FARAONE INDUSTRIE SPA
Via San Giovanni, 20 - C.da Salino
64018 Tortoreto (TE) ITALY
Tel. +39 0861.772221
Fax +39 0861.772222

www.faraone.com
info@faraone.com

ECON.INDEX 92848 CCIAA TE
VAT and TAX NUM. IT 00732060678
S.C. 2,000,000 Euro f.p.

USE AND MAINTENANCE INSTRUCTIONS

MOBILE SCAFFOLD

TSA 320

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Chapter 1 - GENERAL

1.1. Introduction

This USE AND MAINTENANCE MANUAL Is aimed at providing users with the essential information to carry out the procedures intended for the appropriate operation of the mobile elevating scaffold, in accordance with the purposes it has been manufactured for. All information in this manual must be **READ and UNDERSTOOD** before making any attempt to operate the machine. **THE USE AND MAINTENANCE MANUAL IS THE MOST IMPORTANT TOOL, SO IT IS RECOMMENDED TO KEEP IT IN THE MOBILE ELEVATING SCAFFOLD.**
These *user instructions and limits of use* are only valid for the mobile working scaffold of the TSA 320 line, whose Declaration of Conformity is given in Section 1.5.
Mobile working scaffolds must only be used for finishing, maintenance or similar work. This *instruction* manual contains important information on the use, maintenance and safety of mobile working scaffolds; the operator must be fully aware of this before use and, on his own responsibility, must:

- Ensure that local, regional and national regulations are respected;
- Observe the regulations (laws, regulations, directives, etc.) for safe use indicated in these *User instructions and limits of use*;
- Ensure that the *operating instructions and limits of use* are available to the user's personnel and that the information contained therein, such as warnings and cautions, and the safety regulations are observed in all details.

The mobile working scaffold must be erected in accordance with the manufacturer's instructions in order to achieve the stability conditions specified in the design and verified during testing. However, it should be remembered that the assembly and disassembly operations of the provisional works must be carried out, by law, under the direct supervision of a person in charge of the works, who is required to check the structural integrity of the components, the efficiency of the connections and the safety systems. The person in charge shall ensure that, during assembly, dismantling and in any case when the elements for safe use of the mobile scaffold are not in place, operations on it are carried out using appropriate fall protection systems. The person in charge will also ensure that during the assembly and disassembly of the mobile scaffold, the components are not subjected to impacts and falls that could compromise its structural integrity and efficiency. When positioning the base of the mobile scaffold, carefully consider the possible interference that raising the height could cause against existing obstacles up to the maximum height to be reached. In particular, when working in the vicinity of power lines, place the mobile scaffold at a minimum distance of 5m, also taking into account any fluctuations to which the power lines may be subjected due to wind or other accidental events. The assembly operation must be carried out in the sequence indicated in this manual in order to be able to use the mobile scaffold safely.
Scrupulously observing this Manual means operating in compliance with the current legislation on workers' health and safety D.L. 81/2008.

1.2. Designation

- Mobile working scaffolds are constructed in accordance with the Technical Standards UNI EN 1004;
- Mobile working platforms have uniformly distributed load Classes of '2' (corresponding 1,5kN/m^2);
- Mobile working platforms have a maximum permitted working surface height of 1.4 m (without bracing) and 4.4 m (with bracing);
- The mobile working scaffold can have Access Classes to the working decks according to the following list:
    - Type D access: Vertical ladder.

1.3. Manufacturer

The manufacturer of the model TSA 320 mobile work platforms described in this *Instruction* Manual is:

FARAONE INDUSTRIE Spa
Industrial area Contrada Salino
64018 Tortoreto (TE)
ITALY

Tel: +39 0861 772221
Fax: +39 0861 772222
Website: www.faraone.com
E-mail: info@faraone.com

The manufacturer's details are shown on a plate affixed to the mobile scaffold in a clearly visible position and shown below:

1.4. Normative references

- ✓ UNI EN 1004:2005: *"Mobile access and working towers made of prefabricated elements - Materials, dimensions, design loads, safety and performance requirements"*;
- ✓ UNI 8634: *"Structures of aluminium alloys: calculation and execution instructions"*;
- ✓ CNR – UNI 10011: *'Steel constructions: calculation, execution, testing and maintenance instructions'*;
- ✓ EN 1298 (February 1996): *"Mobile working towers. Rules and guidelines for the preparation of an instruction manual*';
- ✓ D.M. 27.03.1998 (G.U. no. 102 of 05.05.1998): *"Acknowledgment of compliance with the applicable standards of means and safety systems relating to the construction and use of tower bridges";*
- ✓ Italian Legislative Decree 09.04.2008 no. 81: *"Consolidation Act on Health and Safety in the Workplace';*

1.5. Declaration of conformity

Faraone Industrie Spa. with registered office in Tortoreto (TE) Zona Industriale Contrada Salino

DECLARES:

- That the mobile working scaffold named TSA 320 is constructed in accordance with the *Consolidation Act on Health and Safety in the Workplace* Lgs.Dec. 81/08;
- That all products are marked with the identification mark; the *User Instructions and limits of use* manual is enclosed in the package containing the wheels of the mobile scaffold. This Manual is drawn up in accordance with the requirements of Technical Standard EN 1298 and related standards.

Chapter 2 - SAFETY INSTRUCTIONS

2.1. General warnings

MOBILE WORKING SCAFFOLDS MUST ONLY BE USED FOR FINISHING, MAINTENANCE OR SIMILAR WORK.

The system consists of two side towers on wheels, which have a hand-operated winch, by means of which it is possible to move the central work deck (ascent/descent).
This section indicates the correct safety procedures relating to the main aspects of mobile scaffold operation.
To promote the appropriate use of the unit, it is imperative to establish a daily routine, based on the instructions presented in this section.
A maintenance program must also be established by a qualified person and must be carried out regularly to ensure the safe operation of the machine.

	**The owner/user/operator MUST NOT accept responsibility for the operation of the system without having read and understood this manual and without having completed training under the supervision of a qualified and skilled operator.**

	**On receipt of the mobile scaffold, read the use and maintenance manual carefully before carrying out any assembly or handling operations.**

This USER INSTRUCTION MANUAL is an integral and essential part of the product.

	**Carefully read the warnings contained herein and any instructions as they provide important information regarding safety during installation, use and maintenance operations.**

Keep this document carefully for further reference.

Installation must be carried out in compliance with applicable regulations and in accordance with the manufacturer's instructions.

Any contractual or non-contractual liability of the manufacturer is excluded for damage caused by improper installation, use and maintenance and due to non-observance of the instructions supplied by the manufacturer.
In order to guarantee product efficiency and proper functioning, it is essential to follow the Manufacturer's instructions by having professionally qualified personnel carry out periodic maintenance.
In particular, it is recommended that the correct functioning of all safety devices be periodically checked by him.
The product should only be used for the purpose for which it was expressly designed; any other use is considered improper and therefore dangerous.
The manufacturer cannot be held liable for any damage caused by improper, incorrect and unreasonable use.
Do not remove the protective guards and safety devices.
For maintenance and/or repairs, contact only professionally qualified personnel or the manufacturer.
Failure to do so may compromise product safety.
If you decide not to use the product any longer, it is recommended to make it unusable.

SCAFFOLDS MUST BE ASSEMBLED, DISMANTLED OR ALTERED UNDER THE SUPERVISION OF A PERSON IN CHARGE AND BY WORKERS WHO HAVE RECEIVED APPROPRIATE TRAINING FOR THE OPERATIONS ENVISAGED.

FIG. A

FIG. A: Mobile work towers may only be assembled and disassembled by persons who are familiar with the assembly and operating instructions. Specifications regarding the stability and safety of mobile working scaffolds (e.g. use of ballast weights and outriggers) are described in these user instructions and limits of use (Chapter 5).

FIG. B

FIG. B: Damaged components must not be used for the assembly of mobile working towers.

FIG. C

FIG. C: Only original components in perfect condition, as specified by the manufacturer, may be used to assemble mobile working towers.

FIG. D

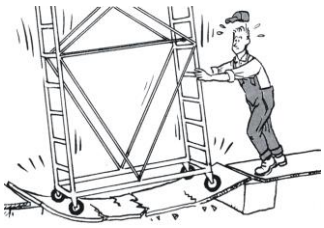


FIG. D: The surface on which the mobile working tower is moved must be able to support its weight. The surface must be level and free of holes, manholes and stairs. During use, in the event of uneven ground, block any gaps under the wheels with planks or another equivalent means. Check the weight, in relation to the model, that the surface on which the mobile scaffold rests must bear (see chapter: Limits of use).

FIG. E

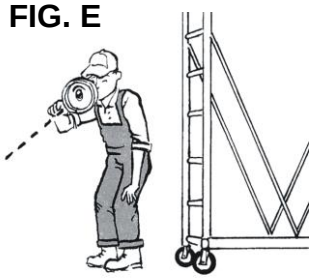


FIG. E: Mobile working towers may only be moved on compact, smooth, obstacle-free surfaces and in the absence of wind. Before moving, it is advisable to reduce the height of the mobile working scaffold depending on the ground and weather conditions. Raise the outriggers from the ground by no more than 20mm, release the wheel brake. When the movement has been completed, engage the brakes on the four wheels, level the scaffold again, move the outriggers downwards until they are firmly on the ground.

FIG. F

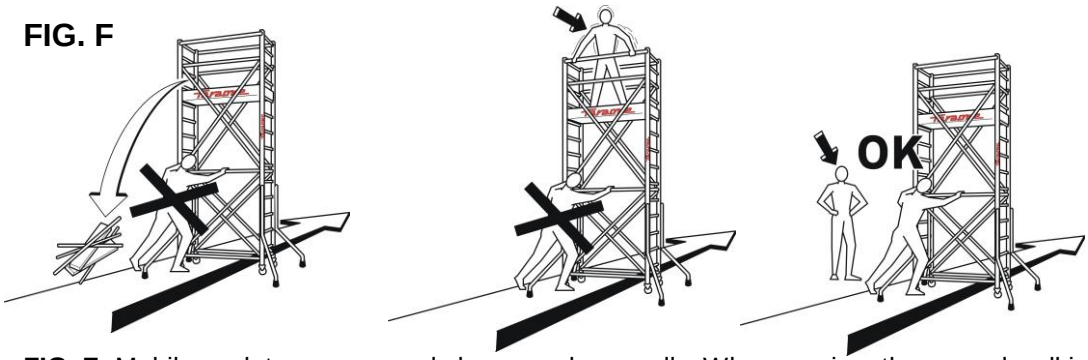


FIG. F: Mobile work towers can only be moved manually. When moving, the normal walking speed must not be exceeded and no materials or people must be found on the mobile working tower. Always ensure that the overhead area is clear of obstacles and electrical cables. Mobile working scaffolds are not electrically insulated; therefore, do not approach within five metres of power lines (the swinging of the line ropes and the movement space of the worker and the objects used must be taken into account when calculating the safety distance). If the safety distances cannot be complied with, the lines must be de-energized and secured against re-energizing, in agreement with the owners or operators of the lines. Observe the indications in fig. P.

FIG. T

FIG. G: During assembly of the mobile working scaffold, it must be ensured that the base deck is vertical to the ground (measurement can be made with a spirit level). Before use, check that the scaffold has been assembled in accordance with the manufacturer's instructions, which are intended to ensure that it is used in accordance with the regulations.

FIG. H

FIG. H: It is not permitted to support and use lifting devices. In addition, no horizontal loads must be generated that could cause the scaffold to tip over. The lifting of materials and tools to the working platforms must be carried out from inside the scaffold, from floor to floor, through the access hatches, using ropes of adequate size that are manually tensioned. When this is not possible, lifting can be carried out from outside the scaffold, using ropes of suitable size and manual traction, for loads not exceeding 50 kg and lifted in a vertical direction parallel to the scaffold and at a distance from the scaffold such that it remains within the area occupied by the outriggers.

FIG. I

FIG. I: It is not permitted to make bridge connections between a mobile working tower and a building or other structure that is not part of the mobile working scaffold.

FIG. L

FIG. L: Before use, it must be ensured that all safety measures have been taken to prevent accidental displacement, by using the appropriate wheel brakes and, if necessary, by using adjustable bases.

FIG. M

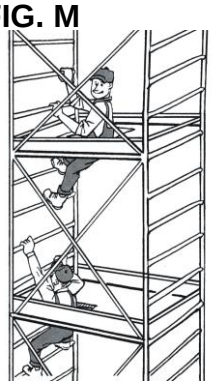


FIG. M: It is not permitted to access or descend from the surface of the deck using accesses other than those provided:

- Vertical rung ladder (in this case, the load-bearing side panels act as a ladder themselves, as the stringers have a non-slip surface and are set at a distance of 280mm)
- Inclined step ladder

In any case, the operator must always climb up and down inside the scaffold. For the safe assembly and disassembly of the mobile working scaffold, the use of a safety belt with fall arrest device is mandatory.

FIG. N

FIG. N: It is forbidden to jump on the decks or to load loads or persons onto them that are heavier than the load capacity declared by the manufacturer. It is not permitted to increase the height of decks by the use of ladders, crates or other devices and no screens of any kind, such as trellises, tarpaulins or other, may be fitted.

FIG. O

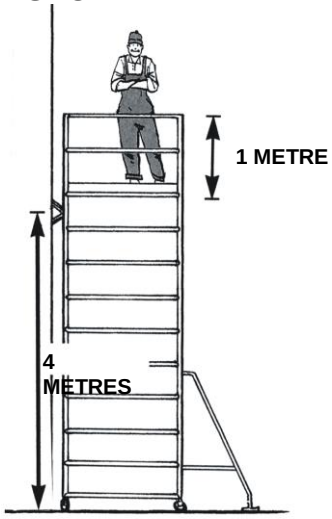


FIG. O: According to UNI EN 1004, the maximum heights for mobile working scaffolds are limited to 8m outdoors and 12m in rooms that are enclosed on all sides. **However, it is advisable, regardless of the height specifications in this manual, to anchor mobile working scaffolds securely to the building at four-metre intervals wherever possible, both outside and inside buildings.** When used outdoors or in open buildings, the scaffold must be moved to a wind-protected area or dismantled or protected against tipping over by other suitable measures (e.g. anchors) after completion of the work or in special weather conditions. The anchoring forces must be applied to the crossbeams next to the frame nodes. Only components supplied by the manufacturer should be used as anchoring elements (refer to the instructions in this manual for their correct arrangement).

FIG. P

If electrical equipment with a mains connection is used on the mobile working scaffold, the applicable regulations must be observed.
Work with the mobile scaffold must not be carried out on or in the vicinity of unprotected live equipment if:

- Power has not been disconnected on the plant side;
- The part of the plant was not ensured against re-ignition;
- It has not been verified that the plant part is de-energized;
- The part of the installation has not been short-circuited by a ground rod;
- The part of the system is not separated from neighbouring live parts.

N.B.:

THE MAXIMUM HORIZONTAL LOAD THAT CAN BE APPLIED, FOR EXAMPLE AS A RESULT OF WORK BEING CARRIED OUT ON AN ADJACENT STRUCTURE, IS 25KG, WHICH IS THE SUM OF THE LOADS APPLIED BY THE VARIOUS OPERATORS ON THE

Chapter 3 - LIMITS OF USE

3.1. Access to work platforms

Access to the working surfaces may only be from inside the scaffold, using the vertical ladder, which is made up of the crosspieces of the side frames of the scaffold structure itself.

3.2. Class, capacity

Use of the TSA 320 is limited to one operator.
The total permissible load on the work surface is therefore 150 kg.

3.3. Maximum heights in different configurations

The maximum height of the working surface without the use of bracing is, for all TSA 320 scaffold models, 3.8m.
The maximum working surface height with the use of bracing is, for all TSA 320 scaffold models, 4.4m.

3.4. Wind limits

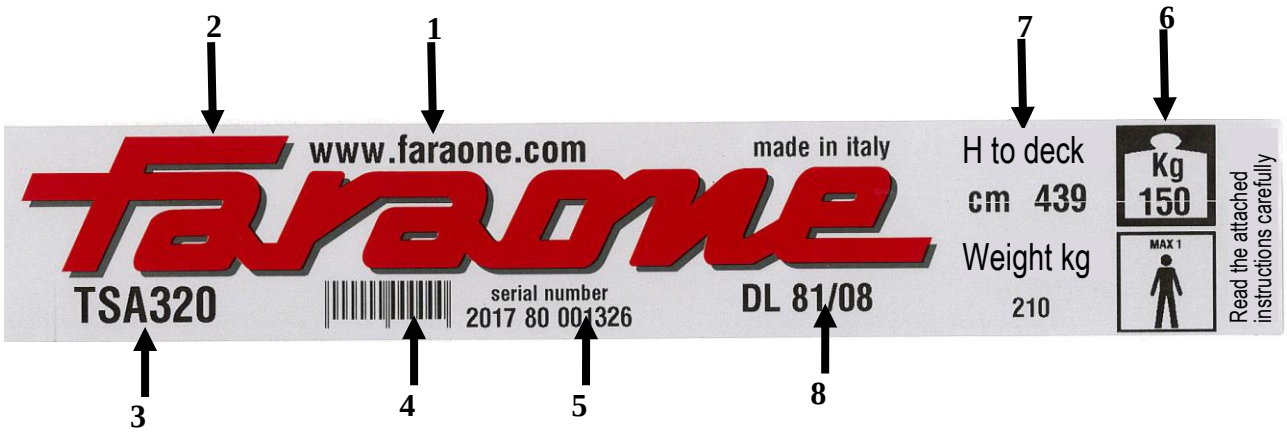
Mobile working platforms must only be erected and used when there is no wind. Special attention should also be paid to the wind tunnel effect when the mobile scaffold is located inside buildings under construction. In the event of wind, the scaffold, whether in working order or not, must be dismantled (or in any case lowered to a height that prevents it from tipping over) or anchored securely to a stable fixed structure.

Chapter 4 - IDENTIFICATION

4.1. Identification points

Each TSA 320 mobile scaffold is identified by an adhesive label bearing the following information:

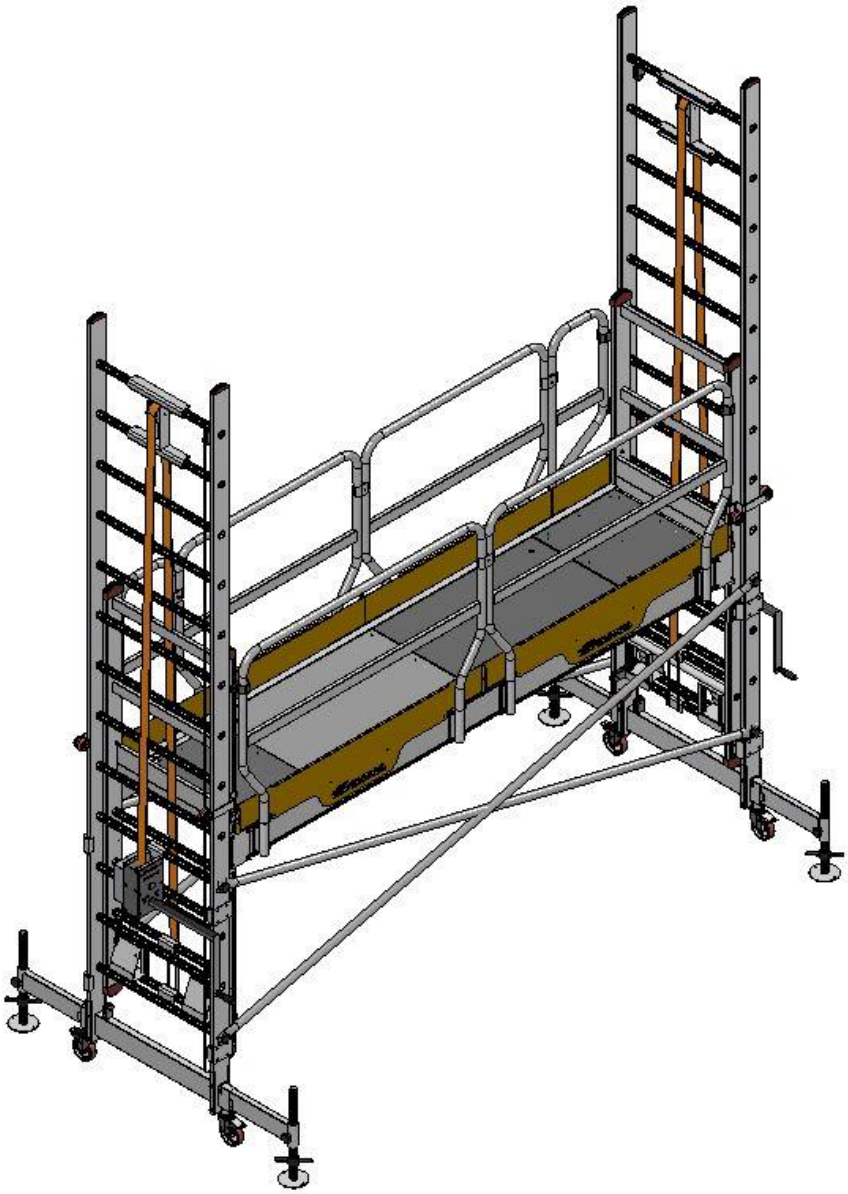
- Manufacturer's website (1)
- Manufacturer's logo (2)
- Article code (3)
- Article barcode (4)
- Serial number (5)
- Maximum capacity (6)
- Maximum height (7)
- Normative reference (8)



Chapter 5 - MOUNTING CONFIGURATIONS

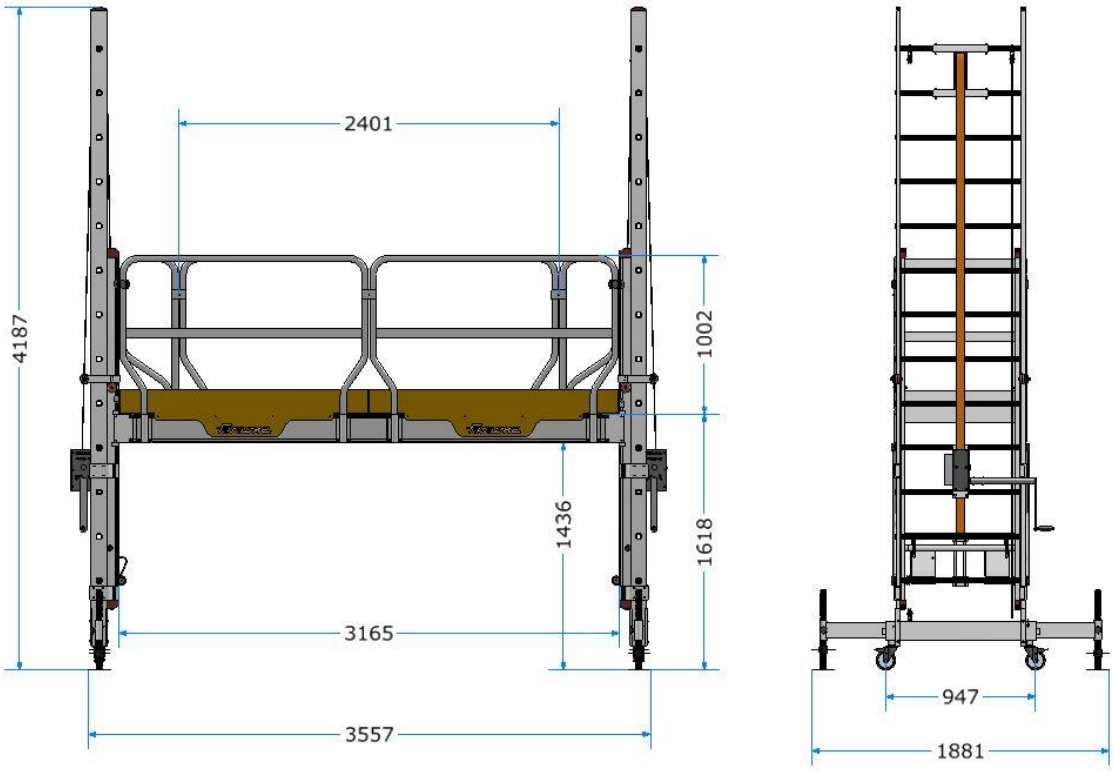
5.1. Description of the system

The TSA 320 mobile scaffold is a wheeled tower scaffold system, used only for finishing, maintenance or similar work. The system consists of two side towers on wheels, which have a hand-operated winch, by means of which it is possible to move the central work deck (ascent/descent).



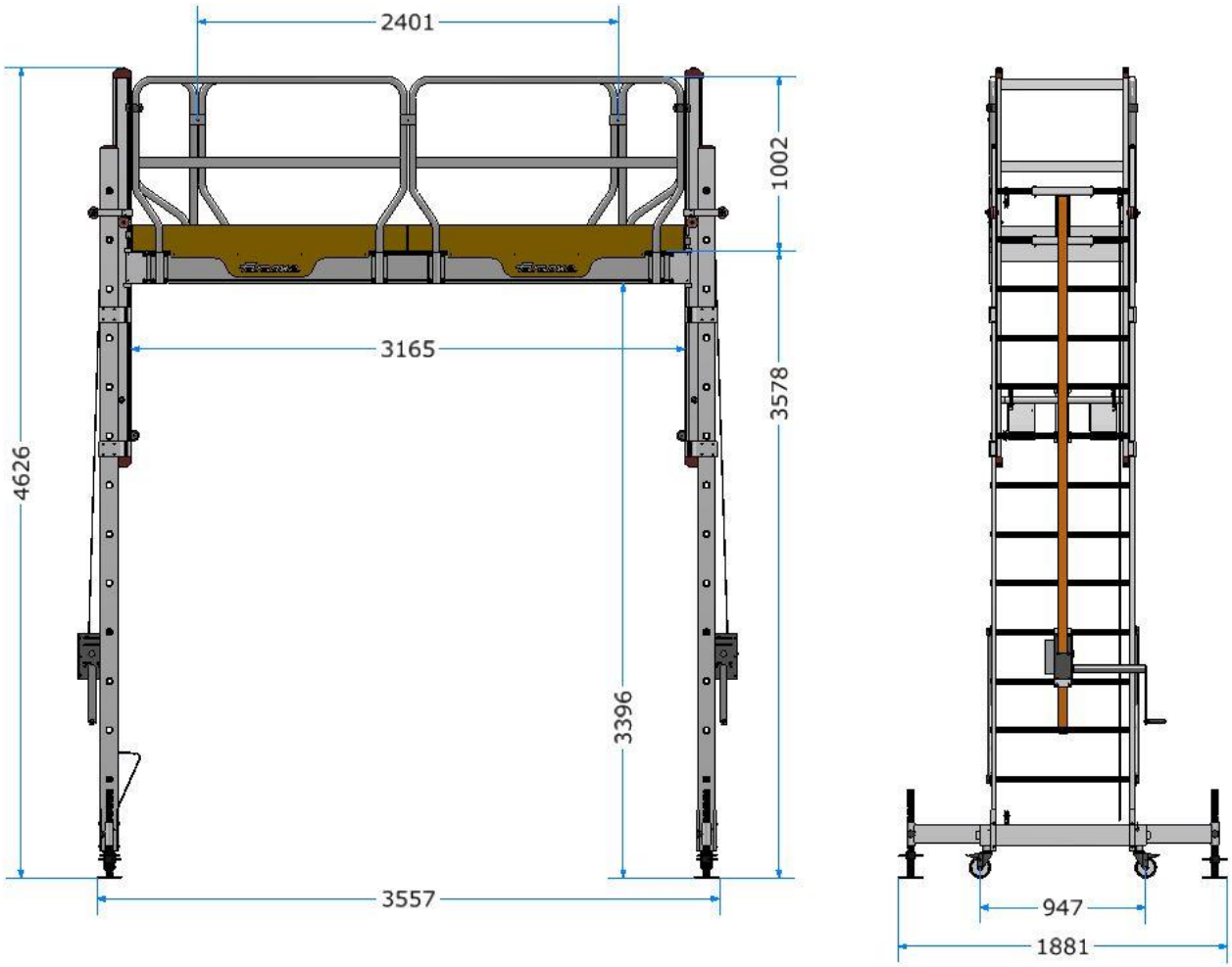
5.2. FRAMEWORK OF MODELS

Working position 1: minimum height attainable by the operator



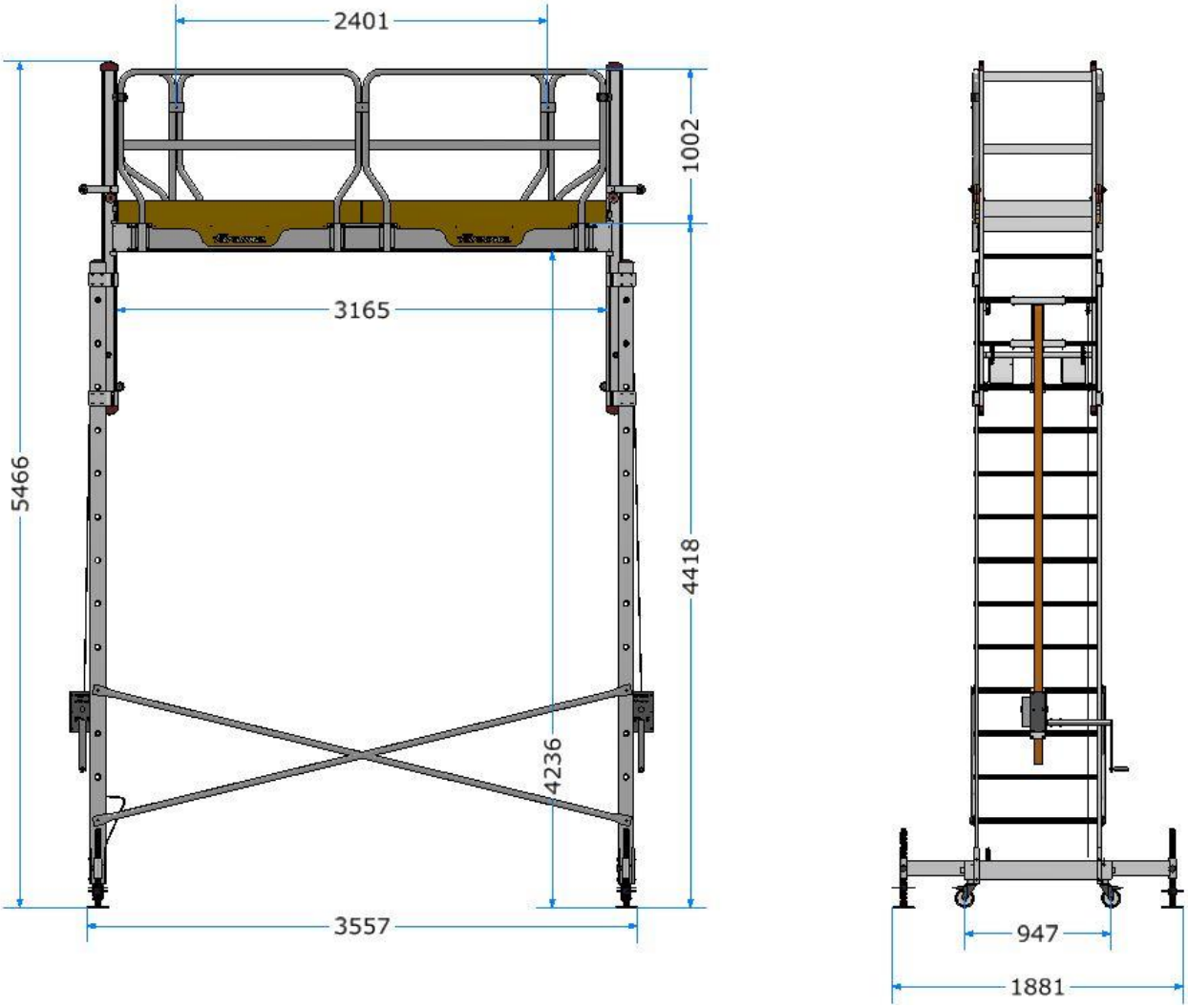
REFERENCES	DIMENSIONS [mm]
SUB-DECK HEIGHT	1436
WORK DECK HEIGHT	1618
SIDE HEIGHT	4187
DECK LENGTH	3155
OVERALL DIMENSIONS ON THE GROUND	3557x1881

Working position 2: maximum height attainable by the operator without bracing



REFERENCES	DIMENSIONS [mm]
SUB-DECK HEIGHT	3396
WORK DECK HEIGHT	3578
SIDE HEIGHT	4626
DECK LENGTH	3155
OVERALL DIMENSIONS ON THE GROUND	3557x1881

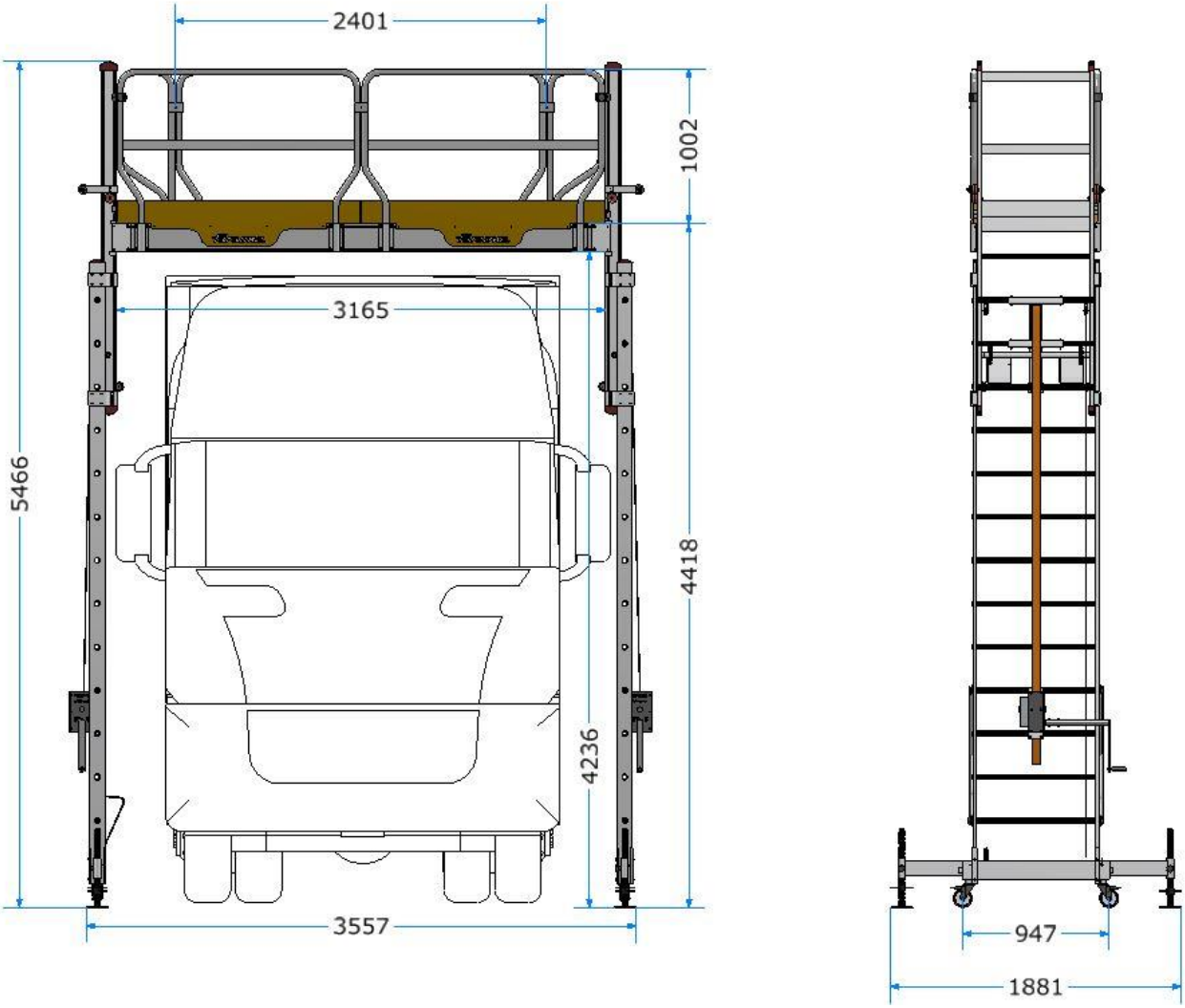
Working position 3: maximum height attainable by the operator with bracing.



REFERENCES	DIMENSIONS [mm]
SUB-DECK HEIGHT	4236
WORK DECK HEIGHT	4418
SIDE HEIGHT	5466
DECK LENGTH	3155
OVERALL DIMENSIONS ON THE GROUND	3557x1881

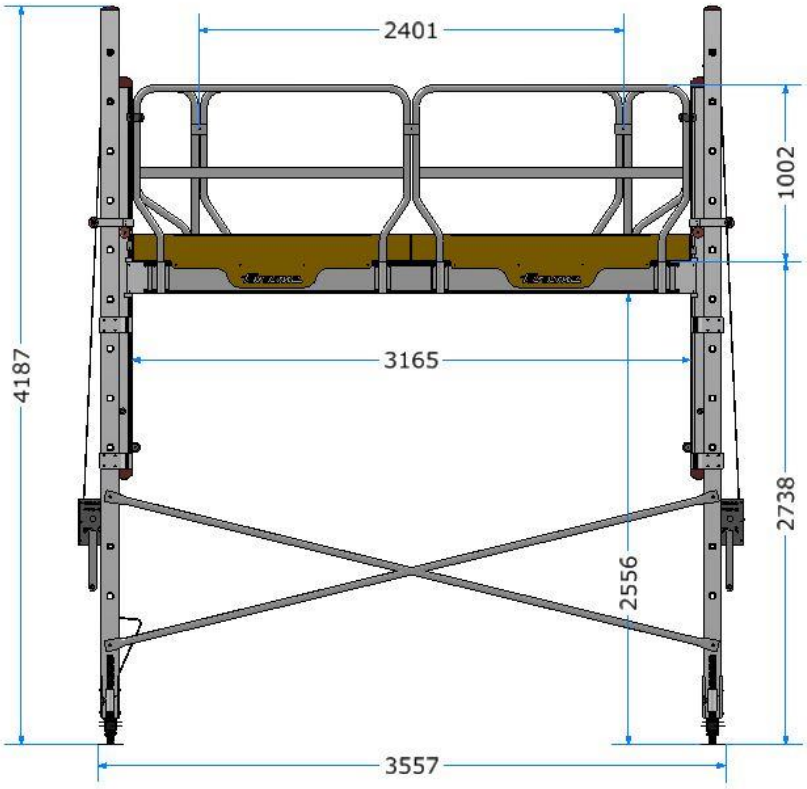
Working position 4: maximum free height for climbing over the vehicle.

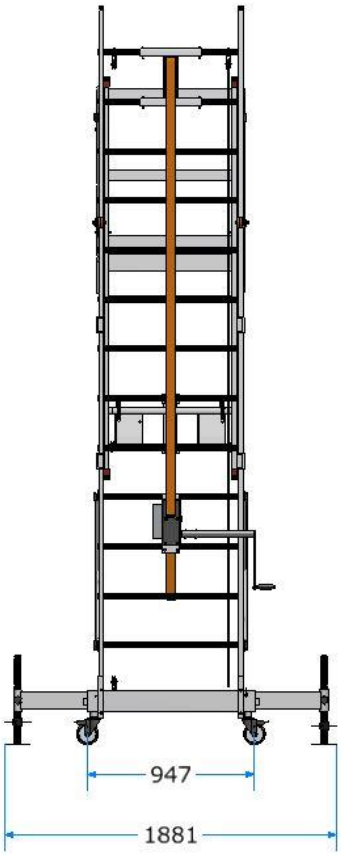
The use of the mobile scaffold is prohibited in this position.



REFERENCES	DIMENSIONS [mm]
SUB-DECK HEIGHT	4236
SIDE HEIGHT	5466
DECK LENGTH	3155
OVERALL DIMENSIONS ON THE GROUND	3557x1881
LANDING WIDTH	2401

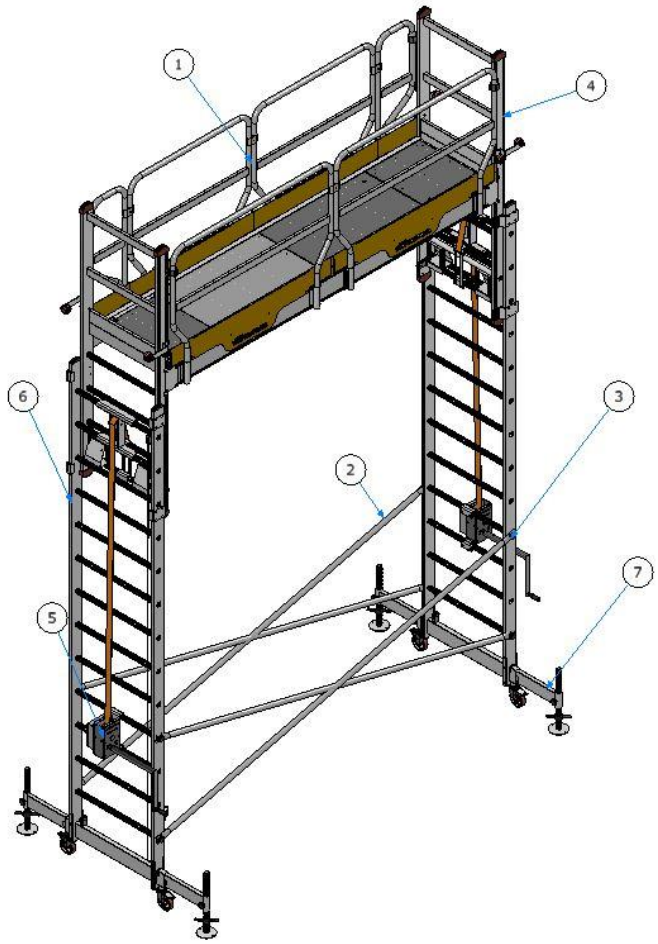
Working position 5: height within which bracing is required for working operations, when the scaffold is used at the side of the vehicle.





REFERENCES	DIMENSIONS [mm]
SUB-DECK HEIGHT	2556
WORK DECK HEIGHT	2738
SIDE HEIGHT	4187
DECK LENGTH	3155
OVERALL DIMENSIONS ON THE GROUND	3557x1881
LANDING WIDTH	2401

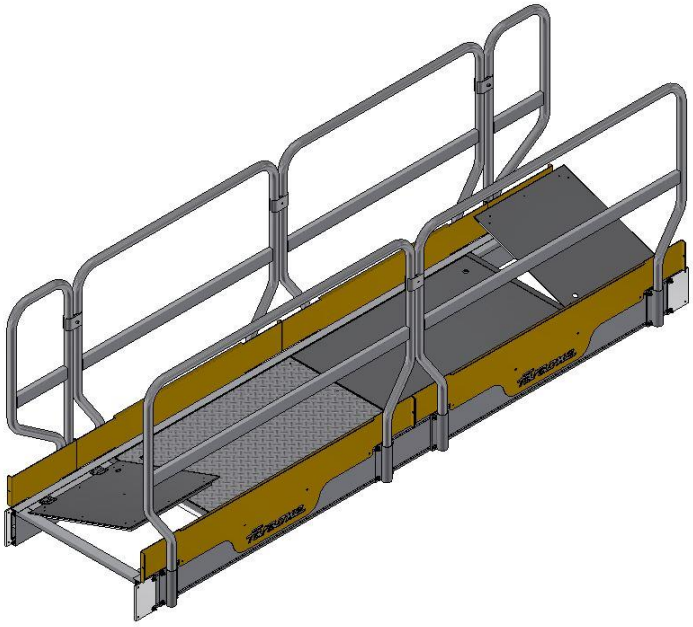
5.3. COMPONENT ELEMENTS: TSA 320



PARTS LIST	
ELEMENT	PART NUMBER
1	WORK DECK WITH RAILINGS
2	BRACINGS
3	KNOBS
4	SLIDING CROSSBARS
5	WINCH
6	FIXED LADDER ON REMOVABLE BASE
7	OUTRIGGER BASES

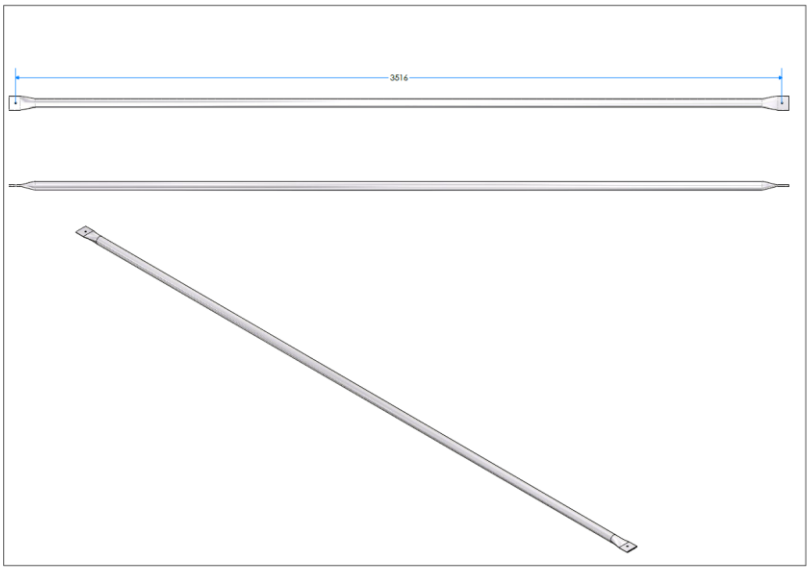
5.3.1. Work deck with railings

The work deck consists of a rigid aluminium frame with non-slip, diamond plates on top, each of which can act as a hatch.
Lateral protection is provided by the ratings, which are attached by means of plates on the sides of the work surface and the side panels.
The railings provide both upper and intermediate protection according to the heights laid down in the reference standard.



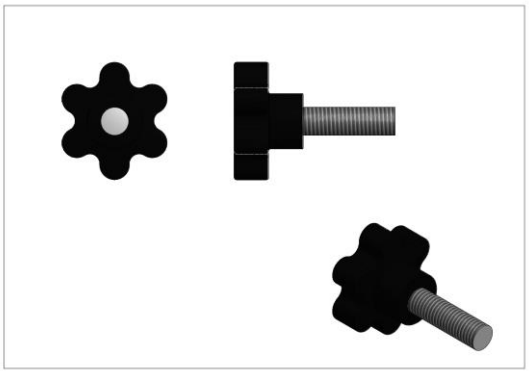
5.3.2. Bracings

These devices increase the stability of the mobile scaffold in the case of a considerable working height. Bracings must be fitted if the working deck is higher than 3546 mm above the ground (see working position 2).
Bracings must be mounted if work is being performed on one side of the scaffold, from a height above the ground of 2706 mm on up (see working position 5).



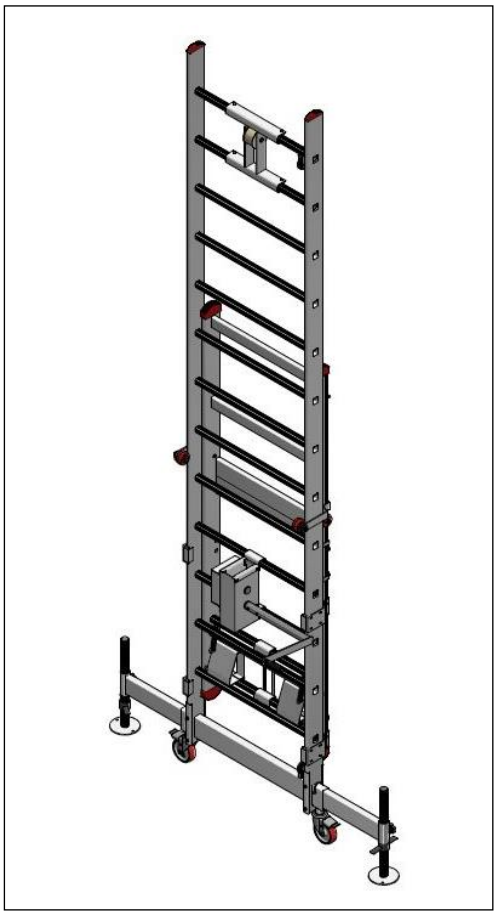
5.3.3. Knobs

The knobs will be used to fix the diagonal crossbars and stabilising feet once they are level.

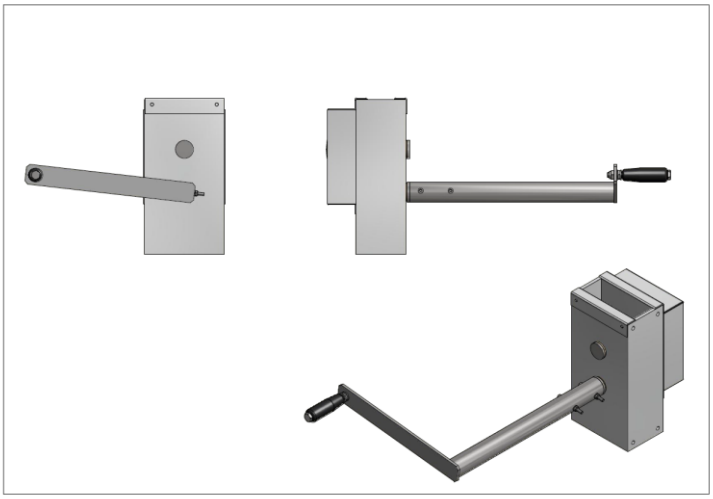


5.3.4. Sliding upright and fixed ladder

Ladder sliding system, anchored to the work deck and moved by means of a manually operated winch to move the work deck up or down.
The sliding column is equipped with an auto-locking system for height adjustment of the work deck.

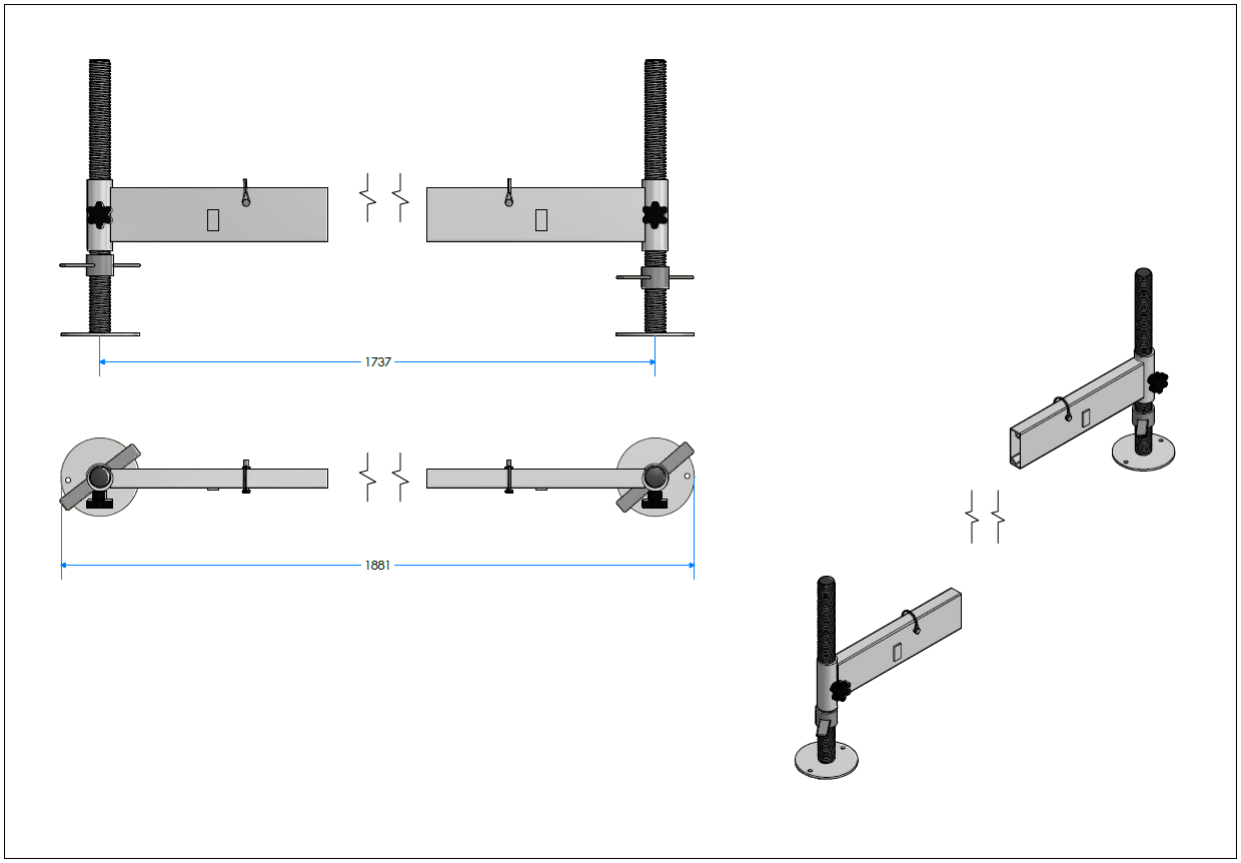


5.3.5. Winch

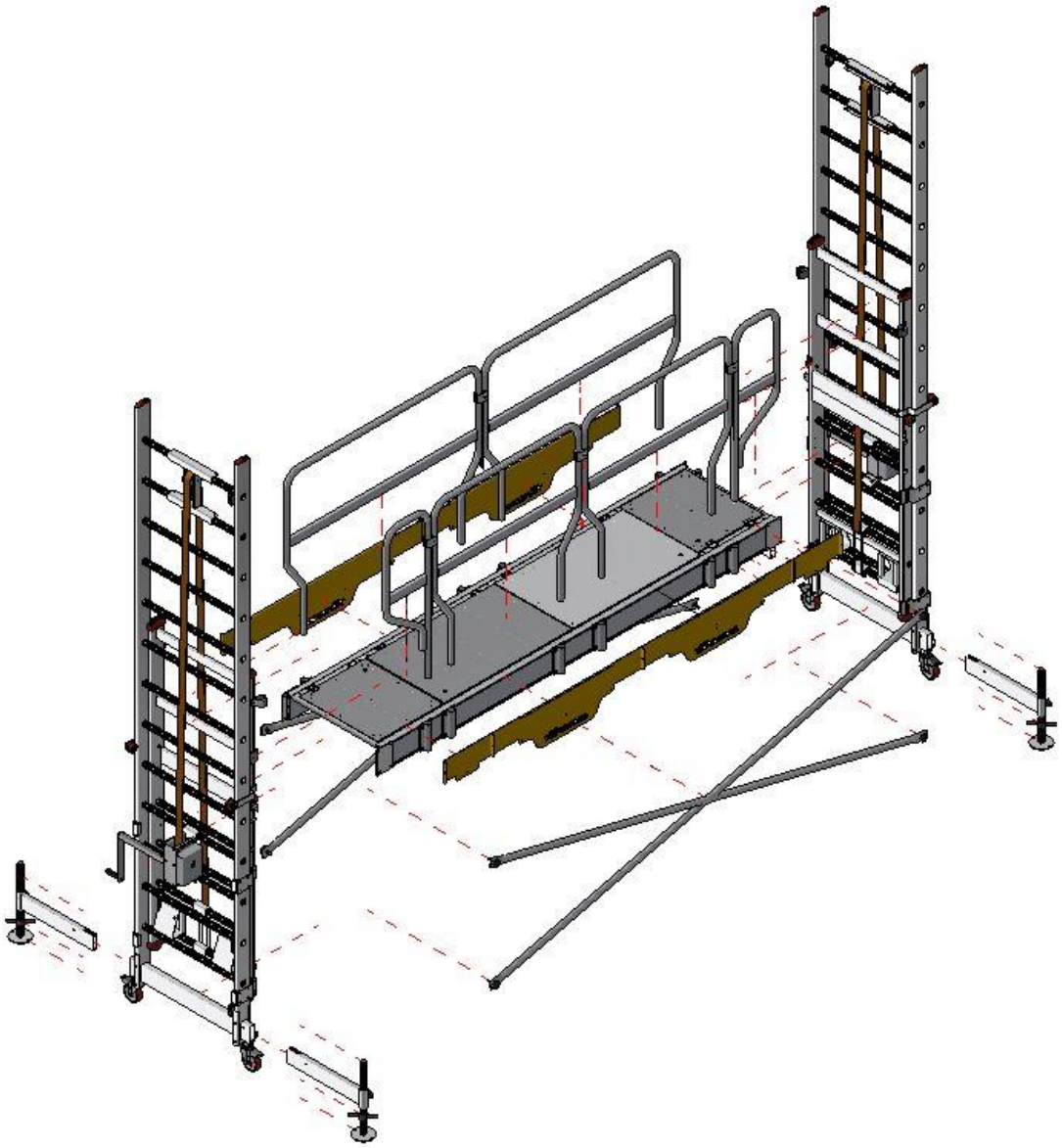


5.3.6. Outriggers

The outrigger is the element that ensures the stability of the mobile scaffold during its operation.



Chapter 6 - ASSEMBLY, DISASSEMBLY AND MAINTENANCE



6.1. General information

The erection of a mobile working scaffold may only be carried out if the safety instructions in Chapter 2 "Safety instructions" have been read through completely and understood. Therefore, first observe Chapter 2 and only then continue with the following instructions;

a) **Scaffolds must be assembled, dismantled or altered under the supervision of a person in charge and by workers who have received appropriate training for the operations envisaged;**
b) At least two people are always required for the assembly and dismantling of the mobile working scaffold and it is essential that they are familiar with the assembly instructions and operating limits;
c) During the assembly or disassembly of the mobile scaffold from a height of 2.00 m above the ground, work platforms or scaffold planks of a size suitable for the dimensions of the deck must be installed over the entire surface, to be used as a support surface for the assembly personnel;
d) **Depending on the height to be achieved, one of the configurations given in Chapter 5 will be chosen, where the weight of the structure and the quantity of the elements required for assembly are also given. DO NOT USE THE MOBILE SCAFFOLD WITH AN ASSEMBLY CONFIGURATION OTHER THAN THOSE INDICATED IN THIS MANUAL, IN ORDER NOT TO REDUCE THE STABILITY OF THE SCAFFOLD, WHETHER IN WORKING OR NON-WORKING CONDITIONS**;
e) Railings, horizontal and diagonal beams are secured by means of quick-release fasteners that snap into place during assembly and are therefore automatically secured against accidental opening. To open the quick-release fasteners, the retaining bracket must be pressed against the resistance of the existing spring;
f) During assembly work it must be ensured that the diagonal beams are always inserted from above next to the side members, and the guardrails on the longitudinal side of the upper work platform must be fixed laterally to the respective side panel uprights from the inside to the outside;
g) The components of the mobile scaffold must be transported vertically (during assembly or dismantling) using ropes or other suitable means, taking care never to lift more than one component at a time and in any case avoiding sudden impacts of the components with the ground;
h) All decks on the mobile scaffold, positioned in accordance with the instructions in Chapter 5, even if they are used as walkways and not as working decks, must be fitted with side protection (guardrails) and footboards.

6.2. Preliminary verifications

a) The surface on which the mobile working scaffold is mounted and moved must be able to bear the weight of the scaffold and must be levelled to ensure that the load is evenly distributed (check the tables on the weight of the structure and the maximum load on the work platform to determine the total weight that is unloaded onto the ground);
b) The absence of any kind of obstacle must be ensured;
c) Mounting operations can only begin when there is no wind;
d) It must be verified that all components, any accessories, tools and safety equipment for erecting the scaffold are available on site.

6.3. Product-specific assembly instructions

1)Insert the outrigger bases into the two guide bases as far as they will go on both sides (Fig.1).

Fig.1: Insertion of outrigger bases

2) Secure the outrigger bases with the clamping pin (Fig.2).

Fig.2: Locking of outrigger bases

3) Raise the work surface approximately 140 cm above the ground using a mechanical lifting device (Fig.3).

4) Align both side panels with the sides of the work deck, so that the work deck can be inserted and mounted by means of the fixing plates (Fig.3,4,5).

Fig.3: Inserting the deck between the two sides

Fig.4: Deck assembly

Fig.5: Deck attachment plate detail

5) Mount the foot board strips (Fig.5a) on the side uprights using the appropriate

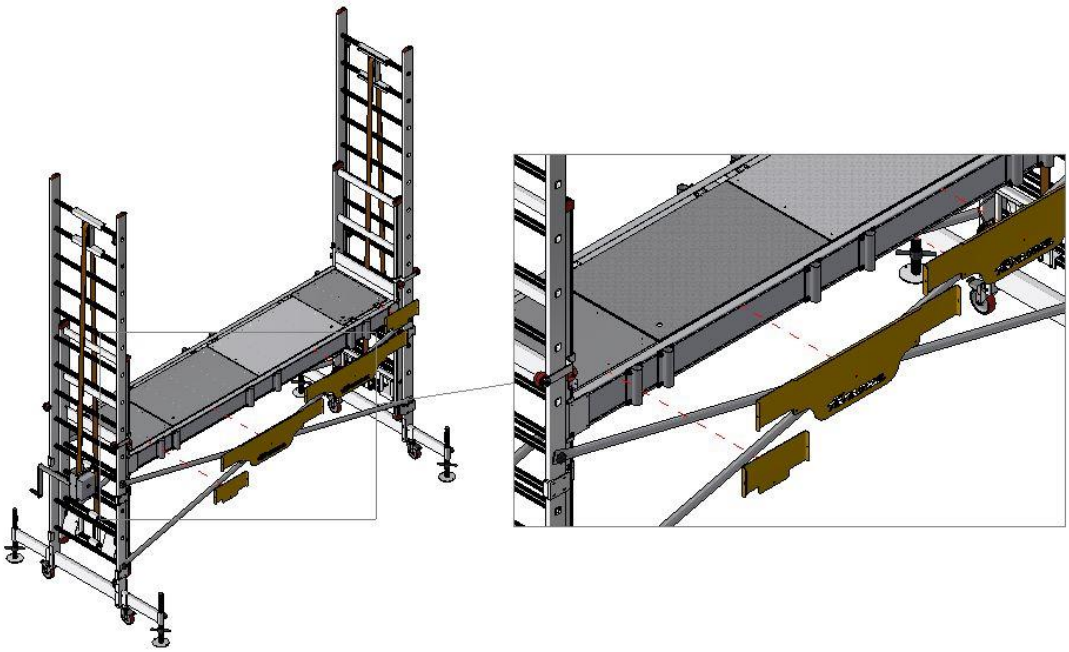
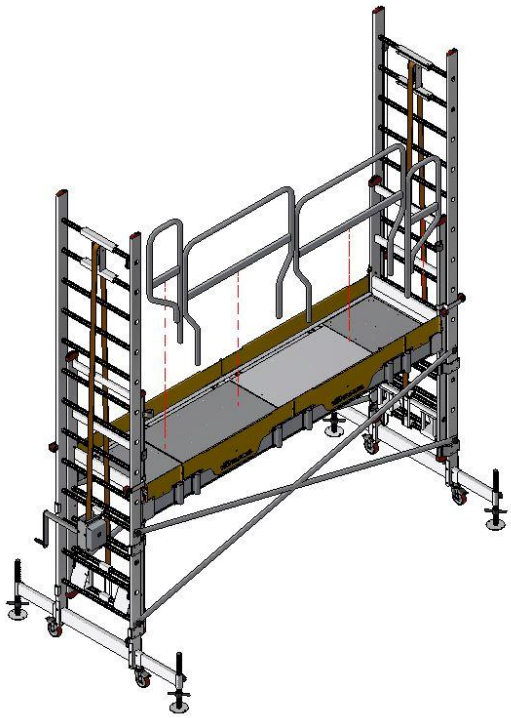


Fig.5a: Mounting of foot board strips on the deck



When mounting the railings (Fig.5b), use the fixing ties for correct positioning on the deck uprights; then fix the railings one to another with the appropriate ties (Fig.6) and to the uprights of the vertical ladders (Fig.7)

Fig.5b : Mounting the railings on the deck

Fig.6: Detail of coupling hook to side crossbars

Fig.7: Installation of railings between two consecutive railings

6) Mount the diagonal crossbars as required, using the fixing knobs (Fig.8).

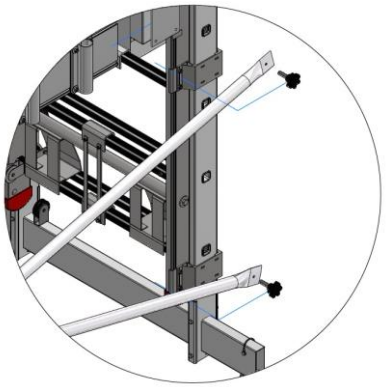


Fig.8: Assembly of crossbars

7) Level and secure the feet of the outrigger base by means of the fixing knobs (Fig.9), lock the wheels by means of the brake (Fig.10).

WARNING: Levelling must be carried out with the utmost care as any small deviations of the floor could lead to considerable vertical deviations.

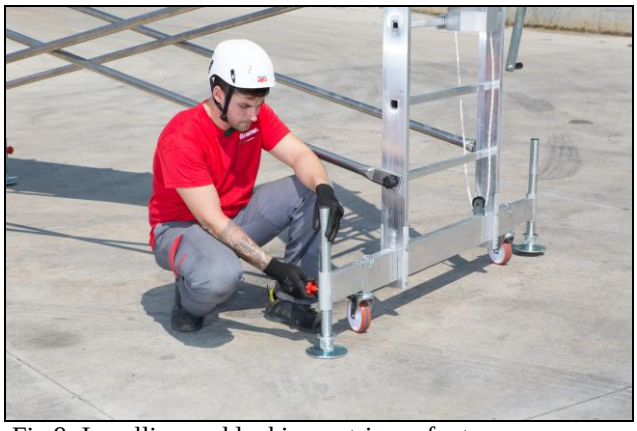


Fig.9: Levelling and locking outrigger foot

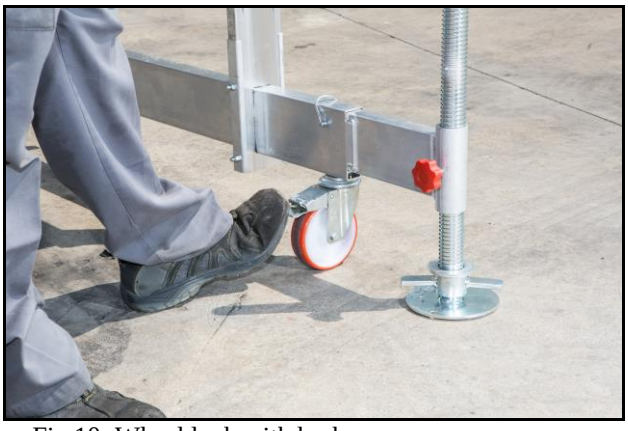


Fig.10: Wheel lock with brake

WARNINGS:

- Before using the mobile scaffold, check that all connections have been made correctly;
- Remove all assembly devices from the mobile scaffold that are not part of the structure (e.g. system shelves, scaffold planks, various tools and others);
- After assembly, mobile scaffold can be moved to its future location. When moving the mobile scaffold, raise the outriggers off the ground (by a maximum of 20 mm), release the brake levers and move the mobile scaffold to the desired location in accordance with the "Safety Instructions" in Chapter 2.
  After reaching the place of use, lock the wheels by applying the brake levers and restore contact of the outrigger feet with the ground. If necessary, adjust the outrigger feet until the mobile scaffold is in a horizontal position.

6.4. Use

Step 1

Place the mobile scaffold in the working area after assembly.

Step 2

The work deck is raised using the lifting winch by turning the lever clockwise as shown, until the desired height is reached (Fig.11).

Ensure that the locking device has passed the reference peg, then turn the winch lever anti-clockwise to allow the device to operate (Fig.12).

Fig.11: Lifting the work surface

Fig.12: Locking device

N.B. : THE WORK DECK LIFTING OPERATION MUST BE CARRIED OUT BY TWO PERSONS WORKING SIMULTANEOUSLY ON BOTH SIDES, TRYING TO KEEP THE ROTATION SPEED EQUAL AND AS CONSTANT AS POSSIBLE ON BOTH WINCHES.

Step 3
The operator climbs onto the work deck.
Access to the work deck is gained by climbing up the sides of the mobile scaffold underneath the deck itself via the access hatches (Fig.13).

Fig.13: Access to the work deck

N.B. : ACCESS TO THE DECK IS ONLY ALLOWED
WHEN THE LOCKING DEVICE HAS GONE OVER THE RUNGS ON BOTH SIDES OF THE SCAFFOLD.

6.5. Removal

The mobile scaffold must be dismantled in the reverse order of assembly. During disassembly, it must be ensured that work platforms or scaffold planks of a suitable size for the size of the deck must first be installed over the entire platform again, which are required as a support platform for the assembly personnel.

6.6. Verification, care and maintenance

a) After a certain number of uses at the operator's discretion, remove any deposits of mortar, cement, paint, etc. that may be present on the various components;
b) Cleaning can be carried out with water and commercially available detergent. In case of soiling with varnish, this can be removed with turpentine (N.B.: Cleaning agents must not penetrate into the ground, cleaning liquids used must be disposed of in accordance with environmental protection regulations);
c) Lubricate all moving parts (threaded rod, wheel bearing, quick-release devices) with commercially available oil. Use fluid oil for winter use. Dispose of excess oil, the oil must not reach the platforms, in order to avoid the danger of the scaffold operator slipping (dispose of oil-soaked cloths in accordance with environmental protection regulations);
d) Before each assembly, check that the components are in perfect condition, replacing any damaged or deteriorated ones with others of the same type, absolutely original, as indicated by the manufacturer:
    a. Examine the side panels for deformation, crushing and cracking. In the event of a defect, the side panel must not be used;
    b. Examine the diagonals and crossbeams for deformation, crushing and cracks and check the functioning of the quick-release fasteners. In the event of a defect, the diagonal/crossbeam must not be used;
    c. Examine the railings for deformation, crushing and cracking and check the function of the quick-release fasteners. In the event of a defect, the guardrail must not be used;
    d. Examine the work platforms for deformation, crushing and cracks and check the function of the quick-release fasteners. In the event of a defect, the platform must not be used. Check the smoothness of the hatch, if fitted;
    e. Check the condition of the wood of the footboards. Examine the foot stop brackets for cracks. In the event of a defect, the bracket must not be used;
    f. Check the rolling capacity of the wheels, check the smoothness of the threaded rod and the function of the brake. In the event of a defect, the wheel must not be used
e) The mobile scaffold components must be stored in such a way that no damage can occur. The scaffold components must be stored in a place protected from atmospheric influences. Prefer horizontal storage. During transport to or from the storage location, the scaffold components must be secured against slipping, bumping and falling. The scaffold components must not be thrown away during loading.

6.7. Scaffolds and temporary works

Where work is carried out at a height of more than 2m, appropriate scaffolds or temporary works or other precautions must be taken as the work progresses in order to eliminate the dangers of falling persons and property. **The assembly and disassembly of temporary works must be carried out under the direct supervision of a person in charge of the work.**

6.8. Safety belts

During assembly and disassembly of the scaffold, the persons in charge must use a suitable safety belt with braces connected to a restraining rope that limits the free fall to no more than 0.7m. The restraint rope must be secured either directly or by means of a sliding loop along a rope stretched for this purpose to stable parts of the provisional structures used for assembly/disassembly of the scaffold, or to stable parts of the scaffold. The fall arrest device, the safety belt and the restraint rope must be of an approved type, and must have sections that can withstand the stresses resulting from a worker falling.

Chapter 7 - TSA 320 accessories

Additional accessories to the TSA 320 are listed in the following attachments:

Attachment 1: TSA 320.P pantograph

Attachment 2: Cantilever deck TSA 320.SB

Attachment 3: TSA 320.SP tipping deck

Attachment 4: TSA 320.AN anchoring system

Attachment 5: Access gate TSA 320.CN

Attachment 6: Cantilever deck cm 50 TSA 320.SB50

ATTACHMENT 1 TO THE USE AND MAINTENANCE INSTRUCTIONS

MOBILE SCAFFOLD TSA 320

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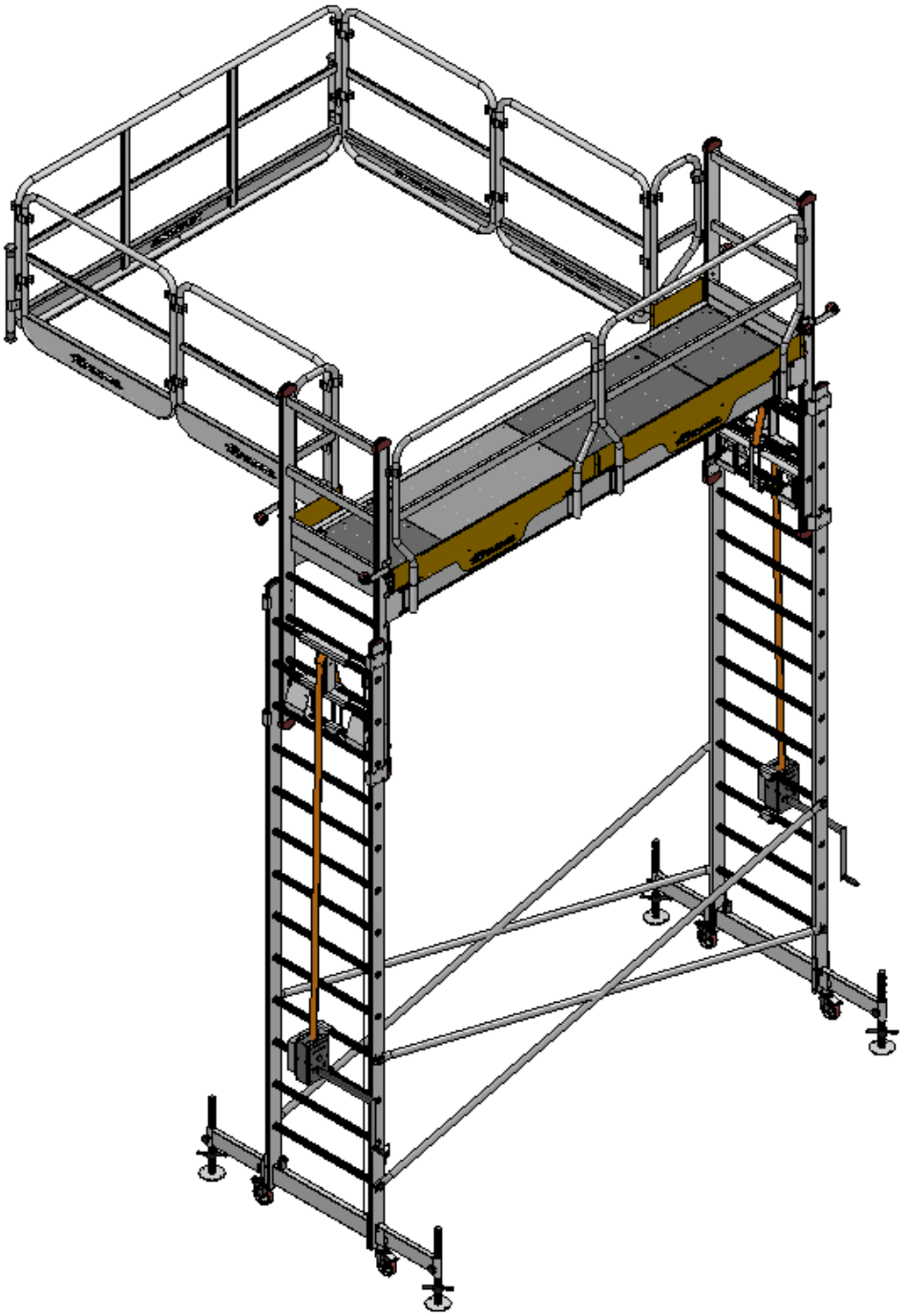
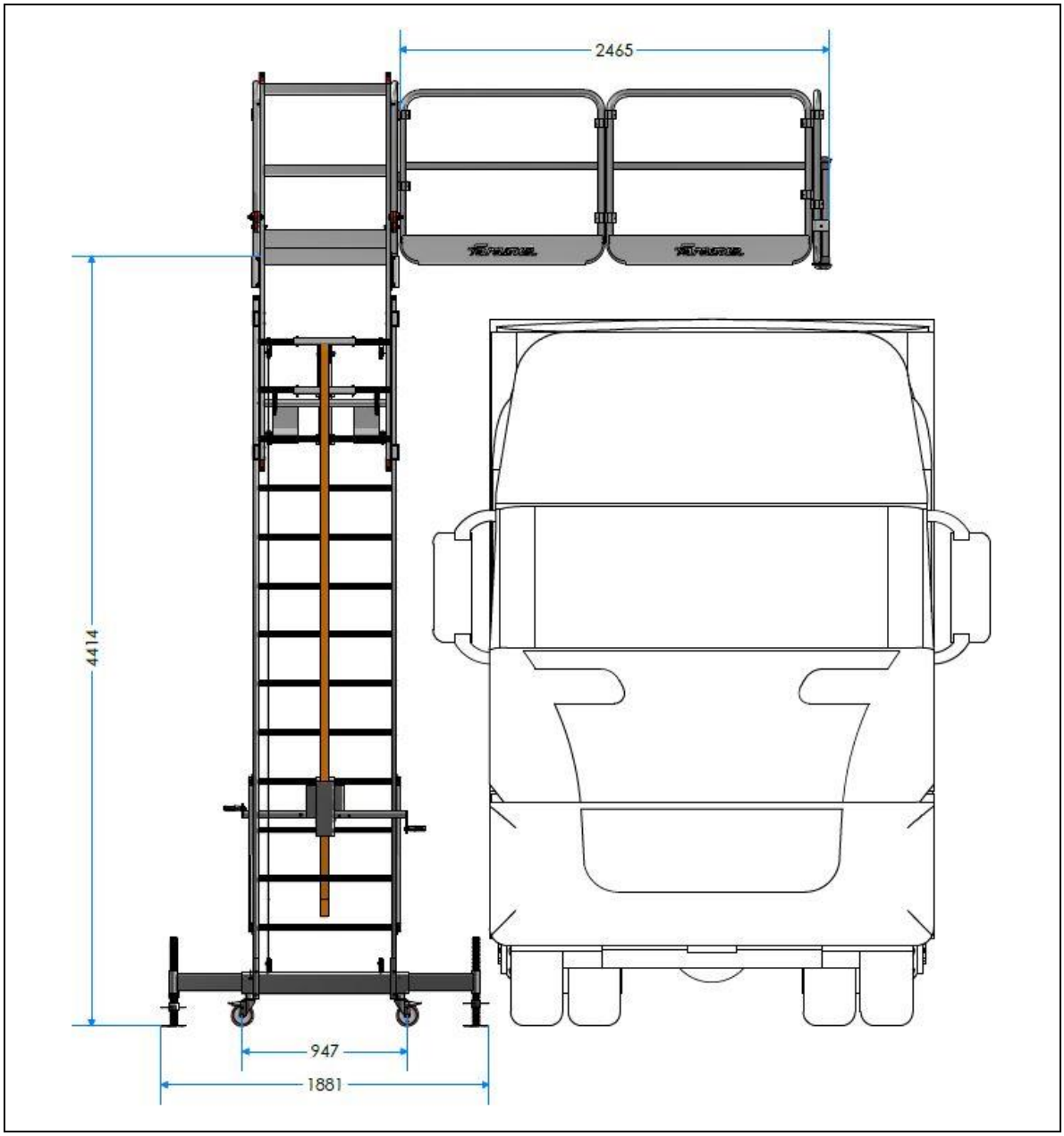
Annex 1 - Pantograph for TSA 320

The **TSA 320 MOBILE SCAFFOLD** can be equipped with a pantograph railing: **TSA 320.P.** It is a railing that can be attached to one side of the mobile scaffold and provides perimeter protection on top of the vehicle.



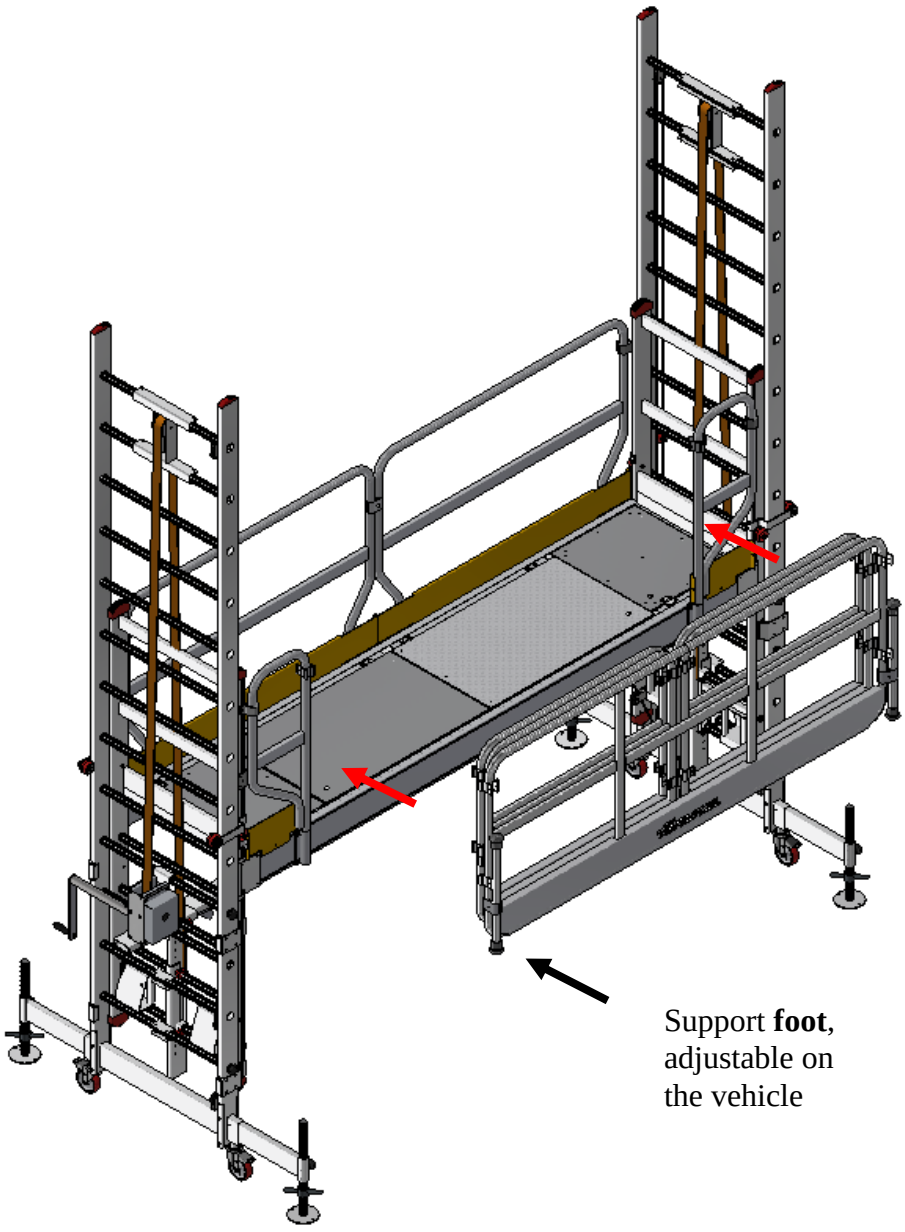
Working position



REFERENCES	DIMENSIONS [mm]
SUB-DECK HEIGHT	4234
WORK DECK HEIGHT	4414
LATERAL HEIGHT	5464
DECK LENGTH	3155
OVERALL DIMENSIONS ON THE GROUND	3557x1881
LANDING WIDTH	2401
PANTOGRAPH FOOTPRINT	2465X2500

Assembly Instructions TSA 320.P on TSA 320

The coupling between the TSA 320.P and the TSA 320 is carried out before lifting the deck, by hooking the couplings on the TSA 320.P to the tubes of the deck's railings.



Use

Step 1
Raise the deck in accordance with the instructions in the TSA 320 mobile scaffold use and maintenance manual (Section 6.4 Step 2) to the height where the vehicle can be supported.

Step 2
Climbing of the operator onto the work deck instructions given in the TSA 320 mobile scaffold use and maintenance manual (Section 6.4 Step 3).

Step 3
Position and adjust the support leg on the vehicle until contact is made between the two.

N.B. : THE TSA320.P TELESCOPIC RAILING CANNOT BE ATTACHED WITH THE MOBILE SCAFFOLD OVER THE VEHICLE.

ATTACHMENT 2 TO THE USE AND MAINTENANCE INSTRUCTIONS

MOBILE SCAFFOLD TSA 320

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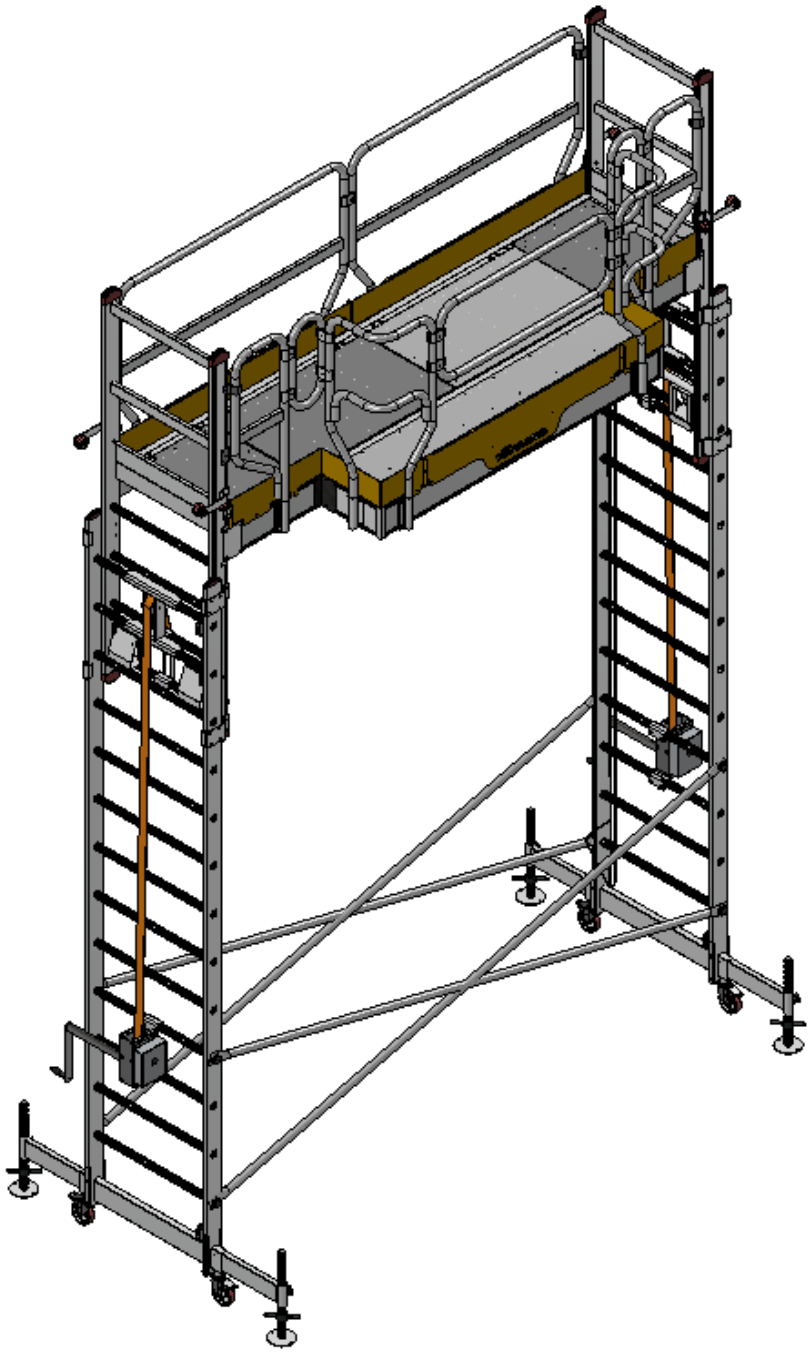
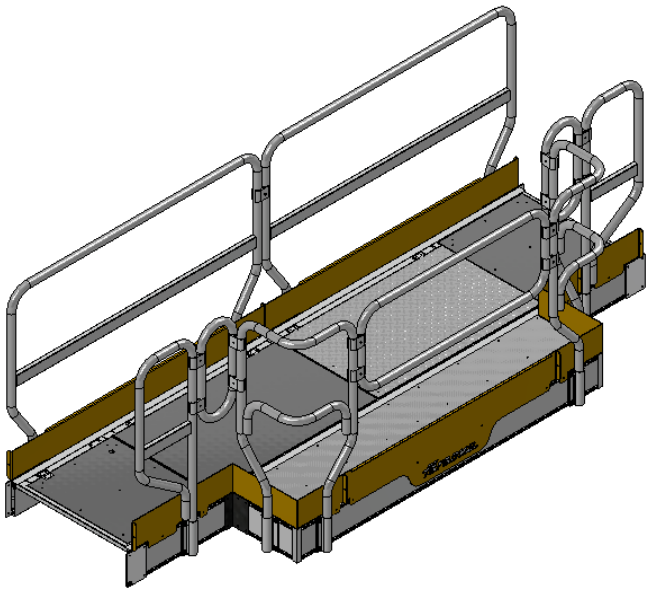
Attachment 2 - Cantilever deck for TSA 320

The **TSA 320 MOBILE SCAFFOLD** can be equipped with a cantilever deck**.**
It is an additional deck segment to the standard work deck and is supplied as an element already incorporated into the work deck.

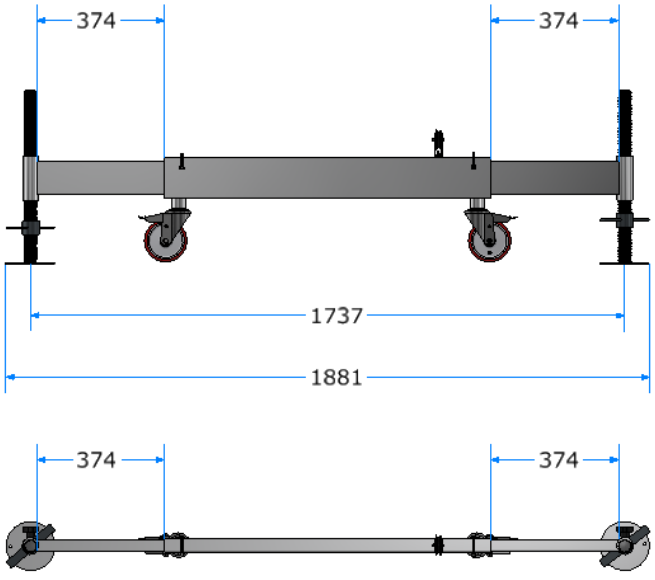


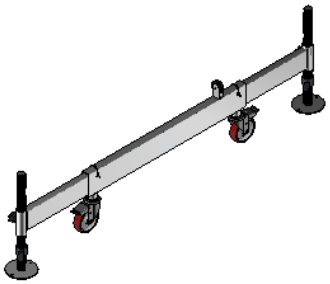
Substitute elements for TSA 320

1) Work deck with overhang



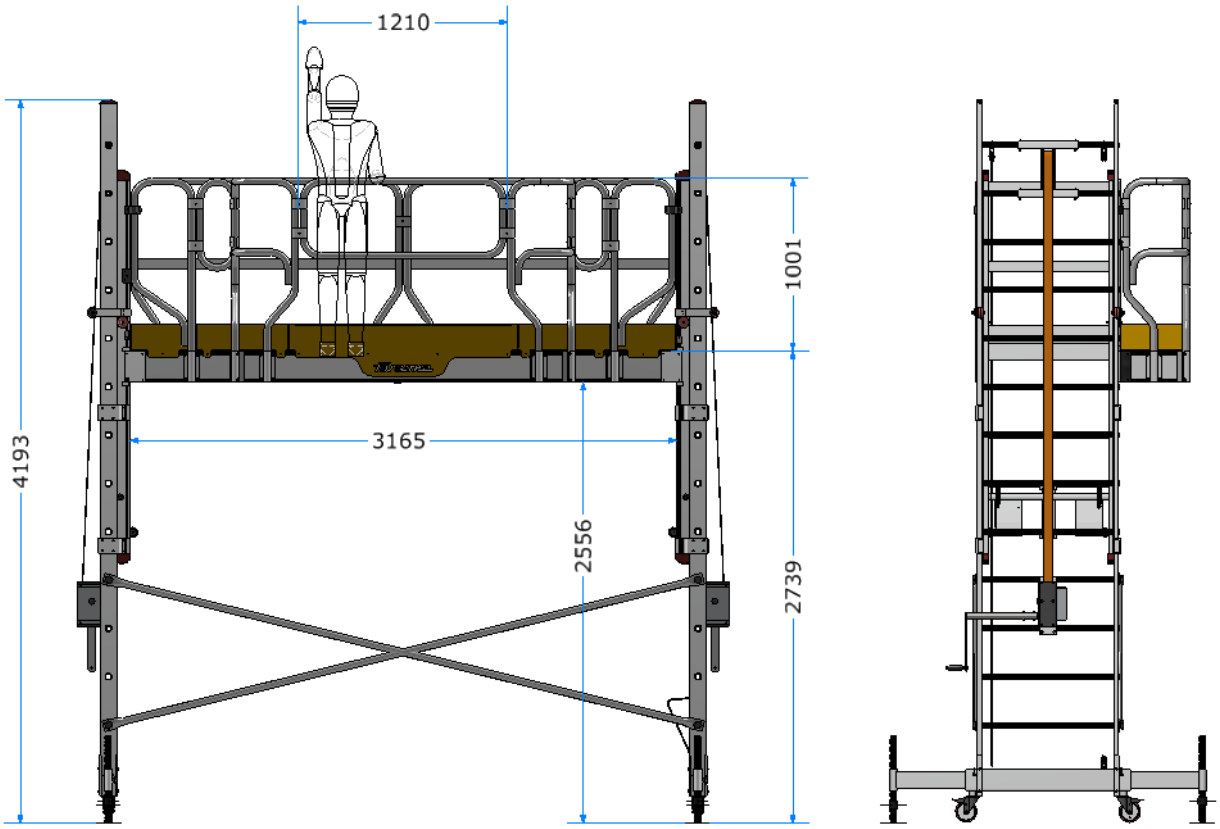
2)Outriggers





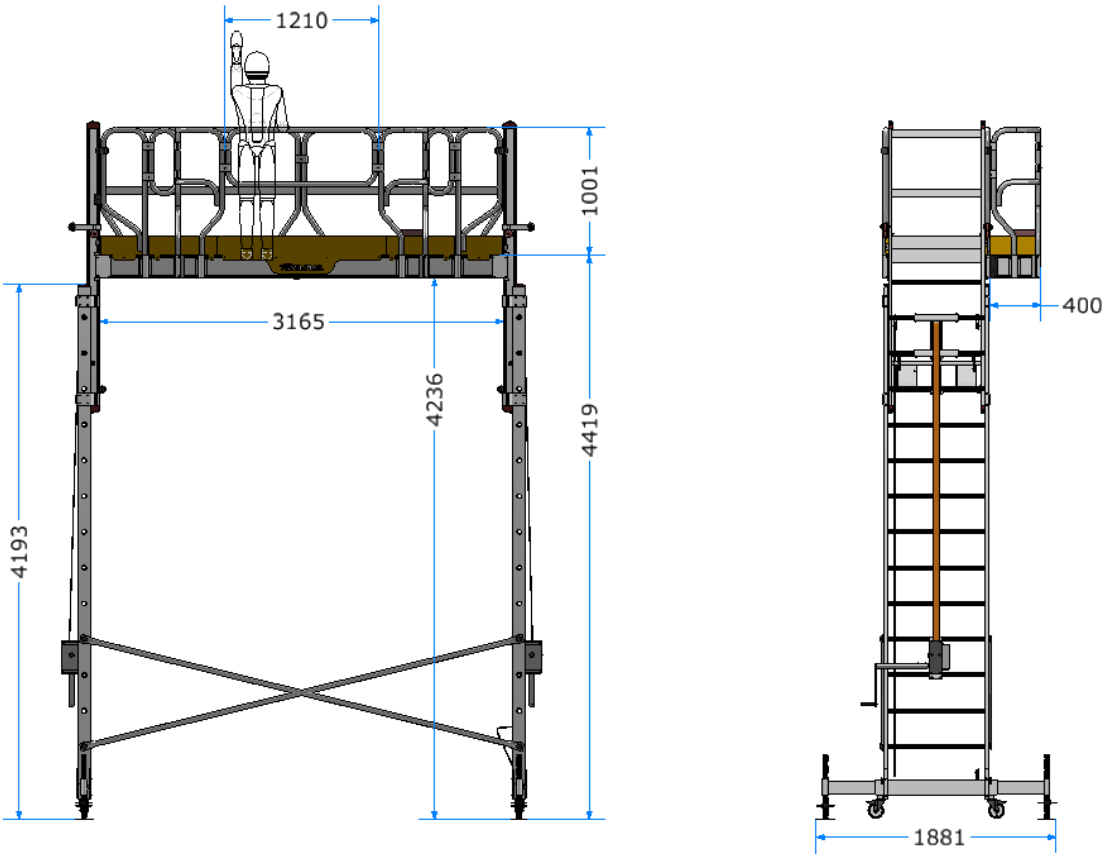
Working positions

Working position 1



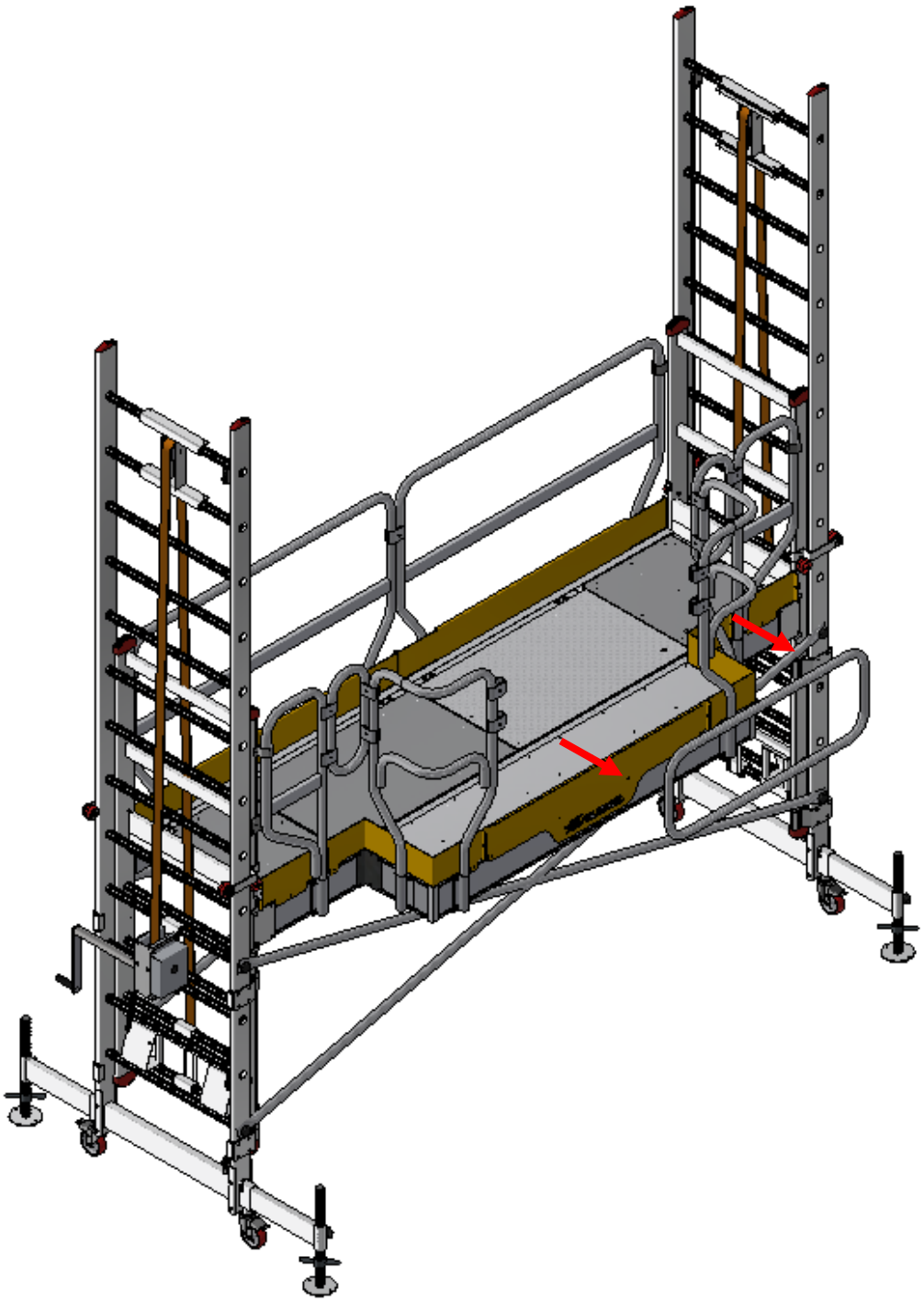
REFERENCES	DIMENSIONS [mm]
SUB-DECK HEIGHT	2556
WORK DECK HEIGHT	2739
SIDE HEIGHT	4193
DECK LENGTH	3155
OVERALL DIMENSIONS ON THE GROUND	3557x1881
LANDING WIDTH	1210
CANTILEVER DECK FOOTPRINT	1990X400

Working position 2



REFERENCES	DIMENSIONS [mm]
SUB-DECK HEIGHT	4236
WORK DECK HEIGHT	4419
SIDE HEIGHT	5466
DECK LENGTH	3155
OVERALL DIMENSIONS ON THE GROUND	3557x1881
LANDING WIDTH	1210
CANTILEVER DECK FOOTPRINT	1990X400

Instructions for Use of TSA 320 mobile scaffold with cantilevered deck



Step 1
Raise the deck in accordance with the instructions in the TSA 320 mobile scaffold use and maintenance manual (Section 6.4 Step 2) to the height that allows you to get off on the on the vehicle roof.

Step 2
Climbing of the operator onto the work deck instructions given in the TSA 320 mobile scaffold use and maintenance manual (Section 6.4 Step 3).

Step 3
Unhook the front railing of the cantilever deck in order to work on the vehicle.

N.B. : REMOVAL OF THE FRONT RAILING MUST ONLY TAKE PLACE WHEN THE MOBILE SCAFFOLD IS ADJACENT TO THE WORKING AREA OF THE VEHICLE AND THERE IS NO DANGER OF FALLING.

N.B. : THE TSA320 WITH CANTILEVERED DECK CANNOT BE APPLIED WITH THE MOBILE SCAFFOLD STRADDLING THE VEHICLE IN THE CASE OF WORKING POSITION 2.

ATTACHMENT 3 TO THE USE AND MAINTENANCE INSTRUCTIONS

MOBILE SCAFFOLD TSA 320

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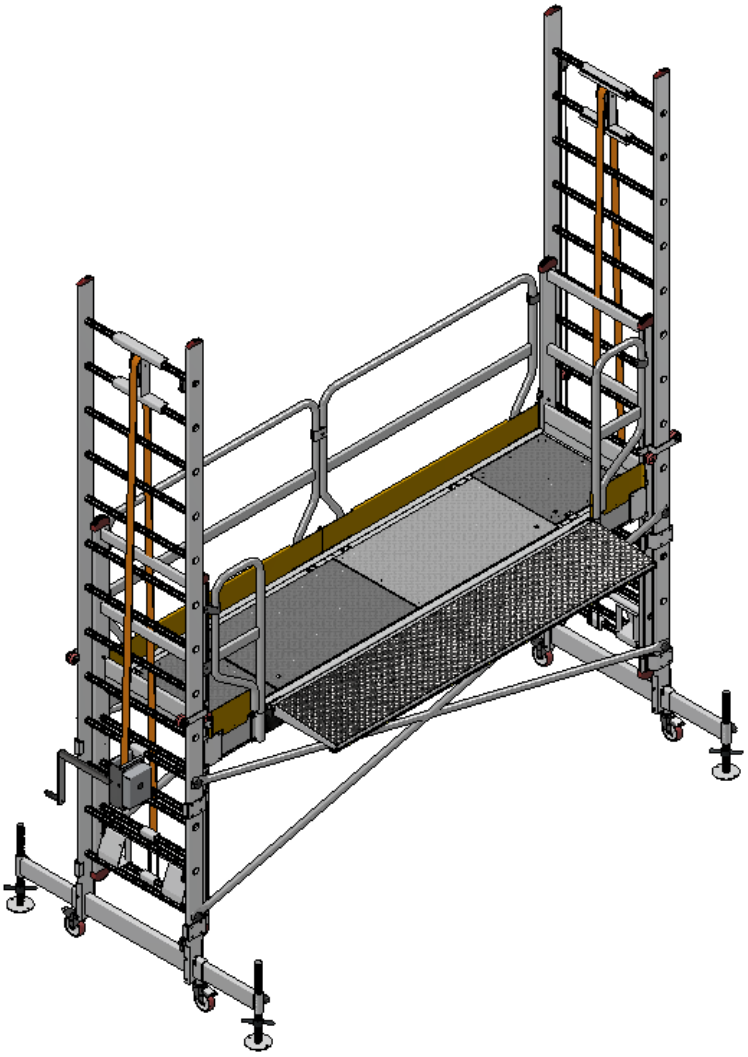
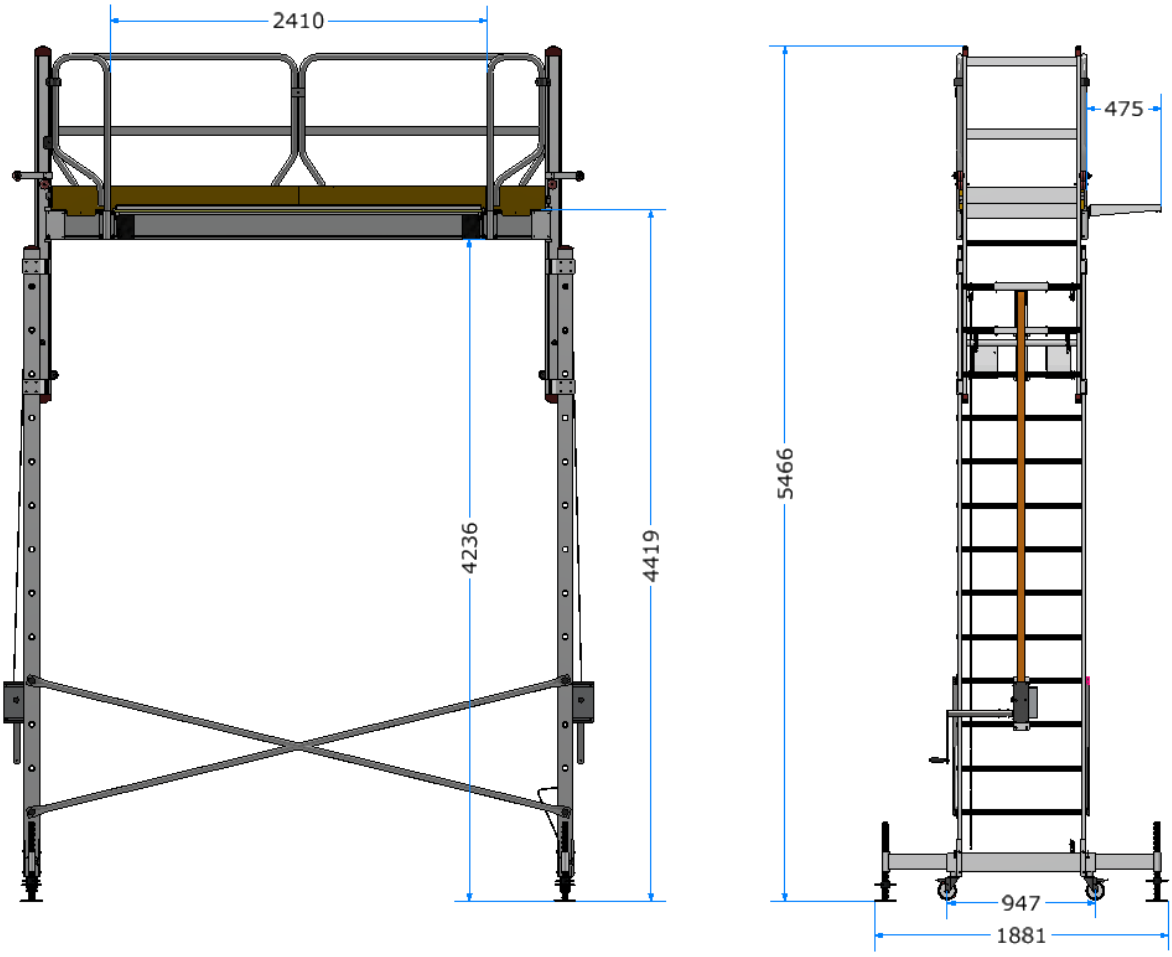
Attachment 3 - TSA 320.SP for TSA 320

The **TSA 320 MOBILE SCAFFOLD** can be equipped with a Tipping Deck: **TSA 320.SP**
It is an additional deck portion to the standard work deck that is supplied as an element that can be assembled.

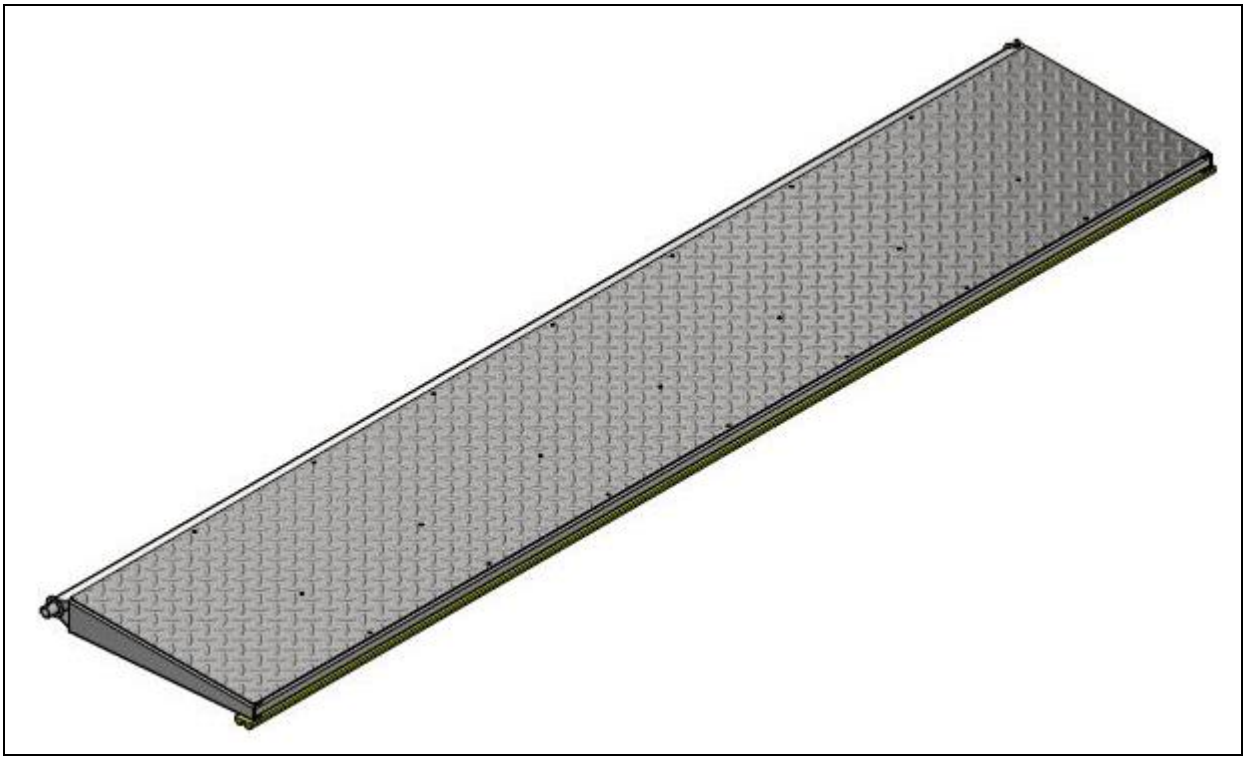




REFERENCES	DIMENSIONS [mm]
SUB-DECK HEIGHT	4236
WORK DECK HEIGHT	4419
DECK LENGTH	3155
OVERALL DIMENSIONS ON THE GROUND	3557x1881
LANDING WIDTH	2410
TIPPING DECK FOOTPRINT	2410X475

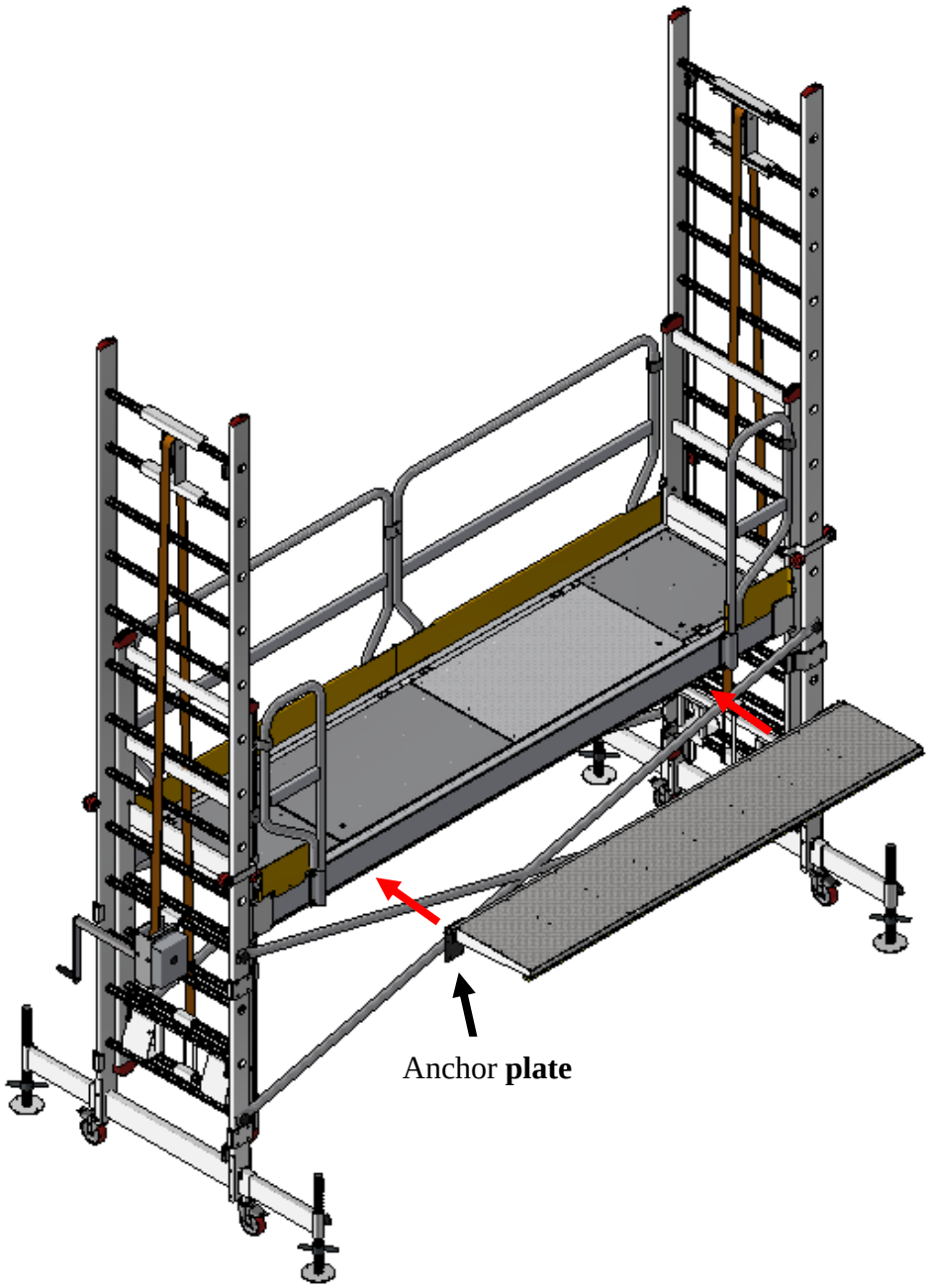
Additional elements to TSA 320

1) Tipping Deck

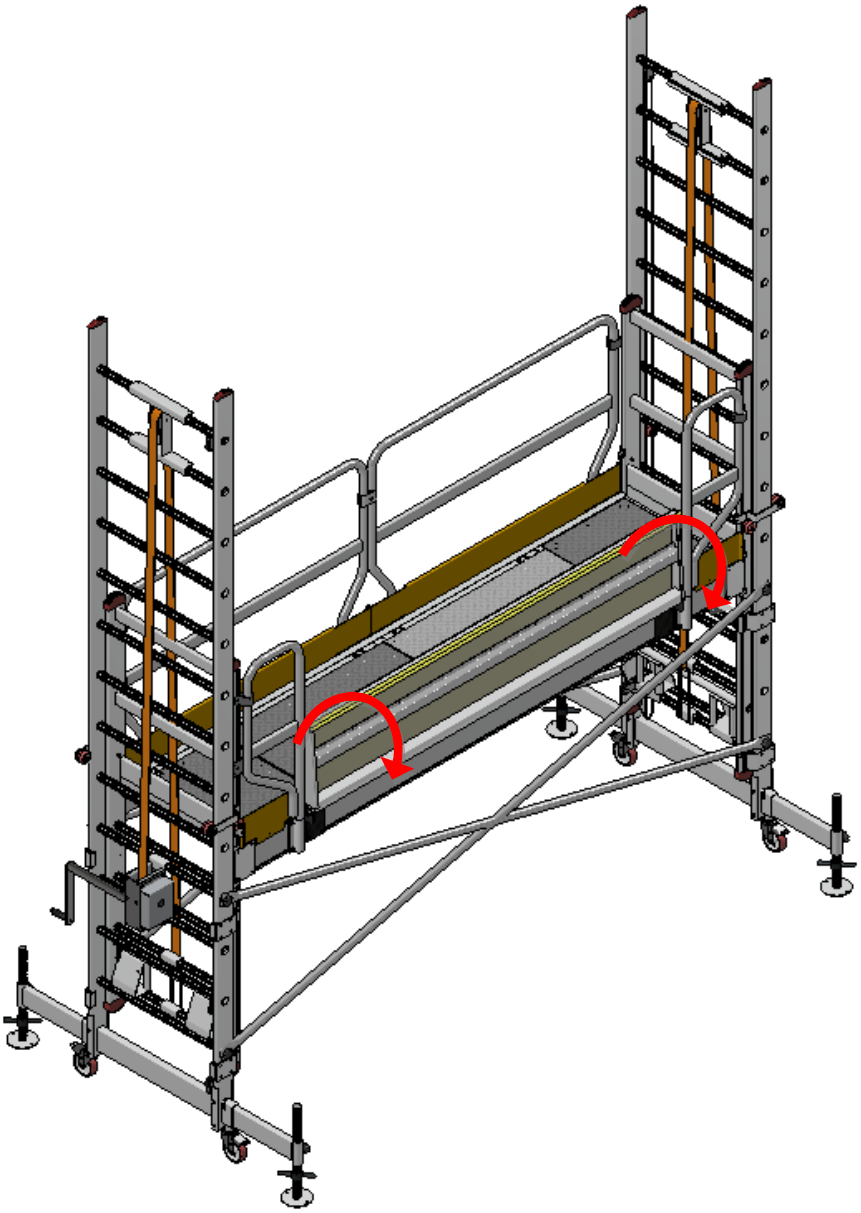


Assembly Instructions TSA 320.SP on TSA 320

The assembly of the TSA320.SP Tipping Deck and the TSA 320 is carried out before lifting the work deck by first inserting the anchor plates to the tipping deck and then attaching them to the work deck of the TSA.320.



Operating Instructions for TSA 320 Mobile Scaffold with Tipping Deck TSA320.SP



Step 1

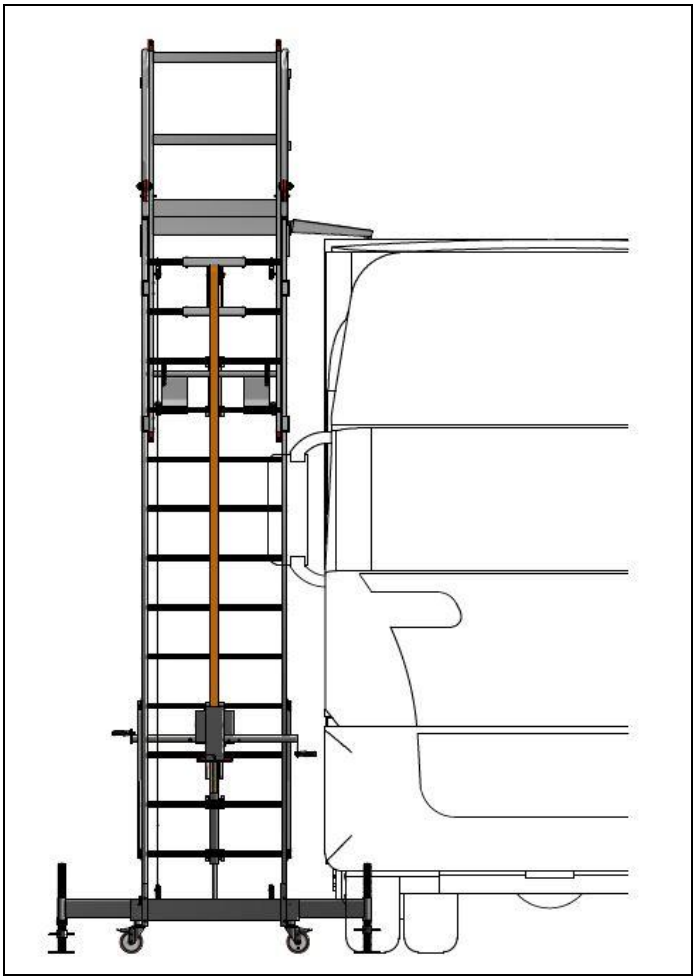
Raise the deck in accordance with the instructions in the TSA 320 mobile scaffold use and maintenance manual (Section 6.4 Step 2) to the height that allows you to get off on the on the vehicle roof.

Step 2

Climbing of the operator onto the work deck instructions given in the TSA 320 mobile scaffold use and maintenance manual (Section 6.4 Step 3).

Step 3

Unhook and rotate the tipping deck by placing it on the vehicle until contact is made between the two.



N.B. : ROTATION OF THE TIPPING DECK MAY ONLY TAKE PLACE WHEN THE MOBILE SCAFFOLD IS ADJACENT TO THE WORKING AREA OF THE VEHICLE AND THERE IS NO DANGER OF FALLING.

ATTACHMENT 4 TO THE USE AND MAINTENANCE INSTRUCTIONS

MOBILE SCAFFOLD TSA 320

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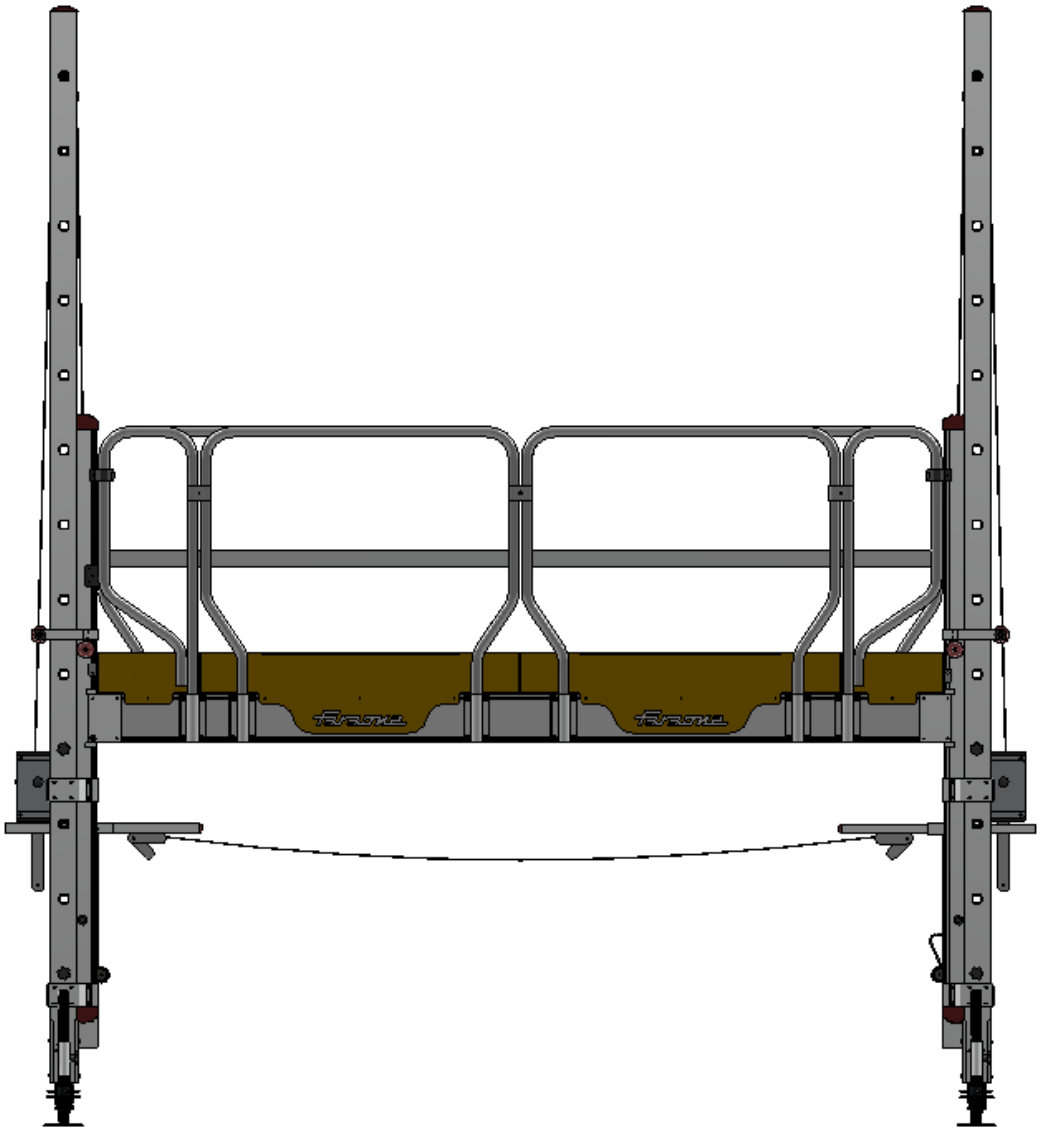
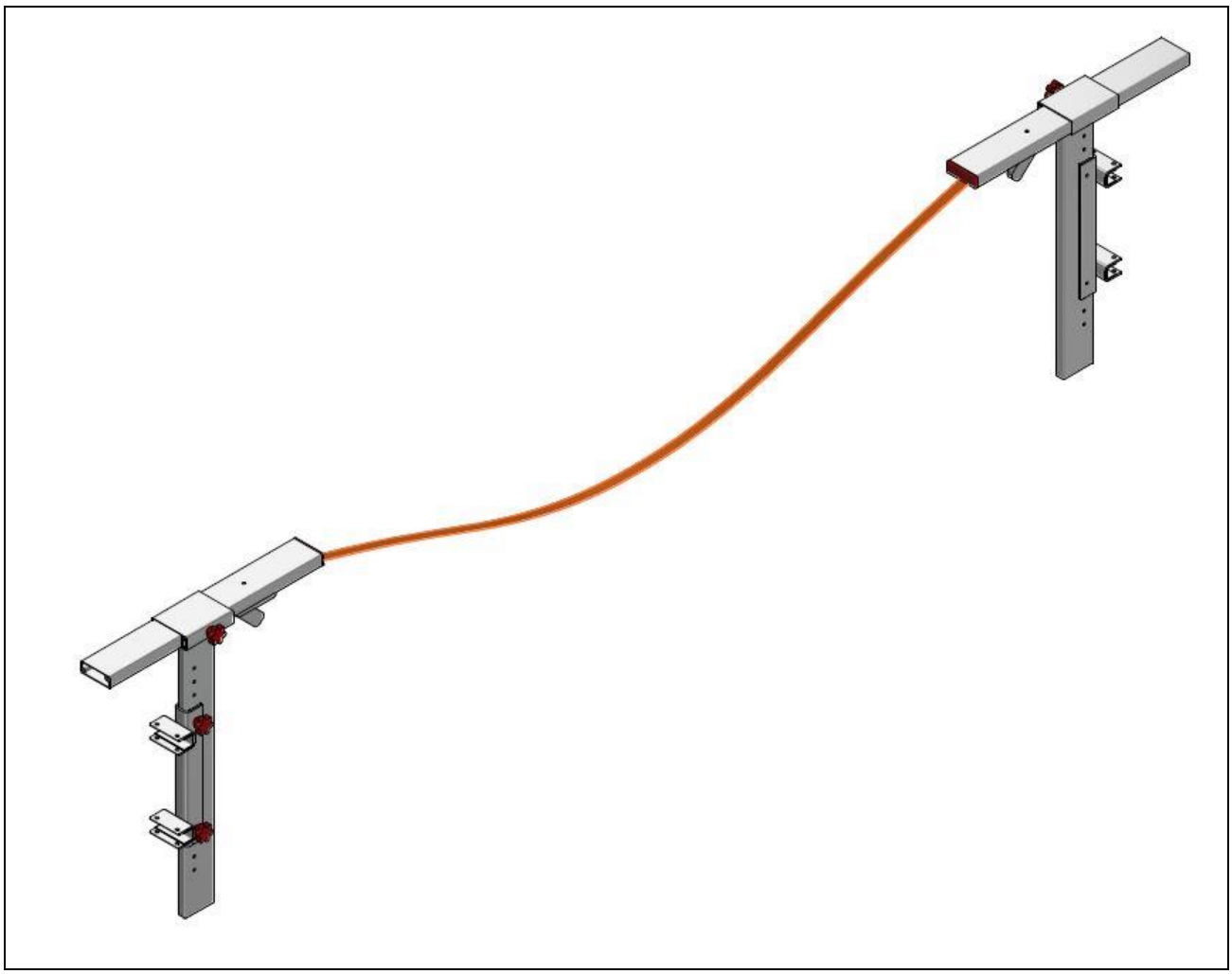
Attachment 4 - TSA 320.AN for TSA 320

The **TSA 320 MOBILE SCAFFOLD** can be equipped with a system for anchoring the scaffolding to the vehicle: **TSA 320.AN**.
Required when the TSA exceeds 4 metres and the stabilising crossbars cannot be applied.



Additional elements to TSA 320

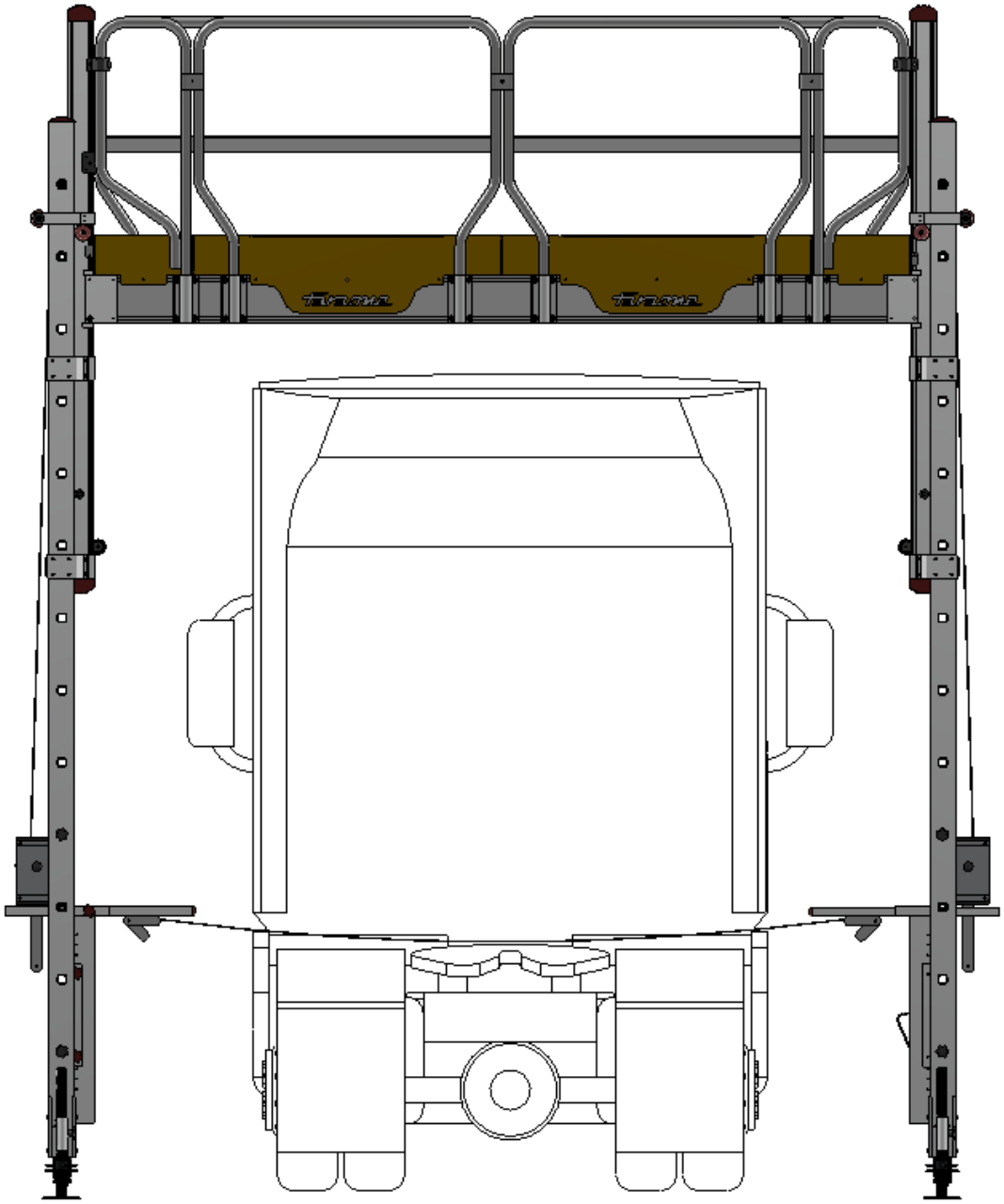
1)Anchoring system



Assembly Instructions TSA 320.AN on TSA 320

Mounting the TSA320.AN Anchorage System to the TSA 320 is carried out before lifting the work deck by hooking it onto the steps of the TSA 320.

Mobile scaffold TSA 320 with anchorage system TSA320.AN operating instructions



Step 1
Raise the deck in accordance with the instructions in the TSA 320 mobile scaffold use and maintenance manual (Section 6.4 Step 2) to the height that allows you to get off on the on the vehicle roof.

Step 2
Pass the belt under the truck axle and tension it by tightening it using the jack system on both sides.

Step 3
Climbing of the operator onto the work deck instructions given in the TSA 320 mobile scaffold use and maintenance manual (Section 6.4 Step 3).

ATTACHMENT 5 TO THE USE AND MAINTENANCE INSTRUCTIONS

MOBILE SCAFFOLD TSA 320

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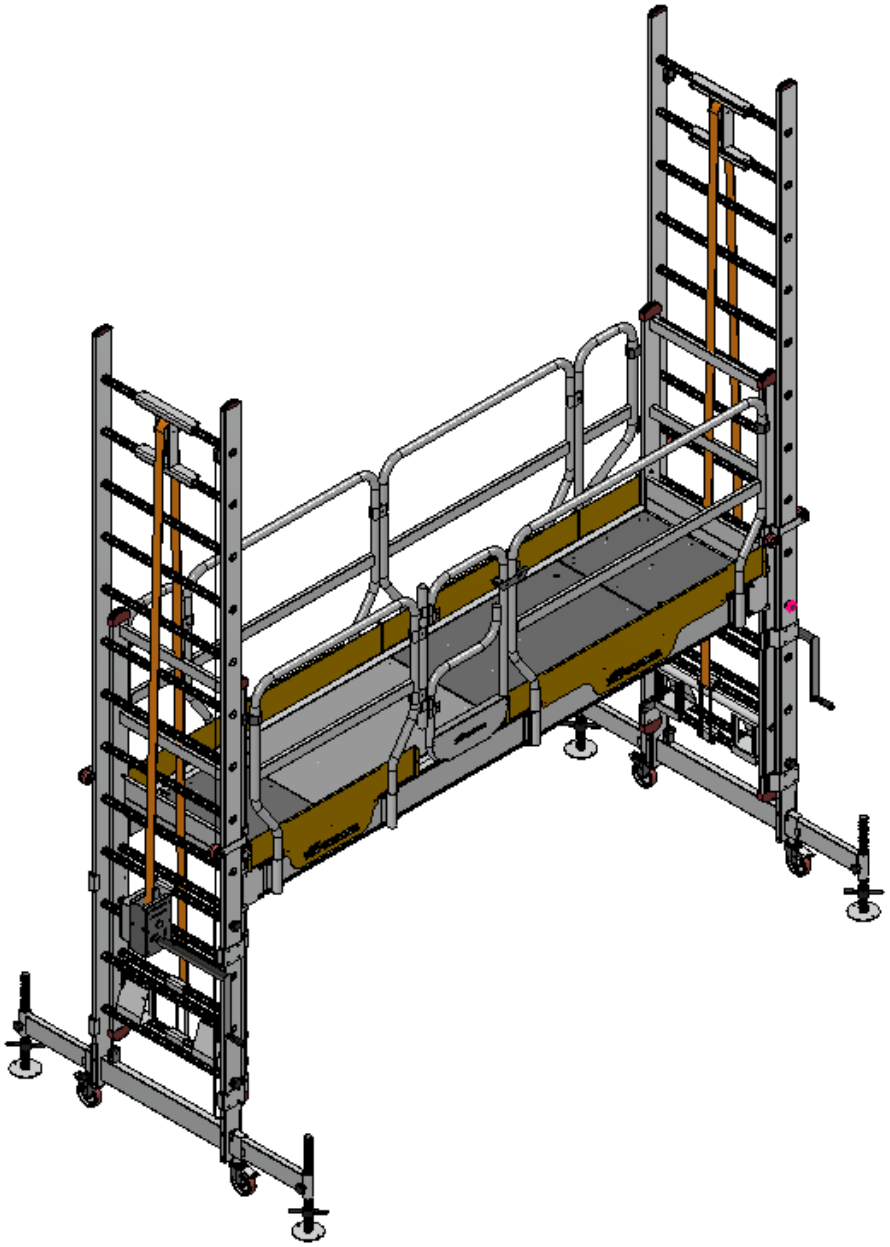
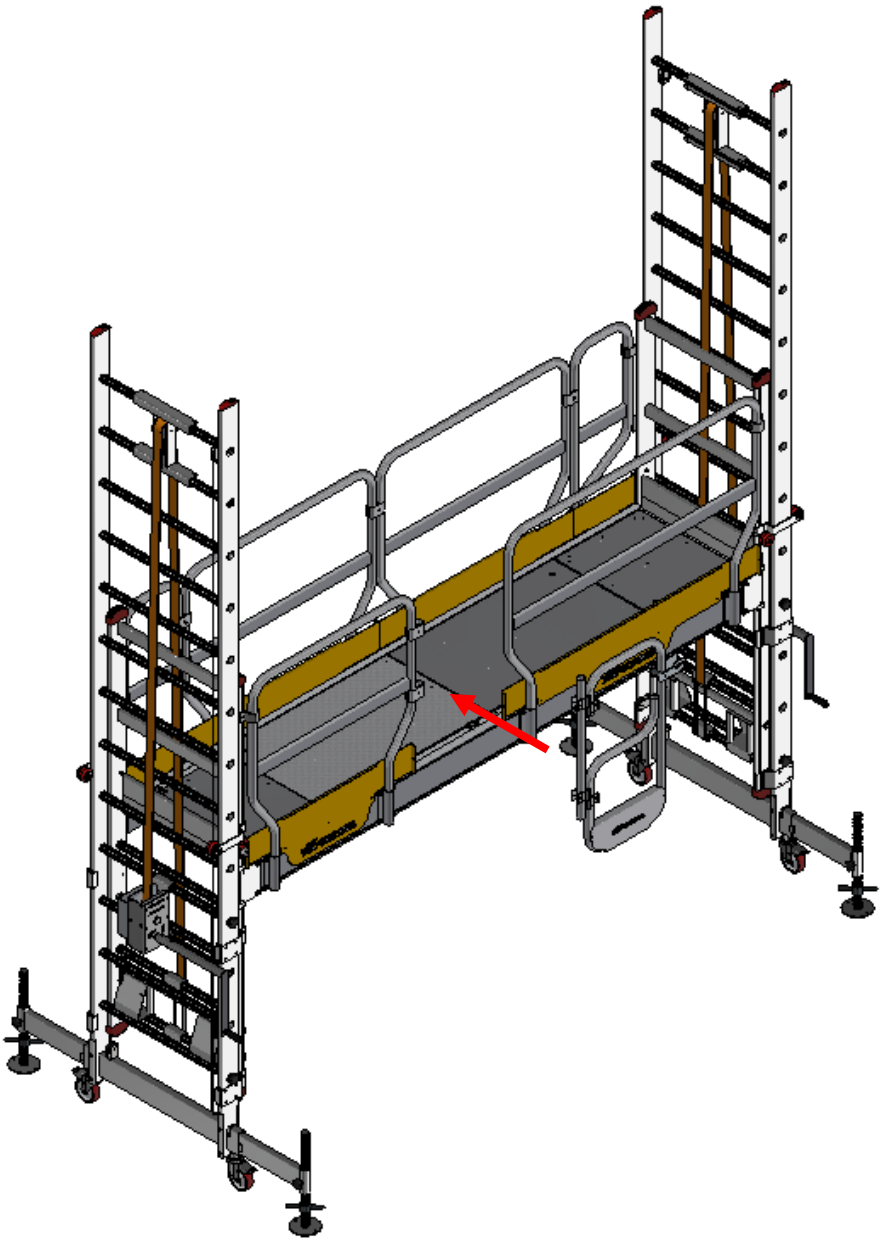
Attachment 5 -TSA 320.CN for TSA 320

The **TSA 320 MOBILE SCAFFOLD** can be equipped with a gate to get on the deck: **TSA 320.CN**.
This accessory is an alternative for accessing the deck using the classic hatch system.
In order to be used, an external means is required to reach the necessary height.



Assembly Instructions TSA 320.CN on TSA 320

After the correct assembly of the foot board strips and railings according to the instructions in the TSA 320 mobile scaffold use and maintenance manual (Section 6.3 Step 5),
secure the gate to the two adjacent railings by means of the appropriate ties.



ATTACHMENT 6 TO THE USE AND MAINTENANCE INSTRUCTIONS

MOBILE SCAFFOLD TSA 320

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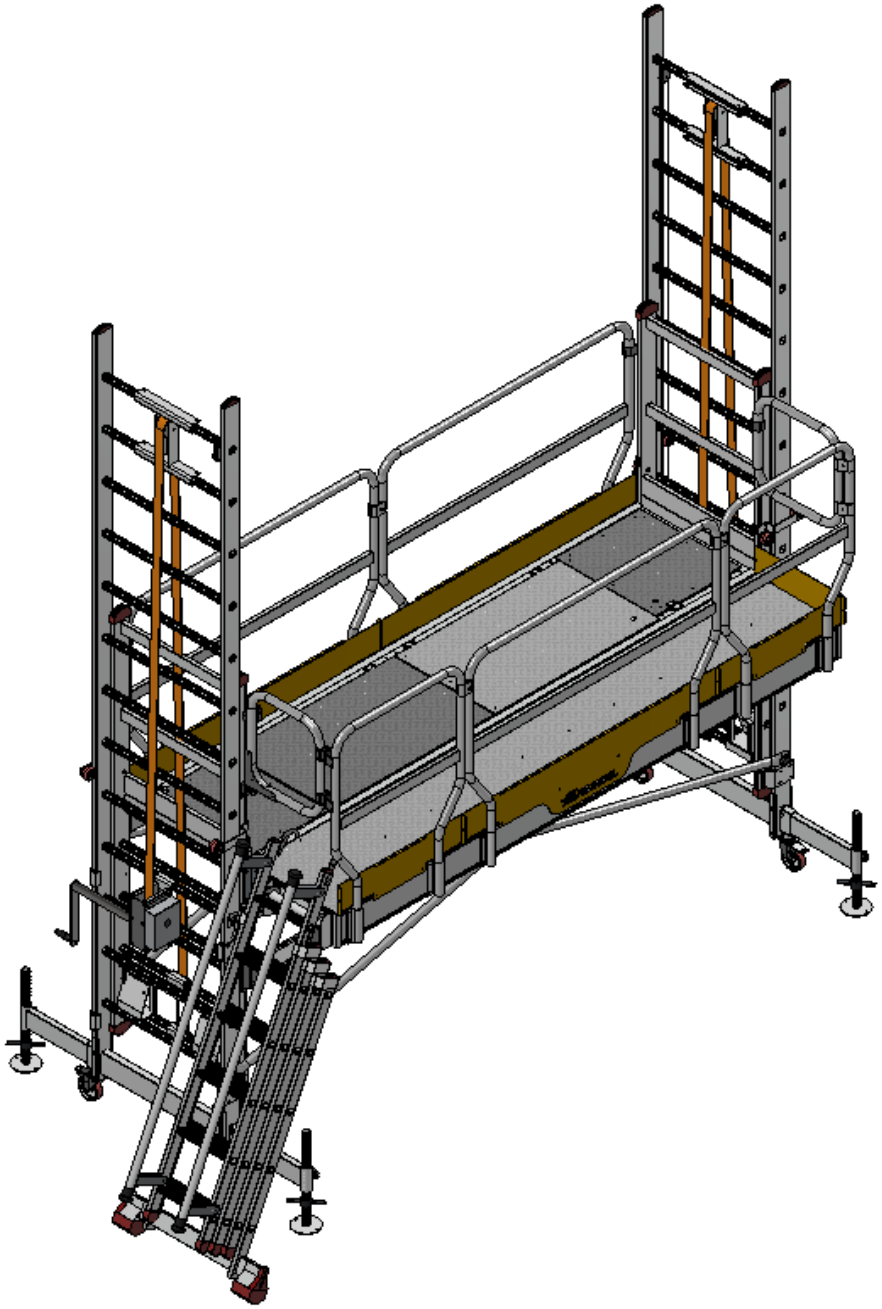
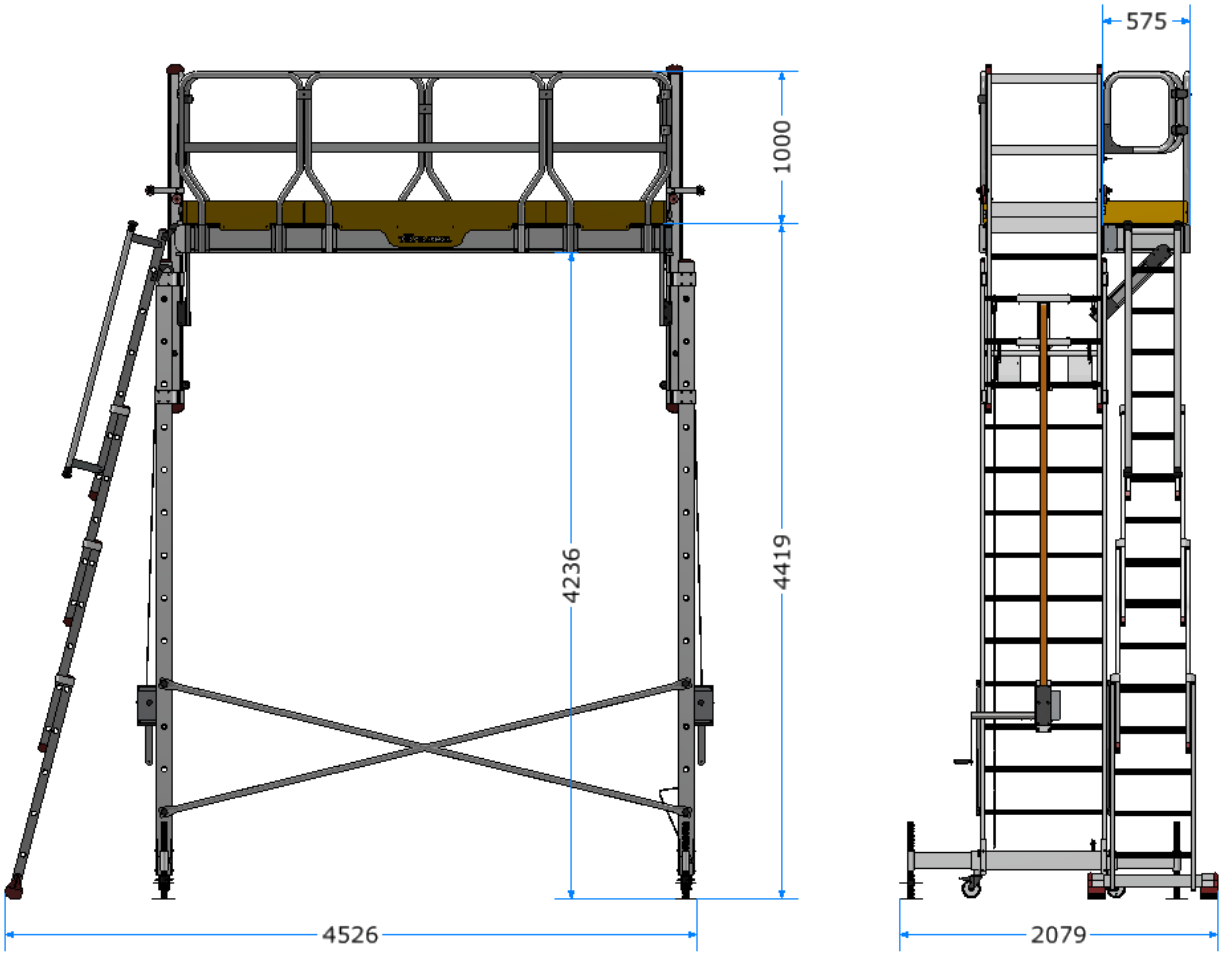
Attachment 6 -TSA 320.SB50 for TSA 320

The **TSA 320 MOBILE SCAFFOLD** can be equipped with a cantilevered deck that can be reached via a telescopic ladder and access gate: **TSA 320.SB50**.
This accessory may only be used as an alternative access to the main work deck.
The additional cantilevered deck **CANNOT BE USED** as an additional work deck.



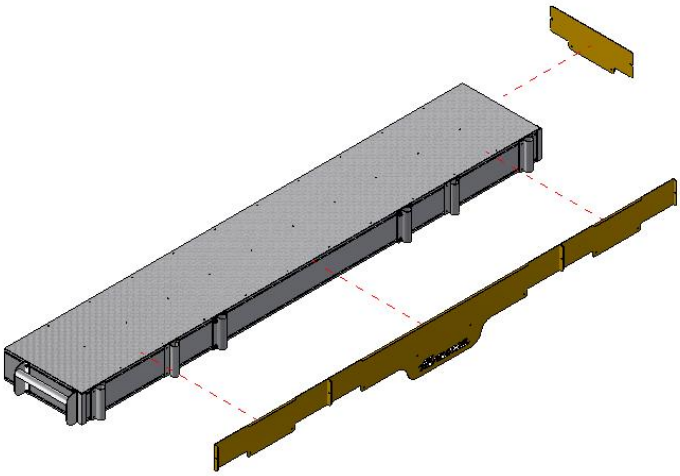


REFERENCES	DIMENSIONS [mm]
SUB-DECK HEIGHT	4236
WORK DECK HEIGHT	4419
DECK LENGTH	3155
OVERALL DIMENSIONS ON THE GROUND	4526x2079
CANTILEVER DECK FOOTPRINT	3125X575

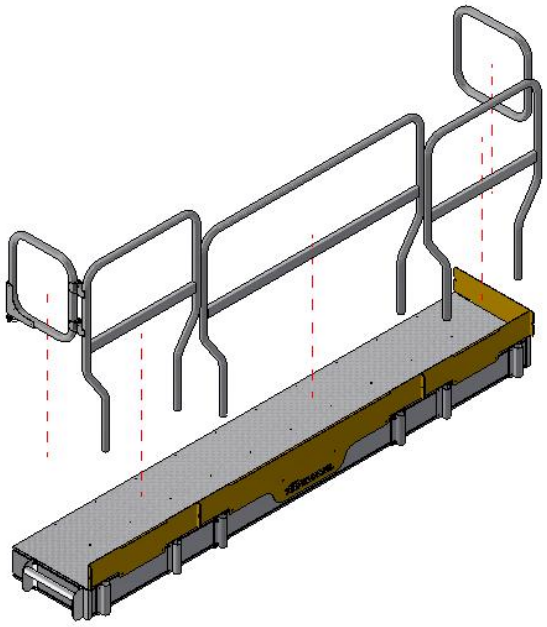
Assembly Instructions TSA 320.SB50 on TSA 320

After the correct assembly of the foot board strips and railings according to the instructions in the TSA 320 mobile scaffold use and maintenance manual (Section 6.3 Step 5), follow the steps below:

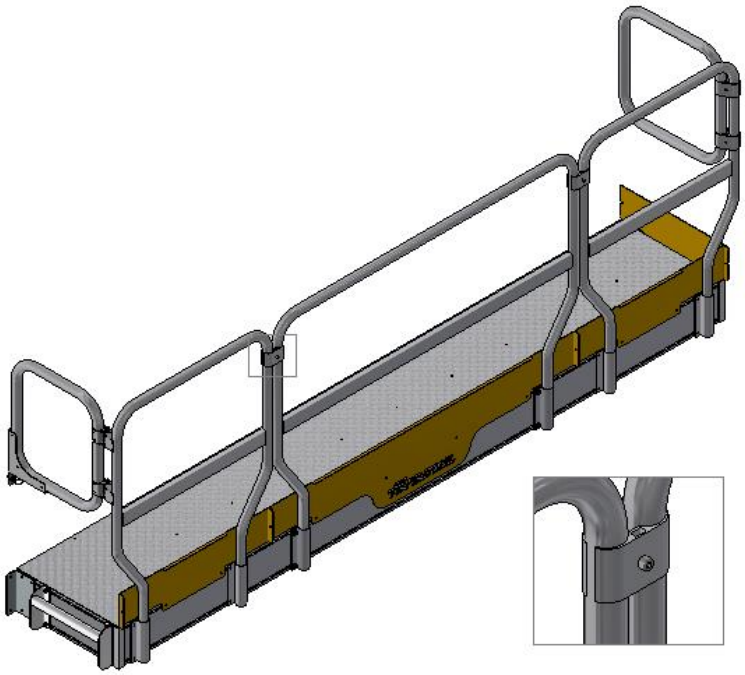
1) Mounting of foot board strips on SB50 landing surface



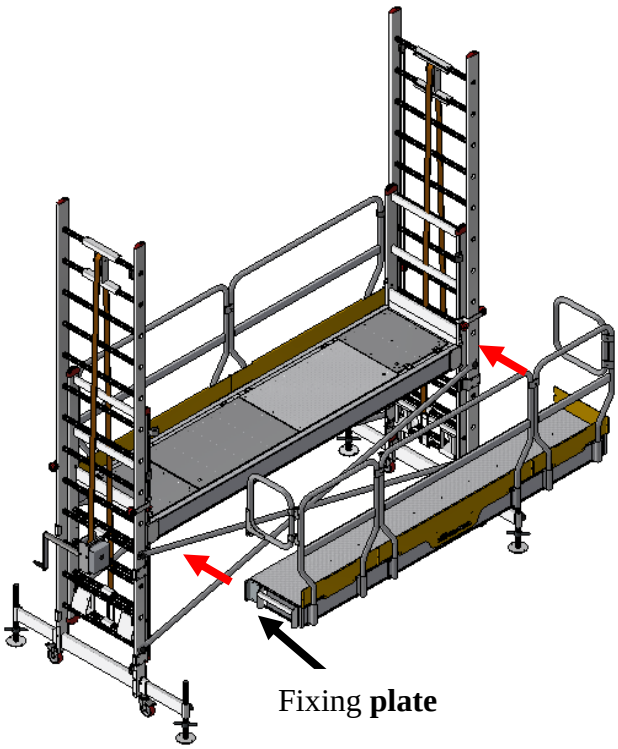
2) Mounting of railings on SB50 landing deck



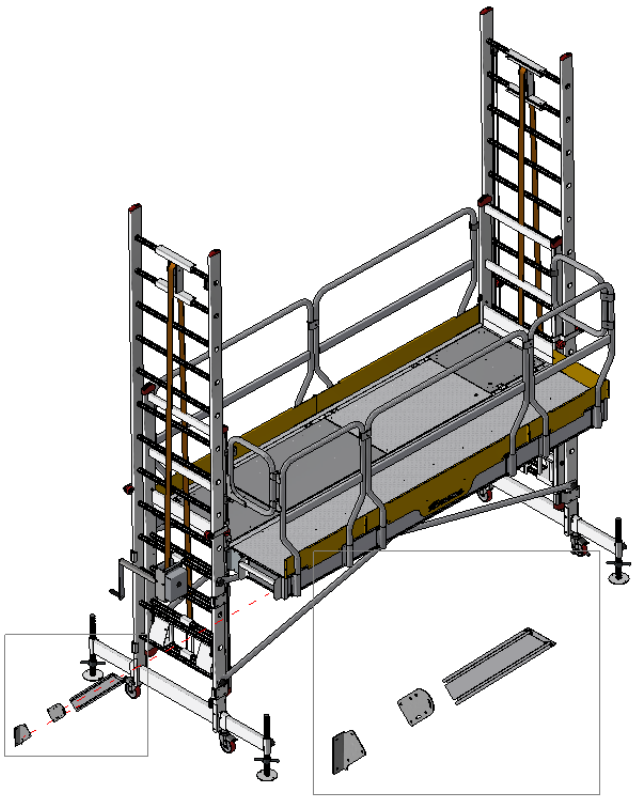
3) Railing fixing by means of special ties



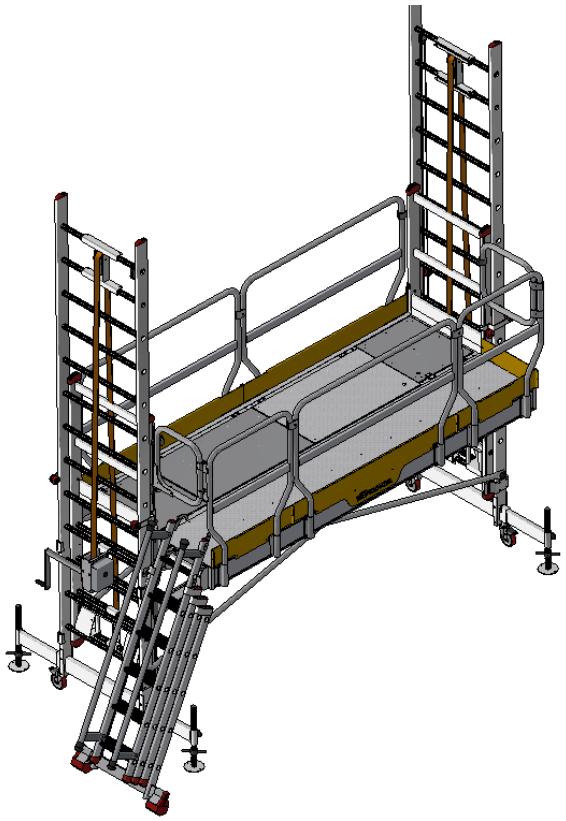
4) Assembly of the cantilever deck on the mobile scaffold



5) Mounting of reinforcement crossbars: mount crossbars using the dedicated plates



6) Attach the adjustable ladder



Attachment 3 - Operations and repair sheet

Date	Operation description	Technician signature

Date	Operation description	Technician signature

Notes

Notes

Faraone Industrie Spa
Contrada Salino – Via San Giovanni, 20
64018, Tortoreto (TE) – ITALY
Tel.:+39.0861.77.22.21 – fax: +39.0861.77.22.22
www.faraone.com
info@faraone.com