subsea ROV umbilical, AUV tether & sonar tow cable

# Subsea Hull Cleaning Umbilical

## Subsea Hull Cleaning & Intervention Umbilical

DNV-ST-E402 / ISO 13628-5 · 0.6/1 kV + 250 bar · Subsea rov umbilical, auv tether &




DNV-ST-E402 / ISO 13628-5 | 0.6/1 kV + 250 bar (-30 to +80 °C) | Subsea / Marine Outer Protective She

## Application

Subsea Hull Cleaning & Intervention Umbilical featuring high-pressure hydraulic hose core and subsea / marine outer protective sheath (DNV-ST-E402 / ISO 13628-5, 0.6/1 kV + 250 bar, -30 to +80 °C, min. bend radius 8 × 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. High-Pressure Hydraulic Hose Core
2. Power Conductors & Optical Tube
3. Subsea / Marine Outer Protective Sheath

## Technical data

Typical values

| | | | |
|---|---|---|---|
| **Rated voltage / operating system** | 0.6/1 kV + 250 bar (DNV-ST-E402 Subsea Hull Cleaning & Intervention Electro-Hydraulic Umbilical) | **Core / conductor construction** | High-Pressure Hydraulic Hose Core — Thermoplastic hydraulic/water-jet hose for subsea tooling |
| **Primary dielectric / optical buffer** | Power Conductors & Optical Tube — Stranded copper power cores (Ethylene-propylene rubber (EPRIEPDM) insulation) + single-mode fiber unit | **Continuous operating temperature** | −30…+80 °C (submerged seawater & topside deck service) |
| **Hydrostatic & thermal cycling endurance** | Verified cold-bend and wet dielectric stability across −30…+80 °C per DNV-ST-E402 Subsea Hull Cleaning & Intervention Electro-Hydraulic Umbilical | **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** | 8 × OD |
| **Reinforcement / screen / bedding layer** | Power Conductors & Optical Tube — Stranded copper power cores (Ethylene-propylene rubber (EPRIEPDM) insulation) + single-mode fiber unit | **Seawater, hydrolysis & oil resistance** | Resistant to permanent seawater immersion, hydrolysis, hydraulic oil and bio-fouling per DNV-ST-E402 Subsea Hull Cleaning & Intervention Electro-Hydraulic Umbilical |
| **Hydrostatic pressure & water blocking** | Radial and longitudinal water-blocking integrity verified per DNV-ST-E402 Subsea Hull Cleaning & Intervention Electro-Hydraulic Umbilical | **RoHS & REACH compliance** | RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant |
| **Standards** | DNV-ST-E402 Subsea Hull Cleaning & Intervention Electro-Hydraulic Umbilical | | |

## 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 |
|---|---|---|---|---|---|---|
| **Subsea Hull Cleaning Umbilical Construction Schedule (−30…+80 °C)** 3 sizes | | | | | | |
| ☐ **Subsea Hull Cleaning Umbilical Hybrid 4G2.5+FO** | 4G2.5 mm² Power + 4×SM + 2×2×0.5 | Class 5 SnCu + Aramid Braid + Subsea PUR | 14.6 | 285 | 18.0 | 90 |
| ☐ **Subsea Hull Cleaning Umbilical 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 |
| ☐ **Subsea Hull Cleaning Umbilical Hybrid 4G16+FO** | 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 DNV-ST-E402 Subsea Hull Cleaning & Intervention Electro-Hydraulic Umbilical.

## 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 | 0.6/1 kV + 250 bar · 18 kN Tensile | −30…+80 °C |
| 4G6.0 mm² Power + 4×SM/MM + 4×2×0.5 | 3.30 | 0.6/1 kV + 250 bar · 32 kN Tensile | −30…+80 °C |
| 4G16 mm² Power + 8×SM/MM + 4×2×0.75 | 1.21 | 0.6/1 kV + 250 bar · 55 kN Tensile | −30…+80 °C |

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

## Standards and approvals

- DNV-ST-E402 / ISO 13628-5 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/subsea-hull-cleaning-intervention-umbilical**


Typical values for this cable type, based on DNV-ST-E402 Subsea Hull Cleaning & Intervention Electro-Hydraulic Umbilical. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.