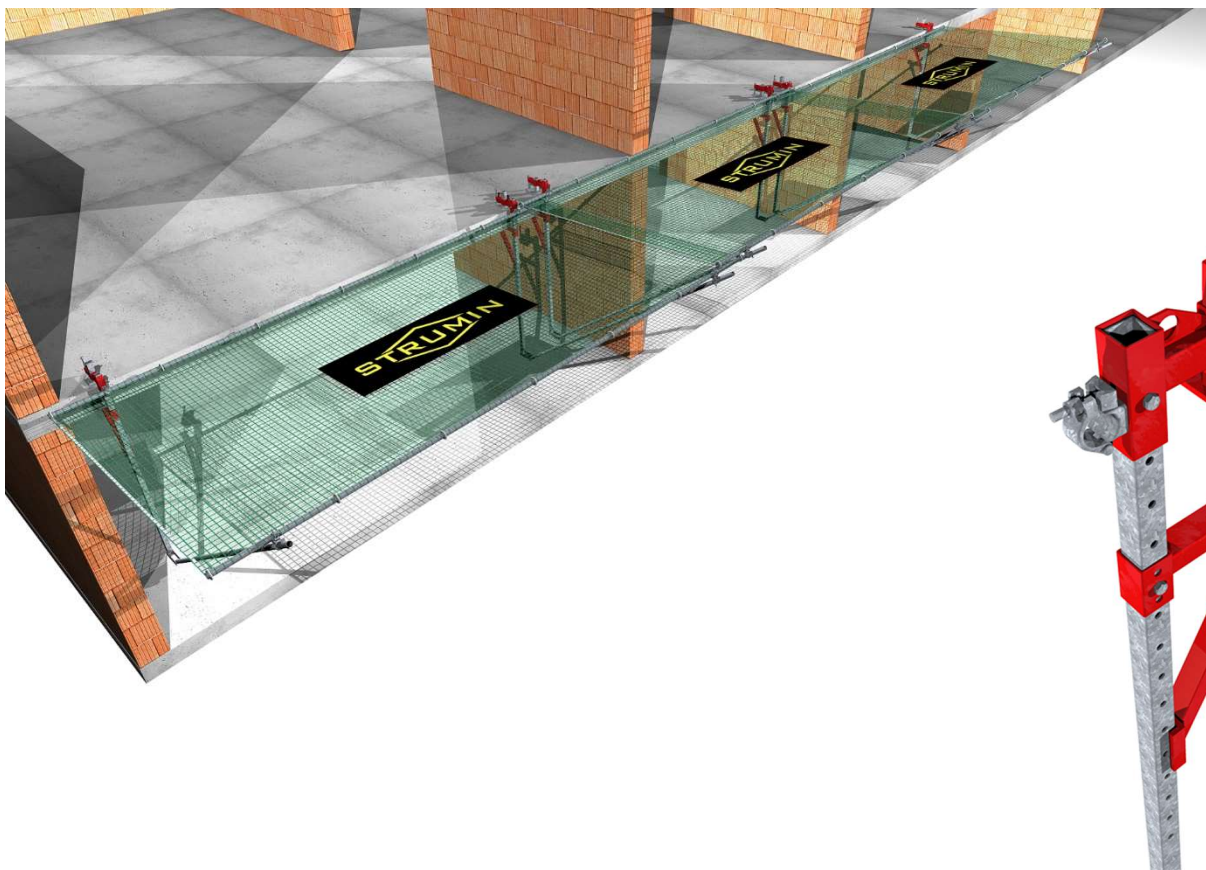


SAFETY NETS [T-TYPE]

SAFE WORKS AT HEIGHTS



CONTENTS:

- I. TECHNICAL DOCUMENTATION (DTR)**
- II. SYSTEM'S [T] TECHNICAL DATA**
- III. DESIGNER'S STATEMENT**



I. TECHNICAL DOCUMENTATION

ATTENTION!!!

BEFORE EVERY USE OF THE SAFETY SYSTEM [T], THE USER SHALL READ THIS TECHNICAL DOCUMENTATION AND ALWAYS STRICTLY FOLLOW THE RULES DESCRIBED HEREIN. THE INSTRUCTIONS WERE PREPARED FOR ALL EMPLOYEES AND PEOPLE WHO TAKE PART IN THE TRANSPORTING, UNLOADING, ASSEMBLING, DISASSEMBLING, STORING, INSPECTING AND OTHER ACTIVITIES CONNECTED TO **THE SAFETY SYSTEM [T]**.

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ONGOING INSPECTION,
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INTRODUCTION

This Technical documentation contains the guidelines concerning the proper use of **the Safety system [T]**. Workers and other people using the system shall always observe the guidelines contained herein. In case of any events not described in this document, the occupational safety and health regulations and other regulations, appropriate to the specific situation, shall be observed.

1. MANUFACTURING BASIS

The manufacturing basis of the Safety System [T] is the implementation of a project that is aimed at providing safety while performing works at heights. The safety system was prepared in accordance with the current laws and technical standards, i.e.: EN 1090-2..2012, EN ISO 13920:2000, EN-1263-1_2015-02E

2. TECHNICAL DESCRIPTION

2.1 PURPOSE AND SCOPE OF USAGE

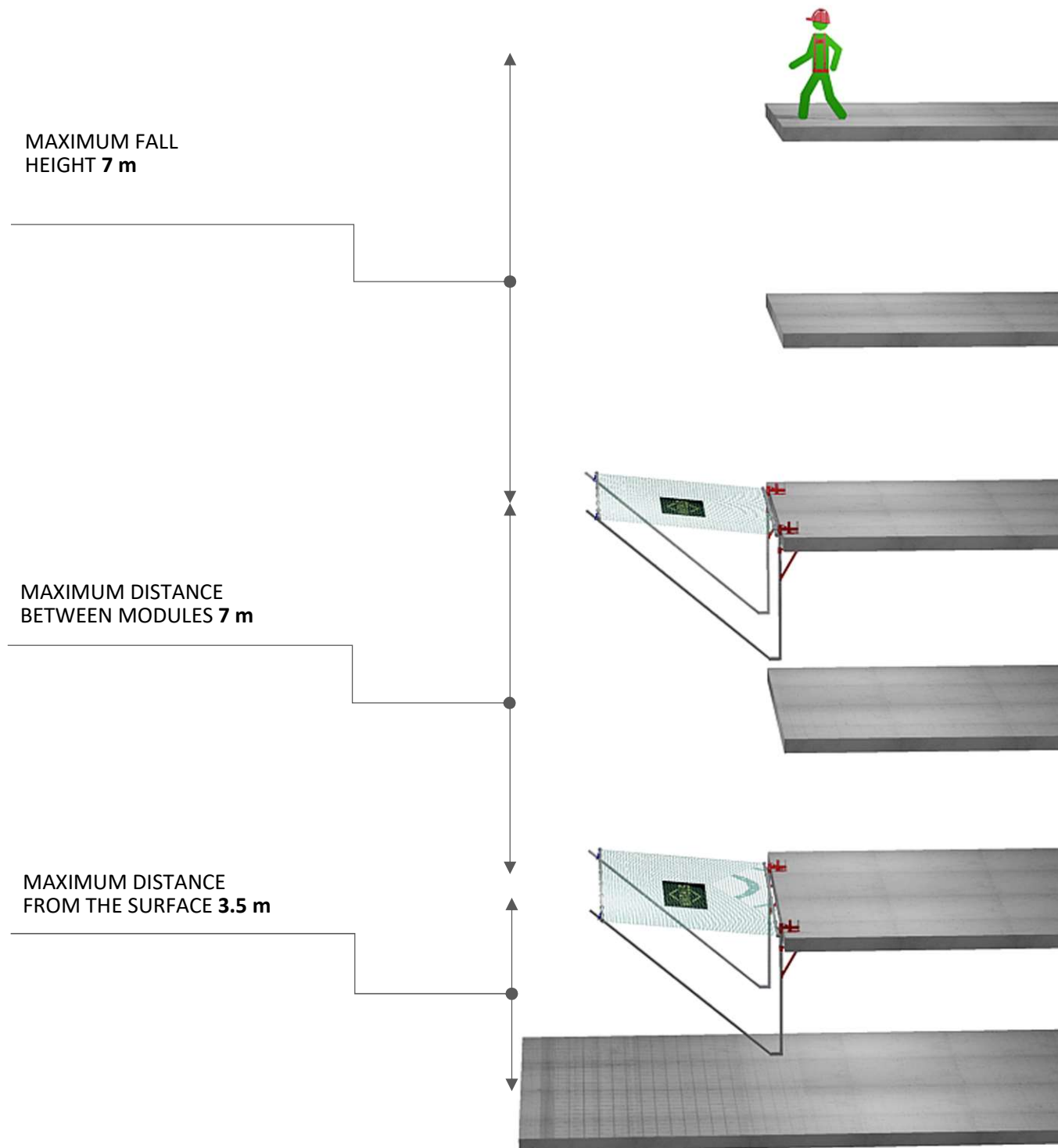
The Safety system [T] is aimed at minimising the effects of a fall from heights. It protects from a fall from heights (e.g. constructional elements, formworks, reinforcements etc.) Together with personal protective equipment it provides safety.

The use of the Safety System [T] is allowed only on condition that the user adheres to this Technical Documentation, as well as the proper occupational safety and health regulations.



2.2 ALLOWED FALL PARAMETERS.

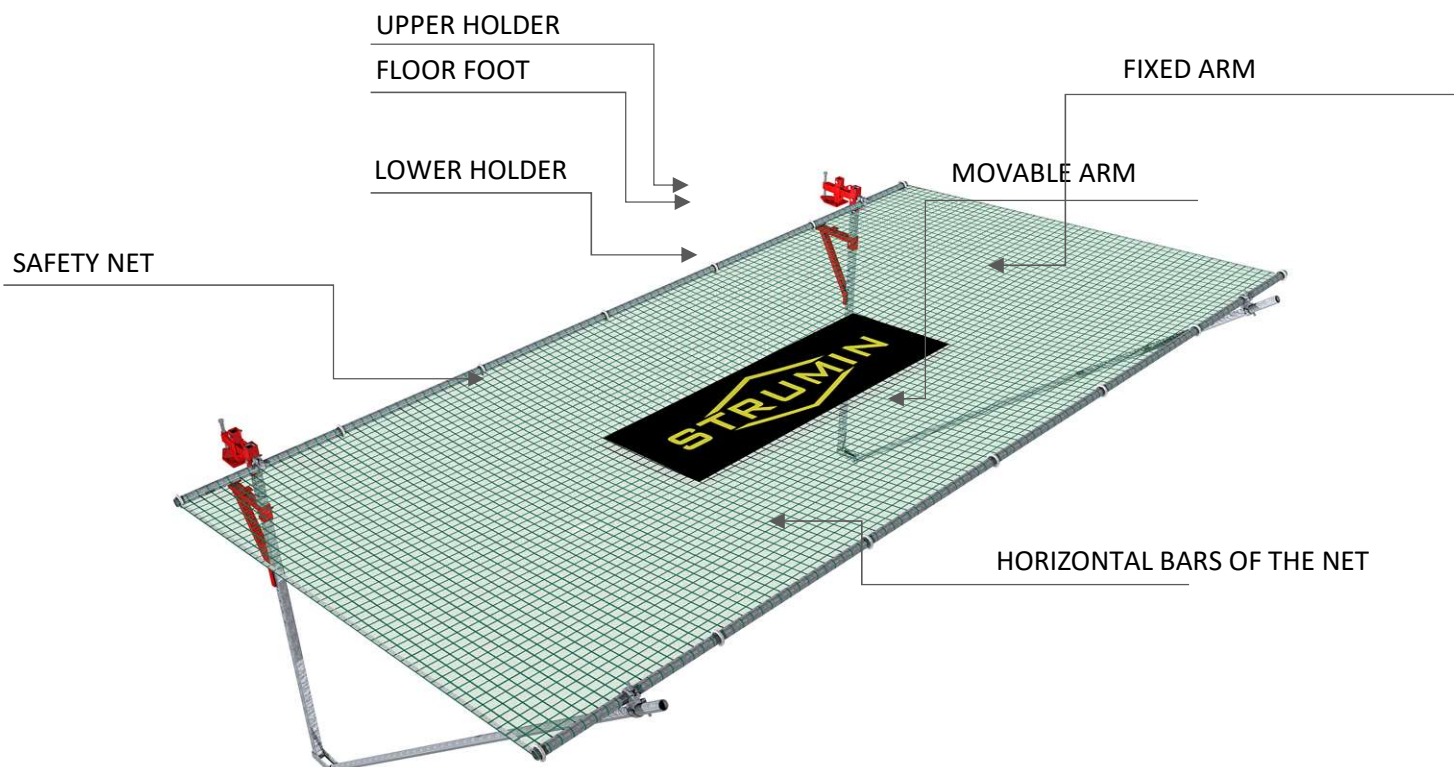
Despite of the type of a T system used, the maximum fall height (H) is 7 m, and the catching width is 3 m.



2.3 TECHNICAL CHARACTERISTICS, CONSTRUCTION OF THE FALL SYSTEM [T].

The Safety System [T] is a steel construction consisting of six main parts: A fixed arm, a movable arm, an upper holder, a fixed arm lower holder, horizontal bars of the net and a safety net.

Each module of the T system is also equipped with optional adapters for different fixing, i.e. floor fixing (standard) or wall fixing.



2.3.1 SAFETY NET

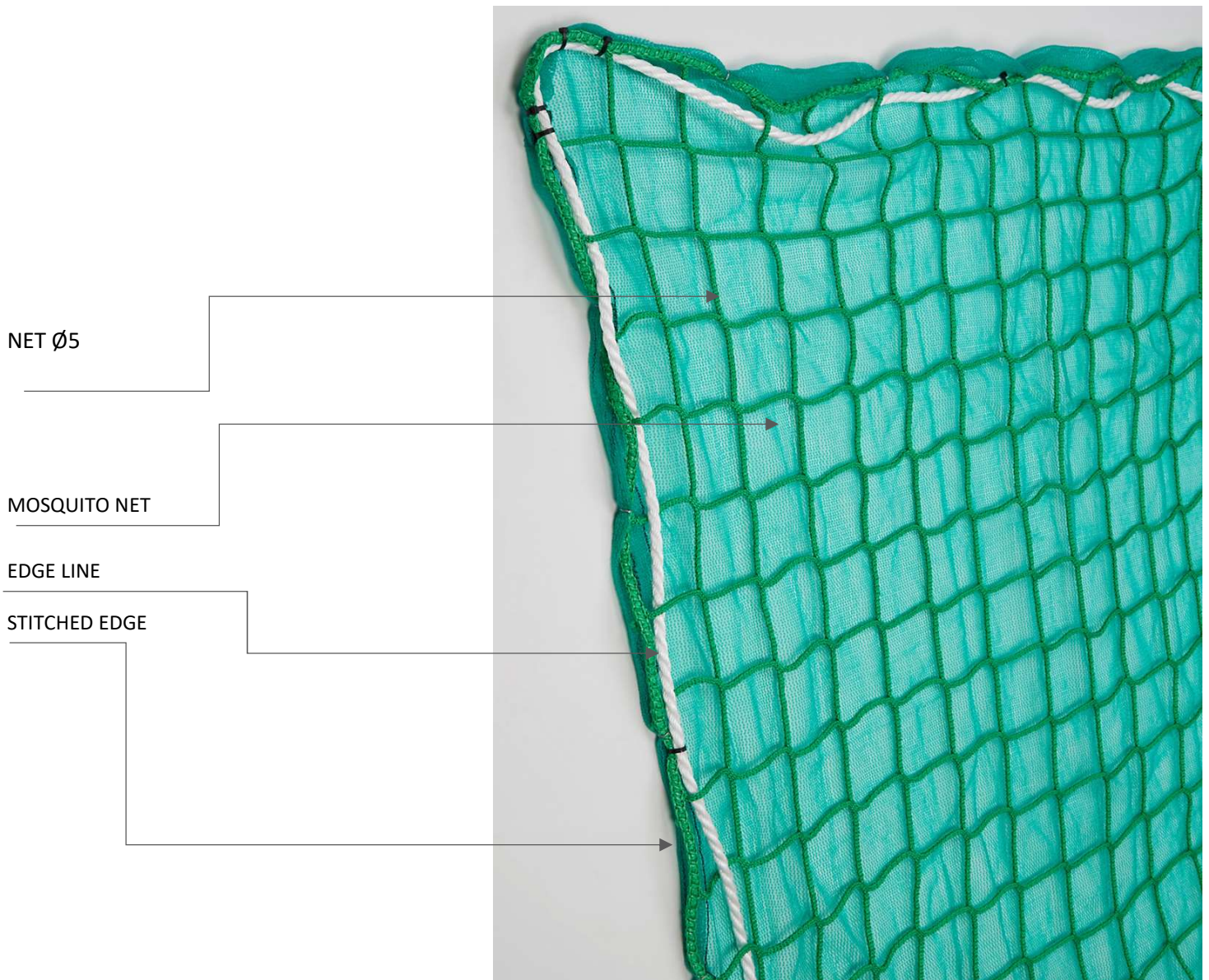
It is an attested element of the T system and consists of two integrated nets. One of them is used for catching heavier objects while the other (mosquito net) catches smaller elements, i.e. tools, hardcore etc.

The first layer is a knotless net made of polypropylene line (5 mm in diameter and 6×6 mesh size).

Both nets are stitched together along the outer edge.

Along the edge of the net there is an integrated polypropylene line (Ø12 and the strength of 30 kN).

The net is periodically checked for its wear and suitability for the use in a safety system. That inspection is performed via strength and quality tests (control meshes), which are once a year collected and send for testing.



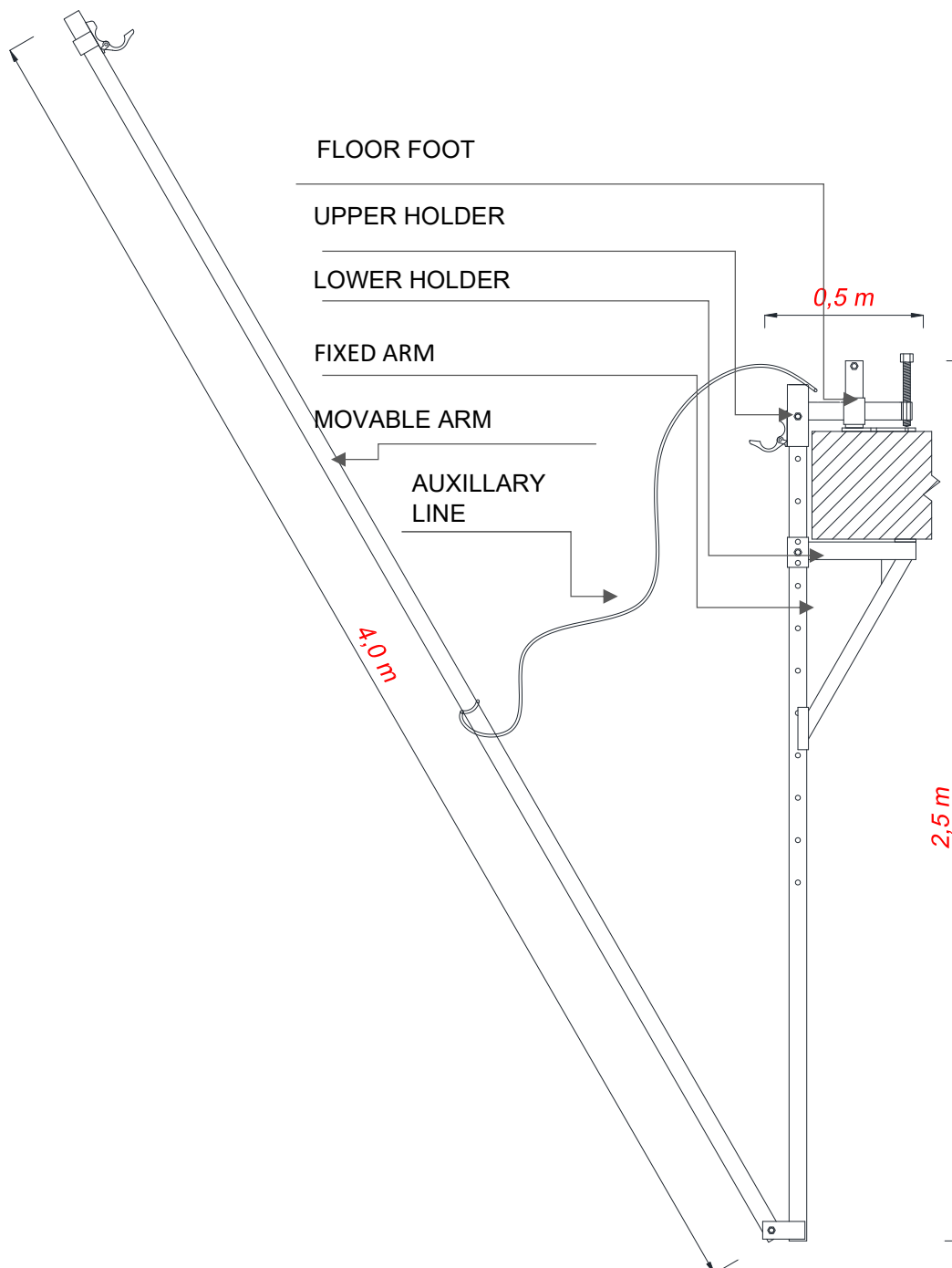
➔ MORE INFORMATION IN THE CHAPTER ASSEMBLY p. 16, 24, 25



2.3.2 CONSOLE

Is the main element of the System [T].

Two consoles with a safety net and its horizontal bars make the MODULE

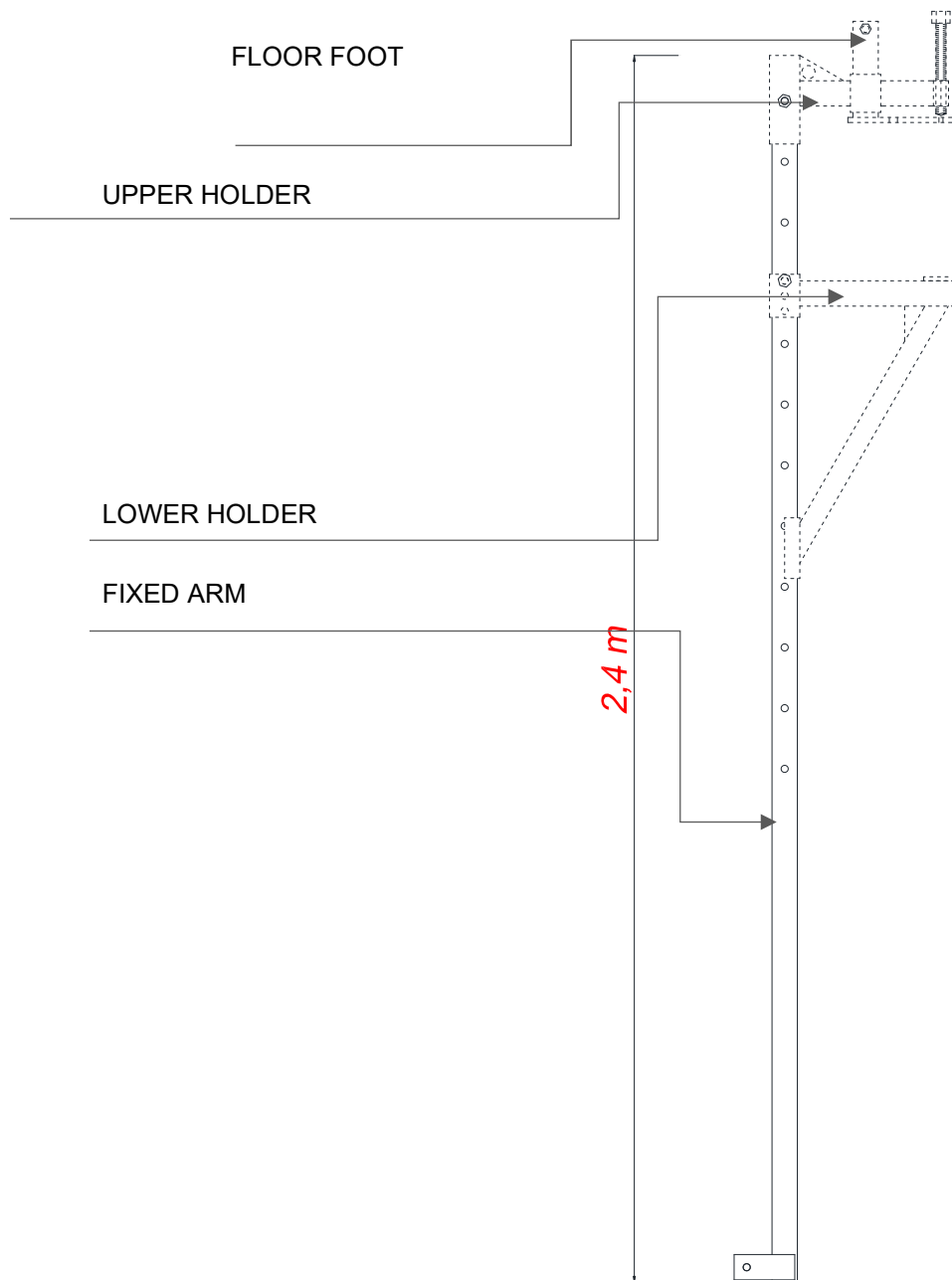


➔ MORE INFORMATION IN THE CHAPTER ASSEMBLY p. 19–22



2.3.3 FIXED ARM

Is the main element of the console to which other elements are assembled. The 240 cm long arm in its upper part contains $\varnothing 12$ holes for fixing the upper and lower arms. Those holes are placed in a row in order to adjust the distance between holders, making it possible to tailor them to a given floor thickness. The module for holes is 30 mm which allows for a jumping adjustment of the width of the holders while more precise adjustment is possible thanks to the screw of the upper holder. In the bottom part of the main arm there is a holder used for joining with the diagonal arm.

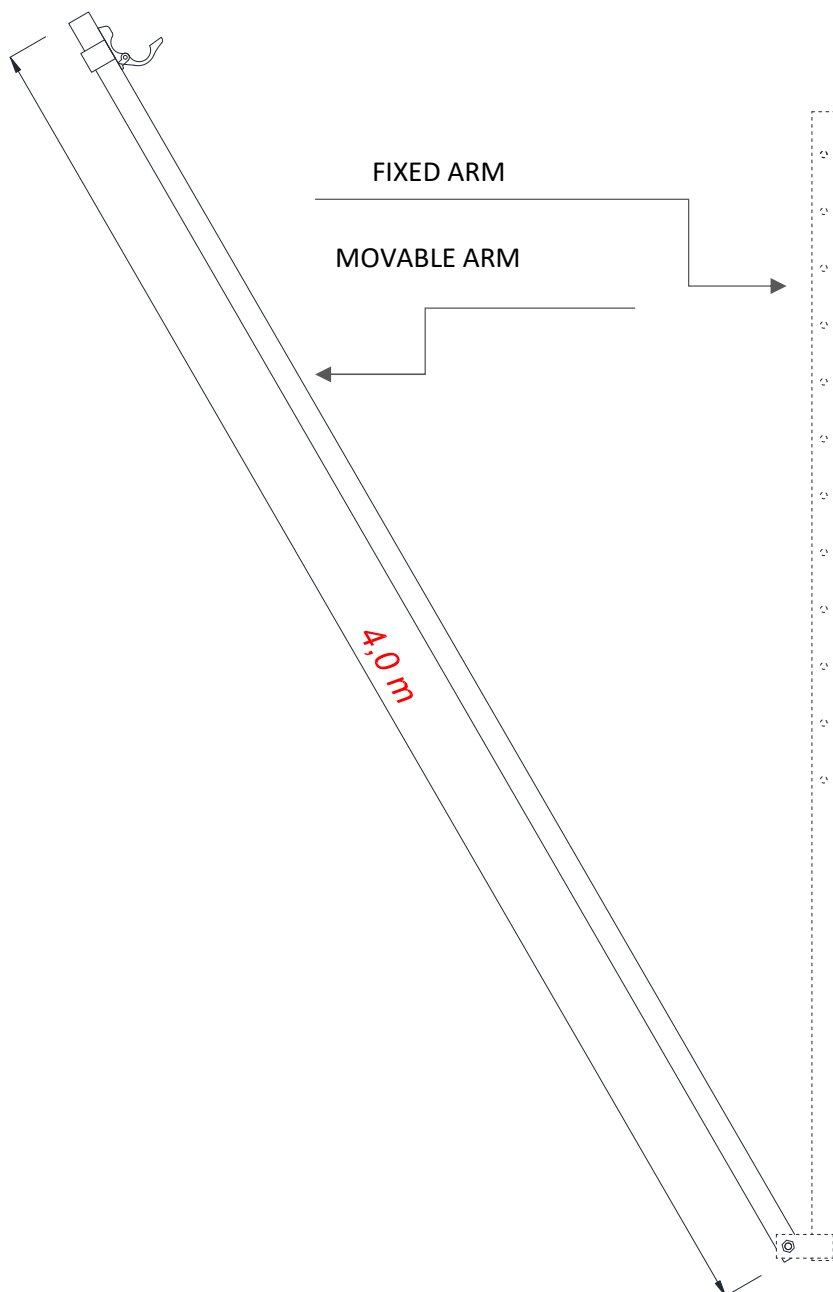


➔ *MORE INFORMATION IN THE CHAPTER ASSEMBLY p. 19–20,*



2.3.4 MOVABLE ARM

Is a 4 m long straight element. At the bottom, it is attached to the fixed arm with a M12 screw. At the end, there is the upper horizontal bar of the net, assembled with a fixed cross handle.



➔ **MORE INFORMATION IN THE CHAPTER ASSEMBLY p. 23–24,**



2.3.5 UPPER HOLDER

of the fixed arm is a mounting element that allows to fix the console to the floor.

It consist of a floor foot and a pressing screw. The correct cooperation between those elements provides safe and reliable connection of the system to the safety object. The upper holder has two vertical guides attached to the fixed arm and the floor foot.

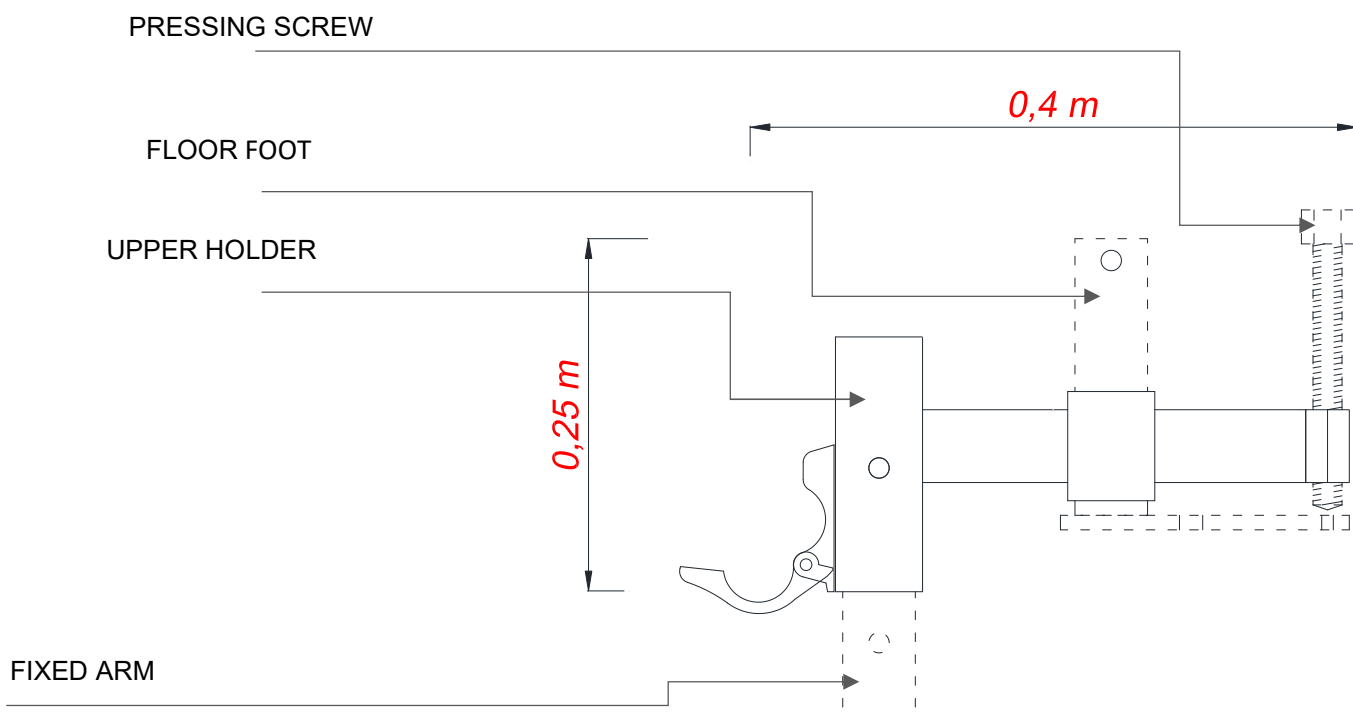
The guide of the fixed arm has two holes that are used to set and lock those two elements.

At the end of the upper holder there is a pressing screw that helps to assemble the whole module to the floor.

The floor foot has to be anchored to the floor with concrete screws that provide the durability of 10 kN.

In the upper part there is a grip for transporting with a crane.

The upper holder with the fixed arm has to be moved to the edge of the floor (the permitted clearance is 15 mm).



→ MORE INFORMATION IN THE CHAPTER **ASSEMBLY** p. 19–22

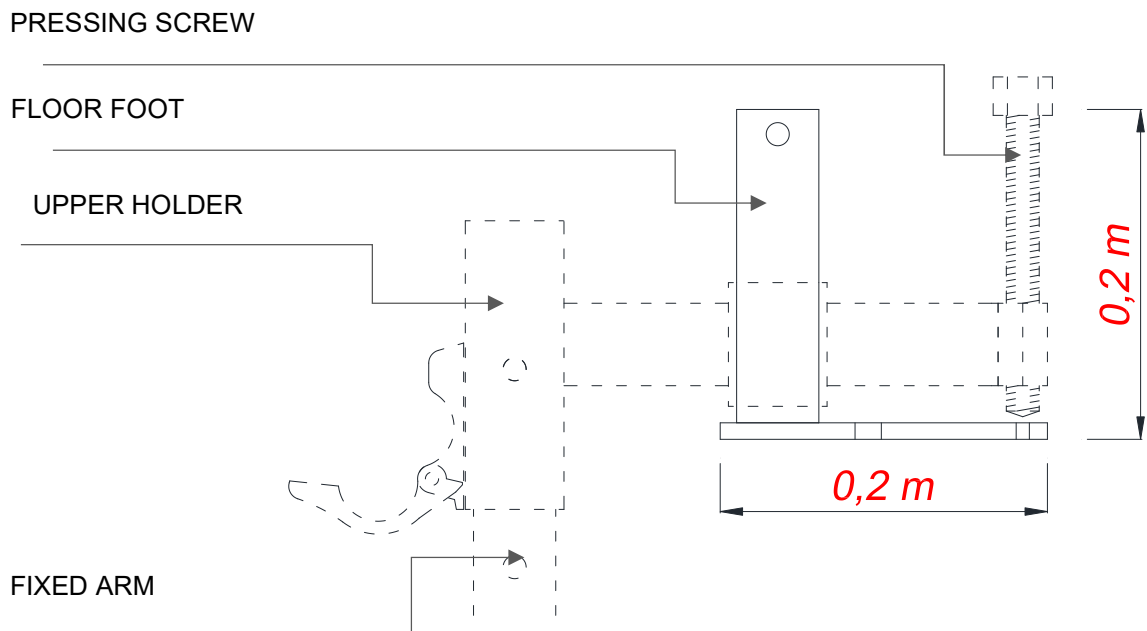


2.3.6 FLOOR FOOT OF THE UPPER HOLDER

The floor foot is an element which assembles and sets the upper holder on the floor.

By fixing the pressing screw of the upper holder, it moves upwards on the floor foot profile, allowing to tighten to the floor the lower holder, which is connected through the fixed arm to the upper holder.

The floor foot is used to set the vertical position of the console. It decides whether the module (console) is an upper or a lower one.



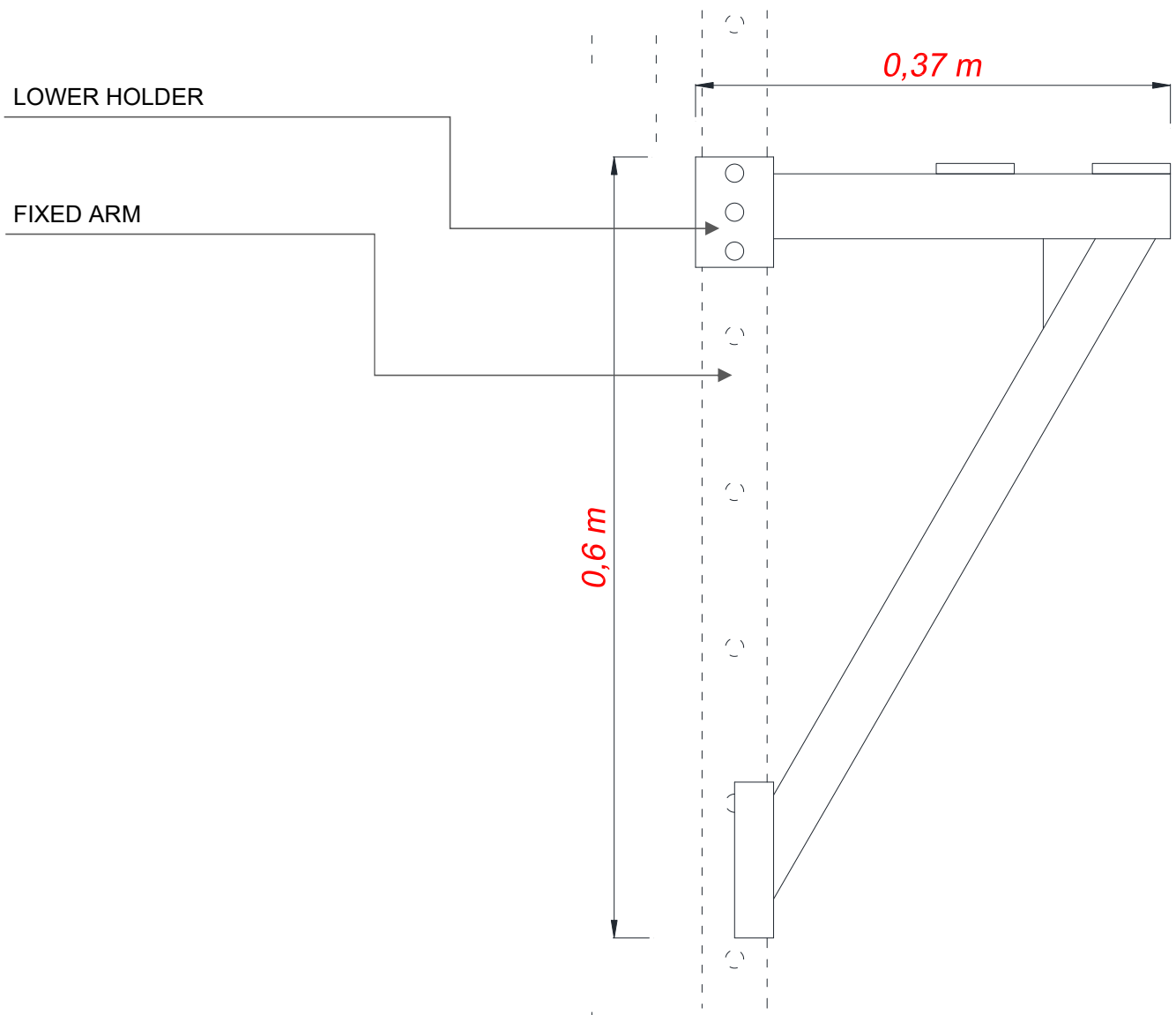
→ MORE INFORMATION IN THE CHAPTER **ASSEMBLY** p. 19–20, 30



2.3.7 LOWER HOLDER

of the fixed arm works with the upper holder.

It captures the pressing load of the upper holder and the load of the movable arm and the fixed arm when the net catches falling objects. The guide of the lower holder has three holes that allow to set the spacing of the holders by 30 mm. The lower holder can be used to set the spacing between holders for a given floor thickness, as well as to regulate the height of the upper holder over the floor in case of two separate modules passing by.



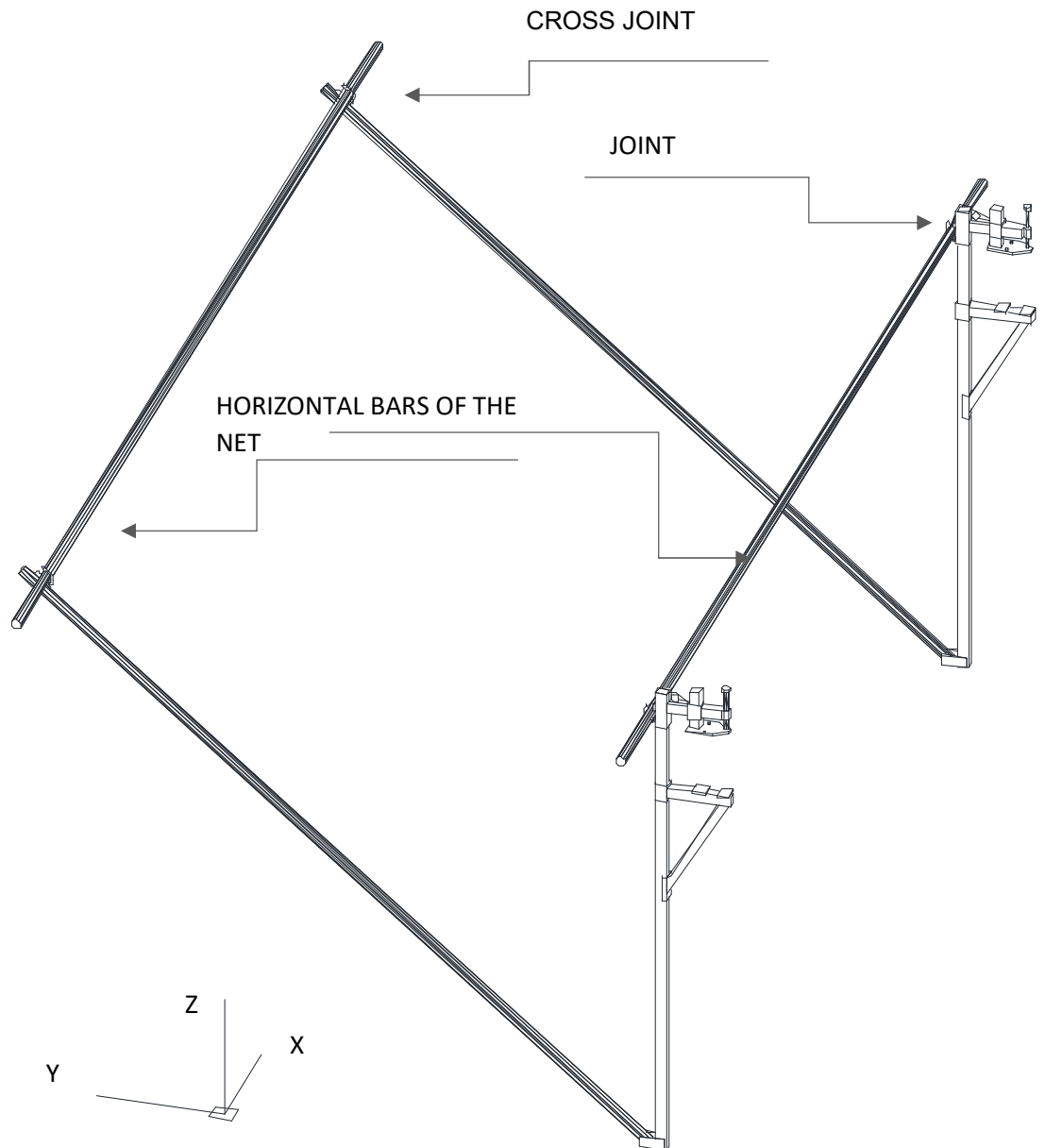
➔ **MORE INFORMATION IN THE CHAPTER ASSEMBLY p. 19–20, 30**



2.3.8 HORIZONTAL BARS OF THE NET

Those elements are used to assemble the safety net which catches falling objects. The lower bar is assembled to the joints of the upper holders.

The upper bar is assembled to the movable arms with cross joints. The horizontal bars are prone to plastic deformations while catching a falling object. It is the key element of the system and its destruction absorbs part of the energy created while braking and overloading, thus ensuring safety of a person who fell from height.



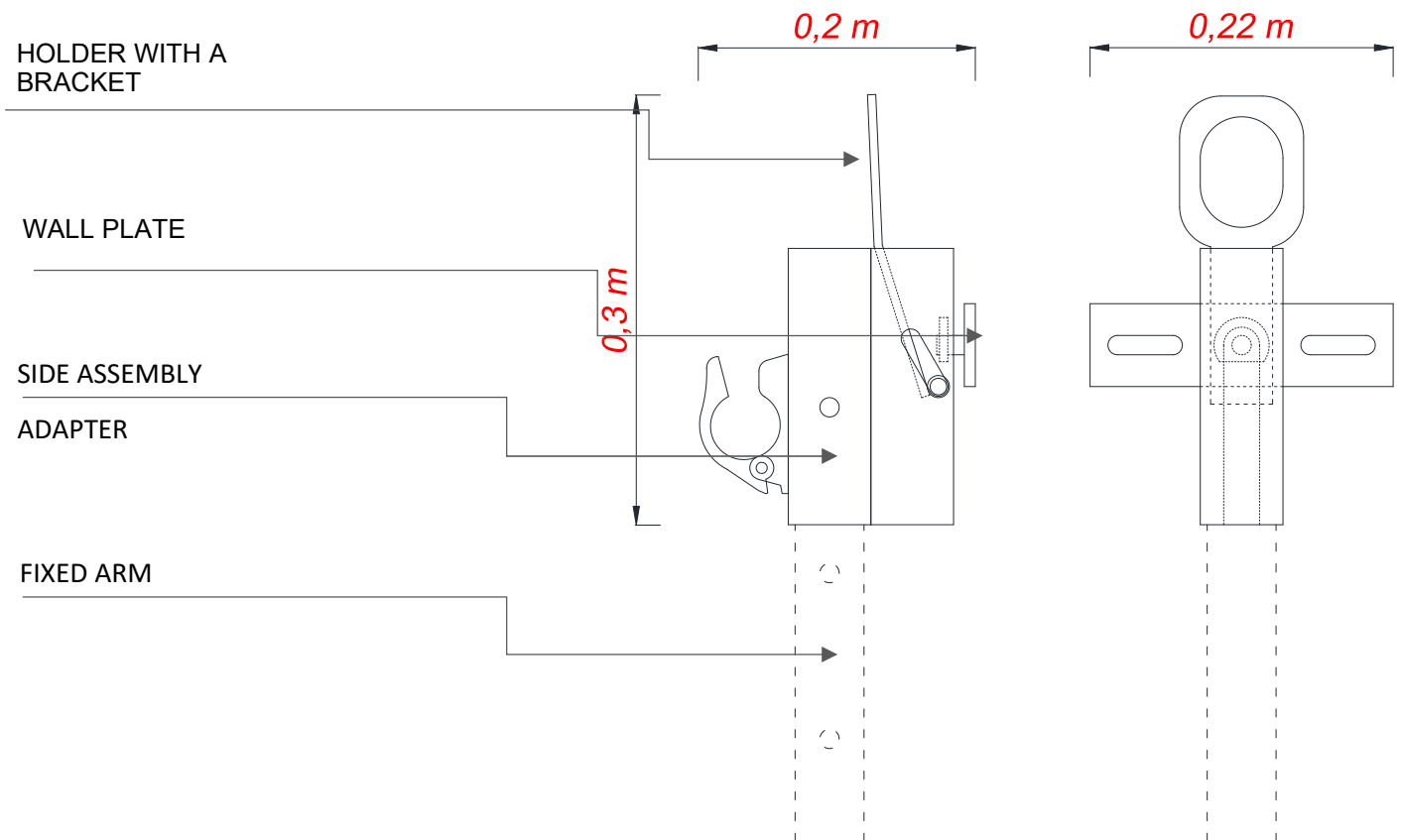
→ MORE INFORMATION IN THE CHAPTER ASSEMBLY p. 23–24



2.3.9 SIDE ASSEMBLY ADAPTER – ASSEMBLING TO THE WALLS AND EDGES.

Side assembly of the fixed arm is used when there is no possibility of the floor assembly. The side assembly adapter replaces the upper and lower holder of the fixed arm. The side assembly adapter consists of three elements: a wall plate, a holder with locking bracket and a fixed arm holder. To assemble the adapter it should be put (from top to bottom) on the wall plate which has a mounting mandrel.

While placing the adapter on the mandrel, the locking bracket locks the whole mechanism. The wall assembly of the T net module is usually performed with a crane on assembled wall plates. The net module is transported with a sling attached to the adapter's brackets. After releasing the sling, the bracket locks the adapter on the wall plate's mandrels.



➔ MORE INFORMATION IN THE CHAPTER **ASSEMBLY** p. 26–28



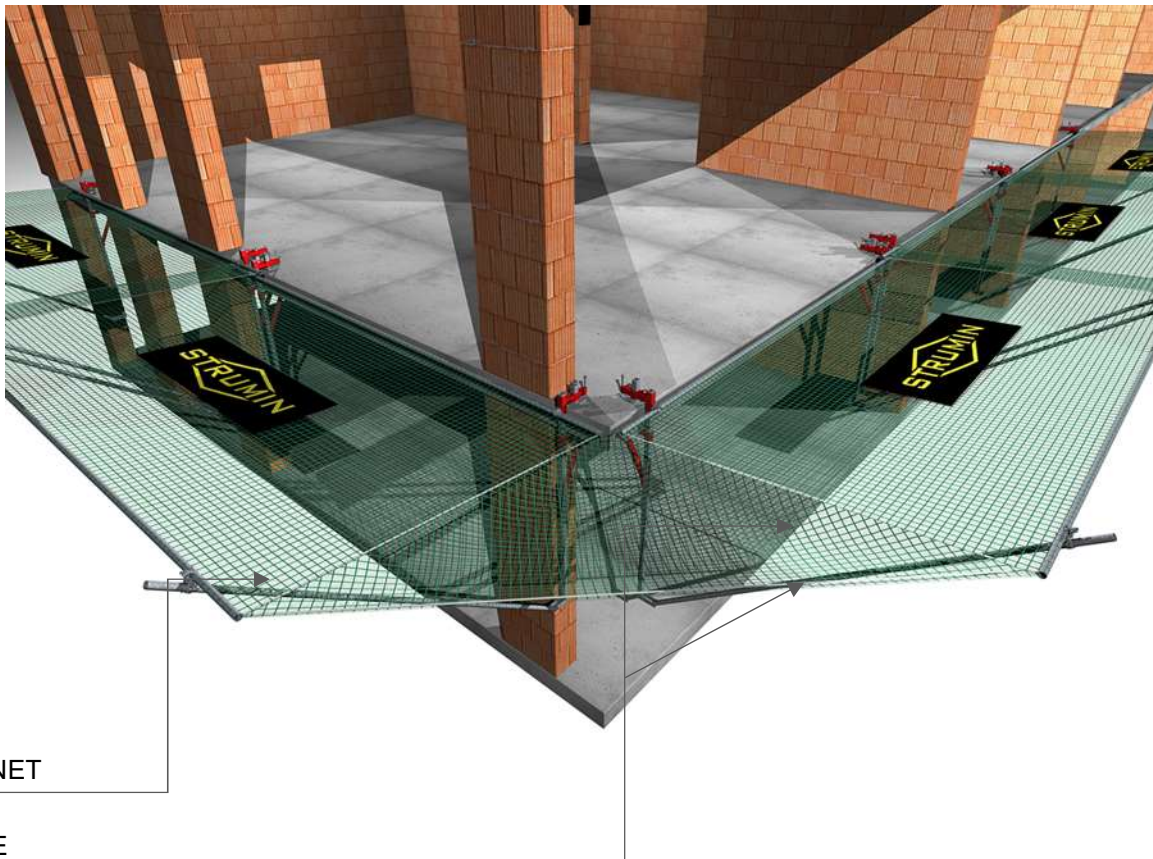
2.3.10 CORNER NET – T MODULES CORNER CONNECTION

Corner net may be used for joining neighbouring T modules that are oriented towards one another by 90° or a similar angle.

The corner net is a S-type safety system what means that it protects only from falling objects – and not people. Its nominal strength is defined for the maximum fall height of 2 m. The corner net consists of two integrated nets 60 × 60 × 5 and a mosquito net.

There is a polypropylene edge line (Ø12 and the strength of 30 kN) threaded in the edges. The connection between T-net modules and a corner net is realised by splicing two shorter sides with an edge line.

The figure below shows a mounted corner net. Its integration is performed on closed modules (in vertical position).



CORNER NET

EDGE LINE



3. USAGE

The Safety System [T] shall be used only for the purposes described in this manual. Any use not in compliance with this manual entails risk of accidents and poses threat to health and life.

Any use not in compliance with the Technical Documentation voids the guarantee.

The device shall be used to minimise the effects of a worker's fall from height. Moreover, it catches falling objects that pose threat to people standing below the working area. In case on an improper use of the system, it poses a risk for the user as well as the other people near the user.

Before using the Safety System [T] the worker shall read this manual.

During the use of the Safety System [T], the workers shall meet all the requirements described in the Technical Documentation and in any laws and regulations that apply

Any works connected to the assembly, elements installation and anchoring to the floor lies within the responsibility of the site manager.

The whole scope of works connected to the everyday use of the product lies within the responsibility of the site manager. Such actions like a daily and weekly inspection of the system shall be entered into a system's control card.

After an accident that resulted in damaging any elements of the system, it should be immediately withdrawn from further use. The damaged elements shall be replaced with new elements.

IMPORTANT NOTES:

- The device shall not be used as a provisional platform, as it was not designed to carry continuous loads or store objects.
- Elements not delivered with the complete device shall not be attached to the system. It may have a negative impact on mechanical parameters and affect the operational safety.
- The place where the Safety System [T] is used shall have a rescue plan implemented, in case of an event that led to securing from a fall.
- The Safety System [T] was designed to catch falling people and objects. The dynamic strength of the system provides its proper functioning for loads of maximum 100 [kg] falling from 7 [m]. Exceeding the allowed height and weight leads to uncontrolled and unpredictable deformations and damages to the parts of the system.
- In case of selling the device, the seller shall provide the product's manual in the language of a country where the equipment is to be used.
- For elements not produced by STRUMIN, please adhere to a given element's product manual.

3.1 ACTIONS PERFORMED BEFORE THE USE OF THE SAFETY SYSTEM [T]

- During the transport, workers shall act carefully in order to avoid possible impact to the constructional elements. In case of damaging any elements of the device, it shall be immediately withdrawn from further operation,
- The assembly shall be performed with due care. In case of damaging any elements of the device, it shall be immediately withdrawn from further operation or checked by a trained person.
- - If the device is transported with a crane, workers shall pay special attention to any movements of a crane and keep safe distance from it.
- -In case of using a crane, all works connected to joining the sling to the device shall be performed by a person holding the permissions for a hook operator,
- -Check all elements of the system for damages, check the technical documentation and the net's certificate.



3.2 QUALIFICATIONS OF THE PEOPLE USING THE SAFETY SYSTEM [T]

Workers operating the system should:

- Read the whole Technical Documentation of the Safety System [T] – the training must be confirmed in a written form.
- Finish a training on the occupational safety and health (work at heights).
- Undergo a training about using the personal and collective protective equipment.
- Hold current medical examinations proper for a given work.

3.3 ASSEMBLY OF THE SAFETY SYSTEM [T]

Any works connected to the assembly of the Safety System [T] shall be performed in accordance with this manual and under a supervision of people that finished the required trainings.

The assembly of the T-system shall be performed by minimum 2 people, equipped with the right tools and PPE which protects them during the assembly works.

Before commencing the works, the deployment and assembly plan of the T-system shall be prepared, individually for each construction site and for each variant of the system. It allows to properly use the Safety System.

The assembly of the Safety System [T] can be performed only by a worker that has read the system's Technical Documentation. The site manager or a different person that obtained permission from the site manager is responsible for the deployment and the choice of places that are to be protected.

Before the assembly, it shall be checked if the system is complete and has no visible signs of damage.

The assembly shall be performed with caution. In case of damaging any elements of the system, it shall be immediately replaced or checked by a trained person.

Before starting any assembly works, there shall be determined a danger zone within the area where there is a danger of falling objects – 1/10 of the height, but no less than 6 m.

The detailed assembly instructions can be found later in this document.

No elements that do not belong to the device can be assembled to the Safety System.

3.4 DISASSEMBLING AND MOVING THE DEVICE BETWEEN WORKPLACES

During the disassembly of the Safety System [T], workers shall keep all security measures and comply with the same regulations as during the assembly process.

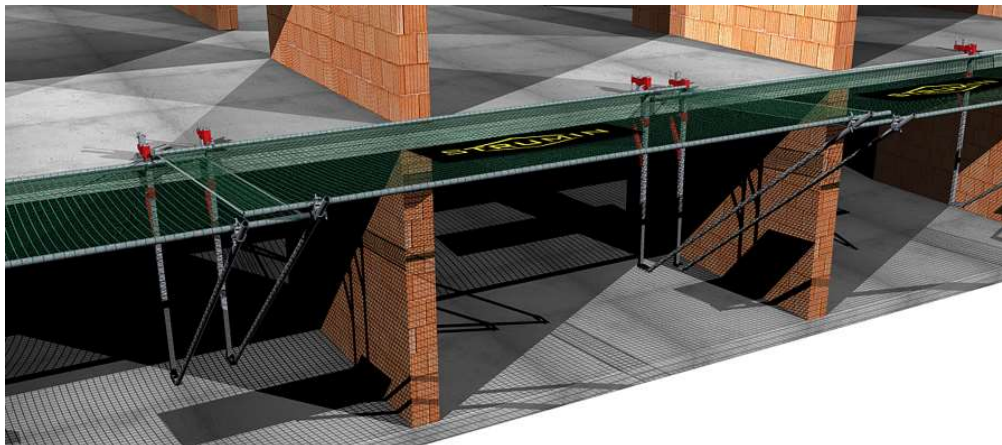


3.5 ASSEMBLY WITH A CRANE – GENERAL INFORMATION.

Modules assembled to the floor are placed vertically. The first, third, fifth etc. are lower modules, while the second, fourth, sixth etc. are upper modules.

In order to turn a module into a lower or an upper one, the console shall be properly configured.

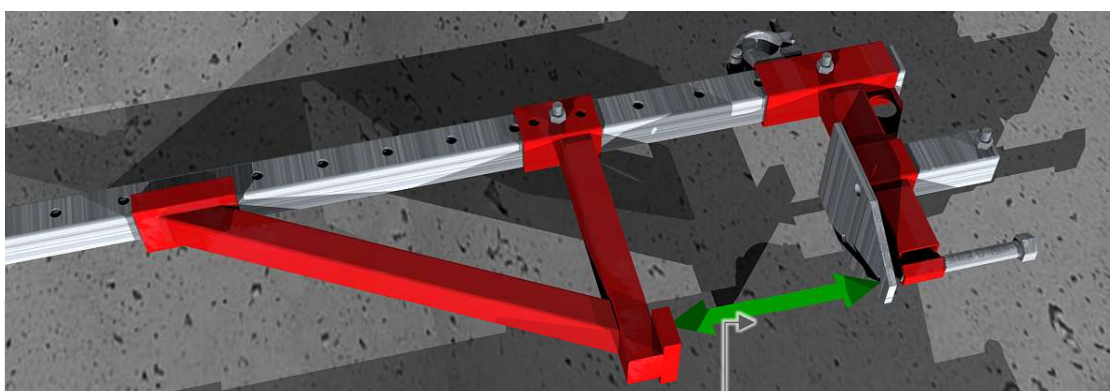
The console consists of the upper and lower holder, as well as the floor foot. The console may be adjusted through changing the position of the foot and the lower holder, in order to turn it into an upper or a lower console – adjusted to the floor.



3.5.1 ASSEMBLY WITH A CRANE – STEP 1: CONSOLES' REGULATION (UPPER AND LOWER)

The basic configuration of the console is the lower setting (for the lower module). In order to achieve it, the floor foot shall be completely inserted into the socket in the upper arm.

Remove the screw from the lower holder and then move the holder away from the foot in order to achieve the size equal to the floor width (plus clearance ~1–2 cm). After setting the offset, the lower holder shall be locked with a screw M12.



FLOOR WIDTH + CLEARANCE ~1– 2

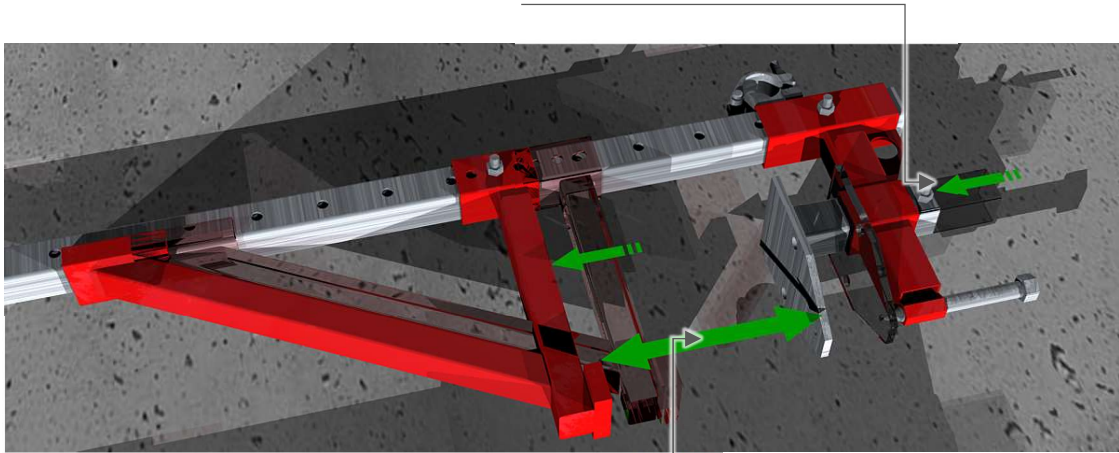
CONSOLE IN THE LOWER CONFIGURATION

In order to configure the console in its upper position, the floor foot shall be slid out of the socket of the upper holder by about 7–8 cm. Then the screw locking the lower arm shall be removed and the offset



between the foot and the lower holder shall be adjusted to the thickness of the floor. At the end, lock the lower holder with a M12 screw.

The foot offset 8 cm



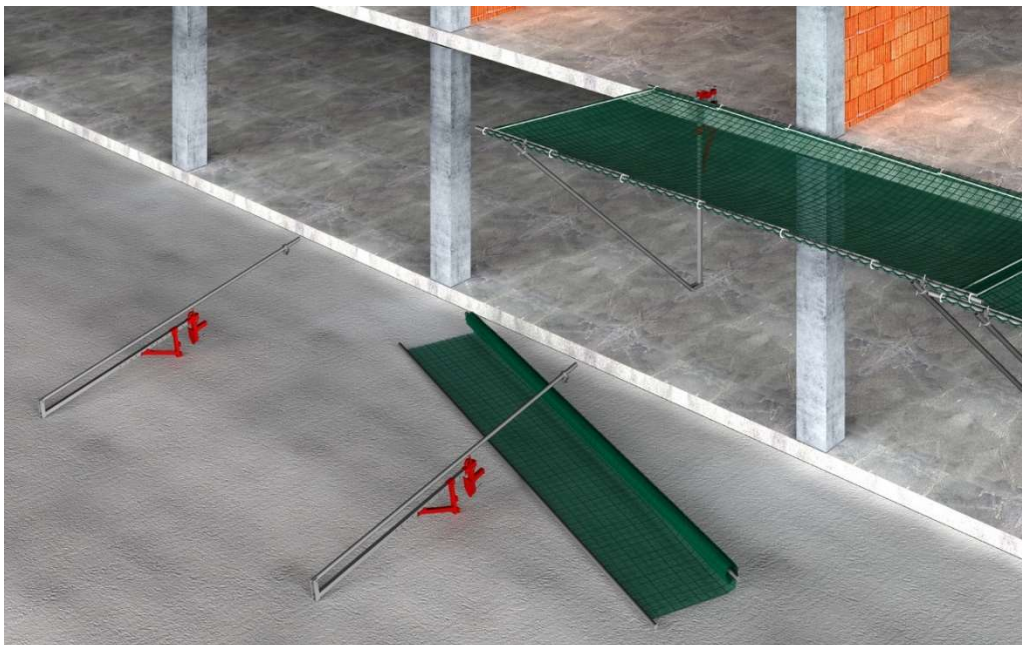
CONSOLE IN THE UPPER CONFIGURATION

FLOOR WIDTH + CLEARANCE ~1- 2

3.5.2 ASSEMBLY WITH A CRANE – STEP 2: MODULE ASSEMBLY.

Assembling the module to the floor requires its preparation on the surface on which the parts of the module are stored (usually on the ground).

Both consoles shall be placed flat, so that the movable arm will be at the top. The standard distance between the consoles shall be about 4.6 m (theoretical distance is 5 m, but it should be shorter due to the practical experience of the users).

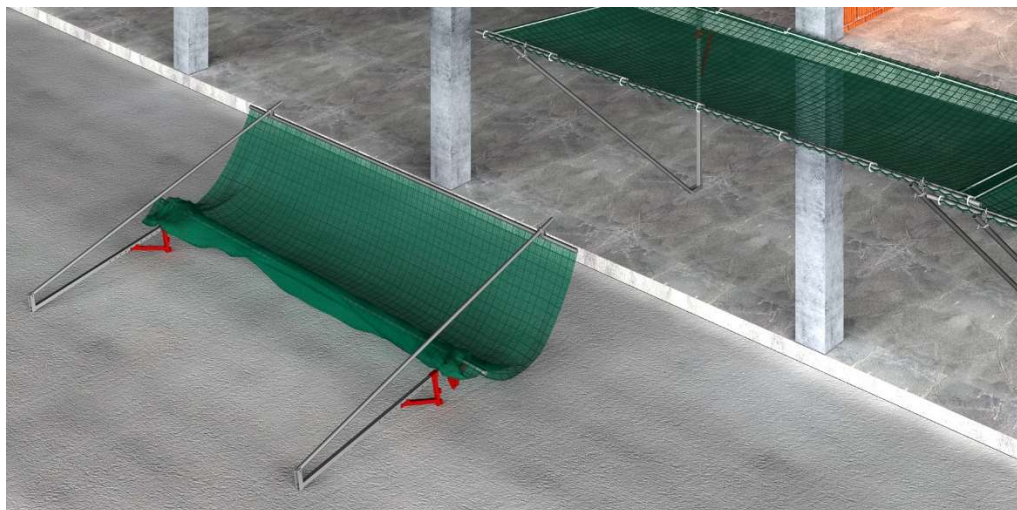


3.5.3 ASSEMBLY WITH A CRANE – STEP 3: ASSEMBLING THE NET WITH HORIZONTAL TUBES.

The safety net and horizontal tubes are provided complete to the construction site. In order to assemble the safety net with tubes, the net shall be placed on a console and tubes shall be placed on its arms.



One tube is assembled to the fixed arm holders, while the other is assembled to the movable arm holders. The user shall check the distance between the assembly points, so that it is about 4.6 m.



3.5.4 ASSEMBLY WITH A CRANE – STEP 4: TRANSPORT OF THE MODULE.

The complete module shall be assembled to a hook of a crane, e.g. with stripes. Such stripes can be placed where the horizontal tube connects with the movable arm. Assembling the module to those points ensures its stability during the transportation with a crane. Assembling to the floor holders of the console or other, available places will usually lead to an uncontrolled deviation from the vertical position and difficulties to position the module's consoles on the floor.



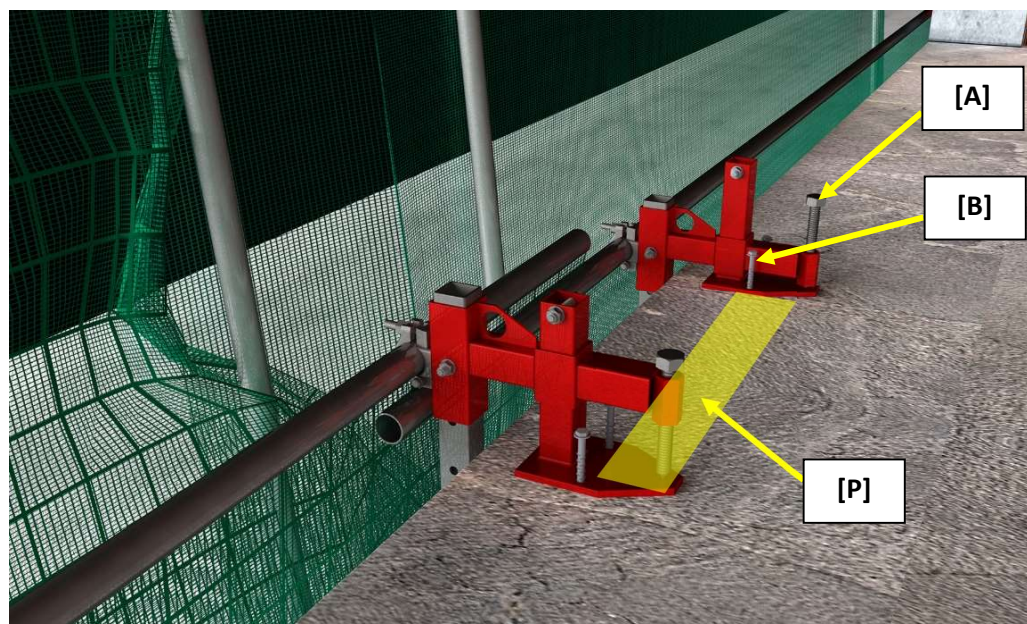
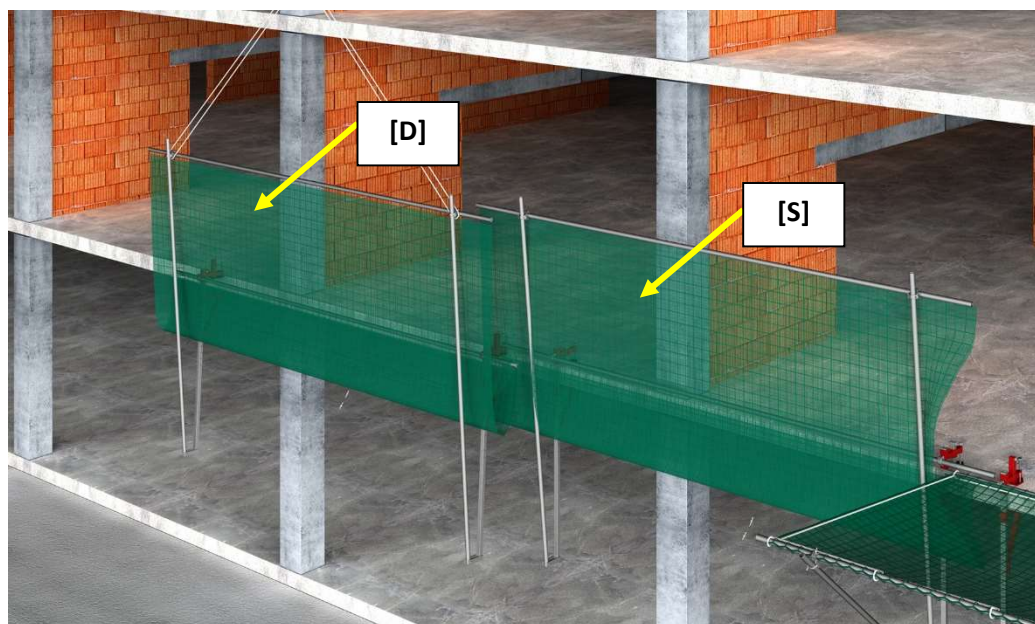
3.5.5 ASSEMBLY WITH A CRANE – STEP 5: ASSEMBLING THE MODULE TO THE FLOOR.

To make the process of the module assembly easier, the neighbouring module shall be placed vertically [S].

It is obligatory to raise the neighbouring module if it is the upper module (see p. 19–20), as the placement of the lower module [D] shall be performed first – before the neighbouring upper module [S].

The module shall be placed on the floor and moved towards the neighbouring module in order to decrease the distance between them while still leaving the proper space [P].

After that step, the screws locking the upper arm of the console shall be attached (screw M20) [A] Moreover, the assembly of the floor foot shall be performed with screws for concrete (i.e. FBS 10×100) [B].

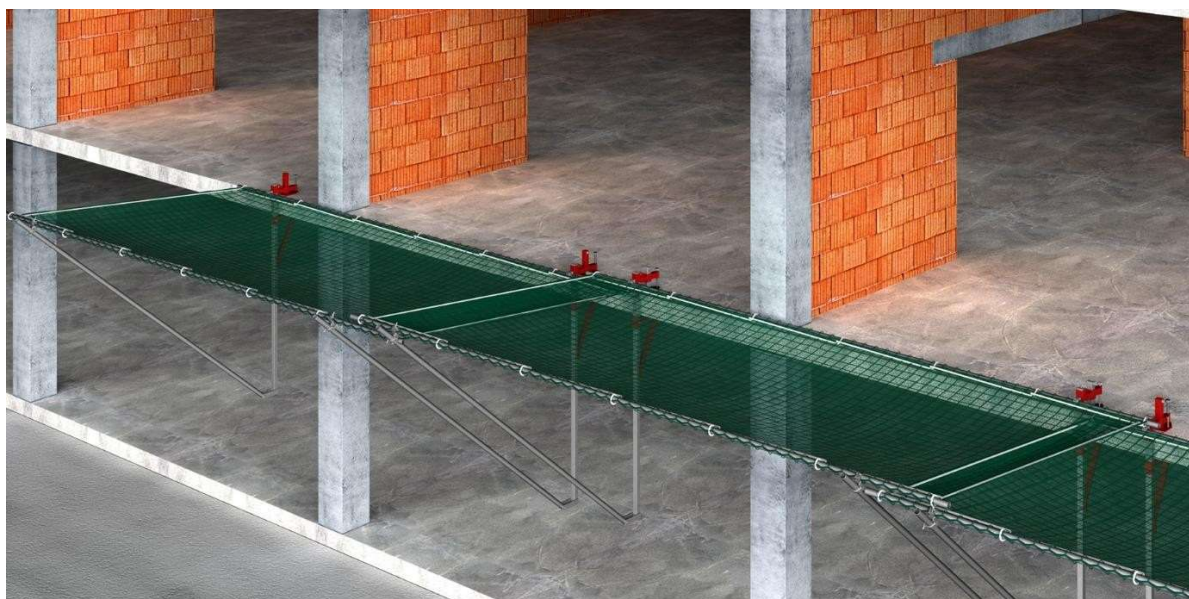
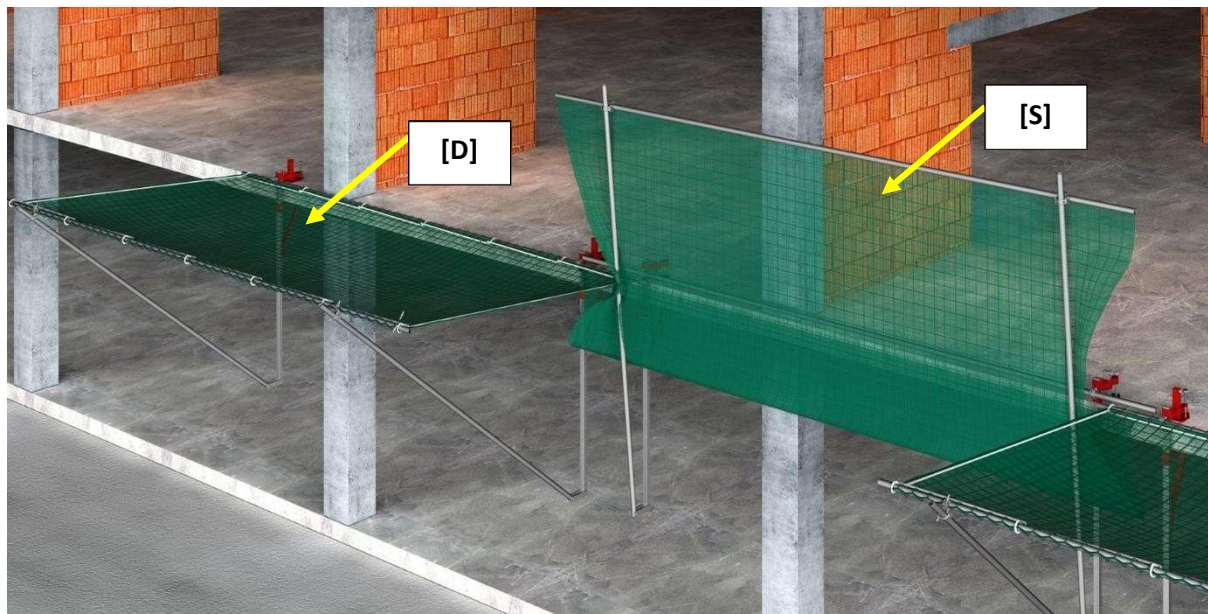


3.5.6 ASSEMBLY WITH A CRANE – STEP 6: PLACEMENT OF THE MODULES.



After assembling the console to the floor, first a lower net [D], and then the neighbouring, upper net [S].

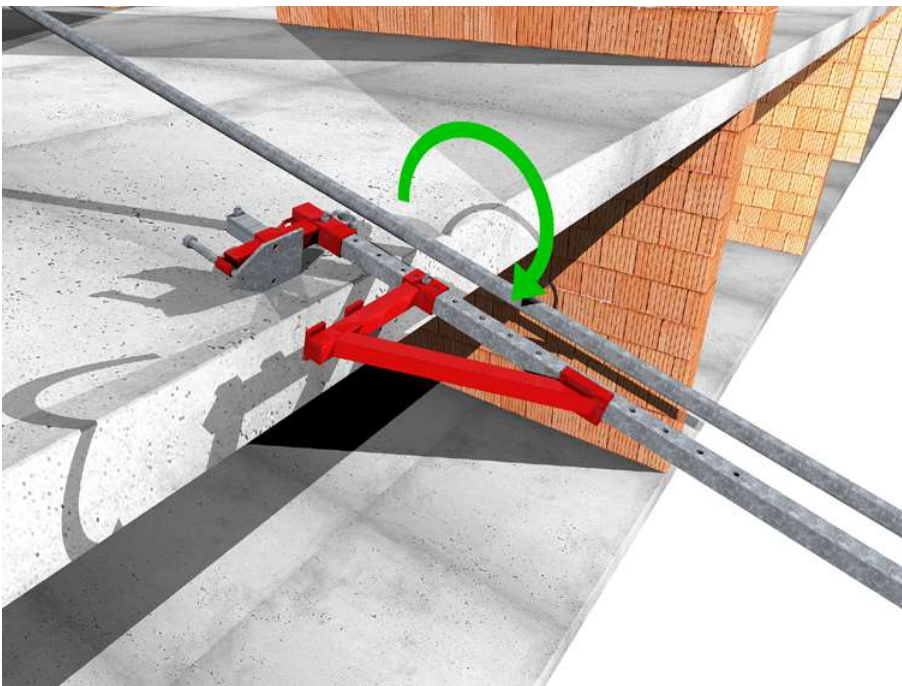
In case the neighbouring net is a lower net, the placement order is the opposite.



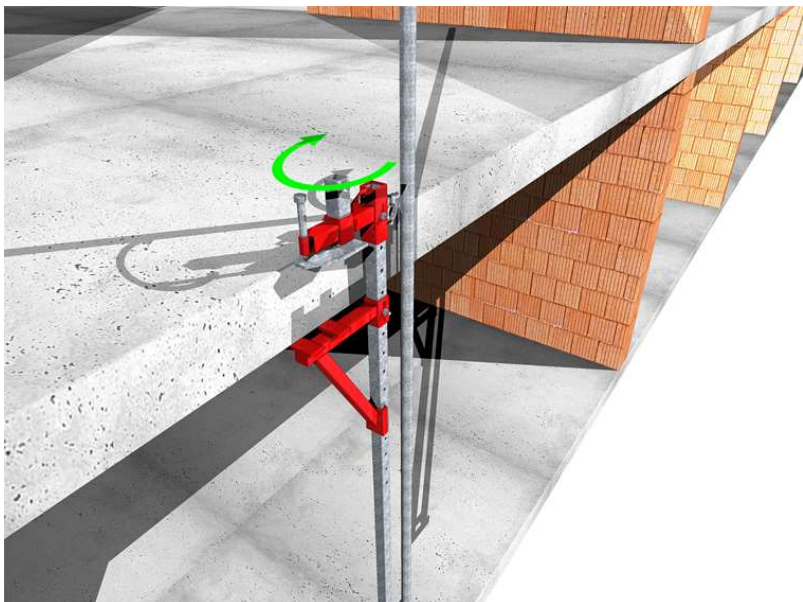
3.6.0 INDIVIDUAL (manual) ASSEMBLY – ASSEMBLY OF THE CONSOLE ON THE FLOOR.

The console can be assembled in three easy steps what is presented in the below figures.

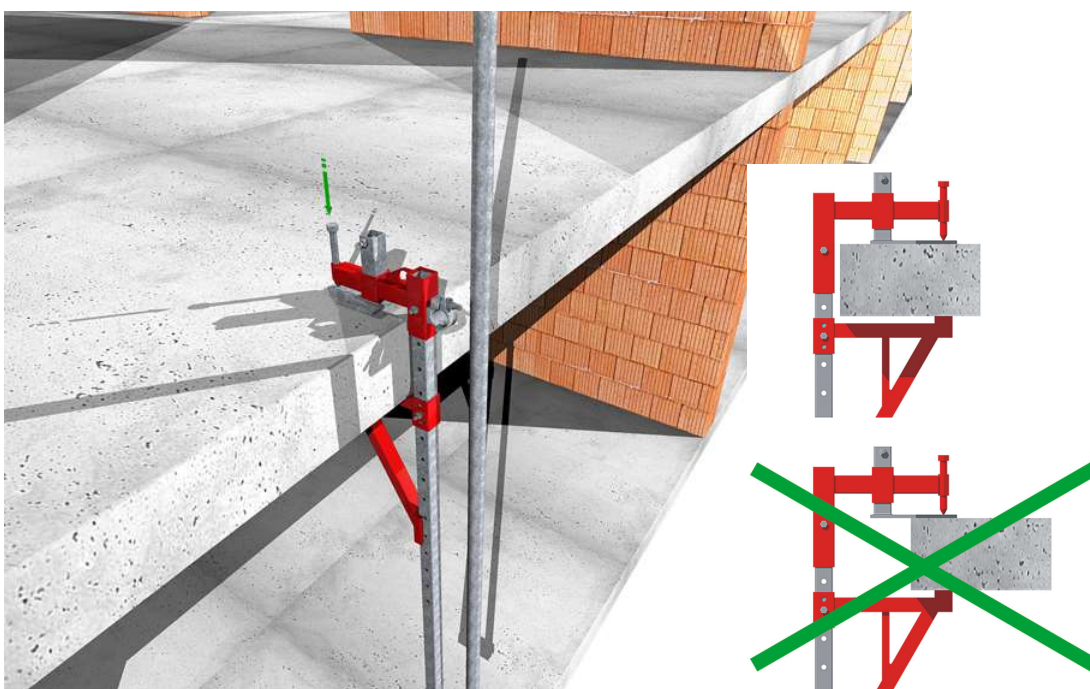
1. Place the console on the edge of the floor, support it on the side edge of the floor foot and turn until the console will be standing in a vertical position.



2. Then turn the console by 90° around its vertical axis, so that the upper and lower holders will touch the floor. Move the console to the front of the floor. The maximum distance from the floor is 20 mm. It is forbidden to assemble the console moved away from the floor by more than 20 mm. In some special cases, when the construction of the walls and floors makes it impossible to move the console close to the floor, the assembly in every such case shall be individually analysed.



3. The third step is tightening the upper holder screw and thus tightening the console on the floor.



4. The last step is tightening the floor foot to the floor with screws for concrete. The minimum required anchoring strength is: $Q = 10 \text{ kN}$, and the minimum anchoring depth is 100 mm. It is recommended to use $\varnothing 10$ screws for concrete.

In a concrete surface, drill a hole with a 10 mm driller. The depth of the hole shall be no less than 160 mm. Then fix a bolt with an impact wrench.

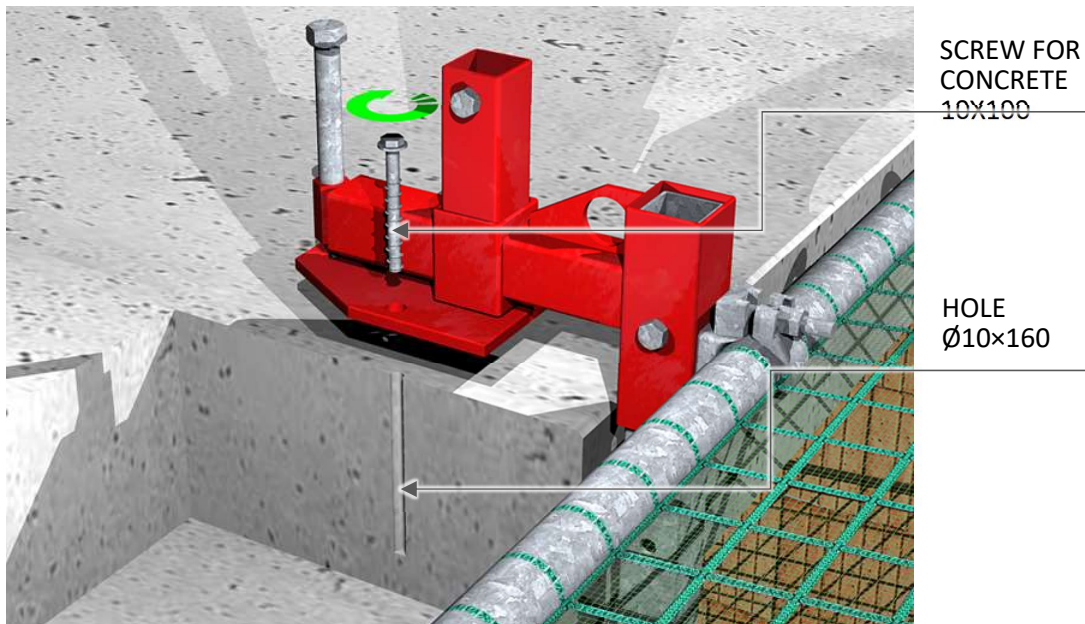
In case of a wooden surface, use special screws for wood with a shrank diameter of 100 mm and minimum length of 60 mm.

The tools needed for assembling (in concrete):

- Screws for concrete, e.g. FBS 10×100,
- Hammer drill + $\varnothing 10$ mm bit
- Impact wrench + 15 mm cap.

The tools needed for assembling (in wood):

- Screws for wood $\varnothing 10 \times 60$
- Drill + bit for wood or metal $\varnothing 8$ mm,
- Screw gun + 17 mm cap



3.6.1 ASSEMBLY OF THE SECOND CONSOLE OF THE MODULE ON THE FLOOR

For the 6 m module, the standard distance between consoles is 5 m. It means that a module exceeds the console by 0.5 m on both sides.

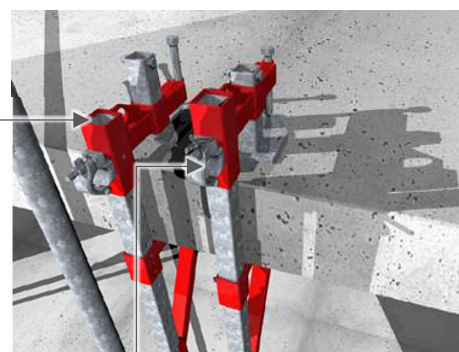
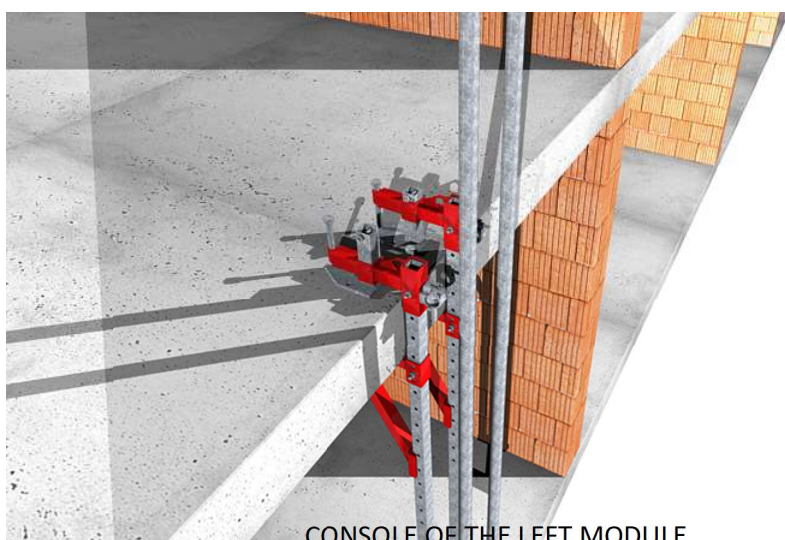
The following description concerns the lower module. Later in this instruction there will be described the upper module.



In case of a 4 m module, the distance between the consoles is 3 m. For a 3 m module, the distance between the consoles is 2 m.

3.6.2 ASSEMBLY OF THE NEIGHBOURING MODULE'S CONSOLE (ON THE FLOOR)

Every next module must be risen or lowered, depending on the configuration of the previous module. To console of the next module shall be placed as close as possible to the previous console. It is necessary to make the neighbouring modules overlap one another.



CONSOLE OF THE LEFT MODULE

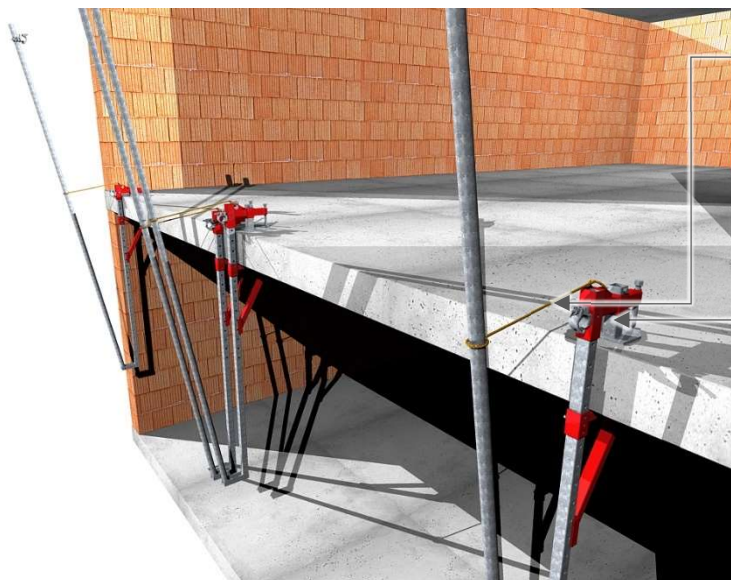
CONSOLE OF THE RIGHT MODULE



3.6.3 ASSEMBLY OF THE NET'S HORIZONTAL BARS

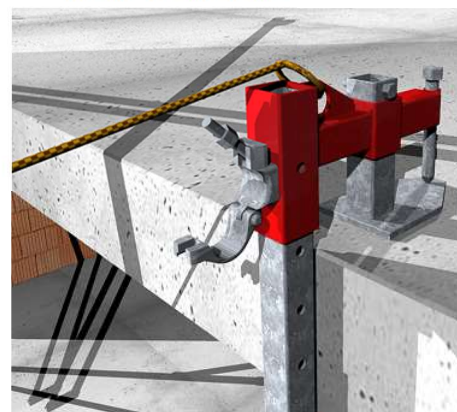
In order to assemble the horizontal bars of the net, firstly a neighbouring modules' console shall be assembled, as the bars overlay one another „from top to bottom”, blocking the possibility to place the consoles.

After assembling the consoles, the movable arms shall be spread in order to make it easier to gain access to the bars' joints (in the upper holder). In order to achieve that, the auxiliary line shall be loosen and locked in a convenient position of the movable arm.

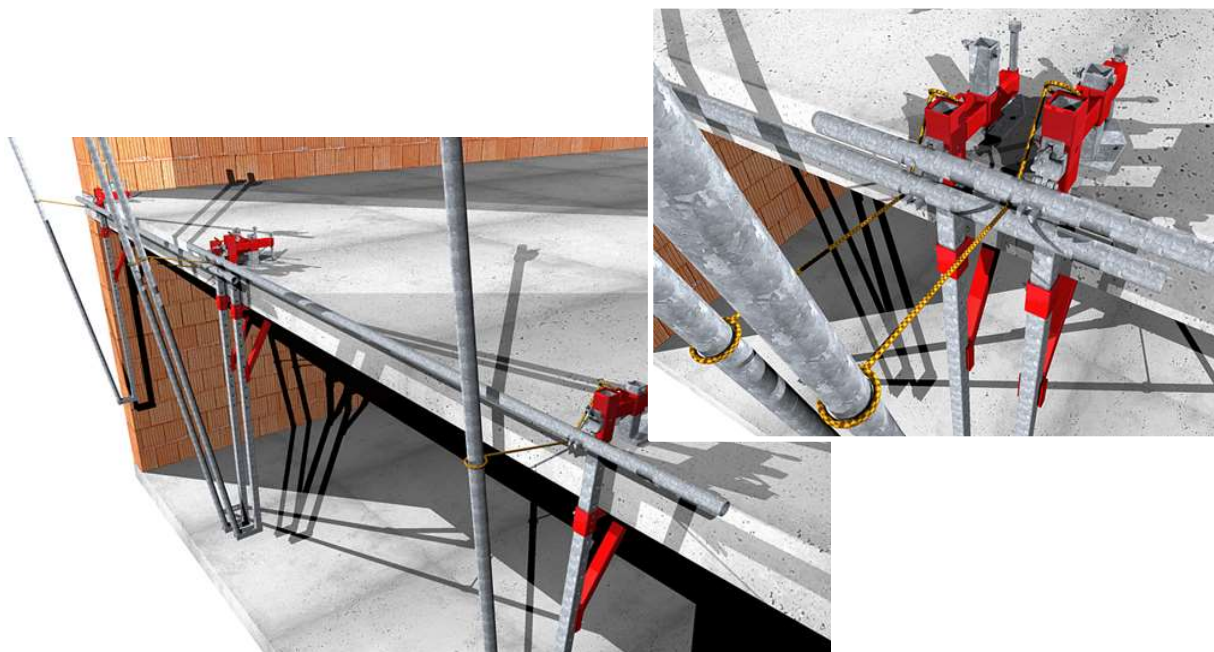


AUXILIARY LINE

CONNECTOR OF THE HORIZONTAL BAR



The net's horizontal bars shall be placed on the open connectors. The auxiliary line shall be placed under the net's bar – as shown in the below figure.



The same action shall be repeated for the second bar that is assembled to the cross holders of the adjustable arms.

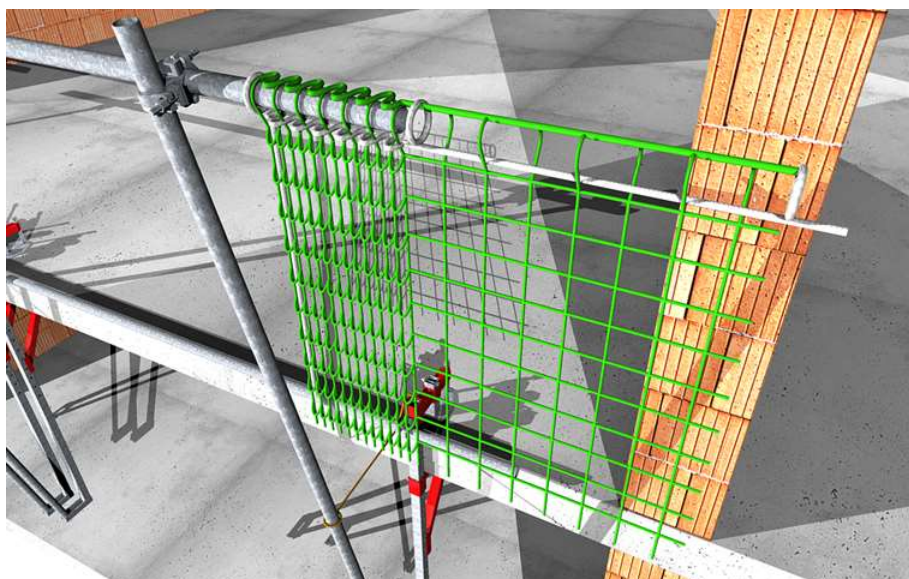


3.6.3 NET ASSEMBLY

The construction of the modules is ready for the assembly of the safety net.

The assembly of the net shall be started from the upper bar. Place (interchangeably) the net's mesh $60 \times 60 \times 5$ on the part of the transverse bar projecting beyond the console. Repeat the process until the whole net (6 m) is placed on the bar.

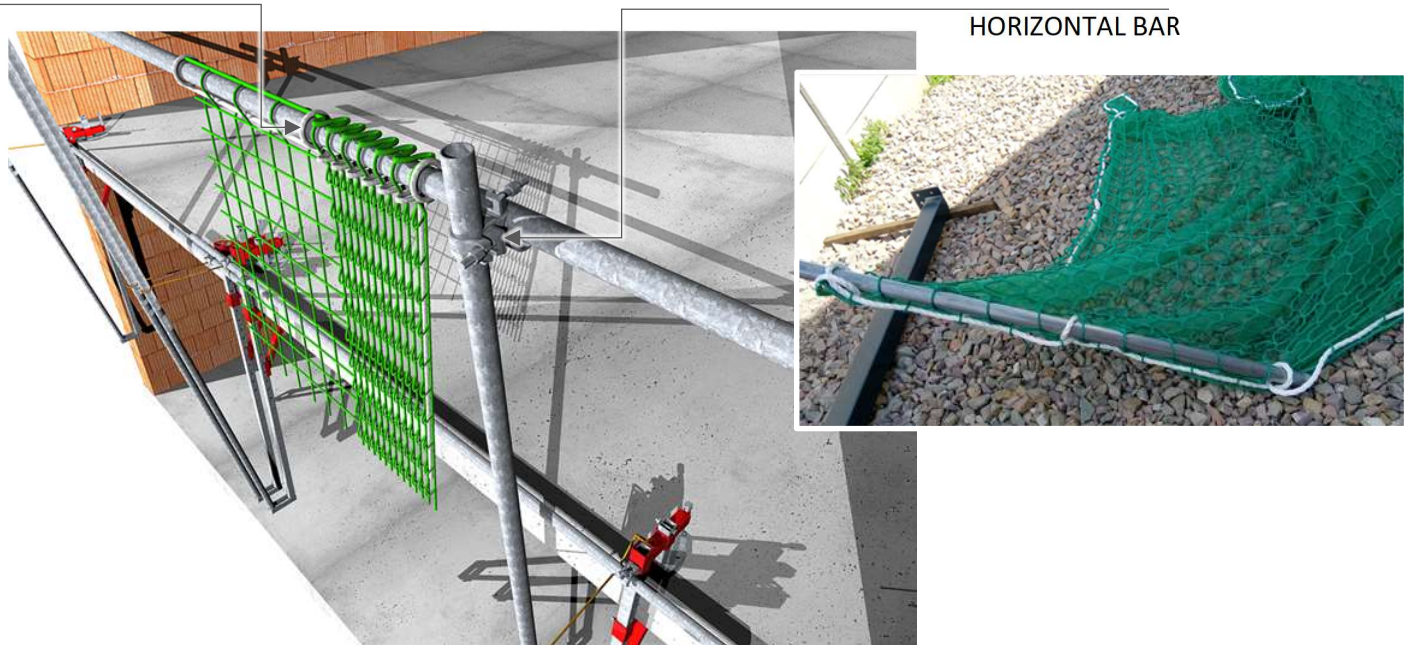
Afterwards, open the holder on the movable arm and move it to the other side of the bar against the holder.



The net is equipped with an $\varnothing 12$ edge line that shall be wrapped around the bar every seventh or eighth „mesh” of the net. The line shall be properly wrapped in order to create a loop that can be placed on the bar. The details of that process are presented in the below figure.

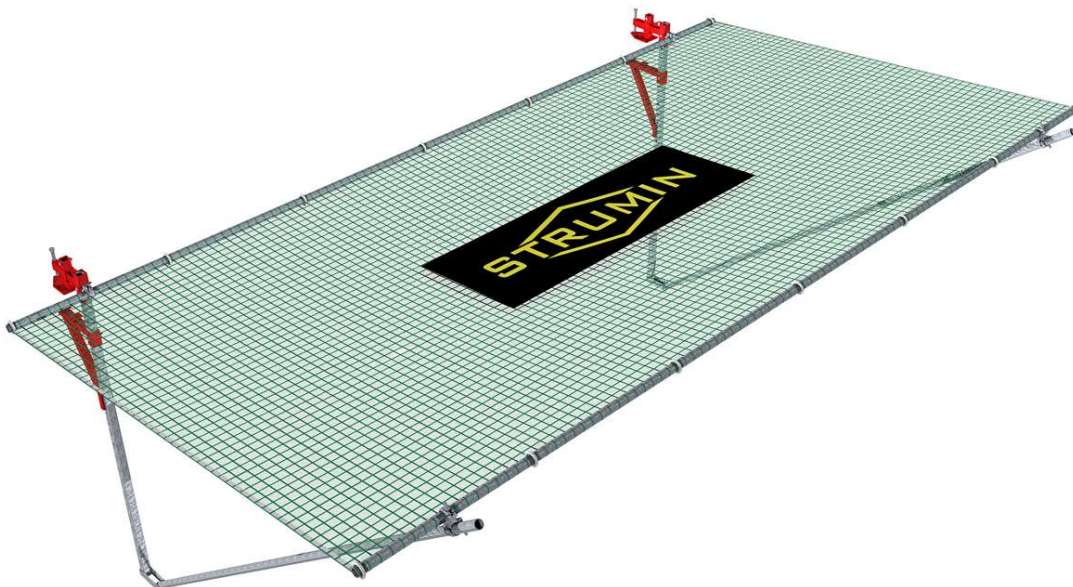
EDGE LINE

CONNECTORS OF THE
HORIZONTAL BAR



The procedure of placing the net shall be repeated for the lower bar, starting from interchangeably putting the mesh on the horizontal bar, and then opening the upper arm connector and moving the net further on the bar. After closing the bar, the net can be placed on its whole width.

It is important to remember about spreading the net beyond the bars connectors in order to use the whole width of the safety net. The fully extended net shall cover the horizontal bars to the maximum extent.



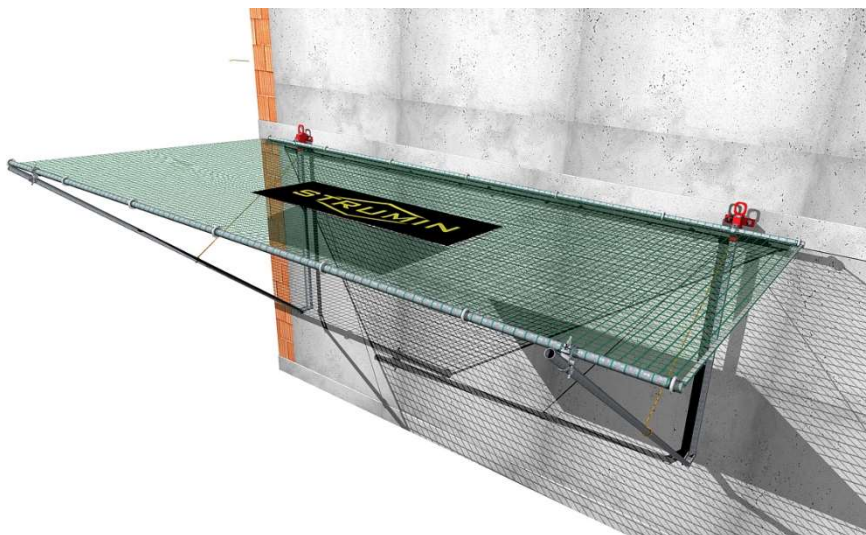
3.7.0 ASSEMBLY OF THE CONSOLE TO THE WALL (SIDE ASSEMBLY ADAPTER)



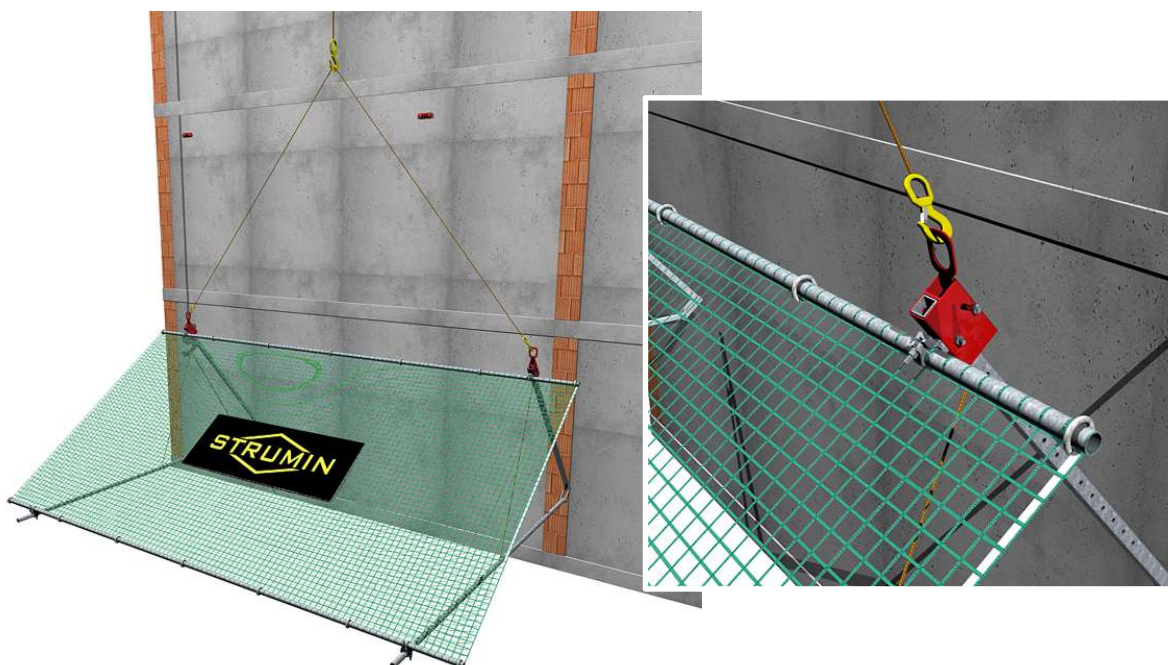
The assembly of the module to the wall is performed in full, so that the whole module is placed with a crane on holders assembled to the wall.

The side assembly adapters' holders, during the transportation on the hook slings, are unlocked, so that they may be placed on holders attached to the wall.

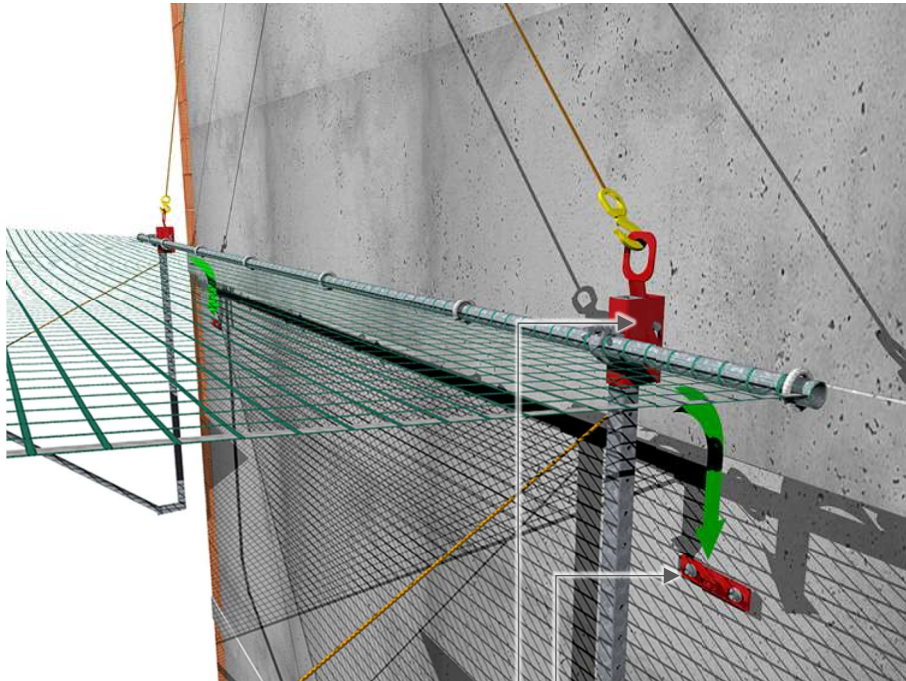
The adapter's holder is locked on the wall holder in the moment of releasing the sling.



The assembly of the wall plates can only be performed near to a surface that is characterized by sufficient mechanical strength. The assembly of the wall plates must be able to provide strength of 10 kN. The assembly may be performed with screws for concrete $\varnothing 12 \times 120$ or with a M12 pins attached through the wall.

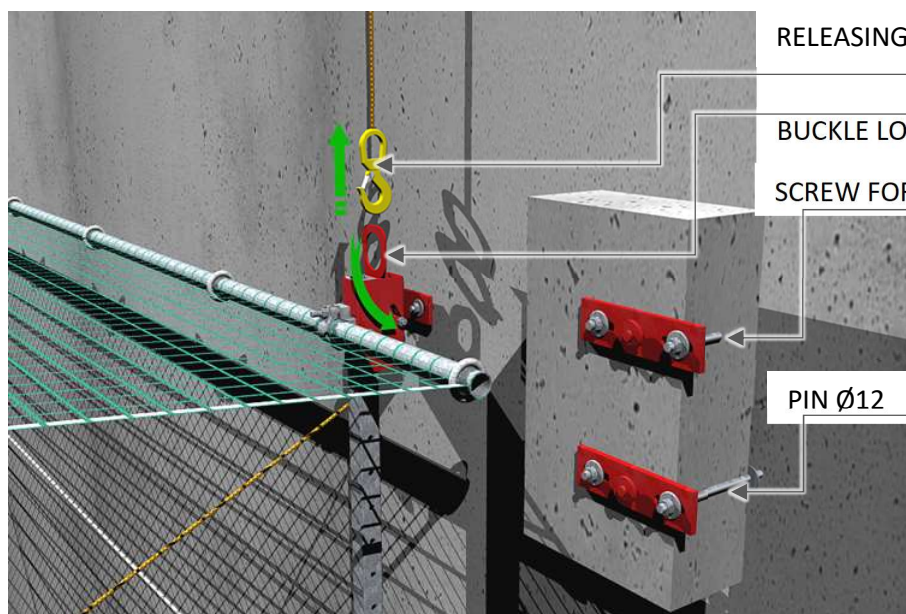


The assembly of the net's module is limited to placing the adapters on the wall plates with holders. After releasing the sling of a hook crane, the adapters are locked what secures them from accidental detaching – e.g. due to wind blowing or accidental pulling up by the crane while performing other works.



SIDE ASSEMBLY ADAPTER

WALL PLATE WITH A HOLDER



RELEASING OF THE CRANE'S HOOK

BUCKLE LOCK

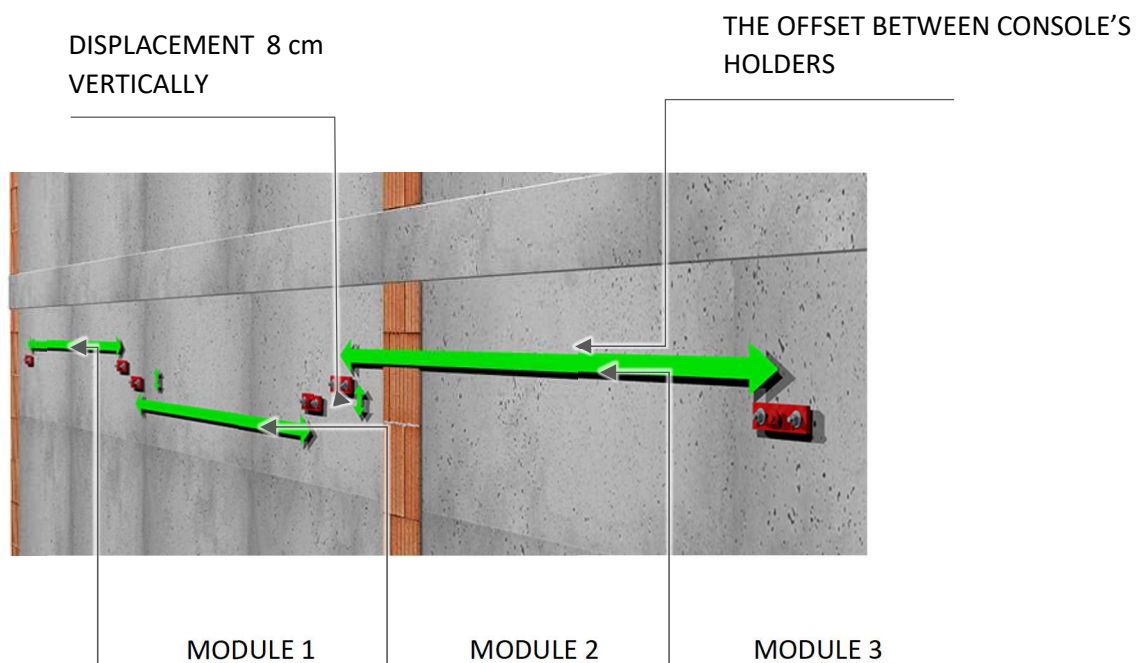
SCREW FOR CONCRETE Ø12 x 100

PIN Ø12



As in the case of the modules assembled to the floor, the modules shall be assembled interchangeably – moved vertically by 8 cm.

The distance between the consoles' holders (one module) → is 2,3,5 m The distance between the holders of the neighbouring consoles is → 25–30 cm.



3.8 THE USE OF TEMPORARY, AUXILLARY AND CORRECTIVE ELEMENTS.

During the assembly there might be the need to correct mistakes made during the construction works, irregularity in the floor, walls etc. In such cases it is allowed to use corrective pads, which change the offset of upper and lower holders.

It is also allowed to use wooden boards no thicker than 5 cm.

It is not allowed to use several layers of pads in one place, e.g. when there is the need to correct the 5 cm thickness, no two boards of 2.5 cm shall be used.

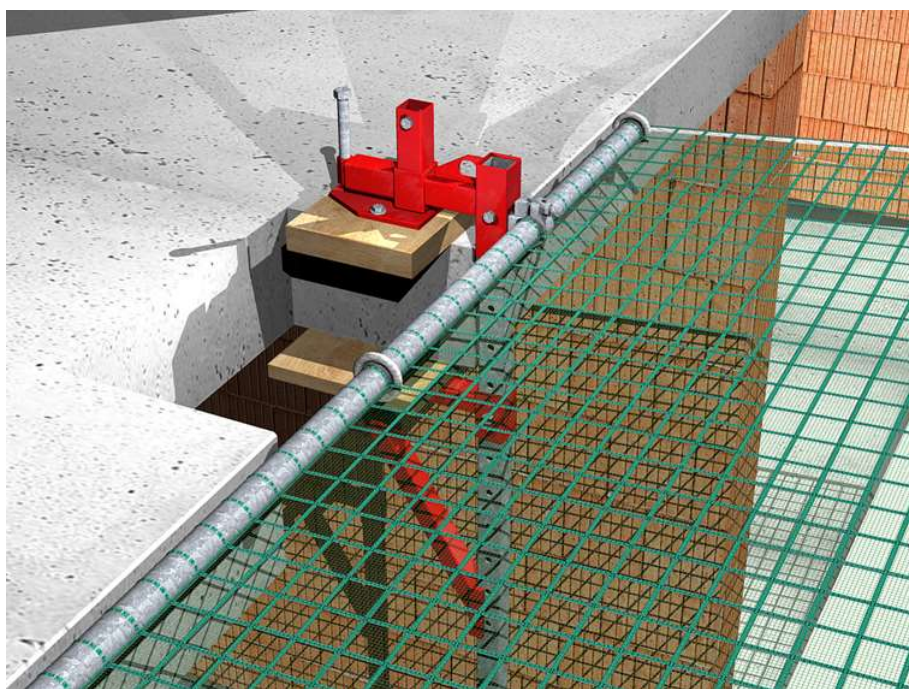
The corrective element shall be attached to the surface in case it is in a place where different screws are to be used, → like in the case of the floor board. When the correction is applied to the foot board, the corrective pad must be bigger than the foot. In such situation, the foot cannot extend beyond the pad.

The corrective element must provide the strength of 10 kN for each assembly point.

In case the screw is tighten in the place where is a corrective element, the screw shall be longer by the width of the corrective element.

For example, for the floor foot, under which there is a 3 cm thick board placed, the screw for concrete shall be longer by no less than 3 cm.

The choice of the corrective elements and their compliance lies in the scope of the responsibility of the site manager.



4.0 TIPS FOR A SAFE USE

During the operation workers shall bear in mind the safety of the users, any personnel or people that may be affected by the operation of the device.

DURING ANY WORKS WITH THE Safety System [T] the personnel:

- Shall read the system's Technical Documentation
- Shall verify if the modules attached to the floor are stable, the net has no visible signs of damages and other elements also bear no damages.
- Shall wear proper personal protective equipment,

4.1 RISK ANALYSIS

No.	Danger	Risk	Risk assessment	Safety measures
1	Not sufficient mechanical durability.	Using of a damaged or destroyed floor foot.	Fall of the construction. Danger to health and life.	Check, control and properly store the elements of the system.
		Using a damaged or destroyed upper holder.	Fall of the construction. Danger to health and life.	Check, control and properly store the elements of the system.
		Damaging of destruction of the main or skewed arm, as well as the net's bars due to overloading.	Fall of the construction. Danger to health and life.	Check, control and properly store the system's elements. Do not allow the risk of heavy objects falling from heights to arise.
2	Smashing squashing	Putting or placing a foot, a hand or other part of the body under the handles during the assembly.	Smashing, cutting cutting or scraping, of the body. Danger to health and life.	Be careful while assembling especially during the assembly of the modules on the floor. The risk of falling from Height, use PPE. Use gloves, shoes and protective helmets with a chin strap.
3	Hitting	The risk of being hit by the system's elements during transport and moving of people.	Hitting the construction or other working surface, especially the bars of the net (length 6 m). Danger to health and life.	Be careful while moving and avoid carrying long elements by only one worker. Use a protective helmet with a chin strap.
		Not securing the skewed arm during the assembly.	Hitting with head or any other part of the body of people that are on the bottom level. Danger to health and life.	Be careful while assembling, take notice of any protective measures of elements and avoid uncontrolled movements, i.e. turning, moving, slipping etc.
		Not securing the upper arm from sliding out.	Risk for people on the lower levels of hitting with head or any other part of the body. Danger to health and life.	Be careful while assembling, take notice of any protective measures of elements and avoid uncontrolled movements, i.e. turning, moving, slipping etc.



4	Falling or thrown away objects	Improper securing of the objects around the workspace.	Hitting, breaking, injuring or burning any part of the body. Danger to health and life.	Wear proper personal protective equipment. Define the safe work's system. Define a safety area during the assembly and disassembly of the system, which amounts to (horizontally) 1/10 height of the building, but no less than 6 m.
5	Weather conditions	Hitting by a lightning, wind.	Electrocuting, burning. Danger to health and life.	Avoid performing any works near the system during a storm and strong wind (over 10 m/s).

5. MAINTENANCE

Parts of the system are covered with zinc and lacquered layers.
 In case of any chips, they should be filled with the proper lacquered layer (zinc paste or top coat).
 It is forbidden to use corroded or mechanically damaged elements.

6. TECHNICAL INSPECTION

6.1 QUICK INSPECTION

Before the assembly of the system, its technical condition shall be checked in terms of:

- a) completeness of the system's elements,
- b) Completeness of screws, connectors,
- c) no damages to any welds,
- d) any bent, broken, cut or otherwise damaged elements,
- e) check if all assembly holes are unobstructed.

Weekly inspection.

After assembling the Safety System [T], it is required to check the connections and technical condition of the consoles and the safety net (points from *a*) to *e*). Such inspection shall be performed by a competent person (technician, e.g. a master workman or a site manager who has read the technical documentation). Such check shall be documented in the system's control card.

The aim of the weekly inspection is to ensure that no changes have been made to the system's construction that could lead to a construction disaster or pose a threat to people using it.

Daily inspection.

Shall be documented by employees working within the area equipped with the system.

Daily inspection includes:

- checking if the net has no visible damages (e.g. caused by storms, winds etc.),
- checking if the parts of the system, consoles and net's bars, have no deformations,
- checking if the anchoring elements are properly assembled,
- checking if there were no factors that have had a direct influence on the user's safety (e.g. if the nets were
- torn or the connections were damaged, there was a deformation of constructional elements due to strong winds, heavy rains, hailstorms or snowfall etc.

It is forbidden to individually repair parts of the system, the elements of the console, bars or the safety net.
 Assembly of a system that was repaired by unauthorized people poses threat to health and life.



If any of these requirements are not met, the user shall stop using the system and inform the manufacturer about the need to perform a detailed inspection.

In case of a dangerous event, e.g. a fall from height, any works shall be stopped and the incident shall be reported to the site manager.

6.2 DETAILED CHECK

The detailed check of the Safety System [T] shall be performed by the manufacturer or any appropriate entity:

- always before delivering the system to a construction site,
- after 12 months of using,
- always when the system has not been used for longer than 3 months,
- after every information from the user about the need to perform the detailed check.

For the detailed check, performed at the request of the user, shall be charged a fee.

- After a fall that was secured by the system.



III. DESIGNER'S STATEMENT

**According to art. 20(4) of the "Building Code" I hereby declare that
this project documentation of the constructional part of the
Safety System [T]**

was drawn in accordance *with the provisions of the code, rules and guidelines of technical knowledge (art. 20 point 4 of the 16 April 2004 Act, amending the 7 July 1994 Act – "Building Code" Journal of Laws no. 6, pos. 41/2004)*, binding technical and building provisions, as well as Polish and European Standards, and was handed in full to serve its purpose.

designer's readable signature and seal

Designer

