



USER MANUAL



CDL MAPLE CREAM MACHINE

CDL Maple Sugaring Equipment Inc.

Thank-you for choosing a CDL Maple Cream Machine. Our years of experience serving maple producers guarantees that you have acquired an efficient and good quality piece of equipment. Before installing and operating the equipment, make sure you understand all of the instructions in this manual. In addition, if any problem occurs upon receipt of your equipment, immediately contact your local representative or CDL.

TAKE NOTES

Take note of the following details for future reference:

Brand: _____

Purchase date: _____

Model number: _____

Serial number: _____



Serial Number Location:

The serial number is located on the side of the machine.

Dimensions

Width.....63cm /25po

Height.....68cm /27po

Depth.....50cm /20po

Total weight.....41kg /90lb



IMPORTANT WARNING

Before the first use

Prepare a solution of hot soapy water and add the equivalent of one cup of vinegar (250 mL) or 15 mL (1/2 oz.) of acetic acid per gallon (4L) of solution.

Hand wash each component (stainless steel pipes, fittings, and valves) that may come in contact with maple sap or maple syrup.

Rinse and dry with a soft clean cloth.

This will remove any residual traces of manufacturing oil, polishing paste and/or packaging debris.



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SAFETY

Even though at first glance there seems to be no risks in operating a maple cream machine, accidents can occur. Always think "safety first" when operating any equipment. Never insert any object into the hole of the funnel. Never put your hand or fingers at the bottom of the funnel. If the cream machine is installed on a table, make sure it is leveled, stable and that the machine is far enough away from the edges of the table. When the machine is on, it may move. If it falls off of the table, its weight could seriously hurt someone.

A maple cream machine is quite heavy. If you have to move it, it is recommended that two people handle it to avoid back injuries.

Never turn a maple cream machine on its side or upside down. The oil contained in the speed reducer attached to the engine could drain out.

Handling hot maple syrup can be very dangerous. Always wear temperature-resistant gloves when handling a pan filled with hot maple syrup and be sure not to spill the contents on yourself or anyone nearby. Hot maple syrup can cause serious burns.



INSTALLATION

Install the machine on a flat, stable surface. It is recommended to clean the machine before using it for the first time. Fill the funnel halfway with hot water. Plug the machine into a 120-volt outlet. Turn the machine on and let the pump circulate water for about one minute. **Unplug the machine** and clean any remaining residue in the funnel if necessary. Open the drain valve and allow the machine to drain. When the water is drained, wipe down the walls to dry the machine. You are now ready to make maple cream.

OPERATING THE MACHING

HOW TO MAKE MAPLE CREAM

- 1- Before starting, make sure the machine is clean.
- 2- Use a large pot. The sides should be twice as high as the syrup level.
- 3- Prepare a cooling bath for the syrup. Preferably, use a pan that has a surface at least 3 times larger than the pot. The water level in the pan must reach the same level as the syrup in the pot. Do not forget to install a spacer at the bottom of the pan. The water must be able to circulate underneath the pot. Finally, the temperature of the cooling water must remain constant. So, water must constantly flow into the pan to keep its temperature cold. If running water is not available, add snow or ice every 30 minutes. **NEVER PUT THE PAN DIRECTLY IN SNOW OR ICE, THIS WILL NOT WORK.** (The ice becomes an insulator)

COOKING THE SYRUP

- 4- Calibrate the cooking thermometer. Ideally, use a thermometer specifically designed for cooking maple syrup. To calibrate it, bring water to a boil and adjust the needle to 0°F (therefore 0°F equals 212°F or 100°C). The use of a second thermometer is recommended in order to validate the results of the first.
- 5- Pour the syrup into the pot. For the smaller model, use a 7L pot (1.5 US gallons) of syrup and a 15L pot (3 US gallons) for the larger model.
- 6- Ideally, cook the syrup on a propane burner. A stove could be difficult to clean if a spill occurred.
- 7- Open the propane to maximum.
- 8- Add 1 tablespoon of Kosher anti-foaming agent to the syrup (2 tablespoons for the larger machine)
- 9- Grease the inside of the pan over the syrup, about 1" thick.
- 10- Put the thermometer in the syrup.
- 11- Allow the temperature to rise.
- 12- When the temperature reaches 2°F above the boiling point of water, reduce the heat by half.
- 13- They syrup should start to boil at 5°F.
- 14- AT THIS POINT, BE VERY CAREFUL, WHEN THE SYRUP STARTS TO BOIL, THE FOAM CAN RISE RAPIDLY AND SPILL. THIS IS WHY THE TEMPERATURE MUST BE REDUCED.



- 15- When the foam begins to rise, one teaspoon of antifoam or ¼ teaspoon of a greasy substance can be added directly into the pot.
- 16- When the foam stabilizes and the bubbles break down, the heat can be restored to maximum (at about 10°F)
- 17- The syrup will be ready at 22°F.
- 18- Always wear waterproof, heat resistant gloves when handling the pot.
- 19- IMPORTANT, DO NOT EXCEED 22°F. IT IS PREFERABLE TO STOP COOKING AT 21.5°F, THE TEMPERATURE OF THE SYRUP WILL CONTINUE TO GO UP A LITTLE MORE WHEN THE POT IS REMOVED FROM THE BURNER. If the temperature rises too high, the syrup will harden in the cream machine and it will be impossible to make maple cream.
- 20- As soon as the syrup reaches 22°F, take the pot and place it in the cooling pan.
- 21- Spray a little cold water on the surface of the syrup to prevent the formation of sugar crystals.
- 22- Make sure that there is running water circulating in the cooling pan.
- 23- Allow the syrup to cool for at least 6 hours, ideally 12 hours.
- 24- Remove the pot from the cooling pan. It is recommended that the syrup be allowed to cool at room temperature for another 4 hours.

MIXING

- 25- Fill the cooling pan (or a large enough container) with hot water. Dip the maple syrup pot in warm water for 1 minute to facilitate pouring the syrup into the machine.
- 26- Pour the syrup into the funnel of the maple cream machine (never pour the syrup above the inlet of the pipe in the funnel).
- 27- Start the machine.
- 28- While the syrup is mixing, with a spatula, constantly peel the syrup from the funnel walls towards the center of the cone so that the mixture is uniform.
- 29- Allow the machine to run for approximately 10 minutes while continuing to push the syrup from the walls to the center. **DO NOT STOP THE MACHINE UNTIL IT IS EMPTY. IF THE MACHINE IS STOPPED, THE CREAM WILL SOLIDIFY.**
- 30- The mixture will be ready when the lines on the surface of the cream become paler and spaced. In addition, the surface will become matte (non-glossy).
- 31- When the cream is ready, open the valve and start filling the containers while the machine is still running.
- 32- Push the remaining butter from the sides of the funnel towards the center to avoid any waste.
- 33- If you have boiled several syrup recipes, you can pass them through the machine one after the other, without cleaning the machine between each one.
- 34- When all the syrup is processed, stop the machine, remove the tube and empty it in one of the maple cream containers.
- 35- Reassemble the tube and fill the machine with hot water, not boiling. Start the machine and let it run until all the cream residues are dissolved.
- 36- Drain the water from the machine and rinse with hot water to prevent the surfaces from sticking.
- 37- Dry completely.



MAINTENANCE AND CLEANING

The only maintenance required is to keep the machine clean. After the production of maple cream, pour hot water not boiling in the funnel and let the machine run until all residue is dissolved. Then, open the valve to drain the water. Rinse with hot water to prevent the surfaces from sticking. Finally, wipe the machine and cover the funnel with a cloth so that objects or dust do not penetrate into the pump.

Preferably, store in a dry place.

TROUBLESHOOTING

Motor won't turn:

- Check electric switch or breaker.

The motor turns, but the product isn't moving:

- Problem with the gear reducer or motor coupling. Replace gear reducer or coupling.

The motor turns, but the product moves very slowly:

- The pump gears are worn. Replace the whole pump.

Maple cream leaks from the pump:

- Because the machine manufactures food, the pump has been made so it can operate without a lubricant. It is therefore possible that a small amount of water will flow from the pump during cleaning. However, if maple cream leaks from the pump, the mechanical seal of the pump must be replaced.

The machine runs properly without stopping, but the syrup does not turn into cream:

- The syrup has not been sufficiently cooked, empty the machine, add water to the syrup and boil it again at the correct temperature. Change or verify the thermometer.
- There is too much inverted sugar in the syrup. This is a common problem with dark syrup or syrup that was made at the end of the season. The inverted sugar level can be measured with a kit available on the market. The maximum rate for making maple cream is 2.0, above this level, it becomes impossible to make maple cream.
- The syrup wasn't cooled long enough before processing.



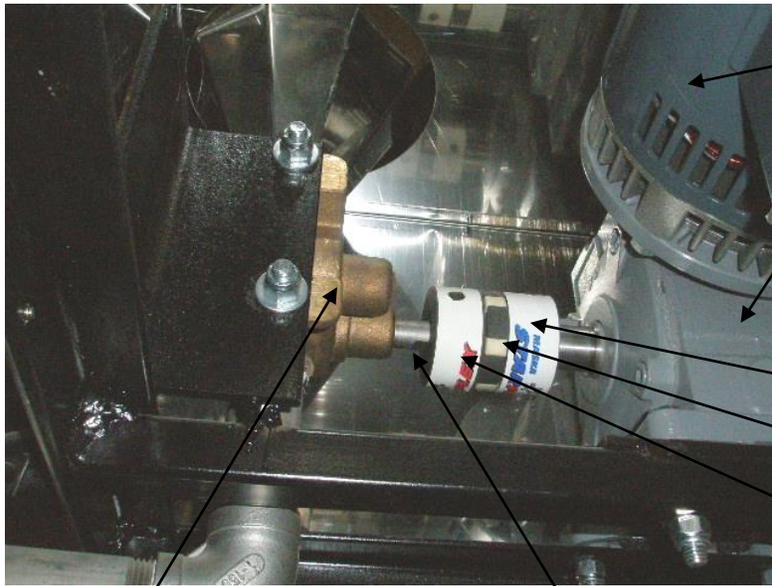
- Ambient conditions are too humid. Maple cream must be processed in a controlled environment, ideally with air conditioning. If the air is too humid, the sugar will not crystallize.

The cream solidified in the machine:

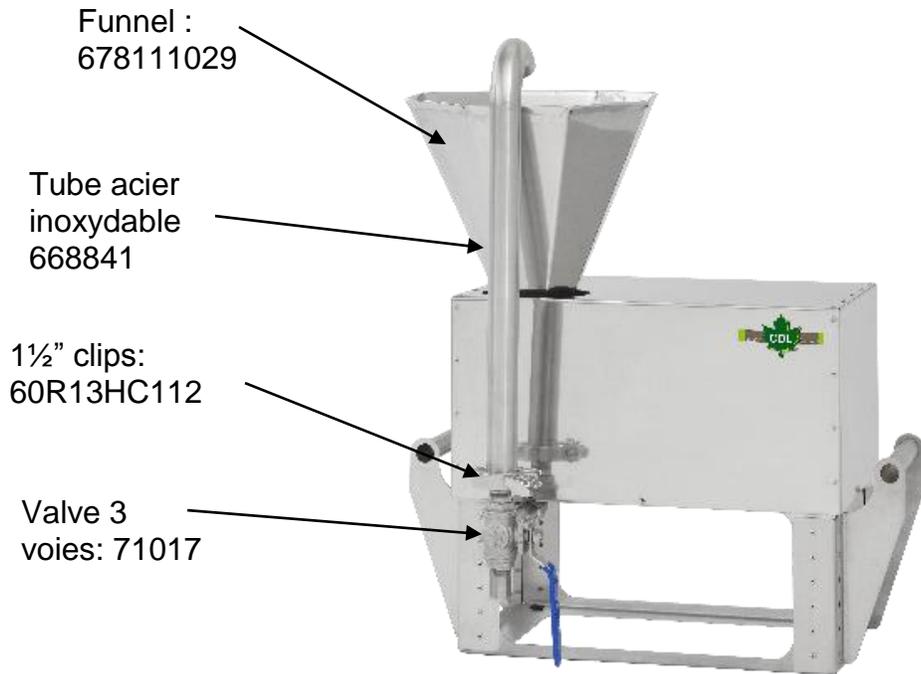
- The syrup has overcooked. Stop the machine, pour some maple syrup into the funnel and mix by hand until the mixture is liquid enough to be pumped and complete the work. If you can not obtain cream, empty the machine, pour hot water into the product and boil it again.
- The syrup turned to solid too quickly. Apply the solution of the previous point.



Part # 668828: Small 8-liter cream machine



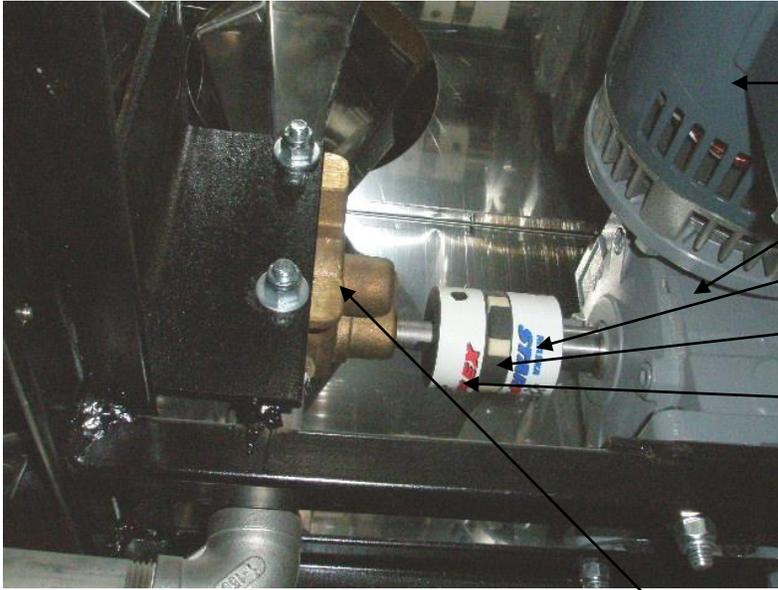
- Motor : 66G250
- Reducer : 668859
- 1" coupling: 429058
- Universal coupling: 429095
- 1" coupling: 429058
- Pump : 66397A
- Key : 660316



- Funnel : 678111029
- Tube acier inoxydable 668841
- 1½" clips: 60R13HC112
- Valve 3 voies: 71017

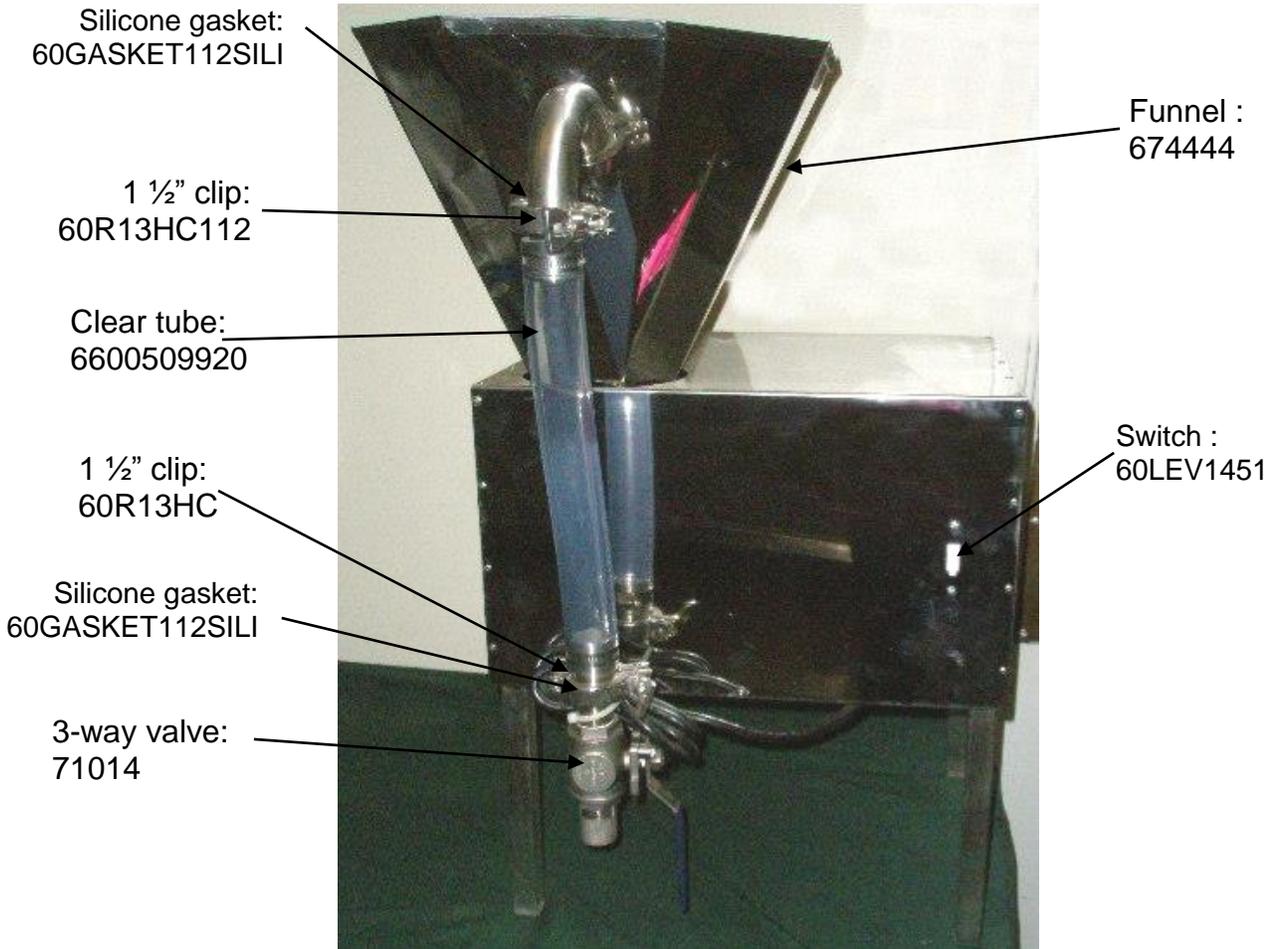


Parts # 668827: Large 16 Liter Cream Machine



- Motor : 66G274
- Reducer : 668863
- 1" coupling: 429021
- Universal coupling: 429022
- 5/8" coupling: 429058

Pump : 66399M



Silicone gasket:
60GASKET112SILI

1 1/2" clip:
60R13HC112

Clear tube:
6600509920

1 1/2" clip:
60R13HC

Silicone gasket:
60GASKET112SILI

3-way valve:
71014

Funnel :
674444

Switch :
60LEV1451



THE WARRANTY

Your maple cream machine is covered by a two-year limited warranty. For a period of two years from the original date of purchase, CDL Maple Sugaring Equipment Inc. will repair or replace parts of this equipment that are defective in material or workmanship, if installed, used and maintained according to the instructions provided.

Exclusions

This warranty does not cover the following:

1. Products with the original serial numbers removed, altered or that are not easily readable.
2. Equipment that changed owners or that is outside of North America.
3. If damage is caused because the cream machine has been kept in a place where the temperature is lower than the freezing point.
4. If the CDL maintenance procedure is not respected.
5. If the pump has started dry (without liquid inside)
6. Production losses due to any problem with the machine.
7. The loss of income caused by cream or maple syrup quality.
8. Service calls that are not related to a malfunction, a manufacturing defect or a defect in material, or for products that are not used in accordance with the instructions provided.
9. Service calls to check the installation of your cream machine or to obtain instructions regarding the use of your cream machine.
10. Service calls after 2 years.
11. Damages caused by: repairs made by unauthorized technicians; The use of parts other than the original CDL parts or the use of parts that have not been obtained through an authorized technician; Or external causes such as abuse, misuse, accidents, fires or natural disasters.
12. Consumer products such as antifoam.
13. If the machine has been modified or damaged by abuse, neglect, alterations made by the customer or electrical problems.
14. Damage caused by the use of products not intended for use in a cream machine or by misuse of cleaning agents.



Warning concerning warranties; Limitations of use

The only recourse for the customer under this limited warranty is the repair or replacement of the product as described above. Claims based on warranties, including warranties of merchantability or adaptation to a particular use, are limited to the shortest period permitted by law, which can not be less than two years. CDL Maple Sugaring Equipment Inc. will not be held liable for incidental or consequential damages or material damage. Some states do not allow limitations or exemption for incidental or consequential damages or restriction of guarantees. In this case, this limitation or exclusion may not apply. This written warranty gives you specific legal rights. According to the state or province, it is possible that you have other rights.

If you need to call for repair

Keep your receipt, delivery slip, or any other appropriate payment record to establish the warranty period in case you ever need to call for repair. If a repair is performed, it is in your best interest to obtain and keep all receipts. The service you are entitled to under this warranty must be obtained by contacting CDL at one of the addresses or phone numbers below.

The service for your cream machine will be done by CDL in Canada. The characteristics described or illustrated and specifications may be changed without notice.

If you live in Canada, please call:

CDL Maple Sugaring Equipment
257 Route 279
St-Lazare, Québec, Canada
G0R 3J0
(418) 883-5158
www.cdlinc.ca

If you live in the U.S.A., please call:

CDL St-Albans
3 Lemnah Drive
St-Albans, VT
05478
(800) 762-5587

