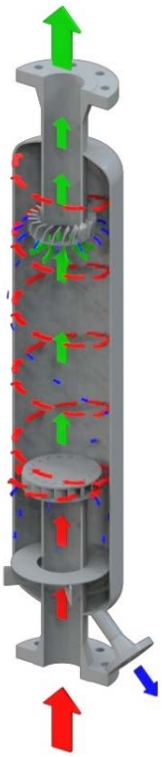
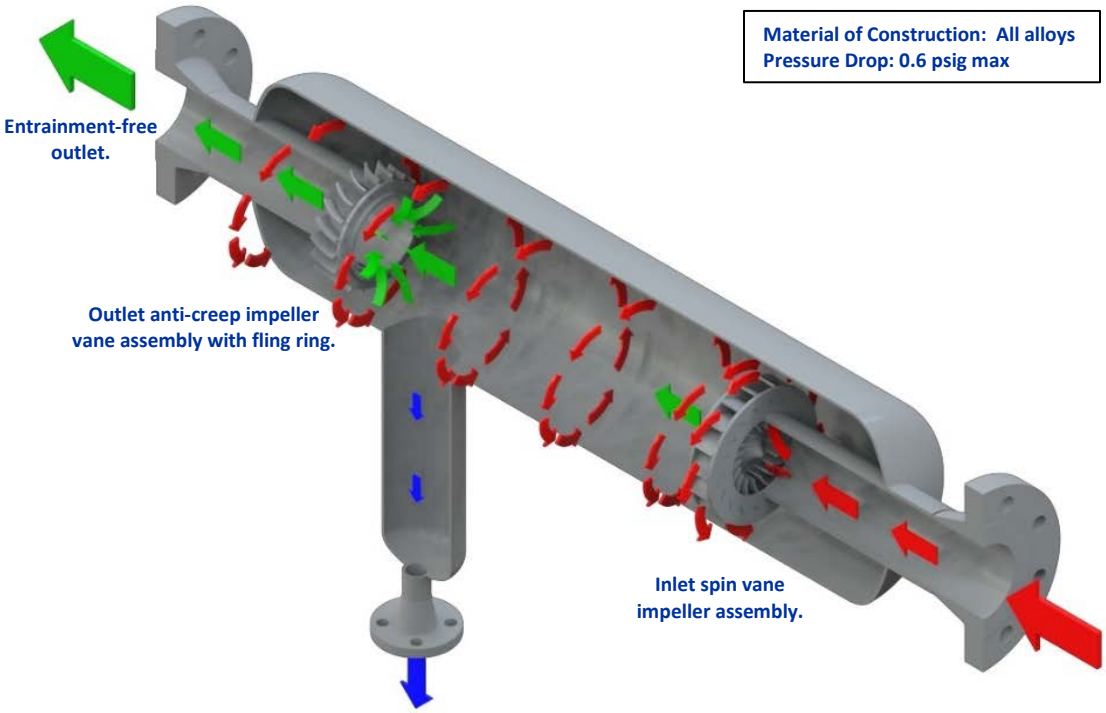
AIROL® VORTEX SEPARATORS





Material of Construction: All alloys
Pressure Drop: 0.6 psig max

Vertical AIROL® Vortex Separator

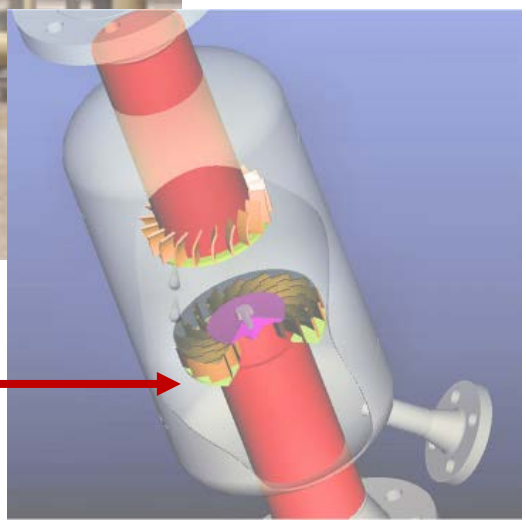
Horizontal AIROL® Vortex Separator

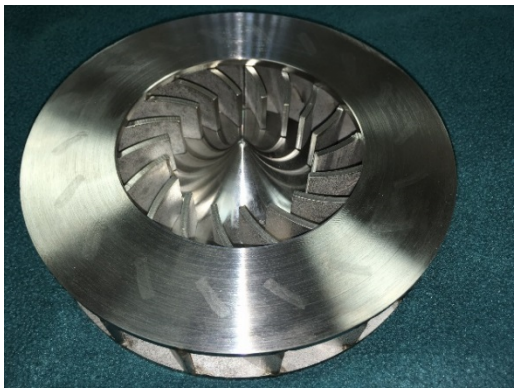
The AIROL® Vortex Separator consists of an inlet vortex spin vane assembly and secondary separation outlet tube. Gas with entrained liquid enters the vortex spin vane assembly. Gas velocity through the spin vanes initiate centrifugal force on the entrained droplets leaving the vanes. Droplets with their imparted radial velocity, spin out against the vessel wall where they further coalesce. Most coalesced entrainment drains down the vessel wall.

Cyclonic action continues to the outlet end of the vessel. Depending on gas velocity and gas density, some liquid on the vessel wall may drag and re-entrain. Before gas reaches the outlet, it is subject to secondary entrainment separation as it spins cyclonically around the outlet tube. An umbrella cone, or fling vanes with creep ring, at the bottom of the outlet tube prevent any remaining entrainment from entering the outlet tube. At lower velocities, the umbrella cone is sufficient, however at higher through-put rates, the fling vanes with creep ring are necessary.

Vortex Separator in Geothermal Well Separation System

Separating CO_2 from brine solution.





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