



Marine seismic source array umbilical

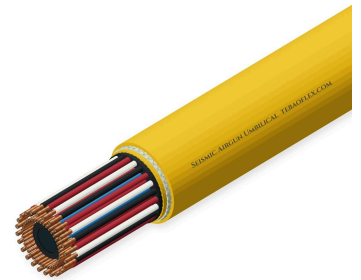
Seismic Airgun Umbilical

2,000–3,000 psi high-pressure air & solenoid firing towed marine seismic gun umbilical

ISO 13628-5

2,000–3,000 psi

Seismic Source

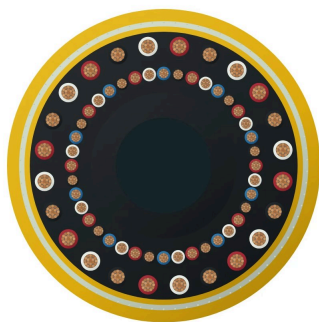
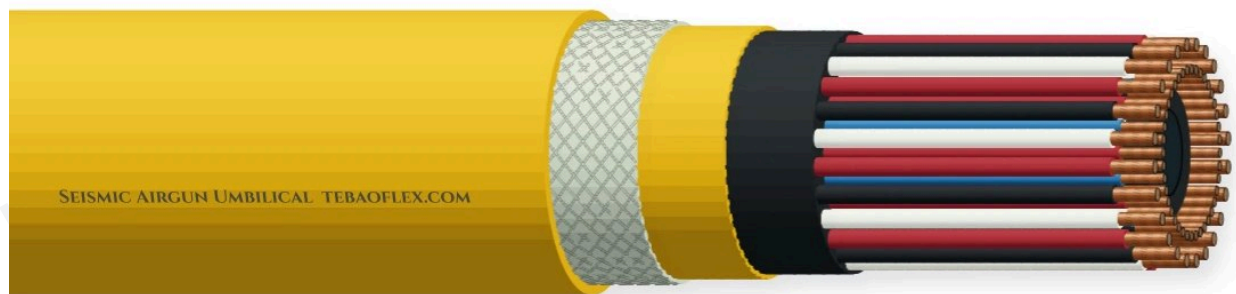


Application

Heavy-duty towed seismic source umbilical integrating 138–207 bar (2,000–3,000 psi) polyaramid-reinforced air supply lines, individually screened solenoid firing pairs, near-field hydrophone quads and high-load tow armour per ISO 13628-5.

Typical uses: 3D/4D Marine Seismic Survey, Ocean Bottom Node (OBN) Source, High-Resolution Site Survey, Geophysical Academic Vessels, Subsea Carbon Storage Monitoring

Construction



Cross-section, not to scale

- 1 Solenoid & sensor conductors
- 2 High-pressure air supply hose
- 3 Shock-resistant core insulation
- 4 Individual pair & overall EMC shield
- 5 Towed array tensile member
- 6 Heavy-duty marine PUR outer sheath

Supports 80–350 kN tow and recovery tension

Technical data

Typical values

Solenoid pair voltage	600/1000 V AC/DC pulse rated
Sensor pair impedance	100 ± 10 Ω screened twisted pair
AC dielectric test	3.0 kV AC rms for 5 min
Deck winch operation	−30 °C to +75 °C
Air hose working pressure	138 bar (2,000 psi) or 207 bar (3,000 psi)
Min. breaking load (MBL)	80 kN to 350 kN
Min. bend radius	10 × OD dynamic · 8 × OD static
Abrasion resistance	DIN ISO 4649 ≤ 35 mm ³ heavy-wall PUR
Standards	ISO 13628-5 / API Spec 17E

Solenoid conductor resistance	≤ 13.7 Ω/km (1.5 mm ² / 16 AWG tinned copper)
Cross-talk attenuation	≥ 75 dB between solenoid and NFH pairs
Operating seawater temperature	−5 °C to +50 °C
Compressed air temperature	Up to +85 °C discharge temperature
Air hose min. burst pressure	552 bar (8,000 psi) or 828 bar (12,000 psi)
Acoustic shock endurance	Tested to 100 g peak acoustic shock wave
Water blocking	Gel/compound-filled interstices + water-swellaable tapes
Oil & hydraulic fluid	IEC 60811-404 resistant

Sizes

12 standard constructions

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

Order designation	Air Hose Bore + Electrical Pairs	Air WP psi (bar)	Nominal OD mm	Weight in air kg/km	Weight in sea kg/km	MBL kN	Min. bend R mm
Integrated HP Air + Electrical Gun Array Umbilicals 7 sizes							
☐ SAU-INT-12-10P-2K	1/2" Air + 6×2×1.5 + 4×2×0.5 mm ²	2000 (138)	34.0	1,180	240	100	340
☐ SAU-INT-12-16P-3K	1/2" Air + 10×2×1.5 + 6×2×0.5 mm ²	3000 (207)	38.5	1,520	340	140	385
☐ SAU-INT-34-20P-2K	3/4" Air + 12×2×1.5 + 8×2×0.5 mm ²	2000 (138)	44.2	1,980	430	180	442
☐ SAU-INT-34-24P-3K	3/4" Air + 14×2×1.5 + 10×2×0.5 mm ²	3000 (207)	47.5	2,360	540	220	475
☐ SAU-INT-34-32P-3K	3/4" Air + 18×2×1.5 + 14×2×0.5 mm ² + 4FO	3000 (207)	52.0	2,840	680	260	520
☐ SAU-INT-100-36P-3K	1" Air + 20×2×1.5 + 16×2×0.5 mm ² + 6FO	3000 (207)	58.5	3,590	850	320	585
☐ SAU-INT-2X12-24P-3K	2×1/2" Air + 14×2×1.5 + 10×2×0.5 mm ²	3000 (207)	54.0	3,120	720	280	540
All-Electrical Gun String & Slip-In Control Umbilicals 5 sizes							
☐ SAU-ELC-12P-ARM	8×2×1.5 + 4×2×0.75 mm ² (Gun Slip-In)	N/A (Elec)	22.8	740	320	85	228
☐ SAU-ELC-20P-ARM	12×2×1.5 + 8×2×0.75 mm ²	N/A (Elec)	27.4	1,060	460	125	274
☐ SAU-ELC-28P-ARM	16×2×1.5 + 12×2×0.75 mm ²	N/A (Elec)	31.6	1,410	610	165	316
☐ SAU-ELC-36P-ARM	20×2×1.5 + 16×2×0.75 mm ² + 4FO	N/A (Elec)	35.8	1,820	790	210	358
☐ SAU-ELC-48P-ARM	28×2×1.5 + 20×2×0.75 mm ² + 8FO	N/A (Elec)	40.5	2,340	1,020	250	405

– All pneumatic hoses are hydrostatically proof-tested at 1.5 × working pressure (3,000 or 4,500 psi) prior to umbilical extrusion.

Standards and approvals

- ✓ ISO 13628-5 Marine Seismic Umbilical Compliant
- ✓ SAE J517 100R8 / ISO 3949 High-Pressure Core

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

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Email

info@tebaoflex.com

Web

tebaoflex.com/cables/seismic-airgun-umbilical



Typical values for this cable type, based on ISO 13628-5 / SAE J517 100R8 / IEC 60092-350. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.