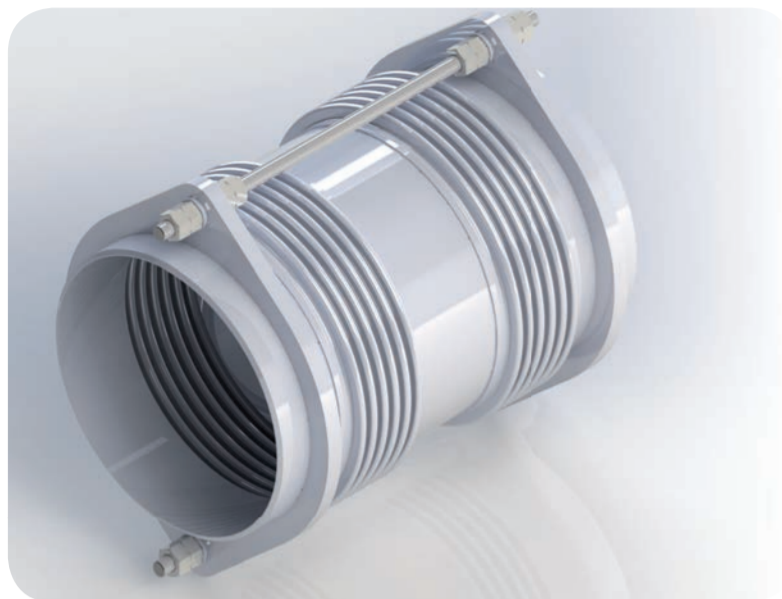


## ➤ Metal



### DESIGN

- Circular or Rectangular expansion joints
- Diameter ranging from 15 to 8 000 mm
- Floating flanges or Fully Integrated flanges
- Single or Multi ply
- Single or Multiple convolutions
- Special Designs

### MATERIALS

- BELLOWS : Austenitic Steels such as AISI 321, 304, 316, 316L, 316Ti, 309, 253 Ma, 254 SMO. Nickel Alloys such as Monel 400, Inconel 600, 625, Incoloy 800 H, Hastelloy, etc.
- FLANGES : Carbon Steel or Stainless Steel
- CONTROL RODS & FASTENERS : A193Gr B7 and A194Cl.2H, Stainless steel.

### STANDARDS

- Metal Expansion Joints are designed, manufactured and tested according to Internationally Recognized Codes and Standards :
- E.J.M.A. (Expansion Joints Manufacturers Association, Inc.)
- EN14917
- ASME
- AD Merkblätter...

### MAIN ADVANTAGES

- High pressure resistant
- Corrosion resistance
- Short build length
- Large movement capacity
- Flexibility
- Low spring rates
- Low maintenance

## ➤ Rubber



### DESIGN

- Circular or Rectangular expansion joints
- Diameter ranging from 25 to 4 000 mm
- Floating flanges and fully Integrated flanges
- Single or Multi ply (fabric or steel reinforcements) Single or Multiple convolutions
- Special Designs

### MATERIALS

- RUBBER BELLOW : Natural rubber (IR), Neoprene (CR), EPDM (EP), Silicone (SI), Butyl (IIR), Chlorobutyl (CIIR), Nitrile (NBR), Styrene Butadiene (SBR), Hypalon (CSM) and Viton (FKM).
- FLANGES : S275JR, S355J2G3, AISI 304, AISI 316, AISI 316L, AISI904, Aluminium...
- CONTROL RODS & FASTENERS : A193Gr B7 and A194Cl.2H, Stainless steel.

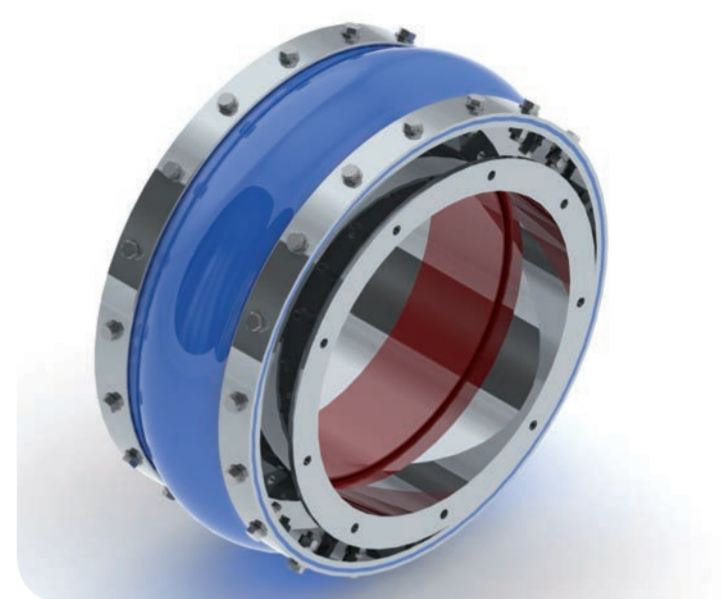
### STANDARDS

- Rubber expansion joints are designed, manufactured and tested according to internationally recognized codes and standards :
- F.S.A (Fluid Sealing Association)
- ASTM

### MAIN ADVANTAGES

- Medium to High pressure resistance
- Vibrations resistance
- Stress resistance
- Noise absorption
- Flexibility
- Low spring rates
- Low maintenance
- Large life cycle

## ➤ Fabric



### DESIGN

- Circular, rectangular or any other shape
- Single or Multi-Layer
- Limitless Dimensions
- Temperature up to 1 200°C
- Belt Type or Flanged Type
- With or without steel frame

### MATERIALS

- SUPPORTING LAYER(S) : Provides protection during handling and system operation + basis for arched or convoluted expansion joints where specific shapes are required (galvanized steel, stainless steel, inconel Wire Mesh)
- INSULATING LAYER(S) : Provides a thermal barrier + reduce condensate problems (Different types of Fiberglass and Silica cloth and blankets)
- GAS SEAL LAYER(S) : Provides a chemical barrier (PTFE, Viton®, EPDM, Silicone, Hypalon and Metal foils...)
- COVER LAYER : Provides protection from the external environment, acts also as a complementary gas seal layer. (Fiberglass cloth coated with PTFE, Viton®, EPDM, Silicone, Hypalon ...)
- FLANGE REINFORCEMENT : Provides thermal and mechanical protection. (Fiberglass cloth)

### STANDARDS

- Fabric Expansion Joints are designed, manufactured and tested according to Internationally Recognized Codes and Standards :
- E.S.A (European Sealing Association),
- F.S.A (Fluid Sealing Association)
- RAL...

### MAIN ADVANTAGES

- Compensate large movements simultaneously (Axial, Lateral, Angular, Torsion)
- Compensate pipe or duct misalignments
- No limits in dimensions
- Low cost of raw materials
- Low cost of Installation and Maintenance
- Light and Handy (reduced load for the ducts and safe for the staff)
- Corrosion resistance

## ➤ Other products and accessories

- FLEXIBLE METAL HOSES (WITH OR WITHOUT BRAIDING)
- GASKETS & JOINTINGS
- HIGH TEMPERATURE RESISTANT INDUSTRIAL TEXTILES, INSULATION AND SEALING MATERIALS (twisted ropes, fibre ropes, braided and knitted packings and sleeveings, woven and knitted tapes)

## ➤ Quality control

ALWAYS CARRIED OUT ACCORDING TO OUR CLIENTS PARTICULAR REQUESTS

- Identification and Control of Materials
- Drawings and Documents control
- Manufacturing Process control
- Testing, Inspection and Documentation
- Final Inspection and preparation for Delivery

## Applications

Aeration and venting systems - Air conditioning systems - Air filter construction - Air heaters- Air pre-heaters -All metallurgical engineering - Blast heating systems - Blowers - Cement factories - Chemical industry - Chimney construction - Conveyor systems  
Crushing plants - Diesel power plants - Drying systems - Dust exhaust systems - Dust extractors - Dust rejectors - Economizers - Electrical conductivity - Exhaust lines - Exhaust systems of all types - Explosive atmospheres/media (ATEX) - Filter systems - Flue construction - Flue gas cleaning systems - Food processing industry (FDA) - Furnace construction - Gas generating, cooling, cleaning splitting, and drying systems -General apparatus construction for chemical systems - Heat exchanger - Heat technology - Heaters: gas and air heaters - Industrial furnaces - Lacquering systems - Large motor construction - Metallurgical systems - Paint mist suction systems - Paper machinery manufacturer - Pharmaceutical industry - Pipeline construction (especially construction of large pipes)Power plants - Preparing, cleaning and drying systems for natural gas - Reactor construction - Refinery gas - Refuse incineration - Sheet-metal containers and sheet-metal pipes for gas lines - Shipbuilding - Sintering and pelletising systems - Sludge combustion system - Steam generating systems - Steel construction for engineering work, for protection against heat and corrosion - Suction systems - Systems for natural gas, coal, coke, and ores - Ventilator construction -Vibration technology

## SOME OF OUR CLIENTS

