



Gas Fired Filter & Canning Unit Instructions



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INTRODUCTION

Filtering is performed to clarify the maple syrup. When maple syrup is boiled it concentrates both the sugars and the unwanted materials called niter and sugar sand. Filtering removes the unwanted materials and improves the quality and flavor of the maple syrup.

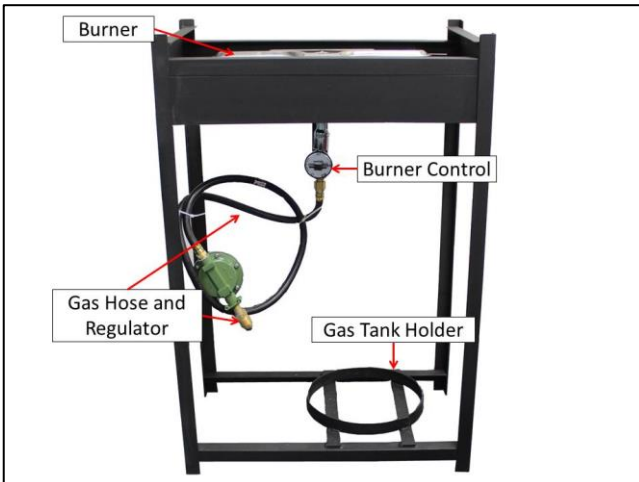
Filtering & canning units are designed to gravity filter and provide the heat source needed to can maple syrup. The tank is constructed of stainless steel and comes with a filter rack, cover, shelf and gas fired arch. The tank has a ½” threaded outlet to be used for accessories such as the stainless steel faucet assembly or fill stop automatic valve. Each tank also features a ¼” threaded coupler to allow for mounting a thermometer.

The 16” X 24” canning unit is provided with a tank that is 16” wide, 24” long and 12” deep. It has a filtering capacity of 15 gallons. Capacity is stated with the filter rack in place.






EQUIPMENT DESCRIPTION



16"X24" Unit LEADER Order #: 55026





Canning & Filter Units Included Equipment

ITEM	LEADER ORDER #	DESCRIPTION/PHOTO
16" X 24" Tank Only	55023	
16" X 24" Cover	55024	
16" X 24" Shelf	55028	
16" X 24" Rack	55025	
16" X 24" Arch	55026	

Optional Setup Equipment and Supplies

ITEM	LEADER ORDER #	DESCRIPTION/PHOTO
Synthetic Filter 24" X 30"	64016	
Rayon Prefilters/Dozen 24" X 30"	64001	
½" Stainless Steel Valve With Nozzle	61139	
AC Powered Fill Stop Dispenser Valve	61110	

ITEM	LEADER ORDER #	DESCRIPTION/PHOTO
DC Powered Fill Stop Dispenser Valve	61112	
½" Stainless Steel Ball Valve	60100	
½" Stainless Steel Close Nipple	72101	
½" Stainless Steel Street Elbow	72116	
Dial Thermometer 3X6 (0 - 250°)	61019	

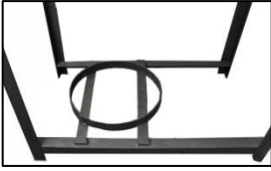
SETUP AND USE OF FILTER & CANNING UNITS

CAUTION: When handling syrup and equipment for filtering & canning it will be HOT. Take proper precautions.

1. Prior to use, wash all equipment with clean unsoftened, non-chlorinated well or spring water.
2. Place the arch where it will be used. It should be placed a minimum of 24" from any non-fireproof material. It should be in a well-ventilated area.
3. Level the arch. The arch is provided with leveling adjusters on each of the legs.
4. Place the tank on the arch. It will fit between the uprights of the legs. The side of the tank with the outlet and coupler should be on the same side of the arch as the legs with the series of holes. Check to ensure the tank is level. Adjust the leg levelers as necessary.
5. Install the draw off equipment to be used. The following directions are for a canning faucet. If you are going to use a LEADER fill stop valve (AC Model Order # 61110 or DC Model

Order # 61112) refer to the installation instructions for that unit ([AC Model](#) or [DC Model](#)).

- a. Teflon tape the exposed end of the ½” nipple of the faucet.
 - b. Thread the taped end of the faucet into the ½” threaded outlet in the tank.
 - c. Tighten until the ball valve handle is positioned for ease of use.
6. Install a thermometer, if desired.
- a. Remove the stainless steel plug from the ¼” threaded coupler.
 - b. Tape the threads of the thermometer.
 - c. Thread the thermometer into the ¼” threaded coupler on the tank and tighten. Remember to position the dial of the thermometer so it can be read easily.



7. Place a standard LP gas grill (20#) tank into the holder in the base of the arch. The opening in the ring at the top of the tank should be facing the arch burner control and rotated slightly forward so it does not hit the burner control. Insert the tank carefully to prevent damage to the burner control.



8. Thread the regulator connector at the end of the burner gas hose into the valve opening on the LP tank. The threads are located internal to the valve on the LP tank. To tighten, turn counter clockwise. Hand tighten with some force applied. Do not use a tool to tighten.

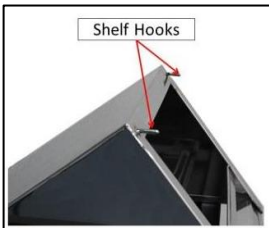


9. Position the hose so it will not be touching any surfaces that will be hot during use.



10. Check the tank and connections
 - a. Do NOT use an open flame to test for leaks
 - b. Read all notes on the LP tank
 - c. Position the arch burner control knob to “OFF”
 - d. Obtain a solution of dishwashing detergent and water
 - e. Turn on the LP tank and put the water/soap solution on the connections, control and hose. If there is any bubbling, immediately shut off the tank and leave the area. Have the unit serviced by authorized personnel.

11. When the test is completed turn off the LP tank. Ensure there is no flame present then open the burner control to vent the gas present in the line. Do not attempt to work with the unit for at least 5 minutes. Turn the burner control knob to “OFF”.



12. Position the shelf so it will be at the proper height for the containers to be filled and the filling device being used.
 - a. The arch is provided with a series of holes to allow the shelf to be raised and lowered.
 - b. The shelf has hooks which slip into the holes.
 - c. Place the shelf level at the correct height so the containers will be close to the exit of the filling nozzle but still be easily inserted and removed.



Stainless Steel Valve with Nozzle



Stainless Steel Fill Stop

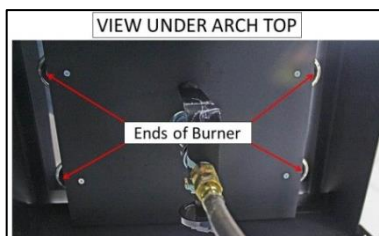
13. Place the filter rack into the filter tank.
14. Prewash the filter media (filters and prefilters) to be used. Filter media should be washed in boiling non-chlorinated hot water then rinsed in non-chlorinated hot water and dried. Do NOT twist the filters to wring out the water.
15. Install the filters and prefilters. Filters and prefilters should be pre-moistened with non-chlorinated water.



- a. Lay a 16" X 24" synthetic filter into the filter rack. Center the filter in the rack.
- b. Lay 3 layers of prefilter onto the synthetic filter.
- c. Keep the filter media away from the bottom of the filter tank where there is heat. Fold the excess filter media (if any) over the top of the tank. The cover will aid in holding the filter media in place.



16. Begin by slowly pouring hot maple syrup into the filters to allow the filters to seat into the rack.
17. Fill the filters then add syrup to keep the same level. The approximate capacity of the filter rack is 4 gallons.
- 18. Keep the cover in place between additions of syrup.**
19. If the syrup is to be canned after filtering it must be kept at 185°F to 190°F. Use low heat to minimize the generation of additional sugar sand and niter. To heat the syrup to the canning temperature light the arch (after there is syrup in the tank) as follows:



- a. Turn the burner control knob to “OFF”.
- b. Turn the LP tank “ON” approximately ¼ turn. Wait several seconds then turn the LP tank all the way on.
- c. Ignite a lighter with a long nozzle (minimum of 11”) and place it under the arch at either end near the exposed portion of the burner. Do NOT use a standard lighter or book matches to light the burner.
- d. Turn the burner control knob onto “HIGH”.
- e. If the burner does not light in 5 seconds, turn the burner control knob to “OFF”. Wait a minimum of 5 minutes then attempt to relight.

NOTE: Be sure to check the maple syrup for proper density prior to canning. Heating can change the density of the syrup. Please reference an appropriate compensation chart such as the one that follows for accurate density.

TEMPERATURE °F	Degrees Baume	Degrees Brix
209	32.0	59.0
202	32.25	59.6
193	32.5	60.0
185	32.75	60.4
176	33.0	60.9
167	33.25	61.4
158	33.5	61.8
149	33.75	62.3
140	34.0	62.8
130	34.25	63.3
120	34.5	63.8
110	34.75	64.3
100	35.0	64.8
90	35.25	65.4
80	35.5	65.9
70	35.75	66.4
60	36.0	66.9
50	36.25	67.4

20. When the filtering rate slows and it is noted the synthetic filter has accumulated material, carefully change the prefilters and the synthetic filter.
21. Clean the filters as described in the section USE AND CARE OF FILTERS.
22. To shut off the burner, close the LP tank valve and allow the burner to use up the gas in the lines. Turn off the burner control valve when the flame goes out.
23. To drain the remainder of the syrup from the bottom of the tank, the unit may be tipped up slightly by raising the side opposite the faucet connection. CAUTION as the unit may be hot.

MAINTENANCE

Startup

1. Prior to startup, reconnect the LP gas tank check for leaks in the LP gas system.
 - a. Do NOT use an open flame to test for leaks
 - b. Read all notes on the LP tank
 - c. Position the arch burner control knob to “OFF”
 - d. Obtain a solution of dishwashing soap and water.
 - e. Turn on the LP tank and put the water/soap solution on the connections, controls and hose. If there is any bubbling immediately shut off the tank and leave the area. Have the unit serviced by authorized personnel.
2. Install clean filter media.

Shutdown

1. Allow the syrup to complete filtering then remove the synthetic filters and prefilters from the tank.
2. Clean the filters and as described in the section USE AND CARE OF FILTERS.
3. Drain the syrup from the tank to finish containers.
4. Use hot water and wash out the tank and the draw off equipment used. Rinse the equipment with unsoftened, non-chlorinated well or spring water.
5. Disconnect the LP gas tank. Make sure to shut the LP tank off first and allow the gas to burn through the burner before disconnecting.

End Of Season

1. Drain the filter tank.
2. Clean the filters and store as described in the section USE AND CARE OF FILTERS.
3. Thoroughly wash the filter tank, rack cover and shelf, inside and out.
4. Place the parts and tank under cover in a clean area. Cover with clean plastic or cloth.
5. Disconnect and store the LP gas tank:
 - a. Make sure to shut the LP tank off first and allow the gas to burn through the burner before disconnecting.

- b. Follow all directions supplied by the LP tank supplier
- c. Store the tank outside away from travelled areas
- d. Store the tank on a solid surface with good drainage
- e. Do not store the tank on a grass surface
- f. Do not store tank near any heat source
- g. Store tank upright
- h. Do not smoke near LP tank
- i. Check propane tank on a regular schedule for leaks.
The interval between checks should be short.

Use and Care of Filters

Filter Use

- Flat filters should be used damp.
- Syrup being filtered should be hot (185°F to 190°F for canning).
- If filters are found not to filter as well as new filters or have an odor, replace them.

Cleaning of Filters

- Wash filters in hot water only. Do NOT use any chemicals to clean filters.
- Water used in cleaning should be non-chlorinated well or spring water.
- Do NOT use a washing machine to clean filters.
- Filters may be pressed to help them dry (ex. using the wringer from an old wringer washing machine) but do NOT twist (wring) the filter.
- Cleaning:
 - a. Fold the ends of the filter together to form a “bag” with the clean side of the filter as the outside of the bag.
 - b. Hold the filter over the flue pan or syrup pan (if no hood) and scoop hot sap onto the outside of the filter.
 - c. Dip the filter through two (2) buckets of water. The water can be dumped into the flue pan.
 - d. Turn the filter inside out and dip into a third bucket of water. The water from this bucket should be discarded.

Storage and Reuse

- At the end of the season, clean the filter thoroughly.

- Dry the filter completely.
- Place the filter in a sealed container.
- Before re-using the filter, remove it from the sealed container and do a “deep sniff” test. If there is any odor, discard the filter.
- Hold the filter up to the light and if thin spots are noted, replace the filter.
- If the filter does not filter as good as a new one, replace the filter.

FEEDBACK

Please use the following e-mail address

(feedback@leaderevaporator.com) to suggest improvements or enter comments on this document. Reference the document title in your note. You may also contact LEADER Customer Service.

NOTES