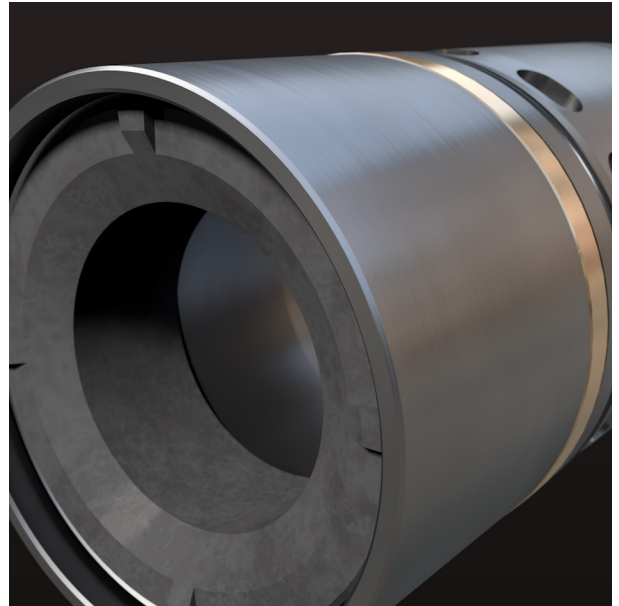
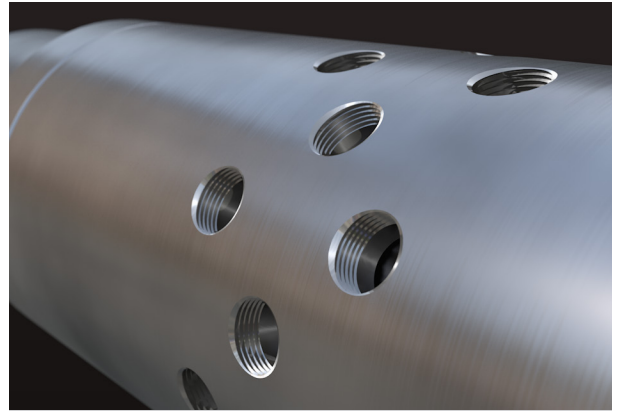




UNCONVENTIONALS



Frac Sleeve Systems

**UNCONVENTIONAL COMPLETION SOLUTIONS
DESIGNED TO MAXIMIZE EFFICIENCY**

Frac Sleeve Systems Make It Easy to Do More with Less

Optimizing production in low-permeability unconventional wells requires a variety of completion solutions due to the variation in geologies and reservoir properties - not only from one reservoir to another, but often within each reservoir.

Halliburton Unconventional Completion systems provide a wide range of technologies to meet these challenges. From Fas Drill® composite plugs to RapidStage® multiple-entry frac sleeves, Halliburton can tailor the completion to provide the best fit for your reservoir requirements.

Halliburton RapidSuite™ sleeve technologies consist of several different frac sleeves and sleeve systems to meet a wide range of requirements.

RapidStart® Initiator System (not shown)

The RapidStart® Initiator sleeve, which is actuated by applying hydraulic pressure to the casing inside diameter (ID), can be used to create a flow path at the toe of a cemented or packer-isolated casing string.

RapidStart® Initiator CT System

The RapidStart® Initiator (Casing Test) CT sleeve is a pressure-operated fracturing sleeve designed to enable a casing pressure test prior to opening and establishing a fluid flow path to the target formation. This sleeve can be used with either multistage fracturing sleeve systems or plug-and-perforate operations.

RapidStage® (Single-Entry) SE System

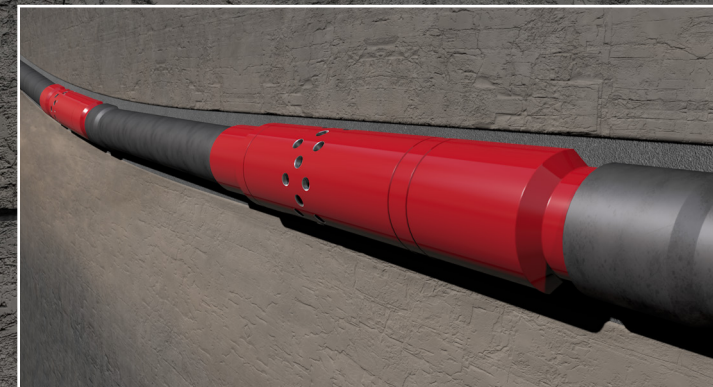
The RapidStage SE sleeve is a ball-activated frac sleeve for independent stage fracturing through individual sleeves. This system enables 50 or more stages in a single completion.

RapidStage® (Multi-Entry) ME System

The RapidStage ME sleeve is applied where a large number of transverse fractures are desired along a wellbore. Several RapidStage ME sleeves are opened together with a single ball launched from surface.

RapidStage ME Cemented System

Cementing RapidStage ME sleeves in a wellbore provides an efficient completion method by creating numerous frac treatment entry points with the dependability of cement isolation.



RapidShift® Multistage Stimulation and Production Sleeve System (not shown)

For optional sleeve closure after a frac treatment, the RapidShift® sleeve is an ideal solution. This sleeve can be opened with a hydraulic shifting tool or a ball with an optional baffle installed.

Swellpacker System

RapidStage® SE System

RapidStage ME System

RapidStage® ME System

Swellpacker® System

RapidStart® Initiator CT Toe Sleeve

Enhanced Toe Sleeve Solutions

RapidStart and RapidStart Initiator CT sleeves provide an interventionless means of establishing a flow path at the toe of a completion during multi-zone fracturing or plug-and-perforate operations.

RapidStart Initiator CT sleeves provide the enhanced feature of performing a controlled casing pressure test.

The rugged construction and debris-tolerant designs allow the RapidStart Initiator family of tools to be successfully run in cemented applications in both horizontal and vertical wells.

Also available from the Halliburton line of Unconventional Completion equipment are several different plug systems designed to cover a wide range of pressure requirements and downhole environments once the wells are readied for completion. Innovative plug solutions, such as Obsidian® and Fas Drill composite plugs, offer easy milling and removal.

For operations requiring little or no post-stimulation intervention, Illusion® dissolvable frac plugs are available.

RapidBall™

Self-Removing Ball Technology

Flowing fracturing sleeve activation balls back to surface after stimulation can be challenging and costly. Halliburton RapidBall™ DP and RapidBall DM ball technologies are self-removing, fracturing sleeve activation balls that reduce flowback challenges, eliminating the cost of post-stimulation wellbore intervention and helping provide assurance that the balls used to activate fracturing sleeves in a completion string will not restrict flow during production. Constructed of specially formulated compounds, these robust, impact-resistant ball technologies can withstand pressures up to 10,000 psi and temperatures up to 300°F (149°C).





Swellpacker System

RapidStage® SE System

RapidStage ME System

RapidStage® ME System

Swellpacker® System

Swellpacker System

Reliable Zonal Isolation

To create transverse fractures through multiple sleeves, it is vital to have effective isolation between sleeves to create individual entry points. Halliburton offers several types of isolation devices, depending on your completion requirements.

Swellpacker® Systems

Swellpacker® zonal isolation systems provide a simple method of isolation, without requiring the use of conventional setting mechanisms, to address a wide range of wellbore issues. With various elastomers available to reliably swell and seal in a range of water and oil-based fluids, Swellpacker systems can be used in both cased-hole and openhole completion applications.

ZoneGuard® Openhole Packers

ZoneGuard® isolation packers are designed for openhole and cased-hole applications where multi-zone isolation is required for stimulation, fracturing, or general production operations. The packer uses a uniquely designed element package with backup and deployment systems to deliver consistent sealing performance in a defined range of openhole and cased-hole conditions.



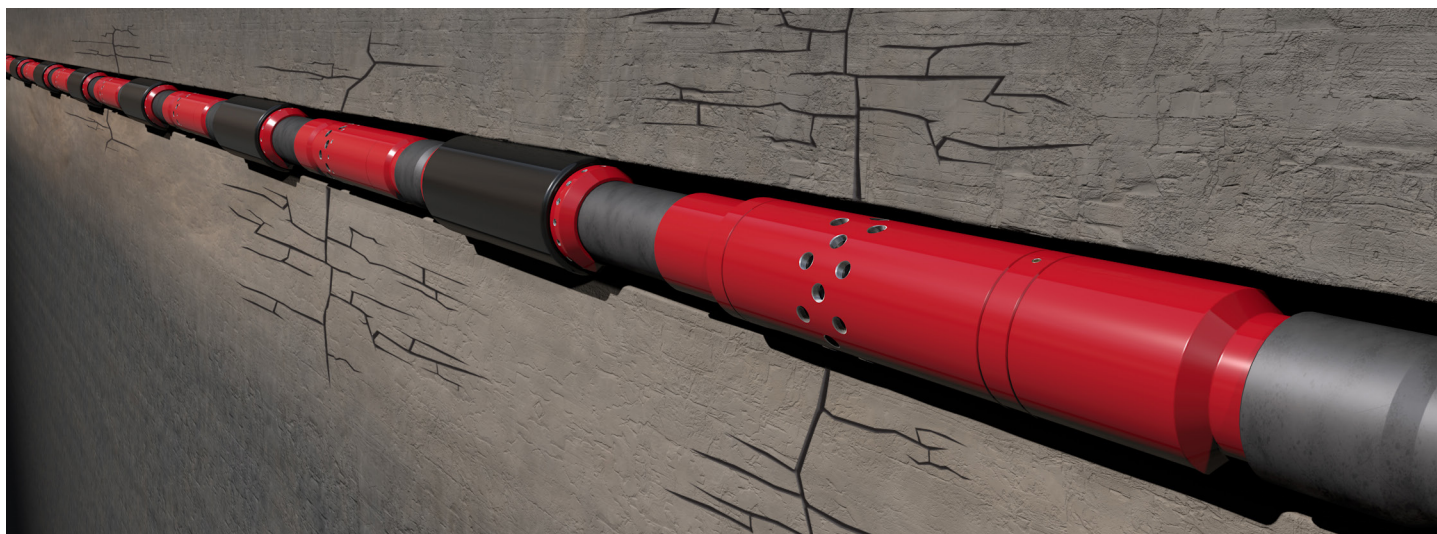
The hydraulically set ZoneGuard® packer, with a 10,000-psi rating, can be used in place of Swellpacker® systems.

RapidSuite sleeve technology can also be integrated with Halliburton SoluCem™ acid-soluble cement for yet another zonal isolation option.

Optimize Reservoir Contact with RapidStage® Sleeves and AccessFrac® Stimulation Service

By successfully integrating the latest RapidStage® ball-drop frac sleeve systems and AccessFrac® stimulation service, you can DOUBLE the number of stimulated fractures per zone compared to conventional methods. This combination

helps optimize completion efficiency, while enabling more stages to be simply delivered for increased reservoir contact, resulting in a lower cost per barrel of oil equivalent (BOE).



Increase Efficiency in Extended-Reach Laterals

Solutions for multistage unconventional completions continue to evolve as advancements in extended-reach drilling (ERD) are made. Operators want economical, risk-averse solutions to address the challenges they face in extended-reach lateral (ERL) completions. Halliburton RapidSuite frac sleeve systems include a portfolio that has been proven effective in ERL applications.

These cost-effective, interventionless solutions have no impact on the stimulation program and are able to provide more lateral length, more reservoir contact, and more production, while reducing cost, reducing risk, and reducing time. At Halliburton, we make it easy to do more with less.

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

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