STENFLEX®

RUBBER EXPANSION JOINT TYPE MS-1

FLAME-PROOF

TWIN-CONVOLUTED UNIVERSAL EXPANSION JOINT DN 65 – DN 250

STRUCTURE TYPE MS-1 / RUBBER BELLOWS PN 16

- Universal expansion joint (double shafted), consisting of a rubber bellows and rotable flanges
- Highly elastic molded bellows in various rubber grades
- Steel wire cord reinforcement
- Wire-reinforced self-sealing rubber rim

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	with vacuum supporting ring (at permanent vacuum)

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

- Rotatable flanges with stabilizing collar
- Flange drilling for through bolts
- Special machined groove for rubber rim annex

	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, 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.

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, DIN 4809 part 1 and VGB R 455P, the manufacturer of the chemicals must state that the materials used in the expansion joint, especially for the rubber bellows, will not be damaged by the chemicals.

APPLICATIONS

- for compensating large axial, lateral and angular movement
- 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
- to compensate for installation
- inaccuracies
- to meet fire protection regulations
- shipbuilding industry
- in heating plants

CERTIFICATES

- CE (DGR 2014/68/EU)
- American Bureau of Shipping
- DNV GL® / DNV®
- Bureau Veritas
- Lloyd`s Register of Shipping
- RINA
- CCS
- MED

DIMENSIONS STANDARD PROGRAM

DN	BL mm	Pressure rate bar	Ø d_j Bellows inner Ø mm	Ø C Raised face outer Ø mm	Ø E Raised face inner Ø mm	Ø W* Convolution Ø mm	PN Flange connection EN 1092	Ø D Flange outer Ø mm	b Flange thickness mm
65	220	16	63+5/63-1	115	72 ± 1	113	16	185	18
80	250	16	75+5/75-1	127	84 ± 1	135	16	200	20
100	275	16	98+5/98-1	151	109 ± 1	160	16	220	20
125	275	16	125+5/125-1	178	133 ± 1	184	16	250	22
150	275	16	151+5/151-1	206	161 ± 1	212	16	285	22
200	275	10	200+5/200-1	260	209 ± 1	265	10	340	25
250	275	10	250+5/250-1	313	262 ± 1	218	10	395	25

*unpressurized
Please contact us for further flange dimensions.

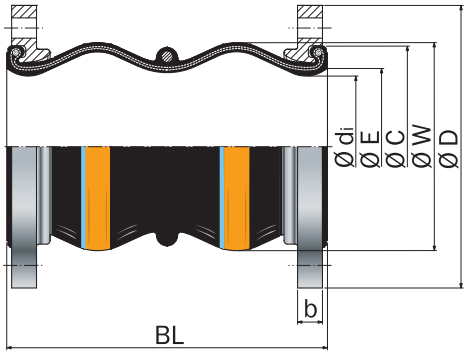
MOVEMENT COMPENSATION

DN	BL mm	Δ ax Axial movement Compression - mm	 Elongation + mm	Δ lat Lateral movement ± mm	Δ ang* Angular movement ± ∢ degrees	A** Effective bellows cross sectional area at 16 bar cm²	Permissible vacuum w/o supporting ring at length BL bar absolute	Weight approx. kg
65	220	70	30	38	30	14	0,0	6,05
80	250	90	30	40	30	12	0,0	7,90
100	275	90	30	40	30	16	0,4	9,17
125	275	80	25	30	30	15	1,0	11,80
150	275	80	25	30	24	29	0,4	14,40
200	275	90	35	30	16	152	0,7	20,40
250	275	90	35	15	10	328	1,0	28,00

* 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



Type MS-1

Universal expansion joint without restraint