

S.M.A. Crash Cushions



Industry A.M.S. srl (Automation Manufacturing Services) designs and develops industrial automation solutions, automotive industrial systems and road safety devices.

In over 40 years of activity INDUSTRY A.M.S. has grown according to the following guidelines:

Experience

Innovation

Reliability

Quality

These features can be identified in all company's products and in particular in the S.M.A. Crash Cushions which distinguish themselves for their high security, incredible strength and wide-ranging suitability.

S.M.A. Crash Cushions are designed to assure the highest level of passive safety. For their particular system of absorbing energy, S.M.A. Crash Cushions restrain and attenuate the crash effect on the passengers of the vehicle. Moreover for standard impacts, according to the UNI EN 1317, they prevent passengers from undergoing lasting injuries.



S.M.A. Crash Cushions are all redirective and bidirectional. They have been successfully tested according to the UNI EN 1317-3 normative and the entire S.M.A. family of crash cushions is CE Marked, as indicated by the 4th statement of the rule.

The crash tests results and the CE mark have been certificated by the authorized EU Notified Body, CSI.

S.M.A. Crash Cushions presents the most complete product range in the market that can be positioned on every kind of junction.

The S.M.A. safety modular absorbers are totally made of steel, they can undergo every kind of climate change and guarantee a duration of 20 years.

Foundation notes

- Installation on reinforced concrete basement
 - Installation on hot mix asphalt
- Further details are reported in our installation manual

Industry A.M.S. invites you to visit its site www.smaroadsafety.com and its Youtube channel user\attenuatoriurtoSMA to get further information about the performances of S.M.A. Crash Cushions



Member of CISQ Federation
RINA
ISO 9001-3834-2
Certified Integrated Systems



Member of CISQ Federation
RINA
ISO 9001:2008
Certified Quality System



CSI
CERT



Why choosing S.M.A. crash cushions

High safety

Top performances in terms of protection of car occupants.

Reusability (80%)

Thanks to their strength, after a standard impact it is possible to change only the absorbing panels of the S.M.A. crash cushion. Consequently S.M.A. crash cushions are very simple and inexpensive to restore, as you can see from the pictures above.

The shortest one

The S.M.A. crash cushions are the shortest one among the others available on the market. This increases safety and allows to install them in place where previously it was not possible to do (tunnels and divergence areas).

No maintenance required

S.M.A. crash cushions require no maintenance because they are totally made of steel. They can resist to the effects of atmospheric agents or climate change, like precipitations, ice, wind, dust. The efficiency of the device is always intact.

Life cycle

S.M.A. crash cushions market costs is the lowest because of their life cycle. They are:

- Totally made of steel
- Particularly robust
- The shortest ones
- Highly reusable in case of impacts
- Easy to be restored on site

For further details you can visit our site www.smaroadsafety.com and our Youtube channel user\attenuatoriurtoSMA



Recovery of SMA™ crash cushion 80 km/h after a crash test

Crash cushion
SMA50P
Redirective

Easy to be installed
Reusability (80%)
No maintenance required
High safety
The shortest one



Totally made of Steel (ClassO)

www.smaroadsafety.com
[youtube: user/attenuatoriurtoSMA](https://www.youtube.com/user/attenuatoriurtoSMA)

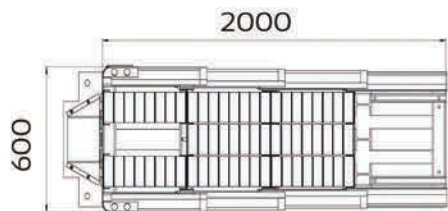


CSI
CERT

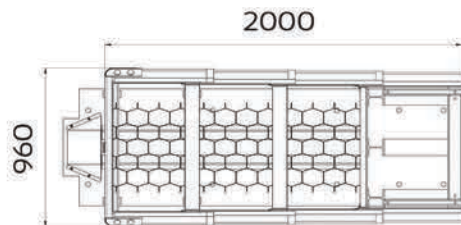


Registrazione numero

0497/CPD/4629/12



SMA 50 P



SMA 50 P-L

S.M.A. 50P

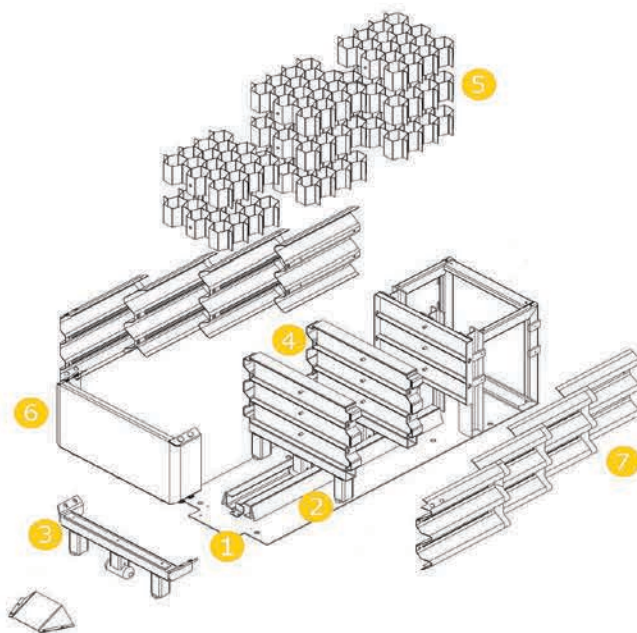
Redirective

The shortest crash cushion in the world: just 2 meters long.

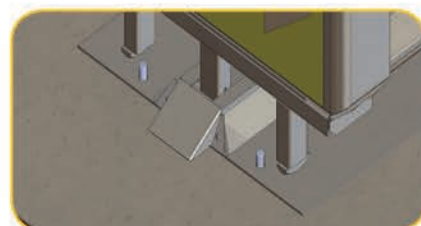
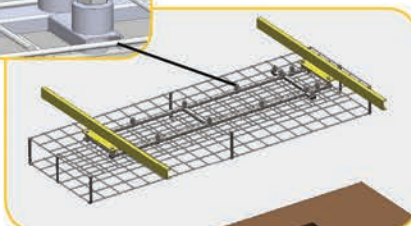


*The **base structure** (1), completely in electro-welded steel, is made of a 5/6 mm thick plate and a monorail guide (2) for the sliding bars (3) linked to retaining panels (4) of the absorbing cells (5). The bumper or frontal panel (6) is the rigid connection among the sliding side panels (7), which after the impact slide one upon the other driven by an appropriate shift system.*

At the same time the central panels (4), connected to a couple of sliding side panels (7), crash the cells (5) that gradually dissipate the kinetic energy coming from the impact.



Installation with bolts



Installation with fials

Available Models

	SMA 50 P	SMA 50 P-L
Width	670 mm	960 mm
Length	2000 mm	2000 mm
Height	760 mm	760 mm



Concrete basement

Crash cushion
SMA80P
Redirective

Easy to be installed
Reusability (80%)
No maintenance required
High safety
The shortest one



Totally made of Steel (ClassO)

www.smaroadsafety.com
[youtube: user/attenuatoriurtoSMA](https://www.youtube.com/user/attenuatoriurtoSMA)

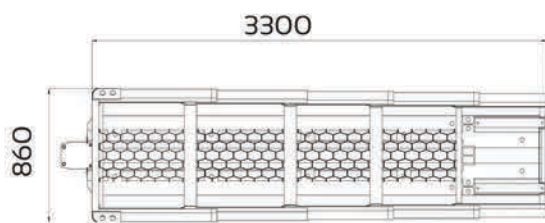


CSI
CERT

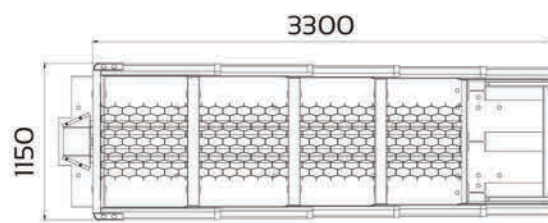


Registrazione numero

0497/CPD/4588/12



SMA 80 P



SMA 80 P-L

S.M.A. 80P

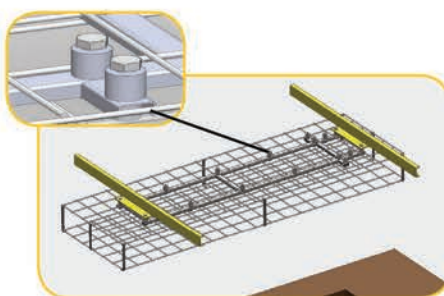
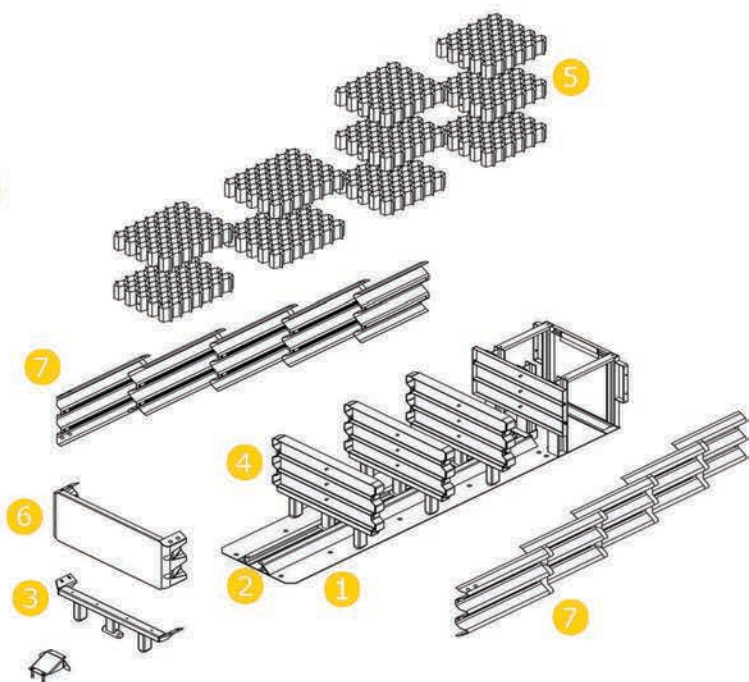
Redirective

The most widespread speed class.

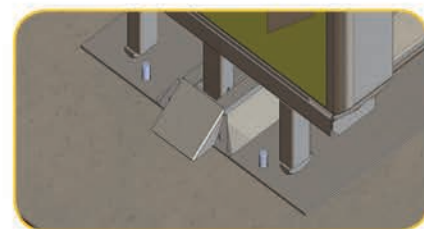
Thanks to its small dimensions S.M.A. 80 km/h allows to protect particular critical areas. It is the only road safety device in its class which is suitable for bypass and tunnels. Moreover all its parts are completely made of steel according to the UNI EN ISO 13943/2004 (Fire Safety).

The base structure (1), completely in electro-welded steel, is made of a 5/6 mm thick plate and a monorail guide (2) for the sliding bars (3) linked to retaining panels (4) of the absorbing cells (5). The bumper or frontal panel (6) is the rigid connection among the sliding side panels (7), which after the impact slide one upon the other driven by an appropriate shift system.

At the same time the central panels (4), connected to a couple of sliding side panels (7), crash the cells (5) that gradually dissipate the kinetic energy coming from the impact.



Installation with bolts



Installation with fials



Concrete basement

Available Models

	SMA 80 P	SMA 80 P-L
Width	860 mm	1150 mm
Length	3300 mm	3300 mm
Height	760 mm	760 mm

Crash cushion
SMA100P
Redirective

Easy to be installed
Reusability (80%)
No maintenance required
High safety
The shortest one



Totally made of Steel (Class0)

www.smaroadsafety.com
[youtube: user/attenuatoriurtoSMA](https://www.youtube.com/user/attenuatoriurtoSMA)

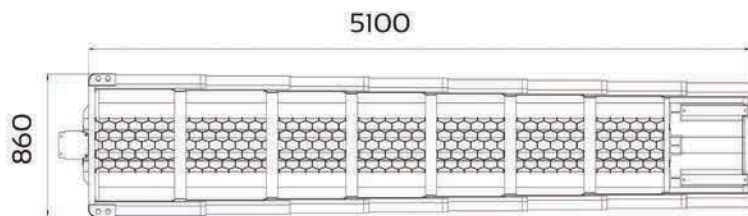


CSI
CERT

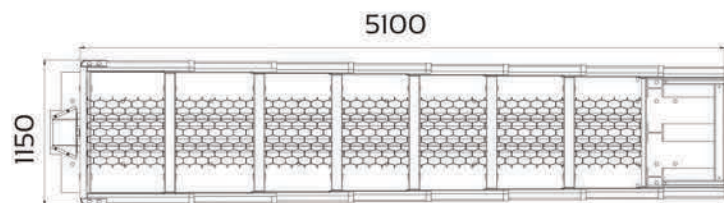


Registrazione numero

0497/CPD/4588/12



SMA 100 P



SMA 100 P - L

S.M.A. 100P

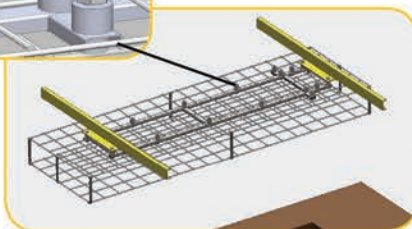
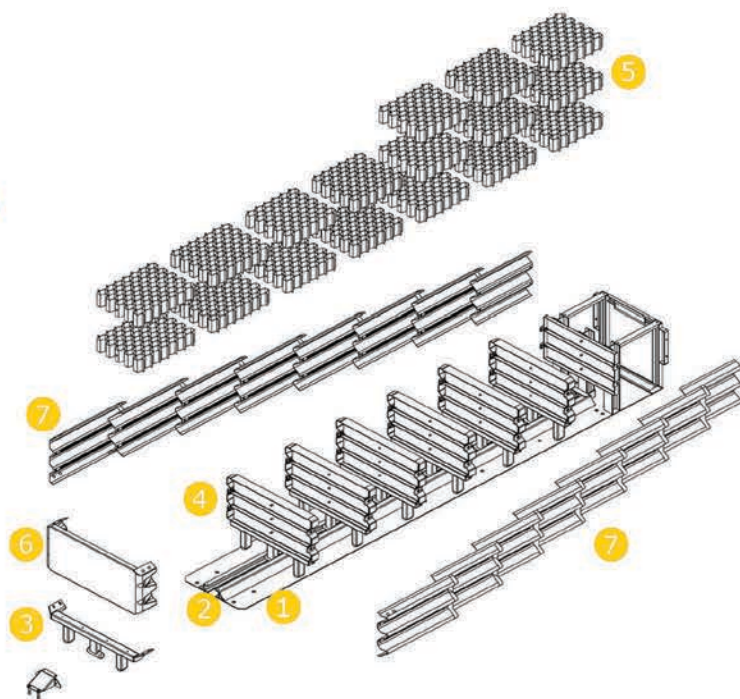
Redirective

This device represents the best features of its class with its reduced dimensions, high stability and great functionality.

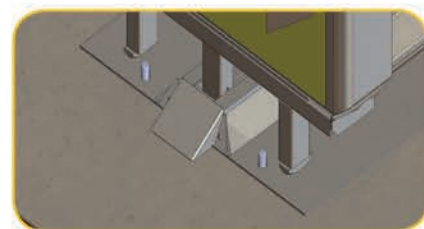


The base structure (1), completely in electro-welded steel, is made of a 5/6 mm thick plate and a monorail guide (2) for the sliding bars (3) linked to retaining panels (4) of the absorbing cells (5). The bumper or frontal panel (6) is the rigid connection among the sliding side panels (7), which after the impact slide one upon the other driven by an appropriate shift system.

At the same time the central panels (4), connected to a couple of sliding side panels (7), crash the cells (5) that gradually dissipate the kinetic energy coming from the impact.



Installation with bolts



Installation with fials

Available Models

	SMA 100 P	SMA 100 P-L
Width	860 mm	1150 mm
Length	5100 mm	5100 mm
Height	760 mm	760 mm



Concrete basement

Crash cushion **SMA110P**

Redirective

Easy to be installed
Reusability (80%)
No maintenance required
High safety
The shortest one



Totally made of Steel (Class0)

www.smaroadsafety.com
[youtube: user/attenuatoriurtoSMA](https://www.youtube.com/user/attenuatoriurtoSMA)

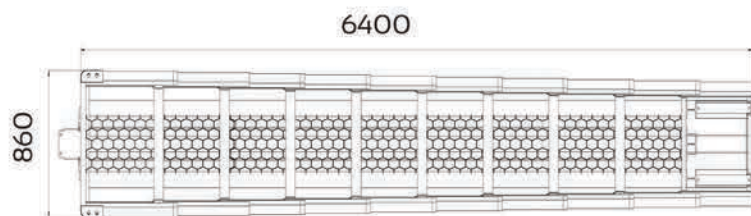


CSI
CERT

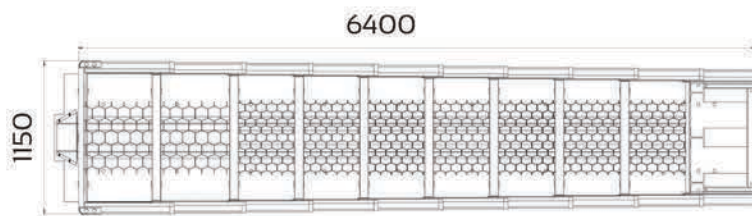


Registrazione numero

0497/CPD/4588/12



SMA 110 P



SMA 110 P-L

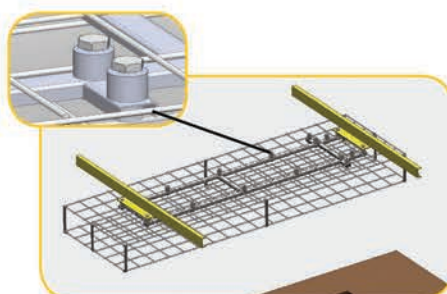
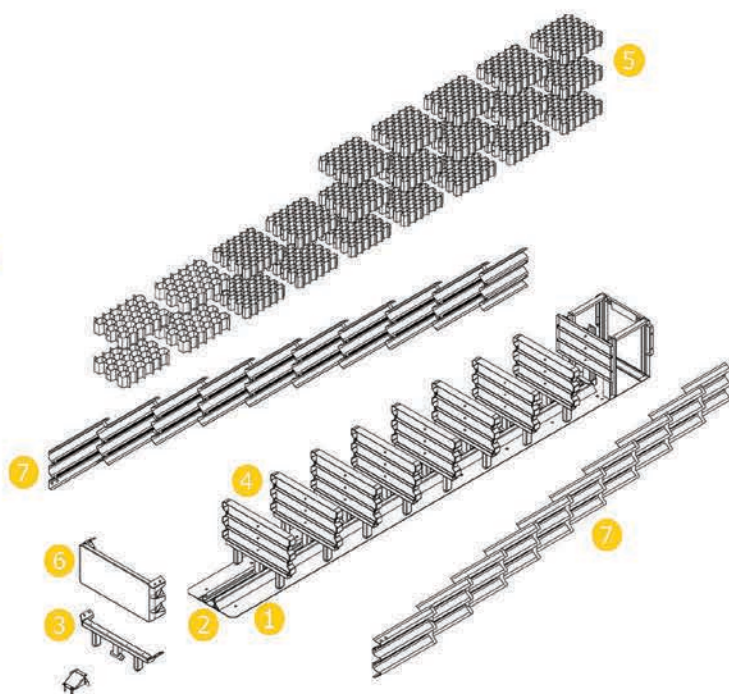
S.M.A. 110P

Redirective

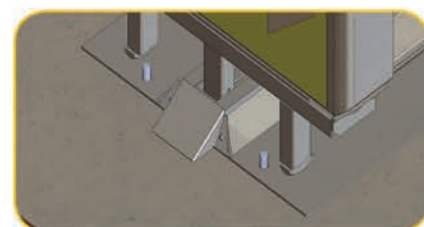
SMA 110 km/h is a particularly strong crash cushion: it has even passed the experimental test at a speed of 130 km/h without modifying the safety index foreseen by the UNI EN 1317 normative.



The base structure (1), completely in electro-welded steel, is made of a 5/6 mm thick plate and a monorail guide (2) for the sliding bars (3) linked to retaining panels (4) of the absorbing cells (5). The bumper or frontal panel (6) is the rigid connection among the sliding side panels (7), which after the impact slide one upon the other driven by an appropriate shift system. At the same time the central panels (4), connected to a couple of sliding side panels (7), crash the cells (5) that gradually dissipate the kinetic energy coming from the impact.



Installation with bolts



Installation with flials



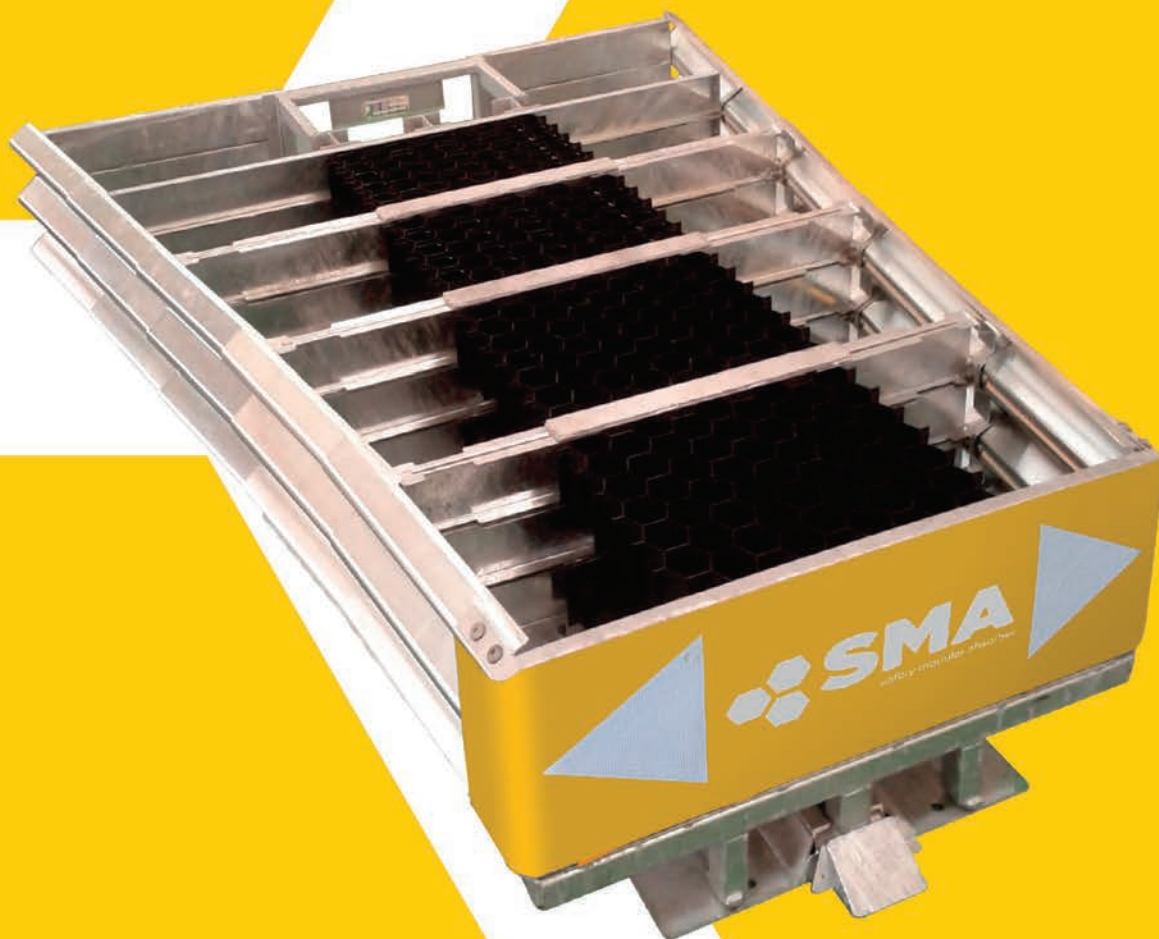
Concrete basement

Available Models

	SMA 110 P	SMA 110 P-L
Width	860 mm	1150 mm
Length	6400 mm	6400 mm
Height	760 mm	760 mm

Crash cushion
SMA80W
Redirective

Easy to be installed
Reusability (80%)
No maintenance required
High safety
The shortest one



Totally made of Steel (Class0)

www.smaroadsafety.com
[youtube: user/attenuatoriurtoSMA](https://www.youtube.com/user/attenuatoriurtoSMA)

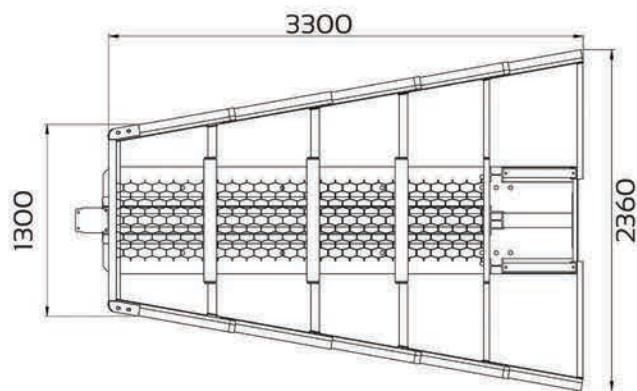


CSI
CERT

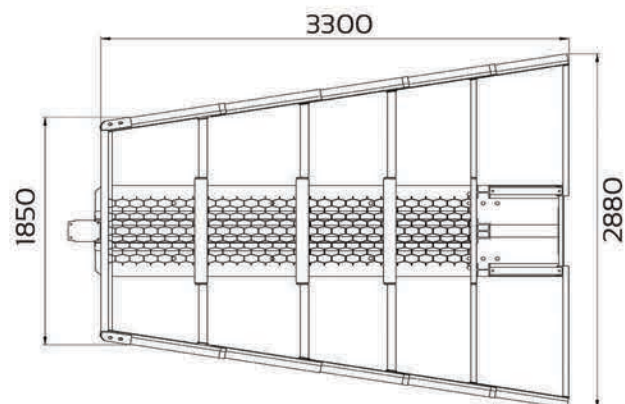


Registrazione numero

In attesa di rilascio



SMA 80 W



SMA 80 W-L

S.M.A. 80W

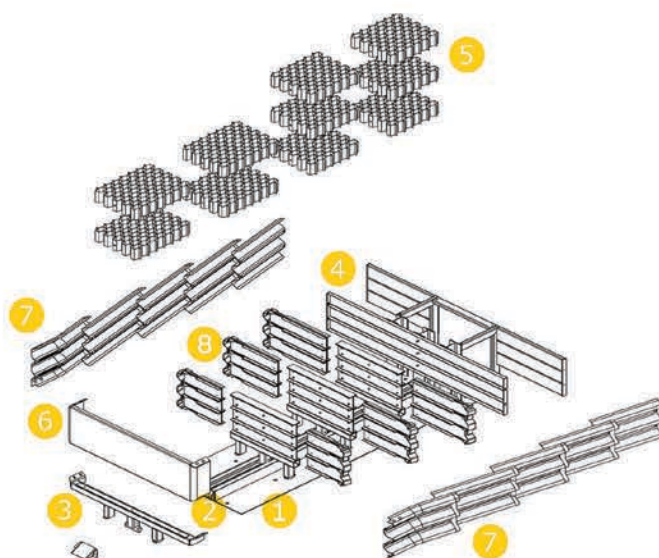
Redirective

It protects road junctions in areas with reduced space

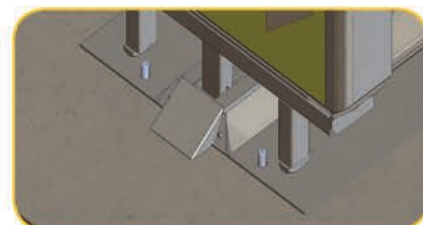
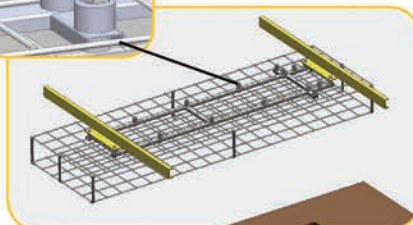


The base structure (1), completely in electro-welded steel, is made of a 5/6 mm thick plate and a monorail guide (2) for the sliding bars (3) linked to retaining panels (4) of the absorbing cells (5). The bumper or frontal panel (6) is the rigid connection among the sliding side panels (7), which after the impact slide one upon the other driven by an appropriate shift system.

At the same time the central panels (4), composed of additional panels (8) giving the V-shape to the crash cushion, connected to a couple of sliding side panels (7), crash the cells (5) that gradually dissipate the kinetic energy coming from the impact.



Installation with bolts



Installation with fials

Available Models

	SMA 80 W	SMA 80 W-L
Width	2360 mm	2880 mm
Length	3300 mm	3300 mm
Height	760 mm	760 mm



Concrete basement

Crash cushion
SMA100W
Redirective

Easy to be installed
Reusability (80%)
No maintenance required
High safety
The shortest one



Totally made of Steel (ClassO)

www.smaroadsafety.com
[youtube: user/attenuatoriurtoSMA](https://www.youtube.com/user/attenuatoriurtoSMA)

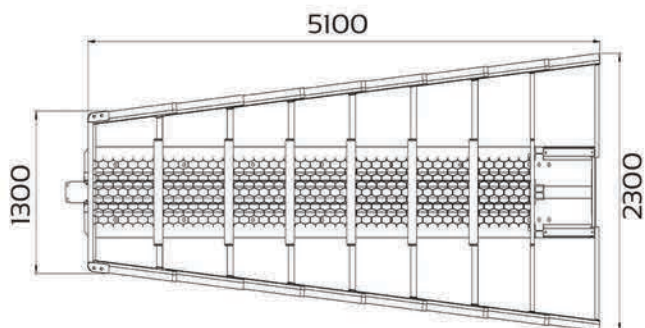


CSI
CERT

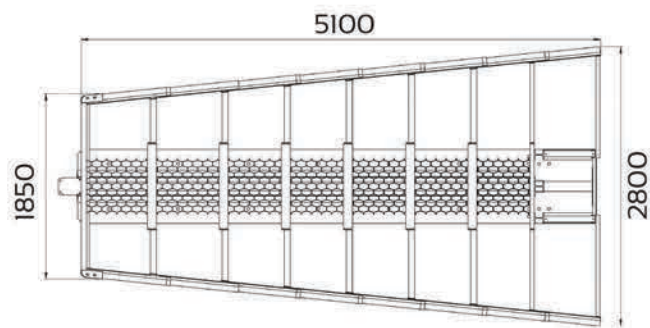


Registrazione numero

In attesa di rilascio



SMA 100 W



SMA 100 W - L

S.M.A. 100W

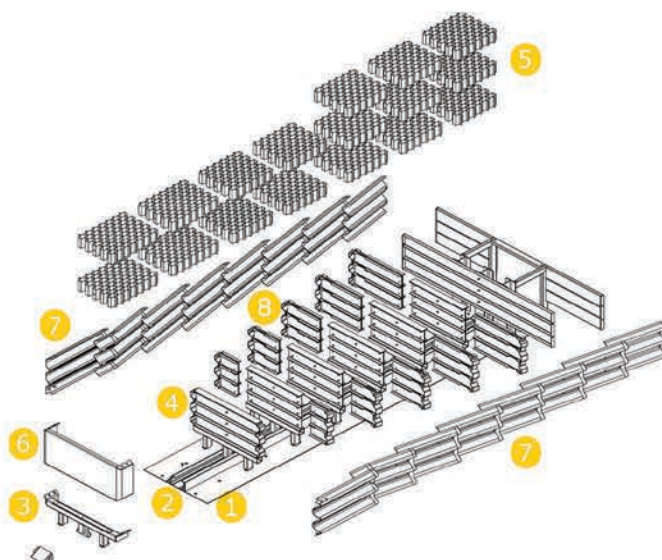
Redirective

High safety in wider spaces.
It protects junctions and
highway exits where the
speed limit is 100 km/h.

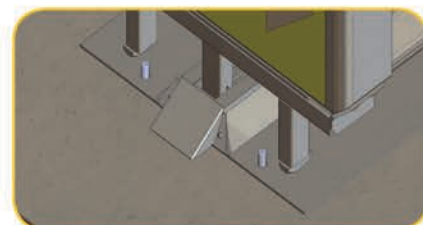
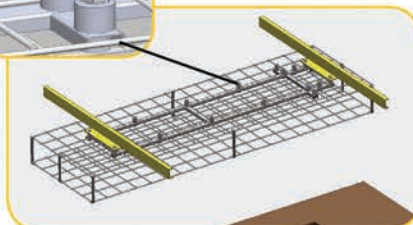


The base structure (1), completely in electro-welded steel, is made of a 5/6 mm thick plate and a monorail guide (2) for the sliding bars (3) linked to retaining panels (4) of the absorbing cells (5). The bumper or frontal panel (6) is the rigid connection among the sliding side panels (7), which after the impact slide one upon the other driven by an appropriate shift system.

At the same time the central panels (4), composed of additional panels (8) giving the V-shape to the crash cushion, connected to a couple of sliding side panels (7), crash the cells (5) that gradually dissipate the kinetic energy coming from the impact.



Installation with bolts



Installation with fials

Available Models

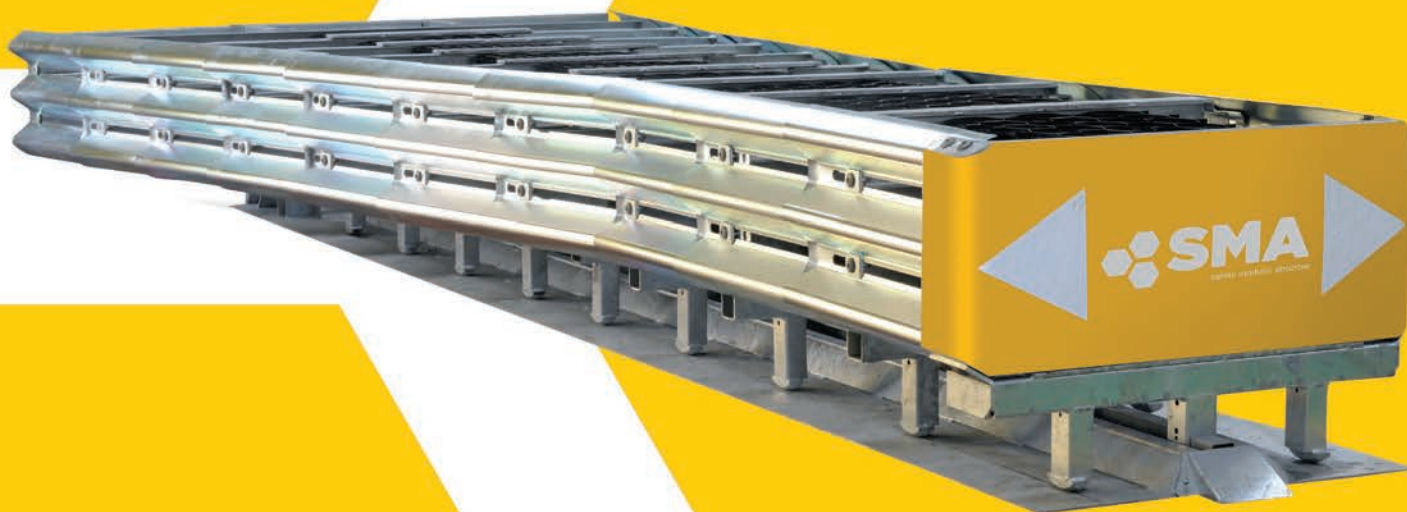
	SMA 100 W	SMA 100 W-L
Width	2300 mm	2800 mm
Length	5100 mm	5100 mm
Height	760 mm	760 mm



Concrete basement

Crash cushion
SMA110W
Redirective

Easy to be installed
Reusability (80%)
No maintenance required
High safety
The shortest one



Totally made of Steel (Class0)

www.smaroadsafety.com
[youtube: user/attenuatoriurtoSMA](https://www.youtube.com/user/attenuatoriurtoSMA)

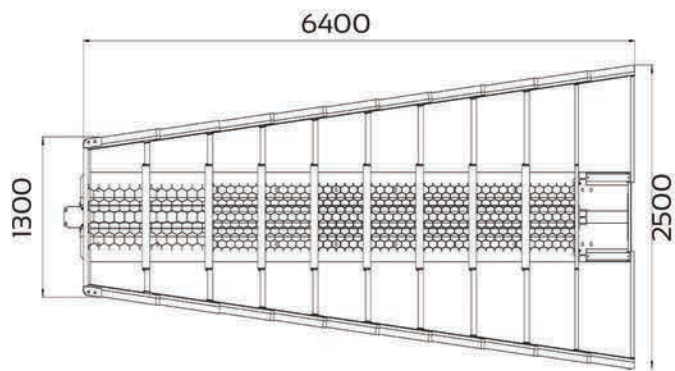


CSI
CERT

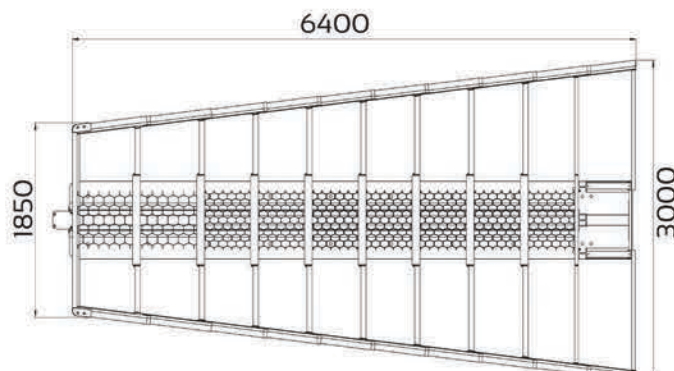


Registrazione numero

In attesa di rilascio



SMA 110 W



SMA 110 W - L

S.M.A. 110W

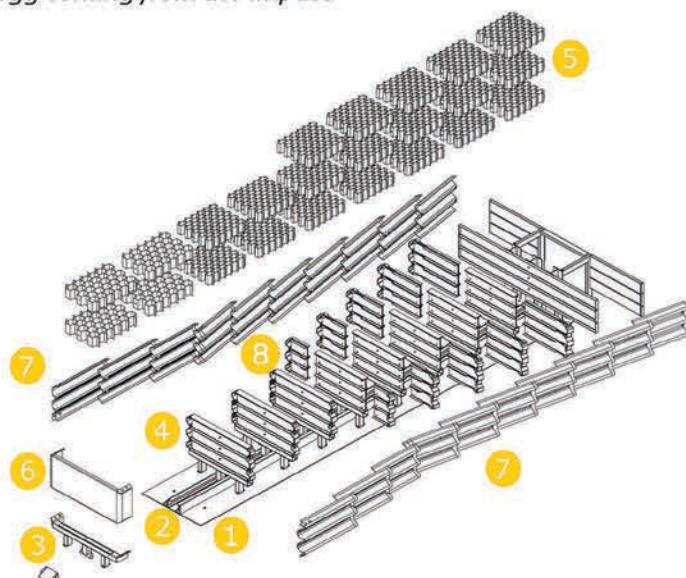
Redirective

It protects junctions and highway exits where the speed limit is over 100 km/h.

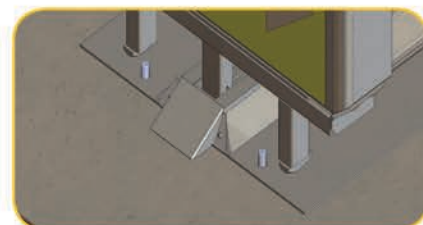
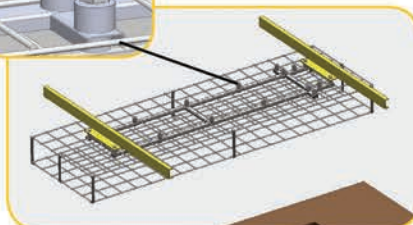


The base structure (1), completely in electro-welded steel, is made of a 5/6 mm thick plate and a monorail guide (2) for the sliding bars (3) linked to retaining panels (4) of the absorbing cells (5). The bumper or frontal panel (6) is the rigid connection among the sliding side panels (7), which after the impact slide one upon the other driven by an appropriate shift system.

At the same time the central panels (4), composed of additional panels (8) giving the V-shape to the crash cushion, connected to a couple of sliding side panels (7), crash the cells (5) that gradually dissipate the kinetic energy coming from the impact.



Installation with bolts



Installation with fials

Available Models

	SMA 110 W	SMA 110 W-L
Width	2500 mm	3000 mm
Length	6400 mm	6400 mm
Height	760 mm	760 mm



Concrete basement

Crash cushion **SMA CITY**

Successfully tested at level 50 of EN
1317-3

Easy to install

Reusability (up to 80%)

No maintenance required

High safety

The shortest one



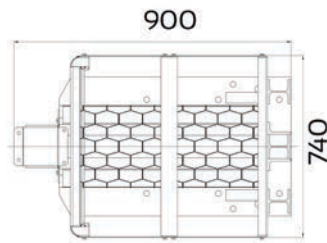
www.smaroadsafety.com
[youtube: user/attenuatoriurtoSMA](https://www.youtube.com/user/attenuatoriurtoSMA)

Totally made of Steel (Fire Safety Class 0)



Registration number

waiting for release



S.M.A. City

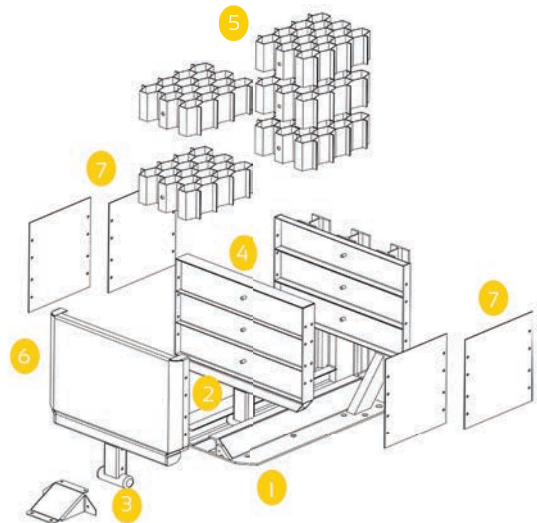
S.M.A. CITY

The narrowest crash cushion on the market with its width of just 740 mm. Thanks to its dimensions it perfectly fits in with the urban furniture.



The base structure (1), completely in electro-welded steel, is made of a 5/6 mm thick plate and a monorail guide (2) for the sliding bars (3) linked to retaining frames (4) of the absorbing cells (5). The bumper or frontal panel (6) is the rigid connection among the sliding side panels (7), which after the impact deform.

At the same time the central panels (4), connected to a couple of sliding side panels (7), crash the absorbing cells (5) that gradually dissipate the kinetic energy coming from the impact.



Available Model

	S.M.A. City
Width	740 mm
Length	900 mm
Height	760 mm

Depending on the place of installation S.M.A. City can be positioned using sticks; concrete foundation; chemical anchors for asphalt.

Crash cushion

SMA - T 80/1

Successfully tested at level 80 of EN 1317-3

Redirective

Easy to install

Reusability (up to 80%)

No maintenance required

High safety

The shortest one



www.smaroadsafety.com
[youtube: user/attenuatoriurtoSMA](https://www.youtube.com/user/attenuatoriurtoSMA)

Totally made of Steel (Fire Safety Class 0)

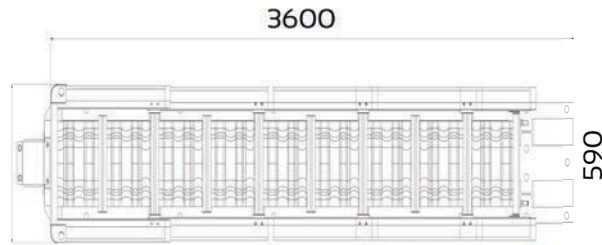


CSI
CERT



Registration number

waiting for release



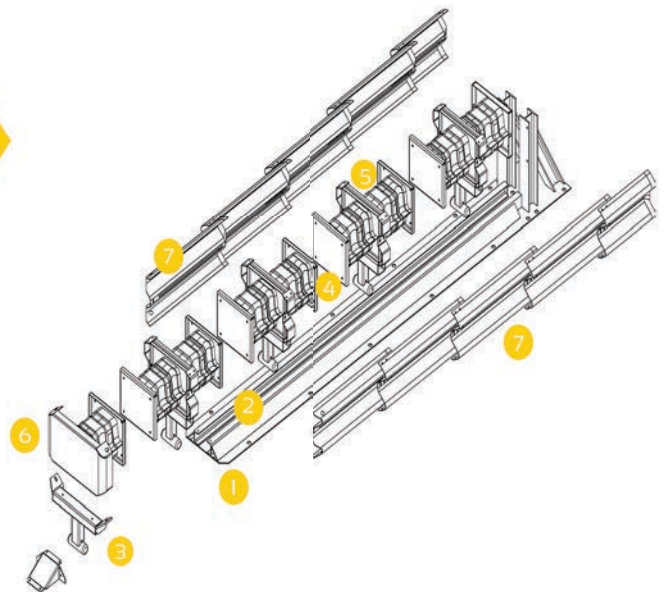
S.M.A. - T 80/I

S.M.A. - T 80/I

Redirective

S.M.A. - T 80/I has been designed to be used in work zones. It is particularly suitable to protect New Jersey barriers.

The base structure (1), completely in electro-welded steel, is made of a 5/6 mm thick plate and a monorail guide (2) for the sliding bars (3) linked to retaining panels (4) of the cashboxes (5). The bumper or frontal panel (6) is the rigid connection among the sliding side panels (7), which after the impact deform. At the same time the central panels (4), connected to a couple of sliding side panels (7), crash the cashboxes (5) that gradually dissipate the kinetic energy coming from the impact.



Depending on the place of installation S.M.A. T 80/I can be positioned using sticks; concrete foundation; chemical anchors for asphalt.

Available Model

	S.M.A. - T 80/I
Width	590 mm
Length	3600 mm
Height	606 mm

Crash cushion **SMA TREE**

Successfully tested at level 50 of EN
1317-3

Easy to install

Reusability (up to 80%)

No maintenance required

High safety

The shortest one



www.smaroadsafety.com
[youtube: user/attenuatoriurtoSMA](https://www.youtube.com/user/attenuatoriurtoSMA)

Totally made of Steel (Fire Safety Class 0)



CSI
CERT



Registration number

waiting for release



S.M.A. Tree

S.M.A. TREE

Redirective

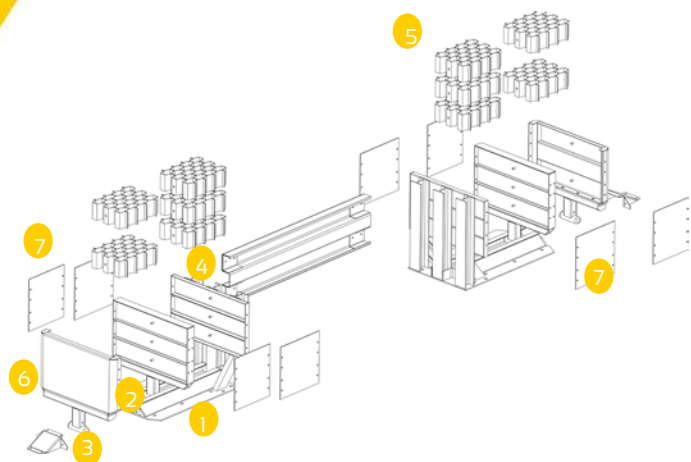
S.M.A. Tree is the crash cushion designed to protect trees and posts from car impacts.

It perfectly fits in with the urban furniture.



The base structure (1), completely in electro-welded steel, is made of a 5/6 mm thick plate and a monorail guide (2) for the sliding bars (3) linked to retaining frames (4) of the absorbing cells (5). The bumper or frontal panel (6) is the rigid connection among the sliding side panels (7), which after the impact deform.

At the same time the central panels (4), connected to a couple of sliding side panels (7), crash the absorbing cells (5) that gradually dissipate the kinetic energy coming from the impact.



Available Model

	SMA Tree
Width	740 mm
Length	1182 mm
Height	760 mm



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