Hydro International

Downstream Defender® Select

Meet stormwater quality objectives with customised treatment performance

Product Summary

The Downstream Defender® Select is the **new generation of advanced hydrodynamic vortex separator** for treatment of urban surface water runoff. Its customisable performance and extended range of chamber sizes allows engineers to tailor their drainage designs to meet specific pollutant removal standards.

The Downstream Defender® Select also offers easier installation with much more flexibility of pipe sizes and connections and can accept up to three inlets.

Applications

Treat runoff from any impermeable surfaces:

- » Highways
- » Car parks
- » Industrial areas
- » Pre-treatment for natural SuDS features (such as swales and ponds).
- » For use with other natural SuDS treatment to meet required performance standards.
- » Retrofit surface water treatment for space-constrained urban areas.

Benefits

Customise performance to suit site stormwater quality objectives

Engineers can meet stormwater quality objectives with customisable performance and the ability to work alongside other treatment solutions such as ponds, swales and constructed wetlands.

Cut costs with more specific sizing for performance

The Downstream Defender® Select is offered in an extended range of chamber sizes helping engineers match flow rates and removal rates more cost-effectively.

Save money with improved connectivity

The Downstream Defender® Select can accept up to three inlets and a wider range of connecting pipe sizes, helping to make design and installation on site easier and cheaper.

Downstream Defender® Select Options

Engineers can select from three models, depending on the level of treatment required.

Advanced Vortex

Our recommended model which provides sediments, litter and hydrocarbon (oil) removal with enhanced sediment retention up to four times the treatment flow rate.
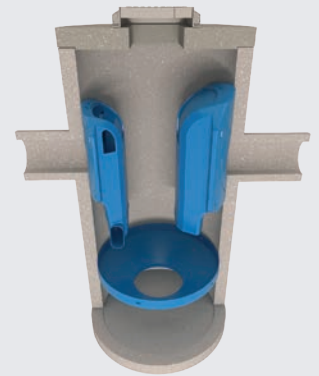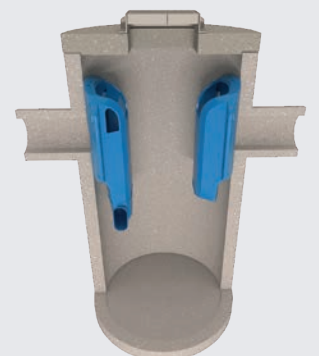

Vortex Plus

Provides sediments, litter and hydrocarbon (oil) removal, with sediments retained at up to two times the treatment flow rate.
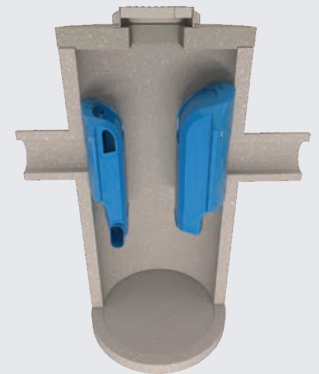
Vortex

A simpler model providing removal of sediments, with retention up to two times the treatment flow rate.

Find out about the Downstream Defender® Select's validated performance and mitigation indices for use with the Simple Index Approach (SIA):

→ **https://www.hydro-int.com/dd-select**

Technical information

» Selectable performance levels for pollutant targets and retention.

» Extended range of chamber sizes.

» Can accept up to three inlet pipes.

» Can accept a range of pipe sizes.

» No moving parts and no power requirement.

» Available in concrete or plastic chambers.

*Downstream Defender® Select Advanced Vortex with three inlet pipes.*

Enhancement Options

Make Maintenance Smart

To help with SuDS maintenance plans and to ensure that maintenance is cost-effective, add Hydro-Logic® Smart Monitoring to any model and **get automated maintenance alerts**.

Hydro-Logic® Smart Monitoring can also **reduce risk and save costs** by reducing the need for inspection visits for units installed alongside roads or rail tracks.

The **ATEX/IECEx** rated logger and sensors capture real-time data for flow levels and/or sediment build-up. Level monitoring will enable the detection of blockages relating to the unit, and sediment level monitoring can be set to a trigger point and **self-report to the client's maintenance team when maintenance is due.**
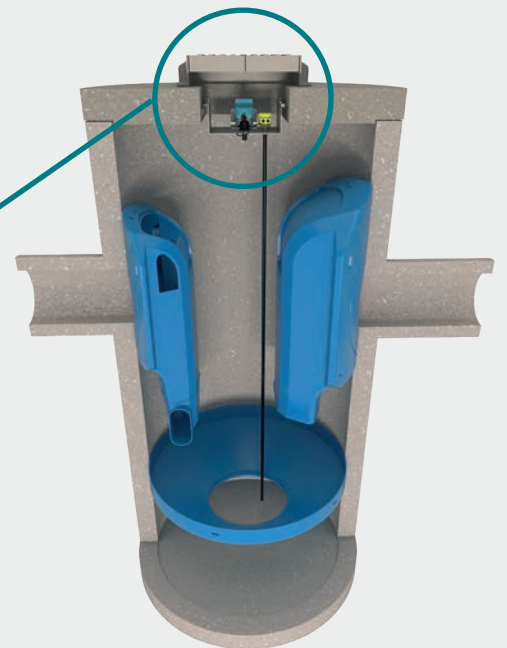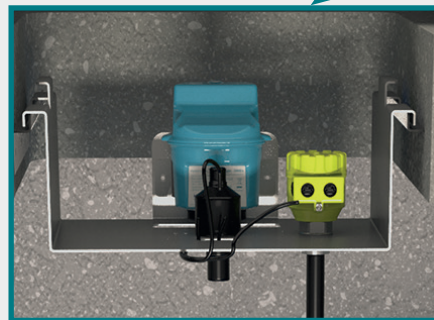
Improve hydrocarbon retention

The option of storing hydrocarbons (oils) as solids can be added, **providing increased retention**, even at flow rates where the unit is bypassing.

This option is available for the Advanced Vortex and Vortex Plus models only.
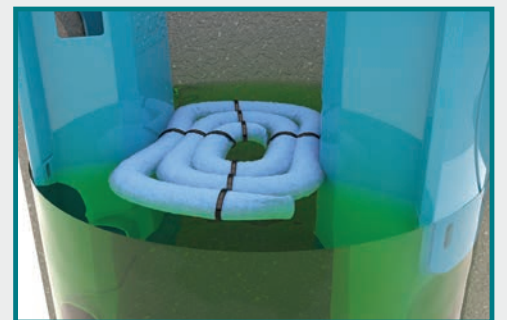
Patent: www.hydro-int.com/patents

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Design your own Downstream Defender® Select with the free online design tool at:

→ hydro-int.design