

# UK SBS PR17147

## RAFOS Sound Source x 8

### Specification

#### General description

The requirement is for the provision of up to 8 No. sound projectors which generate a swept frequency signal in the range 200-300Hz (nominally 260Hz). These should be self-powered, with an accurate clock to maintain synchronisation and will generally be moored in depths at least 2000m, but may be up to 6000m, for up to 3 years. Full technical specification for the minimum requirement are provided below.

#### Physical specification

Due to the frequency required and the battery life, the physical size of each device will be large, but should not exceed 2 tons in air. The structural design should include load-tested eyes and/or structural parts so that it can be used as a component in a mooring.

Materials used for the structure, the projector and for any connectors should be chosen for corrosion resistance and electrochemical compatibility, and be warrantied against corrosion for a 3-year deployment.

#### Technical Specification (minimum requirements)

Chirp range	Standard RAFOS sweep chirp from 259.375Hz to 260.898Hz
Minimum power level	180dB ref 1uPa at 1m
Endurance at 1 transmission per day	3 years from deployment
Clock stability	Less than or equal to 40ms per year
Operating depth	At least 2000m

#### Acceptance testing

Each device should be tested by the manufacturer to ensure that it is functioning to the technical specifications, either at the factory or at the National Oceanographic Centre (NOC).

NOC will carry out tank tests as soon after delivery as possible, but deployment may not happen for more than 1 year. If the unit fails on deployment by NOC it will be returned and will be repaired or replaced under warranty.

#### Warranty

The manufacturer should offer a warranty for repair/replacement of any components which fail due to a manufacturing fault within at least five years of delivery, or during the first 3 years of the first deployment, whichever is sooner. All housings, connectors and transducers that are exposed to seawater should be warrantied against corrosion for these 3 years.

### Desirable characteristics

In addition to the above minimum Technical Specification the following characteristics are desirable and will provide bidders with a further score for each additional criteria which can be provided. Full details can be viewed within the tender question (PROJ1.1) within the Emptoris sourcing portal. The maximum marks available out of 100% is 20%.

Additional Provision	Score
Provision of Programmable sweep in chirp form, frequency range and duration	4%
Ability to add additional battery capacity to increase the stated minimum endurance requirement	4%
Provision of increased power levels above the stated minimum requirement	4%
Improved clock stability above the stated minimum requirement	4%
Provision of directional gain in the horizontal plane	4%

### Acceptance criteria

The devices must be delivered before the end of March 2018.

### Budget Allocation

The budget allocated to this requirement is capped at £250k - Any bids received which are higher than this will be deemed as non compliant and will subsequently not be evaluated.