

NEPTUNE 500 ATTENUATION CRATE

Technical Specification Sheet

(Stormwater & SuDS)

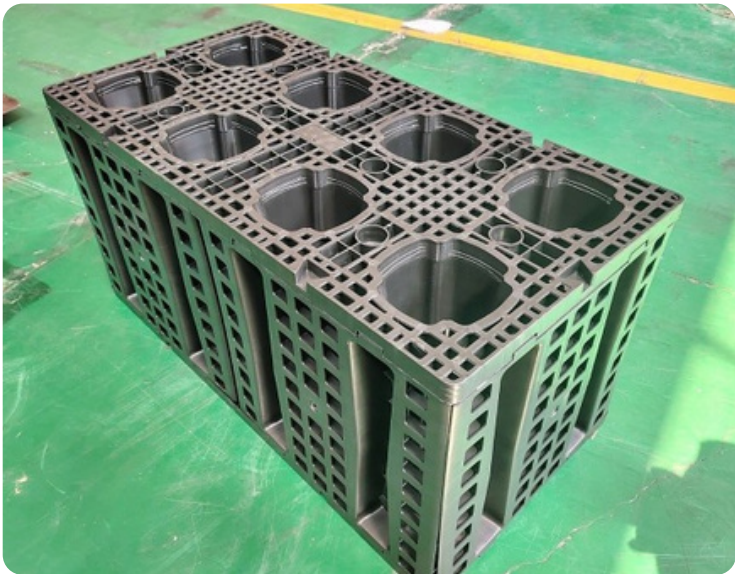


Product Overview

A compact, modular stormwater attenuation crate engineered with internal load-bearing columns for efficient support and straightforward assembly. The 1000 x 500 x 500 mm format is suited to attenuation and infiltration systems in landscaped, residential, commercial and trafficked applications, subject to project design.

Key Benefits

- Internal column layout provides balanced load transfer.
- Compact modular format supports flexible tank layouts.
- Open inspection routes run between the columns.
- HGV applications supported subject to project-specific structural design.



Technical Specification

Assembled Size	1000 x 500 x 500 mm
Nominal volume	250 litres
Void ratio	95%
Strength / loading	HGV capable - 30-70 t/m ² *
Configuration	Modular / flat-pack
Tank entry	Via flange adaptor
Inspection	Between internal columns

**MODULAR. INSPECTABLE.
READY FOR SITE ASSEMBLY.**

Typical Applications

- Stormwater attenuation tanks
- Sustainable Drainage Systems (SuDS)
- Car parks, service yards and HGV areas*
- Residential and commercial developments

*Final structural performance and permitted loading depend on soil conditions, cover depth, installation arrangement and project-specific engineering validation.

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Detailed Technical Data

Product type	Modular stormwater crate
Assembled dimensions	1000 x 500 x 500 mm
Nominal gross volume	250 litres
Void ratio	95%
Internal structure	Load-bearing column arrangement
Loading classification	HGV capable - design dependent*
Indicative strength range	30-70 t/m ² *
Supply format	Modular / flat-pack
System use	Attenuation or infiltration
Tank entry	Via flange adaptor
Inspection route	Between internal columns

Project Design Requirements

Engineering Inputs

- Design traffic and imposed loads
- Minimum and maximum cover depth
- Soil type, stiffness and groundwater level
- Tank footprint, depth and module arrangement
- Lateral earth pressure and flotation risk
- Membrane/geotextile and protection layer specification
- Applicable safety factors and design life

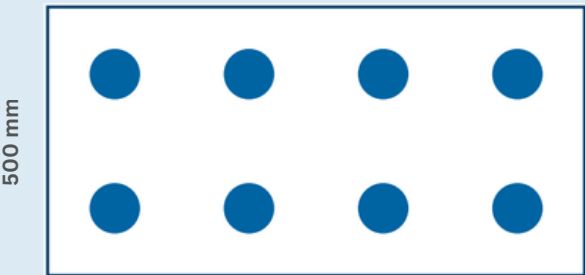
System Performance

- Internal column geometry distributes vertical loads through the module.
- HGV loading can be accommodated where confirmed by project-specific structural design and certified product data.
- Modular format supports varied tank footprints and depths.
- Inspection and CCTV routes are provided between the columns.
- Suitable for impermeable membrane systems (attenuation) or permeable geotextile systems (infiltration).
- Final performance depends on complete tank design, installation quality and surrounding ground conditions.

Typical installation sequence

1. Excavate and prepare a level, stable formation.
2. Install specified bedding and geotextile or geomembrane protection system.
3. Assemble each module with all internal columns fully seated and locked.
4. Position, connect and stack modules to the approved tank layout.
5. Form tank entry through the specified flange adaptor; complete inspection access and ventilation provisions.
6. Wrap, protect and backfill using the specified material and compaction method.

Dimensioned Column Layout



1000 mm
Plan view: internal load-bearing column arrangement



1000 mm
Elevation: indicative modular assembly

*30-70 t/m² is an indicative requested strength range; certified project values are subject to product test data and engineering approval.

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Component Overview

- Main body panels / crate frame
- Internal load-bearing columns
- Top and base grid panels
- Shear connectors and locking clips
- Flange adaptor for tank entry, plus closing caps as required

Component quantities and product codes are confirmed against the approved tank schedule and connection details.

Compliance References

The complete drainage system should be assessed with reference to the standards and guidance applicable to the project, including:

- CIRIA C753 - The SuDS Manual
- Design & Construction Guidance / Sewers for Adoption
- BS EN 752 - Drain and sewer systems outside buildings
- BS EN 16941 where applicable
- DMRB drainage requirements for relevant highway projects

Compliance applies to the designed and installed system, not the crate module in isolation.

Required Design Documentation

- Approved tank layout and module schedule
- Structural verification for loading, cover and burial depth
- Hydraulic calculations and storage requirement
- Pipe, access, ventilation and flow-control details
- Membrane/geotextile and protection specification
- Construction method statement and inspection plan

Handling & Storage

Store components on firm, level ground away from traffic routes. Protect locking features and internal columns from impact. Inspect all parts before assembly and do not install visibly damaged components.

Installation Quality Controls

Before covering the tank, verify and record:

- Formation level, bearing condition and bedding thickness
- Correct orientation and full engagement of all internal columns
- Module connectors installed at every specified location
- Tank line, level, footprint and stacked arrangement
- Tank entry flange adaptor sealed, secured and protected
- Membrane/geotextile free from tears, folds and unsealed joints
- Protection layer installed before backfilling
- Backfill material, lift thickness and compaction method compliant with the design

Inspection & Maintenance Plan

Commissioning inspection:

- Confirm access, flow controls and upstream treatment devices are clear.
- Record the as-built tank arrangement and inspection routes

Operational maintenance:

- Inspect after significant construction activity and at planned intervals.
- Remove sediment and debris before it enters the tank.
- Investigate restricted flow, settlement or unexpected surcharge promptly.
- Maintain an asset log of inspections, cleaning and repairs.

Design Limitations

Cover levels, burial depth, traffic class and allowable loading must be determined by a qualified engineer for the specific site. Values from other crate sizes or configurations must not be transferred to the NEPTUNE 250 without validation.

Do not use the crate as an exposed load-bearing platform or install it outside the approved drainage design.

Technical Support

For quotation and design review, provide the site location, proposed tank dimensions, cover depth, loading class, ground conditions, groundwater level, pipe arrangement and required storage volume.

FULL SUPPLY, DESIGN REVIEW AND INSTALLATION SUPPORT AVAILABLE

Final suitability is subject to project-specific structural, hydraulic and installation validation.



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