subsea ROV umbilical, AUV tether & sonar tow cable

Variable-Depth Dipping Sonar Tow

Variable Depth & Dipping Sonar Towed Cable

MIL-DTL-24643 / DNV Subsea · 1,000 V · Subsea rov umbilical, auv tether & sonar tow cable



MIL-DTL-24643 / DNV Subsea | 1,000 V (-40 to +80 °C) | Subsea / Marine Outer Protective She

Application

Variable Depth & Dipping Sonar Towed Cable featuring optical fiber & 75-ohm coaxial units and subsea / marine outer protective sheath (MIL-DTL-24643 / DNV Subsea, 1,000 V, -40 to +80 °C, min. bend radius 10 × OD).

Typical uses: Work-Class & Observation ROV Umbilicals and TMS Tethers, Offshore Aquaculture Net Cleaners & Subsea Cage Inspection, AUV, Ocean Glider & Expendable Spool-Payoff Micro-Tethers, USV Towed Sonar Arrays, Seabed Crawlers & Subsea Trenchers

Construction





Cross-section, not to scale

1. Optical Fiber & 75-Ohm Coaxial Units
2. Flexible Copper Power & Control Cores
3. Aramid / LCP Braided Strength Member
4. Galvanized Steel Wire Armour
5. Subsea / Marine Outer Protective Sheath

Technical data

Typical values

Rated voltage / operating system	1,000 V (MIL-DTL-24643 Variable-Depth & Dipping Sonar Towed Cable Specification)	**Core / conductor construction**	Optical Fiber & 75-Ohm Coaxial Units — Central stainless-steel optical tube + shielded coaxial video core
Primary dielectric / optical buffer	Flexible Copper Power & Control Cores — Stranded copper conductors with Cross-linked polyethylene (XLPE) insulation	**Continuous operating temperature**	−40…+80 °C (submerged seawater & topside deck service)
Hydrostatic & thermal cycling endurance	Verified cold-bend and wet dielectric stability across −40…+80 °C per MIL-DTL-24643 Variable-Depth & Dipping Sonar Towed Cable Specification	**Storage & transport temperature**	−40…+80 °C on export wooden/steel cable drum
Outer jacket / sheath protection	Subsea / Marine Outer Protective Sheath — Black hydrolysis- & abrasion-resistant marine Polyurethane (PUR) outer sheath	**Minimum bending radius**	10 × OD
Reinforcement / screen / bedding layer	Galvanized Steel Wire Armour — High-strength galvanized steel wire armour layer	**Seawater, hydrolysis & oil resistance**	Resistant to permanent seawater immersion, hydrolysis, hydraulic oil and bio-fouling per MIL-DTL-24643 Variable-Depth & Dipping Sonar Towed Cable Specification
Hydrostatic pressure & water blocking	Radial and longitudinal water-blocking integrity verified per MIL-DTL-24643 Variable-Depth & Dipping Sonar Towed Cable Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	MIL-DTL-24643 Variable-Depth & Dipping Sonar Towed Cable 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	Max. pulling kN ≈	Min. bend R mm
Variable-Depth Dipping Sonar Tow Construction Schedule (−40…+80 °C) 3 sizes						
☐ Variable-Depth Dipping Sonar Tow 3×6 + 4×SM + 2T	3×6 mm² Power + 4×SM Fiber + 2×2×0.75	SnCu + Gel Tube + Contra-Helical GSWA	20.8	1,280	115.0	250
☐ Variable-Depth Dipping Sonar Tow 3×10 + 6×SM + 4	3×10 mm² Power + 6×SM Fiber + 4×2×0.75	SnCu + SS Tube + Double Steel Armour	25.4	1,890	185.0	305
☐ Variable-Depth Dipping Sonar Tow 3×16 + 8×SM/MM	3×16 mm² Power + 8×SM/MM + 3×2×1.0	SnCu + SS Tube + Heavy GSWA Pack	30.2	2,680	260.0	365

– Custom core counts, optical fiber channels, wet-mate terminations and continuous winch lengths available per MIL-DTL-24643 Variable-Depth & Dipping Sonar Towed Cable Specification.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance / Load	Operating temp.
3×6 mm² Power + 4×SM Fiber + 2×2×0.75	3.30	1,000 V · 115 kN MBS	−40…+80 °C
3×10 mm² Power + 6×SM Fiber + 4×2×0.75	1.91	1,000 V · 185 kN MBS	−40…+80 °C
3×16 mm² Power + 8×SM/MM + 3×2×1.0	1.21	1,000 V · 260 kN MBS	−40…+80 °C

– Every production length undergoes routine conductor DC resistance / OTDR optical attenuation, AC dielectric and dimensional verification.

Standards and approvals

- MIL-DTL-24643 / DNV Subsea 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/variable-depth-dipping-sonar-towed-cable

Typical values for this cable type, based on MIL-DTL-24643 Variable-Depth & Dipping Sonar Towed Cable Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.