



# KLINGER

## Expansion Joints

» Rubber

» PTFE

» Metal

» Fabric



GLOBAL LEADER

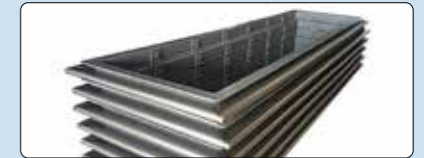
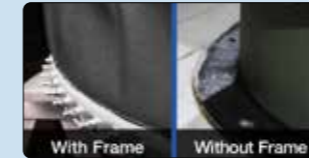
LOCAL PARTNER

# KLINGER Expansion Joints - Select the correct product for the job.



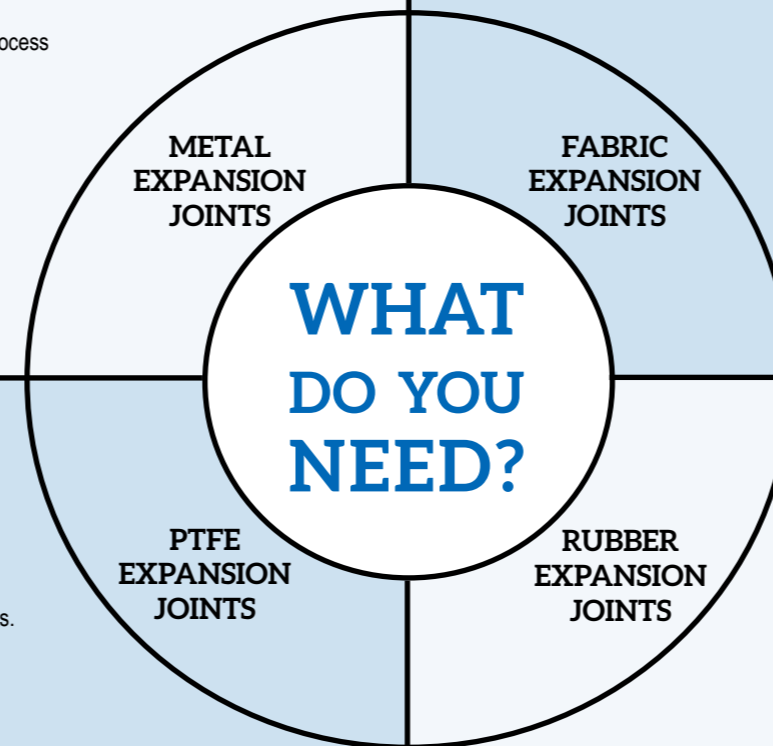
- » Metal expansion joints consist of a flexible bellow element with end fittings such as flanges to allow connection to the adjacent piping or equipment.
- » Metal expansion joints are manufactured from relatively thin-walled tubing to form a corrugated cylinder.
- » KLINGER manufactures and supplies a wide variety of expansion joints from 80 mm nominal diameter to 6000 mm with process temperatures from 0°C to 900°C.
- » Pressures for these designs range from full vacuum to 150bar.
- » Single-ply, multi-ply, root ring, equaliser ring and spun bellows designs are also available.
- » Expansion joint designs are in accordance with the latest edition of international design codes such as EJMA (Expansion Joint Manufacturers Association), ASME VIII Appendix 26, ASME B31.3.
- » End connection options:
  - Weld ends
  - Fixed flanged
  - Floating flanges

- » Fabric expansion joints are flexible connectors designed to provide stress relief and seal in gaseous media in ducting systems.
- » Fabricated from a wide variety of materials, including synthetic elastomers, fabrics, insulation materials and fluoroplastics, depending on the designs.
- » Fabric expansion joints provide flexibility in ductwork and are used to allow for:
  - Expansion or contraction of the duct due to temperature changes.
  - Isolation of components to minimize the effects of vibration or noise.
  - Movement of components during process operations.
- » Layers of different fabrics insulation can be combined to accommodate the temperature and pressure in the system.



## Applications of Fabric Expansion Joints:

- » Chemical process plants
- » Cement manufacturing
- » Pulp and paper industry
- » Power stations
- » Refineries
- » Steel plants
- » Sugar plants
- » Gas turbine installations

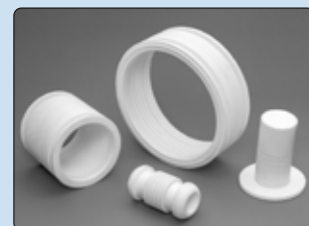


- » PTFE expansion joints are used where the chemical properties of other materials are not sufficient.
- » PTFE expansion joints are installed in steel and PTFE-lined steel pipelines.
- » PTFE expansion joints are designed to compensate for mechanical and thermal changes.
- » PTFE expansion joints have a high degree of reliability, long service life and maximum resistance to chemicals and solvents.

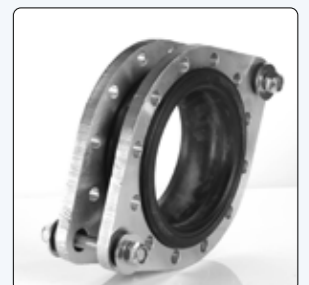
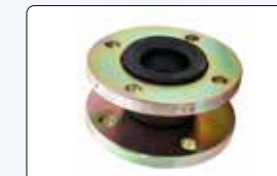


## Industries:

- » Chemical industry
- » Pharmaceutical industry
- » Food and beverage industry



- » In order to offer a complete product range for our customers, we also supply rubber expansion joints.
- » Rubber expansion joints are flexible units that are manufactured from natural or synthetic elastomers.
- » Rubber expansion joints are the perfect solution for pipe systems to absorb movements, vibrations or noise, resulting in the significantly prolonged service life of the pipework and connected equipment.



## Advantages of Rubber Expansion Joints:

- » Good solution to vibration, noise and misalignment problems.
- » Up to 16bar pressure and 110°C temperature working conditions.
- » Flanges - electro galvanized carbon steel / stainless steel.
- » Flanges with limit rod connections or limit rod kits are available.
- » Safe, reliable, durable and maintenance free.
- » Temperature, chemical and corrosion resistant.

## Applications of Rubber Expansion Joints:

- » Power stations
- » Process plants
- » Pulp and paper plants
- » Heating and ventilating systems
- » Chemical / petrochemical plants



## MANUFACTURING INFORMATION REQUIREMENTS

### STANDARD INFORMATION REQUIRED

<b>S</b>	<b>T</b>	<b>A</b>	<b>M</b>	<b>P</b>
SIZE	TEMPERATURE	APPLICATION	MEDIA	PRESSURE

### INFORMATION REQUIRED FOR METALLIC, RUBBER & PTFE EXPANSION JOINTS

FACE TO FACE (LENGTH)	BELLOW MATERIAL	FLANGE MATERIAL	TABLE DRILLING
DRAWING	TIE RODS	LIMITING RODS	HINGES

### INFORMATION REQUIRED FOR FABRIC EXPANSION JOINTS

DRAWING FOR CONSTRUCTION	IS STEEL WORK REQUIRED?
DUST / SOLID PARTICLES?	FLOW RATE m <sup>3</sup> /hr
WET OR DRY APPLICATION?	VELOCITY M/S

### INFORMATION REQUIRED FOR A BELT

BELT WIDTH	FACE TO FACE
BELT LENGTH	INSULATION REQUIRED
ROUND (DIAMETER REQUIRED) OR	INSULATION PILLOW REQUIRED
RECTANGULAR (LONG & SHORT ID'S REQUIRED)	

### INFORMATION REQUIRED FOR A U-PROFILE (FLANGED)

ROUND / RECTANGULAR	FACE TO FACE
FLANGED WIDTH/SECTION	INSULATION REQUIRED
INSULATION PILLOW REQUIRED	BACKING BAR DETAILS
ID (DIAMETER FOR ROUND) / LONG & SHORT ID (FOR RECTANGULAR)	

\* NB: specific dimensions are required for each expansion joint type, dimension drawing templates are available on request - [technical@klinger.co.za](mailto:technical@klinger.co.za)

