

# QR-F<sup>e</sup>™

## Decorative Hardwood Acoustical Diffuser-Absorber

### AVL Systems QR-F<sup>e</sup>™ Acoustical Diffuser-Absorber

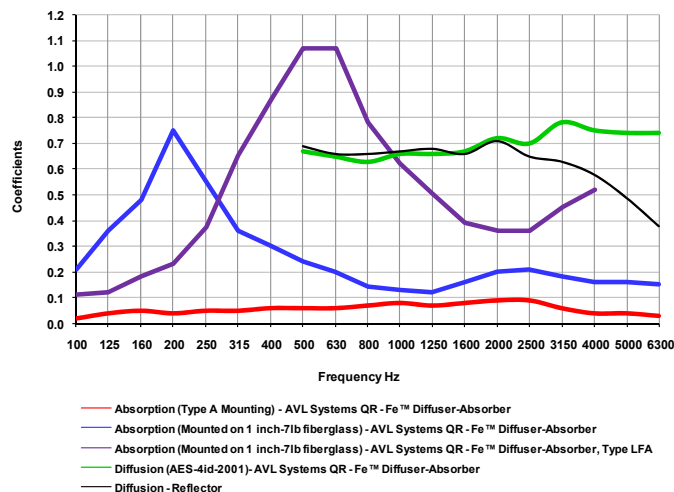
- Provide diffusion for control of flutter echo without deadening room
- Furniture-grade wood acoustical moldings for ceilings and walls
- Helmholtz resonance mounting option for added low freq absorption
- Thickness: 1-1/16"
- Sizes (Nominal): 3-15/16" x 96" for most wood species
- Special Sizes: Available upon request
- Installation: Nail, screw, adhesive, as required

### QR-F<sup>e</sup>™ Acoustical Performance

Frequency (Hz)	125	250	500	1K	2K	4K	NRC
Absorption Coefficients, Type A Mount	.04	.05	.06	.08	.09	.04	.05
Frequency (Hz)	1K	2K	4K	8K	12.5K	16K	MEAN
Diffusion Coefficients, AES-4id-2001	.63	.67	.78	.74	.73	.74	.72

### QR-F<sup>e</sup>™ Type LFA - Acoustical Performance

Frequency (Hz)	125	250	500	1K	2K	4K	NRC
Absorption Coefficients (AcousTech™ 1" fiberglass core back-mounted)	.12	.39	1.09	.66	.41	.51	.65



### Description

**AVL Systems QR - F<sup>e</sup>™ Diffuser-Absorber** is an attractive, furniture-grade hardwood wall system easily installed to most any architectural surface. It's decorative finishes and profiled design combine to provide single-dimension mid-high frequency diffusion for control of flutter echo, while preserving the natural ambience of the space. Optional **Type - LFA**

has rear reliefs engineered to provide additional absorption below the frequency range of the diffuser cut-off frequency. Installation mounting is by traditional screw/glue methods direct to most architectural surfaces. Additionally, **QR - F<sup>e</sup>™** profiles can be installed with a rear air space and with slight separations, along with a glass or polyester fiber back-layer for increased low frequency absorption. This product is a quadratic residue design derived from mathematical number theory sequences for reflection phase grating principles, then precisely manufactured to provide a combination of mid-high frequency diffusion with low frequency absorption; all in one product. Finished profiles are solid core materials to prevent resonances and resist damage. Finishes are factory applied on standard or customer specified wood species.

### Applications

**AVL Systems QR - F<sup>e</sup>™ Diffuser-Absorber** is an ideal solution for rooms and spaces where flutter echo is a consideration. The design of these products allows the specifier to provide a combination of diffusion and absorption to enhance the listening enjoyment for both music and speech.

### Interactive System Performance

The QR™ and DiSorb™ families of interactive performance products are designed to provide the acoustical engineer and specifier with a complete "toolbox" of technically compatible products for any application. These engineered products can be used individually or, as an interactive system, working together to optimally enhance the interior design, functionality, and acoustics of the architectural space. AVL Systems, Inc. is pleased to offer a full range of standard and custom architectural acoustic products for virtually every application and technical requirement.

### Finishes

Standard hardwoods, or customer selected species are available.

### Warranty

AVL Systems *Limited Warranty* extends for ONE FULL YEAR from the original date of shipment. AVL Systems literature, presentations and published data are correct to the best of our knowledge at time of publication. AVL Systems, Inc. reserves the right to change or amend any of the products or the information presented or published without liability or notice.



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