



Flat Pan

BATCH BOILING

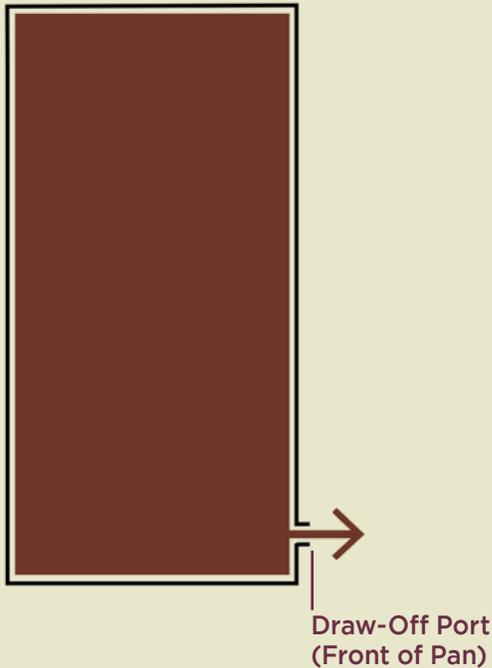


 Check Out Our Instructional Videos On YouTube.

INCLUDES

- A | 22 Gauge, Mirror Finish Stainless Steel Pan**
- B | Stainless Steel Ball Valve w/Nipple**
(No Nipple required on 16" x 30" Pans)
- C | Angled Thermometer Port**
- D | Stainless Steel Hex Plug**
(Supplied if no thermometer.)
OR
3" Dial Maple Thermometer
(Included on all Full Evaporators. Also available separately.)

- E | Built-in, Full Length Handles**
- F | Level Assist Feature**
Available exclusively from Smoky Lake Maple Products. This 2" fill line helps you level the pan before boiling.
-  **Lifetime Limited Warranty on TIG Welds**
-  **Smooth, Hemmed Edges**
-  **Handcrafted in Hilbert, Wisc.**



BATCH BOILING

- A Flat Pan is also known as a “batch pan” because you will continue boiling until the entire contents have reached the proper sugar density, resulting in one large batch of syrup.
- Finished syrup should be between 66 – 66.9° BRIX sugar density.
- You will know when it is time to draw off syrup based on the sugar density. Temperature will help you monitor the density while boiling. Next, a hydrometer and Murphy Compensation Cup will help perfect the density for bottling, so you can avoid spoilage (under density) or formation of sugar crystals (over density).
- **IMPORTANT: We recommend maintaining 2" sap depth throughout the system; especially until you have gained experience.** This will protect your pans from warping and prevent your maple syrup from scorching. Before starting, make sure your pans are level and depth is consistent throughout the pan. (See the Level Assist Feature on p. 3)

SET UP

Remove all protective vinyl and instructional stickers.

Vinyl and/or stickers can melt to the side of the pan during boiling if they are not removed.

Draw-Off Port



- Connect the stainless steel Ball Valve to the draw-off port using the stainless steel Nipple. (NOTE: 16" x 30" Flat Pans typically have a *male* draw-off port, in which case a Nipple is not needed.) Use plumber's tape on these threaded connections to enhance seal and prevent binding.
- How to open and close a Ball Valve: SmokyLakeMaple.com/open-ball-valve
- If the handle hits against the pan when you are trying to open/close the valve, you have attached it backwards. Easy fix! Just unthread it, turn it around and reconnect with plumber's tape.
- If the handle feels tight, close the valve and dab vegetable oil on the inner ball. Then open and close the handle a few times.

Thermometer Port

- Always use Plumber's Tape on threaded connections to enhance seal and prevent binding.
- If you will not be using a Thermometer, plug the Thermometer Port using the 1/4" hex plug provided.



- A 0 – 50 Maple Thermometer helps monitor the progress of your sap while boiling. Calibration information and other details are provided on the Thermometer's instruction sheet and also online at SmokyLakeMaple.com. Never immerse the dial of your Thermometer in liquid nor expose it to direct steam for prolonged periods. This could cause condensation to develop within the dial. Clean the thermometer face using a clean, damp cloth.

SAP LEVEL

Level Assist

Using the 2" depth line on each of the pan's end panels will help you protect the pan from overheating and scorching. To use this feature:

- Fill your pan to the 2" depth mark before you begin to boil.
- Make sure the pan is sitting level so that sap depth is consistent throughout the pan. Level both front to back AND side to side.
- Video: [SmokyLakeMaple.com/level-assist](https://www.SmokyLakeMaple.com/level-assist)

While You Are Boiling...

The main purpose of boiling sap is to remove water to condense the maple sugars into syrup. The water is removed through steam. This means that **in order to maintain 2" of depth in your pan, you will need to be continuously adding more sap.** See "Ways to Maintain Depth" below.

Beware of Foam



Foam will periodically develop on the surface of the sap, masking the actual liquid depth. Eliminate the foam by adding ONE DROP of vegetable oil.

CLEANING

Prior to First Use

Make sure all of the protective vinyl has been removed from the stainless steel (if applicable), and then rinse the pan with clean water.

After Use

- **Natural Method: PRE-mix** a 50/50 solution of white vinegar and hot water. Soak for up to 24 hours, drain and spray out with a hose.
- **Barkeeper's Friend:** Many folks have reported good results with this common household product. The manufacturer's website confirms that it is safe to use on cookware.

More Tips

- [SmokyLakeMaple.com/cleaning-pan](https://www.SmokyLakeMaple.com/cleaning-pan)
- NOTE: Excessive exposure to **any** cleaning agent/acid — including vinegar — could harm your pan.

WAYS TO MAINTAIN DEPTH

A) Feed Pan

(A.K.A. Warming Pan)

Trickles prewarmed raw sap into the Pan. Rate of flow is manually adjusted with a valve.

See Fig A

B) Periodically add sap by hand

Slowly pour small amounts of sap into the pan at regular time intervals. Set a timer so that you don't forget!



GASKETS

Rail Gasket

- This gasket lays on the top rail of your arch, underneath your pan. (Do NOT glue.)
- Rail Gaskets increase efficiency by preventing cold air from being pulled underneath the pan while boiling.
- Corsair™ Evaporators with Flat Pans work well with a fluffier gasket called “Insulated Rail Gasket”. Alternatively, “Braided Rope Gasket” also works great for 2' x 4' or smaller Corsairs.
- StarCat™ and Dauntless™ Evaporators were designed to be more straight forward and can certainly function without gaskets. That being said, the 1"-wide Rail Gasket with adhesive is a popular upgrade and will increase boil rate. See SmokyLakeMaple.com for details.



Stiffened Gasket

- This style of gasket is included with Smoky Lake Corsair™ evaporators. It is placed behind the pan to prevent cold air from entering, and exhaust from escaping the arch.
- For more information, see our video: SmokyLakeMaple.com/stiffened-gasket



WARNINGS

- **Maintain 2" sap depth throughout the pan; especially until you have gained experience.**
- Use plumber's tape on all threaded connections to enhance the seal and prevent thread binding.
- BEFORE lighting the evaporator, review the Start Up Checklist. **SmokyLakeMaple.com/start-up**
- Wear protective clothing such as leather gloves and a face shield.
- Keep a spare bucket of sap or water on hand.
- Keep a fire extinguisher handy. Make sure all of your helpers know where it is and how to operate it.

NITRE

WHAT IS NITRE?

Nitre, a.k.a. “sugar sand”, is a collection of minerals that have “fallen out” of the sap as it became more condensed. Learn more at SmokyLakeMaple.com/sugar-sand

WHY IS IT IMPORTANT TO REMOVE NITRE BUILD UP?

A large build-up of nitre can harm/insulate your pan. It can also create off flavors in your maple syrup.

HOW TO REMOVE NITRE?

Extinguish the fire completely and allow the pan to cool. Drain the maple sap/syrup into food grade containers. Pre-mix a 50/50 solution of vinegar and hot water. Pour the mixed solution into the pan and allow it to soak for up to a day. Drain, rinse and wipe down the pan. See SmokyLakeMaple.com/cleaning-pan for more pan cleaning tips and ideas.



Flake of nitre from the floor of an evaporator pan

