GRAPHITE ANODES

When used with BAC Carbonaceous Backfill, BAC Graphite Anodes provide an economic and reliable medium for buried impressed current systems. They are particularly suitable for use in high resistivity environments where anode current density is not a determining factor.

Equally suited to applications on land or underwater, the standard BAC Graphite Anode is chemically inert and vacuum impregnated with linseed oil.

Graphite has excellent electrical conductivity and therefore ensures good current distribution and uniform material consumption.

The proven performance of BAC standard cable attachments and sealing arrangements insure against the possibility of premature failure.

<table>
<thead>
<tr>
<th>Anode Type</th>
<th>A x B</th>
<th>Nominal Surface Area</th>
<th>Amps output at varying current densities</th>
<th>Approx. Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm x mm</td>
<td>m²</td>
<td>2A/m²</td>
<td>3A/m²</td>
</tr>
<tr>
<td>BG1</td>
<td>1372 x 76</td>
<td>0.3</td>
<td>0.60</td>
<td>0.90</td>
</tr>
<tr>
<td>BG2</td>
<td>63 x 2.8</td>
<td>0.28</td>
<td>0.56</td>
<td>0.84</td>
</tr>
<tr>
<td>BG3</td>
<td>1525 x 76</td>
<td>0.33</td>
<td>0.66</td>
<td>0.99</td>
</tr>
<tr>
<td>BG4</td>
<td>102 x 0.47</td>
<td>0.92</td>
<td>1.39</td>
<td>2.35</td>
</tr>
<tr>
<td>BG5</td>
<td>1830 x 102</td>
<td>0.58</td>
<td>1.16</td>
<td>1.74</td>
</tr>
<tr>
<td>BG6</td>
<td>153 x 0.87</td>
<td>1.64</td>
<td>2.51</td>
<td>4.35</td>
</tr>
</tbody>
</table>

Centre Tapped Graphite Anodes

A range of graphite anodes with a centre connection is also available. Operating data is the same as standard graphite anodes but weights are very much reduced.
1.4.3

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Consumption Rates of Graphite Anodes

Rates of consumption vary with current density, environment, and method of installation. The following figures are given for guidance only.

<table>
<thead>
<tr>
<th>Environment</th>
<th>Current Density A/m²</th>
<th>Consumption rate Kg/Ampere/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh Water</td>
<td>3</td>
<td>0.1 - 0.2</td>
</tr>
<tr>
<td>Salt Water</td>
<td>10</td>
<td>0.1 - 0.2</td>
</tr>
<tr>
<td>Wet Carbonaceous backfill</td>
<td>10</td>
<td>0.05 - 0.1</td>
</tr>
<tr>
<td>Dry Carbonaceous backfill</td>
<td>10</td>
<td>Negligible</td>
</tr>
</tbody>
</table>

Graphite Anode Ordering Details

- ANODE DIMENSIONS, WEIGHTS AND TYPE
  - BG1: 1372mm x 76mm, 8.3 kg
  - BG2: 1525mm x 63mm, 6.7 kg
  - BG3: 1525mm x 76mm, 9.2 kg
  - BG4: 1525mm x 102mm, 18.8 kg
  - BG5: 1830mm x 102mm, 23.2 kg
  - BG6: 1830mm x 153mm, 53.6 kg

- TABLE 1

- INSULATION SHEATH (BLACK)
  - CROSS SECTIONAL SIZE (7 STRAND CORE)
    - 10 mm²
      - XLPE/PVC: 10XP
      - PVF/HMWPE: 10KH
      - EPR/CSP: 10EC
    - 16 mm²
      - XLPE/PVC: 16XP
      - PVF/HMWPE: 16KH
      - EPR/CSP: 16EC

- TABLE 2

- STANDARD CABLE LENGTHS IN METRES
  - 10
    - 1.0, 5, 10, 15, 20, 30

Example: You require a graphite anode 1525mm x 63mm (6.7Kg) complete with 16 mm² XLPE/PVC black cable 10 metre length.

How to Order:

- Step 1: Find the reference number for the 1525mm x 63mm anode type in Table 1 - BG2
- Step 2: Select the cable type from Table 2 - 16XP
- Step 3: Choose the cable length from Table 3 - 10

Therefore, your requirement is for: **BG2 - 16XP - 10**