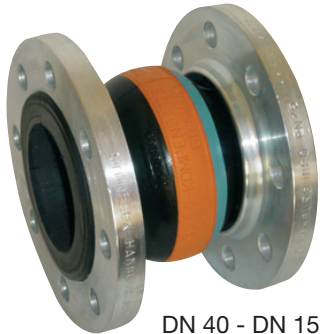


Rubber compensator - Type VS-1

Universal compensator DN 40 – DN 150



DN 40 - DN 150



Structure type VS-1

Universal compensator, consisting of a rubber bellows and rotating flanges

Rubber bellows PN 16

- 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*	Colour code	Possible uses
EPDM	orange/blue	Hot water, acids, lyes
NBR	red/blue	Oil

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

Property	Pressure	Temperature
Max. perm. operating pressure	16 bar	up to +60 °C
	10 bar	up to +100 °C
	6 bar	up to +110 °C
		up to +130 °C for brief periods*
Bursting pressure	≥ 50 bar	
Vacuum	≥ 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

Version

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

Dimensions

Standard: DN 40 - DN 150
according to VG 85356

Materials

Standard: 1.0038 (RSt 37-2)
Others: 1.4541, 1.4571 etc.

Corrosion protection

Standard: electrogalvanized
Others: hot-dip galvanized, special varnish, special coating, etc.

Applications

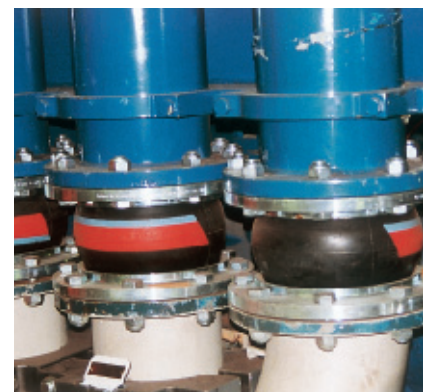
- for reducing thermal and mechanical tension in pipes and their system components, e.g.
 - pumps
 - compressors
 - motors
- for muffling vibration and noise
 - at appliances
 - in cooling water and lub oil pipes
- for compensating axial, lateral and angular movement
- to compensate for installation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

Accessories

- Vacuum supporting ring
- Internal guide sleeve

Certificates

- CE (DGR 97/23/EC)



STENFLEX type VS-1 used in cooling water system of ship's engine

Dimensions standard program

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

From DN 200 pressure rate 16 bar also available with flanges PN 16.

Movement compensation/bellows cross sectional area

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.

Please inquire for simultaneous (different) movement.

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

Note

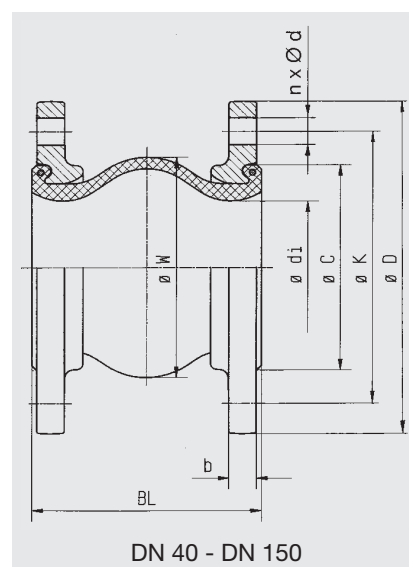
Please comply with the general technical instructions regarding reaction force, moving force, fixed point load, installation instructions etc.

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.

Versions



DN 40 - DN 150

Type VS-1

Universal compensator without restraint