

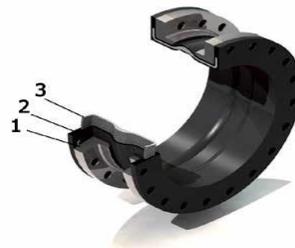
▪ **Construction of ready-made products**

The construction of expansion joints is closely related to their intended use. The production of expansion joints is carried out according to the strict production technology, and each final product undergoes pressure tests confirming the strength of the expansion joint and approval for use in given conditions. By nature, compensators, as well as other ready-made products, have an inner and outer layer of rubber that protects the compensator against media or atmospheric conditions in environment in which they work. The heart of the compensator is reinforcement, i.e. synthetic cord acting as an main strenghtening element.

The reinforcement consists of several layers arranged crosswise at the right angle, the number of layers depends on the pressure at which the compensator is predicted to work.

The compensator is installed with flanges made of ordinary galvanized steel or stainless steel. The shape of the flanges also depends on the purpose and the pressure of the medium.

- 1. **Motion limiter** - applied to protect against exceeding value of displacement - max. pipeline compensation.
- 2. **External layer** EPDM/NR.
- 3. **Synthetic cord** – protect against a bellow failure and damages.
- 4. **Inner layer** EPDM/NBR/NR – depends on the type of transported medium



Joint extensioners with rotary flanges TYPE A



Joint extensioners with non - rotary flanges TYPE B



TYPE	Requirements	Benefits/Advantages
<b>A - rotary</b>	Particular attention should be paid during assembly, so that, no stress on the pipeline is transferred to the expansion joint.	1. Easier to center the flange holes. 2. Due to lower surface pressure - lower bolt tightening moments.
<b>B- non rotary</b>	Accurate centering of holes in pipeline flanges with holes in compensator flanges are required.	Less susceptibility to the seal slipping out from under the flange - can be used for higher pressures.