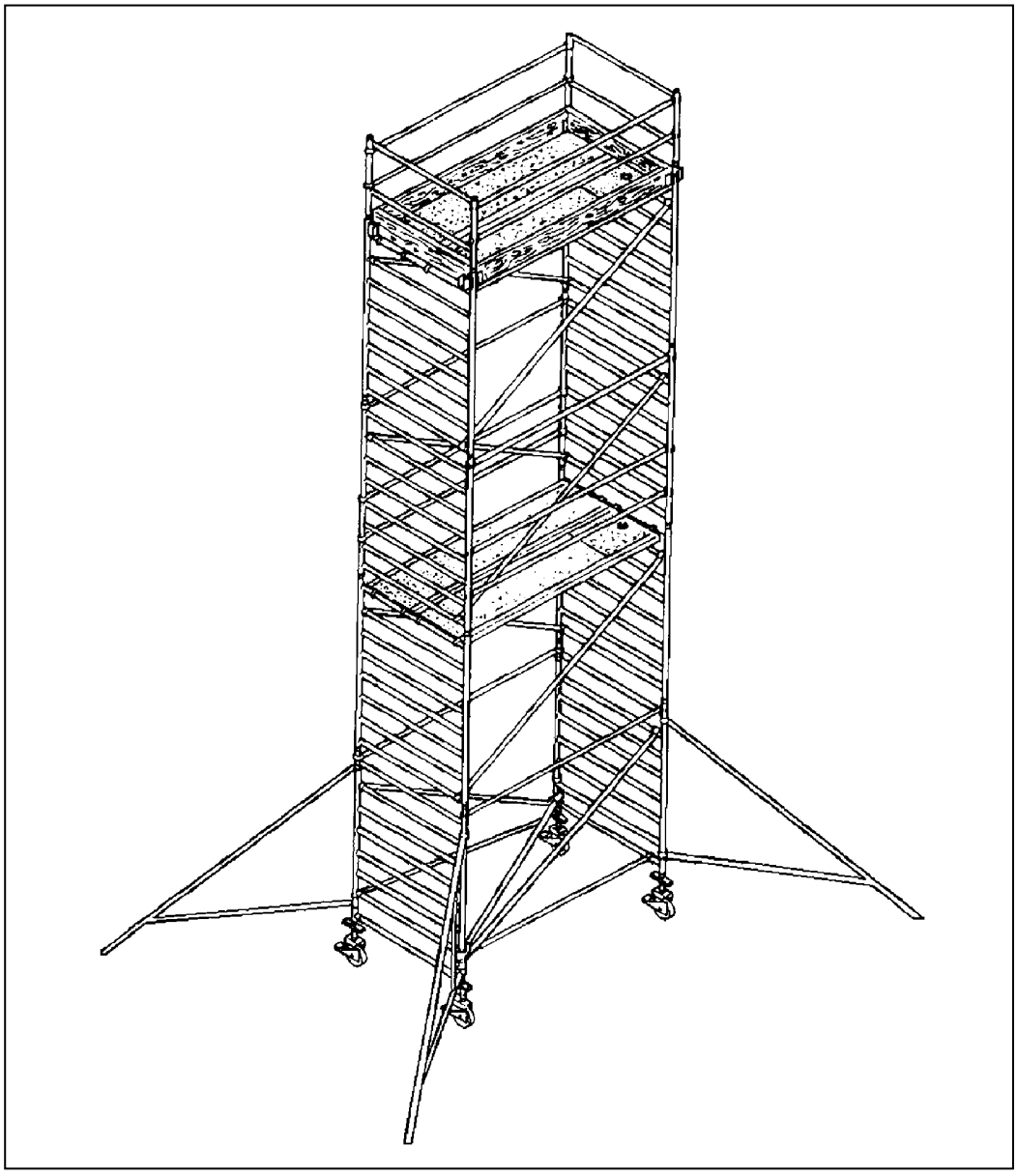
MANUAL

EN-1298 / EN 1004 ACCORDINGLY



CUSTERS TOWER SCAFFOLD

CONTENTS

1. INTRODUCTION

We thank you for purchasing a CUSTERS tower scaffold. The CUSTERS tower scaffold is part of our wide range of aluminium scaffold-products.
It meets the HD 1004 requirements, provided that it is erected as mentioned in the manual. It is approved according to the DIN 4422, group 3 regulations by several international notified bodies. (TÜV among thema).

The CUSTERS scaffold is available in the versions:
- scaffold-length 1.8 – 2.5 – 3.1 m
- scaffold-width 0.7 – 1.3 m

This manual instructs you step by step how to erect your scaffold in an easy and safe way.
If the scaffold is not erected correctly, it could jeopardize the user; therefore: read the instruction carefully.
Erecting and dismantling should be done by at least two skilled and experienced persons of at least 18 years of age.

The user is responsible for having this manual at the erecting / working site. The user is also responsible for having the manual in the site-supervisor's possession.

For further particular information regarding the use of tower scaffold in general, we refer to EN 1004.

If you have any questions regarding this manual, please do not hesitate to contact your supplier or the manufacturer.

Manufacturer:

CUSTERS HYDRAULICA B.V.
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Supplier:

2. WARRENTY AND LIABILITY

CUSTERS warrants that the products will be free from defects in material and workmanship for a period of 12 month from the date of delivery.
For all defects reported to us within the warranty period our liability is limited to repairing or replacing any defective products at our opinion and no charge to the customer. If for discharge of our liability under the warranty we replace (parts of) products supplied by us, the products (or parts) replaced will become our property. All costs and expenses exceeding the liability specified above, inducting but not limited to transport charges, travel expenses and the cost of disassembly and reassembly, will be for the account of the customer. If for the discharge of our liability under this warranty we carry out repairs to products supplied by us, the products concerned shall remain entirely at the risk of the customer.

Our liability is not valid:

a. if any defect is the result of abuse, misuse or inexpert use, or the result of other causes than unfitness of material or workmanship;

b. if the cause of any defect cannot be conclusively proved;

c. if our instruction for the use of the products and other specifically applicable warranty instructions have not been accurately and fully observed.

Our warranty will cease if during the warranty period the customer (or any person acting on the customer's instruction) has subjected the products supplied by us to unauthorised modifications and/or repairs.

3. INSPECTION OF THE DELIVERY

The customer has to inspect the tower scaffold upon delivery. Contact your supplier immediately if parts are damaged and/or the scaffold in incomplete.

4. SAFETY INSTRUCTIONS

4.1. Inspection before erecting

Check whether the (at least two) mechanics are sufficiently skilled; of at least 18 years of age and if the site where the scaffold will be positioned, is safe and of proper surface.

Make sure that:

- the surface is flat and hard enough;
- the area is free from obstacles, both on the ground and above;
- the wind-conditions allow working with the scaffold (see chapter 6);
- all parts and ropes required for pulling up material, are present at the site;
- damaged, wrong or non-original parts are never used

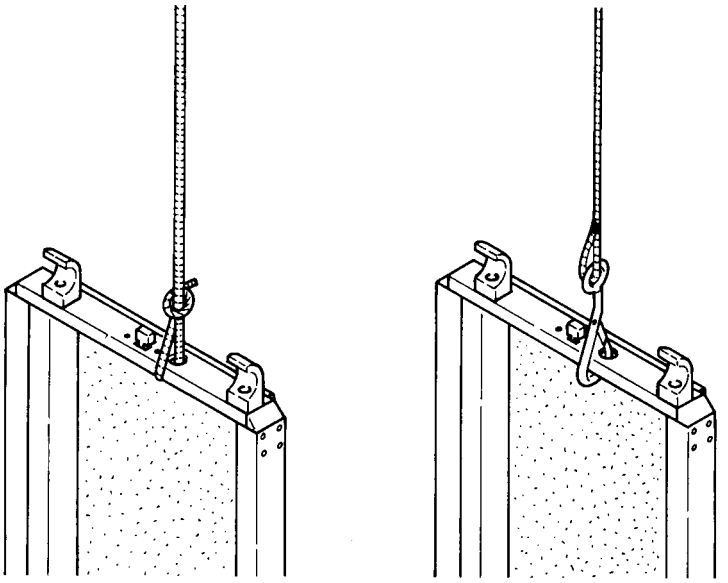
4.2. ERECTING

The scaffold erection as described in the erection instructions, must be done by at least two persons. Always use guardrails during the erection, where necessary also use temporary ones.
The scaffold tower must be erected on a flat surface (to be checked with a levelling-instrument); adjustments are possible by turning the castor wheel spindle nuts. the wheels must always be blocked, except during the rolling/steering.
Make sure that the wheels are secured, either by turning the spindle nut or the locking cam over the edge of the ring. The platforms must be secured by sliding the wind-securing pin under the frame rung.
The frames must be secured with frame securing clips. The horizontals/guardrails must be mounted on the frames with the open side of the claw pointing out to the scaffold outside edges.
The working-floor must be equipped with at least one trapdoor-platform, hip-guardrails knee-guardrails and toe-boards around this platform. The resting-floor should always be equipped with at least one trapdoor-platform and hip-guardrails. This resting-floor has to be mounted on every 4 meter height. The rest-floor will be changed into a working-floor by mounting guardrail-horizontals on knee-height and toe-boards.

4.3. Lifting of parts

Lifting or pulling up parts should be done by handing the parts form one platform to the other. Parts can also be pulled up by using a strong rope. Use a proper knot, noose or hook to connect the parts (see picture).
Lifting or lowering parts, materials and tools with a rope should be done on the inner side of the scaffold.
It is not allowed attaching lifting equipment onto a free-standing scaffold.

Picture 1: Lifting



4.4. Outriggers / elbow outriggers

The outriggers / elbow outriggers as described in the matrix must always be as soon as the lower part of scaffold reaches 2 meters height.
Which dimension (large / small) of the outrigger you should use, can be deducted from the composition-matrices (see paragraph 11.2).

☞ The instructions related to the outriggers dimensions as mentioned in picture 2, are to be strictly followed.

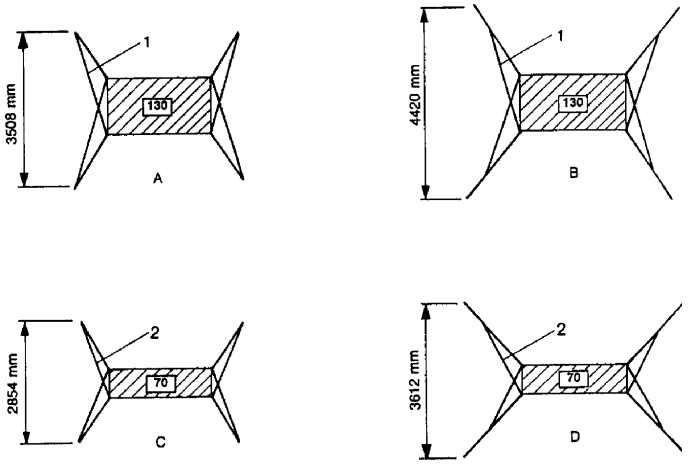
Disregarding these instructions imply that you should use additional ballast weight (contact your producer / supplier on this).
Small elbows may be replaced by small outriggers and large elbows may be replaced by large outriggers, provided that the dimensions of elbows and outriggers are similar.
This means that, seen from above, the outriggers must be put in the same position as the elbows.

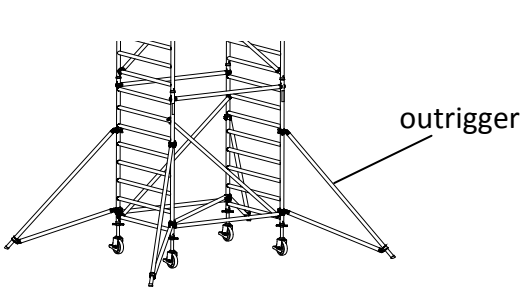
Picture 2: Dimensions

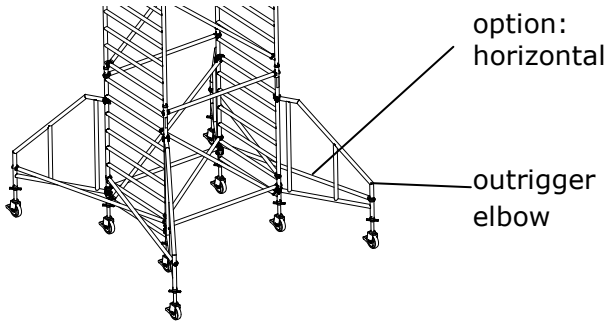
A. Small elbow, length: 1.3 m
B. Large elbow, length: 2.0 m
C. Small elbow, length: 1.3 m
D. Large elbow, length: 2.0

1) Horizontal, length: 2.5 m
art.no: 9501.200.030

2) Horizontal length: 1.9 m
art.no: 9501.200.048



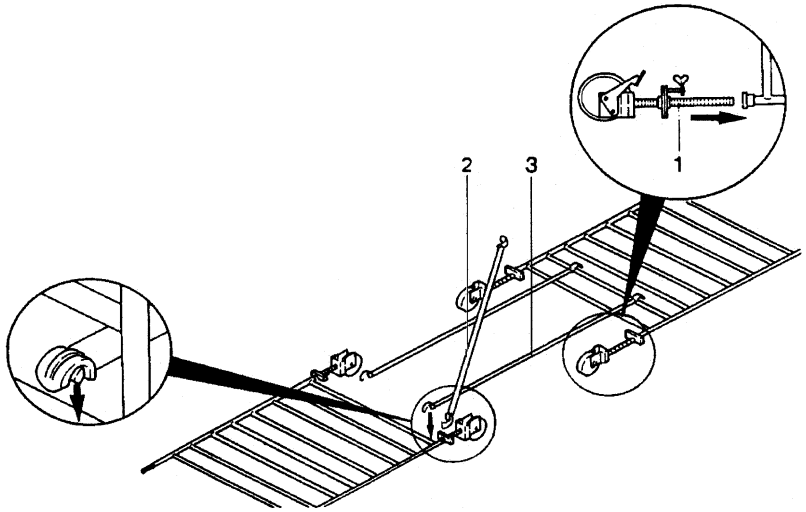




5. MOBILE SCAFFOLD

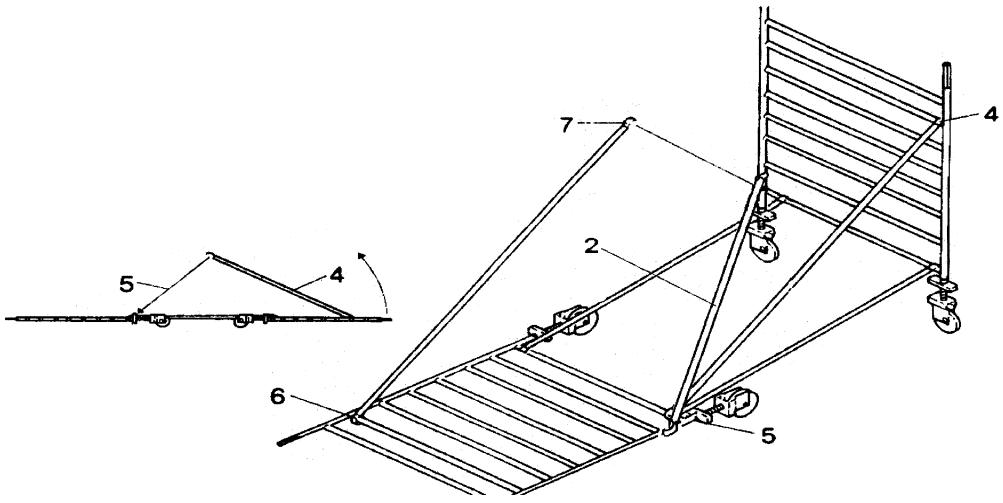
Picture 3-A:

- put in wheels (1)
- place horizontals (3) (marked with red coloured brace claw blocks)



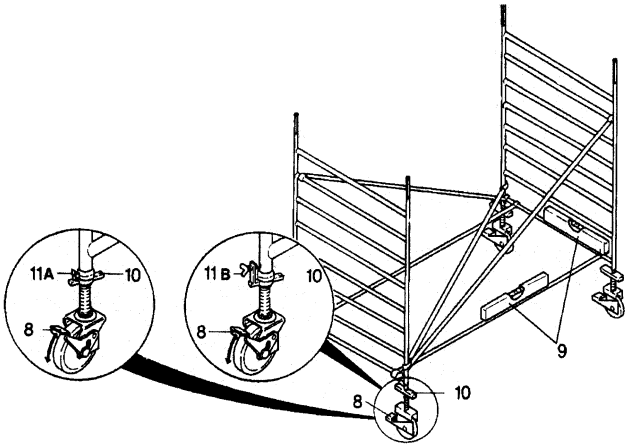
Picture 3-B:

Diagonals are marked with blue-coloured brace claw-blocks
- put diagonal (4) on 7th rung
- put diagonal (5) on 1st rung
- put diagonal (6) on 7th rung
- put diagonal (7) on 1st rung
- place horizontal-diagonal (2) (marked with yellow-coloured brace claw blocks)



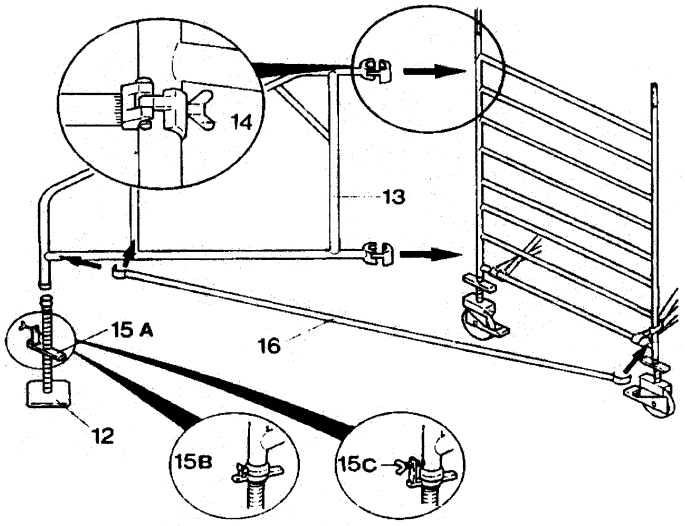
Picture 3-C:

- lock brakes (8)
- level (9)
- level by turning spindles (10)
- lock locking com (11 A) or turn wing nut (11 B)
(depending on purchased model)



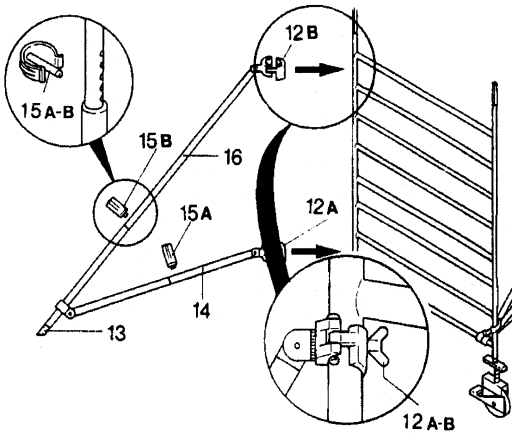
Picture 3-D1: Elbow outriggers

- put in the foot plates 12)
- attach outriggers (13)
- loosely attach claws (14)
- put foot-plates on the ground by turning the spindles (15 A)
- lock locking cam (15 B) or turn wing nut (15 C) (depending on purchased model)
- place diagonal (16), taking the dimensions into account (paragraph 4.4)
- firmly attach claws (14)



Picture 3-D2: Outriggers

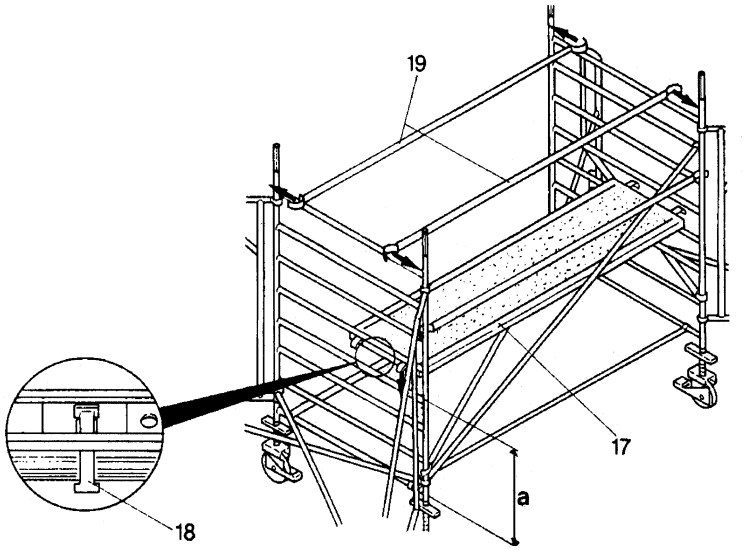
- position and loosely attach highest claw (12B) directly under the rung (this to prevent any movements)
- adjust length of higher tube (16) in such a way that rubber foot (13) is well positioned on the ground, then secure tube with a securing clip (15B). Outrigger-width must be min. 2.0 m for large outrigger.
- adjust length of lower tube (14), so that lower claw (12A) can be attached on post. Secure lower tube with a securing clip (15A). Loosely attach lower claw
- put the outriggers on the right position (see dimensions, paragraph 4.4)
- firmly attach claws (12A and 12B)



Picture 3-E:

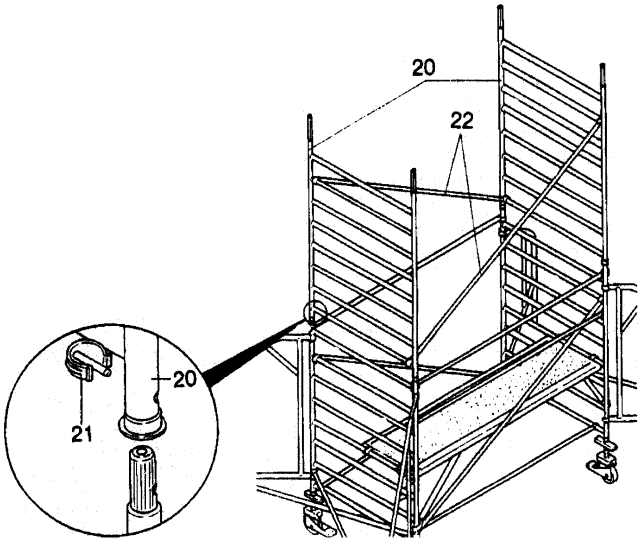
- platform (17) on 4th rung
- lock windsecuring lock
- Mount horizontals (19)

a: 3-rung distance (=0.75 m)



Picture 3-F:

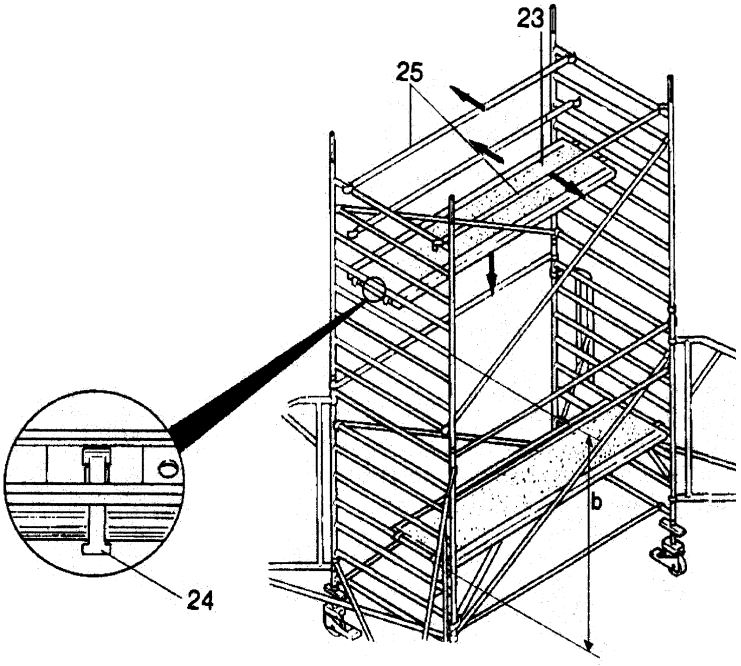
- mount frames (20)
- attach 4 frame securing clips (21)
- mount diagonals (22)



Picture 3-G:

- place platform (23)
- lock windsecuring-lock (24)
- Mount horizontals (25)

b: 8-rung dista



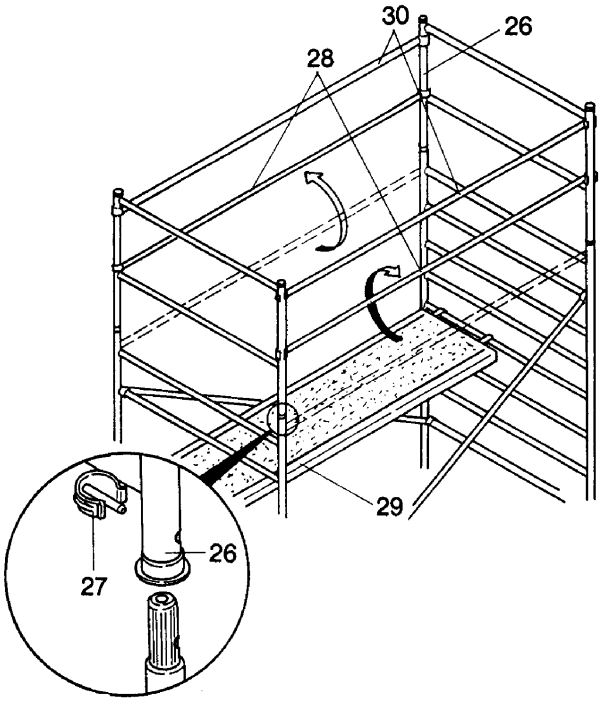
Picture 3-H:

- place guardrails (26)
- attach 4 frames securing clips (27)
- place horizontals (28)
- reposition the platforms (29) according to schedule

*From platform during erection**	*To final rest/ working floor**
0 m	*0 m*
1 m	*8 m*
7 m	*8 m*
3 m	*4 m*
5 m	*4 m*

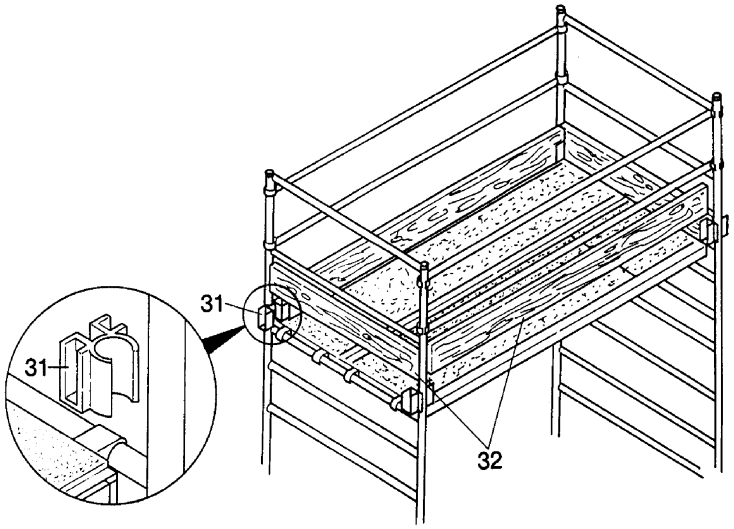
** measured from the lowest frame-rung*

- place horizontal (30)



Picture 3-I:

- attach toeboard-holders (31)
- Mount toeboards (32) two long & two short on



6. USE

Prior to every use you must check whether:

- the base of the mobile scaffold is correct;
- the total composition / construction is correct and complete;
- there is no change in conditions, which affect the safe use of the scaffold.

The mobile scaffold is built to provide a safe access to a site it is not allowed using the scaffold as a stairway-tower for other constructions. It is also prohibited using it as hanging scaffold or using it for stepping over to other constructions.
It is strongly forbidden using bridges between scaffolds or between a scaffold and a building, unless you use scaffolds / bridges which have been produced and calculated especially for these purposes.
The maximum workload per platform is 200 kg/m2 (scaffold class 3); each scaffold may have max. load on only one level. It is not allowed to jump on rest / working platforms; the trapdoor must always be closed, except when you are climbing up or down, however: always to be closed after passing.

Maximum platform height:

- inside : 12 meter
- outside : 8 meter

You may only climb from the inner side of the scaffold (onto frames)
Do not put boxes, stairways or other equipment on the platform in order to gain height. It is forbidden to work on the scaffold if the windforce is stronger than 6 Beaufort (big leaves move, umbrellas bend, windspeed is 11-14 m/s = ± 45 km/h).
If a windforce higher than 6 Beaufort is predicted, the mobile scaffold must be dismantled, anchored or transported to a windfree area. This should also be done if the mobile scaffold is not in use.
Please be careful with openings between buildings, edges and spots of buildings, extra windforces could be possible.
The maximum allowed horizontal force if 30 kg, so be aware of this when you exercise horizontal forces (e.g. drilling), which could endanger the stability of the scaffold.
It is not allowed to step onto horizontals, diagonals, guardrails and guardrail-horizontals.
It is not allowed to attach wind-catching materials such as advertising boards or canvasses onto free-standing scaffolds.
Do not expose the scaffold to aggressive liquids or gasses.

7. STEERING / ROLLING

The scaffold is only rolled lengthways by hand from the ground. During this move you may not exceed the normal walking speed and no persons or materials are allowed on the scaffold during this move. Be aware of any obstacles that could be on the ground when you roll the scaffold.
If the wind is stronger than 4 Beaufort it is forbidden to roll the scaffold (dust, sand and paper blow up, little leaves are torn off, windspeed is 4-6 m/s ± 18 km/h).
You should be very careful when the scaffold is rolled over bad surfaces (inclined planes, insufficient load-carrying capacity, holes, etc.); the wheels should be free or on a brake, depending on the situation.
If you roll the scaffold, the supporting points of the outriggers should only be a few centimetres above the ground. After moving, put the supporting points on the ground again.

8. ANCHORING

The anchors must be used when the scaffold gets too instable, e.g. by strong wind.
The anchors must be solid and must be attached to both frames-posts by couplings.
Anchor only on durable spots onto a construction or building.
On at least every 4 meter height, at least 2 anchors must be used (so: one per frame).

9. DISMANTLING OF THE MOBILE SCAFFOLD

Dismantling is done in reversed order. Start on the top by dismantling the toeboards and toeboards–holders.
Take off the platforms and guardrails, so that all parts can be transported down alongside the platforms.
Dismantle the scaffold from the top to the base. Never throw with parts.

10. MAINTENANCE

All parts, particularly the pivoting parts and the weldings, must be inspected regularly. Lost or damaged parts must be replaced.
Custers 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 (tears), regardless lengths, depth or location of these dent(s) and tears.

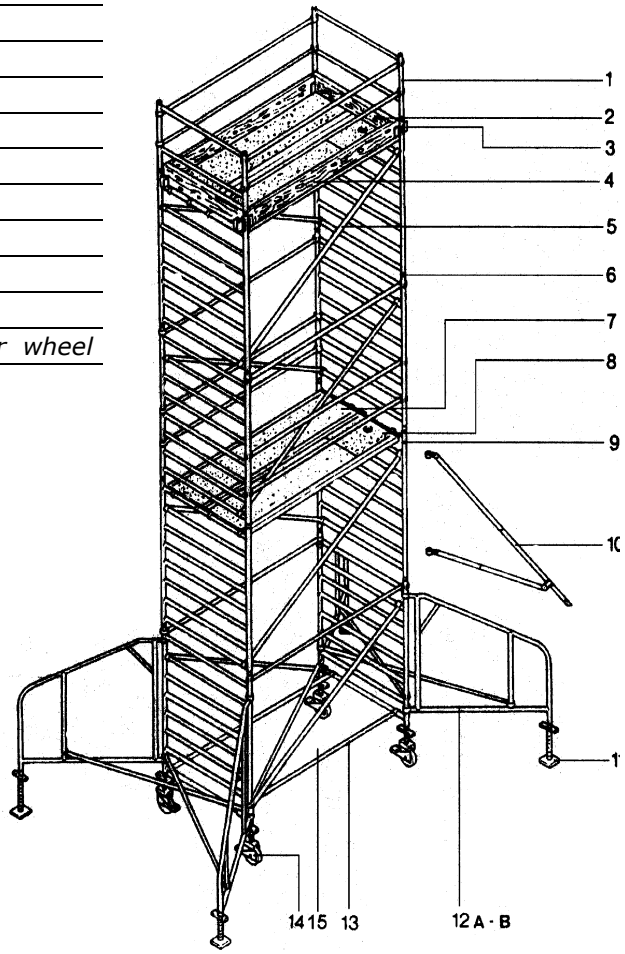
Pivoting parts, among others castor wheel, must be clean and run smoothly,
Repair of scaffold-material is only possible in consultation with the producer.

11. SPARE PARTS (3.5 X 1,3 M)

11.1 Components list

Picture 4

pos.no.	part number	description
1	9501.200.120	guardrail-frame
2	9501.200.090	toeboard small
3	9501.800.087	toeboard-holder
4	9501.902.080	toeboard large
5	9501.902.056	diagonal
6	9501.410.162	frame securing clip
7	9501.310.030	platform
8	9501.310.035	trapdoor-platform
9	9501.200.010	8-rung frame
10A	9501.410.100	outrigger small
10B	9501.510.020	outrigger large
11	9501.520.010	jack and base plate
12A	9501.460.010	elbow outrigger small
12B	9501.470.010	elbow outrigger large
13	9501.200.040	horizontal
14	9501.510.050	synthetic jack & castor wheel
15	9501.902.050	horizontal-diagonal



11.2 Spare parts list

In the matrices of the following pages you will see which parts are needed erecting a scaffold with a certain height.
Make sure that you received all necessary parts

Composition matrix CUSTERS 1,30 m, available in 3 lengths 1,80 m / 2,50 m / 3,05 m.

					Working height: [m]		4	5	6	7	8	9	10	11	12	13	14
					Platform height: [m]		2	3	4	5	6	7	8	9	10	11	12
Description	**Part number**	**kg**															
8-rung frame 130	9501.200.010	12,5					2	4	4	6	6	8	8	10	10	12	12
Guardrail-frame 130	9501.200.120	3,7					2		2		2		2		2		2
Frame securing clip	9501.410.162	0,06					4	4	8	8	12	12	16	16	20	20	24
Toeboard 130	9501.200.090	2,8					2	2	2	2	2	2	2	2	2	2	2
Toeboard-holder	9501.800.087	0,2					4	4	4	4	4	4	4	4	4	4	4
Jack&castor wheel rubber/synthetic	9501.510.010/050	5,7					4	4	4	4	4	4	4	4	4	4	4
	LENGTH 1,8 M		**LENGTH 2,5 m**		**LENGTH 3,05 m**												
Description	**Part number**	**kg**	**Part number**	**kg**	**Part number**	**kg**											
Platform wood / synthetic deck	9501.310/311.010	14,4/10,4	9501.310/311.020	20/14,4	9501.310/311.030	24,6/17,7	1	1	1	2	2	2	2	3	3	3	3
Trapdoor platf. wood /synthetic deck	9501.310/311.015	14,4/10,4	9501.310/311.025	20/14,4	9501.310/311.035	24,6/17,7	1	1	1	2	2	2	2	3	3	3	3
Horizontal	9501.200.058	2,0	9501.200.030	2,7	9501.200.040	3,2	6	8	8	12	12	14	14	18	18	20	20
Diagonal	9501.200.043	2,5	9501.200.056	3,1	9501.902.056	3,6	2	4	4	6	6	8	8	10	10	12	12
Toeboard large	9501.200.086	2,5	9501.200.080	4,9	9501.902.080	6,2	2	2	2	2	2	2	2	2	2	2	2
Horizontal - diagonal	9501.200.049	2,4	9501.200.050	3,0	9501.902.050	3,5	1	1	1	1	1	1	1	1	1	1	1
ONLY INSIDE-USE		**kg**															
Outrigger / elbow small	9501.460.010/410.100	6,2/6,6					4	4	4	4	4	4	4	4	4	4	
Outrigger / elbow large	9501.470.010/420.100	8,3/9,4															4
Jack & base plate *	9501.520.010/013	5,4					4	4	4	4	4	4	4	4	4	4	4
Horizontal **	9501.200.030	2,7					4	4	4	4	4	4	4	4	4	4	4
INSIDE- / OUTSIDE-USE		**kg**															
Outrigger / elbow small	9501.460.010/410.100	6,2/6,6					4	4	4	4				**x**	**x**	**x**	**x**
Outrigger / elbow large	9501.470.010/420.100	8,3/9,4									4	4		**x**	**x**	**x**	**x**
Outrigger extra large	9501.430.100	12,4											4	**x**	**x**	**x**	**x**
Jack & base plate *	9501.520.010/013	5,4					4	4	4	4	4	4	4	**x**	**x**	**x**	**x**
Horizonal **	9501.200.030	2,7					4	4	4	4	4	4	4	**x**	**x**	**x**	**x**

x = Not allowed to use outside, unless anchored.

* = Only applicable for outrigger elbow: standard jack & baseplate 9501.520.010; jack & base plate with wing-nut 9501.520.013. is: castor wheel & jack.
Alternative for jack & base plate

** = Option applicable in case of use of outrigger elbow.

REMARK:

This composition matrix is based on a working-floor of a given platform height, equipped with guardrail-horizontals, toeboards and one or more restfloors of each 4 m with guardrails.
To change a rest-floor into a working-floor, you need: 2x horizontals, 4x toeboar-holder, 2x toeboard small, 2x toeboard large.

Composition matrix CUSTERS 0,7 m, available in 3 lengths 1,80 m / 2,50 m / 3,05 m.

					Working height: [m]		4	5	6	7	8	9	10	11	12	13	14
					Platform height: [m]		2	3	4	5	6	7	8	9	10	11	12
Description	**Part number**	**kg**															
8-rung frame 70	9501.200.012	8,5					2	4	4	6	6	8	8	10	10	12	12
Guardrail-frame 70	9501.200.122	2,9					2		2		2		2		2		2
Frame-securing clip	9501.410.162	0,06					4	4	8	8	12	12	16	16	20	20	24
Toeboard 70	9501.200.092	1,2					2	2	2	2	2	2	2	2	2	2	2
Toeboard-holder	9501.800.087	0,2					4	4	4	4	4	4	4	4	4	4	4
Jack&castor wheel rubber/synthetic	9501.510.010/050	5,7					4	4	4	4	4	4	4	4	4	4	4
	LENGTH 1,8 m		**LENGTH 2,5 m**		**LENGTH 3,05 m**												
Description	**Part number**	**kg**	**Part number**	**kg**	**Part number**	**kg**											
Trapdoor platf. w ood/synthetic deck	9501.310/311.015	14,4/10,4	9501.310/311.025	20/14,4	9501.310/311.035	24,6/17,7	1	1	1	2	2	2	2	3	3	3	3
Horizontal	9501.200.058	2,0	9501.200.030	2,7	9501.200.040	3,2	6	8	8	12	12	14	14	18	18	20	20
Diagonal	9501.200.043	2,5	9501.200.056	3,1	9501.902.056	3,6	2	4	4	6	6	8	8	10	10	12	12
Toebord large	9501.200.086	2,5	9501.200.080	4,9	9501.902.080	6,2	2	2	2	2	2	2	2	2	2	2	2
Horizontal	9501.200.048	2,1	9501.200.052	2,8	9501.200.054	3,3	1	1	1	1	1	1	1	1	1	1	1
ONLY INSIDE-USE		kg															
Outrigger / elbow small	9501.460.010/410.100	6,2/6,6					4	4	4	4							
Outrigger / elbow large	9501.470.010/420.100	8,3/9,4									4	4	4	4	4	4	4
Jack & base plate *	9501.520.010/013	5,4					4	4	4	4	4	4	4	4	4	4	4
Horizontal **	9501.200.048	2,1					4	4	4	4	4	4	4	4	4	4	4
INSIDE- / OUTSIDE-USE		kg															
Outrigger / elbow small	9501.460.010/410.100	6,2/6,6					4	4	4	4				**x**	**x**	**x**	**x**
Outrigger / elbow large	9501.470.010/420.100	8,3/9,4									4	4		**x**	**x**	**x**	**x**
Outrigger extra large	9501.430.100	12,4											4	**x**	**x**	**x**	**x**
Jack & base plate *	9501.520.010/013	5,4					4	4	4	4	4	4	4	**x**	**x**	**x**	**x**
Horizontal **	9501.200.048	2,1					4	4	4	4	4	4	4	**x**	**x**	**x**	**x**

x = Not allowed to use outside, unless anchored.

* = Only applicable for outrigger elbow: standard jack & baseplate 9501.520.010; jack & base plate with wing-nut 9501.520.013.
Alternative for jack & base plate is: castor wheel & jack.

** = Option applicable in case of use of outrigger elbow.

REMARK:

This composition matrix is based on a working-floor of a given platform height, equipped with guardrail-horizontals, toeboards and one or more restfloors of each 4 m with guardrails.

To change a rest-floor into a working-floor, you need: 2x horizontals, 4x toeboar-holder, 2x toeboard small, 2x toeboard large.

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