

Rubber expansion joint Type W-1 and W-2

Wall-sealing expansion joint DN 80 – DN 3400



Structure type W-1

Wall-sealing expansion joint consisting of a flat-convoluted rubber bellows with press-on retaining flanges

Structure type W-2

Wall-sealing expansion joint consisting of a deep-convoluted rubber bellows with press-on retaining flanges. Suitable for large movements

Rubber bellows PN 2,5

- Elastic robust bellows in various rubber grades
- Synthetic fibre reinforcement
- Bellows with flat convolution (type W-1) or deep convolution (type W-2)
- 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

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

Technical design	
Type	W-1 and W-2
Pressure rate	PN 2,5
Max. perm. operating pressure	2,5 bar*
Max. perm. temperature	+90 °C
Bursting pressure	≥ 10 bar
Vacuum operation	with vacuum supporting ring (type W-1 only)

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
- Flange drilling for through bolts

Dimensions

Standard: see tables

Materials

Standard: 1.0038 (S235JR)
Others: stainless steel, etc.

Corrosion protection

Standard: anti-corrosion primed
Others: hot-dip galvanized, special varnish, special coating, etc.

Applications

- to seal ducts on
 - vessels, or containers
 - wall ducts
- for compensating axial and lateral movement between pipe and wall duct
- for reliable sealing against groundwater
- process plant engineering
- power station technology
- cement industry

Accessories

- Vacuum supporting ring (type W-1)

Certificates

- CE (DGR 97/23/EG)



STENFLEX® type W-2 in a power plant

Dimensions standard program type W-1/ BL 150

DN Pipeline	DN Wall duct	Pressure rate bar	Bellows		Wall duct			Pipeline				Δ ax Axial movement \pm mm	Δ lat Lateral movement \pm mm	Weight approx. kg
			ϕ D Bellows inner ϕ mm	h Rubber flange thickness mm	ϕ da Flange outer ϕ mm	ϕ K ₁ K1 PCD ϕ mm	$n_1 \times \phi d_1$ Drilling mm	ϕ di Flange inner ϕ mm	ϕ K ₂ PCD ϕ mm	$n_2 \times \phi d_2$ Drilling mm	b Flange thickness mm			
80	250	2.5	290	8	430	380	8x14	120	160	8x14	10	20	30	10.0
100	250	2.5	290	8	430	380	8x14	140	190	8x14	10	20	30	11.5
150	300	2.5	440	12	640	560	12x23	185	265	8x23	10	20	30	23.5
200	400	2.5	495	12	695	615	12x23	240	320	12x23	10	20	30	26.5
250	450	2.5	570	12	770	690	12x23	315	395	12x23	10	20	30	29.5
250	500	2.5	570	12	770	690	12x23	285	365	12x23	10	20	30	29.5
300	500	2.5	570	12	770	690	12x23	350	430	12x23	10	20	30	31.5
400	600	2.5	665	12	865	785	16x23	430	510	16x23	10	20	30	36.5
500	700	2.5	770	12	970	890	16x23	535	615	16x23	10	20	30	43.0
600	800	2.5	870	12	1070	990	16x23	635	715	16x23	10	20	30	48.5
700	900	2.5	975	12	1175	1095	24x23	730	810	24x23	15	20	30	64.5
800	1000	2.5	1050	12	1280	1200	24x23	840	920	24x23	15	20	30	73.5
900	1100	2.5	1180	12	1380	1300	24x23	940	1020	24x23	15	20	30	73.5
1000	1200	2.5	1280	12	1480	1400	24x23	1040	1120	24x23	15	20	30	95.0
1100	1300	2.5	1380	12	1580	1500	24x23	1140	1220	24x23	15	20	30	105.0
1200	1400	2.5	1490	12	1690	1610	24x23	1250	1330	24x23	15	20	30	114.5
1400	1600	2.5	1636	12	1880	1800	24x23	1440	1520	24x23	15	20	30	161.5
1600	1800	2.5	1880	15	2080	2000	28x23	1640	1720	28x23	15	20	30	148.5
1800	2000	2.5	2080	15	2280	2200	32x23	1840	1920	32x23	15	20	30	165.0
2000	2200	2.5	2280	15	2480	2400	36x23	2060	2140	36x23	15	20	30	179.0
2200	2400	2.5	2480	15	2680	2600	36x23	2260	2340	36x23	15	20	30	196.0
2400	2600	2.5	2665	15	2880	2780	48x23	2460	2540	48x23	15	20	30	210.0
2500	2700	2.5	2785	15	2980	2900	48x23	2560	2640	36x23	15	20	30	220.0
3000	3200	2.5	3280	15	3490	3410	48x23	3050	3130	48x23	15	20	30	270.0
3400	3600	2.5	3610	20	3830	3750	108x23	3450	3530	108x23	15	20	30	330.0

Dimensions standard program type W-1/ BL 280

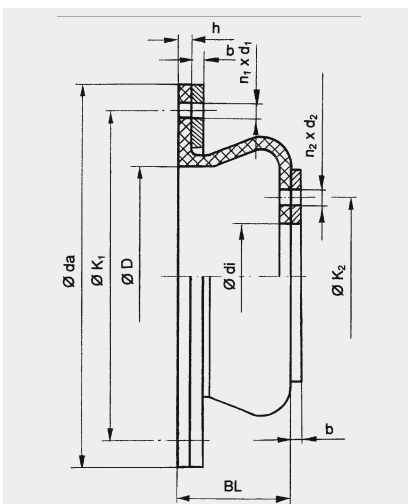
2200	2400	2.5	2480	15	2680	2600	36x23	2260	2340	36x23	15	40	60	226
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Dimensions standard program type W-2

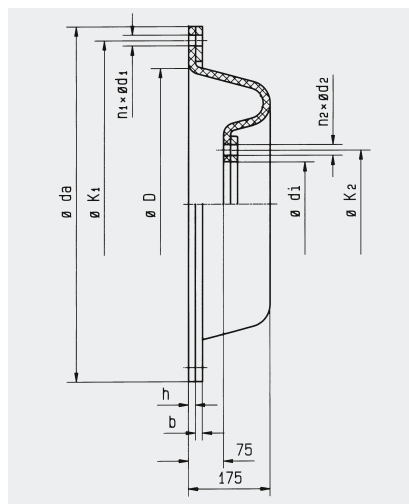
DN Pipeline	DN Wall duct	Pressure rate bar	Bellows		Wall duct			Pipeline				Δ ax Axial movement \pm mm	Δ lat Lateral movement \pm mm	Weight approx. kg
			ϕ D Bellows inner ϕ mm	h Rubber flange thickness mm	ϕ da Flange outer ϕ mm	ϕ K ₁ K1 PCD ϕ mm	$n_1 \times \phi d_1$ Drilling mm	ϕ di Flange inner ϕ mm	ϕ K ₂ PCD ϕ mm	$n_2 \times \phi d_2$ Drilling mm	b Flange thickness mm			
200	450	2.5	610	10	740	680	12x23	240	290	12x18	10	80	80	19.5
400	800	2.5	890	12	1025	965	16x23	490	550	16x23	10	80	80	34.0
500	900	2.5	1020	12	1175	1115	24x23	620	680	24x23	12	80	80	48.0
800	1300	2.5	1260	15	1480	1420	24x23	850	910	24x23	15	80	90	93.0

Please inquire for simultaneous (different) movement. Other dimensions on request.

Versions



Type W-1
Wall-sealing expansion joint, flat-convoluted

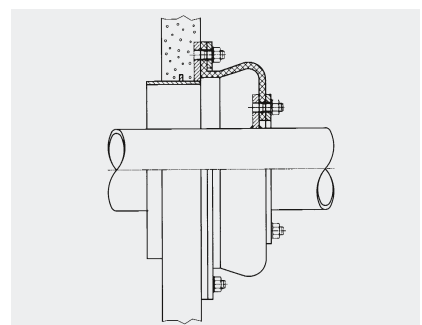


Type W-2
Wall-sealing expansion joint, deep-convoluted, for large movements

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.



Installation drawing type W-1