

Data Sheet • Novus Flexible Rubber Bellows – Single Sphere

Novus Flexible Single Sphere Rubber Bellows provide a cost-effective solution for demanding industrial applications conveying water, air, mild corrosive fluids and odours, with the added advantage of reducing fluid-borne noises. They are flexible rubber elements (combined with metal and/or textile reinforcements) useful for conveying fluids and absorbing movements between sections or pipelines. With a correct design they can absorb axial, lateral and angular movements offering both

safety and insulation against noise and vibration.



Service

Novus Rubber expansion joints provide time-tested ways to accommodate pressure loads, relieve movement stresses, reduce noise, isolate vibration, compensate for misalignment after plants go on stream and prolong the life of motive equipment. Rubber expansion joints, designed by engineers and fabricated by skilled craftsmen, are used in all systems conveying fluids under pressure and/or vacuum at various temperatures.

Application

- Process piping in paper and pulp, chemical, primary metal and petroleum refining plants.
- Sewage disposal and water-treatment plants.
- Central and ancillary power-generating stations in communities, factories and buildings
- Air Conditioning, heating and ventilating systems in commercial and institutional buildings, hospitals, motels and hotels

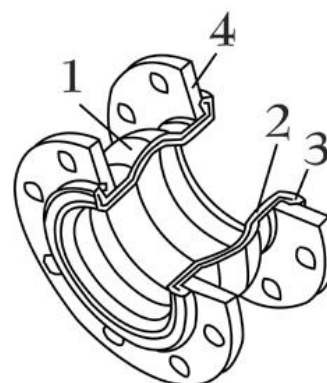
Features

- High Absorption of Sonorous Vibration
- Low Spring Rate
- Loose Flanges for Ease of Alignment

- Resistance to Heat and Water
- Electrical Discontinuity
- Compensate for system misalignments
- Absorb pipework stresses

Material of Construction

Item	Part	Material
1	Elastomer	Special Synthetic Rubber
2	Reinforced Fabric	Synthetic Fiber
3	Wire	Carbon Steel Wire
4	Flange	Carbon / Stainless Steel



Standard Length

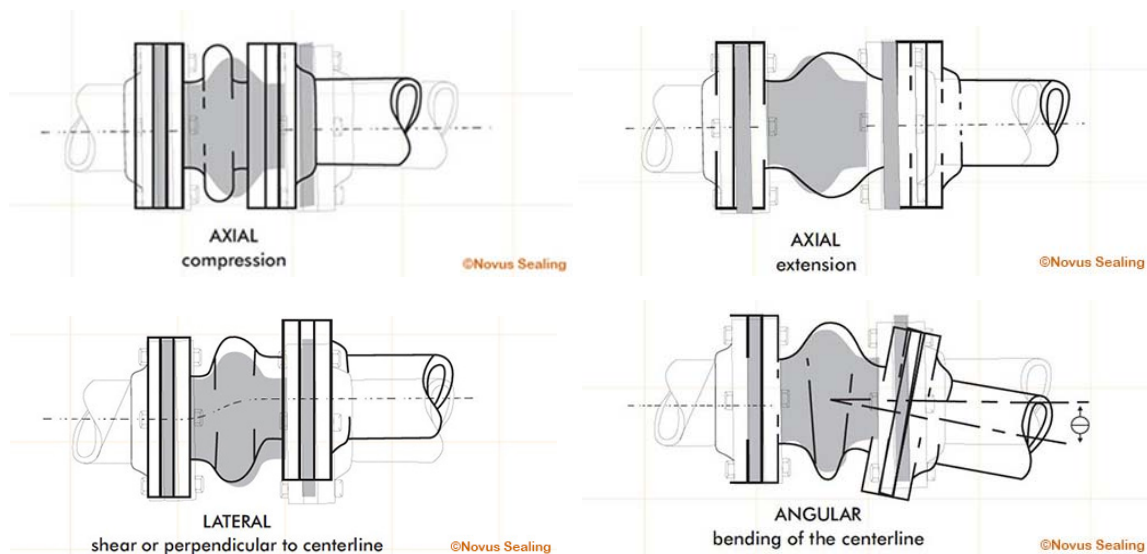
NB mm	Size inch	Length mm	Axial Comp. mm	Axial Exten. mm	Lateral Deflect. mm	Angular Deflect Degrees	Working Pressure kPa	Burst Pressure kPa	Vacuum Rating mm/Hg	Weight incl Flanges kg
25	1"	95	8	4	8	15°	2065	5884	650	1.97
32	1 1/4"	95	8	4	8	15°	2065	5884	650	2.99
40	1 1/2"	95	8	4	8	15°	2065	5884	650	3.92
50	2"	105	8	5	8	15°	2065	5884	650	4.54
65	2 1/2"	115	12	6	10	15°	2065	5884	650	5.64
80	3"	130	12	6	10	15°	2065	5884	650	6.35
100	4"	135	18	10	12	15°	2065	5884	650	7.06
125	5"	170	18	10	12	15°	2065	5884	650	9.78
150	6"	180	18	10	12	15°	2065	5884	650	12.55
200	8"	205	25	14	22	15°	2065	5884	650	15.83
250	10"	240	25	14	22	15°	2065	5884	650	24.35
300	12"	260	25	14	22	15°	2065	5884	650	26.21
350	14"	265	25	16	22	15°	1034	2353	650	41.13
400	16"	265	25	16	22	15°	1034	2353	650	47.80
450	18"	265	25	16	22	15°	1034	2353	650	58.18
500	20"	265	25	16	22	15°	1034	2353	650	67.20
600	24"	254	25	16	19	15°	1034	2353	650	76.50

Short Length

NB mm	Size inch	Length mm	Axial Comp. mm	Axial Exten. mm	Lateral Deflect. mm	Angular Deflect Degrees	Working Pressure kPa	Burst Pressure kPa	Vacuum Rating mm/Hg	Weight incl Flanges kg
25	1"	130	12	9	12	15°	2065	5884	650	2.16
32	1 1/4"	130	12	9	12	15°	2065	5884	650	3.21
40	1 1/2"	130	12	9	12	15°	2065	5884	650	3.90
50	2"	130	12	9	12	15°	2065	5884	650	4.70
65	2 1/2"	130	12	9	12	15°	2065	5884	650	5.92
80	3"	130	12	9	12	15°	2065	5884	650	6.91
100	4"	130	14	9	14	15°	2065	5884	650	7.53
125	5"	130	14	9	14	15°	2065	5884	650	10.06
150	6"	130	14	9	14	15°	2065	5884	650	13.53
200	8"	130	14	9	14	15°	2065	5884	650	17.67
250	10"	130	14	9	14	15°	2065	5884	650	20.99
300	12"	130	16	9	16	15°	2065	5884	650	24.16

Imperial Length

NB mm	Size inch	Length mm	Axial Comp. mm	Axial Exten. mm	Lateral Deflect. mm	Angular Deflect Degrees	Working Pressure kPa	Burst Pressure kPa	Vacuum Rating mm/Hg	Weight incl Flanges kg
25	1"	152/6"	12	9	12	15°	2065	5884	650	1.99
32	1 1/4"	152/6"	12	9	12	15°	2065	5884	650	3.03
40	1 1/2"	152/6"	12	9	12	15°	2065	5884	650	3.69
50	2"	152/6"	12	9	12	15°	2065	5884	650	4.22
65	2 1/2"	152/6"	12	9	12	15°	2065	5884	650	5.63
80	3"	152/6"	12	9	12	15°	2065	5884	650	6.03
100	4"	152/6"	15	9	12	15°	2065	5884	650	6.83
125	5"	152/6"	15	9	12	15°	2065	5884	650	9.43
150	6"	152/6"	15	9	12	15°	2065	5884	650	12.26
200	8"	152/6"	15	9	12	15°	2065	5884	650	17.68
250	10"	203/8"	15	12	19	15°	2065	5884	650	22.22
300	12"	203/8"	19	12	19	15°	2065	5884	650	25.30
350	14"	203/8"	25	12	19	15°	1034	2353	650	41.07
400	16"	203/8"	25	12	19	15°	1034	2353	650	49.78
450	18"	203/8"	25	12	19	15°	1034	2353	650	56.89
500	20"	203/8"	25	12	19	15°	1034	2353	650	65.00
600	24"	254/10"	25	12	19	15°	1034	2353	650	77.50



Control Rods must be used when pressure exceeds the rating below

	1" - 4"	5" - 10"	12" - 14"	16" - 24"
Size	25 - 100 mm	125 - 250 mm	300 - 350 mm	400 - 600 mm
kPa	1035	931	621	310

When the operating temperature exceeds 75 °C – Derate maximum pressures as follows:

DE-RATE PRESSURE (kPa)			
80°C	90°C	100°C	110°C
15%	30%	35%	40%

Reference

1. Elastomer Materials – EPDM, Nitrile, Hypalon, Neoprene, Butyl, SBR, Natural rubber for your specifications
2. Flange Drilling – DIN, JIS, ANSI, BS and other standard drilling for your specification
3. Applicable fluids – water, warm water, seawater, weak acids, alkalis, etc.