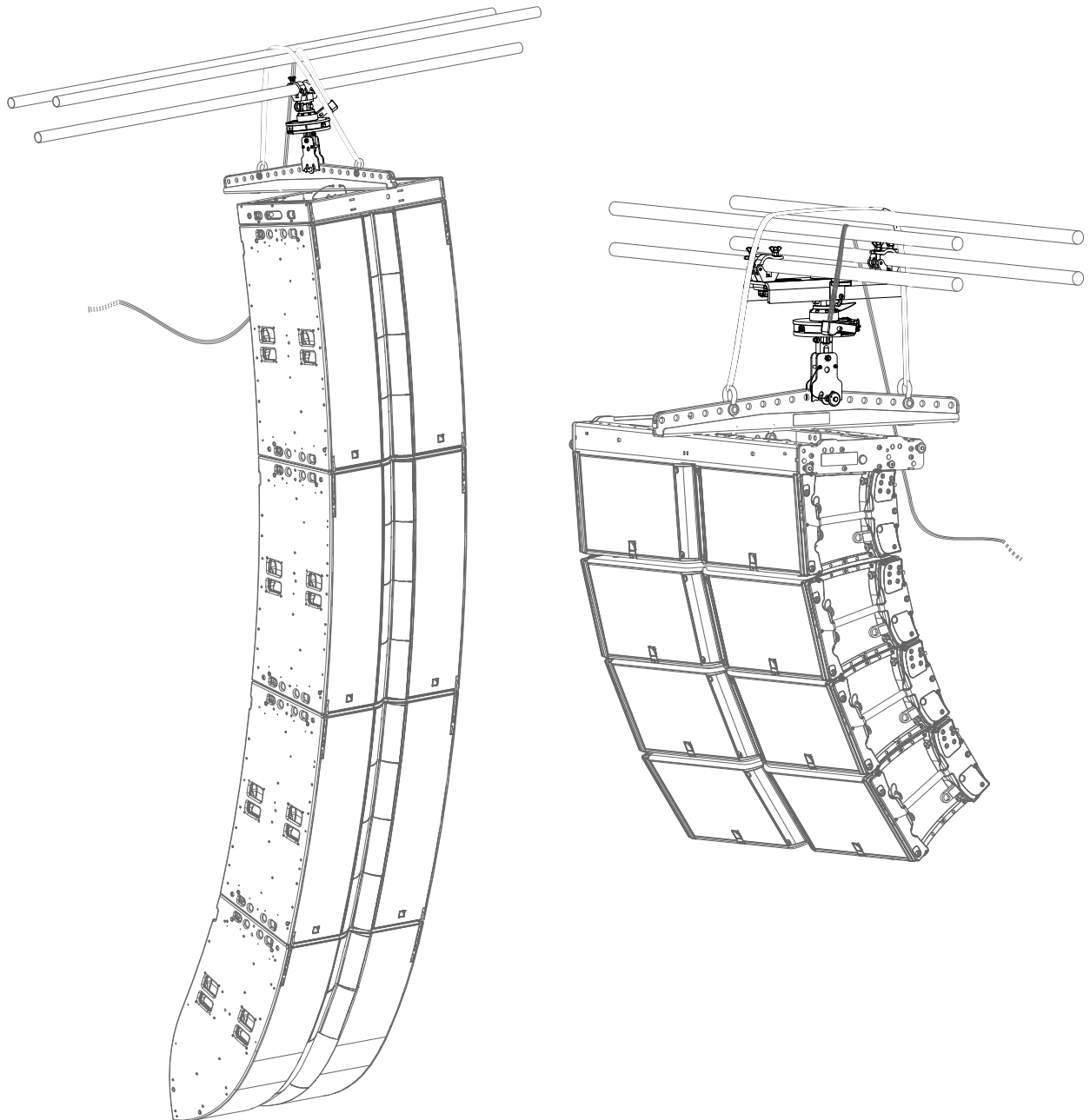


# CLAMP1000



## owner's manual (EN)



Document reference: CLAMP1000 owner's manual (EN) version 3.0

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# Safety

## Instructions

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### **Inspect the system before any deployment.**

Perform safety related checks and inspections before any deployment.

### **Perform preventive maintenance at least once a year.**

Refer to the preventive maintenance section for a list of actions and their periodicity.

Insufficient upkeep of the product can void the warranty.

### **If any safety issue is detected during inspection, do not use the product before performing corrective maintenance.**

Check for issues. A rigging system part or fastener is missing or loose. A rigging system part exhibits: bends, breaks, broken parts, corrosion, cracks, cracks in welded joints, deformation, denting, wear, holes. A safety cue or label is missing.



### **Never incorporate equipment or accessories not approved by L-Acoustics.**

**Read all the related PRODUCT INFORMATION documents shipped with the products before exploiting the system.**



**Do not store the product on an unstable cart, stand, tripod, bracket, or table.**



### **Work with qualified personnel for rigging the system.**

Installation should only be carried out by qualified personnel that are familiar with the rigging techniques and safety recommendations outlined in this manual.

### **Ensure personnel health and safety.**

During installation and set-up personnel must wear protective headgear and footwear at all times. Under no circumstances is personnel allowed to climb on a loudspeaker assembly.

### **Respect the Working Load Limit (WLL) of third party equipment.**

L-Acoustics is not responsible for any rigging equipment and accessories provided by third party manufacturers. Verify that the Working Load Limit (WLL) of the suspension points, chain hoists and all additional hardware rigging accessories is respected.

### **Respect the maximum configurations and the recommended safety precautions.**

For safety issue, respect the maximum configurations outlined in this manual.

### **Be cautious when flying a loudspeaker configuration.**

Before installing/raising the product, check each individual element to make sure that it is securely fastened to the adjacent element. Always verify that no one is standing underneath the product when it is being installed/raised. Never leave the product unattended during the installation process.

As a general rule, L-Acoustics recommends the use of secondary safety at all times.

### **Be cautious when ground-stacking a loudspeaker array.**

Do not stack the loudspeaker array on unstable ground or surface. If the array is stacked on a structure, platform, or stage, always check that the latter can support the total weight of the array.

As a general rule, L-Acoustics recommends the use of safety straps at all times.

### **Risk of falling objects**

Verify that no unattached items remain on the product or assembly.

### **Risk of tipping**

Remove all rigging accessories before transporting a product or an assembly.

### **Take into account the wind effects on dynamic load.**

When a loudspeaker assembly is deployed in an open air environment, wind can produce dynamic stress to the rigging components and suspension points.

If the wind force exceeds 6 bft (Beaufort scale), lower down and/or secure the product or the assembly.

**Intended use**

This system is intended for use by trained personnel for professional applications.



**As part of a continuous evolution of techniques and standards, L-Acoustics reserves the right to change the specifications of its products and the content of its documents without prior notice.**

Check [www.l-acoustics.com](http://www.l-acoustics.com) on a regular basis to download the latest document and software updates.



**Long term exposure to extreme conditions may damage the product.**

For more information, refer to the **Products weather protection** document, available on the website.



This marking indicates that this product should not be disposed of with other household waste throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.



# Introduction

## How to use this manual

The CLAMP1000 owner's manual provides information about using CLAMP1000 as a rigging accessory for enclosure systems. It is intended to be used together with the owner's manual of the main enclosure system.

1. Read the product description.
  - [Rigging system description](#) (p.8)
2. Identify compatible products to prepare the system configuration. Consider the mechanical limits and safety precautions.
  - [Mechanical safety](#) (p.13)
3. Before rigging the system, perform mandatory inspections and functional checks.
  - [Inspection and preventive maintenance](#) (p.15)
4. To deploy the system, follow the step-by-step rigging instructions.
  - [Rigging procedures](#) (p.28)

**As part of a continuous evolution of techniques and standards, L-Acoustics reserves the right to change the specifications of its products and the content of its document without prior notice.** Please check [www.l-acoustics.com](http://www.l-acoustics.com) on a regular basis to download the latest document and software updates.

## Contact information

For information on advanced corrective maintenance:

- contact your Certified Provider or your L-Acoustics representative
- for Certified Providers, contact the L-Acoustics customer service: [customer.service@l-acoustics.com](mailto:customer.service@l-acoustics.com) (EMEA/APAC), [laus.service@l-acoustics.com](mailto:laus.service@l-acoustics.com) (Americas).

## Symbols

The following symbols are used in this document:

-  This symbol indicates a potential risk of harm to an individual or damage to the product. It can also notify the user about instructions that must be strictly followed to ensure safe installation or operation of the product.
-  This symbol notifies the user about instructions that must be strictly followed to ensure proper installation or operation of the product.
-  This symbol notifies the user about complementary information or optional instructions.

## Revision history

| version number | publication date | modification                                                                                             |
|----------------|------------------|----------------------------------------------------------------------------------------------------------|
| 1.0            | May 2024         | Initial version.                                                                                         |
| 2.0            | Jan. 2025        | Various updates and improvements.                                                                        |
| 3.0            | Feb. 2025        | Added safety pins warning for CLAMP1000-DUAL in <a href="#">Flying array with CLAMP1000-DUAL</a> (p.35). |

## System components

### Rigging elements

CLAMP1000-BASE CLAMP1000 rotary base certified for 1000 kg / 2205 lb

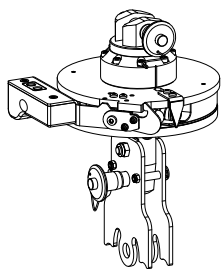
CLAMP1000-SINGLE Single point mounting adaptor for CLAMP1000-BASE

CLAMP1000-DUAL Dual point mounting adaptor for CLAMP1000-BASE

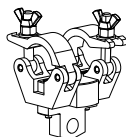
### System component illustrations

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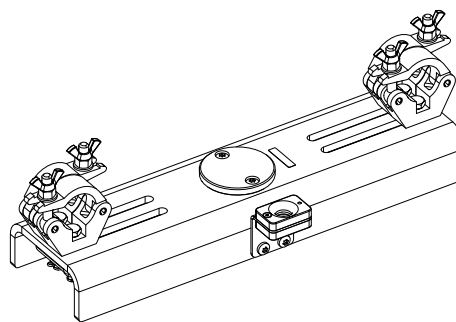
#### Rigging accessories



CLAMP1000-BASE



CLAMP1000-SINGLE



CLAMP1000-DUAL

## Rigging system description

CLAMP1000 is a set composed of CLAMP1000-BASE, a CLAMP1000 rotary base certified for 1000 kg / 2205 lb, and two accessories:

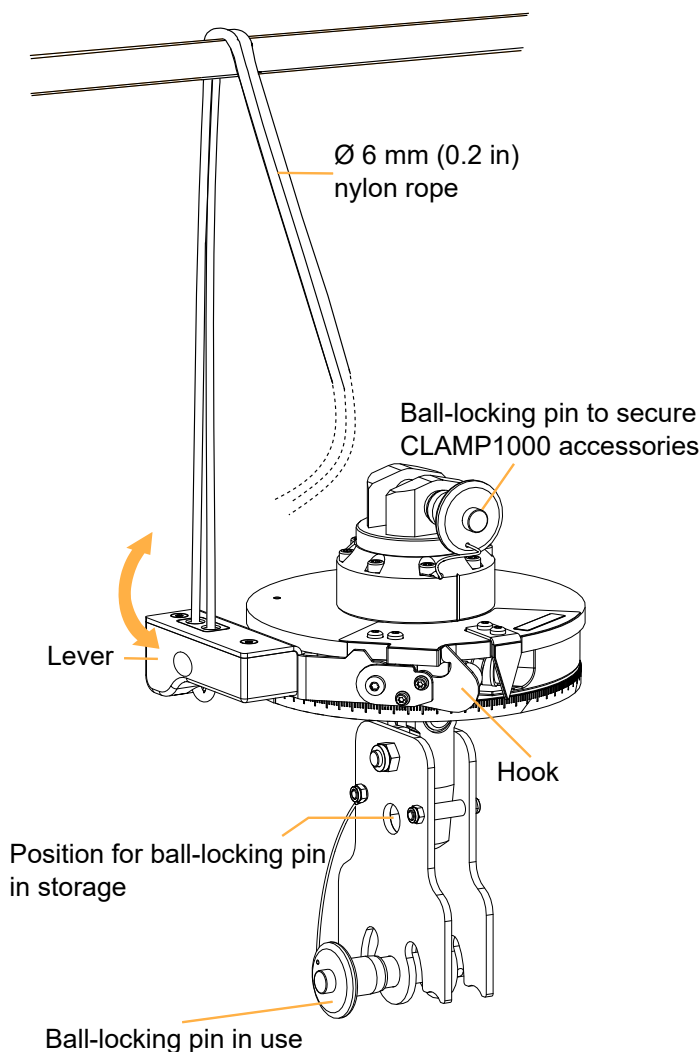
- CLAMP1000-SINGLE is a single point mounting adaptor for CLAMP1000-BASE.
- CLAMP1000-DUAL is a dual point mounting adaptor for CLAMP1000-BASE.

CLAMP1000 is designed to hang an enclosure array from a truss.

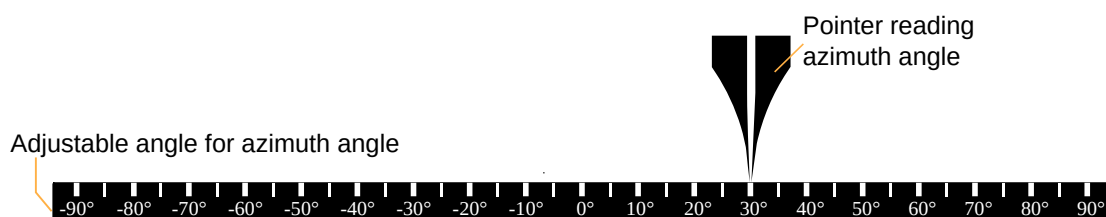
### CLAMP1000-BASE

CLAMP1000-BASE is a CLAMP1000 rotary base certified for 1000 kg / 2205 lb.

CLAMP1000-BASE is secured to the rigging accessory with a ball-locking mechanism. Refer to [Mechanical safety](#) (p.13) for compatible accessories.

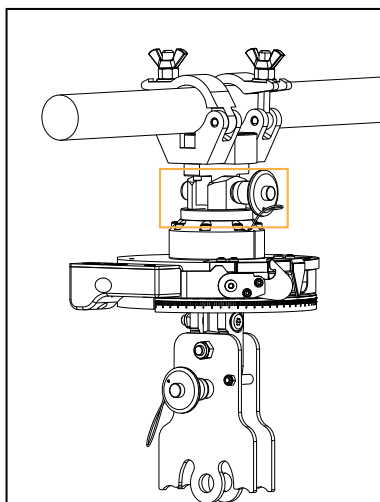


CLAMP1000-BASE is provided with a 50-meter spool of nylon rope of Ø 6 mm (0.22 in). The nylon rope is used to operate the lever and to adjust the desired azimuth angle when the array is flown. The azimuth angle of the enclosure array can be set from -90° to +90° with a locking and unlocking mechanism using a lever and a hook. The pointer and the graduation read the azimuth angle when the angle is adjusted.

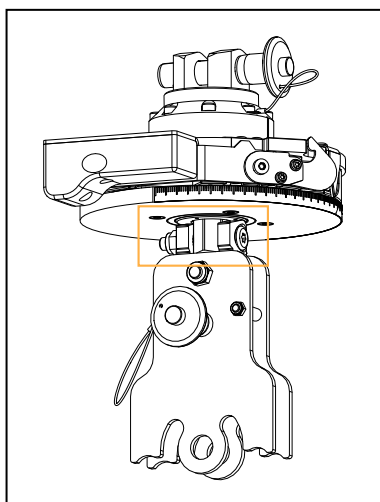


A roll angle from  $-15^{\circ}$  to  $+15^{\circ}$  is possible on two parts of CLAMP1000-BASE:

- When the CLAMP1000 rigging accessory is mounted on CLAMP1000-BASE.

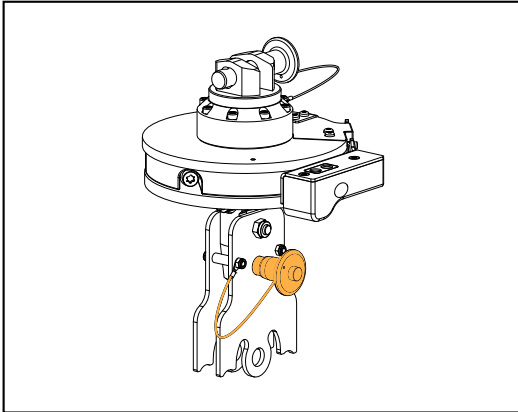


- Under the blocking zone of CLAMP1000-BASE.

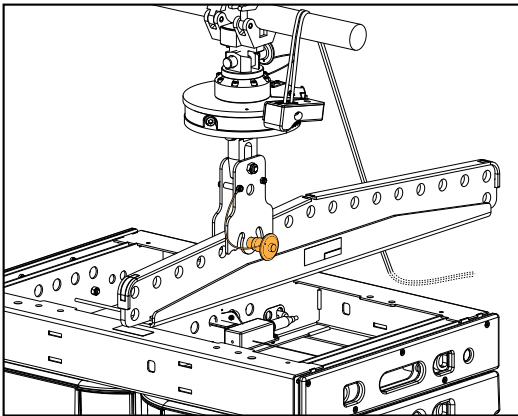


The lower part of CLAMP1000-BASE is adjustable in height and enables to connect CLAMP1000-BASE to compatible rigging accessories of an enclosure array. It has one ball-locking pin of Ø 19 mm (0.75 in) that has two positions depending on the use:

- storage position: the ball-locking pin is stored into the first hole (near the azimuth graduation) during transportation.



- position in use: when the ball-locking pin is secured into the second hole, the lower part of CLAMP1000-BASE is adjustable in height. The adjustment facilitates the connection between CLAMP1000-BASE and the rigging accessory of the enclosure array.



#### **Mechanical safety of the rigging system**

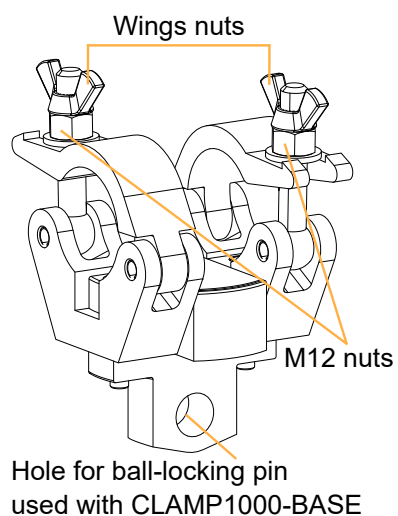
Information about the safety of enclosure arrays is not provided in this document.

Refer to the corresponding system owner's manual.

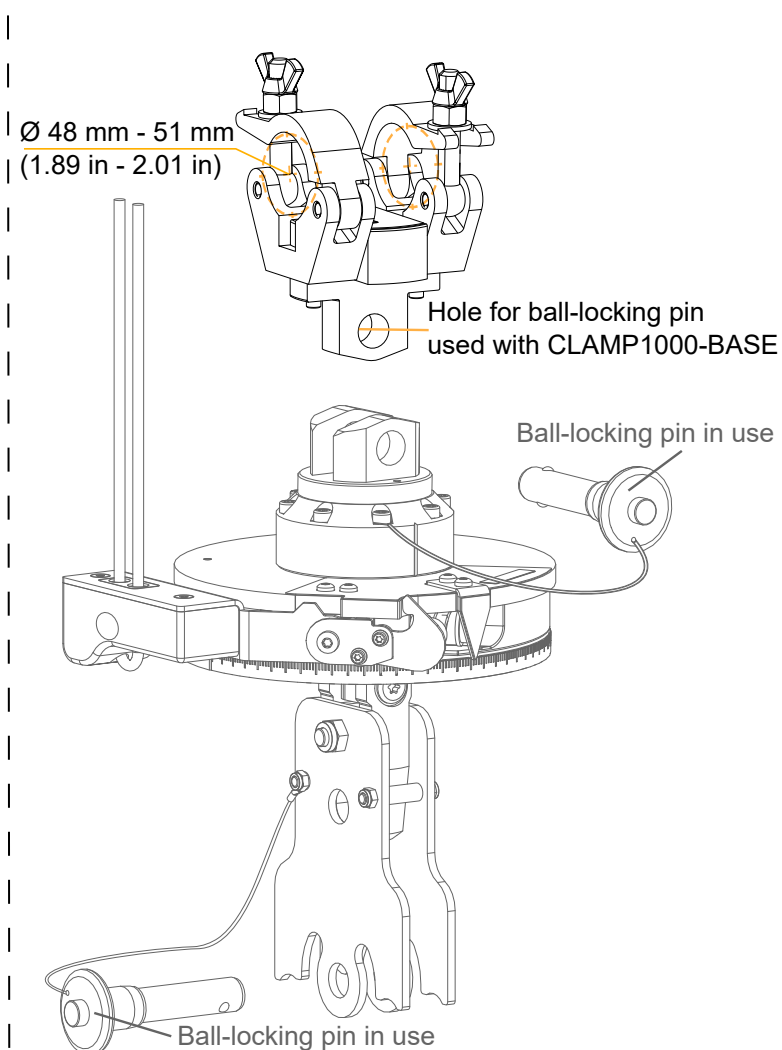
Refer to [Mechanical safety](#) (p.13) for compatible accessories.

## CLAMP1000-SINGLE

CLAMP1000-SINGLE is a single point mounting adaptor for CLAMP1000-BASE. It can be mounted to a  $\varnothing$  48 mm - 51 mm ( $\varnothing$  1.89 in - 2.01 in) tube. The two wing nuts are tightened by hand and the two M12 nuts are secured with a 19 mm wrench.



CLAMP1000-SINGLE

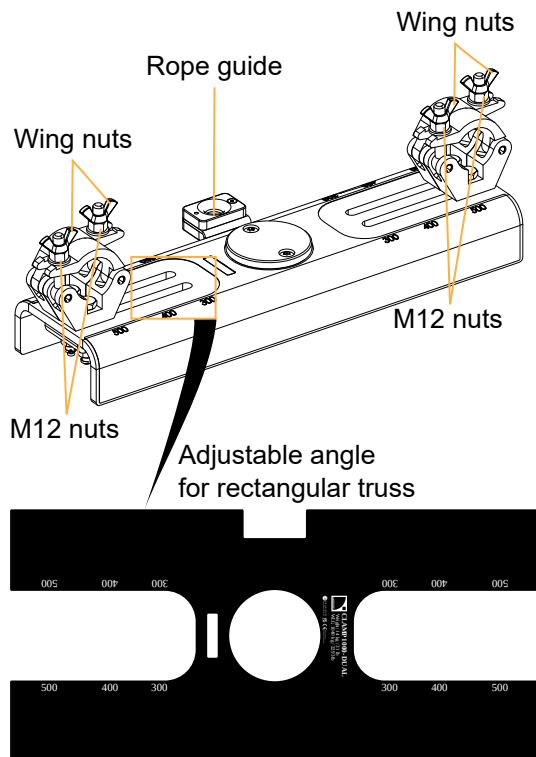


CLAMP1000-BASE with CLAMP1000-SINGLE

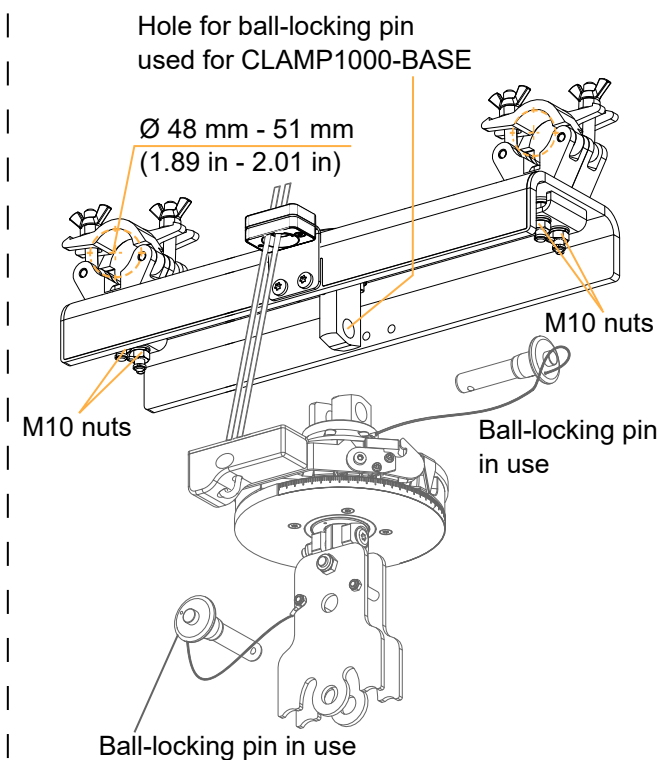
## CLAMP1000-DUAL

CLAMP1000-DUAL is a dual point mounting adaptor for CLAMP1000-BASE. It has four clamps: each pair of clamps can slide following a graduation to adjust the spacing between the two clamp pairs from 200 mm to 500 mm (7.9 to 19.7 in), for coupling with a rectangular truss. It can be mounted to a  $\varnothing$  48 mm - 51 mm ( $\varnothing$  1.89 in - 2.01 in) tube. The four wing nuts are tightened by hand and the four M12 nuts are secured with a 19 mm wrench. The four M10 nuts located under CLAMP1000-DUAL are secured with a 17 mm wrench.

The rope guide is used to guide the nylon rope and facilitate the adjustment of the azimuth angle.



CLAMP1000-DUAL

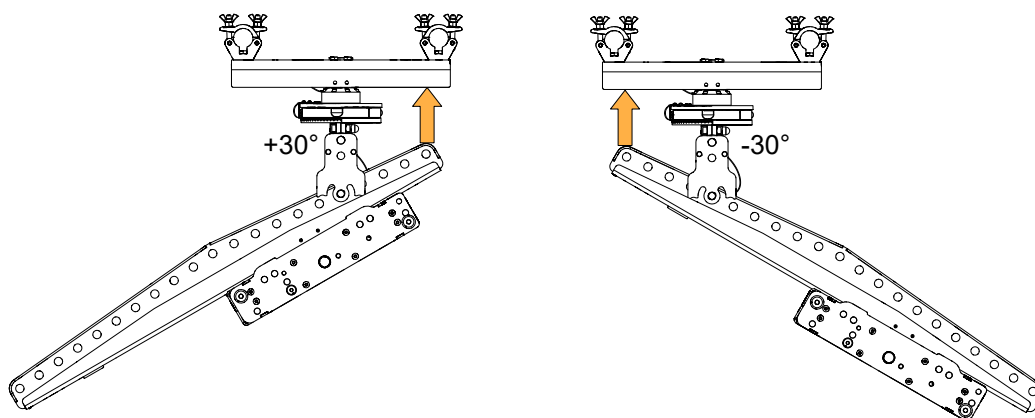


CLAMP1000-BASE with CLAMP1000-DUAL



### Risk of collision of the rigging element with the truss

Maximum site angle of an array with CLAMP1000-DUAL is  $+30^\circ$  /  $-30^\circ$ .



## Mechanical safety

### Flown configurations

The CLAMP1000 rigging system complies with 2006/42/EC: Machinery Directive.

2006/42/EC: Machinery Directive specifies a safety factor of 4 against the rupture. The flown deployments described in this manual achieve a safety factor of **4 or more**.

CLAMP1000 has a WLL (Working Load Limit) of **1000 kg / 2205 lb**.

### Products compatible with CLAMP1000



#### Maximum limit with CLAMP1000

Do not exceed the **1000 kg / 2205 lb** WLL (Working Load Limit) of CLAMP1000.

| Enclosure       | Rigging element(s)       |
|-----------------|--------------------------|
| K1              | K2-BUMP with K2-BAR      |
| K2              | K2-BUMP with K2-BAR      |
| K3              | K3-BUMP with K3-BAR      |
| K3i             | K3i-BUMP with K3i-BAR    |
| Kara II         | M-BUMP with M-BAR        |
| Kara Ili        | KARAIli-BUMP with M-BARi |
| A15 Wide/Focus  | A15-BUMP with M-BAR      |
| A15i Wide/Focus | A15i-BUMP with M-BARi    |
| K1-SB           | K2-BUMP with K2-BAR      |
| SB18            | M-BUMP with M-BAR        |
| SB18 Ili        | KARAIli-BUMP with M-BARi |
| KS21            | A15-BUMP with M-BAR      |
| KS21i           | KARAIli-BUMP with M-BARi |
| L2 / L2D        | L2-BUMP with L2-BAR      |

### Assessing mechanical safety



#### Respect the Working Load Limit (WLL) of the truss.

L-Acoustics is not responsible for any rigging equipment and accessories provided by third party manufacturers.

It is the responsibility of the user to check the compatibility of the truss in terms of shape, dimension, type, and Working Load Limit (WLL).

Verify that the Working Load Limit (WLL) of the truss is respected considering the weight of the entire deployment, including CLAMP1000, rigging equipment and accessories, and enclosure arrays.

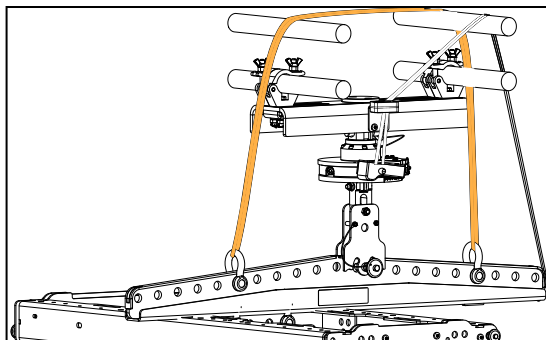
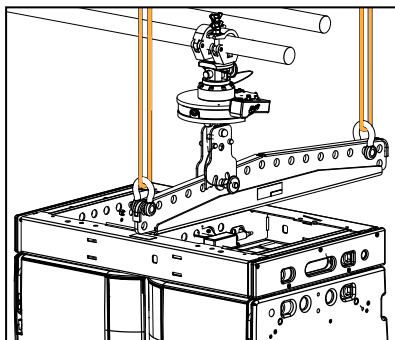
Refer to the documentation of the truss manufacturer for more information.

### **! Additional safety for flown arrays with CLAMP1000**

Always implement a secondary safety using a shackle and a steel wire rope.

Use available holes on the rigging element.

Make sure the steel rope is as tensed as possible without bearing the load.



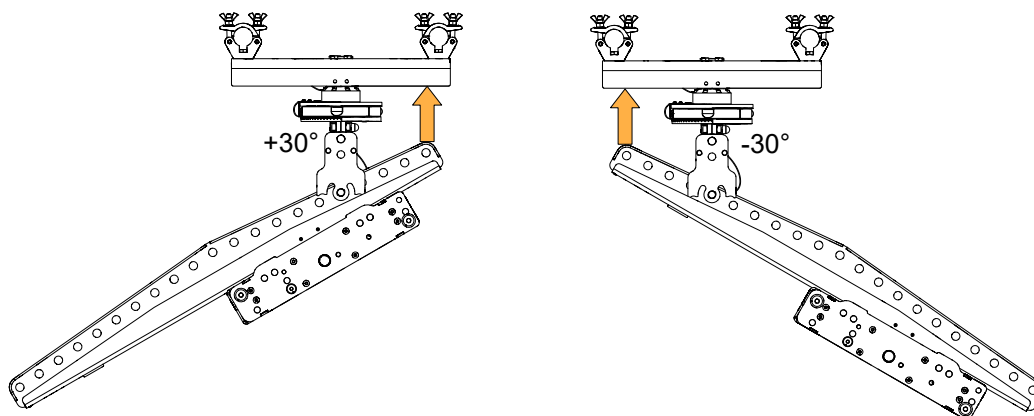
### **! Mechanical safety of the rigging system**

Information about the safety of enclosure arrays is not provided in this document.

Refer to the corresponding system owner's manual.

### **! Risk of collision of the rigging element with the truss**

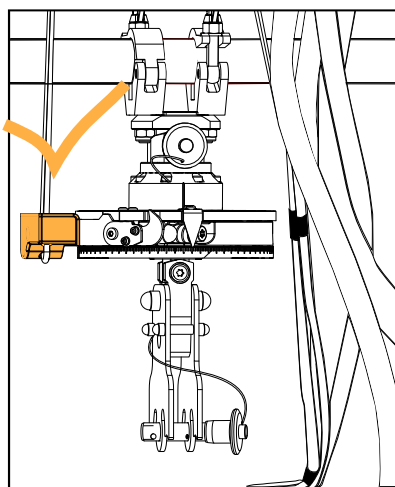
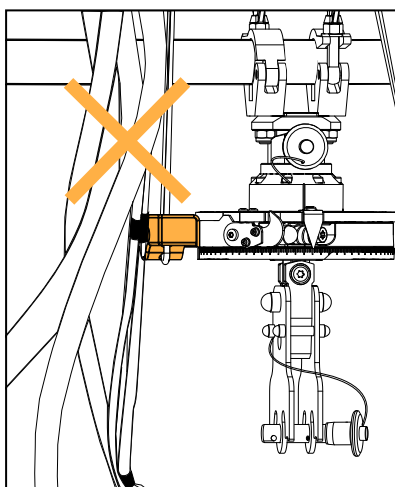
Maximum site angle of an array with CLAMP1000-DUAL is  $+30^\circ$  /  $-30^\circ$ .



### **! Risk of damage to the cables**

Make sure the cables face the opposite side of the CLAMP1000-BASE lever to facilitate the use of the brake.

Make sure to give 50 cm / 20 in of slack to the cables at the top of the array to account for site and azimuth angles.



# Inspection and preventive maintenance

## How to do preventive maintenance

---

Inspect the system before any deployment and after any corrective maintenance operation.

Perform preventive maintenance at least once a year.

### Rigging and hardware

Perform the [Visual inspection](#) (p.16).

Do the [Rigging check](#) (p.21).

If any parts are damaged, contact your L-Acoustics representative for further instructions.

## Visual inspection

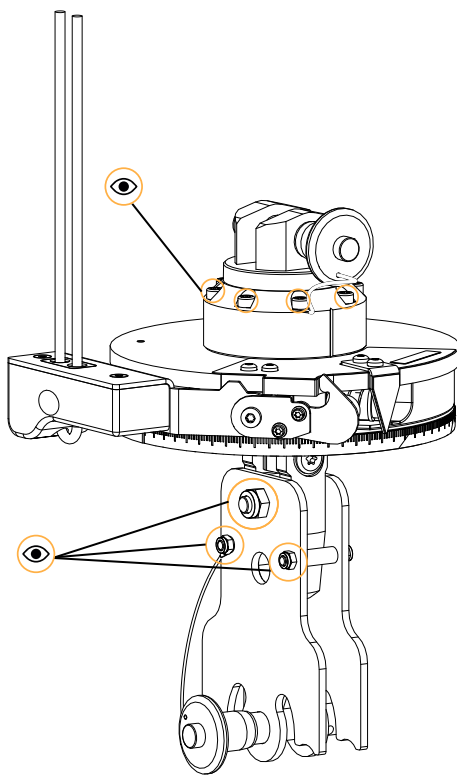
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### Prerequisite

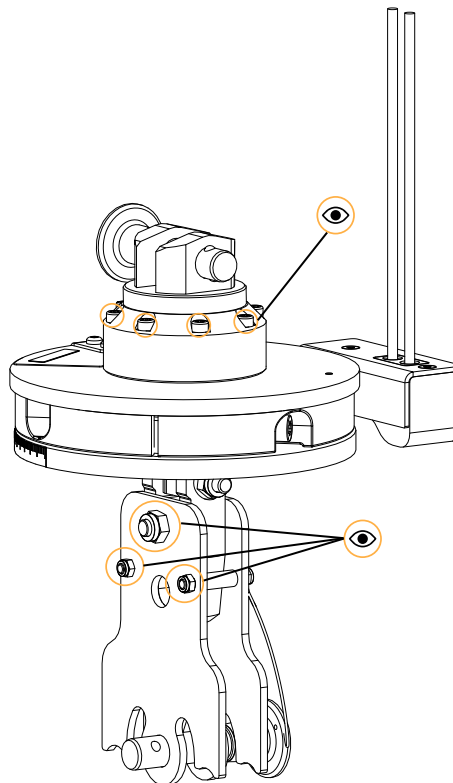
Perform the inspection in a well-lit environment.

### Procedure

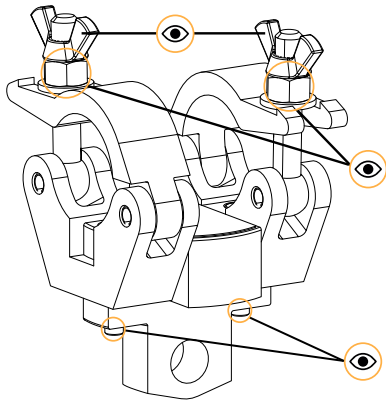
1. Check the product for:
  - corrosion
  - wear and cracks
  - bends and dents
  - deformation
  - holes
  - missing safety cues
  - missing identification labels
2. Check that all screws and nuts are tightened.



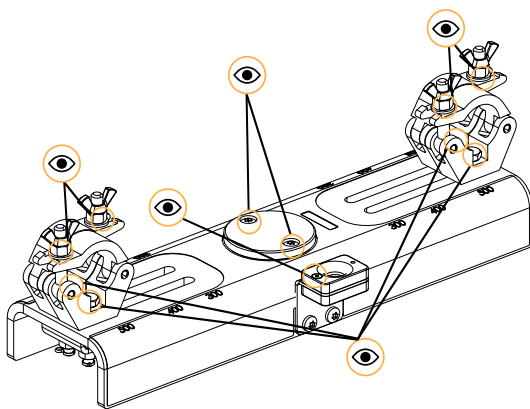
CLAMP1000-BASE front view



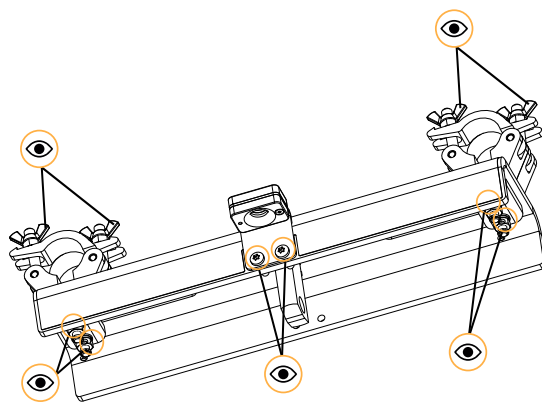
CLAMP1000-BASE back view



CLAMP1000-SINGLE

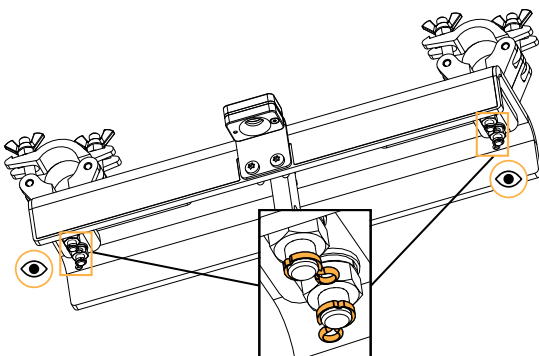


CLAMP1000-DUAL top view

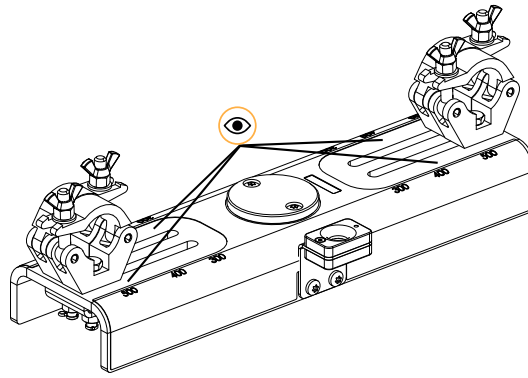
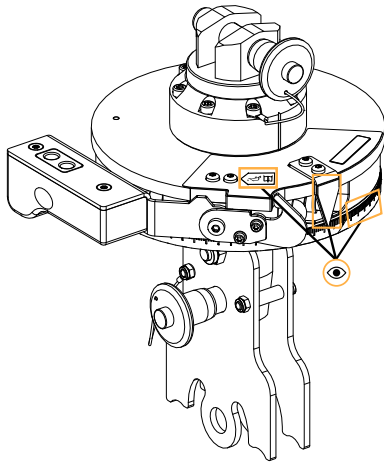


CLAMP1000-DUAL bottom view

3. For CLAMP1000-DUAL, check that the safety pins are not missing, damaged, and cannot be removed.



4. Check that the graduation labels and the oil can symbol are present, readable, and not damaged.



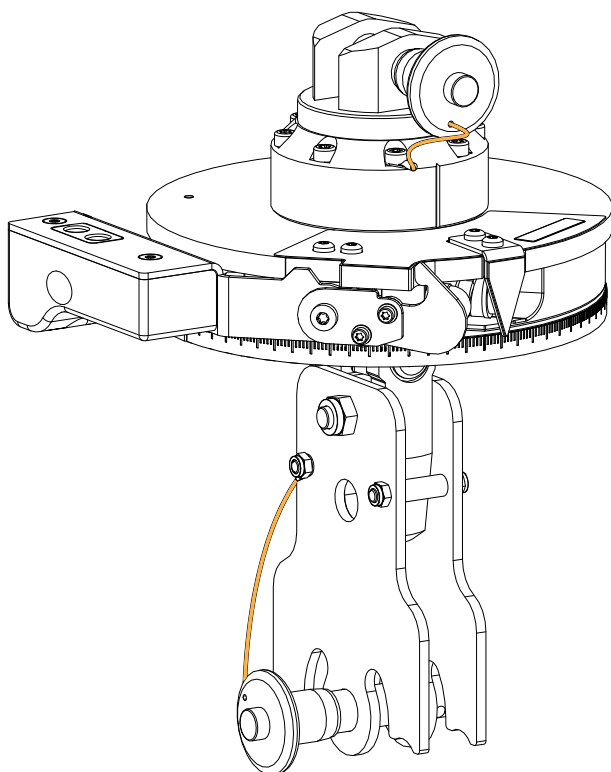
5. Check the nylon rope for:
- wear and cuts
  - fraying
  - abrasion
  - any traces of chemical substances
  - strands coming out of the sheath
6. Perform the [Greasing procedure](#) (p.24).

#### What to do next

If a problem is detected, contact your L-Acoustics representative.

## Ball-locking pins

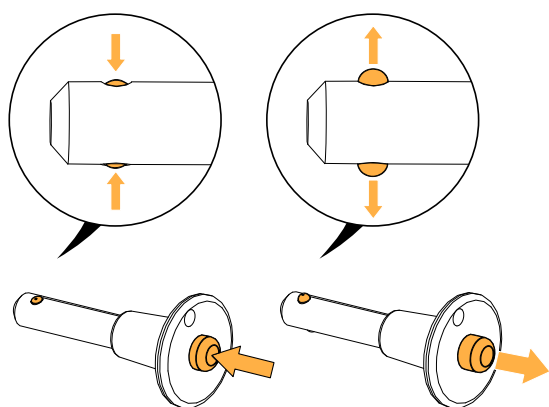
### Reference pictures



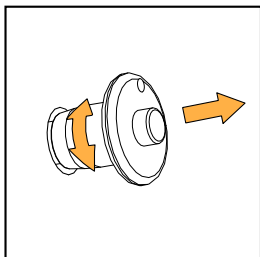
CLAMP1000-BASE

### Moving parts

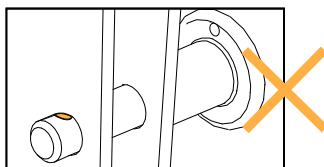
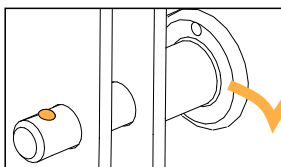
1. Press the push button. The ball-locking mechanism is retracted.
2. Release the button. The ball-locking mechanism is activated.



3. Insert the pin in each storage and rigging hole. Pull and rotate the pin.  
The pin must remain inside the hole.



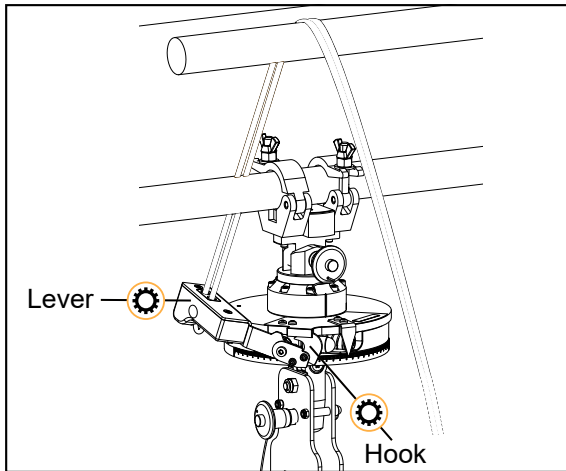
If the pin is inserted in two plates, the ball must pass through both plates and lock the pin in place.



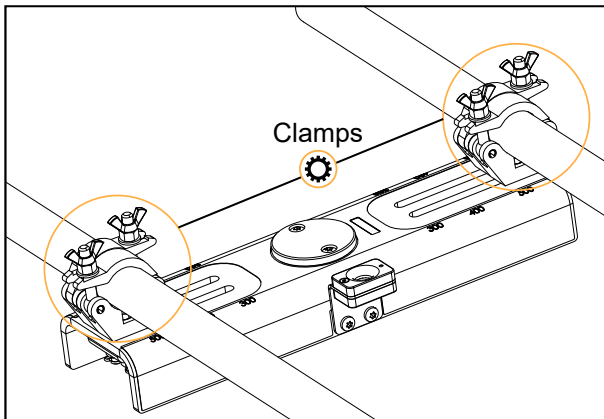
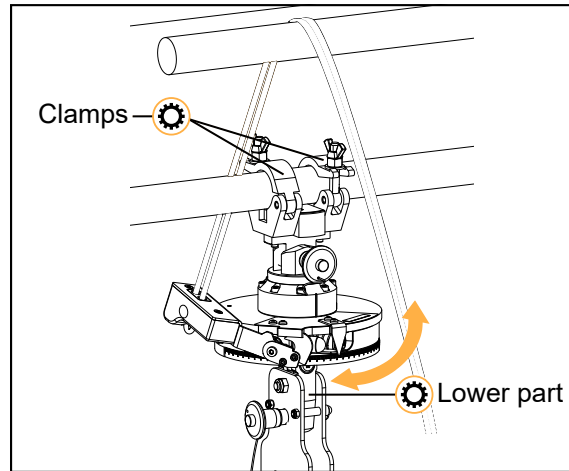
If the check fails, **immediately withdraw the product from use and contact L-Acoustics.**

## Rigging check

### About this task



CLAMP1000-BASE with CLAMP1000-SINGLE



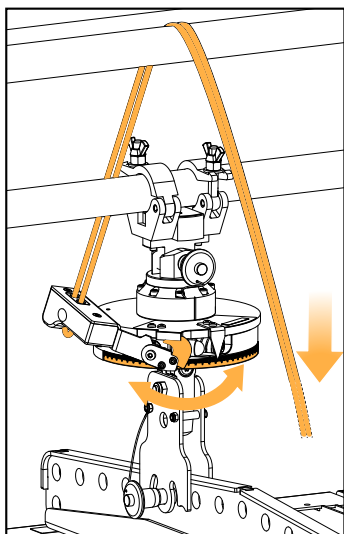
CLAMP1000-DUAL top view

### Procedure

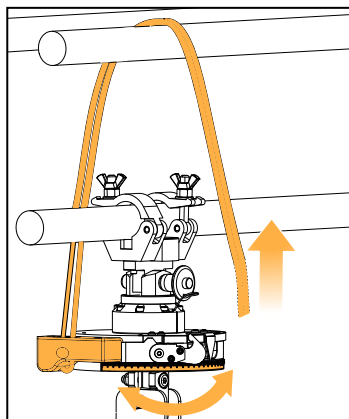
1. Fix the clamps to the truss.
  - The wing nuts and the nuts are present.
  - The wing nuts can be tightened and loosened by hand.
  - The clamps open up when the wing nuts and the nuts are loosened.
  - The clamps close when the wing nuts and the nuts are tightened.
  - For CLAMP1000-DUAL, clamps can slide when the wing nuts and the nuts are loosened.
2. Secure CLAMP1000-BASE to its accessory using the ball-locking pin.  
CLAMP1000-BASE remains attached.
3. Connect the lower part of CLAMP1000-BASE to the dedicated rigging element(s) (rigging frame, rigging bar, ...) of the enclosure array.  
CLAMP1000-BASE and its rigging system remain attached.

**4. Unlock and lock the azimuth angle of CLAMP1000-BASE.**

- When the nylon rope is pulled down and when the hook is retracted by hand, the azimuth angle can be changed.

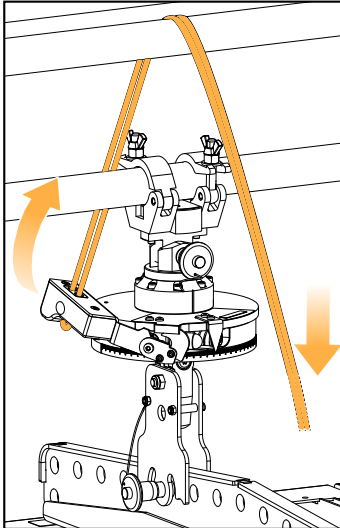


- when the nylon rope is released (after applying a quick pull down), the rotation is blocked.

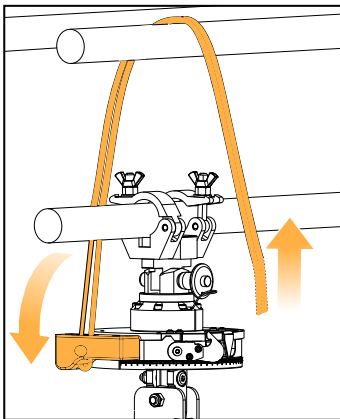


**5. Drop and lift the lever of CLAMP1000-BASE.**

- The lever can be lifted when the nylon rope is pulled down.



- The lever can be dropped when the nylon rope is released.



If the lever cannot drop down correctly (locked position), add greasing. Refer to the [Greasing procedure](#) (p.24).

**What to do next**

If a problem is detected, contact your L-Acoustics representative.

## Greasing procedure

---

### About this task

This procedure explains how to grease the lever mechanism of CLAMP1000-BASE.

Perform this procedure at least once a year.



Contact your L-Acoustics representative for information about the greasing procedure.

Do not use grease that is not approved by L-Acoustics.

### Tools and consumables

- torque screwdriver
- T25 Torx bit
- grease spray can, intended for the lubrication of gears used with high loads and in extreme climatic conditions
- clean, dry tissue

### Repair kit

**G03931**

**KR 20 greasing hole screws CLAMP1000-BASE**



×2

S100195

M5×8 Torx

### Prerequisite



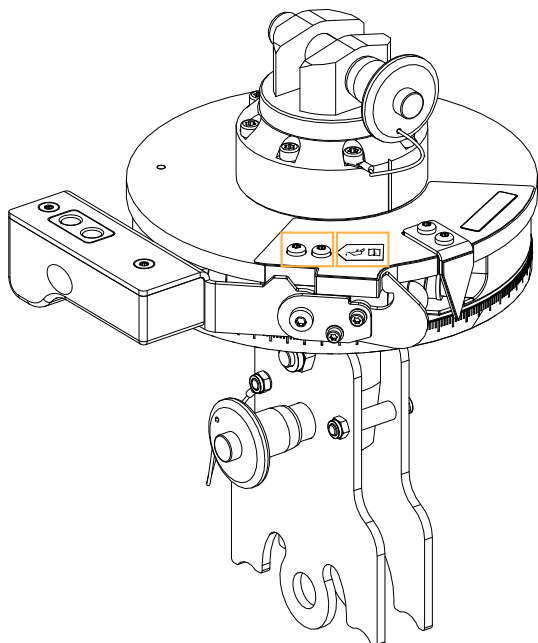
Make sure the Greasing procedure is performed in a clean environment: keep dirt, dust, and residue from coming inside the greasing hole.

Place CLAMP1000-BASE on a stable surface.

Use the grease spray can with the straw attached.

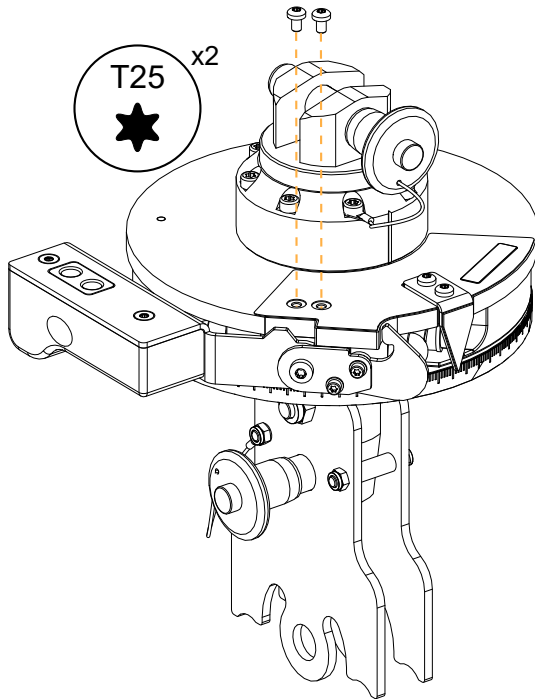
### Procedure

1. Locate the two greasing hole screws and the greasing label on CLAMP1000-BASE.

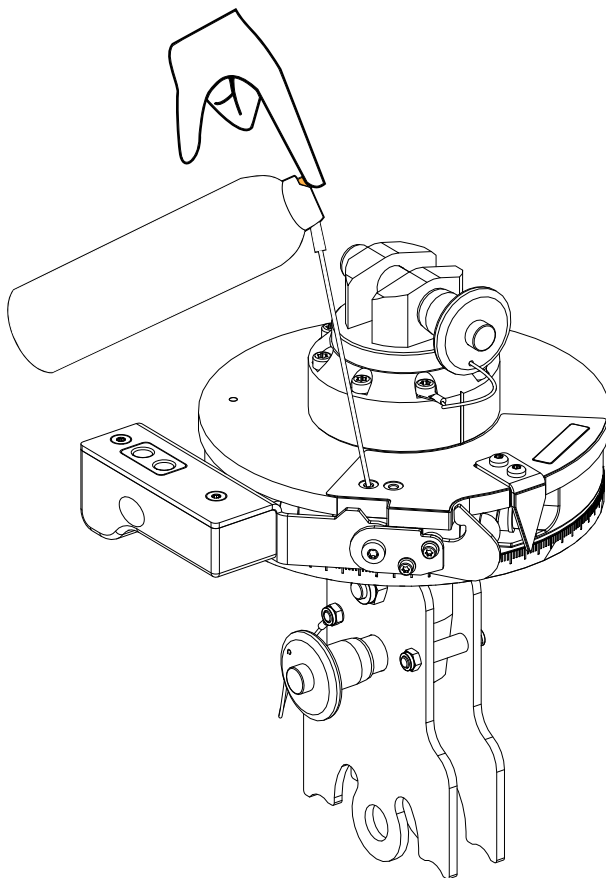


**2. Remove the two greasing hole screws from CLAMP1000-BASE.**

Use the torque screwdriver and the T25 Torx bit.

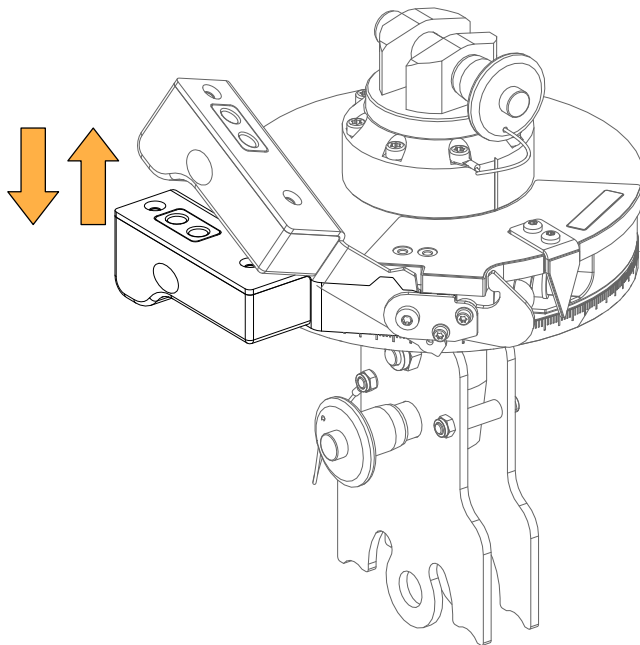
**3. Inject the grease into each of the two holes:**

- a) Place the grease spray can tube into the left hole until it touches the bottom of the mechanism.
- b) Apply slight pressure (0.5 seconds) and wait until the grease spills out.

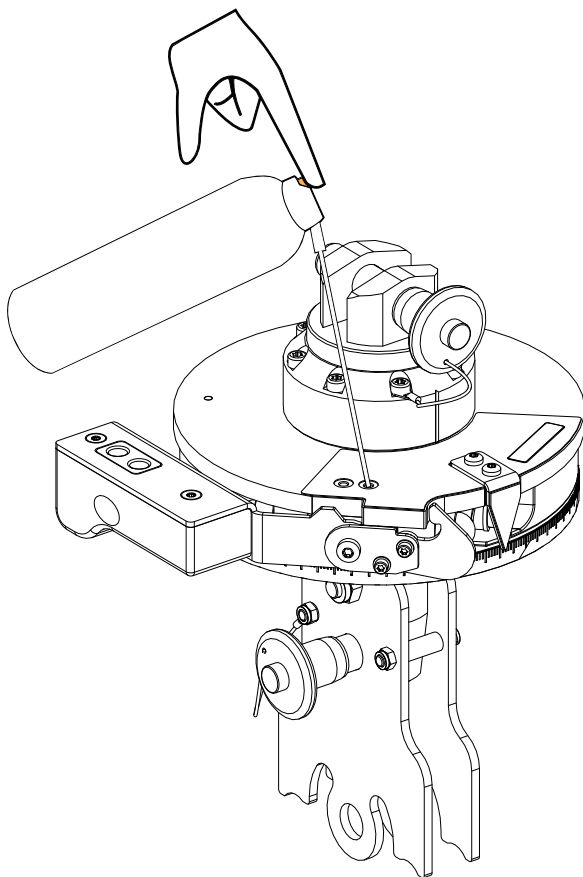


- c) Removed the excess grease with a clean, dry tissue.

- d) Lift up and down the lever by hand three times to spread the product into the mechanism.



- e) Place the grease spray can tube into the right hole until it touches the bottom of the mechanism.



Repeat substeps [3.b](#) (p.25) to [3.d](#) (p.26).

4. Tighten the two greasing hole screws.



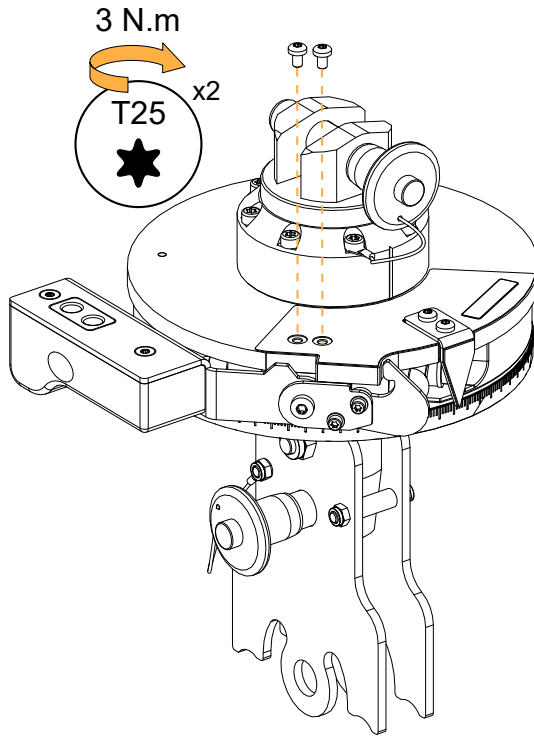
**Replacing screws**

If a screw is loose, remove and replace it.

Always use the new screws provided in the repair kit.

Do not apply more than the indicated torque.

Use the torque screwdriver and the T25 Torx bit. Set the torque to 3 N.m.

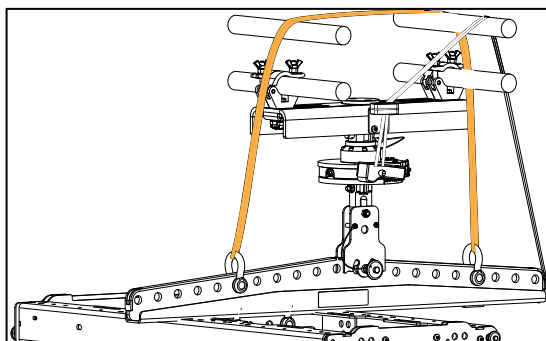
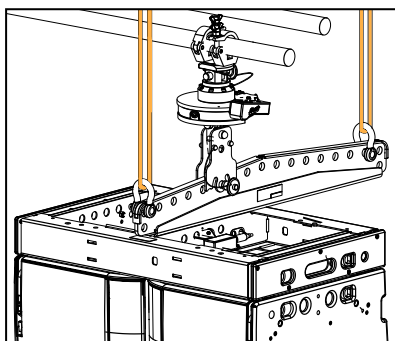


# Rigging procedures

## Flying an array with CLAMP1000-SINGLE

|                         |                                     |
|-------------------------|-------------------------------------|
| Type of deployment      | flown array                         |
| Rigging accessory       | CLAMP1000-BASE and CLAMP1000-SINGLE |
| Tool                    | 19 mm wrench                        |
| Min number of operators | 1                                   |

- ! Mechanical safety of the rigging system**  
Information about the safety of enclosure arrays is not provided in this document.  
Refer to the corresponding system owner's manual.
- ! Respect the Working Load Limit (WLL) of the truss.**  
L-Acoustics is not responsible for any rigging equipment and accessories provided by third party manufacturers.  
It is the responsibility of the user to check the compatibility of the truss in terms of shape, dimension, type, and Working Load Limit (WLL).  
Verify that the Working Load Limit (WLL) of the truss is respected considering the weight of the entire deployment, including CLAMP1000, rigging equipment and accessories, and enclosure arrays.  
Refer to the documentation of the truss manufacturer for more information.
- ! Risk of falling objects**  
Verify that no unattached items remain on the product or assembly.
- ! Additional safety for flown arrays with CLAMP1000**  
Always implement a secondary safety using a shackle and a steel wire rope.  
Use available holes on the rigging element.  
Make sure the steel rope is as tensed as possible without bearing the load.



## Assembly

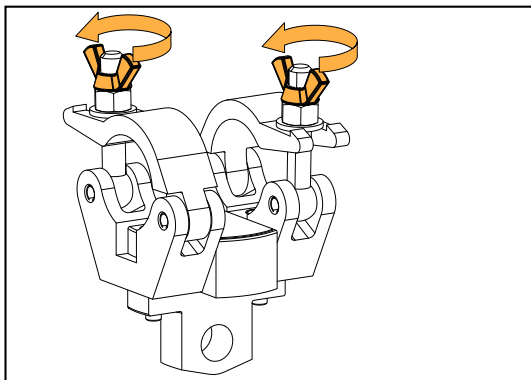
### Prerequisite

- Enclosure arrays are connected to their rigging frames. Refer to the dedicated owner's manual.
- Compatible rigging elements are prepared and ready for mouting. Refer to [Mechanical safety](#) (p.13) for compatible accessories.

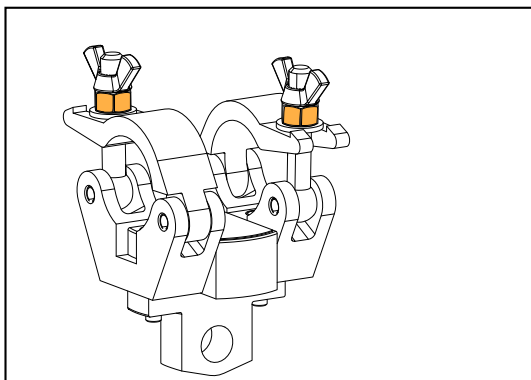
### Procedure

1. Lower the truss.

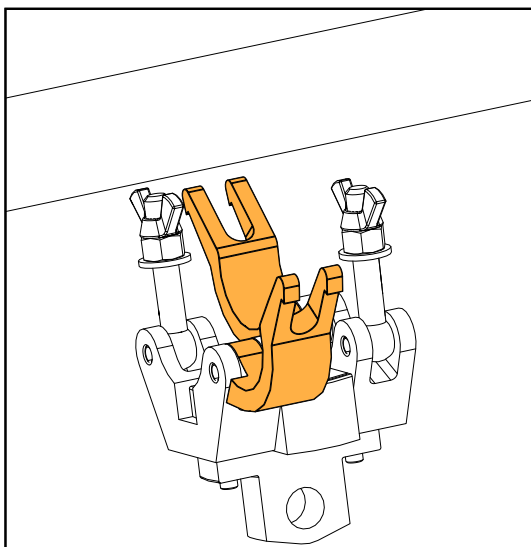
2. Loosen the two wings nuts by hand.



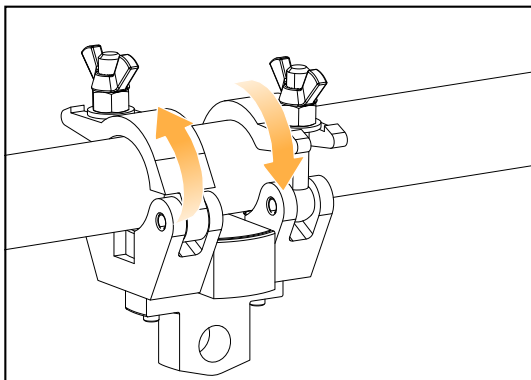
3. Loosen the two M12 nuts.



4. Open the two clamps to fit the truss.



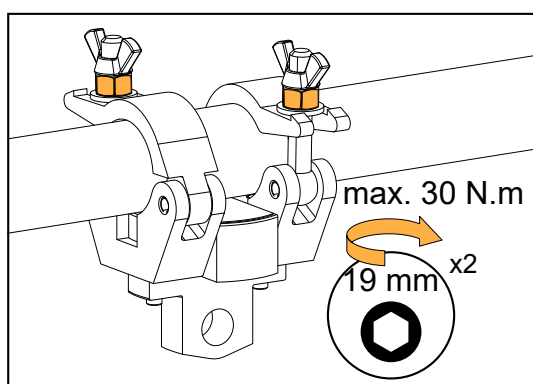
5. Fix the two clamps of CLAMP1000-SINGLE to the truss.



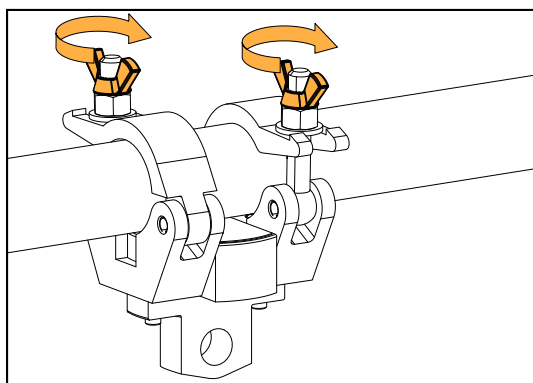
**Risk of falling arrays**

Make sure the nuts and wing nuts are correctly tightened.

- a) Close the two clamps and secure the two M12 nuts using the 19 mm wrench. Set the torque to a maximum of 30 N.m.



- b) Tighten the two wing nuts by hand.

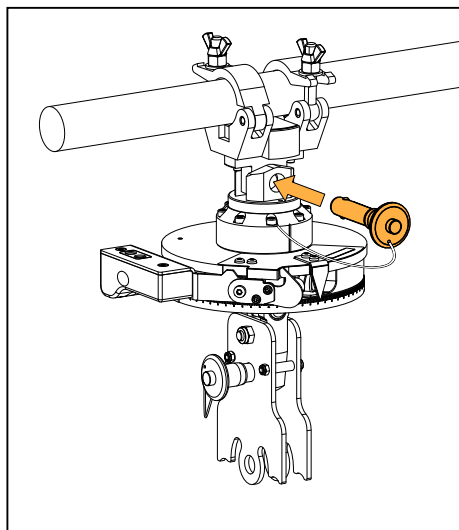
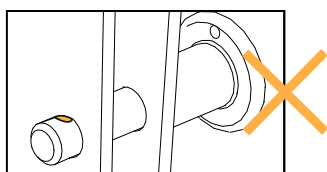
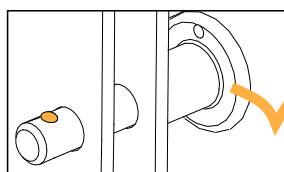


6. Mount CLAMP1000-BASE on CLAMP1000-SINGLE using the ball-locking pin.

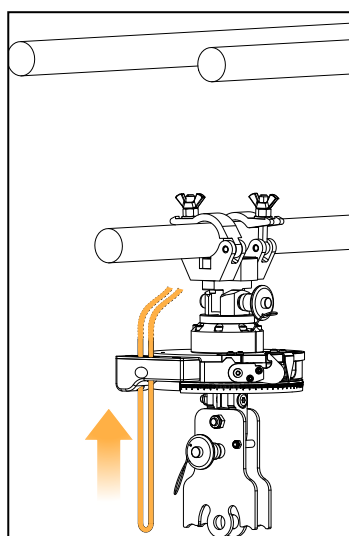


**Ball-locking pin check**

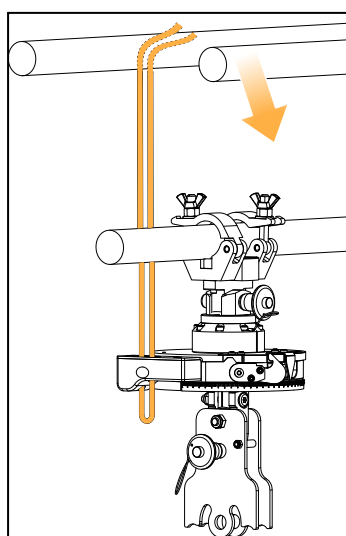
The ball must pass through both plates and lock the pin in place.



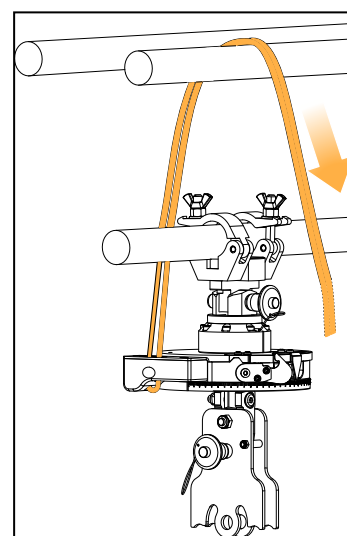
7. Fix the nylon rope on CLAMP1000-BASE.



Pass the two strands through the lever.

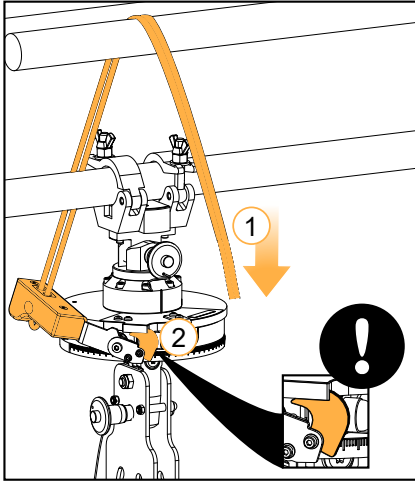


Pass the strands above the truss.



Let the nylon rope fall down at hand level.

8. Set the hook into unlocked position: (1) pull up the lever using the nylon rope from one hand and (2) retract the hook with the other hand.

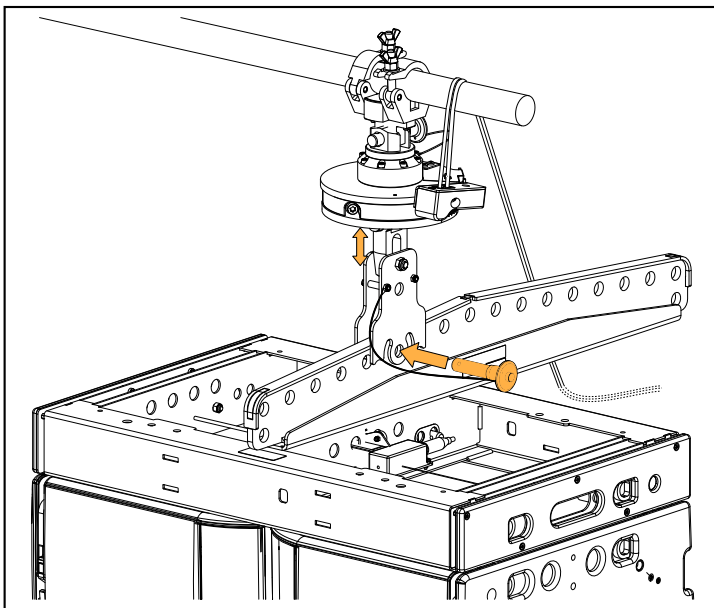


Be careful not to pinch fingers.

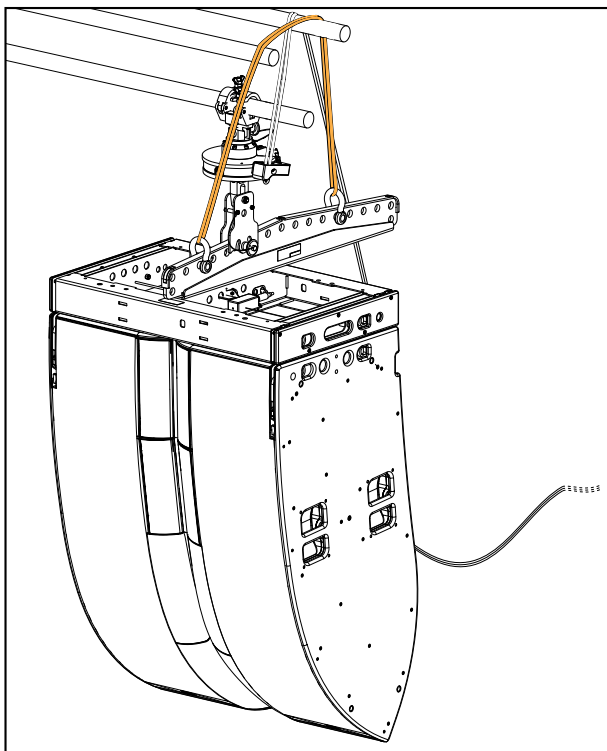


For an L-ISA Technology deployment, leave the hook into unlocked position until all enclosure arrays are mounted.

9. Connect the lower part of CLAMP1000-BASE to the dedicated rigging element(s) (rigging frame, bar, ...) of the enclosure array. Refer to [Mechanical safety](#) (p.13) for compatible accessories.
  - a) Remove the ball-locking pin from the first hole of CLAMP1000-BASE.
  - b) Adjust the lower part of CLAMP1000-BASE to match the second hole of CLAMP1000-BASE with the desired hole from the rigging bar of the enclosure.
  - c) Secure CLAMP1000-BASE to the rigging bar using the ball-locking pin.

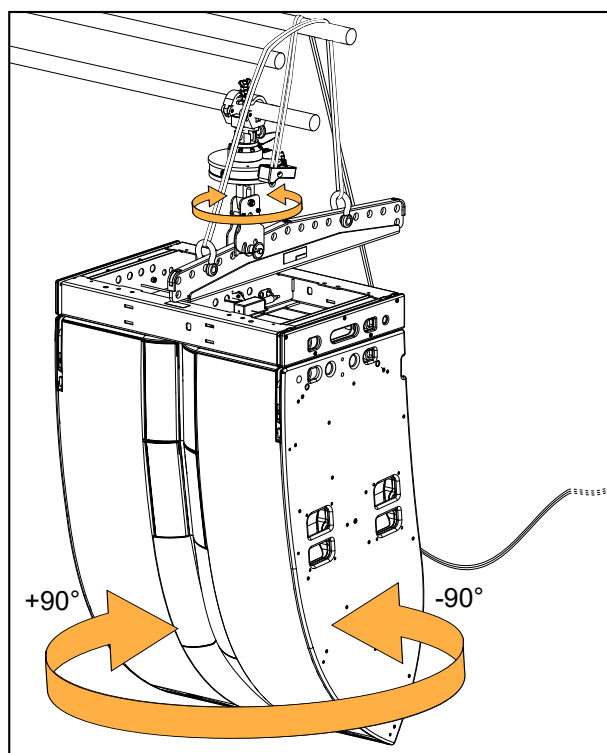


**10.** Add the secondary safety and lift the truss.



**11.** Adjust the azimuth angle.

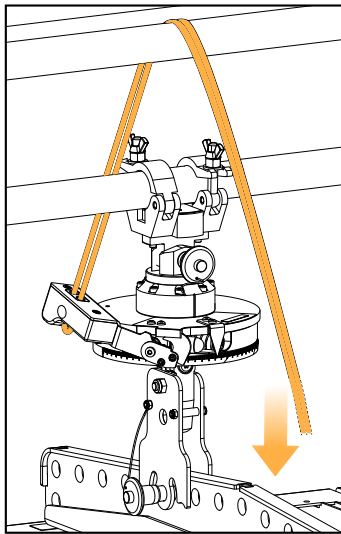
- a) Rotate the enclosure array by hand to set the azimuth angle.



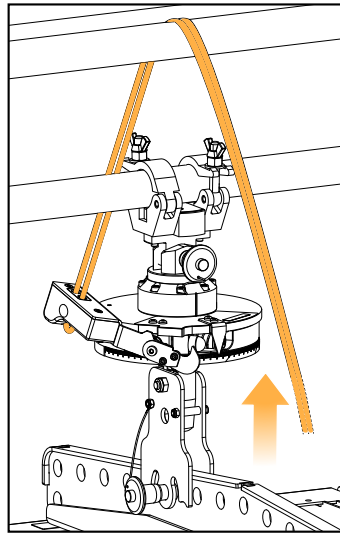


Rotating the enclosure array rotates the lower part of CLAMP1000-BASE.

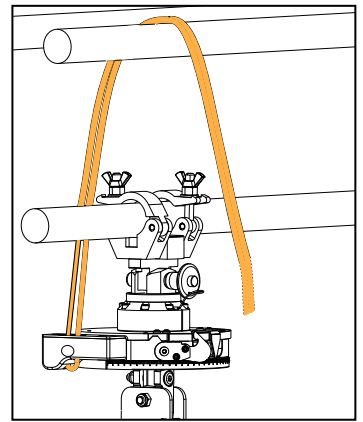
b) Lock the azimuth angle:



Apply a quick pull down to the nylon rope.



Release the nylon rope to lock the lever at the desired azimuth angle.

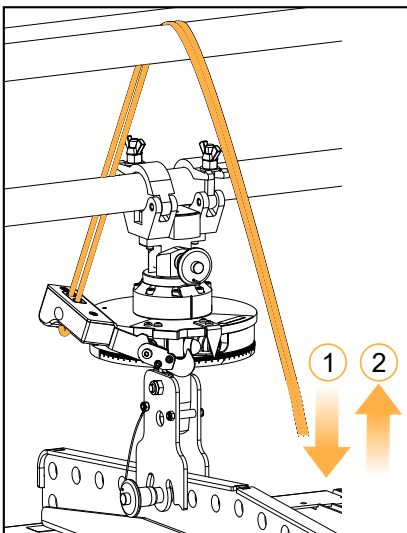


The lever is down and the hook is in locked position.

### What to do next

To change the azimuth angle again: (1) pull down and hold the nylon rope to unlock the lever and rotate the enclosure array by hand.

(2) Release the nylon rope to lock the azimuth angle.



## Flying array with CLAMP1000-DUAL

|                         |                                   |
|-------------------------|-----------------------------------|
| Type of deployment      | flown array                       |
| Rigging accessory       | CLAMP1000-BASE and CLAMP1000-DUAL |
| Tools                   | 17 mm wrench<br>19 mm wrench      |
| Min number of operators | 2                                 |



### Mechanical safety of the rigging system

Information about the safety of enclosure arrays is not provided in this document.  
Refer to the corresponding system owner's manual.



### Respect the Working Load Limit (WLL) of the truss.

L-Acoustics is not responsible for any rigging equipment and accessories provided by third party manufacturers.  
It is the responsibility of the user to check the compatibility of the truss in terms of shape, dimension, type, and Working Load Limit (WLL).

Verify that the Working Load Limit (WLL) of the truss is respected considering the weight of the entire deployment, including CLAMP1000, rigging equipment and accessories, and enclosure arrays.

Refer to the documentation of the truss manufacturer for more information.



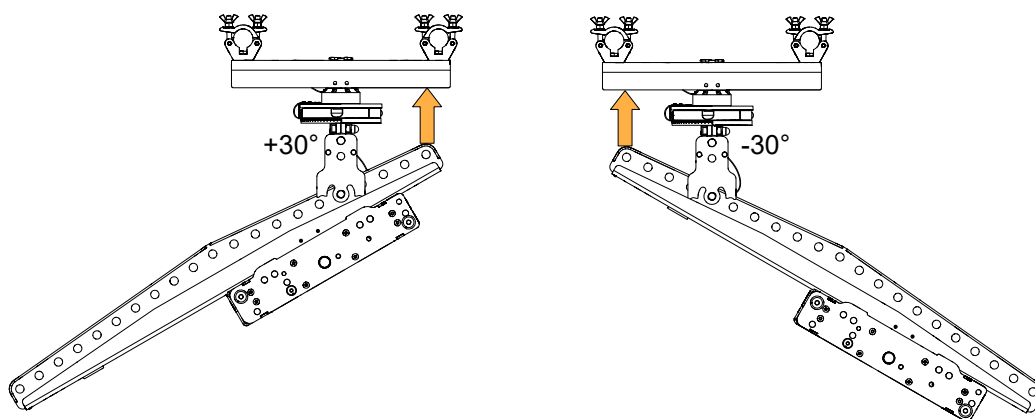
### Risk of falling objects

Verify that no unattached items remain on the product or assembly.



### Risk of collision of the rigging element with the truss

Maximum site angle of an array with CLAMP1000-DUAL is  $+30^\circ$  /  $-30^\circ$ .

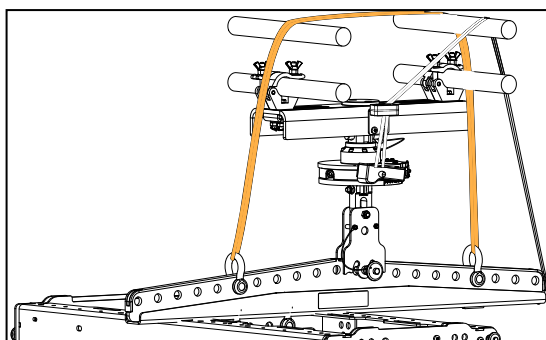
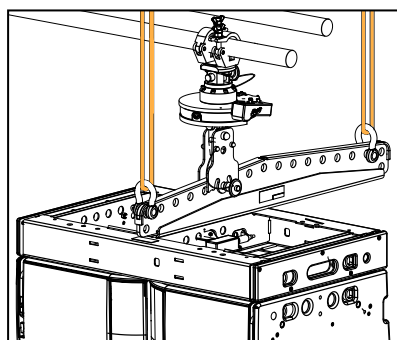


### Additional safety for flown arrays with CLAMP1000

Always implement a secondary safety using a shackle and a steel wire rope.

Use available holes on the rigging element.

Make sure the steel rope is as tensed as possible without bearing the load.



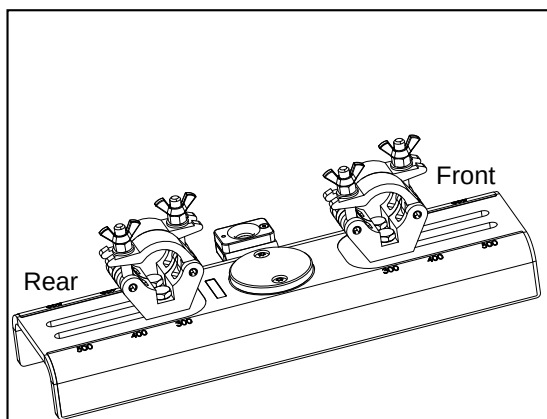
## Assembly

### Prerequisite

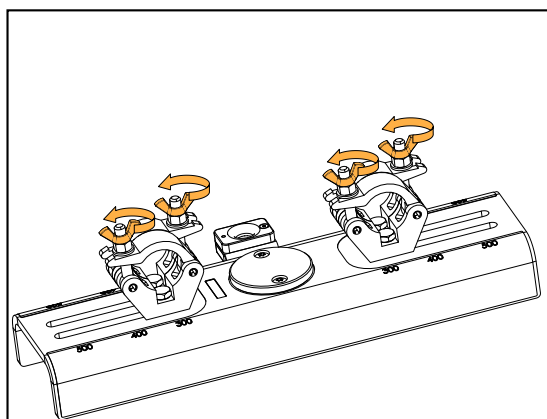
- Enclosure arrays are connected to their rigging frames. Refer to the dedicated owner's manual.
- Compatible rigging elements are prepared and ready for mounting. Refer to [Mechanical safety](#) (p.13) for compatible accessories.

### Procedure

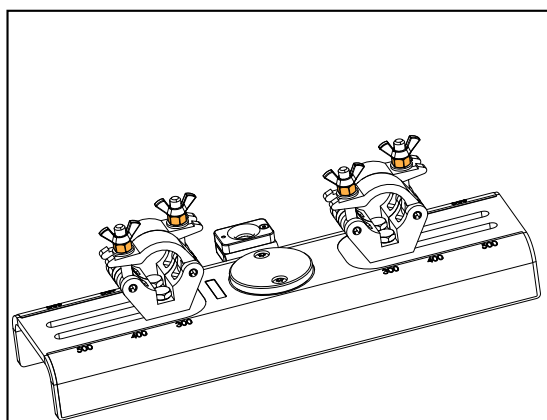
1. Lower the truss.
2. Locate the front and the rear sides of CLAMP1000-DUAL.



3. Loosen the four wings nuts by hand.

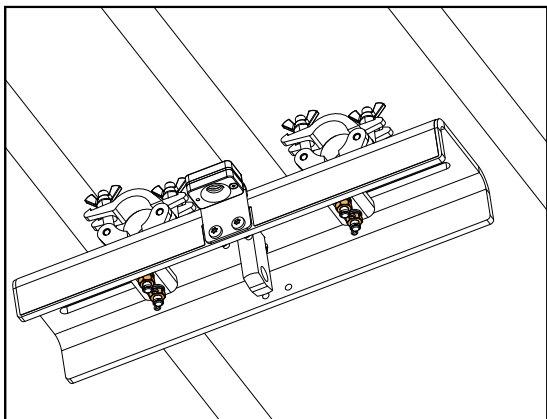


4. Loosen the four M12 nuts.

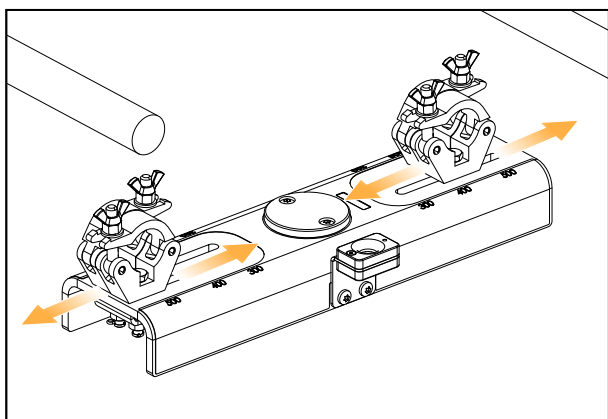


5. Adjust the position of the four clamps to fit the truss.

- a) Loosen the four M10 nuts located under CLAMP1000-DUAL.

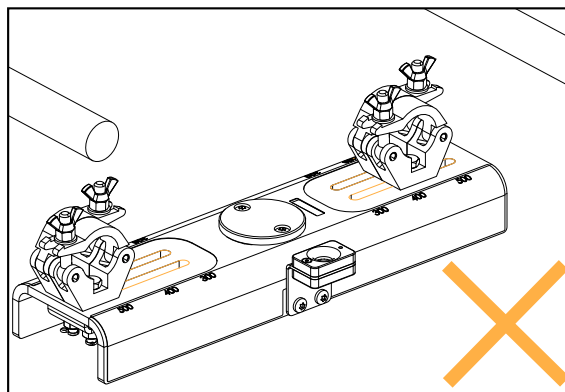
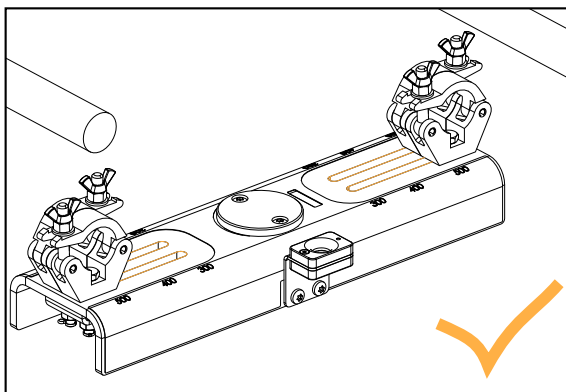


- b) Slide each clamp using the graduation to fit the size of the truss.

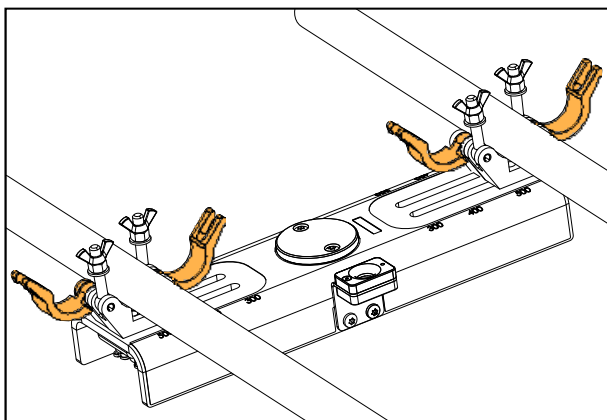


**Risk of unbalanced load on CLAMP1000-DUAL**

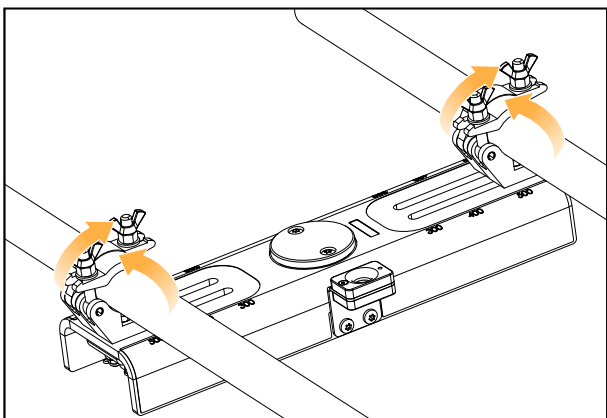
Use the graduation to make sure that the clamp pairs are positioned symmetrically and that their spacing matches the size of the truss.



6. Open the four clamps to fit the truss.



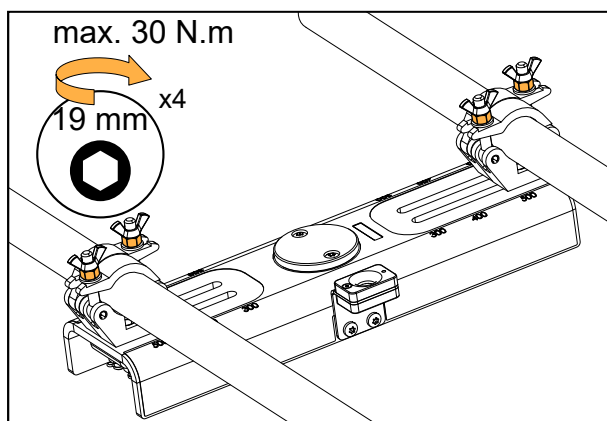
7. Fix the four clamps of CLAMP1000-DUAL to the truss.



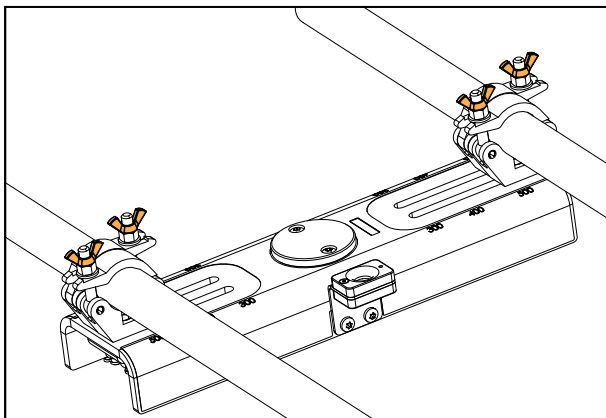
**Risk of falling arrays**

Make sure the nuts and wing nuts are correctly tightened.

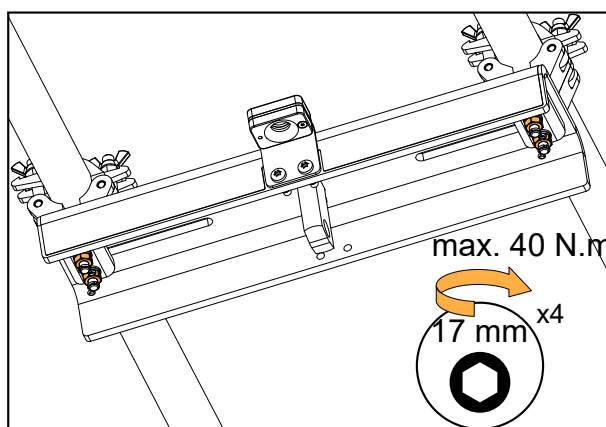
- a) Close the four clamps and secure the four M12 nuts using the 19 mm wrench. Set the torque to a maximum of 30 N.m.



b) Tighten the four wing nuts by hand.



c) Tighten the four M10 nuts located under CLAMP1000-DUAL using the 17 mm wrench. Set the torque to a maximum of 40 N.m.



Check that the safety pins are present.



**Risk of defeating the secondary safety mechanism**

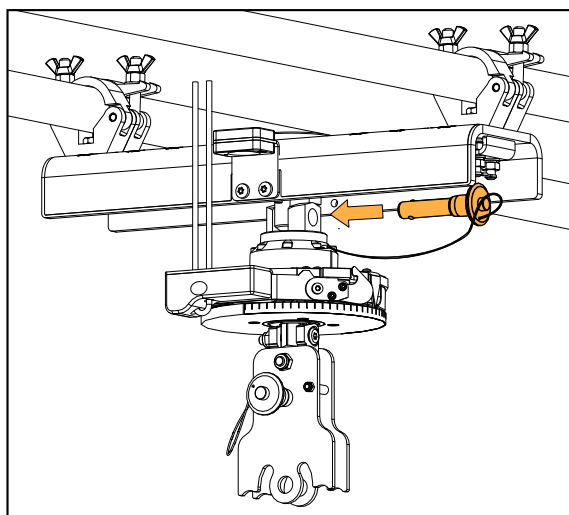
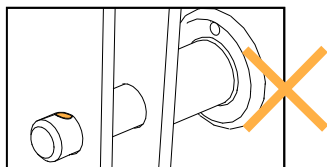
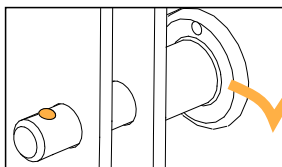
Do not remove the safety pins.

8. Mount CLAMP1000-BASE on CLAMP1000-DUAL using the ball-locking pin.

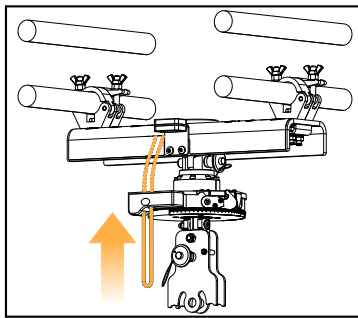


**Ball-locking pin check**

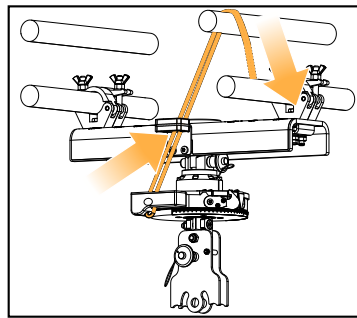
The ball must pass through both plates and lock the pin in place.



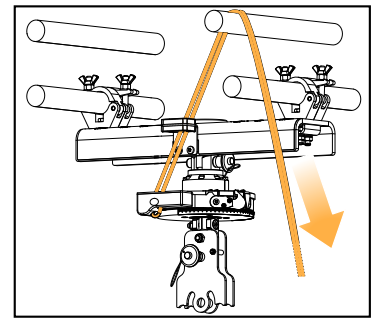
9. Fix the nylon rope on CLAMP1000-BASE and CLAMP1000-DUAL.



Pass the two strands through the lever.

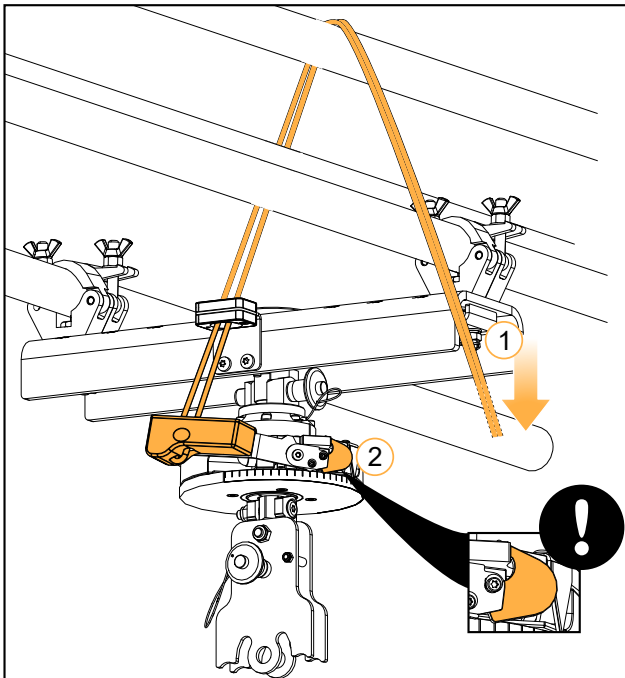


Pass the strands through the rope guide of CLAMP1000-DUAL and above the truss.



Let the nylon rope fall down at hand level.

10. Set the hook into unlocked position: (1) pull up the lever using the nylon rope from one hand and (2) retract the hook with the other hand.



Be careful not to pinch fingers.



For an L-ISA Technology deployment, leave the hook into unlocked position until all enclosure arrays are mounted.

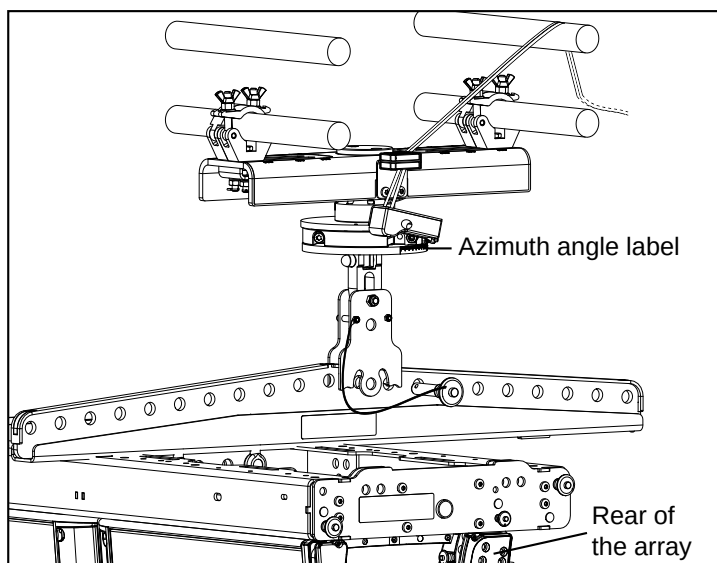
11. Connect the lower part of CLAMP1000-BASE to the dedicated rigging element(s) (rigging frame, rigging bar, ...) of the enclosure array. Refer to [Mechanical safety](#) (p.13) for compatible accessories.

- Remove the ball-locking pin from the first hole of CLAMP1000-BASE.
- Locate the rear of the enclosure array.

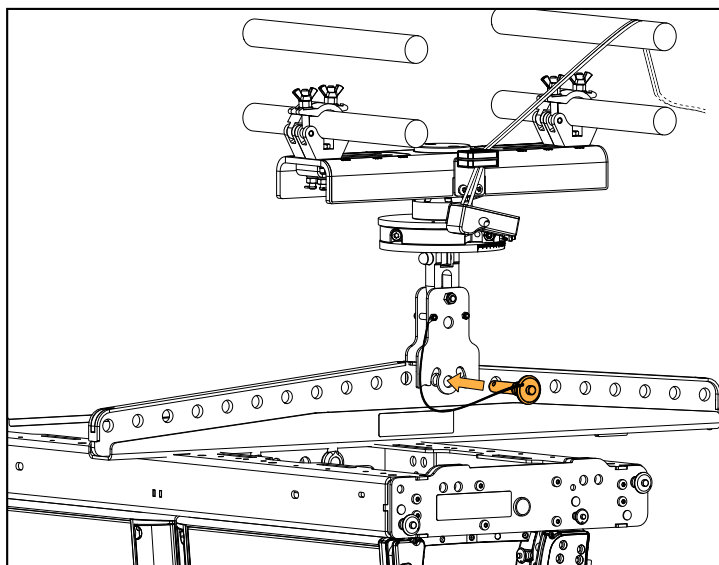
- c) Adjust the lower part of CLAMP1000-BASE to match the second hole of CLAMP1000-BASE with the desired hole from the rigging bar of the enclosure.



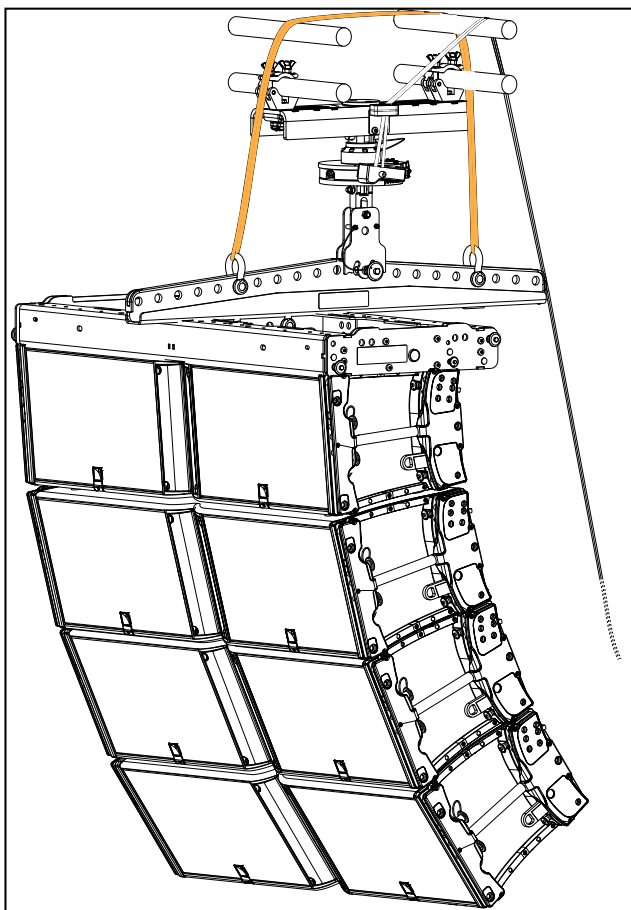
Make sure the rear of the enclosure array is located on the same side of CLAMP1000-BASE azimuth angle label.



- d) Secure CLAMP1000-BASE to the rigging bar using the ball-locking pin.

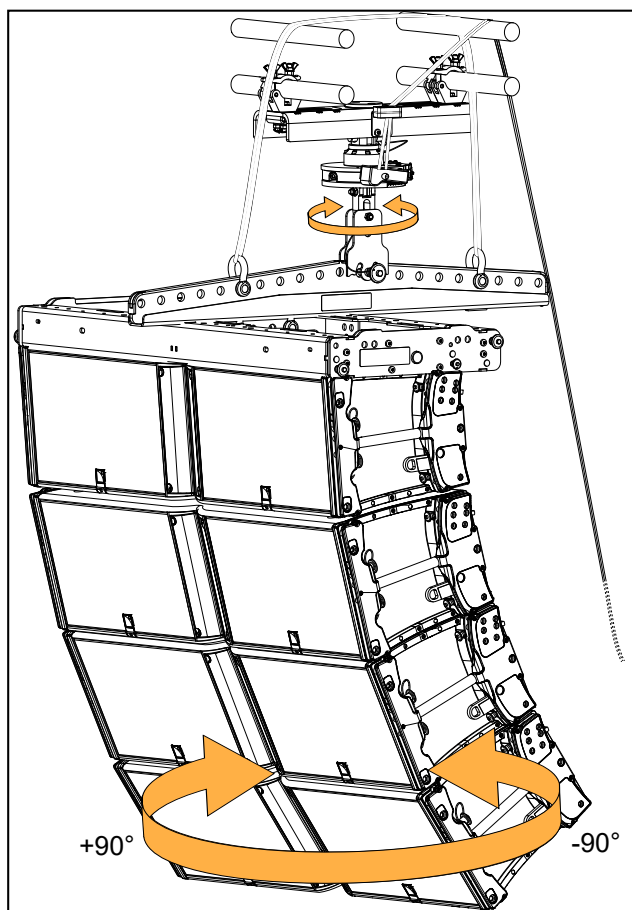


**12.** Add the secondary safety and lift the truss.



### 13. Adjust the azimuth angle.

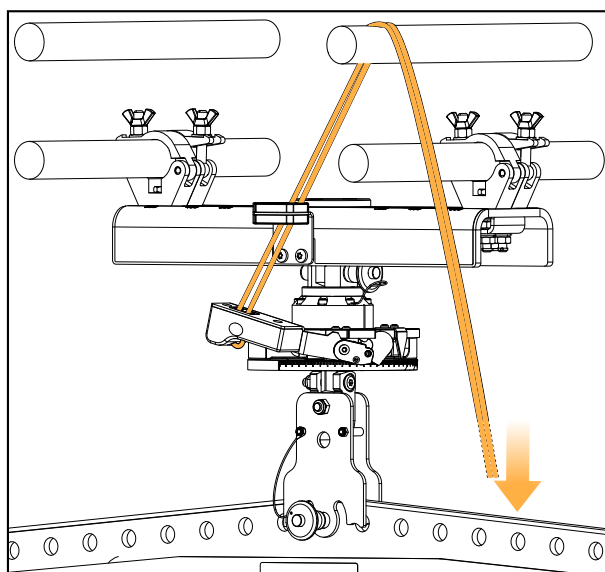
- a) Rotate the enclosure array by hand to set the azimuth angle.



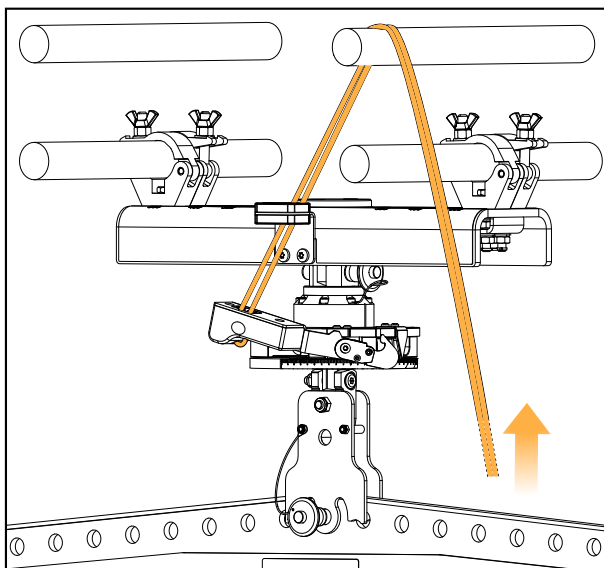
Rotating the enclosure array rotates the lower part of CLAMP1000-BASE.

- b) Lock the azimuth angle:

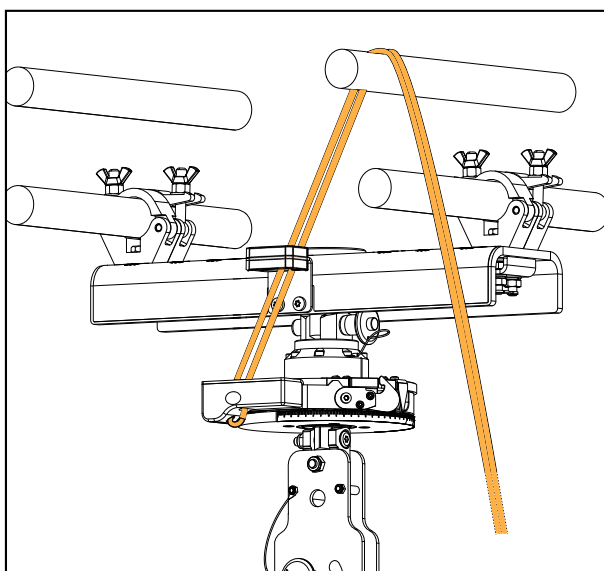
1. Apply a quick pull down to the nylon rope.



2. Release the nylon rope to lock the lever at the desired azimuth angle.



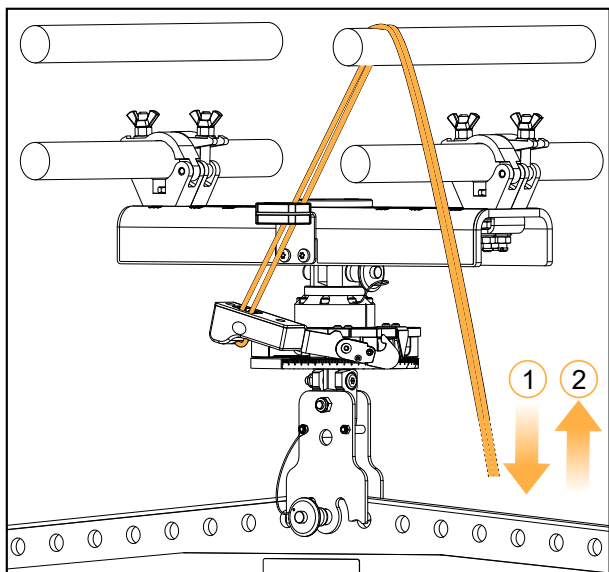
3. The lever is down and the hook is in locked position.



**What to do next**

To change the azimuth angle again: (1) pull down and hold the nylon rope to unlock the lever and rotate the enclosure array by hand.

(2) Release the nylon rope to lock the azimuth angle.



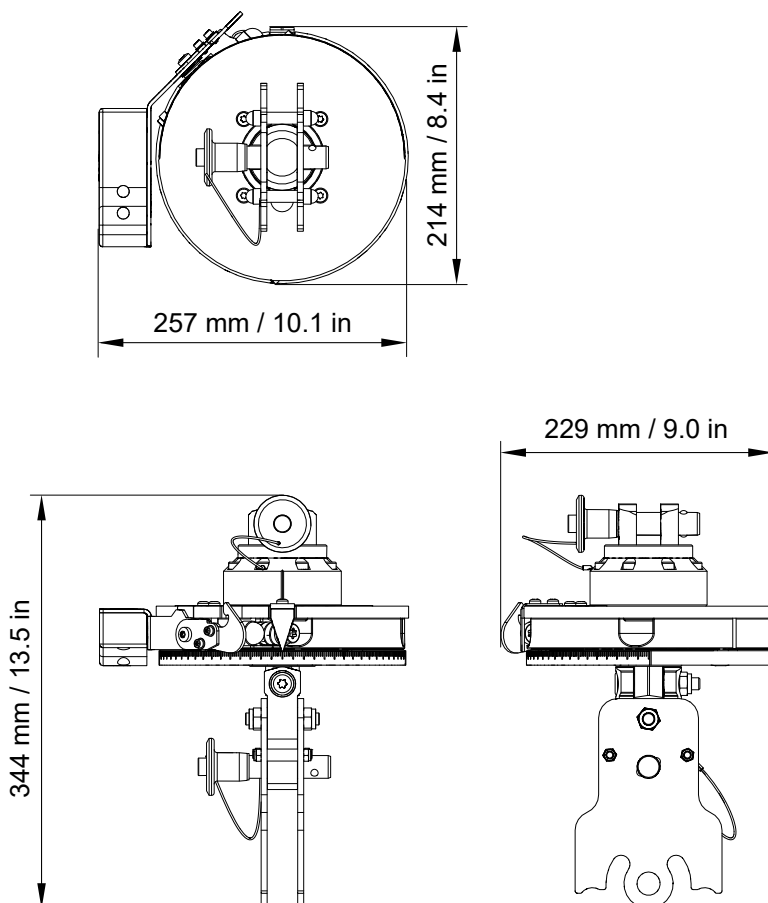
## Specifications

### CLAMP1000-BASE specifications

---

|                     |                                                       |
|---------------------|-------------------------------------------------------|
| <b>Description</b>  | CLAMP1000 rotary base certified for 1000 kg / 2205 lb |
| <b>Weight (net)</b> | 15 kg / 33 lb                                         |
| <b>Material</b>     | high grade steel with anti-corrosion coating          |

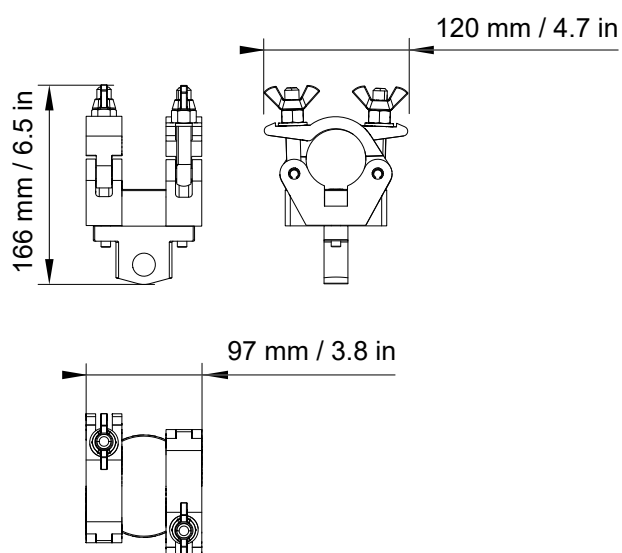
### CLAMP1000-BASE dimensions



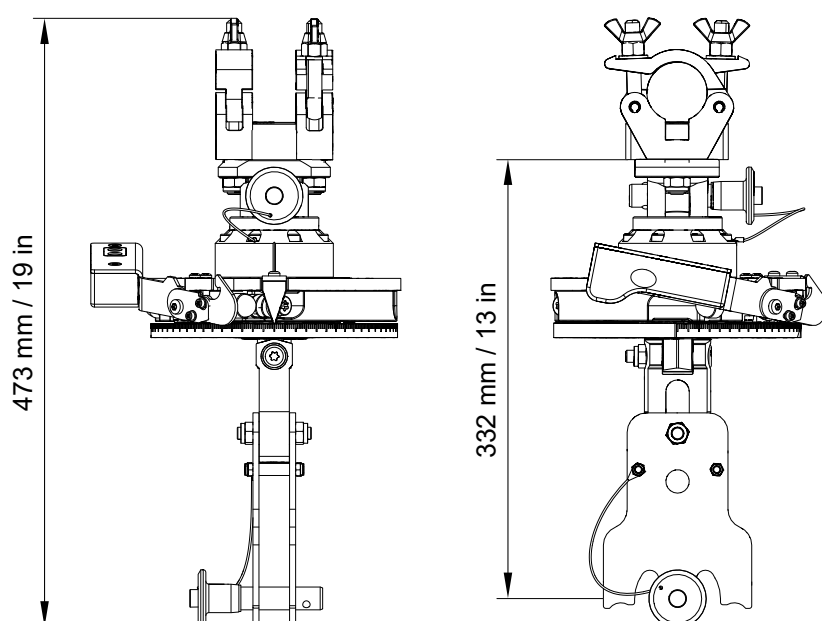
## CLAMP1000-SINGLE specifications

|                     |                                                  |
|---------------------|--------------------------------------------------|
| <b>Description</b>  | Single point mounting adaptor for CLAMP1000-BASE |
| <b>Weight (net)</b> | 2.0 kg / 4.4 lb                                  |
| <b>Material</b>     | high grade steel with anti-corrosion coating     |

## CLAMP1000-SINGLE dimensions



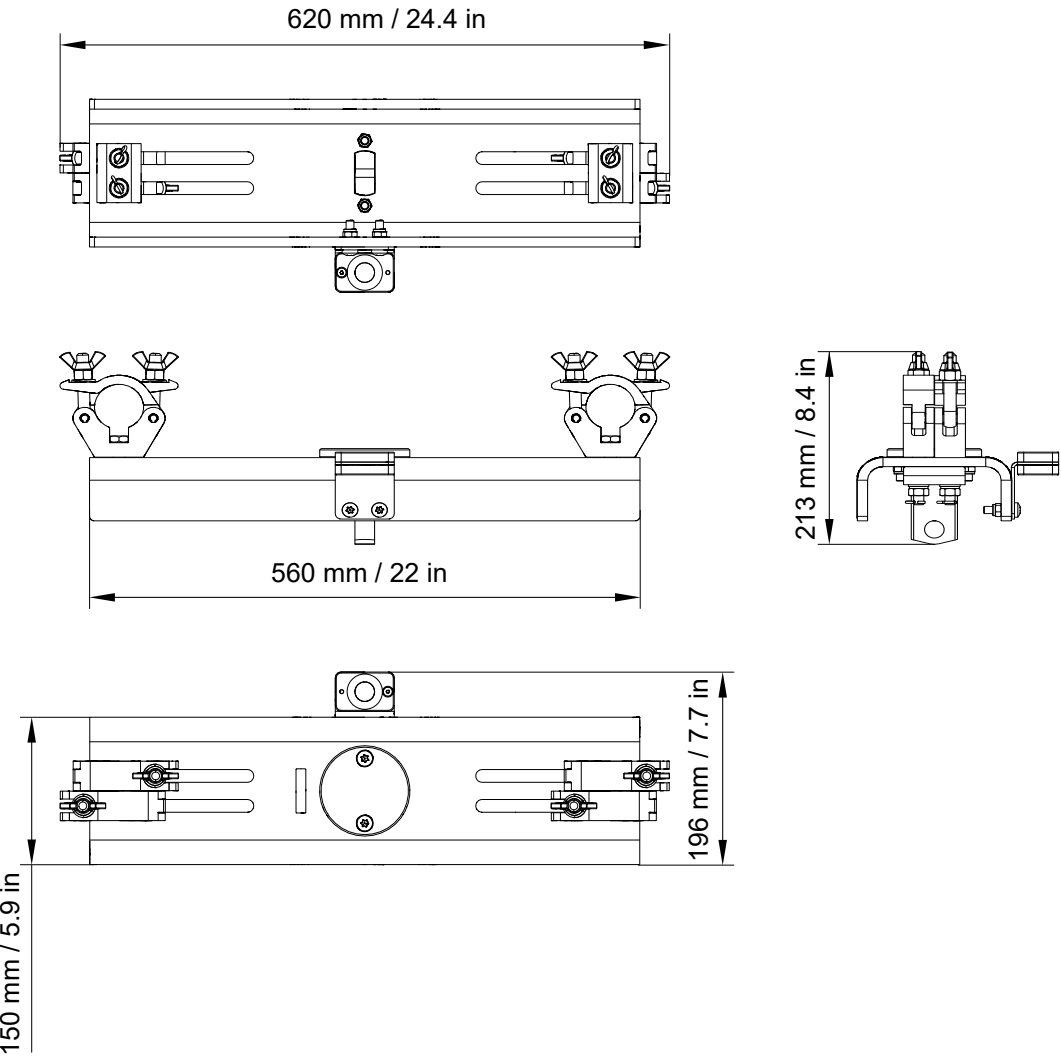
## Mounted on CLAMP1000-BASE

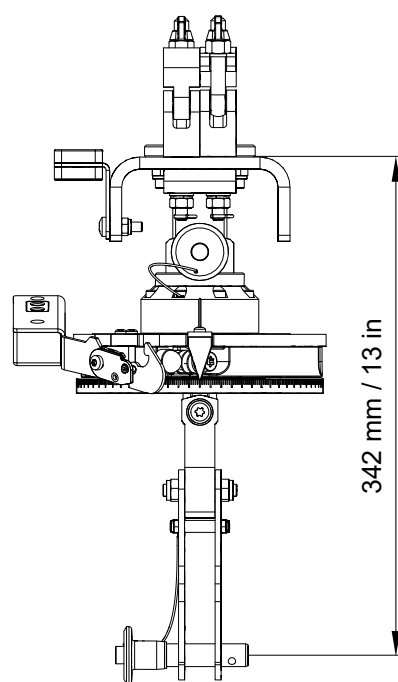
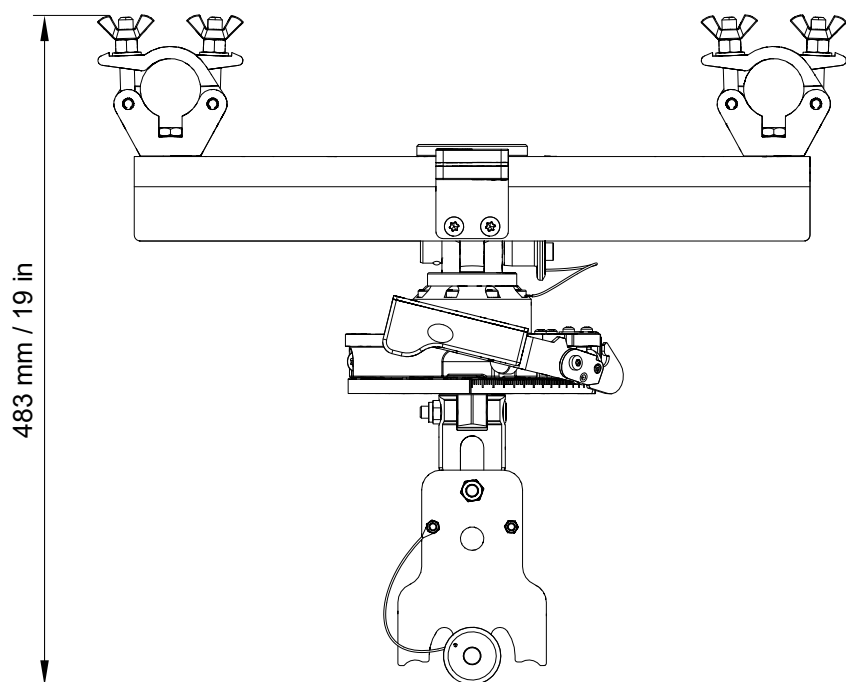


CLAMP1000-DUAL specifications

|              |                                                |
|--------------|------------------------------------------------|
| Description  | Dual point mounting adaptor for CLAMP1000-BASE |
| Weight (net) | 14 kg / 31 lb                                  |
| Material     | high grade steel with anti-corrosion coating   |

CLAMP1000-DUAL dimensions



**Mounted on CLAMP1000-BASE**



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