

# What is a Modular Air Pulsed Jig?

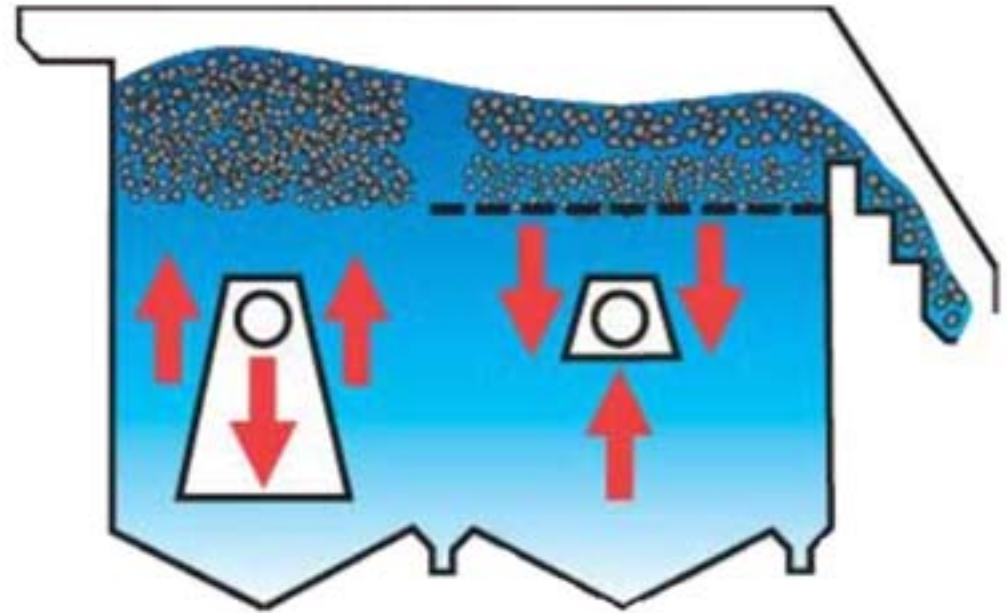
An Air-Pulsed Jig is a water only density separation device.

'**Water Only**' Refers to the fact that no dense medium is required.

'**Density Separation**' is process where particles are separated from each other by utilizing the differences in the densities of the individual particles.

A '**Jig**' is a device that makes use of what can best be described as a sinusoidal water pulse in a bed of particles. The water pulse fluidizes the bed with every pulse, and the bed of particles stratifies in layers of different densities, with the heaviest at the bottom and the lightest at the top.

'**Air-Pulsed**' refers to the method of how the water pulse is generated. Air is injected at precisely measured intervals into an air-chamber and creates an upward flow of water through the bed of particles – the pulse.



The process around a jig is quite simple – the jig must be supplied of process water, and the water has to be cleaned once it has passed through the jig. The process water does not have to be perfectly clean, but must be free of coarse particles (sand like particles). In simple circuits like the one above, a hydro-cyclone removes the sand from the process water. Slimes still build up in the process water, and the water must be replaced every week or two. The slimes must be discarded off in an acceptable way.

In larger circuits, we operate a coarse jog, a fine jig and heavier mineral spirals on the -1mm fraction for the most effective process. Water is cleaned more thoroughly by using specialized clusters of hydro cyclones or thickeners.