

## Micronics "VP" Vacuum Pulse Drying Filter Press

Micronics is a leader in providing engineered solutions that result in much drier filter cakes. The **Micronics "VP" Vacuum Pulse Drying Filter Press** will provide customers with filter cakes with a much greater solids content than achievable with conventional filters.

The initial step is achieved by pressure filtration up to 7 bar. Slurry is pumped into the filter chambers, and pump control uses pressure and flow control to achieve an optimum filtration curve. The filtrate is then discharged via the filter press manifold, where valves on the manifold are also automatically controlled to ensure an even filling of the chambers.

After the filter cakes have been formed, hot water is introduced into the filter plates behind a suitable bladder material - specific to process conditions - to discharge air and achieve full face heat contact. The flow is then reversed and continues at a controlled temperature to start cake drying.

A highly-efficient vacuum is created within each chamber to flash off moisture, becoming less efficient as time progresses. At such time that vacuum is insufficient - which varies by material type - atmosphere is allowed to return to the chamber, and vacuum is then reapplied.

This pulsing sequence is repeated until the desired filter cake dryness target is achieved. The plate face (bladder) maintains contact with the filter plate by controlled extension as the filter cake shrinks.

The **Micronics "VP" Vacuum Pulse Drying Filter Press** system achieves the correct levels of moisture quicker than with a fixed vacuum approach and, in some cases, is the only effective means of economically achieving a very dry filter cake.

The **Micronics "VP" Vacuum Pulse Drying Filter Press** is effective in reducing the amount of dry solids to be disposed of in landfills and allows the solids to be



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Vacuum Skid



Heater Skid

disposed of at a lower cost. In some cases, the solids may be burned, adding further to the economic advantages of the filtration system. With the "VP", handling of the filter cake is reduced to a single process, reducing labor costs and the need for having additional drying units.

Vacuum filter presses use heated water. While excess heat from the plant operation is the most economic approach, **Micronics heating skids** are available as stand-alone units.

The **Micronics "VP" Vacuum Pulse Drying Filter Press** may be fully automated and run without the need for operator intervention. For this type of completely operator-free, fully automatic operation, it is essential that Micronics' team of field service professionals conduct appropriate tests at the proposed site.

**Contact us to learn more about how we can help you achieve superior filter cake dryness.**