



OWNER'S MANUAL

14/06/2022 | REV01
210ZZ0-MAN-EN

CDL ROTOR FLOWMETERS



Models : 210100 | 210150 | 210200 | 210300

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INTRODUCTION

- **Important: This type of flowmeter will continue to count even if the water flow direction is reversed. Install a non-return valve if possible.**
- For maximum accuracy, it is important to choose the right model for your capacity. The typical flow rate of your production will determine the best model to choose. You can find this information in the **Product Features** section.
- Please make sure to read these instructions carefully before installing in order to ensure your flowmeter is as accurate as possible. In the **Installation Diagram** section, you will find examples of proper and improper installation.
- The flowmeters come pre-programmed from the company. You do not need to adjust the settings. By default, the display will be in gallons. However, you will be able to see it in litres on your CDL monitoring interface if you wish. See the **CDL Monitoring Interface** section.
- The flowmeter will automatically connect to your CDL monitoring system once you connect it to a power source. See the **CDL Monitoring Interface** section for more details.

PRODUCT FEATURES

Power supply: 24V DC

Flowmeter material: PVC

Accuracy: $\pm 5\%$

Maximum pressure: 150 PSI

Maximum temperature: 60 degrees Celsius or 140 degrees Fahrenheit

Protection: IP66

1 " model **210100**: Minimum flow rate = 11.5 GPM Maximum flow rate = **67 GPM**

1 ½ " model **210150**: Minimum flow rate = 30 GPM Maximum flow rate = **162 GPM**

2 " model **210200**: Minimum flow rate = 47 GPM Maximum flow rate = **303 GPM**

3 " model **210300**: Minimum flow rate = 108 GPM Maximum flow rate = **628 GPM**

RESETTING TO ZERO



Displays accumulated gallons

Display flow rate in gallons per minute (**gpm**)



Important

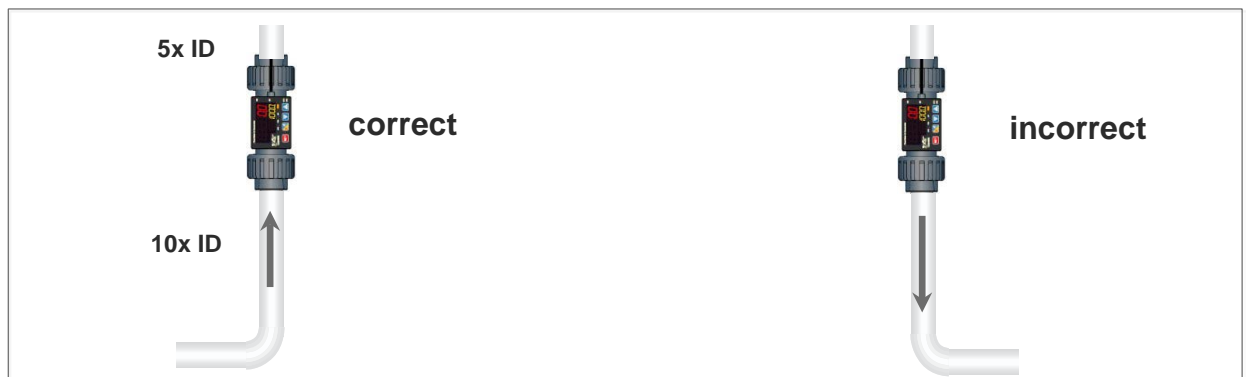
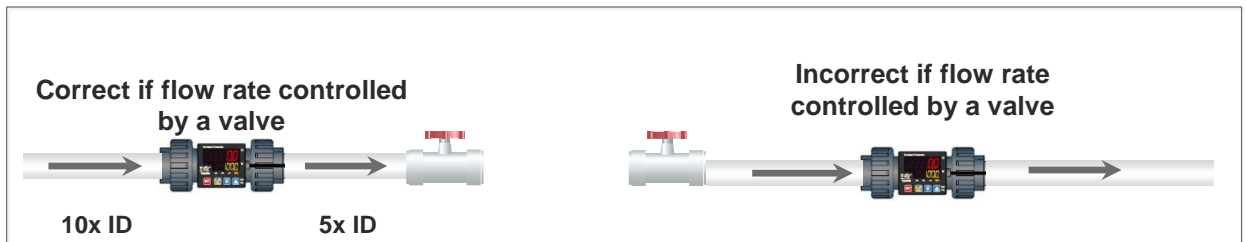
To reset the accumulated gallons to zero, press and hold these two buttons for 3 seconds.

INSTALLATION

Please read the notes below carefully before consulting the installation diagram for more details.

1. As a basic principle, the tube should always be full so that the flowmeter can get a proper reading.
2. Reduce turbulence inside the tube as much as possible to ensure accuracy.
3. The Mesh communication module can be screwed into the desired location.

INSTALLATION DIAGRAM



Note: The * ID *** is inner diameter**

SUMMARY BY MODEL

<p style="text-align: center;">1 " Model 210100</p> <p>10x ID = Straight line (no elbows) of 10'' minimum before the flowmeter's inlet 5x x ID = Straight line (no elbows) of 5'' minimum before the flowmeter's inlet</p>
<p style="text-align: center;">1 ½ " Model 210150</p> <p>10x ID = Straight line (no elbows) of 15'' minimum before the flowmeter's inlet 5x x ID = Straight line (no elbows) of 7 ½'' minimum before the flowmeter's inlet</p>
<p style="text-align: center;">2 " Model 210200</p> <p>10x ID = Straight line (no elbows) of 20'' minimum before the flowmeter's inlet 5x x ID = Straight line (no elbows) of 10'' minimum before the flowmeter's inlet</p>
<p style="text-align: center;">3 " Model 210300</p> <p>10x ID = Straight line (no elbows) of 30'' minimum before the flowmeter's inlet 5x x ID = Straight line (no elbows) of 15'' minimum before the flowmeter's inlet</p>

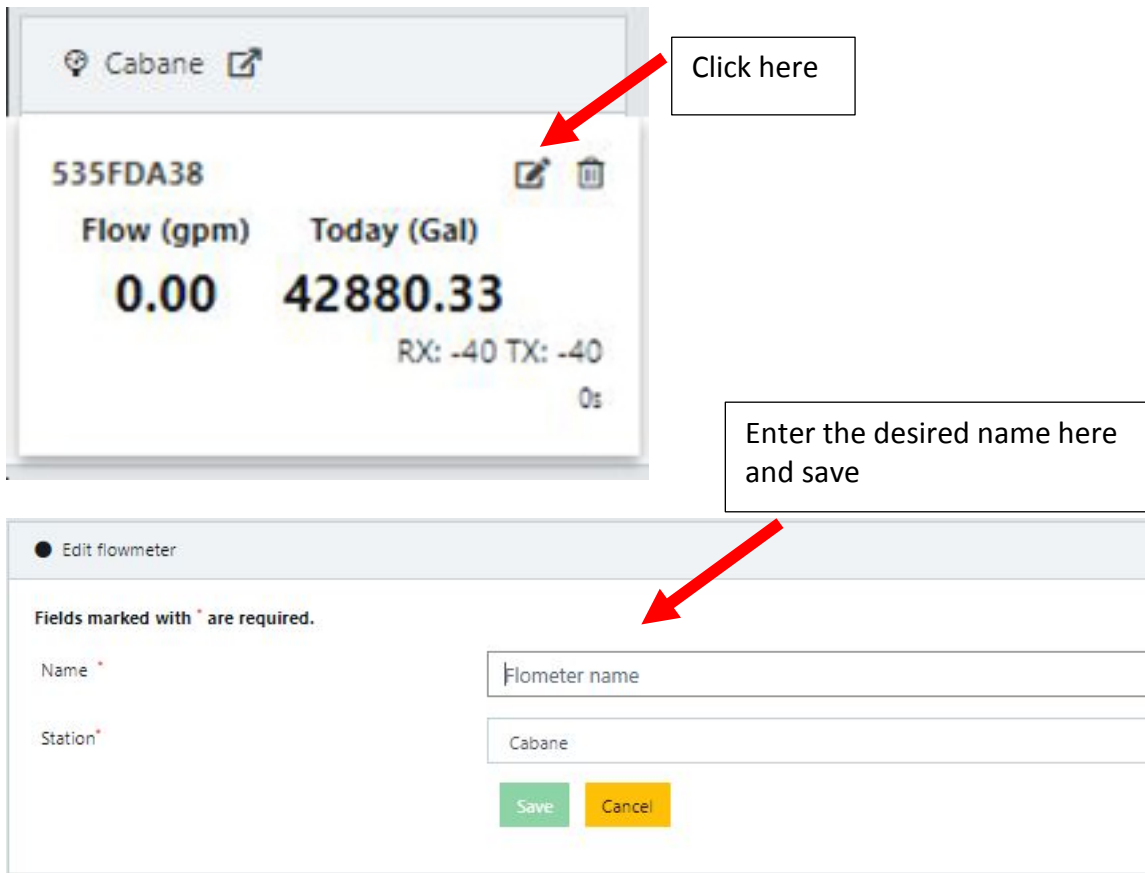
CDL MONITORING INTERFACE

Step 1: Find your flowmeter, which is connected to the CDL monitoring system, in the interface.

The screenshot shows the CDL Monitoring System interface. On the left is a dark sidebar with a 'MAIN MENU' containing several options: Automation, Vacuum sensors, Stations, Tanks, Devices, IO Controllers, Extractors, **Flowmeters** (highlighted in green), Pumps, Sniffers, Valves, and Brix sensors. The main content area is titled 'Tableau de bord / Débitmètres' and features a 'Cabane' button. Below it is a card for device '535FDA38' with a red arrow pointing to the device ID. The card displays 'Flow (gpm)' as 0.00 and 'Today (Gal)' as 42880.33. Below these values are smaller numbers: 'RX: -40 TX: -40' and '0s'. A second red arrow points from the 'Flowmeters' menu item to the device card. A text box on the right contains the following instructions:

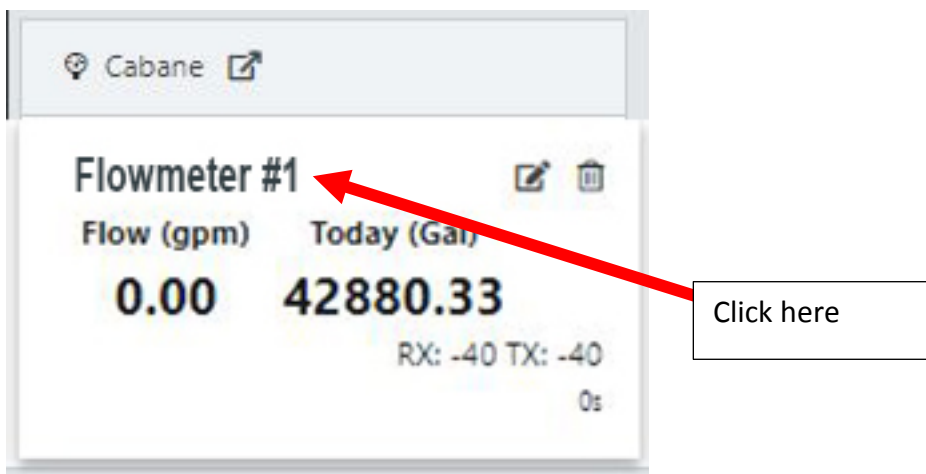
In the Device tab, click on **Flowmeters**.
You will be redirected to this page, where you will see your flowmeter's number.

Step 2: Rename your flowmeter as desired.



The image shows two parts of a software interface. The top part is a data card for a flowmeter with ID '535FDA38'. It displays 'Flow (gpm)' as 0.00 and 'Today (Gal)' as 42880.33. Below this, it shows 'RX: -40 TX: -40' and '0s'. There are edit and delete icons in the top right. A red arrow points from a 'Click here' box to the edit icon. The bottom part is an 'Edit flowmeter' form. It has a title 'Edit flowmeter' and a note 'Fields marked with * are required.'. There are two input fields: 'Name *' with the text 'Flometer name' and 'Station*' with the text 'Cabane'. At the bottom are 'Save' and 'Cancel' buttons. A red arrow points from a box containing the text 'Enter the desired name here and save' to the 'Name' input field.

To view a flowmeter's data, simply click on its tab.



The image shows a data card for a flowmeter. The name '535FDA38' has been replaced with 'Flowmeter #1'. The 'Flow (gpm)' is 0.00 and 'Today (Gal)' is 42880.33. Below this, it shows 'RX: -40 TX: -40' and '0s'. There are edit and delete icons in the top right. A red arrow points from a 'Click here' box to the 'Flowmeter #1' text.

This will give you access to specific, advanced information for your flowmeter such as:

- Flowmeter name
- Station name
- Last communication with CDL monitoring system
- Communication delay with CDL monitoring system
- Current flow rate
- Total accumulated for the day
- Total accumulated
- Signal strength
- Software versions
- Volume graph by day
- Volume graph by period (week, month or year)

MAINTENANCE

- **IMPORTANT!** Rinse well with **unsweetened (plain)** water at the end of the season.
- If the flow rate displays zero while running, make sure that the small inner rotor is not obstructed. Make sure it rotates freely, without friction. Use warm water to thoroughly rinse and clean it as needed to keep it turning freely.
- Turn off the power supply if the device is not going to be used for a long period of time. (Note: The flowmeter will remember the data that was displayed when the power was turned off.)
- When you restart the flowmeter each year, use your interface to make sure that the device is communicating properly with the monitoring system. Make sure the communication intervals are good.

WARRANTY

Your flowmeter is covered by a one-year limited warranty. For one year from the date of original purchase, CDL Maple Sugaring Equipment Inc. will repair or replace parts of this flowmeter that are defective in material or workmanship provided that the flowmeter is installed, operated, and maintained according to the instructions provided.

Exclusions

This warranty does not cover:

1. Products whose original serial number has been removed or modified or is not easily readable.
2. Equipment that has changed owners or is located outside of North America.
3. Breakage caused by poor drainage if the flowmeter has been stored below freezing.
4. Failure to follow CDL's maintenance procedure.
5. Production losses caused by problems with the flowmeter.
6. Loss of income caused by the quality of the syrup.
7. Service calls that do not involve malfunctions, manufacturing or material defects, or products that were not used according to the instructions provided.
8. Service calls to check installation or receive instruction on using the flowmeter.
9. Service calls after one year.
10. Damage caused by: repairs made by unauthorized technicians; use of parts other than original CDL parts or parts that were not obtained from an authorized technician; or external causes like abuse, misuse, accidents, fires, or natural disasters.
11. Damage caused by misuse, negligence, modifications made by the customer, or electrical problems.
12. Damage caused by the use of products not intended for use with the flowmeter or misuse of cleaning products.

Disclaimer of Warranties; Limitation of Remedies

The customer's sole remedy under this limited warranty is the repair or replacement of the product as described above. Claims based on warranties, including warranties of merchantability or fitness for a particular purpose, are limited to two years or the shortest period permitted by law, which shall not be less than two years.

CDL Maple Sugaring Equipment Inc. shall not be held responsible for incidental or indirect damages or for material and implicit damages. Some states and provinces do not allow limitations or exemptions on incidental or indirect damages or limitations on warranties. In this case, these restrictions or exemptions may not be applicable. This written warranty gives you specific legal rights. Depending on the state or province, you may have other rights.

If you need to call the repair service

Keep your receipt, delivery note, or other valid proof of payment to establish the warranty period in case you need to call for repairs. If a repair is made, it is in your best interest to obtain and keep all receipts. The service to which you are entitled under this warranty must be obtained by contacting CDL at the addresses or telephone numbers below.

Your flowmeter will be serviced by CDL in Canada. Any features and specifications described or illustrated are subject to change without notice.

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