Ace Plus gas handler pumps

Increase lift efficiency and extend gas production

Applications

- Oil producing wells with high gas and low intake pressures
- ESPs unable to separate gas prior to entering the pump
- ESPs using gas separators in extremely gassy wells
- Subsea oil wells or wells with non-vented packers
- Abrasive oil well applications
- Steam flood applications including steam-assisted gravity damage (SAGD)

Features

- Modified impellers feature low inlet angles and a high-angle discharge vane design
- Multiple vanes on impellers increase the number of available edges to break gas bubbles
- Axial stage design manufactured to prevent fluid from separating when passing through the stages
- Optional constructions available for abrasive well applications
- Flexible installation allows placement above the standard intake or above a gas separator in high-gas wells

Benefits

- Allows the pump to handle high gas volume fraction (GVF) well conditions
- Seeks to increase lift efficiency using natural lift from the gas
- Reduces production shutdown due to gas lock
- Improves draw down for optimal well production
- Extends gas production capabilities of standard pump stages
- Enables operators to customize the number of stages required based on the application

The **Ace Plus™ gas handler pumps** from Baker Hughes are designed to increase lift efficiency and extend gas production capabilities by handling up to 75% free gas.

The Baker Hughes Ace Plus gas handler series is part of a suite of gas management products for high, medium, and low flow rate applications. This multistage, axial-flow gas handling system is located below the main pumping system, can be used independently or in conjunction with other gas management products, and is designed to efficiently manage downhole applications with high percentages of free gas. This is accomplished by using pressure generated by the pump stages to compress the gas and produce it as part of the fluid.

Performance tests indicate that the Ace Plus gas handler pumps are able to process up to 75% free gas without locking at extremely low intake pressures. Standard pump stages can handle only one-fourth of this amount of free gas before locking. The Ace Plus gas handler pumps are designed to reduce production disruption and overheating of the electrical submersible pump (ESP) motor caused by gas locking.

Specifications		
	Ace Plus 538 gas handler series	Ace Plus 400 gas handler series
Housing outer diameter	5.38 in. (136.7 mm)	4.00 in. (101.6 mm)
Minimum casing size	7.00 in. (177.8 mm)	5.5 in. (139.7 mm)
GVF	Up to 75%	Up to 75%
Maximum pressure	6,000 psig (414.7 bar)	6,000 psig (414.7 bar)
Maximum temperature	Up to 250°C (482°F)	Up to 250°C (482°F)
Stage metallurgy	NiResist[1]	NiResist[1]
Housing metallurgy	Carbon steel[1]	Carbon steel[1]

[1] All metallurgy is available with coatings for scale, corrosive, and abrasive environments upon request.

Ace Plus gas handlers	BEP	Application range
400 Series GH650	800 B/D	300 to 1,200 B/D
400 Series GH1400	1,500 B/D	600 to 2,600 B/D
400 Series GH2500	2,650 B/D	800 to 4,275 B/D
400 Series GH6000	6,300 B/D	3,400 to 10,125 B/D
538 Series GH4000	4,500 B/D	1,400 to 5,400 B/D
538 Series GH7000	8,000 B/D	3,000 to 9,600 B/D

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