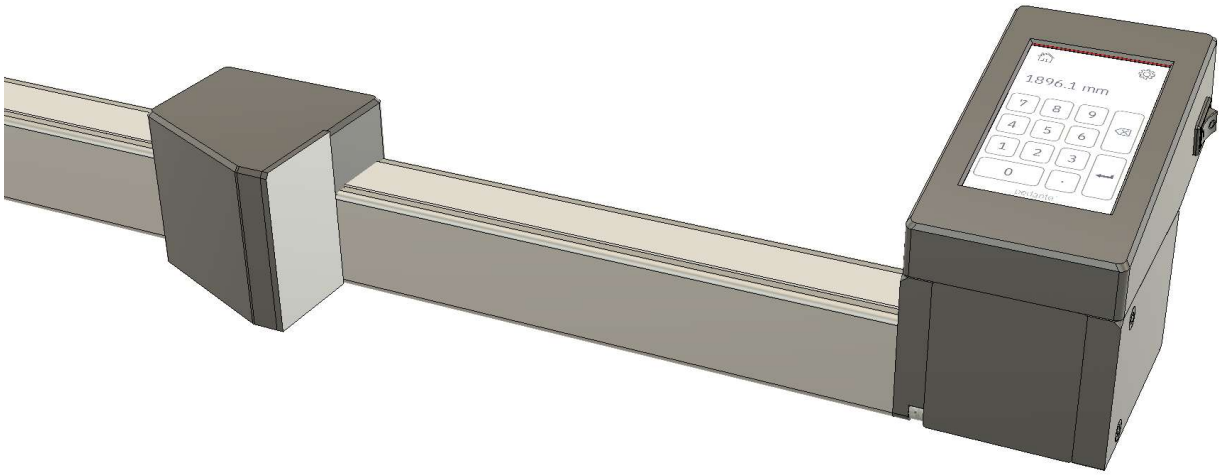
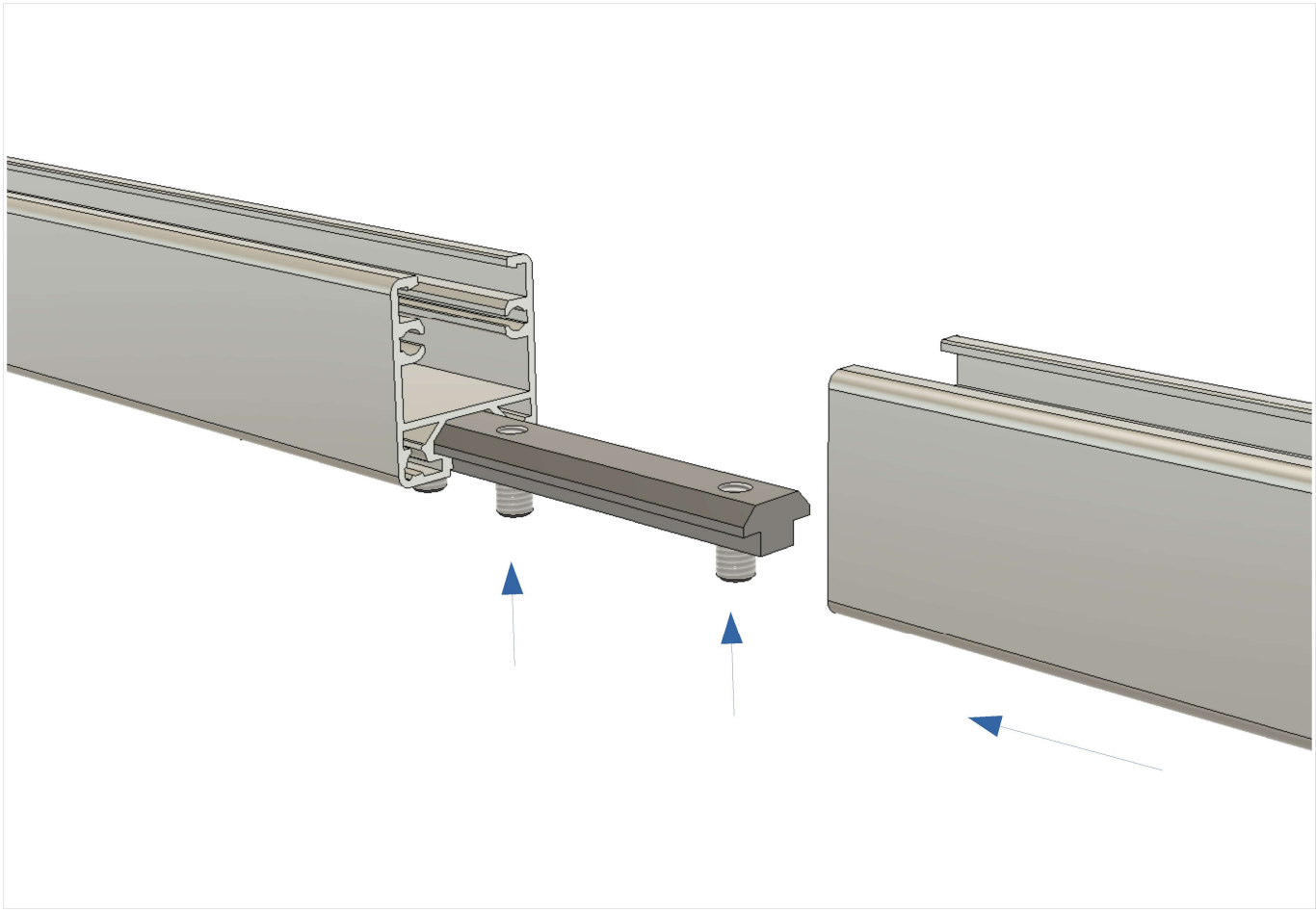
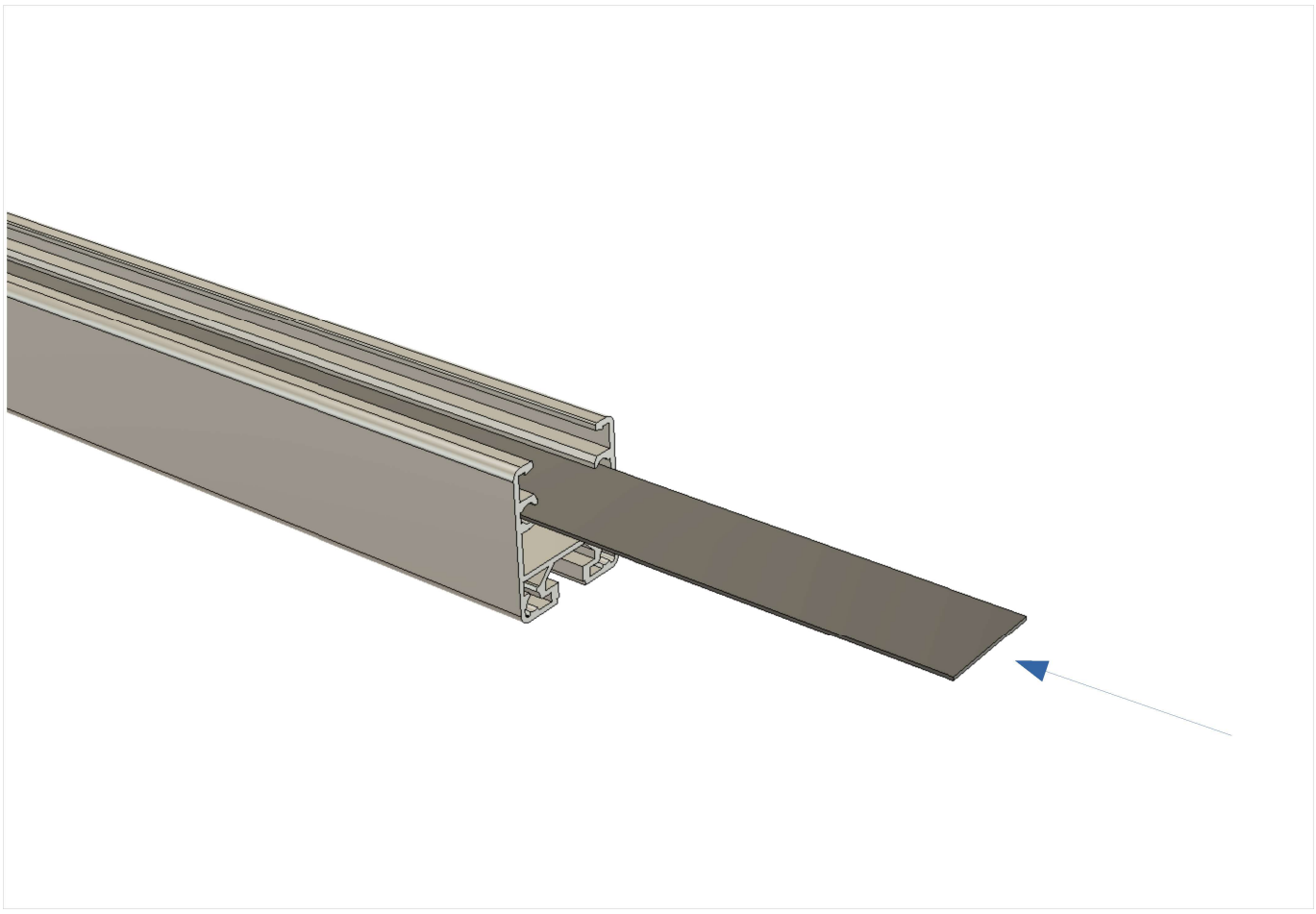
pedante.1

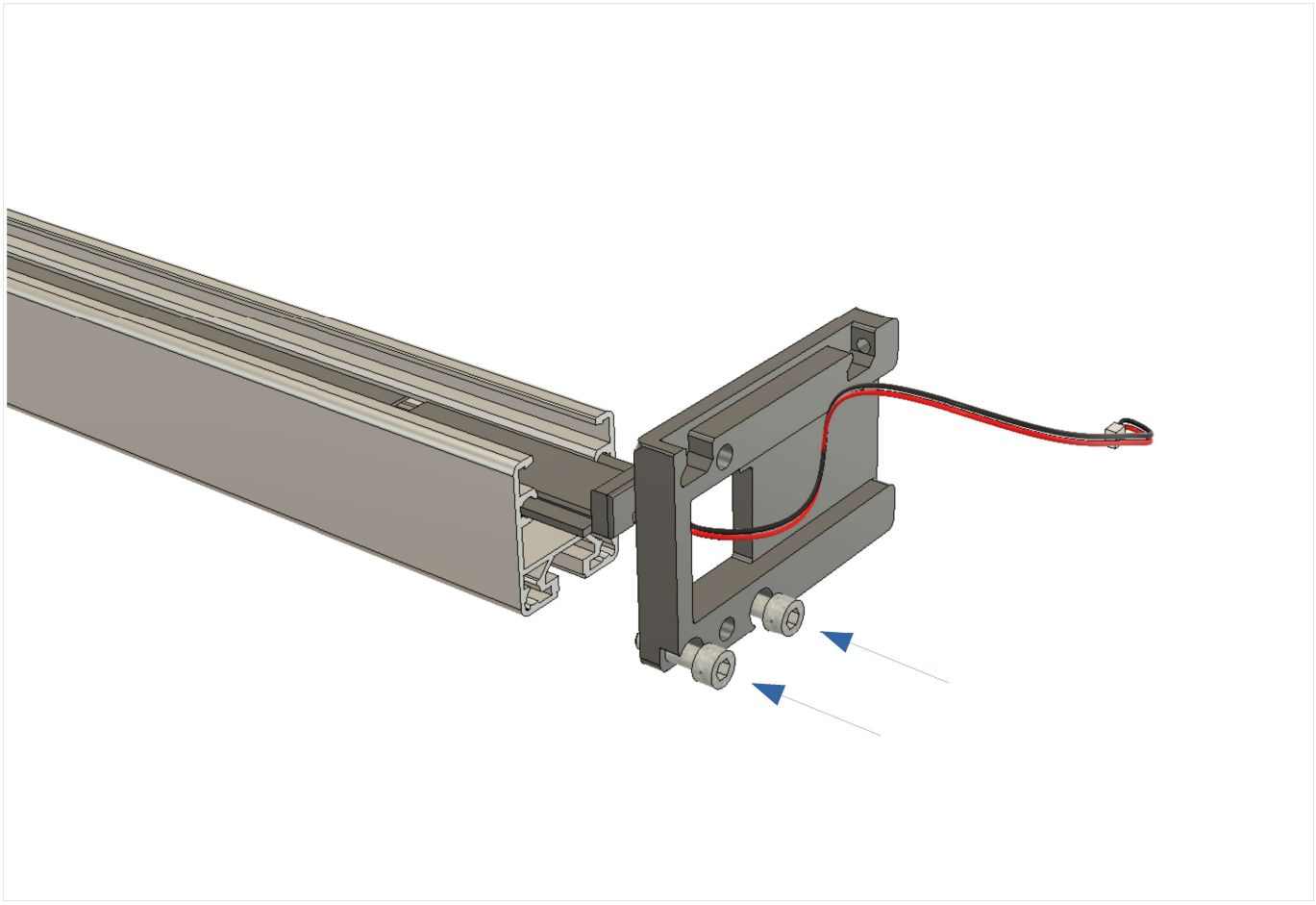
automated length stop

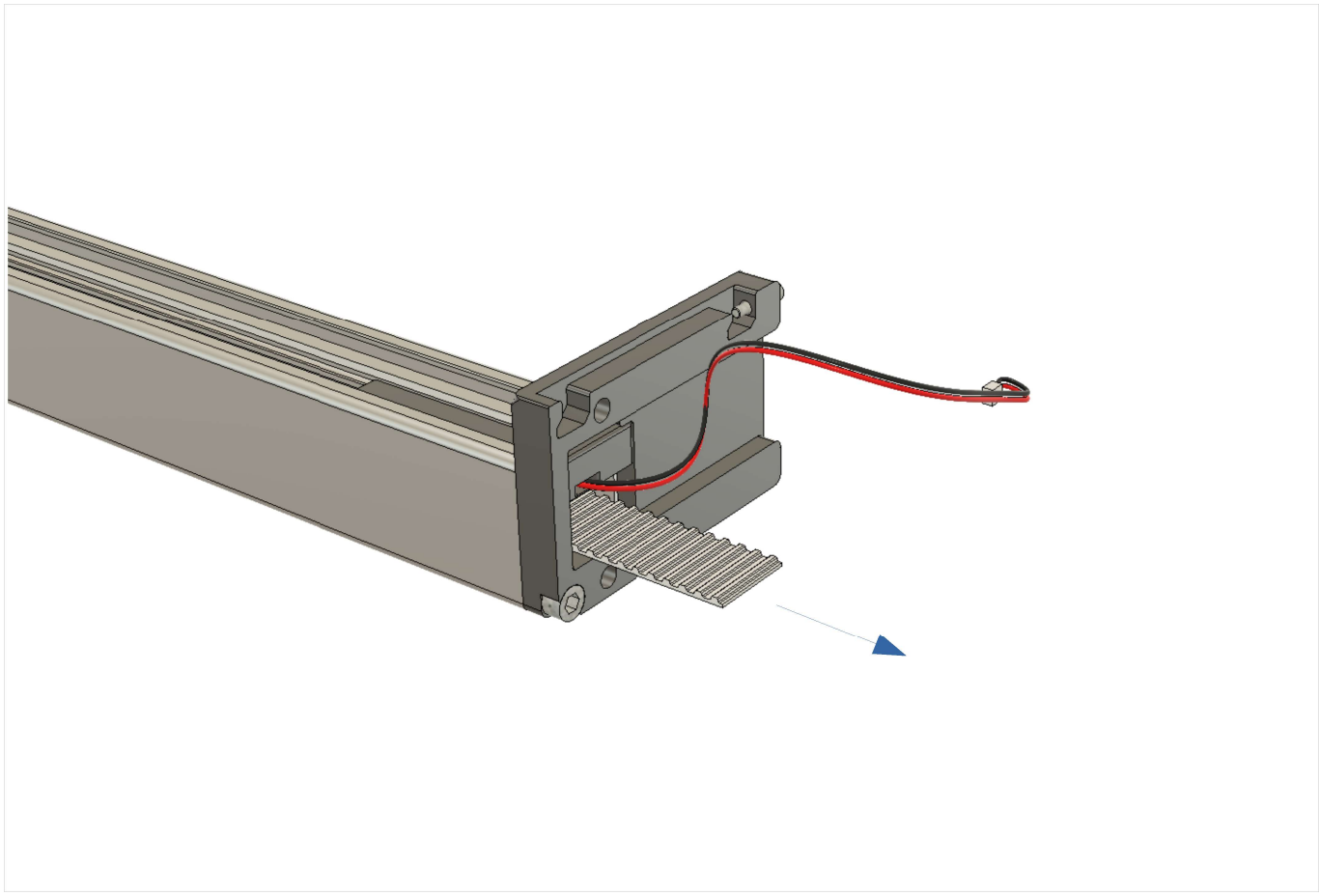
models:
LS – 24 – L, LS – 24 – R
LS – 36 – L, LS – 36 - R

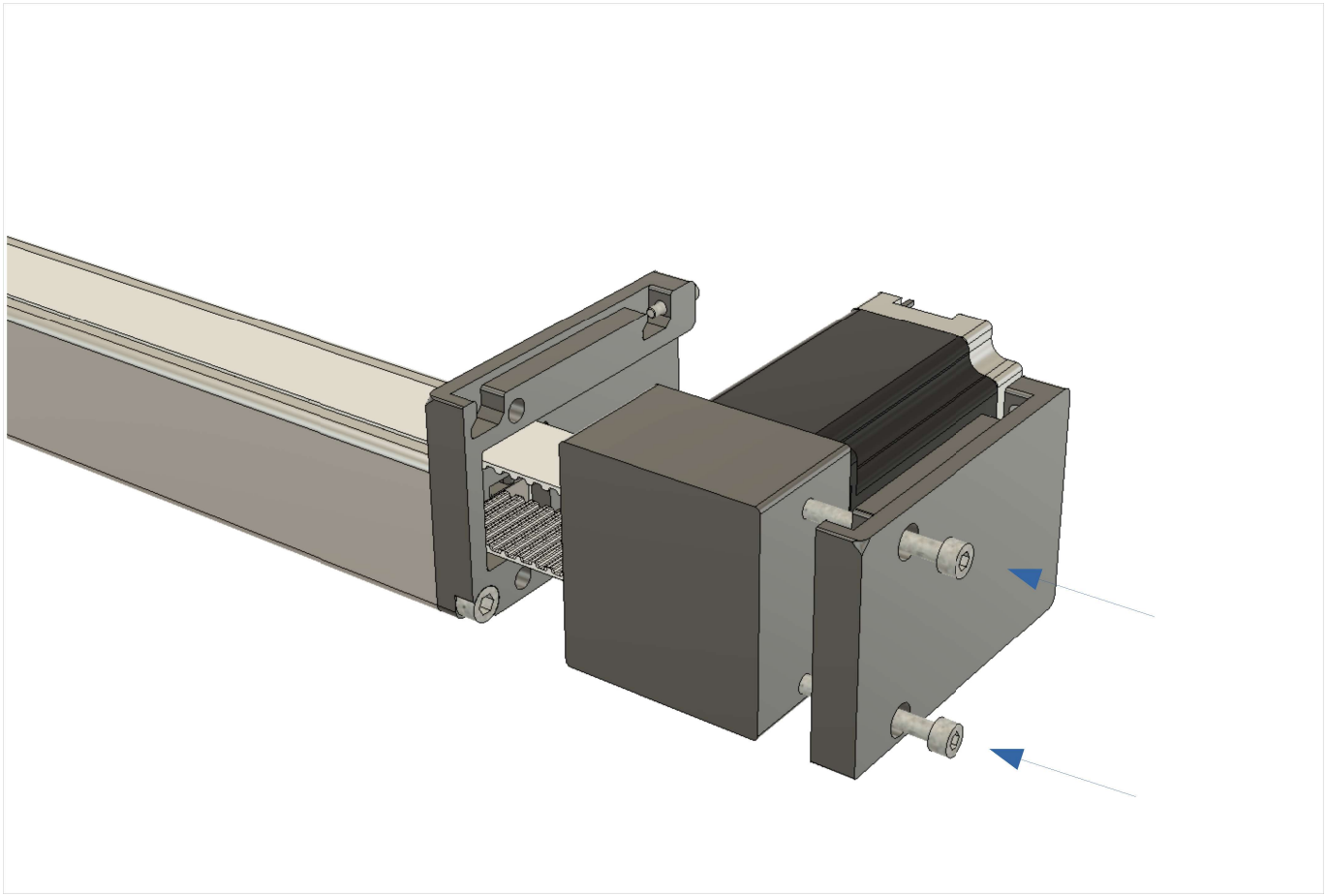


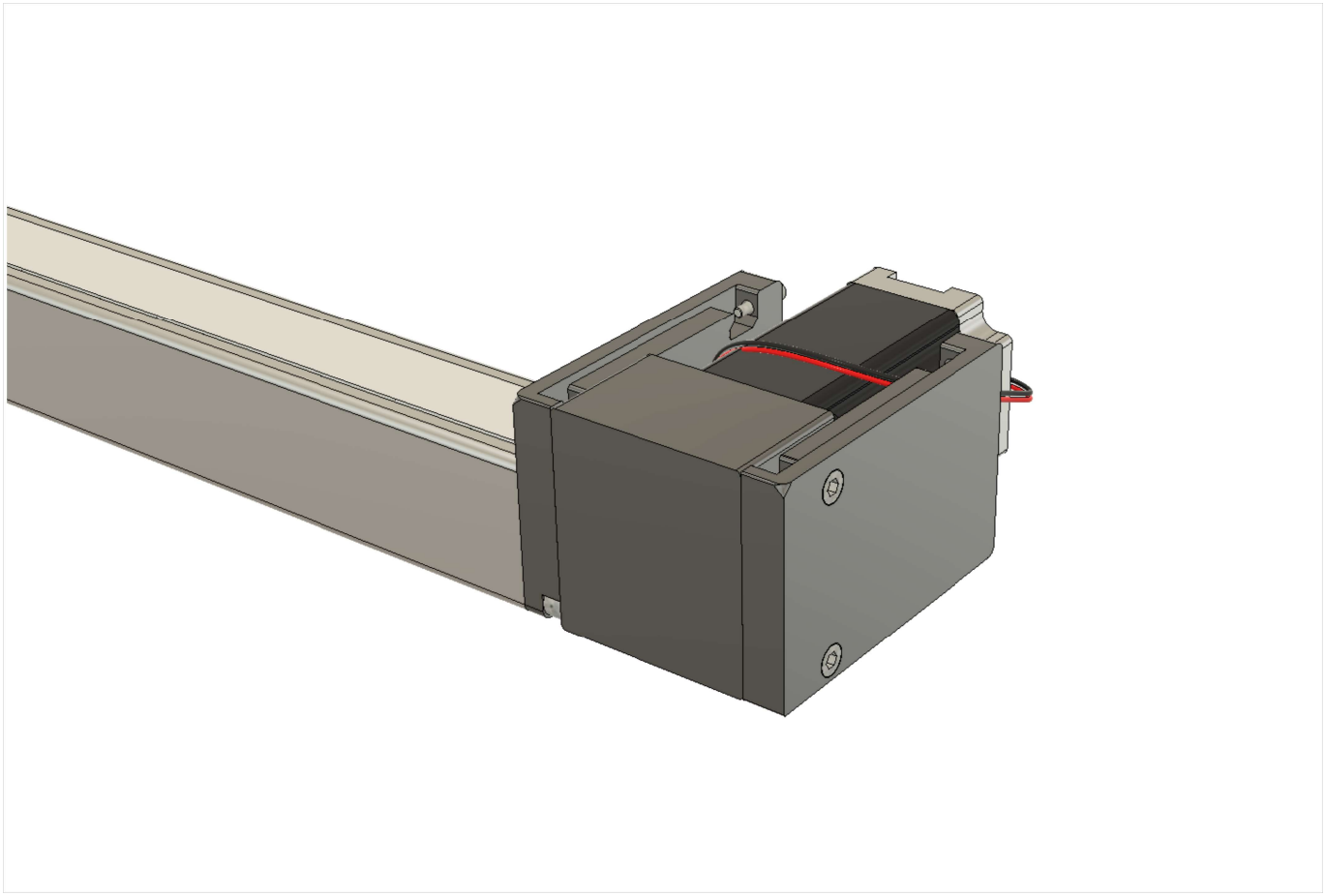


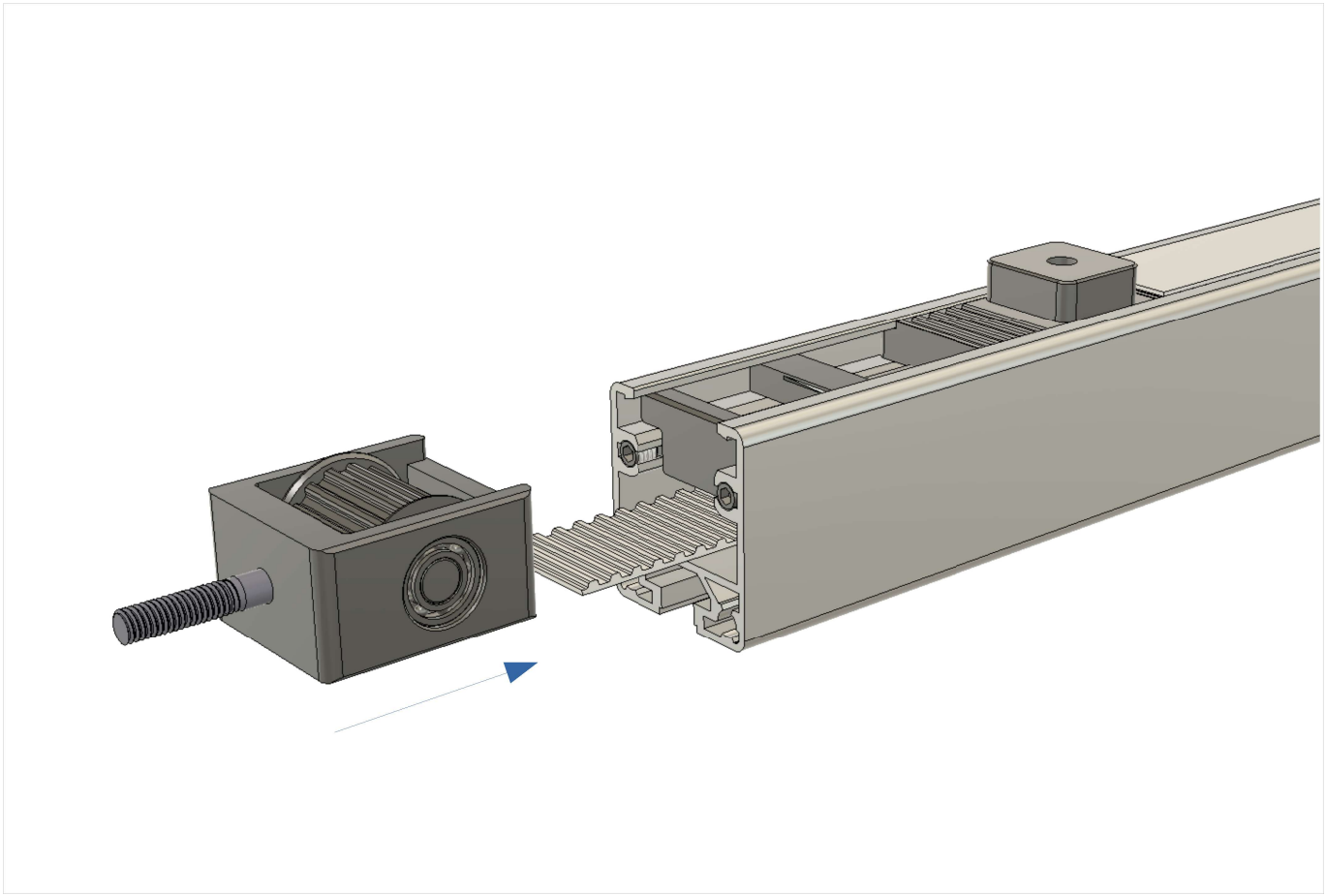


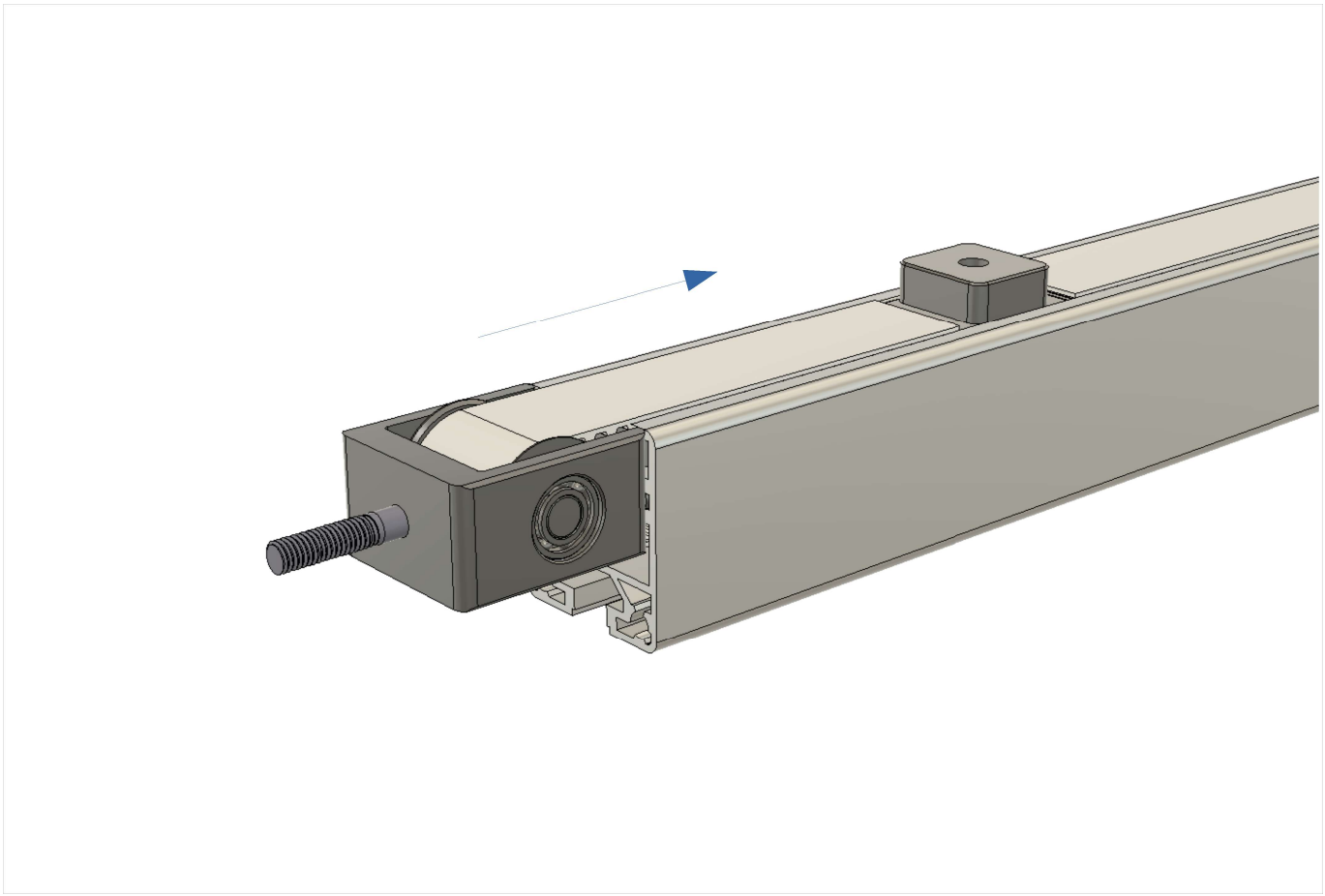


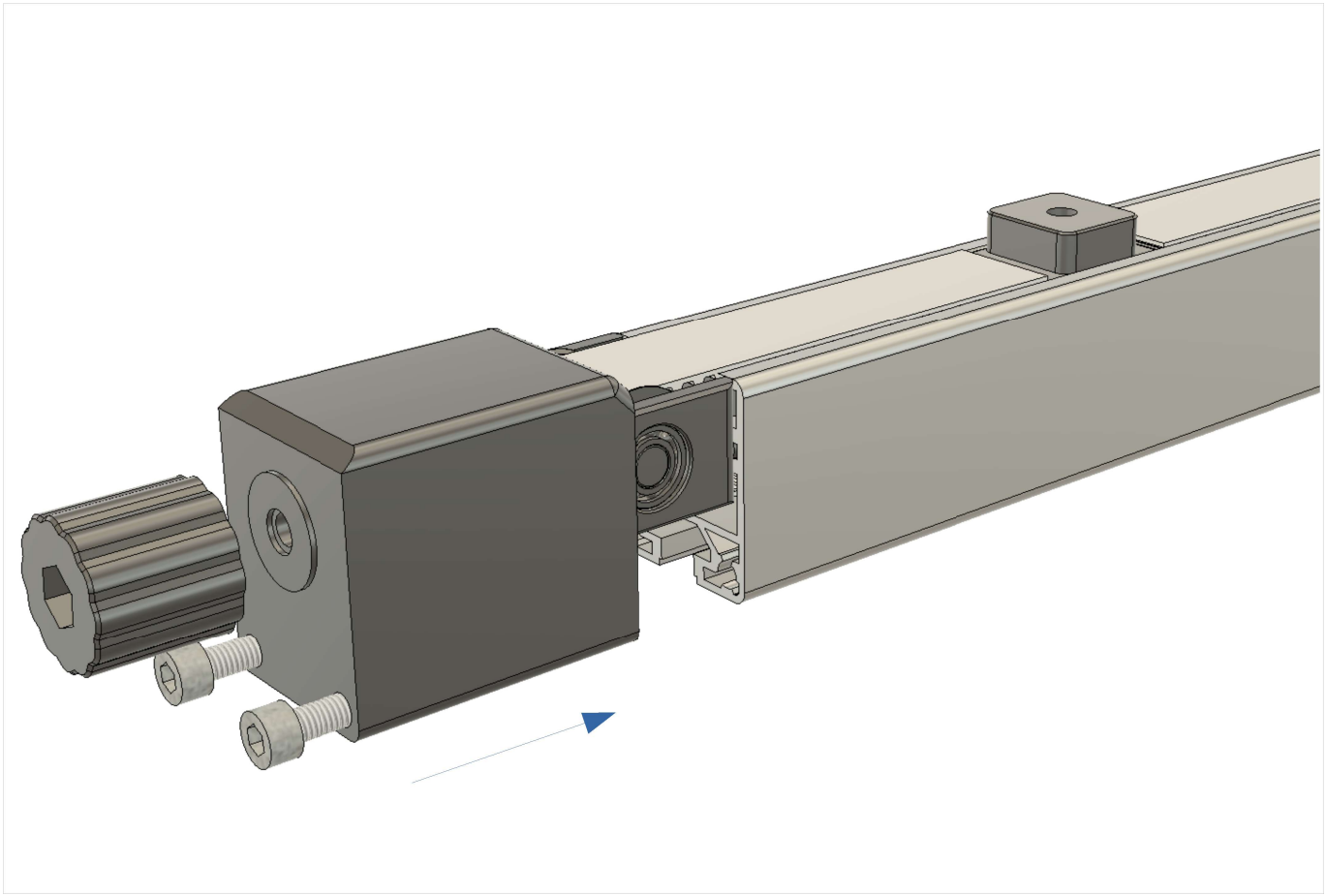


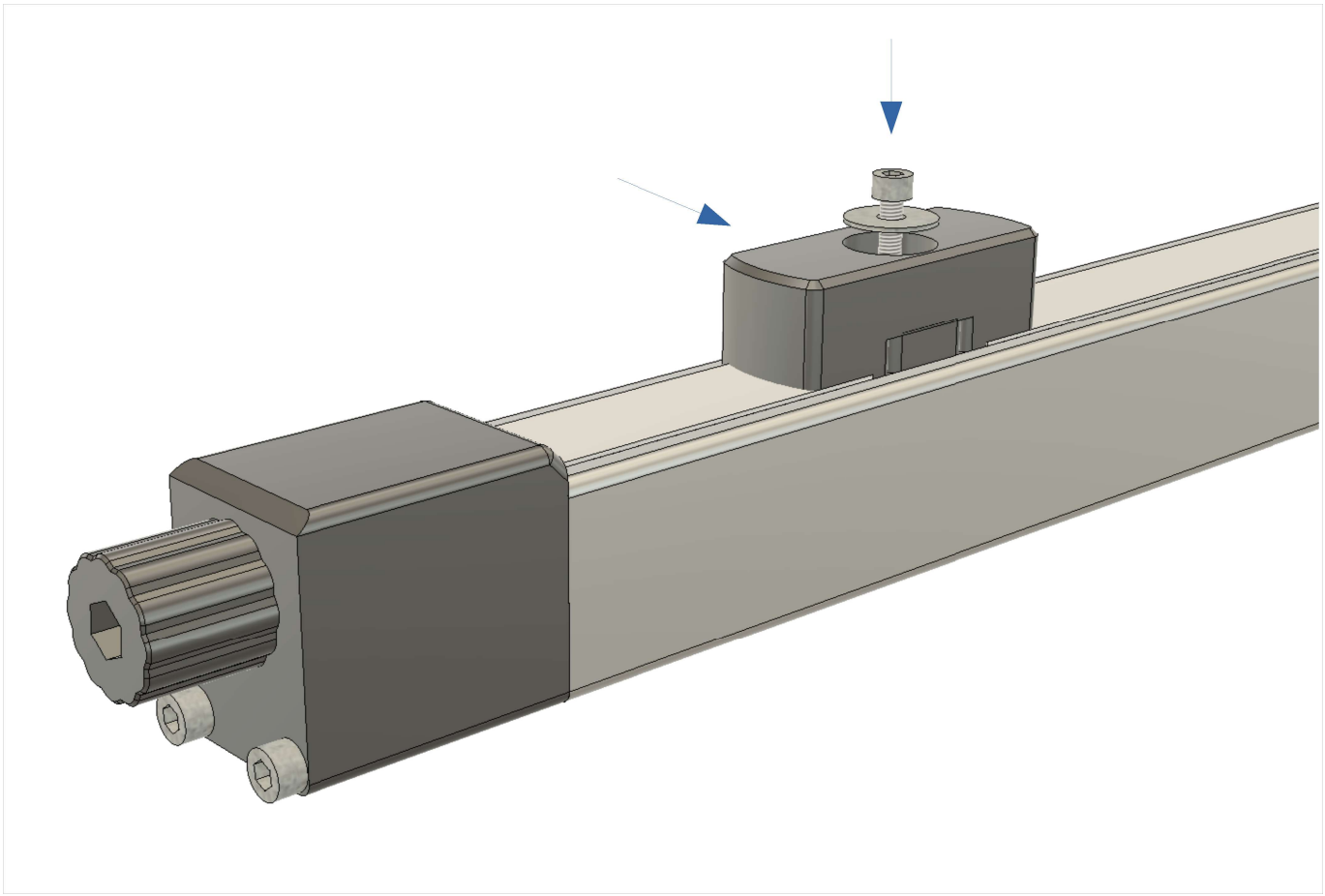


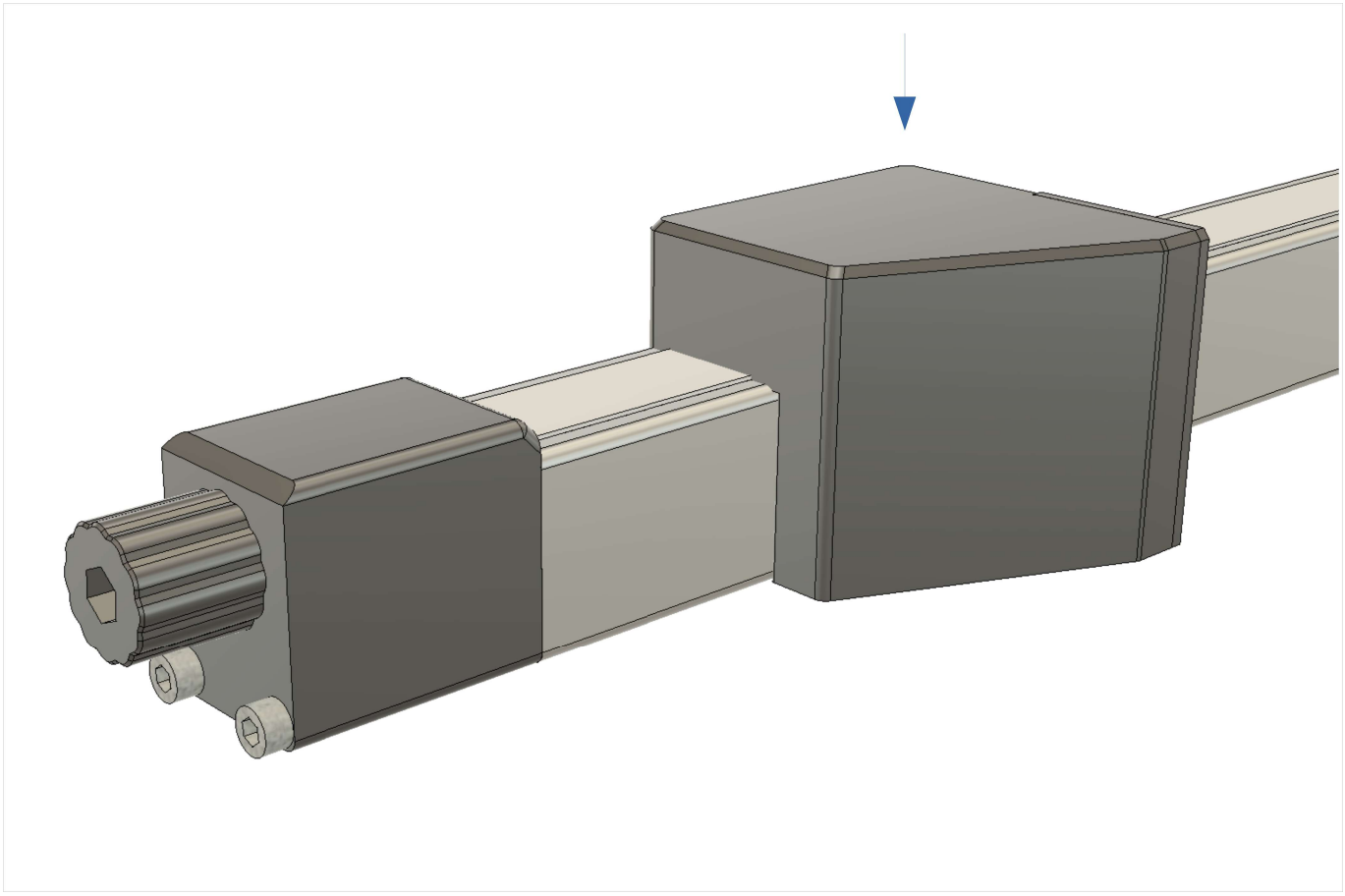


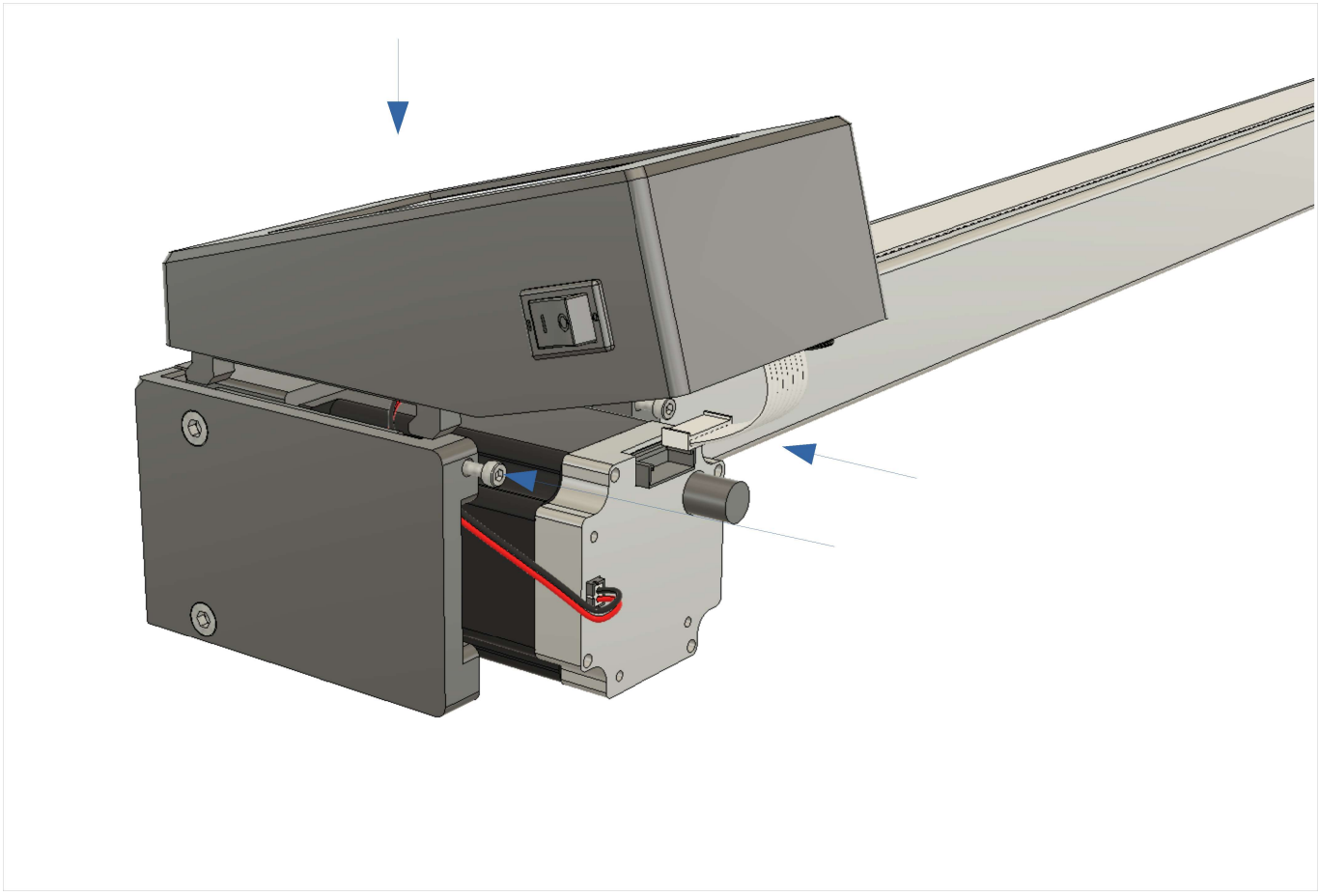












Please Read Safety Instructions and Usage Guidelines

Failure to follow safety instructions and guidelines can result in fire, electrical shock, or serious injury.
Please pay attention to the images at the beginning of the user manual.

General warnings

- **Keep Body Parts Away During Operation**

  Maintain a safe distance from the equipment while it is in motion to avoid the risk of entrapment. There is a risk of pinching or crushing injuries.

- **Electrical Safety:** Ensure that the equipment is connected to the correct voltage and that all electrical connections are secure and compliant with safety standards.
- **Avoid Overloading:** Do not exceed the specified load capacity of the equipment to prevent damage or malfunction.
- **Keep Dry:** Avoid exposing the equipment to water or moisture to prevent electrical hazards.
- **Proper Use:** Use the equipment only for its intended purpose and in accordance with the manufacturer's guidelines.
- **Regular Maintenance:** Perform regular maintenance and inspections to ensure the equipment operates correctly and safely.
- **Emergency Procedures:** Familiarize yourself with emergency stop procedures and ensure that they are easily accessible during operation.
- **Protective Gear:** Wear appropriate personal protective equipment (PPE) as required for the specific tasks being performed.

➔ **Do not use the automatic stop for pushing materials.**

➔ **Continuous pressure on the stop block may cause the equipment to overheat.**

➔ **A strong magnetic field near the equipment can cause operational disturbances.**

➔ **Do not compress, bend, or otherwise mechanically damage any parts of the equipment, including the aluminum profile.**

➔ **Avoid mechanical impacts on the stop block.**

Equipment Description

- The automatic length stop is an electronically controlled device designed as an auxiliary tool for material cutting or drilling operations.
- The equipment consists of an aluminum profile and a carriage that moves along the profile, on which the stop block is mounted. The carriage is driven by a stepper motor and a timing belt.
- The control unit includes a touchscreen and stepper motor control with an integrated microcontroller. The control unit requires an external power supply of DC 24V 3.0A, with a 2.1/5.5 mm socket.

Technical Data

Models		**LS - 24 - L** **LS - 24 - R**	**LS - 36 – L** **LS - 36 - R**
Voltage		DC 24 V	
Max current	A	3.0	
Power	W	72	
Working range	mm	2200	3380
Total length	mm	2527	3707
Accuracy		± 0.2 mm	
Weight	kg	5.3	7.1
Electrical protection class		 / III	

Installation:

- There is a groove at the bottom of the aluminum profile where an M8 bolt or a nut designed for the B10 groove type can be inserted.
- The profile is secured to the table or roller table using bolts.
- The automatic length stop is installed so that the control unit is positioned closer to the reference point (saw blade, drill, etc.).
- After installation, the equipment is connected to an external DC 24V power supply.

Preparation and Setup

Control is managed via a touchscreen. To turn the equipment on or off, there is a mechanical switch located on the side of the control unit's casing.

Daily Positioning (Homing)

Daily positioning is a necessary step to ensure the accuracy of the equipment. Upon starting, the equipment automatically finds a known reference point (end switch) from which to take measurements. This procedure should be repeated each time the equipment is turned on.

1. **Turn On the Equipment:**
    - After turning on the equipment, a button with a home symbol will appear on the screen.
2. **Press the Button:**
    - Press the button with the home symbol. A short beep will sound, and the carriage will start moving towards the control unit.
3. **End Switch Activation:**
    - The end switch, a reed switch, is located near the control unit. A magnet mounted in the carriage will activate the switch.
4. **Braking:**
    - After the switch is activated (ON), the carriage will start braking, then move 20 mm in the opposite direction, change direction again, and slowly move towards the control unit until the end switch is reactivated.
5. **Completion of the Process:**
    - When the end switch is reactivated, a long beep will sound, and the main screen with control buttons and the current position of the stop block (carriage) will appear on the display.

Calibration (Initial Position Setting)

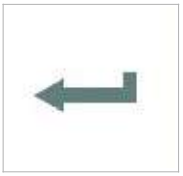
After installing the equipment or making any changes that affect the physical distance between the stop block and the reference zero point (saw blade, drill bit, etc.), calibration is required.

Calibration Process:

1. **Measure the Actual Distance:**
    - Measure the distance between the stop block and the reference point (saw blade, drill bit, etc.).
    - Alternatively, you can cut a workpiece and measure the actual size.
2. **Enter the Measurement:**
    - Enter the obtained measurement on the screen.
3. **Perform Calibration:**
    - Press and hold the calibration button (gear icon) for 4 seconds.
    - A long beep will indicate that the calibration has been successfully completed.

Operation

Entering the Measurement:



- Use the buttons on the screen to enter the required measurement. The measurement can be entered with an accuracy of up to one-tenth of a millimeter.
- You can correct the entered measurement and confirm the final result by pressing the Enter button.
- If you enter a position that exceeds the allowable operating range, a message will appear on the screen indicating the range limits >minPosition-maxPosition<.

Movement:

- After pressing the Enter button, the carriage will move to the entered position.
- The movement can be stopped using the emergency button on the screen or by turning off the equipment.

Direction Change:

- If the set position is away from the control unit, the carriage will move 20 mm beyond the required position and then change direction towards the control unit, stopping at the set position.
- This is necessary to reduce the effect of mechanical backlash on positioning accuracy.

Smart Position Guard:

- The equipment is equipped with a high-resolution encoder that continuously monitors the position. If the position deviates by more than 0.1 mm, a signal is immediately given to restore the position.

Emergency Stop

Emergency Button:

- When the carriage is in motion, an image of a red emergency button with the text "emergency stop" on a yellow background appears on the screen.

Motor Shutdown:

- Touching anywhere on the screen deactivates the motor, and the movement is immediately stopped.

Emergency Notification:

- The screen displays the message "ALARM!! Motor stopped," and short beeps sound.

Restarting the Equipment:

- To return to normal operation, turn the equipment off and then on again.

This emergency stop function ensures that the equipment can be quickly and safely halted in any situation.

Maintenance

Regular maintenance is required to keep the equipment functioning properly, especially to clean out the dust and shavings that accumulate under the timing belt.

Maintenance Process:

1. **Disconnect the power supply.**
2. **Detach the timing belt:**
   - Loosen the belt using the tensioning knob.
   - Remove the stop block by pulling upwards.
   - Unscrew the belt clamp and release the belt ends.
3. **Clean the dust compartment using a vacuum cleaner.**
4. **After maintenance:**
   - Secure and tension the timing belt.
   - Check and calibrate the equipment if necessary.

Possible Malfunctions

- The equipment is equipped with overload protection.
- In case of an overload, if the carriage movement is obstructed or blocked, a noise will be heard from the motor.
- If the motor attempts to move and encounters resistance that exceeds a certain limit, a microstep is skipped, causing a sound.
- If such situations occur, identify what is causing the resistance to the free movement of the carriage. This could be due to external obstructions or an issue within the equipment itself.

General Power Tool Safety Warnings

WARNING

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

Work area safety

- **Keep work area clean and well lit. Cluttered or dark areas invite accidents.**
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

- **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.

- **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock..
- **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

Personal safety

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

Power tool use and care

- **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

Service

- **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

Customer service

The customer service team will assist you with questions regarding product repair and maintenance, as well as spare parts. Additional information about operation and spare parts can be found on our website:

www.pedante.eu

When requesting consultations or ordering spare parts, please provide the product serial number, which is indicated on the product's nameplate.

Pedante SIA
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Tel.: + 371 22845678
E-mail: info@pedante.eu

Disposal of Used Electrical Tools

Electrical tools, their accessories, and packaging materials should be disposed of through recycling in an environmentally friendly manner.

Do not discard electrical tools in household waste bins!

Only for EU countries.

According to the European Directive 2012/19/EU on Waste Electrical and Electronic Equipment and its implementation into national law, chargers that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

If disposed incorrectly, waste electrical and electronic equipment may have harmful effects on the environment and human health, due to the potential presence of hazardous substances.