

Single Shot Circulating Valve (SSCV)



Description

The Single Shot Circulating Valve functions as both a safety valve circulating valve and safety valve. The tool functions as a circulating valve when predetermined pressure is applied to the annulus to establish communication.

Between the annulus and the ID of the tubing or work string. It also functions as safety valve in the event annulus pressure exceeds limits defined by the tubulars, liner and/or casing. At predetermined pressure limits, the valve establishes communication between the annulus and the tubing/work string protecting well components from over-pressure.

The SSCV can be run in conjunction with other annular pressure operated tools. It is compatible with multicyle tools and perforating systems using internal or annular applied pressures.

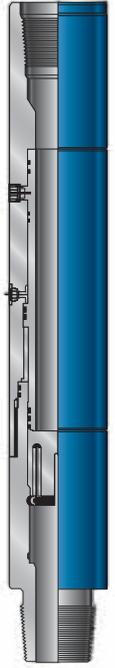
Features & Benefits

-The operating section consists of a inner mandrel and rupture disk that is available for a wide range of pressure applications. The rupture disk burst at a predetermined pressure, allowing annulus pressure to be applied to a differential area on their inner mandrel. The mandrel moves down exposing circulation ports in the lower sub.

- The circulating section consists of a set of ports in the lower housing that are sealed by the inner mandrel. When the rupture disk burst, the inner mandrel moves down, exposing the ports that allow communication between the annulus and internal flow path.

- The inner mandrel in the open position allows either direct or reverse circulation. The open flows ports provide an equivalent 4 in² flow area allowing maximum circulation rates. Flow port inserts provide protection from damage caused by higher circulation rates.

- The SSCV is fully balanced to internal pressure preventing movements of the inner mandrel due applied internal or circulating pressures. The mandrel also has a redundant collet system to keep the mandrel in position, either when closed or open.



Operating Specification

	STANDARD	HTHP
OD	5 in.	5 in.
ID	2.25 in.	2.25 in.
LENGHT	33.4 in.	33.4 in.
FLOW AREA	4 in ²	4 in ²
MAX. DIFF. PRESSURE	15,000 psi	15,000 psi
MAX. TEMPERATURE	350 °F	425 °F
TENSILE RATING	400,000 lbs.	400,000 lbs.
TORQUE RATING	19,000 ft./lb.	19,000 ft./lb.
CONNECTIONS	3-1/2 in. API I.F.	3-1/2 in. API I.F.

* Optional connections available

Compatible with common well fluids including hydrocarbons, HCl (<15%), sour gas, salt solutions and CO₂ for normal exposure time for testing, treatment and stimulations.