

High standard  
innovative flushing system ...



## Tipping Bucket – for stormwater tanks

### The System

After storage events, stormwater tanks in combined or separate sewer systems have slower flow rates, which lead to heavy sediment deposits on the floor of the tank. These sediments consolidate during the next dry period and are not remobilised. One of the resulting problems is the build-up of biogas. At the next stormwater event, loose sediments can be transported to receiving waters as impact load and cause damage there. It is therefore necessary to clean stormwater tanks after every impound regularly and cost-effectively.

The cleaning of stormwater tanks by means of tipping buckets is, along with flushing with gates, one of the most common methods used for the removal of sediments.

It is an operationally safe process, which has proved itself in numerous applications over decades. The cleaning of rectangular stormwater tanks in open and closed constructions with short flushing lengths of below 50m are typical areas of application for the HydroSelf Tipping Buckets, which can be installed in new as well as in existing structures.



The HydroSelf tipping bucket has one or more drain holes so that stormwater cannot accumulate in open tanks.

### The Function

The HydroSelf tipping buckets consist of a specially designed cross-sectional form which ensures automatic release of the flushing wave and the return of the trough to the start position. When filling is activated, the tipping bucket is filled to a previously set water level. During the filling process the load centre of the tipping bucket shifts so that it turns automatically and the flushing volume is emptied against the back wall of the stormwater tank. The flushing volume slides over a rounding in the wall to the tank floor. This conversion of potential into kinetic energy creates a flushing wave of high velocity and great turbulence in the head wave. It removes the sediments on the tank floor and transports them reliably to the end of the flushing lane into the flushing sump. After emptying, the tipping bucket returns automatically to its start position and is ready for operation again. If required, the HydroSelf tipping bucket can also be supplied with a control lock for manual or automatic releases.

The filling time of the tipping bucket is dependent on the inflow and the volume of the tipping bucket. The number of flushes required is dependent on the nature of the deposits. In most cases, one flush is sufficient. Several flushes may be necessary for especially severe deposits.

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### Advantages

- Automatic release of flushing wave and return to start position
- High cleaning performance and low energy costs
- No moveable parts in wastewater
- Low-noise tipping with smooth sliding into the start position (from any position)
- Flexible volume in any increment between 200 and 2000 l/s
- Complete construction in stainless steel, in V2A or V4A as required
- Economic and easy mounting system for new structures or already existing tanks. Low maintenance flushing system.
- Water-tight ball bearings
- Corrosion-resistant material
- Bend-proof and torque-proof tipping trough
- Minimal suspension strain due to optimal torque sequence
- Minimised outlay in material, weight and costs due to CAD optimised construction
- Filling with stormwater, used water, ground water or potable water
- Easy to install