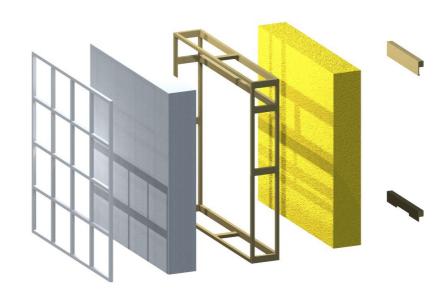
Document: Acoustic absorber building description

Version: 2016-1
Date: 28.04.2016



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Acoustic absorber building description

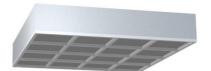


Acoustic Absorber 120x120x20cm for ceiling or wall mounting



The 120cm x 120cm x 20cm acoustic absorber

For ceiling or wall mounting, using standard building insulation for absorption:



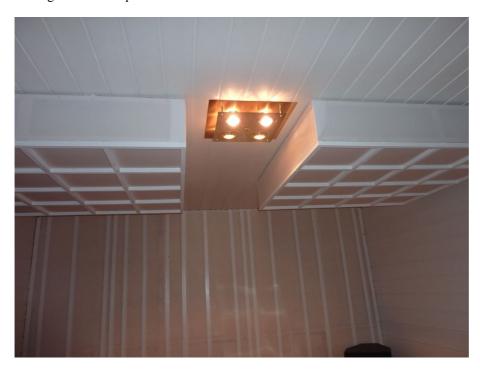


The frame is designed for low weight and open for best acoustic performance. It is fragile and can barely support the weight of the completed absorber, and that is sufficient.

Building the frame requires wood working skills and equipment.

Assembly and mounting can be done by any handy person.

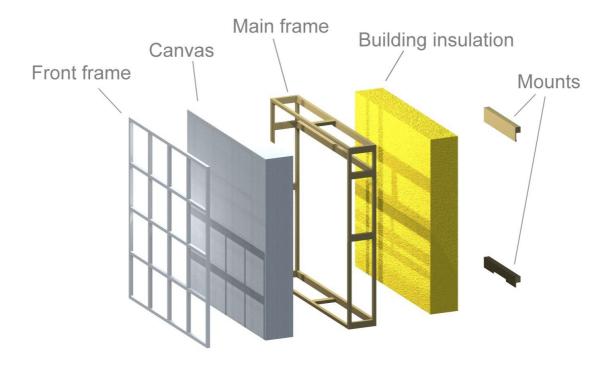
Ceiling absorbers in place:





Parts and materials

- Frame and front frame built in wood
- Paint for frame
- Cotton canvas cover
- Building insulation for the absorption, 2x Glava or Rockwool 1200mmx600mmx200mm plates for each absorber
- Building insulation plastic for back cover
- Mounts made in wood and plywood



Parts ready for assembly - canvas, building insulation, painted front frame, main frame:



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Tools

- Staple machine for canvas
- Hammer
- Nails
- Scissors
- Cutting knife for building insulation
- Gloves and protective clothing for working with the building insulation
- Making the wooden frames require woodworking equipment





Building

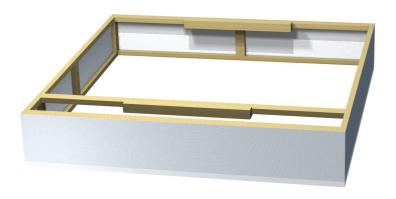
1. Build the frame

Make all wooden parts - build the main frame, front frame and make the mounts.

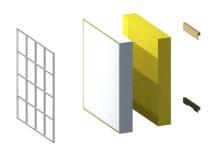
Paint the front frame in desired color, it is also recommended to paint the main frame because the canvas will likely be slightly transparent.

Construction drawings are available in .pdf format, and also added at the end of this document.

Main frame from rear side, with mounts:



2. Mount the canvas

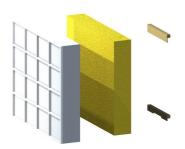


Use a staple gun to mount the canvas to the main frame:





3. Mount the front frame



Use nails from the back side to fasten the front frame to the main frame. This is easier to do if the canvas is not fastened up on to the sides and back:

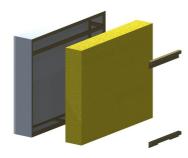


Then finish off the canvas wrapping:





4. Place insulation



This is a job you want to do outdoors, and use protective clothing. Working with building insulation is not pleasant and may cause skin irritation, so cover up and be sure to clean off all particles from yourself and the finished absorber.



5. Cover back side with plastic

Use the staple gun to fasten plastic cover on back side, after this is done the insulation is safely contained:



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The completed absorber, ready to be mounted:



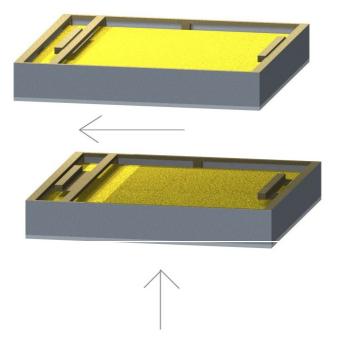


Mounting

Use screws to fasten the mounts on ceiling/wall. Walls require only one mount:



The ceiling absorber is easy to mount when the mounts are in place, just move it up in between the mounts and then slide it into position:





Alternative versions

Using the same build procedure different versions can be made by varying the frame and front frame design.

For wall mounting, the angled corners-version with small binary distributed slats:

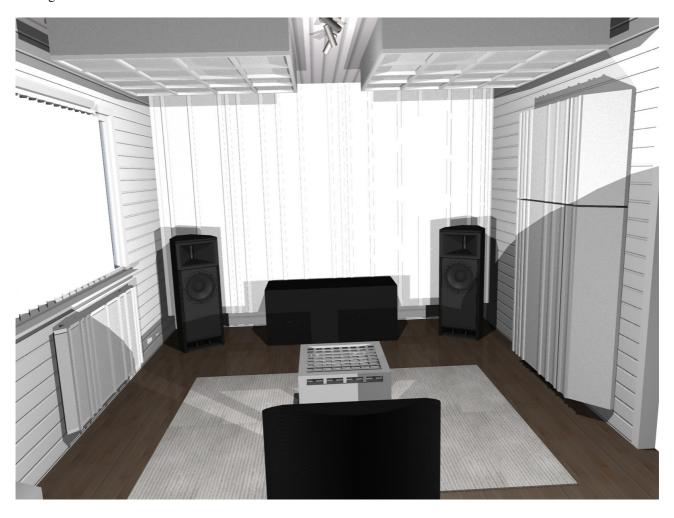


Half-size 120cm x 60cm x 20cm:



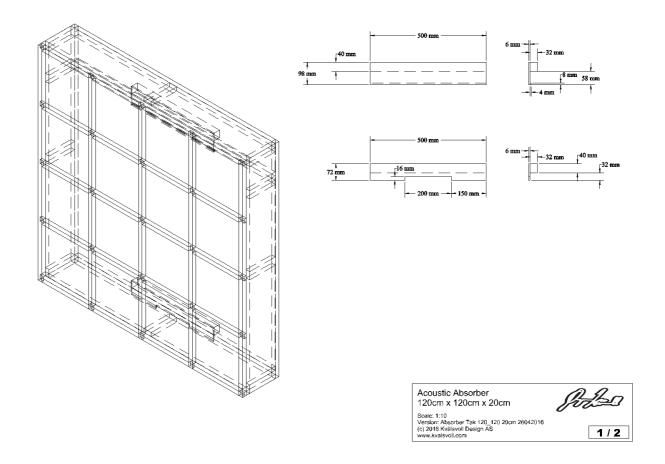


Ceiling and side wall absorbers mounted:

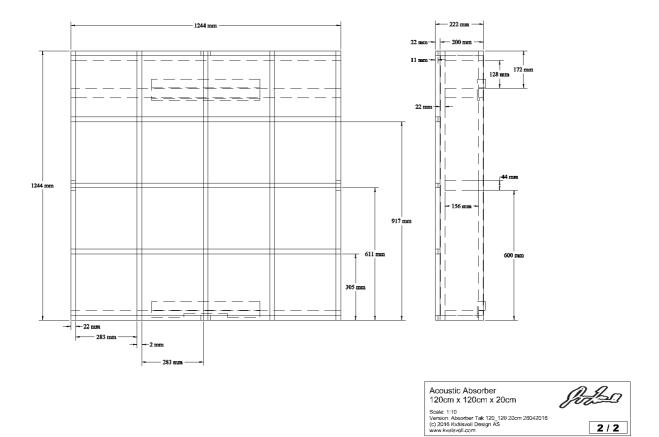




Construction drawing







More information on www.kvalsvoll.com

<u>Drawing</u> – Construction drawings for the acoustic absorber frame, .pdf format.

<u>3D model</u> – 3D model of the acoustic absorber, .pdf format.

<u>How to set up a Home Theater Sound System</u> – With acoustics chapter, also valid for 2-channel systems.