



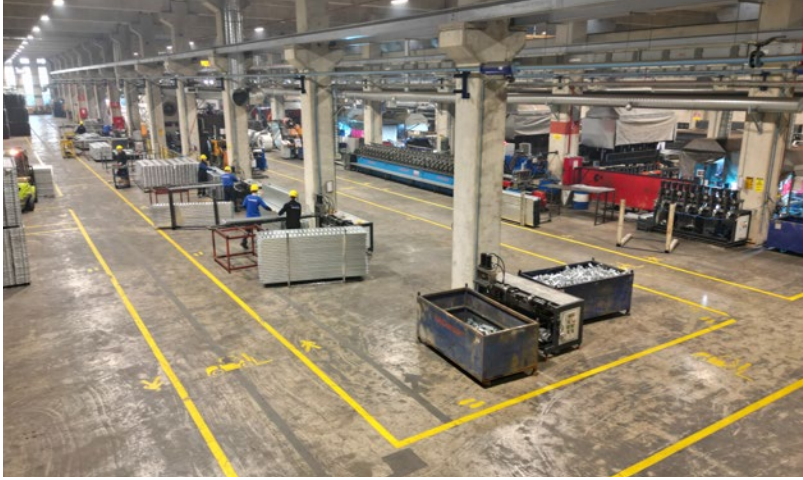
YAĞMUR[®]
SCAFFOLDING SYSTEMS

EDGE PROTECTION SYSTEM PRODUCT MANUAL



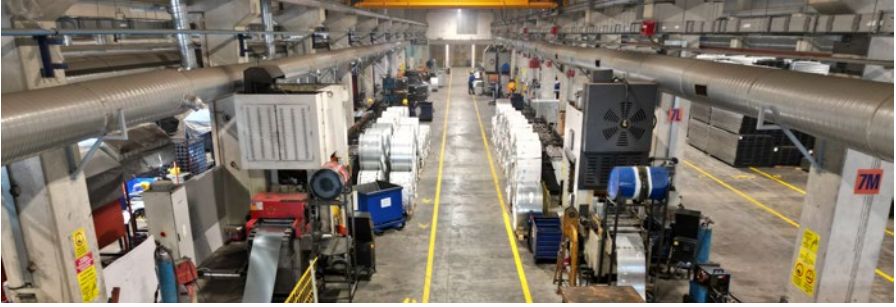
The preference of those who value their time...

ABOUT US



In 2007, our partners combined their experiences they have gained since 1997 under the roof of **YAĞMUR SCAFFOLDING SYSTEMS**. Today we operate in three different locations with a total area of 34.000 m², 16.000 m² of which is closed. Since its establishment, our company has not compromised on the principle of quality service and product.

We aim to develop a strong relationship with our customers that does not end with sales and to continue this relationship with technical consultancy after sales. Growing rapidly in a highly balanced and healthy structure our company stands out with its reliable services and has also reinforced its quality policy with the certificates it has received.



PRODUCTION

We manufacture our products at our own modern facility located in Gebze and Dilovası. Thanks to our high production capacity and permanent stock, our fundamental principle is to provide our customers with high-quality products at the most competitive prices and on time deliveries.

RENTAL & SALES

We would be pleased to assist you with the supply of edge protection system, which are manufactured at our factory through sales, rental, and buy-back models. You can consult our sales representatives to determine the most cost-effective supply model for your project.

TECHNICAL SUPPORT

Your projects are analyzed by our technical team in an optimal way and material quantities are determined. Edge protection layout plans are prepared in CAD program and presented to you.

QUALITY POLICY

To be a leader in quality at all times.

To increase customer and employee satisfaction by applying the philosophy of continuous improvement

To increase market share both domestically and internationally by offering timely, high-quality products to customers at competitive prices.

To use the most advanced technology to reduce product costs and achieve the goal of zero defects in production.

To instill the total quality philosophy in all personnel and continuously carry out training activities.

To support our suppliers in improving their quality levels with the understanding that customer satisfaction can only be achieved by providing high-quality inputs.

1.1. BASIC REQUIREMENTS

According to EN 13374+A1, a guardrail system should consist of a main guardrail, an intermediate guardrail and toe board or an intermediate protection (fence, net, etc.) and toe board system. While the main guardrail and toe board are specified as the basic requirements, for the area between these two elements it is stated that any of the intermediate guardrail or intermediate protection (guardrail, fence, safety net, etc.) systems can be preferred as the basic requirement. All components in the system, any component in any direction must be designed to prevent accidental removal or displacement.

1.1.1 MAIN GUARDRAIL

The distance between the top of the main guardrail and the working surface must be at least 1000 mm at any point, when measured perpendicular to the working surface. Main guardrails should be continuous and any horizontal gap should be less than 120 mm.

1.1.2 TOE BOARD

The distance between the top of the toe board and the working surface must be at least 150 mm at each point when measured perpendicular to the working surface.

The toe board must be designed with no gaps between it and the working surface. If there are any gaps, a 20 mm diameter sphere must not pass through them.

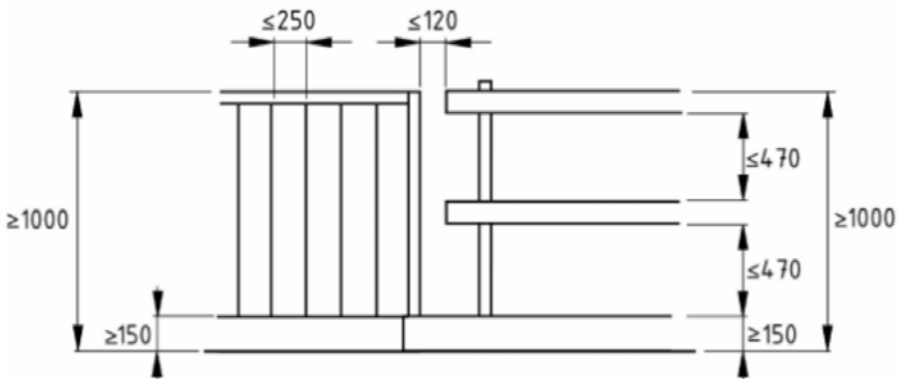
1.1.3 INTERMEDIATE PROTECTION SYSTEM OR INTERMEDIATE GUARDRAIL

The dimensions of the guardrail system and components in the EN 13374+A1 standard coincide with the values defined in Article 6 of Annex-4 (A) Working at Height of the Occupational Health and Safety Regulation in Construction Works and the value in the standard is given in more detail.

Regulation on Occupational Health and Safety in Construction Works Annex-4 Article 6

In the guardrails, there must be;

- Main guardrail at least one meter high from the platform and resistant to at least 125 kg load that may come from any direction,
- Toeboard at least 15 cm high adjacent to the platform,
- Intermediate guardrails placed between the toe board and the main guardrail with a gap of no more than 47 cm.



Height and gap measurements of guardrail components (EN 13374+A1, 2019)

2- CLASSIFICATION OF GUARDRAIL SYSTEMS

Class B

Class B protection provides resistance only for static loads and low dynamic impacts:

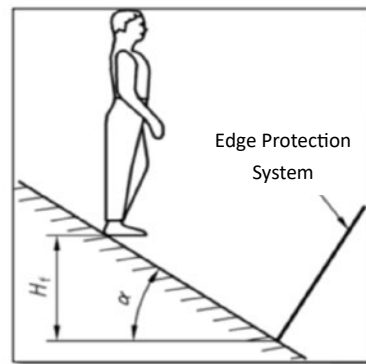
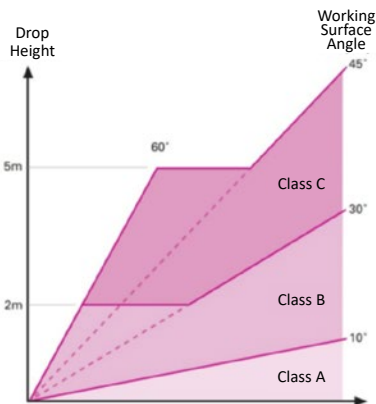
- Providing support for someone leaning on or walking next to the guardrail,
- Stopping a person walking or falling towards the guardrail;
- Stopping a person rolling down or falling from a sloped surface (EN 13374+A1, 2019).

It is used in areas where the work surface angle is less than 30° without any fall height restrictions or in areas where the fall height is less than two meters and the angle of the working surface is less than 60° (Regulation on Occupational Health and Safety in Construction Works).

The slopes of Class B guardrail systems must not deflect more than 15° from the vertical to the working surface. The Class B guardrail system shall be dimensioned so that 250 mm diameter sphere cannot pass through any gap on it (EN 13374+A1, 2019).

The Class B edge protection system must be able to absorb 200 J of kinetic energy anywhere along the edge protection up to a height of 1100 mm from the working surface and 500 J in all higher parts (EN 13374 + A1, 2019).

At least two pins must be used.




H_1 : Drop Height
 α : Working Surface Slope

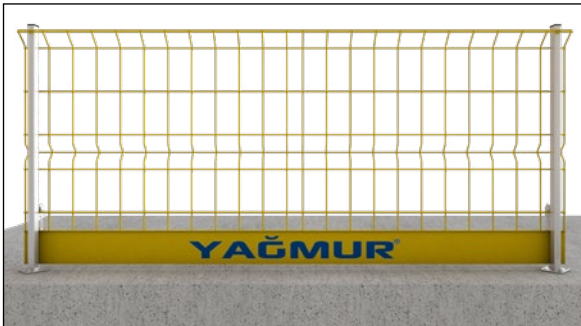
3- YAĞMUR EDGE PROTECTION SYSTEM


Yağmur Edge Protection System is manufactured in high quality in accordance with EN 13374+A1 standards. This system, which consists of three parts, works very efficiently with its structure that can be quickly installed and dismantled.



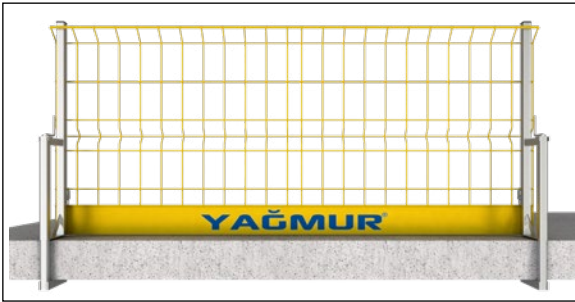
3.1 EDGE PROTECTION POST	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.501.000.112	112	3,30


This product is produced from 30x50x2 mm box profile and it is a whole with its base plate welded to the base. It is fixed to the ground with M10x75 mm concrete screws through Ø12 diameter holes in its base plate. This post which can be used for years with its high production quality and galvanized coating has a lock on it.



3.2 BEAM COMPRESSIBLE POST	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.506.000.120	110x150	7,00

The compressible edge protection post is installed by clamping to the beam without fixing. The upper part of the post is produced from 40x40x1 mm and the lower part is produced from 35x35x1.5 mm box profiles. The clamping kit of upper and lower sides of the post are inserted into the beam, the fastener on the upper part is turned until the both sides touch to beam. This post which can be used for years with its high production quality and galvanized coating has a lock on it.




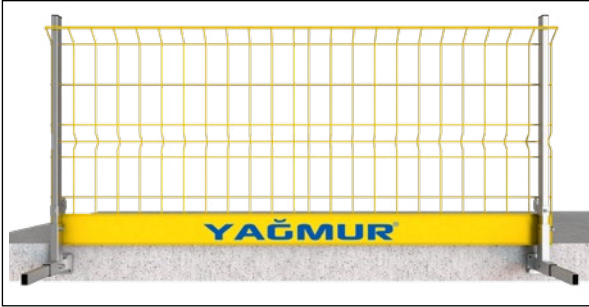
3.3 WOOD COMPRESSIBLE POST	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.511.000.120	125-200	6,50

This post model is used where the slab concrete has not yet been poured or has just been poured. As there is no concrete surface to be fixed or clamped, the upper and lower clamping kit of the post are inserted on to the H20 or wooden timber prepared for the slab. The fastener on the upper part is turned until the clamping kit contacts with H20 or wooden timber. The clamping kit is securely fixed on H20 or wooden timber via its U-shaped structure.

The upper part of the post is produced from 40x40x1 mm and the lower part is produced from 35x35x1.5 mm box profiles. This post which can be used for years with its high production quality and galvanized coating has a lock on it.




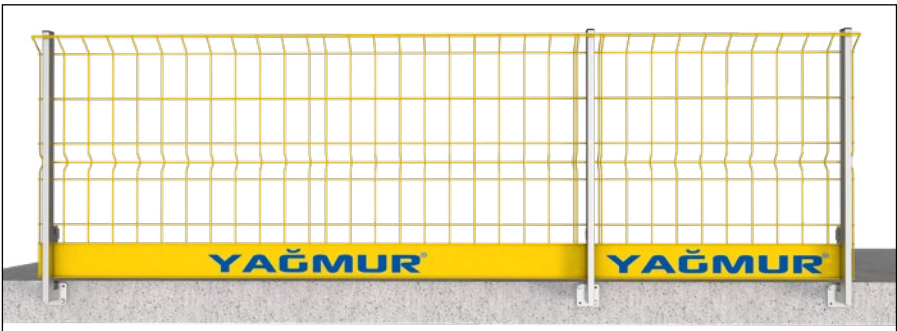
3.4 DISTANCE ADJUSTABLE POST	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.521.000.120	110-150	3,50





Distance adjustable post is used in cases where the post is not intended to be mounted on the ground. The bottom part is fixed to under the slab with concrete screw, the gap between the slab and the panel is adjusted to the desired level and fixed with an adjustment screw. Then the upper part is adjusted also to the desired level and fixed with adjustment screw.

The upper part of the post is produced from 40x40x1 mm and the lower part is produced from 35x35x1.5 mm box profiles. This post which can be used for years with its high production quality and galvanized coating has a lock on it.

3.5 L EDGE PROTECTION POST	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.517.000.125	125	3,50

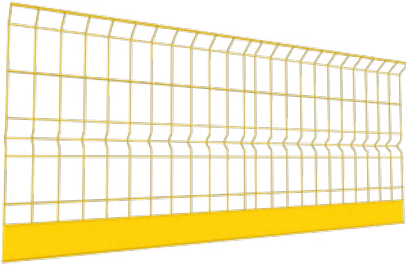


3.6 EDGE PROTECTION PANEL	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.532.105.250	250	12,10
	M.532.105.125	125	6,40

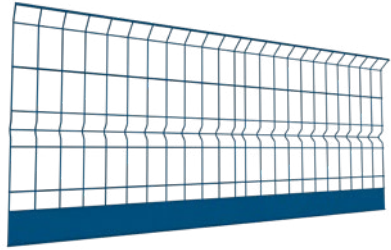


The edge protection panel which is produced from $\varnothing 6$ wire offers high strength with 2 bends in its structure. There is a 15 cm high toe board at the bottom of the panel. The panel is produced from galvanized wire and powder coated in order to be used for a long time without wearing out. In order to increase the visibility of the product, it is possible to produce in different color codes other than the preferred color RAL 1023 (pg 13).

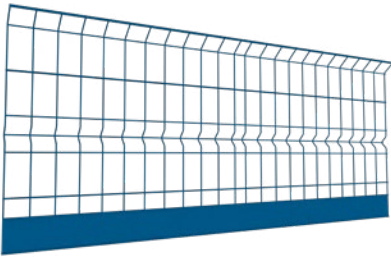
ALTERNATIVE COLORS



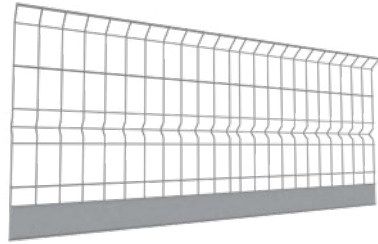
RAL 1023
TRAFFIC YELLOW



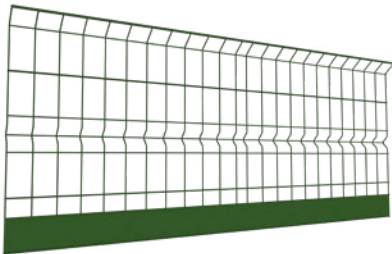
RAL 5010
GENTIAN BLUE



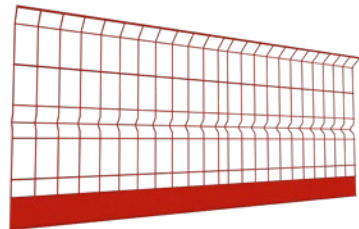
RAL 5017
TRAFFIC BLUE



RAL 7040
WINDOW GREY



RAL 6002
LEAF GREEN




RAL 3020
TRAFFIC RED

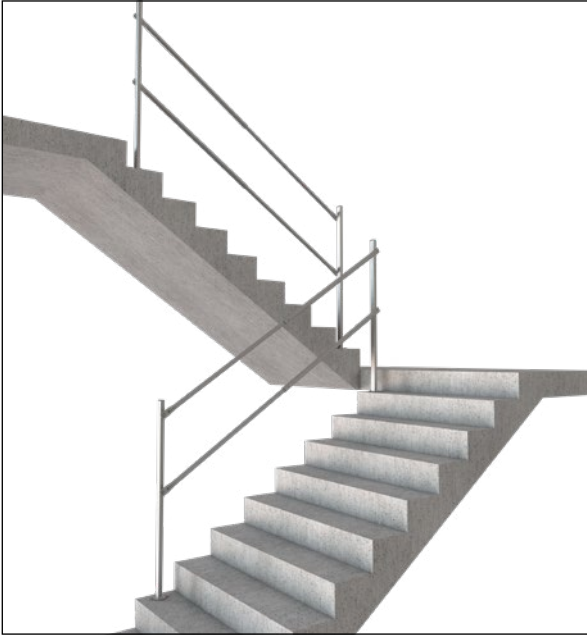


4- YAĞMUR STAIR EDGE PROTECTION SYSTEM


This system is used to secure floor stairs in buildings under construction against falls. The system consists of galvanized post, galvanized adjustable horizontal connections at waist and knee level and mounting screws.

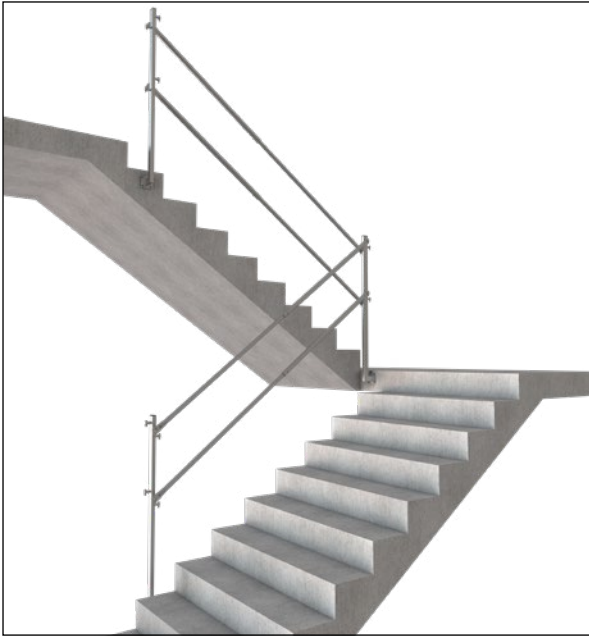



4.1 EDGE PROTECTION POST WITH PIN	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.502.000.112	112	3,30



This product is produced from 30x50x2 mm box profile and it is a whole with its base plate welded to the base. It is fixed to the ground with M10x75 mm concrete screw through $\varnothing 12$ diameter holes in the base plate. This post which can be used for years with its high production quality and galvanized coating has two pins on it.

4.2 L STAIR GUARDRAIL POST	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.517.000.125	125	4,00




4.3 ADJUSTABLE HORIZONTAL BRACE	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.116.034.350	200-350	7,30
	M.116.034.250	140-250	5,70
	M.116.034.140	85-140	3,00
	M.116.034.070	40-70	1,60




It works by inserting $\varnothing 34 \times 2$ mm pipe into $\varnothing 42 \times 2$ mm pipe and then screwing the lock when the desired length is achieved. They are inserted to the pins on the stair edge protection posts through the holes at the tips. Thus the barrier is set up at the waist and knee level.


5- ACCESSORIES


There are several accessories that can be used to increase the edge protection and their types vary depending on the area where they will be used.


5.1 EDGE PROTECTION CONCRETE SCREW	CODE	DIMENSION (mm)	WEIGHT (kg)
	T.541.001.007	M10x75	0,1

The edge protection concrete screw with a dimension of M10x75 mm, allows the edge protection panel to be fixed to the ground. It provides quick installation and can be disassembled and reused.

5.2 BOLT	CODE	DIMENSION (mm)	WEIGHT (kg)
	H.007.101.007	M10x75	0,02

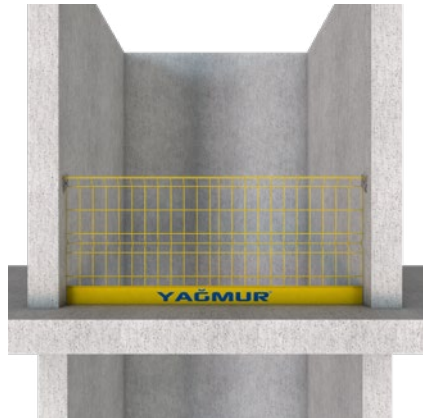
5.3 NUT	CODE	DIMENSION (mm)	WEIGHT (kg)
	H.007.101.008	M10x25	0,01


5.4 PANEL STACKING PALLET	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.667.080.140	80x140	29

5.5 WALL BRACKET	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.552.003.015	15	0,2



The wall bracket is used instead of the edge protection post to block window openings and elevator shafts. It is fixed to the concrete surface with the edge protection concrete screw and the edge protection panel is inserted on to it. This galvanized product weighs 0.20 kg and is very practical to install.



5.6 STAIR BRACKET	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.553.003.015	20	0,3




It is used instead of the post to install horizontal braces in places where the stair edge protection system is used. It is fixed to the concrete surface with the edge protection concrete screw and horizontal braces are connected to the pin on it. This galvanized product weighs 0.30 kg and is very easy to install.



5.7 POST CONSOLE	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.508.015.000	15x20	1,8

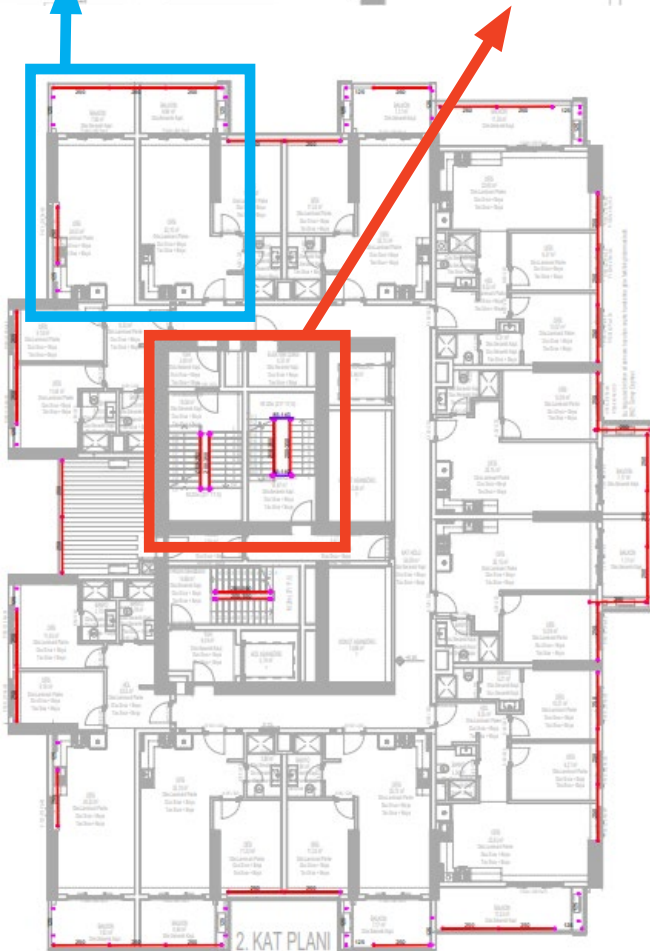
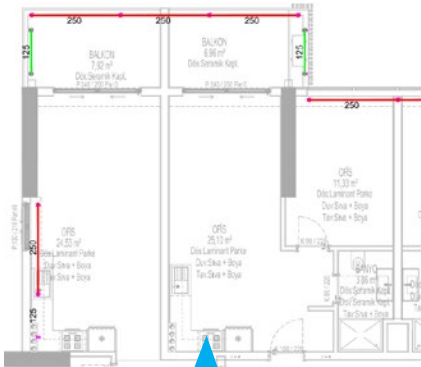


The post console is used in cases where it is not preferred to mount the edge protection post on the surface. It is attached to the steel plugs fixed to the stair or ground with the help of studs. The standard edge protection post is placed on the console and fixed with bolts and nuts. The console weighs 1.8 kg and is galvanized.

5.8 GROUND SUPPORTING PLATE	CODE	DIMENSION (cm)	WEIGHT (kg)
	M.551.030.090	30x90	2,8



This product is used when it is preferred to use the edge protection system in a removable mode rather than fixed. It is also used in cases where the surfaces on which the post will be mounted is loose and it can not be fixed with screws. The ground supporting plate is mounted to the edge protection post with bolt, washers and nuts. This galvanized product is 90 cm long, 30 cm wide and weighs 2.8 kg.



6- WARNINGS

- Products and accessories must be checked before use, damaged products should not be used.
- Before installation, the information in the manual should be read attentively and installation should be done in accordance with the specified instructions.
- Hand tools, accessories etc. to be used for the installation and dismantling must be used according to the instructions.
- Necessary precautions must be taken to avoid the risk of products falling, tipping over, etc. during installation.
- Personal protective equipment against falling and appropriate systems for these equipment should always be preferred during installation and dismantling
- If there is a risk of falling during installation or dismantling, the safety belt should always be worn with a full body grip and be fixed to a suitable fixed point.
- During installation or dismantling, the working area must be limited to prevent tools or products from being dropped.
- No tools or equipment should be used other than installation and dismantling tools and equipment.
- The installed products should be checked by eye and hand, and the improper installations (gaps, swinging, leaning, etc.) should be readjusted.
- Edge protection systems should not be used out of purpose, materials and people should be prevented from leaning against the panel as much as possible.
- In case a person or object falls towards the edge protection system or on to the edge protection system and its accessories; the system should be reused only after it has been inspected by an authorized person.
- The gaps between the edge protection system and other construction elements should be as small as possible, but should not exceed 120 mm for guardrails and 20 mm for toeplate.

Conditions to be Considered in Terms of Product Using:

- It should not be used where the wind speed exceeds 32 km/h (900N/m²).
- It should not be used where the ice load exceeds 300 N/m².
- It should not be used where the surface is slippery due to weather and environmental conditions (icing, oiling, etc.).
- The product should be tied to a safe place with a rope until the installation is completed.

7- INSTALLATION WARNINGS

The concrete surface on which the M10x75 mm concrete screw will be used must be minimum C20 quality and uncracked. For uses other than concrete surface, it is necessary to know the nature of the ground where the post will be fixed. Installation of the product should not be carried out on soft and loose grounds or damaged compression areas that are not suitable for the clamping capacity of the product. Installation should not be carried out in cases where the wind speed exceeds 32 km/h.

- Take safety precautions around the installation area.
- Ensure that the installation team uses all personal protective equipment and connected systems.
- Provide at least one observation personnel in installation area and in the area of influence.
- Ensure that tools, equipments and objects which will prevent the installation process are moved to suitable places.
- Determine the length of the installation area, the divisions of the edge protection post and edge protection pannel.
- After the direction of the pin located on the edge protection post is adjusted to stay in the internal area of the installation, drill the holes for the M10x75 mm concrete screw with a drill through 2 opposite holes on the base plate. During drilling, make sure that the drill works at a 90° angle with the ground.

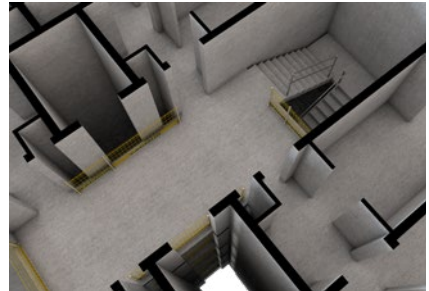
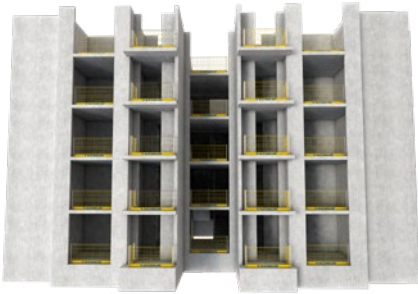
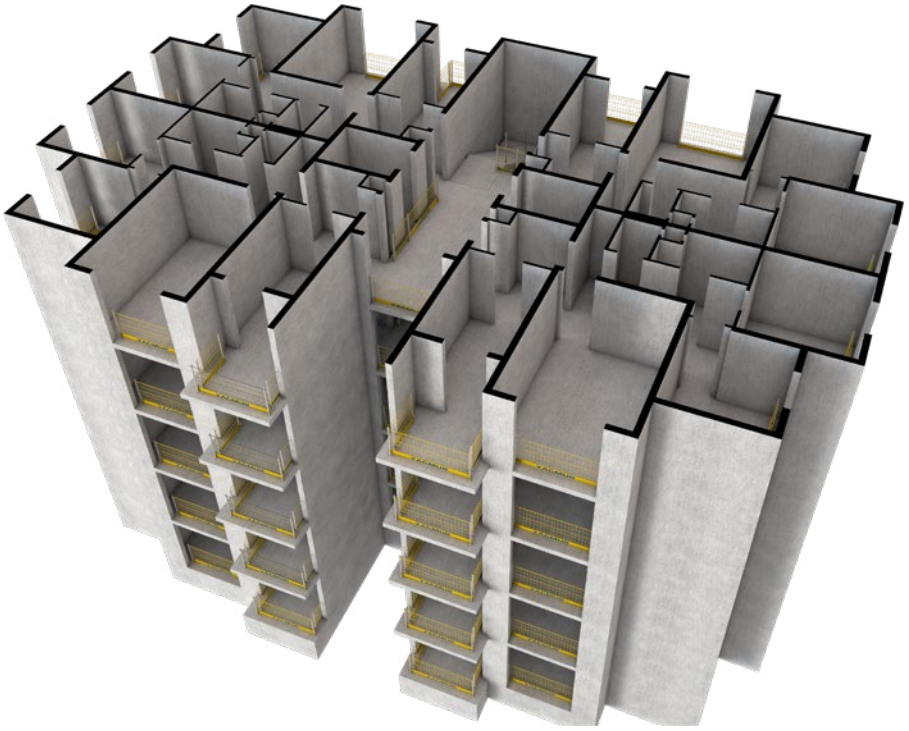


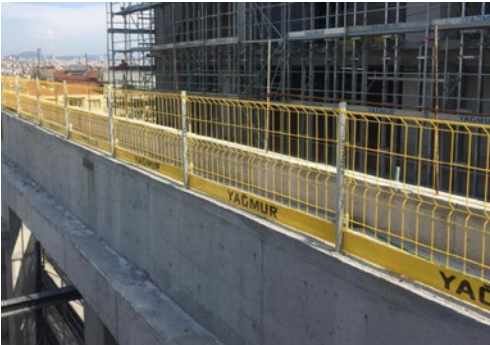
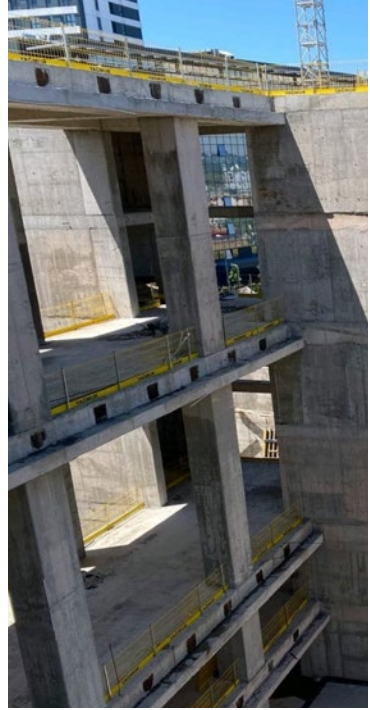
- Make sure that the hole drilled for M10x70 mm concrete screw is 75-80 mm deep. Clean the holes with a brush or by blowing air from outside. Fix the M10x70 mm concrete screw to the ground with a screwing drill through these 2 holes drilled at least 120 mm away from the edge.
- At the end of the process, check the edge protection post for any shaking or looseness caused by compression. Maximum contact of the plate under the post with the ground will reduce vibration.



The following steps should be followed to install the adjustable edge protection post:

- Insert the clamping kit of the post on to the slab concrete, H20 or wooden timber turn the fastener at the top until it touches the ground, H20 or wooden timber.
- Check the adjustable edge protection post for looseness at the end of the operation. Maximum contact of the post clamping kit with the slab concrete, H20 or wooden plank will reduce vibration.
- Attach the edge protection panel with its top bend to the head of the edge protection post and the pin slot at the bottom of the post.
- Move the pin of the edge protection post to the lock position.
- Thus, the installation of the edge protection system with a height of 112,5 cm and a width of 250 cm is completed. After installation, the conformity of the products should be determined by eye and hand control.





8- DISMANTLING WARNING:

Do not dismantle in the open area when the wind speed exceeds 32 km/h
Wait for the wind speed to decrease.

- Open the lock pin on the edge protection post for dismantling.
- Remove edge protection panel from edge protection post.
- Stack the edge protection panel horizontally on the ground in a safe place.
- Remove the concrete screws holding the edge protection posts from the base plate with a screwing drill. To remove the adjustable edge protection posts, turn the fastener on the adjustable edge protection posts until the clamping kit is free from the slab concrete or wooden timber.
- Stack the edge protection post horizontally on the slab concrete in a safe place.

9- CHECKLIST TO BE USED BEFORE AND AFTER INSTALLATION

The checklist must be completed by the installation team and kept for the duration of use in case of need and to be shown to the authorities.

	Y	N
Do you have product handbook?	0	0
Have you removed the elements that will endanger your working environment?	0	0
Is the ground suitable for installation?	0	0
Is the installation team qualified?	0	0
Does the installation team have appropriate personal protective equipment?	0	0
Are electrical and non-electrical hand tools suitable for installation?	0	0
Is the length of installation area of protection systems determined?	0	0
Are the posts placed appropriately on the ground and are they torqued?	0	0
Are the post properly balanced (90 degrees with the ground)?	0	0
Are barriers installed?	0	0
Is the system installed properly and squared?	0	0
Are barrier pins locked?	0	0
Is load resistance test conducted after installation?	0	0
Are warning signs placed?	0	0



FACTORY - 1

OSB Mahallesi
5. Cadde No: 10 / 2
Dilovası / Kocaeli / TÜRKİYE

FACTORY - 2

Bariş Mahallesi
Koşuyolu Caddesi No: 19
Gebze / Kocaeli



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