



# ALUTREND®

**TECHNICAL DESCRIPTION  
AND INSTALLATION INFO**  
*FOR ALUTREND MAXI AND  
MINI MAT SYSTEMS*

## Technical information about the ALUTREND mat system

### Description

Multifunctional mat system which combines the anti-slip ribbed rubber and brush surfaces with absorbent textiles. The open structure, embedded in aluminum, is tied with steel wires so that the mat system can be rolled up and dirt can be removed easily.

### Usability

Can be used both indoors and outdoors.

Recommended for frequented entrances where more than 100 people pass every hour.

### Warranty

5 years warranty for general use.

### Installation

It is recommended to install the mat system with aluminum mounting frames wrapped onto the outer layer. By laying the mat system on the flooring, it must be equipped with ramps in terms to preventing accidents.

### Profile properties

Profile type: aluminum alloy (AlMgSi 0,5)

Aluminum alloy hardness: F25

Full thickness: 23-26 mm (maxi); 20-22,5 mm (mini)

Aluminum profile width: 31 mm (maxi); 30 mm (mini)

Aluminum profile height: 18 mm (maxi); 13 mm (mini)

Aluminum profile wall thickness: 1,65 mm (maxi); 1,2 mm (mini)

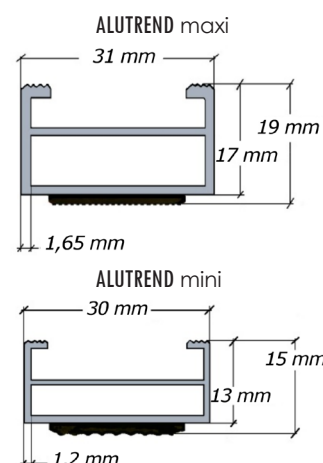
Sound-damping thickness: 2 mm

Permissible axle pressure, load bearing capacity: 1017 Kg

Tensile strength: 217 N/m

Thermal expansion coefficient: 0,0238 mm/m/C

Total weight: 16,5 – 19 Kg/m<sup>2</sup>

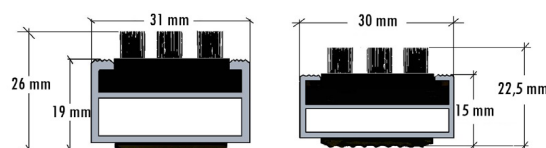


### Characteristics of the (grinding) brush tread

Material: 6.6 nylon, UV resistant

Fiber density: 110 fibers/knot

Fiber height: 5 mm



### Characteristics of the (drying) textile tread

Material: 100% polyamide

Thickness: 9 mm

Width: 22 mm

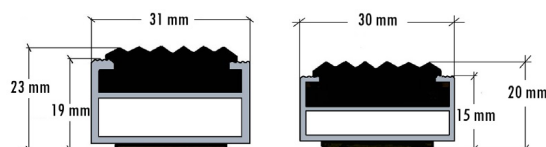


### Characteristics of the (slip resistant) rubber tread

Material: flexible vinyl

Thickness: 9 mm

Width: 22 mm



### Tests

Fire resistance: pr EN ISO 11925-2 ClassB

Smoke emission: PeEN 13501-1 (2000) S1

Resistance to light: ISO 105 B02 Class 6-7



## Construction support for the ALUTREND mat system

### Accessories

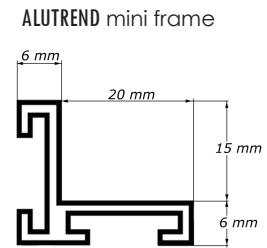
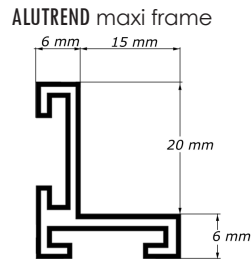
Due to the height of the aluminum profiles, the installation is being realized with mounting frames in any case, onto the die of required height. If this is not feasible, or the mat's placed only for short-term uses, it's possible to avoid the risk of tripping by mounting ramps onto the sides of the mat.

### Frames

The mat systems can be installed in completely even dies onto aluminum mounting frames. The wall thickness of the mounting frame is 6 mm, which requires precise levelling after building out the die, in order to form a completely balanced receiving surface.

Depth of the die:

- Maxi - 26 mm
- Mini - 21 mm
- Levelling - 6 mm



### Installation options with frame

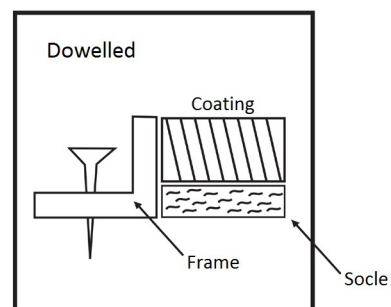
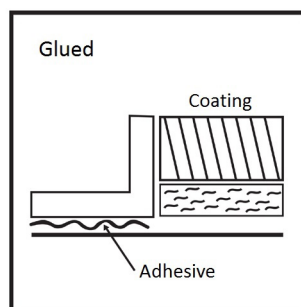
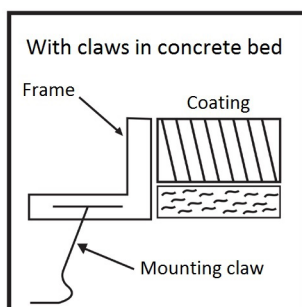
By using mounting frames, the mat system cannot slip and the tread does not bend. This is important to form a completely flat reception surface with a well-fixed frame. When planning the aluprofile mat system and the frame, 3 mm have to be left for dilatation.

*Recommended ground coating: Mapeprim SP, Eporip, Schönox KH or SG.*

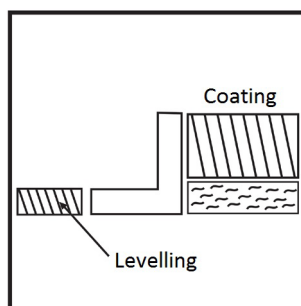
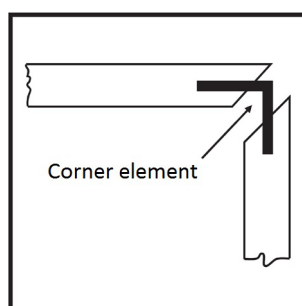
*Recommended surface evener: Mapei Ultraplan series, Planolit 315, Schönox BM or FPL*

The frame is being fixed

- with claws mounted into the concrete bed
- glued onto the concrete bed (with Soudal adhesive or Würth mounting adhesive)
- dowelled, with screw



Extensions can be used for longitudinal expansion of the frame; also corner elements are available to join edges together. The various elements of the frame must be assembled into the die before insertion. Accessories for fixing with claws and dowels are not included.

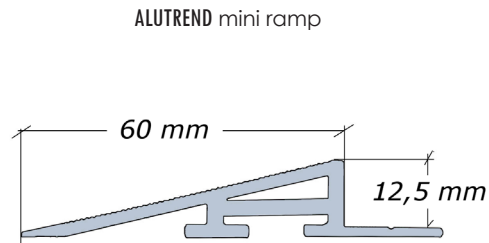
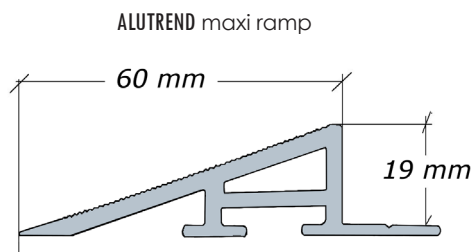


In order to achieve a completely even receiving surface, levelling is required at the height of the frame's lower area.

## Construction support for the ALUTREND mat system

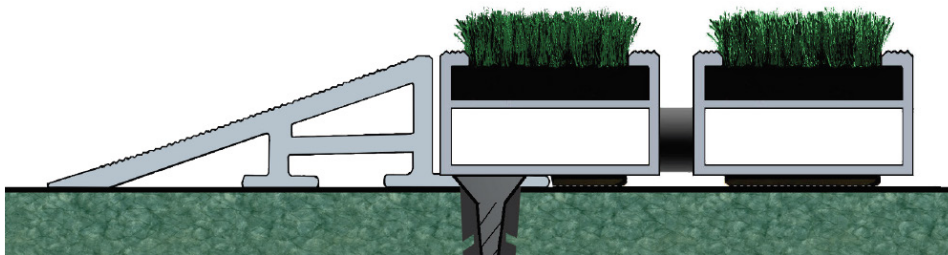
### Ramps

By using the mat system only as a temporary solution, or there's no opportunity to forming dies, it is highly recommended to attach ramps onto the mat to avoid tripping accidents. The mat equipped with ramps can be installed on flat surfaces in front of doors that open laterally or to the other direction as the mat's been laid.



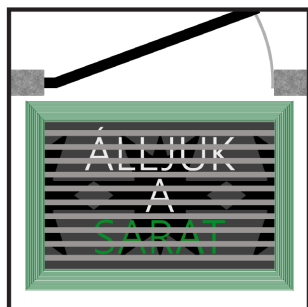
### Installation options with ramps

Ramps can be solidly fixed by gluing or doweling. Ramps can be mounted on all sides, but by pushing the mat to the door sill, it's enough to place ramps only on three sides. If there's no cross-traffic, one ramp fixed on the front is sufficient.

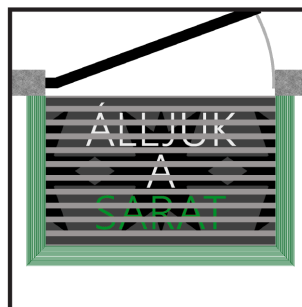


If the maxi-profile mat serves as a short-term solution, it's possible to provide ramps at the front and rear so that the mat remains mobile.

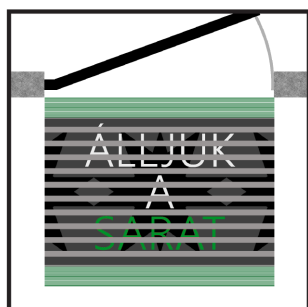
Possibilities for ramp mounting:



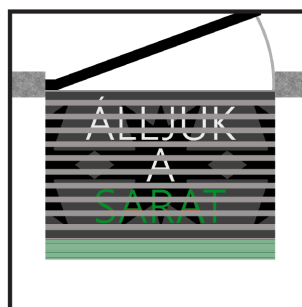
Ramps on 4 sides



Ramps on 3 sides,  
pushed to door sill



Ramps on 2 sides



Ramps on 1 side,  
pushed to door sill



## Planning support for the ALUTREND mat system

### **Elements of the mat system**

The sense of the mat system results by removing and collecting dirt most effectively when being divided into zones equally. In many cases, the division into zones succeeds according to zone approach, such as a long mat with different treads provides practically the tasks of the different zones. Thus, it may happen that the mat exceeds the optimum wearable length. In this case, the walking direction of the mat system is split to elements. If the mat is too wide, which also makes cleaning more difficult, the mat can still be rolled up and the mobility can be kept. The elements are almost invisibly adapted with a T-profile. Split mat systems can only be installed onto dies.

In best case, the elements do not exceed weights of 40 Kg (mini) and 50 Kg (maxi). The weights of a 1 m<sup>2</sup> mat is 12-18 Kg (mini) and 14-20 Kg (maxi) average depending on cleaning tread, which means the elements of the system have a scale of 2-3 m<sup>2</sup> approximately.

Maximum widths and lengths (physical factors)

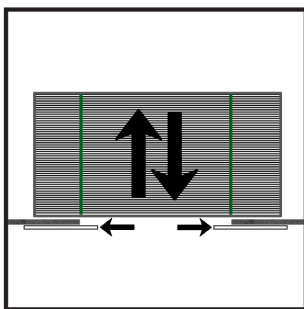
- Width: 2,5-3 m (maxi) and 2-2,5 m (mini)
- Length (walking direction): 2 m (maxi and mini)

The maximum values above are strongly dependent on the execution possibilities and do not mean that 3x2 m is the maximum size. The 6 m<sup>2</sup> mats are made of two-three 2x3 m or 3x2 m elements according to the possibilities.

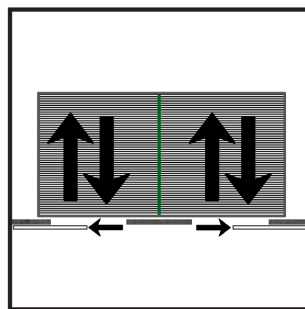
### **Segmentation of the mat system elements**

When using a larger mat, environment, sizes and traffic directions of the entry zones must be considered while planning. Important: in the typical traffic direction (otherwise: walking direction) any structuring in the middle must be avoided. Transverse adaptations do not affect the installation, but clearly simplify maintenance.

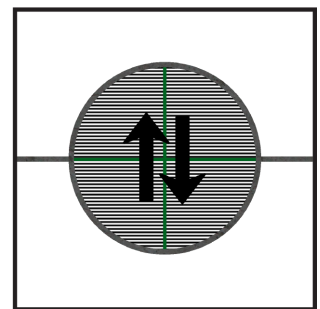
During the planning phase, the mats can be divided into elements these ways:



If the mat system leaps out from the width of the entrance, the mat can be split where the traffic is less.



By accommodating the mat system in multiple door entrances, the mat can be divided between the two entrance doors.

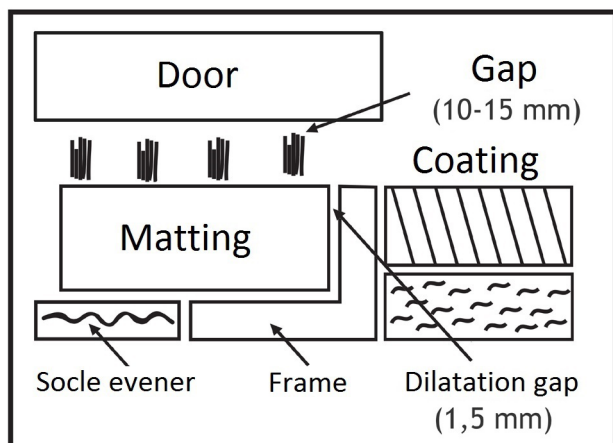


In the case of rotary doors, the mat can be installed into 4 elements divided.

## Planning support for the ALUTREND mat system

### Sizing

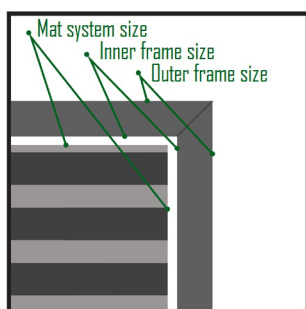
The exact size of the mat system depends strongly on traffic size, environmental characteristics, shape of the die and the type of the entrance doors. Two aspects must be respected in each case. Because of dilatations caused by temperature fluctuation, 1,5 mm must be left on each side during planning. The other important aspect is to consider the door opening over the mat. The treads protrude 3-6 mm from the aluminum profiles, so leaving a gap of 10-15 mm between the tread and the bottom of the door is recommended, depending on the flexibility of the brush or rubber surface.



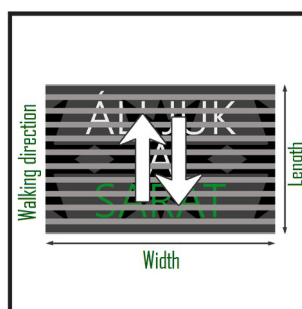
The accurate dimensioning and execution is essential in any case, since the finished mat system can't be newly parameterized afterwards. The mismeasured and thus incorrectly made mat system carries additional costs and delays, which are always charged to the client. Furthermore, unevenness (of more than  $\pm 1$  mm deviation) on the receiving surface will result in the loss of warranty.

### Basic concepts for accurate sizing

The basic requirement for accurate sizing is the precise measuring in the right places. The dimensions given for manufacturing can be changed afterwards only in very exceptional cases. The client is always responsible for incorrect information and the resulting delays.



During the planning and installation into the finished die, internal dimensions of the frame can be critical factors since the mat system is made based on these data.

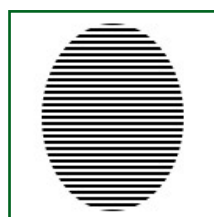
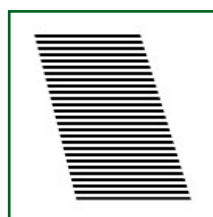
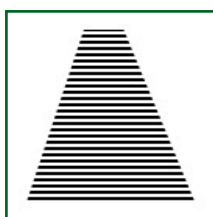
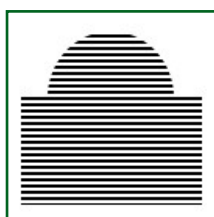


The length of the mat systems is based on the precise sizing of the rubber bolts, which requires precise measurements.

### Formable shapes

The mat systems can be planned in virtually any form.

In the production phase the exceptionally shaped mat systems are tailor-made in several elements; on the one hand due to the shapeability of the molds, on the other hand to prevent potential damage.



## Cleaning, maintenance and storage

### Cleaning

The main task of the mat systems is to remove soiling from the shoe soles and to store it inside themselves. The collected solid dirt must be removed daily from the mat system just as from any other type of flooring.

This can happen by:

- Sweeping (daily, several times)
- Hoovering (daily)
- Wet vacuum cleaning (weekly)
- Carpet cleaner with dry rotary brush (weekly)
- Carpet cleaner with wet rotary brush (weekly)

The absorbent textile surfaces of the **ALUTREND** mat systems evaporate the accumulated liquids by themselves - thanks to the brushing and stabilizing fibers - this way no special drying phases are being required.



By sweeping, temporary soiling can be removed quickly, so they pass between the rails in the die.



Dirt can be removed from the treads and between the rails by hoovering before they would be cemented into the system.

### Maintenance and storage

In addition to regular maintenance, it's important to maintain the mats system monthly or quarterly. In this case, the mat system must be taken out of the die, washed thoroughly with high pressure water (including soap cleaner), and the die must also be cleaned out. At least two persons are required for maintenance and moving. The mats can be removed from the die by rolling them up and can be transported in a rolled-up position. It's forbidden to move the mats with a forklift, only to move by hand! The rolled-up mats can be stored standing and secured.



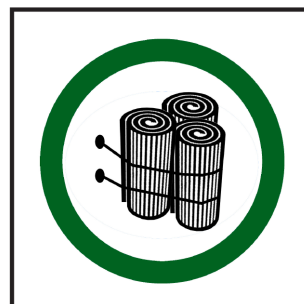
The mats can be serviced by hand by 2 persons in any case.



Dirt can be washed with high-pressure water from the deeper layers and between the rails.



It is forbidden to move, carry or carry out any type of maintenance of the mats by forklifts.



The mats can only be stored in a standing position. In order to prevent accidents, they have to be secured.



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