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1. General information

1.1. Introduction

The present operating and assembly instructions are only valid for the scaffolds described in these operating and assembly instructions.

The instructions provided in these operating and assembly instructions for safety as well as the rules and regulations for the handling of scaffolds are in the area of application of the scaffolds mentioned in this documentation.

The operator must on his own responsibility:

- bear responsibility for adherence to local, regional and national regulations,
- adhere to the regulations (laws, ordinances, guidelines, etc.) listed for safe handling, •
- ensure that the operating and assembly instructions are available to operating . personnel and that all details such as instructions, warnings and safety provisions are followed completely.

1.2. Manufacturer

The manufacturer of the scaffolds described in this documentation is:

ZARGES GmbH Lift technology branch PO Box 16 30 82360 Weilheim

Tel.: +49 8 81 / 68 71 00 Fax: +49 8 81 / 68 72 95 E-mail: zarges@zarges.de Internet: http://www.zarges.de

1.3. Construction type approval

The scaffolds addressed below were inspected by.





Beyond the sales and delivery conditions, it applies that: There is no warranty assumed for damage to the delivered scaffolds which arises due to one or several of the following reasons:

- lack of knowledge or disregarding of these operating and assembly instructions •
- insufficiently-qualified or trained operating personnel
- use of other than original spare parts

The operator must ensure on his own responsibility:

- that the safety provisions according to section 5 are adhered to,
- that an improper use (see section 1.8) and faulty setting up and impermissible use are excluded and thus
- that in addition, proper use (see section 1.7) is guaranteed and that the scaffolds are • operated according to the contractually agreed-upon conditions of use.





1.5. Date of issue

The date of issue of these German-language operating and assembly instructions is 1 October 2006.

1.6. Industrial property and trademark rights

- The trademark right for these operating and assembly instructions remains with the manufacturer.
- Furthermore, all rights are reserved, especially for the case of the granting of a patent or utility patent registration.
- Violations which contradict the details above are subject to punitive damages!

1.7. Proper usage

The scaffolds listed in these operating and assembly instructions may only be used as scaffolds according to the regulations of EN 1004 and the version overview of these operating and assembly instructions.

1.8. Improper usage

A use other than for the purposes intended – that is, a deviation from the details provided in section 1.7 of the scaffolds documented in these operating and assembly instructions – counts as improper usage in the sense of ProdSG (status as of 1.8.1997). This also applies for the disregarding of the standards and guidelines listed in these operating and assembly instructions.

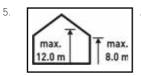


2. Design

2.1. Safety provisions

- 1. For the stability, installation and usage of the scaffolds mentioned above, the regulations of EN 1004 "Mobile access and working towers" apply.
- 2. The scaffolds may only be assembled and used by people who are familiar with these operating and assembly instructions.
- 3. For the assembly and disassembly of the scaffold, at least two people are required.
- 4. Only undamaged and faultless original spare parts of the manufacturer's scaffold system, which refers to the inspection certificate, may be used. Before using the unit, inspect all components for proper assembly and functionality.





According to EN 1004, the maximum platform heights are limited to 8 m outdoors and 12 m in entirely closed-in spaces. For the scaffolds described in these operating and assembly instructions, the maximum platform height in entirely closed-in spaces is 10 m.

- 6. The use of lifts on the scaffold is not permitted.
- 7. The first platform may be at a height of max. 4.40 m above the ground. The distance between the other platforms may be at most 4 m. The platforms must be at least 1.70 m apart.
- 8. During the assembly and disassembly of the scaffold, platforms or scaffold planks must be laid out completely at a distance of 2 m as assembly aids. With the use of scaffold planks, these must extend 500 mm beyond the scaffold on each side. It is forbidden to use railings and braces as a place to stand, also not for assembly and disassembly.
- The assembly of the scaffold is only permitted perpendicular on a horizontally-level subsurface with sufficient carrying capacity. If necessary, loaddistributing bases must be used.

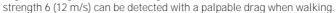


- 10. For information about the use of chassis beams, ballast weights, stabilisers and wall spacers to guarantee stability, see these operating and assembly instructions.
- 11. Work on the working platform is only permitted with complete 3-part side protection, that is, railing frames, knee protection and surrounding toe boards. The intermediate platforms do not have to have toe boards.
- 12. Work on several working platforms simultaneously is not permitted.

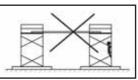




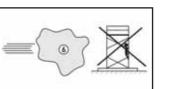
- 13. For wall-side assembly of the scaffold, wall spacers can also be used for ballasting (accessory, order no. 44461).
- 14. The permissible load capacity of the scaffold with evenly-distributed load is 2.0 kN/ m² (according to EN 1004 scaffolding group 3).
- All swivel castors must be fixed by pressing down the brake lever. The brake lever may only be released for moving.
- 16. When moving the scaffold, neither people nor material or tools may be on the platform. Avoid all collisions. Move the scaffold only by hand in the lengthwise or diagonal direction on solid, level and obstacle-free surfaces. When moving, normal walking speed may not be exceeded.
- 17. Moving the scaffold with the assistance of vehicles (e.g. fork lifts) is forbidden. The scaffold may not be lifted or pulled or pushed with the fork lift.
- 18. The area on which the scaffold is moved must be able to accommodate its weight.
- 19. For use outdoors or in open buildings, the scaffold must be moved into a wind-protected area if there are wind strengths above 6 (according to the Beaufort scale), in case of an oncoming storm and when work is complete and protected against tipping with other suitable measures (e.g. anchoring). The exceeding of the wind



- 20. With the use of anchors in connection with anchor fitting connections, the information in the "Bulletin for the attachment of dowels to anchors of facade scaffolds" (can be ordered from Carl Heymanns Verlag KG, Luxemburger Straße 449 in 50939 Cologneorder no. ZH 1/500) must be heeded.
- 21. The bridging of scaffolds to buildings with planks is not permitted. The scaffold may not be used as a stair tower in order to reach other constructions from there.



- 22. Before using the scaffold, the vertical alignment of the scaffold must be checked and corrected if necessary. Furthermore, the scaffold must be checked to ensure complete assembly according to section 2.8.
- 23. With the use of stabilisers, these must always be attached under a frame. The antitwist devices of the stabilisers must always be attached.





2.2. Behaviour for work on electrical systems with the scaffold

Work on or in the proximity of unprotected live systems, may not be carried out using the scaffold if

- the system component is not disconnected,
- the system component is not secured against switching on,
- if there is voltage in the system component,
- the system component is not short-circuited with an earthing rail,
- the system component is not isolated against adjacent live parts.

2.3. Further applicable safety instructions

For the inspection, assembly and usage of the scaffold, the following provisions are applicable: BGI 663 " Instructions for action for handling work and protective scaffolds"

For the use of electrical devices on the scaffold, the provisions of BGR 165 and BGI 594 (previously ZH 1/228) "Safety rules for the use of electrical equipment with increased electrical hazard" apply.

2.4. Technical specifications

Z200 folding scaffold 0.7 m × 1.5 m

Approved according to EN 1004	Scaffold group 3
Permissible load according to scaffold group 3	200 kg/m ²
Total load of the scaffold (maximum)	210 kg
Load of the platform (maximum)	210 kg
Maximum platform height	6.60 m

Z200 mobile scaffold tower 0.7 m \times 1.5 m

Z300 folding scaffold 0.7 m \times 2.0 m

Approved according to EN 1004 Permissible load according to scaffold group 3 Total load of the scaffold (maximum) Load of the platform (maximum) Maximum platform height

Z300 mobile scaffold tower 0.7 m \times 2.0 m

Approved according to EN 1004	Scaffold group 3
Permissible load according to scaffold group 3	200 kg/m²
Total load of the scaffold (maximum)	280 kg
Load of the platform (maximum)	280 kg
Maximum platform height	9.85 m



Scaffold group 3

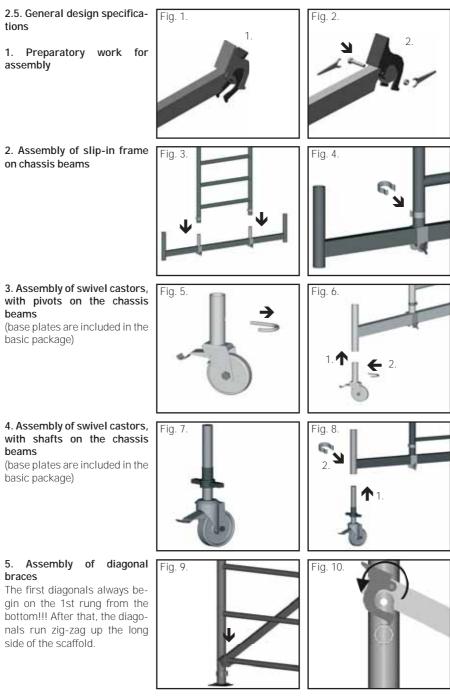
200 kg/m²

280 kg

280 kg

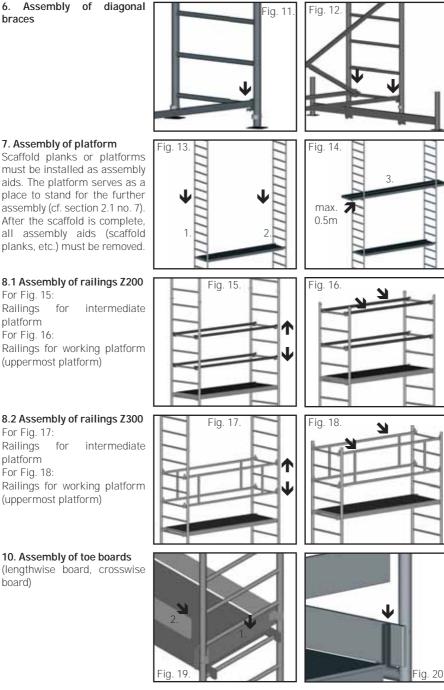
9.60 m







braces



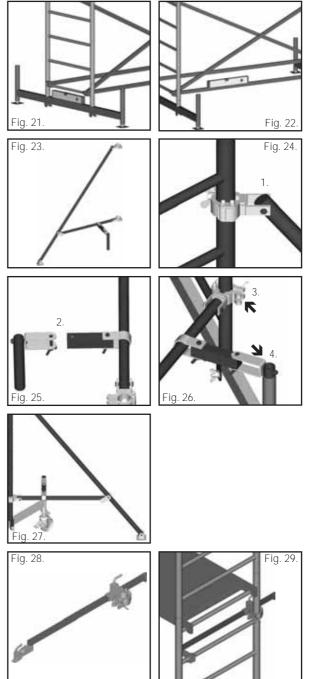


11. Aligning the scaffold

After the scaffold has been assembled, it must be aligned using a spirit level. If the scaffold should be moved to its usage location only after assembly, its alignment must absolutely be checked again on location.

12. Assembly of stabilisers

Only for mobile scaffold towers with stabilisers (D and E module).

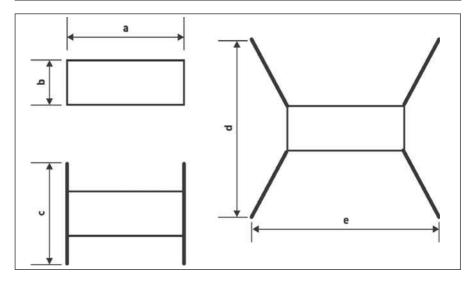


13. Assembly of wall anchor



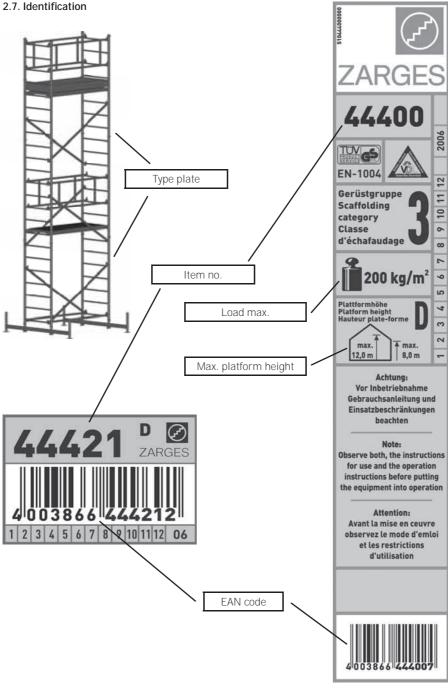
2.6. Basic measurements

Module / dimensions [mm]	а	b	С	d	е				
Z200 0.7 m × 1.5 m									
A	1500	700	-	-	-				
A+B	1500	700	1500	-	-				
A+B+C	1500	700	1500	-	-				
A+B+C+D	1500	700	1500	3000	2800				
К	1500	700	-	-	-				
K+B	1500	700	1500	-	-				
K+B+C	1500	700	1500	-	-				
K+B+C+D	1500	700	1500	3000	2800				
	Z	.300 0.7 m × 2.	0 m						
А	2000	700	-	-	-				
A+B	2000	700	1650	-	-				
A+B+C	2000	700	1650	-	-				
A+B+C+D	2000	700	1650	3000	3300				
A+B+C+D+E	2000	700	1650	3000	3300				
К	2000	700	-	-	-				
K+B	2000	700	1650	-	-				
K+B+C	2000	700	1650	-	-				
K+B+C+D	2000	700	1650	3000	3300				











2.8. Parts list incl. ballasting (see also 5.2)

The parts list includes the designation of the individual parts, their associated weights, the item no. of the individual parts which are included in the complete scaffold and the item no. of the complete scaffold. The necessary ballasting per scaffold is also listed.

Z200 / Z300 mobile scaffold towers																						
0	ght ¹⁾		1.75 m		e 1 m	e 2 m		th flap	oard	board	ace	race	ace race	ms ³⁾	ms ³⁾					rior age		door age
Scaffold size	Working height	Parts list	Basic frame	Folding unit	Slip-in frame 1	Slip-in frame	Railings ²⁾	Platform with flap	Crosswise board	Lengthwise board	Diagonal brace	Horizontal brace	Chassis beams	Stabilisers	Base plates	Ballasting	centre erection	erection ²⁾	erection	erection ²⁾		
appro	x. [m]	Order no.	44400	44468	44407	44405		44435	4445	44440	44420	44410	44450	44455	44459		centre (side ere	centre (side ere		
5	2.55	48409	-	1	-	-		1	-	-	-	1	-	-	4	as-	0	0	0	0		
×.	2.80	48400	2	-	-	-		1	-	-	1	1	-	-	4	swivel cas-	0	0	0	0		
Z200 0.7	5.00	48401	-	-	2	1		-	2	2	2	5	2	-	-	swiv	3	3/3	3	3/3		
200	7.00	48402	-	-	-	2		1	-	-	3	4	-	-	-	ach	5	7/7	5	7/7		
	9.00	48403	-	-	-	2		-	-	-	2	-	-	4	-	er e	2	2/2	2	2/2		
appro	x. [m]	Order no.	44400	44404	44407	44405	44413	44436	4445	4441	44421	44411	44451	44455	44459	weights over each tor	444		160 ⁴⁾			
	2.55	44509	-	1	-	-	-	1	-	-	-	1	-	-	4	weig	0	0	0	0		
2.0	2.80	44500	2	-	-	-	-	1	-	-	1	1	-	-	4	ballast	0	0	0	0		
	5.00	44501	-	-	2	1	2	-	2	2	2	1	2	-	-		1	1/2	1	1/2		
Z300 0.7 ×	7.00	44502	-	-	-	2	2	1	-	-	3	-	-	-	-	r of	3	3/5	4	3/5		
Z3	9.00	44503	-	-	-	2	-	-	-	-	2	-	-	4	-	Number	0	0/0	2	0/0		
	12.00	44504	-	-	-	3	2	1	-	-	2	-	-	-	-	Nu	2	2/2	2	2/2		
not ind	luded	ites; when in the sco with 2 hor	pe of (delive	ry.	1454 a	are us	ed = 2	2 cm t	o max	. 33 cr	m; 44	453 = -	+16 cr	n (at a	n extr	a cost). Ball	ast we	eights		

³⁾ Length of the chassis beams for the Z300: 1.65 m of galvanised steel; for the Z200: 1.50 m of aluminium.

⁴ In the case of side erection, sometimes more ballast weights are located on the side facing away from the wall.

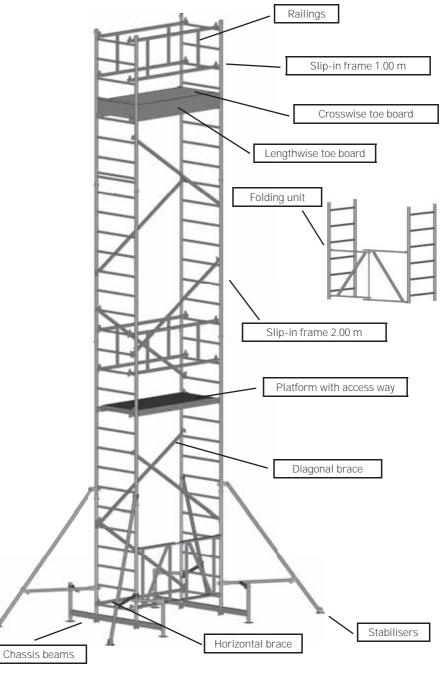
(Example: 3/5 = 3 weights on the side facing the wall and 5 ballast weights on the side facing away from the wall)

With more than 4 ballast weights per swivel castor, additional slip-in pipes (44449) must be used. Pay attention to the ballasting specifications in the operating and assembly instructions!



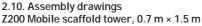


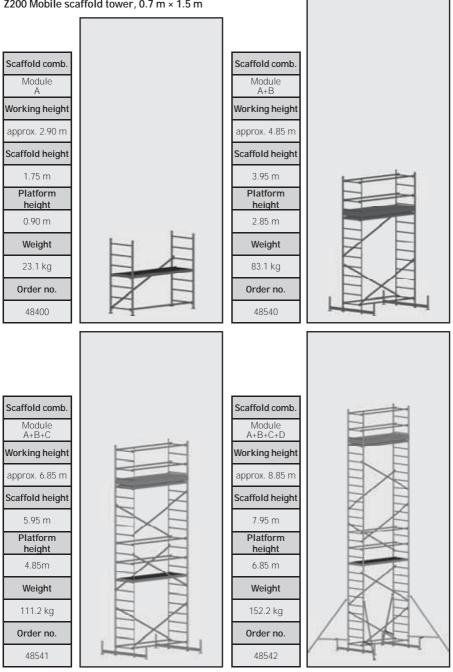
2.9. Position of the individual parts



Z200 / Z300

ZARGES

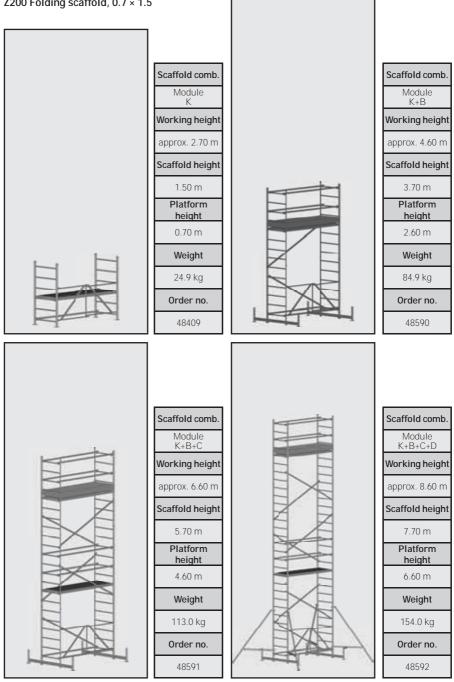








Z200 Folding scaffold, 0.7 × 1.5





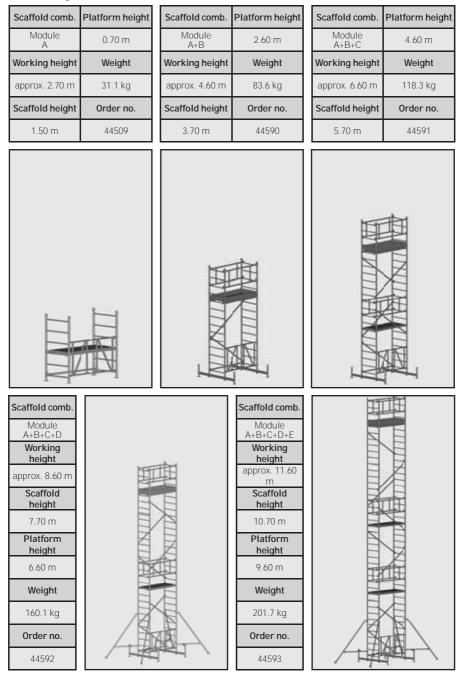
Z300 Mobile scaffold tower, 0.7 × 2.0

Scaffold comb.	Platform height	Scaffold comb.	Platform height	Scaffold comb.	Platform height
Module A	0.90 m	Module A+B	2.85 m	Module A+B+C	4.85m
Working height	Weight	Working height	Weight	Working height	Weight
approx. 2.90 m	27.1 kg	approx. 4.85 m	79.6 kg	approx. 6.85 m	114.3 kg
Scaffold height	Order no.	Scaffold height	Order no.	Scaffold height	Order no.
1.75 m	44500	3.95 m	44540	5.95 m	44541
		THE WAY			
		Scaffold comb. Module A+B+C+D Working height approx. 8.85 m Scaffold height 7.95 m Platform height 6.85 m Weight 156.1 kg Order no. 44542			Scaffold comb. Module A+B+C+D+E Working height approx. 11.85 m Scaffold height 10.95 m Platform height 9.85 m Weight 197.7 kg Order no. 44543





Z300 Folding scaffold, 0.7 × 2.0



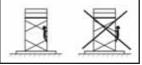


3. Note about disassembly of the scaffold

Disassembly of the erected scaffold occurs in the reverse order of assembly. Here it must be noted that the platforms or scaffold planks necessary for the assembly personnel must be laid out in advance as places to stand and thereby laid out completely. In no case may parts of the scaffold (braces, platforms, etc.) be disassembled before the levels above them have been disassembled completely.

4. Usage rules and regulations

- 1. Ascent to the working platform may only occur from the inside.
- 2. It is not permitted to lean against the side protector while working.



- 3. It is not permitted to jump on the panel coverings.
- 4. No horizontal loads may be generated, e.g. due to work on adjacent constructions which could cause the scaffold to tip.



- 5. While using scaffolds in passageway buildings, on uncovered buildings or building corners, special attention must be paid to the wind situation in order to prevent the scaffold from tipping over.
- 6. It is forbidden to extend the platform height by using ladders, crates or other equipment.
- 7. Tools and materials may only be handed upwards. Here, the weight of the tools and materials must always be taken into account in order not to overload the working platform. The person lifting the load may only let go when the person accepting the load has it securely in his or her hands.
- 8. Scaffolds with swivel castors can be moved to their later location after assembly (floor slant may not be more than 3%). Avoid all collisions. After moving, the alignment of the scaffold must be checked again.
- 9. When moving the scaffold, always pay attention that no live system components are touched.
- 10. Electrical devices (drills, etc.) may only be operated on the scaffold with protection low voltage (48 V), with protective isolation (separation transformer) or if they are connected to a residual current operated device with a residual current of 30 mA. The regulations of BGI 594 (previously ZH 1/228) must be applied.
- 11. Tools and materials must be stored on the working platform so that 20 cm on the side of the working platform remains free as a passageway.





5. Stability specifications

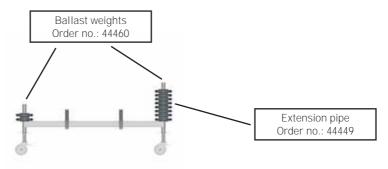
5.1. General information

Chassis beams and stabilisers are responsible for the stability of the scaffold. However, these must also be ballasted according to the area of deployment (indoors / outdoors). For the correct ballasting, please see the parts lists (packet 2.8).

5.2. Fastening the ballasting

The attachment location and the quantity of the ballast weights depend on the type of assembly and platform height of the scaffold. For the precise quantity of the ballasting, please see the parts lists in section 2.8 (lower portion of the tables).

Attach ballast weights over the supports on the swivel castors, see Fig. below. For scaffolds for which a larger number of ballast weights are required, the supports on the chassis beams can be lengthened with slip-in pipes (accessory, order no. 44449).



5.3. Maintenance, repair, storage and cleaning

Clean the scaffold with water and commercial cleansers. If paint gets on the scaffold, it can be removed with turpentine. Cleansers may not penetrate the soil; used cleansers must be disposed of in accordance with the applicable environmental regulations.

Greasing the moving parts

Grease all moving parts (spindle, swivel castor bearing, catches) with commercial oil. For use in the winter, use low viscosity oil. Wipe off excess oil, the oil may not reach the treads - danger of slipping. Dispose of cleaning rags soiled with grease in accordance with the applicable environmental regulations.

Storage

Storage must be in a manner such that damage to the unit is excluded. The scaffold components must be stored so that they are protected against the effects of weather. During transport to or from the storage location, the scaffold components must be secured against slipping and bumping as well as falling down. When loading, the scaffold components may not be thrown.



5.4. Inspections of the scaffold components

If a defect is discovered, the affected part may not be used any longer.

Slip-in frame / chassis beams

• Check for deformation, crushing and crack formation.

Braces (diagonal / railings)

• Check for deformation, crushing, crack formation and function of the catches.

Platform

- Check for deformation, crushing, crack formation and function of the catches.
- Check state of the wood.
- Check pass-through flap for function.

Toe boards

- Check state of the wood.
- Check toe boards for crack formation.

Swivel castors

- Check rolling capacity of the castor and function of the brake on rolling and basic frame.
- For swivel castors with spindle, also check that spindle can move freely.
- Check fail safe (thumb screw, plug) on the chassis beams and and basic frame.

Safety springs

• Check for deformation, crushing, crack formation and tight fit.

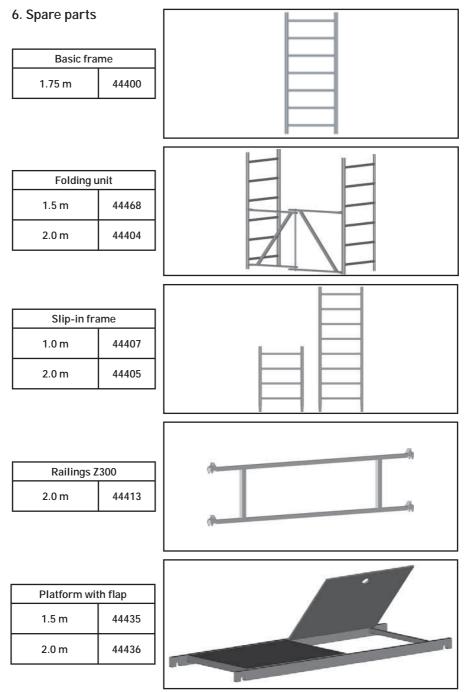
If you would like information or if you have special problems that are not treated in sufficient detail in these operating and assembly instructions, you can request the required information directly from the manufacturer (see section 1.2).

Furthermore, we hereby notify you that the content of these operating and assembly instructions is not part of an earlier existing agreement, covenant or a legal relationship nor should it change these. All obligations arise from the respective purchase contract, which also contains the complete and solely-valid warranty regulation (see also section 1.4). These contractual warranty regulations are neither extended nor limited by the details of these operating and assembly instructions.

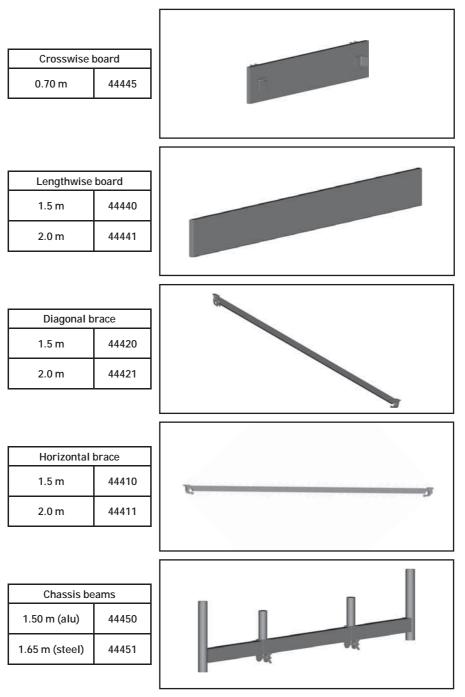
The propagation and duplication of these documents, the exploitation and communication of their content are only permissible with the express permission of the manufacturer. Violations which contradict the details above are subject to punitive damages.





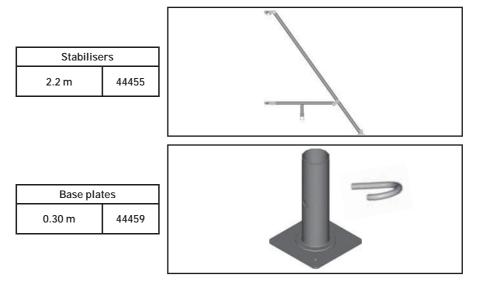




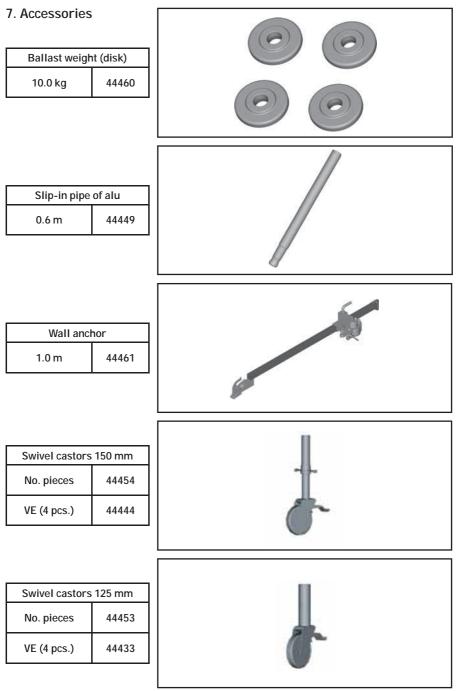


















Entry arm (steel)
0.3 m	44456









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Nº291291 EN

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