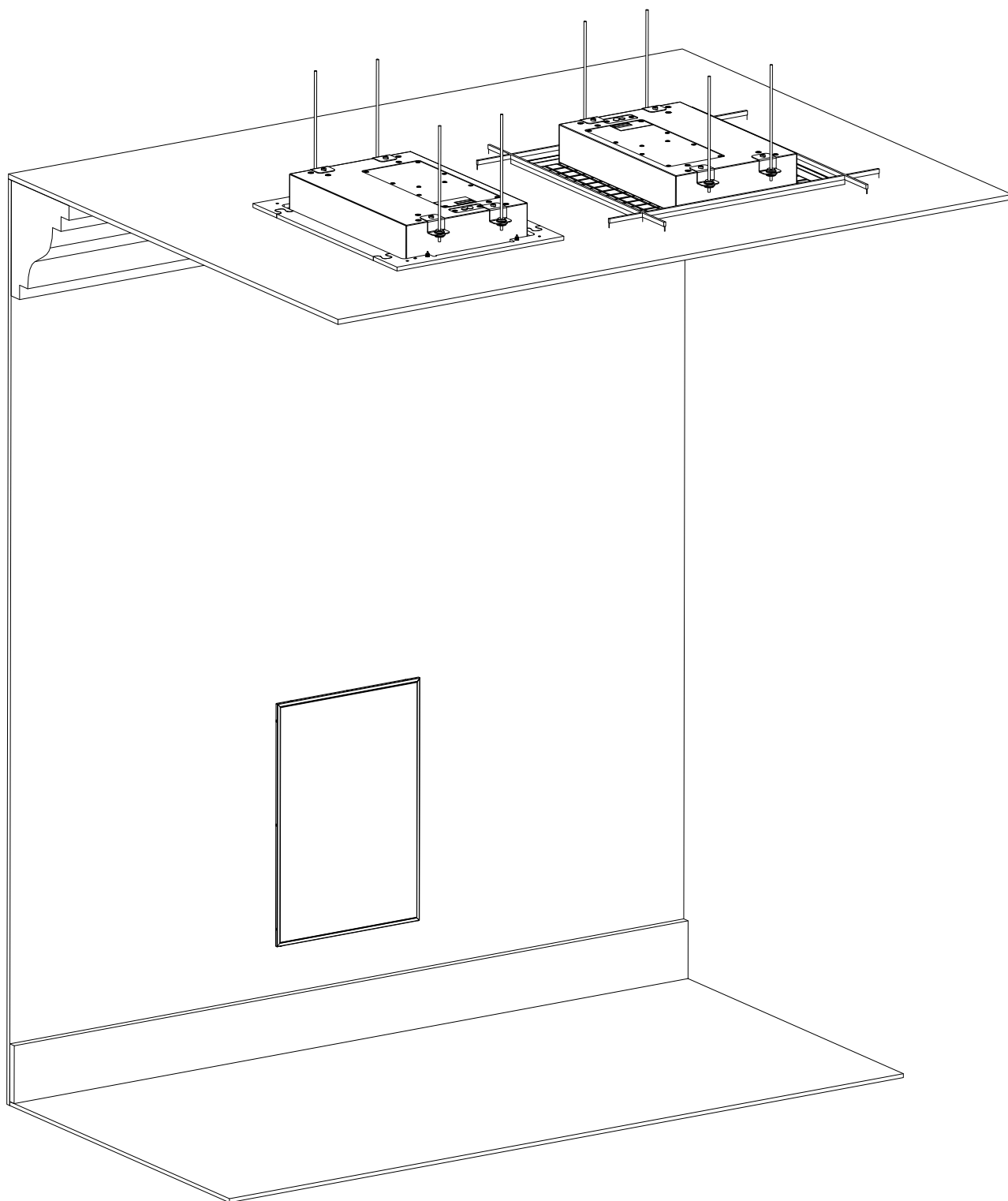


# SB6r



owner's manual (EN)



Document reference: SB6r owner's manual (EN) version 1.1

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## Contents

|   |    |
|---|----|
| Safety.....   | 5  |
| Instructions.....                                     | 5  |
| Introduction.....                                     | 7  |
| SB6r ultra-shallow subwoofer.....                     | 7  |
| How to use this manual.....                           | 7  |
| Revision history.....                                 | 8  |
| System components.....                                | 9  |
| Electro-acoustical description.....                   | 11 |
| Preset description.....                               | 11 |
| Connectors.....                                       | 11 |
| Rigging system description.....                       | 12 |
| SB6r.....   | 12 |
| Rigging elements.....                                 | 13 |
| SB6r-inW.....   | 13 |
| SB6r-inC.....   | 14 |
| SB6r-Screen.....                                      | 16 |
| SB6r-Tilescreen.....                                  | 16 |
| Mechanical safety.....                                | 18 |
| Loudspeaker configurations.....                       | 19 |
| SB6r in standard configuration.....                   | 19 |
| Rigging procedures.....                               | 20 |
| Tools.....  | 20 |
| Mounting SB6r in a wall with SB6r inWall.....         | 21 |
| Mounting SB6r in a ceiling with SB6r inCeiling.....   | 28 |
| Mounting SB6r in a ceiling tile with SB6r inTile..... | 36 |
| Connection to LA amplified controllers.....           | 41 |
| Cabling schemes.....                                  | 41 |
| Cabling SB6r.....                                     | 43 |
| Specifications.....                                   | 46 |
| SB6r.....   | 46 |
| SB6r-inW.....   | 47 |
| SB6r-inC.....   | 48 |

|  |    |
|--|----|
| SB6r-Screen.....   | 49 |
| SB6r-Tilescreen.....   | 50 |
| APPENDIX A: Recommendation for speaker cables.....           | 51 |
| APPENDIX B: Specifications for custom rigging.....           | 52 |
| APPENDIX C: Replacing SB6r-Screen barbed push fasteners..... | 54 |

# Safety

## Instructions

---

- ! Inspect the system before any deployment.**  
Perform safety related checks and inspections before any deployment.
- Perform preventive maintenance at least once a year.**  
Refer to the preventive maintenance section for a list of actions and their periodicity.  
Insufficient upkeep of the product can void the warranty.
- If any safety issue is detected during inspection, do not use the product before performing corrective maintenance.**  
Check for issues. A rigging system part or fastener is missing or loose. A rigging system part exhibits: bends, breaks, broken parts, corrosion, cracks, cracks in welded joints, deformation, denting, wear, holes. A safety cue or label is missing.
- ! Read all the related PRODUCT INFORMATION documents shipped with the products before exploiting the system.**
- ! Do not store the product on an unstable cart, stand, tripod, bracket, or table.**
- ! Beware of sound levels.**  
Do not stay within close proximity of loudspeakers in operation.  
Loudspeaker systems are capable of producing very high sound pressure levels (SPL) which can instantaneously lead to permanent hearing damage to performers, production crew and audience members. Hearing damage can also occur at moderate level with prolonged exposure to sound.  
Check the applicable laws and regulations relating to maximum sound levels and exposure times.
- ! Work with qualified personnel for rigging the system.**  
Installation should only be carried out by qualified personnel that are familiar with the rigging techniques and safety recommendations outlined in this manual.
- Ensure personnel health and safety.**  
During installation and set-up personnel must wear protective headgear and footwear at all times. Under no circumstances is personnel allowed to climb on a loudspeaker assembly.
- Respect the Working Load Limit (WLL) of third party equipment.**  
L-Acoustics is not responsible for any rigging equipment and accessories provided by third party manufacturers. Verify that the Working Load Limit (WLL) of the suspension points, chain hoists and all additional hardware rigging accessories is respected.
- Respect the maximum configurations and the recommended safety precautions.**  
For safety issue, respect the maximum configurations outlined in this manual. To check the conformity of any configuration in regards with the safety precautions recommended by L-Acoustics, model the system in Soundvision and refer to the warnings in Mechanical Data section.
- Be cautious when flying a loudspeaker configuration.**  
Before installing/raising the product, check each individual element to make sure that it is securely fastened to the adjacent element. Always verify that no one is standing underneath the product when it is being installed/raised. Never leave the product unattended during the installation process.  
As a general rule, L-Acoustics recommends the use of secondary safety at all times.
- Risk of falling objects**  
Verify that no unattached items remain on the product or assembly.
- Risk of tipping**  
Remove all rigging accessories before transporting a product or an assembly.



**Intended use**

This system is intended for use by trained personnel for professional applications.



**As part of a continuous evolution of techniques and standards, L-Acoustics reserves the right to change the specifications of its products and the content of its documents without prior notice.**

Check [www.l-acoustics.com](http://www.l-acoustics.com) on a regular basis to download the latest document and software updates.



**Long term exposure to extreme conditions may damage the product.**

For more information, refer to the **Products weather protection** document, available on the website.



**Read the maintenance section of this document before servicing the product.**



**Contact L-Acoustics for advanced maintenance.**

Any unauthorized maintenance operation will void the product warranty.



This marking indicates that this product should not be disposed of with other household waste throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.



# Introduction

## SB6r ultra-shallow subwoofer

---

SB6r is an ultra-shallow subwoofer designed to extend the bandwidth of X4r and Sokar in installation applications requiring concert sound and utmost discretion. SB6r features two direct-radiating 6.5" transducers mounted in a bass-reflex tuned enclosure. Its ultra-slim profile enables in-wall and in-ceiling integration, making it ideal for high-end architectural and professional sound reinforcement settings, with minimal to no visual impact.

SB6r couples with other L-Acoustics shallow enclosures to provide low-frequency content down to 29 Hz and an output of 110 dB Max SPL when separated from the main loudspeakers using the 60 Hz preset. In coupled configurations, SB6r can be driven by two presets, 100 Hz and 200 Hz, providing 111 dB and 115 dB of Max SPL respectively.

Like the largest concert-grade subwoofers, SB6r features L-Vents laminar vents that substantially reduce turbulence and port noise at high levels while also increasing LF efficiency.

## How to use this manual

---

The SB6r owner's manual is intended for all actors involved in the system design, implementation, preventive and corrective maintenance of the SB6r system. It must be used as follows:

1. Read the technical description for an overview of all system elements, their features, and their compatibilities.
  - [Electro-acoustical description](#) (p.11)
  - [Rigging system description](#) (p.12)
2. Prepare the system configuration. Consider the mechanical limits and the available acoustical configurations.
  - [Mechanical safety](#) (p.18)
  - [Loudspeaker configurations](#) (p.19)
3. Before rigging the system, perform mandatory inspections and functional checks.
4. To deploy the system, follow the step-by-step rigging instructions and refer to the cabling schemes.
  - [Rigging procedures](#) (p.20)
  - [Connection to LA amplified controllers](#) (p.41)

**As part of a continuous evolution of techniques and standards, L-Acoustics reserves the right to change the specifications of its products and the content of its document without prior notice.** Please check [www.l-acoustics.com](http://www.l-acoustics.com) on a regular basis to download the latest document and software updates.




## Contact information

For information on advanced corrective maintenance:

- contact your Certified Provider or your L-Acoustics representative
- for Certified Providers, contact the L-Acoustics customer service: [customer.service@l-acoustics.com](mailto:customer.service@l-acoustics.com) (EMEA/APAC), [laus.service@l-acoustics.com](mailto:laus.service@l-acoustics.com) (Americas).

## Symbols

The following symbols are used in this document:

-  This symbol indicates a potential risk of harm to an individual or damage to the product. It can also notify the user about instructions that must be strictly followed to ensure safe installation or operation of the product.
-  This symbol notifies the user about instructions that must be strictly followed to ensure proper installation or operation of the product.
-  This symbol notifies the user about complementary information or optional instructions.

## Revision history

---

| version number | publication date | modification   |
|----------------|------------------|--|
| 1.0            | Jun. 2023        | Initial version.   |
| 1.1            | Jun. 2023        | Updated <a href="#">Mounting SBór in a ceiling tile with SBór inTile</a> (p.36) procedure. |



## System components

### Loudspeaker enclosures

SB6r Ultra-shallow subwoofer: 2 x 6.5" (recessed version)

### Powering and driving system

LA2Xi / LA4X /  
LA7.16i / LA12X Amplified controller with DSP, preset library and networking capabilities



Refer to the LA2Xi / LA4X / LA7.16i / LA12X owner's manual for operating instructions.

### Cables

2 x 2.5 mm<sup>2</sup> cable speaker cable with bare wire endings  
Adapt the cable length to the installation.

custom 2-point  
speakON cable 2-point speakON cable (2.5 mm<sup>2</sup> gauge) to bare wire cable  
This cable needs to be custom made.



**Information about the connection of the enclosures to the LA amplified controllers is given in this document.**

Refer to the LA2Xi / LA4X / LA7.16i / LA12X owner's manual for detailed instructions about the whole cabling scheme, including modulation cables and network.

### Rigging elements

SB6r-inW In-wall mounting accessory for SB6r  
SB6r-inC In-ceiling mounting accessory for SB6r

### Screens

SB6r-Screen Wall or ceiling screen for SB6r  
SB6r-Tilescreen Tile ceiling screen for SB6r

### Software applications

Soundvision 3D acoustical and mechanical modeling software  
LA Network Manager Software for remote control and monitoring of amplified controllers

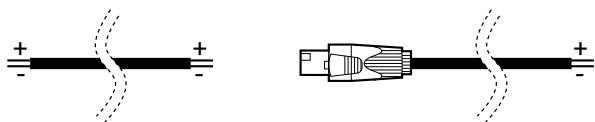


Refer to the **Soundvision** help.  
Refer to the **LA Network Manager** help.

## System component illustrations

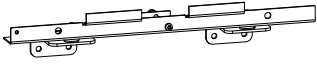
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### Cables

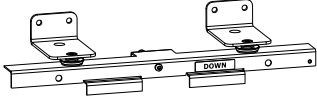


2 x 2.5 mm<sup>2</sup> cable custom 2-point speakON cable

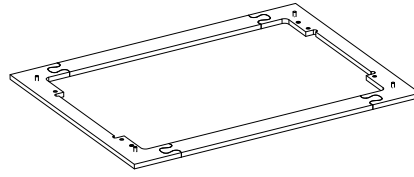
## Rigging accessories



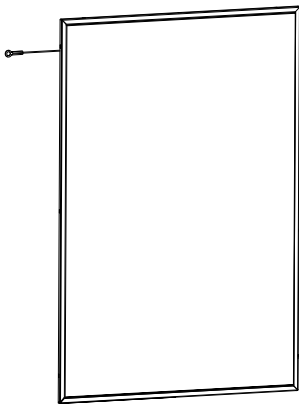
SB6r-inW



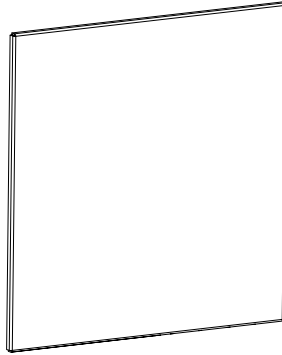
SB6r-inC



## Screens

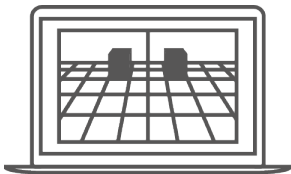


SB6r-Screen



SB6r-Tilescreen

## Software applications



Soundvision



LA Network Manager

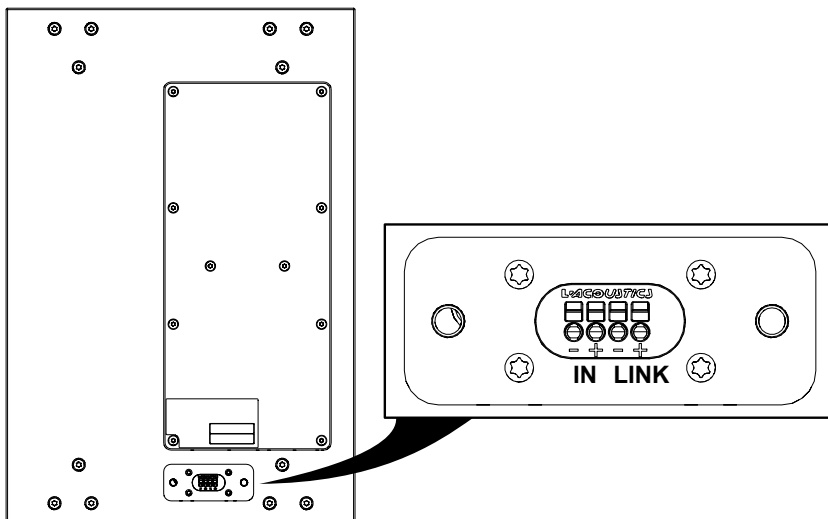
## Electro-acoustical description

### Preset description

[SB6\_60] [SB6\_100] [SB6\_200]

| outputs | channels | routing | gain | delay | polarity | mute |
|---------|----------|---------|------|-------|----------|------|
| OUT 1   | SB       | IN A    | 0 dB | 0 ms  | +        | ON   |
| OUT 2   | SB       | IN A    | 0 dB | 0 ms  | +        | ON   |
| OUT 3   | SB       | IN A    | 0 dB | 0 ms  | +        | ON   |
| OUT 4   | SB       | IN A    | 0 dB | 0 ms  | +        | ON   |

### Connectors



SB6r

1 x 4-point terminal block with push-in connection

### Internal pinout for L-Acoustics subwoofers

|                       |      |      |
|-----------------------|------|------|
| Terminal block points | IN + | IN - |
| Transducer connectors | LF + | LF - |

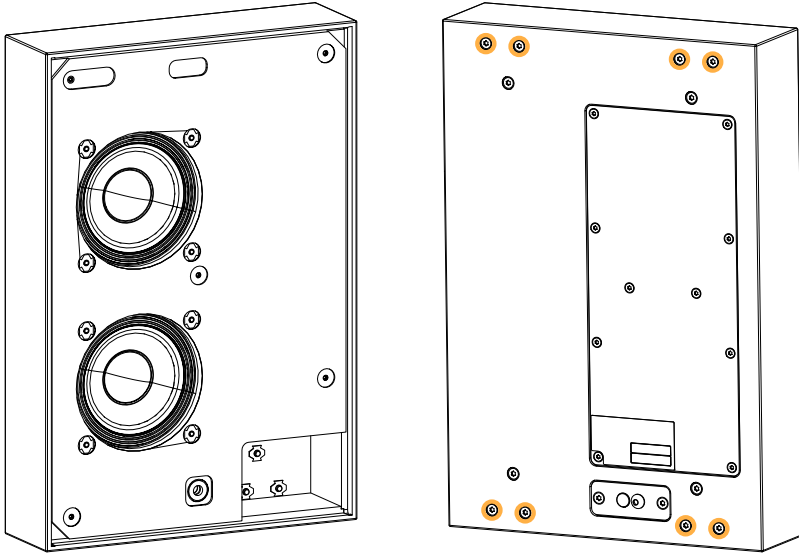
## Rigging system description

### SB6r

---

SB6r is the recessed version of the SB6i enclosure and is designed for in-wall or in-ceiling configurations.

SB6r features eight inserts on the back to secure SB6r-inW for in-wall configurations, or the rigging brackets from SB6r-inC and SB6r-Tilescreen for in-ceiling and in-tile configurations.



#### **Risk of acoustic leaks**

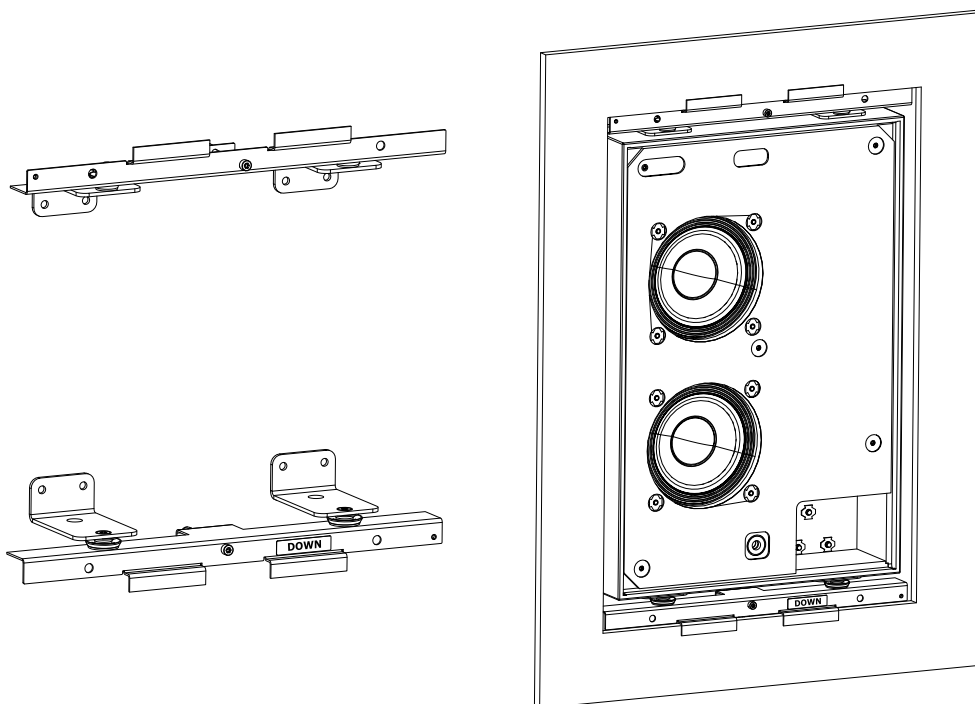
Always put the placeholder screws back in place when the inserts are not in use.

## Rigging elements

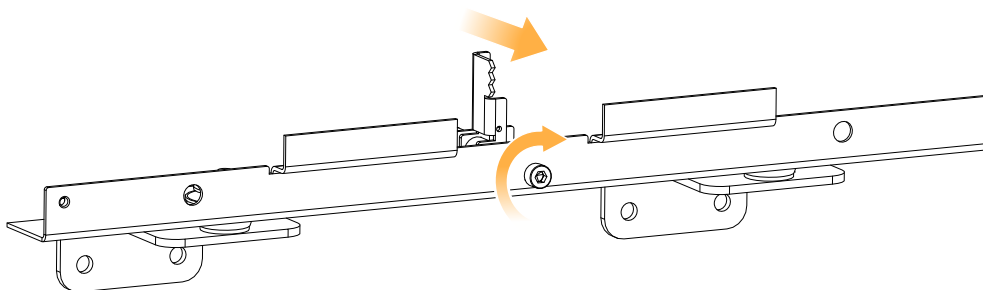
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### SB6r-inW

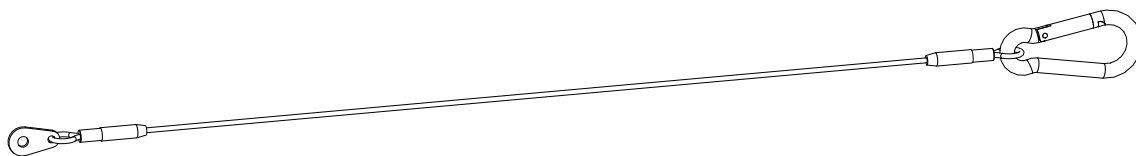
SB6r-inW is a rigging accessory for mounting one SB6r inside a wall or a ceiling.



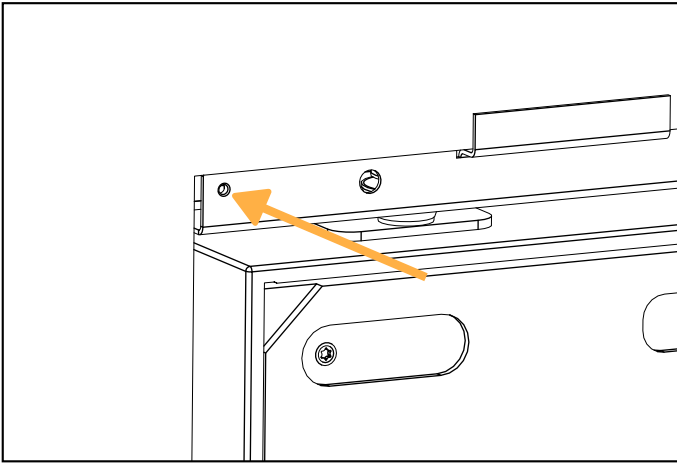
SB6r-inW is secured to the drywall using the fixing clamps.



SB6r-inW is provided with a tether for secondary safety.



An insert is available on both elements of SB6r-inW to secure the secondary safety tether and the tether of SB6r-Screen.

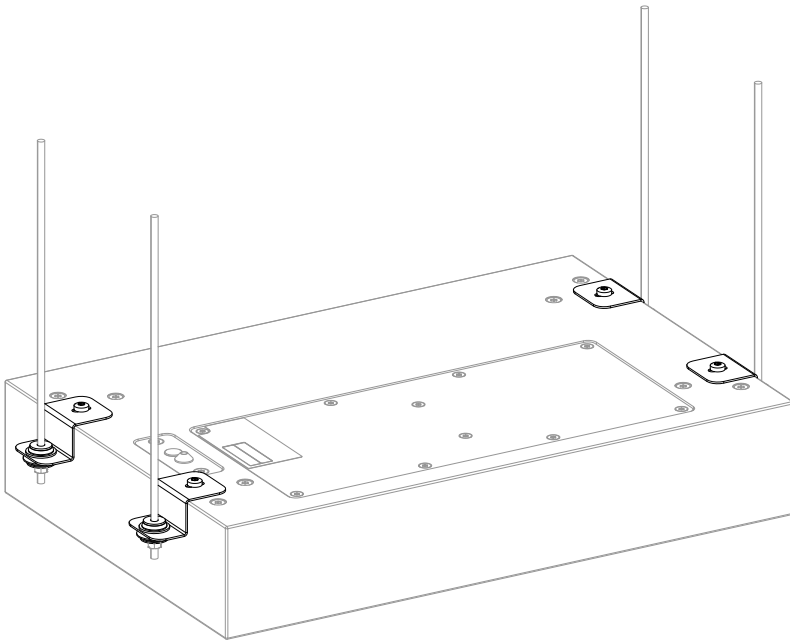


## SB6r-inC

SB6r-inC is a rigging kit for mounting one SB6r in a ceiling. It is composed of:

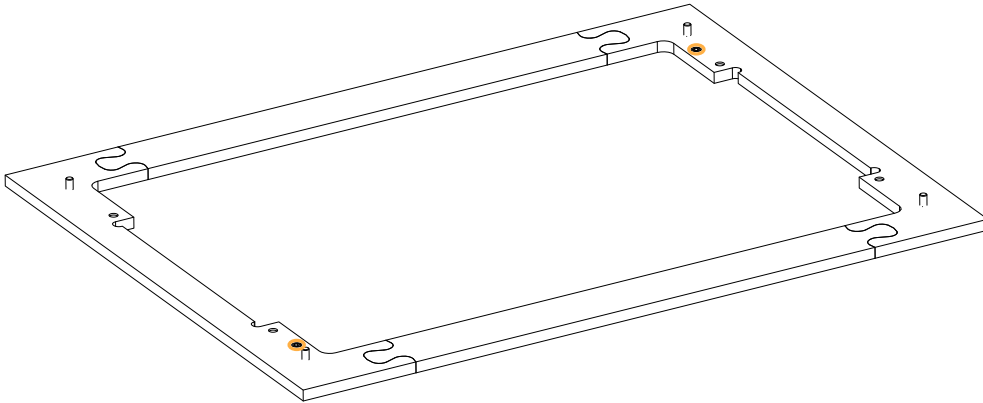
- four rigging brackets
- a plastic frame
- two positioning bracket tools

The four rigging brackets are used to secure SB6r to the main ceiling using threaded rods.



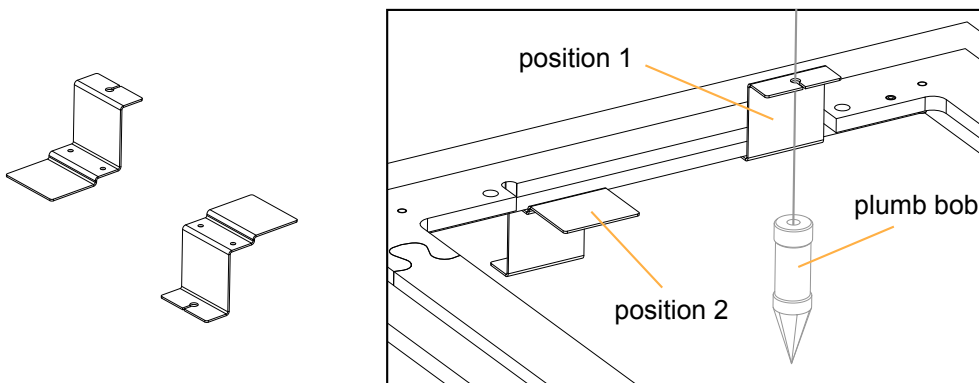
The plastic frame is composed of four parts and is used to secure SB6r-Screen.

Two inserts are available to secure the tether of SB6r-Screen.

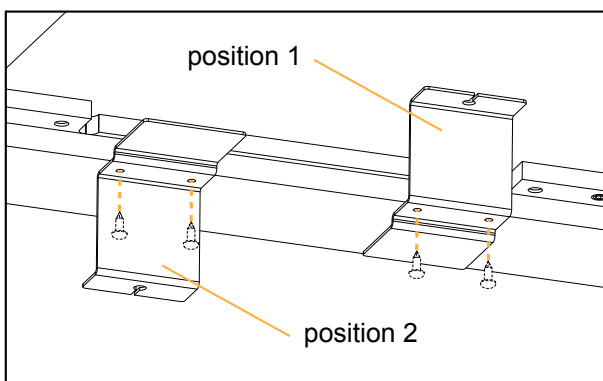


The bracket tools can be used in two positions:

- position 1: to position the threaded rods on the main ceiling, using a plumb bob
- position 2: to adjust the height of the enclosure when mounted to the threaded rods



The bracket tools can be temporarily fixed to the drywall ceiling using two drywall or wood screws.

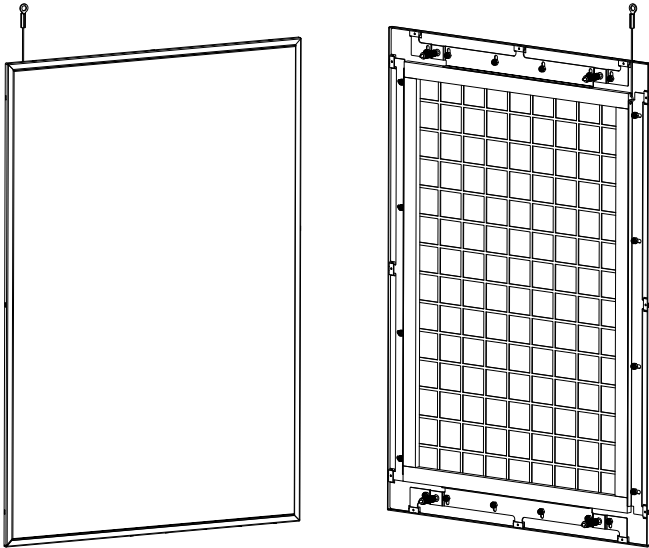


## SB6r-Screen

SB6r-Screen is an acoustically transparent screen for in-wall or in-ceiling configurations with SB6r and SB6r-inW or SB6r-inC. SB6r-Screen is secured to the assembly using four barbed push fasteners.

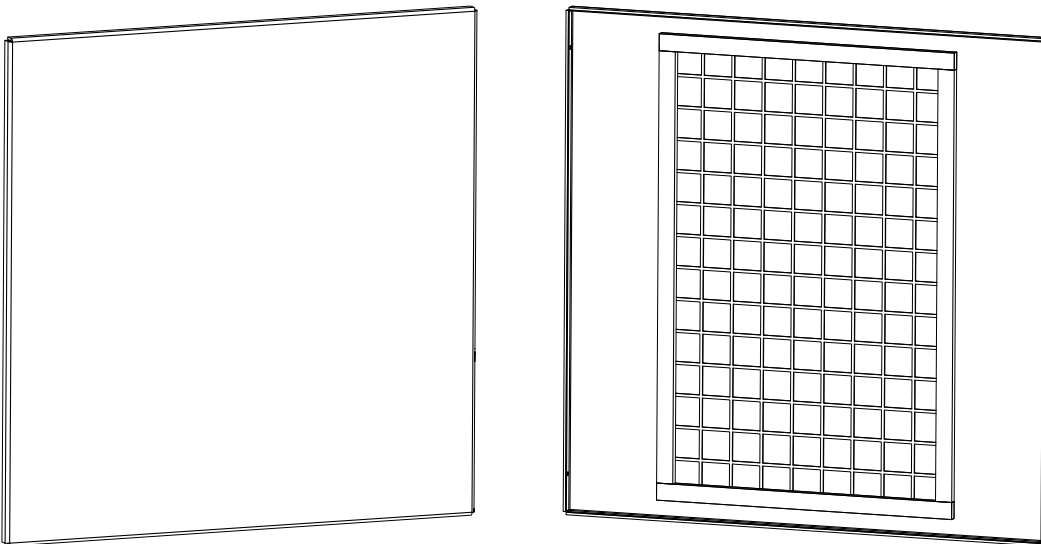
SB6r-Screen can be secured to the rigging accessory using the tether and the provided M4x12 Torx screw for additional safety.

Four longer barbed push fasteners are provided for configurations in thicker ceilings. To replace them, refer to [APPENDIX C: Replacing SB6r-Screen barbed push fasteners](#) (p.54).



## SB6r-Tilescreen

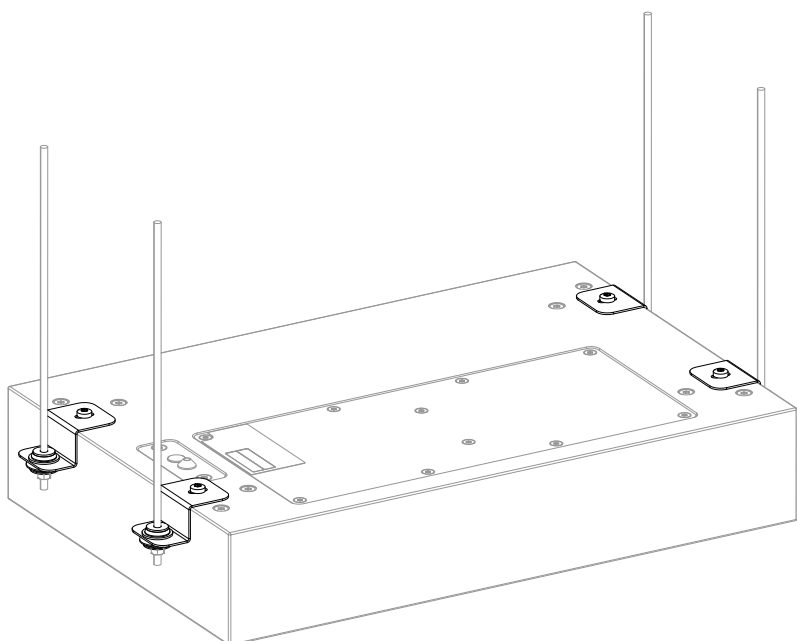
SB6r-Tilescreen is an acoustically transparent screen for configurations in ceiling tiles with SB6r.



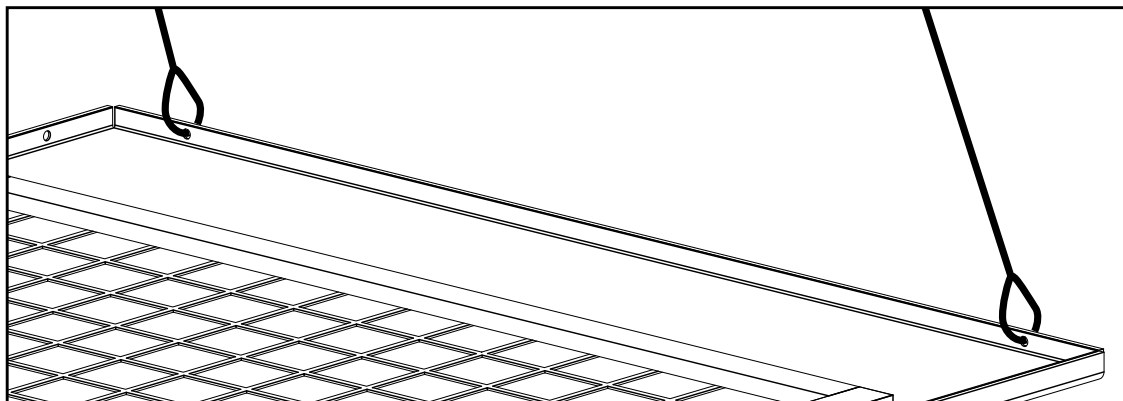
SB6r-Tilescreen is only compatible with 600x600 mm (2x2 ft) tiles (European standard).



SB6r-Tilescreen is provided with four rigging brackets to secure SB6r to the main ceiling using threaded rods.



Eight holes are available on the sides of SB6r-Tilescreen for secondary safety.






## Mechanical safety

The SB6r rigging system complies with EN 62368-1: 2014 Audio/video, information and communication technology equipment — Part 1: Safety requirements.

The deployments described in this manual achieve a safety factor of **5**.

### SB6r

| configuration | rigging accessory      | safe/maximum limit |
|---------------|------------------------|--------------------|
| in-wall       | SB6r-inW + SB6r-Screen | 1                  |
| in-ceiling    | SB6r-inC + SB6r-Screen |                    |
| in-tile       | SB6r-Tilescreen        |                    |

- 
**Risk of overloading the drywall**  
 When implementing a recessed system in a drywall, make sure to respect the country's standards related to loads in a drywall.
- 
**Risk of tearing the drywall**  
 The recessed system should always be implemented in a straight drywall.
- 
**Risk of overloading the suspended ceiling**  
 When implementing one or multiple SB6r-Tilescreen, make sure to respect the country's standards related to suspended ceilings.  
 SB6r-Tilescreen weight: 2.3 kg / 5.1 lb

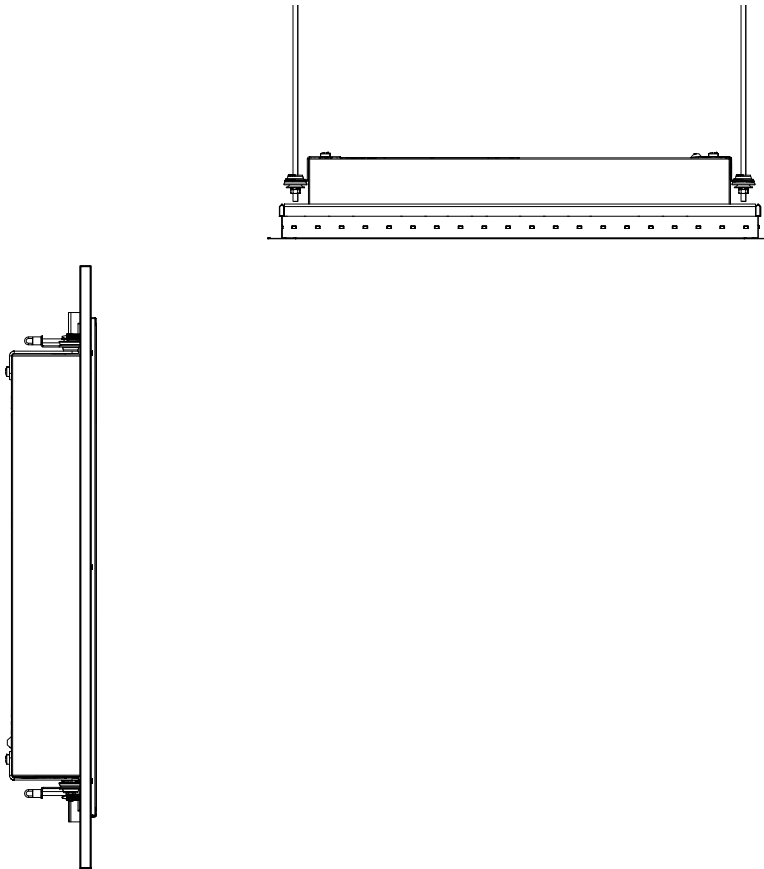
# Loudspeaker configurations

## SB6r in standard configuration

Deployed in a standard configuration, an SB6r system operates with an omnidirectional directivity pattern over the nominal bandwidth of the SB6r enclosure.

The [SB6\_60], [SB6\_100], and [SB6\_200] factory presets provide the subwoofer system with an upper frequency limit at 60 Hz, 100 Hz, and 200 Hz respectively, in order to optimize the acoustic coupling with a main full-range system.

The SB6r subwoofer is driven by the LA2Xi / LA4X / LA7.16i / LA12X amplified controllers.



| Preset                       | [SB6_60] | [SB6_100] | [SB6_200] |
|------------------------------|----------|-----------|-----------|
| Low frequency limit (-10 dB) | 29 Hz    | 29 Hz     | 32 Hz     |



### Delay values

When combining a line source with subwoofers, delays may have to be added to the presets. Refer to the Preset Guide to obtain the pre-alignment delay values.

# Rigging procedures

## Tools

---

Before rigging this product, make sure all the tools listed are available. References are given for FACOM® products in this table. Other manufacturers can be used.

| <b>name</b>                     | <b>reference</b>     | <b>distributor</b> |
|---------------------------------|----------------------|--------------------|
| set of 6-point 1/4" sockets     | RL.NANO1 / R.360NANO | FACOM              |
| torque screwdriver (2 - 10 N.m) | A.404                | FACOM              |
| level                           | -                    | -                  |
| plumb bob                       | -                    | -                  |
| electric drill                  | -                    | -                  |
| trim clip removal pliers        | -                    | -                  |

## Mounting SB6r in a wall with SB6r inWall

|                          |   |
|--------------------------|---|
| type of deployment       | wall-mounting   |
| rigging accessories      | SB6r inWall, including: <ul style="list-style-type: none"> <li>• SB6r enclosure</li> <li>• SB6r-inW rigging accessory</li> <li>• SB6r-Screen</li> <li>• cardboard cutting template</li> </ul> |
| additional material      | 8 M6x20 Torx screws (provided)  |
|                          | 1 M4x12 Torx screw (provided)   |
|                          | secondary safety tether (provided)  |
| tools                    | torque screwdriver  |
|                          | T30 Torx bit  |
|                          | T20 Torx bit  |
|                          | 4 mm hex bit  |
| min. number of operators | 1   |



### Use reinforcements on the drywall for supporting the enclosure assembly.

As reinforcement, use either a second layer of drywall, or wooden battens or panels.

The total thickness of the drywall and its reinforcement should not be more than 30 mm / 1.2 in.

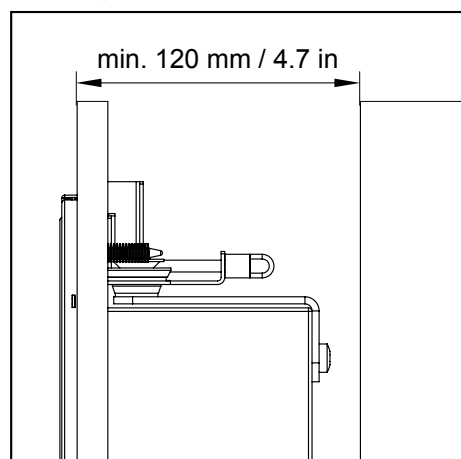


### Secondary safety for in-wall configurations

Use the provided tether to implement a secondary safety.



120 mm / 4.7 in of room are required between the main wall and the secondary wall to install the enclosure assembly.

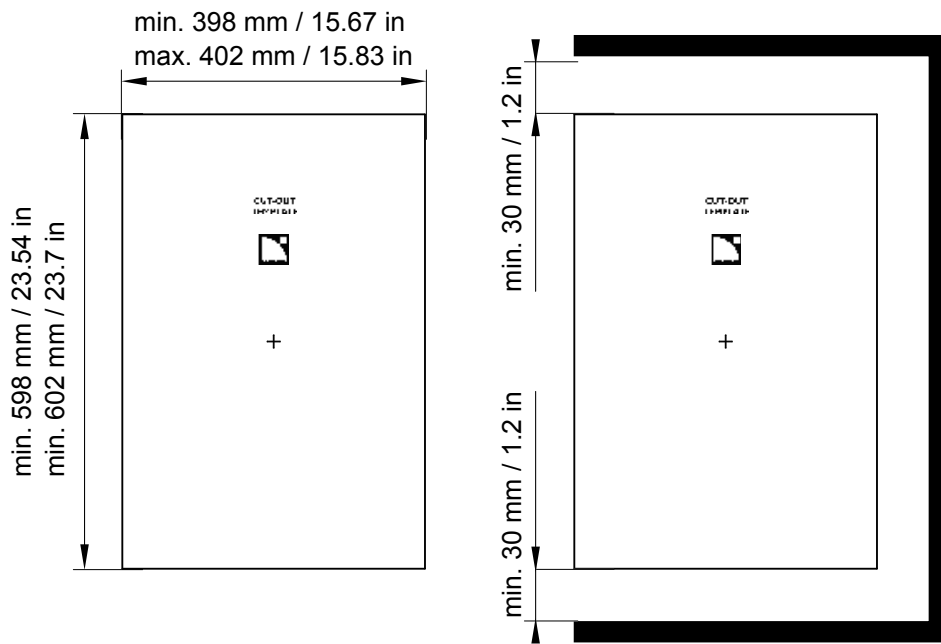


## Assembly

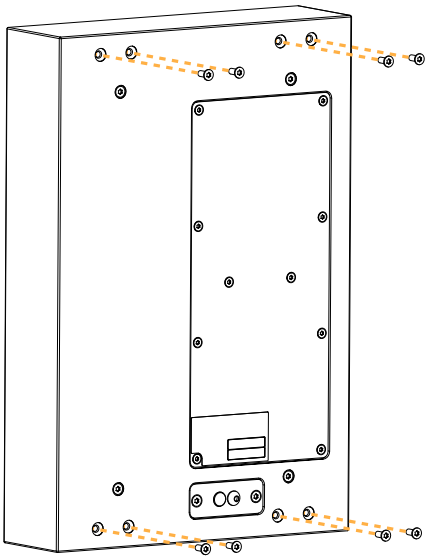
### Procedure

**1.** Cut the drywall.

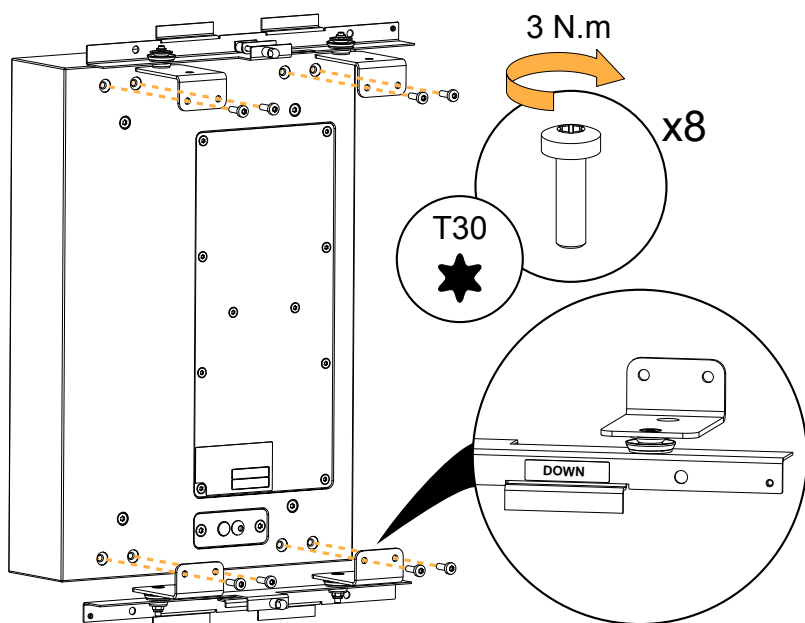
Use the cardboard template provided with SB6r-Screen as a reference.



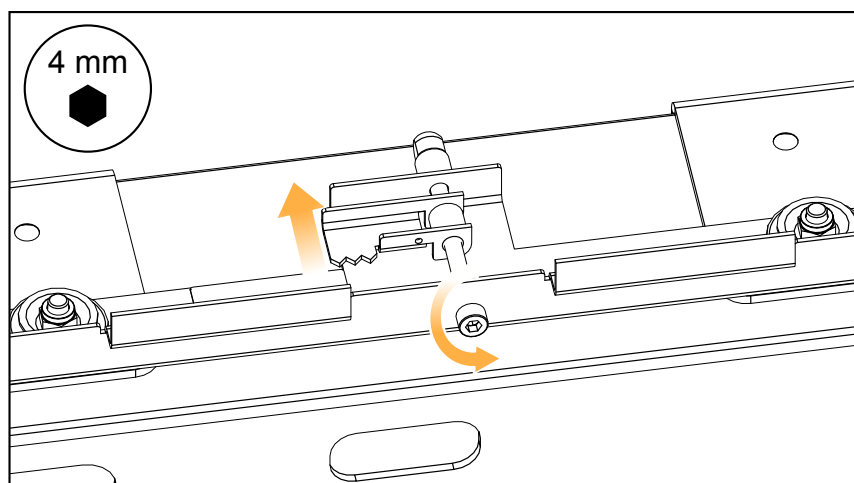
**2.** Remove the placeholder screws from the enclosure.



- Secure SB6r-inW to the enclosure using the M6x20 Torx screws.

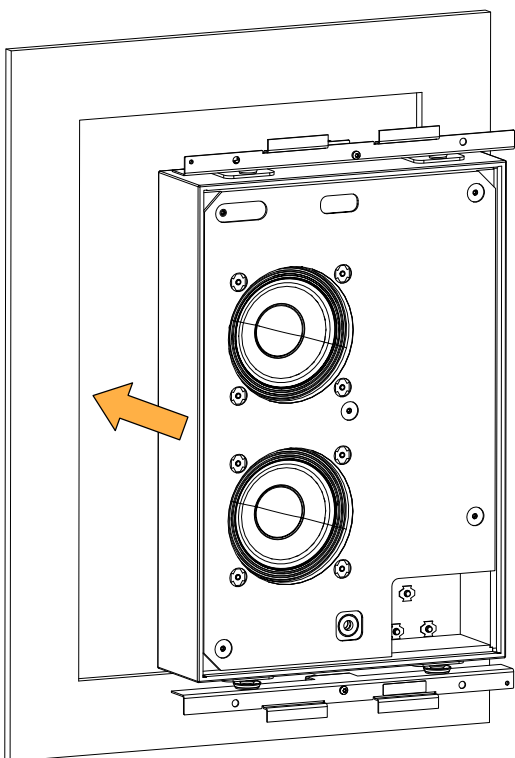


- Unscrew the clamp screws until there is enough space for the drywall between the clamps and the front of the accessory.

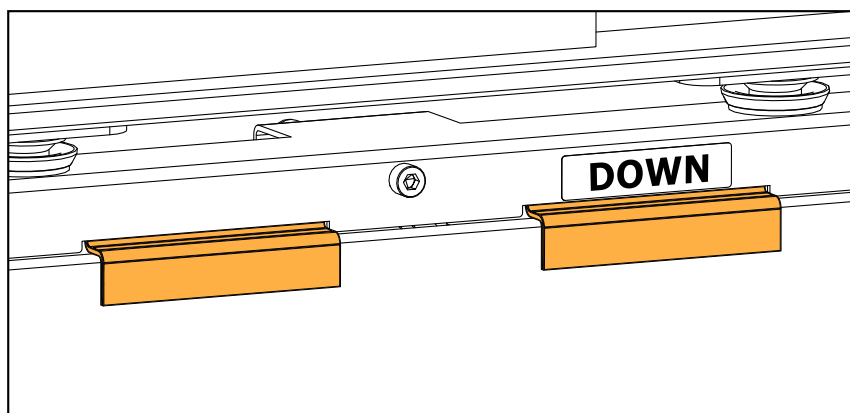


- Prepare the cabling. Refer to [Cabling SB6r](#) (p.43).

6. Position the enclosure assembly in the drywall cutout.



7. Secure the enclosure assembly to the drywall.
  - a) Position the bottom element against the drywall.  
Make sure the element is aligned with the drywall.



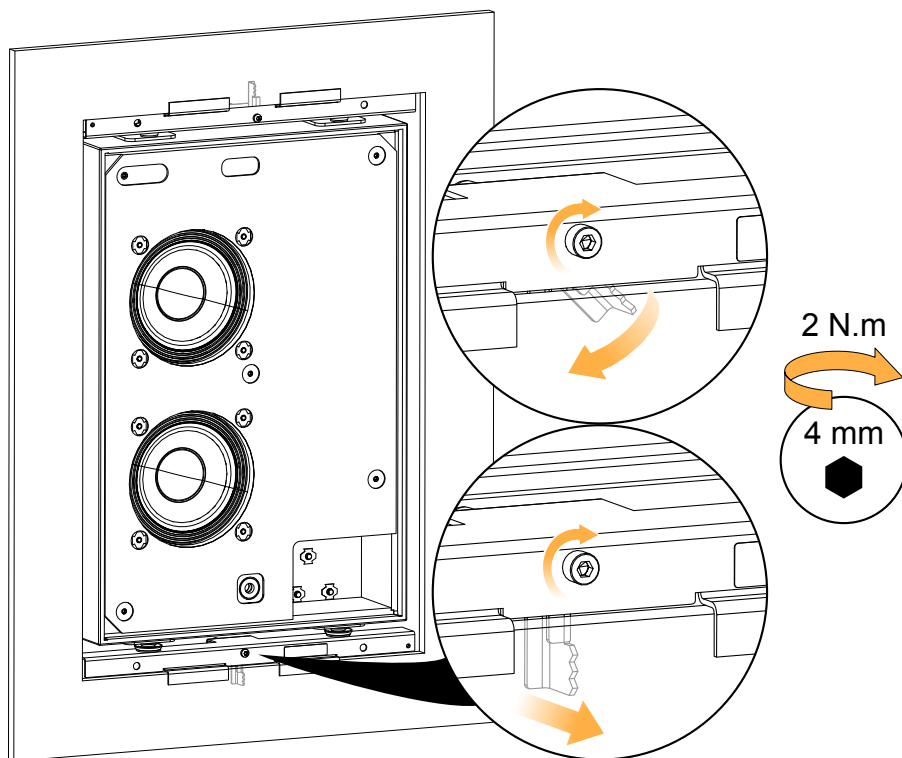


- b) Tighten the screw of the bottom element to rotate the clamps until the element is tightly secured against the drywall.

**Risk of damage**

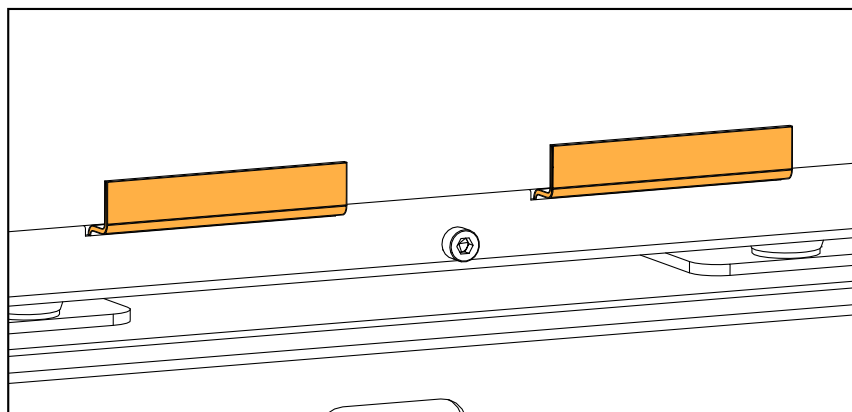
Do not apply more than the indicated torque.

Support the enclosure assembly and hold the bottom element in place against the drywall cutout while tightening the clamps.



- c) Pull the top element and position it against the drywall.

Make sure the element is aligned with the drywall.



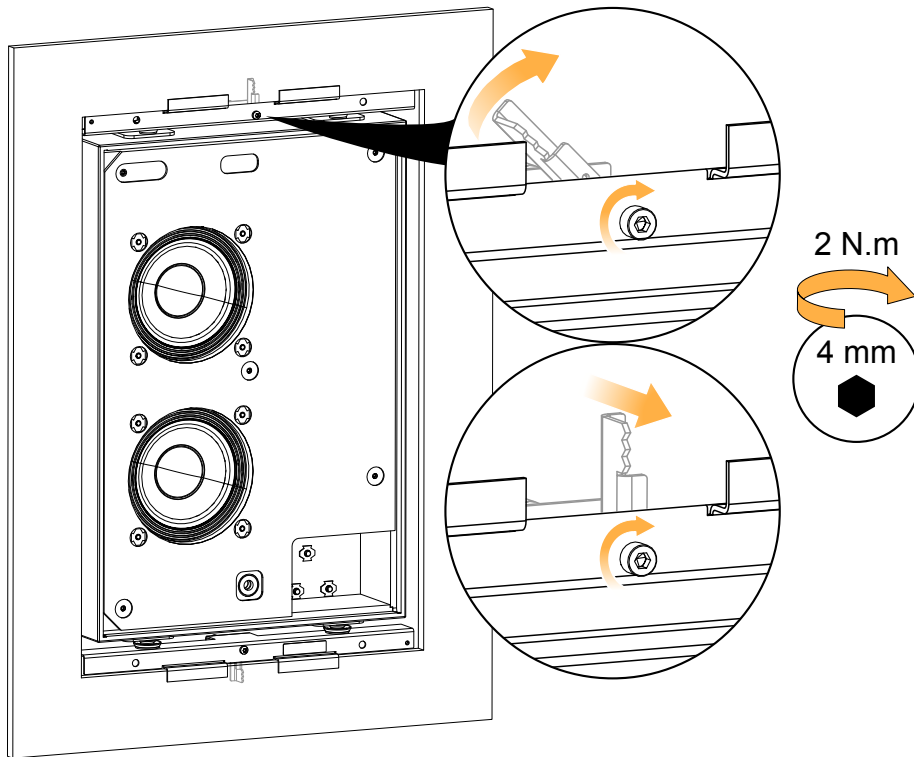
d) Tighten the screw of the top element to rotate the clamps until the element is tightly secured against the drywall.



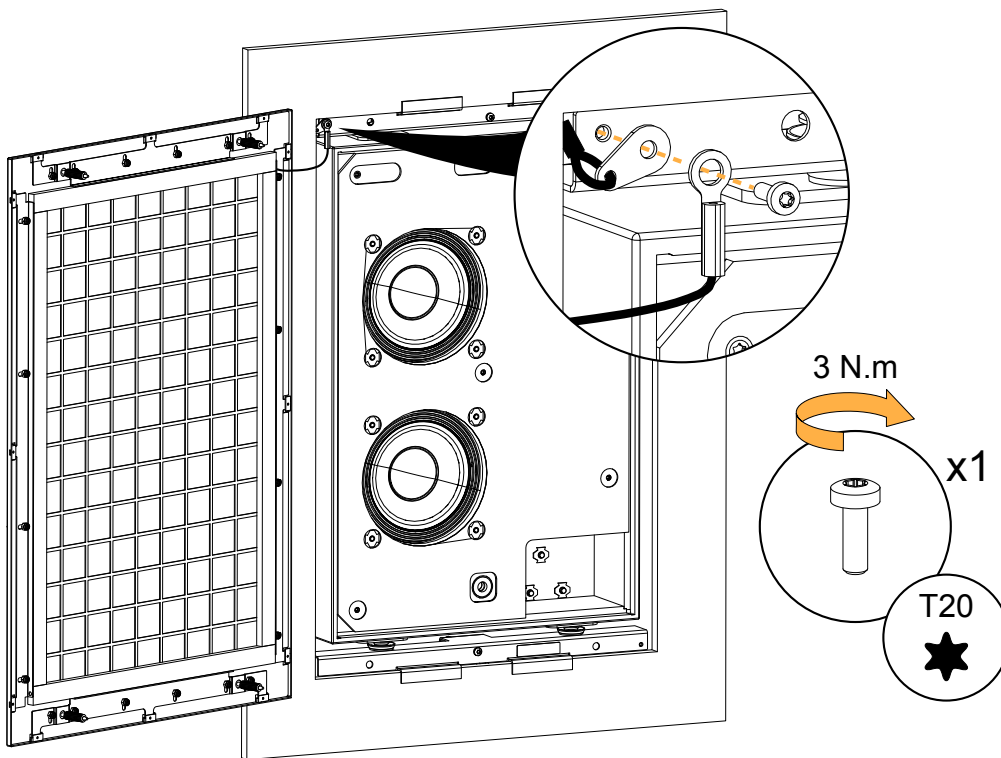
**Risk of damage**

Do not apply more than the indicated torque.

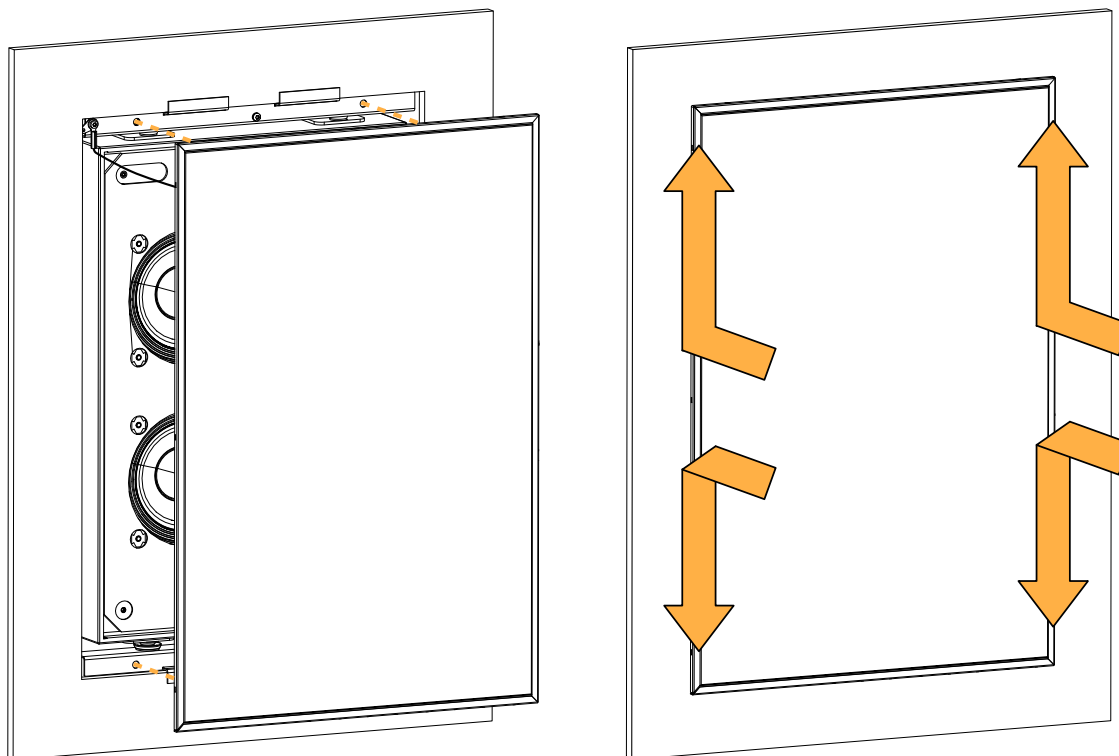
Support the enclosure assembly and hold the top element in place against the drywall while tightening the clamps.



8. Secure the secondary safety tether and the tether of the screen to the top element of SB6r-inW using the M4x12 Torx screw.



9. Align the barbed push fasteners with the SB6r-inW holes and push the screen into place.  
Press the screen around the frame from the center to the ends until the screen is fully pressed against the drywall.



### What to do next

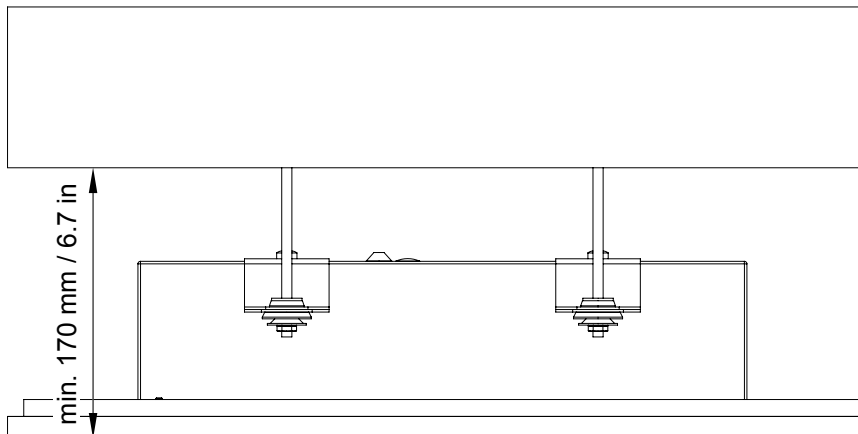
If SB6r-Screen needs to be removed, use trim clip removal pliers to remove the barbed push fasteners from SB6r-inW.

## Mounting SB6r in a ceiling with SB6r inCeiling

|                          |  |
|--------------------------|--|
| type of deployment       | ceiling-mounting   |
| rigging accessories      | SB6r inCeiling, including: <ul style="list-style-type: none"> <li>• SB6r enclosure</li> <li>• SB6r-inC 4 rigging brackets</li> <li>• plastic frame</li> <li>• SB6r-Screen</li> <li>• 2 set-up bracket tools</li> <li>• cardboard cutting template</li> </ul> |
| additional material      | 4 max. Ø6 mm / 0.24 in threaded rods   |
|                          | 8 corresponding nuts   |
|                          | 4 drywall or wood screws   |
|                          | 4 M6x16 Torx screws (provided)   |
|                          | 1 M4x12 Torx screw (provided)  |
| tools                    | torque screwdriver   |
|                          | T30 Torx bit   |
|                          | T20 Torx bit   |
| min. number of operators | 2  |

**i** SB6r-Screen is secured with barbed push fasteners compatible with drywall sheets up to 13 mm / 0.5 in thick. Additional barbed push fasteners are provided for drywall sheets up to 30 mm / 1.2 in thick. Refer to [APPENDIX C: Replacing SB6r-Screen barbed push fasteners](#) (p.54) for instructions on how to replace the barbed push fasteners.

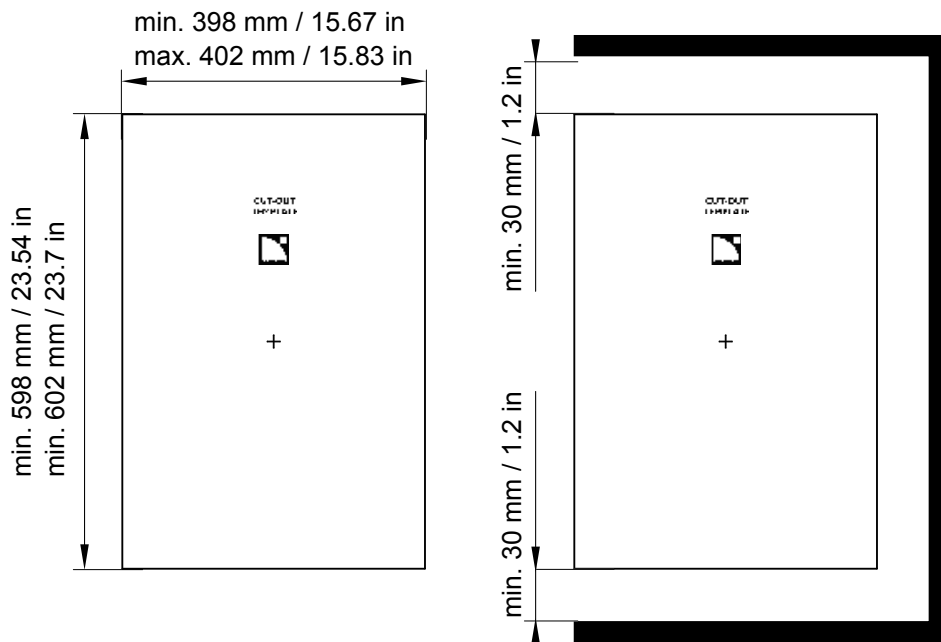
**!** 170 mm / 6.7 in of room are required between the main ceiling and the secondary ceiling to install the enclosure assembly.



## Assembly

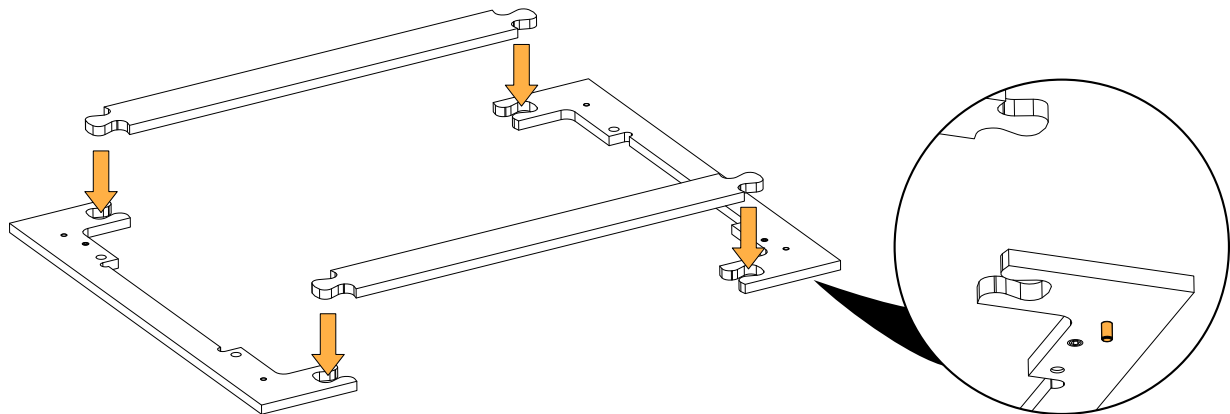
### Procedure

1. Cut the drywall ceiling. Refer to the provided template.  
Use the cardboard template provided with SBór-Screen.



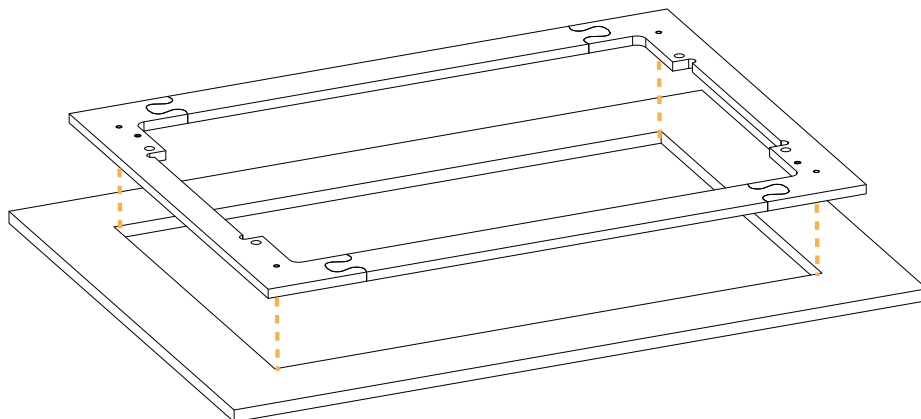
2. Pass the frame parts through the drywall cutout.
3. Assemble the frame.

Make sure the studs are oriented towards the drywall ceiling.



**4.** Fix the frame to the drywall:

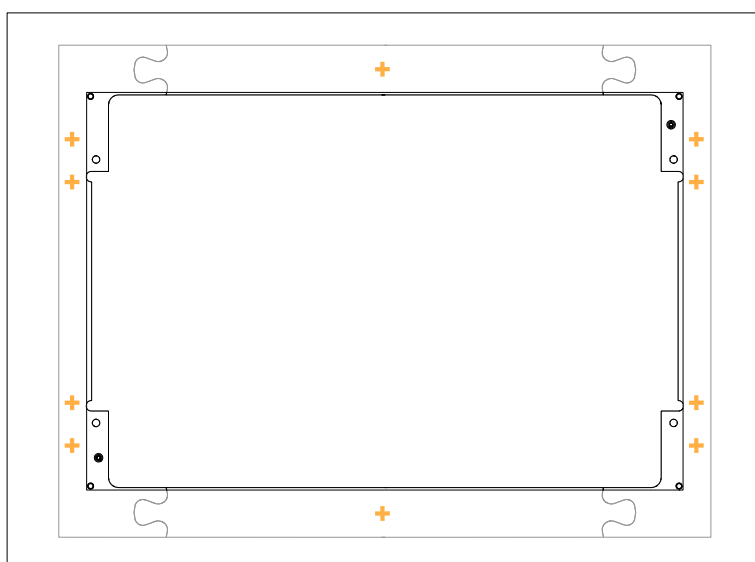
- a) Position the frame in the drywall cutout using the studs.



- b) Drill screws through the drywall and frame.

Hold the frame against the drywall when drilling.

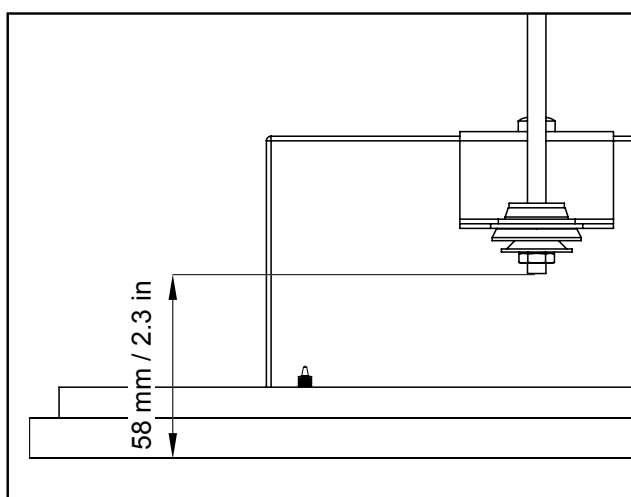
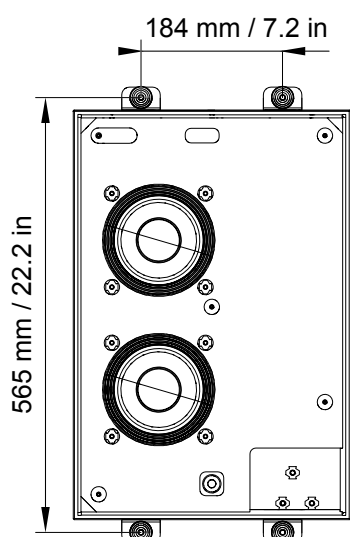
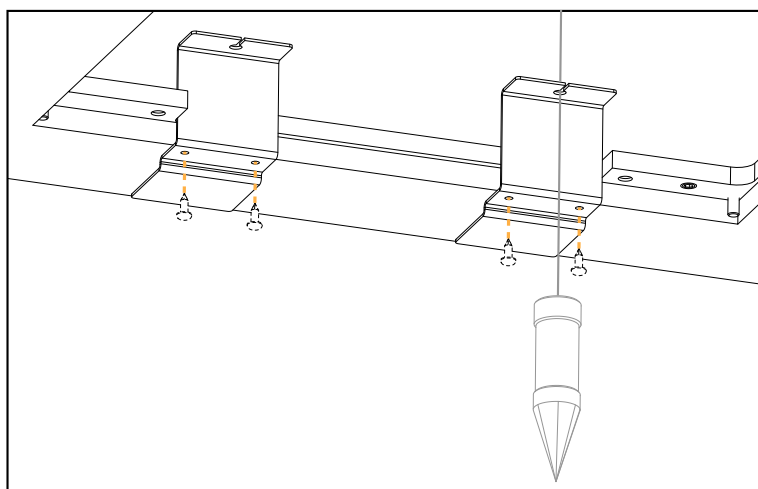
Use self-drilling screws. Adapt the screws length to the thickness of the drywall.



**5.** Secure the threaded rods to the main ceiling.

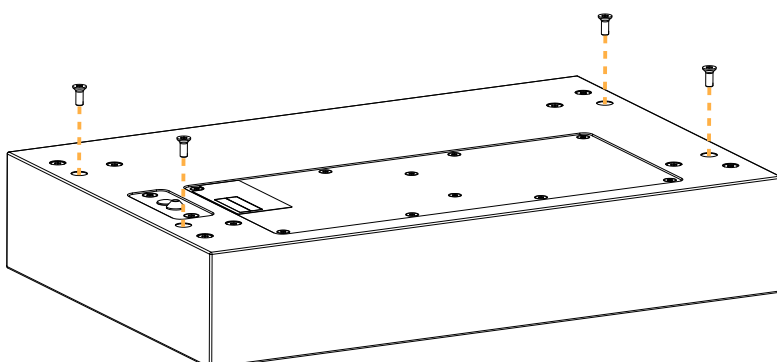
Use the provided bracket tools with a plumb bob to identify the desired position of the threaded rods on the main ceiling. The bracket tools should be positioned in each corner of the recess of the frame.

The bottom end of the threaded rods should be approximately at 58 mm / 2.3 in of the drywall.

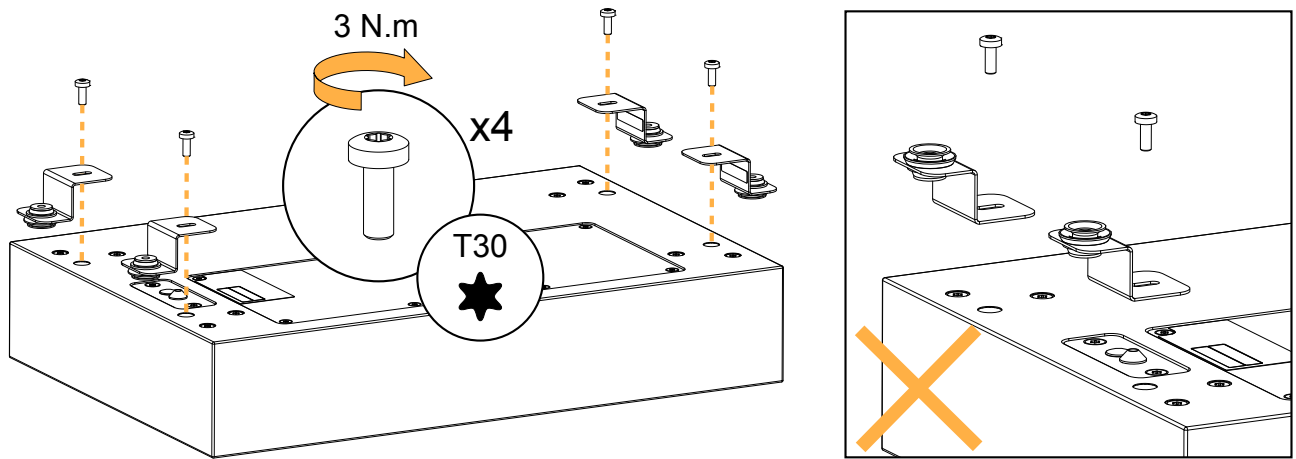


**6.** Prepare the cabling. Refer to [Cabling SB6r](#) (p.43).

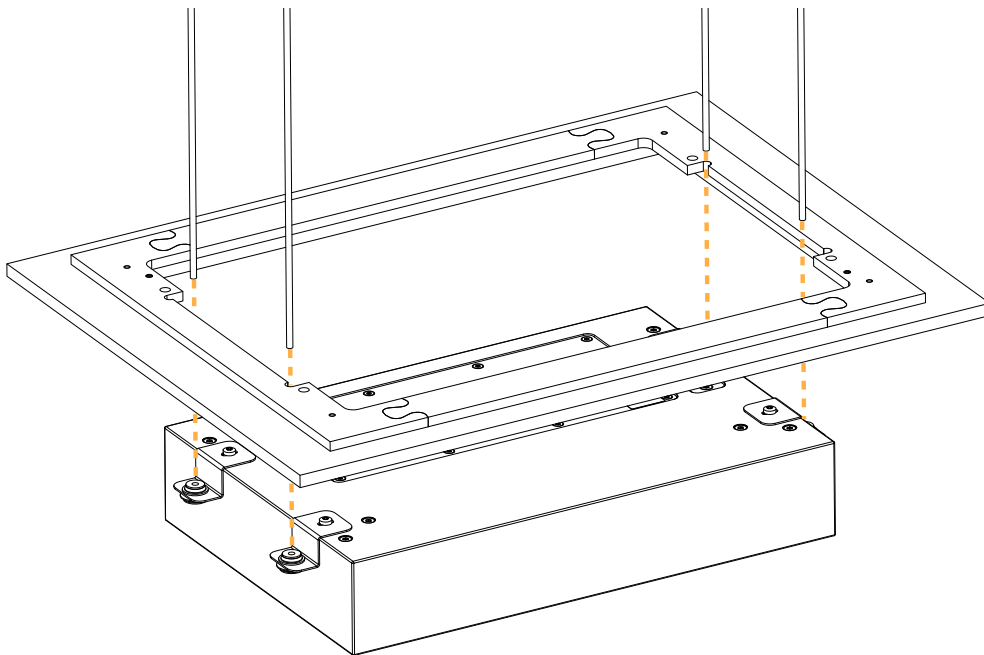
**7.** Remove the placeholder screws from the enclosure.



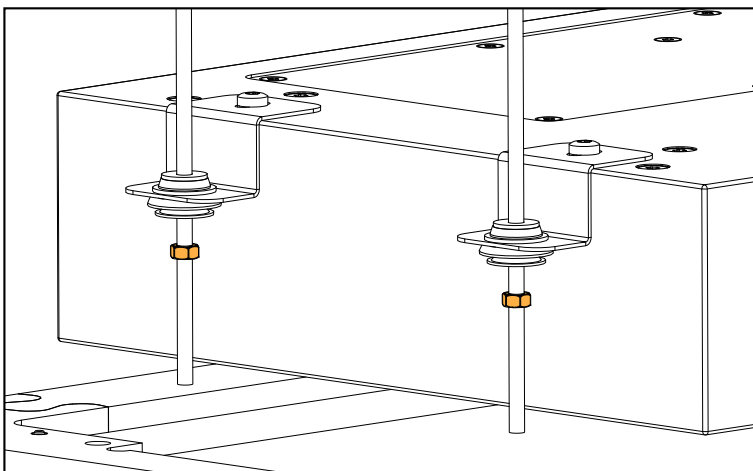
- 8.** Secure the rigging brackets to the enclosure using the M6x16 Torx screws.



- 9.** Insert the threaded rods in the enclosure assembly.

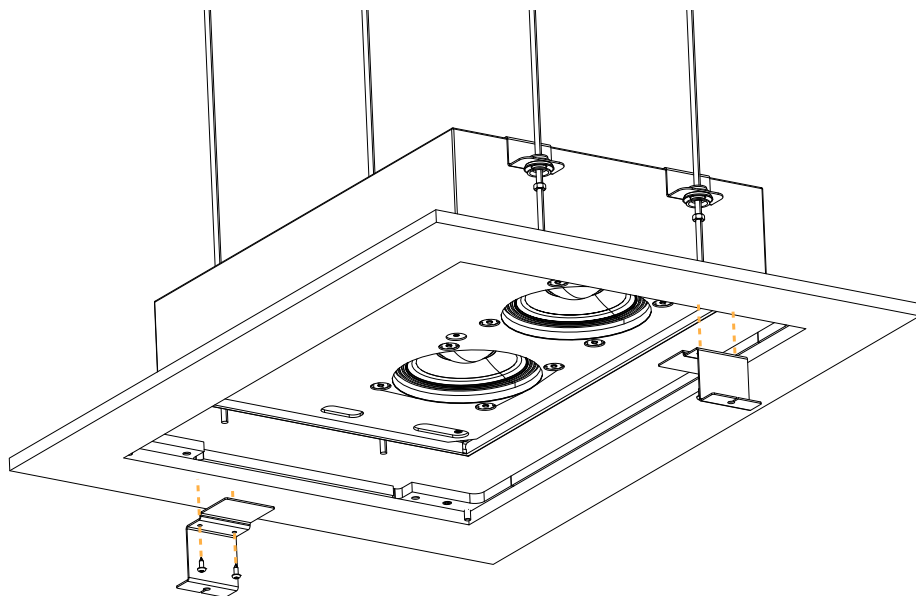


- 10.** Secure the enclosure assembly to the threaded rods using nuts.

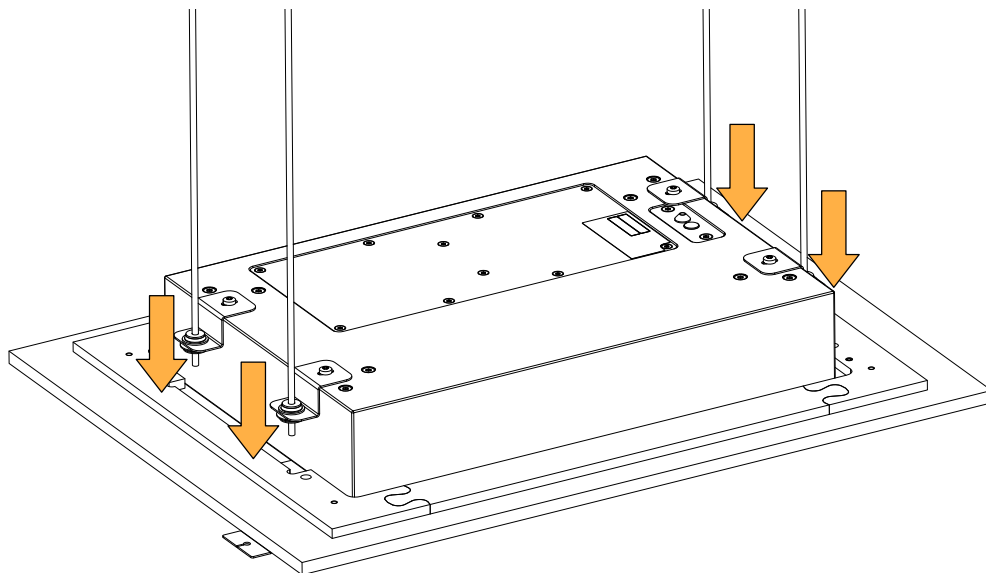




- 11.** Fix the two bracket tools to the drywall using screws for drywall or wood.

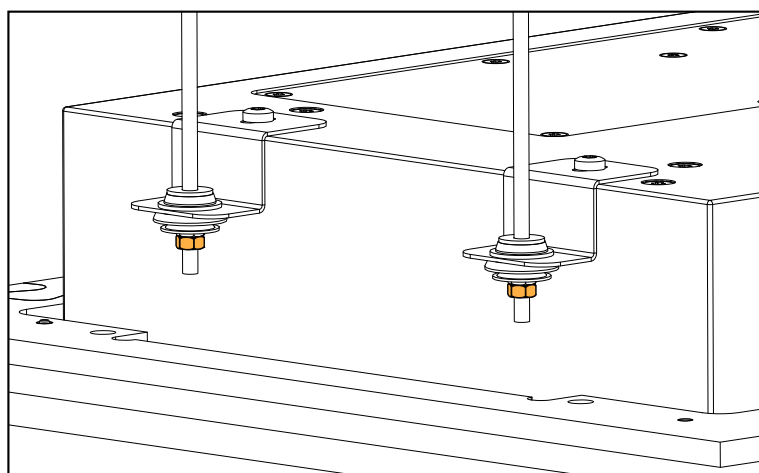


- 12.** Lower the enclosure assembly by moving down the nuts until the front touches the bracket tools.

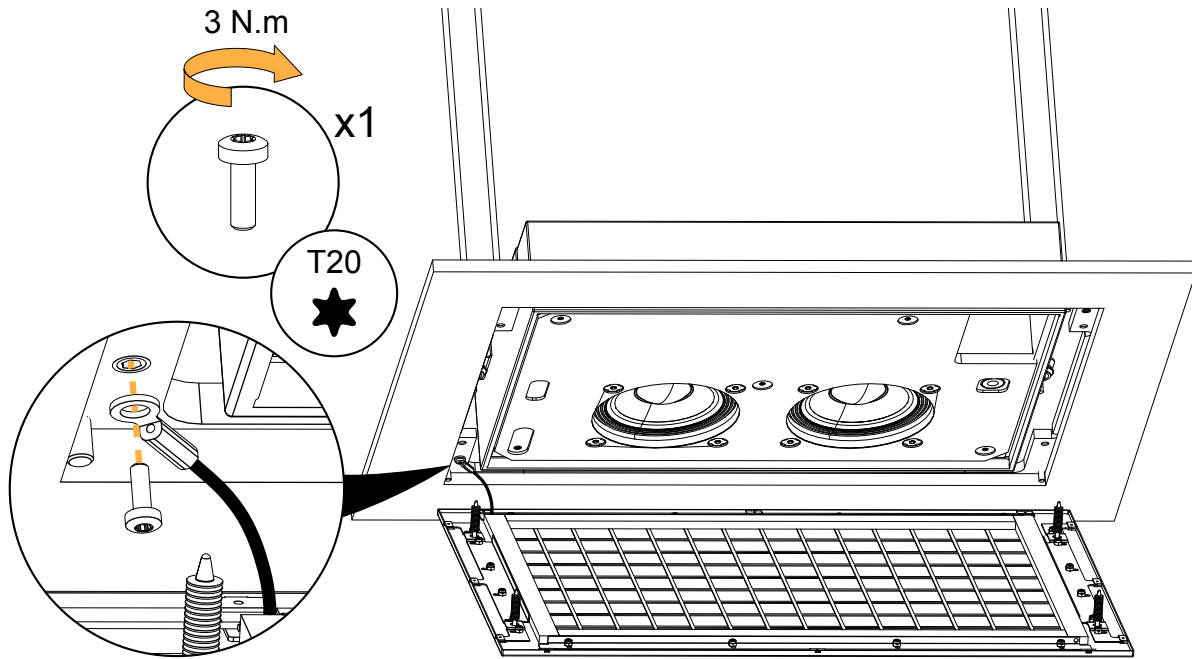


- 13.** Remove the two bracket tools from the drywall.

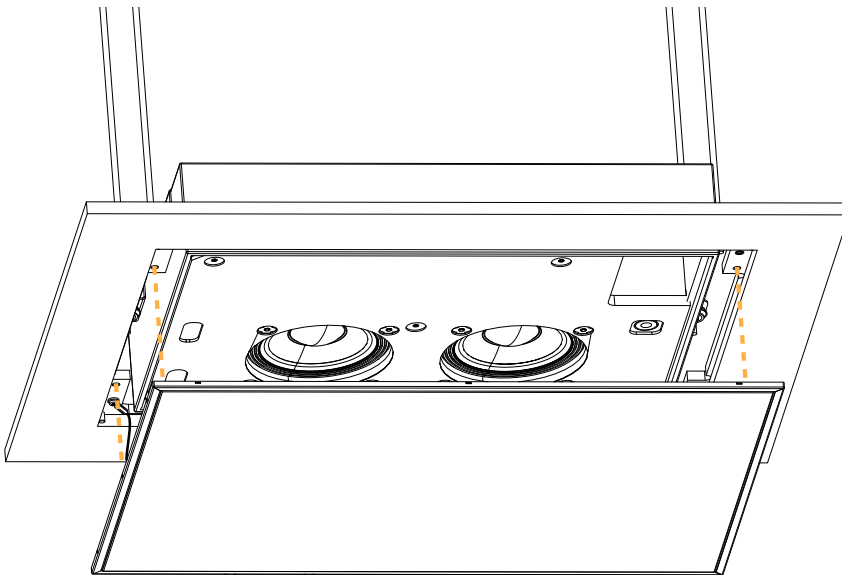
- 14.** Insert security nuts in the threaded rods and tighten them against the rigging nuts.



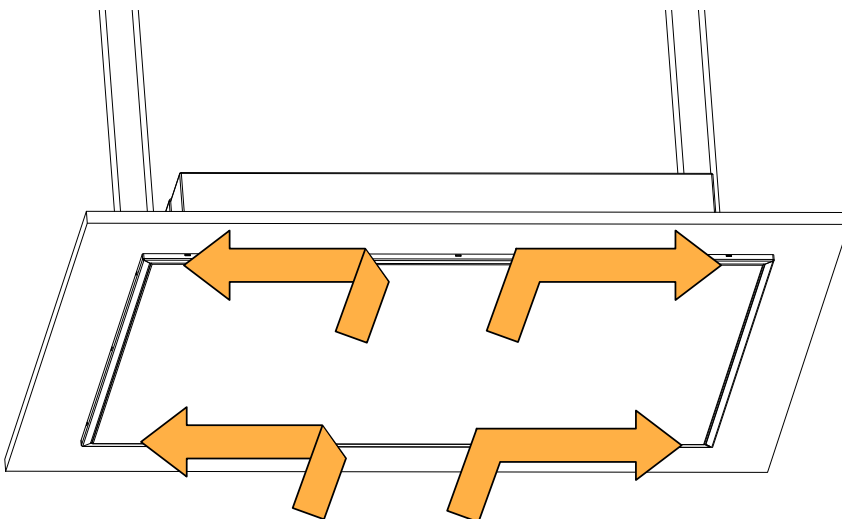
**15.** Secure the tether of the screen to the frame using the M4x12 Torx screw.



**16.** Align the barbed push fasteners with the frame holes and push the screen into place.



**17.** Press the screen from the center to the ends until the screen is fully pressed against the ceiling.



**What to do next**

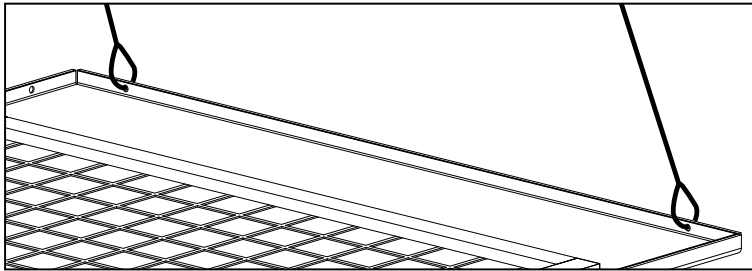
If SBór-Screen needs to be removed, use trim clip removal pliers to remove the barbed push fasteners from SBór-inC.

## Mounting SB6r in a ceiling tile with SB6r inTile

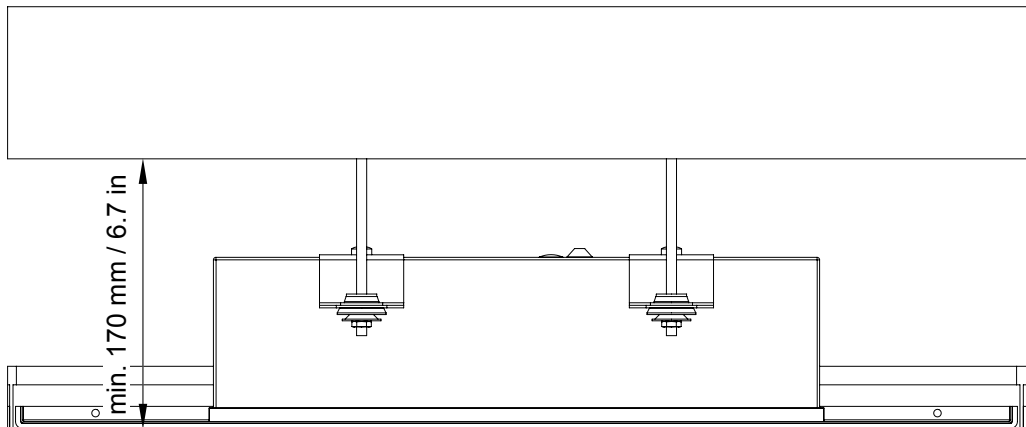
|                          |   |
|--------------------------|---|
| type of deployment       | ceiling-mounting  |
| rigging accessories      | SB6r inTile, including: <ul style="list-style-type: none"> <li>• SB6r enclosure</li> <li>• SB6r-Tilescreen</li> <li>• 4 rigging brackets</li> </ul> |
| additional material      | 4 max. Ø6 mm / 0.24 in threaded rods  |
|                          | 8 corresponding nuts  |
|                          | 4 M6x16 Torx screws (provided)  |
|                          | tethers for secondary safety  |
| tools                    | torque screwdriver  |
|                          | T30 Torx bit  |
| min. number of operators | 2   |

**!** SB6r-Tilescreen is only compatible with 600x600 mm (2x2 ft) tiles (European standard).

**!** **Secondary safety with SB6r-Tilescreen**  
Use the available holes to implement a secondary safety.



**!** 170 mm / 6.7 in of room are required between the main ceiling and the suspended ceiling to install the enclosure assembly.



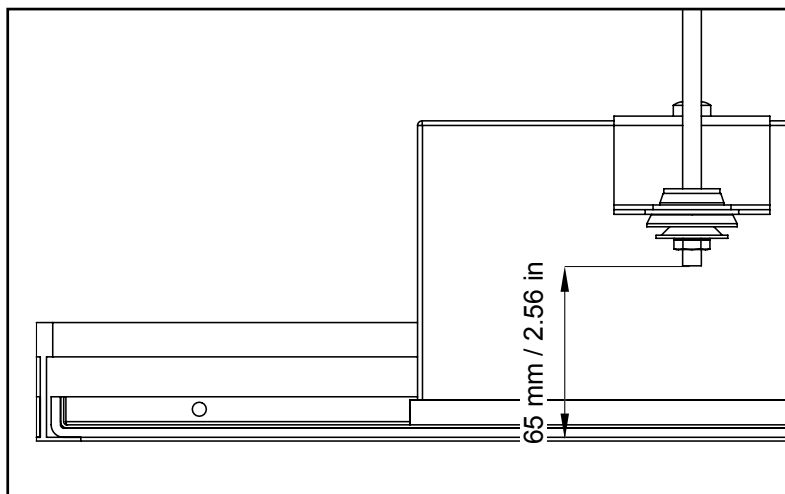
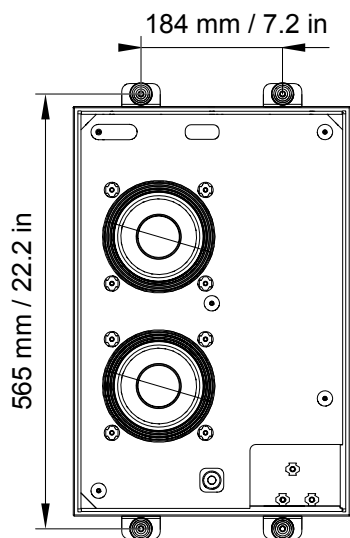
## Assembly

### Procedure

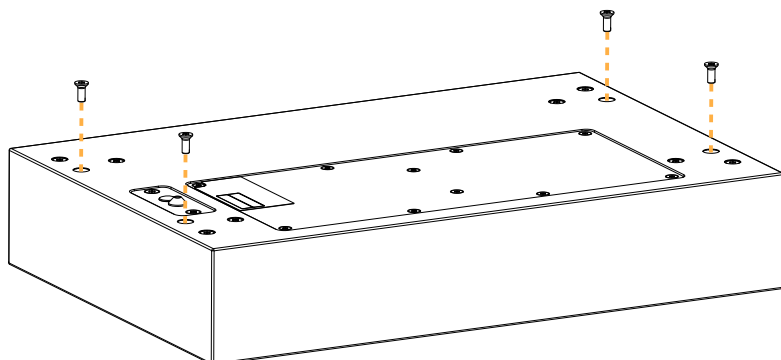
1. Secure the threaded rods to the main ceiling.

The enclosure assembly should be centered with the tile frame.

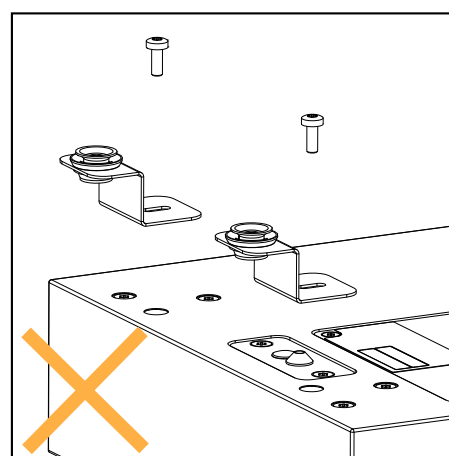
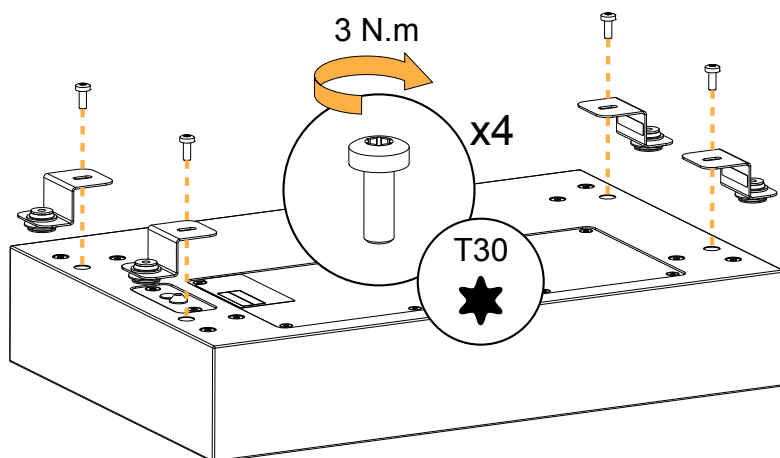
The bottom end of the threaded rods should be approximately at 65 mm / 2.56 in of the tile frame.



2. Remove the placeholder screws from the enclosure.

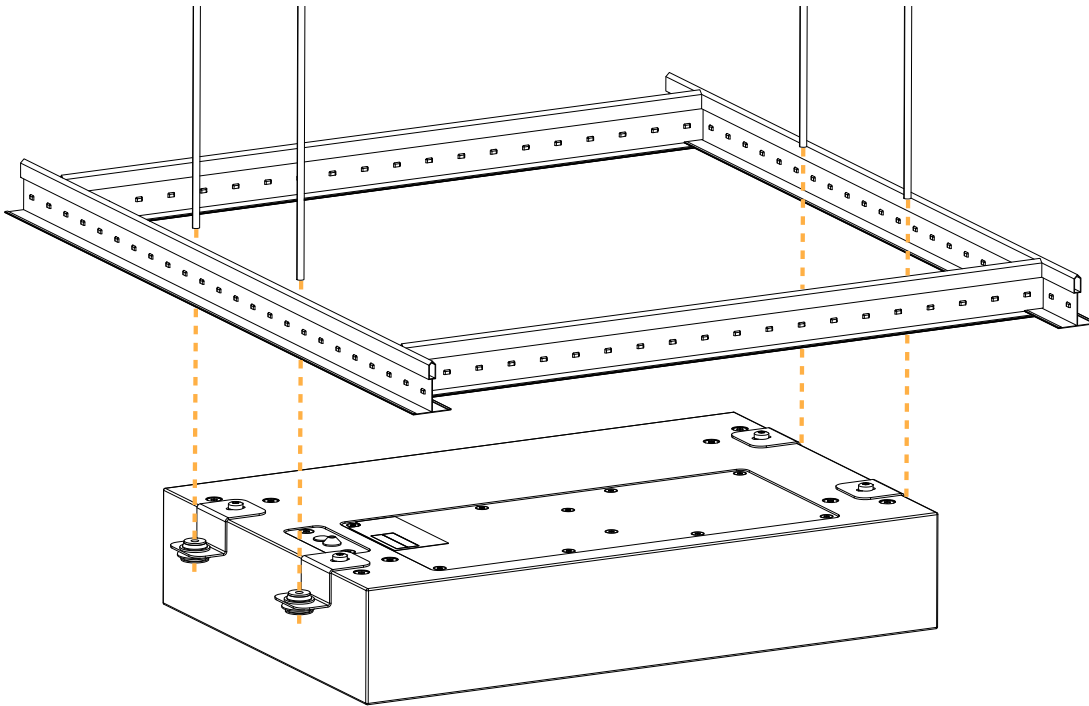


3. Secure the rigging brackets to the enclosure using the M6x16 Torx screws.

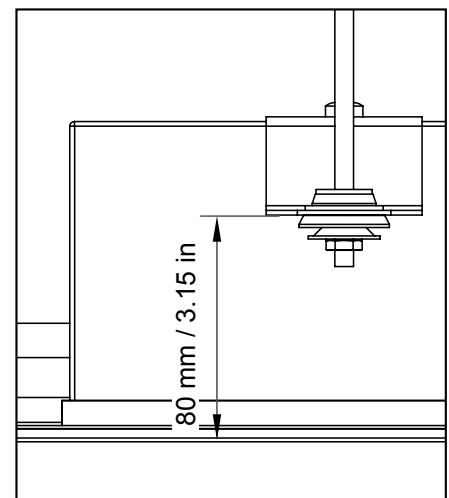
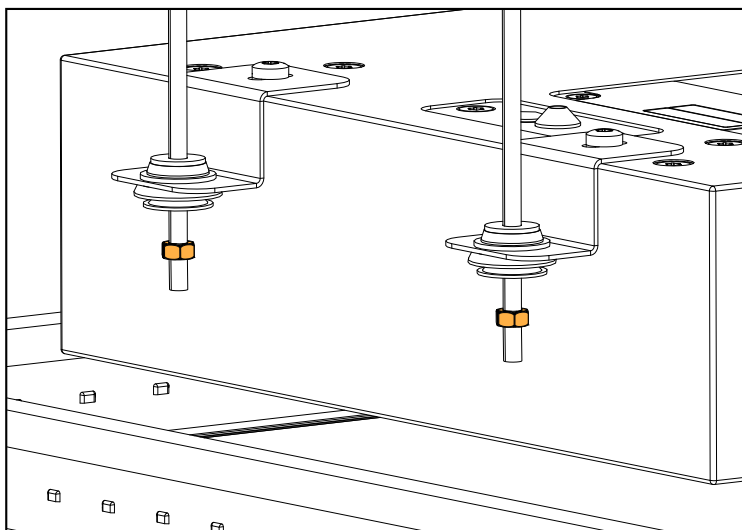


4. Prepare the cabling. Refer to [Cabling SB6r](#) (p.43).

- 5.** Insert the threaded rods in the enclosure assembly.

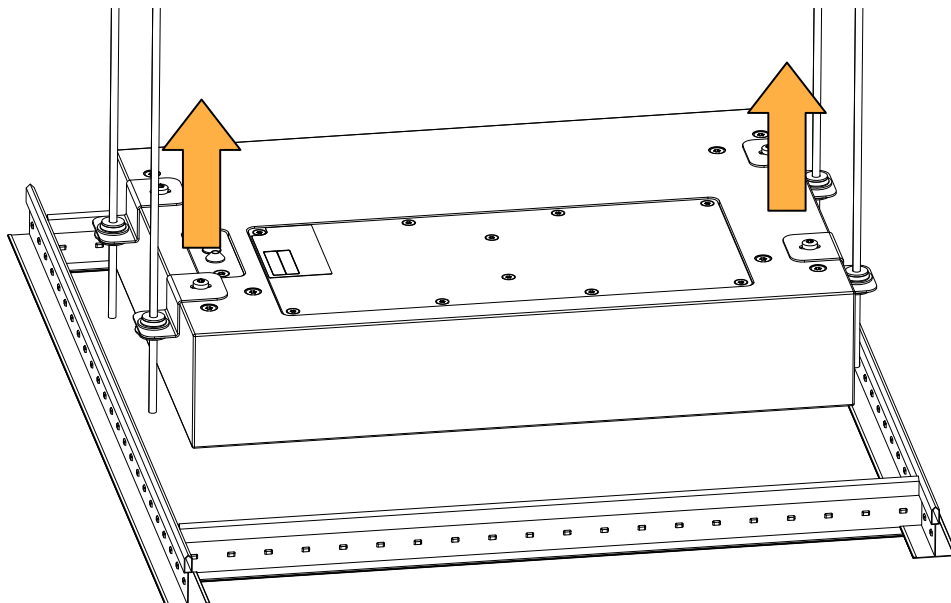


- 6.** Secure the enclosure assembly to the threaded rods using nuts.  
The rigging brackets should be at 80 mm / 3.15 in of the tile frame.



**7. Secure the screen:**

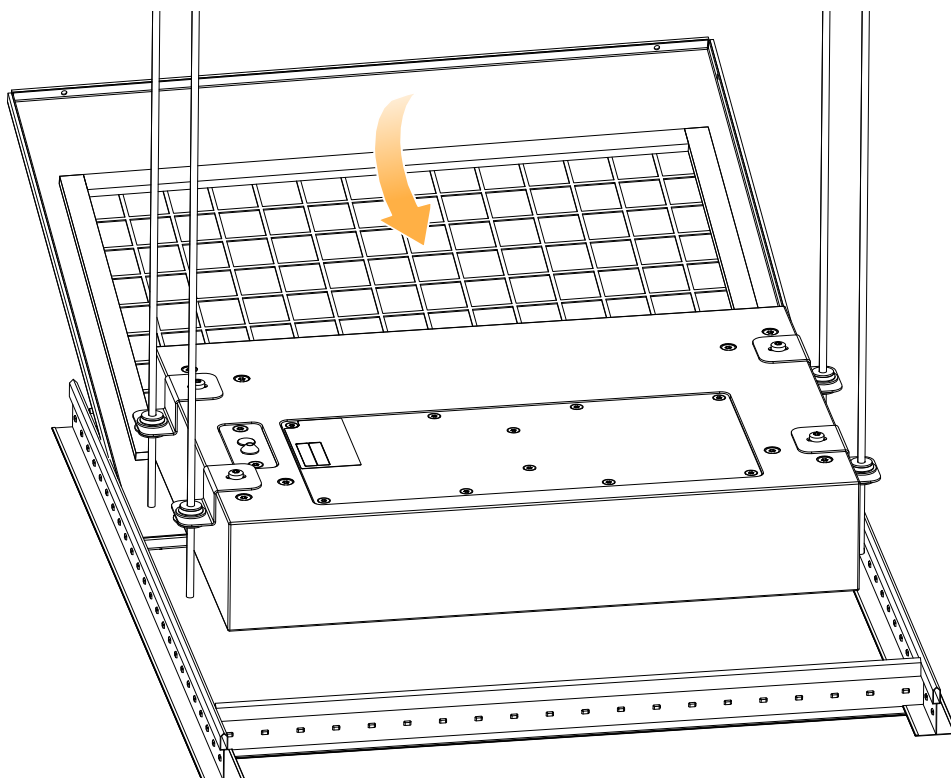
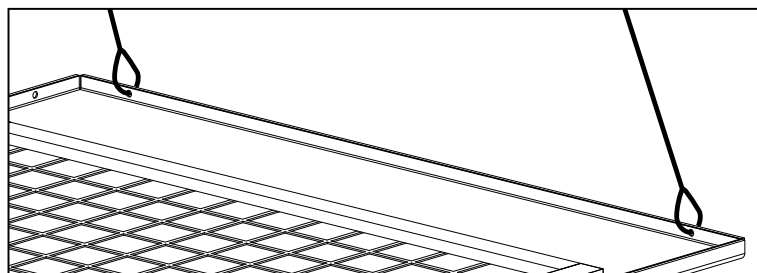
- a) Lift and hold the enclosure assembly.



- b) Slide the screen into place laterally from above the tile frame.

**Secondary safety with SB6r-Tilescreen**

Use the available holes to implement a secondary safety.



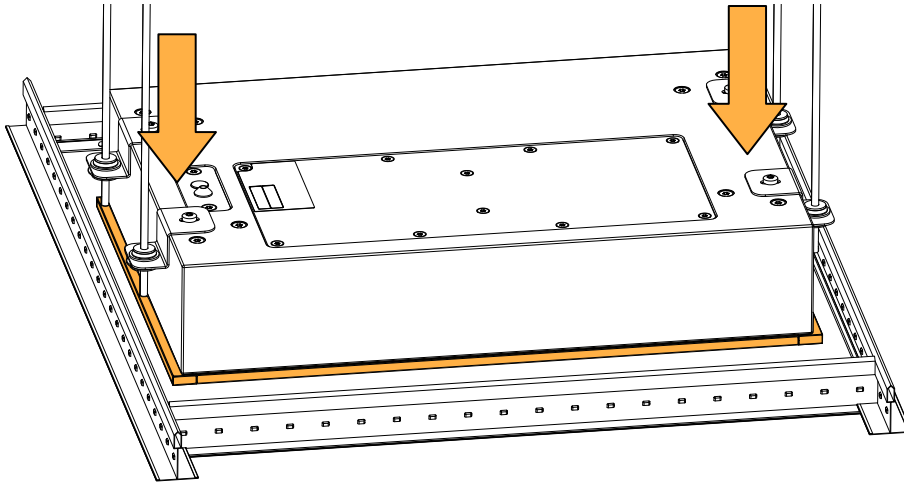
c) Lower the enclosure assembly until it rests on the nuts.

The front of the enclosure assembly should press on the screen gasket.

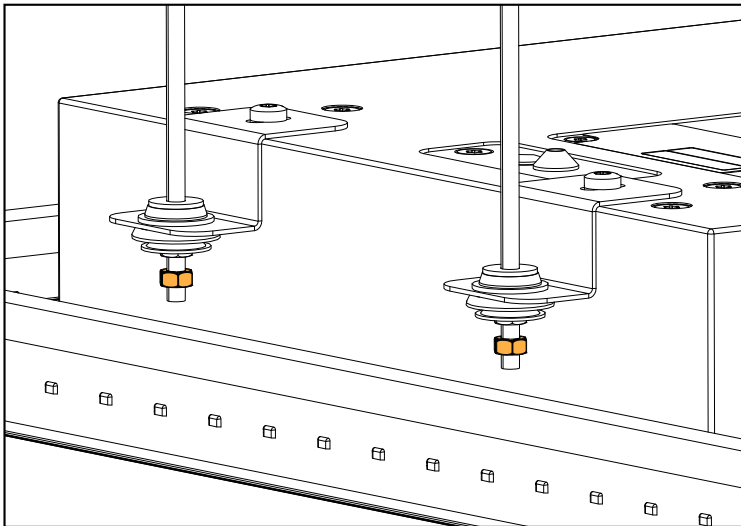


**Risk of overloading the suspended ceiling**

Do not let the enclosure assembly rest on SB6r-Tilescreen and the suspended ceiling.



**8.** Insert security nuts and tighten them against the rigging nuts.





## Connection to LA amplified controllers

**!** Refer to the **Amplification reference** technical bulletin for the latest information on compatibility with amplified controllers and cabling schemes for all enclosure types.

### Enclosure drive capacity per amplified controller

Make sure the total number of connected enclosures does not exceed the maximum number of enclosures per controller (refer to the footnotes).

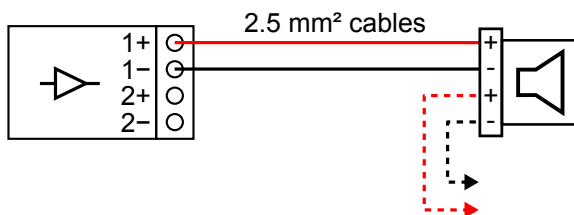
|      | <b>LA2Xi</b>                          | <b>LA4X</b>                           | <b>LA7.16i</b>                        | <b>LA12X</b>                          |
|------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
|      | <b>per output<sup>*</sup> / total</b> | <b>per output<sup>*</sup> / total</b> | <b>per output<sup>*</sup> / total</b> | <b>per output<sup>*</sup> / total</b> |
| SB6r | 1 / 4                                 | 1 / 4                                 | 1 / 16                                | 2 / 8                                 |

## Cabling schemes

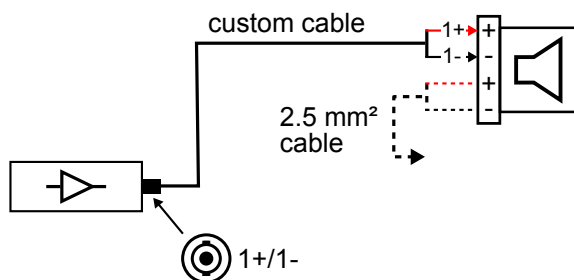
Refer to the cabling schemes to connect the enclosures to different types of output configurations.

**!** Refer to the cable manufacturer documentation for the wire color code.

### Terminal block output (LA2Xi SE / LA7.16i)

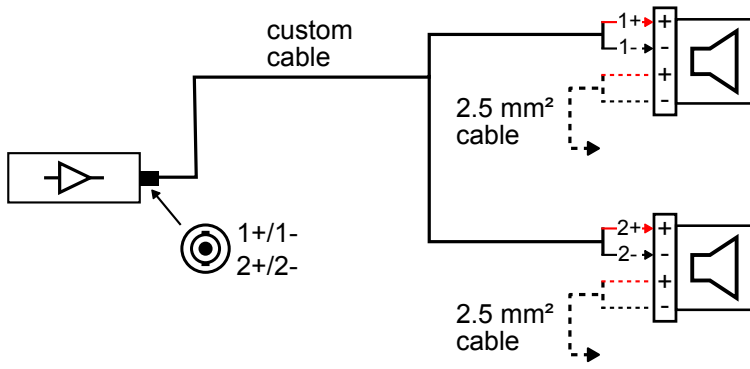


### One-channel speakON output



\* For passive loudspeakers, the value corresponds to the number of enclosures in parallel on the output. For active loudspeakers, the value corresponds to the number of sections in parallel on the output.

### Two-channel speakON output



## Cabling SB6r

|                                |   |
|--------------------------------|---|
| <b>Accessory</b>               | connector sealing plate (provided)  |
| <b>Screws and fasteners</b>    | 2 M6×16 screws (mounted on enclosure)   |
| <b>Tools</b>                   | torque screwdriver<br>T30 Torx bit<br>small tool or flat screwdriver (3 mm or less) |
| <b>Min number of operators</b> | 1   |

## Assembly

### Prerequisite

**!** The cable glands on the connector sealing plate are compatible with cables up to  $2 \times 2.5 \text{ mm}^2$  gauge.

Refer to:

- [APPENDIX A: Recommendation for speaker cables](#) (p.51)
- [Cabling schemes](#) (p.41)

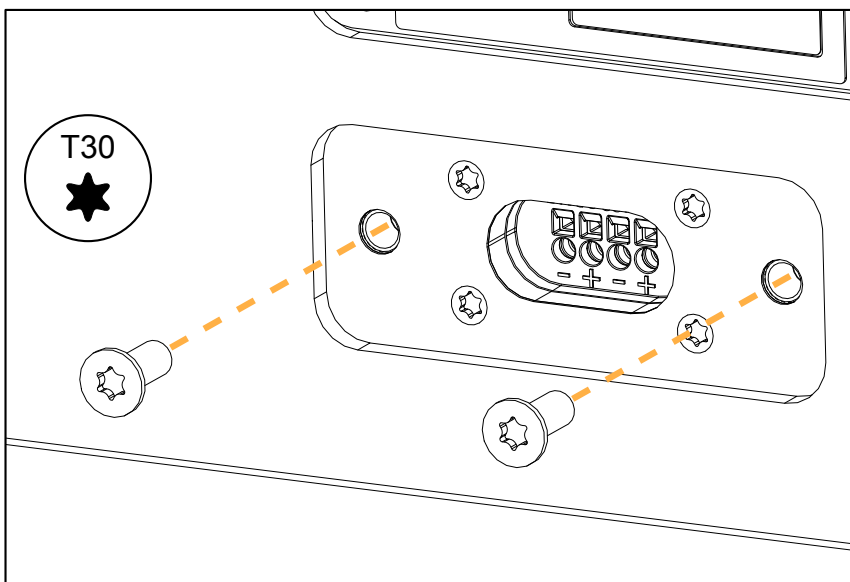
### About this task

The connector sealing plate has two holes: one for the input cable and one for the cable connecting to the next enclosure in parallel. By default, the first hole is fitted with a cable gland and the second one with a protective plug. An extra cable gland is provided with each enclosure.

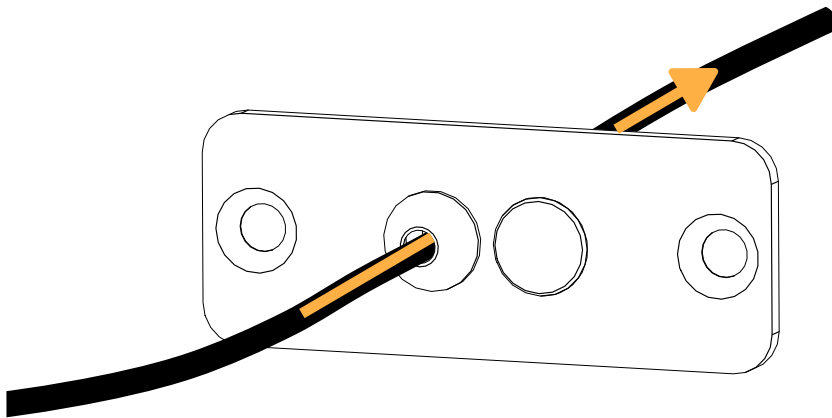
This procedure describes how to connect the input cable to the enclosure. If the enclosure must be connected in parallel, replace the protective plug with the extra cable gland and proceed identically for both cables.

### Procedure

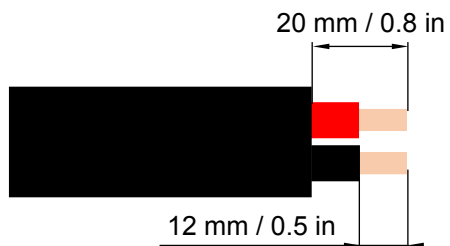
1. Remove the two screws from the enclosure.



2. Insert the cable through the cable gland.



3. Strip the wires of the cable.



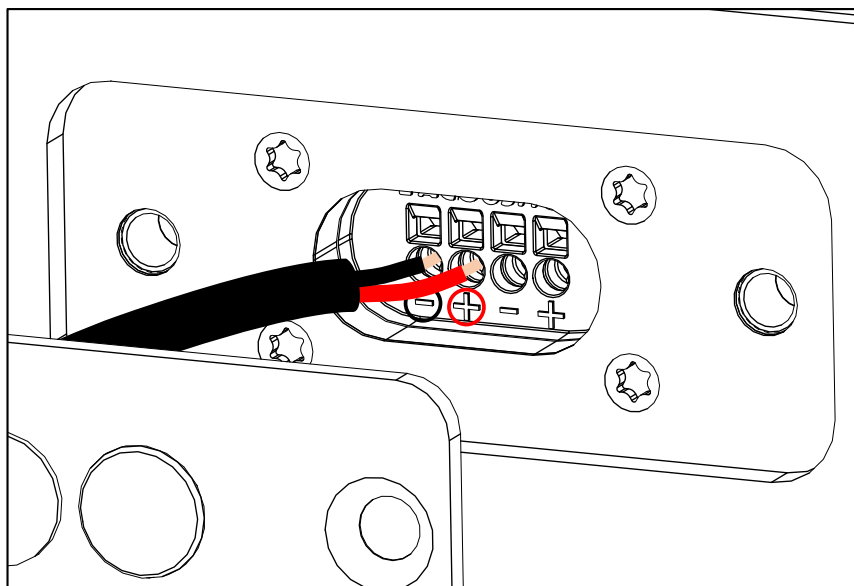
2 x max. 2.5 mm<sup>2</sup> cable



Refer to the cable manufacturer documentation for the wire color code.

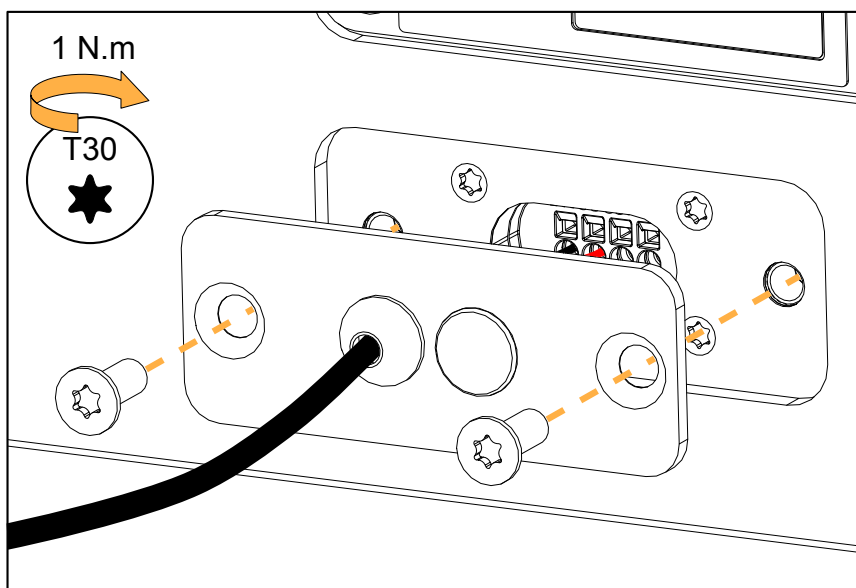
4. Push the wires into the terminals.

If necessary, use a small tool in the hole on top of the terminal to unlock it.

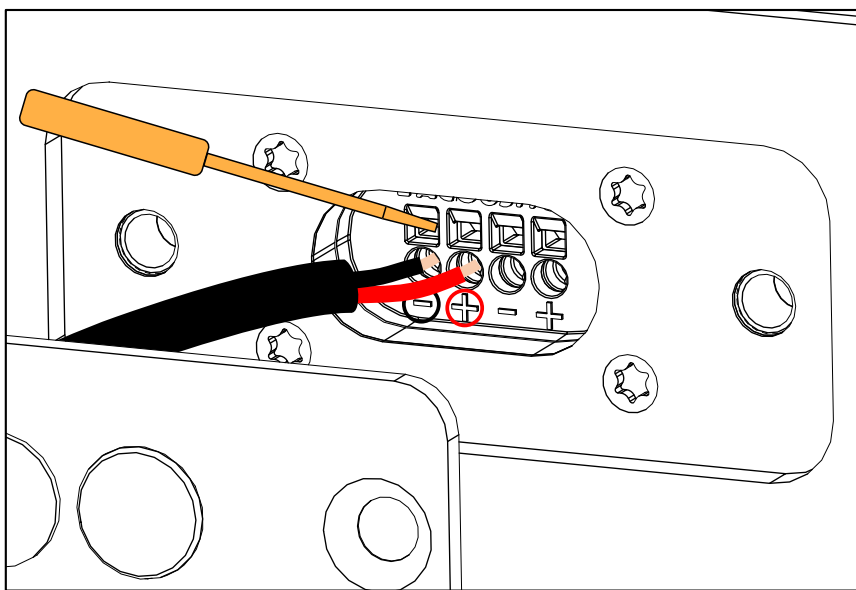


**5.** Secure the connector sealing plate to the enclosure.

Apply a torque of 1 N.m.

**What to do next**

To remove the cables, use the small tool to unlock the terminals and pull on the wires.



# Specifications

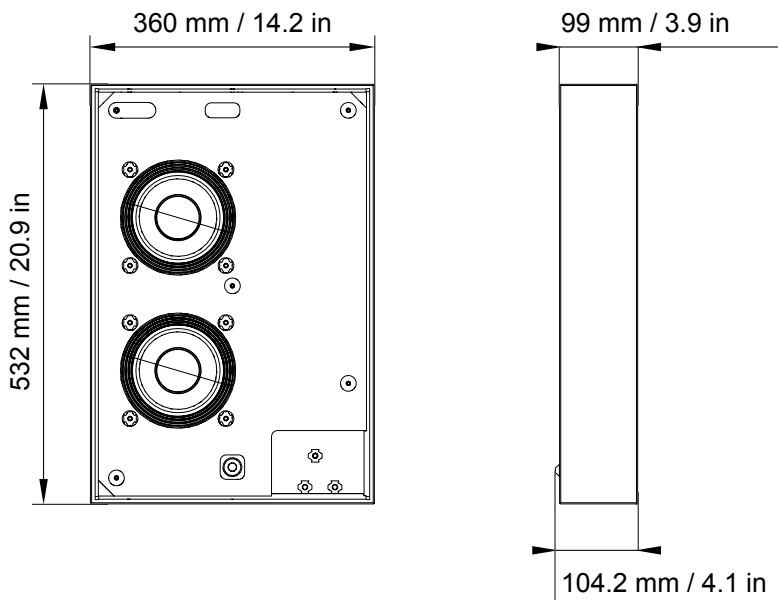
## SB6r specifications

|                                     |   |                       |                       |
|-------------------------------------|---|-----------------------|-----------------------|
| <b>Description</b>                  | Ultra-shallow subwoofer: 2 × 6.5" (recessed version), amplified by LA2Xi / LA4X / LA7.16i / LA12X |                       |                       |
|                                     | with preset [SB6_60]  | with preset [SB6_100] | with preset [SB6_200] |
| <b>Low frequency limit (-10 dB)</b> | 29 Hz   | 29 Hz                 | 32 Hz                 |
| <b>Maximum SPL<sup>1</sup></b>      | 110 dB  | 111 dB                | 115 dB                |
| <b>Nominal directivity (-6 dB)</b>  | standard configuration  |                       |                       |
| <b>Transducers</b>                  | 2 × 6.5" cone driver  |                       |                       |
| <b>Acoustical load</b>              | bass-reflex, L-Vents  |                       |                       |
| <b>Nominal impedance</b>            | 4 Ω   |                       |                       |
| <b>Connectors</b>                   | 1 × 4-point terminal block with push-in connection  |                       |                       |
| <b>Rigging and handling</b>         | 8 M6 inserts for rigging accessories  |                       |                       |
| <b>Weight (net)</b>                 | 7.6 kg / 16.8 lb  |                       |                       |
| <b>Cabinet</b>                      | premium grade Baltic beech and birch plywood  |                       |                       |
| <b>Finish</b>                       | dark grey brown Pantone 426 C   |                       |                       |
| <b>IP</b>                           | IP55 <sup>2</sup>   |                       |                       |

<sup>1</sup> Peak level at 1 m under half space conditions using pink noise with crest factor 4 (preset specified in brackets).

<sup>2</sup> When integrated in-wall or in-ceiling with screen and connector sealing plate.

## SB6r dimensions

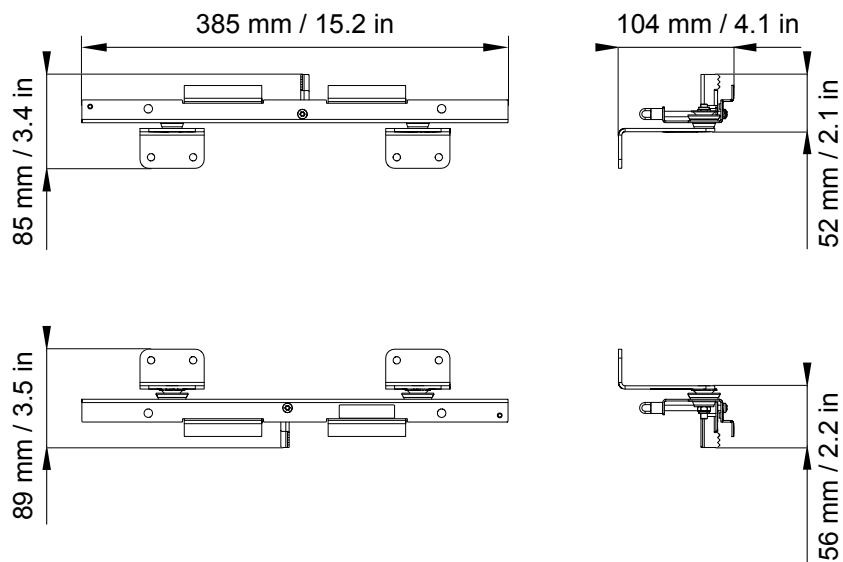


## SB6r-inW specifications

---

|                     |  |
|---------------------|--|
| <b>Description</b>  | In-wall mounting accessory for SB6r          |
| <b>Weight (net)</b> | 1.4 kg / 3.1 lb                              |
| <b>Material</b>     | high grade steel with anti-corrosion coating |

### SB6r-inW dimensions

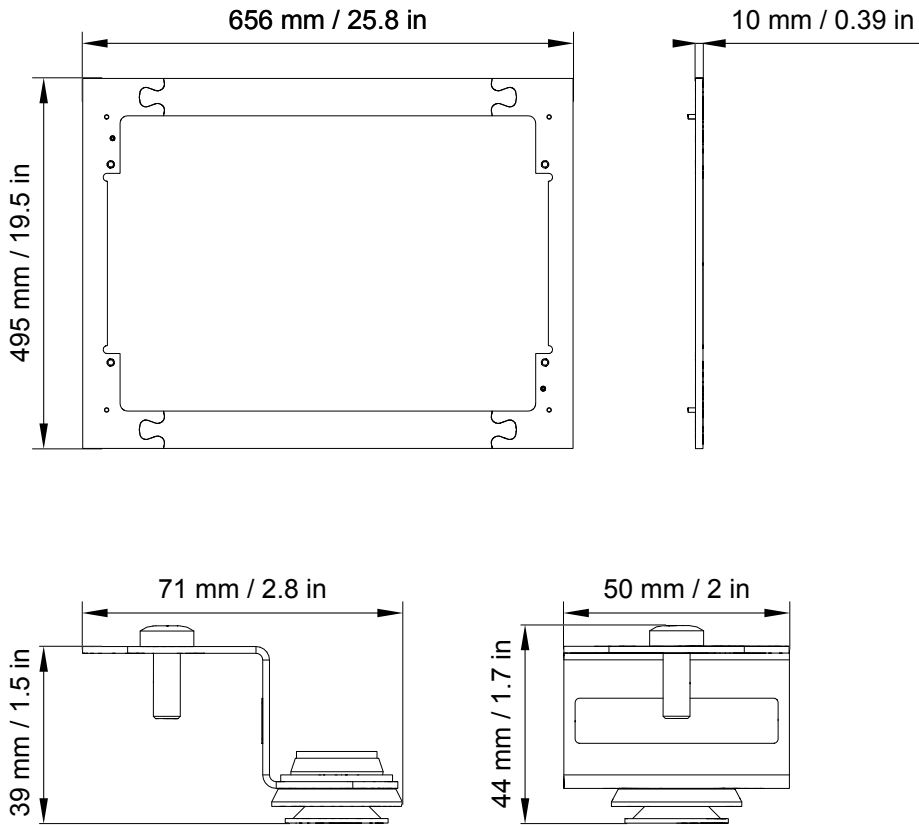


## SB6r-inC specifications

---

|                     |  |
|---------------------|--|
| <b>Description</b>  | In-ceiling mounting accessory for SB6r       |
| <b>Weight (net)</b> | 1.3 kg / 2.9 lb                              |
| <b>Material</b>     | high grade steel with anti-corrosion coating |

### SB6r-inC dimensions



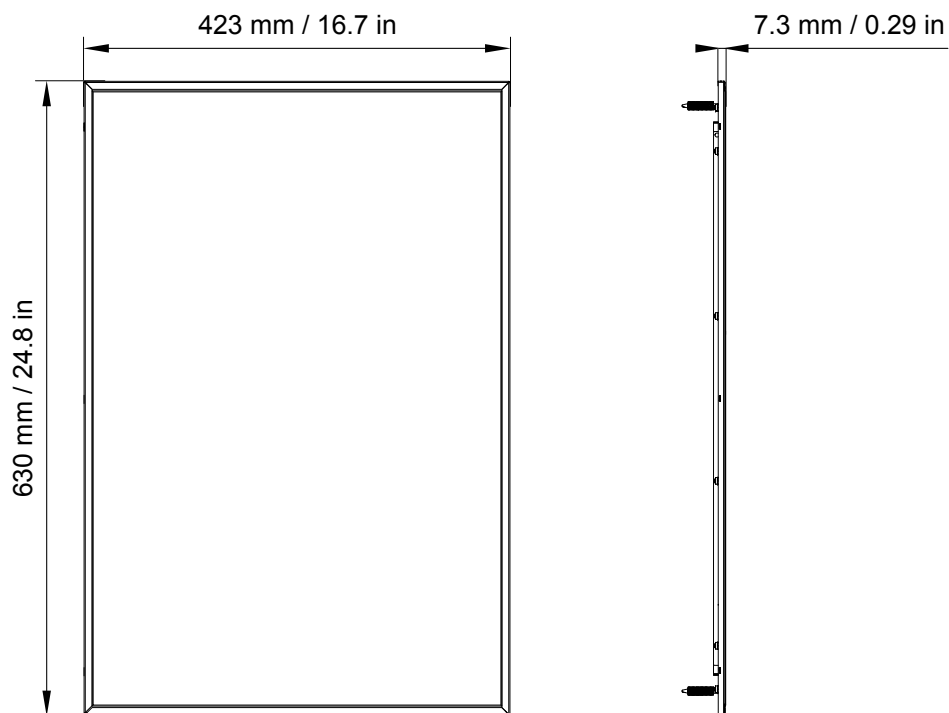


## SB6r-Screen specifications

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|                     |   |
|---------------------|---|
| <b>Description</b>  | Wall or ceiling screen for SB6r                                     |
| <b>Weight (net)</b> | 2 kg / 4.4 lb   |
| <b>Material</b>     | steel with anti-corrosion coating<br>acoustically neutral 3D fabric |

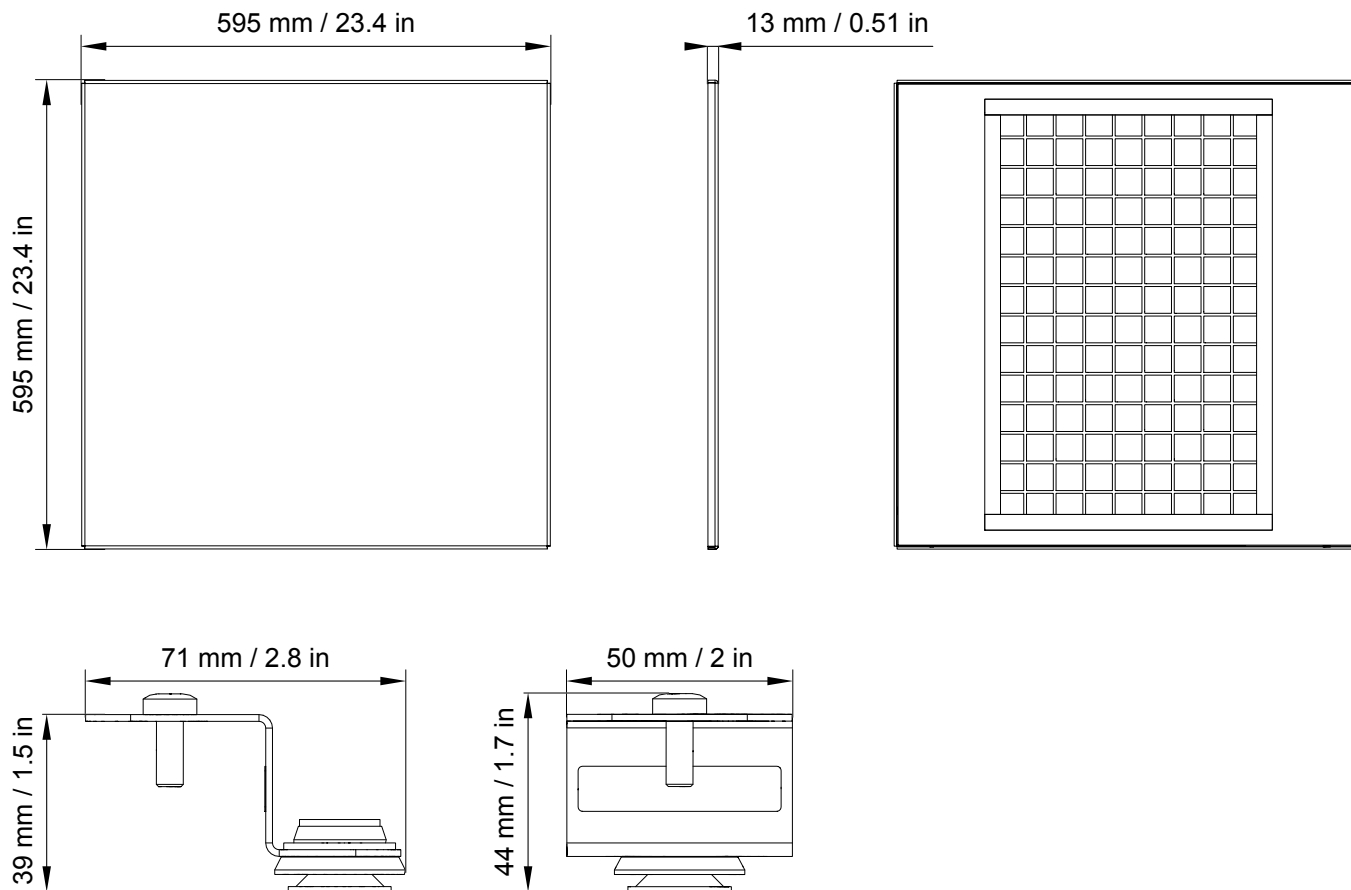
### SB6r-Screen dimensions



## SB6r-Tilescreen specifications

|                     |   |
|---------------------|---|
| <b>Description</b>  | Tile ceiling screen for SB6r  |
| <b>Weight (net)</b> | 2.3 kg / 5.1 lb   |
| <b>Material</b>     | steel with anti-corrosion coating<br>acoustically neutral 3D fabric |

### SB6r-Tilescreen dimensions



## Recommendation for speaker cables

Follow the recommended maximum length for loudspeaker cables to ensure minimal SPL attenuation.



### Cable quality and resistance

Only use high-quality fully insulated speaker cables made of stranded copper wire.

Use cables with a gauge offering low resistance per unit length and keep the cables as short as possible.

The table below provides the recommended maximum length for loudspeaker cables depending on the cable gauge and on the impedance load connected to the amplifier.

| cable gauge     |     |     | recommended maximum length |     |          |     |            |    |
|-----------------|-----|-----|----------------------------|-----|----------|-----|------------|----|
|                 |     |     | 8 Ω load                   |     | 4 Ω load |     | 2.7 Ω load |    |
| mm <sup>2</sup> | SWG | AWG | m                          | ft  | m        | ft  | m          | ft |
| 2.5             | 15  | 13  | 30                         | 100 | 15       | 50  | 10         | 33 |
| 4               | 13  | 11  | 50                         | 160 | 25       | 80  | 17         | 53 |
| 6               | 11  | 9   | 74                         | 240 | 37       | 120 | 25         | 80 |

Use the more detailed L-Acoustics calculation tool to evaluate cable length and gauge based on the type and number of enclosures connected. The calculation tool is available on our website:

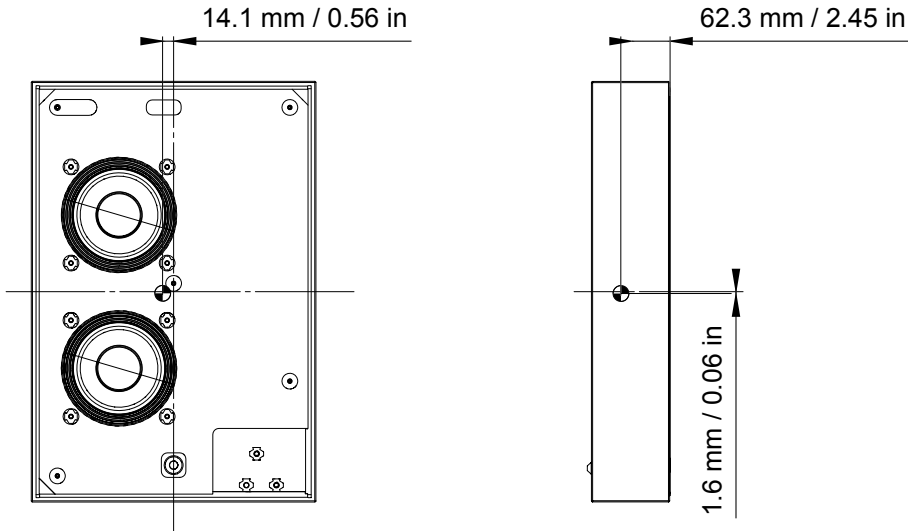
<https://www.l-acoustics.com/installation-tools/>

# Specifications for custom rigging

## Dimensions

Refer to [SB6r dimensions](#) (p.46).

## Center of gravity




## Weight

SB6r: 7.6 kg / 16.8 lb

## Threaded inserts and screws

### Use only rigging inserts to implement a custom rigging

Inserts marked with  can be used for rigging.

Inserts marked with  must not be used for custom rigging (reserved for screen mounting, maintenance purposes, L-Acoustics accessories, etc.).


### Grade of screws must be defined by a qualified person

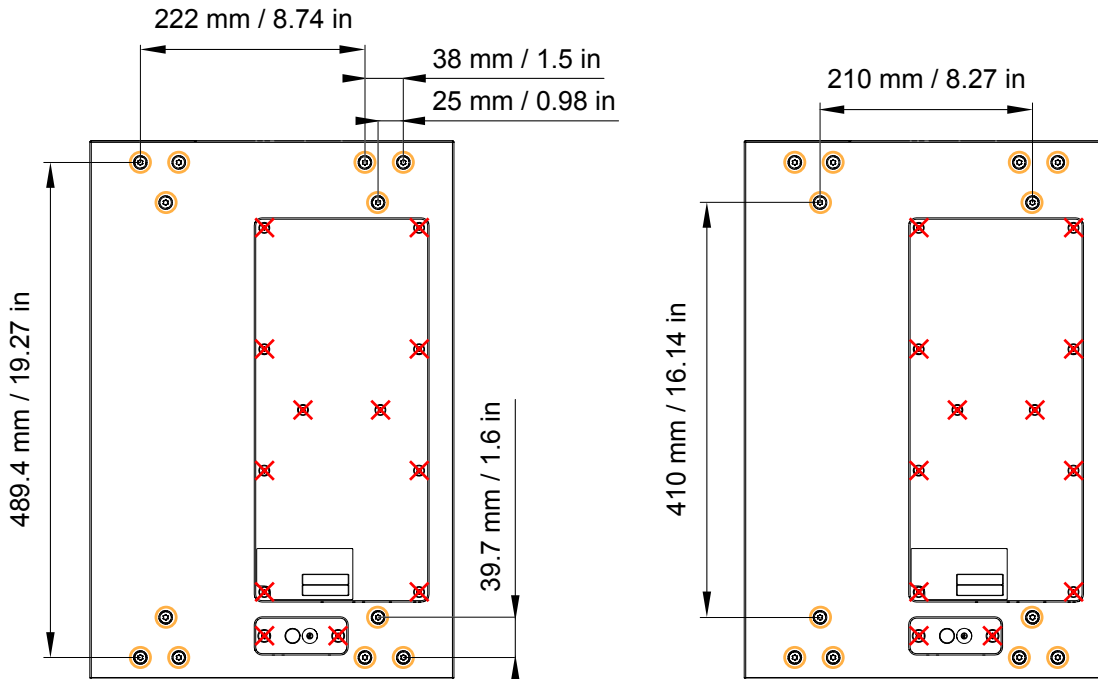
Take into consideration the number of inserts used, weight and center of gravity of enclosure(s), and resulting action forces.

Prevent screws from loosening (threadlocker, spring washer...).

SB6r has **12 threaded M6 inserts** available for rigging.

|                            |                     |
|----------------------------|---------------------|
| Ultimate Tensile Strength  | 1160 N              |
| Ultimate Shear Strength    | 3300 N              |
| Recommended screw length * | min. 20 mm / 0.8 in |
| Recommended torque         | 5 N.m               |

 \* Recommended screw length for a metal sheet with a thickness of 3 mm / 0.1 in. Adapt the length to the custom rigging design.



### Front screen

**!** To ensure acoustic quality of the system, it is highly recommended to use a screen with gaskets to make sure the screen is fitted against the enclosure.

## Replacing SB6r-Screen barbed push fasteners

### Tools

- torque screwdriver
- 7 mm hex socket
- trim clip removal pliers

### Disassembly

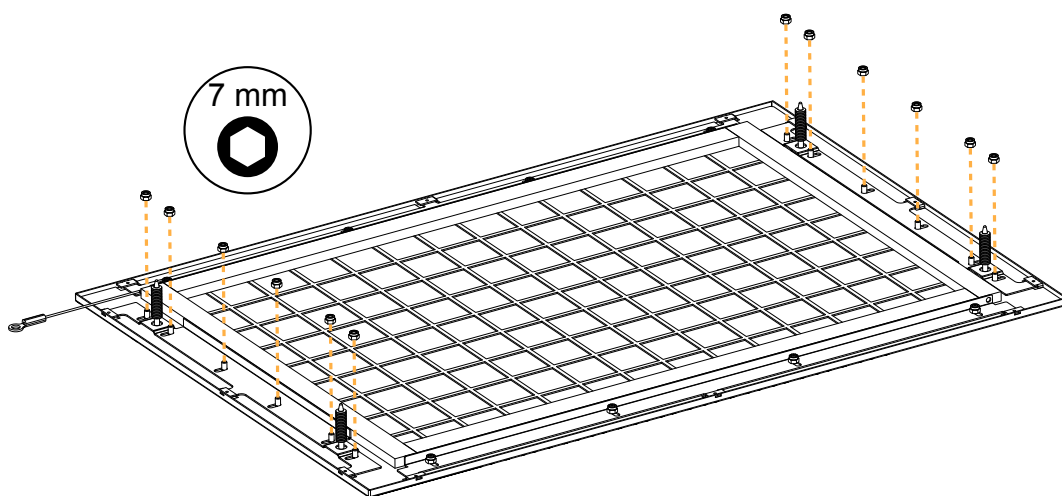
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#### Prerequisite

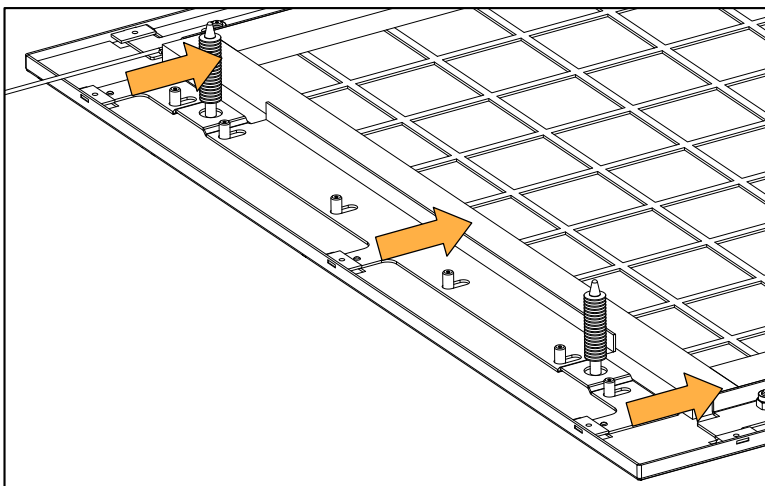
Remove the barbed push fasteners of SB6r-Screen from SB6r-inW or SB6r-inC using trim clip removal pliers.

#### Procedure

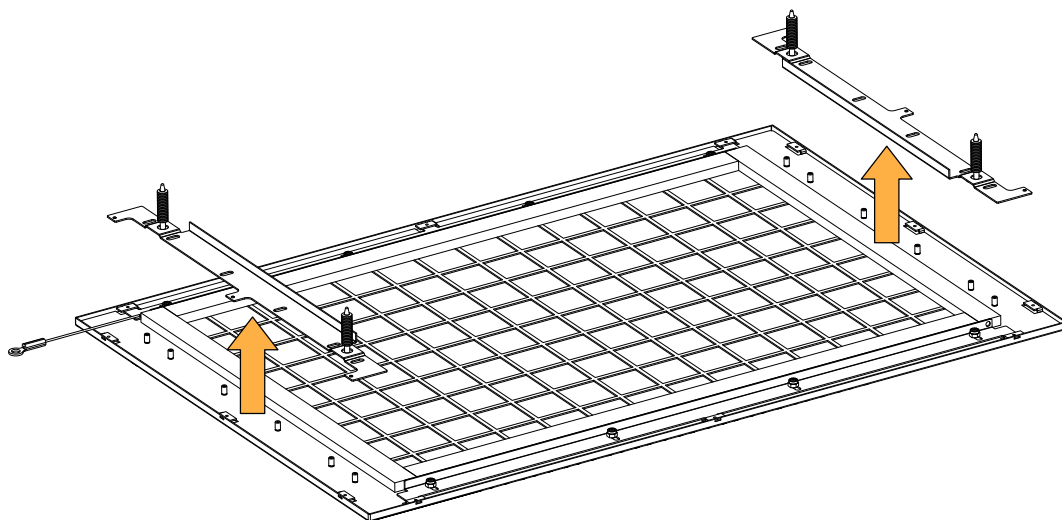
1. Remove the nuts.



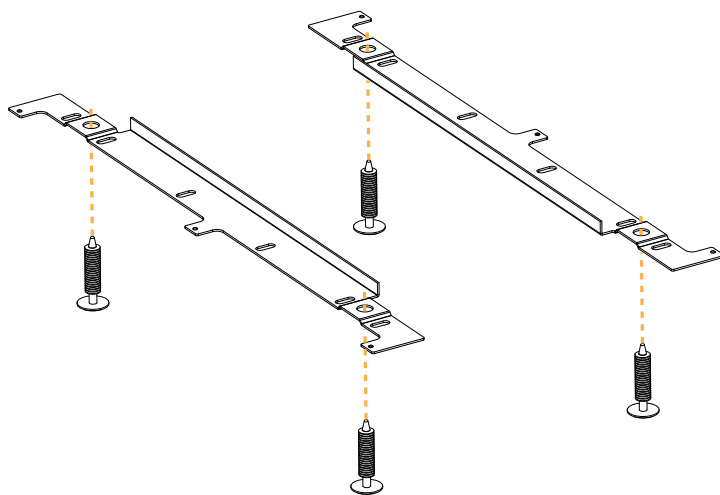
2. Unclip the metal bars from the frame.



3. Remove the metal bars.



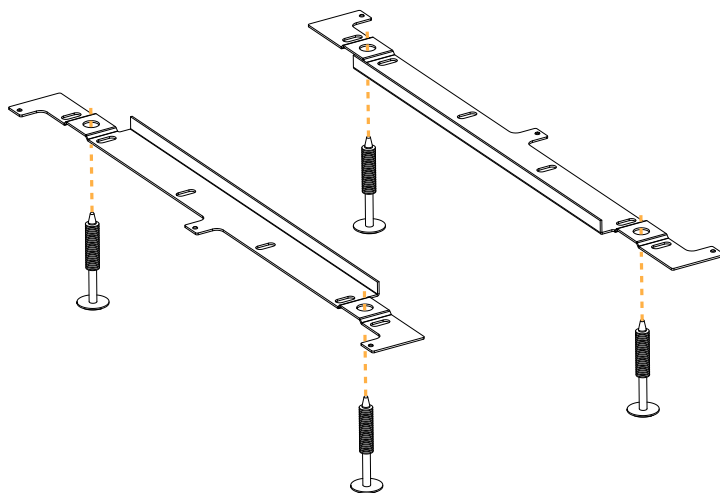
4. Remove the barbed push fasteners.



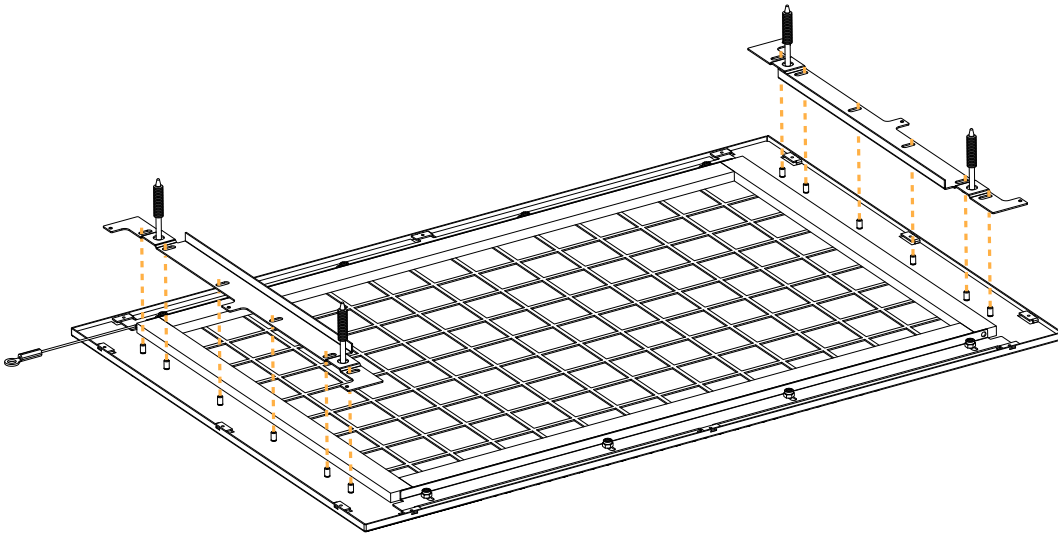
## Reassembly

### Procedure

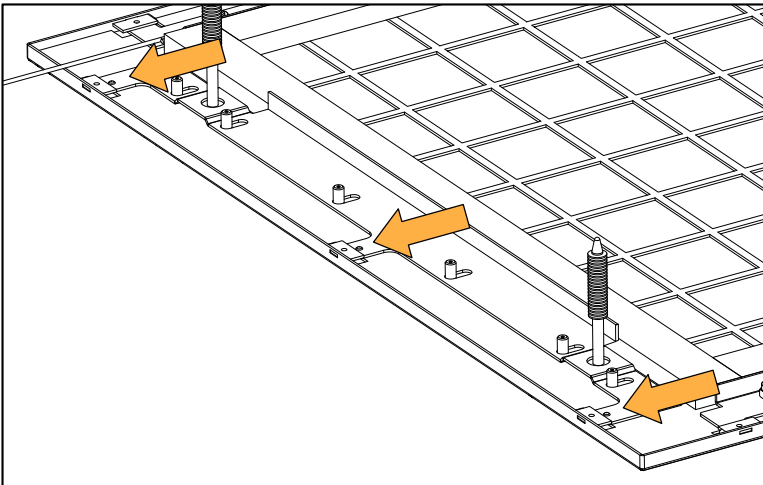
1. Insert the new barbed push fasteners.



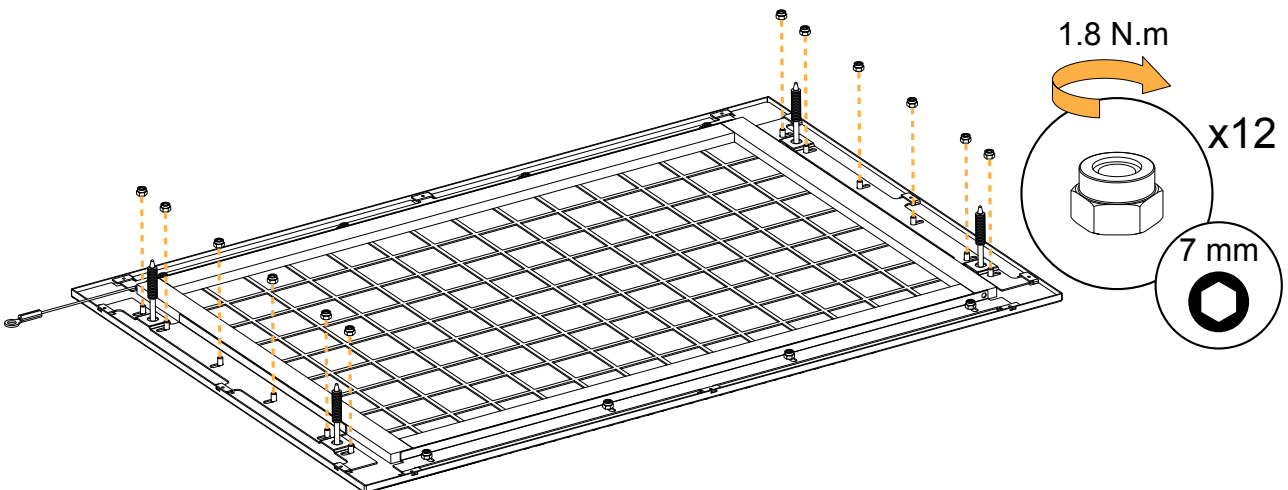
**2.** Position the metal bars.



**3.** Clip the metal bars into the frame.



**4.** Secure the nuts.







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