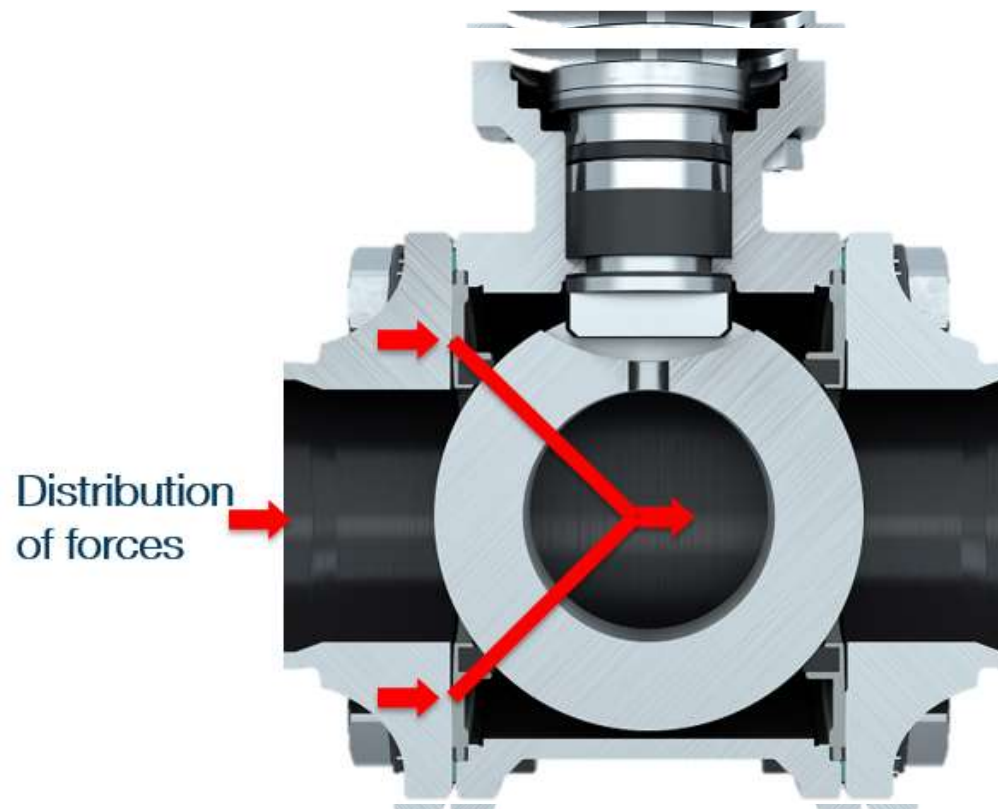


KHA NEW: OPERATION PRINCIPLE

Thanks to its "elastic sealing system, the ball valve guarantees full tightness at both high and lowest pressures.

The necessary contact forces between the spherical shut-off part and the sealing elements are generated by the differential pressure in the shut-off valve. With this sealing principle of the "FLOATING BALL" it is important that the shut-off part is freely guided between the two sealing rings. These rings perform a dual function: They guide the ball and absorb the bearing forces.

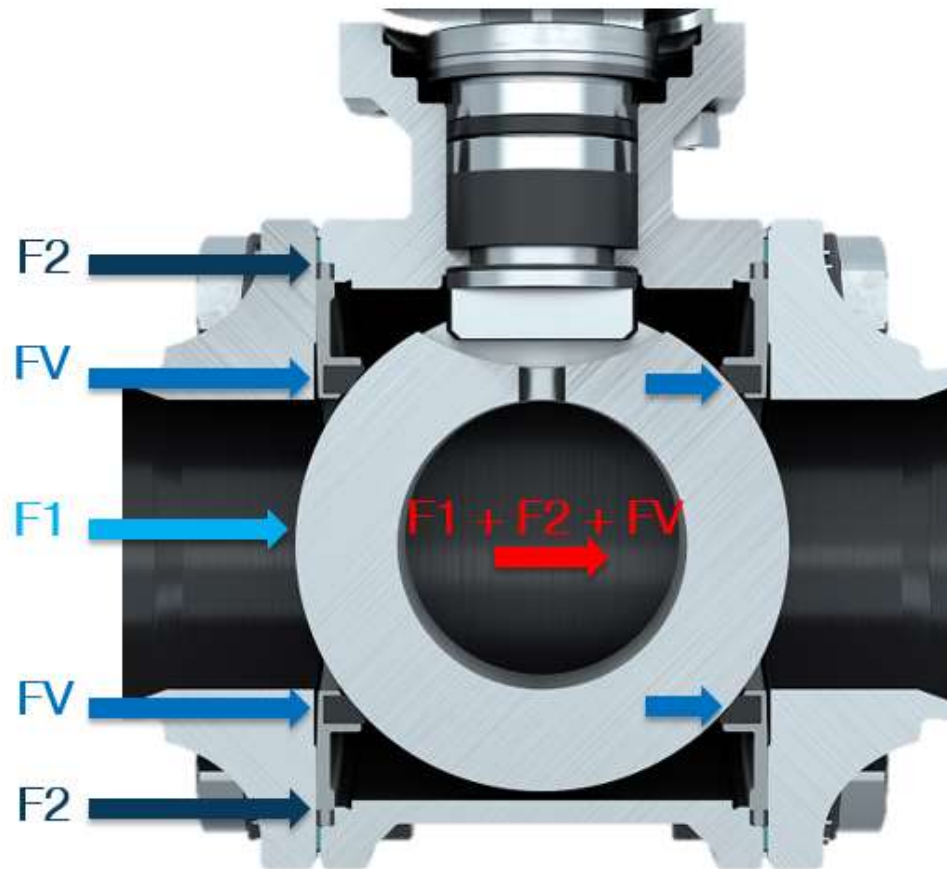
This principle is used for ball valves with smaller nominal diameters. At larger line sizes, the absorbed forces of the sealing rings increase. In order to achieve a long service life and to keep the operating forces for the swivelling movement as low as possible of the ball, this three-part design is not possible for all nominal diameters.



KHA NEW: MODE OF OPERATION



The two pre-stressed elastic sealing elements made of stainless steel with KFC sealing rings, a U – sleeve made of K- Flon at the upstream and downstream side of the ball valve and the ball create the sealing system. The pressure of the medium presses the ball into the downstream sealing element. At the same time, the upstream element is also pressed against the ball. The Ballostar® ball valve is maintenance-free and can be pressurized in both flow directions. The U- sleeve attached to the outer circumference of the sealing element is completely chambered and seals against the housing connection part.



Exerted forces:

F1: Force of the medium exerted on the ball

F2: Force of the medium exerted on the sealing element

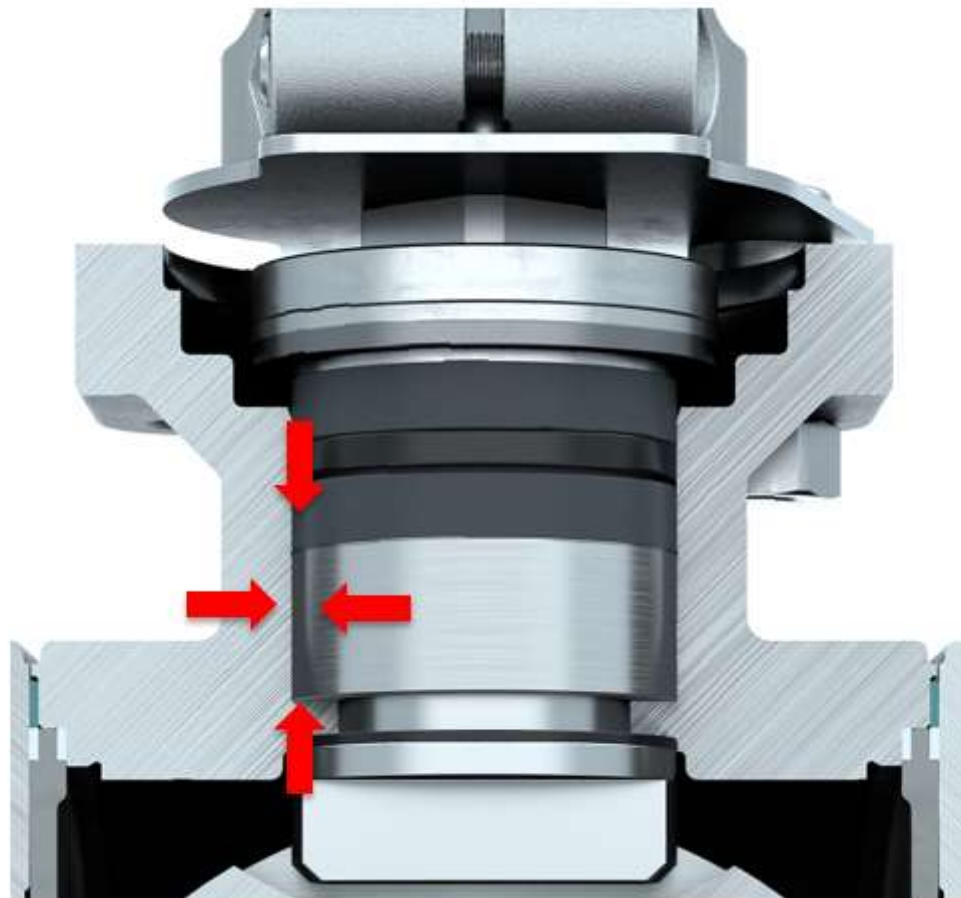
FV: Pre-stress force of the sealing element

F1+F2+FV: Total force exerted on the seat ring

KHA NEW- MODE OF OPERATION

The seal of the operating stem is formed by a STUFFING BOX supported by a belleville spring washer. This type of seal is virtually maintenance-free, has a low setting behavior and only minor contact forces are necessary to achieve tightness.

The belleville spring washer is positioned in a manner that a contact force is always exerted on the stuffing box. This ensures that temperature and pressure differences are compensated.



KHA NEW- MODE OF OPERATION

The disc of the sealing element prevents the sealing ring from flowing in radial direction (1), against the back side (2) and passage (3). The ball presses against the sealing ring (4). The sealing ring can neither settle nor flow away, as it is enclosed on all sides.

