

# Product Sheet: Barrier Verification System (BVS)

## Product Description

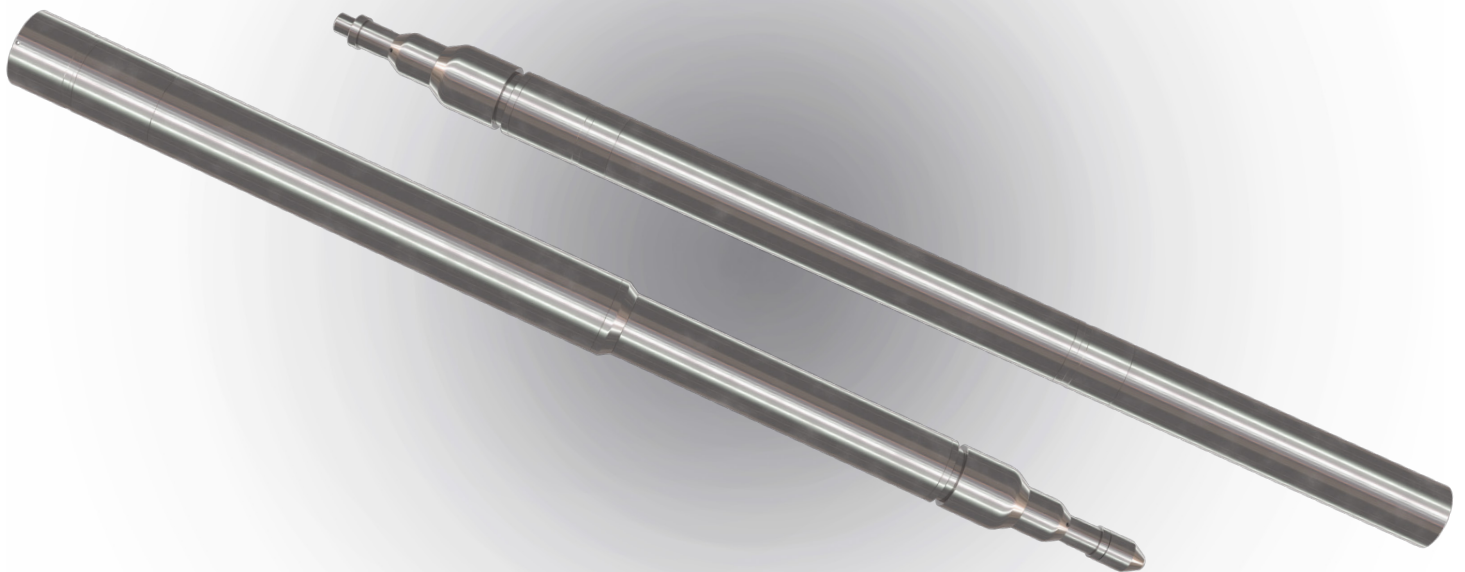
The Barrier Verification System is a market leading barrier assurance tool. It features an inductive Transmitter module that houses pressure and temperature sensors which are fitted below any plugging device. The receiver module, which in turn is fitted above the plug to the Electronic Setting Tool (EST), also houses pressure and temperature sensors. Once all parts are configured correctly and deployed into the well, the EST records the installation of the barrier. The setting of the barrier can then be verified before the pressure test is undertaken. A pressure test can then be performed, the sensors recording the pressures and temperatures from either side of the barrier before confirming the integrity of the barrier. The data can be recorded within the tool when configured in memory mode, or it can be live fed on surface read out versions.

The system is rated up to 689 bar (10,000psi) and 150°C (302°F) and is available across all tubing/casing weights.

## Product Benefits:

The barrier verification system (BVS) can be run on memory slickline, coiled tubing, pipe or e-line surface read out.

The BVS provides reliable verification of a barrier whilst saving the operator huge amounts of time when testing barriers using conventional methods.



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## Product Application

### Barrier Verification System

The BVS can be used to verify a temporary mechanical intervention plug, permanent mechanical or permanent cement barrier. Run in conjunction with an Electronic Setting Tool and Interwell retrievable bridge plug it can log the setting sequence and record the pressures and temperatures across the barrier, along with the forces emitted on the completion. The system can also be adapted to monitor reservoir pressures during a field abandonment.

### Barrier Verification System and Pressure Manipulating Test Tool (PMTT)

When two plugs are set closely together. The PMTT can allow for the pressure existing between the two barriers to be drawn down. This localises the pressure testing operation, allowing the condition of the well above to be discounted as a possible leak path for any potential unsatisfactory pressure testing. By using this device the dual barriers can be tested in both directions using only the pressure existing in the well bore.

## Product Features

- Removes doubt from verifying barriers
- Provides documentable information on installed barrier and pressure test
- Plug sets can be verified with assurance comparing against bank of sets already recorded
- Slim design
- Can be run on slickline, e-line, coiled tubing or pipe
- Slickline memory or E-line surface read out versions available
- Other sizes available on request

## Technical Specifications

### BVS Transmitter Module

Model	Size	Pressure Rating	Temp Rating
280 Transmitter	2.8"	5,000psi*	150°C
350 Transmitter	3.5"	10,000psi	150°C
420 Transmitter	4.2"	10,000psi	150°C
420i Transmitter	4.2"	10,000psi	150°C

\*10,000psi available on request

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### BVS Receiver Module

Model	Size	To Fit EST	Pressure Rating	Temp Rating
213 Receiver	2.13"	213 EST	10,000psi	150°C
270 Receiver	2.7"	270 EST	10,000psi	150°C
270 Active E-line	2.7"	270 EST	10,000psi	150°C
350 Receiver	3.5"	350 EST	10,000psi	150°C
350 Active E-line	3.5"	350 EST	10,000psi	150°C

\*Receivers available in memory or e-line surface read-out

### Pressure Manipulation Test Tool (PMTT)

Size	OD	Capacity	Pressure Rating	Temp Rating
270 Small capacity	2.7"	1.825 litre	10,000psi	150°C
270 Large capacity	2.7"	3.28 litre	10,000psi	150°C
375 Small capacity	3.75"	2.22 litre	10,000psi	150°C
375 Large capacity	3.75"	5.2 litre	10,000psi	150°C