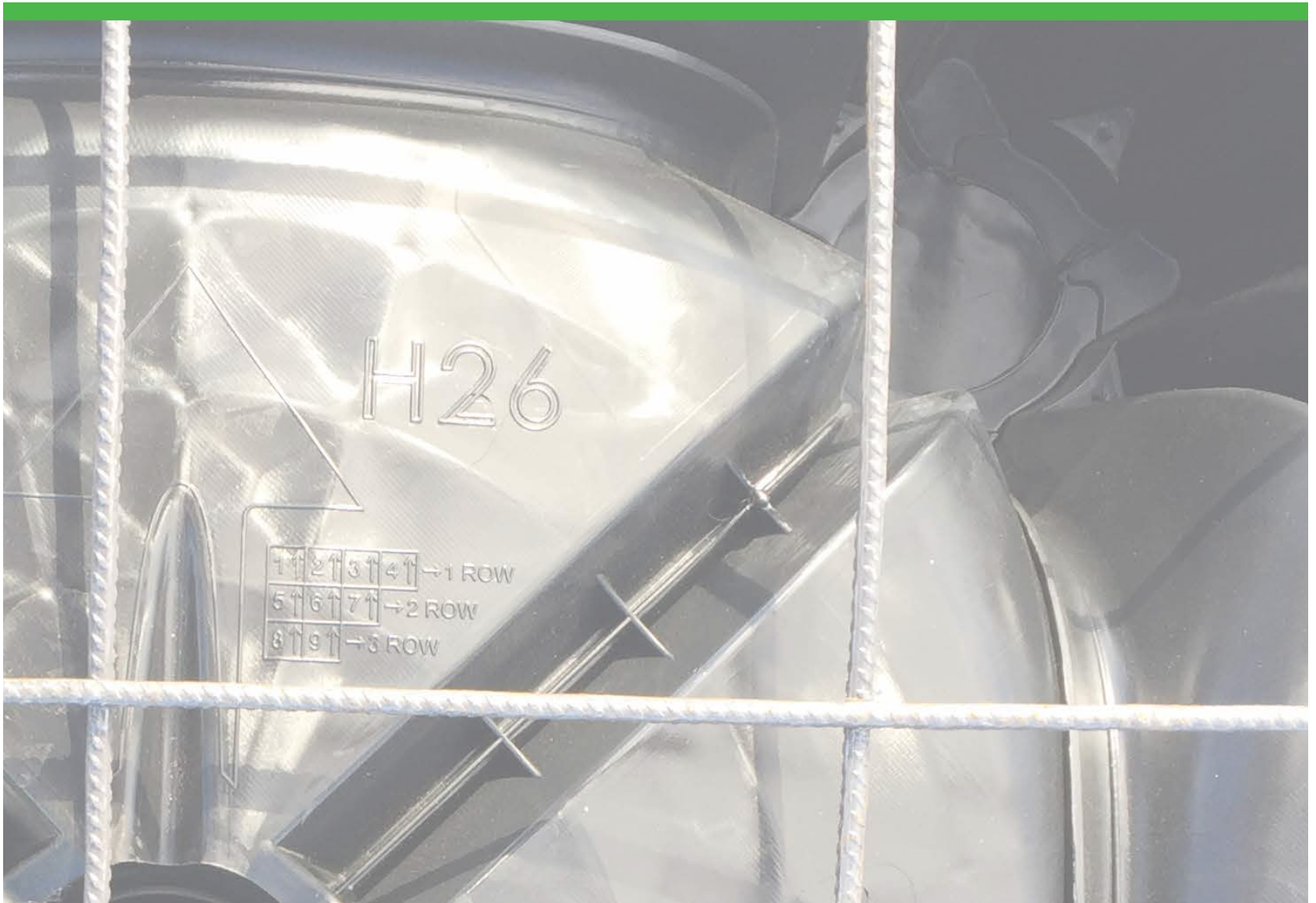


# CUPOLEX<sup>®</sup>

**Smart Void Formers**



**The worlds' leading 100% recycled void former**



*"The strength of an arch and dome lies in its ability to distribute weight and stress evenly throughout its curved structured form."*

*"With decades of experience globally, Cupolex has established itself as a reliable and innovative solution for construction projects."*

Cupolex is a unique and innovative technology that sets it apart from other construction materials in several ways. Here are some of the key factors that make Cupolex stand out from the competition:

**Eco-Friendly:** Cupolex is made from recycled polypropylene, which is a thermoplastic polymer that is 100% recyclable. This makes it an eco-friendly and sustainable choice for construction.

**Versatility:** Cupolex can be used in a wide range of construction projects, including residential, commercial, industrial, and civil engineering applications. It can also be used for both above and below-ground structures, making it a versatile solution for many different types of projects.

**Easy Installation:** Cupolex is designed to be quick and easy to install, which can save time and money on construction projects. The modular design allows for easy customization and flexibility during installation.

**Strength and Durability:** Cupolex is designed to provide strong and durable support for concrete slabs and foundations. It can withstand heavy loads and is resistant to damage from moisture, chemicals, and other environmental factors.

**Cost-Effective:** Cupolex can be a cost-effective solution for construction projects, particularly for larger structures. The modular design and easy installation can help to reduce **labour** costs, while the durable material can help reduce concrete and steel reinforcement.

Overall, Cupolex's unique combination of eco-friendliness, versatility, easy installation, strength and durability, and cost-effectiveness make it a standout choice for construction projects.

RESILIENT INFRASTRUCTURE

URBAN RESILIENCE

### Converting Risk-Driving Impervious Spaces Into Resilient Assets

CUPOLEX<sup>®</sup>, with its proprietary engineered concrete structural design and applications, converts risk-driving impervious spaces into resilient assets. By engineering the geometry of concrete through the CUPOLEX<sup>®</sup> form-based approach, our design and engineering brings a unique set of additional performance functions to any construction project with limitless applications.

Next to cost-benefits for our clients, CUPOLEX<sup>®</sup> solutions bring a set of ecological, social, and municipal benefits by integrating risk-reducing functions, such as stormwater capture and management, structural soil cells for flood mitigation, and green infrastructure to combat urban heat.


### CUPOLEX<sup>®</sup> Concrete Cast-in-Place Pavements and Structures for Stormwater Capture

CUPOLEX<sup>®</sup> is not a product! but rather a tool that gives developers and design engineers a form-based methodology to maximize the usage of space and budgets by sustainably engineering the geometry of concrete.


The firms are supplied to contractors by the manufacturer Fontarolo Engineering Inc. to form the concrete cast-in-place structures and pavements as to the design and specifications provided by CUPOLEX<sup>®</sup>.

**Applications**


- Detention
- Retention
- Harvesting
- Infiltration
- Cisterns
- LIDs
- Permeable Pavements
- Soil Cell Pavements
- Treatment
- Flood Mitigating Rigid Pavements




**Isolator Rows**  
Incorporated in the design with closed borders to pre-treat run-off along with manholes for easy access and maintenance. They can be integrated into bike lanes, roads, and sidewalks before water enters the main CUPOLEX<sup>®</sup> cast-in-place concrete pavement chamber. The complete system can reduce TSS by up to 60-80% and water is treated naturally.



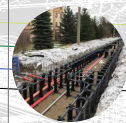
**Roads & Laneways**  
The resulting product is a concrete pavement slab, capable of providing carrying capacities equivalent to conventional road pavements, with less concrete required to do so. The ability of CUPOLEX<sup>®</sup> to reduce the initial construction costs of concrete road pavements makes them much more economically attractive to transportation agencies.



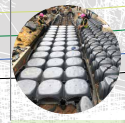
**Rigid Pavements**  
Are designed for Stormwater capture to mitigate flood risk. This design converts impervious pavements into resilient assets but also extends the life of existing water infrastructure by reducing the hydrological load. Transforming urban impervious pavements in areas of flood vulnerability can now be done cost-effectively with much less interruption in traffic patterns and the local economy.




**Soil Cell Pavements**  
A Cupolex concrete cast in place Soil Cell Pavement is a green infrastructure facility designed to provide stormwater management benefits equivalent to bioretention or bioinfiltration. The void of variable depths provided is filled with filtration soil media. Stormwater is distributed and collected within the cell network and an underdrain is connected to a discharge point or storm sewer.




**Utilities**  
The elevated CUPOLEX<sup>®</sup> concrete structure and the void created below the pavement is used to contain quality and unfiltered soil volumes. Flexible for any dimension on plan or depth, CUPOLEX<sup>®</sup> can be easily installed around new or existing underground utilities and pavement penetrations. Any future utility retro-fits are easily cut out.




**Hybrid Systems**  
Soil Cells Pavements designed as Hybrid Systems combined CUPOLEX<sup>®</sup> stormwater capturing pavements and structures. This cast-in-place concrete stormwater management system is designed with integrated stormwater capture, retention, infiltration and treatment as a stand-alone system.



**High Load Bearing**  
The elevated CUPOLEX<sup>®</sup> pavement is supported by the matrix of concrete columns formed by the CUPOLEX<sup>®</sup> forming system. The paving loads are transferred vertically down to the subbase below the planting soil layer, allowing the pavement to support high load-bearing capacities. Applications include sidewalks, rights-of-ways, parking areas, plazas or other public realms including above structural decks and roofs.



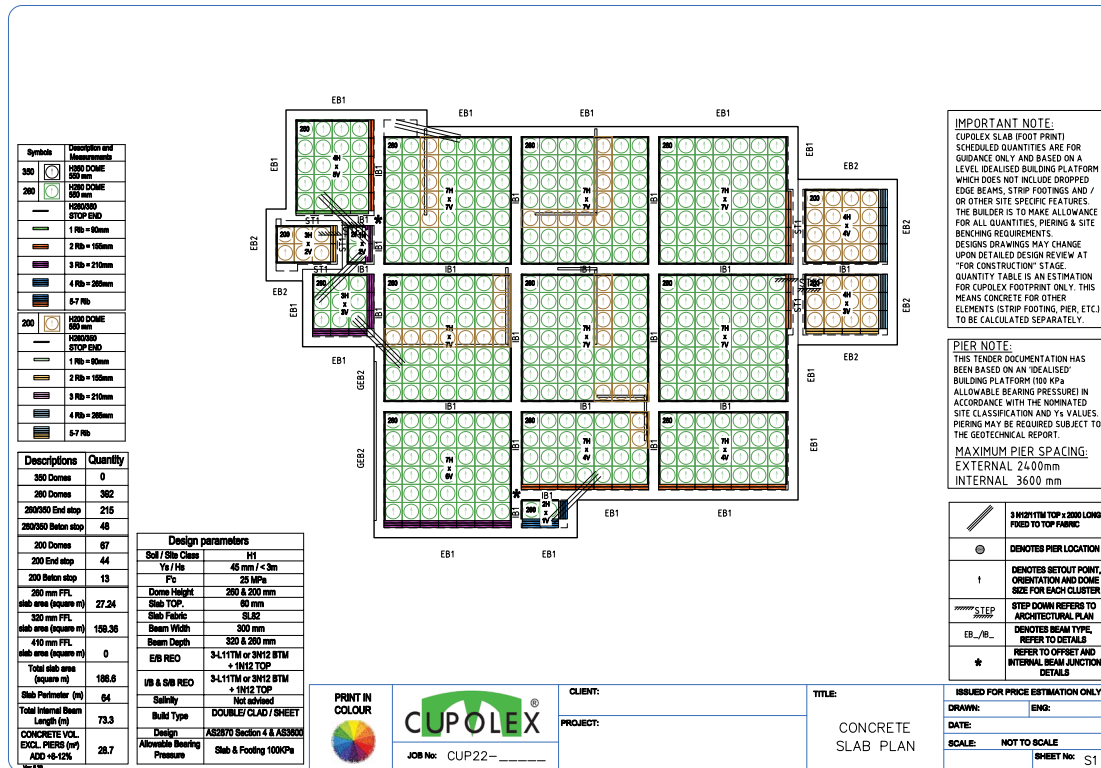
**LID**  
CUPOLEX<sup>®</sup> concrete structures provide green solutions for total Stormwater Management when designed with a PRATEX<sup>®</sup> permeable grid or pavers and a leveling base above the CUPOLEX<sup>®</sup> structure. Water is filtered from the surface down to collection in the CUPOLEX<sup>®</sup> concrete structure for controlled management. This design removes TSS by as much as 60-90% via the permeable surface paving and Isolator Rows with manhole access for easy maintenance.



**Detention**  
CUPOLEX<sup>®</sup> concrete structures provide cost-effective solutions for site applications where stormwater needs to be detained and discharged at a controlled rate. Detention structures are designed for superior performance and allow for maximization of developable land. Placed efficiently and easily under parking lots with deep cover or no cover at all, as well as in non-traffic areas and building foundations.

\* Some international products on display

*"Be part of the solution, not the problem"*



"Cupolex Engineering Direct" is a state-of-the-art solution designed to meet the needs of builders like you. With this service, you can enjoy a full custom engineered design to suit your build, every time, by structural engineers that specialise in the Cupolex range of products.

It's not just about engineering, our plans include,

- Colour coded design layouts for easy installation
- Quantity table for easy scheduling with mesh and beam measurements
- Estimated concrete consumption of the Cupolex footprint
- Separate pier layout with beam location measurements, if applicable
- Quick turnaround times
- Full and/or slab only engineering services available
- Competitive rates

Whether you are looking to streamline your workflow, increase efficiency, or simply make your life easier, this new service is the perfect solution.

To take advantage of this new service, simply email [engineering@cupolex.com.au](mailto:engineering@cupolex.com.au) with your contact details. Our dedicated team is always available to assist you, so if you have any questions, please do not hesitate to reach out.

"What we do....."



Structural Slab Foundation Solutions



Freezer Floor Solutions



Flood Zone Slab Solutions



Relocatable Slab Solutions



Gas Mitigation Solutions



Green Roof Solutions



- > **Installed Globally Since 1995**
- > **Installed Locally Since 2010**
- > **Over 40 000 Projects Completed**
- > **100% Recycled and Recyclable**
- > **Made in Australia**
- > **AS2870 & AS3600 Compliant**
- > **Certified Drawings Available**

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