subsea umbilical, ROV tether & oceanographic tow cable

VDS Armoured Tow

Variable Depth Sonar (VDS) Multi-Layer Steel-Armoured Low-Drag Electro

Naval VDS / Heavy Armoured EO · 600 V – 1,500 V · Subsea umbilical, rov tether &



Naval VDS / Heavy Armoured EO | **600 V – 1,500 V (-30 to +80 °C)** | **Streamlined Low-Drag Outer Sheath**

Application

Variable Depth Sonar (VDS) Multi-Layer Steel-Armoured Low-Drag Electro-Optical Tow Cable featuring optical fiber unit (sm/mm) and streamlined low-drag outer sheath (Naval VDS / Heavy Armoured EO, 600 V – 1,500 V, -30 to +80 °C).

Typical uses: Oceanographic CTD, ADCP & Deep-Tow Surveys, Work-Class & Observation ROV / AUV Systems, Side-Scan Sonar, SAS & Towed Hydrophone Arrays, Marine 2D/3D/UHR Seismic Streamers & OBC

Construction





Cross-section, not to scale

1. Optical Fiber Unit (SM/MM)
2. VDS Transmitter Power & Data Pairs
3. Torque-Balanced Multi-Layer Steel Armour
4. Streamlined Low-Drag Outer Sheath

Technical data

Typical values

Rated voltage / transmission duty	600 V – 1,500 V (Variable Depth Sonar (VDS) Multi-Layer Steel-Armoured Electro-Optical Tow Specification)	**Core / conductor construction**	Optical Fiber Unit (SM/MM) — Central stainless-steel tube housing single-mode and multi-mode fibers
Primary dielectric / buffering	VDS Transmitter Power & Data Pairs — Tinned copper cross-linked polyolefin power cores + shielded data pairs	**Continuous operating temperature**	−30…+80 °C (subsea & offshore duty)
Hydrostatic & thermal stability	Verified thermal and hydrostatic stability per Variable Depth Sonar (VDS) Multi-Layer Steel-Armoured Electro-Optical Tow Specification	**Storage & transport temperature**	−40…+80 °C on export wooden/steel winch reel
Outer protection / armouring	Streamlined Low-Drag Outer Sheath — Abrasion-resistant polymeric fairing jacket reducing tow strumming	**Minimum bending radius**	12 × OD
Armour, strength member & mechanical duty	Torque-Balanced Multi-Layer Steel Armour — Contra-helical high-tensile alloy steel wire armour layers	**Seawater, hydrostatic & hydrolysis resistance**	Engineered for continuous seawater immersion, pressure cycling and hydrolysis resistance per Variable Depth Sonar (VDS) Multi-Layer Steel-Armoured Electro-Optical Tow Specification
Oil, drilling mud & abrasion resistance	Resistant to marine hydraulic oils, salt mist, winch sheave wear and seabed abrasion per Variable Depth Sonar (VDS) Multi-Layer Steel-Armoured Electro-Optical Tow Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	Variable Depth Sonar (VDS) Multi-Layer Steel-Armoured Electro-Optical Tow Specification		

Sizes

3 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Configuration	Core / stranding	Outer Ø ≈ mm	Net weight ≈ kg/km	Breaking / tensile kN ≈	Min. bend R mm
VDS Armoured Tow Construction Schedule (−30…+80 °C) 3 sizes						
☐ **VDS Armoured Tow 4–12F EOM/Sub**	**4–12 × ITU-T G.652D / G.654E SM (+ Power)**	**Laser-welded SS FIMT + Steel/Aramid Armour**	**8.2**	**260**	**48.0**	**125**
☐ **VDS Armoured Tow 24–48F EOM/Sub**	**24–48 × ITU-T G.652D / G.654E SM (+ Power)**	**Laser-welded SS FIMT + Contra-Helical Steel**	**17.5**	**680**	**120.0**	**260**
☐ **VDS Armoured Tow 96–192F Trunk**	**96–192 × ITU-T G.654E / G.652D Submarine**	**SS Tube + Steel Vault + Cu Tube + DA Armour**	**28.0**	**1,650**	**300.0**	**420**

– Custom core cross-sections, pair/fibre counts, armour breaking loads and continuous winch/seabed lengths available per Variable Depth Sonar (VDS) Multi-Layer Steel-Armoured Electro-Optical Tow Specification.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
4–12 × ITU-T G.652D / G.654E SM (+ Power)	**0.35**	**≤0.35 dB/km @ 1310 nm**	**−30…+80 °C**
24–48 × ITU-T G.652D / G.654E SM (+ Power)	**0.21**	**≤0.21 dB/km @ 1550 nm**	**−30…+80 °C**
96–192 × ITU-T G.654E / G.652D Submarine	**0.18**	**≤0.18 dB/km @ 1550 nm**	**−30…+80 °C**

– Every production length undergoes routine conductor DC resistance, high-voltage dielectric or OTDR continuity and dimensional verification.

Standards and approvals

- Naval VDS / Heavy Armoured EO Compliant
- EN 10204 3.1 Factory Test Certificate
- CE, RoHS 2 (2011/65/EU) & REACH

Certifications

Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone
+86 185 9591 3361

Email
info@tebaoflex.com

Web
tebaoflex.com/cables/vds-armoured-sonar-tow-cable

Typical values for this cable type, based on Variable Depth Sonar (VDS) Multi-Layer Steel-Armoured Electro-Optical Tow Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.