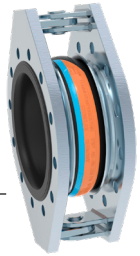
STENFLEX®

RUBBER EXPANSION JOINT TYPE AS-3

FLAME-PROOF

ANGULAR EXPANSION JOINT DN 32 – DN 400



STRUCTURE TYPE AS-3 / RUBBER BELLOWS PN 16

- Angular expansion joint consisting of a rubber bellows and flanges
- Welded hinge restraints to absorb reaction force from internal pressure or vacuum
- 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*
Max. perm. temperature	+130 °C
Bursting pressure	≥ 50 bar
Vacuum operation	DN 32 – 50 without vacuum supporting ring, DN 65 – 400 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

- Oval flanges with stabilizing collar and hinge restraints
- 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)	stainless steel etc.
Corrosion protection	electrogalvanized	anti-corrosion primed, 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, 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 angular movement
- as double or triple joint compensation system for large movements
  - for tank settlement during filling
  - in plastic pipe systems
- to meet fire protection regulations
  - in shipbuilding industry
  - in chemical industry

HINGE RESTRAINTS

- Pivot of joint bars at center of bellows
- Hinge restraints control bellows movement

Materials

Standard: 1.0038 (S235JR), 1.0577 (S355J2)

Others: stainless steel, etc.

Corrosion protection

Standard: DN 32 - DN 175 electrogalvanized
DN 200 - DN 400 anti-corrosion primed

Others: hot-dip galvanized, special varnish and coating, etc

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	H Flange height mm
32	125	16	31 ± 3	72	39	78	16	140	16	220
40	125	16	39 ± 3	81	45	86	16	150	16	230
50	125	16	49 ± 3	95	56	97	16	165	16	240
65	125	16	65 ± 3	115	72	113	16	185	18	260
80	150	16	77 ± 3	127	84	135	16	200	20	300
100	150	16	100 ± 3	151	109	160	16	220	20	350
125	150	16	127 ± 3	178	133	184	16	250	22	385
150	150	16	153 ± 3	206	161	212	16	285	22	420
175	150	16	176 ± 3	230	185	236	16	315	22	450
200	175	10	202 ± 3	260	209	265	10	340	25	440
250	175	10	252 ± 3	313	262	318	10	385	25	505
300	200	10	303 ± 3	363	312	373	10	445	25	560
350	200	10	344 ± 3	423	360	425	10	505	34	620
400	200	10	396 ± 3	474	410	470	10	565	38	680

From DN 200 higher pressure rate available on request. Please contact us for further flange dimensions. *The measure BL (length) for DN 400 is approx. 6 mm shorter when fitted.
**unpressurized

CERTIFICATES

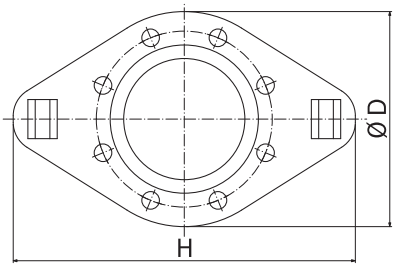
- CE (PED 2014/68/EU)
- RINA
- MED
- DNV GL® / DNV®
- Lloyd's Register of Shipping
- TÜV/DIN 4809
- Others see technical annex

ACCESSORIES

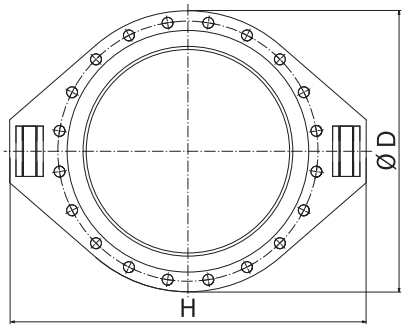
- Vacuum supporting ring
- Internal guide sleeve
- Protective hood

MOVEMENT COMPENSATION / FLANGE VERSIONS

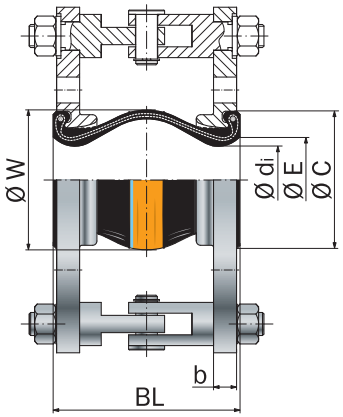
DN	Δ ang Angular movement ± ∢ degrees	Weight approx. kg
32	25	6.0
40	25	6.5
50	25	7.2
65	25	8.6
80	20	12.1
100	15	14.0
125	15	17.6
150	12	20.4
175	10	23.1
200	8	34.5
250	7	39.6
300	6	45.2
350	5	67.0
400	5	93.0



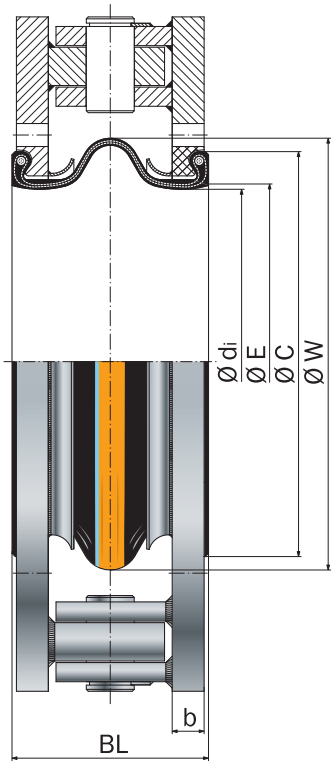
DN 32 – DN 150



DN 175 – DN 400



DN 32 – DN 150



DN 175 – DN 400

Type AS-3

Angular expansion joint with hinge restraints