

TASK

The shutting off and steering of water inlets and outlets in municipal or industrial pipe, sewage and tank systems.

SOLUTION

PASSAVANT® shut-off devices play a central role in the shutting-off, regulating and controlling of water and effluent flows in drainage systems. Not only do the shut-off devices help protect against floods and surface waters, they also perform safety relevant functions serving to protect people, buildings and infrastructure in endangered areas. At Bilfinger Water Technologies we use the very latest technology, from planning to manufacture, assembly, commissioning and customer service to ensure that our products satisfy – and in many cases exceed – the required standards of DIN 19569-4, or respectively DIN 19704-1 to 3, for equivalent hydraulic steel shut-off devices.

FUNCTION

Depending on the particular design, the various 3 and 4 side shut-off devices are lowered into the water flow by means of guiding or holding devices. The soft seals (EPDM, NBR or neoprene) guarantee water tightness in both directions of flow. Double lip seals, profile seals or double bulb seals are used depending on the type of device and specific requirements.

Operation:

- Manual operation (square key wrench, handwheel, crank, tie rod, gear unit with handwheel)
- Electrical drive (actuator and variable speed drive with and without control system)
- Pneumatic (with pneumatic cylinder for customer's own installations)
- Hydraulic (with hydraulic cylinder incl. hydraulic aggregate)
- Solar driven solutions

BILFINGER WATER TECHNOLOGIES

PASSAVANT® Shut-Off Devices

ADVANTAGES

- Cost effective standard programs, available from stock (up to 3,000 x 3,000 mm in size and 0.6/0.8/1.0 bar water pressure)
- Individually customized, according to specific utilization/ customer requirements (to date max. 7,000 x 7,000 mm in size and up to 5.0 bar water pressure)
- Maximum safety due to static and stress calculations (Finite Element-Method)
- Optimized welded construction for long service life
- High loading capacity with regard to hard and bulky objects in the wastewater
- Low maintenance, therefore low running costs



BILFINGER

**WATER
TECHNOLOGIES**

Drainage Tunnel Project
Emisor Oriente (TEO), Mexico City:
PASSAVANT® penstock with roller,
W x H = 7,000 x 7,000 and 5,000 x
5,000 mm, made of stainless steel
material 1.4301 (AISI 304),
for 4.0 bar (40 m) water pressure



STRUCTURAL SHAPES AND BOTTOM PROFILES

We offer you products which are flexible and exactly tailored to your particular requirements. There are limitless possibilities for the realisation of new installations. We are also able to provide diverse solutions for the modernisation of existing installations.

- Set in concrete
- Anchored
- Flanged
- Combinations
- 1 or 2 spindle design
- Straight bottom
- Semicircular bottom

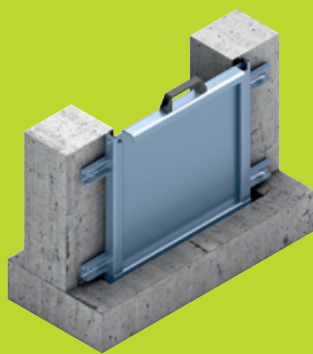
MATERIALS

You will receive your PASSAVANT® shut-off device in a material which has been optimally aligned to the intended application or media. Simply contact us and let us know the material you require!

- Standard steel, coated
- Stainless steel
 - Austenitic (antimagnetic) steel:
1.4301 (AISI 304), 1.4571 (316 Ti), 1.4404 (316 L)
 - Duplex + Superduplex (magnetic / antimagnetic) steel:
1.4462 (AISI 318 LN), 1.4501 (AISI F55)

PRODUCT VERSIONS

3-side sealing



Handstop Gate
(up to 1,000 x 1,000 mm)



Sluice Gate
(available in all sizes)



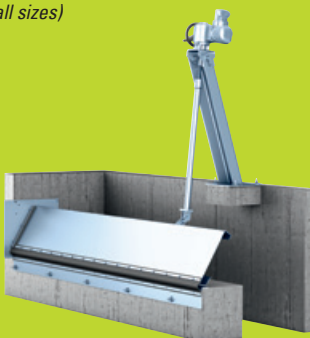
Weir Sluice Gate
(available in all sizes)



Stop Gate
(available in all sizes)



Flood Stop Log System
(available in all sizes)



Overflow Weir
(up to 8,000 x 1,000 mm)



Relief Gate
(up to 2,500 x 1,500 mm)

4 side sealing



Stop Log
(available in all sizes)



Penstock
(available in all sizes)



Backwater Flap
(up to 4,000 mm)

OPTIONS

- Telescopic Pipes

APPLICATIONS AND FIELDS OF OPERATION

Wastewater Technology	Storm Water Retention and Rain Management	Flood Protection and Water Conservation
<ul style="list-style-type: none"> ▪ Municipal WWTP ▪ Industrial WWTP ▪ Drain & pipe network ▪ Pump stations 	<ul style="list-style-type: none"> ▪ Storm water retention tanks ▪ Rain water overflow tanks ▪ Separating structures 	<ul style="list-style-type: none"> ▪ Polder ▪ Retention tanks ▪ Property protection
Hydraulic Steel Structures	Further areas	
<ul style="list-style-type: none"> ▪ Lake reservoirs ▪ Reservoir basins ▪ Scour outlets ▪ Valley dams ▪ Pump stations 	<ul style="list-style-type: none"> ▪ Water supply ▪ Irrigation systems 	

SPECIAL PRODUCTS

We will be pleased to manufacture our “classic designs in cast iron” at your request. Due to their metal seals, these are particularly suited to wastewater with a high solid load and are renowned for their particularly long service life (up to 30 years).

- 150 – 1,400 mm anchored
- 150 – 3,400 mm set in concrete



*Penstock gate-roller gate,
KW Moorburg
W x H = 4,800 x 3,900 mm for 2.8 bar
made of steel – coated 4 times.*