



# USER'S MANUAL



## CDL'S AUTOMATIC DRAW-OFF VALVES

Les Équipements d'Érablière CDL inc.

Thank you for choosing a CDL automatic draw off valve. Our 25 years of experience working with sugar makers ensures you that you acquired a performant and quality piece of equipment. Before using this product, make sure you understand all the following instructions. If there is any problem upon reception of this product, please immediately contact CDL or your local representative.

## FINDING INFORMATION

### Make a record for future use

Brand: \_\_\_\_\_

Purchased Date: \_\_\_\_\_

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

### Serial number location

The serial number is located under the valve control box



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## SAFETY

Operate your modulating draw-off valve with caution. It operates with 120 volt power. Do not open the control box or the motor. If service is required, call to you local dealer or CDL. Never introduce a foreign object or fingers in the butterfly valve. The valve gets in contact with very hot maple syrup, so the butterfly valve will get hot. Always wear heat resistant gloves when you work with hot maple syrup.

## INSTALLATION



Attach the butterfly valve to the syrup pan using a clips  
Like the one shown on the right



Depending on what side you draw off, you may have to modify the valve adjustment by loosen the 2 nuts and adjust the valve arm so the valve is closed and the valve arm is free to open counter clock wise to open the valve



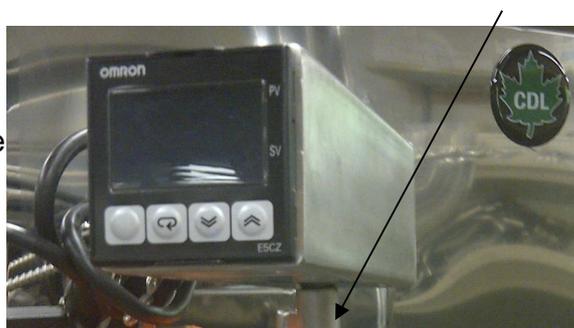
Loosen these 2 nuts

Install the Belimo motor on the valve by sliding it down. Make sure the square pin slide inside the handle and the flat notch fits inside the motor slot.



Slide

the controller threaded rod in the stainless steel tube



You can screw in, the SS nut after, but it makes it less convenient to remove the controller after



- Connect the controller to the valve motor



- It is recommended to install after the butterfly valve a draw-off elbow. It will give a nicer stream of syrup coming out and it will prevent it from splashing in every direction.
- Install the temperature probe in the pan (we suggest to use CDL's probe holder)



- The probe position will vary with evaporator size. It needs to be 1/4" from the bottom of the pan.  
**Make sure the probe doesn't touch the bottom of the pan, it will burn the probe.**
- Hook up the power to the valve (120 volts)

When everything is hooked up, make sure the butterfly valve is closed. If it's open, manually close it.

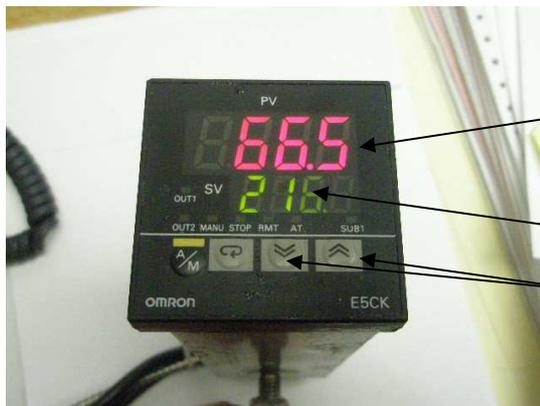
To manually turn the valve, push the black button on the orange motor and turn the valve handle as shown on the above picture



When you operate the thermoregulatory, at any moment, you can push the black button to free the valve. By releasing the button, the valve automatically returns to the right position.

## OPERATE THE VALVE





Syrup temperature

Set point

Up and down adjustment arrows

- Make sure everything is installed as described in the previous section
- Adjust the set point temperature (Normally at 219°F), using the up and down arrows
- This temperature will vary with atmospheric pressure. Use the boiling temperature of water plus 7°F
- The other 2 buttons of the control are not used for our application.
- When the syrup reaches the set temperature, the valve will start drawing off syrup.
- Always double check the brix level of the syrup coming out of the valve with a hydrometer and adjust the valve set point if needed.
- Adjust the temperature of the controller if necessary, increase the set point by 1 or 2 tenths to thicken the syrup. Reduce the temperature to make it lighter.

## MAINTENANCE

The only maintenance you need to do is to keep your valve and probe clean. If niter or sugar sand sticks to the butterfly valve, it will prevent it from operation properly and eventually will break the motor gears. If niter covers the probe, the temperature reading will be off. Clean the valve by taking the motor and controller off and soak the butterfly valve in a solution of pan acid. Do the same with the tip of the probe only. Follow the acid manufacturer's instructions to know what acid concentration to use. If niter build up on the valve causes the motor gears to break, it will not be covered by the warranty. For the storage of the unit after the season, lubricate the butterfly valve sealing rubber with vegetable oil.

## TROUBLESHOOTING GUIDE

Motor and valve won't turn  
Check electric switch



The valve is dirty and prevents the system from turning. Remove niter from the butterfly valve by soaking it in a solution of pan acid. Follow the product guidelines to know what concentration of acid to use.

Motor turns but not the valve.

Gears are worn out or broken. The motor will have to be replaced

The motor is not fasten hard enough on the shaft of the motor, tighten the nuts or verify the assembly and fix.

The valve is not installed properly. When the motor turns it is trying to close is even more instead of opening the valve. Unplug the valve, push the black push button on top of the motor and manually turn the valve 180°.

Syrup coming out of valve has the wrong brix

Verify the boiling temperature of water and adjust the set point of the valve

## **PARTS: 2" AUTOMATIC DRAW-OFF VALVE**

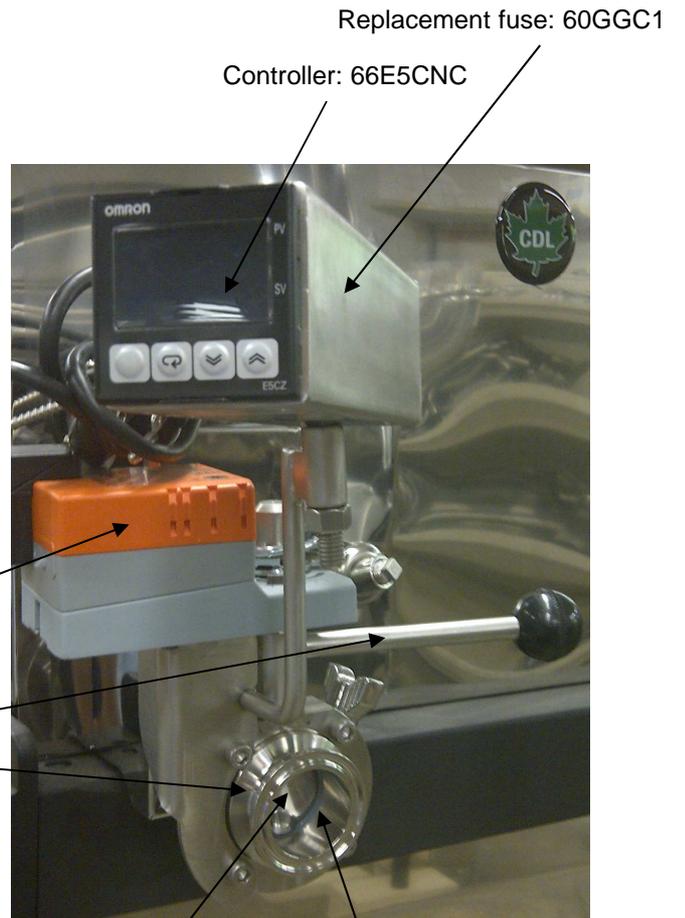




Clip 2": 60R13HC2

Draw-off elbow: 69BCD112

Silicone gasket 2": 60GASKET2SILI



Replacement fuse: 60GGC1

Controller: 66E5CNC

Motor: 66776

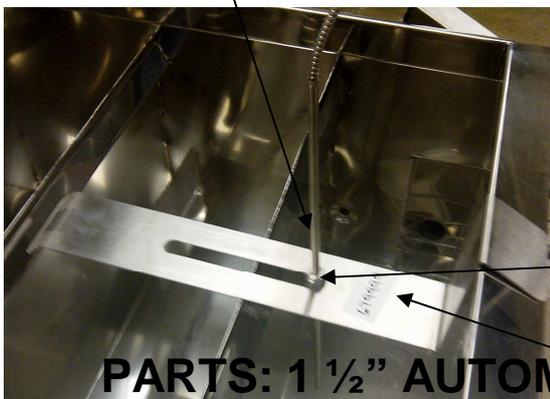
Replacement handle: 60P883

Butterfly valve 2": 60P88CC2

Gate 2": 60P882

Replacement gasket: 60GP2

Temperature probe: 661100



Probe tightening nut: 664544P

Probe holder: 679999

**PARTS: 1 1/2" AUTOMATIC DRAW-OFF VALVE**





Clip 2": 60R13HC112

Draw-off elbow: 69BCD150

Silicone gasket 2": 60GASKET112SILI

Temperature probe: 66100



Replacement handle: 60P883

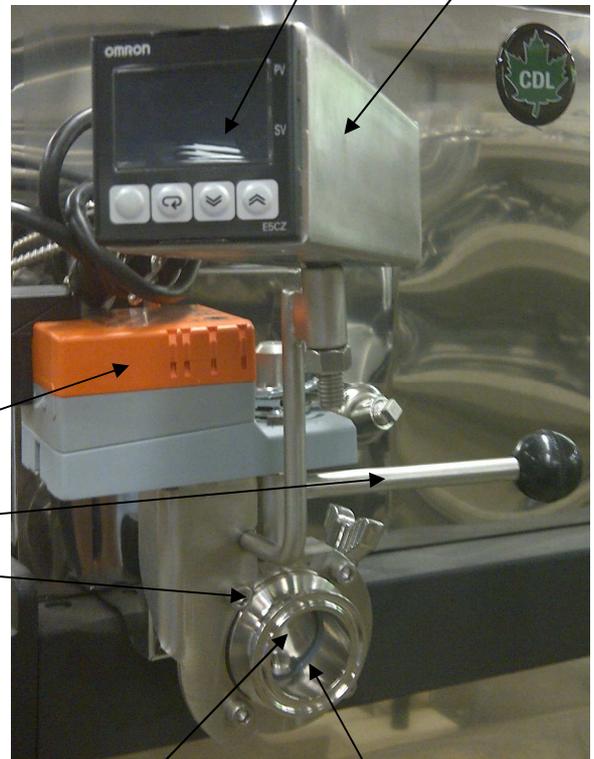
Butterfly valve 1 1/2 ": 60T150

Probe tightening nut: 664544P

Probe holder: 679999

Replacement fuse: 66GGC1

Controller: 66E5CNC



Motor: 66776

Gate 1 1/2": 60P88112:

Replacement gasket: 60GP112

## WARRANTY

Your new CDL automatic draw-off valve is covered by limited 2 year warranty against manufacturing defects. For two years from your original date of purchase, Les Équipements d'Érablière CDL (CDL), will replace or replace any parts of this



press that prove to be defective in materials or workmanship when such evaporator is installed, used and maintained in accordance with the provided instructions.

### **Exclusions**

This warranty does not cover the following:

1. Product that has been transferred from its original owner to another party or removed outside the USA or Canada.
2. If anything else than maple syrup is processed in the machine.
3. If the motor failed because the butterfly valve wasn't cleaned properly.
4. If normal maintenance is not performed as specified in the CDL owner's manual.
5. If the probe is burned because it touched the bottom of the syrup pan.
6. Production loss due to any kind of failure of the valve.
7. Revenue losses due to syrup quality or brix level.
8. Service calls which do not involve malfunction or defect in materials or workmanship, or used other than in accordance with the provided instructions.
9. Service calls to correct the installation of your valve or to instruct you how to use it.
10. Any service beyond the first two years.
11. Damages caused by: services performed by unauthorized service companies; use of parts other than genuine CDL parts or parts obtained from persons other than authorized service companies; or external causes such as abuse, misuse, inadequate power supply, accidents, fires, or acts of God.
12. It doesn't cover the consumable products or accessories.
13. If the product was damaged by abusive use, negligence, accident caused by the customer, modification made by the customer, variation in the electric power.
14. Damage cause by the use of products that are not meant for use with our equipment or a bad use of cleaning products.

### **Disclaimer of implied warranties; limitation of remedies**

Customer's sole and exclusive remedy under this limited warranty shall be repair or replacement as provided herein. Claims based on implied warranties, including warranties of merchantability or fitness for a particular purpose, are limited to two years or the shortest period allowed by law, but not less than two years. CDL shall not be liable for consequential or



incidental damages such as property damages and incidental expenses or loss or revenues caused by any event covered by this warranty. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages, or limitations on the duration of implied warranties, so these limitations or exclusions may not apply to you. This written warranty gives you specific legal rights. You may also have other rights that vary from states to states.

**If you need service**

Keep your receipt, delivery slip or some other appropriate payment record to establish the warranty period should service be required. If service is performed, it is in your best interest to obtain and keep all receipts. Service under this warranty must be obtained by contacting CDL at the addresses or phone numbers below. Obligations for service and parts under this warranty will be performed by CDL in Canada. Products features or specifications as described or illustrated are subject to change without notice.

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