In our constant efforts to bring ever improving products to the market, we are pleased to announce the introduction of the advanced Super SeaKing Dual Frequency Sonar.

We have used the very latest in composite transducer technology to produce a sonar which delivers the clearest images available, at operating ranges previously unobtainable. In addition, we have introduced a modular transducer design and longer-life slip ring assembly to minimise the consequences of operational damage and to improve on the SeaKing’s already excellent reliability.

The Super SeaKing DFS shares many of the features of the SeaKing DFS, which has been chosen as the standard obstacle avoidance sonar in many of the major ROV fleets around the world.

The Super SeaKing DFS is not one but two mechanically scanned imaging sonars in a single subsea pressure housing: a 325 kHz sonar with a true operational range of up to 300 metres for long range target acquisition, and a 675 kHz sonar for ultra-high definition images. Other frequency options are available upon request.

All products in the SeaKing family can be run simultaneously on a single ArcNet communications link, using the same processor and display.

**Features**
- Composite material technology used in new transducer design, providing:
  - Greater range capability
  - Greatly improved resolution and sidelobe suppression
  - Direct compatibility with existing transducers - can be retro-fitted
- Modular transducer construction - elements replaceable
- New longer lasting slip ring assembly
- Option of RS232 communications for single head applications

**Applications**
- ROV obstacle avoidance
- AUV obstacle avoidance and target recognition
- Harbour and port surveillance

Super SeaKing
New generation sonar

Super SeaKing Dual Frequency Sonar
### Specification

#### Super SeaKing DFS Sonar Head

- **Operating frequency**: 325 and 675 kHz
- **Optional high frequency**: 1 MHz
- **Beamwidth, vertical**: 20°[325], 40°[675]
- **Beamwidth, horizontal**: 3.0°[325], 1.5°[675]
- **Maximum range**: 300 m [325], 100 m [675]
- **Minimum range**: 0.4 m
- **Range resolution**: 5 - 400 mm depending on range
- **Source level**: 210 dB re 1uPA @ 1 m
- **Pulse length**: 20 - 300 microsec
- **Scan modes**: Various combinations of resolution & speed
- **Mechanical step sizes**: 0.225°, 0.45°, 0.9°, 1.8°
- **Mechanical resolution**: 0.225°
- **Scanned sector**: Variable to 360°
- **Continuous 360° mode available**: Yes
- **Sector offset mode available**: Yes
- **Overall maximum diameter**: 110 mm
- **Maximum length**: 242 mm
- **Weight in air**: 3.0 kg
- **Weight in water**: 1.4 kg
- **Standard maximum operational depth**: 4,000 m
- **Optional maximum operational depth**: 6,800 m
- **Standard materials**: Aluminium alloy-HE30, RPU
- **Optional materials**: Stainless steel
- **Finish**: Hard anodised black
- **Standard connector**: Tritech 6 pin with water-block
- **Connector options**: Various upon request
- **Operating temperature**: -10°C to +35°C
- **Storage temperature**: -20°C to +50°C
- **Power requirements**: 18 to 36 VDC @ 10VA
- **Communication protocols**: Arcnet, RS232
- **Data communication rate**: Arcnet 156 kBits/sec, 78 kBits/sec
  RS232 115.2 kbaud
- **Communication requirements**: Twisted pair, modem or coax

#### Surface Controls and Display

**Software Features**

- **Range selection**: 1 to 300m
- **Gain and contrast**: Rotatory controls
- **Scanned sector**: Fully variable in direction and width to 360°
- **Quick select origin shift**: Centre, forward, reverse, left and right
- **Resolution selection**: 0.225° to 1.8°
- **Cursor measurements**: Origin to target and Target to target

#### Key features include:

- Real-time true acoustic zoom
- Full screen true acoustic zoom with second 360° PPI display window
- Real-time switching between 325 kHz and 675 kHz
- Built-in 100 kHz to 2 MHz spectrum analyser mode
- Runs on industry standard SeaNet SCU or on user-supplied PC
- Integrates with all other Tritech SeaKing sensors
- Time stamped data logging and replay to hard disk
- Control and cursor reporting via SK-V4 protocol available
- Instantaneous scan reversal

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**Tritech Super SeaKing DFS**

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**Marketed by:**

**SCOTTISH OFFSHORE ACHIEVEMENT AWARDS**

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All specifications are subject to change in line with Tritech’s policy of continual product development.