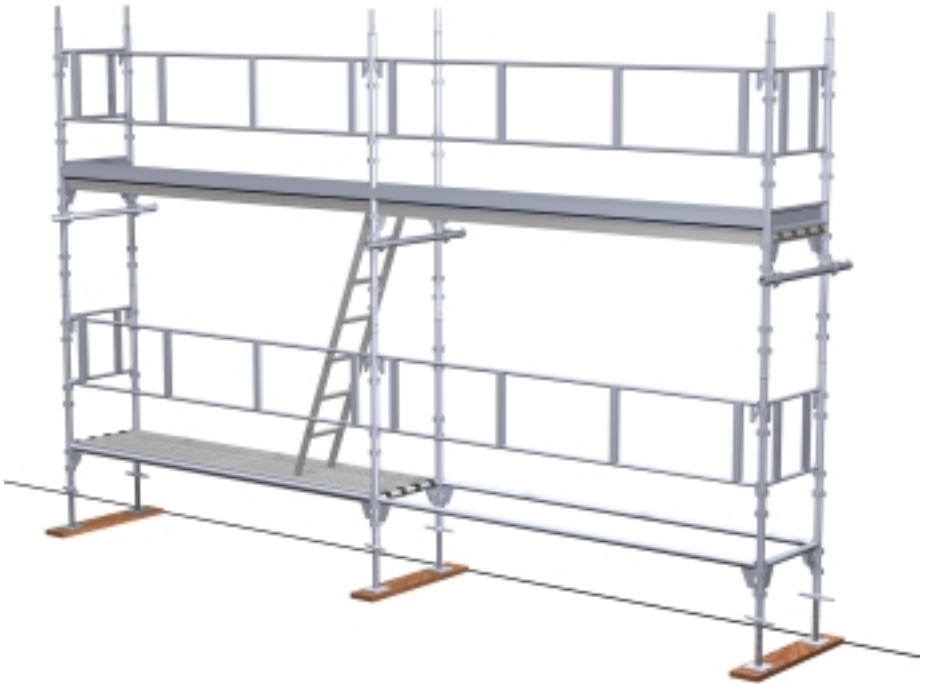


USER'S MANUAL

HAKI CONTINENTAL





HAKI User's Manual and product liability applies only to scaffolding containing components manufactured and supplied by HAKI.

Building scaffolding using components from other manufactures or integrating HAKI scaffolding into scaffolding from other manufactures is not recommended. In such cases, a special prior investigation of the load-bearing capacity needs to be carried out — contact the HAKI Technical Department for assistance. There are, however, no objections to adding customary accessories to the scaffolding tubes or approved couplers.

By mixing components of other manufactures this may invalidate insurance policy cover.

Other configurations of HAKI Universal scaffolding are possible, but it is important to contact the HAKI Technical Department for details.

The type inspection certificate applies only to scaffolding, the materials, dimensions and design of which comply in full with the inspected certificate. The values given in the following tables are in accordance with this certificate.

HAKI Continental

Following examination by the SP Swedish National Testing and Research Institute, the scaffolding has been issued with a Type Examination Certificate in accordance with the requirements of AFS1990:12 and SS-HD 1000 - Certificate No. 14 55 02 - for load classes 1 - 4 (0.75 - 3.0 kN/m²).

The calculations have been carried out using method 1172 of the Swedish National Testing and Research Institute.

General


The scaffolding has a width of 650 mm or 960 mm and a bay length of 3050 mm with a lift height of 2.0 m.

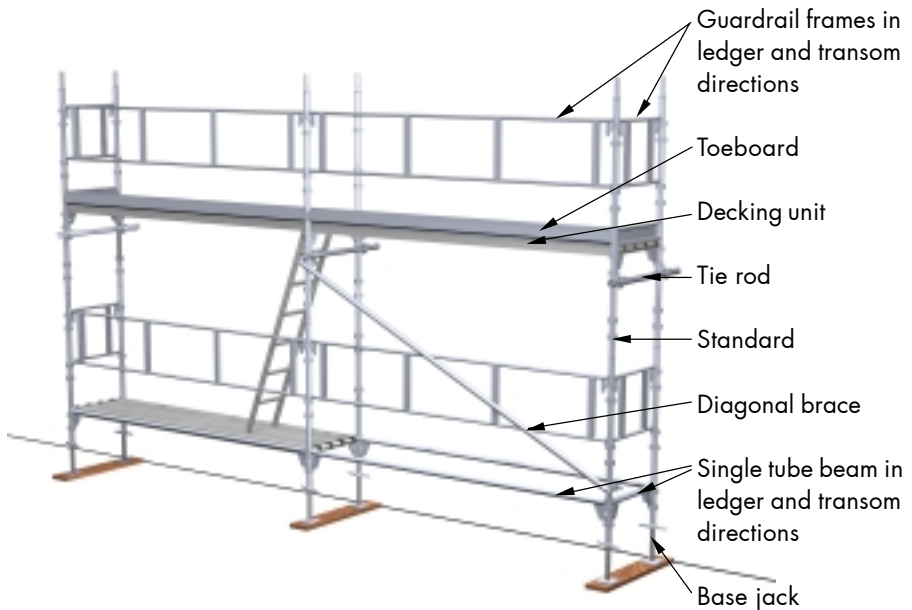
ERB and LB beams can be used both as ledgers and transoms.

Each lift must be fitted with a guardrail frame 1.0 m above the lift level on the outside and with ERB single tube beams at the lift level on the inside. The lowermost lift must be fitted with a single tube beam on both the inside and the outside and must always be arranged at the lowest possible level.

HAKI's steel planks and decking units are suitable for use as decking.





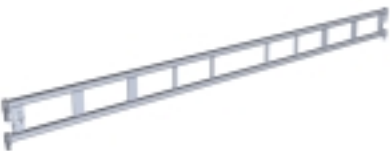
Marking

All components with the exception of locks, bolt pins etc. come permanently marked with the HAKI logo and the year of manufacture last two figures. ( S03).





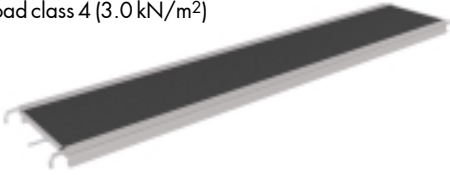


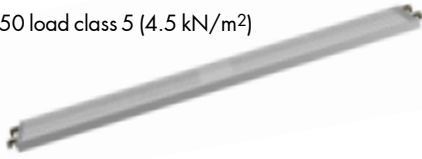


Article numbers and weights are for galvanized options unless otherwise stated. The most of the components are also available in painted option.

Name	Art.No.	Code	Weight (kg)
Base jack Adjustable 55-570 mm 	2071000	BS	5.0
Standard Standard joint with tap Pockets at the same level Tube diameter 48 mm 	7017055	FSSH 500	3.2
	7017105	FSSH 1000	6.0
	7017155	FSSH 1500	8.4
	7017205	FSSH 2000	11.2
	7017305	FSSH 3000	16.7
Locking pin For locking standard joint at hanging scaffolding, lifting or scaffolding for weather protection  	2116000		0.1
	5141256		0.3
Ledger beam Tube diameter 34 mm With spring locking catch 	7021101	LB 1000	6.9
	7021121	LB 1200	7.2
	7021161	LB 1605	9.6
	7021191	LB 1914	11.0
	7021251	LB 2450	14.8
	7021301	LB 3000	17.7
	7021361	LB 3600	21.0
	7021401	LB 4000	23.1

LIST OF COMPONENTS




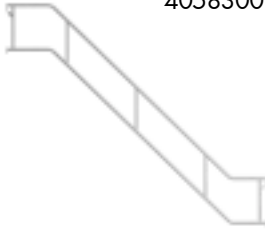
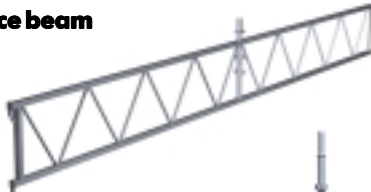




Name	Art.No.	Code	Weight (kg)
Single tube beam	7023065	ERB S 650	4.1
Tube diameter 48 mm	7022072	ERB 720	4.6
	7023096	ERB S 960	5.2
	7022100	ERB 1000	5.4
	7022120	ERB 1200	6.5
	7023160	ERB S1605	7.3
	7023190	ERB S1914	8.3
	7023245	ERB S 2450	10.2
	7023300	ERB S 3000	10.4
Guardrail frame	7052065	SKRD 650	5.1
	7052096	SKRD 960	7.3
	7052100	SKRD 1000	7.4
	7052120	SKRD 1200	7.9
	7052160	SKRD 1605	10.4
	7052190	SKRD 1914	11.2
	7052245	SKRD 2450	14.7
	7052300	SKRD 3000	15.4
Advance Guardrail Tool	4052001		1.4
Aluminium			
Diagonal brace	7122120	DS 1200	7.8
With wedge junctions	7122160	DS 1605	9.3
	7122190	DS 1914	9.6
	7121250	DS 2450	12.3
	7121300	DS 3000	14.2
Tie rod tube	8832090	SVF 900x48	3.3
Tube diameter 48 mm	8832120	SVF 1200x48	4.4
Right angel coupler KF 48x48	2041005		1.0
width of jaws 22 mm			

Name	Art.No.	Code	Weight (kg)
Decking unit	4096121	1200 x 600	12.2
Aluminium	4096161	1605 x 600	15.0
High hooks	4096250	2450 x 600	21.4
For all types of standards Load class 4 (3.0 kN/m ²)	4096302	3000 x 600	25.5
	4097121	1200 x 400	9.7
	4097161	1605 x 400	12.3
	4097250	2450 x 400	17.5
	4097302	3000 x 400	21.0
Decking unit with trapdoor	4096254	2450 x 600	25.9
See Decking unit	4096304	3000 x 600	28.5
			
Ladder	2091210	ST 2100 AL	3.4
Aluminium For decking unit with trapdoor			
			
Steel plank	2153071	SPL 700 x 320	7.6
SPL 700-2500 load class 6 (6.0 kN/m ²)	2153101	SPL 1010 x 320	10.0
SPL 3050 load class 5 (4.5 kN/m ²)	2153121	SPL 1250 x 320	11.5
	2153161	SPL 1655 x 320	13.5
	2153191	SPL 1964 x 320	16.4
	2153251	SPL 2500 x 320	20.0
	2153301	SPL 1964 x 320	25.0
			
Toeboard wood	2025300	FL 3000 x 150 x 32	5.8
			
Toeboard clip	2131000	FLPL 150 x 32	0.2
Plastic			
			

LIST OF COMPONENTS



Name	Art.No.	Code	Weight (kg)	
Bracket Without spigot Tube diameter 48 mm		7211024	SK 230	2.2
		7211034	SK S 334	2.5
		7211040	SK 400	2.7
		7211047	SK 460	2.8
		7211060	SK 600	3.6
Bracket With spigot		7211050	SK 514	5.8
		7211066	SK S 652	6.0
		7211070	SK 720	6.8
Stair UTV Aluminium		4102300	UTV 3000 AL	22.9
		4058300	Handrail UTV AL	10.3
Lattice beam Steel		7031601	FBB 6050	59.1
Standard adapter Steel		7011000		6.3
Lattice beam Aluminium		4032410	FB 4100 AL	16.7
		4032610	FB 6100 AL	24.3
		4032810	FB 8100 AL	32.2

For other accessories, see Type Examination Certificate 14 55 01 for HAKI Modular Scaffolding and HAKI User's Manual.

Ensure that ground conditions are capable of carrying loads to be imposed by the scaffold. Whenever possible start erecting at the highest ground point.



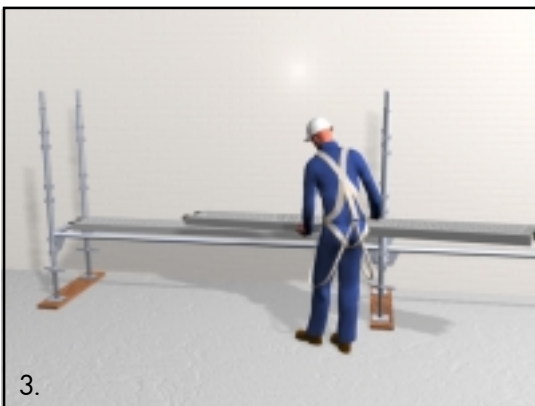
Preparation

Lay the components to be assembled on the ground. Place base jacks onto sole plates, place 1500 mm standards on base jacks, mount the first single tube beam in required position and lock it. Erection can also be performed with the aid of 3000 mm standards on the outside and 2000 mm standards on the inside of the scaffolding, the first lift height will be 1.5 m.



Levelling

Determine the height of one of the first base jacks as a reference level. Place a magnetic level on one of the single tube beams and by making rotating motions set the level of all other base jacks.



Installing steel planks

Fix the end of the steel plank to the beam. Erect the other end of the steel plank, secure both the ends with the locking rods.



Installing guardrail frames

Fit guardrail frames to the standards. Secure the guardrail frames in required position.



Adding standards

Add 2000 mm standards on the lower standards. Make sure that the holes in the standard fully coincide and are parallel to the façade.



Erecting ledgers

Erect all single tube beams along the façade. When their position is completely determined secure the beams.



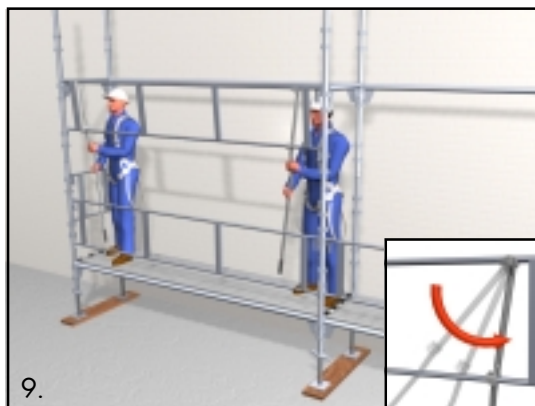
Erecting transoms

Erect all transoms. When their position is completely determined secure them.



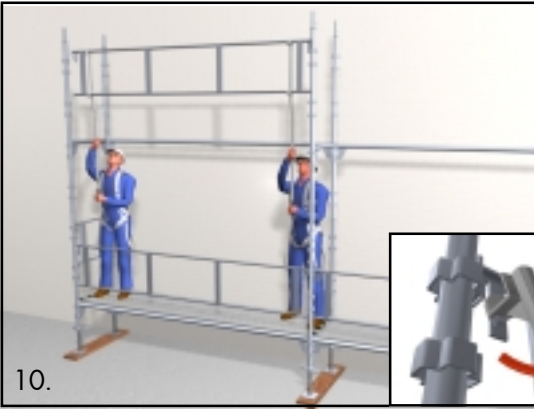
Provisional guardrail frames

To provide full safety, the upper guardrails must be erected before the erector climbs up the platform. For this purpose fit provisional guardrail frames, in any unoccupied pockets of the standard. The locking tongues on the guardrail frame must be on the inside.



Advance guardrail tool for erecting upper guardrails

Hook the guardrail tools in required position and fix them on the provisional guardrail frame.



Erection of upper guardrail frames

Raise guardrail frames from the lower platform and fix them in the pockets.



Secure the guardrail frames using the upper end of the guardrail tool.

10.



Erecting decking unit trapdoor

Erect the end of a decking unit on the beam and the other end on the opposite beam. Secure the decking unit trapdoor using the lock fittings.

11.



Erecting ladder

Hook the ladder onto the decking unit trapdoor.

12.



Installing steel planks

Fix the end of the steel plank to the beam. Erect the other end of the steel plank, secure both the ends with the locking rods.



Erecting diagonal braces

When using diagonal braces, fit them as close as possible to the node points, transom positions.



Access to the upper levels

The upper level is duly protected. Due to the ladder the access to the upper level is easy and safe.



16.

Erecting toeboards

Toeboards are secured to standards with toeboard clips.



17.

Anchoring

By using tie rod tubes and right angle couplers 48x48 anchor the scaffolding to the structure.

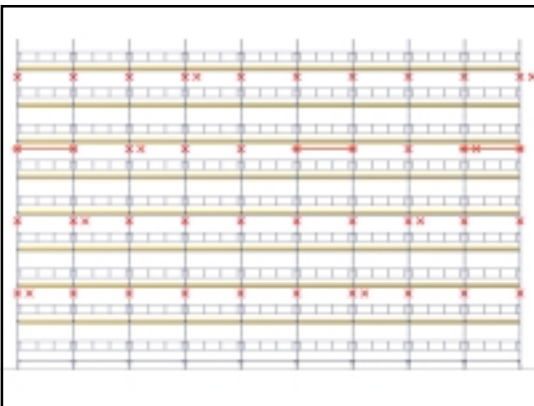
Bracing and tying-in

Each lift must be fitted with a guardrail frame 1.0 m above the lift level on the outside, also the lowermost lift. If using diagonal braces, they must be fitted in every fifth bay and always in the end bays.

Plan braces must be fitted in every fifth bay and always in the end bays at every 12 m in height.

The scaffold must be tied to the structure at each 4 m in height at each inner standard at the nodes between standards and transoms. The lowest tie point must not be more than about 4.8 above ground.

Ties able to resist horizontal forces shall be fitted to at least every fifth pair of standards along the scaffold at each tie level.



Permissible loads on standards

The loads are valid for scaffold width 650 mm and 960 mm.

Lift height m	Vertical distance between ties m	Permissible standard loads kN	
		Width 650 mm	Width 960 mm
1.5	3.0	21.6	22.2
	1.5	33.9	30.9
2.0	4.0	19.5	17.7
	2.0	31.6	28.7



1 kN = 100 kp

Permissible loads on platforms

Platform	Bay length mm	Load class	Permissible load kN/m ²
Decking unit	1200 - 3000	4	3.0
Steel plank	700 - 2500	6	6.0
	3050	5	4.5

1 kN = 100 kp

Permissible loads on beams

		
Type of beam	Permissible uniform load Q kN	Permissible centre point load P kN
ERB 650	26.0	13.0
ERB 720	26.0	13.0
ERB 960	26.0	13.0
ERB 1000	26.0	13.0
ERB 1200	26.0	13.0
ERB 1605	19.9	10.0
ERB 1914	13.0	6.5
ERB 2450	9.3	4.7
ERB 3000	9.0	4.5

1 kN = 100 kp



CERTIFICATE

Type examination certificate issued by an accredited certification body



TYPE EXAMINATION CERTIFICATE No. 14 55 02

Narrow Scaffolding

Holder/Manufacturer/Supplier

HAKI AB
280 63 Sibbhult

Product name

HAKI Narrow Scaffolding

Product description

As described in the appendix to this certificate. See also the appendix to the certificate for HAKI modular scaffolding, no. 14 55 01. Technical documentation in accordance with the material supplied for file 95C8,1424.

Requirements

The National Board of Occupational Safety and Health's Code of Statutes, AFS 1990:12 Scaffolding, Paragraph 6, (SP's certification rules, SPCR 064), SS-HD 1000.

Permissible load

Load class 4 (3,0 kN/m²), in accordance with the product description.

Marking

All components, except locks, pins etc. shall be durably and permanently marked with HAKI's logotype and the year of manufacture (two digits). HAKI's logotype may be applied only to type-examined products. The markings as shown below may also be applied to the products.

Validity

This type examination certificate is valid until 2007-12-30.


This certificate replaces the certificate having the same number, but dated 1999-08-27.

This is a translation from the Swedish original document. In the event of any dispute as to the content of the document, the Swedish text shall take precedence.

Borås, 7th March 2001
Translation 7th March 2001

SP Swedish National Testing and Research Institute Certification


Leif Erik Månsson
Certification manager


Gunnar Söderlind
Certification officer



SAFETY CHECKLIST

1. Is the ground condition adequate to take the load imposed by the scaffold?
2. Are the sole plates adequate?
3. Is the scaffold plumb and level?
4. Are all components in their correct position and all locking tongues engaged?
5. Have any items been removed?
6. Is the scaffold adequately braced and tied in?
7. Are toeboards and guardrails in position?
8. Is the scaffold correctly loaded? - Ensure that loads are concentrated near the standards.

HAKI AB is ISO 9001:2000 certified



HAKI AB

SE-280 63 Sibbhult, Sweden

Tel +46 44 494 00 Fax +46 44 494 72

info@haki.se

www.haki.com