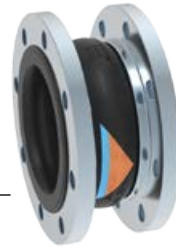


RUBBER EXPANSION JOINT TYPE RS-1

FLAME-PROOF

UNIVERSAL EXPANSION JOINT DN 25 – DN 300



STRUCTURE TYPE RS-1 / RUBBER BELLOWS PN 16

- Universal-expansion joint, consisting of a flat-convoluted rubber bellows and rotatable flanges
- Flat-convoluted molded bellows in various rubber grades
- Steel wire cord reinforcement
- Wire-reinforced self-sealing rubber rim
- Electrical impedance < 100 Ohm (DIN IEC 93, VDE 0303-30)

Rubber grade*	EPDM	NBR
Colour code	orange/blue	red/blue
Possible uses	Hot water, acids, lyes	hydrocarbon containing liquids

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

Technical design	
Max. perm. operating pressure	16 bar*
Max. perm. temperature	+130 °C
Bursting pressure	≥ 50 bar
Vacuum operation	DN 20 – 50 without vacuum supporting ring, DN 65 – 300 with vacuum supporting ring

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

- Rotable flanges with stabilizing collar
- Flange drilling for through bolts, DN 25 with Drill holes
- 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 etc.
Corrosion protection	electrogalvanized	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.

Chemicals used for water treatment (particularly in heating systems and coolant systems) can corrode the materials of the rubber expansion joint. According to VDI Directive 2035, the manufacturer of the chemicals must state that the data indicating that the materials used in the expansion joint, especially for the rubber bellows, will not be damaged by the chemicals.

APPLICATIONS

- for reducing thermal and mechanical tension in pipes and their system components, e.g.
 - pumps
 - compressors
 - engines
- for muffling vibrations and noise
 - at appliances
 - in cooling water and lub oil pipes
- for compensating axial, lateral and angular movement
- to compensate for installation inaccuracies
- to meet fire protection regulations
- shipbuilding industry
- in heating plants

CERTIFICATES

- CE (PED 2014/68/EU)
- Bureau Veritas
- DNV GL® / DNV®
- Lloyd's Register of Shipping
- TÜV/DIN 4809 (DN 25 – 200)
- American Bureau of Shipping
- MED
- TÜV Süd (KTA)

DIMENSIONS STANDARD PROGRAM

DN	BL	Pressure rate	Ø dj Bellows inner Ø	Ø C Raised face outer Ø	Ø E Raised face inner Ø	Ø W* Con- volution Ø	PN Flange connection EN 1902	Ø D Flange outer Ø	b Flange thickness
	mm	bar	mm	mm	mm	mm		mm	mm
25	130	16	31 ± 3	72	39	88	16	115	16
32	130	16	31 ± 3	72	39	88	16	140	16
40	130	16	39 ± 3	81	45	96	16	150	16
50	130	16	49 ± 3	95	56	107	16	165	16
65	130	16	65 ± 3	115	72	123	16	185	18
80	130	16	77 ± 3	127	84	135	16	200	20
100	130	16	100 ± 3	151	109	160	16	220	20
125	130	16	127 ± 3	178	133	184	16	250	22
150	130	16	153 ± 3	206	161	212	16	285	22
200	130	16	202 ± 3	260	209	260	10	340	25
250	130	16	252 ± 3	313	262	313	10	395	25
300	130	16	303 ± 3	363	312	363	10	445	25

*unpressurized. From DN 200 pressure rate 16 bar also available with flanges PN 16.
Please contact us for further flange dimensions.

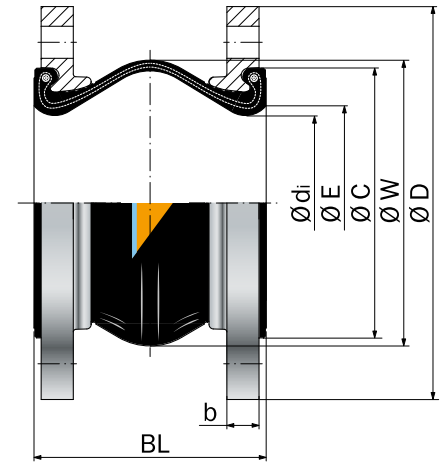
MOVEMENT COMPENSATION

DN	Δ ax Axial movement		Δ lat Lateral movement ± mm	Δ ang* Angular movement ± < degrees	A** Effective bellows cross sectional area at 16 bar cm ²	Permissible vacuum w/o supporting ring at length BL bar absolute	Weight approx. kg
	Compression - mm	Elongation + mm					
25	35	10	15	25	0	-	2.2
32	35	10	15	25	0	0	3.3
40	35	10	15	25	0	0.2	3.8
50	35	10	15	25	2	0.2	4.5
65	35	10	15	25	3	0.4	5.2
80	30	10	15	20	16	0.4	7.1
100	30	10	15	15	48	0.4	8.0
125	30	10	15	15	81	0.4	10.5
150	30	10	15	10	143	0.4	12.8
200	25	10	15	7	191	0.4	19.0
250	25	10	15	6	413	0.5	24.5
300	20	10	15	5	533	0.6	31.3

* Larger Δ ang possible for compressed installation length.
**Effective bellows cross sectional area is a theoretical value.
Please inquire for simultaneous (different) movement.

ACCESSORIES

- Vacuum supporting ring
- Internal guide sleeve
- Protective hood
- Protective tube



Type RS-1

Universal-expansion joint, without restraint