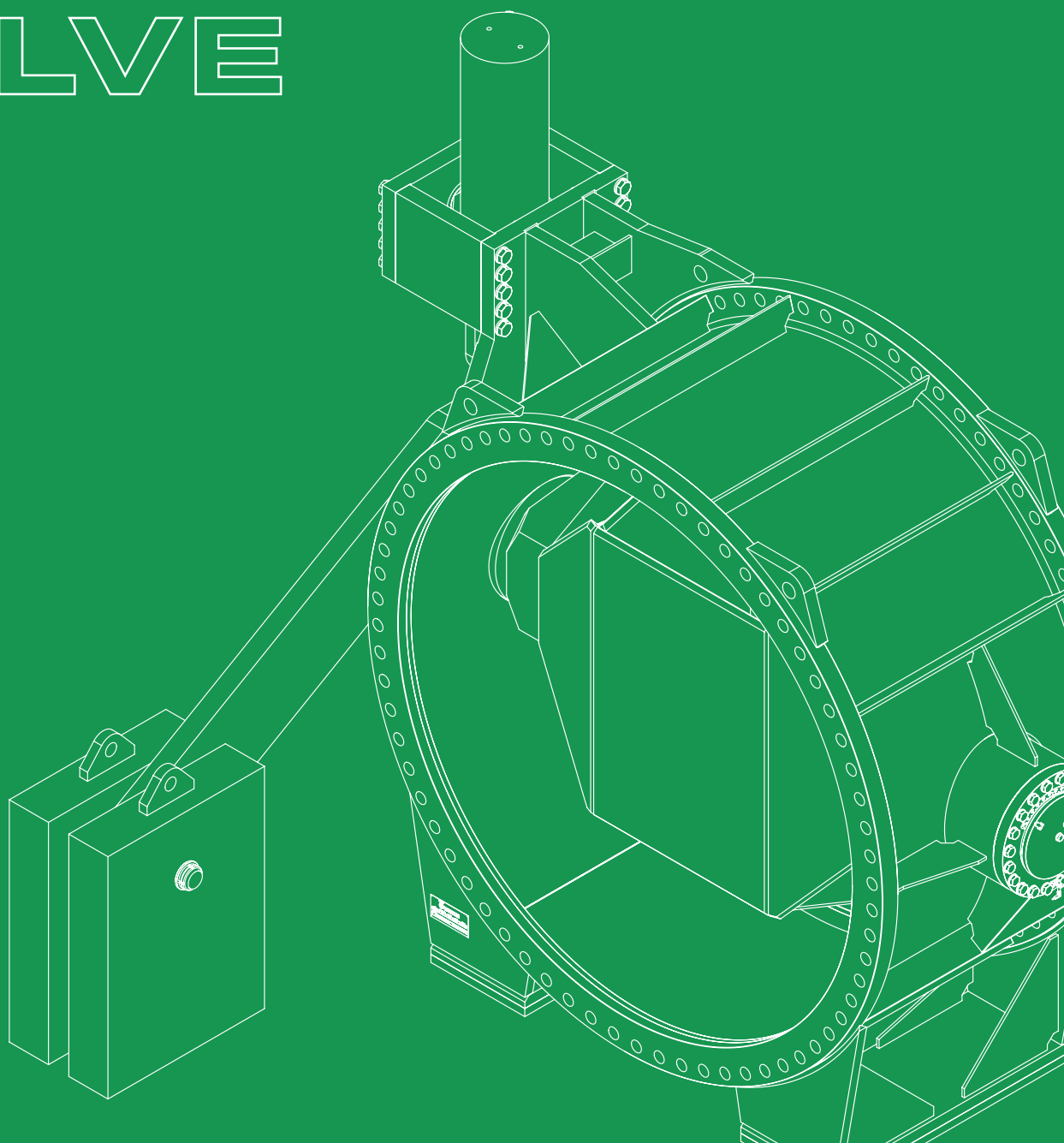




**NENCINI®**  
CUSTOM-MADE WATERWORKS VALVES

A member  
of OMB Valves  
Group

# LARGE SIZE BUTTERFLY VALVE



Established since 1967, **Nencini** has over fifty years of design and manufacturing experience. As a result, Nencini can accomplish any job efficiently and effectively. Research and Development is an important part of the company strategy and we pride ourselves in our ability to provide modern and effective design solutions with our fully customizable valves. Our experience covers the complete range of hydraulic valves and structures, i.e. flow control valves, on/off and safety valves, automatic valves, discharge valves, penstocks, radial gates, slide gates for high pressure outlets, stop logs, etc.

# LARGE SIZE BUTTERFLY VALVE

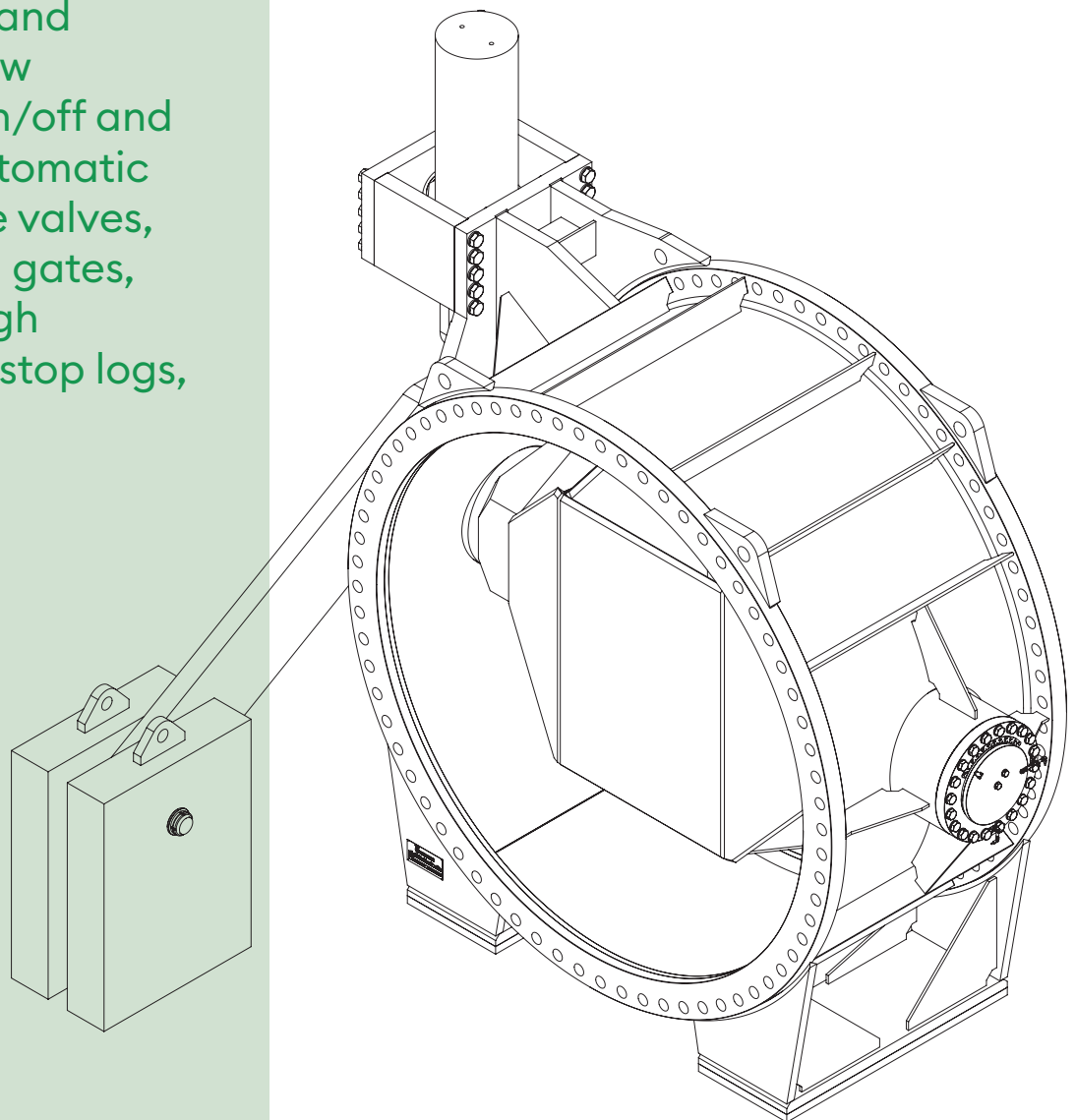
## MAINTENANCE AND SAFETY TYPE

Butterfly valves are used for water and gas pipelines in power generation facilities, water treatment plants and major water supply and distribution lines.

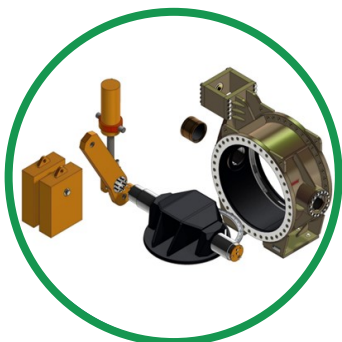
The butterfly valve is an isolation device that provides a drop tight shutoff when closed and causes only a low-pressure loss when open.

The butterfly valve is not a flow control valve and is generally only used in complete open or closed position. As a result, the butterfly valve is often a valve of On / Off Maintenance type.

It is relatively easy to operate and requires minimal space.



# ⊕ OPERATIVE PRINCIPLE AND ACTUATION



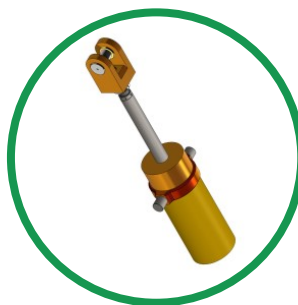
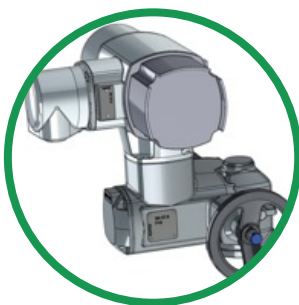
Advantages of our butterfly valves:

- **Range:** Nencini has designed and manufactured valves up to DN3500 in pressure classes from PN2,5 to PN64.
- **Tightness:** All our butterfly valves are drop tight with soft seat (double eccentric) or metal-to-metal seating (triple eccentric).
- **Durability:** The design of the butterfly valve is very simple. It consists out of four main components: the disc, shaft, body and its actuation. As a result the butterfly valve is very reliable.
- **Dimensions:** The face-to-face dimension is small and thus the valve requires minimal space for its installation.
- **Performance:** The normal opening and closing time for a butterfly valve can be very quick for emergence applications, but also very slow to avoid water hammer phenomena.
- **Emergency Operation:** when equipped with counterweights or with a set of accumulators, the butterfly valve can perform an emergency opening or closing also in case of power failure.
- **Cavitation:** Butterfly valves are generally not used for flow regulation. At the complete open position the pressure drop is so low that the risk of cavitation is almost nihil.



The actuation type depends on the project specifications, client requirements and the project flow conditions. The following actuations are most common:

- Manual hand-wheel (with gearbox)
- Electric actuator (with gearbox)
- Hydraulic Piston powered by an hydraulic power unit
- with counterweights, such that in case of power failure the valve will automatically close or open.



In the common scope of supply from Nencini, there is also the electric control board and/or the hydraulic power unit so that the valve can easily be tested in the workshop before shipping, by avoiding any unforeseen event on site.

The Control Panel is obviously suitable for local and remote control



# ⊕ VALVE PERFORMANCES



Nencini has been designing and manufacturing butterfly valves for more than fifty years, in sizes up to 3500 mm and pressure classes up to 64 bars.

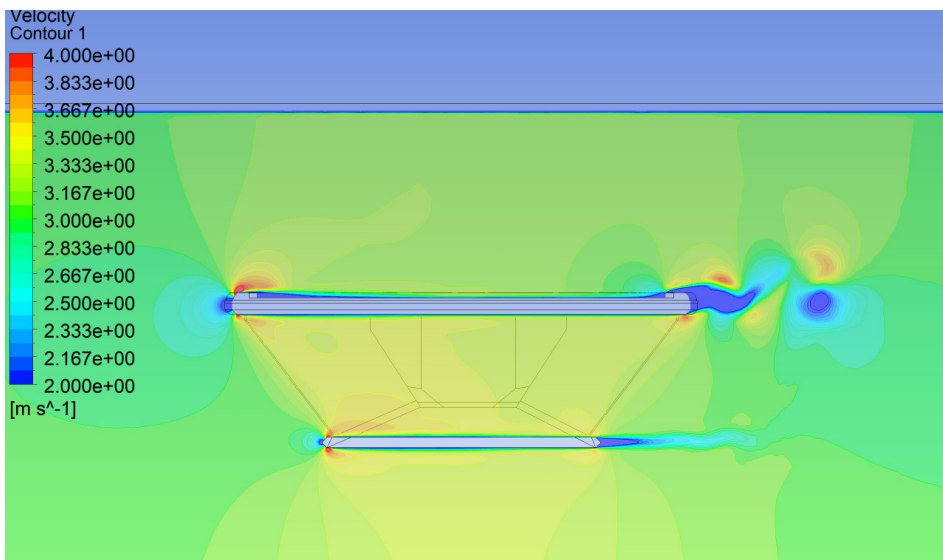
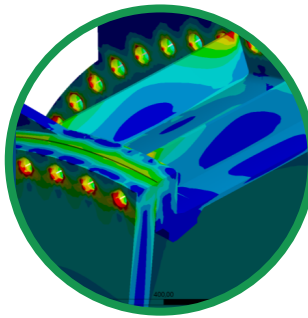
Thanks to the knowledge acquired during these decades of experience, Nencini has the required know-how and approach to solve any critical design challenge and to comply with any requirement set by the client



Our standard **double offset** butterfly valves are drop tight and are of the rubber-to-metal type.

Due to the simplicity of the mechanical design and actuation, no special maintenance is required and moreover, a high lifetime of the valve is guaranteed.

Gaskets and seals on the shaft and disc are easily serviceable.



Nencini also offers specialized butterfly valves, such as the triple offset metal seated type.

The triple offset butterfly valve provides a drop-tight metal-to-metal seating, while avoiding galling, minimizing seating torque and guaranteeing bi-directional operation.

Due to these specific properties of the triple offset type, they are commonly used in the oil and gas industry and for cryogenic applications.





## ⊕ SPECIAL APPLICATIONS

The Nencini Butterfly Valve can also be equipped with a special **maintenance seal**, just on the upstream side of the common service seal, allowing the customer to easily perform maintenance on the service seal without perform any time consuming and complicated draining operation of the upstream piping system.

Although we are specialized in large sized butterfly valves from welded carbon steel, Nencini also provides butterfly valves made from casting and/or **special steels** (i.e. stainless steel, duplex, super duplex, special alloy) suitable for the involved medium and to match any critical project specification.



## ⊕ QUALITY SYSTEM

Nencini follows the international quality system standard EN ISO 9001:2015.

However, the real testimony to the quality of our products are our satisfied customers around the world for the last 50 years, including many renowned engineering consultancy companies like ALSTOM Power, Andritz, Voith, ATB, ENI, Saipem, Salini Impregilo.

Through close collaboration with our clients, we are able to help define system specification and perform accurate hydraulic studies based on literature studies and experimental data as well as structural analysis by in-house developed tools and ANSYS when required.

For the analysis of the hydraulic performance during the opening and closing operation of the butterfly valves we use empirical formulas and Computational Fluid Dynamics. Furthermore, we conduct destructive as well as non-destructive test on the used materials and perform pressure tests on the final product with the client.





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