RZD
R

Axial Control Valve

Streamlined flow path for demanding hydropower and water applications

Type designation
Control valve

Mokveld model
RZD - R....

Size and pressure ratings
- 2" - 48" (DN 50 - DN 1200)
  Larger sizes upon request
- ASME Class 125 - 2500
  (PN 16 - PN 420)

In preference to
- Sleeve valve (incl. submerged vertical)
- Plunger or needle valve
- Fixed cone valve

Typical applications
- Hydropower plants, dams and reservoirs
- Inlet valve and turbine bypass / control
- Controlled discharge
- Waterworks and transmission systems
- Pump start-up and control
- Tank / reservoir level control

Benefits
- Zero cavitation and low noise
- High energy dissipation without vibration
- Accurate control also at low openings
- Quick opening to reduce impact of surges
- Operation is not susceptible to debris
- Small installation footprint



NSF 61
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Mokveld axial control valves main benefits:

Axial flow

The axial control valve is integrally cast and consists of an expanded outer body and an inner body which is positioned in the center by means of ribs. The streamlined flow path avoids turbulence and allows for compact installation with 2x DN straight pipe up- and downstream the valve being sufficient.

Accurate control

Accurate control is possible (also at minimum opening) because of the pressure-balanced trim. Minimum controllable flowrate is a factor 10 - 20 lower compared to conventional solutions.

High capacity

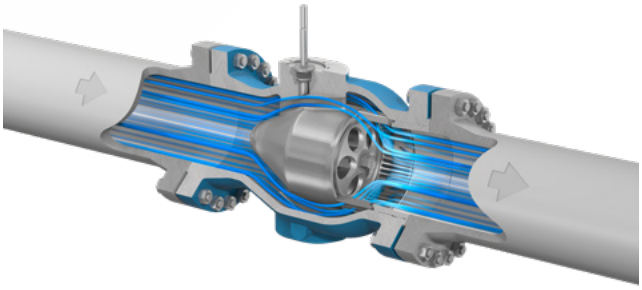
The inherent capacity of the axial valve is high compared to conventional globe or plunger control valves. This enables selection of smaller valve sizes, or to implement anti-cavitation or noise abatement trim technologies.

Custom-designed trim selection

Depending on the process envelope we can produce a custom designed trim to suit the hydraulic profile of the specific application. A hybrid trim could typically consist of multi- and single-stage trim sections combined.

Silent

As cavitation is avoided, the produced noise is substantially lower compared to conventional solutions that accept certain levels of cavitation.



Zero cavitation without air venting

Cavitation is completely avoided by multi-stage pressure reduction trim technology without the necessity to add air and thus avoiding the negative consequences of air pockets and pressure spikes in pipelines. Velocity and cavitation induced vibrations are avoided.

Short discharge jet trajectory

In free discharge applications the valve discharge jet will be homogeneous with short trajectory (clear water). Secondary energy dissipation in the tailrace is not required.

Quick operation

The optional equal% control characteristic combined with a pressure balanced trim make it possible to operate the valve quickly without the risk of pressure surges at closure. The valve is able to follow the rapid adjustment of the turbines.

Bi-directional flow

The axial control valve is suitable for bi-directional flow which means flexible solutions to secure potable water supply. Operation of interstate and regional supply networks (mains, loops) and the layout of interconnection vaults can be simplified.

Compact

The face-to-face dimension of a Mokveld axial control valve is less than half when compared to sleeve valves.

Other unique features

- Dual functionality (control / on-off)
- Reliable bi-directional tight shut-off (Class VI)
- Certified to NSF 61

For more information, please contact Mokveld.

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