



# Steinhardt® HYDROSCREEN

Fine Bar Screen Model FSRF

High performance screen protects waters  
Overflows are secured  
River banks stay clean



**Fine Bar Screen  
Model FSRF**

**The challenge**

Even when CSO's and SSO's are equipped with scum boards, considerable quantities of floatables and suspended solids still reach the waters. Sanitary articles, toilet paper and synthetics are left caught in the river bank after heavy rain. The waters are biologically and hydraulically "stressed".

**The way**

All polluted discharges into receiving waters have to be treated. Floatables and suspended solids can be screened out. This should be done continuously and carefully to prevent the screenings from breaking up and slipping through the screen meshes.

**The solution**

The Steinhardt® HydroScreen Fine Bar Screen Model FSRF is a very flat screen. It is installed horizontally at overflows in combined and separate sewer systems. The direction of flow is from bottom to top. All fine bar screens Model FSRF are made of stainless steel and are normally hydraulically driven. Explosion protection is not necessary. The control cabinet can be in any chosen position above ground.

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The HydroScreen Fine Bar Screen Model FSRF is modular in design and can be installed through small openings (also Ø 600) and mounted in the structure. The module is about 65 cm long; the smallest unit starts at 1.30 m with integrated hydraulic drive. Waterwheel drive unit on demand. To prevent screenings being carried over the whole length of the screen, each module has rest zones. The screenings are released there by gravity, sink to the floor and are carried by the sewer flow to the WWTP.

The minimum installed width starts at 40 cm, extendable in 10 cm steps. The screen height including the hydraulic drive is less than 30 cm when assembled. It is installed horizontally and partially lowered before existing overflow crests so that the screen bars are evenly charged. The normal bar spacing is 4 and 6 mm, which ensures the highest possible degree of cleaning by corresponding flow rate. In order to trap as much dissolved matter as possible, the flow velocity between the screen bars is limited to  $\leq 1.4$  m/s.

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Removal of screenings begins automatically when the HydroScreen Fine Bar Screen Model FSRF is charged. It operates continuously during the discharge and is set to continuous operation.

**Range of Application**

- before combined 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
- retrofit through small apertures possible
- high cleaning efficiency
- safe transport of screenings
- wiper elements on the pollution-protected side
- very flat screen
- velocity between screen bars limited to  $\leq 1.4$  m/s
- head loss approx.  $\leq 10$  cm
- effective performance approx.  $500 \text{ l x s}^{-1} \text{ x m}^{-2}$
- bio oil
- screenings release zone every 65 cm
- no re-adjustment
- hydraulic drive
- optional waterwheel drive

**Selection diagram for 4 mm bar spacing**

Installation length [m]		1,50	2,25	3,00	3,75	4,50	5,25	6,00
Installation width [m]	Selected width [m]	Flow rate Q [l/s]						
0,40	0,30	170	255	340	425	510	595	680
0,50	0,40	230	345	460	575	690	805	920
0,60	0,50	290	435	580	725	870	1015	1160
0,70	0,60	340	510	680	850	1020	1190	1360
0,80	0,70	400	600	800	1000	1200	1400	1600
0,90	0,80	460	690	920	1150	1380	1610	1840
1,00	0,90	520	780	1040	1300	1560	1820	2080
1,10	1,00	570	855	1140	1425	1710	1995	2280
1,20	1,10	630	945	1260	1575	1890	2205	2520
1,30	1,20	690	1035	1380	1725	2070	2415	2760

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