



# KOHLHAUER® Grid-Insulation-Systems (GIS) – QUALITY OF LIFE

## KOHLHAUER ALUFERA® – SIMPLE / PROVEN / ECONOMICAL

Austria · Bosnia & Herzegovina · Bulgaria · China · Czech Republic · France · Germany · Greece · Hong Kong · Italy · Korea · Latvia · Netherlands · Poland · Romania · Serbia · Spain · Sweden · Switzerland · Turkey · United Kingdom

### MULTIFARIOUS

Optimized construction  
Large-sized formats  
Economical design





## KOHLHAUER **ALUFERA**<sup>®</sup> - UTMOST FUNCTIONALITY FOR ECONOMICAL NOISE BARRIER

After the successful introduction of the patented plantable system KOHLHAUER PLANTA<sup>®</sup>, KOHLHAUER<sup>®</sup> is presenting the new all-round Grid-Insulation-System (GIS) **KOHLHAUER ALUFERA**<sup>®</sup>.

Based on the proven design of our PLANTA system, this element had been specially developed for the needs of the new trans-european future markets, without having to renounce the proven construction principle. The result is a new and attractive large-sized noise barrier element, with the well-known and highly efficient acoustical properties and the easy to assemble, patented technology.

## APPLICATION

KOHLHAUER **ALUFERA**<sup>®</sup> noise barrier systems perfectly combine an appealing finish with sustainable construction and high technical requirements. All KOHLHAUER<sup>®</sup> Grid-Insulation-Systems (GIS) have been tested by renowned institutes for noise insulation, sound absorptivity, wind load, frost and road salt resistance, durability etc. and so KOHLHAUER **ALUFERA**<sup>®</sup> as well.

## BENEFITS

- Innovative aluminium sectional frame for increased stability
- Solid tongue and groove interlock for easy stacking of multiple elements
- More solid vertical bars for even higher noise barriers (EN 1794-1, App. A)
- Ventilation and drain ducts for constant noise barrier performance and water drainage
- Innovative click-fastening system for various post profiles (patent pending) reduces the assembly time effort at the construction site
- Modular standard components (4.960 x 1.000 mm, 4.960 x 1.500 mm and 3.960 x 1.000 mm, 3.960 x 1.500 mm) for a cost efficient realisation of large-scale projects
- Various height compensation modules (stackable) for easy adaptation to different landscapes
- Extensive colour range for all system components allows an individual design
- CE-certified quality



## PRODUCT SPECIFICATIONS

- Excellent sound-insulating and highly absorptive performance. Classified in B3 and A3 according to ZTV-Lsw on both sides (optionally available in A4)
- Solid element structure for a consistent natural appearance
- All used materials are completely recyclable
- Extremely high aging and corrosion resistance
- High UV and colour resistance for all used materials
- Combinable to other KOHLHAUER® noise barrier elements

## TECHNICAL SPECIFICATIONS

- **Noise Insulation:**  
Category B3 according EN 1793-2
- **Sound absorption:**  
Category A3-(A4) according EN 1793-1
- **Weight:** approx. 35 kg/m<sup>2</sup>
- **Windload:** Standard version up to 1,4 kN/m<sup>2</sup> (for additional requirements up to 2,1 kN/m<sup>2</sup>)
- **Load bending** tested according EN 1794-1
- **Fire resistance:** assigned to category A1 according EN/ISO 1716 and 1182
- **Minimum service live:** 30 years
- **Width:** 122 mm
- **Tested on dynamic load** through snow impact

Reasonable modifications, meeting our high quality requirements and supporting the further product development are reserved.

## CLASSIFICATION OF THE ACOUSTIC CHARACTERISTICS

According EN ISO 717-1 as well as EN 1793

	Sound insulation	Absorption
ALUFERA	RW (C;Ctr) = 34 (-2;-6) dB; DL <sub>R</sub> 28 dB (Category B3)	DL <sub>a</sub> = 11 dB (Category A3)
ALUFERA-2.6	RW (C;Ctr) = 32 (-1;-5) dB; DL <sub>R</sub> 27 dB (Category B3)	DL <sub>a</sub> = 12 dB (Category A4)



KOHLHAUER® Grid-Insulation-System (GIS) – KOHLHAUER **ALUFERA**® with screen printing

## NOISE BARRIER IS QUALITY OF LIFE

Noise in residential areas is often perceived as annoying. This is where man and noise are in a direct conflict. KOHLHAUER **ALUFERA**® barriers help to ease the situation, supporting the life quality of our environment.

Bypass roads, highways and motorways are a permanent source of noise. Protecting the residents from annoying noise puts some special requirements on noise barriers.

Not only inner city areas require flexible noise barrier solutions, that can be placed easily between existing objects. Whenever there is a limited space availability, suitable noise barrier solutions that integrate seamlessly with the environment are required.

The implementation with structural calculated post foundation system provides permanent security.

More and more engineers, architects and authorities rely on KOHLHAUER® Grid-Insulation-Systems (GIS) and its variations for its high sustainability and effectivity.



KOHLHAUER **ALUFERA**® (GIS)

Two coloured element due to different protection net



KOHLHAUER **ALUFERA**® (GIS)

Printed 'gabions optics'

# SYSTEM LAYOUT

## BASIC ELEMENTS

- The basic elements are available in sizes of 3.960 x 1.000 / 3.960 x 1.500 / 4.960 x 1.000 / 4.960 x 1.500 mm
- Elements can be displaced using the reusable eyebolts and rivet nuts integrated in the upper chord
- Standard equipment: innovative aluminium concept frame, galvanised (80 µ) load-transferring steel grid, protection net (grey, mesh sizes: 2 x 2 mm), KOHLHAUER® insulation (160 kg/m³), classes B3/A3, incl. 2 fixing springs
- The elements are fixed in the post using patent-pending fixing springs

## ADVANCED ELEMENTS

- **Height compensation 100**, to compensate for various ground shapes, as base elements for ground integration or as a design variant between the elements
- **Height compensation 25**, for use between the elements
- **Cover panel**, for a proper finish of stacked elements with innovative click technology
- **Adjustment** to post HEA-U 160 and larger available
- **Protection nets** disponsible in various colors for an enhanced visual appearance of the noise barrier
- **Screen printing** for individual scope of design
- **Acoustic insulation foils** for meeting special sound absorption (A4) requirements
- **Selected RAL colours**, for a high quality visual design of the noise barrier (see colour chart)

## COLOUR CHART

### Red Tones



RAL 3001  
Signal Red

RAL 3003  
Ruby Red

### Blue Tone



RAL 5017  
Traffic Blue

### Green Tones



RAL 6005  
Moss Green

RAL 6011  
Reseda Green

### Metallic effect



RAL 9007  
Grey Aluminium

RAL 9006  
White Aluminium

### White



RAL 9010  
Pure White

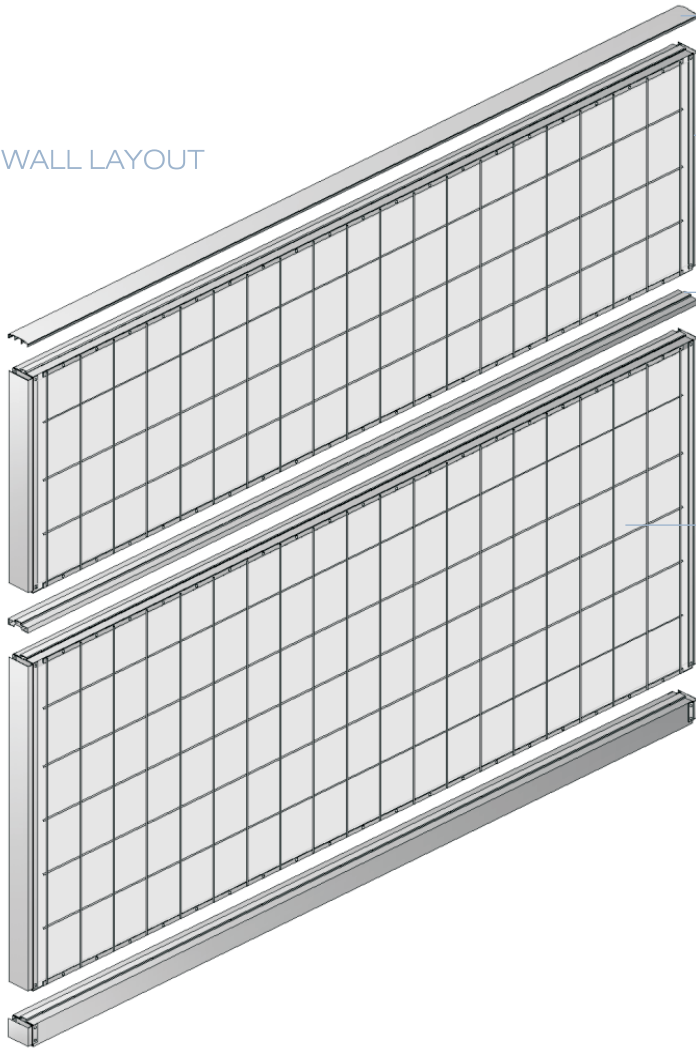
### Grey Tones



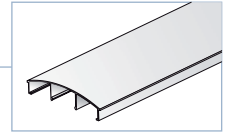
RAL 7004  
Signal Grey

RAL 7035  
Light Grey

## WALL LAYOUT

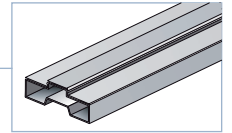


Cover panel



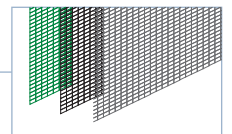
4.960 x 1.000 mm  
3.960 x 1.000 mm

Height compensation 25

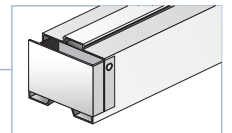


4.960 x 1.500 mm  
3.960 x 1.500 mm

Protection net



Height compensation 100



Ring screws

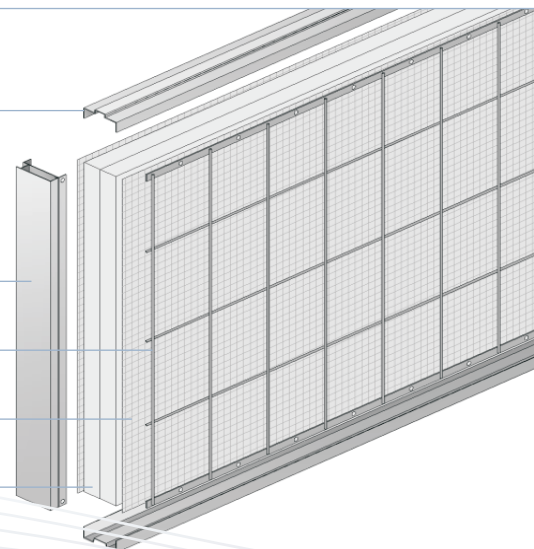


Fixing springs



## WALL LAYOUT (FROM OUTSIDE TO INSIDE)

- Innovative aluminium structure frame with tongue and groove section
- Lateral section for supporting the fixing spring
- Load-transferring, galvanised steel grid
- UV-resistant protection net
- Double-layer, high dense mineral wool, RAL quality certificate





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## MORE KOHLHAUER® PRODUCTS



Transparent, reflecting respectively absorbent noise barrier systems with transparency and glare shield.



The plantable noise barrier - eco-friendly, sustainable and highly functional.



Double benefit: Noise barrier combined with sustainable power generation through solar technology.

