



# ELIQUO | HYDROK

## Flushing Gates

### Channel and Sewer Flushing

*Automatic systems for the cleaning of tanks and channels*



# Flushing Gates

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Tanks & channels

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Sewer networks

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STORM TANKS OR SEWERS REQUIRE CLEANING AFTER OPERATION DURING STORMS DUE TO THE SEDIMENT DEPOSITED ON THE TANK OR SEWER FLOOR ONCE THE STORM HAS SUBSIDED. IF THE SYSTEM IS NOT CLEANED THE POTENTIAL FOR BLOCKAGES IS INCREASED AND ODOUR PROBLEMS WILL OCCUR DUE TO SEPTICITY.

Wastewater sewers and channels with little slope cause sediments deposited on the channels or sewer floor. These sediments require flushing to maintain operational capability of the network.

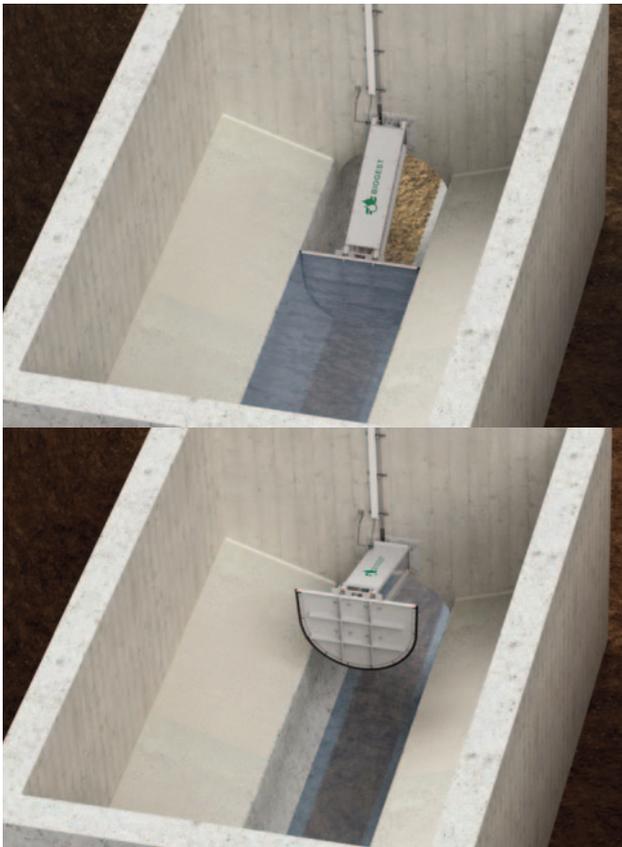
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## CHANNEL FLUSHING GATE - CF

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Storm water catchment channels create sediments during storm events. If these long channel sections are not cleaned, the potential for blockages is increased and odour nuisance will occur due to septicity. The channel flushing gate is an ideal solution to solve this problem. Once a flushing is required, the gate will be operated electro-hydraulically in low position. The upstream channel water fills the channel behind the plate. Once filled, the gate will be opened and the flushing sequence starts automatically.

The CF Flushing Gate acts as a shield and uses impounded water to flush the downstream sewer automatically. During dry weather conditions the CF will impound the flow behind the shield, periodically releasing the flow as a flushing wave carrying sewer debris along to the sewage treatment plant. In storm conditions the shield rises above the flow leaving the high flows to pass through unimpeded.



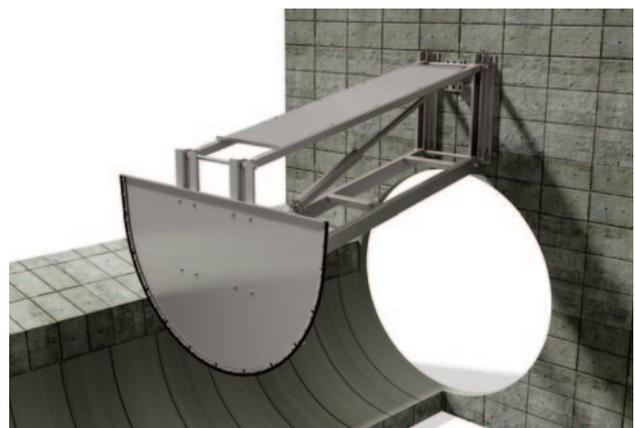
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## OPERATING PRICIPLE

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The Channel Flushing Gate - CF consists of one moveable plate made of stainless steel, sized to partly close the diameter of the channel, a hydraulic power pack and one double acting cylinder. The size of the plate is dependent on the diameter and dimensions of the channel and can be circular or rectangular.

The plate is fixed on a parallel guided framed lifting construction that is fixed on the outlet wall of the channel chamber above the outlet pipe. The plate has a special sealing that is fixed onto the plate border. Once the plate is in the low position the water pressure will press the plate, sealing in the channel profile and closing the cap between the plate and channel. This causes the partial closure of the channel and the channel water will be stored up to the desired water level for flushing the channel.



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## FLUSHING GATES-KS

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An established method of surge cleaning is using the technology of flushing gates. With the KS Flushing Gate systems, control can either take place electronically or by using float technology. The flushing chamber is filled whenever water is in the tank or sewer. As soon as the tank is empty, the flushing gates will open automatically and the flushing wave enters the sewer or tank with a very high sweeping force.

The KS flushing system is a highly effective cleaning system for rectangular or circular storm water retention tanks and storage sewer systems.

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## OPERATING PRICIPLE

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The KS consists of one or more gates, manufactured from stainless steel available in several sizes. The principal parts of the system consist of: the gate, the gate frame, the gate lock, the hydraulic-cylinder, the hydraulic power pack, the main floater body and the control floating body.

The gate is hinged at the top of the frame. The bottom of the gate is held closed by retaining lock hooks. A special sealing is used between the gate and the gate frame. The retaining look hooks are mounted on a shaft. The shaft moves around its axis and operated by the hydraulic cylinder. The hydraulic cylinder is driven via a hydraulic pump. The control unit consist of a float, a hydraulic cylinder and a mounting board. The frame of the gate is fixed with bolts and dowels on the concrete wall or to a pre-cast fixing bar set in the concrete.

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## ADVANTAGES AND BENEFITS

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Manual or automated operation

Efficient cleaning with a water head of up to 3m

Flushes even after partial fillings

Double acting hydraulic locking and opening system for positive operation

Suitable for retrofit into existing tanks and shafts

Locking technology with fast gate opening and dampening closing function

Can be designed and provided with a complete control centre package

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Effective cleaning system for rectangular wastewater retention tanks and storage sewer systems.

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