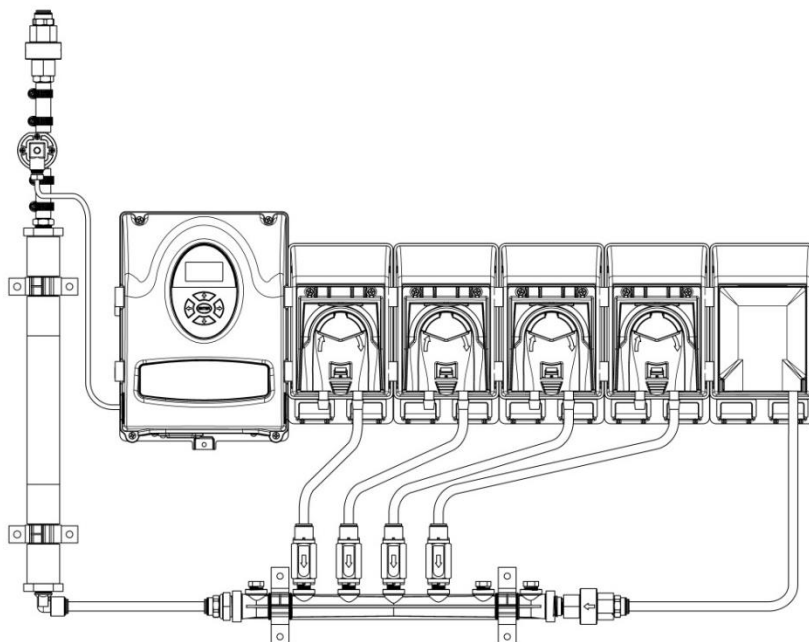# Aurora Chemical Measurement System

Installation and Setup Guide

The DEMA® Aurora Chemical Measurement System (CMS) for laundry applications. The Aurora CMS can be used in conjunction with the Aurora Laundry System, to accurately validate the amount of product being dispensed.

Warnings

Installation of DEMA products must meet all applicable electrical codes and regulations established by national, city, county, parish, provincial or other agencies. It is possible that electrical codes and regulations require that a certified electrical contractor or engineer perform the electrical installation. For questions, contact a certified electrician.

All installations must conform to local plumbing codes and use approved backflow prevention devices. A pressure indicating tee is to be installed with existing faucets according to local plumbing codes in the state of Wisconsin and any other state that requires the use of a pressure indicating tee.

Do not use this   Do not use this system with flammable or combustible products. for anything other than its intended purpose or injury could occur.
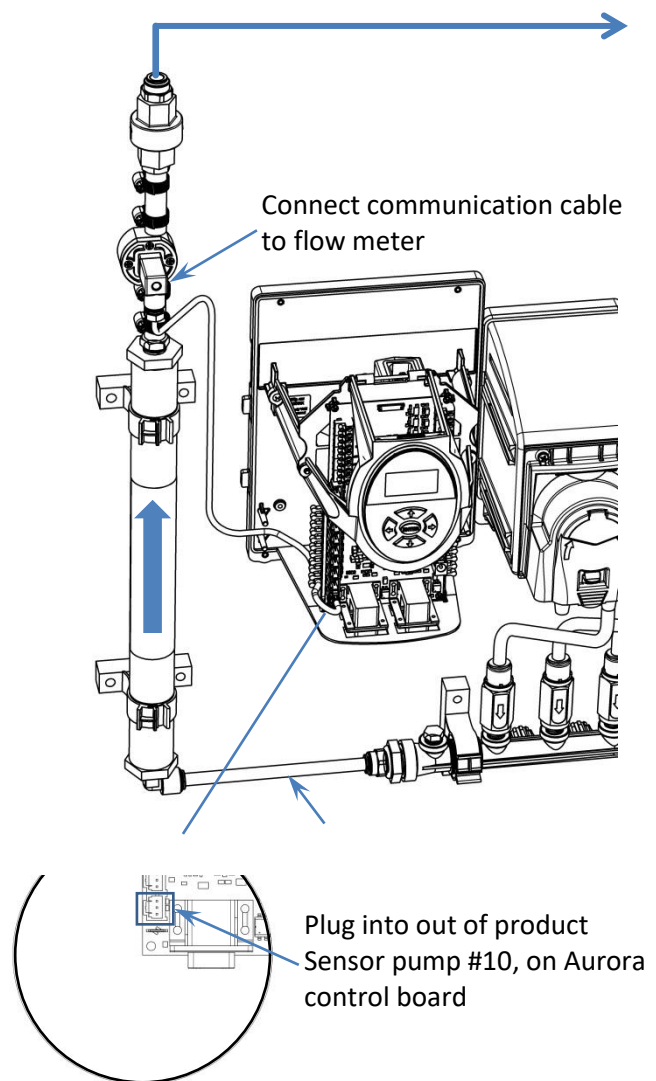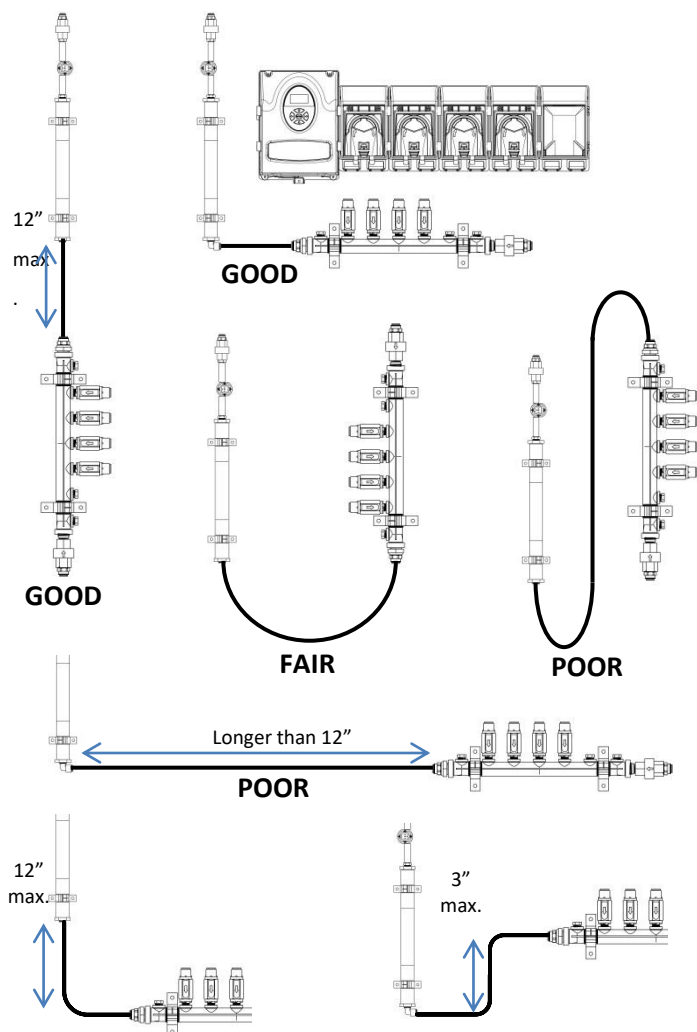
ALWAYS WEAR PROTECTIVE CLOTHING AND EYEWEAR WHEN WORKING WITH CHEMICAL PRODUCTS.

Installation

WARNING: INSTALLATION OF DEMA PRODUCTS MUST MEET ALL APPLICABLE ELECTRICAL CODES AND REGULATIONS ESTABLISHED BY NATIONAL, CITY, COUNTY, PARISH, PROVINCIAL OR OTHER AGENCIES. IT IS POSSIBLE THAT ELECTRICAL CODES AND REGULATIONS REQUIRE THAT A CERTIFIED ELECTRICAL CONTRACTOR OR ENGINEER PERFORM THE ELECTRICAL INSTALLATION. FOR QUESTIONS, CONTACT A CERTIFIED ELECTRICIAN.

1. Determine a suitable location to mount the Aurora CMS. The following should be considered:
   a. Install the accumulator assembly vertically, by using the flow direction label attach to the unit.
   b. The viscosity of the chemical may affect the Aurora CMS's performance. Longer distances of the chemical pick-up tubing may require larger diameter inlet tubing.
   c. Attach the outlet of the flush manifold to the inlet of the accumulator assembly. Use LDPE tubing that is no longer than 12" in length, to connect the manifold to the accumulator. The LDPE tubing should be cut long enough to make a good connection between the two JG fittings, but not too that it bends or kinks.
   d. Connect and screw the communication cable to the flow meter, and plug the other end into the out of product sensor, pump #10; on the Aurora control board of the Pump Driver assembly.
   e. Run the outlet tubing from the accumulator to the laundry machine.
2. Prime pumps and flush to remove air from the chemical/flush lines, and to check for leaks. If there are none, then proceed with programing the unit.


12"
max.
.

GOOD

GOOD

FAIR

POOR

Longer than 12"

POOR

12"
max.

3"
max.

Connect communication cable to flow meter

Plug into out of product Sensor pump #10, on Aurora control board

Programming & Setup

The Aurora CMS can only be programmed via the Pro-Access; programming via the DEMA is currently being developed.

Programming with Pro-Access
The Pro-Access has six buttons and the graphical LCD display that allows easy programming. The button arrangement consist of an enter button, navigational and selection arrow buttons and a return/back button.

- Enter button – Use this to enter the various programming screens and to save value or setting changes
- Navigational arrow buttons – Use these to navigate through the programming screens and selecting values or setting opportunities
- Return/Back button – Use this to return to previous screens

LCD Display

Up Arrow Button

Left Arrow Button

Return/Back Button

Right Arrow Button

Enter Button

Down Arrow
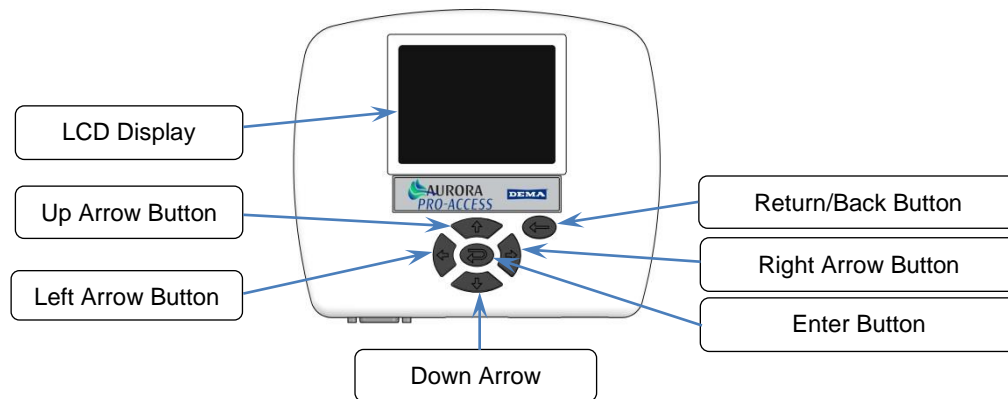
Enter the Main Menu of the Pro-Access:

Idle Screen – Status of any Aurora pump stands that are connected to the Pro-Access. This includes current formula and any active chemical pumps or flush. Each Pro-Access will support up to 8 Aurora pump stands.

Press Enter to access programming.

Language Screen – Select desired language and press Enter.

**Passcode Screen** – Enter the passcode and press Enter.

Select Pump Stand Screen – The various Aurora pump stands will be listed on the left side. Highlight the desired pump stand and press Enter. Pro-Access Configuration, Find Pump Stands, and Resort and Clear the list can be accessed by highlighting and pressing Enter.

Aurora Pump Stand – Allows full programming and setup for the Aurora Pump Stand.

- Select Pump Stand Configuration

Flushes/ Flow Meter – Select Flow Meter (The box should be filled, indicating that the Flow Meter has been selected.)

Check This Box.
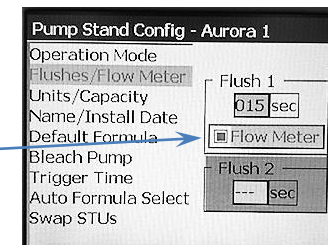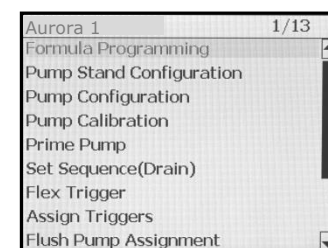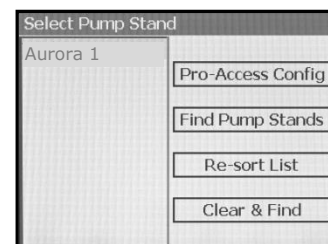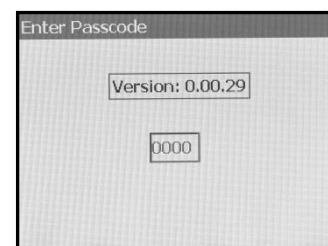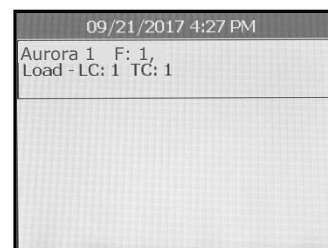
Units/ Capacity – Select Ounces or milliliters for the amount of product you to dispense. The capacity of the accumulator is 5 oz. The Aurora System must be set in ounces or milliliters. Make sure the pumps are primed, the system is now ready.
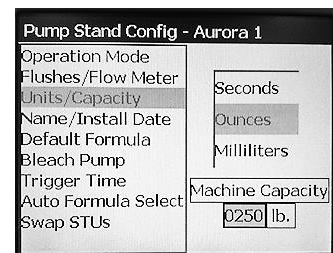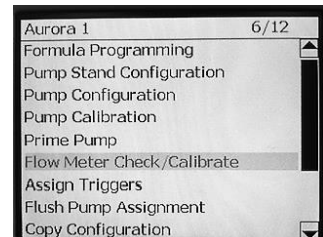

To verify or calibrate the flow meter, perform the following steps. Select the screen:

Flow Meter Check/ Calibrate – (Select Check/Calibrate)

- Check/ Calibrate
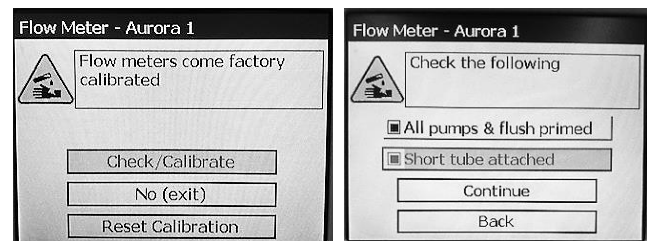- No (exit)
- Reset Calibration

(Select Check/Calibrate)

Check/ Calibrate – Verifies the calibration that comes set from the factory.

- Select all pumps & flush primed and short tube attached.

This is to collect the sample of product that from the accumulator.

For the next portion of the setup, you will need a short length of LDPE tubing (12"-24") to connect to the JG fitting of the accumulator assembly. This will be used to drain the system during the Pre-Flush.

Note: A Pre-flush is required before pumping chemical. Point or direct the short tube to the drain!

Check: Short tube in drain, then select Pre-Flush. DO NOT point the short tube at yourself or anyone while performing a Pre-Flush. After the Pre-Flush, you will be allowed to choose the pump you want to calibrate.

It will dispense 4 oz. Place the short tube into a graduated cylinder or a container to collect and measure the dispensed chemical.

- Check Tube in graduated cylinder
- Select Run Pump
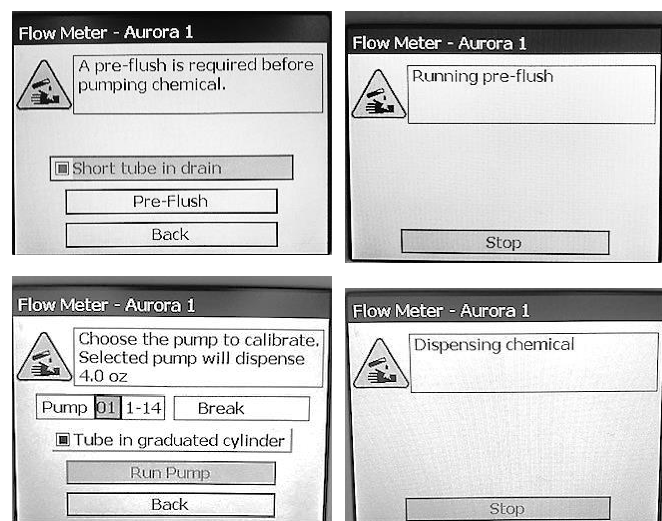
When the system has completed the run time, it will stop. It will ask if it dispensed 4 oz.?

If so, select: Yes (in range).
If not, select No (out of range).

If you select No, it will allow you to enter the measured volume collected. This will set a new calibration factor into the system. It will ask you to perform a post-flush.

- Check short tube in drain
- Select Flush (approximately 14 seconds runtime)

At this point you would re-run the calibration for that pump, and it should dispense 4 oz.
You would perform the post-flush, and then choose to select the next pump to be calibrated
or end the calibration process.

Reset Calibration – This function will allow you to reset all the pumps or select a particular pump to be calibrated.
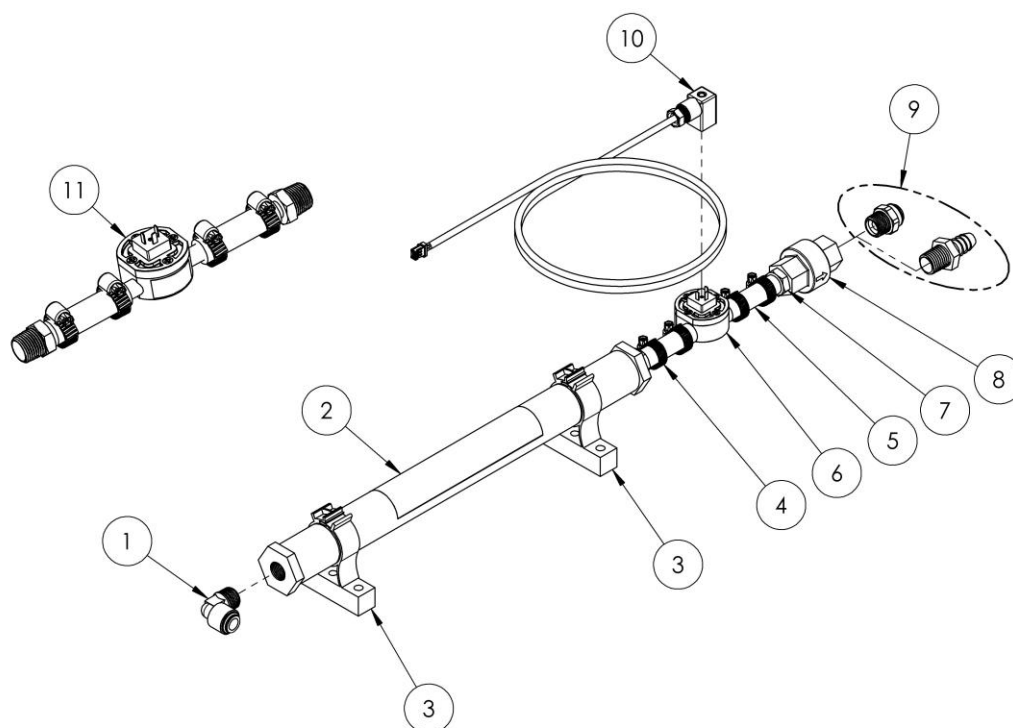
No Prod/Low Flow – This alarm message will appear and sound to notify you that no or low amounts of product is being dispensed. Some of the reasons are listed below:

- Pump cover not installed properly
- Squeeze tube worn to end of life
- Blockage in chemical lines or flow meter
- Out of chemical product

DEMA Engineering Aurora
Aurora FloMtr P1 No Prod./Low Flow
Aurora FloMtr F: 1, Sheets-White
Load - LC: 442 TC: 445
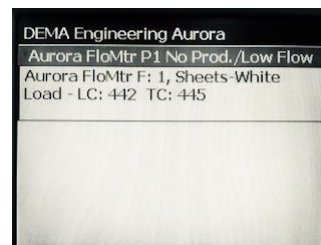
Parts List

Aurora Flow Meter Parts List		
Item No.	**DEMA Part No.**	**Description**
1	58.104.4	Fitting JG elbow 3/8 x 3/8 MNPT
2	86.100.22	Accumulator w/ end caps
3	95.22	Conduit clamp 3/4"
4	76.2.14	Hose clamp
5	66.98.10	Braided tubing, 3/8" id. X 2" long
6	41.212.1	Flow meter kit
7	66.119.31	Hose barb, 3/8" id. x 3/8 MNPT
8	95.23	Check valve 3/8 NPT
9	58.103.4	Straight JG fitting 3/8" od. X 3/8 MNPT
	66.119.19	Hose barb, 1/2" id. x 3/8 MNPT
10	41.051.1	Flow meter power cable
11	86.100.58	Flow meter kit with 3/8 MNPT fittings

Warranty

Merchandise Returns

No Merchandise will be Returned for Credit Without DEMA'S Written Permission.
Returned Merchandise Authorization Number is Required in Advance of Return.

Product Warranty

DEMA products are warranted against defective material and workmanship under normal use and service for one year from the date of manufacture. This limited warranty does not apply to any products that have a normal life shorter than one year or failure and damage caused by chemicals, corrosion, physical abuse, or misapplication. Rubber and synthetic rubber parts such as "O"-rings, diaphragms, PVC tubing, and gaskets are considered expendable and are not covered under warranty. This warranty is extended only to the original buyer of DEMA products. If products are altered or repaired without prior approval of DEMA, this warranty is void.