



SF-2 Filtration Unit

USER MANUAL

Version 1.0.0 (2026-01-15)

The **SF-2 Filtration Unit** is an innovative solution designed to improve maple sap quality by clarifying sap before evaporation.

The SF-2 is ideal for **small producers or weekend operations** who cannot boil every day. By clarifying sap before storage, the unit helps maintain sap quality for a longer period of time.

An additional benefit is a **cleaner evaporator**. By removing a large portion of impurities, the SF-2 reduces sediment and foam buildup in the pans and float box, saving time during cleaning.

Simple to operate and easy to maintain, the SF-2 is an essential tool for efficient maple syrup production.

This manual will guide you through the **installation, operation, and maintenance** of your unit to ensure optimal performance throughout the season.

SF-2 Unit Installation

Upon receiving your SF-2 unit, it is important to install it correctly to ensure optimal performance.

This section explains how to connect the unit to sap tanks and describes available equipment to simplify installation.

1. Tank Connections

The SF-2 must be connected to tanks using flexible hoses to ensure smooth sap circulation.

Two configurations are possible.

➔ Two-Tank Installation (Recommended)

This configuration allows continuous and efficient sap filtration.

Inlet:

Connect the SF-2 inlet to the tank containing raw sap.

Outlet:

Connect the SF-2 outlet to a second tank that will receive filtered sap.

→ **Single Tank Installation (Recirculation)**

If only one tank is available, sap can be recirculated within the same tank.

Important:

The outlet (filtered sap) must be positioned **opposite the inlet (unfiltered sap)** to maximize clarification.

2. Connections for Backwash and Cleaning

To simplify **Backwash and Cleaning operations**, dedicated plumbing connections are recommended.

→ **Backwash Connection**

Backwash allows the SF-2 to remove accumulated impurities.

Unit inlet:

Connect a hose to the SF-2 inlet and place it in a **5-gallon bucket of clean water** (warm water is recommended for better efficiency).

Unit outlet:

Disconnect the hose from the outlet as a precaution.

The backwash water will exit through the **Drain Valve**.

Note:

Follow the **Backwash Mode instructions** to perform the procedure correctly.

→ **Cleaning Connection**

Cleaning is a deeper cleaning process using a cleaning solution to remove deposits after extended use.

Unit inlet:

Connect a hose from the SF-2 inlet to a **5-gallon bucket containing the cleaning solution** (warm water recommended).

Unit outlet:

Connect another hose from the outlet of the SF-2 back into the same bucket to recirculate the cleaning solution.

Note:

Follow the **Cleaning Mode instructions** to perform the procedure.

3. Startup Kit (Optional)

To simplify maintenance of your SF-2 unit, a **starter kit** is available.

→ Plumbing

- 30 ft flexible hose (inlet and outlet connections)
- 4 stainless steel clamps
- 2 quick adapters compatible with the unit plumbing

→ Cleaning and Maintenance

- RO Clean+ soap – 1.5 lb
- 5-gallon bucket for Backwash and Cleaning operations



5101A1-KIT

4. First Start-Up

Before using your SF-2 for the first time, it is **mandatory to perform a Backwash operation**.

This step removes any residues from assembly and transportation, ensuring optimal performance from the start.

Refer to the **Backwash Mode section** of this manual to perform the procedure.

Operations

Filtration Mode

1. Tank Connections

Two-Tank Setup (Recommended)

Connect the inlet to the raw sap tank.

Connect the outlet to the filtered sap tank.

Single Tank Setup

Recirculation is possible with one tank.

Make sure the outlet (filtered sap) is positioned **opposite the inlet (raw sap)**.

Connect the inlet to the tank.

Connect the outlet to the same tank.

2. Start-Up Procedure

1. Set **Valve #1 and Valve #2** to **Filtration Mode**
2. Close the **Drain Valve**
3. Start the SF-2 unit
4. Immediately adjust the **Flow Adjustment Valve** to maintain a target flow between **1.5 and 2 GPM**

After approximately **15 minutes**, readjust if necessary to maintain the target flow.

3. Monitoring

Pressure must remain **below 50 PSI**.

If pressure exceeds **50 PSI** and flow drops below **1.5 GPM**, perform a **Backwash**.

Backwash Mode

When to Perform a Backwash

Perform a backwash when:

Pressure reaches **50 PSI** and flow drops below **1.5 GPM**.

Procedure

1. Stop the unit and open the **Drain Valve**
2. Turn **Valve #1 and Valve #2** to **Backwash position**
3. Close the **Flow Adjustment Valve**
4. Prepare a **5-gallon bucket of clean water** at room temperature (warm water recommended).
5. Disconnect the hose from the raw sap tank and place the inlet hose into the bucket.
6. Disconnect the outlet hose from the filtered sap tank as a precaution.
7. Start the SF-2.
8. When the bucket becomes empty, **stop the unit immediately**.

The Backwash cycle is now complete.

To resume filtration, follow the **Filtration Mode procedure** and close the Drain Valve.

Cleaning Mode

A **soap cleaning cycle** is required when the unit cannot maintain adequate flow after a backwash.

Example:

Flow below **1 GPM at 50 PSI**.

A full cleaning is also required **at the end of the season before storage**.

Procedure

1. Stop the unit and ensure the **Drain Valve is closed**
2. Set **Valve #1 and Valve #2** to **Filtration Mode**
3. Close the **Flow Adjustment Valve**

4. Prepare the cleaning solution:

- Fill a **5-gallon bucket with water** (warm water recommended).
- Add **RO Clean+ soap** until reaching **pH 12** (check using pH test strips).



7302RO4



COLR59200-10

5. Disconnect the raw sap inlet hose and place it in the bucket.
6. Disconnect the filtered sap outlet hose and connect a hose returning to the bucket.
7. Start the SF-2 and **recirculate the solution for 60 minutes**.
8. After the first minute, verify and adjust pH if necessary.
9. After 60 minutes, stop the unit.
10. Perform an extended **Backwash using 30 gallons of clean water**.
Follow the Backwash procedure, using **30 gallons instead of 5 gallons**.

Cleaning is now complete.

Maintenance Recommendations

- Regularly monitor pressure and flow
- Use warm water during cleaning to improve efficiency
- Maintain **pH 12** during soap cleaning for optimal RO Clean+ performance

Parts and Replacement Components

Plumbing Components

SKU	Description
TUYTR005ID	Reinforced clear hose – 1/2" ID x 3/4" OD
COLHAS008	Stainless steel clamp – 1/2"
PC005P	Quick adapter – male insert x female coupler – 1/2"

Cleaning Products and Accessories

SKU	Description
7302RO1	RO Clean+ powder membrane cleaner – 1.5 lb
7302RO4	RO Clean+ powder membrane cleaner – 4 lb
COLR59200-10	pH test strips
S-16970	5-gallon bucket

Replacement Parts

SKU	Description
08601500A	Electric pump 6 GPM – 115V
MCM93105K63	Rubber foot cap

Need Additional Parts?

To order parts or receive technical support, contact our service team or visit:

h2oinnovation.net

Technical Support

If you have questions or need assistance with your SF-2 unit:

Phone: 438-256-0943

SMS: 819-803-0384

Email: serv@h2oinnovation.com

Website: h2oinnovation.net