611 Expansion Joints, Single End

611 Single End Expansion Joints are slip-type joints that provide for expansion/contraction in pipelines.

The standard model provides for 10 inches of concentrated axial pipe movement (traverse). When required, Model 611 Expansion Joints can be designed for any amount of movement (more or less than 10 inches). They are available in several configurations to meet varying application requirements (without slip pipe without limit rods, with slip pipe without limit rods or with slip pipe with limit rods).

For convenience of connecting the expansion joint into the pipeline, 611 Expansion Joints can be furnished with various end configurations. The ends can be beveled for welding, flanged, threaded, grooved and plain end for use with locking type or harnessed mechanical couplings. They can also be furnished with mixed end connections (i.e. one end flanged and one end beveled for welding).

Standard model 611 Expansion Joints are manufactured from carbon steel and furnished with a hard chrome-plated slip pipe. When service conditions dictate, stainless steel slip pipe can be furnished or the expansion joint can be fabricated from various types of weldable metals such as monel, stainless steel or high strength low alloy steel.

611 Expansion Joints can be furnished with a built-in anchor base when required.

Material Specifications

| BODY: | Carbon Steel AISI C1015-20 or ASTM A283 GR. C. |
| GASKET: | Alternate square rings of lubricant impregnated fibrous packing and Nitrile (Buna-N) rubber-compounded to resist oil, natural gas, acids, alkalies, most (aliphatic) hydrocarbon fluids, water and many chemicals (contact Smith-Blair engineers for applications involving chemicals). Temperature range: -20°F to 180°F. For higher or lower temperatures, other types of packing materials can be furnished. |
| LIMIT RODS: | High strength low alloy steel with heavy, semi finished hexagon nuts. |
| BODYSTUDS & BOLTS & NUTS: | High strength low alloy steel with heavy, semi finished hexagon nuts. |
| OPTIONAL: | Stainless Steel hardware for corrosive applications to allow re-torque of packing material. Other materials available. |

Material Specifications are subject to change.
611 Expansion Joints, Single End (10” Expansion) - Plain Ends Beveled for Welding

When expansion joints are furnished without slip pipes, the customer is responsible for providing a smooth surfaced, properly sized slip pipe and assumes all responsibility for proper operation of the expansion joint. The customer furnished slip pipe must have a prepared end at least 24 inches long that is round, smooth and no greater than +.030” or -.010” from nominal size.

---

### Without Slip Pipe - Without Limit Rods - Open (Cold) Length 26”

<table>
<thead>
<tr>
<th>Nominal Pipe Size Inches</th>
<th>Pipe O.D. (A)</th>
<th>Catalog Number</th>
<th>Wt. Each Lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3.50</td>
<td>611-03501010-000</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>4.50</td>
<td>611-04501010-000</td>
<td>65</td>
</tr>
<tr>
<td>6</td>
<td>6.63</td>
<td>611-06631010-000</td>
<td>90</td>
</tr>
<tr>
<td>8</td>
<td>8.63</td>
<td>611-08631010-000</td>
<td>125</td>
</tr>
<tr>
<td>10</td>
<td>10.75</td>
<td>611-10751010-000</td>
<td>165</td>
</tr>
<tr>
<td>12</td>
<td>12.75</td>
<td>611-12751010-000</td>
<td>195</td>
</tr>
<tr>
<td>14</td>
<td>14.00</td>
<td>611-14001010-000</td>
<td>220</td>
</tr>
<tr>
<td>16</td>
<td>16.00</td>
<td>611-16001010-000</td>
<td>250</td>
</tr>
<tr>
<td>18</td>
<td>18.00</td>
<td>611-18001010-000</td>
<td>280</td>
</tr>
<tr>
<td>20</td>
<td>20.00</td>
<td>611-20001010-000</td>
<td>310</td>
</tr>
<tr>
<td>22</td>
<td>22.00</td>
<td>611-22001010-000</td>
<td>340</td>
</tr>
<tr>
<td>24</td>
<td>24.00</td>
<td>611-24001010-000</td>
<td>370</td>
</tr>
</tbody>
</table>

---

### With Slip Pipe - Without Limit Rods - Open (Cold) Length 38” (L)

<table>
<thead>
<tr>
<th>Nominal Pipe Size Inches</th>
<th>Pipe O.D. (A)</th>
<th>Catalog Number</th>
<th>Wt. Each Lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3.50</td>
<td>611-03502010-000</td>
<td>75</td>
</tr>
<tr>
<td>4</td>
<td>4.50</td>
<td>611-04502010-000</td>
<td>90</td>
</tr>
<tr>
<td>6</td>
<td>6.63</td>
<td>611-06632010-000</td>
<td>125</td>
</tr>
<tr>
<td>8</td>
<td>8.63</td>
<td>611-08632010-000</td>
<td>200</td>
</tr>
<tr>
<td>10</td>
<td>10.75</td>
<td>611-10752010-000</td>
<td>270</td>
</tr>
<tr>
<td>12</td>
<td>12.75</td>
<td>611-12752010-000</td>
<td>300</td>
</tr>
<tr>
<td>14</td>
<td>14.00</td>
<td>611-14002010-000</td>
<td>335</td>
</tr>
<tr>
<td>16</td>
<td>16.00</td>
<td>611-16002010-000</td>
<td>385</td>
</tr>
<tr>
<td>18</td>
<td>18.00</td>
<td>611-18002010-000</td>
<td>475</td>
</tr>
<tr>
<td>20</td>
<td>20.00</td>
<td>611-20002010-000</td>
<td>520</td>
</tr>
<tr>
<td>22</td>
<td>22.00</td>
<td>611-22002010-000</td>
<td>560</td>
</tr>
<tr>
<td>24</td>
<td>24.00</td>
<td>611-24002010-000</td>
<td>625</td>
</tr>
</tbody>
</table>

---

### With Slip Pipe - With Limit Rods - Open (Cold) Length 40 1/2” (L)

<table>
<thead>
<tr>
<th>Nominal Pipe Size Inches</th>
<th>Pipe O.D. (A)</th>
<th>Catalog Number</th>
<th>Wt. Each Lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3.50</td>
<td>611-03503010-000</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>4.50</td>
<td>611-04503010-000</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>6.63</td>
<td>611-06633010-000</td>
<td>150</td>
</tr>
<tr>
<td>8</td>
<td>8.63</td>
<td>611-08633010-000</td>
<td>200</td>
</tr>
<tr>
<td>10</td>
<td>10.75</td>
<td>611-10753010-000</td>
<td>265</td>
</tr>
<tr>
<td>12</td>
<td>12.75</td>
<td>611-12753010-000</td>
<td>330</td>
</tr>
<tr>
<td>14</td>
<td>14.00</td>
<td>611-14003010-000</td>
<td>380</td>
</tr>
<tr>
<td>16</td>
<td>16.00</td>
<td>611-16003010-000</td>
<td>430</td>
</tr>
<tr>
<td>18</td>
<td>18.00</td>
<td>611-18003010-000</td>
<td>480</td>
</tr>
<tr>
<td>20</td>
<td>20.00</td>
<td>611-20003010-000</td>
<td>540</td>
</tr>
<tr>
<td>22</td>
<td>22.00</td>
<td>611-22003010-000</td>
<td>595</td>
</tr>
<tr>
<td>24</td>
<td>24.00</td>
<td>611-24003010-000</td>
<td>650</td>
</tr>
</tbody>
</table>

Larger sizes--up to 96” available on request. Other types of end connections available on request.
With Slip Pipe - Without Limit Rods - Open (Cold) Length 39” (L)

<table>
<thead>
<tr>
<th>Nominal Pipe Size (Inches)</th>
<th>Pipe O.D. (A)</th>
<th>Catalog Number</th>
<th>Wt. Each Lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3.50</td>
<td>611-03504010-000</td>
<td>90</td>
</tr>
<tr>
<td>4</td>
<td>4.50</td>
<td>611-04504010-000</td>
<td>115</td>
</tr>
<tr>
<td>6</td>
<td>6.63</td>
<td>611-06634010-000</td>
<td>185</td>
</tr>
<tr>
<td>8</td>
<td>8.63</td>
<td>611-08634010-000</td>
<td>355</td>
</tr>
<tr>
<td>10</td>
<td>10.75</td>
<td>611-10754010-000</td>
<td>425</td>
</tr>
<tr>
<td>12</td>
<td>12.75</td>
<td>611-12754010-000</td>
<td>515</td>
</tr>
<tr>
<td>14</td>
<td>14.00</td>
<td>611-14004010-000</td>
<td>580</td>
</tr>
<tr>
<td>16</td>
<td>16.00</td>
<td>611-16004010-000</td>
<td>735</td>
</tr>
<tr>
<td>18</td>
<td>18.00</td>
<td>611-18004010-000</td>
<td>850</td>
</tr>
<tr>
<td>20</td>
<td>20.00</td>
<td>611-20004010-000</td>
<td>930</td>
</tr>
<tr>
<td>22</td>
<td>22.00</td>
<td>611-22004010-000</td>
<td>1065</td>
</tr>
<tr>
<td>24</td>
<td>24.00</td>
<td>611-24004010-000</td>
<td>1090</td>
</tr>
</tbody>
</table>

With Slip Pipe - With Limit Rods - Open (Cold) Length 50 1/2” (L)

<table>
<thead>
<tr>
<th>Nominal Pipe Size (Inches)</th>
<th>Pipe O.D. (A)</th>
<th>Catalog Number</th>
<th>Wt. Each Lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3.50</td>
<td>611-03505010-000</td>
<td>95</td>
</tr>
<tr>
<td>4</td>
<td>4.50</td>
<td>611-04505010-000</td>
<td>125</td>
</tr>
<tr>
<td>6</td>
<td>6.63</td>
<td>611-06635010-000</td>
<td>185</td>
</tr>
<tr>
<td>8</td>
<td>8.63</td>
<td>611-08635010-000</td>
<td>260</td>
</tr>
<tr>
<td>10</td>
<td>10.75</td>
<td>611-10755010-000</td>
<td>350</td>
</tr>
<tr>
<td>12</td>
<td>12.75</td>
<td>611-12755010-000</td>
<td>460</td>
</tr>
<tr>
<td>14</td>
<td>14.00</td>
<td>611-14005010-000</td>
<td>560</td>
</tr>
<tr>
<td>16</td>
<td>16.00</td>
<td>611-16005010-000</td>
<td>685</td>
</tr>
<tr>
<td>18</td>
<td>18.00</td>
<td>611-18005010-000</td>
<td>740</td>
</tr>
<tr>
<td>20</td>
<td>20.00</td>
<td>611-20005010-000</td>
<td>870</td>
</tr>
<tr>
<td>22</td>
<td>22.00</td>
<td>611-22005010-000</td>
<td>965</td>
</tr>
<tr>
<td>24</td>
<td>24.00</td>
<td>611-24005010-000</td>
<td>1090</td>
</tr>
</tbody>
</table>

Larger sizes up to 96” available on request. Other types of end connections available on request.

Slip-type expansion joints must be installed in an accessible location for future maintenance and packing adjustment.

When more than one Smith-Blair Expansion Joint is installed in a straight segment of pipe between two anchors, it must have limit rods. The limit rods limit the movement of each joint when the pipe contracts and internal stops (optional) will limit the movement in each joint when the pipe expands.

*Pipe stop optional.