EXPANSION JOINTS & METAL HOSES
RUBBER EXPANSION JOINTS
- Flange material: galvanized carbon steel
- Temperature: 110°C
- Pressure: 16 barg

CENTRAL HEATING SYSTEM PIPE EXPANSION JOINTS
- Movement: 50 mm
- Temperature: 400°C
- Pressure: 16 barg

FABRIC EXPANSION JOINTS
- Temperature: 850°C
- High flexibility
- Low reaction force
- Vibration and noise elimination

FAN-COIL FLEXIBLE CONNECTORS
- Hose material: 316 L
- Fitting material: carbon steel
- Temperature: 450°C
- Pressure: 10 barg

FLEXIBLE METAL HOSES
- Hose material: AISI316L
- Braid material: AISI304
- Fitting types: union, nipple, weld ended, flanged
Manufacturing of expansion joints

1. Bellows material is cut from sheet or coil.
2. Material is rolled to required diameter.
3. Rolled tubes are longitudinally welded.
4. If bellows is multi ply each tube is put inside each other.
5. Convolutions are manufactured by mechanical or hydroforming.
Dents and gouges create stress risers in thin ply bellows which result in fatigue cracks over time. Lens bellows have the advantage of holding up to mechanical damage better than thin wall bellows. Other advantages of lens bellows are:

- Weld repair can be performed by plant maintenance staff on thick walled bellows.
- Thicker wall of lens bellows holds up better to corrosion attacks
- Common use of carbon steel material
- Drain couplings can be added to the bottom of the convolution to prevent condensate build up

Thick walled, high convolution is durable and lasts for a long time.
Expansion Joints

Expansion joint is a device containing one or more flexible element used to absorb dimensional changes such as those caused by thermal expansion or contraction of a pipeline, duct or vessel.

Bellows type expansion joints require little to no maintenance and are capable of absorbing axial, lateral and angular types of movements in a compact space.

Since expansion joints are generally custom designed, they are highly specialized products. It is necessary to supply the expansion joint manufacturer with the necessary information for correct design. As a minimum the following information must be given: Diameter, design movements, pressure and temperature, materials of construction, connection type and length.