



# Fibrotex



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.

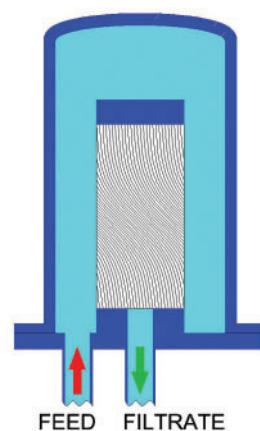
Fibrotex enables a choice of water sources, including boreholes, rivers and canals to be utilised, minimising the consumption of costly mains water.

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.

## The Technology

### Filtration

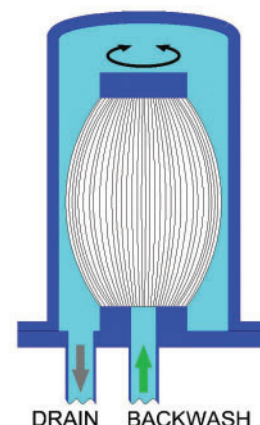
The FIBROTEX filter element comprises thousands of high performance synthetic fibres arranged in a bundle around a central core. During filtration, the fibre bundle is twisted and compressed, to form a tight helical matrix. The feedstream passes radially from the outside to the inside of the element,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



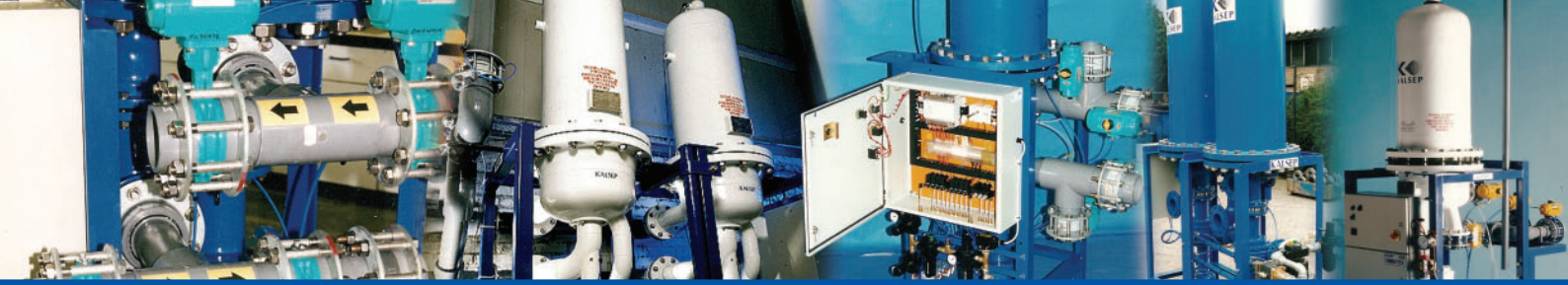
Element in Filtration Mode

### Backwashing

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.

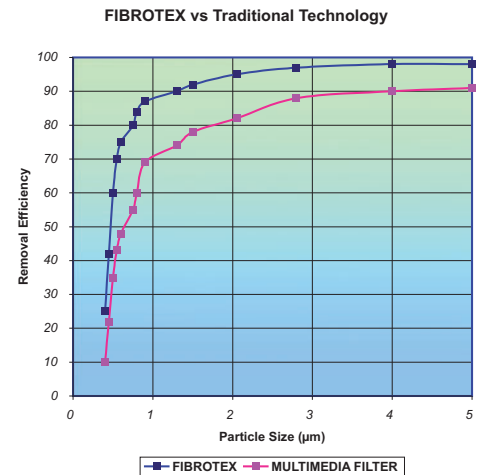


Element in Backwash Mode



## Features

- Range of element materials provide a variety of performance ratings down to 98% removal of 2 micron particles
- Compact footprint
- Low backwash volumes
- PLC controlled, fully automatic operations
- Modular plant available for mobile operations
- Choice of materials of construction: 316 stainless steel, FBE coated mild steel, Glass reinforced plastics, all suitable for ATEX Zone 1 explosion-proof standard
- WRAS listed Materials for potable water use



## Benefits

- Fine Filtration
  - 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%
  - Ensures compliance with discharge consents for waste water
  - Removes particulate from process streams
- Compact Plant
  - Enables installation within existing plant room
  - Minimal installation costs
  - Complete containerised filtration system provides mobility
- Low Backwash
  - Low volume requirement creates less effluent and uses less water
  - Short backwash cycles minimise process disruption
- Yarn Types Available
  - Different yarn types to provide a range of removal ratings and chemical compatibility across the pH range.
  - For fine duties, Fibrotex is available with high performance Nylon elements with removal efficiencies of 98% down to 2 micron
  - For applications where the feed stream contains higher levels of suspended solids, a polyester (PBT) element can be used. It has removal efficiencies of 95% down to 5 microns and is made from a material which is almost inert to chemical attack.





## Applications for Fibrotex

Fibrotex provides cost effective, high performance filtration of feed water in process streams and waste waters in a wide range of industries. Fibrotex is being successfully used in the following industries:

Food and beverage; Brewing; Processing; Pharmaceutical; Engineering; Papermaking; Desalination and Water Utilities

Major applications for Fibrotex include:

- Mains water polishing
- Pretreatment prior to reverse osmosis
- 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

## Specifications





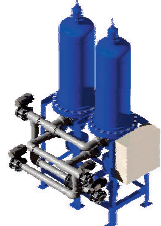
For larger flows, AX50 units are manifolded together

AX50 - 0-30m<sup>3</sup>/hr

AX5 - 0-3m<sup>3</sup>/hr





FIBROTEX		AX5	AX50	AX100
				
MAXIMUM FILTER FLOWRATE (m³/h)		3	30	60
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
APPROX.WEIGHT (kg)	DRY	200	725	1400
	OPERATING	225	1125	2200
	LIFTING LID WEIGHT	22	185	185
VESSEL VOLUME (Litres)		25.6	213	213
INLET & OUTLET FLANGE (mm) / PIPE SIZE (ins)		40 / 1½	80/3	80/3 or 100/4
BACKWASH & DRAIN FLANGE (mm) / PIPE SIZE (ins)		40 / 1½	80/3	80/3
AIRLINE CONNECTION - BSPF (inches)		½	1	1
BACKWASH FLOWRATE (m³/h)		2	20	40
BACKWASH TIME (mins)		3½	4	4
ELECTRICAL POWER SUPPLY REQUIRED		110 V	110 V	110 V
		SINGLE PH	SINGLE PH	SINGLE PH
		50 Hz	50 Hz	50 Hz
POWER CONSUMPTION (watts)		< 100	< 100	< 100
COMPRESSED AIR REQUIRED	PRESSURE (bar g/psi)	7 / 105	7 / 105	7 / 105
	VOLUME (Nm³/h/Scfm)	42 / 25	68 / 40	136 / 80
INLET RAW WATER PRESSURE	MINIMUM (bar g/psi)	3 / 45	3 / 45	3 / 45
	MAXIMUM (bar g/psi)	8 / 116	8 / 116	8 / 116
MAXIMUM DIFFERENTIAL PRESSURE (bar g/psi)		2.5 (37.5)	2.5 (37.5)	2.5 (37.5)
VESSEL LINING		FUSION BONDED EPOXY (WRAS LISTED) - BLUE		
EXTERNAL PAINT		FUSION BONDED EPOXY - BLUE		

PLEASE CONSULT KALSEP IF YOU HAVE ANY QUERIES ON PROCESS REQUIREMENTS

For further information, please contact us at:

**KALSEP UK LTD**

Unit 2F Albany Park

Camberley, Surrey GU16 7PL

Tel: 44(0)1276 675675

Fax: 44(0)1276 676276



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