CDS® Unit
Gross Pollutant Traps

WATER QUALITY
The leading stormwater pollutant trap

Characteristics of the CDS® Unit

- Non-blocking functionality
- 95% capture of gross pollutants >1mm
- 95% sediment capture >200µm
- Captures organics and oils
- Captures adsorbed toxics and nutrients
- Can treat any pipe or multiple pipes
- Various sump sizes available
- Customised bypass requirements
- Underground - small footprint
- Easy installation
- No moving parts
- Lowest life cycle costs
- More water treated than comparable treatment designs
- Pollutants stored in the sump, not the screens

Applications

- Subdivisions and roads
- Residential, commercial and industrial developments
- Carparks and shopping centres
- Pre-treatment for wetlands
- Pre-treatment for reuse applications
- Pipes, channels, culverts and creeks

Other CDS® models are available for non-stormwater applications involving high flow solids/liquids separation, such as industrial processes and sewer overflows.

High performance GPTs using patented CDS® indirect screening technology
Selecting a CDS® Unit

The size and type of CDS® GPT required depends on catchment area, flows, pollution loads, performance requirements, maintenance method, hydraulic limitations and site constraints. Visit the Rocla website (www.rocla.com.au) or email solutions@rocla.com.au for a sizing request. Details submitted with this form provide all the information needed to calculate the size of device most applicable for the site.

CDS® Unit Models

<table>
<thead>
<tr>
<th>CDS Unit No</th>
<th>Construction Material</th>
<th>Catchment Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDS0506</td>
<td>in-line polymer</td>
<td>&lt; 1 ha</td>
</tr>
<tr>
<td>CDS0708</td>
<td>in-line concrete</td>
<td>&lt; 2 ha</td>
</tr>
<tr>
<td>CDS0708M</td>
<td>in-line concrete</td>
<td>&lt; 4 ha</td>
</tr>
<tr>
<td>CDS1009</td>
<td>pre-cast concrete</td>
<td>2-8 ha</td>
</tr>
<tr>
<td>CDS1012</td>
<td>pre-cast concrete</td>
<td>4-12 ha</td>
</tr>
<tr>
<td>CDS1015</td>
<td>pre-cast concrete</td>
<td>6-15 ha</td>
</tr>
<tr>
<td>CDS1512</td>
<td>pre-cast concrete</td>
<td>8-20 ha</td>
</tr>
<tr>
<td>CDS2018</td>
<td>pre-cast concrete</td>
<td>15-45 ha</td>
</tr>
<tr>
<td>CDS2028</td>
<td>pre-cast concrete</td>
<td>30-75 ha</td>
</tr>
<tr>
<td>CDS3018</td>
<td>pre-cast concrete</td>
<td>40-100 ha</td>
</tr>
<tr>
<td>CDS3024</td>
<td>pre-cast concrete</td>
<td>60-150 ha</td>
</tr>
<tr>
<td>CDS3030</td>
<td>pre-cast concrete</td>
<td>80-200 ha</td>
</tr>
</tbody>
</table>

How Stormwater Pollutant Traps Rate

The CDS® GPT is rated the most effective stormwater pollution trap in every independent comparison.

<table>
<thead>
<tr>
<th>Type of Trap</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Line Devices</td>
<td>POOR</td>
</tr>
<tr>
<td>Off-Line Devices</td>
<td>GOOD</td>
</tr>
<tr>
<td>Off-Line Non-Blocking Devices</td>
<td>BETTER</td>
</tr>
<tr>
<td>Off-Line Non-Blocking Devices with Double Off-Line Storage (CDS)</td>
<td>BEST</td>
</tr>
</tbody>
</table>

Independent studies show that no GPT rates higher than the CDS® GPT on performance and pollution retention.

Complete design service

Rocla offers a complete design service for CDS® products that takes into account the catchment’s characteristics, pollution load, hydraulic site constraints and opportunities, system capacities, velocity, backwater, as well as the location of services and access for cleaning. Hydraulic reports are available on request and are automatically carried out for larger units.

Diversion chamber

Precast diversion chambers can be manufactured to suit most typical installations, or chambers can be tailored to meet the hydraulic limitations of the site.

The diversion chamber has the capacity to cater for the highest possible flow in the stormwater system. The chamber is configured on the assumption that the CDS® unit has not been maintained and there is no flow passing through the unit.

A weir is located within the diversion chamber to create a driving head and direct the majority of flows into the CDS® GPT.

Diversion chamber options

- Precast diversion chambers
- Semi-precast diversion chambers
- Customised designs for multiple pipes, drops and bends
- In-situ channel designs
- Fixed or collapsible weirs
- Any flow capacity
- No flooding

The CDS® GPT and diversion chamber design depends on the system capacity and site constraints. Rocla will design the most suitable CDS® GPT configuration to meet project requirements.

Maintaining CDS® GPTs

CDS® units have the lowest life-cycle costs due to their non-blocking functionality, large off-line storage and multiple cleaning options.

There are 3 methods of emptying CDS® GPTs:

- Removable basket
- Material grab
- Suction method

With no requirement to unblock screens, confined space entry is minimised. Large off-line sump volumes (up to 10m³ available) also minimise cleaning frequency, reducing maintenance costs and hence life-cycle costs over the next 50 years.
Off-line CDS® Unit Operating Principle

- Weir
- Diversion chamber
- Continuous deflection screen
- Off-line storage sump
- Optional oil baffle

Compact in-line GPTs for smaller catchments

- CDS 0506
- CDS 0708
- CDS 0708 Maxi

Side elevation

Front elevation

Plan

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Patented screening technology

CDS® gross pollutant traps (GPTs) are designed to capture and retain gross pollutants, litter, grit, sediments and associated oils, utilising patented CDS® indirect screening technology.

Continuous deflective separation (CDS)

It has long been acknowledged that best management practice for stormwater pollutant traps involves locating the devices off-line.

- GPTs located on-line suffer badly from turbulence and eddies, often resulting in the re-suspension and loss of previously captured pollutants.
- GPTs which store pollution in the screening area suffer decreasing screen area and therefore decreasing flow rates, as they fill up.
- GPTs which function by direct filtration have a treatable flow rate decay that is proportional to the percentage of screen blockage.
- GPTs that utilise a vortex only, without a screen, cannot guarantee neutrally buoyant pollution removal.

Only CDS® units combine the advantages of being off-line, having non-blocking functionality, vortex forces and storing pollution outside the screening area. For these reasons, no other device is “equivalent” to a CDS® Unit.

The only off-line GPT with non-blocking screens and storage outside the screening area
CDS® Unit
Gross Pollutant Traps

For further information on CDS® products and solutions

Call Rocla on
131 004

For an information kit email
solutions@rocla.com.au

Or visit our website
www.waterquality.rocla.com.au

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• Dapto
• Dubbo
• Newcastle
• Glen Innes
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