

Layher Rolling Towers – Uni Standard

Safety Structure 

Instructions for Assembly and Use

Mobile working platforms

to DIN EN 1004:2005-03

Working platform 0.75 x 2.85 m

max. working height:

indoors 13.6 m

outdoors 9.6 m

Load bearing capacity 2.0 kN/m²

on max. one working level

(scaffold group 3 to

DIN EN 1004:2005-03)



Rolling Towers

Layher®

More Possibilities. The Scaffolding System.

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► **NOTE**

The products or assembly variants shown in these instructions for assembly and use may be subject to country-specific regulations. The user of the products bears the responsibility for compliance with such regulations. Subject to local regulations, we reserve the right not to supply all the products illustrated here.

Your Layher partner on the spot will be happy to provide advice and answers to all questions relating to the approvals for the products, to their use or to specific assembly regulations.

▶ 1. INTRODUCTION

General

These instructions for assembly and use relate to the assembly, modification and dismantling of the Layher Uni Standard rolling tower from Wilhelm Layher GmbH & Co. KG, of Gueglingen-Eibensbach, Germany. These instructions cannot cover all possible applications. If you have any questions about specific applications, please contact your Layher partner.

Caution: Layher Uni Standard equipment may only be assembled, modified and dismantled under the supervision of a qualified expert and by technically trained employees.

▶ 2. GENERAL DIRECTIONS FOR ASSEMBLY AND USE

The rolling tower may be used for the scaffolding group as specified in DIN EN 1004.

The user of the rolling tower must comply with the following instructions:

1. The user must check the suitability of the selected rolling tower for the work to be performed (Section 4 of BetrSichV – German Ordinance on Industrial Safety and Health).

2. According to DIN EN 1004:2005-03 the maximum platform height is

- 12.0 m when inside buildings
- 8.0 m when outside buildings

The specifications governing ballasting and components on pages 8 – 10 and 18 – 19 must be observed. There is a risk of accident if this is not done. Stability and load-bearing capacity are no longer assured. Any variations in assembly that differ from the specifications may require additional design measures. In such a case, the stability and load-bearing capacity would have to be verified for the individual case.

3. The assembly, modification or dismantling of the rolling tower in accordance with the present instructions for assembly and use may only be performed under the supervision of a qualified expert and by technically trained employees after special instruction. Only the

scaffolding types shown in these instructions for assembly and use may be used. After assembly and before being put into service, the equipment must be inspected by persons qualified to do so (Sections 4 and 10 of BetrSichV). The inspection must be documented (Section 11 of BetrSichV). During assembly, modification or dismantling, the rolling tower must be provided with a prohibition sign indicating “No access allowed” and be adequately safeguarded by means of barriers preventing access to the danger zone (BetrSichV Annex 2, para. 5.2.5).

4. Before installation, all parts must be inspected to ensure they are in perfect condition. Only undamaged original parts from Layher’s mobile working platform systems may be used. Scaffolding parts such as snap-on claws and spigots must be cleaned of dirt after use. Scaffolding components must be secured against slipping and impacts when transported by truck. Scaffolding components must be handled in such a way that they are not damaged. See the tables on pages 8 – 10 of these instructions for wall bracing and attachment of the ballast weights.

5. In order to assemble the upper sections of the rolling tower, the individual parts must be handed up from one level to the next. Tools and small amounts of materials can be carried up by the personnel, otherwise hoisted up to the working level using transport ropes.

6. The ladder frame joints must always be secured with locking pins.

7. Suitable materials must be inserted underneath to ensure that the scaffolding is perpendicular. The permitted deviation from the perpendicular must not be more than 1 %.

8. Stability must be ensured at every phase of assembly.

9. Toe boards can be omitted from intermediate platforms that are only used for ascent. Small towers in which the deck surface is more than 1.00 m high must include equipment that permits attachment of side protection in accordance with DIN EN 1004:2005-03.

10. Access up to the working platform is generally only permitted on the inside of the scaffolding. Scaffolding types with an assembly height of less than 1 m are an exception to this rule.

11. Work must not take place on two or more working levels at the same time. The manufacturer must be consulted regarding any variations. If work is to take place on more than one level, they must be fully fitted with 3-piece side protection.

12. It is not permitted to push against adjacent objects (such as walls) when working on mobile working platforms.

13. Lifting gear must not be attached to or used on mobile working platforms.

14. Assembly and movement is only permitted on sufficiently strong surfaces, and only in the longitudinal direction or diagonally. All impacts must be avoided. If the base is widened on one side with wall bracing, movement must always be parallel to the wall. Movement should not be faster than normal walking pace.

15. No personnel and/or loose objects may be on the tower while it is being moved.

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

17. The towers must not be subjected to any aggressive fluids or gases.

18. Mobile working platforms must not be connected by bridging unless a special verification of structural stability is provided. The same applies to all special structures such as suspended scaffolding. The attachment of any bridging elements between one mobile working platform and a building is also not permitted.

19. **When used in the open air, or in open buildings, the mobile working platform must be moved to an area protected from the wind or secured by other suitable means to prevent it falling over if the wind strength exceeds 6 on the Beaufort scale, or at the end of the working shift.** (Wind that exceeds strength 6 can be recognized from the difficulty felt when walking into the wind.) If possible, rolling towers used outside buildings should be securely fastened to the building or to some other structure. It is recommended that mobile working platforms are anchored down if they are left unsupervised. The scaffolding must be aligned perpendicular either by use of the compensating screw, or by inserting suitable materials underneath. The permitted deviation from the perpendicular must not be more than 1 %.

20. Decks can also be raised or lowered one rung in order to obtain a different working height. In that case it is necessary to make sure that the specified side protection heights of 1.0 m and 0.5 m are maintained. When assembled this way, deck diagonals are to be used.

The manufacturer must be consulted regarding a stability verification.

21. The access hatches must always be kept closed except when climbing through them.

22. All couplers are to be tightened up to 50 Nm.

23. It is forbidden to climb over from rolling towers.

24. Jumping onto the deck surfaces is forbidden.

25. A check must be made on whether all the parts, auxiliary tools and safety equipment (ropes etc.) needed for assembly of the mobile working platforms are available on the building site.

26. Horizontal and vertical loads that could cause the mobile working platform to tip over must be avoided. These include:
– forces caused by pushing against adjacent objects (e.g. walls)
– additional wind loads (the tunnel effect of buildings with through-passages, buildings without facings or building corners).

27. Mobile beams, stabilizers or outriggers and ballast must be installed if specified.

28. It is forbidden to increase the height of the deck surfaces by using ladders, boxes or any other objects.

29. Mobile working platforms are not designed to be lifted or suspended.

30. The item numbers for components given in blue in the text refer to the list of individual parts on pages 27 – 29.

▶ 3. MEASURES TO PREVENT FALLS

Preventing falls during assembly, modification or dismantling of the tower

General

In line with local regulations or as the result of a risk analysis performed by the scaffolding erector, personal safety apparatus (PSA), an assembly guardrail or a combination of the two may be necessary for assembly, modification or dismantling of the scaffolding.

Attachment points on the tower for the personal safety apparatus (PSA)

The tower can be assembled/dismantled optionally with personal safety apparatus (PSA) too. Suspend the snap hook during ascent at least **1.0 m above the standing area** of the still unsecured level. The platform height must be at least 5.75 m. This results in a **minimum attachment height for the PSA of 6.75 m** (Fig. 1).



Fig. 1: Attachment of PSA during ascent onto the unsecured level

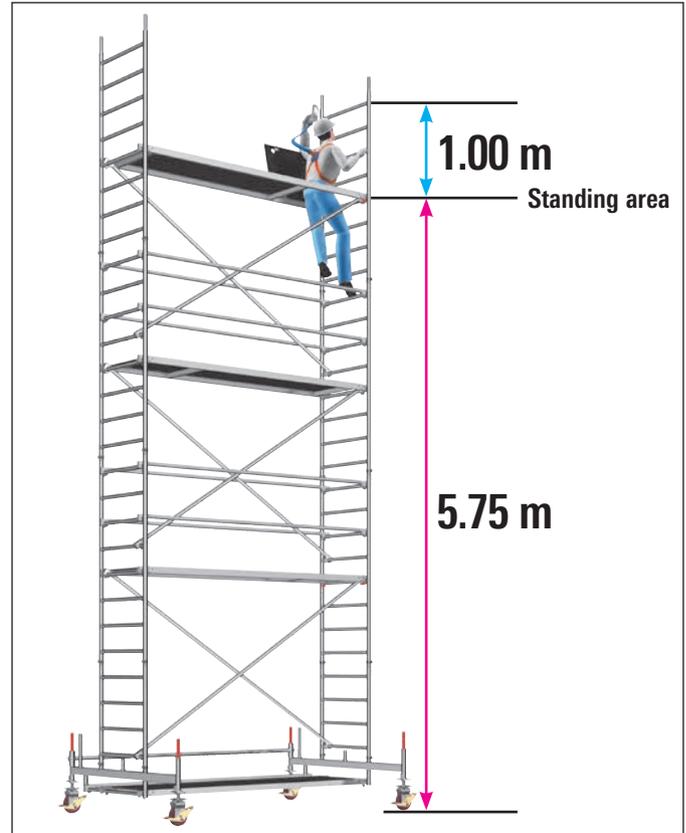


Fig. 2: Minimum heights for use of PSA

The tower level can then be secured with the rear guardrails.

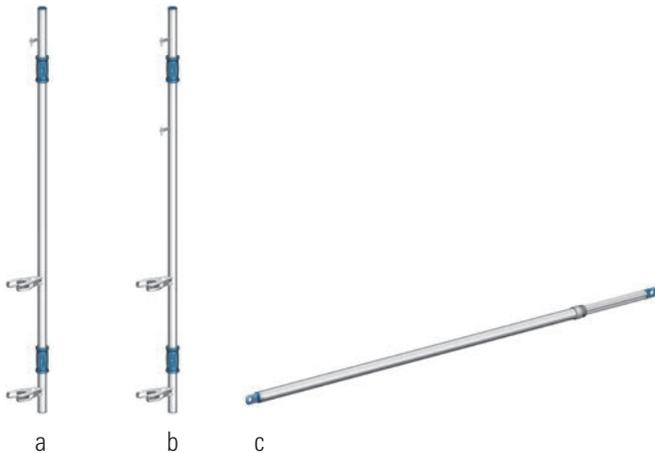


Fig. 3: Safe assembly of rear guardrails using PSA

How the Layher advance guardrail system works

The Layher advance guardrail consists of two basic components – advance guardrail post and telescoping guardrail. The assembly post a) or b) must be used depending on local regulations.

- a. Advance guardrail post with connection for telescoping guardrail at 1 m height
- b. Advance guardrail post with connection for telescoping guardrail at 0.5 m and 1 m heights
- c. Advance telescopic guardrail of aluminium



The advance guardrail post of the assembly safety rail can be fitted and dismantled by an erector from two positions:

1. Assembly/dismantling from above
2. Assembly/dismantling from below

Ensure that both claws of the advance guardrail snap in completely and that the telescoping guardrail is attached using the tilting pins.



To prevent unintended slipping of the advance guardrail post, fit a rear guardrail at the level of a snap-on claw.

Fig. 4: Connection of advance guardrail post to the ladder frame



Fig. 5: Upward movement of the advance guardrail system



Fig. 6: Safe assembly of rear guardrails using advance guardrail system

► 4. TOWER MODELS

In the case of **assembly outdoors**, do not exceed the height limit!

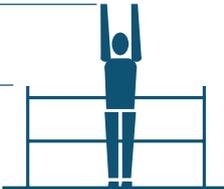
Tower models

1401101 – 1401111

Working height

Scaffolding height

Platform height



1401101



1401102



1401103



1401104



1401105



1401106



1401107



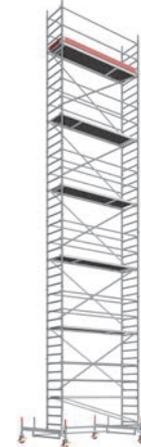
1401108



1401109



1401110



1401111

Tower model	1401101	1401102	1401103	1401104	1401105	1401106	1401107	1401108	1401109	1401110	1401111
Working height [m]	3.5	4.5	5.5	6.5	7.5	8.5	9.6	10.6	11.6	12.6	13.6
Scaffolding height [m]	2.6	3.75	4.75	5.75	6.75	7.75	8.79	9.79	10.79	11.79	12.79
Platform height [m]	1.5	2.5	3.5	4.5	5.5	6.5	7.6	8.6	9.6	10.6	11.6
Weight [kg] (without ballast)	85.6	184.0	218.9	245.8	280.7	307.6	393.7	420.6	455.5	482.4	517.3
Ballasting											
Indoors											
Assembly central	I2 r2	0	0	0	0	0	0	0	0	0	0
Assembly off-set	X	0	0	L0 R4	L0 R4	L0 R6	L0 R4	L0 R6	L0 R6	L0 R8	L0 R10
Assembly off-set 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-set	X	L0 R2	L0 R6	L0 R10	L4 R16	L10 R22	L0 R18	X	X	X	X
Assembly off-set 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	L0 R2	L0 R16	L12 R12	X	X	X	X	X
Assembly central with 2 brackets	X	I2 r2	I5 r5	I8 r8	X	X	X	X	X	X	X

When assembling with adjustable mobile beam, it must be fully extended. X = not permissible / possible 0 = no ballast required Table gives the number of ballast weights each of 10 kg.

For ballasting, use Layher ballast weights, Ref. No. 1249.000, 10 kg each. These are fastened quickly and securely at the right place using the star handle coupling.

Liquid or granular ballast materials must not be used. The ballast weights must be distributed evenly to all ballast fixing points (see pages 20 – 23).

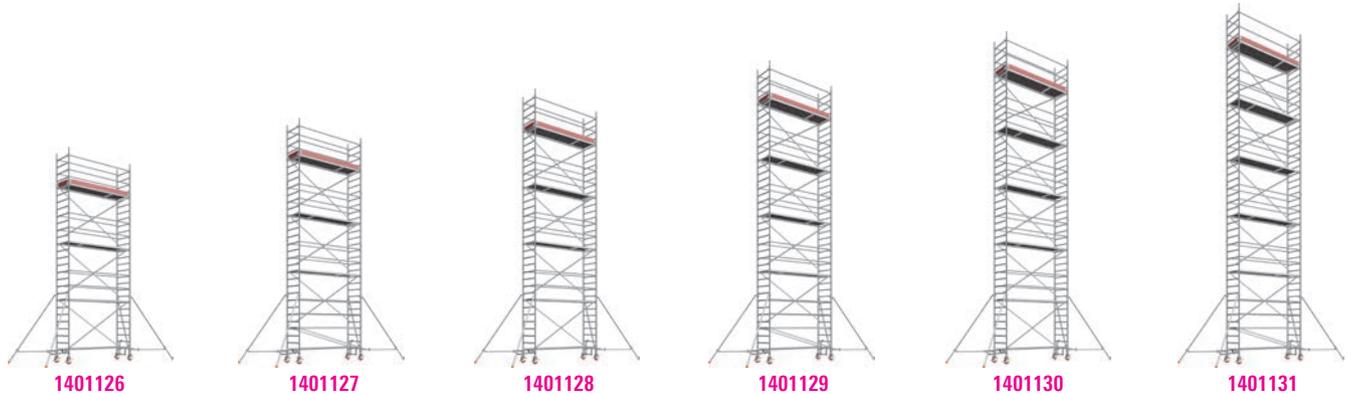
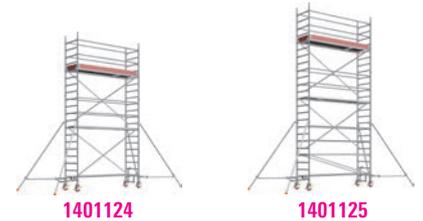
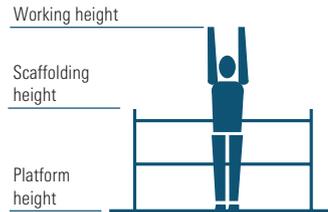
Example: I2, r2 → 2 ballast weights of 10 kg each must be fastened to the left-hand side of the ladder frame, and 2 ballast weights of 10 kg each to its right-hand side
L6, R16 → 6 ballast weights of 10 kg each must be fastened to the left-hand side of the mobile beam, and 16 ballast weights of 10 kg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

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

► TOWER MODELS WITH STABILIZERS, EXTENDABLE

In the case of **assembly outdoors**, do not exceed the height limit!

Tower models 1401124 – 1401131



Tower model	1401124	1401125	1401126	1401127	1401128	1401129	1401130	1401131
Working height [m]	6.5	7.5	8.5	9.5	10.5	11.5	12.5	13.5
Scaffolding height [m]	5.7	6.7	7.7	8.7	9.7	10.7	11.7	12.7
Platform height [m]	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5
Weight [kg] (without ballast)	234.7	286.0	296.5	347.8	358.3	409.6	420.1	471.4
Ballasting								
Indoors								
Assembly central	0	0	0	0	0	0	0	0
Assembly off-set	LO R6	LO R8	LO R12	LO R12	LO R16	LO R18	LO R20	LO R22
Assembly off-set with wall bracing	0	0	0	0	0	0	0	0
Outdoors								
Assembly central	0	0	0	0	X	X	X	X
Assembly off-set	LO R16	LO R20	LO R28	LO R34	X	X	X	X
Assembly off-set with wall bracing	0	0	0	0	X	X	X	X

When assembling with adjustable mobile beam, it must be fully extended. X = not permissible / possible 0 = no ballast required Table gives the number of ballast weights each of 10 kg.

For ballasting, use Layher ballast weights, Ref. No. 1249.000, 10 kg each. These are fastened quickly and securely at the right place using the star handle coupling.

Liquid or granular ballast materials must not be used. The ballast weights must be distributed evenly to all ballast fixing points (see pages 20 – 23).

Example: L2, r2 → 2 ballast weights of 10 kg each must be fastened to the left-hand side of the ladder frame, and 2 ballast weights of 10 kg each to its right-hand side
L6, R16 → 6 ballast weights of 10 kg each must be fastened to the left-hand side of the stabilizers, and 16 ballast weights of 10 kg each to its right-hand side

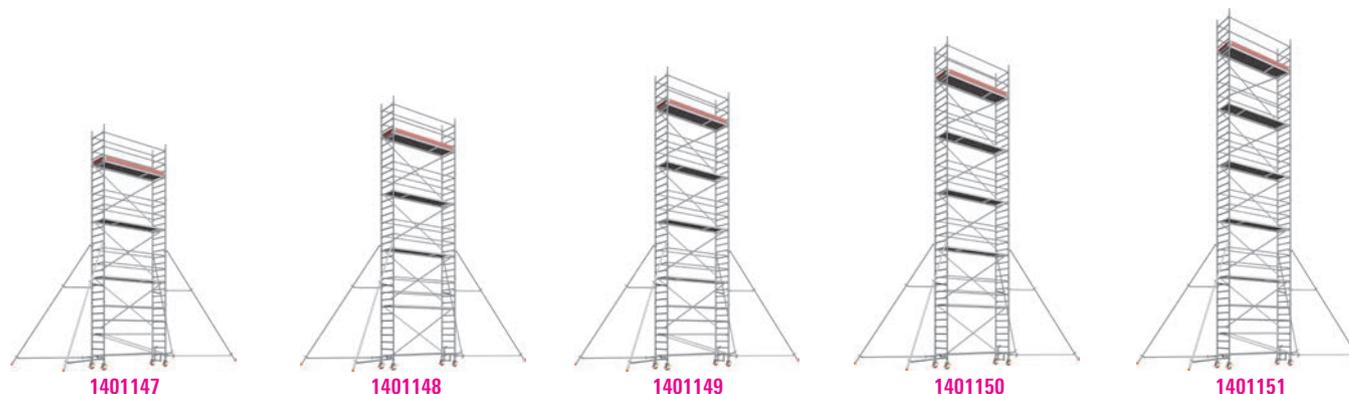
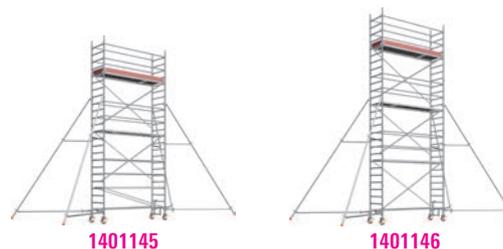
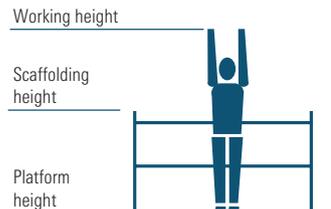
r and R always relate, in the case of off-centre assembly, to that side facing away from the scaffolding; l and L relate to the side facing the scaffolding (see also Section 9, Ballasting, on pages 20 – 23)

► TOWER MODELS WITH STABILIZERS, 5 M

In the case of **assembly outdoors**, do not exceed the height limit!

Tower models

1401145 – 1401151



Tower model	1401145	1401146	1401147	1401148	1401149	1401150	1401151
Working height [m]	7.5	8.5	9.5	10.5	11.5	12.5	13.5
Scaffolding height [m]	6.7	7.7	8.7	9.7	10.7	11.7	12.7
Platform height [m]	5.5	6.5	7.5	8.5	9.5	10.5	11.5
Weight [kg] (without ballast)	311.6	322.1	373.4	383.9	435.2	445.7	497.0
Ballasting							
Indoors							
Assembly central	0	0	0	0	0	0	0
Assembly off-set	LO R6	LO R8	LO R8	LO R10	LO R12	LO R14	LO R14
Assembly off-set with wall bracing	0	0	0	0	0	0	0
Outdoors							
Assembly central	0	0	0	X	X	X	X
Assembly off-set	LO R16	LO R20	X	X	X	X	X
Assembly off-set with wall bracing	0	0	0	X	X	X	X

When assembling with adjustable mobile beam, it must be fully extended. X = not permissible / possible 0 = no ballast required Table gives the number of ballast weights each of 10 kg.

For ballasting, use Layher ballast weights, Ref. No. 1249.000, 10 kg each. These are fastened quickly and securely at the right place using the star handle coupling.

Liquid or granular ballast materials must not be used. The ballast weights must be distributed evenly to all ballast fixing points (see pages 20 – 23).

Example: I2, r2 → 2 ballast weights of 10 kg each must be fastened to the left-hand side of the ladder frame, and 2 ballast weights of 10 kg each to its right-hand side
L6, R16 → 6 ballast weights of 10 kg each must be fastened to the left-hand side of the stabilizers, and 16 ballast weights of 10 kg each to its right-hand side

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

► 5. ASSEMBLY Safety Structure P2

Observe the general directions for assembly and use on pages 4–5. The assembly examples shown are intended for use indoors up to a maximum platform height of 12 m and outdoors up to a maximum platform height of 8 m. Snap the snap-on claws of all parts into the ladder frames from above. Level the tower after the basic assembly process. This is done using the threaded spindles of the castors 1.



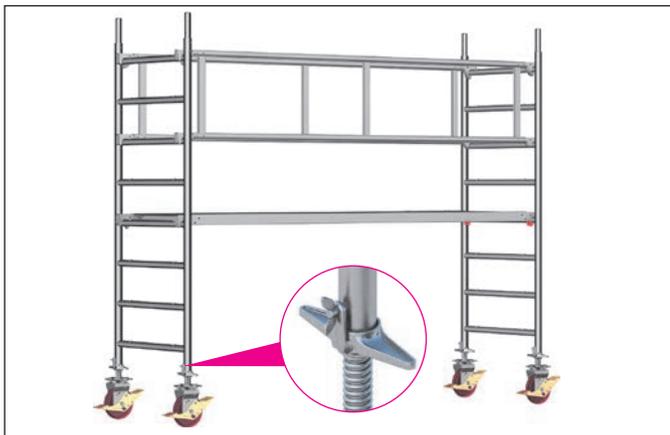
The castors must be locked during assembly, modification or dismantling, and when there are people on the scaffolding.

Wedges in the system must be hammered home until the blow bounces off. Screw couplers must generally be tightened (50 Nm).

On the topmost scaffolding level, a double guardrail 16 or a tower beam 17 can be fitted instead of two rear guardrails. Please remember in this case that for assembly and dismantling two additional rear guardrails must be present to ensure collective side protection. These can be removed again after insertion of the double guardrail or of the tower beam.

The item numbers of the parts relate to the individual part list on page 27–29.

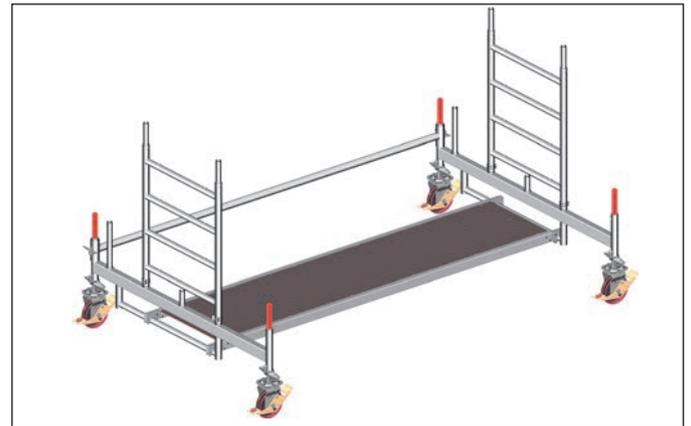
Basic assembly Tower model 1401101



1. Insert the castors 1 into the 2.00 m ladder frames 13 and secure them against falling out by fastening the wing screws on the spindle nuts.

2. Connect the two ladder frames 13 using two double guardrails 16. Suspend the access deck 23 from the fourth rung from below of the 2.00 m ladder frames 13.

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



1. Insert the castors 1 into the mobile beams 5/6 and secure them against falling out by fastening the wing screws on the spindle nuts.

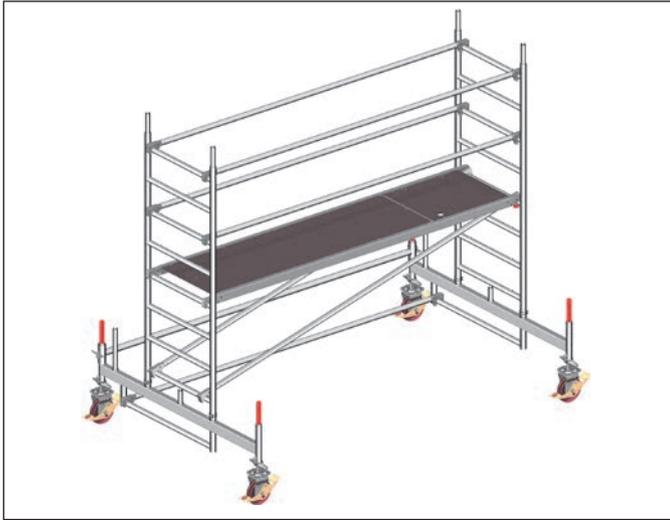
2. Connect the mobile beams 5/6 using a basic tube 7 / basic strut 8 and a deck 24.

3. Fit two 1.00 m ladder frames 12 onto the mobile beams and secure them using spring clips 14.

Further assembly is in accordance with page 13 “Assembly of intermediate platforms”.

Basic assembly

Tower models 1401103, 1401105, 1401107, 1401109 and 1401111



1. Insert the castors 1 into the mobile beams 5/6 and secure them against falling out by fastening the wing screws on the spindle nuts.
2. Connect the mobile beams 5/6 using a basic tube 7 / basic strut 8 and a rear guardrail 15 to the bar of the mobile beam.
3. Fit a 2.00 m ladder frame 13 onto the mobile beam 5/6 and secure it with spring clips 14. Suspend two rear guardrails 15 from the top rung and connect them with a second 2.00 m ladder frame 13. Then fit the second 2.00 m ladder frame 13 onto the mobile beam and secure it using spring clips 14. (Any double guardrails in stock must be installed as side protection for the first level. The rear guardrails previously installed as an advance side protection are removed again after the double guardrails have been fitted.)
4. Fit two diagonal braces 19 and the access deck 23. **Ensure here that the two diagonal braces are installed parallel to one another in the direction of the access hatch.**
5. Climb up to the next level and fit additional rear guardrails 15 to the second rung above the platform surface.

Further assembly is in accordance with page 13 "Assembly of intermediate platforms".

Basic assembly

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



1. Insert the castors 1 into the 1.00 m ladder frames 12 and secure them against falling out by fastening the wing screws on the spindle nuts.
2. Fit further 2.00 m ladder frames 13. Connect the two rolling tower side parts to the top rungs and to the bottom rungs, using two rear guardrails 15 in each case.
3. Install two diagonal braces 18 crosswise. Then suspend an access deck 23.
4. To keep to the maximum spacing from the first rung, fit an access ledger 9 on the access side of the rolling tower.
5. Climb up to the next level and fit additional rear guardrails 15 to the second rung above the platform surface.

Further assembly is in accordance with page 13 "Assembly of intermediate platforms".

Basic assembly

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



1. Insert the castors 1 into the 2.00 m ladder frames 13 and secure them against falling out by fastening the wing screws on the spindle nuts.
2. Connect the two rolling tower side parts to the top rungs and to the bottom rungs, using two rear guardrails 15 in each case.
3. Fit two diagonal braces 19 and the access deck 23. Ensure here that the two diagonal braces are installed parallel to one another in the direction of the access hatch.
4. To keep to the maximum spacing from the first rung, fit an access ledger 9 on the access side of the rolling tower.
5. Climb up to the next level and fit additional rear guardrails 15 to the second rung above the platform surface. (Any double guardrails 16 in stock must be installed as side protection for the first level. The rear guardrails previously installed as an advance side protection are removed again after the double guardrails have been fitted.)

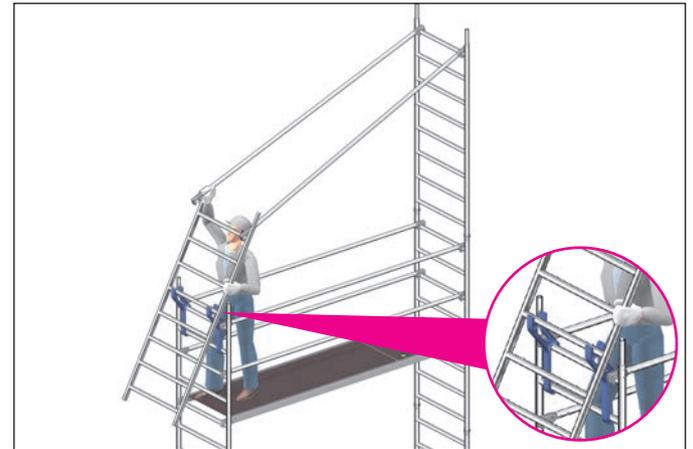
Further assembly is in accordance with "Assembly of intermediate platforms" (see on the right side).

Assembly of intermediate platforms

All tower models



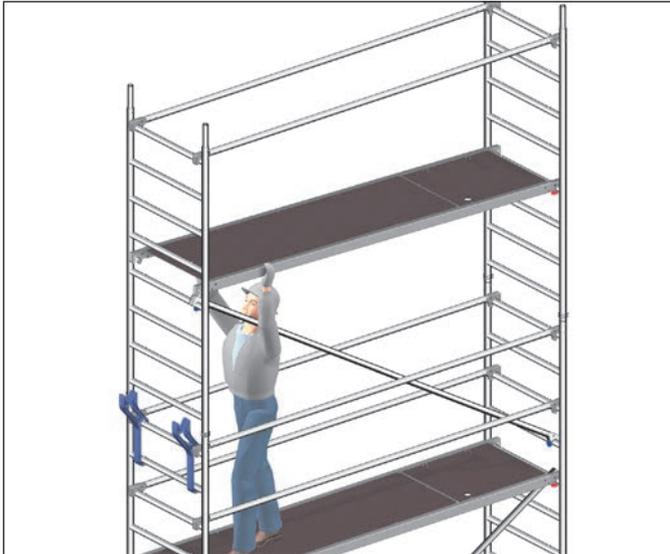
The following assembly steps 1 to 5 are repeated several times depending on the assembly height.



1. Fit the first 2.00 m ladder frame 13 and secure it with spring clips 14.
2. Attach the Uni assembly hook 25 and position the second ladder frame 13 for fitting the rear guardrails 15.



3. Swing the ladder frame with the rear guardrail upwards, fit it in place and secure it with spring clips 14.

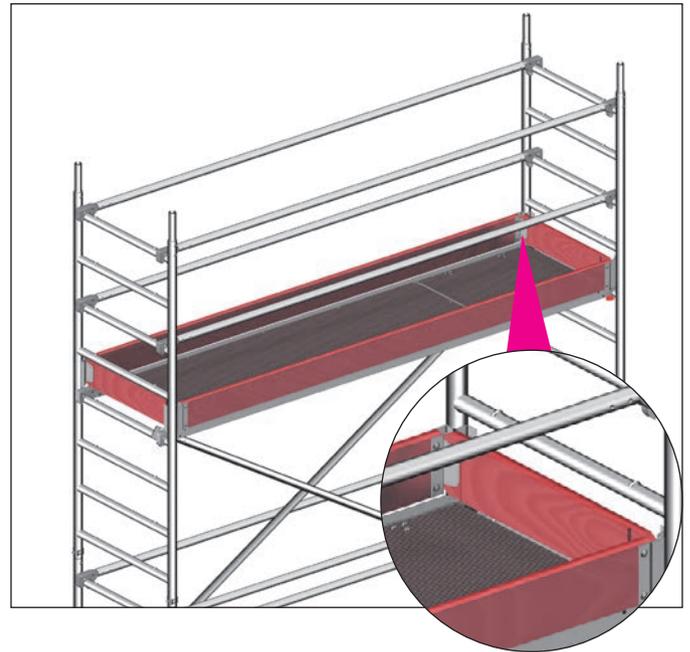


4. Insert diagonal braces 18 and an access deck 23. The diagonal braces must be installed in a tower-like (zig-zag) form on both sides.



5. Climb up to the next level and fit additional rear guardrails 15 to the second rung above the platform surface.

Completion of working platform All tower models



1. To complete the working platform, attach toe boards with claw 28 and end toe boards 29.



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

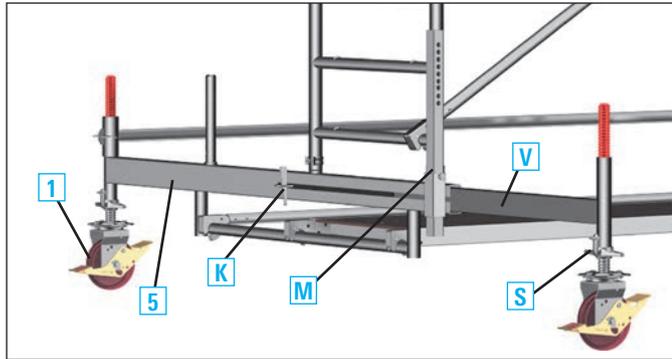
Operating the castors



During assembly and while working, keep the castors locked by pressing down the brake lever labelled STOP.

When the brake is locked, the lever labelled STOP is in the down position. For movement, unlock the castors by pushing the opposite lever down.

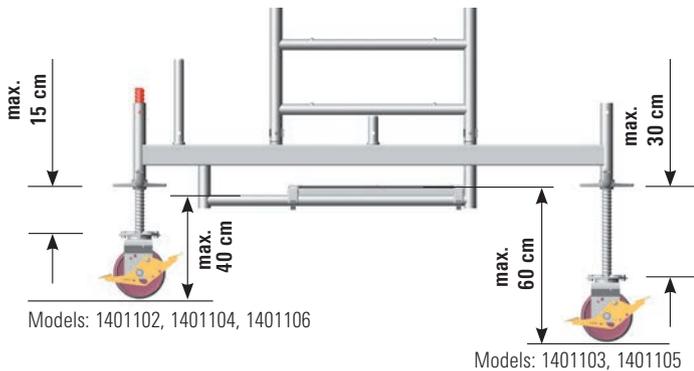
Adjustment of the mobile beam



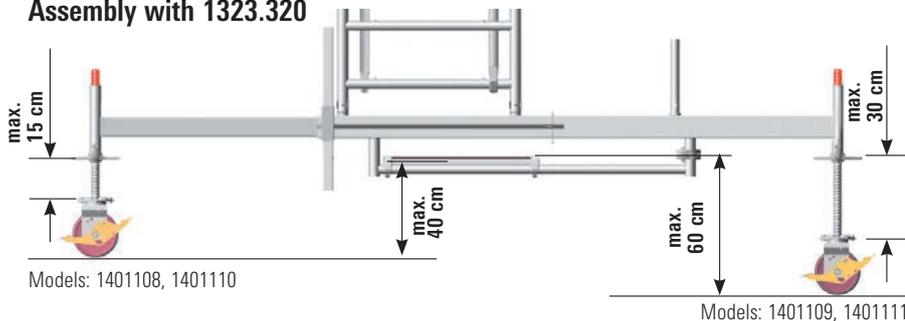
The adjustable mobile beam 5 permits operation in the centre position and at the wall without dismantling the scaffolding. It can be retracted and extended in the assembled state. Ensure before adjustment the ballast weights specified in the ballasting table are always attached at the right place (see pages 8 – 10). For adjustment in the assembled state, lower the central support M attached to the mobile beam 5 as far as possible and secure it. Relieve the castors 1 at the sliding parts by turning the spindle S until the adjustment part V can be adjusted when the clamping wedge K has been loosened. After adjustment, fix the clamping wedge K, subject the castor 1 to load again by turning the spindle, and move the central support M upwards and secure it.

Maximum spindle adjustment of the various models

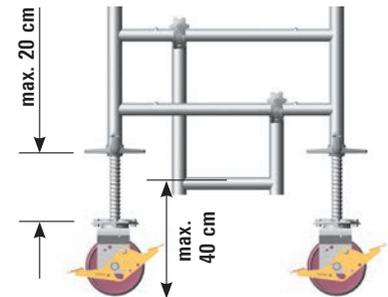
Assembly with 1323.180



Assembly with 1323.320

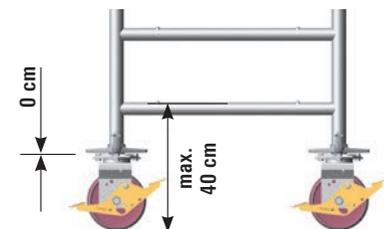


Assembly directly on castors with access ledger



Models: 1401101
(access ledger add. required)
1401124 – 1401131
1401145 – 1401151

Assembly directly on castors



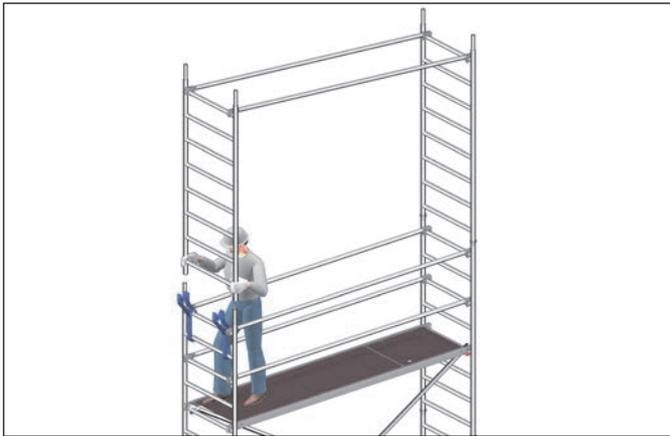
Model: 1401101

▶ 6. DISMANTLING

Dismantling is in the reverse order to assembly (see page 11 – 15).

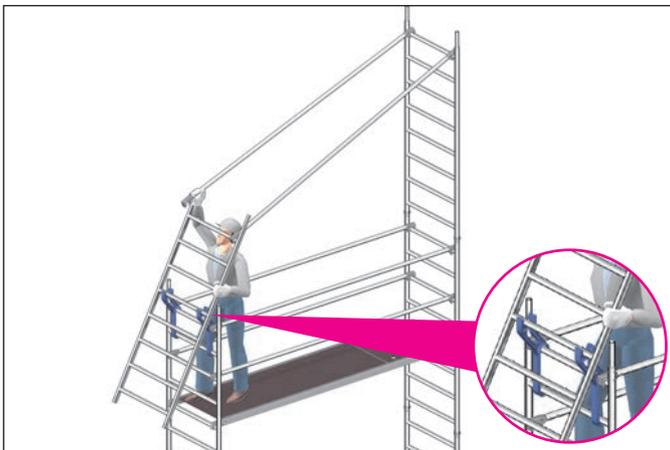
When dismantling, do not remove the bracing elements such as diagonal braces, rear guardrails or access decks until the ladder frames above them have been dismantled.

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



During dismantling of an intermediate or working platform, first remove the topmost rear guardrails from the level underneath them. This is done with the aid of a rear guardrail installed at knee level.

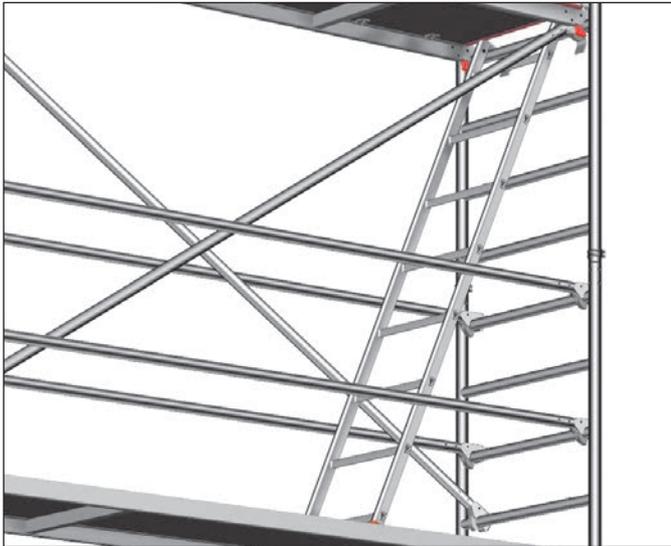
It is placed from above onto the 2nd rung and acts as a lever for opening the snap-on claw (see detail).



The red locking clips of the decks permit effortless installation and removal by a single person; first open them and place the deck with the opened clips on the rung, then open the opposite clips and lift out the deck.

▶ 7. ASCENT VIA SUSPENDED LADDER

The types 1401102–1401111, 1401124–1401131 and 1401145–1401151 can easily be equipped with the scaffolding access ladder 33 to provide more convenient access. The ladder is simply dropped into the 8th rung of the ladder frame (deck level) on the access hatch side and placed on the deck below.



▶ 8. PARTS LIST

Tower model	Ref. 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	1238.075	0	2	2	2	2	2	2	2	2	2	2
Toe board 2.85 m, with claw	1239.285	0	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
Castor 700 – 7 kN	1259.200	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	1300.001	0	1	1	1	1	1	1	1	1	1	1
Ballast	1249.000	For the number of ballasting weights see the ballasting table, see pages 8–10										

Assembly variants with stabilizers, extendable: 1124–1131; with stabilizer, 5 m: 1145–1151

Tower model	Ref. No.	1401124	1401125	1401126	1401127	1401128	1401129	1401130	1401131	1401145	1401146	1401147	1401148	1401149	1401150	1401151
Guardrail 2.85 m	1205.285	10	14	14	18	20	22	22	26	14	14	18	20	22	22	26
Diagonal brace 3.35 m	1208.285	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	2	0	2	0	2	0	2
End toe board 0.75 m	1238.075	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Toe board 2.85 m, with claw	1239.285	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Access deck 2.85 m	1242.285	2	3	3	4	4	5	5	6	3	3	4	4	5	5	6
Stabilizer, extendable	1248.260	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
Stabilizer, 5 m	1248.500	0	0	0	0	0	0	0	0	4	4	4	4	4	4	4
Spring clip 11 mm	1250.000	12	12	16	16	20	20	24	24	12	16	16	20	20	24	24
Castor 700 – 7 kN	1259.200	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	0	2	0	2	0	2	0
Ladder frame 75/8 – 2.00 m	1297.008	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
Uni assembly hook	1300.001	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, see pages 8–10														

Additional requirement for special structure with bracket deck surfaces

Tower model	Ref. No.	1 bracket deck surface	2 bracket deck surfaces
End toe board 0.75 m	1238.075	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



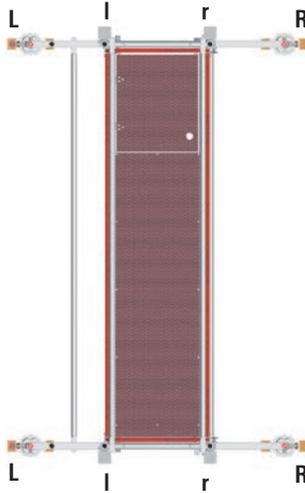
The tower models, which can be extended with bracket deck surfaces are shown on pages 8 – 10 (Ballasting). When operating with brackets, the tower may be loaded with 1.5 kN/m^2 (scaffold group 2) at one working level only. A maximum of 2 bracket deck surfaces may be assembled. When bracket deck surfaces are fitted, the spindles mustn't be extended. The corresponding working level must be equipped with complete side protection.

► 9. BALLASTING

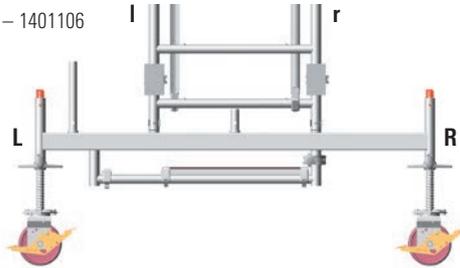
Attachment of ballast weights

Assembly central:

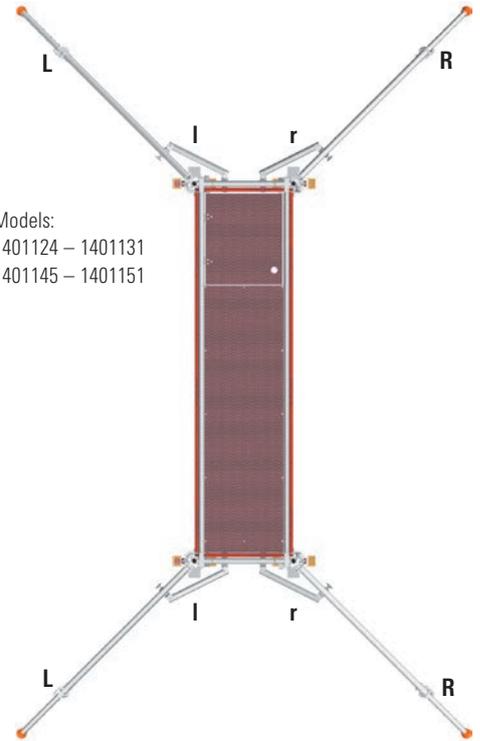
Model:
1401101



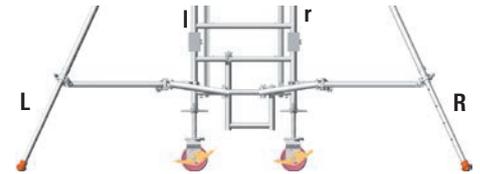
Models:
1401102 – 1401106



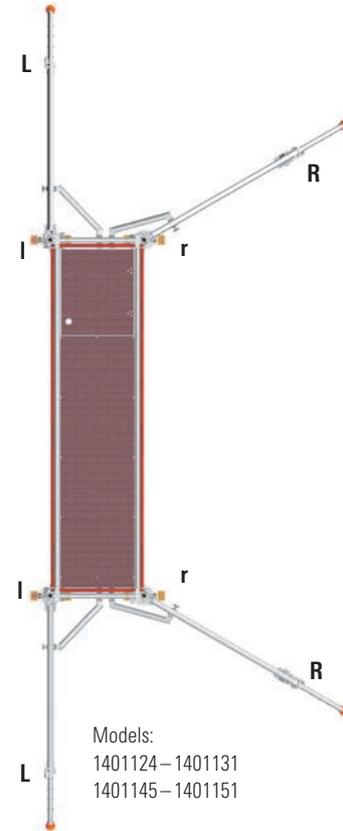
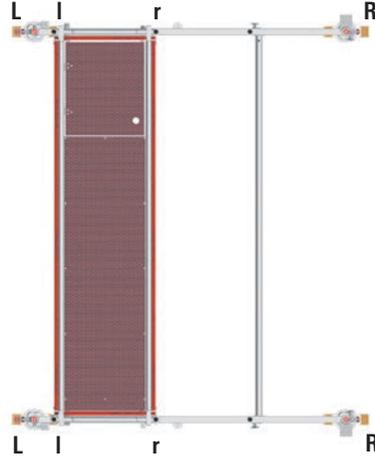
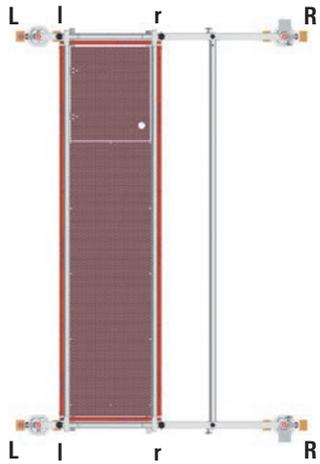
Models:
1401107 – 1401111



Models:
1401124 – 1401131
1401145 – 1401151

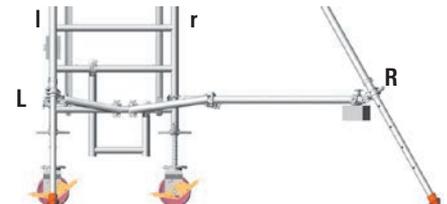
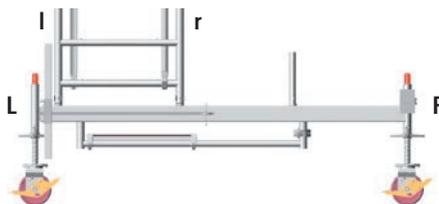
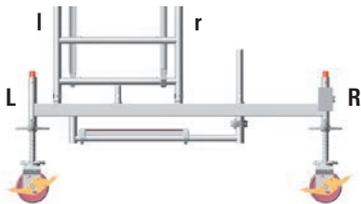


Assembly off-set:

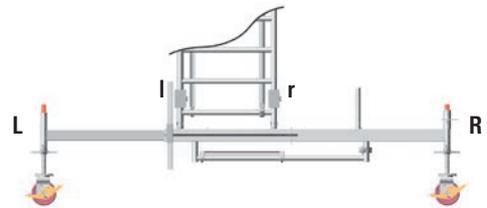
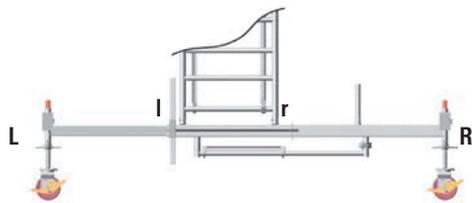
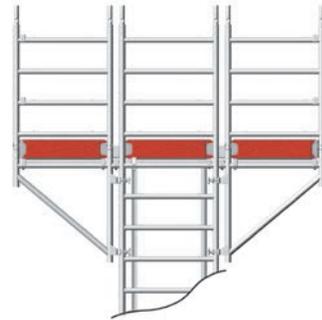
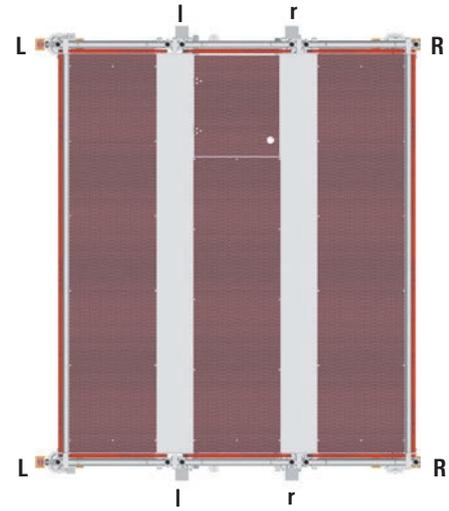
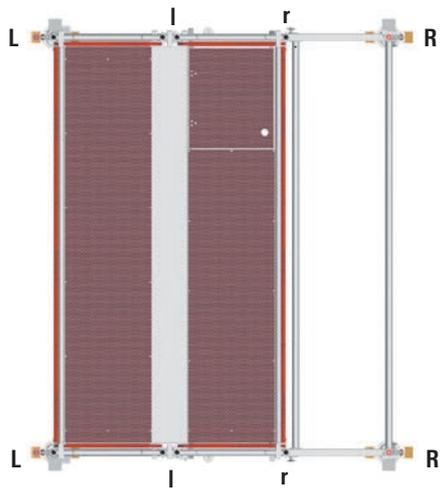


Models:
1401102–1401106

Models:
1401107–1401111



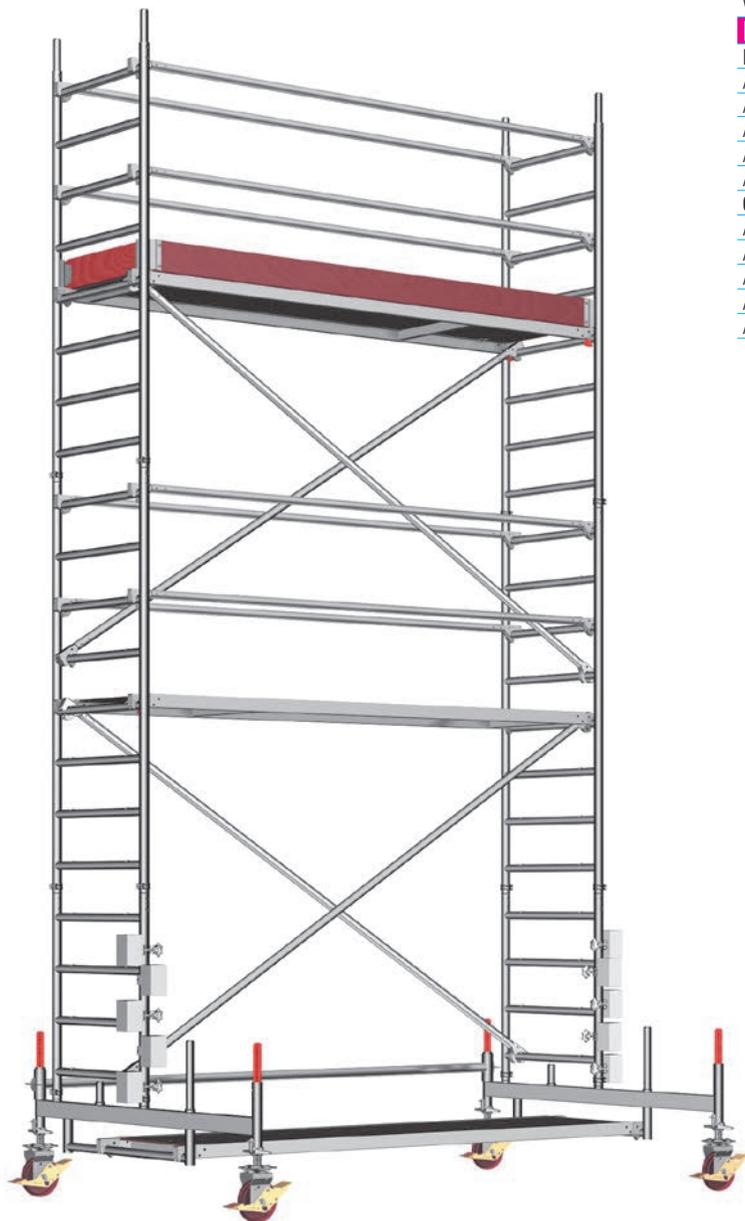
Assembly central with brackets:



Example for assembly, model 1401104

Assembly outdoors in off-centre position

Ballast: see page 8



Tower model		1401104
Working height [m]		6.5
Scaffolding height [m]		5.75
Platform height [m]		4.5
Weight [kg] (without ballast)		245.8
Ballasting		
Indoors		
Assembly central		0
Assembly off-set		L0 R4
Assembly off-set with wall bracing		0
Assembly central with 1 bracket		L0 R2
Assembly central with 2 brackets		0
Outdoors		
Assembly central		15 r5
Assembly off-set		L0 R10
Assembly off-set with wall bracing		0
Assembly central with 1 bracket		L0 R2
Assembly central with 2 brackets		18 r8

► 10. STABILIZER ATTACHMENT

Read and understand “Basic Assembly for Rolling Tower Types Without Mobile Beams” on pages 12 – 13 before assembly. The fixed and adjustable mobile beams are not included when assembled this way. They are replaced by extendable stabilizers 30.



Attach a stabilizer 30/31 to every stile of the ladder frame 13. To do so, attach the half-coupler directly underneath the rung of the ladder frame 13. Before tightening the star-knobs (hand wheels), fix the stabilizers in the correct position against the wall, or free-standing, then tighten using the star-knobs. Move the half-coupler on the stabilizer to make sure that the foot is standing firmly on the ground. Fasten the lower half-coupler above the lowest rung of the ladder frame 13 and tighten it with the star-knob.

The position of the stabilizers must be adjusted as follows:

Free-standing assembly: Each about 60° to the long side of the tower (illustration on the left).

Assembly against a wall: On the wall side, about 90° to the end face of the tower, and on the side away from the wall at about 60° to the long side of the tower (illustration on the right).

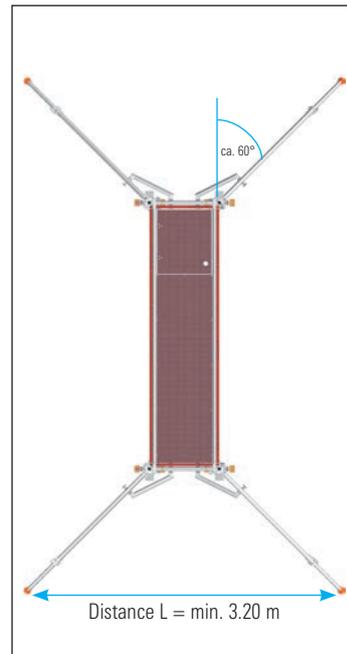
After the stabilizers have been fitted, the angles mentioned above can be checked using the “Distance L” dimension.

To ensure that the position cannot change, now attach the rolling tower rotation lock 32 to the stabilizer 30/31 and to the rung of the ladder frame 13.

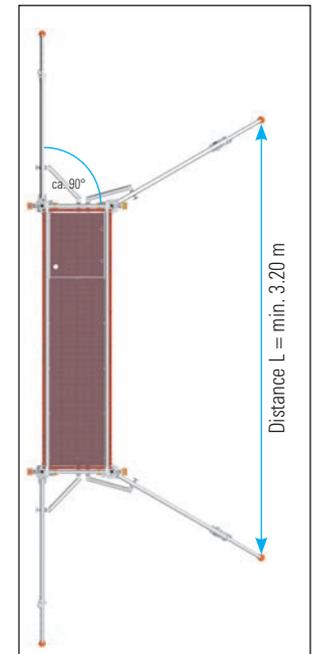
Adjust the rolling tower rotation preventer by moving the half-coupler on the stabilizer 30/31 such that the half-coupler is fastened underneath the first rung of the ladder frame. It must be ensured that the locking pins engage securely in the telescoping parts on the scaffold frame in such a way that they can be withdrawn. When moving the rolling tower, the stabilizer must be lifted no more than 2 cm from the ground.

For work to be carried out on a wall that can support a load, the ballasting may be done in accordance with the ballasting table (see pages 8 – 10).

Free-standing assembly



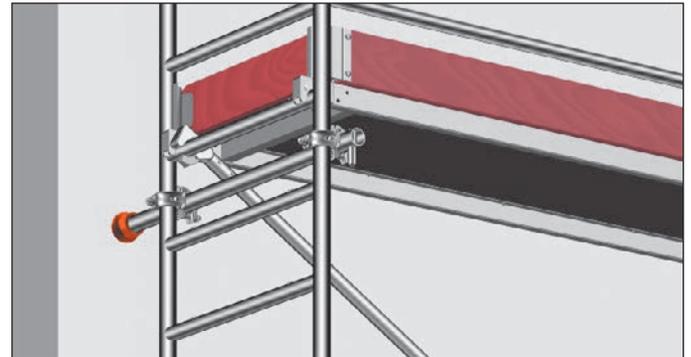
Assembly against a wall



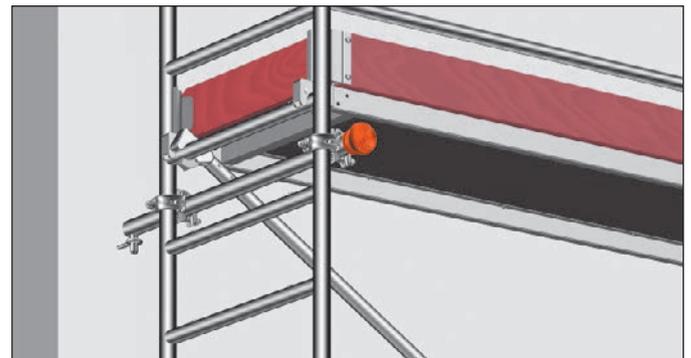
▶ 11. WALL SUPPORT (under load) ANCHORING (under load and tension)



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 21 and fix it to the ladder frame 12/13 using two couplers 22 in each case. The rubber mount is positioned on the wall to provide support (see detail A). The Uni distance tube, rotated by 180°, is used for anchoring and is fitted in an eyebolt which was attached to the wall previously (see detail B). The mobile beams must be installed so that they project at the side facing away from the wall. The wall supports/anchoring must be attached at the level of the top working platform or at most 1 m below that.



Detail A



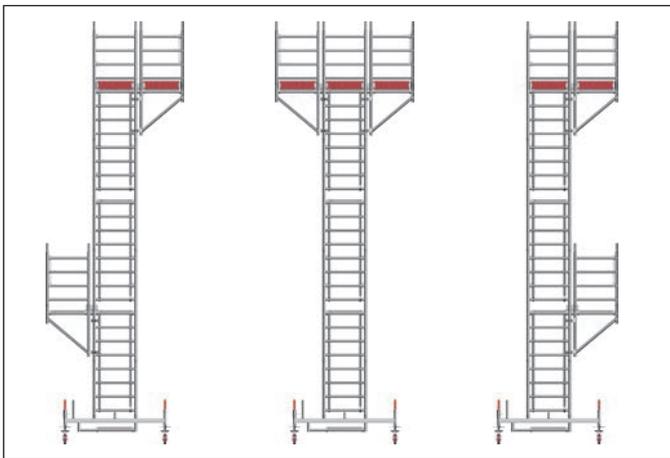
Detail B

▶ 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:

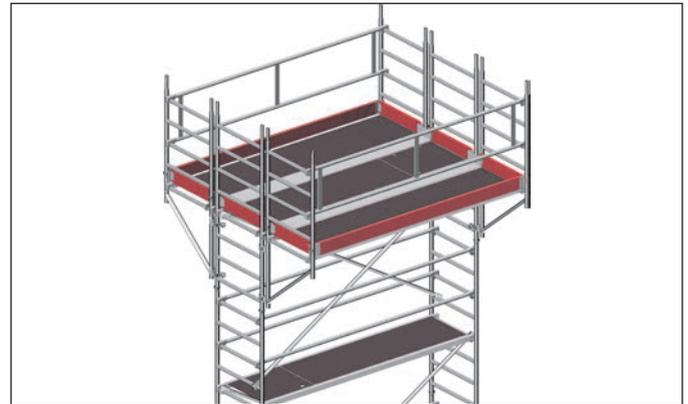
- The tower may be loaded with 1.5 kN/m² (scaffold group 2) at one working level only.
- The spindles must not be overextended.
- The corresponding working platform must be equipped with complete side protection.
- The ladder frames must be assembled in the centre position. The corresponding ballast weights (see ballasting table on p. 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.



WARNING

If the ballasting table is not complied with, there is an increased risk of accidents as a result of the tower tipping over due to one-sided loading.

1. Tower assembly up to the height required in accordance with the assembly sequence already described (see page 11 ff.).
2. Before fitting of brackets, remove the side protection at a height of 0.5 m and the toe boards at this point.
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 suspend the deck from the bracket rungs.



5. Fit a 1 m ladder frame onto each of the brackets 0.75 m and then mount the side protection removed earlier at a height of 1 m. The guardrail still remaining on the tower can be fitted at a height of 0.5 m
6. Place the intermediate deck 2.85 m between the deck and the access deck and snap it into the bracket rungs 0.75 m.
7. Complete the regulation side protection, which depends on the tower model concerned, by fitting and adjusting the toe boards 2.85 m between the ladder frames on the bracket and secure them by inserting end toe boards.
8. To attach a second bracket deck surface, repeat the steps 2–7.

Dismantling

Dismantling of the brackets is in the reverse order to that of the assembly steps. After removal of the brackets, the entire tower can be dismantled as described in "Dismantling" on page 16.

▶ 13. COMPONENTS OF THE SYSTEM

1



1259.200 Castor 700 with spindle and lock

Steel. Plastic wheel, dia. 200 mm. Permissible load-bearing capacity 7 kN (≈ 700 kg). With double brake lever and load centering in the braked state. Wheel and slewing ring can be locked. Adjustment range 0.3 – 0.6 m, weight 7.7 kg.

2



1260.200 Castor 1000 with spindle and lock

Steel. Plastic wheel, dia. 200 mm. Permissible load-bearing capacity 10 kN (≈ 1000 kg). With double brake lever and load centering in the braked state. Wheel and slewing ring can be locked. Adjustment range 0.3 – 0.6 m, weight 9.4 kg.

3



1268.200 Castor 1000 with spindle and lock

Aluminium rim with Vulkollan tyre, dia. 200 mm. Permissible load-bearing capacity 10 kN (≈ 1000 kg). Special wheel for sensitive floor surfaces. Wheel and slewing ring can be locked. Adjustment range 0.3 – 0.6 m, weight 10.0 kg.

4



1323.180 Mobile beam with bar, 1.8 m

Steel rectangular tube, hot-dip-galvanized. For widening the base of towers with up to 6.6 m platform height. Width 1.8 m, weight 16.8 kg.

5



1332.320 Mobile beam with bar, 3.2 m, adjustable

Steel rectangular tube, hot-dip-galvanized. For widening the base of towers with up to 11.6 m platform height. Width max. 3.2 m, min. 2.3 m, weight 42.5 kg.

6



1338.320 Mobile beam with 2 spigots, 3.2 m, adjustable

Steel rectangular tube, hot-dip-galvanized. For base widening in special rolling tower structures. Width max. 3.2 m, min. 2.3 m, weight 42.6 kg.

7



1211.285 Basic tube 2.85 m

Steel tube, hot-dip-galvanized. Length 2.85 m, weight 12.2 kg.

8



1324.285 Basic strut 2.85 m with 2 half-couplers

steel tube hot-dip-galvanized, length 2.85 m, weight 9.3 kg.

9



1344.002 Access ledger 0.3

Aluminium, length 0.27 m, weight 2.9 kg.

10



1249.000 Ballast (10 kg)

Steel, hot-dip-galvanized with half-coupler.

11



1337.000 Spigot, adjustable

for twin towers, steel, hot-dip-galvanized. For use with mobile beam No. 1338.320. Weight 2.1 kg.

12



1297.004 Ladder frame 75/4
Aluminium, with press-in spigot.
Rungs with non-slip grooving.
Height 1.0 m, width 0.75 m,
weight 4.7 kg.

1298.004 Ladder frame 75/4
Aluminium, with screw-in spigot.

13



1297.008 Ladder frame 75/8
Aluminium, with press-in spigot.
Rungs with non-slip grooving.
Height 2.0 m, width 0.75 m,
weight 8.6 kg.

1298.008 Ladder frame 75/8
Aluminium, with screw-in spigot.

14



1250.000 Spring clip
Steel.
Weight 0.1 kg.

15



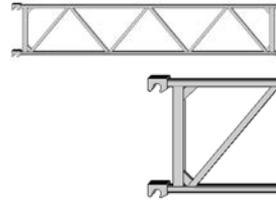
1205.285 Rear guardrail 2.85 m
Aluminium.
Length 2.85 m,
weight 3.6 kg.

16



1206.285 Double guardrail 2.85 m
Aluminium.
Length 2.85 m, height 0.5 m,
weight 8.0 kg.

17



1207.285 Beam 2.85 m
Aluminium. Support elements in
tower construction kit or double
side protection.
Length 2.85 m, height 0.5 m,
weight 9.6 kg.

18



1208.285 Diagonal brace 3.35 m
Aluminium.
Length 3.35 m,
weight 4.1 kg.

19



1208.295 Diagonal brace 2.95 m
Aluminium.
Length 2.95 m,
weight 3.8 kg.

20



1347.335 Deck diagonal brace 3.35 m
Weight 5.0 kg.

21



1275.110 Uni distance tube
Aluminium tube with hook and
rubber foot. Dia. 48.3 mm,
length 1.1 m, weight 1.4 kg.

22



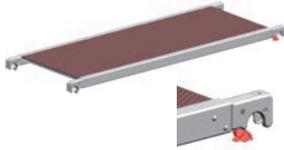
1269.019/1269.022 Special tower screw coupler, rigid
WS 19 or 22 mm, weight 1.1 kg.

23



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.

24

**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.

25

**1300.001 Uni assembly hook**

Polyethylene, set of 2.
Weight 1.2 kg.

26

**1341.075 Bracket 0.75 m**

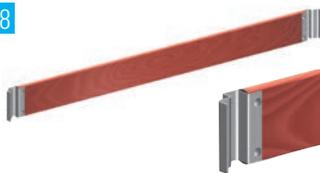
for rolling towers, aluminium.
For widening of the work platform on one or two sides.
Width 0.75 m, height 0.9 m, weight 5.4 kg.

27

**1339.285 Intermediate deck 2.85 m**

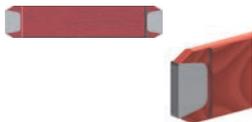
Aluminium. For console bracket structures. Length 2.85 m, width 0.23 m, weight 10.5 kg.

28

**1239.285 Toe board 2.85 m, with claw**

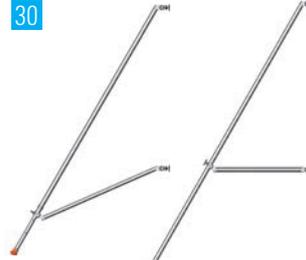
Wood.
Length 2.86 m, height 0.15 m, weight 5.6 kg.

29

**1238.075 End toe board 0.75 m**

Wood.
Length 0.73 m, height 0.15 m, weight 1.6 kg.

30

**1248.260 Stabilizer, extendable**

Aluminium.
Length 2.6 m, weight 8.5 kg.

31

**1248.500 Stabilizer, 5 m**

Aluminium.
Length 5.0 m, weight 14.9 kg.

32

**1248.261 Rotation lock**

Aluminium.
Length 0.5 m, weight 2.8 kg.

33

**1314.008 Suspended ladder**

8 rungs,
weight 5.8 kg.

34

**6344.200 Prohibition sign**

35

**Identification sign**

for rolling towers.
Orderable only in German.

▶ 14. CERTIFICATE

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ CERTIFICADO ◆ CERTIFIKAT ◆ CERTIFICATE



Product Service

CERTIFICATE

No. Z1A 10 02 19959 062

Holder of Certificate: Wilhelm Layher GmbH & Co. KG

Ochsenbacher Straße 56
74363 Güglingen-Eibensbach
GERMANY

Factory(ies): 19959

Certification Mark:



Product: Scaffold

Model(s): UniStandard P2

Parameters: Scaffold construction: EN AW-6063-T66
EN AW-6082-T5

Further parameter see attachment 1.

Tested according to: DIN EN 1004:2005
DIN EN 1298:1996
ZEK 01.2-08

The product meets the safety and health requirements of the German Equipment and Product Safety Act section 7 subsection 1 sentence 2 GPSG. The certification marks shown above can be affixed on the product. It is not permitted to alter the certification marks in any way. In addition the certificate holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. See also notes overleaf.

Test report no.: 028-71356389-101

Valid until: 2015-02-23

Date, 2010-02-26


(Martin Schmied)



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Scaffolding Grandstands Ladders

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