

THE QUADRATIC DIFFUSER

Acoustics First® Quadratic Diffusers (Model Q) provide balanced sound throughout a performance space and help reduce excessive sound concentration or “hot spots”. A true Quadratic Residue Diffuser is designed so that the reflected sound waves are harmonically dissociated from the source waves and spread over time to create a more neutral listening space.

Borrowing a feature from the patented Art Diffusor® design, the well bottoms of the Acoustics First® Quadratics are angled at 10 – degrees to extend the unit’s range and scatter higher frequencies that would otherwise reflect in a straight line-of-sight path, back into the room.

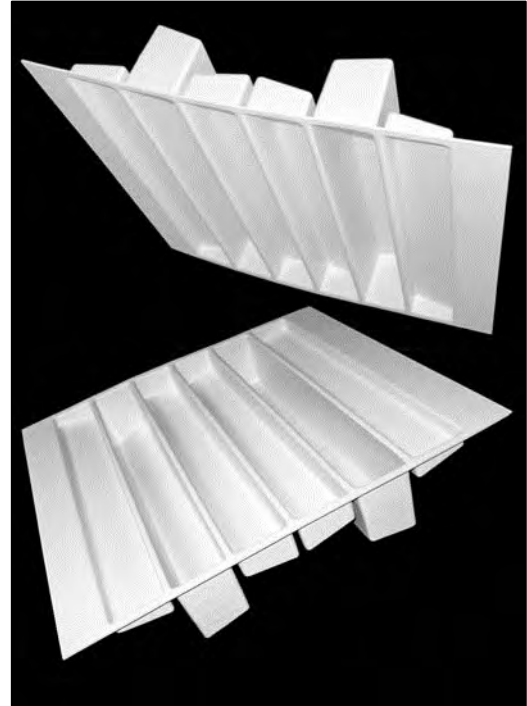
CONSTRUCTION:

Model Q: 1 Dimensional / Quadratic Residue Diffuser
Size: 23-5/8 x 23-5/8”
Depth: 4”
Weight: 3.75 pounds
Mount: Drop into T-Bar grid or wall recessed.
Material: Thermoplastic (White)
Bandwidth: 600 Hz to 4 kHz
Fire Rating: Class 1 (A) per ASTM E84
NRC: 0.30

Installation:

Quadratic Diffuser Ceiling Panels may be installed into heavy-duty 15/16" face lay-in ceiling grid systems. They may be flush-mounted recessed, or installed on a wall surface with suitable surrounding trim.

Although it is a one-dimensional diffuser and produces a directional hemispheric polar response, the units may be oriented in any direction and, by alternating 90 degree rotation, will provide two-dimensional diffusion outside of the near field.



Applications: Recording & Broadcast Studios · Live Music Venues · Practice/Rehearsal Rooms · Theaters & Auditoriums · Houses of Worship · Home Entertainment Rooms & more!

The Quadratic Diffuser – Performance							
Test	125 Hz	250 Hz	500Hz	1000 Hz	2000 Hz	4000 Hz	NRC
Type E400	0.35	0.40	0.45	0.30	0.14	0.19	0.30
Type E400 w/insulation	0.38	0.39	0.45	0.31	0.13	0.16	0.30

*Note: Diffusion data available upon request