

Abstract

Echo and reverberation problems are often overlooked and become a challenge that the contractor must solve. Eurospan® by Conwed is a cost-effective acoustic solution that can be retrofitted to spaces, or be planned into the original design. With a simple construction that allows both design and literal flexibility, Eurospan bridges the gap between cost, effectiveness, and aesthetics for acoustic solutions.

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Low budget acoustic projects

Open-air spaces and industrial architecture have continued to grow in popularity and demand in the last 15 years; both in newly designed spaces and retrofitted offices. A common problem among these projects is the acoustics.

Whether the building owner or the architect on the job understands the acoustic challenges inherent in these designs, the problems often arise only after the space is occupied. At that point fixing the noise in an already occupied space becomes a major challenge for the contractor.

If the building owner and architect do plan for a solution during the planning phase, a major hurdle is the lack of a cost-effective solution that adequately handles the noise & echo while still abiding by the design that causes them. Drop ceiling grids have an outdated look that architects don't want to design, and acoustical plaster is immensely expensive in its material cost and installation time.

Eurospan by Conwed though, is acoustic solution that can compete with, and beat, the looks of acoustical plaster while being as easy and affordable as acoustical drop ceiling tile and grid.

	Cost	Fast Install	Aesthetics	Accessibility
Grid	X	X		X
Acoustical Plaster			Х	
Eurospan	X	X	Х	X



Building budgets reserve money for important facets of the project before acoustic solutions, and sometimes pull money from acoustics if more is needed elsewhere since it is low on the priority list. So, it's not a surprise that acoustical drop ceiling systems beat acoustical plaster in these cases. But designers and owners have to then deal with the aesthetics that drop ceiling brings.

In some scenarios, designers will even forego drop ceiling in favor of plain drywall ceilings, just to maintain a clean look. Only assuming that carpeting and furniture will absorb the reverberation this creates.

"The red flag was not brought up that we might have some sound issues. Of course, we thought the furniture, the carpet on the floor, that'll take care of it. Here we are. The spaces just really don't work because of the [echo]."

This puts installing contractors in a bind to either go ahead with traditional acoustical drop ceiling, disappointing the customer with outdated looks, or proceeding with drywall ceilings which leads to unusable spaces and eventually, a retrofitted acoustic solution.

Eurospan bridges this cost-gap by costing 4x more than drop ceilings in materials, where acoustical plaster is 9.3x more. Eurospan becomes an easy selling point to the owner here, the larger the project is, the more the 5.3 Δ compounds on the total of the project. (Eurospan vs Acoustical Plaster)

	Material/sqft	Cost Delta
Grid	\$3.00	-
Acoustical Plaster	\$14.00	9.3x
Eurospan	\$6.00	4x

In scenarios where drywall is chosen and a retrofit solution is needed, Eurospan can still be installed to avoid grid or standard acoustical panels mounted to the walls. Although it's not ideal from an owner's perspective, Eurospan is still a viable post-build solution that doesn't compromise design choices.

Sue Hague-Rogers Environmental Designer & Project Manager on the remodel of the 'Tower on the Maumee"

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How acoustical plaster actually costs more

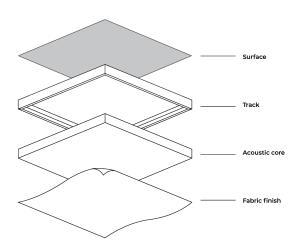
In the scenario that the finished look of the project trumps cost, acoustical plaster becomes the product of choice. The new problem in this situation is that it's not an easy or fast product to work with.

Acoustical plaster requires more background training to install properly, unique and expensive tools, and can take the same amount of time as installing two or more additional projects done with drop ceiling grids. This makes acoustical plaster not only a higher cost to the owner, but the increased opportunity cost to the installer makes it undesirable to pitch or agree to.

If an installer is being asked specifically for acoustical plaster, the only choices are to commit the extra time accepting the opportunity cost or turn down the project.

Jason Lanier Sales Manager Interior Supply Inc "Acoustical plaster is not easy at all to install and is one of the more labor intensive ceiling finishes. That's one of the reasons why Eurospan is such a great option. To me, you really cannot compare drop ceilings with acoustic plaster or Eurospan, they are different levels of finish."

Eurospan answers this problem with its simple construction and installation. The entire system is made of three components, (track, core, and fabric finish) and assembled in three steps.

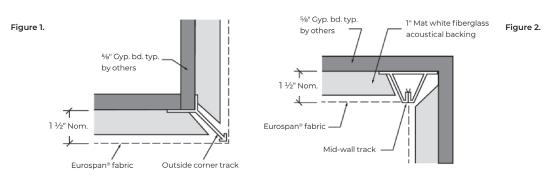


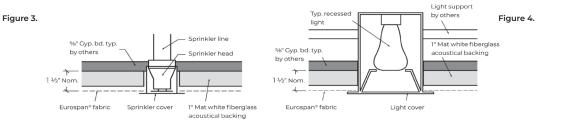
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Installing Eurospan

The track system is installed in the perimeter of the project, creating the frame of the installation. The track comes in four primary pieces, allowing it to cover non-rectangular surface areas, stretch around corners, and flow from wall to ceiling. (Fig. 1 & 2) Even if a surface has existing penetrations, like sprinkler systems or lights, they can be dropped and fitted flush with the system. (Fig. 3 & 4)





After track is installed, the acoustic core is mounted in place within the frame using 1 5/8" screws. Lastly, stretch fabric is tucked into the track system, with any excess being trimmed away. Fabric comes in 16'-wide rolls. This allows Eurospan to seamlessly cover wide ceilings. If a space is wider than this, mid-seam track pieces allow multiple rolls of fabric to connect side-by-side, covering as much suraface area as needed.

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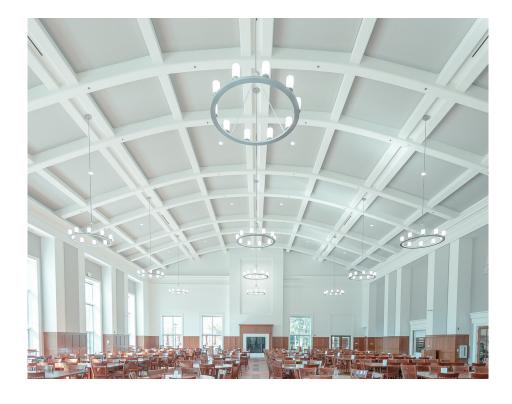
By keeping the product's construction and installation simple, Eurospan can be installed nearly as quickly as drop ceiling, while maintaining the high-budget look of acoustical plaster. This makes Eurospan a more affordable option for an installer can present, that doesn't require a time-opportunity cost from themselves.

(see p. 8 for install time example)

In addition to simplicity, Conwed offers free Eurospan Installation training and accessible online installation guides. While training is not required in order to purchase materials; upon completion installers are given official certificates of training, giving owners more confidence in approving the project.

Doug Kemper Carpenter Foreman on the Transylvania University Great Hall (Seen below) "Didnt exactly know how it was going to go at first; different material, different process. But it went great, we got into a routine and it just flew up there.

I'm a big fan of Eurospan now, worked real well. As someone who does a lot of interior systems, I havent seen something quite like this before."



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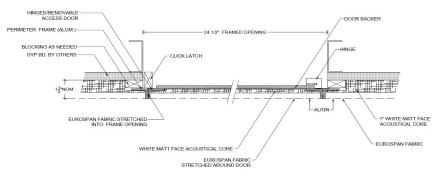


Accessibility costs

A common requirement of acoustic ceilings is future accessibility. Wiring, lights, and overhead water damage all lead to removing any solution that is installed. This makes acoustical plaster more difficult to sell, and gives drop grid ceilings an advantage.

But Eurospan® also gains the advantage against acoustical plaster. Eurospan® can have doors installed for frequently accessed spaces, as well as lift-and-shift sections. (Fig. 5)

Figure 5.



Following installation in reverse order, damaged core can be accessed by untucking the fabric finish, and cutting out the section of the core to be replaced.

If a 4'x2' section of core were damaged in a Eurospan ceiling, a contractor would only need to purchase a single 4'x8' sheet of acoustic core. This would cost on average \$40 + freight, and could be fixed in a few hours of work.

With acoustical plaster, the same 4'x8' area would cost around \$200 just to remove, not considering new material costs.







Findings

Eurospan is a unique acoustic solution in a previously limited market.

Rather than settling for a traditional drop ceiling, Eurospan offers the best combination of acoustics, aesthetics, and cost. Allowing installers to profit off of the saved install time by avoiding burdensome products.

Example based on averaged samples of products built onto an existing structure of 1,600sqft, resourcing different contractors for data and fixr.com/costs

1,600sqft*	Material/sqft	Material Total	Install/hr	Days on Site
Acoustical Plaster	\$14.00	\$22,400	100	11
Eurospan	\$6.00	\$9,600	80	8