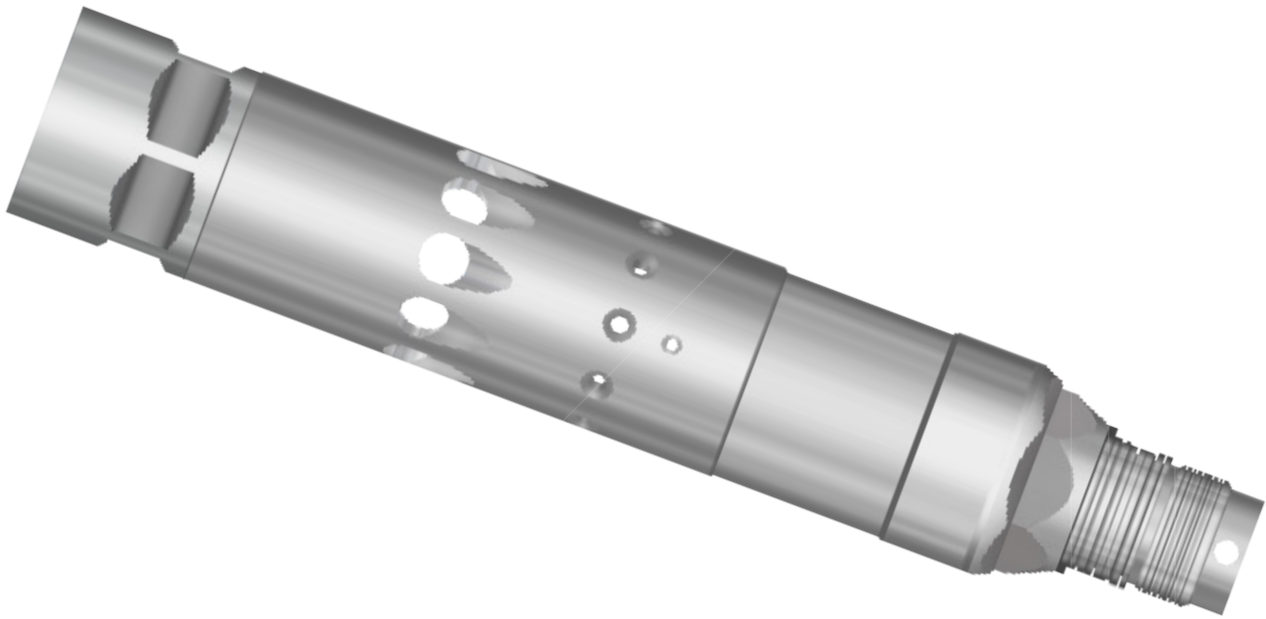


# Quick Downhole Shut In Tool (DST)



## Description

The DST will eliminate the wellbore storage effect and significantly reduce the shut-in time during pressure build up.

The wellbore storage effect results from fluids entering the wellbore from the formation, even after the well is shut in at the surface. The pressure data collected during the wellbore storage can therefore be invalid over a long time period. A solution is to shut a well in for extended periods to conduct a pressure build up test, ensuring that the data is representative.

The patent pending, multi-cycle, instant close DST includes a shuttle piston, which when moved, closes a relief port allowing a differential pressure to form across a sliding sleeve. This differential pressure forces a sliding sleeve in a direction which closes the valve.

With or without a differential pressure present, the shuttle valve will continue to force the sliding sleeve in the correct direction to close the valve. This same shuttle piston has the ability to move in the opposite direction. Thereby, the piston will open a relief port to remove the potential differential pressure across the sliding sleeve element and in turn cause the valve to open.

An electronic timer assembly and electric drive motor are provided for controlling the action of the shuttle piston. The operator pre-programs the timing circuit of the job to open, close and re-open the valve multiple times.

# Quick Downhole Shut in Tool (DST)

## Benefits

- Instant close time.
- Multiple cycle capability.
- Metal to metal seals.
- Eliminates wellbore storage effect.
- Modular design.

## Technical Specifications

	Imperial	Metric
Valve Flow Area	2.50 in <sup>2</sup>	16.1 cm <sup>2</sup>
Lock Mandrel Flow Area	2.40 in <sup>2</sup>	15.5cm <sup>2</sup>
Max External pressure	16,000 psi	1,000 bar
Max Differential Pressure	10,000 psi	700 bar
Max Temperature	302 °F	150 °C
Closing Time	Instantaneous	
Material (sweet version)	SS17-4 Toughmet Piston	
Material (sour version)	Inconel 718 Toughmet Piston	
Power Source	3 "D" Cell Battery Pack (11.0 Volts, 10.0A hr)	
Communication Method	USB	