EDF non-return valve

YGROS, which in Greek means fluid and flowing, bases itself on the desire to introduce innovation and simplicity to the world of non-return/unidirectional valves. The YGROS valve is based on the application of an external magnetic field to interrupt the backflow inside a pipe, by means of a shutter. This innovative idea guarantees a level of sterility which no other classic spring system can reproduce. As a matter of fact, using a system which excludes and completely substitutes the use of the classic spring, and by consequence any contact with the treated fluids, so total hygiene is guaranteed. No point of stagnation exists inside the valve body, and the fluids only make contact with material which has high chemical resistance.

Advantages

- EN ERGY LOSS / EN ERGY SAVING
  The YGROS EDF valve allows a very smooth fluid flow with consequent minimal energy loss.
- LAMINAR FLOW
  All the designed features of the shutter and the valve body are aimed at optimizing the flow and reducing turbulence to a minimum.
- HYGIENE
  Only the shutter comes in contact with the fluid while the valve is working, so there are no points of stagnation.

Technical features

The differential pressure needed to open the valve in a horizontal position is 0.05 bar; this differential pressure tends to zero when the valve is open and therefore operational losses of energy are almost zero.

Working principle

The YGROS EDF non-return valve opens when the inflow pressure exceeds that of the outflow and magnetic field pressure combined. The valve closes when the difference in pressure ceases. A higher backpressure pushes the valve shutter against the seal.

The major difference between a traditional unidirectional spring valve and the innovated YGROS EDF valve is in the resistance which the shutter offers to the passage of the fluid.

While a traditional spring valve, when open, offers the maximum resistance to the fluid, because the spring is at maximum compression, the YGROS EDF valve shutter offers a minimum resistance to the fluid, because it is far from the magnetic field and therefore has a minimal closing force.

Characteristics

- VALVE MATERIALS
  - AISI 304, AISI 316L, DUPLEX
- FINISHING SURFACES
  - Internal surfaces Ra<0.8, Ra<0.4
  - External surface Ra<1.2, Ra<0.8, blasted with microspheres of glass or ceramics, electro-polished
- POSITION
  The YGROS EDF valve can be mounted in any position.
- FLANGE MATERIALS
  - DIN 11851
  - Welding DIN 11851
  - Clamp
  - Welding Tri clover ASME BPE
- O-RING
  - EPDM, NBR, FPM (Viton), Silicone, FEP