

# UST lens for F-series

Installation manual

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# General

# 1

## Overview

- Preparation of the lens
- Parts indication

# 1.1 Preparation of the lens

## Overview

This lens can be mounted on 4 different projectors and in different position for each projector. E.g. facing up, facing to the left or facing to the right. For each position the lens has to be rebuild according the its use and projector type. The motor housing must be turned to the correct position before the lens is mounted in the projector.

The following positions for the lens are possible:

- For F40: facing up, to the left and to the right (not indicated on drawing)

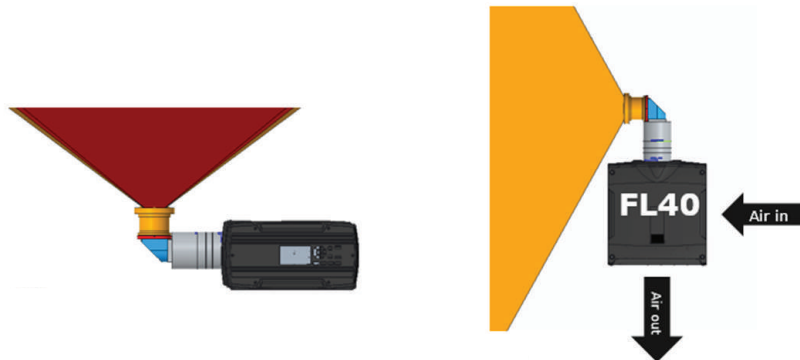


Image 1-1

- For F70: facing up and to the left

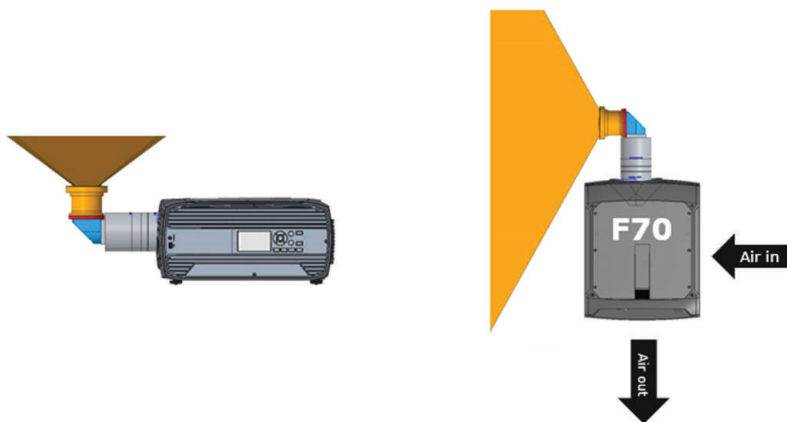


Image 1-2

Do not use for projection to the left when mounted in a frame.

- For F80: facing up and to the left



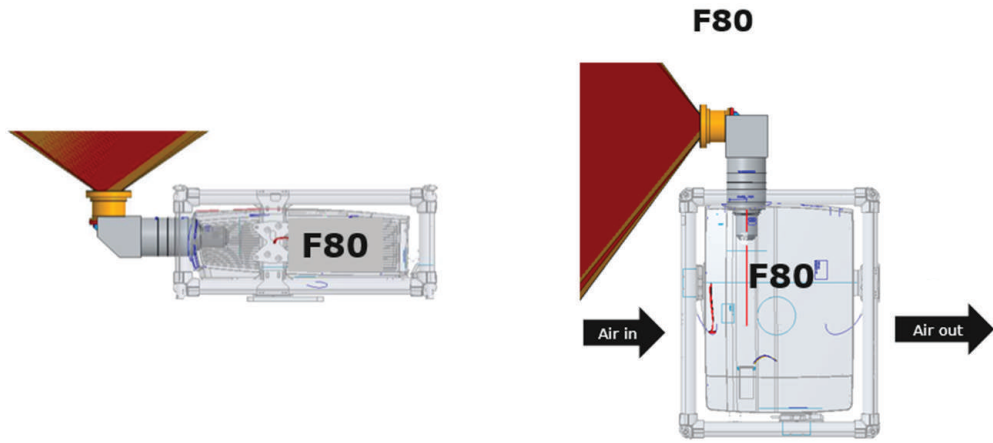


Image 1-3

- For F90: facing up and to the right

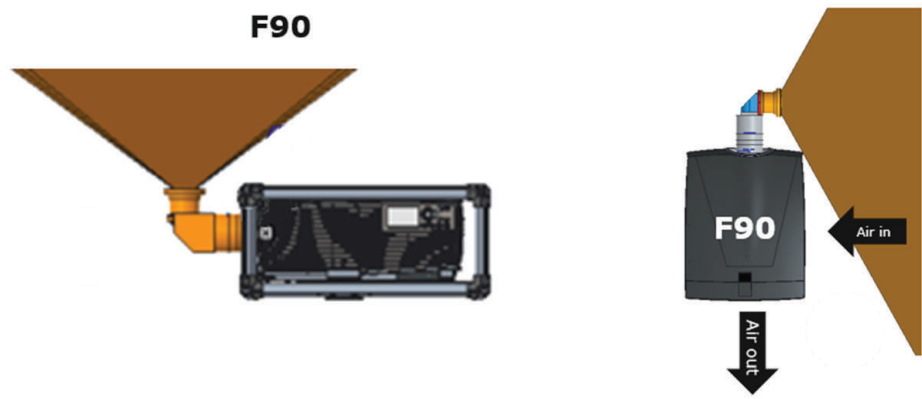


Image 1-4

Do not use for projection to the right when mounted in a frame.

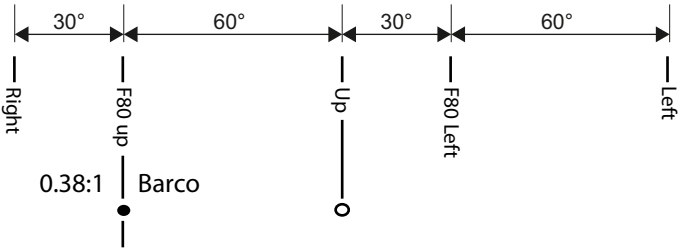


Image 1-5



Image 1-6

Be aware that the position for Up and left for F80 is not the same as for the other projector models.

### Required tools

Allen key 2 mm with long shaft (delivered with the kit)

### How to prepare the lens for all F-series

1. Place the lens on a table. Turn out the 6 screws (1). Use an Allen key with a long shaft so that you do not damage the screw head. These screws will not be reused.



*Note:* Always use the correct tool (delivered with the kit) to avoid damage to the screw heads !



Image 1-7

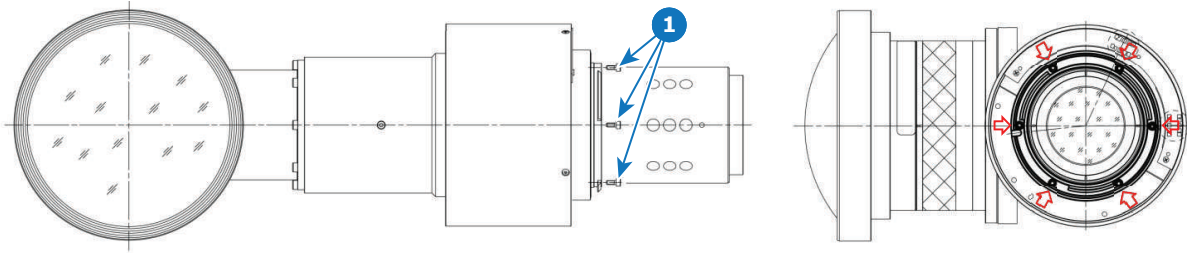


Image 1-8

2. Slide the motor housing a few mm to the backside of the lens (2) to disengage focusing gear and motor gear.

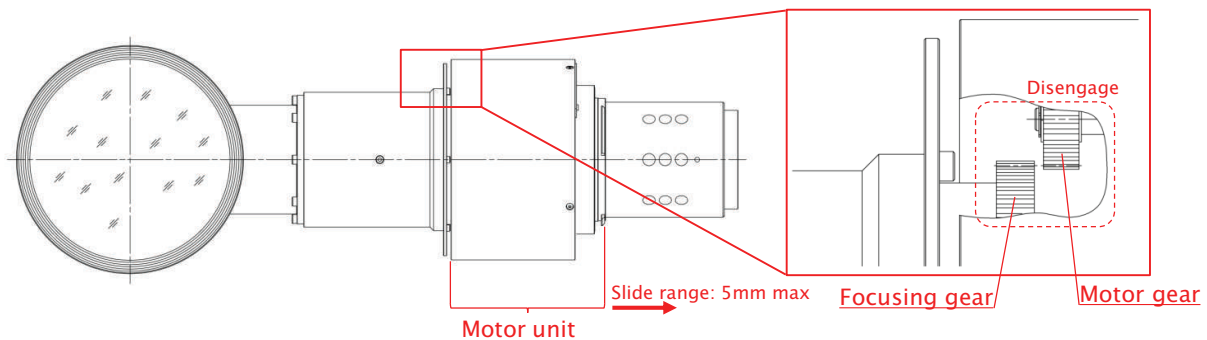


Image 1-9

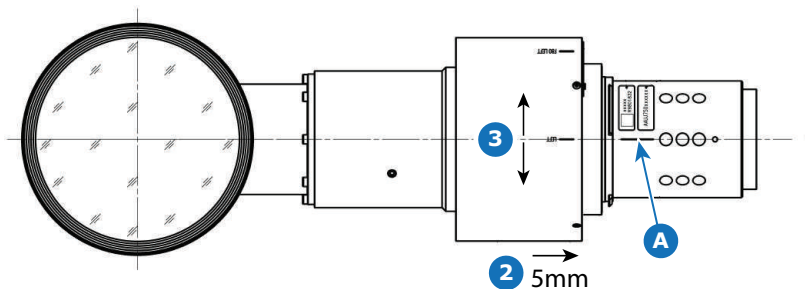


Image 1-10

**A** reference marking

3. Rotate the motor housing until the chosen marker on the housing corresponds with the reference marking on the lens body (steps of  $30^\circ$ ). See if the mounting holes matches the holes in the lens body.

E.g. for an FS40 projector, you want to project to the left, then turn the motor housing until the left marking on the motor housing corresponds with the reference marking on the lens housing.

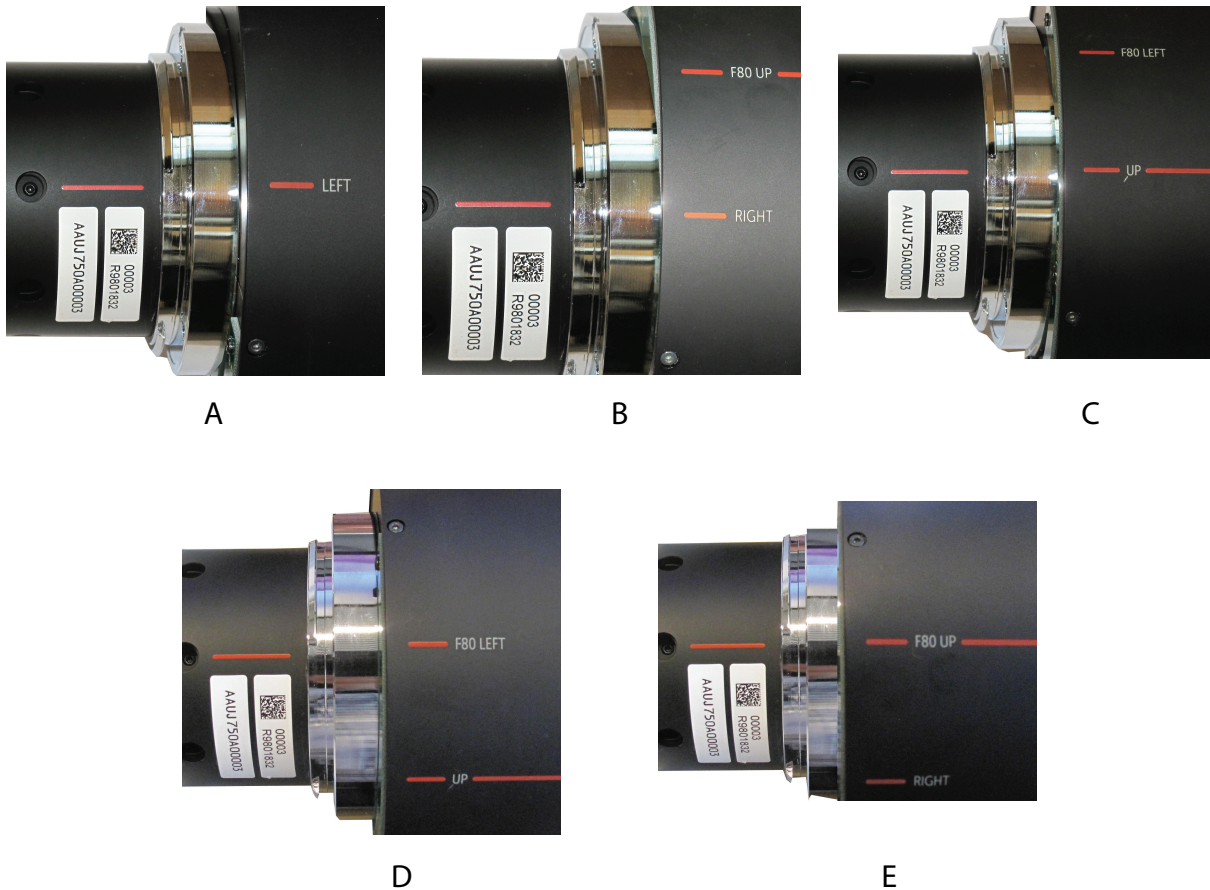


Image 1-11

- A** Project LEFT, for F40 and F70
- B** Project RIGHT for F90 and F40
- C** Project UP for F40, F70 and F90

- D** Project LEFT for F80
- E** Project UP for F80

4. Slide the motor housing back to the front of the lens to re-engage focusing gear and motor gear.
5. Turn in 6 **new** Allen screws with glue (screws are delivered with the kit). These screws can be multiple times reused. The turned out old screws can be thrown away.

Use again a tool with a long shaft (Allen key 2 mm, delivered with the kit).

The lens is ready to be mounted on the projector.

## How your image is displayed

Projection to the side for any projector:

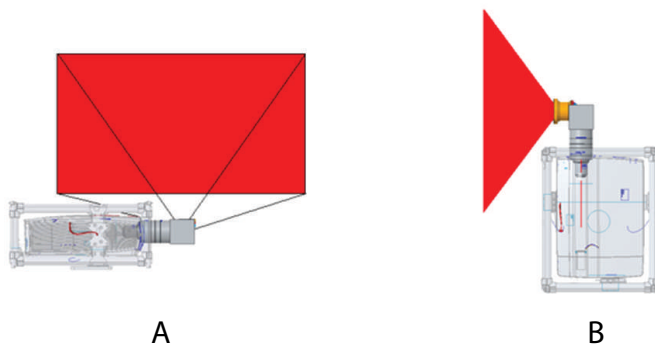


Image 1-12

- A** Side view
- B** Top view

Up projection for any projector:

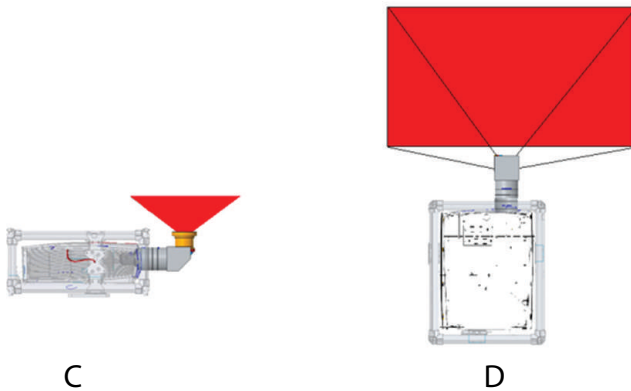


Image 1-13

- C** Side view  
**D** Bottom view

### Extra preparation for F80

1. Slide the lens adaptor on the lens input until it matches the motor housing (1). Make sure the contacts are on the left top of the adaptor.

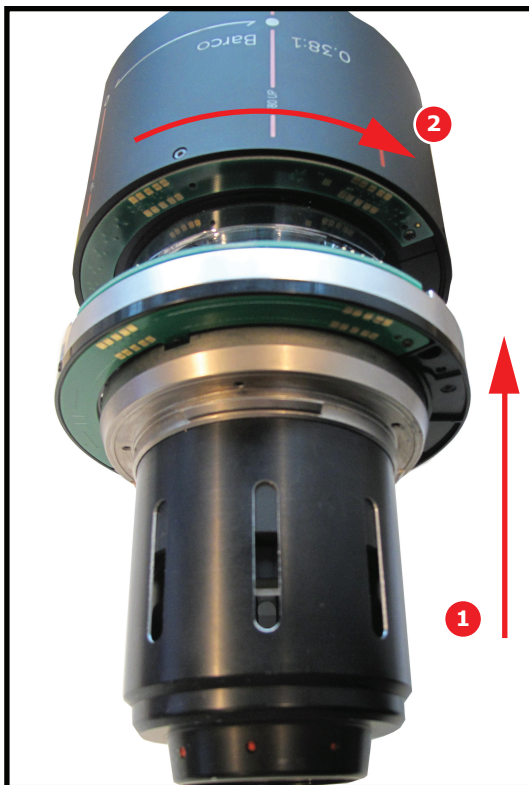


Image 1-14

2. Secure the adaptor by turning it to the right (bayonet fitting) (2).

## 1.2 Parts indication

### Overview

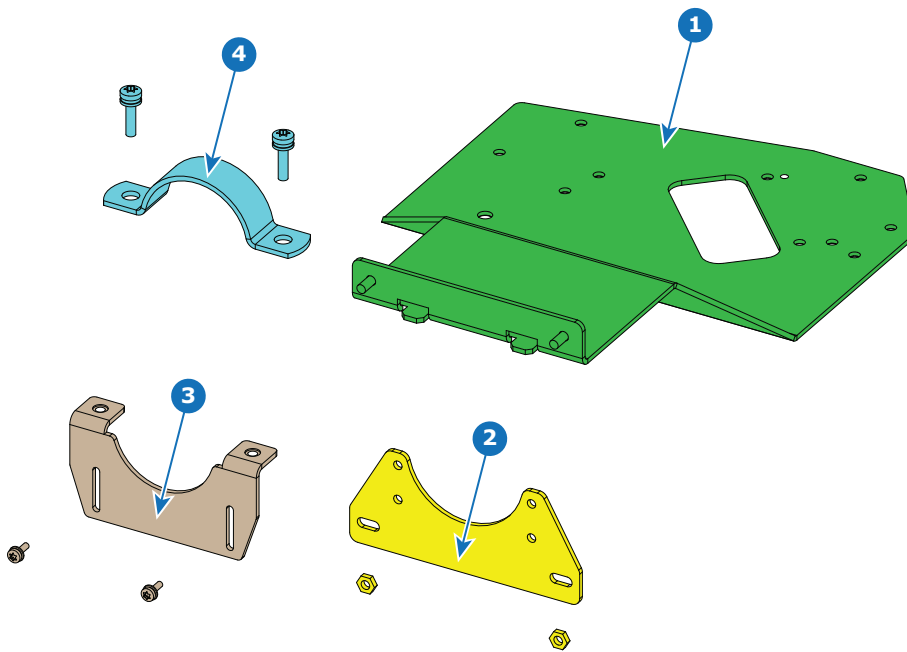


Image 1-15

- 1 Bottom plate, fixation screws depends on projector type
- 2 2th plate with 2 nuts
- 3 3th plate with 2 screws
- 4 Clamp, with 2 screws

# Mounting the lens

# 2

## When mounting the lens without the support

When mounting the lens without the support, always use a safety cable as shown in the image.

### Overview

- When mounting the lens without the support
- Mounting the UST lens on a F90 projector
- Mounting the UST lens on a F70 projector
- Mounting the UST lens on a F40 projector
- Mounting the UST lens on a F80 projector

## 2.1 When mounting the lens without the support

### When using the safety cable

When mounting the lens in a projector without using the specially designed mounting support for this lens.

### How to handle before mounting the lens.

1. Stick 3 to 4 clips on the surface of the lens body (1).
2. Snap the first loop end of the safety cable into one of the clips.

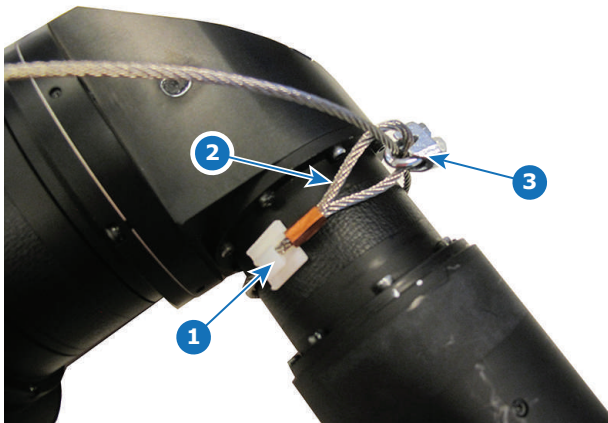



Image 2-1

3. Slide the rest of the cable around the lens. Click the cable into every clip it passes in the loop.
  4. Slide the cable through the loop end at the beginning of the cable (2).
  5. Install an U-bolt on the lens holder with the open ends oriented outwards (3). Make sure that both a part of the loop end and the outgoing part of the safety cable are placed in the enclosure.
  6. Close the U-bolt and tighten it.
-  **Note:** Make sure the safety cable is tightened around the lens before tightening the U-bolt nuts.
7. Place the shackle through the free loop end of the safety cable.
  8. Mount the lens in the projector.
  9. Secure the safety cable around the truss and secure the shackle by turning the safety ring of the shackle over the open end.

## 2.2 Mounting the UST lens on a F90 projector

### How to mount

1. Turn the projector on its side or on its top cover.
2. Place the bottom support plate on the bottom plate of the projector. Make sure that both fixation holes match the holes in the bottom plate.



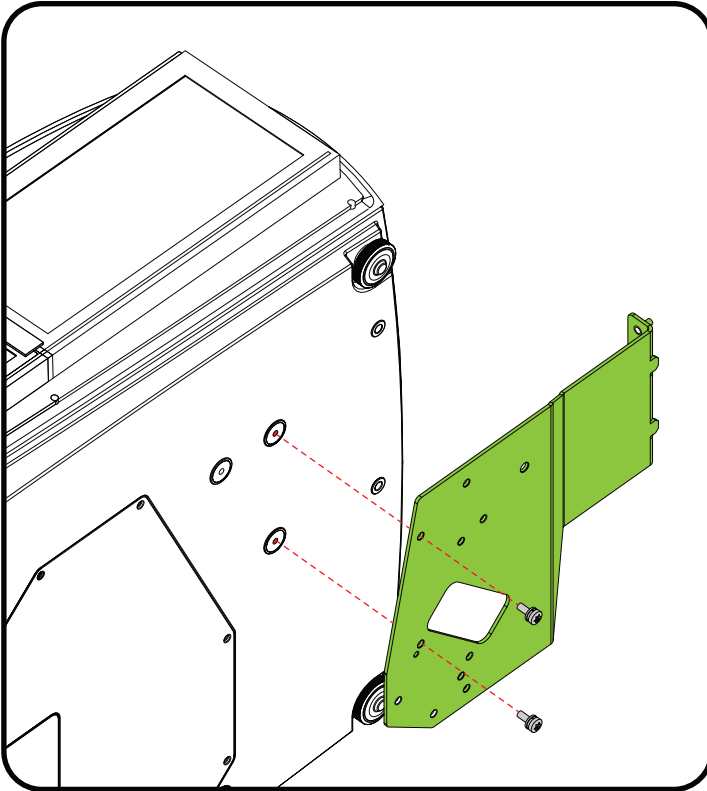


Image 2-2: Support plate

3. Turn in both M6 screws.

4. Turn the projector back on its feet.

Slide the lens locking system to the left.

Insert the lens. Make sure the electric contact points (C) on the lens match the contact points on the lens holder.

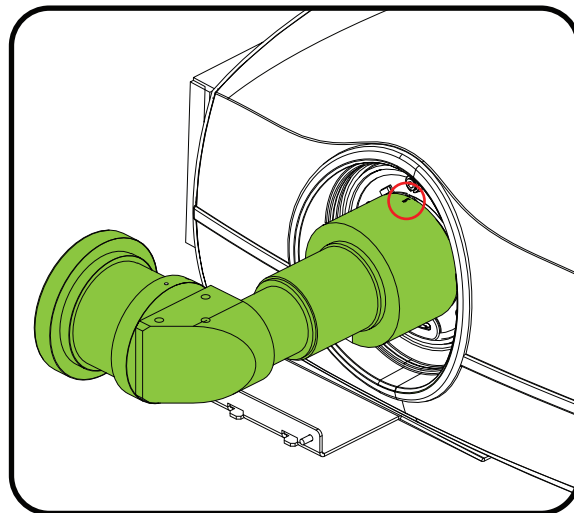
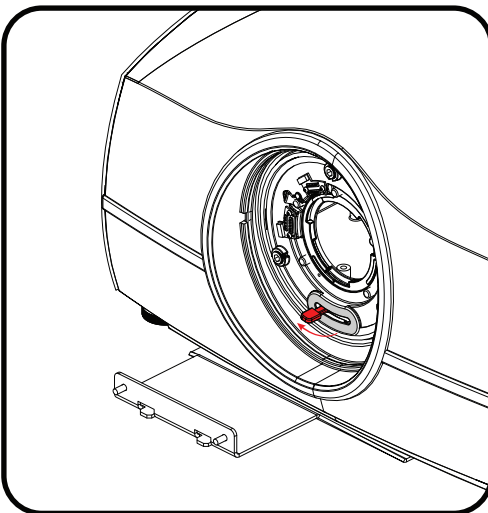


Image 2-3: Mounting lens



Image 2-4: Contact points

5. When the lens is on its place, close the lens locking system by moving the handle from the left to the right.
6. Project an image and adjust the shift. See projector's user manual for more information about shifting the image.



**Note:** Shift cannot be adjusted anymore after full installation of the complete kit.

7. Slide plate 2 on both threaded rods and turn a nut on each rod. Do not fasten yet! It must be possible to move the plate a little bit while mounting the other plates.

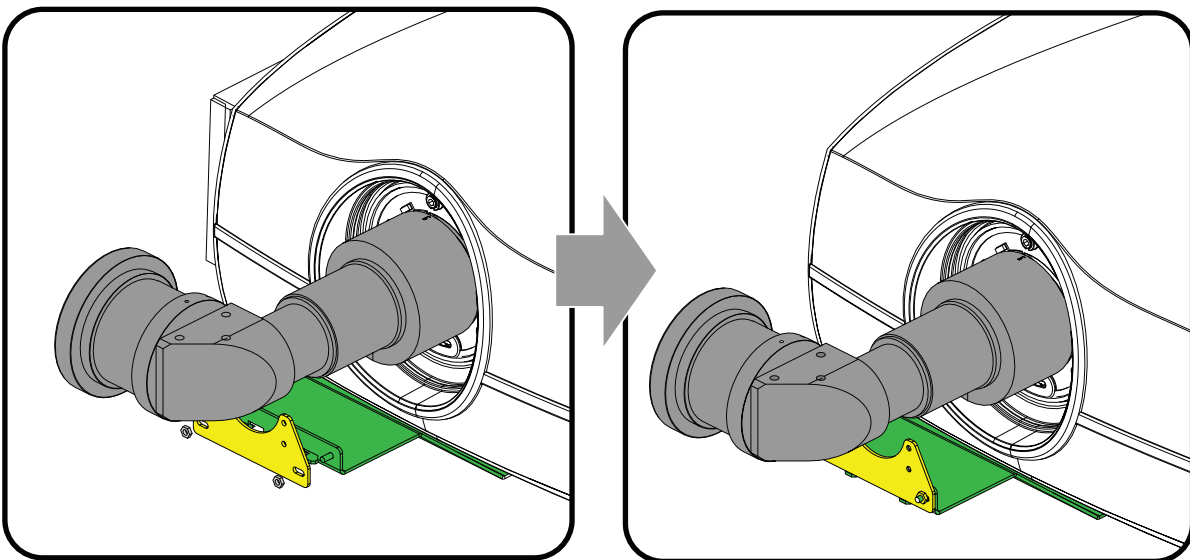


Image 2-5: Mount 2nd plate

8. Mount the 3th plate on the 2nd plate. Use the upper mounting holes in the 2nd plate. Drive in both screws but do not fasten yet.

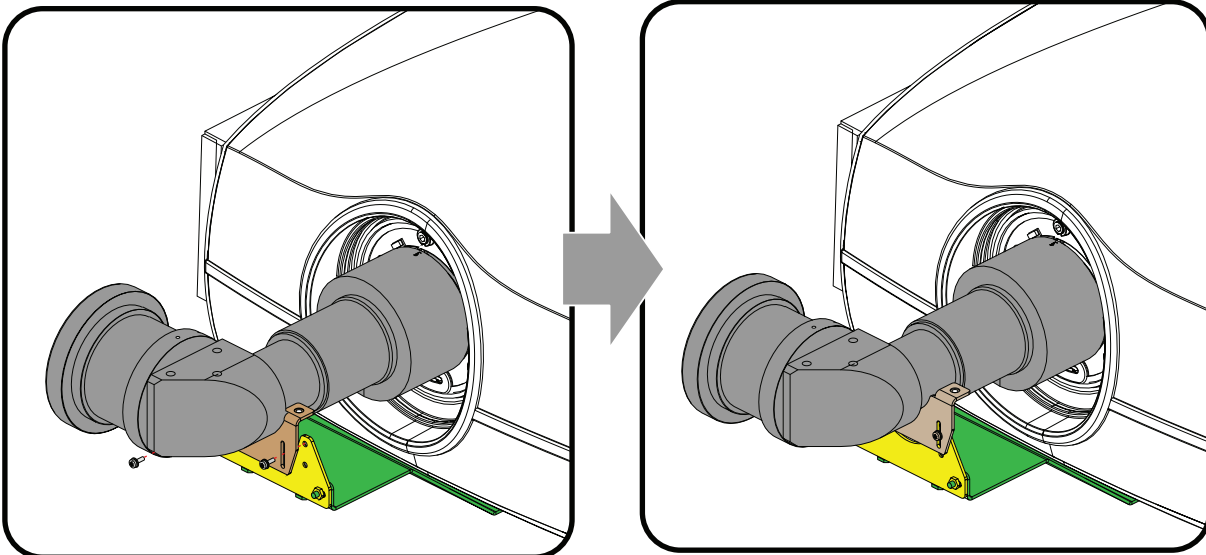


Image 2-6: Mount 3th plate

9. Place the clamping bracket on the lens so that the fixation holes matches the holes in the support. Drive in both fixation screws. If necessary, move the 3th plate a little bit until it fully match with the lens. Fully secure both screws.

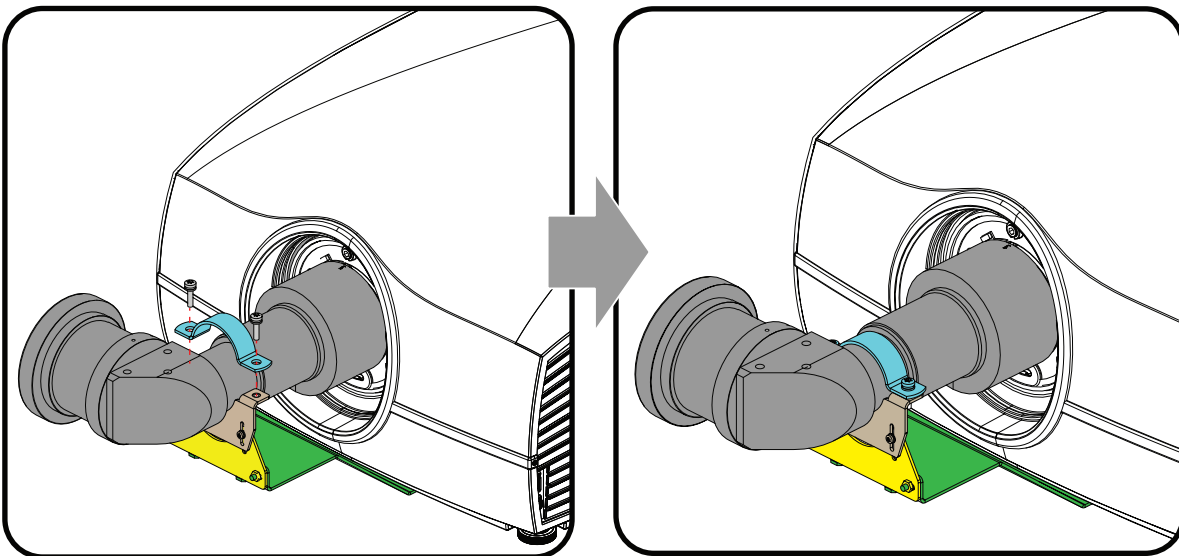


Image 2-7: Mount clamp bracket

10. Fully fasten the screws of the 3th plate and the nuts of the 2nd plate so that the support is fully assembled. The projector is ready for use.

## 2.3 Mounting the UST lens on a F70 projector

### How to mount

1. Turn the projector on its side or on its top cover.
2. Place the bottom support plate on the bottom plate of the projector. Make sure that the fixation holes match the holes in the bottom plate.

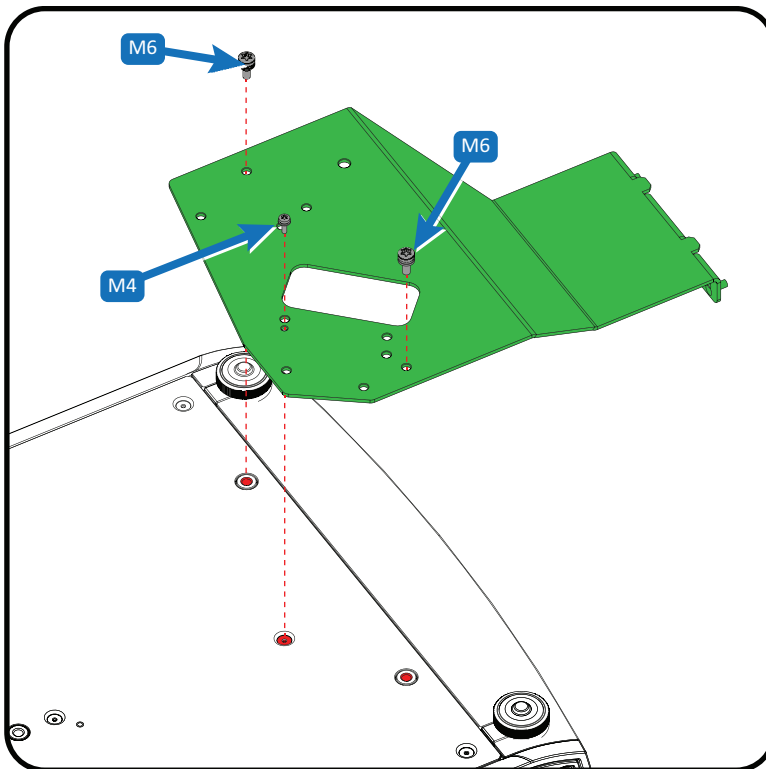


Image 2-8: Mount the bottom plate

3. Turn in both M6 screws and the M4 screw.

4. Turn the projector back on its feet.

Slide the lens locking system to the left.

Insert the lens. Make sure the electric contact points (C) on the lens match the contact points on the lens holder.

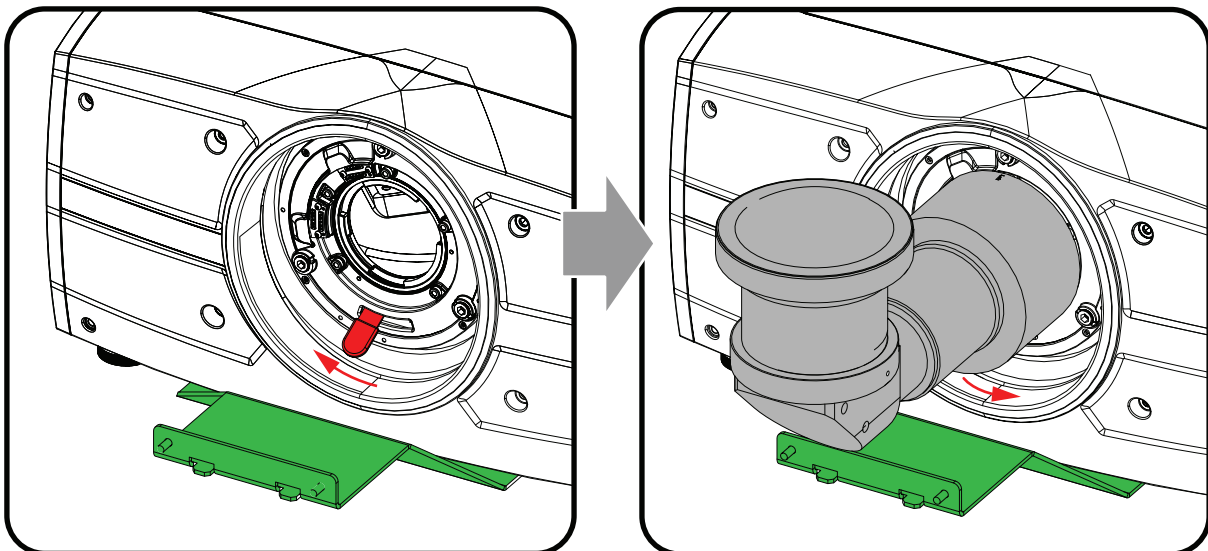


Image 2-9: Mount the lens



Image 2-10

5. When the lens is on its place, close the lens locking system by moving the handle from the left to the right.
6. Project an image and adjust the shift. See projector's user manual for more information about lens shift.



**Note:** Shift cannot be adjusted anymore after full installation of the complete kit.

7. Slide plate 2 on both threaded rods and turn a nut on each rod. Do not fasten yet! It must be possible to move the plate a little bit while mounting the other plates.

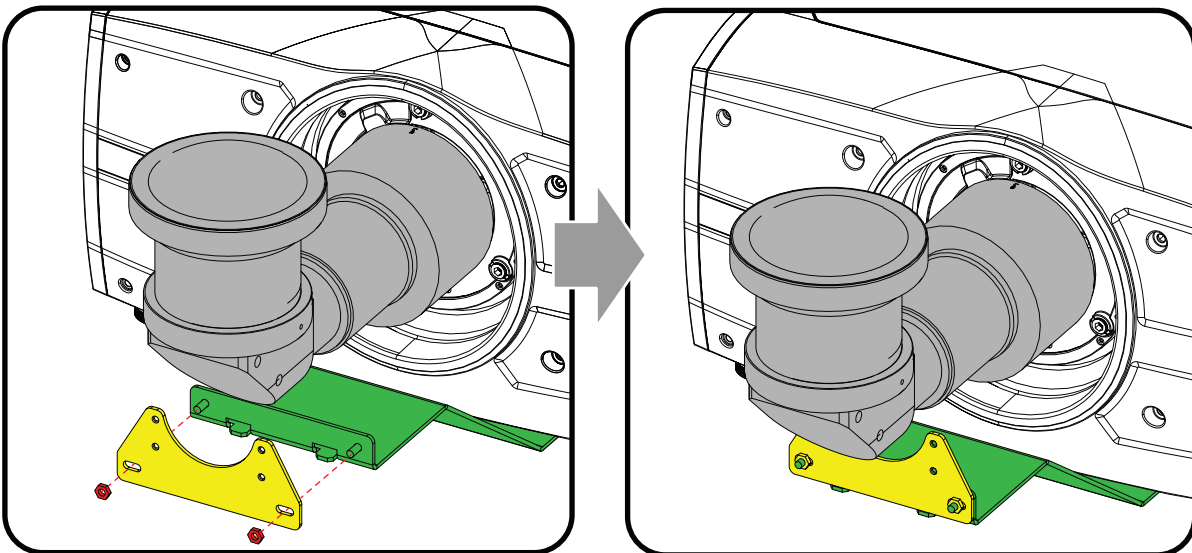


Image 2-11: Mount the 2nd plate

8. Mount the 3th plate on the 2nd plate. Use the upper mounting holes in the 2nd plate. Drive in both screws but do not fasten yet.

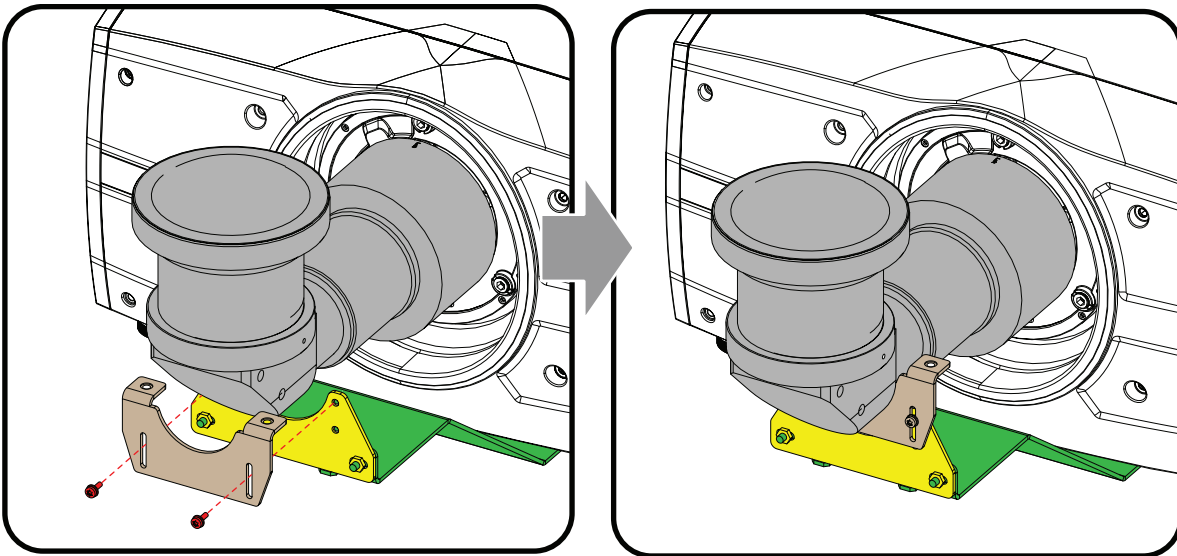


Image 2-12: Mount the 3th plate

9. Place the clamping bracket on the lens so that the fixation holes matches the holes in the support. Drive in both fixation screws. If necessary, move the 3th plate a little bit until it fully match with the lens. Fully secure both screws.

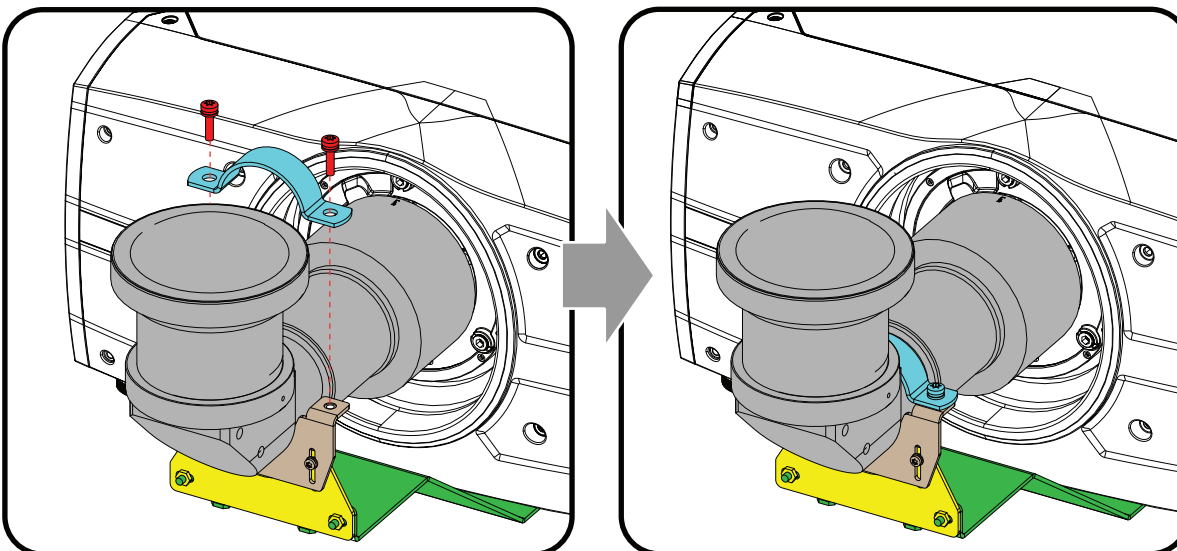


Image 2-13: Mount clamp bracket

10. Fully fasten the screws of the 3th plate and the nuts of the 2nd plate so that the support is fully assembled. The projector is ready for use.

## 2.4 Mounting the UST lens on a F40 projector

### How to mount

1. Turn the projector on its side or on its top cover.
2. Place the bottom support plate on the bottom plate of the projector. Make sure that the fixation holes match the holes in the bottom plate.

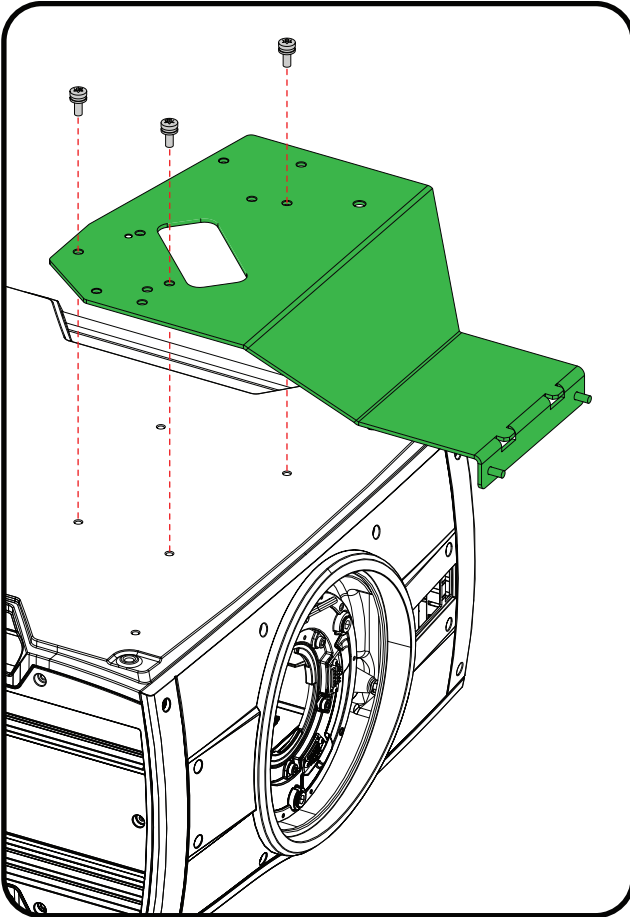


Image 2-14: Mount bottom plate

3. Turn in the 3 M6 screws.
4. Turn the projector back on its feet.

Slide the lens locking system to the left.

Insert the lens. Make sure the electric contact points (C) on the lens match the contact points on the lens holder.



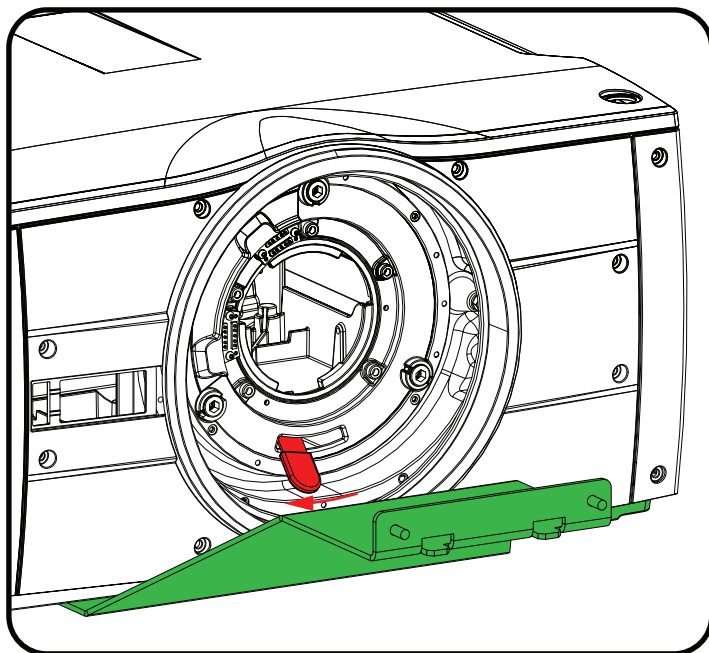


Image 2-15: Open locking system

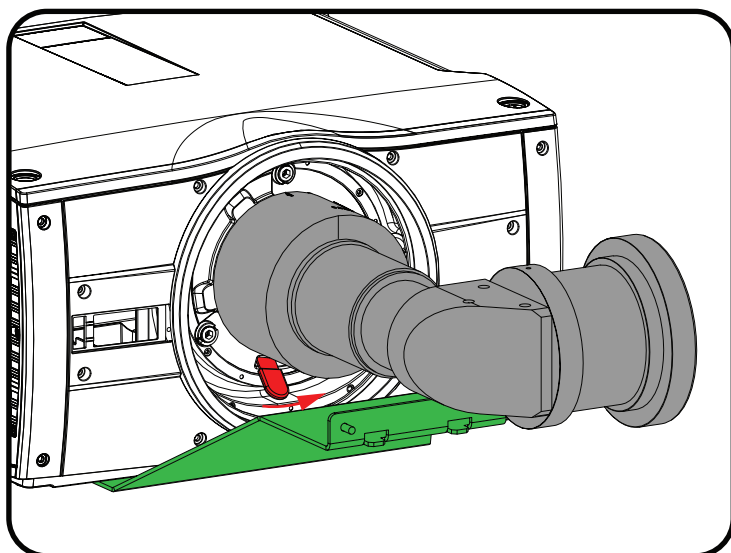


Image 2-16: Mounting lens





Image 2-17

5. When the lens is on its place, close the lens locking system by moving the handle from the left to the right.
6. Project an image and adjust the shift. See projector's user manual for more information about lens shift.



*Note:* Shift cannot be adjusted anymore after full installation of the complete kit.

7. Slide plate 2 on both threaded rods and turn a nut on each rod. Do not fasten yet! It must be possible to move the plate a little bit while mounting the other plates.

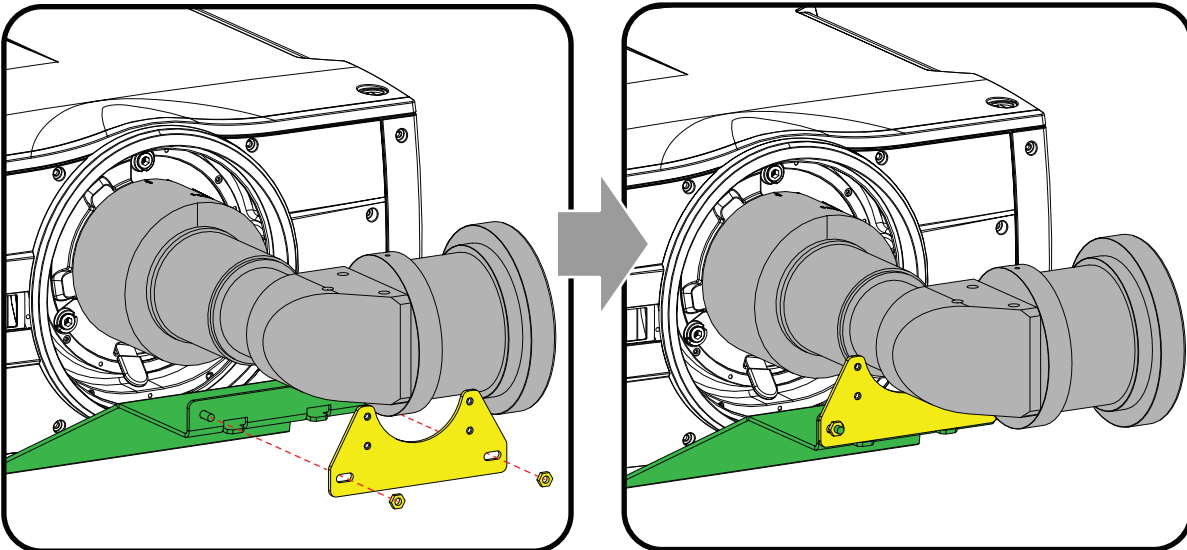


Image 2-18: Mount the 2nd plate

8. Mount the 3th plate on the 2nd plate. Use the lower mounting holes in the 2nd plate. Drive in both screws but do not fasten yet.

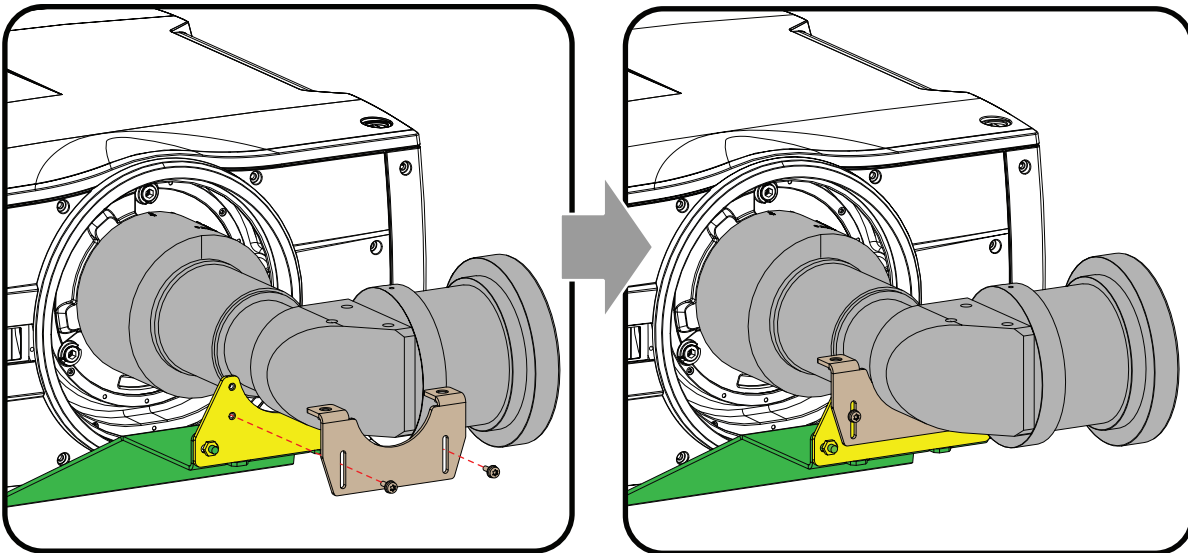


Image 2-19: Mount the 3th plate

9. Place the clamping bracket on the lens so that the fixation holes matches the holes in the support. Drive in both fixation screws. If necessary, move the 3th plate a little bit until it fully match with the lens. Fully secure both screws.

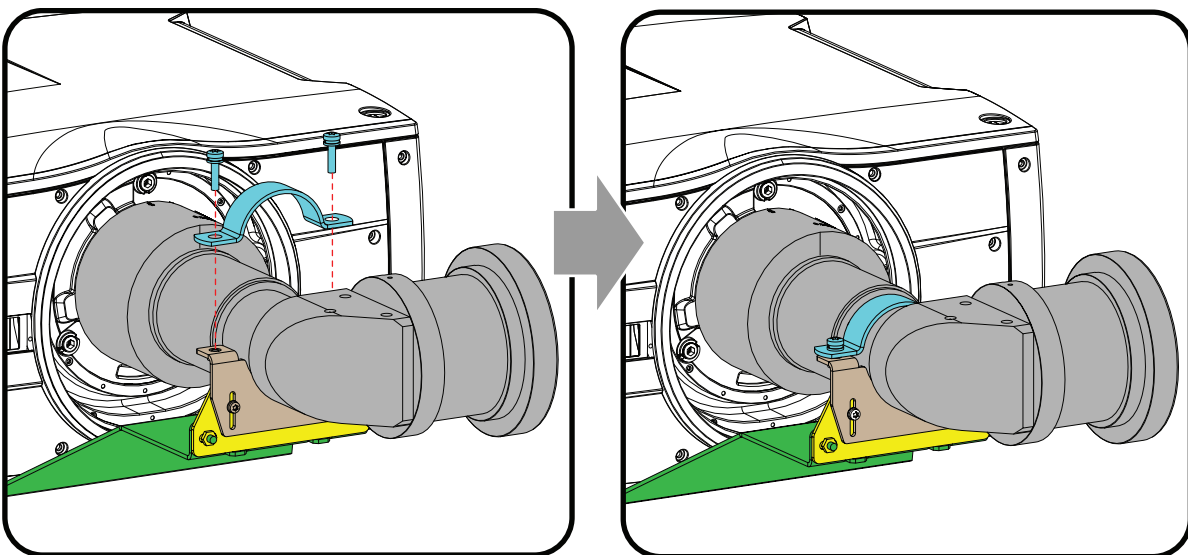


Image 2-20: Mount clamp bracket

10. Fully fasten the screws of the 3th plate and the nuts of the 2nd plate so that the support is fully assembled. The projector is ready for use.

## 2.5 Mounting the UST lens on a F80 projector



Lens can also be used with an F80 mounted in its rigging frame.



Do not forget to mount the lens adapter on the lens. See “Preparation of the lens”, page 4, Extra preparation for F80.

## How to mount

1. Turn the projector on its side or on its top cover.
2. Place the bottom support plate on the bottom plate of the projector. Make sure that the fixation holes match the holes in the bottom plate.

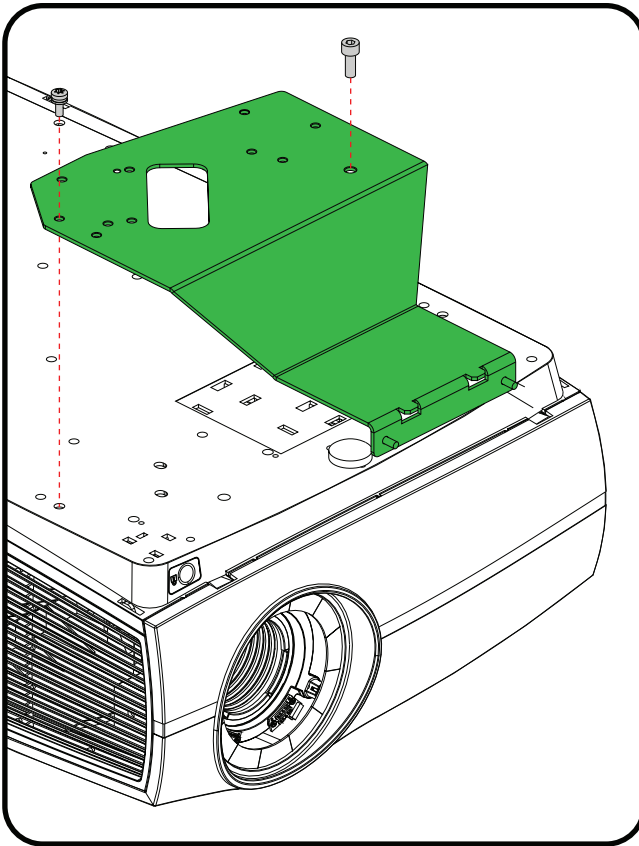


Image 2-21: Mount bottom plate

3. Turn in the M6 screws and the M8 bolt.
4. Turn the projector back on its feet.

Insert the prepared lens. Make sure the electric contact points (C) on the lens match the contact points on the lens holder.

Turn the lens to the right to lock the bajonet closing.

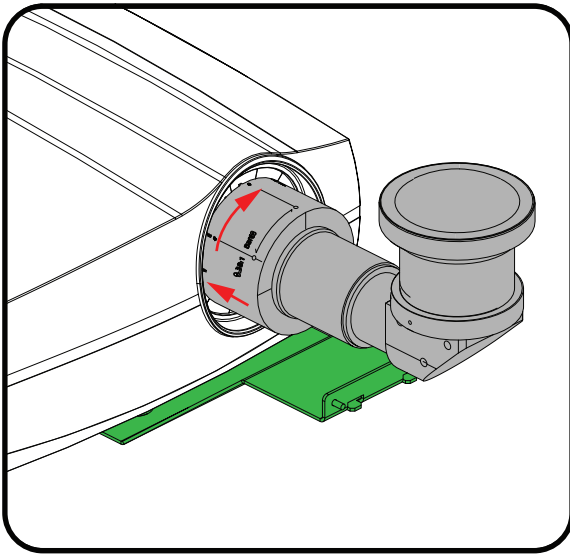


Image 2-22



Image 2-23

5. Project an image and adjust the shift. See projector's user manual for more information about lens shift.



**Note:** Shift cannot be adjusted anymore after full installation of the complete kit.

6. Slide plate 2 on both threaded rods and turn a nut on each rod. Do not fasten yet! It must be possible to move the plate a little bit while mounting the other plates.

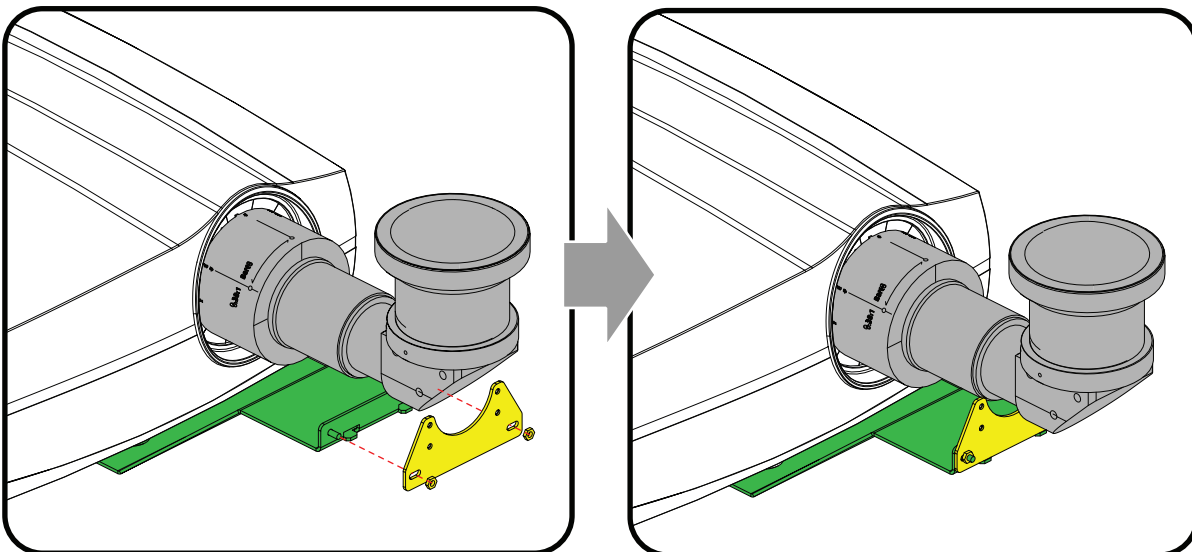


Image 2-24: Mount the 2nd plate

7. Mount the 3th plate on the 2nd plate. Use the lower mounting holes in the 2nd plate. Drive in both screws but do not fasten yet.

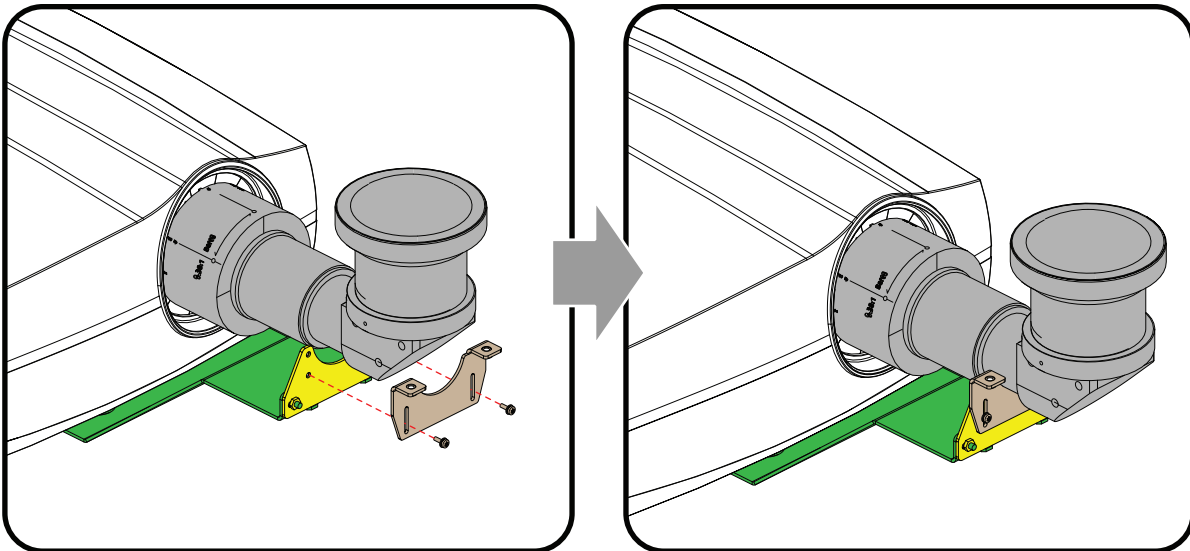


Image 2-25

8. Place the clamping bracket on the lens so that the fixation holes matches the holes in the support. Drive in both fixation screws. If necessary, move the 3th plate a little bit until it fully match with the lens. Fully secure both screws.

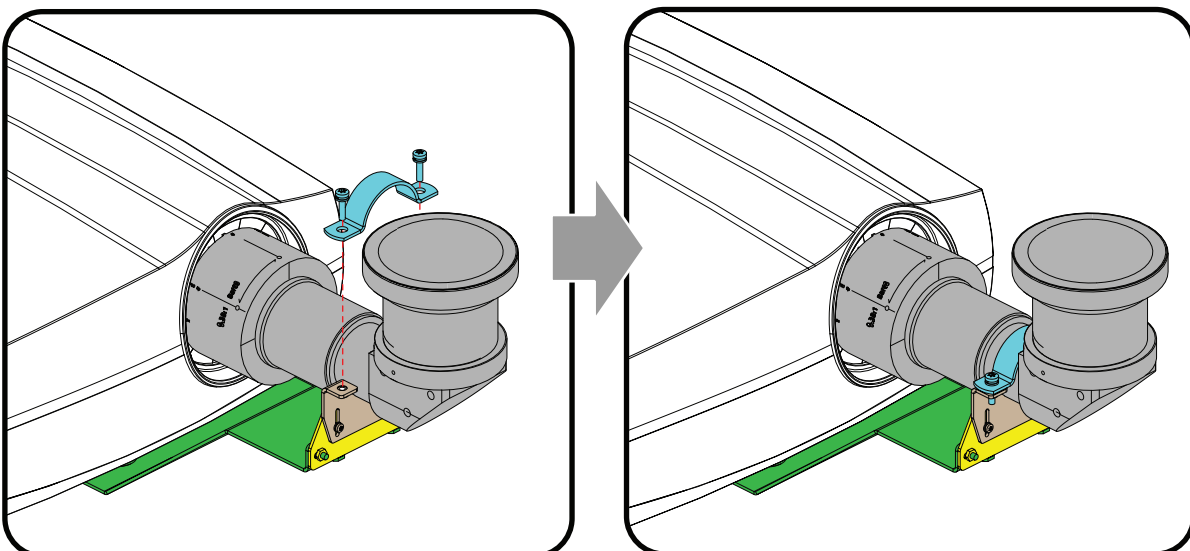


Image 2-26: Mount clamp bracket

9. Fully fasten the screws of the 3th plate and the nuts of the 2nd plate so that the support is fully assembled. The projector is ready for use.

