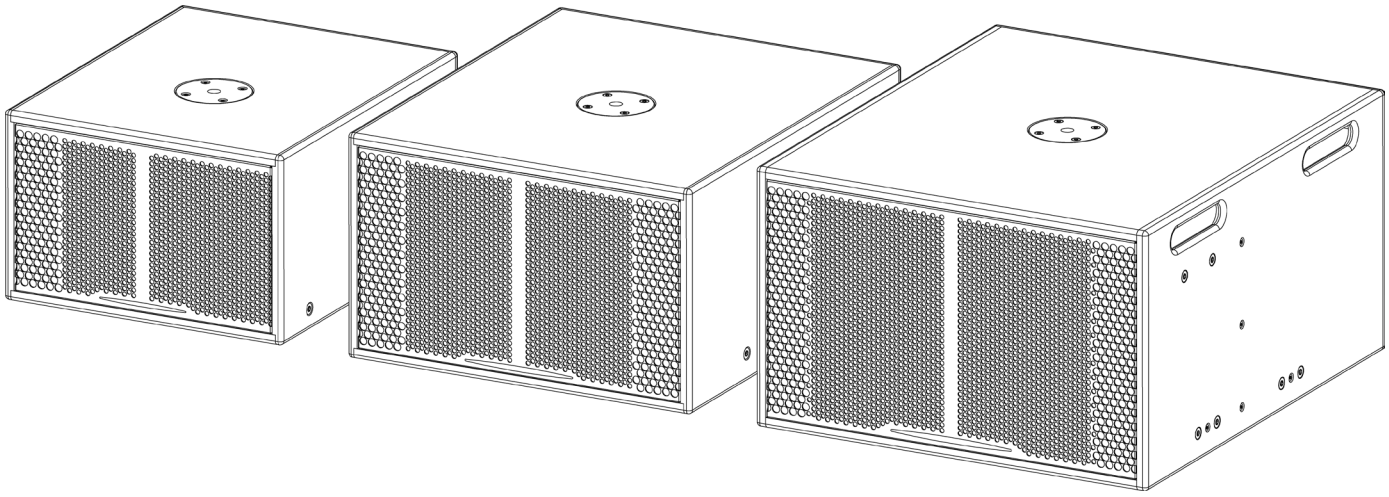
iS Series

User manual



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groupe

General information

iS Series - User manual
03/2023 EN

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1. Safety note and general information

- Information on the risk of exposure to high sound level
- APG loudspeakers are liable to generate levels of sound pressure hazardous to health, which may cause hearing impairment. It is recommended that you never stand in the immediate vicinity of the loudspeakers in operation and wear hearing protection when necessary. Observe the maximum exposure time to noise according to the noise level and the regulations in force in your country. Pay attention to the hearing protection of listeners when using APG systems.
- Read this manual before use and keep it.
- Read all documents relating to the product to be used before setting up and using it. Please contact APG with any questions relating to the product.
- Obtain the latest version of the user manual from the APG website: www.apg.audio .
- Consider all warnings and follow the instructions and recommendations for use.
- Make sure you know the safety rules for hanging, stacking or setting up on a pole or tripod. Failure to follow these rules may expose people to potential injury or death.
- Ensure the safety of operators and spectators.
- Staff must wear personal protective equipment (PPE) during each step of installing the product (helmet, gloves, safety shoes at a minimum).
- Installation of APG products should only be carried out by qualified staff trained in rigging techniques and aware of the safety recommendations set out in this manual.
- Always check the stability, resistance to weight, flatness and horizontality of the support. Prevent access to the spectators around the system, prevent it being possible to push or climb the stack of speakers. Use straps to prevent tipping.
- Do not store the product on an unstable cart, stand, tripod, bracket or table.
- Use the products with the specified accessories by the manufacturer.
- Inspect lifting products and accessories before each use.
- Do not install equipment that is faulty or presents a risk of breakage and have it repaired by qualified personnel or by APG.
- Entrust all repairs to qualified staff or by APG. Repairs are mandatory if the device is damaged in any way, for example: damaged power cord or plug, spilled liquid or object dropped inside the device, exposure of the device rain or moisture for long periods of time, appliance that does not operate normally or that has been dropped.
- Any unauthorized maintenance operation will void the product warranty.
- Perform safety and compliance checks of accessories, enclosures, and third-party accessories periodically at least once a year.
- Respect the maximum load capacity of each configuration and carry out conformity simulations using the tools APG Tools, APG Uniline Aiming Tool, AFMG EASE Focus 3.
- Use only with a cart, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. If a cart is used, move the cart-apparatus combination carefully so as not to tip it over, which could cause personal injury.
- Do not install near a heat source such as an open flame, radiator, heat register, stove or any other device that produces heat (including amplifiers).
- Do not expose the product to extreme conditions such as humidity (rain, sea water, condensation, ambient humidity, etc.), excessive heat (sun, heating, etc.) over a long period.
- Take into account the effects of the wind. Flying loudspeakers overhead at wind forces higher than, 16 mph (25km/h) is not recommended. If the wind force exceeds 46 mph (72km/h):
    - Make sure that no person remains in the vicinity of the loudspeaker array.
    - Lower and secure the array.
- During an outdoor performance, it is advisable to find out about the weather conditions and to follow the local weather report and the recommendations of the competent authorities. An anemometer can be used at the top of the system.

- Use a secondary safety system for any APG speaker rigging.
- The product is intended for be used by professionals trained in professional audio work.
- APG declines all responsibility in the event of the use of non-validated accessories or non-compliance with safety instructions and rules.
- APG products are guaranteed for 5 years. The full five-year warranty covers filters and transducers against manufacturing defects under normal product use.
- APG pursues a research and development policy aimed at improving its products. For this reason, new materials, manufacturing methods and changes in principle may be introduced without prior warning. As a result, an APG product may differ in some aspects from its published description, however, unless otherwise indicated, its characteristics will be greater than or equal to those published.
- Disposal of electrical or electronic equipment
- This symbol on the product or on its packaging indicates that it will not be treated as household waste. Instead it will be delivered to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring recycling, you will help prevent potential consequences for the environment and human health. Recycling of materials will help conserve natural resources. For more detailed information on recycling this product, please contact your local office, waste collection agency or dealer.

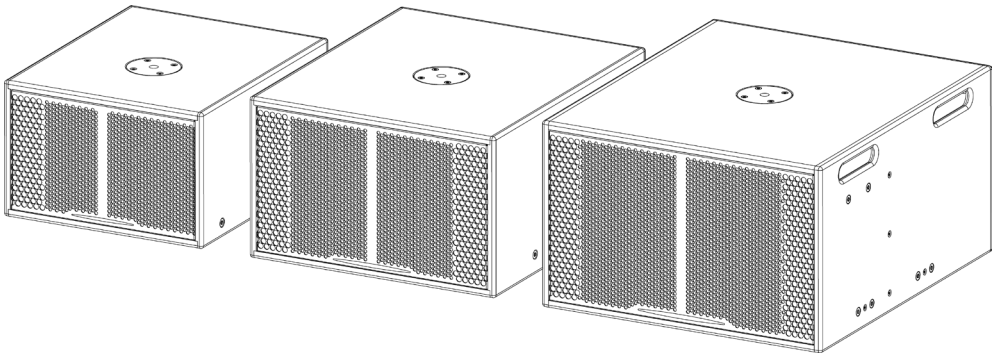
2. The iS range

2.1 Description of the product line

iS Series is a range made up of 3 high-quality bass speakers dedicated to professional installations.

Aesthetic and compact, they deliver a high sound level while offering a high quality of sound reproduction.

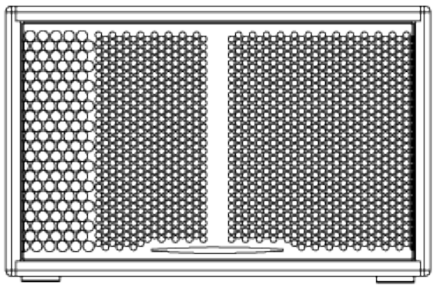
Designed for fixed installation, the iS Series speakers feature ergonomic options for quick and easy integration.



2.2 Product description

iS110

The iS110 subwoofer has been designed to add a deep bass extension to the speakers of the installation range while discreetly.



The iS110 is equipped with a 10" speaker loaded with bass reflex. This exclusive acoustic design has the effect of greatly reducing the load volumes in order to achieve an optimal {size / low cutoff frequency} ratio while improving acoustic efficiency.

The iS110 is equipped with two SPEAKON NL4 connectors.

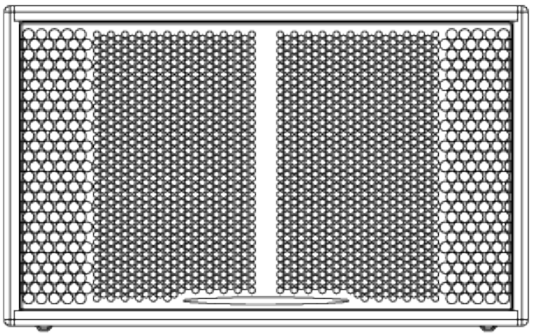
The frequency response ranges from 45Hz to 150Hz.

It is very compact and can be positioned horizontally and vertically for optimal visual integration in fact it is possible to arrange it or fix it to the wall using optional fixing brackets (iS110KMV). Embedded in a cutaway, the connections are protected and allow discreet wiring. It is naturally intended for the bass extension of iX and DX speakers. The iS110 is available in white or black for even more efficient integration.

In a fixed installation, the compact dimensions of the iS110 allow a non-obstructive arrangement in restricted environments and can fit perfectly under small stages or podiums or even under seats or benches. It is perfect for places like, for example, small theaters, conference venues or themed bars.

iS112

The iS112 is a compact subwoofer dedicated to mobile applications and small-scale fixed installations. It is equipped with a 12'' speaker.



Its acoustic design has the effect of considerably reducing the load volumes in order to obtain the lowest possible {size / low cutoff frequency} ratio while improving acoustic efficiency.
This dual speaker load with front and rear volume also provides true mechanical control of diaphragm travel and reduced distortion.
Ergonomically, the iS112 incorporates a screw base for coupling tube, integrated and protected connectors, damping and non-slip pads.

The iS112 is equipped with two SPEAKON NL4 connectors.

In a fixed installation, its reduced dimensions facilitate its integration in confined spaces, under small stages, platforms or even benches.

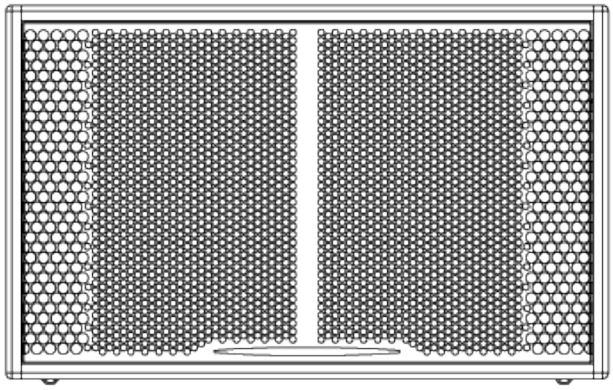
The sound reproduction is characterized by a precise bass from 45Hz translated by a beautiful sound impact and a lot of musicality in the bass.

The iS112 pairs perfectly with iX and DX loudspeakers to provide effective front panel systems in small concert venues, bars and clubs, and conference rooms.

The iS112 will be appreciated by service delivery mobile systems for its compactness and portability, especially for corporate events. This subwoofer is also suitable for distributed sound in an installation. The impact sound rendering and dynamics of the iS112 make it effective for "drum fill" applications on small stages. For maximum performance and protection, the iS112 should only be used with an APG processor and amplifier.

iS115

The iS115 model is a compact subwoofer suitable for both fixed installation and service.
It is equipped with a 15" neodymium speaker, the acoustic load being the bass reflex.



This exclusive acoustic design has the effect of greatly reducing the load volumes in order to achieve an optimal {size / low cutoff frequency} ratio while improving acoustic efficiency. This dual speaker load with front and rear volume also provides true mechanical control of diaphragm travel and reduced distortion.

At the ergonomic level, the iS115 integrates multiple functions: two integrated handles, a fully recessed protected and discreet connection, a screw tube base and glides.

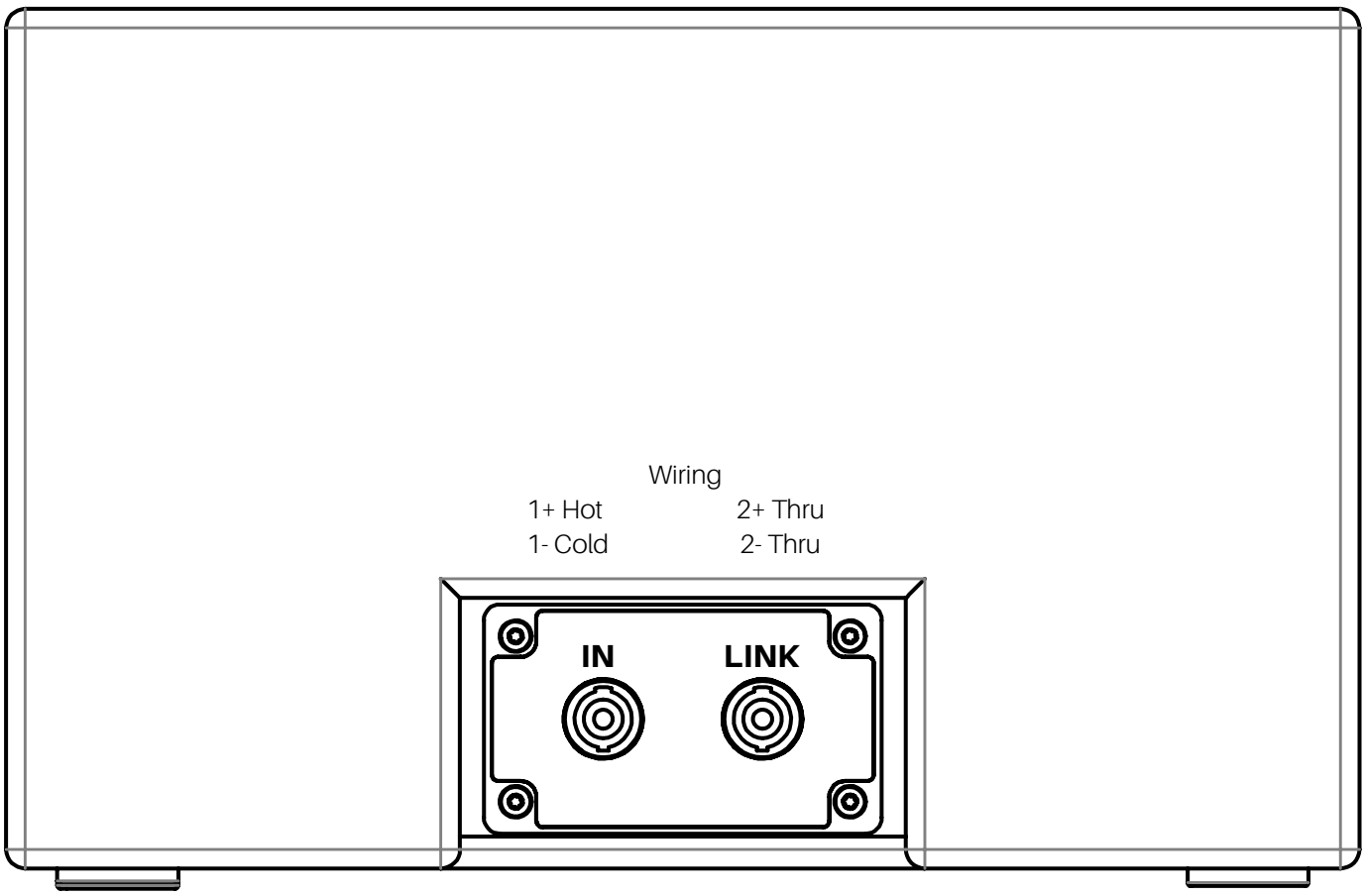
The iS115 is equipped with two SPEAKON NL4 connectors.

The iS115 is ideal for all applications where maximum power is desired with regard to its small footprint. It is naturally intended for the bass extension of DX speakers and goes very well with the Uniline Compact in a reduced configuration. In a fixed installation, the reduced dimensions of the iS115 allow a non-obstructive arrangement in restricted environments and can be perfectly integrated under small stages or podiums or even under seats or benches. It is perfect for places such as theaters, small concert venues, conference rooms, music bars or even small clubs.

In mobile system it is suitable for the sound of small concerts and events, in animation. This subwoofer is also suitable for distributed sound in large spaces.
The hanging options allow it to be fixed to the ceiling with the possibility of coupling with DX12 or DX15 speakers. With these same speakers, in on-stage mode, it makes it possible to constitute a compact and very efficient "drum fill" type system.

The iS115 works in low frequencies from 40Hz and provides a bass of great musicality and maximum precision even in adverse acoustics. For maximum performance and protection, the iS115 should only be used with an APG processor and amplifier.

2.3 Connections



The rear panel of the iS Series subwoofers are equipped with two NL4 connectors. The four pins of the two connectors are connected in parallel. The speakers occupy points 1 + / 1-.
The IN connector is used to receive the audio signal. The LINK connector allows it to be redistributed to another iS subwoofer connected in parallel.

The internal pinout of the iS subwoofers is shown in the table below.

NL4	1+	1-	2+	2-
Rear panel connectors	Hot (+)	Cold (-)	THRU	THRU

2.4 Amplifiers

WARNING

APG speakers must be powered by APG or Powersoft amplifiers with the corresponding speaker preset. Failure to heed this warning may cause damage to speaker components and the user experience will not be optimal. Refer to the amplifier manual fot its connection to the speakers.

	DA8	DA12
iS110	8	8
iS112	8	8
iS115	8	8

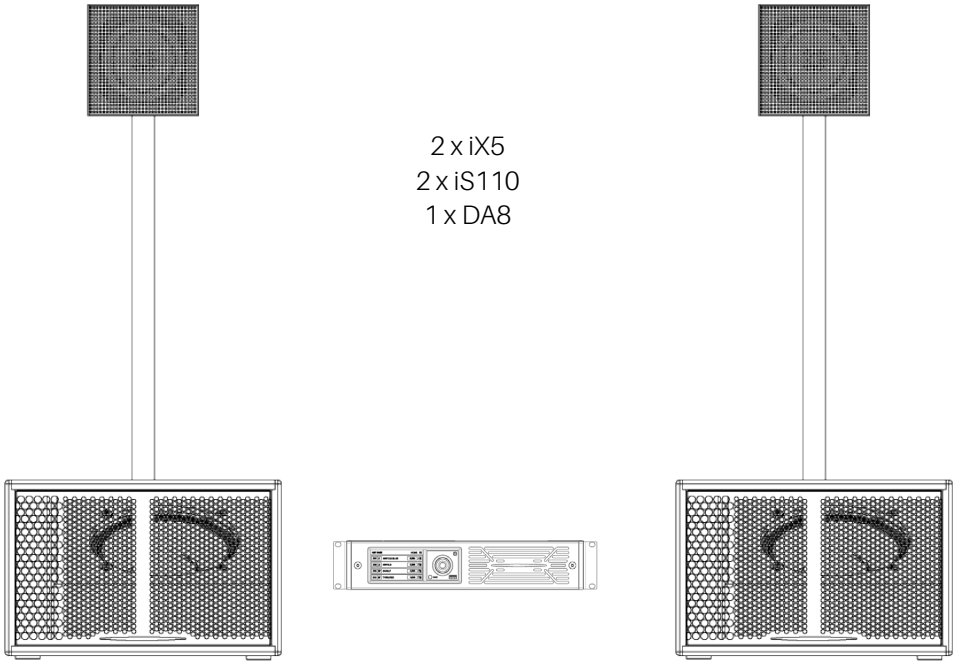
Table : Loudspeakers / Amplifiers parallel wiring recommendations

In order to maintain sound quality, the wiring will be carried out with flexible deoxyged-copper speaker cable with a minimum 2.5mm2 or 4mm2 section for lengths of up to 30 maximum for one speaker per channel.

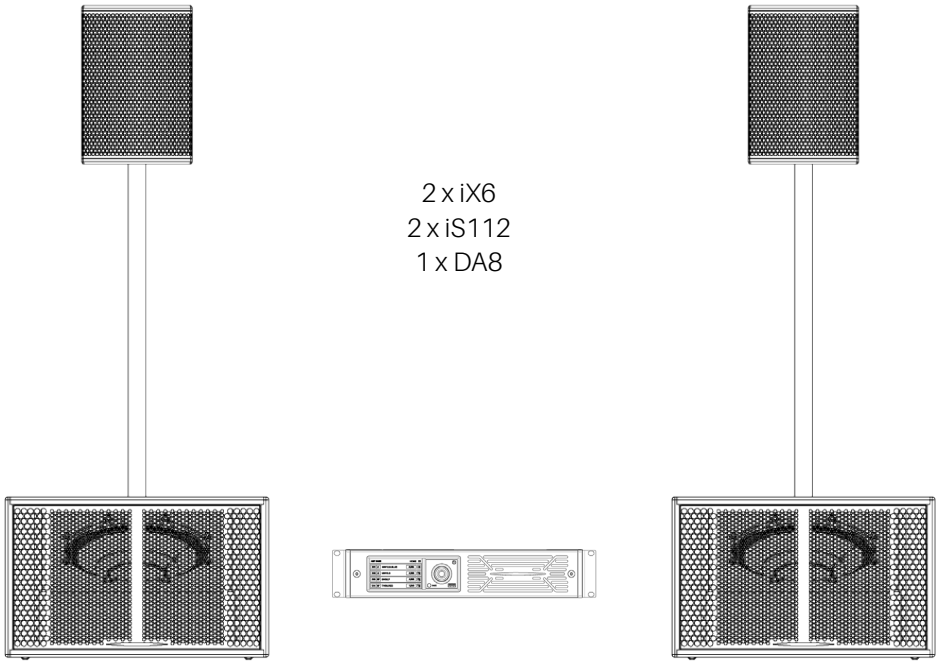
	Rec. minimum cable section [mm^2]	Rec. maximum cable length [m]
iS110	2.5mm^2	35m
iS110 x 2	2.5mm^2	15m
iS112	2.5mm^2	35m
iS112 x 2	2.5mm^2	15m
iS115	4mm^2	35m
iS115 x 2	4mm^2	15m

Table : Recommended cable section & length depending on the configuration

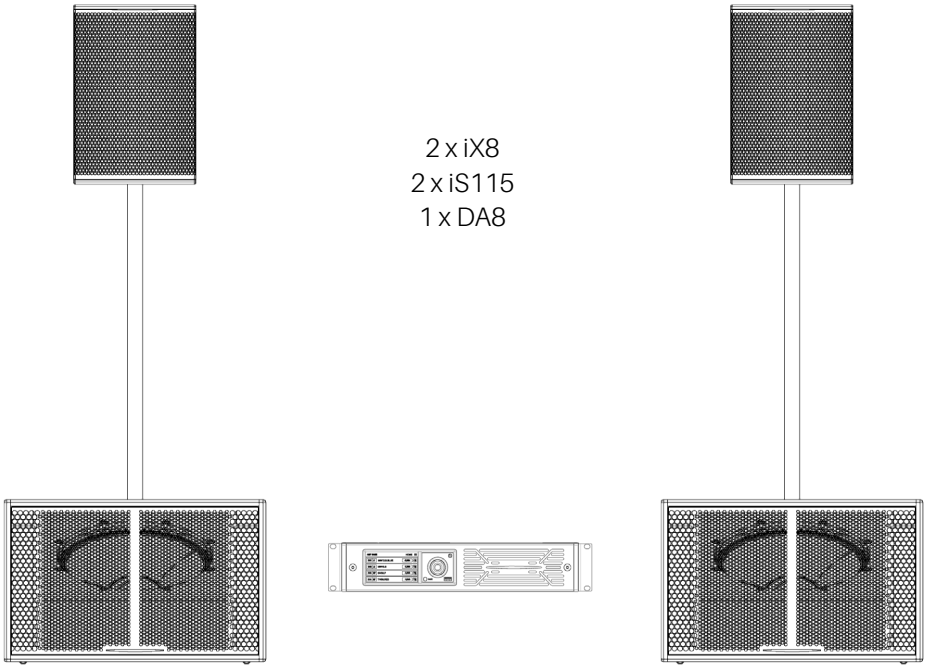
2.5 Examples of configurations

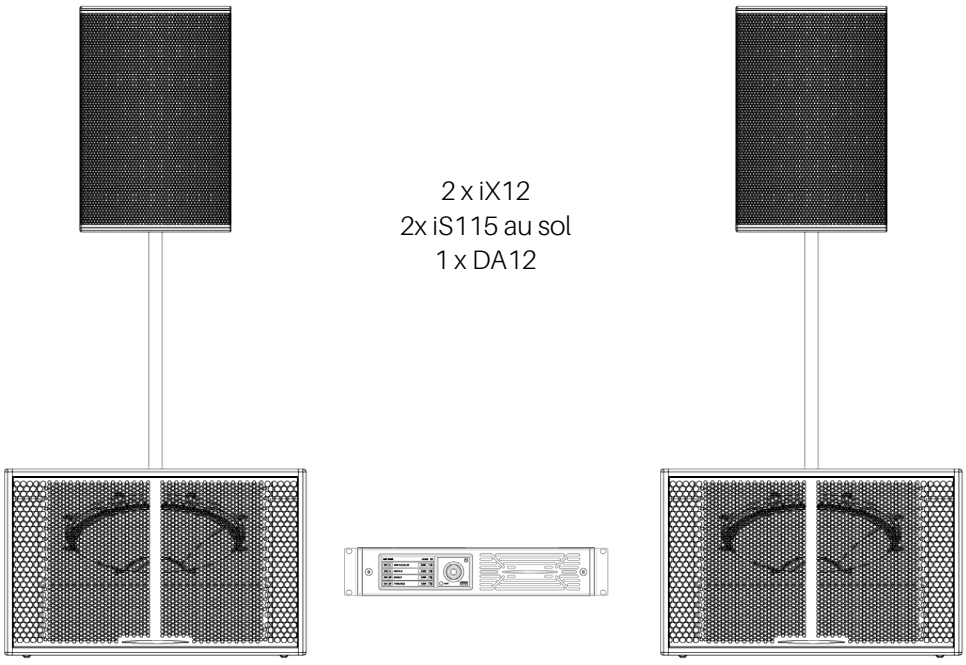


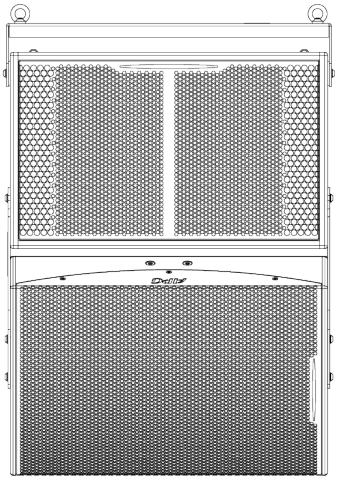
2 x iX5
2 x iS110
1 x DA8



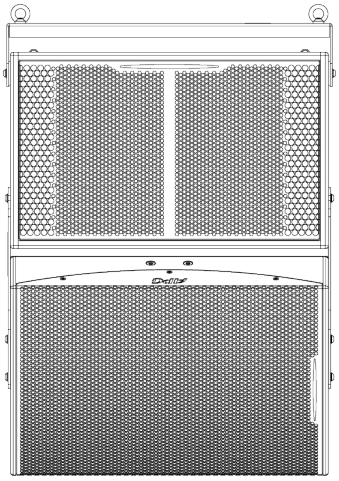
2 x iX6
2 x iS112
1 x DA8


2 x iX8
2 x iS115
1 x DA8


2 x iX12
2x iS115 au sol
1 x DA12



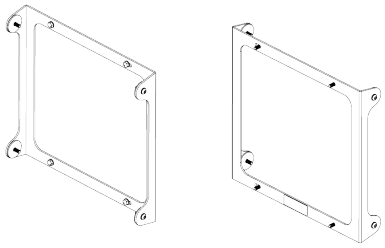
2 x iX12
2 x iS115 suspendu
1 x DA12



2.6 Rigging

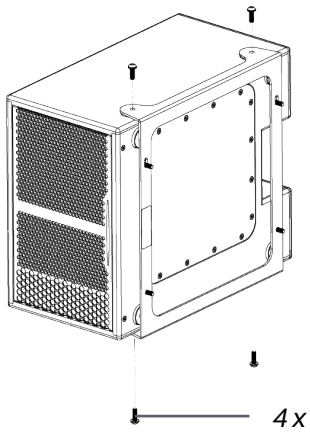
iS110 hanging accessory

The iS110 can be placed on the floor horizontally, or positioned vertically against a wall with the iS110KMV mounting accessory.

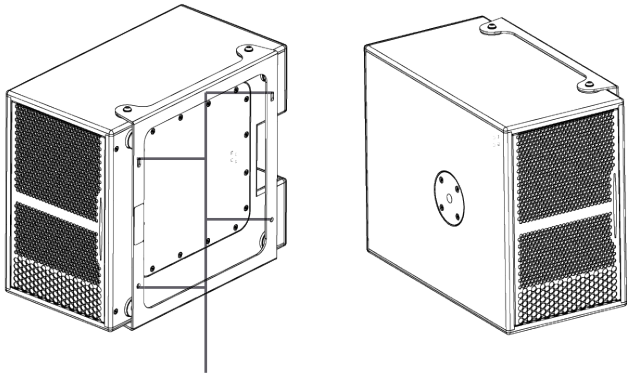


iS110KMV wall or ceiling mounting accessory

1. Place the mounting accessory on the underside of the enclosure then secure it using the M8x25 screws provided for this purpose.



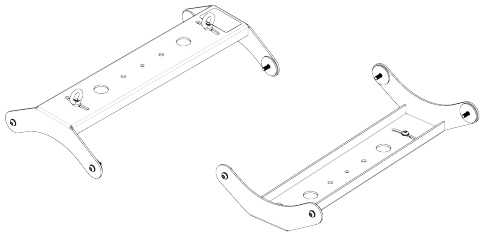
2. If necessary, it is possible to fix the assembly on a section of wall using the fixing holes.



Fixing holes for installation on a wall

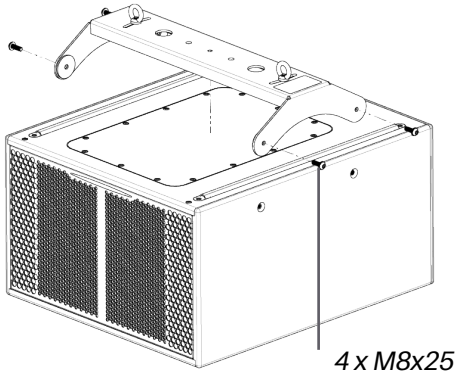
iS112 hanging accessory

The iS112 can be placed on the floor or suspended using the iS112BH mounting accessory.

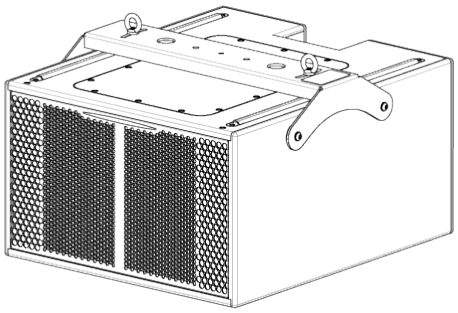


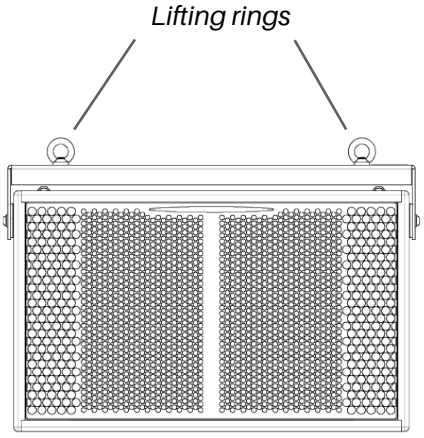
Hanging bumper iS112BH

1. Place the mounting accessory on the underside of the enclosure then secure it using the M8x25 screws provided for this purpose.



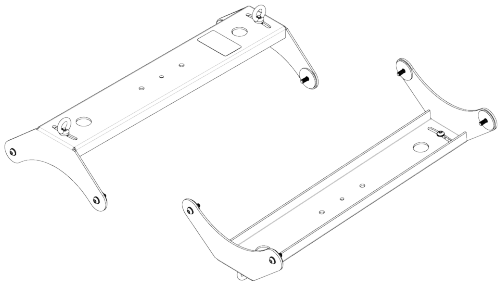
2. Use the lifting rings to suspend and secure the subwoofer with a motor for example.





iS115 hanging accessory

The iS115 can be placed on the floor or suspended using the iS115BH mounting accessory.



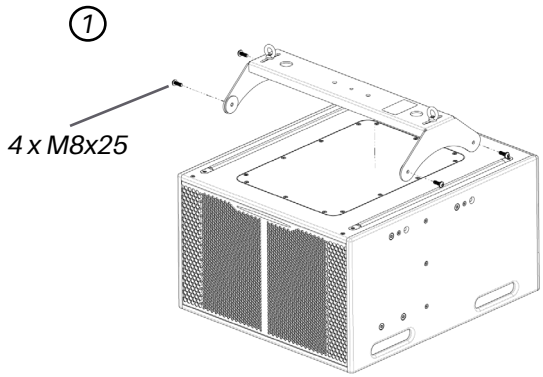
Hanging bumper iS115BH

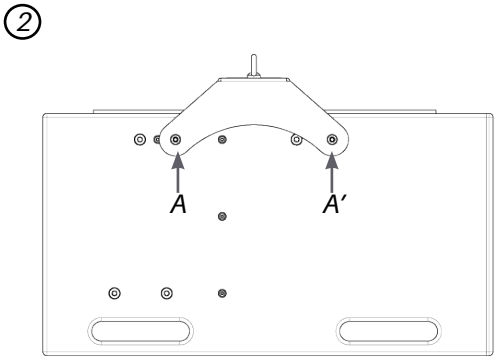
1. Place the mounting accessory on the underside of the speaker.

WARNING :

- For use alone, be sure to secure the hanging bumper to the corresponding attachment points (A and A ') then secure it using the M8x25 screws provided for this purpose.

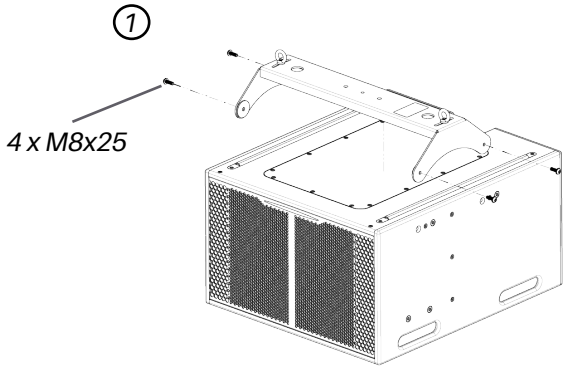
Use alone

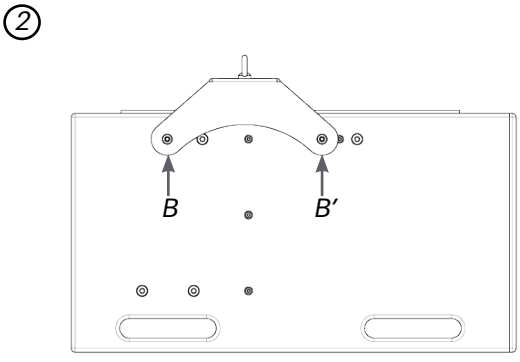




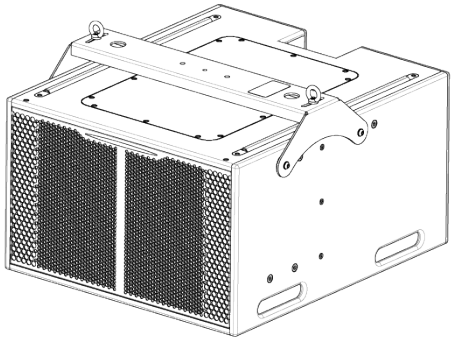
- For use with iX12 loudspeaker, be sure to secure the hanging bumper to the attachment points (B and B ') then fix it using the M8x25 screws provided for this purpose.

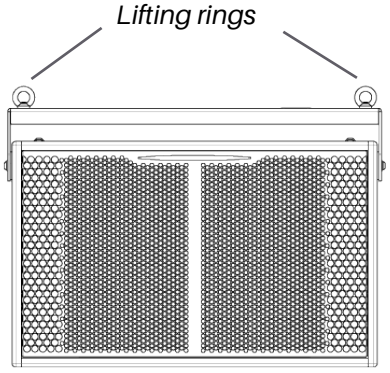
Use with iX12 loudspeaker





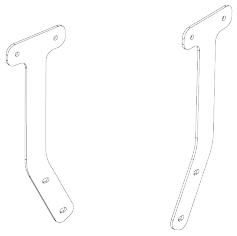
2. Use the lifting rings to suspend and secure the subwoofer with a motor for example.





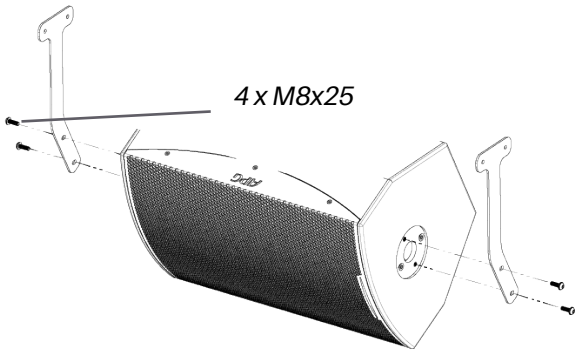
iS115 to iX12 connection accessory

The iS115 also has an LS115-iX12 junction piece allowing coupling with an iX12.

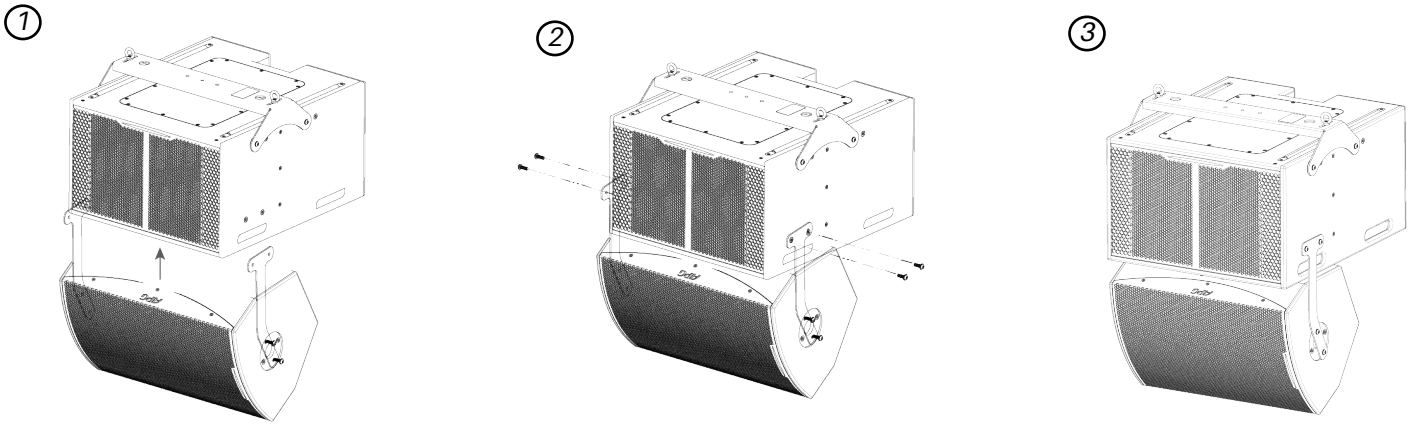


Connection accessory LKiS115-iX12

1. Place the iX12 loudspeaker horizontally and fix the junction pieces on each side of the iX12.

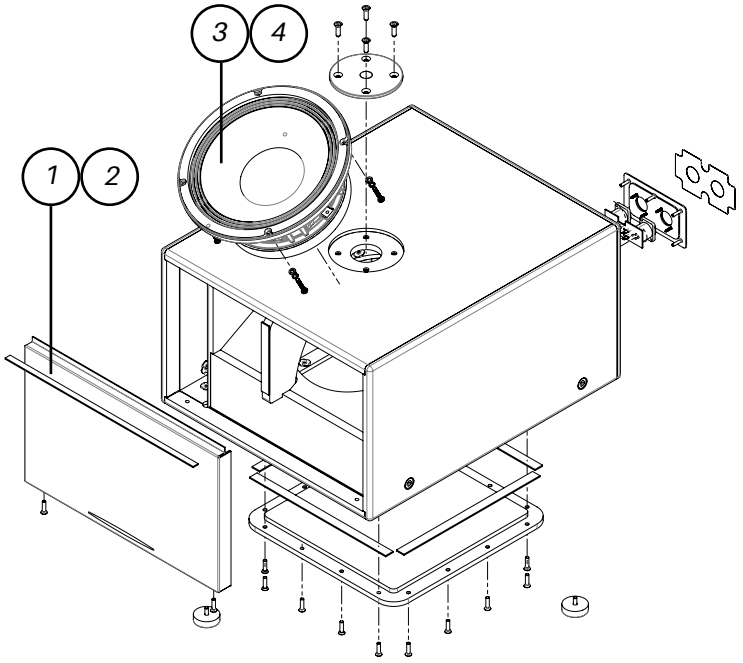


2. Assemble by approaching the iX12 under the iS115 then fix the junction pieces to the iS115 using the M8x25 screws.



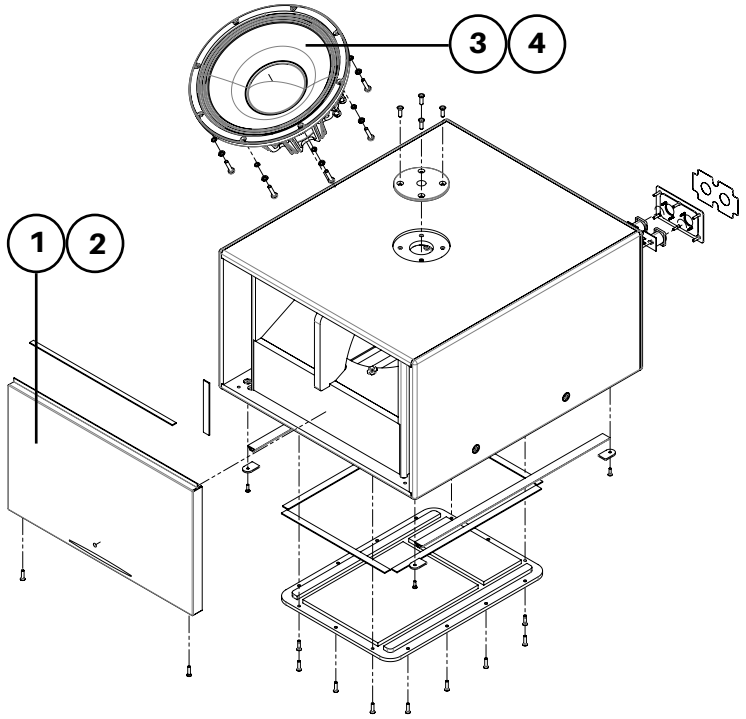
2.7 Maintenance - Spare parts

iS110 loudspeaker



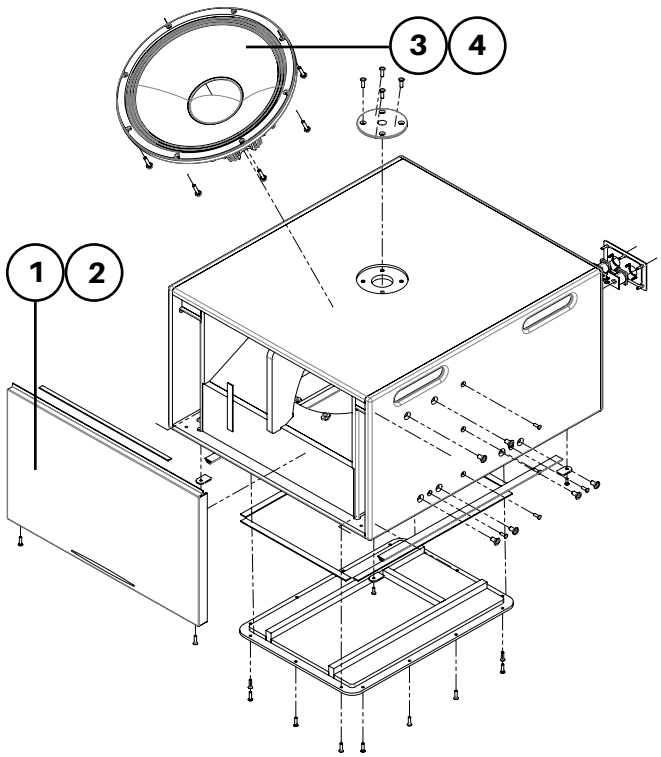
REPERE	REFERENCE	DESIGNATION
1	PRS_1193	Black steel iS110
2	PRS_1194	White steel iS110
3	PRS_1126	Recone kit for PST_1508
4	PRS_1195	HP PST_1508_completed

iS112 loudspeaker



REPERE	REFERENCE	DESIGNATION
1	PRS_1196	Black steel iS112
2	PRS_1197	White steel iS112
3	PRS_1198	Recone kit for PST_1524
4	PRS_1199	HP PST_1524_completed

iS115 loudspeaker

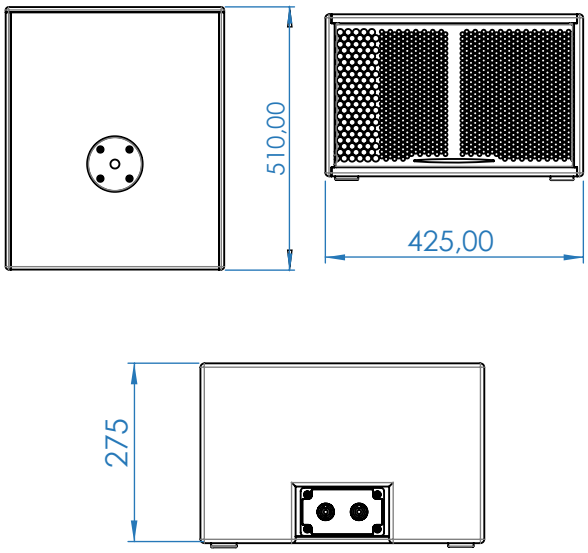


REPERE	REFERENCE	DESIGNATION
1	PRS_1200	Black steel iS115
2	PRS_1201	White steel iS115
3	PRS_1202	Recone kit for PST_1541
4	PRS_1203	HP PST_1541_completed

2.8 Technical specifications

iS110 loudspeaker

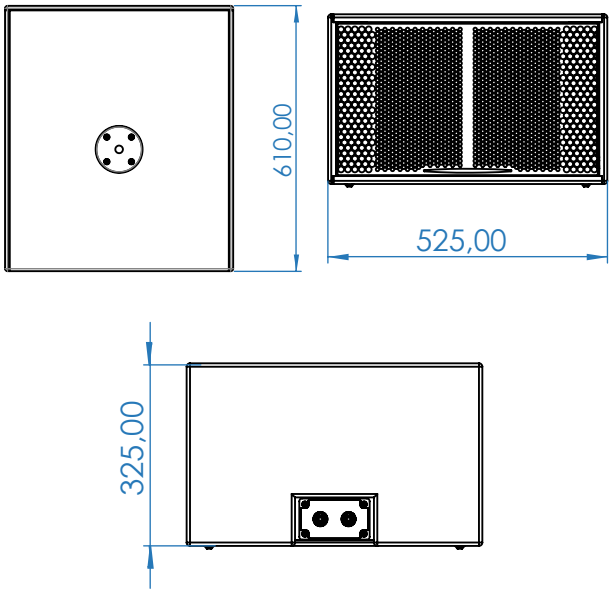
Features	
Usable bandwidth (± 10 dB)	45 Hz - 150 Hz
SPL Max @ 1m	132 dB SPL (1)
Nominal directivity	Omnidirectionnal (2)
Nominal impedance	8 ohm
Components	
Transducers	1 x 10" Ferrite
Topology	Dual Interactive Chamber Technology
Acoustical load	Bass Reflex
Ways and amplification type	1 way, mono amplified
Power	
AES	500 W (3)
Maximum power handling	2000 W (4)
Construction	
Dimensions H,W,D (mm)	10,8" x 16,7" x 20" (275 x 425 x 510 mm)
Weight	41,8 lb (19,2 kg)
Connectors	2 x Speakon NL4MP (5)
IP	43



(1) Peak level @ 1m, 2ϖsr using 12dB crest factor pink noise with APG preset
(2) Nominal directivity @-6dB
(3) Continuous power according to AES2-2012 in DCR
(4) Peak power according to AES2-2012 in DCR
(5) SPEAKON connectors are wired hot pin 1+, cold pin1- (2+ and 2- THRU)

iS112 loudspeaker

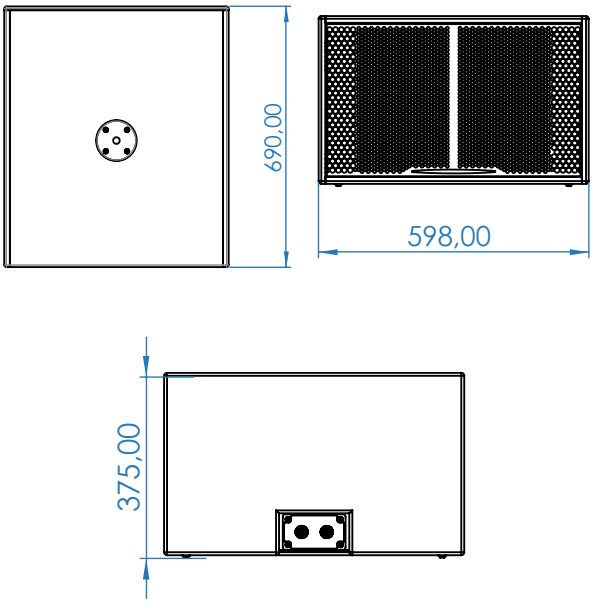
Features	
Usable bandwidth (± 10 dB)	45 Hz - 150 Hz
SPL Max @ 1m	137 dB SPL (1)
Nominal directivity	Omnidirectionnal (2)
Nominal impedance	8 ohm
Components	
Transducers	1 x 12" ND
Topology	Dual Interactive Chamber Technology
Acoustical load	Bass Reflex
Ways and amplification type	1 way, mono amplified
Power	
AES	800 W (3)
Maximum power handling	3200 W (4)
Construction	
Dimensions H,W,D (mm)	12,7" x 20,6" x 24" (325 x 525 x 610 mm)
Weight	53,1 lb (24,1 kg)
Connectors	2 x Speakon NL4MP (5)
IP	43



(1) Peak level @ 1m, 2ϖsr using 12dB crest factor pink noise with APG preset
(2) Nominal directivity @-6dB
(3) Continuous power according to AES2-2012 in DCR
(4) Peak power according to AES2-2012 in DCR
(5) SPEAKON connectors are wired hot pin 1+, cold pin1- (2+ and 2- THRU)

iS115 loudspeaker

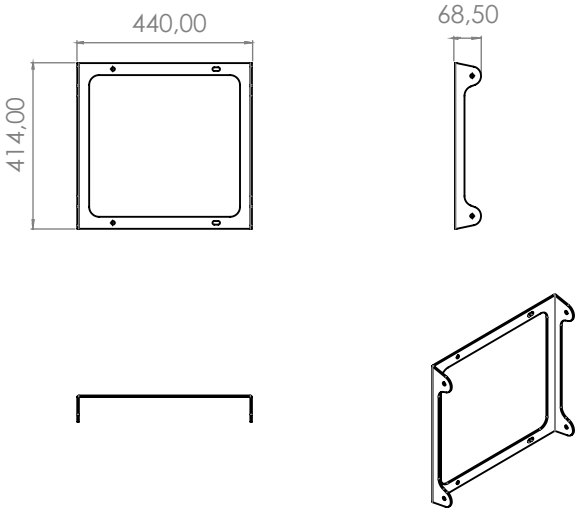
Features	
Usable bandwidth (± 10 dB)	42 Hz - 120 Hz
SPL Max @ 1m	138 dB SPL (1)
Nominal directivity	Omnidirectionnal (2)
Nominal impedance	8 ohm
Components	
Transducers	1 x 15" ND
Topology	Dual Interactive Chamber Technology
Acoustical load	Bass Reflex
Ways and amplification type	1 way, mono amplified
Power	
AES	900 W (3)
Maximum power handling	3600 W (4)
Construction	
Dimensions H,W,D (mm)	14,7" x 23,5" x 27,1" (375 x 598 x 690 mm)
Weight	72 lb (32,7 kg)
Connectors	2 x Speakon NL4MP (5)
IP	43



(1) Peak level @ 1m, 2ϖsr using 12dB crest factor pink noise with APG preset
(2) Nominal directivity @-6dB
(3) Continuous power according to AES2-2012 in DCR
(4) Peak power according to AES2-2012 in DCR
(5) SPEAKON connectors are wired hot pin 1+, cold pin1- (2+ and 2- THRU)

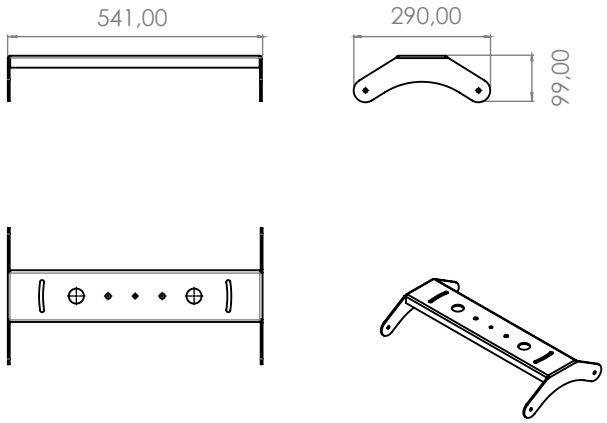
iS110KMV

Construction	
Dimensions H,W,D (mm)	16,2" x 17,3" x 2,6" (414 x 440 x 68,50 mm)
Weight	5,5 lb (2,5 kg)
WLL (Working Load Limit)	44 lb (20 kg)



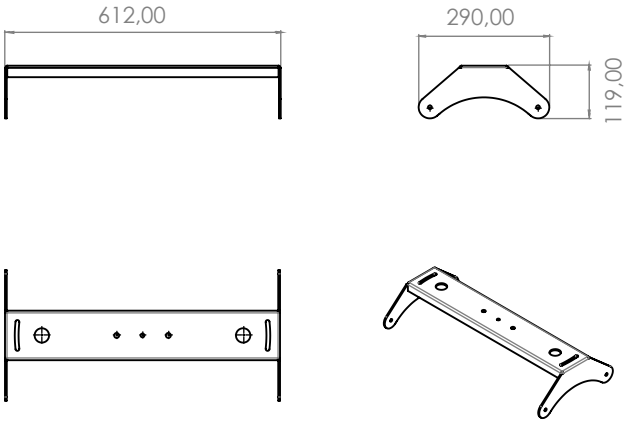
iS112BH

Construction	
Dimensions H,W,D (mm)	3,8" x 21,2" x 11,4" (99 x 541 x 290 mm)
Weight	7,5 lb (3,4 kg)
WLL (Working Load Limit)	55 lb (25 kg)



iS115BH

Construction	
Dimensions H,W,D (mm)	4,6" x 24" x 11,4" (119 x 612 x 290 mm)
Weight	8,5 lb (3,9 kg)
WLL (Working Load Limit)	121 lb (55 kg)



2.9 iS-O : iS Series special Outdoor

IP54 loudspeakers

Cabinet	For the cabinet, APG uses exclusively Baltic birch plywood treated with a polyurethane coating against humidity and splashing water. This coating offers better resistance to UV as well as to humid environments.
Steel	Anti-corrosion treated steel, water resistant.
Accessries	Water resistant stainless steel fixing bracket and screws.
Componants	Waterproof treatment on the speaker membranes.
Connectors	Cable gland connectors as standard for iS-O range. Speakon connectors are available on specific request.

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