**LIDA® Tubular Anodes**

**LIDA® tubular anodes** are titanium tubes with a mixed metal oxide coating, that have an extremely low consumption rate, measured in terms of milligrams per ampere-year. As a result of this low consumption rate, the tubular dimensions remain nearly constant during the life of the anode providing a consistently low resistance anode.

Whether operating in soil, freshwater, mud, or seawater, LIDA® mixed metal oxide coatings demonstrate very high chemical stability even in environments with very low pH values. Unlike other impressed current anodes, the LIDA® coatings are not affected by the generation of chlorine.

**Benefits:**
- Dramatically reduces cable costs
- Reduces handling and installation costs
- Lower cost per amp-hr
- Guaranteed electrical contact and moisture seal integrity
- Consistently low resistance anode

**Features:**
- Multi-anode conductor
- Lightweight / durable
- High current output
- Patented crimp connections
- Dimensionally stable

**Applications:**
- **Groundbeds:** Deep; Shallow; Vertical; Horizontal; Open Hole
- **Marine:** Sea Water; Brackish Water; Mud
- **Fresh Water**

**Dimension:**

<table>
<thead>
<tr>
<th>Anodes</th>
<th>Diameter</th>
<th>Length</th>
<th>Weight</th>
<th>Surface Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>cm</td>
<td>inches</td>
<td>kg</td>
<td>m²</td>
</tr>
<tr>
<td>1.6 x 100</td>
<td>1.6</td>
<td>0.63</td>
<td>100</td>
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<tr>
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<td>1.00</td>
<td>50</td>
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<tr>
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<td>100</td>
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<td>3.1</td>
<td>1.22</td>
<td>76</td>
<td>30</td>
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<tr>
<td>3.1 x 122</td>
<td>3.1</td>
<td>1.22</td>
<td>122</td>
<td>48</td>
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</table>

LIDA® tubular 2.5 x 100 XXL are designed for extended life operation.

**LIDA® Tubular Anode Life in Sea Water**

**LIDA® Tubular Anode Life in Fresh Water**
LIDA® “anode string” is comprised of electrical cable threaded through one or more tubular anodes. Electrical connection between the anode and cable is via a patented, mechanical crimping process. The crimp connection is likewise utilized to seal the anode around the cable at both ends. Since only a single cable lead protrudes from the hole, the junction box is eliminated when using a LIDA® string reducing the cost of materials and labor.

String assemblies are also available in a looped configuration with two tails, or as multiple, staggered strings for system redundancy and maximum current distribution throughout the groundbed.

De Nora recommends the use of quality, conductive, carbonaceous backfill, a vent pipe and Ventralizers™, suitable cable, good design practices, and understanding.

Both ends of the tubular anode are sealed over the insulated cable by applying 50 tons of hydraulic pressure. This crimping process eliminates the need for mastic or resin sealants.

Reliability - LIDA® tubular anode, are the most durable and reliable product in the industry for your cathodic protection needs. LIDA® tubular anode strings are backed by a five-year, no hassle warranty.

Ease Of Installation - The LIDA® anode-cable assemblies are easy to handle, transport and install because of their unique flexibility. It makes your on-site job easier as well.