

COMPACT VACUUM D-GASSER



FEATURES

- Corrosion-proof internal conical disks reduce repair & maintenance costs
- Large cleanout port allows easier access for cleaning inside of D-GASSER
- Large surface area allows gas entrained in mud to be released effectively
- Interchangeability of many of the parts with the HORIZONTAL VACUUM D-GASSER allows use of existing inventory parts
- Same field-proven vacuum pump as HORIZONTAL VACUUM D-GASSER
- Short footprint can be installed in smaller spaces

The M-I SWACO COMPACT VACUUM D-GASSER[†] unit works by removing entrained gases from the drilling fluid. Vacuum degassing is more effective than atmospheric degassing due to the exposure of the drilling fluid to pressures well below ambient atmospheric pressure.

Small footprint technology for removing entrained gases

The COMPACT D-GASSER unit removes entrained gases from drilling fluid by exposing the fluid to pressures well below ambient atmospheric pressure. The vacuum-style degasser is mounted in the first compartment downstream of the sand trap and upstream of any centrifugal pumps. The piston-style vacuum pump on the COMPACT D-GASSER unit continuously removes free gas, which can be directed to the flare stack.

Accelerating free gas “break out”

Greater internal surface area allows gas-entrained mud to be released more efficiently. The unit directs incoming fluid over internal conical disks that create large surface areas. Because of the thinness of fluid layers continuously flowing over the surface, gases require less time to separate or “break out,” enhancing processing efficiency.

Efficient operating features

A float valve controls the mud level in the vessel to ensure that the disk stack is never submerged. A liquid-trap tank in the gas-removal piping collects any fluid or condensate that may have entered the gas removal piping.

Solid construction and ease of maintenance

Corrosion-proof internal conical disks reduce repair and maintenance costs. A large cleanout port makes cleanout of the COMPACT D-GASSER easy. You also benefit from the interchangeability of many parts. The HORIZONTAL D-GASSER unit allows use of existing inventory parts and the COMPACT D-GASSER unit has the same field-proven vacuum pump as the HORIZONTAL D-GASSER unit, but with a smaller footprint for tighter spaces.

How it Works

The unit directs the incoming fluid flow over internal conical disks that create large surface areas over which thin layers of the fluid continuously flow. The transit time required for the gas to travel up, through the fluid and “break out” of the mud is minimized by spreading the fluid into thin layers.

At pressures below atmospheric pressure, the rate at which gas separates from a fluid is accelerated. The low pressure promotes the growth of large gas bubbles which rise rapidly to the nearest surface.

The free gas that breaks out of the drilling fluid is continuously removed from the vessel by the action of the piston-style vacuum pump on the unit. The removed gas is typically directed to the flare stack.

The level of mud within the vessel is controlled by a float valve to ensure that the disk stack is never submerged. As fluid level rises and lifts the float, air enters the vessel through the three-way valve to decrease the vacuum inside the vessel. With less vacuum inside the vessel, the rate at which fluid is drawn into the tank slows and the rate at which fluid exits the vessel increases. The fluid level inside the vessel drops rapidly until the float lowers and full vacuum is restored.

A liquid-trap tank in the gas-removal piping collects any fluid or condensate that may have entered the gas-removal piping. A float ball in the liquid-trap tank prevents the liquids from entering the vacuum pump.

Specifications

- Length: 00.5 in. (2,553 mm)
- Width: 69.9 in. (1,775 mm)
- Height: 79.4 in. (2,016 mm)
- Vessel diameter: 60 in. (1,524 mm)
- Weight (dry): 4,750 lb
- Capacity: Up to 1,300 gpm

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