

Formedffusor™

1D Diffusion



*The First Low Cost Thermoformed QRD® Diffusor
From The Acoustical Industry's Leading Innovator*

Since its introduction in 1984, the number theoretic QRD® 734 Diffusor has proven to be a versatile general purpose diffusor. The uniform scattering, wide bandwidth, and broad selection of finishes make the QRD® a logical choice for almost any speech, critical listening, or performance facility. The Formedffusor™ brings this proven technology to a wider audience because of its low price, ease of installation, Class A fire rating, light weight, impact resistance, and color and texture options.



The Sound of Innovation™

Problem and Solution

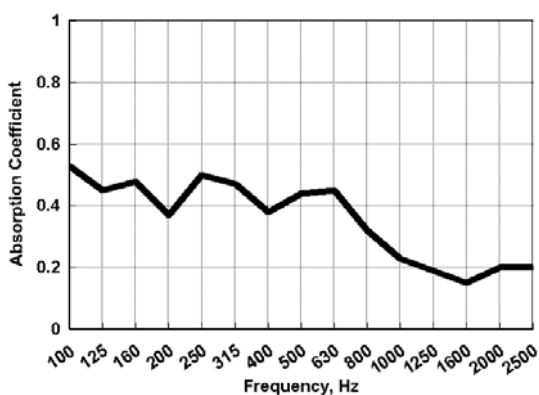
Problem

Wooden QRD® diffusors may be too heavy for some ceiling applications or too expensive for large scale coverage. There is a need for a lightweight, Class A, cost effective, molded plastic QRD®.

Solution

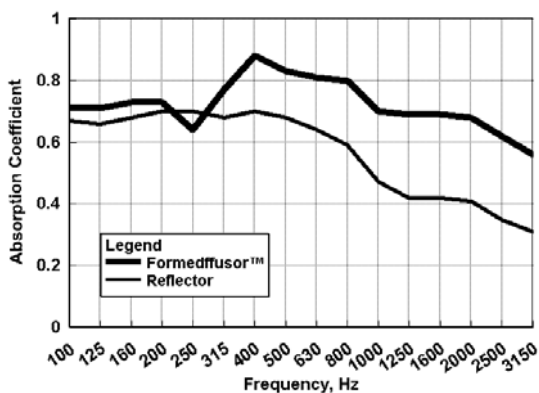
To address this problem, RPG® developed a lightweight, thermoformed panel made of Class A Kydex®. The diffusor has graceful curved inner and outer radii for an attractive appearance. Kydex® is stiff and impact resistant, allowing the Formedffusor™ to be used in almost any wall or ceiling application.

Performance Specifications



Absorption

The Formedffusor™ is designed to offer wide angle, broad bandwidth sound diffusion as well as useful low frequency absorption. These features control excessive boominess and balance the room's reverberation response. The Formedffusor™ can be used to offset the usually predominate high frequency absorption of people, drapery, rugs, and porous materials.



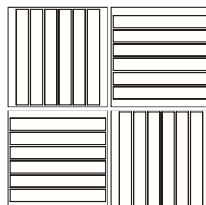
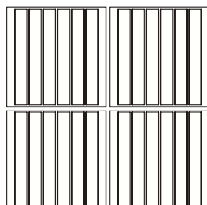
Diffusion

The Formedffusor™ is based on the QRD® reflection phase grating introduced by RPG® in 1983. It offers broad bandwidth wide angle diffusion. The graph illustrates the average diffusion coefficient (1 is ideal) for all angles of incidence. Compared to a flat reflecting panel, the QRD® maintains uniform diffusivity as a function of frequency above the diffraction limit.

Installation

The Formedffusor™ can be wall mounted using custom millwork or suspended in a T-bar grid. Panels can be aligned to form a one dimensional diffusor array or staggered 90° for a two dimensional diffusor array.

1D Array



2D Array

FEATURES

- QRD® number theory sound diffusion
- Lightweight thermoformed fabrication
- Low frequency diaphragmatic absorption
- Custom colors
- Can be oriented to provide one or two dimensional diffusion in the far field
- Panels nest into one another

BENEFITS

- Low frequency absorption can be used to control boominess in small rooms, while also providing uniform sound diffusion
- Thermoformed panels are designed to nest for lower shipping costs
- Diffusors can be aligned linearly for diffusion in the direction perpendicular to the wall direction or rotated 90° forming an alternating pattern to provide omnidirectional scattering
- 2' x 2' size offers more flexibility and higher diffusion performance than larger periodic 4' x 4' formats with a smaller repeat unit
- The Formedffusor's light weight makes handling and installation simple

APPLICATIONS

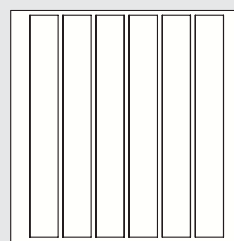
Music education facilities, Recording studios, Broadcast studios, Rehearsal rooms, Classrooms, Auditoriums, Worship spaces, Cinemas, Performing arts centers

SPECIFICATIONS

- Size: 23-5/8" (H) x 23-5/8" (W) x 4" (D)
- Shipping Weight: 5 lbs.
- Standard finish: white
- Custom colors are available
- Class A Fire Rated



Top View



Front View



Side View