cause.

**RETURNS:** Merchandise may not be returned unless a RMA is obtained from Energenics. A copy of the RMA must accompany the returned item as the packing Slip. Energenics will assume no responsibility for merchandise returned neither without such prior approval nor for any charges or expenses incurred therewith.

**CANCELLATIONS:** Any order may be canceled by the purchaser only upon written notice & upon payment to Energenics of reasonable & proper cancellation charges.

**SALES & SIMILAR TAXES:** Energenics prices do not include sales, use, gross receipts, excise or similar taxes, license fees & export or import duties. All taxes or other charges assessed to Energenics by reason of a transaction with the Purchaser must be paid by the Purchaser.

**PRICE POLICY:** All sales are made F.O.B. point of shipment and all prices are subject to change without notice.

**DESIGN CHANGES:** Energenics reserves the right to make changes in the design & changes or improvements in its products without notice or without imposing any obligation upon Energenics to install the same upon products heretofore manufactured.

**GENERAL:** No alteration, modification or extension of the foregoing conditions shall be binding upon Energenics unless made in writing & signed by an officer of Energenics.

## **AVOIDING UNNECESSARY SERVICE COSTS**

Any modifications made to the system without the express written consent of Energenics Corp. will result in termination of the warranty agreement. This includes modifications to the wash pump, wash pump settings, pump system hoses, spray nozzles, and associated tanks, sensors, and fittings. Any travel expenses incurred by Energenics for repair(s) resulting from unauthorized modifications will be the responsibility of the end user