

Versatile maintenance free negative discharge sparker designed for small and larger operations.

Description

INNOVATIVE PRESERVING ELECTRODE MODE

The Geo-Source 400 is designed to operate with the 2000 X Geo-Spark Pulsed Power Supply or higher. It uses the the "Preserving Electrode Mode", a patented concept that consists of using a NEGATIVE electric discharge pulse, instead of positive.

Note that working with a negative pulse is NOT the same thing as reversing the polarity of an antique power supply, which is generating a positive pulse.

MAINTENANCE FREE ELECTRODES 5 YEAR GUARANTEE

The Preserving Electrode Mode reduces the tip wear to practically zero. You can shoot day after day, week after week, month after month with practically NO tip maintenance.

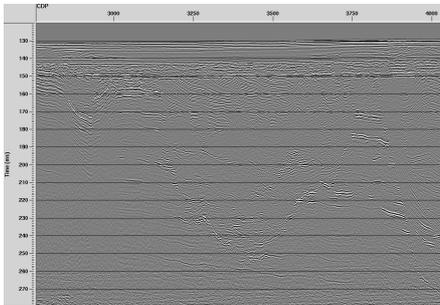
OPTIMUM ACOUSTIC REPEATABILITY

Zero tip wear is essential for the repeatability of the acoustic pulse, which depends largely on a constant, unaltered electrode surface.

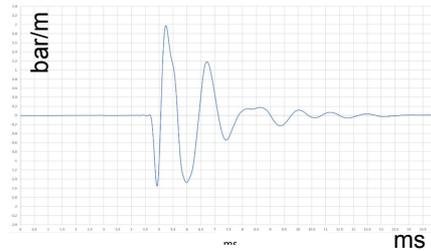
Operational Features

- Water depths from 2 to 1500 m.
- Penetration higher than 400 ms below seabed depending on geology.
- Vertical resolution of 10 - 30 cm.
- You don't need to trim tips during the survey - electrodes do NOT burn off.
- Successfully employed in wind farm surveying, coastal engineering, sand search, site and route surveys and many others.

MARINE MULTI-TIP SPARKER SYSTEM



Geo Spark 400 with a 48 ch Multi-channel streamer - see more examples at our gallery.



signal spectrum at 800 J and source 30 cm deep.



No wear of the tips even after 3 years of use.

Additional Features

CONTROL OF ALL SPARKER PARAMETERS

The effective source depth is 15-20 cm. A constant source depth at 1/4 of the wavelength is essential in order to optimize the constructive interference between the primary pulse and surface ghost. But this can be easily customized by the user with the use of extensions, for instance, in situations where penetration should be a priority.

SOURCE GEOMETRY AND CONFIGURATION OF THE TIPS

The electrode modules are evenly spaced in a planar array of 0.50 m x 1.00 m. This geometry not only enhances the downward projection of the acoustic energy, it also reduces the primary pulse length, since all tips are perfectly in phase. Each tip has an exposed surface of 1.4 mm, suitable for maximum 10 Joules per tip and with this configuration it gives an excellent pulse over the 400 - 2000 Joule power range.

FLEXIBLE AND FLOATING HV TOW CABLE

The Geo-Source 400 is towed by a very high quality, Kevlar reinforced, coaxial power/tow cable with stainless steel kelly grip. This dedicated high voltage (HV) cable contains 4 x 10 mm² cores (negative) plus a 40 mm braiding (ground-referenced). It is designed to have a very low self inductance to preserve the high dI/dt pulse output of the Geo-Spark 2000 PPS. The coaxial structure of the HV cable reduces the electromagnetic interference to the absolute minimum.

Specification

Dimensions (cm) & Weight	110 (L) x 120 (W) x 60 (H) for 80 kg
Number of Tips	400
Operation Depth (m)	2 - 1500
Dominant Frequencies	1000 - 1500 Hz (at 800 J)
Better if used with	Geo-Spark 2000 , 8E single-channel Streamer , multi-channel streamer
Recommended interface system	Mini-Trace II or Multi-Trace Server
Power Requirements	5kVA generator (for the Power Supply)

We are always pushing for improvements, so equipment specifications can change without notice. Please keep in contact with support to stay in tune with the developments.