

Characteristics of the GÄBLER-piston slide valve

The *GÄBLER-piston slide valve* shows some advantages, that make him first choice for all shut-off problems in pipelines for oxygen, technical gases and neutral liquids.

The body material is exclusively made of cast bronze, all other components that are in contact with the flowing medium are made of copper alloys, too.

Especially for pipelines for gaseous oxygen the hazard of an ignition of the pipeline materials is high. A sudden combustion might occur if particles like welding pearls, swarfs or major rust particles hit the surface with a sufficient impact leading to a sudden oxidation of the surface.

According to the recommendation of the EIGA document 13/02/E the flow velocity is limited for oxygen pipelines. With exempt materials materials like tin bronze the flow velocity can be increased and is not limited up to a pressure of 21 MPa.

Therefore the choice of tin bronze (without aluminium content) for oxygen pipelines is, due the *excellent heat conductivity* and the *low thermal energy set free at the oxidation of bronze* is of decisive importance and a fundamental aspect of safety.

The flow through the *GÄBLER-piston slide valve* is just insignificantly bent and reorientated and is at no place laced. The **Kvs-value of the valves is comparatively high.**

The piston is is guided on both ends for high reliability. Furtheron it is almost pressure-balanced in the closed position. Therefore the pressure / torque required for the opening of the valves is almost independant from the pressure difference over the closed valve.

The concept of the *GÄBLER-piston slide valve* includes a short piston stroke and the possibility of a smooth and slow opening as well as a **very fast closing**. Particularly the valves operated by own-medium through a 3/2-directional piloting valve can be used as safety quick shut-off valves.

GÄBLER-piston slide valves can be operated with the pipeline medium (own medium operation) with no additional pneumatical energy such as instrument air or nitrogen. The required pressures are low enough for the most applications in technical gases. The operation with fuel gases is not recommended.

Another decisive advantage of the *GÄBLER-piston slide valve* is, that **the replacement of liners or sealing elements**, if ever necessary, **is possible without dismantling the piston slide valve body from the pipeline.**

The *GÄBLER-piston slide valve* is a **modular construction system**, which makes it possible to shift the mode of operation later on reusing the most parts one assembled.

If the flowing medium is free of abrasive mineralic dust, dirt and rust particles the *GÄBLER-piston slide valve will show almost no wear.*

All *GÄBLER-piston slide valves* are degreased carefully within an ultra-sonic degreasing bath before they are assembled and are tested for tightness in the valve seat and towards the atmosphere.

GÄBLER-piston slide valves exceeding DN 25 bear a CE-sign stating the conformity with the pressure equipment directive PED 97/23/EEC.