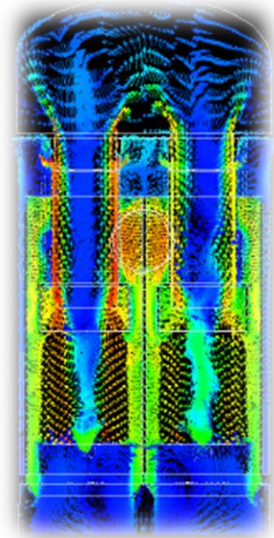


## DUAL CYCLONE SEPARATOR

The dual cyclone separator / scrubber imparts high centrifugal forces to the fluid mixture to achieve high efficiency separation of liquid, semi-solids, and associated solids from gas dominant flow regimes. Its unique design combines the bulk liquid removal capability of a cyclone inlet device with the fine liquid removal achieved with a recycling cyclone separator.

Gas smoothly enters the cyclone through an inlet header, eliminating the potential for liquid shear present in most separation devices. Contaminants are captured on the inner surface of the cyclones and drained into the sump for removal. Gas flows upwards through two vortex finders; any fine mist still entrained is spun to the inner surface of the vortex finders and removed through the recycle gap near the gas outlet and drained into the sump. This two-stage process allows for very high efficiency separation, making it ideal for compressor suction scrubbers, meter separators, test separators, glycol after scrubbers, amine after scrubbers, or inlet separators.

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



CFD Results of dual cyclone design.

### ADVANTAGES:

- High Efficiency Separation (99.9% of 8 micron and larger liquid and associated solid particles)
- Extremely resistant to fouling, ideal for heavy waxy, asphaltene, and salty applications
- Can be arranged in a variety of configurations – inline, offset, top outlet
- Very low maintenance
- Proven technology, verified by 3<sup>rd</sup> party testing and computational fluid dynamics
- Pulsation and vibration dampening features, suitable for reciprocating compressor packages



**US PATENT NO.: US 11,458,486**

**CANADIAN PATENT NO.: 2,937,888**

**MEXICAN PATENT NO: 390221**

### APPLICATIONS:

- Compressor Suction and Interstage Scrubbers
- Inlet Separators
- Meter Separators
- Test Separators
- Glycol After Scrubbers
- Amine After Scrubbers

**JCI Head Office and  
Manufacturing Facility:**  
2929 – 15 St. N.E.  
Calgary, AB T2E 7L8  
(403) 313-1559  
[jci-group.com](http://jci-group.com)