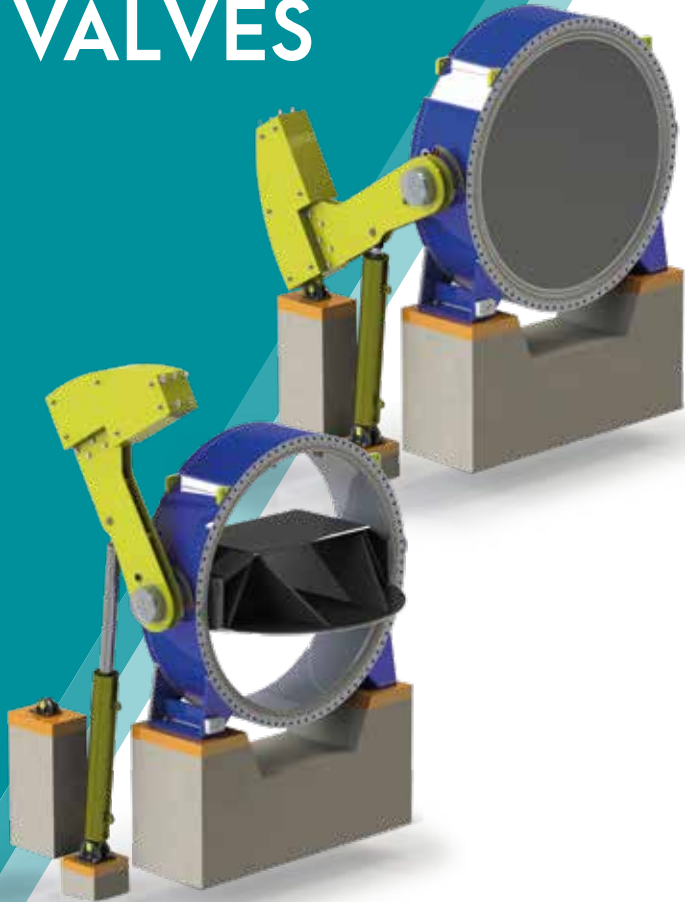


BUTTERFLY VALVES



VORTEX HYDRA
innovation & engineering

since 1967



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HYDRAULIC WORKS

COMPONENT	OFFERED MATERIAL
Valve body	Carbon Steel type S355J2 (or equivalent)
Valve shutter	Carbon Steel type S355J2 (or equivalent)
Disc trunnions	Stainless Steel or Carbon Steel with a stainless steel overlay
Bearings	Self lubricated type
Main rubber seal	NBR (or alternative type of rubber)
Seal counterseat	Stainless Steel type AISI316L (or equivalent)
Other structural parts	Carbon Steel type S355J2 (or equivalent)
Internal bolts and nuts	Stainless Steel type A2-70 (or equivalent)
Structural bolts	Class 8.8, 10.9 or 12.9

The Butterfly Valves are frequently used in power plants and dams.

They have various applications the most common of which are:

- **Penstock Protection:** the valve acts as both a safety and maintenance device for the penstock. As a rule valves used in this type of application are characterised by large diameters.
- **Turbine Protection:** the valve acts as both a safety and maintenance device for the turbine. Usually the valves used in this type of application are characterised by high water pressures.
- **Water Discharge Line:** the valve acts as both a safety and maintenance device for the upstream discharge.
- **Water Intake:** the valve is employed to open/close the intake lines of the intake tower.

Vortex Hydra design and manufacture both mono-plane and bi-plane (lattice type) Butterfly Valves depending on the dimensional requirements and operating water pressures.

As a special application a **secondary maintenance seal system** that is mechanically actuated (rubber seated in metal) can be implemented.

The Butterfly Valves are manufactured with the combination of steel plates and forged components.

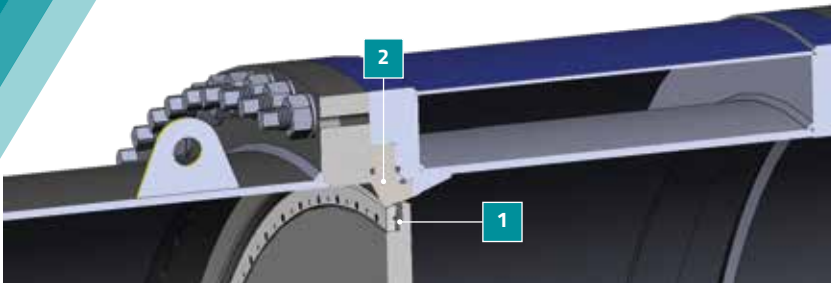


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FLEXIBLE AND CUSTOM MADE DESIGN SOLUTIONS

- The valve dimensions can be adapted to fit with the existing site conditions;
- Sealing System: rubber **1** seated in metal **2** ;
- Geometrical Feature: double eccentric.

VERSATILE OPERATING SYSTEM.

#1 or #2 hydraulic cylinders which could be

- A) single action:** opening by pressurized oil, closing by counterweight;
- B) double action:** opening and closing by pressurized oil or penstock's water;
- C) double action:** opening by pressurized oil, closing by penstock's water.

POSSIBILITY TO SUPPLY A FULL SET OF ACCESSORIES

- Bypass system;
- Upstream connection pipe;
- Dismantling joint;
- Hydraulic Power unit;
- Electrical Cabinet;
- Original Spare Parts.

VORTEX HYDRA'S RANGE OF APPLICATION

- Diameter up to DN5000;
- Pressure up to PN40.

All phases of the engineering design and fabrication through to final testing are undertaken by Vortex Hydra in compliance with UNI EN ISO 9001 Quality Management System.



UNI EN ISO 9001:2015
UNI EN ISO 14001:2015



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Technology for
**CONCRETE
PRODUCTS**



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