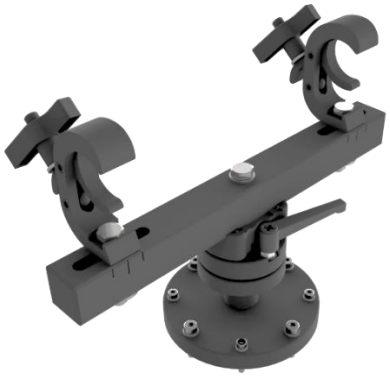
EVO-LINK-200 series

Truss mount for EVO frame series

Manual Version 1.3

EVO-LINK-200

EVO-LINK-201



EVO-LINK-210

EVO-LINK-211

Date	Revision No.	Author	Checked	Approved	Description
30.03.2020	1.0	VIU			Version draft 1.0
04.05.2020	1.1	VIU	DRD	DRD	Version 1.1
19.01.2022	1.2	TSN			Adding P30 and P17
23.02.2022	1.3	TSN	GJN		Redesigning
21.11.2022	1.4	GJN	TSN		Adding Pan. m.no.

These installation instructions must always be provided to the installing persons

Table of contents

1. Preamble

The EVO-LINK-200 series has been developed and manufactured with the highest care and attention. However, improper handling can cause a risk for safety and / or damage. Read these instructions carefully before handling and installing the product so that you can safely enjoy your device. In the following pages you will find all the information needed for a safe and fast installation.
After the installation is done properly, you can enjoy all the features of your new product. Please consider keeping the original box and packaging materials, in case you ever need to ship the product.

Model numbers:
- EVO-LINK-200 (without additional fine adjustment)
- EVO-LINK-201 (with additional fine adjustment)
- EVO-LINK-210 (with crossbeam and two clamps, without additional fine adjustment)
- EVO-LINK-211 (with crossbeam and two clamps, with additional fine adjustment)

1.1 Tools required

The tools required are:

- 5mm Allen key to tighten the M6 screws or 6 mm Allen key to tighten the M8 screws

Figure 1 Allen key (hex key)

- 19mm hexagon wrench key

Figure 2 19mm hexagon wrench key

- Universal torque

Figure 3 Universal torque key

2. Safety instructions

These installation instructions must always be handed over to the person who is carrying out the installation.
Read these instructions carefully before installing the system.

2.1 Definition of qualified persons

Note: The definitions provided here in parts translated from German standard DGUV 315-390, chapter 4. The information provided in the following section is just an excerpt of DGUV 315-390. There is no guarantee for a flawless translation. For further details see DGUV 315-390 and consider your local laws and regulations.

Qualified Person (Technical Expert)
Qualified person is qualified through relevant technical professional training, through knowledge of the operating methods as well as professional experience and recent professional activity in the field of event technology.
The required qualifications include in particular:

- Knowledge of applicable regulations and technical rules
- Required information from the manufacturer of the mechanical event technology equipment, that needs to be tested
- Knowledge of the risk assessments of the mechanical work equipment for event technology, that needs to be tested

A person can be considered as qualified when it has been thoroughly informed and/or trained about the assigned task and the possible dangers that can occur in case of improper behaviour and / or not observing precisely the installation instructions.

Authorised Expert Inspector

Authorized experts are persons who:

- have completed a technical degree at a technical university or scientific college
- be able to demonstrate at least three years of experience in the design, construction, maintenance or testing of mechanical work equipment for event technology, including at least six months of experience in testing this equipment
- have special knowledge of the relevant regulations and regulations
- are familiar with the operation of the event technology
- have the facilities and documents required for the examination and
- keep their professional knowledge up to date
- attest a certificate of qualification from the DGUV (authorization of a statutory accident insurance institution to act as an expert according to § 36 DGUV regulation 17 or 18 "Event and production facilities for scenic representation")

The requirements contained in the BetrSichV in conjunction with TRBS 1203 for inspectors for the verification of mechanical work equipment for event technology are met by the authorized experts in accordance with DGUV regulation 17 or 18 "Event and production facilities for scenic representation". These meet the requirements for inspectors for the work equipment mentioned above.

2.2 Warnings

The EVO-LINK-200 series is intended for use by fully qualified, trained and competent persons to provide safe and secure transportation, installation and adjustment of projectors.

Warning: Handling only by instructed, qualified and authorised person with a minimum age 18 years and of sound mind.

Only use the EVO-LINK-200 products as well as a corresponding frame with projector in a closed environment (conference rooms, theatres, convention halls, etc.) where there is no wind, moisture, excessive heat etc.

Make sure that only the designated projector frames are installed with the products of EVO-LINK-200 series! Do not try to use it with other products because serious accidents can occur!

Always use a rigging sling with steel cable insert and a shackle that is stable enough for the load including dynamic forces when falling into the rigging sling! (Two sets of rigging sling and shackle are recommended) Otherwise it is not allowed to use the product and serious accidents or death can happen.

Do not remove or replace any parts of EVO-LINK-200 series on your own. Contact the manufacturer or service partner in case of damage or loss. Removing or replacing parts by non-certified companies or people might result in serious accidents and death.

Only use the EVO-LINK and its components for its intended use.

- If this product is used for something else than its intended use, serious accidents and death may result. See chapter 6.1 Intended use

Installation work should only be carried out by a qualified technician.

- If this product is not installed correctly, serious accidents and death may result.

Do not use the products of EVO-LINK-200 series outdoors.

- This product is made only for indoor usage. If the product is mounted outdoor, there are many influences like wind or rain that can have an effect on the stability of the whole system.
- This can cause property damage, serious accidents and death.

A visual inspection must be done prior to every installation, in which the system is involved. The inspection must be performed by a qualified person.

- All parts of an EVO-LINK truss mount must be inspected in detail prior to any usage
- Only if the product and all its components are in a flawless condition, it is safe to use the system.
- For further details, see chapter 10. System maintenance and inspection Re-examination
- Using a truss mount which has damages, missing parts or the like can cause serious accidents and death.

Only use projector frames and projectors that are specified by the manufacturer to be used with the frame. When mounting the projector frame to the EVO-LINK, use all screws and washers that are specified by the manufacturer. Make sure to tighten the screws safely, with the provided torque information

- It is mandatory to use all screws and washers that the manufacturer defines to mount the projector frame to the EVO-LINK. Use only the ones that are clearly specified.
- For a safe installation the screws must be tightened with the provided torque
- Using the wrong screws or washers is highly dangerous. Tightening the screw with a to low torque can cause the screw to loosen itself. Tightening the screw with a too high torque might cause structural damage to the screw or the thread inside the projector.
- Ignoring these instructions can cause the parts or the whole system to fall down and with this can cause death, serious injuries or product damage.

Do not install the EVO-LINK truss mount and / or the projector frame while people are present under the mounting zone during the installation process.

- When installing the system (EVO-LINK, projector frame, projector) make sure no one is in the area underneath the installation zone. Otherwise, this will be a risk for all people underneath, that could cause serious injuries and death.

Make sure that the structure from which you hang the EVO-LINK up is capable of carrying the overall weight of approx. 210 kg (463 lbs) plus the weight of all additional equipment as well as other potential systems. Do not hang the truss mount from unstable or inappropriate structures.

- Prior to any installation, you must do a visual inspection to make sure that the system is in a good condition. For more information, please refer to chapter 10. System maintenance and inspection Re-examination
- If the system is hung on an unstable structure, the entire system can fall down and injuries may occur. Make sure that the construction can support a total weight of up to 210,0 kg (463 lbs) plus the weight of all additional equipment as well as other potential systems. The above-named weight of 210,0 kg (463 lbs) represents the weight load limit of EVO-LINK-200 series which is 200,0 kg plus the weight of the EVO-LINK itself.
- Ignoring this might cause significant damage to the product and serious accidents or death may result

Make sure to use only approved and recommended projector frames to be used with the EVO-LINK products. Only use approved and recommended accessories.

- Do not use other projector frames than the ones recommended and approved. Otherwise, using incompatible projector frames may lead to serious injuries, death and property damage
- Do not use other accessories than the ones recommended and approved. Otherwise, using insufficient accessories may lead to serious injuries, death and property damage
- Please also refer to chapter 4.2 Compatible frames for EVO-LINK-200 series and also to chapter 5. Optional accessories

Make sure to not exceed max. weight loads.

- Do not overload the products of EVO-LINK-200 series or of any accessories and make sure the overall weight is within working specifications of the accessories. Please also refer to chapter 5. Optional accessories as well as to chapter 9. Maximum stacking information
- Overloading the accessories and other equipment can cause serious accidents and death

The EVO-LINK-200 series and the used clamps are made for installing on 48-51mm diameter pipe structures. Do not try to use it with other dimensioned structures

- Ignoring this and trying to install the system to a different pipe diameter then 48 to 51mm is not allowed as it will not be safe and people might get hurt or killed.

Do not hang more projector frames under EVO-LINK-200 series products than allowed by the manufacturer

- Do not exceed the maximum number of hung units as this may cause the whole system or parts of it to fall down. Refer to chapter 9. Maximum stacking information
- Ignoring this might cause significant damage to the product and serious accidents or death may result

When using the adjustment features of the EVO-LINK products, never apply significant force.

- When using the adjustment features of the products, never apply force. All adjustments shall work smoothly and do not require significant force.
- If significant force is necessary, the cause may be a faulty part or that, the end of the adjustment range has been reached.
- Ignoring this, might cause significant damage to the product and serious accidents may result

Always secure the projector frame to the rigging truss with rigging slings with steel cable insert and shackles (two sets of rigging sling and shackle are recommended).

- The projector frame must always be secured with an appropriate rigging sling and shackle so that in case of a malfunction it doesn't fall more than 10 cm. It is recommended to use two sets of rigging sling and shackle to avoid too much dynamic forces as well as the projector swinging. Please consult the local laws or regulations regarding the additional safety of hanging equipment.
- It is important to use correct rigging slings with cable inserts and shackles that are capable to resist the high dynamic forces.
- Refer also to chapter 7.2 Mounting the EVO-LINK-200 or EVO-LINK-201 to a truss and 7.3 Mounting the EVO-LINK-210 or EVO-LINK-211 to a truss
- The rigging slings and shackles act as a secondary safety element and it is mandatory to use them. Not using them or using the wrong products might cause serious accidents and death.

Service work shall only be done by qualified personnel that is authorized by the manufacturer. Furthermore, only original spare parts shall be used.

- Unauthorized personnel shall never do service work on the products, as service work requires special training and knowledge
- Spare parts must always be original ones, provided by the manufacturer
- Not observing these rules on service work ends with immediate effect the responsibility of the manufacturer and, where applicable, warranty is irrecoverably lost. The product is no longer safe to use. This may cause serious accidents or death and property damage.

Tighten the adjustment handle with a maximum torque of 10 Nm to guarantee a proper and safe fastening.

- A maximum torque of 10 Nm must be applied to guarantee a proper fastening. Refer to chapter **8.1** Rough adjustment for more information.
- Only use tools to ensure the maximum torque of 10 Nm. This can be done by lifting the handle and use a torque key at the 13mm nut.
- Do not use any tools to increase the force that is applied on the handle.
- If too much force is applied on the handle property damage or serious accidents can occur.

Figure 4 position of handle and cross recess screw drive

2.3 Caution

Before installing the frame to the EVO-LINK-200 series truss mount, please read the frame's user manual.

- The EVO-LINK-200 series truss mount with the frame and the projector attached must be installed only in an environment that is recommended by the projector manufacturer.
- If this product is not installed correctly, serious accidents may result.

Minimum two persons are required to install the EVO-LINK-200 series products.

- With regard to the overall weight of all necessary installation devices, make sure to handle those with at least two people.

Periodic inspections are mandatory

- Depending on local laws and regulations owners / users must do periodic inspections of the frame and all components. In case of German regulations this must be done and documented once a year by a qualified and authorised person. Furthermore, for German DGUV V17/V18 is mandatory to revalidate the safety every four years. This must be done and documented by an expert, that is authorized by the German Social Accident Insurance (DGUV)

Do not place unsecured accessories like tools or electrical devices (converter, video player etc) on top of the frame that is mounted with EVO-LINK to a truss.

- These devices may fall down and causes serious accidents or even death to people who are situated near the installation.
- The additional weight of every device added to the system must be considered. Contact the manufacturer for any questions.

Use suitable transport boxes / flight cases to protect the products during transport. Handle with care.

- When transporting the EVO-LINK products, make sure you are using a flight case that protects and damps impacts during transport.
- Transport shall be carried out gently to avoid damages through falling or similar impacts.
- During transportation, heavy impacts might damage the product. In this case, the stability and safety of the system is at high risk. This can lead to accidents, death and property damage.

Use only gentle cleaning agents to avoid damage

- Cleaning may be done with a soft cloth and a little bit of warm, slightly soapy water
- Do not use any oil, acid etc. on the products or its components. This may damage the system.

Incorrect disposal is a risk to humans and nature

- Disposal must be done in accordance with local laws and regulations. Contact the manufacturer in case of any questions.

2.4 Risk Situations

Risk of injury due to the possibility of falling objects during the assembly or disassembly of the EVO-LINK-200 series truss mount.

- Protection objective: Avoid injury from falling parts.
- Wear appropriate safety shoes, gloves and helmet.
- Make sure the area under the truss mount is clear and no person is present during installation.

Risk of hitting the head with the EVO-LINK-200 series truss mount during the hanging set up process.

- Protection objective: Avoid injury from hitting the head.
- Wear a helmet.

Incorrect installation may lead to certain parts of the EVO-LINK-200 series truss mount or the entire EVO-LINK-200 series truss mount to fall down.

- Protection objective: Prevent personal injury and property damage.
- Double check the EVO-LINK-200 series truss mount and its installation.
- Read the EVO-LINK-200 series manual carefully.

Insufficient load capacity of the supporting structure may lead to certain parts of the EVO-LINK-200 series truss mount or the entire EVO-LINK-200 series truss mount to fall down.

- Protection objective: Prevent personal injury and property damage.
- Provide adequate dimensioning of the supporting structure. The supporting structure must be able to support the combined weight of all the equipment attached to, or hung from it.
- Ensure correct installation of the supporting structure.

Usage of unsafe ladders/steps/scaffolding may lead to serious personal injuries

- Protection objective: prevent personal injury by using only safe ladders/steps/scaffolding.
- Use only appropriate and safe equipment
- Always follow the documentation of the manufacturer of the provided ladders/steps/scaffolding
- Use personal safety equipment if necessary

The fingers or the hand of the user can be caught between the metal plates of the EVO-LINK-200 series while adjusting the image.

- Protection objective: Prevent personal injury by using safety gloves.
- When the mechanical adjustment is made, the user must always keep his hands away from the area in between the moving parts. In case of EVO-LINK-201 and EVO-LINK-211 users should only touch the heads of the adjustment screws not the area around.

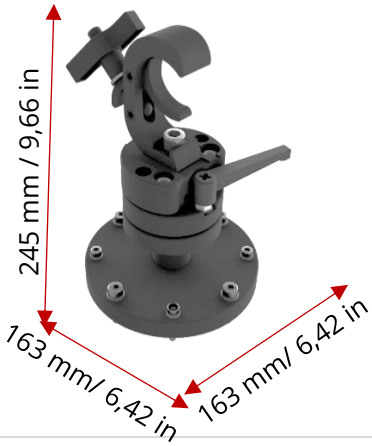
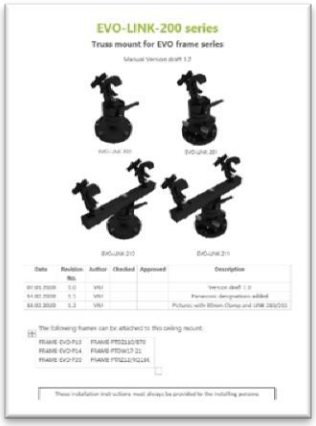
Figure 5 Adjustment screws position

3. Scope of delivery

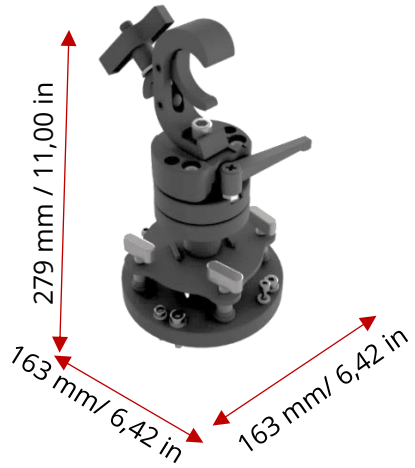
Note: Please check the delivery for completeness and damage immediately after you receive the shipment. Please contact your vendor in case of missing or damaged parts.

The EVO-LINK-200, EVO-LINK-201, EVO-LINK-210 or EVO-LINK-211 are sold separately! They are not sold together in the same box.

3.1 EVO-LINK-200

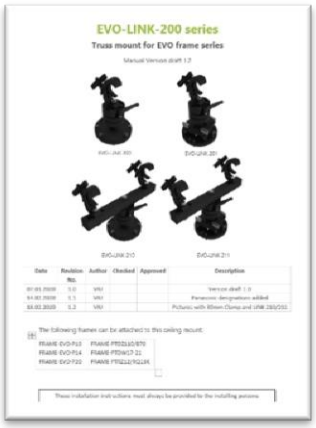
	**EVO-LINK-200** • Used for frame installation • Number of units: **1** • Weight: **3,1 kg / 6,83 lbs** • Permanently mounted four M6 screws and four M8 screws
	**User manual and installation guide** for EVO-LINK-200 series

3.2 EVO-LINK-201



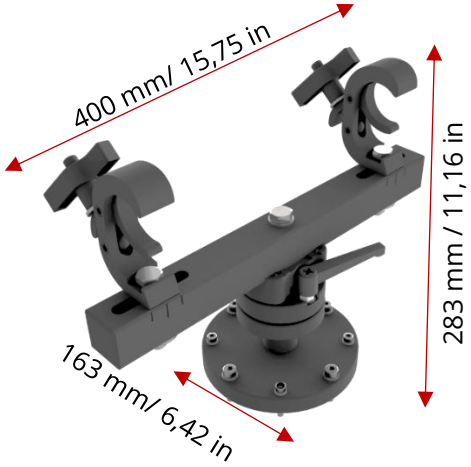
EVO-LINK-201

- Used for frame installation
- Number of units: **1**
- Weight: **4,4 kg / 9,70 lbs**
- Permanently mounted four M6 screws and four M8 screws



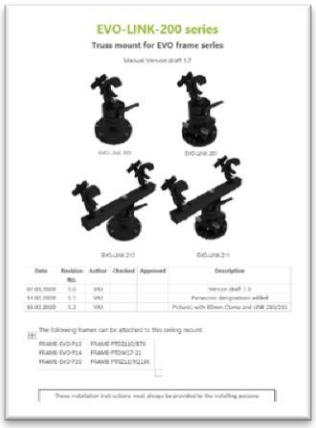
User manual and installation guide
for EVO-LINK-200 series

3.3 EVO-LINK-210



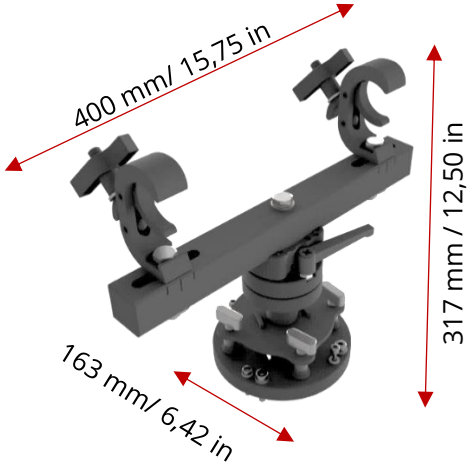
EVO-LINK-210

- Used for frame installation
- Number of units: **1**
- Weight: **5,0 kg / 11,023 lbs**
- Permanently mounted four M6 screws and four M8 screws



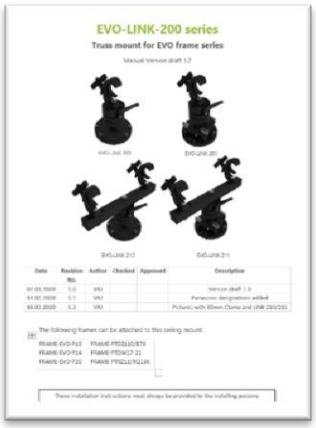
User manual and installation guide
for EVO-LINK-200 series

3.4 EVO-LINK-211



EVO-LINK-211

- Used for frame installation
- Number of units: **1**
- Weight: **6,3 kg / 13,88 lbs**
- Permanently mounted four M6 screws and four M8 screws



User manual and installation guide
for EVO-LINK-200 series

4. Overview of model numbers and compatibility

4.1 EVO-LINK-200 series designations

European market	Non-European market
Manufacturer m.no.: EVO-LINK-200 Panasonic EU m.no.: ET-LINK200 Epson m.no.: TBD	Manufacturer m.no.: EVO-LINK-200-US Panasonic USA m.no.: ET-PFD065TMS2 Epson m.no.: TBD
Manufacturer m.no.: EVO-LINK-201 Panasonic EU m.no.: ET-LINK201 Epson m.no.: TBD	Manufacturer m.no.: EVO-LINK-201-US Panasonic USA m.no.: ET-PFD165TMS2 Epson m.no.: TBD
Manufacturer m.no.: EVO-LINK-210 Panasonic EU m.no.: ET-LINK210 Epson m.no.: TBD	Manufacturer m.no.: EVO-LINK-210-US Panasonic USA m.no.: ET-PFD265TMCX2 Epson m.no.: TBD
Manufacturer m.no.: EVO-LINK-211 Panasonic EU m.no.: ET-LINK211 Epson m.no.: TBD	Manufacturer m.no.: EVO-LINK-211-US Panasonic USA m.no.: ET-PFD365TMCX2 Epson m.no.: TBD

m.no. = model number

Note: In this manual, when reference is made to the manufacturer model number it is also automatically a reference to the Panasonic EU / USA or Epson model number like described in the table above.

4.2 Compatible frames for EVO-LINK-200 series

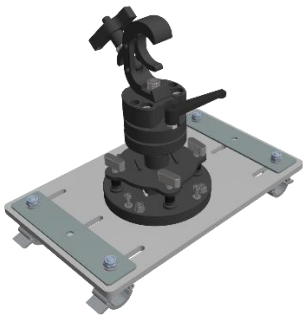
European market	Non-European market
Manufacturer m.no.: FRAME-EVO-P10 Panasonic EU m.no.: ET-RFD40	Manufacturer m.no.: FRAME-EVO-P10-US Panasonic USA m.no.: ET-PFD365
Manufacturer m.no.: FRAME-EVO-P14 Panasonic EU m.no.: ET-RFD50	Manufacturer m.no.: FRAME-EVO-P14-US Panasonic USA m.no.: ET-PFD465
Manufacturer m.no.: FRAME-EVO-P20 Panasonic EU m.no.: ET-RFD60	Manufacturer m.no.: FRAME-EVO-P20-US Panasonic USA m.no.: ET-PFD565
Manufacturer m.no.: FRAME-EVO-P17 Panasonic EU m.no.: /	Manufacturer m.no.: FRAME-EVO-P17-US Panasonic USA m.no.: ET-PFD525
Manufacturer m.no.: FRAME-EVO-P30 Panasonic EU m.no.: ET-RFD70	Manufacturer m.no.: FRAME-EVO-P30-US Panasonic USA m.no.: ET-PFD765
Manufacturer m.no.: FRAME-EVO-P31H Panasonic EU m.no.: NA	Manufacturer m.no.: FRAME-EVO-P31H-US Panasonic USA m.no.: NA
Manufacturer m.no.: FRAME-EVO-E10 Epson m.no.: ELPMB59	Manufacturer m.no.: FRAME-EVO-E10 Epson m.no.: ELPMB59
Manufacturer m.no.: FRAME-EVO-E20 Epson m.no.: ELPMB57	Manufacturer m.no.: FRAME-EVO-E20 Epson m.no.: ELPMB57

m.no. = model number

This is an abstract of a complete list of compatible projector frames. EVO-LINK-200 series is also compatible with other projector frames, please contact us for more information.

Note: In this manual, when reference is made to the manufacturer model number it is also automatically a reference to the Panasonic EU / USA or Epson model number like described in the table above.

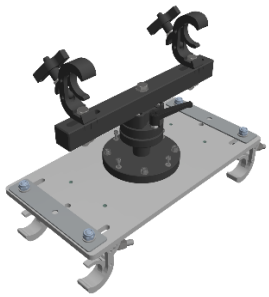
5. Optional accessories



FRAME-PF-UNI-PORAD
Portrait Adapter for Projector Frames
Optional accessory for portrait mode truss mount installations.
Does not include EVO-LINK-200 series product.

More information can be found in the FRAME-PF-UNI-PORAD installation manual.

FRAME-PF-UNI-PORAD-L
Portrait Adapter for large Projector Frames
Optional accessory for portrait mode truss mount installations.
Does not include EVO-LINK-200 series product.



More information can be found in the FRAME-PF-UNI-PORAD-L installation manual.

EVO-LINK SK

The EVO-LINK Safety Kit consists of two rigging slings with steel cable insert and two shackles.

The optional accessories must be purchased separately. They are not included in the standard package!

Make sure to not exceed max. weight loads.

Always secure the mounted frame to the rigging truss with rigging slings with steel cable insert and shackles (two sets of rigging sling and shackle are recommended).

Make sure to use only approved and recommended accessories.

6. Description of the product

6.1 Intended use

The EVO-LINK-200 series is a series of truss mounting products that are used to attach a projector rigging frame to a truss. They offer possibilities to adjust the projector rigging frame. The EVO-LINK-200 series products are intended for use by fully qualified, trained and competent persons to provide safe and secure installation and adjustment of projectors. The EVO-LINK-200 series, the rigging frame as well as the projectors that can be installed are made only for indoor usage. The EVO-LINK-200 series and the used clamps are made for installing on 48-51mm diameter pipe structures. Do not try to use it with other dimensioned structures

6.2 Specifications

Parameter	**Value**
Size [mm]	See drawing
Weight [kg]	EVO-LINK-200: 3,1 kg EVO-LINK-201: 4,4 kg EVO-LINK-210: 5,0 kg EVO-LINK-211: 6,3 kg
Maximum safe working load	200 kg
Operating temperature [°C]	0 - 45
Operating rel. humidity [%rH]	10 - 75
Operation area	Indoor in closed rooms

7. EVO-LINK-200 series and the EVO frame series

7.1 Attaching to the frame

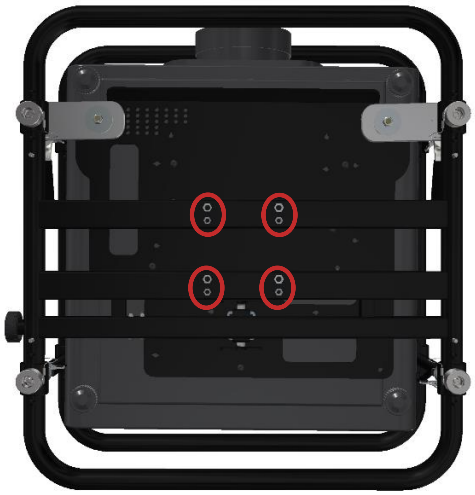


Figure 6 Downside of a frame with mounting points marked

EVO-LINK-200 series mounts have four M6 and four M8 screws to fix it to the projector frame. All four M6 or all M8 screws have to be used.

Step 1: Place the frame, with the projector already installed, upside down on a flat surface. The four M6 and the four M8 threads from the middle of the frame have to be on the top. Figure 6 shows a FRAME-EVO-P10 as example. Different frames have different mounting points. Please consult the compatibility list presented on subchapter 4.2 Compatible frames for EVO-LINK-200 series to check if your frame is compatible with the EVO-LINK-200 series. After this consult the corresponding frame manual, to find out what type of mounting points are provided.

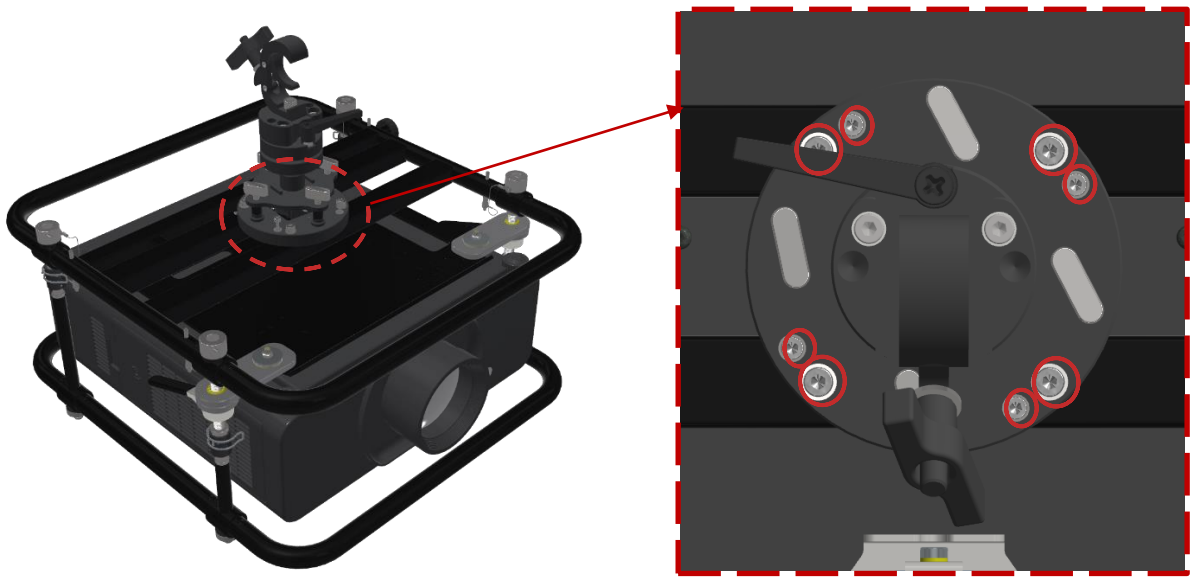


Figure 7 M6 and M8 threads on EVO-LINK

Step 2: For the frames that have M6 and M8 threads, one can choose between those two sets of screws. Use the 5 mm hex key to tighten the four M6 screws with a torque of 10±0.5 Nm and the 6 mm hex key to tighten the four M8 screws with a torque of 25±0.5 Nm. All four M6 or all M8 screws have to be used.

To see how many stacked frames can be hanged with EVO-LINK 200 series, please check the chapter 9. Maximum stacking information. Do not exceed the given number of maximum frames

Do not exceed the maximum load limit of 200kg for EVO-LINK-200 series.

Make sure you tighten all of the four screws with the correct torque

Torque:
M8: 25±0.5 Nm
M6: 10±0.5 Nm

Always secure the frame using appropriate **rigging slings with steel cable insert and shackles**. Make sure they are chosen correctly regarding strength, format and length. Please avoid high dynamic forces by ensuring that the frame will not drop more than **10 cm** into the rigging slings.

Please consult the local laws or regulations regarding the additional safety of hanging equipment.

For further information regarding an appropriate rigging sling with steel cable insert and shackle please contact us.

Insufficient load capacity of the supporting structure may lead to certain parts or the entire system to fall down.

7.2 Mounting the EVO-LINK-200 or EVO-LINK-201 to a truss

The EVO-LINK-200 series and the used clamps are made for installing on 48-51mm diameter pipe structures. Do not try to use it with other dimensioned structures

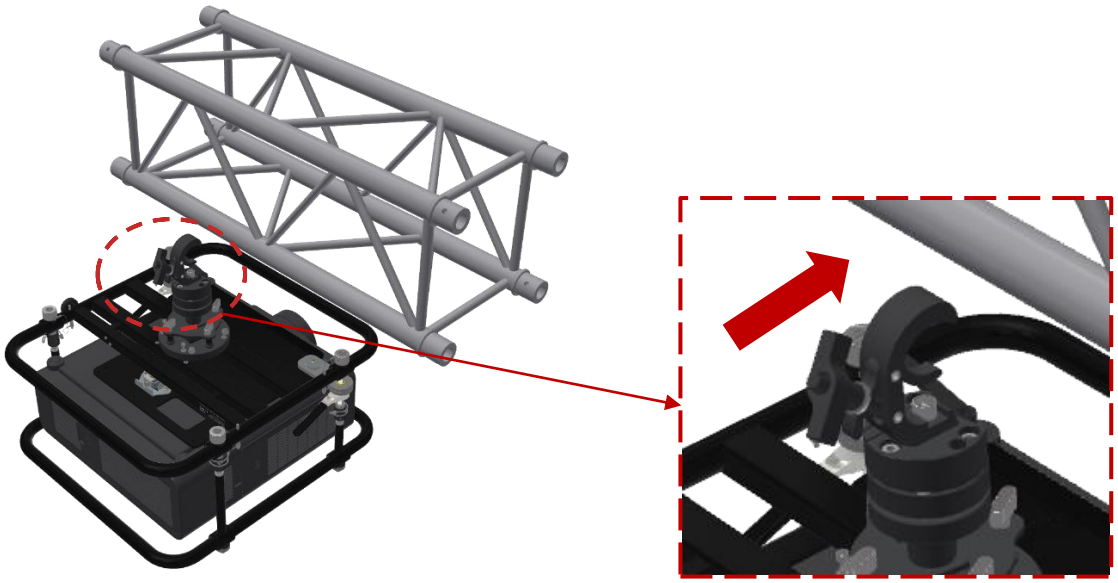


Figure 8 Mounting EVO-LINK-200 or -201 to a truss

Step 1: Carefully move the truss mount with the frame attached towards the truss. Please make sure that the self-lock hook clamp is open enough so it will fit easily on the truss.

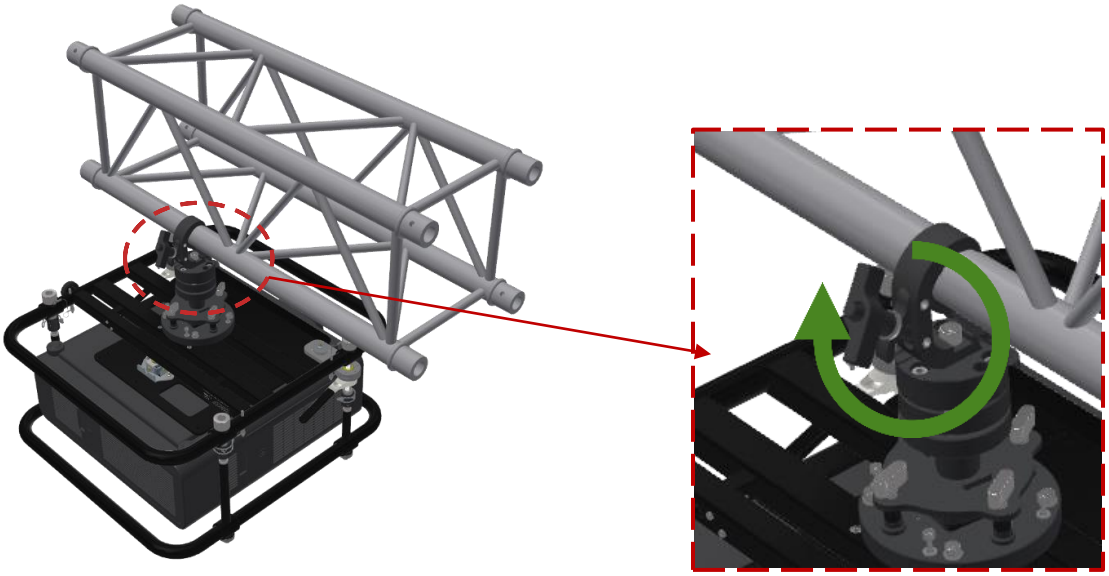


Figure 9 Tightening the wing nut on EVO-LINK-200 or -201

Step 2: When the truss mount with the frame is in the desired position, turn the wing nut clockwise to secure your set-up. Please tighten the wing nut until the EVO-LINK-200 series and the frame are not oscillating and are in a safe position. The clamp needs to be attached firmly, but not so firmly as to damage a pipe or truss tube.

Always install the EVO-LINK-200 series in a vertical hanging position!

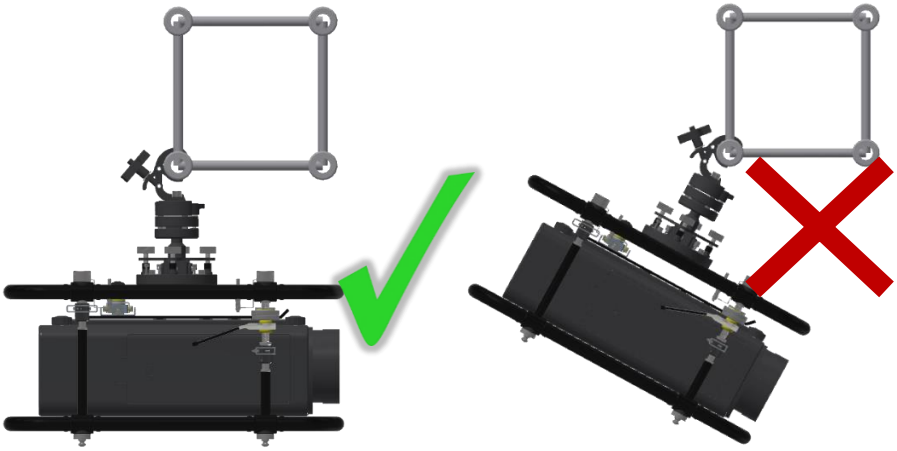


Figure 10 Only installation in vertical hanging position

Always secure the frame using appropriate **rigging slings with steel cable insert and shackles**. Make sure they are chosen correctly regarding strength, format and length. Make sure the rigging slings and the shackles are strong enough for the load and the dynamic force when the load falls into the rigging slings and shackles. Please avoid high dynamic forces by ensuring that the frame will not drop more than **10 cm** into the rigging slings. Depending on your application it is recommended to use two sets of rigging slings and shackles to avoid too much dynamic forces as well as the projector swinging.

Please consult the local laws or regulations regarding the additional safety of hanging equipment.

For further information regarding an appropriate rigging sling with steel cable insert and shackle please contact us.

Insufficient load capacity of the supporting structure may lead to certain parts or the entire system to fall down.

The clamp needs to be attached firmly, but not so firmly as to damage a pipe or truss tube.

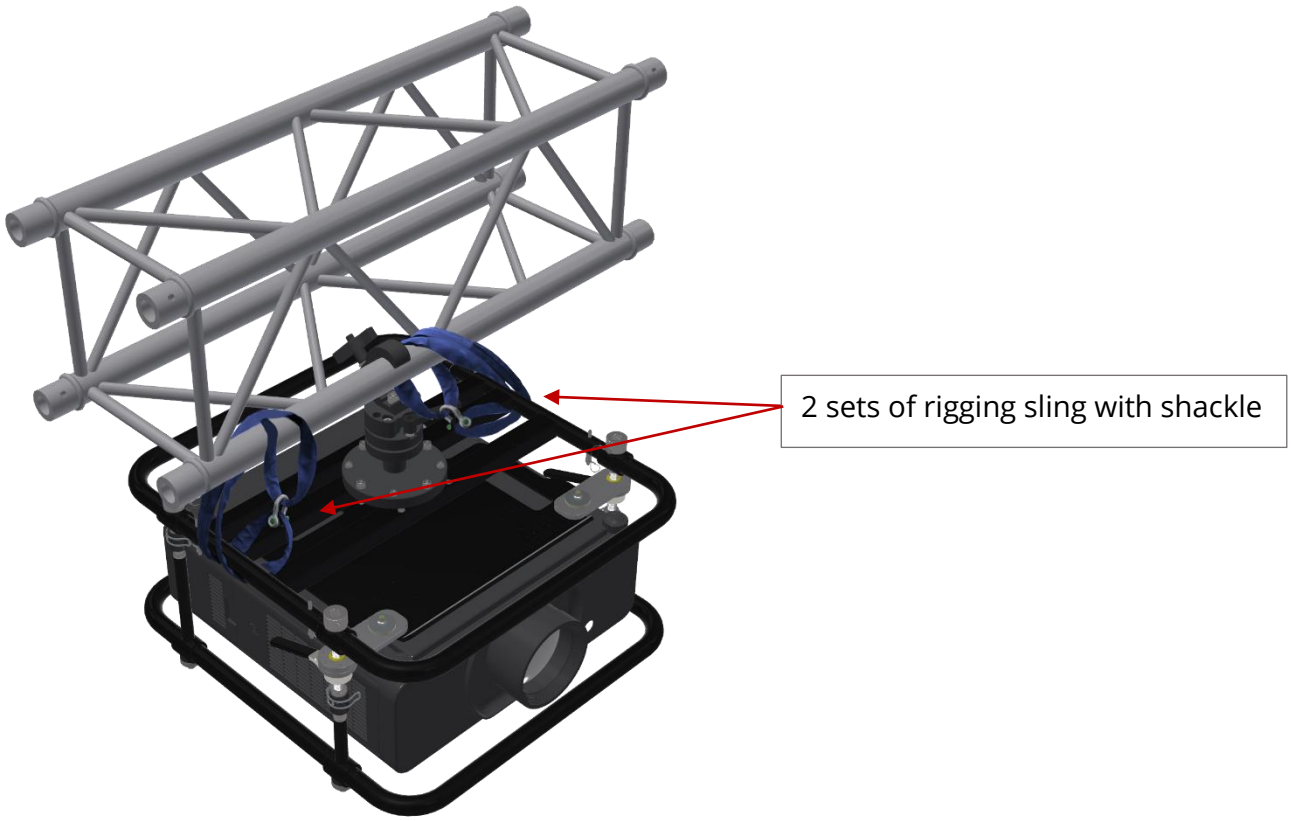


Figure 11 securing the truss mount using EVO-LINK Safety Kit

7.3 Mounting the EVO-LINK-210 or EVO-LINK-211 to a truss

The EVO-LINK-200 series and the used clamps are made for installing on 48-51mm diameter pipe structures. Do not try to use it with other dimensioned structures

The two self-lock hook clamps on the EVO-LINK-210 and EVO-LINK-211 cross beam can be adjusted in a range of 124 mm (4,88 in). The distance between the clamps can vary between 236mm and 360mm. For moving a clamp, please unscrew the M12 safety nut with the 19mm hexagonal wrench key and move the clamps to the desired position. **Afterwards secure the M12 Safety nut with a torque of 85Nm +/-0,5 Nm.**

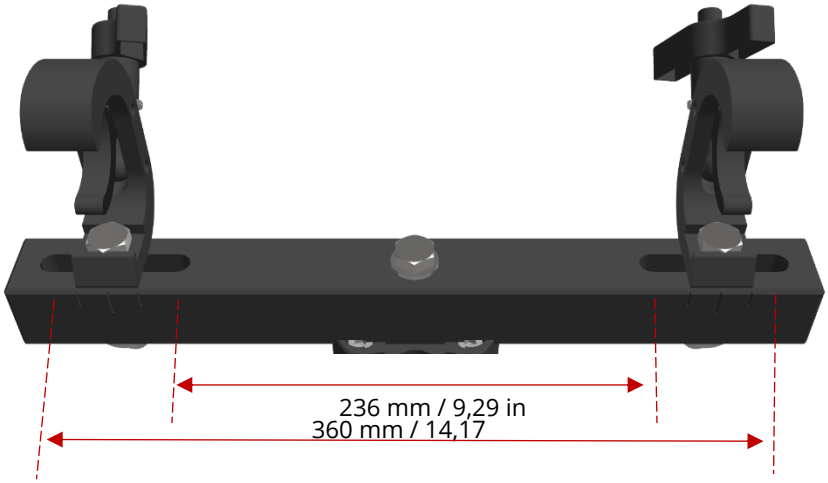


Figure 12 Adjustment range of EVO-LINK-210 or -211

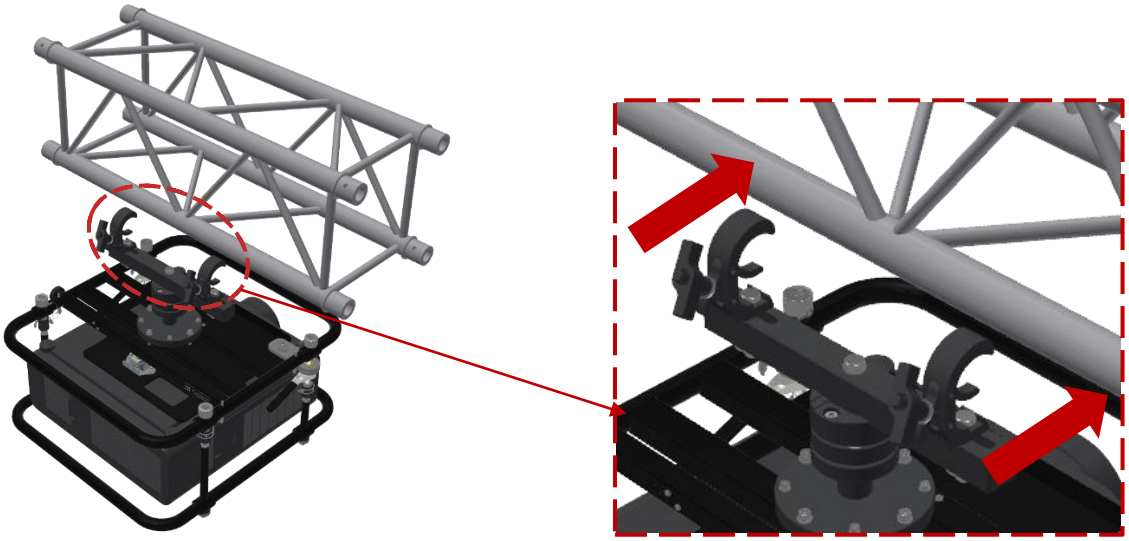


Figure 13 Mounting EVO-LINK-210 or -211 to a truss

Step 1: Carefully move the truss mount with the frame attached towards the truss. Please make sure that both self-lock hook clamps are open enough so they will fit easily on the truss.

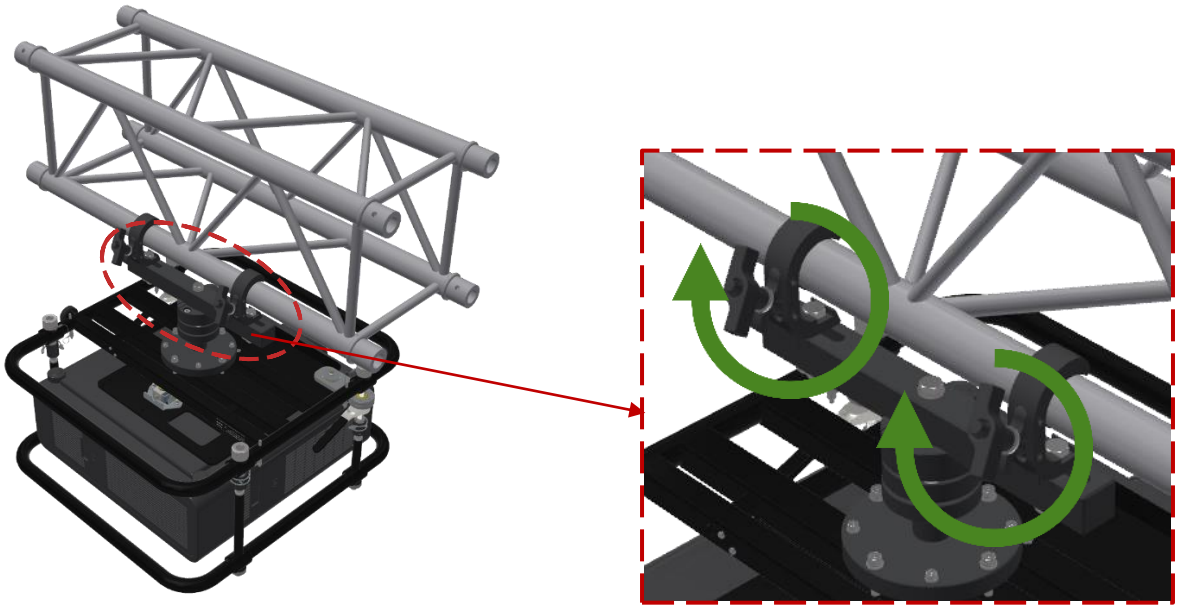


Figure 14 Tightening the wing nut on EVO-LINK-201 or -211

Step 2: When the truss mount with the frame is in the desired position, turn both wing nuts clockwise to secure your set-up. The clamps need to be attached firmly, but not so firmly as to damage a pipe or truss tube.

Always install the EVO-LINK-200 series in a vertical hanging position!

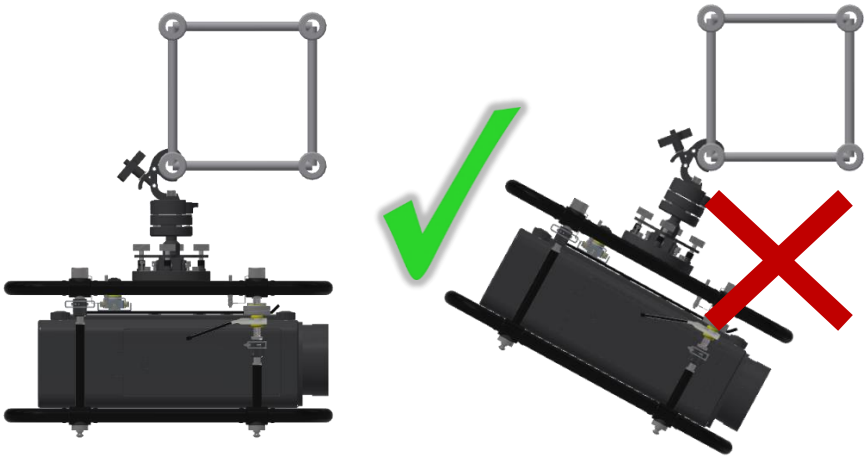


Figure 15 Only installation in vertical hanging position

Always secure the frame using appropriate **rigging slings with steel cable insert and shackles**. Make sure they are chosen correctly regarding strength, format and length. Make sure the rigging slings and the shackles are strong enough for the load and the dynamic force when the load falls into the rigging slings and shackles. Please avoid high dynamic forces by ensuring that the frame will not drop more than **10 cm** into the rigging slings. Depending on your application it is recommended to use two sets of rigging slings and shackles to avoid too much dynamic forces as well as the projector swinging.

Please consult the local laws or regulations regarding the additional safety of hanging equipment.

For further information regarding an appropriate rigging sling with steel cable insert and shackle please contact us.

Insufficient load capacity of the supporting structure may lead to certain parts or the entire system to fall down.

The clamp needs to be attached firmly, but not so firmly as to damage a pipe or truss tube.

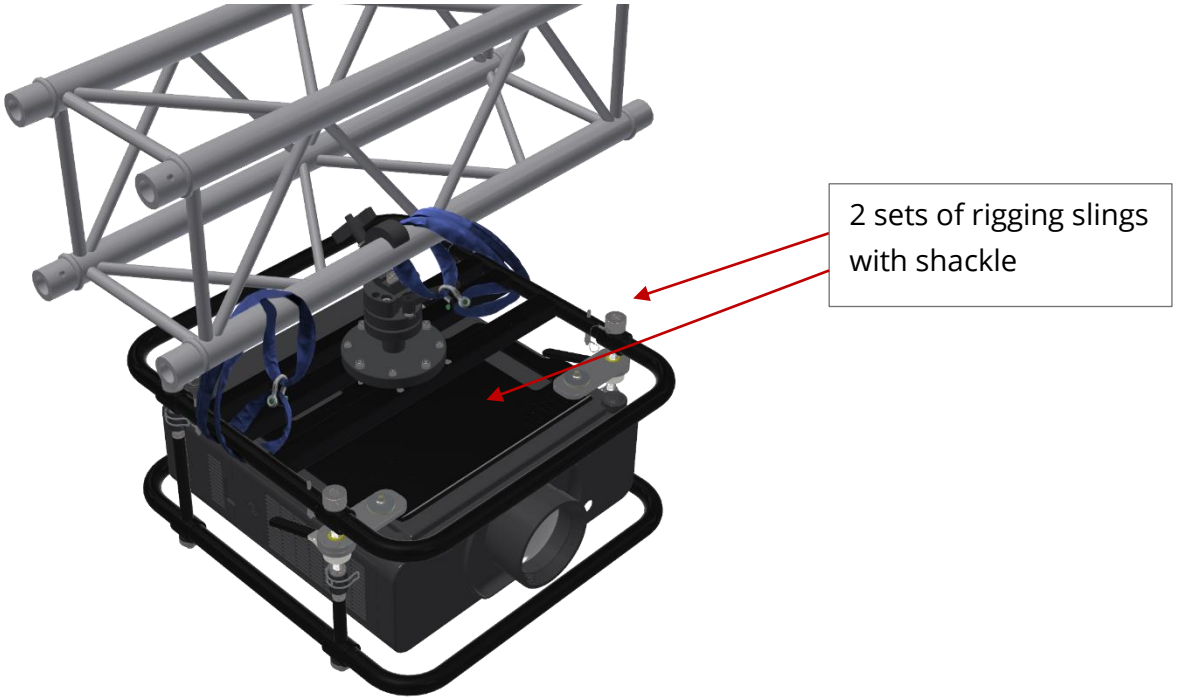


Figure 16 securing the truss mount using EVO-LINK Safety Kit

8. Adjustment options

When using the adjustment features of the EVO-LINK products, never apply significant force. All adjustments shall work smoothly and do not require significant force. If significant force is necessary, the cause may be a faulty part or that, the end of the adjustment range has been reached.

When the mechanical adjustment is made, the user must always keep his hands away from the area in between the moving parts. In case of EVO-LINK-201 and EVO-LINK-211 users should only touch the heads of the adjustment screws not the area around

8.1 Rough adjustment

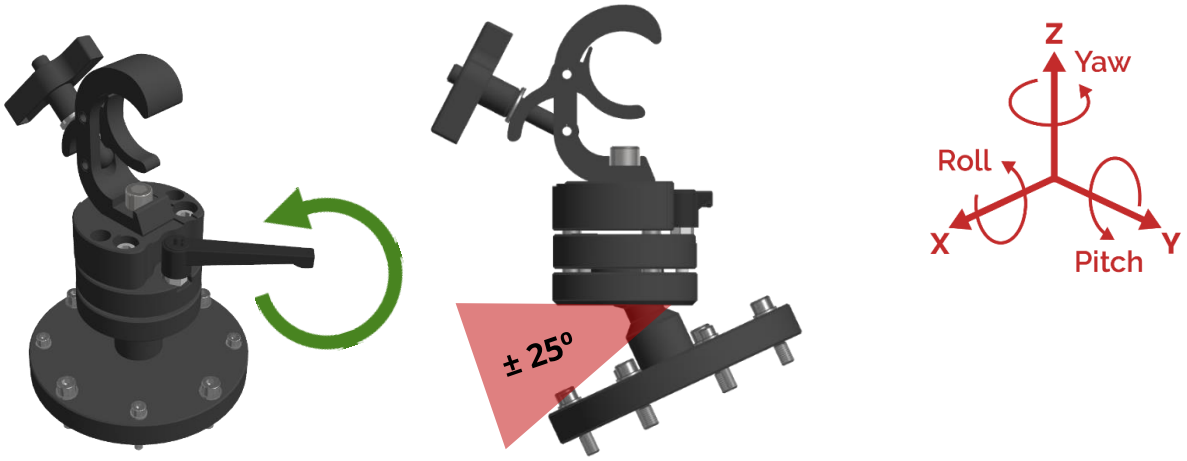


Figure 17 Rough adjustment

By loosening the handle, one can adjust the EVO-Link-200 series freely, in the pitch and/or roll directions, with an angle of ± 25 degrees. Also, the entire set-up can be rotated 360 degrees around the Z axis.

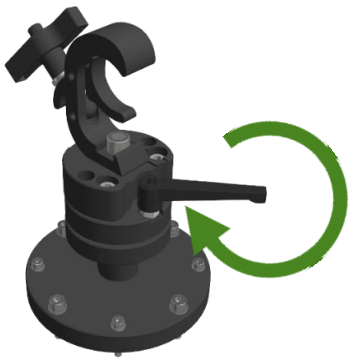


Figure 18 Handle

When the desired position is reached, please tighten the handle hand-tight to keep the set-up in that position. If there is need to tighten the handle more, it is possible to lift the handle a little bit and turn it counter clock wise. After this lower the handle and tighten it again hand-tight. To ensure a maximum torque of 10 Nm, the 13mm nut inside the handle can be used.

WARNING: Tighten the handle with a maximum torque of 10 Nm to guarantee a proper and safe fastening.

8.2 Fine adjustment (only EVO-LINK-201 and EVO-LINK-211)

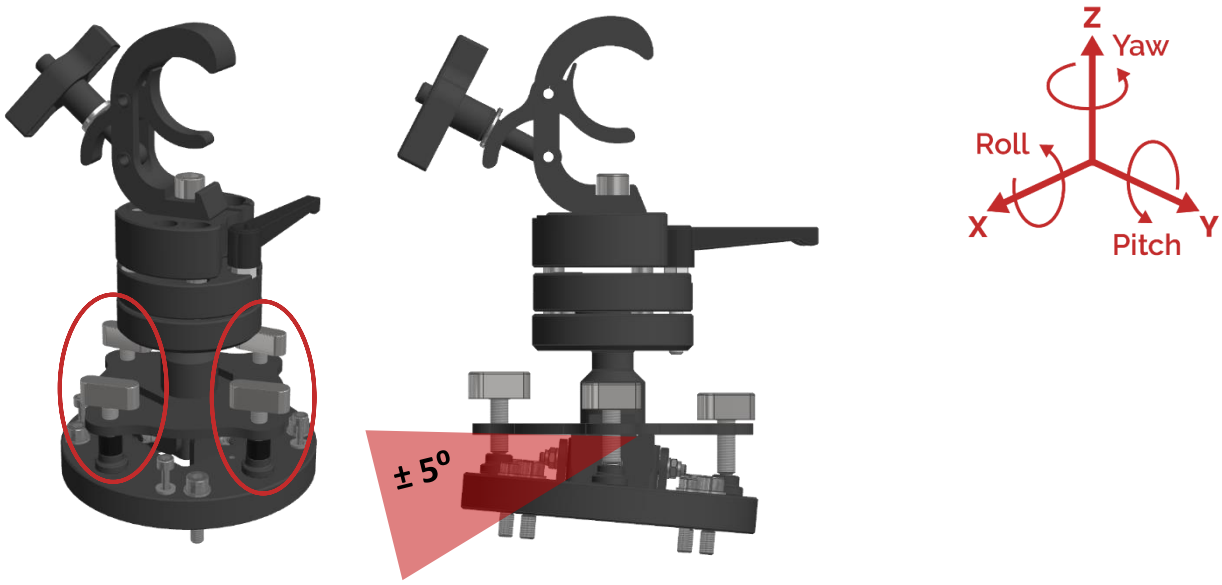


Figure 19 Fine adjustment

For obtaining a more precise and accurate set-up on the pitch and roll directions, please use the four adjustment screws situated in the middle of the EVO-LINK-201 and EVO-LINK-211.

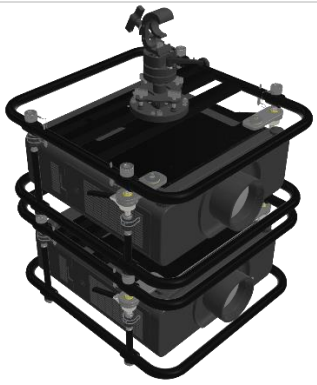
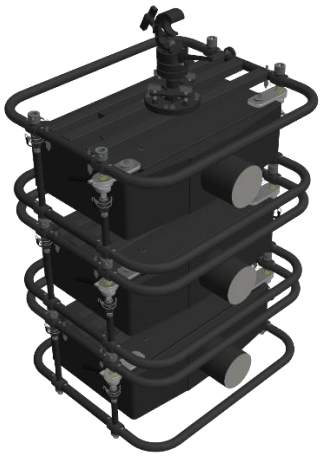
By screwing and unscrewing each screw at a time, one opposite to another, one can adjust EVO-LINK-201/211 in the two directions with an angle of approx. ± 5 degrees.

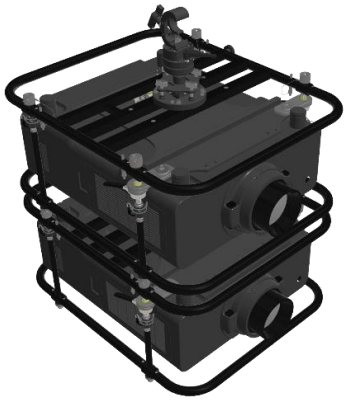
9. Maximum stacking information

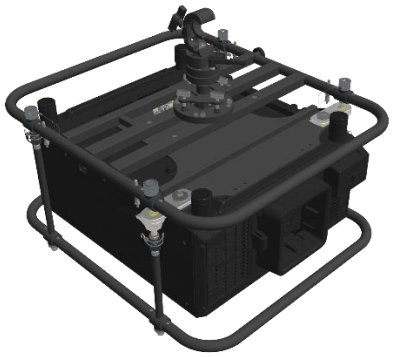
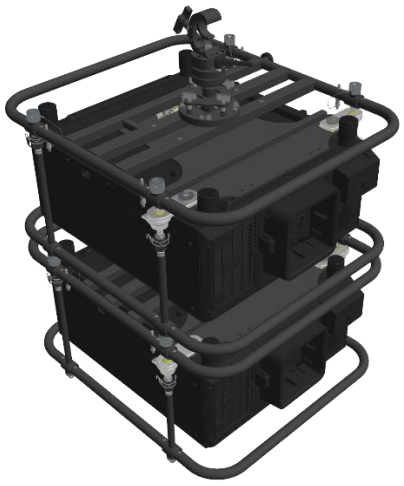
Please refer to the tables below to confirm proper usage.

Do not exceed the maximum number of stacked frames that are presented in the table below.

Do not exceed the maximum load limit of 200kg for EVO-LINK-200 series.

With FRAME-EVO-P10		
1 frame	**2 frames**	**3 frames**
		
With FRAME-EVO-P14		
1 frame	**2 frames**	**3 frames**
		

With FRAME-EVO-P20 or FRAME-EVO-P30 or FRAME-EVO-P31H		
1 frame	2 frames	
		
With FRAME-EVO-E10		
1 frame	**2 frames**	**3 frames**
		

With FRAME-EVO-E20		
1 frame	2 frames	
		

10. System maintenance and inspection Re-examination

For the EVO-LINK-200 series truss mount a visual inspection must be done prior to every installation in which the system is involved. The inspection must be done by a qualified person!

Periodic inspections are mandatory. Depending on local laws and regulations owners / users must do periodic inspections of the frame and all components. In case of German regulations this must be done and documented once a year by a qualified and authorised person. Furthermore, for German DGUV V17/V18 it is mandatory to revalidate the safety every four years. This must be done and documented by an expert that is authorized by the German Social Accident Insurance (DGUV). See chapter 2.1 Definition of qualified persons

Note: The necessary inspection can also be done by the manufacturer.

It is recommended to replace the M6 and M8 screws every year during periodic inspection revalidates the safety of the product

10.1 Mounting screws

- Please make a visual inspection to be sure that all the M6 and M8 screws and corresponding washers are in the right place and none are missing. Make sure they are not damaged in any way such as bended or abrasion at the screw tread
- Make sure that the screws, wing nuts, metal plate and all other components are not bended, damaged, or broken.

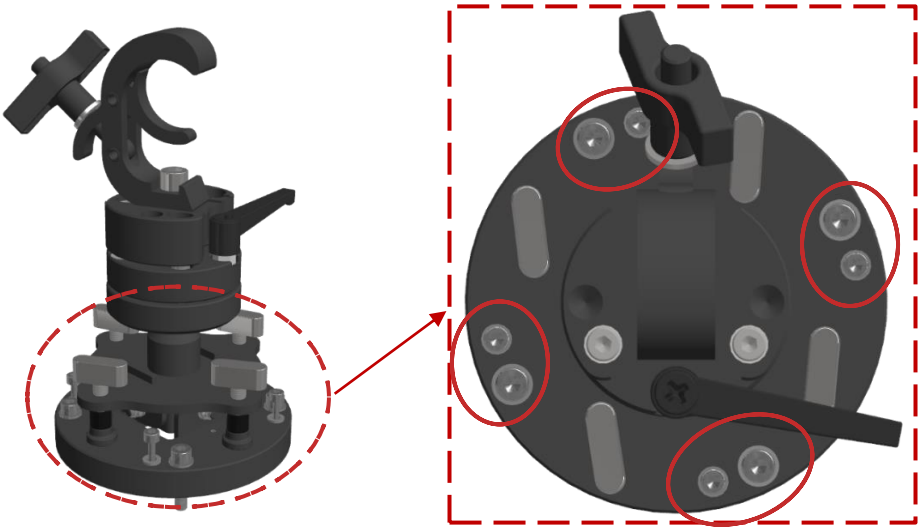


Figure 20 Inspection of M6 and M8 screws

Do not exchange broken or malfunctioning parts with ones that are not accredited by the manufacturer because serious injuries and property damage can occur!

If any parts are broken or missing stop using the product, please contact the seller so he can provide the spare parts. Do not replace any parts on your own.

10.2 Screws M12 attaching the clamps

Make sure that the M12 screws, washer and safety nuts are not missing or damaged (see Figure 21).

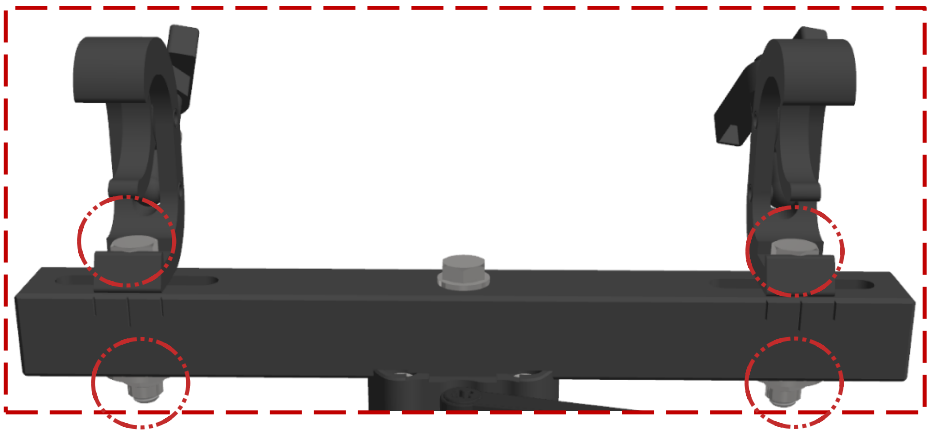


Figure 21 M12 screws at EVO-LINK-201 and -211

- Make sure that the truss clamp has no damage and that it is securely tighten to the whole truss mount. Also make sure that the wing nut is in place and is able to close the clamp to secure it to a trussing pipe.
- Please control, with a corresponding tool, that all the screws are properly tightened.

Do not exchange broken or malfunctioning parts with ones that are not accredited by the manufacturer because serious injuries and property damage can occur!

If any parts are broken or missing stop using the product, please contact the seller so he can provide the spare parts. Do not replace any parts on your own.

11. Disposal of components

11.1 Metal parts and packaging

All metal parts and packaging can be recycled.

11.2 Disposal of entire devices

You have the possibility to send old devices back to us. Please note that you have to take over the transportation costs for this. Please send the devices to:

EXACT solutions GmbH

Lustheide 85

51427 Bergisch Gladbach

GERMANY

12. Declaration of Conformity

EC - Declaration of Conformity

We hereby confirm that the following described lifting accessory in its conception, construction and form put by us in circulation is in full accordance with all relevant health and safety requirements and complies with the following EC-directive:

2006 / 42 / EG (EG-Machinery Directive)

This declaration is no longer valid if the lifting accessory is modified without our written consent.

Manufacturer:

EXACT solutions GmbH
Lustheide 85
D - 51427 Bergisch Gladbach
Tel.: +49 2204 9485 30

Description of the lifting accessory:

- Function: Truss mounting for projector frames such as: FRAME-EVO-P10, FRAME-EVO-P14, FRAME-EVO-P20, FRAME-EVO-E10, FRAME-EVO-E20 and other compatible projector frames.
- Type/model: **EVO-LINK-200 series (EVO-LINK-200, EVO-LINK-200-US, EVO-LINK-201, EVO-LINK-201-US, EVO-LINK-210, EVO-LINK-210-US, EVO-LINK-211, EVO-LINK-211-US)**
- Serial number: **LINK200.XXXX.YY or LINK200US.XXXX.YY / LINK201.XXXX.YY or LINK201US.XXXX.YY / LINK210.XXXX.YY or LINK210US.XXXX.YY / LINK211.XXXX.YY or LINK211US.XXXX.YY**
- Year of construction: 2020

The applied harmonized EN - standards include:

- **DIN EN ISO 1200:2010** — Safety of machinery – General principles for design – Risk assessment and risk reduction

Further applied standards and regulations include:

- **DIN EN 13155** — DE: Krane – Sicherheit – Lose Lastaufnahmemittel (11/2017)
  EN: Crane – Safety – Non fixed load lifting attachments
- **DIN EN 1990** — DE: Eurocode 0: Grundlagen der Tragwerksplanung (12/2010)
  EN: Eurocode 0: basis of structural design (12/2010)
- **DIN EN 1991-1** — DE: Eurocode 1: Einwirkungen auf Tragwerke (12/2010)
  EN: Eurocode 1: Actions on structures (12/2010)
- **DIN EN 1993 -1-1/8** — DE: Eurocode 3: Bemessung und Konstruktion von Stahlbauten (12/2010)
  EN: Eurocode 3: Design of steel structures (12/2010)
- **DIN EN 1999-1** — DE: Eurocode 9: Bemessung und Konstruktion von Aluminiumtragwerken (12/2010)
  EN: Eurocode 9: Design of aluminium structures (12/2010)
- **DIN EN 62368-1** — DE: Einrichtungen für Audio/Video-Informations- und Kommunikationstechnik – Teil 1: Sicherheitsanforderungen / konstruktive Anforderungen(05/2016)
  EN: Audio/video, information and communication technology equipment – Part 1: Safety requirements / constructive requirements (05/2016)
- **DGUV V17/18** — DE: UVV Veranstaltungs- und Produktionsstätten für szenische Darstellung, Stand Januar 2011 (bisher: BGV C1)
  EN: Accident Prevention Regulation for Staging and Production Facilities for the Entertainment Industry (formerly BGV C1)
- **DGUV 315-390** — DE: Grundsätze für die Prüfung maschinentechnischer Einrichtungen in Bühnen und Studios (bisher: BGG/GUV-G 912)
  EN: Fundamentals for testing in stages and studios of the mechanical equipment (formerly BGG/GUV-G 912)
- **DGUV 215-313** — DE: Lasten über Personen. Sicherheit bei Produktionen und Veranstaltungen von Fernsehen, Hörfunk, Film, Theater, Messen, Veranstaltungen (bisher BGI-810)
  EN: Safety at Productions and Events – Loads Suspended above Persons (formerly BGI-810)

Bergisch Gladbach, 14th of Mai 2020

Signature:

EXACT solutions GmbH
Lustheide 85 · D-51427 Bergisch Gladbach
+49 2204 948530 · www.exactsolutions.de

(Tobias Schwirten, Managing Director, EXACT solutions GmbH)

CE

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