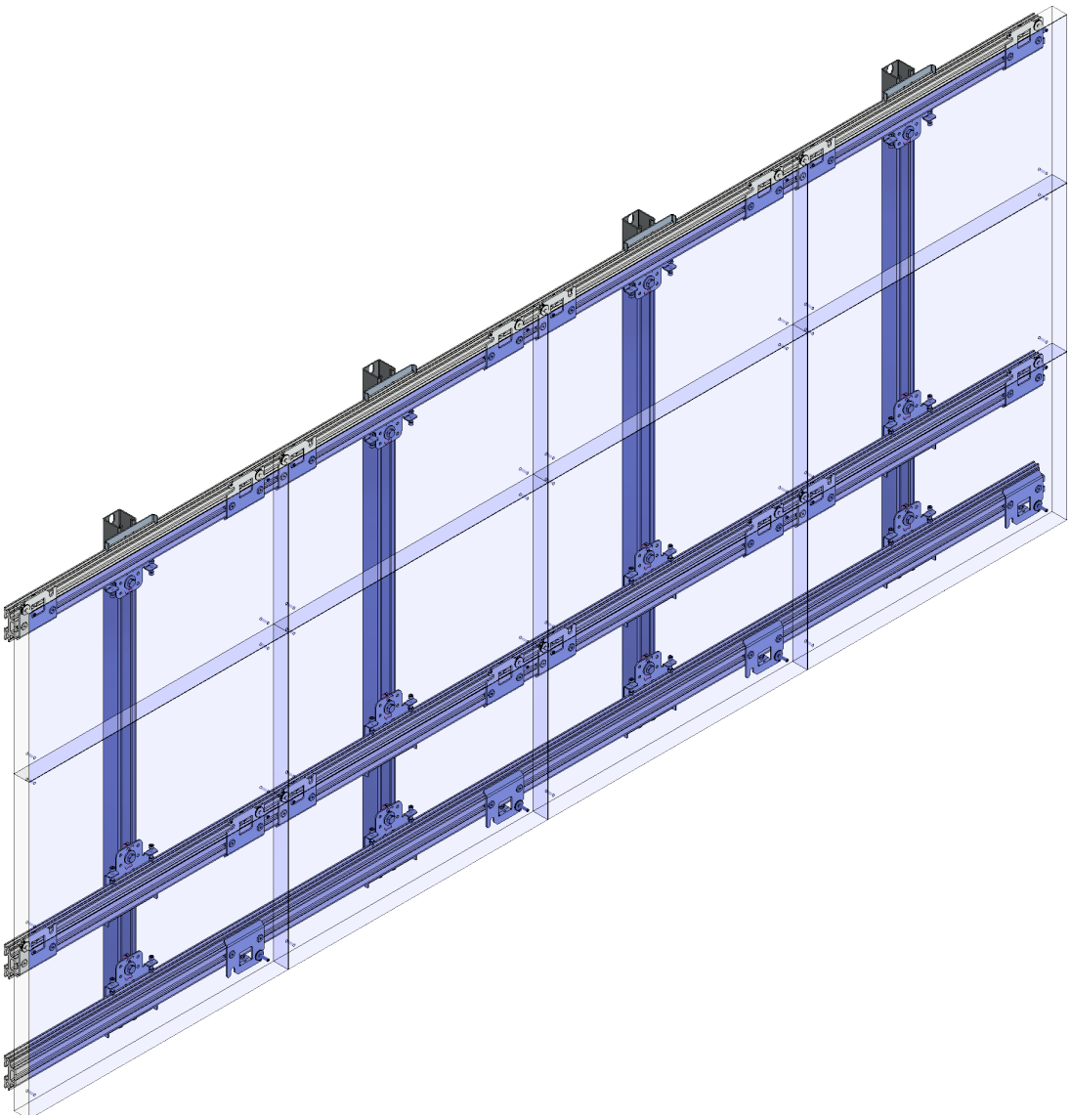
Manual sLEDge

Professional wallmount for DV LED Walls

Manual Version 1.0

Date	Revision No.	Author	Checked	Approved	Description
28.01.2024	1.0	TSN	GHL	GJN	1.0



These installation instructions must always be handed out to the persons that carry out the installation.

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

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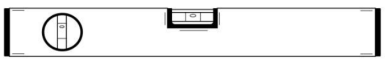
1. Preamble

The sLEDge product series has been developed and manufactured with the highest care and attention. However, improper handling can cause a risk for safety and / or damage. Read these instructions carefully before handling and installing the product so that you can safely set-up and use the system. In the following pages, you will find all the information needed for a safe and fast installation.
After the installation is done properly, you can enjoy all the features of your new product.

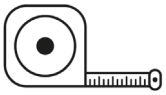
1.1 Tools required

The tools required are:

- Spirit level to align parts

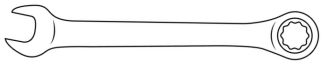


- Measuring tool

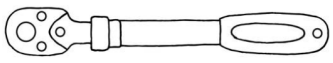


- 4 mm Allen key to tighten the screws in the mounting plates
- 3 mm Allen key to fine adjust the z-axis with the cabinet screws

- 10 mm ratchet or wrench to tighten the cabinet screws



- Ratchet with 13 mm nut to tighten the hex screw for the optional C-Profile



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 sLEDge product series is intended for use by fully qualified, trained and competent persons to provide safe and secure wall installation and adjustment of LED walls.

Warning: Handling only by instructed, qualified and authorised person with a minimum age 18 years and of sound mind.

For indoor usage only! Use the sLEDge product series only in a closed environment (conference rooms, theatres, convention halls, etc.) where there is no wind, moisture, excessive heat, salty air etc.

Make sure that only suitable LED cabinets are installed with the products of sLEDge! Do not try to use it with other products because serious accidents can occur!

Do not remove or replace any parts of the sLEDge product series 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.

Only use the sLEDge wall mount for its intended use.

- If this product is used for something else than its intended use, serious accidents and death may result. See chapter 5.1 Technical introduction and 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.

A visual inspection must be done prior installation. The inspection must be performed by a qualified person.

- All parts of the sLEDge wall mount must be inspected in detail prior to any usage
- Only if the product and all its components are in a flawless condition, it is safe to use the system.

Make sure that the wall where the sLEDge system is mounted to, is capable of carrying the overall weight of the system

- The onsite wall must be able to carry the complete system weight
- Ignoring this might cause significant damage to the product and serious accidents or death may result

Make sure to use only suitable fixing material (screws, dowels etc) for mounting the sLEDge system to the onsite wall.

- Depending on the system weight and the onsite wall, select the correct fixing material to avoid serious accidents

Build the system exactly as it is specified by the manufacturer

- Make sure you follow the drawings provided by the manufacturer that define how to setup the system
- Ignoring this might cause significant damage to the product and serious accidents or death may result

When using the adjustment features, screws etc of the sLEDge products, never apply significant force.

- When using components such as the adjustment features of the products, never apply force. All those features shall work smoothly and do not require significant force.
- If significant force is necessary, the cause may be a faulty part and this should not be ignored.
- Ignoring this, might cause significant damage to the product and serious accidents may result

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.

Only use LED cabinets that are specified by the manufacturer to be used with the sLEDge-system. When mounting the LED cabinets to the system, use all screws and locks that are specified by the manufacturer. Make sure to tighten the screws safely

- It is mandatory to use all screws and locks that the manufacturer defines to mount the LED cabinet to the system. Use only the ones that are clearly specified.
- For a safe installation the screws must be tightened with the provided torque
- Using the wrong screws and locks is highly dangerous. Tightening the screw with a too low torque can cause the screw to loosen itself. Tightening the screw with a too high torque might cause structural damage to the screw or the thread inside the LED cabinet.
- 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.

2.2 Caution

Minimum two persons are required to install the sLEDge products.

- With regard to the overall weight of all necessary installation devices, make sure to handle those with at least two people.

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 products 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 sLEDge mount.

- Protection objective: Avoid injury from falling parts.
- Wear appropriate safety shoes, gloves and eventually a helmet.
- Make sure the area next to the installation is clear and no person is present during installation.

Incorrect installation may lead to certain parts of the sLEDge wall mount or the entire system to fall down.

- Protection objective: Prevent personal injury and property damage.
- Double check the components and its installation.
- Read the manual carefully.
- Always level the System exactly horizontal before adding the LED-Cabinets.

Insufficient load capacity of the supporting wall may lead to certain parts of the sLEDge or the entire system to fall down.

- Protection objective: Prevent personal injury and property damage.
- The onsite wall must be able to support the combined weight of all the equipment attached to it.
- Ensure correct installation of the supporting structure using the correct screws, dowels etc

Usage of unsafe ladders/steps/scaffolding may lead to serious personal injuries

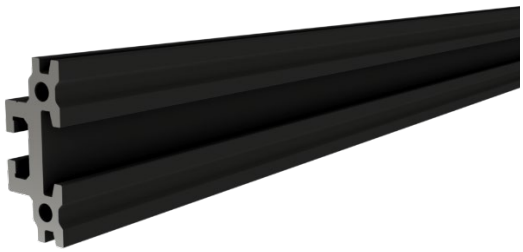
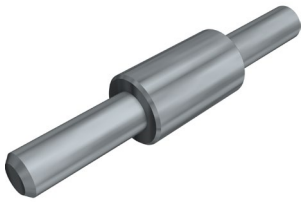
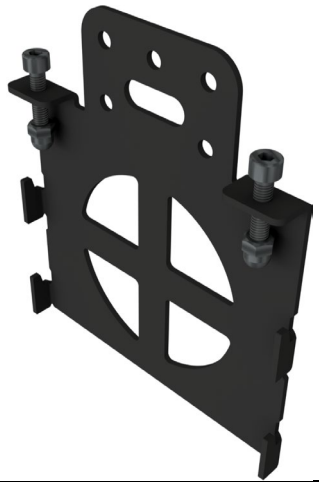
- Protection objective: prevent personal injury by using only safe ladders/steps/scaffolding.
- Use only appropriate and safe equipment
- Always follow the documentation of the manufacturer of the provided ladders/steps/scaffolding
- Use personal safety equipment if necessary

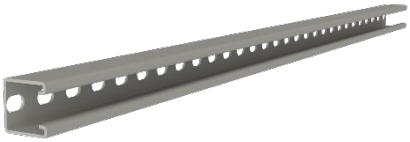
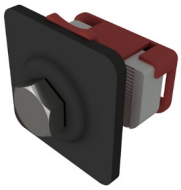
3. Scope of delivery

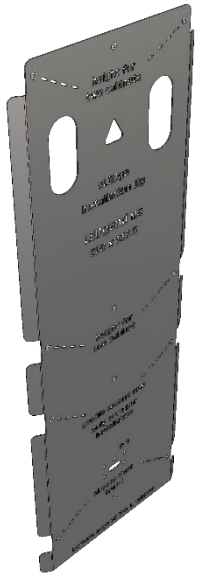
Note: Please check the delivery for completeness and damage immediately after you receive the shipment. Please contact your vendor in case of missing or damaged parts.

As a reference check the provided drawings to see if all parts are complete.

4. Overview of model numbers

Name, Article Number and rendering	Description
The profile sLEDge-Pxxx-y 	The profile is made of aluminium, is black anodized and is the centre part of the system. It will be mounted between onsite wall and the LED cabinets. The profile is always mounted horizontally to the onsite wall. The profiles vary in their length which is defined by the width of one cabinet and the number of cabinets that can mounted to the profile. Part Nr: sLEDge-Pxxx-y xxx: width in mm of the cabinet y: number of cabinets Example: sLEDge-P600-3 is made for three cabinets each with a width of 600 mm
The profile connector sLEDge-UNI-PCON 	The profile connector comes in a two-piece set and connects two profiles
The wall mounting plate sLEDge-UNI-WPLATE 	The wall mounting plate fixes the profile to the wall or to an optional C-Profile.

The cabinet mounting plate sLEDge-UNI-MPLATE 	The cabinet mounting plate fixes the cabinet to the profile
The cabinet mounting screws sLEDge-UNI-SRES-M6 sLEDge-UNI-SRES-M8 sLEDge-UNI-SRES-M10 	The cabinet mounting screws are inserted to the back of the cabinet and slide into the cabinet mounting plate. They are available in different thread diameters such as M6, M8 and M10. With the help of the cabinet mounting screws the Z-axis of the wall can be adjusted
The C-Profile sLEDge-UNI-CP-CUST 	The C-Profile can be ordered optionally. It is mounted between the onsite wall or structure and the wall mounting plate. The C-Profiles are always mounted vertically. Usually they have a thickness of 41 mm, others are available on request.
The screw set for the C-Profile sLEDge-UNI-SRES-CP 	The C-Profile screw set is needed to fix the wall mounting plate to the C-Profile.

The mounting jig sLEDge-JIG-xyz 	The mounting jig aligns the profiles to each other. It is different depending on what LED product shall be installed.

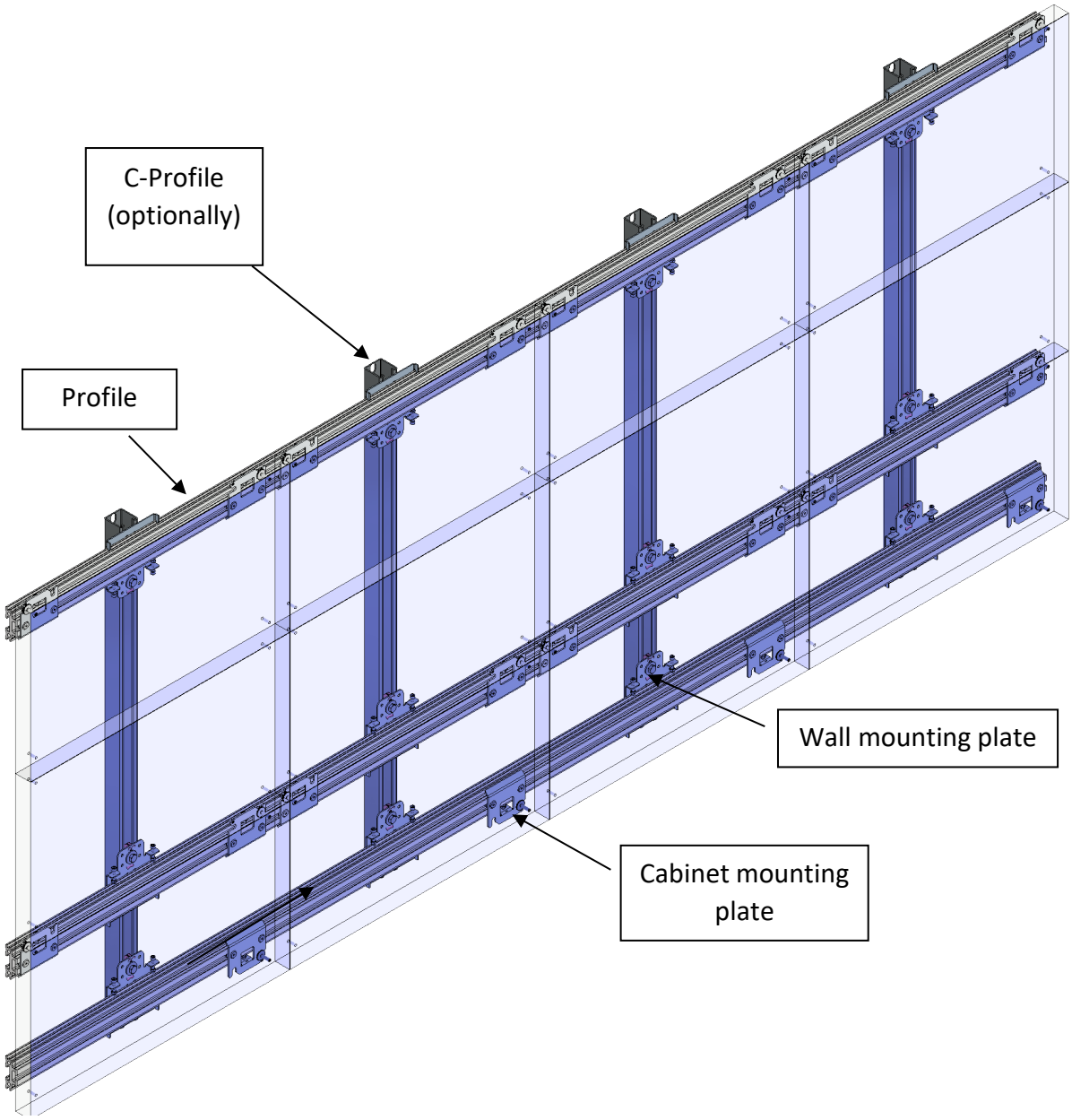


Figure 1 Exemplary overview of sLEDge components

5. Description of the product

5.1 Technical introduction and intended use

A direct view LED Wall is set up using multiple LED Cabinets to create large displays. There are several manufacturers that provide different LED Cabinet models. The sLEDge product series is a universal mechanical solution for mounting LED Cabinets to an onsite wall.

This product is made for being installed on a vertical wall only. Make sure the wall is flat and unobstructed. Ensure that the wall is able to carry the overall weight of the whole equipment.

The sLEDge product series is made only for indoor usage. Outdoor usage is prohibited and highly dangerous.

Make sure you use the correct screws, dowels etc that are able to carry the weight and momentum of the dv LED wall and are suitable for your onsite wall.

5.2 Compatible LED cabinets for sLEDge product series

Most cabinets will be compatible with sLEDge. From our experience very common cabinet dimensions are:

- 600,0 x 337,5 [mm]
- 610,0 x 343 [mm]
- 608,0 x 342 [mm]
- 500,0 x 500,0 [mm]

Despite all universality, it is important to provide a range of parameters for the DV LED product what was initially considered for sLEDge.

We are considering a maximum weight per cabinet of 10,0 kg. Furthermore, we consider a maximum cabinet width of 610,0 mm and maximum depth of 60,0 mm.

In all cases the drawing that we will provide is the one defining the wall setup and needs to be followed at all times.

Table 1 is an excerpt of compatible LED cabinets. Please contact us for more information.

LED Manufacturer and product (excerpt)
Absen A2715
Absen KLCOB
AOTO CV
LEDgend
INFiLED WP
NEC FE

Table 1

Figure 2 shows the rear view of a cabinet and illustrates some basic parameter that can define the compatibility. Dimension “A” must be at least 15 mm as its defining the distance of the mounting holes to the cabinet edges. Furthermore the mounting threads should either be M6, M8 or M10.

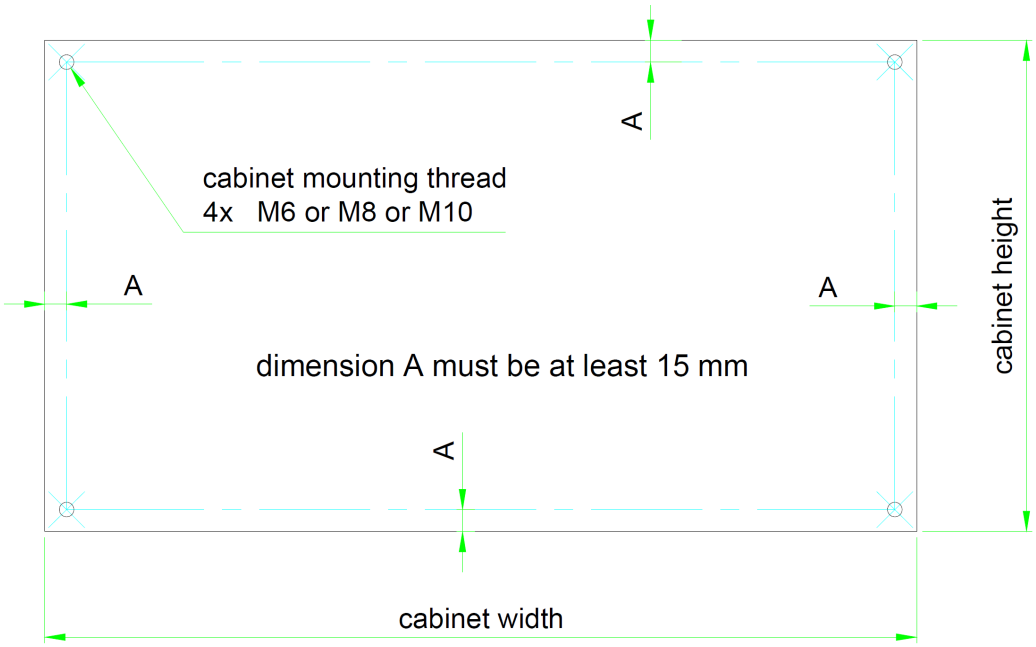


Figure 2 Rear view of a cabinet

Once we know the desired LED product, we can check functionality even if the product might not be listed here or differs anyhow from the provided information.

5.3 Specifications

Parameter	Value
Operating temperature [°C]	0 - 45
Operating rel. humidity [%rH]	10 - 75
Operation area	Indoor in closed rooms
Maximum cabinet weight [kg]	10
Maximum cabinet width [mm]	610
Maximum cabinet depth [mm]	60

6. Step by Step installation procedure

Depending on the size of the dV LED Wall drawings will be provided which illustrate the exact amount of parts as well as dimensions. Those drawings define the needed parts of the sLEDge system and where to position them. **The following step by step procedure is exemplary for a 4x3 Wall.**

Screws, dowels etc to connect the system to an onsite wall are not provided.

6.1 Prepare the installation

Make sure that the surface on which you want to build the LED wall is flat, clean and sufficiently stable to support the weight of the entire system as well as other potential loads. Eliminate any bumps and ensure a safe setup environment. Make sure you use the correct screws, dowels etc that are able to carry the weight and momentum of the dv LED wall and are suitable for your onsite wall.

6.2 Install C Profiles (Optionally)

The optional C-Profiles are installed vertically to the onsite wall. The distance between the C-Profiles can be seen in the drawings that are provided for your specific wall.

Choose the right number of screws and dowels correctly depending on the onsite wall, weight and momentum of the DV LED Wall. If needed we can help choosing the right equipment as well as defining the potential loads.

Check with a spirit level that the profiles are vertically aligned. Check for example with the help of a laser tool if the C-Profiles all form a perfectly flat surface with no differences in Z-Direction (looking at the wall). See also Figure 4.

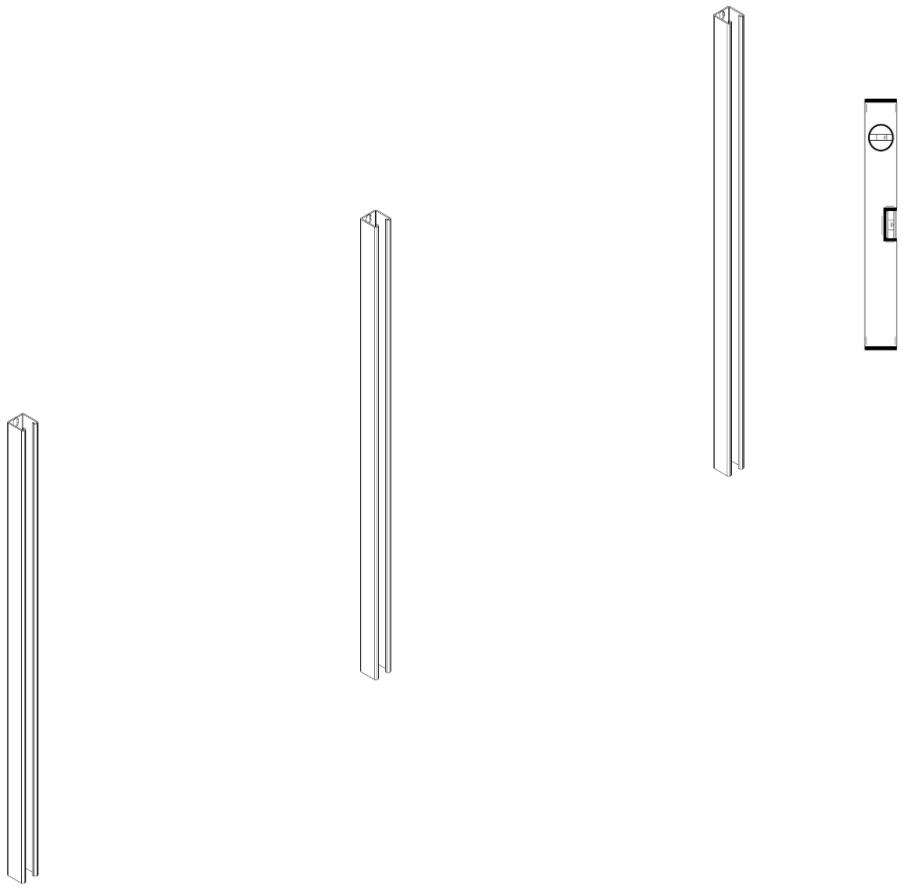


Figure 3 Installation of C-Profiles

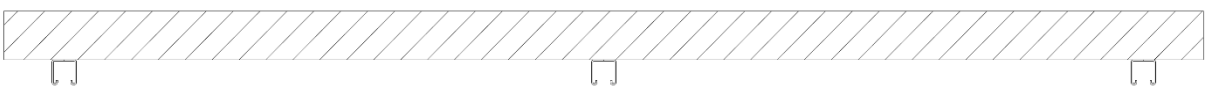


Figure 4 Top view of C-Profiles

6.3 Install Profiles and wall mounting plates

In the next steps you will install the wall mounting plates directly to your onsite wall or as can be seen in Figure 5 to the C-Profiles. To connect them to the C-Profiles you have received screw sets which can be seen as in Figure 5. You need one screw set per wall mounting plate. The green circle in Figure 6 marks the slotted screw hole where the mounting plate connects to the C-Profile.

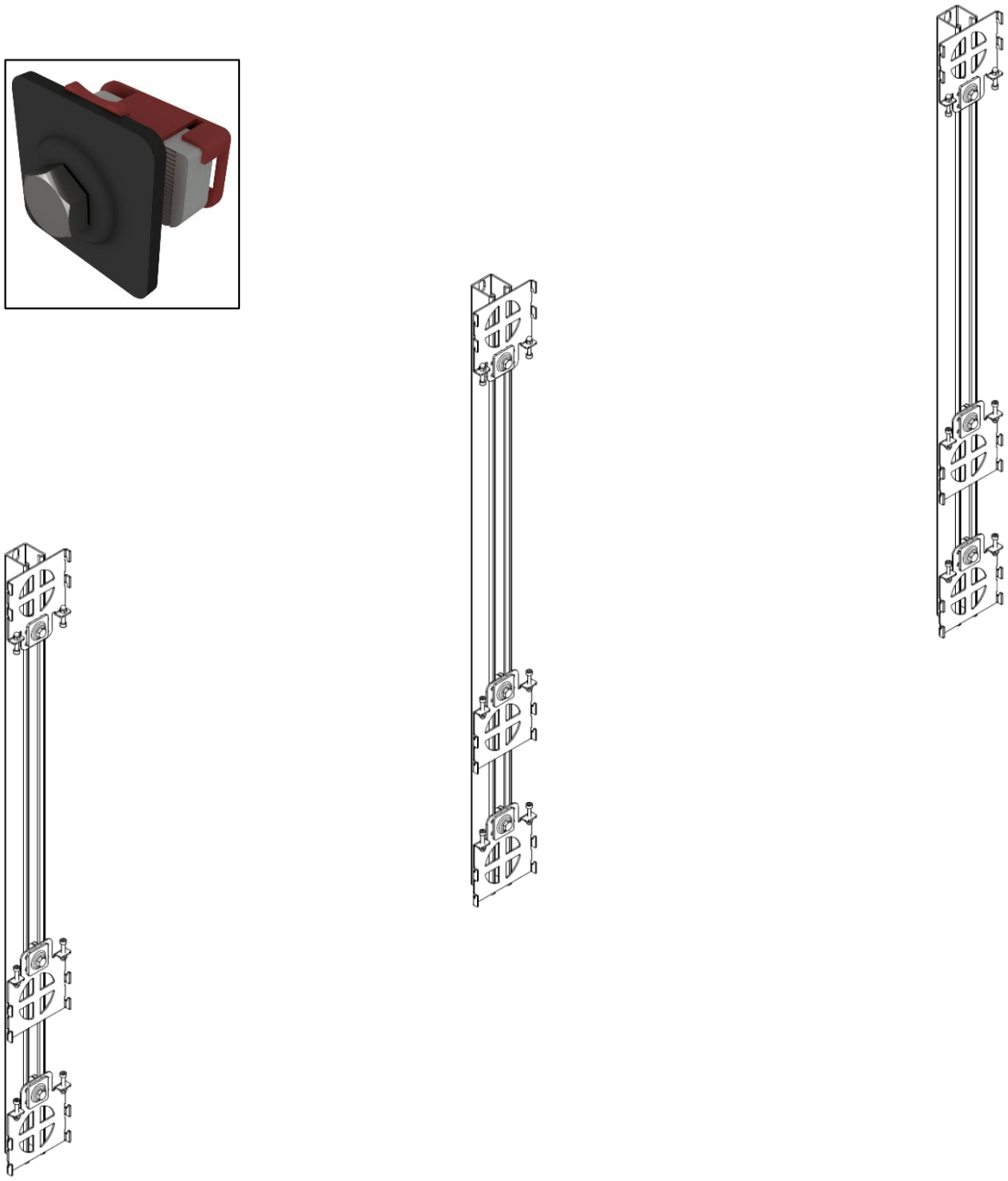


Figure 5 Installation of wall mounting plates

The blue arrows in Figure 6 point to the two M5 screws that need be tighten on the wall mounting plate once the profile is installed.

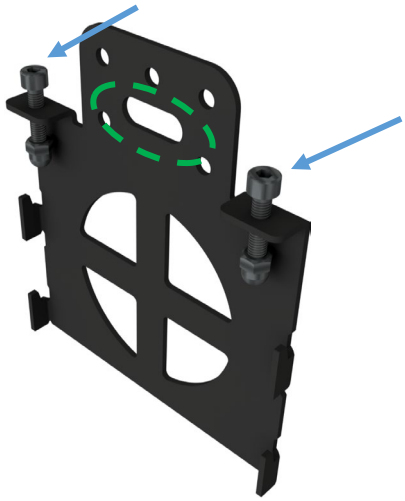


Figure 6 Fixation holes for C-Profile in wall mounting plate

Below Figure 7 shows the mounting order of the separate pieces to fix the wall mounting plate to the C-Profiles

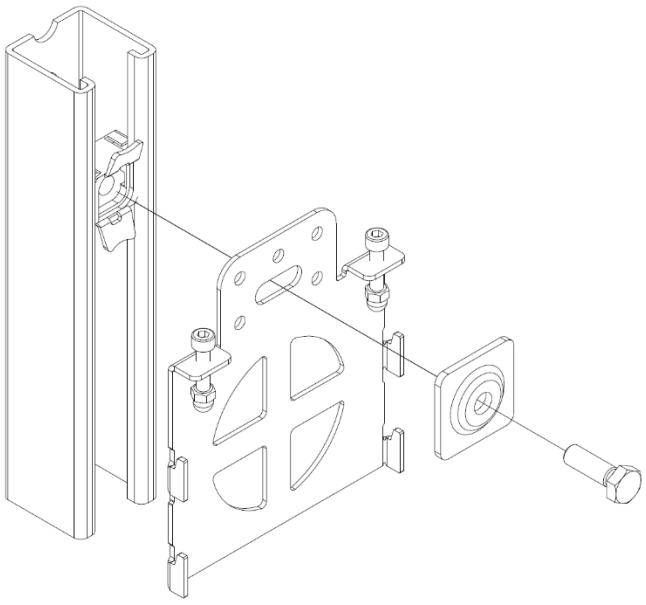


Figure 7 Explosion drawing pieces to fix wall mounting plate

If you wish to directly install the wall mounting plates to your onsite wall and not use C-Profiles, make sure to use at least one of the holes in the blue marked section in Figure 6.

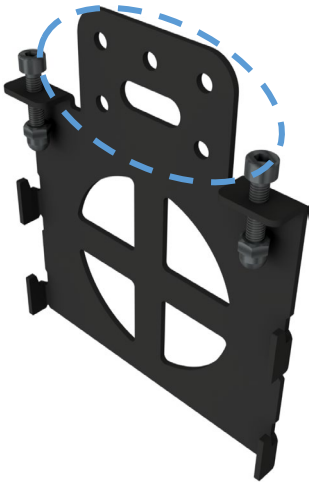


Figure 8 Fixation holes without C-Profile in wall mounting plate

Always use suitable and sufficiently strong dowels, screws and appropriate washers.

As can be seen in Figure 5, the upper row of wall mounting plates is installed upside down. Otherwise, they would extend the size of the DV LED wall and would be visible.

The correct layout with all components of your specific wall will be provided in a drawing. However, it is important that between the distance between two wall mounting plates does never exceed 1400 mm.

Step 1: Start with mounting the lowest row of the wall mounting plates together with the lowest profiles at your desired height. To insert the profiles to the wall mounting plates, unscrew the screws indicated with a blue circle in Figure 9 in the wall mounting plate and slide the profile from the top into the hooks of the plate. Tighten the M5 screws with the 4 mm Allen key so that the profile is secured.

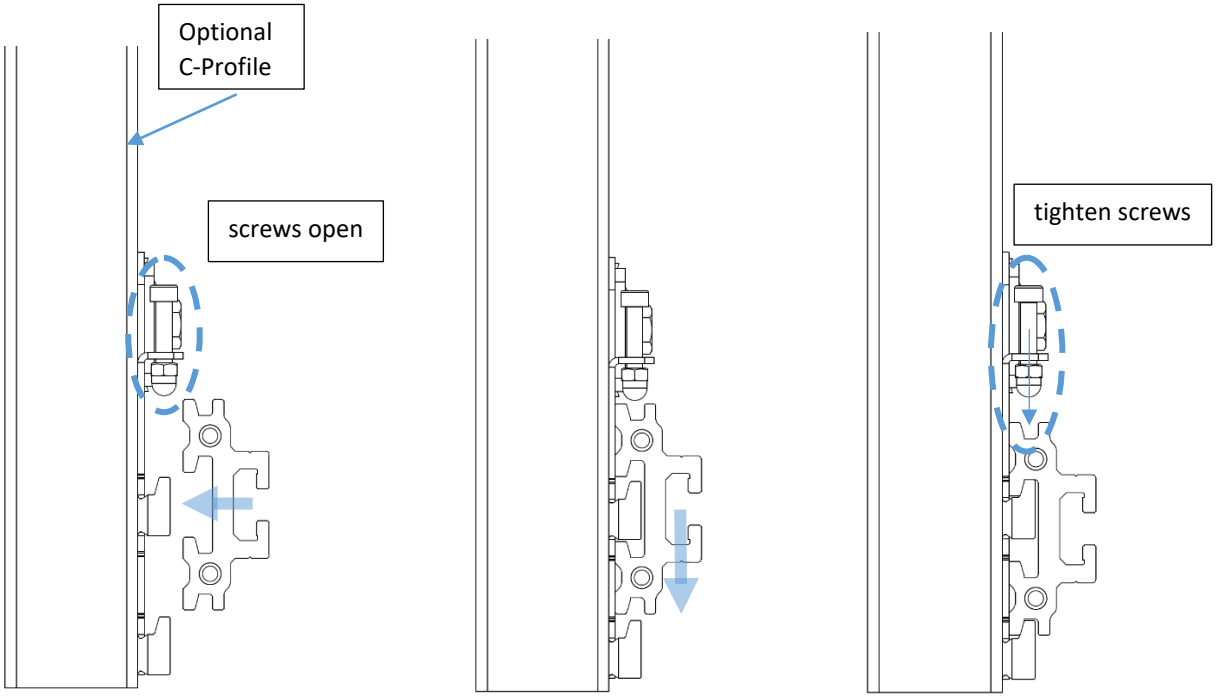


Figure 9 Side view inserting profile to wall mounting plate (step by step from left to right)

Use a spirit level to make sure that the profiles are perfectly horizontal aligned.

Make sure that all mounting plates are on the same level so that all will carry their part of the weight. Securely tighten all screws.

You might have multiple profiles in one row. In that case use the provided profile connectors to connect them. See also picture Figure 10.

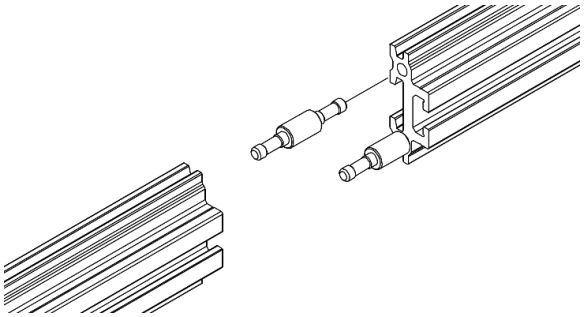


Figure 10 Profile connector

Step 2: Use the two provided mounting jigs and position them with the lowest guiding pin into the nut profile of the lowest profile. Install the second row of profiles so that the second lowest guiding pin fits to the nut profile of that second row. See also Figure 11.
Use one jig on the left end of the profile and one jig on the right end of the profile. Make sure to tighten all screws once the second profile row is installed.

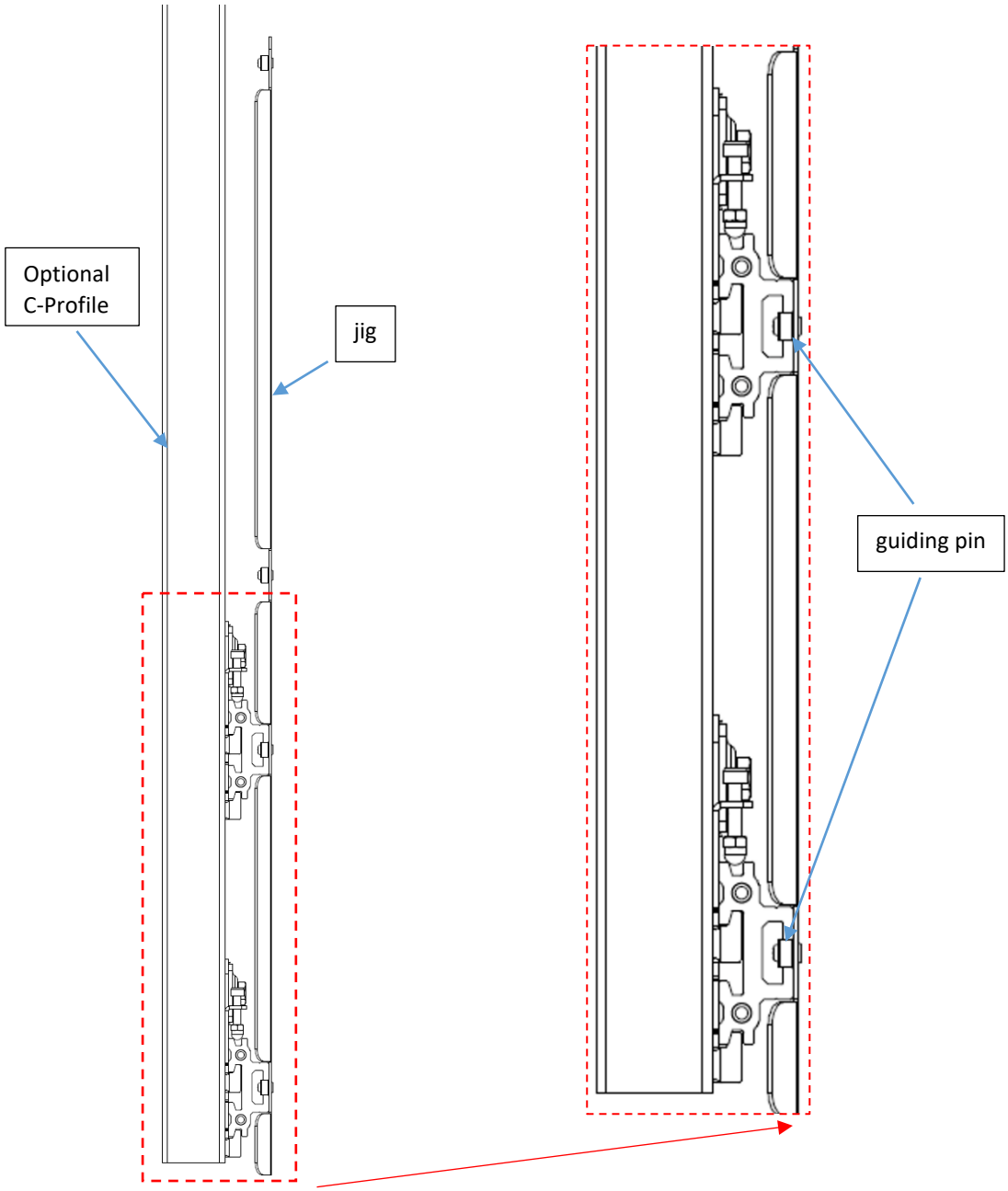


Figure 11 Sideview using the jig on first and second row profiles

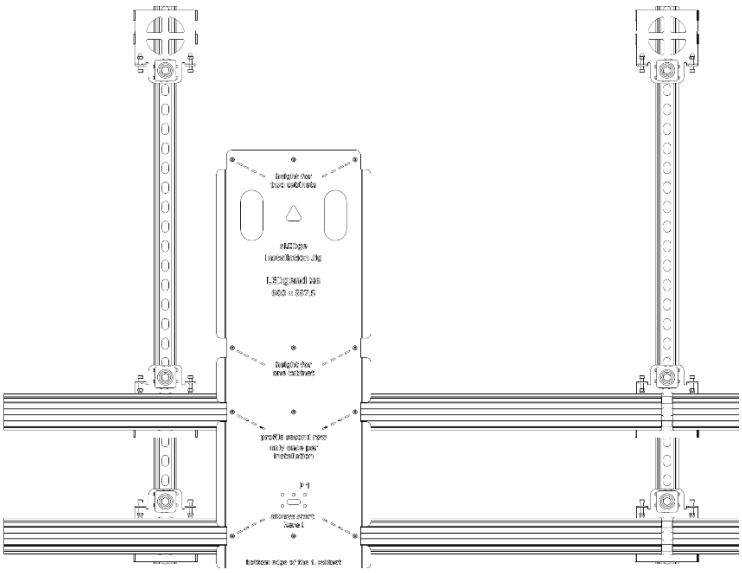


Figure 12 Front view jig in first and second row

Step 3: Proceed similar to Step 2:

- If the next row has a gap of one cabinet, use the lowest guiding pin for the current top row and the third guiding pin for the next row
- If the next row has a gap of two cabinets, use the lowest guiding pin for the current top row and the fourth guiding pin for the next row (see Figure 13)

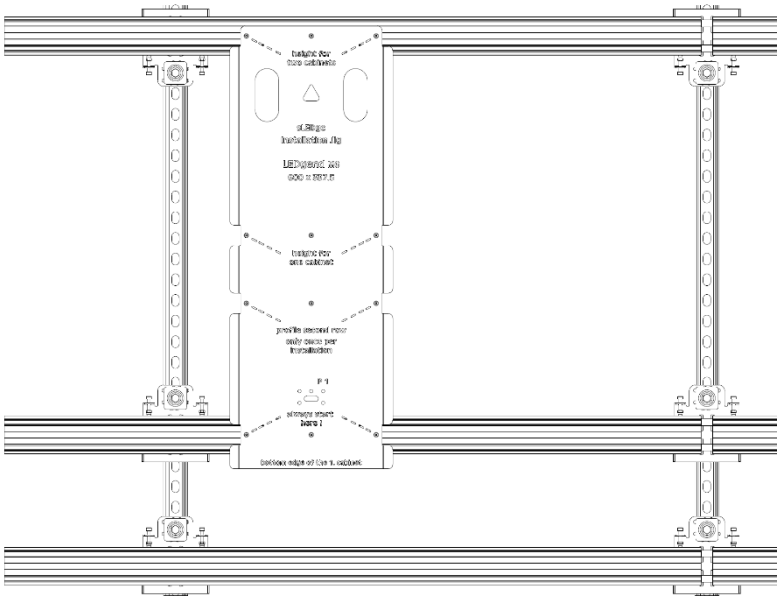


Figure 13 Front view jig with two cabinet distance

See also Figure 14 as an example how the mounting jigs looks like.

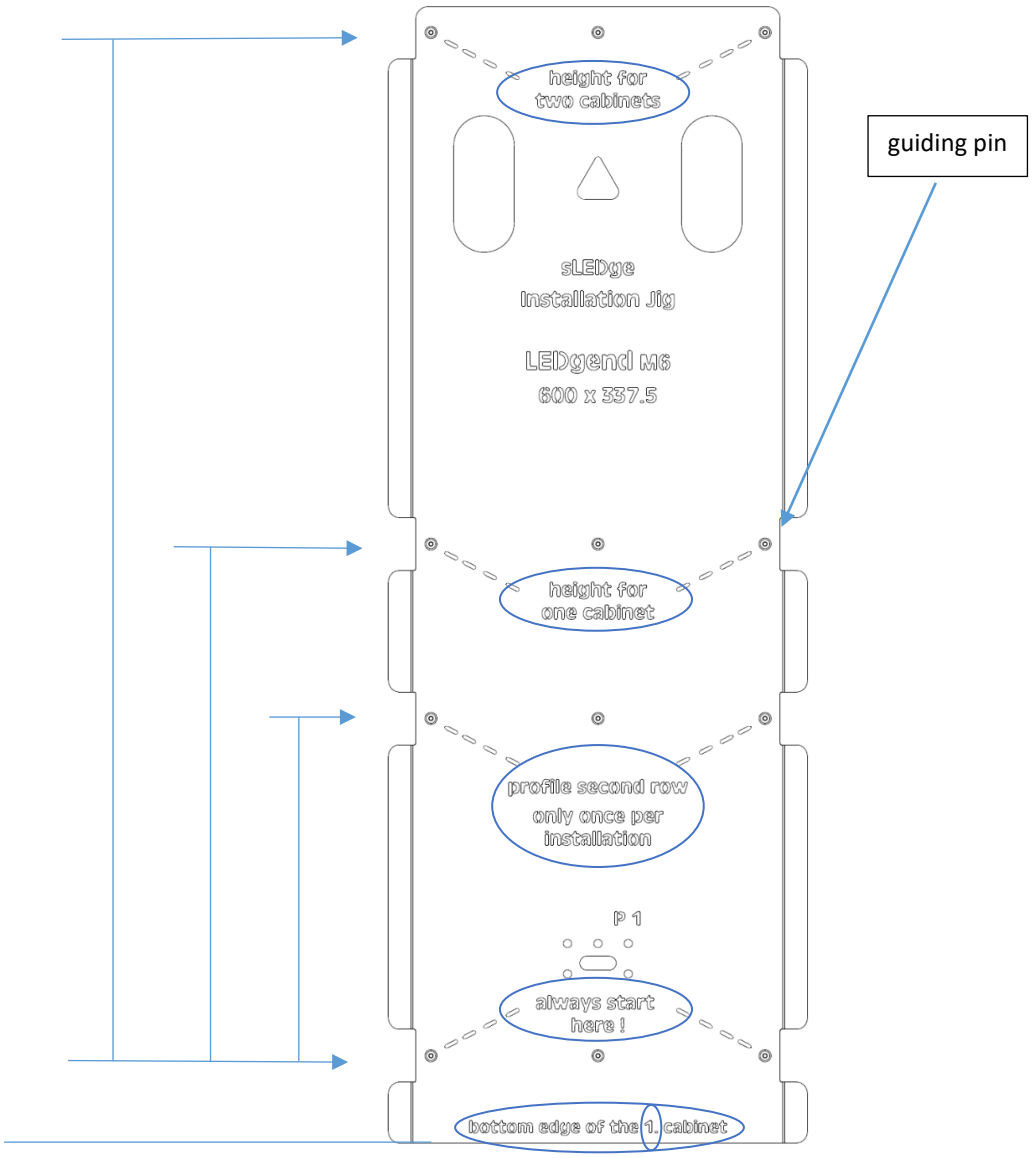


Figure 14 Exemplary illustration mounting jig

As we remember and have seen in Figure 5, the upper row of wall mounting plates is installed upside down. Inserting the profile here is similar but you need to tighten the M5 screws right away otherwise the profile will not stay in that position.

Finally, all horizontal profiles should be installed. Make sure all is aligned, levelled and screws are securely tightened. Check the distance between the profiles with the provided drawings.

Make sure that all profiles are on the same level so that all will carry their part of the weight. Securely tighten all screws.

6.4 Installing the cabinet mounting plates and the LED cabinets

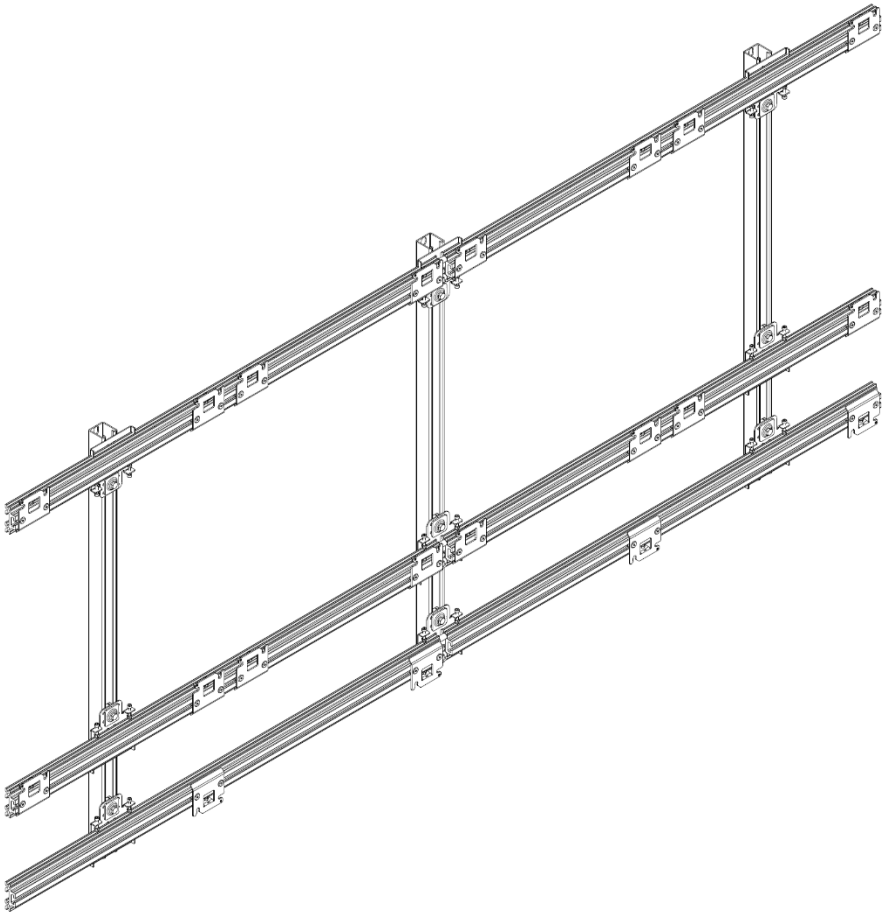


Figure 15 Exemplary overview for a 4x3 wall

Next you will prepare the installation of the DV LED cabinets. To do so, please check the provided drawings for your setup and start sliding in the cabinet mounting plates into the aluminium profiles and position them at their approximate position.

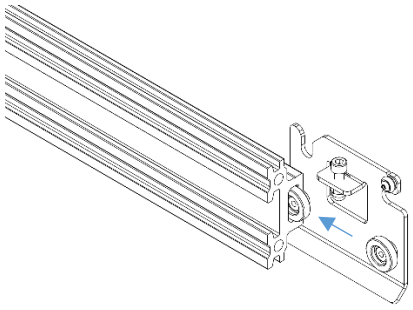


Figure 16 sliding the mounting plates into the profile (backside view)

The amount, position and orientation of needed cabinet mounting plates can be seen in the drawings provided. Please note that the plates in the lowest profile are rotated upside down. See also Figure 17. There is only one mounting plate per cabinet needed.

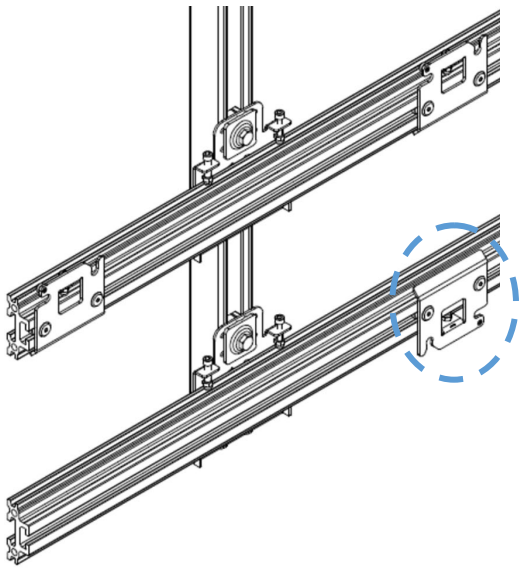


Figure 17 Lowest profile and rotated mounting plates

Before installing the LED cabinet, make sure the cabinet mounting screws are screwed to the corresponding screw hole in the LED cabinet. We recommend not screwing the screw all the way into the cabinet but rather maintaining a gap of approximately 2mm from the back of the cabinet. This allows the Z-axis to be adjusted also in the negative range.

Note: The amount and position where the cabinet mounting screws need to be positioned can be seen in the provided drawing.

Once the cabinet mounting plates are roughly positioned, you can start installing the LED cabinets.

For larger walls it could be beneficial to start setting up the cabinets from the centre of the lowest row and then proceed to the left and right side. With this tolerance will not add up as much compared to building for example left to right.

First you must install the lowest cabinet row. You will see that this row is a bit different than the following as the cabinet mounting plates connecting to the lower cabinet screw are less and rotated.

Step 4: Hang the first cabinet in the keyhole of the upper right cabinet mounting plate.

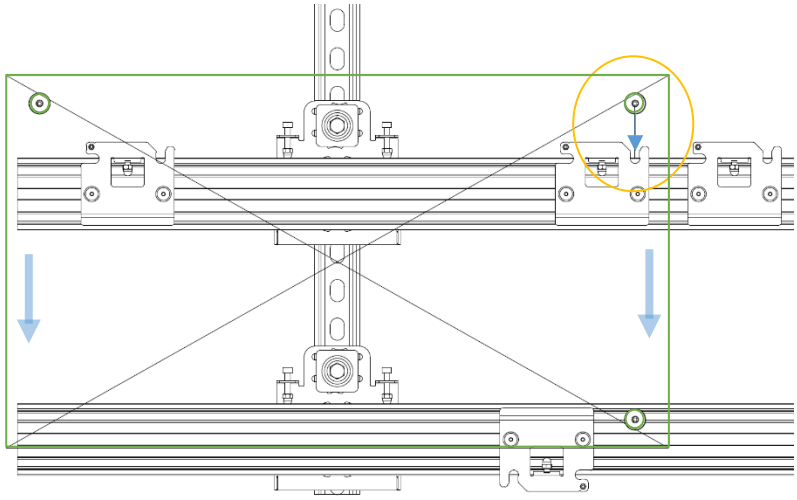


Figure 18 Cabinet moving towards keyhole

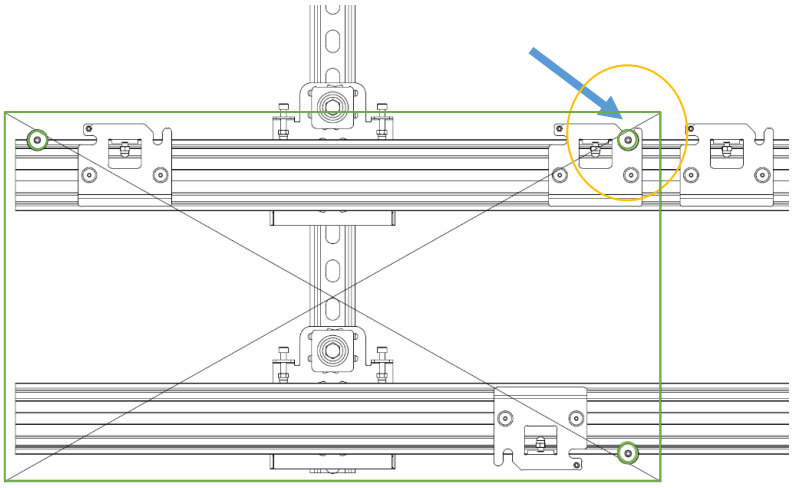


Figure 19 Keyhole upper right corner inserted

Step 5: Slide the cabinet mounting plate on the upper left corner of the cabinet to the left until the keyhole connects to the cabinet screw and the mounting plate can’t be moved any further. During this process you have to overcome a slight resistance.

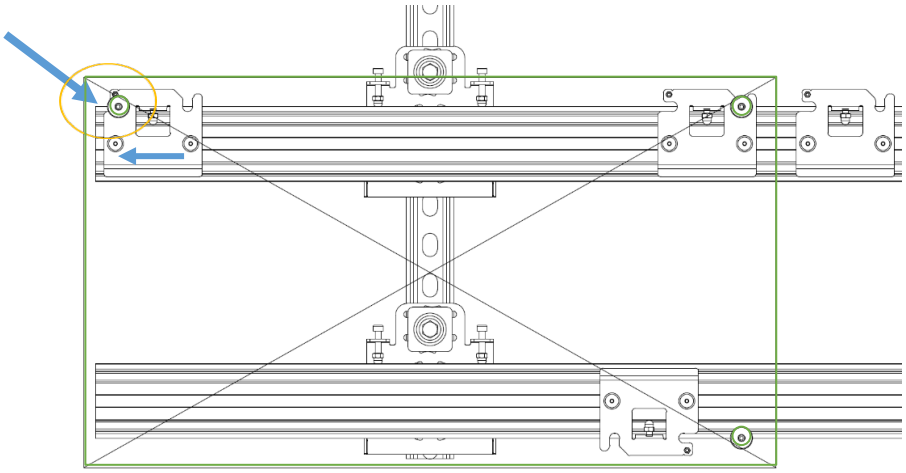


Figure 20 Keyhole upper left corner locked

Step 6: Slide the cabinet mounting plate on the lower right corner of the cabinet to the right until the keyhole connects to the cabinet screw and the mounting plate can’t be moved any further.

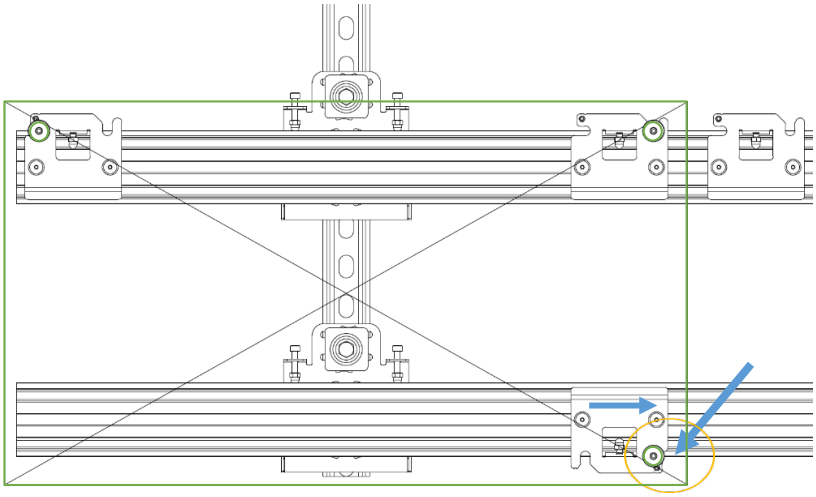


Figure 21 Keyhole lower right corner

Make sure to tighten the M5 screws of the cabinet mounting plates to make sure they stay in the correct position. See also Figure 22 where the blue arrow points to the M5 screw.

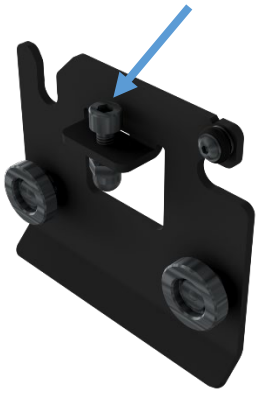


Figure 22 Back view of cabinet mounting plate

If you wish to reposition the cabinet, make sure to tighten all screws once the final position is reached.

Proceed with the other cabinets of the lowest row as described in Step 1 to Step 3. Make sure to connect the cabinets to each other as well.

To align the Z-Axis of the cabinet, you can use a 3 mm Allen Key to adjust the cabinet screws.

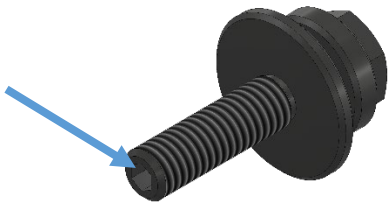


Figure 23 Position for Allen key at cabinet screw

Now your first cabinet row should be set up, screws securely tighten and everything aligned.

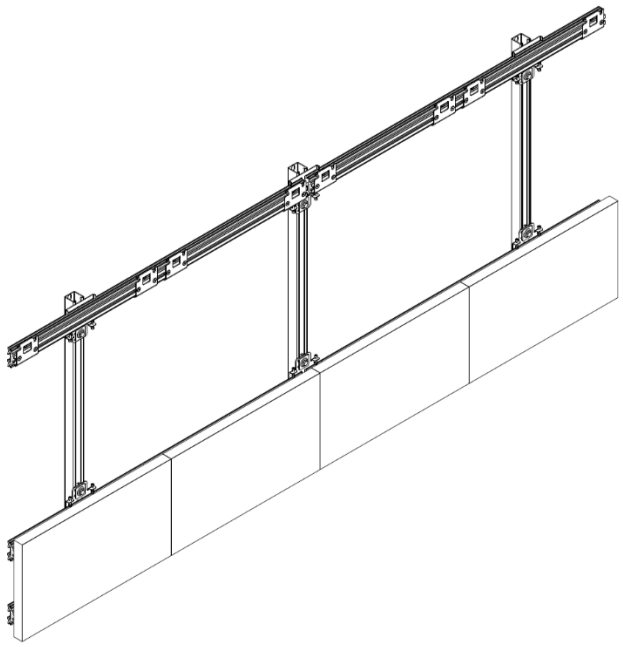


Figure 24 First cabinet row installed

Step 7: In case of our exemplary 4x3 wall, the second row has not profile and will only be mounted on top of the lower profile. Make sure to connect all cabinets properly.

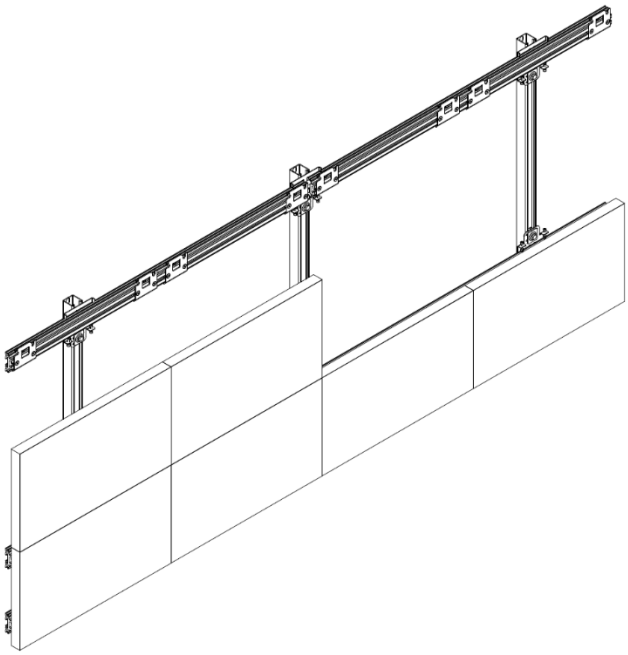


Figure 25 Second cabinet row partly installed

Step 8: Proceed with the following rows similar as with the first row. The difference will be that the keyhole of all lower right cabinet mounting plates will now be facing upwards. Due to this you will insert the upper right and the lower right cabinet screw in one smooth movement into both cabinet mounting plates.
Proceed with the upper left cabinet mounting plate as already known by sliding the cabinet mounting plate to the left until the keyhole connects to the cabinet screw and the mounting plate can't be moved any further (see also Figure 19 and Figure 20).

Make sure to tighten all screws of the cabinet mounting plates with the 4 mm Allen Key.

Depending on your actual wall layout, you might have cabinet rows that only connect to profiles on the top side. In that case they do not have a mounting plate on the lower right side.

Make sure you connect all cabinets to each other

There are rows of cabinets that will only be connected to each other.

7. Disposal of components

7.1 Metal parts and packaging

All metal parts and packaging can be recycled.

7.2 Disposal of entire devices

You have the possibility to send old devices back to us. Please note that you have to take over the transportation costs for this. Please send the devices to:

EXACT solutions GmbH

Lustheide 85

51427 Bergisch Gladbach

GERMANY

Imprint

EXACT solutions GmbH

Lustheide 85

51427 Bergisch Gladbach

GERMANY

Tel.: +49 2204 9485 30

E-Mail: info@exactsolutions.de

Web: www.exactsolutions.de