

AQUACULTURE | WASTEWATER | COMMERCIAL



Floccell

SUSTAINABLE FILTRATION TECHNOLOGY

EVOLUTION
AQUA
GROUP

Part of the Evolution Aqua Group

FloccellFiltration.com



Flocell

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Flocell provide sustainable filtration solutions for aquaculture, wastewater and commercial applications. Manufactured by Flocell, in the UK, Flocell filter media and filtration systems provide more retention capacity, use less power and less water than sand filters.

Flocell technology has been independently tested and is backed up by years of research and development by technicians within the Evolution Aqua group. Our products are installed across the aquaculture market.

Flocell - your environmental water treatment partner for sustainability.



Part of the Evolution Aqua Group



Flocell

Bio Media - RAS Hatchery MOWI Scotland

Flocell, part of the Evolution Aqua group, supplied 850m³ of Bio Media to IAT (International Aqua-Tech), process engineers for Mowi Scotland salmon hatchery, at Inchmore, Glenmoriston. The 13,500 sq.m. hatchery uses one of the most technically advanced water recirculating systems.

Our media was specified for this project by IAT because of its high surface area (total surface area 950m² per m³. Protected surface area 500m² per m³).

“All the material was delivered on time to the agreed schedule and was consistent in quality. We look forward to working with the team on future projects.”

Steve Dalton, International Aqua-Tech

Project: 13,500m² salmon hatchery, at Inchmore

Client: Mowi Scotland

Engineers: International Aqua-Tech

Product: 850m³ BM-1 Bio Media




Flocell[®]

XFM Fines Filters

Flocell XFM Fines Filters are a range of pressurised filtration systems optimised specifically for use with Flocell XFM Fines Media. Both the media and filters are designed and manufactured exclusively by Flocell in the UK.

- Fines filtration systems with XFM Fines Filter Media**
 Manufactured exclusively in the UK
- 100 times more retention capacity than sand filters***
 Independently tested by Cranfield University
- Uses 50% less power than sand filters***
 Only 12kW per day vs. 24kW per day
- Uses 80% less water than sand filters***
 1 clean per week vs. 1 backwash per day
- No maintenance required**
 No hydraulic load, no clogging, no downtime and no media replacement

 MANUFACTURED IN THE UK



100x
More Retention Capacity
Than Sand Filters

50%
Less Power
Than Sand Filters

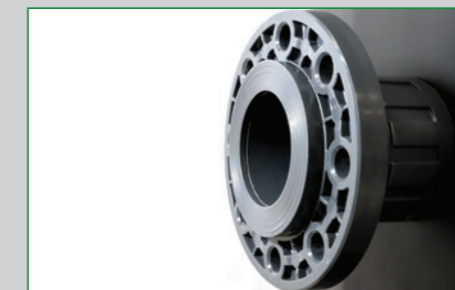
80%
Less Water
Than Sand Filters

OPTIMISED FOR




Designed and manufactured to exacting standards to deliver reliable and economical performance in a wide variety of applications. For example:

- Post Bio-Filter** – Removal of particles generated by biological processing associated with biomass regeneration.
- Back-End Polishing** – Tertiary treatment in situations where exceptional final effluent is necessary.
- Pre-Discharge** – Post final settlement where consents are tight.
- Continuous Fish Tank Water Maintenance** – As a constant filtration loop is used to ensure optimal solids reduction to maximise fish health and reduce risks associated with solids build-up.
- Integrated solutions post DAF / Lamella separators** – as other modular units are large, XFM units can be installed immediately post DAF or Lamella plant to utilize the excess head height and provide pump-free filtration for exceptional tertiary treatment at low cost.
- Post flocculation** – Many systems use chemical dosing to flocculate and precipitate-out dissolved solids that then need to be captured.



Air Clean Technology

XFM Filters use air to clean rather than a traditional backwash cycle.

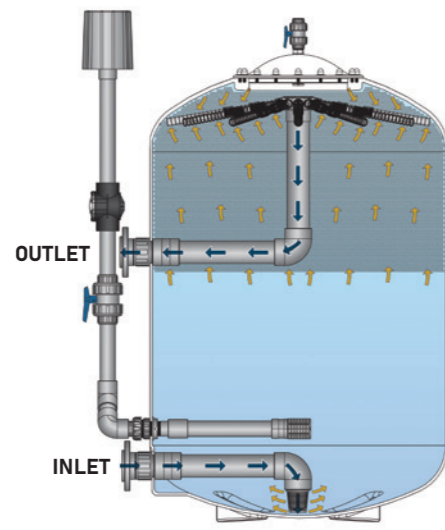
Cleaning with air using the included low-energy blower package agitates the media pack and removes contained solids during the short cleaning cycle.

Using air reduces energy use, it substantially reduces the amount of water that is lost, whilst at the same time producing a highly concentrated and manageable effluent stream that infrequently needs to be removed.

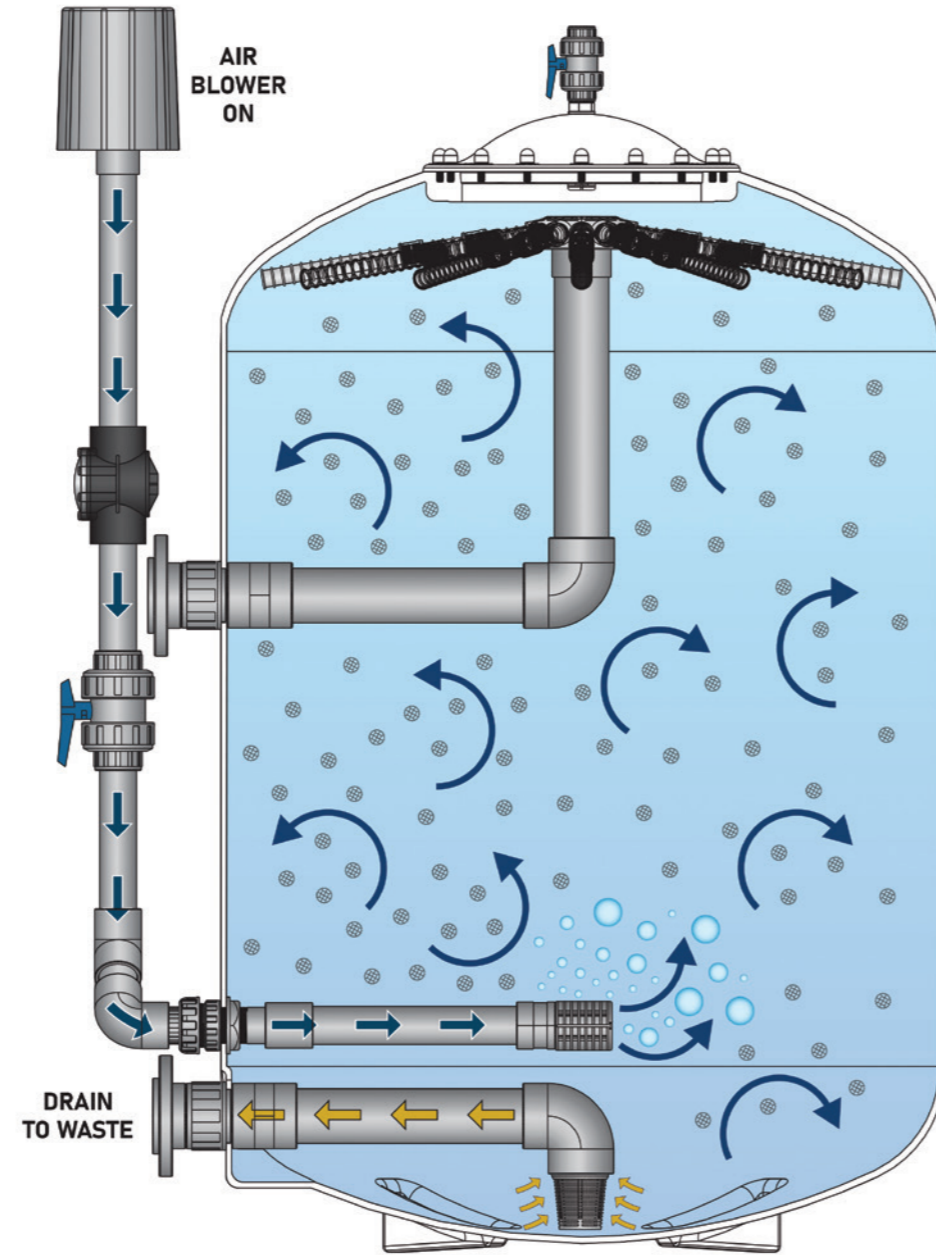
Only the single volume of the filter is discharged when cleaning and with prolonged periods of operation possible due to high retention capacity the water and power savings are significant.



Inside View - XFM Fines Filter 1200

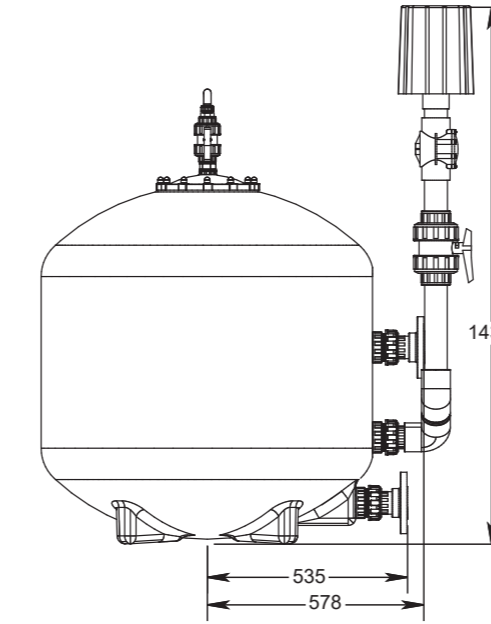


Filtration Mode - Upflow

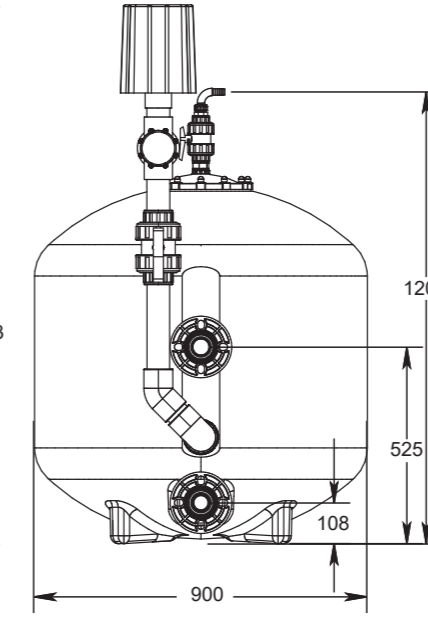


Air Clean Cycle

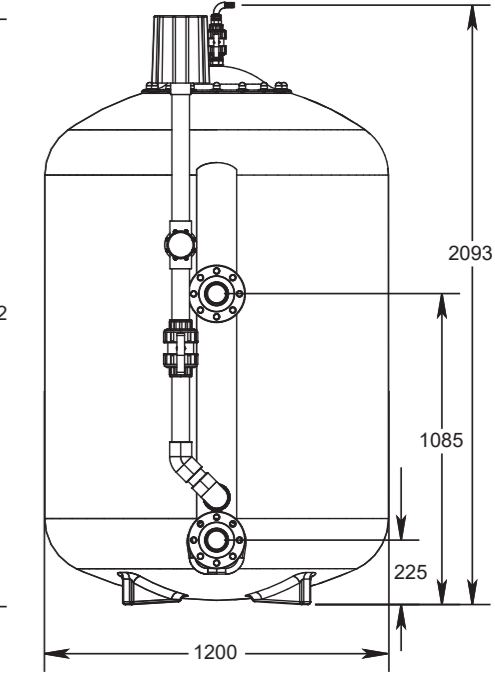
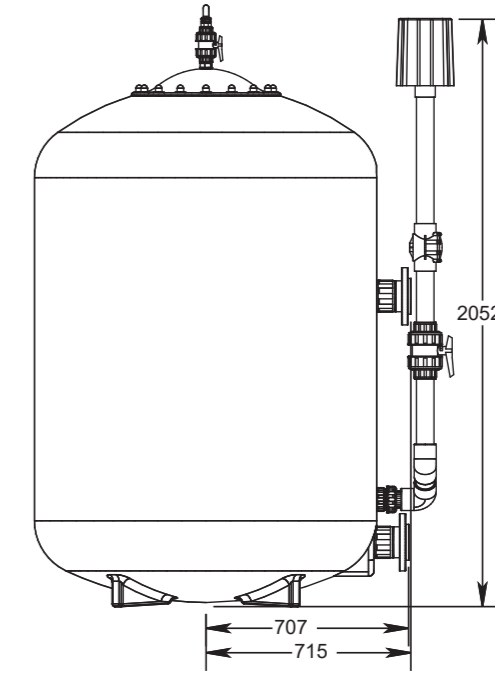
Specifications



XFM Fines Filter 900



XFM Fines Filter 1200



Model	Flocell XFM Fines Filter 900	Flocell XFM Fines Filter 1200
Filter Diameter	900mm (36")	1200mm (48")
Filtration Area	0.64m ²	1.12m ²
Connection Size	63mm	90mm
Maximum Operation Pressure	2.0 bar	2.0 bar
Maximum Flow Rate	32m ³ /hr	56m ³ /hr
Quantity Of XFM Fines Media Included	250 litres	1200 litres

 MANUFACTURED IN THE UK

Flocell

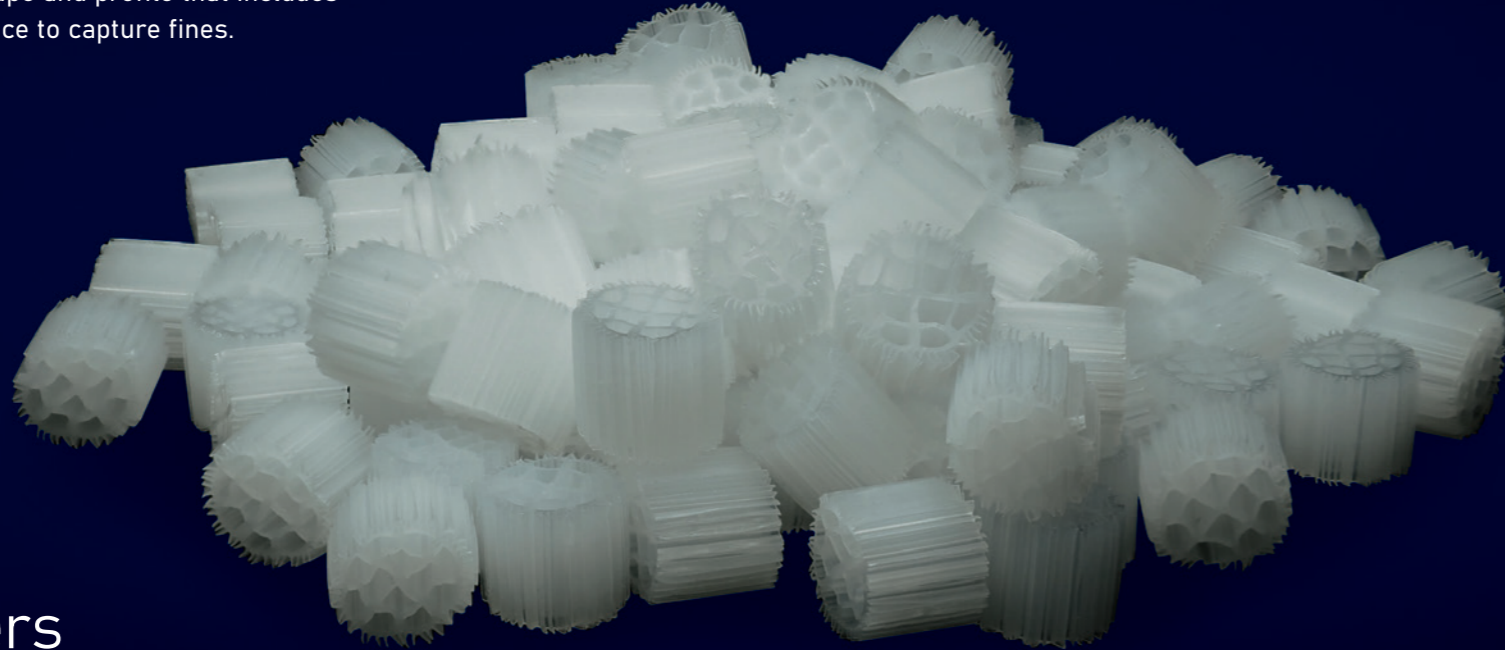
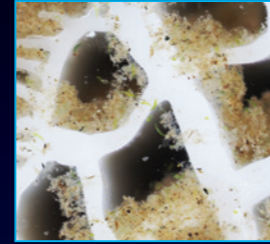
XFM Fines Media

Flocell XFM Fines Media has been specifically engineered to optimise the mechanical filtration performance of Flocell XFM Fines Filters. This filter media features a unique shape and profile that includes a series of fins around the outer surface to capture fines.

- Fines filtration
- Unique design
- More retention capacity
- No hydraulic load
- No clogging
- No need to replace

ONLY AVAILABLE WITH

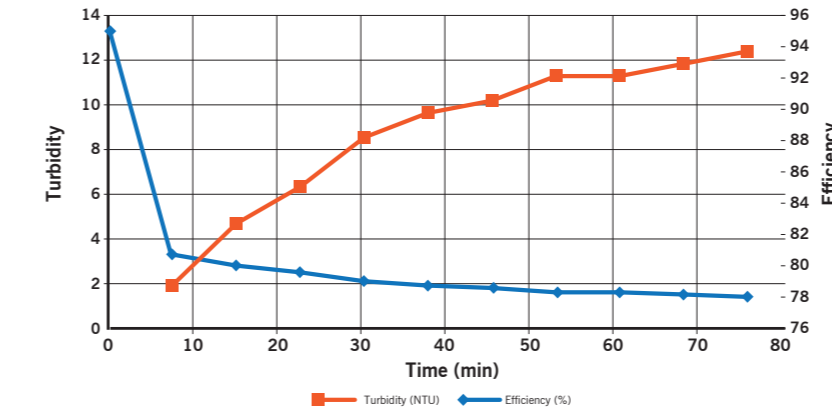
XFM Fines Filters



Why Our XFM Fines Media And Filters?

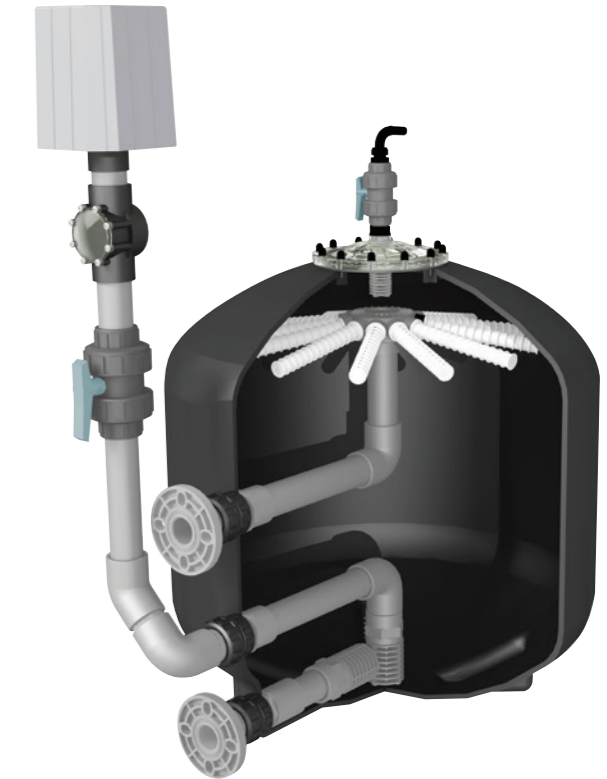
Flocell open-cell media has been designed to efficiently reduce water turbidity and retain particulate without increasing the pressure within the filter or reducing the flow.

Turbidity Reduction Efficiency Test



The European Standard states that a minimum reduction in turbidity of 50% must be achieved in this test.

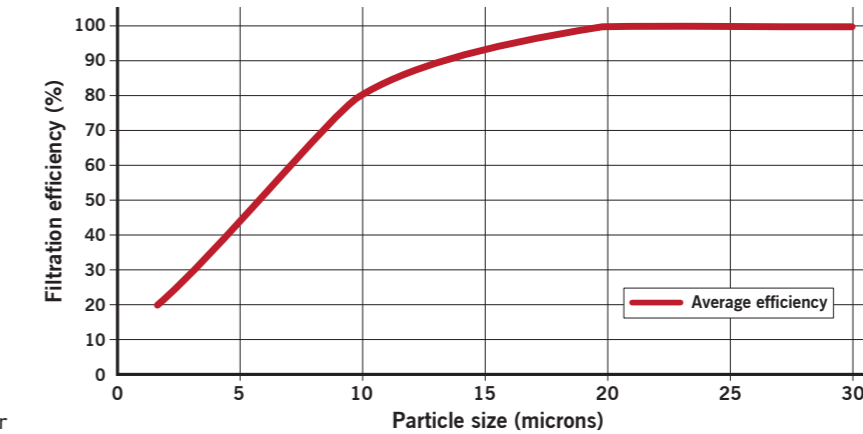
Flocell Filtration Media has a turbidity reduction efficiency of 93% after 20 cycles.



Filtration Efficiency vs. Particle Size

This test define the efficiency with which particles of specified size are removed by the filter in one pass.

The retention capacity of our media was not reached during this testing.



Data recorded at flow rate of 25m³ per m² per hour



Independently tested by IFTS (Institut de la Filtration et des Techniques Séparatives)



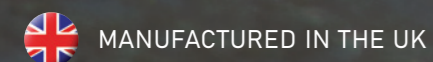
Independently tested by Cranfield University

Flocell

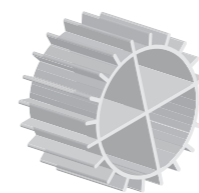
Bio Media

Flocell Bio Media is available in four designs, all manufactured by Flocell in our dedicated UK factory, using 100% virgin materials. It is possible to also design and manufacture your own bespoke media profile in any specific gravity to accommodate fresh or saltwater applications.

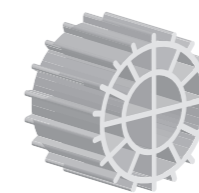
- Made by Flocell in the UK
- Manufactured from 100% virgin material
- Four designs to choose from
- Bespoke designs available
- Large protected surface area
- Available for any project size - small or large
- From 50 litre bags up to full shipping containers



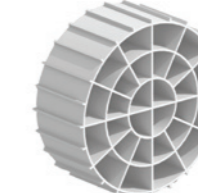
Bio Media



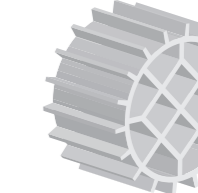
Flocell
BM-1 Media



Flocell
BM-2 Media



Flocell
BM-3 Media



Flocell
BM-4 Media

Model	Flocell BM-1 Bio Media	Flocell BM-2 Bio Media	Flocell BM-3 Bio Media	Flocell BM-4 Bio Media
Gravity	Floating	Floating	Floating	Floating
Diameter	10.5mm	10.5mm	25mm	10.5mm
Length	8mm	8mm	10mm	8mm
Total Surface Area	950m ² per m ³ (+/-1%)	1,350m ² per m ³ (+/-5%)	800m ² per m ³ (+/-1%)	1200m ² per m ³ (+/-1%)
Protected Surface Area	500m ² per m ³ (+/-1%)	1,025m ² per m ³ (+/-5%)	500m ² per m ³ (+/-1%)	800m ² per m ³ (+/-1%)
Weight	120 - 140kg per m ³	175kg per m ³	115kg per m ³	165kg per m ³
Density	0.95kg/l <small>with a tolerance of +/- 0.02 kg/l</small>	0.95kg/l <small>with a tolerance of +/- 0.02 kg/l</small>	0.95kg/l <small>with a tolerance of +/- 0.02 kg/l</small>	0.96kg/l <small>with a tolerance of +/- 0.02 kg/l</small>
Colour	Natural Opaque	Natural Opaque	Natural Opaque	Natural Opaque
Material	Virgin HDPE	Virgin HDPE with minerals	Virgin HDPE	Virgin HDPE

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