

EUR101

GEODESIGN BARRIERS

A new low priced, light and quick flood barrier from Geodesign.



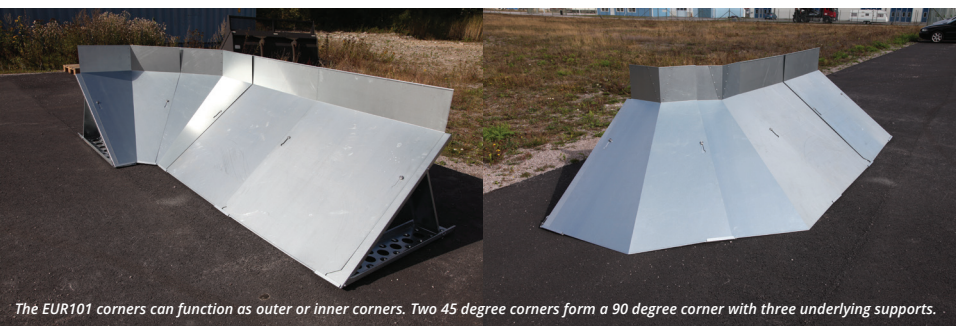
EUR101 Steel Barrier

The EUR101 Steel Barrier is part of the Geodesign Barriers' product range. It dams 1.01 m, can be overtopped and still maintain full stability.

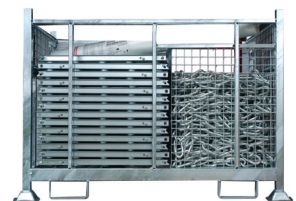
Its support frame construction consists of a front beam, bottom beam and one supporting beam. The supports are held together by the steel sheet, locked into the system, without any extra fittings. The support automatically anchors to the ground surface when the pressure from flood water is applied to the sloping and upright standing front. The new angled design of the front enhances the anchoring forces to the ground and makes this system probably one of the safest on the market. With this high strength quality steel, the thickness of the support is 1.5mm and the front steel panel is 1.0 mm.

The 0.25m higher EUR125 Flood Barrier was the first free standing barrier to win the coveted British Standard Institution BSI PAS 1188-2 Kitemark, in May 2003. Geodesign still holds the Kitemark.

Dam height:	1.01 m
Material:	EN 10292:2000 Continuously hot-dip alu-zink coated strip and sheet of steels with higher yield strength for cold forming. This has double the strength compared to that of standard steel.
Weight:	10.6 kg/support
Support:	Dimensions: 1142mm x 242mm x 62mm (folded (l x w x h)), 1142mm x 242mm x 1003mm (unfolded (l x w x h)) Continuously hot-dip alu-zink coated strip and sheet of steel quality 420LADZ275
Panel:	Size 1100mm x 1306 x 1.0mm. Continuously hot-dip alu-zink coated strip and sheet of steel quality DOGAL1000DPXZ275. Weight: 12.8 kg/sheet
Plastic membrane:	Reinforced polypropylene 3-layer, weight 25.9kg, 3.7m wide x 50m long.
Sealer clips:	One sealer clip per section, to fasten the plastic membrane.
Chain:	One row of chain on the outer edge 5.0m x 12mm (weight: 2.84 kg/m, wrapped in membrane and secured by a cable ties.
Weight total:	27.3 kg/m (including chain)



The EUR101 corners can function as outer or inner corners. Two 45 degree corners form a 90 degree corner with three underlying supports.



50 metres of the EUR101 Steel Barrier can be stored in this metal crate (1747mm x 1195mm x 1320mm (LxWxH)). Total weight: 1,500 kg.



EUR101 TEST - INSPECTA REPORT

Inspecta

Inspecta is the leading provider of inspection, testing, certification and technical consultancy services in Northern Europe. Geodesign contracted Inspecta to verify a test of the new EUR101 Steel barrier. The purpose was to see if the barrier could withstand the pressure of extreme flooding scenarios. Inspecta's report concluded that the EUR101 Steel barrier is well suited for the most extreme flooding conditions and that overtopping or moving water does not affect the stability of EUR101 Steel Barrier.



Overtopping of barrier

The barrier was tested at its intended design load 1.01m. The barrier is demonstrably stable at 1m when holding back flood water and when used in accordance with our instructions. It is also demonstrably stable when over-topped and for induced 0.1m waves. Outer and inner corners can be created by using corner units and the barrier can overcome shift in levels. We are using steel instead of aluminum for our panels. Steel needs less energy than aluminum to produce. The risk of theft is considerably lower with steel. This makes the system more economical over the years.



Barrier in wave action

With wave action onto EUR101 full stability is still maintained. The barrier is self anchored due to its 39 degree angle and the use of a plastic membrane. The weight of the water on the membrane and onto the barrier slope, adds to the total withholding force. With the new EUR101 Steel Barrier, the angle of the panels has been lowered from 45 to 39 degrees, which adds 10% extra vertical anchoring force (from 3916N to 4308N with full load 1.01m water).



Barrier level adjustment

For normal undulation of the ground, the barrier can be deployed and work without a problem. However, there is always a need to overcome obstacles when responding to a flood emergency. Then a step-change-adaptor together with an ordinary support will solve the problem (Here: a 150mm shift in level). The adaptor can take up to 500mm in level shift.

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In civil engineering and flood protection

Address: 1 Chapel Street, Warwick, CV34 4HL
Tel: 0845 241 8108 or 01793 538565 **Mobile:** 07890 983239
Email: britt.warg@palletbarrier.com
Web: www.geodesignbarriers.com
Twitter: @GeodesignB