

## Wavin AquaCell

# Retention, Detention and Infiltration

AquaCell is a geocellular unit manufactured from recycled polypropylene (PP) for the construction of rainwater detention, retention, and infiltration, and temporary storage tanks, manufactured by Wavin.

AquaCell consists of the following components:



AquaCell is certified under EN 17152-1 Plastics piping systems for non-pressure underground conveyance and storage of non-potable water. Boxes are used for infiltration, attenuation, and storage systems. Part 1: Specifications for stormwater boxes made of PP and PVC-U.

The recommendations in Appendix A of this Warranty and the corresponding technical standards for the design and execution of hydraulic works and installations must be followed.

When the units are installed following Wavin recommendations, the operation of the tank for managing rainwater runoff for reuse or controlled disposal is guaranteed.

The system's flexibility makes it possible to design underground tanks with different geometric configurations.

If you have any questions or experience a problem with AquaCell, contact the customer service line: customer.service@wavin.orbia.com

### Warranty

The seller WAVIN warrants that AquaCell units are free from defects in material and workmanship, if they were handled, stored and installed following the recommendations defined in the Product Technical Manual for one (1) year from the initial date of purchase. Improper handling, storage, shipping, or installation of the product shall render this warranty void. Our liability shall be limited to the replacement of any product confirmed to be defective and will only be effective upon written notification and return of the defective product.

The seller's obligation is limited to (1) replacement of the confirmed defective product or (2) refund of the purchase price. Seller shall have no liability for the cost of removal or reinstallation concerning any replaced product. The election of said remedies will be determined by the seller at its sole discretion, and final disposition shall be considered.

FOR THE AVOIDANCE OF DOUBT, SELLER'S LIABILITY FOR ANY LOSS OR DAMAGE, HOWSOEVER ARISING AND UNDER ANY LEGAL OR EQUITABLE THEORY (INCLUDING WITHOUT LIMITATION BREACH OF CONTRACT; BREACH OF WARRANTY; COMMON LAW, EQUITABLE, OR CONTRACT INDEMNITY; NEGLIGENCE; OR TORT) SHALL BE STRICTLY LIMITED TO THE PURCHASE PRICE OF THE PRODUCT.

ALL IMPLIED WARRANTIES ARE HEREBY EXCLUDED. THIS EXPRESS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, GUARANTEES, AND AGREEMENTS. SELLER EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND/OR WARRANTY OF NON-INFRINGEMENT. IN NO EVENT SHALL THE SELLER BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES.

The warranty terms and conditions contained herein shall be governed by and construed following the laws of the jurisdiction in which the seller is incorporated, excluding in any case conflict of law principles. The Parties acknowledge and agree that the applicability of the United Nations Convention on Contracts for the International Sale of Goods (often referred to as the Vienna Sales Convention) is expressly excluded.



#### Appendix A. Technical Recommendations.

The 1-year system warranty applies only to installations where the following have been supplied and installed: AquaCell (with characteristic Wavin markings and identification logos).

Before installing, check the system's elements for cuts, dents, broken sections, or incomplete or damaged ends resulting from previous handling.

#### Installation

- Prepare the bottom of the trench with suitable bedding material at a minimum depth of 4 in (max. 12 in).
   Remove sharp protruding objects (e.g., rocks) that could damage the geotextile/geomembrane.
- Level the bottom of the trench; this is particularly important for laying the units.
- 3. Lay the infiltration geotextile/geomembrane over the bottom of the trench. Leave at least 20 in of overlap on each side of the geotextile/geomembrane.
- 4. Outline a right angle with a thin cord (plumb line) to ensure a straight system.

Note: Do not insert stake posts through the infiltration geotextile/geomembrane. Place these stakes outside this area.

- 5.Bottom layer: Mount the base unit with the corresponding bottom plate (make sure an audible click is heard to ensure a proper connection). Place the unit in one of the corners that will comprise the tank over the geotextile/geomembrane on the bottom of the trench.
- 6.A. Bottom layer: Place the next (outer) units (including premounted bottom plates) next to the installed units by sliding the integrated connectors (vertical) into each other.

Note: Check the orientation of the units (white circles aligned). Repeat this step until the full bottom layer has been installed.

6.B. Vertical inspection: Where vertical access through the unit is required, the round plate ("circle" or "cross") on top of the unit must be cut. The cutting lines are marked by a "hand saw" logo. A saw with a blade length of at least 3 in. is required.

Note: Make sure that the round plate (circle or cross) of each unit of each level below the vertical access is cut.

7. Next layer(s): Mount the base units (without bottom plate) directly on top of the bottom layer unit(s). Each of the pillars will fall into position and click into the top openings of the unit below.

Note 1: Pay attention to the orientation of the white circle
(a white circle directly above a white circle is NOT possible).

Note 2: The integrated connectors will slide into each other (vertically).

- 8. Side Plate: The next step is to install the side plates by inserting the two side plate hinge pins diagonally into the units' hinge pockets. The plates can then be hinged against the pillars of the unit. The plate will snap to the unit.
- 6. Repeat this step until all side plates are installed and the system is fully closed, except at the location where the inlet and outlet will be installed.

Note 1: If a half-side plate is required, the plate will need to be cut.

Note 2: After cutting, the plate will have a left and a right part. Make sure that the original edge (not the cut edge) is positioned facing outward. In this way, possible splinters from the cut are prevented from breaking the geotextile/geomembrane.

- 9.A. Pipe Connections: The side plate design has an integrated pipe stopper to provide the space necessary for two 6 in connections. To activate these connections, it is necessary to cut/break the sprues of the pipe stopper and rotate it 90° toward the inside of the tank. In this way, space is generated to insert the pipes. This stopper has an integrated pipe wall retaining clip, which restricts excessive penetration of the pipe into the tank.
- 9.B. Pipe Connections >6 in: Each side plate has two preformed connectors that can be cut to connect the pipes. 8 in.-12 in. connector can be installed by positioning and snapping the clicks together with a small radial turn.
- 10. Wrap the complete system in a geotextile or geomembrane. Note 1: The overlap of the geotextile/geomembrane should be at least 20 inches.

Note 2: When using a geomembrane, it is recommended that a pneumatic tightness test be performed following the manufacturer's recommendations, engineering design, and the hydraulic conditions of the tank before proceeding to backfill and compact.

11. Backfill the trench around the system in layers not exceeding 12 inches with the appropriate soil type and compact the soil until it is level with the top entrance. The correct degree of soil compaction must be adapted to the original ground and water conditions as well as the future external load.

It is recommended that soil be compacted at a minimum Standard Proctor Density (SPD) of:

- SPD 90% for traffic-free areas.
- SPD 95% for roads with light traffic loads
- SPD 98% for roads with heavy traffic loads.

In the event of a high ground water level, it is recommended that the degree of soil compaction be increased to at least SPD 95% for traffic-free areas and SPD 98% for areas with traffic loads.

12. Install the (top) inlet and fix the geotextile (infiltration) or seal the geomembrane (attenuation) to the pipe (overlap 39 in. X 39 in).

Backfill the soil under the pipe and compact it.

To enable integral vertical inspection, cut the geotextile/ geomembrane on the top and position the 10 in. spigot at the bottom of the top connector into the respective opening. Seal the connection with the geotextile/geomembrane.

13. Backfill the trench around the system in layers not exceeding 12 in. with the appropriate soil type and compact the soil evenly until it is level with the top of the system (tank).

Backfill the trench evenly on top of the system with a 8 inch uncompacted layer.

See Step 11 for the appropriate degree of soil compacting.

Backfill the trench in layers not exceeding 12 inches with the appropriate soil type and compact it evenly until it is level with the surface.

External vertical pipes that have been enabled for inspection and cleaning must be cut at grade level and with a cover installed.



#### Design:

- Because each project is specific, a resistance calculation study must be conducted by our project office.
- Suitability for use in a given project depends on the resistance calculation for that project.

#### Storage and Exposure:

- Do not expose AquaCell to chemicals such as esters, acetones, chlorine, or petroleum-based products such as certain oils used in cutting tools.
- Do not store the units in places where there is a possibility of vehicles passing over them.
- O Follow AquaCell Operation Manual.

#### Information required from the customer:

- Soil, water level, and infiltration rate studies.
- Rain intensity, design flow, pump flow.
- O Applied loads.
- O Blueprints.
- Use of the area above the tank.

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Wavin is part of Orbia, a community of companies working together to tackle some of the world's most complex challenges. We are bound by a common purpose:

To Advance Life Around the World.

Orbia's Building and Infrastructure business Wavin is an innovative solutions provider for the global building and infrastructure industry. Backed by more than 60 years of product development experience, Wavin is advancing life around the world by building healthy, sustainable environments for global citizens. Whether it's to improve the distribution of clean drinking water, to make sanitation accessible for everyone, to create climate resilient cities, or to design comfortable living spaces, Wavin collaborates with municipal leaders, engineers, contractors, and installers to help future-proof communities, buildings and homes. Wavin has 12,000+ employees around 65 production sites worldwide, serving over 80 countries through a global sales and distribution network.

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