SAFETY BARRIERS

www.fracasso-volkmann.com

Fracasso Volkmann

Via Barbariga, 7
30032 Fiesso d'Artico (VE) - Italy
Phone: +39 049 9899 399

Hohe Strasse, 9-17
56410 Montabaur - Germany
Phone: +49 2602 91 99 230

mbox@fracasso-volkmann.com
www.fracasso-volkmann.com

SAFETY BARRIERS

FRACASSO VOLKMANN

FRACASSO VOLKMANN

The Joint Venture Company *Fracasso Volkmann* is the result of a common project of the Fracasso Group and the Volkmann & Rossbach Group, leading companies in road furniture.

Fracasso Volkmann offers the widest product range with more than hundred different EN 1317 tested vehicle restraint systems covering all containment levels and including all European National Standards.

The product portfolio is completed by steel culverts, mobile barriers, noise protecting systems and steel constructions for civil and industrial infrastructure.

The JV Company has a comprehensive presence on the EMEA markets through direct subsidiaries or partner companies and supports clients from the beginning phase of their project to the final installation of the product.

The mission of Fracasso Volkmann is to be the worldwide leader in its market segment developing new solutions to improve road safety and standards for civil-industrial constructions.

By founding this new Joint Venture, the companies Fracasso SpA and Volkmann & Rossbach GmbH & Co. KG are going to improve the service for their clients and partner companies significantly.

Fracasso is a multinational Group with the headquarter located in Fiesso d'Artico, a beautiful town between Padua and Venice, in the northern part of Italy.
Oreste Fracasso, the company founder, started the business founding a small artisan laboratory in the middle of the 1940's later transformed into a mass production industry around the early 50's with production of metal scaffolding.

In the next decade products offered by Fracasso increased in range, including formworks for cement, and money was invested in an R&D structure focusing on designing and carrying out a wide portfolio of road safety barriers, main pipes, breast walls, noise-reducing barriers and photovoltaic solutions acting even as EPC even as steel structure provider. Afterwards the company started with the production of civil and industrial buildings, hotels and social housing.
During 90's, Fracasso started an internationalization program focused on new and growing markets. The process allowed Fracasso to become a strategic partner for general contractors and local firms, offering deep knowledge of the markets and competencies in feeding customer needs, developing and supplying state of art products with a strong and capillary presence in Europe, Africa, Asia and Middle East. Fracasso Deutschland, Fracasso Constructii (Romania), Fracasso Hellas (Greece), Fracasso India, Fracasso Ri.doo (Croatia) and Fracasso Algèrie represents Fracasso Group worldwide offices.

The VOLKMANN & ROSSBACH Group is one of the biggest and most innovative road safety companies in Germany and appreciated expert for contractors and local partners all over the world. The headquarter is situated in Montabaur, a small town between Cologne and Frankfurt, in the Midwest of Germany.

Starting in 1963 as a small company for Road Marking and Guardrail Systems, nowadays VOLKMANN & ROSSBACH – with this tradition and the know-how of nearly 50 years - is standing for safety on roads and highways globally.

More than 1200 highly skilled employees and specialists in different subsidiaries develop innovative vehicle restraint systems, manufacture in modern plants and install the high-quality products to ensure safety on roads in the world.

As a competent partner and consultant for our customers, VOLKMANN & ROSSBACH provides the needed know-how for planning, design, realization and supervision of projects.

The product portfolio is fulfilled by Mobile Safety Barriers, Amphibian Protection Systems, Solar Constructions, Crash Protection, Race and Test Tracks and Intelligent Transportation Systems.

Note

This brochure can help to choose the guardrail systems suitable for own use.
In order to get the correct function of the safety barriers we suggest to read all the parts contained in the test reports.

OUR GUARDRAIL SYSTEM:

Containment Level	N2				H1					
	Working width	ASI	Name	Page	Working width	ASI	Name	Page	Working width	ASI
Single-sided Pile-driven	W1	B	ESP Plus W1	6	W3	A	EasyRail 1.33	8	W3	A
	W2	B	B29707	7	W3	A	SuperRail ES 1.0	9	W4	A
	W2	A	EasyRail 1.33	8	W4	A	B33061	19	W4	B
	W2	A	SuperRail ES 1.0	9	W4	A	EasyRail 2.0	10	W4	A
	W3	A	EasyRail 2.0	10	W4	A	OBB 2.0	20	W4	A
	W4	A	EasyRail 4.0	11	W4	A	EDSP 1.33	21	W4	A
	W4/W5	A	ESP 2.0	12	W4	A	SuperRail ES 1.33	22	W4	A
	W5	A	EasyRail 6.0	13	W5	A	EDSP 2.0	23	W5	A
	W5	A	ESP 4.0	14					W5	A
	W5	A	ESP 4.0 MPS	15					W6	A
	W5	A	B36345	16					W7	A
	W6	A	B25635	17					W8	A
	W7	A	B29711	18						
On structure					W4	A	EasyRail 1.33 OS	24	W4	A
					W5	A	EDSP 1.33 OS	25	W4	B
									W4	A
									W4	A
									W4	C
									W5	B
Safety Barriers and Noise protection									W8	B
									W8	B
Double-sided Pile-driven	W6	A	B25635	17	W4	A	OBB 2.0	20	W4	B
					W6	A	DDSP 4.0	26	W4	A
					W6	A	B22478	27	W4	B
									W6	A

TRANSITIONS

Containment Level	N2		H1		H2	
	Name	Page	Name	Page	Name	Page
Steel to Steel	EasyRail-ESP	76	EasyRail-EDSP	77	Flextra SR-SR ECO	83
			EasyRail-SR ECO	78	3n32539 H2/H2	84
			3n36354 H1/H2	79		
			Flextra SR ECO-EDSP	80		
			Flextra SR-EDSP	81		
Steel to concrete			BeStCONNECT ER	82	BeStCONNECT EDSP	85
					3n34381 Safe Link	86
					BeStCONNECT SR ECO	87
					BeStCONNECT SR	88

H2				H3				H4-B	
Name	Page	Working width	ASI	Name	Page	Working width	ASI	Name	Page
3n36060	28	W5	A	3n36450	51	W4	B	3n34352	60
3n35975	29	W6	A	3n33568	52	W5	A	3n31679	61
SuperRail Eco	30	W7	A	3n21756	53	W6	B	3n32818	62
SuperRail Eco 1A	31	W8	A	3n28079	54	W6	B	B33820	63
3n32312	32					W7	A	SuperRail	33
SuperRail	33					W8*	B	3n21610	64
VR 3N Italy	34								
3n24872	35								
3n33880	36								
B26825	37								
3n31382	38								
SuperRail ECO OS	39	W5	A	3n36706	55	W4	B	3n34650 (DS)	65
SuperRail OS	40	W6	A	3n28361mod	56	W4	B	3n31857	66
3n32122	41	W6	B	3n22490	57	W6	A	3n31622	67
B28736	42	W8	B	3n24409	58	W7	B	SuperRail Plus OS	68
SafetyRail	43					W8	B	3n28236	69
3n24335	44								
ISB26482	45					W4	A	ISB36234	70
ISB36942	46					W5	A	ISB36358	71
						W5	A	ISB35931	72
						W7	A	ISB27757	73
SuperRail Eco DS	47	W8	A	3n22051	59	W5	B	SuperRail DS	49
3n32773	48					W5	B	3n32795	74
SuperRail DS	49					W8*	A	3n22053	75
DDSP 2.0++	50								

** = H4-A*

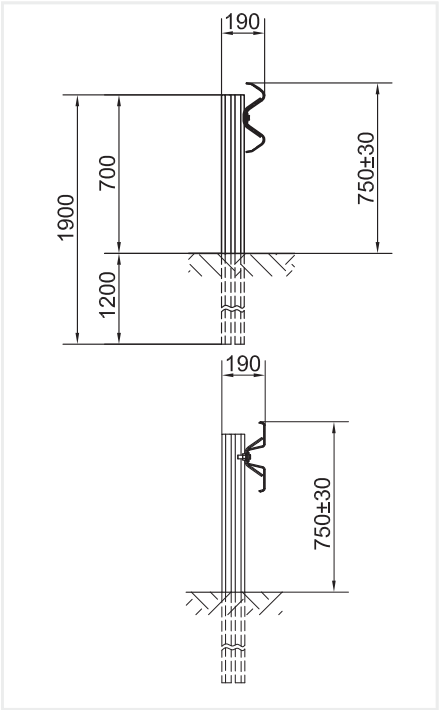
TERMINALS

Containment Level	P2	
	Name	Page
Terminals	EasyRail P2A	89
	Twiny	90
	EDSP P2A	91

SPECIAL CONSTRUCTIONS

Containment Level	Working width	ASI	Application	Name	Page
N2	W3	B	Tree and Obstacle Protection	ESP-BOS	92
P2	-	A	Tree and Obstacle Protection	Twinsafe	93
H2	W3	B	Gantry Protection	SuperRail VZB	94
H2	W3	B	Gantry Protection	3n33666	95
H2	W4	A	Median Crossing	SuperRail ECO Median Crossing	96
H2	W4	A	Median Crossing	3n36903	97
H4b	W5	B	Freestanding Barrier IntegraSystem	3n36779	98

ESP PLUS W1



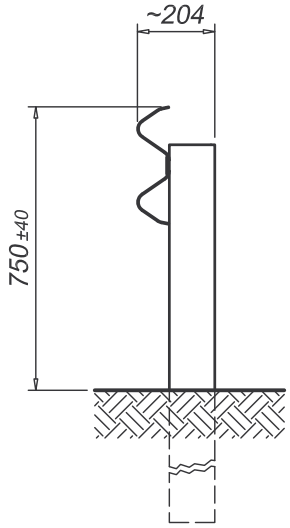
Performance	
Containment level	N2
Acceleration Severity Index “ASI”	B
Working width	W1
Extreme lateral position of the vehicle	-
Dynamic deflection	0.5 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	194/190 mm (A/B profile)
Centre to centre between posts	666 mm
Tested minimum length (without terminal end)	60 m

Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, reinforcement beam, thickness 4.2 mm, 4300 mm length, Sigma posts 100x55x4.2 mm, h. 1900 mm, the posts are driven into the ground every 666 mm, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE no. 0176-CPD-2010

B29707 N2-W2-B



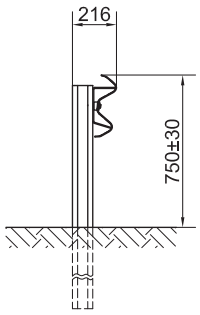
Performance	
Containment level	N2
Acceleration Severity Index “ASI”	B
Working width	W2 (0.80 m)
Extreme lateral position of the vehicle	-
Dynamic deflection	0.7 m

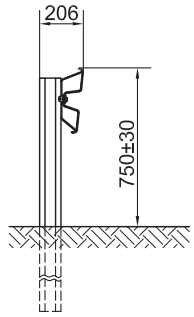
Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	204 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	54 m

Description

Supply and installation of 2-waves safety barrier, thickness 2.5 mm, U posts 120x80x5.0, h. 1500 mm, driven into the ground every 2000 mm, nuts and bolts and reflectors.
S235JR-S275JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 115/2131/CPD/2011

EASYRAIL 1.33





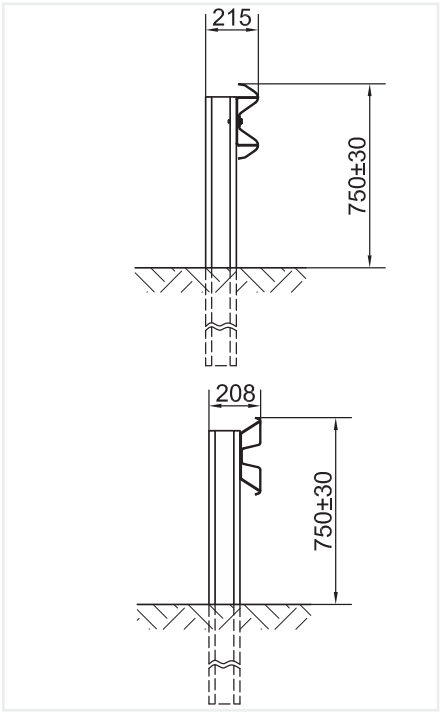
Performance		
Containment level	N2	H1
Acceleration Severity Index “ASI”	A	A
Working width	W2 (0.8 m)	W3 (1.0 m)
Extreme lateral position of the vehicle	-	2.7 m
Dynamic deflection	0.7 m	0.9 m

Characteristics		
Height out of ground	750 mm	
Transversal overall dimensions	216/206 mm (A/B profile)	
Centre to centre between posts	1333 mm	
Tested minimum length (without terminal end)	48 m	60 m

Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 2.5 mm, C posts 100x60x5 mm, h. 1750 mm, the posts are driven into the ground every 1333 mm, support brackets 175/185x70x5 mm, inclined by 6°, nuts and bolts, reflectors optional.
AMVR1 steel quality on the basis of DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE no. 0066-CPD-2011 for N2 and 0067-CPD-2011 for H1

SUPER RAIL ES 1.0



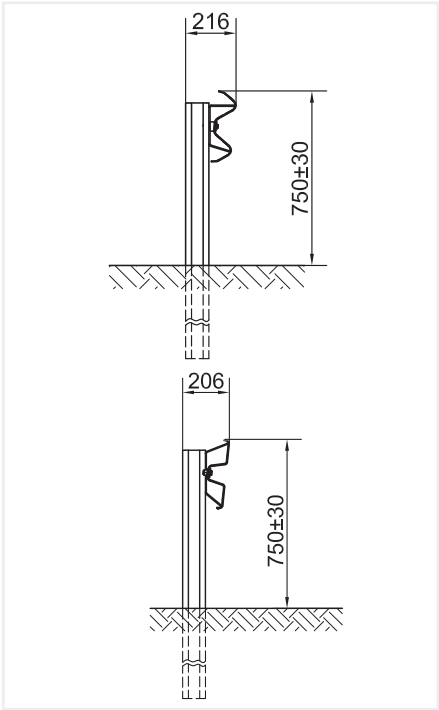
Performance		
Containment level	N2	H1
Acceleration Severity Index “ASI”	A	A
Working width	W2 (0.70 m)	W3(0.80 m)
Extreme lateral position of the vehicle	-	2.70 m
Dynamic deflection	0.50 m	0.80 m

Characteristics		
Height out of ground	750 mm	
Transversal overall dimensions	210/200 mm (A/B profile)	
Centre to centre between posts	1000 mm	
Tested minimum length (without terminal end)	60 m	60 m

Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, posts C 125 mm, h. 1750 mm, the posts are driven into the ground every 1000 mm, support brackets 200/185x70x5 mm, nuts and bolts, reflectors optional.
S235JR/S355JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE no. 0060-CPD-2011 for N2 and 0052-CPD-2011 for H1

EASYRAIL 2.00



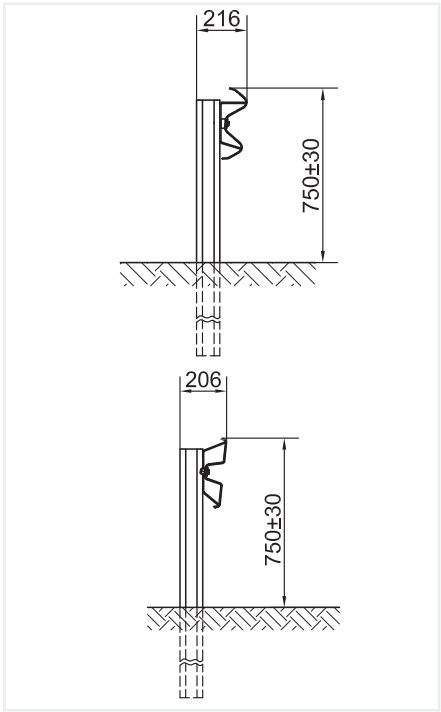
Performance		
Containment level	N2	H1
Acceleration Severity Index “ASI”	A	A
Working width	W3 (1.0 m)	W4 (1.3 m)
Extreme lateral position of the vehicle	-	2.3 m
Dynamic deflection	0.7 m	1.2 m

Characteristics		
Height out of ground	750 mm	
Transversal overall dimensions	216/206 mm (A/B profile)	
Centre to centre between posts	2000 mm	
Tested minimum length (without terminal end)	52 m	68 m

Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 2.5 mm, C posts 100x60x5 mm, h. 1750 mm, the posts are driven into the ground every 2000 mm, support brackets 175/185x70x5 mm, inclined by 6°, nuts and bolts, reflectors optional.
AMVR1 steel quality on the basis of DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE no. 0068-CPD-2011 for N2 and 0069-CPD-2011 for H1

EASYRAIL 4.00



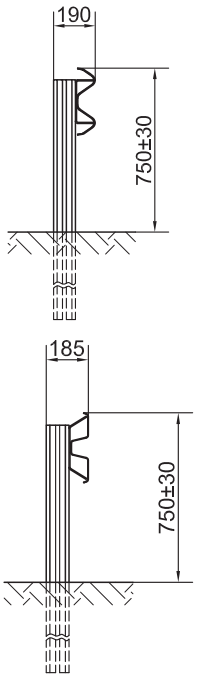
Performance	
Containment level	N2
Acceleration Severity Index “ASI”	A
Working width	W4 (1.30 m)
Extreme lateral position of the vehicle	-
Dynamic deflection	0.90 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	216/206 mm (A/B profile)
Centre to centre between posts	4000 mm
Tested minimum length (without terminal end)	84 mm

Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 2.5 mm, C posts 100x60x5 mm, h. 1750 mm, the posts are driven into the ground every 4000 mm, support brackets 175/185x70x5 mm, inclined by 6°, nuts and bolts, reflectors optional.
AMVR1 steel quality on the basis of DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE no. 1826-CPD-11-02-14-DR3

ESP 2.00



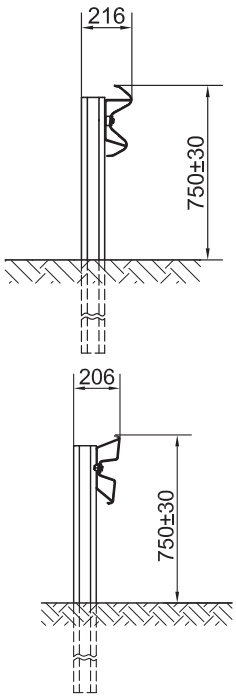
Performance		
Containment level	N2	N2
Acceleration Severity Index “ASI”	A	A
Working width	A-Profile W4	B-Profile W5
Extreme lateral position of the vehicle	-	
Dynamic deflection	A-Prof 1.3 m	B-Prof 1.6 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	190/185 mm (A/B profile)
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	60 m

Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, Sigma posts 100x55x4.2 mm, h. 1900 mm, the posts are driven into the ground every 2000 mm, support brackets 200/185x70x5 mm, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE no. 0760-CPD-F10129 for profile A and 0760-CPD-F10130 for profile B

EASYRAIL b.00



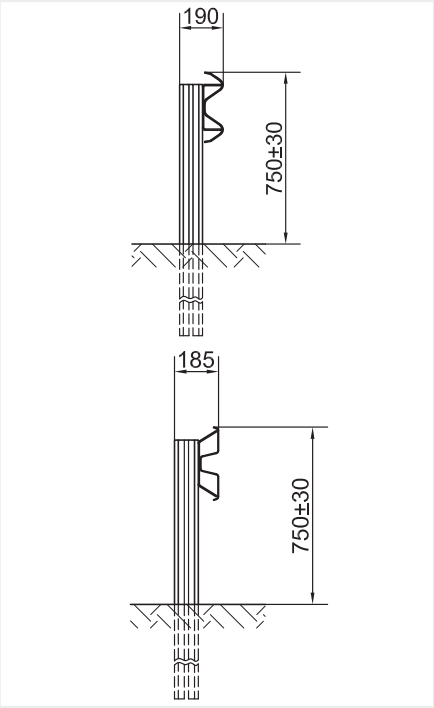
Performance	
Containment level	N2
Acceleration Severity Index “ASI”	A
Working width	W5 (1.7 m)
Extreme lateral position of the vehicle	-
Dynamic deflection	1.6 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	216/206 mm (A/B profile)
Centre to centre between posts	6000 mm
Tested minimum length (without terminal end)	84 m

Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 2.5 mm, C posts 100x60x5 mm, h. 1750 mm, the posts are driven into the ground every 6000 mm, support brackets 175/185x70x5 mm, inclined by 6°, nuts and bolts, reflectors optional.
AMVR1 steel quality on the basis of DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE no. 0070-CPD-2011

ESP 4.00



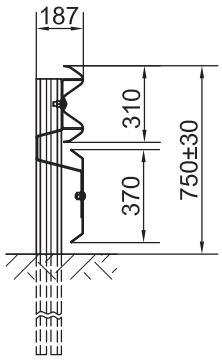
Performance	
Containment level	N2
Acceleration Severity Index “ASI”	A
Working width	W5
Extreme lateral position of the vehicle	-
Dynamic deflection	1.6 m

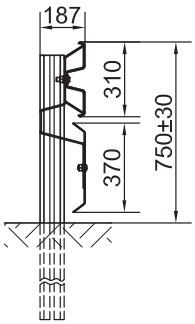
Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	190/185 mm (A/B profile)
Centre to centre between posts	4000 mm
Tested minimum length (without terminal end)	60 m

Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, Sigma posts 100x55x4.2 mm, h. 1900 mm, the posts are driven into the ground every 4000 mm, support brackets 200/185x70x5 mm, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE no. 0177-CPD-2010

ESP 4.00 MPS





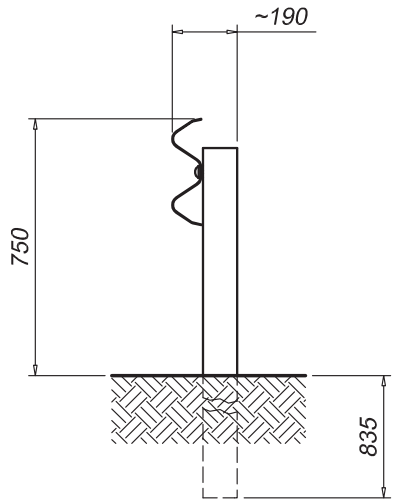
Performance	
Containment level	N2
Acceleration Severity Index “ASI”	A
Working width	W5
Extreme lateral position of the vehicle	-
Dynamic deflection	1.5 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	190/185 mm (A/B profile)
Centre to centre between posts	4000 mm
Tested minimum length (without terminal end)	60 m

Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, underride protection beam, thickness 2.5 mm, Sigma posts 100x55x4.2 mm, h. 1900 mm, the posts are driven into the ground every 4000 mm, support bracket 200/185x70x5 mm, suspension brackets for underride protection, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE no. 0760-CPD-F10132

B36345 N2-W5-A



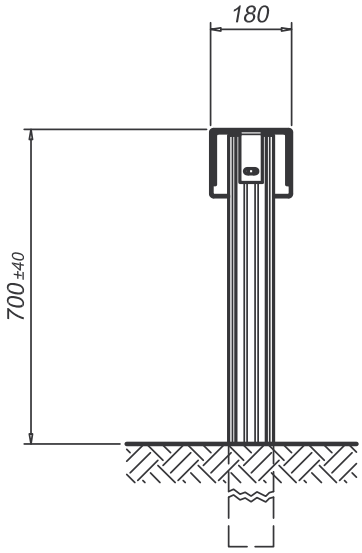
Performance	
Containment level	N2
Acceleration Severity Index “ASI”	A
Working width	W5 (1.70 m)
Extreme lateral position of the vehicle	-
Dynamic deflection	1.60 m

Characteristics	
Height out of ground	700 mm
Transversal overall dimensions	180 mm
Centre to centre between posts	2666 mm
Tested minimum length (without terminal end)	42.64 m

Description

Supply and installation of a 2-wave safety barrier, thickness 4,0 mm, C100x50x25x4,0 mm H= 1500 mm, fixed to ground every 4500 mm; assembled with nuts and bolts and provided with reflectors.
S235JR-S275JR-S355JR steel quality according to EN 10025 EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 211/2131/CPD/2012

B25635 N2-W6-A



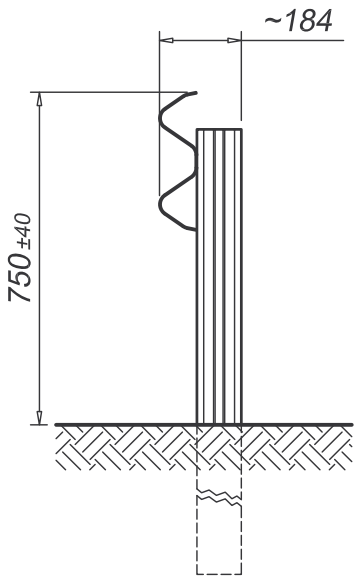
Performance	
Containment level	N2
Acceleration Severity Index “ASI”	A
Working width	W6 (2.10 m)
Extreme lateral position of the vehicle	-
Dynamic deflection	1.90 m

Characteristics	
Height out of ground	700 mm
Transversal overall dimensions	180 mm
Centre to centre between posts	2666 mm
Tested minimum length (without terminal end)	42.64 m

Description

Supply and installation of safety barrier consisting of C beam 180x150x25x3.5 mm with sleeve, SIGMA posts 100x55x4.2, h. 1550 mm, driven into the ground every 2666 mm, L section Ø 115x75x4 mm beam-post connection, nuts and bolts and reflectors.
S235JR-S275JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 132/2131/CPD/2011

B29711 N2-W7-A



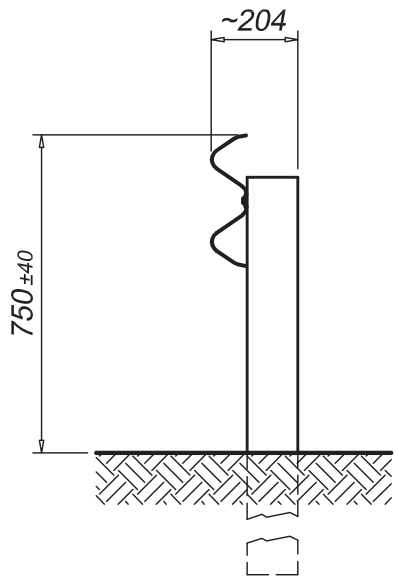
Performance	
Containment level	N2
Acceleration Severity Index “ASI”	A
Working width	W7
Extreme lateral position of the vehicle	-
Dynamic deflection	2.30 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	184 mm
Centre to centre between posts	4000 mm
Tested minimum length (without terminal end)	56 m

Description

Supply and installation of 2-waves safety barrier, thickness 2.5 mm, SIGMA posts 100x55x4,0 mm h. 1500 mm, driven into the ground every 4000 mm, nuts and bolts and reflectors.
S235JR-S275JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. AISICO/042/CPD/2010

B330b1 H1-W4-A



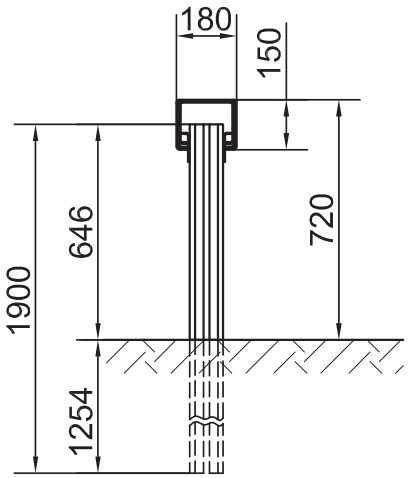
Performance	
Containment level	H1
Acceleration Severity Index “ASI”	A
Working width	W4 (1.30 m)
Extreme lateral position of the vehicle	1.60
Dynamic deflection	1.00 m

Characteristics	
Height out of ground	700 mm
Transversal overall dimensions	204 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	70 m

Description

Supply and installation of safety barrier, with 2-waves beam thickness 2,5 mm, posts C120x80x30x5 mm h.1500 mm, driven into the ground every 2000 mm, complete with assembly bolts and reflectors.
S275JR steel in quality-according EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. AISICO/050/CPD/2010 rev.1

OBB 2.0



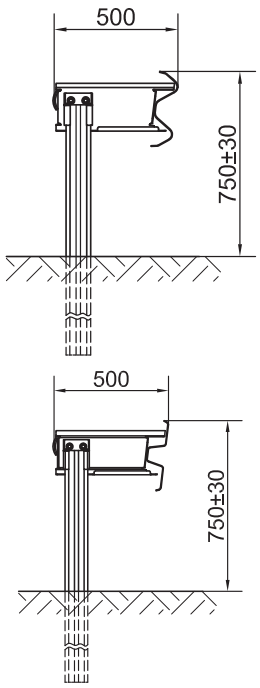
Performance	
Containment level	H1
Acceleration Severity Index “ASI”	A
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	-

Characteristics	
Height out of ground	720 mm
Transversal overall dimensions	180 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	64 m

Description

Supply and installation of safety barrier consisting of box beam 180x150x25x4 mm with but joint, Sigma posts 100x55x4.2 mm, h. 1.900 mm, the posts are driven into the ground every 2000 mm,
Fastening brackets, welded, for box beam, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.

EDSP 1.33



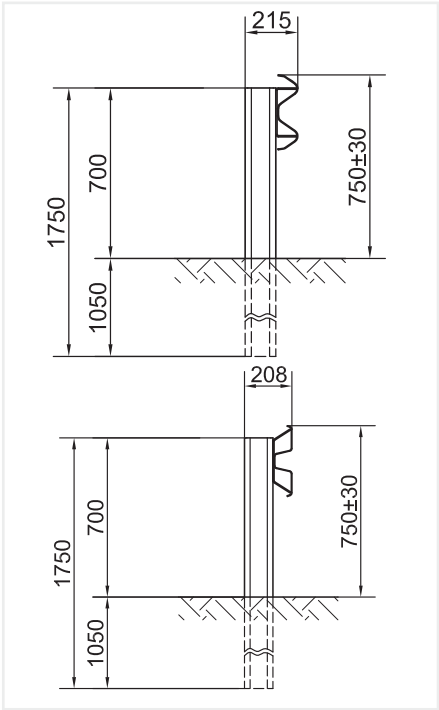
Performance	
Containment level	H1
Acceleration Severity Index “ASI”	A
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	1.1 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	500 mm
Centre to centre between posts	1333 mm
Tested minimum length (without terminal end)	60 m

Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, tension coil 70x5 mm, length 4140 mm, Sigma posts 100x55x4.2 mm, h. 1900 mm, the posts are driven into the ground every 1333 mm, spacers 480 mm with post mounted brackets, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0760/CPD/F10134

SUPER RAIL ES 1.33



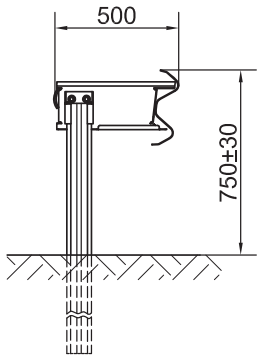
Performance		
Containment level	H1	
Acceleration Severity Index “ASI”	A	
Working width	W4	
Extreme lateral position of the vehicle	-	2.70 m
Dynamic deflection	0.90 m	

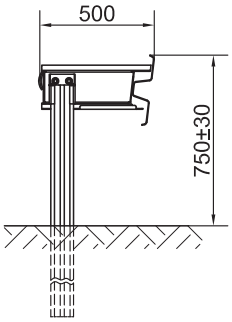
Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	210/200 mm (A/B profile)
Centre to centre between posts	1333 mm
Tested minimum length (without terminal end)	60 m

Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, posts C 125 mm, h. 1750 mm, the posts are driven into the ground every 1333 mm, support brackets 200/185x70x5 mm, nuts and bolts, reflectors optional.
S235JR/S355JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE no. 0087-CPD-2011 for H1

EDSP 2.00





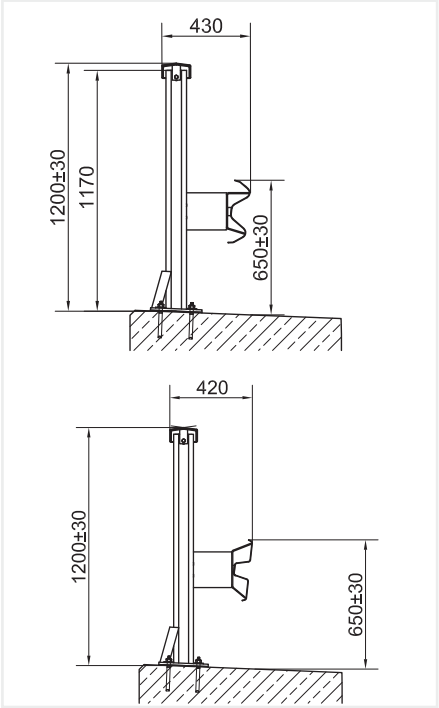
Performance	
Containment level	H1
Acceleration Severity Index “ASI”	A
Working width	W5
Extreme lateral position of the vehicle	-
Dynamic deflection	1.3 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	500 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	60 m

Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, tension coil 70x5 mm, length 4140 mm, Sigma posts 100x55x4.2 mm, h. 1900 mm, the posts are driven into the ground every 2000 mm, spacers 480 mm with post mounted brackets, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0760/CPD/F10133

EASY RAIL 1.33 OS



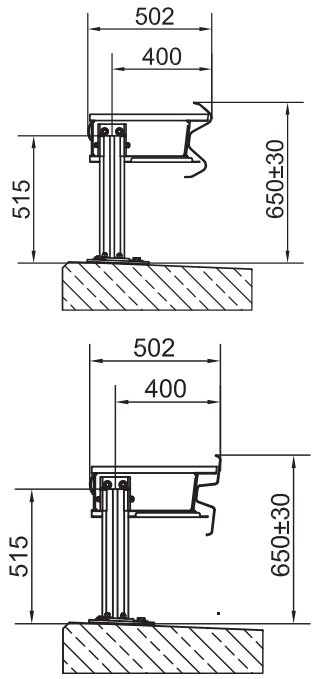
Performance	
Containment level	H1
Acceleration Severity Index “ASI”	A
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	0.6 m

Characteristics	
Height out of ground	1200 mm
Transversal overall dimensions	430/420 mm (A/B Profile)
Centre to centre between posts	1333 mm
Tested minimum length (without terminal end)	36 m

Description

Supply and installation of 2-waves safety barrier on structure (Profile: German A / B), thickness 2.5 mm, profiled railing 140x74x2.5 mm, length 3.998 mm, C posts 100x60x5 mm, h. 1170 mm with base plates 250x300x12 mm, the posts are fixed on the structure every 1333 mm, Deformation elements Ø 193 mm, support brackets 175/185x70x5 inclined by 6°, nuts and bolts, reflectors optional.
AMVR1 steel quality on the basis of DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.

EDSP 1.33 OS



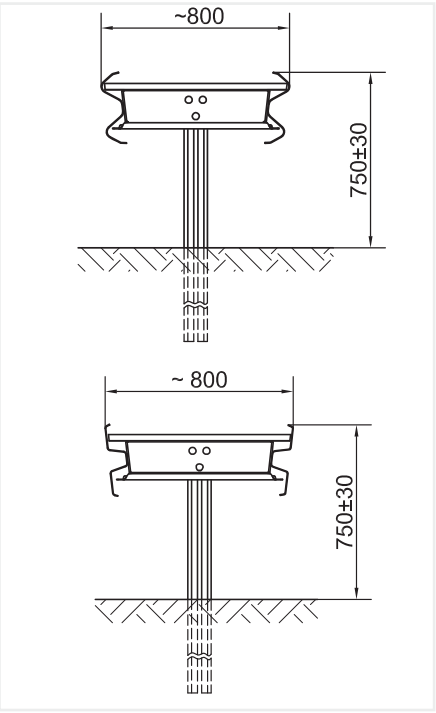
Performance	
Containment level	H1
Acceleration Severity Index “ASI”	A
Working width	W5
Extreme lateral position of the vehicle	-
Dynamic deflection	1.2 m

Characteristics	
Height out of ground	650 mm
Transversal overall dimensions	500 mm
Centre to centre between posts	1333 mm
Tested minimum length (without terminal end)	68 m

Description

Supply and installation of 2-waves safety barrier on structure (Profile: German A / B), thickness 3.0 mm, tension coil 70x5 mm, length 4140 mm, Sigma posts 100x55x4.2 mm, h. 515 mm with base plates 250x300x10 mm, the posts are fixed on the structure every 1333 mm, spacers 480 mm with post mounted brackets, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0760/CPD/F10135

DDSP 4.00



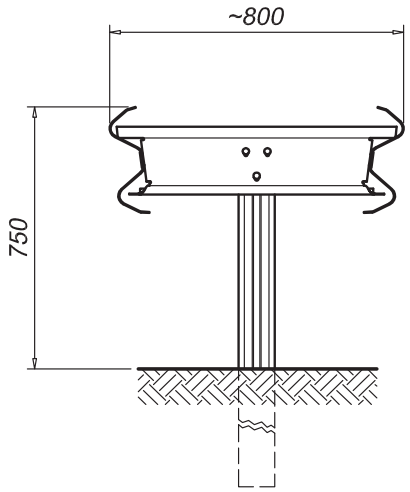
Performance	
Containment level	H1
Acceleration Severity Index “ASI”	A
Working width	W6
Extreme lateral position of the vehicle	-
Dynamic deflection	A-Prof 1.6 m / B-Prof 1.8 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	800 mm
Centre to centre between posts	4000 mm
Tested minimum length (without terminal end)	60 m

Description

Supply and installation of double sided 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, Sigma posts 100x55x4.2 mm, h. 1.900 mm, the posts are driven into the ground every 4000 mm, Separators 780 mm with post mounted brackets, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 132/2131/CPD/2011

B22478 H1-W6-A



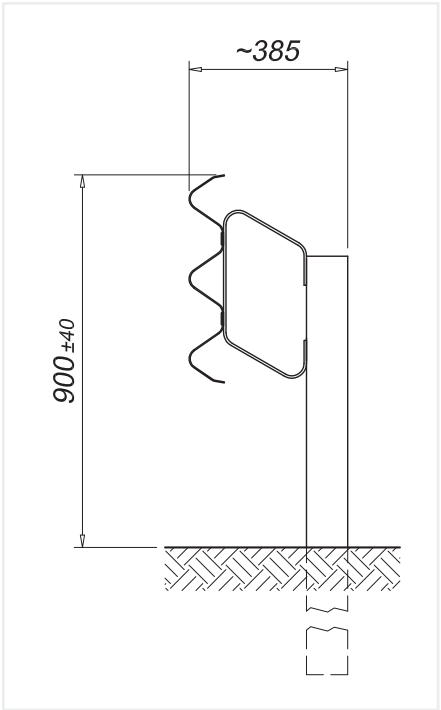
Performance	
Containment level	H1
Acceleration Severity Index “ASI”	A
Working width	W6 (1.95 m)
Extreme lateral position of the vehicle	1.60
Dynamic deflection	1.50 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	800 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	120 m

Description

Supply and installation of safety barrier, with 2-waves beam thickness 2.5 mm, posts C120x80x30x5 mm h.2000 mm, driven into the ground every 2000 mm, complete with assembly bolts and reflectors.
S275JR steel in quality-according EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. AISICO/050/CPD/2010 rev.1

3N3bOb0 H2-W3-A



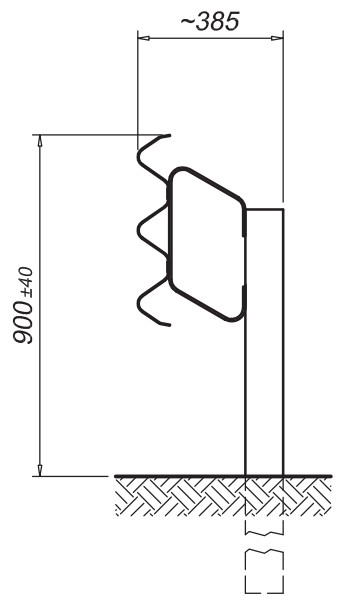
Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W3 (1.00 m)
Extreme lateral position of the vehicle	1.40 m
Dynamic deflection	0.90 m

Characteristics	
Height out of ground	900 mm
Transversal overall dimensions	385 mm
Centre to centre between posts	1000 mm
Tested minimum length (without terminal end)	54 m

Description

Supply and installation of a 3-wave safety barrier, thickness 4,0 mm, C100x50x25x4,0 mm h= 1700 mm, fixed to ground every 1000 mm; spacers 407x201x5.9 mm L=80 mm, assembled with nuts and bolts and provided with reflectors.
S235JR-S355JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 203/2131/CPD/2012

3N35975 H2-W4-A



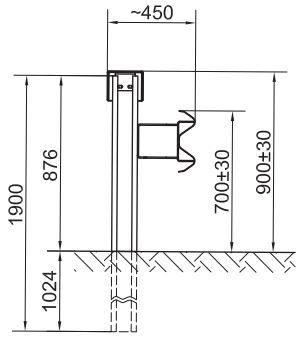
Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W4 (1.30 m)
Extreme lateral position of the vehicle	-
Dynamic deflection	1.1 m

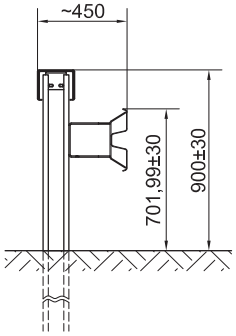
Characteristics	
Height out of ground	900 mm
Transversal overall dimensions	385 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	49.50 m

Description

Supply and installation of a 3-wave safety barrier, thickness 2,5 mm, C100x50x25x4,0 mm h= 1700 mm, fixed to ground every 1500 mm; spacers 407x201x5.9 mm L=80 mm, assembled with nuts and bolts and provided with reflectors.
S235JR-S275JR-S355JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 187/2131/CPD/2011

SUPER RAIL ECO





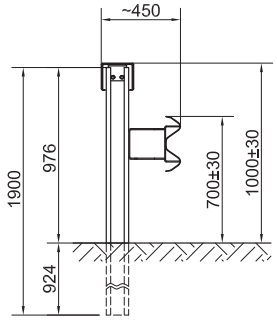
Performance	
Containment level	H2
Acceleration Severity Index “ASI”	B
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	0.7 m

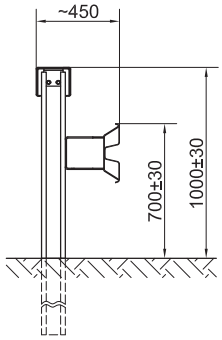
Characteristics	
Height out of ground	900 mm
Transversal overall dimensions	450 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	52 m

Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, box beam 180x150x3 mm length 3.998 mm, posts C 125, h. 1.900 mm, the posts are driven into the ground every 2000 mm, deformation brackets 200 mm, nuts and bolts, reflectors optional.
S235JR/S355JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0009/CPD/2011

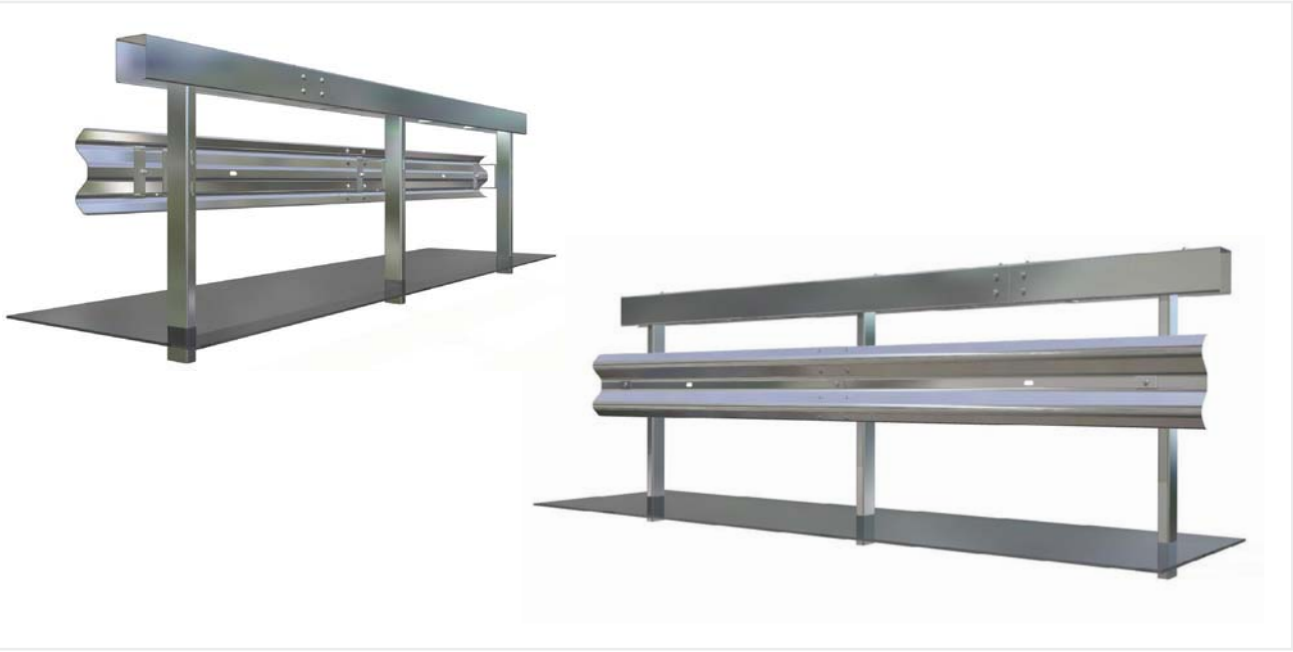
SUPER RAIL ECO 1A





Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	1.1 m

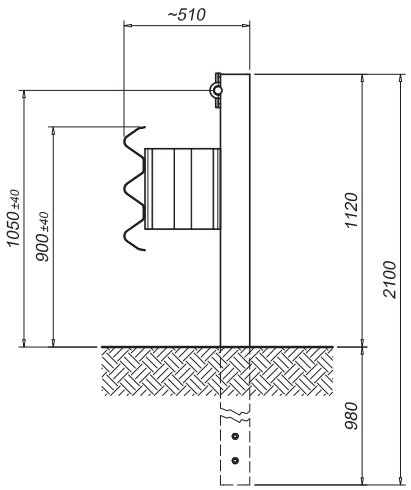
Characteristics	
Height out of ground	1000 mm
Transversal overall dimensions	450 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	52 m



Description

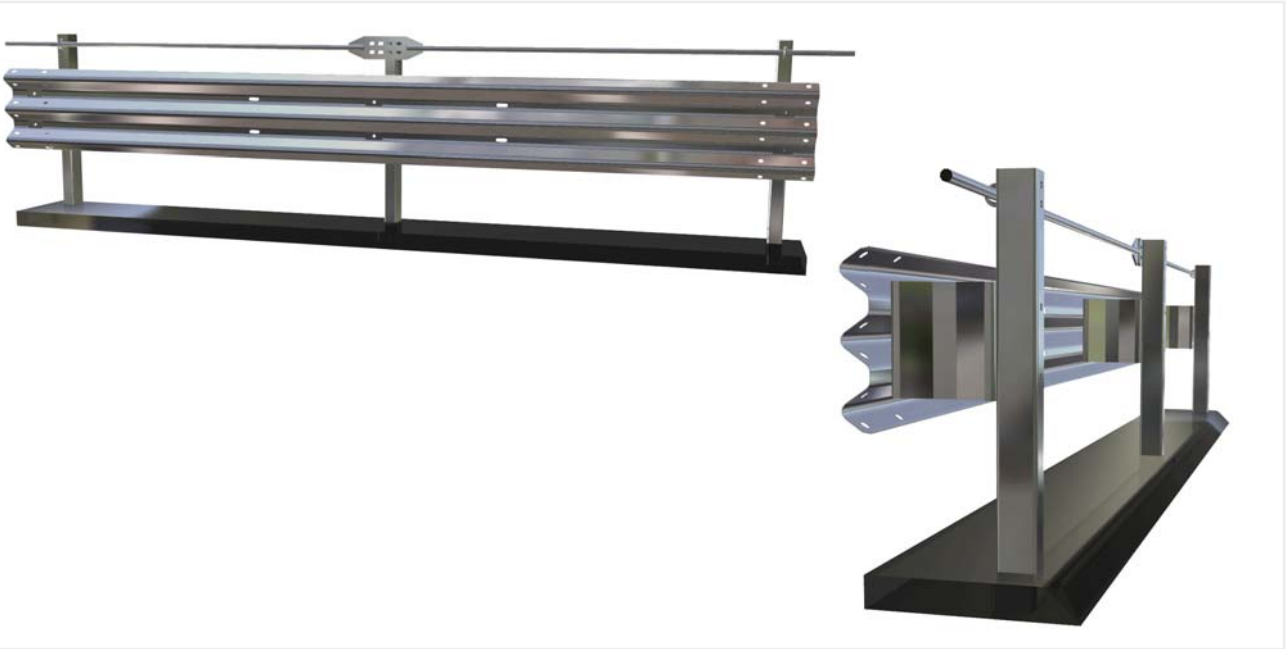
Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, box beam 180x150x3 mm length 3.998 mm, posts C 125, h. 1.900 mm, the posts are driven into the ground every 2000 mm, deformation brackets 200 mm, nuts and bolts, reflectors optional.
S235JR/S355JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0096/CPD/2011

3N32312 H2-W4-A



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W4 (1.10 m)
Extreme lateral position of the vehicle	1.20 m
Dynamic deflection	0.80 m

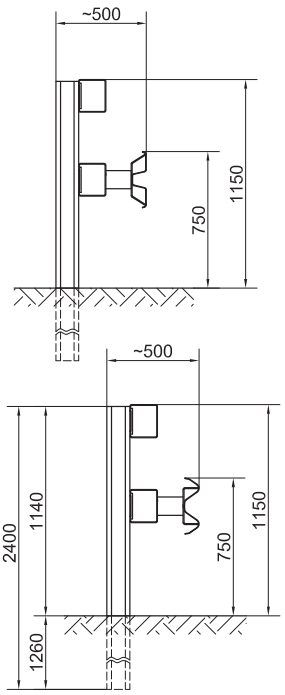
Characteristics	
Height out of ground	1050 mm / 900 mm
Transversal overall dimensions	510 mm
Centre to centre between posts	2250 mm
Tested minimum length (without terminal end)	78 m



Description

Supply and installation of a 3-wave safety barrier, thickness 2,5 mm, C posts 120x80x30 mmx5,9 mm, h=2100 mm, fixed to ground every 2250 mm; spacers 310x80x5,9 mm, with an upper threaded retaining bars Ø 32 mm, assembled with nuts and bolts and provided with reflectors.
S235JR-S355JR steel quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. AISICO/039/CPD/2010

SUPER RAIL

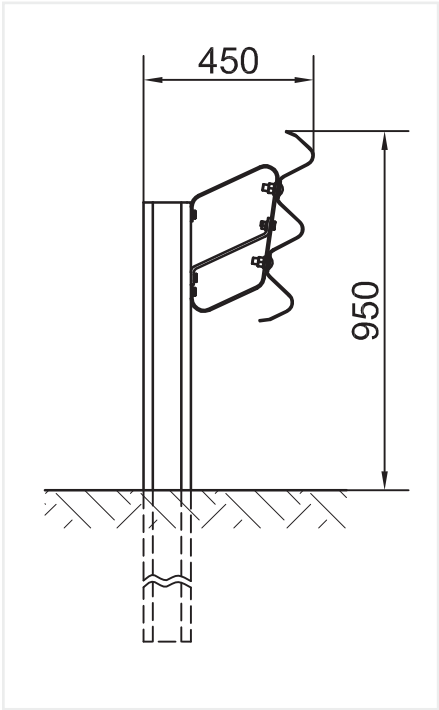


Performance		
Containment level	H2	H4B
Acceleration Severity Index “ASI”	A	A
Working width	W4	W7
Extreme lateral position of the vehicle	-	
Dynamic deflection	0.8 m	2.12 m

Characteristics		
Height out of ground	1150 mm	
Transversal overall dimensions	500 mm	
Centre to centre between posts	1333 mm	
Tested minimum length (without terminal end)	40 m	76 m

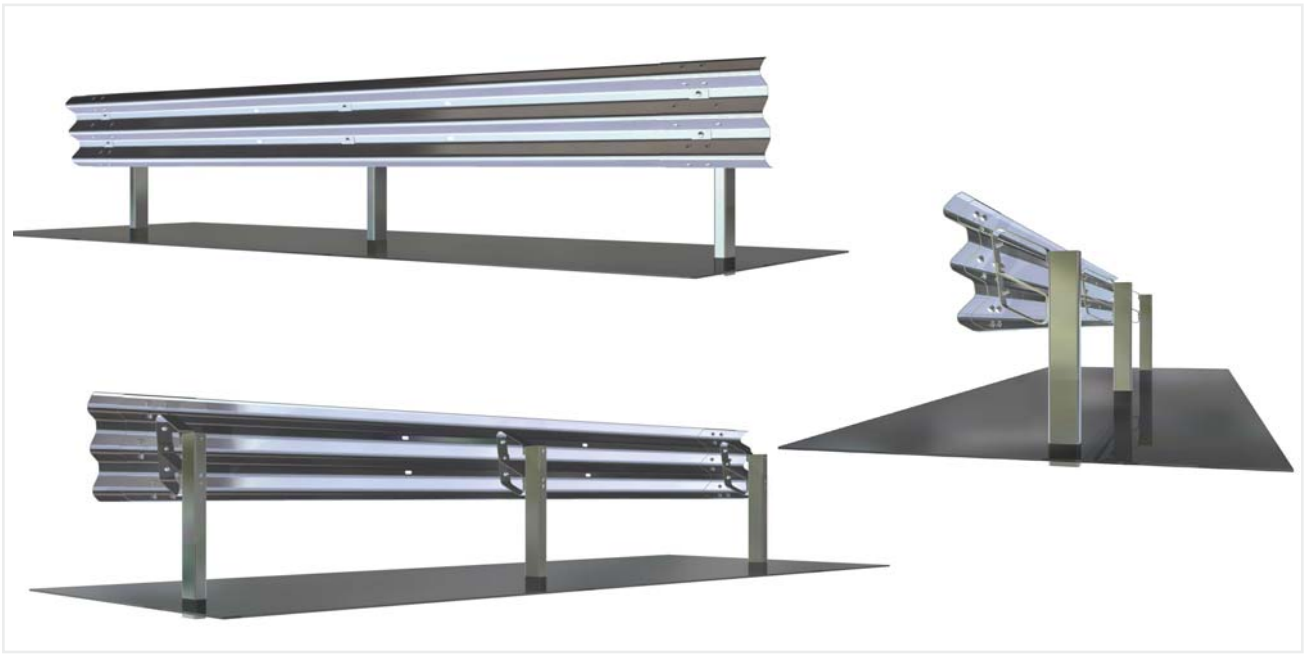
Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, box beams 180x150x4 mm length 3.998 mm, posts C 125, h. 2.400 mm, the posts are driven into the ground every 1333 mm, Deformation elements Ø 139.7 mm, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0139/CPD/2010



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W5
Extreme lateral position of the vehicle	-
Dynamic deflection	1.60 m

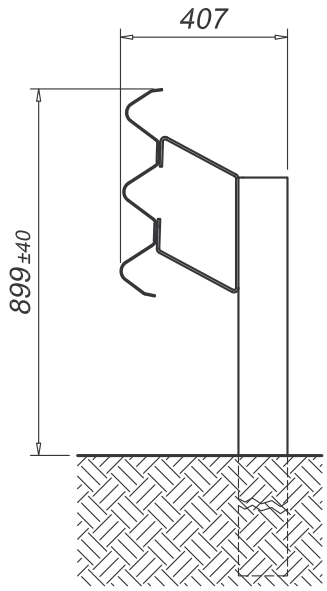
Characteristics	
Height out of ground	950 mm
Transversal overall dimensions	450 mm
Centre to centre between posts	2250 mm
Tested minimum length (without terminal end)	60 m



Description

Supply and installation of 3-wave safety barrier, thickness 2.7 mm, posts C 125, h. 1.600 mm, the posts are driven into the ground every 2250 mm, deformation elements with stiffener-sheets, nuts and bolts, reflectors optional.
S275JR/S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.

3N24072 H2-W5-A



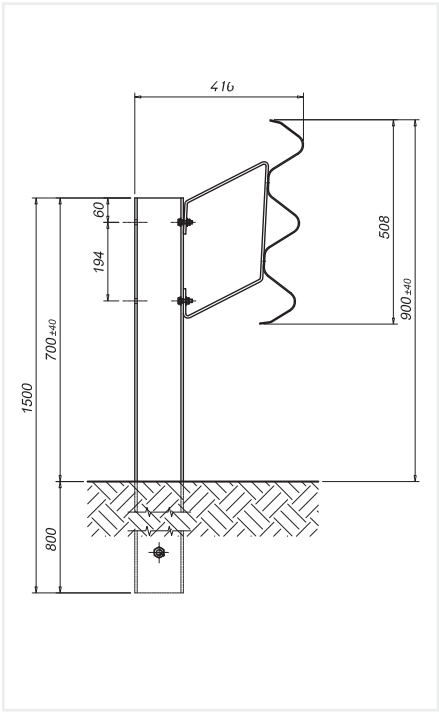
Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W5 (1.70 m)
Extreme lateral position of the vehicle	2.20 m
Dynamic deflection	1.60 m

Characteristics	
Height out of ground	899 mm
Transversal overall dimensions	407 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	48 m

Description

Supply and installation of a 3-wave safety barrier, thickness 3,0 mm, C post 120x80x30x5.9 mm h= 1840 mm, fixed to ground every 2000 mm; spacers 80x5.9 mm, assembled with nuts and bolts and provided with reflectors.
S235JR-S275JR-S355JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 121/2131/CPD/2011.

3N33880 H2-W6-A



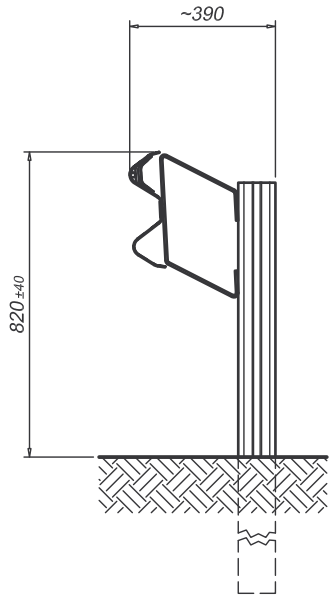
Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W6 (2.10 m)
Extreme lateral position of the vehicle	2.00 m
Dynamic deflection	2.10 m

Characteristics	
Height out of ground	900 mm
Transversal overall dimensions	416 mm
Centre to centre between posts	2250 mm
Tested minimum length (without terminal end)	88.50 m

Description

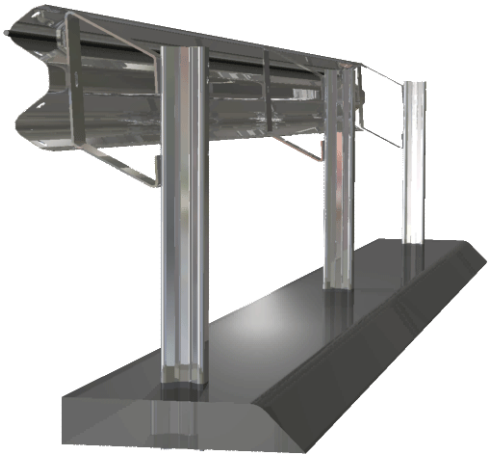
Supply and installation of 3-waves safety barrier, thickness 2,5 mm, U posts 120x80x5 mm, h= 1500 mm, the posts are driven into the ground every 2250 mm, spacers 395x201x5.9 mm L=80 mm, assembled with nuts and bolts and provided with reflectors.
S235JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 092/2131/CPD/2010

B2b825 H2-W7-A



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W7 (2.28 m)
Extreme lateral position of the vehicle	3.25 m
Dynamic deflection	2.10 m

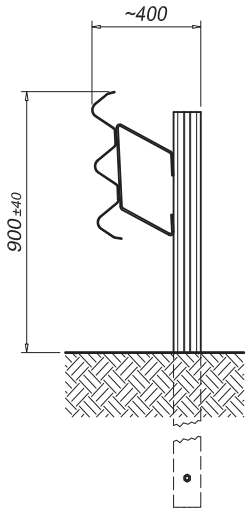
Characteristics	
Height out of ground	820 mm
Transversal overall dimensions	390 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	84.00 m



Description

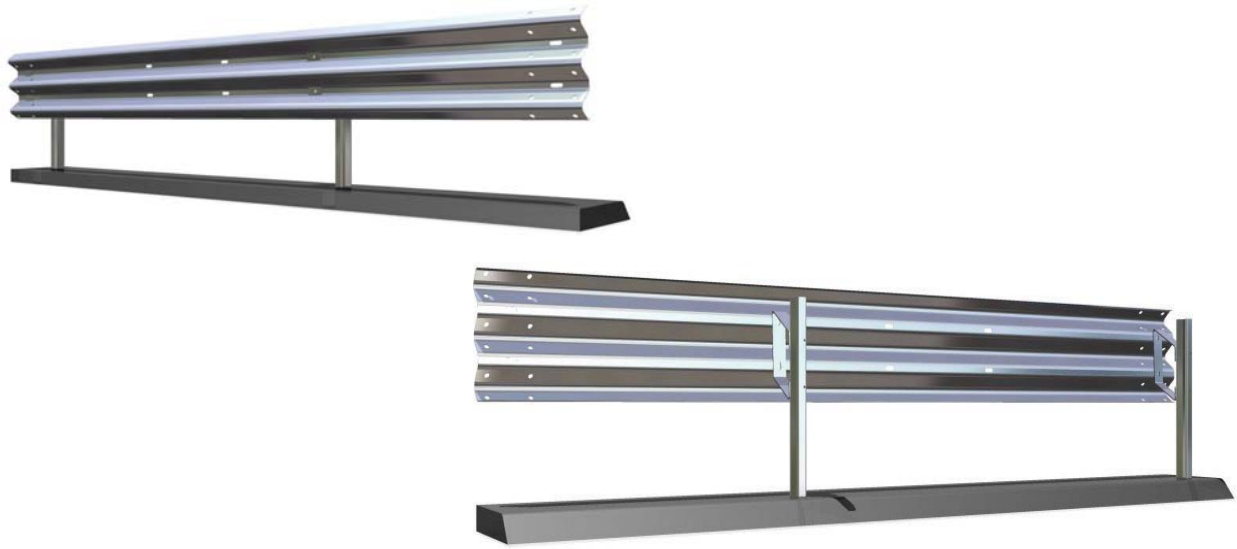
Supply and installation of 2-waves safety barrier, thickness 2.5 mm, SIGMA posts 100x55x4.2, h. 1900 mm, driven into the ground every 2000 mm, spacers 395x201x5.9 mm, Ø 14 mm rope passing between girder and spacer connected to the extremity supports, with nuts and bolts and and provided with reflectors.
S235JR-S275JR-S355JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n.AISICO/055/CPD/2010

3N31382 H2-W8-A



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W8 (2.80 m)
Extreme lateral position of the vehicle	3.40 m
Dynamic deflection	2.60 m

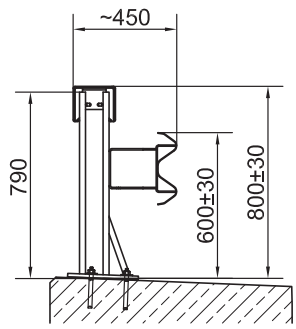
Characteristics	
Height out of ground	900 mm
Transversal overall dimensions	400 mm
Centre to centre between posts	3000 mm
Tested minimum length (without terminal end)	72.00 m

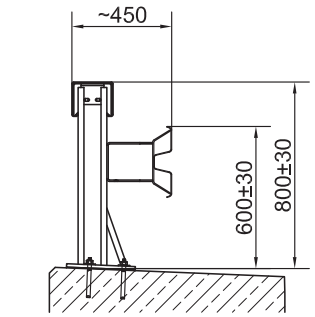


Description

Supply and installation of a 3-wave safety barrier, thickness 2,5 mm, Sigma posts 100x55 mm, h. 1900 mm, driven into ground every 3000 mm, spacers 395x201x80x5.9 mm, assembled with nuts and bolts and provided with reflectors.
S235JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. AISICO/005/CPD/2009

SUPER RAIL ECO 05





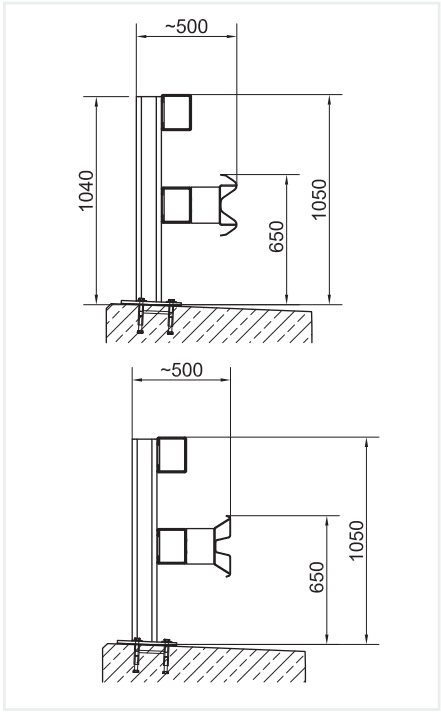
Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	1.00 m

Characteristics	
Height out of ground	800 mm
Transversal overall dimensions	450 mm
Centre to centre between posts	1333 mm
Tested minimum length (without terminal end)	60 m

Description

Supply and installation of 2-waves safety barrier on structure (Profile: German A / B), thickness 3.0 mm, box beam 180x150x3 mm length 3.998 mm, posts C 125, h. 790 mm with base plate 300x300x15 mm, the posts are fixed on the structure every 1333 mm, deformation brackets 200 mm, nuts and bolts, reflectors optional.
S235JR/S355JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0139/CPD/2010

SUPER RAIL OS



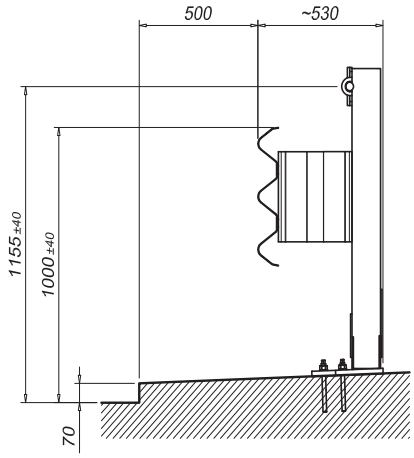
Performance	
Containment level	H2
Acceleration Severity Index “ASI”	B
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	0.65 m

Characteristics	
Height out of ground	1050 mm
Transversal overall dimensions	500 mm
Centre to centre between posts	1333 mm
Tested minimum length (without terminal end)	36 m

Description

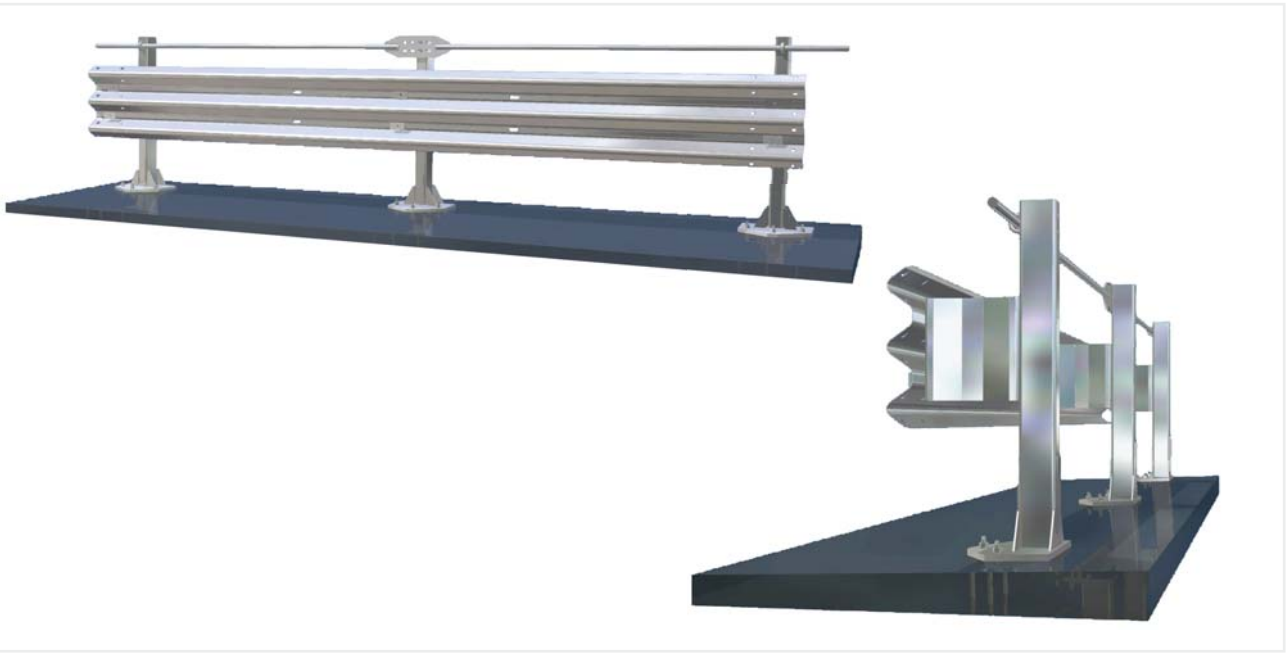
Supply and installation of 2-waves safety barrier on structure (Profile: German A / B), thickness 3.0 mm, box beams 180x150x4 mm length 3.998 mm, posts C 125, h. 1040 mm with base plate 300x300x15 mm, the posts are fixed on the structure every 1333 mm, deformation elements Ø 139.7 mm, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0120/CPD/2010

3N32122 H2-W4-A



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W4 (1.10 m)
Extreme lateral position of the vehicle	1.20 m
Dynamic deflection	0.80 m

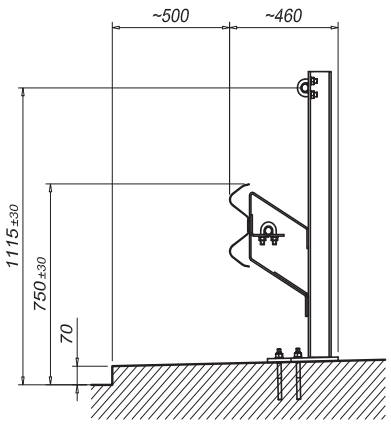
Characteristics	
Height out of ground	900 mm / 1155 mm
Transversal overall dimensions	530 mm
Centre to centre between posts	2250 mm
Tested minimum length (without terminal end)	78 m



Description

Supply and installation of a 3-wave safety barrier on structure, thickness 2,5 mm, C post 120x80x30x5,9 mm, h= 1100 mm, fixed to ground every 2250 mm by anchor bolts, spacers 310x80x5,9 mm, with an upper threaded retaining bars
Ø 32 mm with welded plates, assembled with nuts and bolts and provided with reflectors.
S235JR-S355JR steel quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. AISICO/039/CPD/2010

B28736 H2-W4-A



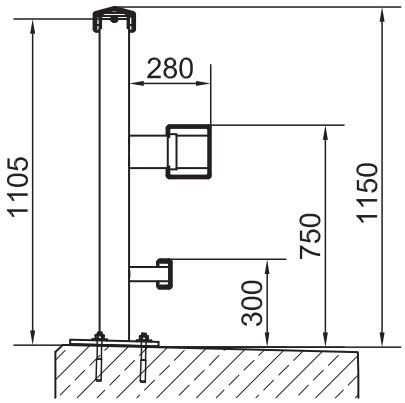
Performance	
Containment level	H2
Acceleration Severity Index “ASI”	B
Working width	W4 (1.30 m)
Extreme lateral position of the vehicle	1.30 m
Dynamic deflection	0.75 m

Characteristics	
Height out of ground	750 mm / 1155 mm
Transversal overall dimensions	460 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	68 m

Description

Supply and installation of 2-waves safety barrier on structure, thickness 3,0 mm, HEA posts 100, h. 1070 mm with plate 400x300x15 mm fixed to the concrete every 2000 mm by anchor bolts, spacers 250x260X5.9 mm, upper rail and lower rail threaded bars Ø 28 mm, nuts and bolts and reflectors.
S235JR-S275JR-S355JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n.146/2131/CPD/2011

SAFETY RAIL OS



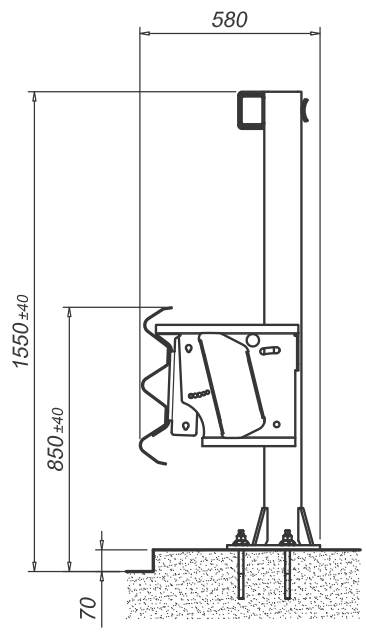
Performance	
Containment level	H2
Acceleration Severity Index “ASI”	C
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	0.72 m

Characteristics	
Height out of ground	1150 mm
Transversal overall dimensions	397 mm
Centre to centre between posts	1333 mm
Tested minimum length (without terminal end)	32 m

Description

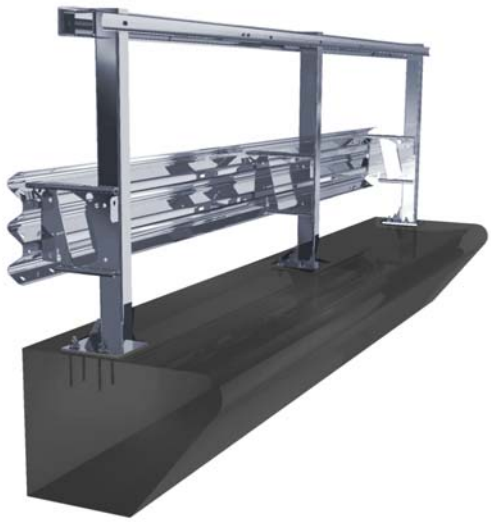
Supply and installation of safety barrier on structure with box beam 180x150x4 mm, length 3.998 mm, profiled railing 140x84x4 mm, length 3.998 mm, C-100 beam, length 3.998 mm, rectangular tube posts, h. 1150 mm with base plate 300x300x15 mm, the posts are fixed on the structure every 1333 mm, deformation elements Ø273 mm, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0071/CPD/2011

3N24335 H2-W5-B



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	B
Working width	W5 (1.65 m)
Extreme lateral position of the vehicle	-
Dynamic deflection	1.08 m

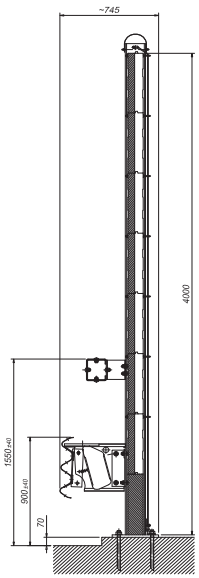
Characteristics	
Height out of ground	750 mm / 1155 mm
Transversal overall dimensions	460 mm
Centre to centre between posts	2250 mm
Tested minimum length (without terminal end)	68 m



Description

Supply and installation of 3-waves safety barrier on structure, thickness 3,0 mm, U posts 120x80x5.9, h. 1465 mm with plate 250x300x15 mm fixed to the concrete every 2250 mm by anchor bolts, spacers 460x392 mm, thickness 3 mm, energy releaser-bracer, U upper rail 120x80x5.9 with supports, rear rail 70x5 mm, nuts and bolts and reflectors.
S235JR-S275JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 119/2131/CPD/2011

ISB2H4W2 H2-W8-B (NOISE PROTECTION)



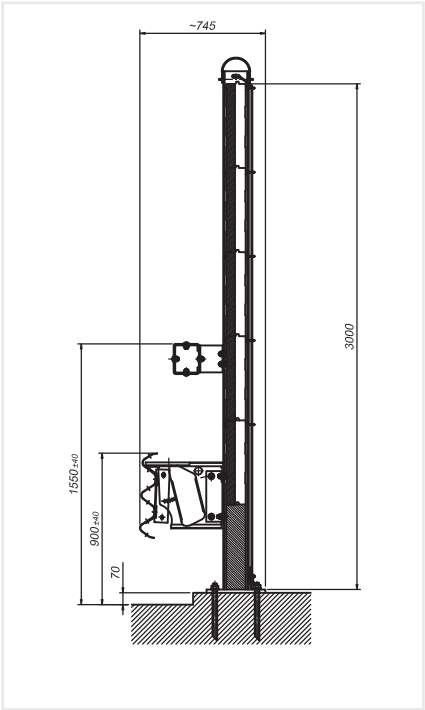
Performance	
Containment level	H2
Acceleration Severity Index “ASI”	B
Working width	W8 (2.90 m)
Extreme lateral position of the vehicle	-
Dynamic deflection	0.70 m

Characteristics	
Height out of ground	900 mm / 1550 mm / 4100 mm
Transversal overall dimensions	745 mm
Centre to centre between posts	2250 mm
Tested minimum length (without terminal end)	72.00 m

Description

Supply and installation of combined safety barrier, having 3-waves beams th. 3, 0 mm., posts HEA 160 H 4080 mm. with base plate 350x350x20 mm and anchor bolts M24x330 c/c 2250 mm., spacers 460x329x3 with energy absorber, upper beam C180x150x3 mm with supports, bolts and reflectors.
S235JR-S275JR-S355JR steel quality according to EN 10025
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
Between HEA posts, there are soundproofing panels, made of a concrete panel H 500 mm at the base, then aluminium panels th. 1,2 mm. dim. 115x500 C7C 2250 mm, up to the top of the posts. Inside the panels, a cushion of mineral wool th. 50 mm. and density of 90 kg/m3 and a protective coating on the side exposed to the traffic. Panels are fixed one another by means of steel ropes diam. 6-14 mm with clamps to avoid their falling down in case of crash.
The treatment of the panel surface is provided by a powdered coating with a fixing by fire on a high-temperature oven. The standard RAL colour is 6021.
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 098/2131/CPD/2010

ISB36942 H2-W8-B (NOISE PROTECTION)



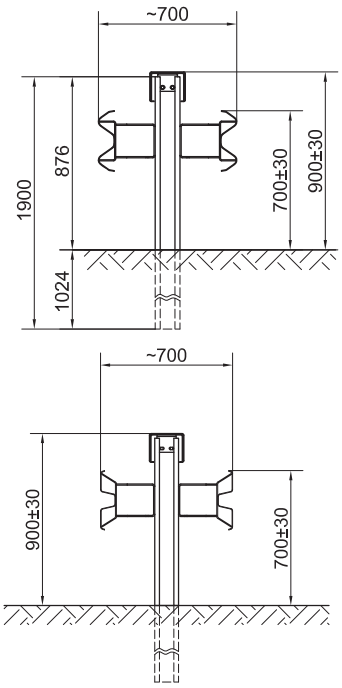
Performance	
Containment level	H2
Acceleration Severity Index “ASI”	B
Working width	W8 (2.90 m)
Extreme lateral position of the vehicle	-
Dynamic deflection	0.70 m

Characteristics	
Height out of ground	900 mm / 1550 mm / 3000 mm
Transversal overall dimensions	745 mm
Centre to centre between posts	2250 mm
Tested minimum length (without terminal end)	72.00 m

Description

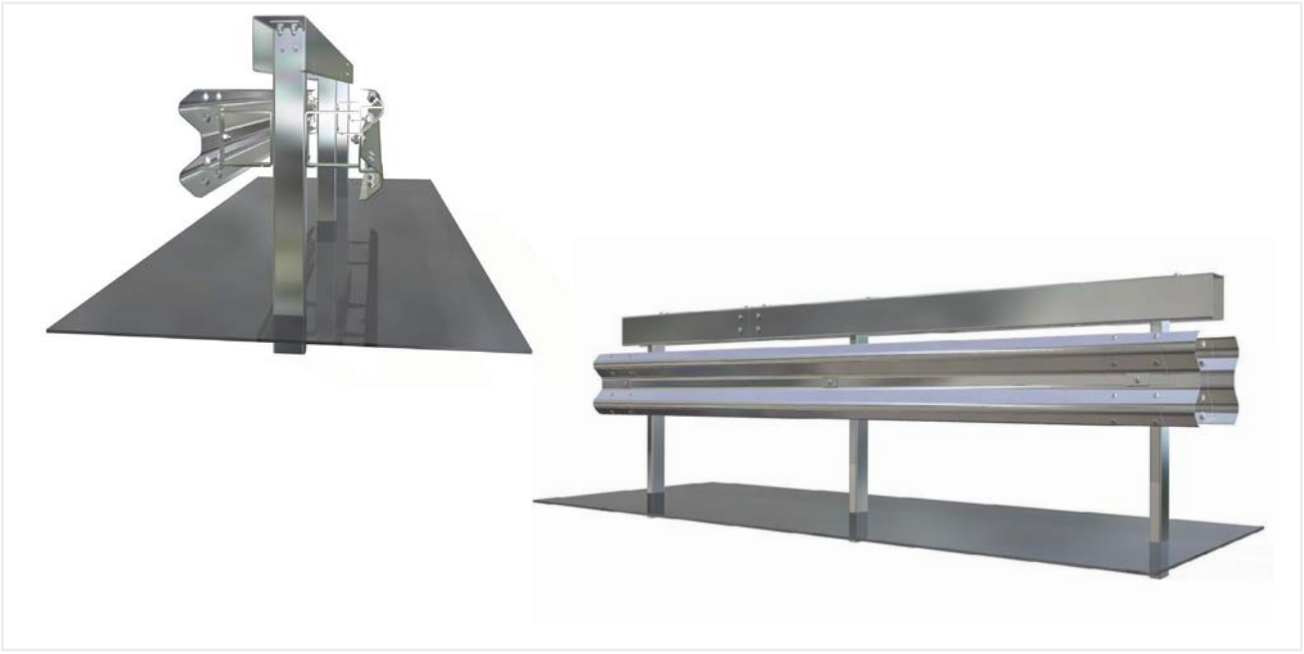
Supply and installation of combined safety barrier, having 3-waves beams th. 3, 0 mm., posts HEA 160 H 3080 mm. with base plate 350x350x20 mm and anchor bolts M24x330 c/c 2250 mm., spacers 460x329x3 with energy absorber, upper beam C180x150x3 mm with supports, bolts and reflectors.
S235JR-S275JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
Between HEA posts, there are soundproofing panels, made of a concrete panel H 500 mm at the base, then aluminium panels th. 1,2 mm. dim. 115x500 C7C 2250 mm, up to the top of the posts. Inside the panels, a cushion of mineral wool th. 50 mm. and density of 90 kg/m3 and a protective coating on the side exposed to the traffic. Panels are fixed one another by means of steel ropes diam. 6-14 mm with clamps to avoid their falling down in case of crash. The treatment of the panel surface is provided by a powdered coating with a fixing by fire on a high-temperature oven. The standard RAL colour is 6021.
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 098/2131/CPD/2011

SUPER RAIL ECO DOUBLE SIDED



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	B
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	0.7 m

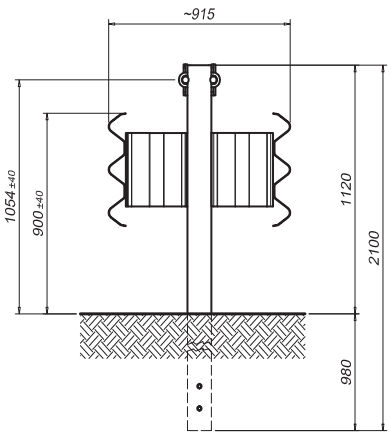
Characteristics	
Height out of ground	900 mm
Transversal overall dimensions	700 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	52 m



Description

Supply and installation of double-sided 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, box beam 180x150x3 mm length 3.998 mm, posts C 125, h. 1.900 mm, the posts are driven into the ground every 2000 mm, deformation brackets 200 mm, nuts and bolts, reflectors optional.
S235JR/S355JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0179/CPD/2010

3N32773 L2-W4-B



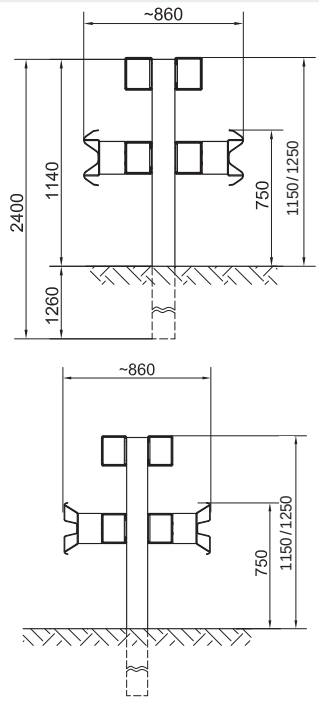
Performance	
Containment level	L2
Acceleration Severity Index “ASI”	A / B (TB11/TB32)
Working width	W4 (1.30 m)
Extreme lateral position of the vehicle	1.30 m
Dynamic deflection	0.90 m

Characteristics	
Height out of ground	900 mm / 1054 mm
Transversal overall dimensions	910 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	76.50 m

Description

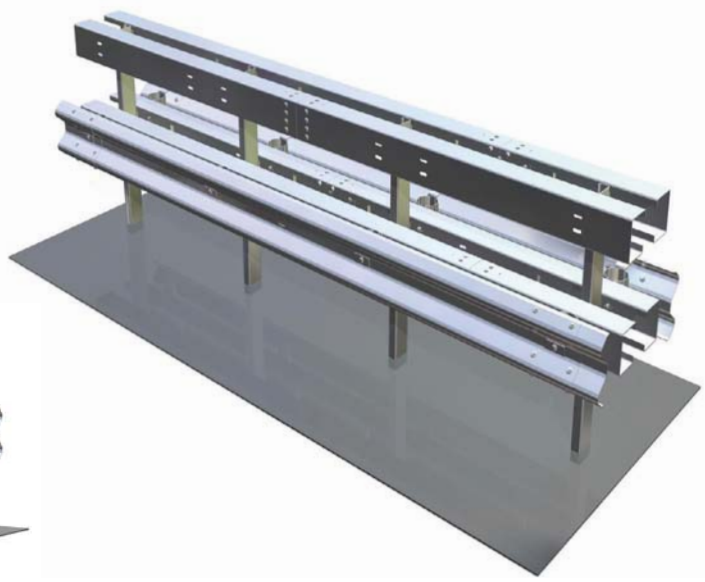
Supply and installation of 3-waves safety barrier, thickness 2.5 mm, posts C 120x80x30 mm, h= 2100, fixed to ground every 1500 mm, spacers 310x80x5,9 mm, with two upper threaded retaining bars Ø 32 mm, with welded plates, assembled with nuts and bolts and provided with reflectors.
S235JR-S355JR steel quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 135/2131/CPD/2011

SUPER RAIL DOUBLE SIDED



Performance		
Containment level	H2	H4B
Acceleration Severity Index "ASI"	B	B
Working width	W4	W5
Extreme lateral position of the vehicle	-	
Dynamic deflection	0.65 m	0.90 m

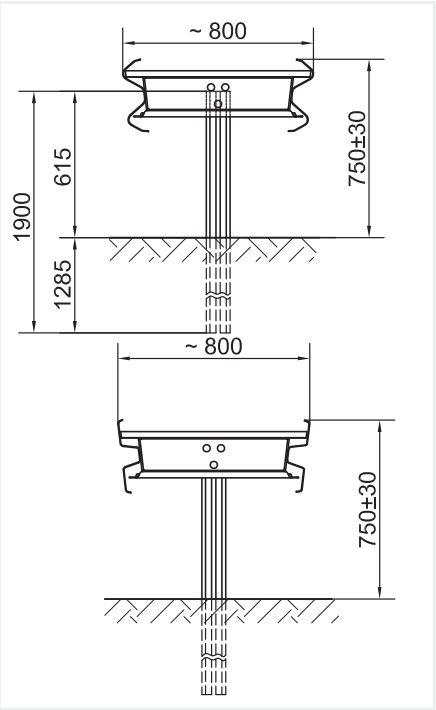
Characteristics		
Height out of ground	1150 mm	1250 mm
Transversal overall dimensions	860 mm	860 mm
Centre to centre between posts	1333 mm	1333 mm
Tested minimum length (without terminal end)	40 m	76 m



Description

Supply and installation of double-sided 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, box beams 180x150x4 mm length 3.998 mm, posts C 125, h. 2.400 mm, the posts are driven into the ground every 1333 mm, Deformation elements Ø 139.7 mm, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0104/CPD/2010

DDSP++ 2.00



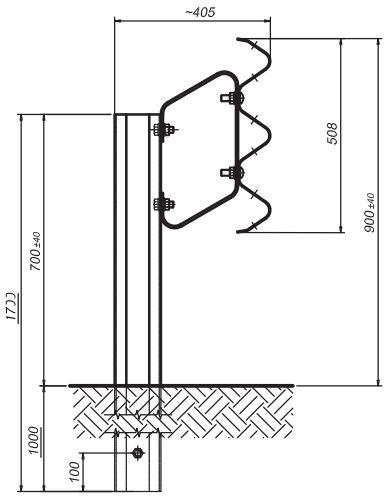
Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W6
Extreme lateral position of the vehicle	-
Dynamic deflection	1.8 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	800 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	80 m

Description

Supply and installation of double-sided 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, Sigma posts 100x55x4.2 mm, h. 1.900 mm, the posts are driven into the ground every 2000 mm,
Separators 780 mm with post mounted brackets, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0760-CPD-F10138

3N36450 H3-W5-A



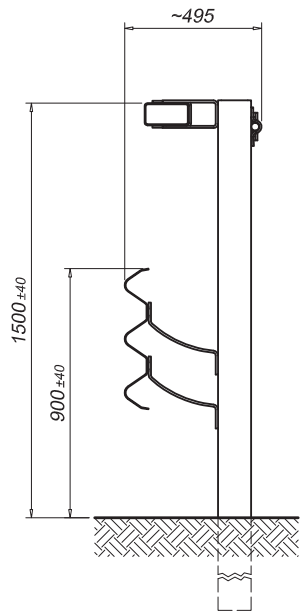
Performance	
Containment level	H3
Acceleration Severity Index “ASI”	A
Working width	W5 (1,70 m)
Extreme lateral position of the vehicle	2,10 m
Dynamic deflection	1,40 m

Characteristics	
Height out of ground	900 mm
Transversal overall dimensions	405 mm
Centre to centre between posts	1000 mm
Tested minimum length (without terminal end)	54 m

Description

Supply and installation of a 3-wave safety barrier, thickness 4,0 mm, C120 x 80 x 30 x 4,0 mm H = 1700 mm, fixed to ground every 1000 mm; spacers 407 x 201 x 5.9 mm L = 80 mm, assembled with nuts and bolts and provided with reflectors.
S235JR - S355JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n.209/2131/CPD/2011

3N33568 H3-W6-A



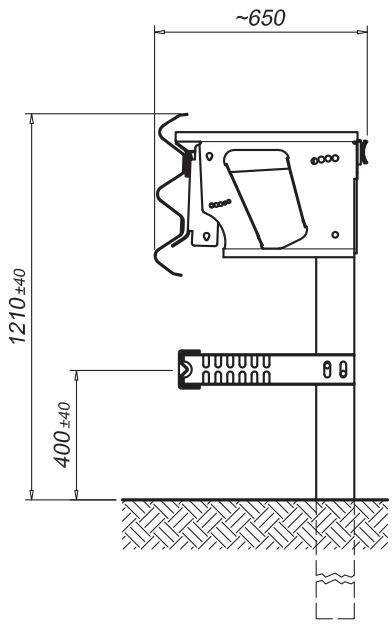
Performance	
Containment level	H3
Acceleration Severity Index “ASI”	A
Working width	W6 (1.97 m)
Extreme lateral position of the vehicle	1.50
Dynamic deflection	1.52 m

Characteristics	
Height out of ground	900 mm / 1150 mm
Transversal overall dimensions	385 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	94.50 m

Description

Supply and installation of 3-waves safety barrier, thickness 3,0 mm, U posts 120x80x5.9 mm h.2700 mm are driven into the ground every 1500 mm, spacers 250x260x8 mm, upper rail 160x80x4 mm, rear rail diam. 28 mm with supports, nuts and bolts and reflectors.
S235JR-S275JR steel in quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n.131/2131/CPD/2011

3N21756 H3-W7-A



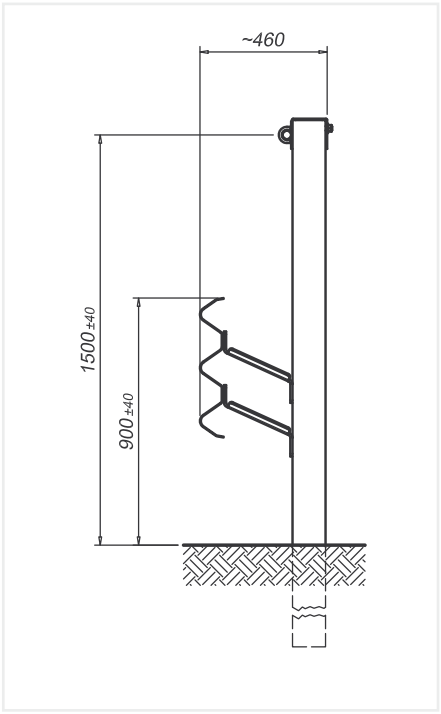
Performance	
Containment level	H3
Acceleration Severity Index “ASI”	A
Working width	W7 (2.50 m)
Extreme lateral position of the vehicle	2.50 m
Dynamic deflection	2.11 m

Characteristics	
Height out of ground	400 mm / 1210 mm
Transversal overall dimensions	615 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	90.30 m

Description

Supply and installationof 3-waves safety barrier, thickness 3,0 mm, U posts 120x80x5, h. 2200 mm, the posts are driven into the ground every 1500 mm, spacers 570x392x3mm with energy releaser-brace system, diagonal plate 70x5 mm, U 120x65x4 mm lower rail with supports, rear rail 70x5 mm, nuts and bolts and reflectors.
S235JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 134/2131/CPD/2011

3N28079 H3-W8-A



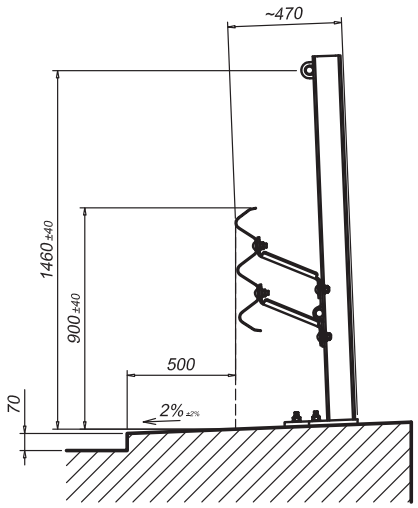
Performance	
Containment level	H3
Acceleration Severity Index “ASI”	A
Working width	W8 (2.85 m)
Extreme lateral position of the vehicle	3.14 m
Dynamic deflection	2.40 m

Characteristics	
Height out of ground	900 mm / 1500 mm
Transversal overall dimensions	460 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	90.00 m

Description

Supply and installation of 3-waves safety barrier, thickness 3,0 mm, U posts 120x80x5.9, h. 2700 mm, the posts are driven into the ground every 1500 mm, spacers 250x260x8 mm, upper rail with threaded bar with connectors and supports, nuts and bolts and reflectors.
S235JR-S3555JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n.062/2131/CPD/2010

3N36706 H3-W5-A



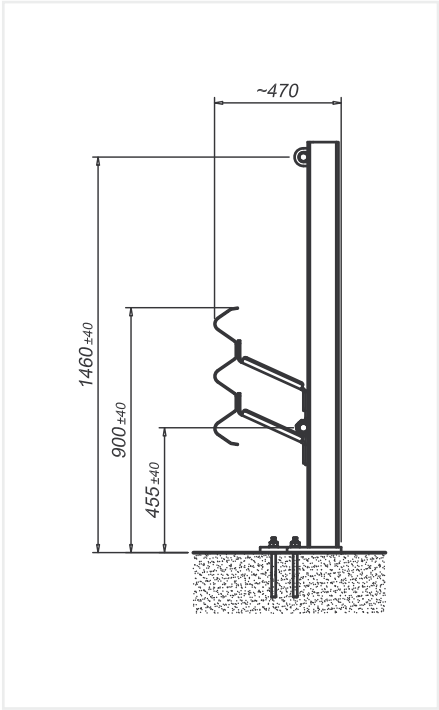
Performance	
Containment level	H3
Acceleration Severity Index “ASI”	A
Working width	W5 (1.60 m)
Extreme lateral position of the vehicle	-
Dynamic deflection	1.50 m

Characteristics	
Height out of ground	1460 mm
Transversal overall dimensions	470 mm
Centre to centre between posts	2250 mm
Tested minimum length (without terminal end)	78 m

Description

Supply and installationof 3-waves safety barrier, thickness 4,0 mm, the posts, HE120A H=1500, are driven into the ground every 2250 mm, spacers 250x260x8mm L=80mm, nuts and bolts and reflectors.
S235JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 218/2131/CPD/2012

3n28361 H3-W6-A



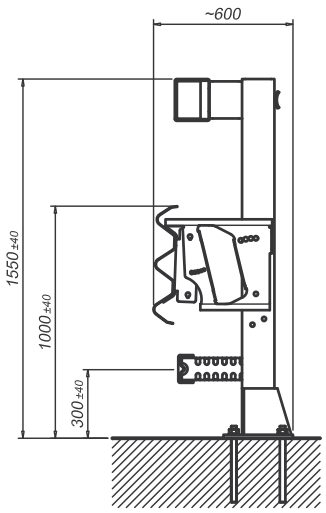
Performance	
Containment level	H3
Acceleration Severity Index “ASI”	A
Working width	W6 (1.80 m*)
Extreme lateral position of the vehicle	2.00 m*
Dynamic deflection	1.60 m

Characteristics	
Height out of ground	455 mm / 900 mm / 1460 mm
Transversal overall dimensions	470 mm
Centre to centre between posts	2250 mm
Tested minimum length (without terminal end)	108.00 m

Description

Supply and installation of 3-waves safety barrier, thickness 3,0 mm, HEA posts 120, h. 1520 mm with plate 300x400x20 mm fixed to the concrete every 2250 mm by anchor bolts, spacers 250x260X8 mm with upper rail and lower rail threaded bars Ø 32 mm with clamps, nuts and bolts and reflectors.
S235JR-S275JR-S355JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. AISICO/056/CPD/2010
* The safety barrier 3n28361 has been tested according with test TB61 by TÜV Institute of Munich (Germany) for the force measurements, Test n. X49.01.H01
the performance are following described:
Working width= W5 (1,60 m)
Extreme lateral position of the vehicle = 1,70 m

3N22490 H3-W6-B



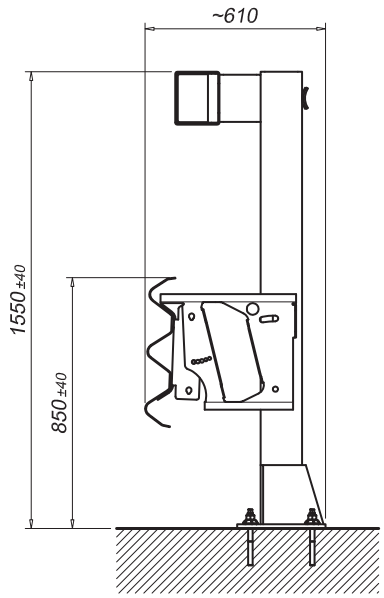
Performance	
Containment level	H3
Acceleration Severity Index “ASI”	B
Working width	W6 (1.91 m)
Extreme lateral position of the vehicle	1.91 m
Dynamic deflection	1.71 m

Characteristics	
Height out of ground	300 mm / 1000 mm / 1550 mm
Transversal overall dimensions	600 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	85.80 m

Description

Supply and installation of 3-waves safety barrier, thickness 3,0 mm, U posts 140x70x7, h. 1535 mm with plate 250x300x15 mm fixed to the ground every 1535 mm by anchor bolts M24x330, spacers 460x392x3 mm, energy releaser-bracer, upper rail C180x150x4x3mm with supports, U120x65x4 section lower rail with bored spacers, rear rail 70x5 mm, nuts and bolts and reflectors.
S235JR-S275JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 150/2131/CPD/2010

3N24409 H3-W8-B



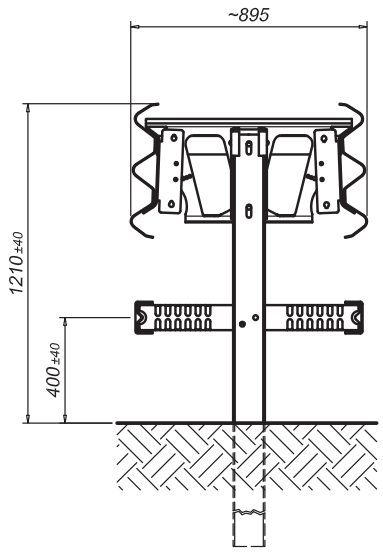
Performance	
Containment level	H3
Acceleration Severity Index “ASI”	B
Working width	W8 (2.80 m)
Extreme lateral position of the vehicle	2.80 m
Dynamic deflection	2.10 m

Characteristics	
Height out of ground	850 mm / 1550 mm
Transversal overall dimensions	610 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	94.80 m

Description

Supply and installation of 3-waves safety barrier, thickness 3,0 mm, U posts 140x70x7 mm h.1535 mm with plate 250x300x15 mm fixed to the concrete every 1500 mm by anchor bolts, spacers 460x392x3 mm with energy absorption, box upper rail C-shaped 180x150x40x3 mm with supports, and box-shaped tension rail 70x5 mm, assembled with nuts and bolts and provided with reflectors.
S235JR-S275JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 064/2131/CPD/2010

3N22051 H3-W8-A



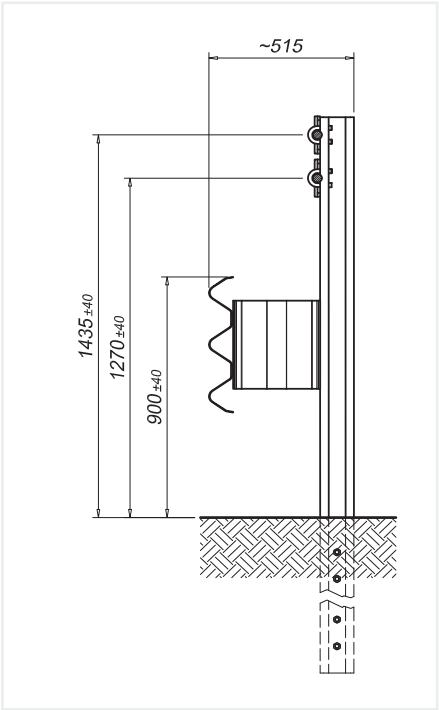
Performance	
Containment level	H3
Acceleration Severity Index “ASI”	A
Working width	W8 (2.78 m)
Extreme lateral position of the vehicle	2.20 m
Dynamic deflection	2.78 m

Characteristics	
Height out of ground	1210 mm
Transversal overall dimensions	895 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	80.00 m

Description

Supply and installation of 3-waves safety barrier with 2 beams, thickness 3,0 mm, U posts 120x80x6 mm, h. 2200 mm, the posts are driven into the ground every 1500 mm, spacers 780x392x3mm with energy releaser-brace system, diagonal plate 70x5 mm, double lower rails U 120x65x4 mm with supports, nuts and bolts and reflectors.
S235JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n.144/2131/CPD/2011

3N34352 L4-W4-A



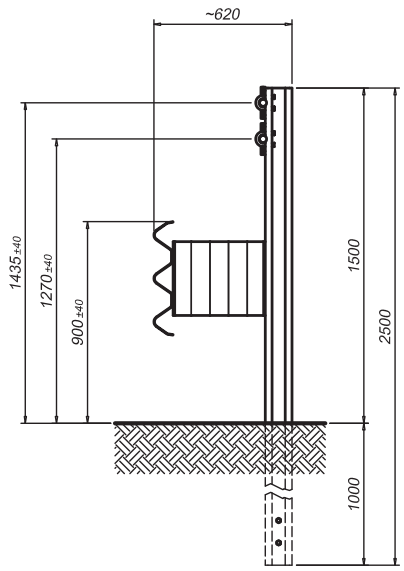
Performance	
Containment level	L4b
Acceleration Severity Index “ASI”	A / B (TB11/TB32)
Working width	W4 (1.30 m)
Extreme lateral position of the vehicle	2.00 m
Dynamic deflection	1.20 m

Characteristics	
Height out of ground	900 mm / 1270 mm / 1435 mm
Transversal overall dimensions	515 mm
Centre to centre between posts	1000 mm
Tested minimum length (without terminal end)	90.00 m

Description

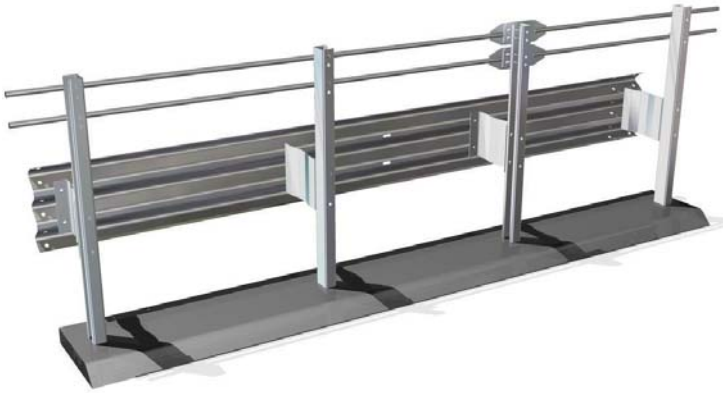
Supply and installation of 3-waves safety barrier, thickness 2.5 mm,C posts 120x80x30x5.9 mm; h.2500 mm the posts are driven into the ground every 1000 mm, spacers 310x80x5.9 mm, with double upper threaded retaining bars diam. 32 mm, assembled with nuts and bolts and provided with reflectors.
S235JR-S355JR steel in quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 082/2131/CPD/2010

3N31679 H4-W5-A



Performance	
Containment level	H4b
Acceleration Severity Index “ASI”	A
Working width	W5 (1.70 m)
Extreme lateral position of the vehicle	1.60 m
Dynamic deflection	1.10 m

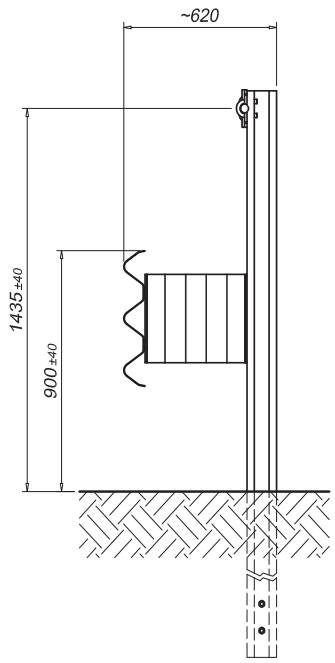
Characteristics	
Height out of ground	900 mm / 1270 mm / 1435 mm
Transversal overall dimensions	620 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	81.00 m



Description

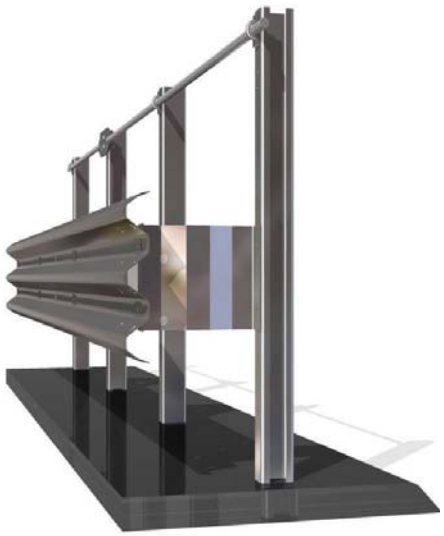
Supply and installation of a 3-wave safety barrier, thickness 2,5 mm, C post 120x80x30x5,9 mm h.2500 mm, fixed to ground every 1500 mm, spacers 415x80x5 mm, with an upper threaded retaining bars Ø 32 mm with welded plates, assembled with nuts and bolts and provided with reflectors.
S235JR-S275JR-S355JR steel quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. AISICO/030/CPD/2010

3N32818 H4-W6-B



Performance	
Containment level	H4b
Acceleration Severity Index “ASI”	B
Working width	W6 (2.00 m)
Extreme lateral position of the vehicle	2.10 m
Dynamic deflection	1.60 m

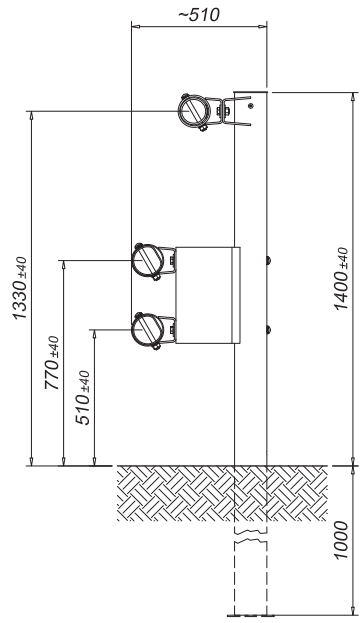
Characteristics	
Height out of ground	900 mm / 1435 mm
Transversal overall dimensions	620 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	75.50 m



Description

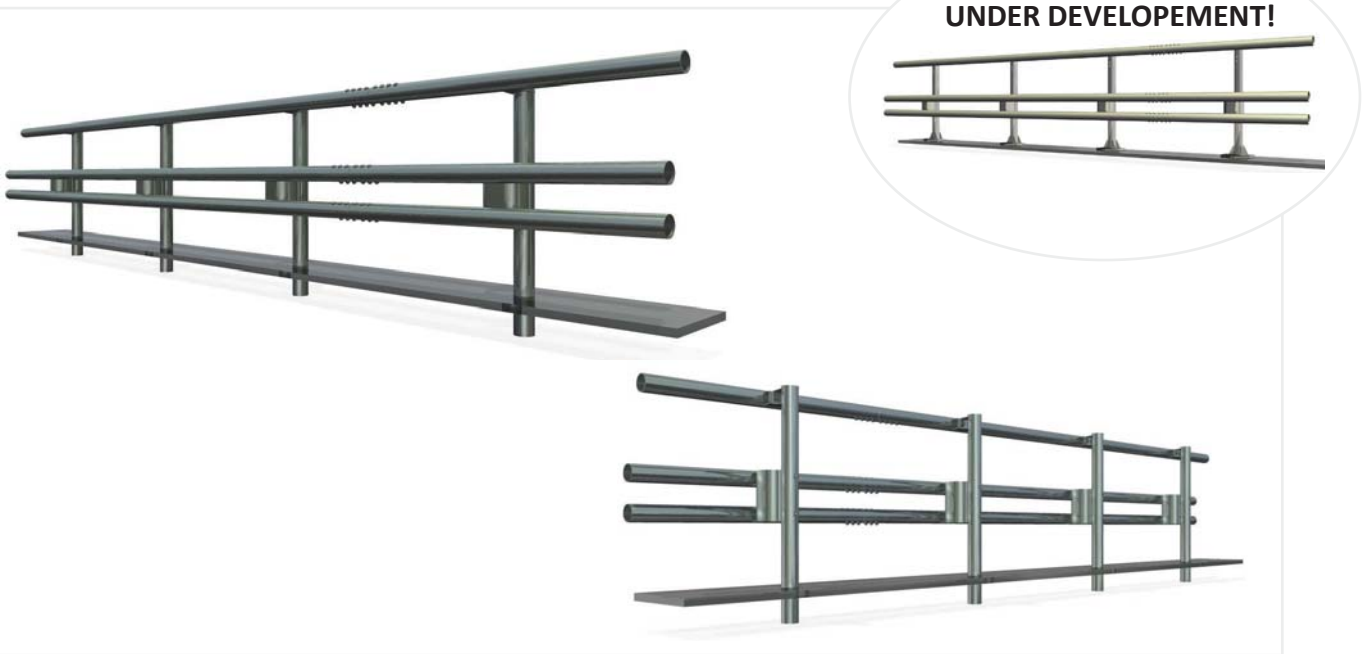
Supply and installationof 2-waves safety barrier, thickness 2.5 mm, posts type C120x80x30x5,9 h.2500 mm fixed to the ground every 1500 mm, spacers 415x80x5mm L=330mm, upper rail threaded bars Ø 32 mm with welded plates, nuts and bolts and reflectors.
S235JR-S275JR-S355JR steel quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. AISICO/053/CPD/2010

B33820 H4-W6-B



Performance	
Containment level	H4b
Acceleration Severity Index “ASI”	B
Working width	W6 (1.90 m)
Extreme lateral position of the vehicle	2.50 m
Dynamic deflection	1.70 m

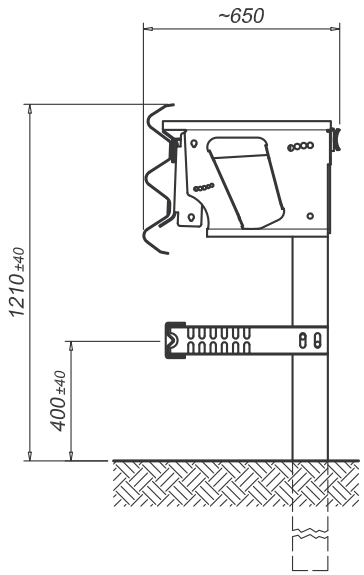
Characteristics	
Height out of ground	510 mm / 770 mm / 1330 mm
Transversal overall dimensions	510 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	78.00 m



Description

Supply and installation of safety barrier, arranged by welded pipes ø121 mm thicknesses 3,0 mm and 6,0 mm, tubular posts ø121 mm thk. 6,0 mm h. 2400 mm; fixed to the ground every 2000 mm; spacers ø244 mm thk 5,0 mm, assembled with nuts and bolts and provided with reflectors.
S235JR-S355JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 180/2131/CPD/2011

3N2161O H4-W8-A



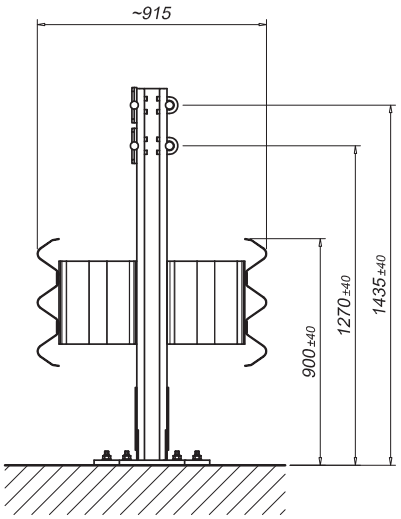
Performance	
Containment level	H4a
Acceleration Severity Index “ASI”	A
Working width	W8 (2.90 m)
Extreme lateral position of the vehicle	3.25 m
Dynamic deflection	2.60 m

Characteristics	
Height out of ground	400 mm / 1210 mm
Transversal overall dimensions	615 mm
Centre to centre between posts	1333 mm
Tested minimum length (without terminal end)	132.00 m

Description

Supply and installation of 3-waves safety barrier, thickness 3,0 mm, U posts 120x80x6, h. 2200 mm, the posts are driven into the ground every 1333 mm, spacers 570x392x3mm with energy releaser-brace system, diagonal plate 70x5 mm, U 120x65x4 mm lower rail with supports, rear rail 70x5 mm, nuts and bolts and reflectors.
S235JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 143/2131/CPD/2011

3N34650 L4-W4-B



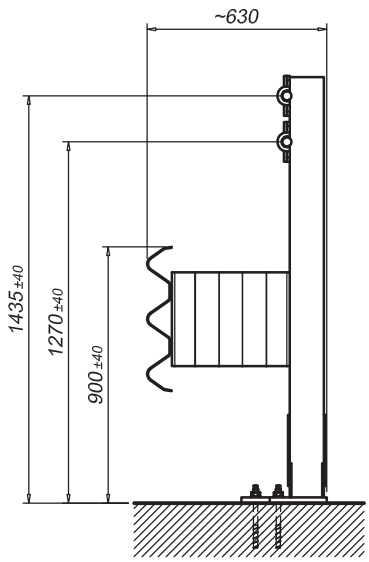
Performance	
Containment level	L4b
Acceleration Severity Index “ASI”	B / B (TB11/TB32)
Working width	W4 (1.30 m)
Extreme lateral position of the vehicle	2.30 m
Dynamic deflection	0.80 m

Characteristics	
Height out of ground	900 mm / 1270 mm / 1435 mm
Transversal overall dimensions	915 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	89.00 m

Description

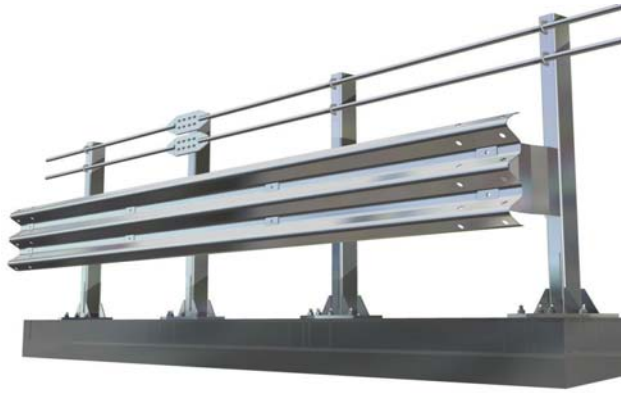
Supply and installation of 3-waves safety barrier, thickness 3.0 mm, posts C 120x80x30x5,9 mm; h. 1480 mm, fixed to ground every 1500 mm by anchor bolts; spacers 310x80x5,9 mm, with four upper threaded retaining bars Ø 32 mm with welded plates, assembled with nuts and bolts and provided with reflectors.
S235JR-S275JR-S355JR steel quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 165/2131/CPD/2011

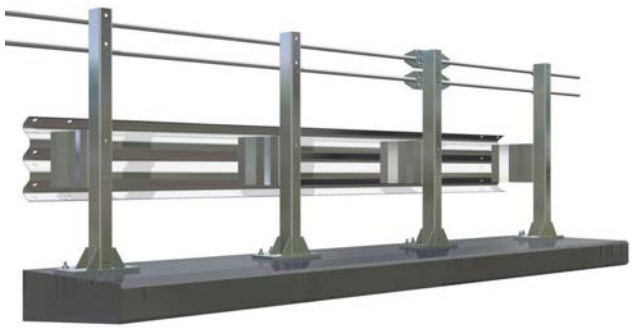
3N31857 H4-W4-B



Performance	
Containment level	H4b
Acceleration Severity Index “ASI”	B
Working width	W4 (1.30 m)
Extreme lateral position of the vehicle	1.20
Dynamic deflection	0.80 m

Characteristics	
Height out of ground	900 mm / 1270 mm / 1435 mm
Transversal overall dimensions	630 mm
Centre to centre between posts	1333 mm
Tested minimum length (without terminal end)	92.00 m

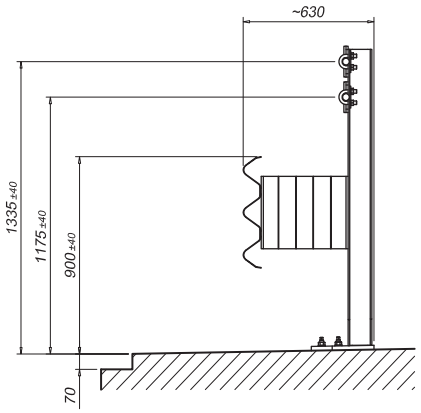




Description

Supply and installation of a 3-wave safety barrier, thickness 3 mm, C post 120x80x30x5,9 mm h.1480 mm fixed to ground every 1333 mm by anchor bolts, spacers 415x80x5 mm L=330 mm, with double threaded retaining bars Ø 32 mm with welded plates, assembled with nuts and bolts and provided with reflectors.
S235JR-S275JR-S355JR steel quality according to EN 10025 EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. AISICO/029/CPD/2010

3N31622 H4-W6-A



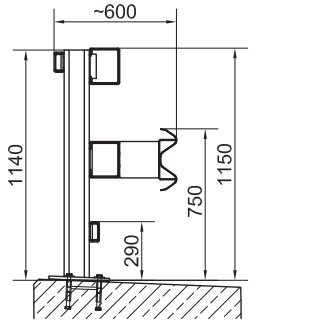
Performance	
Containment level	H4b
Acceleration Severity Index “ASI”	A
Working width	W6 (2.00 m)
Extreme lateral position of the vehicle	2.30
Dynamic deflection	1.50 m

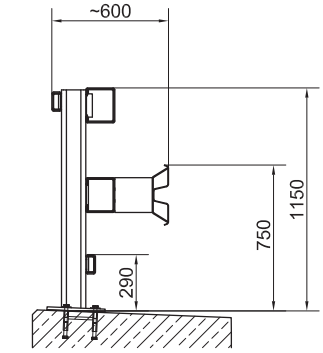
Characteristics	
Height out of ground	900 mm / 1175 mm / 1335 mm
Transversal overall dimensions	630 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	78.00 m

Description

Supply and installation of a 3-wave safety barrier, thickness 2.5 mm, HEA Posts 120 h.1350 mm with plate 300x400x20 mm fixed to ground every 1500 mm by anchor bolts, spacers 415x80x5 mm L=330 mm, with double upper threaded retaining bars Ø 32 mm with welded plates, assembled with nuts and bolts and provided with reflectors.
S235JR-S275JR steel quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 059A/2131/CPD/2010

SUPER RAIL PLUS OS





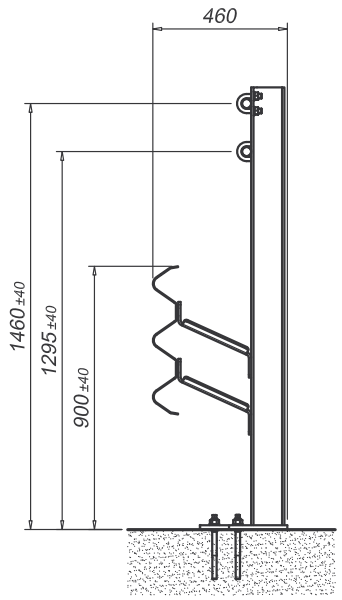
Performance	
Containment level	H4b
Acceleration Severity Index “ASI”	B
Working width	W7
Extreme lateral position of the vehicle	-
Dynamic deflection	1.31 m

Characteristics	
Height out of ground	1150 mm
Transversal overall dimensions	600 mm
Centre to centre between posts	1333 mm
Tested minimum length (without terminal end)	80 m

Description

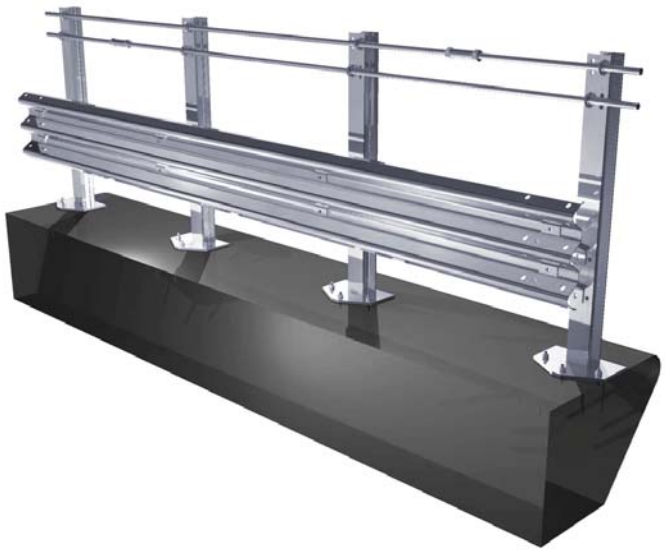
Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, box beams 180x150x4 mm length 3.998 mm and two additional C-100 beams 3.998 mm, posts C 125, h. 1150 mm with base plate 300x300x15 mm, the posts are fixed on the structure every 1333 mm,
deformation elements Ø 193.7 mm, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0131/CPD/2010

3N2823b H4-W8-B



Performance	
Containment level	H4b
Acceleration Severity Index “ASI”	B
Working width	W8 (2.80 m)
Extreme lateral position of the vehicle	1.80
Dynamic deflection	2.60 m

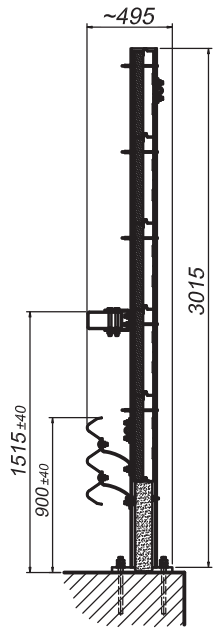
Characteristics	
Height out of ground	900 mm / 1295 mm / 1460 mm
Transversal overall dimensions	460 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	108.00 m



Description

Supply and installation of 3-waves safety barrier, thickness 3,0 mm, HEA posts 120, h. 1600 mm with plate 300x400x15 mm fixed to the concrete every 1500 mm by anchor bolts, spacers 250x260X8 mm, no. 2 threaded bars Ø 32 mm with upper rear and clamps, nuts and bolts and reflectors.
S235JR-S275JR-S355JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 066/2131/CPD/2010

ISB36234 H4-W4-A (NOISE PROTECTION)



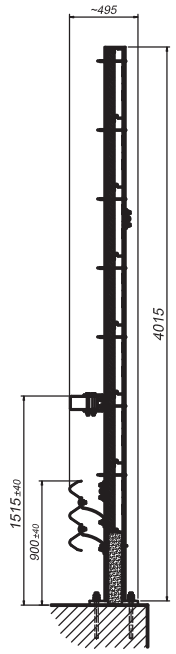
Performance	
Containment level	H4b
Acceleration Severity Index “ASI”	A
Working width	W4 (1.20 m)
Extreme lateral position of the vehicle	0.45 m
Dynamic deflection	0.80 m

Characteristics	
Height out of ground	900 mm / 1515 mm / 3015 mm
Transversal overall dimensions	495 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	90 m

Description

Supply and installation of combined safety barrier, having 3-waves beams th. 3, 0 mm., posts HEA 160 h=3015 and 1500 mm. with base plate 250x350x30 mm and anchor bolts M24x330, spacers 170x215x7, upper beam 200x100x5 mm with supports, bolts and reflectors.
S235JR-S275JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
Between HEA posts, there are soundproofing panels, made of a concrete panel h=500 mm at the base, then aluminium panels th. 1,2 mm. dim. 115x500 l=1500/3000 mm, up to the top of the posts. Inside the panels, a cushion of mineral wool th. 50 mm. and density of 90 kg/m^3 and a protective coating on the side exposed to the traffic. Panels are fixed one another by means of steel ropes diam. 6 mm with clamps to avoid their falling down in case of crash. The treatment of the panel surface is provided by a powdered coating with a fixing by fire on a high-temperature oven. The standard RAL colour is 6021.
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 198/2131/CPD/2012

ISB36358 H4-W4-A (NOISE PROTECTION)



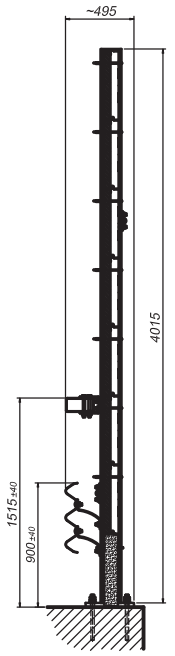
Performance	
Containment level	H4b
Acceleration Severity Index “ASI”	A
Working width	W4 (1.30 m)
Extreme lateral position of the vehicle	0.45 m
Dynamic deflection	0.90 m

Characteristics	
Height out of ground	900 mm / 1515 mm / 4015 mm
Transversal overall dimensions	495 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	90 m

Description

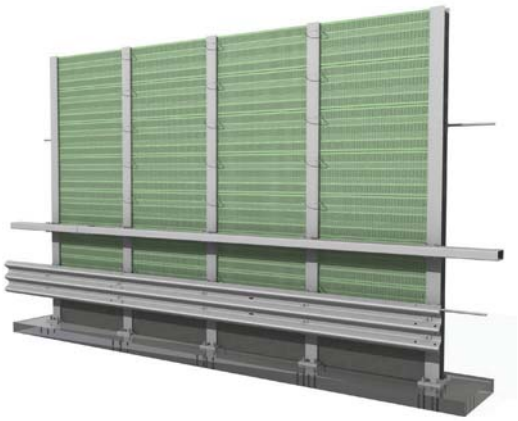
Supply and installation of combined safety barrier, having 3-waves beams th. 3,0 mm., posts HEA 160 h=4015 and 1500 mm. with base plate 250x350x30 mm and anchor bolts M24x330, spacers 170x215x7, upper beam 200x100x5 mm with supports, bolts and reflectors.
S235JR-S275JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
Between HEA posts, there are soundproofing panels, made of a concrete panel h=500 mm at the base, then aluminium panels th. 1,2 mm. dim. 115x500 l=1500, up to the top of the posts. Inside the panels, a cushion of mineral wool th. 50 mm. and density of 90 kg/m^3 and a protective coating on the side exposed to the traffic. Panels are fixed one another by means of steel ropes diam. 6 mm with clamps to avoid their falling down in case of crash. The treatment of the panel surface is provided by a powdered coating with a fixing by fire on a high-temperature oven. The standard RAL colour is 6021.
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 198/2131/CPD/2012

ISB35931 H4-W5-A (NOISE PROTECTION)



Performance	
Containment level	H4b
Acceleration Severity Index “ASI”	A
Working width	W5 (1.40 m)
Extreme lateral position of the vehicle	0.45 m
Dynamic deflection	0.90 m

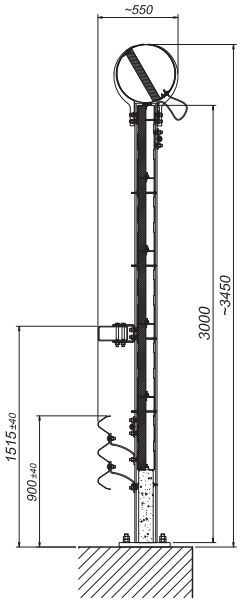
Characteristics	
Height out of ground	900 mm / 1515 mm / 5015 mm
Transversal overall dimensions	495 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	90 m



Description

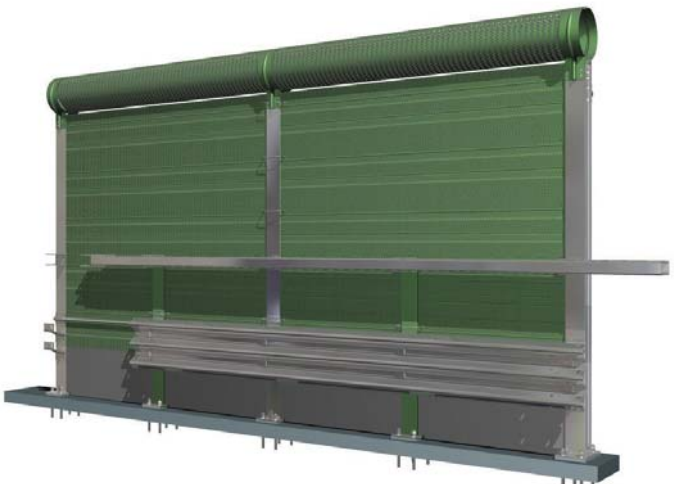
Supply and installation of combined safety barrier, having 3-waves beams th. 3,0 mm., posts HEA 160 h=5015 and 1500 mm with base plate 250x350x30 mm and anchor bolts M24x330, spacers 170x215x7, upper beam 200x100x5 mm with supports, bolts and reflectors.
S235JR-S275JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
Between HEA posts, there are soundproofing panels, made of a concrete panel h=500 mm at the base, then aluminium panels th. 1,2 mm. dim. 115x500 l=1500, up to the top of the posts. Inside the panels, a cushion of mineral wool th. 50 mm. and density of 90 kg/m^3 and a protective coating on the side exposed to the traffic. Panels are fixed one another by means of steel ropes diam. 6 mm with clamps to avoid their falling down in case of crash. The treatment of the panel surface is provided by a powdered coating with a fixing by fire on a high-temperature oven. The standard RAL colour is 6021.
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 198/2131/CPD/2012

ISB27757 H4-W7-A (NOISE PROTECTION)



Performance	
Containment level	H4b
Acceleration Severity Index “ASI”	A
Working width	W7 (2.43 m)
Extreme lateral position of the vehicle	-
Dynamic deflection	0.77 m

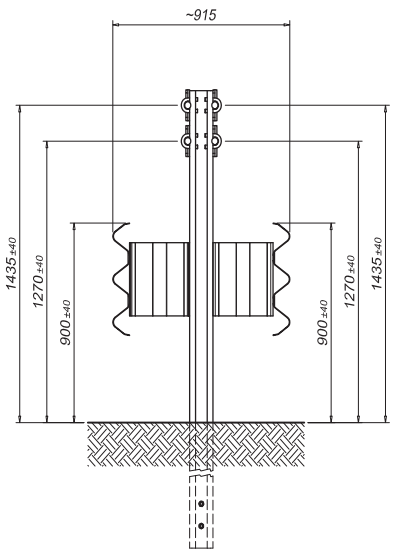
Characteristics	
Height out of ground	900 mm / 1515 mm / 3450 mm
Transversal overall dimensions	-
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	90.00 m



Description

Supply and installation of combined safety barrier, having 3-waves beams th. 3, 0 mm., posts HEA 160 H 4080 mm. with base plate 350x350x20 mm and anchor bolts M24x330 c/c 2250 mm., spacers 460x329x3 with energy absorber, upper beam C180x150x3 mm with supports, bolts and reflectors.
S235JR-S275JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
Between HEA posts, there are soundproofing panels, made of a concrete panel H 500 mm at the base, then aluminium panels th. 1,2 mm. dim. 115x500 C7C 2250 mm, up to the top of the posts. Inside the panels, a cushion of mineral wool th. 50 mm. and density of 90 kg/m3 and a protective coating on the side exposed to the traffic. Panels are fixed one another by means of steel ropes diam. 6-14 mm with clamps to avoid their falling down in case of crash. The treatment of the panel surface is provided by a powdered coating with a fixing by fire on a high-temperature oven. The standard RAL colour is 6021.
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 112/2131/CPD/2011

3N32795 H4-W5-B



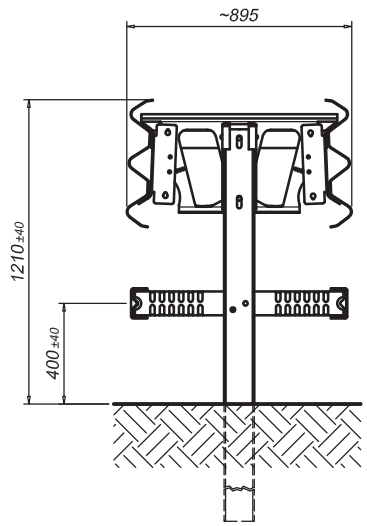
Performance	
Containment level	H4b
Acceleration Severity Index “ASI”	B
Working width	W5 (1.70 m)
Extreme lateral position of the vehicle	1.60 m
Dynamic deflection	1.40 m

Characteristics	
Height out of ground	900 mm / 1270 mm / 1435 mm
Transversal overall dimensions	915 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	89.00 m

Description

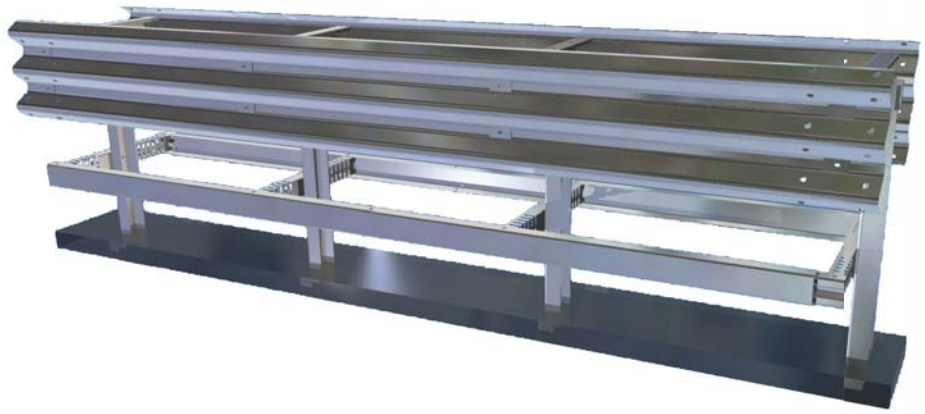
Supply and installation of a 3-wave safety barrier, thicknes 2,5 mm, C post 120x80x30 mm, h. 2500 mm, fixed to ground every 1500 mm; spacers 310x80x5,9 mm, with an upper threaded retaining bars Ø 32 mm, with welded plates, assembled with nuts and bolts and provided with reflectors.
S235JR-S275JR-S355JR steel quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 072/2131/CPD/2010

3N22053 H4-W8-A



Performance	
Containment level	H4a
Acceleration Severity Index “ASI”	A
Working width	W8 (2.58 m)
Extreme lateral position of the vehicle	1.60
Dynamic deflection	2.53 m

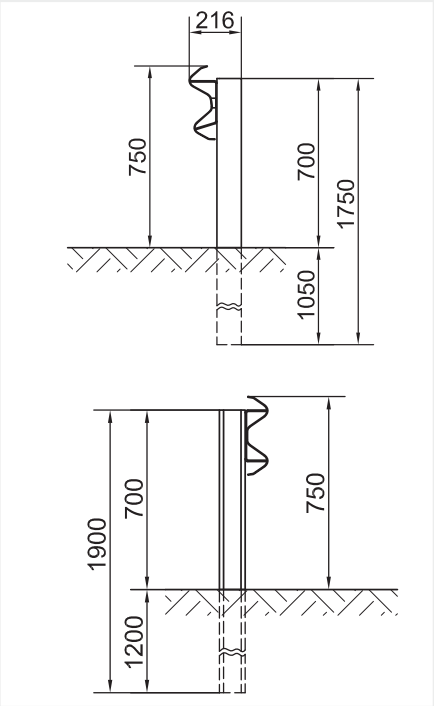
Characteristics	
Height out of ground	400 mm / 1210 mm
Transversal overall dimensions	895 mm
Centre to centre between posts	1333 mm
Tested minimum length (without terminal end)	80 m



Description

Supply and installation of 3-waves safety barrier with 2 beams, thickness 3,0 mm, U posts 120x80x6, h. 2200 mm, the posts are driven into the ground every 1333 mm, spacers 7800x392x3 mm with energy releaser-brace system, double lower rails U 120x65x4 mm with supports, diagonal plate 70x5 mm, nuts and bolts and reflectors.
S235JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n.151/2131/CPD/20101

TRANSITION EASYRAIL / ESP



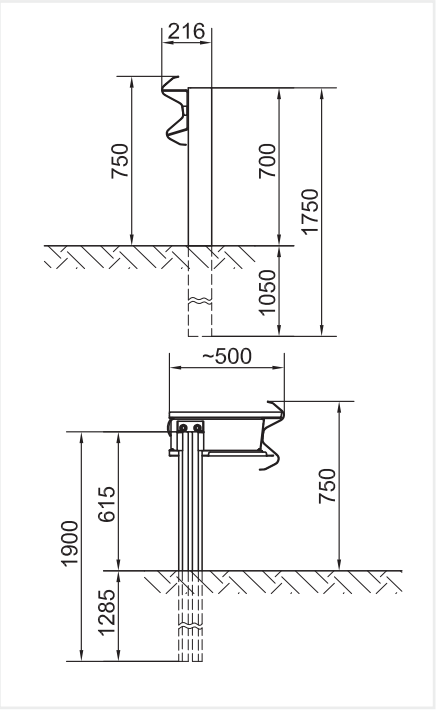
Performance	
Containment level	N2
Acceleration Severity Index “ASI”	A
Working width	W3
Extreme lateral position of the vehicle	-
Dynamic deflection	0.9 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	216/206 mm (A/B Profile)
Centre to centre between posts	1333 - 2000 mm
Tested minimum length (without terminal end)	12 m

Description

Supply and installation of transition between EasyRail and ESP (Profile: German A / B)
AMVR1 steel quality on the basis of DIN EN 10025, S235JR steel according to DIN EN 10025,
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by DINV ENV 1317-4:2002.

TRANSITION EASYRAIL / EDSP



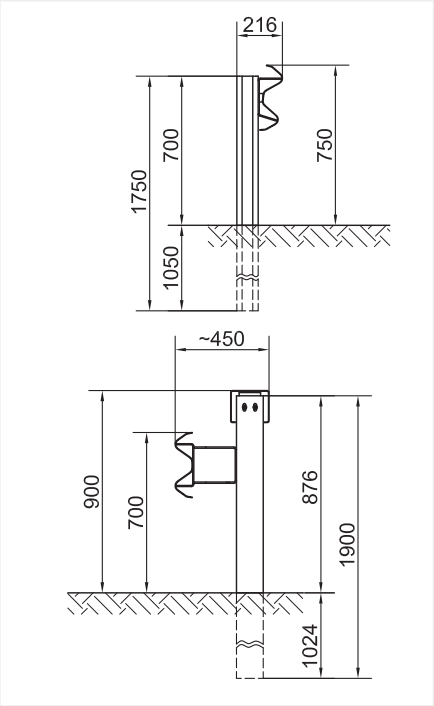
Performance	
Containment level	H1
Acceleration Severity Index “ASI”	B
Working width	W3
Extreme lateral position of the vehicle	-
Dynamic deflection	0.7 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	500 mm (A/B Profile)
Centre to centre between posts	1000 - 1333 mm
Tested minimum length (without terminal end)	16 m

Description

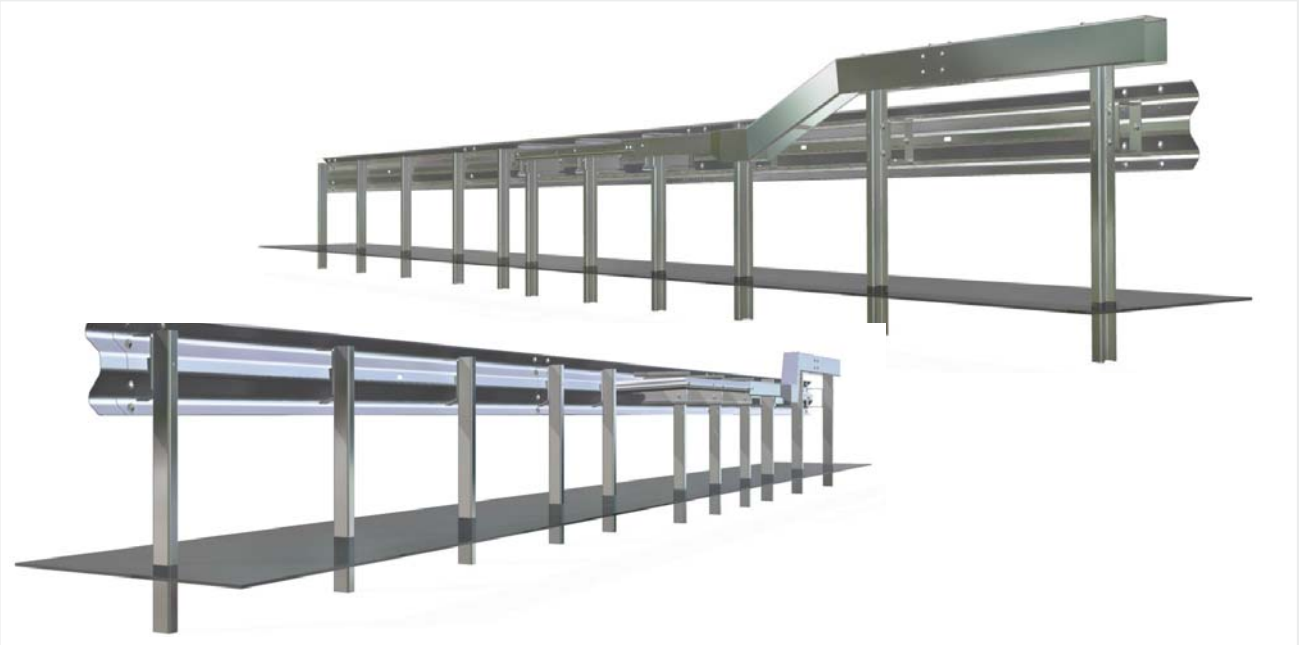
Supply and installation of transition between EasyRail and EDSP (Profile: German A / B)
AMVR1 steel quality on the basis of DIN EN 10025, S235JR steel according to DIN EN 10025,
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by DINV ENV 1317-4:2002.

TRANSITION EASYRAIL / SR ECO



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	0.6 m

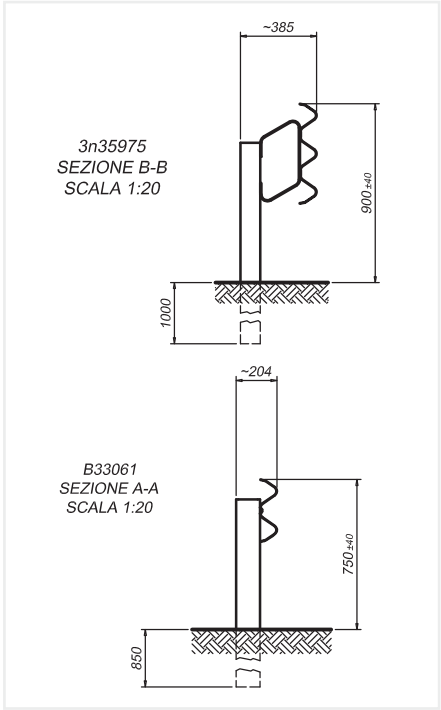
Characteristics	
Height out of ground	750-900 mm
Transversal overall dimensions	589/585 mm (A/B Profile)
Centre to centre between posts	1000 - 1666 mm
Tested minimum length (without terminal end)	12 m



Description

Supply and installation of transition between EasyRail and Super Rail Eco (Profile: German A / B),
AMVR1 steel quality on the basis of DIN EN 10025, S235JR/S355JR steel according to DIN EN 10025,
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by DINV ENV 1317-4:2002.

TRANSITION 3N36354
H1-W4-A / H2-W4-A



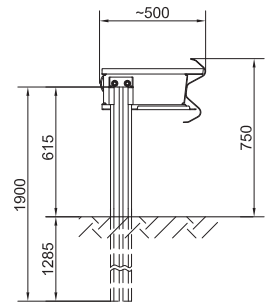
Performance	
Containment level	H1
Acceleration Severity Index “ASI”	A
Working width	W4 (1,30 m)
Extreme lateral position of the vehicle	3.00 m
Dynamic deflection	1.20 m

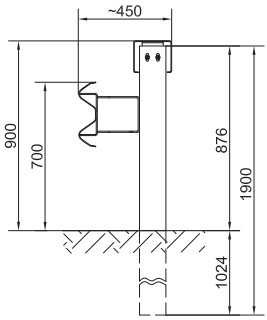
Characteristics	
Height out of ground	900 / 750 mm
Transversal overall dimensions	385 / 204 mm
Centre to centre between posts	1000 - 850 mm
Tested minimum length (without terminal end)	-

Description

Supply and installation of transiction between 2-wave and 3-wave safety barriers, centre to centre between ports 2000 mm.
S275JR steel quality according to EN ISO 1461
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
Certificate CE n. 208/2131/CPD/2010

TRANSITION FLEXTRA SR ECO / EDSP





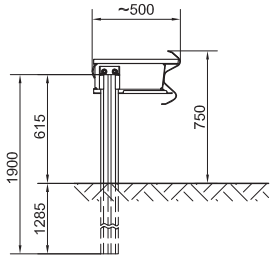
Performance	
Containment level	H1
Acceleration Severity Index “ASI”	B
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	1.00 m

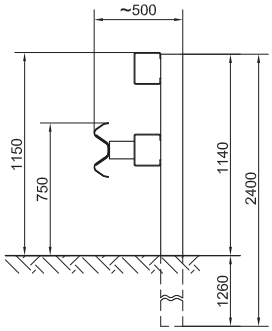
Characteristics	
Height out of ground	750 - 900 mm
Transversal overall dimensions	600/592 mm (A/B Profile)
Centre to centre between posts	1333 - 2000 mm
Tested minimum length (without terminal end)	12 m

Description

Supply and installation of transition between SuperRail ECO and EDSP (Profile: German A / B)
S235JR/S355JR steel according to DIN EN 10025,
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The transition is a modification of the transition Flextra EDSP - SuperRail which was tested successfully according to DINV ENV 1317-4:2002.

TRANSITION FLEXTRA SUPER RAIL / EDSP





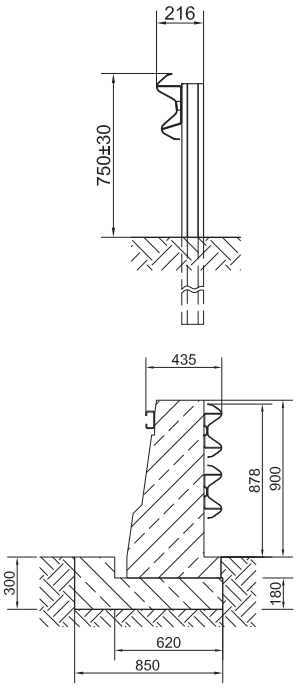
Performance	
Containment level	H1
Acceleration Severity Index “ASI”	B
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	1.00 m

Characteristics	
Height out of ground	750-1150 mm
Transversal overall dimensions	554/549 mm (A/B Profile)
Centre to centre between posts	1333 - 2000 mm
Tested minimum length (without terminal end)	12 m

Description

Supply and installation of transition between SuperRail and EDSP (Profile: German A / B)
S235JR/S355JR steel according to DIN EN 10025,
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by DINV ENV 1317-4:2002.

TRANSITION BESTCONNECT ER



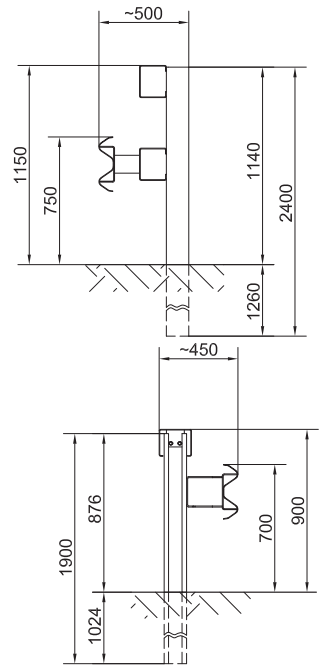
Performance	
Containment level	H1
Acceleration Severity Index “ASI”	C
Working width	W1
Extreme lateral position of the vehicle	-
Dynamic deflection	0.2 m

Characteristics	
Height out of ground	750 - 900 mm
Transversal overall dimensions	206 - 610 mm
Centre to centre between posts	500 - 2000 mm
Tested minimum length (without terminal end)	19.60 m

Description

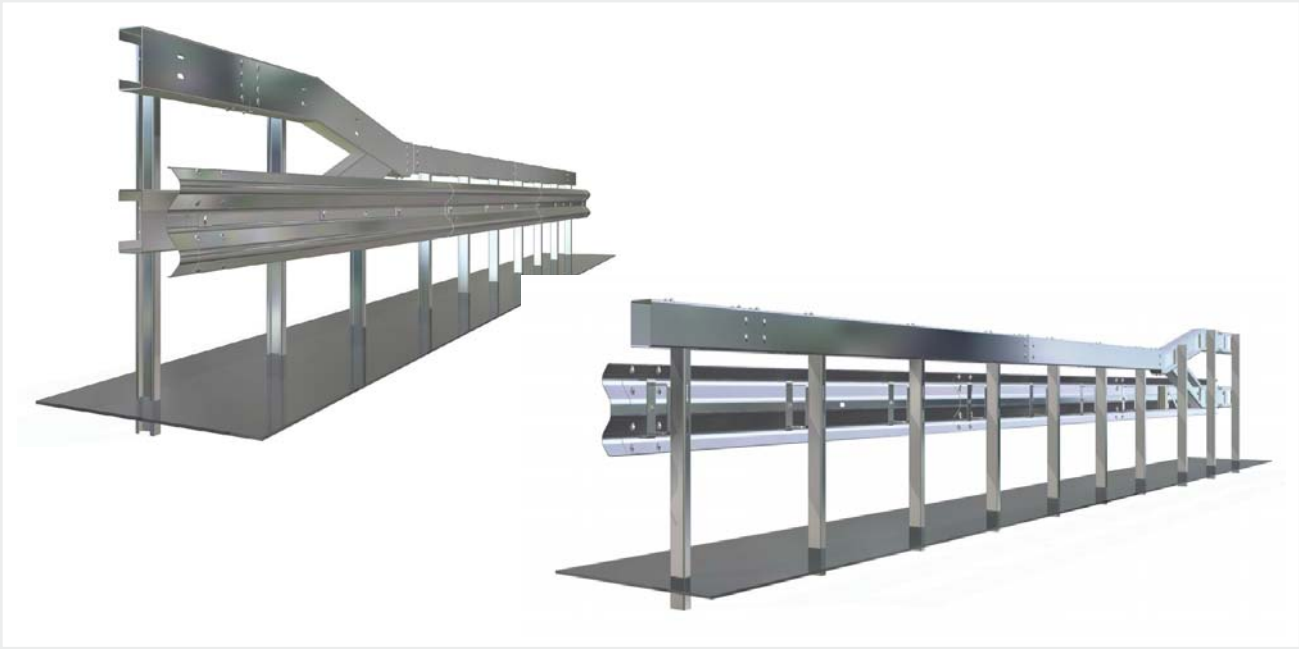
Supply and installation of transition between EasyRail (Profile: German A / B) and concrete barrier (e.g. Spengler New Jersey 93 BK)
S235JR/S355JR steel according to DIN EN 10025,
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by ENV 1317-4:2002

TRANSITION FLEXTRA SR / SR ECO



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	B
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	1.0 m

Characteristics	
Height out of ground	900 - 1150 mm
Transversal overall dimensions	500 mm (A/B Profile)
Centre to centre between posts	1333 - 2000 mm
Tested minimum length (without terminal end)	12 m



Description

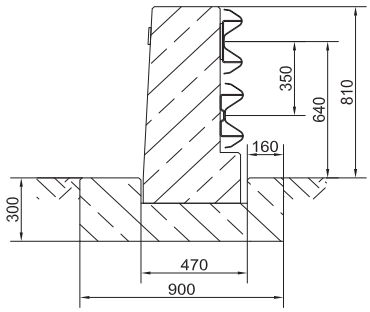
Supply and installation of transition between SuperRail and SuperRail ECO (Profile: German A / B)
S235JR/S355JR steel according to DIN EN 10025,
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
According to the guidelines of the “Einsatzfreigabeverfahren” from the German BASt, there is no need to test the transition Flextra SR - SR ECO because the transition fulfills the requirements of a transition element.

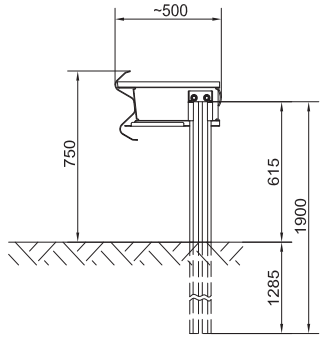
TRANSITION 3N32539
H2-W5-A / H2-W4-A

Description

Supply and installation of transits between guardrail 4Safe H2-W5 3n24872 and H2-W4 3n32312.
The 4Safe guardrail, thanks to the extreme flexibility, permit the transit (in this case containment level H2) from one working width to another one, only using/removing a single threaded bar diam. 32 mm.
S235JR-S355JR steel quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 4

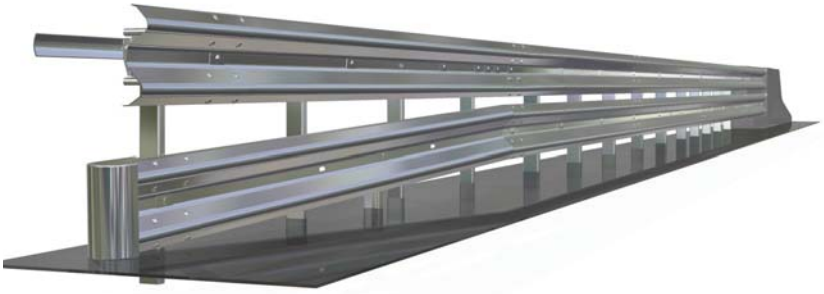
TRANSITION BESTCONNECT EDSP H2-W2-C / NJ





Performance	
Containment level	H2
Acceleration Severity Index “ASI”	C
Working width	W2
Extreme lateral position of the vehicle	-
Dynamic deflection	0.4 m

Characteristics	
Height out of ground	750 - 810 mm
Transversal overall dimensions	500 - 610 mm
Centre to centre between posts	1000 - 2000 mm
Tested minimum length (without terminal end)	27.10 m



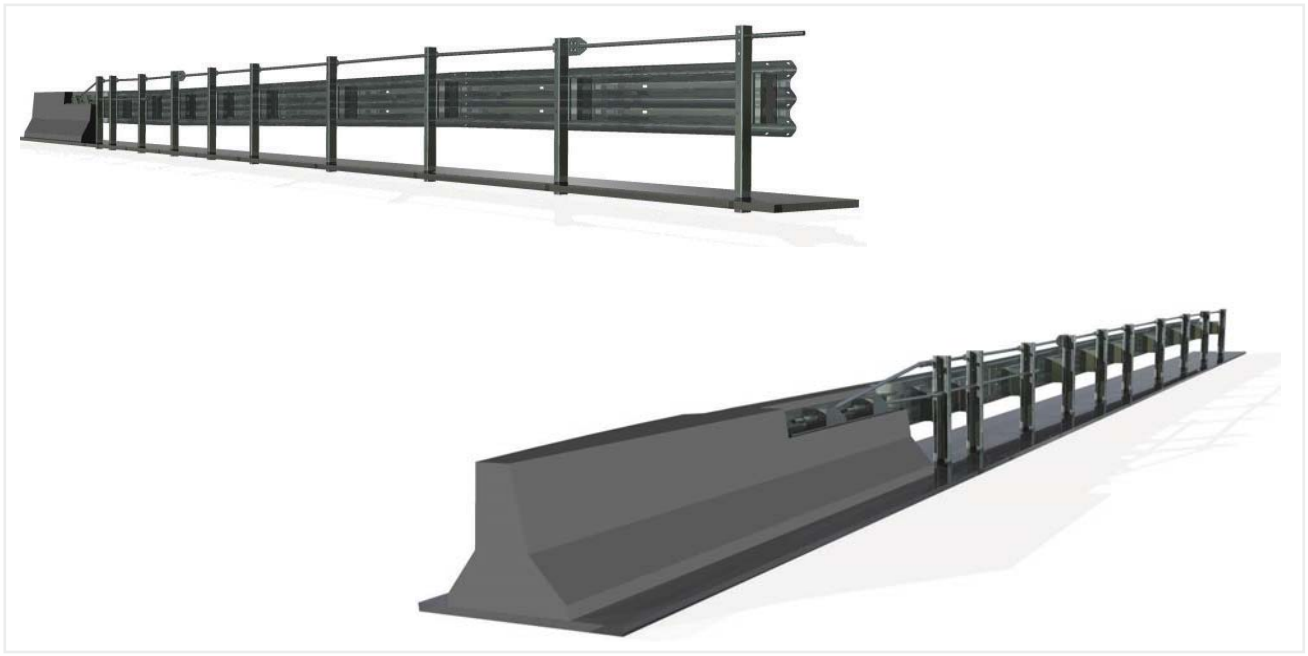
Description

Supply and installation of transition between EDSP (Profile: German A / B) and concrete barrier (e.g. Spengler New Jersey 81+12/2)
S235JR steel according to DIN EN 10025,
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by ENV 1317-4:2002.

TRANSITION 3N34381 SAFE LINK
H2-W4-A / NJ

Performance	
Containment level	H2
Acceleration Severity Index “ASI”	B
Working width	W4 (1.10 m)
Extreme lateral position of the vehicle	1.30 m
Dynamic deflection	0.80 m

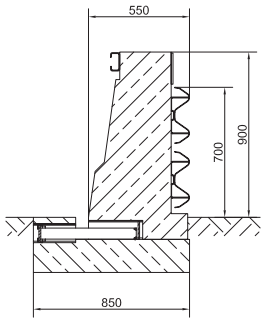
Characteristics	
Height out of ground	800 mm (Concrete) / 1120 mm (H2-W4-A in Steel)
Transversal overall dimensions	600 mm (Concrete) / 515 mm (H2-W4-A in Steel)
Tested minimum length	15.36 m

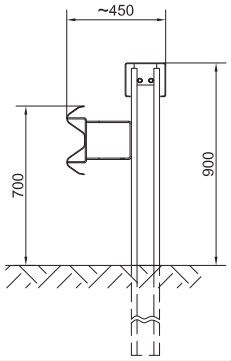


Description

Supply and installation of transit between metal safety barrier Fracasso H2-W4-A (3n32312) and concrete barrier Deltablock DB 80 F.
S235JR-S275JR-S355JR steel quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 4.
Certificate CE n. 182/2131/CPD/2011

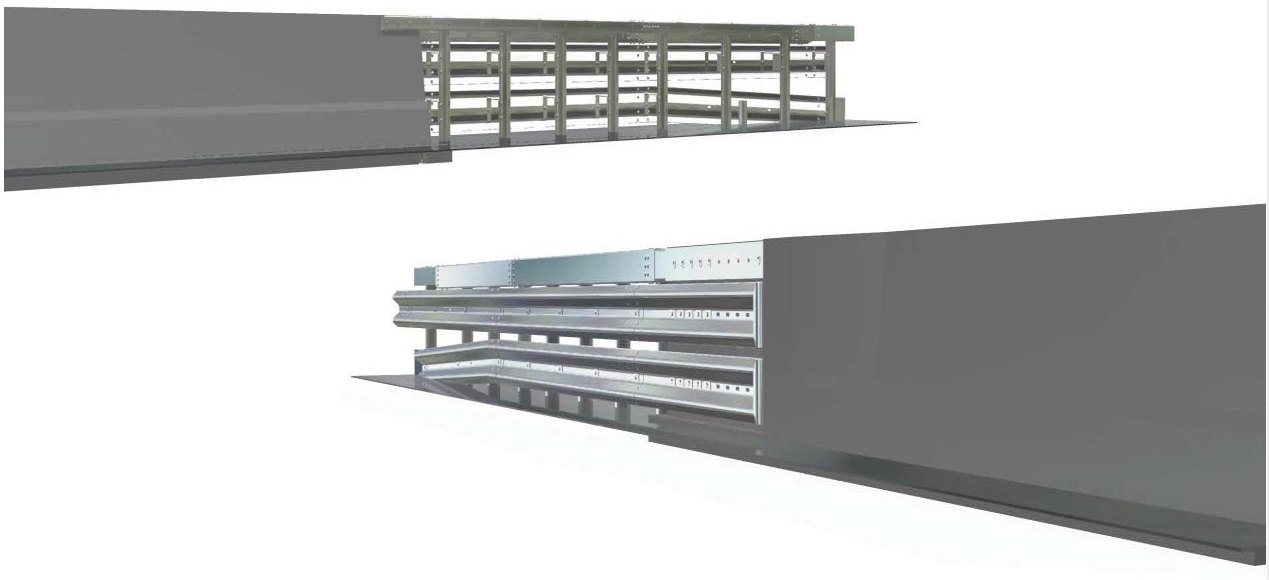
TRANSITION BESTCONNECT SR ECO H2-W4-B / NJ





Performance	
Containment level	H2
Acceleration Severity Index “ASI”	B
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	0.6 m

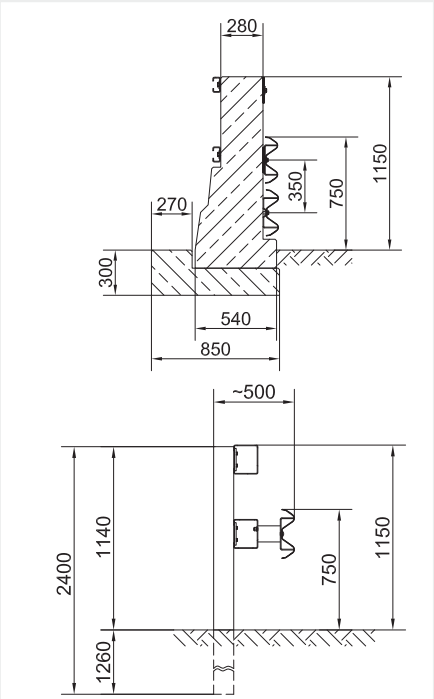
Characteristics	
Height out of ground	900 mm
Transversal overall dimensions	450 - 540 mm
Centre to centre between posts	2000 - 1000 mm
Tested minimum length (without terminal end)	19.60 m



Description

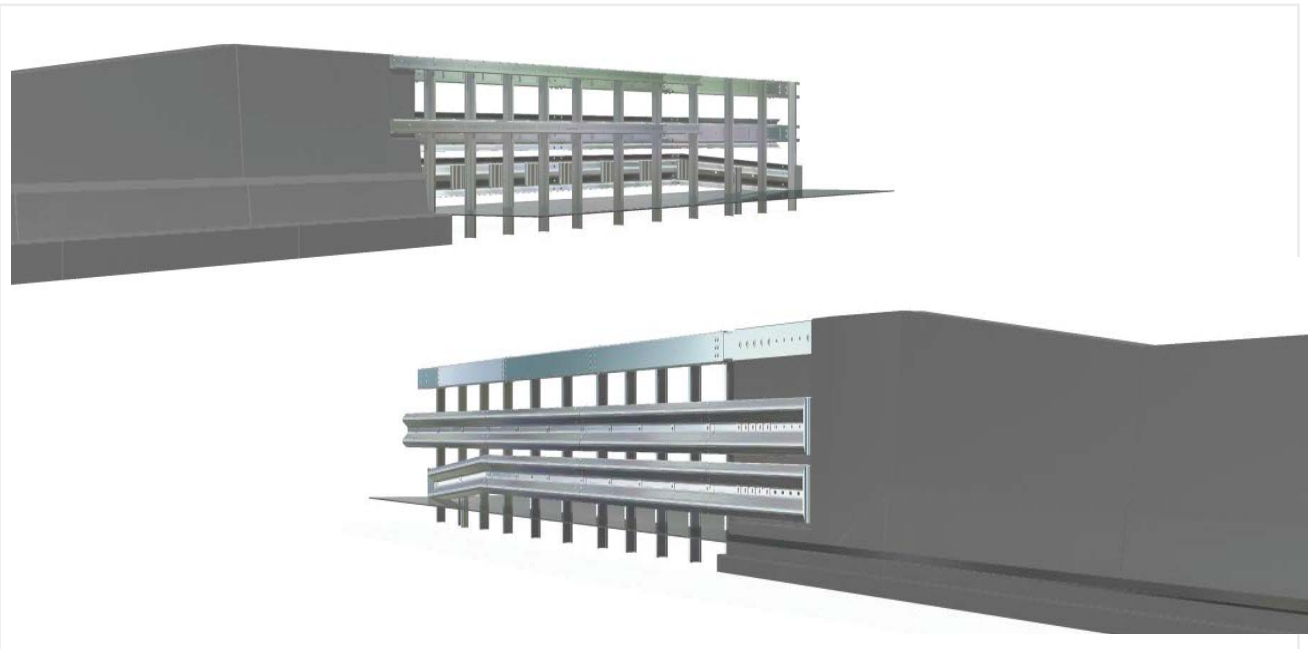
Supply and installation of transition between SuperRail ECO (Profile: German A / B) and concrete barrier (e.g. Spengler Step Barrier 90+12/2)
S235JR/S355JR steel according to DIN EN 10025,
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by ENV 1317-4:2002

TRANSITION BESTCONNECT SUPER RAIL H2-W2-C / NJ



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	C
Working width	W2
Extreme lateral position of the vehicle	-
Dynamic deflection	0.4 m

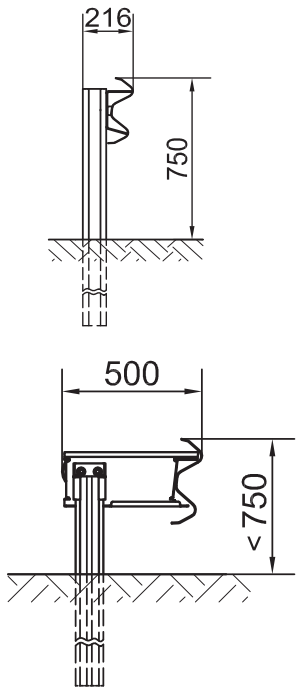
Characteristics	
Height out of ground	900 - 1150 mm
Transversal overall dimensions	500 - 540 mm
Centre to centre between posts	1000 - 1333 mm
Tested minimum length (without terminal end)	23.10 m



Description

Supply and installation of transition between SuperRail (Profile: German A / B) and concrete barrier (e.g. Spengler Step Barrier 90+12/2)
S235JR steel according to DIN EN 10025,
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by ENV 1317-4:2002

TERMINAL EASYRAIL P2A



Performance	
Containment level	P2A
Acceleration Severity Index “ASI”	A
Exit Box	Z1
Extreme lateral position of the vehicle	-
Lateral Displacement	x1y1

Characteristics	
Height out of ground	0 - 750 mm
Transversal overall dimensions	206 - 500 mm
Centre to centre between posts	1333 mm
Tested length	16.00 m

Description

Supply and installation of terminal P2A for EasyRail (Profile: German A / B)
AMVR1 steel quality on the basis of DIN EN 10025, S235JR Steel according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The terminal has successfully passed the tests required by ENV 1317-4:2002

3n24155 Twiny

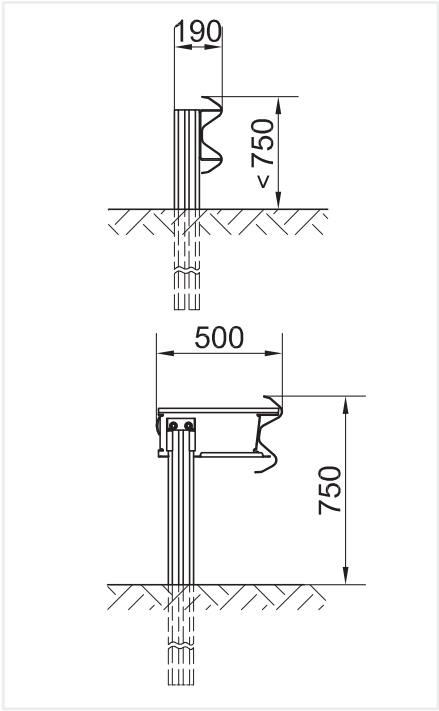
Performance	
Containment level	P2
Acceleration Severity Index “ASI”	A
Exit Box	Z1
Extreme lateral position of the vehicle	-
Lateral Displacement	x1y1

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	5017 mm

Description

Supply and installation of terminal 3n24155 “Twiny”.
S235JR - S275JR steel according to DIN EN 10025,
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The terminal has successfully passed the tests required by EN 1317

TERMINAL EDSP P2A



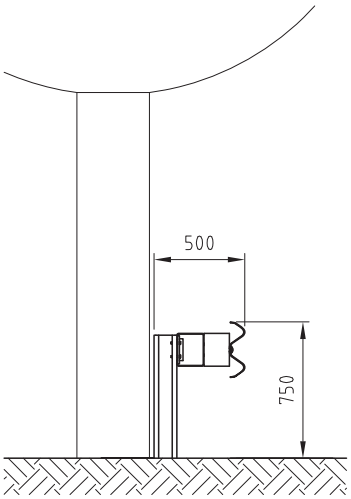
Performance	
Containment level	P2A
Acceleration Severity Index “ASI”	A
Exit Box	Z2
Extreme lateral position of the vehicle	-
Lateral Displacement	x1y1

Characteristics	
Height out of ground	0 - 750 mm
Transversal overall dimensions	185 - 190 mm
Centre to centre between posts	1333 - 2000 mm
Tested length	12.00 m

Description

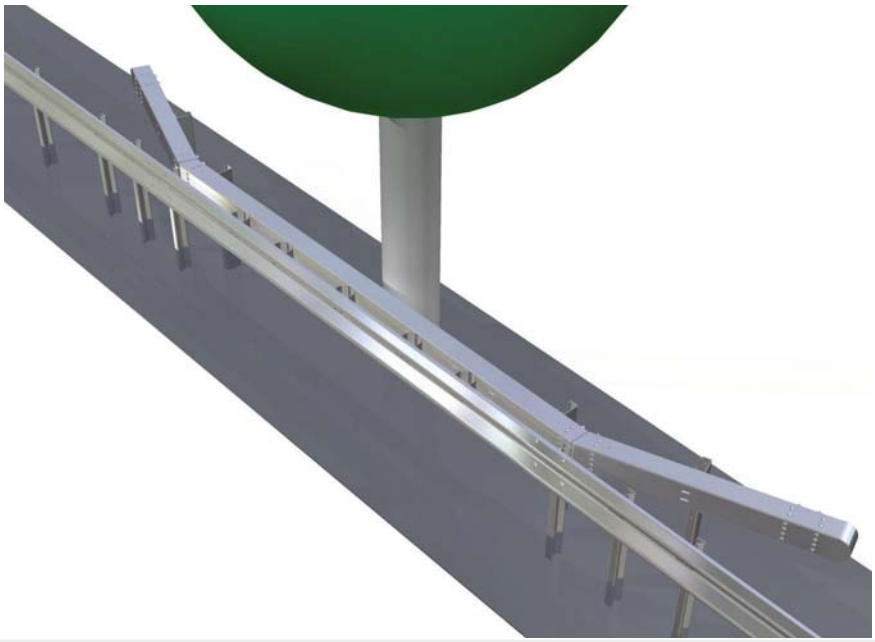
Supply and installation of terminal P2A for EDSP (Profile: German A / B)
S235JR steel according to DIN EN 10025,
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The terminal has successfully passed the tests required by ENV 1317-4:2002

ESP BOS
(TREE AND OBSTACLE PROTECTION)



Performance	
Containment level	N2
Acceleration Severity Index “ASI”	B
Working width	W3
Extreme lateral position of the vehicle	-
Dynamic deflection	0.6 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	495 mm
Centre to centre between posts	1000 mm
Tested minimum length (without terminal end)	20.00 m



Description

Supply and installation of 2-waves safety barrier (Profile: German A / B), thickness 3.0 mm, box beams 180x150x4 mm length 3.998 mm, Sigma posts 100x55x4.2 mm, h. 1900 mm, C-125 posts, h. 2000 mm, support bracket 200/185x70x5, deformation elements Ø 139.7 mm, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE no. 0175-CPD-2010

3N23996 TWINSAFE (TREES AND OBSTACLE POROTECTION)

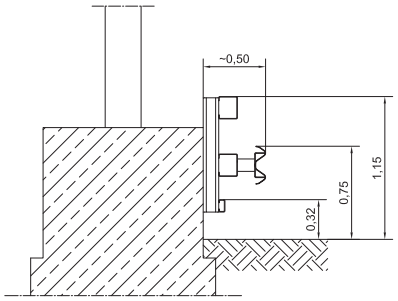
Performance	
Containment level	P2
Acceleration Severity Index “ASI”	A
Working width	X1;Y1
Extreme lateral position of the vehicle	Z1
Dynamic deflection	0.56 m

Characteristics	
Height out of ground	750 mm
Transversal overall dimensions	1160 mm
Tested minimum length	5.02 m

Description

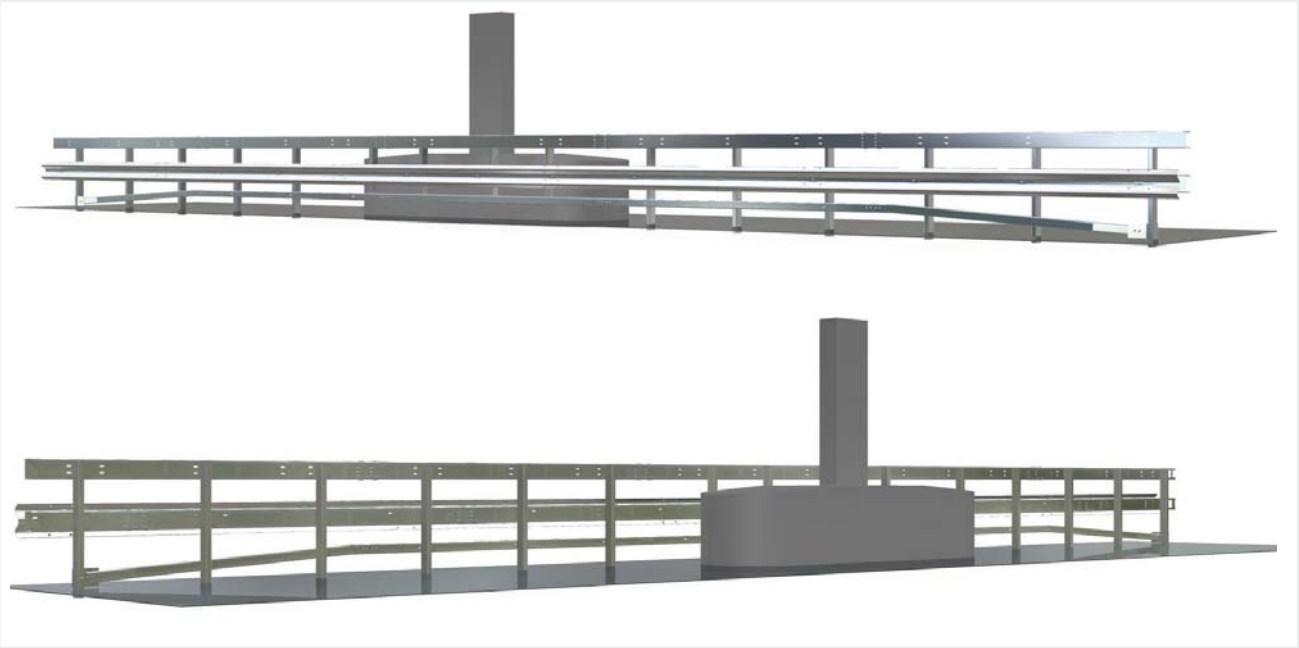
Supply and installation of 3-waves safety barrier, thickness 2.5 mm,”U” posts 120x80x5,9 mm and 140x70x7 mm fixed to the ground every 4 - 2- 1- 0.75 m;
Reinforcement plate 7 mm thikness; Spacers 105x204x3 mm
S235JR-S275JR steel quality according to EN 10025
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 4.
Certificate CE n. 081/2131/CPD/2010

SUPER RAIL VZB (GANTRY PROTECTION)



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	B
Working width	W3
Extreme lateral position of the vehicle	-
Dynamic deflection	0.55 m

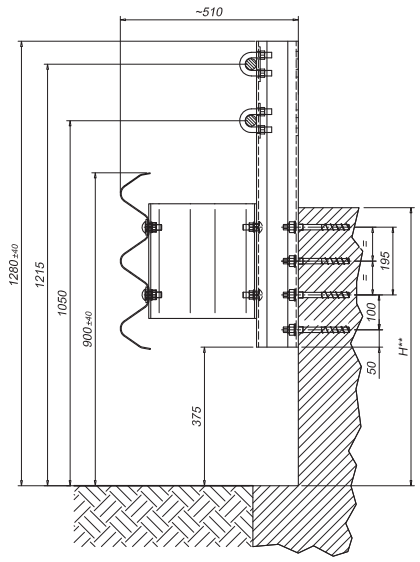
Characteristics	
Height out of ground	1150 mm
Transversal overall dimensions	500 mm
Centre to centre between posts	1333 mm
Tested minimum length (without terminal end)	28.00 m



Description

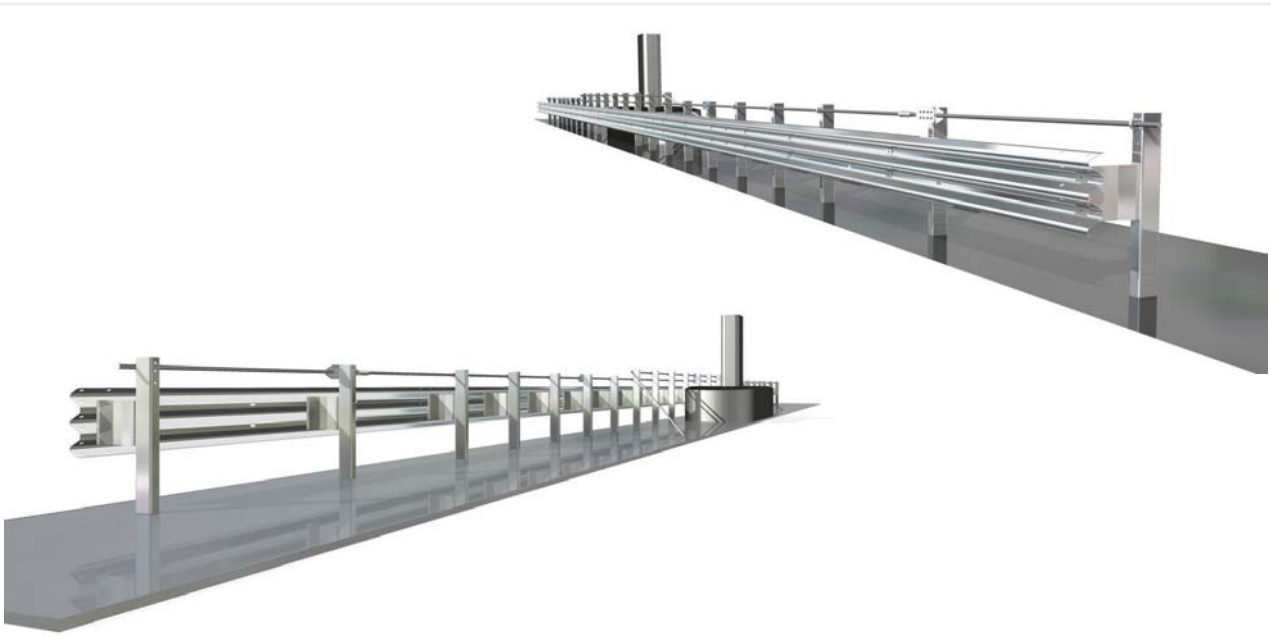
Supply and installation of 2-waves safety barrier gantry protection (Profile: German A / B), thickness 3.0 mm, box beam 180x150x3 mm length 3.998 mm, C-100 beam 3.998 mm, posts C 125, h. 2.400 mm, the posts are driven into the ground every 1333 mm, deformation elements Ø 139.7 mm, nuts and bolts, reflectors optional.
S235JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0112/CPD/2010

3N3366b HF H2-W3-B (GANTRY PROTECTION



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	B
Working width	W3 (0.90 m)
Extreme lateral position of the vehicle	0.90
Dynamic deflection	0.60 m

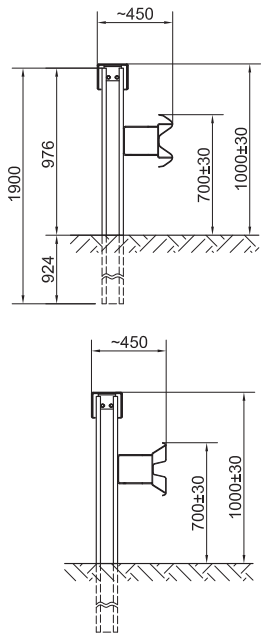
Characteristics	
Height out of ground	900 mm / 1215 mm / 1280 mm
Transversal overall dimensions	510 mm
Centre to centre between posts	1500 mm
Tested minimum length (without terminal end)	27.00 m



Description

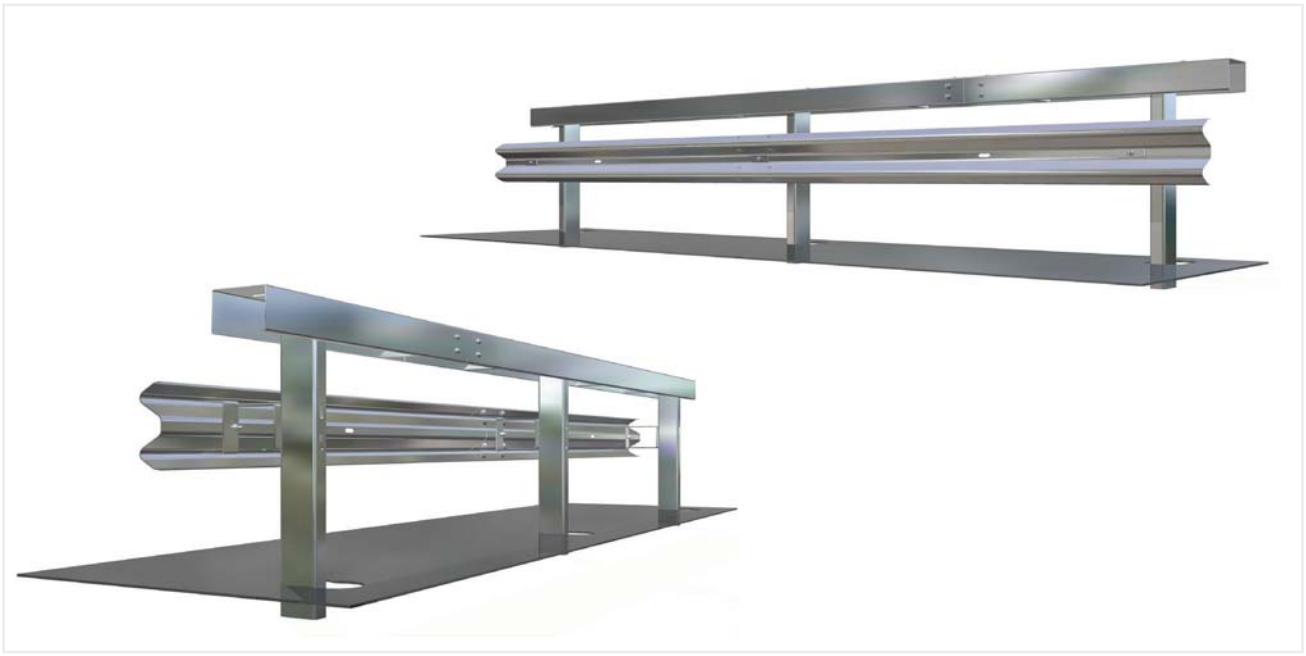
Supply and installation of 3-waves safety barrier, thickness 2.5 mm, utilized like of pylon and concrete basements protection. Posts C 120x80x30x5,9 mm; fixed to ground every 1500 mm (for the external parts outside the concrete basements area), 1000 mm (for the part of the pylon protection). The C 120 (L= 1070 mm) posts are fixed through bolts and nuts to the concrete structure. Spacers 415x80x5.9 mm, with two upper threaded retaining bars Ø 32 mm with welded plates, assembled with nuts and bolts and provided with reflectors.
S235JR-S355JR steel quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 4
Certificate CE n. 152/2131/CPD/20101

SUPER RAIL ECO MEDIAN CROSSING



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W4
Extreme lateral position of the vehicle	-
Dynamic deflection	1.10 m

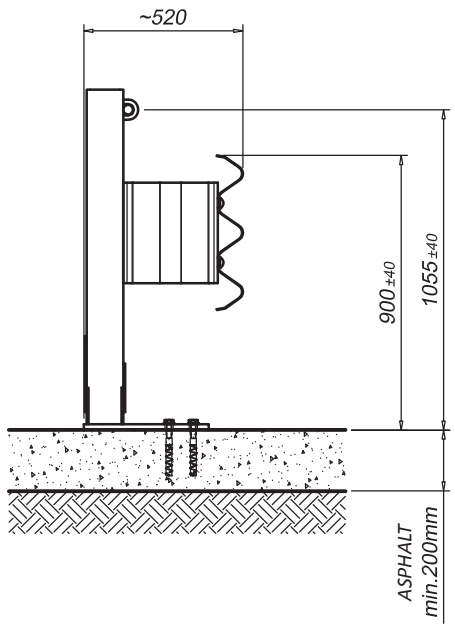
Characteristics	
Height out of ground	1000 mm
Transversal overall dimensions	450 mm
Centre to centre between posts	2000 mm
Tested minimum length (without terminal end)	52.00 m



Description

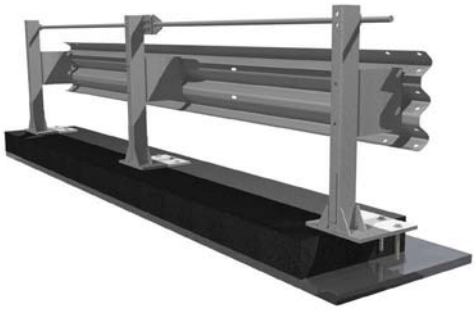
Supply and installation of 2-waves safety barrier in median crossing (Profile: German A / B), thickness 3.0 mm, box beam 180x150x3 mm length 3.998 mm, posts C 125, h. 1.900 mm, the posts are driven into drilled holes in the asphalt surface every 2000 mm, deformation brackets 200 mm, nuts and bolts, reflectors optional.
S235JR/S355JR steel quality according to DIN EN 10025
Hot dip galvanization according to DIN EN ISO 1461
Nuts and bolts according to DIN EN ISO 898-1, DIN EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 0096/CPD/2011

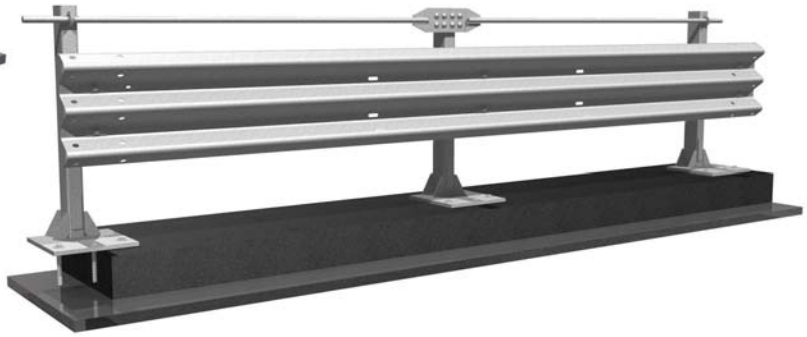
3N36903 MEDIAN CROSSING H2-W4-A



Performance	
Containment level	H2
Acceleration Severity Index “ASI”	A
Working width	W4 (1.10 m)
Extreme lateral position of the vehicle	1.20 m
Dynamic deflection	0.80 m

Caratteristiche	
Height out of ground	1120 mm
Transversal overall dimensions	520 mm
Centre to centre between posts	2250 mm
Tested minimum length (without terminal end)	78 m

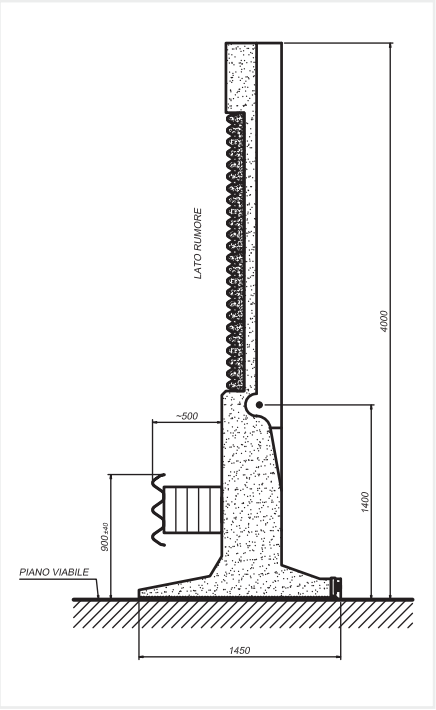




Description

Supply and installation of a 3-wave safety barrier on asphalt, thickness 4 mm, C posts 120x80x30 mm x 5,9 mm, h=1120 mm, fixed to ground every 2250 mm; spacers 310x80x5,9 mm L=330 mm, assembled with nuts and bolts and provided with reflectors.
S235JR-S355JR steel quality according to EN 10025 and FeB44k according to (D.M. 09/01/1996)
Hot dip galvanization according to UNI EN ISO 1461
Nuts and bolts according to UNI EN ISO 898-1, UNI EN 20898-2
The safety barrier has successfully passed the tests required by EN 1317, part 1 and 2.
Certificate CE n. 217/2131/CPD/2010

INTEGRA SYSTEM



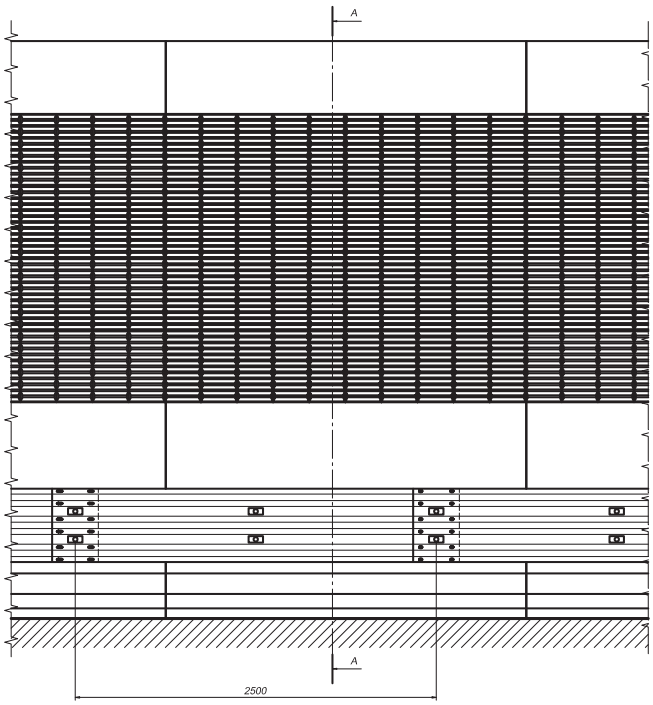
Performance	
Containment level	H4b
Acceleration Severity Index “ASI”	B
Working width	W5 (1.70 m)
Extreme lateral position of the vehicle	1.60 m
Dynamic deflection	1.10 m

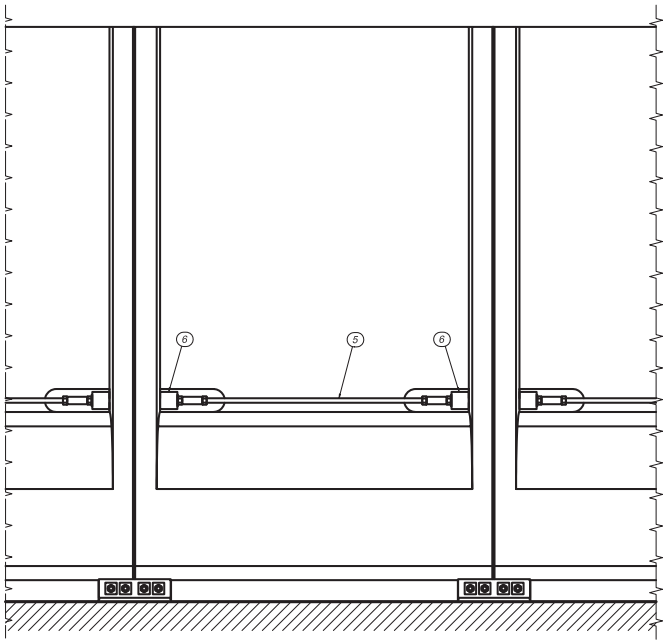
Characteristics	
Height out of ground	900 mm / 4000 mm
Transversal overall dimensions	1450 mm
Centre to centre between posts	2500 mm
Tested minimum length (without terminal end)	-

Description

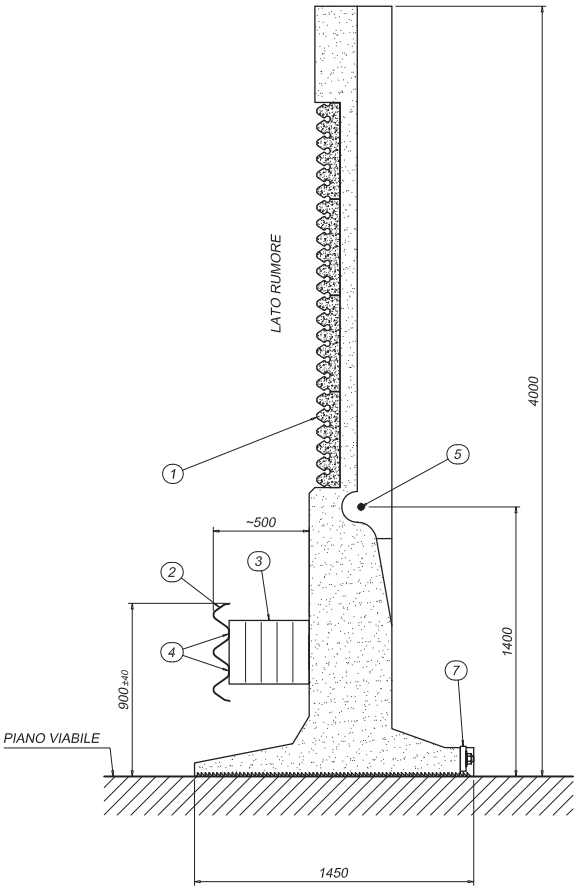
Pre-fabricated element with self-standing, monolithic, noise insulating (56 dB) and noise absorbing (A2 or A4) foot, with a width (length) of 2.50 m and a height of 4.00 to 5.50 m in C35/35 concrete, reinforced with B450C-class steel. The noise absorbing cladding can be comprised of vibration-compressed elements in lightweight concrete with expanded clay, or vibration-compressed elements in lightweight concrete with mineral wood, with modular measurements (height x length) of 25/50 x 50 cm and a maximum thickness of 18 cm. The vibration-compressed elements have dovetail grooves that secure them to the fresh concrete. The prefabricated element is sized for the static loads generated by its weight, by the aerodynamic pressure, as well as the dynamic stresses deriving from shock, as set forth in regulations EN1317-1 and EN1317-2 of 07/2010;
the 3-wave belt in S275JR steel, according to regulation EN 10025, with a thickness of 3 mm (galvanised in accordance with regulation UNI EN ISO 1461);

310x80mm spacers, L=330mm, 5.9mm thickness, in S235JR steel, installed every 1.25m between the 3-wave belt and the pre-fabricated element.
130x500mm steel plate, 30mm thickness, in S355JR steel, for the connection to the foot of the pre-fabricated concrete modules;
rear current with course-thread bar with a diameter of 32mm in class B450C steel connected with special damper system;
bolts in accordance with regulations UNI EN ISO 898-1 and UNI EN 20898-2.





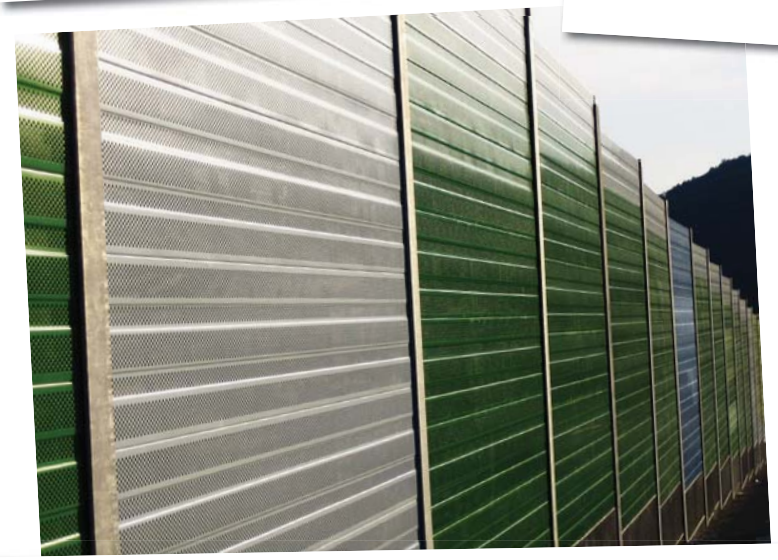
1	Soundproofing wall
2	3 wave 3n thickness 3 mm
3	Spacer
4	Small plate
5	Threaded bar Ø120x6,0
6	Plate 500x130x30 with 4 holes Ø50



FRACASSO

VOLKMANN & ROSSBACH

Other products



VOLKMANN & ROSSBACH