

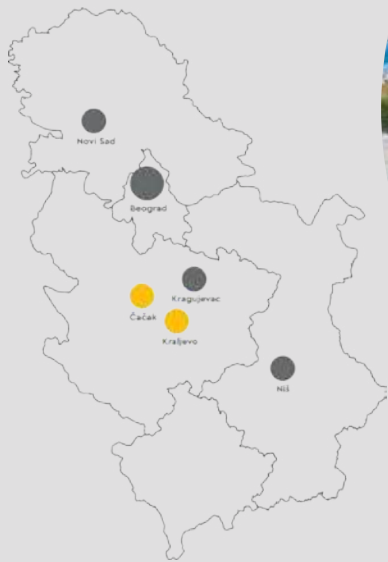


On the bright side of the road

UNIPROMET

ROAD SAFETY CATALOGUE





WHO WE ARE

The company Unipromet was founded in 1989, as a privately owned business. For over three decades now, we have been manufacturing and installing safety guard rails all according to European (EN 1317 standard series) and international standards ASTRA (Switzerland) and NF (French). In this period the company has specialized in the production, delivery and installation of road-fence security systems, noise protection panels, seam pipes and various steel constructions and become a regional leader. Anually, we process over 80.000 t of steel and aluminium and most of the steel elements are galvanized in our own galvanizing plant.

WELCOME TO UNIPROMET



UNIPROMET



Metal processing is conducted on over **60.000 m²** of working area and **220.000 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 **BAST** from Germany and **DTC certification body** from Switzerland, enable us the access to all markets that have accepted **EN 1317 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, 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.

Mission

Our mission is to create products that improve quality and safety of life in our society. Always on the bright side of the road.

Vision

Our vision is to be a synonym for a reliable company that creates and respects values.

Values

- Open communication and mutual trust
- Human welfare
- Reliability
- Integrity
- Persistence
- Innovation

660
employees

20%

Export to **30** countries

with high education

48%

employees younger than

40

years

HISTORY

1989.

Unipromet was founded as a trading company.

1996.

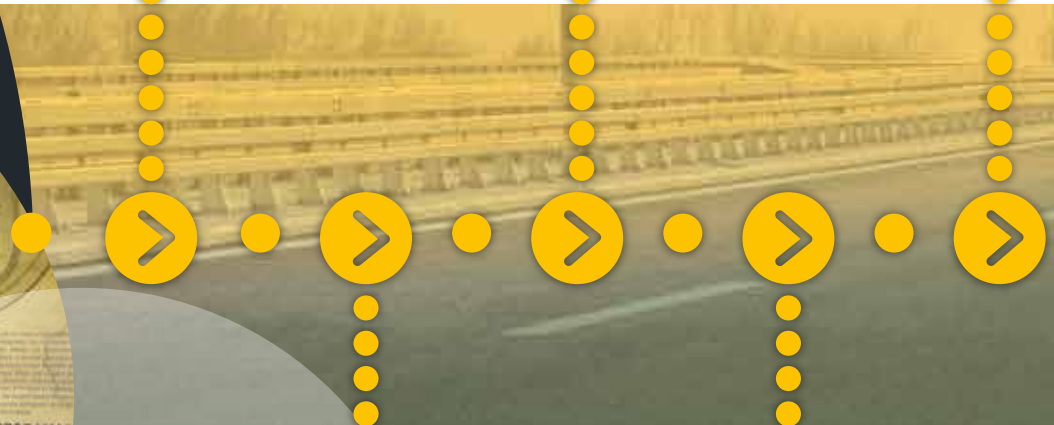
Line for profiling, longitudinal cutting and press brakes was purchased.

Idea of the manufacturing of steel guard rails was born.

1992.

Unipromet became a member of the "RAL" society from Germany.

2003.



2007.

Hot galvanizing plant was bought.

2012.

Factory of **steel seam pipes** was purchased in Kraljevo.

2016.

The production of **three way beam** began.

2022.

Implementation of **WCM**

2024.

The largest contract in the company's history, the Šabac -Loznica expressway



New, **Integrated Information System** was implemented.

2010.

Production of **noise protection panels** began.

2015.

New plant for **noise panels and plastification**

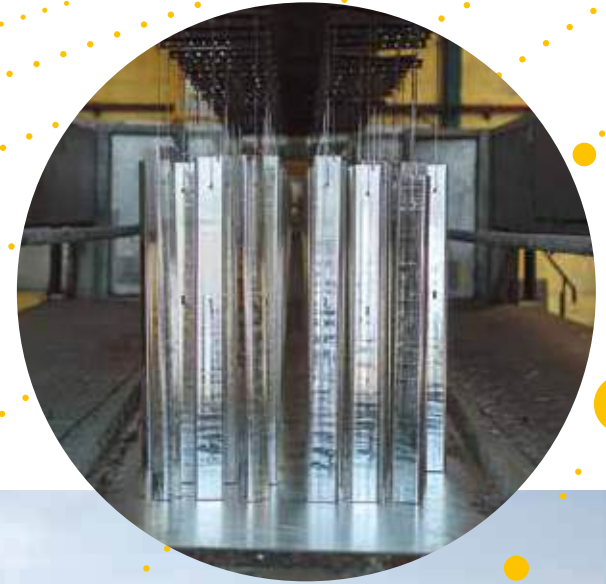
2019.

Establishment of the subsidiary "Unipromet NM" LLC in North Macedonia

2023.



WHAT WE DO



ROAD SAFETY

- Safety Guardrails
- Noise Protection Panels
- Pedestrian Fences
- Wire Fences
- Protective Wire
- Installation





COLD FORMED PROFILES AND SHEETS

- ZP Profiles
- Handle M9
- Tubes and pipes
- Cold rolled sheet
- Hot rolled sheet
- Cold rolled strip
- Hot rolled strip

STEEL CONSTRUCTION

- for farms
- for industry
- for mobile fences
- for traffic signalization
- for solar photovoltaic power plants
- for Carports
- for vineyards and orchards

SERVICES

- hot-dip galvanizing service
- plastification
- transport services

SAFETY GUARD RAILS

Working width category	Working width degree
W1	W ≤ 0,6m
W2	W ≤ 0,8m
W3	W ≤ 1,0m
W4	W ≤ 1,3m
W5	W ≤ 1,7m
W6	W ≤ 2,1m
W7	W ≤ 2,5m
W8	W ≤ 3,5m

Beam A

Beam B

Beam A1

Three wave beam

Safety guardrails are necessary for the safe traffic flow and protection of all traffic participants. Unipromet safety guard rails are made of high quality steel, with a hot-dip galvanizing coat.

We have over 60 tested and certified systems that fully comply with all European (EN 1317) and world standards (GOST R, SWISS and NF).



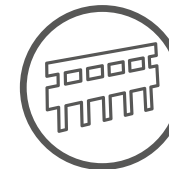
Levels of containment

Levels of containment	Appropriate testing
Normal containment potential N1 N2	TB 31 TB 32 & TB 11
High containment potential H1 L1 H2 L2 H3 L3	TB 42 & TB11 TB 42 & TB 32 & TB 11 TB 51 & TB 11 TB 51 & TB 32 & TB 11 TB 61 & TB 11 TB 61 & TB 32 & TB 11
Very high containment potential H4a H4b L4a L4b	TB 71 & TB11 TB 81 & TB 11 TB 71 & TB 32 & TB 11 TB 81 & TB 32 & TB 11

Vehicle intrusion category	Normalized vehicle intrusion
V11	$V_{IN} \leq 0,6m$
V12	$V_{IN} \leq 0,8m$
V13	$V_{IN} \leq 1,0m$
V14	$V_{IN} \leq 1,3m$
V15	$V_{IN} \leq 1,7m$
V16	$V_{IN} \leq 2,1m$
V17	$V_{IN} \leq 2,5m$
V18	$V_{IN} > 3,5m$

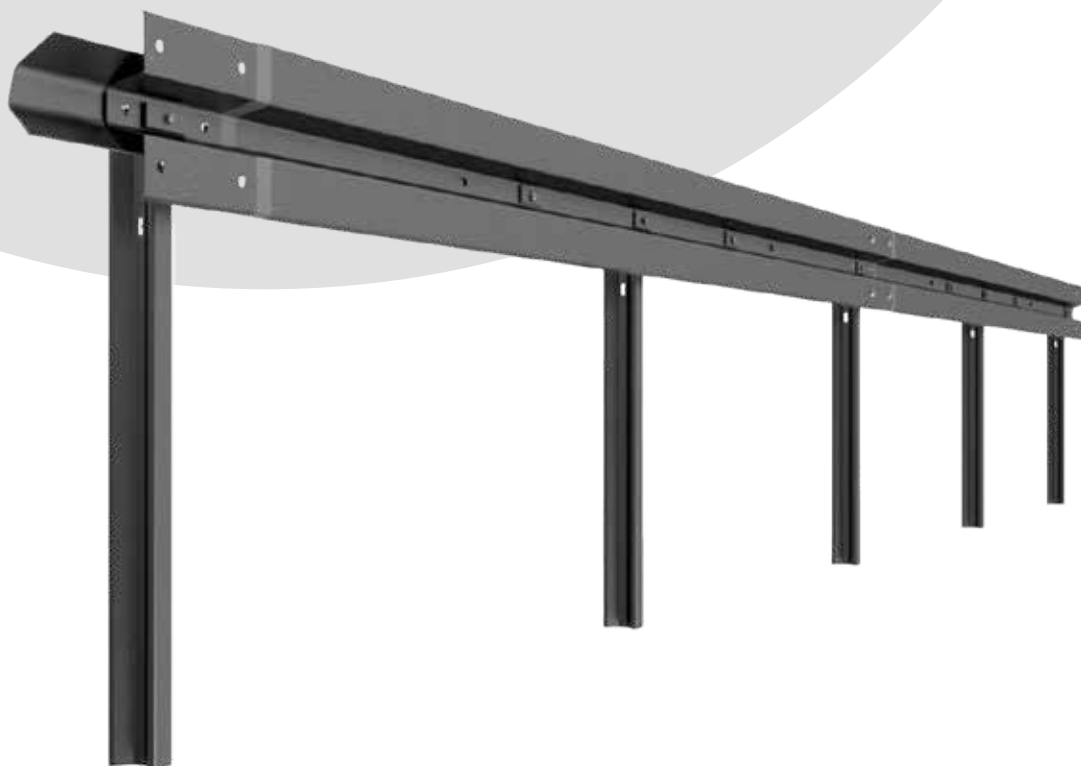
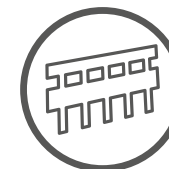
N2

ESP/2.0



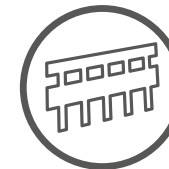
● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	N2
● ASI	A
● Working Width	W4 (Wn = 1,3 m)
➤ Dynamic Deflection	1,20m
● Vehicle Intrusion (VI)	/
● Tested Length	60m
● System Width	0,18m
● System Height	0,75m

N2 ESP PLUS/2.0



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	N2
● ASI	A
● Working Width	W4 (Wn = 1,2 m)
➤ Dynamic Deflection	1,10m
● Vehicle Intrusion (VI)	/
● Tested Length	60m
● System Width	0,18m
● System Height	0,75m

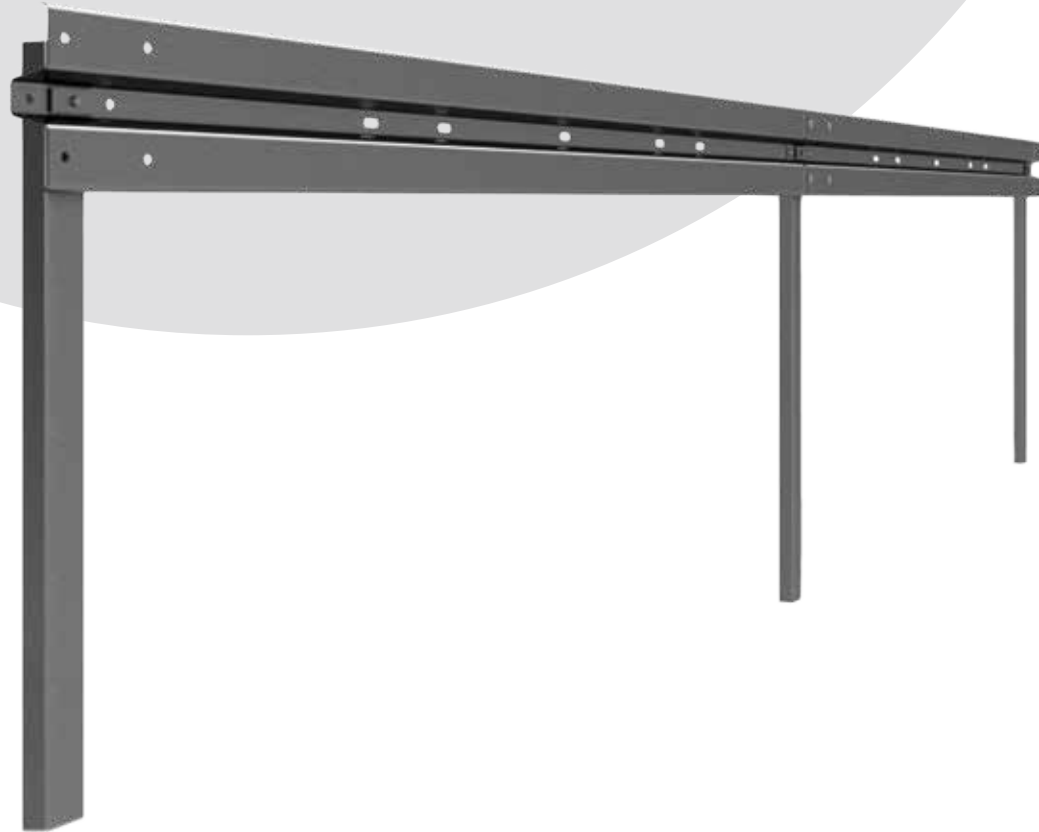
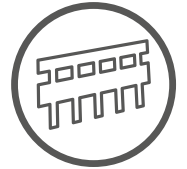
N2 ESP PLUS/W1



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	N2
● ASI	B
● Working Width	W1 (W_n = 0,6 m)
➤ Dynamic Deflection	0,50m
● Vehicle Intrusion (VI)	/
● Tested Length	40m
● System Width	0,18m
● System Height	0,75m

N2

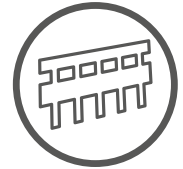
ECO-SAFE/4.0



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	N2
● ASI	A
● Working Width	W5 (Wn = 1,7 m)
➤ ● Dynamic Deflection	1,60m
● Vehicle Intrusion (VI)	/
● Tested Length	48m
● System Width	0,14m
● System Height	0,75m

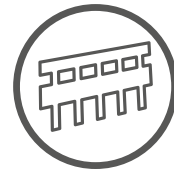
N2

ESP/4.0 WITH MOTORCYCLIST PROTECTION



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	N2
● ASI	A
● Working Width	W5 (Wn = 1,6 m)
➤ Dynamic Deflection	1,40m
● Vehicle Intrusion (VI)	/
● Tested Length	60m
● System Width	0,18m
● System Height	0,75m

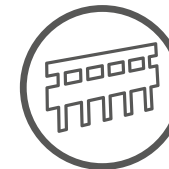
H1 EDSP/2.0



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	H1
● ASI	A
● Working Width	W5 (Wn = 1,7 m)
➤ Dynamic Deflection	1,30m
● Vehicle Intrusion (VI)	VI7 (VIIn = 2,3 m)
● Tested Length	60m
● System Width	0,50m
● System Height	0,75m

H1

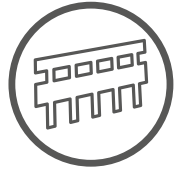
EDSP/1.33



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	H1
● ASI	A
● Working Width	W4 (Wn = 1,2 m)
➤ Dynamic Deflection	1,10m
● Vehicle Intrusion (VI)	VI6 (VIIn = 2,0 m)
● Tested Length	60m
● System Width	0,50m
● System Height	0,75m

H1

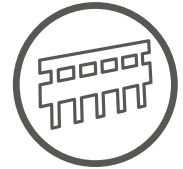
DDSP/4.0



●	Safety Beam Type	Safety Beam A Safety Beam B
●	Containment Level	H1
●	ASI	A
●	Working Width	W6 (Wn = 1,9 m)
●	Dynamic Deflection	1,6m (Profile A) 1,8m (Profile B)
●	Vehicle Intrusion (VI)	VI6 (VIn = 2,1 m)
●	Tested Length	60m
●	System Width	0,80m
●	System Height	0,75m

H1

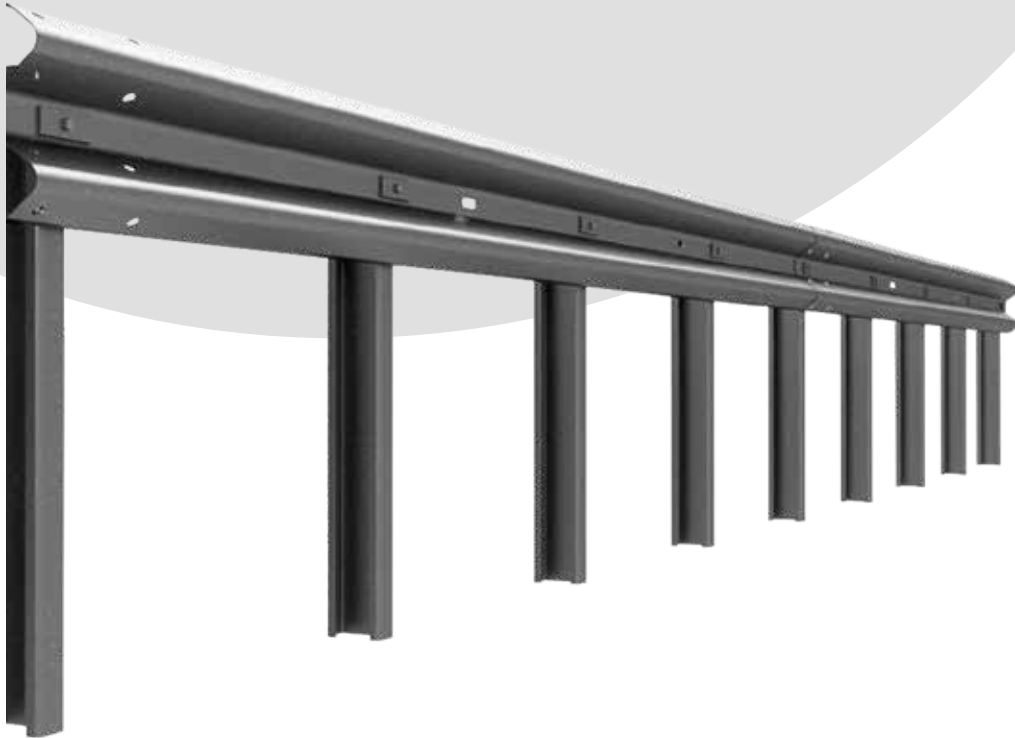
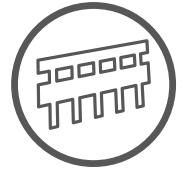
UNIRAIL 3.0 H1W3



● Safety Beam Type	Safety Beam B
● Containment Level	H1
● ASI	A
● Working Width	W3 (Wn=1,0m)
➤ Dynamic Deflection	0,90m
● Vehicle Intrusion (VI)	VI4 (VIn=1,2m)
● Tested Length	49,5m
● System Width	0,21m
● System Height	0,75m (+30/-10mm)

L1

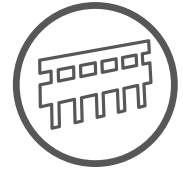
SUPER RAIL ES/1.0



● Safety Beam Type	Safety Beam A Safety Beam B	Safety Beam A Safety Beam B
● Containment Level	H1/L1	N2
● ASI	A	A
● Working Width	W2 (Wn = 0,8 m)	W2 (Wn=0,7 m)
➤ Dynamic Deflection	0,70m	0,50m
● Vehicle Intrusion (VI)	VI5 (VIIn = 1,4 m)	/
● Tested Length	40m	60m
● System Width	0,20m	0,20m
● System Height	0,75m	0,75m

L1

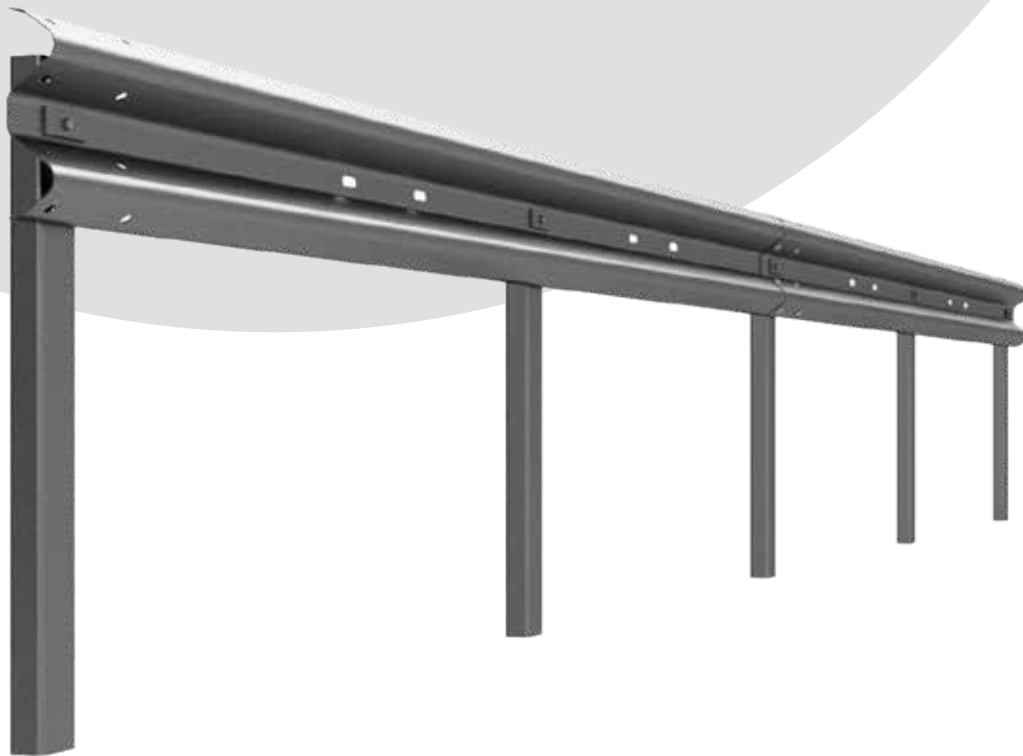
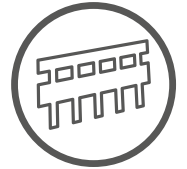
SUPER RAIL ES/1.33



● Safety Beam Type	Safety Beam A Safety Beam B	Safety Beam A Safety Beam B
● Containment Level	H1/L1	N2
● ASI	A	A
● Working Width	W4 (Wn = 1,1 m)	W2 (Wn = 0,8 m)
● > Dynamic Deflection	1,00m	0,70m
● Vehicle Intrusion (VI)	VI4 (VIn = 1,3 m)	/
● Tested Length	60m	60m
● System Width	0,20m	0,20m
● System Height	0,75m	0,75m

L1

ECO-SAFE/2.0

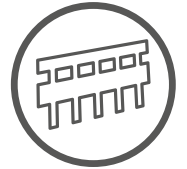


● Safety Beam Type	Safety Beam A Safety Beam B	Safety Beam A Safety Beam B
● Containment Level	H1/L1	N2
● ASI	A	A
● Working Width	W4 (Wn = 1,3 m) W5 (Wn = 1,4 m)*	W3 (Wn = 1,0 m)
➤ Dynamic Deflection	1,20m 1,30m*	0,90m
● Vehicle Intrusion (VI)	VI6 (VIn = 2,1 m) VI7 (VIn = 2,4 m)*	/
● Tested Length	48m	48m
● System Width	0,14m	0,14m
● System Height	0,75m	0,75m

*a narrow guardrail

L1

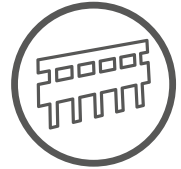
ECO-SAFE/1.33



Safety Beam Type	Safety Beam A Safety Beam B	Safety Beam A Safety Beam B
Containment Level	H1/L1	N2
ASI	A	A
Working Width	W3 (Wn = 1,0 m)	W3 (Wn = 0,9 m)
Dynamic Deflection	0,80m	0,80m
Vehicle Intrusion (VI)	VI7 (VIn = 2,2 m)	/
Tested Length	48m	48m
System Width	0,14m	0,14m
System Height	0,75m	0,75m

H2

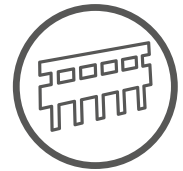
DDSP/2.0++



•	Safety Beam Type	Safety Beam A
•	Containment Level	H2
•	ASI	A
•	Working Width	W6 (Wn = 1,9 m)
•	Dynamic Deflection	1,70m
•	Vehicle Intrusion (VI)	VI6 (VIIn = 2,1 m)
•	Tested Length	80m
•	System Width	0,80m
•	System Height	0,75m

H2

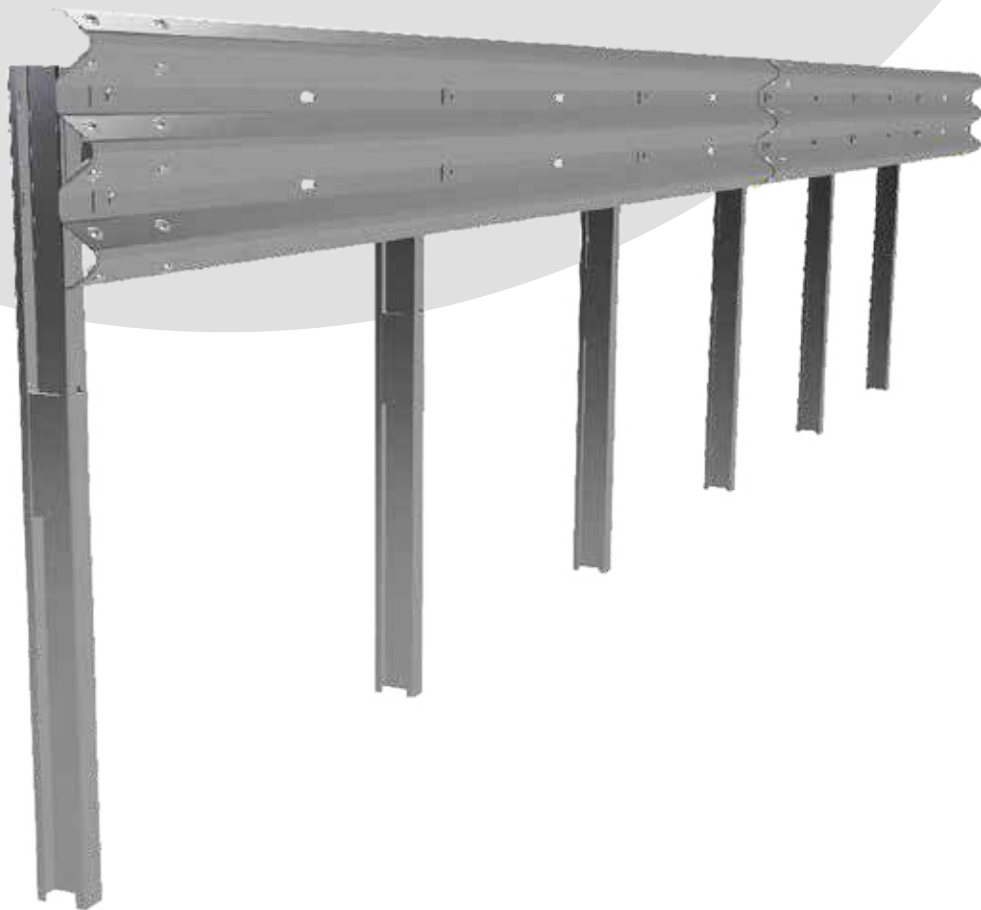
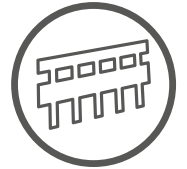
DDSP/1.33 +SL



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	H2
● ASI	A
● Working Width	W7 (Wn = 2,4 m)
➤ Dynamic Deflection	1,60m
● Vehicle Intrusion (VI)	VI7 (VIn = 2,5 m)
● Tested Length	64m
● System Width	0,80m
● System Height	0,75m

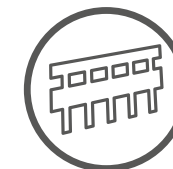
H2

UNI 3W 1.5



• Safety Beam Type	Three wave beam
• Containment Level	H2
• ASI	B
• Working Width	W3 (Wn = 1,0 m)
> Dynamic Deflection	0,90m
• Vehicle Intrusion (VI)	VI2 (VI_n = 1,0 m)
• Tested Length	45,00
• System Width	0,29m
• System Height	0,93m (+10/-20 mm)

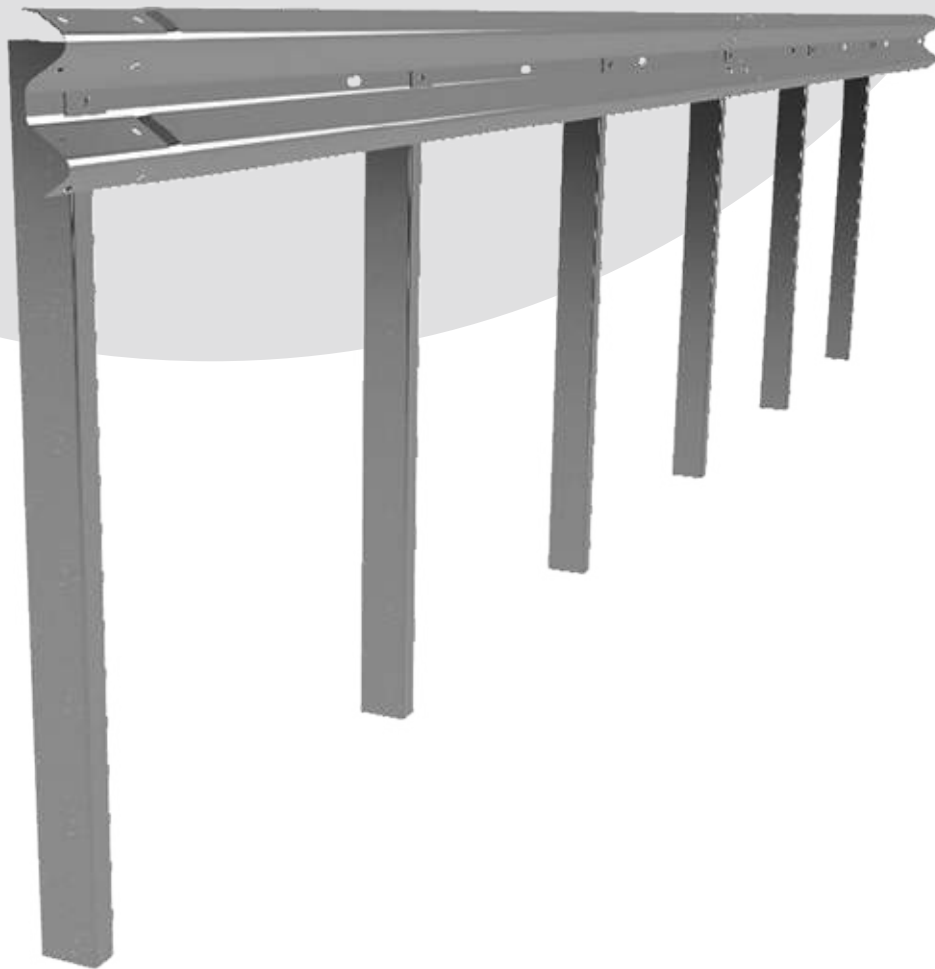
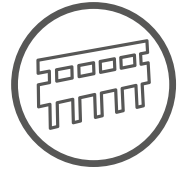
H2 UNI 3W 2.0



●	Safety Beam Type	Three wave beam
●	Containment Level	H2
●	ASI	A
●	Working Width	W5 (Wn = 1,7 m)
●	Dynamic Deflection	1,60m
●	Vehicle Intrusion (VI)	VI6 (VIn = 2,1 m)
●	Tested Length	40,00
●	System Width	0,35m
●	System Height	0,89m (± 30mm)

H2

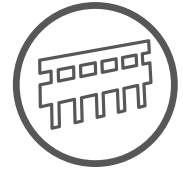
UNI RAIL 1.33 H2 W5 Type A



• Safety Beam Type	Safety Beam A
• Containment Level	H2
• ASI	A
• Working Width	W5 (Wn=)
> • Dynamic Deflection	1,60m
• Vehicle Intrusion (VI)	VI7 (VIn = 2,3m)
• Tested Length	48m
• System Width	0,21m
• System Height	0,80m (± 20mm)

H2

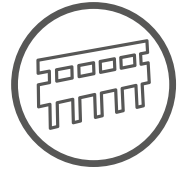
UNI RAIL 1.33 H2 W5



● Safety Beam Type	Safety Beam B
● Containment Level	H2
● ASI	A
● Working Width	W5 (Wn = 1,6 m)
➤ Dynamic Deflection	1,50m
● Vehicle Intrusion (VI)	VI5 (VIIn = 1,6 m)
● Tested Length	48m
● System Width	0,21m
● System Height	0,80m (± 20mm)

H2

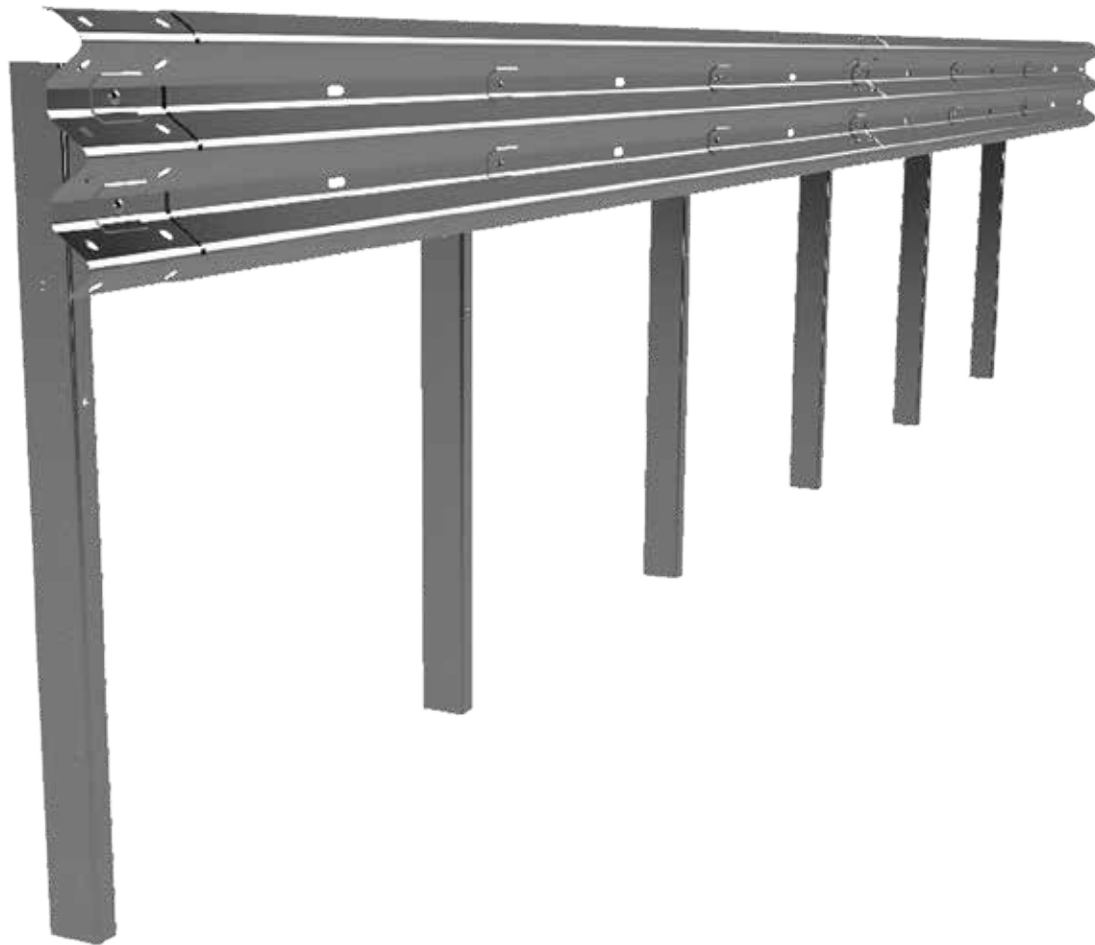
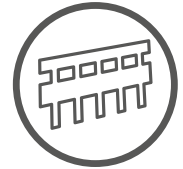
UNI RAIL PLUS 1.33 H2 W3 Type B



• Safety Beam Type	Safety Beam A Safety Beam B Safety Beam SLO
• Containment Level	H2
• ASI	B
• Working Width	W3 (W_n = 1,0 m)
➤ Dynamic Deflection	0,90m
• Vehicle Intrusion (VI)	Type A VI4 (VI_n = 1,3 m) Type B VI5 (VI_n = 1,5 m)
• Tested Length	44m
• System Width	0,21m
• System Height	0,90m (± 20mm)

H2

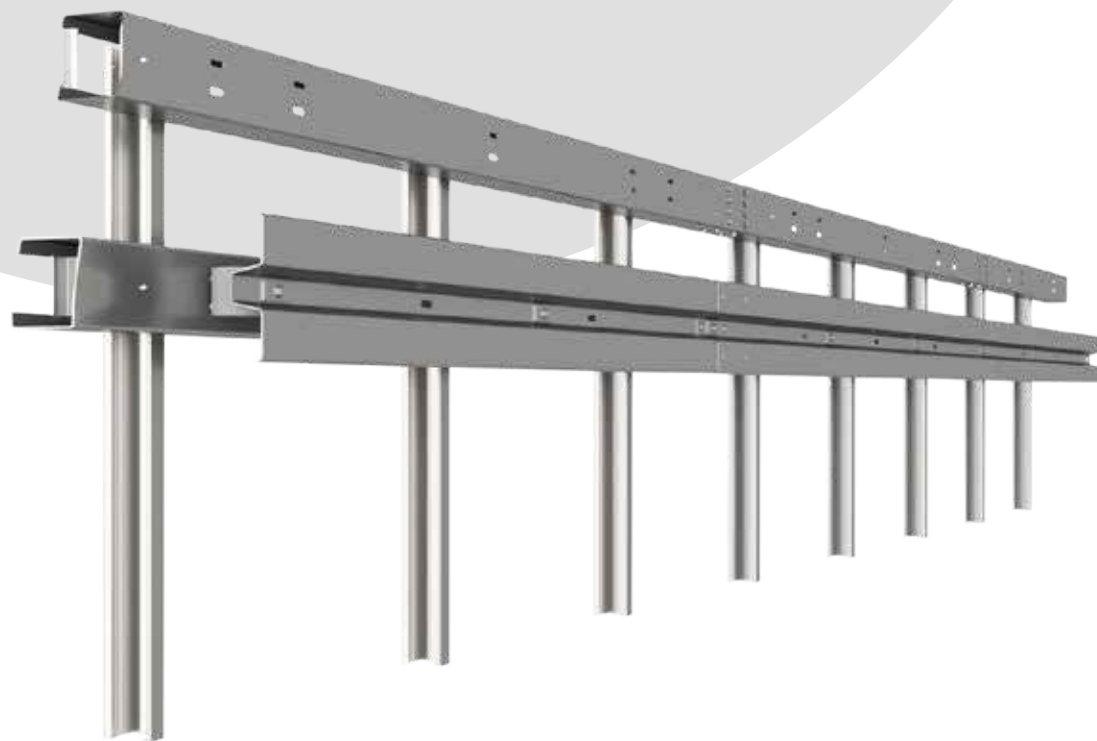
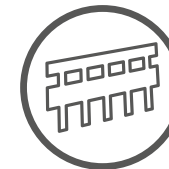
UNI RAIL ULTRA 3N 1.5 H2 W2



• Safety Beam Type	Three wave beam
• Containment Level	H2
• ASI	B
• Working Width	W2 (Wn = 0,7 m)
> Dynamic Deflection	0,70m
• Vehicle Intrusion (VI)	VI5 (VIn = 1,5 m)
• Tested Length	49m
• System Width	0,29m
• System Height	0,95m (+10/-20 mm)

L2

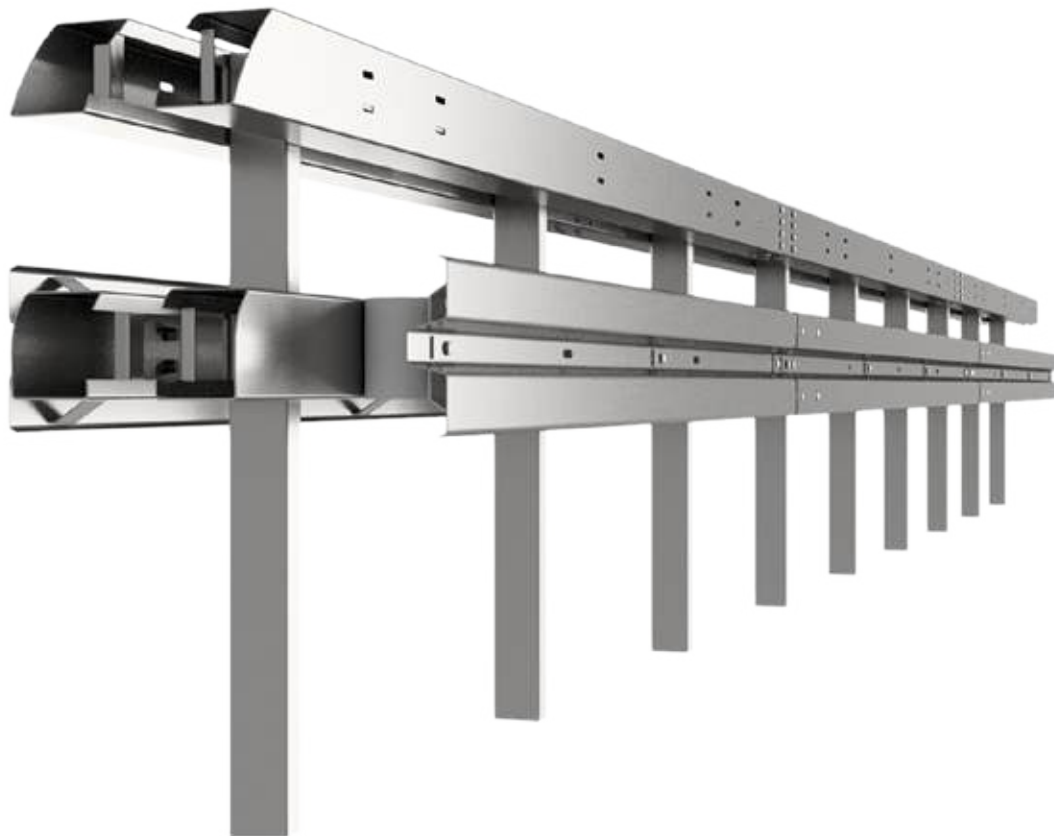
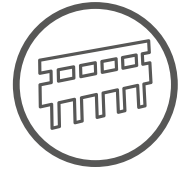
SUPER RAIL



• Safety Beam Type	Safety Beam A Safety Beam B
• Containment Level	H2/L2
• ASI	A
• Working Width	W4 (Wn = 1,3 m)
➤ Dynamic Deflection	0,80m
• Vehicle Intrusion (VI)	VI4 (VIn = 1,3 m)
• Tested Length	40m
• System Width	0,50m
• System Height	1,15m

L2

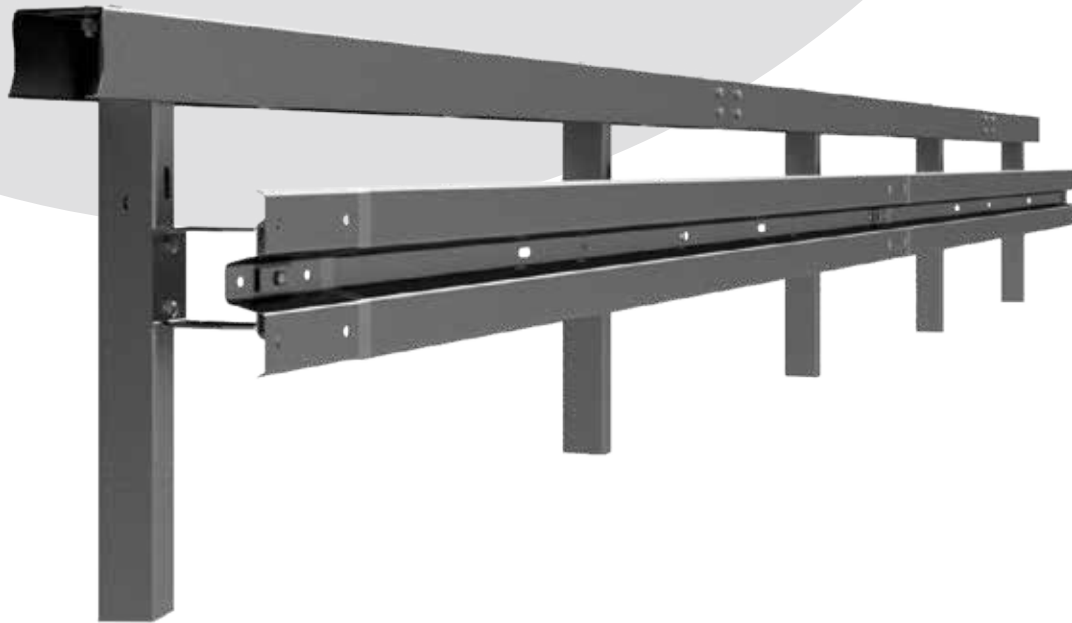
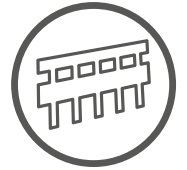
SUPER RAIL TWO-SIDED



●	Safety Beam Type	Safety Beam A Safety Beam B
●	Containment Level	H2/L2
●	ASI	B
●	Working Width	W4 (Wn = 1,2 m)
➤	Dynamic Deflection	0,60m
●	Vehicle Intrusion (VI)	VI3 (VIn = 1,0 m)
●	Tested Length	60m
●	System Width	0,86m
●	System Height	1,15m

L2

SUPER RAIL ECO

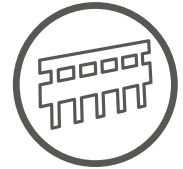


● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	H2/L2
● ASI	A
● Working Width	W4 (Wn = 1,3 m) W4 (Wn = 1,5 m)*
➤ Dynamic Deflection	0,70m 1,20m*
● Vehicle Intrusion (VI)	VI4 (VIIn = 1,3 m) VI4 (VIIn = 1,5 m)*
● Tested Length	52m
● System Width	0,45m
● System Height	0,90m

**a narrow guardrail*

L2

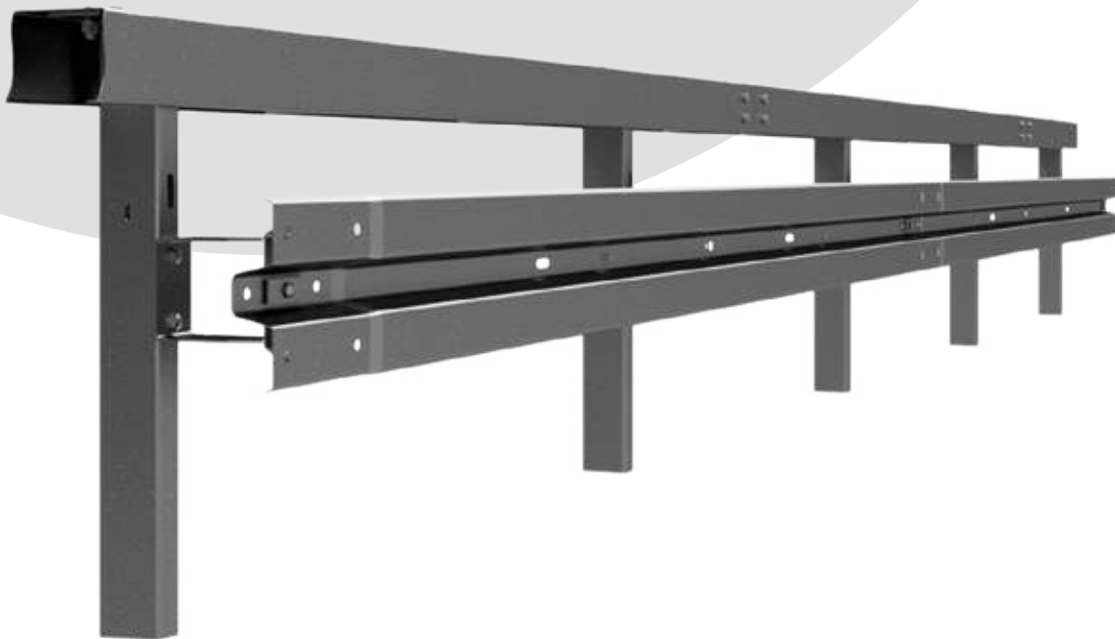
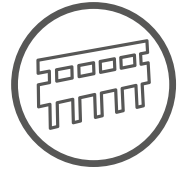
SUPER RAIL ECO TWO-SIDED



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	H2/L2
● ASI	B
● Working Width	W4 (Wn = 1,2 m)
➤ Dynamic Deflection	0,60m
● Vehicle Intrusion (VI)	VI5 (VIn = 1,4 m)
● Tested Length	52m
● System Width	0,45m
● System Height	0,70m

L2

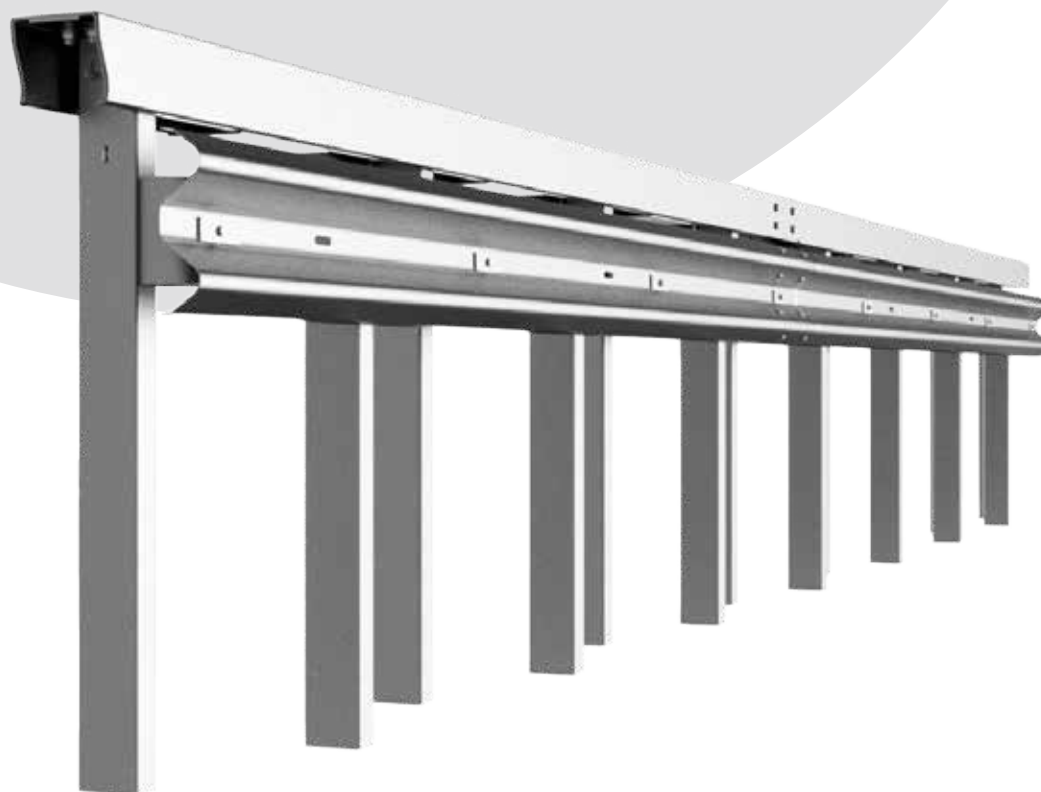
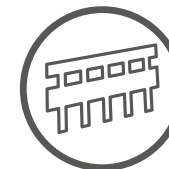
SUPER RAIL ECO MÜF



• Safety Beam Type	Safety Beam A Safety Beam B
• Containment Level	H2/L2
• ASI	A
• Working Width	W4 (Wn = 1,3 m)
➤ Dynamic Deflection	1,10m
• Vehicle Intrusion (VI)	VI4 (VIIn = 1,3 m)
• Tested Length	52m
• System Width	0,45m
• System Height	1,00m

L2

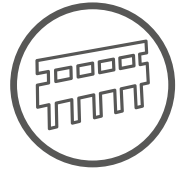
SUPER RAIL ECO HS



• Safety Beam Type	Safety Beam A Safety Beam B
• Containment Level	H2/L2
• ASI	B
• Working Width	W2 (Wn = 0,8 m)
➤ Dynamic Deflection	0,60m
• Vehicle Intrusion (VI)	VI2 (VIn = 0,8 m)
• Tested Length	36m
• System Width	0,37m
• System Height	0,90m

L4b

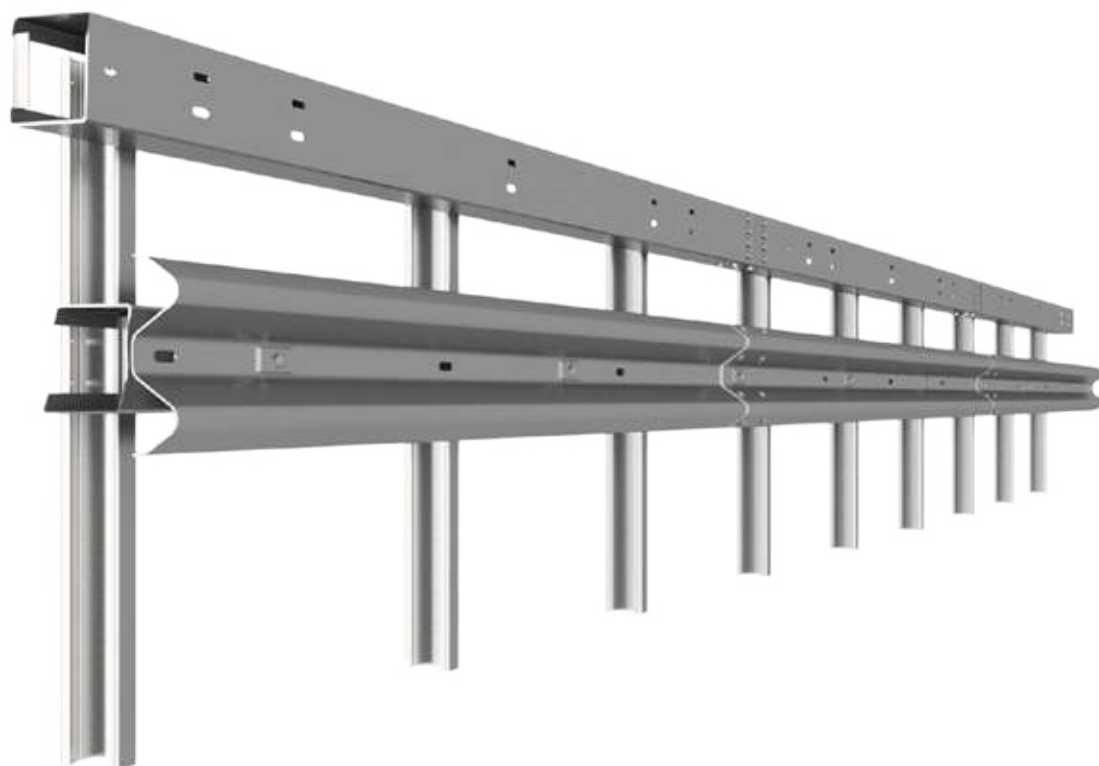
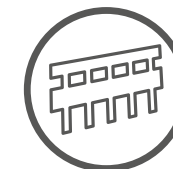
SUPER RAIL HS



Safety Beam Type	Safety Beam A Safety Beam B	Safety Beam A Safety Beam B
Containment Level	H2/L2	H4b/L4b
ASI	B	B
Working Width	W3 (Wn = 0,9 m)	W4 (Wn = 1,2 m)
Dynamic Deflection	0,50m	0,90m
Vehicle Intrusion (VI)	VI2 (VIn = 0,8 m)	VI8 (VIn = 3,3m)
Tested Length	60m	60m
System Width	0,45m	0,45m
System Height	1,10m	1,15m

L4b

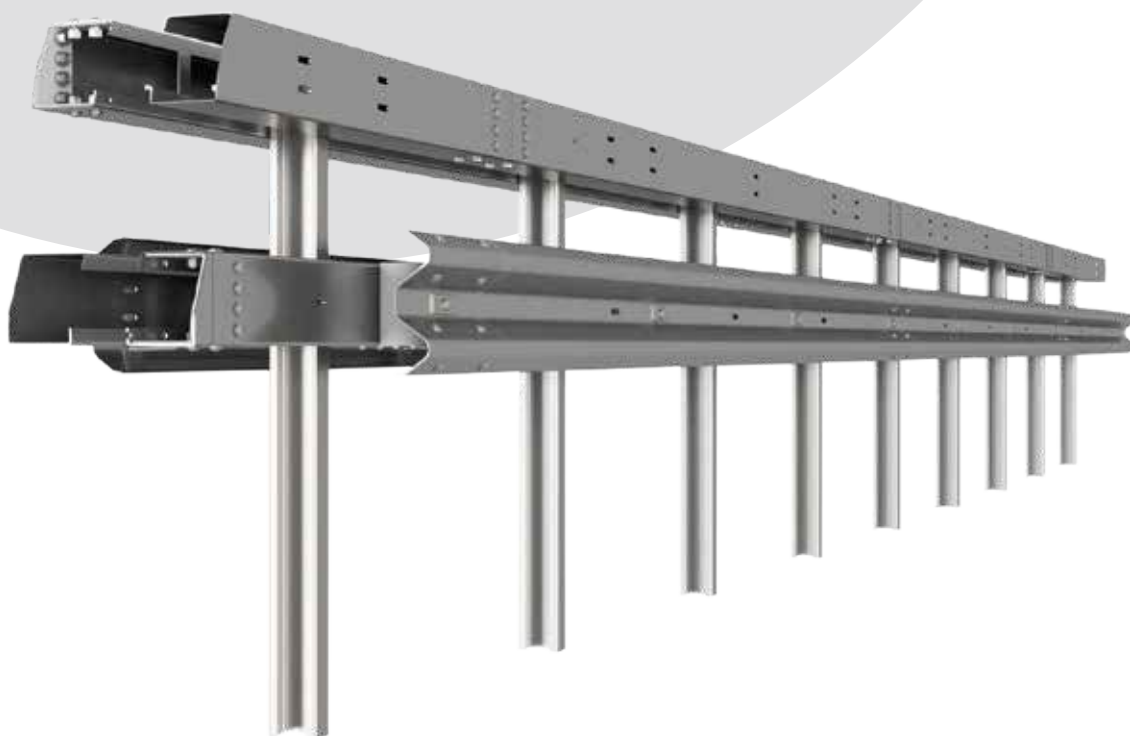
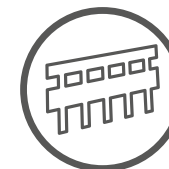
SUPER RAIL



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	H4b/L4b
● ASI	A
● Working Width	W7 (Wn = 2,3 m)
➤ Dynamic Deflection	2,00m
● Vehicle Intrusion (VI)	VI7 (VIn = 2,5 m)
● Tested Length	76m
● System Width	0,50m
● System Height	1,15m

L4b

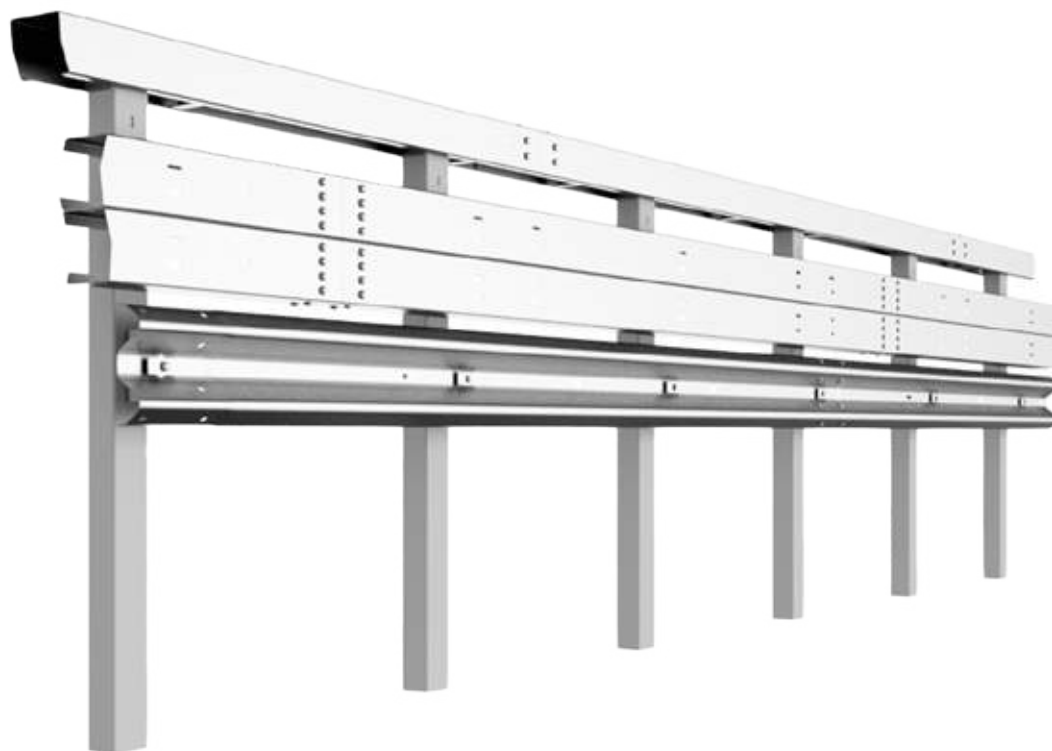
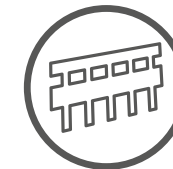
SUPER RAIL TWO-SIDED



• Safety Beam Type	Safety Beam A Safety Beam B
• Containment Level	H4b/L4b
• ASI	B
• Working Width	W5 (Wn = 1,5 m)
➤ Dynamic Deflection	0,90m
• Vehicle Intrusion (VI)	VI8 (VIIn = 3,4 m)
• Tested Length	60m
• System Width	0,86m
• System Height	1,15m

L4b

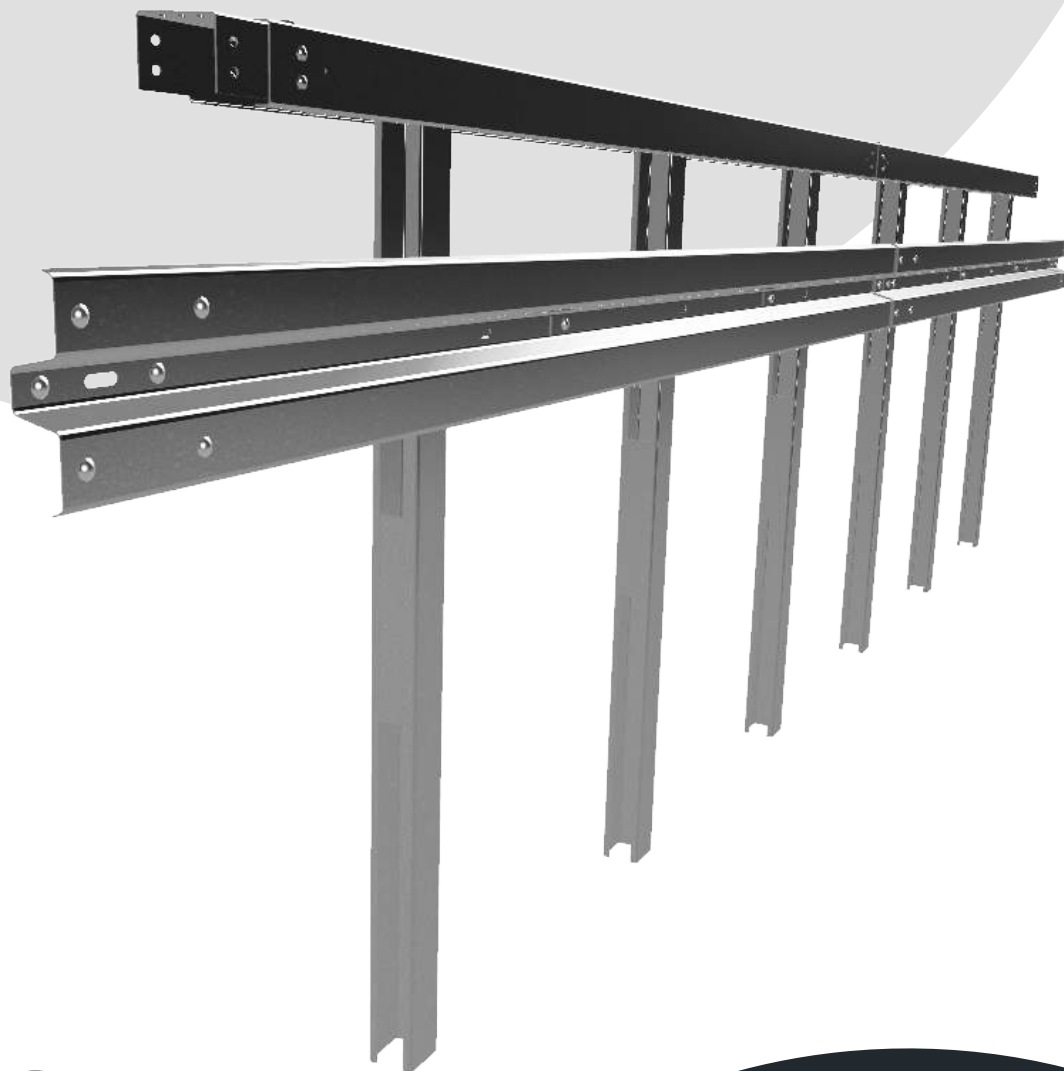
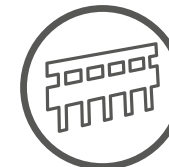
SUPER RAIL PRO



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	H4b/L4b
● ASI	B
● Working Width	W4 (Wn = 1,3 m)
➤ Dynamic Deflection	1,10m
● Vehicle Intrusion (VI)	VI9 (VI_n = 3,6 m)
● Tested Length	60m
● System Width	0,32m
● System Height	1,40m

L4b

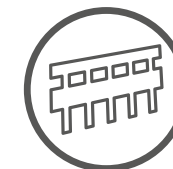
SUPER RAIL HS



• Safety Beam Type	Safety Beam A Safety Beam B
• Containment Level	H4b/L4b
• ASI	B
• Working Width	W4 (Wn = 1,2 m)
➤ Dynamic Deflection	0,90m
• Vehicle Intrusion (VI)	VI8 (VIIn = 3,3 m)
• Tested Length	60m
• System Width	0,46m
• System Height	1,15m

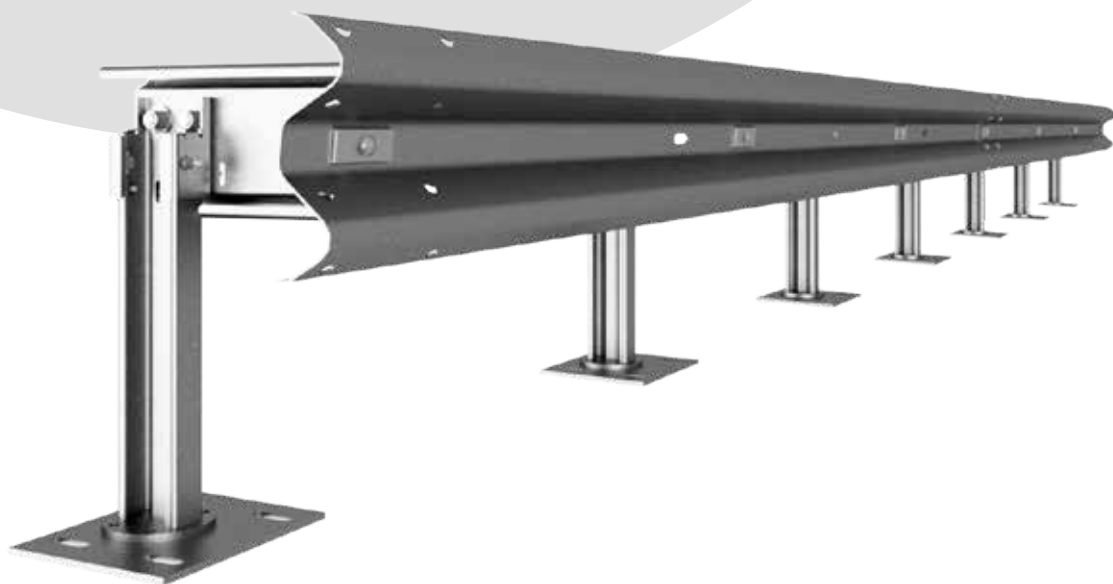
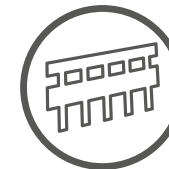
L4b

SUPER RAIL ECO HS



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	H4b/L4b
● ASI	B
● Working Width	W4 (Wn = 1,1 m)
➤ Dynamic Deflection	0,90m
● Vehicle Intrusion (VI)	VI9 (VIn = 4,1 m)
● Tested Length	80m
● System Width	0,37m
● System Height	0,90m

H1 on object EDSP/1.33 BW

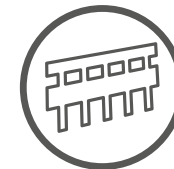


• Safety Beam Type	Safety Beam A Safety Beam B
• Containment Level	H1 *
• ASI	A
• Working Width	W5 (Wn = 1,6 m)
➤ Dynamic Deflection	1,20m
• Vehicle Intrusion (VI)	VI6 (VI_n = 2,1 m)
• Tested Length	68m
• System Width	0,50m
• System Height	0,74m

* In participation with the railing according to RiZ Gel 3 (h = 1.0 m) with steel cable insert in the handrail

L1 on object

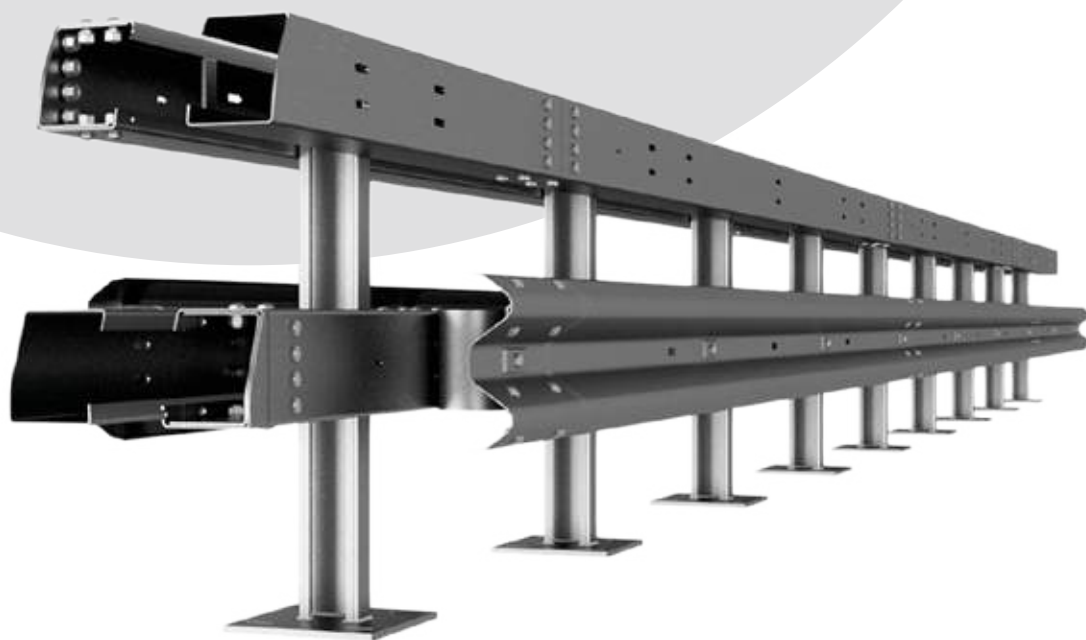
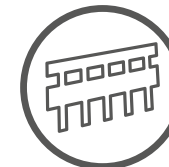
ECO SAFE 1.33 BW



Safety Beam Type	Safety Beam A Safety Beam B	Safety Beam A Safety Beam B
Containment Level	H1/L1	N2
ASI	A	A
Working Width	W2 (Wn = 0,8 m)	W1 (Wn = 0,6 m)
Dynamic Deflection	0,60m	0,50m
Vehicle Intrusion (VI)	VI7 (VIIn = 2,4m)	/
Tested Length	36m	36m
System Width	0,30m	0,30m
System Height	0,80m	0,80m

H2 on object

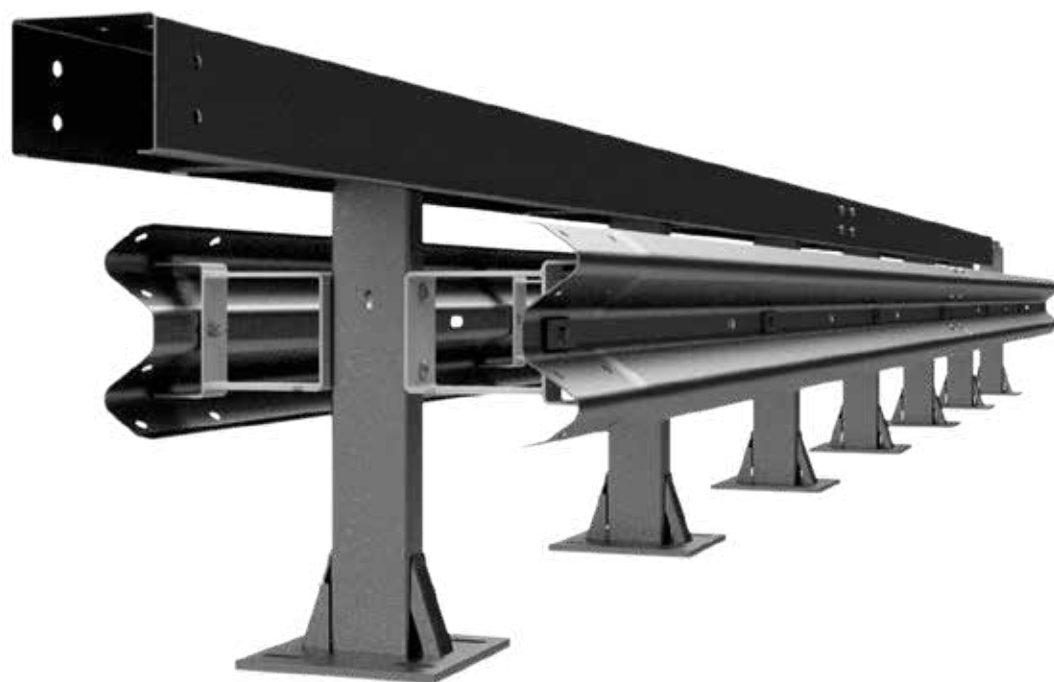
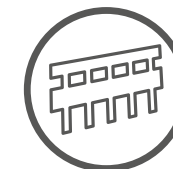
SUPER RAIL BW TWO-SIDED



• Safety Beam Type	Safety Beam A Safety Beam B
• Containment Level	H2
• ASI	B
• Working Width	W4 (Wn = 1,2 m)
> Dynamic Deflection	0,60m
• Vehicle Intrusion (VI)	VI4 (VIn = 1,2 m)
• Tested Length	36m
• System Width	0,86m
• System Height	1,15m

H2 on object

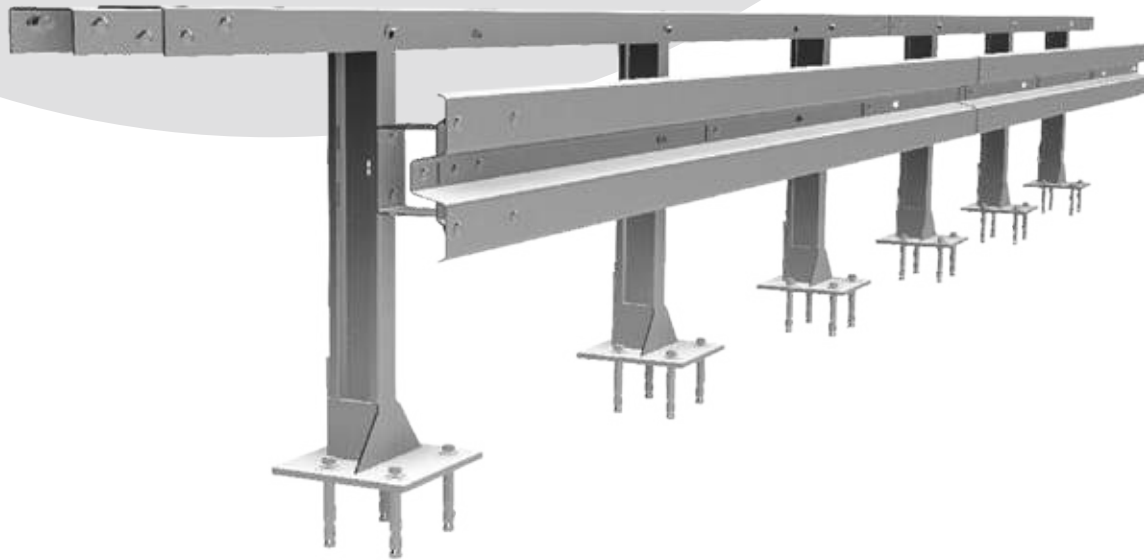
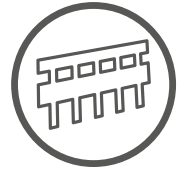
SUPER RAIL ECO BW TWO-SIDED



• Safety Beam Type	Safety Beam A Safety Beam B
• Containment Level	H2
• ASI	B
• Working Width	W4 (Wn = 1,3 m)
> Dynamic Deflection	0,90m
• Vehicle Intrusion (VI)	VI5 (VIn = 1,4 m)
• Tested Length	60m
• System Width	0,70m
• System Height	0,90m

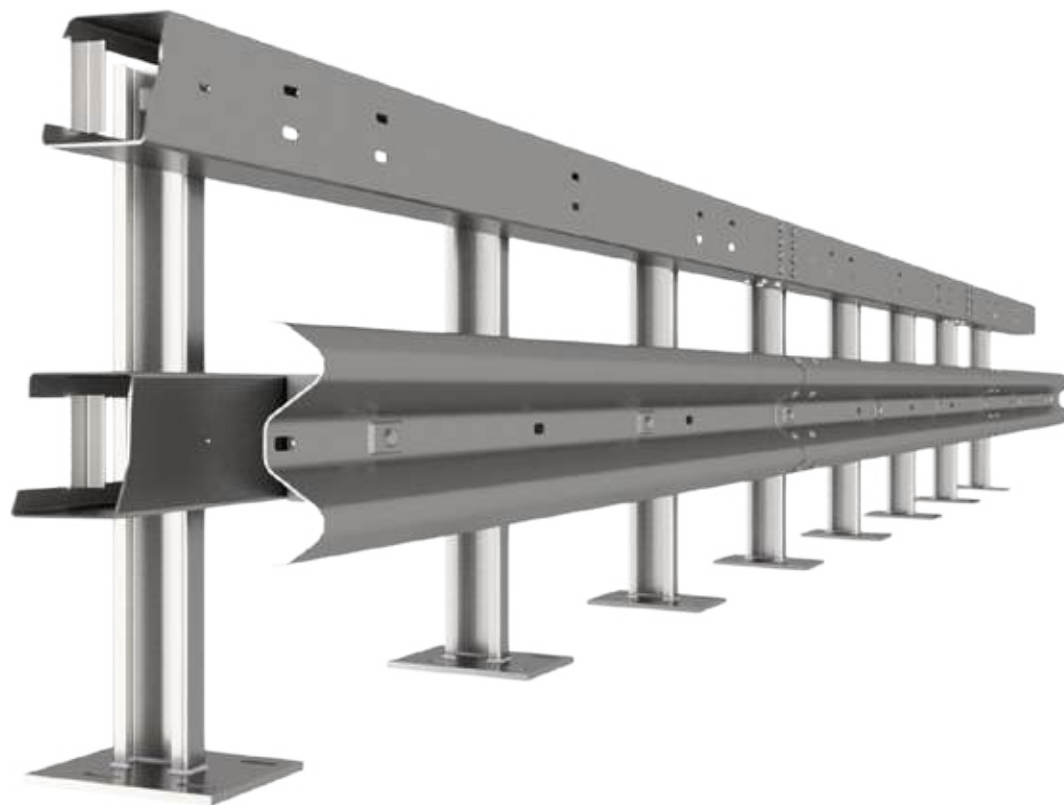
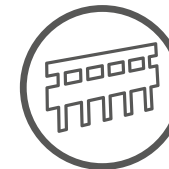
H2 on object

UNI RAIL PLUS 1.33 BW H2 W3



● Safety Beam Type	Safety Beam A Safety Beam B Safety Beam SLO
● Containment Level	H2
● ASI	B
● Working Width	W1 (Wn = 0,5 m)
➤ Dynamic Deflection	0,70m
● Vehicle Intrusion (VI)	VI4 (VIn = 1,3 m)
● Tested Length	36m
● System Width	0,39m
● System Height	0,90m (± 20mm)

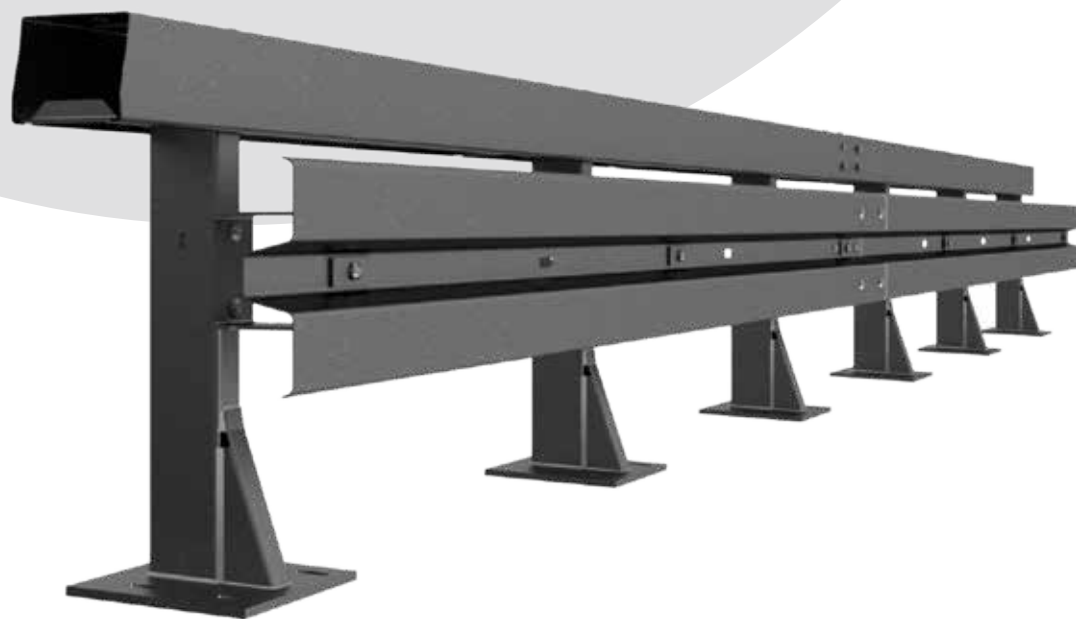
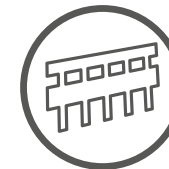
L2 on object SUPER RAIL BW



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	H2/L2
● ASI	B
● Working Width	W4 (WN = 1,2 m)
➤ Dynamic Deflection	0,60m
● Vehicle Intrusion (VI)	VI4 (VIN = 1,2 m)
● Tested Length	36m
● System Width	0,50m
● System Height	1,15m

L2 on object

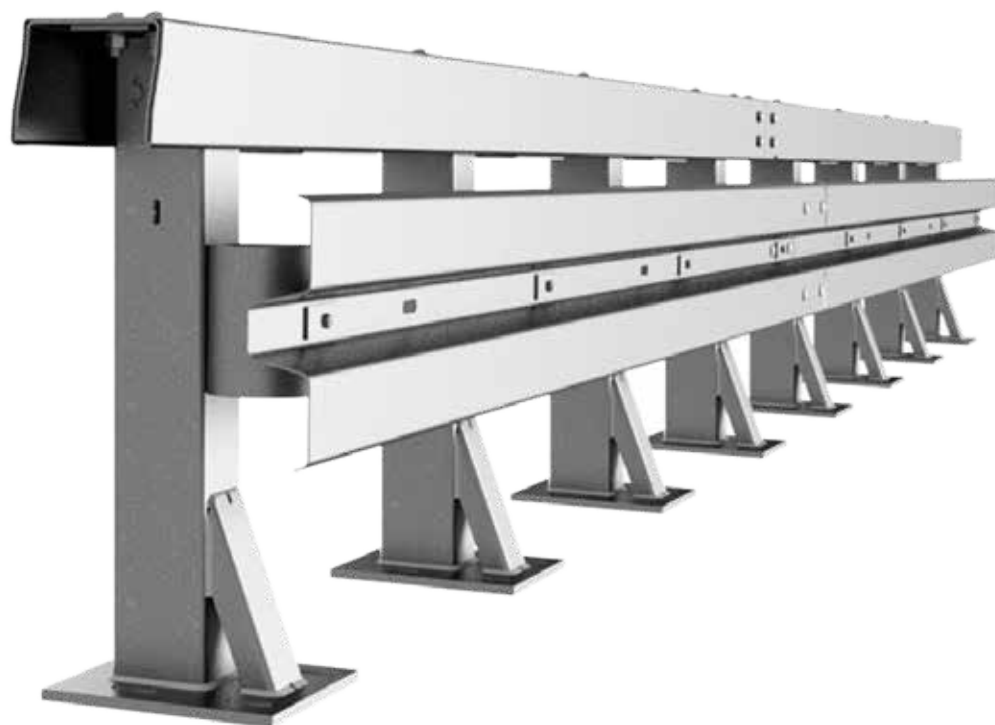
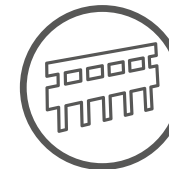
SUPER RAIL ECO BW



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	H2/L2
● ASI	A
● Working Width	W4 (Wn = 1,3 m)
➤ Dynamic Deflection	0,90m
● Vehicle Intrusion (VI)	VI5 (VIIn = 1,4 m)
● Tested Length	60m
● System Width	0,45m
● System Height	1,15m

L2 on object

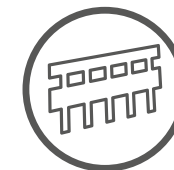
SUPER RAIL ECO HS BW



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	H2/L2
● ASI	B
● Working Width	W1 (Wn = 0,5 m)
➤ Dynamic Deflection	0,40m
● Vehicle Intrusion (VI)	VI2 (VIn = 0,7 m)
● Tested Length	36m
● System Width	0,37m
● System Height	0,90m

H4b on object

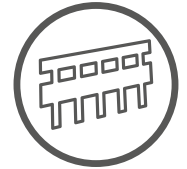
SUPER RAIL HS BW



Safety Beam Type	Safety Beam A Safety Beam B	Safety Beam A Safety Beam B
Containment Level	H2	H4b
ASI	B	B
Working Width	W2 (Wn = 0,8 m)	W4 (Wn = 1,3 m)
Dynamic Deflection	0,40m	0,90m
Vehicle Intrusion (VI)	VI2 (VIn = 0,8 m)	VI9 (VIn = 4,2m)
Tested Length	60m	60m
System Width	0,45m	0,45m
System Height	1,20m	1,20m

L4b on object

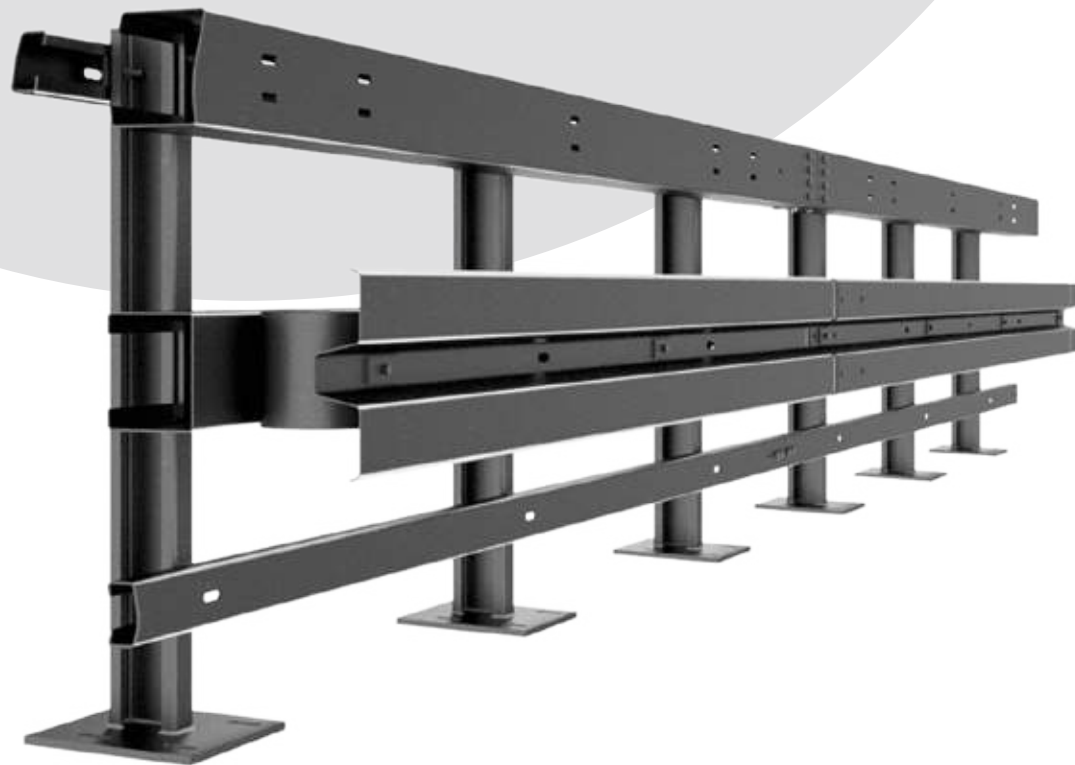
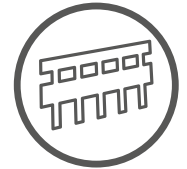
SUPER RAIL PRO BW



●	Safety Beam Type	Safety Beam A Safety Beam B
●	Containment Level	H4b/L4b
●	ASI	B
●	Working Width	W2 (Wn = 0,7 m)
➤	Dynamic Deflection	0,30m
●	Vehicle Intrusion (VI)	VI5 (VIIn = 1,7 m)
●	Tested Length	72m
●	System Width	0,32m
●	System Height	1,40m

H4b on object


SUPER RAIL PLUS BW



● Safety Beam Type	Safety Beam A Safety Beam B
● Containment Level	H4b *
● ASI	B
● Working Width	W6 (Wn = 2,1 m)
➤ ● Dynamic Deflection	1,2m
● Vehicle Intrusion (VI)	VI9 (VIIn > 3,5 m)
● Tested Length	80m
● System Width	0,60m (1,53m)**
● System Height	1,24m

* In participation with the railing according to RiZ Gel 3 (h = 1.0 m) with steel cable insert in the handrail

** including railings



NOISE PROTECTION PANELS

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

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 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)

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 w	



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 PANELS

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.

PEDESTRIAN FENCES

We make pedestrian fences according to customer requirements, but we can also offer our standard solutions made of round or square pipes of different sizes, with appropriate fillings. Pedestrian fences can be protected by hot-dip galvanizing in accordance with the standard EN ISO 1461 or painting in color according to customer requirements. We also offer various options for installing pedestrian fences, through appropriate anchor bolts or direct concreting in the bridge cap.









WIRE FENCES

We can offer wires of different heights and types of knits. We also offer a solution with columns that are installed by directly driving the posts into the ground, without concreting. The standard solution is 1650mm high (with farmer's mesh height 1600mm). The elements of the wire fence are protected by hot-dip galvanizing in accordance with the standard EN ISO 1461 (mesh with a minimum zinc content of 200gr / m²).



SAFETY NETS

They are made of griffin mesh built into a suitable L-profile frame. All elements of the net are protected with hot-dip galvanizing in accordance with the standard EN ISO 1461 and the nets are placed on the existing pedestrian / protective fences by means of appropriate stirrups without additional welding.





HOT DIP GALVANIZING

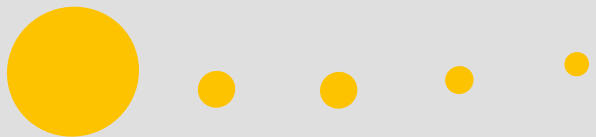
Hot-dip galvanizing is taking primacy over coating, primarily due to permanent and high quality anti-corrosive protection but also expendable and ecological acceptability.

After we purchased the hot-dip galvanizing plant, the production lifecycle was completed and product quality was improved. We process 80.000t of metal per year.



Advantages

- Quality and durable anti-corrosion protection
- High resistance to mechanical damage
- More profitable and durable than coating
- Environmentally friendly
- Protects the interior of hollow structures





INTERNATIONAL TRANSPORT

In order to complete the story of full service for our clients, from the production of steel elements and their galvanizing for additional protection, we provide the service of international transport. We own a fleet of over 30 new trucks with experienced drivers who travel over 2,000,000 km per year.

Widely branched network and long-term partnerships with our associates enable us high quality and reliability of the international road transport services.

Strongest on the Road

- Fleet of 30 trucks of various load capacities
- Experienced drivers with over 2,000,000 km per year
- Meeting deadlines

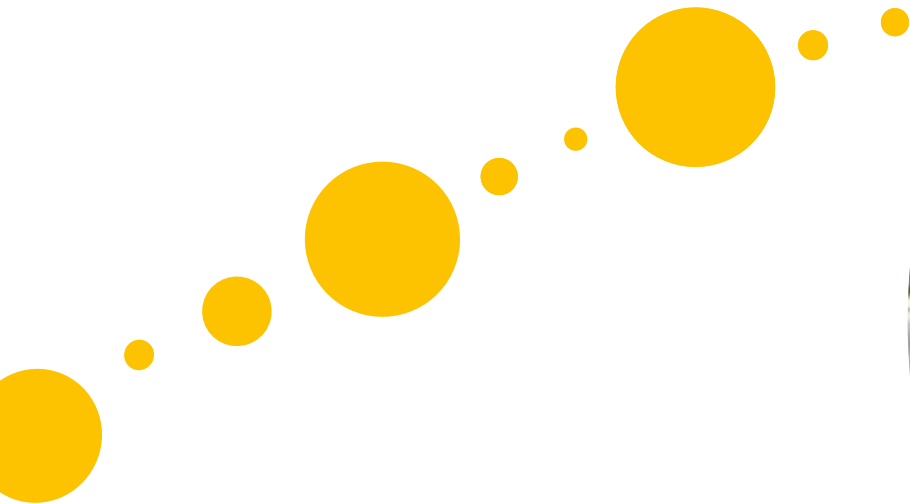




INSTALLATION

Professional and experienced team, combined with modern equipment and technology, allow us to perform the assembly service of all of our elements promptly and with great ease.

Years of experience and satisfied customers are the best proof of our quality and commitment.





Efficient and Professional

- 10 highly-skilled installation teams
- Over 700 installed kilometers of safety guardrails per year
- Use of state-of-the-art equipment
- Meeting deadlines





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