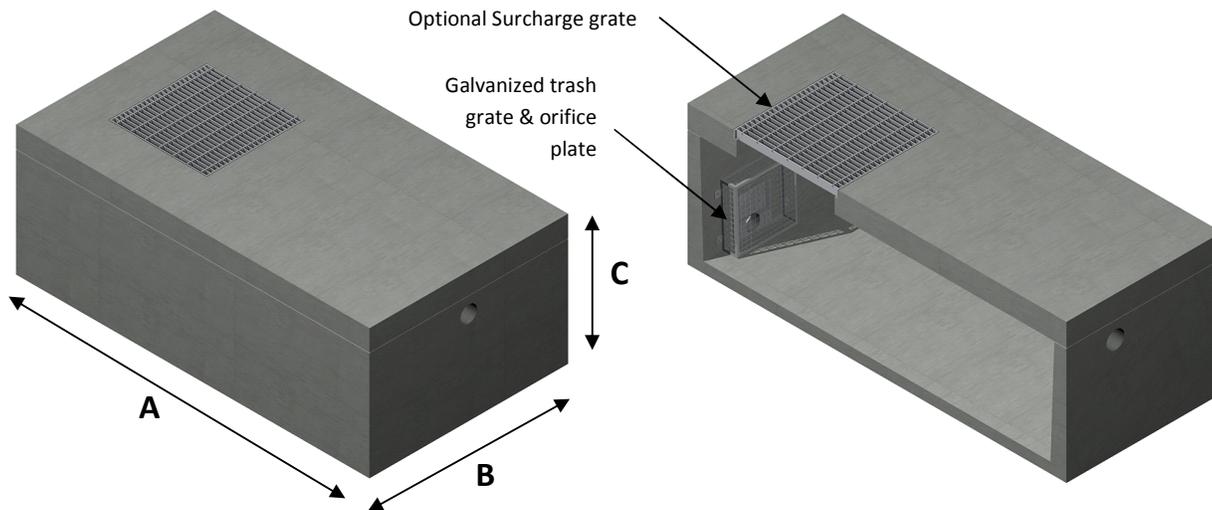


## Detention tanks – single units

Precast concrete detention units offer fast, cost effective installation combined with the strength and durability benefits of precast concrete. Available in 1,000 and 2,000 Litre capacities, they are simply installed online quickly with a minimum of fuss. If a larger storage is required then multiple tanks can be close-coupled to create purpose built storage systems.



CODE	CAPACITY	A	B	C
ST650	1000	2100	1200	600
ST670	2000	2512	1412	920

Design considerations should take into account some basic information to help choose the model that is best suited to your requirements:

Depth to invert of the outlet from ground level is greater than 550mm?	YES	A 2,000 litre tank is suitable for installation
	NO	Due to depth restrictions, 1,000 litre tanks may be necessary to ensure tanks are situated below ground.
Are you permitted to divert excess water to Councils storm water system after the design capacity has been reached?	YES	A "Top hat" restrictor may be installed to allow a bypass of high flows into the councils mains
	NO	An "Orifice Plate" must be fitted over the outlet, constantly restricting the flow.
If installing an Orifice Plate, do you wish the excess flood water to be discharged directly above the storage Unit?	YES	A surcharge grate will be installed in the lid of the unit. This grate is able to be adjusted on site by your plumber when landscaping has been completed.
	NO	Your Plumber will need to ensure that the excess storm water is allowed to overflow from your system in a safe location until floodwaters subside.
Has your design stipulated the size of the orifice (hole) on the outlet of the structure?	YES	We will supply and fit either the Top hat or Orifice Plate with this size opening
	NO	You will need to obtain this information for us to complete the tank prior to delivery.

## Detention tank options

On site stormwater detention helps relieve pressure on Councils existing and new infrastructure by helping to slow or minimise flows during rain events by detaining or retaining the stormwater collected during such events. Hudson Civil Products has many options to assist designers and builders install the most cost effective option for any given site. Precast concrete units offer many benefits including:

- Fast installation with delivery and installation using a crane truck.
- No assembling, liners or membranes
- No specific requirements on back fill materials
- May be used in trafficked areas
- Manufactured from durable high strength reinforced concrete
- The ability to couple together units for large storage requirements

In fact, with the large range of products manufactured by Hudson Civil Products, we could not possibly detail them all here. Our staff will assess any site to determine the most cost effective option, however, below are the most common off the shelf systems.

**The 2,000 litre tank** (1,000 Litre also available) system is ideal for small unit developments or large houses and is best used as a detention tank to slow flows from the property. A typical system involves the connection of the 100mm or 150mm stormwater pipe at the invert of the tank. The outlet is generally fitted with an orifice plate with an opening of around 50-75mm diameter. This orifice plates allows high flows to bypass the restrictor and exit the pit to alleviate flooding if the 2,000 litre capacity is reached. Alternatively, a surcharge grate can be fitted to allow this surcharge to remain on the property until flows subside.

**The 4,000 litre circular tank** system is best suited to areas where the reuse of stormwater is required. It is becoming more important that our precious rainwater is used to help alleviate the pressures on our lakes and rivers. A Hudson Civil circular tank will provide enough water to run the toilets and also provide water for the garden. A complete design can be provided to ensure the correct pump size is chosen to ensure a seamless change from mains water to recycled stormwater in your house. These systems can be retrofitted to most houses with little trouble.

**Modular storage systems** are also available from Hudson Civil and may be constructed in varying sizes to meet your project specific requirements. The plastic modules are capable of taking traffic loads and may be constructed to provide a sealed unit suitable for water reuse applications.

**Reinforced Concrete Box Culverts** (RCBC) are the traditional and most widely used system for detaining stormwater flows. RCBC units come in many sizes and it is this flexibility and their ability to be designed for any situation that sees them used extensively. A RCBC system however can be costly for small volumes and will generally require some engineering designs adding additional costs to projects.

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