

# Glaskasten GK and GKN Model Train Display case

## User manual



## Introduction

Glaskasten display cases are modular wall-mounted display cabinets for model trains.

This manual contains important information for installation, use and maintenance of your Glaskasten display case.

Please read the entire manual before installation.

## Versions

This manual covers the following versions:

- GK Model train display cases with 8 shelves for H0, H0m, H0e and TT models (Basic and Pro version)
- GKN Model train display cases with 11 shelves for N, TT and Z gauges.

Both single display cases, as well as wall cabinets that consist of several modules beside and/or above each other are covered.

### **GK display cases**

Shelf spacing is suited for H0 models, with integrated “catenary” at the correct height to hold the pantograph in the right orientation.

- H0/OO models will fit without track, because the groove in each shelf has exactly the right width.
- For TT or H0m/OO12 models, the outside of the wheels fit exactly in the groove.
- This display case is also suitable for H0e, because N track can be placed into the grooves.

### **GKN display cases**

Shelf spacing is suited for 1:160 (N), 1:120 (TT) or 1:220 (Z) scale models, with enough height to extend pantographs.

The GKN display case can be supplied with 9mm N gauge track. If you did not order your GKN display case with track, you can fit your own track, the outside width of the sleepers must not exceed 16.5 mm.

## Unpacking

Depending on the destination, Glaskasten display cases are either shipped in a sturdy box, or in a wooden crate on a pallet. If the display cabinet consists of multiple modules, a label on the back of the module, or on the box, indicates which module it is.

If the display case was delivered on a pallet, remove the 6 screws from the top and 8 screws from the side of the crate, then the lid can be removed from the crate.

Check before assembly if the product is complete and undamaged. If anything is missing or damaged, please contact Glaskasten ([info@glaskasten.de](mailto:info@glaskasten.de)).

## Warranty

Glaskasten offers a 3 year warranty on all its display cabinets. The warranty conditions are:

- All production defects will either be rectified by Glaskasten, or replacement parts will be sent free of charge.
- All production defects will either be rectified by Glaskasten, or replacement parts will be sent free of charge.
- This warranty is only valid if the installation, use and maintenance instructions in this manual have been adhered to.
- Glaskasten cannot guarantee that the included wall mounting materials are suitable for all wall types. Check with an expert in case of any doubt, e.g. in case of drywall (plasterboard).
- Exempt from warranty is damage that is the result of:
  - not following the installation instructions in this manual;
  - not using the display cabinet for its intended purpose;
  - not mounting the cabinet to a wall or other suitable background;
  - incorrectly mounting the cabinet, or mounting it to a background that is not suitable, always involve an expert in case of any doubt;
  - overloading the display case, see the specifications for the maximum load;;
  - connecting any other electric appliance to the AC output of a display cabinet module;
  - cleaning with agents that are not suitable, contact Glaskasten in case of any doubt ([info@glaskasten.de](mailto:info@glaskasten.de));
  - exposing the cabinet to sustained direct sunlight;
  - exposing the cabinet to chemicals that may affect the materials of the display cabinet;
  - mounting or storing the display cabinet in a humid environment;
  - mounting or storing the display cabinet outdoors.

## About tempered glass

Glaskasten display cabinets are fitted with tempered glass, also called toughened glass. This is a very scratch resistant and durable material, which is safe for use inside your home. If tempered glass would ever break, it does not produce sharp shards, but small fragments.

Very rarely toughened glass spontaneously breaks shortly after production. It is very unlikely that this would happen after the cabinet is assembled and shipped, but if it should happen, please contact Glaskasten ([info@glaskasten.de](mailto:info@glaskasten.de)) and you will receive a replacement pane asap.

## Important information

In order to get the most out of your Glaskasten display cabinet, please observe the following:

- Place the display cabinet at a suitable location in your home, mounted to a solid background.
- It is important for your own safety and that of your models to use the included mounting brackets. Do not place the cabinet anywhere without fixing it, as it may fall over, especially when opening the doors.
- Don't get any fingers jammed between the doors, especially when children can reach the cabinet.
- Do not mount the cabinet in direct sunlight. This may lead to discolouration of the cabinet itself and models inside the cabinet. Your models also look better with indirect light.
- Make sure the display cabinet is not exposed to high humidity or low temperatures where condensation could occur. This may harm the cabinet, but more importantly your models.
- The doors can open up to 105°. Do not force the doors open any further and don't let the doors open any longer than necessary. This will reduce the risk of someone accidentally walking into them.
- For display cabinets with lighting: Don't leave the cabinet lights on unnecessarily when nobody is in the room. This will save energy and increase LED life. The lights can simply be switched off using the switch at the bottom right hand side of the display case (Pro version), or by unplugging the power adapter (Basic version).

## Installation (also see online videos)

We recommend to install the cabinet with 2 people. The following tools are necessary for installation:

- (Hammer) drill (depends on wall type)
- Spirit level, pencil
- Philips screwdriver
- Allen keys 3 and 4 mm (included)

If you are not comfortable with the above tools, ask someone with experience to help you.

### For display cabinets that consist of multiple modules

In case of cabinets that consist of multiple modules, the label on the box or on the back of the module indicates which module it is. In that case, note the extra instructions in this manual that are indicated as follows:

*Modules beside each other:*

- GK2:** In case you have a GK or GKN 1,5 to 4 (i.e. multiple modules side-by-side), you must also follow these instructions.

*Modules above each other:*

- GK1x2:** In case you have a GK or GKN 1x2, 1,5x2 or 2x2 (i.e. 2 rows of modules above each other), you must also follow these instructions.

### Preparation of the modules

Before hanging each module, you need to attach some parts from the accessory box:

1. Stick an adhesive bumper on the back at each corner, as indicated by 4 circles on Fig 1.
2. Stick a cable clip at the back in 2 places, as indicated by the 2 squares on fig 1. This is not necessary on the left module. If the left module is a half module, the separately supplied cable in the module next to it is now clipped in and the connector connected (figs 13-2 & 15a).

- GK1x2:** Mount a metal tab at the top of each lower module, behind which the module above it later hooks.

### Mounting standard wall brackets

Select the display cabinet location, taking into account:

- that the wall is suitable for mounting the cabinet, get expert advice in case of any doubt;
- that there is no water, power, heating or other wiring or piping in the wall;
- that there is no direct sunlight on the display cabinet;
- that the humidity in the room is not too high.

We recommend to keep the top of the cabinet between 170 and 200 cm above floor level (fig. 2).

- GK1x2:** In case two modules are mounted above each other, 200 - 220 cm would be better (fig. 3).

1. Use figure 5 to determine the location of the holes and mark these on the wall using a spirit level. Dimension \* depends on the height adjustment system and is approximately 140 mm.

- GK1x2:** Use figure 3 for the vertical dimensions when mounting two rows of modules above each other.

2. Drill holes in the wall at the marked spots, four holes per module:
  - In case of a solid timber wall of sufficient thickness: use a  $\varnothing 3$ mm drill bit.
  - In case of a brick, stone or concrete wall: use a suitable drill bit of  $\varnothing 8$ mm and drill at least 60mm deep. Insert the 4 wall plugs.
3. Use the 4 screws to fix the brackets to the wall in the correct orientation (fig. 6).
4. Remove all dust from the area after the dust has settled.

## Drywall wall mounting rail

The optional drywall mounting rail replaces the aforementioned mounting brackets. It has several holes to use more screws: at least 1 screw at the location of each post in the wall + at least 1 screw with plasterboard plug at both ends of the rail. Screws and plugs are not included, as type and length depend on the local situation. More screws may be necessary, if in doubt consult an expert, also about the type of screws and plugs.

**NOTE:** To determine the location of the mounting rail, use the two outer holes of the mounting brackets shown in Figures 3 and 5 and move them each 5 mm inwards. The dimension 1000 mm thus becomes 990 mm. The height of the holes is the same.

## Mounting the cabinet to the wall

Now you can mount the display cabinet to the wall:

**GK2 & 1x2:** Note the indication on the boxes or the back of the module, start with the left hand bottom module.

1. First make sure that the adjustment screws are all the way out (counter clockwise), the screws will stick out approximately 2 cm.
2. Then lift the display cabinet with 2 persons and place it over the brackets, starting approximately 1-2 cm above its final position (fig. 7a - 7b - 7c).
3. Use a 4 mm allen key to tighten the adjustment screws clockwise until the cabinet is at the right height and horizontal (fig. 8). Tightening these screws also locks the cabinet, so that it cannot be lifted from its brackets, so make sure these are always done up at least 5 turns, even if the height appears to be ok.

**GK2:** Make sure the modules are not just level, but also at the same height.

4. Finally tighten the second adjustment screw to pull the cabinet towards the wall (fig. 9)

**GK1x2:** Hang the top module(s) in the same way and adjust their height to a gap of about 5mm between the top and bottom module(s).

**GK2:** Clip the cords of each module behind the cable clips of the module to its right and insert the plugs into the corresponding connector (fig. 13 & 15b). In case of a half module, you have already hung the cable behind the module next to it so you only need to insert the plug.

**GK1x2:** Insert the plug(s) of the bottom module(s) into the socket(s) of the top module(s) (fig. 14).

5. Plug in the AC lead and check if the light functions correctly (fig. 15f & 15e).

## Mounting the doors

Once the cabinet is fixed firmly to the wall, the doors can be installed. Place the doors one by one, making sure that the door with the red Glaskasten Logo goes to the right. It is convenient to do this with 2 people.

1. First fold all hinges outwards into the open position (fig. 10a - 10b).
2. Now hold the door in place and hook the hinges into the glass-mounted seats one by one (fig. 10c - 10d).
3. Lock both hinges by turning the screws half a turn clockwise (fig. 10e). Don't let go of the door until both hinges are locked.
4. Close the doors.

**GK1x2:** Make sure the depth adjustment of the hinges are correct. This is the rear screw (see section "Door adjustment"). This screw will not be accessible later. Then remove the doors. **NOTE:** This only concerns the hinges of modules that are located between the two modules.

**GK1x2:** Place the separately supplied back panel between the top and bottom modules. It fits in the groove at the back of the shelves. When it is in place, slowly drop the top module (using its height adjustment screws) until the vertical distance between top and bottom modules is about 1 mm.

## Mounting the glass side panels

Use the included materials to mount both glass side panels. Note that each glass panel must be protected by a plastic washer **on both sides** (fig. 11b)!

1. Put a stainless steel collar and plastic protective washer on each screw.
2. Put a stainless steel collar and plastic protective washer on each screw.
3. Carefully manoeuvre the glass panel to its position on the side of the cabinet, making sure plastic washers are held between the cabinet and the glass panel. Then place the screws with collar and washer. **NOTE:** there must be a plastic washer on both sides of the glass (fig. 11b)!
4. Now fasten the screws with a 3 mm allen key. The glass panel allows some movement, so that you can position it at the right height before fastening. Fasten these screws manually, do not use electric tools!

## Door adjustment

The high quality hinges of Glaskasten display cabinets can be adjusted in three directions (fig.12).

**GK1x2:** First mount the glass doors back to their hinges.

1. Use the rear screw (fig. 12a) to move the doors forwards and backwards. It should be correctly positioned in the middle.
2. Set the doors at the right height with the middle screw (fig. 12b), do this for the top and bottom hinges.

- Now use the front screw (fig. 12c) to adjust the doors so that they are horizontal and at the same height, making sure that they do not touch each other or the glass side panels. All clearances should be about equal in width, at about 1 mm.
- Now stick the transparent bumpers to the insides of the doors, so that they touch the front of the top and bottom shelves (fig. 11a). Make sure the glass is cleaned beforehand using a degreasing agent (e.g. cleaning alcohol).

### Installing track in the display case

If you have chosen optional N track for the GKN display case, you can now click them into the groove provided. Each groove contains 2 pieces of track, which together have the correct length.

### Placing trains into the display case

Carefully place the train models, while preventing scratching the shelves.  
For models of electric trains: hold the pantograph down while placing the model and extend it.

### Installation videos

You can watch the Glaskasten installation instruction videos on our Youtube channel.



### Use and maintenance

The light switch of Glaskasten Pro display cases with integrated lighting can be found at the bottom right hand side of the display case (fig. 15e). If the display case is fitted with a dimmer, the knob is found next to the switch (fig. 15d). Open and close the doors by lightly holding them at the top or bottom, this will reduce the chance of stains on the glass. Keep the doors closed to prevent dust from entering the cabinet.  
Some time after installation it is possible that the door hinges need slight adjustment. See instructions in the installation section.

### Cleaning

Other than cleaning, the display case does not need maintenance. Only use neutral cleaning agents, no aggressive cleaners, acids or solvents.  
We recommend only cleaning the metal parts with a dry cloth, or in case of stains a damp cloth. A glass cleaner may be used for the glass parts, but avoid spraying, as the spray may touch the models. It is advised to spray onto a cloth first and use the cloth for cleaning.

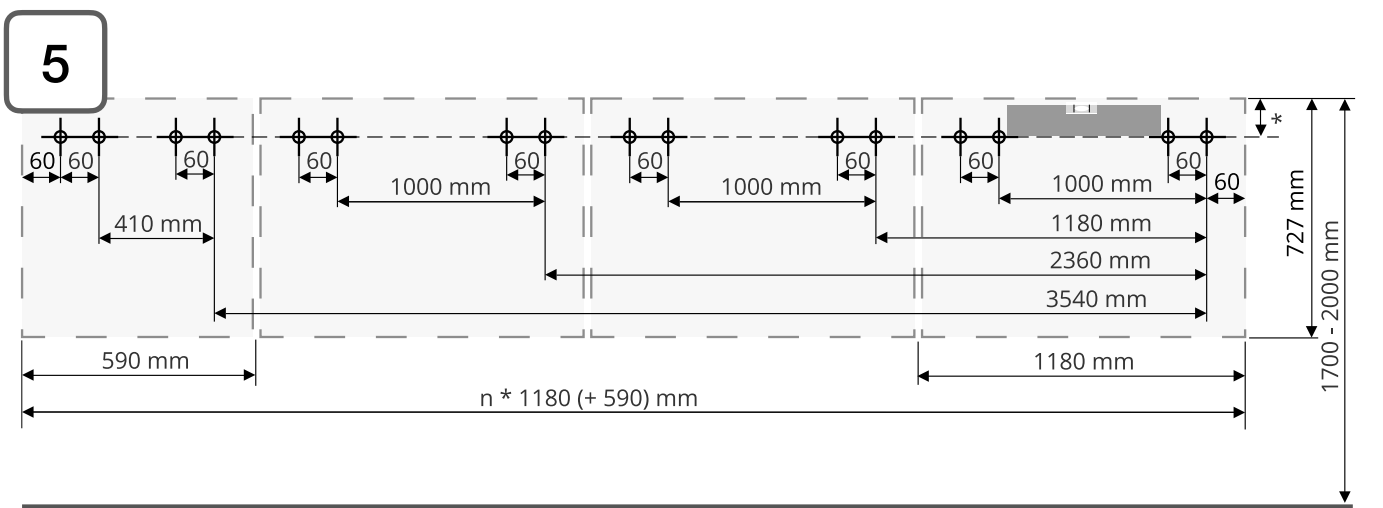
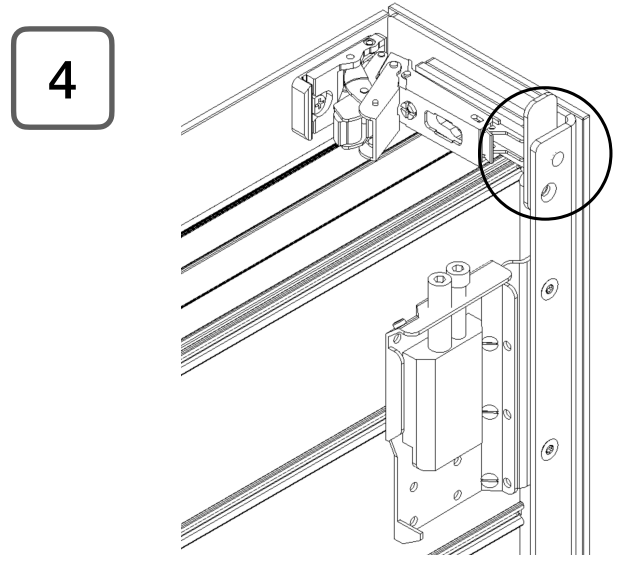
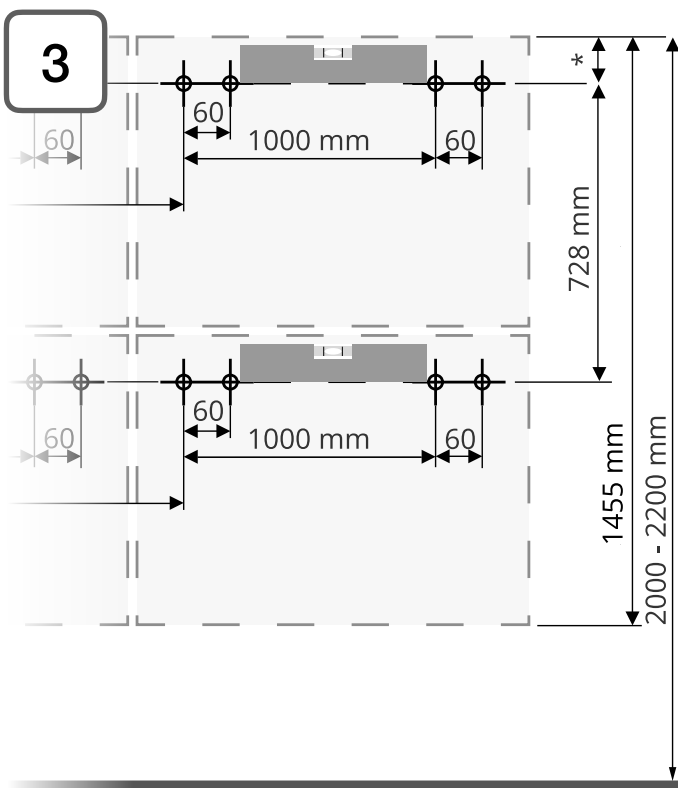
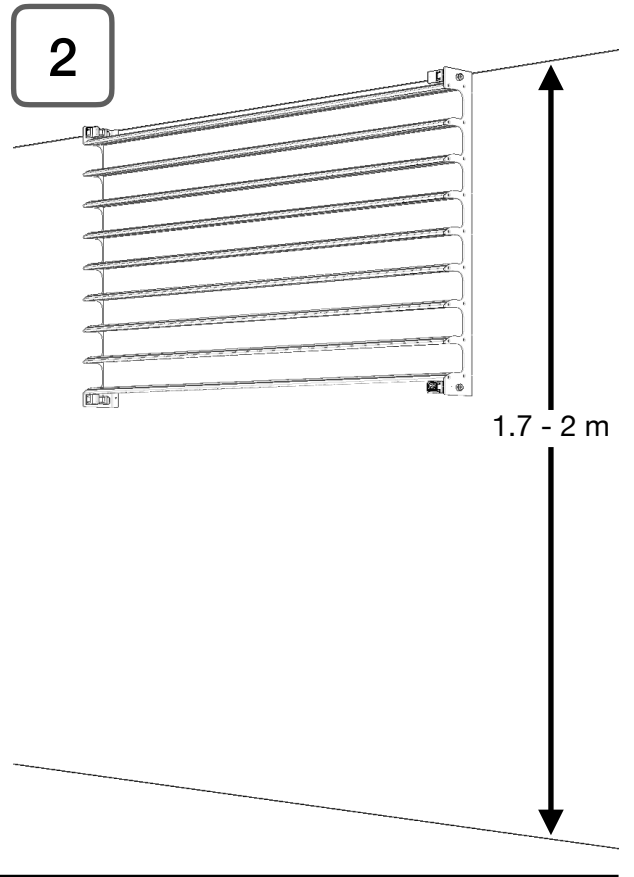
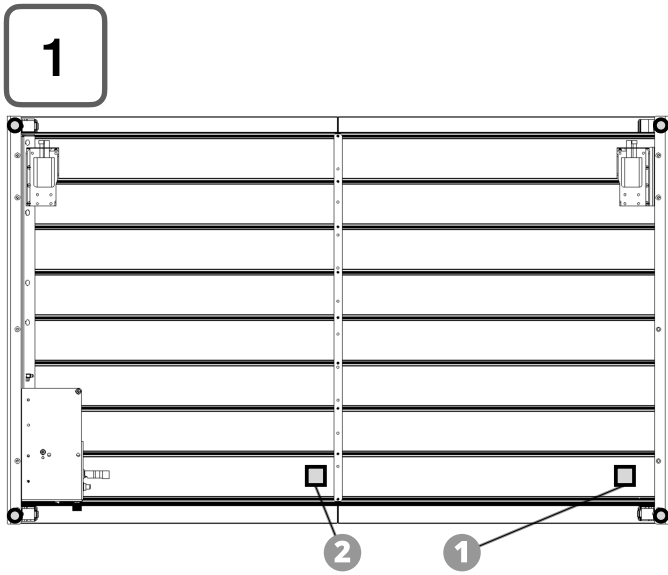
### Product specifications

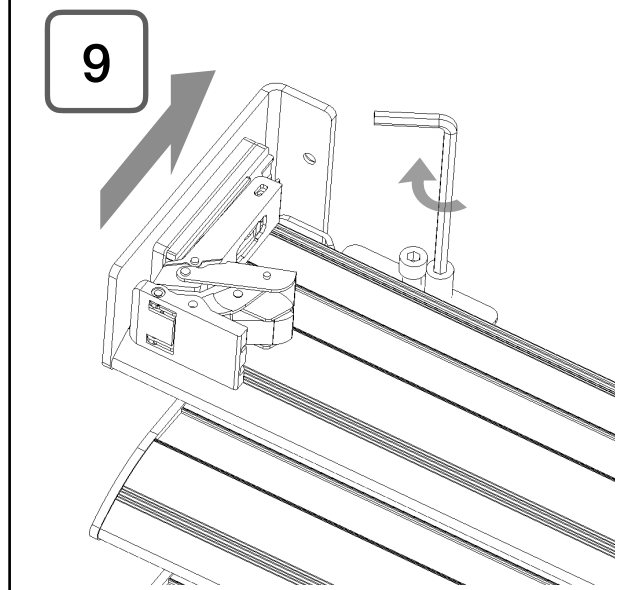
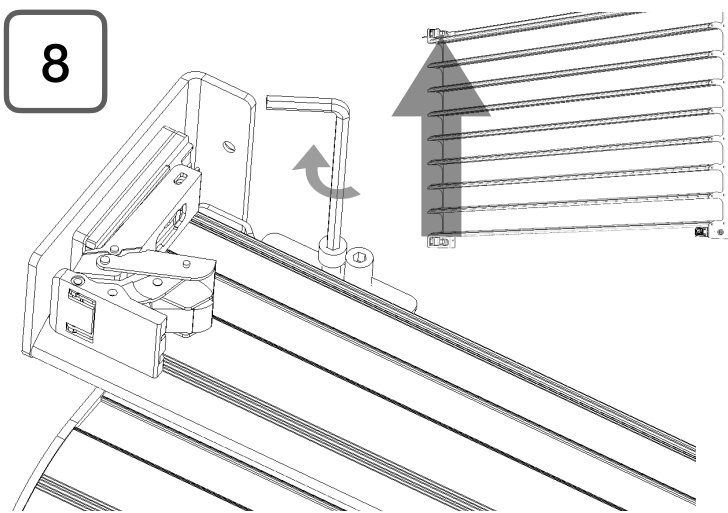
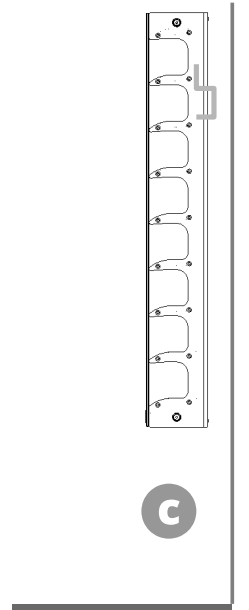
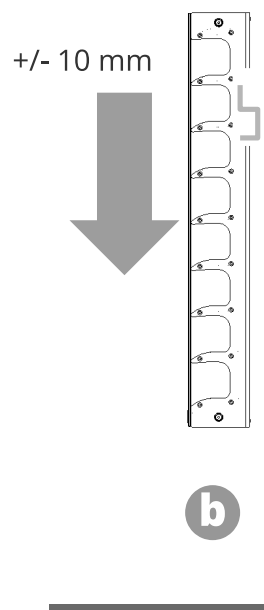
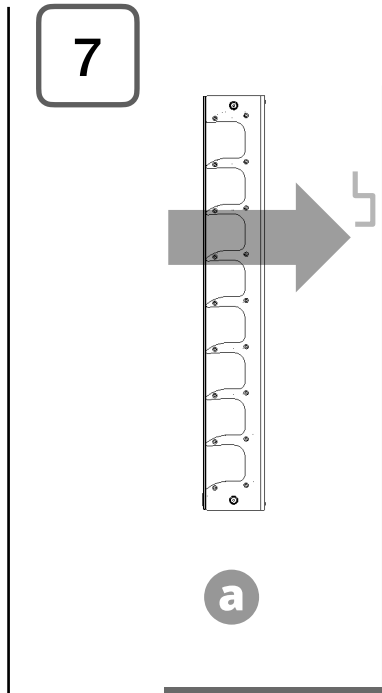
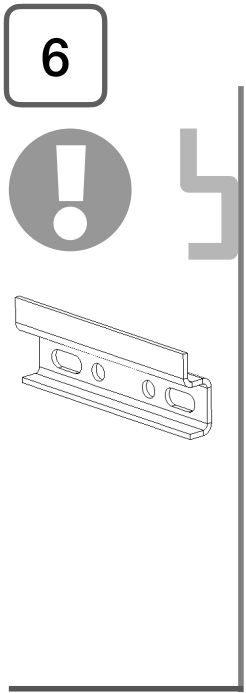
depth:	10 cm
maximum load per 118cm long shelf:	2,5 kg
net weight per module:	22 kg
maximum gross weight per module:	42 kg

	GK1	GK1,5	GK2	GK2,5	GK3	GK4	GK1x2	GK1,5x2	GK2x2
width (cm)	120	179	238	297	356	474	120	179	238
height (cm)	73	73	73	73	73	73	146	146	146
max. train length (cm)	118	177	236	295	354	472	118	177	236
power consumption (W)	27	41	54	68	81	108	58	86	115

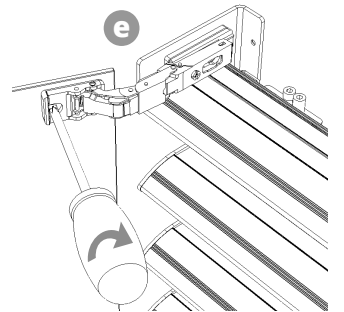
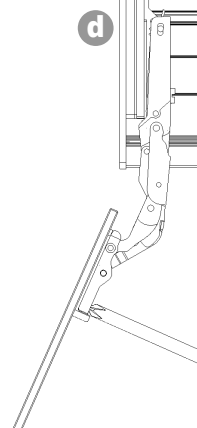
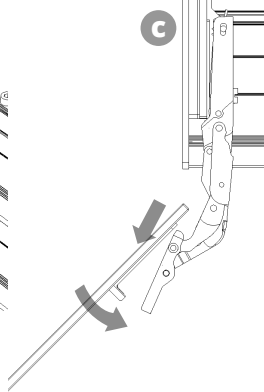
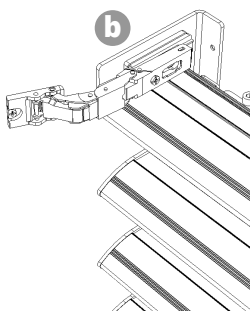
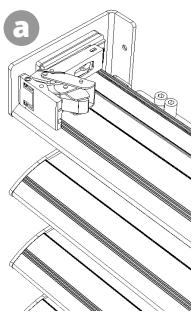
\* alleen verlichte uitvoering

Glaskasten products are designed and manufactured in the Netherlands.

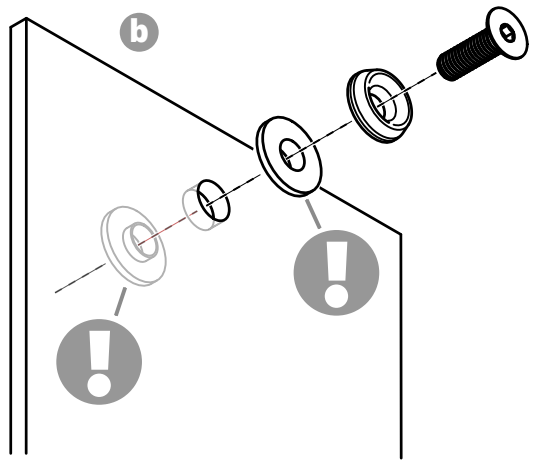




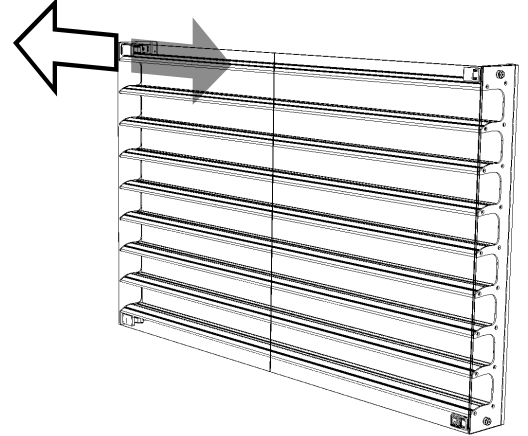
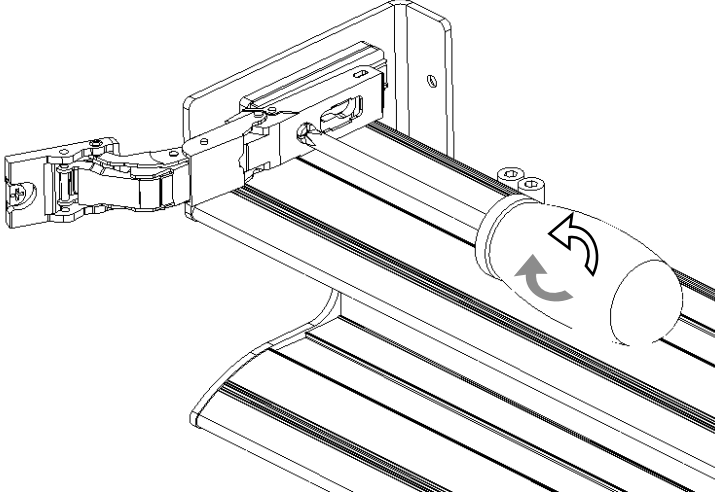
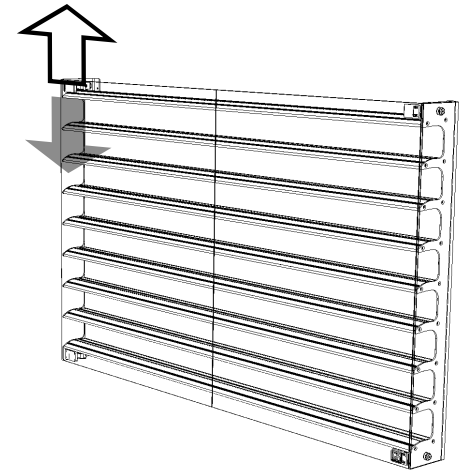
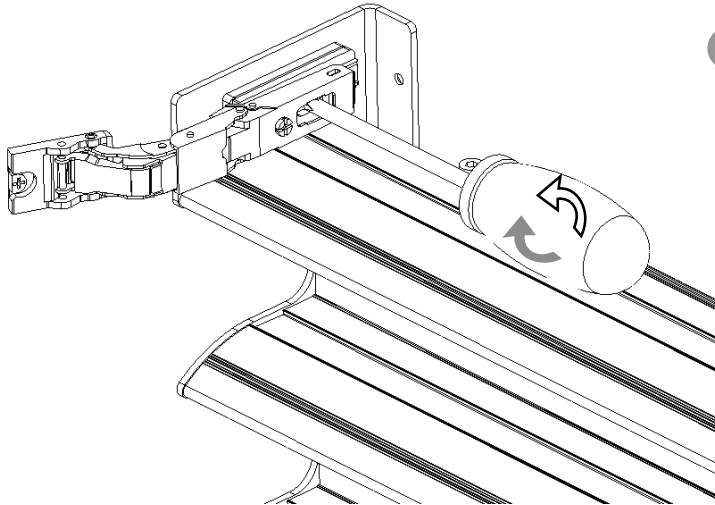
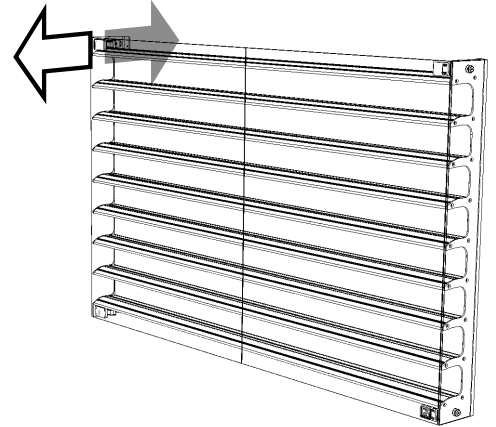
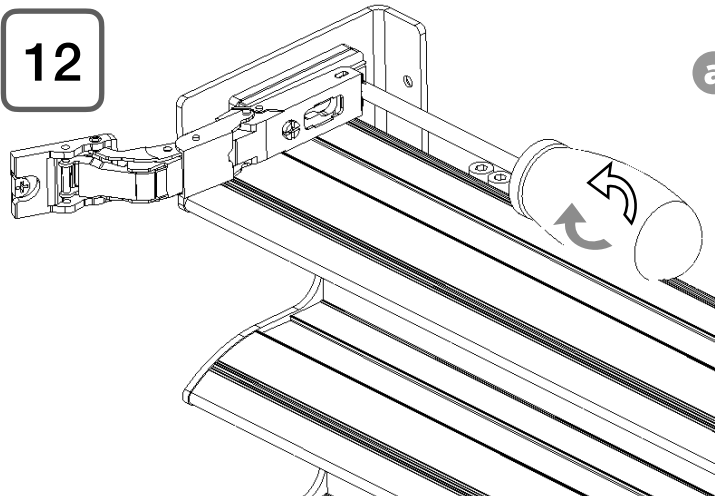
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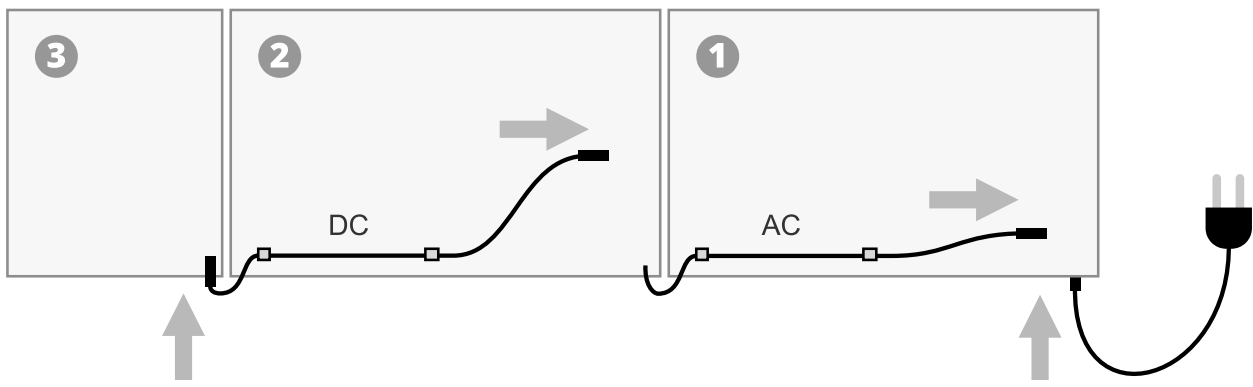
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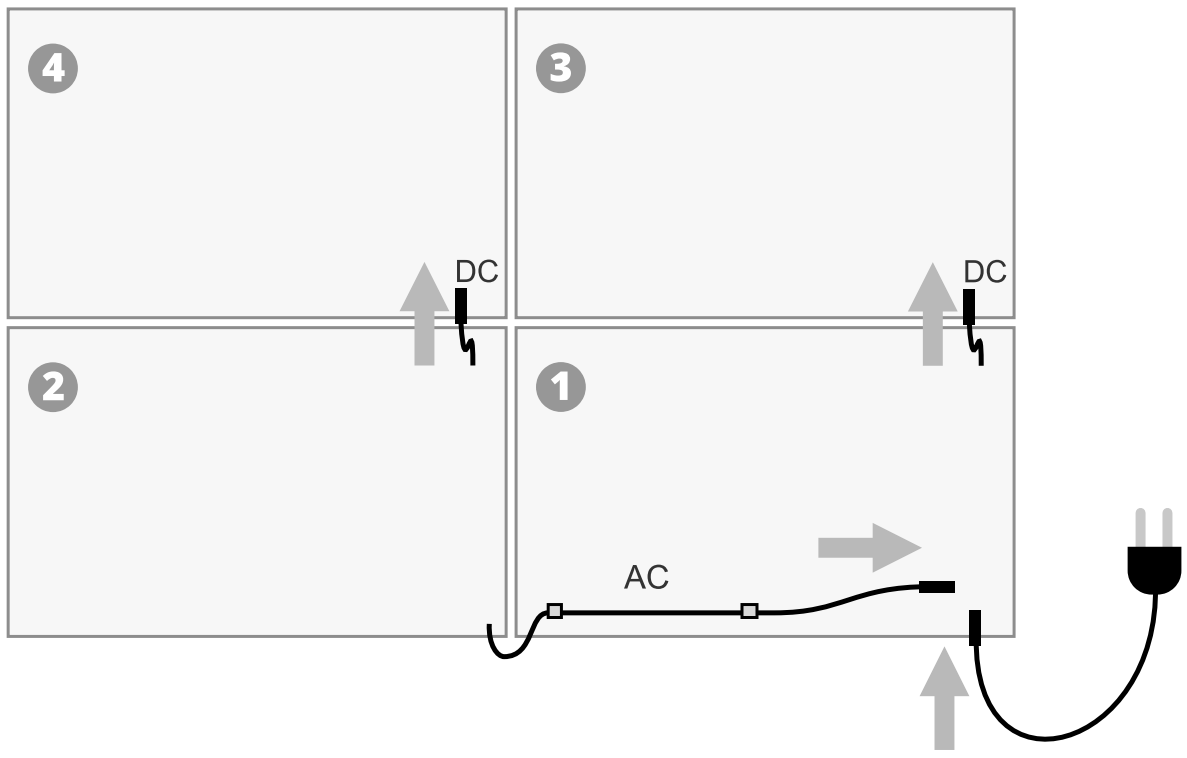
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