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[RakeMax®-hf: Save costs with even smaller bar spacing](#)



It was a precision job to mount the RakeMax®-hf ...



... in its intended installation place.

The old fine screen on WWTP Roth was replaced by the newly developed 'high flow' multi-rake bar screen RakeMax®-hf without the need for any structural alterations on site.

The district town Roth is situated south of the Nuremberg Metropolitan Region, about 30 km from the HUBER SE headquarters. The municipality of Roth operates a sewage treatment plant for 65,000 PE, which include neighbouring villages and the lake Rothsee catchment area.

Mainly due to the big bar spacing of the old fine screen the plant blocked again and again and caused operating troubles. It was hard work every time for the WWTP operating staff to eliminate these problems.

Simply replacing the old fine screen with a new conventional fine screen with a smaller bar spacing would have caused considerable costs for structural alterations that would have become necessary. HUBER had an alternative to offer: To meet the requirements of exactly such applications, we developed on the basis of our well proven RakeMax® Multi-Rake Bar Screen a modified system with two different sections: a flat and therefore hydraulically favourable screening section followed by a steeply inclined conveying section. This solution combines the benefits of the well proven RakeMax®, reliable solids separation and high screenings discharge capacity, with a low headloss due to a big effective screen rake surface. Due to the extremely small inclination of the bar rack, the screen section of the new RakeMax®-hf (high flow) where the flow passes through is always double the flow profile.

All other design features are the same as on the original RakeMax®. Therefore, the screen's advantages, high efficiency and low maintenance requirements, are maintained by using well-proven standardised elements.

Owing to the new development of the RakeMax®-hf design, the old screen on WWTP Roth could be replaced with a new fine screen with 6 mm bar spacing without the need for any prior structural alterations. This smaller bar spacing ensures that the majority of disturbing coarse materials are retained and gravel and grit are collected in the downstream grit trap.

Material removal from the screen starts virtually right at the bar rack mounted flat to the channel bottom so that any accumulation of disturbing material is eliminated. The cleaning elements, attached to the chain system, can easily be adjusted to different requirements. This is especially favourable for high solids loads.



Principal sketch RakeMax-hf®: The screen consists of a flat and therefore hydraulically advantageous bottom section and a steep conveying section.

The HUBER RakeMax®-hf Multi-Rake Bar Screen is especially suitable for applications with given hydraulic and structural conditions as it can be tailored to meet almost any application requirements.

Also on WWTP Roth it was the outstanding flexibility of the RakeMax®-hf screen that made it possible to further use the customer's

screw conveyors for screenings removal. The resulting financial scope could be used to also replace the customer's wash press with a new type with integrated intensive washing (WAP/SL). The old wash press was very susceptible to failure. The WAP/SL type of screenings washing system washes out faeces and suspended organic material through addition of wash water and mechanical energy.

After the installation of the HUBER RakeMax®-hf Multi-Rake Bar Screen and Wash Press WAP/SL, two more HUBER products are successfully operated on WWTP Roth in addition to the COANDA Grit Washer RoSF 4 and ROTAMAT® Disc Thickener RoS 2S which have been successfully used for many years already.

Related Products:

- [HUBER Multi-Rake Bar Screen RakeMax® HF \(high flow\)](#)

Related Solutions:

- [HUBER Solutions for Mechanical Pre-Treatment](#)

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