

# Upside-Down Flapper Valve

## FLUID LOSS CONTROL IN HORIZONTAL SCREEN COMPLETION SYSTEMS

### OVERVIEW

This Halliburton Upside-Down Flapper Valve is a mechanically closed, hydraulically opened reverse flapper valve, specifically designed for horizontal screen completion and multilateral systems. The flapper valve controls fluid loss to the formation after the sand screens are in place, the packer is set, and the flapper prop sleeve shifted. When running the completion in hole, a prop sleeve holds the valve open, and a shifting tool on the end of the washpipe, coiled tubing, wireline, etc., shifts this sleeve, allowing the flapper to close. The valve is reopened by applying pressure down the tubing and activating the spring-activated prong, which opens the flapper when differential pressure across the flapper is removed. This device produces no flapper fragments and requires no well intervention using through-tubing techniques. The flapper design is proven technology from subsurface safety curved flapper valves.

**Note** Using this upside-down flapper valve in a debris-laden environment (gravel pack, saturated salt or solids-based systems) is not recommended.

### DESIGN PRINCIPLE

The upside-down flapper valve is run with the flapper open. During service operations, a prop sleeve holds the flapper open.

After service operations and while the work string is pulled out of the well, a shifting tool shifts the prop sleeve allowing the flapper to close. A pressure differential from above the valve ensures the flapper remains closed.

To reopen the valve, apply a differential pressure across the flapper assembly from surface to activate the opening prong. The valve will lock open once the differential pressure across the valve is removed. Once the valve is open, the well is ready for production.

**Note** No communication across the closed flapper occurs until the flapper is reopened.

### FEATURES

- » Run in the open position for well fluid circulation
- » Serves as a fluid control device to the formation
- » Positioned below the gravel pack or in a liner assembly
- » Compact design fits in existing space for conventional fluid loss control devices
- » Closes with a shifting tool on washpipe by shifting a prop sleeve
- » Reopens with pressure to restore flow
- » Proven subsurface safety valve flapper design
- » Proven sleeve shift activation
- » Sizes for 7.0 to 10 3/4-inch casing

### BENEFITS

- » Pressure remains internally balanced until the prop sleeve is shifted
- » No metal or ceramic fragments remain in the wellbore
- » Full bore access before and after opening
- » Remote open with pressure



Hydraulic Upside-Down  
Flapper Valve

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