



USER MANUAL

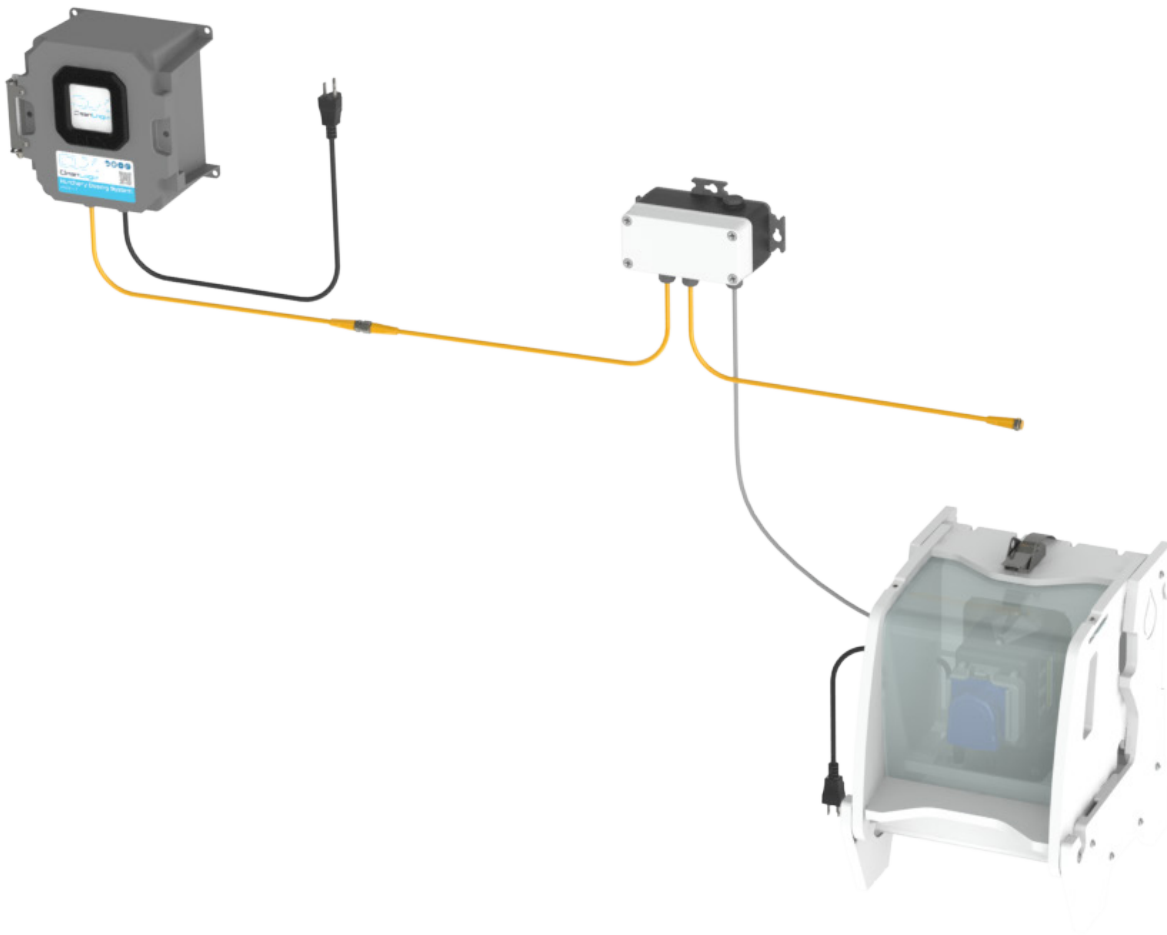
MODEL:

HDX-CT, HDX-PBX

HATCHERY DOSING SYSTEM

English (Original Instructions)

Updated: 06/22/26



USER MANUAL: HDX HATCHERY DOSING SYSTEM

READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Table of Contents

System Requirements	03
Connections	04
Installation	05
Configuration	09
Operation	12
Maintenance	13
Troubleshooting	14
Parts Call Out	15
Electrical Schematic	20
Appendix A - Light Beacon	21



Safety Warnings



- All personnel servicing this unit must be familiar with the information contained in this manual. Follow all installation and maintenance instructions.
- Follow safety instructions of chemical manufacturer (SDS).
- Wear proper PPE when working with chemicals (gloves, safety glasses, face shield, etc.)
- Always follow plant and OSHA guidelines.
- Avoid contact of chemicals with skin and eyes. If contact occurs, see SDS sheet for further first aid measures.
- Manufacturer assumes no liability for the use or misuse of this unit or chemical compatibility.
- When installing and using this electrical equipment, basic safety precautions should always be followed.
- Risk of Electric Shock. Connect only to a branch circuit protected by a ground-fault circuit interrupter (GFCI). Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI.
- To reduce the risk of electric shock, replace damaged cord(s) immediately.
- Specifications and parts are subject to change without notice.

PROTECT THE ENVIRONMENT

Please dispose of packaging materials, old machine components, and hazardous fluids in an environmentally safe way according to local waste disposal regulations.



Always remember to recycle.

USER MANUAL: HDX HATCHERY DOSING SYSTEM

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Overview

The HDX Hatchery Dosing System is an automated pump control platform designed for formaldehyde dosing in egg incubation applications. Built to support food processing standards, the HDX system delivers accurate, automated chemical dispensing to help maintain optimal hatchery hygiene and biosecurity.

The system combines an intuitive 2.5-inch color touchscreen control timer with a peristaltic metering pump to deliver accurate, repeatable chemical dispensing cycles that support hatchery cleaning protocols. HDX helps hatcheries improve process consistency and reduce manual handling of chemical — delivering dependable performance where precision and biosecurity matter most.

Requirements

Controller

- Power: 115VAC

Pump

- Power: 115VAC
- Output: 16GPD
- Max Pressure: 80PSI
- Max Temperature: 104°F
- Speed Adjustment: 10-100% (1% increments)
- Reproducibility: +/- 2%
- Max Suction Lift: 25 ft. (vertical)
- Chemical compatibility: Chemical products used with this equipment must be formulated for this type of application and compatible with unit materials (see specifications).

Specifications

- Materials of Construction:
 - Controller: Polypropylene, HDPE, SS
 - PBX Enclosure: HDPE, SS, Polypropylene
 - Pump Body: Polycarbonate, PVC, Polyethylene, SS
 - Backplate: 304SS
 - Wetted Parts: PVC, Polypropylene, AFLAS, and Stainless Steel

NOTE: For more information on chemical compatibility consult the chemical manufacturer.

- Weights:
 - Controller: 7 lbs.
 - PBX-25: 11 lbs.
 - Pump: 4 lbs.
- Dimensions:
 - Controller: 20" x 20" x 8-1/4"
 - PBX-25: 10-1/2" x 13-1/4" x 15"
 - Junction: 7" x 4" x 3-1/2"
- Flow Rates (E20PHG Pump):
 - Pump Tube: G
 - Roller Assembly: Black
 - Turndown Ratio: 10:1
 - Gallons per Day: 16.0 (60.48L)
 - Gallons per Hour: 0.67 (2.52L)
 - Ounces per Hour: 85.3 (2520ml)
 - Ounces per Minute: 1.42 (42ml)
 - Max Pressure: 80PSI (5.5bar)

NOTE: Specs based on pumping water under a controlled testing environment. Many variables can affect the output of the pump.



More Information

Please contact Clean Logix at:

(616)-438-9200 or **sales@clean-logix.com**

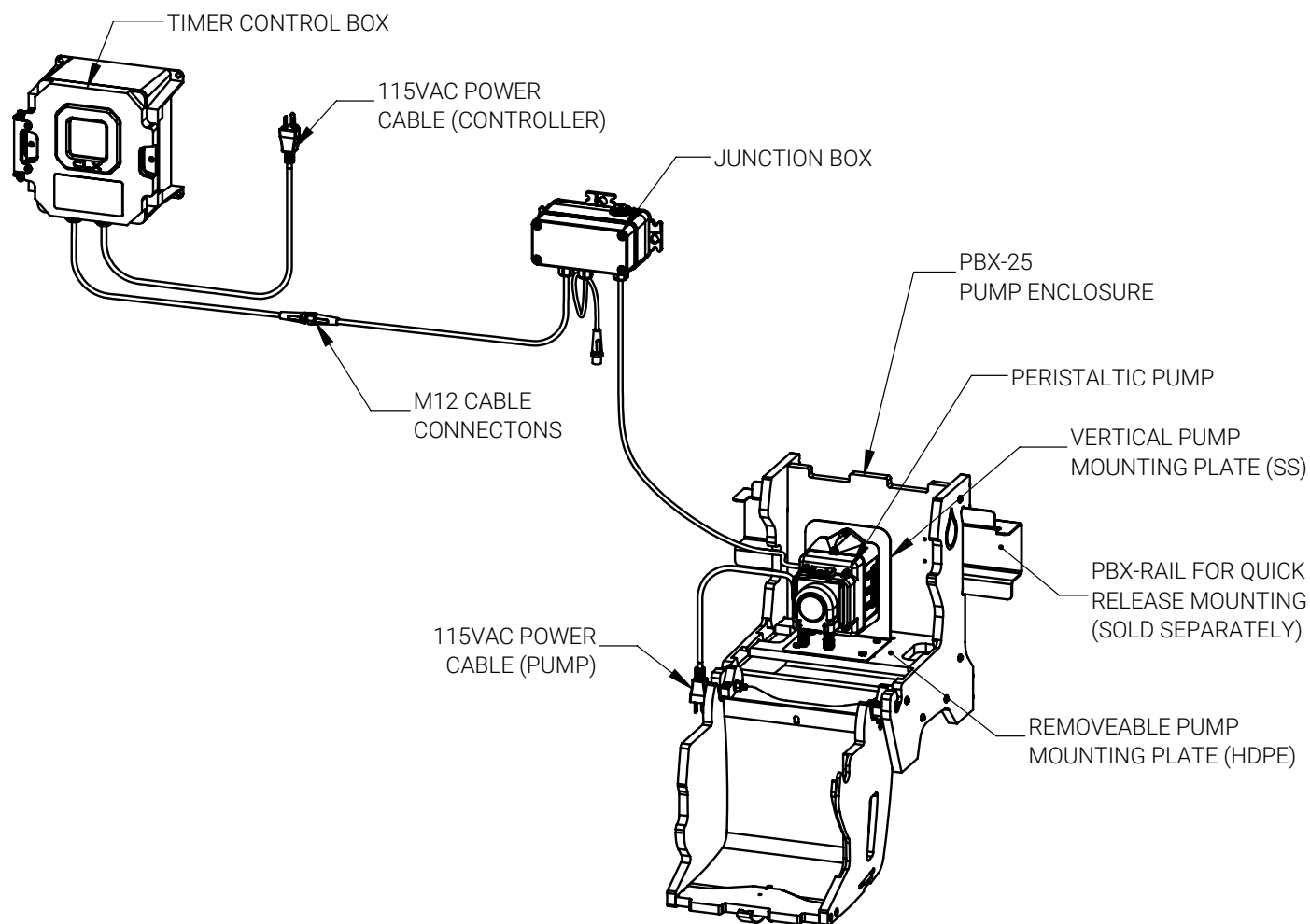
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Connections

Timer control box and PBX pump with electrical junction box are sold separately. Up to 16 pumps can be daisy chained to a single controller to control one timer schedule (all pump will activate at the same time).



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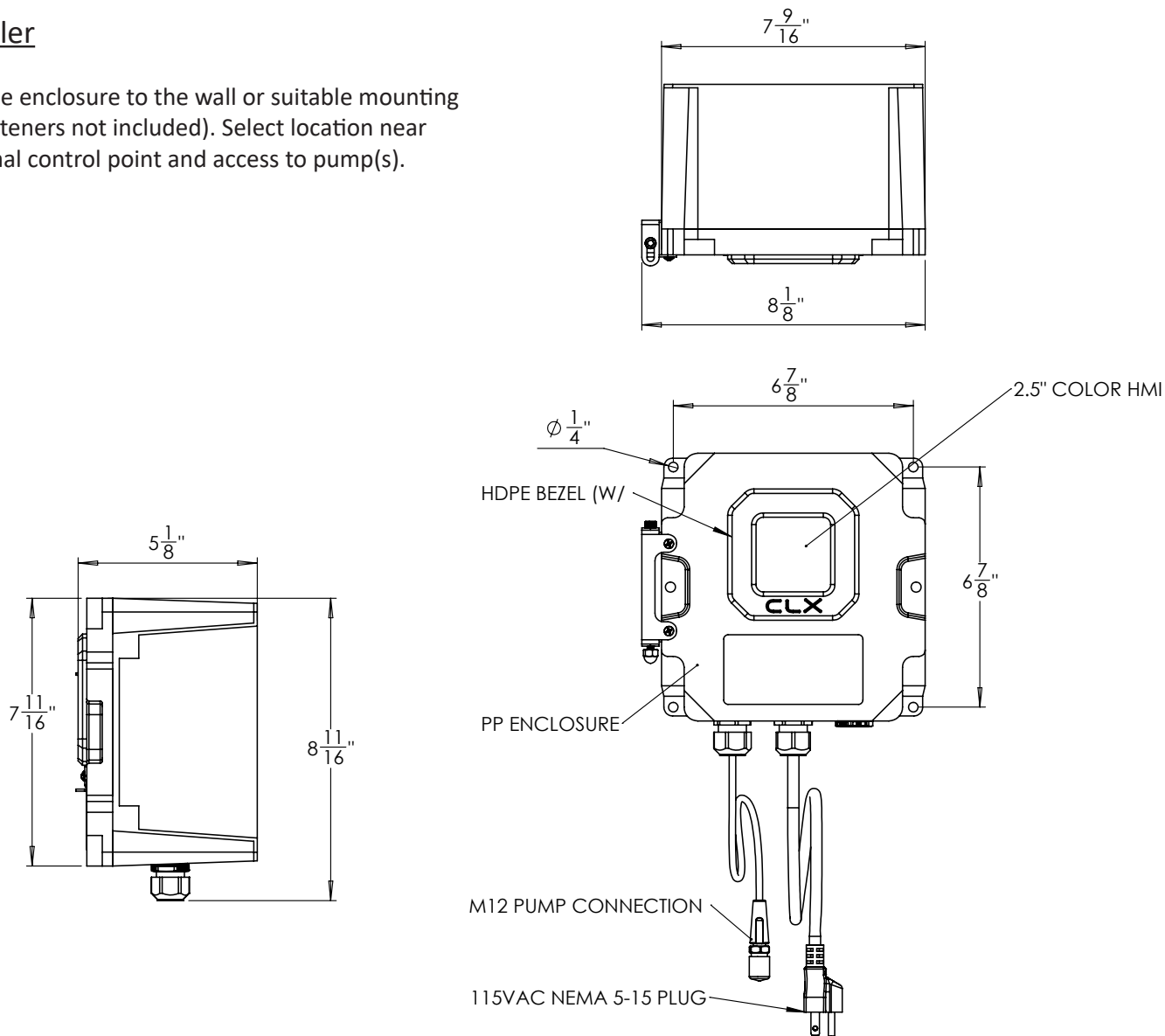
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Installation

Controller

Mount the enclosure to the wall or suitable mounting point (fasteners not included). Select location near operational control point and access to pump(s).



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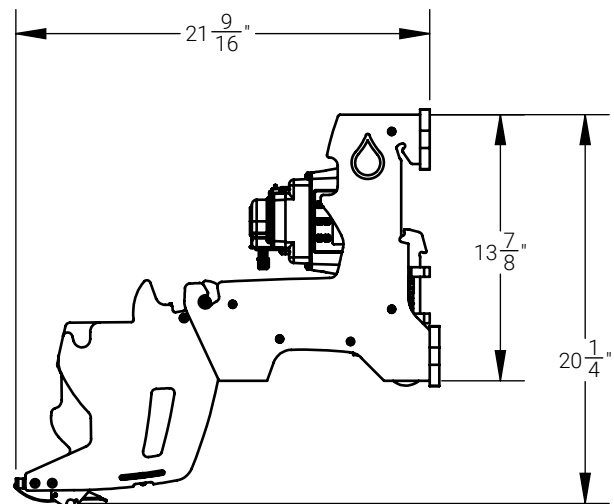
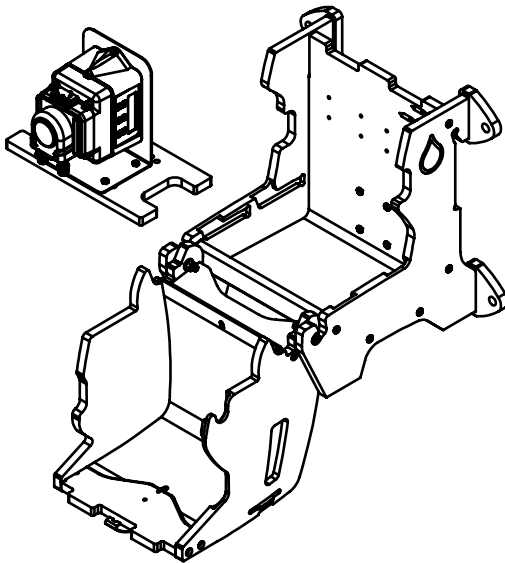
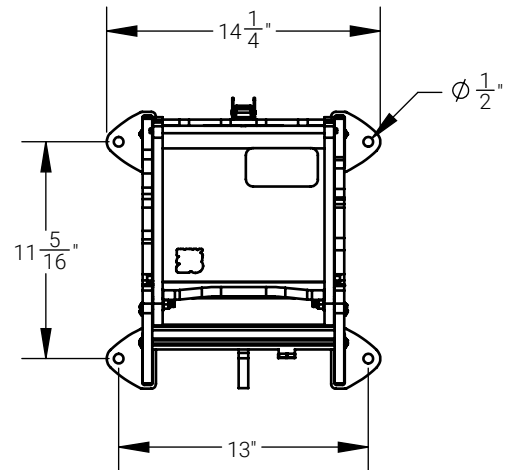
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Installation (cont.)

PBX Pump Box Install

1. Mount pump enclosure to wall or shelf using included mounting feet and hardware (optional rail accessory available for quick-release installations).
 - Choose a location that is suitable for access to solution pick-up and dispense location (max vertical lift for pump = 25 ft.), routing cable connections for Junction box, and 115V outlet for pump power.
 - Remove pump via. mounting plate to make installation easier (open cover, slide plate forward and lift up to remove).
2. Mount Junction Box nearby for cable routing.
3. Connect M12 cable from Pump Junction Box to Controller.



USER MANUAL: HDX HATCHERY DOSING SYSTEM

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Installation (cont.)

Pump Plumbing (inlet)

The following installation instructions are for the Stenner Econ FP Series peristaltic pump. For other pump models, please consult product-specific user manuals.

1. Uncoil the suction/discharge line (included with pump).

NOTE: Allow sufficient slack to avoid kinks and stress cracks. Make a clean square cut so the suction line is burr free.

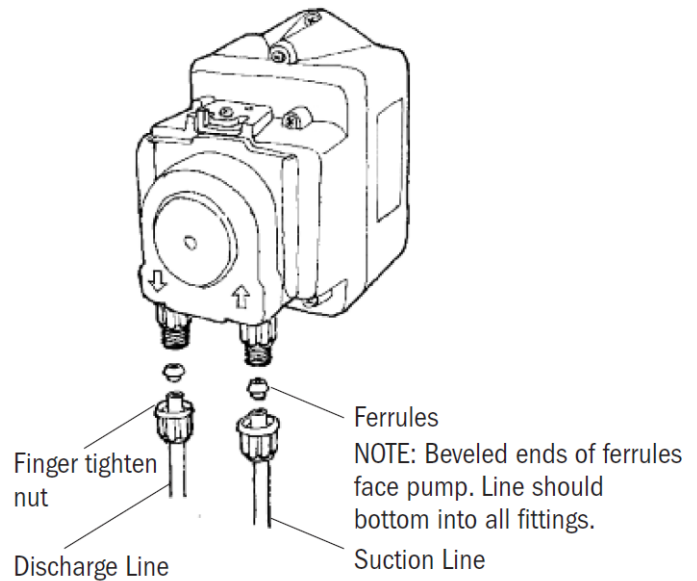
2. Use outside of solution container (tank, jug, barrel) as a guide to cut length of suction line ensuring it will be 2-3" above the bottom of solution tank.
3. Using the included nut and ferrules, slide the line(s) through connecting nut and ferrule and finger tighten to the pump's inlet and outlet ports at the bottom of the pump (hold tubing while tightening connection).

WARNING

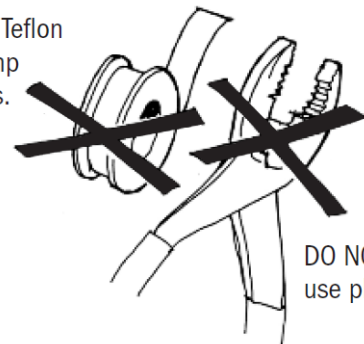
Do NOT use thread sealant tape on pump tube connections or tools to tighten connections. Over tightening the nut with a wrench may result in damaged fittings, crushed ferrules, and leaks.

4. (Optional) attach the strainer assembly to the suction line.
 - To attach the strainer, push approximately 3.5" of suction line through the cap on the strainer body. Pull line to make sure it is secure.
5. Insert suction line into solution container.
6. Suspend above tank bottom to reduce chance of sediment pickup (~3").

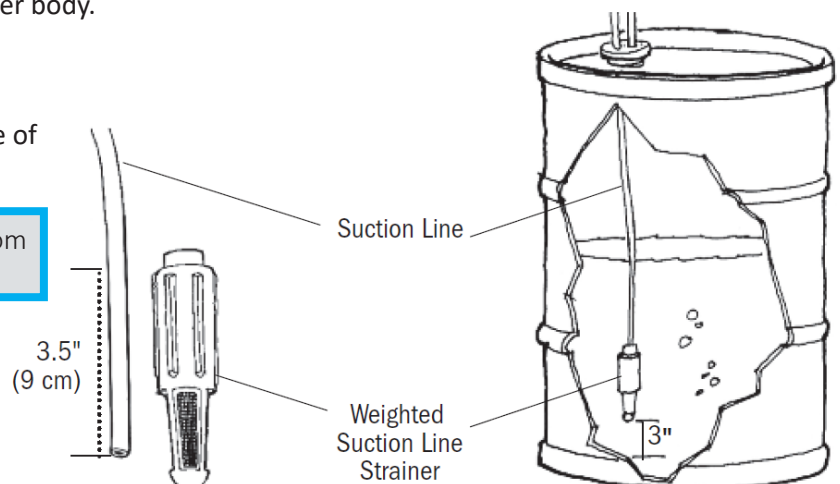
NOTE: Suction lines that extend to the bottom of the tank can clog injectors.



DO NOT use Teflon tape on pump tube threads.



DO NOT use pliers.



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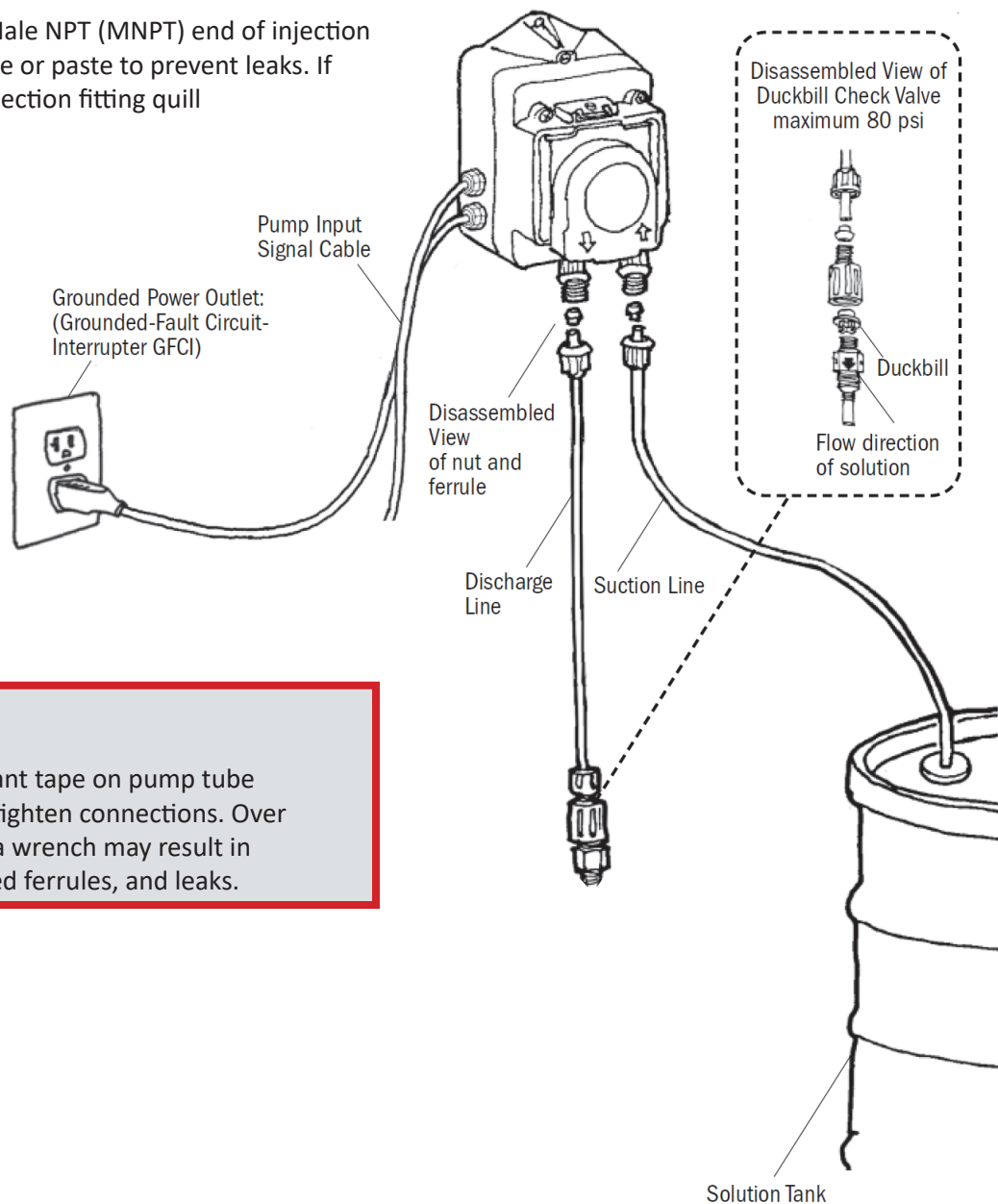
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Installation (cont.)

Pump Plumbing (outlet)

1. Make a secure finger tight connection on the discharge fitting of the pump head following inlet instructions.
2. Locate a point of injection beyond all pumps and filters or as determined by the application.
 - 1/4" or 1/2" FNPT connection is required for installing the injection fitting.
3. (optional) Wrap the Male NPT (MNPT) end of injection fitting with thread tape or paste to prevent leaks. If necessary, trim the injection fitting quill
4. Hand tighten the injection fitting into the FNPT fitting.
 - Install connecting nut and ferrule to the pump discharge line. Insert line into injection fitting until it reaches base of fitting.
 - Finger tighten connecting nut to fitting.



WARNING

Do NOT use thread sealant tape on pump tube connections or tools to tighten connections. Over tightening the nut with a wrench may result in damaged fittings, crushed ferrules, and leaks.

USER MANUAL: HDX HATCHERY DOSING SYSTEM

READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Configuration

Pump:

Econ FP Series is activated by an Auxiliary 12-24 VAC/ VDC signal and runs for a programmed set time. The control panel on the pump has a backlit LCD display; when operating it will display the operating modes and settings.

Pump Speed:

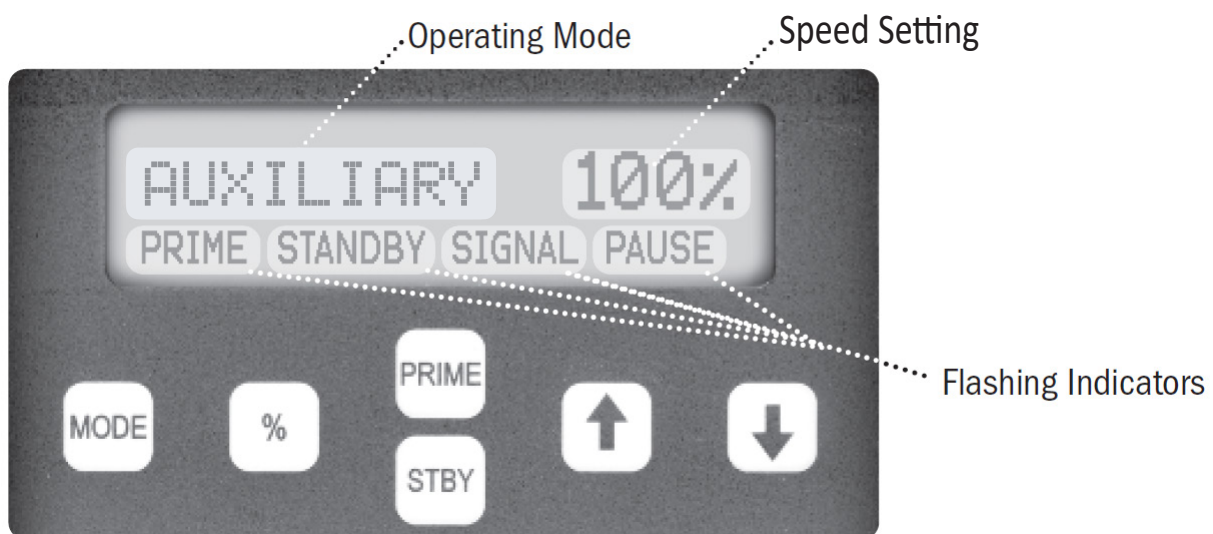
The pump speed is adjustable from 10% to 100% in 1% increments. To adjust the speed increment:

1. Unlock the Keypad
 - To unlock the keypad, simultaneously press and hold **MODE** and **%** for 5 seconds. The keypad will automatically lock if there is no operation for 60 seconds.
2. Press and continue to hold **%** while using the up/down arrows to increment the speed.
3. When the display shows the desired speed percentage, release all buttons to set the selection. (keypad will lock automatically after 60-seconds)

Pump Display:

The display has flashing indicators beneath the operating mode and setting. The indicators represent the following functions:

- **PRIME** = Prime button is pressed, pump will run full speed
- **STANDBY** = Standby button was pressed, pump is in standby (*will not activate if enabled*)
- **SIGNAL** = Pump received a signal
- **PAUSE** = Pump received a dry contact to the pause input
- **KEYPAD LOCKED** = After 60 seconds of no keypad operation, the keypad will lock and the display will show "KEYPAD LOCKED"
- To unlock the keypad, simultaneously press and hold **MODE** and **%** for 5 seconds. The keypad will automatically lock if there is no operation for 60 seconds.

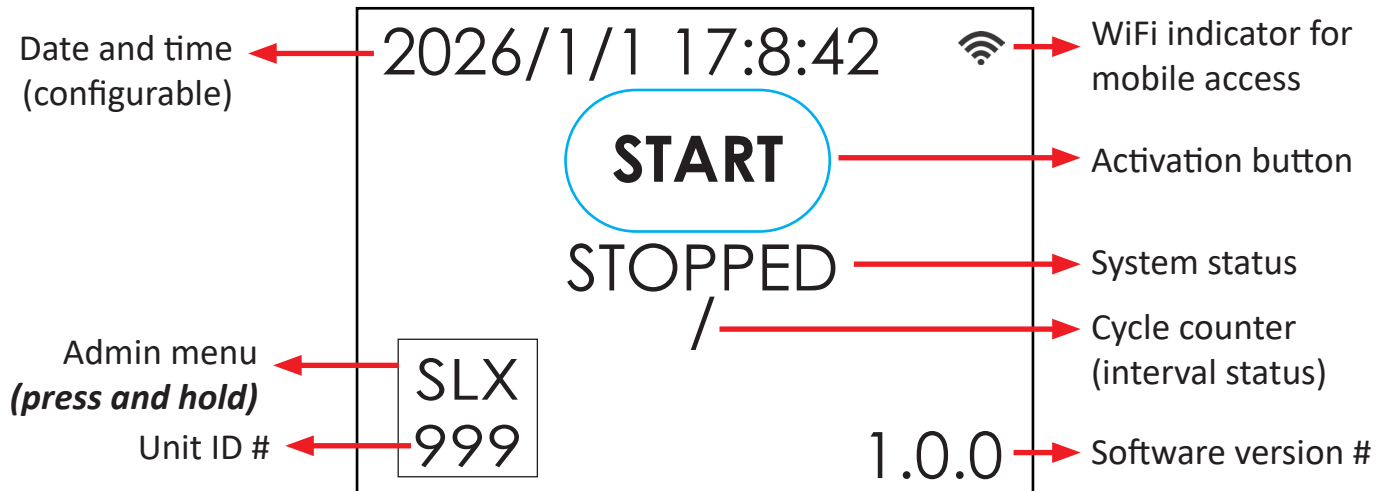


Configuration

Controller

The controller is comprised of a 2.5" touchscreen HMI for timer configuration, priming, and general operation. A mobile app is also available to aid in system set up.

1. Plug in power cord (115VAC). Unit will power on and display home screen:



2. Press and hold the Admin Menu button (bottom left corner) to enter admin settings. A keyboard will display, enter **1234** for the default admin code.
3. Select **Settings** [Fig 10.1]
4. Using the Next button, cycle through the screens to alter the following timer settings:
 - **On Time:** The amount of time, in seconds, the unit will dispense (Default = 10 sec.)
 - **Off Time:** the amount of time, in minutes, between dispense activation cycles. (Default = 15 min.)
 - **Boost Off Time:** When Boost is active, the amount of time, in minutes, between boosted cycles.
 - **Boost Timeout:** The amount of time, in minutes, Boost will be enabled for when selected.
 - **Pre Delay:** The amount of time the unit will delay before dispensing. If a Light accessory is connected this would be the amount of time the light is on before the unit begins dispensing.

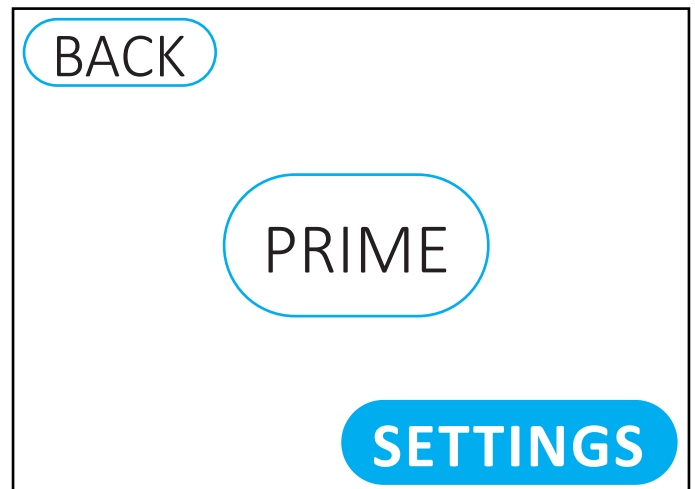


Fig. 10.1: HMI admin menu, Settings selection

5. Select **Exit** to apply changes and return to main screen

USER MANUAL: HDX HATCHERY DOSING SYSTEM

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Configuration (cont.)

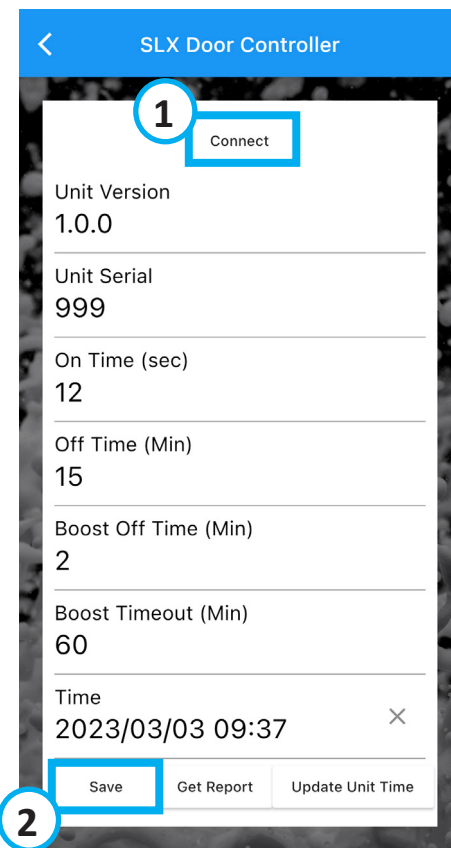
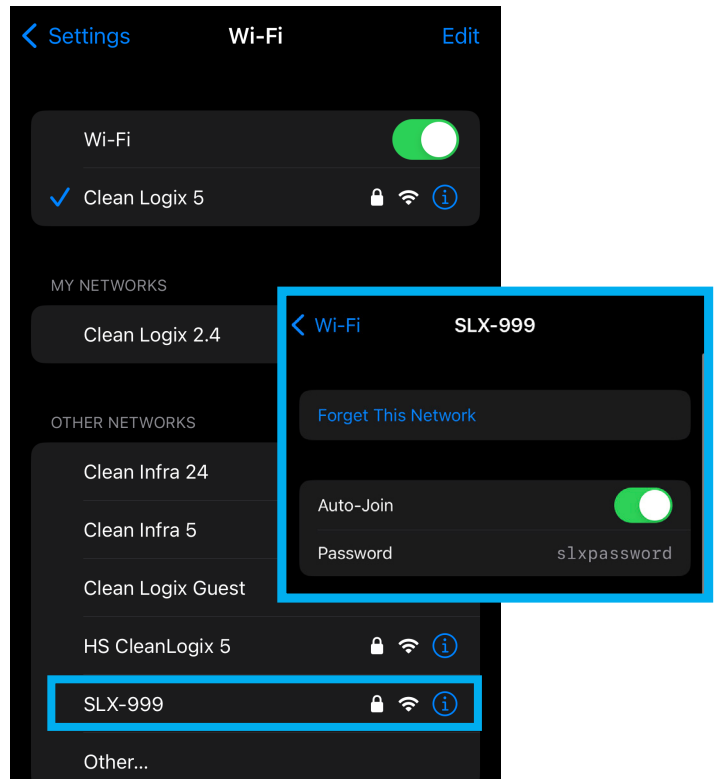
Mobile App

Using a smartphone, the unit is also able to be programmed without using the HMI screen.

1. Open the Wifi settings on your mobile device
2. Select the controller to be programmed from your list of available networks. The name of the network will be identified by the Unit ID # (ex: SLX-999)
3. Select the Wifi network and enter the password **slxpassword**
4. Download and open the Clean Logix mobile app
5. Select **SLX Controller**
6. A pop-up will appear asking to connect to local devices - select **Allow** to connect to the controller
7. Select **Connect** to generate system information. The following options will be modifiable:
 - **On Time:** The amount of time, in seconds, the unit will dispense (Default = 10 sec.)
 - **Off Time:** the amount of time, in minutes, between dispense activation cycles. (Default = 15 min.)
 - **Boost Off Time:** When Boost is active, the amount of time, in minutes, between boosted cycles.
 - **Boost Timeout:** The amount of time, in minutes, Boost will be enabled for when selected.
 - **Time:** Date and time settings for reporting purposes.
8. Select **Save** to apply changes before existing to update controller.

NOTE: Controller settings are independent to each unit. If multiple controllers are installed each will need to be configured separately.

Download Mobile App:



USER MANUAL: HDX HATCHERY DOSING SYSTEM

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Operation

Initial Use / Priming

When operating for the first time some alterations may need to be made to produce the desired dispense volume and ensure the unit is functioning as intended.

1. Verify the following:
 - Controller is plugged in and screen is on
 - Pump is installed to PBX box with lid latched
 - Pump is plugged in, receiving power, and displays Auxiliary mode operation.
 - Pump is connected to Controller via M12 cables
 - If applicable, other pumps are connected in a daisy chain fashion
2. Open the Admin Menu (see page 11).
3. Press **PRIME** to initiate dispensing - Pump rotor will begin to run.
4. Press **PRIME** again to halt system.

Normal Use

1. Ensure unit is properly connected
2. Press **START** to activate system
3. Activation timer will initiate and unit will dispense based on Timer Settings.
4. Press **BOOST** to manually activate and increase the cycle intervals for a temporary period of time.
5. Press **START** again to halt system.

NOTE: Current selected option(s) will display solid blue.

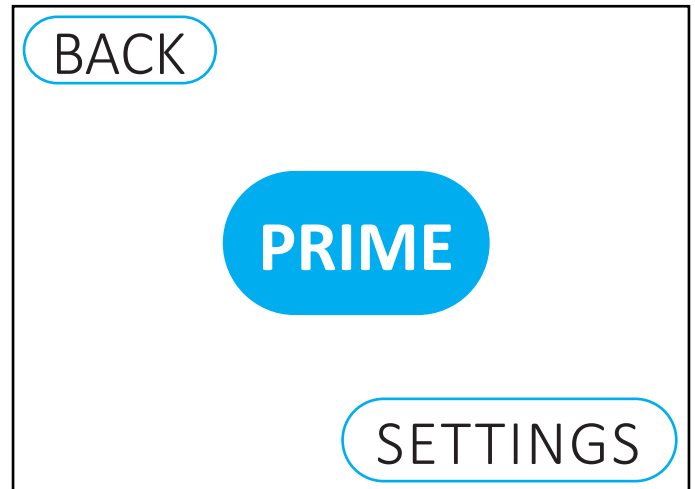


Fig. 12.1: HMI admin menu, PRIME selection

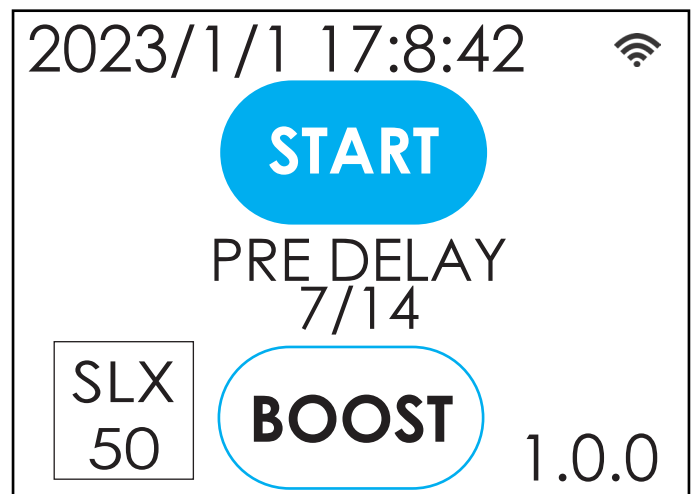


Fig. 12.2: HMI activated in Pre-Delay cycle. Boost not selected.

Maintenance

The following maintenance procedures are recommended for normal use. Units which see a high amount of use should be inspected more frequently.



WARNING

Depressurize system prior to servicing! Always wear appropriate personal protective equipment (PPE) when handling chemical per SDS recommendations.

- Ensure solution containers are full and lines are fully primed for regular operation
- Check condition of pump tubing (damage or leaks)
 - Replace as necessary.
- Check lines and tubing for clogs
 - Remove from chemical and clean
- Verify wire and cable connections for pumps and secure and not damaged
 - Replace as necessary.
- Verify check valves are operating properly
 - Remove or replace as necessary.
- Check the PBX enclosure and drain container (if used) for leaks and/or liquid accumulation.
- Check and adjust plumbing as necessary to prevent and protect against leaks, spills and other plumbing issues.
- Ensure door is latched closed at all times while pump is active.
- Check enclosure and pump mounting plate for cracks or damage.



More Information

Please contact Clean Logix at:

(616)-438-9200 or sales@clean-logix.com

Notes:

[illegible]

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Troubleshooting

Controller or Pump is not powering on

Cause	Solution
Unit is not plugged in	Plug in power cord (115V)
GFCI has been tripped	Reset GFCI and/or verify breaker has not been tripped

Pump is not activating

Cause	Solution
Pump is not configured properly for AUXILARY mode.	Check pump display - should read AUXILARY mode. If other settings are shown, unlock the keypad then press/hold MODE while using the Up/Down arrows to filter modes until AUXILARY mode is selected.
Pump is in STANDBY mode	Check pump display - if STANDBY is shown below mode selection disable it (unlock keypad, press/hold MODE, and select the STBY button to disable).
Pump is not receiving power.	Ensure the pump is plugged in, receiving power, and display is illuminated.
M12 cable connection from pump junction box to controller (or next pump in daisy chain) is broken or loose.	Check cable and wires for connections or damage. Tighten connections (finger tight and 2-clicks with wrench) where loose. Replace damaged cables or wires as needed.
Loose wires in junction box or controller	Power down system, check wire connections in junction and controller. See wiring diagrams for more information.
M12 cable from controller is wired into wrong	Power down system, open control box, and ensure wires from pump are wired to Output 1. See wiring diagrams for more information.

Pump dispense volume too much/little

Cause	Solution
Pump speed not sufficient	Increase/Decrease pump speed (see page 9) until desired dispense volume is achieved.

For pump related issues please consult pump user manual.

For Technical Support:



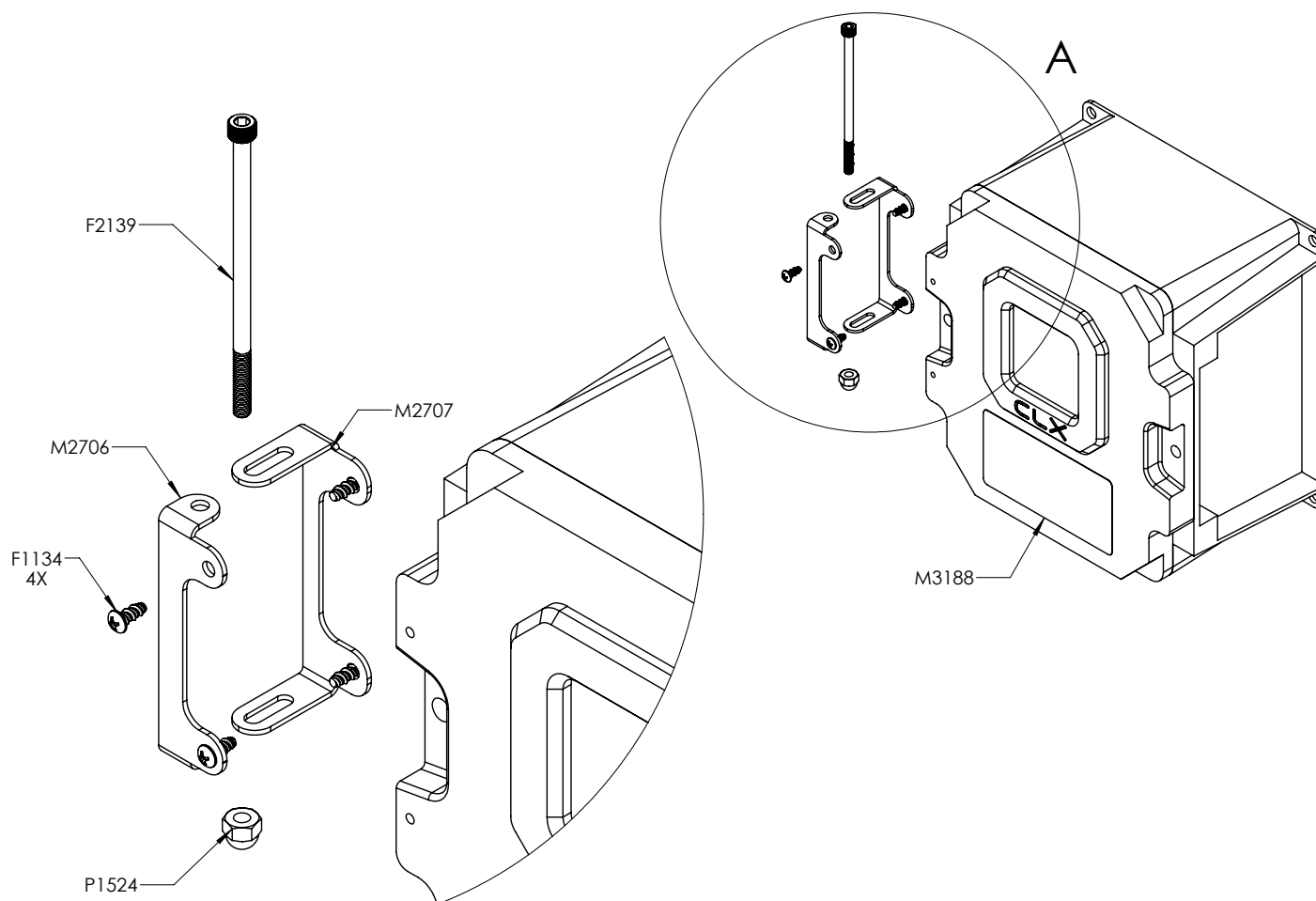
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Parts Call-Out

Parts may vary depending on model configuration.



More Information

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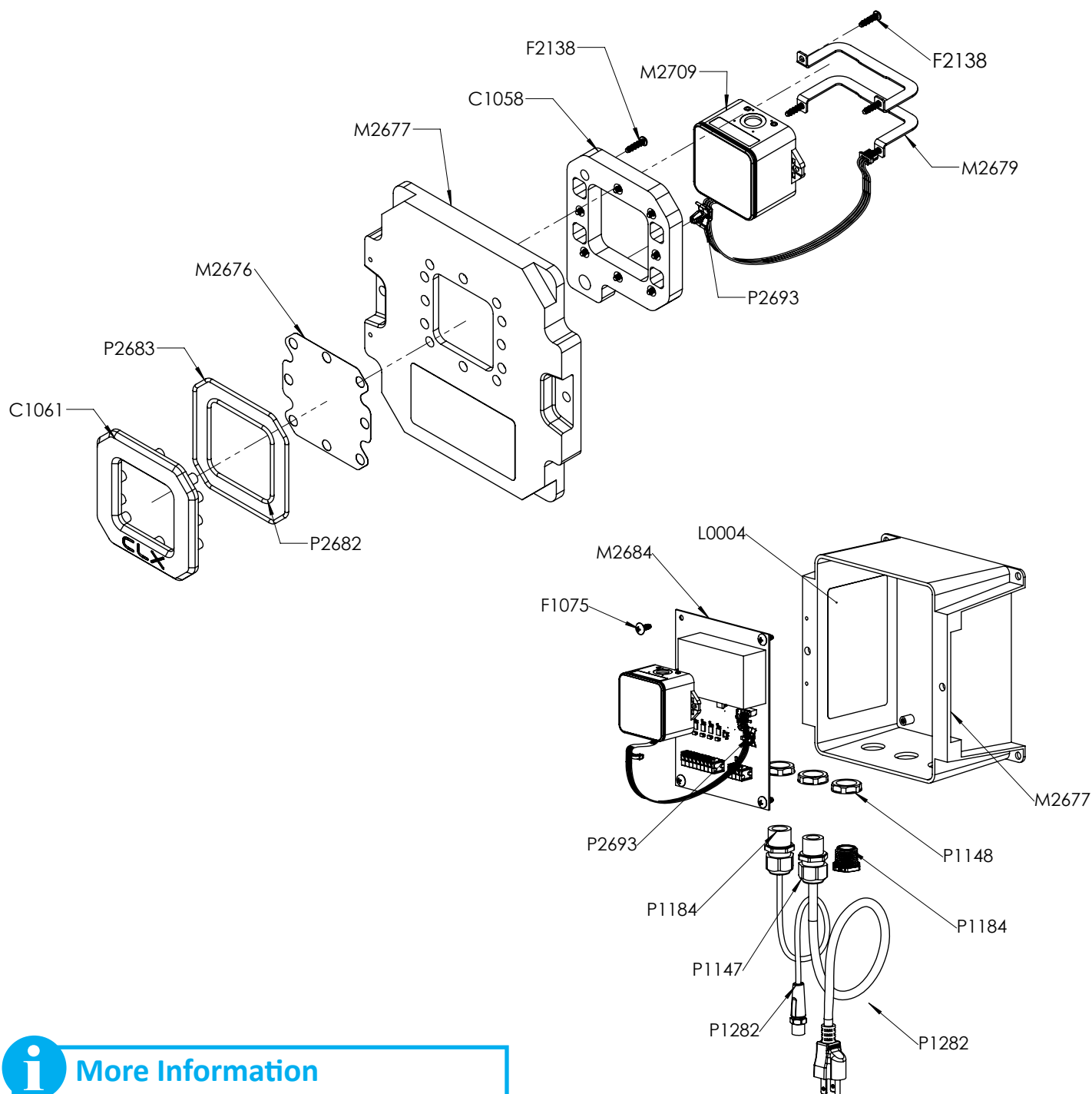
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Parts Call-Out



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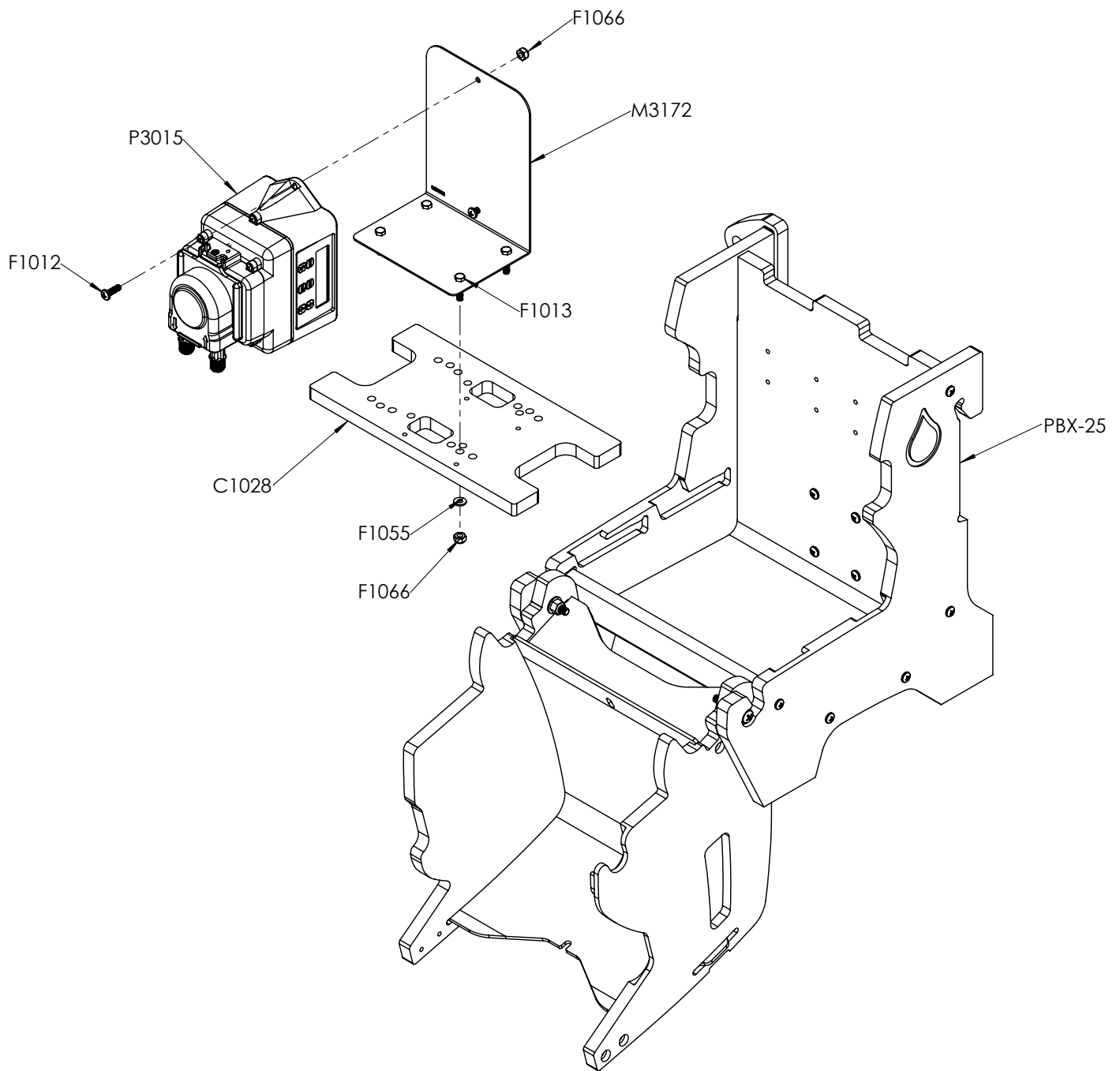
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USER MANUAL: HDX HATCHERY DOSING SYSTEM

READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Parts Call-Out

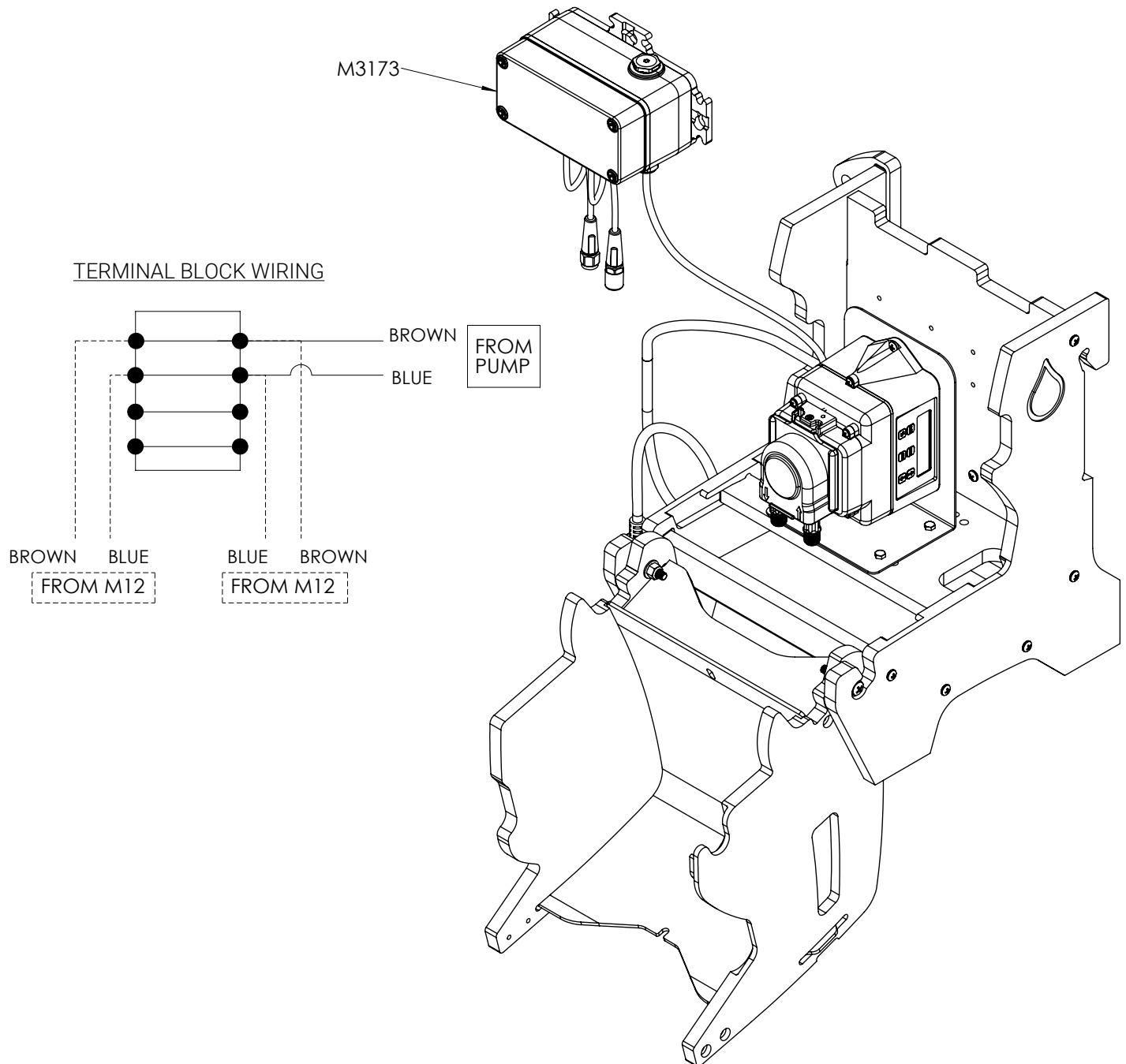


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Parts Call-Out



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Spare Parts

NO.	DESCRIPTION
C1028	PBX-25 PUMP PLATE
C1058	BEZEL BACKPLATE
C1061	OUTER BEZEL
F1012	SCREW, MACHINE, 10-32 x 5/8", SS, PHILLIPS
F1013	BOLT, HHC, 10-32 X 7/8", SS
F1055	WASHER, FLAT, #8 X .438", SS, TYPE A
F1066	NUT, NYLOCK, 10-32, SS
F1075	SCREW, SELF TAP, 10-16 x 1/2", SS, TRUSS HD
F1134	SCREW, SELF TAP, 8-18 X 3/8", SS, PHILLIPS, PAN HD, BLUNT TIP
F2138	SCREW, SELF TAP, #8 X 5/8", SS, PHILLIPS, PAN HD
F2139	BOLT, SHC, 10-32 X 3-3/4", SS
M2676	SCREEN PROTECTOR, KYNAR, M5 CONTROLLER
M2677	ENCLOSURE, PVC JUNCTION BOX, 6X6X4, GRAY
M2679	SLX M5 CONTROLLER SHEET METAL CLIP
M2684	SLX PCB ENTRYWAY FOAMER CONTROL BOARD
M2706	SLX ENTRYWAY CONTROLLER HINGE, TOP, SS
M2707	SLX ENTRYWAY CONTROLLER HINGE, BOTTOM, SS
M2709	SLX M5 CONTROLLER ASSEMBLY FOR ENTRYWAY FOAMER
M3172	BRACKET, PUMP, HATCHERY DOSING SYSTEM, SS
M3173	Hatchery Dosing Pump Junction Box
P1147	CORD GRIP, 1/2" NPT, .170"-.450", NYLON, BLACK HEYCO M3231

NO.	DESCRIPTION
P1148	CORD GRIP NUT, 1/2" NPT, .170"-.450", NYLON, BLACK
P1184	CORD GRIP, 1/2" NPT, .095"-.260", NYLON, BLACK
P1282	CABLE, M12, 4 PIN, AXIAL FEMALE / MALE, 4 POLE, PVC, ORANGE, IP69K, 5m
P1288	CABLE, POWER, NEMA 5-15P PLUG X WIRE LEADS, 7 AMP MAX, 18 AWG, BLACK, SJOOW, 10'
P1362	HOLE PLUG, HEX, 1/2" NPT, NYLON, BLACK
P1524	NUT, ACORN, #10-32, SS
P1941	ROUND DIP MOLDED END CAP, .47" ID x 1/2", PVC
P2682	O-RING, ROUND, -149, .103" X 3", EPDM, BLACK
P2683	O-RING, ROUND, -155, .103" X 4-3/16", EPDM, BLACK
P2692	CABLE, JUMPER, UNIVERSAL 4 PIN BUCKLED, 50cm
P2693	CABLE TIE MOUNT, PUSH BARB, .229" - .255"
P3015	PUMP, PERISTALTIC, 120V 60HZ, 80PSI, 16GPD
P3019	FERRULE, WIRE, 18 AWG
PBX-25	PUMP BOX FOR 1/4" PUMPS

Purchase Replacement Parts:



More Information

Please contact Clean Logix at:

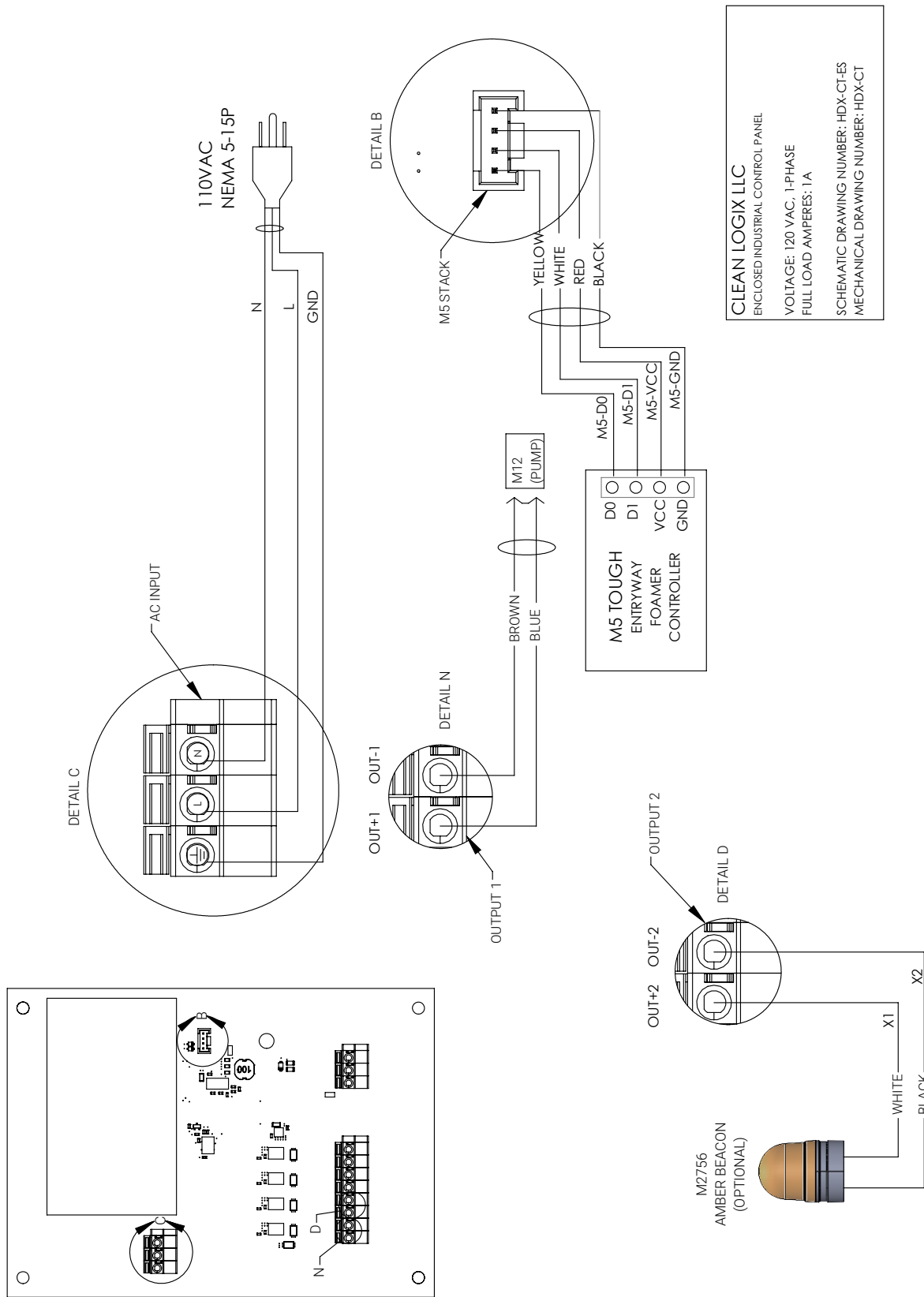
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Electrical Schematic

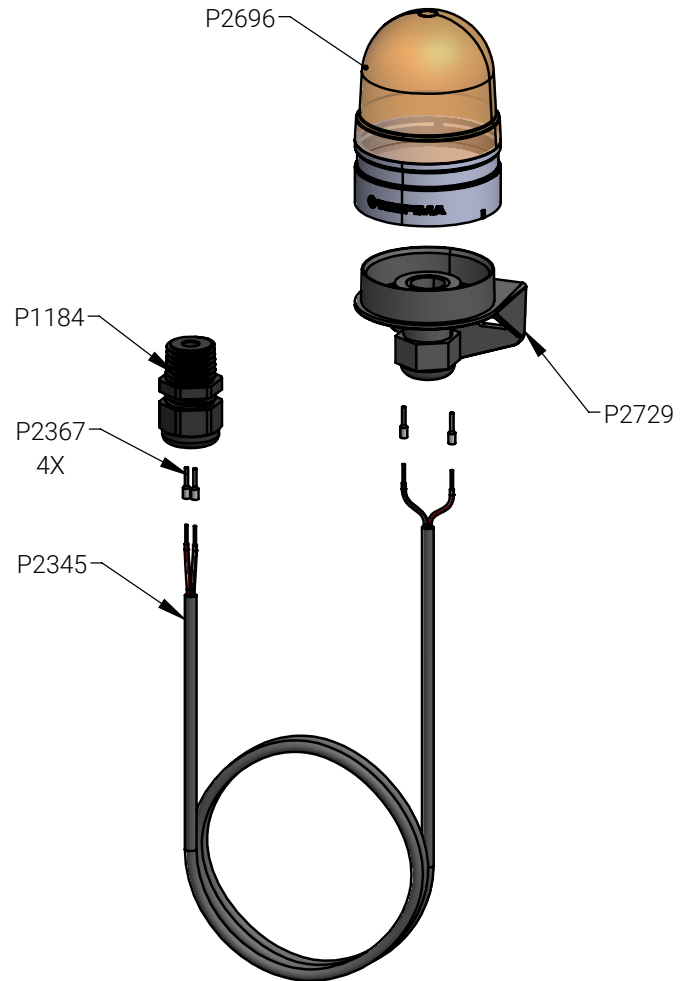


Appendix A

Indicator Beacon Light Accessory

#M2756

1. Mount the light, using it's wall mounting bracket, to a suitable location (8 ft. cable provided)
2. Power down the controller (unplug from outlet)
3. Remove the cord grip plug from the bottom of enclosure and replace with cord grip for light
4. Using the pre-stripped wires, connect the wires to the appropriate terminals:
 - X1 (White) : OUT+2
 - X2 (black) : OUT-2
5. Plug controller back into outlet
6. Press Start to test light functionality - light should engage during "Pre-Delay" cycle, before dispense activation.
7. Consult eletrical schematic for more information



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