



## **GUILLOTINE TYPE VALVES**



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# GUILLOTINE TYPE VALVES

## GENERAL DESCRIPTION and INTENDED USE

It is generally used to control water flow on pipelines. They are designed in different sizes according to the water load they will subject to and the place that they will be mounted. The most common area of usage is the internal return pumps used in the aeration pools in the biological treatment systems.

## WORKING PRINCIPLE OF EQUIPMENT

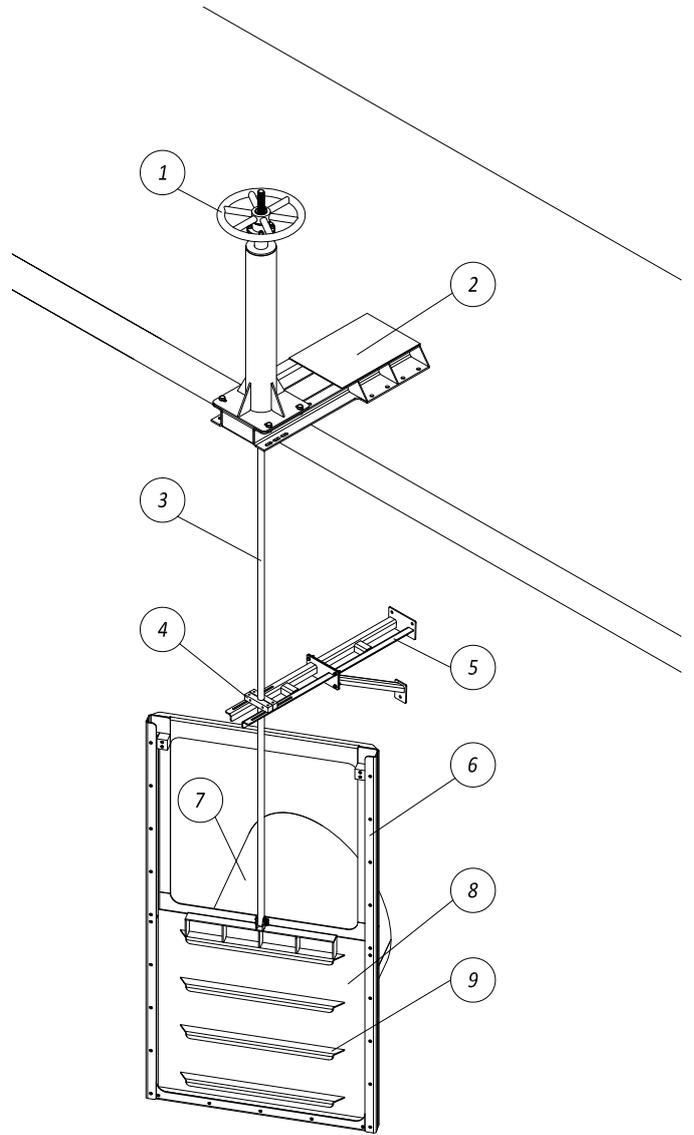
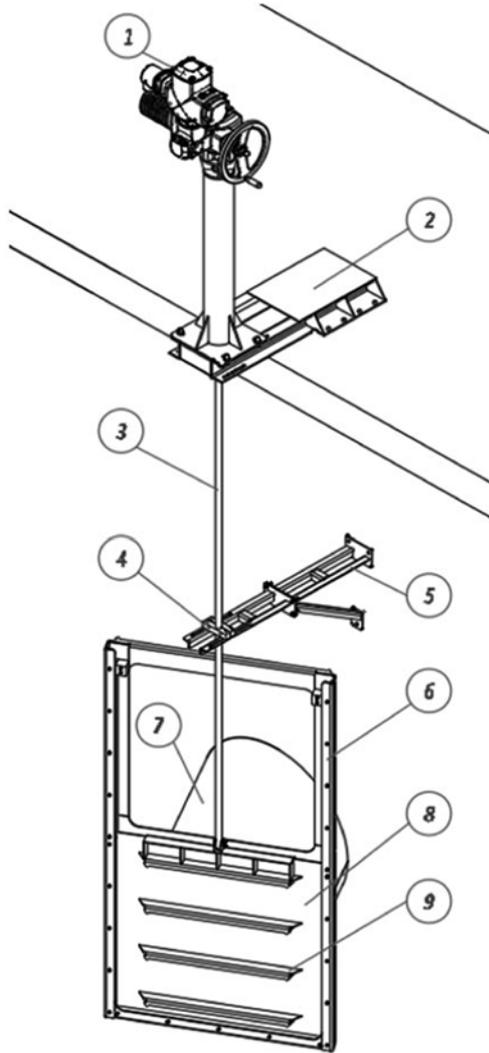
Guillotine type valves control water flow via a cover moving on a frame designed according to the place where they will be mounted. The custom-made bolts are fixed on the frame. They operate according to a principle similar to penstocks.

The moving cover moves in vertical direction with the help of the drive mechanism and the shaft and the cover opens and closes.



# TECHNICAL SPECIFICATIONS

- Guillotine type valves are manufactured to provide impermeability according to ANSI / AWWA C561.
- It is manufactured with rising stem shaft in order to allow easy interference and maintenance.
- They are commonly used on pipe lines. They are generally manufactured as sealed in 4 edges.
- It is manufactured as manual remote control, electrical actuator or pneumatic actuator drive mechanism according to customer's request and using location.
- The safe straining and deflection values are calculated by considering the maximum water loads and operation conditions on the valve. Guillotine type valves are manufactured according to these calculations.
- Since they are designed according to detailed resistance calculations, the optimum material thickness and sizes are selected.
- The sealing material which is suitable for the process that the valve will be operated is selected
- In order to facilitate manual usage of the valves and to open and close them easily, a custom-made bearing group with double row bearing under the flywheel is used.
- According to the customer's request, the electrical actuator models are coupled to the valves so that they will have various communication protocols. Position of the telescopic valve is monitored and controlled with the info received from actuator, if requested.
- As a standard, electrical actuators of all guillotine type valves are selected in a way to move the moving cover with a speed which does not damage the gaskets.
- The pneumatic actuators are equipped with accessories suitable to monitor the limit or position information according to the customer's request and process selection.
- In order to prevent the shaft get damaged by environmental conditions such as dust, rain etc., all guillotine type valves are equipped with polycarbonate shaft protection tubes.
- Guillotine type valves of which shaft twisting calculations are made before designing are designed and manufactured so that they will have interim bearing systems preventing the shaft twisting. Interim bearing is selected according to the process.
- All actuators are selected according to resistance and torque calculations.



## ACCESSORIES

- Polycarbonate Shaft Protection Tube\*
- Barrier Mounting Pipe\*
- Pneumatic Actuator\*
- Electrical Actuator\*
- Online Position Monitoring and Control System\*
- Local Power and Control Panel\*

\* Optional accessories are defined.

No	Part Name
1	Drive Mechanism
2	Mounting Bench
3	Shaft
4	Mid Bearing
5	Mid Bearing Frame
6	Frame
7	Connection Pipe
8	Moving Cover
9	Vertical Ties over Moving Cover

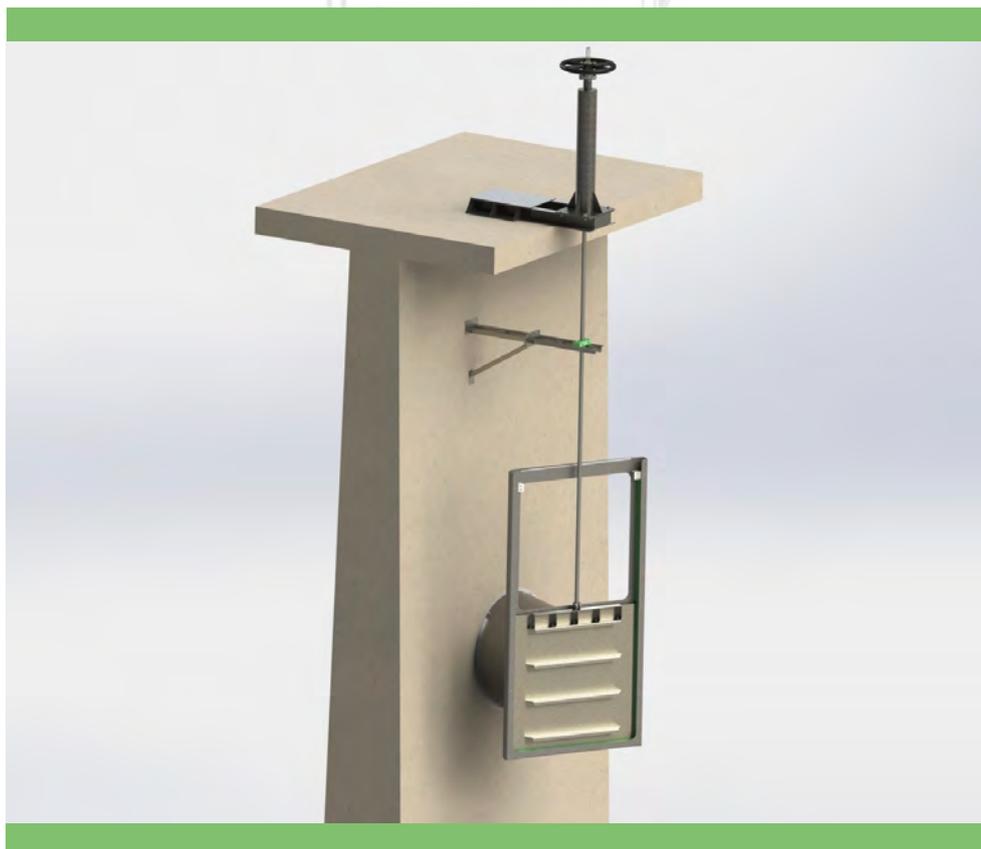
# Material Details

- Frame: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Shaft: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Mounting Bench: They can be manufactured as S235JR + Hot Dipping Galvanized Coating, S235JR + Epoxy Paint, DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Moving Cover: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Interim Bearing: Provided with Castermid or Polyethylene.
- Sealing: Provided with EPDM, Teflon or Neoprene.
- Shaft Protection: Provided with polycarbonate tube.

“Different materials can be preferred in accordance with the request of the customer.”

# Advantages

- Manufacturing in Several Dimensions,
- Long Shaft Valve Mounting in Deep Lines,
- Economical and Resistant Design,
- Suitable for Outdoor Operation,
- Easy Maintenance and Low Maintenance Costs,
- Possibility to Tracking and Check the System Operation over SCADA,
- Maximum Impermeability.





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