Elastomeric compensators

An elastomer is a synthetic or natural polymer material, with ability to return to its original shape after deformation caused by mechanical stress, without any damage to its structure. The group of elastomers comprises a wider variety of materials than rubber, which is only one of the classes within this group. The elastomer has the ability to undergo deformation in a wide range of its dimensions under the influence of tensile, shear or compressive force and regain its original dimensions once the force has been removed.
Elastomeric compensators are intended to work in constant working temperature reaching above +200°C (depending on a bellow material). Each compensator is made of an elastomeric material with one or more layers of reinforcement vulcanized together to form one robust and resistant material. There is no standard set of dimensions for this type of compensators so they can be freely manufactured in any shape or dimension. Available as round, rectangular or oval with length adjusted to fit the installation. The length of these compensators is not fixed as it depends on displacement that is to be absorbed by the compensator. This type of compensators is the best choice for the transfer of wet gases and exhaust in ducting of hot air or chimney installations. They can efficiently absorb multidirectional displacement and vibration of hose assemblies and any incidents of misalignment.

There are four basic materials used to make elastomeric compensators:

EPDM - Resistant to the influence of hot air, unoiled exhaust gases and weather conditions. Not intended for contact with fat, oils and petrochemicals. Suitable for installations with a constant working temperature up to +120°C and working pressure up to 50 kPa.
FKM (Viton B) - Excellent resistance to chemicals and high temperature. Resistant to the chemical impact of mineral oil and acid particles contained in exhausts as well as sulphurcompounds (SO and H_2S) in carbon and mineral oil exhausts. Suitable for dry and wet installations with a constant working temperature up to +200°C and working pressure up to 50 kPa.
PTFE - Combines excellent resistance to the majority of chemicals with high mechanical strength and low weight. Frequently used in sulphate removal installations where other materials are easily damaged by toxic compounds. Suitable for installations with a constant working temperature up to +250°C and working pressure up to 50 kPa.
SI (Silicone) - Temperature resistance is similar to Viton. It maintains its mechanical properties in a very wide range of temperatures. Used in e.g. food industry as it is taste and odour free. Resistant to extreme weather conditions, but not resistant to acids, oils and abrasion. Suitable for dry and wet installations with a constant working temperature up to +200°C (temporarily even higher) and working pressure up to 20 kPa.