FLOOD DEFENCE

BoxBarrier

Effective, temporary flood barrier system



A cost-effective, temporary flood defence

BoxBarrier is a cost-effective, temporary flood defence system with the huge advantage of quick and easy installation and removal. The modular system consists of boxes, lids and joints; the boxes are filled with water to create a highly effective flood barrier.

When empty, BoxBarrier is lightweight and compact, making it easy to transport and install — especially compared to heavy sandbags. The UV-stabilised polyethylene construction means it can be used multiple times, stored outside and is 100% recyclable.

Quick and easy installation

BoxBarrier consists of three parts — a box, a lid and a connecting element. Apart from a simple pump, no additional equipment or permanent foundation is required for installation.

It can be installed on a variety of surfaces, and water is pumped into the boxes using a simple pump. 100 metres of BoxBarrier can be filled in one hour with a standard 30m³/hour pump.

Removal is even faster: the boxes are emptied by pump or bucket, removed by hand and stacked with the joints stored in the top box. There is no debris to clear up, as is often the case with weathered and ruptured sandbags.

Efficient storage

The compact shape and stackability mean both easy transportation and efficient storage. BoxBarrier can stack up to 20 units high, is weather-resistant and durable, and can be stored outside — though dry storage is preferable.

Easy transportation

The compact shape and stackability of BoxBarrier make transportation easy. 10 to 20 units can be moved in an average car trailer, and larger quantities by truck or container — 250 units fit in one conventional 20ft container.

Due to the low weight of the system, BoxBarrier is also ideal for air freight for international disaster relief.

Corner and wall pieces

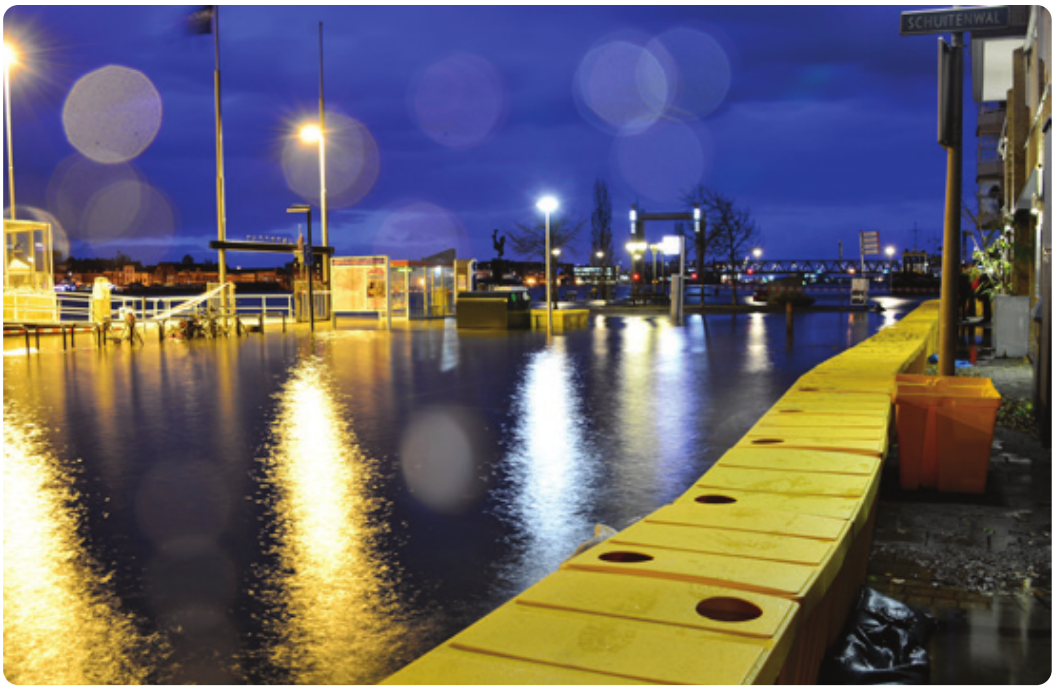
With corner pieces it is possible to place BoxBarriers at sharp angles of up to 90 degrees. Wall pieces make it possible to create a watertight join between a wall or other fixed structure and BoxBarrier.

Deployment in flooded areas

BoxBarrier can even be installed in water when an area is already flooded. It can be transported on the water by floating or by boat and deployed at the required location. After filling with water the system is ready, and floodwater from the flooded area can then be pumped away.

More than a flood barrier — temporary bridge

Because BoxBarrier can be walked on, it can also be used as a temporary bridge in a flooded area, which is especially useful in urban floods.



BoxBarrier deployed as a temporary, water-filled flood barrier.

Benefits at a glance

- Low-cost, temporary flood barrier
- Lightweight when empty
- Easy to transport
- Quick and easy to install and remove
- Ideal as both first and second line of defence
- Efficient, compact storage
- Can be stored outside
- Can be used multiple times as and when needed
- Can be installed on multiple ground surfaces
- Less intrusive than traditional large sandbags
- Multifunctional
- Constructed from UV-stabilised polyethylene — lightweight, robust and durable
- 100% recyclable
- Zero maintenance
- Vandal-proof

TECHNICAL INFORMATION

DIMENSIONS & WEIGHT

Box dimensions: L 90cm × H 60cm × W 60cm

Empty box: 8.3kg

Lid: 3.4kg

Joint element: 1.5kg

Filled with water: ± 273kg

PERFORMANCE

Max water retaining height: 50cm with BoxBarrier completely filled (dependent on subsoil type and inclination)

Filling rate: 30–60 m³/hour by hand or water pump

Installation rate: 100m/hour with a team of 3 (units supplied at the installation point)

Leakage: <0.25 m³/hour on a level asphalt surface; 10–15 m³/hour per 100m on peat subsoil (Waterboard Waternet test, Netherlands)

Support boxes / joint elements: When required, support boxes or joint elements can be added at the rear of the barrier. Recommended in cases of wave action, strong currents and possible impact from floating debris.

CONSTRUCTION & CERTIFICATION

Material: UV-stabilised polyethylene, 100% recyclable

Seal: Neoprene rubber seal applied at the underside

Suitable surfaces: Grass on peat or clay, clay, asphalt and concrete pavement. On concrete pavement blocks, the joints between the blocks should be sealed to avoid excessive leakage through the pavement; an additional membrane can also be applied.

Certification: TÜV certified under certificate number 2400-B-154