

# GESTRA Control Valve with ZK Radial Stage Nozzle®

Type ZK 29, DN 25–150 (1–6"), PN 160, Class 900,  $\Delta p_{\max}$  100 bar



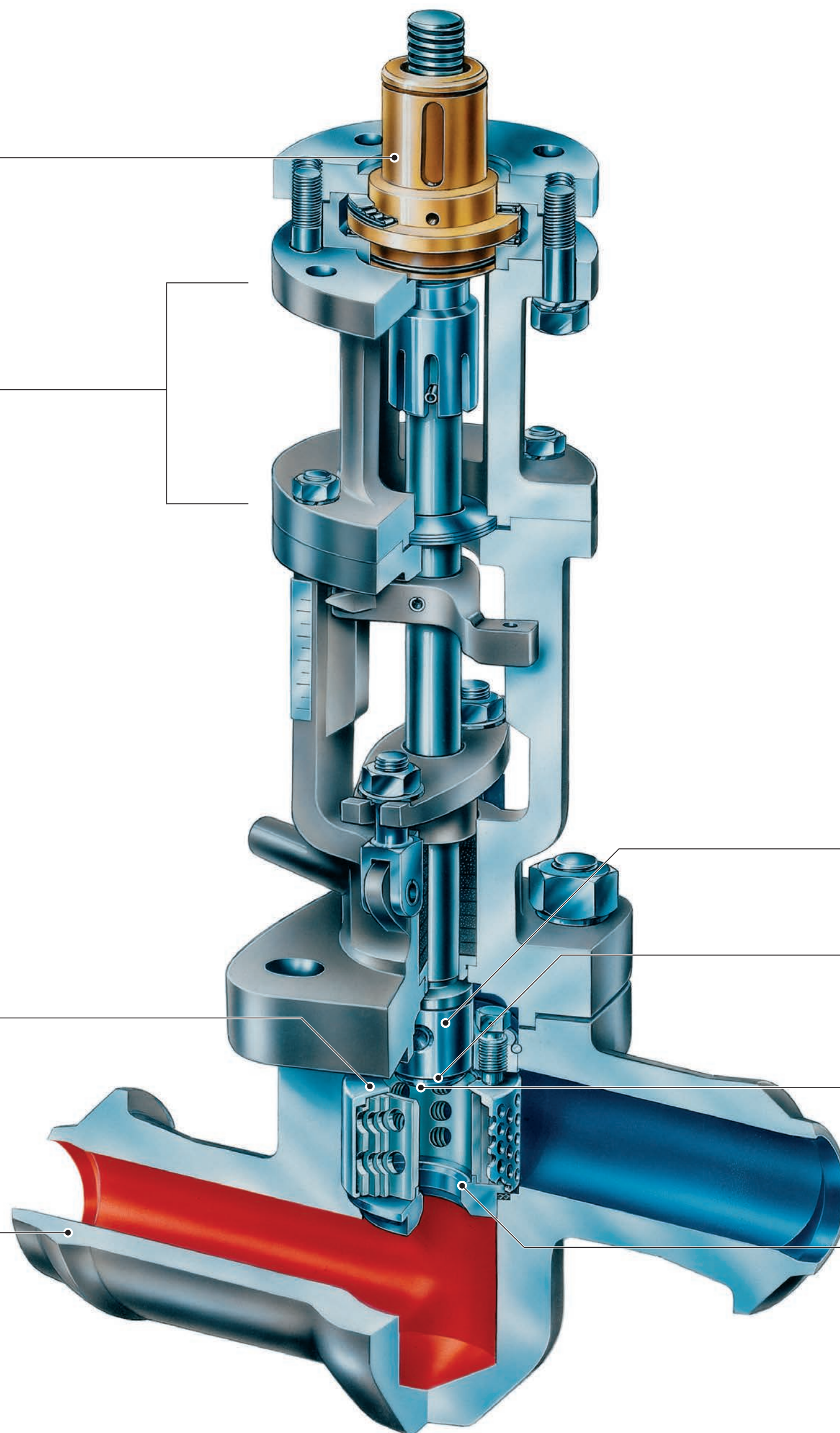
GESTRA

**Actuator** ▶  
Prepared for electrical rotary actuation.  
Pneumatic, hydraulic or handwheel  
actuation also possible

**Lift restriction** ▶  
Adjustable lift restriction available  
as an option for special applications

**ZK radial stage nozzle®** ▶  
Easily exchanged without removing  
the body from the line.  
Adjustable resistance coefficients  
and valve characteristics

**Connections** ▶  
Flanges, socket-weld or butt-weld ends.  
Body in angle or straight-through pattern



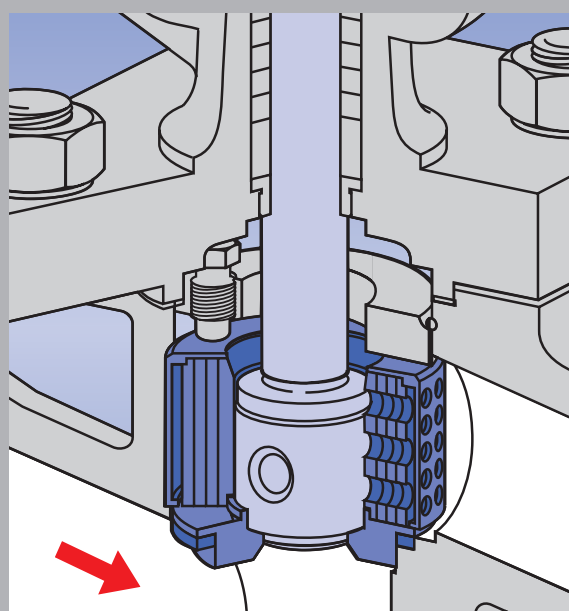
**Valve plug**  
With seating surface ground in

**Control edge**  
Prevents wire drawing at the  
sealing surfaces

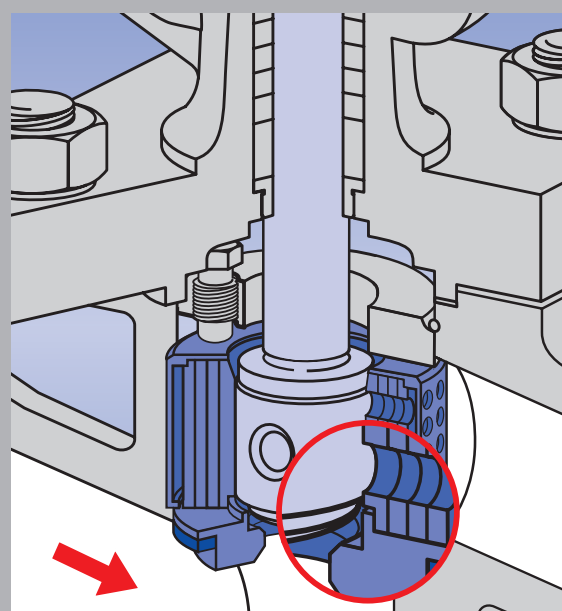
**Sealing surface**  
Excellent sealing characteristics:  
- Leakage rate A according to EN 12266-1  
- ANSI Class VI

**Seat**  
Easily exchanged

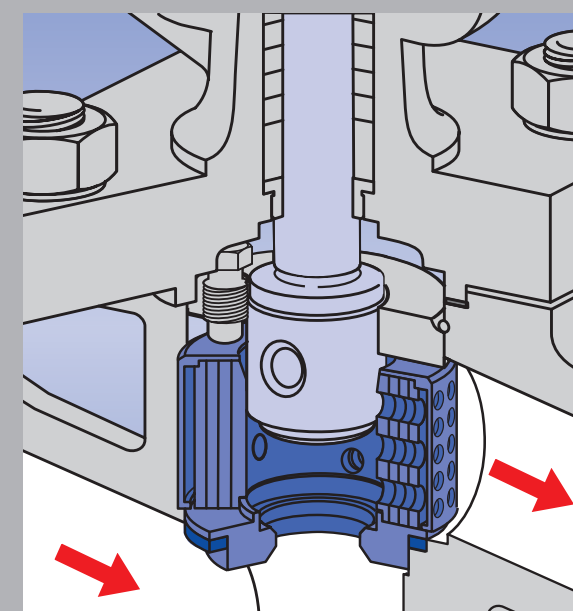
## Functional principle of the control edge



The control edge permits the function of a conventional isolating valve and a control valve to be combined in one unit, and achieves very low leakage rates. Here the valve plug is shown in the closed position.



At the beginning of the opening process, the valve plug lifts off the seat but the control edge does not set any orifices free yet. At the moment of opening or closing, the flow velocity at the valve seat is zero, so that wire drawing is excluded.



The valve is now in the control position. Irrespective of the position of the valve plug, the pressure is always reduced in several stages, even for the lower control range.