

## SMF/ MMF – Single Media/ Multi Media Filtration

### Description:

Media Filtration is probably the oldest water treatment system. In grave of pharao Amenophis II, pictures have been found, showing men filtrating water, dating 1.500 years BC. Still it is a simple, but efficient process removing particles in all ranges of size and showing biological activity.

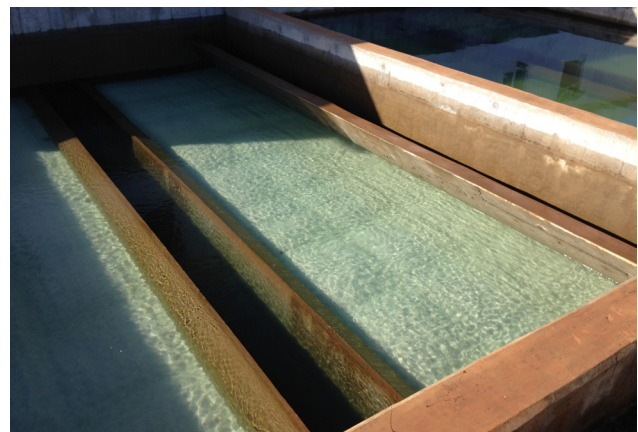
This treatment relies only partly of size exclusion at the surface, but rather on volume filtration within the complete filter body. This can be especially enhanced using multi-media filtration. Due to different media layers within one filter, a wider spectrum of particles can be removed, using the volume more efficiently.

In most cases for large volume flows (500-1000 m<sup>3</sup>/h), open filters in concrete, operated by gravity, are applied, while at lower volume flows closed steel filters, operated by gravity or by pressure are usually the right choice.

Using media like activated carbon, the operation can be extended from particle removal to the removal of dissolved organic compounds. Single-media and multi-media filtration are often combined with flocculation processes, allowing a final polishing and safe particle removal.

### Advantages:

- ▶ Safe treatment system for both water and wastewater applications.
- ▶ High removal efficiency.
- ▶ More than 10 references for BHU.



*Filter in operation*



*Filter in backwash*

**Technical data:**

- ▶ Volume flows between 100 and 1,000 m<sup>3</sup>/h for each system.
- ▶ Filter velocity between 5 and 20 m/h.
- ▶ Removal of particles by up to 95%.
- ▶ Removal of turbidity by up to 90% per system.

