HydroCAD Supports Triton Stormwater Solutions

HydroCAD-10 provides direct support for underground stormwater chambers manufactured by **Triton Stormwater Solutions** of Brighton, Michigan. This allows **Triton** chambers to be easily used within any HydroCAD model for stormwater storage, detention, or infiltration.

HydroCAD includes complete Triton chamber definitions, plus an interactive chamber wizard for easy layout, pricing, and modeling of underground storage systems.

> To get the latest Triton chamber definitions make sure you're using HydroCAD-10 build-17 or later. If you have an earlier HydroCAD 10.0 build, you can get the latest build at no charge by using your previous HydroCAD 10 download details. If you have an earlier *version* of HydroCAD, you must obtain a program update in order to model all Triton chambers and end-caps.

How chambers are modeled

In a HydroCAD model, stormwater chambers typically appear as part of the storage definition for a "pond". In the simplest case, HydroCAD calculates the available storage for use with other calculations. But more often, it is used to generate a complete inflow or runoff hydrograph and route it through the pond. The resulting analysis indicates the water levels attained throughout the rainfall event, as well as any discharge that may occur through outlet devices or infiltration into the surrounding ground.

Flexible storage options

Each pond may include an unlimited number of storage definitions as required to describe its overall storage characteristics. This makes it easy to model complex storage arrangements, such as a combination of multiple chambers, pipe storage, catch basins, or other contributing volumes.

But the most significant feature is the ability to embed (bury) chambers in a bed of crushed stone, and have HydroCAD automatically calculate the combined storage at any water surface elevation. This makes it easy to determine the storage for virtually any configuration of storage chambers, without resorting to any manual calculations.

HydroCAD can also model almost any imaginable storage arrangement, including chambers of different sizes combined with auxiliary storage from adjacent pipes and catch basins, and even the above-ground areas (parking lot) that may provide overflow storage for certain events.

Modeling Triton chambers in HydroCAD

Setting up a pond to use Triton chambers is a simple process: Just pick the desired Triton model from the drop-down list, and specify the total number of chambers.

For chambers in a stone bed, you can describe the shape and dimensions of the outer excavation, plus the stone voids (porosity), and the composite storage is calculated automatically. Or you can use the new chamber wizard for automatic chamber layout, modeling, and cost estimating.

Why are the chamber dimensions different from the manufacturer's data?

Some chamber definition files use the *effective* dimensions of each chamber. These values include the effects of the corrugated sides, and allow exact calculation of the storage volume at any depth. The effective dimensions may be somewhat *less* than the overall (outside) dimensions quoted by the manufacturer.

When calculating the volume for multiple chambers in a row, HydroCAD uses the *lay-up length*, rather than the outside chamber length. This avoids double-counting the volume at the overlap between each successive chamber.

Detailed chamber information

For detailed chamber specifications and design information, please visit Triton Stormwater Solutions.

For more information about HydroCAD

Please see the following pages for further HydroCAD information:
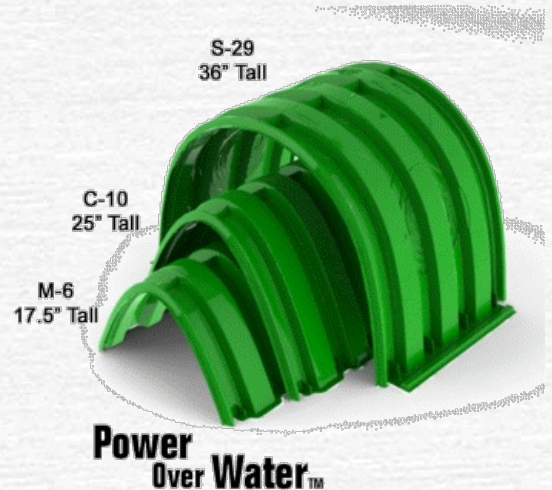
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