

Brightwork MBF

High-performance, continuous moving bed filtration with integrated monitoring for total process visibility

Product Summary

The **Brightwork MBF (Moving Bed Filter)** is an advanced continuous moving bed media filtration system that delivers stable, predictable treatment performance, even under varying hydraulic and solids loads.

Its integrated **Sand-Cycle® smart monitoring and control system** provides engineers with real-time insight into filter operation, helping them quickly pinpoint developing issues and avoid potential non-compliance with effluent discharge permits

Applications

Tertiary treatment of wastewater at wastewater treatment plants:

- » Final effluent polishing
- » Nitrogen removal
- » Phosphorus removal

Targeted pollutants

- » Biological nitrification
- » Biological denitrification
- » Total Suspended Solids (TSS)
- » BOD
- » Phosphorus

Benefits

Stay compliant with consistent, high-quality performance

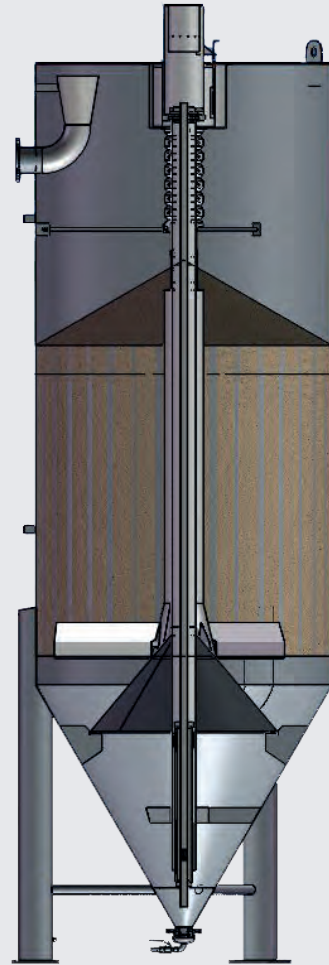
The Brightwork MBF is robust, providing consistent performance under varying hydraulic and solids loadings helping water companies stay compliant.

Reduce design and installation time and costs

The system is modular in design, right down to the gantrys, walkways and control kiosks, cutting the design time. The modular components plug-and-play also reducing the time required for installation by weeks - all that is needed is a concrete slab to site the equipment on.

Cut inspection time and cost with remotely monitored performance

The Brightwork MBF is supplied with an integral, patented, intelligent Sand-Cycle® technology which allows operators to monitor and control the filter operations in real-time. This provides early detection of changes in performance and assists with predictive maintenance planning.



Pollutant removal performance

Process	Target pollutant	Typical concentration	
		In	Out
Biological nitrification / BOD removal	NH ₄ ⁺ - N BOD	5 - 20 10 - 40	1 - 5 5 - 15
Biological denitrification	NO _x - N	10 - 50 5 - 10	0 - 5 0 - 1
P removal	PO _x - P	5 - 10 1-2	1 - 2 0.1 - 0.2
TSS removal	TSS	40 - 200 10 - 40	10 - 50 1 - 10



Find out more about how the Brightwork MBF sand filter can help you stay compliant:

→ hydro-int.com/brightwork-mbf

Sand-Cycle® is a remote monitoring and control solution designed to improve the performance of continuous moving bed sand filters, reduce operational cost and make day-to-day operations easier.

The system retrofits into all types of continuous moving bed sand filters, supporting AMP8 objectives by enabling improved performance and resilience from existing and new assets.

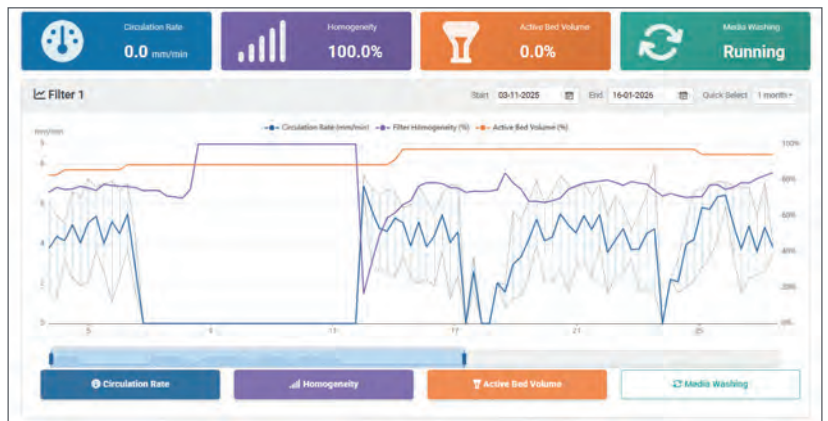
How it works

Sand-Cycle® uses RFID tags, similar in principle to those used for pet microchipping. These tags are mixed into the filter media, whether sand or granular activated carbon.

As the tags move with the media, they act as a reliable proxy for sand circulation. Field data is continuously collected and processed to calculate meaningful process parameters, which are displayed via clear, intuitive dashboards.

Operators gain real-time visibility of key operating conditions, supporting faster decisions, improved performance and greater confidence in filter operation.

By providing continuous insight into filter behaviour, the system allows filters to be operated closer to optimal conditions, supports wider operating envelopes and helps meet more stringent effluent requirements.



Specialist sand filter services

Operating from five regional offices across the UK, Hydro International's engineers provide specialist maintenance, repair and complete refurbishment of tertiary treatment sand filters.

Sand-Cycle® remote monitoring system can be retrofit into any type of moving bed sand filter.

To find out how our services team can help you keep your sand filters working at peak efficiency please call 01305 821142

