drainage

Megaflo®

Geocomposite Panel Drain System

Made in Australia to drain down under

RECYCLED

Quality System
Quality Endorsed Company

Geofabrics
AUSTRALASIA PTY LTD

Introduction

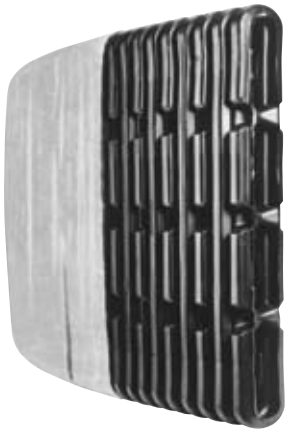
Megaflo® geocomposite panel drain provides the dimensional stability and field-proven structural strength for quick, effective subsurface drainage. **Megaflo®** consists of a perforated recycled HDPE core wrapped with **bidim®** nonwoven geotextile to prevent soil ingress into the drainage system.

Performance is the distinguishing feature of the panel drain with is its ability to rapidly collect and remove water. Compared to 100mm round pipe, **Megaflo®** has twice the inflow capacity for an equivalent length and will drain a given quantity of water in less than 60% of the response time. Its slim 40mm wide profile permits faster and more cost effective installation in a narrow trench.

Megaflo® is not round, but its panel shaped core fully encloses the waterway. Lateral pillars maintain the core opening, resulting in a series of oval shaped channels providing superior strength and relatively few projections into the waterway. The design of the panel permits significantly higher flow velocity at lower head.

An effective solution for a wide range of applications:

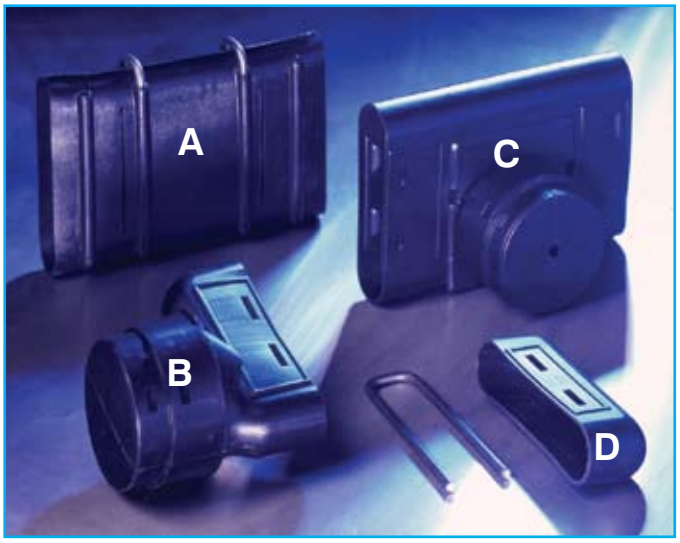
- Highway edge drains
- Golf green and fairway drainage
- Sports field drainage
- Building foundations and retaining walls
- Waste management curtain drains
- Shotcrete drainage
- Vertical drainage applications
- Horizontal drainage applications



Megaflo® Products:		
Product Description	**Height**	**Length**
Megaflo® 150	170mm	50m or 100m
Megaflo® 300	315mm	50m or 100m
Megaflo® 450	450mm	50m or 100m
Megaflo® 900	900mm	50m

- **Fittings to suit all Megaflo sizes**

  A Joiner Coupling
  B End Outlet fitting
  C Side Outlet fitting
  D End Cap



Panel		MEG150	MEG300	MEG450	MEG900
Panel Height (Norm)	ASTM D2122	170mm	315mm	450mm	900mm
Panel Width	ASTM D2122	> 40mm			
Slot Size (Min)	ASTM D2122	2.0mm x 25mm			
Horizontal Compressive Strength	ASTM D2412	> 200 kPa			
Vertical Stiffness (@5% deflection)	AS2439	> 1800kN/m/m	> 900kN/m/m	NA	NA
Geotextile					
The nonwoven, needle-punched polyester geotextile complies with the following road authority specifications ranges:					
New South Wales RTA R63 (Ed 2, Rev 0, September 2002)					
Queensland MRS 11.27 (Dec. 1999)					
New Zealand Transit TNZ F/7 (2003)					

Applications:

Roadside Edge Drains

Megaflo® is a proven alternative in road edge drainage applications, providing faster and higher inflow capacity due to its high trench installation profile providing earlier interception of pavement infiltration. **Megaflo®** performs as an equivalent drainage system in a narrow trench profile, and is designed for installation with washed sand and no fines concrete in addition to aggregates.

Megaflo® has a high compressive modulus and structural rigidity preventing deflection under normal service loads, due to its elongated ribbed profile incorporating internal support. The **bidim®** geotextile filter conforms to Main Roads MRS11.27 and RTA R63 A1 specifications, amongst others and is fully supported by the ribbed panel construction, preventing deformation under backfill loads.

Sports Fields

Sports field surfaces endure high traffic, which if not drained adequately, results in costly and time consuming maintenance. Adequate drainage requires more than removal of excess water, but also fast and effective response to rainfall events. The **Megaflo®** drainage system, designed for superior drainage response times to suit various growing mediums and structures, is available in standard depths of 150, 300 & 450mm.

The use of narrow width **Megaflo®** flat panel drain ensures minimal disruption of the existing sports surface with simple cost effective installation and quick recovery after rainfall.

Retaining Walls

Megaflo® is used to provide reliable drainage in specialist construction applications such as retaining walls, shotcrete walls and tunnels. The **Megaflo®** Drainage System can be utilised to remove excess water, preventing the build up of water pressures induced on the structure, particularly important on structures founded below the water table. **Megaflo®** is ideally suited to these applications installed vertically or horizontally, due to its' high compressive capacity, integrated bidim filter geotextile and slim profile.

Landfill

Landfill leachate and gas collection systems are an integral part of landfill design for lining and capping systems. The high compressive strength of **Megaflo®** under normal and inclined loads makes it the ideal product for a range of drainage applications in landfills, providing positive drainage to liners under extreme loading.

Megaflo® is manufactured from high density polyethylene (HDPE), thus the product is resistant to leachates present in landfill operations. **Megaflo®** can be supplied without the geotextile wrapping to suit unfavourable biological environments.

Golf

The trenchless option of **Megaflo®** laid directly onto the subgrade results in a huge saving in man-hours and material. Regardless of the subgrade soil type, (sand or clay base) all golf courses can benefit from improved drainage using **Megaflo®**.

Significant savings can be realised using **Megaflo®**, as a typical green can have a drainage system completely installed in under two hours with an average installed cost less than half that of traditional round pipe.

Mining

Containment of hazardous waste is a key factor in the long-term viability and environmental sustainability of modern mining operations. Inadequate control and containment of waste can lead to contamination of groundwater systems causing significant environmental damage requiring potentially expensive rehabilitation costs. The **Megaflo®** flat panel drainage system is ideally suited for use as collector drains due to high compressive modulus and structural rigidity preventing deflection and loss of flow capacity under high load or localised settlement. **Megaflo®** Ultra is available for high load applications in mining.

Megaflo®

Installation

While actual installation procedures are specific to each application, some general guidelines will aid in the successful installation of **Megaflo®**.

Step 1 – Excavate trench to the required depth and width ensuring sufficient cover from the surface to the top of the panel. Typically this is between 100mm and 300mm depending on the loading and application.

Step 2 – Locate the **Megaflo®** panel against the side of the trench from which the infiltrating water is being drained. Where site conditions result in water being drained from both sides or the soil characteristics require further filtration, locate the **Megaflo®** in the centre of the trench.

Step 3 – Backfill around the drain with a free draining compactable material such as well graded, clean washed sand or gravel. Compact to 95% MDD in a maximum of 150mm lifts or alternatively wash in sand drainage material then compact. No fines concrete may also be used as backfill under road pavements.

Fittings

A range of standard **Megaflo®** fittings are available. **Megaflo®** couplers are a high strength, secure means to join continuous sections of **Megaflo®**, inserted beneath the geotextile to maintain the geotextile filter integrity. Connecting to 100mm round pipe is easily achieved using either the **Megaflo** side outlet or **Megaflo®** end outlet where required. **Megaflo®** end caps can be fitted to terminations to prevent backfill ingress into the system. Other fittings are available for connecting **Megaflo®** in various arrangements depending on the application.'

Why Megaflo®

Features:

- Australian Made
- Made from recycled HDPE
- Compact components
- Narrow width
- Composite product
- High crush strength
- Rigid core
- High velocity discharge
- Fully enclosed core

Benefits:

- 3 dimensional stability
- High compressive modulus
- Solid waterproof invert
- Fast drainage response time
- High infiltration capacity
- Low cover requirement
- Efficient retrofit option
- Low installation cost
- Durable HDPE

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MELBOURNE	SYDNEY	NEWCASTLE	COFFS HARBOUR	PERTH	ADELAIDE
(03) 8586 9111	(02) 9821 3277	(02) 4950 5845	(02) 6658 4598	(08) 9309 4388	(08) 8177 2055
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Geofabrics AUSTRALASIA PTY LTD

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