
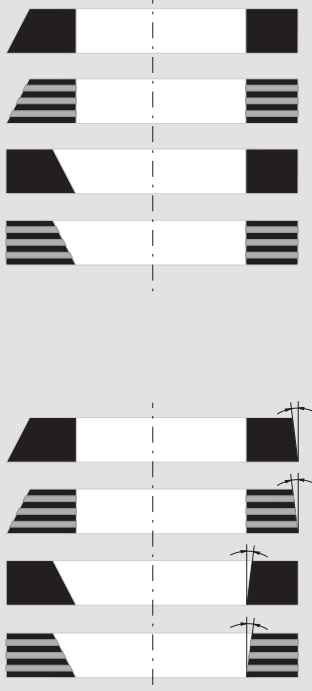

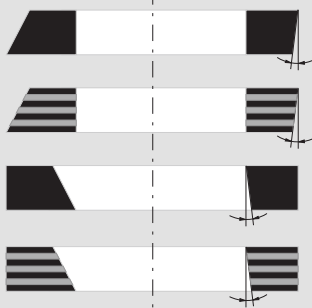
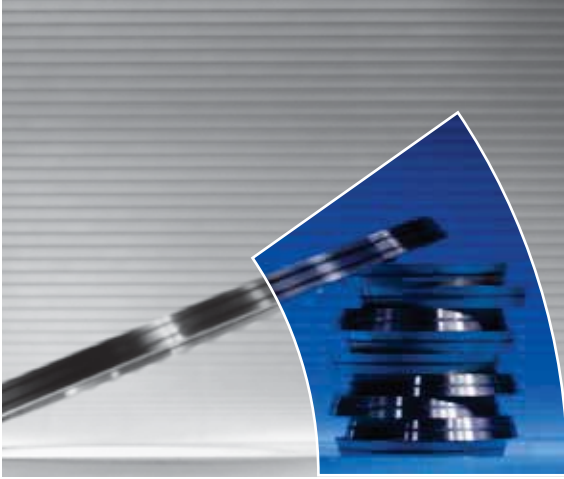


SPECIAL SEALING SYSTEMS


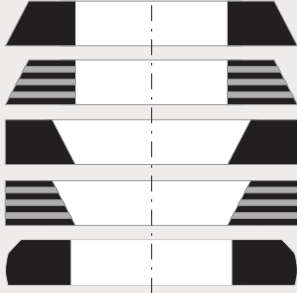
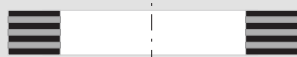
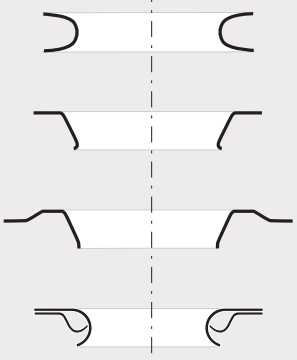
OFFSET SEALS FOR BUTTERFLY VALVES SPETORING® RQ-E, RT-E

Code	Sketch	Description
<p>SPETORING® RQ-E</p> 		<p>In terms of the kinematics of the butterfly valve disc movement double RD-E, triple RT-E and quadruple RQ-E eccentric seals may be distinguished. This structural characteristic has a significant impact on the geometry of the sealing surface. The purpose of the multi-eccentric valve structures is to minimize the friction in the area of sealing while closing and opening the butterfly valve.</p> <p>This is especially important issue for seals containing metal inside, due to the low flexibility of these seals (in compare to rubber based materials) and the real risk of wear due to grinding.</p> <p>The difference between triple- or quadruple- eccentric seals are may assume different contours, especially round or elliptical.</p> <p>All our offset seals are always made according to a precise documentation of the manufacturer of the butterfly valve.</p> <p>The range of dimensions of the internal metal laminate seals for butterfly valves is as follows is up to DN3000 (NPS 120").</p> <p>The most popular form of RQ-E, RT-E, RD-E seals are a graphite-metal laminated structure made of alternately combined layers of foil made of expanded graphite (characterized by specified quality, thickness and density) and inter-layers made of flat metal elements.</p> <p>The geometry of the seal and its material characteristics are determined in detail by the manufacturer of the fittings. This way, the specified leakage rate, durability, drive and structure of the valve is determining the selection of:</p> <ul style="list-style-type: none"> - the number of metal layers (in general, the layers may vary in terms of thickness – their number is usually between 2 and 12 and their thickness is usually between 0.5 and 5.00mm) - the number and the thickness of the soft inter layers (also in this case the layers may vary in thickness – their thickness is usually between 0.25 and 2.00mm, while their density is between 0.7 and 1.3 g/ccm).
<p>SPETORING® RT-E</p> 		<p>Above RQ-E, RT-E, RD-E seals may be:</p> <ul style="list-style-type: none"> - "disc mounted" if installed on the disk of butterfly valve, - "body mounted" if installed in the body of the butterfly valve.

SPECIAL SEALING SYSTEMS



OFFSET SEALS FOR BUTTERFLY VALVES SPETORING® RD-E, RU-E, RL-S

Code	Sketch	Description
<p>SPETORING® RD-E</p> 		<p>Depending on the case, the offset conical sealing surface is given either on the external surface (in case of "disc mounted") or internal surface of the laminate (in case of "body mounted"). As the complementary products, SPETECH® can also supply corresponding solid offset parts:</p> <ul style="list-style-type: none"> – offset solid metal ring to be mounted in the disc and work together with offset laminate seat, – offset solid metal seat to be mounted in the body and work together with offset laminate seal. <p>Standard sealing rings are capable of moving within the housing laterally, which facilitates their positioning in relation to the opposite sealing surface. Such solution, however, requires the application of secondary sealing which enables such movements.</p> <p>For this purpose other styles of customized SPETECH® back-up seals are available such as: spiral wounds, die-pressed graphite rings, self-energized seals, etc.</p>
<p>SPETORING® RU-E</p>		<p>Raw laminate RU-E manufacture by SPETECH provided with or without premachined inner or outer diameter. This product is delivered in aim to be given final offset shape by valve manufacturer.</p>
<p>SPETORING® RL-S</p>		<p>Alternatively to RD-E, RT-E and RQ-E seals presented above inside butterfly valves another solution may be installed. An optional solution available both for 2-offset and 3-offset valves is especially shaped elastic metal ring called SPETORING® RL-S.</p> <p>Shape of the SPETORING® RL-S can be given either by spinning or by machining. Springiness, mechanical strengths and other features may be modified by specific construction, shape and wide choice from many available materials.</p> <p>SPETORING® RL-S is normally installed in the body of the valve and (what is different from sandwich construction of offset rings) RL-S seal is resistant to any potential erosion due to lack of any soft material inside. But in the same moment (and in some of construction options), the RL-S seal is performing with much higher elasticity and self-energizing effect. Such features make the this solution very useful to work in high / frequently changing pressure and temperature.</p> <p>Details of this SPETORING® RL-S (construction / geometry / material used / additional surface plating) always are settled in co-operation between Spetech and valve manufacturer. Such solution we deliver for valves with size up DN3000 (or 120" adequately).</p>