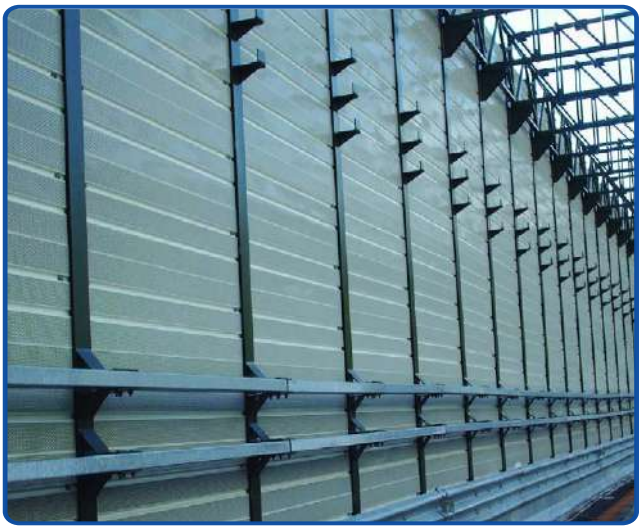
ALPHAfon - HB.S

HIGHWAY STEEL NOISE BARRIER

APPLICATIONS

Highway noise metal barrier **ALPHAfon-HB.S** is a highly efficient Acoustic Reflection (Air-born noise insulation) and sound absorptive solution for noise control in highways or other roads, railways and other mechanical noise sources.



ALPHAfon HB Applications

DESCRIPTION

The highway noise barrier **ALPHAfon-HB.S** is made from a special compount metal sheet (COR-TEN) at the external side and the noise source side.
The top and the bottom side of the barrier are properly formed (projection - cavity) in order to achieve perfect sound sealing but also to improve its bending strength.
Internally it is filled with sound-absorbing material, mineral wool, water repellent, with appropriate density and covered with thin protective glasswool cloth.
The metal noise barrier has great durability against time and ultraviolet radiation. It is water repellent, consists of incombustible materials and it can be easily replaced if needed.
The standard color in both sides is Ral 9002 but both sides can be painted in any Ral Color to match different project requirements.

Standard Version:
Lenght=2960mm , Height=500mm , Thickness=100mm
The thickness of the panel allows for insertion in HE 140 profile posts
(Compatible with HE 160,180,200 profiles posts with plastic side covering adapters)

INSTALLATION

The highway noise barrier **ALPHAfon-HB.S** is installed by sliding the panels in a HE metal profile pillar according to the structural study (the use of specially designed plastic side covers allows the installation of the panel in different sizes of HE profile posts).
The top and bottom sides of the metal barrier need protection with appropriate metal profile coverings.
Building an appropriate concrete base at the bottom of the barrier is highly recommended.

ALPHAfon HB External Side View

CE
ALPHAfon - HB panels are CE marked

TECHNICAL CHARACTERISTICS

Characteristics	Measurement Method	Results
Acoustic Reflection (Airborn Sound Insulation)	Assessment Index (EN 1793-2)	DL_R=25dB Cat.B3
Acoustic Absorption (Sound Absorption)	Assessment Index (EN 1793-1)	DL_a=20dB Cat.A4
Self Weight	Weight(kN/element) (EN 1794-1 appendix B)	dry= 0,202 / wet= 0,785 / reduced wet= 0,222
Maximum Vertical Load	(EN 1794-1 appendix B.3.2)	Horizontal deformation: 10,0mm load of the structural element 4,45kN/m Vertical deformation : 5,49mm
Maximum Normal Load	(EN 1794-1 appendix A)	positive result – design load 2,5 kN/m for L=2960mm panel
Hazard of Falling Debris	(EN 1794-2 appendix B)	CLASS 3
Light Reflection	Average GU measure with angle 20/60/85° (EN 1794-2 appendix E)	Drilled side 83,2 / 148,5 / 42,2 Undrilled side 285,0 / 476,1 / 11,4

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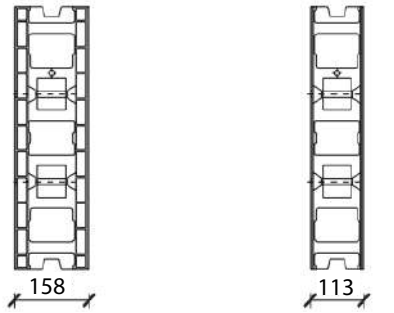
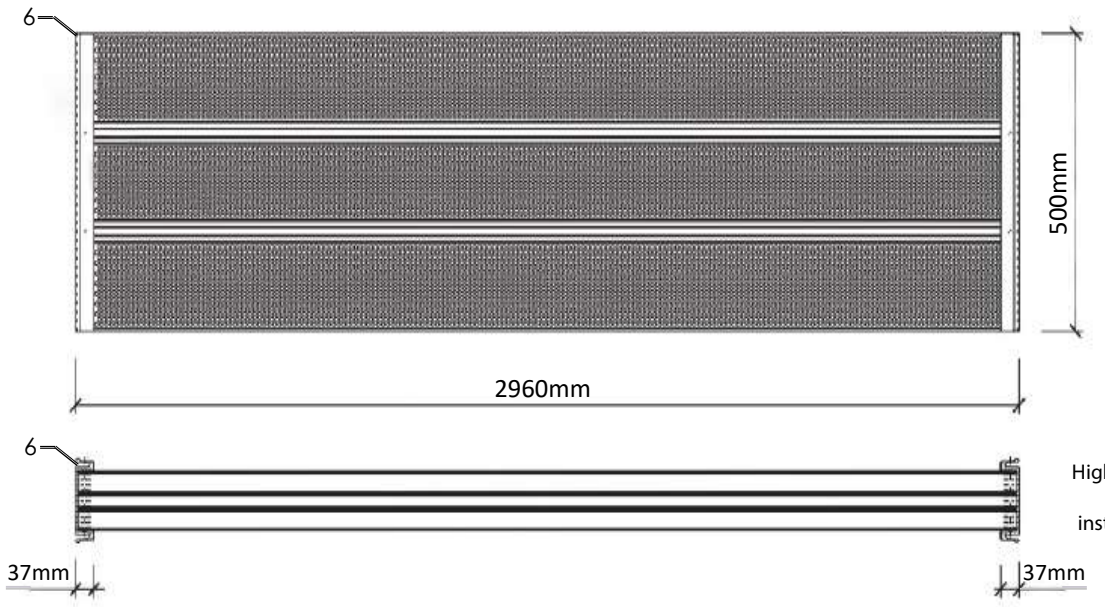
HIGHWAY METAL NOISE BARRIER

Side Covering Adapters

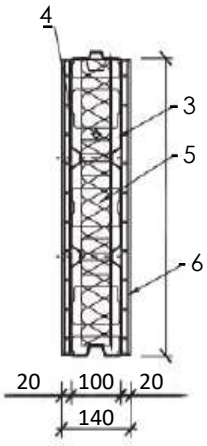


	DIMENSIONS	
1	Base Module (mm)	L=2960mm | H=500mm | s=100mm | The panel can be made with custom L(Length)
2	Type of Insertion	The thickness of the panel allows for installation with pillar profiles HE 140 (compatible with HE 160,180,200 using appropriate plastic side covering adaptors)
	COMPONENTS	
3	Front Element	Front element (absorptive side facing the noise source) Made of COR-TEN steel, thickness of 1.0mm, perforated with hole diameter 7mm and pitch 10mm (45% perforation) Painted with polyester powder, RAL colours available
4	Back Element	Back Element (facing the noise receptor) Made of COR-TEN steel, thickness of 1.0mm, non perforated Painted with polyester powder, RAL colours available
5	Absortive/ Reflective	Mineral Wool Panel, thickness of 60mm with 90kg/m³ minimum density Positioned inside the panel with special housing
6	Side Covering	Prevent direct contact of the panel and the HE profile by using appropriate adapter size Made of plastic Gurantees the hermetic sealing of the noise barrier

Front View



Section A-A



Highway Metal Noise Barrier with side covering plastic adapter for installation with HE 160 pillar profiles

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