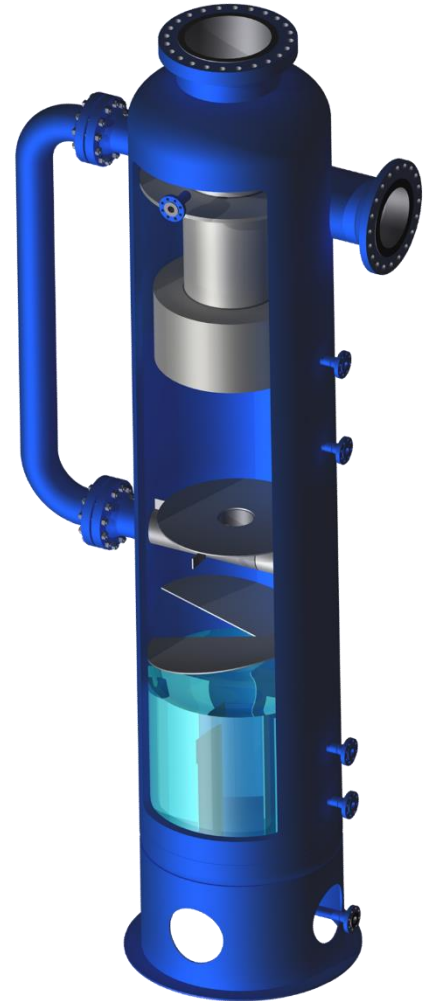


## VERTICAL RECYCLING SEPARATOR

The vertical recycling cyclone separator uses a tangential inlet nozzle to impart high centrifugal force to the inlet gas and liquid mixture to achieve high efficiency separation of liquid, semi-solids, and associated solids from gas dominant flow regimes. Its design uses a two-stage separation process to achieve separation efficiencies that are much higher than conventional, reverse flow cyclones.

Gas enters the vessel through a tangential inlet nozzle. As the gas, liquid, and other contaminants flow around the inside wall of the vessel, a high centrifugal force is applied. Liquid and other contaminants are captured on the inner surface of the vessel and drained into the sump for removal. Gas flows upwards through a central cyclone tube where any fine mist still entrained is spun to the inner surface of the cyclones and removed through the recycle gap near the gas outlet. The liquid and contaminants are drained through an external recycle pipe spool and into the sump. This two-stage process allows for very high efficiency separation, making it ideal for applications of low to moderate liquid loading such as inlet separators, test separators, and scrubbers.

The vertical recycling cyclone separator is extremely resistant to fouling, eliminating the operational challenges that can result when conventional separation devices and filters are plugged with contaminants. The vertical recycling separator has been proven to work in very dirty applications, such as natural gas laden with waxy hydrocarbon liquids, asphaltenes, and salt water.



### ADVANTAGES:

- High Efficiency Separation (99.9% of 8-10 micron and larger liquid and associated solid particles)
- Extremely resistant to fouling, ideal for heavy waxy, asphaltene, and salty applications
- Compact design resulting in a small footprint
- Very low maintenance
- Proven technology, used in oilfield applications for over 60 years

### APPLICATIONS:

- Steam Separators
- Inlet Separators
- Test Separators
- Glycol After Scrubbers
- Amine After Scrubbers

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