Filter Plate Setup

Extend the life of your wastewater treatment equipment by properly sequencing your filter plates.

To get the best cake formation during a filtration cycle, your filter plates must be correctly sequenced in the press. Proper sequencing allows drainage from all four corners of each chamber. If the plates are out of order, drainage is limited to one side, resulting in sloppy, sticky cakes instead of firm, fudge-like slabs.

📷 *Poor-quality filter cake*

A messy, porridge-like filter cake — not ideal!

Proper Plate Sequencing

Proper sequencing is known as the **1-3-1-3 pattern**, which means alternating filter plates #1 and #3. The difference between plate #1 and plate #3 lies in how they are ported (i.e., where their flow channels are located).

A Tip from Our Sales Team

Once your plates are in the correct order, it's helpful to **number them sequentially**, starting from the head plate to the tail plate (1–...). This keeps everything organized and makes it easier to spot any issues (like leaking plates).

📸 *Numbered filter plates in press*

Filter Plate Ports

Each Enviro Solutions filter press system includes at least four types of filter plates:

- **Head Plate (#1):** The first plate, located closest to the manifold. This plate is fixed and cannot be removed unless you have a connector plate.
- **Tail Plate:** This marks the end of the filter plate stack.
- **#1 Intermediate Plate:** Marked with a single dot. These plates have ports on the **right corners** (when viewed from the pipe end of the press).
- **#3 Intermediate Plate:** Marked with three vertical dots. These have ports on the **left corners** (again, when viewed from the pipe end).
- **Optional Blank Plate:** Learn more about blank plates in this article.

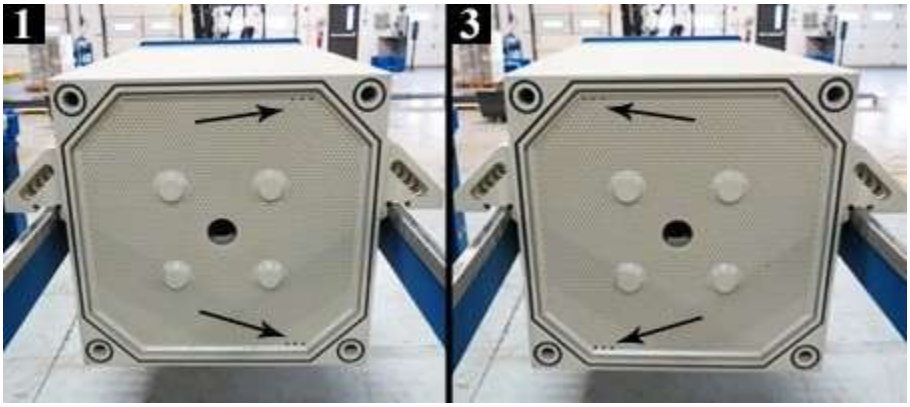
🧩 **For non-gasketed plates**, plate #1 and #3 can also be identified by **cloth pin color** or the **number of dimples** along the edge of the plate.

📸 *Head plate with port*

📸 *#Red Button (1B) intermediate plate with visible ports*

📸 In order from left to right: *Rear plate, #3 ported plate, and #1 plate side-by-side*

📸 *Ports on the face of intermediate plates #1 and #3*



These porting patterns force air or liquid (depending on the operation) to flow evenly throughout the plate chambers — from top to bottom, and front to back.

Post-Filtration: Air Blow

Proper plate sequencing is also essential for post-filtration operations like **air blowing**. Air is blown through the filter cake to remove the remaining filtrate and residual liquid in the port connections before cake discharge.

Here's how it works:

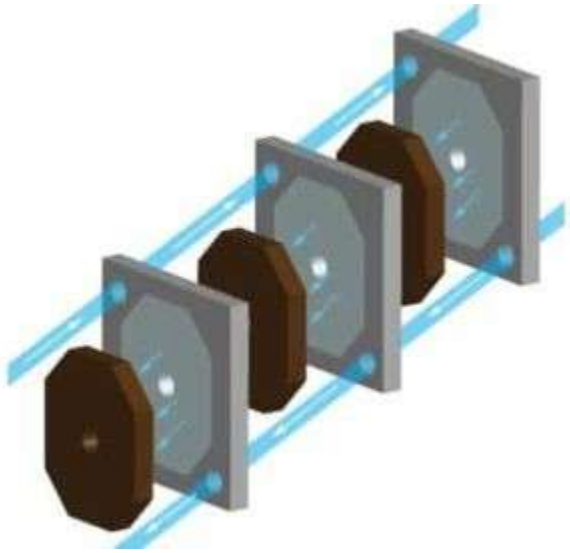
- Pressurized air enters the **top left filtrate outlet port**.
- It moves through the filter cloth and cake in each chamber.
- Then, it exits through the **bottom right port**.
- This clears out buildup from the system efficiently.

💡 Plate #3 has **top and bottom left** outlet ports and is the **only plate where air can enter** the system.

💡 Plate #1 has **right-side** ports only, so **air exits through the bottom right**.

This **1-3-1 sequencing** ensures airflow moves across each cake chamber properly — improving cake dryness and helping with cleaner cake release. Without proper air blow, you'll likely see water leaking out when you open the press.

1-3-1 Filter Plate Sequence



For additional support or questions regarding your filter press or maintenance parts and procedures, please contact our team at your convenience.

We're here to help ensure your system runs smoothly.

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