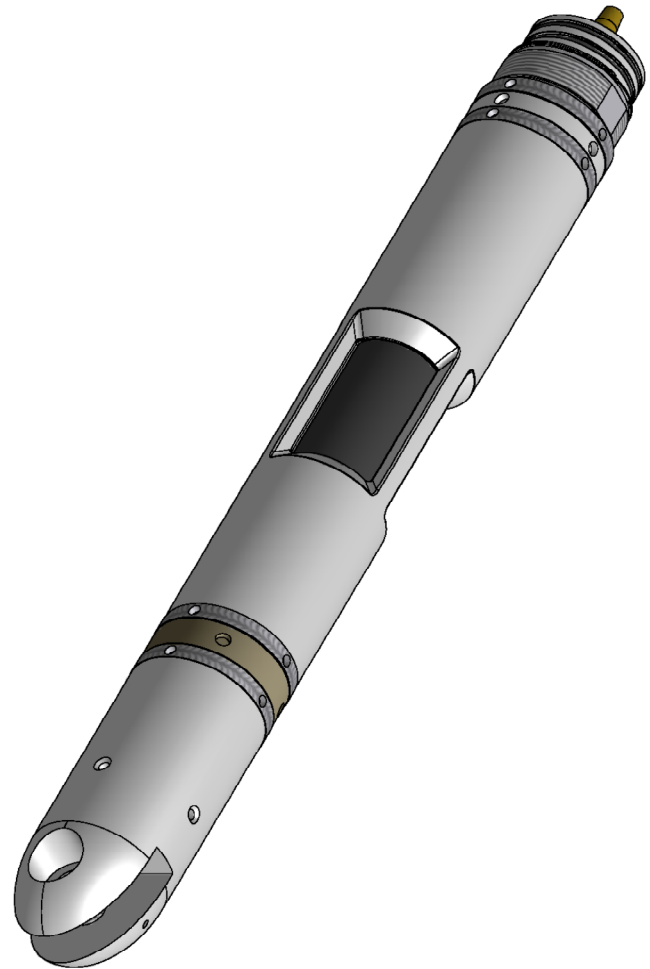


AST-1 Advanced Sparker Tool

AST Main Features

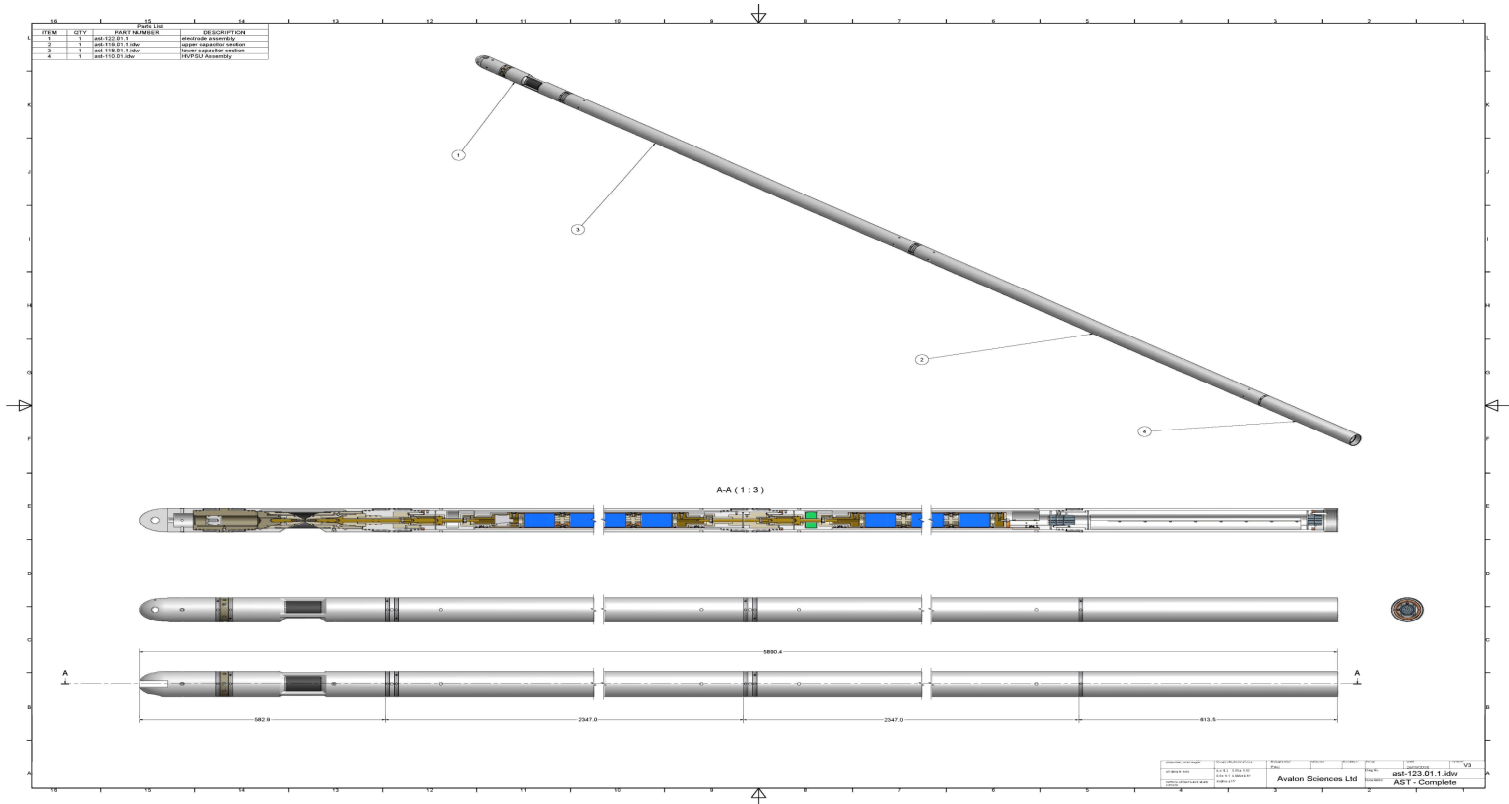
- Peak Power 1000 Joules/Shot
- Bandwidth 10 - 4000Hz
- Omni Directional
- 3" (76.2mm) Diameter
- Automatic or Triggered Firing
- 150°C Temperature Rating
- 10,000 PSI Pressure Rating
- Monocable or 7 conductor wireline
- Deployed with Geochain™ System or standalone operation
- Repeatable energy pulse
- Firing T/B transmitted to surface or recorded in well
- 3 component geophone sensor for pulse verification
- Operation in any type of well fluid
- Built in safety protection



General

The Advanced Sparker Tool (AST) has been developed to provide a high energy and a repeatable down hole seismic source. Primary use of the AST would be with seismic sensors deployed in an adjacent well or wells to provide cross well imaging or sensor orientation. When the AST is deployed with the Geochain™ system it will be possible to provide single well imaging. With a low power requirement of a 100W and high energy output of 1000J the AST is a versatile downhole seismic source which can be deployed in various configurations.

AST-1 Advanced Sparker Tool



Specifications

Power:	1000 Joules/shot
Bandwidth:	10-4000Hz
Power consumption:	100 watts
Electrode life:	>5000 shots
Diameter:	3" (76mm)
Length:	20.5ft (6.25m)
Pressure:	10,000psi (700bar)
Temperature:	300°F (150°C).
Firing interval:	20 seconds
Wireline:	Mono or hepta

Functionality

To operate the Advanced Sparker Tool DC power is supplied to the high voltage power supply unit. The DC power can be supplied by the Geochain™ system or if run independently, directly from the surface. The downhole HVPSU charges a bank of capacitors to a high voltage. When the critical voltage has been reached the energy is switched to the electrode via a gas discharge switch generating a spark and creating a high energy output pulse. The unit can be programmed to fire at a constant rate or it can be triggered remotely.