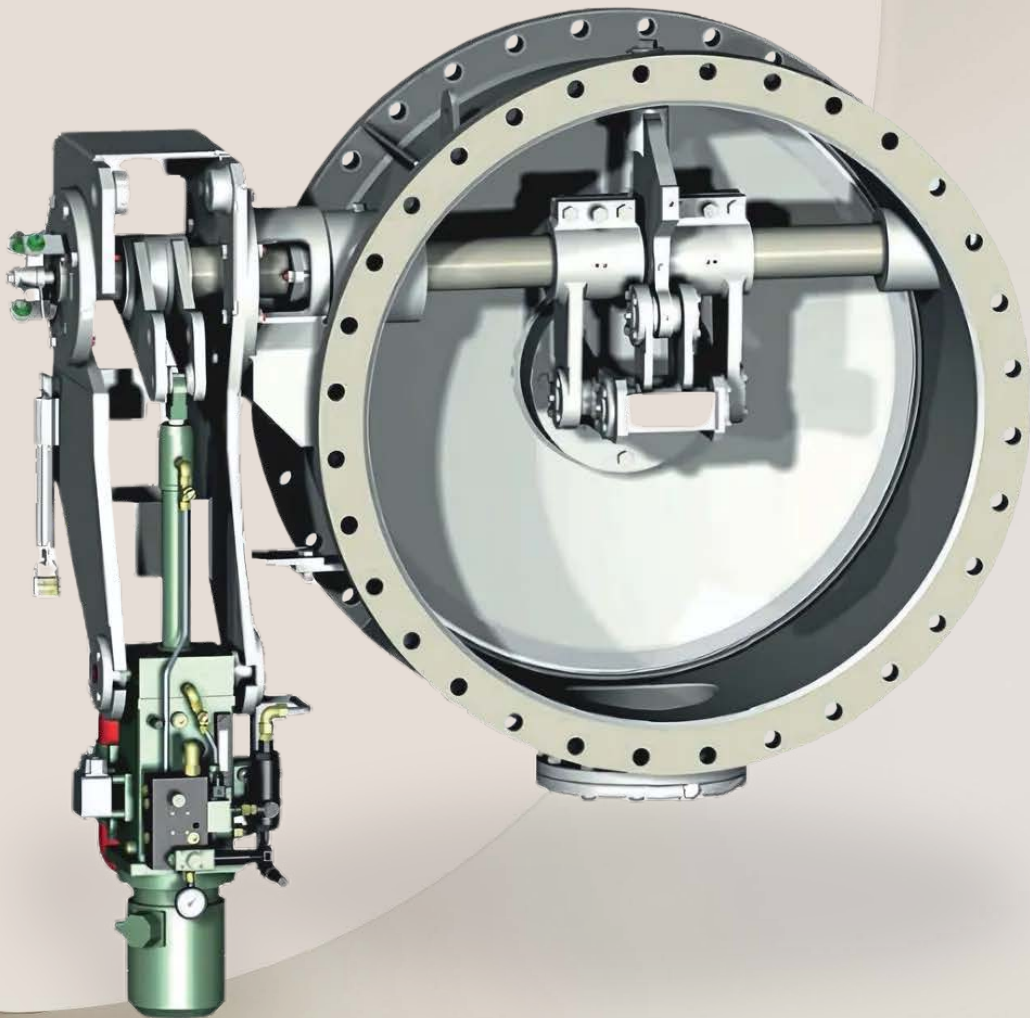


Process Automation

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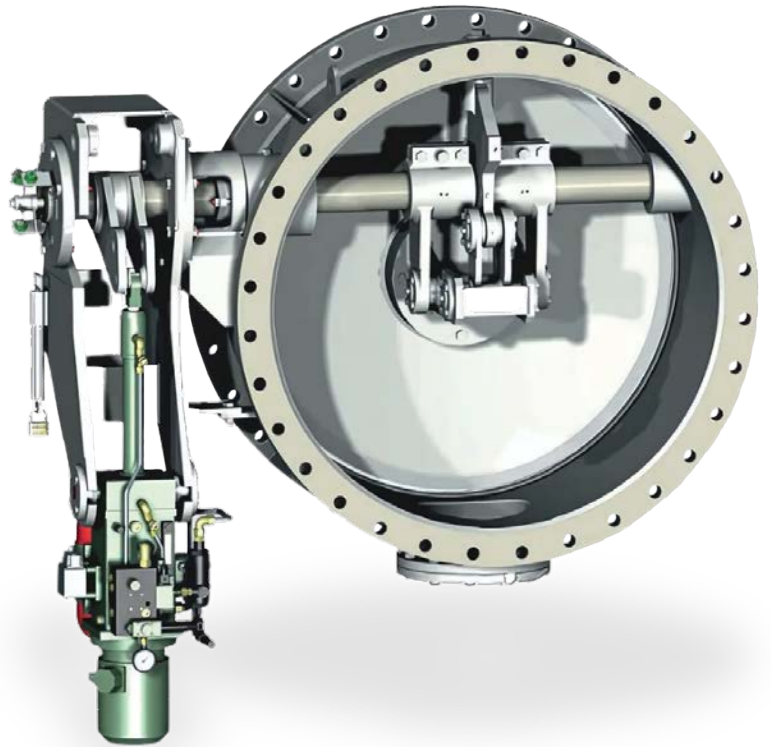
Iron & Steel
Three Lever Valves



Breakthrough
engineering for
a better world

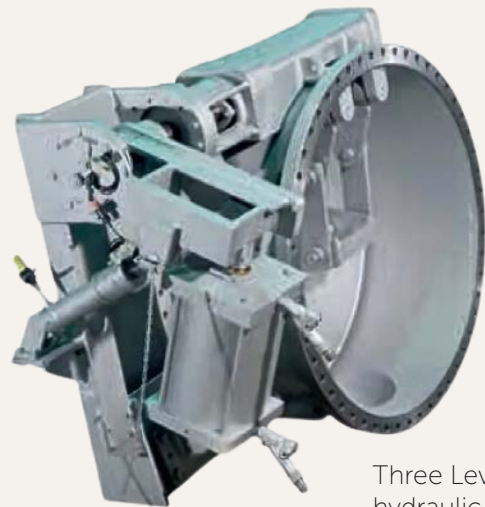
Iron & Steel Three Lever Valves

This shut-off valve is ideal for gaseous media, especially with high operating frequency. It excels in applications requiring isolation of gaseous media at low differential pressures (up to 200 mbar) but can handle higher static pressures when open or closed. Key industries include iron and steel, air separation, gas-fired power plants, and chemical plants.



Key features

- Centrally Suspended Valve Disc: Ensures uniform clamping force distribution.
- Sealed Bearings: Bearings can be fully sealed and filled with temperature and acid-resistant paste (standard for Type 440).
- Slide Bearings for Actuating Shaft: Includes axial fixation on the actuator side, regreasable from outside.



Three Lever Valve with hydraulic cylinder

Two Shaft Designs

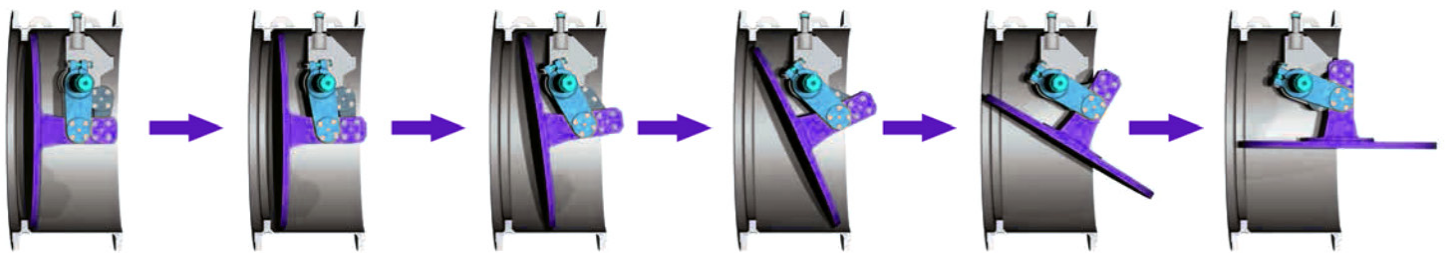
- Internal Shaft (Type 440): Located inside the pipe cross-section, causing higher pressure drop but requiring lower torque. Not recommended for diameters below DN 600 (24").
- External Shaft (Type 450): Located outside the pipe cross-section, requiring higher torque but causing lower pressure drop. Suitable for diameters from DN 200 (8").

Actuation Options

- Worm Gearbox: Operated by handwheel or chain, or electric actuator.
- Pneumatic/Hydraulic Actuators: Cylinders or rotary actuators, with optional safety functions (spring or counterweight).
- Electro-Hydraulic Actuation: Independent system with optional safety function by hydraulic accumulator.

Execution of shaft designs

- Closed Position: Valve disc is tightly pressed against the body seat by actuator force, possibly supported by medium pressure.
- Opening Motion: Disc moves parallel first to avoid frictional wear of the seats.



Execution with Internal Shaft (Type 440)

- Approx. 70° turning motion at the actuation shaft results in a 90° tilting motion of the valve disc

Execution with External Shaft (Type 450)

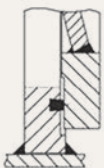
- Only approx. 42° turning motion is needed for a 90° movement of the valve disc.

Execution of seat designs

- Depending on the flow medium and temperature there are different sealing types available.

Benefits

- Choice of shaft location depending upon application.
- Locked grease holes for easy greasing.
- Maintenance free operation.
- Good performance under high static pressure.
- Choice of actuation.
- Strong reference base for installed valves.



Typ I

Encased special tissue fibre, temperature up to approx. 300 °C



Typ II

Elastomer sealing (e.g. CR, FKM/FPM, VMQ), temperature up to approx. 200 °C



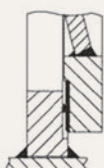
Typ III

Hardfaced Morton edge and disc sealing surface, temperature up to approx. 500 °C



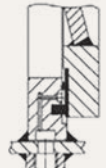
Typ IV

Double sealing comprising Morton edge with soft sealing, temperature up to approx. 300 °C



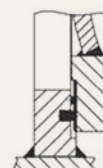
Typ V

Advanced Morton edge for dust loaded fluids, temperature up to approx. 500 °C



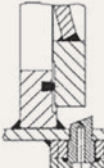
Typ VI

Double sealing with chamber for sealing agent or suction arrangement, temperature up to approx. 200 °C



Typ VII

Double sealing with chamber for sealing agent or suction arrangement, temperature up to approx. 300 °C



Typ VIII

Seat with additional purge arrangement for steam or pressurized water

Process Automation

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