



# Vacu-Flo™ Degasser



Higher Efficiency and Simplified Maintenance

## Why Use the Vacu-Flo™ Degasser in a Mud System?

An efficient degasser is essential to safe and productive drilling operations. Since gas is practically insoluble in water, it is relatively easy to detect and remove. By comparison, gas is readily soluble in oilbase muds – its detection is more difficult as well as its removal. Regardless of the composition of the gas encountered, gas present mud can decrease efficiencies in rig pumps, centrifugal pumps and associated operational equipment. The goal is to “Keep the pumps Operating”.

### Atmospheric vs. Vacuum Degassers

Atmospheric separations rely on impact, turbulence, agitation or a combination of these techniques to separate gas from the fluid. They possess few moving parts and have low initial cost. But their efficiency is limited and they may not be suitable for all conditions.

Vacuum degassers have more moving parts and higher initial cost. This is due primarily to the vacuum pump and attendant components. They are, however, much more efficient. Because gas volume is inversely proportional to pressure, gas bubbles surface from a fluid more rapidly under pressure. By combining impact and turbulence features with low pressure, modern vacuum degassers prove to be fast acting and highly effective in separating dissolved gasses.

### The Vacu-Flo Design

The team of engineers who created the Flo-Line® Cleaner and other successful Derrick solids control equipment, have designed a degasser which improves on existing devices in several respects. First and most important is the Vacu-Flo's leaf capacity – Vacu-Flo 500: 7264 square inches; and Vacu-Flo 1200: 14528 square inches. It is the stacked corrugated fiberglass leaves which promote superior separation of gas from mud. The more surface available – the more separation occurs. The Vacu-Flo 1200 provides four times as much area as one popular unit, and 217% more than the closest competitor. This design improvement does not increase vessel size, tank space requirements, or weight.

Traditionally, the inspection and/or maintenance of degassers requires unbolting and removing the vessel lid. Vacu-Flo eliminates this time consuming problem with an oversized access door on the lower side of the vessel. This door also permits fast and simple maintenance of the float valve assembly without removing any piping. These features, together with other design improvements, make the Vacu-Flo degasser the new leader in vacuum degassing for the drilling industry worldwide.

## Features

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**Derrick's Design** – Stacked leaf arrangement and multiple feed ports provide higher fluid impact and greater turbulence for faster gas removal.

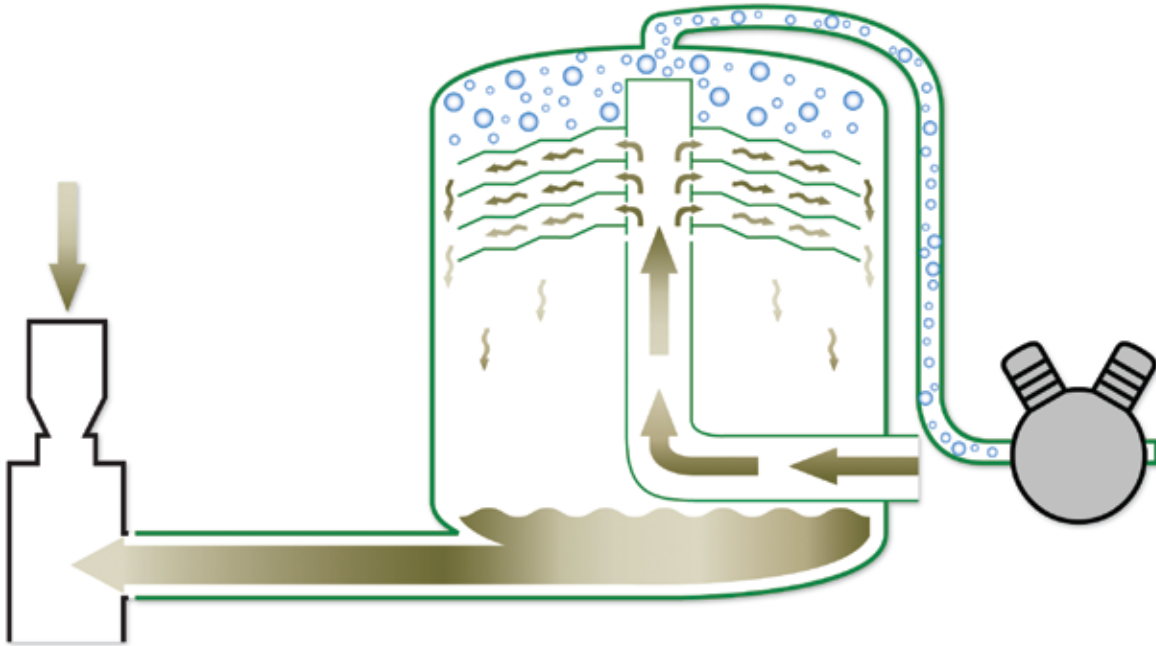
**More Leaf Surface Area** – The greater the effective surface area, the more efficiently gas is separated from the mud. The Vacu-Flo 1200 provides four times as much area as one popular unit, and 217% more than the closest competitor.

**Corrugated Fiberglass Leaves** – Corrugations promote additional turbulence for efficient gas removal.

**Gas Extraction** – Located at the top of the vessel, this configuration permits all gas to be evacuated. Maintenance is also simplified.

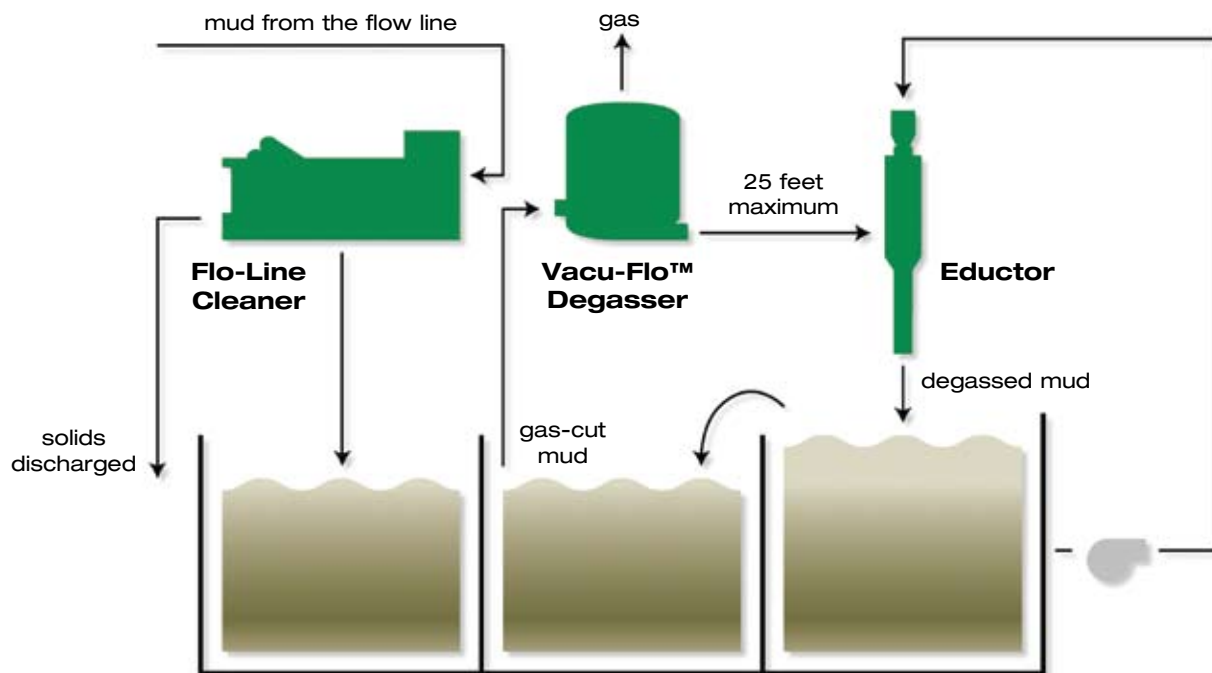
**Large Access Door** – The leaf assembly and float mechanism can be readily inspected without removing the vessel lid and components. The vacuum pump extraction line can be serviced from the outside of the Derrick Vacu-Flo degasser without removal of the degasser top for ease of service. This feature significantly reduces downtime and maintenance costs compared to other units.

## How the Vacu-Flo Degasser Operates



Stacked leaf arrangement allows superior gas/liquid separation.  
Vacuum pump eliminates remixing and inefficient cyclonic re-separations.

## Typical Installations



Typical installation is downstream from the Flo-Line Cleaner as shown here. Eductor pump efficiency allows 25 feet horizontal run, over twice that of other designs.

## Approximate Dimensions and Weights



**Vacu-Flo 500**



**Vacu-Flo 1200**

### Vacu-Flo 500

Weight: 2450 lbs (1111 kg)  
Length: 85 3/8" (2169 mm)  
Height: 63" (1600 mm)  
Width: 60" (1524 mm)  
Leaf Area: 7264 in<sup>2</sup> (4686442 mm<sup>2</sup>)  
Flow Rate: 500 gpm (1893 lpm)

### Vacu-Flo 1200

Weight: 2700 lbs (1226 kg)  
Length: 87 3/4" (2229 mm)  
Height: 73 5/8" (1870 mm)  
Width: 63" (1632 mm)  
Leaf Area: 14,528 in<sup>2</sup> (9372884 mm<sup>2</sup>)  
Flow Rate: 1200 gpm (4542 lpm)



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