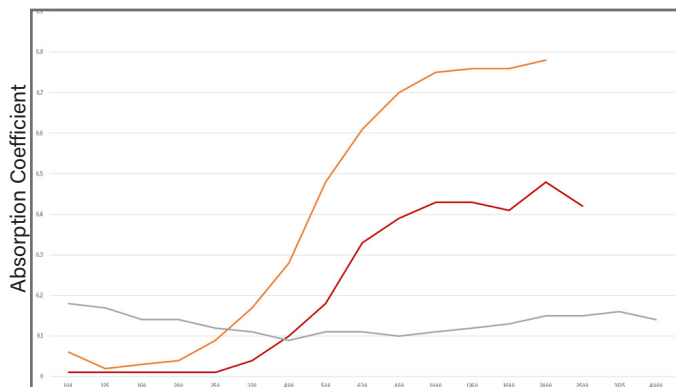


# Waveform Spline



As architecture evolves from rectilinear to curvilinear lines, acoustic surface treatment needs to evolve to meet the aesthetic challenge, while also offering optimal sound diffusion and absorption. To solve this problem and provide curvilinear options, RPG developed a powerful Shape Optimization software, which optimizes sound diffusion, while providing a given shape motif. The Waveform Spline-W is a veneered or painted, wall or ceiling applied, 1-dimensional sound diffuser, which provides an attractive wavy spline shaped appearance. It is available in 24" x 48" x 4" panels, allowing a variety of tiling options, depending on the orientation of adjacent panels. The panels are easily mounted with wall or ceiling cleats and are available in a wide variety of veneers and finishes. In the photo, Waveform Spline-W units are applied to the walls of a performance stage. The upper row of panels is rotated 180 degrees from the lower row offering an interesting topology.



### Acoustic Data

The graph illustrates the random incidence diffusion, scattering and absorption coefficients. The diffusion coefficient measured according to AES-4id-2001 is a measure of how uniform the Waveform Gaussian scatters sound. The correlation scattering coefficient is less critical than the diffusion coefficient and measures the amount of sound scattered in non-specular directions to only be used in computer modelling programs. The random incidence coefficient, measure according to ISO 354 is a measure of how much sound is absorber.

### Installation

Installation is simple using integral metal hair pin connectors. Simply attach suitable supplied engineered cables for dead hung installation. The image to the far right illustrates how the Spline panels can be seamlessly joined end to end forming an arc.

Frequency	Diffusion	Scattering (ISO)	Absorption (A Mount)
100	0.01	0.06	0.18
125	0.01	0.02	0.17
160	0.01	0.03	0.14
200	0.01	0.04	0.14
250	0.01	0.09	0.12
320	0.04	0.17	0.11
400	0.1	0.28	0.09
500	0.18	0.48	0.11
630	0.33	0.61	0.11
800	0.39	0.7	0.1
1000	0.43	0.75	0.11
1260	0.43	0.76	0.12
1600	0.41	0.76	0.13
2000	0.48	0.78	0.15
2500	0.42		0.15
3125			0.16
4000			0.14

