

FILTER BAGS FOR PROCESS WATER & WASTEWATER

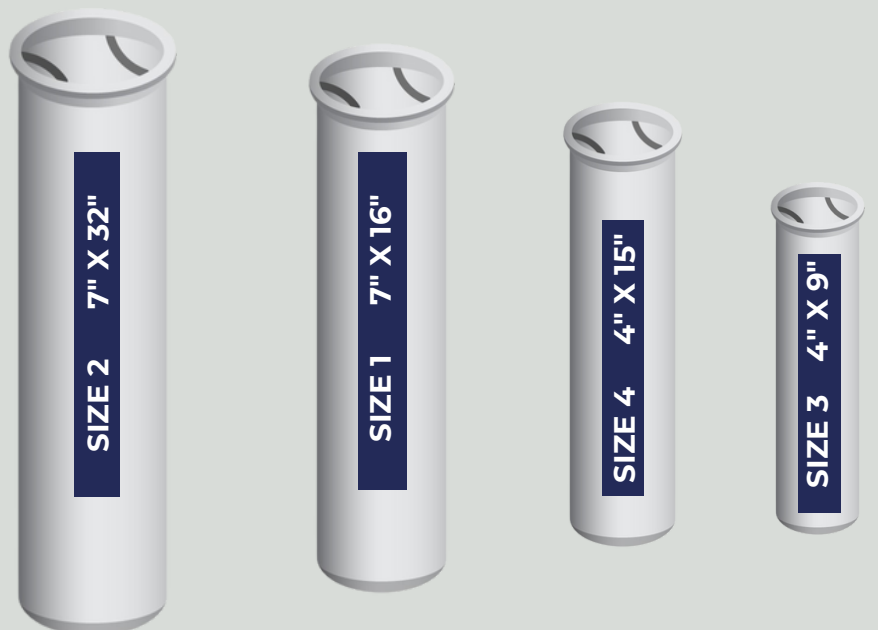
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Filter bags provide a cost effective solution for filtration of process and wastewater. They are designed to remove solid particles, contaminants, and debris from water by trapping them inside a porous medium (felt type media), or on the surface (mesh type media). Polypropylene felt is the most commonly used media for industrial applications. Polyester felt offers similar performance to Polypropylene felt filter bags but also provides high temperature resistance. Nylon mesh filter bags offer high thermal resistance and are an excellent choice for straining applications. Extended life Polypropylene and Polyester media provide longer service life as compared to standard bags.

How filter bags work?

Water enters the filtration system, usually under pressure and passes through the filter bag, which acts as a physical barrier. The bag captures particles based on its micron rating. Solid contaminants are trapped inside the bag, while clean water flows through. Filtered water exits the system for further use or treatment.

Filter bag sizes and max flow rates*



Size	Size 2	Size 1	Size 4	Size 3
Dims	7" x 32"	7" x 16.5"	4" x 15"	4" x 8.8"
Area	0.5m ²	0.25m ²	0.12m ²	0.07m ²
Volume	17l	8l	2.5l	1.4l
Flow rate*	40 m ³ /hr	20 m ³ /hr	10 m ³ /hr	6 m ³ /hr

**Flow rate figures are a rough guide and depend on application.*



Advantages

- Cost-effective and easy to replace
- High flow rates with low pressure drop
- Versatile for various applications
- Wide range of media, micron ratings and efficiencies

Applications for Water & Wastewater

Equipment Protection:

- Protection of downstream equipment - pumps, valves, sensors
- Protection of heat exchangers to avoid fouling of heat exchanger plates
- Protection of high pressure pumps

Process Heating & Cooling:

- Filtration of process cooling water
- In HVAC applications - Filtering water in heating and cooling systems to prevent fouling and scaling.

Borehole water:

- Groundwater remediation - Filtration of particulates and suspended iron from borehole water.

Other:

- Prefiltration to protect and extend the life of fine filters
- Filtration of wastewater to reduce suspended solids count and to meet regulatory requirements.

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Filter bag sizing for water applications



Flow rate

Use the table above to select the bag for required flow rate. Unless the incoming water is of good quality, apply a safety factor of 0.70.

For applications handling a high concentration of particles, a safety factor 0.50 or lower may be required.



Micron rating

Base the micron rating on the smallest size that needs to be removed. Use our micron rating explainer guide for guidance.



Contaminant loading

High solid loads will require larger surface areas or multi-bag systems to prevent rapid clogging.



Max differential pressure

Operating the filter bags past their max allowable differential pressure can result in bag ruptures and increase energy expenditure.

Filter bag media, materials and micron ratings

Needlefelt filter bags

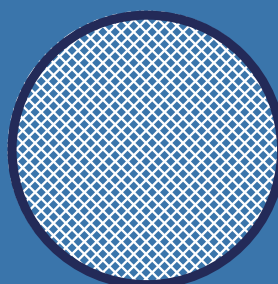


Needlefelt type filter bags work on the basis of depth filtration and trap particles throughout the depth of filter medium. This type of media provides a high dirt holding capacity.

Materials:
Polypropylene, Polyester, Nylon, PTFE, NOMEX, Extended Life

Micron ratings:
1, 5, 10, 25, 50, 100 and 200 micron

Monofilament mesh filter bags



Mesh type filter bags trap particles on the surface of the filter media and work on the basis of size exclusion. Suitable for applications where a large number of particles have a similar size distribution. Also suitable for removal of large particles.

Materials:
Polypropylene, Nylon

Micron ratings:
1 - 1800 micron

This guide is provided in good faith and is intended for general informational purposes only. While every effort has been made to ensure the accuracy and reliability of the information contained herein, Siga Filtration assumes no responsibility for any errors or omissions. Users are encouraged to consult with our technical team to ensure the suitability of filter bags for specific applications.