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# Mission, vision and values

Guaranteeing customer loyalty through the design and manufacture of expansion joints for the world market, applying experience and innovation through specialisation.

Prestige
Specialisation
Flexibility
Internationalisation



### WE ARE MANUFACTURERS

With experience spanning over 30 years, Bikar is a company that manufactures expansion joints geared mainly towards the fluid handling and sealing industry. Bikar's human team has a wealth of experience and is specialised in collaborating technically with engineering and end-users to offer solutions for the various problems that may emerge in the implementation of projects.

- 1/ Engineering and technical project implementation
- 2/ Moulded and custom made manufacturing
- 3/ Optimum quality products
- 4/ Broad range





### WE DESIGN AND GIVE TECHNICAL ADVICE

Each project requires a customized solution. Our capacity for design and manufacture is the result of our experience and specialization in many different sectors. Ensuring customer loyalty in our market requires a team of persons who are able to adapt their knowledge towards finding the best technical solution. BIKAR offers experience, commitment and quality in a sector that demands trust. Our aim is to guarantee the best result by developing all our production processes as expert manufacturers of reliability and prestige.



## **EXPERT PROFESSIONALS**

Our technical and production team develops each specific part, applying their experience and know-how in a **moulded and custom made manufacturing process**, with the aim of ensuring maximum precision and quality in each project. One of the aspects most appreciated by our clients is our capacity to deal successfully with situations that are difficult to solve.





### TYPES OF EXPANSION JOINT

We make and develop our own products to meet specific needs, taking critical situations related to temperature, pressure or movement into consideration. In addition to offering advice and participating in the study of each project, we offer diverse solutions, always underscoring quality as our most consistent hallmark.

RUBBER JOINTS FABRIC JOINTS METAL JOINTS





All types of compensators, from economic products with a high rotation to high, added-value components that are custom designed to meet our clients' needs.

#### **RUBBER JOINTS**

Compensators: single, double and triple wave, hinged, gimbal, selfcompensated from DN 32 (11/4") to DN 4.000 (160"). Body materials: EPDM, Neophrene, Nitrile, Viton®, Hypalon®, Butil, etc. Flange materials: Carbon steel, High Yield Stress Steels, Polypropylene, Aluminium, Stainless Steel, Aluminium Bronze, Duplex, Super Duplex, Hastelloy, etc. Flange Standards: DIN, ANSI, AWWA, BS, GIS.

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#### FABRIC JOINTS

Rectangular, circular, U-shaped, band-type **compensators** with or without metal parts. For temperatures ranging from 60 °C to 1200 °C without size limits. **Metal parts:** carbon steel: high temperature, abra-

Flexible band: carbon steel: high temperature, abrasion resistant. Stainless steels: superduplex, Inconel. Flexible band: containment and sealing membrane: PVC, fluorplate laminates with varying tensile resistance ranges and resistance to chemical attack. Reinforced elastomers (Silicone, EPDM, BUTIL, HYPALON, Viton). **Insulating materials:** glass fibre, rockwool and silica insulation blanket. Reinforcements: Polyester, glass fibre, aramid fibre and silica fabrics, with or without special treatments. Metal meshes in AISI 304, 310, Inconel 600. **Bolsters:** glass fibre, rockwool and silica insulation blanket.

#### **METAL JOINTS**

Compensators: simple, double, hinged, gimbal, selfcompensated, reinforced, refracted, thermally insulated, from DN 32 (1 1/4") up to DN 4000 (160"). Wave materials: stainless steel ( 304, 316, 321), aluminium bronze, Duplex, Super Duplex, Hastelloy, Inconel, Monel. Flange Materials: carbon steel, high yield stress steels, stainless steel, Duplex, Super Duplex, Hastelloy, Inconel, Monel. Flange standards: DIN, ANSI, AWWA, BS, GIS.



# **Types of Expansion Joints**



# Rubber

These are mainly used in desalination plants, combined cycle plants, water pumping systems, phosphate plants, etc. To absorb movement, vibration and stress in pipe systems for fluids at temperatures lower than 200 °C and habitual pressures under 25 bar, thereby protecting valuable equipment (pumps, valves, condensers, etc.) from thermal movements and mechanical stress. We design in line with the FSA (Fluis Sealing Association) and produce customised parts for special working conditions (high pressures, high temperatures and great movements).

Great capacity to absorb movements and vibrations.

# **Types of Expansion Joints**



# **Fabric**

These are mainly used in boilers, ventilation circuits, industrial furnaces, cement plants, paper plants, etc. to absorb movement and vibration and prevent stress in pipe systems where gases, air or steam circulate at temperatures of up to 1200 °C and habitual pressures lower than 0.5 kg/cm², using materials of highly advanced and next-generation technology and applying extremely useful tools such as SolidWorks, finite element analysis, etc. Designed to meet FSA (Fluid Sealing Association) parameters.

Great resistance in high-temperature pipe systems.



# **Types of Expansion Joints**





# Metal

These are mainly used in petrochemical plants, boiler pipes, etc. to absorb movement and stress in piping systems for fluids at temperatures of up to 1200 ° C and pressures of up to 90 bar. They are designed in accordance with EJMA and ASTM standards using software specially developed for their calculation, producing customised solutions for each installation.

For use in ducts for high-pressure and high-temperature fluids.



# AFTER-SALES TECHNICAL SERVICE

Infrastructure supervision guarantees results with respect to safety, optimises performance and reduces costs. Know-how is the reserve of truly specialised companies such as Bikar. We offer an integrated process that includes design / calculation / manufacture / installation / supervision and inspection.



# 4 Major Lines of Business



More than 5 million m<sup>3</sup> of water a day desalinated, more than 45,000 MW installed in combined cycle plants and more than 500 MW in nuclear and solar thermal power stations using our expansion joints. LNG vessels, offshore plants, paper mills, cement plants and mines.

#### Asia

Al dur Desalination Plant (Bahrein)
Jubail and Yanbu Petrochemical Plant (Saudi Arabia)
Fujairah (United Arab Emirates)
Pulau Sakra Combined Cycle Plant (Singapore)
Messaied Combined Cycle Plant (Qatar)
Beilungang Power Plant (China)
Korangi Combined Cycle Plant (Pakistan)
Barkha Desalination Plant (Oman)
Kelanitissa CCPP1 - L16 (Sri Lanka)

#### **Oceania**

Melbourne Desalination Plant (Australia) Adelaida Desalination Plant (Australia) Perth I &II Desalination Plant (Australia)

#### **America**

Monte Alegre CTMP (Brasil)
Cabatao CTMP (Brasil)
Baja California (Mexico)
Minera Escondida (Chile)
Tamuin Petroleum Coke Fired Power Station I & II
(Mexico)
San Miguel Tucumán Combined Cycle plant (Argentina)
Nehuenco Combined Cycle Plant (Chile)

Curação Desalinaton Plant (Dutch Lesser Antilles Islands)

#### **Africa**

Koudiet Combined Cycle plant (Algeria) North Cairo Combined Cycle Plant (Egypt) Phosphate Plant (Morocco)

### Europe

Sugres Combined Cycle Plant (Russia)
Brazi Combined Cycle Plant (Romania)
Barcelona Desalination Plant (Spain)
Beckton Desalination Plant (England)
CAN Coal Boiler (Turkey)
Dunkerque Combined Cycle Plant (France)
Santurtzi Combined Cycle Plant (Spain)
Agios Nikolaos Combined Cycle Plant (Greece)
Portucel CTMP (Portugal)
Dhekelia Desalination Plant (Cyprus)
Esch Sur Alzette Combined Cycle Plant (Luxemburg)
CFB Boiler (Kazakhstan)

## **CERTIFICATIONS**







#### ISO CERTIFICATIONS

We have ISO certification 9001: 2008 (registry no. 0.04.08191/02) and ISO Certification 14001: 2004 (registry no. 3.00.09008/02). Field of application: design, manufacture and marketing of expansion joints, and fabric, rubber and metal compensators and bellows.







#### TYPE APPROVAL

In accordance with Lloyd's Register requirements for: Rubber Expansion Joints (certificate no. 07/0009) Metal Expansion Joints (certificate no. 07/00010).



#### TZW CERTIFICATION

**Food quality** certification of the rubber for contact with drinking water.



# LEIMOTIV® GROUP CONSULTANCY SERVICE **ENGINEERING INDUSTRY** - Renewable Energies - Valves - Company Management - Human Capital - Electrical Power Generation - Pumps - Water Desalination and Treatment - Technological Solutions - Technological Solutions - Oil&Gas



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