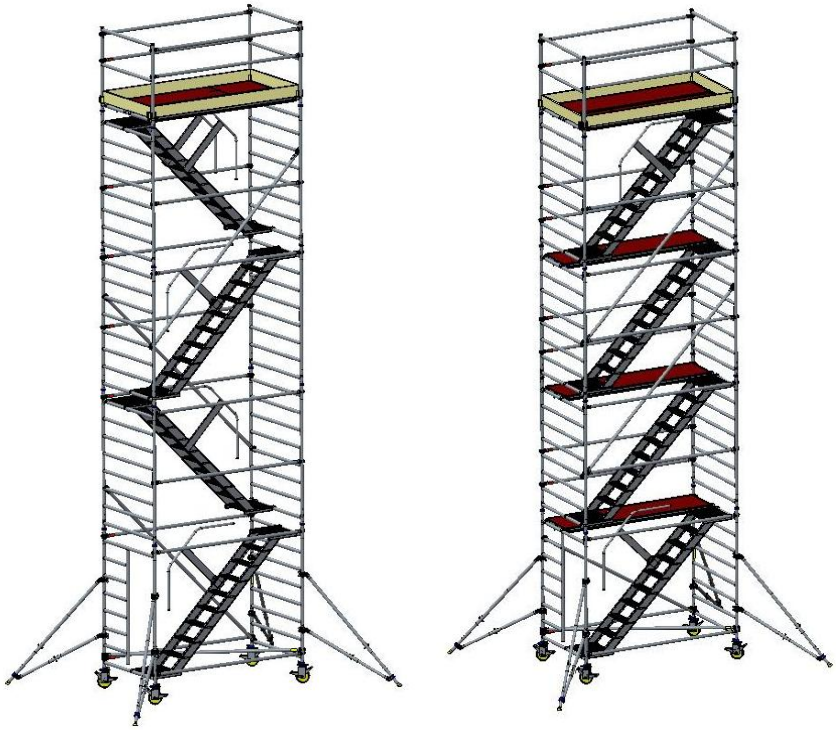
INSTRUCTION MANUAL

CUSTERS STAIR TOWER
type HANDY



maximum load: 200 kg/m^2

maximum platformheight: 12 meter indoors
8 meter outdoors

9.505.600.012EN Sept. 2014

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INHOUD

1 INTRODUCTION

The Custers stair tower is part of a wide range of aluminium scaffolding products.

If assembled according to the instructions given in this manual, the Custers stair tower meets the requirements of the EN1004.

The Custers stair tower is available in the following lengths:
- Scaffolding length: 1.8 m and 2.5 m
- Scaffolding width: 1.3 m

This instruction manual gives step-by-step instructions for the easy and safe assembly of the stair tower. Incorrect assembly can lead to dangerous situations for the user. Read the instructions carefully before assembling the tower. The tower must be assembled and disassembled by experienced and skilled personnel.

The user is responsible for making sure the instruction manual is present at the location where the stair tower is to be assembled and used and that the person who supervises the work also has a copy.

It there is any uncertainty concerning this instruction manual, please contact your supplier and/or the manufacturer.

Manufacturer:

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Supplier:

2 WARRANTY AND LIABILITY

Custers provides a guarantee for material and manufacture faults. This guarantee is valid for 12 months after delivery.
This means that we will repair faults or, at our discretion, we will take back part of the delivery or the whole delivery and replace it with a new delivery free of charge.
If, by fulfilling our guarantee obligations, we replace delivered goods, the goods returned will become our property. All costs which exceed the obligations described above will have to be met by the customer. If products are returned to be treated, repaired, etc., the guarantee only applies to the quality of the treatment requested.

Custers is not responsible:
a. If the fault is the result of improper use or if the fault is due to a cause other than faulty materials or poor manufacture.
b. If the cause of the fault cannot be clearly proved.
c. If not all of the instructions for the use of the product, including the guidelines given in this instruction manual, have been accurately carried out in full.

The manufacturer is not liable if the customer carries out, or has carried out by third parties, any alterations and/or repairs to the product without the express permission of Custers.

3 CHECKING THE DELIVERY

After delivery, check whether the stair tower is complete and undamaged.
Contact your supplier immediately if components are damaged or if the delivery is incomplete.

4 SAFETY INSTRUCTIONS

4.1 Checking before assembly

Check whether the people assembling the stair tower are suitably qualified and check if the location where the stair tower is to be erected is safe and suitable.

Note:
- The surface must be flat and sufficiently strong.
- The area must be free from obstructions, both at ground level and above the ground.
- Check whether the wind conditions are such that the stair tower may be used.
- Check whether all the components are present at the location.
- Damaged, incorrect or non-original components must not be used.

4.2 Assembly

The assembly of the stair tower is described in the assembly instructions. The stair tower must be assembled by at least two people. Also use safety rails during the assembly. If necessary, fit the rails temporarily.
The stair tower must be assembled on a flat surface. Check this using a spirit level. It is possible to correct the stair tower by rotating the wheel spindles' spindle nut. The wheels must remain braked at all times, expect when the tower is being moved.
Make sure the wheels are locked, either by tightening the wing nut or by clipping the locking nock over the edge of the strengthening ring.
The platforms must be secured by sliding the wind securing pin under the rung. The frames must be locked together using the locking pin. The horizontals or railings must be fitted to the stands in such a way that the claws' openings face outwards.
The work platform must have: railings, intermediate railings and toeboards fitted all around.

4.3 Raising components

Components must be raised to higher levels by carrying them up the stairs.
Hoists must not be secured to the stair tower.

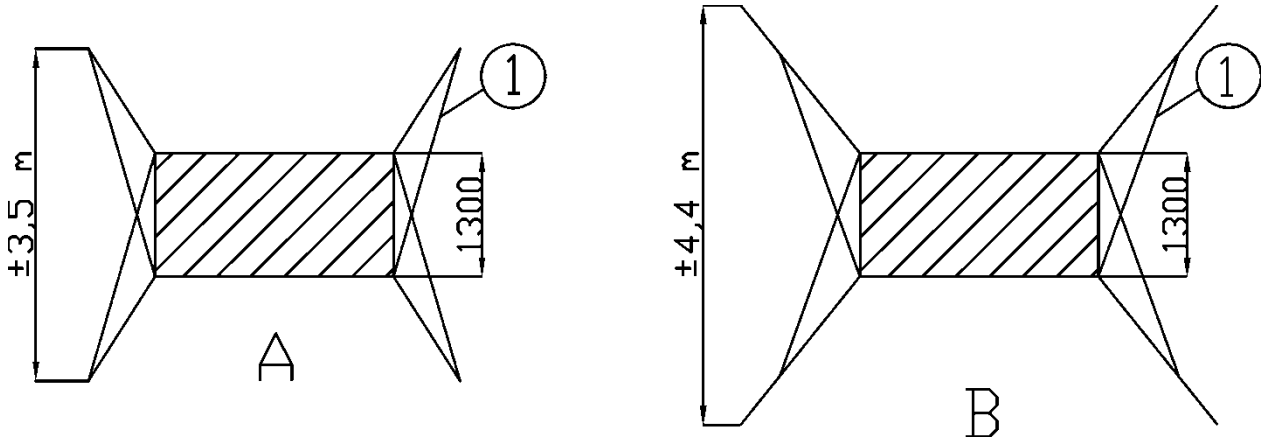
4.4 Outriggers/elbow outriggers

The outriggers/elbow outriggers stated in the assembly tables must always be fitted as soon as the bottom section of the stair tower reaches a height of 2 metres.

The basic shape to be used, i.e. the outrigger/elbow outrigger to be used (small or large), can be found in the assembly tables.

The basic shapes given below must be strictly followed!

If the required shape is deviated from, it may be necessary to use ballast. Contact the manufacturer or supplier for further information. Small elbow outriggers may be replaced by small outriggers and large elbow outriggers may be replaced by large outriggers if, when using the outriggers, the same basic shape is maintained as for the elbow outriggers. This means that the outriggers must be fitted in the same position as the elbow outriggers when viewed from above.

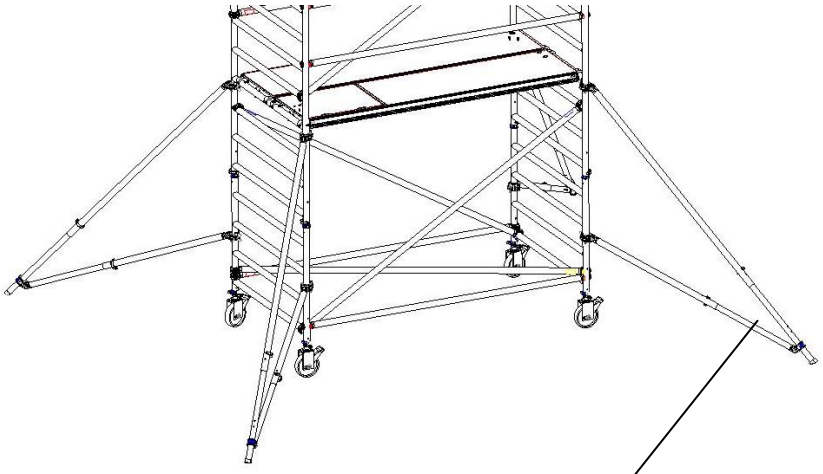


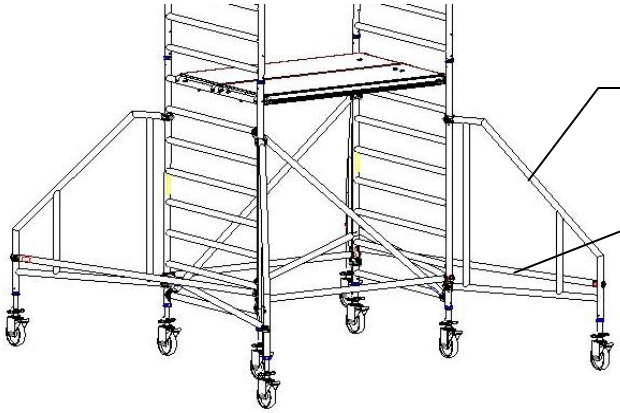
Basic shapes

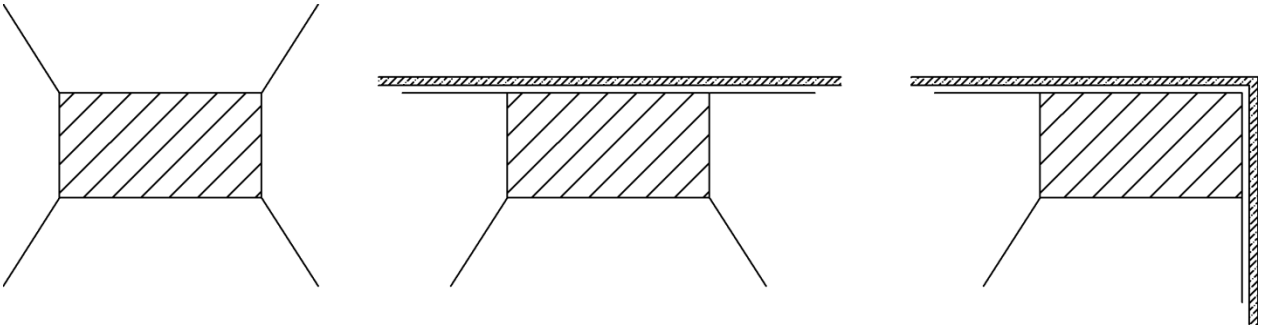
A: Small elbow outrigger, length 1300 mm

B: Large elbow outrigger, length 2000 mm

1: Horizontal, length 2500 mm, art. nr. 9501.200.030

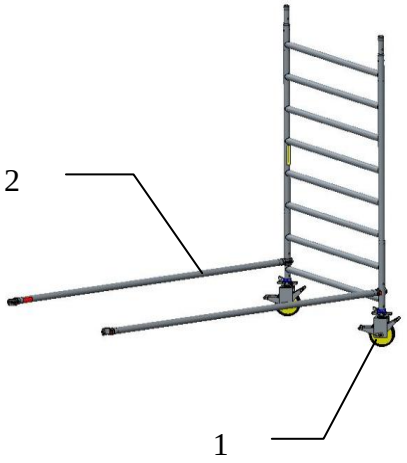




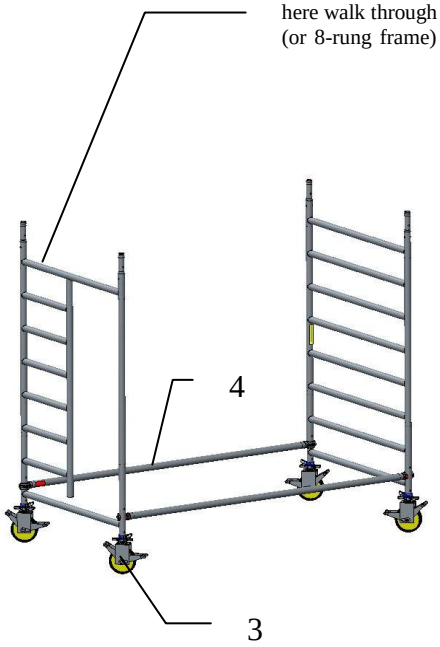


When the tower is positioned against a wall, do not remove the outriggers/elbow outriggers, but turn them parallel to the wall.
When the tower is positioned in a corner, remove the inside outrigger/elbow outrigger, and turn the outside two parallel to the wall.

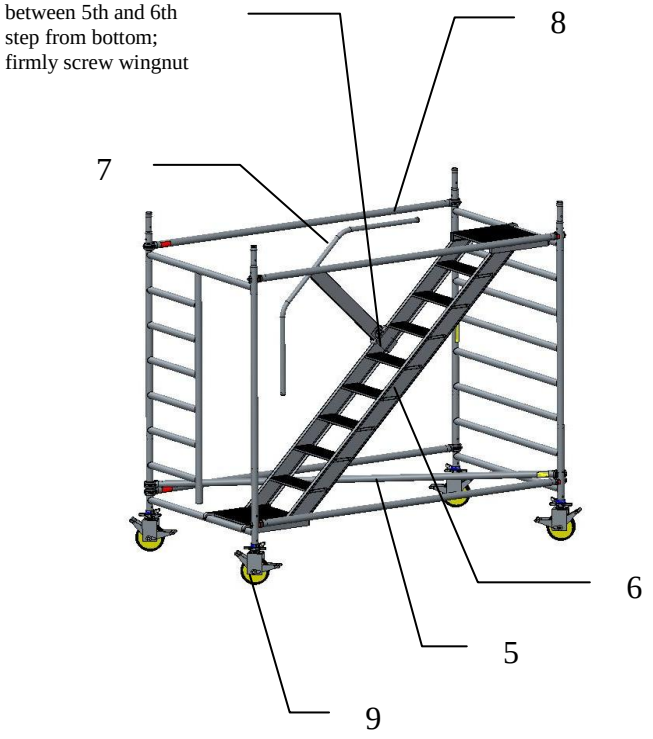
5 ASSEMBLY OF THE STAIR TOWER ZIG-ZAG



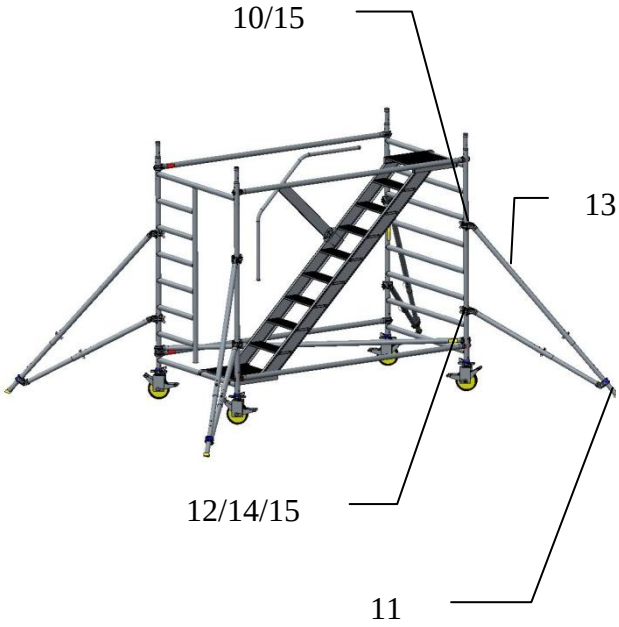
1: insert both wheels in the frame; make sure that the wheels are locked correctly
2: place the horizontals on the stands of the frame



3: insert both wheels in the frame; make sure that the wheels are locked correctly
4: place the horizontals on the stands of the frame

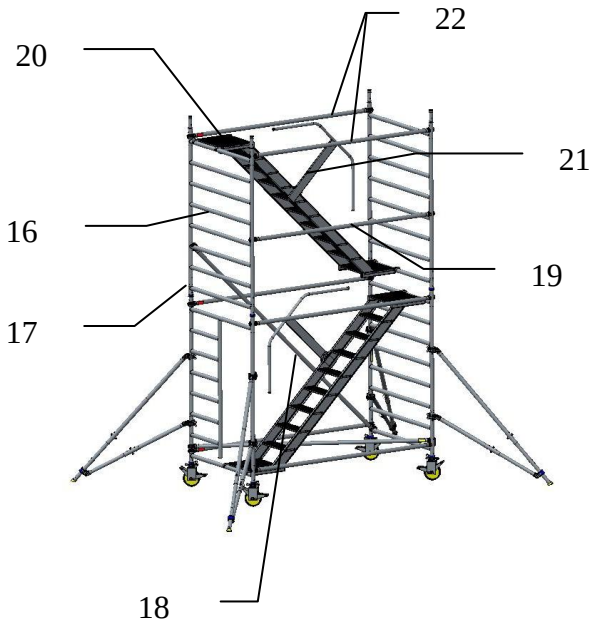


5: position the horizontal/diagonal
6: position the stairs; make sure the stairs are properly secured (under the rung)
7: position the stairs guardrail on the inside of the stairs
8: place both horizontals on the stands of the frames
9: apply the brakes and make the tower level by rotating the wheels' spindle nut

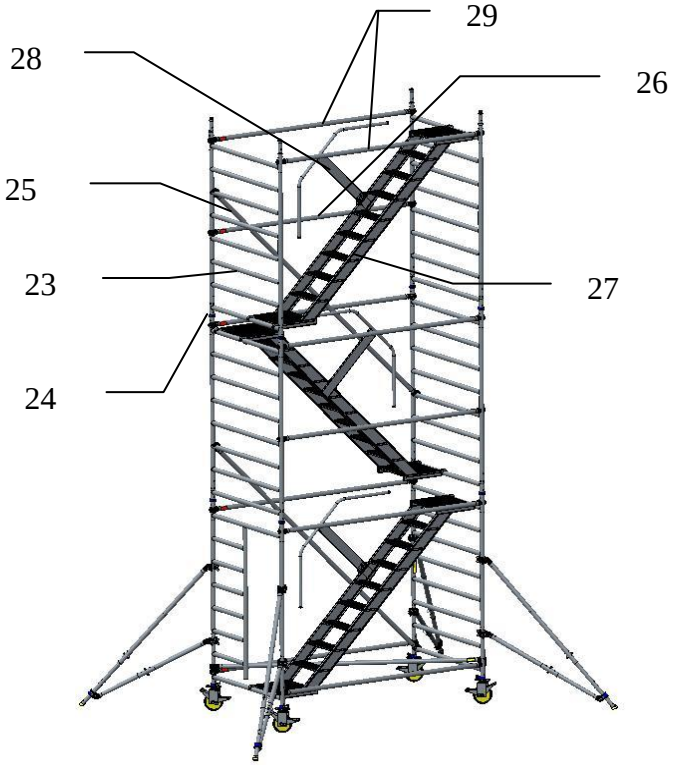


now assemble the four (large or small) outriggers:

10: place the upper coupling below the 6th or 7th rung (small outrigger), 9th or 10th rung (large outrigger)
11: put base on the ground in compliance with the prescribed base pattern (see 4.4)
12: make sure the bottom coupling comes between two rungs
13: turn the outrigger so that the prescribed base pattern (see 4.4) is achieved
14: loosely attach the bottom coupling to the stand and push the coupling up over the stand until the outrigger is a little bit under pressure
15: firmly tighten both couplings

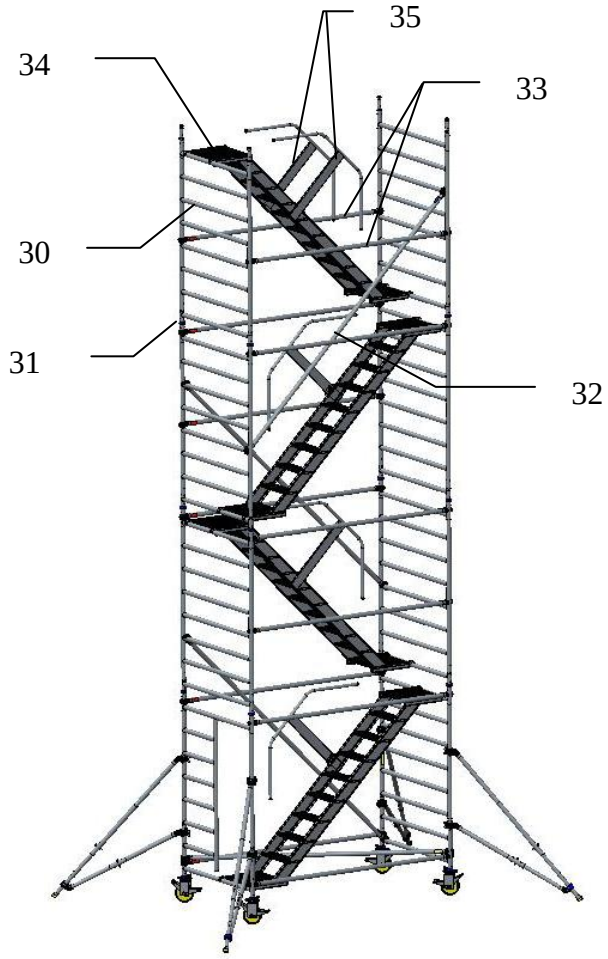


16: position both frames
17: position locking pins between the mutual frames
18: position the diagonal (from 1st to 11th rung)
19: position a horizontal on the stands of the frames
20: position the stairs; make sure the stairs are properly secured (under the rung)
21: position the stairs guardrail on the inside of the stairs
22: place both horizontals on the stands of the frames



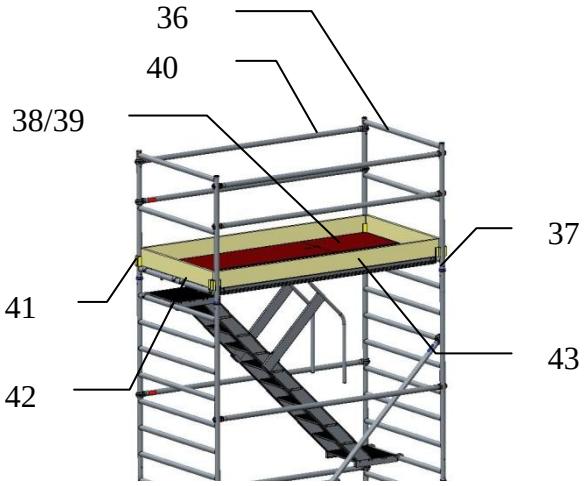
next level:

23: position both frames
24: position locking pins between the mutual frames
25: position the guardrail/diagonal along the stairs of the previous level
26: position a horizontal on the stands of the frames
27: position the stairs; make sure the stairs are properly secured (under the rung)
28: position the stairs guardrail on the inside of the stairs
29: place both horizontals on the stands of the frames



the penultimate level:

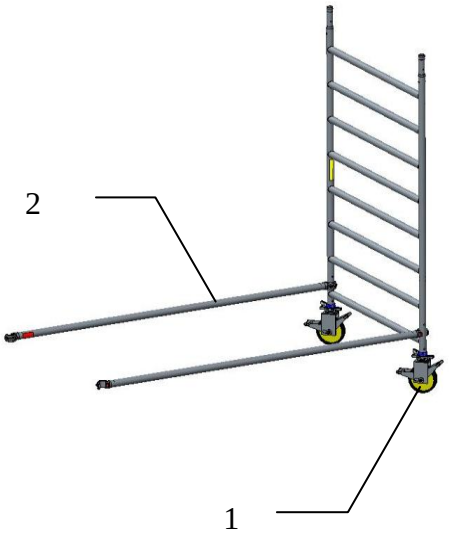
30: position both frames
31: position locking pins between the mutual frames
32: position the guardrail/diagonal along the stairs of the previous level
33: place both horizontals on the stands of the frames
34: position the stairs; make sure the stairs are properly secured (under the rung)
35: position the stairs guardrail on the inside of the stairs and on the outside of the stairs



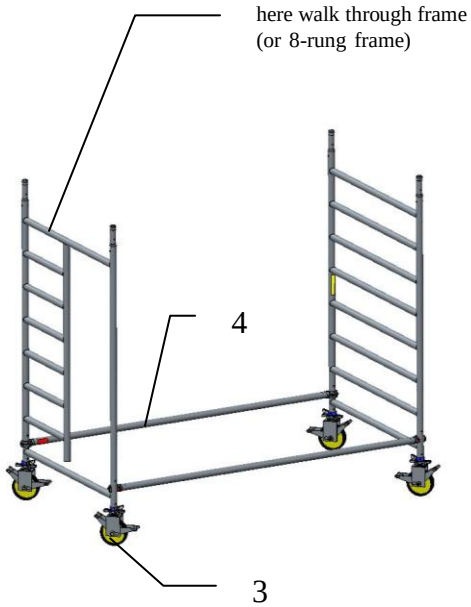
top level:

36: position both railing frames
37: position locking pins between the mutual frames
38: position the platform with hatch (above the stairs); slide both wind securing pins under the rung
39: position the platform; slide both wind securing pins under the rung
40: place four horizontals on the stands of the frames
41: place the four toeboardholders
42: place both toeboards 1,22m
43: place both toeboards 1,73 or 2,45m

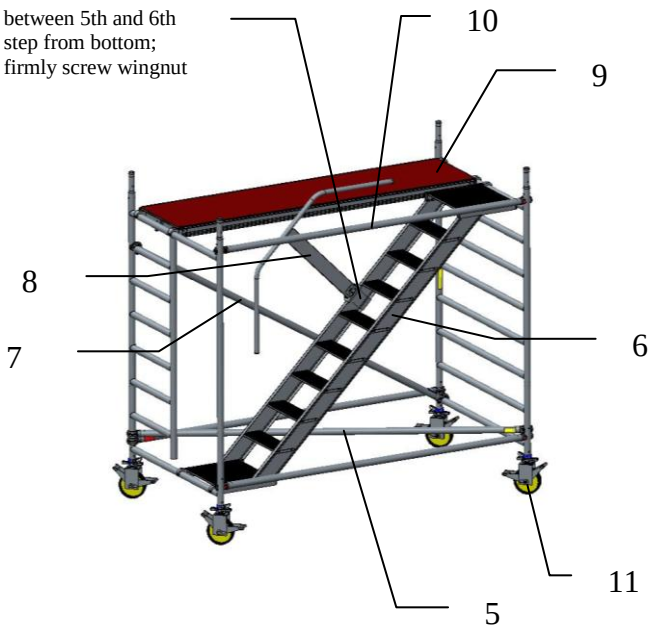
6 ASSEMBLY OF THE STAIR TOWER PARALLEL



1: insert both wheels in the frame; make sure that the wheels are locked correctly
2: place the horizontals on the stands of the frame

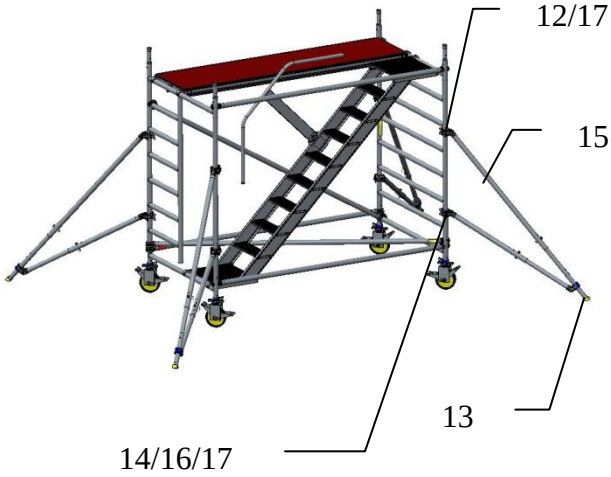


3: insert both wheels in the frame; make sure that the wheels are locked correctly
4: place the horizontals on the stands of the frame

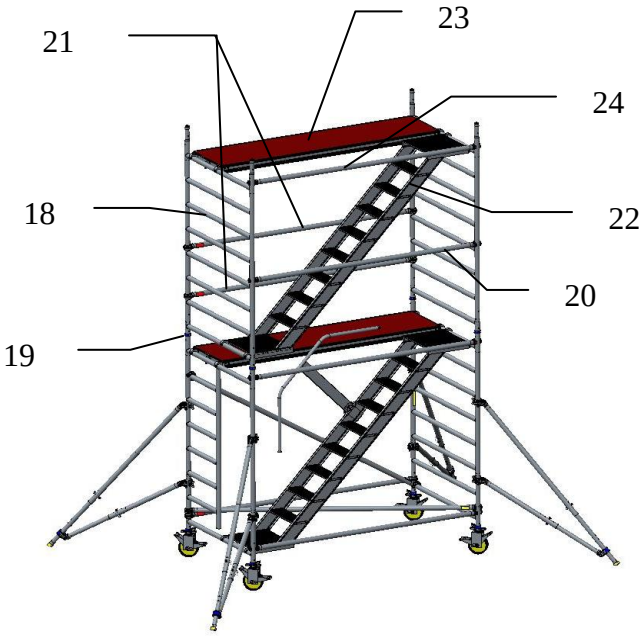


5: position the horizontal/diagonal
6: position the stairs; make sure the stairs are properly secured (under the rung)
7: position the diagonal (from 1st to 7th rung)
8: position the stairs guardrail on the inside of the stairs
9: position the platform; slide both wind securing pins under the rung
10: place the horizontal on the stands of the frames
11: apply the brakes and make the tower level by rotating the wheels' spindle nut

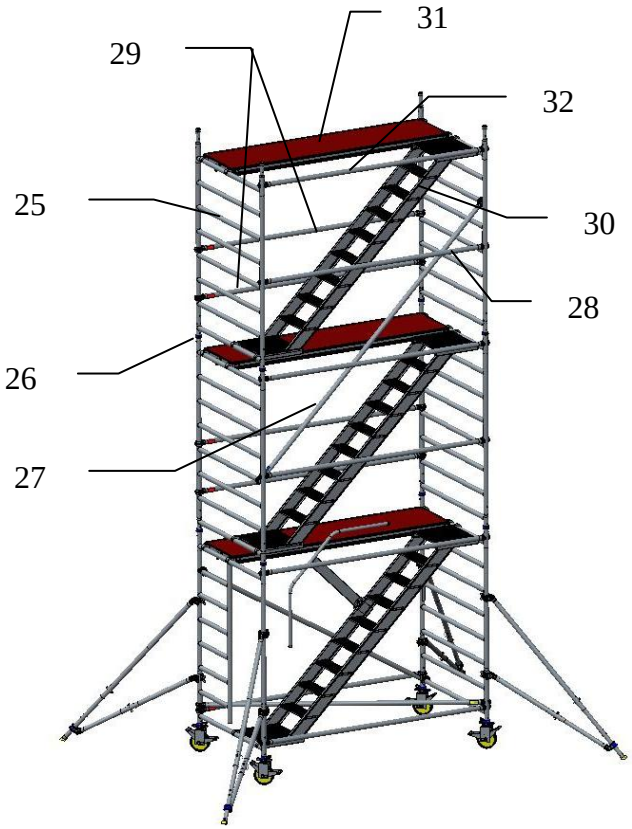
now assemble the four (large or small) outriggers:



12: place the upper coupling below the 6th or 7th rung (small outrigger), 9th or 10th rung (large outrigger)
13: put base on the ground in compliance with the prescribed base pattern (see 4.4)
14: make sure the bottom coupling comes between two rungs
15: turn the outrigger so that the prescribed base pattern (see 4.4) is achieved
16: loosely attach the bottom coupling to the stand and push the coupling up over the stand until the outrigger is a little bit under pressure
17: firmly tighten both couplings

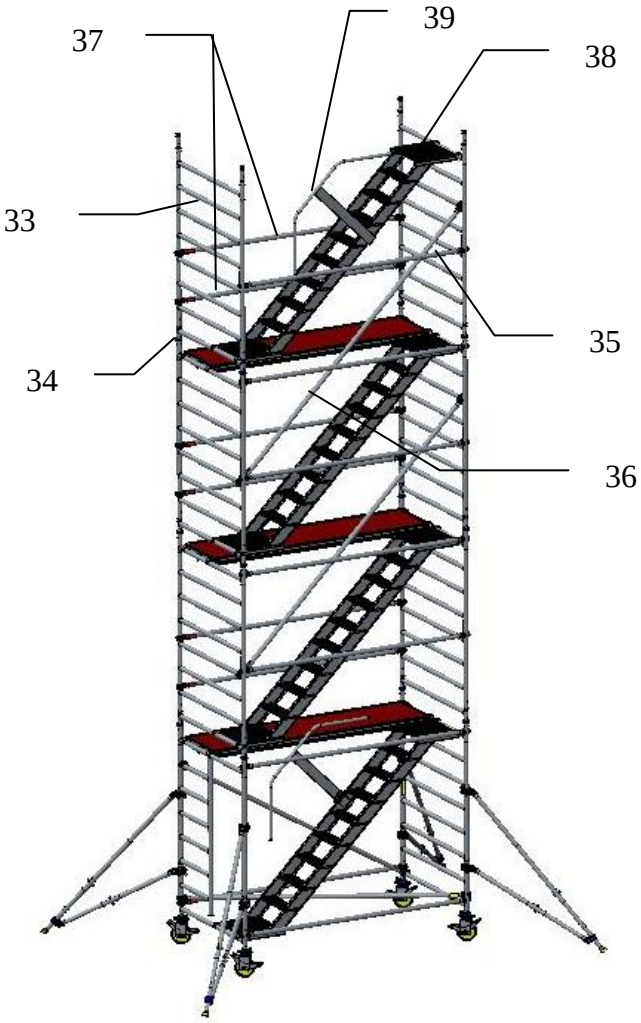


18: position both frames
19: position locking pins between the mutual frames
20: position a horizontal on the stands of the frames
21: place both horizontals on the stands of the frames
22: position the stairs; make sure the stairs are properly secured (under the rung)
23: position the platform; slide both wind securing pins under the rung
24: position a horizontal on the stands of the frames



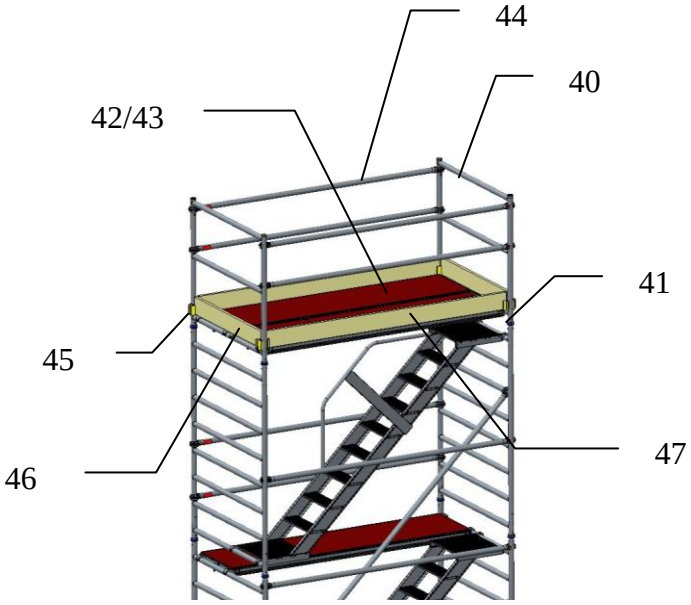
next level:

25: position both frames
26: position locking pins between the mutual frames
27: position the guardrail/diagonal along the stairs of the previous level
28: position a horizontal on the stands of the frames
29: place both horizontals on the stands of the frames
30: position the stairs; make sure the stairs are properly secured (under the rung)
31: position the platform; slide both wind securing pins under the rung
32: position a horizontal on the stands of the frames



the penultimate level:

33: position both frames
34: position locking pins between the mutual frames
35: place a horizontal on the stands of the frames
36: position the guardrail/diagonal along the stairs of the previous level
37: place both horizontals on the stands of the frames
38: position the stairs; make sure the stairs are properly secured (under the rung)
39: position the stairs guardrail on the outside of the stairs



top level:

40: position both railing frames
41: position locking pins between the mutual frames
42: position the platform with hatch (above the stairs); slide both wind securing pins under the rung
43: position the platform; slide both wind securing pins under the rung
44: place four horizontals on the stands of the frames
45: place the four toeboardholders
46: place both toeboards 1,22m
47: place both toeboards 1,73 or 2,45m

7 USING THE STAIR TOWER

The following must be carried out each time before the stair tower is used:

- Check whether the base (including the outriggers/elbow outriggers, wheel brakes) of the stair tower is correct.
- Check whether the entire construction is correct and complete.
- Check whether there are any changes in the circumstances which may affect the safe use of the stair tower.

The stair tower is intended for providing access to a work location.
It is not permitted to use the stair tower as suspended scaffolding, as an overhanging work floor or for stepping onto other constructions.
No bridges may be built between the stair tower and a building.
No bridges may be built between two stair towers, unless use is made of objects which have been specifically designed for this use.
The maximum work load is 200 kg/m^2 (scaffold class 3). The maximum load may only be placed on one level of a tower.
It is not permitted to jump on the platform. The hatch in the platform must remain closed at all times, except for when climbing or descending the stair tower.

The maximum platform height is:
- Indoors: 12 metres
- Outdoors: 8 metres

The stair tower may only be climbed from the inside using the stairs.
No boxes, stepladders or other aids may be placed on the platform to gain extra height.
It is not permitted to work on the stair tower if the wind force is greater than force 6 Beaufort (large branches on trees move, umbrellas blow inside out, wind speed 11 – 14 m/s or approx. 45 km/h).
For an expected wind force greater than force 6 Beaufort, a free-standing stair tower must be disassembled, moved to an area out of the wind or anchored. This should also be done if the stair tower is not used.
Pay attention to openings in a building, uncovered buildings and the corners of buildings which may increase the force of the wind.
Be careful when exerting a horizontal force (e.g. when drilling) which will cause the stair tower to be pushed away from the construction. The maximum horizontal force is 30 kg.
Horizontals, railings, intermediate railings and diagonals may not be used as steps.
It is not permitted to secure objects which may catch the wind, such as bill boards or sailcloths, to free-standing stair towers. The stair tower must not be exposed to aggressive liquids or gasses.

8 MOVING THE STAIR TOWER

The stair tower may only be moved manually along the ground. When moving the stair tower, the normal walking speed must not be exceeded and no people or materials may left on the tower. Pay attention to obstructions, both on the ground and above ground level, when moving the stair tower.
The tower may not be moved in winds greater than force 4 Beaufort (dust, earth and paper blow around, small branches break off, the wind speed is 4 – 6 m/s = approx. 18 km/h).
Be careful when the stair tower is moved over an unsuitable surface (incline, insufficiently strong surface, holes, etc). Make sure the wheels are braked or released at the correct times. When moving the stair tower, the support points for the outriggers may only be a couple of centimetres above the ground. After moving the stair tower, the support points must be placed back on the ground so that they just support the weight.

9 ANCHORING

The tower must be anchored when the tower becomes unstable, for example, due to a high wind. The anchoring must be firmly connected to both of the frame's stands with couplers. Anchor the tower at reliable and suitable places on the construction or the building. A minimum of two anchors must be fitted every 4 metres (therefore, one on every frame).

10 DISASSEMBLY OF THE STAIR TOWER

The stair tower is disassembled in the opposite order to assembly. Start at the top and remove the toeboards and the toeboardholders.
Components must be lowered to lower levels by carrying them down the stairs.
Disassemble the stair tower from the top to the bottom. Never throw components from the stair tower.

11 MAINTENANCE OF THE STAIR TOWER

All parts, particularly the pivoting parts and the welds, must be inspected regularly, but at least once per year, on wear and damages. Lost or damaged parts must be replaced.
Aluminium scaffolding parts are not allowed to be used in the following cases:

- when round tubes have one or more dull dents with a depth of more than 3,0 m;
- when round tubes have one or more dents directly next to a welding junction, in spite of the depth or shape of the dent;
- when square of rectangular tubes have one or more dull dents with a depth of more than 2,0 mm;
- when round or square tubes have one or more sharp dents or cracks, regardless length, depth or location of these dent(s)/crack.

Pivoting parts, among others castor wheels, must be clean and run smoothly.
Repair of scaffold-material may only be done in consultation with the producer.

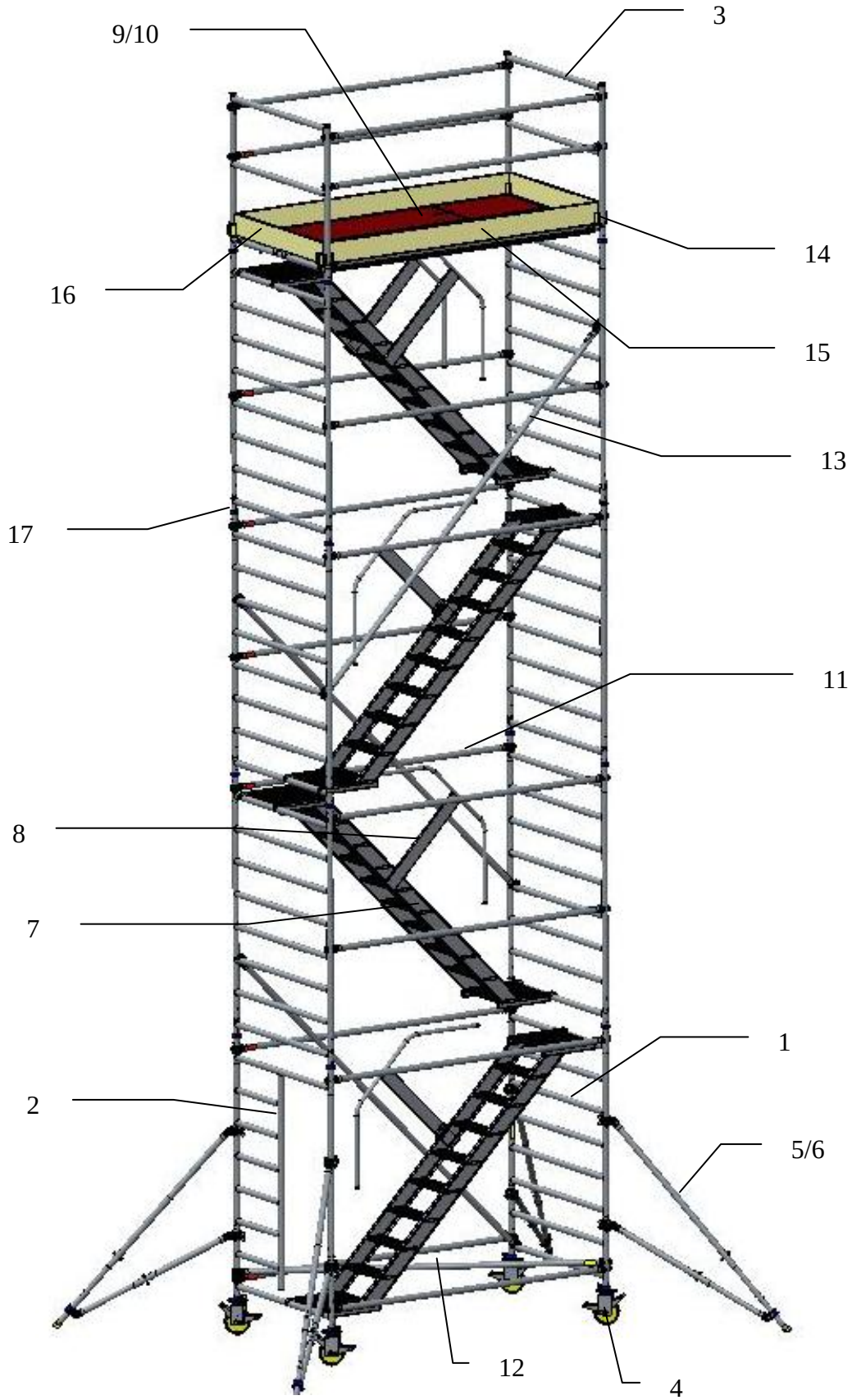
12 COMPONENTS

12.1 Component list

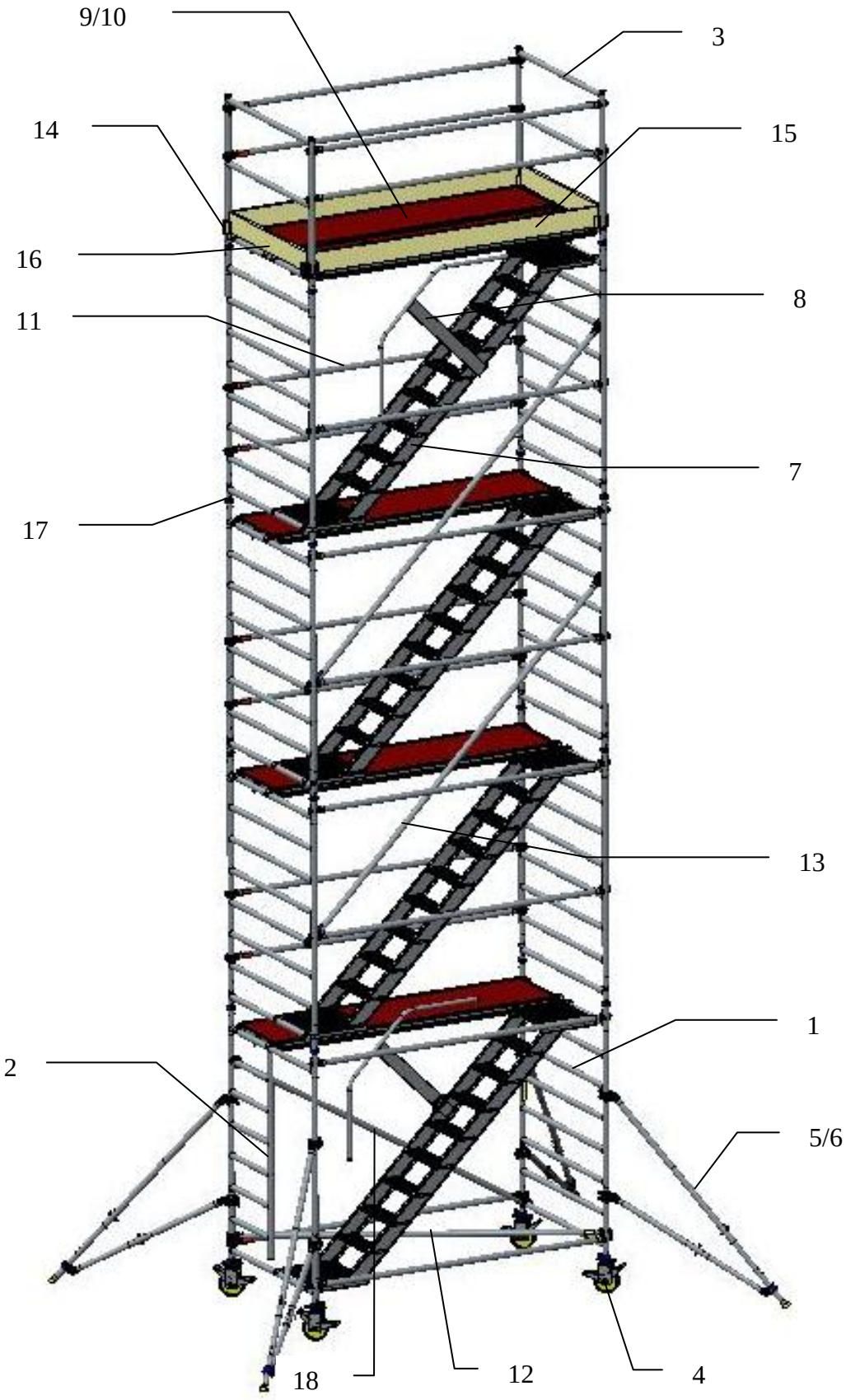
	standard components	scaffold length 1.8m	scaffold length 2.5m
1	eight rung frame	9501.200.010	9501.200.010
2	walk through frame	9501.200.109	9501.200.109
3	tower railing frame	9501.200.125	9501.200.125
4	wheel	9501.510.010	9501.510.010
5	outrigger 1300	9501.410.100	9501.410.100
6	outrigger 2000	9501.420.100	9501.420.100
7	stairs	9501.600.???	9501.600.370
8	stairs guardrail	9501.600.???	9501.600.400
9	platform	9501.310.010	9501.310.020
10	platform with hatch	9501.330.015	9501.330.025
11	horizontal (red coloured)	9501.200.058	9501.200.030
12	horizontal/diagonal (yellow coloured)	9501.200.049	9501.200.050
13	guardrail/diagonal 1-11	9501.600.145	9501.600.020
14	toeboardholder	9501.800.087	9501.800.087
15	toeboard 1,73m/2,45m	9501.200.086	9501.200.080
16	toeboard 1,22m	9501.200.090	9501.200.090
17	locking pin	9501.410.162	9501.410.162
18	diagonal 1-7 (blue coloured)	9501.200.043	9501.200.056

	alternative components	scaffold length 1.8m	scaffold length 2.5m
A	elbow outrigger 1300	9501.460.010	9501.460.010
B	elbow outrigger 2000	9501.470.010	9501.470.010
C	spindle with footplate	9501.520.010	9501.520.010
D	horizontal	9501.200.030	9501.200.030
E	eight rung frame	9501.200.010	9501.200.010

A: alternative for outrigger 1300
B: alternative for outrigger 2000
C: alternative for wheel when using the elbow outrigger
D: option when using the elbow outrigger
E: alternative for walk through frame



zig-zag



parallel

12.2 Assembly tables

The tables below shows which components are necessary for the assembly of a tower of a certain height. Make sure these components are present.

Assembly table stair tower **zigzag**, available in the lengths: 1,8 m. and 2,5 m.									
				Working height (m):	6	8	10	12	14
				Platform height (m):	4	6	8	10	12
Description	**Article number**	**kg**							
8-rung frame	9501.200.010	12,5			3	5	7	9	11
walk through frame	9501.200.109	12,0			1	1	1	1	1
tower railing frame	9501.200.125	5,0			2	2	2	2	2
wheel	9501.510.010	7,2			4	4	4	4	4
toeboard holder	9501.800.087	0,2			4	4	4	4	4
toeboard 1,22m	9501.200.090	2,4			2	2	2	2	2
locking pin	9501.410.162	0,1			8	12	16	20	24
	scaffold length 1,8m.		scaffold length 2,5m.						
Description	**Article number**	**kg**	**Article number**	**kg**					
stairs	9501.600.???		9501.600.370	21,3	2	3	4	5	6
stairs guardrail	9501.600.???		9501.600.400	2,6	3	4	5	6	7
platform	9501.310.010	15,0	9501.310.020	19,5	1	1	1	1	1
platform with hatch	9501.330.015	15,0	9501.330.025	19,5	1	1	1	1	1
horizontal	9501.200.058	2,3	9501.200.030	3,0	10	13	16	19	22
horizontal/diagonal	9501.200.049	2,5	9501.200.050	3,1	1	1	1	1	1
guardrail/diagonal 1-11	9501.600.145	3,1	9501.600.020	3,7	1	2	3	4	5
toeboard 1,73m/2,45m	9501.200.086	3,3	9501.200.080	4,4	2	2	2	2	2
ONLY FOR USE INDOORS		**kg**							
outrigger 1300	9501.410.100	6,6			4	4	4	4	
outrigger 2000	9501.420.100	9,8							4
INDOOR/OUTDOOR USE		**kg**							
outrigger 1300	9501.410.100	6,6			4			**x**	**x**
outrigger 2000	9501.420.100	9,8				4	4	**x**	**x**

x : outdoor use prohibited unless anchored

Assembly table stair tower **parallel**, available in the lengths: 1,8 m. and 2,5 m.									
			Working height (m):		6	8	10	12	14
			Platform height (m):		4	6	8	10	12
Description	**Article number**	**kg**							
8-rung frame	9501.200.010	12,5			3	5	7	9	11
walk through frame	9501.200.109	12,0			1	1	1	1	1
tower railing frame	9501.200.125	5,0			2	2	2	2	2
wheel	9501.510.010	7,2			4	4	4	4	4
toeboard holder	9501.800.087	0,2			4	4	4	4	4
toeboard 1,22m	9501.200.090	2,4			2	2	2	2	2
locking pin	9501.410.162	0,1			8	12	16	20	24
	scaffold length 1,8m.		scaffold length 2,5m.						
Description	**Article number**	**kg**	**Article number**	**kg**					
stairs	9501.600.???		9501.600.370	21,3	2	3	4	5	6
stairs guardrail	9501.600.???		9501.600.400	2,6	2	2	2	2	2
platform	9501.310.010	15,0	9501.310.020	19,5	2	3	4	5	6
platform with hatch	9501.330.015	15,0	9501.330.025	19,5	1	1	1	1	1
horizontal	9501.200.058	2,3	9501.200.030	3,0	10	14	18	22	26
horizontal/diagonal	9501.200.049	2,5	9501.200.050	3,1	1	1	1	1	1
diagonal 1-7	9501.200.043	2,3	9501.200.056	2,9	1	1	1	1	1
guardrail/diagonal 1-11	9501.600.145	3,1	9501.600.020	3,7		1	2	3	4
toeboard 1,73m/2,45m	9501.200.086	3,3	9501.200.080	4,4	2	2	2	2	2
ONLY FOR USE INDOORS		**kg**							
outrigger 1300	9501.410.100	6,6			4	4	4	4	
outrigger 2000	9501.420.100	9,8							4
INDOOR/OUTDOOR USE		**kg**							
outrigger 1300	9501.410.100	6,6			4			**x**	**x**
outrigger 2000	9501.420.100	9,8				4	4	**x**	**x**

x : outdoor use prohibited unless anchored