

RUBBER EXPANSION JOINT WITH PTFE LINING TYPE AI-2

LATERAL EXPANSION JOINT

DN 40 – DN 500



STRUCTURE TYPE AI-2 RUBBER BELLOWS WITH PTFE LINING PN 10

- Lateral expansion joint consisting of a rubber bellows with seamless PTFE lining and rotatable flanges, also with tie rods (external restraints) to absorb reaction force from internal pressure
- Flat-convoluted molded bellows made of EPDM
- Synthetic fibre reinforcement
- Wire-reinforced rubber rim
- Seamless PTFE lining with self-sealing flared ends, from DN 50 with inner PTFE supporting ring

Material grade*	EPDM/PTFE, NBR/PTFE
Colour code	orange, red with stamp "PTFE-Inliner"
Einsatzmöglichkeiten	Chemicals, acids, lyes

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

Technical calculation	
Max. perm. operating pressure	10 bar*
Max. permissible temperature	+100 °C
Bursting pressure	≥ 20 bar
Vacuum operation	not suitable

Max. operating pressure to be set 30 % lower for shock loads.

*Temperature related decrease of pressure (see technical annex page 198 rubber expansion joint Type A-1).

FLANGES / VERSIONS

- Flanges with stabilizing collar and ears to carry the tie rods
- Flange drilling for through bolts
- Special machined groove for rubber rim

	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	electrogalvanized	hot-dip galvanized, special varnish, special 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 conveying aggressive media
 - very good chemical resistance
 - resistant to most acids and lyes
- for compensating lateral movement
- for muffling vibration and noise
- for reducing thermal and mechanical tension
- to compensate for installation inaccuracies
- chemical industry
- beverages industry

TIE ROD RESTRAINTS

- DN 40 – DN 150 Tie rods carried on silencing rubber sockets
- DN 175 – DN 500 Tie rods carried on spherical washers and conical seats

Materials

Standard: tie rods 8.8

Others: stainless steel

Corrosion protection

Standard: electrogalvanized

Others: hot-dip galvanized

CERTIFICATES

- CE (PED 2014/68/EU)

ACCESSORIES

- Internal guide sleeve of PTFE
- Protective cover

DIMENSIONS STANDARD PROGRAM

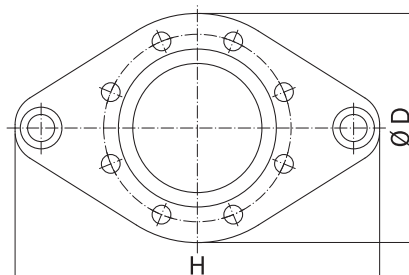
DN	BL*	Pressure rate	Ø di** Bellows inner Ø mm	Ø C Raised face Ø mm	Ø W Convolution Ø unpressurized mm	PN Flange connec- tion EN 1092	Ø D Flange outer Ø mm	b Flange thick- ness mm	H Flange height mm
40	131	10	33	92	86	16	150	16	230
50	131	10	43	101.5	97	16	165	16	240
65	131	10	59	127	113	16	185	18	260
80	156	10	71	133	135	16	200	20	300
100	156	10	94	171.5	160	16	220	20	350
125	156	10	121	192	184	16	250	22	385
150	157	10	146	218	212	16	285	22	420
175	157	10	169	248	236	16	315	22	440
200	182	10	195	273	265	10	340	25	465
250	182	10	245	328	318	10	395	25	520
300	207	10	296	378	373	10	445	25	570
350	212	10	332	438	420	10	505	30	630
400	212	10	384	489	460	10	565	30	690
450	262	10	423	539	575	10	615	35	795
500	262	10	473	594	625	10	670	35	850

*DN 40 - DN 125 also available as type Ri-2, length 136, DN 150 - DN 300 also available length 137.

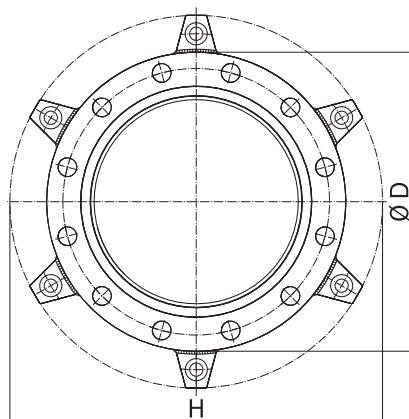
**For manufacturing reasons the inner diameter may vary by ± 3 or ± 5 mm

MOVEMENT COMPENSATION / VERSIONS

DN	Δ lat Lateral movement ± mm	Weight approx. kg
40	8	5.6
50	8	6.3
65	8	7.6
80	8	11.0
100	8	13.0
125	8	17.3
150	8	20.3
175	8	21.0
200	8	25.0
250	8	29.2
300	8	34.0
350	8	50.9
400	8	63.0
450	15	92.0
500	15	105.4

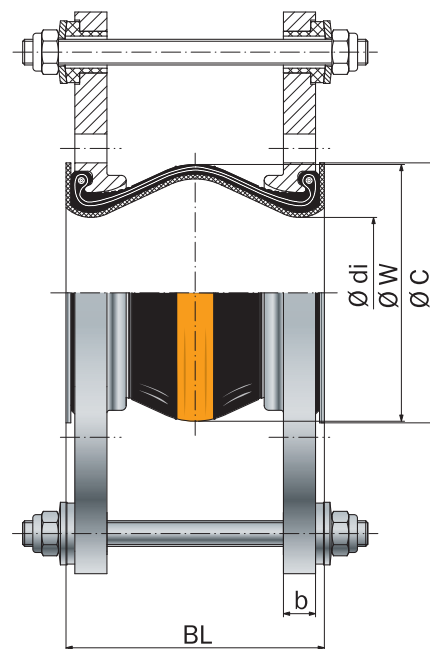


DN 40 - DN 150



DN 175 - DN 500

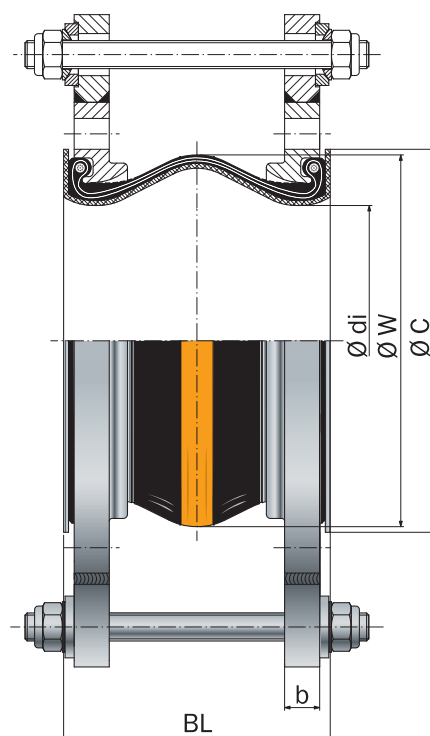
Number of tie rods depending on pressure



DN 40 - DN 150

Type Ai-2

Lateral expansion joint with PTFE lining, with tie rods (external restraints) carried on silencing rubber sockets.



DN 175 - DN 500

Type Ai-2

Lateral expansion joint with PTFE lining, with tie rods (external restraints) carried on spherical washers and conical seats.