

category	sound diffusion
description	QRD734® diffuser panel
part code	GRG230 – GRG260

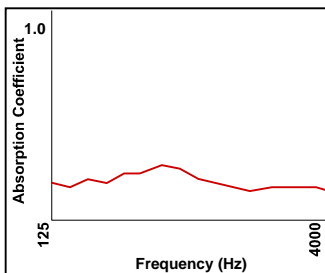
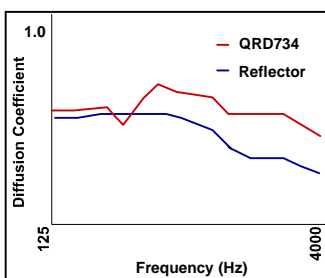


QRD734® DIFFUSER PANELS scatter incident sound uniformly so that the acoustic glare in all directions is minimised.

Small rooms, where the boundaries are relatively close to the listener, need very efficient surfaces to diffuse interfering rear wall reflections and provide a diffuse sound field.

To solve this problem, QRD734® utilises advanced quadratic residue number theory to produce the most powerful and aesthetic one-dimensional, diffusing surface in the acoustics industry.

It has a high bandwidth and broad selection of wood or paint finishes. Units can be alternated at 90° to provide for 2D diffusion in the far field.



Acoustic Performance

Diffusion

Compared to a flat reflector panel, the QRD734® offers significant diffusion above the diffraction limit of 565Hz, which is equal to the speed of sound (1130ft/sec) divided by the 2' dimension of the panel. As the frequency increases above 565Hz, the graph indicates how the reference reflector becomes more and more specular (*focused, directed*), whereas the QRD734® provides a uniform diffusivity.

Absorption

The wooden QRD734® contributes minimal absorption.

Installation

The QRD734® is typically mounted on a split timber batten cleat and secured. For installations that require a flush mount the units should be framed, much like an opening for a window.

Custom

Other sizes are available up to 2400mm tall.

Fixing battens are recessed into the panel so units must be ordered as portrait (channels running vertically) or landscape (channels running horizontally).

Finishes

MDF, poplar, beech, ash, oak, maple, cherry.

Supplied plain unfinished MDF unless paint, veneer and/or clear lacquer finishes are specifically requested.

Technical Specification

Product GRG230–GRG260

QRD734 Diffuser Panels

Colour	MDF, timber veneer or paint
Standard panel size	1200x600mm or 600x600mm
Nominal thickness	230mm



Guidance for QRD734 Diffusor from Custom Audio Designs Ltd



Description:

Dimensional Diffusers can be either independent, stand alone units or specially fabricated so that standard size units join together to form a continuous, larger unit.

Features:

- MDF or MDF Veneered class 1 or class 0 finished available.
- Units are shop-finished without stain or stained/ painted and with clear lacquer prior to arrival at site.
- Alternative materials are available on request.
- One-dimensional reflection phase grating principle, using an array of equal width wells separated by thin dividers.
- Depths of the wells vary, based on the prime seven quadratic residue theory sequence.
- Vertically oriented wells provide sound diffusion in the horizontal plane.
- Horizontally oriented wells provide sound diffusion in the vertical plane.
- Flame Spread / Smoke Developed Characteristics tested by independent, accredited NVLAP facility according to ASTM E 84 and NFPA 255.
- Composite Flame Spread Rating (maximum): 25.
- Smoke Developed (maximum): 450.

Well Terminations:

- End (E): Last partial width end well terminates with solid, side board, which is usually exposed visually.
- Half (H): Last well is half width without a side board and meant to abut against adjacent wall at inside corners where open side is concealed visually.
- Joining (J): Last well is half width without well board or side board (top & bottom only). Full width joining well board is inserted into top and bottom between two adjoining units to form one continuous diffuser.

Unit Types:

- End/ End (E/ E): Unit has two end wells and side boards to make stand alone unit.
- End/ Half (E/ H): Unit has one end well and one half well to abut against inside corner.
- End/ Joining (E/ J): Unit has one end well and one joining well to adjoin with adjacent unit.
- Half/ Half (H/ H): Unit has two half wells to fit into opening where sides are not visible.
- Half/ Joining (H/ J): Unit has one half well to abut against inside corner and one joining well to adjoin with adjacent unit.
- Joining/ Joining (J/ J): Unit has two joining wells to adjoin to adjacent units on both sides.

Dimensions:

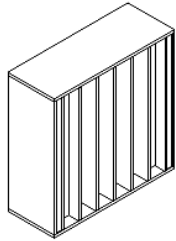
- 600 x 600 x 230 mm.
- 1200 x 600 x 230 mm.
- Custom units - Height 2440 mm (maximum), depth 100 mm (minimum).

Installation:

- Wall Cleats: Units are supplied with top and bottom wood wall cleats that are screwed to substrate prior to diffuser installation.

NBS

- Manufacturer: Custom Audio Designs Ltd
- - Web: www.customaudiodesigns.co.uk
- - Tel: +44 (0) 1730 269572
- - Product reference: QRD-734 Diffuser.
- Size: [600 x 600 mm].
[1200 x 600 mm].
[As schedule]. Custom units are available on request.
- Unit types: [E/E].
[E/H].
[E/J].
[H/H].
[H/J].
[J/J].
- Well terminations: [E].
[H].
[J].
- Finish: [Clear lacquer].
[Painted RAL ???].
[MDF].
[Ash veneer].
[Beech veneer].
[Oak veneer].
[Cherry veneer].
[Maple veneer].



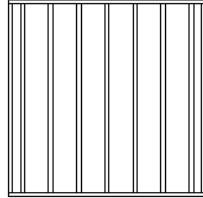
ISOMETRIC VIEW



TOP VIEW



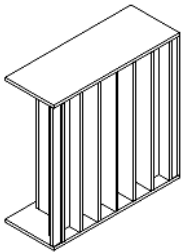
LEFT VIEW



FRONT VIEW

End/End (E/E) (standard unit):

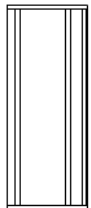
The unit has two end wells and side boards to make a stand alone unit.



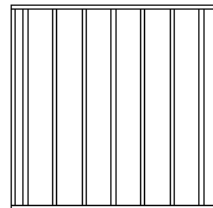
ISOMETRIC VIEW



TOP VIEW



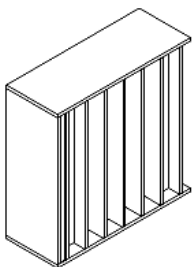
LEFT VIEW



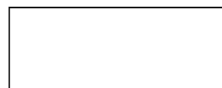
FRONT VIEW

End/Half (E/H):

Unit has one end well and one half well to abut against inside corner.



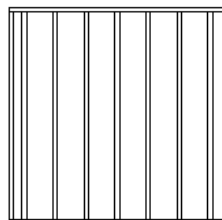
ISOMETRIC VIEW



TOP VIEW



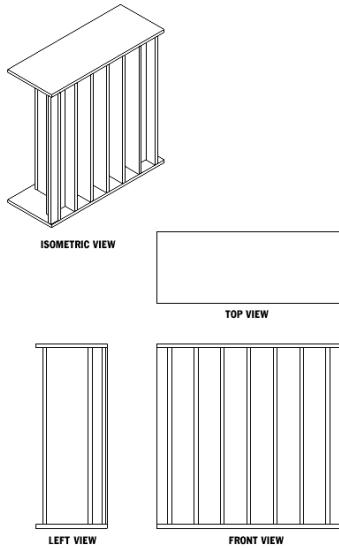
LEFT VIEW



FRONT VIEW

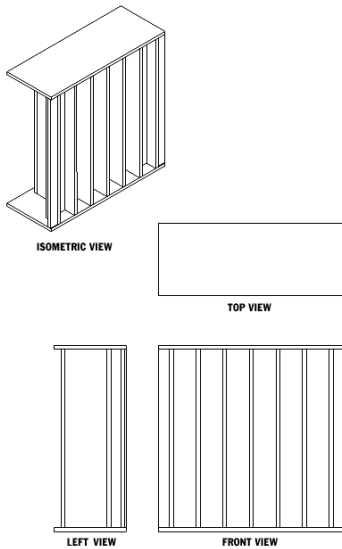
End/Joining (E/J):

Unit has one end well and one joining well to adjoin with adjacent unit.



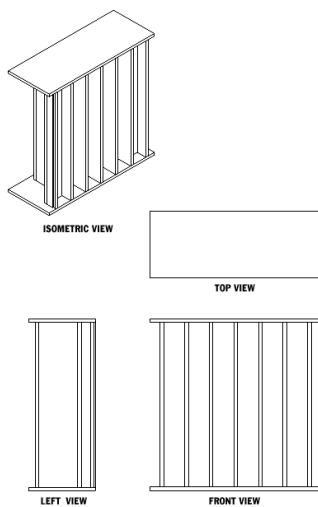
Half/Half (H/H):

Unit has two half wells to fit into opening where sides are not visible.



Half/Joining (H/J):

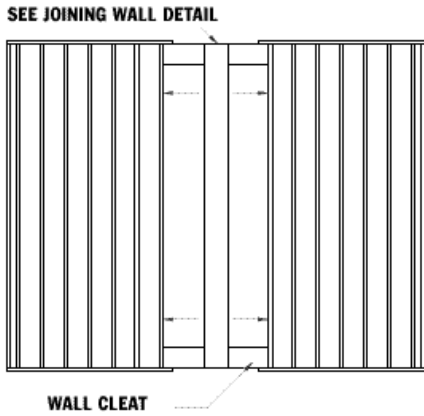
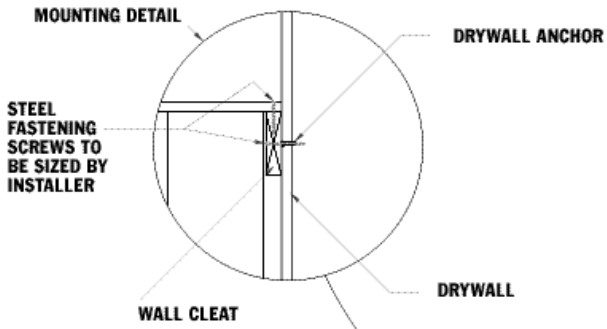
Unit has one half well to abut against inside corner and one adjoining well to adjoin with adjacent unit.



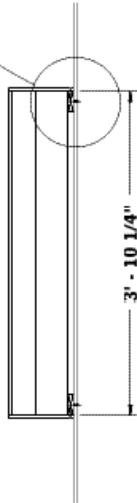
Joining/Joining (J/J):

Unit has two joining wells to adjoin to adjacent units on both sides.

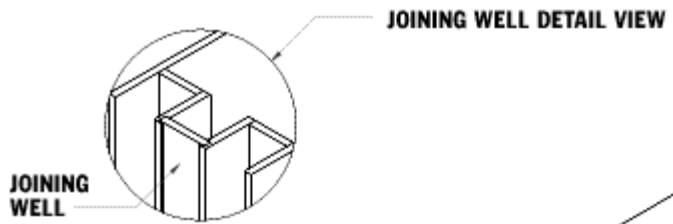




FRONT ELEVATION



SIDE EL



JOINING WELL

WOOD/MELAMINE DIVIDERS

