



## LAYHER UNI STANDARD P2 INSTRUCTIONS FOR ASSEMBLY AND USE

DIN EN 1004-2-DE



### Edition 04.2022

Ref. No. 8107.338

Mobile working platforms  
According to DIN EN 1004-1: 2021  
working platform 0.75x2.85 m





max. working height:  
indoors 13.60 m  
outdoors 9.60 m  
permissible load 2.0 kN/m<sup>2</sup>  
on max. one working level  
(Load class 3 according to  
DIN EN 1004-1: 2021)



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# EXPLANATION OF SYMBOLS

-  Additional information and notes on the assembly, modification, dismantling and use of mobile working platforms and situations in which it is necessary to consult with the manufacturer are indicated by the symbol opposite.
-  When assembling, modifying, dismantling or using mobile working platforms, failure to observe the present Instructions for Assembly and Use and the applicable work safety regulations may result in a variety of hazards and/or require increased attention on the part of the user. Situations in which such hazards may arise and/or in which users must be required to pay increased attention are indicated by the symbol opposite.
-  When assembling, modifying, dismantling or using mobile working platforms, failure to observe the present Instructions for Assembly and Use and the applicable work safety regulations may result in risks due to electrical voltages. Situations in which risks due to electrical voltages may arise are indicated by the symbol opposite.
-  When assembling, modifying, dismantling or using mobile working platforms, failure to observe the present Instructions for Assembly and Use and the applicable work safety regulations may result in risks of falling. Situations in which risks of falling may arise are indicated by the symbol opposite.

# NOTE


The DIN EN 1004-2-de-compliant products or assembly variants shown in these Instructions for Assembly and Use may be subject to country-specific regulations. Subject to local regulations, we reserve the right not to supply all of the products illustrated here.

- These Instructions for Assembly and Use must:
- ▶ be available at the place of use of the mobile working platform.
  - ▶ be fully respected during the assembly, modification and dismantling of the mobile working platform, including all specifications they contain, and no modifications to them are permitted or are permissible only after consultation with the manufacturer.

 These instructions cannot cover all the possible applications. If you have any questions regarding specific applications, please contact your local Layher partner who will be happy to advise you on all questions relating to the products, their use or special assembly regulations.

# 1. INTRODUCTION

- ## General

These instructions for assembly and use relate to the assembly, modification and dismantling of the **Uni Standard** mobile working platform made by Wilhelm Layher GmbH & Co KG, of Güglingen-Eibensbach, Germany.
-  Number of persons required for assembly, modification and dismantling: ▶ 2 persons

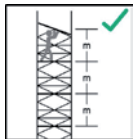
**Caution:** Layher Uni Standard may only be assembled, modified and dismantled under the supervision of a person who has been qualified, trained and authorised for operations involving “mobile working platforms”.

## 2. GENERAL DIRECTIONS FOR ASSEMBLY AND USE

The mobile working platform may be used for the specified load class in accordance with the stipulations of DIN EN 1004 and taking into account the appropriate sections of the German Ordinance on Industrial Safety and Health (BetrSichV).

The user of the mobile working platform must comply with the following instructions:

- ▶ The user must verify the suitability of the selected mobile working platform for the work to be performed (Section 4 of BetrSichV).
- ▶ The maximum platform height for mobile working platforms in accordance with DIN EN 1004 is
  - inside buildings: 12.00 m
  - outside buildings: 8.00 m
- ▶ Assembly, modification or dismantling of the mobile working platform in accordance with the present instructions for assembly and use may only be performed under the supervision of a qualified person or by professionally suitable employees after special instruction. Only the models shown in these instructions for assembly and use may be built and also used. The mobile working platform must be inspected before, after or during assembly, but no later than before it is put into service (Section 14 of BetrSichV). During assembly, modification or dismantling, the mobile working platform must be marked with a keep-out sign indicating "no entry" (BetrSichV Annex 1, Para. 3).
- ▶ It must first be checked that all parts, auxiliary tools and safety equipment for assembling the mobile working platforms are available at the site.
- ▶ All ladder frame joints must always be secured using spring clips.
- ▶ The access hatches must be kept shut whenever they are not in use.
- ▶ Mobile working platforms are not designed to be covered. Mobile working platforms are not designed to be used as side protection.
- ▶ If stipulated, the base must be widened by means, for example, of mobile beams or stabilisers or outriggers and ballast must be installed.
- ▶ Stability **must be ensured during every phase** of assembly and dismantling as well as when the platform is moved. **The necessary ballast weights and/or wall supports** (see corresponding section in these Instructions for Assembly and Use) **must generally be attached before any risk of falling arises.**
- ▶ The adjustable mobile beams may only be inserted in conformity with the instructions for assembly and use. Any ballasting that is required must be installed prior to adjustment in accordance with the ballast specifications given in the section on "Models".
- ▶ To assemble the upper platforms, the individual parts must be passed up from one level to the next. Small quantities of tools and materials can be carried up by the personnel, or failing that hoisted to the working level using transport ropes.
- ▶ On intermediate levels used solely for ascent, toe boards can be dispensed with.
- ▶ Working on two or more working levels at the same time is not permitted. In the event of exceptions, the manufacturer must be consulted. When work is being done on several levels, they must be completely fitted with 3-part side protection.
- ▶ It is necessary to prevent horizontal and vertical loads that can cause the mobile working platform to topple over, for example:
  - by pushing against the side protection (**max. 30 kg**)
  - additional wind loads (tunnel effect of through-type buildings, unclad buildings and corners).
- ▶ Before installation, all parts must be inspected to ensure they are in flawless condition. Only undamaged original parts of the mobile working platforms from Layher may be used. Components such as snap-on claws and spigots must be cleaned of dirt after use. Components must be secured against slipping and impacts when transported by truck. Components must be handled in such a way that they are not damaged.
- ▶ The mobile working platforms must not be subjected to any aggressive fluids or gases.
- ▶ Couplers in the structures must be tightened to 50Nm.



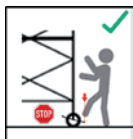
The maximum distance between the platforms must not exceed 2.25 m. Exception: The distance between the assembly level (the ground) and the first platform. The maximum distance permitted here is 3.40 m.



Mobile working platforms must be set to the perpendicular using the adjusting spindles or by inserting suitable materials underneath them. The maximum permitted tilt is 1 % (in horizontal direction = scaffolding length / 100).



Movement is only permitted on sufficiently firm ground with a max. inclination of 4% (approx. 2.5°), in the longitudinal direction or perpendicular to this, and the speed must not exceed normal walking pace (4 km/h). All impacts must be avoided.



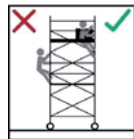
After movement, the wheels must be locked by pressing down the brake lever.



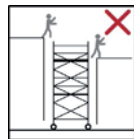
When used in the open air or in open buildings, **any work on the mobile platform must be stopped immediately if the wind strength exceeds 6 on the Beaufort scale.** At these wind speeds or at the end of a shift, mobile working platforms must be moved to a location where they are protected from the wind or must be or suitable measures must be taken to secure them against toppling over.



*A wind strength of more than 6 can be recognized by noticeable difficulty in walking. If possible, mobile working platforms used outside buildings must be securely fastened to the building itself or to another structure. It is recommended that mobile work platforms be anchored if they are left unattended.*



Upward access to mobile working platforms is permitted only on the inside of the tower. External access is not permitted.



It is not permitted to climb onto and across different mobile working platforms, to climb onto mobile working platforms from other objects or structures or to jump onto deck surfaces.



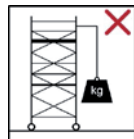
Due to the maximum load-bearing capacity of the structure, there may be a limit to the number of persons who may be present on a working level at any given time. This maximum load on the working level due to persons, tools and material must be checked in advance and be limited if necessary.



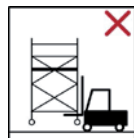
Failure to respect the maximum load limit can overload the structure and/or cause it to collapse. Serious or fatal injuries are possible.



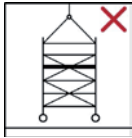
It is not permitted to increase the platform height by using ladders, boxes or other mechanisms.



It is not permitted to lift heavy objects by attaching and using lifting gear at mobile working platforms.



It is not permitted to lift mobile working platforms using mechanical equipment.



In the standard version, mobile work platforms are not designed to be lifted or suspended.



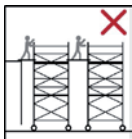
*In certain cases, and following consultation with the manufacturer, it may be possible to reinforce the structure by replacing the appropriate components.*



It is not permitted to move the mobile platform when persons and/or loose objects are present on it.



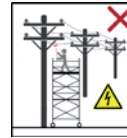
It is not permissible to stand and move around on unsecured levels/platforms of mobile working platforms.



In the standard version, it is not permitted to establish bridges between different mobile working platforms or between mobile working platforms and other objects or structures.



*In certain cases, and following consultation with the manufacturer, this may be possible if the structure is reinforced (special construction form) and a special verification of stability is performed for this or a structural calculation is performed.*



When working with mobile working platforms at or in the vicinity of electrical equipment and overhead cables, it is necessary to respect the following additional instructions.

It is only permissible to assemble and use mobile working platforms if:

- ▶ the equipment is no longer live.
- ▶ the deactivated equipment has been secured against reactivation.
- ▶ the equipment has been checked for the absence of voltage.
- ▶ neighbouring live parts have been secured by means of protective mechanisms.
- ▶ in the case of work performed in the vicinity of overhead electrical cables, an adequate safety distance as specified in VDE 0105-100 can be/is respected.



### 3. MEASURES FOR FALL PROTECTION

#### Fall protection during assembly, modification or dismantling of rolling towers

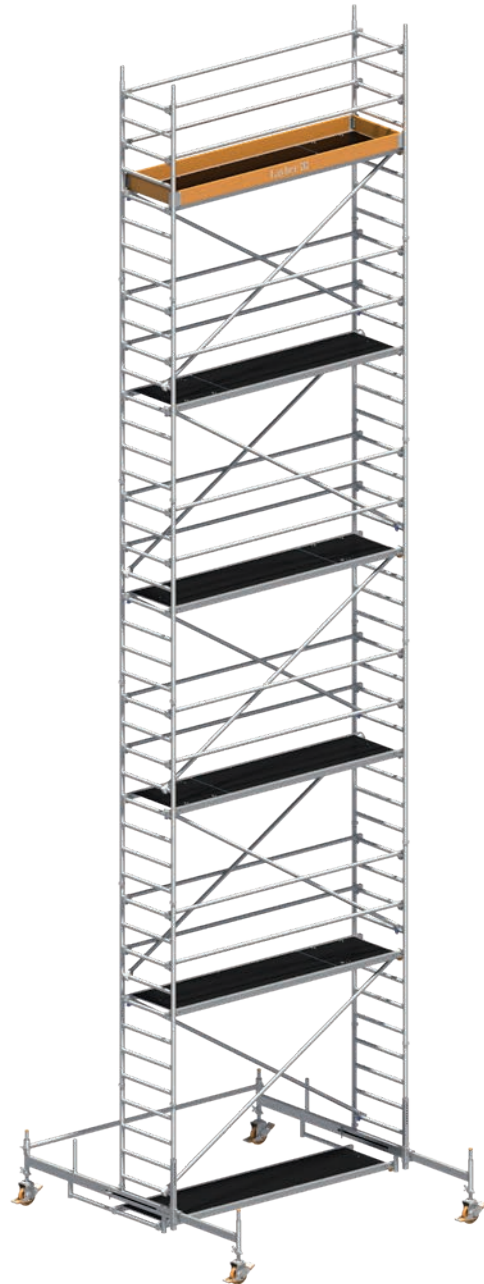
##### General

Suitable measures for fall protection must be taken during assembly, modification or dismantling of the tower. Safety Structure P2 implements these protective measures in full.

##### Safety Structure P2

- ▶ Platforms with vertical spacing of 2 m.
- ▶ Safe design with integrated and collective side protection.

Thanks to the platforms, which are assembled 2 m apart, the handrails can already be fitted from the level underneath and intermediate rails can be fitted from the secured area of the access hatch, so that when the next platform up is accessed there is already a two-part side protection in place on all sides.

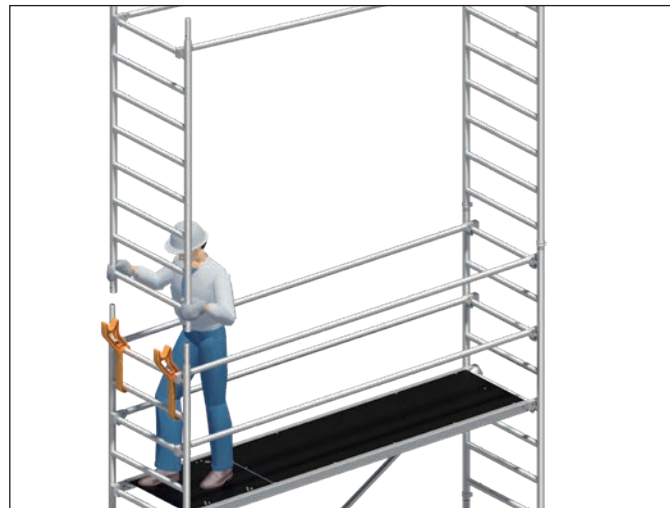


## THE PRINCIPLE – SIMPLER. FASTER. SAFER.

1. Attach the first ladder frame.  
Attach the Uni assembly hooks and position the second ladder frame in order to fit the guardrails.



2. Swivel the ladder frame with guardrail upwards and fit it in place.



3. Insert diagonal braces and access deck.



4. Assemble the intermediate rails from a secured position in the area of the access hatch



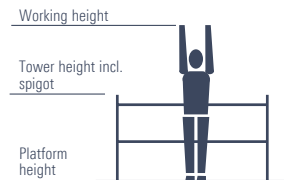


## 4. TOWER MODELS

For assembly outdoors comply with the height restriction!

### Tower models

1401101 – 1401111



1401101



1401102



1401103



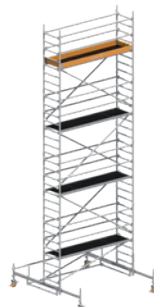
1401104



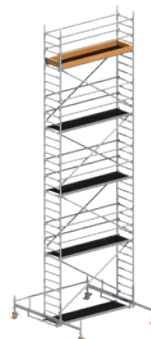
1401105



1401106



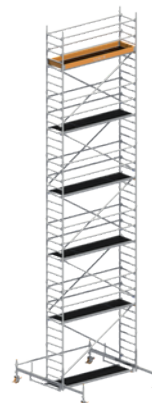
1401107



1401108



1401109



1401110



1401111

Tower model	1401101	1401102	1401103	1401104	1401105	1401106	1401107	1401108	1401109	1401110	1401111
Working height [m]	3.20	4.35	5.35	6.35	7.35	8.35	9.38	10.38	11.38	12.38	13.38
Tower height [m]	2.43	3.58	4.58	5.58	6.58	7.58	8.61	9.61	10.61	11.61	12.61
Platform height [m]	1.20	2.35	3.35	4.35	5.35	6.35	7.38	8.38	9.38	10.38	11.38
Weight [kg] (without ballast)	96.4	181.5	216.4	243.3	278.2	305.1	391.2	418.1	453.0	479.9	514.8
<b>Ballasting</b>											
<b>Indoors</b>											
Assembly central	I2 r2	0	0	0	0	0	0	0	0	0	0
Assembly off-centre	X	0	0	L0 R4	L0 R4	L0 R6	L0 R4	L0 R6	L0 R6	L0 R8	L0 R10
Assembly off-centre with wall bracing	X	0	0	0	0	0	0	0	0	0	0
Assembly central with 1 bracket	X	0	0	L0 R2	L0 R4	L0 R6	0	0	0	0	0
Assembly central with 2 brackets	X	0	0	0	0	0	0	0	0	0	0
<b>Outdoors</b>											
Assembly central	I2 r2	0	I1 r1	I5 r5	I9 r9	I15 r15	I2 r2	X	X	X	X
Assembly off-centre	X	L0 R2	L0 R6	L0 R10	L4 R16	L10 R22	L0 R18	X	X	X	X
Assembly off-centre with wall bracing	X	0	0	0	L4 R0	L10 R0	0	X	X	X	X
Assembly central with 1 bracket	X	L0 R4	L0 R8	L2 R12	L6 R16	L12 R22	X	X	X	X	X
Assembly central with 2 brackets	X	I2 r2	I5 r5	I8 r8	X	X	X	X	X	X	X

For assembly with adjustable mobile beam, the latter must be fully extended. X = not permissible / not possible 0 = no ballast required Specified as number of ballast weights at 10 kg each.

For ballasting, use Layher ballast weights, Ref. No. 1249.000, of 10 kg each. Fasten the weights quickly and securely at the right place using the coupler handwheel.

**Do not use any liquid or granular ballast substances. The ballast weights must be distributed evenly to all ballasting fixing points (see page 20 – 23)**

Example:

I2, r2 → Fasten 2 ballast weights of 10 kg each to the ladder frame on its left-hand side, and 2 ballast weights of 10 kg each on its right-hand side  
L6, R16 → Fasten 6 ballast weights of 10 kg each to the mobile beam on its left-hand side, and 16 ballast weights of 10 kg each on its right-hand side

r and R relate in the case of off-centre assembly always to the side facing away from the tower; I and L relate to the side facing the tower (see also Section 9, Ballasting, on pages 20 – 23)

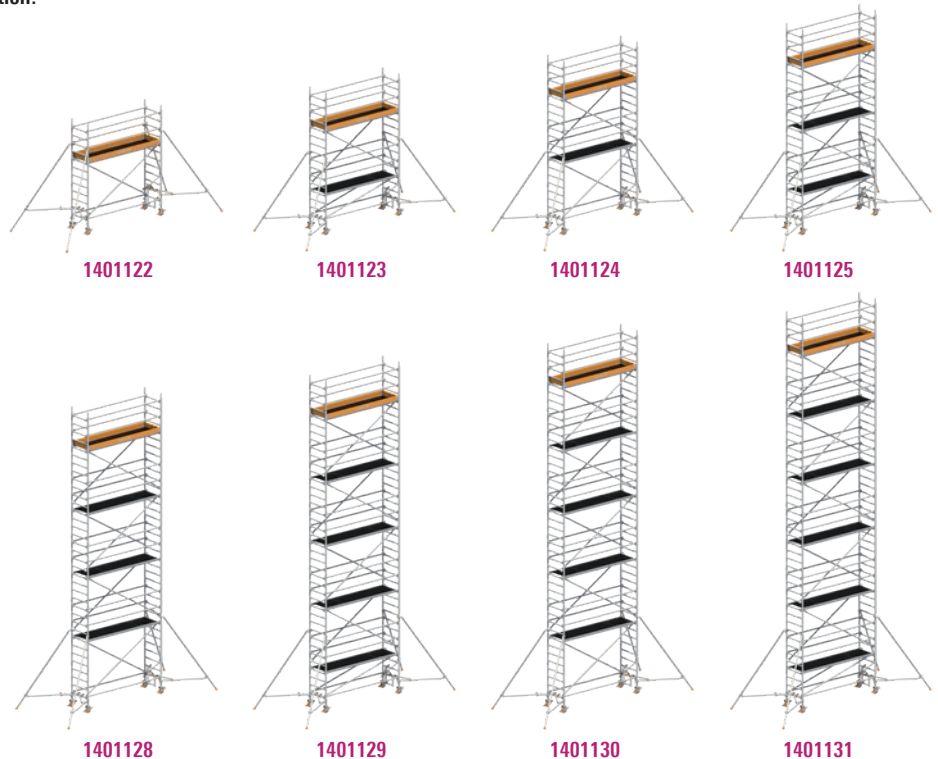
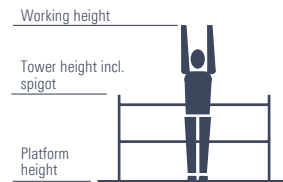


# TOWER MODELS WITH STABILISERS, EXTENDABLE

For assembly outdoors comply with the height restriction!

## Tower models

1401124 – 1401131



Tower model	1401122	1401123	1401124	1401125	1401126	1401127	1401128	1401129	1401130	1401131
Working height [m]	4.20	5.20	6.20	7.20	8.20	9.20	10.20	11.20	12.20	13.20
Tower height [m]	3.43	4.43	5.43	6.43	7.43	8.43	9.43	10.43	11.43	12.43
Platform height [m]	2.20	3.20	4.20	5.20	6.20	7.20	8.20	9.20	10.20	11.20
Weight [kg] (without ballast)	169.3	220.6	232.2	283.5	294.0	345.3	355.8	407.1	417.6	468.9
Ballasting										
<b>Indoors</b>										
Assembly central	0	0	0	0	0	0	0	0	0	0
Assembly off-centre	L0 R2	L0 R4	L0 R6	L0 R8	L0 R12	L0 R12	L0 R16	L0 R18	L0 R20	L0 R22
Assembly off-centre with wall bracing	0	0	0	0	0	0	0	0	0	0
<b>Outdoors</b>										
Assembly central	0	0	0	0	0	0	X	X	X	X
Assembly off-centre	L0 R8	L0 R10	L0 R16	L0 R20	L0 R28	L0 R34	X	X	X	X
Assembly off-centre with wall bracing	0	0	0	0	0	0	X	X	X	X

For assembly with adjustable mobile beam, the latter must be fully extended. X = not permissible/not possible 0 = no ballast required Specified as number of ballast weights at 10 kg each.  
For ballasting, use Layher ballast weights, Ref. No. 1249.000, of 10 kg each. Fasten the weights quickly and securely at the right place using the coupler handwheel.

**Do not use any liquid or granular ballast substances. The ballast weights must be distributed evenly to all ballasting fixing points (see page 20 – 23)**

Example: L2, r2 → Fasten 2 ballast weights of 10 kg each to the ladder frame on its left-hand side, and 2 ballast weights of 10 kg each on its right-hand side  
L6, R16 → Six ballast weights of 10 kg each must be fastened on the left-hand side at the stabilisers, and 16 ballast weights of 10 kg each must be fastened on the right-hand side

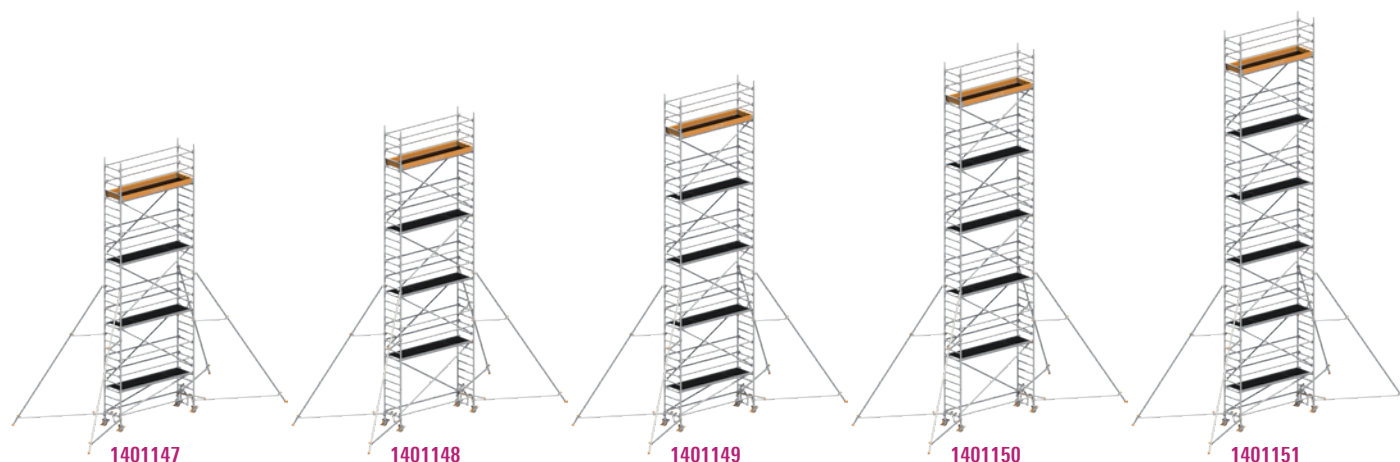
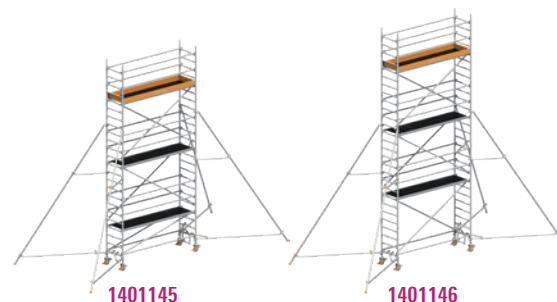
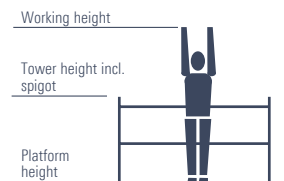
r and R relate in the case of off-centre assembly always to the side facing away from the tower; l and L relate to the side facing the tower (see also Section 9, Ballasting, on pages 20 – 23)

# TOWER MODELS WITH STABILISERS, 5 M

For assembly outdoors comply with the height restriction!

## Tower models

1401145 – 1401151



Tower model	1401145	1401146	1401147	1401148	1401149	1401150	1401151
Working height [m]	7.20	8.20	9.20	10.20	11.20	12.20	13.20
Tower height [m]	6.43	7.43	8.43	9.43	10.43	11.43	12.43
Platform height [m]	5.20	6.20	7.20	8.20	9.20	10.20	11.20
Weight [kg] (without ballast)	309.1	319.6	370.9	381.4	432.7	443.2	494.5
Ballasting							
<b>Indoors</b>							
Assembly central	0	0	0	0	0	0	0
Assembly off-centre	L0 R6	L0 R8	L0 R8	L0 R10	L0 R12	L0 R14	L0 R14
Assembly off-centre with wall bracing	0	0	0	0	0	0	0
<b>Outdoors</b>							
Assembly central	0	0	0	X	X	X	X
Assembly off-centre	L0 R16	L0 R20	X	X	X	X	X
Assembly off-centre with wall bracing	0	0	0	X	X	X	X

For assembly with adjustable mobile beam, the latter must be fully extended. X = not permissible / not possible 0 = no ballast required Specified as number of ballast weights at 10 kg each.

For ballasting, use Layher ballast weights, Ref. No. 1249.000, of 10 kg each. Fasten the weights quickly and securely at the right place using the coupler handwheel.

**Do not use any liquid or granular ballast substances. The ballast weights must be distributed evenly to all ballasting fixing points (see page 20 – 23)**

Example: L2, r2 → Fasten 2 ballast weights of 10 kg each to the ladder frame on its left-hand side, and 2 ballast weights of 10 kg each on its right-hand side  
L6, R16 → Six ballast weights of 10 kg each must be fastened on the left-hand side at the stabilisers, and 16 ballast weights of 10 kg each must be fastened on the right-hand side

r and R relate in the case of off-centre assembly always to the side facing away from the tower; l and L relate to the side facing the tower (see also Section 9, Ballasting, on pages 20 – 23)

## 5. ASSEMBLY SEQUENCE Safety Structure P2

Observe the general directions for assembly and use on pages 3 – 5. The assembly examples shown are intended for use up to a maximum platform height of 12 m indoors and up to a maximum platform height of 8 m outdoors. Snap the snap-on claws of all parts into the ladder frames from above. Level the tower after basic assembly. This is done using the threaded spindles of the wheels 1.



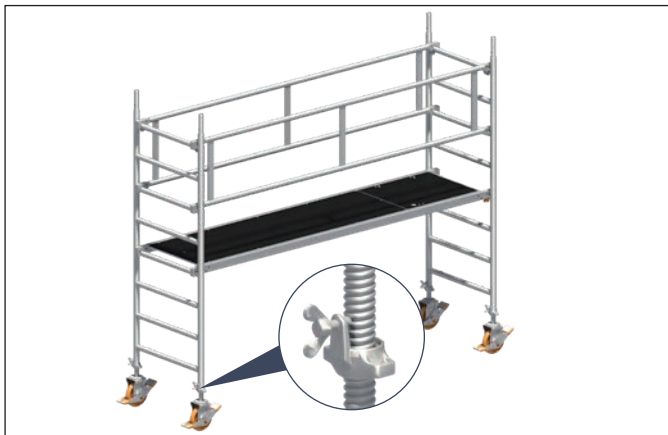
**The wheels must be locked during assembly, modification or dismantling and while there is anybody on the tower.**

Hammer home the wedges in the system until the blow bounces off. Always tighten the screw couplers well (50 Nm).

At the top level, a double guardrail 18 or a tower beam 19 can be fitted instead of two single guardrails. Please remember in this case that two additional guardrails must be provided for assembly and dismantling in order to ensure collective side protection. They can be removed again after insertion of the double guardrail or rolling tower beam.

The item numbers for the components relate to the component list on pages 27 – 30.

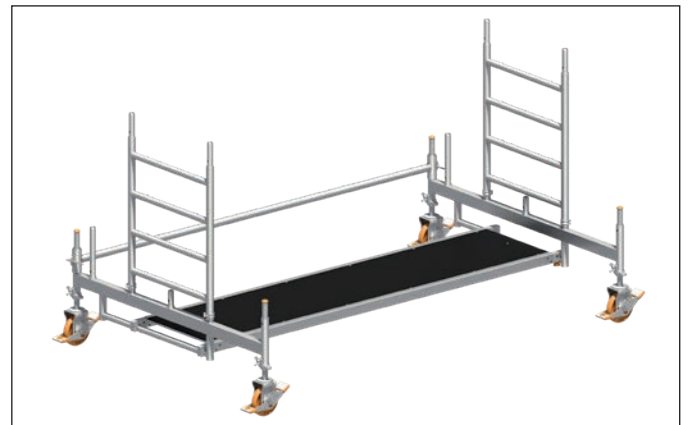
### Basic assembly Tower model 1401101



1. Insert the wheels 1 into the 2.00-m ladder frames 15 and secure them against falling out by tightening the wing screws on the spindle nuts.
2. Connect the two ladder frames 15 to two double guardrails 18. Hook the access deck 25 in into the fourth rung from the bottom of the 2,00-m ladder frames 15.

Further assembly is performed as per page 14, "Completing the working platform".

### Basic assembly Tower models 1401102, 1401104, 1401106, 1401108 and 1401110



1. Insert the wheels 1 into the mobile beams 7/8 and secure them against falling out by tightening the wing screws on the spindle nuts.
2. Connect the mobile beams 7/8 with a basic tube 9, a basic strut 10 and a deck 26.
3. Fit two 1.00-m ladder frames 14 onto the mobile beams and secure them using spring clips 16.

Further assembly is performed as per page 13, "Assembly of intermediate platforms".

## Basic assembly

Tower models 1401103, 1401105, 1401107, 1401109 and 1401111



1. Insert the wheels 1 into the mobile beams 7/8 and secure them against falling out by tightening the wing screws on the spindle nuts.
2. Connect the mobile beams 7/8 to one another with a basic tube 9, a basic strut 10 and a guardrail 17 on the bar of the mobile beam.
3. Fit a 2.00-m ladder frame 15 onto the mobile beam 7/8 and secure it using spring clips 16. Hook two guardrails 17 over the top rung and connect them to a second 2.00-m ladder frame 15. Fit the second 2.00-m ladder frame 15 onto the mobile beam and secure it using spring clips 16. (Any double guardrails that might be in stock must be installed as side protection for the first level. The guardrails previously installed as advancing side protection are removed again after fitting of the double guardrails.)
4. Fit two diagonal braces 21 and an access deck 25. **Ensure that the two diagonal braces are installed parallel to one another in the direction of the access hatch.**
5. Before going up, fit two additional guardrails 17 as intermediate rails to the second rung above the standing surface, starting from the assembly surface (floor).

Further assembly is performed as per page 13, "Assembly of intermediate platforms".

## Basic assembly

Tower models 1401124, 1401126, 1401128, 1401130, 1401146, 1401148 and 1401150



1. Insert the wheels 1 into the 1.00-m ladder frames 14 and secure them against falling out by tightening the wing screws on the spindle nuts.
2. Fit further 2.00-m ladder frames 15. Connect the two rolling tower side parts at the top rungs and at the bottom rungs with two guardrails 17 in each case.
3. Fit two diagonal braces 20 crosswise. Then hook in an access deck 25.
4. To maintain the maximum distance from the first rung, fit an access ledger 11 on the ascent side of the rolling tower.
5. Climb up on the inside using the rungs of the ladder frame and through the access hatch provided. While sitting in the access hatch opening, protected from falling by the sides of the access deck 25, assemble the intermediate rail of the next level: to do so, fit the guardrails 17 to the second rungs above the standing surface (see also *Assembly of intermediate platforms, item 5*)

Further assembly is performed as per page 13, "Assembly of intermediate platforms".

## Basic assembly

**Tower models 1401125, 1401127, 1401129, 1401131, 1401145, 1401147, 1401149 and 1401151**



1. Insert the wheels **1** into the 2.00-m ladder frames **15** and secure them against falling out by tightening the wing screws on the spindle nuts.
2. Connect the two rolling tower side parts at the top rungs and at the bottom rungs with two guardrails **17** in each case.
3. Fit two diagonal braces **21** and an access deck **25**. Ensure that the two diagonal braces are installed parallel to one another in the direction of the access hatch.
4. To maintain the maximum distance from the first rung, fit an access ledger **11** on the ascent side of the rolling tower.
5. Before going up, fit two additional guardrails **17** as intermediate rails to the second rung above the standing surface, starting from the assembly surface (floor).

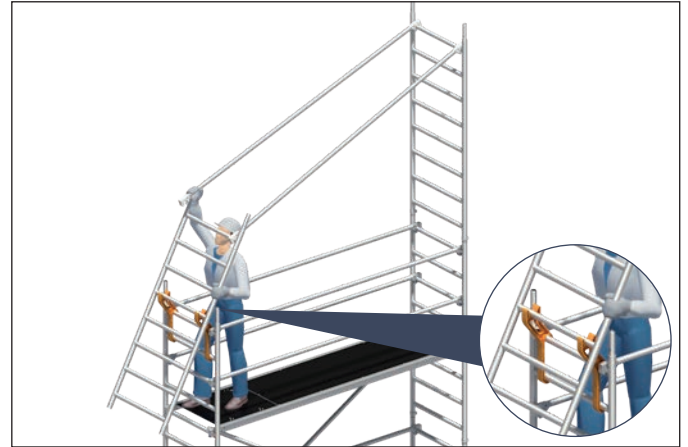
Further assembly is performed as "Assembly of intermediate platforms" (see right-hand side).

## Assembly of intermediate platforms

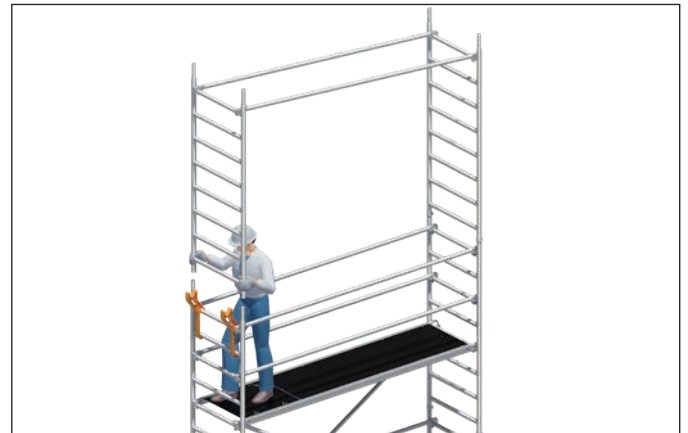
**All tower models**



Repeat the following assembly steps 1 to 5 several times depending on the assembly height.



1. Fit first 2.00-m ladder frame **15** and secure it using spring clips **16**.
2. Attach the Uni assembly hooks **27** and position the second ladder frame **15** in order to fit the guardrails **17**.



3. Swivel the ladder frame with guardrails upwards, fit it in place and secure it with spring clips **16**.



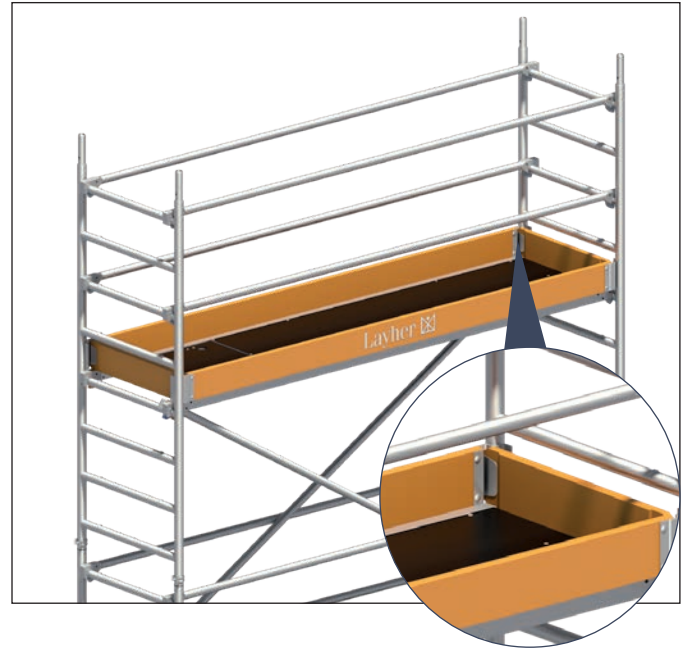
4. Insert diagonal braces 20 and access deck 25. Install the diagonal braces on both sides in tower-like (zig-zag) form.



5. Climb up on the inside using the rungs of the ladder frame and through the access hatch provided. Further assemble the intermediate rail for the next level while sitting in the access hatch opening, protected from falls by the rails of the access deck 26; to this end, the guardrails 15 are mounted on the second rung above the platform area.

## Completing the working platform

All tower models

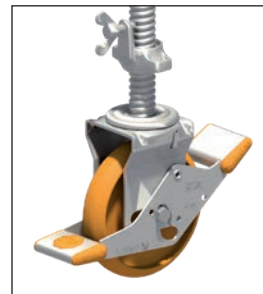


1. To complete the working platform, attach toe boards with claw 30 and end toe boards 31.



If an intermediate platform is also to be used for working, attach toe boards here too.

## Operating the wheels



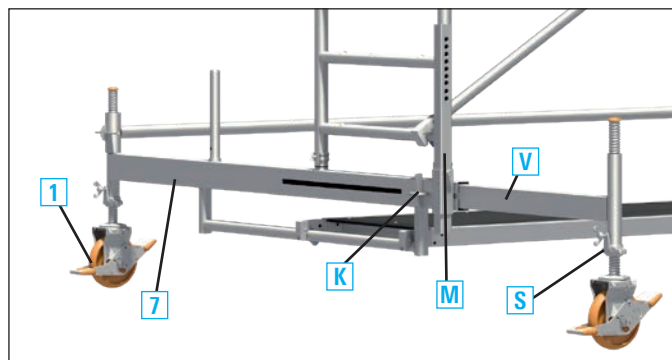
During assembly and while working, lock the wheels by pressing down the brake lever labelled STOP.

When the brake is locked, the lever labelled STOP must be in the down position.

To move the structure, unlock the wheels by pressing the opposite lever.



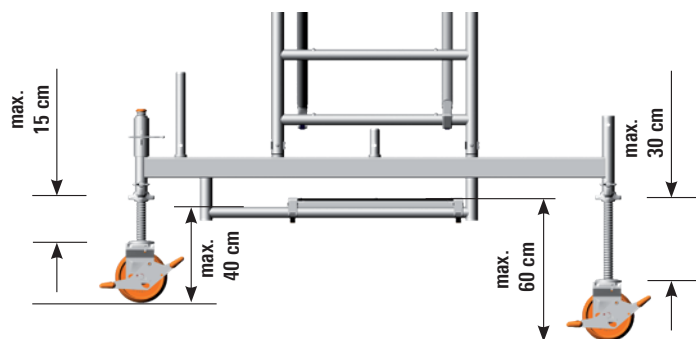
## Adjusting the mobile beam



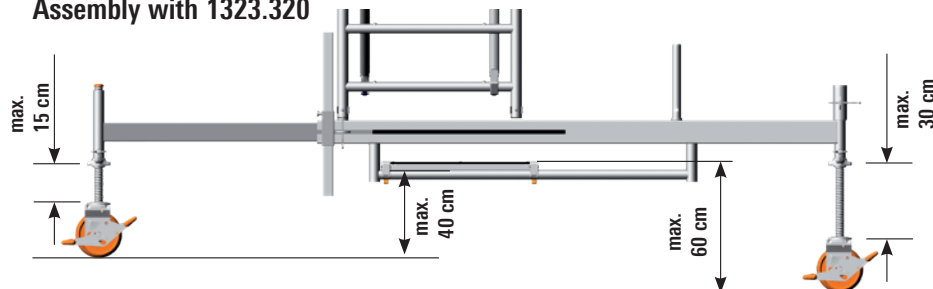
The adjustable mobile beam 7 permits working in a central position and at the wall without dismantling the tower. It can be pushed in and out in the assembled state. Before performing adjustment, it is necessary to ensure that all the ballast weights specified in the ballasting table are attached at the right place (see pages 8–10). For adjustment in the assembled state, lower the central support M attached to the mobile beam 7 as far as possible and secure it. Take the load off the wheels 1 at the sliding parts by turning the spindles S far enough for the adjusting part V to be adjusted after releasing the clamping wedge K. After adjustment, fix the clamping wedge K in place, put the load back onto the wheel 1 by extending the spindle, and then raise and secure the central support M.

## Maximum spindle extension of the different models

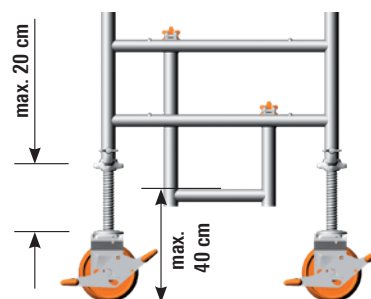
### Assembly with 1323.180



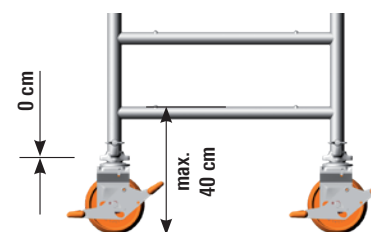
### Assembly with 1323.320



## Assembly directly on wheels with access ledger



## Assembly directly on wheels





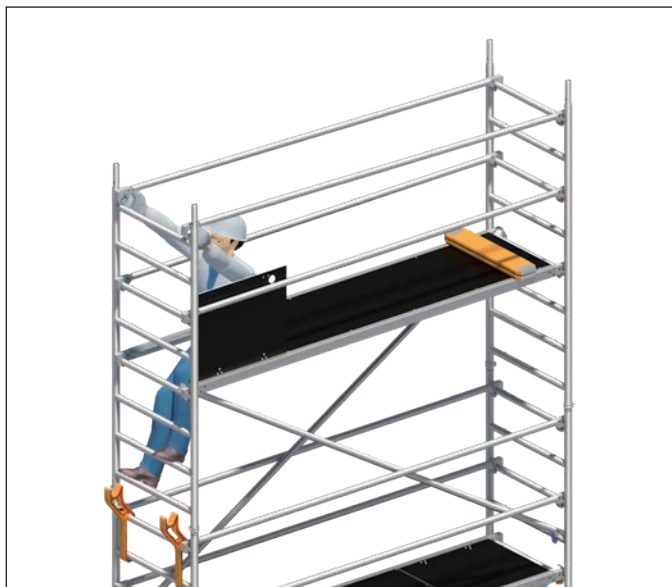
## 6. DISMANTLING SEQUENCE

Dismantling is performed in the reverse order to assembly.

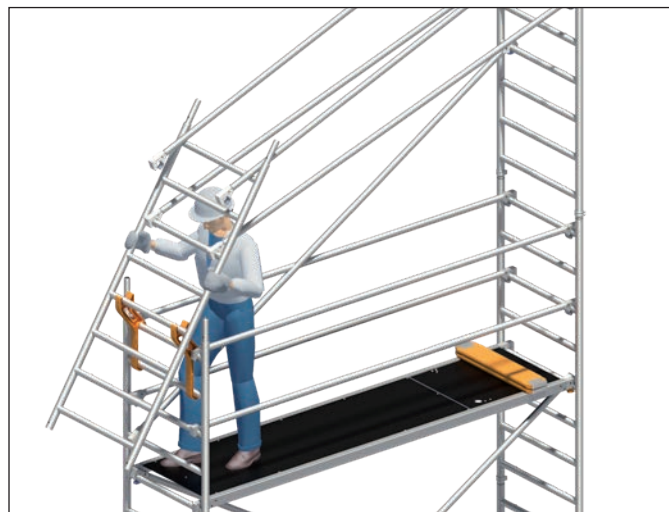
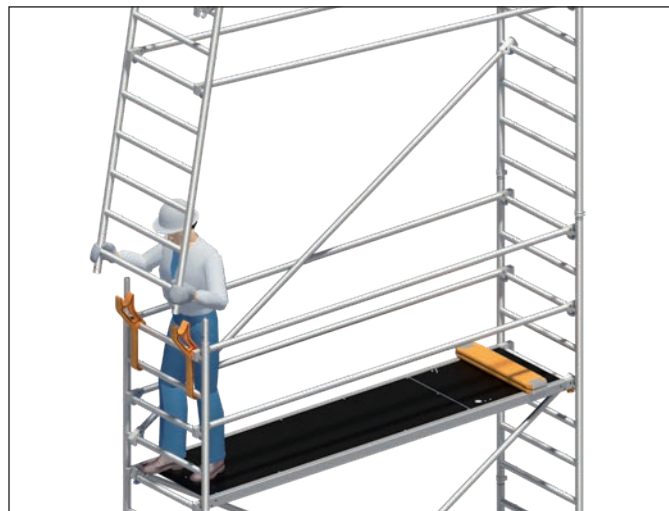
**When dismantling, do not remove the bracing elements such as diagonal braces, guardrails or access decks until the ladder frames above them have been dismantled.**

To lift out the individual parts, open the snap-on claws by pressing their locking clips.

1. Dismantle the toe boards (only necessary on the work platform).



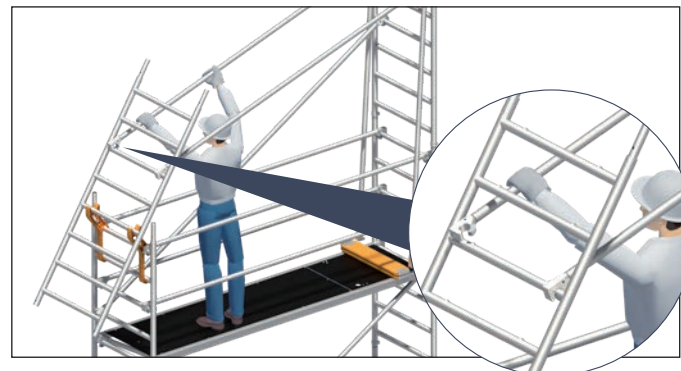
2. While sitting in the access hatch opening, protected from falling by the sides of the access deck 26, dismantle and put down the snap-on claws of both guardrails on one side, the side of the access hatch, 1 metre above the standing surface.
3. After climbing down to the platform underneath, dismantle the access deck 26 and the diagonal braces 20.
4. Attach the Uni assembly hooks 27 at the side of the access hatch opening above and remove the spring clips 16 on one side.



5. Lift out the ladder frame 15 on the side of the Uni assembly hooks and swivel it downwards with the guardrails released under 2. and the still attached intermediate rails, in order to position this unit into the previously fitted Uni assembly hooks 27. Take care when swivelling it down that the guardrails 17, released on one side, can slide outwards on the top rung of the ladder frame, allowing the complete unit to be positioned in the Uni assembly hooks 27.



6. Moving the upper guardrails 17, already released on one side, on the outside past the upper ends of the ladder frame positioned in the Uni assembly hooks 27 allows the ladder frame to be positioned for later dismantling.



7. Using the end toe board or a guardrail additionally available, to act as extensions, release the locking clip of the snap-on claws on one of the intermediate rails still attached, guardrail 17, about 2.5 metres up in order to lift out the snap-on claw on one side. After that, release the guardrail 17 released on one side, at that side in which it is positioned in the Uni assembly hooks 27, and remove it by rotating it 90° about its own axis.



8. Lift out the second intermediate rail still remaining, guardrail 17, on one side, in that side in which it is positioned in the Uni assembly hooks, and swivel the ladder frame 15 in the Uni assembly hooks 27 into a vertical position, so that the three guardrails 17 still remaining can then be removed using the guardrail 17, already removed under 7., as an extension. Place the loose guardrail 17 onto the rung underneath, for use as a lever to open the locking clip of the snap-on claw (see detail).

## 7. ACCESS VIA HOOK-IN LADDER

For more convenient access, the models 1401102–1401111 / 1401131 / 1401145–1401151 can easily be equipped with the hook-in step ladder 34.

Simply snap the ladder into the eighth rung of the ladder frame (deck level) in the access hatch area using the snap-on claws, and rest it on the deck below.

When the models are equipped with mobile beams, ensure that at the level of the mobile beam the hook-in step ladder 34 is equipped with the ladder stabiliser set 37 intended for it, to maintain the tread angle of the steps.



## 8. PARTS LIST

Tower model	Reference No.	1401101	1401102	1401103	1401104	1401105	1401106	1401107	1401108	1401109	1401110	1401111
Guardrail 2.85 m	1205.285	0	4	9	8	13	12	17	16	21	20	25
Double guardrail 2.85 m	1206.285	2	0	0	0	0	0	0	0	0	0	0
Diagonal brace 3.35 m	1208.285	0	2	2	4	4	6	6	8	8	10	10
Diagonal brace 2.95 m	1208.295	0	0	2	0	2	0	2	0	2	0	2
Basic tube 2.85 m	1211.285	0	1	1	1	1	1	1	1	1	1	1
End toe board 0.75 m	1438.075	2	2	2	2	2	2	2	2	2	2	2
Toe board 2.85 m with claw	1439.285	2	2	2	2	2	2	2	2	2	2	2
Deck 2.85 m	1241.285	0	1	0	1	0	1	0	1	0	1	0
Access deck 2.85 m	1242.285	1	1	2	2	3	3	4	4	5	5	6
Spring clip 11 mm	1250.000	0	8	8	12	12	16	16	20	20	24	24
Wheel 700 – 7 kN	1359.200	4	4	4	4	4	4	4	4	4	4	4
Ladder frame 75/4 – 1.00 m	1297.004	0	2	0	2	0	2	0	2	0	2	0
Ladder frame 75/8 – 2.00 m	1297.008	2	2	4	4	6	6	8	8	10	10	12
Mobile beam with bar	1323.180	0	2	2	2	2	2	0	0	0	0	0
Mobile beam with bar, adjustable	1323.320	0	0	0	0	0	0	2	2	2	2	2
Uni assembly hook	1300.010	0	1	1	1	1	1	1	1	1	1	1
Ballast	1249.000	For the number of ballasting weights, see the ballasting table, pages 8 – 10										

### Assembly variants with stabiliser, extendable: 1401122 – 1401131; with stabiliser 5 m: 1401145 – 1401151

Tower model	Ref. No.	1401122	1401123	1401124	1401125	1401126	1401127	1401128	1401129	1401130	1401131	1401145	1401146	1401147	1401148	1401149	1401150	1401151
Guardrail 2.85 m	1205.285	6	10	10	14	14	18	20	22	22	26	14	14	18	20	22	22	26
Diagonal brace 3.35 m	1208.285	2	2	4	4	6	6	8	8	10	10	4	6	6	8	8	10	10
Diagonal brace 2.95 m	1208.295	0	2	0	2	0	2	0	2	0	2	2	0	2	0	2	0	2
End toe board 0.75 m	1438.075	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Toe board 2.85 m with claw	1439.285	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Access deck 2.85 m	1242.285	1	2	2	3	3	4	4	5	5	6	3	3	4	4	5	5	6
Stabiliser, extendable	1248.260	4	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0
Tower rotation lock	1248.261	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Stabiliser 5 m	1248.500	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	4	4
Spring clip 11 mm	1250.000	4	4	12	12	16	16	20	20	24	24	12	16	16	20	20	24	24
Wheel 700 – 7 kN	1359.200	2	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Ladder frame 75/4 – 1.00 m	1297.004	2	0	2	0	2	0	2	0	2	0	0	2	0	2	0	2	0
Ladder frame 75/8 – 2.00 m	1297.008	2	4	4	6	6	8	8	10	10	12	6	6	8	8	10	10	12
Access ledger	1344.002	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Uni assembly hook	1300.010	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ballast	1249.000	For the number of ballasting weights, see the ballasting table, pages 8 – 10																

### Extra requirements for special assembly with bracket deck surfaces

Tower model	Reference No.	1 bracket deck surface	2 bracket deck surfaces
End toe board 0.75 m	1438.075	2	4
Deck 2.85 m	1241.285	1	2
Spring clip	1250.000	4	8
Ladder frame 75/4	1297.004	2	4
Intermediate deck	1339.285	1	2
Aluminium bracket 0.75 m	1341.075	4	4
Guardrail 2.85 m	1205.285	2	2



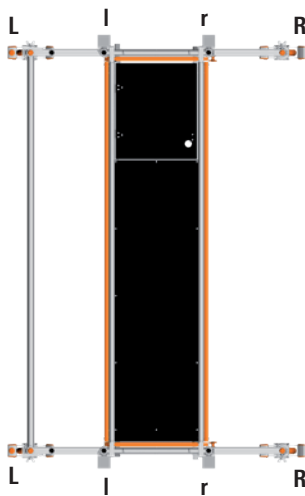
The tower models that may be widened using bracket deck surfaces can be found on pages 8 – 10 (ballasting). When using brackets, the tower may only be loaded with 1.5 kN/m<sup>2</sup> (scaffolding group 2) at one working level only. A maximum of 2 bracket deck surfaces may be assembled. When bracket deck surfaces are fitted, the spindles must not be overextended. The respective working level must be equipped with complete side protection.

## 9. BALLASTING

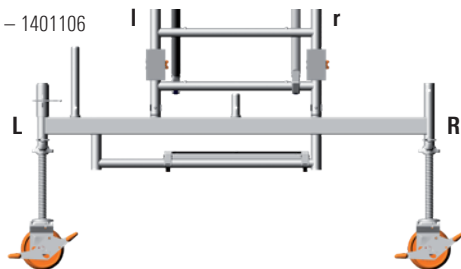
### Attachment of ballast weights

#### Assembly central:

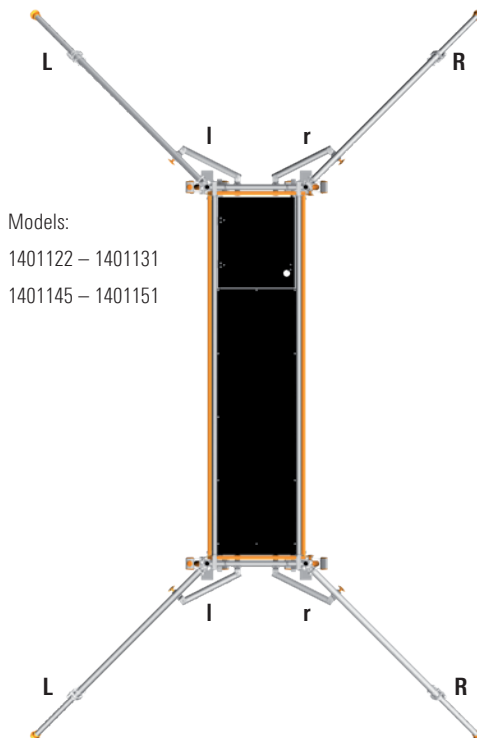
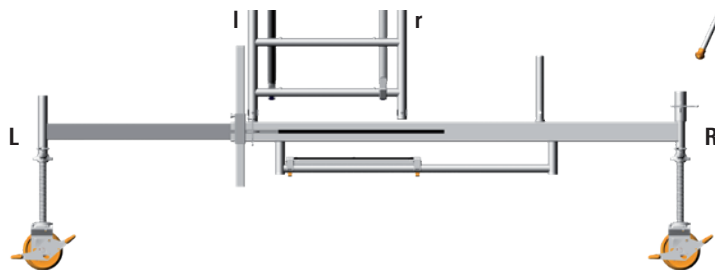
Model:  
1401101



Models:  
1401102 – 1401106



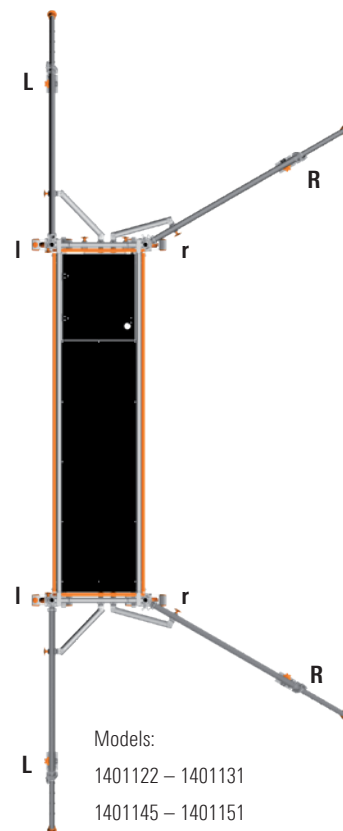
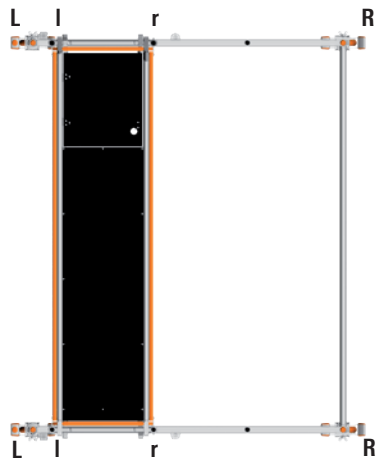
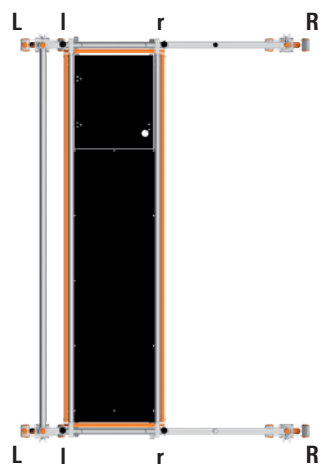
Models:  
1401107 – 1401111



Models:  
1401122 – 1401131  
1401145 – 1401151



## Assembly off-centre:

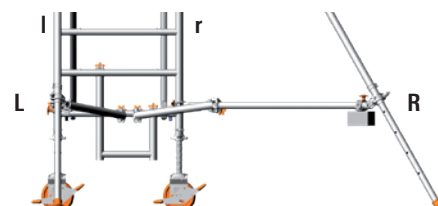
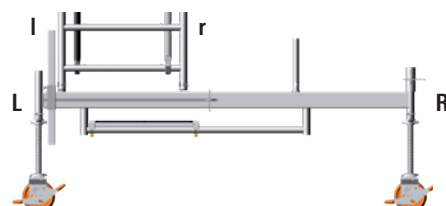
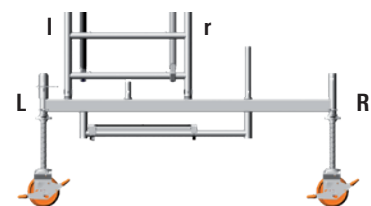


Models:

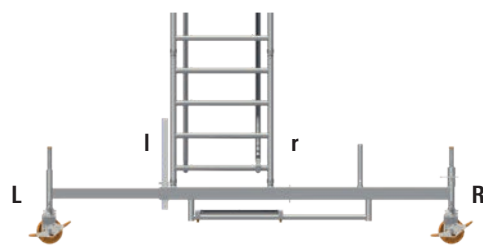
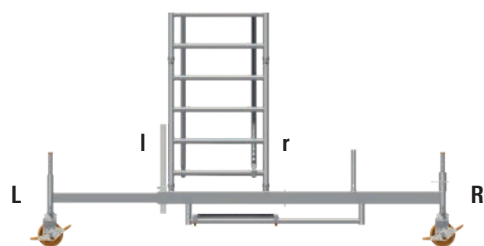
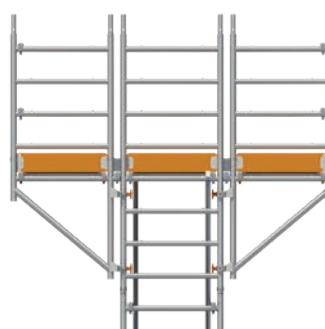
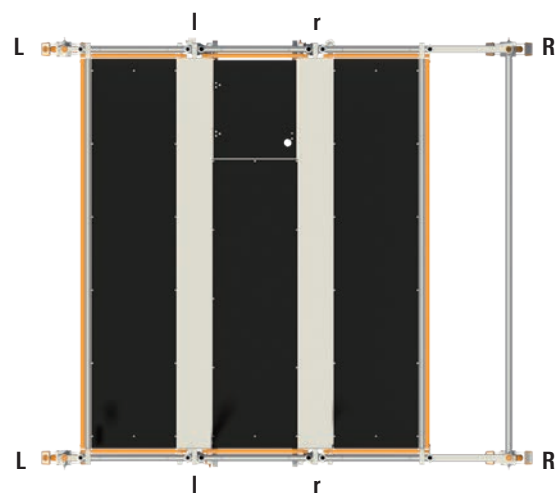
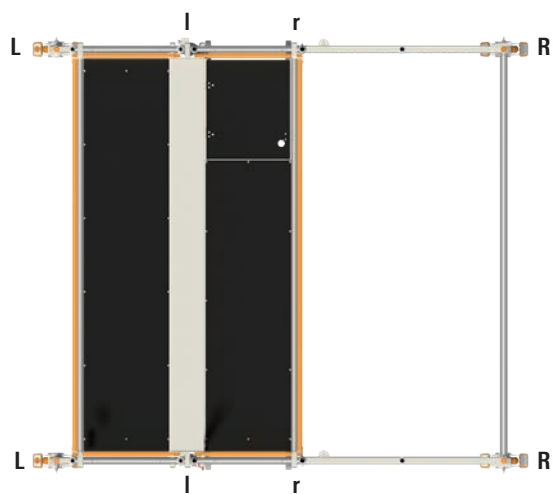
1401102 – 1401106

Models:

1401107 – 1401111



## Assembly central with brackets:





# Example for assembly of model 1401104

Assembly outdoors in central position

Ballast: see page 8



Tower model	1401104
Working height [m]	6.5
Tower height [m]	5.75
Platform height [m]	4.5
Weight [kg] (without ballast)	245.8
Ballasting	
Indoors	
Assembly central	0
Assembly off-centre	L0 R4
Assembly off-centre with wall bracing	0
Assembly central with 1 bracket	L0 R2
Assembly central with 2 brackets	0
Outdoors	
Assembly central	l5 r5
Assembly off-centre	L0 R10
Assembly off-centre with wall bracing	0
Assembly central with 1 bracket	L0 R2
Assembly central with 2 brackets	l8 r8

## 10. STABILISER ATTACHMENT

Before assembly, please note pages 11 – 14, "Basic assembly for rolling tower models without mobile beams". With this assembly form, the fixed and adjustable mobile beams are dispensed with. They are replaced by extendable stabilisers or 5-metre stabilisers.



Attach a stabiliser 32/33 to each stile of the ladder frame 14/15 as follows.

Position the upper half-coupler of the stabiliser 32/33 at the appropriate height on the ladder frame 14/15, and before finally tightening the handwheels position the transverse tube by means of the half-coupler, also at the appropriate height on the ladder frame 14/15. After alignment of the stabilisers in the correct position (against wall or free-standing) and ensuring a firm stand on the ground, tighten the half-couplers using the handwheels.

It must be ensured that the spring clips safely engage in the telescoping parts of the extendable stabiliser.

Set the alignment of the stabilisers as follows:

### Free-standing assembly:

in each case about 60° to the tower longitudinal side (Fig. left).

### Assembly against a wall

On the wall side about 90° to the tower end face

Side facing away from the wall about 60° to the tower longitudinal side (Fig. right).

The specified angles can be checked after attachment of the stabilisers on the basis of the length dimensions "Spacing L".

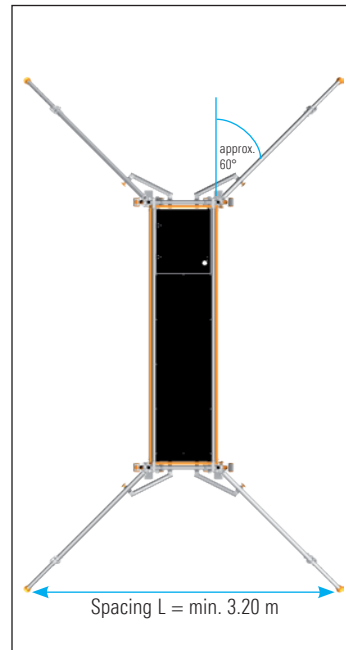
To ensure that the position of the stabilisers cannot change, for example due to inadvertent rotation, attach the tower rotation lock 34 to the stabiliser 32/33.

Position the tower rotation lock between the ladder frame and the stabiliser 32/33 such that one half-coupler is fastened to the transverse tube of the stabiliser and the second half-coupler to the ladder frame rung. After positioning, tighten the half-couplers using the handwheels.

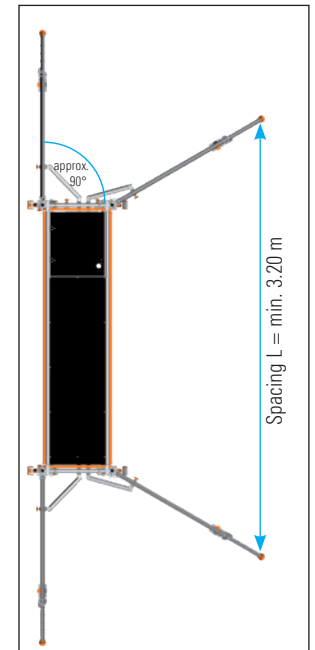
When moving the mobile working platform, do not lift the stabiliser more than 2 cm off the ground.

Correct ballasting of the individual models is specified in the table for ballasting (see pages 9 – 10). For work performed on a load-bearing wall, wall bracing can be fitted on both sides of the tower, allowing a reduction of the ballasting in accordance with the table (see pages 9 – 10).

### Free-standing assembly



### Assembly against a wall



## 11. WALL BRACING (under compression) ANCHORING (under compression and tension)



For work performed on a load-bearing wall, ballasting can be reduced in accordance with the **Ballasting** table (see pages 8 to 10). In this case, wall supports or anchoring must be installed on both sides of the tower.

Use the Uni distance tube 23 and fix it to the ladder frame 14 / 15 using two couplers 24 in each case.

Position the rubber mount on the wall (see detail A) to provide bracing. Use the Uni distance tube, rotated by 180°, for anchoring and fit it into an eyebolt (see detail B) which was attached to the wall previously. Install the mobile beams such that they project from the side facing away from the wall.

Attach the wall supports / anchoring at the height of the top working platform or at most 1 m below that.



Detail A



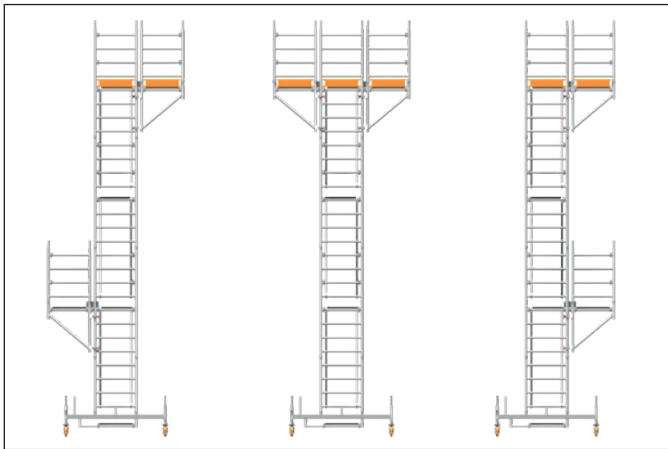
Detail B

## 12. ASSEMBLY WITH BRACKETS

Please refer to the table of tower models on page 8 to see which tower models are allowed to be extended with brackets.

When brackets are used, the following points must be noted in addition:

- ▶ The tower may be loaded with 1.5 kN/m (scaffolding group 2) at one working level only.
- ▶ To ensure stability, do not use full spindle extension when assembling with brackets.
- ▶ Two additional guardrails are required for provided the necessary 2-part side protection.
- ▶ The respective working platform must be equipped with complete side protection.
- ▶ The ladder frames must be assembled in the centre position.
- ▶ The corresponding ballast weights (see ballasting tables pages 8–10) must be attached before fitting the brackets.
- ▶ A maximum of 2 bracket deck surfaces can be fitted to a tower. The bracket deck surfaces can be used either on one side, both on one side or one on each side.
- ▶ The bracket deck surfaces can be fitted at any level of the tower where a deck is provided.



If the ballasting table is not complied with, there is an increased risk of accidents as a result of the tower toppling over because of uneven loading.

1. Tower assembly up to the height required in accordance with the assembly sequence already described. (page 11 ff.)
2. Before attaching the brackets 0.75 m 28, remove the toe boards 30+31.
3. At the access level, bolt on 2 brackets at each side using the couplers in such a way that the rungs of the aluminium brackets 0.75 m are at the same level as the ladder frame rungs.
4. Now hook the decks 26 into the rungs of the bracket 0.75 m 28 in each case.
5. Fit the intermediate deck / intermediate decks 2.85 m 29 between the deck 26 in the bracket 0.75 m 28 and the access deck 25 in the basic structure.
6. Fit one ladder frame 75/4 14 onto each bracket 0.75 m 28.
7. Assemble the side protection of the first bracket deck surface, or on one side, using two additional guardrails 17, which are hooked from above into the ladder frames 75/4 14, beyond the existing side protection of the basic structure, in the top and third rungs. For a bracket deck surface on both sides, reassemble the side protection of the basic structure – on which side protection is already provided in the bracket deck surface – beyond the still existing side protection of the basic structure, in the ladder frames 75/4 14 of the second bracket deck surface. To do so, hook both guardrails 17 from the existing side protection of the basic structure in the top and third rungs from above into the ladder frames 75/4 14. The two guardrails which are still present as side protection of the basic structure, after fitting of the guardrails to the single bracket deck surface or on both sides, can be removed and then either transported downwards or deposited in the rungs of the ladder frames 75/4 14 of the bracket deck surface(s).
8. Complete the 3-part side protection, which depends on the tower model concerned, by installing the toe boards 2.85 m 30; position the latter on the bracket, on the longitudinal side between the ladder frames, and secure them by inserting end toe boards 31 between the toe board 2.85 m 30 and the intermediate deck 2.85 m 29.

### Dismantling

Dismantle the bracket deck surfaces in the reverse order to assembly. After removal of the bracket deck surfaces and restoring the minimum two-part side protection in the basic structure, the entire tower can be dismantled as described in the dismantling sequence (see page 16).

## 13. COMPONENTS OF THE SYSTEM

1



### 1359.200 Wheel 700

Plastic wheel, Ø 200 mm.  
With base plate,  
adjustment range 0.30 – 0.60 m,  
spindle nut with lock, wheel with  
twin brake lever and load centring  
when braked. Permissible load  
capacity: 7.0 kN ( $\approx$  700 kg).

*Functioning predecessor article  
1259.200 / 1259.201 (not shown)  
can remain in use.*

2



### 1358.200 Wheel 700 with polyurethane tyre

Plastic wheel, Ø 200 mm.  
With base plate,  
adjustment range 0.30 – 0.60 m,  
spindle nut with lock, wheel with  
twin brake lever and load centring  
when braked. Permissible load  
capacity: 7.0 kN ( $\approx$  700 kg).

*Functioning predecessor article  
1268.200 / 1259.202 (not shown)  
can remain in use.*

3



### 1260.201 Wheel 1000

Plastic wheel, Ø 200 mm,  
polyamide. With base plate,  
adjustment range 0.30 – 0.60 m,  
spindle nut with lock, wheel with  
twin brake lever and load centring  
when braked. Permissible load  
capacity: 10 kN ( $\approx$  1,000 kg).

*Functioning predecessor article  
1260.200 (not shown) can remain  
in use.*

4



### 1260.202 Wheel 1000 with electrically conductive polyurethane tyre

Plastic wheel, Ø 200 mm of polyam-  
ide with tyre of electrically conduc-  
tive polyurethane. With base plate,  
adjustment range 0.30 – 0.60 m,  
spindle nut with lock, wheel with  
twin brake lever and load centring  
when braked. Permissible load  
capacity 10 kN ( $\approx$  1,000 kg).  
Special wheel for sensitive floors,  
and thanks to electrical conductivity  
usable in explosion-proof or in ESD-  
risk areas, electrical leakage resis-  
tance as per DIN EN 12526  $< 10^4 \Omega$ .

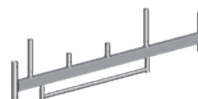
5



### 1300.150 Wheel D = 150 with base plate 250

Plastic wheel, Ø 150 mm, with base  
plate, adjustment range 0.2 – 0.35 m,  
spindle nut with lock, wheel with twin  
brake lever and load centring when  
braked.  
Permissible load capacity: 7 kN  
( $\approx$  700 kg).

6



### 1323.180 Mobile beam w. bar 1.80 m

Steel rectangular tube, hot-dip-  
galvanized. For base widening in  
mobile working platforms. Width  
1.80 m, weight 16.8 kg.

7



### 1323.320 Mobile beam with deck support, 3.20 m, adjustable

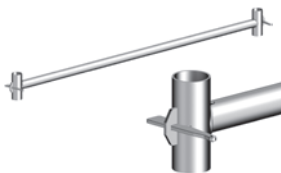
Steel rectangular tube, hot-dip-  
galvanized. For base widening  
in mobile working platforms.  
Width max. 3.20 m, min. 2.30 m,  
weight 42.5 kg.

8



**1338.320 Mobile beam with 2 spigots, 3.20 m, adjustable**  
Steel rectangular tube, hot-dip-galvanised. For base widening in special rolling tower structures. Width max. 3.20 m, min. 2.30 m, weight 42.6 kg.

9



**1211.285 Basic tube 2.85 m**  
steel tube, hot-dip-galvanized. Length 2.85 m, weight 12.2 kg.

10



**1324.285 Basic strut 2.85 m**  
with 2 half-couplers, steel tube hot-dip-galvanized, length 2.85 m, weight 9.3 kg.

11



**1344.002 Access ledger 0.3**  
of aluminium, length 0.27 m, weight 2.9 kg.

12



**1249.000 Ballast (10 kg)**  
steel, hot-dip-galvanized with half-coupler.

13



**1337.000 spigot, adjustable**  
for twin towers, steel, hot-dip-galvanized. For use with mobile beam No. 1338.320. weight 2.1 kg.

14



**1297.004 Ladder frame 75/4**  
aluminium with press-in spigot. Rungs with non-slip grooving. Height 1.00 m, Width 0.75 m, weight 4.7 kg.

**1298.004 Ladder frame 75/4**  
aluminium with screw-in spigot.

15



**1297.008 Ladder frame 75/8**  
aluminium with press-in spigot. Rungs with non-slip grooving. Height 2.00 m, Width 0.75 m, weight 8.6 kg.

**1298.008 Ladder frame 75/8**  
aluminium with screw-in spigot.

16



**1250.000 Spring clip**  
steel. weight 0.1 kg.

17



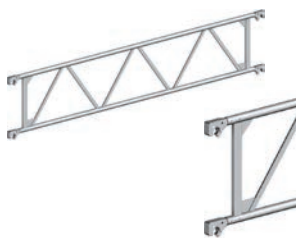
**1205.285 Guardrail 2.85 m**  
aluminium. Length 2.85 m, weight 3.6 kg.

18



**1206.285 Double guardrail 2.85 m**  
aluminium. Length 2.85 m, height 0.50 m, weight 8.0 kg.

19



**1207.285 Beam 2.85 m**  
aluminium. Support elements in tower construction kit or double side protection.  
Length 2.85 m, height 0.50 m, weight 9.6 kg.

20



**1208.285 Diagonal brace 3.35 m**  
aluminium.  
Length 3.35 m, weight 4.1 kg.

21



**1208.295 Diagonal brace 2.95 m**  
aluminium.  
Length 2.95 m, weight 3.8 kg.

22



**1347.335 Deck diagonal brace 3.35 m**  
weight 5.0 kg.

23



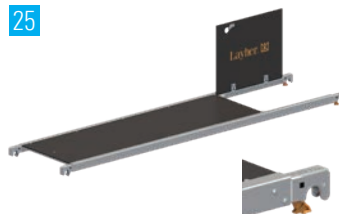
**1275.110 Uni distance tube**  
Aluminium tube with hook and rubber mount. Ø 48.3 mm, Length 1.10 m, weight 1.4 kg.

24



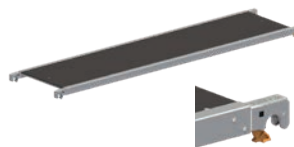
**4700.019 / 4700.022 Double coupler**  
19 or 22 mm AF, weight 1.3 kg.

25



**1242.285 Access deck 2.85 m**  
Aluminium frame, with plywood deck and hatch (BFU 100 G) with phenolic resin coating.  
Length 2.85 m, Width 0.68 m, weight 21.6 kg.

26



**1241.285 Deck 2.85 m**  
Aluminium frame with plywood deck (BFU 100G) with phenolic resin coating.  
Length 2.85 m, width 0.68 m, weight 20.0 kg.

27



**1300.010 Uni assembly hooks**  
polyethylene, set of 2.  
weight 1.2 kg.

28



**1341.075 Bracket 0.75 m**  
for rolling towers, aluminium.  
For widening of the working platform on one or two sides.  
Width 0.75 m, height 0.90 m, weight 5.4 kg.

29



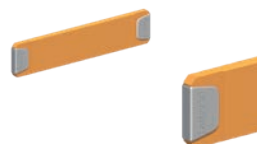
**1339.285 Intermediate deck 2.85 m**  
aluminium.  
For bracket structures.  
Length 2.85 m, width 0.23 m, weight 10.5 kg.

30



**1439.285 Toe board 2.85 m with claw wood.**  
Length 2.86 m, height 0.15 m, weight 5.6 kg.

31



**1438.075 End toe board 0.75 m**  
wood.  
Length 0.73 m, height 0.15 m, weight 1.6 kg.



32



**1248.260 Stabiliser, extendable**  
aluminium.  
Length 2.60 m,  
weight 8.5 kg.

33



**1248.500 Stabiliser, 5 m**  
aluminium.  
Length 5.00 m,  
weight 14.9 kg.

34



**1248.261 Rotation lock**  
aluminium.  
Length 0.50 m,  
weight 2.8 kg.

36



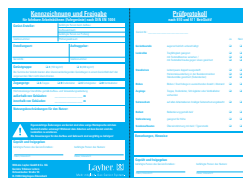
**1314.108 Hook-in step ladder**  
aluminium.  
8 steps, with snap-on claw and  
wheels on ladder foot.  
  
Functioning predecessor article  
1314.008 (not shown) can remain  
in use.

37



**1314.109 Ladder stabiliser set**  
for hook-in step ladder  
Ref. No. 1314.108

## 6344.400 Tower identification block



## 6344.010 See-through pocket, with integrated keep-out sign.



# 14. CERTIFICATE

In view of possible expiry dates and / or updating, you can obtain the appropriate certificate on request using the contact details stated overleaf.





# Layher®



More Possibilities. The Scaffolding System.

**Wilhelm Layher GmbH & Co KG**  
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