

Invisible Loudspeakers

- Datasheets
- Installation Details

cerasonar 1520x1

Mini-sized sound panel for room sizes of 1-20 square meters. Ideal for retrofitting as multiroom or surround speaker. Qualified for single-ply dry walls and suspended ceilings. Ideal size of the installation location requires min. 60 x 60 cm of clearance to the adjacent profiles of the substructure. In full-range mode this allows for a full frequency response.

* Power rating as per application of a high-pass filter. No electronic low-frequency boost must be used. Resulting damage from mechanical overload are excluded from the warranty.

** Max. pulse power rating. The load capacity can be increased when operated via electronic high-pass filters of an AV receiver (min. 150 Hz / 12 dB) and speaker size set to „small“ or in conjunction with a multiroom amplifier with respective equalization adjustment options.



Back view



Installation video



The 1520 panel model has been especially designed for retrofitting in drywall ceilings. Ideal for small spaces such as bathrooms, guest toilets, but also cuisines because of its hygienic properties.



With help of the enclosed template the cutout is specified and then worked out by means of a rasp with cutter edge or a knife. Caution! Make sure that no power cables run behind the opening! The wiring to the speakers is to be effected via the existing openings, as e.g. of the built-in lights of ceilings or walls. Possibly additional holes are required which have to be closed again after cable installation.



Technical specifications

Power rating:	25 Watt * (50 Watt **)
Impedance:	8 Ohm
Driver:	1 Exciter
Frequency range:	100 - 18.000 Hz *
Dispersion range:	180° x 180°
Sensitivity:	81 dB 1 W/1 m
Dimensions:	15 x 22,5 x 5,6 cm
Installation in:	only plasterboard 12,5 mm
Alcove depth:	-
Weight:	0,4 Kg

Application areas

Multiroom audio	*****
Surround systems	*****
Conference and media rooms	*****
Exhibitions, trade fairs, museums	*****
Gastronomy, hotels, spas	*****
Stores, sales rooms, POS	*****

Tender specification

Flat-panel speaker for the invisible installation in walls and ceilings. Qualified for background music / music playback in high quality without the use of a special DSP amplifier.

Warranty period

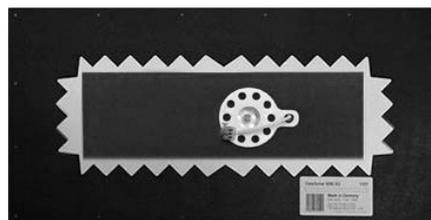
Ceratec grants a 5-year functional warranty on Exciters and panels, if the installation and setup protocol has been signed and registered with us. Improper use or overloading may void the warranty.

cerasonar 3060x1

Small-sized sound panel for room sizes of 5-30 square meters. Ideal for multiroom or surround applications. Qualified for dry walls and ceilings with a substructure spacing of 62.5 cm and a depth of 6 cm. Installation in solid walls and ceilings possible with the use of the optional mounting frame.

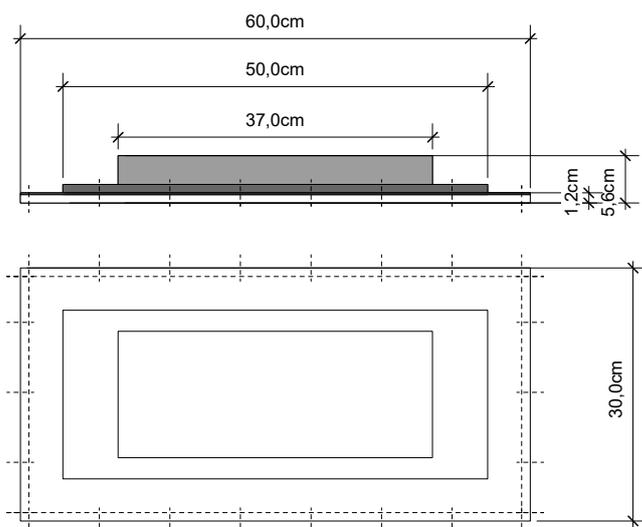
* Power rating as per application of a high-pass filter. No electronic low-frequency boost must be used. Resulting damage from mechanical overload are excluded from the warranty.

** Max. pulse power rating. The load capacity can be increased when operated via electronic high-pass filters of an AV receiver (min. 150 Hz / 12 dB) and speaker size set to „small“ or in conjunction with a multiroom amplifier with respective equalization adjustment options.



Back view

CAD Detail



Technical specifications

Power rating:	25 Watt * (50 Watt **)
Impedance:	8 Ohm
Driver:	1 Exciter
Frequency range:	80 - 18.000 Hz *
Dispersion range:	180° x 180°
Sensitivity:	81 dB 1 W/1 m
Dimensions:	30 x 60 x 5,6 cm
Installation in:	plasterboard 12,5 mm / solidwall construction
Alcove depth:	12,8 cm with mountingframe
Weight:	1,5 Kg

Application areas

Multiroom audio	*****
Surround systems	*****
Conference and media rooms	*****
Exhibitions, trade fairs, museums	*****
Gastronomy, hotels, spas	*****
Stores, sales rooms, POS	*****

Accessories

3060x mounting frame for solid masonry and ceilings

Dimensions:	30,2 x 60,2 x 10,5 cm
Installation cutout:	32 x 62 x 11,5 cm
Weight:	2,0 Kg

Tender specification

Flat-panel speaker for the invisible installation in walls and ceilings. Qualified for background music / music playback in high quality without the use of a special DSP amplifier

Warranty period

Ceratec grants a 5-year functional warranty on Exciters and panels, if the installation and setup protocol has been signed and registered with us. Improper use or overloading may void the warranty.

cerasonar 3060x2

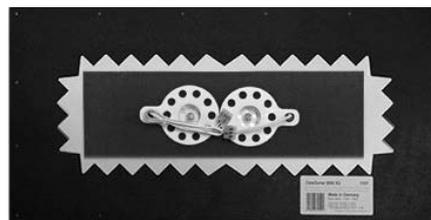
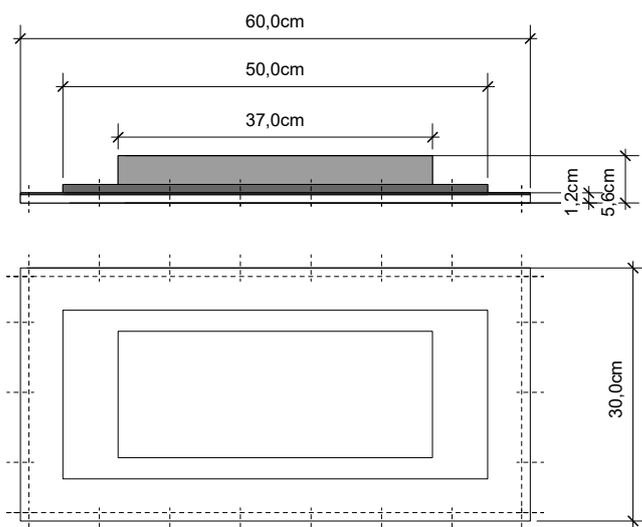
Small-sized sound panel for room sizes of 5-30 square meters. Ideal for multiroom or surround applications. Also useable in single-stereo speaker mode. Qualified for dry walls and ceilings with a substructure spacing of 62.5 cm and a depth of 6 cm.

* Power rating as per application of a high-pass filter. No electronic low-frequency boost must be used. Resulting damage from mechanical overload are excluded from the warranty.

** Max. pulse power rating. The load capacity can be increased when operated via electronic high-pass filters of an AV receiver (min. 150 Hz / 12 dB) and speaker size set to „small“ or in conjunction with a multiroom amplifier with respective equalization adjustment options.

*** Single-Stereo – this term expresses a special configuration mode of the speaker, which then is connected simultaneously to the left and right amplifier channels. This is useful in long corridors or small spaces such as restrooms in which no stereo base is audible. The models 9060x4, 6060x4, 6060x2, 4062x2 and 3060x2 are ready for this feature by using different cable combinations.

CAD Detail



Back view

Technical specifications

Power rating:	50 W * (100 W **) / 2 x 25 Watt ***
Impedance:	4 Ohm / 2 x 8 Ohm ***
Driver:	2 Exciter
Frequency range:	80 - 18.000 Hz *
Dispersion range:	180° x 180°
Sensitivity:	84 dB 1 W/1 m
Dimensions:	30 x 60 x 5,6 cm
Installation in:	plasterboard 12,5 mm / solidwall construction
Alcove depth:	12,8 cm with mountingframe
Weight:	1,6 Kg

Application areas

Multiroom audio	*****
Surround systems	*****
Conference and media rooms	*****
Exhibitions, trade fairs, museums	*****
Gastronomy, hotels, spas	*****
Stores, sales rooms, POS	*****

Accessories

3060x mounting frame for solid masonry and ceilings

Dimensions:	30,2 x 60,2 x 10,5 cm
Installation cutout:	32 x 62 x 11,5 cm
Weight:	2,0 Kg

Tender specification

Flat-panel speaker with high load-capacity for the invisible installation in walls and ceilings. Configurable for mono and single-stereo playback. Qualified for background music / music playback in high quality without the use of a special DSP amplifier.

Warranty period

Ceratec grants a 5-year functional warranty on Exciters and panels, if the installation and setup protocol has been signed and registered with us. Improper use or overloading may void the warranty.

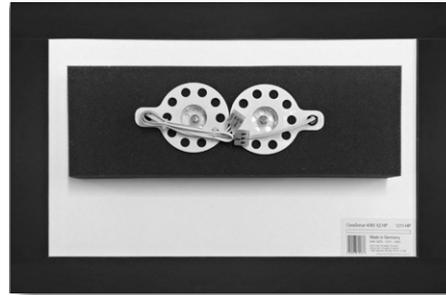
cerasonar 4062x2 hp

High-Performance Soundpanel for room sizes of 20-60 square meters. Ideal for multiroom or surround applications. Also useable in single-stereo speaker mode. Qualified for dry walls and suspended ceilings with a substructure spacing of 62.5 cm or 40 cm

* Power rating as per application of a high-pass filter. No electronic low-frequency boost must be used. Resulting damage from mechanical overload are excluded from the warranty.

** Max. pulse power rating. The load capacity can be increased when operated via electronic high-pass filters of an AV receiver (min. 150 Hz / 12 dB) and speaker size set to „small“ or in conjunction with a multiroom amplifier with respective equalization adjustment options.

*** Single-Stereo – this term expresses a special configuration mode of the speaker, which then is connected simultaneously to the left and right amplifier channels. This is useful in long corridors or small spaces such as restrooms in which no stereo base is audible. The models 9060×4, 6060×4, 6060×2, 4062×2 and 3060×2 are ready for this feature by using different cable combinations.

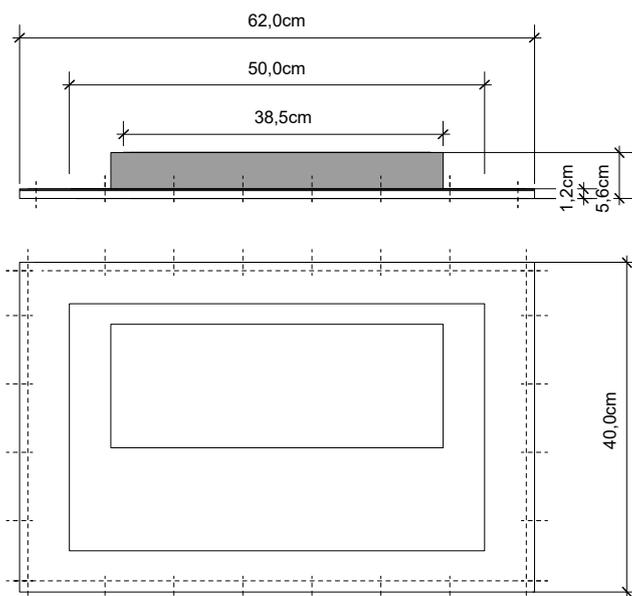


Back view

Technical specifications

Power rating:	50 W * (100 W **) / 2 x 25 Watt ***
Impedance:	4 Ohm / 2 x 8 Ohm ***
Driver:	2 Exciter
Frequency range:	70 - 18.000 Hz *
Dispersion range:	180° x 180°
Sensitivity:	90 dB 1 W/1 m / 2 x 81 dB 1 W/1 m
Dimensions:	40 x 62 x 5,6 cm
Installation in:	only plasterboard 12,5 mm
Alcove depth:	-
Weight:	1,8 Kg

CAD Detail



Application areas

Multiroom audio	*****
Surround systems	*****
Conference and media rooms	*****
Exhibitions, trade fairs, museums	*****
Gastronomy, hotels, spas	*****
Stores, sales rooms, POS	*****

Tender specification

High-Performance Flat-panel speaker with high load-capacity for the invisible installation in walls and ceilings. Configurable for mono and single-stereo playback. Qualified for background music / music playback in high quality without the use of a special DSP amplifier..

Warranty period

Ceratec grants a 5-year functional warranty on Exciters and panels, if the installation and setup protocol has been signed and registered with us. Improper use or overloading may void the warranty.

cerasonar 6060x2

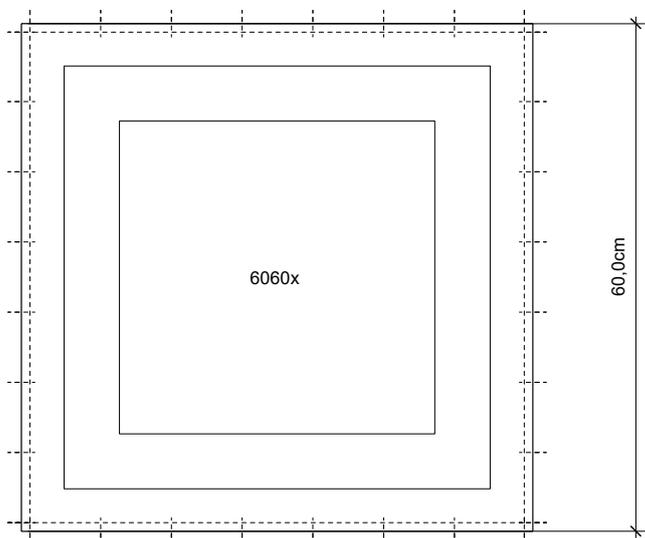
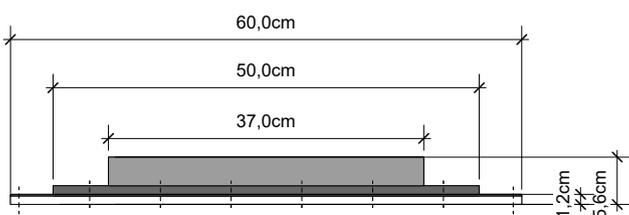
Standard sound panel for room sizes of 20-60 square meters. Ideal for multiroom or surround applications. Also useable in single-stereo speaker mode. Qualified for dry walls and suspended ceilings with a substructure spacing of 62.5 cm and a depth of 6 cm

* Power rating as per application of a high-pass filter. No electronic low-frequency boost must be used. Resulting damage from mechanical overload are excluded from the warranty.

** Max. pulse power rating. The load capacity can be increased when operated via electronic high-pass filters of an AV receiver (min. 150 Hz / 12 dB) and speaker size set to „small“ or in conjunction with a multiroom amplifier with respective equalization adjustment options.

*** Single-Stereo – this term expresses a special configuration mode of the speaker, which then is connected simultaneously to the left and right amplifier channels. This is useful in long corridors or small spaces such as restrooms in which no stereo base is audible. The models 9060x4, 6060x4, 6060x2, 4062x2 and 3060x2 are ready for this feature by using different cable combinations.

CAD Detail



Back view

Technical specifications

Power rating:	50 W * (100 W **) / 2 x 25 Watt ***
Impedance:	4 Ohm / 2 x 8 Ohm ***
Driver:	2 Exciter
Frequency range:	60 - 18.000 Hz *
Dispersion range:	180° x 180°
Sensitivity:	84 dB 1 W/1 m / 2 x 81 dB 1 W/1 m
Dimensions:	60 x 60 x 5,6 cm
Installation in:	plasterboard 12,5 mm / solidwall construction
Alcove depth:	12,8 cm with mountingframe
Weight:	2 Kg

Application areas

Multiroom audio	*****
Surround systems	*****
Conference and media rooms	*****
Exhibitions, trade fairs, museums	*****
Gastronomy, hotels, spas	*****
Stores, sales rooms, POS	*****

Accessories

6060x mounting frame for solid masonry and ceilings

Dimensions: 60,2 x 60,2 x 10,5 cm

Installation cutout: 62 x 62 x 11,5 cm

Weight: 2,0 Kg

Tender specification

Flat-panel speaker with high load-capacity for the invisible installation in walls and ceilings. Configurable for mono and single-stereo playback. Qualified for background music / music playback in high quality without the use of a special DSP amplifier..

Warranty period

Ceratec grants a 5-year functional warranty on Exciters and panels, if the installation and setup protocol has been signed and registered with us. Improper use or overloading may void the warranty.

cerasonar 6060x4

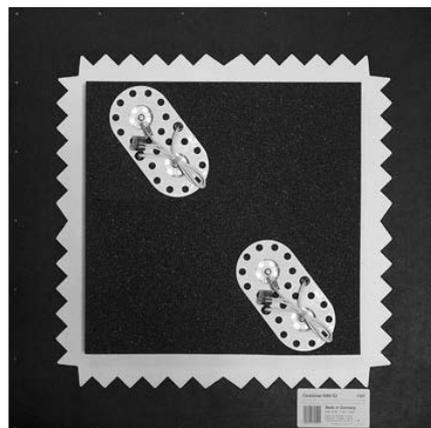
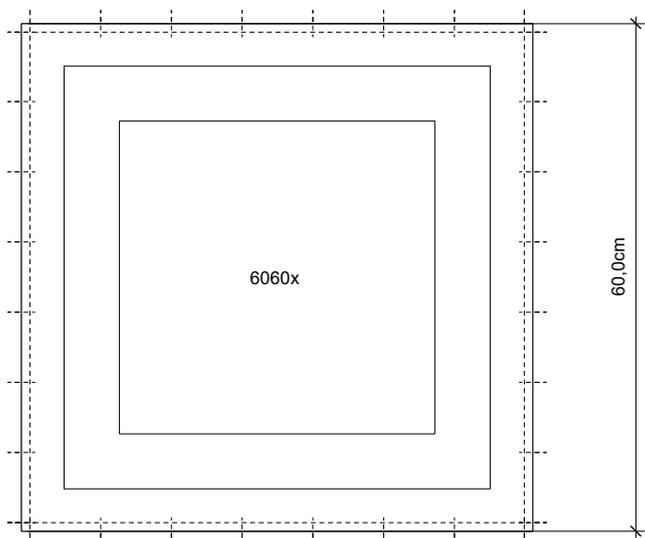
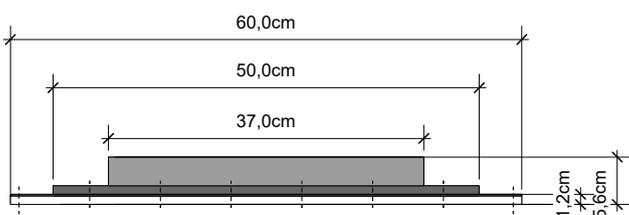
Standard sound panel with high load-capacity for room sizes of 20-60 square meters. Ideal for multiroom or surround applications. Also useable in single-stereo speaker mode. Qualified for dry walls and suspended ceilings with a substructure spacing of 62.5 cm and a depth of 6 cm.

* Power rating as per application of a high-pass filter. No electronic low-frequency boost must be used. Resulting damage from mechanical overload are excluded from the warranty.

** Max. pulse power rating. The load capacity can be increased when operated via electronic high-pass filters of an AV receiver (min. 150 Hz / 12 dB) and speaker size set to „small“ or in conjunction with a multiroom amplifier with respective equalization adjustment options.

*** Single-Stereo – this term expresses a special configuration mode of the speaker, which then is connected simultaneously to the left and right amplifier channels. This is useful in long corridors or small spaces such as restrooms in which no stereo base is audible. The models 9060x4, 6060x4, 6060x2, 4062x2 and 3060x2 are ready for this feature by using different cable combinations.

CAD Detail



Back view

Technical specifications

Power rating:	100 W * (200 W **) / 2 x 50 Watt ***
Impedance:	8 Ohm / 2 x 4 Ohm ***
Driver:	4 Exciter
Frequency range:	60 - 18.000 Hz *
Dispersion range:	180° x 180°
Sensitivity:	85 dB 1 W/1 m
Dimensions:	60 x 60 x 5,6 cm
Installation in:	plasterboard 12,5 mm / solidwall construction
Alcove depth:	12,8 cm with mountingframe
Weight:	2,2 Kg

Application areas

Multiroom audio	*****
Surround systems	*****
Conference and media rooms	*****
Exhibitions, trade fairs, museums	*****
Gastronomy, hotels, spas	*****
Stores, sales rooms, POS	*****

Accessories

6060x mounting frame for solid masonry and ceilings

Dimensions: 60,2 x 60,2 x 10,5 cm

Installation cutout: 62 x 62 x 11,5 cm

Weight: 2,2 Kg

Tender specification

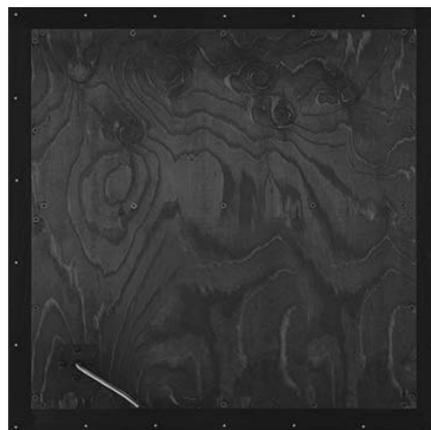
Flat-panel speaker with high load-capacity for the invisible installation in walls and ceilings. Configurable for mono and single-stereo playback. Qualified for background music / music playback in high quality without the use of a special DSP amplifier.

Warranty period

Ceratec grants a 5-year functional warranty on Exciters and panels, if the installation and setup protocol has been signed and registered with us. Improper use or overloading may void the warranty.

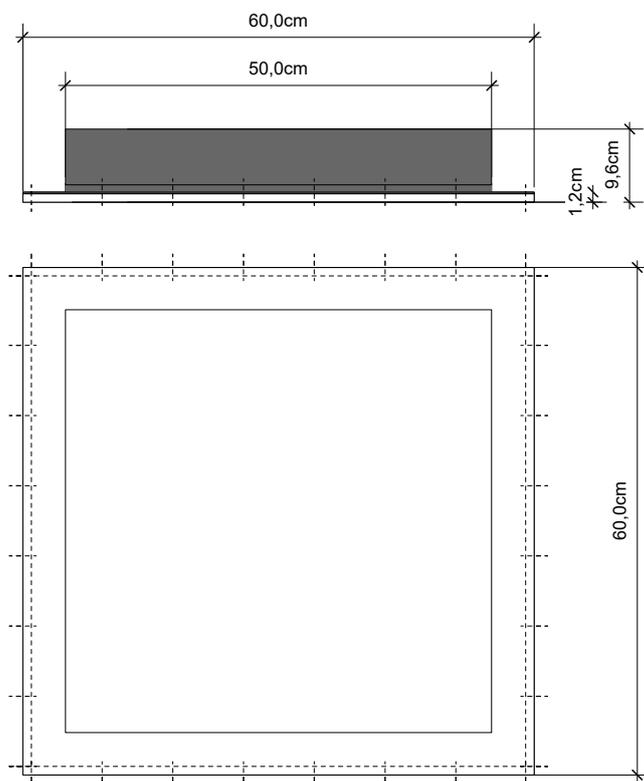
cerasonar 6060plus

High-end sound panel for room sizes of 20-60 square meters. Ideal for multiroom or surround applications. Verso closed for improvement of sound insulation. Qualified for dry walls and suspended ceilings with a substructure spacing of 62.5 cm and a depth of 10 cm.



Back view

CAD Detail



Technical specifications

Power rating:	110 Watt
Impedance:	4 Ohm
Driver:	1 Exciter , 2 Woofers
Frequency range:	45 - 18.000 Hz
Dispersion range:	180° x 180°
Sensitivity:	86 dB 1 W/1 m
Dimensions:	60 x 60 x 9,9 cm
Installation in:	plasterboard 12,5 mm / solidwall construction
Alcove depth:	12,8 cm with mountingframe
Weight:	7,0 Kg

Application areas

Multiroom audio	*****
Surround systems	*****
Conference and media rooms	*****
Exhibitions, trade fairs, museums	*****
Gastronomy, hotels, spas	*****
Stores, sales rooms, POS	*****

Tender specification

Flat-panel speaker with high load-capacity for the invisible installation in walls and ceilings. Including back cover to reduce sound radiation on rear side. Qualified for music playback in highest quality without the use of an additional subwoofer and special DSP amplifier.

Accessories

6060x mounting frame for solid masonry and ceilings

Dimensions: 60,2 x 60,2 x 10,5 cm

Installation cutout: 62 x 62 x 11,5 cm

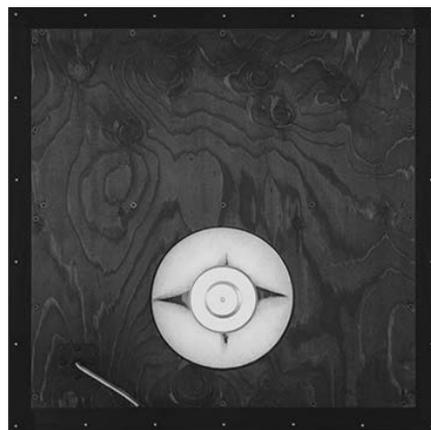
Weight: 2,0 Kg

Warranty period

Ceratec grants a 5-year functional warranty on Exciters and panels, if the installation and setup protocol has been signed and registered with us. Improper use or overloading may void the warranty.

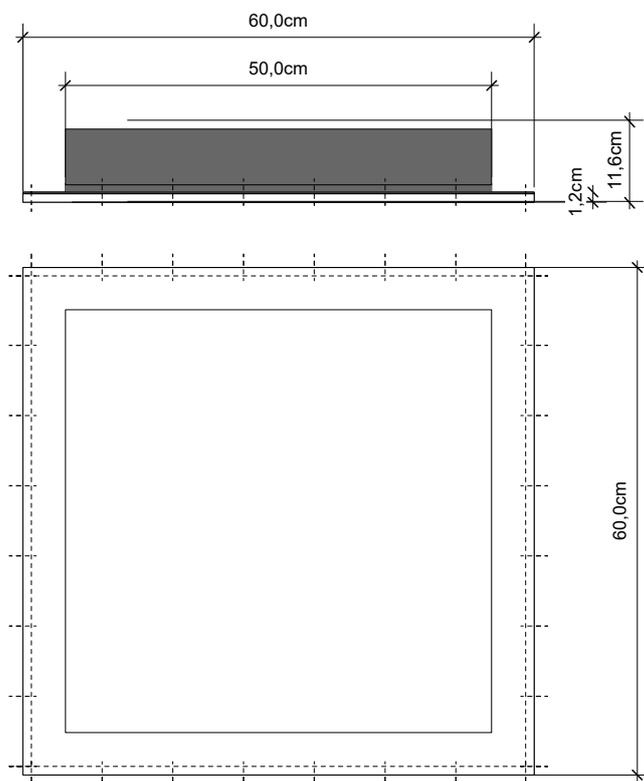
cerasonar 6060os+

High-end sound panel for room sizes of 30-80 square meters. Ideal for multiroom or surround applications. Verso closed for improvement of sound insulation. Qualified for dry walls and suspended ceilings with a substructure spacing of 62.5 cm and a depth of 11 cm.



Back view

CAD Detail



Technical specifications

Power rating:	120 Watt
Impedance:	8 Ohm
Driver:	1 Exciter , 1 Woofer
Frequency range:	37 - 18.000 Hz
Dispersion range:	180° x 180°
Sensitivity:	86 dB 1 W/1 m
Dimensions:	60 x 60 x 11,6 cm
Installation in:	only plasterboard 12,5 mm
Alcove depth:	12,8 cm
Weight:	7,0 Kg

Application areas

Multiroom audio	*****
Surround systems	*****
Conference and media rooms	*****
Exhibitions, trade fairs, museums	*****
Gastronomy, hotels, spas	*****
Stores, sales rooms, POS	*****

Tender specification

Flat-panel speaker with high load-capacity for the invisible installation in walls and ceilings. Including back cover to reduce sound radiation on rear side. Qualified for music playback in highest quality without the use of an additional subwoofer and special DSP amplifier.

Installation options

- Dry Wall 1- or 2-layer of 12,5mm GK
- Achievable surface quality Q3 / Q4

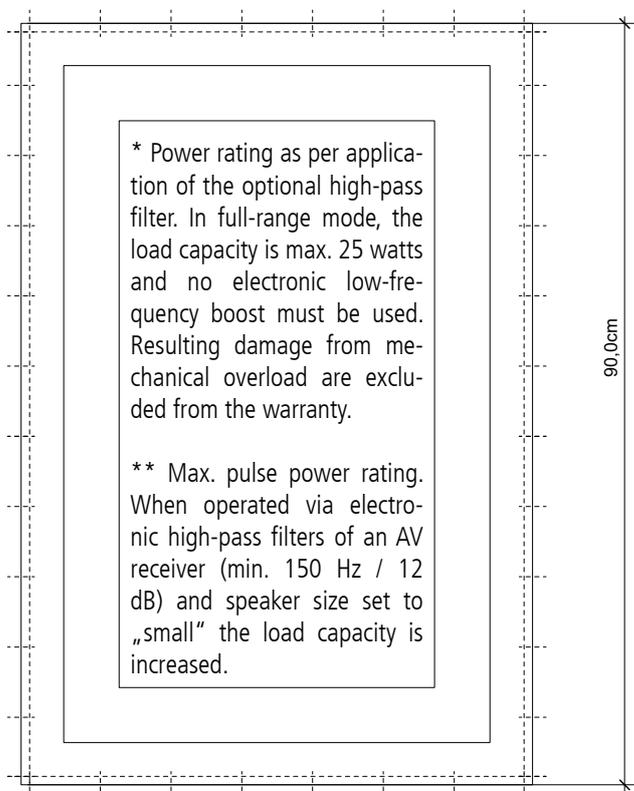
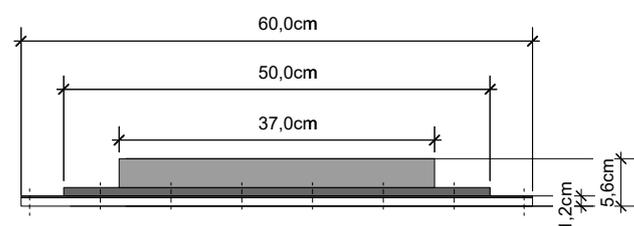
Warranty period

Ceratec grants a 5-year functional warranty on Exciters and panels, if the installation and setup protocol has been signed and registered with us. Improper use or overloading may void the warranty.

cerasonar 9060x4

Large-sized sound panel with higher load-capacity for room sizes of 20-60 square meters. Ideal for multiroom or surround applications. Also useable in single-stereo speaker mode. Qualified for dry walls and suspended ceilings with a substructure spacing of 62.5 cm and a depth of 6 cm. Installation in solid walls and ceilings possible with the use of the optional mounting frame.

CAD Detail



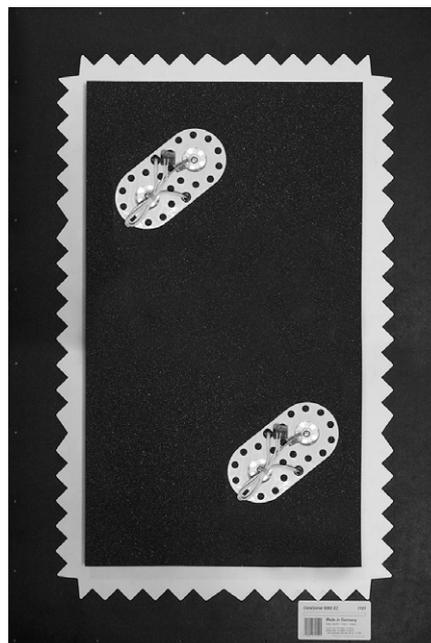
Accessories

9060x mounting frame for solid masonry and ceilings

Dimensions: 90,2 x 60,2 x 10,5 cm

Installation cutout: 92 x 62 x 11,5 cm

Weight: 3,5 Kg



Back view

Technical specifications

Power rating:	100 W* (200 W **) / 2 x 50 Watt ***
Impedance:	8 Ohm / 2 x 4 Ohm ***
Driver:	4 Exciter
Frequency range:	50 - 18.000 Hz *
Dispersion range:	180° x 180°
Sensitivity:	85 dB 1 W/1 m
Dimensions:	90 x 60 x 5,6 cm
Installation in:	plasterboard 12,5 mm / solidwall construction
Alcove depth:	12,8 cm with mountingframe
Weight:	3,2 Kg

Application areas

Multiroom audio	*****
Surround systems	*****
Conference and media rooms	*****
Exhibitions, trade fairs, museums	*****
Gastronomy, hotels, spas	*****
Stores, sales rooms, POS	*****

Tender specification

Large-sized flat-panel speaker with high load-capacity for the invisible installation in walls and ceilings. Configurable for mono and single-stereo playback. Qualified for background music / music playback in high quality without the use of a special DSP amplifier.

Warranty period

Ceratec grants a 5-year functional warranty on Exciters and panels, if the installation and setup protocol has been signed and registered with us. Improper use or overloading may void the warranty.

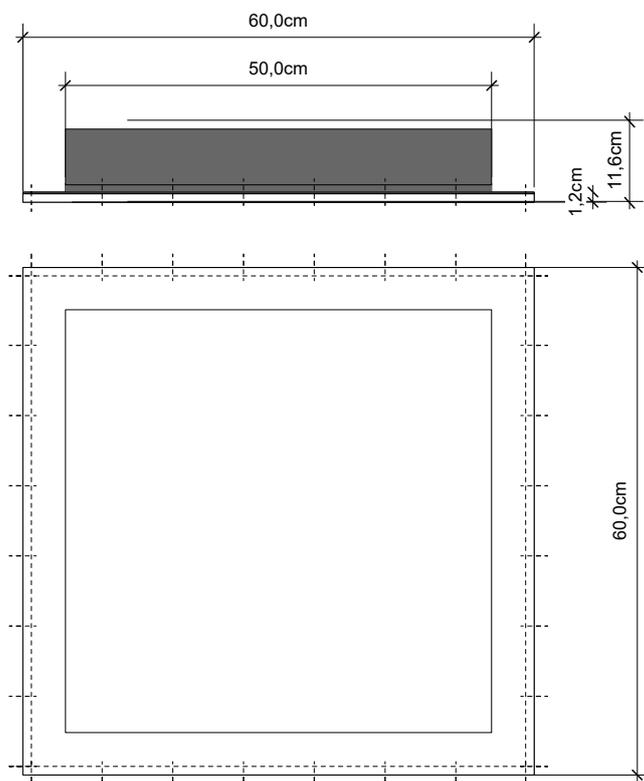
cerasonar 6060sub

Total invisible Subwoofer to combine with all cerasonar sound panels. Qualified for dry masonry walls with a sub-structure spacing of 62.5 cm and inside depth of 11 cm. The use of high-pass filters with the full-range panels relieve these from low frequencies in order to allow the 6060sub to reproduce the bass with a higher maximum volume.



Back view

CAD Detail



Technical specifications

Power rating:	120 Watt
Impedance:	8 Ohm
Driver:	1 Woofer
Frequency range:	35 - 150 Hz
Dispersion range:	180° x 180°
Sensitivity:	86 dB 1 W/1 m
Dimensions:	60 x 60 x 11,6 cm
Installation in:	only plasterboard 12,5 mm
Alcove depth:	12,8 cm
Weight:	7,0 Kg

Application areas

Multiroom audio	*****
Surround systems	*****
Conference and media rooms	*****
Exhibitions, trade fairs, museums	*****
Gastronomy, hotels, spas	*****
Stores, sales rooms, POS	*****

Tender specification

Flat-panel subwoofer with high load-capacity for the invisible installation in walls and ceilings. Including back cover to reduce sound radiation on rear side.

Installation options

- Dry Wall 1- or 2-layer of 12,5mm GK
- Achievable surface quality Q3 / Q4

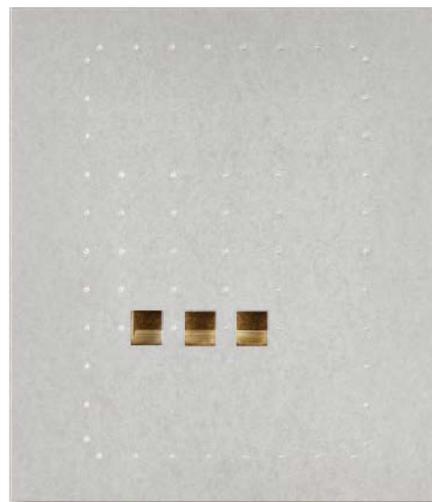
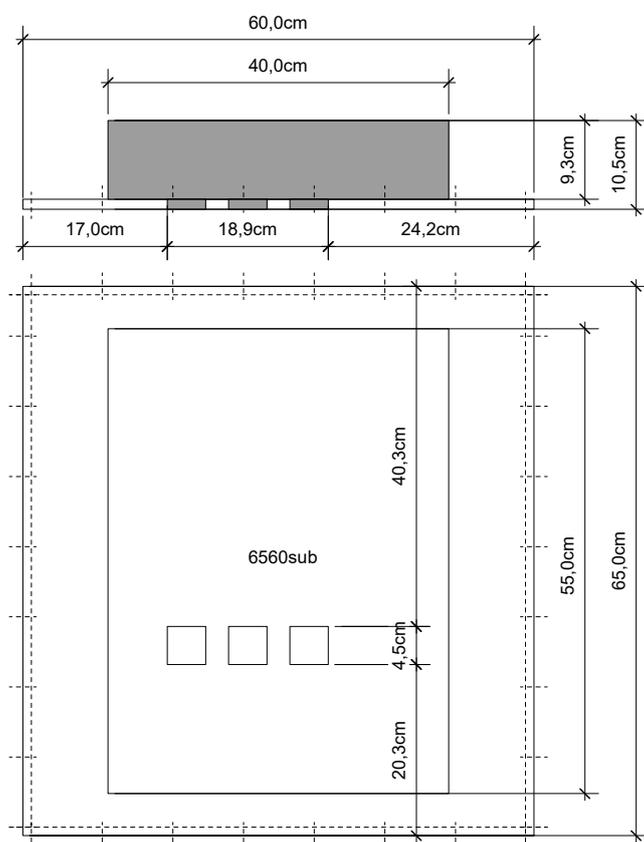
Warranty period

Ceratec grants a 5-year functional warranty on Exciters and panels, if the installation and setup protocol has been signed and registered with us. Improper use or overloading may void the warranty.

cerasonar 6560x4 sub

Subwoofer to combine with all cerasonar sound panels. Qualified for wet and dry masonry walls with a substructure spacing of 62.5 cm and inside depth of 10 cm. The use of high-pass filters with the full-range panels relieve these from low frequencies in order to allow the 6560x4 sub to reproduce the bass with a higher maximum volume.

CAD Detail



Front view

Technical specifications

Power rating:	200 Watt
Impedance:	8 Ohm
Driver:	4 Woofers
Frequency range:	40 - 200 Hz
Dispersion range:	hemispherical
Sensitivity:	84 dB 1 W/1 m
Dimensions:	65 x 60 x 11,5 cm
Installation in:	plasterboard 12,5 mm / solidwall construction
Alcove depth:	14 cm with mountingframe
Weight:	7,2 Kg

Application areas

Multiroom audio	*****
Surround systems	*****
Conference and media rooms	*****
Exhibitions, trade fairs, museums	*****
Gastronomy, hotels, spas	*****
Stores, sales rooms, POS	*****

Accessories

6560x mounting frame for solid masonry and ceilings

Dimensions: 65,2 x 60,2 x 10,5 cm

Installation cutout: 67 x 62 x 11,5 cm

Weight: 3,5 Kg

Tender specification

Complementary built-in subwoofer for invisible flat-panel speakers with high load-capacity for the nearly invisible installation in walls. External amplifier is required.

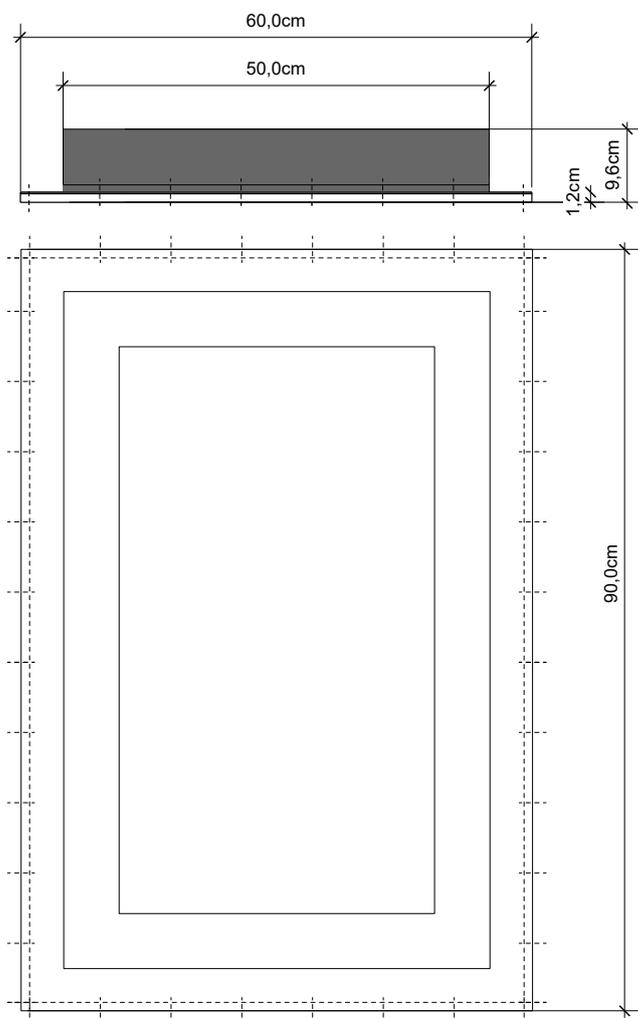
Warranty period

Ceratec grants a 5-year functional warranty on Exciters and panels, if the installation and setup protocol has been signed and registered with us. Improper use or overloading may void the warranty.

cerasonar 9060sub

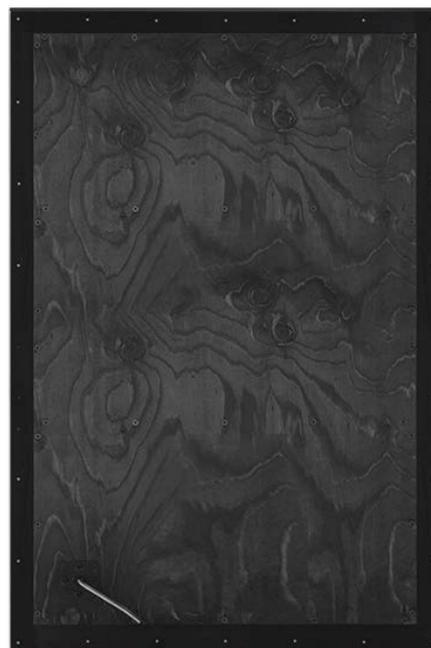
Total invisible Subwoofer to combine with all cerasonar sound panels. Qualified for dry masonry walls with a sub-structure spacing of 62.5 cm and inside depth of 10 cm. The use of high-pass filters with the full-range panels relieve these from low frequencies in order to allow the 9060sub to reproduce the bass with a higher maximum volume.

CAD Detail



Installation options

- Dry Wall 1- or 2-layer of 12,5mm GK
- Achievable surface quality Q3 / Q4



Back view

Technical specifications

Power rating:	240 Watt
Impedance:	4 Ohm
Driver:	4 Woofers
Frequency range:	25 - 150 Hz
Dispersion range:	180° x 180°
Sensitivity:	85 dB 1 W/1 m
Dimensions:	90 x 60 x 9,9 cm
Installation in:	plasterboard 12,5 mm / solidwall construction
Alcove depth:	12,8 cm with mountingframe
Weight:	8,2 Kg

Application areas

Multiroom audio	*****
Surround systems	*****
Conference and media rooms	*****
Exhibitions, trade fairs, museums	*****
Gastronomy, hotels, spas	*****
Stores, sales rooms, POS	*****

Tender specification

Flat-panel subwoofer with high load-capacity for the invisible installation in walls and ceilings. Including back cover to reduce sound radiation on rear side.

Warranty period

Ceratec grants a 5-year functional warranty on Exciters and panels, if the installation and setup protocol has been signed and registered with us. Improper use or overloading may void the warranty.

The speakers of cerasonar can also be used in single stereo mode depending on the model
(Both channels from one panel).

cerasonar 1520x1
cerasonar 3060x1

Option1:

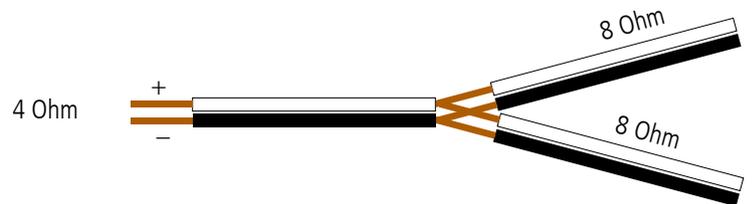
Cabling single
Amplifier connection
left or right channel



cerasonar 3060x2
cerasonar 6060x2
cerasonar 4062x2

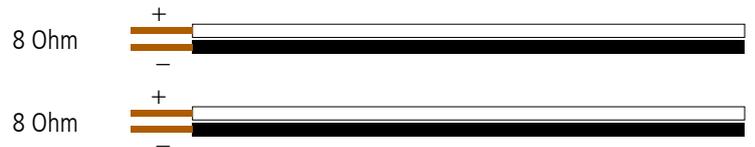
Option 1:

Cabling parallel
Amplifier connection
left or right channel



Option 2:

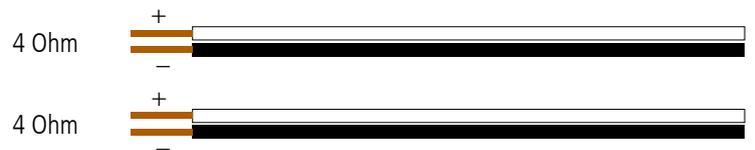
Cabling single
Amplifier connection
left and right
as a single stereo



cerasonar 6060x4
cerasonar 9060x4

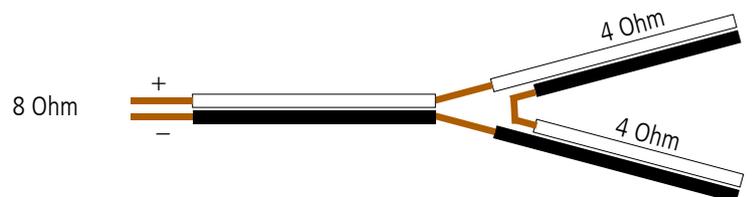
Option 1:

Cabling single
Amplifier connection
left and right
as a single stereo



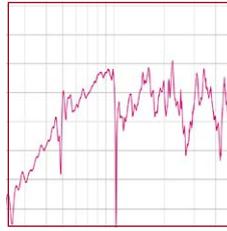
Option 2:

Row connection
Amplifier connection
left or right channel

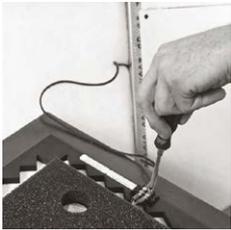




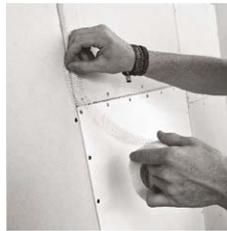
1 Before the installation is carried out in walls or ceilings, the construction should be tested for vibration noise. Light beats with the heel of your hand against the plasterboard shell reveals any weaknesses of the substructure. The cavity behind the panel must get an insulation, for example, mineral wool or according to the specifications of the architect.



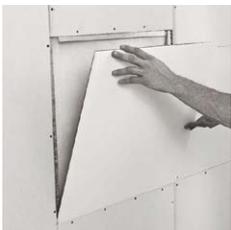
5 Functional test: In addition to the basic function, any existing vibration noise can be made audible through the music signal, so that the substructure can be improved accordingly.



2 The enclosed cable lugs have to be properly crimped to the connector cable. Then connect the cables following the colour coding / markings, for example, marking to plus (red). This order has to be maintained building and amplifierwise.



6 As it is obligatory with single-ply plasterboard constructions, the joints between plasterboard and speaker have to be always filled with a crack bridge. The same filling material that is used against cracks in other joints can be also applied here.



3 Insert the speaker into the prepared recess. Make sure that there is no strain between underlying insulation and panel (no compression). The speaker should be easily insertable into the opening.



7 The sealing and spackling of joints and edges as well as screw heads is effected using a flexible fine filler as it is usually applied in drywall constructions.



4 Screw on the speaker according to the pre-drilled holes. The heads of the drywall screws should immerse about 1 mm into the diaphragm material. Since the diaphragm has a lower density than the plasterboard panels, it's essential to tighten the screws very cautiously.



8 Cerasonar speaker panels are out-fitted with a primer and have to be spackled all-over with the surrounding surface. Thus, Q3 and Q4 wall / ceiling qualities are easily possible.

Important:

After fixing the screws a functional test using a music signal is mandatory!

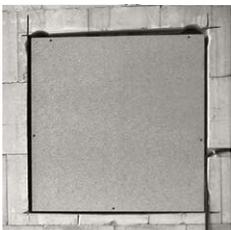
Installation video



Scan this QR Code to access e.g. the video about installation in drywalls. The panel showed in the video is the 6060x2 model. The described procedures are also applicable to other models.



1 For the installation of the invisible cerasonar speakers an mounting frame is required. This special accessory is available for all models. For this purpose an appropriate recess has to be prepared in the masonry. The recess has to be about 2mm larger all-round. Place the mounting frame into the recess to control the correct fitting.



2 The frame is ideally mounted flush to the finished wall surface. Therefore the wall plaster should have been applied to the masonry already, so that the speaker only has to be fine spackled flush to the wall surface using a fine or structured filler. The connector cable has to be installed into the frame before.



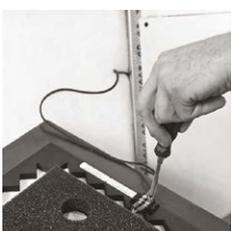
3 With the help of two roof battens the frame can easily be brought into position and then fixed. Use construction foam to foam out the lateral joints and wait until the frame sits firmly and stable in the recess.



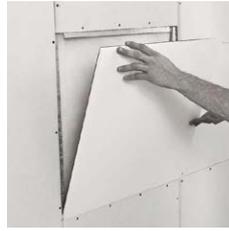
4 Then use four frame dowels at the minimum to anchor the frame in the surrounding masonry. The next steps then follow the „Installation in drywalls“ instructions.



5 Insert the cavity insulation material into the recess. For this purpose use the material enclosed.



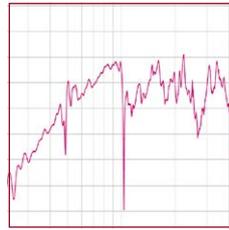
6 The enclosed cable lugs have to be properly crimped to the connector cable. Then connect the cables to the connector terminal paying attention to the polarity.



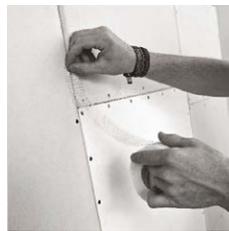
7 Insert the speaker into the prepared recess. Make sure that there is no strain between underlying insulation and panel.



8 Screw on the speaker according to the pre-drilled holes. The heads of the drywall screws should immerse about 1 mm into the diaphragm material.



9 Important: After fixing the screws a functional test using a music signal is mandatory!



10 The joints between wall/ceiling and the speaker panel have to be filled with a crack bridge.



11 Joints and screw holes have to be sealed using a fine filler.



12 The speaker panels have to be spackled all-over with the surrounding surface. Thus, Q3 and Q4 wall / ceiling qualities are easily possible.



cerasonar mounting frames

- 3060x Mounting frame** - 302 x 602 x 105 mm
- 6060x Mounting frame** - 602 x 602 x 105 mm
- 9060x Mounting frame** - 902 x 602 x 105 mm
- 6560x Mounting frame** - 652 x 602 x 115 mm

Project:

Date:

Building owner:

Location:

Architect:

Page:

Drywall/masonry contractor:

Painting contractor:

Electroacoustic contractor:

Room name:

Installation location:

Position:

Construction type:

Surface finish:

Speaker model:

Quantity:

Application:

Amplifier type:

Circuitry type:

Signature:

Contractor

Customer

Warranty period

Ceratec grants a 5-year functional warranty on Exciters and panels, if the installation and setup protocol has been signed and registered with us. Improper use or overloading may void the warranty.

How can cracks be avoided?

1. Like all built-in speakers, also the invisible speaker panels emit vibration noise into the adjacent areas. To ensure that no cracks occur at the butt joints, a crack bridge must be applied before spackling. This kind of processing used for single-layer drywall constructions, which is mandatory according to the generally accepted rules of craftsmanship, is highly recommended also for installation work in solid walls and ceilings. The use of paint substrate as a crack bridge is a common practice with painters and drywall constructors.

2. The plaster, whether decorative or non-decorative, which is applied to the diaphragm should have a certain „flexibility“. So pure mineral plasters are not necessarily advisable. These generally cure in a hard and porous manner. With these types of plaster it is not rare to see cracks even without speakers in walls or ceilings. This can occur, for example, when processed in rooms with high residual moisture remaining from shell construction or also in case of rapid drying during high air temperatures in summer. However, these shortcomings then are no constructional defects but blemishes that can be repaired through repaint with the respective wall colour.

What is there to know about sound insulation?

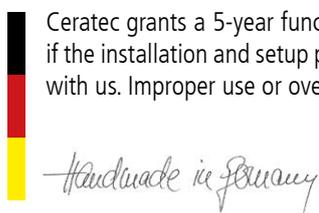
The cerasonar panels emit structure-borne noise into the adjacent areas. It therefore is recommended - and this incidentally affects any built-in speaker - that the drywall shell is designed in a flexible way as it is very much common in acoustic construction. This especially applies to multi-family houses. The rearward sound already is reduced by the mandatory cavity insulation. Additionally, Cerasonar also offers as an accessory cover hoods as they are already standard with the 6060plus panel. If, however, music is played above the household noise level, at some point also the structural noise insulation fails - which again is a trivial problem with any type of speakers.

What happens in case of a defect?

In any case, the panels must be removed. A repair or further use depends on the nature of the defect. Our high-performance Exciter XT 5500, which comes from our own production, is equipped with a so-called PTC fuse to prevent electrical destruction. This thermally responsive resistor controls the load capacity of the electrical part of the oscillating system. In case of overload, the PTC reduces the signal level, that is, the volume is significantly lowered until the voice coil has cooled down (the panel then plays quieter).

Warranty period

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Documentation of installation positions!

It is strongly recommended to document the installation positions in the architectural plans. If at some point a defect occurs, the position of the defective panel can be accurately determined and the panel be replaced. Also future modifications to the interior design and room layout benefit from the documented positions of the speakers.

What about the durability?

If installation and operation is effected in accordance with our regulations a malfunction is almost impossible. A good example to compare is perhaps the „floor heating system“, which resembles a similar situation, and which also requires a careful execution. A trained retailer or installer meets these requirements due to the cerasonar installation and setup protocol. DIY is also possible if the manual and technical skills are given.

Installation and setup protocol

The installing retailer should document all installation steps, especially the functional test of step 5 (of „Installation in drywalls“) or step 9 (of „Installation in solid walls and ceilings“), and have the correct function approved and signed by the customer. The final acceptance should go together with a corresponding protocol which is to be deposited for at least 5 years with the customer and the executing firms. A copy of the protocol should also be handed over to ceratec.

Project:	Mr. & Mrs. Sample' dreamhouse
Building owner:	Mr. Sam Sample
Architect:	„Name of company“
Drywall/masonry contractor:	„Name of company“
Painting contractor:	„Name of company“
Electroacoustic contractor:	„Name of company“

Here is an example for a room comprising a cerasonar speaker:

Room name:	Living room
Installation location:	Ceiling
Position:	Note in drawing/dimensionally correct draft
Construction type:	Suspended ceiling with metal substructure, single-layer plasterboard, Q4 type spackling
Surface finish:	Paint substrate, pure white
Speaker model:	6060plus
Quantity:	4
Application:	Multiroom audio
Amplifier type:	Control4 AMP16
Circuitry type:	1x panel per amplifier channel

Manufacturer address



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E-Mail: info@ceratecaudio.de