HALLIBURTON

WELLBORE SERVICE TOOLS | RETRIEVABLE TOOLS

Subsurface control valves

Reliable solutions for temporary well abandonment

Overview

Halliburton subsurface control (SSC) valves provide reliable barriers for use in a variety of applications from regular BOP maintenance and integrity validation to casing and liner-top testing to longer term applications, (ie.e, batch drilling). When combined with the strength and durability of the industry-standard RTTS® packer, SSC valves allow operators to perform workover operations as well as minimize disruptions caused by weather emergencies.

With SSC valves, operators can secure the drillstring downhole to provide more efficient abandonment of the drilling rig. Because the drillstring is left in place, minimal effort is required to return the well online. Well security and personnel safety are increased, and operations can resume quickly after a workover or storm.

Solutions for a range of applications

The SSC valve product line includes the SSC I, SSC II, SSC III, and the newest addition to the line, the SSC IV valve. Each of these valves offers specific features to suit multiple wellbore construction scenarios.

The SSC I valve is a sliding sleeve valve and backoff joint, ideal for situations where there is a requirement to close in a well without pulling the workstring.

The SSC II valve is a ball valve and release mechanism, which allows operators to isolate a wellbore without having to fully recover the workstring. The release mechanism requires only right-hand rotation to disconnect the workstring and is relatched by setting down weight. This ball valve has also been validated to API 19 AC V3 requirements.

The SSC III valve is a ball valve and release mechanism that requires minimal rotation with high hang weight capability. It supports up to one million pounds of drillstring weight hanging off the valve.

The SSC IV valve encompasses all the benefits of the SSC III valve, along with a gas-tight qualification to meet the industry requirement for a secure barrier in well operations.

Capabilities

SSC valves use the industry-standard RTTS packer to support the weight of the workstring. The packer seals inside the casing (surface pipe or intermediate casing string), and the SSC valve seals the workstring ID. Because SSC valves include a release mechanism, the workstring above it can be removed from the well and then reconnected when operations resume.

To take advantage of the SSC III and IV valve high-load capabilities, special high-strength RTTS® packer assemblies are available for use in conjunction with these valves to support the workstring weight.

When operated from a floater-type rig, a bumper sub or slip joint should be inserted in the workstring above the SSC valves. By opening and closing the valve, the operator can check for pressure buildup before unsetting the packer. The SSC II, III, and IV valves can handle large volumes of drilling fluids to recondition the mud system before the packer and valve are removed and normal drilling operations resume.

SC valve specifications

TYPE	ASSEMBLY OD	RTTS® SIZE RANGE	PRESSURE RATING	TENSILE	LENGTH	VALVE TYPE
	IN.	IN.	PSI	LB	FT	
SSC I	3.72	4 1/2 to 5 1/2	8,000	218,306	4.05	Sliding
	4.87	6 5/8 to 7 5/8	6,200	335,811	5.69	Sliding
	6.25	8 5/9 to 20	10,000	598,040	5.69	Sliding
SSC II*	4.75	6 5/8 to 7 5/8	10,000	186,946	10.41	Ball
	4.75 (1.5 ID)	6 5/8 to 7 5/8	15,000	302,449	11.11	Ball
	6.5	8 5/8 to 20	10,000	452,092	12.60	Ball
SSC III	8.5	10 3/4 to 20	8,000	1,038,600	15.52	Ball
SSC IV	8.0	9 5/8 to 20	8,000	400,000	16.07	Ball
	8.5	10 3/4 to 20	8,000	1,058,487	15.52	Ball

*API 19 AC V3 validated assemblies available.

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com