WELD END

Expansion Joints

Weld end expansion joints are equipped with carbon steel or stainless steel pipe connections.

Even though they can absorb movements in any direction, this type is mainly used for axial movements. If lateral movement is requested, a universal type may be more suitable. These type of expansion joints can be supplied with limit rod, liners, covers, rods, hinges or gimbals.

Available for exhaust gas, liquid medium and steam. Bellows are calculated following latest EJMA standards.

Also, weld end type expansion joints may have a double bellows which are designed for absorbing the higher lateral movements.



Advantages

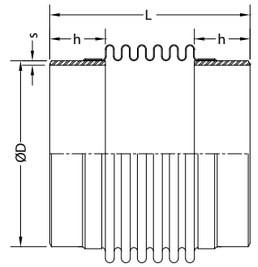
» Economical when it is compared with other flange end expansion joints
» No need for gaskets
» Welded, no leakage possible

Applications

» Hot & Cold water pipelines
» District heating pipelines
» Steam pipelines
» Shipbuilding and exhaust systems
» Geothermal water application
» Chemical industry
» Iron and steel industry
» Pulp and paper industry

DESIGN VALUES

Bellows Material	304, 316, 321
Weld End Material	Carbon Steel, Stainless Steel
Design Pressure	2,5 barg
Design Temperature	550°C



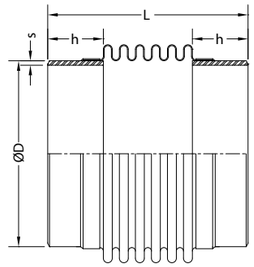
PN 2,5

DN	Type	Length (L) (mm)	Movements		Spring Rates		Effective Area (cm²)	Weld-End		
			Axial (+/-) (mm)	Lateral (+/-) (mm)	Axial (N/mm)	Lateral (N/mm)		ØD (mm)	s (mm)	h (mm)
32	L	255	16	17	31	4	19	42,4	3	50
	S	185	8	5	57	26				
40	L	255	18	17	27	5	26	48,3	3	50
	S	185	10	5	50	29				
50	L	255	29	22	30	9	39	60,3	4	50
	S	205	20	10	44	27				
65	L	260	33	21	32	13	58	76,1	4	50
	S	205	22	9	48	45				
80	L	265	40	22	27	14	80	88,9	4	50
	S	205	24	9	46	58				
100	L	295	35	16	60	45	129	114,3	4	60
	S	225	23	6	82	166				
125	L	304	36	15	67	66	187	139,7	4	60
	S	237	26	7	85	202				
150	L	304	50	17	44	62	271	168,3	5	60
	S	225	30	6	65	274				
200	L	325	64	19	41	78	452	219,1	5	60
	S	225	40	6	58	389				
250	L	365	70	16	42	42	684	273	5	80
	S	265	40	5	68	683				
300	L	385	70	16	50	161	945	323,9	6	80
	S	265	40	4	78	1.076				
350	L	425	65	16	47	181	1.133	355,6	6	100
	S	295	35	3	102	1.993				
400	L	425	65	14	51	255	1.478	406,4	6	100
	S	300	30	2	65	1.507				
450	L	420	70	13	51	329	1.839	457,2	6	100
	S	310	35	2	80	2.001				
500	L	420	85	13	44	354	2.263	508	6	100
	S	315	40	2	72	1.931				

Please consult with our technical department for different working conditions and design parameters.
Movements are non-concurrent

DESIGN VALUES

Bellows Material	304, 316, 321
Weld End Material	Carbon Steel, Stainless Steel
Design Pressure	6 barg
Design Temperature	400°C



PN 6

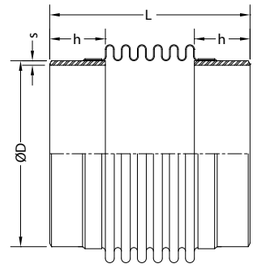
DN	Type	Length (L) (mm)	Movements		Spring Rates		Effective Area (cm²)	Weld-End		
			Axial (+/-) (mm)	Lateral (+/-) (mm)	Axial (N/mm)	Lateral (N/mm)		ØD (mm)	s (mm)	h (mm)
32	S	180	8	4,5	70	35	19	42,4	3	50
40	S	200	11	7	49	21	26	48,3	3	50
50	L	205	19	10	49	30	39	60,3	4	50
	S	156	10	3	92	189				
65	L	216	23	11	49	38	58	76,1	4	50
	S	180	16	5	71	112				
80	L	210	24	9	52	60	80	88,9	4	50
	S	174	17	4	75	181				
100	L	265	32	12	67	74	129	114,3	4	60
	S	210	25	6	49	132				
125	L	266	32	10	78	121	187	139,7	4	60
	S	194	20	3,5	73	404				
150	L	264	38	10	63	143	271	168,3	5	60
	S	196	20	3	115	879				
200	L	290	45	11,5	93	250	452	219,1	5	60
	S	210	28	3,5	102	895				
250	L	350	48	11	96	317	684	273	5	80
	S	250	30	3	104	1.380				
300	L	370	55	11,5	99	369	945	323,9	6	80
	S	270	32	3,5	159	1.984				
350	L	410	58	11	95	422	1.133	355,6	6	100
	S	310	32	3,5	170	2.533				
400	L	400	58	9,5	97	604	1.478	406,4	6	100
	S	320	38	4	139	2.257				
450	L	420	60	10	105	681	1.839	457,2	6	100
	S	320	36	3	170	3.419				
500	L	420	65	10	93	743	2.263	508	6	100
	S	320	35	3	167	4.132				

Please consult with our technical department for different working conditions and design parameters.

Movements are non-concurrent

DESIGN VALUES

Bellows Material	304, 316, 321
Weld End Material	Carbon Steel, Stainless Steel
Design Pressure	10 barg
Design Temperature	400°C



PN 10

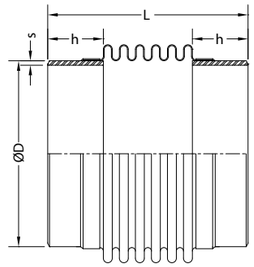
DN	Type	Length (L) (mm)	Movements		Spring Rates		Effective Area (cm²)	Weld-End		
			Axial (+/-) (mm)	Lateral (+/-) (mm)	Axial (N/mm)	Lateral (N/mm)		ØD (mm)	s (mm)	h (mm)
32	S	180	8	4,5	64	33	19	42,4	3	50
40	S	180	9	4,5	57	37	26	48,3	3	50
50	S	180	15	6	61	64	39	60,3	4	50
65	S	190	17	6	64	81	58	76,1	4	50
80	L	234	22	10	94	74	80	88,9	4	50
	S	184	18	5,5	65	125				
100	L	240	24	7,5	89	139	129	114,3	5	60
	S	190	18	3,5	71	300				
125	L	250	26	7,5	99	190	187	139,7	5	60
	S	190	18	3	81	495				
150	L	250	27	6,5	100	271	271	168,3	5	60
	S	210	22	3,5	79	423				
200	L	270	35	8	116	396	452	219,1	5	60
	S	210	23	3	131	1.133				
250	L	330	40	8	122	494	684	273	6	80
	S	250	23	2,5	192	2.562				
300	L	340	44	8	126	624	945	323,9	6	80
	S	270	27	3	202	2.489				
350	L	390	45	7,5	158	859	1.133	355,6	6	100
	S	310	28	2,5	253	3.793				
400	L	400	50	8	152	954	1.478	406,4	8	100
	S	320	30	3	256	4.136				
450	L	430	50	8,5	165	991	1.839	457,2	8	100
	S	320	30	2,5	283	5.703				
500	L	430	50	7,5	191	1.393	2.263	508	8	100
	S	320	27	2	343	8.426				

Please consult with our technical department for different working conditions and design parameters.

Movements are non-concurrent

DESIGN VALUES

Bellows Material	304, 316, 321
Weld End Material	Carbon Steel, Stainless Steel
Design Pressure	16 barg
Design Temperature	400°C



PN 16

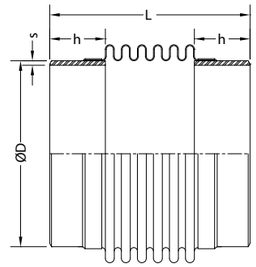
DN	Type	Length (L) (mm)	Movements		Spring Rates		Effective Area (cm²)	Weld-End		
			Axial (+/-) (mm)	Lateral (+/-) (mm)	Axial (N/mm)	Lateral (N/mm)		ØD (mm)	s (mm)	h (mm)
32	S	170	7	3,5	76	50	19	42,4	3	50
40	S	164	7	2,5	74	73	26	48,3	3	50
50	S	170	12	4	79	105	39	60,3	4	50
65	S	170	13	3,5	80	163	58	76,1	4	50
80	L	210	17	6,5	125	143	80	88,9	4	50
	S	160	12	2,5	99	353				
100	L	254	22	7,5	146	186	129	114,3	5	60
	S	220	19	5	113	249				
125	L	270	23	7,5	164	241	187	139,7	5	60
	S	220	21	4,5	114	363				
150	L	270	23	6,5	170	352	271	168,3	5	60
	S	200	15	2	180	1.217				
200	L	294	31	8	195	499	452	219,1	5	60
	S	210	18	2,5	255	2.208				
250	L	340	32	6,5	201	731	684	273	6	80
	S	250	18	2	343	4.557				
300	L	380	40	8,5	262	912	945	323,9	6	80
	S	280	22	2,5	472	5.103				
350	L	440	43	9	264	925	1.133	355,6	6	100
	S	320	22	2,5	513	6.592				
400	L	430	43	8	288	1.395	1.478	406,4	8	100
	S	324	24	2,5	519	7.948				
450	L	460	45	8,5	302	1.441	1.839	457,2	8	100
	S	324	22	2	604	11.529				
500	L	580	52	13	429	1.208	2.263	508	8	100
	S	360	23	2	1001	14.638				

Please consult with our technical department for different working conditions and design parameters.

Movements are non-concurrent

DESIGN VALUES

Bellows Material	304, 316, 321
Weld End Material	Carbon Steel, Stainless Steel
Design Pressure	25 barg
Design Temperature	400°C



PN 25

DN	Type	Length (L) (mm)	Movements		Spring Rates		Effective Area (cm²)	Weld-End		
			Axial (+/-) (mm)	Lateral (+/-) (mm)	Axial (N/mm)	Lateral (N/mm)		ØD (mm)	s (mm)	h (mm)
50	S	155	9	2,5	102	215	39	60,3	4	50
65	S	155	9	2	129	402	58	76,1	4	50
80	L	180	12	3	161	340	80	88,9	4	50
	S	155	8	1,5	226	955				
100	L	250	16	6	221	289	129	114,3	4	60
	S	200	11	2,5	276	923				
125	L	250	16	5	243	460	187	139,7	6	60
	S	200	11	2	326	1.569				
150	L	250	20	5	227	608	271	168,3	6	60
	S	215	15	3	263	1.284				
200	L	250	23	4,5	290	1.290	452	219,1	8	60
	S	225	19	3	354	2.348				
250	L	320	29	5,5	344	1.572	684	273	8	80
	S	270	20	2,5	6204	4.279				
300	L	340	32	5,5	507	2.588	975	323,9	8	80
	S	280	21	2,5	530	5.711				
350	L	400	36	6,5	480	1.391	1.161	355,6	8	100
	S	325	17	2	1199	14.065				
400	L	390	34	5	556	3.874	1.489	406,4	10	100
	S	330	24	2,5	778	10.975				
450	L	400	35	5	819	6.488	1.865	457,2	10	100
	S	340	22	2	992	15.450				
500	L	400	37	5	776	7.539	2.290	508	10	100
	S	340	25	2,5	1138	21.480				

Please consult with our technical department for different working conditions and design parameters.

Movements are non-concurrent