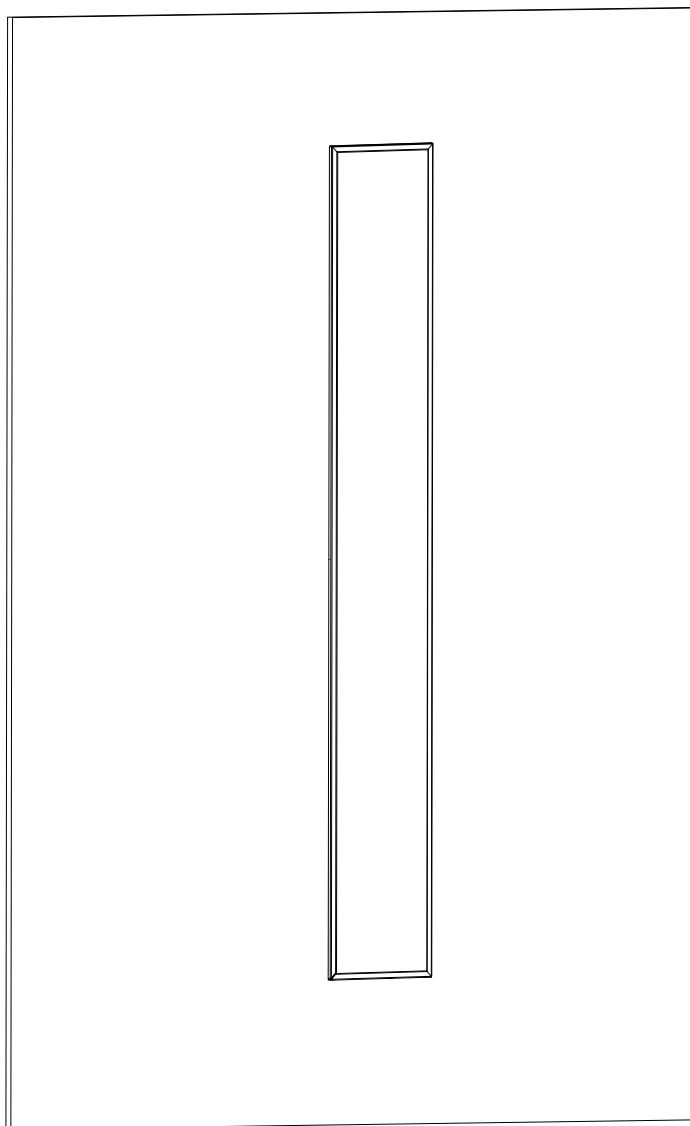


# Sokar



owner's manual (EN)



Document reference: Sokar owner's manual (EN) version 1.0

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# Safety

## Instructions

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- ! 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

## Sokar ultra-shallow colinear source

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Sokar is a colinear source system suited to medium throw applications that require discretion and elegance. Inheriting from our line source systems, Sokar brings high fidelity and live concert power to high- end architectural and professional sound reinforcement settings, with minimal visual impact.

As a passive enclosure, Sokar features nine 3.5" neodymium LF speakers and three 1" neodymium HF compression drivers, loaded by DOSC waveguides in a J-shaped progressive curvature. This transducer arrangement, called colinear source, produces a H/V directivity pattern of 140° x 26° (+5/-21°), optimized for ultra-wide horizontal coverage with extended throw capability and controlled vertical dispersion.

Sokar can be driven using different presets to match specific acoustic needs or coupling configurations with subwoofers. A broadband preset provides extension down to 60 Hz and 124 dB of SPL. For vocal reinforcement, or when closely coupled with a subwoofer, such as SB6r or SB10r, Sokar can be driven with the 100 or 200 Hz presets, offering very-high output of 130 dB or 133 dB respectively.

The unique combination of discrete form factor and performance makes Sokar ideal for vocal reinforcement or surround systems when used on its own. Accompanied by a subwoofer, Sokar is also an ideal main music system in museums, commercial, residential, luxury settings, hospitality spaces, and more.

## How to use this manual

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The Sokar owner's manual is intended for all actors involved in the system design, implementation, preventive and corrective maintenance of the Sokar 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.14)
2. Prepare the system configuration. Consider the mechanical limits and the available acoustical configurations.
  - [Mechanical safety](#) (p.17)
  - [Loudspeaker configurations](#) (p.18)
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.25)
  - [Connection to LA amplified controllers](#) (p.33)

**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

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version number	publication date	modification
1.0	Jun. 2023	Initial version.



## System components

### Loudspeaker enclosures

Sokar	2-way passive colinear enclosure: 9 x 3.5" LF + 3 x 1" HF diaphragm (recessed version)
SB6r	Ultra-shallow subwoofer: 2 x 6.5" (recessed version)
SB10r	Ultra-compact subwoofer: 1 x 10" (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

Sokar-inW	In-wall mounting accessory for Sokar
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### Screens

Soka-Screen	Wall screen for Sokar
-------------	-----------------------

### Software applications

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



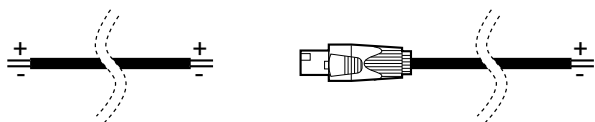
Refer to the **Soundvision** help.

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

## System component illustrations

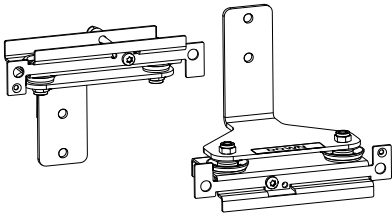
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### Cables



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

## Rigging accessories



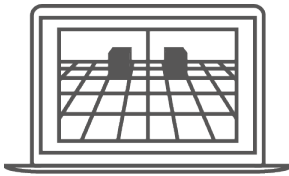
Sokar-inW

## Screens

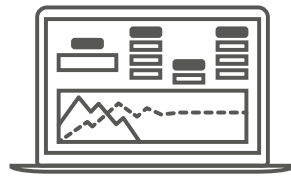


Soka-Screen

## Software applications



Soundvision



LA Network Manager

## Electro-acoustical description

### Directivity

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Sokar generates a horizontal directivity pattern of 140° and a vertical directivity pattern of +5°/-21° in J-shape (> 2 kHz).

Dispersion is dependant on the installation environment.

### Preset description

---

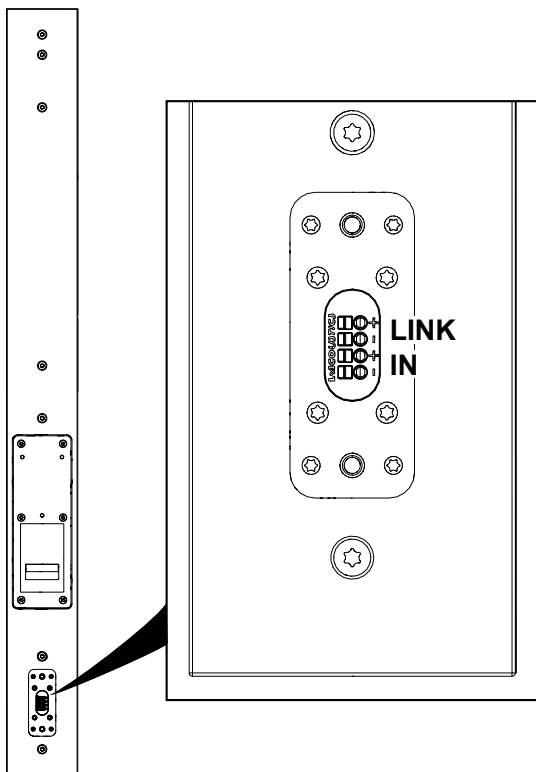
#### [SOKA] [SOKA\_60] [SOKA\_200]

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

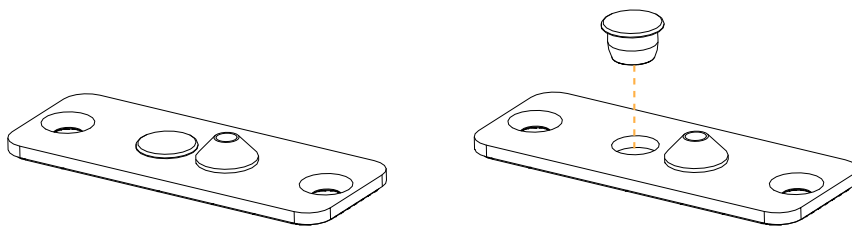
#### [SB10\_60] [SB10\_100] [SB10\_200] [SB6\_60] [SB6\_100] [SB6\_200]

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

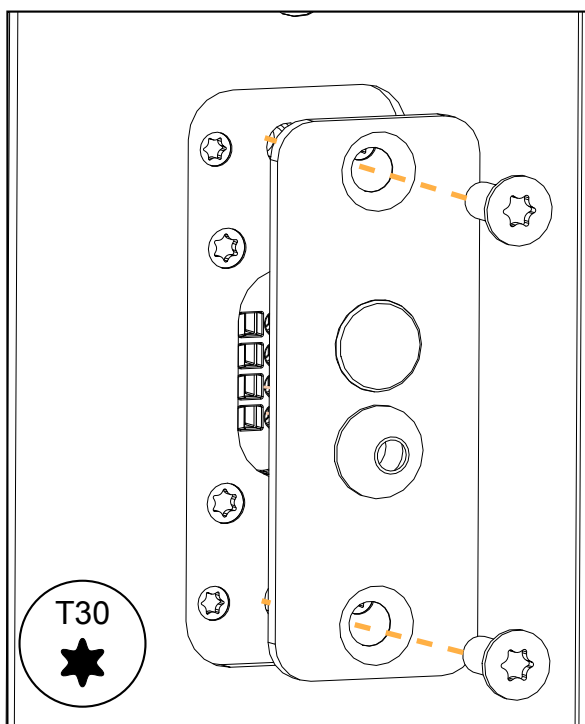


Sokar is provided with a connector sealing plate with two cable glands for 2.5 mm<sup>2</sup> cables.



Pass the cables through the cable glands before connecting them to the screw terminals.

Secure the connector sealing plate to protect the connector.



### Internal pinout for L-Acoustics 2-way passive enclosures

Screw terminal points	IN +	IN -
Transducer connectors	+	-

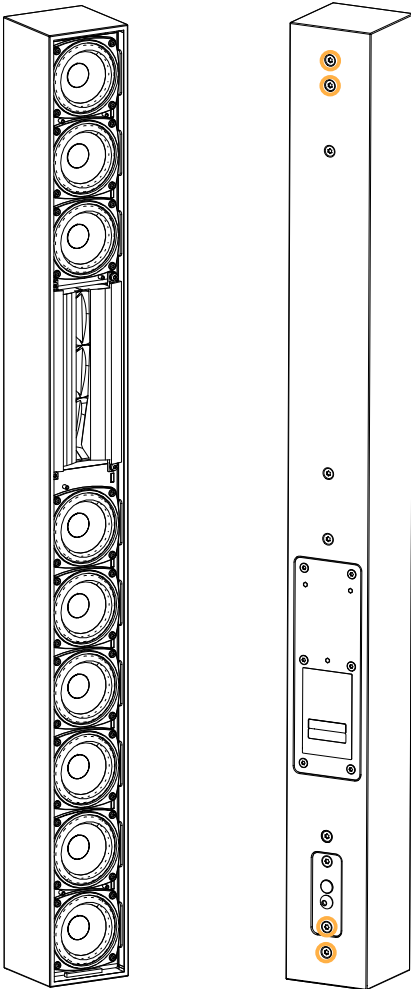
## Rigging system description

### Sokar

---

Sokar is the recessed version of the Soka enclosure and is designed for in-wall configurations.

Four M6 inserts are available at the back of Sokar to secure Sokar-inW for in-wall configurations.

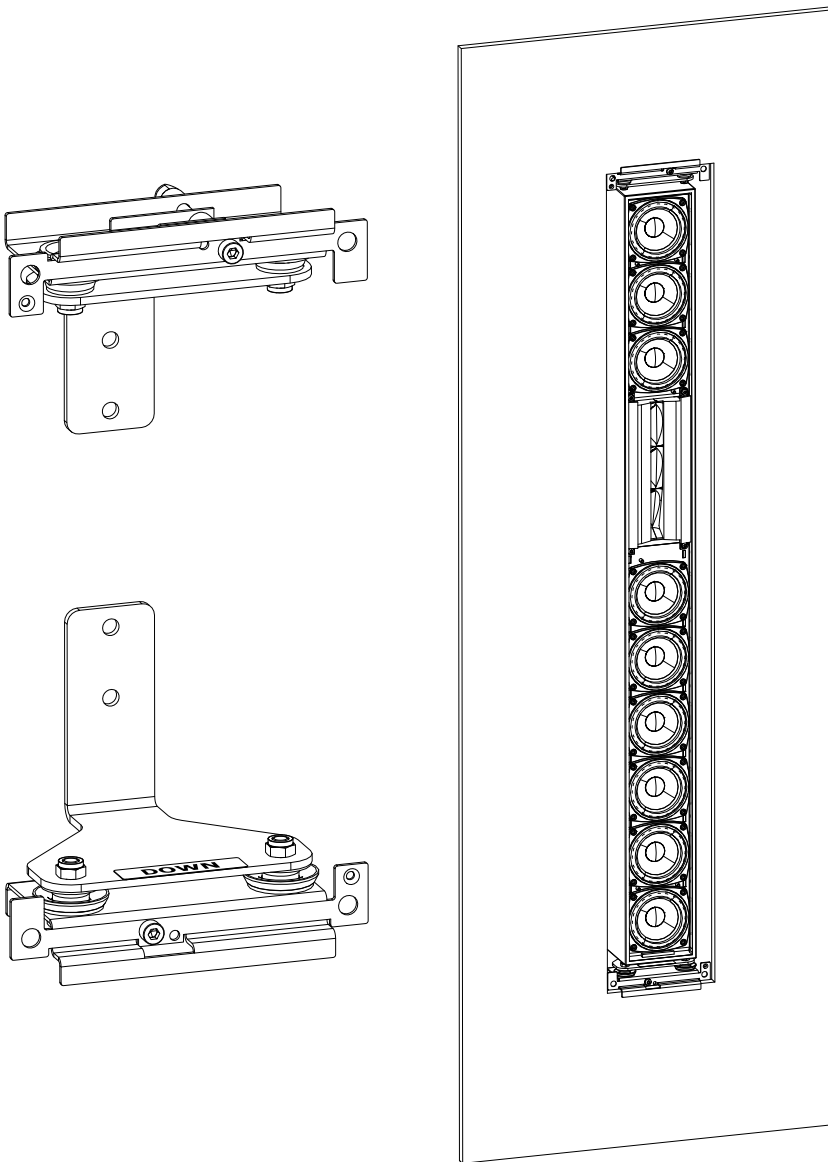


#### **Risk of acoustic leaks**

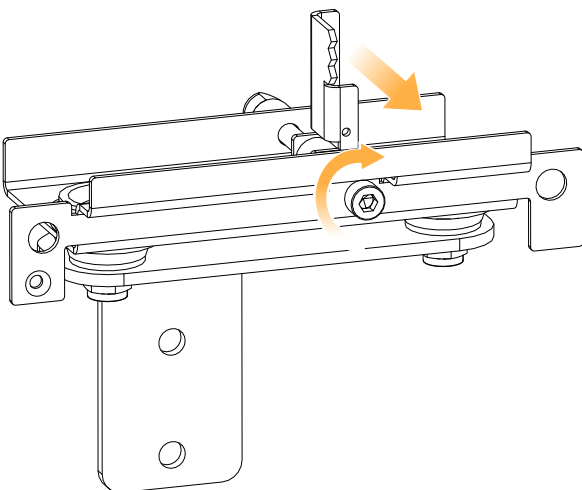
Always put the placeholder screws back in place when the inserts are not in use.

## Sokar-inW

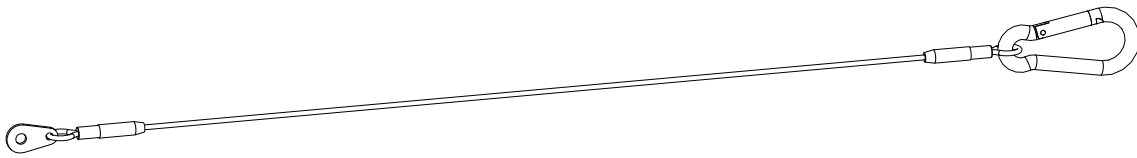
Sokar-inW is a rigging accessory for mounting one Soka in a wall.



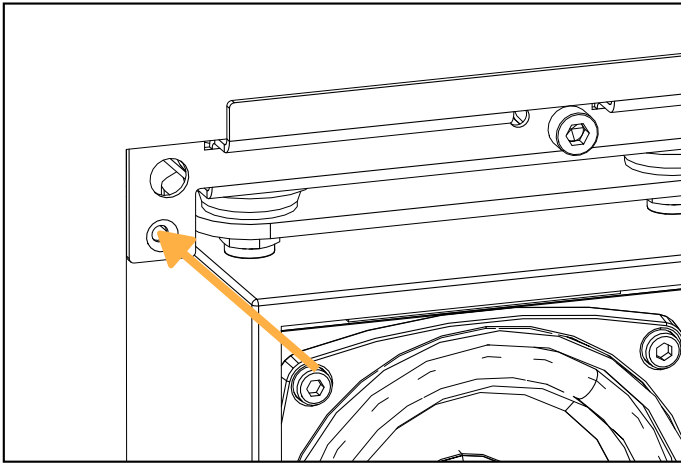
Sokar-inW is secured to the drywall using the fixing clamps.



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



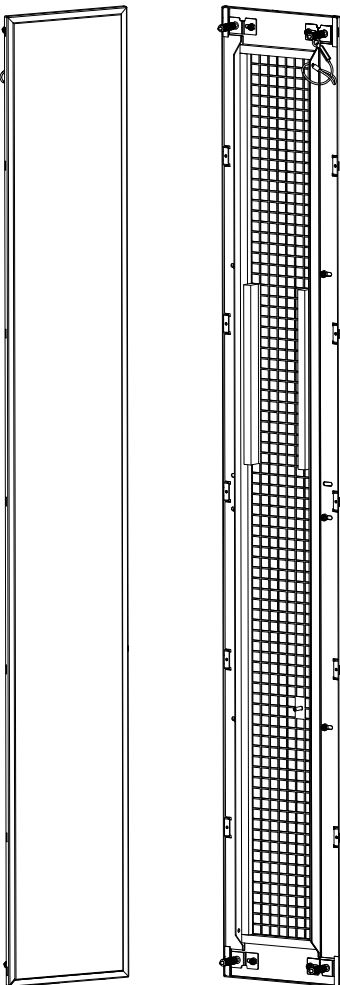
An insert is available on both elements of Sokar-inW to secure the tether of Soka-Screen.



## Soka-Screen

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

Soka-Screen can be secured to Sokar-inW using the tether and the provided M4x12 Torx screw for additional safety.







## Mechanical safety

The Sokar 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**.

### Sokar

configuration	rigging accessory	safe limit / maximum limit
in-wall	Sokar-inW + Soka-Screen	1

- 
**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.

## Loudspeaker configurations

### Sokar colinear source

---

In this configuration the system operates over the nominal bandwidth of the enclosure.

The [SOKA] preset delivers a reference frequency response in medium throw applications.

The Sokar enclosure is driven by the LA2Xi / LA4X / LA7.16i / LA12X amplified controllers.



Reduced maximum SPL or drive capacity with LA2Xi: refer to the **LA2Xi owner's manual**.



Enclosure	Sokar
Preset	[SOKA]
Frequency range (-10 dB)	100 Hz - 20 kHz



#### 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.

## Sokar ultra-shallow colinear source with low-frequency element

Deployed as a colinear source with SB6r or SB10r subwoofers, Sokar operates with augmented LF resources.

For closely coupled configurations, the [SOKA\_200] preset delivers a reference frequency response in medium throw applications, and the [SB6\_200] and [SB10\_200] presets provide SB6r and SB10r with an upper frequency limit at 200 Hz.

For coupled configurations, the [SOKA] preset delivers a reference frequency response in medium throw applications, and the [SB6\_100] and [SB10\_100] presets provide SB6r and SB10r with an upper frequency limit at 100 Hz.

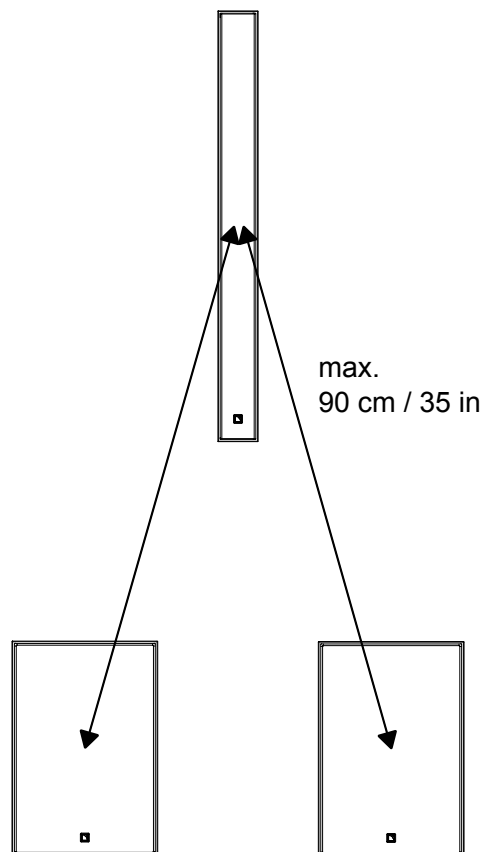
For separated configurations, the [SOKA\_60] preset provides Sokar with a lower frequency limit at 60 Hz, and the [SB6\_60] and [SB10\_60] presets provide SB6r and SB10r with an upper frequency limit at 60 Hz.

Sokar, SB6r, and SB10r are driven by LA2Xi / LA4X / LA7.16i / LA12X.

### Sokar with SB6r

#### Closely coupled

With SB6r and the preset [SB6\_200], the bandwidth of the Sokar system is extended down to 32 Hz. The preset [SOKA\_200] provides optimal frequency coupling with the low-frequency element.



Enclosure	Sokar	SB6r
Preset	[SOKA_200]	[SB6_200]
Ratio	1 Sokar : 2 SB6r	
Low frequency limit (-10 dB)	32 Hz - 20 kHz	



#### Delay values

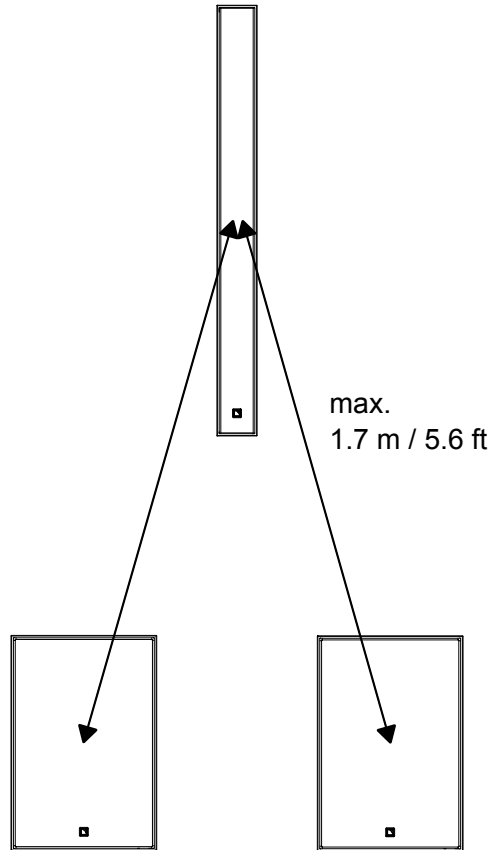
Do not forget to add the pre-alignment and geometric delays depending on the configuration.

### Pre-alignment delays

presets	pre-alignment delay values and polarity settings	
[SOKA_200] + [SB6_200]	Soka = 1.9 ms <input style="float: right;" type="button" value="+"/>	SB6i = 0 ms <input style="float: right;" type="button" value="+"/>

### Coupled

With SB6r and the preset [SB6\_100], the bandwidth of the Sokar system is extended down to 29 Hz. The preset [SOKA] provides optimal frequency coupling with the low-frequency element.



Enclosure	Sokar	SB6r
Preset	[SOKA]	[SB6_100]
Ratio	1 Sokar : 2 SB6r	
Low frequency limit (-10 dB)	29 Hz - 20 kHz	

### Delay values

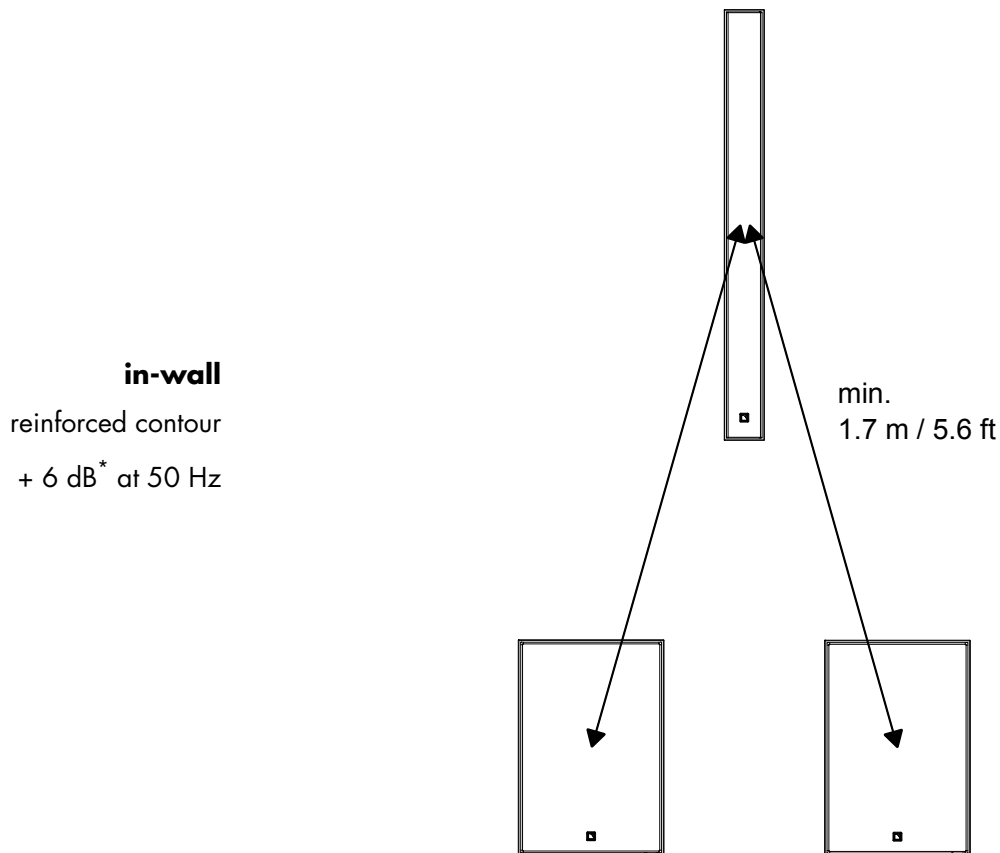
Do not forget to add the pre-alignment and geometric delays depending on the configuration.

### Pre-alignment delays

presets	pre-alignment delay values and polarity settings	
[SOKA] + [SB6_100]	Soka = 1.4 ms <input style="float: right;" type="button" value="+"/>	SB6i = 0 ms <input style="float: right;" type="button" value="+"/>

## Separated

With SB6r and the preset [SB6\_60], the bandwidth of the Sokar system is extended down to 29 Hz and the contour is reinforced by 6 dB\* at 50 Hz (peak low-end SPL). The preset [SOKA\_60] provides optimal frequency coupling with the low-frequency element.



Enclosure	Sokar	SB6r
Preset	[SOKA_60]	[SB6_60]
Ratio	1 Sokar : 2 SB6r	
Low frequency limit (-10 dB)	29 Hz - 20 kHz	

### ! Delay values

Do not forget to add the pre-alignment and geometric delays depending on the configuration.

### Pre-alignment delays

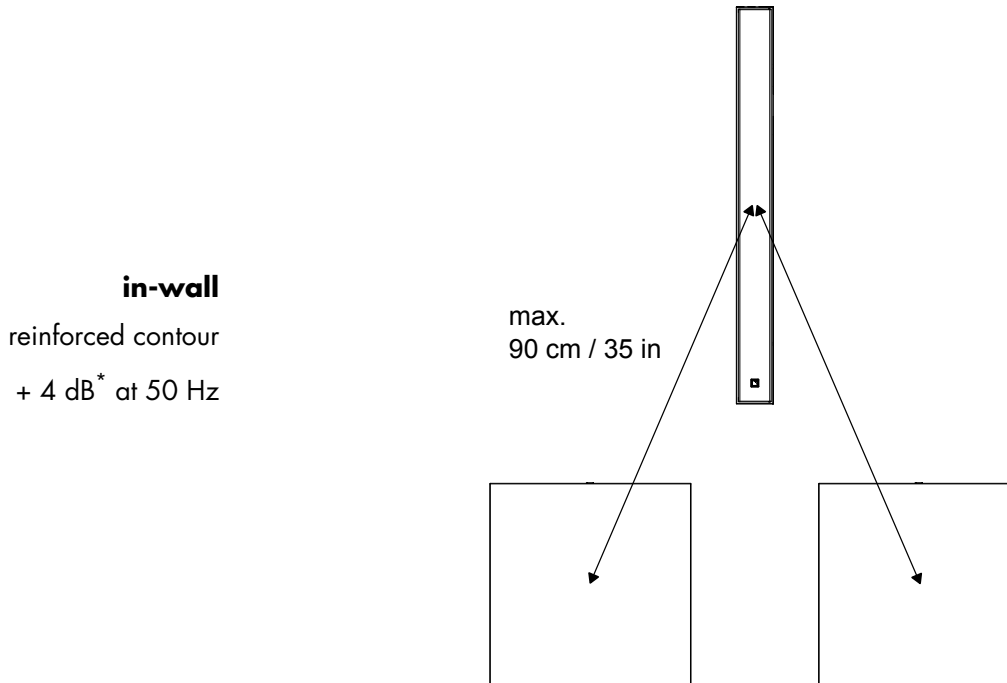
presets	pre-alignment delay values and polarity settings	
[SOKA_60] + [SB6_60]	Soka = 3.6 ms <input type="checkbox"/>	SB6i = 0 ms <input type="checkbox"/>

\* Contour value takes into account the effect of the wall and floor on the contour.

## Sokar with SB10r

### Closely coupled

With SB10r and the preset [SB10\_200], the bandwidth of the Sokar system is extended down to 29 Hz and the system contour is reinforced by 4 dB\* at 50 Hz. The preset [SOKA\_200] provides optimal frequency coupling with the low-frequency element.



Enclosure	Sokar	SB10r
Preset	[SOKA_200]	[SB10_200]
Ratio	1 Sokar : 2 SB10r	
Low frequency limit (-10 dB)	29 Hz - 20 kHz	

### ! Delay values

Do not forget to add the pre-alignment and geometric delays depending on the configuration.

### Pre-alignment delays

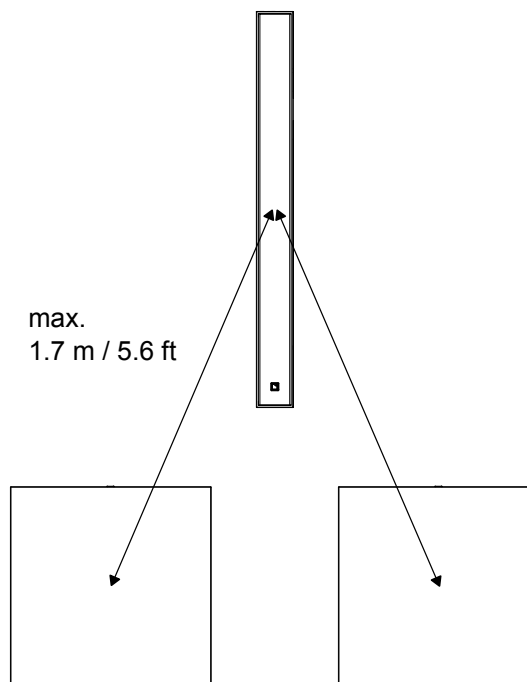
presets	pre-alignment delay values and polarity settings	
[SOKA_200] + [SB10_200]	Soka = 3.2 ms <input type="checkbox"/>	SB10i = 0 ms <input type="checkbox"/>

\* Contour value takes into account the effect of the wall and floor on the contour.

## Coupled

With SB10r and the preset [SB10\_100], the bandwidth of the Sokar system is extended down to 27 Hz and the system contour is reinforced by 4 dB\* at 50 Hz. The preset [SOKA] provides optimal frequency coupling with the low-frequency element.

**in-wall**  
reinforced contour  
+ 4 dB\* at 50 Hz



Enclosure	Sokar	SB10r
Preset	[SOKA]	[SB10_100]
Ratio	1 Sokar : 2 SB10r	
Low frequency limit (-10 dB)	27 Hz - 20 kHz	

### ! Delay values

Do not forget to add the pre-alignment and geometric delays depending on the configuration.

### Pre-alignment delays

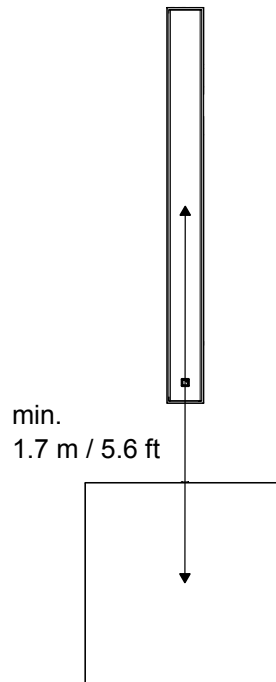
presets	pre-alignment delay values and polarity settings	
[SOKA] + [SB10_100]	Soka = 2.6 ms <input type="checkbox"/>	SB10i = 0 ms <input type="checkbox"/>

\* Contour value takes into account the effect of the wall and floor on the contour.

### Separated

With SB10r and the preset [SB10\_60], the bandwidth of the Sokar system is extended down to 25 Hz and the system contour is reinforced by 5 dB\* at 50 Hz. The preset [SOKA\_60] provides optimal frequency coupling with the low-frequency element.

**in-wall**  
reinforced contour  
+ 5 dB\* at 50 Hz



Enclosure	Sokar	SB10r
Preset	[SOKA_60]	[SB10_60]
Ratio	1 Sokar : 1 SB10r	
Low frequency limit (-10 dB)	25 Hz - 20 kHz	



#### Delay values

Do not forget to add the pre-alignment and geometric delays depending on the configuration.

#### Pre-alignment delays

presets	pre-alignment delay values and polarity settings	
[SOKA_60] + [SB10_60]	Soka = 9 ms <input style="float: right;" type="checkbox" value="+"/>	SB10i = 0 ms <input style="float: right;" type="checkbox" value="-"/>

\* Contour value takes into account the effect of the wall and floor on the contour.



# Rigging procedures

## Tools

---

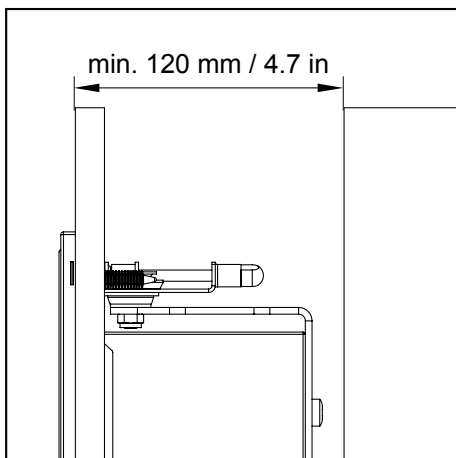
Before rigging this product, make sure all the tools listed are available. References are given for FACOM® products in this table. Other manufacturers can be used.

<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	-	-
trim clip removal pliers	-	-

## Mounting Sokar in a wall with Sokar-inW

type of deployment	wall-mounting
rigging accessories	Soka inWall, including: <ul style="list-style-type: none"> <li>• Sokar enclosure</li> <li>• Sokar-inW rigging accessory</li> <li>• Soka-Screen</li> <li>• cardboard cutting template</li> </ul>
additional material	4 M6x25 Torx screws (provided)
	1 M4x12 Torx screws (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.

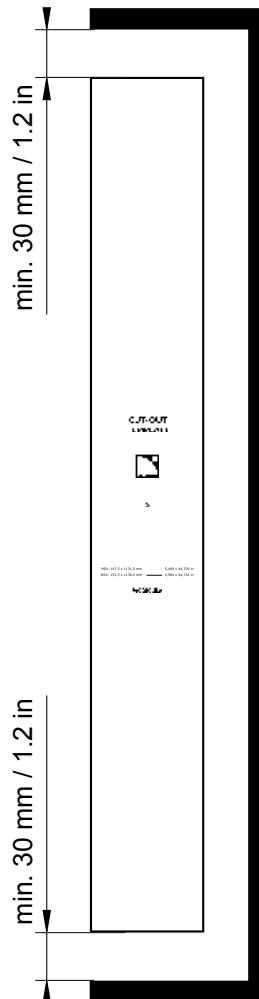
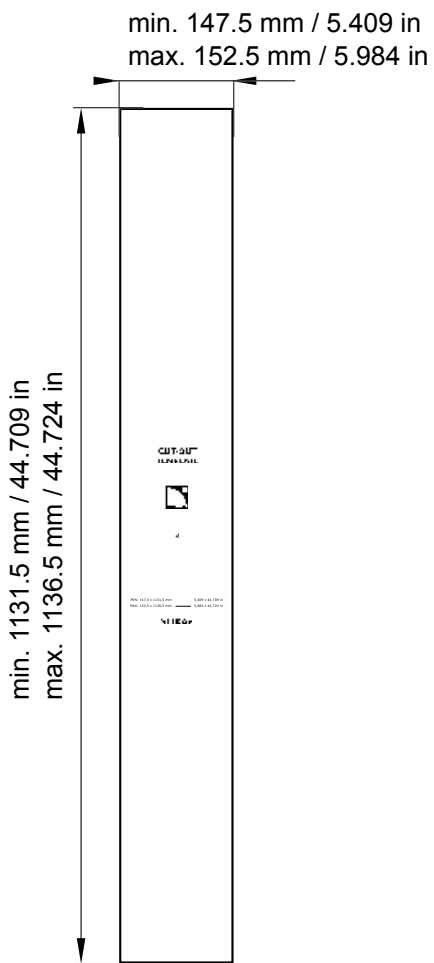


## Assembly

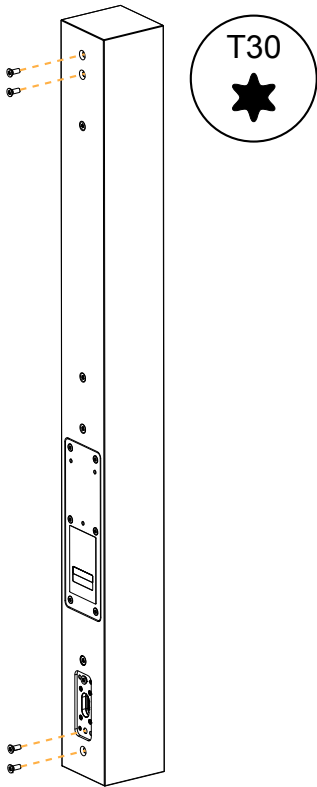
### Procedure

1. Cut the drywall.

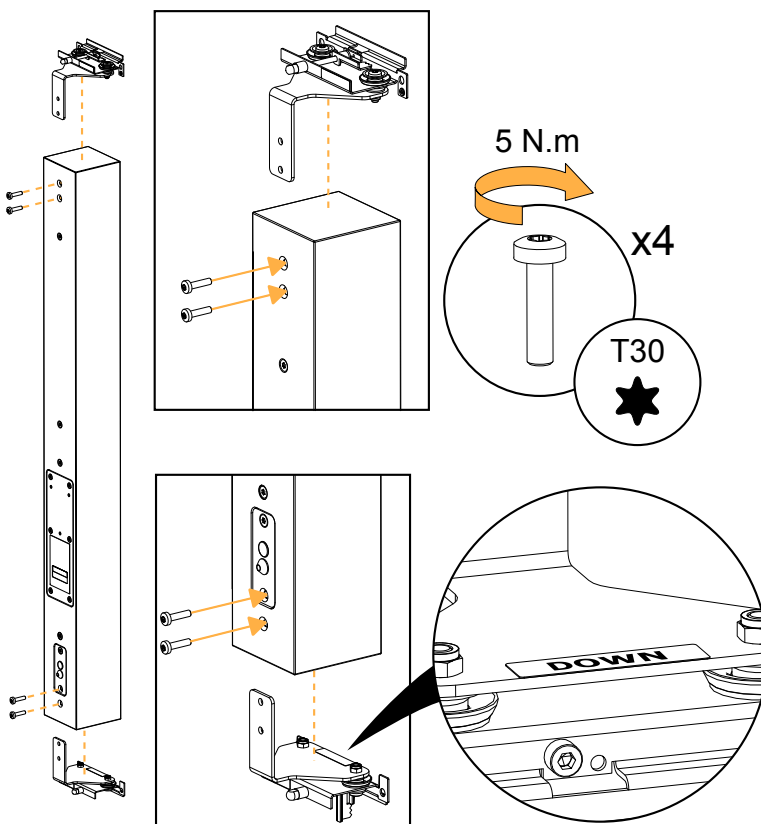
Use the cardboard template provided with Soka-Screen as a reference.



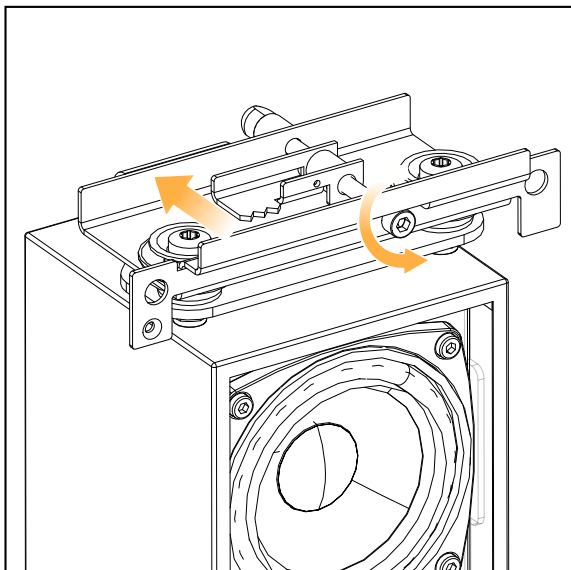
2. Remove the placeholder screws at the back of the enclosure.



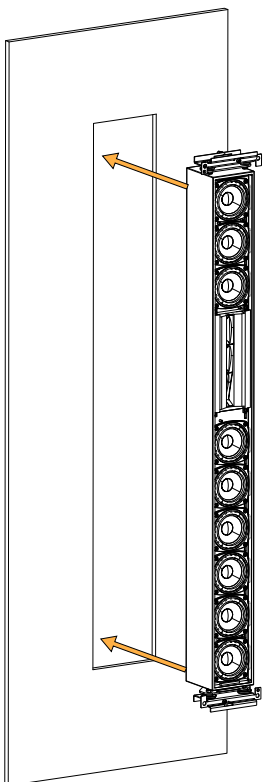
3. Prepare the cabling. Refer to [Cabling Sokar](#) (p.35).
4. Secure Sokar-inW to the enclosure using the M6x25 Torx screws.



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



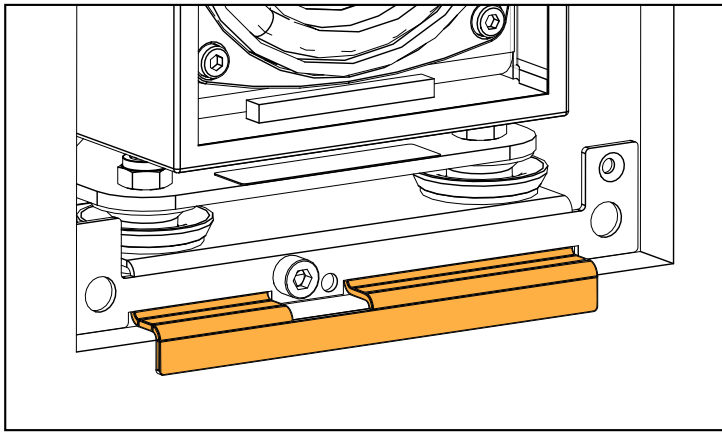
- 6.** Position the enclosure assembly in the drywall.



**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.



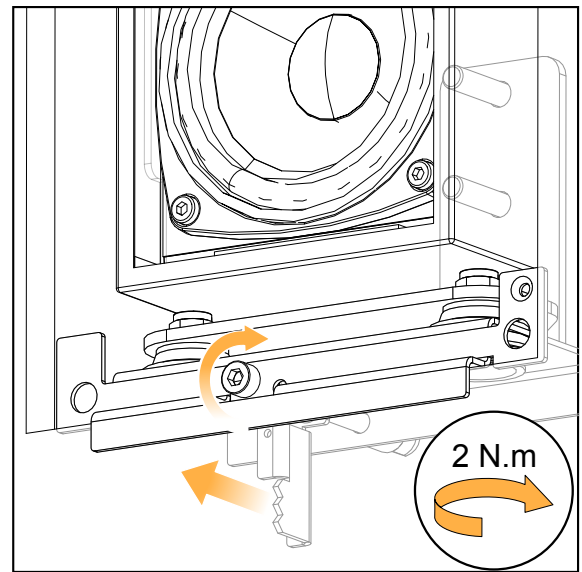
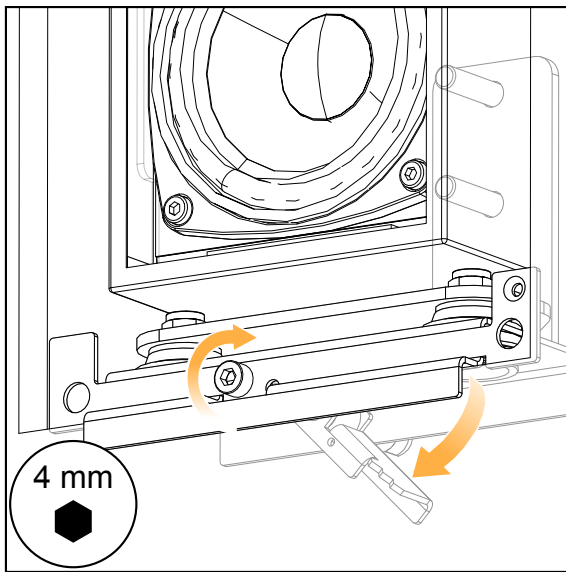
- b) Tighten the screw of the bottom element to rotate the clamps until the element is tightly secured against the drywall.



**Risk of damage**

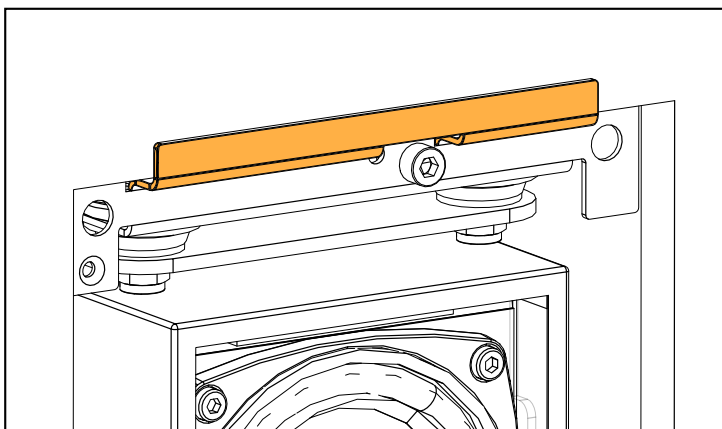
Do not apply more than the indicated torque.

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.

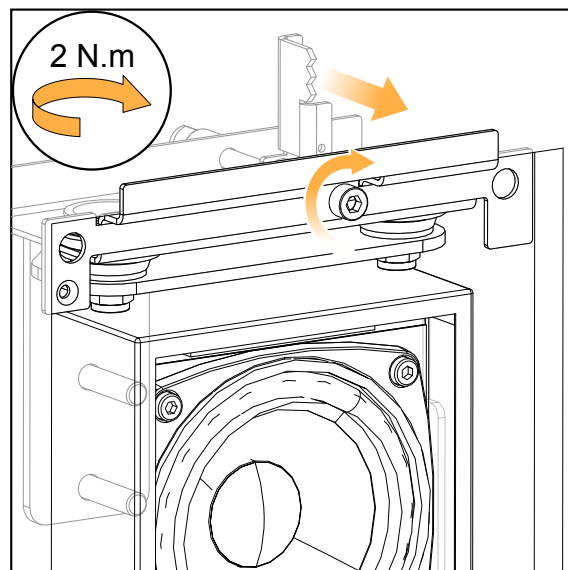
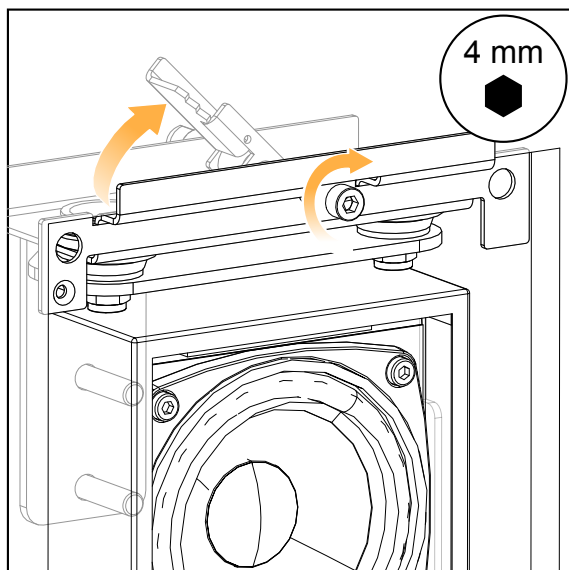


d) Tighten the screw of the top element to rotate the clamps until the element is tightly secured against the drywall.

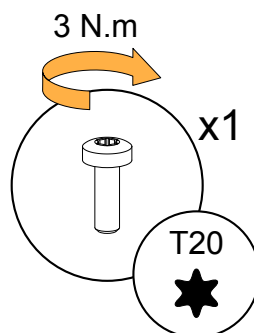
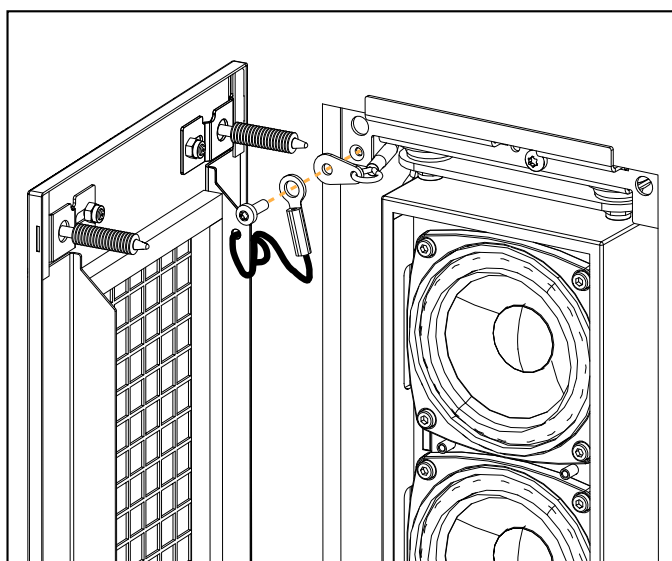
**! Risk of damage**

Do not apply more than the indicated torque.

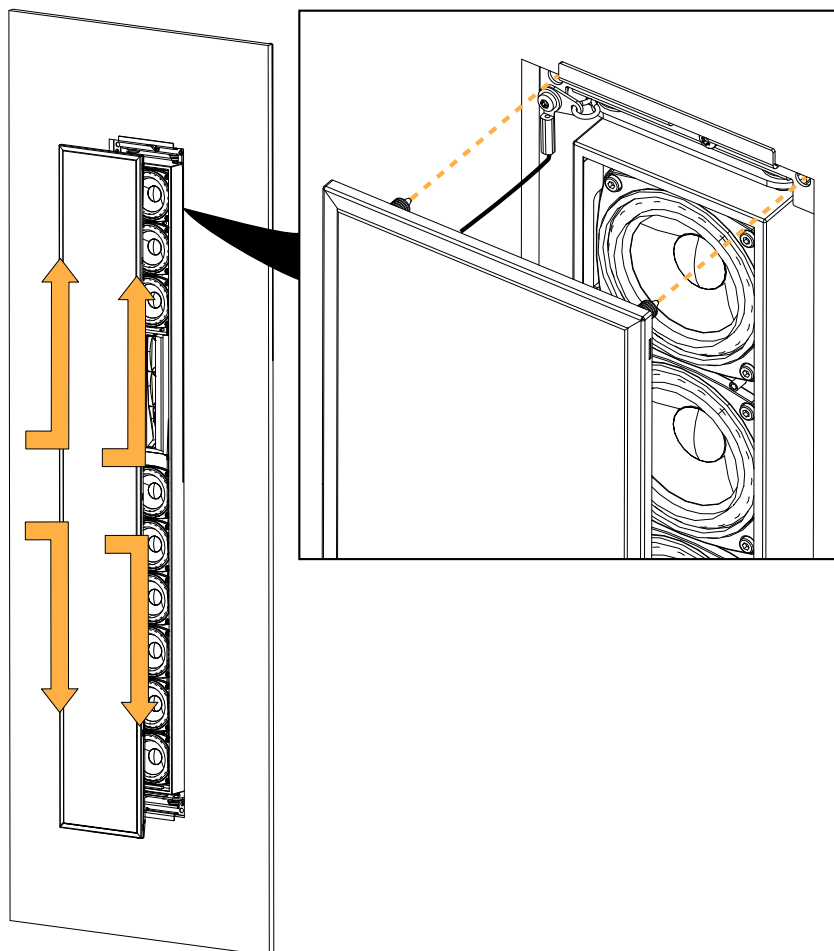
Support the enclosure assembly and hold the top element in place against the drywall while tightening the clamps.



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



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





## 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).

	LA2Xi	LA4X	LA7.16i	LA12X
	per output* / total	per output* / total	per output* / total	per output* / total
Sokar	1 / 4 (SE), 1 / 2 (BTL)	2 / 8	1 / 16	3 / 12

**i** Reduced maximum SPL or drive capacity with LA2Xi: refer to the **LA2Xi owner's manual**.

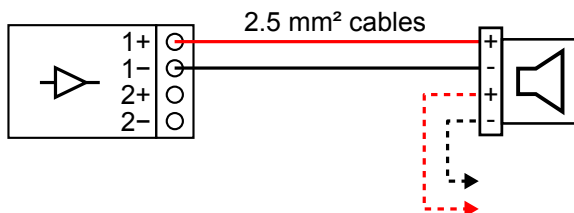
### Cabling schemes for Sokar

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

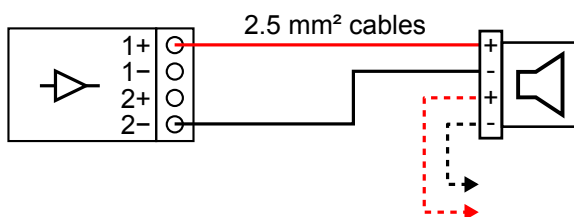
**!** Refer to the cable manufacturer documentation for the wire color code.

**i** Refer to the **LA2Xi owner's manual** for more information on output configurations.

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

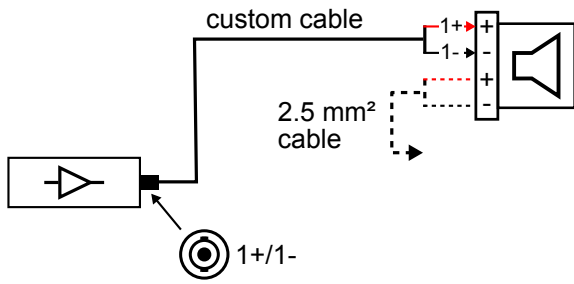


#### Terminal block output (LA2Xi BTL)

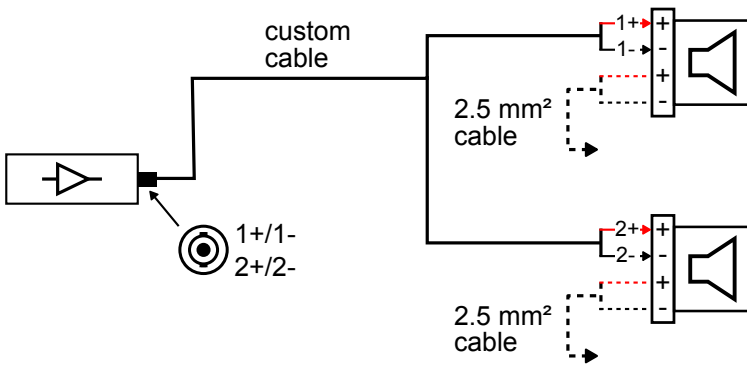


\* For passive loudspeakers, the value corresponds to the number of enclosures in parallel on the output. For active loudspeakers, the value corresponds to the number of sections in parallel on the output.

### One-channel speakON output



### Two-channel speakON output



## Cabling Sokar

<b>Accessory</b>	connector sealing plate (provided)
<b>Screws and fasteners</b>	2 M6×16 screws (mounted on enclosure)
<b>Tools</b>	torque screwdriver T30 Torx bit 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 × 2.5 mm<sup>2</sup> gauge.

Refer to:

- [APPENDIX A: Recommendation for speaker cables](#) (p.44)
- [Cabling schemes for Sokar](#) (p.33)

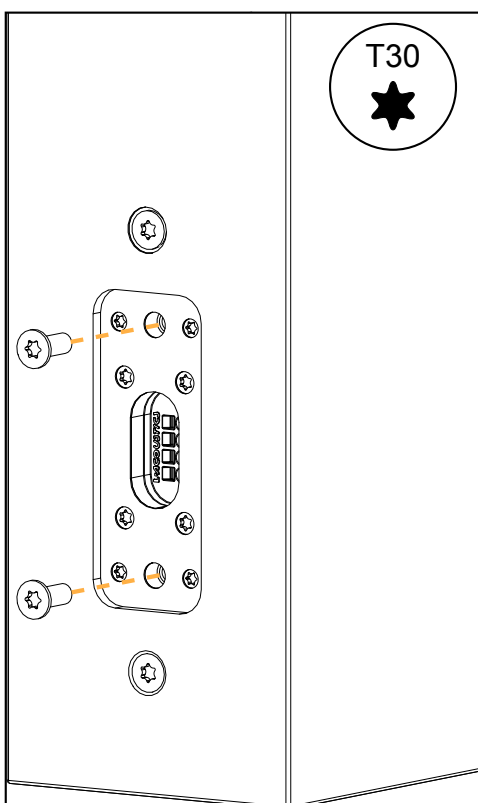
### About this task

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.

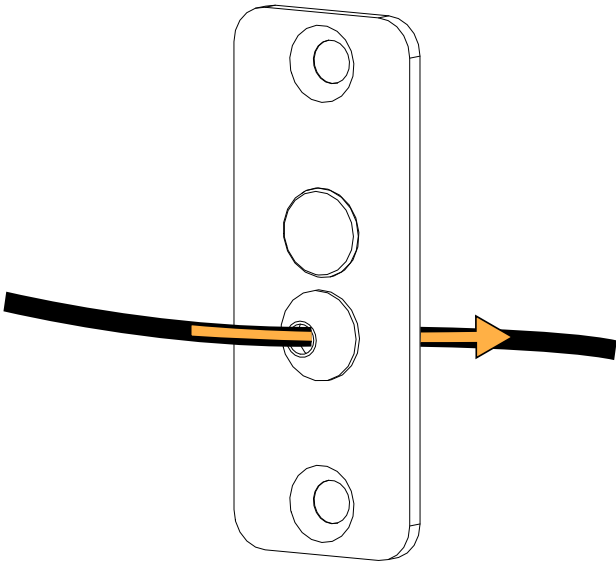
This procedure describes how to connect the input cable to the enclosure. If the enclosure must be connected in parallel, replace the protective plug with the extra cable gland and proceed identically for both cables.

### Procedure

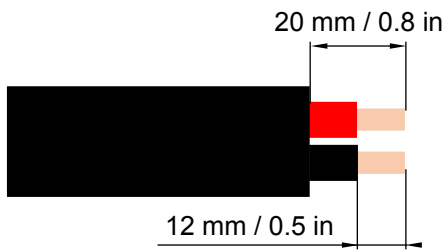
1. Remove the two screws from the enclosure.



2. Insert the cable through the cable gland.



3. Strip the wires of the cable.



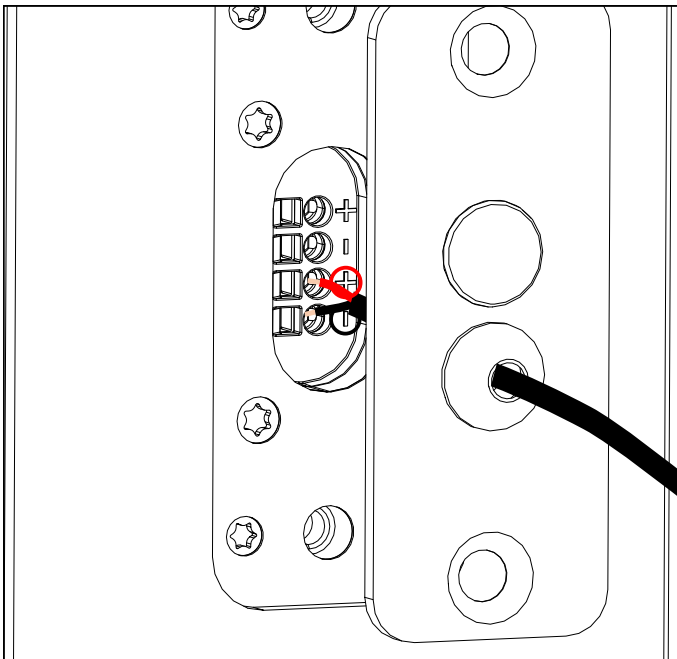
2 x max. 2.5 mm<sup>2</sup> cable



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

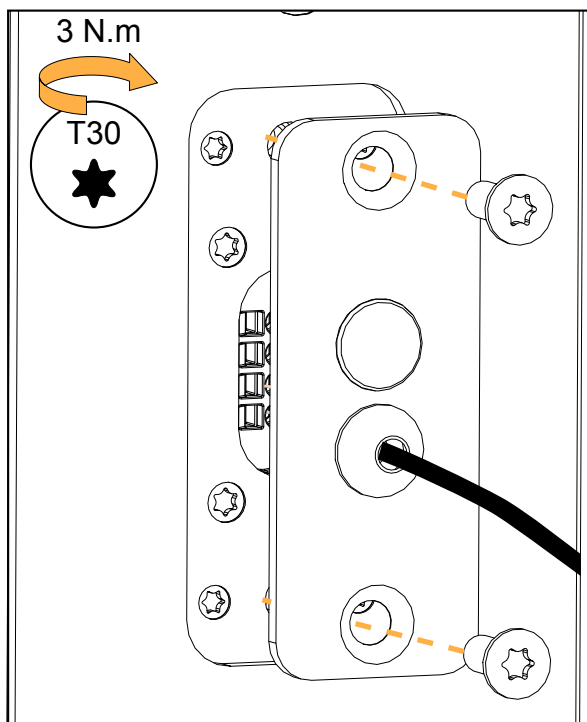
4. Push the wires into the terminals.

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

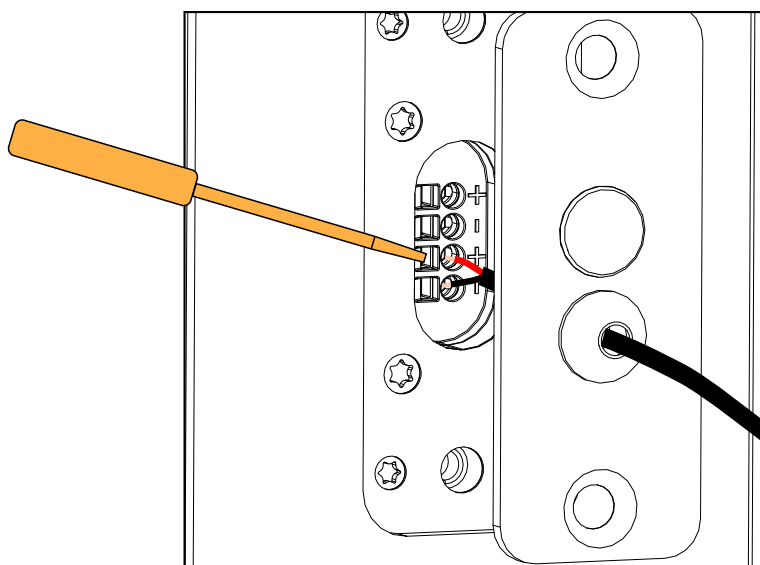


**5.** Secure the connector sealing plate to the enclosure.

Apply a torque of 3 N.m.

**What to do next**

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



# Specifications

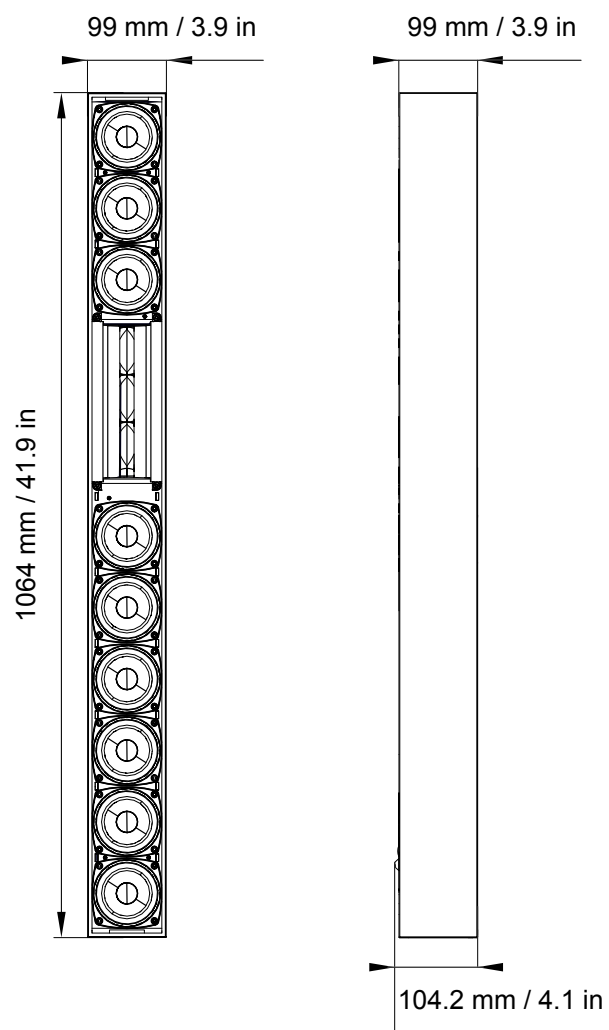
## Sokar specifications

<b>Description</b>	2-way passive colinear enclosure: 9 x 3.5" LF + 3 x 1" HF diaphragm (recessed version), amplified by LA2Xi / LA4X / LA7.16i / LA12X		
	with preset [SOKA_60]	with preset [SOKA]	with preset [SOKA_200]
<b>Usable bandwidth (-10 dB)</b>	60 Hz - 20 kHz	100 Hz - 20 kHz	200 Hz - 20 kHz
<b>Maximum SPL<sup>1</sup></b>	with LA2Xi (bridge mode) / LA4X / LA7.16i / LA12X	124 dB	130 dB
	with LA2Xi	124 dB	128 dB
<b>Nominal directivity (-6 dB)</b>	vertical: +5/-21° (> 2 kHz) horizontal: 140°		
<b>Transducers</b>	LF: 9 x 3.5" neodymium cone driver HF: 3 x 1" neodymium		
<b>Acoustical load</b>	LF: closed enclosure HF: conical waveguide, L-Fins		
<b>Nominal impedance</b>	8 Ω		
<b>Connectors</b>	1 x 4-point terminal block with push-in connection		
<b>Rigging and handling</b>	6 M6 inserts for external rigging and safety		
<b>Weight (net)</b>	8.7 kg / 19.2 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 measured at 1 m under free field 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.

## Sokar dimensions



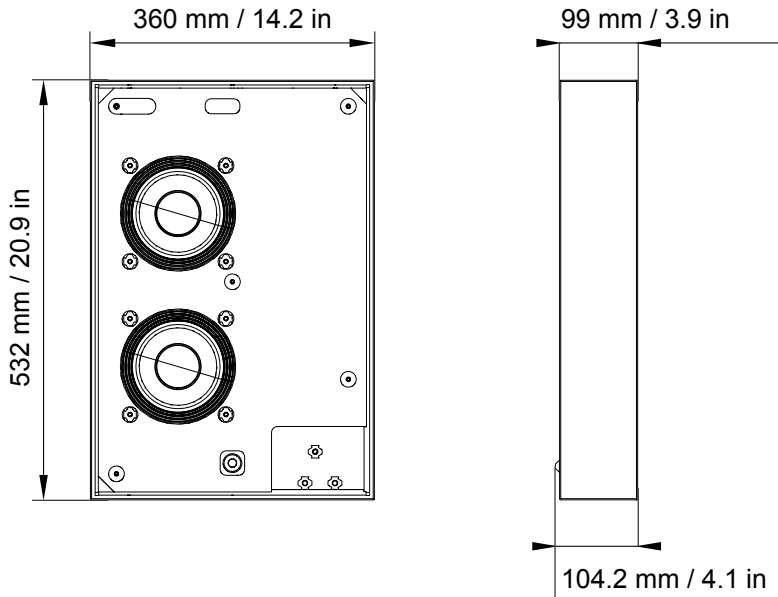
## SB6r specifications

<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





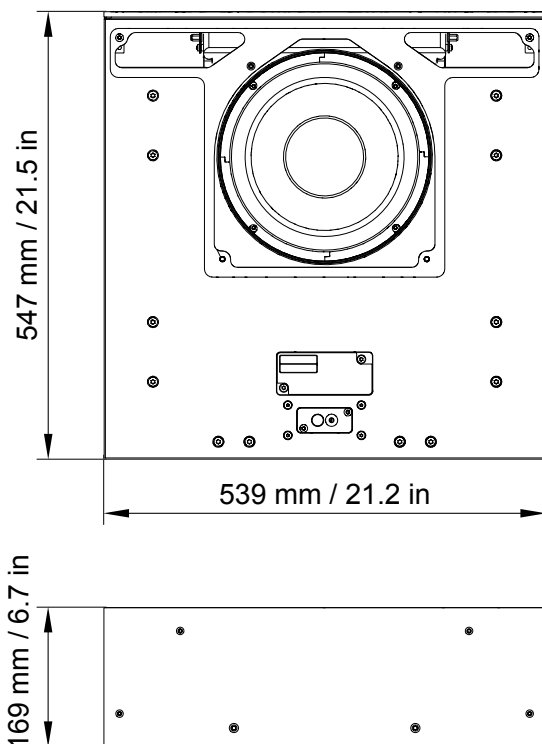
## SB10r specifications

<b>Description</b>	Ultra-compact subwoofer: 1 × 10" (recessed version), amplified by LA2Xi / LA4X / LA7.16i / LA12X		
	with [SB10_60]	with [SB10_100]	with [SB10_200]
<b>Low frequency limit (-10 dB)</b>	25 Hz	27 Hz	29 Hz
<b>Maximum SPL<sup>1</sup></b> with LA2Xi (bridge mode) / LA4X / LA7.16i / LA12X	119 dB	122 dB	124 dB
with LA2Xi	119 dB	120 dB	122 dB
<b>Nominal directivity (-6 dB)</b>	standard configuration		
<b>Transducers</b>	1 × 10" cone driver		
<b>Acoustical load</b>	bass-reflex, L-Vents		
<b>Nominal impedance</b>	8 Ω		
<b>Connectors</b>	1 × 4-point terminal block with push-in connection		
<b>Rigging and handling</b>	12 M6 inserts for rigging accessories		
<b>Weight (net)</b>	13 kg / 29 lb		
<b>Cabinet</b>	premium grade Baltic 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.

## SB10r dimensions

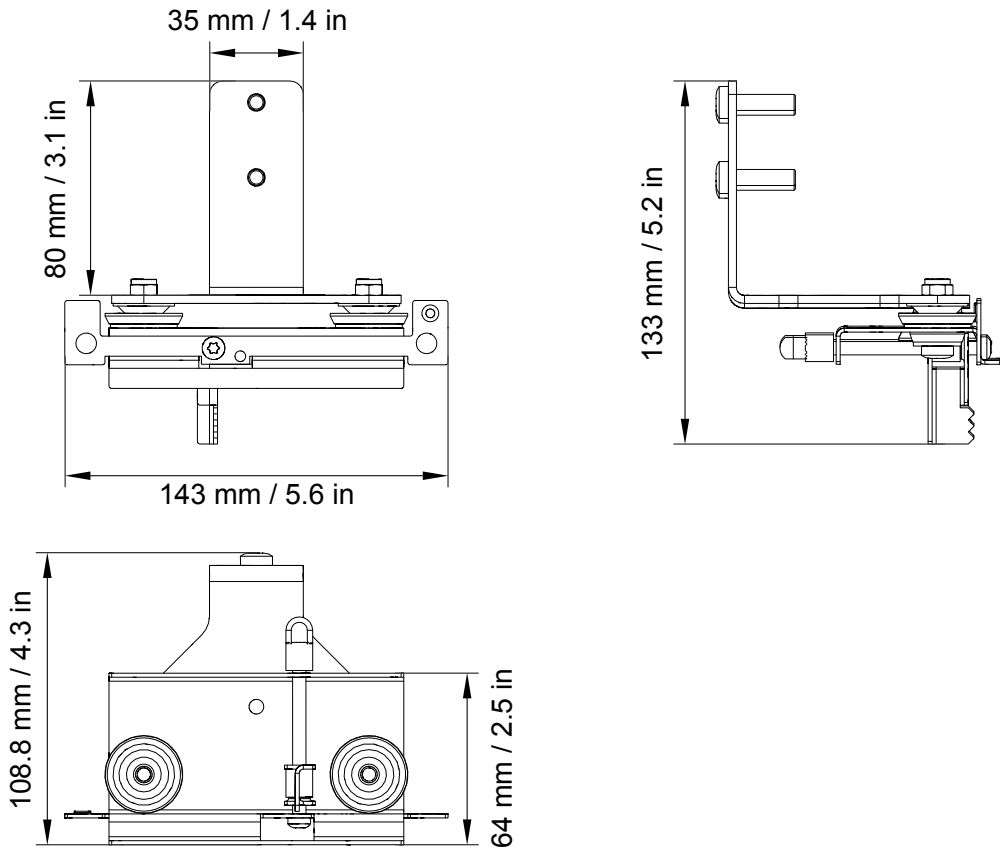


## Sokar-inW specifications

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<b>Description</b>	In-wall mounting accessory for Sokar
<b>Weight (net)</b>	0.89 kg / 2 lb
<b>Material</b>	high grade steel with anti-corrosion coating

### Sokar-inW dimensions

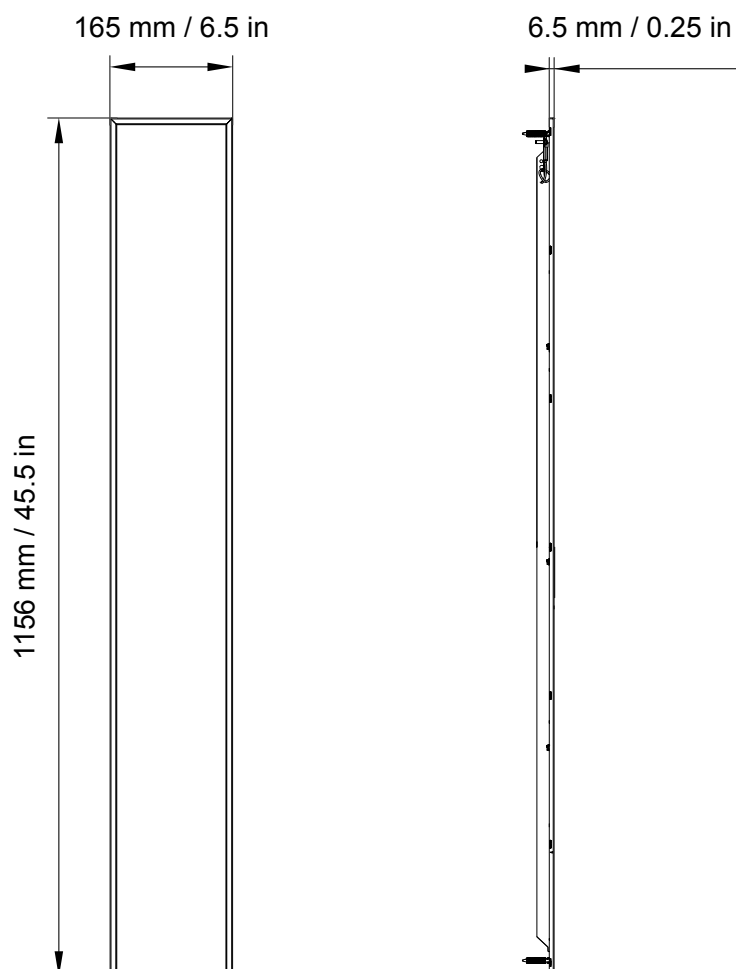


## Soka-Screen specifications

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<b>Description</b>	Wall screen for Sokar
<b>Weight (net)</b>	2.4 kg / 5.3 lb
<b>Material</b>	steel with anti-corrosion coating acoustically neutral 3D fabric

## Soka-Screen 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:

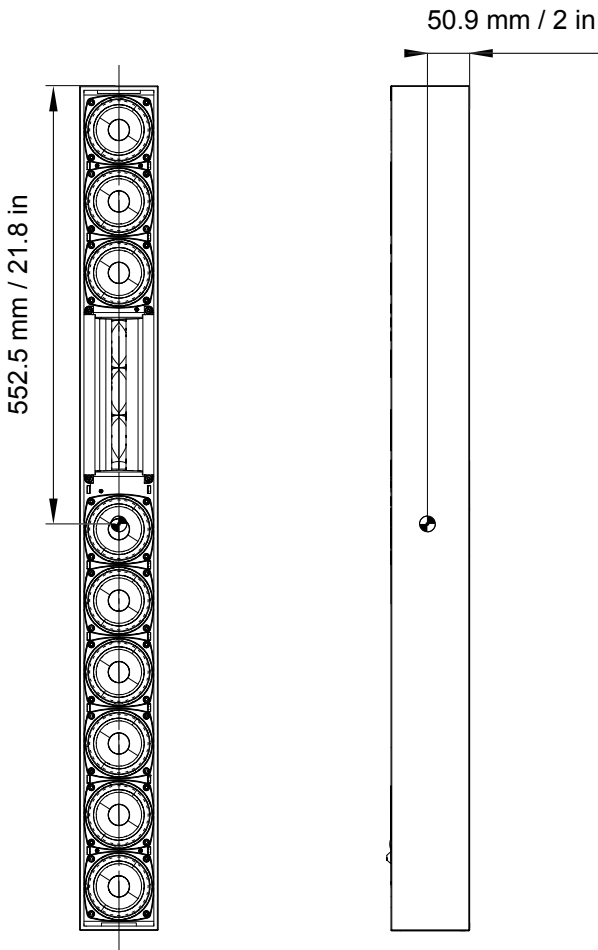
<https://www.l-acoustics.com/installation-tools/>

# Specifications for custom rigging

## Dimensions

Refer to [Sokar dimensions](#) (p.39).

## Center of gravity



## Weight


Sokar: 8.7 kg / 19.2 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

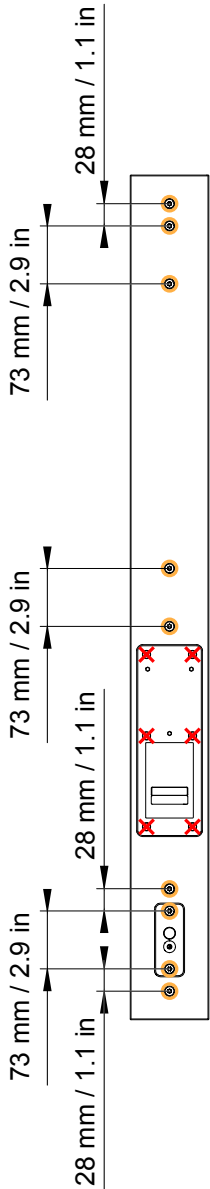
Take into consideration the number of inserts used, weight and center of gravity of enclosure(s), and resulting action forces.

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

Sokar has **9 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

**i** \* 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.



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