



Smith & Loveless Inc.



FIBROTEX®

The Efficient Backwashable Depth Filter





Highly Efficient Fine Particle Filtration... with a *Twist*

FIBROTEX® comprises a range of compact, fully automatic, self-cleaning fibrous depth filtration systems designed to eliminate or reduce particulates in aqueous feedstreams, either prior to use in the process, or before discharge from the process. Be free from turbidity, iron, manganese or color. Or safeguard your membrane system by pre-treating your process water with a **FIBROTEX®** filter. If your process water requires polishing, **FIBROTEX®** will provide a better quality filtration prior to recycling or discharge.

FIBROTEX® enables a choice of water sources, including boreholes, rivers and canals to be utilised, minimising the consumption of costly mains water. **FIBROTEX®** filters are based on a unique, yet proven technology and use advanced materials and construction techniques to provide effective, compact and reliable filtration solutions to the water quality problems of industry.

Manufactured and fully supported in North America, the UK and Europe by:



Smith & Loveless Inc.



Applications

- Mains water polishing
- Pretreatment prior to reverse osmosis and membrane filtration
- Filtration of recycled process waters
- Industrial effluent polishing
- Iron and manganese removal from boreholes
- Filtration of potable supplies drawn from non-mains source, i.e. borehole, river
- Protection of disposable membrane cartridge filters

The Smart Choice for Fine Filtration

FIBROTEX® filters are based on a unique, yet proven technology and use advanced materials and construction techniques to provide effective, compact and reliable filtration solutions to the water quality problems of municipalities and industry. *Features and benefits include:*

Fine Filtration

- Performance 98% removal of 2 micron particles
- Improved filtrate quality compared to sand and multimedia filters
- Enables use of lower cost water sources, such as boreholes, rivers and recycled waters from waste streams
- Improves longevity of downstream filters, reducing replacement costs by up to 80%
- Removes particulate from process streams

Compact Plant

- Enables installation within existing plant room
- Minimal installation costs

Low Backwash

- Low volume requirement creates less effluent and uses less water
- Short backwash cycles of a few minutes minimise process disruption

Features

- PLC controlled with touchscreen interface, fully automatic operations
- WRAS listed Materials for potable water use (UK)
- Choice of materials of construction includes 316 stainless steel
- FBE coated mild steel, Glass reinforced plastics, all suitable for ATEX Zone 1 explosion-proof standard



Cutaway view of filter element inside vessel housing

How FIBROTEX Efficiently Achieves 98% Removal of Two Micron Particles

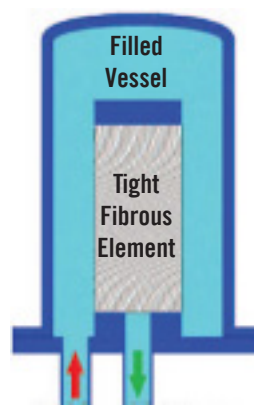
Filtration Mode

The FIBROTEX filter element comprises thousands of high performance synthetic fibres arranged in a bundle around a central core. During filtration, the fibre bundle is twisted and compressed, to form a tight helical matrix. The feedstream passes radially from the outside to the inside of the element, with particulates being captured within the fibrous matrix and held until the element reaches a pre-set loading.

Backwash Mode

When the filter element is fully loaded, an automatic backwash cycle is initiated. During backwashing, the element is first untwisted and stretched and is then 'wrung out' by an alternate twisting motion. A small 'backwash' flow of water is introduced during the backwash cycle, and this is drawn into the individual fibres and expelled, along with the dirt, as the fibres are alternatively stretched, squeezed and relaxed. A highly concentrated backwash stream leaves the system before the next filtration cycle commences.

Filtration Mode

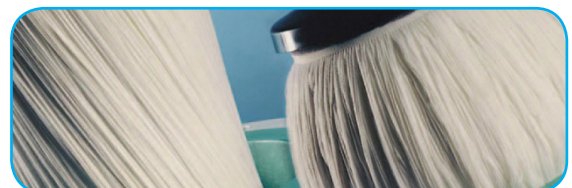


Feed Water
Filtrate

Backwash Mode



Drain
Backwash



FIBROTEX's filtration strength stems from its fibrous element.

FIBROTEX® Models and Specifications



AX-50



AX-100



For even larger flows, AX50 units are manifolded together

Compare to Conventional Multi-Media Filters

	AX-5	AX-50	AX-100
Floor Area (length x width mm)	650 x 800	1090 x 1030	1700 x 1300
Height (mm)	1400	3000	3000
Clearance Height for Element Removal (mm)	1600	4200	4200
Flow Rate (m ³ /h)	3	30	60
Inlet & Outlet Flange (mm)/ Pipe Size (in.)	40 / 1.5	80/3	80/3 or 100/4
Backwash & Drain Flange (mm)/ Pipe Size (in.)	40 / 1.5	80/3	80/3
Backwash Flowrate (m ³ /h)	2	20	40
Backwash Time (min.)	3.5	4	4
Electrical Supply Required (All Single Phase)	110 V / 50 Hz / 3 Amp	110 V / 50 Hz / 3 Amp	110 V / 50 Hz / 3 Amp
Power Consumption (watts)	< 100	< 100	< 100

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