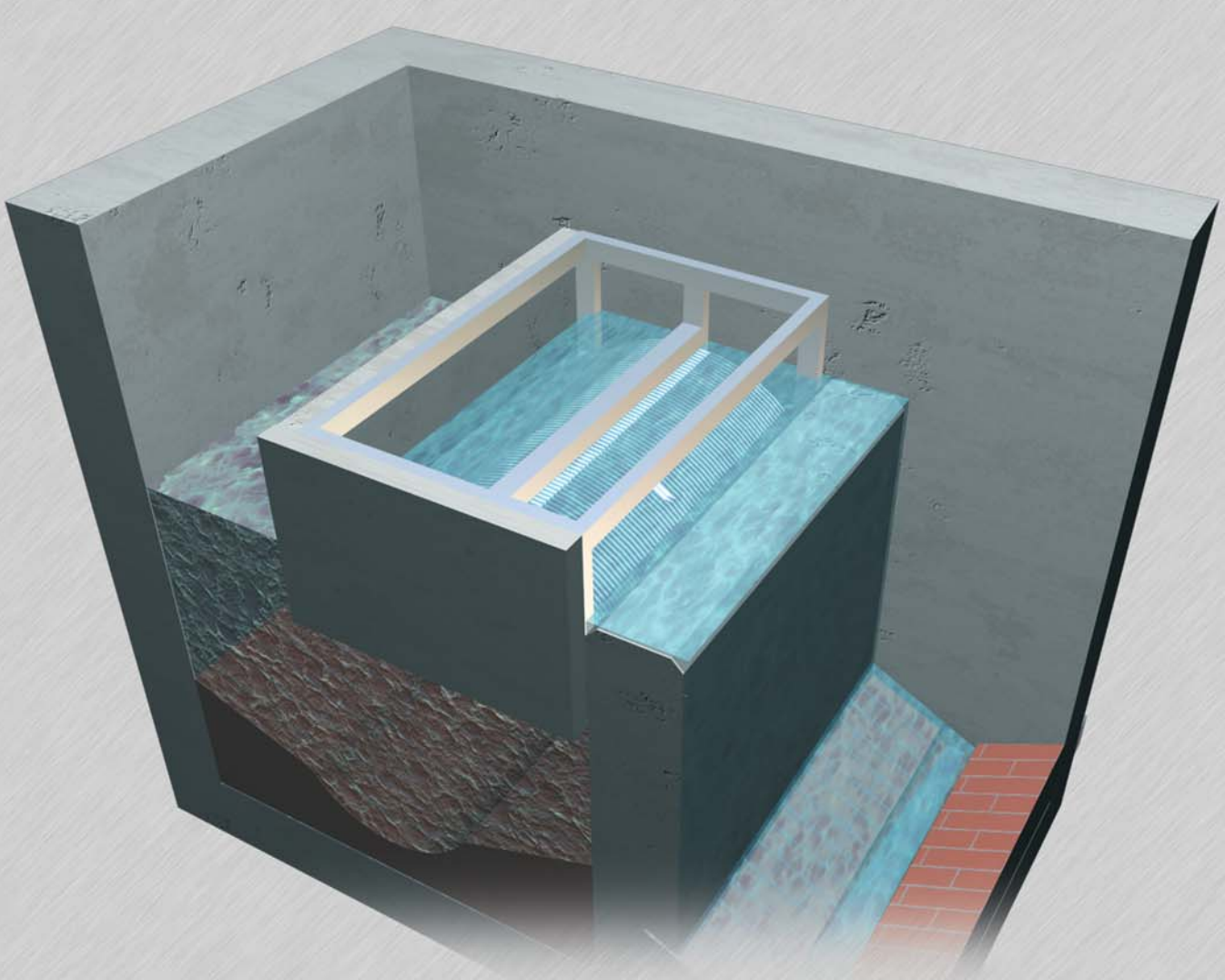
NEW

Steinhardt® HYDROSCREEN

fine bar screen model FSRB

arc-screen protects waters
river banks stay clean



Steinhardt®
Water Technology Systems

Steinhardt®
HYDROSCREEN

Fine bar screen, Model FSRB

The Challenge

There are thousands of old overflows in sewer networks. When it rains, this is how considerable quantities of pollution, like sanitary articles, paper and synthetics, reach our waters. Old overflows are often at the performance limit of today's design, which is why reconstruction through extending the overflow crest is often necessary when installing standard screens. If the narrow space cannot be corrected or the flow rate is not sufficient, then expensive new build CSO's and SSO's are necessary.

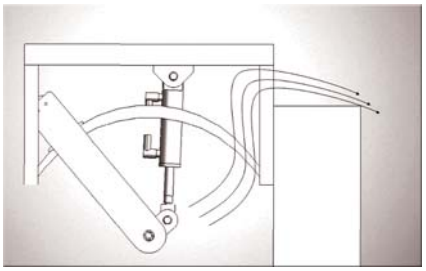
The way

The Steinhardt® HydroScreen Model FSRB is designed as an arc-screen which increases the flow rate. It matches the curved form of the inlet pipe. It is usually positioned lying horizontal in front of the overflow crest. The Steinhardt arc-screen is installed sitting from 0 to 45°, as well as parallel or perpendicular to the overflow crest. We are happy to offer engineering support, where Steinhardt GmbH's long-standing experience comes in.

The Product

The Steinhardt® HydroScreen arc-screen has been developed to boost the efficiency of existing emergency overflows and designed for a hydraulically high flow rate. To achieve this, innovative arc rake bars with new PE wiper element were developed.

The HydroScreen arc-screen is streamed from bottom to top and is usually positioned horizontally before the weir crest. It is modular and can be delivered in various curve radii with corresponding capacity (see selection diagram). Please inquire for intermediate sizes. The curve segments are optimised at about 90° and 120° degrees at a bar spacing between 4 and 6 mm. Once set up readjustment is not necessary.



All HydroScreen arc-screens are made from stainless steel and are normally delivered with hydraulic drive. Water wheel drive is optional. The system is suitable to operate in explosion zones. The control cabinet can be at any suitable position on the ground.

To prevent pollutants being carried over the whole length of the screen, the screenings are carried to the left and right sides of the screen. The wiper elements are on the cleaned side and are pollution-resistant. They are made from polyethylene. The screenings are carried away by the flow. Compression of screenings does not occur. Heavy screenings sink to the floor and are carried ahead to the WWTP. For narrow chambers an optional slide-in system provides safe maintenance from the ground.

The Steinhardt® HydroScreen arc-screen is designed for continuous operation and operates during the complete discharge period.

Range of Application

- before combined water inflows into receiving waters
- before storm water inflows into receiving waters
- before soil filter systems
- before earth and retention basins
- before percolations
- before difficult-to-clean basins

Advantages

- Robust stainless steel construction
- modular in construction
- hydraulic drive
- space-saving curved screen
- high flow rate
- can be retrofitted, also possible through small hatch openings
- high cleaning efficiency
- safe transport of screenings
- wiper elements on the pollution-protected side
- screenings released to right and left of curved screen
- velocity between the screen bars limited to ≤ 1,4 m/s
- head loss ≤10 cm
- high specific performance approx. 500 $l \cdot s^{-1} \cdot m^{-2}$ due to curved surface
- no readjustment necessary

Selection diagram for 4 mm bar spacing

Installation length [m]		1,00	1,20	1,25	1,50	2,00	2,20	2,25	2,50
Installation width [m]	design width [m]	flowrate Q [l/s]							
0,60	0,55	265	318	331	397	530	583	596	662
0,75	0,70	338	406	422	507	676	743	760	845
0,90	0,85	407	488	509	611	814	895	916	1018

Note: The screen can be extended modularly --Q increases accordingly -- Q increases also at higher primary pressure. All data are approximate.

patent pending

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