



DeAmp Transparent Sound Absorbers

DeAmp Panels address the problem of reflective glass surfaces in spaces while maintaining transparency and openness.



DeAmp Transparent Sound Absorbers are the solution to controlling the often deficient acoustics in rooms with large areas of glass or other hard surfaces.

Modern architecture and interior design embraces “enclosed openness” with rooms built with hard and reflective materials which leads to compromised acoustics. DeAmp panels reduce the negative impact of the uncontrolled reverberation and background sound, reducing the chaos and frenzy of unwanted noise.

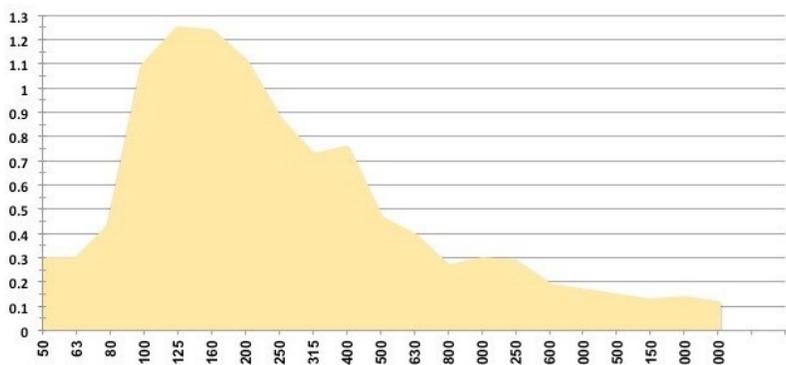
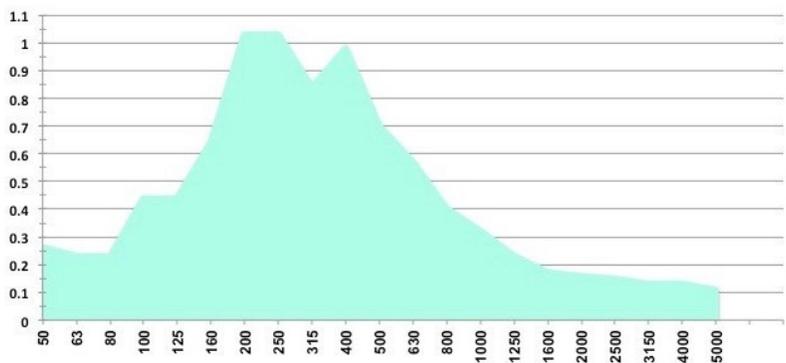
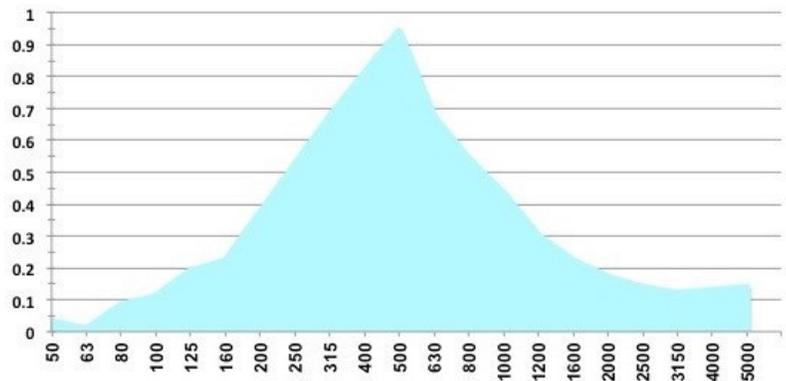
The use of DeAmp panels in these high reverberation spaces will increase speech intelligibility while maintaining the designed visual openness.

**INTEGRATING ACOUSTICS YOU
WILL HARDLY SEE...**

Below is the ISO 354 laboratory test data (conducted at SINTEF Norway) with the DeAmp panels at approximately 2, 4 and 8 inches from the lab floor. The acoustic performance of the DeAmp panels is tuneable by varying the off-set to the rear hard surface. By doubling the standoff distance, the absorption centre-frequency drops by an octave with each doubling of distance.

DeAmp panels are specifically designed to be absorptive in the human-voice frequency range in the mid to lower-mid areas. Unlike porous absorbers that typically absorb in the mid to lower-high frequency range; which can often strip a room of crucial hearing intelligibility cues.

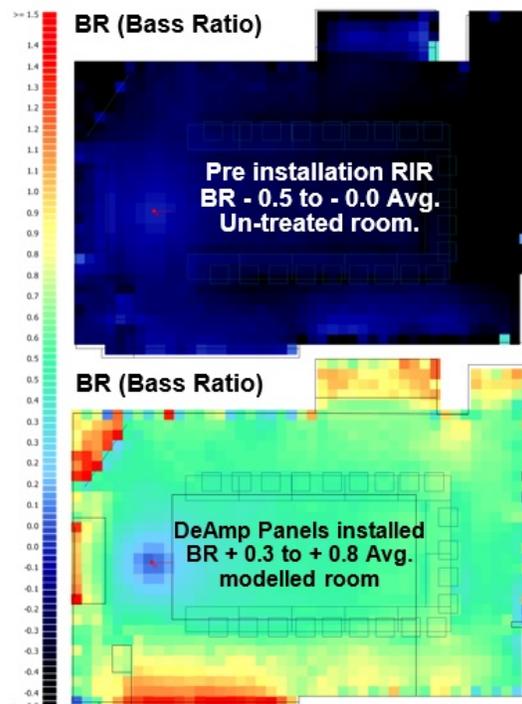
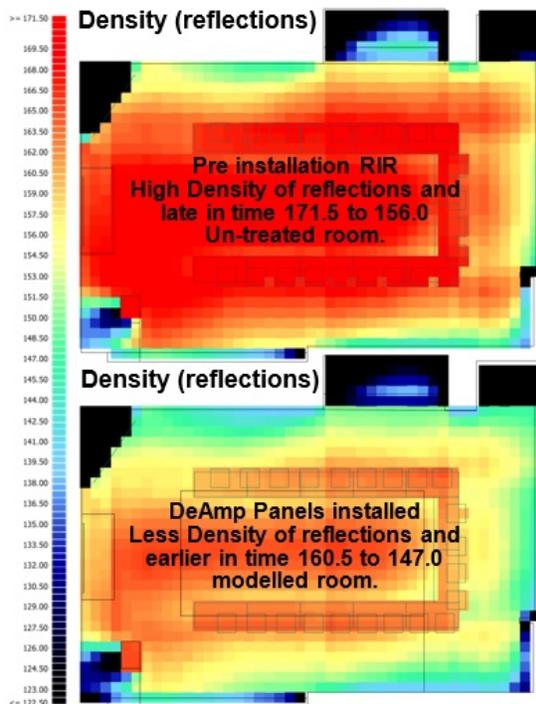
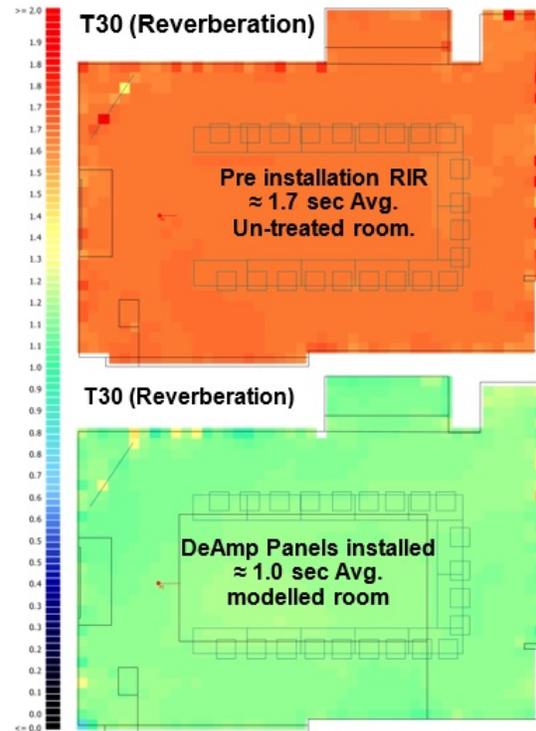
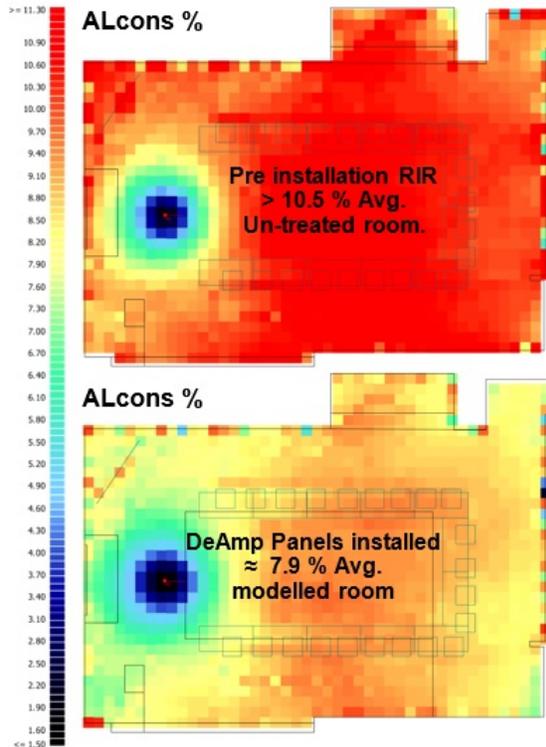
1/3 Octave frequencies	ISO 354 ASTM C423 data available		
	54 mm cavity (≈ 2-in)	97 mm cavity (≈ 4-in)	197 mm cavity (≈ 8-in)
50	0.03	0.26	0.29
63	0.01	0.23	0.29
80	0.08	0.23	0.43
100	0.11	0.44	1.09
125	0.19	0.44	1.24
160	0.22	0.64	1.23
200	0.37	1.03	1.11
250	0.52	1.03	0.87
315	0.67	0.84	0.72
400	0.81	0.98	0.75
500	0.94	0.70	0.46
630	0.67	0.57	0.39
800	0.54	0.40	0.26
1000	0.43	0.32	0.29
1200	0.30	0.23	0.28
1600	0.22	0.17	0.18
2000	0.17	0.16	0.16
2500	0.14	0.15	0.14
3150	0.12	0.13	0.12
4000	0.13	0.13	0.13
5000	0.14	0.11	0.11
NRC	0.50	0.55	0.45



HGC Engineering Canada has converted the ISO 354 test data to ASTM C423. A signed engineering letter with the conversion is available upon request.

Below are a few in-situ acoustic measurements and predictive modelled outputs from an ODEON Room Impulse Response (RIR) analysis, which were conducted at Durham College CFF by Golder Associates Toronto.

In the examples below, the upper graph of each pair are real-world RIR's captured in location. The lower graph of each pair are the ODEON modelled room performance outputs with only the DeAmp panels inserted into the model.





Below are photo examples of DeAmp panels that are cable suspended in an open office environment.





How do DeAmp panels absorb sound?

By absorbing sound energy via airflow resistance which is caused by the surface tension in the micro-slits.

Customizable options for DeAmp panels include:

- 1200 LPI, CMYK colour printing and 3M film application on clear acrylic
- Non-clear options include coloured, matte, non-glare, frosted P95 and 'sign white'
- Backlit options with 20% sign white transmittance material



The micro-millimetre slits, and the pattern created in the panels, is the foundation of DeAmp A.S. International and U.S. patents.

PHYSICAL PROPERTIES

Maximum Panel Size:	1.2m x 2.4m	4' x 8'
Thickness (nom.):	4.7mm	3/16"
Weight @ 5mm:	5.8kg/m ²	1.2 lbs/ft ²
typ.1.2m x 2.4m [4'x8'] panel	17.4kg.	38.4 lbs.
Tensile Stress @ break:	26MPa	3,800 psi
Flexural Strength:	77MPa	11,200 psi
Deflection Temp @ .45 MPa [66 psi]:	74°C	164°F
Softening Temp @ 1 kg load [2.2 lbs]:	88°C	181°F
Optical Transmittance - clear panel:	<91%	
Haze - clear panel:	>1%	
Refractive Index - clear panel:	1.57	
Flammability Classification:	DIN4102-B1	UL94 (94V-2)

