subsea ROV umbilical, AUV tether & sonar tow cable

Small-Bend-Radius USV Sonar Tow

Cable



DNV-ST-E402 / MIL-DTL-24643 · 600 V · Subsea rov umbilical, auv tether & sonar tow cable

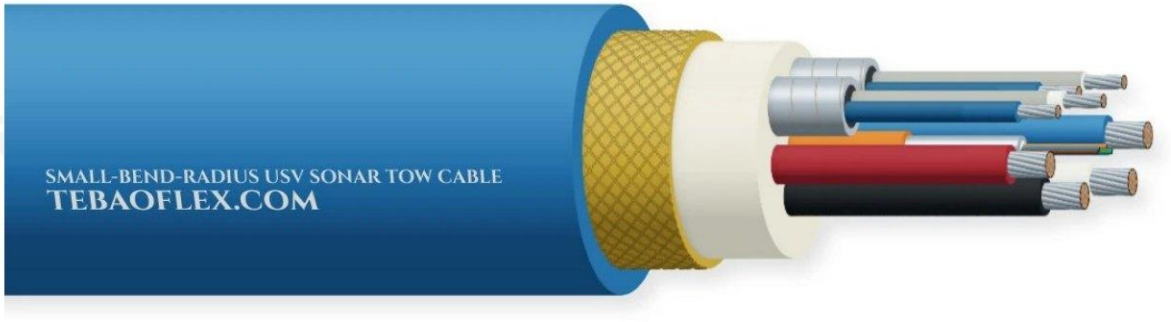
DNV-ST-E402 / MIL-DTL-24643 | 600 V (-40 to +80 °C) | Subsea / Marine Outer Protective She

Application

Small-Bend-Radius USV Sonar Tow Cable featuring single-mode / multi-mode optical unit and subsea / marine outer protective sheath (DNV-ST-E402 / MIL-DTL-24643, 600 V, -40 to +80 °C, min. bend radius 6 × 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. Single-Mode / Multi-Mode Optical Unit
2. Power & Control Copper Conductors
3. Galvanized Steel Wire Armour
4. Subsea / Marine Outer Protective Sheath

Technical data

Typical values

Rated voltage / operating system	600 V (DNV-ST-E402 Small-Bend-Radius USV Compact Winch Sonar Tow Cable Specification)	**Core / conductor construction**	Single-Mode / Multi-Mode Optical Unit — Hermetic stainless-steel tube / tight-buffered optical unit
Primary dielectric / optical buffer	Power & Control Copper Conductors — 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 DNV-ST-E402 Small-Bend-Radius USV Compact Winch Sonar Tow 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**	6 × 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 DNV-ST-E402 Small-Bend-Radius USV Compact Winch Sonar Tow Cable Specification
Hydrostatic pressure & water blocking	Radial and longitudinal water-blocking integrity verified per DNV-ST-E402 Small-Bend-Radius USV Compact Winch Sonar Tow Cable Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	DNV-ST-E402 Small-Bend-Radius USV Compact Winch Sonar Tow 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
Small-Bend-Radius USV Sonar Tow Construction Schedule (−40…+80 °C) 3 sizes						
☐ **Small-Bend-Radius USV Sonar Tow 3×6 + 4×SM + 2TP**	3×6 mm² Power + 4×SM Fiber + 2×2×0.75	SnCu + Gel Tube + Contra-Helical GSWA	20.8	1,280	115.0	250
☐ **Small-Bend-Radius USV Sonar Tow 3×10 + 6×SM + 4T**	3×10 mm² Power + 6×SM Fiber + 4×2×0.75	SnCu + SS Tube + Double Steel Armour	25.4	1,890	185.0	305
☐ **Small-Bend-Radius USV 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 DNV-ST-E402 Small-Bend-Radius USV Compact Winch Sonar Tow 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	600 V · 115 kN MBS	−40…+80 °C
3×10 mm² Power + 6×SM Fiber + 4×2×0.75	1.91	600 V · 185 kN MBS	−40…+80 °C
3×16 mm² Power + 8×SM/MM + 3×2×1.0	1.21	600 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

- DNV-ST-E402 / MIL-DTL-24643 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/small-bend-radius-usv-sonar-tow-cable

Typical values for this cable type, based on DNV-ST-E402 Small-Bend-Radius USV Compact Winch Sonar Tow 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.