



PRODUCTION

# ULTRALIFT™ DEEPWATER GAS-LIFT SYSTEMS

Enhance production and improve completion integrity in the most extreme environment

DRILLING & FORMATION EVALUATION  
WELL CONSTRUCTION  
COMPLETION & STIMULATION  
PRODUCTION



**Weatherford®**



## HIGHEST INDUSTRY STANDARDS

**API  
19G1 AND 19G2  
CERTIFICATIONS**  
for V1-rated gas-lift  
mandrels and  
valves

**CHECK  
VALVES  
QUALIFIED**  
per stringent TR2385  
testing standards

**EXTENSIVE  
APPLICATION-  
BASED TESTING**  
for all system  
components

# MINIMIZE RISK AND MAXIMIZE PROFITABILITY

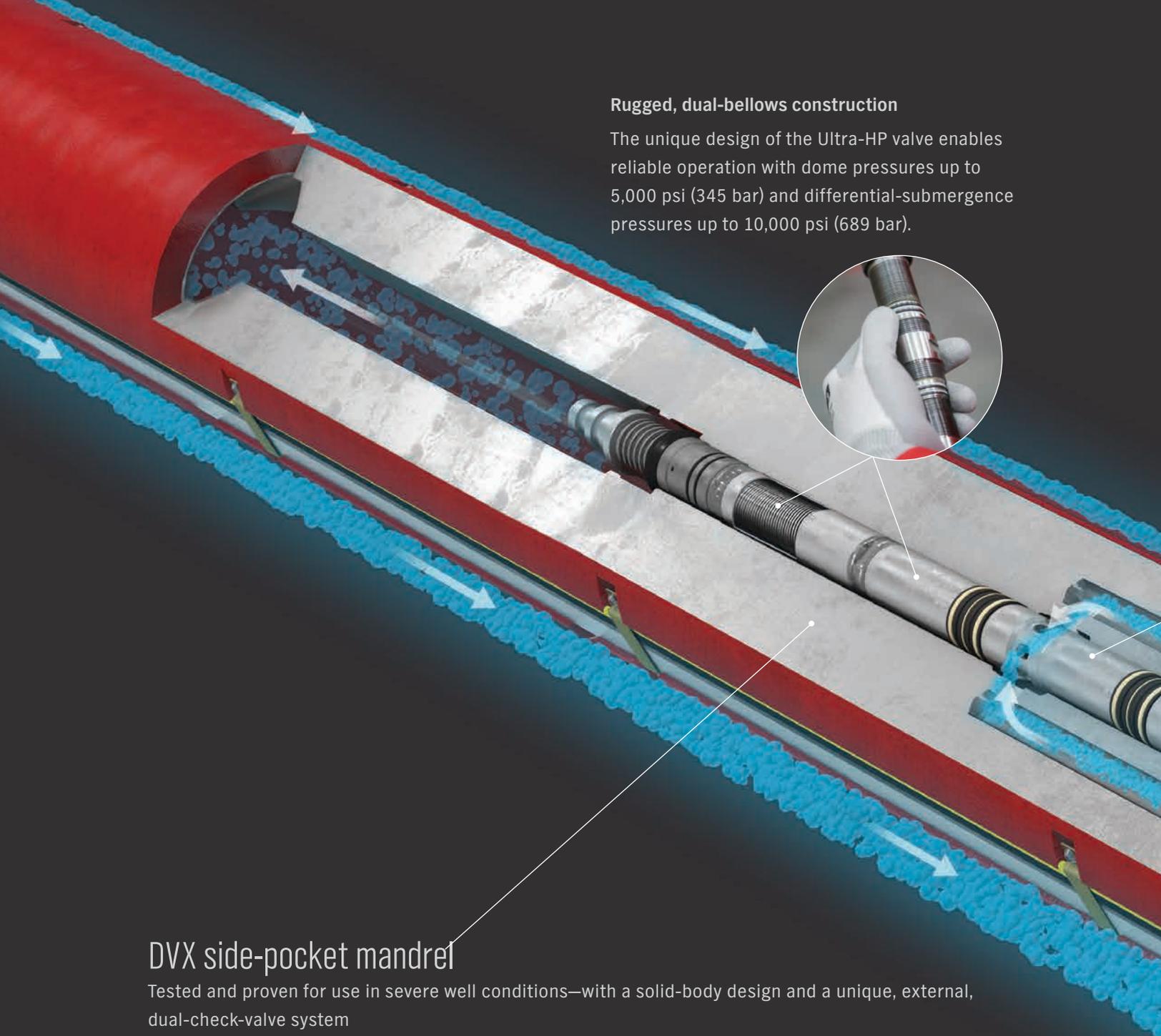
in ultrahigh-pressure lift applications.

In challenging environments where safety, efficiency, and reliability are especially critical, you can trust the Weatherford UltraLift gas-lift portfolio to deliver consistent, long-term performance for the highest level of completion integrity.

- Valves designed to maximize gas passage and handle extreme pressures.
- Mandrels with dual external check valves that provide barriers to enhance completion integrity during production and gas-lift servicing.
- Complete solutions that have passed extensive testing and deliver field-proven results in the harshest conditions.

As the world leader in gas-lift technology, we have a strong track record of developing and deploying vital deepwater gas-lift systems that span the life cycle of high-profile offshore wells—so you can be confident that your production assets are designed to perform to the highest standards.





### Rugged, dual-bellows construction

The unique design of the Ultra-HP valve enables reliable operation with dome pressures up to 5,000 psi (345 bar) and differential-submergence pressures up to 10,000 psi (689 bar).

## DVX side-pocket mandrel

Tested and proven for use in severe well conditions—with a solid-body design and a unique, external, dual-check-valve system

- Dual CV-2 DVX external check valves provide a true second barrier to prevent wellbore fluids from entering the casing annulus, which maintains completion integrity by protecting the casing string from high pressures and corrosive fluids.
- Industry-standard pocket configuration accepts 1- and 1 1/2-in. outside diameter (OD) gas-lift valves and latches.
- Custom-designed grooves can be machined on the side of the mandrel to accommodate multiple control lines without increasing the mandrel OD.
- Unloading of the casing annulus is not required after changing live gas-lift valves via wireline, which reduces production downtime.
- Assembly can be configured to meet the highest API 19G1 V-1 certifications.

# THE ULTIMATE CONFIGURATION

for ultrahigh-pressure conditions.

When you combine **THE ULTRA-HP™ GAS-LIFT VALVE** with the proven Weatherford **DVX™ SIDE-POCKET MANDREL**, you're well equipped to excel in the most severe offshore environments.

## Ultra-HP gas-lift valve

Designed for ultrahigh-pressure injection systems to achieve deep points of injection and to maximize production

- Average run life exceeds 100,000 cycles, per API 19G2 testing guidelines.
- Aerodynamic design, based on computational flow dynamics (CFD) testing, provides maximum gas passage and erosion resistance.
- Bellows-protection system, based on aerospace technology, prevents deformation under high differential pressures.
- Dome-charge capability is 5,000 psi (345 bar).
- Differential-submergence-pressure rating is 10,000 psi (689 bar) at 300°F (149°C).



## Reliable completion integrity

Dual, external check valves provide extra protection for the casing string against high pressures, hydrogen sulfide, carbon dioxide, and other hazards.

# A RANGE OF TOP-PERFORMING VALVES

for a variety of offshore well conditions.

As part of the comprehensive Weatherford offering of gas-lift products and solutions, the premium UltraLift portfolio offers a suite of wireline-retrievable gas-lift valves that have been flow-performance and erosion tested to deliver maximum production.



Each UltraLift valve incorporates our proven DVX check-valve design, which can be equipped with a modified-PTFE and metal-to-metal combination seal or with a strictly metal-to-metal seal. Both configurations have passed stringent API 19G2 and TR2385 testing standards for barrier certification in demanding environments.

## **RH-2 injection-pressure-operated valve**

With a solid track record of operation in midrange operating conditions, this valve includes a conventional inverted-bellows design with hydraulic bellows protection for high-injection-pressure and high-injection-volume systems.

## **RDDK-2A shearable-orifice valve**

This versatile tool functions as a dummy valve upon initial installation and then facilitates the completion test after being sheared open via annulus pressure. At the next predetermined pressure point, the fracture rod breaks, and the valve operates as an orifice valve.

## **RO-2HV orifice valve**

Designed using the latest CFD software to maximize gas-passage capability and minimize erosion, this valve provides reliable, long-term operation under extreme conditions. The assembly can be modified to the RV-2HV configuration, which is equipped with a Venturi-style nozzle to enhance flow stability in some applications.



## Qualified for the world's toughest **DEEPWATER ENVIRONMENTS**

The CV-2 DVX reverse-flow check-valve system has passed stringent North Sea flow-erosion testing and meets sealing criteria for maximum well-containment capabilities per API 19G2 and guiding document TR2385.



## A small package with **A BIG RESPONSIBILITY**

Even the tiny, aerodynamic darts of our DVX check valves have passed rigorous physical testing to enhance completion integrity.

More than  
**1,200**  
successful DVX™  
mandrel installations  
in high-profile gas-lift  
applications

**ZERO**  
reported  
communication  
incidents

## **LIFT SMARTER.**

UltraLift gas-lift systems represent only a fraction of our production solutions. With our unparalleled experience and an unmatched breadth and depth of solutions for all forms of artificial lift, Weatherford can optimize production in any well. Our customer service centers are conveniently located in every major oil-producing area of the world to address your needs efficiently wherever you operate.



## Protect your high-profile assets with the worldwide leader in gas-lift systems.

To learn how Weatherford UltraLift gas-lift systems provide a true second barrier to protect the casing against high pressures and corrosive well fluids, contact your local Weatherford representative. For more information about our full breadth and depth of offerings, visit [weatherford.com](http://weatherford.com).



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