KLH®

MADE FOR BUILDING
BUILT FOR LIVING

OPERATING INSTRUCTIONS FOR KLH® LIFTING SYSTEMS

IMPRINT

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CONTENT

01 UNLOADING, TEMPORARY STORAGE, LIFTING 03
02 GENERAL INFORMATION ON INSTALLING THE ONE-WAY LIFTING LOOPS 04
03 INSTALLATION 07
04 EC CERTIFICATES OF CONFORMITY 08

01 UNLOADING, TEMPORARY STORAGE, LIFTING

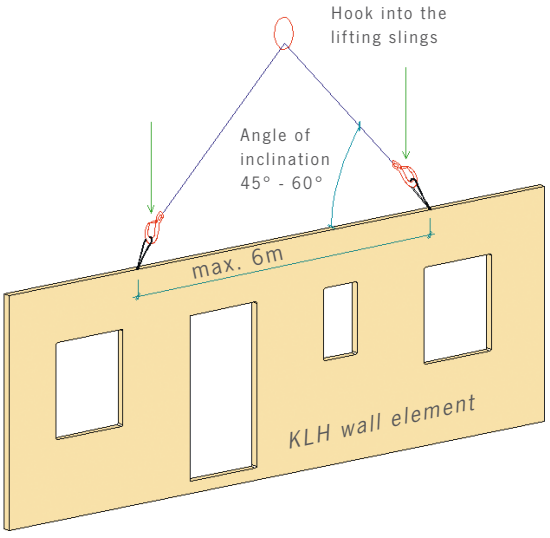
GUIDELINE FOR THE USE OF KLH® LIFTING GEAR SYSTEMS WITH EC CERTIFICATE OF CONFORMITY

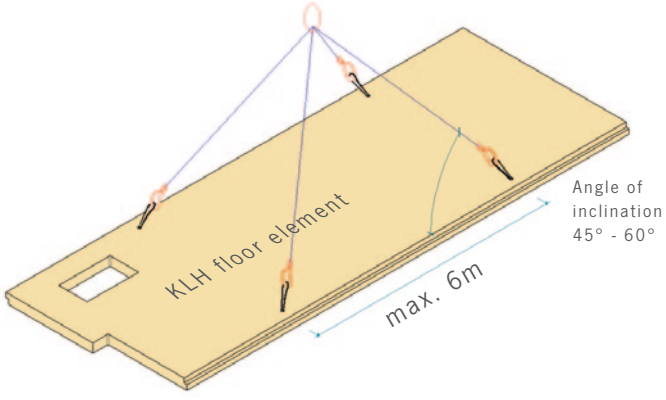
Lifting operations using KLH® lifting gear systems with an EC certificate of conformity may only be carried out with suitable lifting equipment and a suitable hanger.
Use a high capacity lifting device (minimum diameter 10 mm) in accordance with EN 818-2.
Please observe the following procedure for lifting, unloading, interim storing, and assembling:

- Visually inspect the installed one-way lifting loops
- Hook into all installed lifting loops (hook opening to the outside, please refer to illustration)
- Maximum distance between the lifting points 6 m
- Inclination angle of the hanger 45° - 60°

TRANSPORT FLAT → LIFT FLAT OR TRANSPORT STANDING → LIFT STANDING

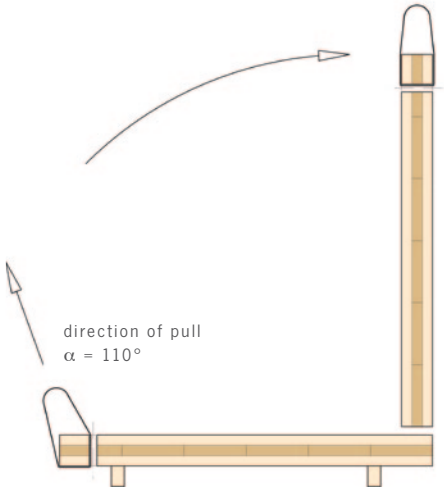
Unloading and assembling are carried out directly from the trailer using the built-in KLH® lifting gear; the position of the element remains unchanged.





TRANSPORT FLAT →
TURNING UPRIGHT →
LIFT STANDING

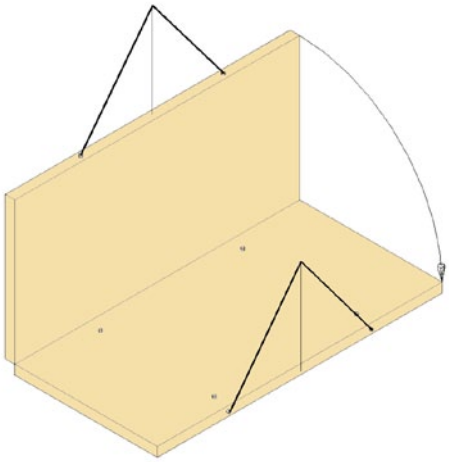
The built-in KLH® lifting devices of type „W“ and „VLS W“ are suitable both for turning upright and for lifting the element upright. When turning upright, the elements must be prevented from slipping (direction of pull α = 110°). This variant can be used for horizontal delivery of wall elements.



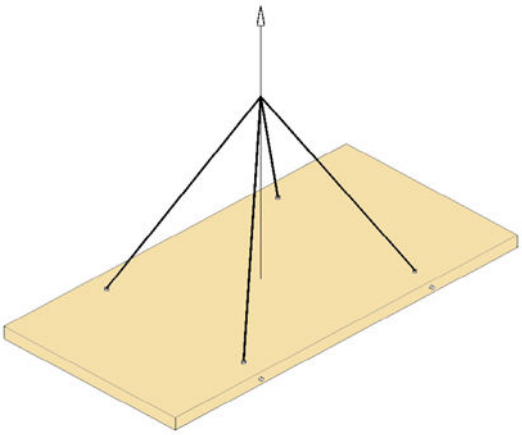
Load securing in accordance with legal regulations and provisions

TRANSPORT STANDING →
LAYING DOWN →
LIFT FLAT

The element is unloaded and deposited horizontally and securely using the built-in KLH® lifting gear type „W“ or „VLS W“. The hanger must then be transferred to the lifting gear for horizontal lifting (e.g. type „VLS S“). In exceptional cases, the loops supplied must be installed on site in the factory-prepared holes in accordance with the installation instructions. This variant can be used for upright delivery of slab or roof elements.



1. Unloading with the unloading lifting system



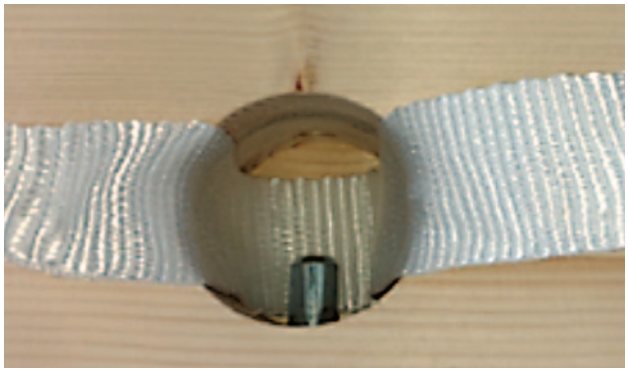
2. Assembling with the assembly lifting system

02 GENERAL INFORMATION ON INSTALLING THE ONE-WAY LIFTING LOOPS

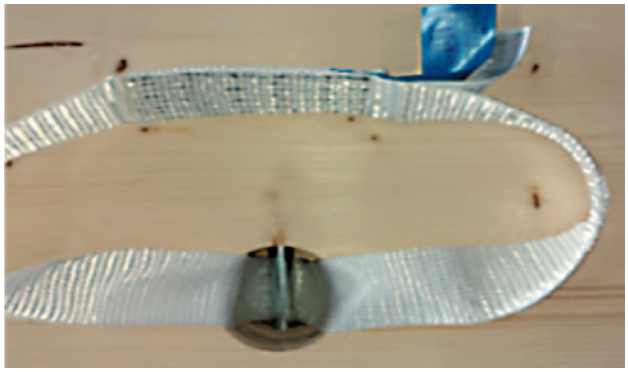
The type and position of the lifting equipment is determined and ordered by the customer. It must be coordinated with both the construction site processes and the means of transportation of the delivery, especially if it is necessary to turn upright or flip elements at the place of arrival. Required drill holes must be marked in the element plans and, if necessary, sealed or filled in a suitable manner on site after installation.

The lifting loops are always installed at the factory. In exceptional cases, only the unloading lifting system is installed for upright transportation, and the system components supplied for the assembly lifting system must be installed on site after unloading. It must be ensured that the loops or bolts provided for the respective element are installed in accordance with the following illustrations.

INSTALLATION OF THE LOOPS FOR SYSTEM VLS S



1. Insert the loop and dowel into the hole



2. Transport situation with rolled-up loop in the blind hole

3. Lifting situation with built-in system VLS S

INSTALLATION OF THE LOOPS FOR SYSTEM W

1. Lifting situation with built-in system W

INSTALLATION OF THE LOOPS FOR SYSTEM FD

1. Insert the lifting loop into the hole

2. Feed the loop back through the second hole

3. Pull the loop upwards

4. Lifting situation with built-in system FD (100 mm center distance of the holes at 45° to the grain direction)

INSTALLATION OF THE LOOPS FOR SYSTEM FB

1. Insert the loop into the hole

2. Do not position the loop seam in the area of the bolt or lifting hook

3. Insert the bolt with the safety clip facing downwards and position it accordingly

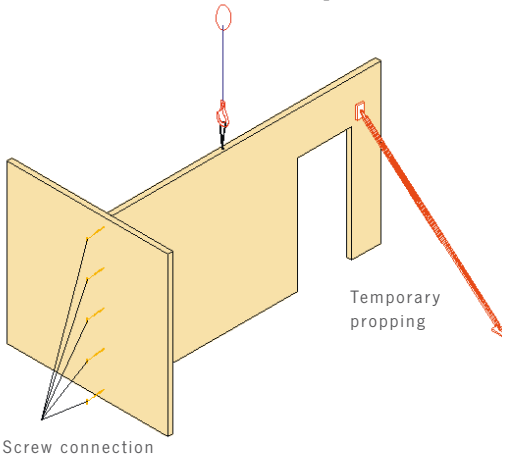
4. Lifting situation with built-in FB system

03 INSTALLATION

VERTICAL ELEMENT INSTALLATION - WALL ELEMENTS

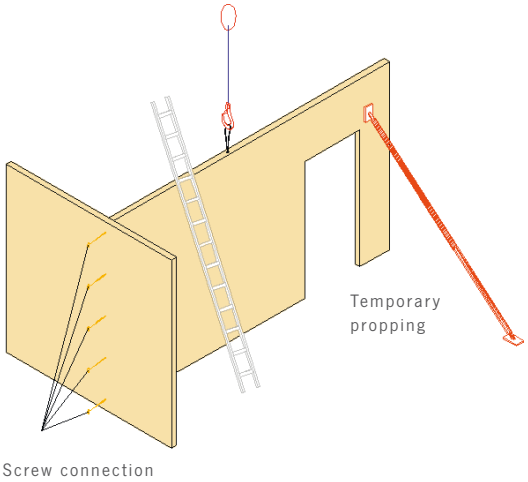
FIX WALL ELEMENT

- Bring the wall into the installation position - ensure that the wall is secured in position



UNHOOK CRANE HOOKS

- Observe the applicable employee protection regulations and other provisions



DISPOSE OF ONE-WAY LIFTING LOOPS

- According to EU waste directive

HORIZONTAL ELEMENT INSTALLATION - SLAB AND ROOF ELEMENTS

FIX SLAB/ROOF ELEMENT

- Bring the slab/roof element into the installation position - ensure that the element is secured in position

UNHOOK CRANE HOOKS

- When accessing the slab or roof element, observe the applicable employee protection regulations and other provisions

CUT THE LIFTING LOOPS WHEN USING THE VLS SYSTEM

- Wearing safety gloves and using a safety knife in accordance with the Employee Protection Ordinance

DECLARATION of CONFORMITY

accord. Directive of Machinery 2006/42/EG

The Signee:	*Dipl.-Ing. Dr. techn. Erich Moschik* *Zivilingenieur für Maschinenbau, A-9300 St. Veit/Glan*

declares, that the system / machinery

1. Product:	***KLH Lifting Systems*** ***for lifting wall and ceiling elements*** ***consisting of lifting loops, manuf. Pewag as well as bolts***
2. Type:	***W 1000, W 2500, FD 1000, FD 2500, FB 1000, FB 2500***
3. Year of Manufacture:	***2009 / Adaptation 2021 / Adaptation 2023***
4. User:	***KLH Massivholz GmbH, A-8842 Teufenbach-Katsch, Gewerbestraße 4*** ***KLH Massivholz Wiesenau GmbH, A-9400 Wolfsberg, Schwemmtratten 7***

meets the following essential safety requirements and standards:

- Provisions of the EC Directives:

2006/42/EG	*Directive of Machinery*

- harmonized Standards

EN 12100 -1	*Safety of machinery - General principles for design — Risk assessment and risk reduction*
EN 547-3	*Safety of machinery - Human body measurements*
EN 614-2	*Safety of machinery - Ergonomic design principles,* *Part 2: Interactions between the design of machinery and work tasks*
EN 818-2	*Short link chain for lifting purposes - Safety* *Part 2: Medium tolerance chain for chain slings - Grade 8*
EN 1492-1	*Textile slings - Safety* *Part 1: Flat woven webbing slings made of man-made fibers for general purpose use*
EN 13854	*Standards on Safety of Machinery - Minimum gaps to avoid crushing of parts of the human body*
EN ISO 13857	*Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs*
EN ISO 14120	*Safety of machinery - General requirements for the design and construction of fixed and movable guards*
EN ISO 14123	*Safety of machinery - Reduction of risks to health from hazardous substances emitted by machinery*

Originally issued	*16.06.2012*
Prolongation	*01.06.2021*
Prolongation	*04.12.2023*
Valid until	*03.12.2028*

St. Veit/Glan, 04.12.2023

The content of this declaration is in conformance with the DIN EN ISO/IEC 17050-1

DECLARATION of CONFORMITY

accord. Directive of Machinery 2006/42/EG

The Signee:	*Dipl.-Ing. Dr. techn. Erich Moschik* *Zivilingenieur für Maschinenbau, A-9300 St. Veit/Glan*

declares, that the system / machinery

1. Product:	***VLS-Visible Lifting System*** ***For lifting wall and ceiling elements*** ***consisting of lifting loops, TGH rod and one-way bolts***
2. Type:	***W2, W3, W4, W5 – wall elements*** ***D1, D2, D3 – ceiling elements***
3. Year of Manufacture:	***2009 / Adaptation 2021 / Adaptation 2023***
4. User:	***KLH Massivholz GmbH, A-8842 Teufenbach-Katsch, Gewerbestraße 4*** ***KLH Massivholz Wiesenau GmbH, A-9400 Wolfsberg, Schwemmtratten 7***

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EN 818-2	*Short link chain for lifting purposes - Safety* *Part 2: Medium tolerance chain for chain slings - Grade 8*
EN 1492-1	*Textile slings - Safety* *Part 1: Flat woven webbing slings made of man-made fibers for general purpose use*
EN 13854	*Standards on Safety of Machinery - Minimum gaps to avoid crushing of parts of the human body*
EN ISO 13857	*Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs*
EN ISO 14120	*Safety of machinery - General requirements for the design and construction of fixed and movable guards*
EN ISO 14123	*Safety of machinery - Reduction of risks to health from hazardous substances emitted by machinery*

Originally issued	*16.06.2012*
First Prolongation	*01.06.2021*
Second Prolongation	*04.12.2023*
Valid until	*03.12.2028*

St. Veit/Glan, 04.12.2023

Dipl.-Ing. Dr. techn. Erich Moschik

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DECLARATION of CONFORMITY

accord. Directive of Machinery 2006/42/EG

The Signee: *Dipl.-Ing. Dr. techn. Erich Moschik*
Zivilingenieur für Maschinenbau, A-9300 St. Veit/Glan

declares, that the system / machinery

1. Product: ***VLS-S Visible Lifting System***
For lifting ceiling elements

2. Type: ***S1, S2, S3, S4 – ceiling elements***

3. Year of Manufacture: ***2021 / Adaptation 2023***

4. User: ***KLH Massivholz GmbH, A-8842 Teufenbach-Katsch, Gewerbestraße 4***
KLH Massivholz Wiesenau GmbH, A-9400 Wolfsberg, Schwemmtratten 7

meets the following essential safety requirements and standards:

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Valid until *03.12.2028*

St. Veit/Glan, 04.12.2023

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For detailed information about KLH®-Lifting systems with an EC declaration of conformity please visit www.klh.at
The use of other lifting equipment with an EC Declaration of Conformity may only be used in accordance with the valid operating instructions of the respective manufacturer.
Please observe the country-specific safety regulations for all systems and ensure that the prescribed personal protective equipment and construction site equipment are used.

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