Layher Uni Standard Tower Instructions for Assembly and Use

Mobile working platforms
to DIN EN 1004 : 2005-03

Working platform $0.75 \times 2.85 \mathrm{~m}$
max. working height:
indoors 13.6 m outdoors 9.6 m

Load bearing capacity $2.0 \mathrm{kN} / \mathrm{m}^{2}$
on max. one working level
(scaffold group 3 to DIN EN 1004 : 2005-03)

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## Layher

More Possibilities. The Scaffolding System.

For outdoor use observe height limits.

| Tower Models 1101-1106 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Tower Model | 1101 | 1102 | 1103 | 1104 | 1105 | 1106 |
| Working height ( m ) $\rightarrow$ T/ | 3.5 | 4.5 | 5.5 | 6.5 | 7.5 | 8.5 |
| Scaffold height ${ }^{11}(\mathrm{~m}) \longrightarrow \square$ | 2.6 (2.45) | 3.75 (3.60) | 4.75 (4.60) | 5.75 (5.60) | 6.75 (6.60) | 7.75 (7.60) |
| Platform height (m) $\rightarrow$ - | 1.5 | 2.5 | 3.5 | 4.5 | 5.5 | 6.5 |
| Weight (kg) [without ballast] | 86.0 | 163.9 | 173.3 | 189.7 | 242.3 | 251.5 |

"Values in brackets: minimum tower height incl. spigots.


[^0]For outdoor use observe height limits.

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[^1]For outdoor use observe height limits.
Tower Models
$\mathbf{1 2 0 1 - \mathbf { 1 2 0 6 }}$
${ }^{1 /}$ Values in brackets: minimum tower height incl. spigots.

"Values in brackets: minimum tower height incl. spigots.

1 Pay attention to the General Assembly and Use Instructions on page 24. The examples shown of the tower types $1108-1111,1128-1131,1208-1211$ are designed for use indoors. According to the regulations in force since January 1st 1987, the permissible maximum platform height outdoors is $\mathbf{8} \mathbf{~ m}$. Pay attention to the parts list and ballasting tables on pages 11-13.


1. The castors $\square$ of the tower type 1101 are inserted into the ladder frame 6 and secured against falling out by fastening the wing screws on the spindle nuts.
2. Connect both ladder frames 6 with 2 Double guardrails 9 . Clip the access deck 10 onto the 4th ladder 6 rung from the bottom. The snap-on claws of all parts are to be locked onto the ladder rungs from above.
3. A three-part side guard must be provided if required by the valid provisions applying for the work to be performed.

In order to remove the different parts, depress the locking clips of the snap-on claws. The red claws on the deck enable a single person to assemble or dismantle them easily; open them at one end and rest the base of the clips on the rung. Now open the opposite clips and remove the deck.

Level the tower using the threaded spindles.


1. Insert the castors 1 into the mobile beam 2 and secure against falling out by fastening the wing screws on the spindle nuts.
2. Connect the mobile beams 2 using a base strut 5 and a guardrail 7 .
3. Mount the two ladder frames 6 and secure with spring clips 11.

## 4. Mount both diagonal braces 8 to the inside of the deck claws and push them outwards as far as possible in order to brace the ladder frames 6 .



Tower types 1115 and 1116 with adjustable mobile beam 3 are intended for outdoor use.

1. Insert the castors $\square$ into the adjustable mobile beam 3 and secure them against falling out by fastening the wing screws on the spindle nuts.
2. Fix the base strut 5 to the deck supports of the adjustable mobile beam 3 and mount the guardrail 7 onto the deck supports.
3. Add two ladder frames 6 and secure with spring clips 11.
4. Mount both diagonal braces 8 inside the deck claws and push them outwards as far as possible in order to brace the ladder frames 6 .
5. For tower models 1102,1105 and 1106 only, an access deck 10 has to be placed on the eighth rung of the ladder frame 6 .
6. Level the tower using the threaded spindles.

For the following assembly steps, tower types 1102 and 1103 see chapter 5 ; for tower models 1104-1106 see chapter 4.
5. For tower types 1115, 1116, 1109 and 1110, install an access deck 10 on the 8th rung of the ladder frame 6.
6. On tower types 1107,1108 and 1111 mount two guardrails 7 on the 8th rung. No access deck 10 is necessary.
7. The horizontal gap between two decks or between decks and ledgers must not exceed 25 mm .
8. Level the tower using the threaded spindles. For the following assembly steps see chapter 4.

1. The castors $\square$ of the tower type 1201 are inserted into the ladder frame 6 and secured against falling out by fastening the wing screws on the spindle nuts.
2. Connect both ladder frames 6 with 2 Uni-girders 9. Clip the access deck 10 onto the 4th ladder 6 rung from the bottom. The snap-on claws of all parts are to be locked onto the ladder rungs from above.
3. Mount the toe boards 2.85 m 12 onto the ladder frames 6 and secure them by fitting the end toe boards 13.

In order to remove the different parts, depress the locking clips of the snap-on claws. The red claws on the deck enable a single person to assemble or dismantle them easily; open them at one end and rest the base of the clips on the rung. Now open the opposite clips and remove the deck.

Level the tower using the threaded spindles.


1. Insert the castors $\square$ into the mobile beam 2
and secure against falling out by fastening the wing screws on the spindle nuts.
2. Connect the mobile beam $\square$ with the base ledger 4 pinning it onto the protruding stub at the end of the mobile beam $\boxed{\square}$ and drive in the wedge after alignment. When assembling in an off-centred position, the base ledger will be fixed and wedged at the opposite side of the mobile beam 2. Insert the deck 14 into the deck support of the mobile beam 2 .
3. Mount the two ladder frames 6 and secure with spring clips 目. $^{\text {. }}$
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Tower types 1215 and 1216 with adjustable mobile beam 3 are intended for outdoor use.

1. Insert the castors $\square$ into the adjustable mobile beam 3 and secure them against falling out by fastening the wing screws on the spindle nuts.
2. Fix the base strut 5 to the deck supports of the adjustable mobile beam 3 and mount the deck 14 onto the deck supports.
3. Connect the mobile beam 3 with the base ledger 4 , fitting the base ledger 4 over the protruding stub at the end of the adjustable mobile beam 3. After alignment drive in the wedge.
4. Add two ladder frames 6 and secure with spring clips 11 .
5. Mount both diagonal braces 8 to the inside of the deck claws and push them outwards as far as possible in order to brace the ladder frames 6 .
6. For tower models 1202, 1205 and 1206 only, an access deck 10 has to be placed on the eighth rung of the ladder frame 10 .
7. Take care that the deck 14 is positioned centrally under the ladder frames 6 . Level the tower using the threaded spindles.

For the following assembly steps, tower types 1202 and 1203 see chapter 5 ; for tower models 1204-1206 see chapter 4.

4 Assembling the intermediate platform


1. During assembly and dismantling, system decks or scaffold planks acc. to DIN 4420 (minimum $28 \times 4.5 \times 350 \mathrm{~cm}$ long) must be used as auxiliary decks at maximum height intervals of 2.0 m . These auxiliary decks, providing a safe footing for assembly and dismantling, are removed after the erection. Each platform must be completely boarded.
2. Continue assembly by adding ladder frames bracing them with guardrails $\square$ and diagonal braces 8 in accordance with the examples. Secure the joints of the ladder frames 6 with spring clips $\square$ 四.
3. Access decks 10 are to be built in at maximum height intervals of 4 m . If these access decks serve as intermediate platforms for ascending, two guardrails 7 at each side are required only.

When they are used as a working platform, double guardrails and toe boards (see chapter 4) are to be built in. In this case the top or any other working level must not be used. The toe boards there should be removed.

After assembly the guardrails $\square$ and diagonal braces 8 should be pushed outwards as far as possible.
4. When assembling the towers, care is needed to ensure the correct order of the diagonal braces 8 the guardrails $\square$ and the access decks (see the Tower Types drawing page 2). Do not add upper ladder frames 6 until the ladder frames 6 below are braced properly.

For the following assembly steps see chapter 5 .

-6 Adjustment of the mobile beam


1. Insert the upper ladder frames 6, 6a and secure them with spring clips 10 . Clip an access deck 10 onto the 5th rung down.
2. Fit the safety protection according to regulations, installing the corresponding four guardrails 7 or two Double guardrails or Uni-Girders 9 .

3. Mount the two toe boards 2.85 m 园 between the ladder frames and secure them by adding two end toe boards 0.75 m [13.

Once mounted push guardrails $\square$ and Double guardrails 9 outwards as far as possible.

## Assembly of

 the top working platform Tower Models 1203, 1205 1207, 1209 and 1211

The adjustable mobile beam 3 enables you to work close to a wall. When mounted, it may be extended or retracted. Before adjusting it, make sure the ballast weights indicated in the ballast table are placed in the correct positions (page 12). Before adjustment, lower the center jack ( M ) fixed to the mobile beam 3 as far as possible and secure it.

Release the castors $\square$ at the extension arm by winding down the spindle ( $S$ ) until the extension arm (V), can be moved after loosening the wedge lock ( K ). Once adjusted, fix the wedge lock ( $K$ ), and load the castor 1 by winding up the spindle ( $S$ ) again. Retract the center jack ( M ) and secure it.

Assembly

## 7 Operating the castors



During assembly and while working, the castors $\square$ 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 are unlocked by pushing the other lever down.

## 18 Maximum spindle adjustment of the various models

## Assembly with 1323.180



Assembly with 1323.320


Assembly directly on castors with access ledger


Models: $1124-1131$

$$
1145-1151
$$

Assembly directly on castors


Wall support

Wall support under load



Side view


## Layher Uni Standard Tower

For work performed on a load-bearing wall, ballasting can be reduced in accordance with the Ballasting table (see pages 12 and 13). In this case, wall supports must be installed on both sides of the tower. Use the Uni distance tube 18 and fix it to the ladder frame 6, 6a with the couplers 19 . 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.

Example figure 1204

## Dismantling



During assembly and dismantling, system decks or scaffolding planks to DIN 4420-3
(minimum dimensions: $28 \times 4.5 \times 350 \mathrm{~cm}$ 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.

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

When dismantling, do not remove the bracing elements such as diagonal braces 8 , guardrails 7 or access decks 10 until the ladder frames 6 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
Towers 1115 and 1116, 1215 and 1216 are intended for outdoor use. The tower base must be assembled as described under 2.3.

| Tower model | Ref. No. | $\mathbf{1 1 0 1}$ | $\mathbf{1 1 0 2}$ | $\mathbf{1 1 0 3}$ | $\mathbf{1 1 0 4}$ | $\mathbf{1 1 0 5}$ | $\mathbf{1 1 1 5}$ | $\mathbf{1 1 0 6}$ | $\mathbf{1 1 1 6}$ | $\mathbf{1 1 0 7}$ | $\mathbf{1 1 0 8}$ | $\mathbf{1 1 0 9}$ | $\mathbf{1 1 1 0}$ | $\mathbf{1 1 1 1}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: |
| Ladder frame $75 / 4$ | 1297.004 | - | 2 | - | 2 | - | - | 2 | 2 | - | 2 | - | 2 | - |
| Ladder frame $75 / 8$ | 1297.008 | 2 | 2 | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 10 | 10 | 12 |
| Access deck 2.85 m | 1242.285 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| Double guardrail 2.85 m | 1206.285 | 2 | - | 2 | - | 2 | 2 | - | - | 2 | - | 2 | - | 2 |
| Guardrail 2.85 m | 1205.285 | - | 5 | 1 | 5 | 7 | 7 | 9 | 9 | 9 | 11 | 13 | 15 | 15 |
| Diagonal brace 3.35 m | 1208.285 | - | 2 | 2 | 4 | 4 | 4 | 6 | 6 | 6 | 8 | 8 | 10 | 10 |
| Mob. beam, fixed, with deck support | 1323.180 | - | 2 | 2 | 2 | 2 | - | 2 | - | - | - | - | - | - |
| Mob. beam, adj., with deck support | 1323.320 | - | - | - | - | - | 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 |
| Toe board 2.85 m, with claw | 1239.285 | - | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| End toe board 0.75 m | 1238.075 | - | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Spring clip | 1250.000 | - | 8 | 8 | 12 | 12 | 12 | 16 | 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 |
| Ballast | 1249.000 |  |  |  | For the number of ballasting weights see the ballaasting table, page 12 |  |  | 4 |  |  |  |  |  |  |


| Tower model | Ref. No. | 1201 | 1202 | 1203 | 1204 | 1205 | 1215 | 1206 | 1216 | 1207 | 1208 | 1209 | 1210 | 1211 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ladder frame 75/4 | 1297.004 | - | 2 | - | 2 | - | - | 2 | 2 | - | 2 | - | 2 | - |
| Ladder frame 75/8 | 1297.008 | 2 | 2 | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 10 | 10 | 12 |
| Access deck 2.85 m | 1242.285 | - | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| Deck 2.85 m | 1241.285 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Tower beam 2.85 m | 1207.285 | 2 | - | 2 | - | 2 | 2 | - | - | 2 | - | 2 | - | 2 |
| Guardrail 2.85 m | 1205.285 | - | 4 | - | 4 | 6 | 6 | 8 | 8 | 8 | 10 | 12 | 14 | 14 |
| Diagonal brace 3.35 m | 1208.285 | - | 2 | 2 | 4 | 4 | 4 | 6 | 6 | 6 | 8 | 8 | 10 | 10 |
| Mob. beam, fixed, with deck support | 1323.180 | - | 2 | 2 | 2 | 2 | - | 2 | - | - | - | - | - | - |
| Mob. beam, adj., with deck support | 1323.320 | - | - | - | - | - | 2 | - | 2 | 2 | 2 | 2 | 2 | 2 |
| Base strut 2.85 m | 1324.285 | - | - | - | - | - | 1 | - | 1 | 1 | 1 | 1 | 1 | 1 |
| Basic tube 2.85 m | 1211.285 | - | 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 | 2 |
| End toe board 0.75 m | 1238.075 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Spring clip | 1250.000 | - | 8 | 8 | 12 | 12 | 12 | 16 | 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 |
| Ballast | 1249.000 |  |  |  |  | ne numb | f ballas | weight | see the b | sting ta | page 12 |  |  |  |

Additional requirement for special structure with 2 bracket deck surfaces

| Aluminium console bracket 0.75 m 1341.075 | - | 4 | 4 | 4 | 4 | - | 4 | - |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Deck 2.85 m | 1241.285 | - | 2 | 2 | 2 | 2 | - | 2 | - |  |  |
| Ladder frame $75 / 4$ | 1297.004 | - | 4 | 4 | 4 | 4 | - | 4 | - |  |  |
| End toe board | 1238.075 | - | 4 | 4 | 4 | 4 | - | 4 | - | The tower models $1107-11111,1207-1211$ |  |
| Intermediate deck | 1339.285 | - | 2 | 2 | 2 | 2 | - | 2 | - |  |  |
| Spring clip | 1250.000 | - | 8 | 8 | 8 | 8 | - | 8 | - |  |  |

When operating with brackets, the tower may be loaded with $1.5 \mathrm{kN} / \mathrm{m}^{2}$ (scaffold group 2) at one working level only. A maximum of 2 bracket deck surfaces may be assembled. For rolling tower models $1102-1104,1202-1204$, the bracket deck surfaces may not be fitted one above the other. When bracket deck surfaces are fitted, the spindles must not be overextended. When bracket deck surfaces are fitted, the corresponding working level must be equipped with complete side protection.

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

| Tower model | Ref. No. | 1124 | 1125 |  | 1126 |  | 1127 |  | 1128 |  | 1129 |  | 1130 |  | 1131 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1145 |  | 1146 |  | 1147 |  | 1148 |  | 1149 |  | 1150 |  | 1151 |
| Ladder frame 75/4 | 1297.004 | 2 | - | - | 2 | 2 | - | - | 2 | 2 | - | - | 2 | 2 | - | - |
| Ladder frame 75/8 | 1297.008 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 |
| Access deck 2.85 m | 1242.285 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 |
| Double guardrail 2.85 m | 1206.285 | - | 2 | 2 | - | - | 2 | 2 | - | - | 2 | 2 | - | - | 2 | 2 |
| Guardrail 2.85 m | 1205.285 | 6 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 14 | 14 | 16 | 16 | 16 | 16 |
| Diagonal brace 3.35 m | 1208.285 | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 |
| Stabilizer, extendable | 1248.260 | 4 | 4 | - | 4 | - | 4 | - | 4 | - | 4 | - | 4 | - | 4 | - |
| Tower support 5 m | 1248.500 | - | - | 4 | - | 4 | - | 4 | - | 4 | - | 4 | - | 4 | - | 4 |
| Rotation preventer | 1248.261 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 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 0.75 m | 1238.075 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Spring clip | 1250.000 | 8 | 8 | 8 | 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 | 4 | 4 | 4 |
| Access ledger | 1344.002 | 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, page 13 |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Ballasting

For ballasting, use Layher ballast weights 20, Ref. 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. Only these ballast weights are to be used, liquid or granular ballast materials must not be used.
The ballast weights must be distributed evenly to all ballasting fixing points. The remainder not divisible by 4 must be distributed to the fixing points A .


## Special assembly with brackets



The figures shown indicate the number of ballast weights of 10 kg each.
$O=$ no ballast required

- example on page 17



The number of weights not divisible by four must be distributed diagonally.

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

O no ballast required
$X=$ not permissible

## Ballasting

## - Attachment of ballast weights



Models:
1102-1106
$1202-1206$

Models:
1107-1111
1115 and 1116
1207-1211
1215 and 1216

## Models:

1124-1131
1145-1151
(also applicable for assembly with tower beam similar to 12...)


## - Attachment of ballast weights

## Centre position with brackets:



Layher Uni Standard Tower

## - Attachment of ballast weights

## Double structure:




Read and understand item 1 "Basic Assembly for Rolling Tower Types Without Mobile Beams" on page 6 before assembly. The fixed and adjustable mobile beams are not included when assembled this way. They are replaced by extendable stabilizers 21


Attach a stabilizer 21 22 to every stile of the ladder frame 6. To do so, attach the half-coupler directly underneath the rung of the ladder frame 6 . 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 6 and tighten it with the star-knob.

The position of the stabilizers must be adjusted as follows:

Free-standing assembly: each about $60^{\circ}$ to the long side of the tower (illustration on the left).

Assembly against a wall: On the wall side, about $90^{\circ}$ to the end face of the tower, and on the side away from the wall at about $60^{\circ}$ 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 23 to the stabilizer 2122 and to the rung of the ladder frame 6 .

Adjust the rolling tower rotation preventer by moving the half-coupler on the stabilizer 2122 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 page 13).

For further assembly of tower models 1124 - 1127 and 1145-1147 see section 5 .

For further assembly of tower models 1128 - 1131 and 1148 - 1151 see section 4.


## Special assembly with brackets

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



| Tower model | $\mathbf{1 3 0 2}$ | $\mathbf{1 3 0 4}$ | $\mathbf{1 3 0 6}$ |
| :--- | :--- | :--- | :--- |
| Working height $(\mathrm{m})$ | 4.6 | 6.4 | 8.4 |
| Scaffolding height $(\mathrm{m})$ | 3.64 | 5.64 | 7.64 |
| Platform height $(\mathrm{m})$ | 2.4 | 4.4 | 6.4 |
| Weight $(\mathrm{kg})$ | 361.7 | 413.3 | 508.1 |



Ballasting $\quad$| The figures shown indicate the number of |
| :--- |
| ballast weights of 10 kg each. |$\quad O=$ no ballast required $\quad X=$ not permissible

Double structure on extended mobile beam (1323.320) with and without tower beam

| Tower model | $\mathbf{1 3 0 2}$ |  | $\mathbf{1 3 0 4}$ |  | $\mathbf{1 3 0 6}$ |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | L R Sum | L R Sum | L R Sum |  |  |  |  |  |
| Assembly indoors | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Assembly outdoors | 2 | 2 | 4 | 0 | 0 | 0 | 6 | 0 |

## 1 Basic assembly

1. Observe the general instructions for assembly and use on page 28 .

The special assemblies 1302, 1304 and 1306 correspond to the double Uni Standard towers 1102, 1104, 1106, or 1202, 1204 and 1206. No other assembly forms are permitted.


No ballasting is necessary for outdoor assembly either.

## The maximum assembly height with a platform

 height of 6.30 m must be observed without fail.The castors must not be fully extended.
The tower may be loaded with max. $1.5 \mathrm{kN} / \mathrm{m}^{2}$ (scaffold group 2) at one working level only.
2. Insert the castors $\square$ into the special mobile beam with adjustable spigot 28 and secure them against falling out by tightening the wing screws on the spindle nuts.
3. Connect the mobile beams 27 by a basic tube 4 . The basic tube 4 is fitted onto the projecting spigots at the ends of the mobile beams 27 and wedged tight after adjustment. Suspend the deck $\square$ from the support of the mobile beam [27. Then clamp the base strut 5 to the leg of the mobile beam support 27.
4. Attach 2 adjustable spigots 28 as shown in the drawing to the adjustable special mobile beam 28 and tighten the screws of the adjustable spigot 28 .

## 2 Assembly of intermediate and

 top working platforms
5. The further assembly of the ladder frames 6 and of the diagonal braces 8 , guardrail 7 and access decks 10 is in accordance with sections 2.3 to 4.0 (see pages $6-8$ ). Ensure that the deck 14 is placed centrally beneath the ladder frame 6, with the ladder frame 6 placed on the adjusting part of the mobile beam 26 determining the position.
6. When assembling the top working platform, omit the guardrails and toe boards on the inside. Now move the access deck 10 and the deck 14 apart to insert the bridge deck 29 between the decks into the ladder frames 8. This creates a closed working surface. Move the decks back together after installation so that the maximum gap of 25 mm .
7. Now snap 2 guardrails, 0.58 m 30 onto the ladder frames 6 , 6a . Place 2 toe boards 0.6 m 31 on the bridge deck 2.85 m 29 and connect them using halfcouplers to the ladder frames 6 , (6a). Complete the side protection with 4 end toe boards 0.75 m 团 and 2 toe boards 2.85 m .
8. Dismantling is in the reverse order. To do so, follow the dismantling sequence (see page 10).

During assembly and dismantling, system decks or scaffolding planks to DIN 4420 (minimum dimensions: $28 \times 4.5 \times 350 \mathrm{~cm}$ 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.

2 Parts list for special assembly with 2 Uni Standard towers on special mobile beams, adjustable

| Tower model | Ref. No. | 1302 | 1304 | 1306 |
| :---: | :---: | :---: | :---: | :---: |
| Ladder frame 75/4 | 1297.004 | 4 | 4 | 4 |
| Ladder frame 75/8 | 1297.008 | 4 | 8 | 12 |
| Access deck 2.85 m | 1242.285 | 1 | 1 | 2 |
| Deck 2.85 m | 1241.285 | 2 | 2 | 2 |
| Tower beam 2.85 m | 1207.285 | - | - | - |
| Guardrail 2.85 m | 1205.285 | 8 | 8 | 14 |
| Mobile beam 3.2 m , adjustable | 1338.320 | 2 | 2 | 2 |
| Spigot, adjustable | 1337.000 | 4 | 4 | 4 |
| Diagonal braces 3.35 m , adjustable | 1208.285 | 4 | 8 | 12 |
| Base strut 2.85 m | 1324.285 | 1 | 1 | 1 |
| Base tube 2.85 m | 1211.285 | 1 | 1 | 1 |
| Bridge deck | 1343.285 | 1 | 1 | 1 |
| Guardrail 0.58 m | 1342.058 | 2 | 2 | 2 |
| Toe board 0.6 m | 1340.060 | 2 | 2 | 2 |
| End toe board 0.75 m | 1238.075 | 4 | 4 | 4 |
| Toe board 2.85 m , with claw | 1239.285 | 2 | 2 | 2 |
| Spring clip | 1250.000 | 16 | 24 | 32 |
| Castor 200 with spindle, 7 kN | 1259.200 | 4 | 4 | 4 |

The maximum platform height is 6.3 m , for these applications ballasting is not necessary.

## Assembly of special mobile beam, adjustable

Ballasting must in any event be in accordance with the ballasting table, column for off-centre position (see page 12).
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 27 in such a way that the ladder frames 6 can be fitted in the different positions.


For this purpose, both fixed and adjustable spigots 28 can be used. Tighten the bolts of the adjustable spigot.


Level the tower using the adjusting spindles. For further assembly see section 2.3.

## Tower assembly off-centre







General directions for assembly and use

## 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 11 - 13 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 $12-13$ 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 page 19.

All dimensions and weights are guideline values.
Subject to technical modification.
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## Layher : 1

## More Possibilities. The Scaffolding System.

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[^0]:    "Values in brackets: minimum tower height incl. spigots.

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

