



Dauntless™ Pan Set

SYRUP PAN + DROP FLUE PAN + WARMING PAN



INCLUDES

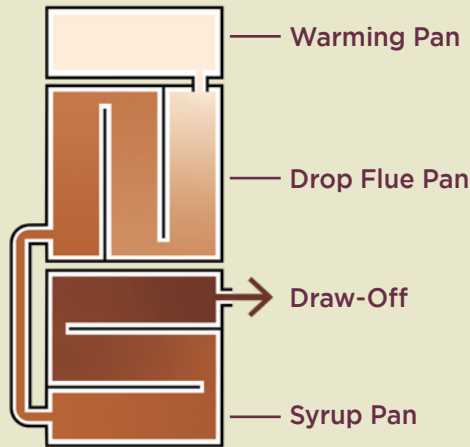
- A | Warming Pan — 20" w x 8" l x 20" h**
(22 ga., mirror finish, TIG welded, drainable)
 - B | Drop Flue Pan — 20" w x 20" l x 10" h**
(22 ga., mirror finish, TIG welded, six 5" flues, full length handles, 3 channels)
 - C | Syrup Pan — 20" w x 20" l x 8" h**
(22 ga., mirror finish, TIG welded, reversible, full length handles, built-in dividers, 3 channels)
 - D | 3/4" Stainless Steel Ball Valve w/3" Nipple**
(for the Draw-off Port)
 - E | Two 1/2" Stainless Steel Ball Valves**
(for the Warming Pan)
 - F | Angled Thermometer Port w/Maple Thermometer**
(3" dial, 6" stem, 0 - 50 scale)
 - G | 1/4" Stainless Steel Hex Plug**
(for the second thermometer port)
 - H | 3/4" Stainless Steel Hex Plug**
(for the Inlet Port on the Flue Pan)
- ✓ Reversible Front Pan
 - ✓ Structurally Formed-in Syrup Pan Dividers
 - ✓ 22 ga. Mirror Finish Stainless Steel
 - ✓ Lifetime Limited Warranty on TIG Welds
 - ✓ Smooth, Hemmed Edges
 - ✓ Handcrafted in Hilbert, Wisc.



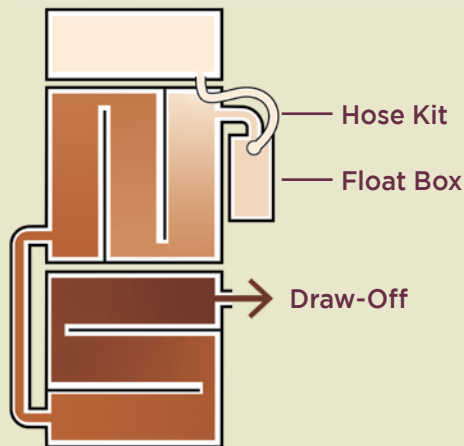
Check Out Our Instructional Videos On YouTube.



STANDARD CONFIGURATION



FLOAT BOX CONFIGURATION



CONTINUOUS FLOW BOILING

- A “Density Gradient” will develop in the pans as you boil. (See illustrations above) As the sap works its way through the channels, it becomes darker and darker (*more condensed*). The sap near the draw-off valve has been in the system for the longest period of time and is closest to completion.
- You will draw off syrup a little bit at a time based on temperature. We highly recommend the Murphy Compensation Cup with Hydrometer for precision density readings and fine tuning density.

SET UP

Remove all protective vinyl and instructional stickers.

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

Draw-Off Port (Rear of the Syrup Pan)

- Connect the stainless steel Nipple to the 3/4" female pan fitting. Then connect the Ball Valve to the Nipple. 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
- The handle of the Ball Valve should be pointed straight toward you when it is open. Otherwise, if it is backwards, simply unthread the Valve from the pan, 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 Ports

- There are two thermometer ports because the front pan is reversible. (See p 4.) Connect your Maple Thermometer to the Thermometer Port located by the Draw-off Valve. The opposite Thermometer Port can be plugged.
- Use plumber's tape on threaded connections to enhance seal and prevent binding.
- Thermometer calibration information and other details can be found on your Thermometer instruction sheet and online at SmokyLakeMaple.com.
- Do NOT immerse the dial of your Thermometer in liquid nor hold it in steam for prolonged periods. This could cause condensation to develop within the dial. Clean the thermometer face using a clean, damp cloth.



SAP LEVEL

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.

WAYS TO MAINTAIN DEPTH

A) Warming Pan

Trickles prewarmed raw sap into the Drop Flue Pan. The rate of flow is manually adjusted using the Ball Valve. See SmokyLakeMaple.com/sap-level

B) Float Box w/Hose Kit

This optional accessory auto-regulates the flow of prewarmed sap from the Warming Pan to the Drop Flue Pan in order to maintain a constant preset depth while boiling.



Transfer Pipe

Use this pipe to connect the Drop Flue Pan to the front of the Syrup Pan. Use plumber's tape to enhance the seal and prevent binding.

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
- NOTE: Excessive exposure to **any** cleaning agent/acid—including vinegar—could harm your pan.

Optional Float Box

- The Float Box will hang on the bracket on the right side of the Flue Pan.
- The stainless steel piping on the end of the Float Box will connect to the sap inlet port on the Drop Flue Pan. In some cases, you may need to remove a plug from the Flue Pan's Inlet Port before connecting.
- A Smoky Lake Hose Kit is the easiest way to connect your Float Box to your Warming Pan. Connect the kit's 3/4" male fitting to the top of the Float Box. Then connect the kit's 1/2" male fitting to the upper Valve on your Warming Pan. While boiling, that Valve should be fully OPEN and the Warming Pan's sap depth should remain higher than the Valve.
- Always use plumber's tape on threaded connections to enhance the seal and prevent binding.
- More details: smokylakemaple.com/inlet-float-box

REVERSING THE DIRECTION OF THE FLOW.

- **WHAT IS NITRE?**

In the front pan, it is very common for nitre — also called sugar sand — to build up on the floor of the pan. This collection of minerals precipitates as the sap becomes more condensed. You will find that the amount of nitre in the sap will vary geographically and also from year to year.

- **WHY IS IT IMPORTANT TO REMOVE THE BUILD UP?**

A large build-up of nitre can harm your front pan and create off flavors in your maple syrup.

- **WHY CHANGE THE DIRECTION OF THE SAP FLOW?**

When less dense sap travels in the opposite direction it is able to pick up some of the nitre from the pan floor.

- **HOW DO I CHANGE THE DIRECTION OF FLOW?**

1. Make sure the fire in your arch is completely extinguished. There should **not** be any intense heat during this procedure.
2. Close the Sap Valve on your Warming Pan.
3. Collect several clean, food grade buckets and label them 1, 2, 3, and so on. Draw off the sap from the front pan into bucket 1. This is the sap of highest sugar density. Continue drawing off sap into the consecutive buckets, so the higher the number on the bucket, the lower the sugar density of the sap. Drain enough sap to be able to disconnect the Front Pan from the Transfer Pipe. The Transfer Pipe can remain connected to the Flue Pan.
4. After disconnecting the Front Pan, turn it 180°. The port which had previously been used for draw off will now be used to connect to the Transfer Pipe and vice versa.
5. After reconnecting your pans, and moving your Draw-off Valve and other accessories to the new draw-off location, you will be ready to reintroduce the sap to the Front Pan. Starting with the highest numbered bucket (the least dense sap), gently pour the sap into the Front Pan at the draw-off location. Continue slowly pouring each consecutive bucket into this location. With each new bucket you pour in, the less dense sap is being pushed back further into the channels. By pouring the sap back into the pan in this fashion, you are reestablishing a gradient.



Flake of nitre from the floor of an evaporator pan

WARNINGS

- **Maintain 2" sap depth above the flues of the Flue Pan and throughout the Syrup Pan; especially until you have gained experience. Keep your Warming Pan full so that it can deliver raw sap to the rest of the system.**
- 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](https://www.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.