



Armoured electromechanical & optical tow cable

Armoured Underwater Tow Cable

Torque-balanced double GIPS steel wire armoured sonar, CTD & geophysical tow cable



MIL-DTL-24643

40-320 kN MBL

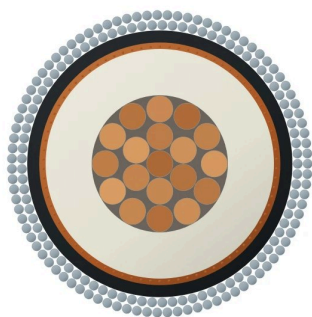
Up to 6,000 m

Application

Double contra-helically armoured electromechanical and electro-optical tow cable engineered for side-scan sonar, sub-bottom profilers, CTD rosettes, magnetometers and deep-tow sleds to 6,000 m depth, with 40-320 kN breaking strength.

Typical uses: Side-Scan & Synthetic Aperture Sonar, Oceanographic CTD & Rosette Profiling, Sub-Bottom & Magnetometer Tow, Naval Towed Acoustic Arrays, Deep-Sea Mineral Survey

Construction



Cross-section, not to scale

- 1 Coaxial / power-telemetry core
- 2 Low-loss high-pressure dielectric
- 3 Coaxial shield / pair screen
- 4 Pressure-compensated bedding
- 5 Inner helical steel wire armour
- 6 Outer contra-helical steel armour

Technical data

Typical values

Operating voltage	600 V – 3,000 V DC/AC rms	Coaxial impedance	50 ± 3 Ω or 75 ± 3 Ω (coax variants)
Insulation resistance	≥ 5,000 MΩ·km at 20 °C	DC loop resistance	6.2 to 42 Ω/km (configuration dependent)
AC dielectric test	3.0 kV – 7.5 kV AC for 5 min	Subsea operating temperature	–10 °C to +60 °C
Winch deck operation	–35 °C to +75 °C	Max. core temperature	+80 °C (PE) / +90 °C (XLPE/PP)
Design water depth	6,000 m (60 MPa hydrostatic)	Min. breaking load (MBL)	38 kN (6.5 mm OD) to 320 kN (22.4 mm OD)
Safe working load (SWL)	10 kN to 80 kN	Min. bend radius (under load)	20 × OD over A-frame sheave
Min. bend radius (no load)	12 × OD	Torque balance	≤ ±1.5°/m up to 50 % MBL
Water blocking	100 % void-filled core & armour interstices	Corrosion resistance	Heavy Class A galvanised GIPS + corrosion inhibitor
Seabed rock abrasion	Preformed high-carbon plow steel outer wires	Hydrocarbon & hydraulic oil	IEC 60811-404 resistant
Standards	MIL-DTL-24643 / ISO 13628-5		

Sizes

13 standard constructions

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

Order designation	Internal Core Construction	Rated V V	Nominal OD mm	Weight in air kg/km	Weight in sea kg/km	SWL kN	MBL kN	Min. sheave R mm
Electromechanical Coaxial & Multicore Tow Cables 7 sizes								
☐ AUTC-1CX-0255	1 × Coax (0.255" CTD / Magnetometer)	600	6.48	158	126	9	38	130
☐ AUTC-1CX-0322	1 × 50 Ω Coax (0.322" UNOLS CTD)	1000	8.18	255	204	14	56	164
☐ AUTC-4C18-0322	4 × 1.0 mm ² (18 AWG Star-Quad)	1000	8.20	262	208	14	55	164
☐ AUTC-1CX4C-0375	1 × 75 Ω Coax + 4 × 1.0 mm ² (Side-Scan)	1000	9.53	350	278	19	76	191
☐ AUTC-7C16-0450	7 × 1.5 mm ² (Side-Scan / Sub-Bottom)	1000	11.43	495	392	27	108	229
☐ AUTC-1CX6C-0450	1 × 50 Ω Coax + 6 × 1.5 mm ²	1200	11.43	505	400	27	110	229
☐ AUTC-12C16-0560	3 × 2.5 + 9 × 1.0 mm ² (Deep Tow)	1500	14.22	780	620	42	168	284
Electro-Optical FIMT Deep-Tow Cables 6 sizes								
☐ AUTC-EO-3C3FO-0394	3 × 1.5 mm ² + 3 SM Fibres in FIMT	1500	10.00	395	315	22	88	200
☐ AUTC-EO-3C6FO-0450	3 × 2.5 mm ² + 6 SM Fibres in FIMT	2000	11.43	515	410	28	112	229
☐ AUTC-EO-3C6FO-0560	3 × 4.0 mm ² + 6 SM/MM Fibres in FIMT	2500	14.22	790	630	44	175	284
☐ AUTC-EO-3C3FO-0680	3 × 6.0 mm ² + 3 SM Fibres (0.680" UNOLS)	3000	17.27	1,175	945	60	240	345
☐ AUTC-EO-3C6FO-0680-JK	3 × 6.0 mm ² + 6FO + HDPE Outer Jacket	3000	19.80	1,265	965	60	240	396
☐ AUTC-EO-3C12FO-0880	3 × 10 mm ² + 3×2×0.75 + 12FO Heavy Tow	3000	22.40	1,890	1,510	80	320	448

– AUTC-1CX-0322 (8.18 mm) and AUTC-EO-3C3FO-0680 (17.27 mm) match standard UNOLS oceanographic winch groove shells.

Standards and approvals

- ✓ MIL-DTL-24643 / ISO 13628-5 Tow Construction
- ✓ UNOLS 0.322" & 0.680" Winch Shell Compatible

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/armoured-underwater-tow-cable



Typical values for this cable type, based on MIL-DTL-24643 / ISO 13628-5 / IEC 60228. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.