

On the bright side of the road



CE

UNIPROMET





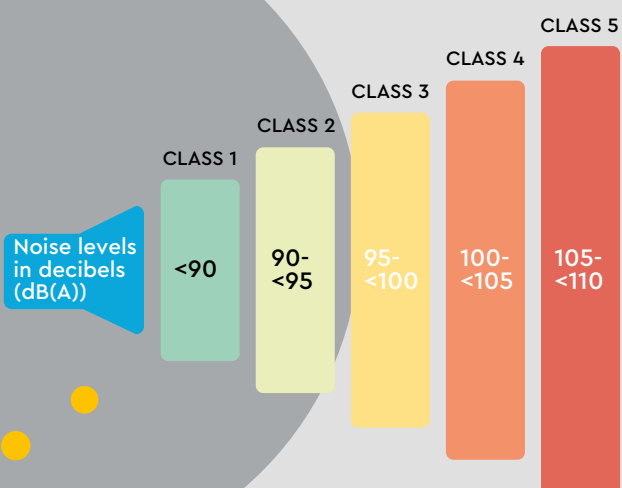
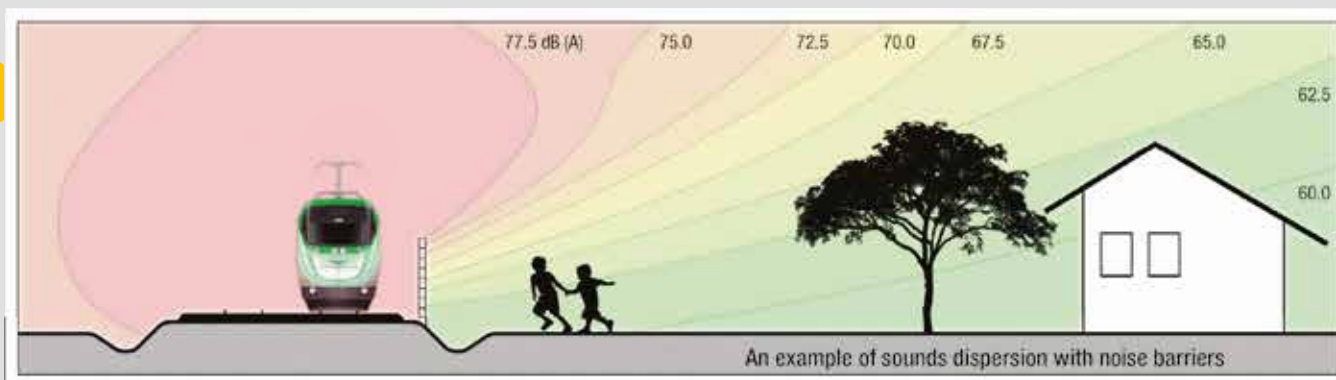
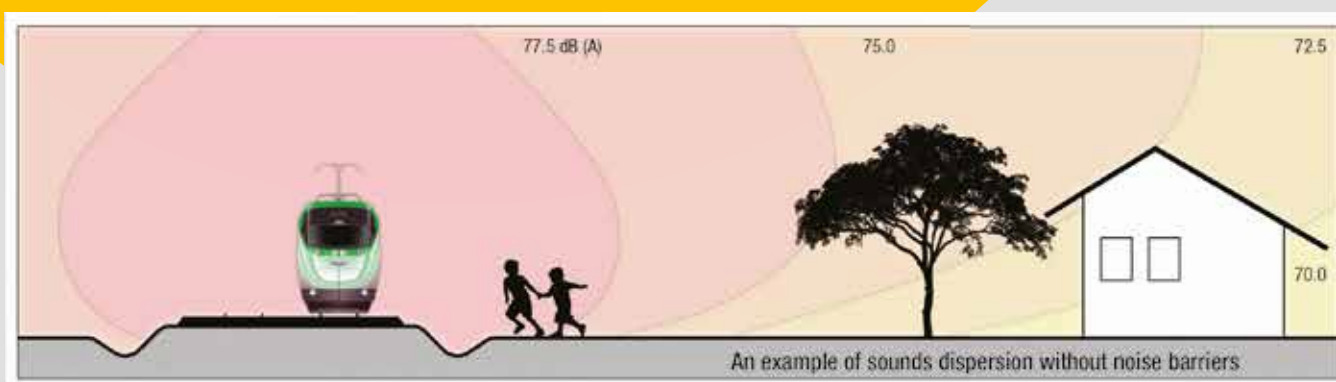
Metal processing is conducted on over **60.000 m²** of working area and **200.000 m²** of land in two facilities. One is positioned in the nearby town, Kraljevo, where various types of steel seam pipes are manufactured and the other one in Čačak, where safety guard rails, aluminum panels for noise protection and other road equipment is being produced (pedestrian fences, portals and vertical signaling poles, etc.)

We have over **660 employees** who are the driving force of the company and the guarantee of quality and further success. Our own R&D center enables continuous enhancement of the existing and the development of new products. Our specialized engineers participate in the development and improvement of safety systems, together with the experts of other European manufacturers. Membership in the "Gütegemeinschaft Stahlschutzplanken eV" association for good quality and "Studiengesellschaft Stahlschutzplanken eV" association for development, better known as **RAL**, and constant quality control performed in modern laboratories such as **TUV** and **BASf** from Germany and **DTC certification body** from Switzerland, enable us the access to all markets that have accepted **EN1317 standards**.

The company has a fleet of over **thirty trucks** for international transport as well as ten mobile teams for the installation of safety guardrails, wire fences and noise protection barriers. Over the years, the company has gained the trust of many partners from the region and around the world. Possession of ISO 9001, CE, GOST and NF certificates enables export of over 55% of production to markets of **30 countries** - from Germany, Switzerland and Italy, through the countries of the Romanian region, Bulgaria and all countries originating from the SFRY, from Russia and Turkey, to Senegal and Libya.

On the bright side of the road

Noise is one of the main causes of degradation of life quality, especially in urban environments where it is constantly present and affects many aspects of everyday life. The purpose of implementation of protective walls against noise is to alleviate the consequences of noise pollution in urban areas and create a positive environment for people's lives. The designer chooses location of the protective walls, the height of the walls and the noise absorption quality, based on the noise calculation model.



Noise barriers placed directly on the roads (road or rail) are the most common and safest way to reduce noise distribution. By applying a sufficient height and adequate length barrier, immediately after the installation, the effect of reducing the noise level at the projected level is achieved. All panels are developed and tested according to standard EN14388. Also, our panels satisfy German norms LSW ZTV 06. On request, UNIPROMET'S panels can be provided with a special layer of anti-graffiti coating that facilitates easier removal of graffiti.

NOISE PROTECTION PANELS

On the highway, vehicles create noise of 80 decibels per average. In residential areas, regulations prescribe noise reduction to below 65 decibels during day and below 55 during night so noise protection panels are a must in these road sections.

Aside from being used on the highways, aluminium noise protection panels are used on railroads, constructions, all urban areas and all other areas where noise reduction is necessary.

Categories of absorptive performance

Category	<i>DL_a</i> dB
A0	Not determined
A1	< 4
A2	4 to 7
A3	8 to 11
A4	11 to 15
A5	> 15



Limit values for outdoor noise indicators

Zone	Space	Limit noise values (dB(A))	
		Day & Evening	Night
1	Rest and recreation areas, hospital zones and convalescent homes, cultural and historical sites, large parks	50	40
2	Tourist areas, camps and school zones	50	45
3	Residential area	55	45
4	Business-residential areas, commercial-residential areas and children's playgrounds	60	50
5	City center, craft, trade, administrative zone with apartments, zone along highways, highways and city roads	65	55
6	Industrial, storage and service areas and transport terminals without residential buildings	At the border of this zone, the noise must not exceed the limit value for the zone	

Categories of Airborne Sound Insulation

Category	DL_R dB
B0	Not determined
B1	$DL_{R\Box} < 15$
B2	15 to 24
B3	25 to 34
B4	> 34

Source: prEN 1793-2 (2011)



ABSORPTION PANELS

Their role is to partially absorb the sound waves and thus reduce noise. They are made of perforated aluminum sheet on the front (absorbent) side and profiled aluminum sheet from the rear (reflective) side, filled with bituminous stripes and stone wool. On the side, these panels are closed with aluminum covers.

TRANSPARENT PANELS

Unlike the standard panel types, these are specific as they do not block the view, however they provide the same protection.

They are made of polycarbonate or acrylic glass in the appropriate aluminum frame.



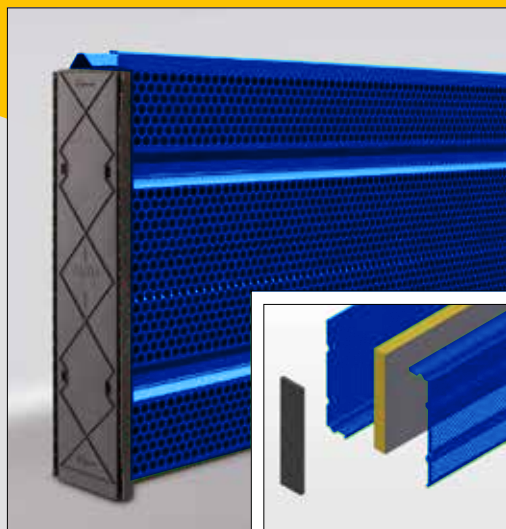


REFLECTIVE

Their role is to reflect part of the sound waves into the atmosphere.

They are made of profiled aluminum sheet on both front and back side , with stone filling wool. On the side, these panels are closed with aluminum covers.





Magnum AL 12 A

Absorbing panel made of aluminium, sheet thickness 1.2 mm

INSULATION

EN 1793-2 : 2013

$DL_R = 25$ dB

EN 1793-2 : 2013

B3

ABSORPTION

EN 1793 -1:2013

$DL_\alpha = 20$ dB

EN 1793 -1:2013

A5

Magnum AL 12 R

Reflecting panel made of aluminium, sheet thickness 1.2 mm

INSULATION

EN 1793-2 : 2013

DL_R (with stone wool) = 28 dB

DL_R (without stone wool) = 25 dB

EN 1793-2 : 2013

B3

B3

Magnum AL 15 A

Absorbing panel made of aluminium, sheet thickness 1.5 mm

INSULATION

EN 1793-2 : 2013

$DL_R = 25$ dB

EN 1793-2 : 2013

B3

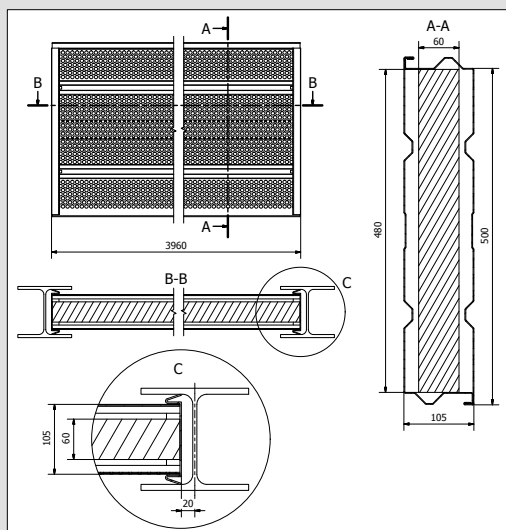
ABSORPTION

EN 1793 -1:2013

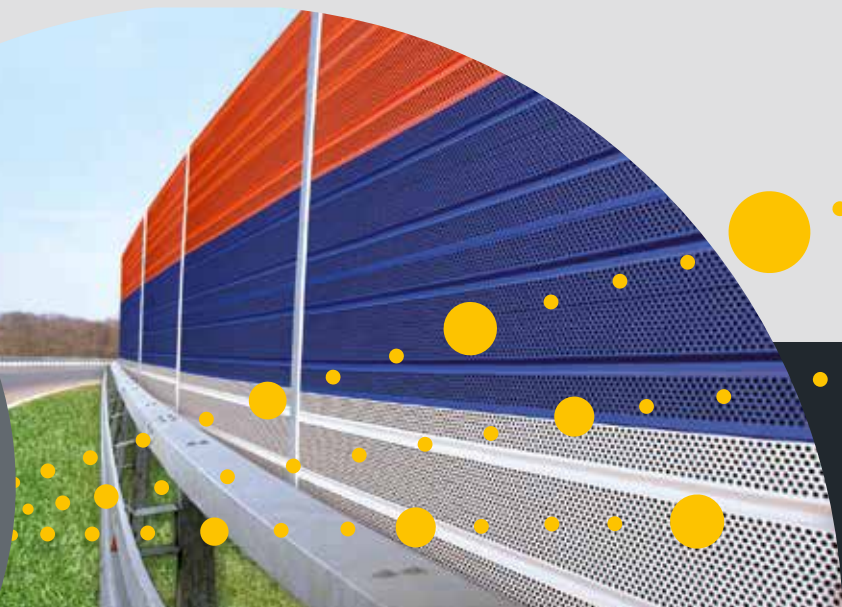
$DL_\alpha = 17$ dB

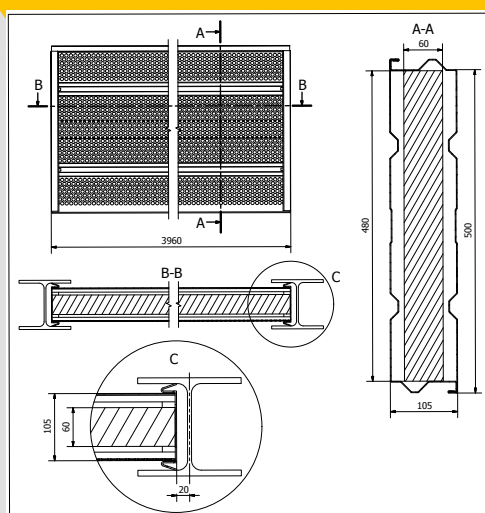
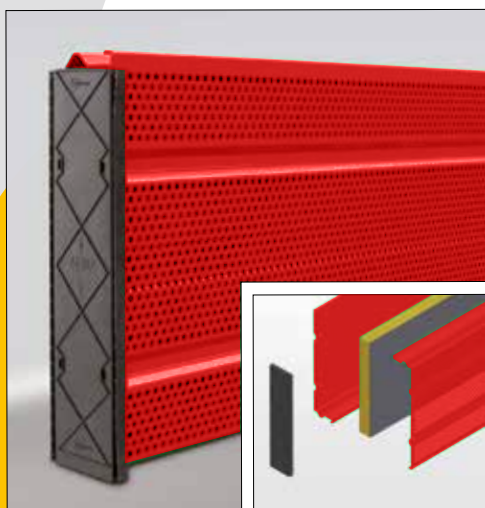
EN 1793 -1:2013

A5



UNIPROMET
MAGNUM





Magnum AC 10 A

Absorbing panel made of galvanized steel, sheet thickness 1 mm

INSULATION

EN 1793-2 : 2013	EN 1793-2 : 2013
$DL_R = 26 \text{ dB}$	B3

ABSORPTION

EN 1793 -1:2013	EN 1793 -1:2013
$DL_\alpha = 17 \text{ dB}$	A5

Magnum AC 10 R

Reflecting panel made of galvanized steel, sheet thickness 1 mm

INSULATION

EN 1793-2 : 2013	EN 1793-2 : 2013
$DL_R \text{ (with stone wool)} = 33 \text{ dB}$	B3
$DL_R \text{ (without stone wool)} = 30 \text{ dB}$	B3

Magnum IX 12 A

Absorbing panel made of stainless steel, sheet thickness 1.2 mm

INSULATION

EN 1793-2 : 2013	EN 1793-2 : 2013
$DL_R = 30 \text{ dB}$	B3

ABSORPTION

EN 1793 -1:2013	EN 1793 -1:2013
$DL_\alpha = 14 \text{ dB}$	A5

Magnum MG 10 A

Absorbing panel made of magnelis, sheet thickness 1 mm

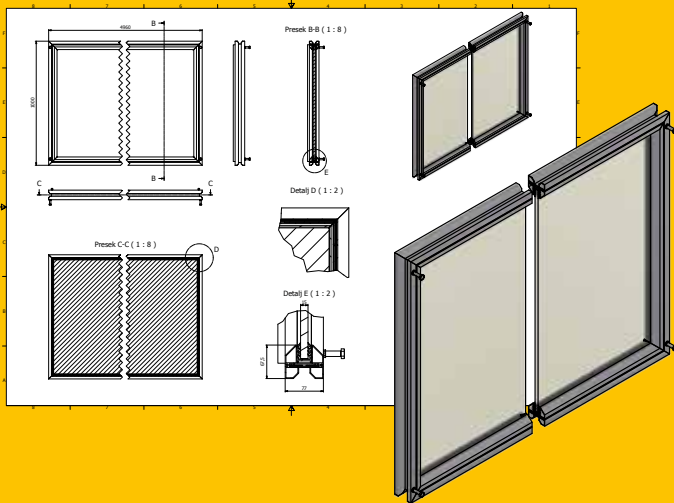
INSULATION

EN 1793-2 : 2013	EN 1793-2 : 2013
$DL_R = 26 \text{ dB}$	B3

ABSORPTION

EN 1793 -1:2013	EN 1793 -1:2013
$DL_\alpha = 20 \text{ dB}$	A5





Transparent PANELS

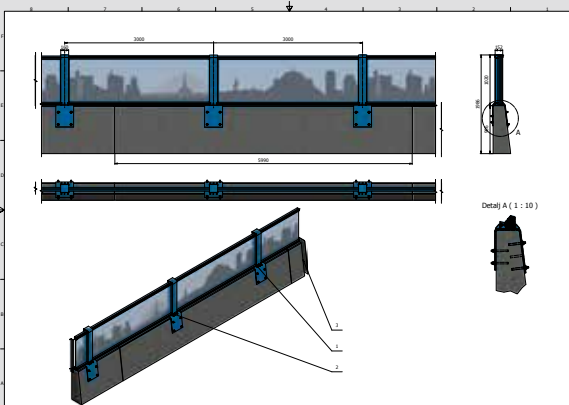
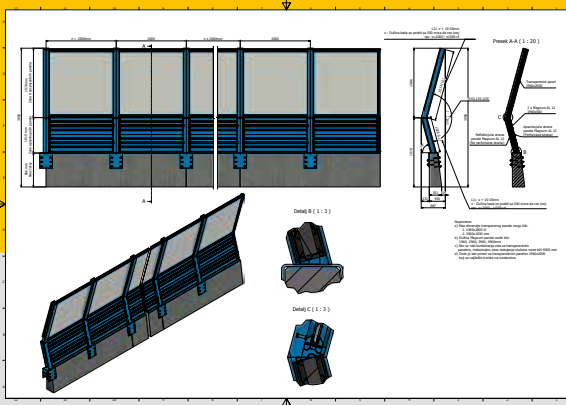
INSULATION

Transparent panels (sheet material)	Thickness	Sound insulation DL_R	Group
Acrylic glass	15 mm 20 mm	27 dB 27 dB	B3 B3

YOUR KEY BENEFITS:

- High stability
- Individual design
- Can be combined with Magnum panels
- Simple to install
- Protect privacy
- Improves quality of living

Using digital printing we apply images, graphic designs directly into the noise control elements.



TRANSPARENT
PANELS





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