



**CASTIONI**  
KABELFÜHRUNGSSYSTEME



TERRASYSTEM+TERRAWALK – GROUND-MOUNTED CABLE TROUGHING

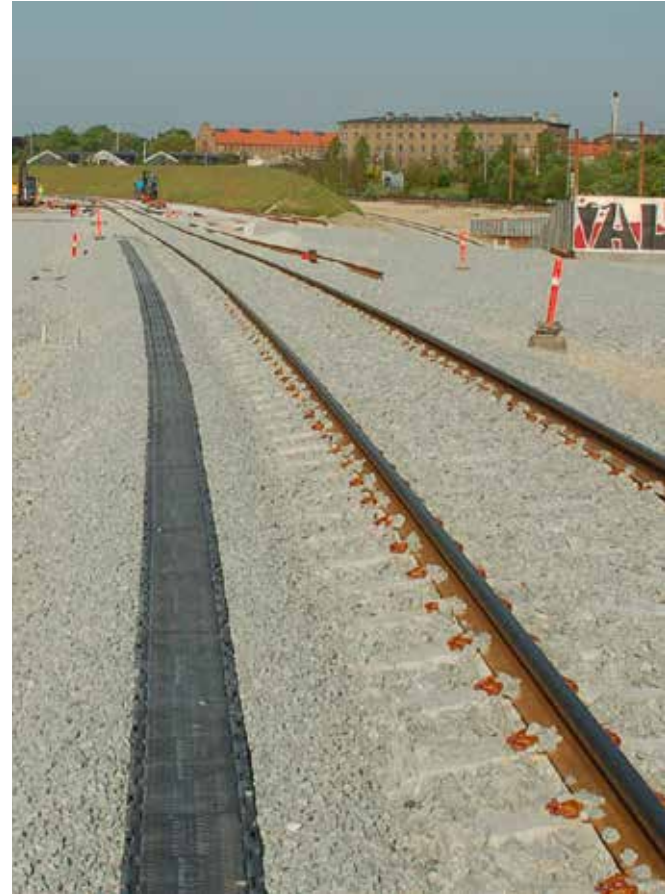


# TERRASYSTEM – GROUND-MOUNTED CABLE TROUGHING









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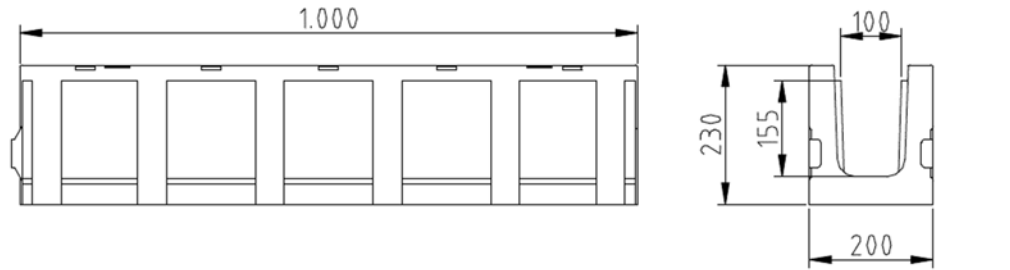
Fast and efficient cable laying  
in halogen-free PP cable troughs

TERRASYSTEM Size 1

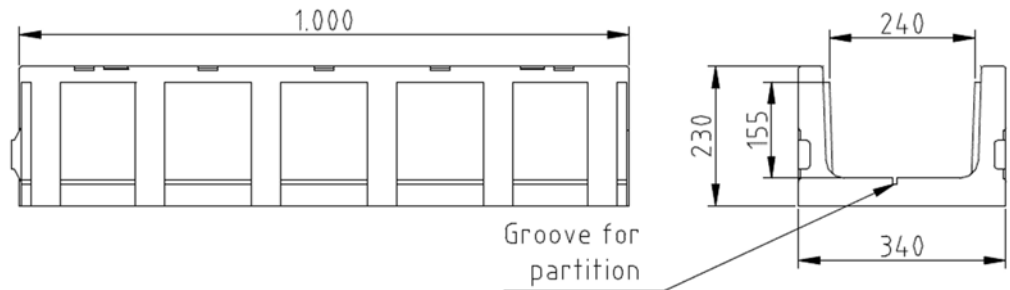
Internal Cross-sectional  
Capacity

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

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



TERRASYSTEM Size 2

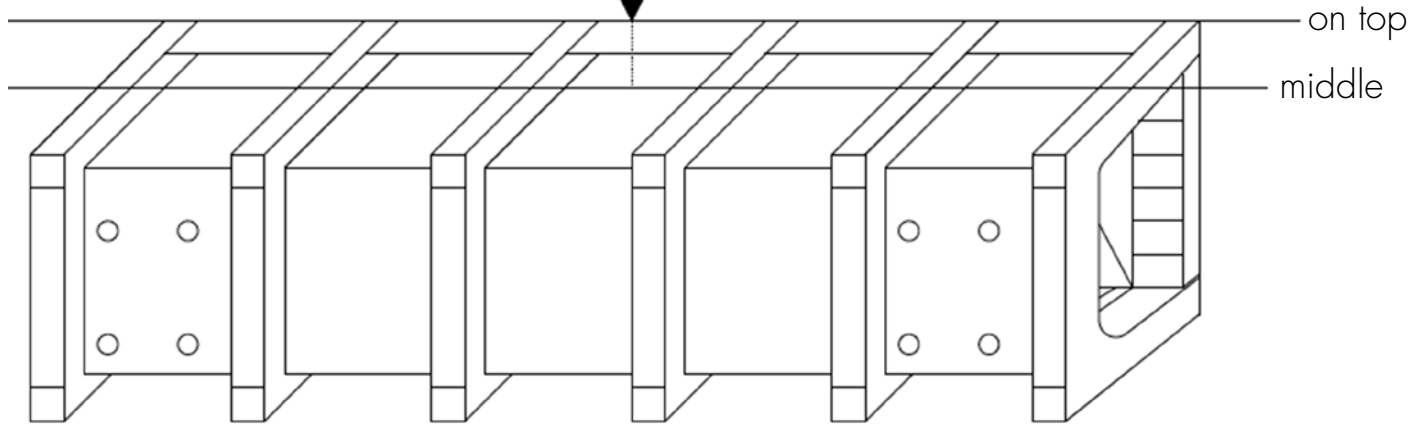


# Side load plastic cable trough (without rupture)

**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 2

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

### Plastic trough Size 2

- Weight approx. 8.6 kg/metre
- Laying rate approx. 1500 m/day
- Manually installed by a small team
- Rapid project execution
- Easy navigation of by-passes and curves with markings on troughs
- Its light weight 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 2

- Weight approx. 160 kg/m
- Loading capacity approx. 150 Pcs. (Truck)
- Heavy lifting gear for unloading
- Expensive storage

### Plastic trough Size 2

- 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 2

very work-intensive and expensive

### Plastic trough Size 2

possible, 100% recycling

## Uninstalling or reuse

### Concrete trough Size 2

not possible

### Plastic trough Size 2

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

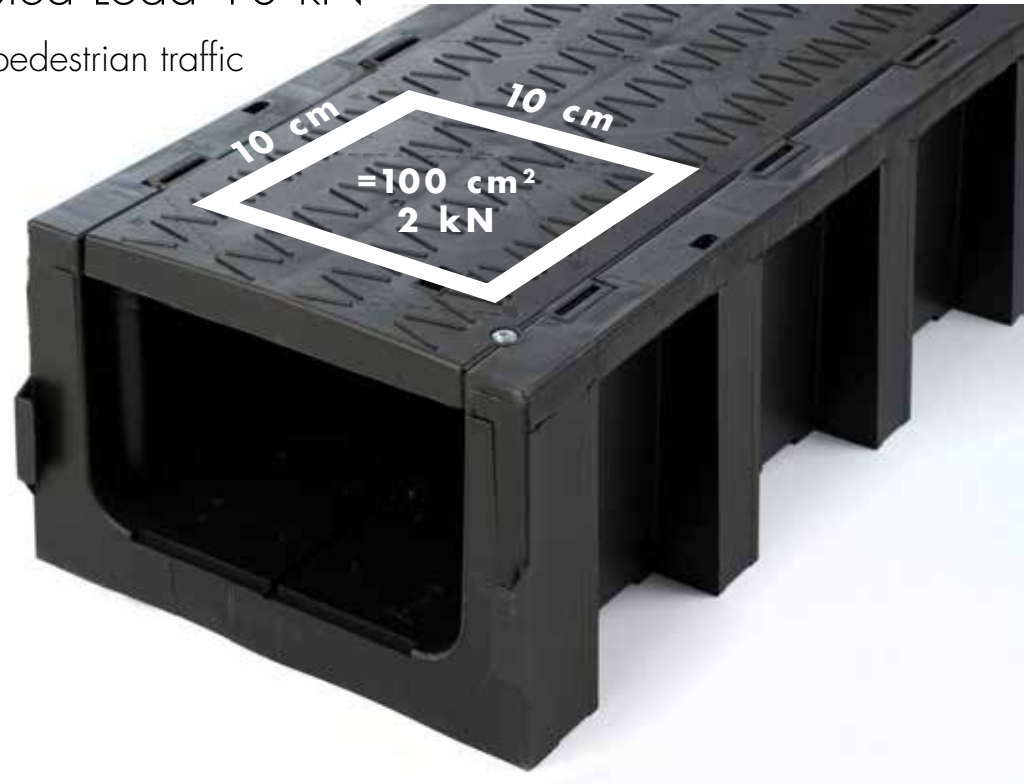




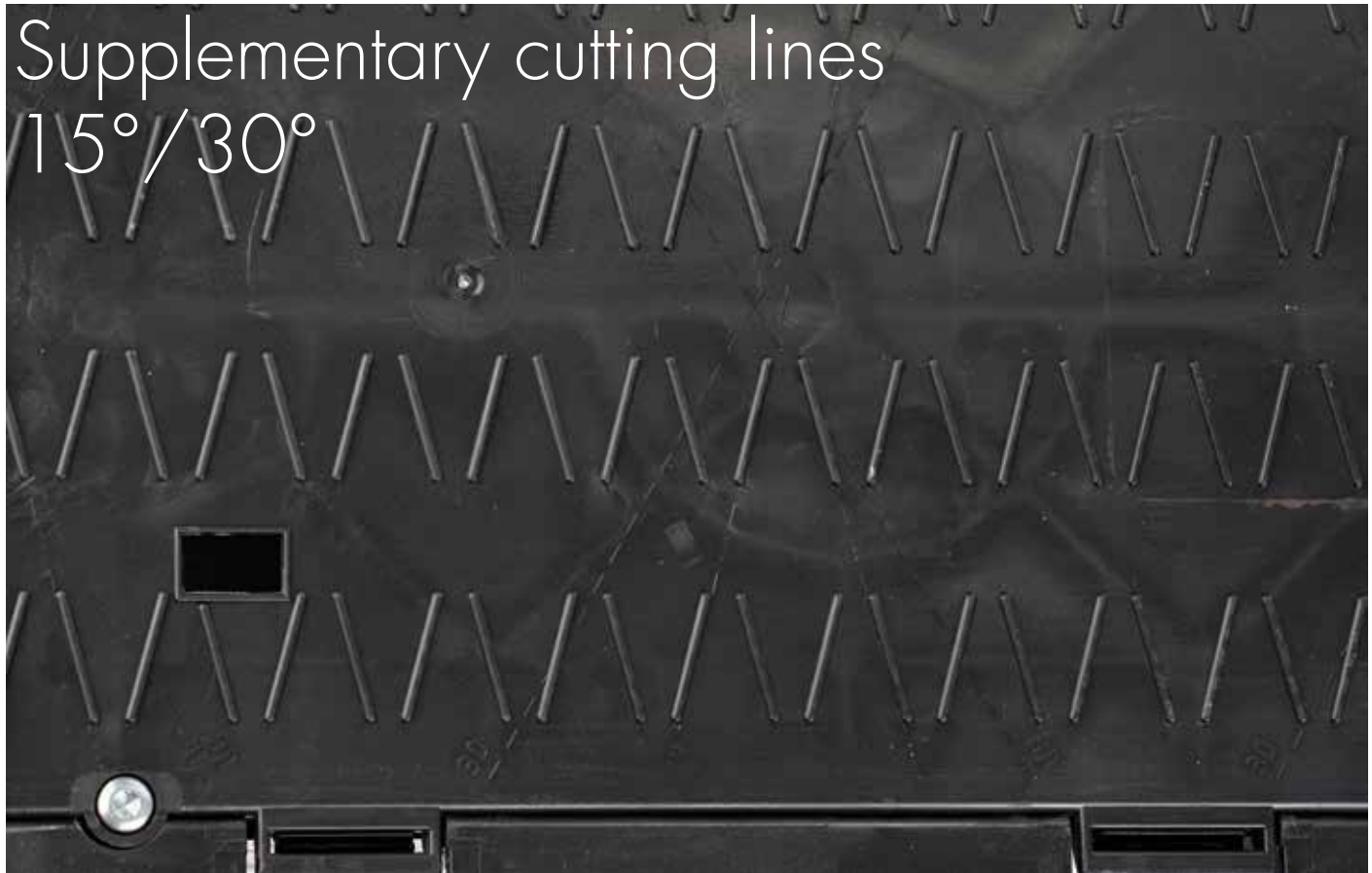
Point Load  $10 \times 10 \text{ cm} = 100 \text{ cm}^2$  2 kN

Uniformly Distributed Load 10 kN

Suitable for occasional pedestrian traffic



Supplementary cutting lines  
15°/30°



# Trough to trough connection



# Cable feed knock-outs



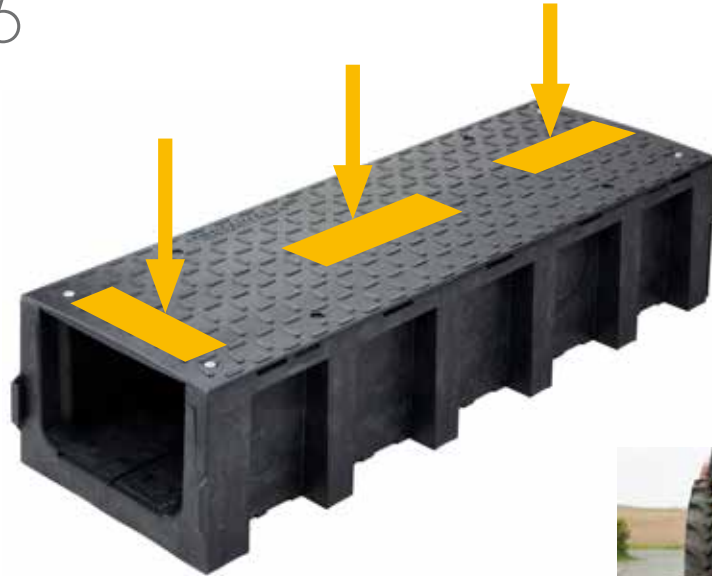
# TERRAWALK – GROUND-MOUNTED CABLE TROUGHING

Press moulded structural SMC trough lid



# Loading Test to EN 124

## Test Result: A15



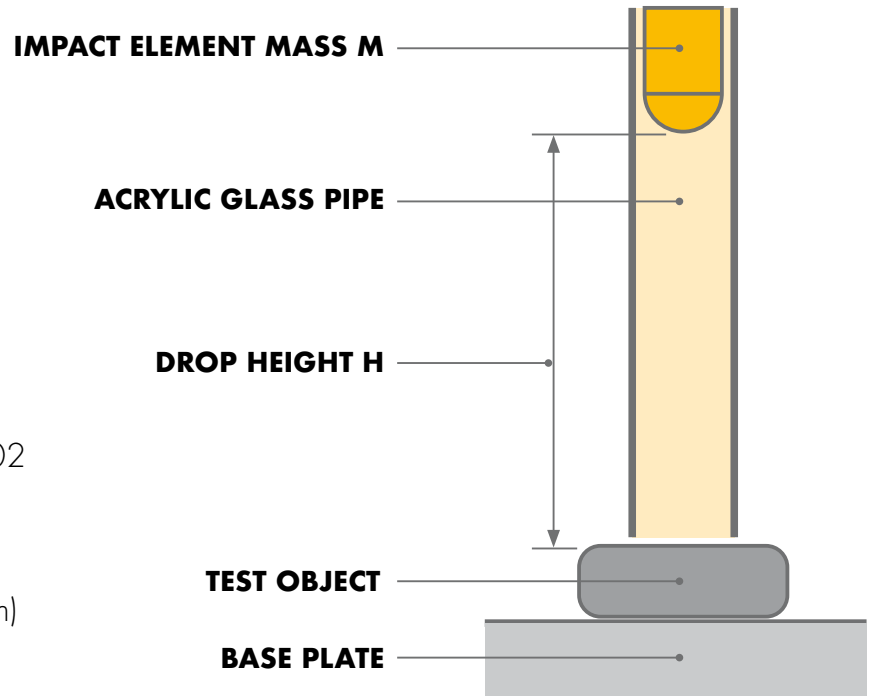
Static Load applied on an area 25 x 10 cm  
Test load was applied in three positions and two orientations  
TERRAWALK classified as A15 (15kN)  
Failure Load applied centrally: 38.6 kN



# Impact Test according to EN 50102

## Test Result: IK10

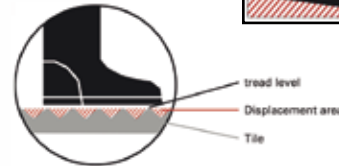
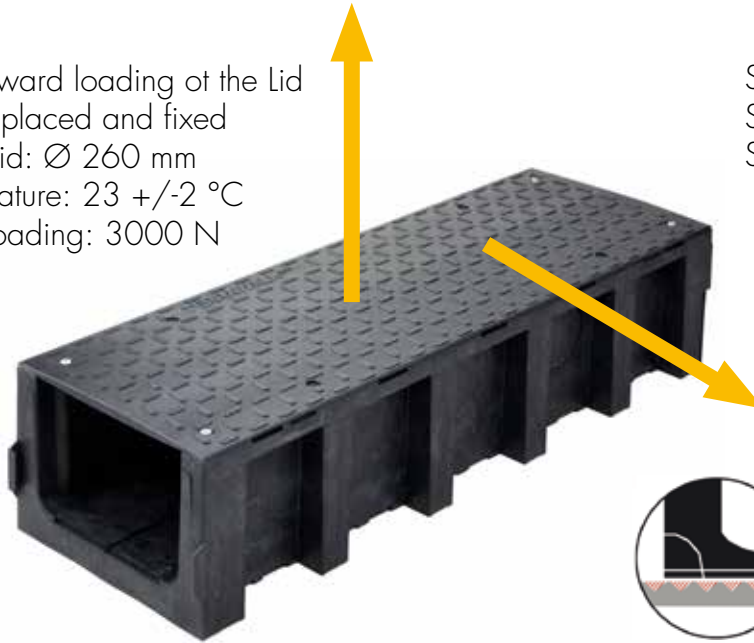
Impact Resistance of the Lid to EN 50102  
Impact Energy: 20 J  
Drop Height: 40 cm  
Test Temperature: 23 +/- 2°C  
Impact Element: Ball Radius R50 (50 mm)  
Number of free fall impacts: 5  
Result: no visible damage, no breakage



# 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  
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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