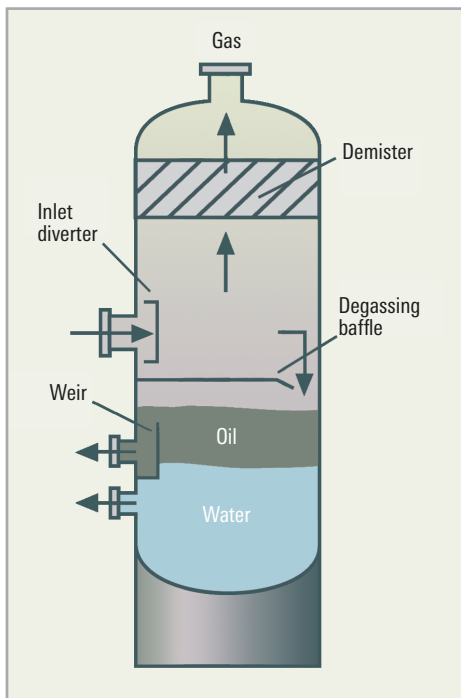


NATCO VUF

Three-phase vertical upflow separator

APPLICATIONS

- Fuel gas scrubber
- Slug catcher
- Surge vessel
- Gas vent vessel
- Small-capacity production separator
- Test separator



Vertically oriented vessel with the gas outlet normally on the top of the separator.

Cost-effective gas/liquid separation

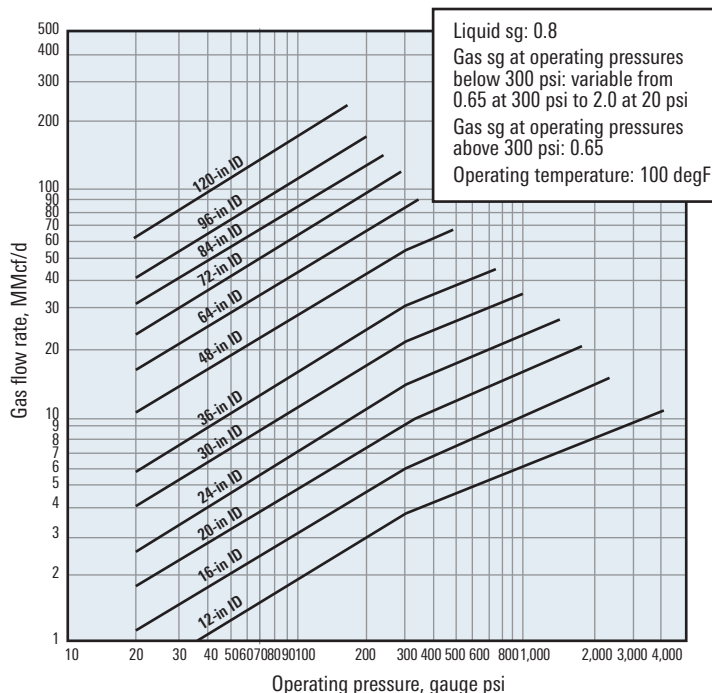
The simple, economical design for low pressures and low flow rates makes the NATCO VUF* three-phase vertical upflow separator one of the most commonly used gas scrubbers. The vertically oriented vessel features a side inlet, and the gas outlet is usually located on the top of the separator. Alternative gas outlet designs are available to reduce overall vessel height.

How it works

NATCO VUF separators provide four main functions: inlet momentum control, vapor demisting, liquid retention, and liquid outlet control. Inlet momentum typically is controlled with a bidirectional inlet diverter that also provides bulk gas/liquid separation. Vapor demisting normally is achieved with wire mesh. If heavy or waxy crudes are present, wire mesh can be eliminated or replaced with serpentine vanes. Liquid retention is provided in the bottom section of the separator. For three-phase designs, oil and water separate in this section. Sizing of this section is usually based on liquid retention time. Liquid outlet control also is provided in the bottom section of the separator. Vortex breakers and baffles prevent the reentrainment of distinct phases.

Droplet-removal performance

Because the primary function of most NATCO VUF separators is to remove small amounts of liquids and solids from the vapor stream, performance is based on the overall percentage of droplet removal. For designs using wire mesh as a demisting device, removal of 99% of 5-um droplets and larger can be expected. For alternative designs using serpentine vanes, removal of 98% of 10-um droplets and larger can be expected.



NATCO VUF separators with wire mesh demister.

*Mark of Schlumberger
Other company, product, and service names are the properties of their respective owners.
Copyright © 2018 Schlumberger. All rights reserved. 18-OSF-367972