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# USER MANUAL

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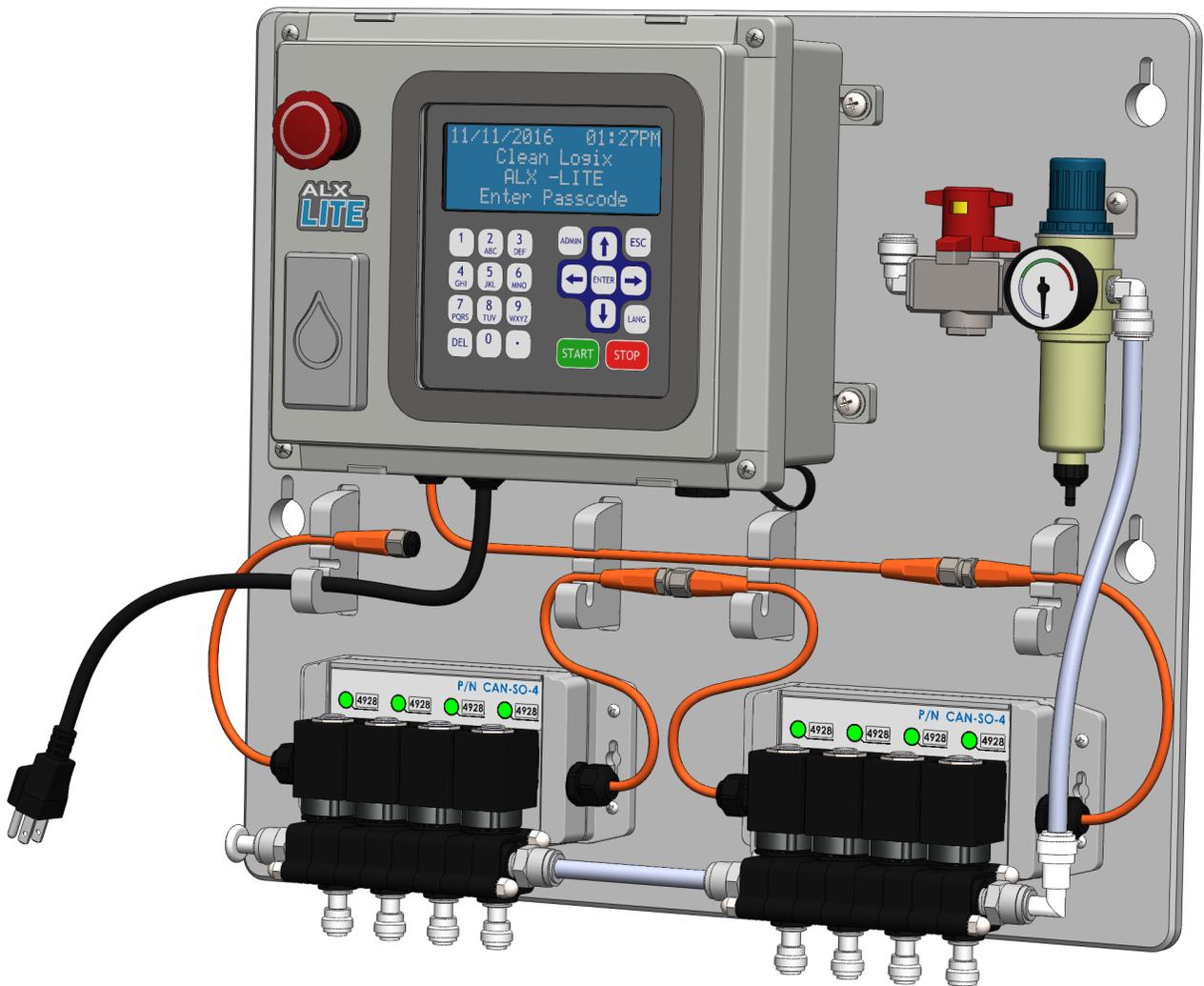
MODEL:

## ALX-OMNI-LITE Chemical Allocation Controller

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*English (Original Instructions)*

*Updated: 03/24/2021*



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### **WARNING:**

- Avoid contact of chemicals with skin and eyes. If contact occurs, see MSDS sheet for further first aid measures.
- Always wear appropriate PPE
- Follow safety instructions of chemical manufacturer (MSDS).
- Always follow plant and OSHA guidelines about the use of equipment.
- Disconnect power before servicing equipment.

## Overview

The ALX-OMNI-LITE is a simple, entry-level time-based chemical dispenser with mounting plate for dispense Applications. It restricts access to chemicals to only authorized individuals either with a 4 digit access code or HID RFID card (optional add-on).

The ALX-LITE is designed to accommodate dispense applications for up to 6 chemicals at a time. Dispenses are controlled via simple fixed-time values with the option of multiple products per dispense Application, if desired. New Applications are set up directly on the unit and can be modified at any time. The controller also records all chemical consumption data into a simple .CSV file format that can be downloaded to a USB drive for review.

## Terminology

- **Users** - The people who will be using the system to dispense Applications. Up to 999 users can be stored.
- **Devices** - The physical outputs and/or inputs that connect to the controller to perform a function. The ALX-LITE is compatible CAN-SO-1 and CAN-SO-4 solenoid valve output devices.
- **Applications** - Recipes which determine the type and sequence of Dispense Steps. Up to 999 recipes can be stored.
- **Dispense Step(s)** - Segments of an Application that determine which output Device will be energized and for how long. 1-6 steps can be used per an Application.
- **Fixed Time Step** - Will energize an output Device for a specified amount of time. Reported Step volume must be manually entered.

## Specifications

### Software

- Maximum number of Users: 100
- Maximum number of Applications: 999
- Maximum Dispense Steps per Application: 6
- Dispense Step time range: 00.1s - 99m:99.9s
- Permissions time range: 1-24 hours
- Max Permissions count: 99

### Hardware

- Maximum number of Devices: 16\*
- Dimensions: 12" x 10" x 7"

**NOTE:** A single CAN-SO-4 counts as 4 Devices.

### Acceptable Chemical Products

- Acids
- Caustics
- Sanitizers
- Chlorine

### Acceptable RFID Card Types:

ProxCard® II	Proximity®
ISOProx® II	ProxCard® Plus
DuoProx® II	ProxKey® II
Smart ISOProx®	MicroProx®
DuoProx® II	MIFARE®

**NOTE:** Only Prox® RFID cards are accepted. iClass cards will not register.

# USER MANUAL: ALX-OMNI-LITE

READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



## Installation Requirements

### Electrical

- 110 VAC, 5A, Single Phase, 50-60 Hz
- NEMA 5-15 GFCI Protected Outlet
- Surge suppression recommended

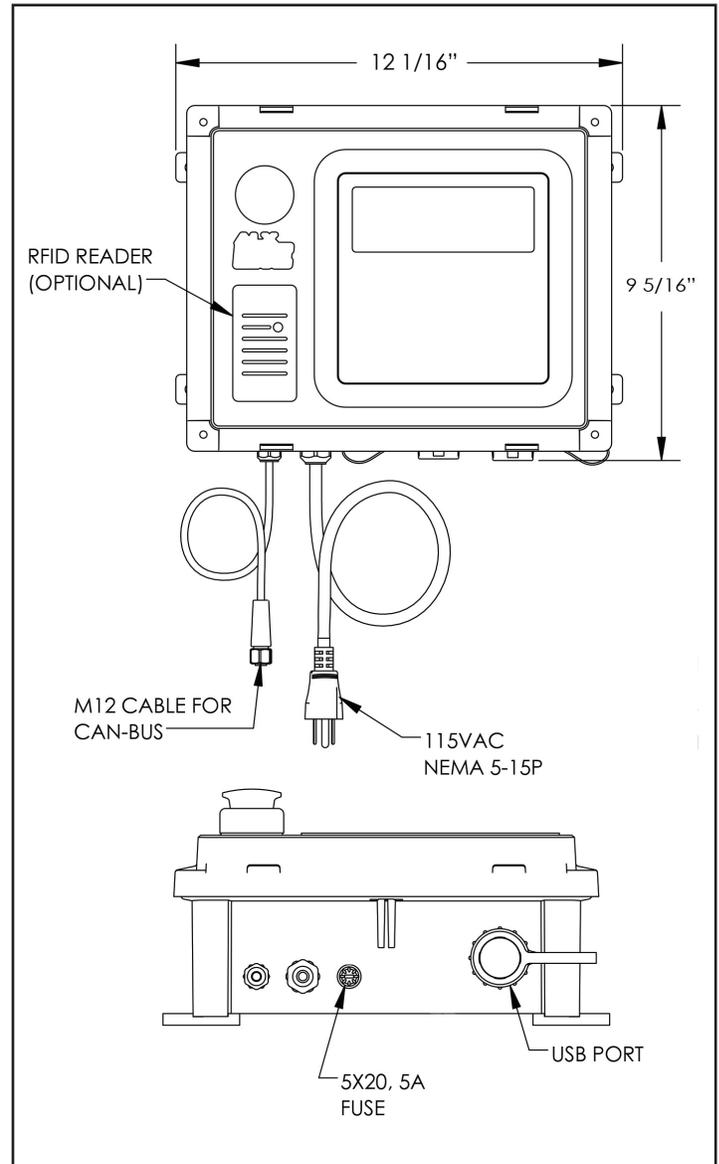
### Compressed Air (typical installation)

- Clean, dry air
- 10 CFM (283 L/min) @ 80 psi (5.5 bar) minimum
- 100 psi (6.9 bar) maximum supply pressure
- Recommended regulator setting: 80 PSI (5.5 bar).

### Water Supply (typical installation)

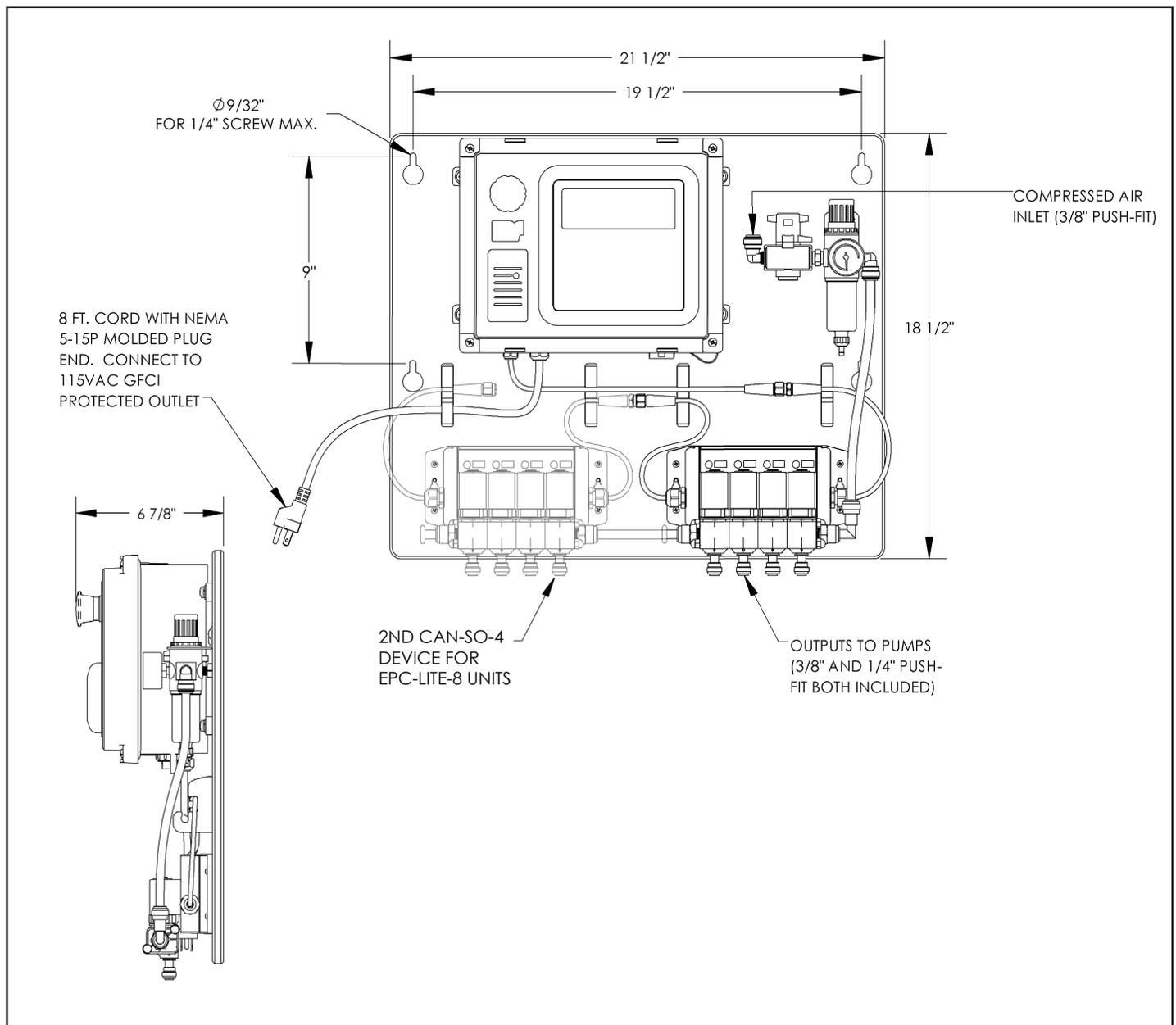
- Cold Portable Water
- 7 GPM (26.5 Lpm) @ 35 psi (2.5 bar) minimum
- 100 psi (6.9 bar) maximum supply pressure
- Recommended regulator setting: 50 PSI (3.4 bar).

**NOTE:** A back flow preventer must be installed in the water supply to this unit, per local codes.



## Mounting System

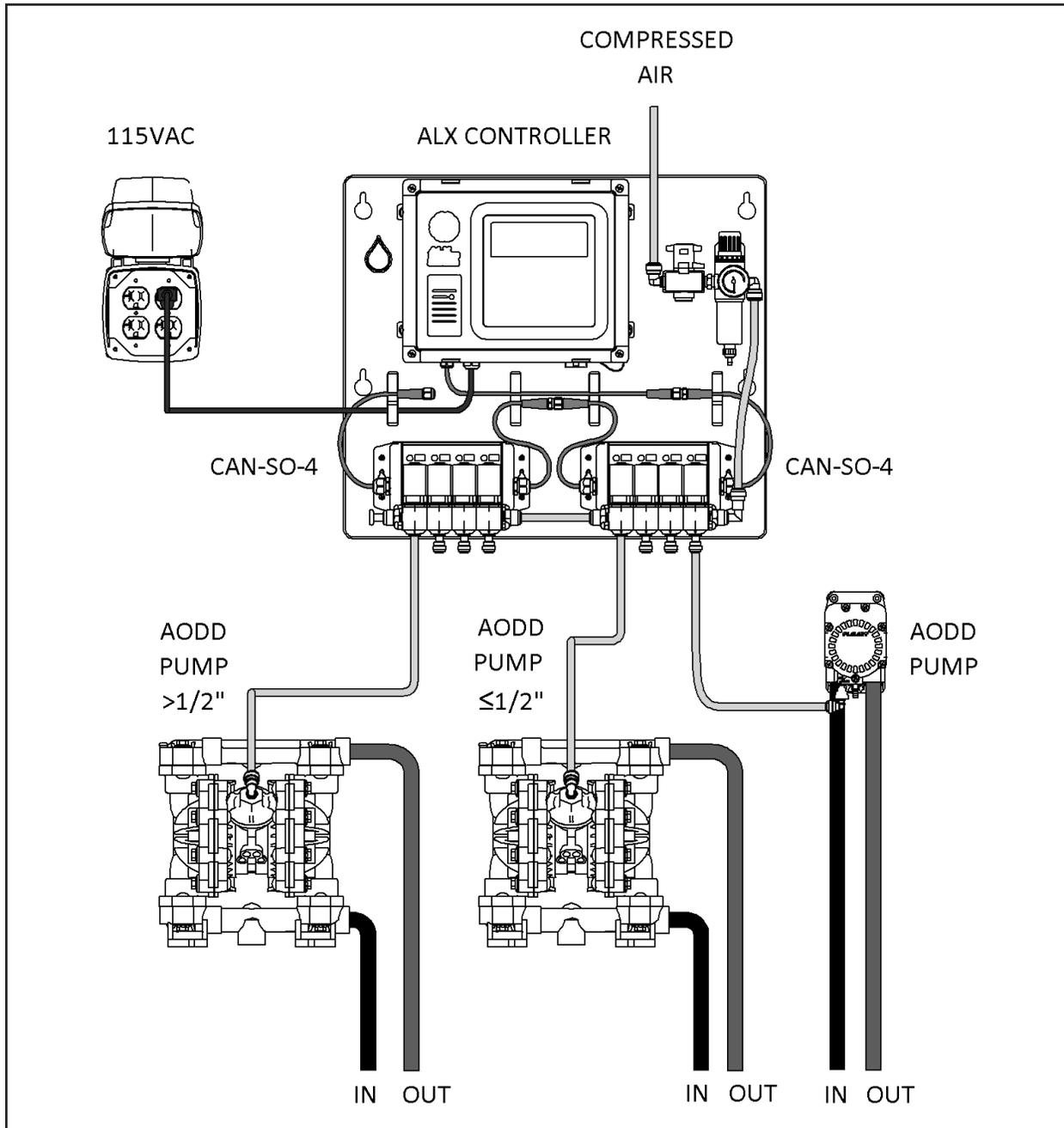
- Determine mounting location, with consideration of the following:
  - User accessibility
  - Distance to electrical outlet
  - Distance to Devices/pumps
- Securely mount to wall using appropriate hardware (not included) via the keyholes on the mounting plate.
- Plug power cord into a 115 VAC, GFCI protected receptacle.



## Connecting Devices

- CAN-SO-4 Devices will be mounted and connected prior to shipping. In the event they need to be reconnected: hand tighten the M12 cable connections, then tighten two more clicks using wrenches.
- Plumb compressed air lines and fluid lines for regulator, pumps, and valves as necessary [see below]

Installation Example:



*\*Shown with ALX-OMNI-LITE-8 for dispensing up to 8 chemicals*





This section explains how to setup the ALX-LITE using the built-in keypad and screen.

## Administrator Login

- Press the **ADMIN** key.
- Type in a 4-digit administrator passcode.

**NOTE:** The default Administrator user passcode is **1234**. This passcode can be changed under the “Users” section.

**NOTE:** Users will be automatically logged out after 1 minute of inactivity for security.

## Users

### Adding a User

- Log in as an administrator.
- Use **↑** and **↓** keys to select **Users** and press **ENTER**.
- Select **00-Add New User** and press **ENTER**.
- Enter a Name and a 4-digit Passcode.  
**NOTE:** Each user must have a unique 4-digit passcode.
- Use **→** and **←** keys to grant or deny Administrator privileges.
- If equipped, an RFID card can be scanned to populate the RFID field.  
**NOTE:** Only one RFID card can be assigned per user, cards cannot be shared between other users.
- Press the **ESC** key to exit.
- When prompted to save changes, press **ENTER** to save or **ESC** to cancel.

```
LITE Admin Menu
1-Users
2-Devices
3-Applications
4-Unit Info/Config
5-Set Date & Time
6-USB Options
7-Network Setup
8-Reporting
```

```
Edit Users
>00-Add New User
01-administrator
```

```
Editing User #02
Name: Jason
Password: 1234
Admin: >NO< YES
RFID: 0000000000
(DELETE Entry)
```

```
Editing User #02
<SAVE Entry>
ENTER to save
ESC to ignore
```

## Users (continued)

### Editing a User

- Select a user in the list and press **ENTER**.
- Edit the user settings as necessary
- Press the **ESC** key to exit.
- When prompted to save changes, press **ENTER** to save or **ESC** to cancel.

```
Edit Users
00-Add New User
01-administrator
>02-Jason
```

```
Editing User #02
Name: Jason
Password: 1234
Admin: >NO< YES
RFID: 0000000000
(DELETE Entry)
```

### Deleting a User

- Select a user in the list and press **ENTER**.
- Use the **↓** key to scroll to the bottom of the screen.
- Select **<DELETED Entry>** and press **ENTER**.
- When asked to confirm, press **ENTER** again.

```
Editing User #02
Name: Jason
Password: 1234
Admin: >NO< YES
RFID: 0000000000
> Are you SURE?
```



### CAUTION:

The unit will always require at least one user to be an administrator. Be careful not to delete all of the administrators!

## Devices

### Adding a Device

- Make sure devices are connected and green lights are illuminated.
- Log in as an administrator.
- Use **↑** and **↓** keys to select **Devices** and press **ENTER**.
- Select a device from the list and press **ENTER**.

**NOTE:** When new Devices are first connected, they will appear in the Device list with the name "CONFIG PUMP"

**TIP:** A red indicating light will blink on the currently selected device

- Type in a name for the device
- Select the Device Type:
  - AODD PUMP** - Constant output
  - Valve** - Constant output
  - Piston Pump** - Pulsed output with user defined stroke Volume and ON/OFF cycle Time.
- If Piston Pump is selected, enter stroke volume and ON/OFF Time
- If you wish to prime, press the **START** key to turn the Device output on and press **STOP** when to turn off.

### **WARNING:**

Pressing the **START** key on this screen will cause the output to turn on and the pump to run! Wear PPE and be ready to contain the flow of chemical in an appropriate vessel!

- Press the **ESC** key to exit.
- When prompted to save changes, press **ENTER** to save or **ESC** to cancel.

```
Edit Devices
>0555-CONFIG PUMP
0875-CONFIG PUMP
0689-Water (Red)
```

```
Editing Device #0555
Demo Chemical
Type: AODD Pump
Prime (Start/Stop)
(DELETE Entry)
```

```
Editing Device #0555
Demo Chemical
Type: Piston Pump
Prime (Start/Stop)
Volume: 000.00oz
ON Time: 00.0s
OFF Time: 00.0s
(DELETE Entry)
```

```
Editing Device #0555
<SAVE Entry>
ENTER to save
ESC to ignore
```

## Devices (continued)

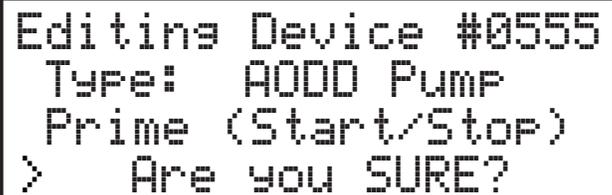
### Deleting a Device

- Select a Device in the list and press **ENTER**.
- Use the ↓ key to scroll to the bottom of the screen.
- Select (DELETE Entry) and press **ENTER**.
- When asked to confirm, press **ENTER** again.



Editing Device #0555  
Type: AODD PUMP  
Prime (Start/Stop)  
> (DELETE Entry)

This screenshot shows the terminal interface for editing device #0555. The user has navigated to the bottom of the screen where the option '(DELETE Entry)' is highlighted. A downward arrow above the box indicates the previous screen.



Editing Device #0555  
Type: AODD PUMP  
Prime (Start/Stop)  
> Are you SURE?

This screenshot shows the terminal interface after selecting the delete option. The prompt '> Are you SURE?' is displayed, indicating a confirmation step. A downward arrow above the box indicates the previous screen.

## Applications

The **ALX-LITE** is designed to accommodate multiple step dispense applications for up to 6 chemicals at a time. Dispenses are controlled via simple time values with the option of multiple products per dispense Application. New Applications are set up directly on the unit and can be modified at any time.

### Adding an Application

- Log in as an administrator.
- Use **↑** and **↓** keys to select **APPlications** and press **ENTER**.
- Select **00-Add New APP** and press **ENTER**.
- Enter a 3-digit Access Code and a Name.

**NOTE:** Each Application must have a unique 3-digit code.

- Select **Add dispense step** and press **ENTER**.
- Select a Device. The Device name will be displayed below.
- Set the On Time for the Fixed Time Dispense Type:
  - **Fixed Time** - Will energize the Device for the amount of time specified in the **Time#** field and requires **Volume#** to be manually entered for Reporting purposes.

**NOTE:** If the Device is configured as a Piston Pump, the **Type#** field will show **Piston Pump**. **Volume#** must be manually entered and **Time#** is automatically calculated.

- Press **ESC** to return to previous screen.
- Repeat steps 5-7 above to add more dispense steps or press **ESC** if finished.
- When prompted to save changes, press **ENTER** to save or **ESC** to cancel.

```
Edit Applications
>000-Add New APP
001-Demo APP 1
```

```
Editing APP #123
Name:Demo APP 2
APP Long ID:
Demo Application 2
>Add dispense step
```

```
APP# 123 Step# 1
Device #0689 A000
Name:Water (Red)
Time: 000m:15s
Volume:
000.50GAL 000.00 oz
<DELETE Entry>
```

```
Editing APP #123
Name:Demo APP 2
Step#1-Water (Red)
Step#2-Demo Chemic
Add dispense step
<DELETE APP>
```

## Applications (continued)

### Deleting a Dispense Step

- Select an Application in the list and press **ENTER**.
- Select the **Step#** you wish to delete and press the **DEL** key.
- When asked to confirm, press **ENTER** to save or **ESC** to cancel.

### OR

- Select the **Step#** you wish to delete and press **ENTER** to open its Edit screen.
- Use the **↓** key to scroll to the bottom of the screen.
- Select **<DELETE Entry>** and press **ENTER**.
- When asked to confirm, press **ENTER** again.

### Deleting an Application

- Select an Application in the list and press **ENTER**.
- Use the **↓** key to scroll to the bottom of the screen.
- Select **<DELETE APP>** and press **ENTER**.
- When asked to confirm, press **ENTER** again.

```
Edit Applications
000-Add New APP
001-Demo APP 1
>123-Demo APP 2
```

```
Editing APP #123
Name:Demo APP 2
Step#1-Water (Red)
>Step#2-Demo Chemic
Add dispense step
(DELETE APP)
```

```
APP# 123 Step# 1
Device #0689 A000
Name:Water (Red)
Time: 000m:15s
Volume:
000.50GAL 000.00 oz
> <DELETE Entry>
```

```
Time:000m:15s
Volume:
000.50GAL 000.00oz
> (DELETE APP)
```

```
Time:000m:15s
Volume:
000.50GAL 000.00oz
> Are you SURE?
```

General

Installation

Configuration

Operation

Troubleshooting

Appendices

## Unit Info/Configuration

- Log in as an administrator.
- Use **↑** and **↓** keys to select Unit Info/Config and press **ENTER**.
- Use **↑** and **↓** keys to select an option and **→** and **←** keys to change selections
  - Login Level:** Switches the user login between Users, RFID, and Admin

**NOTE:** When User Login is set to Admin, the bottom of the home screen will not require a login code and will read Press START To Begin. When set to Users or RFID, the screen will read Enter Passcode and requires Users to enter their 4-digit passcode or scan their RFID card (if applicable).

- Login Level:** Turns dispense log recording on and off.
- Language:** sets the default language that the controller will revert to each time it is rebooted.
- Units:** Imperial (Gal, oz) or Metric (L, ml)
- Version #:** Identifies the software version installed
- Built On:** Identifies the date when the unit was created by manufacturer.

```
Unit ID#: 123456
Login Level: Users
Logging: ON
Language: English
Units: Imperial
Version #: 106
Built On: 01/11/2017
```

```
01/11/2017 01:27PM
CleanLogix ALX-LITE
Welcome!
Press START To Begin
```

```
01/11/2017 01:27PM
CleanLogix ALX-LITE
Welcome!
Enter Passcode
```

## Set Date & Time

- Login as an administrator.
- Use **↑** and **↓** keys to select Set Date & Time and press **ENTER**.
- Use **→** and **←** keys to select a field and **↑** and **↓** keys to change it.
- Press **ESC** to exit.

```
Date
M: 01 D: 11 Y: 2017
Time
H: 04 M: 10 PM
```

## USB Options

The ALX-LITE includes a 8GB USB drive already plugged into the port on the bottom of the controller. The controller will store dispense logs on this USB drive, which can be retrieved manually at anytime. The USB drive can also be used to import and export controller settings (Users, Devices, Applications) and for software updates.

```
USB Options
Update USB logs
Export configs
Import users
Import apps
Import devices
Update firmware
```

### CAUTION:

Leave a USB drive plugged into the unit at all times, except when manually retrieving logs or importing/exporting. If the USB drive is removed indefinitely or for long periods of time, the controller will be unable to record data!

## Export Settings

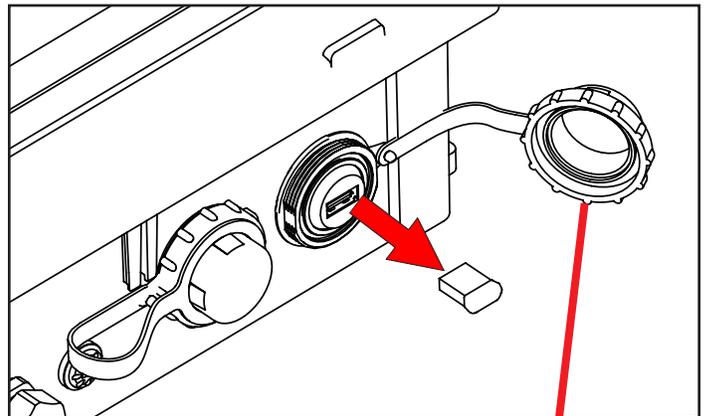
This will export the controller settings for Users, Devices and Applications. It will create a file for each on the USB drive with the suffix **export.db**.

- Make sure a USB drive is plugged into the controller port.
- Log in as an administrator.
- Use **↑** and **↓** keys to select `USB Options` and press **ENTER**.
- Use **↑** and **↓** keys to select `Export configs` and press **ENTER**.

## Import Settings

This will import previously saved settings for Users, Devices and Applications.

- Follow the steps above to export settings onto a USB drive and plug it into a laptop.
- Save a copy of each **export.db** file to be imported and rename each to **import.db**
- Plug the USB drive back into the controller
- Use **↑** and **↓** keys to select `Import` for the items to be imported and press **ENTER**.



### CAUTION:

Always make sure to install and tighten the protective cap after the USB flash drive is re-inserted. If using a flash drive other than the one included, make sure the protective cap will still fit in place and screw on all the way!

**EXAMPLE:** `usersExport.db` will be copied and renamed `usersImport.db` in the same file location.

**NOTE:** When importing settings, the system will automatically reboot when finished.

## Dispensing an Application

- If the screen says `Press START to Begin`, Press **START**.
- If the screen says `Enter Passcode`, Type in a 4-digit passcode or swipe a valid RFID card.
- Select an Application either by using the **↑** and **↓** keys, then press **ENTER** to select the Application.

**TIP:** You can use the number keys to begin typing a specific Application number to filter the list below.

- Make sure the dispense hose is in an appropriate size container.
- Press **START**.
- The screen will show a status bar, the elapsed time (C 0:07) and the total Application time (T 0:20).
- When the application completes, the screen will show `Dispense Complete` and a summary.
- To return to the previous Select App screen press **ESC**.
- Press **START** or **ENTER** to dispense another Application.
- To stay log out press **ESC** again to return to the main screen.

**TIP:** if any errors appear, refer to the troubleshooting guide on the following pages

```
11/11/2016  01:27PM
CleanLogix ALX-LITE
Welcome!
Enter Passcode
```

```
11/11/2016  01:27PM
Passcode: XXXX
```

```
Select APP #---
001-Demo APP 1
123-Demo APP 2
```

```
APP # & Name: #123
Demo APP 2
Press START To
Dispense
```

```
Dispensing APP #123
Demo APP 2
STATUS■■■■■■■
Time C 0:07 / T 0:20
```

```
Cheers!
Dispense Complete
#123 Demo APP 2
Total: T00:20/0.750G
```

## USB Reporting

### Export Dispense Logs

- Make sure a USB drive is plugged into the controller port.
- Log in as an administrator.
- Use **↑** and **↓** keys to select `USB Options` and press **ENTER**.
- Use **↑** and **↓** keys to select `Update USB Dispense Logs` and press **ENTER**.
- Remove the USB drive and plug it into a laptop or computer to view the .CSV file.

```
USB Options
>Update USB logs
Export configs
Import users
Import apps
Import devices
Update firmware
```

*Troubleshooting*

Oh No!  
Dispense Cancelled!

<b>Cause</b>	User pressed STOP before the dispense finished.
<b>Solution</b>	During a dispense, do not press any buttons until the post-dispense screen appears, signaling the end of the dispense.

Application  
confis is  
invalid

<b>Causes</b>	When attempting to dispense an Application, one or more of the following is true: <ul style="list-style-type: none"><li>▪ The Application does not contain any dispense steps</li><li>▪ The Application contains a dispense step with a zero time value</li></ul>
<b>Solution</b>	Log into the Admin screen, then under "Applications" select the Application, then check and correct the above conditions.

Device missing.  
Unable to start  
dispense!

<b>Cause</b>	One or more of the Devices assigned to this Application has been disconnected from the CAN network.
<b>Solution</b>	Ensure there are solid green lights on all of the Devices. Flashing lights indicate a loss of communication. Check orange M12 cable connections to ensure they are not corroded or damaged.

Troubleshooting (continued)

General

Installation

Configuration

Operation

Troubleshooting

Appendices

Select APP#---  
No applications

<b>Cause</b>	No Applications are setup.
<b>Solution</b>	Login as an Administrator and create new Applications (Page 14).

Action Failed

<b>Cause</b>	Export Settings was attempted, but there is no USB drive in the USB port.
<b>Solution</b>	Plug in a USB drive and retry.

INVALID user, Abort?  
Are you SURE?  
Press 1 for Yes  
Press 2 for No

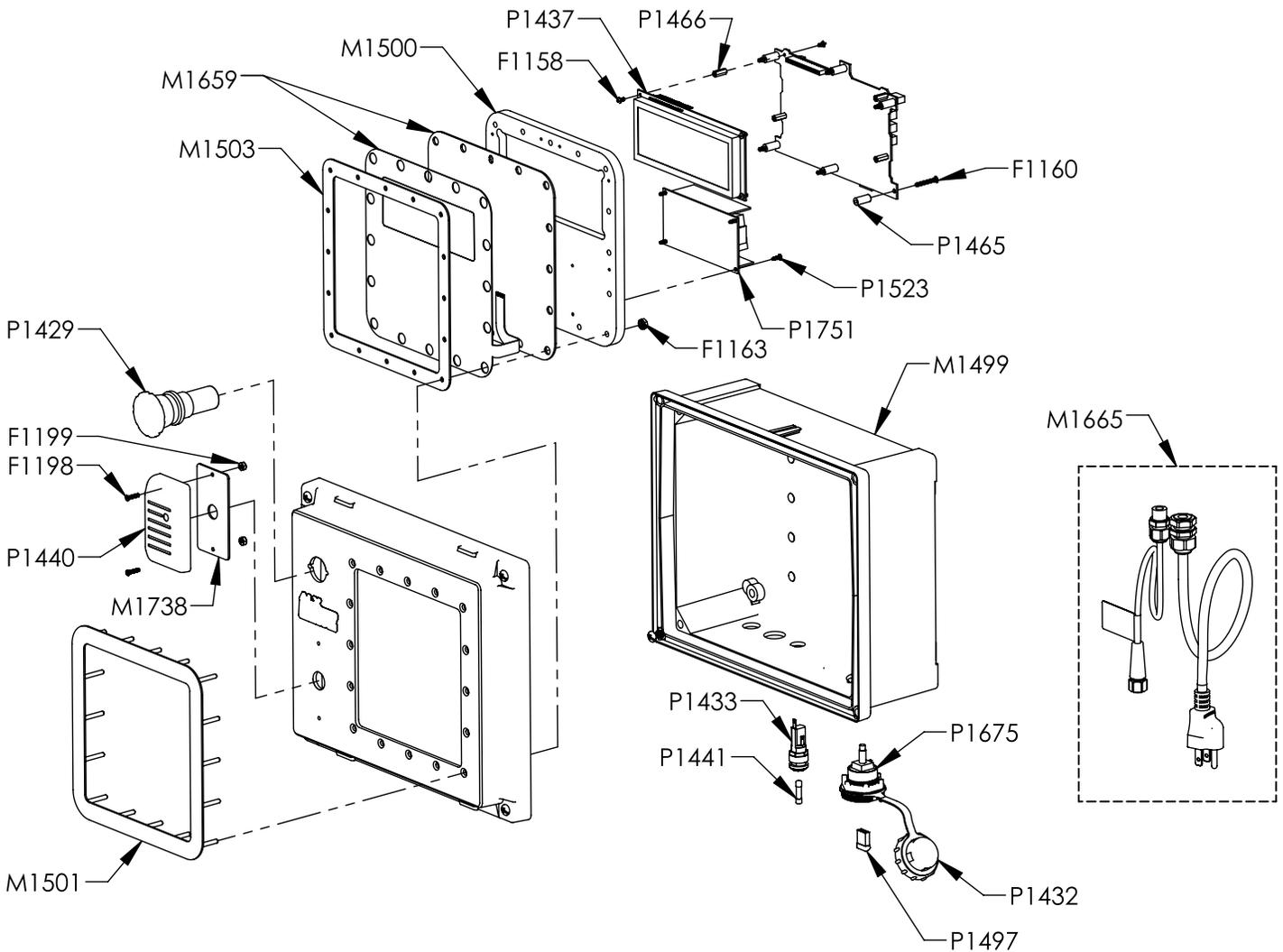
<b>Causes</b>	When creating or editing a User, one or more of the following is true: <ul style="list-style-type: none"><li>▪ User passcode is already in use</li><li>▪ User passcode is missing</li><li>▪ User name is missing</li></ul>
<b>Solution</b>	Press 2, then check and correct the above conditions.

# USER MANUAL: ALX-OMNI-LITE

READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



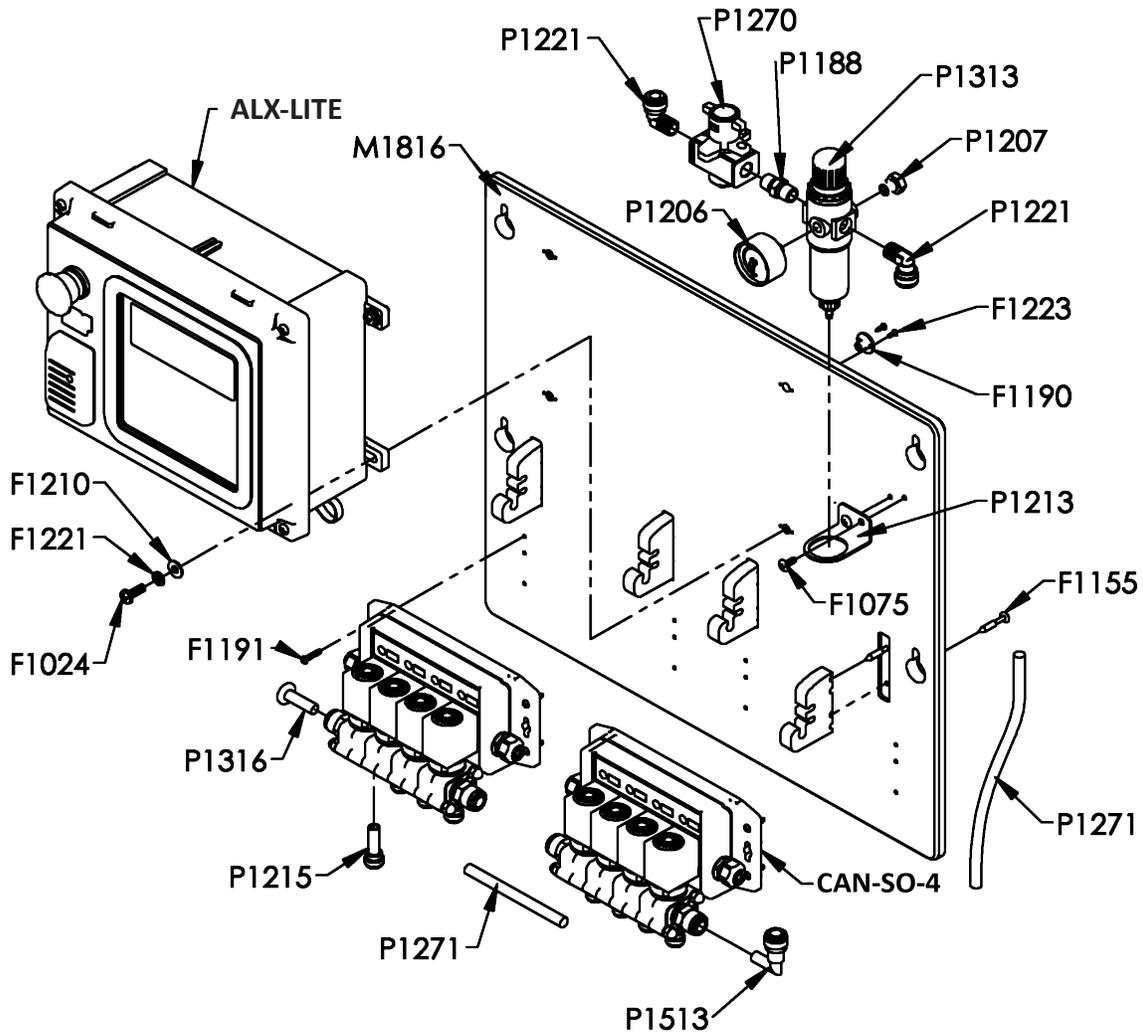
## Appendix A - Parts Callout



Part No.	Description
F1158	SCREW MACHINE M2.5 X 5 SS PHILLIPS PAN HD
F1160	SCREW MACHINE 4-40 X 7/8 ZN PHILLIPS PAN HD
F1163	NUT KEPS LOCK 6-32 ZN
F1198	SCREW MACHINE 4-40 X 1/2 FLAT HEAD PHILLIPS 316SS
F1199	NUT NYLOCK 4-40 ZN
M1499	CONTROLLER ENCLOSURE
M1500	MEMBRANE BACK PLATE
M1501	MEMBRANE BEZEL
M1503	GASKET 200 SERIES KEYPAD
M1659	KEYPAD REPLACEMENT KIT FOR LITE/ELITE CONTROLLERS
M1665	WIRING - LITE SERIES - HARNESS ASSEMBLY
M1738	GASKET RFID PROXPOINT PLUS

Part No.	Description
P1429	PUSH-PULL BUTTON RED 40MM
P1432	USB DUST CAP ASSY
P1433	FUSE HOLDER 250V 10A PANEL MOUNT
P1437	LED DISPLAY 4X20
P1440	RFID READER HID PROXPOINT PLUS 6500 (optional)
P1441	FUSE 250VAC 2A 5X20
P1465	SPACER #4 X 1/4" X 9/16" NYLON
P1466	STANDOFF M2.5 X 12 BRASS
P1497	USB FLASH DRIVE 8GB LOW PROFILE
P1523	SCREW #4-24 X 5/16" HI-LO PHILLIPS PAN ZN
P1675	RECEPTACLE USB-A CIRCULAR SEALED w/0.50m CABLE
P1751	POWER SUPPLY 24V 2.5 AMP 60 WATT OPEN FRAME

## Appendix A - Parts Callout (continued)



Part No.	Description
CAN-SO-4	CAN CONNECTED MODULE WITH FOUR 3-WAY MANIFOLDED VALVES
ALX-LITE	ALX-LITE ALLOCATION CONTROLLER
F1024	SCREW MACHINE 1/4-20 x 3/4 SS PHILLIPS
F1075	SCREW SELF TAP 10-16 X 1/2 SS
F1155	SCREW SHARX #10 X 1-1/4 PAN HD 316SS
F1190	NUT BRAD TEE 1/4-20 SS
F1191	SCREW HI-LO 8-18 X 3/4 SS
F1210	WASHER FLAT 1/4 316SS
F1221	WASHER SPLIT LOCK 1/4 316SS
F1223	SCREW SELF TAP #4 X 3/8 316SS
M1816	BACK PLATE WITH 4 WIRE GUIDES (18.5" x 21.5")
P1188	PIPE HEX NIPPLE 1/4 SS

Part No.	Description
P1206	GAUGE 1-1/2" DUAL SCALE
P1207	PIPE HEX PLUG 1/8 POLY
P1213	MOUNTING BRACKET A33-82
P1215	QUICK FIT REDUCER 3/8" X 1/4"
P1221	QUICK FIT ELBOW 1/4" NPT x 3/8" TUBE
P1270	SHUTOFF/LOCKOUT VALVE 1/4 NPT
P1271	3/8" OD POLYETHYLENE TUBING - NATURAL - 1"
P1271	3/8" OD POLYETHYLENE TUBING - NATURAL - 1"
P1313	REGULATOR 1/4"
P1316	QUICK FIT PLUG 3/8"
P1513	QUICK FIT STEM ELBOW 3/8" X 3/8"
P1540	M12 PORT CAP