

# Hydro-Brake® Optimum

Control surface water, foul and combined flows with customisable performance

## Product Summary

The Hydro-Brake® Optimum is our **most popular and best performing** vortex flow control, capable of controlling storm, foul or combined flows from very low up to 550 l/s. Independently verified by the BBA and WRc it is trusted to provide reliable control of flows, and prevent flooding and has a proven track record with over 14,000 units installed worldwide

With a wide range of configurations and the ability for engineers to customise the performance by tailoring the all-important head / discharge curve, Hydro-Brake® Optimum is an industry leader.

## Applications

- » Surface water management systems and Sustainable Drainage Systems (SuDS).
- » Combined drainage systems and Combined Sewer Overflows (CSOs).
- » Watercourse flood prevention.
- » Sewer network optimisation.
- » Wastewater treatment plants.

## Benefits

### Online design tool

Engineers can explore the customisable options on their own Hydro-Brake® Optimum designs with a free-to-use online design tool, and output unit data, head/discharge curves and data for use in other modelling software.

### Built-in future proof adjustability

Standard, Hydraulically Efficient, Hydro-Brake® Optimum units are supplied with an adjustable inlet, allowing post-installation flow adjustments without the need to replace the whole device.

### Cut costs with better performance

The customisable curve of the Hydro-Brake® Optimum allows engineers to optimise drainage system designs to reduce the amount of storage required.

### Save time and cost on site

The Hydro-Brake® Optimum has a wide range of fitting and installation options designed to save contractors time, cut costs and meet project deadlines.

## Hydro-Brake® Optimum configurations

### Standard

For control of low, moderate and high **surface water flows**. To help you be prepared for the effects of urban creep, changes in regulations or changing climate, this model now incorporates **an adjustable inlet as standard on all hydraulically efficient designs**. This future-proof feature allows **flow adjustments post installation** without the need to replace the whole device. This unit can also be used for regulating the outflow from balancing tanks and detention ponds. This unit requires a sump.



### Conical

With a large inlet to reduce the risk of blockage, the conical unit is ideal for control of **foul or combined sewer flows**. It can also be used for surface water systems with **high flow rates where space is restricted** or where a **sump is not possible**.



Find out more about how the Hydro-Brake® Optimum can help you design optimised drainage systems:

→ [hydro-int.com/hboptimum](https://hydro-int.com/hboptimum)

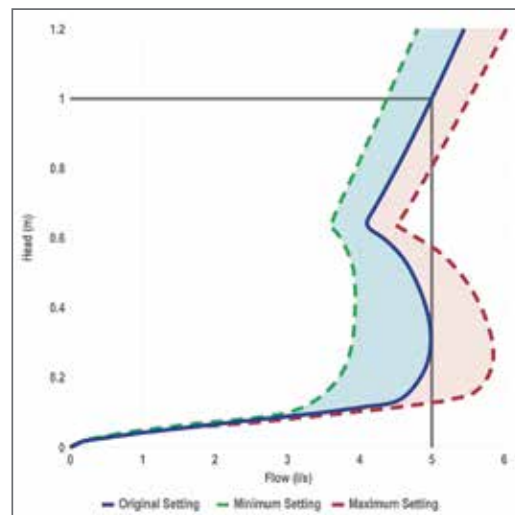
## Hydro-Brake® Optimum performance customisation options

### Reduce onsite storage - Hydraulically Efficient design

Matching the Flush-Flo™ point equal to the design point means that the device will pass forward as much flow as possible during the earlier stages of a storm, reducing the amount of water that needs to be stored upstream.

To help engineers **be prepared** for the effects of urban creep, changes in regulations or a changing climate, **Hydraulically Efficient** S-type units are now supplied with **an adjustable inlet as standard**. This future-proof feature allows **flow adjustments post installation without the need to replace the whole device**. A **unique triple flow head/discharge curve** is generated by the Online Design Tool ([hydro-int.design](http://hydro-int.design)) for these units.

The adjustable inlet can be added to Conical Hydro-Brake® Optimum units as an optional extra by selecting the 'Future proof' option in the Online Design Tool.



### Limit flow control size

Reducing the Flush-Flo™ point reduces the size of the device, so if the exact available space is known then the Flush-Flo™ point may be tuned to give the most hydraulically efficient performance within the space available.

### Design complex systems

Custom Flush-Flo™ points can be specified, enabling the design of precise 'complex flow control' arrangements where the pre-developed hydrology is aligned to the post-developed site.

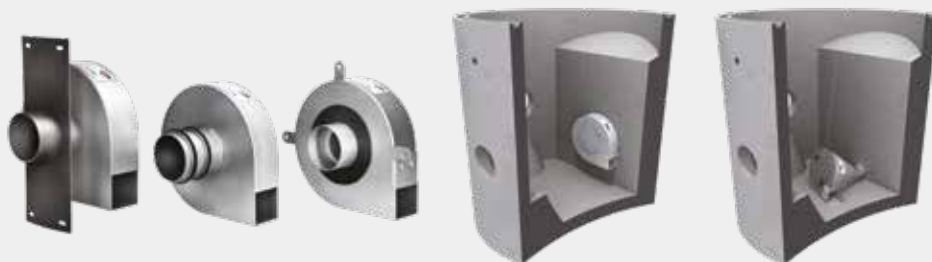
### Low Flows

There are now a variety of industry guidance documents applied at national and regional levels and they are not totally consistent in terms of their stance on minimum flow rates or minimum flow control sizes.

The approaches range from BS8582:2013, which states "controls smaller than 25 mm are possible if protected [from blockage]" up to the advice given by water companies, which can set a minimum acceptable opening size for adoptable flow controls for surface water only systems of >50 mm for protected orifices and >100 mm for unprotected orifices. **Please get in touch to find out about our low flow solutions.**

## Installation options

Hydro-Brake® Optimum has a range of mounting options for ease of installation or can be supplied ready fitted into a manhole chamber (with or without a weir wall) for simple plug-and-play installation. There are no set-up or commissioning requirements.



Hydro International, Unit 2, Rivermead Court  
Kenn Business Park, Windmill Road, Kenn  
Clevedon, BS21 6FT

Tel: +44 (0)1275 337937

Email: [stormwater@hydro-int.com](mailto:stormwater@hydro-int.com)

Web: [hydro-int.com](http://hydro-int.com)

Patent: [www.hydro-int.com/patents](http://www.hydro-int.com/patents)



Try customising your own Hydro-Brake® Optimum with the free online design tool at:

→ [hydro-int.design](http://hydro-int.design)