

Flutterfree T



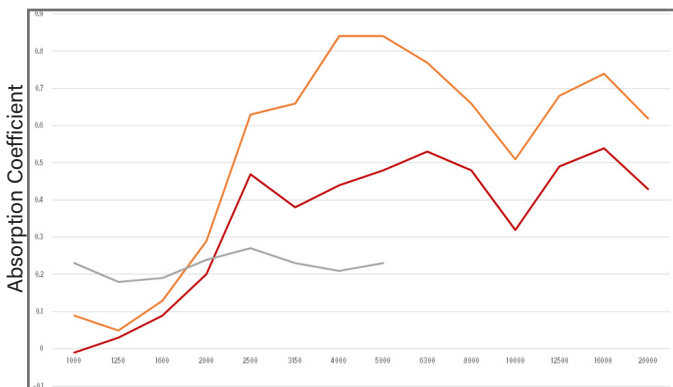
FlutterFree T[®] is an acoustically optimized, shallow, asymmetric diffuser, with folded "L"-shaped side half-wells that provide deeper wells, without increasing the depth of the acoustic moulding. The asymmetric profile allows aperiodic modulation, by flipping adjacent units according to the prescription of an optimal binary sequence. This aperiodic modulation minimizes grating lobes for optimally uniform diffusion and the "L" shaped side half-wells from adjacent units form "T"-shaped wells of longer depth, extending the onset of diffusion to 1000 HZ.

Diffusion

The graph illustrates how Flutterfree T provides improved diffusion performance over the original FlutterFree[®], when arranged in an aperiodic modulation arrangement. The orientation of adjacent Flutterfree T planks follows the prescription of an optimal binary sequence, where a binary 0 represents the base shape and a binary 1 represents the base shape flipped 180 degrees. Flutterfree T planks can be spaced by 1.6 mm to provide low frequency absorption.

Installation

FlutterFree T[®] is moulded on a 5 head wood moulder from hardwood that is kiln dried to 6-8% moisture content. RPG[®] takes every precaution to minimize warping by stress relieving the rear surface and treating all exposed surfaces on prefinished orders. FlutterFree T[®] can either be nailed or glued directly to a wall surface or laterally spaced and mounted with a rear air cavity for low frequency absorption. In this Helmholtz mounting, a semi rigid fiberglass panel is mounted directly behind the FlutterFree T[®], where the particle velocity is a maximum, as opposed to on the rear wall. When used as wall panels, a hardwood frame (not supplied) is suggested.



Frequency	Diffusion	Scattering (ISO)	Absorption (A Mount)
1000	-0.01	0.09	0.23
1250	0.03	0.05	0.18
1600	0.09	0.13	0.19
2000	0.2	0.29	0.24
2500	0.47	0.63	0.27
3150	0.38	0.66	0.23
4000	0.44	0.84	0.21
5000	0.48	0.84	0.23
6300	0.53	0.77	
8000	0.48	0.66	
10000	0.32	0.51	
12500	0.49	0.68	
16000	0.54	0.74	
20000	0.43	0.62	

