



The 1-2-3 of screens!

The FSM perforated belt screen - the original!

1 Higher throughput with the same footprint!

A new angle - $\alpha\beta$ for our proven design

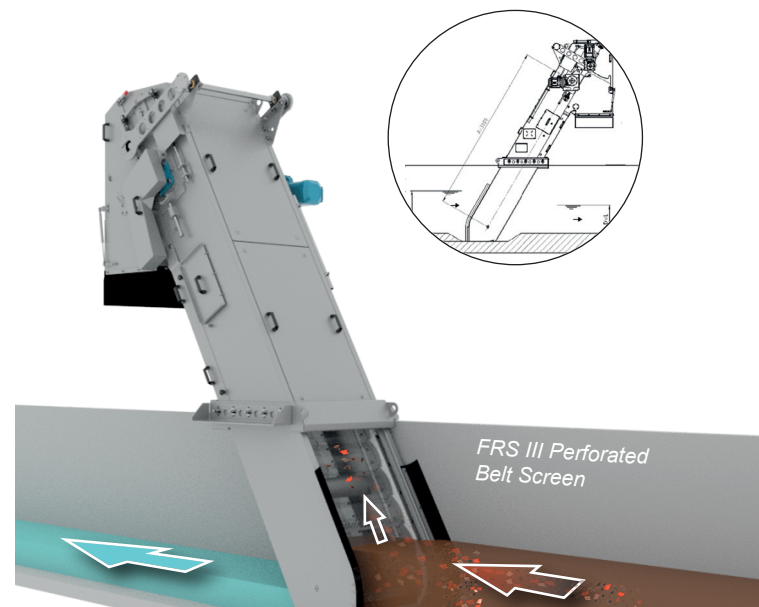
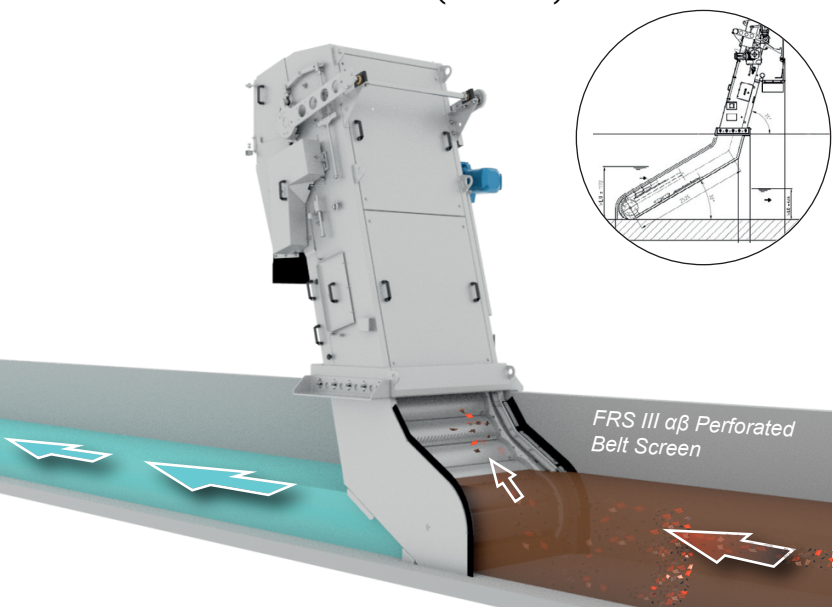
Many sewage treatment plants are facing an upheaval, existing screen plants are to be retrofitted from large gap widths to smaller gap widths or holes.

The main inlet channels to the sewage treatment works are generally in concrete and have fixed dimensions. Therefore, a new inlet screen with smaller bar spacings or holes will capture more screenings material but it may cause hydraulic problems such as higher upstream level and settlement of sewage in front of the inlet screen due to lower velocities (overflow).

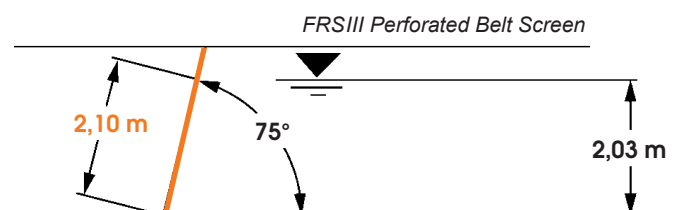
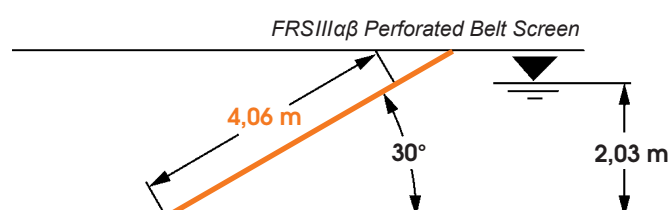
Bar Raked screens that are hydraulically capable of increased capacities, however, support less screening material. **Disruptive materials such as cotton buds and wet wipes may easily get through the bars of a bar screen and therefore lead to failures and operating faults.** Widening the channel to create a correspondingly wide screens entails high investment costs and expensive renovation work.

Your solution: Building on the fundamental design of the FSM perforated belt screen FRSIII, FSM Frankenberger has developed a screen with a **higher throughput with the same footprint.**

The FSM **Alpha Beta** Perforated Belt Screen.



Comparison of Area Flowed Through FRSIII $\alpha\beta$ - FRSIII





Designed at an **angle of inclination of 30°** below the water line, the screening surface area presented to the flow is considerably larger and therefore the throughput is also substantially increased. **Disruptive materials such as wet wipes or cotton buds are increasingly laid on the perforated belt when flowing through and are reliably removed.**

Advantages:

- **Reduced through flow speed**
- **Ideal for retrofitting in the existing channel Generally no structural extensions are required**
- **Increased through flow capacity**
- **Very high retention of screening material (85%)**
- **Up to 93% more screening surface**

2 Simple maintenance due to self-adjusting cleaning brush.

Is there a system which can simplify maintenance work on the screen?

Yes, with the self-adjusting cleaning brush of our FSM perforated belt screen. Regular examination of the existing screen is important. Only then can it be guaranteed that the screen can operate reliably and for a long time. The self-adjusting cleaning brush cleans efficiently by exerting the optimum pressure on the filter baskets and therefore saves on maintenance or manual adjustment of the cleaning brush during routine maintenance.

Please Contact us – FSM will be able to provide you with the solution to your hydraulic challenges!



3 FS High Flow Perforation

Are there other possibilities for optimising the screen system on the sewage treatment plant?

Yes, there are! With the **special FSM High Flow Perforation** there is a greater free filter surface and therefore higher flow rate. We use this special perforation for high hydraulic load cases which do not allow increases in upstream water levels.

The free surface is increased in High Flow Perforation by more than 20%. In combination with the $\alpha\beta$ screen with High Flow Perforation, a 100% higher performance is produced compared with the 75° screen.

| Perforation: | Free surface: |
|---------------------|----------------------|
| Standard 3 mm | 33% |
| FSM High Flow | 47% |
| Standard 6 mm | 51% |
| FSM High Flow | 63% |

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