

category	sound diffuser
description	flutterfree strips
part code	GRG700-GRG820



**FLUTTERFREE** is a handsome, furniture-grade, acoustic hardwood moulding that provides flutter echo control as well as bass absorption.

**Advantages**

- Real wood
- Easy installation
- Impact resistant
- Diffusion and absorption
- Easily trimmed
- Tuned absorption

Its application converts small rooms with flat parallel surfaces into functional spaces with very good speech intelligibility, sound quality, and a natural, comfortable ambiance.

**Applications**

- Conference rooms
- Public spaces
- Listening rooms
- Recording studios
- Post-production studios
- Home theatres
- Distance learning centres
- Rehearsal rooms
- Auditoriums
- Performance spaces



Slotted FlutterFree

**Technical Specification**

Product	FlutterFree Timber Diffuser Strips
Colour	See chart below
Strip length	1200mm
Thickness	25mm
Width	100mm
Weight	Variable

**Features**

- Offers an almost unlimited variety of lacquered, stained, or painted finishes and hardwood options.
- Diffusive flutter control minimises flutter echoes without making the space acoustically 'dead'.
- Diffusive flutter control provides an ambient environment to support speech in conference rooms for less fatigue, greater coverage, and high speech intelligibility.
- Mounting FlutterFree strips over an air cavity provides low frequency absorption to minimise 'boominess' and lack of definition in small rooms.

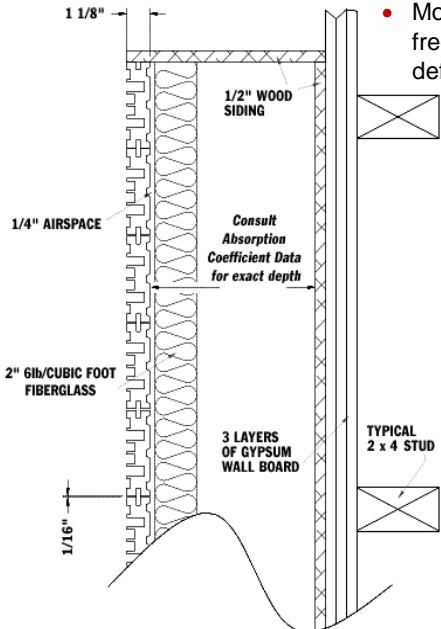


**Installation**

FlutterFree strips are moulded on a 5-head wood moulder from hardwood that is kiln dried to 6-8% moisture content.

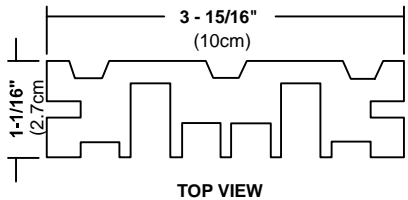
FlutterFree strips can be nailed, screwed or glued directly to a wall surface, or mounted with a rear air cavity for low frequency absorption. In the Helmholtz mounting shown right, a semi-rigid fibreglass panel is mounted 6mm (1/4") behind the FlutterFree strips.

To standardise and maintain the proper spacing, lamello biscuits are included. When used as wall panels, a hardwood frame – not supplied – is suggested.

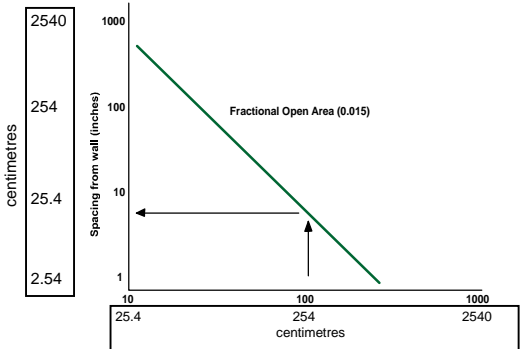
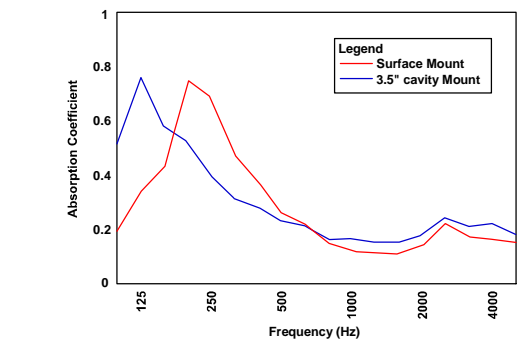
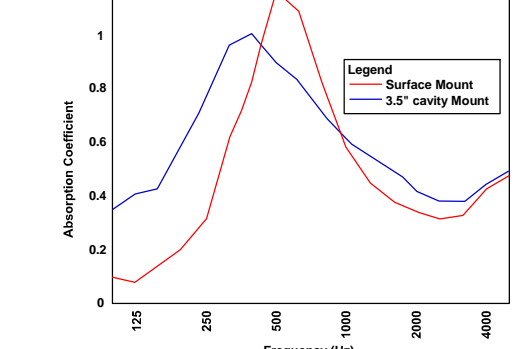
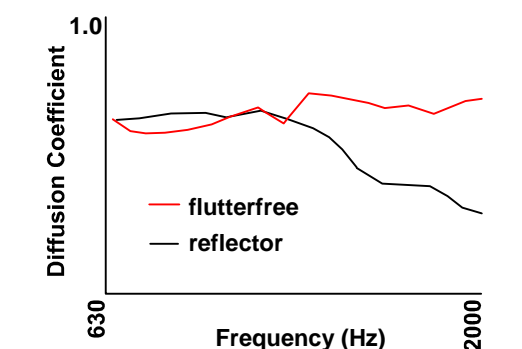


**Colours and codes**

Part code	Composition	Length
GRG710	Poplar	1200mm
GRG720	Ash	1200mm
GRG730	Cherry	1200mm
GRG800	White beech	1200mm
GRG810	Steamed beech	1200mm
GRG820	Maple	1200mm



## Acoustic Performance

 <p>centimetres</p> <p>Spacing from wall (inches)</p> <p>Fractional Open Area (0.015)</p> <p>centimetres</p>	<h3>Absorption 1</h3> <p>When FlutterFree panels are mounted 1.6mm (1/16") apart, the graph can be used to determine the spacing from the mounting wall for the desired absorption frequency. For example, to achieve bass absorption at 100 Hz, follow the vertical 100 Hz frequency line until it intersects the leftward sloping fractional open area line. Follow the horizontal line to the 203mm (8") intersection point.</p>
 <p>Absorption Coefficient</p> <p>Frequency (Hz)</p> <p>Legend — Surface Mount — 3.5" cavity Mount</p>	<h3>Absorption 2</h3> <p>The absorption coefficient data on the left is for non-slotted FlutterFree in a Helmholtz mounting. Surface mount refers to a C mounting with fibreglass on the boundary. The cavity mount refers to a D mounting with a cavity depth of 89 mm (3.5"). The spacing between FlutterFree strips is 1.6mm (0.063") with a fractional open area of 0.4mm (0.015").</p>
 <p>Absorption Coefficient</p> <p>Frequency (Hz)</p> <p>Legend — Surface Mount — 3.5" cavity Mount</p>	<h3>Absorption 3</h3> <p>The absorption coefficient data on the left is for slotted FlutterFree® and was measured without any spacing between the FlutterFree planks. Surface mount refers to a C mounting with fibreglass on the boundary. The cavity mount refers to a D mounting with a cavity depth of 3.5" (89 mm). For extended low frequency absorption the FlutterFree Helmholtz mounting may be used in conjunction with the slotted planks.</p>
 <p>Diffusion Coefficient</p> <p>Frequency (Hz)</p> <p>— flutterfree — reflector</p>	<h3>Diffusion</h3> <p>The graph illustrates how FlutterFree® provides useful diffusion above the diffraction limit of roughly 3400Hz compared to a flat reflective surface. The chart represents the mean diffusion coefficient, which is the normalised standard deviation of the 1/3 octave polar responses for angles of incidence between 0° and 90°.</p>

## Guidance for Flutter-Free Acoustic Moulding from Custom Audio Designs Ltd

### As standard

#### Performance:

- A furniture grade, acoustical hardwood moulding, providing flutter echo control as well as bass absorption. Its application converts small rooms with flat parallel surfaces into functional spaces with good speech intelligibility, sound quality, and a natural, comfortable ambiance.

#### Non-slotted Flutter-Free:

- Offers mid-high frequency diffusion, with the possibility of low frequency absorption using a Helmholtz mount.

#### Slotted Flutter-Free:

- Offers mid-high frequency diffusion with accompanying absorption below the diffusion cut off. Additional low frequency absorption may be added using a Helmholtz mount.

#### Size:

- Refer to Custom Audio Designs Ltd Technical Department for details.

#### Accessories:

- Helmholtz mount.

#### Options

- Flutter-free can be supplied as a wall panel, varnished, stained or left natural.

### NBS

- Manufacturer: Custom Audio Designs Ltd.
  - Web: [www.customaudiodesigns.co.uk](http://www.customaudiodesigns.co.uk)
  - Tel: +44 (0) 1730 269572
  - Product reference: Flutterfree Acoustic Moulding.
- Size: [100 x 25 x 2400 mm]. Standard custom made in any wood up to 2400mm lengths.
- Types: [Standard, non-slotted].  
[Standard, slotted].  
[Wall panel, non-slotted].  
[Wall panel, slotted].
- Accessories: [Not required].  
[Helmholtz mount].
- Finish: [Natural].  
[Stained].  
[Varnished].  
[Painted RAL ???].