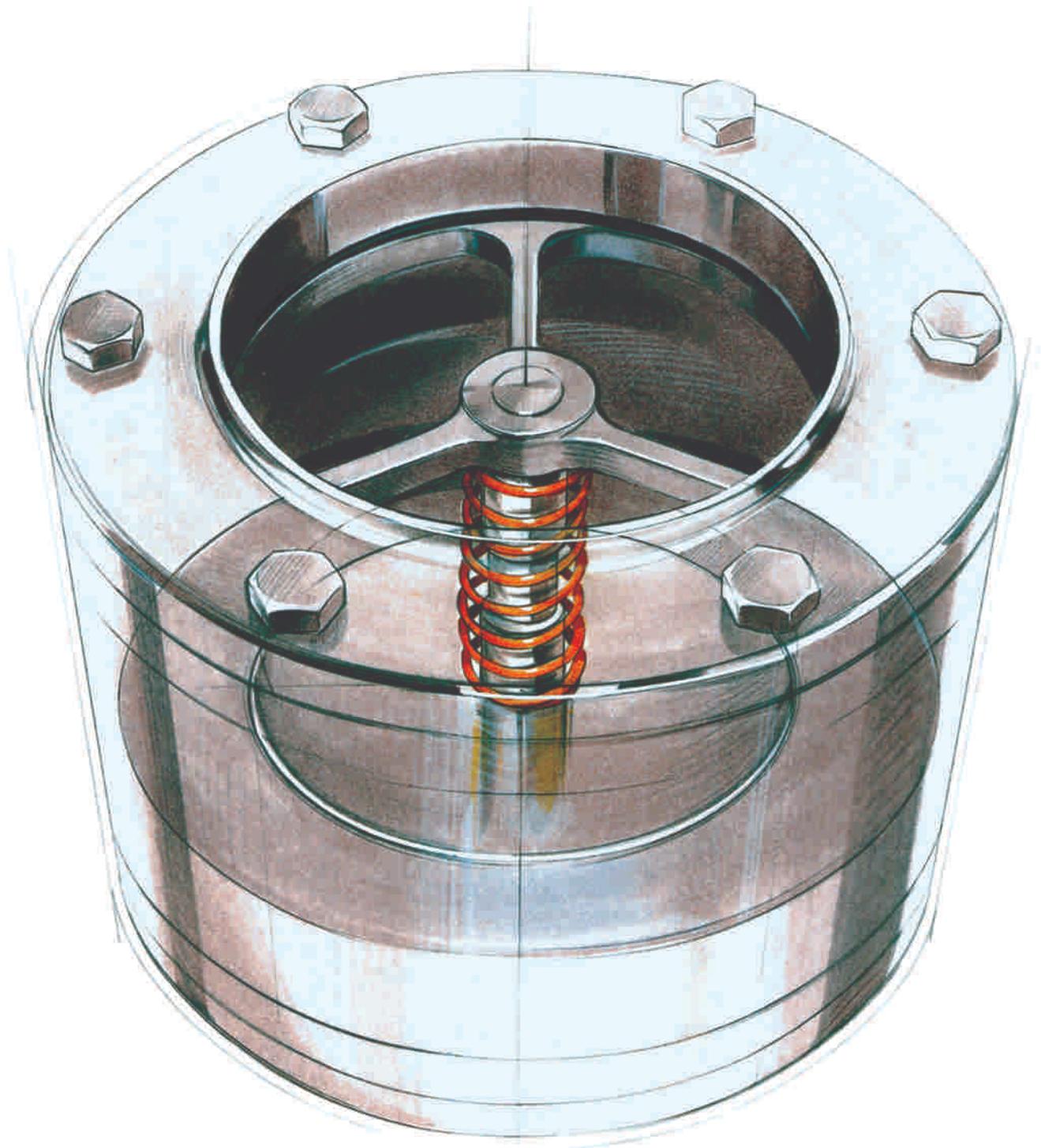


Guth Non-return valve

a good choice





The Guth non-return valve has been designed to prevent back-flow of fluids in tubing systems in all kinds of process applications.

The design of the sealing chamber is similar to the sealing principle of the aseptic standard DIN 11864 (see explanation on next page). Thus, the risk of getting product behind the sealing is minimised. Thanks to the hygienic design of the sealing and the special inner surface design the valve can be cleaned easily and effectively. This makes the valve particularly suitable for all process applications with higher hygienic requirements like in the food & beverages or the pharmaceutical industry.

The Guth non-return valve is available in the stainless steel qualities AISI 304 (1.4301) and AISI 316L (1.4404).

Operating mode:

In the normal position (no product flow) the valve disc will be pushed against the seal at the lower seat due to the pretension of the spring. In case of product flow there are two different cases:

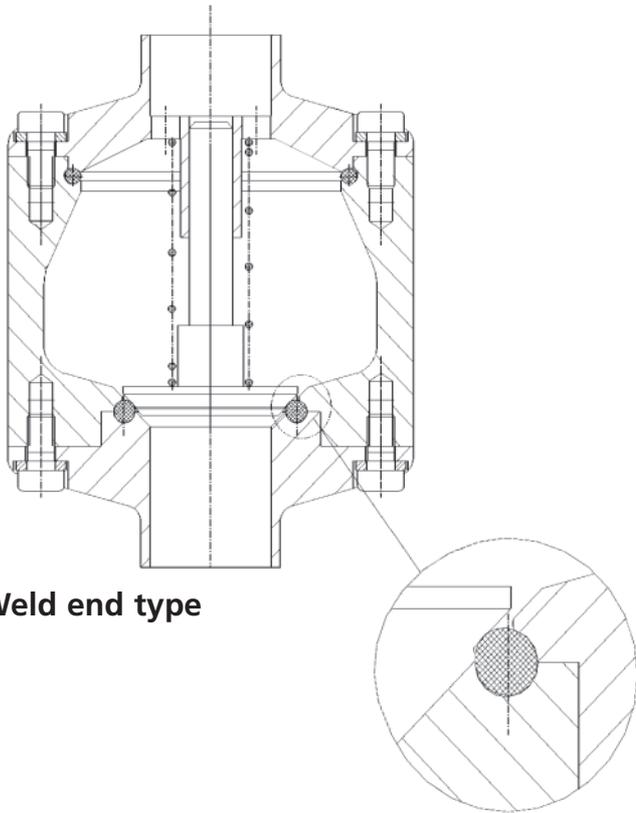
1. Flow against the closing direction of the valve disc:

The flow creates a pressure against the valve disc so that the valve will be opened and the fluid passes with hardly any pressure drop through the valve. The spring is designed to allow the opening at a minimum differential pressure ($\Delta p = 0.1-0.2$ bar, depending on the valve size)

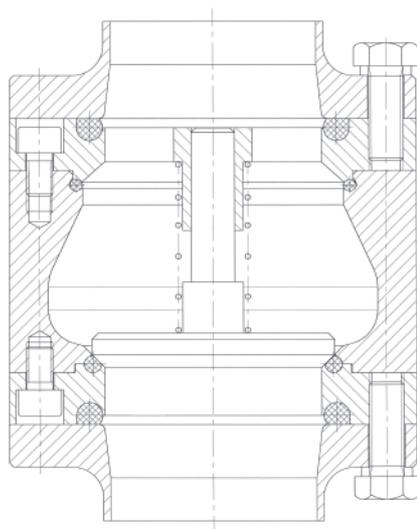
2. Flow in the closing direction of the valve disc:

The flow causes pressure in the same direction as the spring. Thus, the disc closes against the seal at the lower seat. No flow through the valve is possible.

Features



Weld end type



Intermediate flange type

One of the key objectives during development of the valve was the light design of the valve disc and its shaft.

To achieve this the seal has been integrated into the body. Therefore, friction, which is often caused by the weight of the valve disc and the shaft, especially in non-vertical mounting positions, is minimal. Accordingly the Guth non-return valve can be installed horizontally without causing any problems.

The whole inner design of the valve is flow-optimised. Therefore the pressure drop of the flow is minimal.

The seal design is similar to the DIN standard 11864, execution A (O-ring as sealing element). The seat of the seal covers $\frac{3}{4}$ of the seal. This prevents that product can get behind the seal. Furthermore a metallic stop guarantees a defined pretension of the seal. The lifetime of the seal will be improved in this way. The seal has a double function: 1. it seals between the two parts of the housing. 2. It seals between valve disc and housing in case of back-flow.

The different features of the Guth non-return valves are protected by patents.

