

Dura-Spark UHD 400+400 Seismic Sound Source



Key features

- Long life, durable electrodes
- Pulse stability
- High resolution sub-bottom data, up to 25 cm
- Dual 400 tip arrays, 30 cm separation
- Adjustable tow depth
- Single low loss cable
- Tip array selection from on board junction box
- Array Flip-Flop fire capability
- Bubble forming utilising Fire-Delay functionality
- GNSS receiver option (101G MiniPod) High and Ultra-High Resolution geophysical surveys
- Single and multi-channel acquisition
- Water depths of 5 to >1000 m

Applications

- High and Ultra-High Resolution geophysical survey
- Single and multi-channel acquisition
- Water depths of 5 to >1000 m

Dura-Spark UHD 400+400 Overview

The Dura-Spark UHD 400+400 has been designed to provide a stable, repeatable sound source for sub-bottom geophysical surveys. The long life, durable electrodes produce a consistent pulse signature and keep operational maintenance to a minimum. This provides increased survey efficiency and equipment reliability as the sparker tips rarely need replacement.

The Dura-Spark UHD 400 + 400 consists of 2 decks of 400 tips that allow the operator to tune the source from the vessel to its application. Each deck can be fired independently by its seismic power supply, in flip flop mode, combined with fire delays or a split fire delay. Utilising the fire delay functionality the signatures from the 2 decks can be combined to bubble form the sound source signature. This flexibility, together with selectable source depth, allows the sound source to be used in both shallow and deep waters for multiple seismic data gathering applications.

The typical operational bandwidth of the Dura-Spark UHD 400+400 is 300 Hz to 1.2 kHz. When coupled with the CSP-SNv Seismic Power Supply the system offers 4000 J / s peak discharge rate, as well as industry leading design and safety standards.

Technical Specification

PHYSICAL

Dimensions	Length 1806 mm Height 710 mm frame Width 650 mm frame, 1450 mm including floatation
Weight	160 kg (typical), excluding cable
Connector	RMK 1/0 complete with locking collar

ELECTRICAL INPUT (PER 400 TIP DECK)

400 tip configuration	2000 J, 5 J per tip to minimise bubble collapse component, 2400 J maximum
240 tip configuration	1000 J, 5 J per tip to minimise bubble collapse component, 1250 J Maximum
Operating voltage	3000 - 4000 V
Maximum number of tips	800 (2x 400 (each 400 = 5 x 80))
Power Supply	CSP-Nv 1200, CSP-Nv 2400, CSP-SNv 1250
HV Supply Cable	HVC-3502

SOUND OUTPUT

Source level	226 dB re 1µPa at 1 m (typical)
Pulse length	0.5 to 1.5 ms Dependent on power applied

TYPICAL PULSE SIGNATURE AT 600 J (LOWER DECK)

