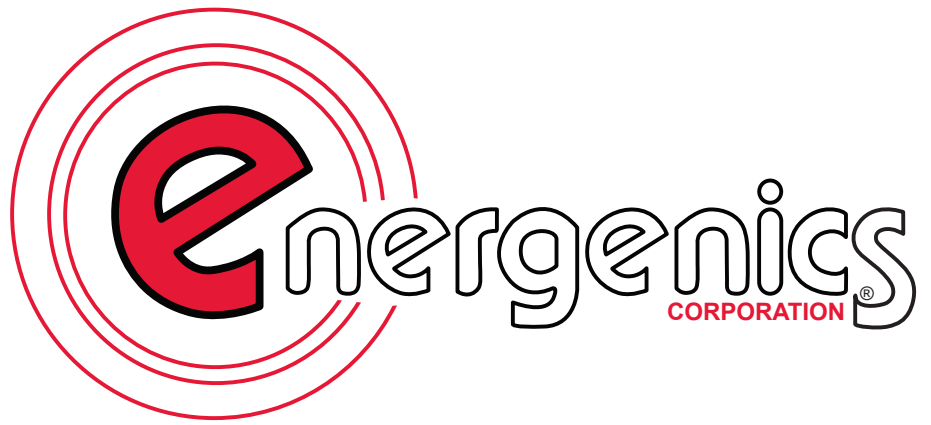
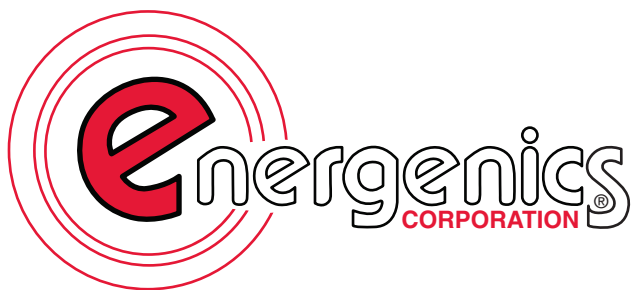


ENERGENICS KART DISINFECTION CHAMBER

Installation and Operation Manual Quaternary
Ammonium (QUAT - SCHNEIDER)



**ADVANCED DISINFECTION
TECHNOLOGY**



1470 Don Street
Naples, FL 34104
(800) 944.1711
www.energenics.com

PART 1:

INSTALLATION & UTILITY CONNECTION REQUIREMENTS QUATERNARY AMMONIUM (QUAT) CHAMBER

PART 2:

SCHNEIDER DISPLAY - QUAT CHAMBER OPERATING AND PROGRAMMING INSTRUCTIONS

PART 1

1470 Don Street • Naples, Florida 34104

Customer Service: (800) 944-1711
Fax: (239) 643-6081

INSTALLATION & UTILITY CONNECTION REQUIREMENTS QUATERNARY AMMONIUM (QUAT) CHAMBER

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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

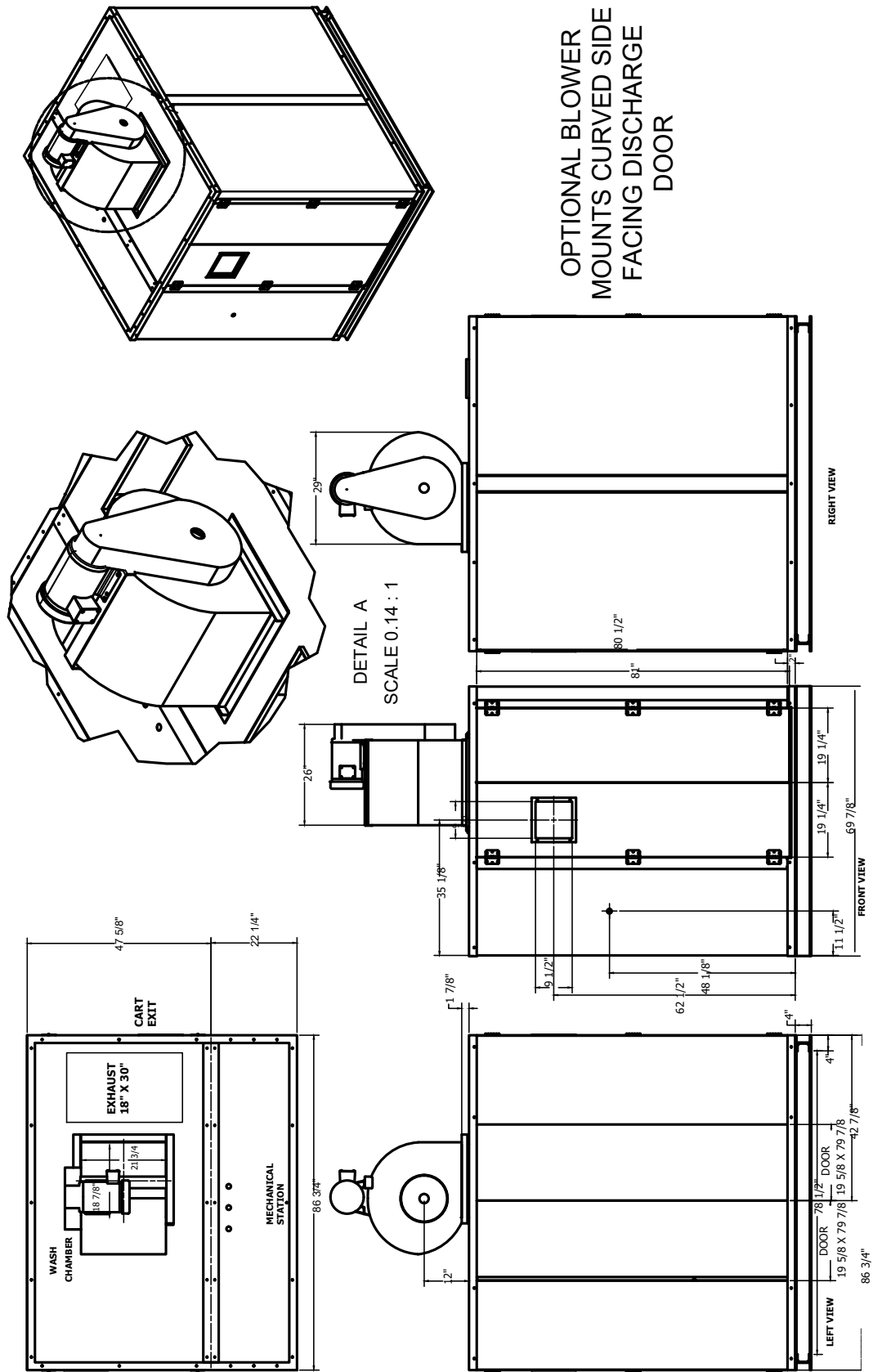
1. Ensure Chamber is facing desired direction. Slide Chamber into final position (use wood between the Chamber frame and forks for added protection).
2. Mount to the floor in 4-8 places using appropriate fasteners per floor type.
3. Install 2 (supplied) yellow exit posts approximately 4" past the trailing 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 exit ramp is flush to the floor level for smooth exit of carts.

Pit Installation

1. Ensure the Chamber is facing 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 beginning a new cycle. (See Page 9)

OVERALL DIMENSIONS



SS KARTWASHER
PIT AND SUMP
DETAIL FOR 4" BEAMS

SECTION A-A

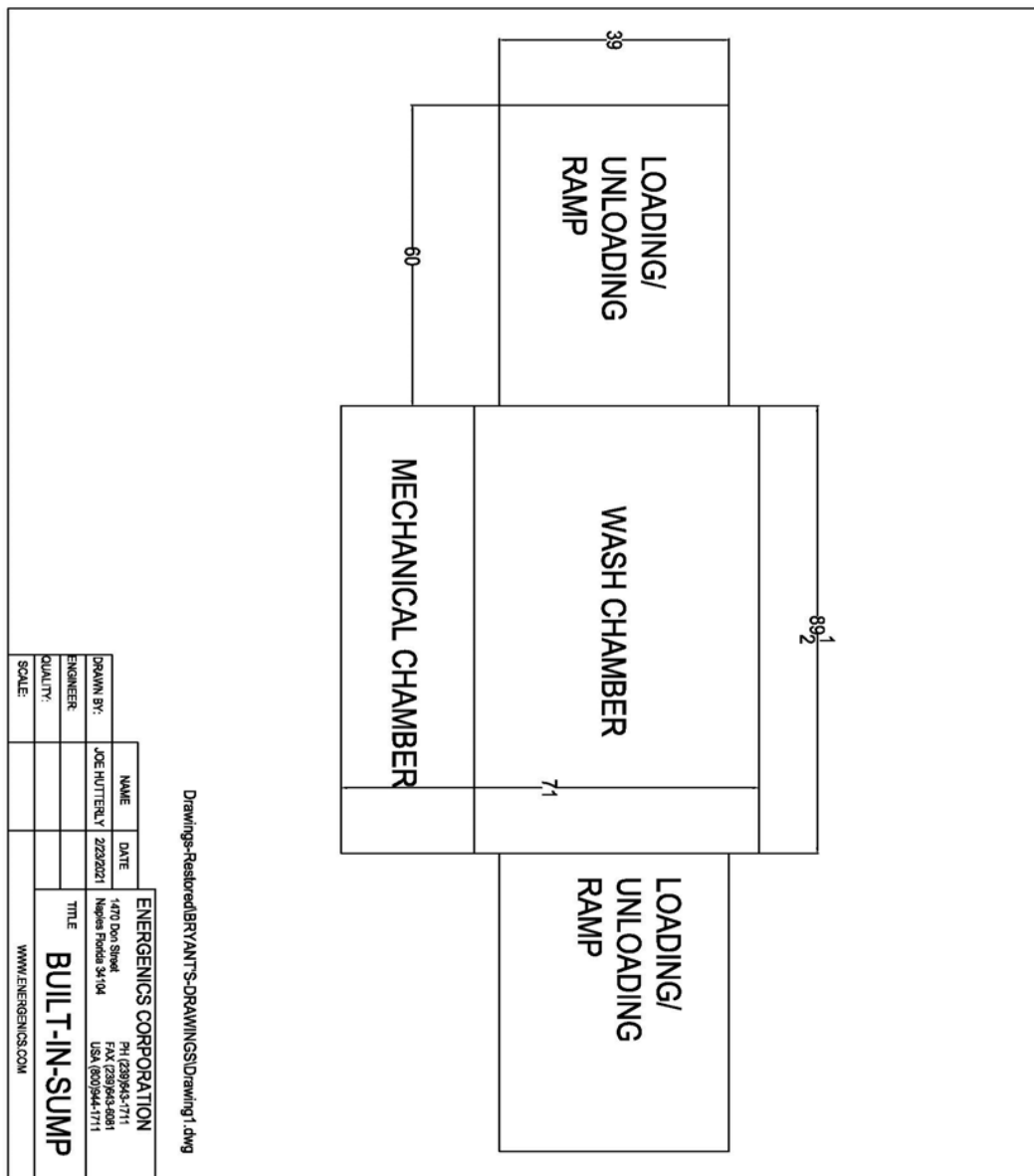
DRAW\KARTWASHER\KARTWASHER PTS 4 INCH.DWG

ENERGENICS Corporation	
1470 Dan Street Naperville, Illinois 60563-3200	PH 630-542-1711 FAX 630-542-0881 USA 800-844-1711
NAME	DATE
DESIGN BY: T. J. Jorgensen	10-10-00
ENGINEER: J. J. Jorgensen	10-23-00-00
DESIGNED: G. M. G. G. G.	01-17-02
MANUFACTURED:	

SS 4" KARTWASHER
PIT AND SUMP DETAIL

7

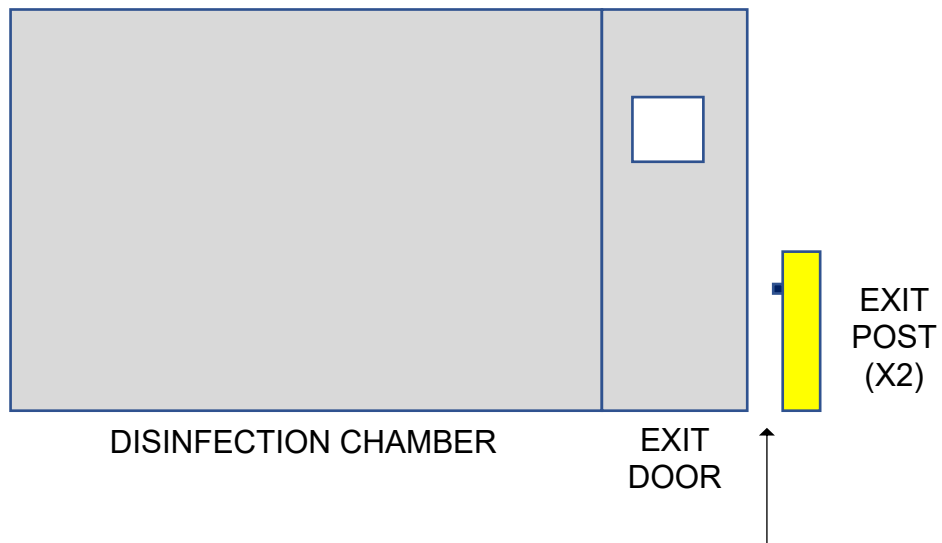
BUILT-IN SUMP WITH LOADING / UNLOADING RAMPS



***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 Chamber 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 3/4" fresh water supply line.

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:

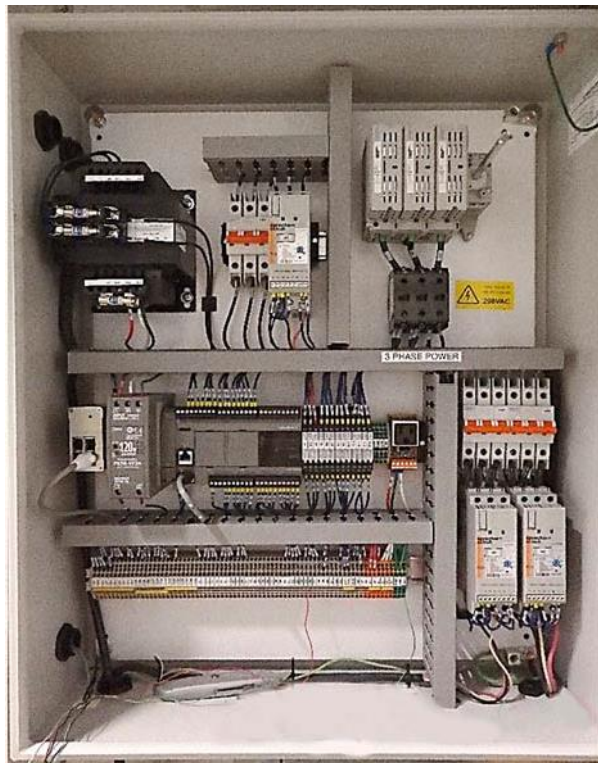
Upper (80 psi) - Ejector Bags and Stop Pin

Lower (20 psi) - Doors

ELECTRICAL SUPPLY REQUIREMENTS (CONTROL PANEL)

1. Connect dedicated 240/60/3 (23.4 FLA) or 480/60/3 (11.7 FLA) wiring from building power source.

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



240/60/3 23.4 FLA

480/60/3 11.7 FLA

INSTALLATION IS NOW COMPLETE

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

PART 2

1470 Don Street • Naples, Florida 34104

Customer Service: (800) 944-1711
Fax: (239) 643-6081

OPERATING AND PROGRAMMING INSTRUCTIONS FOR QUAT - SCHNEIDER DISPLAY CHAMBER

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PRIOR TO START UP

1. Open dedicated water supply valve (facility).
2. Open air supply valve (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 red power handle located on the front exterior of the Chamber control cabinet to the on position.

THE CHAMBER IS NOW READY FOR OPERATION!

DEFAULT CYCLE SETTINGS

Disinfect Cycle	15 Seconds
Drain Cycle	5 Seconds
Dry Cycle (blower)	90 Seconds
Cart Exit	5 Seconds

*Cycle Settings Are Fully Customizable

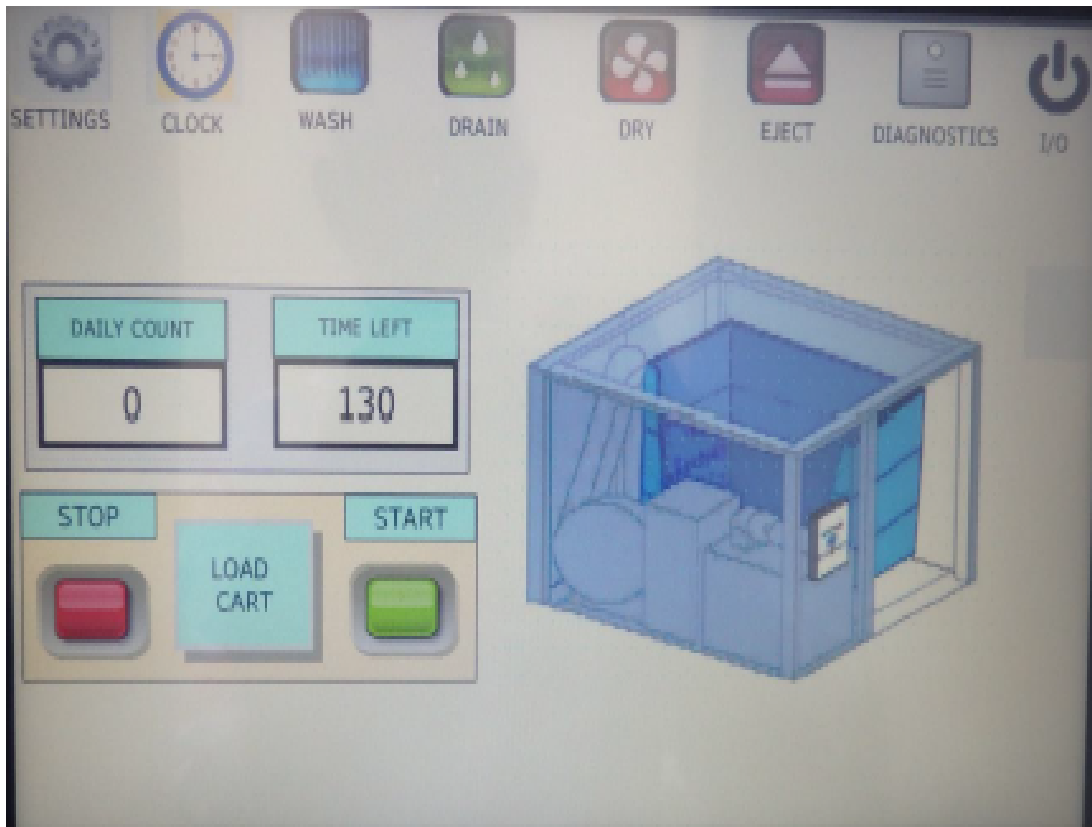
LOAD SEQUENCE



The Chamber 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

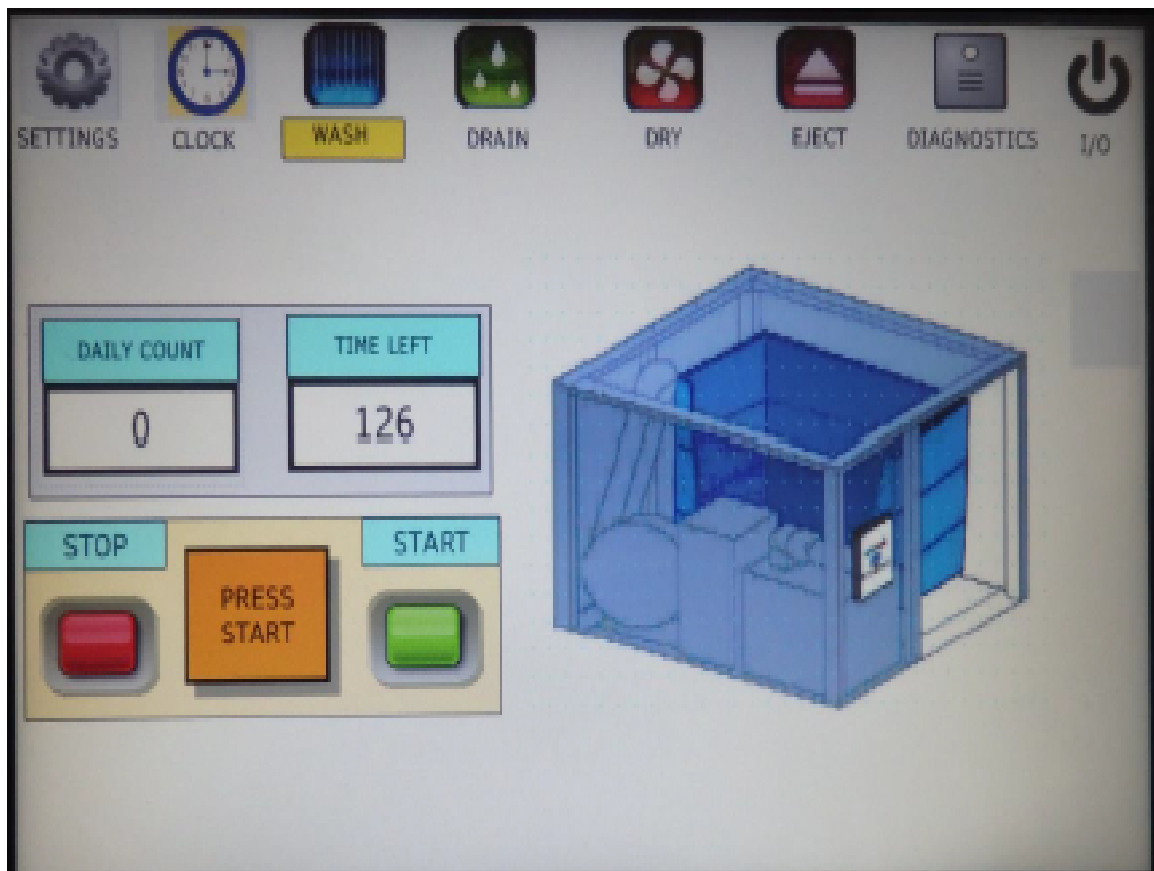


A cart has been loaded into the Chamber and is ready for disinfection.

1. Press green "START" button to begin cycle

Note: If the "START" button is flashing with a cart in the unit, the PLC is missing an input required for beginning the cycle. See Diagnostics Section (Pages 9-11).

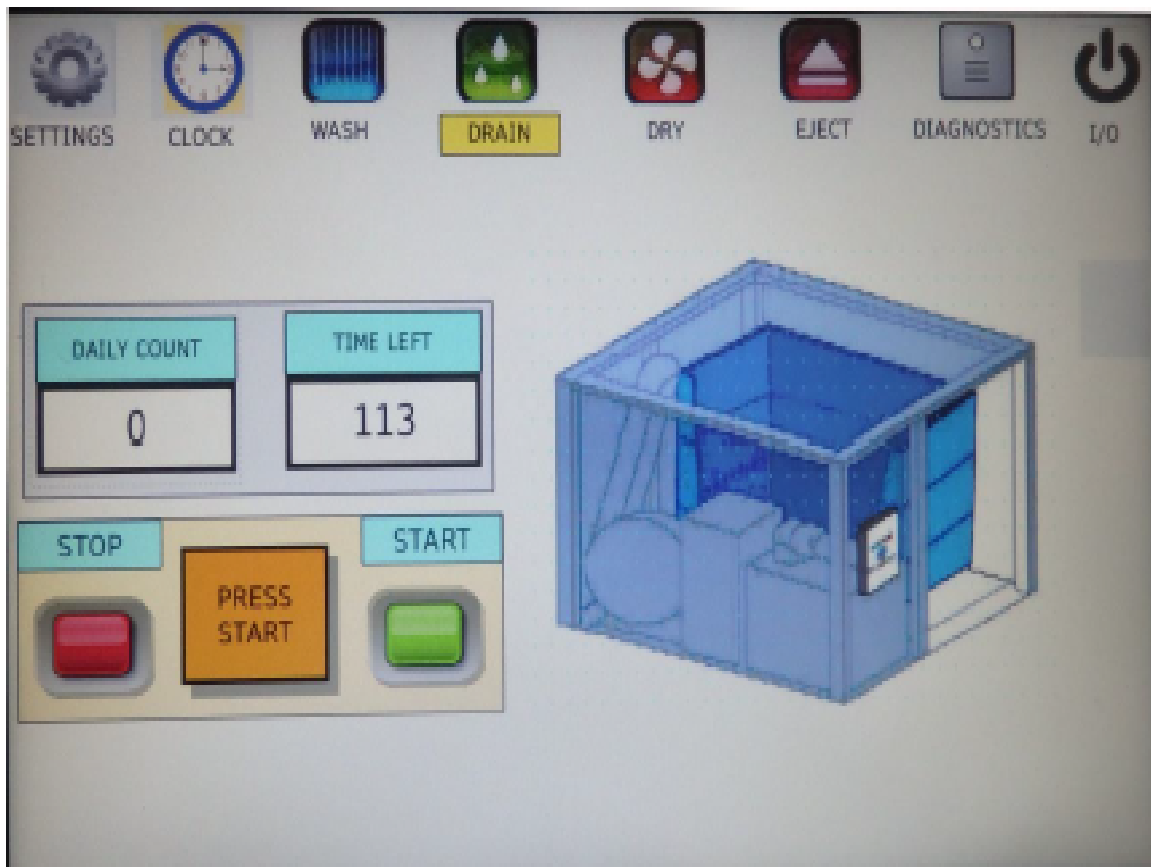
DISINFECT SEQUENCE



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.

Note: If the cycle needs to be paused, press the "STOP" button. To resume the cycle, press the "START" button.

DRAIN SEQUENCE

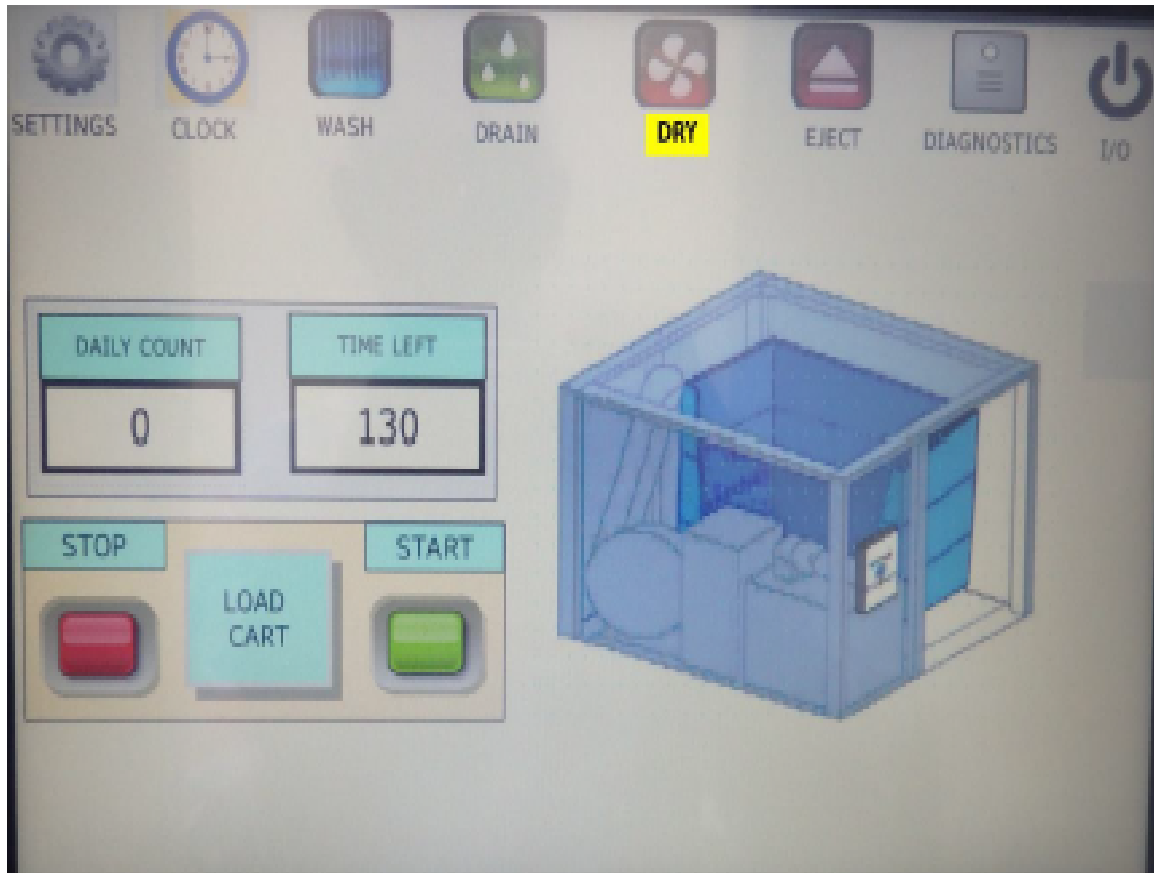


The Drain Sequence will begin following the Disinfect Cycle. The drain sequence will tilt the cart allowing water inside to exit through manufacturer placed drain holes in the cart bottom. Total time remaining for cycle completion is shown in the "TIME LEFT" box and is in measured in seconds.

Note: If there are no drain holes in the cart, ½" holes should be drilled in each corner of the base.

Note: If the cycle needs to be paused, press the "STOP" button. To resume the cycle, press the "START" button.

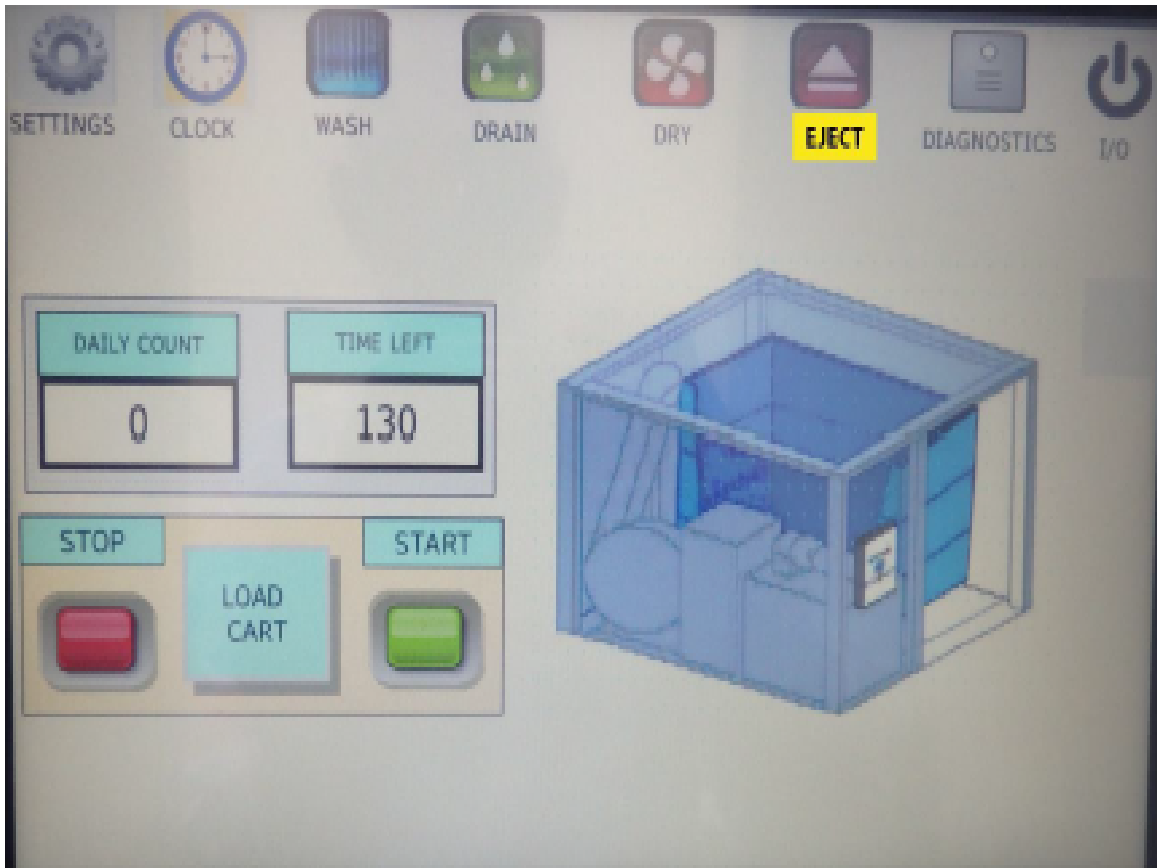
DRY SEQUENCE



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 in measured in seconds.

Note: If the cycle needs to be paused, press the "STOP" button. To resume the cycle, press the "START" button.

EJECT SEQUENCE

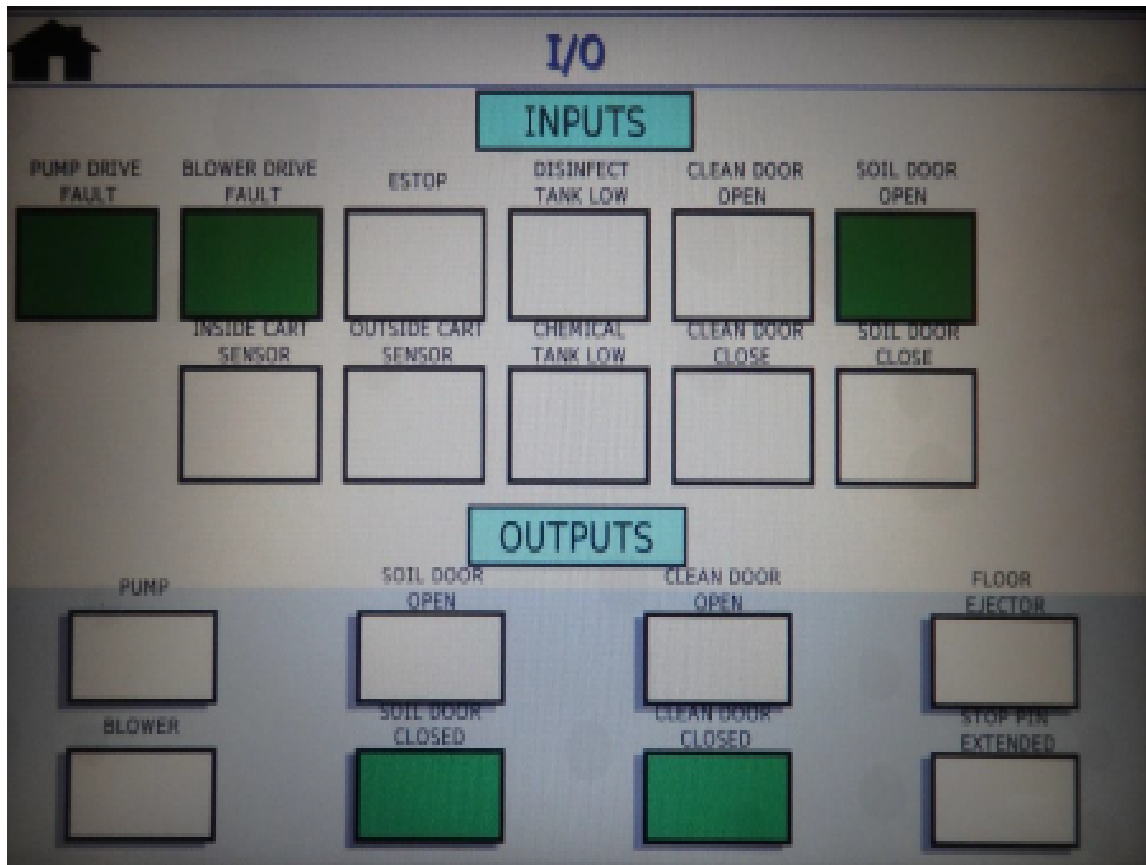


The Eject Sequence has started. The "clean-side" door opens and the wheel-stop pin releases the cart to exit the wash chamber. After the cart is fully ejected past the photo-eye sensors mounted on the yellow exit posts, the "clean-side" door will close allowing the "soil-side" door to open to setup a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

Note: If a cart fails to eject, the Ejection Timer will time-out and a red "EJECT" icon will appear on the control screen. The operator must manually remove the cart then press this red icon to start a new cycle.

DIAGNOSTIC INPUTS / OUTPUTS STATUS SCREEN



CYCLE STATUS INDICATORS

(Inputs page 10 / Outputs page 11)

- | | | |
|--------------------|----------------|--------------------|
| 1. Load Sequence: | Input #6, 10 | Output #2, 7, 8 |
| 2. Start Sequence: | Input #6, 10 | Output #2, 7, 8 |
| 3. Wash Sequence: | Input #10, 11 | Output #1, 6, 7, 8 |
| 4. Drain Sequence: | Input #10, 11 | Output #6, 7, 8 |
| 5. Dry Sequence: | Input #10, 11 | Output #5, 6, 7, 8 |
| 6. Eject Sequence: | Input #5, 7, 8 | Output #3, 4, 6 |

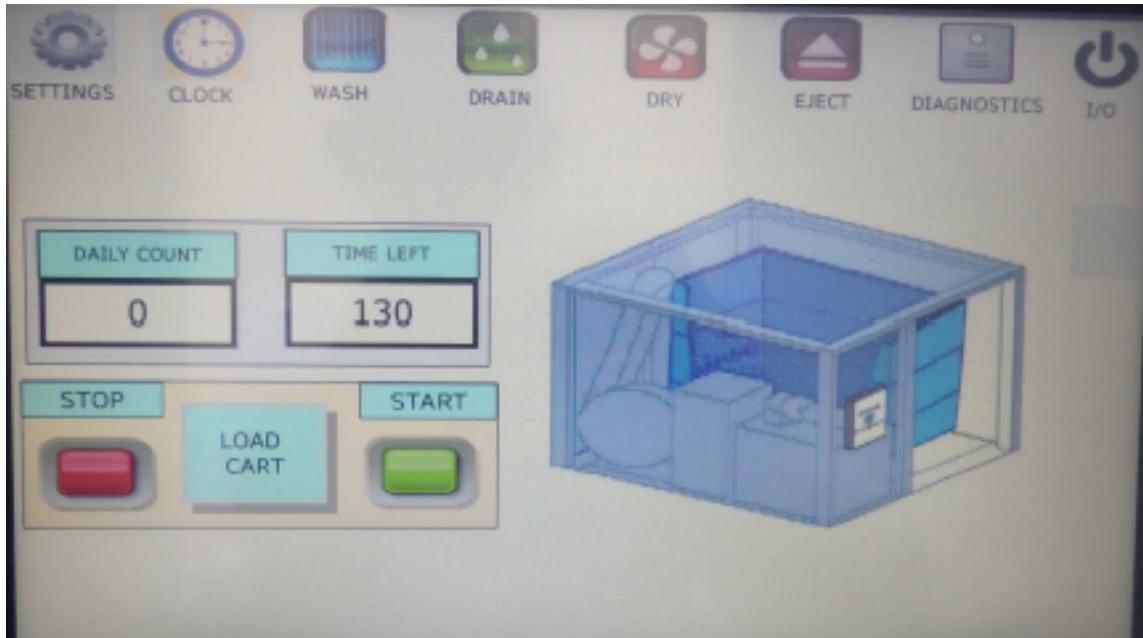
INPUTS SECTION

1. **Pump Drive Fault** - Illuminates when pump VFD is in fault condition.
2. **Blower Drive Fault** - Illuminates when blower drive is in fault condition.
3. **E-Stop** - Illuminates when any E-Stop buttons are depressed.
4. **Disinfect Tank Low** - Illuminates when disinfecting tank solution level is low.
5. **Clean Door Open** - Illuminates when clean-side door is open.
6. **Soil Door Open** - Illuminates when soil-side door is open.
7. **Cart Exit Sensor #1** (interior) - Illuminates when cart passes sensor at exit door threshold.
8. **Exit Cart Sensor #2** (exterior) - Illuminates when cart passes exit sensors mounted on the yellow exit posts.
9. **Chemical Tank Level Low** - Illuminates when chemical level is low in the storage tank.
10. **Clean Door Close** - Illuminates when clean door is closed.
11. **Soil Door Close** - Illuminates when soil door is closed.

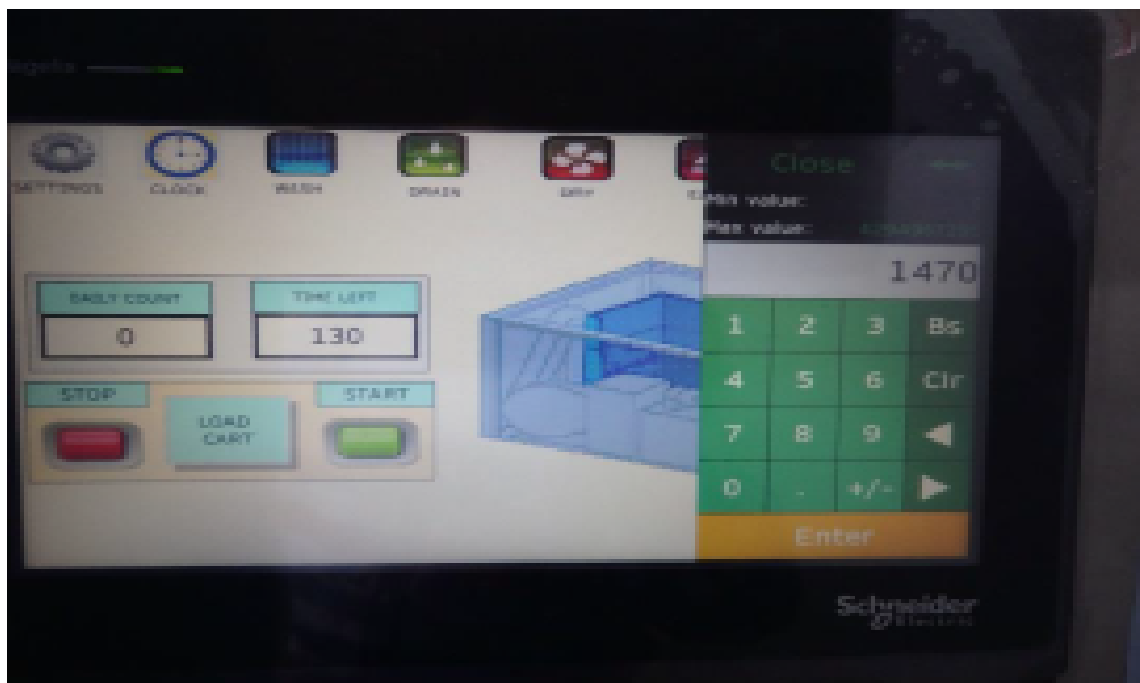
OUTPUTS SECTION

1. **Pump** - Illuminates when pump is engaged.
2. **Soil Door Open** - Illuminates when "soil-side" door is open.
3. **Clean Door Open** - Illuminates when "clean-side" door is open.
4. **Floor Ejector** - Illuminates when floor ejection tilt is engaged.
5. **Blower** - Illuminates when drying blower is on.
6. **Soil Door Closed** - Illuminates when "soil-side" door is closed.
7. **Clean Door Closed** - Illuminates when "clean-side" door is closed.
8. **Stop Pin Extended** - Illuminates when wheel stop pin is engaged.

SEQUENCE PROGRAMMING PROCEDURE

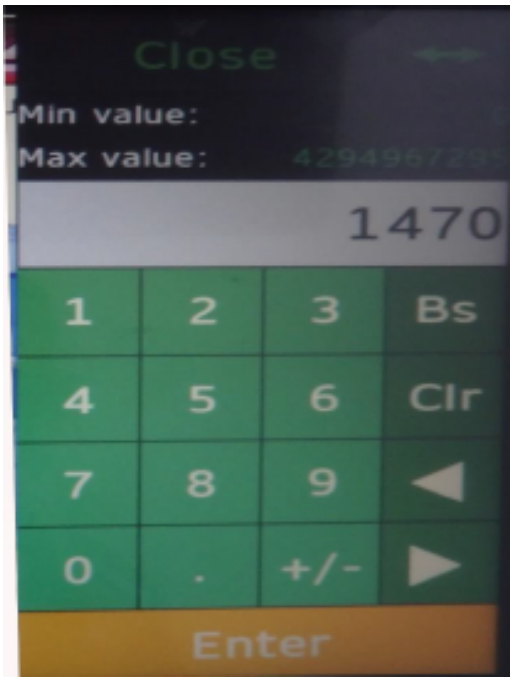


(PRESS SETTINGS ON SCREEN)

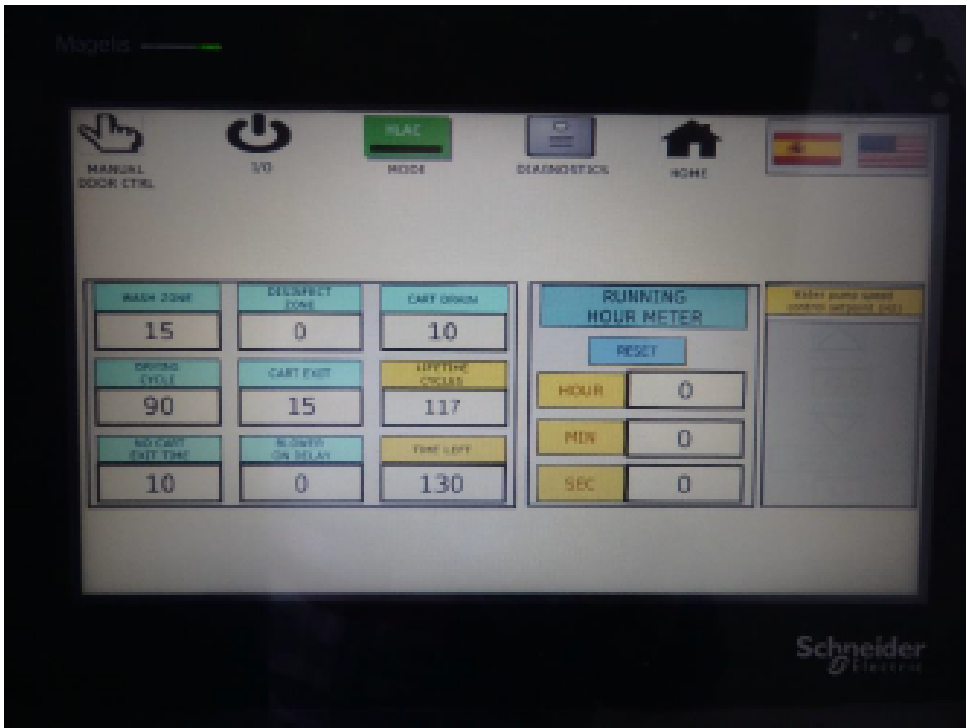


(PASSWORD ENTRY SCREEN)

SEQUENCE PROGRAMMING PROCEDURE

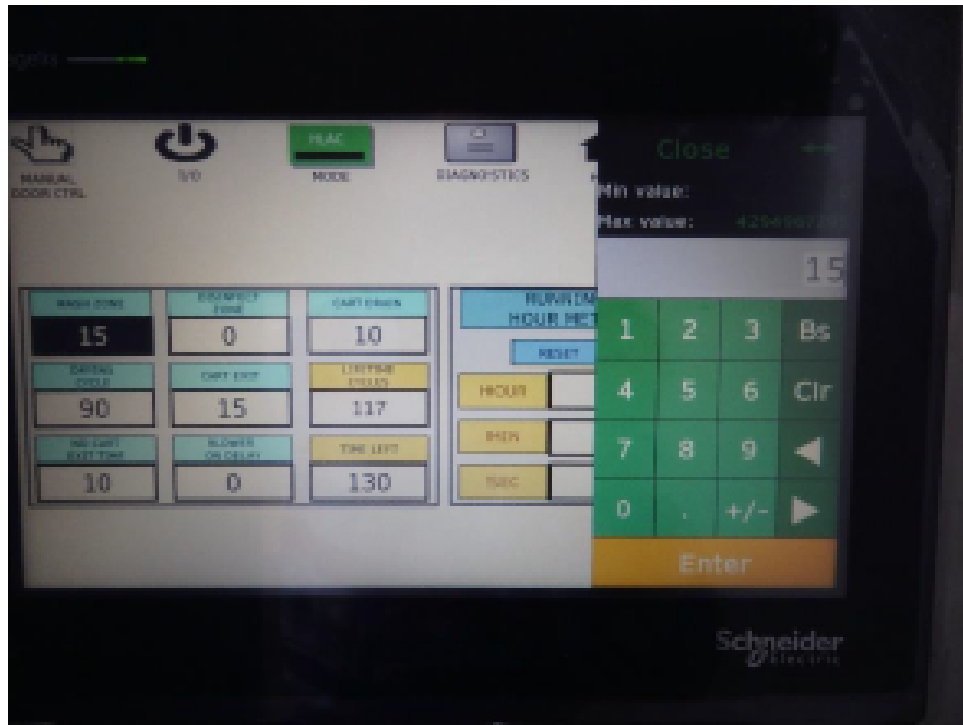


(“1470” ENTER)



(TOUCH SEQUENCE BOX TO CHANGE)

SEQUENCE PROGRAMMING PROCEDURE



(TYPE NEW VALUE; PRESS ENTER)

***Exit to Main Screen at any time by pressing the "HOME" icon.**

MANUAL DOOR OPERATION



To perform manual door operations:

1. Enter Sequence Programming Screen by selecting "Settings" from the Main Screen.
2. Enter Pass-code 1470; press Enter.
3. Press "Manual Door Control" icon at bottom of Programming Screen.
4. Touch directly on top of desired door to activate.
5. Touch "Stop Pin" icon to disengage the floor wheel stop pin.

***Exit to Main Screen at any time by pressing the "HOME" icon.**

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