Rolling Towers

Layher Uni Wide Tower
Instructions for Assembly and Use

Mobile working platforms
according to DIN EN 1004:2005-03

Working platform 1.5 x 2.85 m

max. working height:
indoors 13.6 m
outdoors 9.6 m

Load bearing capacity 2.0 kN/m^2
on max. one working level
(scaffold group 3 as per DIN EN 1004:2005-03)

Layher®

More Possibilities. The Scaffolding System.

Tower Types without ladder access

Layher Uni Wide Tower

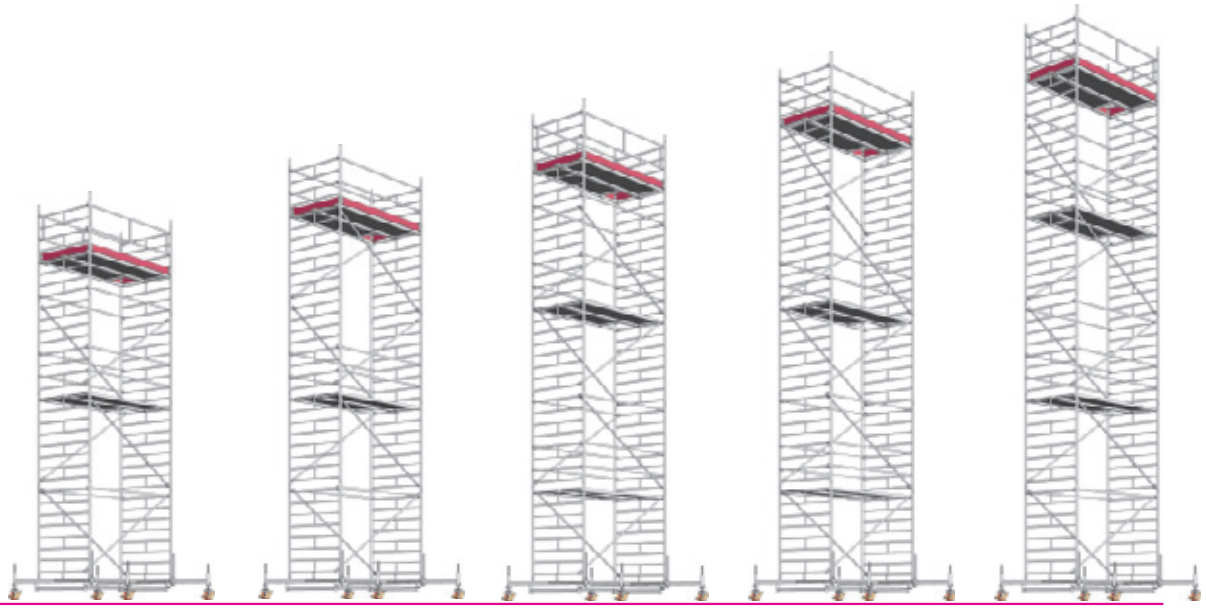
For **outdoor use** observe height limits.

Tower Models 2101– 2106

Tower Model	2101	2102	2103	2104	2105	2106
Working height (m)	3.5	4.5	5.5	6.5	7.5	8.5
Scaffold height[1] (m)	2.6 (2.45)	3.6 (3.45)	4.6 (4.45)	5.6 (5.45)	6.6 (6.45)	7.79 (7.64)
Platform height (m)	1.5	2.5	3.5	4.5	5.5	6.6
Weight (kg) [without ballast]	114.2	164.3	178.9	199.9	277.7	379.3

[1] Values in brackets: minimum tower height incl. spigots.

Tower Models 2107– 2111



Tower Model	2107	2108	2109	2110	2111
Working height (m)	9.6	10.6	11.6	12.6	13.6
Scaffold height[1] (m)	8.79 (8.64)	9.79 (9.64)	10.79 (10.64)	11.79 (11.64)	12.79 (12.64)
Platform height (m)	7.6	8.6	9.6	10.6	11.6
Weight (kg) [without ballast]	408.3	422.1	499.9	513.7	542.7

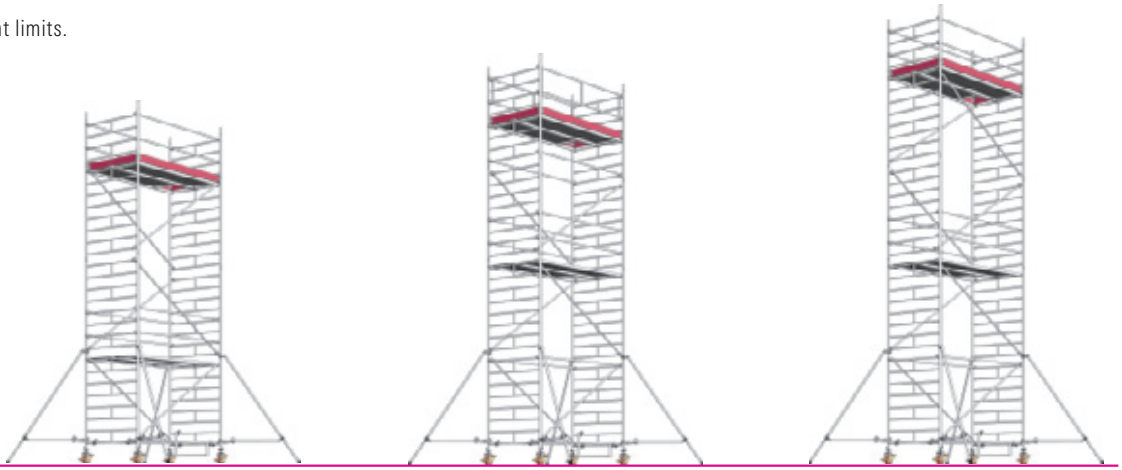
[1] Values in brackets: minimum tower height incl. spigots.

Tower Types with stabilizers, extendable

Layher Uni Wide Tower

For **outdoor use** observe height limits.

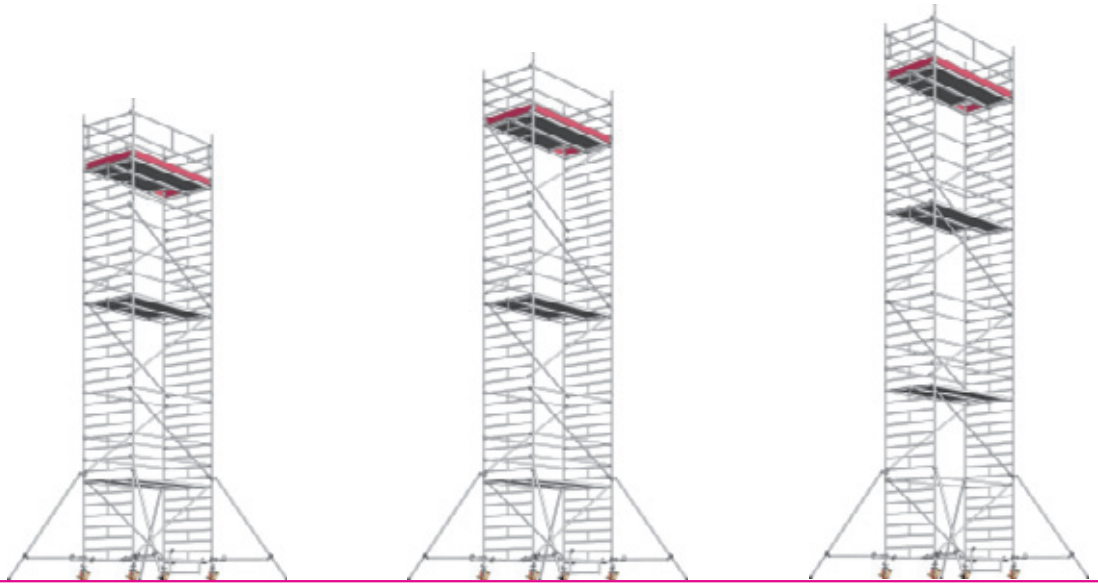
Tower Models
2126 – 2128



Tower Model	2126	2127	2128
Working height (m)	8.5	9.5	10.5
Scaffold height[1] (m)	7.7 (7.45)	8.7 (8.45)	9.7 (9.45)
Platform height (m)	6.5	7.5	8.5
Weight (kg) [without ballast]	336.7	365.7	379.5

[1] Values in brackets: minimum tower height incl. spigots.

Tower Models
2129 – 2131



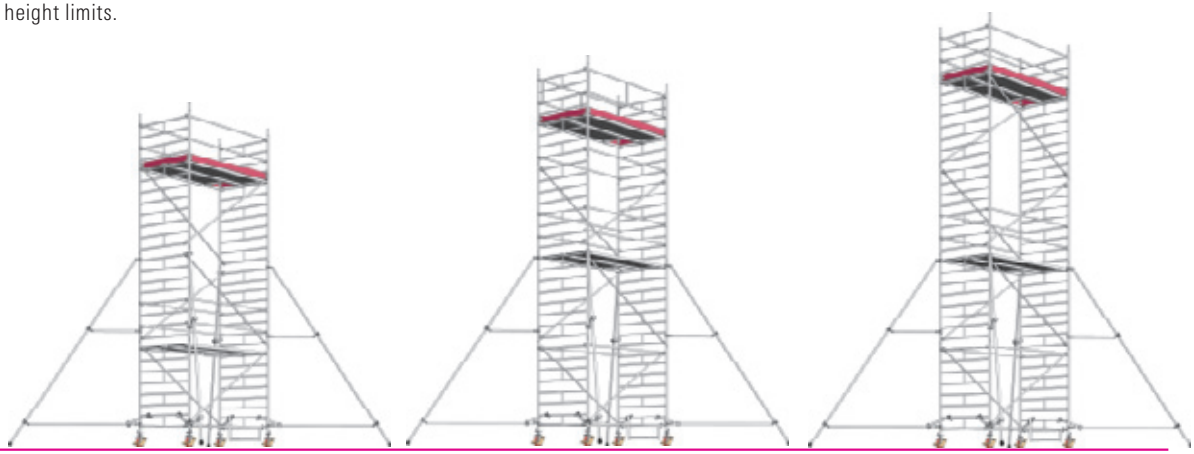
Tower Model	2129	2130	2131
Working height (m)	11.5	12.5	13.5
Scaffold height[1] (m)	10.7 (10.45)	11.7 (11.45)	12.7 (12.45)
Platform height (m)	9.5	10.5	11.5
Weight (kg) [without ballast]	457.3	471.1	500.1

[1] Values in brackets: minimum tower height incl. spigots.

Tower Types with stabilizers, 5 m

For **outdoor use** observe height limits.

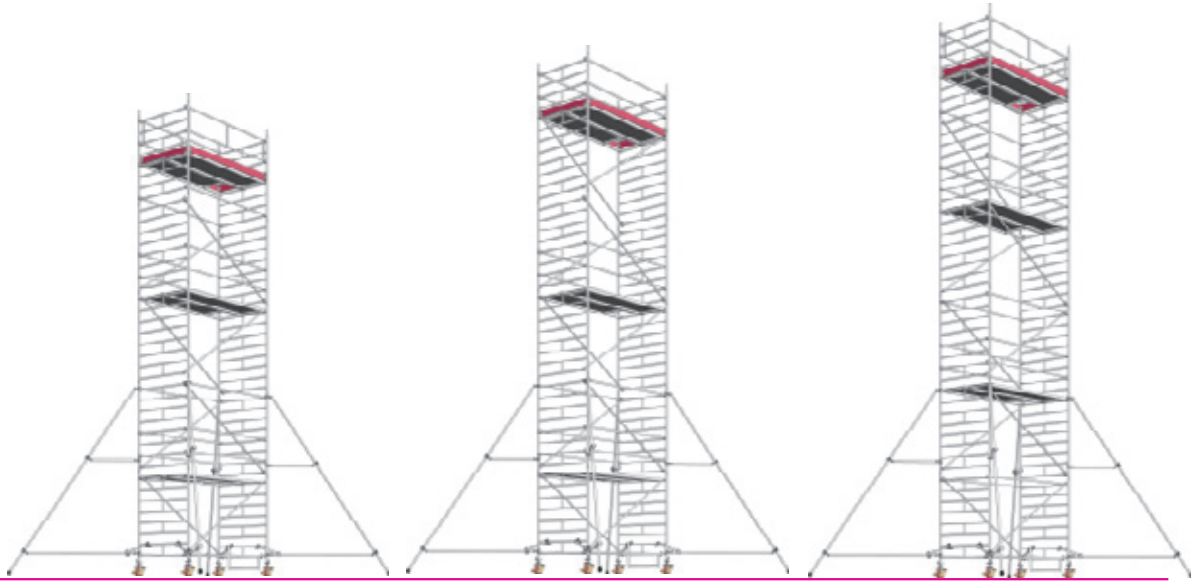
Tower Models
2146 – 2148



Tower Model	2146	2147	2148
Working height (m)	8.5	9.5	10.5
Scaffold height[1] (m)	7.7 (7.45)	8.7 (8.45)	9.7 (9.45)
Platform height (m)	6.5	7.5	8.5
Weight (kg) [without ballast]	368.7	397.7	411.5

[1] Values in brackets: minimum tower height incl. spigots

Tower Models
2249 – 2251



Tower Model	2149	2150	2151
Working height (m)	11.5	12.5	13.5
Scaffold height[1] (m)	10.7 (10.45)	11.7 (11.45)	12.7 (12.45)
Platform height (m)	9.5	10.5	11.5
Weight (kg) [without ballast]	489.3	503.1	532.1

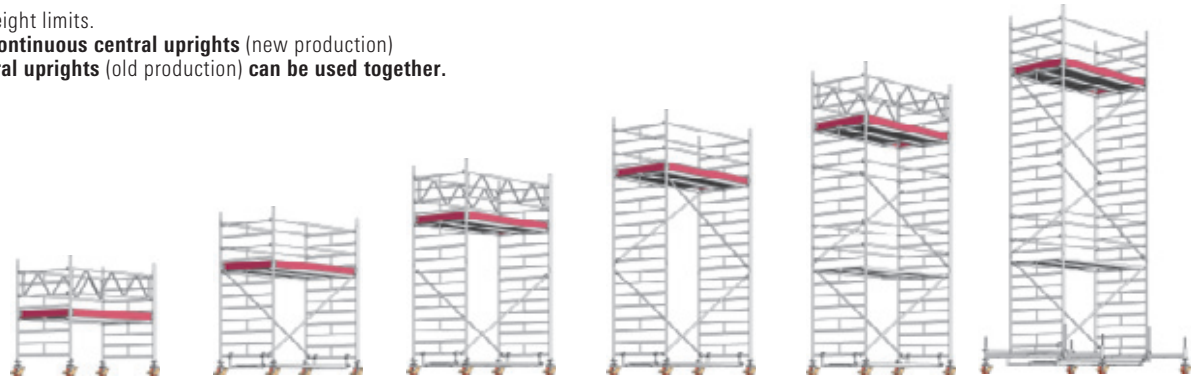
[1] Values in brackets: minimum tower height incl. spigots

Tower Types without ladder access

Layher Uni Wide Tower

For **outdoor use** observe height limits.
Ladder frames with non-continuous central uprights (new production)
and **with continuous central uprights** (old production) **can be used together.**

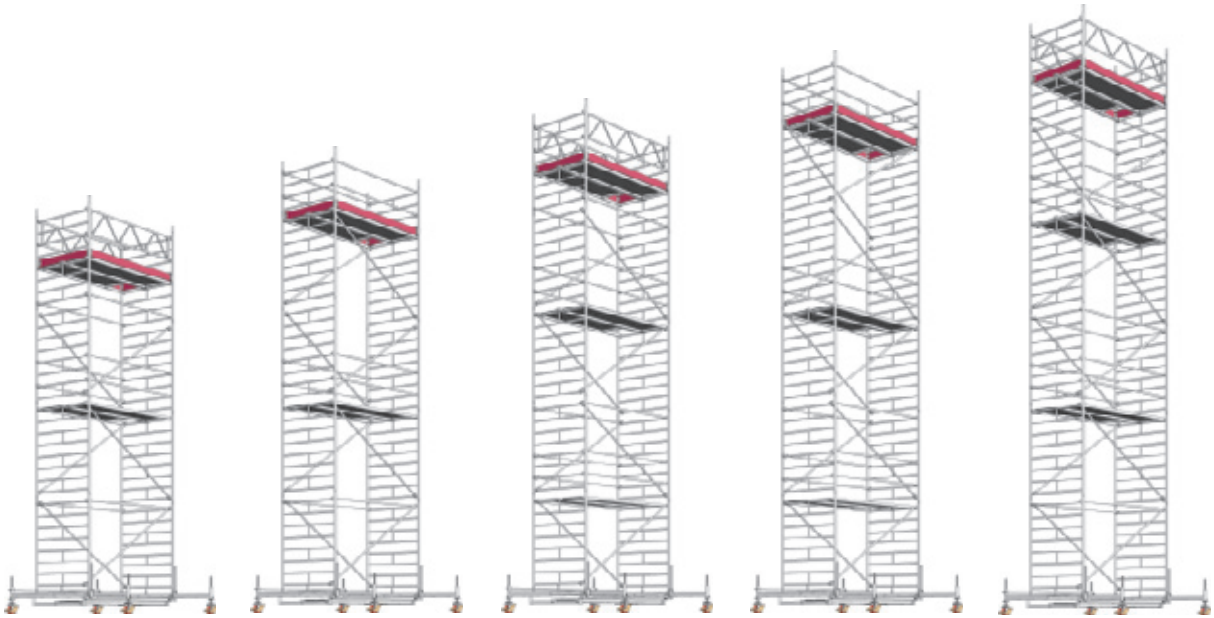
Tower Models
2201– 2206



Tower Model	2201	2202	2203	2204	2205	2206
Working height (m)	3.5	4.5	5.5	6.5	7.5	8.7
Scaffold height[1] (m)	2.70 (2.45)	3.70 (3.45)	4.70 (4.45)	5.70 (5.45)	6.70 (6.45)	7.89 (7.64)
Platform height (m)	1.5	2.5	3.5	4.5	5.5	6.7
Weight (kg) [without ballast]	134.4	190.1	207.9	225.7	306.7	414.30

[1] Values in brackets: minimum tower height incl. spigots

Tower Models
2207– 2211



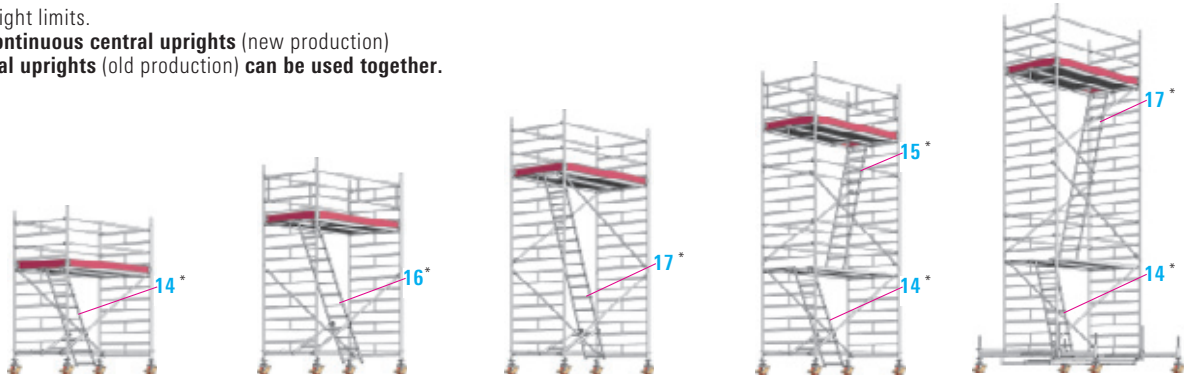
Tower Model	2207	2208	2209	2210	2211
Working height (m)	9.7	10.7	11.7	12.7	13.7
Scaffold height[1] (m)	8.89 (8.64)	9.89 (9.64)	10.89 (10.64)	11.89 (11.64)	12.89 (12.64)
Platform height (m)	7.7	8.7	9.7	10.7	11.7
Weight (kg) [without ballast]	440.1	450.7	531.7	542.3	574.50

[1] Values in brackets: minimum tower height incl. spigots

Tower Types with ladder access

For **outdoor use** observe height limits.
Ladder frames with non-continuous central uprights (new production)
and **with continuous central uprights** (old production) **can be used together.**

Tower Models
2302 – 2306



Tower Model	2302	2303	2304	2305	2306
Working height (m)	4.5	5.5	6.5	7.5	8.7
Scaffold height[1] (m)	3.70 (3.45)	4.70 (4.45)	5.70 (5.45)	6.70 (6.45)	7.89 (7.64)
Platform height (m)	2.5	3.5	4.5	5.5	6.7
Weight (kg) [without ballast]	174.8	194.6	214.5	292.8	426.6

[1] Values in brackets: minimum tower height incl. spigots. * mount the ladders and ladder supports according to page 22 (components).

Tower Models
2307 – 2311

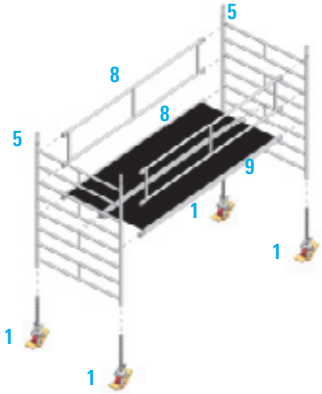
Tower Model	2307	2308	2309	2310	2311
Working height (m)	9.7	10.7	11.7	12.7	13.7
Scaffold height[1] (m)	8.89 (8.64)	9.89 (9.64)	10.89 (10.64)	11.89 (11.64)	12.89 (12.64)
Platform height (m)	7.7	8.7	9.7	10.7	11.7
Weight (kg) [without ballast]	459.3	472.7	551.8	565.2	597.9

[1] Values in brackets: minimum tower height incl. spigots. * mount the ladders and ladder supports according to page 22 (components).

Assembly

1 Observe the general instructions for assembly and use on page 32. The examples of assembly shown for tower models 2108 – 2111, 2128 – 2131, 2148 – 2151, 2208 – 2211 and 2308 – 2311 (see pages 2 – 6) are intended for use indoors and enclosed on all sides. In accordance with the regulations as amended with effect from 1 January 1987, the platform height outdoors **is max. 8 m**. The material and ballast tables on pages 14 – 16 must be complied with.

2 Tower Model 2101 without ladders



1. With tower 2101, the castors **1** are inserted into the ladder frames **5** and secured against falling out by fastening the wing screws on the spindle nuts.

2. Connect the two ladder frames **5** using 2 rolling tower double rear guard rails **8**, in so doing stiffening them. Then suspend 2 decks **9** in the 4th-from-below rungs of the ladder frames **5**.

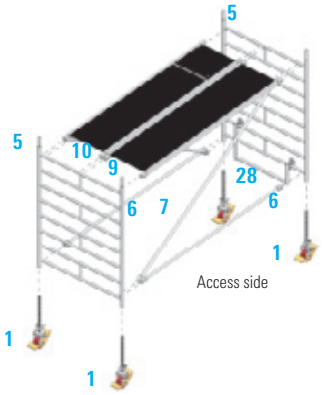
The snap-on claws of all parts must here be snapped on from above into the ladder frames **5**. The horizontal clearance between the decks must not exceed 25 mm.

3. A three-part side protection must be fitted if required by the regulations applicable for the specific work being performed.

To lift out the individual parts, open the snap-on claws by pressing their locking clips. 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.
Level the tower using the threaded spindles.

3 Assembly of the bottom working platform

3.1 Tower Models 2102 – 2105



1. The castors **1** are inserted into the ladder frames **5** and secured against falling out by fastening the wing screws on the spindle nuts.

2. Bolt an access ledger **28** to the centre of the ladder frames **5**. Suspend rear guard rails **6** and diagonal braces **7** from the bottom rung of the ladder frame. Fit a deck **9** and an access deck **10** in accordance with the general drawings (see page 2).
The horizontal clearance between the decks must not exceed 25 mm.

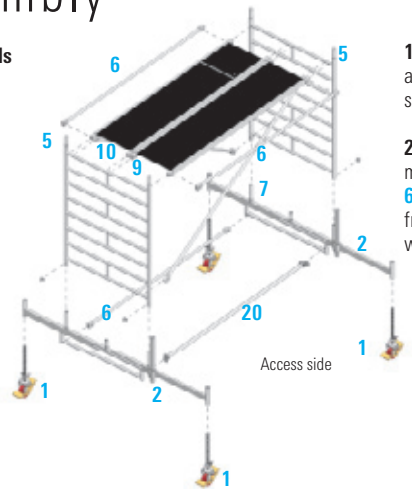
After engagement, push the rear guard rails 6 and diagonal braces 7 as far outwards as possible.

Level the tower using the threaded spindles.

Further assembly of tower models 2102 to 2105 as per section 6.

Assembly

3.2 Tower Models 2106 – 2111 2112, 2113 2114, 2115

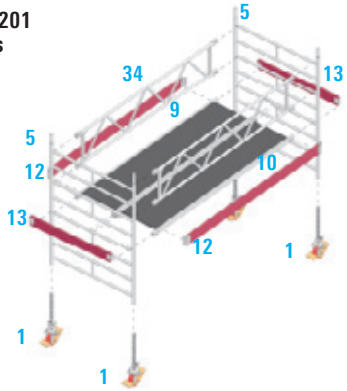


1. The castors **1** are inserted into the mobile beam **2** and secured against falling out by fastening the wing screws on the spindle nuts.

2. Then clamp the base strut **20** to the leg of the mobile beam support **2** and suspend a rear guard rail **6** from the mobile beam support. Fit ladder frames **5** onto the mobile beams **2** and secure them with spring clips **11**.

3. Fit diagonal braces **7**, deck **9** and access deck **10** or rear guard rails **6** in accordance with the general drawings (see page 2 + 3). The horizontal clearance between the decks must not exceed 25 mm. **After installation, push the rear guard rails 6 and diagonal braces 7 as far outwards as possible (see assembly drawings, page 2).**

4 Tower Model 2201 without ladders



1. With tower 2201, the castors **1** are inserted into the ladder frames **5** and secured against falling out by fastening the wing screws on the spindle nuts.

2. Connect the two ladder frames **5** using 2 beams, 2.85 m **34**, in so doing stiffening them. Then suspend 2 decks **9** in the 4th-from-below rungs of the ladder frames **5**.
The snap-on claws of all parts must here be snapped on from above into the ladder frames **5**. The horizontal clearance between the decks must not exceed 25 mm.

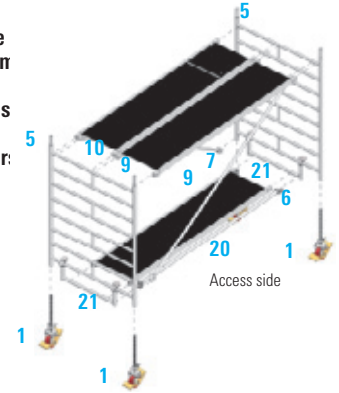
3. Installation of toe boards: First position the toe boards 2.85 m **12** inside the ladder frames **5** and stabilize them by inserting the end toe boards, 1.44 m **13**.

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

Level the tower using the threaded spindles.

5 Assembly of the working platform

5.1 Tower Models 2202 – 2205 without ladders



1. The castors **1** are inserted into the ladder frames **5** and secured against falling out by fastening the wing screws on the spindle nuts.

2. The deck supports **21** are bolted centrally to the ladder frames **5**, deck **9** and diagonal braces **7** are suspended. Ensure that the deck **9** is installed underneath the access deck **10**. Then the base strut **20** is clamped on the deck support **21**.

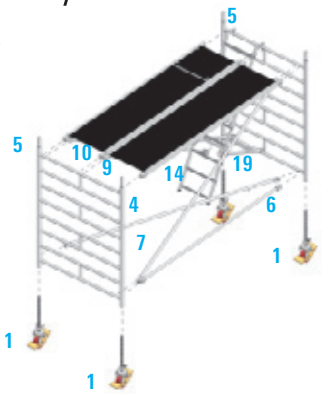
Fit a deck **9** and an access deck **10** in accordance with the general drawings (see page 3). The horizontal clearance between the decks must not exceed 25 mm.

After engagement, push the rear guard rails 6 and diagonal braces 7 as far outwards as possible.

Level the tower using the threaded spindles.

Further assembly of tower models 2202 to 2205 as per section 6.

5.2 Tower Models 2302 – 2305 with ladders



1. The castors **1** are inserted into the ladder frames **5** and secured against falling out by fastening the wing screws on the spindle nuts.

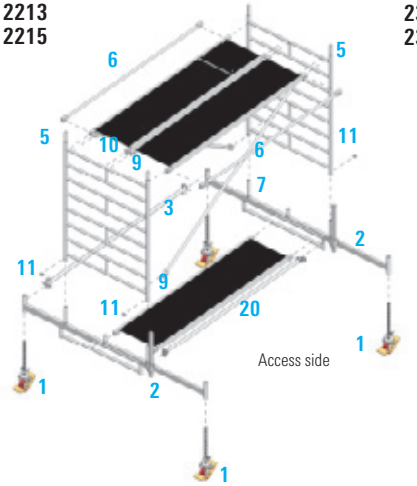
2. The diagonal braces **7** are snapped into the ladder frames **5** and the adjustable plan brace **4** is suspended. Suspend the rear guard rail **6** from the ladder frames **5**. Fit a deck **9** and an access deck **10** in accordance with the general drawings (see page 4). The horizontal clearance between the decks must not exceed 25 mm. Then fit a ladder with suspension hooks **14**, **16** or **17** with the appropriate double ladder support **18** or **19** (see page 22, Components and page 4, General drawings). The double ladder support **18** or **19** (see page 22, Components) is suspended from the bottom rung of the ladder frame **5** and fastened using the clamp coupler between the 2nd and 3rd suspension ladder rungs.

After engagement, push the rear guard rails 6 and diagonal braces 7 as far outwards as possible.

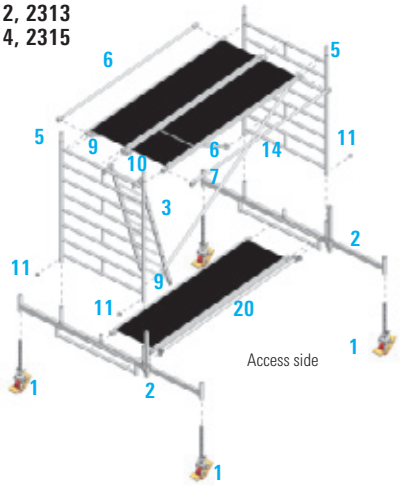
Level the tower using the threaded spindles.

Further assembly of tower models 2302 to 2305 as per section 6.

5.3 Tower Models without ladders 2206 – 2211 2212, 2213 2214, 2215



Tower Models with ladders 2306 – 2311 2312, 2313 2314, 2315



1. The castors **1** are inserted into the mobile beam **2** and secured against falling out by fastening the wing screws on the spindle nuts.

2. Fit the basic tube **3** at the mobile beam end **2** and wedge it tight after aligning it. Then clamp the base strut **20** to the leg of the mobile beam support **2** and suspend a deck **9** from the mobile beam support **2**. Fit ladder frames **5** onto the mobile beams and secure them with spring clips **11**.

3. Fit diagonal braces **7**, deck **9** and access deck **10** or rear guard rails **6** in accordance with the general drawings (see page 2 + 4). Ensure that the deck **9** is underneath the access deck **10**.

The horizontal clearance between the decks must not exceed 25 mm. After installation, push the rear guard rails **6** and diagonal braces **7** as far outwards as possible (see assembly drawings, pages 2 + 4).

4. Only for tower models with ladders.
Suspend the ladders **14**, **17** in ladder frame **5** (see also assembly drawing on page 4).

The tower models 2212, 2213, 2214, 2215, 2312, 2313, 2314 and 2315 are equipped with adjustable mobile beams **2** for use outdoors. Level the tower using the threaded spindles.

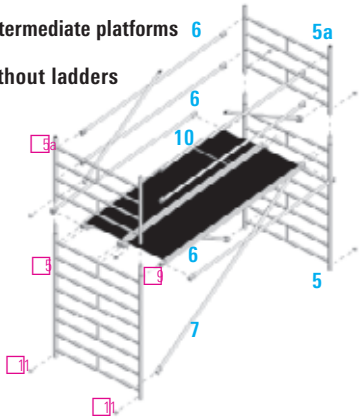
For further assembly see section 6.

Assembly

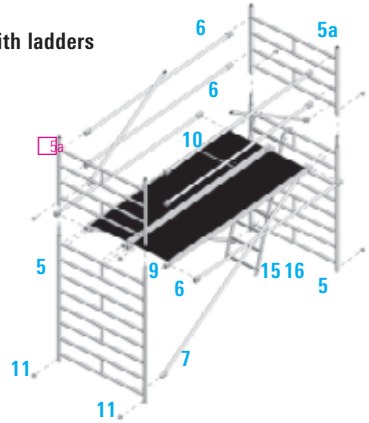
6 Assembly of the intermediate platforms

Tower Models without ladders
2102 – 2111
2112, 2113
2114, 2115

2202 – 2211
2212, 2213
2214, 2215



Tower Models with ladders
2302 – 2311
2312, 2313
2314, 2315



During assembly and dismantling, system decks or scaffolding planks to DIN 4420 (minimum dimensions: 28 x 4.5 x 350 cm long) must be installed as auxiliary decks at maximum height intervals of 2.0 m. These auxiliary decks, providing a safe footing for assembly and dismantling, must be removed again after assembly. Each platform must be completely decked.

1. Assembly is continued by fitting ladder frames **5** and stiffening using 2 diagonal braces **7** and rear guard rails **6** in accordance with the general drawings (see pages 3 – 4). Secure the joints of the ladder frames **5** using spring clips **11**.

2. Install intermediate platforms, each comprising 1 deck **9** and 1 access deck **10** at height intervals of max. 4 m. If these platforms are only used as intermediate platforms for ascent, it is sufficient to install 2 rear guard rails **6** for each side as a side protection. In the case of use as a working platform, install 2 rear guard rails per side plus toe boards (see Section 7). The top working level or another working level must not be used in this case.
The toe boards there must be removed.

After installation, push the rear guard rails **6** and diagonal braces **7** as far outwards as possible.
The horizontal clearance between the decks must not exceed 25 mm.

3. When assembling the tower, ensure without fail that the diagonal braces **7**, decks **9**, **10** and rear guard rails **6** are installed in the correct arrangement (see general drawings, pages 3 – 4).
The next-up ladder frames **5** must not be fitted here until the ladder frames **5** underneath them have been stiffened accordingly.

4. In the case of tower models 2305 – 2311 with ladders, snap in suspension ladders **15**, **17**. During assembly, snap in the suspension ladders **15** or **17** after installing deck **9** and access deck **10** (see general drawing, page 4). The horizontal clearance between the decks must not exceed 25 mm.

5. During dismantling, do not remove the appropriate diagonal braces **7** and stiffening elements **6**,**7** until the ladder frames **5** above them have been dismantled.

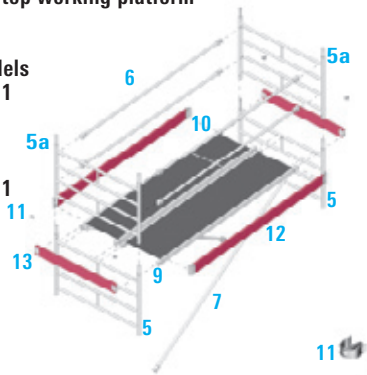
For further assembly see section 7.

7 Assembly of the top working platform

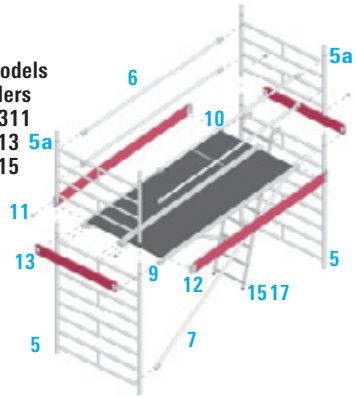
7.1

Tower Models
2102 – 2111
2112, 2113
2114, 2115

2202 – 2211
2212, 2213
2214, 2215



Tower Models with ladders
2302 – 2311
2312, 2313
2314, 2315



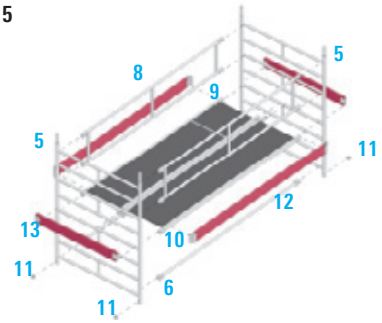
After fitting the top ladder frames **5** or **5a** and securing them with spring clips **11** (always fit spring clips at deck level from the inside towards the outside, see detail), suspend an access deck **10** and a deck **9** into the 5th rung from the top. The regulation side
protection to match the tower model is made by installing 4 rear guard rails **6** (see pages 3 + 4). Position the 2 toe boards 2.85 m **12** between the ladder frames **5** and secure them by inserting end toe boards, 1.44 m **13**.

In the assembly form using inclined ladders **14** to **17** , suspend them in accordance with the general drawings (see page 4).

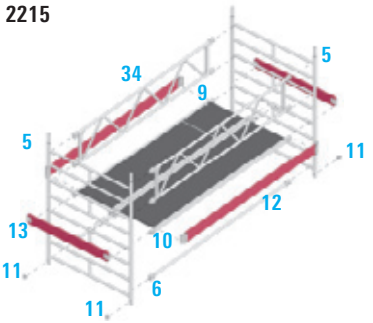
After engagement, push the diagonal braces 7 and the rear guard rails 6,8 and as far outwards as possible! The horizontal clearance between the decks must not exceed 25 mm.

Assembly

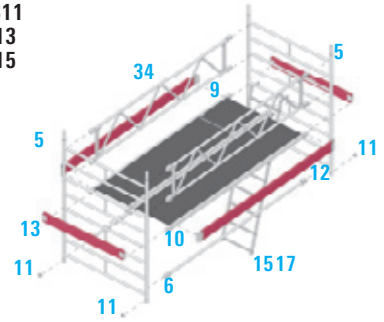
7.2 Tower Models 2102 – 2111 2112, 2113 2114, 2115



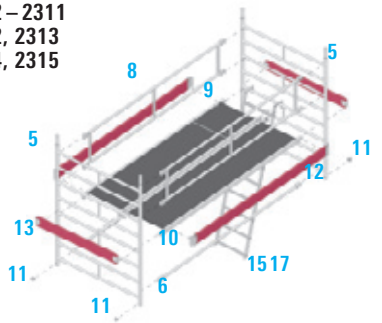
Tower Models 2202 – 2211 2212, 2213 2214, 2215



7.3 Tower Models with ladders 2302 – 2311 2312, 2313 2314, 2315



Tower Models with ladders 2302 – 2311 2312, 2313 2314, 2315

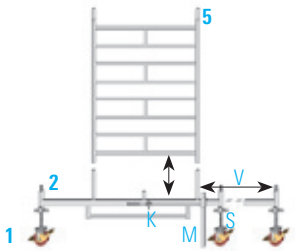


After fitting the top ladder frames **5** or **5a** and securing them with spring clips **11**, suspend an access deck **10** and a deck **9** into the 5th rung from the top. The regulation side protection to match the tower model is made by installing 2 double rear guard rails **8** or 2 beams, 2.85 m **34** (see pages 2 – 4). Position the 2 toe boards 2.85 m **12** between the ladder frames **5** and secure them by inserting end toe boards, 1.44 m **13**.

In the assembly form using inclined ladders **14** to **17**, suspend them in accordance with the general drawings (see page 4).

After engagement, push the diagonal braces 7 and the rear guard rails 6 ,8 and as far outwards as possible! The horizontal clearance between the decks must not exceed 25 mm.

8 Adjusting the mobile beams

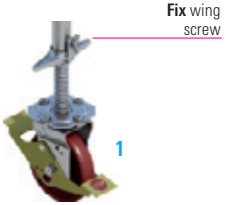


The adjustable mobile beam **2** permits working up against the wall. It can be slid in and out in the assembled state. It must always be ensured before adjustment that the ballast weights specified in the ballast table are fitted in the right places (see page 16). For adjustment in the assembled state, lower the middle support (M) attached to the mobile beam **2** as far as possible and then secure it. The load is taken off the castors at the sliding parts by turning the spindle (S) until the adjustment part (V) can be adjusted following release of the clamping wedge (K).

After adjustment, fix the clamping wedge (K), put load back on the castor by turning the spindle, raise the middle support (M) and secure it.

Assembly

9 Operating the castors

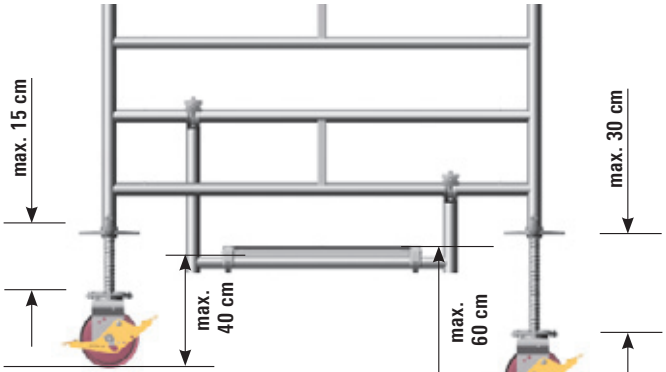


During assembly and while working, the castors **1** must be kept locked by pressing down the brake lever labelled STOP. When the brake is locked, the lever labelled STOP is in the down position.

For movement, the castors **1** are unlocked by pushing the other lever down.

10 Maximum spindle adjustment of the various models

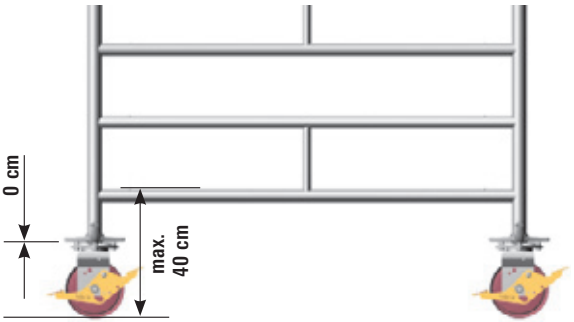
Construction directly on castors with access ledger



Models: 2102 – 2105
2126 – 2131
2146 – 2151

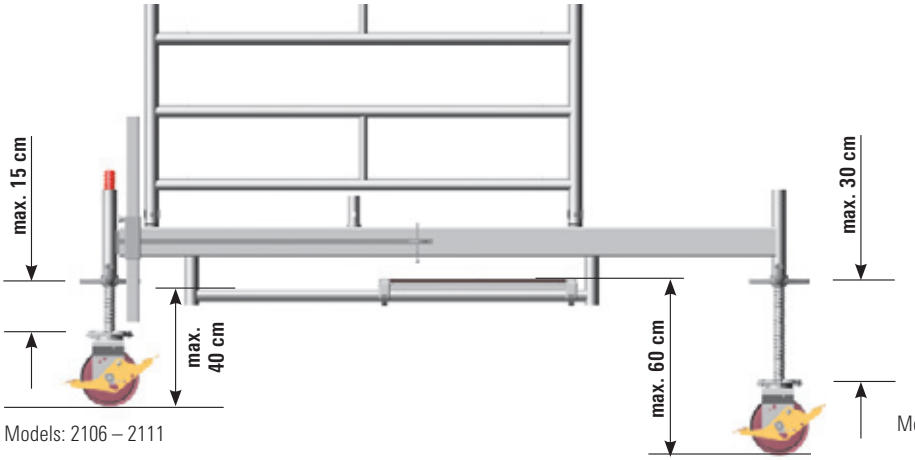
Models: 2202 – 2205

Construction directly on castors



Models: 2101; 2201

Assembly with 1323.320



Models: 2106 – 2111

Models: 2206 – 2211
2306 – 2311

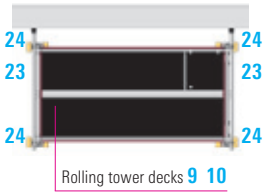
Wall support

Wall support under load

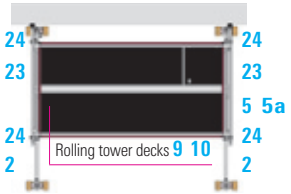
For work performed on a load-bearing wall, ballasting can be reduced in accordance with the ballast table (see page 16).

In this case, wall supports must be installed on both sides of the tower. To do so, the Uni distance tube **23** must be used and fastened with couplers **24** to the ladder frame **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.

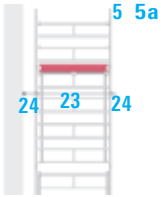
Top view



Top view, with mobile beam



Side view



Dismantling

During assembly and dismantling, system decks or scaffolding planks to DIN 4420 (minimum dimensions: 28 x 4.5 x 350 cm long) must be installed as auxiliary decks at maximum height intervals of 2.0 m. These auxiliary decks, providing a safe footing for assembly and dismantling, must be removed again after assembly. Each platform must be completely decked.

Dismantling is in the reverse order to that of the assembly steps.

When dismantling, do not remove the bracing elements such as diagonal braces 2, rear guard rails 6 or access decks 10 until the ladder frames 5, 5a above them have been dismantled.

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

Parts list

The towers 2112, 2113, 2114, 2115, 2212, 2213, 2214 and 2215 are intended for **outdoor assembly.** The tower base is assembled here in accordance with Section 3.3.

▶1 Table 1

Tower Model	Article No.	2101	2102	2112	2103	2113	2104	2114	2105	2115	2106	2107	2108	2109	2110	2111
Ladder frame 150/4	1299.004	–	2	2	–	–	2	2	–	–	2	–	2	–	2	–
Ladder frame 150/8	1299.008	2	2	2	4	4	4	4	6	6	6	8	8	10	10	12
Deck 2.85 m	1241.285	2	1	1	1	1	1	1	2	2	2	2	2	3	3	3
Access deck 2.85 m	1242.285	–	1	1	1	1	1	1	2	2	2	2	2	3	3	3
Double rear guard rail 2.85 m	1206.285	2	–	–	2	2	–	–	2	2	–	2	–	2	–	2
Rear guard rail 2.85 m	1205.285	–	6	6	2	2	6	6	8	8	9	9	11	13	15	15
Diagonal brace 3.35 m	1208.285	–	2	2	2	2	4	4	4	4	6	6	8	8	10	10
Mobile beam, adjustable, with deck support	1323.320	–	–	2	–	2	–	2	–	2	2	2	2	2	2	2
Base strut 2.85 m	1324.285	–	–	1	–	1	–	1	–	1	1	1	1	1	1	1
Access ledger	1344.003	–	1	–	1	–	1	–	1	–	–	–	–	–	–	–
Toe board 2.85 m, with claw	1239.285	–	2	2	2	2	2	2	2	2	2	2	2	2	2	2
End toe board 1.44 m	1238.144	–	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Spring clip	1250.000	–	4	4	4	4	8	8	8	8	16	16	20	20	24	24
Castor 200 with spindle, 7 kN	1259.200	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Ballast	1249.000	For the number of ballasting weights see the ballast table, page 16														

Tower Model	Article No.	2201	2202	2212	2203	2213	2204	2214	2205	2215	2206	2207	2208	2209	2210	2211
Ladder frame 150/4	1299.004	–	2	2	–	–	2	2	–	–	2	–	2	–	2	–
Ladder frame 150/8	1299.008	2	2	2	4	4	4	4	6	6	6	8	8	10	10	12
Deck 2.85 m	1241.285	2	2	2	2	2	2	2	3	3	3	3	3	4	4	4
Access deck 2.85 m	1242.285	–	1	1	1	1	1	1	2	2	2	2	2	3	3	3
Beam 2.85 m	1207.285	2	–	–	2	2	–	–	2	2	–	2	–	2	–	2
Rear guard rail 2.85 m	1205.285	–	4	4	–	–	4	4	6	6	8	8	10	12	14	14
Diagonal brace 3.35 m	1208.285	–	2	2	2	2	4	4	4	4	6	6	8	8	10	10
Deck support, bolt-on, 0.9 m	1326.090	–	2	–	2	–	2	–	2	–	–	–	–	–	–	–
Mobile beam, adjustable, with deck support	1323.320	–	–	2	–	2	–	2	–	2	2	2	2	2	2	2
Base strut 2.85 m	1324.285	–	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Basic tube 2.85 m	1211.285	–	–	1	–	1	–	1	–	1	1	1	1	1	1	1
Toe board 2.85 m, with claw	1239.285	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
End toe board 1.44 m	1238.144	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Spring clip	1250.000	–	4	4	4	4	8	8	8	8	16	16	20	20	24	24
Castor 200 with spindle, 7 kN	1259.200	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Ballast	1249.000	For the number of ballasting weights see the ballast table, page 16														

Additional requirement for special structure with bracket deck surface		1 bracket deck surface	2 bracket deck surfaces
Aluminium console bracket 0.75 m	1341.075	2	4
Deck 2.85 m	1241.285	1	2
Ladder frame 75/4	1297.004	2	4
End toe board	1238.075	2	4
Intermediate deck 2.85 m	1339.285	1	2
Spring clip	1250.000	4	8

Construction variants with stabilizers, extendable: 2126 – 2151; with stabilizer, 5 m: 2146 – 2131

Tower Model	Article No.	2126	2146	2127	2147	2128	2148	2129	2149	2130	2150	2131	2151
Ladder frame 150/4	1299.004	2	2	–	–	2	2	–	–	2	2	–	–
Ladder frame 150/8	1299.008	6	6	8	8	8	8	10	10	10	10	12	12
Deck 2.85 m	1241.285	2	2	2	2	2	2	3	3	3	3	3	3
Access deck 2.85 m	1242.285	2	2	2	2	2	2	3	3	3	3	3	3
Double rear guard rail 2.85 m	1206.285	–	–	2	2	–	–	2	2	–	–	2	2
Rear guard rail 2.85 m	1205.285	10	10	10	10	12	12	14	14	16	16	16	16
Diagonal brace 3.35 m	1208.285	6	6	6	6	8	8	8	8	10	10	10	10
Stabilizer, extendable	1248.260	4	–	4	–	4	–	4	–	4	–	4	–
Stabilizer 5m	1248.500	–	4	–	4	–	4	–	4	–	4	–	4
Rotation preventer	1248.261	4	4	4	4	4	4	4	4	4	4	4	4
Access ledger	1344.003	1	1	1	1	1	1	1	1	1	1	1	1
Toe board 2.85 m, with claw	1239.285	2	2	2	2	2	2	2	2	2	2	2	2
End toe board 1.44 m	1238.144	2	2	2	2	2	2	2	2	2	2	2	2
Spring clip	1250.000	12	12	12	12	16	16	16	16	20	20	20	20
Castor 200 with spindle, 7 kN	1259.200	4	4	4	4	4	4	4	4	4	4	4	4
Ballast	1249.000	For the number of ballasting weights see the ballast table, page 16											

▶2 Table 2

	Additional requirement compared to Table 1 (2101 – 2111)														
Tower Model with ladders	**Article No.**	**2302**	**2312**	**2303**	**2313**	**2304**	**2314**	**2305**	**2315**	**2306**	**2307**	**2308**	**2309**	**2310**	**2311**
Suspended ladder 9 rungs	1314.009	1	1	–	–	–	–	1	1	1	–	–	1	1	–
Suspended ladder 12 rungs	1314.012	–	–	–	–	–	–	1	1	–	1	–	1	–	1
Suspended ladder 13 rungs	1314.013	–	–	1	1	–	–	–	–	–	–	–	–	–	–
Suspended ladder 16 rungs	1314.016	–	–	–	–	1	1	–	–	1	1	2	1	2	2
Double ladder support 0.86 m	1317.086	1	–	–	–	–	–	1	–	–	–	–	–	–	–
Double ladder support 1.34 m	1317.134	–	–	1	–	1	–	–	–	–	–	–	–	–	–
Basic tube	1211.285	–	1	–	1	–	1	–	1	1	1	1	1	1	1
Deck	1241.285	–	1	–	1	–	1	–	1	1	1	1	1	1	1
Plan brace, adjustable	1318.000	1	–	1	–	1	–	1	–	–	–	–	–	–	–
	Reduced requirement														
Rear guard rail	1205.285	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Access ledger	1344.003	1	–	1	–	1	–	1	1	–	–	–	–	–	–
	Additional requirement for special structure with bracket deck surface								**1 bracket deck surface**					**2 bracket deck surfaces**	
Aluminium console bracket 0.75 m	1341.075								2					4	
Deck 2.85 m	1241.285								1					2	
Ladder frame 75/4	1297.004								2					4	
End toe board	1238.075								2					4	
Intermediate deck 2.85 m	1339.285								1					2	
Spring clip	1250.000								4					8	

The tower models, which can be extended with bracket deck surfaces are shown on page 16 (Ballasting). When operating with brackets, the tower may be loaded with 1.5 kN/m2 (scaffolding group 2) at one working level only. A maximum of 2 bracket deck surfaces may be assembled. When bracket deck surfaces are fitted, the spindles mustn't be extended. The corresponding working level must be equipped with complete side protection.

Ballasting

For ballasting, use Layher ballast weights **22**, Art. No. 1249.000 (10 kg each). A coupler with hand wheel permits simple, quick and secure fixing of the ballast required at the correct places. **Do not use any liquid or granular ballast materials.**
The ballast weights must be distributed evenly to all ballasting fixing points.

Tower Model		2101 2201 2301			2102 2202 2302			2112 2212 2312			2103 2203 2303			2113 2213 2313			2104 2204 2304			2114 2214 2314			2105 2205 2305			2115 2215 2315			2106 2206 2306			2107 2207 2307			2108 2208 2308			2109 2209 2309			2110 2210 2310			2111 2211 2311		
		l	r	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum
Assembly indoors	in centre position	0	0	○	0	0	○	0	0	○	2	2	4	0	0	○	4	4	8	0	0	○	4	4	8	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○
	in off-centre position	×	×	×	×	×	×	0	0	○	×	×	×	0	0	○	×	×	×	0	0	○	×	×	×	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○	0	2	2	0	2	2
Assembly outdoors	in centre position	0	0	○	3	3	6	0	0	○	6	6	12	0	0	○	11	11	22	0	0	○	16	16	32	0	0	○	1	1	2	5	5	10	×	×	×	×	×	×	×	×	×	×	×	×
	in off-centre position	×	×	×	×	×	×	0	0	○	×	×	×	0	0	○	×	×	×	0	0	○	×	×	×	0	4	4	0	6	6	4	14	18	×	×	×	×	×	×	×	×	×	×	×	×
	off-centre with wall support	×	×	×	×	×	×	0	0	○	×	×	×	0	0	○	×	×	×	0	0	○	×	×	×	0	0	○	2	0	2	8	2	10	×	×	×	×	×	×	×	×	×	×	×	×
Special assembly with brackets																																														
		l	r	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum
Assembly indoors	in centre pos. (1 bracket)*	×	×	×	0	8	8	0	0	○	0	12	12	0	0	○	0	14	14	0	0	○	0	14	14	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○
		l	r	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum
	in centre pos. (2 bracket)*	×	×	×	3	3	6	0	0	○	6	6	12	0	0	○	8	8	16	0	0	○	7	7	14	0	0	○	0	0	○	0	0	○	0	0	○	×	×	×	×	×	×	×	×	×
		l	r	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum
Assembly outdoors	in centre pos. (1 bracket)*	×	×	×	0	16	16	0	0	○	2	22	24	0	0	○	6	26	32	0	0	○	12	30	42	0	0	○	0	6	6	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
		l	r	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	l	r	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum
	in centre pos. (2 bracket)*	×	×	×	10	10	20	0	0	○	×	×	×	0	0	○	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×

* **In the case of configurations with the adjustable mobile beam 2, the latter must be fully extended.**

The figures shown indicate the number of ballast weights of 10 kg each.

○ = **no ballast required**
× = **not permissible**

= **example on page 20**

Construction variants with stabilizers, extendable

Tower Model		2126			2127			2128			2129			2130			2131		
		l	r	Sum	l	r	Sum	l	r	Sum	l	r	Sum	l	r	Sum	l	r	Sum
Assembly indoors	in centre position	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○
	in off-centre position	0	4	4	0	4	4	0	6	6	0	6	6	0	8	8	0	8	8
	off-centre with wall support	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○
Assembly outdoors	in centre position	1	1	2	4	4	8	×	×	×	×	×	×	×	×	×	×	×	×
	in off-centre position	0	12	12	0	18	18	×	×	×	×	×	×	×	×	×	×	×	×
	off-centre with wall support	0	6	6	0	12	12	×	×	×	×	×	×	×	×	×	×	×	×

Construction variants with stabilizers, 5 m

Tower Model		2146			2147			2148			2149			2150			2151		
		L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum	L	R	Sum
Assembly indoors	in centre position	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○
	in off-centre position	0	2	2	0	2	2	0	4	4	0	4	4	0	4	4	0	6	6
	off-centre with wall support	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○	0	0	○
Assembly outdoors	in centre position	0	0	○	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
	in off-centre position	0	10	10	0	14	14	×	×	×	×	×	×	×	×	×	×	×	×
	off-centre with wall support	0	0	○	0	0	○	×	×	×	×	×	×	×	×	×	×	×	×

The figures shown indicate the number of ballast weights of 10 kg each.

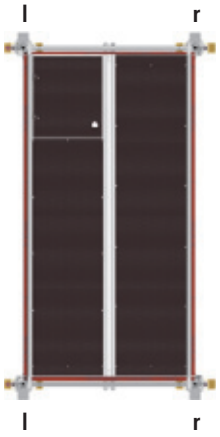
○ = **no ballast required**
× = **not permissible**

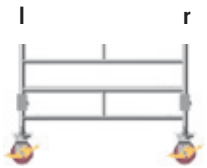
Ballasting

Attachment of ballast weights

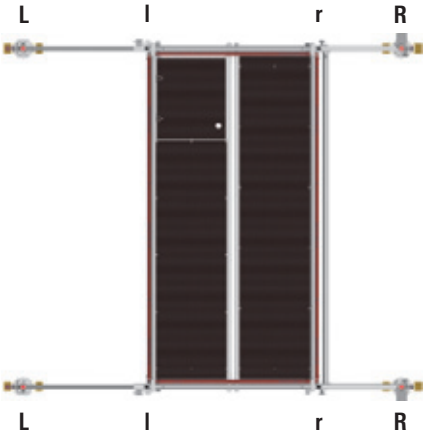
Centre position:

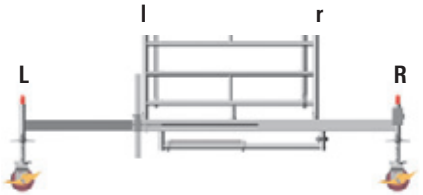
Models: 2101 – 2105
2201 – 2205



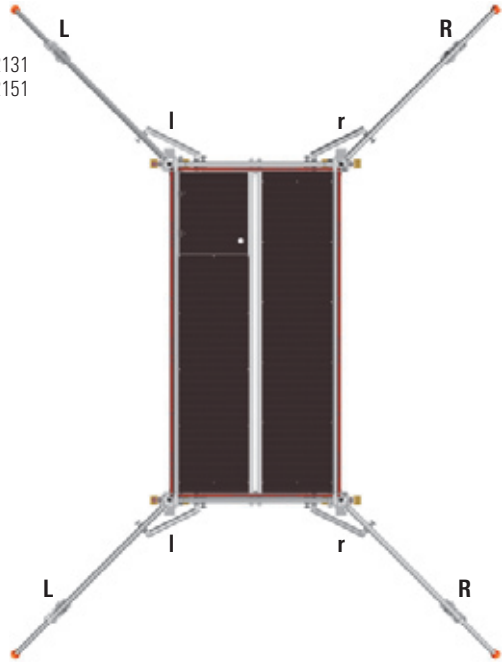


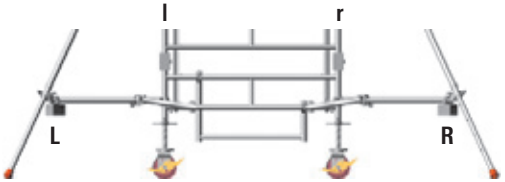
Models: 2106 – 2111
2112 – 2115





Models:
2126 – 2131
2146 – 2151



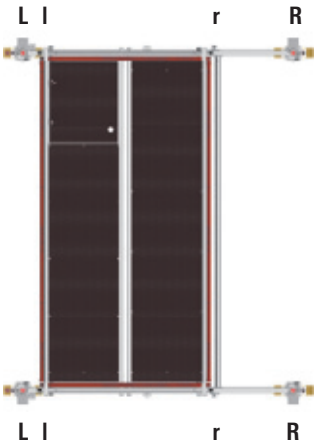


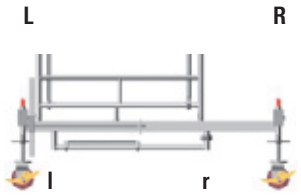
Ballasting

Attachment of ballast weights

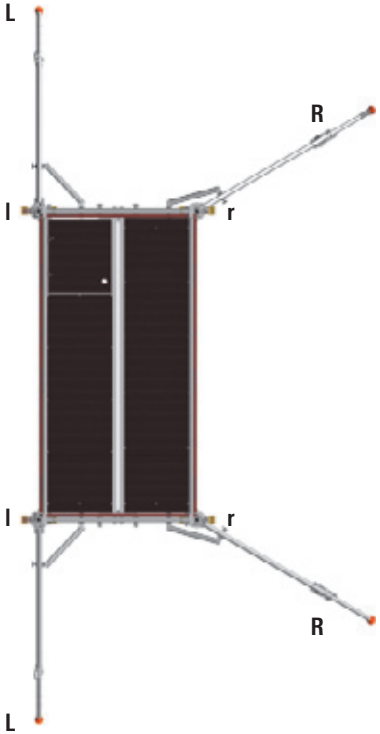
Off-centre position:

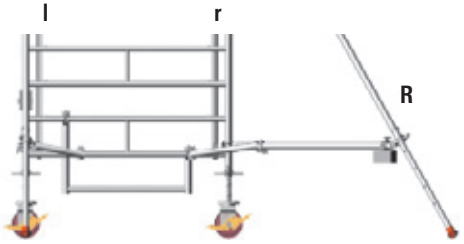
Models: 2106 – 2111
2112 – 2115





Models: 2126 – 2131
2146 – 2151

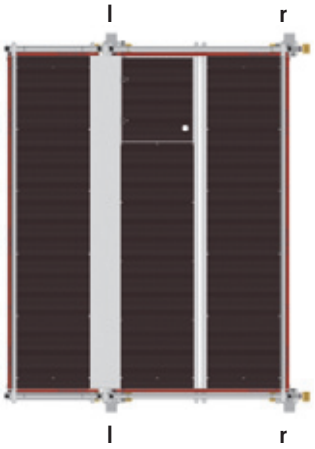




Ballasting

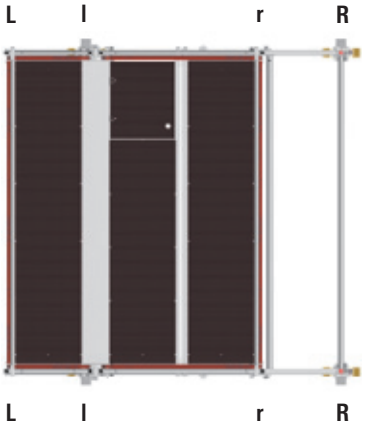
Attachment of ballast weights

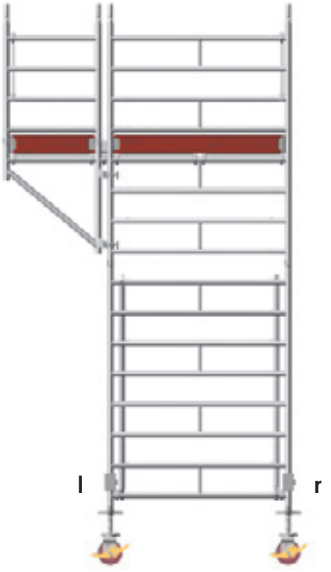
Assembly with brackets directly on castors:

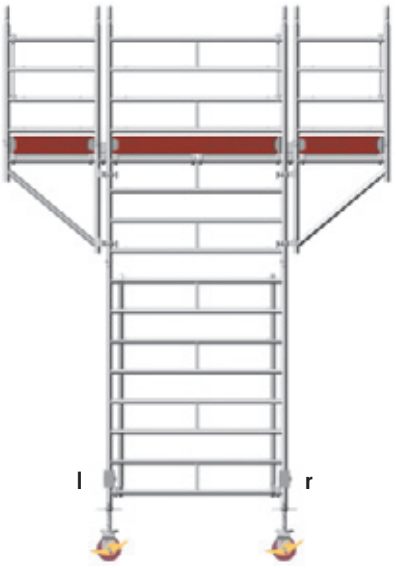


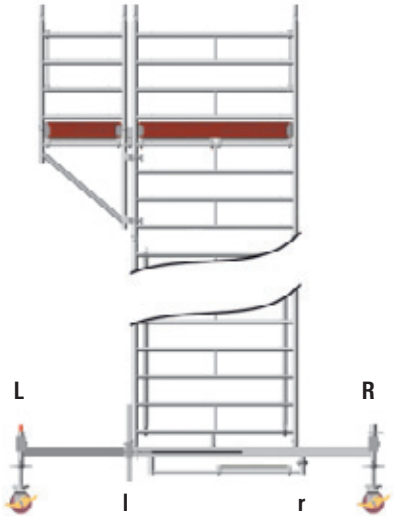
Assembly with 2 brackets directly on castors:

Assembly on mobile beam with 1 bracket:





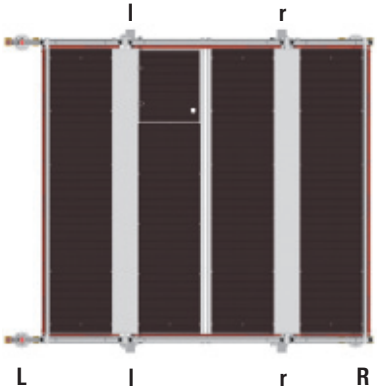




Ballasting

Attachment of ballast weights

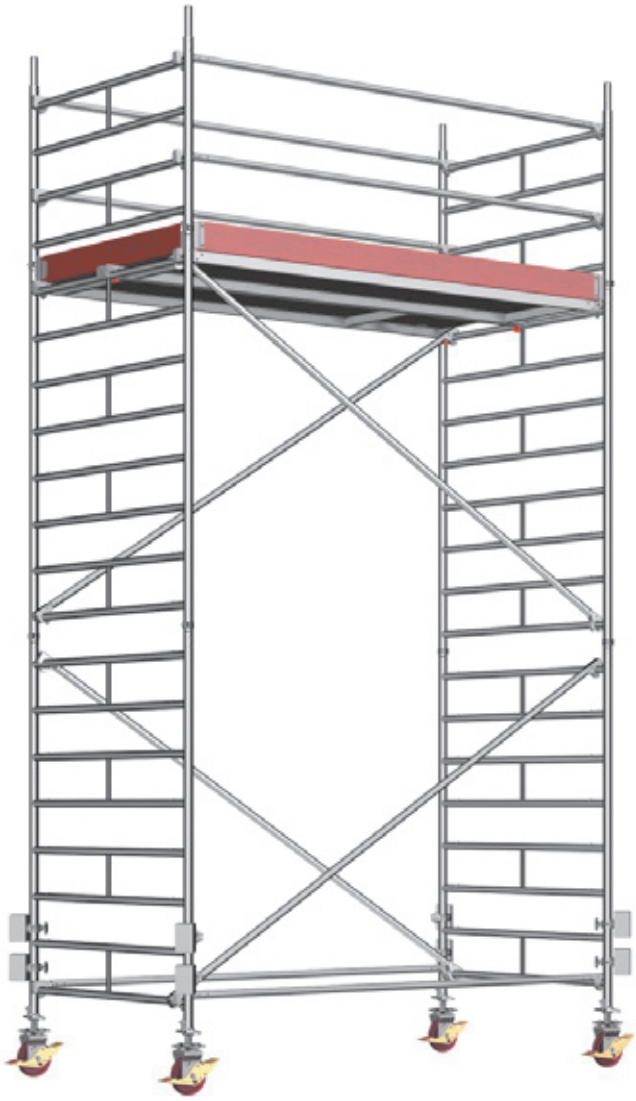
Assembly on mobile beam with 2 brackets:



Example of assembly, model 2104

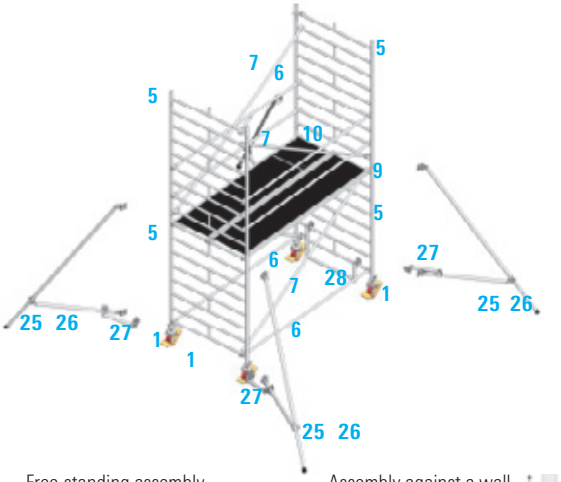
Assembly indoors in centre position
Ballast: see excerpt from table, page 16

	2104
	2204
	2304
l	r Sum
4	4 8
×	× ×

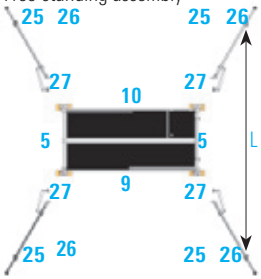


Stabilizer attachment

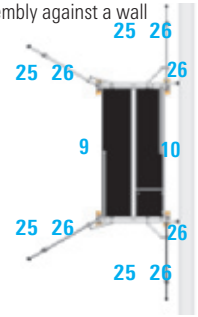
Before assembly, see item 1 on page 7. With this assembly form, the fixed and adjustable mobile beams are dispensed with.
They are replaced by extendable stabilizers or 5 m stabilizers.



Free-standing assembly



Assembly against a wall



For tower model 2126 – 2151 and above
Distance L_{min} = 3.20 m

The castors **1** are inserted into the ladder frames **5** and secured against falling out by fastening the wing screws on the spindle nuts. Bolt an access ledger **28** to the centre of the ladder frame **5**.

Connect the two ladder frames **5** using the two diagonal braces **7** and two double rear guard rails **8**. Fit deck **9** and access deck **10** in accordance with the general drawings. The horizontal clearance between the decks must not exceed 25 mm. After engagement, push the rear guard rails **6** and diagonal braces **7** as far outwards as possible.

Level the tower using the threaded spindles.

Attach a stabilizer **25**, **26** to each leg of the ladder frame **5**. To do so, fasten the half-coupler directly beneath the rung of the ladder frame **5**. Before tightening the star handles (hand wheels), fix the stabilizers in the right position, against the wall or free-standing, and then tighten them using the star handles.

Ensure that the foot is firmly on the ground by sliding the half-coupler on the stabilizer.

Fasten the lower half-coupler beneath the bottom rung of the ladder frame **5** and tighten it in turn using the star handle. Adjust the position of the stabilizer relative to the tower. If the tower is free-standing, set the angle to 60° in each case, if it is against a wall, set the angles to 90° and 60°.

To ensure that the position cannot change, now attach the tower rotation lock **27** to the stabilizer **25**, **26** and to the rung of the ladder frame **5**.

Adjust the rotation lock by moving the half-coupler on the stabilizer **25**, **26** such that the half-coupler is fixed beneath the first rung of the ladder frame. Ensure that the spring clips safely engage in the telescoping parts of the extendable stabilizer. When moving the tower, the stabilizer must not be lifted more than 2 cm off the ground.
Indoors and in the central position, ballasting is not necessary. Outdoors, no ballast weight is needed up to tower model 2127 with extendable stabilizer and central position. For work performed on a load-bearing wall, ballasting can be provided in accordance with the ballast table (see page 16).

Further assembly of tower models 2226 – 2231 as per section 6.
Further assembly of tower models 2246 – 2251 as per section 6.

Components

1 Castor 200 1259.200
with spindle, 7 kN

2 Mobile beam with deck support 1323.320
3.2 m
adjustable

3 Basic tube 1211.285
2.85 m

4 Plan brace 1318.000
adjustable

5 Ladder frame 150/8 1299.008

Ladder frames with non-continuous central standard (new production) and continuous central standard (old production) can be installed together.

5a Ladder frame 150/4 1299.004

6 Rear guard rail 1205.285
2.85 m

7 Diagonal brace 1208.285
3.35 m

8 Double rear guard rail 1206.285

9 Deck 1241.285
2.85 m

10 Access deck 1242.285
2.85 m

11 Spring clip 1250.000

12 Toe board with claw 1239.285
2.85 m

13 End toe board 1238.144
1.44 m

Suspended ladders

36	8 rungs	1314.008 ■
14	9 rungs	1314.009 ■
15	12 rungs	1314.012 ■
16	13 rungs	1314.013 ■
17	16 rungs	1314.016 ■

Double ladder suport

18 1.34 m 1317.134
for suspended ladders 16, 17

19 0.86 m 1317.086
for suspended ladders 14

20 Base strut 1324.285
2.85 m

21 Deck support, bolt-on 1326.090
0.9 m

22 Ballast (10 kg) 1249.000

23 Uni distance tube 1275.180
1.8 m

24 Special screw coupler, rigid
19 mm WS 1269.019
22 mm WS 1269.022

25 Stabilizer extendable 1248.260

26 Stabilizer 1248.500
5 m

27 Tower rotation lock 1248.261

28 Access ledger 1344.003

■ = Delivery time on request

Components for special assemblies

29 Aluminium bracket 1341.075
0.75 m

30 Intermediate deck 1339.285
2.85 m

31 Mobile beam with deck support, without central spigot 1338.320
3.2 m

32 Spigot 1337.000
adjustable

33 End toe board 1238.075
0.75 m

34 Beam 1207.285
2.85 m

35 Deck diagonal brace 1347.335
3.35 m

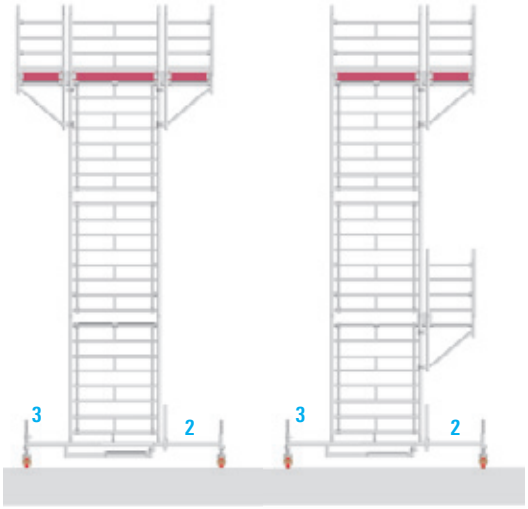
Identification sign 6344.300

Prohibition sign 6344.200

■ = Delivery time on request

Special assembly with brackets

Caution! **Risk of accidents if the ballast table is not complied with.**

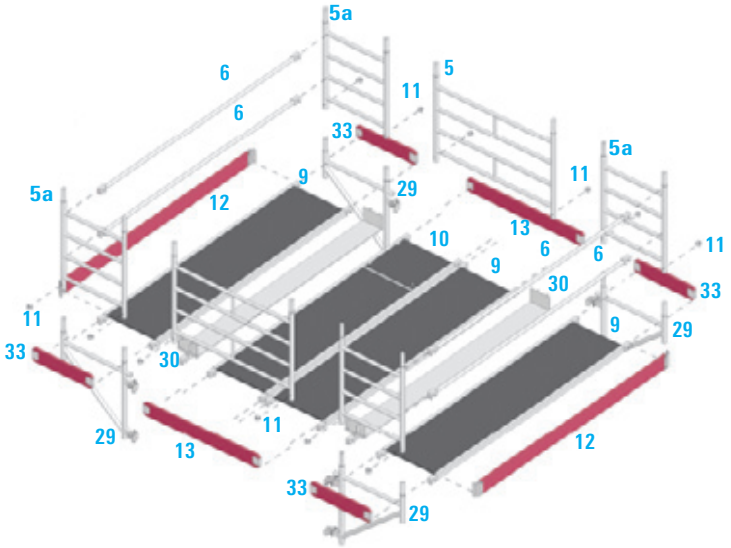


1. The corresponding **ballast weights (see ballast table on p. 16)** must be attached before fitting the brackets.
When operating with brackets, the tower may be loaded with max. 1.5 kN/m² (Class 2) at one working level only.
The spindles must not be overextended.
The corresponding working level must be equipped with complete side protection.

2. The tower models 2102, 2103; 2202, 2203 and 2302, 2303 may only be assembled with one bracket deck surface.
The tower models 2114, 2214 and 2314 may only be expanded with one or max. two bracket deck surfaces at the top working platform.
The tower models 2106, 2115; 2206, 2215; 2306, 2315 may be fitted with one or at most two bracket deck surfaces adjacent to one another or one above the other.
In the case of assembly with mobile beam **2** the latter must be fully extended.
A maximum of 2 bracket deck surfaces can be fitted to a tower. The bracket deck surfaces can be fitted at any level of the tower where a deck is provided.

3. Before fitting the brackets **29**, the side protection with toe boards is dismantled at this point and the **additional ballast** is attached.

4. The tower is assembled in accordance with sections 4 – 5 (see pages 8 – 9).



5. At the deck height, 2 brackets **29** are bolted on with the couplers such that the rung of the aluminium bracket is at the same height as the rungs of the ladder frame **5**. Then suspend a deck **9** in the bracket rungs. 2 ladder frames **5a** are fitted onto the brackets and secured with spring clips **11**.

6. The intermediate deck 2.85 m **30** is positioned between the bracket deck **9** and the access deck **10** or deck **9**.

7. Provision of the regulation side protection depending on the tower model by installation of 2 rear guard rails **6** or 2 rolling tower beams **8** (see tower models, page 2).

8. Position the toe boards 2.85 m **12** between the ladder frames **5**, **5a** and **6** and secure them by inserting 2 end toe boards 0.75 m **33** and 2 end toe boards **13**.

9. After assembly, push the rear guard rails **6**, double rear guard rails **8** or rolling tower beams **8** as far outwards as possible.

10. To attach a second bracket deck surface, the steps 1 – 9 are repeated.

11. Dismantling of the bracket deck surface 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 12.

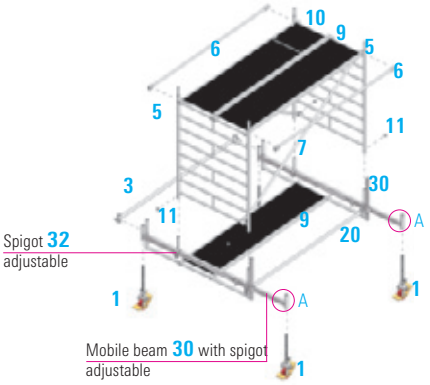
Assembly on special mobile beam

Ballasting must in any event be in accordance with the ballast table, lines relating to **"Assembly in off-centre position"** (see page 16). The ballast weights must be distributed evenly to the fixing points A in the drawing. The assembly instructions must be precisely followed here.

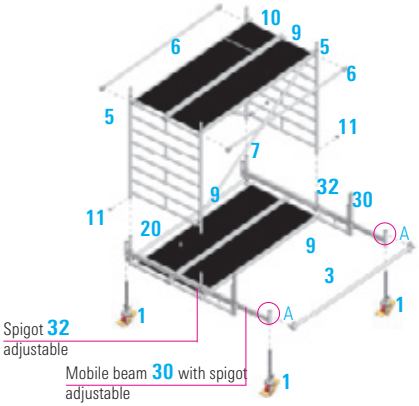
Move the spigots on the mobile beam in such a way that the ladder frames **5** can be fitted in the selected position. For this purpose, both fixed and adjustable spigots can be used depending on the mobile beam model. Tighten the bolts of the adjustable spigot. In the wall assembly form, a 2nd deck **9** is needed. Further assembly must be in accordance with Section 3.3.

with and without ladders

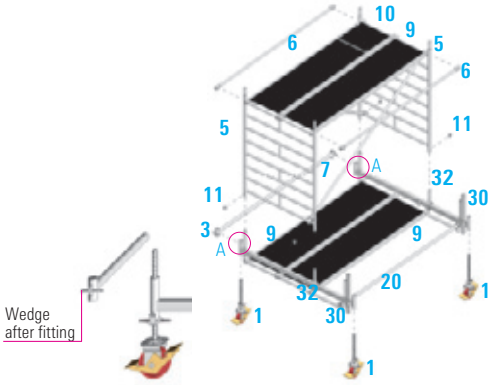
centre position

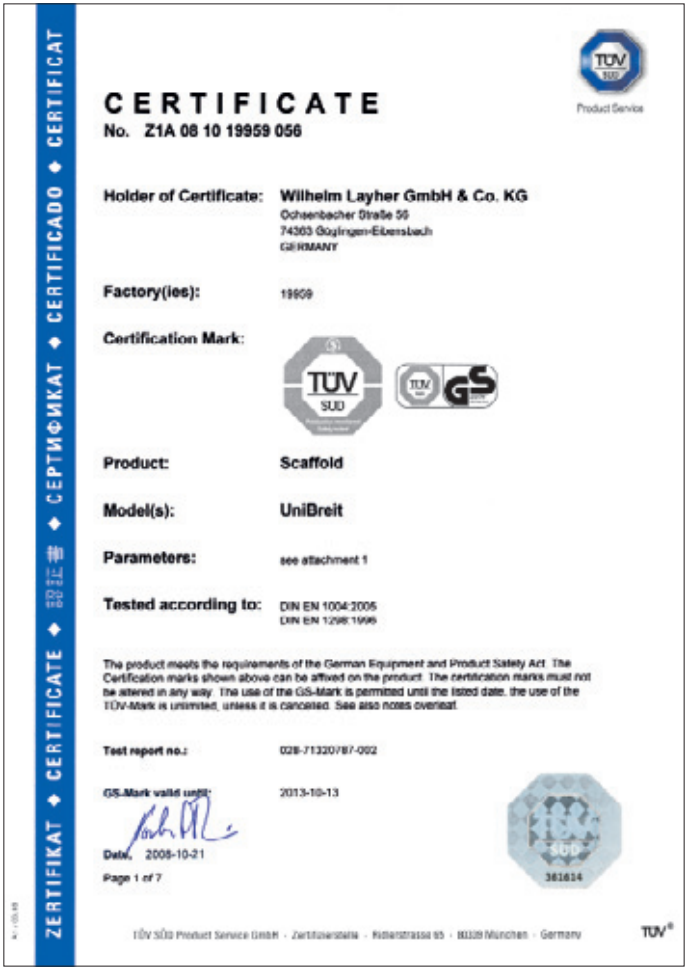


off-centre position



off-centre position,
"wall assembly form"
Mobile beam pushed in





ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

CERTIFICATE

No. Z1A 08 10 19959 056

TÜV SÜD Product Service

Holder of Certificate: Wilhelm Layher GmbH & Co. KG
Ochsenbacher Straße 56
74363 Güglingen-Eibensbach
GERMANY

Factory(ies): 19959

Certification Mark:

Product: Scaffold

Model(s): UniBreit

Parameters: see attachment 1

Tested according to: DIN EN 1004:2005
DIN EN 1298:1996

The product meets the requirements of the German Equipment and Product Safety Act. The Certification marks shown above can be affixed on the product. The certification marks must not be altered in any way. The use of the GS-Mark is permitted until the listed date, the use of the TÜV-Mark is unlimited, unless it is cancelled. See also notes overleaf.

Test report no.: 028-713207/87-002

GS-Mark valid until: 2013-10-13

Date: 2008-10-21

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381614

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ZERTIFIKAT ◆ CERTIFICATE ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Attachment 1 to Certificate No. Z1A 08 10 19959 056
Firm: Wilhelm Layher GmbH & Co. KG

TÜV Product Service

Models and parameters

Mobile access and working towers with stabilizers scaffoldtypes 2101-2115

Max. load:	200 kg/m² (scaffold group 3)
Dimension	
Scaffold lenght:	2,85 m
Scaffold width:	1,50 m
Scaffoldtypes	Standing height
2101:	1,50 m
2102 / 2112:	2,50 m
2103 / 2113:	3,50 m
2104 / 2114:	4,50 m
2105 / 2115:	5,50 m
2106 :	6,50 m
2107:	7,60 m
2108:	8,60 m
2109:	9,60 m
2110:	10,60 m
2111:	11,60 m
Materials	
Scaffold construction:	EN AW-6063-T66 EN AW-6082-T5
Undercarriage:	R St 37-2

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TÜV Product Service

Models and parameters

Mobile access and working towers with stabilizers scaffoldtypes 2201-2215

Max. load:	200 kg/m² (scaffold group 3)
Dimension	
Scaffold lenght.	2.85 m
Scaffold width:	1,50 m
Scaffoldtypes	Standing height
2201:	1,50 m
2202 / 2212.	2,60 m
2203 / 2213:	3,60 m
2204 / 2214:	4,60 m
2205 / 2215:	5,60 m
2206 :	6,60 m
2207:	7,70 m
2208:	8,70 m
2209:	9,70 m
2210:	10,70 m
2211:	11,70 m
Materials	
Scaffold contruction:	EN AW-6063-T66 EN AW-6082-T5
Undercarriage:	R St 37-2

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Product Service

Models and parameters

Mobile access and working towers with stabilizer and sloped ladder, scaffoldtypes 2301-2315

Max. load:	200 kg/m² (scaffold group 3)
Dimension	
Scaffold lenght:	2,85 m
Scaffold width:	1,50 m
Scaffoldtypes	Standing height
2301:	1,50 m
2302 / 2312:	2,50 m
2303 / 2313:	3,50 m
2304 / 2314:	4,50 m
2305 / 2315:	5,50 m
2306 :	6,70 m
2307:	7,70 m
2308:	8,70 m
2309:	9,70 m
2310:	10,70 m
2311:	11,70 m
Materials	
Scaffold construction:	EN AW-6063-T66 EN AW-6082-T5

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Attachment 1 to Certificate No. Z1A 08 10 19959 056
Firm: Wilhelm Layher GmbH & Co. KG

Product Service

Models and parameters

Mobile access and working towers with adjustable outriggers, scaffoldtypes 2126-2131

Max. load.	200 kg/m² (scaffold group 3)
Dimension	
Scaffold lenght:	2,85 m
Scaffold width:	1,50 m
Scaffoldtypes	Standing height
2126:	6,50 m
2127:	7,50 m
2128:	8,50 m
2129:	9,50 m
2130:	10,50 m
2131:	11,50 m
Materials	
Scaffold construction:	EN AW-6063-T66 EN AW-6082-T5

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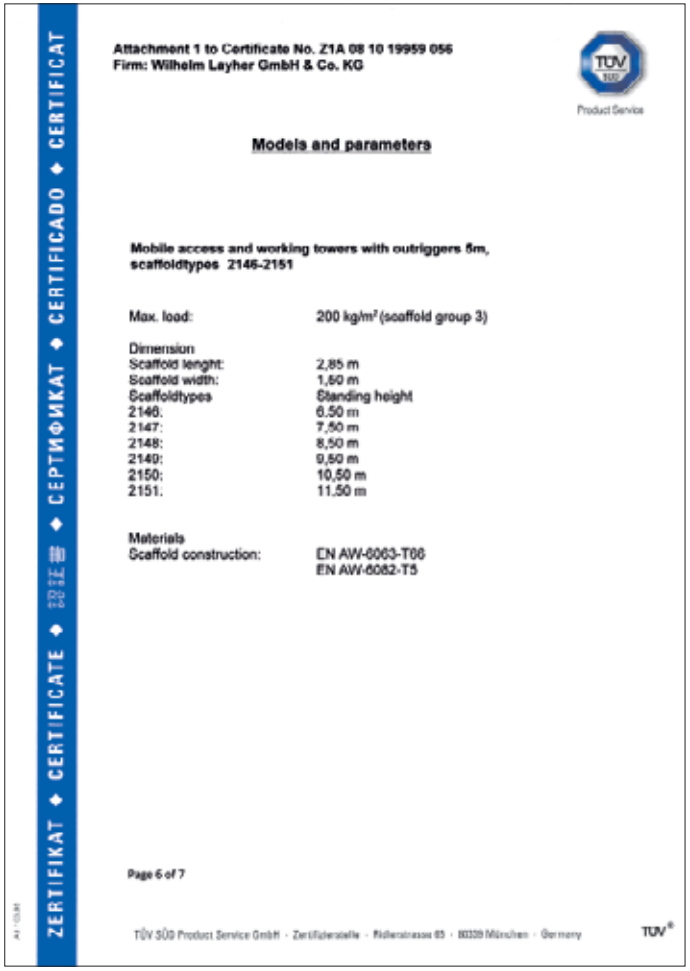

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Attachment 1 to Certificate No. Z1A 08 10 19959 056
Firm: Wilhelm Layher GmbH & Co. KG

Product Service

Models and parameters

Mobile access and working towers with outriggers 5m, scaffoldtypes 2146-2151

Max. load:	200 kg/m² (scaffold group 3)
Dimension	
Scaffold lenght:	2,85 m
Scaffold width:	1,50 m
Scaffoldtypes	Standing height
2146:	6,50 m
2147:	7,50 m
2148:	8,50 m
2149:	9,50 m
2150:	10,50 m
2151:	11,50 m
Materials	
Scaffold construction:	EN AW-6063-T66 EN AW-6082-T5

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Attachment 1 to Certificate No. Z1A 08 10 19959 056
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Product Service

Models and parameters

Mobile access and working towers with console scaffoldtypes 2102-2115, 2202-2215 and 2302-15

Max. load:	150 kg/m² (scaffold group 2)
Dimension	
Scaffold lenght:	2,85 m
Scaffold width:	2,90 m
Scaffoldtypes	Standing height
2102 / 2202 / 2302:	2,60 m
2103 / 2203 / 2303:	3,60 m
2114 / 2214 / 2314:	4,60 m
2115 / 2215 / 2315:	5,60 m
2106 / 2206 / 2306:	6,60 m
Material	
Scaffold construction:	EN AW-6063-T66 EN AW-6082-T5
Undercarriage:	R St 37-2

Munich, 2008-12-08

Norbert Thimm

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General directions for assembly and use

Layher Uni Wide Tower

The rolling tower may be used for the scaffolding class as specified in the German operating safety regulations (BetrSichV). For mobile working platforms (rolling towers) DIN EN 1004:2005-03 shall apply.

The user of the mobile working platform 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. working height is, in accordance with DIN 1004:2005-03:
- – indoors 12.0 m
- – outdoors 8.0 m

The material and ballasting requirements on pages 14 – 20 must be complied with; risk of accidents in the event of non-compliance. For greater heights, additional measures are necessary, obtainable from the manufacturer. The 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 tower 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, all parts must be inspected to ensure they are in perfect condition. Only undamaged original parts from the Layher 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. Storage protected from the effects of weather must be ensured for the scaffolding. Scaffolding components must be handled in such a way that they are not damaged. For attachment of the ballast weights and wall support, see pages 17 – 20 of these instructions for assembly and use!

5. During assembly and dismantling, system decks or scaffolding planks to DIN 4420-03 (minimum dimensions: 28 x 4.5 x 350 cm long) must be installed as auxiliary decks at maximum height intervals of 2.0 m. These auxiliary decks, providing a safe footing for assembly and dismantling, must be removed again after assembly. Each platform must be completely boarded.
For system reasons, intermediate platforms with access hatches must be installed at intervals of 4.00 m. For safety reasons, it is advisable for 2 persons to assemble towers of a height of 4.00 m and above. To assemble the upper sections of the tower, the components must be hoisted using transport ropes.
Small quantities of tools and materials can be carried up by the personnel, otherwise hoisted to the working level using transport ropes.

6. Secure the ladder frame joints against unintended lift-out using spring clips.

7. During assembly, push the rear guard rails and diagonal braces as far outwards as possible.

8. On **intermediate platforms** used solely for ascent, two rear guard rails as sufficient.
For small towers where the height of the deck is more than 1.00 m, equipment must be provided that permits attachment of side protection in accordance with DIN EN 1004:2005-03.

9. Access up onto the working platform is only permitted on the inside of the scaffolding. Exceptions are models 2101, 2201.

10. Working on two or more levels at the same time is not permitted. In the event of exceptions, the manufacturer must be consulted.

11. Personnel working on mobile working platforms must not push against the side protection.

12. Lifting gear must not be attached to and used on mobile working platforms.

13. Assembly and movement are only permitted on sufficiently firm and level ground, and only in a longitudinal or diagonal direction. Avoid any impacts. When the base is extended on one side while wall supports are in use, movement is only permissible parallel to the wall. During movement, do not exceed normal walking speed.

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

15. After movement, lock the castors by pressing down the brake lever.

16. The scaffolding structures must not be subjected to any aggressive fluids or gases.

17. Mobile working platforms must not be connected by bridging **unless its structural strength has been specifically verified.** The same applies for all other special assemblies, e.g. suspended scaffolding etc.

18. When the mobile working platform is **used outdoors** or in open buildings, it must be moved to a wind-protected area when wind strengths exceed 6 on the Beaufort scale or at the end of a shift, or secured against toppling over by other suitable measures. (a wind strength of more than 6 can be recognised by noticeable difficulty in walking.) If possible, towers used outside buildings must be securely fastened to the building itself or to other structures. It is recommended that mobile working platforms be anchored if they are left unattended.

19. Decks can also be fixed one rung higher or lower to achieve a different working height. Ensure here that the specified rear guard rail heights of 1 m are observed. The diagonal braces are also set higher or lower to the appropriate level. If this assembly form is selected, the manufacturer must be consulted to ascertain whether an **additional verification of stability** is required.

20. Level the tower using the adjusting spindles. The maximum inclination must not exceed 1%.

21. Moving in of the adjustable mobile beams is only permitted in conformity with the **instructions for assembly and use** and the ballasting information, see page 16.

22. The access hatches must be kept shut whenever they are not 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 to provide access from there to other structures.

25. It is prohibited to jump on decks.

26. A check must be made as to whether all parts, auxiliary tools and safety equipment (ropes etc.) for assembling the mobile working platforms are available at the site.

27. Avoid horizontal and vertical loads that can cause the mobile working platform to topple over, for example:
- horizontal loads, e.g. from work on adjacent structures,
- additional wind loads (tunnel effect of through-type buildings, unclad buildings and corners).

28. If stipulated, mobile beams or stabilizers or outriggers and ballast must be provided.

29. It is prohibited to increase the height of the deck using ladders, boxes or other objects.

30. It is not permitted to construct bridges between a mobile working platform and a building.

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

All dimensions and weights are guideline values.
Subject to technical modification.
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Post Box 40
74361 Gueglingen-Eibensbach
Germany
Phone +49 7135 70-0
Fax +49 7135 70-372
E-Mail export@layher.com
www.layher.com

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