

WRAS-approved flexible bellows – PN16 flanged

The Dutypoint range of WRAS-approved flexible bellows provides necessary protection from vibration and water hammer, facilitating a quieter system overall.

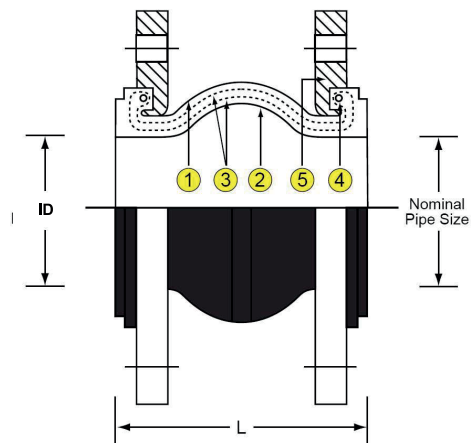
Fitted with PN16 flange. Sizes from 32 mm - 150 mm applications. These valves are manufactured from high-quality materials, ensuring trouble-free usage.

NOTES

- Higher temperatures affect movement and pressure. As temperature increases, rated value must be reduced accordingly
- Pressures are recommended to show 'operating' - test pressure is 1.5 times 'operating'
- Vacuum rating is based on neutral installed length without external load. Products shall not be installed 'elongated' on vacuum applications
- Expansion joints may operate in pipelines or equipment carrying fluids at evaluated temperatures and pressures
- Normal precautions shall be taken to make sure these parts are installed correctly and inspected regularly
- Precautions should be taken to protect personnel in the event of a leakage or splash
- Bellows for fluids other than those stated are available on request

TECHNICAL SPECIFICATION

Working temperature	-10°C to 90°C
Max. working pressure	16 bar at ambient
Vacuum rating	700 mm HG
Applicable fluids	Water, warm water, sea water, air, weak acid
Test pressure	1.5 x working pressure (24 bar max.)
Flanges standard	EN1092-1, PN16 as standard



Dutypoint strongly recommends the need to switch from untied flexible connectors to tied flexible connectors in the following circumstances:

- In unanchored / unsupported systems
- When inertia bases or spring mount / hangers are being used

Additionally, tied units must only be used when the users are expecting to exceed the rated movements or the system operating pressure exceed the values stated.

MATERIAL SPECIFICATION

Body (outer layer)	EPDM
Body (inner layer)	EPDM
Reinforcing fabric	Nylon fabric
Wire	Hard steel wire
Flange	Mild steel (galvanised)



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OPERATING TEMPERATURE AGAINST OPERATING PRESSURE

Operating temperature (°C)	Ambient	50	60	70	80	90
Max operating pressure (bar)	16	12.4	10	7.5	6.5	4

PRODUCT SPECIFICATION

Code	Nominal pipe size (mm)	Neutral length (L) (mm)	Internal diameter (ID)	Axial compression (mm)	Axial elongation (mm)	Lateral deflection (+ or - mm)	Angular deflection (+ or - °C)
FRB32	32	130	29 ± 3	12	10	12	15
FRB40	40	130	37 ± 3	12	10	12	15
FRB50	50	130	47 ± 3	12	10	12	15
FRB65	65	130	62 ± 3	12	10	12	15
FRB80	80	130	77 ± 3	12	10	12	15
FRBT100	100	130	95 ± 3	12	10	12 <td 15	
FRBT125	125	130	120 ± 5	12	10	12	15
FRBT150	150	130	145 ± 5	12	10	12	15

RATED MOVEMENT

Tied units are recommended when the operating pressures achieve the following values

Nominal pipe size (mm)	Pressure
15 to 100 mm	8 bar
125 to 250 mm	6 bar
300 to 350 mm	4 bar
400 mm and above	2.5 bar

