



# User manual

## MODUBEAM





**EC declaration of conformity**

Manufacturer: Kuljetus NPR Oy  
Kalliokuja 1, 09220 Sammatti

Name and address of the individual, who is responsible to collect the technical file:

Jarkko Kokkola  
Kalliokuja 1, 09220 Sammatti

Hereby declares that the conformity of the product  
ModuBeam  
serial number \_\_\_\_\_

with the requirements of the machinery directive 2006/42/EY is established by the fulfillment of the following harmonized European Standards:

- SFS-EN 13155
- SFS-EN ISO 12100

Time and place:

Signature: \_\_\_\_\_

Jarkko Kokkola



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## 1. General information



This operating manual guides you to use the lifting beam manufactured by Kuljetus NPR Oy correctly and safely. Read the operating instructions carefully before using the lifting beam.

## 2. Safety

- This section provides instructions that must be followed during the usage ModuBeam. In addition to these instructions, the user must comply with the regulations in force and / or other occupational safety regulations.
- Familiarize yourself with the structure of ModuBeam and this user manual before using it.
- Only persons familiar with the operation of ModuBeam may use or service the lifting beam.
- ModuBeam is intended as a lifting aid for lifting objects. All other use is strictly prohibited.
- It is forbidden to stand in the vicinity of ModuBeam during use and it is strictly forbidden to lift the load above any person!
- Also observe other safety regulations issued by crane manufacturers.
- If the ModuBeam operator notices a fault, damage or wear that endangers safety on the beam, the operation must be stopped and the fault must be reported to ModuBeams owner.
- Always store ModuBeam on a level surface.
- ModuBeam must not be used in areas where there is a risk of fire or explosion.
- It is strictly prohibited to lift a person with ModuBeam.
- It is prohibited to handle hazardous substances such as;
  - Explosives
  - Hot, molten masses
  - Radiant materials
- ModuBeam cannot guarantee proper lifting operation. Lifting Events should always be planned by a person with sufficient professional skills and experience in lifting work.
- It is prohibited to use ModuBeam during powerful winds.



### 3. Machine overview

#### Machine description

ModuBeam is a lifting aid intended to assist in lifting objects.

#### Technical information

ModuBeam	Basic beam	X-beam	H-beam
Length min.	2546 mm	2546 mm	3300 mm
Length max.	7306 mm	4346 mm	4450 mm
Width min.	390 mm	2540 mm	2550 mm
Width max.	390 mm	4240 mm	4250 mm
Weight (incl. necessary accessories)	198 kg - 325 kg	273 kg - 329 kg	429 kg - 540 kg
Maximum permissible load at the shortest setting (WLL), center lift	13 ton	16 ton	10 ton
Maximum permissible load at the shortest setting (WLL), spreading lift 45 °	15 ton	20 ton	12 ton
Maximum permissible load at longest setting (WLL), center lift	4 ton	10 ton	10 ton
Maximum permissible load at the longest setting (WLL), spreading lift 45 °	10 ton	20 ton	12 ton
Maximum tilt angle from the horizontal	10,6°	6°	6°

The service life of ModuBeam is 20 000 operations.

## 4. Transportation, handling and storage

### Transportation

ModuBeam must always be set to its shortest setting during transportation.

Secure ModuBeam firmly during transport.

### Storage

ModuBeam must be cleaned of water and debris after every use.

Store ModuBeam protected from rain. Store ModuBeam on a level surface.



ModuBeam may fall on an uneven surface.

**DANGER!**

## 5. Assembly and commissioning

The basic beam package includes:

1. 1 pc main beam
2. 2 pcs extension beam 1
3. 2 pcs locking pin

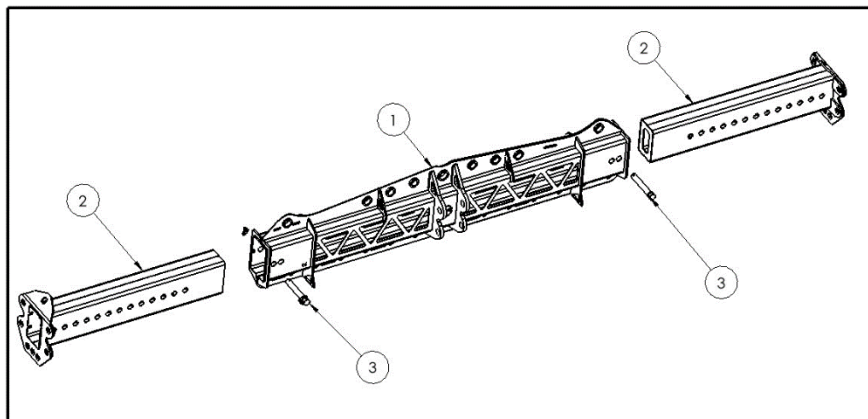


Figure 1, parts of the basic beam

Use only the accessories provided in the package.

In addition, additional parts are available to change the structure of ModuBeam as required:

4. Extension beam 2
5. Extension beam 3
6. Connecting parts for H-beam configuration
7. Adjustment piece for extension beam 2
8. Locking pins for X- and H-beam configurations

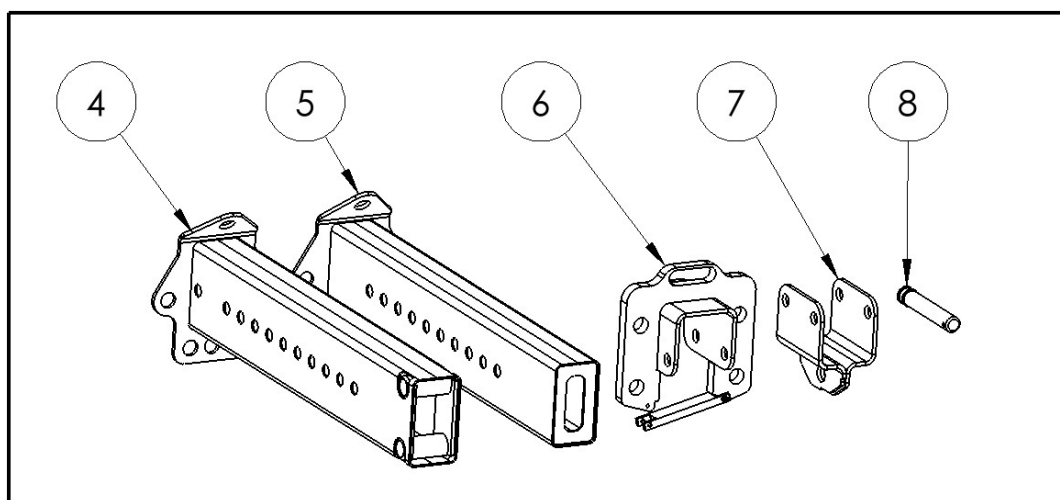


Figure 2, add-ons

## Assembly



NOTE! Use only the accessories provided in the package

When assembling ModuBeam, use only the accessories provided in the package.

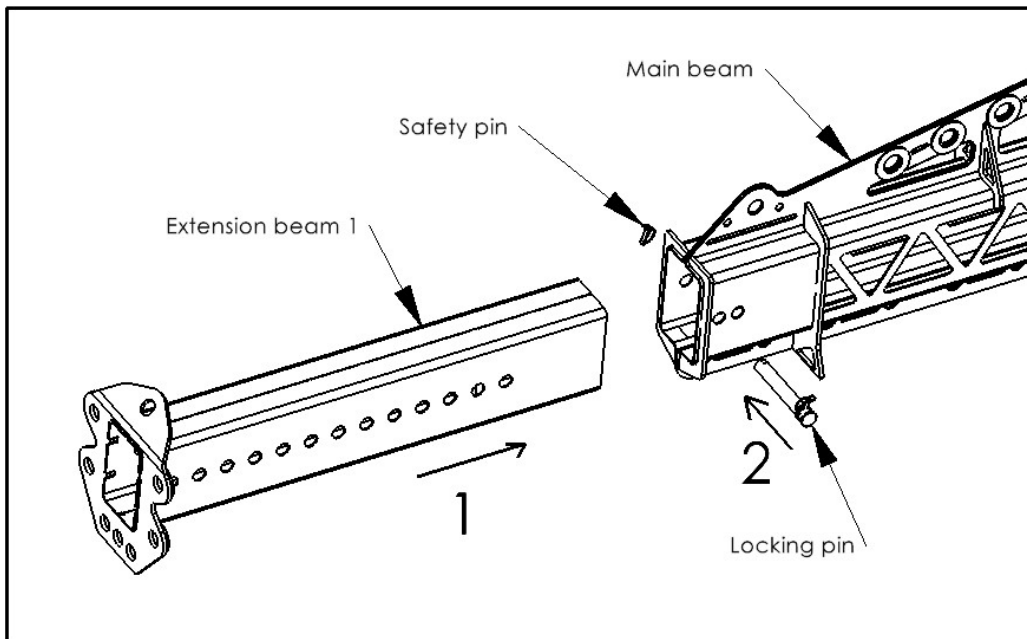


Figure 3, assembly of the basic beam

## Extending the basic beam

The basic beam can be extended with accessories as shown below.

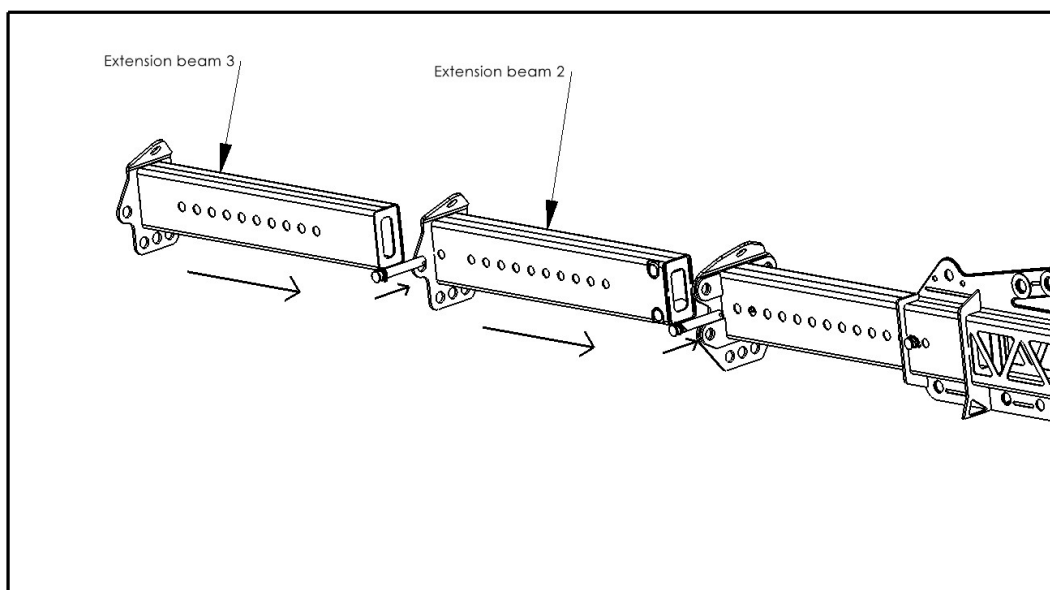


Figure 4, extending the basic beam



## X-configuration

The extension beam 2 allows ModuBeam to be converted to an X-beam as shown below.  
Note! Use only the appropriate locking pins provided in the package!

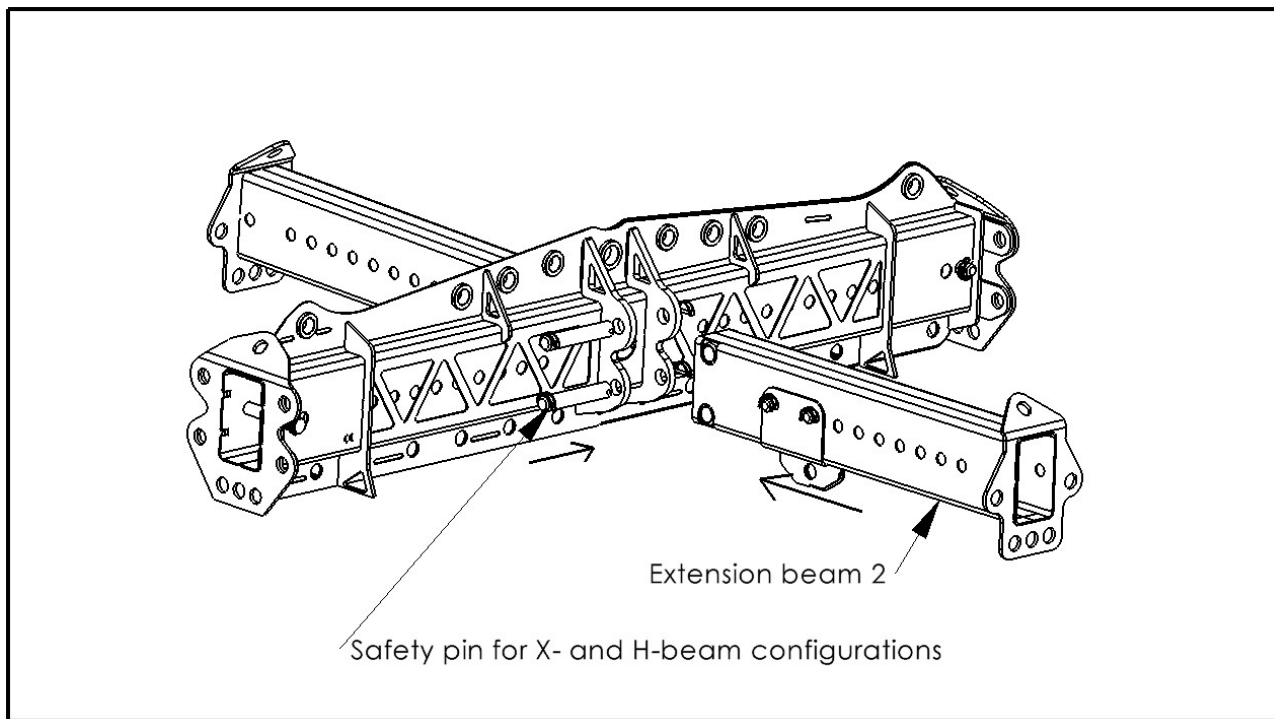


Figure 5, X-beam configuration

The position of the load lifting point for extension beam 2 can be changed as required with a separate adjusting piece. The adjusting piece is fastened with safety pins.

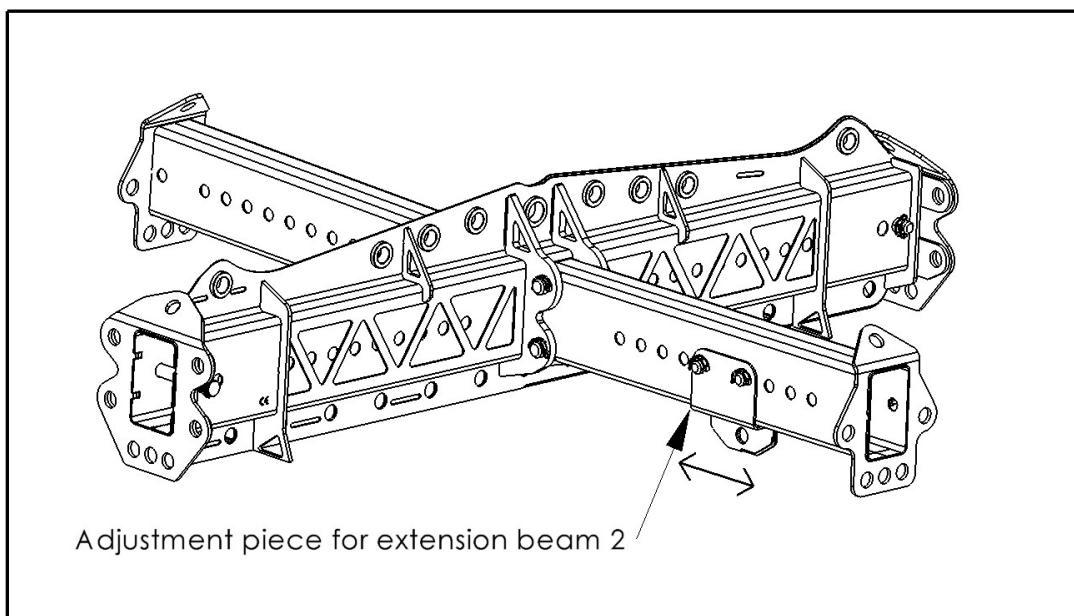


Figure 6, adjusting piece for extension beam 2

The X-beam can be widened by inserting the extension beam 3 inside the extension beam 2.

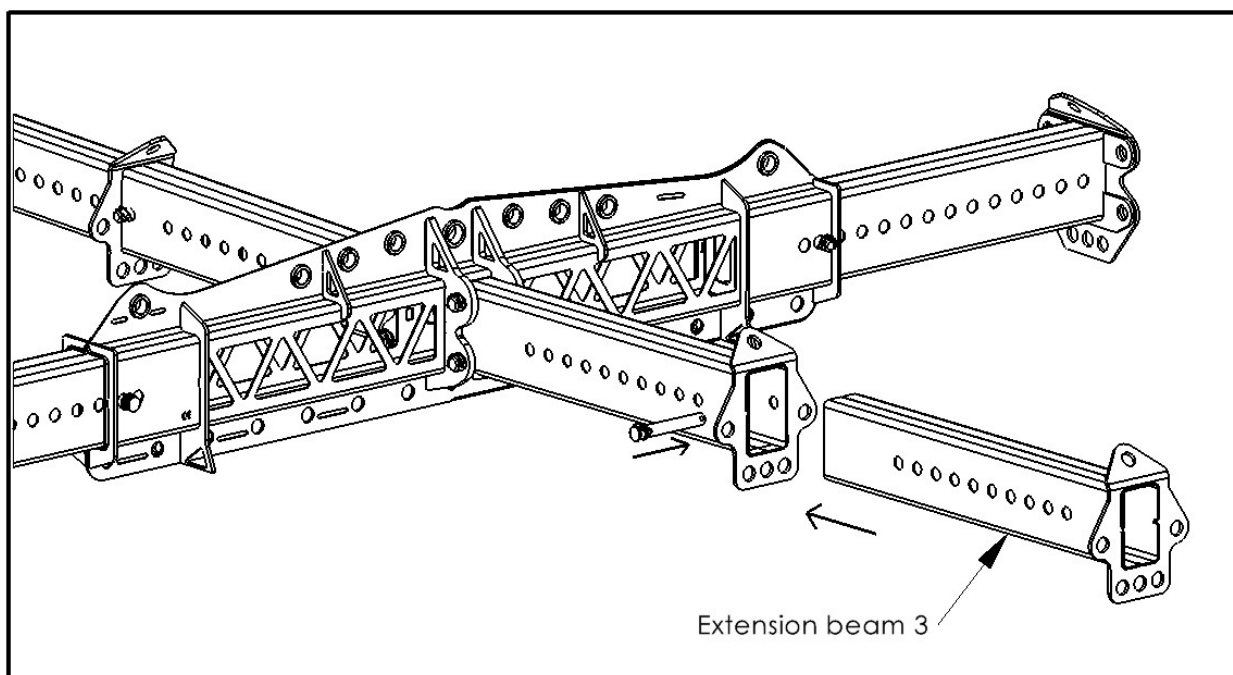


Figure 7, widening the X-beam

## H-configuration

ModuBeam can be converted to an H-beam as shown below using the additional accessories.

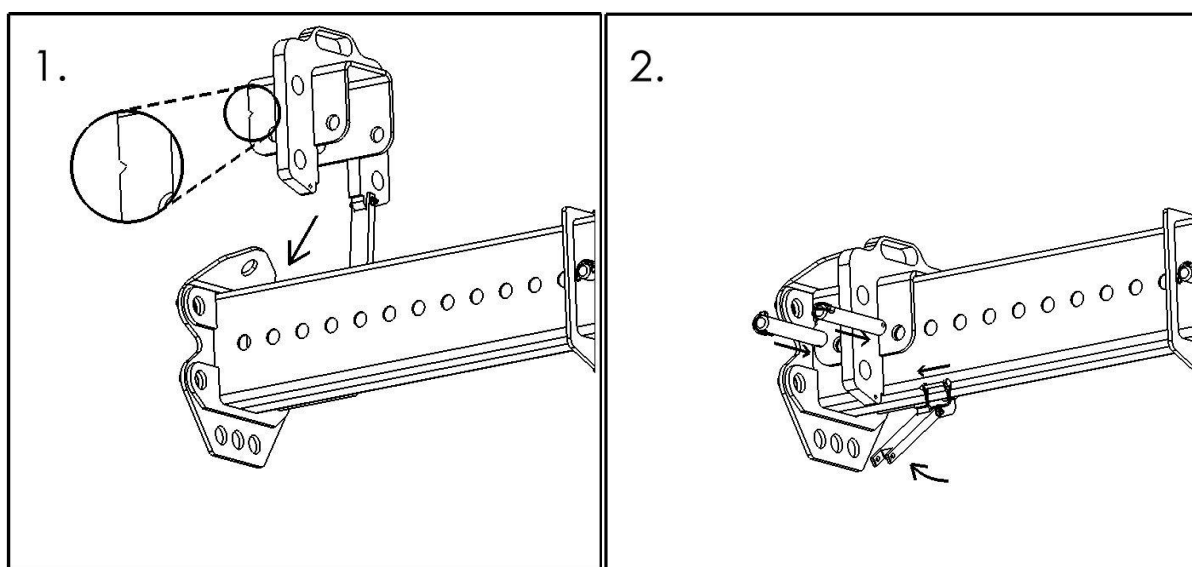


Figure 8, attaching the add-on

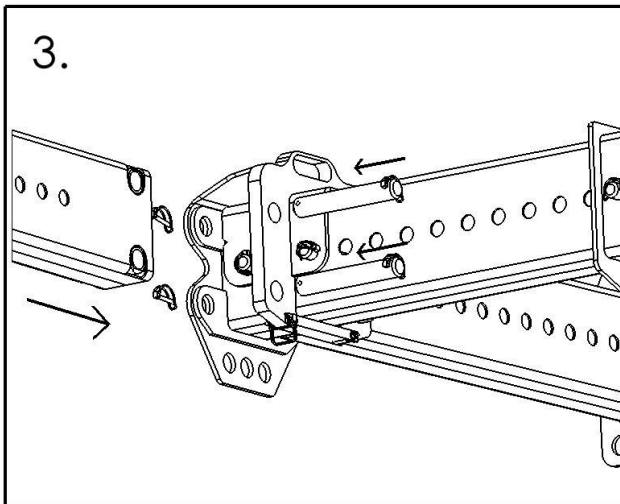


Figure 9, attaching the extension beam 3

At the end of each step, make sure the parts are locked.

The H-beam can also be widened by placing the extension beam 3 inside the extension beam 2.

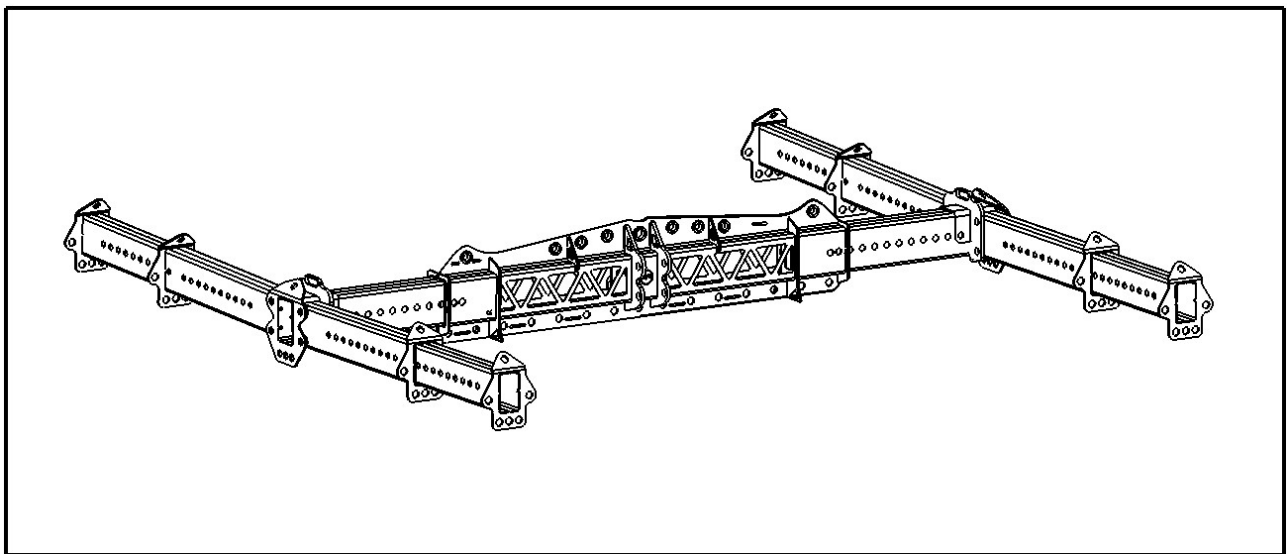


Figure 10, H-configuration

## Commissioning

- Read this manual thoroughly before commissioning.
- Prior to commissioning, check that all the delivered products are error-free and in the correct quantity.

## 6. Using ModuBeam

- Use contrary to the instructions is prohibited! The manufacturer of the lifting boom is not liable for damage caused by improper use.
- ModuBeam is only intended as an auxiliary device for lifting objects.
- Do not lift people with ModuBeam.
- Do not lift objects above people with ModuBeam.
- When used on a construction site, comply with the site-specific regulations and Government decrees in force.
- ModuBeam may only be used for lifting purposes for which it is intended.
- ModuBeam can be operated with a center lift or spreading lift in each configuration as instructed.
- To secure loads to ModuBeam, only use lifting accessories intended for securing loads.
- Always use lifting accessories with the same or greater lifting capacity as ModuBeam.
- It is forbidden to attach the load to attachment points other than those specified in this manual.
- The maximum permissible load must not be exceeded.
- The load must always be evenly attached to ModuBeam at at least two points.
- Before each use, visually inspect for defects. If the boom is damaged during operation, its use must be stopped immediately.
- Before use, make sure that all parts are locked.
- For spreading lifts, the maximum angle is 45°.

## Maximum permissible loads (WLL)

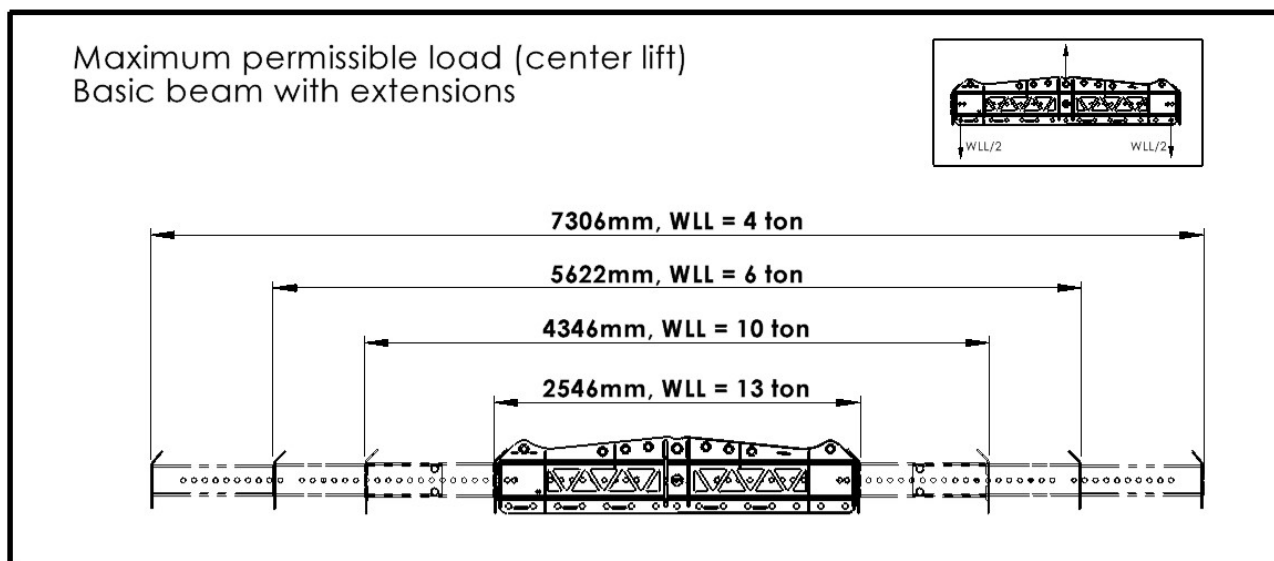


Figure 11, basic beam center lift WLL

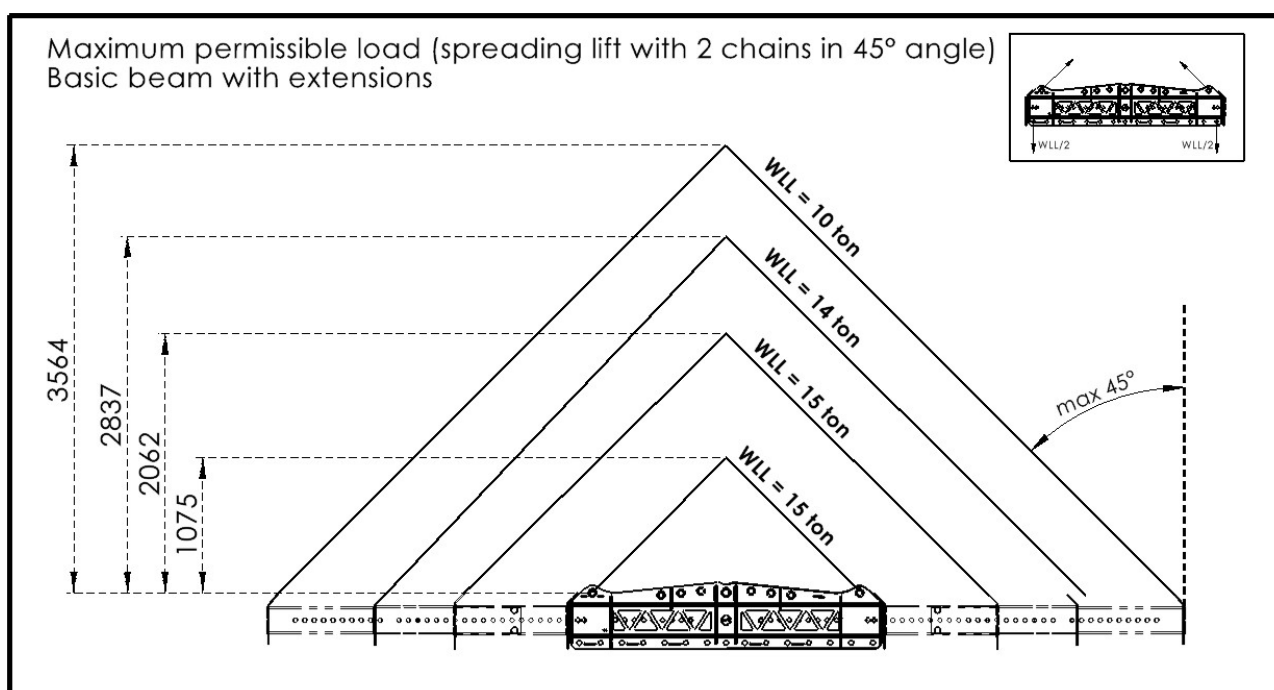


Figure 12, basic beam spreading lift WLL

- The maximum angle of the spreading lift is 45°.

Maximum permissible load (center lift)  
X-configuration

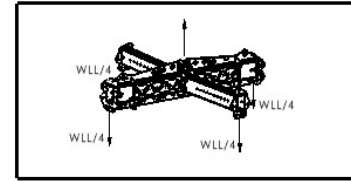
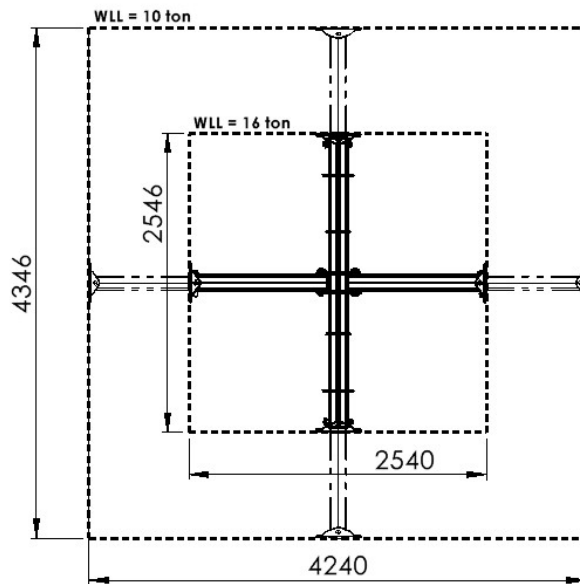


Figure 13, X-configuration center lift WLL

Maximum permissible load (spreading lift with four chains in 45° angle)  
X-configuration

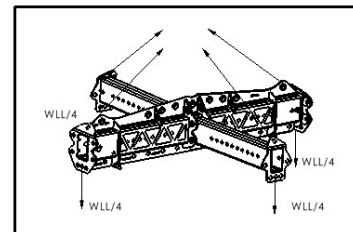
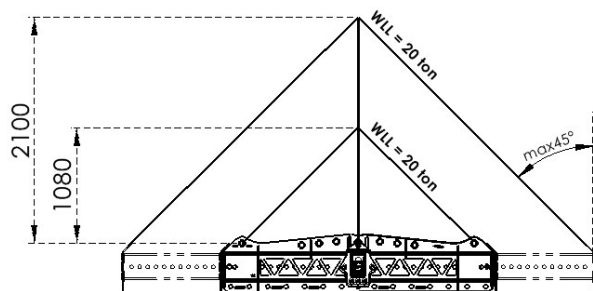


Figure 14, X-configuration spreading lift WLL

- The maximum angle of the spreading lift is 45 °.

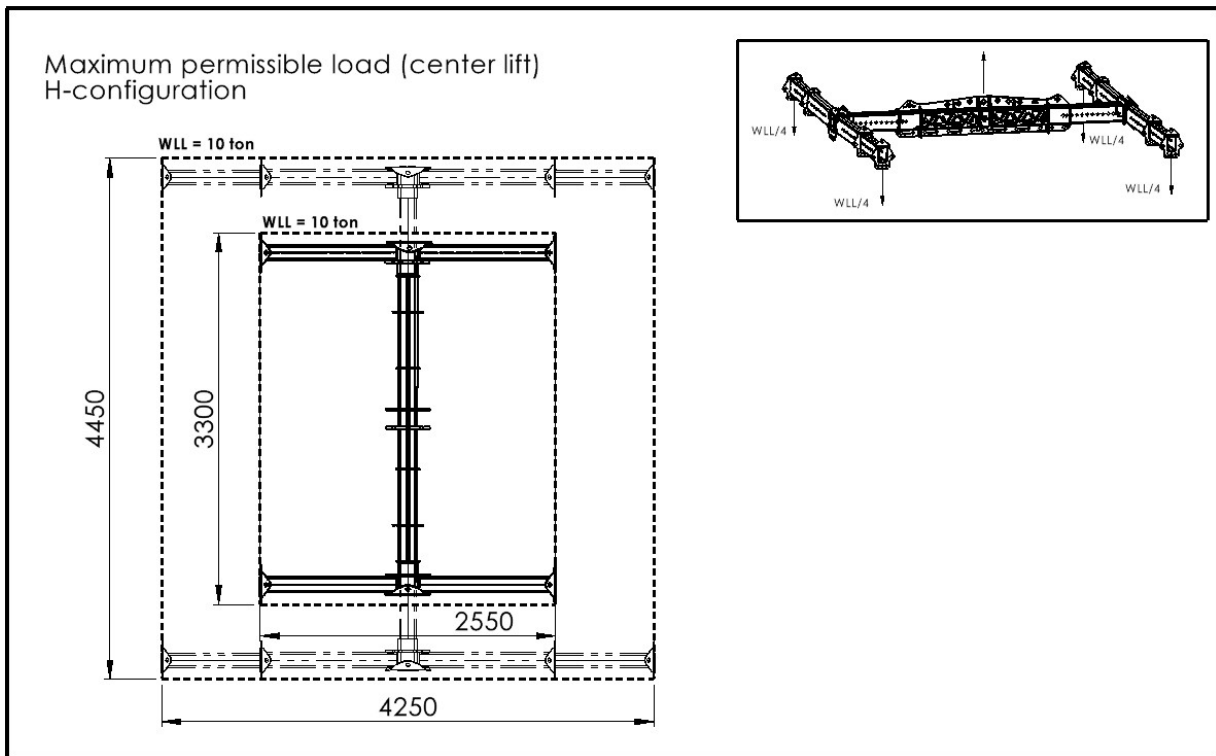


Figure 15, H-configuration center lift WLL

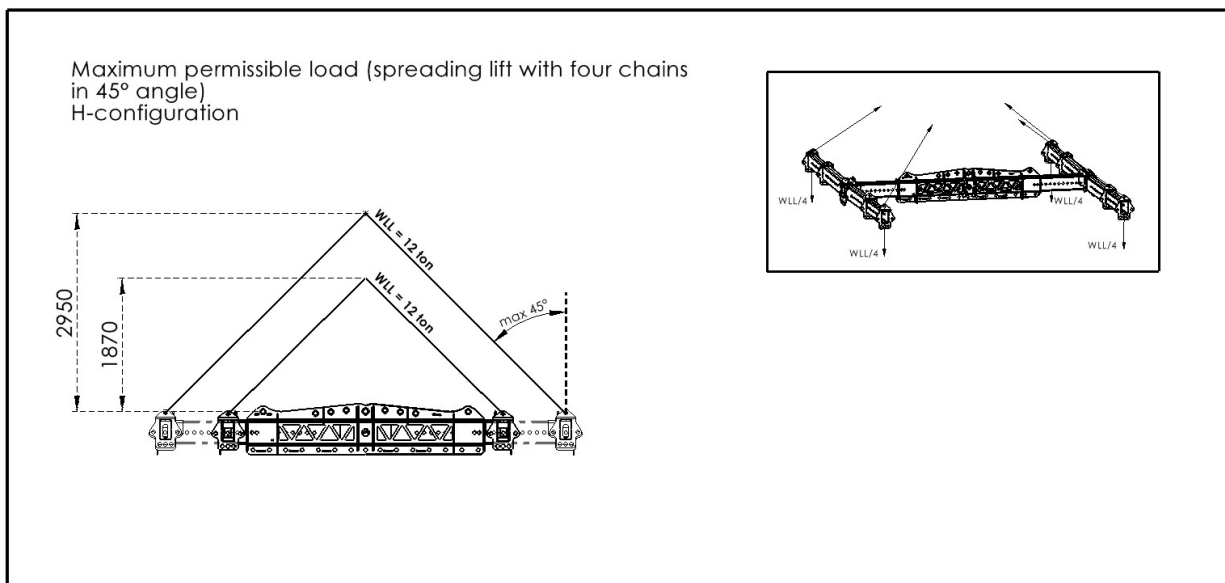


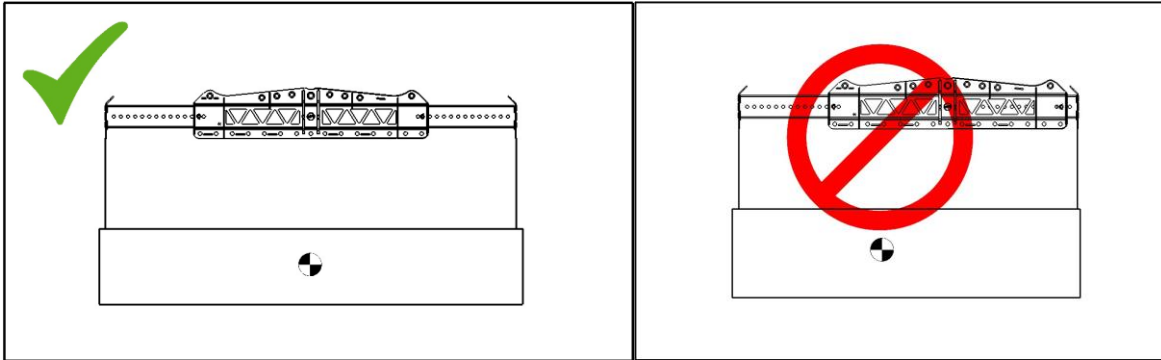
Figure 16, H-configuration spreading lift WLL

- The maximum angle of the spreading lift is 45 °.

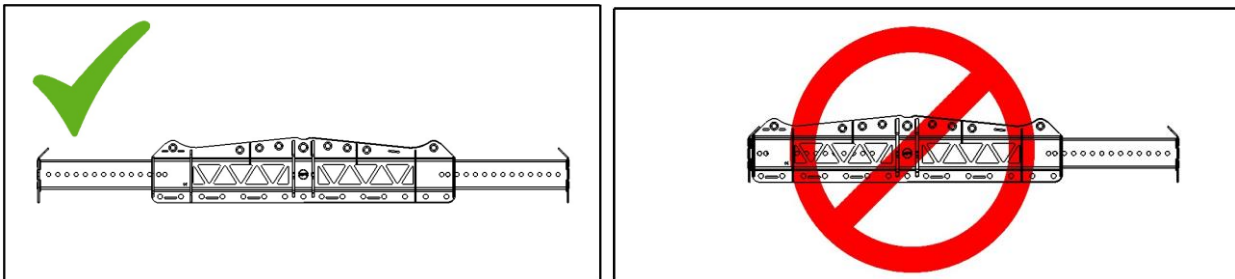


## Securing the load

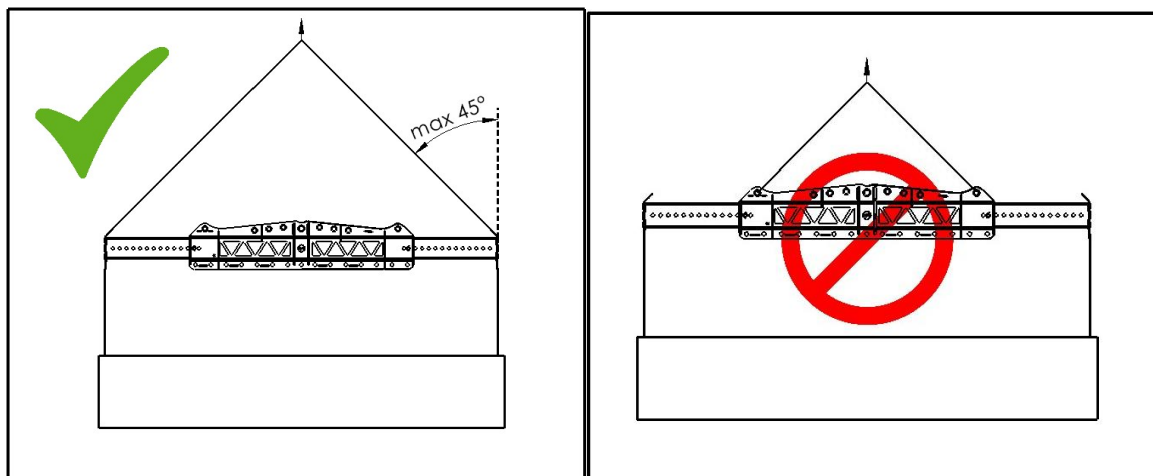
- The load must be secured evenly as shown below.



- Adjustable extension beams must always be adjusted to the same length as shown below.

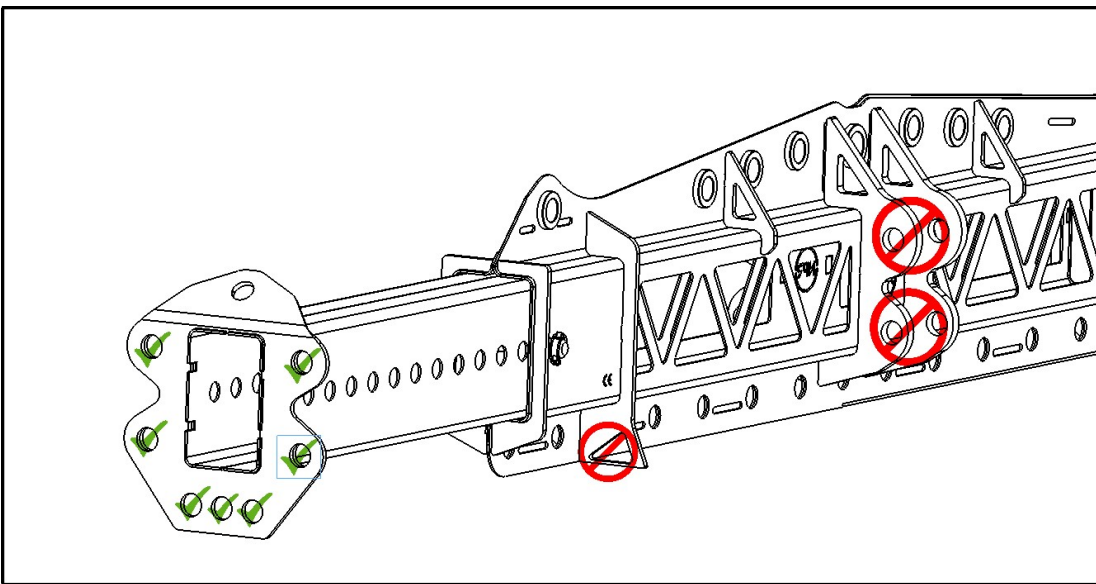
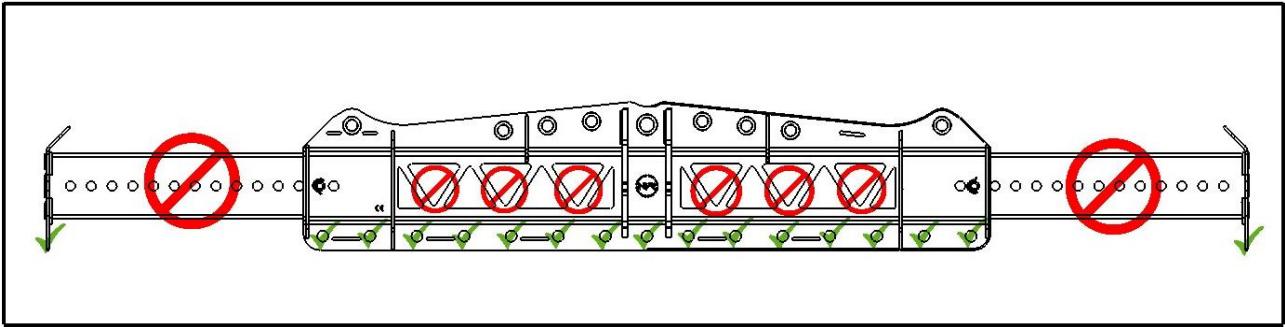


- In spreading lifts, always secure load below the lifting chain as shown below.
- The lifting capacity for spreading lifts only applies when load is appropriately secured.





- Only use lifting gear that is suitable for securing the load
- It is forbidden to attach the load from the pin holes and other holes not intended for lifting.
- It is forbidden to attach the load to the support plates.
- Secure the load only at points intended for supporting the load.



## Adjustments

- Lay ModuBeam firmly to a level surface before conducting any adjusting operations.
- It is forbidden to make any adjustments while ModuBeam is raised off the ground.
- Use caution and wear protective gloves when making adjustments.
- Always make adjustments before securing the load.
- After adjusting, always check the locking of the parts.



## **7. Maintenance and inspection**

- ModuBeam must be inspected annually for the condition of the beam and for any defects / damage / fractures in materials or parts.
- The annual inspections must be recorded in the inspection report. If ModuBeam is defective in any way, it must not be used.
- The safety pins must be replaced if they are damaged.
- Before each use, a visual inspection of the condition of ModuBeam and all of its components must be carried out.



## ModuBeam inspection report

Kuljetus NPR Oy / ModuBeam

The lifting aid is subjected to a commissioning inspection in accordance with the instructions, as well as an annual periodic inspection.

### Commissioning inspection

Date	Inspector	Product number

### Annual inspection

Date	Inspector	Notes