

DAK (Manifold Valve) Gate Valve Replacement Solution







Gate Valve Replacement Solution

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. It is 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 maintenance.

The DAK valve replaces these gate valves and the manifold to integrate all those functions in one single valve. This design improve the steam flow, reducing the pressure drop and thus improving 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

Variety of

actuation options

Key features

- > Simple operation
- > M onolithic body design to avoid weld joints
- > E xcellent streamlining to reduce pressure drop across the valve and increase plant efficiency

Benefits

The DAK valve is designed to join the two 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.

> The valve internal design is precisely machined to ensure maximum flow efficiency and to reduce the pressure drop across the valve, 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 and to the steam turbine.

> The DAK valve can be shut off (manually or with an actuator) to conduct maintenance and/or pressure testing

> B ecause of its i nstallation in the main st eam system, the b ody is machined from forged alloy material to ensure long life under exposure to the extreme temperatu res and pressures found in critica I power plants

> M odular design of the valve to meet customer specifications and

> In let, outlet, and bypass connections

to match the dimensions and material

requirements

of the pipework

- > The valve seat is integrated in the body and hard fa ced for added durability and a long, problem fr ee life
- > Quick- changeable seat design is a vailable to red uce maintenanc e time during over haul or shutdowns

> The valve has three weld seams into

the boiler oulet piping, as opposed to

seven weld seams if the gate valves

saves time and reduces costs during

and a manifold are installed. This

the piping erection



Technical details

3ody style ≥ 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

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	





Codes AD 2000, TRD, IBR, manufactured to ASME

Internals designed for optimum plant efficiency

> For more information, contact your local IMI Critical Engineering team.

Y-shaped body



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