Rubber expansion joints

The company Costruzione Ricambi Macchine Industriali provides rubber expansion joints to its customers. These hoses enable different types of piping to carry fluids under pressure at certain temperatures by compensating for vibrations and axial/angular displacements in an entirely flexible manner.

The elastic body of the compensator consists of vulcanized rubber (different synthetic elastomers), which in turn is reinforced by layers of textile fibers and steel wires that provide optimal elastic, mechanical and chemical properties for the device. Rubber anti-vibration joints do not require the use of gaskets for their assembly.

Benefits of using rubber expansion joints:

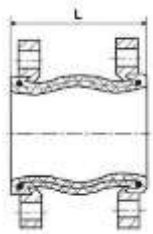
- They reduce stresses due to thermal changes with axial, lateral and angular movements.
- They absorb vibration and the expansion/contraction of pipelines.

- They attenuate noise from pumping fluids in pipes; they have a high acoustic damping capacity.
- They have minimal axial overall dimensions and limited weight.
- They require low deformation forces.
- They have high fatigue and corrosion resistance.
- They do not require gaskets for installation

Technical characteristics of rubber expansion joints

- EPDM, NBR, Hypalon Body
- Nylon reinforcement mesh
- Galvanized cast iron fittings/AISI304
- Allowable range of temperatures: -10, + 80 °C

EPDM expansion joints with PN10/16 flanges

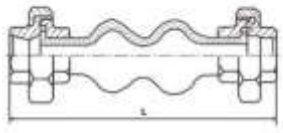


Galvanized flanges - on request also in AISI 304/316 and different bore - Allowed maximum pressure shown in table up to 80 °C - for vacuum values above 660 mm Hg, the installation of an inner seal ring is required

DN	Inche	Axial compression (mm)	Axial extension (mm)	Lateral movement (mm)	Angular Flexion (°)	Length L (mm)	Maximum allowable pressure at 80 °C (bar)	Maximum allowable depression at 80 °C (mm Hg)
25	1"	13	9.5	± 13	15	152	16	660
32	¼"	13	9.5	± 13	15	152	16	660
40	½"	13	9.5	± 13	15	152	16	660
50	2"	13	9.5	± 13	15	152	16	660
65	2 ½"	13	9.5	± 13	15	152	16	660
80	3"	13	9.5	± 13	15	152	16	660
100	4"	19	13	± 13	15	152	16	660
125	5"	19	13	± 13	15	152	16	660
150	6"	19	13	± 13	15	152	16	660
200	8"	19	13	± 13	15	152	16	660
250	10"	25	16	± 19	15	203	16	660
300	12"	25	16	± 19	15	203	16	660
350	14"	25	16	± 19	15	203	10	660
400	16"	25	16	± 19	15	203	9	660
450	18"	25	16	± 19	15	203	9	660
500	20"	25	16	± 19	15	203	9	660
550	22"	25	16	± 19	15	254	9	660
600	24"	25	16	± 19	15	254	9	660
700	28"	25	16	± 19	15	254	9	660
800	32"	25	16	± 19	15	254	9	660

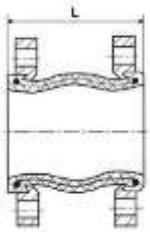
EPDM expansion joints with threaded ends

Galvanized ends - Maximum allowed pressure indicated in table valid up to 80 °C



DN	Inches	Axial compression (mm)	Axial extension (mm)	Lateral movement (mm)	Angular Flexion (°)	Length L (mm)	Maximum allowed pressure at 80 °C (bar)	Max. allowed neg. pressure at 80 °C (mm Hg)
15	½"	22	6	± 22	32	203	10	660
25	1"	22	6	± 22	32	203	10	660
32	1 ¼"	22	6	± 22	32	203	10	660
40	1 ½"	22	6	± 22	32	203	10	660
50	2"	22	6	± 22	32	203	10	660
65	2 ½"	22	6	± 22	32	203	10	660
80	3"	22	6	± 22	32	203	10	660

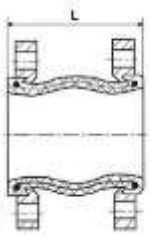
NBR expansion joints with PN10/16 flanges



Galvanized flanges - on request also in AISI 304/316 and different bore - Maximum allowed pressure shown in table valid up to 80 °C - for vacuum values above 660 mm Hg, the installation of an inner sealing ring is required

DN	Inches	Axial compression (mm)	Axial extension (mm)	Lateral movement (mm)	Angular Flexion (°)	Length L (mm)	Maximum allowed pressure at 80° C (bar)	Max. allowed neg. pressure at 80 °C (mm Hg)
25	1"	20	12	± 14	15	130	16	660
32	1 ¼"	20	12	± 14	15	130	16	660
40	1 ½"	20	12	± 14	15	130	16	660
50	2"	20	12	± 14	15	130	16	660
65	2 ½"	20	12	± 14	15	130	16	660
80	3"	20	12	± 14	15	130	16	660
100	4"	20	12	± 14	15	130	16	660
125	5"	20	12	± 14	15	130	16	660
150	6"	20	12	± 14	15	130	16	660
200	8"	20	12	± 14	15	130	16	660
250	10"	20	12	± 14	15	130	16	660
300	12"	25	16	± 22	15	130	16	660
350	14"	25	16	± 22	15	200	8	660
400	16"	25	16	± 22	15	200	8	660
450	18"	25	16	± 22	15	200	8	660
500	20"	25	16	± 22	15	200	8	660
600	24"	25	16	± 22	10	260	8	660

HYPALON expansion joints with PN10/16 flanges



Galvanized flanges - on request also in AISI 304/316 and different bore – Maximum allowed pressure shown in table valid up to 80 °C - for vacuum values above 660 mm Hg, the installation of an inner seal ring is required

DN	Inches	Axial compression (mm)	Axial extension (mm)	Lateral movement (mm)	Angular Flexion (°)	Length L (mm)	Maximum allowed pressure at 80 °C (bar)	Max. allowed neg. pressure at 80 °C (mm Hg)
25	1"	20	12	± 14	15	130	16	660
32	1 ¼"	20	12	± 14	15	130	16	660
40	1 ½"	20	12	± 14	15	130	16	660
50	2"	20	12	± 14	15	130	16	660
65	2 ½"	20	12	± 14	15	130	16	660
80	3"	20	12	± 14	15	130	16	660
100	4"	20	12	± 14	15	130	16	660
125	5"	20	12	± 14	15	130	16	660
150	6"	20	12	± 14	15	130	16	660
200	8"	20	12	± 14	15	130	16	660
250	10"	20	12	± 14	15	130	16	660
300	12"	25	16	± 22	15	130	16	660
350	14"	25	16	± 22	15	200	8	660
400	16"	25	16	± 22	15	200	8	660
450	18"	25	16	± 22	15	200	8	660
500	20"	25	16	± 22	15	200	8	660
600	24"	25	16	± 22	10	260	8	660