Interflex Hose & Bellows Ltd. • ***www.interflex.co.uk***
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Tel: +44 (0)1584 878500 • Email: enquiries @ interflex.co.uk

Rubber Expansion Joint Type W55SO

Type W55SO is a low corrugation bellows compensator with good sound insulating characteristics (structure- and liquid-borne noise). It is characterized by a high expansion absorption capability, in particular in the angular plane.

Design:
Low corrugation rubber bellows with reinforcing inserts and integral sealing bead (therefore self-sealing without additional gaskets) for accommodating the swivel flanges. The flanges are provided with through holes.

Specifications for DN 20 - DN 300

Bellow		Bellow design			Permissible operating data									Surface resistance Ro	
Colour code	Colour marking	Core (inner)	Rein-forcement	Cover (outer)	°C	bar	°C	bar	°C	bar	°C	bar	Short-term °C	Core	Cover
														Ohm x cm	Ohm x cm
red		IIR	Polyamide	EPDM	-40	10	50	16	70	12	100	10	120	7 x 10^6	1 x 10^3
yellow		NBR	Polyamide	CR	-20	10	50	16	70	12	90	10	100	2 x 10^2	1 x 10^3

- Bursting pressure for DN 20 - DN 300: > 48 bar
- DN 250 and DN 300 max. 10 bar working pressure

Use

Type 55 SO red
For drinking water, hot water, sea water, cooling water with chemical additives for treating water, saline solutions, weak acids and weak alkaline solutions. Electrically dissipative inner surface and electrically conductive outer surface. Not suitable for oil products or cooling water with additives containing oil.

Type 55 SO yellow
For oils, lubricants, fuels, gases, city and natural gas (not liquefied) and DIN EN fuels with an aromatic content up to 50 %. Electrically conductive.

Flange: (Design A)
Swivel flanges both sides (design A) with integral rubber profile, so that additional gaskets are not required (self-sealing).

The flanges are drilled to DIN PN10 or PN16 as standard. Other specifications in accordance with DIN, ANSI, BS10, JIS. Special flanges are also available.

Flange material:
Standard S235 JRG2 (RSt 37-2) zinc-plated and yellow passivated. Other materials are available on request including hot dipped galvanised steel, and stainless steel.

Note:
For aggressive media, see resistance table.
The bellows must not be painted or insulated.
Further installation information, see Annex.

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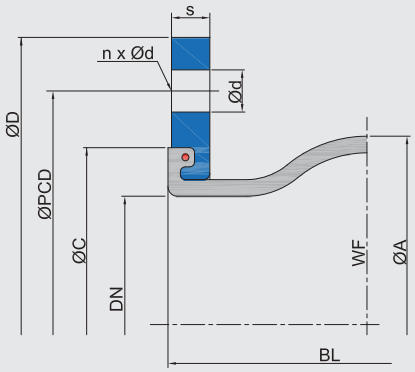
Rubber Expansion Joint Type W55SO

Design A - without tie rods

Can be used for movement absorption in any direction (for combined movements, see the movement diagram in the technical appendix), noise and vibration insulation.

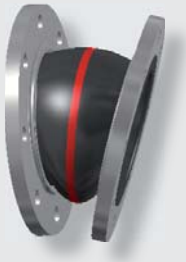
The expansion joints reaction force must be absorbed via suitable piping.




axial -


axial +


lateral ±


angular ±

Dimensions

DN	Overall length BL	Bellow ØA	Bellow WF*1	Flange PN 10*2 ØD	ØPCD	Ød	n	s	ØC	Movement absorption axial +	axial -	lateral ±	angular ±	Weight
	mm	mm	mm²	mm	mm	mm		mm	mm	mm	mm	mm	∠°	kg
20	**160**	81	1700	105	75	12	4	14	66	30	30	30	30	1.5
25	**160**	81	1700	115	85	14	4	14	66	30	30	30	30	1.9
32	**160**	81	1700	140	100	18	4	15	66	30	30	30	30	3.1
40	**160**	86	1800	150	110	18	4	15	74	30	30	30	30	3.5
50	**160**	96	3200	165	125	18	4	16	86	30	30	30	30	3.7
65	**160**	111	5300	185	145	18	8	16	106	30	30	30	30	5.3
80	**160**	122	8500	200	160	18	8	18	118	30	30	30	30	6.8
100	**160**	142	12800	220	180	18	8	18	138	30	30	30	20	7.9
125	**160**	168	18700	250	210	18	8	18	166	30	30	30	20	9.6
150	**160**	192	25900	285	240	22	8	18	192	30	30	30	20	12.9
200	**160**	252	41000	340	295	22	8	20	252	30	30	30	12	16.2
250	**200**	302	59600	395	350	22	12	20	304	30	30	30	12	21.5
300	**200**	354	82200	445	400	22	12	22	354	30	30	30	12	24.5

Permissible degree of utilisation for movement areas:
up to 50 °C: Utilisation ~ 100 %
up to 70 °C: Utilisation ~ 75 %
up to 90 °C: Utilisation ~ 60 %

Shock absorption in any direction ±50 mm

*1 WF = effective area
*2 Other standards/dimensions possible.

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Vacuum resistance

- DN 20 to 50 vacuum-resistant without additional accessories
- DN 65 to 250 up to -200 mbar without additional accessories
- DN 300 not vacuum-resistant without additional accessories
- DN 65 to 300 with vacuum supporting spiral/ring vacuum-resistant

Approvals

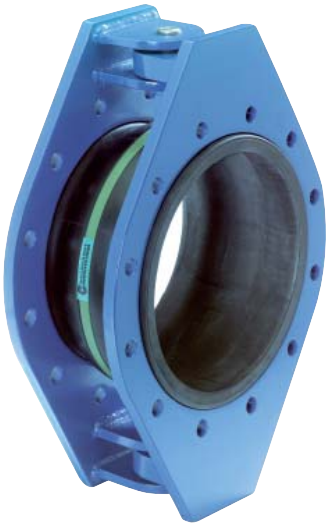
Drinking water and shipbuilding approval

Accessories

- Guide sleeves
- Potential equalisation
- Flame-resistant protective covers
- Dust and splash protection covers
- Earth cover / sun protection hoods
- Segment tie rods

Since the rubber bellows is a soft flexible component, under pressure, the compensator will always try to move in the axial direction because of its reaction force (bellows cross sectional area x working pressure).

Pipework must be properly anchored and guided (with roller bearings, restraining or anchor points) ; and tie bars fitted on the compensator so that any over-extension of the bellows is avoided.
See our range of tie bars below.



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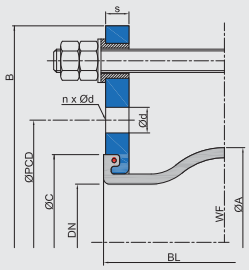
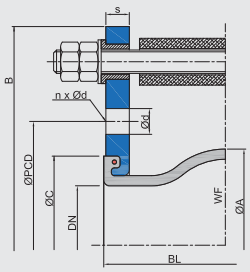
There is a selection of various length limiters / tie rods to absorb the reaction force and to protect the bellow from overstretching or collapsing:

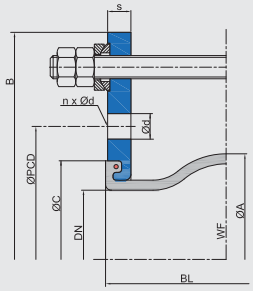
Design B*
with tie rods



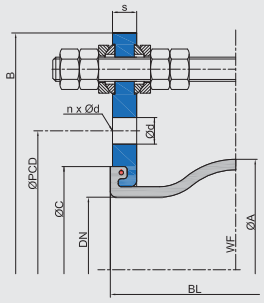
Design C*
with tie rod/thrust limiters



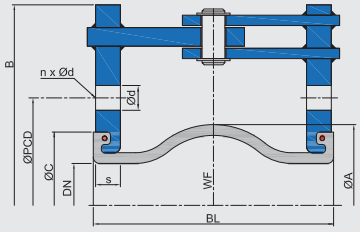
Design E
with tie rods and spherical washers/conical sockets



Design M
with tie rods/thrust limiters with spherical washers/conical sockets



Design F
with hinge



*Note: For Designs B and C
the lateral movement absorption is reduced by around 50 %.