Instructions for assembly, maintenance and use of the

OMEGA mezzanine (PF04) and its accessories

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1. SPECIFICATIONS AND DESCRIPTION OF COMPONENTS

- Read this manual completely before commencing installation and use

- Carefully observe these instructions as well as the plans and recommendations provided.

These documents must be retained by the user and the operations supervisor who will need to refer to them for any maintenance or servicing and in case of questions about the conditions of use. In case of doubt, it is your responsibility to contact our technical services.

- Removable and free-standing equipment designed to create a storage area exclusively for indoor use under normal humidity and temperature conditions (> - 10°C). Not accessible to the public without explicit request and agreement.

- Verify the exact conformity of our equipment, its configuration and its implementation with all the constraints and the environment of the place of installation.

- Assembly must be performed by competent and qualified staff in accordance with standard industrial practices.

It is your responsibility to comply with the regulations in force relating to health and safety conditions, especially for handling, installation, assembly and use of our equipment.

- Make sure the nature and the local and overall strength of the floor is adequate.

The floor must be level, flawless and of sufficient quality to support the installation and its loading.

- Assembly of the structure and its safety equipment must be fully completed prior to access, use and loading of the facility.

- It is strictly forbidden to make changes to the structure or its equipment without our prior consent.

- The specified load capacity refers to an evenly distributed load and must not be exceeded.

It is only valid for an installation in perfect condition and whose assembly and use are in accordance with these instructions.

- Any load plates provided must be attached in places where everyone can see them, along with the EC declaration of performance plate.

- Do not place any loads on any chipboard panel overhangs outside of the structure.

- Industrial railings must not be used as backstops for storage areas. They should be fitted along walk areas accessible to staff.

Maintenance

a) Maintenance of the structure

The steel structure of the mezzanine, railings and stairs may be washed with any detergent that does not damage Epoxy paintwork (in this case, avoid detergents containing chlorine).

b) Modifications to the structure

Any modification or replacement of the structure or its accessories compared with the plans created during the design stage requires consultation with the company MANORGA.

c) Periodic inspection

The entire structure and its accessories must be inspected on a regular basis according to the standard EN 15635.

In case of impact or if the structure or any of its accessories (chipboard, railings, etc.) develops any cracks or deformations, use of the mezzanine must cease.

In this case, the owner and/or the user of the mezzanine must enlist, at its own expense, competent bodies to verify the effects of any such impacts/cracks/deformations on the strength of the structure and its accessories (EN 15635).

Defective parts must be replaced.

a) General information

Observe all the points detailed in the preamble of the instructions (page 2)

The mezzanine and its accessories are only intended for use as an industrial storage area and must not be accessible to the public without explicit request and agreement.

The maximum uniformly distributed load on the mezzanine is shown on the identification plate as well as on the factory order confirmation and must not be exceeded.

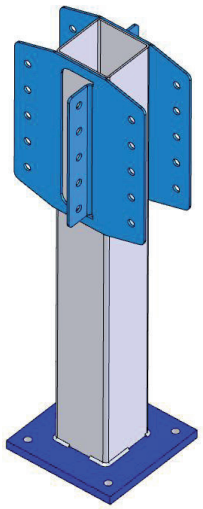
The identification plate(s) must be attached to the mezzanine in places where everyone can see them.

Particular attention must be paid to the positioning of the components of the structure
(See § II- Principles of assembly)

b) The uprights

A standard upright of the mezzanine is composed of a section profile measuring 100x100x3 mm, 120x120x3 mm or 120x120x5 mm, a footplate measuring 200x200 mm and 10 mm thick or 300x300 mm and 15 mm thick, which is welded to the bottom of the tube and has four perforations for anchorage in a concrete floor, and at the top of the upright there are two welded beam connectors able to accommodate up to 6 beams.

The figure opposite shows an example of upright + footplate + connectors:



c) The beams

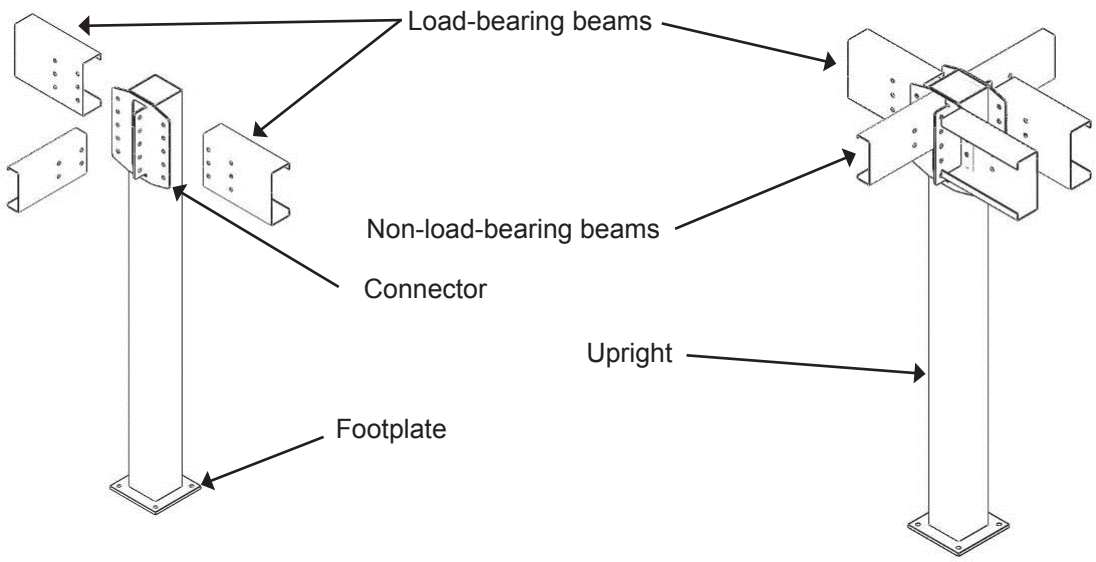
A beam is fixed onto an upright using SB screws M12, 30mm long, class 8.8, and H nuts M12 with lockwashers.
The beams are made in the following C-profiles:

Type of beam	Mass per unit length (kg/m)	SB screw M12 *	Nut M12 *	Lockwasher*	Length	Quality
CR200.80.30.2	6.64	4	4	4	30 mm	Class 8.8
CR250.80.30.2	7.41	6	6	6	30 mm	Class 8.8
CR230.80.30.2.5	8.62	6	6	6	30 mm	Class 8.8
CR250.80.30.3	11.10	6	6	6	30 mm	Class 8.8
CR300.95.30.3	13.19	6	6	6	30 mm	Class 8.8
CR350.95.30.3	14.35	6	6	6	30 mm	Class 8.8
CR350.100.30.4	19.08	6	6	6	30 mm	Class 8.8
CR400.100.30.4	20.63	6	6	6	30 mm	Class 8.8

** Number per beam*

The tightening torque should be between 60 and 80 Nm

Examples of assemblies of beams on an upright :



We distinguish between load-bearing beams, which receive joists, and non-load-bearing beams.
Non-load-bearing beams are mounted parallel to the joists.

We distinguish between the load-bearing and the non-load-bearing orientation of the connector, receiving the load-bearing and the non-load-bearing beams respectively, whereby the folded return is designed to receive non-load-bearing beams.

d) The joists

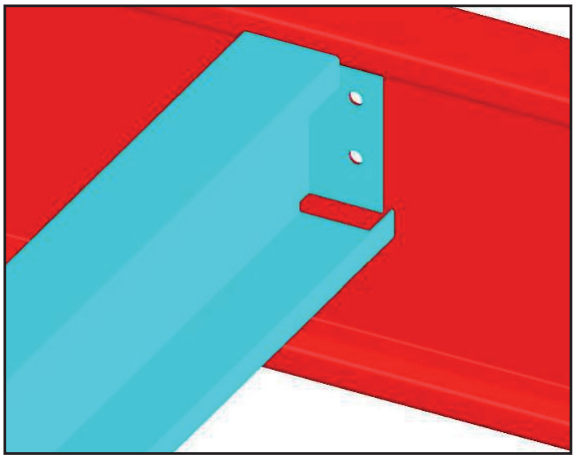
The joists are made in the following C-profiles:

Type of beam	Mass per unit length (kg/m)	SB screw M12 *	Nut M12 *	Lockwasher*	Length	Quality
C150.50.12.2	4.09	4	4	4	30 mm	Class 8.8
C 180.50.20.2	4.73	4	4	4	30 mm	Class 8.8
CR200.80.30.2	6.64	4	4	4	30 mm	Class 8.8
CR250.80.30.2	7.41	6	6	6	30 mm	Class 8.8
CR230.80.30.2.5	8.62	6	6	6	30 mm	Class 8.8
CR250.80.30.3	11.10	6	6	6	30 mm	Class 8.8
CR300.95.30.3	13.19	6	6	6	30 mm	Class 8.8
CR350.95.30.3	14.35	6	6	6	30 mm	Class 8.8

** Number per beam*

The joists are bolted to the core of the load-bearing beams (each joist is notched and bent at the ends) using SB screws M12x30, class 8.8, with nut M12, equipped with a lockwasher according to EN15048.

A waling system must be mounted between the joists if mentioned in the installation plan.



e) The flooring

The flooring is created using a layer of chipboard panels, 30 or 38 mm thick, laid in a «brick wall» arrangement with joins only over a beam or a joist (according to the layout plan supplied).

The panels are fixed using self-tapping screws Ø 6.3mm, L. 70mm, with countersunk Phillips heads.

Altogether, the panels should cover the whole of the structure.

The average densities of the chipboard panels are:

Thickness 38 mm = 720 kg/m3 (EN312-P6)

Thickness 30 mm = 640 kg/m3 (EN312-P4)

See § II-b) for assembly of flooring.

2. PRINCIPLES AND CONDITIONS OF ASSEMBLY

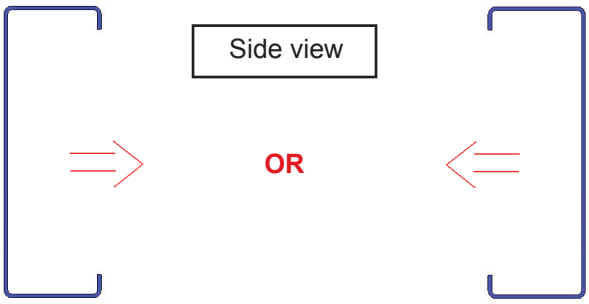
a) Assembly of the metal structure

Principles of assembly for the mezzanine

(Drawing opposite: orientation of opening.

Below: overall diagram, top view)

Orientation of opening of beams and joists according to the arrows



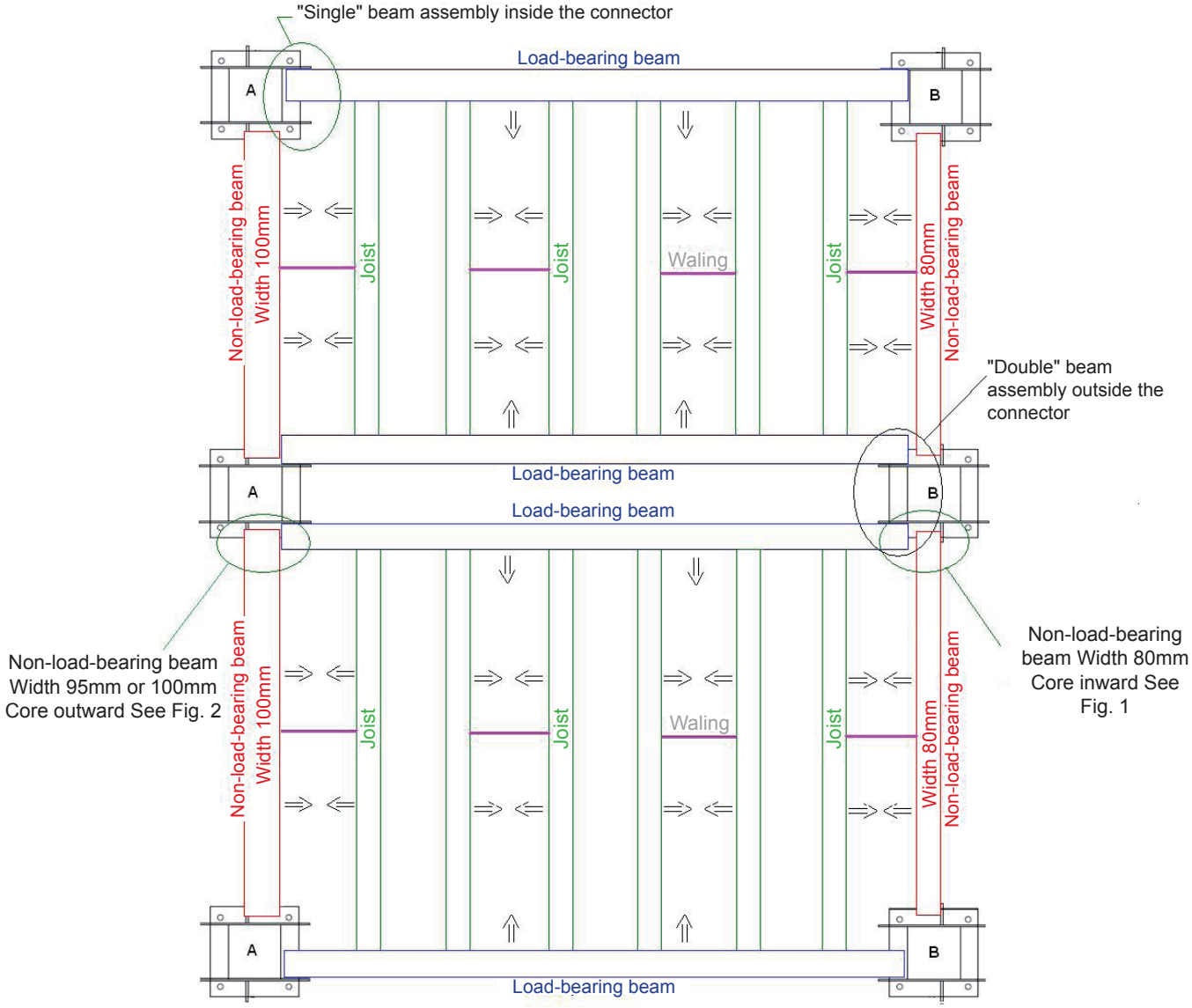


Fig. 2 (beam width 95 or 100mm)

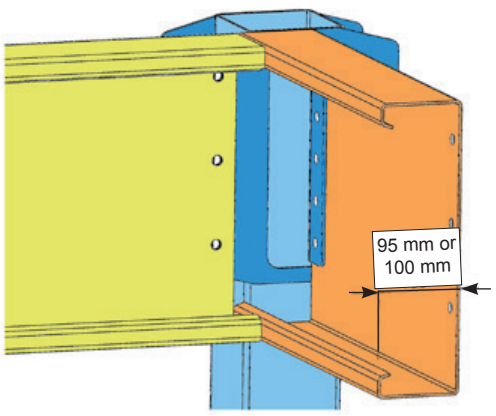
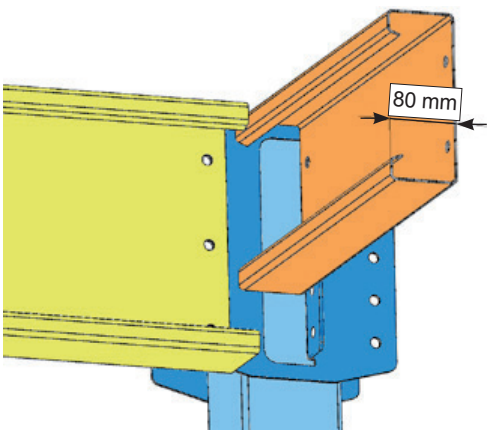
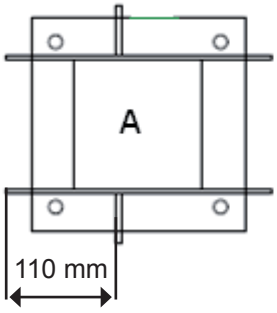


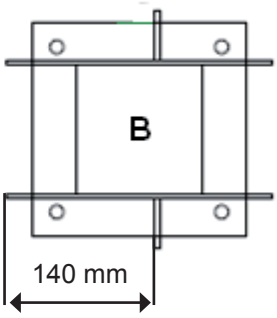
Fig. 1 (beam width 80mm)

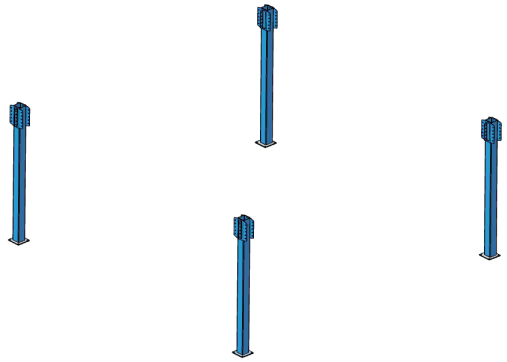


With the help of and in accordance with the installation plan provided:

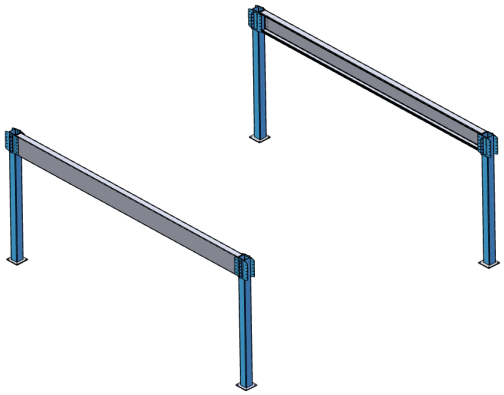
Position the uprights (see assembly tolerances) at the centre distance and in the orientation A or B defined in the installation plan.







Fix the load-bearing beams onto the uprights using the bolts and washers, ensuring that:



- With regard to the orientation of opening of the sections, the opening is in the direction of the arrow.. or

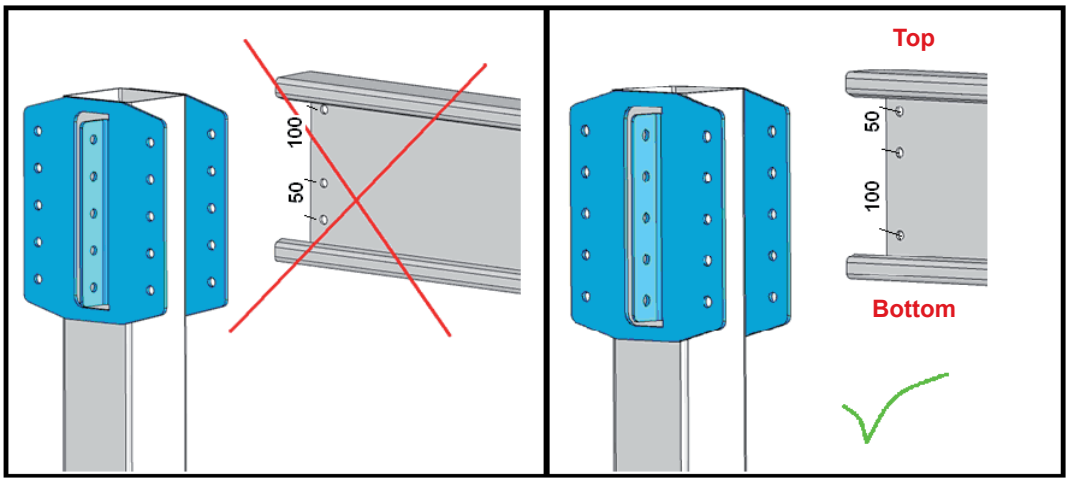
- with regard to the up/down orientation of the beam, the intermediate perforations must coincide with those of the joists. The perforations for the waling (if any) are always located in the lower part of the section.

Visualise the assembly and the correspondence of the beam/joist perforations with the the floor prior to assembly.

- with regard to the positioning of the beam on the connector (load-bearing or non-load-bearing)

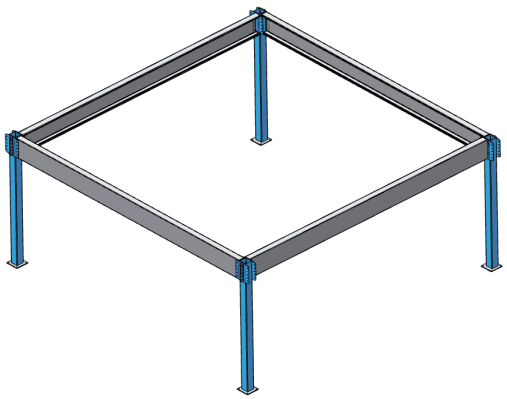
- in respect of the respect tightening torque defined in § I- c.

Up/down orientation: Beam CR250x80x30, thickness 2 and 3 mm :



Positioning of the beams with respect to the connectors:

The load-bearing double beams will be positioned outside the connectors.
The other load-bearing beams will be positioned inside the 2 connectors.
(See § II-a)

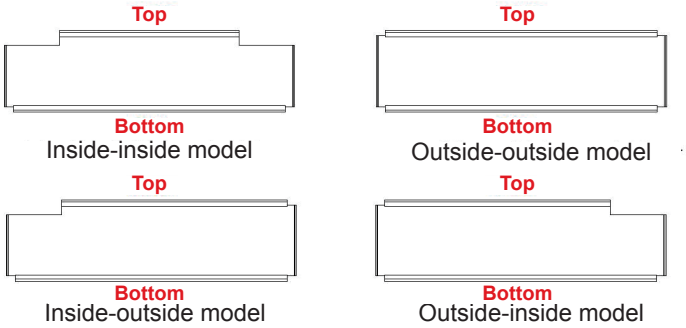


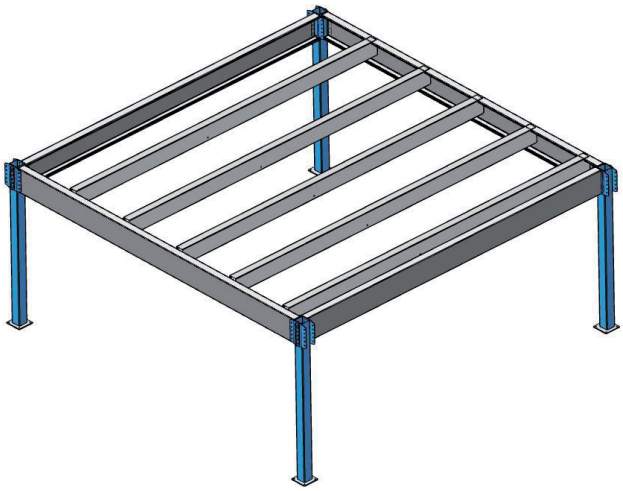
Fix the non-load-bearing beams to close the module

Position the joists on the main beams, respecting the orientation of opening indicated in the assembly plan by the arrows, ⟹ or ⟸ and the up/down orientation.

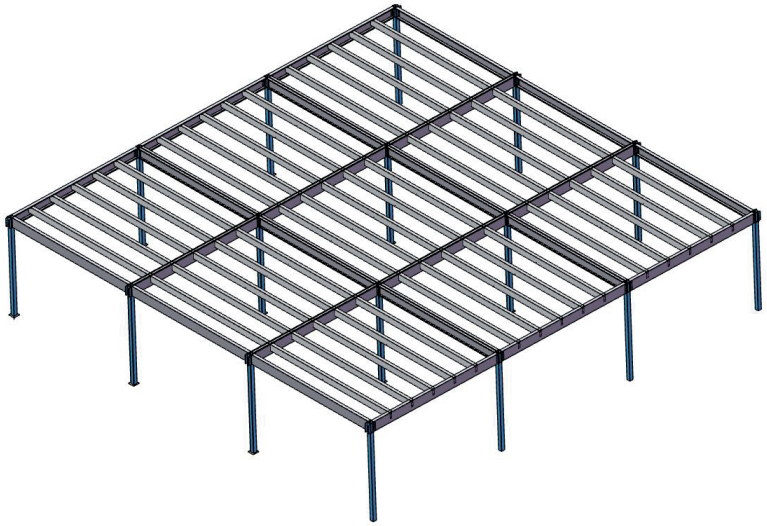
The notching of the joists must be positioned upwards as shown in the diagram below.

The joists are therefore placed opposite each other thus :





Finish assembling and tightening the first module before fitting the next elements.

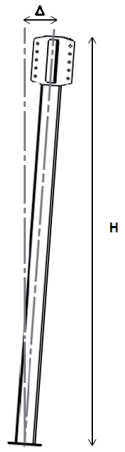
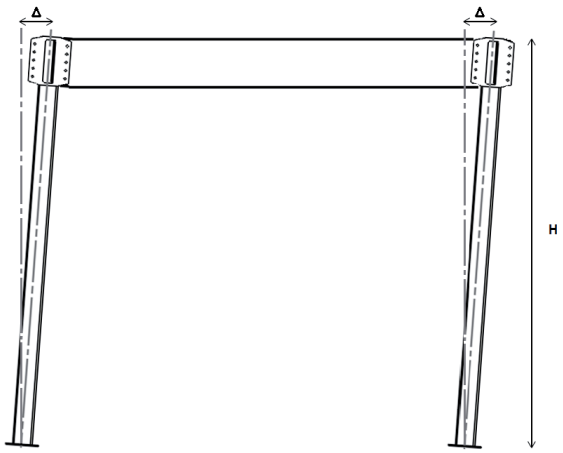
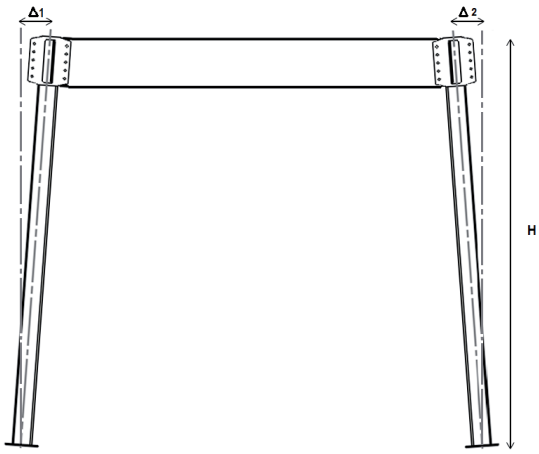
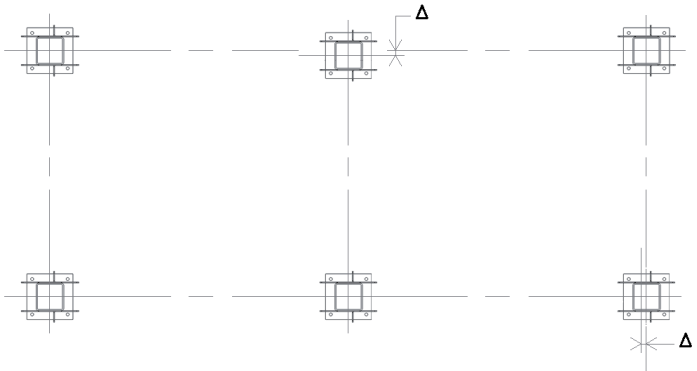


Repeat the above steps to obtain the complete mezzanine.

Fix the uprights to the concrete floor (minimum thickness: 13 cm) using the 4 ground anchor bolts M12x110 supplied, **ensuring full compliance with the assembly conditions and tolerances below.**

Uprights can be shimmed up to a maximum of 2cm. Shims are available for this purpose in thicknesses of 3mm and 10mm for the 200x200x10 footplates and in thicknesses of 3mm and 15mm for the 300x300x15 footplates.

Tolerances to be respected during assembly (according to EN 1090-2)

Maximum out-of-plumb of one isolated upright: $\Delta \leq$ **H / 300**	
Maximum out-of-plumb of several uprights in one line: $\Delta \leq$ **H / 150**	
Maximum average out-of-plumb of several uprights in one line: $\Delta m \leq$ **H / 500** *With Δm = average out-of-plumb of a line*	
Alignment to the floor of the axes of the uprights in their respective line: $\Delta \leq$ **10 mm**	

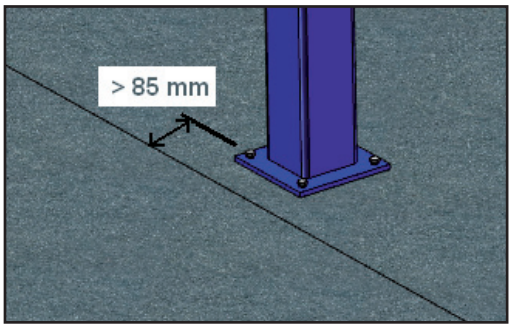
Mezzanines with upright sections of 100x100x3 and 120x120x3 (200x200x10 footplates) must be fixed to a floor with a minimum strength corresponding to that of a concrete of strength class C16/20.

Mezzanines with upright sections of 120x120x5 (300x300x5 footplates) must be fixed to a floor with a minimum strength corresponding to that of a concrete of strength class C25/30.

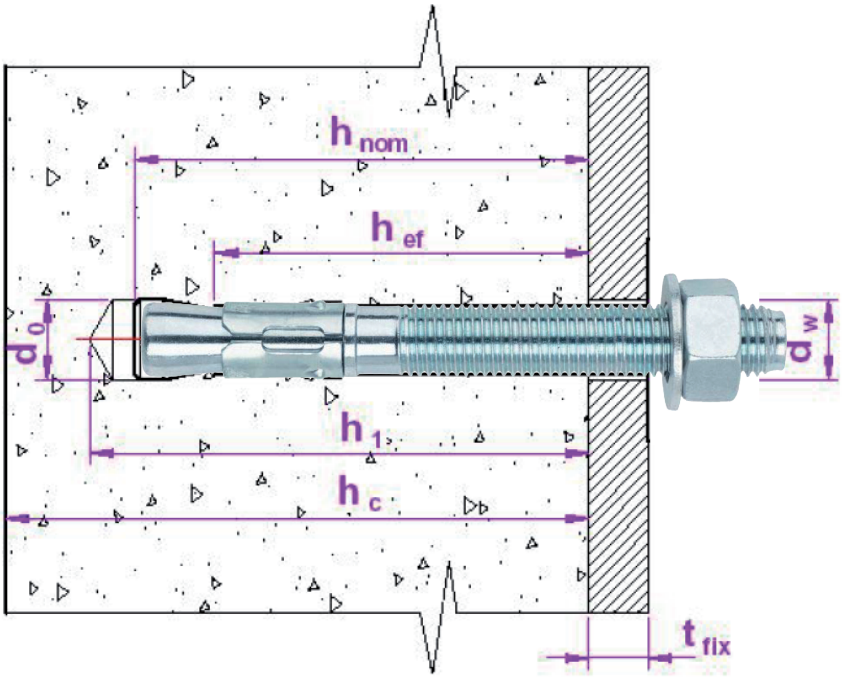
It is essential to have the local (punching) and overall strength of the concrete slab verified by a competent body.

The ground anchor bolts must be fixed to the floor in accordance with the assembly characteristics defined below as well as the following conditions :

- The hole must be drilled with a **Ø12 mm** drill to a depth of **85 mm**
- Any concrete residue must be cleaned out of the hole
- The distance between the axis of a ground anchor bolt and a slab edge or a saw line must be at least **85 mm.**
- The floor onto which the mezzanine and stairs will be fixed must not have any holes or significant elevations/drops that could impair the anchoring of the ground anchor bolts or negatively affect the assembly tolerances.



Observe the installation characteristics of these ground anchor bolts indicated below:



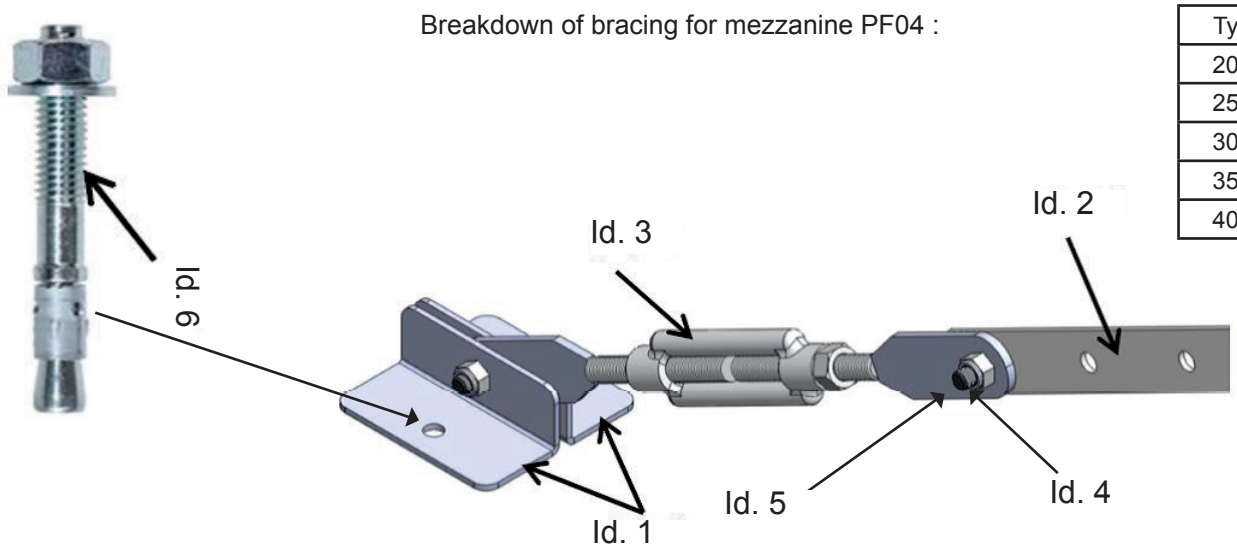
METRIC		M12
Code		AH12XXX
d_0 : Socket diameter	[mm]	12
h_1 : drilling depth	[mm]	85
h_{nom} : installation depth	[mm]	77
h_{ef} : effective depth	[mm]	65
h_c : minimum thickness of the base material	[mm]	130
T_{fix} : maximum thickness to be fixed	[mm]	L-92
D_w : diameter of the metal sheet	[mm]	14
T_{ins} : tightening torque	[Nm]	60
S_{er} :critical centre-to-centre distance	[mm]	195
C_{cr} : critical distance to edge	[mm]	98
S_{min} :minimum centre-to-centre distance	[mm]	85
C_{min} : minimum distance to edge	[mm]	85

If you are providing the ground anchor bolts yourself, it is imperative that the same mechanical and dimensional characteristics are observed.

Fix the braces in accordance with the description below. See installation plan for position (which must be strictly observed) and identification of braces. **Ensure correct tensioning, not excessive.**

Breakdown of bracing for mezzanine PF04 :

Type	Width
2000	1960
2500	2460
3000	2960
3500	3460
4000	3960



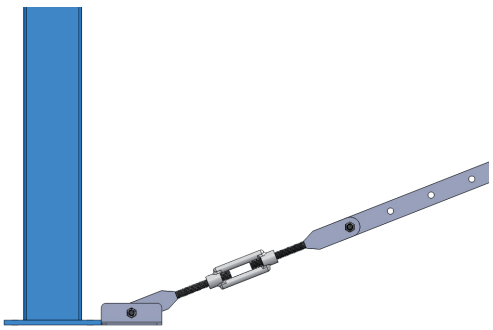
If the bracing consists of 2 cross-bracing rods

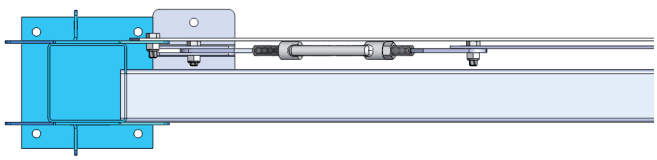
Identification	Designation	Quantities
1	Tensioner support	4
2	Cross-bracing rod (length according to type)	2
3	Tensioner	2
4	Screw HM12x30, class 8.8	6
5	Nut HM12 + Lockwasher	6
6	Ground anchor bolt 12-40/100	4

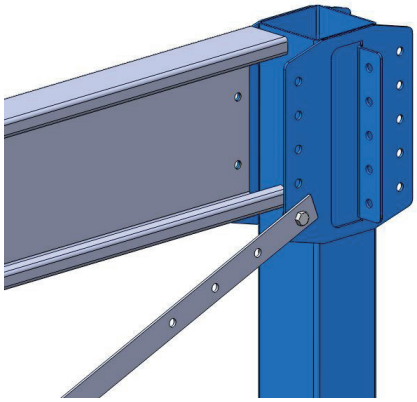
If the bracing consists of 2 cross-bracing rods

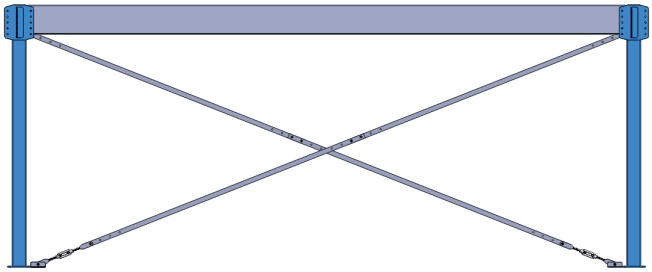
Identification	Designation	Quantities
1	Tensioner support	4
2	Cross-bracing rod (length according to type)	2
3	Tensioner	2
4	Screw HM12x30, class 8.8	10
5	Nut HM12 + Lockwasher	10
6	Ground anchor bolt 12-40/100	4

The cross-bracing rod (ID 2), the tensioner (ID 3) and the tensioner supports (ID 1) are fixed using the screws and nuts HM12 with a lockwasher (ID 4 and 5). The entire set is fixed to the floor, at the foot of the mezzanine upright, using the ground anchor bolts (ID 6) while observing the rules defined on page 10, and, at the top of the upright, on the upright connector using screw and nut HM12 with a lockwasher (ID 4 and 5).



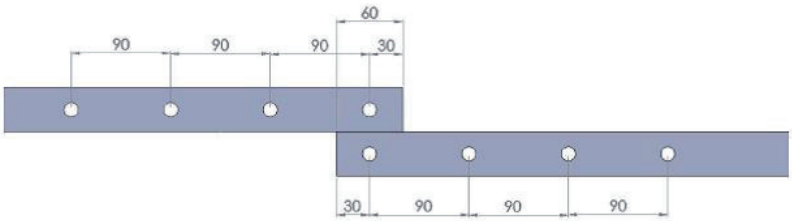


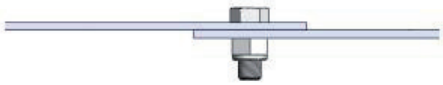




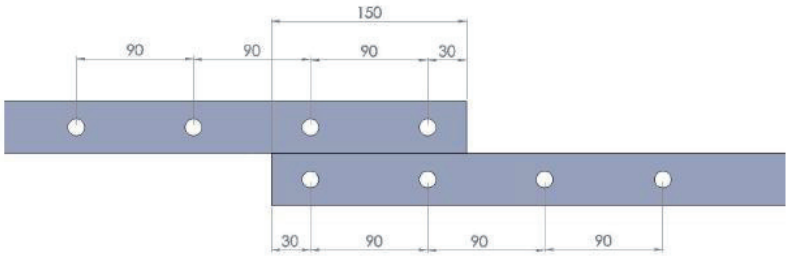
If the bracing is composed of 2 parts (several types may be combined), there will be different cases with respect to the superimposition of the cross braces :

Case no. 1: 60 mm covering

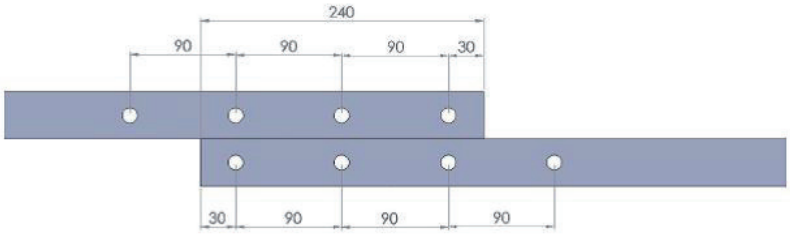




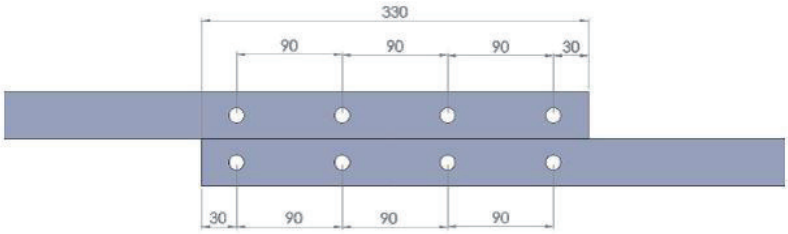
Case no. 2 : 150 mm covering



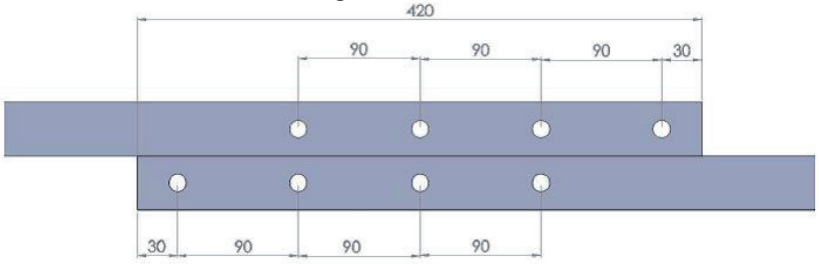
Case no. 3 : 240 mm covering



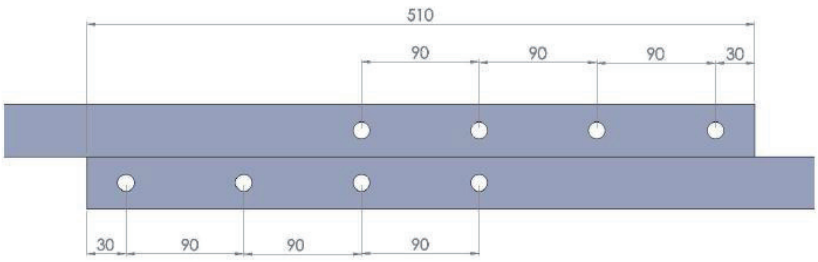
Case no. 4 : 330 mm covering



Case no. 5 : 420mm covering



Case no. 6 : 510 mm covering

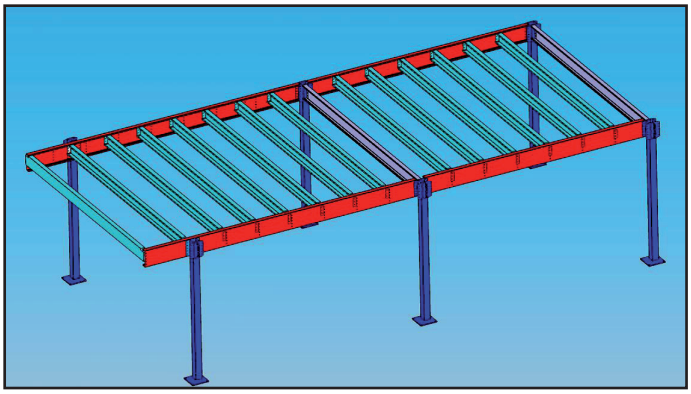


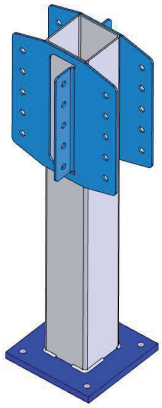
It is essential to check that all bolts (beams, joists, walings, anchor pins, etc.) have been correctly tightened !

In case of customised assembly:

- Overhang :

The load-bearing beam is fixed to the upright by a special connector using SB screws M12, 30 mm long, class 8.8, each with a H nut M12 and a lockwasher (see §I.c).



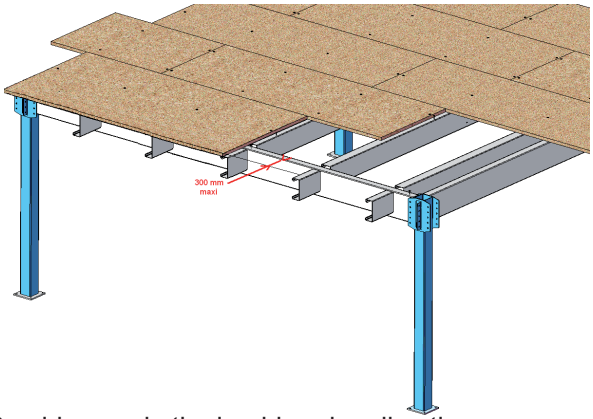


- Semi-beam

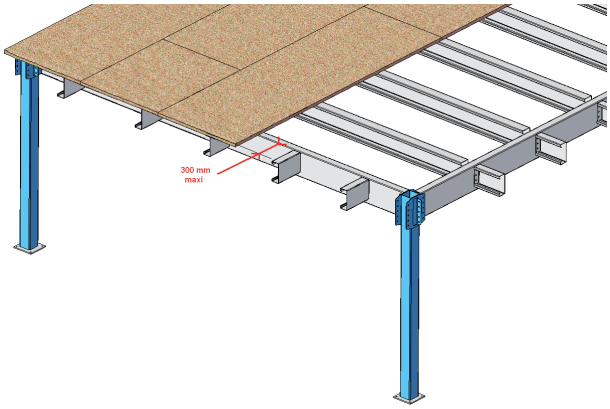
These are 250x80x30x3 section joists placed along the peripheral edge of the mezzanine which make it possible to create a chipboard overrun of 300 mm maximum in length in the load-bearing and non-load-bearing directions.

The maximum chipboard overrun of 300 mm obtained with these semi-beams must not be exceeded under any circumstances.

In the load-bearing direction, the semi-beams are bolted to the joists. In the non-load-bearing direction, perforations are provided in the non-load-bearing beams (bolts M12x30, class 8.8, with nuts M12 and lockwashers).



Semi-beams in the load-bearing direction



Semi-beams in the non-load-bearing direction

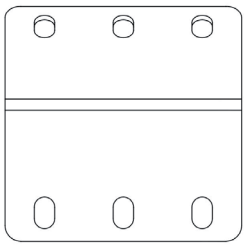
- Bias

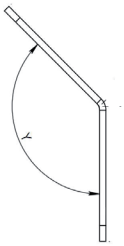
Assembling the modules on the bias requires the use of corners connectors which must be fixed between the uprights and the beams and between the beams and the joists (SB screw M12x30 and H nut M12 with a lockwasher, class 8.8). These connectors are marked at the bend angle required.

Take care to observe the assembly plan :
Position of load-bearing beams on the uprights (with respect to the connectors)
Orientation of opening of the load-bearing beams and the joists
Position of corner connector

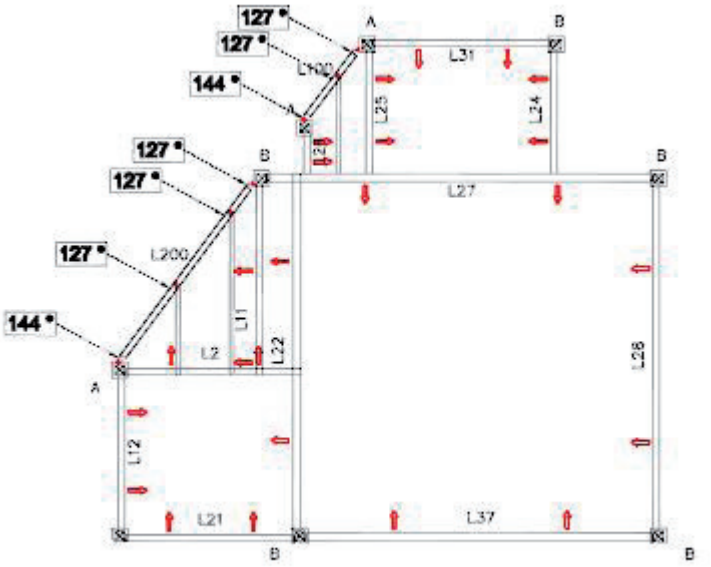
Example:

Corner connector





Example of assembly plan



Height of corner connector :

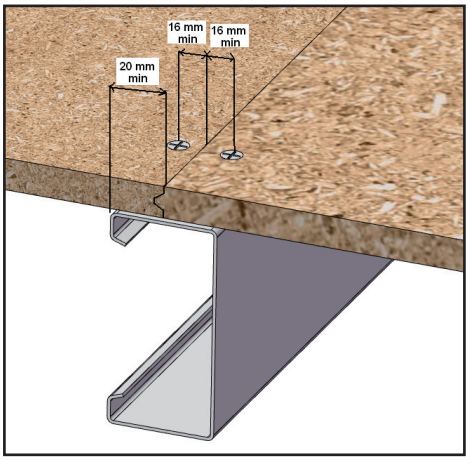
Type	Section	Height of connector (mm)	Number of bolts*
Joist	150x50x12x2	100	4
Joist	180x50x12x2	100	4
Beam or joist	200x80x30x2	150	4
Beam or joist	250x80x30x2	200	6
Beam or joist	230x80x30x2.5	200	6
Beam or joist	250x80x30x3	200	6
Beam or joist	300x95x30x3	250	6
Beam or joist	350x95x30x3	250	6
Beam	350x100x30x4	250	6
Beam	400x100x30x4	250	6

* Number per beam (SB screw M12 and nut M12 with lockwasher, class 8.8)

b) Assembly of flooring

The chipboard panels must be assembled in strict compliance with the layout plan provided with the mezzanine.
The panels must be cut and adjusted on site in order to comply with the recommendations and the general plan.

Each panel must rest on at least three supports (possibly two on small areas). The joins of the panels, parallel to the joists, may only be located above a joist and on a support length of at least **20 mm** for the slab edges.

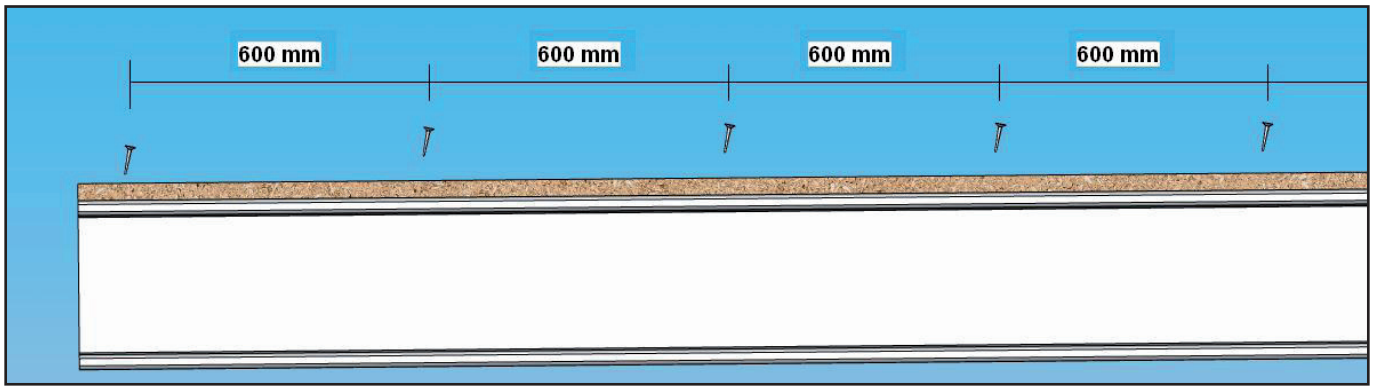


The self-tapping screws must be positioned at least 16 mm from the effective edges of the panel (See drawing opposite). The screw head must sit flush with the upper surface of the flooring.

Fix the flooring onto every beam and joist using self-tapping screws so that there is a minimum of **6 screws/m²** which are sensibly distributed.
It is essential that each joist and beam be **fixed** using at least one screw every 600 mm along its length.

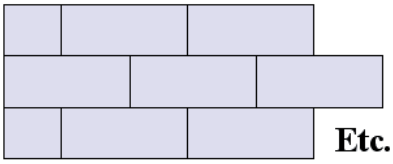
Sectional view:

Fixation along the length of the beams and joists every 600 mm

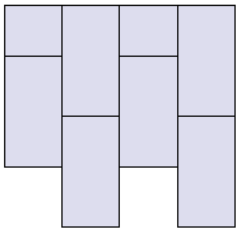


The panels must be laid in a «brick wall» arrangement, taking care to ensure that:

- The layout plan provided is strictly observed.
- Any join between 2 panels is located above and at the centre of the beam or joist.
- Each panel or piece of panel rests on at least 2 supports.
- The panels cover the entire structure and are adequately fixed in place.
- There is no flooring overrun at the top of the stairs.



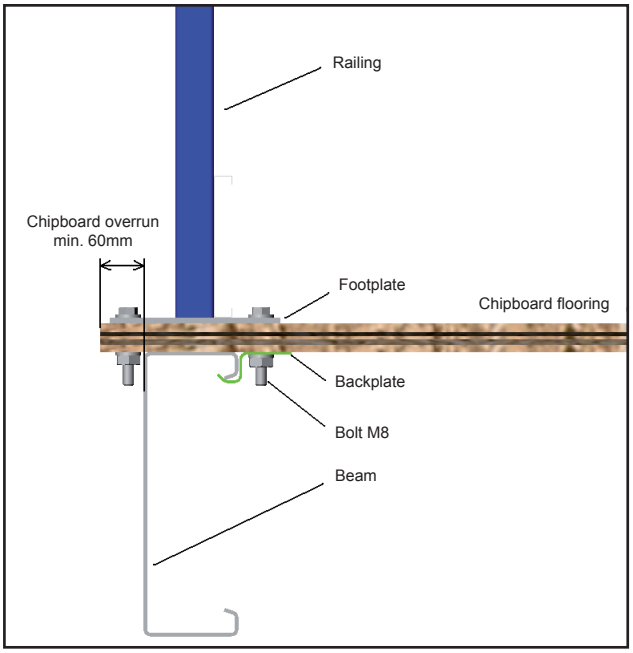
Horizontal arrangement

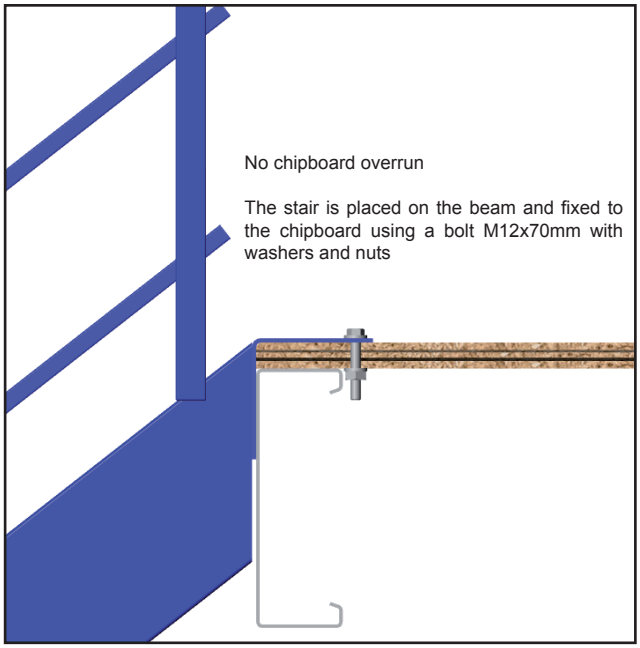


Vertical arrangement

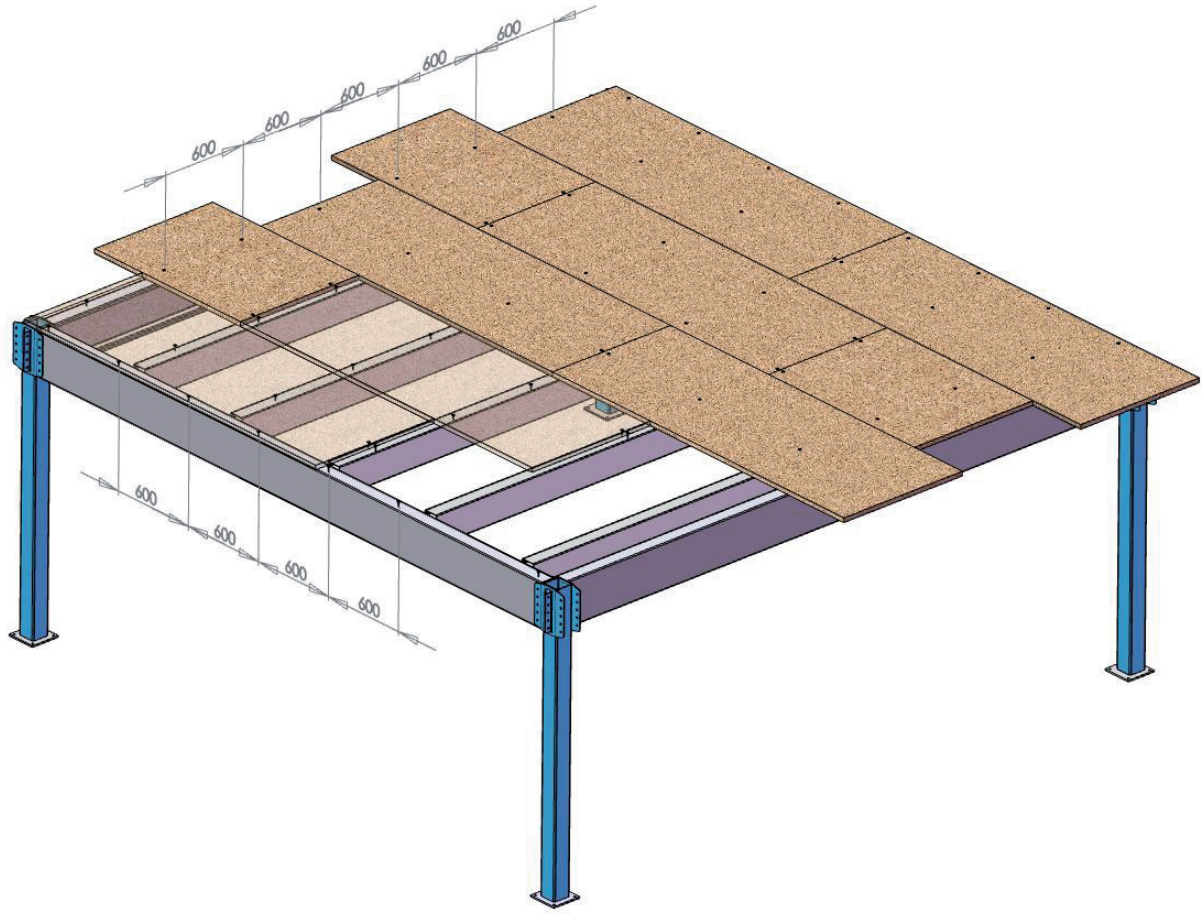
Ensure a chipboard overrun along the peripheral edge of the mezzanine for installation of:

- Railing and safety gate: : minimum 60 mm
- Gate: : 100mm





Assembly example



c) Assembly of walings

A waling consists of a threaded rod Ø12 mm, 4 nuts and 4 flat washers.
Depending on the length, the joists will have to receive 0, 1 or 2 walings:

Maximum length (in mm)	Waling
3500	0 - None
5500	1 - At middle of joist
7500	2 - At one third and two thirds along the length

If the joists have any waling, they will be shown on the installation plan.
Installation is performed as follows:

Place two bolts and two washers onto the threaded rod.

Insert the threaded rod between the joists and place the washers and nuts on the outside of the joists.

Tighten the bolts inside and outside without distorting the joists (the faces of the profiles must remain vertical and parallel!) and make sure they are tightened correctly.

The result should be as shown opposite.

d) Labelling of the load plate and the EC declaration of conformity

Every installation comes with one or more load plates as well as an EC declaration of performance in the form of self-adhesive labels.
These must be clearly and permanently displayed on the mezzanine.
Stick these labels on an upright of the platform in a place where everyone can see them.

Load plate :

MEZZANINE

Calculated and designed in compliance with the **EUROCODE III and FEM standards.**

ASSEMBLY, USING AND MAINTENANCE INSTRUCTIONS MUST BE SCRUPULOUSLY RESPECTED

DRAW ATTENTION TO THE DEDICATED PERSON IN CASE OF DAMAGE. CHECK REGULARLY YOUR INSTALLATION ACCORDING EN 15635.

ANY CHANGES ON THE STRUCTURE MUST BE APPROVED BY THE MANUFACTURER. IN CASE OF DOUBT, PLEASE CONTACT THE MANUFACTURER.

PLEASE DO NOT CLIMB THE MEZZANINE.

FOR USE OF MANUAL HANDPALLET TRUCKS ONLY.

PROTECTIONS FOR MEZZANINE UPRIGHTS ARE COMPULSORY IN CASE OF USING ROLLING EQUIPMENT.

Reference :

Year of construction :

Declaration of performance :

CE

Declaration of conformity

We the firm

MANORGA
Parc d'activités Roubaix Est
Rue de Toufflers - BP89
59452 LYS LEZ LANNOY
FRANCE

Declare that our **Steel storage mezzanine floor PF04**

Correspond to the stipulations of the following EU directives:

Regulation 305/2011/EU on construction product.

Such as in Annex ZA of the harmonized standard **EN1090-1 : 2009+A1 :2011**

When installed according to the instructions mentioned on the documents delivered with the product in accordance with the regulations.

The certificate of conformity of the factory production control Nr. 0035-CPR-1090-1.TÜVRh.201.001 has been delivered by TUV Rheinland Industrie Service under Nr NB 0035

In LYS LEZ LANNOY — CPU *Responsable*

Le 01 Juillet 2014 — Mr. DELAUNOIS Julien

DELAUNOIS JULIEN FPC MANAGER MANORGA EN 1090

Instructions for assembling the railing PF04

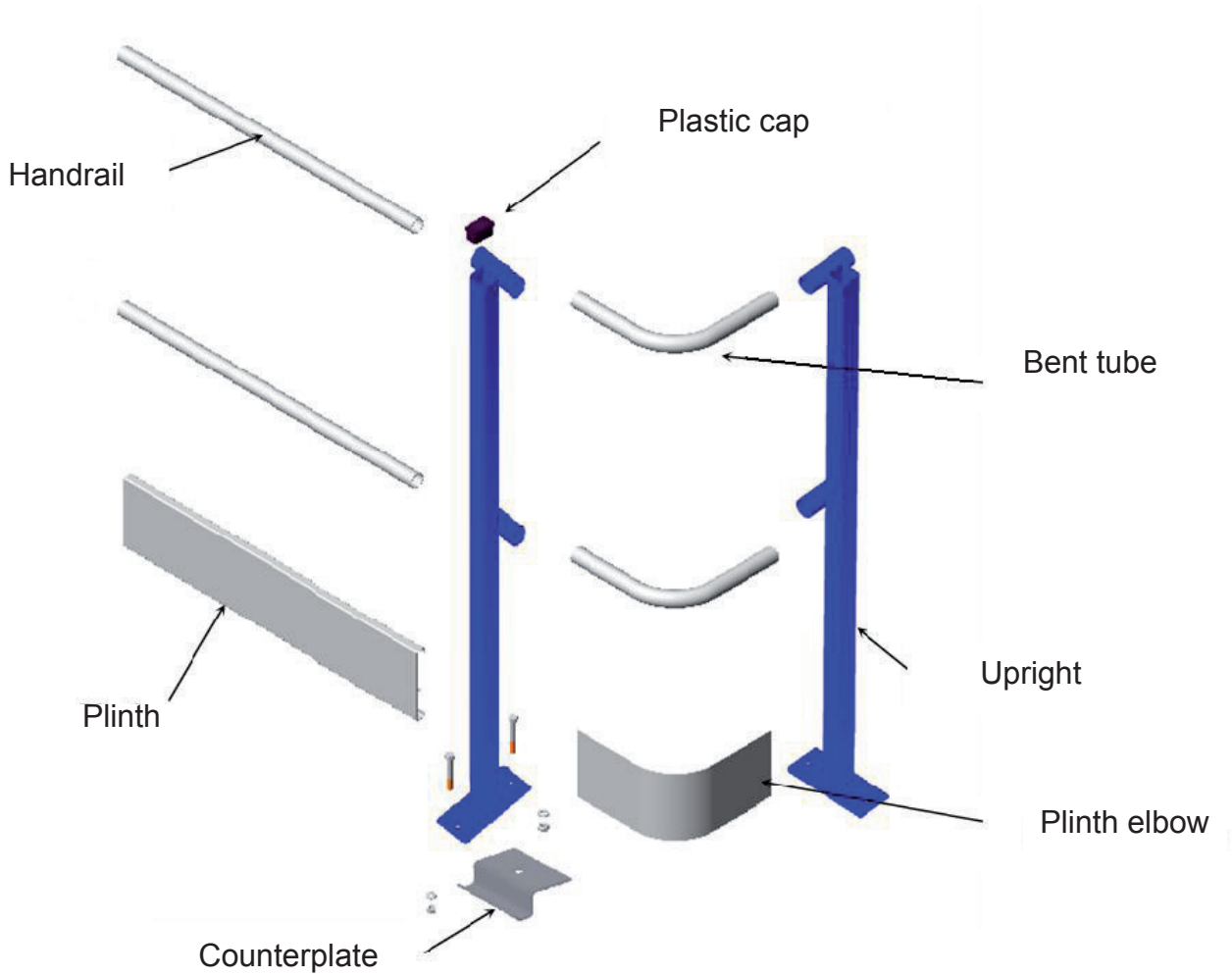
3. TECHNICAL SPECIFICATIONS

a) General information

The railings are protective structures at support height built along the edges of the storage and walkway areas of industrial installations and are designed to offer protection against the risk of people or objects accidentally falling over the edge. These products conform to the standards EN ISO 14122 and NF E 85-015.

The industrial railing must not be used as a backstop for storage areas. It should be fitted along walk areas accessible to staff.

The figure below shows the different components that constitute a railing.



Railing

b) The uprights

A railing upright comprises a 50x30x1x5 profile, a footplate of 160x60mm, 6mm thick, welded to one end of the tube and containing two perforations of 10.5mm diameter for fixation to the flooring of the PF04 mezzanine.
Along the upright, there are two welded tubes of 35mm diameter, 1.5mm thick and 100mm long.

c) The handrails

The handrails are made from tubes of 30mm diameter, 1.2mm thick.
The handrails are fixed to the uprights using self-tapping screws of 4.2mm diameter and 19mm length.

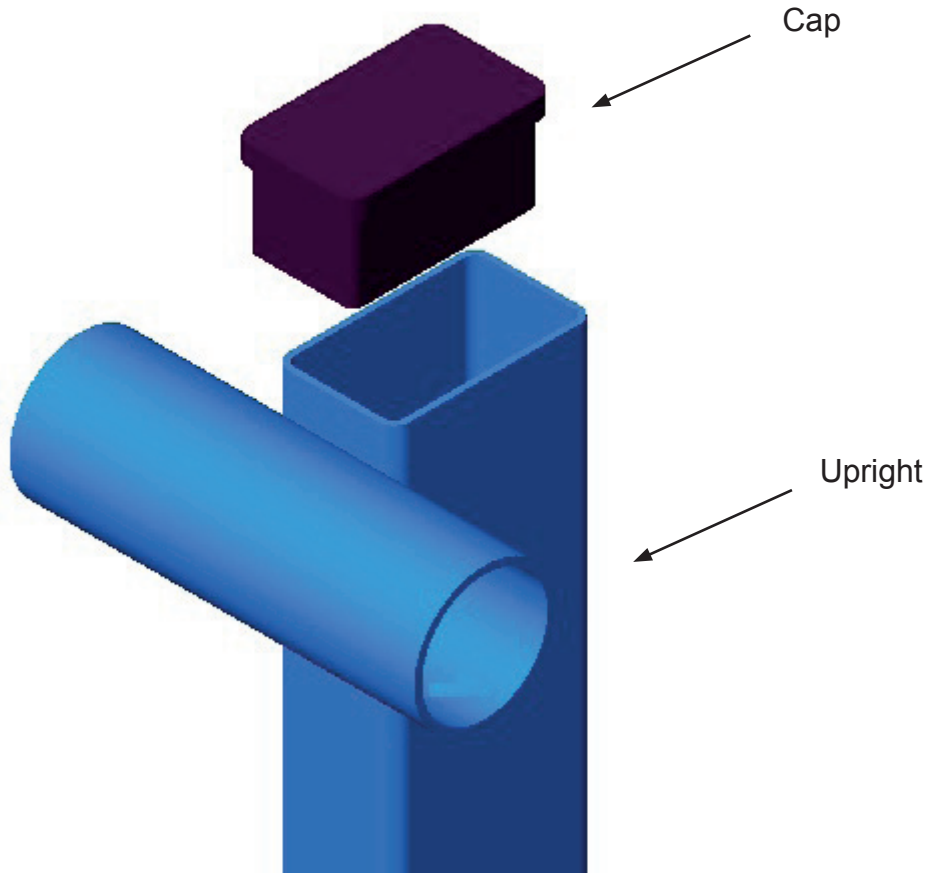
d) The plinths

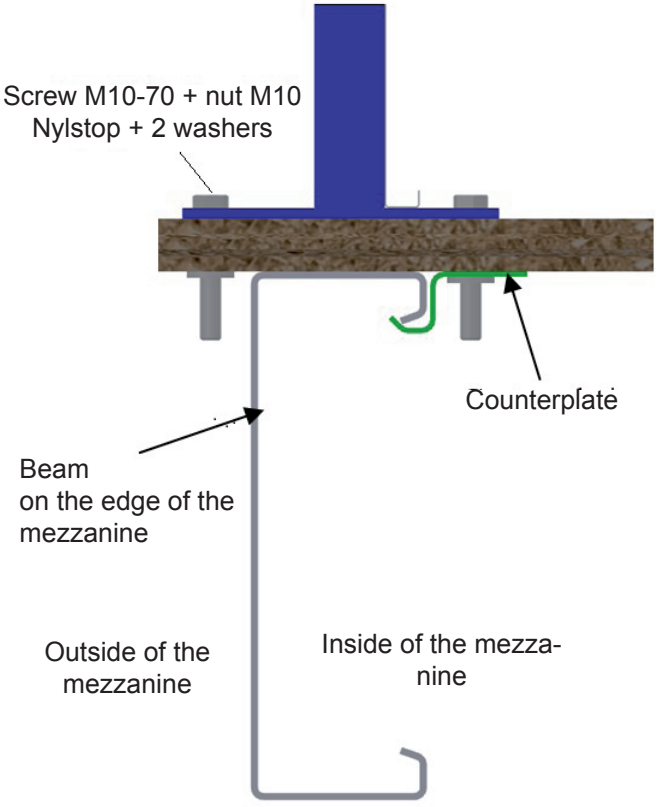
The railing plinths are made from C-profiles measuring 150x20x10 and 1mm thick.
They are fixed to the uprights using self-tapping screws of 4.2mm diameter and 19mm length.

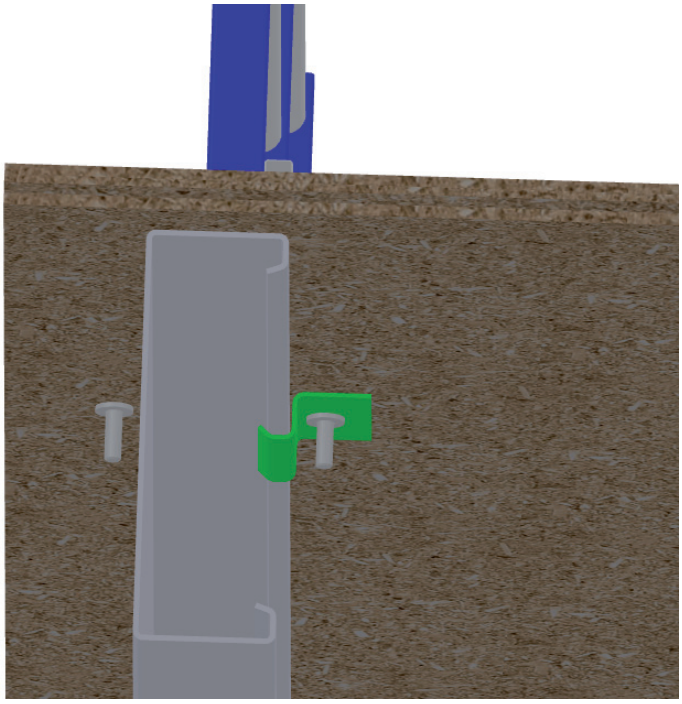
c) The counterplate

The counterplate is an important component of the railing. It is shaped from sheet metal 3mm thick. The counterplate is located beneath the flooring and is attached to a beam inside the mezzanine.

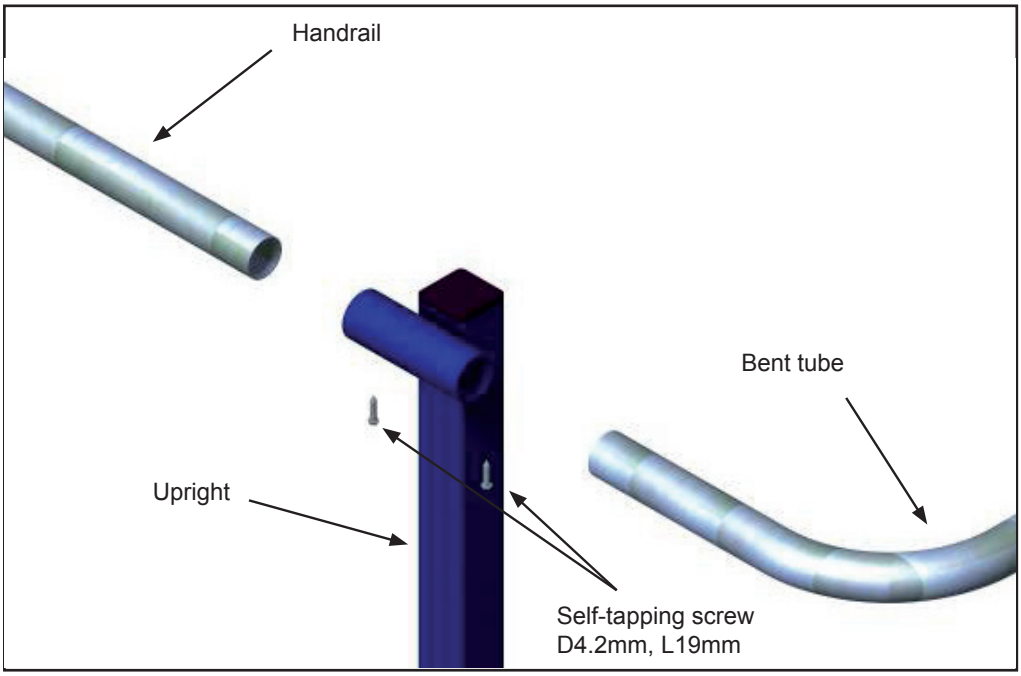
4. PRINCIPLES OF ASSEMBLY FOR THE HANDRAIL

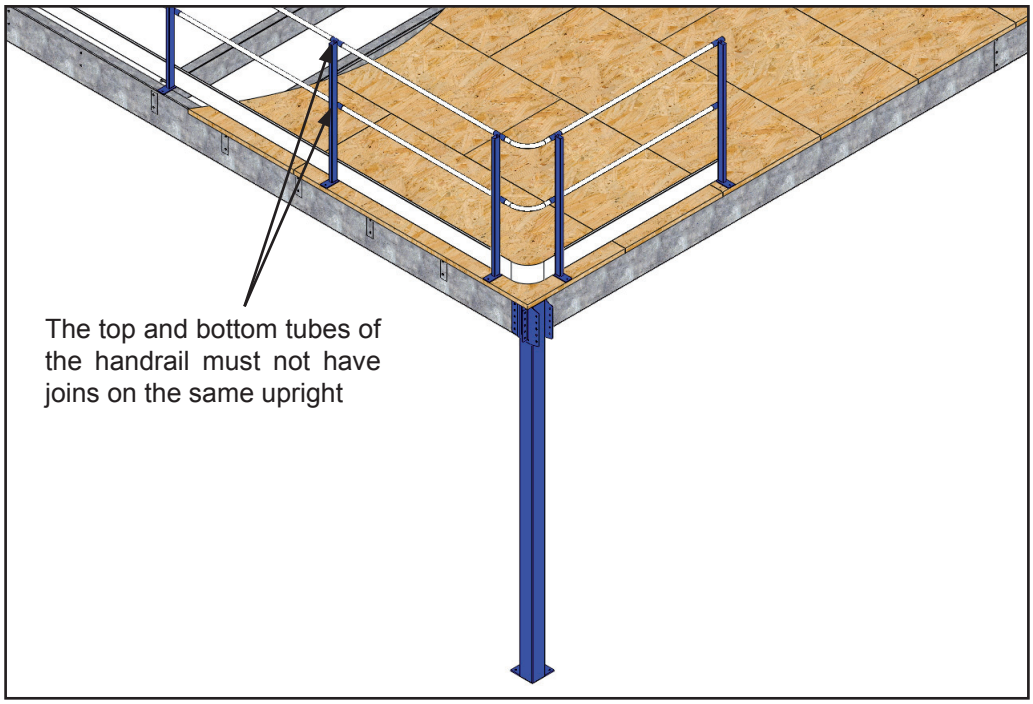




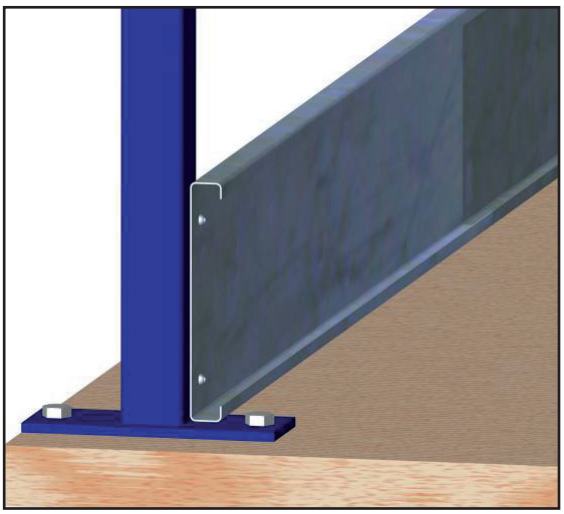


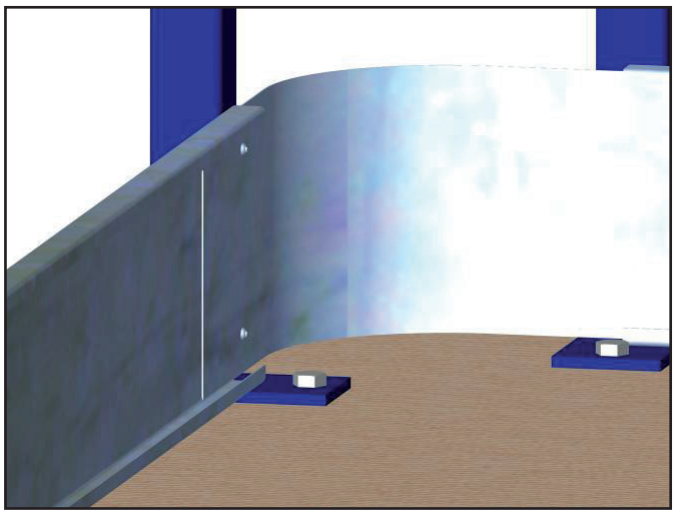
Fix the uprights onto the flooring using 2 screws M10, 70mm long, class 8.8, and 2 nuts M10 Nylstop, 2x2 washers and the counterplate.
The counterplate is installed on the beam return then clamped between the chipboard and the washer inside the mezzanine.
The figure on the left shows a side view, and the view on the right is a view from below.





Position the handrails and fix them in place using the self-tapping screws (D4.2mm, L19mm) provided



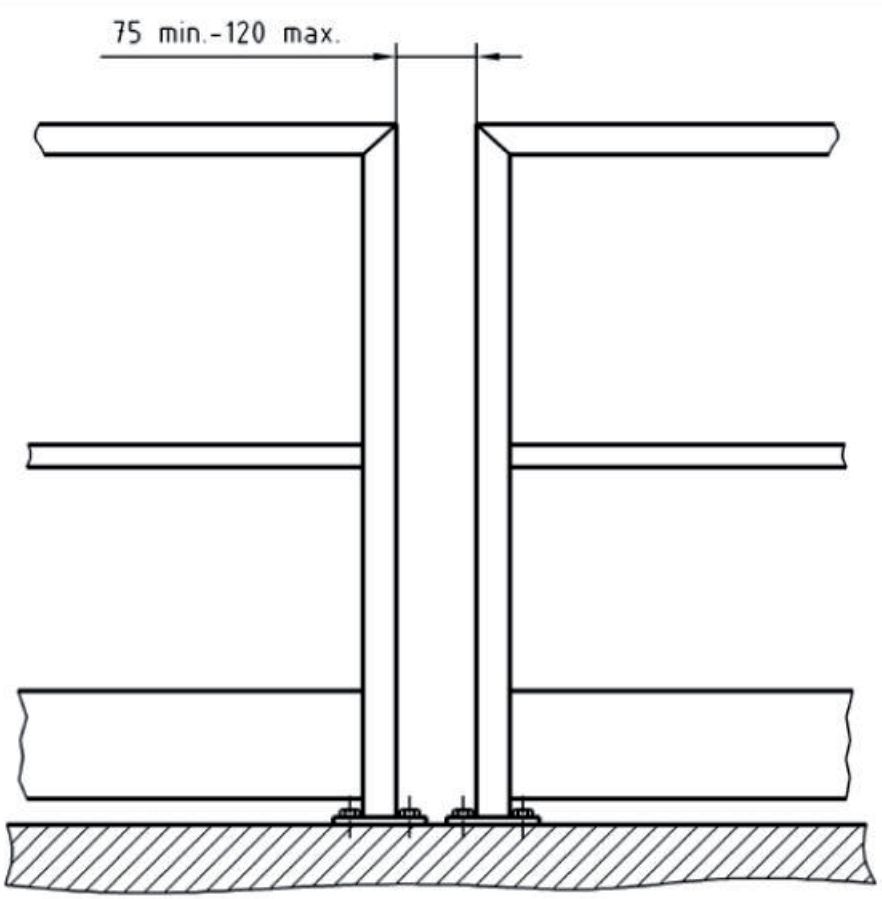


Position the plinths and fix them in place using the self-tapping screws (D4.2mm, L19mm) provided

5. CONDITIONS OF ASSEMBLY

a) Assembly tolerances

The gap between two adjacent uprights must be less than or equal to 1500mm in accordance with the standards EN ISO 14122 and NF E 85-015.
The open space between two segments of railings (railings interrupted, junction with stairs, etc.) must be between 75mm and 120mm in accordance with the standards EN ISO 14122 and NF E 85-015.



Minimum space between two railing elements

b) Quality of flooring

The railing uprights must be mounted on flooring made from 30mm or 38mm chipboard panels laid out in a «brick wall» arrangement. The average densities of the chipboard panels that must be used are as follows: 640 kg/m3 for 30mm chipboard and 720 kg/m3 for 38mm chipboard.

Each footplate for the handrail uprights is fixed to the flooring using two screws M10-70, class 8.8. On the outside of the mezzanine, the upright is fixed using a screw, a washer and a nut underneath the flooring. On the inside of the mezzanine, the upright is fixed using a screw, the counterplate, a washer and a nut underneath the flooring.

The flooring onto which the handrail will be fixed must not have any holes or significant elevations/drops that could impair sturdy fixation of the handrail. In addition, it must be attached to the steel structure in accordance with the recommendations described in the assembly instructions for the mezzanines.

a) Safety regulations

Assembling this type of equipment requires competent staff who observe the health and safety rules in force.

6. MAINTENANCE AND GUARANTEE

a) Maintenance of the handrail

The handrail may be washed with any detergent that does not damage EPOXY paintwork (in this case, avoid detergents containing chlorine).
Users are required to check the tightness of the bolts on the uprights at least once a year.

b) Modifications to the railings

Any modification of the railings compared with the plans created during the design stage requires consultation with the company MANORGA.

Similarly, any replacement of any element of the railing also requires consultation with the company MANORGA.
Also, in case of impact, if the structure develops any significant cracks or deformations, use of the handrail must cease.

In this case, the owner and/or the user of the handrail must enlist, at its own expense, competent bodies to verify the effects of any such impacts/cracks/deformations on the mechanical strength of the railing.
Defective parts must be replaced.

Instructions for assembling the safety gate PF04

7. ASSEMBLING INSTRUCTIONS

The assembling has to be done by a skilled and enabled person to this kind of work. The safety gate has to be fixed on a chipboard floor :

- of a single layer of 38 mm and a density of 720 kg per cubic meter redolent of « structural wall brickwork »
- of a double layer of 22 mm and a density of 610 kg per cubic meter redolent of « structural wall brickwork »

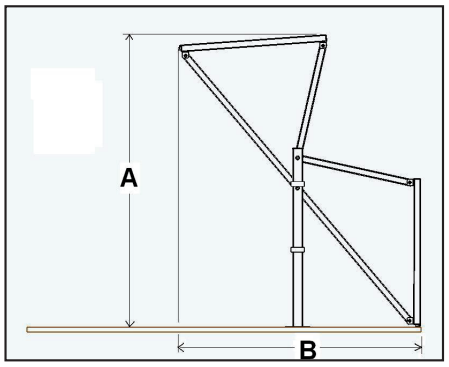
The floor has to be correctly fixed to the mezzanine structure regarding our instrustions mentioned on the assembling and maintenance instruction for the « OMEGA PF04 mezzanine ».

Each floor plate has to be fixed with screws H M 10x70, nuts M10 and counter-wedges.

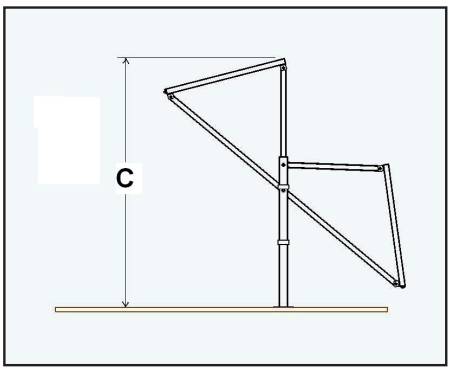
8. DIMENSIONS

DIMENSION INDEX		
mm	Model 18/15	Model 18/23
A	2225 mm	2225 mm
B	1825 mm	1825 mm
C	2250 mm	2250 mm
D	2375 mm	2375 mm
E	480 mm	480 mm
F	1890 mm	1890 mm
G	1800 mm	2600 mm
H	2155 mm	2155 mm
I	1540 mm	2340 mm
J	250/150 (2)	250/150 (2)
Dimension max. load L X H X D	1500x1800x1400 mm	2300x1800x1400 mm
Dimension max. load (2) L X H X D	1500x1600x1600 mm	2300x1600x1600 mm
Handling effort	<20 daN	20 daN
Weight	105 kg	115 kg

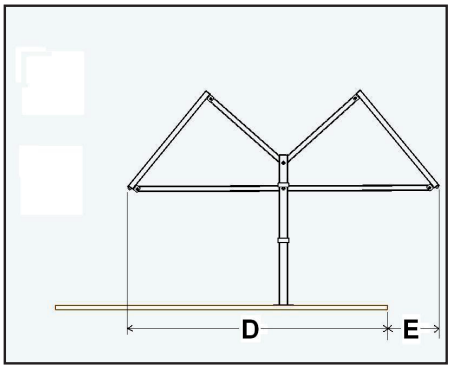
Dimension of the closed safety gate



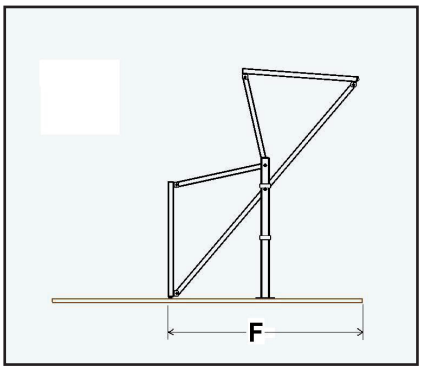
Maximum height at steerage



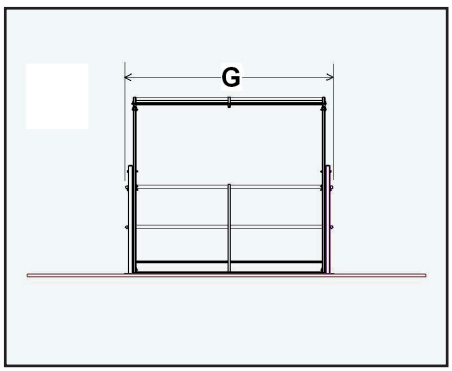
Maximum size at steerage



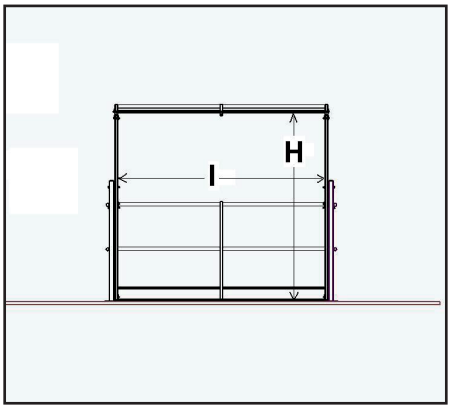
Dimension of the opened safety



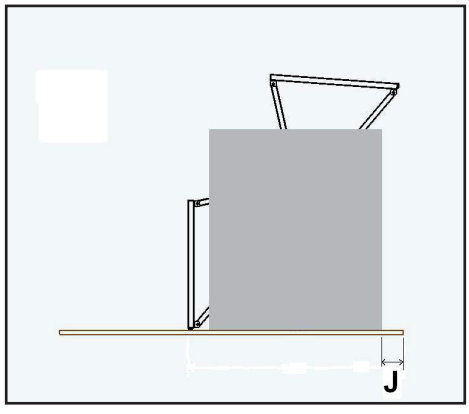
Total length



Free place

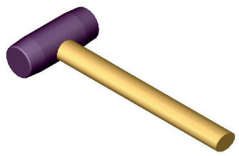


Load capacity

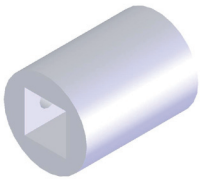


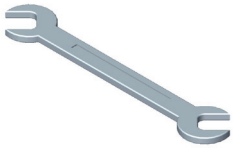
9. METHODS OF INSTALLATION AND ERECTION

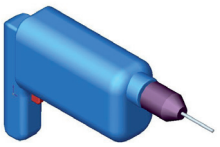
a) Necessary tools for the assembly


rubber mallet


Pawl key


Socket 19 and 17

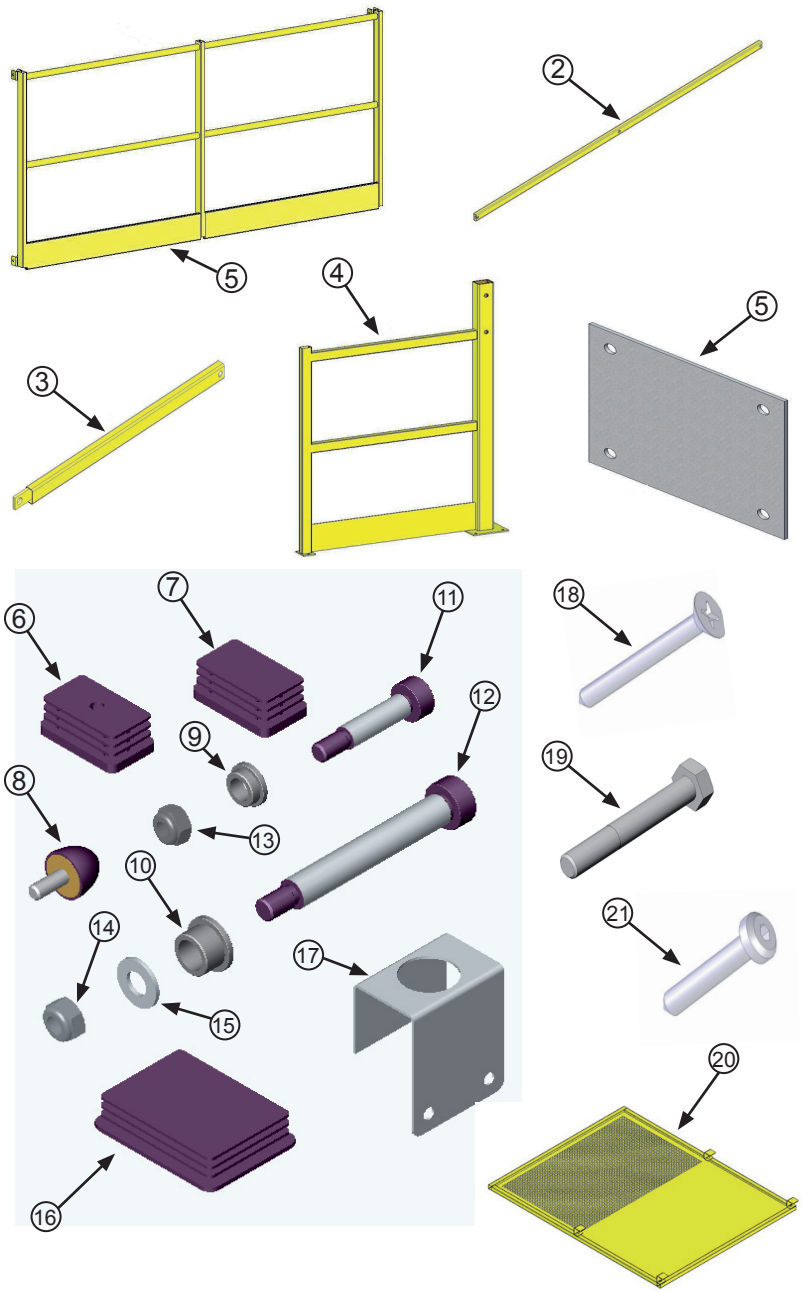

Spanner 19 and 17


Drill

b) Components

Safety gate		
Number	Description	Quantity
1	Mobile panel L.1600 or 2400 mm	2
2	Beams L.2670 mm	2
3	Arm L.910 mm	4
4	Ground L.1350 mm	2
5	Counter wedge	2
6	Perforated Plastic foot 50 x 30 mm	6
7	Plastic foot 50 x 30 mm	8
8	Rubber stop	6
9	Composite bearing block diam.12 mm	32
10	Composite bearing block diam.16 mm	32
11	Grinded axis d.12/M10	8
12	Grinded axis d.16/M12	4
13	Brake nut M10	16
14	Brake nut M12	4
15	Washer M12	4
16	Plastic cap 80 x 60 mm	2
17	Handrail connection	4
18	Chipboard screw diam.5 x 40 mm	4
19	Screw H M 10 x 70 mm (floor fixing))	8

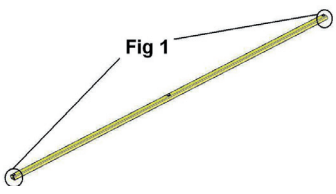
Side protection		
20	Side protection	X ordered quantity
21	Self drilling screw d.4,2 x 19 mm	4 per side protection

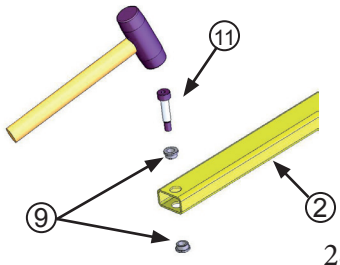


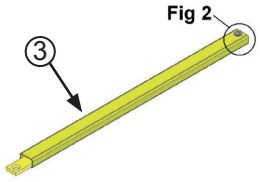
c) Assembling

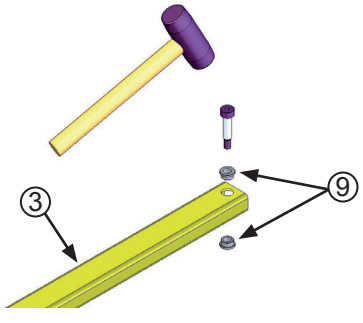
Assembling of the beams

Insert the composite bearing blocks -Nb 9- in the extremity perforations of the beams -Nb 2- and the arms -Nb 3- using a rubber hammer.
Use the grinded axis -Nb 11- as a chuck to insert : . the bearing blocks d.12 - Nb 9- in the arms -Nb 3- and the extremities of the beams -Nb 2- . the bearing blocks d.16 -Nb 10 – in the flat part of the arms -Nb 3- and in the central perforations of the beams -Nb 2- and in the grounds -Nb 4- (check the sens of the bearing blocks on fig. 4 and 5).

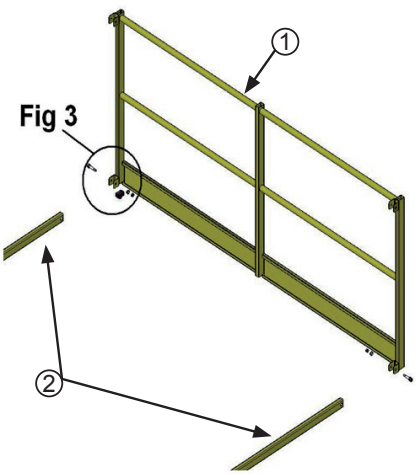


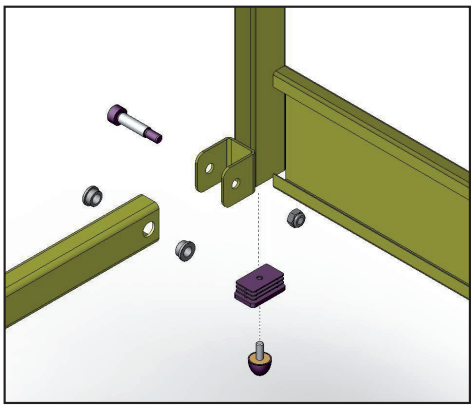






Assembling of the beams, arms and panels





Screw the rubber stops -Nb 8- in the perforated plastic foot -Nb 6- and fix them in the panel tubes - Nb 1- Insert the plastic caps 50 x 30 -Nb 7- on the top of the panel tubes -Nb 1- Fix the beams

-Nb 2- on the firts panel -Nb 1- respecting the order and the direction of the elements. Insert the plastic caps 50 x 30 -Nb 7- and 80 x 60 -Nb 16- on the top of the ground tubes -Nb 4- Fix the beams -Nb 2- on the uprights -Nb 4- with the axis d.16 -Nb 12- then the arms -Nb 13- of the first panel -Nb 1- (see drawings 4 and 5).

Composite bearing block and axis diam. 16 mm -Nb 10 and 12-

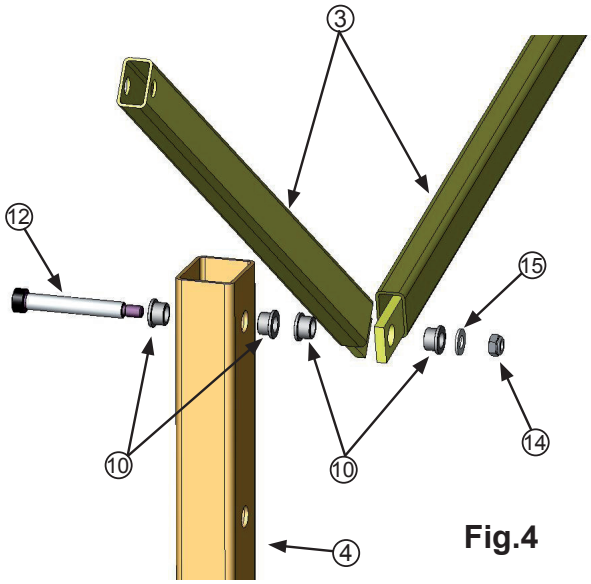


Fig.4

Composite bearing block and axis diam. 12 mm -Nb 9 and 11-

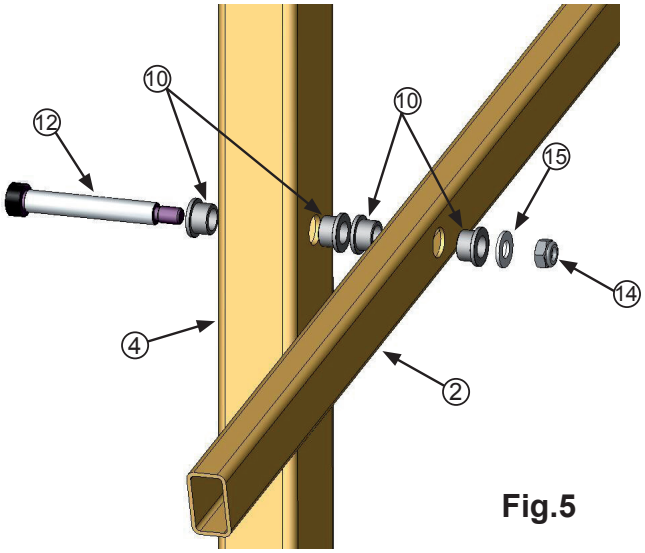
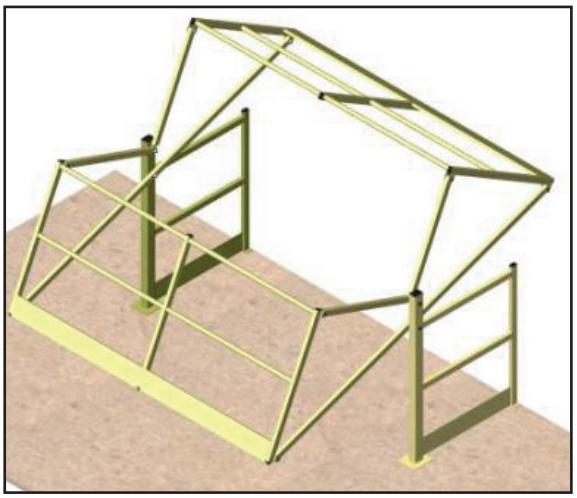


Fig.5



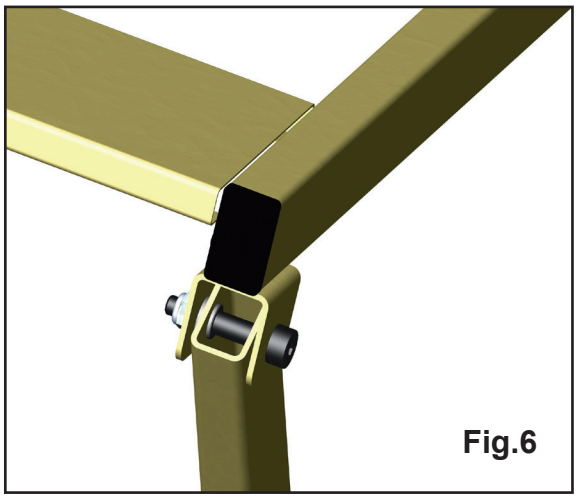
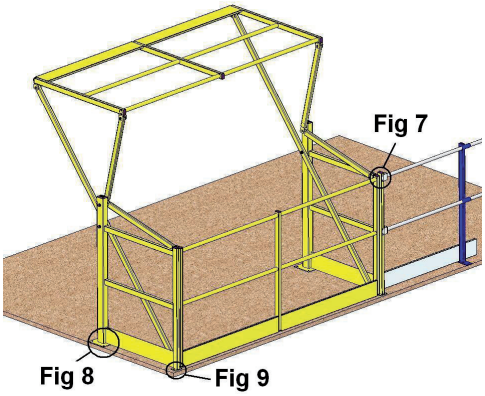


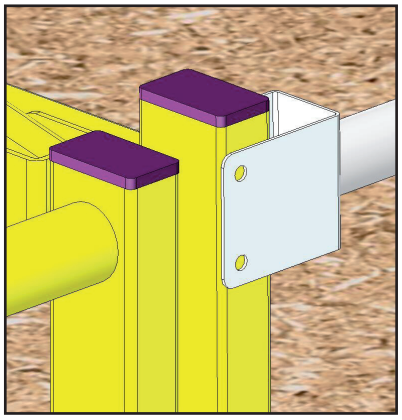
Fig.6

The brake nuts -Nb 14- have to be lightely tightened but not blocked.

Assemble the second panel -Nb 1- on the beam extremity -Nb 2- and then the arms -Nb 3- respecting the order and the direction of the elements (see fig. 3).

Connection with the handrail





Align the safety gate to the handrail, as close as possible to border the mezzanine, respecting the capacity limit of the floor.

Fix the handrail tubes to the safety gate foot using connecting elements -Nb 17-

Fig.7

Fixing to the floor

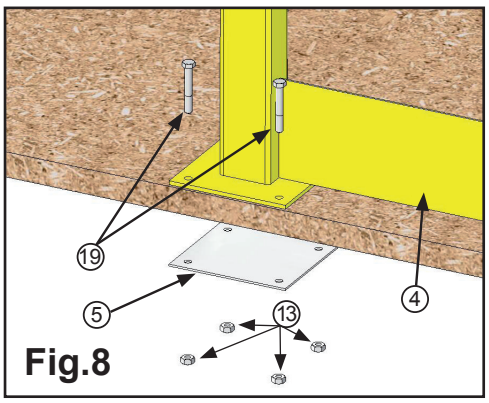
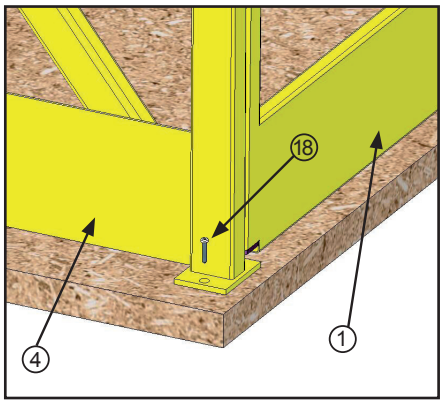


Fig.8

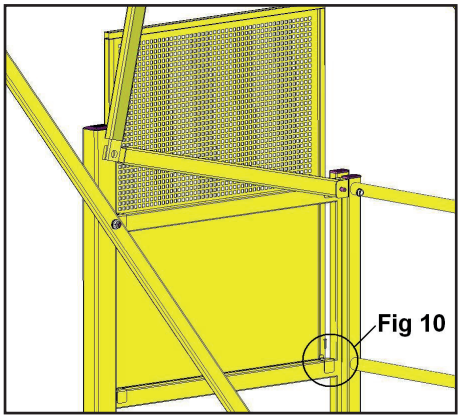


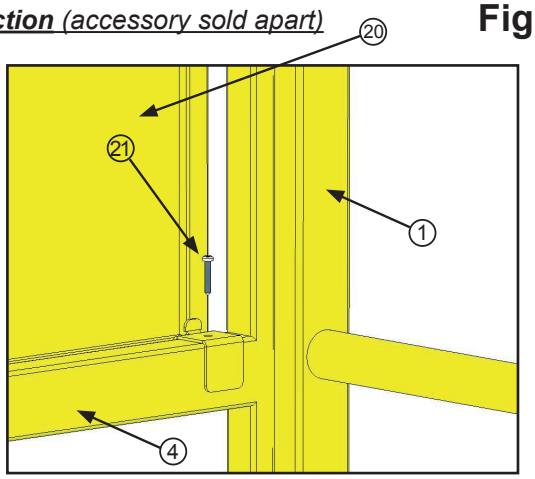
Fix the whole elements to the floor using screws H M 10 x 70 -Nb 19- and self drilling screws diam. 5 x 40 -Nb 18- The main wedges of the ground - Nb 4- will have to be reinforced under the floor (one simple layer of 38 mm or a double layer of 22 mm) with a counter wedge of 3 mm -Nb 5-

Place the safety gate side protection -Nb 20- on the ground -Nb 4-. Fix it with 4 self drilling screws -Nb 21- on the ground -Nb 4-

Fig.9

Assembling of safety gate side protection *(accessory sold apart)*





Position the side protection of the safety gate rep. 20 on the ground rep 4. Fix it with the 4 self drilling screws rep 21 on the ground rep 4.

10. MAINTENANCE AND GUARANTEE

Maintenance

The steel structure of the safety gate can be cleaned with chlorine-free detergent. Use no the detergeant damaging the epoxy paint. The users have to check yearly the tightening of bolts of the structure of the safety gate and its accessories.

Modifications of the structure

Any changes of the structure or/and its accessories in relation to the drawing made initially and even the change of one component of this structure or/and its accessories must be approved before by the manufacturer. Moreover, in case of impact, if the structure or one accessory shows cracks or bendings, the use of the safety gate must be stopped.

The owner and/or the user had to ask to the manufacturer for checking the consequences of the impact on the mechanical resistance of the structure and its accessories.

USE