

Rubber expansion joint - Type C-2

Highly flexible twin-convoluted universal expansion joint DN 300 – DN 3600



Structure type C-2

- Universal expansion joint consisting of a rubber bellows and press-on retaining flanges
- Outer stabilizing ring between the convolutions
- Available in special lengths

Rubber bellows PN 4 / PN 10

- Twin-convoluted very 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*	Colour code	Possible uses
EPDM	orange	Cooling, sea, brackish water, acids, lyes
NBR	red	Oil
CIIR	white	Drinking water

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

Technical design	DN 300 - 2000 PN 4	DN 300 - 2000 PN 10
DN	DN 300 - 2000	DN 300 - 2000
Pressure rate	PN 4	PN 10
Max. perm. operating pressure	4 bar*	10 bar*
Max. perm. temperature	+100 °C	+100 °C
Bursting pressure	≥ 12 bar	≥ 30 bar
Vacuum operation	Vacuum supporting rings on request (only for horizontal installation)	

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

Flanges

Version

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

Dimensions

Standard: see table PN 6/PN 10 according to EN 1092
Others: DIN EN, ANSI, BS etc.
Connection dimensions see technical annex

Materials

Standard: 1.0038 (S235JR)
Others: 1.0577 (S355J2), 1.4541, 1.4571 etc.

Corrosion protection

Standard: DN 300 - DN 700 electrogalvanized
DN 800 - DN 1000 hot-dip galvanized
DN 1100 - DN 3600 anti-corrosion primed

Others: special varnish, special coating, etc.

Applications

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

Accessories

- Vacuum supporting ring
- Internal guide sleeve
- Protective tube

Certificates

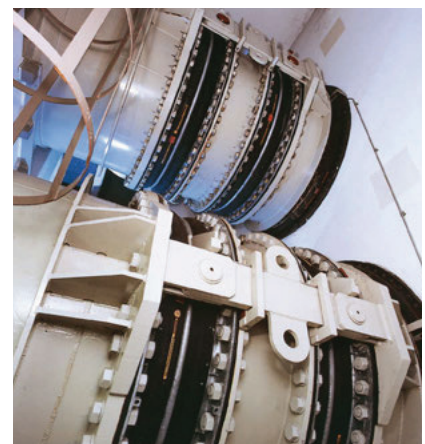
- CE (DGR 97/23/EC)
- Drinking water
- TÜV (KTA)

Note

For vertical installation please consult us for technical advice.

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.



STENFLEX® type C-2 with special high restraints



Dimensions standard program

DN	Pressure rate bar	Bellows		Steel flange			without vacuum supporting ring			with vacuum supporting ring		
		ø di Bellows inner ø tolerance ±1% mm	h Rubber flange thick- ness mm	ø D Flange outer ø PN 6 (EN 1092) mm	ø D Flange outer ø PN 10 (EN 1092) mm	b Flange thickness mm	BL mm	ø W Convolution ø unpressurized mm	Weight approx. kg	BL mm	ø W Convolution ø unpressurized mm	Weight approx. kg
300	4/10	300	15	440	445	20	400	413	35	400	413	40
350	4/10	350	15	490	505	20	400	463	45	400	463	50
400	4/10	400	15	540	565	20	400	513	55	400	513	60
450	4/10	450	15	595	615	20	400	563	60	400	563	65
500	4/10	500	15	645	670	20	400	613	65	400	613	70
600	4/10	600	15	755	780	20	400	713	80	400	713	85
700	4/10	700	15	860	895	20	400	813	100	400	813	105
750	4/10	750	15	925	965	20	400	863	115	400	863	120
800	4/10	800	20	975	1015	20	400	923	130	400	923	135
900	4/10	900	20	1075	1115	20	400	1023	150	400	1023	155
1000	4/10	1000	20	1175	1230	20	400	1123	170	400	1123	175
1100	4/10	1100	20	1290	1345	20	550	1268	220	525	1310	280
1200	4/10	1200	20	1405	1455	20	550	1368	240	525	1410	310
1300	4/10	1300	20	1520	1565	20	550	1468	280	525	1510	350
1400	4/10	1400	20	1630	1675	20	550	1568	320	525	1610	400
1500	4/10	1500	20	1730	1795	20	550	1668	360	525	1710	450
1600	4/10	1600	20	1830	1915	20	550	1768	400	525	1810	490
1700	4/10	1700	20	1940	2015	20	550	1868	415	525	1910	520
1800	4/10	1800	20	2045	2115	20	550	1968	430	525	2010	540
2000	4/10	2000	20	2265	2325	20	550	2168	460	525	2210	620
2100		2100	20	2375	2440	20	550	2268		525	2310	
2200		2200	25	2475	2550	20	550	2378		525	2420	
2300		2300	25	2590	2650	20	550	2478		525	2520	
2400	on request	2400	25	2685	2760	20	550	2578		525	2620	
2500		2500	25	2795	2860	20	550	2678		525	2720	
2600		2600	25	2905	2960	20	550	2778		525	2820	
2800		2800	25	3115	3180	20	550	2978		525	3020	
3000	on request	3000	25	3315	3405	20	550	3178		525	3220	
3200		3200	25	3525	-	20	550	3378		525	3420	
3400		3400	25	3735	-	20	550	3578		525	3620	
3600		3600	25	3975	-	20	550	3778		525	3820	

Other lengths (BL) and pressure rates on request.

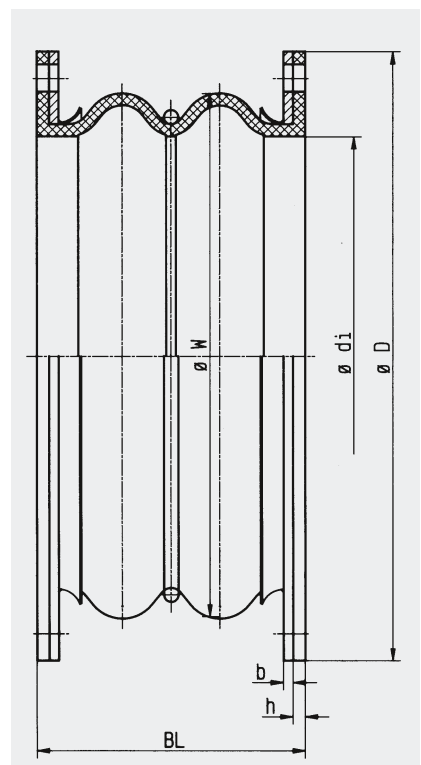
Movement compensation/bellows cross sectional area

DN	without vacuum supporting ring					with vacuum supporting ring					
	Δ ax Axial movement Compression -mm		Δ lat Lateral movement ±mm		Δ ang Angular movement ± degrees*	A* Effective bellows cross sectional area cm²	Δ ax Axial movement Compression -mm		Δ lat Lateral movement ±mm		Δ ang Angular movement ± degrees*
300	80	60	50	21.8	1020	80	60	50	10.0	1020	
350	80	60	50	18.9	1300	80	60	50	9.0	1300	
400	80	60	50	16.7	1620	80	60	50	8.0	1620	
450	80	60	50	15.0	1970	80	60	50	7.0	1970	
500	80	60	50	13.5	2360	80	60	50	6.0	2360	
600	80	60	50	11.3	3240	80	60	50	5.5	3240	
700	80	60	50	9.8	4250	80	60	50	5.0	4250	
750	80	60	50	9.1	4820	80	60	50	4.5	4820	
800	80	60	50	8.6	5410	80	60	50	4.0	5410	
900	80	60	50	7.6	6700	80	60	50	3.5	6700	
1000	80	60	50	6.9	8140	80	60	50	3.5	8140	
1100	80	60	50	6.5	10500	120	70	60	7.3	11200	
1200	80	60	50	5.9	12300	120	70	60	6.7	13000	
1300	80	60	50	5.5	14200	120	70	60	6.2	15000	
1400	80	60	50	5.1	16300	120	70	60	5.7	17100	
1500	80	60	50	4.9	18500	120	70	60	5.4	19300	
1600	80	60	50	4.5	20800	120	70	60	5.0	21700	
1700	80	60	50	4.1	23300	120	70	60	4.7	24300	
1800	80	60	50	3.9	25900	120	70	60	4.5	26900	
2000	80	60	50	3.7	31500	120	70	60	4.0	32700	
2100	80	60	50	3.3	34500	120	70	60	3.8	35800	
2200	80	60	50	3.2	37700	120	70	60	3.7	39000	
2300	80	60	50	3.1	41000	120	70	60	3.5	42300	
2400	80	60	50	3.0	44500	120	70	60	3.4	45800	
2500	80	60	50	2.9	48000	120	70	60	3.2	49500	
2600	80	60	50	2.7	51800	120	70	60	3.1	53300	
2800	80	60	50	2.5	59600	120	70	60	2.9	61200	
3000	80	60	50	2.4	68000	120	70	60	2.7	69700	
3200	80	60	50	2.3	77000	120	70	60	2.5	78800	
3400	80	60	50	2.2	86500	120	70	60	2.4	88500	
3600	80	60	50	2.1	96600	120	70	60	2.3	98600	

Please inquire for simultaneous (different) movement.

*Effective bellows cross sectional area is a theoretical value.

Version



Type C-2
Highly flexible universal expansion joint without restraint