

Installation tips for diaphragm valves with abrasive and particle-containing media

Abrasive

A working medium is abrasive if it removes material from the components / devices (e.g. the valve) it flows through. Example: Sulphur crystals (powder) are transported by compressed air in a piping system. The more abrasive a medium is, the lower the flow velocity ought to be.

Measure / installation hint:

Appropriate countermeasures include reducing flow velocity and protecting the components, either with an extremely hard surface or a soft surface.

Plugging caused by in-line solids:

If the medium consists of gas or liquid with a high content of relatively heavy particles, the heavy components sink to the bottom when pipeline sections or valves are closed or when there are only very low flow velocities. This condition may cause plugs which can only be removed with difficulty or not at all. The cross-section of the pipe diminishes - valves are clogged.

Measure / installation hint:

Install the diaphragm valve upside-down. The particles are deposited at the closed diaphragm. When the valve is opened, it is unclogged by the diaphragm movement and washed out by the flowing medium.

