

Downhole Electronic Shut-In Tool (DHSIT)

The Downhole Electronic Shut-In Tool (DHSIT) incorporates a proprietary seal design to allow the tool to operate and seal properly in a wide variety of downhole conditions. The innovative flow passages are designed to optimise flow, virtually eliminating the “choke” effect. DHSIT is available for various completion sizes.

Applications

No computer is required to prepare the tool for a standard shut and open sequence, simply select the duration of the flow and build-up period. Multiple shut/open sequences, up to 20, may be performed. Programming is accomplished by using any desktop PC combined with Micro-SMART’s software.

Features and benefits

- Fast closing time – less than 60 seconds
- Internal test firmware delivers audible signal and valve movement to confirm proper operation prior to use downhole
- Switch selectable shut and open sequences without using a computer
- Custom computer programming with up to 20 shut/open sequences
- Reduction in wellbore storage minimises test time, and improves data quality for analysis
- The tool can provide vital test information at minimal cost to the operator



Specifications

Downhole Electronic Shut-In Tool	SST -500 2 3/8 in – 2 7/8 in tubing	SST-800 3.5 in tubing	SST-1200 4.5 in tubing
Outer diameter	1.75 in (44.5 mm)	2.50 in (63.5 mm)	3.50 in (88.9 mm)
Inner diameter	1.12 in (24.8 mm)	1.75" (44.5 mm)	2.50 in (63.5 mm)
Flow area	1.0 in ² (2.5 cm ²)	2.4 in ² (6.1 cm ²)	4.9 in ² (12.4 cm ²)
Operating temperature	32 °F TO 305°F* (0°C to 151°C)	32 °F TO 305°F* (0°C to 151°C)	32 °F TO 305°F* (0°C to 177°C)
Max pressure	15,000 psi (38,000 kPa)	15,000 psi (103,000 kPa)	8,000 psi (54,000 kPa)
Max differential pressure	5,500 psi (38,000 kPa)	10,000 psi (69,000 kPa)	2,500 psi (17,000 kPa)
Power supply	18V 5'c' Lithium pack – 20 cycles* 18V 5 'C-C' Lithium pack – 40 cycles*	18V 5'C' Lithium pack – 20 cycles* 18V 5 'C-C' Lithium pack – 40 cycles*	18V 5'C' Lithium pack – 20 cycles* 18V 5 'C-C' Lithium pack – 40 cycles*
Length	62.3" (1.6 m) with short battery pack 72.8" (1.8 m) with longer battery pack	64.1" (1.6 m) with short battery pack 74.6" (1.9 m) with longer battery pack	69.01" (1.8 m) with short battery pack 79.5" (2.0 m) with longer battery pack
Weight	23 lbs (10.4 kg)	28 lbs (12.7 kg)	46 lbs (20.8 kg)
Top connection	1.875 X-lock box (1-3/8" – 14 SLB box)	2.313 X-lock box (2 – 1/4" -12SLB box)	3.813 X-lock box (3- 1/16" -12 SLB box)
Bottom connection	5/8" Sucker rod box (15/16" – 10 UN box)	5/8" Sucker rod box (15/16" – 10 UN box)	5/8" Sucker rod box (15/16" – 10 UN box)
*Depends on test conditions			