Metal Expansion Joints

Experience
Jord Bellows is the leading supplier of metal expansion joints to all sectors of industry in Australia and the Asia Pacific Region.

The Jord Bellows team has extensive experience in all industries requiring expansion joints. It has designed and manufactured joints for major construction and shutdown contracts for petroleum refineries, steel mills, aluminium smelters and power stations, often solving complex piping problems.

Design
The Jord Bellows’ experienced engineers focus on design and material selection to ensure the longest possible bellows life, with optimu resistance to fatigue and corrosion.

Some of our commonly used materials include stainless steel 321, 316 and 304, Incoloy 825 and 800; Inconel 625 and 600, Nickel 200, 253 MA, Hastelloy and 254 SMO.

Manufacturing
Jord Bellows’ workshop is equipped with the most modern and versatile hydraulic, mechanical and punch forming machines available. Our fully qualified tradesmen have many decades experience in expansion joint manufacture and the use of exotic metals.

Jord Bellows can form from 50mm to 5000mm diameter at working pressures up to 4000 kPa.

Range
Jord Bellows designs and manufactures a full range of expansion joints, including single and double unrestrained joints, tied joints, hinged joints and gimbal joints. Externally pressurised joints, pressure balanced joints, and rectangular joints are also available.

All these assemblies are available with flanged ends, weld ends, internal sleeves (liners) and covers.

In addition, Jord Bellows will design non-standard expansion joints to cope with individual plant requirements.

Quality Assurance
Jord Bellows is fully certified to ISO 9001:2000 and has achieved Germanischer Lloyd Certification. Jord Bellows’ designs comply with EJMA, the world recognised code for expansion joint design. All over vessels are designed and manufactured to AS 1210 or ASME Sec VIII. Our QA Team is experienced in detailed traceability and documentation procedures.

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Specifications and codes

**Specification**
The standard bellows performance data in this catalogue is based on the following specifications:

<table>
<thead>
<tr>
<th>Bellows Material</th>
<th>Hardware Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>A240 321 Stainless Steel</td>
<td>AS3678 Grade 250</td>
</tr>
<tr>
<td></td>
<td>Weld ends, all Pressures</td>
</tr>
<tr>
<td>A53 Grade B, standard weight</td>
<td>Flange ends 100 to 240kPa</td>
</tr>
<tr>
<td>AS2129 Table ‘D’</td>
<td>Flange ends 700 to 1999kPa</td>
</tr>
<tr>
<td>AS2129 Table ‘E’</td>
<td>Flange ends 1400 to 2000kPa</td>
</tr>
<tr>
<td>AS2129 Table ‘H’ or ANSI 150 (if required)</td>
<td></td>
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</tbody>
</table>

**Code**
Bellows in this catalogue are designed to conform to stresses in the EJMA standards in conjunction with allowable stresses as shown in AS1210 (unfired pressure vessel code). All Bellows calculations used in computer analysis are to formulae as stated in the EJMA standards.

- Australian Standard AS 1210
- Australian Standard AS 1554
- Australian Standard AS 4041
- Expansion Joint Manufacturers Association (EJMA) Standards
- ASME VIII division 1

DIA.450 & DIA.1000 DTEJ-700-FF. DOUBLE TIED ASSEMBLIES USED FOR TANK SETTLEMENT ON FIRE MAINS WATER TANKS.

650 MM DOUBLE HINGED EXPANSION JOINT FOR NITRIC ACID PLANT.

DIA. 400 DTEJ-400-FFX. DOUBLE TIED ASSEMBLY IN A CHEMICAL PLANT. BELLOWS IS IN INCOLOY 825