

High pressure gate valve P and K

Split Wedge Gate type K
Parallel Slide Gate type P



Split Wedge Gate Valve and Parallel Slide Gate Valve

Construction and Operation

All gate valves are designed as split wedge gate valves type K or parallel slide gate valves type P and are designed for all pressure and temperature ranges as applied in today's Power Plant Applications. The basic design has been applied for over 50 years in the Power Industry both in Germany and worldwide. The valves are tailor made, in accordance with European and German standards. Our long experience assures a high level sophisticated design, most suitable for heavy duty power plant applications.

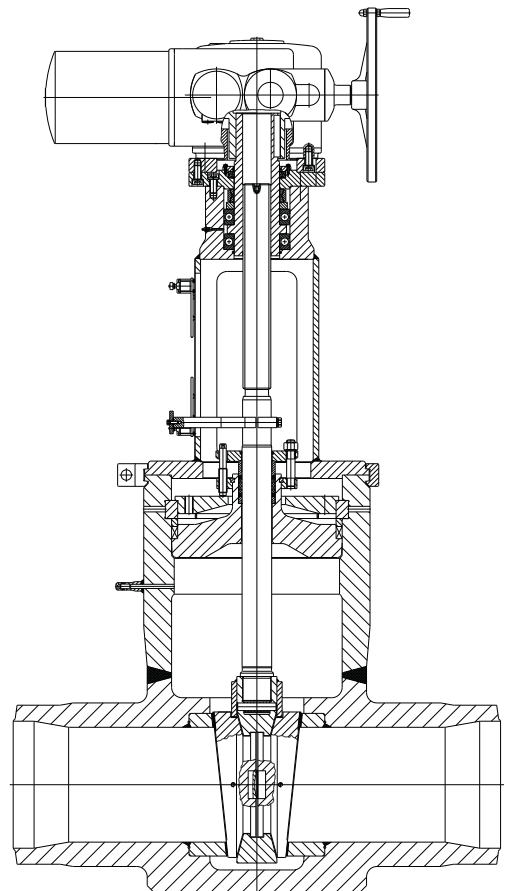
The pressurised parts consist of forgings. The body has only one circumferential weld between the body head and the main housing and thus the body weld is not affected by the piping forces. The circumferential body weld seam enables the exact testing by X-rays, ultrasonic- or other methods.

The valve is sealed by means of a pressure seal cover, in which graphite packing rings are used to realize the sealing.

The yoke on top of the valve allows the application of electric actuators, hand wheel with or without gearbox. The stem nut already is incorporated in the yoke, enabling the actuator removal under full operating pressure.

The spindle thrust is absorbed by heavy duty axial ball bearings and a radial ball bearing which are fitted in the upper part of the yoke.

The spindle surface is grinded and additionally treated by super finishing. This ensures the optimal sealing conditions and reduces the stem friction substantially.



The split wedge sealing plates are suspended in a self-aligning plate support (see illustration). The pressure is transmitted by a hardened ball segment and a ball cup that are inserted in the sealing discs. Absolutely tight sealing can be achieved by minimum contact pressure. The gate valve therefore can be operated with little effort.

The spacing of the sealing plates (e. g. after grinding/machining the sealing surface) simply by inserting shims behind the ball segments. In this way the wedge can be aligned perfectly with the sealing surface. The yoke 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 in the wetted parts.

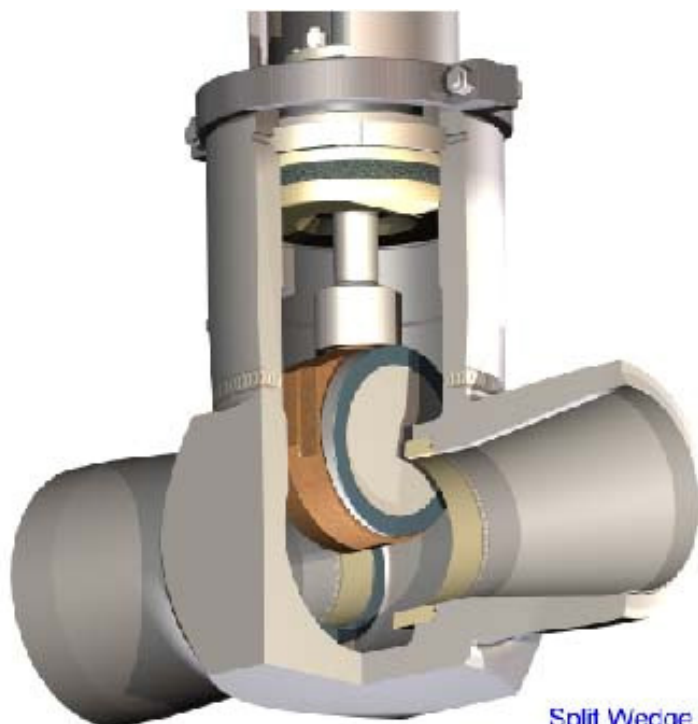
On delivery all metallic parts are protected against corrosion. The external surface of the valve is painted.

Materials

Materials are chosen to suit the pressure and temperature ranges. The stem is made of corrosion resistant chromium and chrome molybdenum steels and of high temperature chromium.

Graphite rings are used for cover sealing and stem packing. The sealing surfaces of the trim are stellite and lapped.

The valves also can be supplied for throttling service or as parallel slide valve, where heat resistant springs maintain the required contact pressure of the plates.



Split Wedge Gate Valve