

PTFE EXPANSION JOINT TYPE P-1

UNIVERSAL EXPANSION JOINT DN 15 – DN 500



STRUCTURE TYPE P-1 PTFE BELLOWS PN 5,5, PN 9, PN 10,5

- Universal expansion joint consisting of PTFE bellows with rotatable flanges
- Multiple convolution bellows made of PTFE
- Outer supporting rings of stainless steel between the convolutions
- Bellows with self-sealing PTFE flange ends
- Inner surface repellent of foreign matter

Material quality*	Possible uses
PTFE	Aggressive acids and lyes, e.g., chloride, sulphate, solvents, bleaches, peroxide, fuels

*Check or inquire about the resistance of the material quality to temperature and medium

DN	DN 15 – 50	DN 65 – 100	DN 125 – 150	DN 200	DN 250 – 300	Temperature
max. perm. pressure rate bar	10 10 7,5 5,3	10 8,3 6,3 4,7	10 6,9 5,2 3,6	9,3 4,9 3,7 3,1	7,2 3,2 2,4 1,7	up to +23 °C up to +100 °C up to +150 °C up to +200 °C

DN	DN 15 – 100	DN 125 – 150	DN 200	DN 250	DN 300	Temperature
max. perm. vacuum operation bar	- 1,0 - 1,0 - 1,0 - 1,0	- 1,0 - 1,0 - 1,0 - 0,8	- 1,0 - 1,0 - 0,8 - 0,55	- 1,0 - 1,0 - 0,7 - 0,45	- 1,0 - 1,0 - 0,5 - 0,35	up to +23 °C up to +100 °C up to +150 °C up to +200 °C

Max. operating pressure should be set 30 % lower for shock load

FLANGES / VERSIONS

- Rotable flange
- threaded holes

	Standard	Others
Dimensions	EN 1092	ANSI, BS etc. Connection dimensions see technical annex page 213 – 215
Materials	1.0038 (S235JR)	1.4541, 1.4571
Corrosion protection	DN 15 – DN 300 electro-galvanized	DN 350 – DN 500 anti-corrosion primed
		hot-dip galvanized, special varnish, special coating etc.

NOTE

Additional PTFE seals necessary for installation in glass, graphite or ceramic pipes.

Type P1 is equipped with 3 check screws as transportation protection and to guarantee flawless installation. These are not impact-, or force-absorbing parts along the lines of tie rods, and must be removed after completing installation.

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

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

APPLICATIONS

- for conveying aggressive media
- for compensating axial, lateral and angular movements
- for muffling vibration and noise
- for reducing thermal and mechanical tension
- to compensate for installation inaccuracies
- chemical industry
- treatment and disposal technology
- pharmaceutical industry

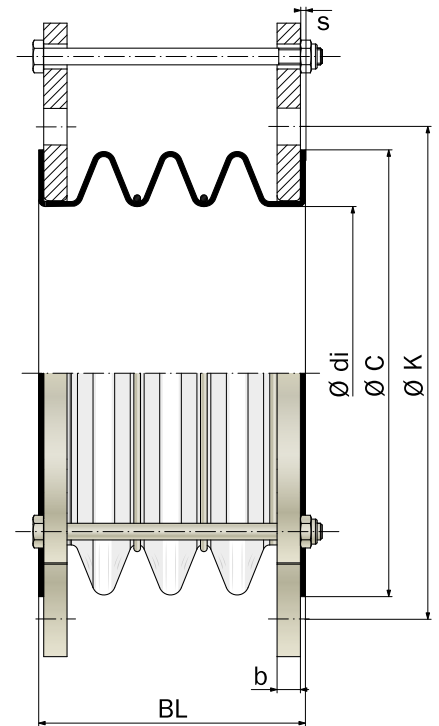
ACCESSORIES

- Internal guide sleeve of PTFE
- Protective cover
- Transport protection (included)

DIMENSIONS STANDARD PROGRAM

DN	BL	Ø K Bolt circle diameter Ø mm	Ø C Raised face Ø mm	S _{min} min. Flare thicknes mm	b Flange thickness mm
15	70	65	45	3.0	13.0
20	70	75	58	3.0	13.0
25	70	85	68	3.0	13.0
32	75	100	78	3.0	13.0
40	80	110	88	3.0	13.0
50	85	125	102	4.0	16.0
65	100	145	122	4.0	16.0
80	110	160	138	4.0	16.0
100	110	180	158	5.0	20.0
125	120	210	188	4.5	19.5
150	130	240	212	5.0	23.0
200	140	295	268	5.0	25.0
250	165	350	320	7.5	29.5
300	175	400	370	6.0	31.0
350	190	460	430	7.5	37.5
400	190	515	482	7.5	37.5
500	190	620	585	8.0	38.0

Larger DN's other structural lengths, higher pressures, other movement absorption available on request. Dimensions according to GR 12-0040 standard available on request.



MOVEMENT COMPENSATION

DN	Δ ax Axial movement ± mm	Δ lat Lateral movement ± mm	Δ ang Angular movement ± ∠ Grad	Weight approx. kg
15	10	6	6	1.4
20	10	6	6	1.7
25	10	6	6	2.0
32	10	6	6	2.8
40	15	6	6	3.3
50	15	9	8	4.6
65	20	9	8	5.5
80	20	13	10	6.6
100	25	13	10	9.0
125	25	14	10	12.0
150	25	14	8	17.0
200	30	14	8	27.4
250	30	14	6	35.5
300	30	15	6	57.9
350	30	15	6	78.8
400	35	15	6	90.2
500	35	20	5	101.9

Please inquire for simultaneous (different) movement

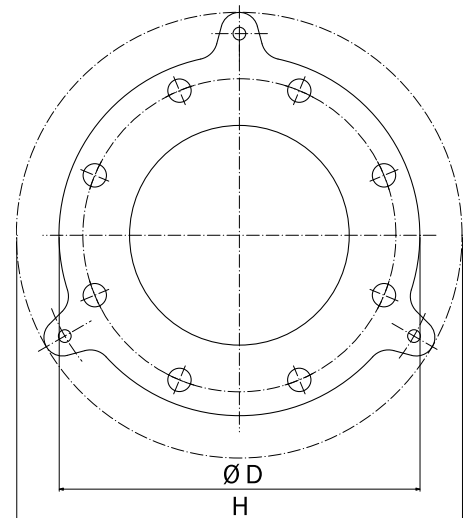
Table values refer to +20 °C and triple convoluted expansion joints

*Effective bellows cross sectional area is a theoretical value.

Type P-1

Universal PTFE expansion joint with transportation safeguard

P-1 available with 2 or 3 convolutions



Molded ears for restraint as transportation safeguard only