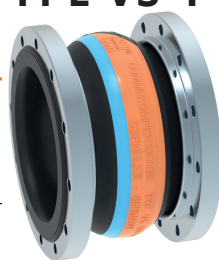


RUBBER EXPANSION JOINT TYPE VS-1

FLAME-PROOF

UNIVERSAL EXPANSION JOINT DN 40 – DN 150



STRUCTURE TYPE VS-1 / RUBBER BELLOWS PN 16

- Universal expansion joint, consisting of a rubber bellows and rotating flanges
- Highly elastic 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	10 bar	6 bar
Max. perm. temperature	up to +60 °C	up to +100 °C	up to +110 °C
	up to +130 °C for brief periods*		
Bursting pressure	≥ 50 bar		
Vacuum operation	≥ 0,05 bar abs. with vacuum supporting ring (from DN 65)		

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

*> +110 °C the manufacturer's approval must be obtained for the corresponding operating conditions.

FLANGES / VERSIONS

- Rotating flanges with stabilizing collar
- Flange drilling for through bolts
- Special turned groove for rubber rim

	Standard	Others
Dimensions	VG 85356	
Materials	1.0038 (RSt 37-2)	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 compensator. According to VDI Directive 2035, DIN 4809 part 1 and VGB R 455P, the manufacturer of the chemicals must state that the materials used in the compensator, 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 vibration 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 (DGR 2014/68/EU)

ACCESSORIES

- Vacuum supporting ring
- Internal guide sleeve

DIMENSIONS STANDARD PROGRAM

DN	BL	Pressure rate	Ø d _i Bellows inner Ø	Ø C Raised face Ø	Ø E Raised face inner Ø	Ø W* Con- volution Ø	Ø K pitch circle diam. Ø	n x Ø d number x bore diam. Ø	Ø D Flange outer Ø	b Flange thickness mm
40	125	16	32 ± 3	71	42	74	84	6 x 11	108	16
50	125	16	40 ± 3	83	50	88	96	6 x 11	120	16
65	125	16	61 ± 3	103	68	113	116	8 x 11	140	18
80	150	16	72 ± 3	113	81	137	126	8 x 11	150	18
100	150	16	93 ± 3	135	101	145	148	10 x 11	172	18
125	150	16	117 ± 4	163	127	178	176	10 x 11	200	20
150	150	16	143 ± 5	189	151	201	202	12 x 11	226	20

*unpressurized

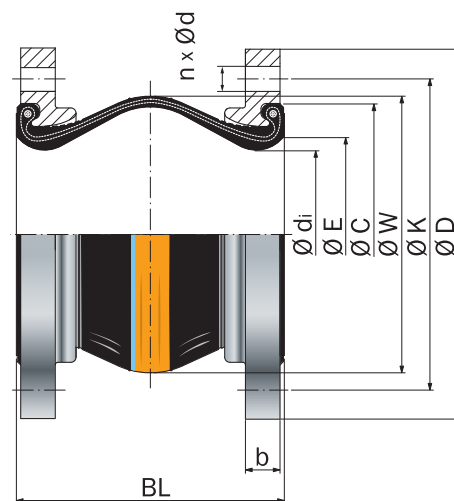
MOVEMENT COMPENSATION

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	Weight approx. kg
	Compression - mm	Elongation + mm				
40	30	10	15	25	0	1.9
50	30	10	15	21	0	2.3
65	30	10	15	17	19	3.0
80	40	10	15	14	23	3.4
100	40	10	15	11	28	4.2
125	40	10	15	9	49	5.7
150	40	10	15	7	81	6.6

* Larger Δ ang possible for compressed installation length.

**Effective bellows cross sectional area is a theoretical value.

Please inquire for simultaneous (different) movement.



DN 40 - DN 150

Type VS-1

Universal compensator without restraint