

Layher UniCompactTower

Mobile access and working towers
in accordance with: HD 1004;
DIN 4422, Part 1 (Version 8/92)

Working platform 1.5 x 1.8 m

Max. working height:
in closed rooms 10.6 m, outdoors 9.6 m

Permissible load 2 kN/m²
on max. one working level:
scaffold group 3 acc. to HD 1004;
DIN 4422, Part 1 (Version 8/92)



Aluminium Rolling Towers

Instructions for Assembly and Use



Layher® 

More Possibilities. The Scaffolding System.

Tower models without ladder access

Layher UniCompactTower

For **outdoor use** observe height limits!

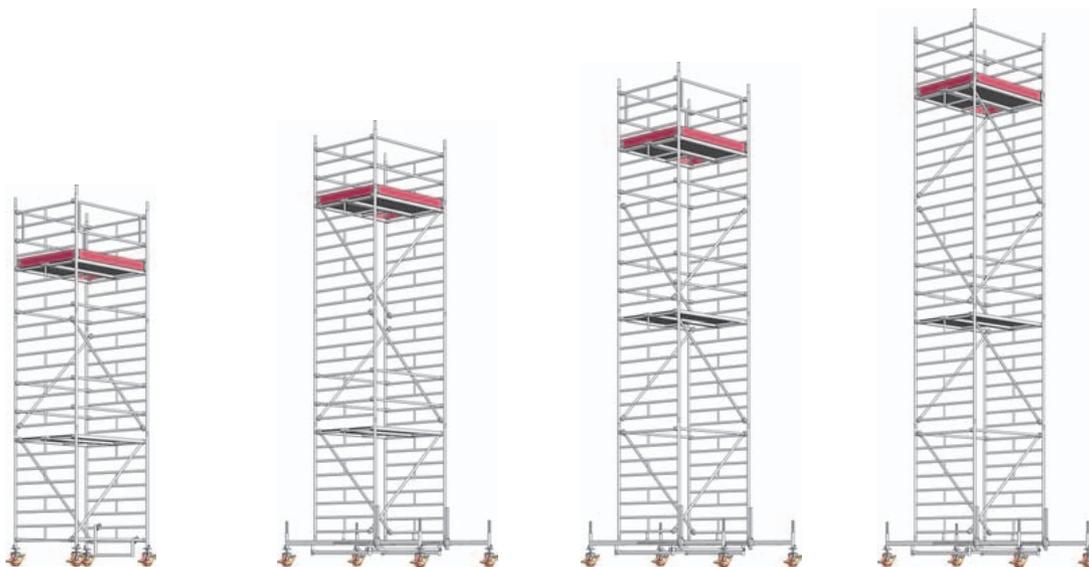
Tower models 5001–5004



Tower model	5001	5002	5003	5004
Working height (m)	3.4	4.4	5.4	6.4
Tower height ¹⁾ (m)	2.6 (2.45)	3.6 (3.45)	4.6 (4.45)	5.6 (5.45)
Platform height (m)	1.4	2.4	3.4	4.4
Weight (kg) [without ballast]	96.8	144.5	156.7	178.6

¹⁾ Values in brackets: minimum tower height incl. spigots.

Tower models 5005–5008



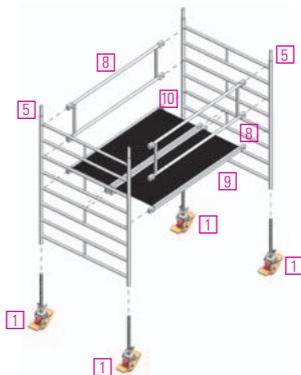
Tower model	5005	5006	5007	5008
Working height (m)	7.4	8.6	9.6	10.6
Scaffold height ¹⁾ (m)	6.6 (6.45)	7.79 (7.64)	8.79 (8.64)	9.79 (9.64)
Platform height (m)	5.4	6.6	7.6	8.6
Weight (kg) [without ballast]	238.0	339.0	363.2	379.1

¹⁾ Values in brackets: minimum tower height incl. spigots.

Assembly Sequence

►1 The general instructions for assembly and use given on page 8 must be followed. The examples of assembled tower models 5001–5008 as shown (see page 2) are intended for use in rooms closed on all sides. In accordance with European HD 1001 amended January 1, 1987, the platform height outdoors **must not exceed 8 m free standing**. The material and ballasting tables on page 7 must be complied with.

►2 Tower model 5001



1. In the case of tower 5001, insert the castors **1** into the ladder frames **5** and secure them against dropping out by tightening the wing screws on the spindle nuts.

2. Connect the two ladder frames **5** with two double guardrails **8** to brace them. Then suspend two decks **9** from the 4th rungs from the bottom of the ladder frames **5**. The snap-on claws of all parts must be attached to the ladder frames **5** from above. The horizontal distance between the decks must not exceed 25 mm.

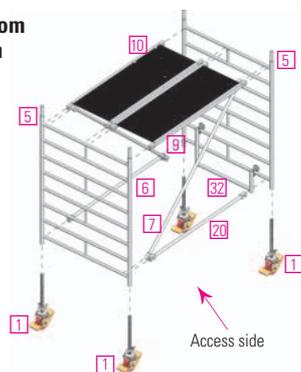
3. A three-part side guard must be attached when this is required by the regulations applying for the job to be performed.

To lift out the individual parts, the closing elements of the snap-on claws are pressed to open them. The red closing elements of the decks mean that one man can install and remove the decks effortlessly; first they must be released and the deck positioned on the rung with the elements opened, and then the elements on the opposite end are released and the deck lifted out.

Use the threaded spindles for vertical alignment of the tower.

►3 Assembly of bottom working platform

►3.1 Tower models 5002–5005



1. Insert the castors **1** into the ladder frames **5** and secure them against dropping out by tightening the wing screws on the spindle nuts.

2. A step bracket **32** is bolted to the centre of the ladder frames **5** and diagonal braces **7** are attached. Then the deck **9** and the access deck **10** must be attached as shown in the general drawings (page 2).

The horizontal distance between the decks must not exceed 25 mm.

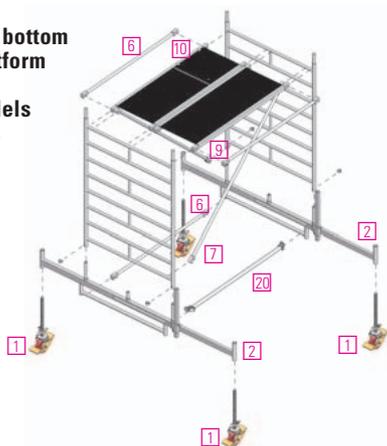
The guardrails **6 and diagonal braces **7** must be slid as far as possible outwards after being snapped in.**

Use the threaded spindles for vertical alignment of the tower.

Further assembly for towers 5002 to 5004 as per section 6.

►4 Assembly of bottom working platform

►4.1 Tower models 5006–5008



1. Insert the castors **1** into the mobile beams **2** and secure them against dropping out by tightening the wing screws on the spindle nuts.

2. Then clamp the base strut **20** to the tube of the mobile beam support **2** and attach the guardrail **6** to the mobile beam support **2**.

3. The deck **9** and the access deck **10** or guardrails **6** must be attached as shown in the general drawings (page 2).

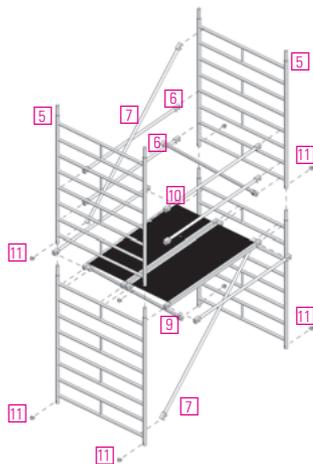
The horizontal distance between the decks must not exceed 25 mm. **The guardrails **6** and diagonal braces **7** must be slid as far as possible outwards after being snapped in** (see drawings on page 2).

Further assembly for towers 5006 to 5008 as per section 5.

Assembly Sequence

►5 Assembly of intermediate platforms

Tower models
5005 – 5008



During erecting and dismantling, system decks or scaffolding planks according to DIN 4420 (minimum dimensions 28 x 4.5 x 250 cm long) must be installed as auxiliary decks at heights of max. 2.0 m. These auxiliary decks provide firm footing for erecting and dismantling and must be removed after assembly is complete. The full deck area must be boarded over.

1. Further assembly is achieved by the attachment of ladder frames [5] and bracing using two diagonal braces [7] and guard rails [6] in accordance with the general drawings (see p. 2). The joints of the ladder frames [5] must be secured with spring clips [11].
2. With a height distance of max. 4.0 m, intermediate platforms each comprising one deck [9] and one access deck [10] must be installed. If these platforms are used only as intermediate platforms for ascent, it is sufficient to provide two guardrails [6] per side as side guards. If the platforms are used for working, two guardrails per side and toe boards (see section 5) must be installed. The top

or other working level must then not be used. The toe boards must be removed there.

The guardrails [6] and diagonal braces [7] must be pushed outward as far as possible after installation.

The horizontal spacing between the decks must not exceed 25 mm.

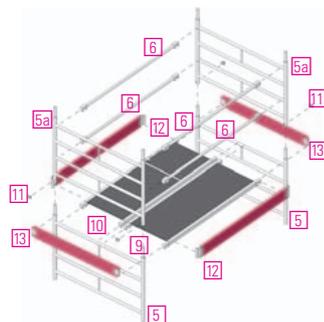
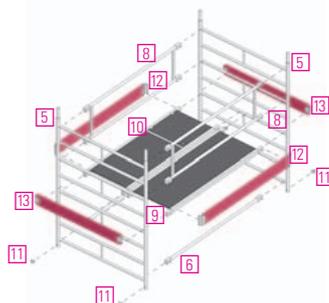
3. When assembling the towers, care must always be taken that the diagonal braces [7], decks [9], [10] and guardrails [6] are installed in the correct arrangement (see general drawings, p. 2). Here the next highest ladder frames [5] may not be attached until the ladder frames [5] beneath them have been braced accordingly.

4. During dismantling the respective diagonal braces [7] and bracing elements [6], [7] may not be removed until the ladder frames [5] above them have been removed.

For further assembly see section 6.

►6 Assembly of top platform

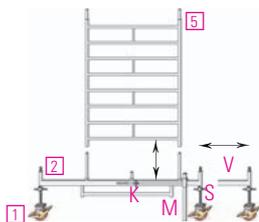
Tower models
5002 – 5008



After attaching the top ladder frames [5] or [5a] and securing them with spring clips [11] an access deck [10] and deck [9] are suspended from the 5th rung from the top. The regulation side guard is provided by installing two double guardrails [8] or four single guardrails [6]. Place two toe boards [12] between the ladder frames [5] and secure them by inserting two 1.44 m end toe boards [13].

The diagonal braces [7] and guardrails [6], [8] must be pushed outward as far as possible after installation! The horizontal spacing between the decks must not exceed 25 mm.

►7 Adjustment of mobile beams

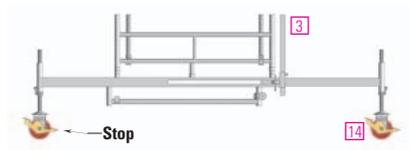


The mobile beam [2] permits work up against the wall. It can be moved in and out in the assembled state. Care must be taken that before assembly the ballast weights given in the ballasting table are fitted at the correct place (see p. 7). For adjustment in the assembled state, the middle support (M) provided on the mobile beam [2] is lowered as far as possible and secured. The load on the castors [1] is reduced at the

sliding parts by turning the spindle (S) until the adjustment part (V) can be adjusted after loosening of the clamping wedge (K). After adjustment, the clamping wedge (K) must be fixed again, the load returned to the castor by turning the spindle back, and the middle support (M) moved up and secured.

Assembly Sequence

8 Operating the castors



Maximum height adjustment (spindle travel) without deck at the base plate = **15 cm**



During assembly and working, the castors 1 can be fixed by pressing down the brake lever identified as Stop. In the braked condition the lever identified as Stop must be down.

For movement, release the castors 1 by pressing the other lever.

Dismantling Sequence

During erecting and dismantling, system decks or scaffolding planks according to DIN 4420 (minimum dimensions 28 x 4.5 x 250 cm long) must be installed as auxiliary decks at heights of max. 2.0 m. These auxiliary decks provide firm footing for erecting and dismantling and must be removed after assembly is complete. The full deck area must be boarded over.

Dismantling is carried out in the reverse order of assembly.

Do not remove the respective bracing elements such as diagonal braces 2, guardrails 6 or access decks 10 until the ladder frames 5,

5a above them have been removed.

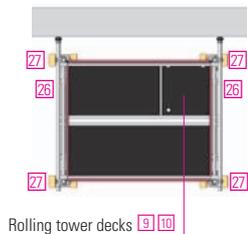
To lift out the various parts, press the locking clips of the snap-on claws to open them. The red locking clips of the decks permit effortless removal and insertion by one person; they must first be

released and the deck with its opened clip placed on the rung, then the clips at the opposite end are opened and the deck is lifted out.

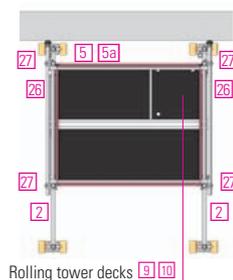
Wall support

Wall support under load

Plan view



Plan view, with mobile beam



Side view



For work performed on a load-bearing wall, ballasting can be reduced in accordance with the ballasting table (see p. 7).

In this case, wall supports must be installed on both sides of the tower. To do so, the Uni distance tube 26 is used and attached with couplers 27 to the ladder frames 5, 5a. The mobile beams must be installed so that they project from the side facing away from the wall. The wall supports must be attached at the height of the top working platform or at most 1 m below that.

Components

Layher UniCompactTower

1 Castor 200
with spindle 7 kN and locking screw **1259.200**



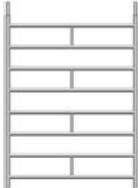
2 Mobile beam with clip
3.2 m
lockable **1323.320**



3 Base tube
1.8 m **1211.180**



5 Ladder frame 150/8 **1299.008**



5a Ladder frame 150/4 **1299.004**



6 Guardrail
1.8 m **1205.180**



7 Diagonal brace
2.5 m **1208.180**



8 Double guardrail
1.8 m **1206.180**



9 Deck
1.8 m **1241.180**



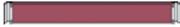
10 Access deck
1.8 m **1242.180**



11 Spring clip **1250.000**



12 Toe board with claw
1.8 m **1239.180**



13 End toe board
1.44 m **1238.144**



21 Deck support, bolt-on
0.9 m **1326.090**



25 Ballast
10 kg **1249.000**



26 Uni distance tube
1.8 m **1275.180**



27 Special screw coupler, rigid
19 mm WS **1269.019**
22 mm WS **1269.022**



32 Step bracket
0.9 m **1344.003**



Parts List

► Table 1

Tower model without ladders	Article No.	5001	5002	5003	5004	5005	5006	5007	5008
Ladder frame 150/4	1299.004	–	2	–	2	–	2	–	2
Ladder frame 150/8	1299.008	2	2	4	4	6	6	8	8
Deck 1.8 m	1241.180	2	1	1	1	2	2	2	2
Access deck 1.8 m	1242.180	–	1	1	1	2	2	2	2
Guardrail 1.8 m	1205.180	–	6	2	6	8	9	9	11
Diagonal brace 2.5 m	1208.180	–	2	2	4	4	6	6	8
Double guardrail	1206.180	2	–	2	–	2	–	2	–
Step bracket	1344.003	–	1	1	1	1	–	–	–
Mobile beam with clip, adjustable	1323.320	–	–	–	–	–	2	2	2
Base strut 1.8 m	1324.180	–	–	–	–	–	1	1	1
Toe board 1.8 m, with claw	1239.180	–	2	2	2	2	2	2	2
End toe board 1.44 m	1238.144	–	2	2	2	2	2	2	2
Spring clip	1250.000	–	4	4	8	8	16	16	20
Castor 200 w. spindle, 7 kN	1259.200	4	4	4	4	4	4	4	4
Ballast	1249.000	For the number of ballast weights see Ballasting table, see p. 7.							

Ballasting

For ballasting use Layher ballasting weights [2], Art. No. 1249.000 (10 kg each). Simple, fast and secure fixing of the appropriate ballast at the right places is achieved using the coupler with star handle. Only these ballast weights may be used, and **not liquid or granular ballast materials**. The ballast weight must be distributed evenly over all fixing points for the ballast. Any remainder not divisible by 4 must be distributed over the 'A' fixing points.

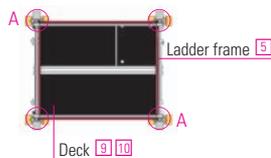
Tower model		5001	5002	5003	5004	5005	5006	5007	5008
Use indoors	central position*	○	○	4	8	8	○	4	6
	off-centre position	–	–	–	–	–	○	4	8
Use outdoors	central position*	○	○	6	14	20	24	36	×
	off-centre position	–	–	–	–	–	24	36	×
	off-centre position with wall support	–	–	–	–	–	24	36	×

* **Assembly with adjustable mobile beam [2], which must be fully extended.** Table denotes the number of ballast weights, 10 kg each. ○ = no ballast needed × = not permitted

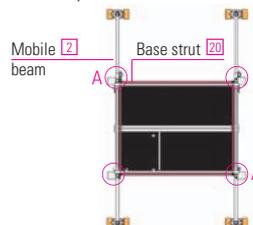
Assembly without console brackets: attachment of ballast weights (plan view)

Assembly (plan view)

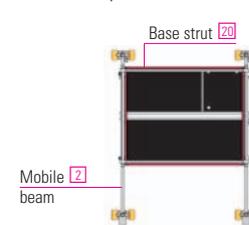
without mobile beam



central position



off-centre position



○ = Fixing points for ballast

A = Fixing points for ballast weight remainder not divisible by 4

General Instructions for Assembly and Use

Layher UniCompactTower

The rolling tower may be used for the scaffolding group and as additionally specified in the German operating safety regulations (BetrSichV). The rules of the German professional associations governing the building of rolling towers (BGR 172/April 2000) and of small scaffolding units (BGR 173/April 2000) must be complied with. For mobile working platforms (rolling towers), DIN 4422 Part 1 (issue 8/92) applies. For small scaffolding units (platform height ≤ 2 m), BGR 173 applies.

The user of mobile working platforms 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).
2. The max. platform height is, in accordance with DIN 4422 Part 1:
 - inside buildings 12.0 m
 - outside buildings 8.0 mThe material and ballasting requirements on page 7 must be complied with; risk of accidents in the event of non-compliance. For greater heights, additional measures are necessary, obtainable from the manufacturer. Stability of the rolling tower must be assured.
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 person and by professionally suitable personnel after special instruction. Only the scaffolding types shown in these instructions for assembly and use may be used. The unit must, after assembly and before being put into service, be inspected by persons qualified to do so (Section 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 assembly, examine all components to ensure they are in perfect condition. Only undamaged original components for Layher mobile working platform systems may be used. Clean dirt off tower parts such as snap-on claws and spigots after use. Secure tower components against slipping and impacts during truck transportation. Ensure that the tower parts are stored where they are free from weather effects. Handle tower parts in such a way that they are not damaged. For attachment of the ballast weights and wall supports see p. 7 of these instructions for assembly and use.
5. During erecting and dismantling, install system decks or scaffolding planks according to DIN 4420 (minimum dimensions 28 x 4.5 x 250 cm long) as auxiliary decks at heights of max. 2.0 m. These auxiliary decks provide firm footing for erecting and dismantling and must be removed after assembly is complete. The full deck area must be boarded over.

With a distance of 4.0 m, the system requires that intermediate platforms with access openings must be installed. For safety reasons, it is advisable for two persons to erect the towers above a height of 4.0 m. To assemble the upper tower sections the individual parts must be hoisted using transportation ropes. Small quantities of tools and materials can be carried up in person, otherwise also hoisted by transportation ropes to the working level.

6. Use spring clips to secure the ladder frame joints against inadvertent lift-off.
7. The guardrails and diagonal braces must be slid as far as possible outwards after being snapped in.
8. For intermediate platforms used only for ascent, it is sufficient to provide two guardrails. For small towers where the height of the deck exceeds 1.0 m, equipment must be provided that permits the attachment of side guards in accordance with DIN 4420-1.
9. Access to the working platform is only permitted on the inside of the tower (except for model 5001).
10. It is not permitted to work on two or more platforms at the same time. Please consult the manufacturer if exceptions to the rule are required.
11. Persons working on mobile working platforms must not lean against the guardrails.
12. Lifting gear must not be attached to or used on mobile working platforms.
13. The tower may only be erected and moved on level and sufficiently firm ground and only longitudinally or diagonally. Any impacts must be avoided. When the base is widened on one side and is fitted with wall supports, only movement parallel to the wall is permissible. Normal walking speed must not be exceeded during movement.
14. No personnel or unsecured objects may be on the tower during movement.
15. After movement, lock the castors by pressing down the brake lever.
16. The towers must not be subjected to any aggressive fluids or gases.
17. Mobile working platforms must not be bridged together **unless a special structural analysis is available**. The same applies for all other special structures, for example suspended scaffolding and the like.
18. For **outdoor use** or in open buildings, the mobile working platform must be moved to a spot protected from wind at wind speeds above 6 on the Beaufort scale or at the end of a shift, or other measures must be taken to secure it against toppling over (Wind speeds above 6 can be recognised by noticeable difficulty when walking.) If possible, rolling towers used on the outside of buildings must be securely attached to the building or to another structure. It is recommended that rolling towers be anchored when they are left unattended.
19. Decks can be raised or lowered by a rung to achieve a different working height. Care must be taken here to

ensure that the specified rail heights of 1.0 m are complied with. The diagonal braces are also raised or lowered by the corresponding distance. If this construction form is selected, please consult the manufacturer on whether an **additional proof of stability** is required.

20. The tower must be set vertically with the adjusting spindles. The maximum inclination must not exceed 1%.
21. Sliding in of the mobile beam is only permissible with due consideration of the **Instructions for Assembly and Use** and of the ballasting requirements, see p. 7.
22. The access hatches must be kept closed except when in use.
23. All couplers must be tightened with 50 Nm.
24. A mobile working platform is not intended for use as a stairway tower providing access to other structures.
25. It is prohibited to jump on the decks.
26. A check must be made that all parts, auxiliary tools and safety equipment (ropes etc.) for erecting the mobile working platforms are available on the site.
27. Avoid horizontal and vertical loads that can cause the mobile work platform to topple over, such as
 - horizontal loads, for example when working on adjacent structures
 - additional wind loads (due to tunnel effect from through-type buildings, unclad buildings and corners).
28. When stipulated, mobile beams or outriggers and ballast must be installed.
29. It is prohibited to increase the height of the decking by using ladders, boxes or other objects.
30. It is not permitted to construct bridges between the rolling tower and a building.
31. Rolling towers are not designed to be lifted or suspended.

All dimensions and weights are for guidance only. Subject to technical modifications.

Sales exclusively on the basis of our currently valid general terms of business.

Layher® 

More Possibilities. The Scaffolding System.

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