Nexans ROV

ROV Umbilicals
Reliable at any depth

Nexans
We are able to select from our wide range of standard electrical and fibre elements as well as a range of armouring packages to design a solution which will satisfy customer demands. Our cables are highly dynamic, torque balanced and compact and are known for their reliability and robustness.

**Steel armoured and aramid armoured umbilicals**

Our manufacturing capabilities include work class and observation umbilicals as well as deep water umbilicals designed for dynamic deep water applications rated down to 6000m.

**Electrical elements**

QUADs, pairs and triads are used for electrical signalling and single conductors for power transfer. Power conductors come in varying sizes with power transfer up to and including 6.6 kV. Earthing conductors are used for detection of faults and draining of charges building up in the cable.

**Fibre elements**

A combination of maximum 12 SW/MM colour coded fibres encased in a laser welded steel tube and protected with a filling compound.

**Shields**

Copper laminate shield in combination with earth conductors make up electrical screens to prevent data interference between conductors.

**Sheaths, insulation and wrapping**

A variety of advanced thermoplastic elastomers are used throughout the design for protecting the cores.

**Armouring**

Up to a 4 layers of Galvan steel wires of varying sizes are used for protection and torsion of the finished umbilical.

**Solid Fillers**

Solid polyethylene fillers are inserted for increased attachment between aramid yarns and outer jacket.

**Outer Sheath**

An outer layer of thermoplastic elastomer mechanically protects the design in addition to preserving the aramid yarns.

Our tether cables are lightweight, neutral and positively buoyant for a variety of underwater applications. Our tethers are designed to be both flexible and durable.

**Design elements:**

**Armouring**

Two layers of high-strength aramid yarns provide lightweight tensile strength and torque balance.

**Mechanical and Environmental Characteristics**

<table>
<thead>
<tr>
<th>Typical Characteristics</th>
<th>Work class/observation class umbilicals</th>
<th>Tethers</th>
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<tbody>
<tr>
<td>Cable outer diameter</td>
<td>20 – 80 mm</td>
<td>12 – 50 mm</td>
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<tr>
<td>Safe working load</td>
<td>Up to 300 kN</td>
<td>1 – 20</td>
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<tr>
<td>Weight in sea water</td>
<td>Design dependent</td>
<td>Typically 100 to +100 kg/m</td>
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<tr>
<td>Minimum dynamic bending diameter</td>
<td>Approx. 30 to 40 x OD</td>
<td>TM5 dependent</td>
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<tr>
<td>Breaking strength</td>
<td>Up to 1500 kN</td>
<td>Up to 150 kN</td>
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<tr>
<td>Operational depth</td>
<td>Max 6000 m</td>
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<tr>
<td>Operational voltage</td>
<td>1.0, 3.3, 4.5 and 6.6 kV</td>
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</tr>
<tr>
<td>Armouring</td>
<td>Galvan coated steel wires or aramid yarns</td>
<td>Aramid yarns</td>
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Your requirement, our responsibility

Innovation through experience
Our technical expertise and experience with ROV umbilicals means that we are able to suggest the most cost efficient and effective design for your needs. We view our customers as partners and suggest changes to existing designs where we see room for cost savings and improvement.

Testing and documentation
We perform mechanical, electrical and optical tests on our cables. We also offer a variety of additional qualification testing upon request.

Customer training and advice
We advise all our customers on how to best handle and maintain our dynamic cables to ensure their longevity. We have technicians and engineers on staff with many years of practical experience who regularly hold courses for operators.

Spooling to your winch drum – delivering a ready to use product
We have recognized our customers’ need for a ready to use product. Our factory traction winch can spool your umbilical directly unto your winch drum for delivery directly to your operating vessel.

We not only save our customers time, our experience with handling of ROV cables enable us to guarantee that the quality of the spooling meets the customer’s specification.

With Nexans now providing this service, the risk associated with spooling by third parties will be eliminated.

Global expert in cables and cabling systems
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