

INLINE CYCLONE SCRUBBER

JCI's inline cyclone scrubber is an extremely compact, two stage separation device that is ideal for process streams with high gas/liquid ratios. Utilizing JCI's proprietary swirl generator, high centrifugal forces are applied to the fluid mixture to achieve high efficiency separation of liquid, semi-solids, and associated solids from gas dominant flow regimes.

Gas and entrained liquid enter the vessel through a low pressure drop nozzle design. Bulk liquid and associated solids are removed in the first stage knockout section and drained into the first sump for removal from the vessel. The fluid mixture then enters the individual axial cyclones where it is forced to spin as it flows across the swirl generator at the inlet of the cyclones. Contaminants are captured on the inner surface of the cyclones and removed through the recycle gap near the outlet end of the cyclones. The liquid and other contaminants drain into a second sump, where they are removed from the vessel. This two-stage process allows for very high efficiency separation, making it ideal for low liquid loading applications such as compressor suction scrubbers, glycol after scrubbers, amine after scrubbers, or inline separators. Single stage designs are also available for an even more compact solution.

JCI has invested a significant amount of time and effort into the development of its proprietary swirl generator. The unique shape of the central hub and surrounding blades result in a design that is optimized to maximize separation efficiency and minimize pressure drop. The result is a total pressure drop that is 15-20% less than comparable cyclones available on the market.

ADVANTAGES:

- High Efficiency Separation (99.9% of 8-10 micron and larger liquid and associated solid particles)
- Compact design resulting in capital savings
- Low pressure drop compared to conventional cyclone separators
- Inline design for simple piping arrangements
- Very low maintenance

APPLICATIONS:

- Compressor Suction and Interstage Scrubbers
- Compact Separation
- Glycol After Scrubbers
- Amine After Scrubbers

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