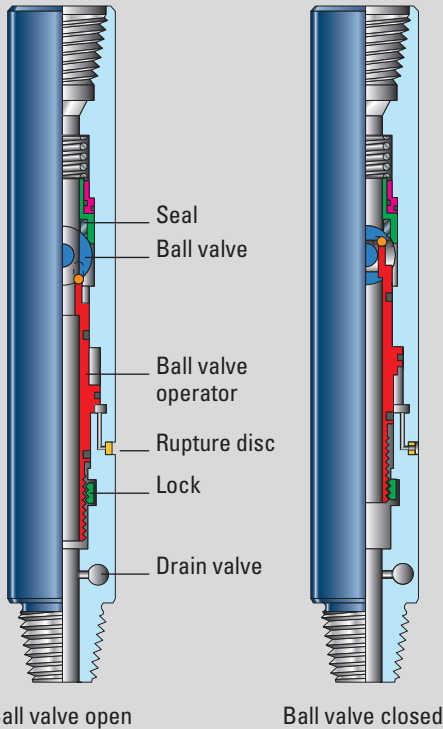


Single-Ball Safety Valve

Single-ball safety valve.



Description

The single-ball safety valve (SBSV) is a fully open downhole safety valve that is run in the open position and closes permanently when the disk is ruptured. The operator mandrel is balanced to internal pressure, and is locked in the open position to prevent premature closure.

Upon rupturing the disk, hydrostatic pressure is applied to the operator mandrel, which closes the valve.

The combination of the large differential pressure (hydrostatic to atmospheric) and the 21-cm² [3 1/4-in²] operator mandrel area yields more than enough force to cut 5.6-mm [1/32-in] wireline cable, even in shallow wells. The operator mandrel locks in the closed position and prevents the tool from reopening until it is retrieved at the surface. The lock can be reset without disassembling the tool, which enables functional testing before running in the hole.

Kits are available to convert the SBSV to a pump-through safety valve (PTSV) or a pipe tester valve (PTV).

Applications

- Drillstem testing
- Operations requiring an additional safety barrier

Benefits

- Converts to a PTSV or PTV with available kit
- Serves as a downhole shut-in device

Features

- High closing force
- Cuts 5.6-mm [1/32-in] wireline cable
- Locks in open and closed positions

Single-Ball Safety Valve Specifications

Model	SBSV-FFB	SBSV-FEA/FEB	SBSV-GAA/GAB
OD, mm [in]	127 [5]	127 [5]	79.4 [3.125]
ID, mm [in]	57.15 [2.25]	57.15 [2.25]	28.6 [1.125]
Pressure rating			
Differential across housing, kPa [psi]	120,658 [17,500]	103,421 [15,000]	103,421 [15,000]
Differential across ball valve, kPa [psi]	103,421 [15,000]	103,421 [15,000]	103,421 [15,000]
Max. on annulus, kPa [psi]	172,369 [25,000]	172,369 [25,000]	137,895 [20,000]
Max. in tubing, kPa [psi]	199,948 [29,000]	199,948 [29,000]	199,948 [29,000]
Temperature rating, deg C [degF]	218 [425]	218 [425]	218 [425]
Service	H ₂ S and acid	H ₂ S and acid	H ₂ S and acid
Length, m [ft]	1.78 [5.83]	1.78 [5.83]	1.84 [6.04]
Weight, kg [lbm]	122 [270]	122 [270]	59 [130]
Connection	3 1/2 PH-6	3 1/2 IF or PH-6	2 3/8 Reg or PH-6