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Besides of compensating thermal expansions,metal bellowed expansion joints can provide proper solutions for the problems caused by the system vibration.

Advantages of Double Double Plied Vibration Absorbers
• The tie rods are used for pressure thrust forces from the pump are not transferred to the piping
• They have a compact design that reduces the waste of space.
• Performance reliability and increased service life of the pipe system and connected equipment

Application Areas
• All piping systems and where vibrations and stresses occur
• Equipment like pumps, compressors, engines,burners etc..
• Heating, climate, ventilation and heat recovery installations
• Gas, water and sewage treatment plants

DESIGN (EN 14917&EJMA)
Bellow Material	Stainless Steel AISI 321 (Opt.304,316L,316TI,309)
Connection Types	Fixed and Floating Flanged, Welded Ended & Grooved
Flange Material	PN 16, St.37.2 as standard, the material can be customised on request
Inner Sleeve	Available in stainless steel AISI 321 (Opt. 304,316L,316TI,309) on request
Accessories	Inner sleeve, cover, counter flange, gaskets, insulation etc. are available on request.
Certificates	Material certificate 3.1 according to EN 10204 and /or ASME
	PED 2014/68/EU Cat.III Mod.H

Operation Conditions
|	
Operating Temperature	-10°C/+550°C
Operating Pressure	Standard pressure rating is PN16
	Can be produced with different pressure rates PN 2,5-63
	PN corresponds to the allowable operating pressure at room temperature

Important
We strongly advise against the use of expansion joints and bellows for misalignment.
Torsion on bellow parts are not desirable and should be eliminated.

VIBRATION ABSORBERS

Double Plied Vibration Absorber with rotating flanges			
Type	Movement	Available Sizes (DN)	Pressure Class (PN)
MKTY-30	30 mm (-20/+10)	25-5000	16
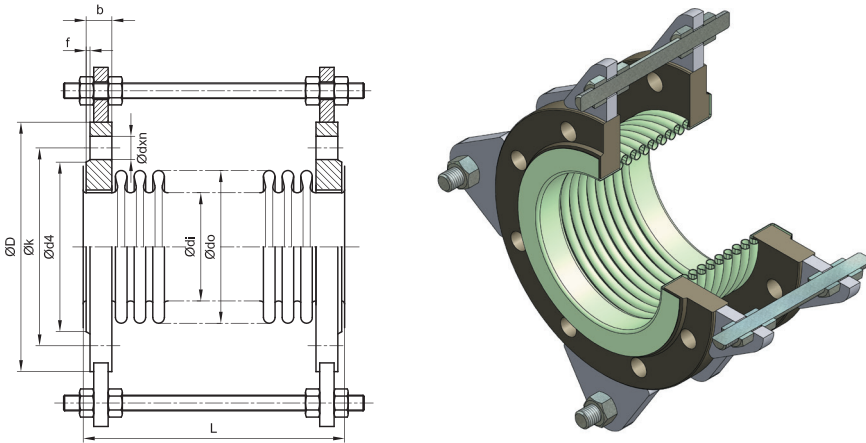
Bellow Information					MKTY-30	
DN	Ødi	Ødo	Effective Bellow Area cm²	Axial Spring Rate N/mm	L	Code
DN25	38	48,2	14,58	82,1	110	702.031.103.102
DN32	42,4	55	18,62	49,7	115	702.031.103.104
DN40	48,3	61	23,44	60,8	120	702.031.103.106
DN50	60,3	76	36,46	104,5	110	702.031.103.108
DN65	76,1	95	57,45	87,8	110	702.031.103.110
DN80	88,9	111	78,42	178,9	110	702.031.103.112
DN100	114,3	140	137,09	252,2	115	702.031.103.114
DN125	139,7	164	181,01	320,0	120	702.031.103.116
DN150	168,3	200	266,20	196,4	145	702.031.103.118
DN200	219,1	250	431,86	694,2	140	702.031.103.120
DN250	273	323	697,11	590,0	150	702.031.103.122
DN300	323,9	380	972,37	496,8	150	702.031.103.124

Flange (DIN EN 1092/1) PN 16						
DN	ØD	Øk	Ød4	f	b	Ødxn
DN25	115	85	68	2	16	Ø 14x4
DN32	140	100	78	2	18	Ø 18x4
DN40	150	110	88	3	18	Ø 18x4
DN50	165	125	102	3	20	Ø 18x4
DN65	185	145	122	3	20	Ø 18x4
DN80	200	160	138	3	20	Ø 18x8
DN100	220	180	158	3	22	Ø 18x8
DN125	250	210	188	3	22	Ø 18x8
DN150	285	240	212	3	24	Ø 23x8
DN200	340	295	268	3	26	Ø 23x12
DN250	405	355	320	3	29	Ø 27x12
DN300	460	410	378	4	32	Ø 27x12

Alternative flange dimensions are also possible e.g. according to US standards (ANSI), JIS etc.

*All dimensions given in the tables are in "mm".
** Subject to technical alterations and deviations resulting from production process without giving any notification.

Reduction Factors for Pressure			
Temperature °C	Reduction Factor Kp	Temperature °C	Reduction Factor Kp
20	1,00	350	0,64
100	0,85	400	0,63
150	0,81	450	0,62
200	0,77	500	0,60
250	0,71	550	0,59
300	0,68	600	0,57

Pressure reduction factor

The reduction factor is used to define the design pressure [PS] where temperatures exceed 20 °C. It compensates for the decay in material mechanical properties at elevated temperatures. The calculated pressure is lower than the nominal pressure of the standard item.

Calculation: PS ≤ PN x Kp