Smart Klaus®

Installation and commissioning manual

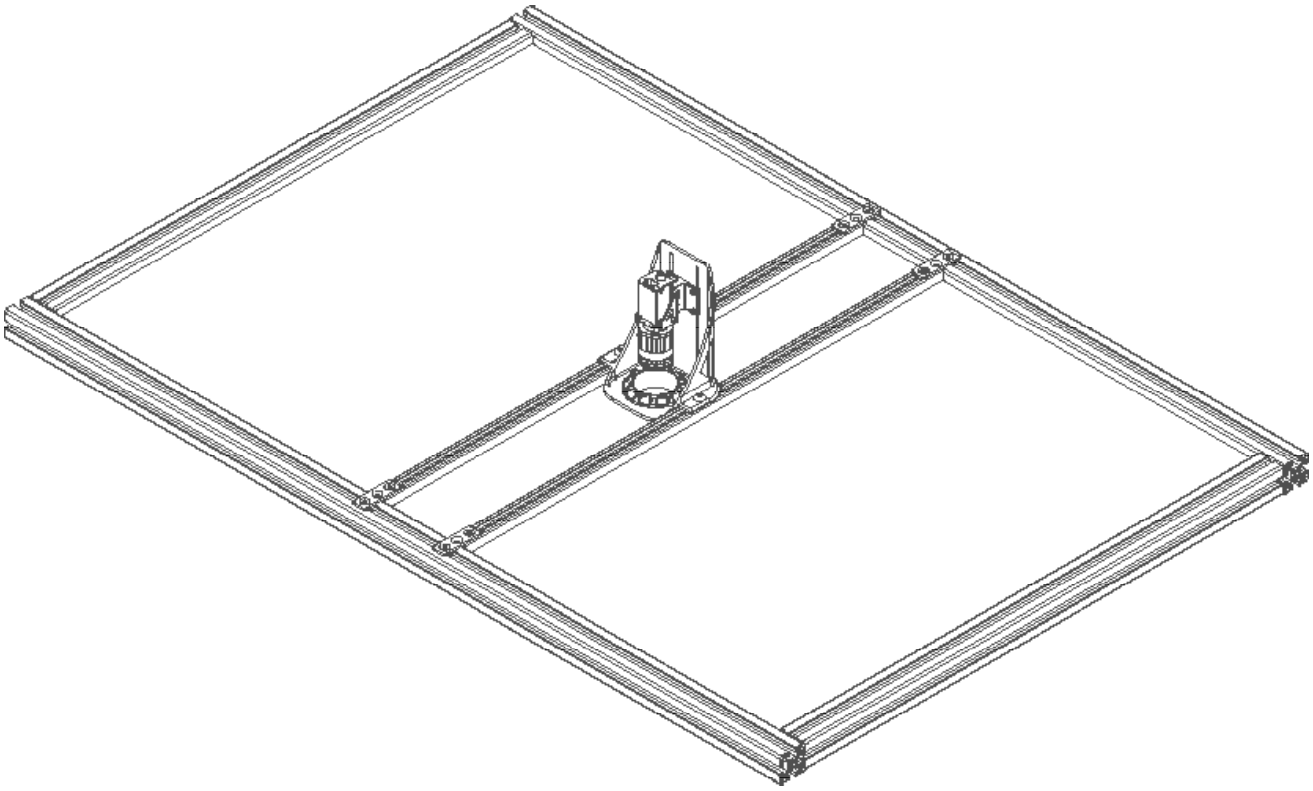
For digital PDF-Version, visit
www.optimum-gmbh.de/en/downloads

Status: 28.10.2025 Errors and changes excepted.

OPTIMUM
datamanagement solutions

Contents

Camera installation



Camera installation

4x

Locknut **A**

4x

Washer **B**

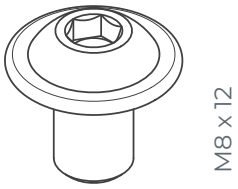
4x

Hexagon Screw **C**

4x

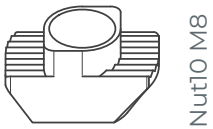
Hexagon Screw **D**

2x



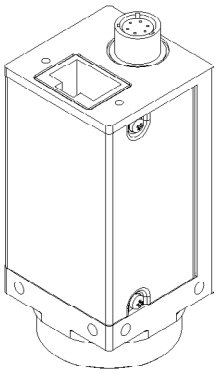
Hexagon Screw **E**

2x



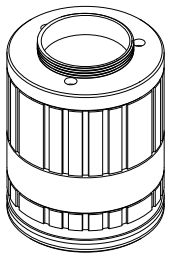
Hammer nut **F**

H



The camera model may vary.

I



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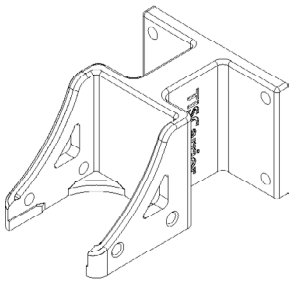

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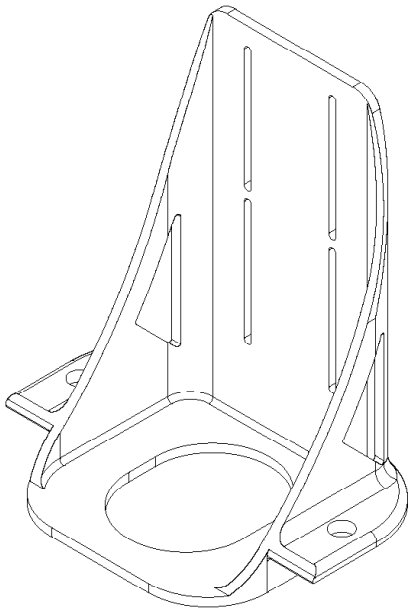
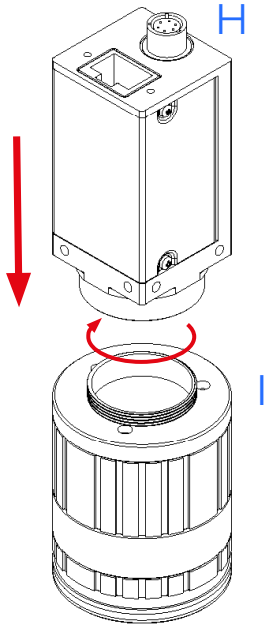


Attention:
Please do not remove the protective caps from the lens and camera until immediately before installing the components!

Camera installation

1.



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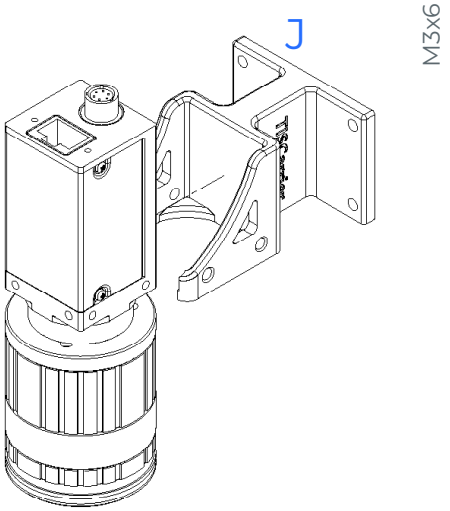
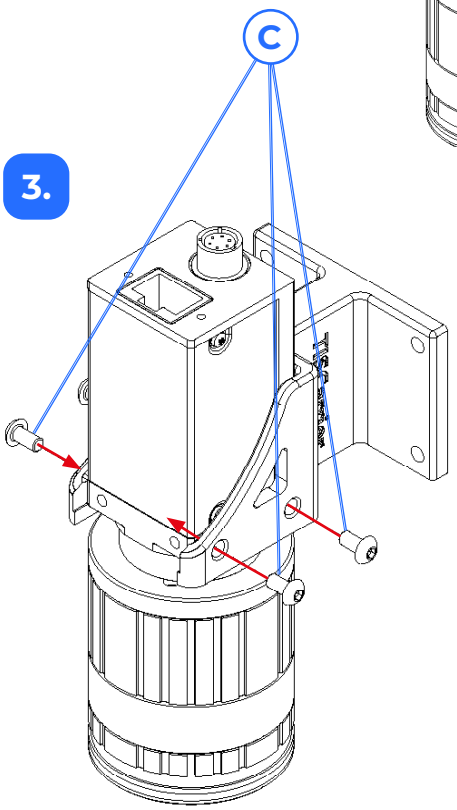


Do not remove the protective cap of the lens yet!

3.



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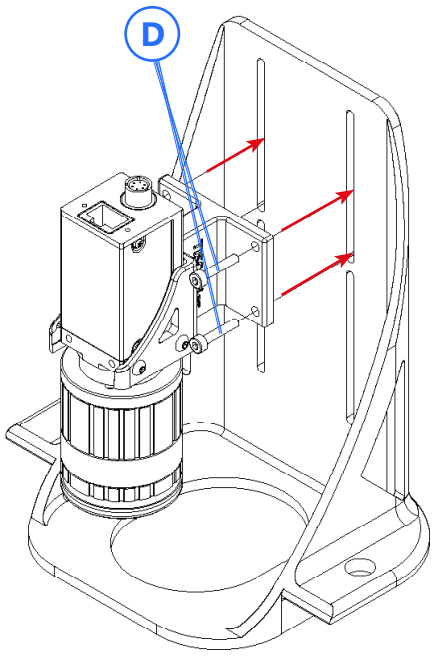

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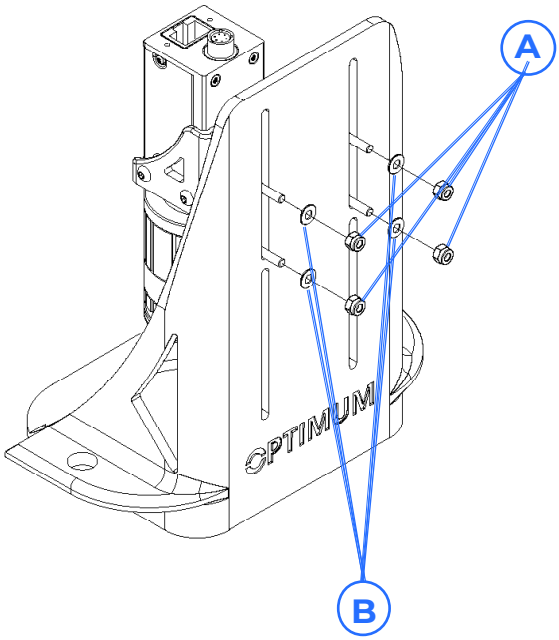
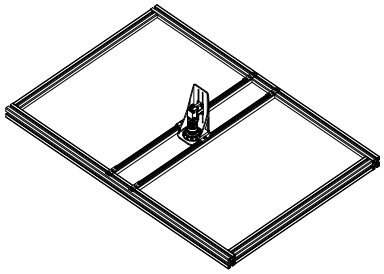
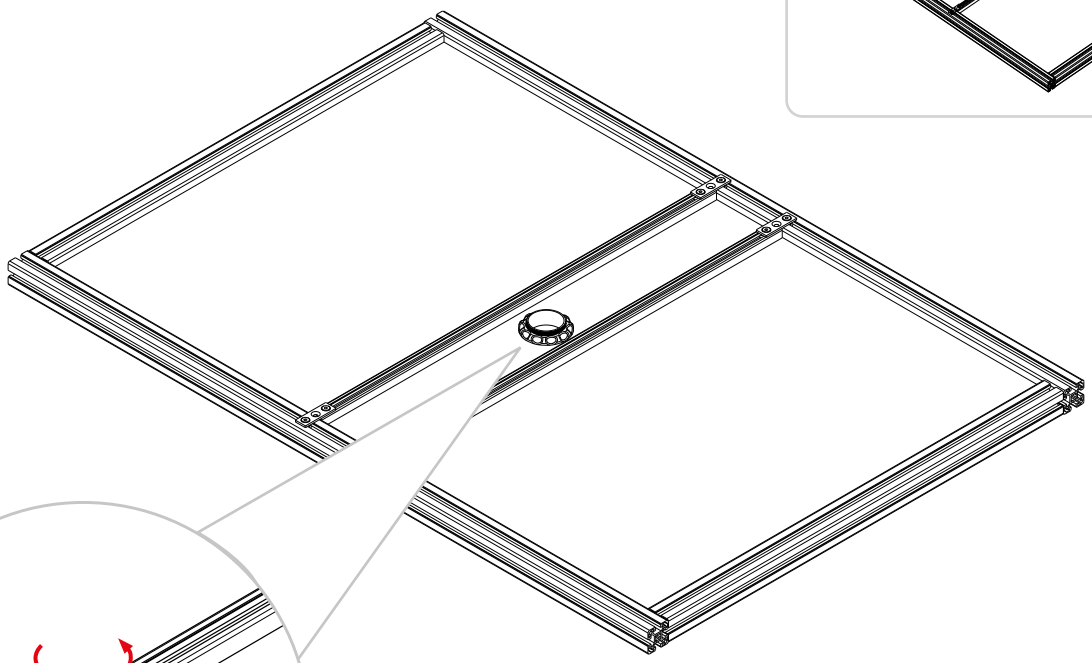
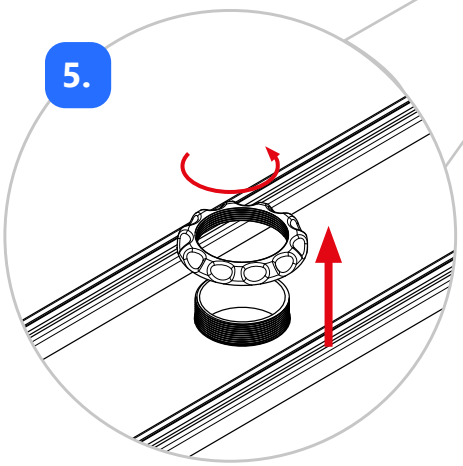


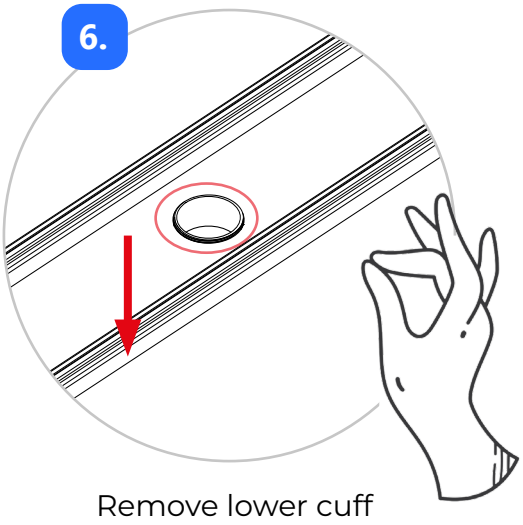
Camera installation



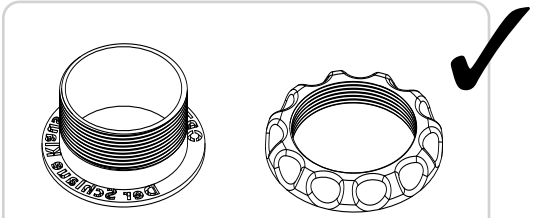




Remove upper cuff

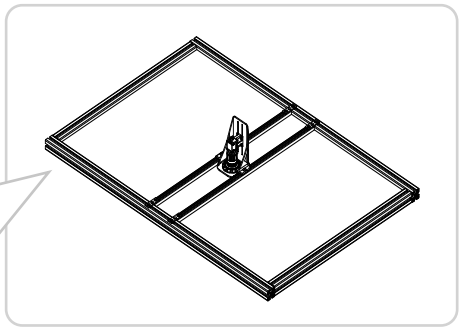


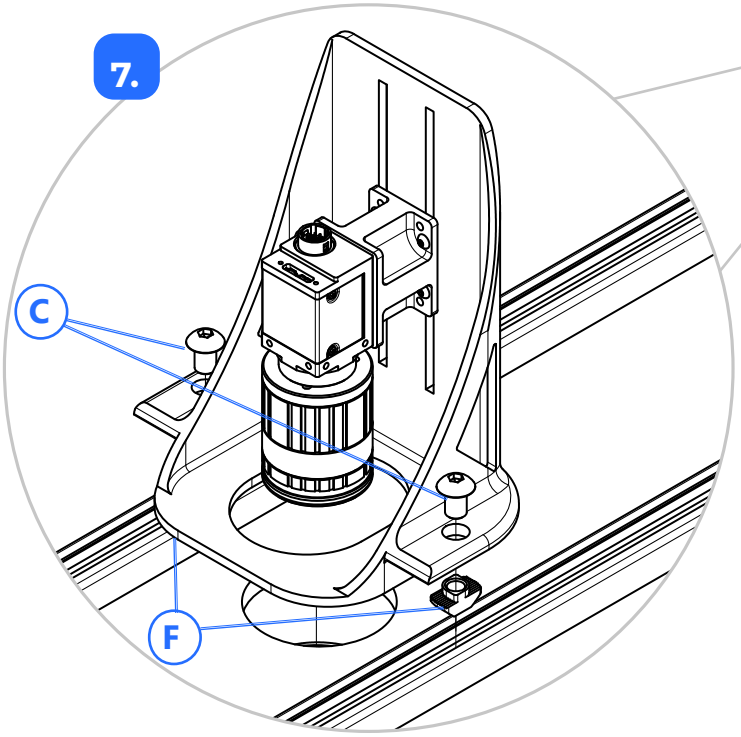
Remove lower cuff

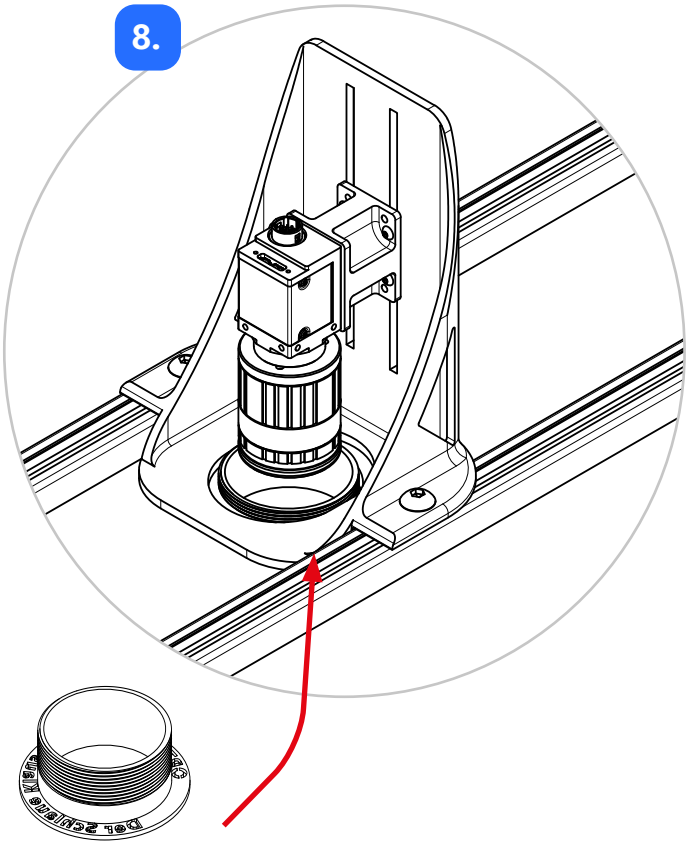


Set aside

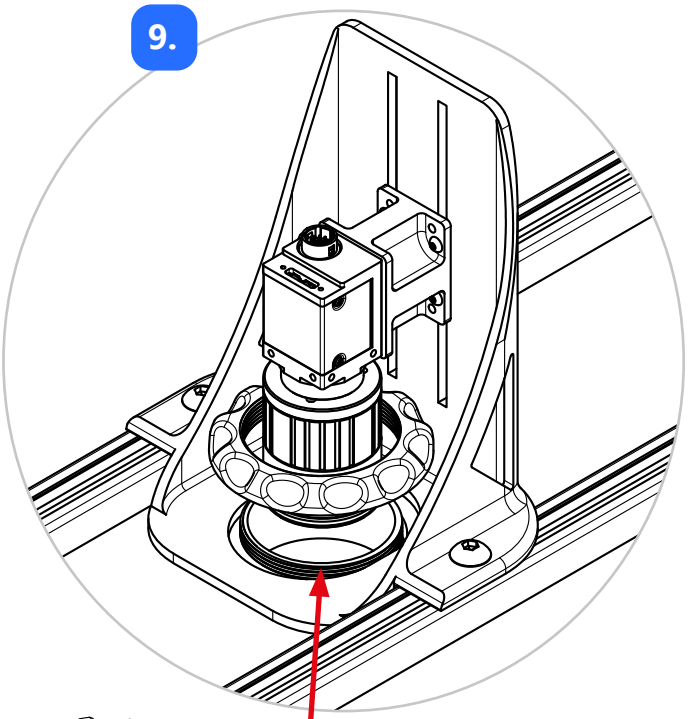
Camera installation

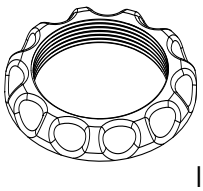






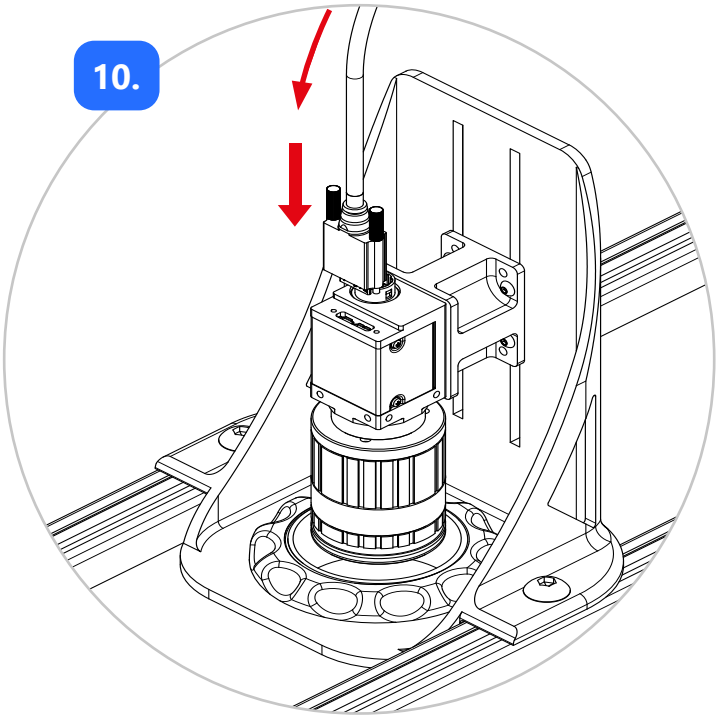
Insert from below

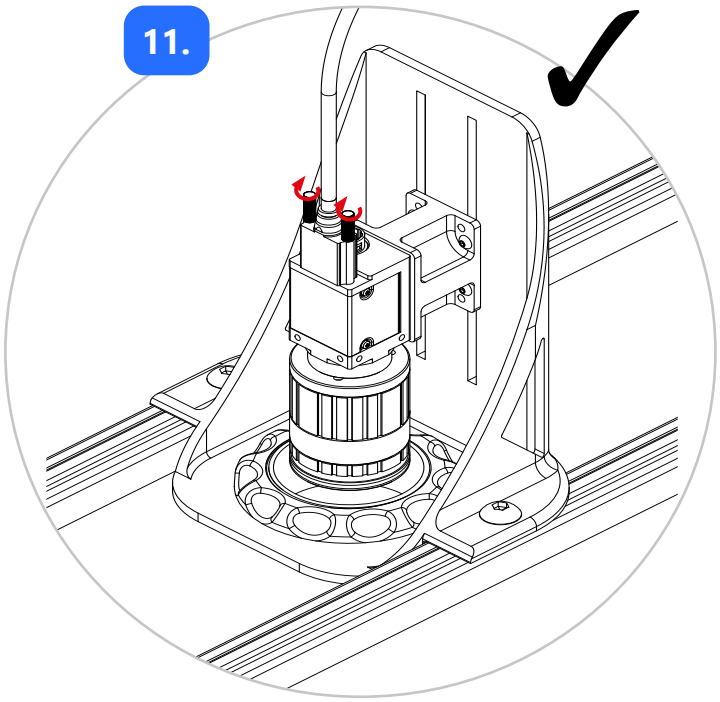




Insert from above

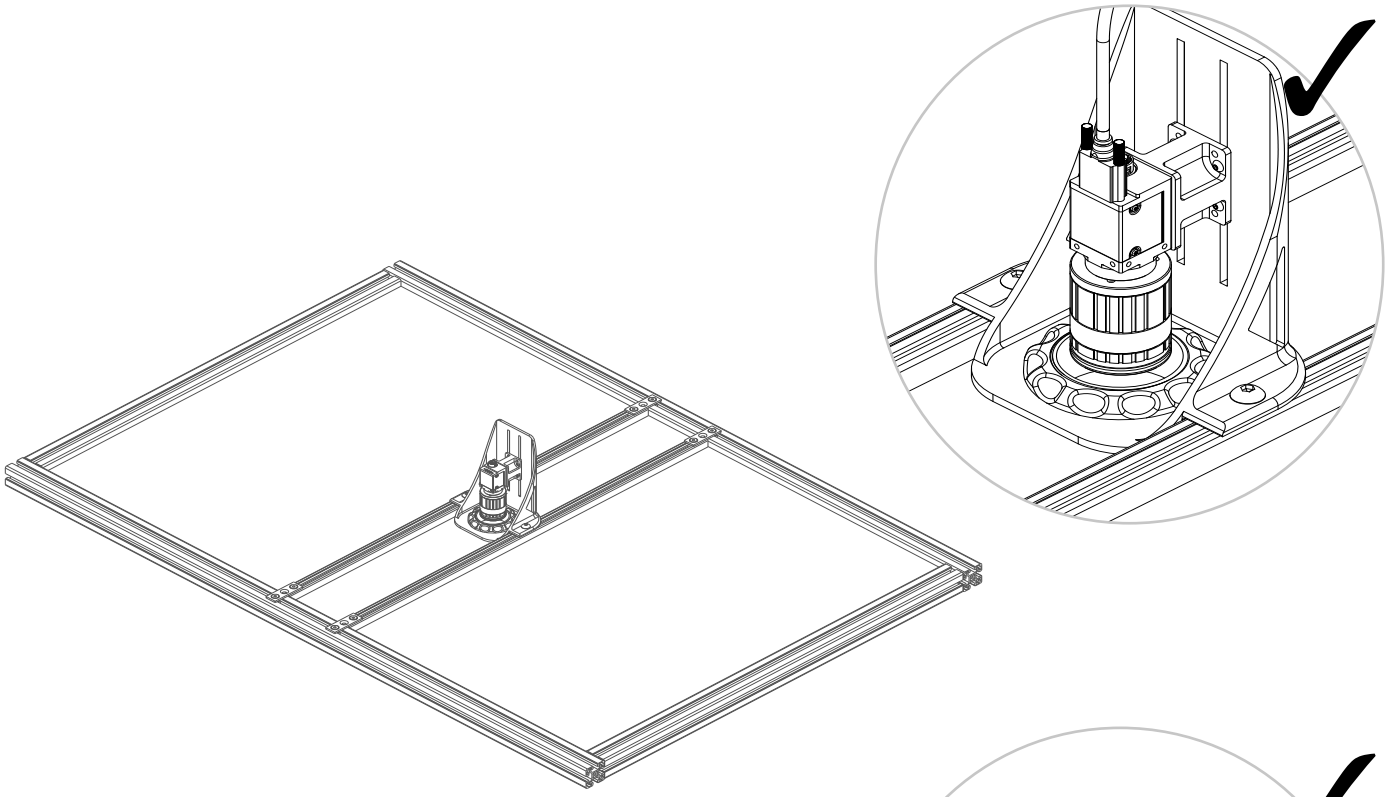
Camera installation

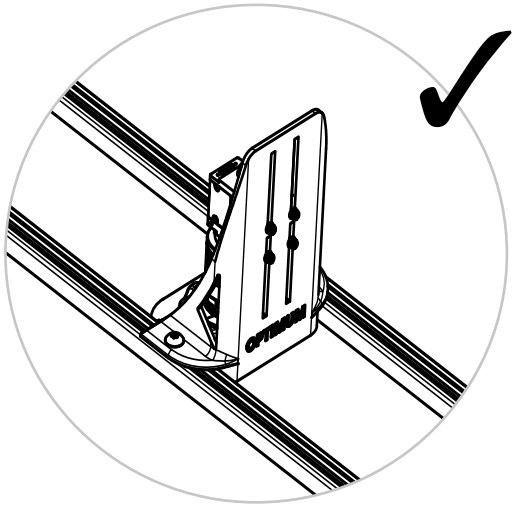




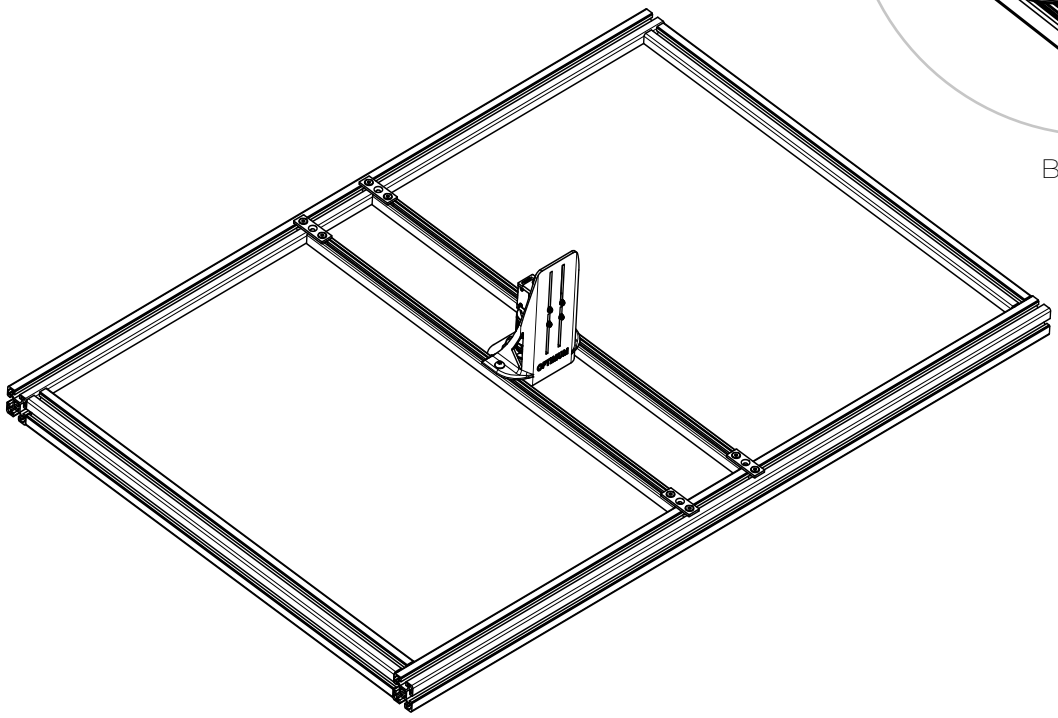
The panel must be mounted firmly and free from vibrations

Camera installation

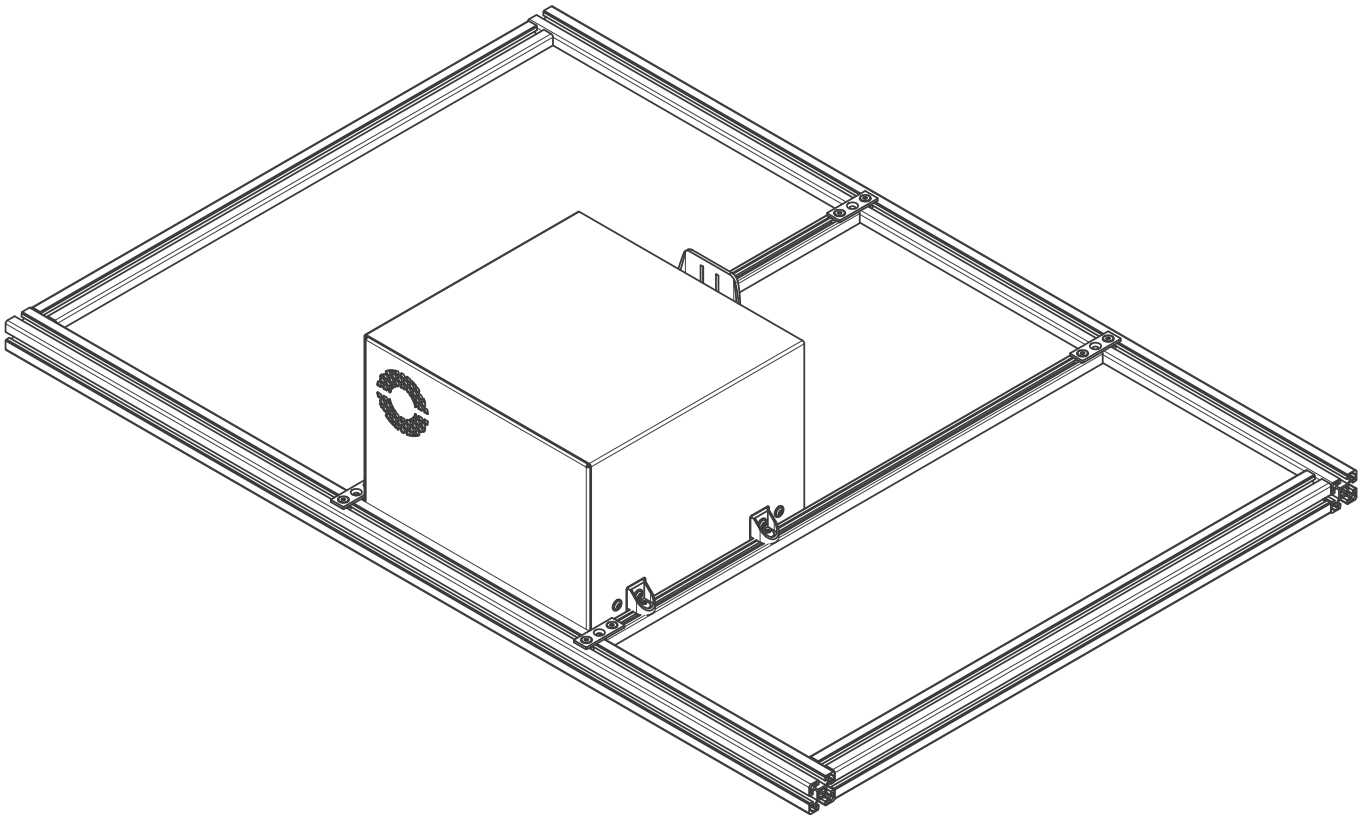




Back view

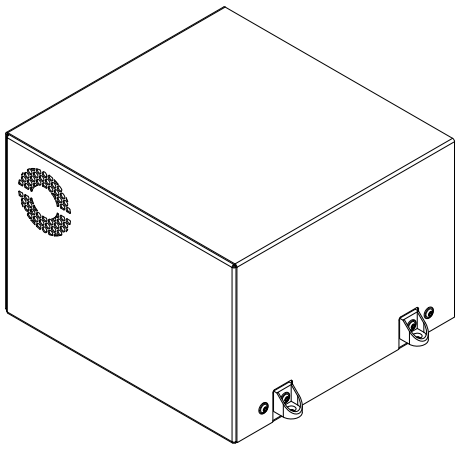


PanTilt Camera installation



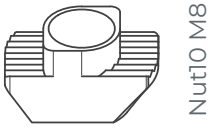
PanTilt Camera installation

1x



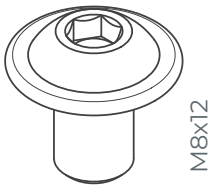
PanTilt Camera **A**

4x



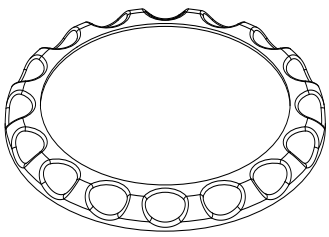
Hammer nut **B**

4x



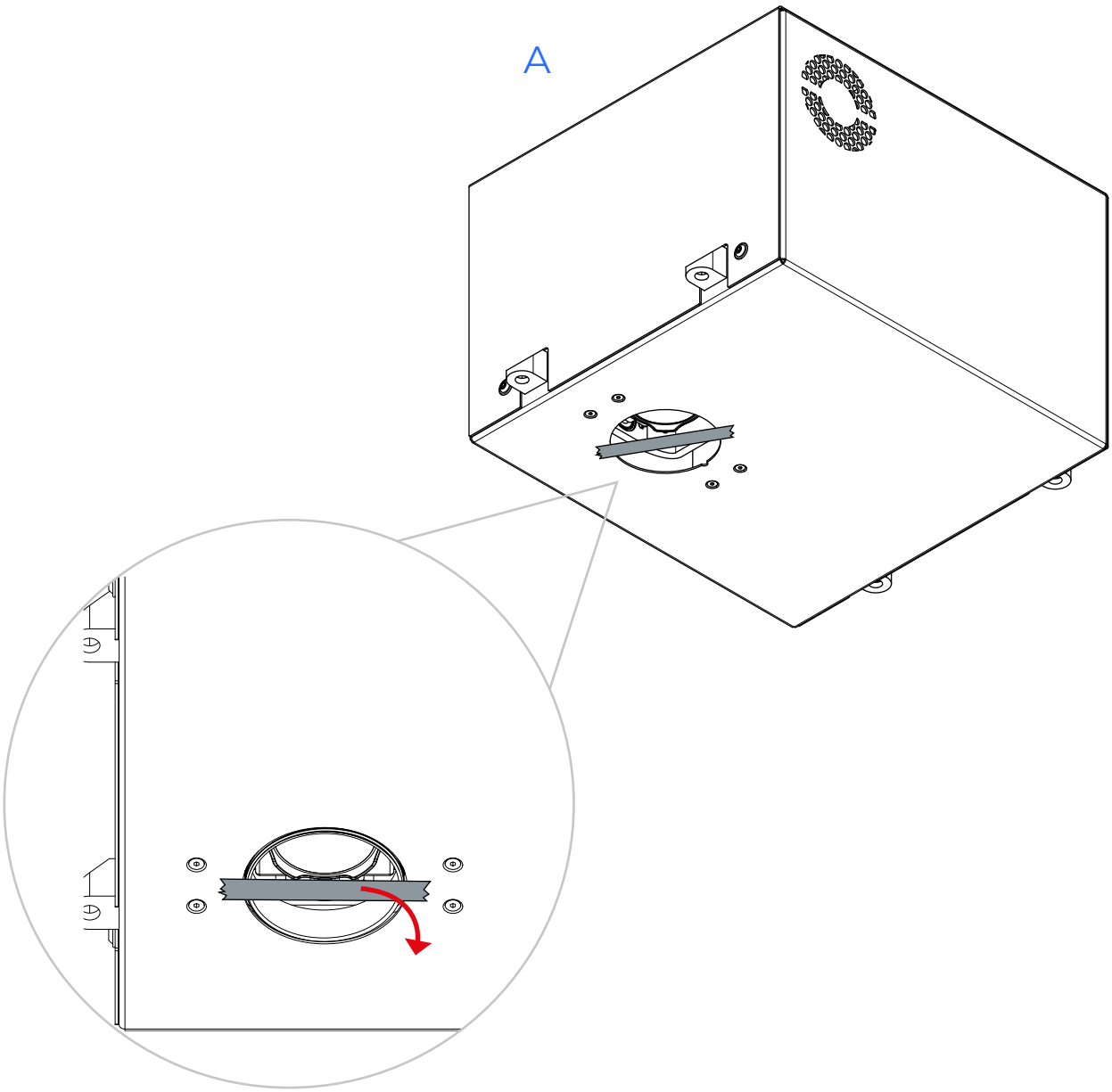
Hexagon Screw **C**

1x



Cuff nut with glass **D**

PanTilt Camera installation



PanTilt Camera installation

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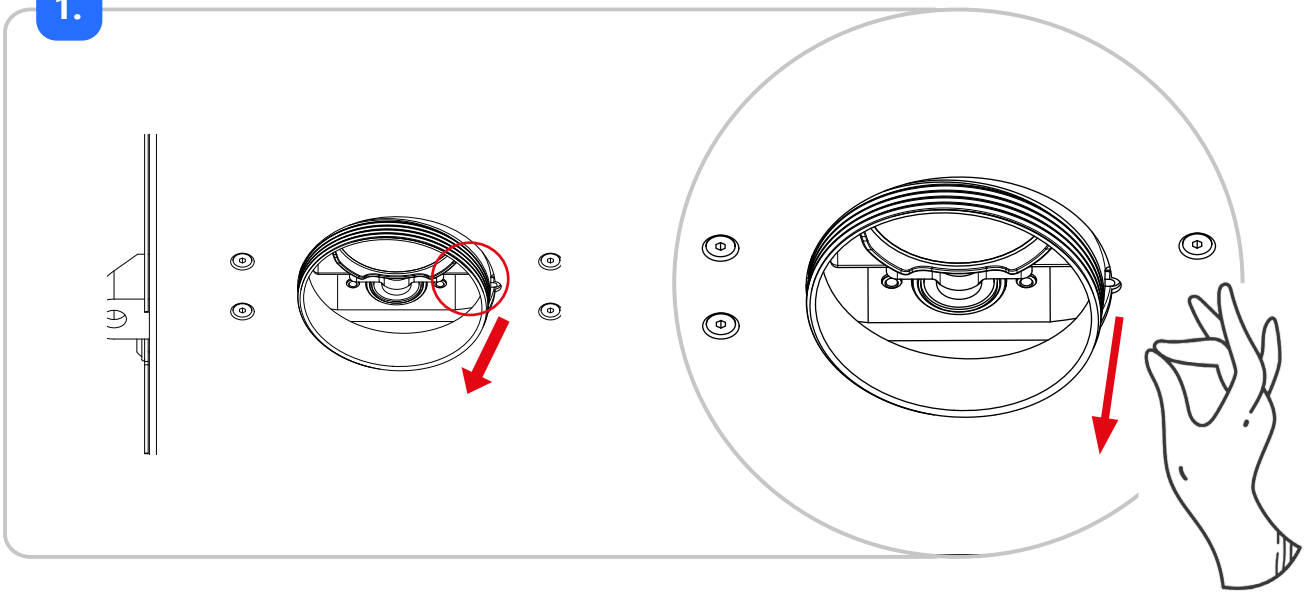

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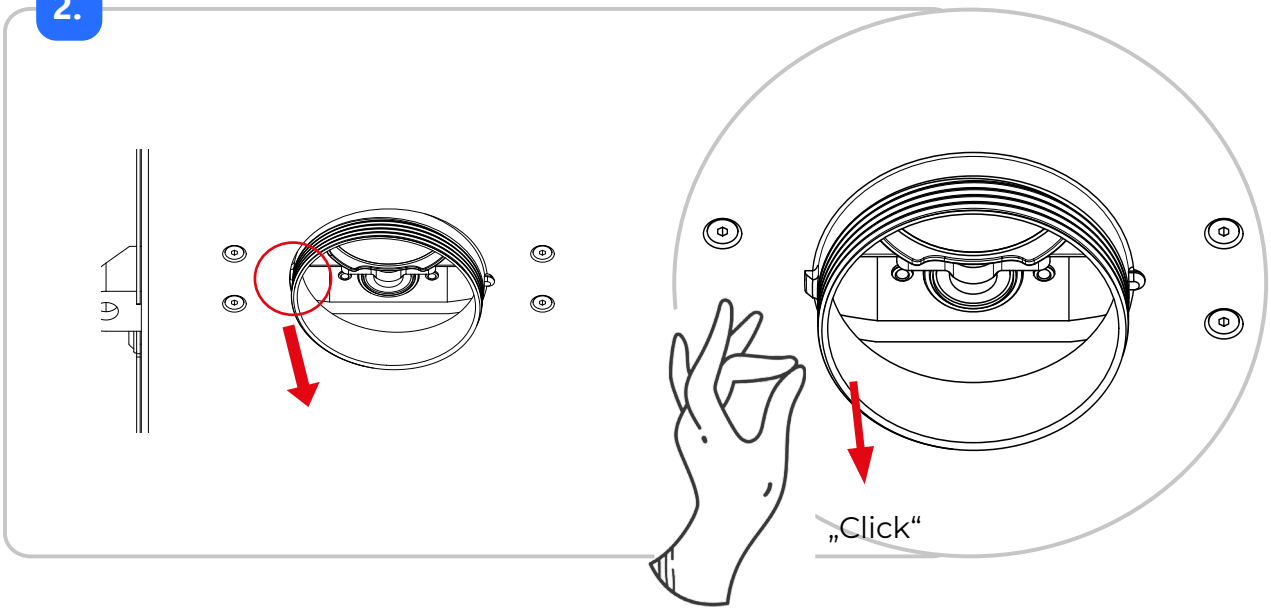
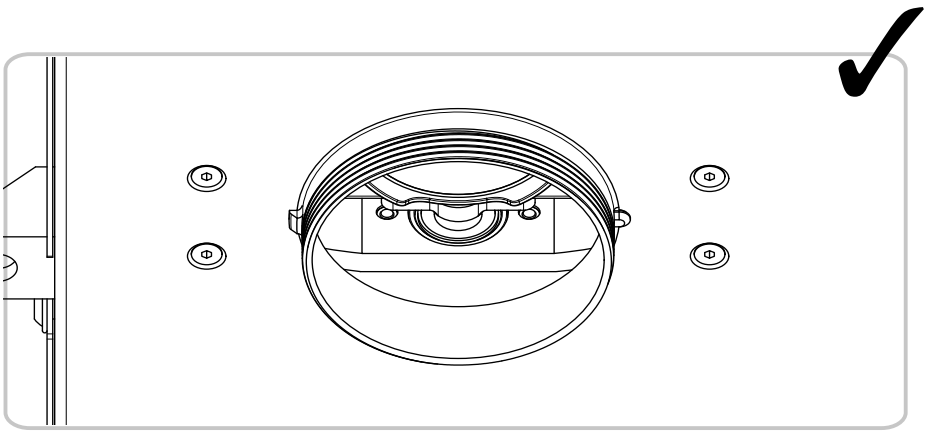
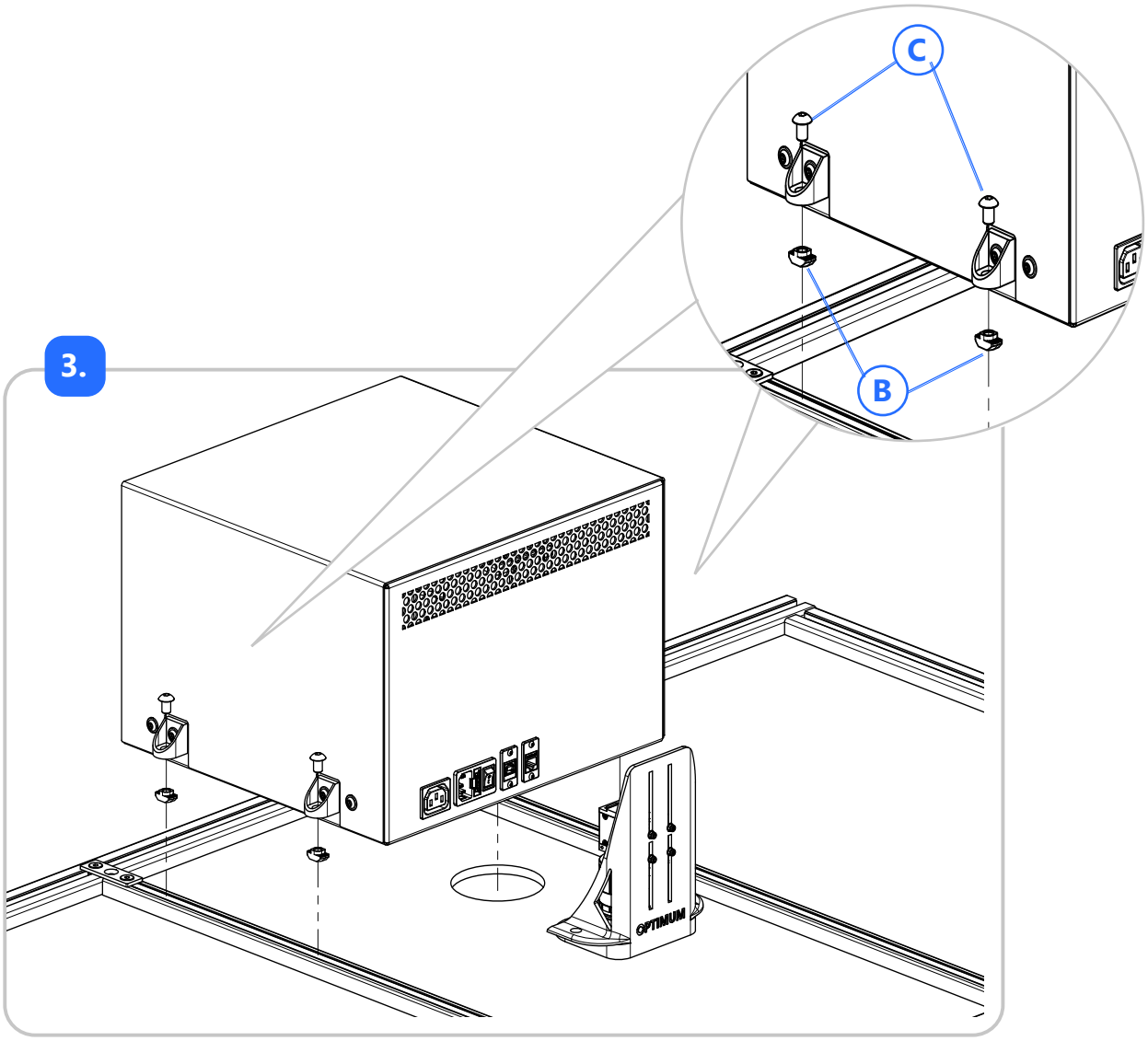
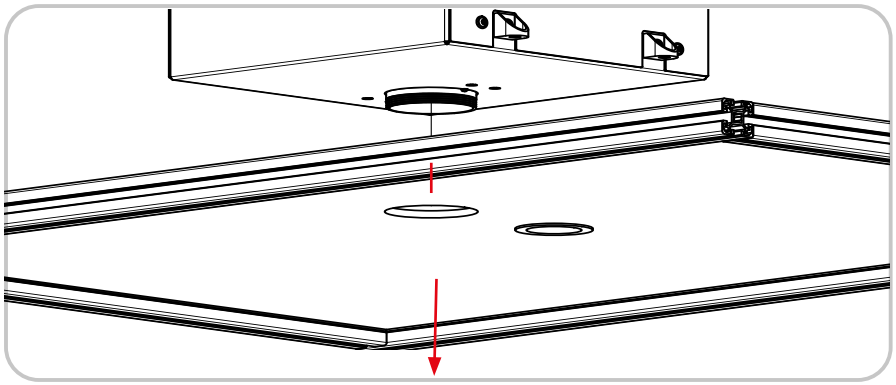




PanTilt Camera installation

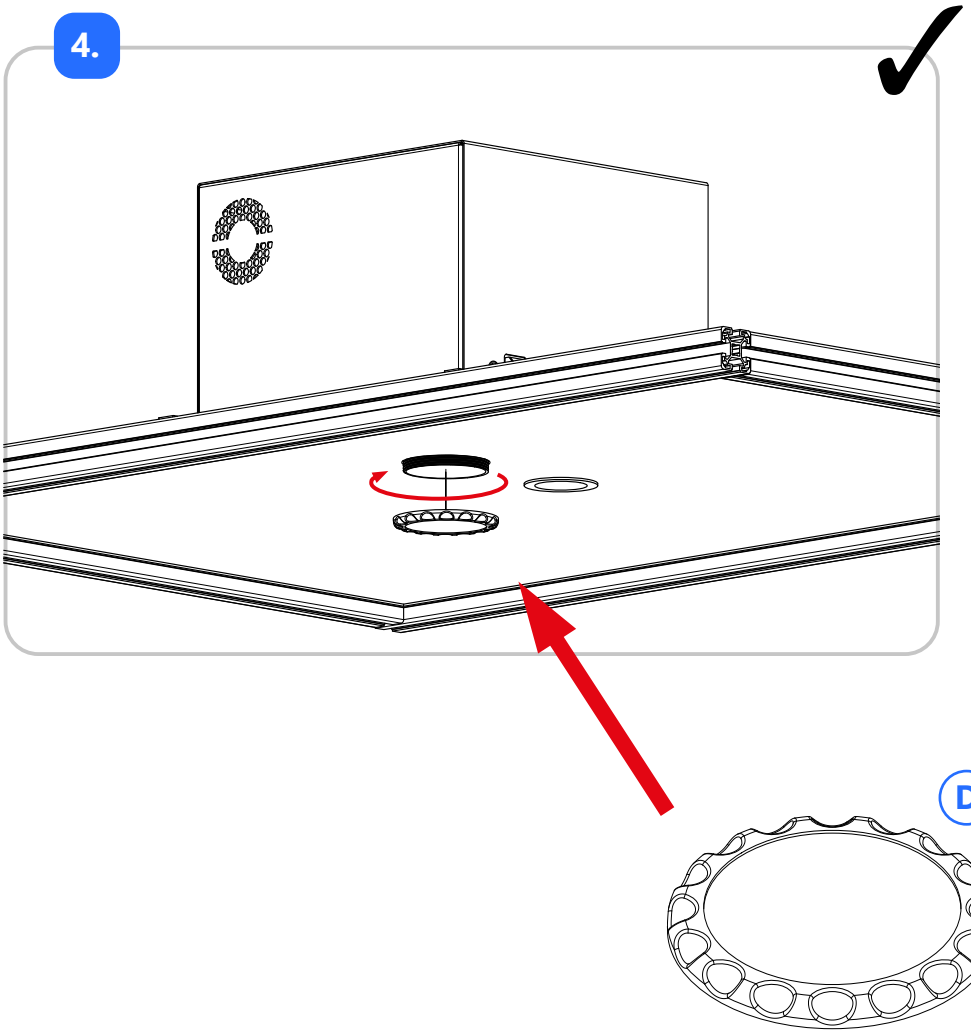


Screw both sides (L + R)

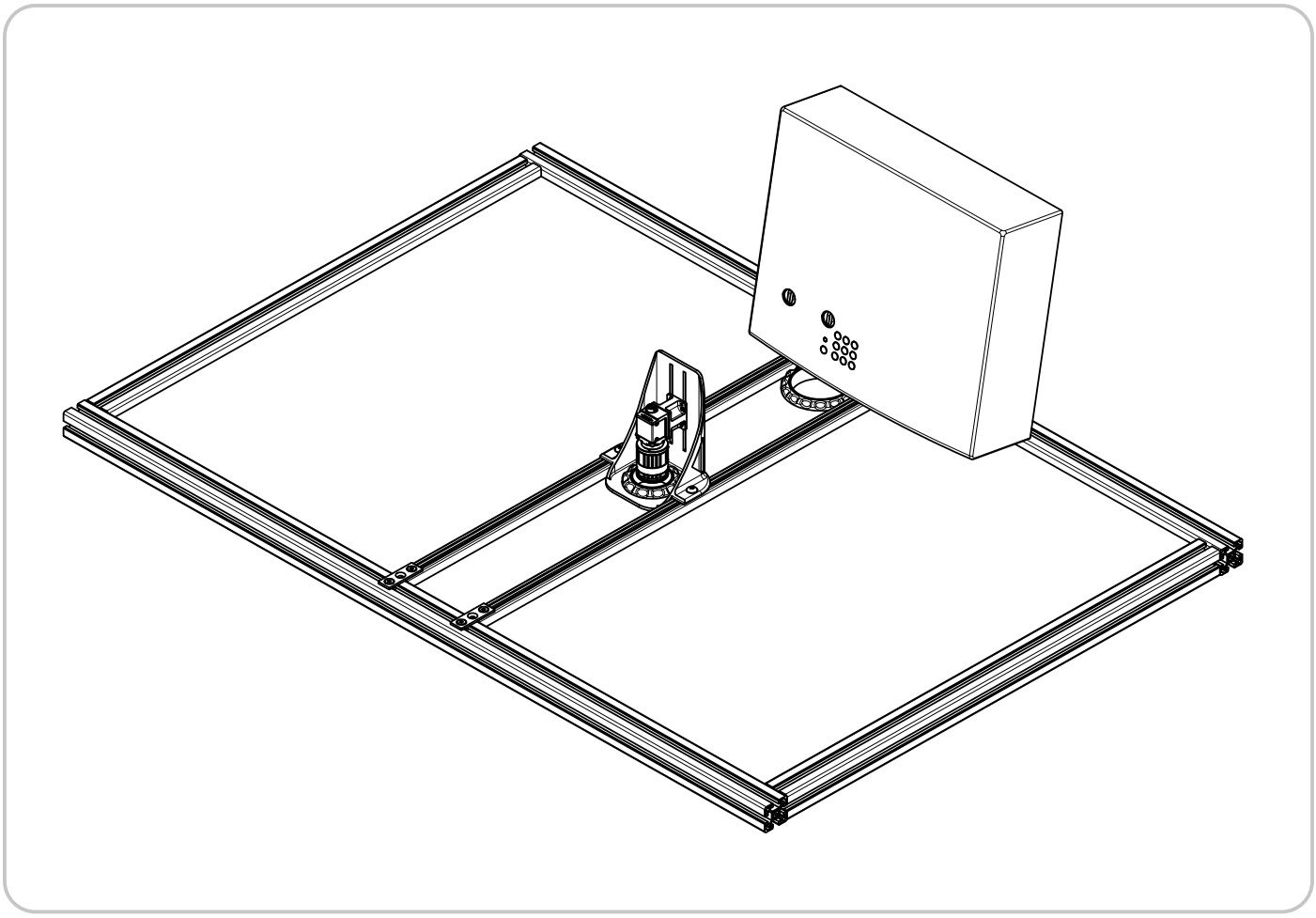


Bottom view

PanTilt Camera installation

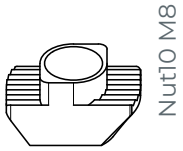


Projector installation



Projector installation

4x

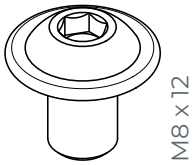


Hammer nut **A**

4x

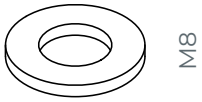
Hex **B**

4x



Hex **C**

4x

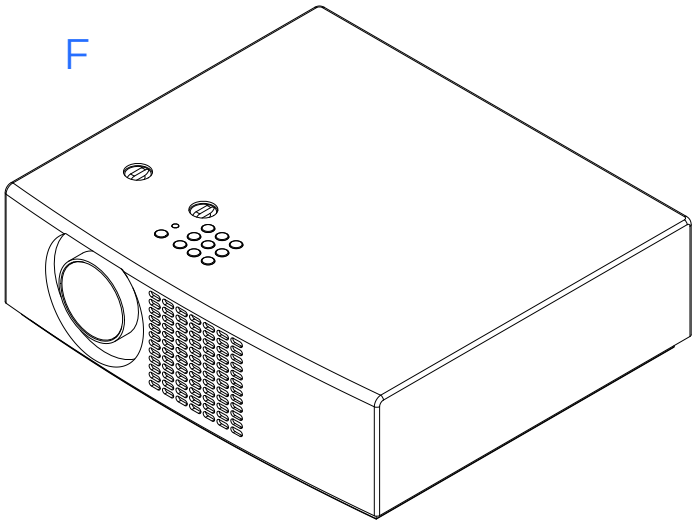


Washer **D**

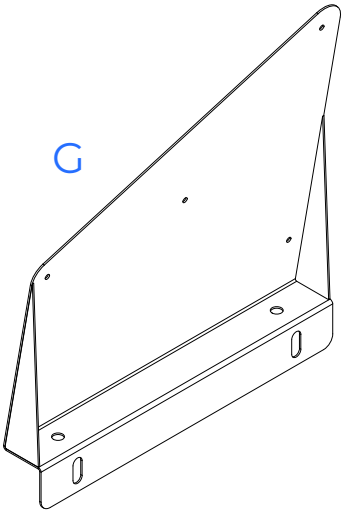
2x

Washer **E**

F



G



Projector installation

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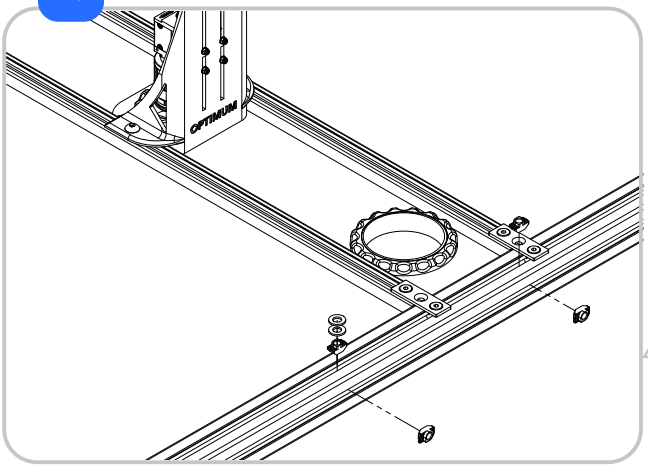

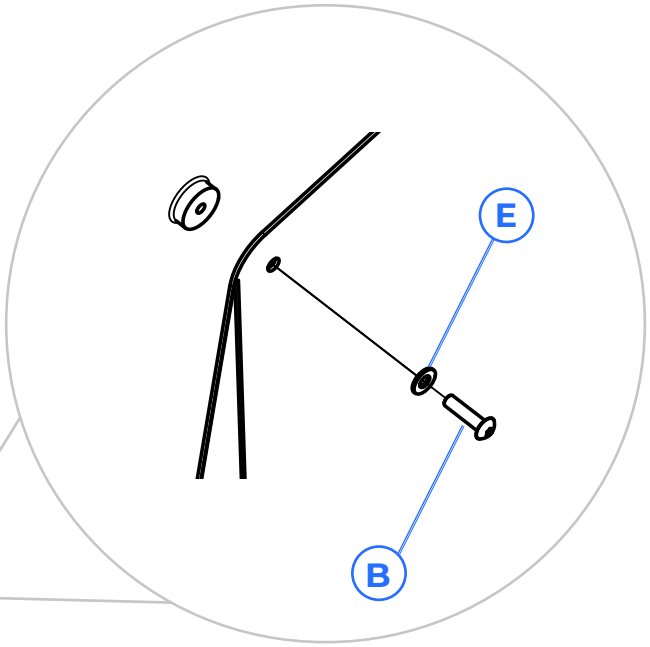

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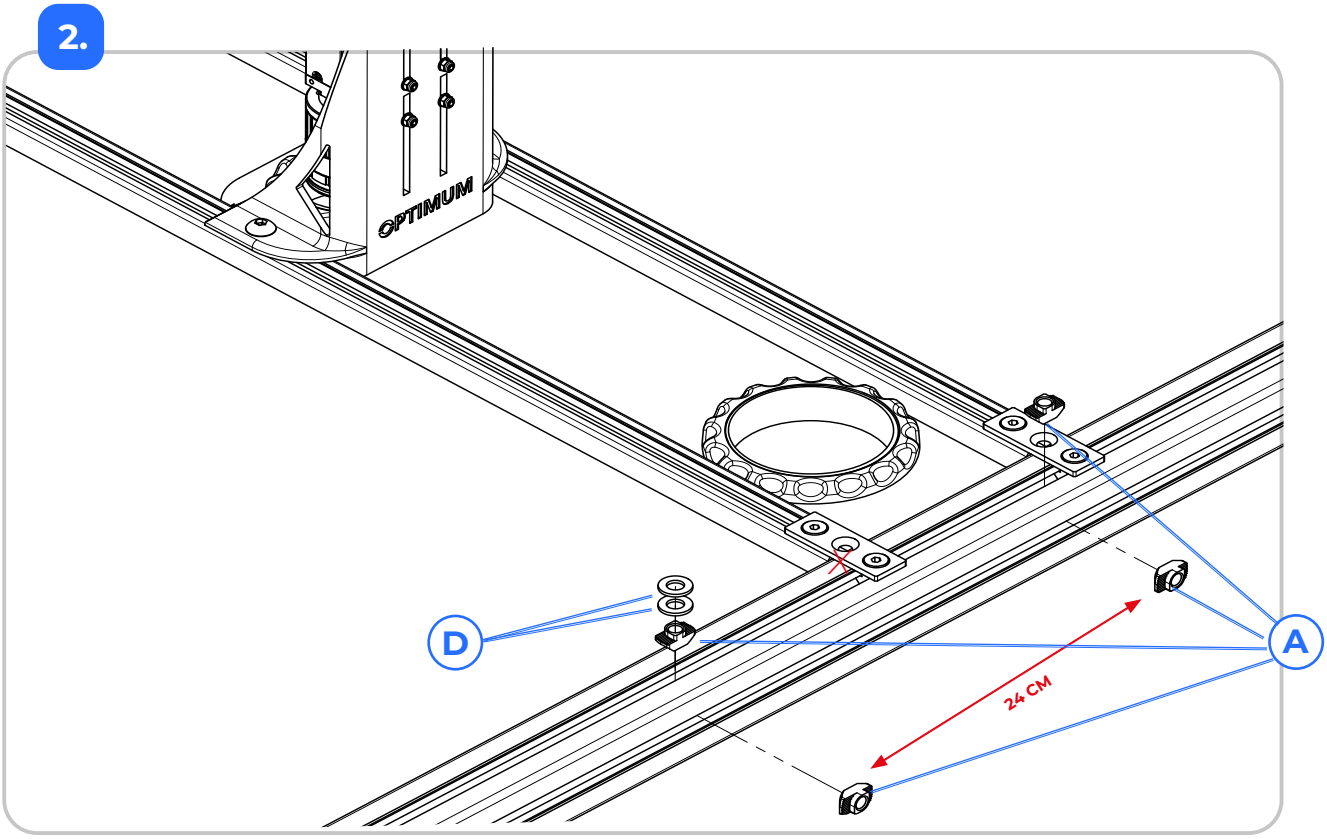

Projector installation

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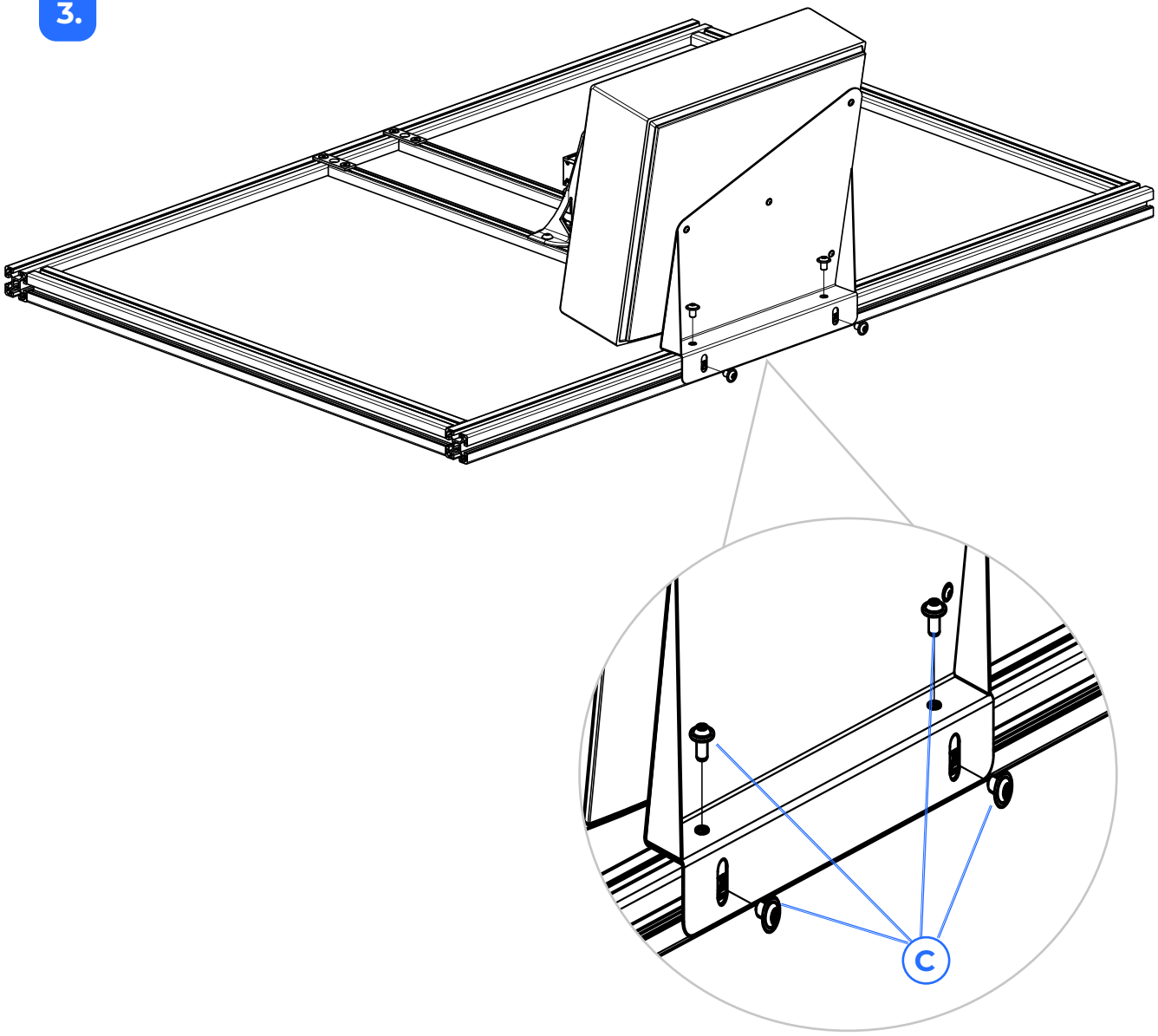
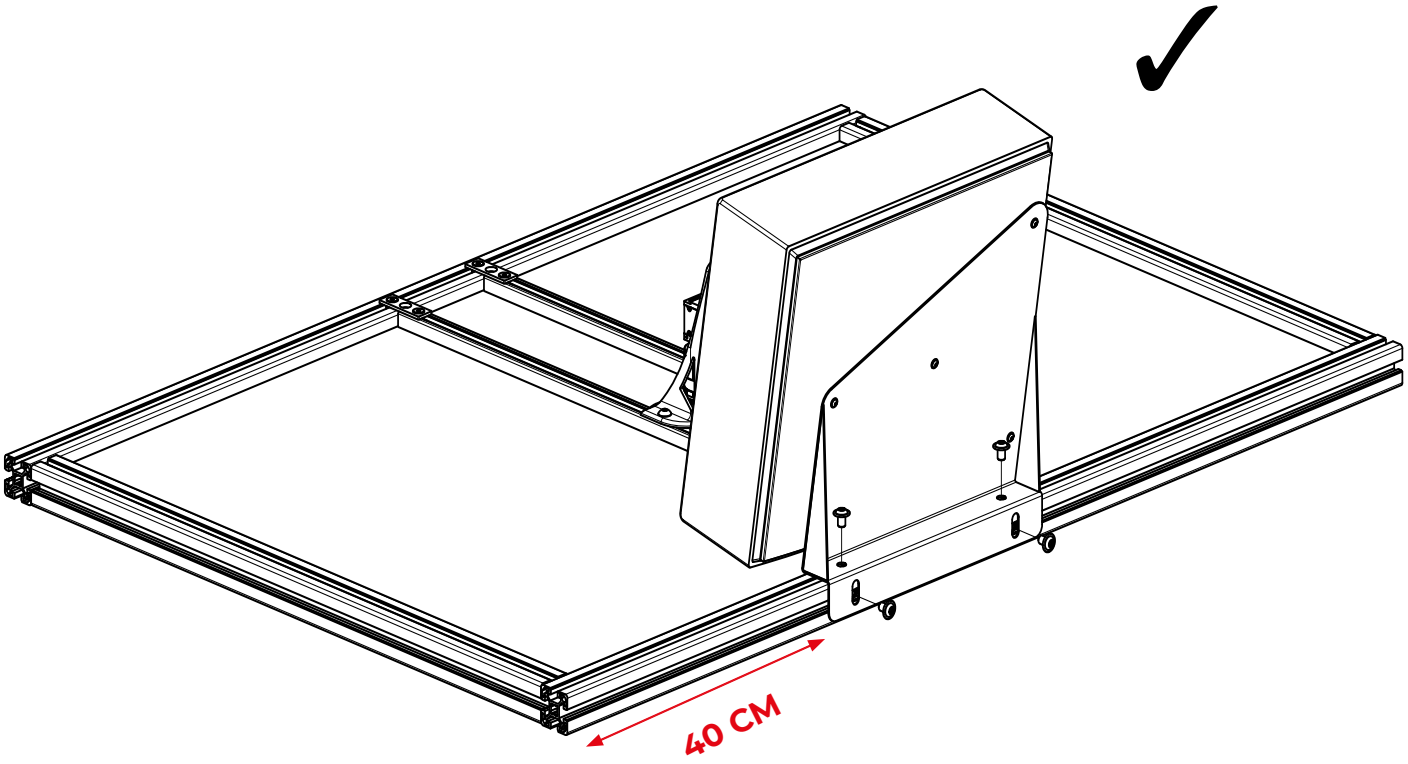
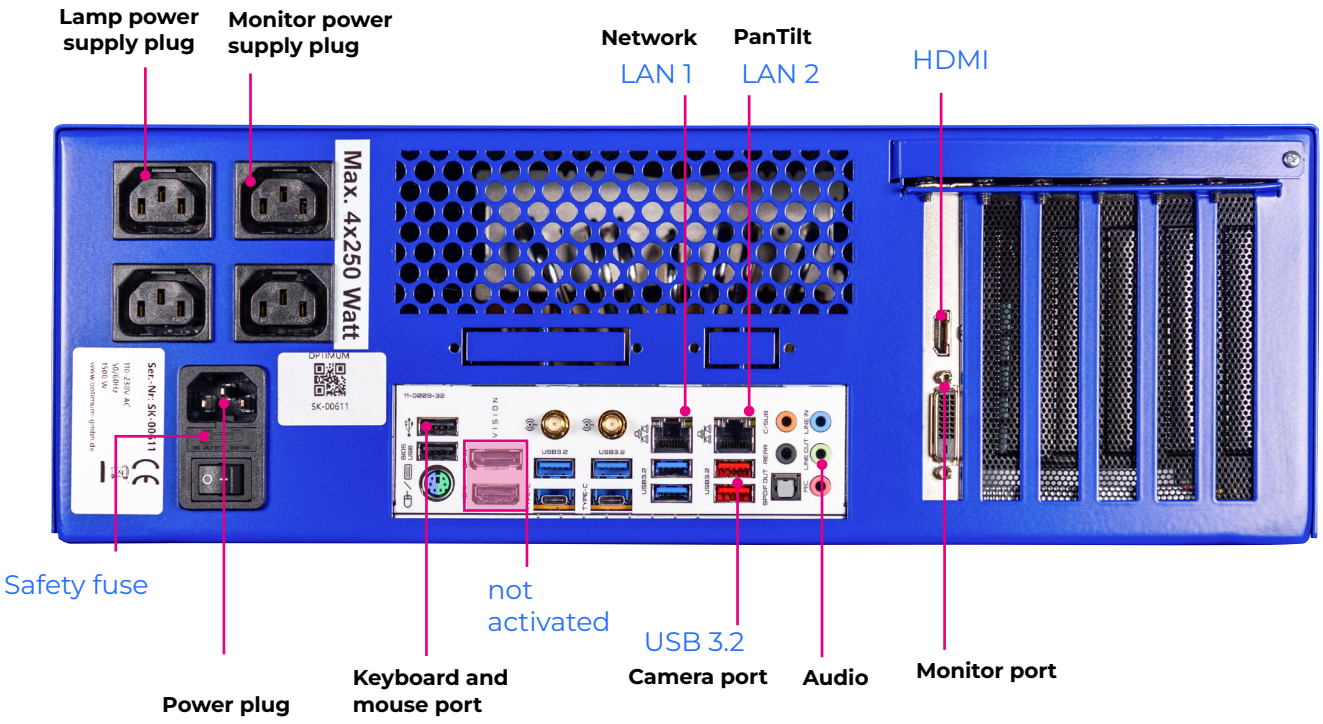
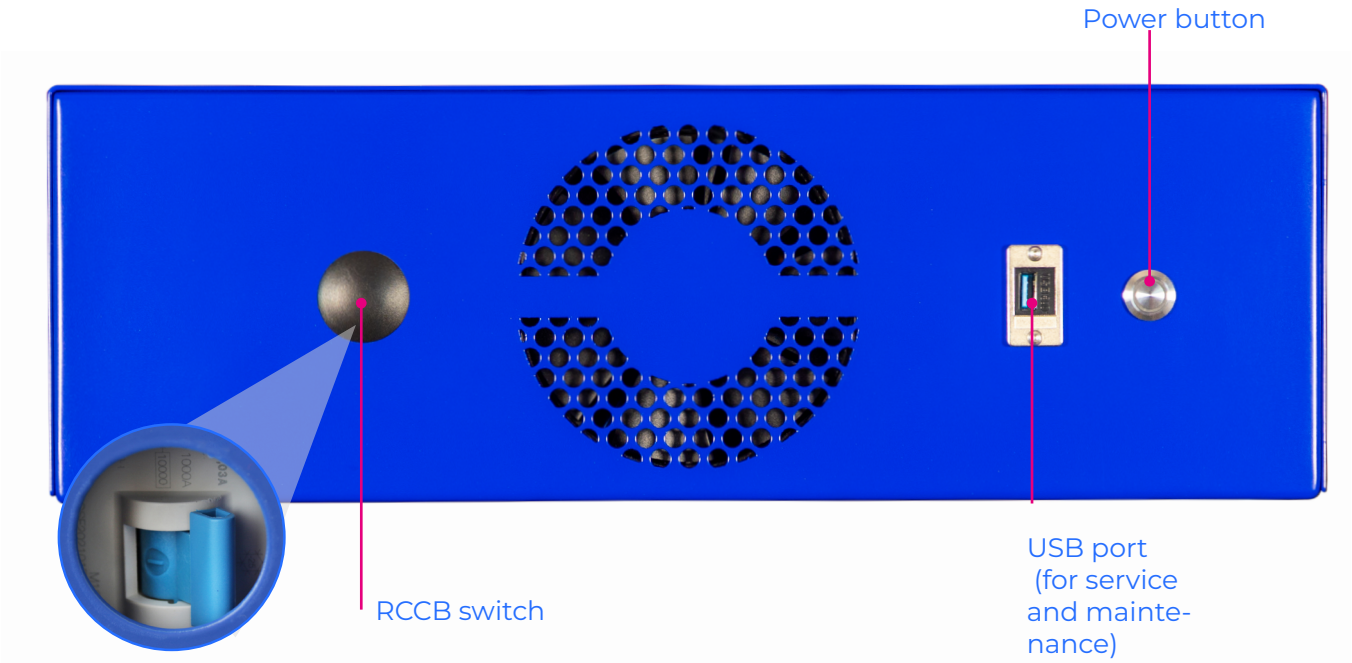


Projector installation



Ports


Lamp power supply plug
Monitor power supply plug
Network
LAN 1
PanTilt
LAN 2
HDMI
Max. 4x250 Watt
Safety fuse
Power plug
Keyboard and mouse port
not activated
USB 3.2
Camera port
Audio
Monitor port


Power button
RCCB switch
USB port (for service and maintenance)

Troubleshooting

Symptom	Troubleshooting
Smart Klaus® does not start.	• Check all plug connections. • Check the switch position on the power switch on the back of the Smart Klaus. • Check the residual-current circuit breaker under the rubber cap on the front of Smart Klaus. When set correctly, the switch points to the right. (see p.6) • Disconnect the power cable and check the safety fuse on the power switch.
The camera image is very slow.	• Cause: The camera is only recognized as a USB 2.0 device. Check the cable connection between the camera and the computer. This must be plugged into USB high-speed slot (red or blue). • USB extensions can reduce the speed. Only use the included camera cables (max. 5 m)! For older systems only: An outdated version of the camera driver can lower the speed. **Please contact our support!**
No image is displayed. The screen remains black.	The monitor does not wake up from standby mode. Turn the monitor off and on.

If the fault cannot be rectified, contact our support:
support@optimum-gmbh.de
Phone: +49 721 570 44 95-70, Monday - Friday, 8:30 a.m - 4:00 p.m CET

Troubleshooting

Original operating instructions
– hereinafter also referred to as work instruction –

Please also observe the enclosed operating instructions, which provide you with details on the usage of the device.

Device designation: **Smart Klaus®**

SK-00100 ...

OPTIMUM datamanagement solutions GmbH, Neureuter Straße 37 b, D-76185 Karlsruhe

1 Information

1.1 Liability, warranty, copyright, licensing right

Limitation of liability
If the following information and warnings, including the supplementary operating instructions, are not observed, liability for loss or damage of any kind on the part of OPTIMUM shall be excluded – to the extent permitted by law. This shall also apply, in particular, to material damage and personal injury.

Warranty
The warranty period for products, accessories and services is 24 months.
All product data, specifications, drawings, etc., correspond to the current status on the specified date of creation.
For the purpose of technical progress and product optimisation, details of our modules and accessory components are subject to change at any time without notice.
Despite the great care taken in the preparation of this document, the possibility of misprints, typing errors or transcription errors cannot be excluded. We cannot accept liability for such errors.

Copyright/licensing right
The product and its usage, including the software content, are subject to the valid copyright and licensing right of the manufacturer.

1.2 Brief description of the system

The Smart Klaus® device/system is a base unit for systems for image recognition and is used for the connection of the required image recognition modules (camera, lighting, monitor, etc.), partly with internal drivers and partly with external drivers (depending on further system specifications beyond the Smart Klaus® device).
Details of setting and operation can be obtained from the additionally enclosed operating instructions.

1.3 General information

The system must only be operated for the purposes described in this document.
Modifications, or the use of components other than those described, result in the loss of warranty and the manufacturer shall assume no liability. This shall also apply in cases where unadapted peripheral equipment is used. In cases where modifications are unavoidable, the manufacturer must be consulted.
Further information on commissioning, installation and connection of the machine can be obtained from the operating instructions.

The system does not produce any critical/significant sound emissions (<70 dB(A)).

2 Safety instructions

All persons tasked with system operation are required not only to read, but also to understand this work instruction. The safety instructions are prescribed by law. They serve to ensure occupational health and safety and accident prevention.

The work instruction, in conjunction with the operating instructions, makes safe operation possible and helps in the elimination of possible malfunctions.
The work instruction must be stored near the system and be available to operating personnel at all times.

Safety instructions can be found in these operating instructions at places where there is a particular danger to life and limb. However, these operating instructions are not intended to replace generally applicable safety regulations, e.g. accident prevention regulations.

Meaning of the symbols:

The following safety symbols identify places in the text that warn against hazards and sources of danger. Please familiarise yourself with these symbols.

Caution: Nonobservance of this warning can result in injury or danger to life and limb and/or damage to the device.

Caution, voltage: Dangerous electrical voltage!
Nonobservance of this warning can result in injury or danger to life and limb.

Note: Materials/operating fl uids that must be handled and/or disposed of in compliance with the law.

Note: Appears before explanations or cross references that relate to other text passages in the operating instructions.

Note: Details that require special attention.

2.1 Obligations of the operating company

The safety of the system can only be guaranteed in practical application if all of the measures this requires have been introduced. The duty to care of the operating company of the system means that it is responsible for planning these measures and for checking their implementation.
The operating company of the system must ensure that all persons tasked with the installation, operation and maintenance or repair of the system have read and understood the sections of the work instruction relevant to their work from start to end.

The operating company of the system is responsible for the safety.
This applies, in particular, to

- the physical safety of all persons in the vicinity of the system,
- trouble-free operation of the system.

Safety devices must not be rendered ineff ective or deactivated.
OPTIMUM shall not be liable in the event of independent, unauthorized modifications

In their own interest, operating companies are requested to perform a visual inspection of the device once a day. Any possible damage must be eliminated in the correct manner prior to operation.

2.2 General safety instructions

These operating instructions do not substitute generally applicable safety regulations.

The functioning of the safety devices (here, e.g. housings) must be checked during commissioning and maintenance. Under no circumstances should safety devices be deactivated (e.g. through ad justment or overriding). Housings and covers must not be removed during operation.

All mechanical work, such as installation, maintenance and repair, must only be carried out with the equipment de-energised and by a suitably qualifi ed technician or under his/her supervision.

A technician in terms of this work instruction is:

- a person who is familiar with the handling of this device, who has received safety instruction and is thus aware of the associated dangers,
- familiar with the content of the work instruction,
- a person who is trained and authorised to start up and repair such systems.

2.3 Safety instructions for work on electrical systems

All electrical work, such as electrical connection and repair, must only be carried out with the equipment de-energised and by a suitably qualifi ed electrician or under his/her supervision.

For all electrical work, tools with insulation up to the tip must be used (e.g. insulated screwdrivers).

Defective electrical components, as well as defective cables, must be replaced immediately. The system must be shut down until electrical repair is complete. The system must only be started up again after repair.

2.3.1 First aid measures following accidents with electric current

Recognition:

•Muscular cramp as long as exposure to current lasts.
•„Electric marks“: at the points where the current enters and exits the body, burn marks appear
• In certain circumstances, unconsciousness and cardiac arrest are possible

Measures:

- Call the emergency number (in Germany 112)

EMERGENCY CALL:

To provide targeted help, emergency services require the following information:

- **WHERE did the accident happen**
- **WHAT happened**
- **HOW MANY injured persons**
- **WHICH type of injuries, state electrical accident!**
- **WAIT and do not end the telephone call immediately; wait in case the emergency service have further enquiries.**

- Take responsibility for your own safety. Never place your hands into an electric circuit
- Disconnect the electric circuit: actuate the emergency off
- Pull aff ected personnel away from the power source with non-conductive materials (blanket, wooden stick)
- Speak to, calm down and provide comfort to aff ected personnel
- Put on protective gloves
- Cover burn wounds with sterile material
- If the person is unconscious and breathing, call loudly for „Help“ to draw the attention of people nearby to the emergency situation
- Recovery position
- While waiting for the emergency service, calm down, comfort and monitor injured personnel and repeatedly check consciousness and breathing
- In case of unconsciousness and lack of normal breathing, perform cardiopulmonary resuscitation
- In case of high-voltage accidents: rescue only by specialist personnel

3 Transport, assembly, maintenance and troubleshooting

CAUTION! All mechanical work, such as installation, maintenance and repair, must only be carried out with the equipment de-energised and by a suitably qualifi ed technician or under his/her supervision.

3.1 Transport

To transport the system, no special features have to be observed except for the standard specifi cations on load securing and suitable packaging to prevent transport damage.

3.2 Set-up and connection of the system

The customer / operating company of the system must ensure that the connection is safeguarded by a residual current device (RCD).

3.3 Maintenance instructions

Prior to operation of the device, a visual inspection must always be carried out. Defi ciencies or visible irregularities
must be eliminated in the correct manner before the device is used. Trigger safety devices, e.g. residualcurrent circuit breakers, every working day for testing purposes. All checks must be carried out every day.

The manufacturer recommends that a system logbook should be maintained. This permits the easier identifi cation of recurring faults and malfunctions.

To keep the device safe and ready for operation, it is also necessary to carry out an inspection semi-annually.

Prior to carrying out work on the system, it is essential to read and understand chapter 2 „Safety instructions“.

The information in the individual operating instructions of the manufacturers must be observed; see operating instructions.

The work must be performed exclusively by qualifi ed personnel or under the supervision of a qualifi ed person.

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