subsea ROV umbilical, AUV tether & sonar tow cable

Heavy-Mining Subsea Trencher Cable

Heavy-Mining Subsea Mining & Trencher Cable

ICEA S-75-381 / DNV-ST-E402 · 3.6/6 kV (1.8/3 kV) · Subsea rov umbilical, auv tether &



ICEA S-75-381 / DNV-ST-E402 | 3.6/6 kV (1.8/3 kV) (-40 to +90 °C) | Subsea / Marine Outer Protective She

Application

Heavy-Mining Subsea Mining & Trencher Cable featuring single-mode / multi-mode optical unit and subsea / marine outer protective sheath (ICEA S-75-381 / DNV-ST-E402, 3.6/6 kV (1.8/3 kV), -40 to +90 °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. Single-Mode / Multi-Mode Optical Unit
2. Power & Control Copper Conductors
3. Subsea / Marine Outer Protective Sheath

Technical data

Typical values

Rated voltage / operating system	3.6/6 kV (1.8/3 kV) (ICEA S-75-381 & DNV Heavy-Mining Subsea Trencher Electro-Optical 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 Ethylene-propylene rubber (EPR/EPDM) insulation	**Continuous operating temperature**	−40…+90 °C (submerged seawater & topside deck service)
Hydrostatic & thermal cycling endurance	Verified cold-bend and wet dielectric stability across −40…+90 °C per ICEA S-75-381 & DNV Heavy-Mining Subsea Trencher Electro-Optical 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	Power & Control Copper Conductors — Stranded copper conductors with Ethylene-propylene rubber (EPR/EPDM) insulation	**Seawater, hydrolysis & oil resistance**	Resistant to permanent seawater immersion, hydrolysis, hydraulic oil and bio-fouling per ICEA S-75-381 & DNV Heavy-Mining Subsea Trencher Electro-Optical Specification
Hydrostatic pressure & water blocking	Radial and longitudinal water-blocking integrity verified per ICEA S-75-381 & DNV Heavy-Mining Subsea Trencher Electro-Optical Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	ICEA S-75-381 & DNV Heavy-Mining Subsea Trencher Electro-Optical 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
Heavy-Mining Subsea Trencher Cable Construction Schedule (−40…+90 °C) 3 sizes						
☐ **Heavy-Mining Subsea Trencher Cable Hybrid 4G2.5+**	**4G2.5 mm² Power + 4×SM + 2×2×0.5**	**Class 5 SnCu + Aramid Braid + Subsea PUR**	**14.6**	**285**	**18.0**	**90**
☐ **Heavy-Mining Subsea Trencher Cable Hybrid 4G6+FO**	**4G6.0 mm² Power + 4×SM/MM + 4×2×0.5**	**Class 5 SnCu + Aramid Braid + Subsea PUR**	**19.2**	**540**	**32.0**	**120**
☐ **Heavy-Mining Subsea Trencher Cable Hybrid 4G16+F**	**4G16 mm² Power + 8×SM/MM + 4×2×0.75**	**Class 5 SnCu + Heavy Aramid + Subsea PUR**	**26.5**	**1,120**	**55.0**	**165**

– Custom core counts, optical fiber channels, wet-mate terminations and continuous winch lengths available per ICEA S-75-381 & DNV Heavy-Mining Subsea Trencher Electro-Optical Specification.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance / Load	Operating temp.
4G2.5 mm² Power + 4×SM + 2×2×0.5	**7.98**	**3.6/6 kV (1.8/3 kV) · 18 kN Tensile**	**−40…+90 °C**
4G6.0 mm² Power + 4×SM/MM + 4×2×0.5	**3.30**	**3.6/6 kV (1.8/3 kV) · 32 kN Tensile**	**−40…+90 °C**
4G16 mm² Power + 8×SM/MM + 4×2×0.75	**1.21**	**3.6/6 kV (1.8/3 kV) · 55 kN Tensile**	**−40…+90 °C**

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

Standards and approvals

- ICEA S-75-381 / DNV-ST-E402 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/heavy-mining-subsea-mining-trencher-cable

Typical values for this cable type, based on ICEA S-75-381 & DNV Heavy-Mining Subsea Trencher Electro-Optical Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.