

The Blackmer logo is written in a white, stylized, cursive font with a registered trademark symbol. It is positioned in the upper left corner of the page, overlaid on a background image of an industrial refinery at night with various towers and storage tanks illuminated by lights.The PSG logo consists of a stylized diamond shape made of four smaller diamonds, with the letters 'PSG' below it. Underneath 'PSG' is the text 'a DOVER company'.

Where Innovation Flows

Condensates

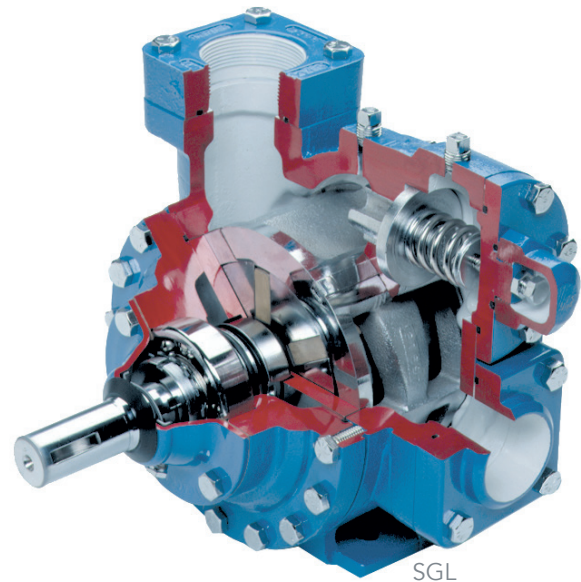
APPLICATION DOCUMENT

Condensate is a low-density, high-API gravity liquid hydrocarbon phase that generally occurs in association with natural gas. The presence of condensate as a liquid phase depends on temperature and pressure conditions in the reservoir allowing condensation of liquid from vapor. If the pressure drops below the hydrocarbon dew point during production, there is a risk of the condensate changing from gas to liquid.

Condensates are a valuable hydrocarbon that can be refined to other downstream petroleum products.

Positive displacement sliding vane pumps excel in condensate applications thanks to a unique design that allows them to handle extremely thin fluids (low viscosity) and liquid with vapors (entrained gas). This design also provides excellent priming capability and high performance over a wide range of temperatures and differential pressures. Additional benefits include "self-adjusting" vanes that allow them to maintain near-original performance during the life of the pump, dry run capability, and the ability to self-prime in order to start pumping condensates.

Blackmer SGL Series Pumps, which are part of the Cavitation Line, are designed to deliver reliable, highly efficient performance for the liquid transfer or recirculation of a wide variety of petroleum and industrial liquefied gases. The SGL Series is equipped with a Cavitation Suppression Liner designed to



eliminate the destructive chattering that is a result of cavitating fluids by breaking large vapor bubbles into smaller bubbles before they have a chance to implode. The result is less noise, less wear and less chance that the pump will be susceptible to disruptive failures associated with cavitation that happens when pumping entrained vapors. Additionally, the vanes, liner and end discs are all easily replaced, bringing the pump back to like new specifications.

Available in five sizes ranging from 1.25- to 4-inch, the SGL pumps have flow capacities that vary from 4 to 300 gpm (15 to 1,135 L/min). Constructed of shock resistant ductile iron, the pumps are available in single and double mechanical seal configurations for the 3- and 4- inch sizes. The double mechanical seals fit into the same axial package as the single seal, and provides protection against leakage of volatile fluids and is field proven to offer long life and reliable service in a wide range of critical and high vapor pressure applications. Based on configurations with various vane and elastomer options, the temperature limits of the pump range from -30°F to 240°F (-34°C to 115°C).



Condensates

BLACKMER SOLUTIONS

- [SGL Series Sliding Vane Pumps](#)

COMPETITION

- Centrifugal Pumps

In upstream oil field applications, the NPSHa can be very low, causing the centrifugal pump to cavitate, causing the pump to work extremely hard to pump what fluid is available. This situation can also lead to vapor lock on the pump.

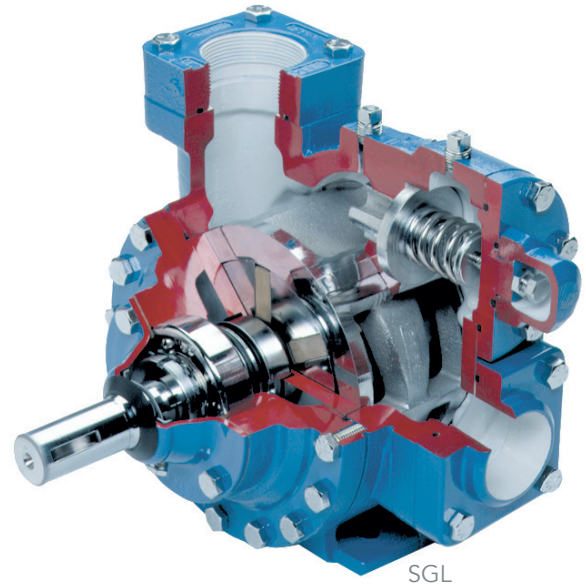
Cavitation is destructive and can quickly decimate internal pump components and make it unusable, leading to costly downtime.

- Gear Pumps

Gear pumps struggle in pumping thin liquids and liquids with vapor (entrained gases) both of which fit condensates. Gear pumps need viscous and lubricating fluids and without them, the pump will wear down quickly.

- Progressive Cavity Pump

Within oil and gas applications, dry run is a common issue, and progressive cavity pumps are highly sensitive to dry run and will quickly burn out and fail if exposed to this condition.

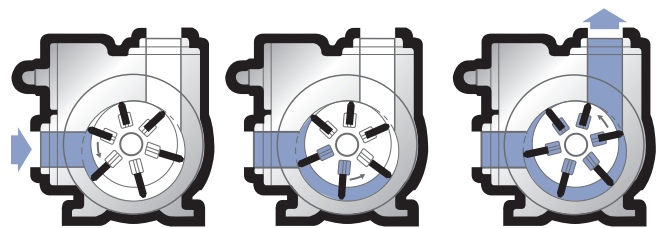


SGL

GLOSSARY

API Gravity - a measure of how heavy or light a petroleum liquid is compared to water.

HOW BLACKMER SLIDING VANE ACTION WORKS



For more information on these additional solutions, visit us at blackmer.com.



PSG

1809 Century Avenue SW
Grand Rapids, MI 49503-1530 USA

P: +1 (616) 241-1611 • F: +1 (616) 241-3752
info@blackmer.com

blackmer.com

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