COMPLETIONS

TR1P™ SINGLE-TRIP COMPLETION SYSTEM

Overcoming deepwater challenges by combining upper and lower completions with remote activation technology
DISCOVER THE POWER OF ONE

The world’s first and only remote-activated, single-trip deepwater completion system delivers greater efficiency, flexibility, and reward.

High rig costs drive the need for reduced trips in hole, particularly in deepwater environments. The ability to perform multiple operations in less time and with fewer equipment and personnel requirements sets the stage for dramatic, tangible benefits.

The Weatherford TR1P single-trip completion system establishes a new precedent in completion installations. By enabling you to install the upper and lower completion in just one trip, the system simplifies your operations and reduces your completion installations times by up to 60 percent.

This game-changing deepwater solution overcomes the barriers to adopting single-trip systems by combining radio-frequency identification (RFID) technology and elements from our premium completions technologies into one. The result is a completion system that eliminates the need for control lines, wash pipe, wireline, coiled tubing, and workover rigs for a 100 percent interventionless operation that reduces deployment risks. The remote, intervention-free capability of the system further enables you to perform the operations demanded by your reservoir—rather than your budget—in both producer and injector wells.

THE TR1P ADVANTAGE

• Function test all components during installation
• Circulate the well from the toe to the heel
• Stimulate and isolate a zone or the whole well
• Set and test selective upper and lower completion components
• Test independent barriers
• Bring the well online remotely

INCREASE EFFICIENCY TO REDUCE COSTS

We help you to do more in less time. Compared to conventional mechanical or hydraulic completion equipment, the TR1P system delivers real savings to overall operational and rig spread costs. Using RFID technology, the system lets you activate your tools an unlimited number of times—without requiring you to pull out of the hole—and can reduce completion installation times by as much as forty percent.

ENHANCE OPERATIONAL FLEXIBILITY AND CONTROL

We bring the power of control and flexibility to your wellsites. The TR1P system lets you control multiple RFID-enabled tools in a single string and selectively target and actuate individual tools as needed. By using RFID for activation, the TR1P system also eliminates control lines, wash pipe, wireline, coiled tubing, and workover rigs. The system will not interfere with wireline or coiled tubing operations. It also allows use with conventional mechanical or hydraulic tools—regardless of where they are placed.

THE FIRST AND ONLY PROVIDER OF RFID-ENABLED DOWNHOLE TECHNOLOGY

Weatherford is the sole provider of RFID-enabled downhole tools. We pioneered the use of this proven technology to expand your capabilities and deliver real business benefits in the oilfield, not only in drilling and cementing operations but also in completions. The TR1P system incorporates RFID completion tools with a decade of successful activations.

MANAGE RISKS AND MAXIMIZE REWARD

We help you to manage risk and maximize reward. By minimizing the number of trips in the hole, the TR1P system reduces total operating hours and exposure of field personnel. Although the system is fully interventionless, it retains mechanical contingencies to further manage risks. The TR1P system eliminates major wellbore and through-tubing interventions, de-risks the installation operation, and improves well control. All of this means engineering and technological excellence throughout the well life cycle for a reduced total cost of ownership.

THE WORLD’S FIRST AND ONLY REMOTE-ACTIVATED DEEPWATER COMPLETION SYSTEM DELIVERS:

• Greater efficiency
• Greater flexibility
• Greater reward

10 YEAR RFID track record

MINIMIZES EXPOSURE
of field personnel

REDUCES TOTAL COST
of ownership

100% Intervention-free

Field-proven RFID
200+ RUNS

MINIMIZES EXPOSURE of field personnel

ZERO control lines, wash pipe, wireline, coiled tubing, workover rigs, wet-connects

Up to 60% reduction in rig-time savings

INTRODUCED TO MARKET

DECEMBER 2018

ADDITIONAL BENEFITS

• Function test all components during installation
• Circulate the well from the toe to the heel
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The TR1P system combines excellence in engineering and RFID-activated technology with our solutions-driven commitment to enhancing your operational capabilities.

THE SINGLE-TRIP COMPLETION SYSTEM AT A GLANCE

RFID inflow control device provides interventionless uniform inflow and outflow distribution.

RFID reservoir isolation valve provides a cost-effective, debris-tolerant means to isolate the completion system.

RFID Optibarrier™ bidirectional ball valve controls wellbore flow as a reliable downhole barrier.

RFID OptiROSS™ remotely operated sliding sleeve manages flow from individual production zones.

Intelligent completion packoff element enables zonal isolation for completions that require multiple-line bypass.

OptiPkr™ production packer delivers a gas-tight seal between the outside of the production tubing and the inside of the casing.

Optimax™ tubing-retrievable safety valve shuts in the well with a gas-tight seal in the event of uncontrolled flow.

RFID Optibarrier™ bidirectional ball valve controls wellbore flow as a reliable downhole barrier.

RFID reservoir isolation valve provides a cost-effective, debris-tolerant means to isolate the completion system.
THE SINGLE-TRIP COMPLETION SYSTEM IN DETAIL

UPPER COMPLETION COMPONENTS

RFID OptiROSS™ Remotely Operated Sliding Sleeve
The RFID OptiROSS remotely operated sliding sleeve remotely manages flow from individual production zones, with no limit to the number of sleeves that can be installed in a single monobore completion. The tool is preprogrammed to operator-specific applications and is opened and closed by circulating RFID tags, frequency-modulated pressure signatures, timers, or a combination of these.

RFID Optibarrier™ Ball Valve
Our Optibarrier ball valve controls wellbore flow. The tubing-mounted, bidirectional ball valve is opened and closed remotely using RFID-enabled hydraulic control modules. It can also be opened mechanically using industry-standard shifting tools or a stinger module in the upper-completion system.

RFID OptiPkr™ Production Packer
Our OptiPkr production packer combines the robust performance of a permanent packer with the flexibility of a retrievable packer. The packer provides a V8-rated, gas-tight seal between the outside of the production tubing and the inside of the casing. The modular design adapts to most applications and wellbore conditions, and it lets you convert between hydraulic, hydrostatic, and RFID-setting modes.

Optimax™ Tubing-Retrievable Safety Valve
With more than 200,000 cumulative years of service, our Optimax tubing-retrievable safety valve is backed by the highest reliability record in the industry. This rod-piston, curved-flapper type safety valve shuts in the well with a gas-tight seal in the event of uncontrolled flow caused by equipment failure or damage. A single hydraulic control line operates the valve: applying pressure opens it, and bleeding off pressure closes it.

Intelligent Completion Packoff Element
Our intelligent completion packoff element is a retrievable and hydraulically set device that provides zonal isolation for completions that require line bypass. With a one-piece body, the packoff element makes it possible to feed multiple lines—for gauges, chemical injection, and other systems—through it in either a workshop or offshore environment.

LOWER COMPLETION COMPONENTS

RFID Inflow Control Device
Our RFID inflow control device (ICD) evenly distributes inflow throughout a horizontal wellbore. The ICD also reduces water or gas production, improves reservoir drainage, and enhances sand control. The device is customizable to customer-specific applications and can be opened by either circulating RFID tags, using a frequency modulated pressure signature, timer or a combination of these.

RFID Reservoir Isolation Valve
Our RFID reservoir isolation valve is an interventionless barrier device that isolates the toe of the completion, which eliminates the need for a deep-set plug. Inside the valve, a patented fall-through-flapper provides a bidirectional barrier. When remotely opened, the flapper releases any debris, mud solids, and cement and leaves a flush bore. The tool also features a ceramic flapper option as applicable.

REAL SAVINGS TO CUSTOMERS

Up to 60% reduction in rig-time savings by installing upper and lower completions in just one trip

Deepwater Field Trials, Offshore West Africa:
Weatherford offers the world’s first and only remote-activated installation system to deliver upper and lower completions in a single trip.
DISCOVER THE POWER OF ONE

By leveraging our reliable RFID technology and premium completion offerings, the TR1P single-trip system realizes the industry's vision for cost-effective and reduced-trip completion installations.

WEATHERFORD.COM/TR1P