BevBright

PLATE FILTER MANUAL

WE008 | WE010

Important Safety Information

Please read this entire instruction manual for important safety information before using your plate filter.

Lifting Instructions: **DO NOT** use a forklift to lift from the bottom as you will damage the pan. Using straps, lift the filter from the top.

General Precautions

1. Avoid operating the machine on uneven surfaces or sloped surfaces. Ensure the breaks are engaged if operating on a slope of less than 2%. Do not use on a slope greater than 5% due to the danger of the machine moving in an uncontrolled manner.

2. Never exceed 30 PSI on the outlet gauge of your BevBright® Plate Filter.

You will also need:

A positive displacement pump, capable of generating 45 PSI of pressure.

OVERVIEW OF THE PLATE FILTER

Key Features

- Rolling cart wine plate filter for wine, beer, cider, and distilling
- Plates made of high temperature Noryl plastic capable of being steam sterilized
- Double filtration kit included as standard
- Built-in pressure gauges, sight glasses, and sample valves
- 1.5" Tri-clamp inlet/outlet with butterfly valves
- 304 Stainless steel construction
- Drop Collection Tray

The plate filter will arrive fully assembled and ready to start. Please perform a visual inspection to ensure no damage occurred during the shipping process. The BevBright® Plate Filter features external stainless steel piping with built-in pressure gauges, sight glasses, and sample valves. Easily connect hoses to the included 1.5" tri-clamp butterfly valves. A double filtration kit comes standard.

Desired Filtration

This unit will enable you to achieve various types of filtration, ranging from rough to fine filtration. Different types of filtration are achieved through the use of various filtering sheets. The liquid undergoes filtration as it passes through the filtering sheets. The filter sheet's micron level determines the degree of filtration. The higher the micron rating, the more particles are able to pass through (Rough Filtration). The lower the micron level, the more the filtering sheet is able to capture smaller particles (Fine Filtration).

PARTS LIST:

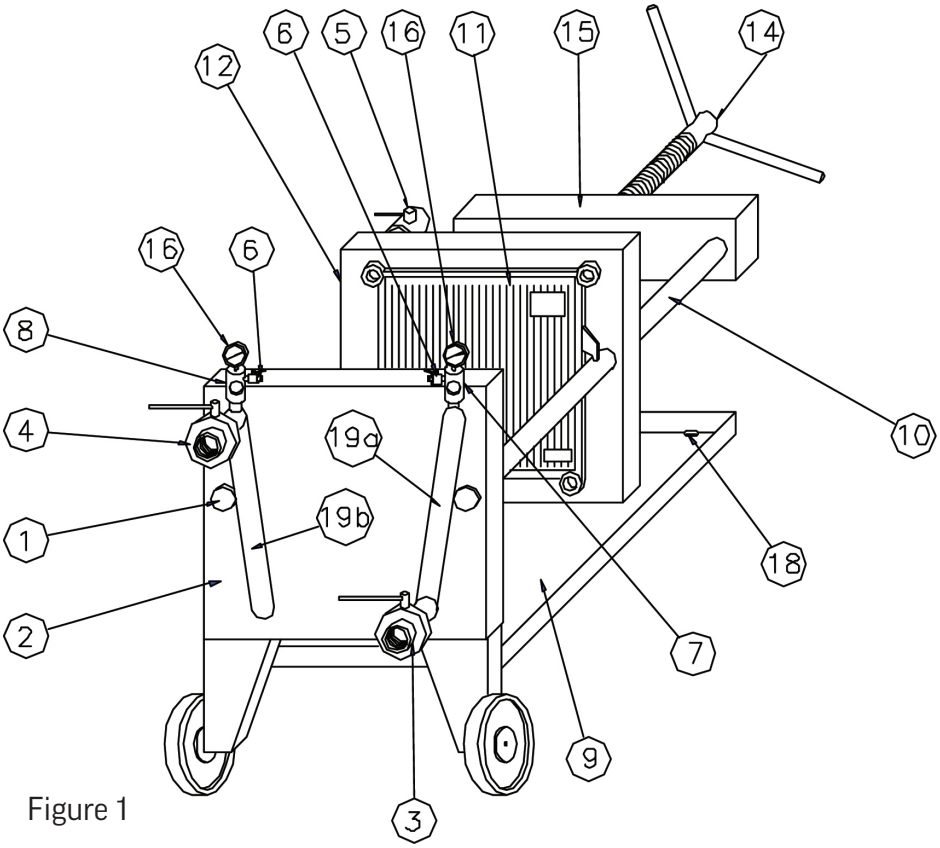


Figure 1

1	Tie Rod Closing Nut
2	Closing Head Plate
3	Inlet Valve
4	Outlet Valve
5	Sampling Valve (Optional)
6	Air Discharge Valve
7	Inlet Sight Gauge
8	Outlet Sight Gauge
9	Drip Collecting Tray
10	Bearing Frame
11	Filtering Element
12	Closing Mobile Plate
14	Closure Screw
15	Cross Bar
16	Pressure Gauge
18	Discharge Plug
19a	Inlet Pipe
19b	Outlet Pipe

PARTS LIST (CONTD):

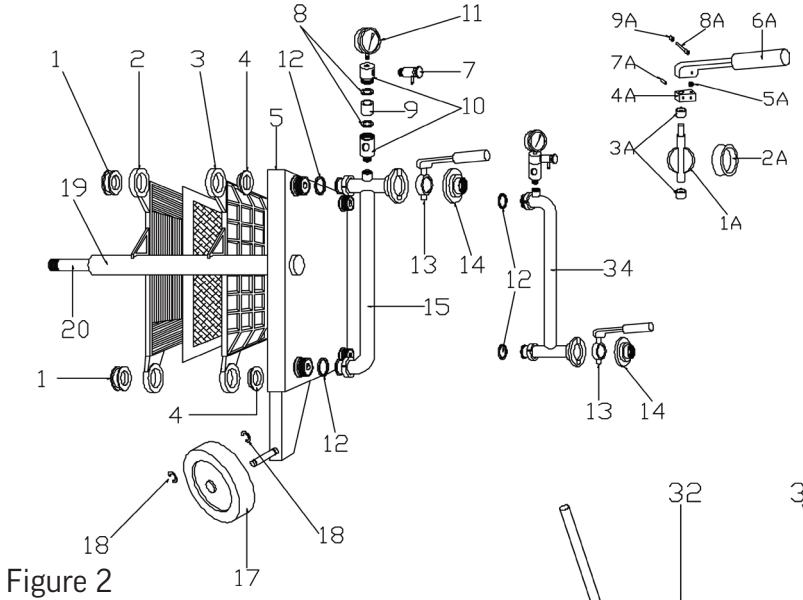


Figure 2

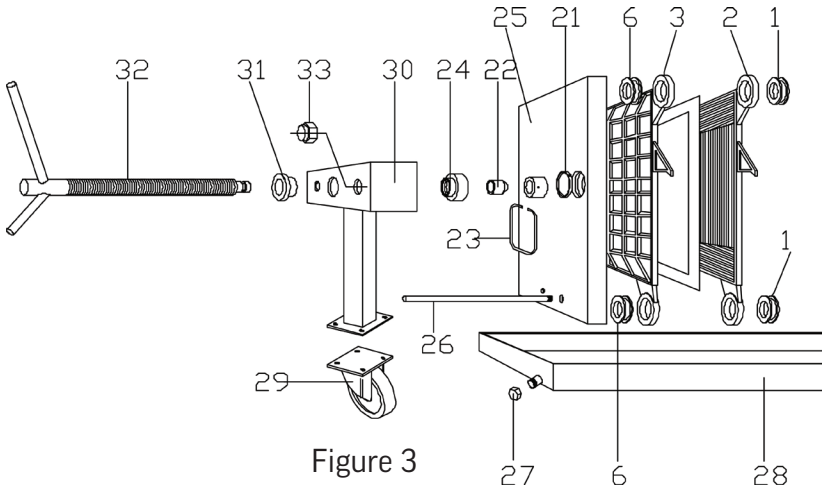
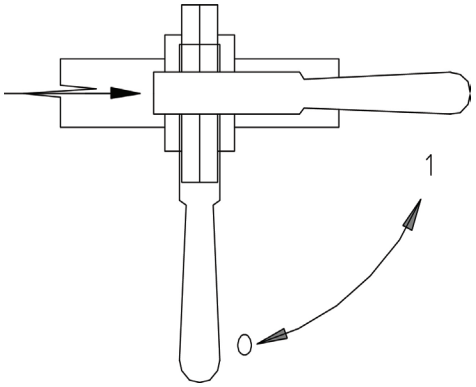


Figure 3

1	Plate Gasket	22	Bushing
2	Plate Standard	23	Plug
3	Head Plate	24	Nut Screw
4	End Plate Gasket	25	Closing Mobile Plate
5	Closing Head Plate	26	Sheet Rod
6	Plate Gasket	27	Plug
7	Air Discharge Valve	28	Basin
8	Gasket	29	Turning Wheel
9	Glass Tube	30	Back Bridge
10	Sight Glass	31	Bushing
11	Pressure Gauge	32	Screw
12	Ring Gasket	1A	Butterfly
13	Complete Handle	2A	Gasket
14	Butterfly Valve Flange with Connection	3A	Bushing
15	Inlet Piping	4A	Handle Valve Block
17	Rubber Wheel	5A	Spring
18	Benzing Ring	6A	Handle
19	Spacer Pipe	7A	Plug
20	Tie Rod	8A	Tie Rod
21	Sliding Bushing	9A	Block Nut

OPERATION OF THE PLATE FILTER

A. Pre-Operation Checklist



0	Open
1	Closed

Figure 4

1. Ensure the tie rod closing nuts (Figure 1, #1) are securely tightened. Please check the tie rod closing nuts throughout the operation to ensure they do not loosen.

2. The valve is closed when the handle is perpendicular at 90 degrees to the piping, position 1. The valve is open when it is parallel to the piping, position 0 (Figure 4).

NOTE: DO NOT leave the handle in between position 0 & 1. Having the handle in the middle position will impede the operation of the plate filter.

4. Apply food-grade lubricant to the closing screw (Figure 5, E) and ensure lubrication is applied to the entire rod. Afterward, remove any excess grease.

5. Inspect the filter sheets before operation to ensure the sheets are not damaged in the corners. Damage to the corners will increase dripping throughout the filtration process.

6. Inspect the filter plates for any signs of warping or cracking and check the gaskets to make sure they are soft and not brittle. Replace as needed.

B. Loading the Filter Sheets

Each filter sheet has a directional flow that allows the liquid to pass through. The filter sheets have both a Smooth Side (SS) and a Rough Side (RS). The incoming product must enter from the Rough Side and exit from the Smooth Side to achieve filtration. Please refer to Figure 5 on how to insert the filter sheets correctly.

Figure 5 Terminology

SS: Smooth Side

RS: Rough Side

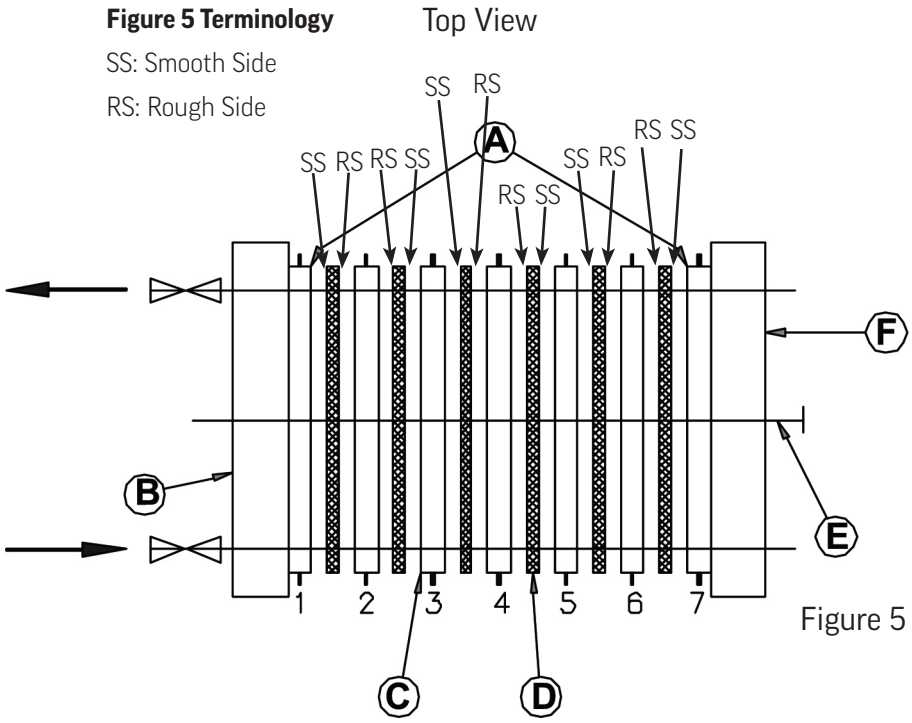


Figure 5

A	Head Plate
B	Stainless Steel Plate
C	Filter Plate
D	Filter Sheet
E	Closing Screw
F	Sliding Stainless Steel Plates
1-3-5-7	Outgoing Product
2-4-6	Incoming Product

C. Sanitizing

Connect your pump to the feed-in side of the filter (Figure 1, #3) and connect to your sanitizing solution or hot water. The machine is now ready to begin sanitizing.

1. If using hot water to sanitize, we recommend using temperatures at a minimum of 180˚F.
2. Prepare about 20 Gallons of a no rinse sanitizing solution to run through the machine. Using a no foam, no rinse sanitizer is prefered.
3. Prepare the inlet valve (Figure 1, #3), outlet valve (Figure 1, #4), and air discharge valve (Figure 1, #6) to be opened.
4. Start filling the plate filter with the sanitizing solution or hot water.
5. The filter should be loosely closed with valves open and drains flowing.
6. Confirm leaking through the system.
7. Slowly tighten the filters until the dripping is significantly reduced but still present.
8. Continue to tighten the filter during the sanitization process until dripping is at acceptable levels.
9. Dripping should be around 3-5 gallons per 8 hours of use. While this may be hard to estimate, experience will show what initial starting pressure should be.
10. Allow the solution or hot water to circulate for 20 minutes.
11. Empty the filter by turning off the pumps and opening the valves.
12. If using sanitizing solution, you may choose to flush with hot water to remove any remaining sanitizer

NOTE: *Avoid chlorinated or caustic chemicals, or quaternary ammonium compounds as they are difficult to rinse from the sheets.*

D. Working Pressure

DO NOT exceed a pressure of 30-37 PSI. If there is a counter pressure indicated on the outlet pressure gauge, ensure that the difference between the inlet and outlet pressure gauges does not exceed 30 PSI.

E. Operating

See Figure 1 for part references.

1. With your filter sanitized, connect your liquid source.
NOTE: *Some users like to flush their lines with inert gas before starting filtration to reduce the risk of oxidation.*
2. Open the inlet valve (Figure 1, #3) and the air discharge valves (Figure 1, #6).
3. When the beverage begins to exit via the air discharge valves (6), close these valves and open the beverage outlet valve (Figure 1, #4).
4. The outlet sight gauge (Figure 1, #8) allows you to monitor the level of beverage filtration. If the outgoing liquid is not sufficiently filtered, you may need to change your filter pads to a lower-micron filtering sheet.
5. If the liquid becomes dirty during filtration, one of the filter sheets may have broken. Stop the machine and open the filter to check if this is the case. If so, replace the filter sheet. This is more likely to occur between pressures of 30-37 PSI.
6. If necessary, periodically release air from the air discharge valves during the filtration process. If you notice high pressure building up too quickly consider that your filter sheets may be too fine.

F. Drip Collecting Tray

The filter is equipped with a drip collecting tray (Figure 1, #9). The loss of drops from the filter sheets during filtration is considered normal. This loss will increase with the increase in filtration pressure. The tray is equipped with a small discharge for easy removal of liquid.

G. Cleaning

To clean the machine, release pressure in the system. Then use the twist handle (Figure 1, #14) to open the filter. Remove and discard the filter sheets.

H. Dual Filtration Inversion Plate

1. An inversion plate is used to achieve double filtration by utilizing two different types of filter sheets to help achieve finer filtration with a single pass-through of the filter.
2. The inversion plate can be inserted at any spot in the filter as long as it is where the outgoing product goes (Figure 5, 1-3-5-7). This ensures that the inversion plate effectively separates the two different types of filter sheets and prevents mixing or bypassing of the filtration sheets.
3. When adding an inversion plate, it is important to note the flow direction. The inlet (Figure 6, #3), where the wine enters the filter, is positioned at the mobile head plate. While the outlet (Figure 6, B), where the filtered wine exits, is located at the fixed head plate.

4. Consider the filtration capacity of the filtering sheets being used to ensure the filtration process remains efficient and effective without overloading or under-utilizing the filter sheets.

5. The blind part of the inversion plate must be positioned on the right side to allow proper alignment and functionality throughout the filter.

6. Allowing for a greater number of plates on the side that utilizes finer filter sheets will enhance the filtration efficiency and thorough clarification of the wine.

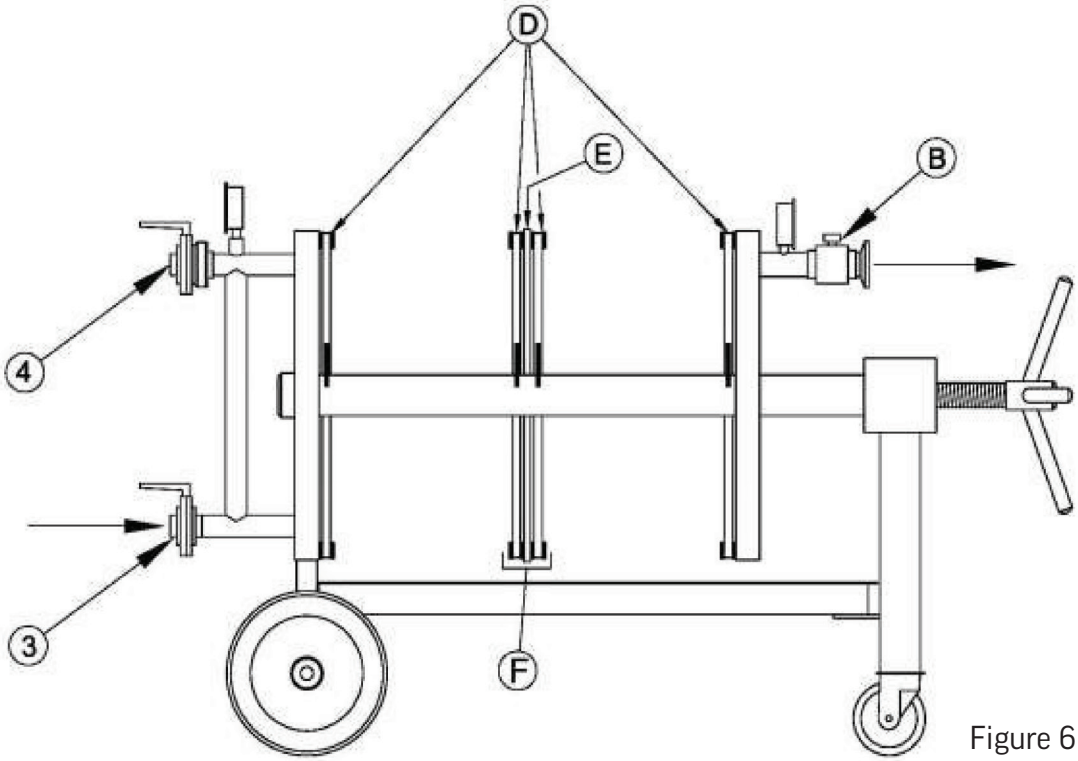


Figure 6

3	Inlet	D	Central Head Plate
B	Outlet	E	Stainless Steel Plate
4	Closed Valve	F	Reconversion Plate Group (3 Pieces)