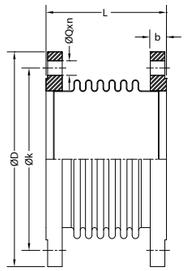
FIXED FLANGED

Expansion Joints



DESIGN VALUES

Bellows Material	304, 316, 321
Flange Material	Carbon Steel, Stainless Steel
Flange Norms	EN 1092, ANSI B16.5, JIS
Design Pressure	2,5 barg
Design Temperature	550°C

KLINGER India

Fixed flanged expansion joints are equipped with welded carbon steel or stainless steel flanges (EN, ASME or as requested). It absorbs mainly axial movements with possibility of some lateral movements.

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, fixed flanged type expansion joints may have a double bellows which are designed for absorbing the higher lateral movements.



Advantages

» Quick connection
» Easy installation
» Can be used at higher pressures than floating flanged expansion joints
» Easily replaced

Applications

» Hot & Cold water pipelines
» District heating pipelines
» Steam pipelines
» Shipbuilding and exhaust systems
» Geothermal water applications
» Process based fluids

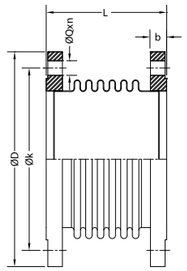
DN	Type	Length (L) (mm)	Movements		Spring Rates		Effective Area (cm^2)	PN 2,5				
			Axial (+/-) (mm)	Lateral (+/-) (mm)	Axial (N/mm)	Lateral (N/mm)		ØD (mm)	Øk (mm)	b (mm)	n	ØQ (mm)
32	L	210	16	17	31	4	18	120	90	14	4	14
	S	140	8	5	57	26						
40	L	210	18	17	27	5	23	130	100	14	4	14
	S	140	10	5	50	29						
50	L	210	29	22	30	9	37	140	110	14	4	14
	S	160	20	10	44	27						
65	L	215	33	21	32	13	58	160	130	14	4	14
	S	160	22	9	48	45						
80	L	240	40	22	27	14	79	190	150	16	4	18
	S	180	24	9	46	58						
100	L	250	35	16	60	45	128	210	170	16	4	18
	S	180	23	6	82	166						
125	L	265	36	15	67	66	187	240	200	18	8	18
	S	195	26	7	85	202						
150	L	270	50	17	44	62	271	265	225	18	8	18
	S	195	30	6	65	274						
200	L	300	64	19	41	78	460	320	280	20	8	18
	S	200	40	6	58	389						
250	L	305	70	16	42	42	688	375	335	22	12	18
	S	205	40	5	68	683						
300	L	325	70	16	50	161	945	440	395	22	12	22
	S	205	40	4	78	1.076						
350	L	330	65	16	47	181	1.127	490	445	22	12	22
	S	200	35	3	102	1.993						
400	L	330	65	14	51	255	1.478	540	495	22	16	22
	S	205	30	2	65	1.507						
450	L	330	70	13	51	329	1.839	595	550	22	16	22
	S	210	35	2	80	2.001						
500	L	330	85	13	44	354	2.263	645	600	24	20	22
	S	225	40	2	72	1931						

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

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DESIGN VALUES

Bellows Material	304, 316, 321
Flange Material	Carbon Steel, Stainless Steel
Flange Norms	EN 1092, ANSI B16.5, JIS
Design Pressure	6 barg
Design Temperature	400°C



PN 6

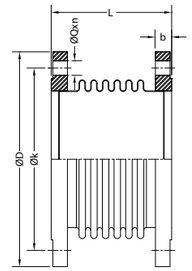
DN	Type	Length (L) (mm)	Movements		Spring Rates		Effective Area (cm²)	PN 6				
			Axial (+/-) (mm)	Lateral (+/-) (mm)	Axial (N/mm)	Lateral (N/mm)		ØD (mm)	Øk (mm)	b (mm)	n	ØQ (mm)
25	S	115	8	4,5	70	35	19	100	75	14	4	11
32	S	115	8	4,5	70	35	19	120	90	14	4	14
40	S	135	11	7	49	21	26	130	100	14	4	14
50	L	140	19	10	49	30	39	140	110	14	4	14
	S	90	10	3	92	189	39	140	110	14	4	14
65	L	155	23	11	49	38	58	160	130	14	4	14
	S	120	16	5	71	112	58	160	130	14	4	14
80	L	155	24	9	52	60	79	190	150	16	4	18
	S	120	17	4	75	181	79	190	150	16	4	18
100	L	225	32	12	67	74	130	210	170	16	4	18
	S	170	25	6	49	132	129	210	170	16	4	18
125	L	230	32	10	78	121	188	240	200	18	8	18
	S	160	20	3,5	73	404	187	240	200	18	8	18
150	L	230	38	10	63	143	271	265	225	18	8	18
	S	160	20	3	115	879	271	265	225	18	8	18
200	L	280	45	11,5	93	250	452	320	280	20	8	18
	S	200	28	3,5	102	895	452	320	280	20	8	18
250	L	300	48	11	96	317	684	375	335	22	12	18
	S	200	30	3	104	1.380	684	375	335	22	12	18
300	L	325	55	11,5	99	369	951	440	395	22	12	22
	S	225	32	3,5	159	1.984	956	440	395	22	12	22
350	L	325	58	11	95	422	1.142	490	445	22	12	22
	S	225	32	3,5	170	2.533	1.142	490	445	22	12	22
400	L	315	58	9,5	97	604	1.472	540	495	22	16	22
	S	235	38	4	139	2.257	1.479	540	495	22	16	22
450	L	335	60	10	105	681	1.832	595	550	22	16	22
	S	235	36	3	170	3.419	1.840	595	550	22	16	22
500	L	340	65	10	93	743	2.258	645	600	24	20	22
	S	240	35	3	167	4.132	2.258	645	600	24	20	22

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

Movements are non-concurrent

DESIGN VALUES

Bellows Material	304, 316, 321
Flange Material	Carbon Steel, Stainless Steel
Flange Norms	EN 1092, ANSI B16.5, JIS
Design Pressure	10 barg
Design Temperature	400°C



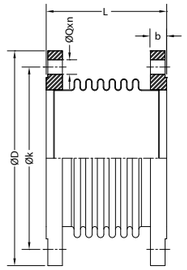
PN 10

DN	Type	Length (L) (mm)	Movements		Spring Rates		Effective Area (cm²)	PN 10				
			Axial (+/-) (mm)	Lateral (+/-) (mm)	Axial (N/mm)	Lateral (N/mm)		ØD (mm)	Øk (mm)	b (mm)	n	ØQ (mm)
25	S	125	8	4,5	64	33	19	115	85	18	4	14
32	S	125	8	4,5	64	33	19	140	100	18	4	18
40	S	125	9	4,5	57	37	26	150	110	18	4	18
50	S	125	15	6	61	64	39	165	125	18	4	18
65	S	140	17	6	64	81	58	185	145	18	8	18
80	L	190	22	10	94	74	80	200	160	20	8	18
	S	140	18	5,5	65	125	79	200	160	20	8	18
100	L	180	24	7,5	89	139	130	220	180	20	8	18
	S	125	18	3,5	71	300	129	220	180	20	8	18
125	L	190	26	7,5	99	190	187	250	210	22	8	18
	S	130	18	3	81	495	187	250	210	22	8	18
150	L	190	27	6,5	100	271	264	285	240	22	8	22
	S	150	22	3,5	79	423	259	285	240	22	8	22
200	L	255	35	8	116	396	452	340	295	24	8	22
	S	195	23	3	131	1.133	445	340	295	24	8	22
250	L	285	40	8	122	494	679	395	350	26	12	22
	S	205	23	2,5	192	2.562	684	395	350	26	12	22
300	L	300	44	8	126	624	948	445	400	26	12	22
	S	230	27	3	202	2.489	948	445	400	26	12	22
350	L	270	45	7,5	158	859	1.148	505	460	26	16	22
	S	190	28	2,5	253	3.793	1.148	505	460	26	16	22
400	L	280	50	8	152	954	1.477	565	515	26	16	26
	S	200	30	3	256	4.136	1.477	565	515	26	16	26
450	L	310	50	8,5	165	991	1.838	615	565	28	20	26
	S	200	30	2,5	283	5.703	1.845	615	565	28	20	26
500	L	310	50	7,5	191	1.393	2.245	670	620	28	20	26
	S	200	27	2	343	8.426	2.245	670	620	28	20	26
450	L	335	60	10	105	681	1.832	595	550	22	16	22
	S	235	36	3	170	3.419	1.840	595	550	22	16	22
500	L	340	65	10	93	743	2.258	645	600	24	20	22
	S	240	35	3	167	4.132	2.258	645	600	24	20	22

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

DESIGN VALUES

Bellows Material	304, 316, 321
Flange Material	Carbon Steel, Stainless Steel
Flange Norms	EN 1092, ANSI B16.5, JIS
Design Pressure	16 barg
Design Temperature	400°C



PN 16

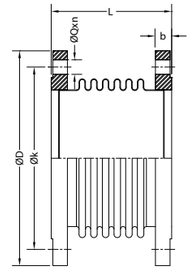
DN	Type	Length (L) (mm)	Movements		Spring Rates		Effective Area (cm²)	PN 16				
			Axial (+/-) (mm)	Lateral (+/-) (mm)	Axial (N/mm)	Lateral (N/mm)		ØD (mm)	Øk (mm)	b (mm)	n	ØQ (mm)
25	S	115	7	3,5	76	50	19	115	85	18	4	14
32	S	115	7	3,5	76	50	18	140	100	18	4	18
40	S	115	7	2,5	74	73	26	150	110	18	4	18
50	S	115	12	4	79	105	39	165	125	18	4	18
65	S	120	13	3,5	80	163	58	185	145	18	4	18
80	L	165	17	6,5	125	143	79	200	160	20	8	18
	S	120	12	2,5	99	353	79	200	160	20	8	18
100	L	190	22	7,5	146	186	130	220	180	20	8	18
	S	160	19	5	113	249	129	220	180	20	8	18
125	L	210	23	7,5	164	241	187	250	210	22	8	18
	S	160	21	4,5	114	363	188	250	210	22	8	18
150	L	210	23	6,5	170	352	263	285	240	22	8	22
	S	140	15	2	180	1.217	264	285	240	22	8	22
200	L	280	31	8	195	499	452	340	295	24	12	22
	S	200	18	2,5	255	2.208	445	340	295	24	12	22
250	L	310	32	6,5	201	731	680	405	355	26	12	26
	S	220	18	2	343	4.557	684	405	355	26	12	26
300	L	370	40	8,5	262	912	974	460	410	28	12	26
	S	270	22	2,5	472	5.103	972	460	410	28	12	26
350	L	330	43	9	264	925	1.155	520	470	30	16	26
	S	210	22	2,5	513	6.592	1.156	520	470	30	16	26
400	L	330	43	8	288	1.395	1.484	580	525	32	16	30
	S	220	24	2,5	519	7.948	1.484	580	525	32	16	30
450	L	360	45	8,5	302	1.441	1.849	640	585	34	20	30
	S	220	22	2	604	11.529	1.851	640	585	34	20	30
500	L	480	52	13	429	1.208	2.265	715	650	36	20	33
	S	260	23	2	1001	14.638	2.265	715	650	36	20	33

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

Movements are non-concurrent

DESIGN VALUES

Bellows Material	304, 316, 321
Flange Material	Carbon Steel, Stainless Steel
Flange Norms	EN 1092, ANSI B16.5, JIS
Design Pressure	25 barg
Design Temperature	400°C



PN 25

DN	Type	Length (L) (mm)	Movements		Spring Rates		Effective Area (cm²)	PN 25				
			Axial (+/-) (mm)	Lateral (+/-) (mm)	Axial (N/mm)	Lateral (N/mm)		ØD (mm)	Øk (mm)	b (mm)	n	ØQ (mm)
50	S	105	9	2,5	102	215	38	165	125	20	4	18
65	S	105	9	2	129	402	57	185	145	22	8	18
80	L	135	12	3	161	340	90	200	160	24	8	18
	S	110	8	1,5	226	955	77	200	160	24	8	18
100	L	185	16	6	221	289	129	235	190	24	8	22
	S	135	11	2,5	276	923	129	235	190	24	8	22
125	L	190	16	5	243	460	187	270	220	26	8	26
	S	140	11	2	326	1.569	187	270	220	26	8	26
150	L	195	20	5	227	608	258	300	250	28	8	26
	S	160	15	3	263	1.284	258	300	250	28	8	26
200	L	200	23	4,5	290	1.290	444	360	310	30	12	26
	S	175	19	3	354	2.348	444	360	310	30	12	26
250	L	235	29	5,5	344	1.572	682	425	370	32	12	30
	S	185	20	2,5	6204	4.279	682	425	370	32	12	30
300	L	260	32	5,5	507	2.588	975	485	430	34	16	30
	S	200	21	2,5	530	5.711	975	485	430	34	16	30
350	L	290	36	6,5	480	1.391	1.161	555	490	38	16	33
	S	215	17	2	1199	14.065	1.161	555	490	38	16	33
400	L	285	34	5	556	3.874	1.489	620	550	40	16	36
	S	225	24	2,5	778	10.975	1.489	620	550	40	16	36
450	L	305	35	5	819	6.488	1.865	670	600	46	20	36
	S	245	22	2	992	15.450	1.865	670	600	46	20	36
500	L	310	37	5	776	7.539	2.289	730	660	48	20	36
	S	250	25	2,5	1138	21.480	2.289	730	660	48	20	36

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

Movements are non-concurrent

KLINGER India

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