

 VACUUM SYSTEMS

 WATER TREATMENT



**YGROS**  
VALVES

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VALVES



NON RETURN VALVES WAFER FOR THE  
VACUUM INDUSTRY AND WATER TREATMENT



*"What doesn't exist, can't get dirty... can't break"*

## WAFER 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 principle guarantees a degree of reliability which the classic spring system cannot match. As a matter of fact, by adopting this new system which excludes and completely substitutes the use of a spring, complete operating reliability is guaranteed and the vibrations of the classic spring valve are eliminated.

## Working principle

The YGROS Wafer 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 tradi-



## 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.

tional unidirectional spring valve and the innovated YGROS Wafer 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 Wafer valve shutter offers a minimum resistance to

the fluid, because it is removed from the magnetic field and therefore has a minimal closing force. The strength of the magnetic field can be modified to meet the requirements of different applications.

The feature of being able to alter the strength of the magnetic field allows valve installation in any position, even those of large dimension.

## Advantages

### ABSCENCE OF VIBRATION

This innovative idea is especially advantageous in plants where the fluid is compressible (such as GAS) or when the fluid is at a low pressure: as a matter of fact the YGROS Wafer valve stays open with a minimal differential pressure, thus avoiding the vibrations typically found in spring valve systems where the differential pressure to keep the valve open is at a maximum

### CHEMICAL CORROSION

The YGROS Wafer valve components which are in contact with the fluid are made of stainless steel suited to the process type, in particular the external body and the two connecting flanges are in AISI 304 or AISI 316, while the shutter is in DUPLEX: a special inoxidable material with ferromagnetic characteristics.

### POSITION

The YGROS Wafer valve can be mounted in any position.

## Characteristics

### VALVE MATERIALS

• AISI 304, AISI 316L, DUPLEX

### O-RING

• EPDM, NBR, FPM (Viton), Silicone, FEP

### FINISHING SURFACES

• Internal surfaces  $Ra < 1.2$   
• External surfaces  $Ra < 1.2$ , blasted with microspheres of glass or ceramics, electro-polished