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Smoky Lake Maple Products™
SmokyLakeMaple.com

Drop Flue Pan Set

SAME SIDE REVERSE (SSR) CONFIGURATION

INCLUDES

A | **SSR Manifold w/Brace & Food-Grade Gaskets**

B | **Positive Drain Draw-Off Boxes**

C | **Ten 7" Flues** *(On 2' wide models)*

D | **Angled Thermometer Ports w/One Maple Thermometer**

E | **Three Stainless Steel Plugs** (¼")

F | **Float Box w/Fittings & Drain** *(See Page 2)*

G | **Flue Pan Drain Manifold**

H | **Optimal Rear Syrup Draw-Off** *(Finished syrup is drawn off at the rear of the Syrup Pan because that is where the heat is most concentrated).*

J | **Two Stiffened Gaskets** *(Creates a seal between and behind the pans. See Page 3)*

K | **Built-in 360º Handles**

L | **SS Draw-off Valve w/ Food-Grade Gaskets**

Check Out Our Instructional Videos On YouTube.

- **Reversible Front Pan by Swinging Two Handles**
- **Structurally Formed-in Syrup Pan Dividers**
- **22 ga. Mirror Finish Stainless Steel**
- **Lifetime Limited Warranty on TIG Welds**
- **Smooth, Hemmed Edges**
- **Handcrafted in USA**

PATH OF THE SAP

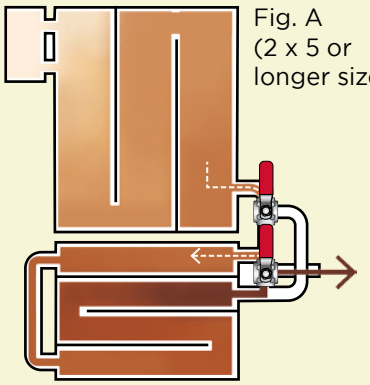


Fig. A
(2 x 5 or longer size)

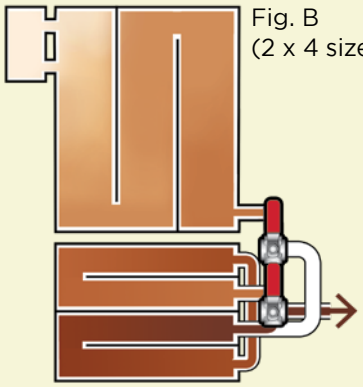


Fig. B
(2 x 4 size)

- The raw sap enters via the inlet float box at the rear of the evaporator.
- Next, sap travels through 3 consecutive channels in the flue pan.
- Sap exits the Flue Pan and enters the Front Pan via the SSR manifold. The exact point of entry into the Front Pan is determined by your current SSR settings. *(See "Reversing Direction" on page 4 for SSR setting details.)*
- After traveling through the four channels of the Front Pan, syrup draws off near the back of the front pan where the heat is most concentrated.
- NOTE: The front pan of a 2 x 4 size pan set is configured slightly differently, but operation is the same.

CONTINUOUS FLOW

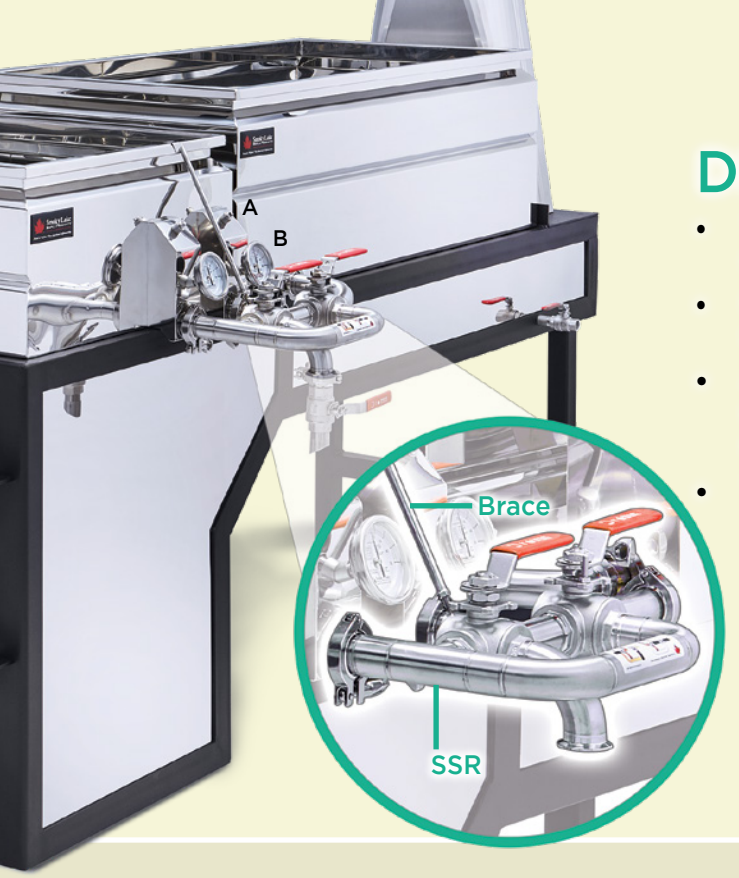
- Rather than waiting for the entire pan to become maple syrup in one big batch, this pan set will allow you to draw off syrup a little bit at a time throughout the boiling process.
- A "Density Gradient" will develop in the pans. *(See Fig A and B to the left.)* As the sap works its way through the 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.
- Your end product should be between 66º – 66.9º BRIX. See Maple Thermometer OR Auto Draw-Off System instructions for details regarding using temperature to monitor progress. Before bottling, it is recommended to fine tune syrup density using a hydrometer and Murphy Compensation Cup.

INLET FLOAT BOX

See our video for more details: SmokyLakeMaple.com/inlet-float-box

- On the outside of the Flue Pan, there is a bracket upon which you will hang your Float Box.

- You will connect the two 1-1/2" ports to the Flue Pan with Sanitary Clamps and Food Grade Gaskets *(provided)*.
- On the bottom of the Float Box you will find a 1/2" port to which you will attach either a drain valve or the Deluxe Sight Glass. Always use plumber's tape on threaded connections to enhance seal and prevent binding. Do NOT over tighten.
- Connect a head tank of sap to the Float Box's Inlet Port. Do NOT exceed 10 feet of head pressure.
- **IMPORTANT**: **We recommend maintaining 2" sap depth throughout the system; especially until you have gained experience.** (In the flue pan, measure depth ABOVE the flues.) This will protect your pans from warping and prevent your maple sap from scorching. Before starting, make sure your pans are level so that depth is consistent throughout the pan set.



DRAW-OFF CONNECTIONS

- The SSR connects the Flue Pan to the Front Pan. It dictates direction of sap flow and serves syrup to the Draw-Off Valve.
- Connect the stainless steel Brace to help support the weight of the SSR. The Brace hooks onto the rim of the Front Pan.
- Attach the SSR to the draw-off boxes on the Front Pan and to the port on the Flue Pan using the Sanitary Clamps and Food Grade Gaskets provided.
- The upper 1/4" ports on the draw off boxes [A] can hold the Syrup Probe for an optional Auto Draw-Off System. If not in use, the ports can be plugged. Use plumber's tape to enhance seal and prevent binding. Do NOT over tighten.
- The lower 1/4" ports on the draw off boxes [B] will hold your Maple Thermometer. Install the thermometer into the channel that is currently being used to finish the syrup. *(See SSR diagrams on Page 4.)* Use plumber's tape to enhance seal and prevent binding. Do NOT over tighten.

TRANSFER PIPE

A Transfer Pipe connects the front-most and back-most channels of the Front Pan. Connect this pipe using the Sanitary Clamps and Food Grade Gaskets provided. *NOTE: On some pans, this pipe is located on the same side of the pan as the SSR manifold.*

STIFFENED GASKETS

- One gasket should be placed between the front pan and the flue pan. The second should be placed behind the flue pan.
- For more information, see our video: SmokyLakeMaple.com/stiffened-gasket

CLEANING

Prior to First Use

Make sure all of the protective vinyl has been removed from the stainless steel (if applicable). Then, rinse the pans 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 had good results with this common household product. The manufacturer's website confirms that it is safe to use on cookware.

More Tips

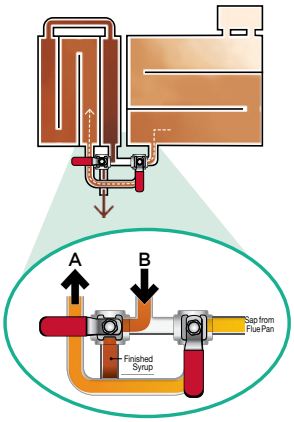
- Visit SmokyLakeMaple.com/cleaning-pan
- In addition to cleaning the pans, periodically clean all hardware and connections. Eliminate all nitre build-up.
- NOTE: Excessive exposure to **any** cleaning agent/acid — including vinegar — could harm stainless steel.

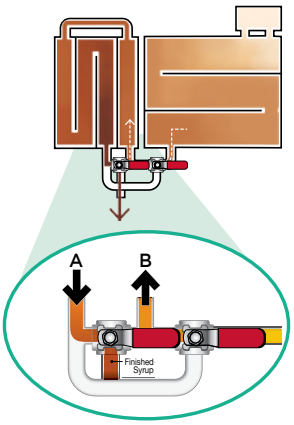
DRAIN MANIFOLD

- The flues can be drained completely.
- The drain manifold is easily accessed via a valve which will extend through the side of your arch.
- Use plumber's tape on this threaded connection to enhance seal and prevent thread binding. Do NOT over tighten.

REVERSING THE FLOW DIRECTION

SSR Diagrams for Evaporators with **Right Side** Draw-Off





- **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. Some regions will encounter more nitre than others.
- **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 sap travels in the opposite direction it is able to pick up and remove some of the nitre from the pan floor.
- **HOW DO I CHANGE THE DIRECTION OF FLOW?**

  The sticker on the Same Side Reverse System tells you which direction the handles should be facing to reverse the flow. An evaporator with left side draw-off will be a mirror image of the below example. The gradient of color in the diagrams represent a density gradient. The lighter color is less condensed/caramelized while the darker brown is finished syrup.

WARNINGS

- **We recommend maintaining 2" sap depth throughout the system; especially until you have gained experience.** *(In the flue pan, you need to maintain 2" ABOVE the flues.)*
- Use plumber's tape on all threaded connections to enhance seal and prevent binding.
- BEFORE lighting the evaporator, run through 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 in case the pans run low or overheat.
- Keep a fire extinguisher nearby. Make sure all of your helpers know where it is located and how to operate it.

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