

Typical Met-Chem Filter Press operation over.

The incoming solution enters into the filter press via the center feed pipe. When the plates are closed, the cavity between the plates is the space where the sludge is captured. The filtered water exits through the filter cloth and works its way to either the left upper and lower corners, depending on whether it is a one button or a three button plate. The one button exits on the opposite side that the three button exits.

The reason for this is to provide proper air flow through the filter cake. When the filter press is full, the sludge chamber is full of sludge. When the three ball valves on the outlet manifold are closed, and the inlet center feed ball valve is closed, the air that enters the filter press via the small ball valve on the upper left hand corner of the manifold is forced through the filter press.

Because of the porting denoted by the one button or the three button plate, the air enters into the sludge chamber via the upper left hand corner of the three button plates, and exits via the bottom right hand corner of the one button plates. This process will push excess water out through the outlet manifold. Think of this a wringing out the sponge.

Because of this porting sequence, care must be taken to maintain the 1-3-1-3-1-3 alignment of the plates.

When expanding with additional plates, remember to always add plates in even numbers, half one buttons and the other half three buttons.

Once the sludge blown down process is complete, the filter press is ready to be opened. To open the automatic filter press, reverse the air valve on the automatic pump to allow the pump to slowly pull open the pushing plate. On the smaller manual units, simply release the ram pressure by opening the release valve and the pushing plate will be pushed back via an internal return spring.

Now that the plates are released, index the plates one by one, and most of the sludge will fall into the sludge dumpster. A sludge spatula is provided on new Filter Presses to aide in the sludge removal. Care should be taken to ensure that the cloths are intact and the o-ring and o-ring sealing surfaces are in position and free from obstructions.

Once all plates are clean, the filter press is ready to be closed hydraulically. The three outlet manifold ball valves should be opened, the center feed pipe should be opened and the pump is ready to be turned on.

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