



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/m²
on max. one working level
(Load class 3 according to
DIN EN 1004-1: 2021)



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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.

Beyond the currently valid General Terms of Sale of Wilhelm Layher GmbH & Co KG, **no liability** is assumed for damage of whatever nature that has been incurred due to the following reasons:

- ▶ Non-compliance with instructions
- ▶ Improper assembly, and use of the product not for its intended purpose
- ▶ Use of non-original and damaged Layher components
- ▶ Unauthorised structural changes
- ▶ Improperly performed repairs, including and above all when non-original Layher spare parts are used
- ▶ Events caused by force majeure (disasters, foreign objects)

The respective user shall ensure on their own responsibility that the points as stated and also the current safety regulations are complied with and that use for the intended purpose is assured.

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.

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.

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 Göglingen-Eibensbach, Germany.



Number of persons required for assembly, modification and dismantling: ▶ 2 persons

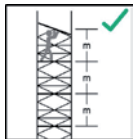
Caution: Layher Uni Standard may only be assembled, modified and dismantled under the supervision of a person who has been qualified, trained and authorised for operations involving "mobile working platforms".

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 50 Nm.



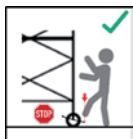
The maximum distance between the platforms must not exceed 2.25 m. Exception: The distance between the assembly level (the ground) and the first platform. The maximum distance permitted here is 3.40 m.



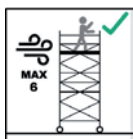
Mobile working platforms must be set to the perpendicular using the adjusting spindles or by inserting suitable materials underneath them. The maximum permitted tilt is 1 % (in horizontal direction = scaffolding length / 100).



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.



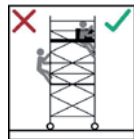
After movement, the wheels must be locked by pressing down the brake lever.



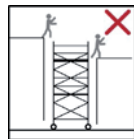
When used in the open air or in open buildings, **any work on the mobile platform must be stopped immediately if the wind strength exceeds 6 on the Beaufort scale.** At these wind speeds or at the end of a shift, mobile working platforms must be moved to a location where they are protected from the wind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



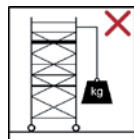
Due to the maximum load-bearing capacity of the structure, there may be a limit to the number of persons who may be present on a working level at any given time. This maximum load on the working level due to persons, tools and material must be checked in advance and be limited if necessary.



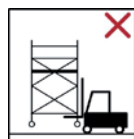
Failure to respect the maximum load limit can overload the structure and/or cause it to collapse. Serious or fatal injuries are possible.



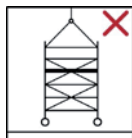
It is not permitted to increase the platform height by using ladders, boxes or other mechanisms.



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.



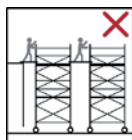
In certain cases, and following consultation with the manufacturer, it may be possible to reinforce the structure by replacing the appropriate components.



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



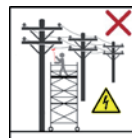
It is not permissible to stand and move around on unsecured levels/platforms of mobile working platforms.



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

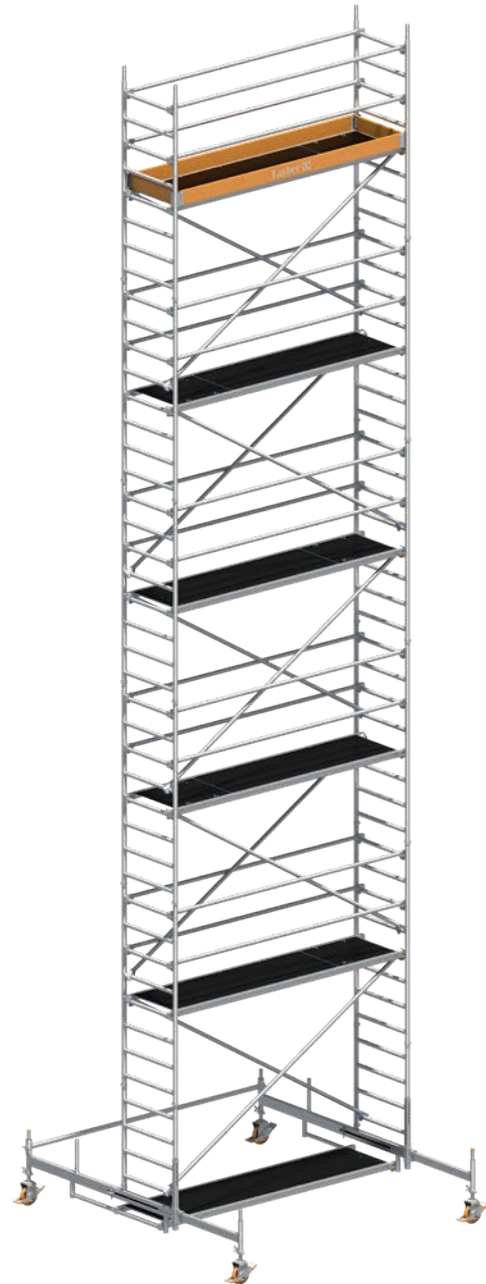
General

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.

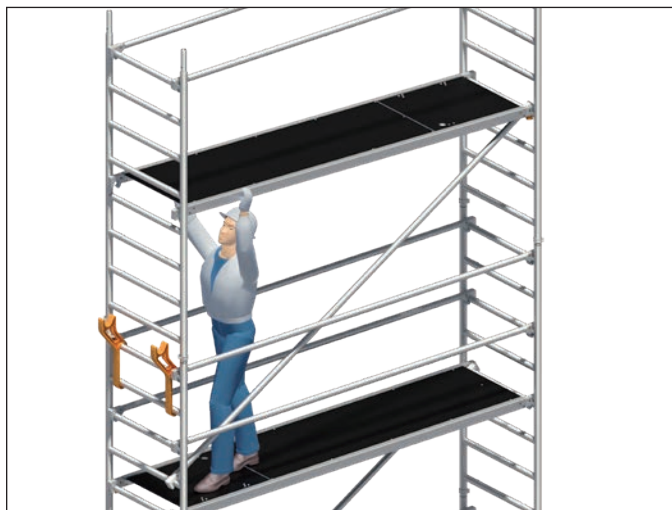
1. Attach the first ladder frame.
Attach the Uni assembly hooks and position the second ladder frame in order to fit the guardrails.



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

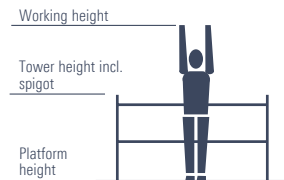


4. TOWER MODELS

For assembly outdoors comply with the height restriction!

Tower models

1401101 – 1401111



1401101



1401102



1401103



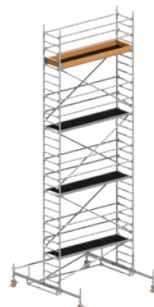
1401104



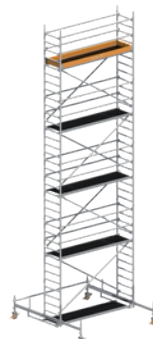
1401105



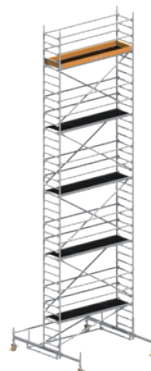
1401106



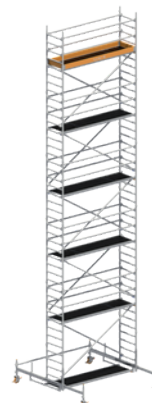
1401107



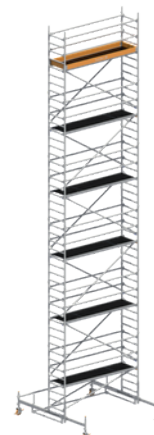
1401108



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
Ballasting											
Indoors											
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
Outdoors											
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 22 – 25)

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

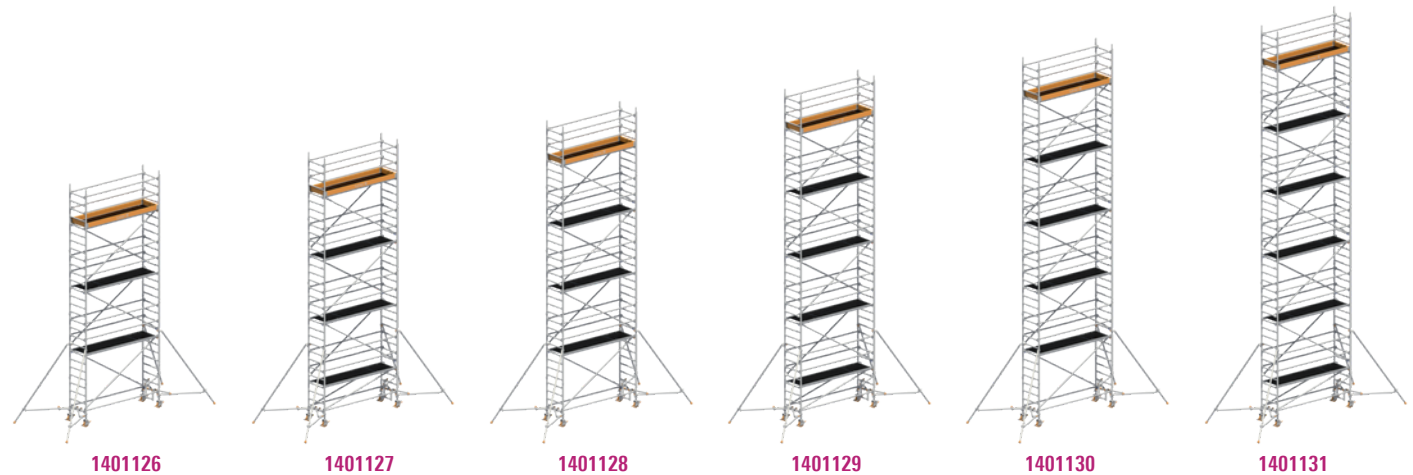
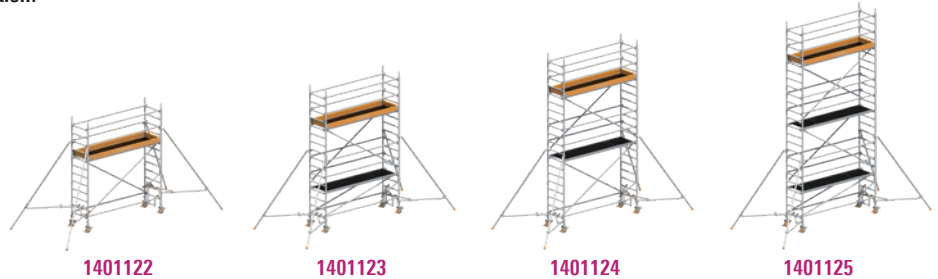
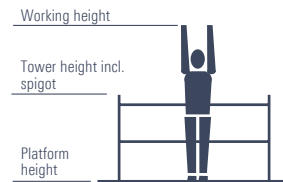
r and R relate in the case of off-centre assembly always to the side facing away from the tower; I and L relate to the side facing the tower (see also Section 9, Ballasting, on pages 22 – 25)

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										
Indoors										
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
Outdoors										
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 22 – 25)

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

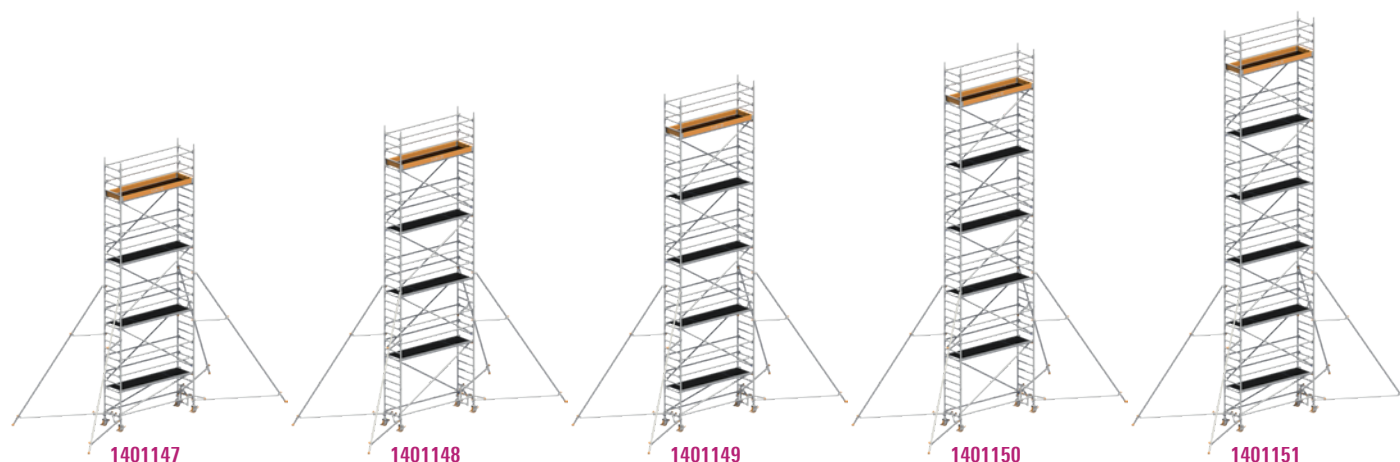
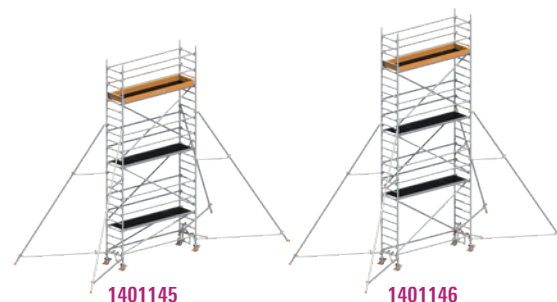
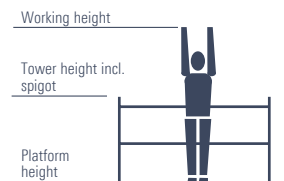
r and R relate in the case of off-centre assembly always to the side facing away from the tower; l and L relate to the side facing the tower (see also Section 9, Ballasting, on pages 22 – 25)

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							
Indoors							
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
Outdoors							
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 22 – 25)

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 22 – 25)

5. ASSEMBLY SEQUENCE Safety Structure P2

Observe the general directions for assembly and use on pages 5 – 7. 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.



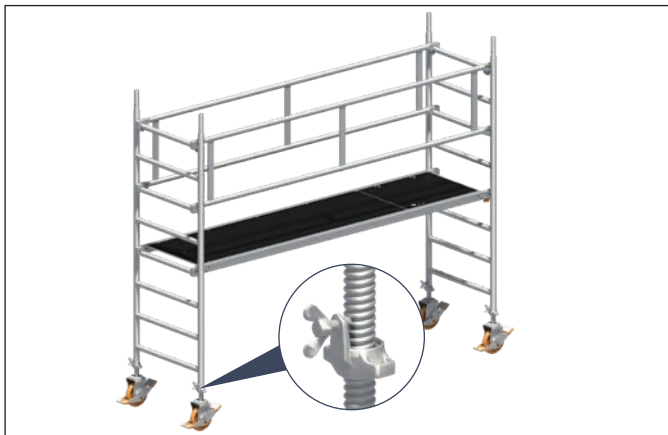
The wheels must be locked during assembly, modification or dismantling and while there is anybody on the tower.

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 30 – 33.

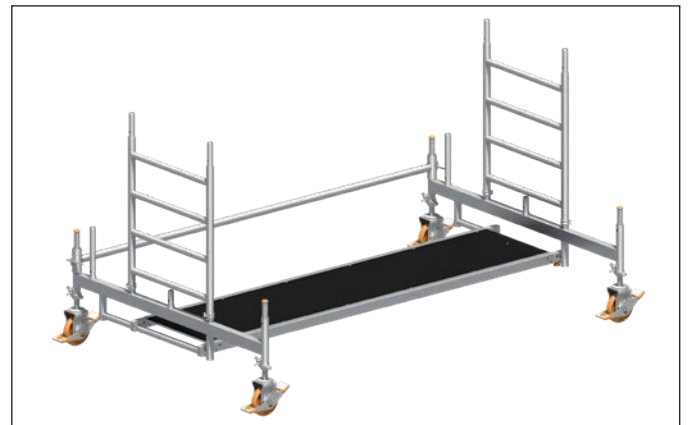
Basic assembly Tower model 1401101



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 16, "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 15, "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 15, "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 15, "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).

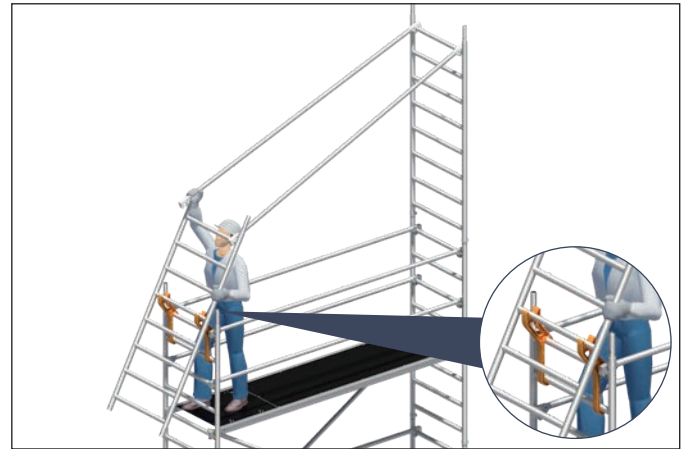
Further assembly is performed as “Assembly of intermediate platforms” (see right-hand side).

Assembly of intermediate platforms

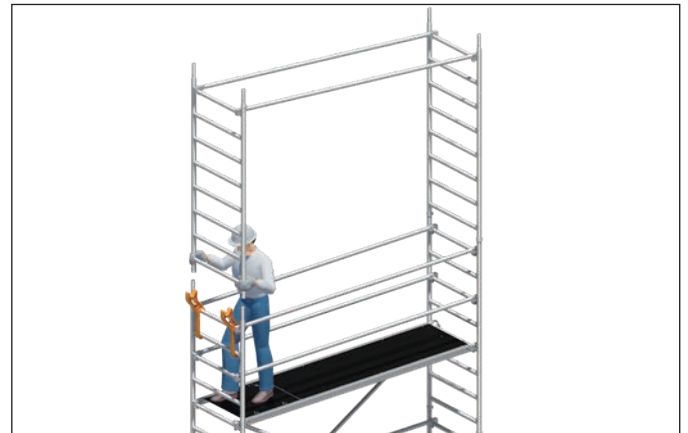
All tower models



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**.



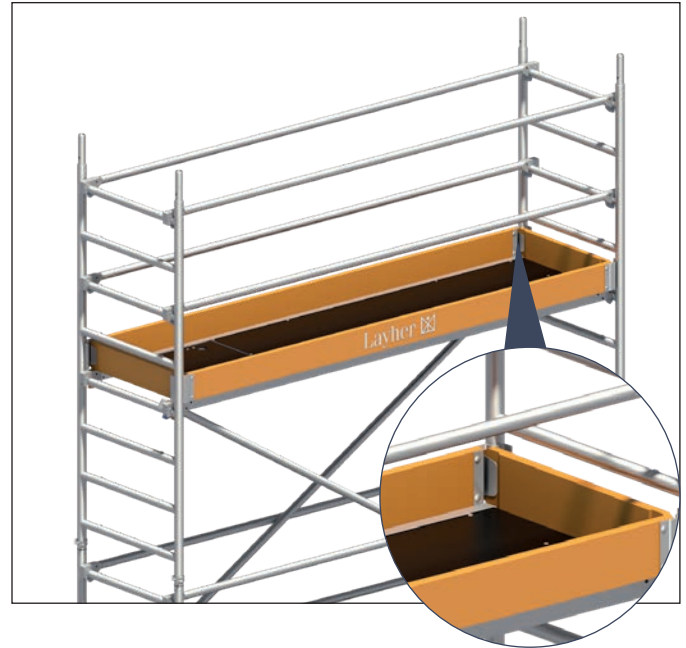
4. Insert diagonal braces 20 and access deck 25. Install the diagonal braces on both sides in tower-like (zig-zag) form.



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

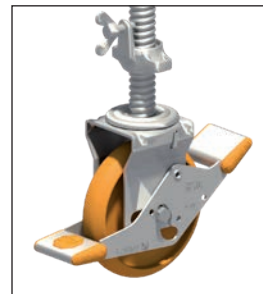


1. To complete the working platform, attach toe boards with claw 30 and end toe boards 31.



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.