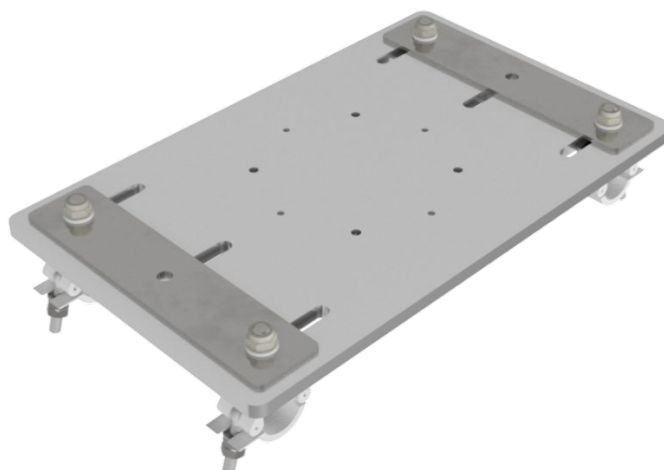


# PF-UNI-PORAD

## Portrait Adapter

Manual Version 1.5



Date	Revision No.	Author	Checked	Approved	Description
03.04.2020	1.3	VIU	DWN	DWN	EVO Link added
15.03.2024	1.4	GJN	TSN	RBR	Complete revision
19.08.2025	1.5	TSN	JHL	RBR	Update on Details and Layout

The following EVO-FRAME models can be mounted to this adapter:

FRAME-EVO-P10	FRAME-EVO-P17
FRAME-EVO-P11	FRAME-EVO-P20
FRAME-EVO-P11-BE	FRAME-EVO-E10
FRAME-EVO-B11	FRAME-EVO-C20
FRAME-EVO-P14	FRAME-EVO-B20



Note: The above table lists some EVO Frame models that are compatible. Please contact us if you are missing a model.



Note: This manual is subject to change without further notice. The latest manual version can be found online at [www.exactsolutions.de](http://www.exactsolutions.de) or by contacting us directly.

### Contact

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## 1. Preamble

The PF-UNI-PORAD (Portrait Adapter) has been developed and manufactured with the highest care and attention. However, improper handling can cause a risk for safety and / or property 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 needed information for a safe and fast installation.

**Model number:**      **PF-UNI-PORAD**

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### 1.1 Tools required



1 x Nr. 10 Screw-wrench  
1 x Nr. 13 Screw-wrench  
1 x Nr. 17 Screw-wrench



1 x Nr. 5 Allen key  
1 x Nr. 6 Allen key



- 1 x Universal torque wrench with Nr. 5 and 6 Allen 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 Warnings



The PF-UNI-PORAD 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.



For indoor usage only

Only use the product 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 EVO Frames are installed with PF-UNI-PORAD! Do not try to use it with other Frames or 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 mandatory) Otherwise it is not allowed to use the product and serious accidents or death can happen.



When using EVO-LINK-SK or other solutions to act as a secondary safety device make sure that the load will not fall more than 10cm to avoid dynamic forces. Depending on the installation, additional material like shackles might be necessary.



Do not remove or replace any parts of the product 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.

## **Definition of qualified persons:**

### **Trained/Qualified person**

A person can be considered as trained/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.

### **Qualified/Specialised person**

A person can be considered qualified or specialised when, based on specialised training, knowledge and experience, it can assess the work assigned and recognise possible dangers.

## **Only use the product 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 PF-UNI-PORAD 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 the product must be inspected in detail prior to any usage
- Only if the PF-UNI-PORAD and all its components are in a flawless condition, it is safe to use the system.
- For further details, please refer to chapter 9. System maintenance and inspection (Re-examination)
- Using a PF-UNI-PORAD which has damages, missing parts or the like can cause serious accidents and death.

**Only use EVO Frames that are specified by the manufacturer to be used with the portrait adapter. When mounting the portrait adapter to a frame, use all couplers that are specified by the manufacturer. Make sure to tighten the nuts safely, with the provided torque information**

- It is mandatory to use all couplers that the manufacturer defines to mount portrait adapter. Use only the ones that are clearly specified.
- Using the wrong coupler is highly dangerous.
- 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 portrait adapter or the projector frame while people are present under the mounting zone during the installation process.**

- When installing the system, 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 PF-UNI-PORAD is capable of carrying the overall weight of max. 150 kg (330.7 lbs.) plus the PORAD itself and mounting accessories such as EVO-LINK. Do not hang the products 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 9. 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 150 kg (330.7 lbs) plus the weight of all additional equipment as well as other potential systems.
- Ignoring this might cause significant damage to the product and serious accidents or death may result

**Make sure to use only approved and recommended accessories to mount the products of PF-UNI-PORAD**

- 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 5. Optional Accessories

**Make sure to not exceed max. weight loads for ceiling mounting.**

- For suspended installations, use only designated hanging accessories, like EVO-LINK-200 series. Please refer to the corresponding instructions for the accessories used. Do not overload these accessories and make sure the overall weight is within working specifications of the accessories. Please also refer to chapter 5. Optional Accessories.
- Overloading the accessories and other equipment can cause serious accidents and death

**Always secure the frames to the rigging truss with rigging slings with steel cable insert and shackles (two sets of rigging sling and shackle are mandatory).**

- The frames 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 mandatory 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.
- 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

## 2.2 Caution

**Minimum two persons are required to install the product.**

- 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 portrait adapter, the frame or the projector.**

- 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.

**The Portrait Adapter is designed for a static, non-moving, installation.**

- The PF-UNI-PORAD Portrait Adapter shall not be mechanically or electro mechanically moved around for example for show purposes.

**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 frame 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.

## 2.3 Risk Situations

**Risk of injury due to the possibility of falling objects during the assembly or disassembly of the Portrait Adapter.**



- Protection objective: avoid injury from falling parts.
- Wear appropriate safety shoes, gloves and helmet.
- Make sure the area under installation is clear during installation.

## **Risk of hitting the head with the Portrait Adapter or EVO Frame 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 Portrait Adapter or the entire system to fall down**

- Protection objective: prevent personal injury and property damage.
- Double check the products and their installation.

## **Insufficient load capacity of the supporting structure may lead to certain parts or the whole system 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

## **Missing components**

- Protection objective: prevent personal injuries and property damage.
- Always check prior to every installation that there are no missing parts.


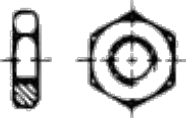
## **Loose components**

- Protection objective: prevent personal injuries and property damage.
- Always check prior to every installation if there are no loose parts.

## 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.




	<p><b>PF-UNI-PORAD Portrait Adapter</b></p> <ul style="list-style-type: none"> <li>• Used for hanging projector frames in portrait mode.</li> <li>• Number of units: 1</li> </ul> <p><b>Consisting of:</b></p> <ul style="list-style-type: none"> <li>- 4 x 30 mm Clamp</li> <li>- 4 x 10mm RIPP LOCK Zinc-Plated washers 400-500 HV</li> <li>- 4 x M10x35 DIN933 Zinc-Plated Steel-Class 8.8</li> <li>- 4 x M10 DIN 980 Zinc-Plated Steel-Class 8*</li> </ul> <ul style="list-style-type: none"> <li>• Weight: 4,7 kg / 10,36 lbs</li> </ul> <p><b>*do not change by any case the DIN980 nuts with other types of nuts</b></p>
	<p><b>4 x M6 DIN 439 Zinc-Plated Steel-Class 4 and</b></p> <p><b>4 x M8 DIN 439 Zinc-Plated Steel-Class 4</b></p>
	<p><b>User manual and installation guide:</b></p> <p><b>PF-UNI-PORAD Portrait Adapter Extra Large</b></p>

## 4. Overview of model numbers



In this manual, when reference is made to the PF-UNI-PORAD, Portrait Adapter or as a short name “PORAD” it is a reference to the model named in the table above.

## 5. Optional Accessories

	<p><b>EVO-LINK-200</b></p> <p>Optional accessory for truss mount installations.</p> <p><i>More information can be found in the EVO-LINK-200 series installation manual.</i></p>
	<p><b>EVO-LINK-201</b></p> <p>Optional accessory for truss mount installations.</p> <p><i>More information can be found in the EVO-LINK-200 series installation manual.</i></p>
	<p><b>EVO-LINK-210</b></p> <p>Optional accessory for truss mount installations.</p> <p><i>More information can be found in the EVO-LINK-200 series installation manual.</i></p>

	<p><b>EVO-LINK-211</b></p> <p>Optional accessory for truss mount installations.</p> <p><i>More information can be found in the EVO-LINK-200 series installation manual.</i></p>
	<p><b>EVO-LINK SK</b></p> <p>The EVO-LINK Safety Kit consists of two rigging slings with steel cable insert and two shackles.</p>



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



Make sure to not exceed max. weight loads for ceiling mounting.



Always secure the EVO-Frames to the rigging truss with rigging slings with steel cable insert and shackles (two sets of rigging sling and shackle are mandatory). A potential accessory offered by EXACT solutions is the EVO-LINK-SK. See above table for further details.



Make sure to use only approved and recommended accessories to mount (hanging or standing) the products

## 6. Description of the product

### 6.1 Intended use

The product PF-UNI-PORAD is an accessories for the EVO Frame Series. It is a so called Portrait Adapter which makes it possible to mount the EVO Frames in portrait mode. The Portrait Adapter as well as the FRAME-EVO series is intended for use by fully qualified, trained and competent persons to provide safe and secure transportation, installation and adjustment of projectors. All of the products, as well as the projectors that can be installed, are made only for indoor usage.

### 6.2 Specifications

Parameter	Value
Size [mm]	See drawing
Weight [kg] Portrait Adapter only	4,7 kg
Maximum weight load limit using the four M8 threads	150 kg (330,7 lbs)
Operating temperature [°C]	0 - 45
Operating rel. humidity [%rH]	10 - 75
Operation area	Indoor in closed rooms

## 7. Using EVO-LINK 200 Series with the Portrait Adapter

The following step by step instruction explains how to install the products of EVO-LINK 200 Series to the Portrait Adapter.



The image below is showing an EVO-LINK 200 as an example. The other products of EVO-LINK 200 series are installed in the same way.

**Step 1:** Place the Portrait Adapter on a suitable surface. Make sure that at least all four M8 screws of the EVO-LINK 200 Series product are aligned with the corresponding screw holes of the Portrait Adapter.

**Step 2:** Use the allen key and tighten the four M8 screws with a torque of 25 Nm.

**Step 3:** Place the four M8 DIN 439 nuts to the bottom side of the Portrait Adapter to secure the four M8 screws. Securely tighten the nuts with the corresponding screw wrench.



For EVO-LINK 200 and EVO-LINK 210 the four M8 and the four M6 can be used. It is mandatory to use all four M8 screws for the full weight load capability. This applies to all models of EVO-LINK 200 Series.

Torque:  
M8:  $25 \pm 0.5$  Nm  
M6:  $10 \pm 0.5$  Nm

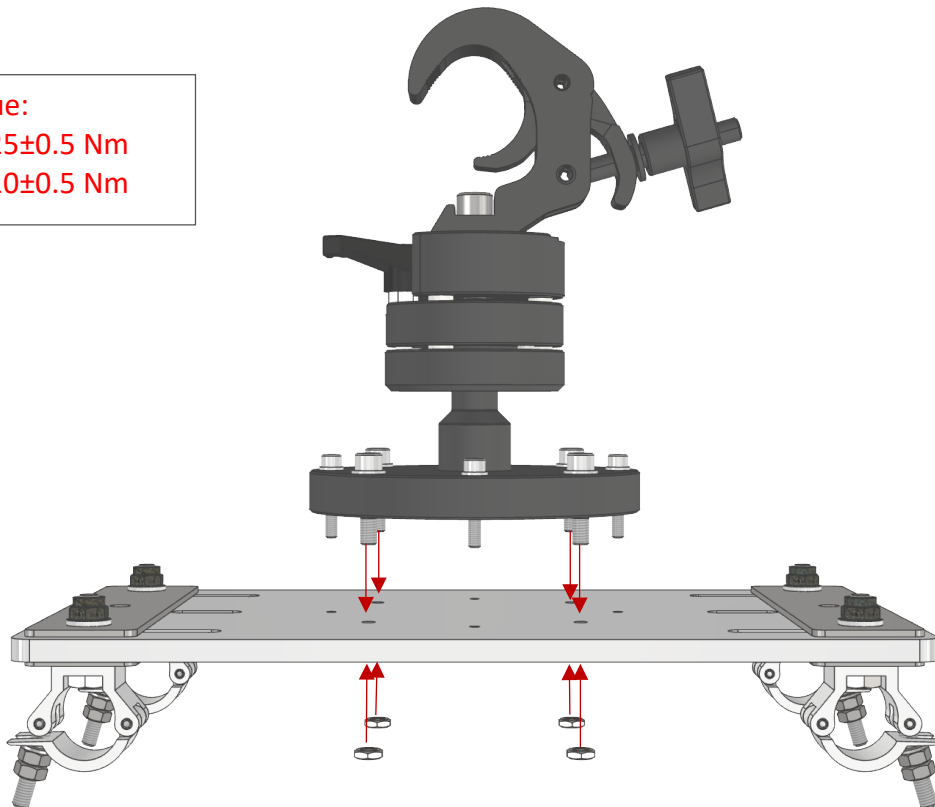


Figure 1 EVO-LINK 200 and Portrait Adapter

## 8. Attaching the Portrait Adapter to the EVO- FRAME



Make sure you are using the correct PORAD for your EVO-Frame. In case of questions please contact us.

### 8.1 Adjusting the clamp position

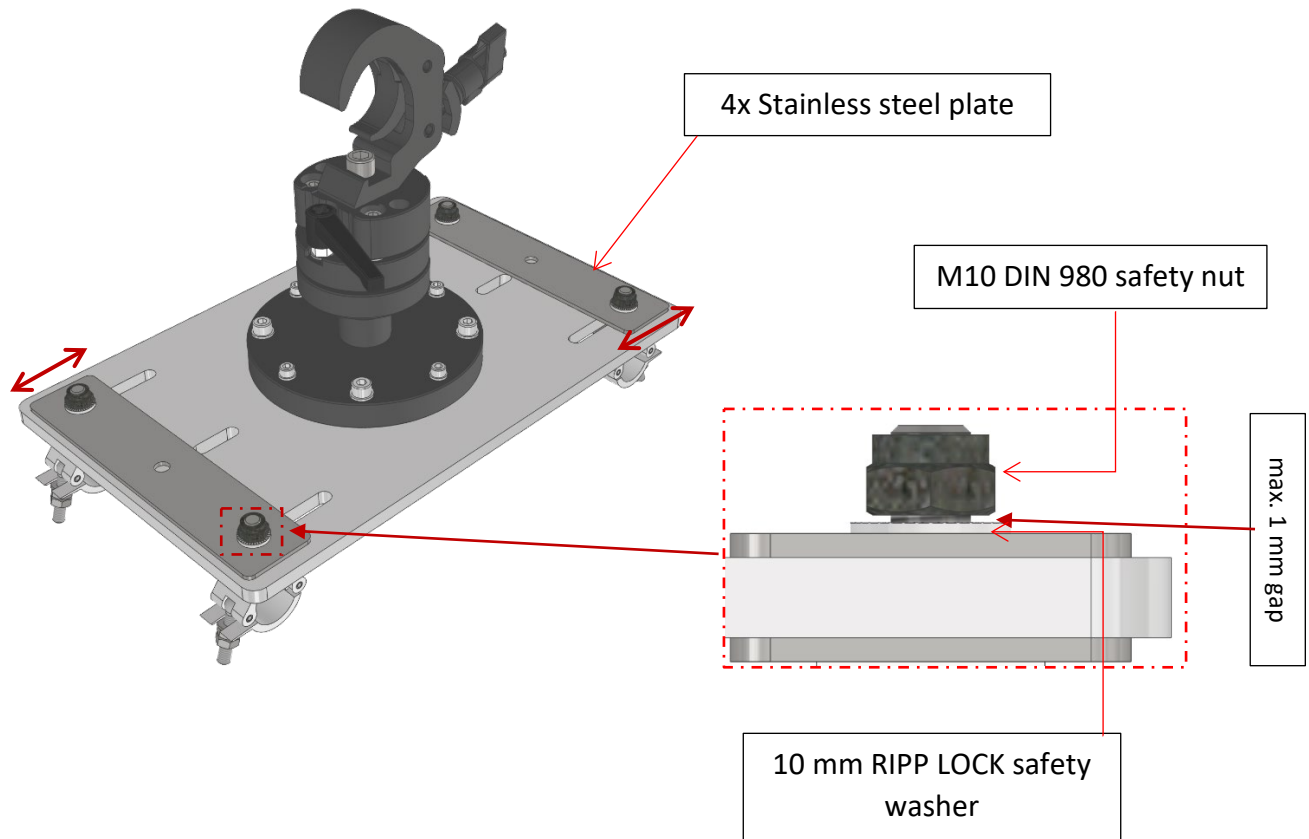


Figure 2 Adjusting clamp position

**Step 1:** Untighten the four M10 DIN 980 safety nuts until there is a gap of max.1 mm between the nut and the 10 mm RIPP LOCK safety washer as described in Figure 2 Adjusting clamp position. With this the position of the clamps can be adjusted to match the dimensions of a suitable EVO FRAME.



Do not remove the M10 DIN 980 safety nuts completely because accidents can occur!

**Step 2:** Move the rigging clamps together with the four stainless steel plates until the desired position is reached.

For a first guidance before attaching to the frame, the distances between the rigging clamps for the below listed frames are as follows:

EVO Frame	Distance between two clamps
FRAME-EVO-P10	265 mm / 10.433 In
FRAME-EVO-P11	300 mm / 11,811 In
FRAME-EVO-E10	265 mm / 10.433 In
FRAME-EVO-P14	275 mm / 10.826 In
FRAME-EVO-P17	300 mm / 11,811 In
FRAME-EVO-P20	337 mm / 13.267 In
FRAME-EVO-C20	337 mm / 13.267 In
FRAME-EVO-B20	337 mm / 13.267 In



## 8.2 Attaching to FRAME-EVO-P10/P11/P11BE/P17/P20/C20/B20

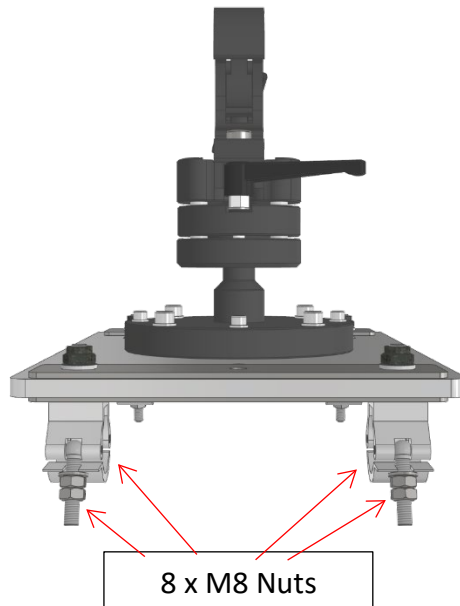


Figure 3 Rigging clamps on PORAD

**Step 1:** Open the rigging clamps by loosen the eight M8 nuts on the clamp-threads (see Figure 3).



Figure 4 Attaching PORAD to EVO FRAME

**Step 2:** Attach the Portrait Adapter to the frame by installing it from the top until the rigging clamps are in contact with the frame pipes. Close the rigging clamps and tighten back the eight M8 nuts using the Nr.13 screw wrench. First tighten the lower nut and secure this with the top nut.



**Please make sure that the nuts are properly tightened, otherwise accidents can occur!**

**Step 3:** Make sure that the stainless steel plates to which the rigging clamps are mounted are arranged parallel to each other. Now safely tighten the M10 DIN 980 safety nuts located on top of the stainless steel plates again. See also chapter 8.1 Adjusting the clamp position as well as Figure 4.



**Please make sure that the nuts are properly tightened, otherwise accidents can occur!**

## 8.3 Attaching to FRAME-EVO-E10/P14

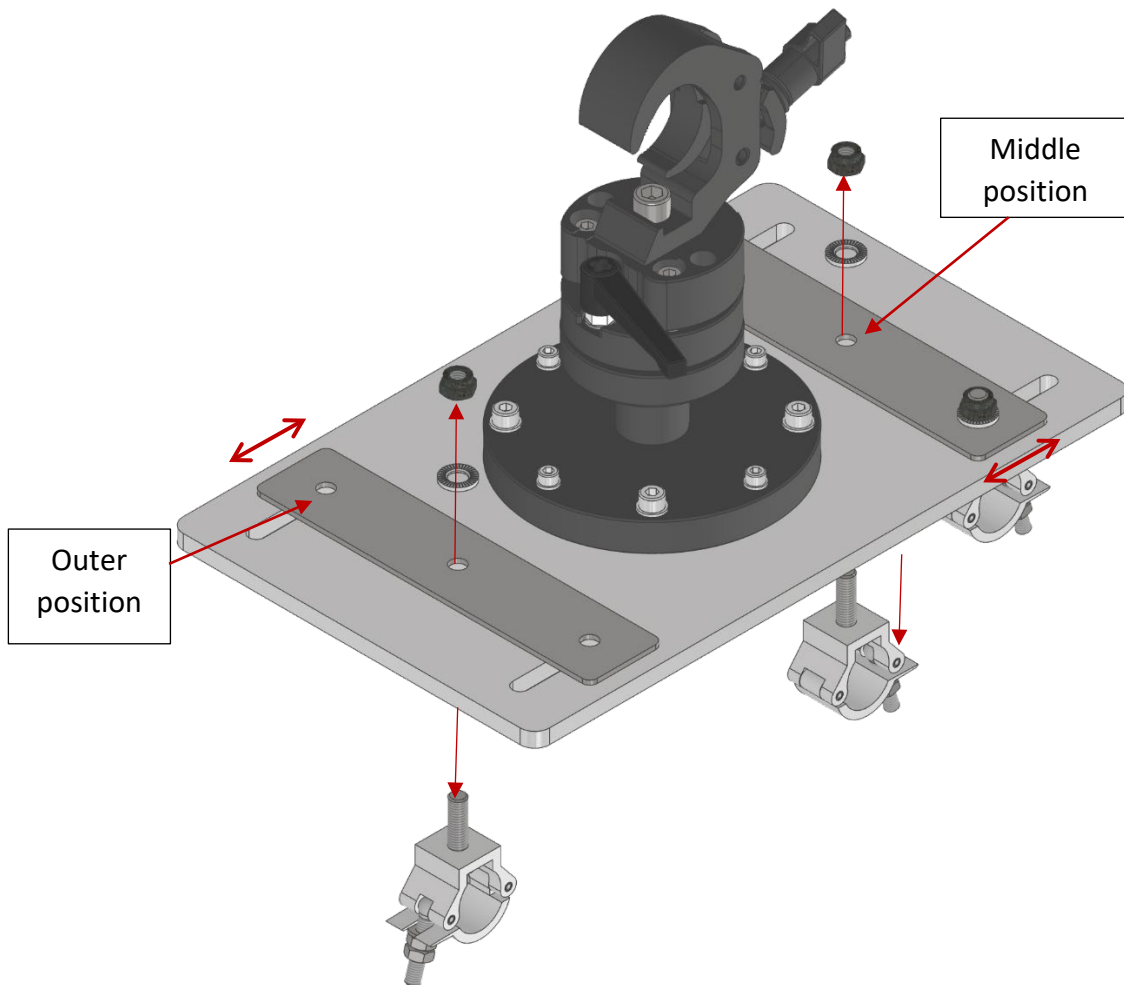


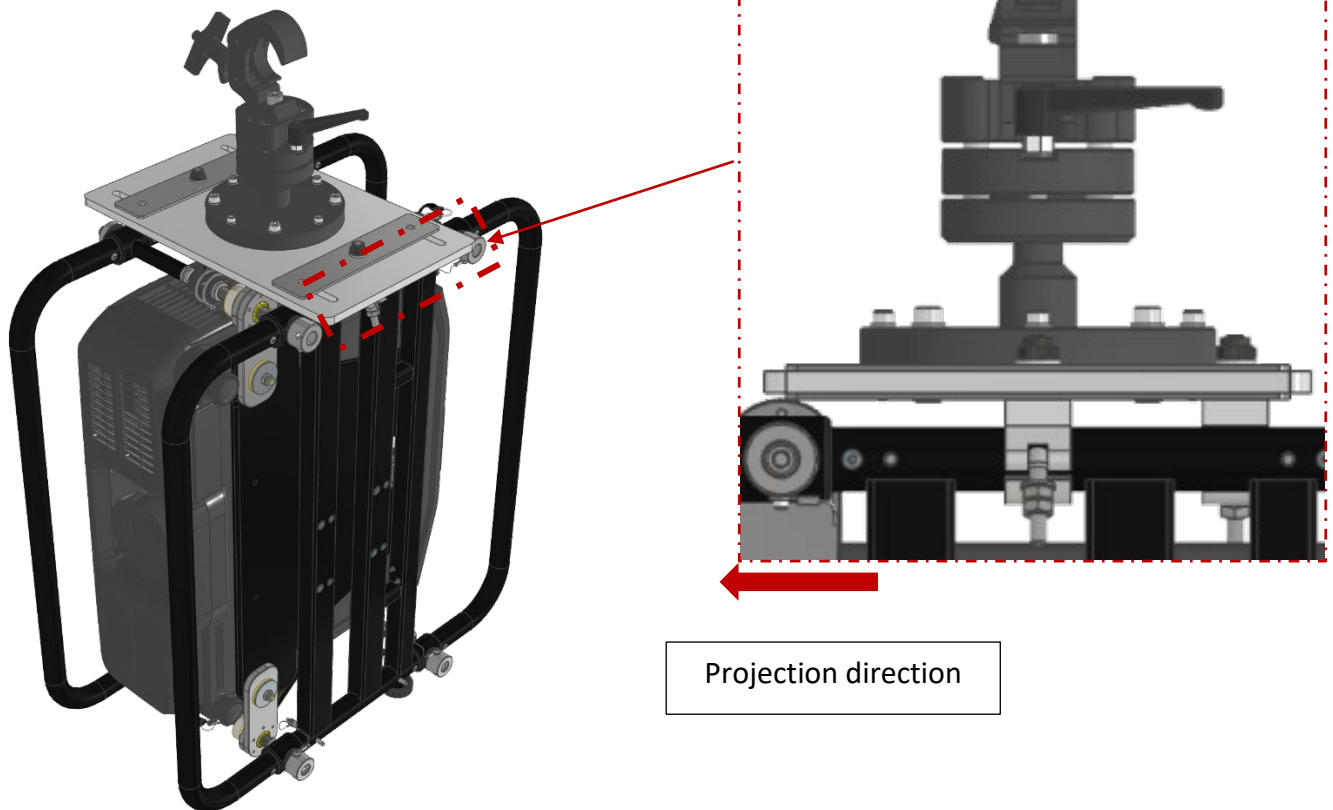
Figure 5 Remove one clamp, reposition two clamps

For attaching the Portrait Adapter to the FRMAE-EVO-E10 or P14, two rigging clamps must be repositioned from the outer position to the middle position and one rigging clamp can be removed.

**Step 1:** Completely remove the M10 DIN 980 safety nuts of the three clamps by using the Nr.17 screw wrench,

**Step 2:** Reposition the two clamps in the middle of the plate and then secure the rigging clamps by screwing the two M10 DIN 980 safety nuts with RIPP LOCK safety washers.

**Step 3:** Move the rigging clamps together with the four stainless steel plates until the desired position is reached and then securely tighten back the two M10 DIN 980 safety nuts.



**Step 4:** Attach the Portrait Adapter to the frame and tighten back the eight M8 nuts of the rigging clamps using the Nr.13 screw wrench.



Please make sure that the nuts are properly tightened, otherwise accidents can occur!

## 9. System maintenance and inspection (Re-examination)

The products of the PF-UNI-PORAD do not require special maintenance but a visual inspection must be done prior to every installation in which the Adapter is involved:

- Please make a visual inspection to be sure that all the screws are in the right place and none are missing
- Please control the threads in the Portrait Adapter plate to be sure that none is faulty
- Make sure that the all parts as well as screws, the rigging clamps, the stainless-steel plates and all the components are not damaged, bended etc and no sign of corrosion is present
- Please control, with corresponding tool (torque screw wrench), that all the screws are properly tightened
- If any parts are broken or missing, please contact the seller so he can provide the spare parts



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

## 10. 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: Hanging System for projector frames in portrait mode: FRAME-EVO P10 / P10US, FRAME EVO E10 / E10US, FRAME EVO P11 / P11US, FRAME EVO P14 / P14US, FRAME EVO P17 / P17US, FRAME EVO P20 / P20US, FRAME EVO C20 / C20US
- Type/model: **FRAME-PF-UNI-PORAD, FRAME-PF-UNI-PORAD-US**
- Serial number: **PF-UNI-PORAD-AA.xxx, PF-UNI-PORAD-US-AA.xxx,**
- Year of construction: 2016

**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 1991-1** DE: Eurocode 1: Einwirkungen auf Tragwerke (12/2010)  
EN: Eurocode 1: Actions on structures (12/2010)
- **DIN EN 1993 -1** 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 (05/2010)  
EN: Eurocode 9: Design of aluminum structures (05/2010)
- **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)
- **BGI 810-3** DE: Lasten über Personen. Sicherheit bei Produktionen und Veranstaltungen von Fernsehen, Hörfunk, Film, Theater, Messen, Veranstaltungen  
EN: Safety at Productions and Events – Loads Suspended above Persons

Bergisch Gladbach, 16<sup>th</sup> of May 2024

Signature:



(Tobias Schwirten, Managing Director, EXACT solutions GmbH)

## Imprint

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