KRINGS Flex shoring is an environmentally friendly alternative to aluminum lightweight shoring and is ideal for the laying of gas and water supply lines and other services down to depths of about 1.5 m and for pipe clearances of up to 0.6 m.

Together with basic and supplementary elements, the shoring can be adapted to various pipe culvert heights. The components are easy to mount on top of each other and can be connected with a coupler. The steel corner posts belonging to the system are simply bolted onto the ends of the timber boards and, with the aid of a cross member, will take the standard KVL spindles. The timber boards are provided by the customer in various lengths and thicknesses.

**Basic data**

|                      | 2,00 m / 2,25 m / 2,50 m / 3,00 m | 0,50 m / 1,00 m / 1,50 m | 0,22 m / 0,60 m | 5 cm / 6 cm / 7 cm | max. 2,00 m | variable, see page 106 |
|----------------------|----------------------------------|-------------------------|-----------------|........................|-----------|----------------------|
| Shoring/board length |                                  |                         |                 |                      |           |                      |
| Element height       |                                  |                         |                 |                      |           |                      |
| Pipe culvert height  |                                  |                         |                 |                      |           |                      |
| Board thickness      |                                  |                         |                 |                      |           |                      |
| Shoring depth        |                                  |                         |                 |                      |           |                      |
| Trench width         |                                  |                         |                 |                      |           |                      |

**Advantages**

- Ecologically compatible timber shoring
- Can be easily adapted to suit various pipe culvert heights
Flex shoring sample combination, height 500 mm, 1000 mm, 1500 mm and 2000 mm

(All dimensions in mm)

<table>
<thead>
<tr>
<th>I</th>
<th>Flex shoring element</th>
<th>b_c</th>
<th>Inner width</th>
<th>Y</th>
<th>Pin</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>Length</td>
<td>HB</td>
<td>Element height</td>
<td>Z</td>
<td>KVL spindle</td>
</tr>
<tr>
<td>l_c</td>
<td>Pipe culvert length</td>
<td>h_c</td>
<td>Pipe culvert height</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Trench width</td>
<td>s</td>
<td>Board thickness</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Base panels

<table>
<thead>
<tr>
<th>Art. No.</th>
<th>Short description</th>
<th>h [m]</th>
<th>h_c [m]</th>
<th>G / VP [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>888 401</td>
<td>Base/top cross member</td>
<td>0,50</td>
<td>0,22</td>
<td>7,6</td>
</tr>
<tr>
<td>888 410</td>
<td>Base cross member</td>
<td>1,00</td>
<td>0,41</td>
<td>18,6</td>
</tr>
<tr>
<td>888 400</td>
<td>Base cross member</td>
<td>1,50</td>
<td>0,60</td>
<td>25,7</td>
</tr>
</tbody>
</table>

### Spindles

<table>
<thead>
<tr>
<th>Art. No.</th>
<th>Short description</th>
<th>l [m]</th>
<th>G [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>118 060</td>
<td>Spindle - 70x650 (rubber pad round)</td>
<td>0,523</td>
<td>12,2</td>
</tr>
<tr>
<td>118 070</td>
<td>Spindle - 70x740 (rubber pad round)</td>
<td>0,613</td>
<td>13,4</td>
</tr>
<tr>
<td>118 090</td>
<td>Spindle - 70x920 (rubber pad round)</td>
<td>0,799</td>
<td>15,8</td>
</tr>
<tr>
<td>118 020</td>
<td>Spindle - 70x1280 (rubber pad round)</td>
<td>1,153</td>
<td>20,5</td>
</tr>
<tr>
<td>118 100</td>
<td>Spindle - 70x1470 (rubber pad round)</td>
<td>1,339</td>
<td>24,0</td>
</tr>
</tbody>
</table>

### Trench widths

<table>
<thead>
<tr>
<th>Art. No.</th>
<th>Short description</th>
<th>Stroke [m]</th>
<th>h_c [m]</th>
<th>b [m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>118 060</td>
<td>Spindle - 70x650 (rubber pad round)</td>
<td>0,094</td>
<td>0,533</td>
<td>0,547</td>
</tr>
<tr>
<td>118 070</td>
<td>Spindle - 70x740 (rubber pad round)</td>
<td>0,184</td>
<td>0,623</td>
<td>0,637</td>
</tr>
<tr>
<td>118 090</td>
<td>Spindle - 70x920 (rubber pad round)</td>
<td>0,362</td>
<td>0,809</td>
<td>0,823</td>
</tr>
<tr>
<td>118 020</td>
<td>Spindle - 70x1280 (rubber pad round)</td>
<td>0,725</td>
<td>1,163</td>
<td>1,177</td>
</tr>
<tr>
<td>118 100</td>
<td>Spindle - 70x1470 (rubber pad round)</td>
<td>0,915</td>
<td>1,349</td>
<td>1,363</td>
</tr>
</tbody>
</table>

### Accessories / Spares

<table>
<thead>
<tr>
<th>Art. No.</th>
<th>Short description</th>
<th>l [m]</th>
<th>d [m]</th>
<th>G [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>138 030</td>
<td>Pin 125 x 20</td>
<td>0,125</td>
<td>0,020</td>
<td>0,4</td>
</tr>
<tr>
<td>138 200</td>
<td>Spring cotter 92 x 5</td>
<td>0,092</td>
<td>0,005</td>
<td>0,1</td>
</tr>
<tr>
<td>888 407</td>
<td>Coupler for Aluminium/Flex shoring</td>
<td>0,83</td>
<td></td>
<td>14,0</td>
</tr>
<tr>
<td>888 405</td>
<td>Coupler for Aluminium/Flex shoring</td>
<td>1,33</td>
<td></td>
<td>21,4</td>
</tr>
<tr>
<td>888 406</td>
<td>Coupler for Aluminium/Flex shoring</td>
<td>1,63</td>
<td></td>
<td>30,0</td>
</tr>
</tbody>
</table>

Timber plank with a height of 0.25 m and lengths between 2.00 m and 3.00 m and saucer-head screws M 10 and nuts M 10 to be provided by customer.

### Minimum system resistance (design) [kN/m²], timber plank

<table>
<thead>
<tr>
<th>Shoring length</th>
<th>Supported width</th>
<th>For plank width s [cm]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>2,00 m</td>
<td>1,76 m</td>
<td>10,2</td>
</tr>
<tr>
<td>2,25 m</td>
<td>2,01 m</td>
<td>7,8</td>
</tr>
<tr>
<td>2,50 m</td>
<td>2,26 m</td>
<td>6,2</td>
</tr>
<tr>
<td>3,00 m</td>
<td>2,76 m</td>
<td>4,1</td>
</tr>
</tbody>
</table>

(EC5, NH S10, Usage Class 2)