

# NEWSLETTER

Water and Wastewater Treatment Contractors



2H Water Technologies

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## INTRODUCING EQUIFLO: The customisable Rotary Distributor that's perfect for Trickling Filter applications

A powerful combination of flexible, intelligent design plus **2H Water Technologies'** experience, industry expertise and customisation skills make the Equiflo trickling filter rotary distributor the ideal choice for any industrial or municipal wastewater treatment application.

Whether it's a stand-alone installation, or part of a new or upgraded trickling filter system, every Equiflo rotary distributor is unique because it's been built to the customer's exact specifications from components precision-designed to be free from problems – for example, blockages in the distributor arms and water damage to the motor - that can undermine the effectiveness of rotary distributors.

Manufactured in robust stainless steel, the Equiflo rotary distributor is reliable, easy to clean, maintain and upgrade with minimum disruption to trickling filter operation over an expected 25-year operational lifetime.

 Visit: [www.2hwatertechnologies.co.uk](http://www.2hwatertechnologies.co.uk)

## NEWS FLASH

### Thatchers Cider Chooses 2H Water Technologies and Equiflo

Somerset-based Thatchers Cider found that doubling production capacity at Myrtle Farm to meet increasing demand wasn't all good news. The company's existing biological treatment system wasn't capable of handling the extra BOD/COD load and keeping the facility within consent. After extensive consultation, Thatchers enhanced their effluent treatment plant which includes BIOdek structured plastic media and the new Equiflo trickling filter rotary distributor.



## ASK THE EXPERT

### Question:

"Is there any benefit to replacing our current lamella settlement tanks with a tubular system?"

### Answer:

Yes, there is. TUBEdek offers better process efficiency than plate systems because the tubes eliminate crossflow and eddy currents whilst maintaining laminar flow. Speed is one of the most obvious – and important improvements. In a traditional settlement tank or clarifier, the solids can travel virtually the entire length of the tank before settling at the bottom. It's a very slow process, sometimes wasting several, expensive hours. With a tubular lamella settlement system like TUBEdek, particles have only a short vertical distance to travel before they settle onto the face of the tubes and slide down to the bottom of the basin. This settling path is less than 100mm so it takes only a matter of minutes for particles to be removed from the flow stream.

As the particles settle onto the face of the tubes, they make very close contact which allows for agglomeration, further enhancing the rate of settlement. Larger clumps of the agglomerated particles settle out much more quickly than individual particles in standard settlement basins.

BIOdek structured cross flow media  
high level purity from a compact process

PLASdek & SANIPACKING fill pack  
efficient air/water interaction

TUBEdek interlocking plastic tubing  
Lamella system for solids/liquids separation

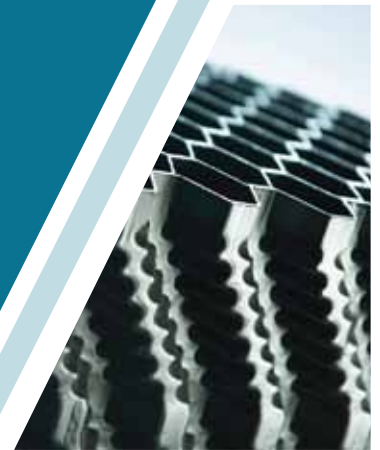
GEOdek & GEOdek LITE modules  
effective stormwater storage & attenuation

# BASF upgrades to BIOdek for improved Biofilter productivity

Choosing the most appropriate and up-to-date effluent treatment is the key to improving operational efficiency as BASF found when the company upgraded to BIOdek structured plastic media. The BASF factory at Bradford, Yorkshire, which manufactures 250,000 tonnes of product annually, is one of the largest single site-chemical plants in the UK.

Having been awarded the contract to replace the existing Davenport Tower, long-term partner, ACWA Services Ltd, asked **2H Water Technologies** to design and supply a combination of cross and vertical flow BIOdek structured plastic media to replace the Flocor media used in the original biofilter.

The Davenport biofilter used PVC-based Flocor media with vertical tubes which had been glued into blocks. In contrast, BIOdek media is manufactured from sustainable and energy efficient polypropylene (PP) media with ribbed vertical tubes which is welded into blocks and so doesn't require any potentially toxic adhesives. The resulting structure not only has high mechanical strength but also further minimizes the potential for blockage.



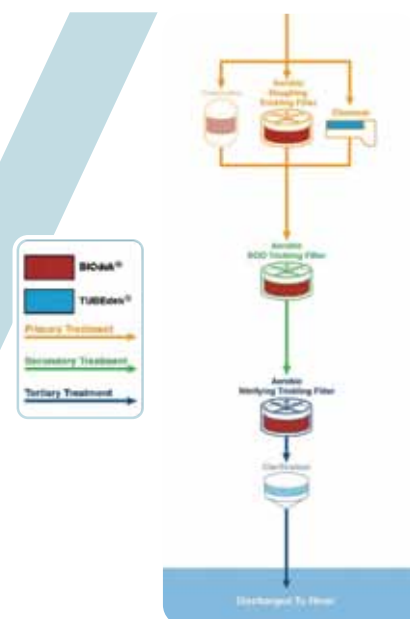
## Effluent treatment

The top two layers of BIOdek media are formed from welded blocks with a 60% cross-flow structure which greatly improves distribution into the vertical media layers beneath. This structure ensures that all the media in the biofilter is being utilised to maximum effect.

## 2H Water Technologies: A customised solution to every Industrial Effluent Treatment challenge

Every **2H Water Technologies solution** is purpose-built to meet the very different and increasingly complex challenges facing managers with responsibility for industrial effluent treatment. We believe that choosing the most appropriate media is the vital first stage in the creation of an effective industrial effluent treatment solution which will ensure managers are:

- Running the plant as cost effectively as possible
- Meeting increasingly stringent wastewater and effluent discharge consent conditions
- Reducing total operating costs.
- Minimising waste
- Cutting energy consumption and improving sustainability



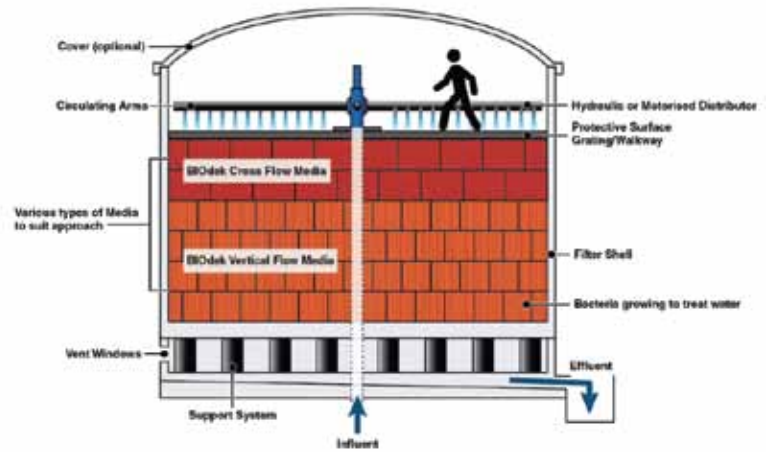
 Visit: [www.2hwatertechnologies.co.uk/treatments/wastewater-treatment](http://www.2hwatertechnologies.co.uk/treatments/wastewater-treatment)

# BIOdek - Efficient and effective Biological Treatment

2H Water Technologies market-leading range of BIOdek structured plastic media offers efficient, cost-effective and reliable biological treatment of effluent in high-pressure industrial applications with heavy effluent loads and rigorous discharge consents.

The BIOdek range offers a choice of cross-flow, vertical and hybrid flow media each of which has the open, uniform structure and high effective surface area needed to support high organic and hydraulic loading rates.

Industrial Effluent Trickling Filter



## BIOdek: Product Profile

### Vertical Flow Fills



Media Type	VC88.07 F833.07	VC55.10 F833.10	VC88.27 F833.27	KVP 18.10	KVP 818 KVP 618	KVP 823 KVP 623	KVP 820 KVP 620
Material	PVC	PVC	PVC	SP	SP	SP	SP
Specific surface area (m <sup>2</sup> /m <sup>3</sup> )	140	153	90	100	155	125	150
Component height (mm)	33 / 7	28 / 9	33 / 27	18 / 10	18	27	20 / 10 / 10
Max. length (mm)	2400	2400	2400	2400	2400	2400	2400
Max. width (mm)	300	800	300	800	800	800	800
Height (mm)	200 / 600	200 / 600	600	200 / 600	200 / 600	200 / 600	200 / 600
Max. application temp. (°C)	80	80	80	80	80	80	80
Mod. ratio (%)	> 97	> 97	> 97	> 97	> 97	> 97	> 97

Efficient and Reliable Operation

Optimum solids discharge

Self-supporting structure with high bearing capacity

High resistance to erosion

Low pressure drop

Long service life

### Cross Fluted/ Flow Fills



Media Type	KCF 312 KCF 612	KCF 310 KCF 610	KCF 327 KCF 627	KCF 308 KCF 608	KC10.12 PB10.12	KC10.18 PB10.18	KC10.27 PB10.27
Material	SP	SP	SP	SP	PVC	PVC	PVC
Specific surface area (m <sup>2</sup> /m <sup>3</sup> )	247	163	125	30	343	148	163
Component height (mm)	12	10	27	38	12	18	27
Max. length (mm)	2400	2400	2400	2400	2400	2400	2400
Max. width (mm)	800	800	800	800	800	800	800
Height (mm)	300 / 600	300 / 600	300 / 600	300 / 600	300 / 600	300 / 600	300 / 600
Max. application temp. (°C)	80	80	80	80	80	80	80
Mod. ratio (%)	> 97	> 97	> 97	> 97	> 97	> 97	> 97

Excellent heat and mass transfer

High resistance to erosion

Self-supporting structure

Flexibility in material and dimensions

Efficient and reliable operation

Long service life

Every 2H Water Technologies' BIOdek solution is customised, using the most appropriate combination of media, to meet the customer's objectives at the same time as being easy to operate and require low levels of energy, supervision and capital expense.

Visit: [www.2hwatertechnologies.co.uk/treatments/wastewater-treatment](http://www.2hwatertechnologies.co.uk/treatments/wastewater-treatment)

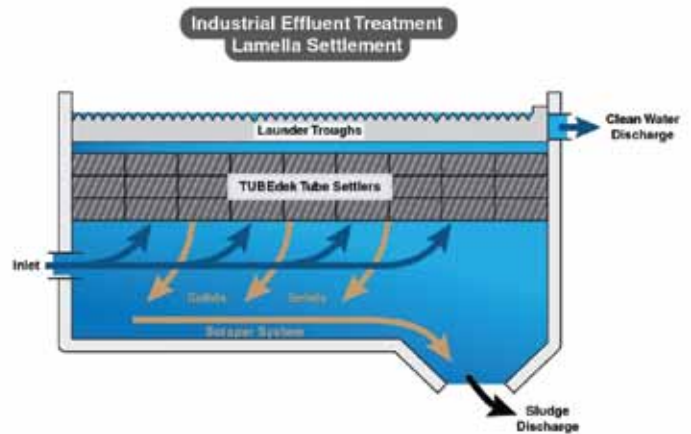
# TUBEdek: The flexible Lamella Settlement solution that guarantees measurable performance and productivity improvements

Lamella separators play an important role in assisting the settlement process while solids are being removed from liquid in refinery, municipal and industrial applications such as chemicals, pharmaceuticals, brewing and food manufacturing. 2H Water Technologies' range of TUBEdek tubular settlers are a more efficient, flexible and economical lamella settlement solution than the steel plates still used in many industrial settings.

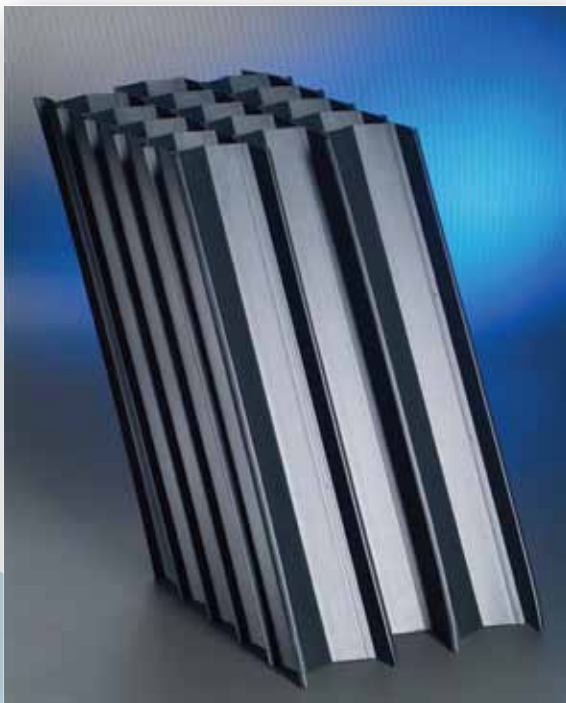
2H offers a DWI accredited TUBEdek product suitable for use in the most demanding potable water application.

TUBEdek uses modules of interlocking, corrosion-resistant plastic tube settlers, connected by a tongue and groove principle, to allow the efficient separation of solids from liquids.

TUBEdek is the most robust and efficient lamella settlement process for any application, including potable water, as the length of tubes, size of modules and the angle of inclination can be varied according to process design requirements. TUBEdek is easy to install which is an advantage in large schemes where TUBEdek modules can be built close, or even adjacent to, the installation site. In addition, because multiple sedimentation planes are all housed within a single tank, a TUBEdek installation uses less energy and is more economical to manage and maintain than a steel-plate alternative



 Visit: [www.2hwatertechnologies.co.uk/treatments/lamella-settlement](http://www.2hwatertechnologies.co.uk/treatments/lamella-settlement)



## 2H Speeds TUBEdek Solution to Jaguar in just 4 days

When Micronics Filtration Ltd asked 2H Water Technologies for help with a lamella settlement problem at the Jaguar car plant in Castle Bromwich, West Midlands, 2H's technical specialists went straight into action. An expert team of 2H designers visited the Jaguar plant, identified the problem, designed and delivered a TUBEdek solution in just four days.

The team found that the existing settlers, which were constructed from offset, square tube plastic modules, were plugged with solids and beginning to delaminate.

Within hours of the visit, 2H produced a detailed proposal recommending TUBEdek FS41.50 tube settlers and a beam support system which would maintain a balance between settlement requirements, hydraulic run-off and media support within the existing tank.

Three days later, 2H delivered the TUBEdek solution, which meant the refit could be conducted during the factory's summer shut-down.

 Visit: [www.2hwatertechnologies.co.uk/products/tube-settlers](http://www.2hwatertechnologies.co.uk/products/tube-settlers)

### 2H Water Technologies

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### Accreditations:

- ISO 9001-2008 (Cert No. 36771/A/0001/UK/En)
- TÜV ( German Testing Agency)
- DWI Reg 31

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