STENFLEX®

RUBBER EXPANSION JOINT TYPE C-1

UNIVERSAL EXPANSION JOINT DN 300 – DN 3600



STRUCTURE TYPE C-1 / RUBBER BELLOWS PN 4, 10, 16

- Universal expansion joint consisting of a rubber bellows and press-on retaining flanges
- Available in various bellow's geometries and special lengths
- Elastic robust bellows in various rubber grades
- Synthetic fibre reinforcement
- Full-faced self-sealing rubber flanges with drilling for through bolts
- Electrical impedance 10^3 to 10^6 Ohm (DIN IEC 93, VDE 0303-30)

Rubber grade*	EPDM	NBR	CIIR
Colour code	orange	red	white
Possible uses	Cooling, sea, brackish water, acids, lyes	hydrocarbon containing liquids	Drinking water

*Check or inquire about the resistance of the rubber grade to temperature and medium.

Technical design			
DN	DN 300 – 3600	DN 300 – 2800	DN 300 – 2400
Pressure rate	PN 4	PN 10	PN 16
Max. perm. operating pressure	4 bar*	10 bar*	16 bar*
Max. perm. temperature	+100 °C	+100 °C	+100 °C
Bursting pressure	≥ 15 bar	≥ 30 bar	≥ 48 bar
Vacuum operation	with vacuum supporting ring (at permanent vacuum)		

Max. operating pressure to be set 30 % lower for shock loads.
*Please consider a decrease of pressure due to temperature (see technical annex).

FLANGES / VERSIONS

- Press-on retaining flanges with stabilizing collar
- Flange drilling for through bolts

	Standard	**Others**
Dimensions	EN 1092	ANSI, BS etc. Connection dimensions see technical annex page 213 – 215
Materials	1.0038 (S235JR)	1.0577 (S355J2), 1.4541, 1.4571 etc.
Corrosion protection	hot dip galvanized	special varnish and coating, etc.

NOTE

Please comply with the general technical instructions regarding reaction force, moving force, fixed point load, installation instructions etc.

Subject to technical alterations and deviations resulting from the manufacturing process.

APPLICATIONS

- for reducing thermal and mechanical tension in pipes and their system components, e.g.
  - pumps
  - condensers
- for compensating axial, lateral and angular movement
- for compensating simultaneous movement in cooling water pipes
- to compensate for ground and foundation settlement
- as installation and dismantling aid
- power station technology
- process plant engineering

CERTIFICATES

- CE (PED 2014/68/EU)
- Drinking water
- TÜV Süd (KTA)

ACCESSORIES

- Vacuum supporting ring
- Internal guide sleeve
- Protective tube

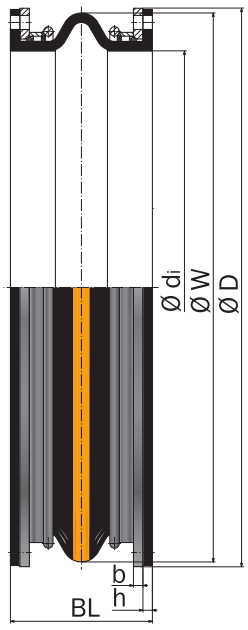
DIMENSIONS STANDARD PROGRAM

DN	Pressure rate	Bellows		Steel flange			**w/o** vacuum supporting ring			**with** vacuum supporting ring		
		Ø d_i Bellows inner Ø tolerance ±1%	h Rubber flange thick-ness	Ø D Flange outer Ø PN 6 (EN 1092)	Ø D Flange outer Ø PN 10 (EN 1092)	b Flange thick-ness	BL	Ø W Convolution Ø unpressurized	Weight	BL	Ø W Convolution Ø unpressurized	Weight
	bar	mm	mm	mm	mm	mm	mm	mm	approx. kg	mm	mm	approx. kg
300	4/10/16	300	15	440	445	20	250	413	34	250	413	40
350	4/10/16	350	15	490	505	20	250	463	38	250	463	45
400	4/10/16	400	15	540	565	20	250	513	43	250	513	55
450	4/10/16	450	15	595	615	20	250	563	54	250	563	60
500	4/10/16	500	15	645	670	20	250	613	59	250	613	65
600	4/10/16	600	15	755	780	20	250	713	80	250	713	80
700	4/10/16	700	15	860	895	20	250	813	93	250	813	95
750	4/10/16	750	15	925	965	20	250	863	103	250	863	115
800	4/10/16	800	20	975	1015	20	250	923	118	250	923	130
900	4/10/16	900	20	1075	1115	20	250	1023	131	250	1023	145
1000	4/10/16	1000	20	1175	1230	20	250	1123	160	250	1123	165
1100	4/10/16	1100	20	1290	1345	20	300	1268	185	325	1310	210
1200	4/10/16	1200	20	1405	1455	20	300	1368	215	325	1410	240
1300	4/10/16	1300	20	1520	1565	20	300	1468	230	325	1510	255
1400	4/10/16	1400	20	1630	1675	20	300	1568	260	325	1610	290
1500	4/10/16	1500	20	1730	1795	20	300	1668	295	325	1710	325
1600	4/10/16	1600	20	1830	1915	20	300	1768	340	325	1810	380
1700	4/10/16	1700	20	1940	2015	20	300	1868	365	325	1910	400
1800	4/10/16	1800	20	2045	2115	20	300	1968	370	325	2010	410
2000	4/10/16	2000	20	2265	2325	20	300	2168	430	325	2210	460
2100	4/10/16	2100	20	2375	2440	20	300	2268	475	325	2310	515
2200	4/10/16	2200	25	2475	2550	20	300	2378	525	325	2420	575
2300	4/10/16	2300	25	2590	2650	20	300	2478	550	325	2520	600
2400	4/10/16	2400	25	2685	2760	20	300	2578	600	325	2620	650
2500	4/10	2500	25	2795	2860	20	300	2678	620	325	2720	670
2600	4/10	2600	25	2905	2960	20	300	2778	640	325	2820	690
2800	4/10	2800	25	3115	3180	20	300	2978	690	325	3020	730
3000	4	3000	25	3315	3405	20	300	3178	720	325	3220	770
3200	4	3200	25	3525	–	20	300	3378	740	325	3420	790
3400	4	3400	25	3735	–	20	300	3578	770	325	3620	820
3600	4	3600	25	3975	–	20	300	3778	820	325	3820	870

Other lengths (BL) and pressure rates on request. Please contact us for further flange dimensions.

MOVEMENT COMPENSATION

DN	**w/o** vacuum supporting ring					**with** vacuum supporting ring				
	Δ ax Axial movement		Δ lat Lateral move-ment	Δ ang Angular movement	A* Effective bellows cross sectional area	Δ ax Axial movement		Δ lat Lateral move-ment	Δ ang Angular movement	A* Effective bellows cross sectional area
	Compression -mm	Elongation +mm	±mm	±∢ degrees	cm^2	Compression -mm	Elongation +mm	±mm	±∢ degrees	cm^2
300	40	30	30	11.3	1020	40	30	30	5.5	1020
350	40	30	30	9.7	1300	40	30	30	4.8	1300
400	40	30	30	8.5	1620	40	30	30	4.2	1620
450	40	30	30	7.7	1970	40	30	30	3.8	1970
500	40	30	30	6.9	2360	40	30	30	3.4	2360
600	40	30	30	5.7	3240	40	30	30	2.8	3240
700	40	30	30	4.9	4250	40	30	30	2.5	4250
750	40	30	30	4.6	4820	40	30	30	2.3	4820
800	40	30	30	4.3	5410	40	30	30	2.1	5410
900	40	30	30	3.8	6700	40	30	30	1.9	6700
1000	40	30	30	3.4	8140	40	30	30	1.7	8140
1100	40	30	30	3.2	10500	60	35	35	3.6	11200
1200	40	30	30	2.9	12300	60	35	35	3.3	13000
1300	40	30	30	2.7	14200	60	35	35	3.0	15000
1400	40	30	30	2.5	16300	60	35	35	2.8	17100
1500	40	30	30	2.3	18500	60	35	35	2.6	19300
1600	40	30	30	2.2	20800	60	35	35	2.5	21700
1700	40	30	30	2.0	23300	60	35	35	2.3	24300
1800	40	30	30	1.9	25900	60	35	35	2.2	26900
2000	40	30	30	1.7	31500	60	35	35	2.0	32700
2100	40	30	30	1.6	34500	60	35	35	1.9	35800
2200	40	30	30	1.6	37700	60	35	35	1.8	39000
2300	40	30	30	1.5	41000	60	35	35	1.7	42300
2400	40	30	30	1.4	44500	60	35	35	1.6	45800
2500	40	30	30	1.4	48000	60	35	35	1.6	49500
2600	40	30	30	1.3	51800	60	35	35	1.5	53300
2800	40	30	30	1.2	59600	60	35	35	1.4	61200
3000	40	30	30	1.1	68000	60	35	35	1.3	69700
3200	40	30	30	1.0	77000	60	35	35	1.2	78800
3400	40	30	30	1.0	86500	60	35	35	1.1	88500
3600	40	30	30	1.0	96600	60	35	35	1.1	98600



Type C-1

Universal expansion joint without restraints

Please inquire for simultaneous (different) movement.

*Effective bellows cross sectional area is a theoretical value.