EXTERNALLY PRESSURIZED

Expansion Joints

Externally pressurized expansion joints is an excellent answer for large axial displacement needs. When large displacements are present in a system, more convolutions are needed to handle these large axial movements. Then, designing the bellows becomes a challenge for the expansion joint engineer due to “column squirm” (instability due to internal pressure / buckling of bellows) concerns. Solution to this challenge is to pressurize the “bellows” externally.

These units are very robust and safe. They have an in-built (part of the design) inner sleeve and outer cover. Outer cover protects the bellows from external damages during shipping, installation and operation. It also makes this unit suitable for underground usage. Inner sleeve provides smooth flow and prevents pressure losses.

These units are not suitable for lateral movements.

They can be provided with pipe ends or welded / rotating flange connections supplied in accordance with many industrial norms or special drillings.

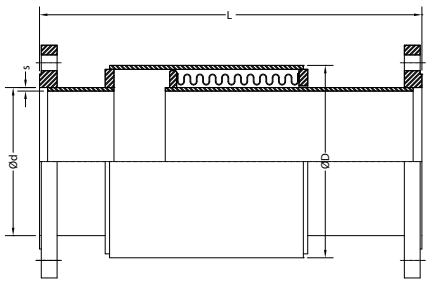


Applications

» City district heating
» Steam and condensate lines
» Superheated water
» HVAC applications
» Chemical and process industries
» Pulp and paper industry
» Geothermal applications

DESIGN VALUES

DN	25-1000
Bellows Material	304, 316, 321
Balance of Material	Carbon Steel, Stainless Steel
Design Pressure	up to 40 barg
Design Temperature	up to 400°C



Flanged End

Nominal Diameter (DN)		Design Pressure (barg)	Axial (-) (mm) Length (L) (mm)				Ød (mm)	s (mm)	ØD (mm)	Effective Area (cm^2)
			30	60	90	120				
25	1"	40	275	395	520	-	33,7	2,6	88,9	54
32	1 1/4"	40	285	405	530	-	42,4	3,2	88,9	54
40	1 1/2"	40	295	415	535	-	48,3	3,2	88,9	54
50	2"	40	300	420	555	710	60,3	3,6	114,3	89
65	2 1/2"	40	315	430	560	715	76,1	3,6	114,3	91
80	3"	25	315	435	585	725	88,9	4,0	139,7	141
100	4"	25	320	450	585	750	114,3	4,5	165,0	196
125	5"	25	335	465	595	765	139,7	5,0	193,7	272
150	6"	25	345	475	615	790	165,0	5,0	219,1	346
200	8"	25	395	520	685	860	219,1	4,5	323,9	572
250	10"	25	420	585	760	950	273,0	5,6	355,6	829

Weld End

Nominal Diameter (DN)		Design Pressure (barg)	Axial (-) (mm) Length (L) (mm)				Ød (mm)	s (mm)	ØD (mm)	Effective Area (cm^2)
			30	60	90	120				
25	1"	40	275	395	520	-	33,7	2,6	88,9	54
32	1 1/4"	40	285	405	530	-	42,4	3,2	88,9	54
40	1 1/2"	40	295	415	535	-	48,3	3,2	88,9	54
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Please consult with our technical department for different working conditions and design parameters.