



**CASTIONI**  
KABELFÜHRUNGSSYSTEME



**TERRASYSTEM**  
GROUND MOUNTED PP CABLE TROUGHING

Introducing  
**TERRAWALK**  
GRP LID - A15

# TERRASYSTEM

GROUND MOUNTED PP CABLE TROUGHING

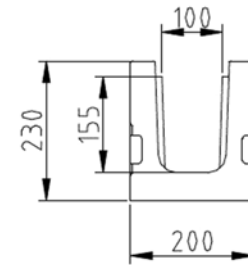
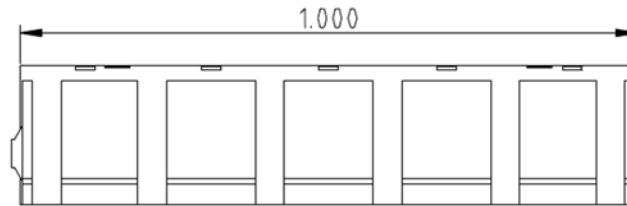
Fast and efficient cable laying  
in halogen free PP cable troughs

TERRASYSTEM Size 1

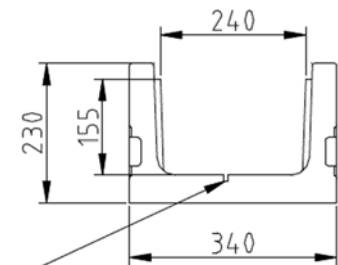
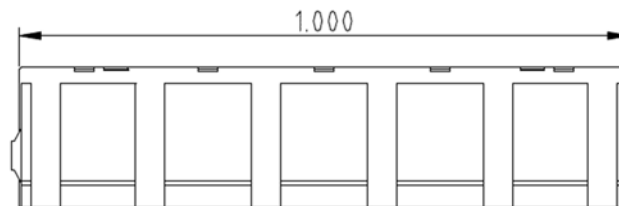
Internal Cross-sectional  
Capacity

Size I: 15500 mm<sup>2</sup>

Size II: 37200 mm<sup>2</sup>



TERRASYSTEM Size 2



Groove for  
partition

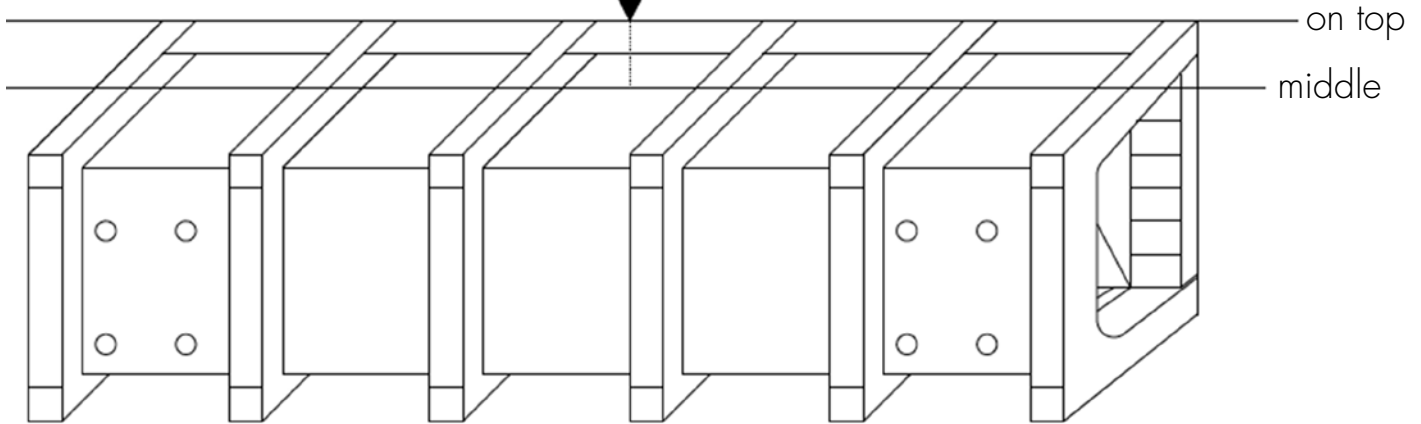


# Side load plastic cable trough (without rupture)

**F**

$$F_{\text{top}} = 18,5 \text{ kN}$$

$$F_{\text{middle}} = 30,5 \text{ kN}$$



# Advantages of plastic cable troughs versus concrete

## Installation

Lightweight, easy to handle, faster to assemble and install

### Concrete trough Size II

Weight approx. 160 kg/metre  
Laying rate approx. 150 m/day  
Heavy lifting gear required  
Long project execution

### Plastic trough Size II

Weight approx. 8.6 kg/metre  
Laying rate approx. 1500 m/day  
Manually by a small team  
Rapid project execution  
Easy navigation of bypasses and curves with markings on troughs  
Its lightweight enables the plastic cable trough to be easily assembled and installed, particularly in sandy ground, where it remains in place and stable.



# Advantages of plastic cable troughs versus concrete

## Logistics

Low weight reduces transport costs

### Concrete trough Size II

Weight approx. 160 kg/meter

Loading capacity approx. 150 Pcs. (Truck)

Heavy lifting gear for unloading

Expensive storage

### Plastic trough Size II

Weight approx. 8.6 kg/m

Loading capacity approx. 1200 Pcs. (Truck)

Manual unloading at site possible if forklift unavailable.

Simple storage, stackable

# Advantages of plastic cable troughs versus concrete

## Recyclable

**Concrete trough Size II**  
very work-intensive and expensive

**Plastic trough Size II**  
possible, 100% Recycling

## Uninstalling or reuse

**Concrete trough Size II**  
not possible

**Plastic trough Size II**  
possible, easy to reuse



# Advantages of plastic cable troughs

- Low weight 8.6 kg/metre trough and lid TERRASYSTEM Size 2
- Fire classification K1 (self-extinguishing) to DIN 53438 Part 2
- Halogen free according to IEC 61249-2-21
- Working temperature range -30° C to +85° C
- UV resistance up to 35 years
- No additional parts required (e.g. connecting pieces, spanners, drainage)
- Single piece cover
- Separator for TERRASYSTEM Size 2 optionally available
- Recyclable
- EBA Approval, released as standard product by DB AG

# Snap-on cover





# Secure lid fixing system



# TERRASYSTEM Size 2 with optional divider



Fixation with rebar  
also  
possible



# Ground Pegs



Point Load  $10 \times 10 \text{ cm} = 100 \text{ cm}^2$  2 kN

Uniformly Distributed Load 10 kN

Suitable for occasional pedestrian traffic



# Supplementary cutting lines 15°/30°



# Trough to trough connection



# Cable feed knock-outs





# TERRAWALK

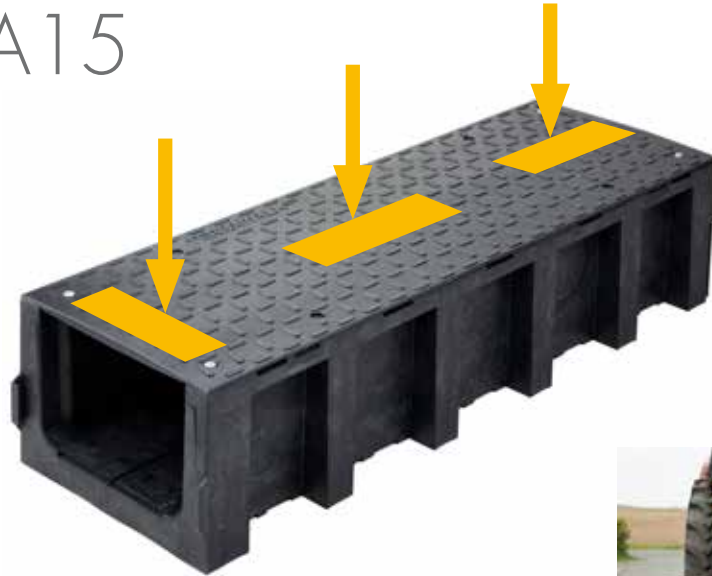
GRP LID – A15



Press moulded structural SMC trough lid  
Upgrades the lid for regular pedestrian traffic

# Loading Test to EN 124

## Test Result: A15



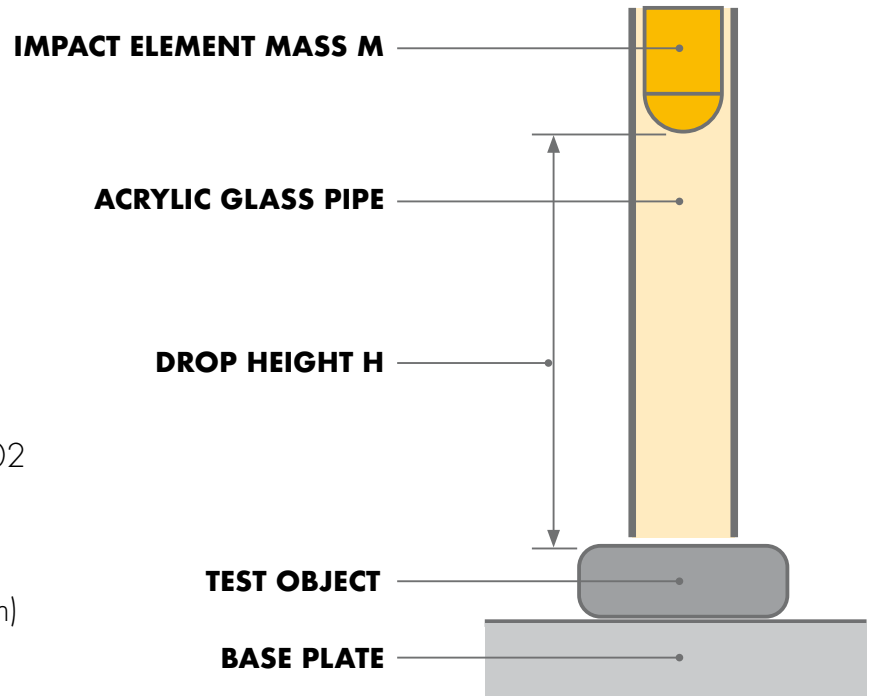
Static Load applied on an area 25 x 10 cm  
Test Load was applied in three positions  
and two orientations TERRAWALK classified as A15 (15kN)  
Failure Load applied centrally: 38.6 kN



# Impact Test according to EN 50102

## Test Result: IK10

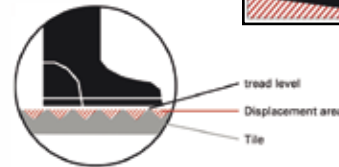
Impact Resistance of the Lid to EN 50102  
Impact Energy: 20 J  
Drop Height: 40 cm  
Test Temperature: 23 +/- 2°C  
Impact Element: Ball Radius R50 (50 mm)  
Number of free fall impacts: 5  
Result: no visible damage, no breakage



# Slip Resistance and Volume Displacement of TERRAWALK Lid and Internal Outward Loading Test

Internal outward loading of the Lid  
Test Stamp placed and fixed  
below the lid:  $\varnothing$  260 mm  
Test temperature:  $23 \pm 2$  °C  
Outward Loading: 3000 N

Slip Resistance Testing to DIN 51130  
Test load of 3 kN applied over an  
area of  $\varnothing$  260 mm on an oily surface  
Test temperature  $23 \pm 2$  °C  
Slip Angle  $10^\circ - 19^\circ$   
Slip Resistance Rating: R10



Displacement space  
measured as  
V10 ( $10 \text{ cm}^3/\text{dm}^2$ )



# Fire Test according to EN 13501-1

## Test Result: C-S2, d0

Fire Test with Red Hot Poker  
at about 700°C placed on the Lid.  
Result: Damaged Surface due to the heat,  
self extinguishing, no breaking,  
does not burn through the Lid









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