

# 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.



01.24 | 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

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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

Testing

- Tested to three times rated pressure

Technical Data

- Size Range: DN40-DN300
- Pressure Range: PN16
- 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)

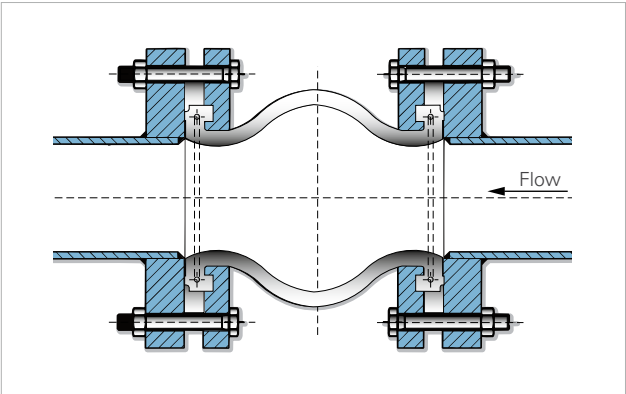


FIG. 1 Spherical moulded design

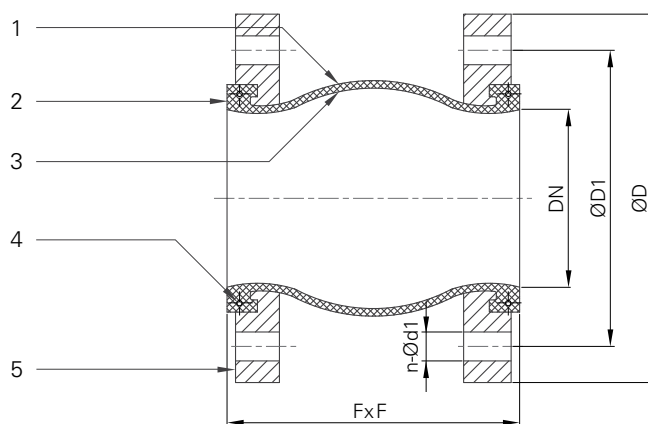


FIG. 2

TABLE 2 Product Range

Code	Dimensions				AS2129 Table E	AS4087 Fig. B5	Movements*			
	DN	FxF	ØD	ØD1	n-Ød1	n-Ød1	Axial Elong.	Axial Comp.	Lateral	Angular (°)
BRSS040DF	40	95	135	98	4-14		6	10	9	15
BRSS050DF	50	105	150	114	4-18		7	10	10	15
BRSS065DF	65	115	165	127	4-18		7	13	11	15
BRSS080DF	80	130	185	146		4-18	8	15	12	15
BRSS100DF	100	135	215	178		4-18	10	19	13	15
BRSS150DF	150	180	280	235		8-18	12	20	14	15
BRSS200DF	200	205	335	292		8-18	16	25	22	15
BRSS250DF	250	240	405	356		8-22	16	25	22	15
BRSS300DF	300	260	455	406		12-22	16	25	22	15

**Note:**

\*Movements are not concurrent.

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

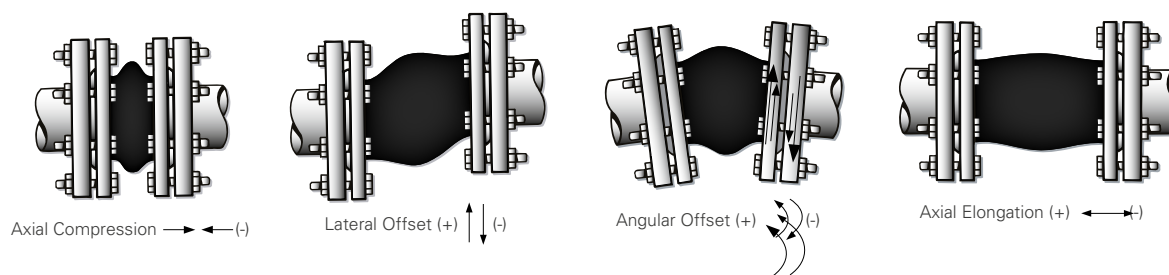
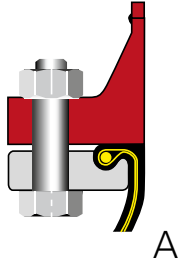


FIG. 3 Movements

## Joints with Beaded End Flanges

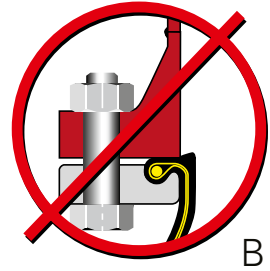
Right:

Weld neck flanges with correct ID prevent damage to rubber.



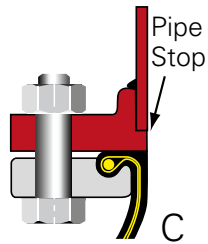
Wrong:

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



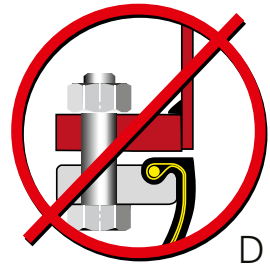
Right:

Flanges with correct ID help prevent damage to rubber.



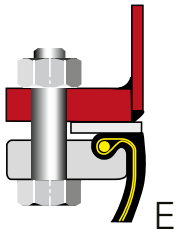
Wrong:

Uneven end of pipe can cause damage to rubber.



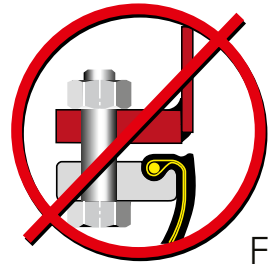
Right:

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



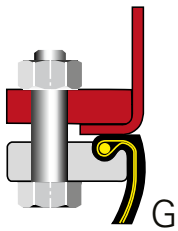
Wrong:

Inner edge of flanges damages rubber.



Right:

Well rounded smooth edge prevents damage to rubber.



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