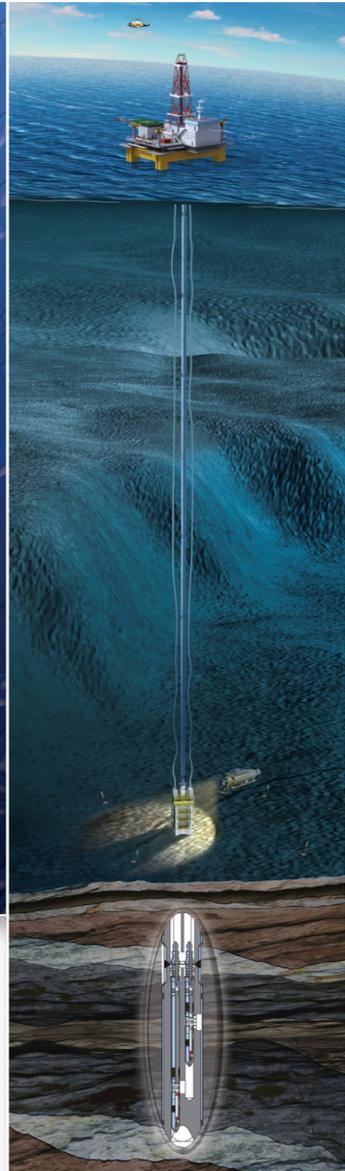
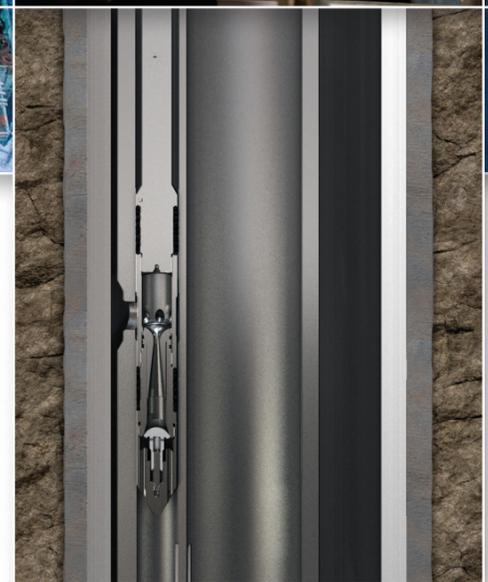
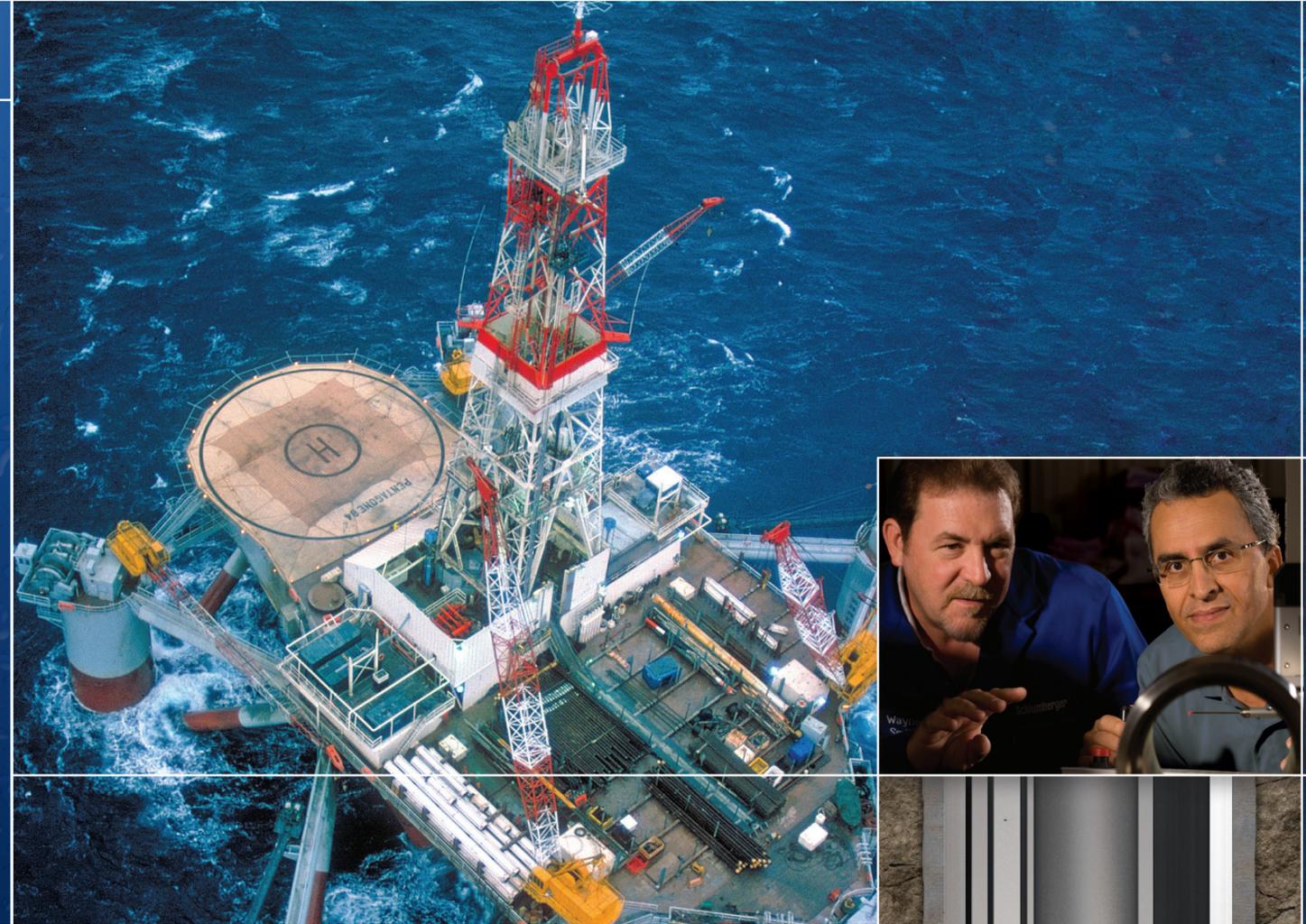


# Barrier Series Gas Lift Systems



Schlumberger Barrier Series gas lift systems combine field-proven Camco and advanced barrier technologies, extending the capabilities and range of existing gas lift systems. With increased reliability and performance, Barrier Series gas lift systems greatly enhance wellbore integrity. Through innovations in product design and engineering, as well as our globally recognized quality services, Schlumberger provides the options, flexibility, and support you need for all of your gas lift operations.



## Barrier Series Gas Lift Systems

Complete your gas lift wells with confidence

[www.slb.com/gaslift](http://www.slb.com/gaslift)

# Barrier Series Gas Lift Systems

## APPLICATIONS

- High-pressure, deepwater installations
- Subsea installations
- Safety-critical applications with stringent pressure integrity requirements
- Standard installations

## BENEFITS

- Reduced downtime by eliminating the need for annulus fluid unloading following typical slickline operations
- Lower costs and downtime through improved pressure integrity of entire wellbore environment

## FEATURES

- Extended capability of existing gas lift systems through a field-proven, dual-pocket, side pocket configuration, with a dual-inline, redundant, leak-tight seal
- Compatibility with existing field-proven Camco\* orienting-type slickline installation and pulling tools
- Industry-standard ISO 17078-1 V1, ISO 17078-2, and pressure barrier qualifications

## Through increased reliability and performance, the Schlumberger Barrier Series gas lift systems enhance existing gas lift applications.

Especially suited for high-pressure, deepwater, and subsea installations, the Barrier Series systems lower costs and downtime by improving the pressure integrity of the entire wellbore environment.

Complete gas lift wells, and improve performance, with the combined benefits of Barrier Series gas lift valves and the newly designed MMRG-2V-B dual-pocket, side pocket mandrel. The MMRG-2V-B dual-pocket, side pocket mandrel is based on the existing, field-proven Camco MMRG-2V dual-pocket, side pocket configuration with a dual inline, redundant, leak-tight seal.

### Enhanced capability and reliability

A barrier-qualified check valve system that provides a positive metal-to-metal seal between the tubing and casing annulus is available in 1½-in and 1¾-in injection-pressure-operated (IPO) valves and orifice valves for multiple barrier valve options.

The availability of dual bores and communication portals in the barrier mandrel allows for two separate and distinct, retrievable, flow control check valve devices that work independently to simultaneously serve both the flow control and the pressure barrier requirements of the gas lift system.

### One piece, leak-resistant, dual-pocket design

The barrier mandrel is a round-body, fully machined mandrel with a one-piece, twin 1½-in bore pocket design with a dual-tool discriminator containing a tubing casing barrier valve (TCBV). The TCBV prevents communication between the tubing and casing when the normal operating gas lift valve is removed from the primary pocket.

### Designed to meet the challenges of demanding environments

Barrier Series gas lift valves are manufactured using state-of-the-art technology and corrosion-resistant materials, to meet the challenges of demanding environments, accommodating a variety of critical operating conditions and pressure ranges. The 1¾-in XLift\* IPO gas lift valve and the standard R-20-02 IPO valve enable well unloading. Multiple models of the XLift valve and traditional orifice valves facilitate continuous-flow gas lift operations.

### Strict quality, leak-rate, and performance criteria

The positive-sealing check valves are designed qualified to meet strict quality, leak-rate, and performance criteria as defined by the Statoil TR2385 standard and ISO 17078-2. With a test pressure rating of 10,000 psi [68,947 kPa], the check valve forms a metal-to-metal barrier between the tubing and casing annulus that prevents undesired communication or reverse flow, and mitigates the risks associated with typical gas lift valve check systems.

#### Valve, Mandrel, and Latch Compatibility

Barrier Series Gas Lift Valves	Side Pocket Mandrels	Latches
R-20-02-B injection pressure operated	M Series side pocket mandrels MMRG-2V-B Barrier Series dual-pocket, side pocket mandrel	R Series latches
O21R-B single-point-injection orifice		
O2-30R-B dual-check orifice		
S02-30R-B dual-check shear orifice		
NOVA 15-B venturi orifice		
XLift Barrier Series Gas Lift Valves	Side Pocket Mandrels	Latches
XLl-B injection pressure operated	XL Series side pocket mandrels	XL Series latches
XLO-B high-pressure orifice		
XLO-R-B rupture-disk orifice		