KLINGER
trusted. worldwide.

POLITEKNIK

A KLINGER Company

www.klinger.dk

RUBBER
EXPANSION JOINTS

flange material	temperature	pressure
galvanized carbon steel	110°C	16barg

CENTRAL HEATING SYSTEM PIPE
EXPANSION JOINTS

movement	temperature	pressure
50mm	400°C	16barg

FABRIC
EXPANSION JOINTS

high flexibility	low reaction force	vibration and noise elimination	temperature
			850°C

FAN-COIL
FLEXIBLE CONNECTORS

hose material	fitting material	temperature	pressure
316 L	carbon steel	450°C	10barg

FLEXIBLE
METAL HOSES

hose material	braid material	fitting types
AISI316L	AISI304	union, nipple, weld ended, flanged

STANDARD
EXPANSION JOINTS

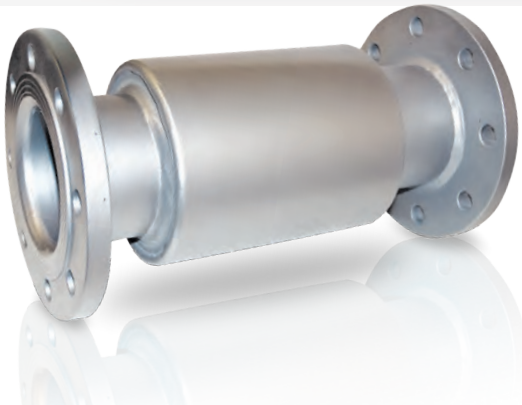
Please contact us for non-standard expansion joints

WELD END
EXPANSION JOINTS

standard bellows material	weld end material	temperature	pressure
304ss - 316ss 321ss	carbon steel	400°c	16barg

FIXED&FLOATING FLANGED
EXPANSION JOINTS

standard bellows material	flange material	temperature	pressure
304ss - 316ss 321ss	galvanized carbon steel	400°c	16barg



EXTERNALLY PRESSURIZED
EXPANSION JOINTS

standard bellows material	balance of materials	temperature	pressure
304ss - 316ss 321ss	carbon steel	400°c	40barg

SEISMIC
EXPANSION JOINTS

standard bellows material	balance of materials	temperature	pressure
304ss	carbon steel	400°c	16barg

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manufacture

We can manufacture bellows from various materials such as 304, 316, 321, 309S, 310S, 904L, duplex 2205, duplex 2507, alloy 625 and other nickel alloys.

quality

Politeknik is fully committed to a quality management process with quality as a fundamental business principle. Core of the process is achieving customer satisfaction by meeting our internal and customer requirements on time.

design

Designing for a wide range of parameters allows product solutions to be developed both quickly and effectively.

We are

With over 40 years of experience in the design and manufacturing of expansion joints, we are proud of producing qualified, fast and economical solutions with our powerful engineering group which utilizes modern technologies.

In 2016, Politeknik became part of Klinger Group.

KLINGER was founded in 1886 as a family business and is known as a pioneer in sealing technology. Serving a global client base, it delivers trusted products worldwide for petro-chemical, chemical, process industries, infrastructure, and transportation applications. Today, the Group comprises of 40 companies and more than 60 manufacturing, distribution and service hubs worldwide.

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.

Manufacturing of expansion joints

BUREAU VERITAS

AD-2000 MERKBLATT HP0

EXPANSION JOINT MANUFACTURERS ASSOCIATION EJMA

CE

PED 2014/68/EU MODULE H

ABS FOUNDED 1862

TÜV SÜD ISO 9001

TSE TS 10880

TSEK

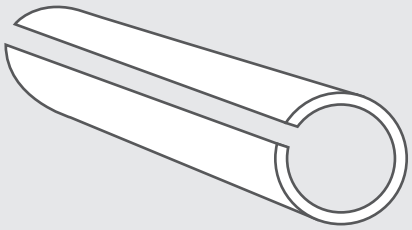
START

1

Bellows material is cut from sheet or coil

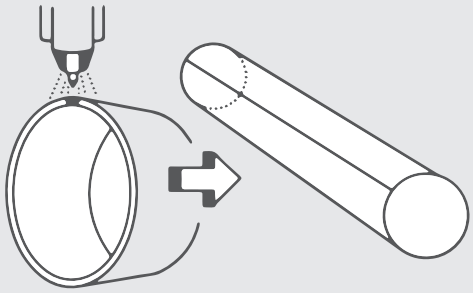
2

Material is rolled to required diameter



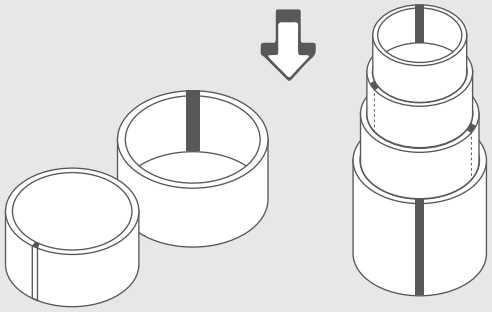
3

Rolled tubes are longitudinally welded



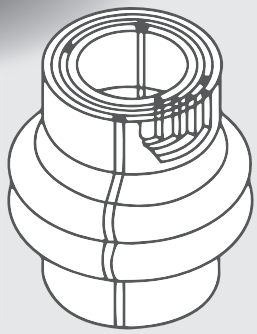
4

If bellows is multi ply each tube is put inside each other



5

FINISH



Convolutions are manufactured by mechanical or hydroforming.

Lens
Expansion Joints

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.

KLINGER Denmark

KLINGER Denmark A/S
Nyager 12-14
DK-2605 Brøndby
T +45 4364 6611

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