



MAPLE SYRUP
EQUIPMENTS

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Automatic draw off user guide

Automatic draw off





The components of our automatic draw off



Operation

The Omron temperature controller displays the current temperature sensed by the probe and the desired syrup pouring temperature, indicated as PV and SV respectively.



Sensed temperature

Desired syrup temperature

Arrows to change the desired syrup draw off temperature



Before making maple syrup using the auto draw off, verify the temperature of boiling water with the automatic draw off probe, then add 7 degrees Fahrenheit to get the desired maple syrup temperature. Using the adjustment arrows, you can change SV to the corresponding value. In addition, there are two other adjustments that can optimize the operation of the device. These are detailed below.

Reactivity adjustment

With the default settings, for each 0.1 degree Farenheit above the desired pouring temperature, the auto draw off opens by 10 degrees. This is called reactivity. With our devic, you can adjust it by changing a parameter. The following explains how to access the parameter and what it does.

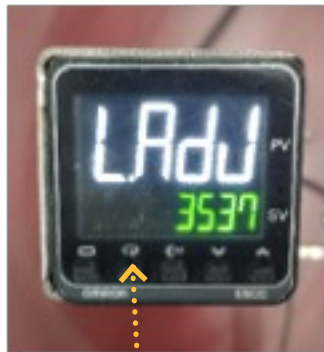
Procedure to access to the reactivity parameter (P)

Press the menu change button once:



Menu change button

The display should look like this:



Parameter change button

Then press twice on the parameter change button, it should be a P displayed, as shown in the next picture:



You are now on the right parameter to change the reactivity. Use the adjustment arrows to change the parameter.

To return to the operational menu, simply press the menu change button.

Explanations

The P at 1.0 is the basic adjustment that allows 10 degrees of valve opening for every 0.1 degree Fahrenheit that the sensed temperature is above the target temperature. If you increase P, you decrease the opening for every 0.1 degree. If you decrease P, you increase the opening for every 0.1 degree.

In short, if you want to increase the responsiveness, just decrease the P parameter.

Actuator's travel limit adjustment

Sometimes the butterfly valve can remain sealed over several degrees of actuator rotation. For instance, the valve could be sealed for the first 25 degrees of rotation of the actuator causing a delay between the targeted pouring temperature and the actual pouring. In order to remove that delay, the travel limit can be adjusted. The following procedure explains how to change travel limits of the actuator.

IMPORTANT

After moving the limits, press the adapt button to let the actuator find his new limits.

Procedure

On the actuator, there are two screws that mark the limits of the path, these are circled in the following figure:



You can reposition them on the guide as show:



Next, the most important step is to press the Adaptation button. If it is pressed correctly, the Status light will turn orange. The actuator checks the new limits by closing and opening completely. You should let it do this, once the adaptation is complete the Status light will go out and the actuator will resume normal operation.





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