

DAK (Manifold Valve)



 Engineering
GREAT Solutions

**Gate Valve
Replacement Solution**

DAK (Manifold Valve)

To ensure that large steam boilers are physically balanced and not subject to undue forces, the steam outlet piping is usually taken from both sides of the boiler and then brought together in a manifold to a central main steam line to the steam turbine. The pipes from the boiler are also usually equipped with manual gate valves which can be closed for pressure testing and/or maintenance. The DAK valve replaces these gate valves and the manifold to integrate all those functions in one single valve. The design of the valve also improves the steam flow reducing pressure drop and thus improves the overall efficiency of the plant.



We combine our decades of experience, expertise and knowledge to satisfy the demands that our customers place on us

Key features

- > Simple operation
- > Monolithic body design to avoid weld joints
- > Excellent streamlining to reduce pressure drop across the valve and increase plant efficiency
- > Modular design of the valve to meet customer specifications and requirements
- > Inlet, outlet and bypass connections to match the dimensions and material of the pipework

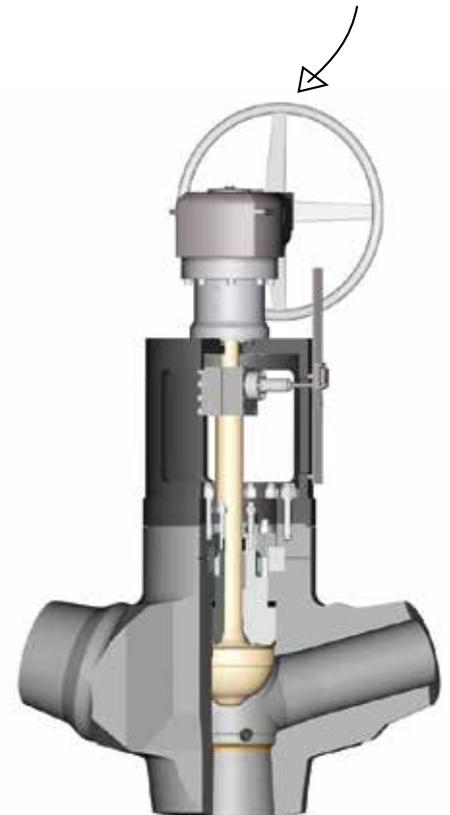
Benefits

- The DAK valve is designed to join the 2 main steam lines exiting the boiler and if required to isolate the boiler from the piping. The valve is designed to take the two steam lines from the boiler and centralise the flow into a single pipe exiting the valve.
- > Because of the installation in the main steam system, the body is machined from forged alloy material to ensure long life under exposure to the extreme temperatures and pressures especially in ultra super critical power plants
- > The valve seat is integrated in the body and hard faced for added durability and a long, trouble free life
- > The valve internal design is precisely machined to ensure maximum flow efficiency and to reduce the pressure drop across the valve thus ensuring maximum efficiency of the entire plant

Application

- The DAK valve replaces the gate valves and the connecting manifold that are installed in the initial run of the boiler superheater outlet piping to the main steam piping to the steam turbine.
- > The valve has 3 weld seams into the boiler outlet piping as opposed to 7 weld seams if gate valves and a manifold are installed, thus saving time and costs during the piping erection
- > The DAK valve can be shut off (manually or with an actuator) to conduct maintenance and/or pressure testing

Variety of actuation options



Customised weld connections and material matching

Technical details

Body style

2 inlets and 1 outlet, Y-shaped body

Operating limits

Temperature up to 650°C
Inlet pressures up to 350 bar[a]

Interfaces

Butt-weld ends according to the customer's specification

Seat

Hard faced seat

Bonnet

Self-sealing bonnet

Actuator

Manual, electric or hydraulic

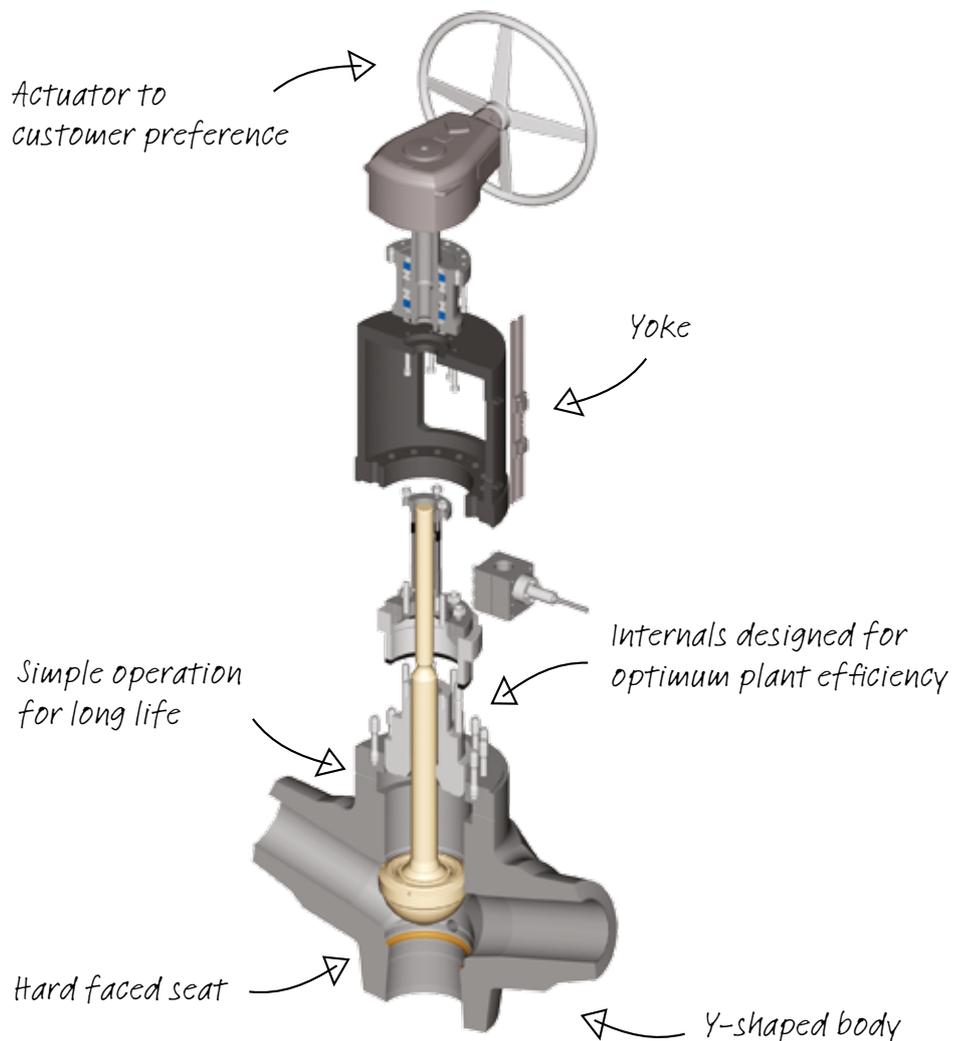
Codes

AD 2000, TRD, IBR, manufactured to ASME

Product breakdown

Typical materials

| Materials EN | ASTM |
|------------------------------|----------------|
| 1.7383 | SA 182 Gr. F22 |
| 1.4903 | SA 182 Gr. F91 |
| 1.4901 | SA 182 Gr. F92 |
| Further materials on request | |



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