MANUFACTURERS OF EXPANSION JOINTS
1. ABOUT US

Guaranteeing worldwide customers´ loyalty through experience, innovation and technical support

With more than 40 years in the sector, BIKAR is a company dedicated to manufacturing components, assemblies, and equipment for the fluid management and sealing industries.

The company’s facilities feature technologically advanced manufacturing equipment, to ensure that the quality standards required by our customers are always exceeded. BIKAR’s future lies in forming even closer collaborative relationships with our customers, offering solutions that can optimize results while decreasing costs.

Quality
Specialisation
Broad Range of solutions
Flexibility
Internationalization
2. WE ARE MANUFACTURERS

Specialized in manufacturing expansion joints in rubber, metal and fabric materials.

Products

We do develop and manufacture our own products based on specific needs, taking into account critical factors involving fluid, temperature, pressure, and movements. In addition to our consultation and participation in each project’s study, we offer a variety of solutions where quality and reliability is always stand out as our strongest mark of identity.
RUBBER EXPANSION JOINTS

Are mainly used to absorb movements, vibrations and tensions in the pipe systems with fluids at temperature under 200ºC (390 ºF) and standard pressures up to 25 bar (362 psi). They provide protection against thermal movements and mechanical forces for high value equipment (pumps, valves, condensers..) We can design and produce under request special executions for high pressures and/or movements.

We design our expansion joints following FSA (Fluid Sealing Association) guidelines, selecting the most appropriate elastomers for the bellows (EPDM, Viton, Hypalon, NBR, Neoprene, SBR..) and reinforcements (Nylon and Kevlar) offering different dimensions, from DN 25 (1") up to DN 4000 (160 "). Besides, using wide range of flange materials (Carbon Steel, 316, 904, Superduplex) and standards (DIN, ANSI, AWWA, JIS, BS)

High resistance to corrosion, abrasion, absorption of movements, vibrations, noise, misalignments and tensions
RUBBER EXPANSION JOINTS

MOLDED

B-FLEX
Easy to install due to the floating flanges, it has a wide variety of industrial and HVAC installations for low and medium pressures. From DN 25 up to DN 300 (12”). It is mostly used to absorb vibrations and compensate small-scale movements.

BL-FLEX
Dimensions up to DN 1000 (40”) and up to10 bar (150 psi). 200 mm fixed length. Used in light duty pumping and cooling towers.

B-FLEX-DA
Double wave to compensate larger movements and vibrations.

CUSTOM MADE

BF-PPS
Thanks to its great elasticity and movement absorption, it offers minimum activation forces. Full rubber faced design with high resistance ideal for high demanding industrial process. Specific designs are available like multiple convolutions, reducers, sleeve type Up to DN 4000 (160”), 90 bar (1300 psi) and 200C (390F).

BF-PPS/HINGED
They are guided by a giratory system that allows to control the movement and the plane that you want to absorb Hinged type as the picture only allows angular movements in a single plane, but not lateral. Gimbal type as the picture to compensate lateral movements.

BF-PPS/MA
For movements that exceed typical levels (usually more than 50 mm-2” axially and more than 25 mm-1” laterally). In order to adjust the product to our customer’s needs, we can manufacture joints with multiple waves in any length required.

BF-LP
Designed for low pressure. It can be rectangular or cylindrical, and with or without waves. Rubber expansion joint to replace fabric ones when process are more demanding in terms of pressure rates and in ducts with high solid or dust content

Pressure Balanced rubber expansion joints are designed and manufactured to absorb the forces generated by the effects of pressure. They allow the forces on pump flanges or other installation elements to be eliminated.

BS-FLEX
Sleeve type, to be installed without flanges on the outside diameter of the pipe. Ideal for low pressure pumping due to their capability to absorb vibrations and its easy assembling.
METAL EXPANSION JOINTS

Mainly used in refineries, petrochemical plants, power generation, shipyards, steel mills district heating, desulphurisation plants and other industrial applications to accommodate movements, vibrations and tensions in pipe systems with fluids at temperatures up to 1200 °C (2200 °F), standard pressures up to 100 bar (1450 psi) and dimension up to DN 3000 (120”). Available different materials, such as: 321 ss, 316 ss, 304, 904, Dúplex, Superduplex, Monel, Inconel 625 and 800, Titanium. Flange standards as per DIN, ANSI, AWWA, BS, JIS and special executions.

Our designs are based in the requirements established under EJMA standards (Expansion Joints Manufacturers Association), ANSI codes applicable to piping, ASME Boiler and Pressure Vessel (Section VIII, Appendix 26), ASME B31.1 (Appendix X) and pursuant to the European Directive for pressure Equipment PED97/23/EC and the standards EN 13445, EN 13480 and EN14917. Calculations are made using special software packages based in the previous standards mentioned. We can supply standard models as well as custom made designs.

High Performance in pipe systems with high temperatures and high pressures
METAL EXPANSION JOINTS

BM-EX/SI
Simple bellow with welding ends. It can absorb movements in any direction but it is mainly used for axial dilatations in longitudinal direct of straight pipe systems and low pressures. It must be supported by anchorages.

BM-SI
Simple bellow with flanges. It can compensate movements in any direction.

BM-SI-TI
Flanged Single bellow expansion joint with tie rods designed to support the force of the pressure and limiting the axial movements.

BM-UN/EX
Universal expansion joint with two bellows separated by a central spool with welding ends for connection.

BM-UN
A Universal expansion joint is made of two single bellows separated by a central pipe and with flanges. It gives a high capacity for absorption of axial and lateral movements.

BM-HI-DO
Made of two articulated bellows joined by an intermediate sleeve to obtain large movements and protection of the bellow from torsional movements.

BM-GI
Designed to allow angular rotation along any plane with the use of two pairs of articulations applied to a common, floating cardan ring.

BM-PB
Designed to absorb lateral and/or axial movements eliminating the thrust caused by internal pressure.

BM-PB/ IN LINE
This metallic expansion joint is designed to absorb axial and lateral movements while retaining the force of the pressure. It transfers minimum loads to the equipment connected.
Mainly used in boilers, ventilation circuits, industrial furnaces, cement plants, mining foundries and paper mills to absorb movements in several directions simultaneously, vibrations and prevent tensions in the pipe systems with gases, air vapours at temperatures of up to 1200 °C (2200 °F) and standard pressures under 0.35 kg/cm² (5psi). They provide high chemical resistance, minimal reaction forces and reduced heat losses.

All our expansion joints are designed pursuant to FSA (Fluid Sealing Association) guidelines, using PTFE laminated fabrics and other advanced materials for their manufacture to provide an optimum solution for the mechanical, chemical and thermal demands.

**High performance in pipe systems with high temperatures and low pressures**
Flange type

This fabric expansion joint is characterized by its economical use. It is installed in small spaces to absorb vibrations and compensate limited movements in ducts. They are flanged between the ends of two pipes or ducts.

- Recommended length up to 300 mm (12”)
- Recommended working temperature up to 540°C (1000°F)
- Limited movements
- Optional: moulded corners

BF-TB
Belt Type

Belt type expansion joints are easy to install and have a great capacity of absorbing heavy duty movements in conduits and handling gases at very high temperatures.

- Face to face length without limit
- Recommended working temperature up to 1200°C (2200°F)
- Large movements

BF-TU
Flange type

Common Features for BF-TB and BF-TU

- Circular and rectangular shape/design
- Dimensions without limits
- Pressures up to 0.35 bar (5 psi)
- Possibility of special designs
- Using many different kinds of fabrics and laminates
- Possibility of supply with/without metal structure: steel parts
- Possibility of using Bolster and Inner sleeve
- Can be delivered as fabric expansion joint or as preassembled unit
- Single or multiple layer construction available

BF-TS
Special constructions

Special constructions customized for each need: circular, rectangular, squared, conical, flanged/not, bellows with or without support clamps, 100% sealing solutions at high temperature, U type with large movements.
Dismantling joints are double flanged fittings that accommodate longitudinal adjustments and can be locked at the required length with the tie bars supplied. They are easy to install and they are designed to facilitate the maintenance in the pipeline and removal of flanged valves. Dismantling joints go up to DN 4000 with any flange drilling – DIN, ANSI, AWWA, JIS - and pressure rating. Special designs are available on request.

**DJ-LP**
Dismantling Joint Low Pressure

They are able to withstand up to 16 bar (230 psi).

**DJ-HP**
Dismantling Joint High Pressure

They are able to withstand up to 90 bar (1500 psi).

Metallic dismantling joints can be made of different materials like ductile iron, carbon steel, or stainless steel and can be adapted to different lengths. The sealing components can be made of different materials depending on the fluid. Potable water certificate available.

**BF-PPS/C**

It is based in the BF-PPS fixed full face rubber flanged expansion joint with tie rods, so it can give a double service with one element. It will absorb the movements in the pipeline and will allow to dismantle the adjacent equipment. Sizes up to DN 4000 with any flange drilling. The main advantages are:

- No metal parts in contact with the fluid.
- Food quality available for the rubber.
- It allows more movements that standard dismantling joint including angular ones.
- Easy assembling
- Cost savings: It can avoid the use of stainless steel in corrosive environments and also the need of regular paintings.
- Absorb vibrations
3. ADDITIONAL SERVICES

Technical knowledge Services

The broad range of BIKAR’s personnel experience and knowledge allows us to provide support to our customers in the most critical phases of an installation’s life cycle. This makes the installations more profitable, durable and efficient, eliminating unnecessary costs.

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<th>Engineering services</th>
<th>Training</th>
<th>Assembly Support and supervising</th>
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<tr>
<td>Collaborating with engineering companies specialized in designing piping. We collaborate with stress calculations and revision of piping installations according to a 360° criteria (design, installation, operation, maintenance, change).</td>
<td>When the client needs to make teams specialized in the expansion joints field, our experts will work to design specific courses focused on their needs.</td>
<td>The highly qualified staff of Bikar is specialized in supporting assemblers, providing expertise and experience in order to guarantee the correct expansion joints installation.</td>
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<th>Preventive maintenance</th>
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<td>During the commissioning or Precommissioning stages, our staff collaborates checking and testing phases of the equipment installed to ensure that it is assembled correctly. Through these prevention actions, we try to minimize the usual problems of startup phases, normally caused by the lack of awareness of this specific area.</td>
<td>One of the biggest advantages of working with BIKAR is to count on an external qualified consultant working for our clients’ interests. The chosen decisions will be backed up by over 20 years of experience and expertise in expansion joints.</td>
<td>Our technicians do periodical inspections in order to define the preventive maintenance program that can guarantee the maximum working hours of the plants, avoiding the high cost of non programed stops.</td>
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4. QUALITY AND CERTIFICATES

“Our company quality and environmental policy has allowed us to obtain the most demanding certificates for the design, manufacturing and sales of metal, rubber and fabric expansion joints for the main sectors of our activity.”

ISO CERTIFICATES

ISO 9001
Quality Management systems.

ISO 14001
Environmental Management systems.

ISO 3834-2
Quality requirements for fusion welding of metallic materials Part 2: Comprehensive quality requirements.

TYPE APPROVAL

In accordance with the Lloyd’s Register requirements for rubber and metal expansion joints

FOOD Grade Certification

According to WRAS or ACS certificates standards, Bikar ensure the best quality of rubber materials for sanitary and food applications.

PED

Bikar implements, operates and maintains a quality assurance system as described in the Pressure Equipment Directive 2014/68/EU, Annex III, Module D for the scope of manufacturing and Sales of Metal Bellows expansion joints according to EU type examinations-production type according to Module B

Test are regulary perform following our quality requirements, applicable standards and each customer/Project specifications
Each project requires a customized solution. Our capacity for design and manufacture is the result of our experience and specialization in many different sectors working together from the initial stages until the industrial plants are commissioned.

BIKAR offers a wide range of products in terms of materials and dimensions and can provide technical advice during selection of the more suitable expansion joint for each service. Our human team has a great capacity to adapt its capacities to the needs of each customer.

Projects are managed integraly from the early design of the pipe system, during request for quotations, contract review, order acceptance, drawings and documentation submittal, Kick off meeting, progress reports and follow up of the production including all the quality controls and inspections to make sure that the supply is done in strict compliance with the specifications and the contract is concluded at the committed delivery time, including all the final documents and logistics actions/paperwork.

Bikar is focused on projects with EPC companies specialized in industrial process like thermosolar and desalination plants linked to new technologies and competitive environments. Those kind of projects require a full commitment and cooperation between the human teams in order to improve the results and reduce costs and then ensure customer loyalty in a market that demands trust.
6. MARKET SECTORS

WATER
Desalination Plants
Waste Water Treatment Plants
Potable Water
Intermediate Pumping Stations
Water Tanks
Bikar has been present in the world of water for more than 30 years using its knowledge to improve the upcoming and existing plants

POWER
Nuclear Plants
Combined Cycles
Thermosolar Plants
Renewable energies
The energy sector is very demanding when it refers to the quality of the materials and control of the manufacturing process.

OIL&GAS
Petrochemical
Petroleum
Upstream
Downstream
LNG

INDUSTRY
Steel plants
Cement
Incinerators
Pulp & Paper
Sugar Mills
Ship Building

EQUIPMENT MANUFACTURERS
Fans
Blowers
Water Pumps
Valves
Cooling Towers
Manufacturers of a wide variety of equipments incorporate expansion joints as a component or accessory to their supply

MINING
Extraction
Wash Plants
Chemical Processes
Storage
The highly corrosive and abrasive processes of this industry requires knowledge of high value-added materials
7. SOME OF OUR CLIENTS


Present in more than 65 countries
More than 5 million of water a day desalinated
More than 4.500 MW installed in combined cycle plants and more than 1.00 MW in nuclear and thermosolar power plants using our expansion joints