



#### A-T ARMATUREN-TECHNIK GMBH

Duisburger Strasse 375  
T-Building  
46049 Oberhausen (Germany)

phone: +49.208.833-1700  
fax: +49.208.833-1755

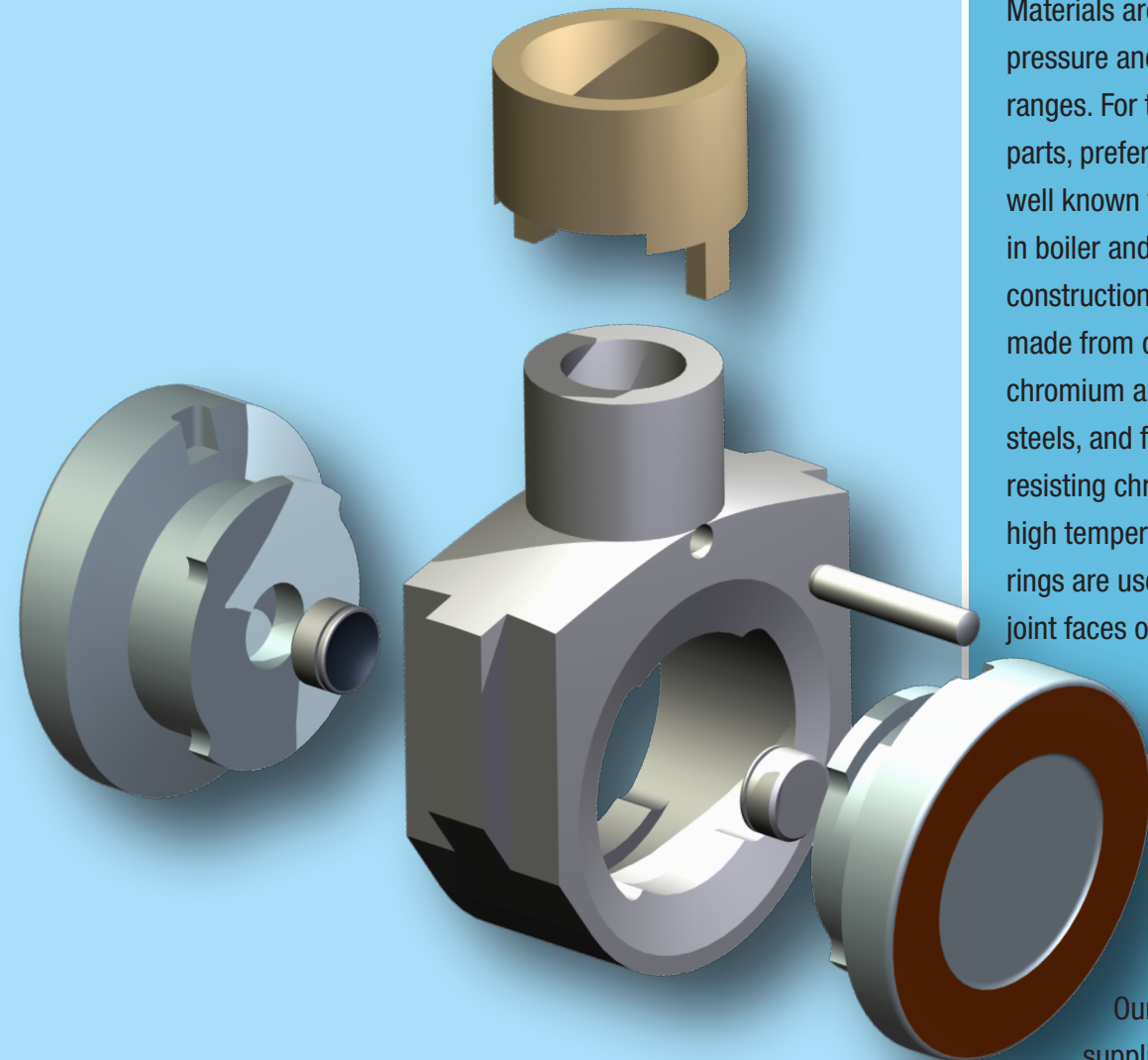
web: [www.at-armaturen.com](http://www.at-armaturen.com)  
email: [sales@at-armaturen.com](mailto:sales@at-armaturen.com)

## High Pressure Gate Valve

P & K



# VALVES



### Materials

Materials are chosen to suit the pressure and temperature ranges. For the pressurised parts, preference is given to the well known types of steel used in boiler and pipeline construction. The spindles are made from corrosion resistant chromium and chromosomal steels, and from high heat resisting chromium steel for high temperatures. Graphite rings are used for packing. The joint faces of the valve are clad in stellite, then precision ground and lapped.

Our gate valves can be supplied on request as throttle valves or parallel slide valves, the contact pressure of the discs in the case of the parallel gate valves being achieved by means of heat resistant compression springs.

All gate valves are designed as double plates gate valves or double plates parallel slides valves and are manufactured to suit all pressure and temperature ranges. They have been in operation in large numbers for over 50 years. The pressurised parts consist of forgings which are welded to the body using only one circumferential weld seam. The sizes and nominal diameters of our gate valve are given in the tables of dimensions. Our many years experience is a guarantee of a High level of technical development and operationally safe design. The body is forged in the direction of flow to form a middle section. The bonnet section is made of forged tubing and is welded to middle section. A single circumferential weld seam enables the weld to be exactly tested by X-rays, ultrasonics or other method. This ensures that the body has adequate strength.

The valve is sealed by means of a self-sealing cover. Pressed graphite packings are used to effect the seal.

The yoke piece on top of the valves is designed in all cases for total direct drive. The spindle thrust is absorbed by heavy duty axial ball bearings and a radial ball bearing which are fitted in the yoke.

The spindle surface is ground to size, after which it is treated by superfinishing. This ensures the most favourable conditions for sealing and sliding in the region of the spindle packing.

The sealing plates are suspended in a plate support so as to be self-aligning (see illustration). The pressure is transmitted by hardened ball segments and ball cups of large area which are inserted in the sealing discs. Absolutely tight sealing can be achieved by relatively low contact pressure. Our gate valves can therefore be opened and closed with little effort. It is possible to increase the spacing at the sealing plates (e. g. after grinding the sealing faces of the sealing rings) simply by inserting shims behind the ball segments.

The yoke piece on top of the valve is connected to the body by means of a two-part clamp which can easily be disconnected when dismantling or assembling. With the exception of the gland, there are no bolted connections under pressure.

All machined metal parts are protected against corrosion before delivery. The external surface of the valve is primed.