TYPE 61

TYPE 61
RUBBER EXPANSION JOINT



DN 50 to DN 1500
Type 61 is a handmade, low corrugated Rubber Expansion Joint with a low corrugation shape to minimise flow resistance.
Both sides of the Bellow are designed with cylindrical ends for clamp fastening. It is characterised by its large movement absorption in all directions and a variety of rubber qualities, so that a suitable rubber compound is available for almost every application (material descriptions are available on request).

Type 61 is used in plant engineering, waste water technology, engine construction and ventilation technology. Here it is used especially for movement and vibration absorption and for noise damping.

Bellow design
Low corrugated rubber Bellow with reinforcement, both ends cylindrical for fixing clamps. The Bellow is designed with a corrugation as standard. Uncorrugated and multi-corrugated versions for greater movement absorption are possible.

Connections
Sleeve ends for ISO pipes (standard) for fixing clamps. The clamp width should be at least 20 mm (up to 3 bar: one clamp per side; above 3 bar: two clamps per side).

Vacuum resistance
Only vacuum-proof with vacuum supporting spiral/rings.

Approvals/conformity
FDA and EG 1935/2004 conform CE and drinking water approvals available on request.

Accessories
- Vacuum supporting spiral/rings
- Potential equalisation
- Flame-resistant protective covers
- Dust and splash protection covers
- Earth cover / sun protection cover

Further information is available on request.



Important information:
For aggressive media, please have the material resistance checked by our engineers.
The Bellows must not be painted or insulated at media temperatures >50°C.
Please also note the installation instructions, which is available on request.

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SPECIFICATIONS & APPLICATION

BELLOW		BELLOW DESIGN*			PERMISSIBLE OPERATING DATA					
Colour code	Colour marking	Core (inner)	Rein-forcement	Cover (outer)	Max. temperature °C	°C bar	°C bar	°C bar	°C bar	°C bar
Red		EPDM	Polyamide	EPDM	100					
Yellow		NBR	Polyamide	NBR	90					
Green		CSM	Polyamide	CSM	100					
Grey		CR	Polyamide	CR	90					
Red-white		EPDM light	Polyamide	EPDM	100					
Yellow-white		NBR light	Polyamide	NBR	90					
Lilac		FPM	Aramid	FPM	200					
Silicone	-	Silicone	Aramid	Silicone	200					

Expansion Joints will be designed according to your operating parameters.

*: Other rubber compounds/reinforcements on request.

APPLICATION

Type 61 Red (EPDM)
For water, sea water, cooling water with glycol or other chemical additives for treating water, salt solutions, weak acids and weak alkalis. Unsuitable for aliphatic, aromatic and chlorinated hydrocarbons, oil or oily media.

Type 61 yYellow (NBR)
For oils, fats, gases, diesel fuels, kerosene and crude oil. Not suitable for aromatic and chlorinated hydrocarbons, esters and ketones.

Type 61 Green (CSM)
For chemicals, aggressive, chemical waste water and compressor air containing oil.

Type 61 Grey (CR)
For water, waste water, swimming pool water, salt water, cooling water with anti-corrosive products containing oil, oil mixtures and compressed air containing oil.

Type 61 Red-white (EPDM light)
Like Type 61 red, but with light-coloured rubber in food-grade (FDA and EG 1935/2004 conform). Not approved for drinking water.

Type 61 Yellow-white (NBR light)
Like Type 61 yellow, but with light-coloured rubber in food-grade (FDA and EG 1935/2004 conform). Not approved for drinking water!

Type 61 Lilac (FPM)
For flue gas desulphurisation systems and bio-diesel. High chemical resistance to benzene, xylene, toluene, aromatic, chlorinated hydrocarbons, mineral acids and fuels with an aromatic content of more than 50%. For temperatures of up to +180°C.

Type 61 Silicone (silicone)
Suitable for hot air, acetic acid. Satisfactory resistance to aliphatic engine and gear oils. Also available in foodstuff quality. Excellent resistance to ageing, UV, ozone and weather. Very good radiation resistance. Not for use with steam above 120°C. No resistance to fuels.

Important information:
Please note the appropriate fix point constructions and plain bearings in your piping system, as well as the tolerances as per the FSA Handbook (technical appendix is available on request.) Please refer to the installation instructions, which is available on request.

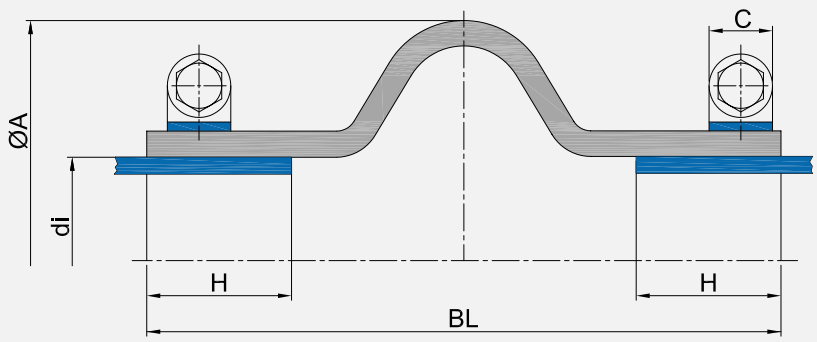
TYPE
61

TYPE 61-1
SINGLE-CORRUGATED



TYPE 61-1 - SINGLE-CORRUGATED

Can be used for absorbing movements in all directions (for combined movements, refer to the movement diagram, which is available on request), for vibration and noise damping. The Expansion Joints reaction force must be absorbed through appropriate pipeline guidance. (Please refer to the installation instructions, which is available on request).



TYPE 61

DIMENSIONS FOR **TYPE 61-1**

DN	LENGTH	BELLOW		FLANGE PN 10		MOVEMENT ABSORPTION*2				PREASURE MAX.
						AX		LA	AN	
	BL mm	di mm	WF*1 mm²	Cylinder end H mm	Clamp C mm	+ mm	- mm	+/- mm	+/- ∠°	bar
50	**250**	60.3	155	55	20	15	30	25	21.8	6
65	**250**	76.1	191	55	20	15	30	25	17.1	6
80	**250**	88.9	224	55	20	15	30	25	14.0	6
100	**250**	114.1	297	55	20	15	30	25	11.3	6
125	**250**	139.7	379	55	20	15	30	25	9.1	6
150	**250**	168.3	484	55	20	15	30	25	7.6	6
200	**250**	219.1	703	55	20	15	30	25	5.7	6
250	**250**	273.0	979	55	20	15	30	25	4.6	6
300	**250**	323.9	1281	55	20	15	30	25	3.8	6
350	**250**	355.6	1292	65	25	15	30	15	3.3	6
400	**250**	406.4	1636	65	25	10	30	15	2.9	6
450	**250**	457.0	2020	65	25	10	30	15	2.5	6
500	**250**	508.0	2445	65	25	10	30	15	2.3	6
600	**250**	610.0	3417	65	25	10	30	15	1.9	4
650	**250**	660.4	3964	65	25	10	30	15	1.8	4
700	**250**	711.0	4551	65	25	10	30	15	1.6	4
750	**250**	762.0	5178	65	25	10	30	15	1.5	4
800	**250**	813.0	5847	65	25	10	30	15	1.4	4
900	**250**	914.0	7305	65	25	10	30	15	1.3	4
1000	**250**	1016.0	8925	65	25	10	30	15	1.3	4
1100	**250**	1117.6	10496	65	25	10	30	15	1.1	3
1200	**250**	1219.0	12370	65	25	10	30	15	1.0	3
1300	**250**	1320.8	14420	65	25	10	30	15	0.9	2
1400	**250**	1422.0	16627	65	25	10	30	15	0.8	2
1500	**250**	1524.0	18991	65	25	10	30	15	0.8	2

*1: WF = effective area

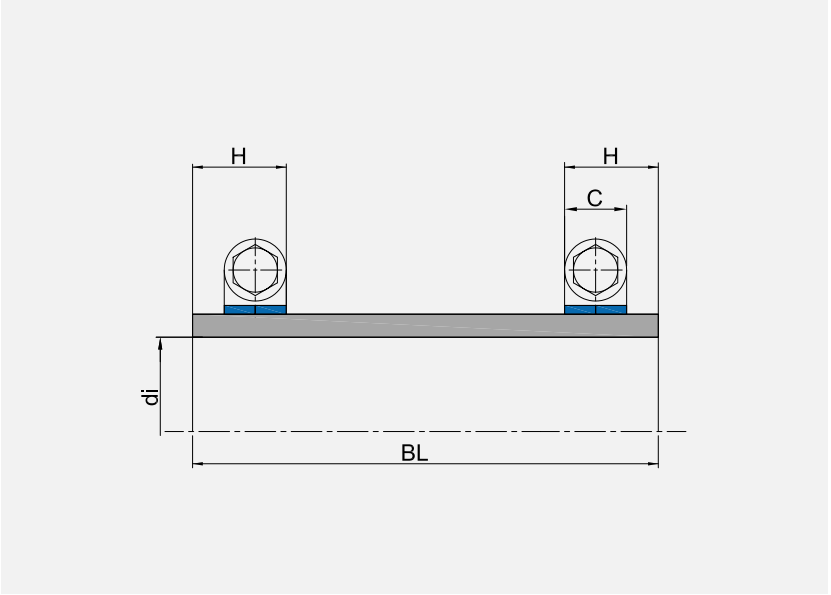
*2: Utilisation rate of movement absorption decreases at higher temperatures (More information is available on request).

- Intermediate sizes and overall length changes possible on request.
- Greater movement absorption possible by changing the overall length/corrugation profile and by changing to a multi-corrugated type (up to 5 corrugations).
- The use of a vacuum supporting ringe (Typ 61-...V) reduces the movement aporption axial+ und angular+/- by 60%.

TYPE 61

DESIGNS
TYPE 61-0 AND 61-2

Type 61-0 - uncorrugated
Can be used to absorb vibration and insulate sound. Cannot be used to absorb axial movement.



Type 61-2 - double-corrugated
Can be used to absorb movement in any direction (for combined movements, see the movement diagram, which is available on request), to absorb vibration and to insulate sound.

