

Gillies Pipe Bellows

Technical Guide W5.11

Single sphere moulded rubber bellows with loose flanges are ideal for pump isolation or compensating for minor pipeline misalignment.



03.22 | W5.11 GILLIES PIPE BELLOWS

Applications

Pump vibration isolation
 Limited pipeline misalignment
 Potable water
 Raw water

Product Attributes

Single sphere moulded rubber bellows
 Electro-plated galvanised steel flanges
 PN16 rated

Approvals/Standards

Flanges to AS4087 Fig. B5 PN16

Quality

ISO 9001 Quality
 Management Systems

We are the supply partner of choice for New Zealand's civil construction industry, specialising in water and infrastructure based solutions.

Single sphere rubber bellows to isolate pump vibration and noise from the surrounding pipe work. Loose flanges allow for easy fitting and minor misalignment.

Pipe bellows consist of a rubber section moulded to shape and fitted with a rotatable coated steel flange at each end for connection to flanged pipework.

Applications

- Compensate for heat-generated expansions
- Compensate for the settlements of terrain or building structures**
- Absorb machinery vibrations and reduce the noise they produce
- Soften the impact of water hammer
- Create disassembly joints
- Suitable for pressure or suction duty*
- Can be fitted between tank and pipe work

Note:

- *Vacuum application bellows must be installed in a neutral position.
- ** For buried service please see Hygrade

Features

- Requires little space
- Absorbs axial, lateral and angular movement
- Safe, reliable and durable – maintenance free
- High capacity acoustic damping

Accessories

- Expansion limit rods
- Other flange drillings
- Stainless steel flanges
- HDG flanges

Testing

- Tested to three times rated pressure

Technical Data

- Size Range: DN32 - DN600
(other sizes available on request)
- Pressure Range: PN16
(Up to PN40 available on request)
- Vacuum: partial vacuum possible*
- Temperature Range: - 20°C to +80°C
- Flange Drilling: AS 4087 Fig. B5
- Pressure Tests: 3 times maximum rated pressure

TABLE 1

No.	Description	Material
1	Cover	EPDM
2	Reinforcing Fabric	Nylon
3	Tube	EPDM
4	Retaining Rings	Zinc plated steel (standard)
5	Flange	Zinc plated steel (standard)

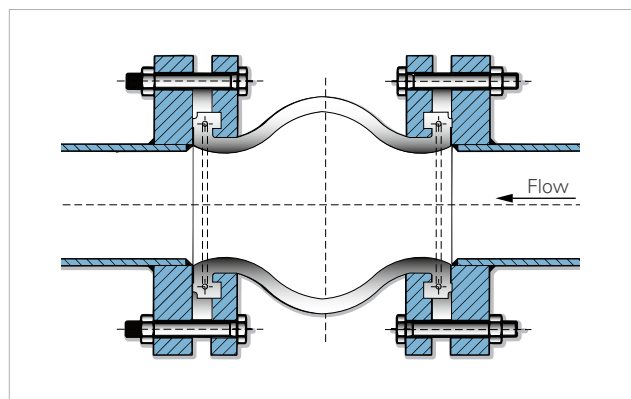


FIG. 1 Spherical moulded design

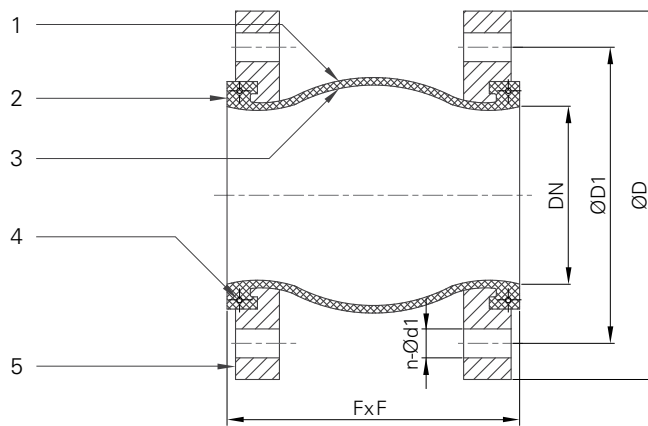








FIG. 2

TABLE 2 Product Range

Item Code	Dimensions				AS2129 Table E	AS4087 Fig. B5	Movements*			
	DN	FxF	ØD	ØD1	n-Ød1	n-Ød1	Axial Elong.	Axial Comp.	Lateral	Angular (°)
	32	95	120	87	4-14		6	9	9	15
BR040AS4087	40	95	135	98	4-14		6	10	9	15
BR050AS4087	50	105	150	114	4-18		7	10	10	15
BR065AS4087	65	115	165	127	4-18		7	13	11	15
BR080AS4087	80	130	185	146		4-18	8	15	12	15
BR100AS4087	100	135	215	178		4-18	10	19	13	15
BR125AS4087	125	170	255	210	8-18		12	19	13	15
BR150AS4087	150	180	280	235		8-18	12	20	14	15
BR200AS4087	200	205	335	292		8-18	16	25	22	15
BR250AS4087	250	240	405	356		8-22	16	25	22	15
BR300AS4087	300	260	455	406		12-22	16	25	22	15
	350	255	525	470		12-26	16	25	22	15
	400	255	580	521		12-26	16	25	22	15
	450	255	640	584		12-26	16	25	22	15
	500	255	705	641		16-26	16	25	22	15
	600	260	825	756		16-30	16	25	22	15

Note:



= Available on request. Indent.

*Movements are not concurrent.

Maximum deflection in one plane may result in less deflection being available in all other planes.

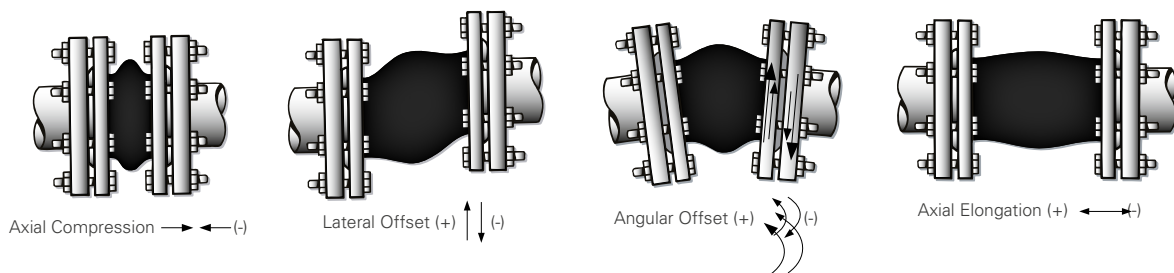
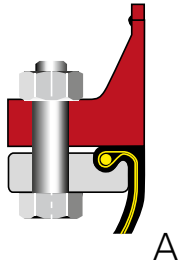


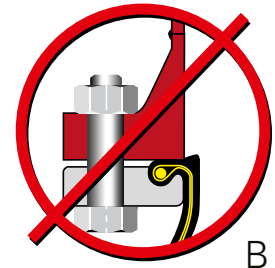
FIG. 3 Movements

Joints with Beaded End Flanges

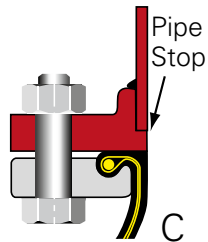
Right:
 Weld neck flanges with correct ID prevent damage to rubber.



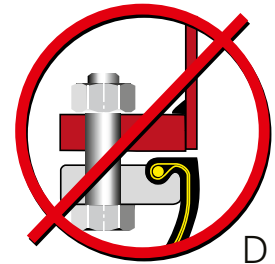
Wrong:
 Insure mating flange I.D. is flush with rubber.



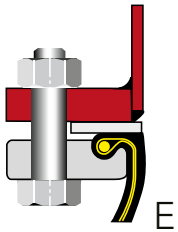
Right:
 Flanges with correct ID help prevent damage to rubber.



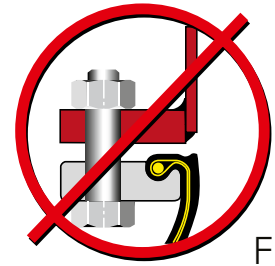
Wrong:
 Uneven end of pipe can cause damage to rubber.



Right:
 In case of B, D, F an additional metal gasket can be used to prevent damage to rubber.



Wrong:
 Inner edge of flanges damages rubber.



Right:
 Well rounded smooth edge prevents damage to rubber.

