

Bag Filters

DE-WATERING SEDIMENT CONTROL TECHNIQUE

Low Flow Rates	✓	Low Filtration	✓	Sandy Soils	✓
Medium Flow Rates	✓	Medium Filtration	✓	Clayey Soils	✓
High Flow Rates		High Filtration	✓	Polluted Soils	✓



Photo 1 – Skid-mounted filters



Bag filter housings

Replacement filter bags

Photos by FSI, Eaton, Pentek, Krystil Klear, & Siemens

Photo 2 – Bag filters

Design Information

A bag filter is not the same as a filter bag. Bag filters are commercial pressure filters containing one or more small, fine-micron filter bags. The bags are typically made of sewn polyester or welded polypropylene.

Bag filters can be installed on transportable skids or trailers in banks of parallel units (for high flow rates), or in series (for increased filtration efficiency).

Bag filters typically have a medium treatment efficiency. The capture efficiency of bag filters is typically in the range of 50 to 70% of the nominal pore size.

The bags typically have a nominal pore size of 0.001 to 0.1mm (1 to 100 microns). This relates to a critical particle size in the range of 50 to 100 microns.

The filter bags normally need to operate in association with a pre-treatment process, typically a sedimentation tank.

Initial discharge can be poor until a sediment build-up occurs on the surface of the filter.

Flow rates of around 23m³/hr per (175 x 750mm) bag, with a full capacity of around 3kg of sediment.

Compared to cartridge filters, bag filters have a higher flow rate at a lower pressure drop, and a higher particle capture volume.