

Wavin
Brochure

AquaCell

Stormwater Management System

wavin

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AquaCell

Our next-generation AquaCell helps control and alleviate rainwater flooding, infiltrating it into groundwater reserves or storing it for reuse. Manufactured from 100% recycled polypropylene resin, our AquaCell is an environmentally friendly solution for water management.



Climate-resilient cities

Climate change is a reality in our world today. Urbanization alters surface hydrology, affecting infiltration, evaporation, and surface runoff.

The latter causing waterlogging and flooding in low-lying areas or locations with heavy rainfall accumulation, wreaking havoc on local infrastructure and putting its inhabitants at risk.

With AquaCell, Wavin® has once again taken on these global challenges with tried, tested, and versatile answers to the effective management of water resources.

The system is made of 100% recycled polypropylene geocellular units that can be used as below ground storage tanks and can mitigate rainwater runoff by reusing/infiltrating it into the subsoil. It provides a comprehensive solution for controlled water management that reduces risks to urban infrastructures and their populations.

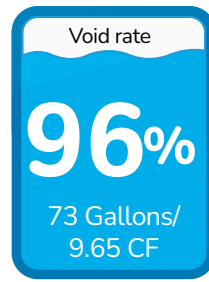
Solution for Sustainable Projects




Environmental Product Declarations (EPDs) are available, making AquaCell ideal for projects seeking water efficiency or LEED certifications. AquaCell has the environment in mind every step of the way, beginning with its manufacturing process with highly resistant and durable 100% recycled raw material. It significantly reduces the water footprint and the dependence on potable water networks, does not pollute the subsoil and is environmentally friendly during storage and installation, thereby reducing CO² emissions.

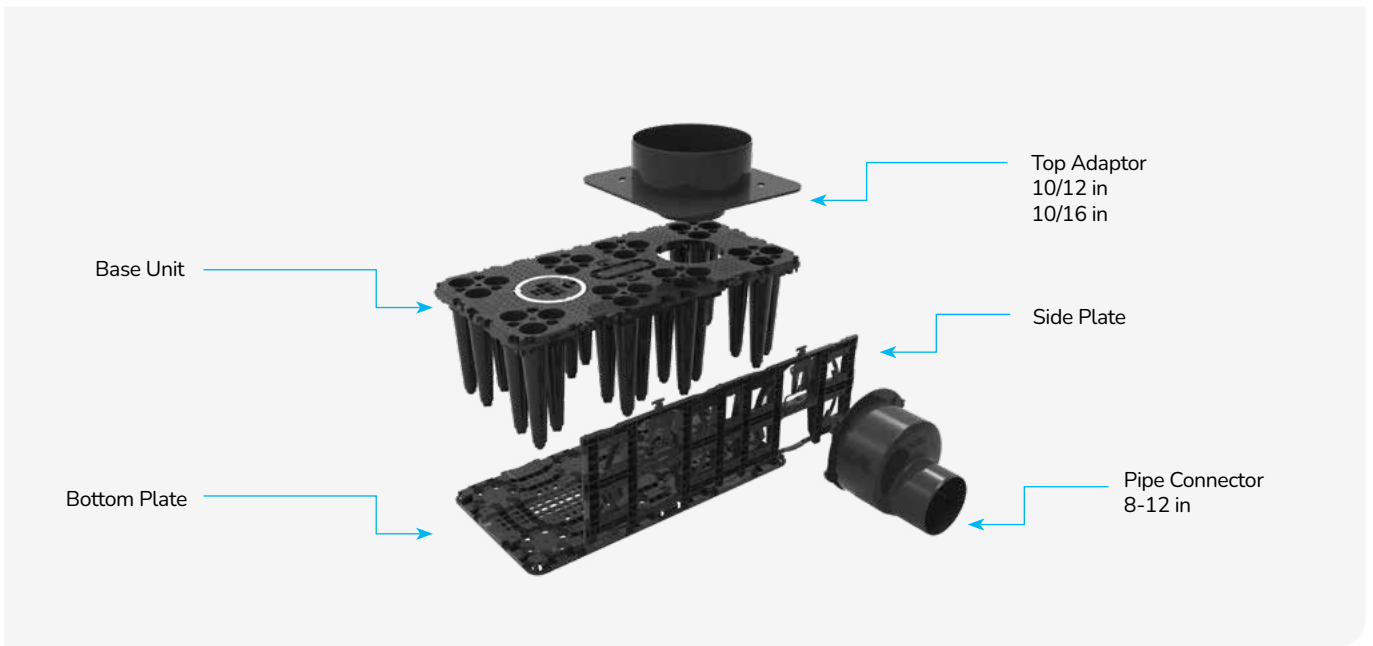


Hydraulic function

AquaCell is a geocellular unit used to build subsurface rainwater detention, retention, infiltration and storage tanks. It's the optimal solution for faster installation and full access to inspection and cleaning activities.



-  Water storage for reuse
-  Infiltration to recharge groundwater
-  Temporary storage to prevent flooding



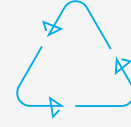
Product Features



Lightweight
100% plastic



Long service life



100% recycled
material



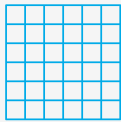
High vertical and
horizontal loading
capacity



No tools needed
for connection



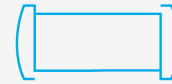
Large storage
capacity



Safe and stable
installations



Modular
system



Compatible with most pipe
sizes & types

Application

AquaCell is a highly versatile solution that users can tailor to new and existing residential, commercial, industrial and infrastructure projects.



BMP (Best Management Practice &
LID (Low Impact Development))



Airports



Educational Institutions



Hospitals



Shopping Malls



Horizontal and Vertical Structures



Public Infrastructure



Industrial Parks and Plants



Urban Centers

Not: (Other structures requiring cisterns/tanks for rainwater management may be included in the design. AquaCell's flexibility makes it possible to build underground tanks in different geometric configurations, recovering the ground surface thanks to its positive loading capacity.)

Support



On-site training for installers and engineers

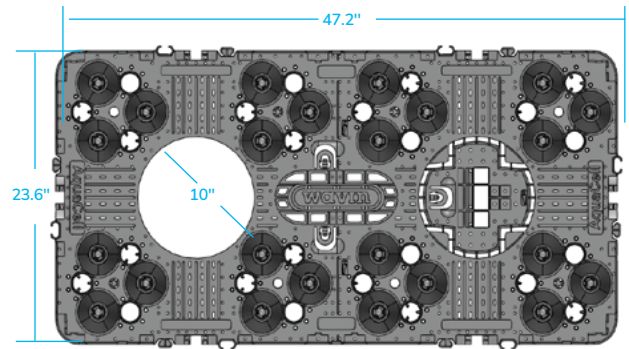
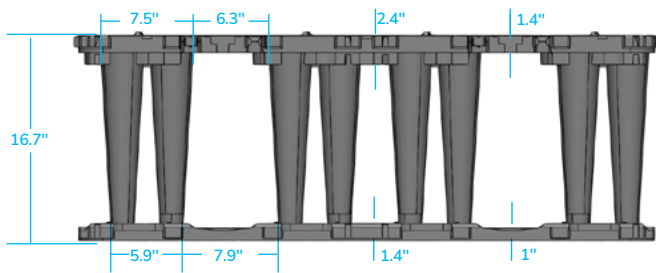


On-site consulting services available



Maintenance training

AquaCell Technical Specifications



Mechanical resistance (versions)

Interlocking two base units can create an extra strong versions of the system

Standard Configuration



Extra Strong Configuration



Designed support AASHTO load standards H-20 and H-25

Storage capacity

STANDARD CONFIGURATION	
Gross Volume (without bottom plate) (l)	76 gal/10.16 cf
Net Volume (without bottom plate) (l)	73 gal/9.65 cf
Void Ratio (without bottom plate) (l)	96%

EXTRA STRONG CONFIGURATION	
Gross Volume (l)	87 gal/11.63 cf
Net Volume (l)	81 gal/10.83 cf
Void Ratio (without bottom plate)	92.4%

Weight, pipe connections and number of layers

Base Unit Weight (lbs)	24
Pipes NPS (in)	6-8-12
Vertical Access (in)	10
Maximum number of layers (with a minimum cover depth of 30 cm for landscaped areas)	8 layers

Performance and installation

Installation speed ¹	1413 ft ³ / hour / per person
Coupling mechanism	Manual - Push fit
Bedding material (base)	Sand, Stone or other approved backfill (compacted and leveled materials)
Minimum depth (base)	4 in
Percent Compaction (SP) ²	90 % -95% -98%

Note: (1) Measured performance for cell assembly, obtained with material supplies and trained personnel on-site. Based on tank size (20' L x 10' W x 4' H)

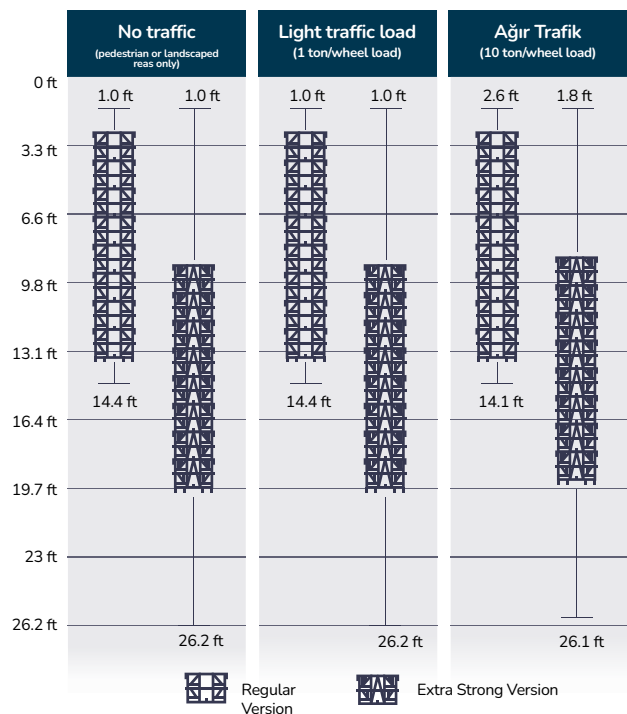
(2) Percent compaction varies according to the type of loads (no traffic, light traffic and heavy traffic, respectively).

Installation depth by load³

MINIMUM/ MAXIMUM COVER DEPTH	STANDARD	EXTRA STRONG
No traffic load (in/ft)	12 in./14.4 ft.	12 in./26.2 ft.
With light traffic load (in/ft)	24 in./14.4 ft.	18 in./26.2 ft.
With heavy traffic load (in/ft)	32 in./14.1 ft.	22 in./26.1 ft.

Note: (3) Each project must conduct a stress analysis to ensure the system's stability based on the acting loads, soil type and water table involved. Wavin recommends a minimum cover of 12 inches over the top of the tank. For details on use in the regular or extra strong versions, or if you need further information, contact your Designated Technical Marketing Consultant

Maximum Installation Depth
Tank height should not exceed 10.5 ft (units)



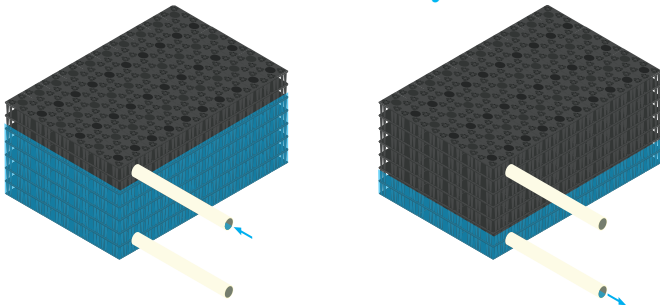
Hydraulic function

AquaCell modular solution can be tailored to three types of applications.

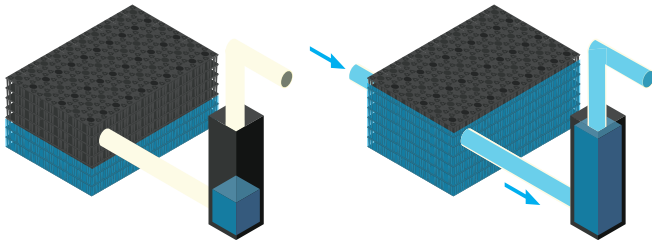
- ◉ **Retention and detention:** A volume of rainwater is temporarily stored for gradual release to the public sewer network or receiving medium. Tank wrapped with Non-Woven Geotextile + Geomembrane + Non-Woven Geotextile.
- ◉ **Reuse:** Rainwater is temporarily stored in the tank and extracted through a pumping system for another purpose. Tank wrapped with Non-Woven Geotextile + Geomembrane + Non-Woven Geotextile.
- ◉ **Infiltration:** Temporary storage in the tank and gradual rainwater infiltration into the soil. Tank wrapped with Non-Woven Geotextile

Note: (4) Soil characteristics should be assessed to ensure this application is feasible. Variables such as rainfall intensity, tributary areas, runoff coefficient and soil typology are used to design any of these applications. Other data may be required depending on the specifics of each project.

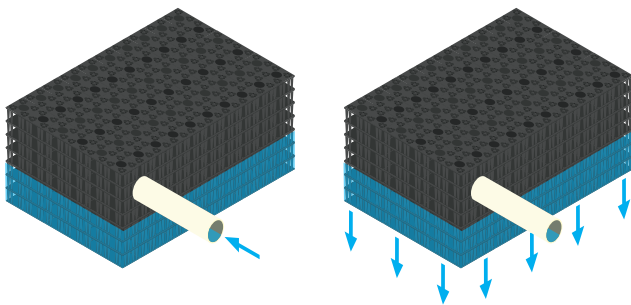
Retention and Detention System



Reuse System



Infiltration System



System Benefits



Environmental

- Ideal for rainwater reuse.
- Reduces the water footprint.
- Does not contaminate the subsoil.
- Does not alter water characteristics.
- Low installation impact.



Structural

- On-site performance is superior to concrete and metal.
- Manual installation, no accessories required.
- The solution can be tailored to any geometric structure. It is ideal for areas with limited access and heavy rainfall.
- Access for inspection and cleaning activities.



Urban Development











- Mitigates the effects of flooding.
- Ideal for sustainability certifications.
- Reduces dependence on potable water.
- Reduces saturation of drainage networks.
- Alternative source for non-potable uses.

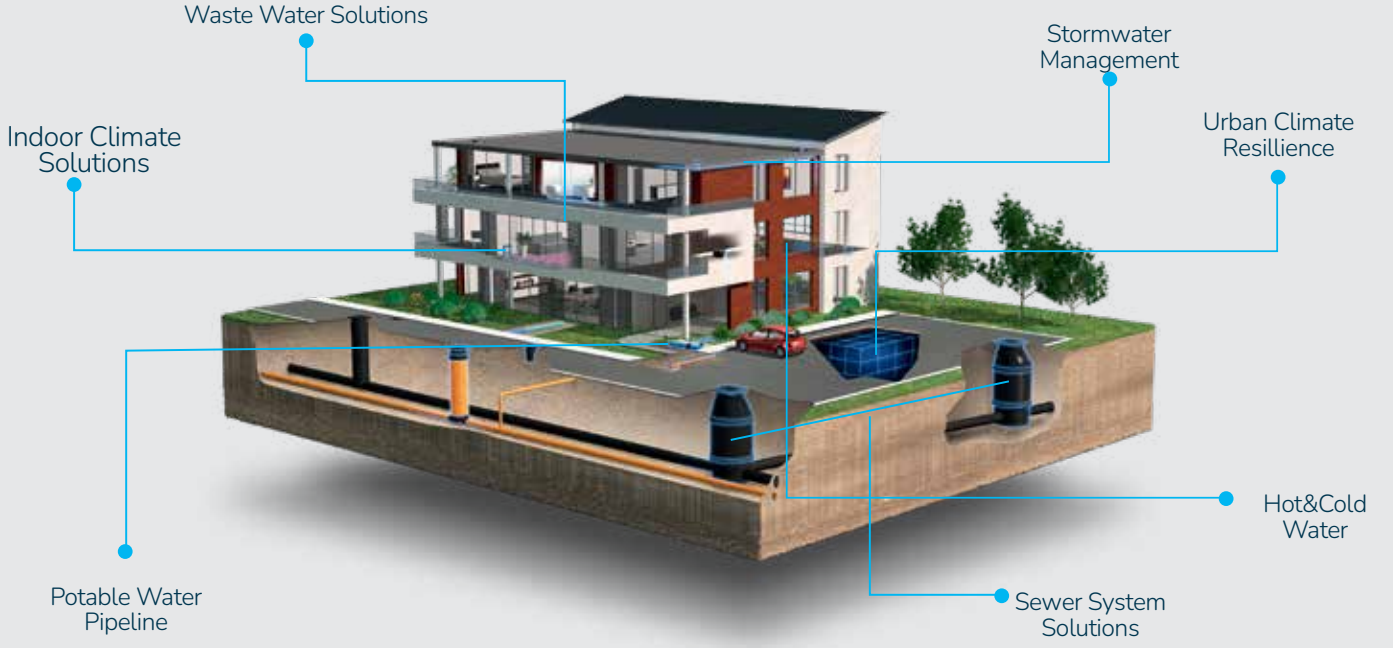


Product Quality

- Long service life.
- Lightweight and highly structurally resistant.
- Large storage capacity: stackable cells.
- Resistant to water and soil activities.

Wavin AquaCell Product Range

	SAP CODE	DESCRIPTION	WEIGHT (Kg)	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)
	3088312	AquaCell Standard Type main Unit	11,4	1200	600	400
	3087891	AquaCell HD Strong Type Unit	15	1200	600	400
	3090664	AquaCell Base Unit	3,5	1200	600	35
	3084336	AquaCell Side Panel	2,2	1200	400	60
	3084337	Pipe Connection Adaptor 315/200	1,2	380	355	330
	3092852	Pipe Connection Adaptor 400	5,8	590	425	260
	3091570	Pipe Connection Adaptor w/Filter 315	3	315	315	270
	3085943	Pipe Connection Adaptor w/o Filter 315	3	315	315	270
	3091567	Shaft Connector Adaptor for Solid Wall Pipe 425	4,6	415	425	200
	3091568	Shaft Connector Adaptor for Solid Wall Pipe 600	7	710	605	600
	3085857	Shaft Connector Adaptor for Corrugated Wall Pipe 315	5	268	592	592
	4067546	Shaft Connector Adaptor for Corrugated Wall Pipe 425	5	592	268	592
	3088124	Shaft Connector Adaptor for Corrugated Wall Pipe 600	8,6	735	735	315



**Hot&Cold Water | Indoor Climate Solutions | Stormwater Management | Waste Water Solutions
Potable Water Pipeline | Sewer System Solutions**



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.

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