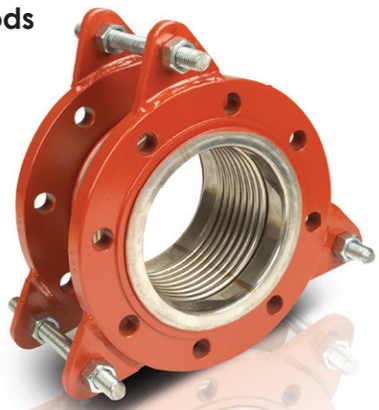
Double Plied Expansion Joints with Tie Rods



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Besides of compensating thermal expansions, the most important function of expansion joints is to solve the problems caused by the system vibration. Expansion joints are very effective especially on compensating the vibrations with high frequency and low oscillation.

Movement Absorption

Pump Connections
Expansion joints are used at the connections of the pump to the pipelines around the pump's inlet and outlet. The fixed points right after the expansion joints are used to prevent the vibration through pipeline which is caused by the pump. Use of expansion joints for vibration absorbing is also useful to prevent the noise caused by the vibration.

Compressor Connections
In most cases, although the insulation applications, compressor movements cause vibration in the connected pipelines. Using expansion joint after the compressor absorbs the vibration caused by the compressor and provides ideal operation conditions for the system.

Advantages of Double Double Plied Vibration Abs orbers

- They prevent damage to pumps result of the piping stress.
- They absorb vibration and noise in pump connections.
- They are installed easily and prevent the possible pump failures.
- They have a compact design that reduces the waste of space.
- The bellows and the braiding are manufactured with stainless steel material
- To provide required piping flexibility to the systems in order to maintain proper operating conditions.
- To protect equipment from stress due to misalignment.

DESIGN

Structure

Bellow Material	Stainless Steel AISI 321 (opt.304,316L,316TI,309) Double Plied
Connection Types	Fixed Flanged
Flange Material	Carbon Steel St.37.2 as standard, the material can be customised on request
Tie Rod Material	Carbon Steel St.37.2 as standard, the material can be customised on request
Carbon Steel	St.37.2 as standard, the material can be customised on request

Operation Conditions

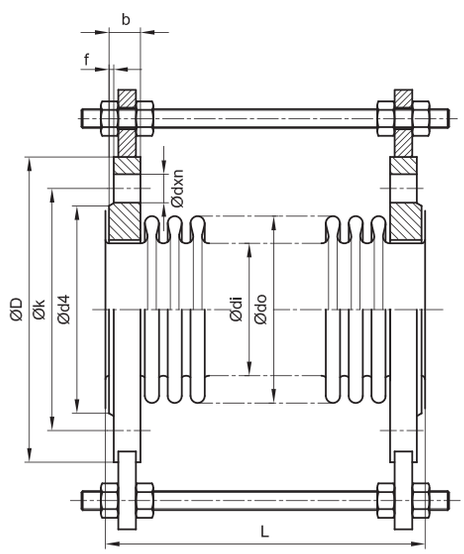
Operating Temperature	-80°C/+600°C
Operating Pressure	PN 2,5/6/16/25/40/64
Nominal Diameters	DN25 (1") - DN1000 (40")

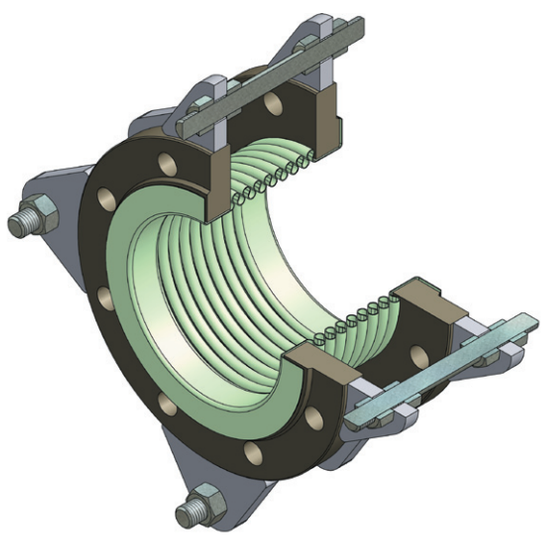
Double Plied Expansion Joints with tie rods

Available Types (Standard Versions)

Name	Axial Expansion Amount	Design Pressure	Definition
MKTY-30	-20/+10	16 bar	Double Plied Vibration Absorber with 30mm axial expansion, flanged

* Special designed, Double Plied Vibration Absorbers with customized features are available on request.
** Subject to technical alterations and deviations resulting from the manufacturing process without giving any notification.





DN	Flange (DIN EN 1092/1) PN 16						Bellow			L	Code
	ØD	Øk	Ød4	f	b	Ødxn	Ødi	Ødo	Effective Bellow Area cm^2		
DN25	115	85	68	2	16	Ø 14x4	38	48,2	14,58	110	702.031.103.102
DN32	140	100	78	2	18	Ø 18x4	42,4	55	18,62	115	702.031.103.104
DN40	150	110	88	3	18	Ø 18x4	48,3	61	23,44	120	702.031.103.106
DN50	165	125	102	3	20	Ø 18x4	60,3	76	36,46	110	702.031.103.108
DN65	185	145	122	3	20	Ø 18x4	76,1	95	57,45	110	702.031.103.110
DN80	200	160	138	3	20	Ø 18x8	88,9	111	78,42	110	702.031.103.112
DN100	220	180	158	3	22	Ø 18x8	114,3	150	137,09	115	702.031.103.114
DN125	250	210	188	3	22	Ø 18x8	139,7	164	181,01	120	702.031.103.116
DN150	285	240	212	3	24	Ø 23x8	168,3	200	266,20	145	702.031.103.118
DN200	340	295	268	3	26	Ø 23x12	219,1	250	431,86	140	702.031.103.120
DN250	405	355	320	3	29	Ø 27x12	273	323	697,11	150	702.031.103.122
DN300	460	410	378	4	32	Ø 27x12	323,9	380	972,37	150	702.031.103.124

All the dimensions in the table are given in “mm“.
Other flange types made according to different standarts (ANSI, BS, UNI) are also available

Application of Fixed Points

By using appropriate expansion joints in pipeline applications, it will be possible to build up well structured and freely moving straight pipelines. Proper expansion absorption can only be possible with applying suitable guides which are strong enough to meet the pressure at both ends.