

High Performance Fluid Handling

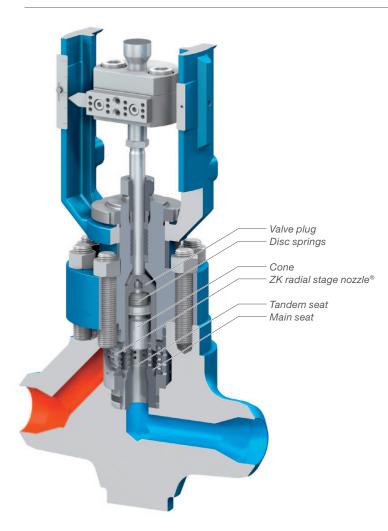
GESTRA Control Valves with ZK Radial Stage Nozzle[®] for Power Station and Plant Engineering



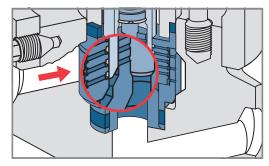
Engineering steam performance

ZK 313 Control Valve with tandem seat and ZK radial stage nozzle[®]

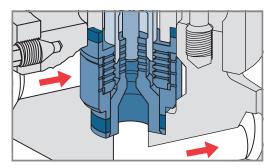
GESTRA control valves with ZK radial stage nozzle[®] prove their excellence in tough conditions in water and steam circuits. These control valves seal tightly and are therefore the first choice for overcoming leakage and wear problems. The multi-stage pressure reduction and specially designed interior valve parts ensure maximum reliability and a long service life.



ZK 313: Valve plug in closed position



ZK 313: No longer in closed position, but control notch on plug keeps orifices sealed



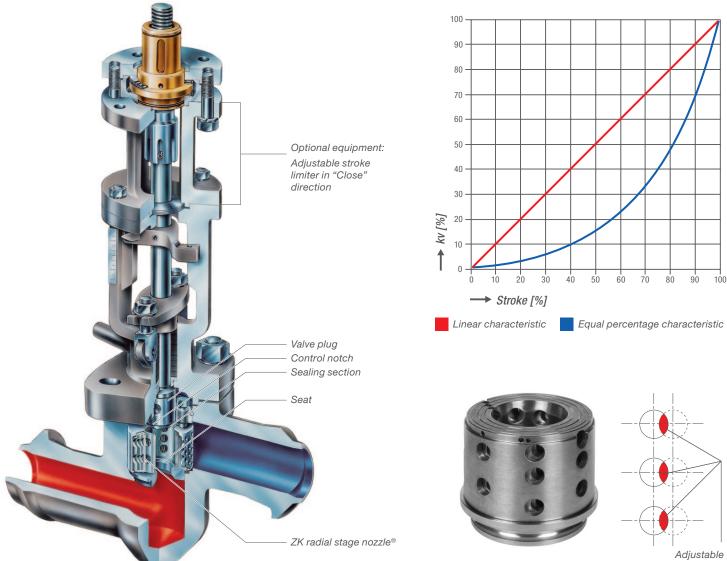
ZK 313: Valve plug in control position

Special features

- No loss of energy due to leakage
- Less system downtime
- Increased productivity
- Safe operation (suitable for SIL 2 and 3)
- Just one valve for closing and controlling
- Low noise

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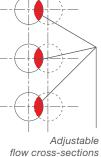
ZK 29 Control Valve with adjustable ZK radial stage nozzle®



Special features

- No loss of energy due to leakage
- Reduced system downtime
- Increased productivity
- Safe operation due to SIL 2 and SIL 3 rating
- Just one valve for closing and controlling
- Adjustable Kvs values and characteristics ensure high flexibility
- Low noise





Market and usage

These valves are used in power plants and high-pressure steam and water systems in refineries, the chemicals industry, and in industry in general. Some typical uses are:

- Steam control systems for > 30 bar
- Injected water control systems in steam coolers
- Feedwater control systems
- Draining and heating steam turbines, boilers and steam pipe systems
- Continuous blowdown in steam boilers

Technical data

ZK 313 with tandem seat and ZK radial stage nozzle[®]

ZK 29 with adjustable ZK radial stage nozzle[®]

| Pressure rating Nominal sizes Max. differential pressure Max. operating temperatures | PN 630 and Cl 2500 DN 25 – DN 150 300 bar and 370 bar 620 °C | Pressure rating Nominal sizes Max. differential pressure Max. operating temperatures | PN 160 and Cl 900 DN 25 – DN 150 100 bar 550 °C |
|---|--|---|--|
| Kvs values | 1.0 m³/h to 17 m³/h | Kvs values | 0.7 m ³ /h to 130 m ³ /h |
| Forged materials | 1.0460/A105 1.5415 1.7383/F22 1.4903/F91 | Forged material (DN 25 and 50) Cast material (DN 80-150) | 1.7335/F12 1.7357/WC6 |
| Body design | Straight through, angle, Z-pattern | Body design | Straight through, angle |
| Connections | Butt-weld ends Socket-weld ends Flanged end DIN/ASME | Connections | Butt-weld ends Socket-weld ends Flanged end DIN/ASME |
| Types of actuation | Handwheel Pneumatic diaphragm actuator Electric rotary actuator Electric linear actuator Hydraulic cylinder Lever with part-turn actuator | Types of actuation | Handwheel Pneumatic diaphragm actuator Electric rotary actuator Electric linear actuator Hydraulic cylinder Lever with/without part-turn actuator |
| Leakage rates | A to EN 12266-1 Class VI to ANSI FCI 70-2-2006 | Leakage rates | A to EN 12266-1 Class VI to ANSI FCI 70-2-2006 |

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