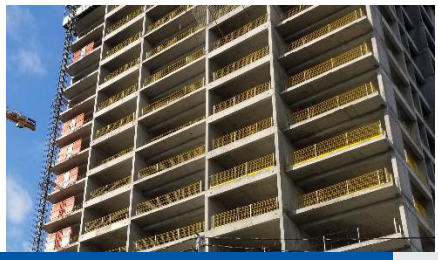
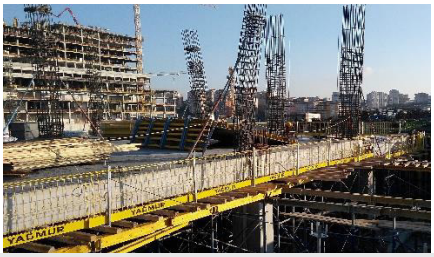
YAĞMUR®
SCAFFOLDING SYSTEMS





Choose Us If Your Time Is Valuable...

EDGE PROTECTION SYSTEM PRODUCTS HANDBOOK

TÜRK STANDARDLARI ENSTİTÜSÜ

TÜRK STANDARDLARINA UYGUNLUK BELGESİ

TURKISH STANDARDS INSTITUTION

CERTIFICATE OF CONFORMITY TO TURKISH STANDARDS

Markanın Tanımı — Description of the Mark

TSE veya/or  veya/or TSE

BELGE NUMARASI *REFERENCE NUMBER OF LICENCE*	070999-TSE-03/01
BELGENİN İLK VERİLİŞ TARİHİ *DATE OF FIRST ISSUE OF LICENCE*	07.02.2018
BELGENİN SON GEÇERLİLİK TARİHİ *LICENCE VALID UNTIL*	07.02.2020
BELGE SAHİBİ KURULUŞUN ADI *NAME OF THE LICENCE HOLDER*	YAĞMUR İSKELE İNŞAATSANAYİ TİCARET LİMİTED ŞİRKETİ
BELGE SAHİBİ KURULUŞUN ADRESİ *ADRESS OF THE LICENCE HOLDER*	BARIŞ MAH. KOŞU YOLU CAD. NO:19 GEBZE KOCAELİ/TÜRKİYE
ÜRETİM YERİ ADI *NAME OF THE MANUFACTURING PLACE*	YAĞMUR İSKELE İNŞAAT SANAYİ TİCARET LİMİTED ŞİRKETİ
ÜRETİM YERİ ADRESİ *ADRESS OF THE MANUFACTURING PLACE*	BARIŞ MAHALLESİ KOŞUYOLU CADDESİ NO:19 GEBZE/KOCAELİ KOCAELİ / TÜRKİYE
İPTAL EDİLEN BELGE NUMARASI (Varsa) *INDICATION OF SUPERSEDED LICENCE (if any)*	
TESCİLLİ TİCARİ MARKASI *REGISTERED TRADE MARK*	YAĞMUR İSKELE
İLGİLİ TÜRK STANDARDI *RELATED TURKISH STANDARD*	TS EN 13374 / Geçici kenar koruma sistemleri - Mamul özellikleri, deney metotları / 18.12.2013

BELGE KAPSAMI
SCOPE OF LICENCE

•EN 13374 – B
SINIFI
•TİP2
TİPİ
GEÇİCİ KENAR KORUMA SİSTEMLERİ.
FİRMA KODLARI;
BARİYER FİRMA KODU: KKP401.105.255
DİKME FİRMA KODU: KKD402.015.112
ANKRAJ CİVATASI FİRMA KODU: KKV403.001.007
PANEL VE DİKME ÖZELLİKLERİ;
BOŞLUK BOYUTLARI: YATAY OLARAK İLK SIRA 85X110MM, İKİNCİ SIRA 200X110MM, EN ÜST SIRA İSE 80X110MM

e-imzalı/e-signed

08.02.2019

Belgelendirme Merkezi Başkanı Adına
ARZU KOŞAR

TSE İSTANBUL BELGELENDİRME MÜDÜRÜ V.

*Bu belge, belgelendirilen ürünün, üretim yerinin Enstitümüzün belirlediği şartları karşıladığını da gösterir.
*Bu belge hiç bir suretle tahrif edilemez, kısmen veya okunmasını zorlaştıracak şekilde çoğaltılamaz, kazıntı ve silinti yapılamaz.
*TSE İSTANBUL BELGELENDİRME MÜDÜRLÜĞÜ * Adres: Çayırova Tren İstasyonu Yanı ÇAYIROVA/GEBZE * Tel: 2627231273* Faks: 2627231606
*TSE BELGELENDİRME MERKEZİ BAŞKANLIĞI; Adres: Necatibey Cad. No:112 06100 Bakanlıklar/ANKARA – Tel: 0 312 416 64 81 / 416 64 27, Faks: 0 312 416 66 17
e-posta : bmb@tse.org.tr , web : www.tse.org.tr

https://evrakkontrol.tse.org.tr/BelgeDogrulama.aspx?p=q2csaxf1 adresinden belgenin doğruluğunu ve geçerliliğini sorgulayınız.

ABOUT US

Our company, operating in the industry under the name of Yağmur İskele Sistemleri (Yağmur Scaffolding Systems) since 2007, has become the largest player in the industry in terms of manufacturing, sales and leasing of secure scaffolding systems during this period. Our company, which has adopted an innovative approach, has started to manufacture and offer edge protection system to its esteemed customers. Having TS EN 13374 certificate for edge protection systems, our Company aims to offer these products to its customers at the most affordable prices without compromising on the quality. Our purpose is to increase the safety of work sites, to make employees feel safe against falling from high at the work sites and ensure that they can focus more comfortably on their current works.

PRODUCTION

We manufacture our products in our modern facilities, located in Gebze, Kocaeli. Manufacturing our products in our own facilities provides us the opportunity to meet the requirements of quality standard and to manufacture specifically for each project. We can always deliver our products directly from our inventory thanks to high production capacity.

LEASING AND SELLING

We will be pleased to help you in supplying our edge protection systems, which we manufacture in our facilities, to you through sales, leasing and sell & buy back models. You can contact with our sales representatives to determine the most suitable and affordable supply model for your project.

TECHNICAL SUPPORT

Your projects are solved in the most optimal way after necessary calculations are made by our technical team and material metrics are calculated. Assembly plans are prepared in Cad environment and offered to you. Our technical team will be ready on-site and provide necessary support during the initial installation.

QUALITY POLICY

To always be the pioneer in quality.
To increase customer and employee satisfaction by implementing continuous improvement philosophy.
To increase domestic and international market share by offering high quality products at affordable prices and on time to the customer.
To use state-of-the-art technology and reach production target with zero error in order to reduce production costs.
To ensure that total quality philosophy is adopted by the entire staff and continue on training activities uninterruptedly.
To support our suppliers in increasing their quality based on the idea that main condition of customer satisfaction is possible by providing high quality input.


YAĞMUR İSKELE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1-ABOUT TS EN 13374 STANDARD

This standard is prepared by CEN/TC 53 Temporary Works Equipment Technical Committee and approved by CEN on 21.03.2013 and then it was decided to be accepted and published as a Turkish Standard in the meeting of Technical Board of Turkish Standards Institute on 18.12.2013.

1.1-BASIC REQUIREMENTS

According to TS EN 13374, a guardrail must include one of the main guardrail, middle guardrail and toe board or middle protection (fence, net, etc.) and toe board systems. While the main guardrail and toe board are specified as main requirements, it is stated that either middle guardrail or middle protection (rail, fence, safety net, etc.) can be chosen as the main requirement for opening between main guardrail and toe board.

1.1.1-Main Guardrail

The vertical distance between any top point and working surface of the main guardrail must be minimum 1000 mm. Main guardrails must be continuous and any horizontal gap must be smaller than 120 mm.

1.1.2-Toe Board

The vertical distance between any top point and working surface of the toe board must be minimum 150 mm. Toe boards must be designed so as to avoid gaps between working surfaces. Even if there is a gap, a 20 mm radius sphere should not pass through that gap.


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1.1.3-Middle Protection System or Middle Guardrail

Although the sizes of guardrail system and components specified in TS EN 13374 are similar to the values defined in Article 6 of Annex-4 (A), titled Working at Height, of the Regulation on Occupational Health and Safety in Construction Works, the values given in the standard are more detailed.

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

For guardrails, it is ensured that there must be

a) Main guardrail, which can resist to minimum 125 kg. load from any distance and which is at least one meter high;

b) A toe board of at least 15 cm. high that is adjacent to the platform; and

c) Middle guardrail, which was placed to ensure that the opening between the toe board and main balustrade is maximum 47 cm.

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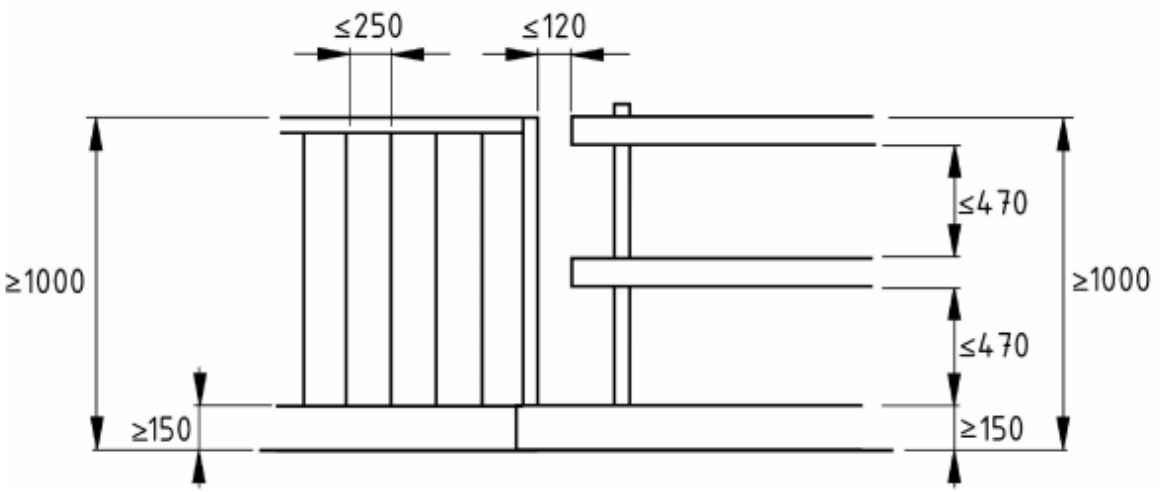


Height and gap measurements of guardrail components (TS EN 13374, 2013)

2- CLASSIFICATION OF GUARDRAIL SYSTEMS

2.1- Class B

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

• Providing support to a human leaning on or walking next to the guardrail;

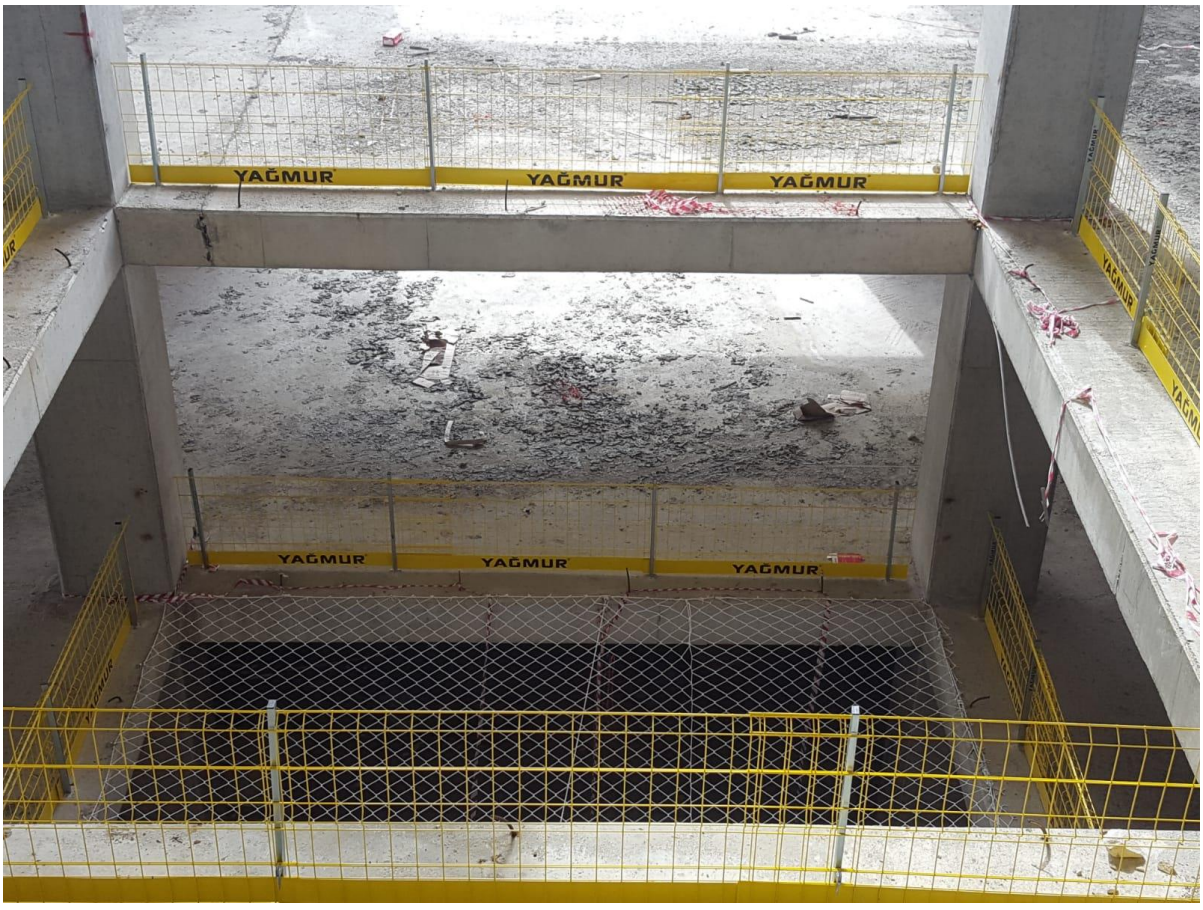
• Stopping a person walking or falling towards the guardrail; and

• Stopping a person rolling down or falling from a sloped surface (TS EN 13374, 2013).

Class B temporary equipment can be used at areas with an angle smaller than 30° without any falling height restriction and at areas with an angle smaller than 60° for falling distances lower than two meters. Slope of Class B guardrail systems must not vary for more than 15 degrees towards the working surface. Class B guardrail system must be prepared so as not to allow a sphere with 250 mm radius to pass through any gap (TS EN 13374, 2013).

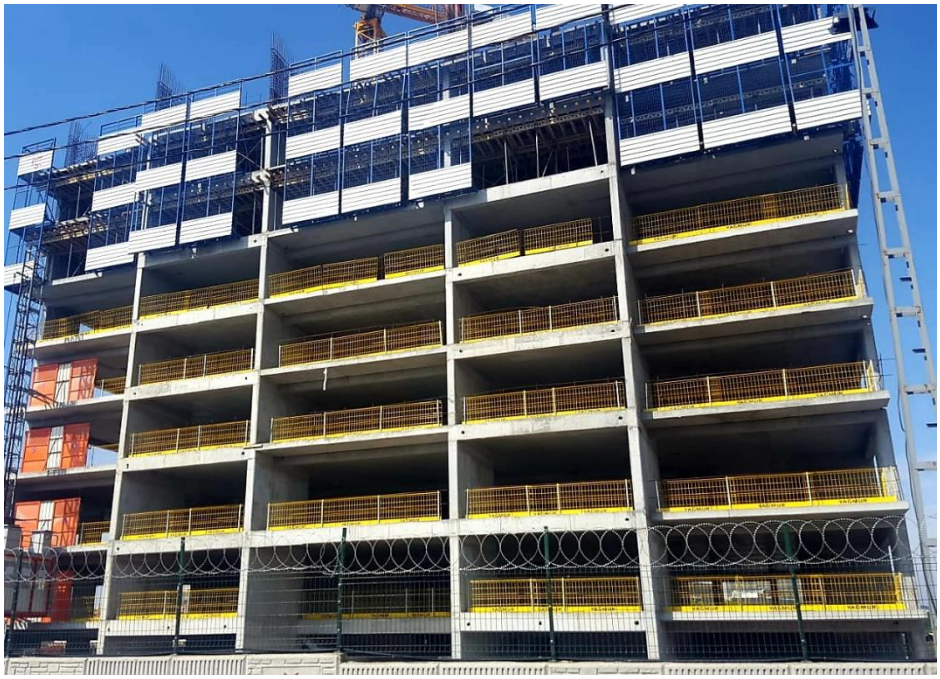
The force being applied to the plates must not exceed 6000 N.

At least two pins must be used.



3- EDGE PROTECTION SYSTEMS

Yağmur edge protection systems are manufactured with high quality according to TS EN 13374 standard. This system, composed of three components in total, is highly efficient thanks to its easy assembly-disassembly capability.



3.1.1- POST

This product, manufactured from 30x50x2 mm TSI certified box profile, is completed with its base plate, welded to the product's base. It is anchored to the ground with M10x70mm concrete screws through Ø12 diameter holes located on the base plate. There is a lock available on this post, which can be used for years thanks to its high production quality and galvanized coating.

Post height: 1120 mm

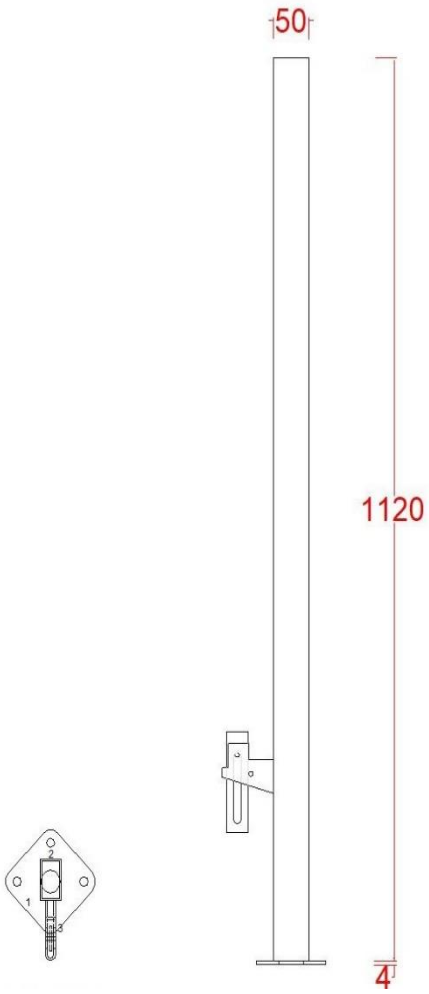
Body: 30x50x2 mm box profile

Base plate: 100x100x4 mm

Lock: 1 piece

Weight: 3.20 kg

Coating: Galvanized.



3.1.2-BEAM COMPRESSİBLE POST

Upper body of crimped edge protection post, which is pinched on the floor without any anchorage, is manufactured from 40x40x1.0 mm TSI certified box profile whereas its lower body is manufactured from 35x35x1.5 mm TSI certified box profile. Lower and upper jaws of the post clamp the floor and the latch on upper section is turned until the jaws contact with the floor. There is a lock available on this post, which can be used for years thanks to its high production quality and galvanized coating.

Post height: Adjustable

Upper Body: 40x40x1.0 mm box profile

Lower Body: 35x35x1.5 mm box profile

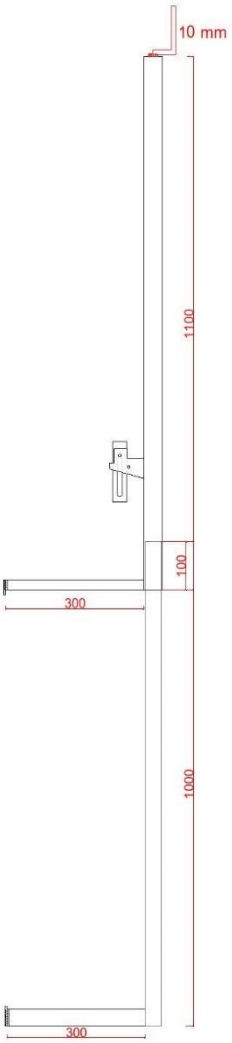
Upper Jaw: 40x20x1.5 mm box profile

Lower Jaw: 35x35x1.5 mm box profile

Lock: 1 piece

Weight: 6.75 kg

Coating: Galvanized



3.1.3-WOOD COMPRESSİBLE POST

This type of post is used at construction floors, the floor concrete of which has not been poured yet or recently poured. Since there is not any concrete floor to place the post by anchoring or pinching, upper and lower jaws of the post are pinched to H20 or wooden timbers that were prepared for the floor. The latch on upper section is turned until the jaws contact with H20 or wooden timber. The jaws are securely fixed on H20 or wooden timber thanks to its U-shaped structure. This post with one lock, the upper body of which was manufactured from 40x40x1.0 mm and lower body was manufactured from 35x35x1.5 mm TSI certified box profile, can be used for long years thanks to its high production quality and galvanized coating.

Post height: Adjustable

Upper Body: 40x40x1,0 mm box profile

Lower Body: 35x35x1.5 mm box profile

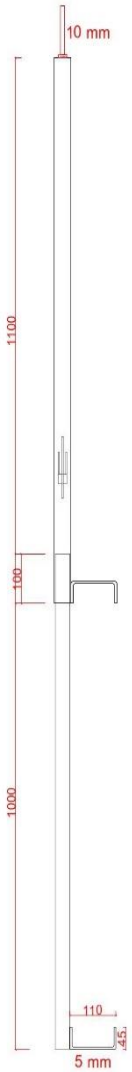
Upper Jaw: 5 mm sheet

Lower Jaw: 5 mm sheet

Lock: 1 piece

Weight: 5.50 kg

Coating: Galvanized



3.1.4 DISTANCE ADJUSTED POST

When it is not requested to assemble the post on the floor, distance adjusted posts are used. The lower body is fixed to the front side of floor with concrete screw and floor gap is adjusted to the desired level, after which the post is fixed with an adjustment screw. Then the uppwer body is adjusted to the desired level and adjustment screw is used for fixing. This post with one lock, the upper body of which was manufactured from 40x40x1.0 mm and lower body was manufactured from 35x35x1.5 mm TSI certified box profile, can be used for long years thanks to its high production quality and galvanized coating.

Post height: Adjustable

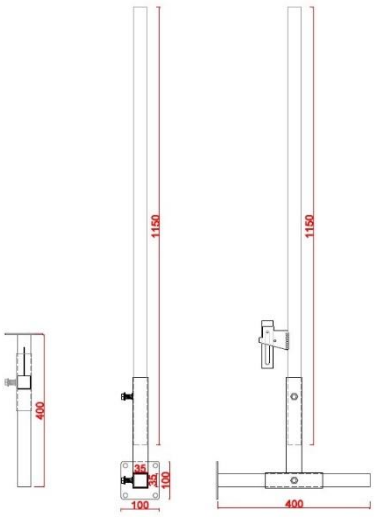
Upper Body: 40x40x1,0 mm box profile

Lower Body: 35x35x1.5 mm box profile

Lock: 1 piece

Weight: 3.25 kg

Coating: Galvanized



3.2.1- PANEL 250 cm.

Edge protection panel, manufactured from Ø6 wire, provides high resistance thanks to 2 twists on its body. There is a 15 cm. high toe board on the lower section and it can be used for a long period thanks to its color (RAL 1003) improving the visibility.

Panel 250: 250x105 cm

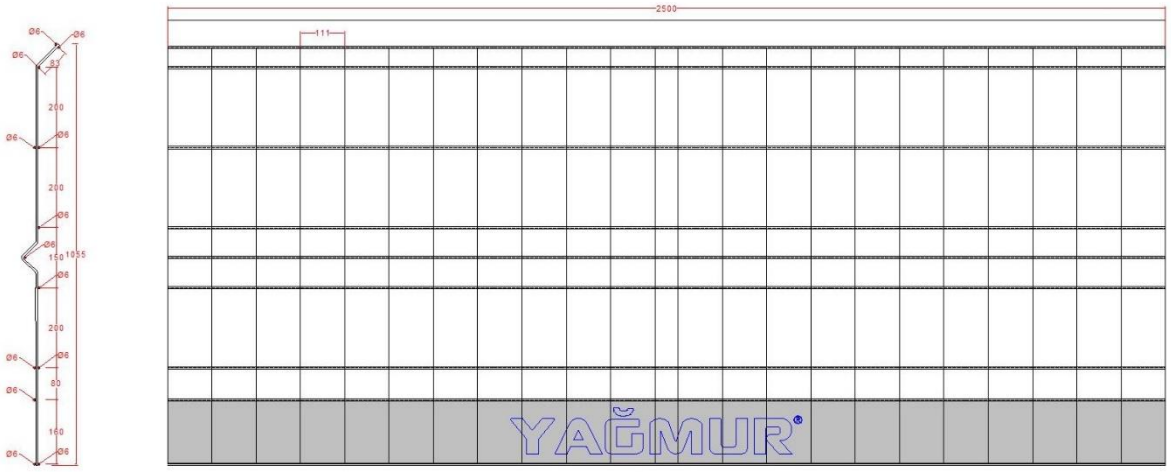
Maximum mesh range: 10x20 cm

Woven iron: Ø6 wire

Weight: 15.50 kg

Toe Board: 15 cm

Coating: Oven dried paint (RAL 1003)



3.2.2- PANEL 125 cm.

Edge protection panel, manufactured from Ø6 wire, provides high resistance thanks to 2 twists on its body. There is a 15 cm. high toe board on the lower section and it can be used for a long period thanks to its color (RAL 1003) improving the visibility.

Panel 125: 125x105 cm

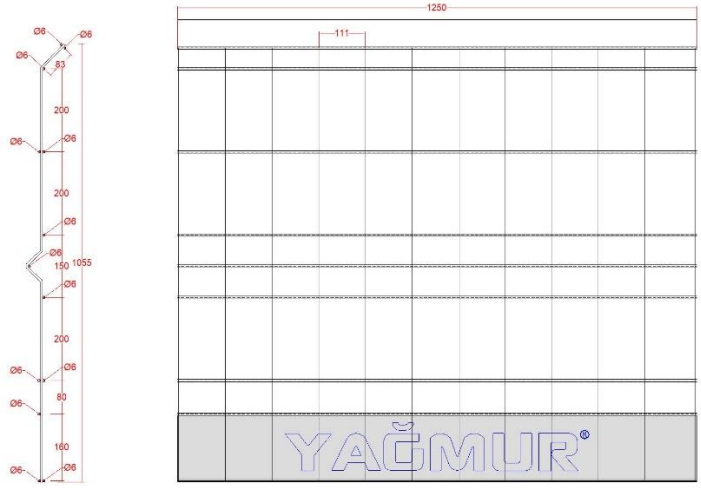
Maximum mesh range: 10x20 cm

Woven iron: Ø6 wire

Weight: 7.8 kg

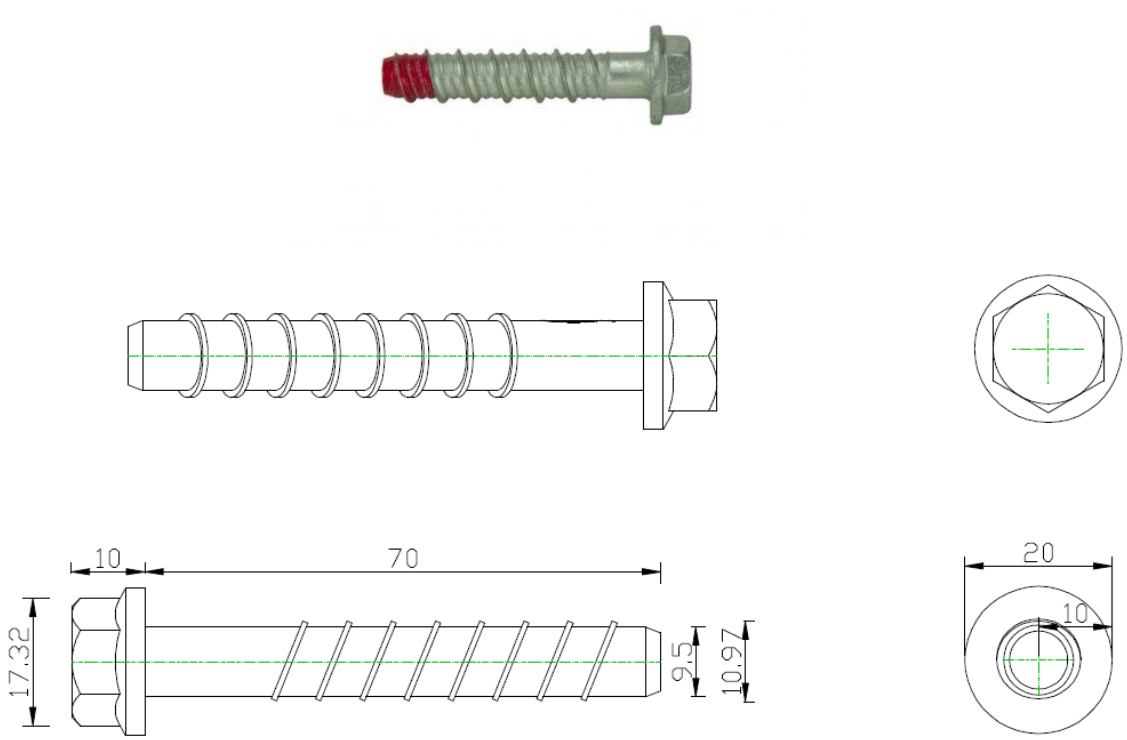
Toe Board: 15 cm

Coating: Oven dried paint (RAL 1003)



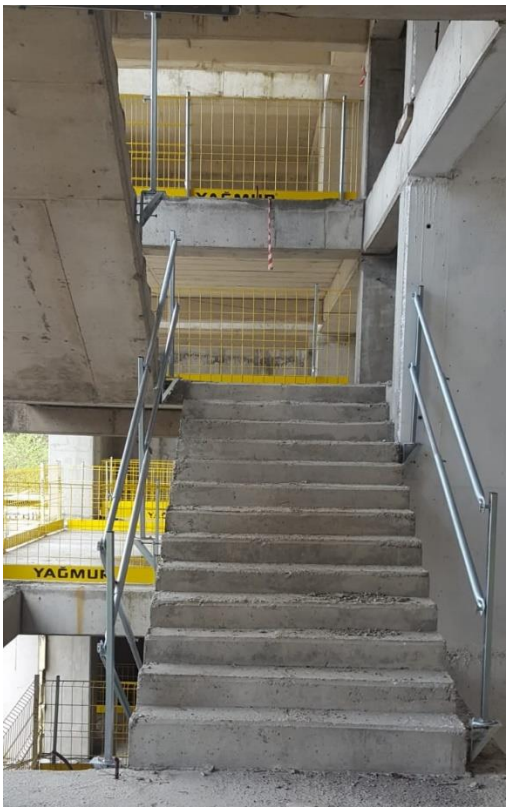
3.3- SCREW

The sizes of edge protection concrete screw to secure the edge protection panel on the floor is M10x70 mm. It provides fast assembly and it can be removed and used again.



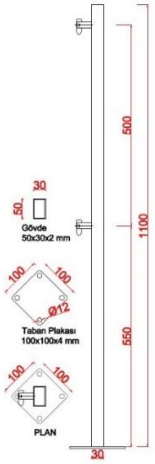
4- STAIR EDGE PROTECTION SYSTEM

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



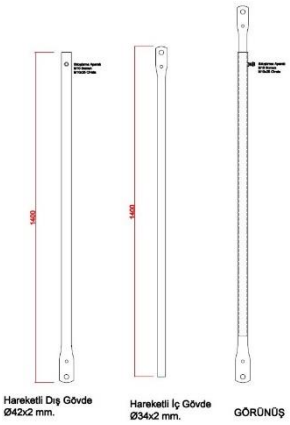
4.1 PIN POST

This product, manufactured from 30x50x2 mm TSI certified box profile, is completed with its base plate, welded to the product's base. It is anchored to the ground with M10x70mm concrete screws through Ø12 diameter holes located on the base plate. There are two pins on this post, which can be used for years thanks to its high production quality and galvanized coating.



4.2 ADJUSTABLE HORIZONTAL BRACE

It works by inserting Ø42x2 mm pipe into Ø34x2mm pipe and then screwing the lock when the desired size is achieved. They are inserted to the pins on the stair edge protection posts through the top holes and so a barrier is made at the waist and knee level. There are two types with sizes, ranging between 80-120 cm 155-270 cm and 200-350 cm.

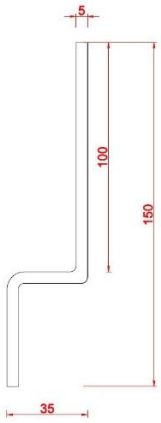


5- ACCESSORIES

There are several accessories that can be used to increase the security of edge and their types vary depending on the area, on which they will be used.

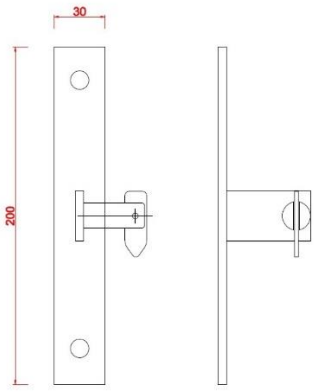
5.1 WALL BRACKET

Wall brackets are used to cover window gaps and elevator gaps with a panel instead of edge protection posts. They are secured on the concrete floor with edge protection screw and then edge protection panel is placed on them. This galvanized product's weight is 0.20 kg and its assembly is quite practicable.



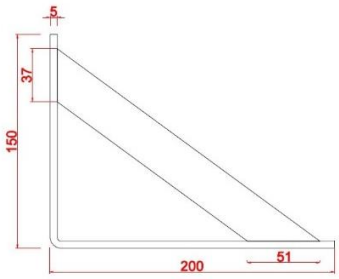
5.2 BRACKET

It is used instead of posts on stairs edge protection system in order to install horizontal connections. It is secured on the concrete floor with edge protection screw and then horizontal braces are inserted to the pins available on the bracket. This galvanized product's weight is 0.40 kg and its assembly is quite easy.



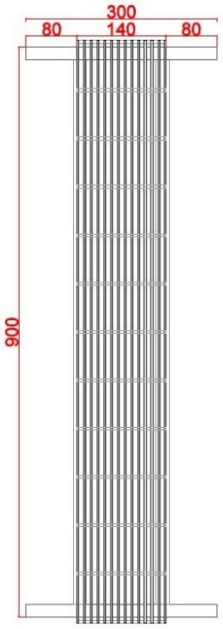
5.3 POST CONSOLE

Post console is used in cases, where it is not requested to mount the edge protection post on the floor. It is secured by anchoring with steel fixing plugs, placed to the front face of stairs or floors. Standard edge protection post is placed on this console and then fixed with nuts and bolts. The console's weight is 1.8 kg and it has galvanized coating.



5.4 GROUND SUPPORT PLATE

If it is requested to have a mobile edge protection system instead of a fixed one, this product can be used. Ground support plate is also used in case the floor, on which the post will be mounted, is not rigid and screws cannot be used for mounting. Ground support plate is mounted to edge protection post with bolts, washers and nuts. This product, which is 90 cm long and 30 cm wide, is galvanized and its weight is 3.3 kg.



6-WARNINGS

- The product and fittings must be checked before use and damaged products must never be used.
- The instructions written in the handbook must be read before mounting and the product must be mounted in accordance with these instructions.
- Hand tools, accessories, etc., which will be used for mounting and dismantling, must be used in accordance with the instructions.
- Necessary measures must be taken to eliminate the risks of falling products during the mounting.
- Always personal protective equipment against falling and suitable systems must be preferred during the mounting and dismantling of products.
- If there is a risk of falling during the mounting and dismantling of products, safety belts covering the entire body must be worn and secured to a suitable fixed point.
- The impact area of works must be limited against the risk of falling products and tools during the mounting and dismantling of products.
- No tools or equipment other than mounting and dismantling tools must be used.
- Mounted products must be checked again visually and by hand and inappropriate assemblies (with gaps, swinging, inclined, etc.) must be dismantled and mounted again.
- Edge protection systems must not be used for any other purpose and people and materials must be prevented to lean on the panels as much as possible.
- If one person or object falls towards or on the edge protection system, the system must not be used again until it is completely controlled by an authorized person.
- The openings between edge protection system and other structures must be as small as possible and it must not be longer than 120 mm for guardrails and 20 mm for toe board

Conditions to be Cared When Using the Products:

- They must not be used. if the wind speed is faster than 32 km/s (900N/m^2).
- They must not be used when the ice load is more than 300 N/m^2.
- They must not be used when the surface is slippery due to environmental and weather conditions (icing, lubrication, etc.).
- The product to be mounted must be fixed to a secure place by rope until the mounting is completed.

7-MOUNTING

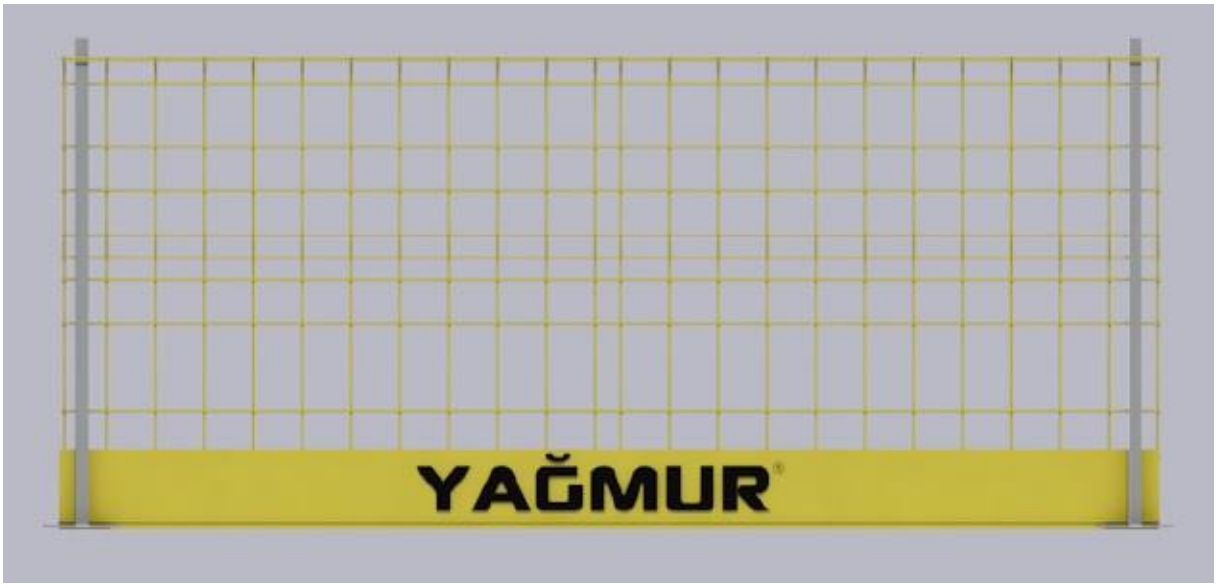
WARNING: The concrete floor, on which M10x70mm concrete screw will be used, must be minimum C20 quality and without any crack. If they will be used on any floor other than concrete, the structure of floor, on which the post will be secured, must be known. The product must not be mounted on soft and loose grounds, which are not suitable for the product's crimping capacity and on damaged crimping areas.

The product must not be mounted under wind speed faster than 32 km/hour. The wind speed must be waited to slow down.

- Take necessary safety measures around the mounting area.
- Ensure that the mounting team use all necessary personal protective equipment and connected systems.
- Keep at least one watchman in the mounting area and impact area.
- Ensure that any tool, equipment and goods that may prevent the works are removed from the mounting area.
- Calculate the length of mounting area and determine the partitions of edge protection post and edge protection barrier.
- After the direction of pin on edge protection post is adjusted to be left within inner mounting area, drill two holes for M10x70mm concrete screw through the base plate by using a drill. Ensure that the drill operates at 90^o angle towards the ground during the drilling.

- Pay attention that the hole that was drilled for M10x70mm concrete screw is 75-80 mm deep. Clean the holes with a brush or spraying air from the top. Anchor M10x70 mm concrete screw to the ground by using screwing machine through the holes, which were drilled at least 120 mm far from the edge.
- After the operation is completed, check whether the edge protection post is swinging or loosened. If the plate under the post contacts at the maximum level with the ground, the swinging will be reduced.
- Below steps must be followed to mount adjustable edge protection post: Lower and upper jaws of the post clamp the floor, H20 or wooden timber and the latch on upper section is turned until the jaws contact with the floor, H20 or wooden timber.
- After the operation is completed, check that edge protection post is not loose. If jaws of the post contact at the maximum level with the floor, H20 or wooden timber, swinging will be reduced.
- Insert edge protection panel to the top of edge protection post through the top twist and to the pin slot, located at the bottom of post.

- Lock the pin of edge protection post.
- So, the mounting of edge protection system with 112.5 cm. height and 250 cm. Width will be completed. After the mounting is completed, the products must be checked visually and by hand.



8-DISMANTLING

WARNING: If the products will be dismantled in an outdoor area, do not dismantle the product when the wind speed is faster than 32 km/hour. Wait for the wind speed to slow down.

- Open the lock pin on the edge protection post for dismantling.
- Remove edge protection panel from edge protection post.
- Stack them horizontally on the ground in a safe place.
- Unscrew concrete screws by using screwing machine from the base plate of edge protection posts. Remove adjustable edge protection screws by turning the latch until the jaws are released from the floor or wooden timber.
- Stack edge protection posts horizontally in a safe area, at where you work.

9-CHECKLIST TO BE USED BEFORE AND AFTER THE MOUNTING

This checklist must be completed by the monitoring team and kept throughout the use of edge protection system in order to be presented to authorized persons.

	Y	N
• Do you have product handbook?	○	○
• Have you removed the elements that will endanger your working environment?	○	○
• Is the floor suitable for mounting?	○	○
• Are mounting staff qualified?	○	○
• Do the mounting staff have appropriate personal protective equipment?	○	○
• Are electrical and non-electrical hand tools suitable for mounting?	○	○
• Does the length of mounting area of protection systems calculated?	○	○
• Are the posts placed appropriately on the floor and are they torqued?	○	○
• Is the balance of posts (90 degrees to the ground) proper?	○	○
• Are barriers installed?	○	○
• Is the system mounted properly and squared?	○	○
• Are barrier pins locked?	○	○
• Is load resistance test conducted after the mounting?	○	○
• Are warning signs placed?	○	○

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