Aaronag GmbH
Stockackerstr. 22
CH 4153 Reinach
Tel +41 (0)61 501 82 09
Fax +41 (0)31 932 00 91
info@aaronag.ch
www.aaronag.ch

OFFICE SOLUTIONS

SOUND PROOFING DIVIDERS

SOUND PROOFING DIVIDERS FEATURES

Details of 40 mm thick foam divider

Details of 20 mm thick divider

(1) 19 mm thick **Chipboard**

(2) (2A) **Foam** thickness e= 10 mm and 60 Kg/m^3 (e_{total}= 40 mm) density

(2B) **Latex** thickness e= 3 mm and 30 Kg/m^3 (e_{total}= 20 mm) density

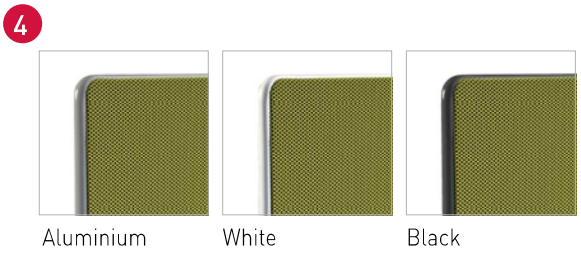
(3) **decorative fabric** adhesives with glue to water

- Possibility of sound **proofing and/or fireproof fabrics,** optional for projects

Actiu upholstered Index		
● GROUP "G"	OMEGA 3D	Maximum sound absorption
GROUP "H"	HARLEQUIN	Good sound absorption
GROUP "M"	MELANGE	Average sound absorption **M1** fire
● GROUP "K"		Average sound absorption
GROUP "C"		Moderate sound absorption. **M1** fire retardant upholstery
● GROUP "T"		Moderate sound absorption

● **Finishes offered in Price List**

(4) **Polyethylene (PE)** of low density clipped with adhesive, in white, black or aluminized finishes.



Aluminium White Black

(5) **Parts mounted** to the desk using alumimum injection or steel plates machined by laser.

CAUSES OF ACOUSTIC DISCOMFORT

Attitude of the subject. Of its acceptability or not.

Physical characteristics of noise

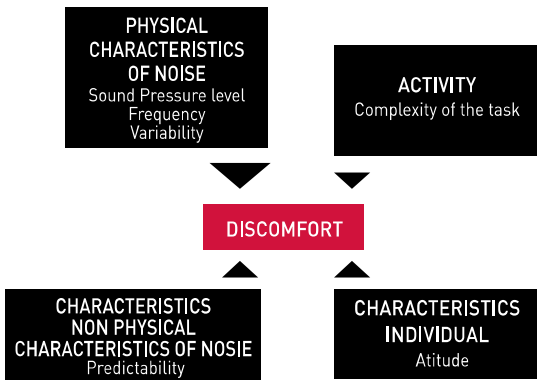
· Types of tones. Pure tones (those that do not vary in frequency) more annoying than the compounds. Even more when aired on audible frequencies (500 – 2000 Hz)

· Frequency. More annoying high frequencies than low ones.

· Randomness. The variation in noise annoyance increases.

Non physical characteristics. Most annoying noise the less prdictable.

Type of activity. Greater discomfort the greater need of concentration.



ACOUSTIC ERGONOMICS AND COMFORT

Acoustic comfort is the sound level that does not disturb or bother or cause any harm direct to health.

ORIGIN OF ACOUSTIC DISCOMFORT

· eam working and equipment: photocopiers, CPU´s, air conditioning, telephones...
· Open officespoorly designed with overstaffing
· External noise due to poor insulation of the building

REFERENCE VALUES

There are no existing mandatory regulations regarding acoustic comfort.
SAccording to the technical guide RD 488/1997, 14 April, for difficult and complex tasks the level should be continuous sound equivalent to LAeq which supports the user, but should not exceed dB(A).

Basic building Standard	**88 dB(A)**
Professional Office	40 dBA
Offices	45 dBA

CONTROL MEASURES

Controlling noise within teams
· Install printers and faxes in remote rooms and areas
· Using silent office equipment, by adding insulated housing
· Lower the intensity of telephones and communication devices
· Use doors with spring systems....

Control the noise within ventilation and air conditioning

Avoid noise transmission between units using insulating the walls

En el medio de propagación se recomienda:
· Place sound absorbing materials in the walls, ceilings and floors
· Surfaces that do not reflect too much. (Reverbatation Time ↖ 1 seg)
· Place absorbent panels between desks and workstations
· Provide office furniture that improves the acoustic behaviour of space, hollow ceilings, carpeted floor, upholstered chairs....
· Respect the local occupancy according to its volumen and its use
· Achieve quiet habits of conduct and communication

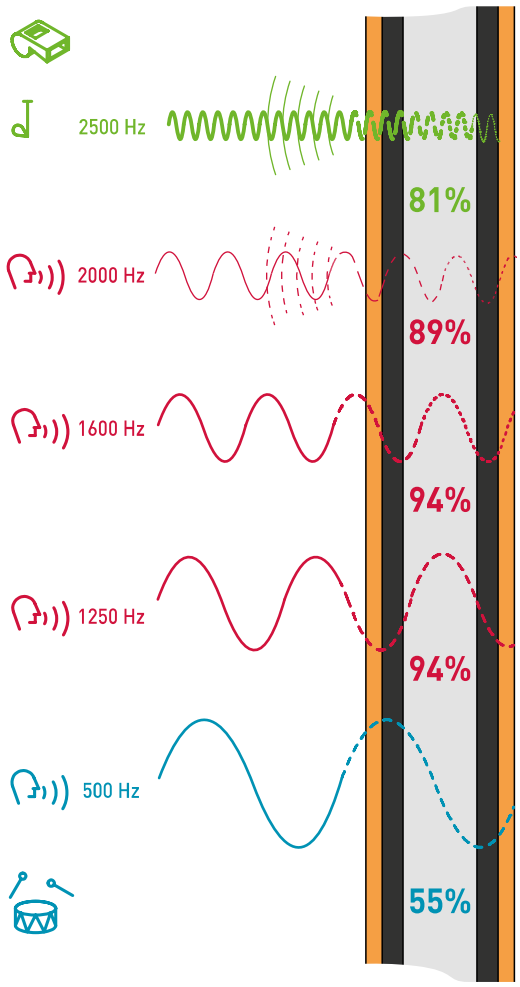
SOUND PROOFING DIVIDERS FEATURES

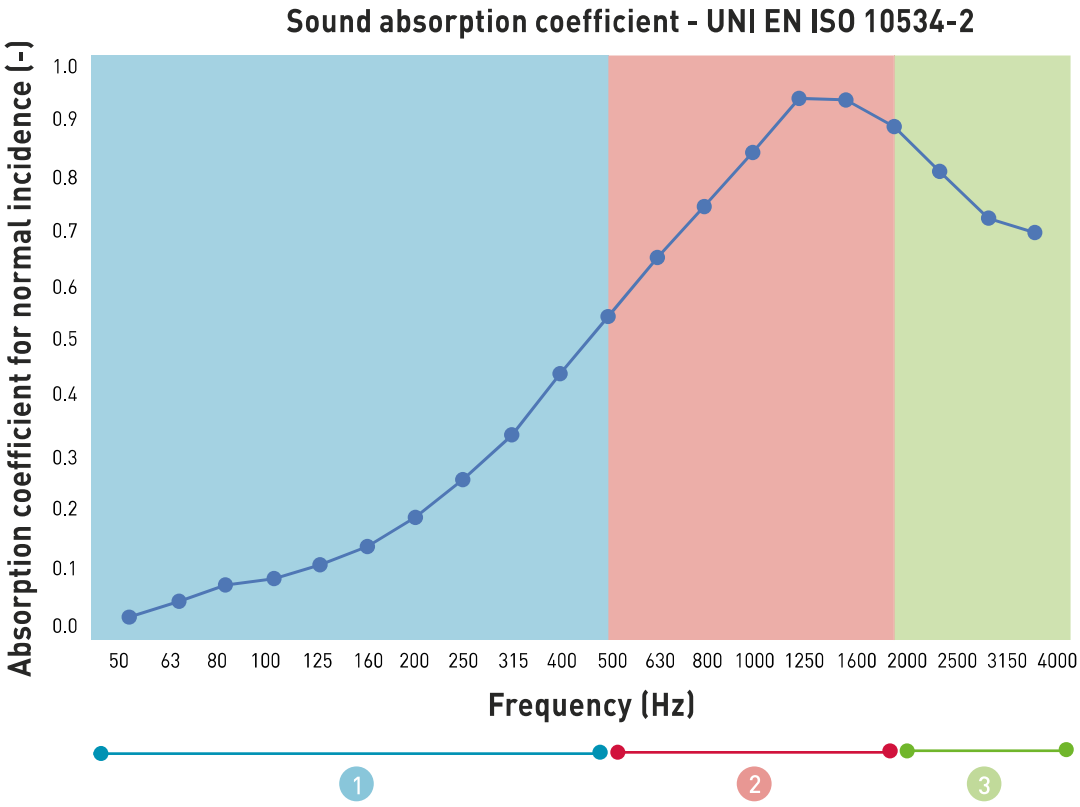
The graphics and image show how the panels, using Snowsound® technology, affect the acoustics of a room:

1. Notwithstanding the reduced thickness they do relatively well in absorbing the low frequencies (below 500 Hz), those that characterise deep sounds that are normally more difficult to dampen;

2. They absorb very well the midrange frequencies (between 500 and 2,000 Hz), those typical of the human voice and generally in all workplaces;

3. They tend to reflect,gradually absorbing less of the high frequencies (above 2,000 Hz), those which by their nature are already in large part absorbed by the walls, the furnishings and by the very presence of people.The result thus obtained is a comprehensive, natural balance of sounds in the environment.

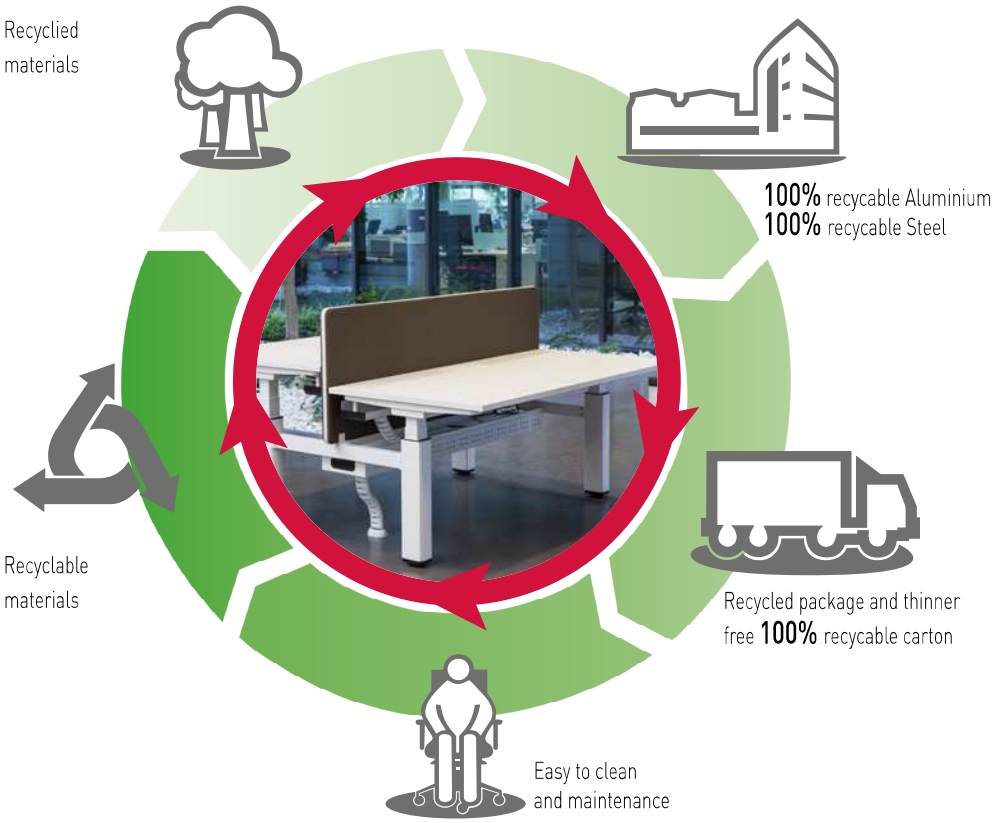




Frequency (Hz)	αn [-]
50	0,01
63	0,04
80	0,07
100	0,08
125	0,10
160	0,14
200	0,19
250	0,26
315	0,34
400	0,45
500	0,55
630	0,65
800	0,75
1000	0,84
1250	0,94
1600	0,94
2000	0,89
2500	0,81
3150	0,73
4000	0,70

The sound absorption coefficientfor normal incidence was calculated in Kundt's tube prepared according to the standard **UNI EN ISO 10534-2**, test executed by Materiacustica, a spin-off company of the University of Ferrara.

ECODESIGN SOUND PROOFING DIVIDERS



MATERIALS

SOUND PROOFING DIVIDERS has been designed to be manufactured with recycled materials, danger substances such as chrome, mercury or cadmium are not used in big quantity. Recycables Aluminium and Steel 100%. Organic volatile Components. Packages manufactured with recycled carton. Ink thinner free.

PRODUCTION

Energy use is optimized during the production process. Minimum environmental impact. Last generation technological system in coating processes. Painting that have not been used is recovered to use it again. Zero COVs emissions and other contaminant gas. Close water circuit to clean the metals. Heat recovery. Automatic manufacture systems. Cut process is planned.

TRANSPORT

Optimum packaging to reduce space in transport and save energy.

USE

Long lasting use. Spare parts and replacements available. Easy to clean and maintenance.

DISPOSAL

Recycable. Easy and quick to split **SOUND PROOFING DIVIDERS** components. Packages are reuse by our supplier to avoid waste generation. Carton used in packages is recyclable.

CERTIFICATES AND REFERENCES

The different programmes get points in different environmental categories to get the LEED certificate (sustainability, material and resources, water, energy and atmosphere, inner environment quality, innovation and design).

The mark of responsible forestry

PEFC/04-31-0782
PEFC Certificate

EN ISO 14006:2011
ECODESIGN Certificate

UNE-EN ISO 9001:2008
ISO 9001 Certificate

UNE-EN ISO 14001:2004
ISO 14001 Certificate

E1 by EN 13986 Certificate

ACTIU TECHNOLOGICAL PARK
project certified as LEED® GOLD
by U.S. Green Building Council 2011
Leadership in Energy & Environmental Design

Aaronag

Aaronag GmbH
Stockackerstr. 22
CH-4153 Reinach
Tel +41 (0)61 501 82 09
Fax +41 (0)31 932 00 91
info@aaronag.ch
www.aaronag.ch

Büromöbel, Betriebseinrichtung, Stadionbestuhlung, Kinostühle, Strassenmöblierung, Tribünen, Lagereinrichtung, Gastronomiemöbel, Schulmöbel, Hörsaalbestuhlung, Schliessfächer, Garderobenbänke, Regalsysteme, Archive, Bibliothek, Wellnesseinrichtung, Pneuschrank, Tresor, Theaterbestuhlung, Lagergestelle, Regale, Einrichtung für Fitness-Studio, Auditorienbestuhlung, Büroeinrichtung, Schuleinrichtung, Gastronomieeinrichtung, Sportplatzbestuhlung, Mehrzweckhalleneinrichtung, Kindergartenmöbel, Konzerthallenbestuhlung, Garderobenschränke, Werkstatteinrichtung, Ablagesysteme, Kindergarteneinrichtung,