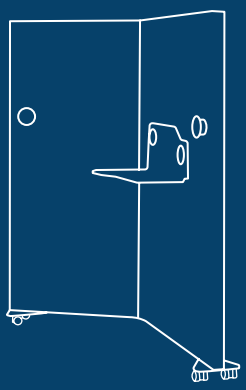
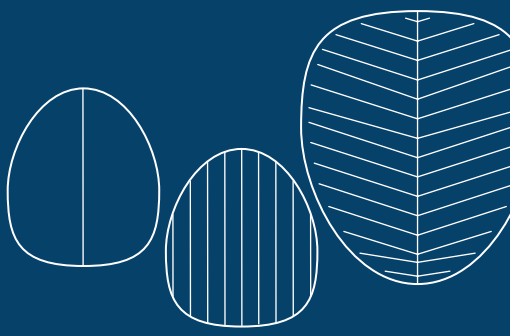
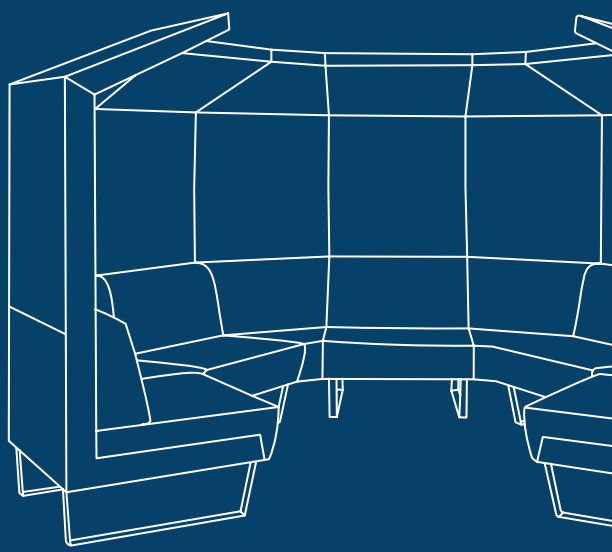
bejot

ACOUSTICS

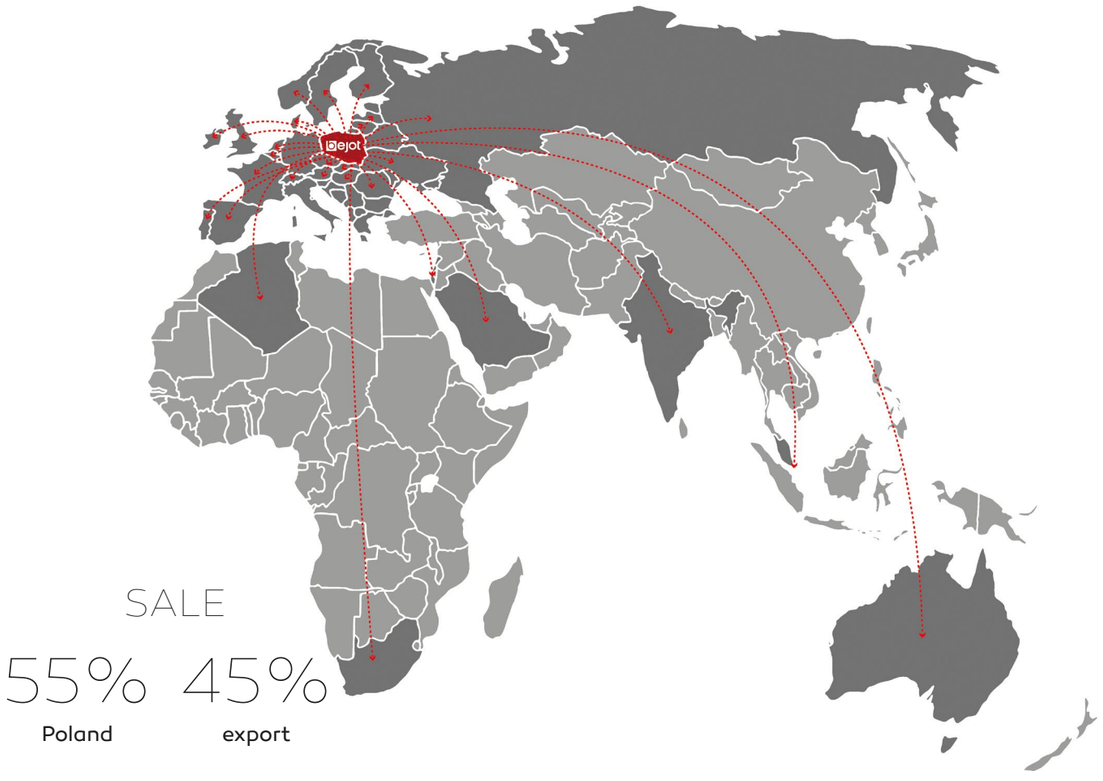






Who we are?

We are a family-run production company that, through the idea, enthusiasm and work of the entire team, has transformed from small carpentry into a office furniture and acoustic solutions manufacturer. We create products in cooperation with creative designers and through rigorous selection of each element of our products to guarantee your satisfaction and comfort even during long hours of use.



Mission statement

Bejot is a company, where the human being is put first above all. His needs, comfort and feeling of aesthetics are for us priorities. We want to be a partaker and an initiator of changes unfolding within the current work conception model as well as an evolution in the field of creation of human friendly spaces for learning, work and some rest.

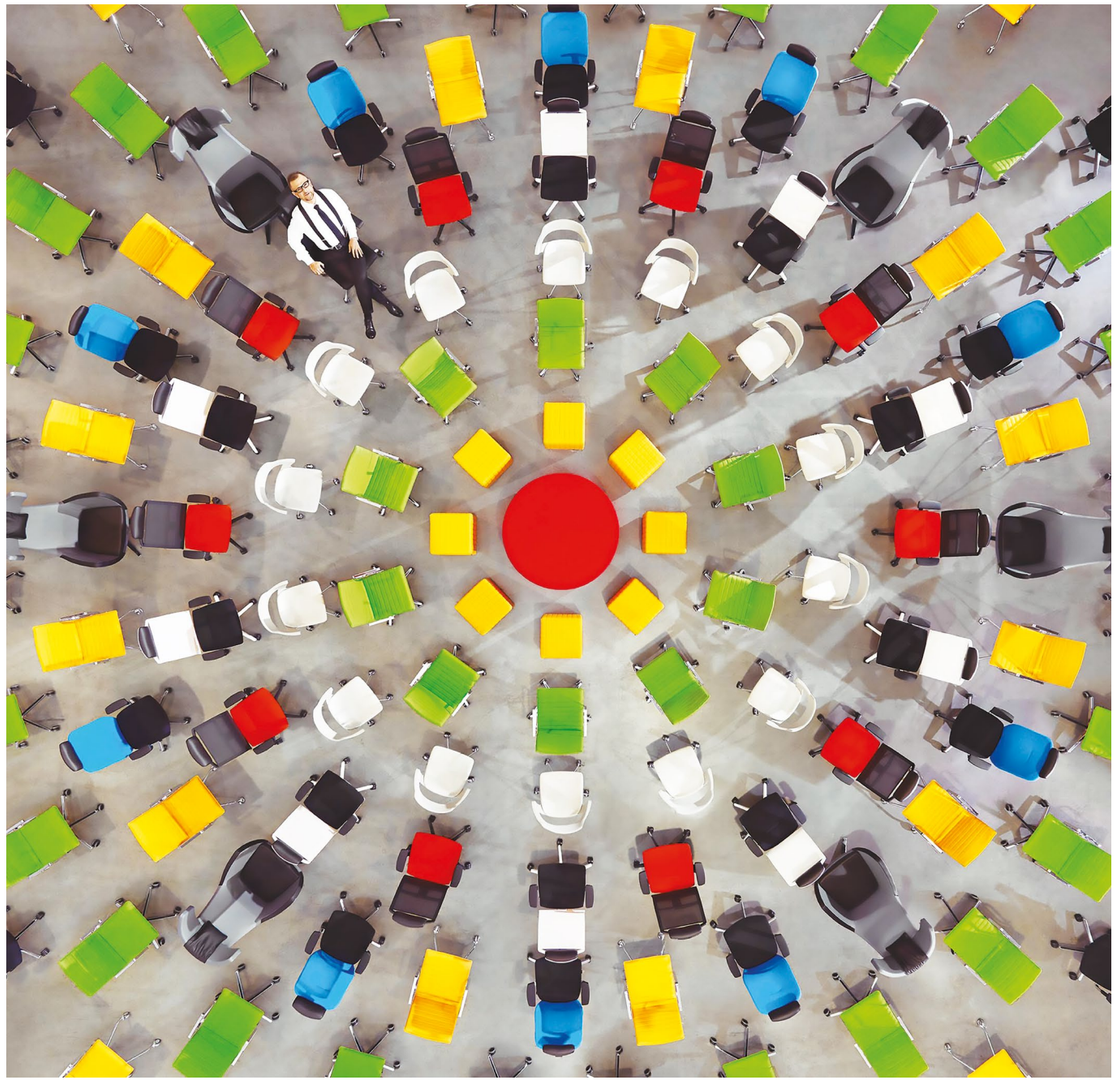
Our mission is to bring the relations between the human being and the space together and to bring about a harmonious relation between these two things. Nevertheless, we attach a great importance to capturing the beauty in everyday objects which establishes a kind of dialog between the pure form and the functionality.

30
years of experience

220
over employees

20 000
products monthly

10 000m^2
office and production space

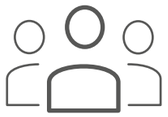


What is with **the acoustics** ?

Every day we think about, how to make the interior more pleasant for you, that's why a few years ago, as a Bejot company, **we took part in a research consortium on acoustic properties of materials** which eliminate noise in workplaces. This allowed us to get to know the issue of acoustics, create and improve products that **support the improvement of interior acoustics** not only in offices, but also in public spaces and HoReCa. With us, learn more about acoustics and solutions that will help us solve your acoustic problem.

Sound sources

20 dB [1]
200 µPa
whisper



60 dB [1]
20 000 µPa
office

80 dB [1]
200 000 µPa
busy street

120 dB [1]
20 000 000 µPa
jet aircraft

How noise affects us?

67%
Decrease in work accuracy[2].

>40%
Employees are not able to fully perform their work[2].

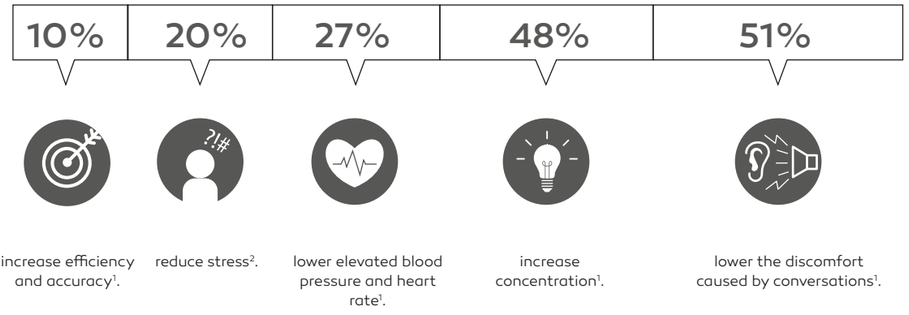
64%
Employees feel discomfort due to noise caused by calls and telephones[2].

30%
Decrease in employee productivity[2].

[1] FIS, *The guide to office acoustic*, ISBN 978-0-9565341-1-8,2015
[2] Evidence Space, *Improving employee productivity by reducing noise*, British Gypsum, Coventry, 2015

The sound **of silence**

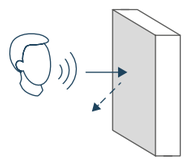
What good acoustics can change?



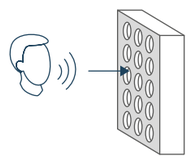
Costs of bad acoustics

The cost of a highly qualified employee on the employer's side	Decrease in productivity due to poor acoustic conditions	5 000 € x 30% ≈	1 500 € x 12 months ≈	20 employees x 18 000 € ≈
5 000 € / month	**30%**	**1 500 € loss / month**	**18 000 € loss / year**	**360 000 € loss / year**

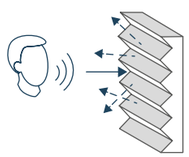
Basic acoustic phenomena



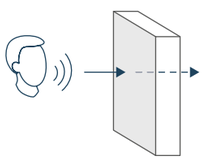
Reflection



Absorption



Diffusion



Penetration

[1] Evidence Space, *Improving employee productivity by reducing noise*, British Gypsum, Coventry, 2015
[2] Cowan, *The Effect of sound people*, Wiley, Chichester, 2016, 93–95

Choose **the best solution**

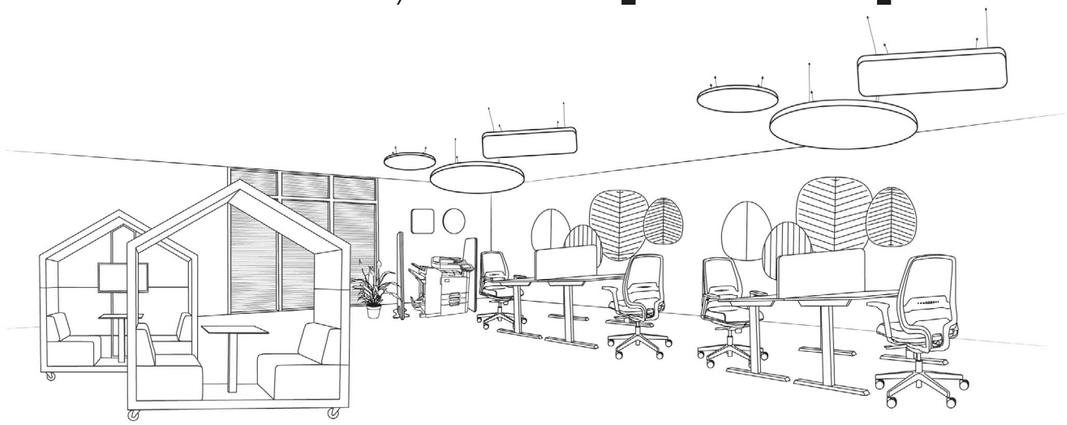
Classification of sound absorbing products – is based on the value of the sound absorption coefficient α_w according to EN ISO 11654. Materials and acoustic products are **classified in 5 classes** marked from A to E. **Class A means the highest sound-absorbing properties** and products for which α_w<0,15 are not classified as sound absorbing.

Sound absorption class	Weighted sound absorption coefficient α_w
A	0,90–1,00
B	0,80–0,85
C	0,60–0,75
D	0,30–0,55
E	0,15–0,25
Unrated	0,00–0,10

We carry out tests for the absorption efficiency of our products in the reverberation chamber in accordance with the standard PN-EN ISO 354: 2005 and the shielding efficiency in the anechoic chamber in accordance with the standard PN-ISO 10053: 2001.

Target	Solution	Proposed products
Reduction of excessive reverberation in the interior	Sound absorption	Alberi Wall, Acoustic Peak, RollWall, Selva Free, Selva Sky, Selva Tower, Selva Wall, Selva Hang, Silent Block, Social Swing VooVoo 9xx Cave, Treehouse, Beachhouse
Increased privacy at the workplace	Screening	Alberi Screen, Selva Free, Selva Desk, Quadra Phonebox, Quadra Sha, Quadra Standing Box, RollWall, VooVoo 9xx Cave, Treehouse Double, Treehouse Glass, Treehouse Stand, Beachhouse
Improving speech intelligibility	Sound absorption and screening	All Bejot acoustic products in the right configuration
Noise reduction	Sound absorption and screening	All Bejot acoustic products in the right configuration

Create your **quiet space**



Principles of acoustic adaptation of interiors:

1. It is important to take into account the purpose of the office and the nature of the work of people staying in it (phone conversations, conversations between employees, teamwork, the need of eye contact).
2. In rooms, it is the most effective to adapt the ceiling and two adjacent perpendicular walls (one of the parallel pairs).
3. Screening noise sources – the higher the screen, the greater its effectiveness. Screens at the workplace should be higher than a sitting man. The septate integrity is also important.
4. A closer location of acoustic products to the sound source will allow more sound to be absorbed.
5. The organization of the workplace can help you with improvement of the acoustic, for example, the separation of quiet areas, communication areas and teamwork areas.
6. Filling the space with soft elements helps to reduce the reverberation time – eg carpeting, upholstered furniture, open bookshelves.
7. Ensuring proper acoustics indoors and avoid design flaws requires choosing proper products and installing them in the right places – if necessary, ask an acoustician for advice.

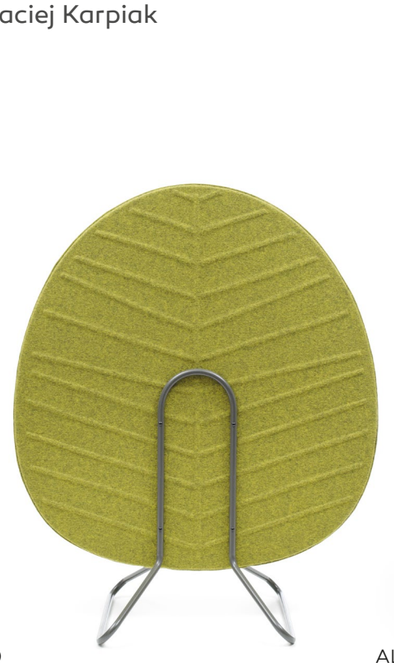
Would you like to improve acoustics of the interior under a watchful guidance of a professional?

Contact with us and use an assistance of our acoustician.

TREEHOUSE
TREEHOUSE DOUBLE
ALBERI FREE
MOMO 102 WHITE

ALBERI FREE

design: **Maciej Karpiak**

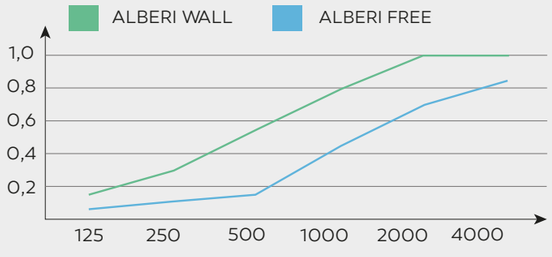


AL SC 1110

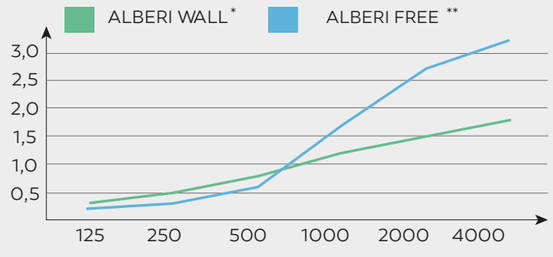
AL SC 1580

max 5

The sound absorption coefficient α_s relative to frequency [Hz] according to PN-EN ISO 354:2005



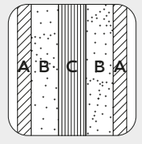
Equivalent acoustic surface area a single object A_{obj} [m²] relative to frequency [Hz] according to PN-EN ISO 354:2005



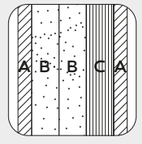
* averaged result for one object based on composition testing
** results for Alberi ALSC1580

	Weighted sound absorption coefficient α_w according to PN-EN ISO 11654:1999	Sound absorption class according to PN-EN ISO 11654:1999
Alberi Free	0,3 (H)	D
Alberi Wall	0,55 (MH)	D

ALBERI FREE



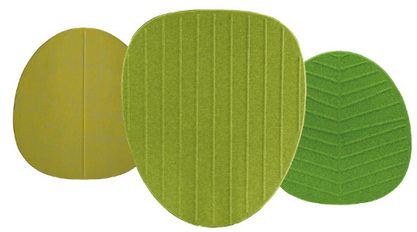
ALBERI WALL



A – decorative felt
B – non-woven fabric
C – hard core

ALBERI WALL

Four **seasons**



SPRING

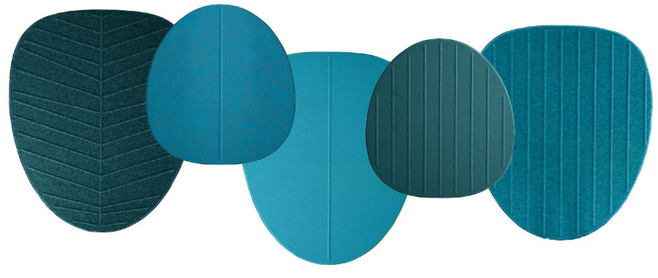
AL PSC 1110 W1 + AL PSC 1580 W2 + AL PSC 1110 W3

SUMMER

AL PSC 1580 W1 + AL PSC 1110 W2 + AL PSC 1580 W3

AUTUMN

AL PSC 1110 W2 + AL PSC 1580 W3 + AL PSC 1110 W1 + AL PSC 1580 W2 + AL PSC 1110 W3



WINTER

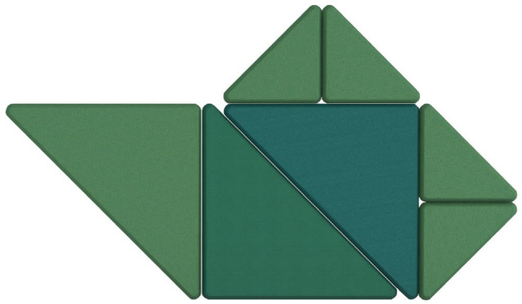
ALPSC 1580 W3 + ALPSC 1110 W1 + ALPSC 1580 W1 + ALPSC 1110 W2 + ALPSC 1580 W2

SILENT BLOCK

design: **Bejot Development Team**

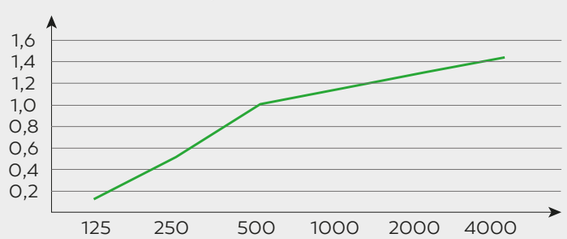
SBW S120 + S60 + S30

SBW H60



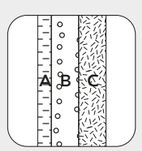
SBW T120 + T60

Estimated equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz] *



* results for SB SQ120

SILENT BLOCK



A – fabric
B – polyurethane foam
C – supporting structure

SILENT BLOCK
SKY 3D

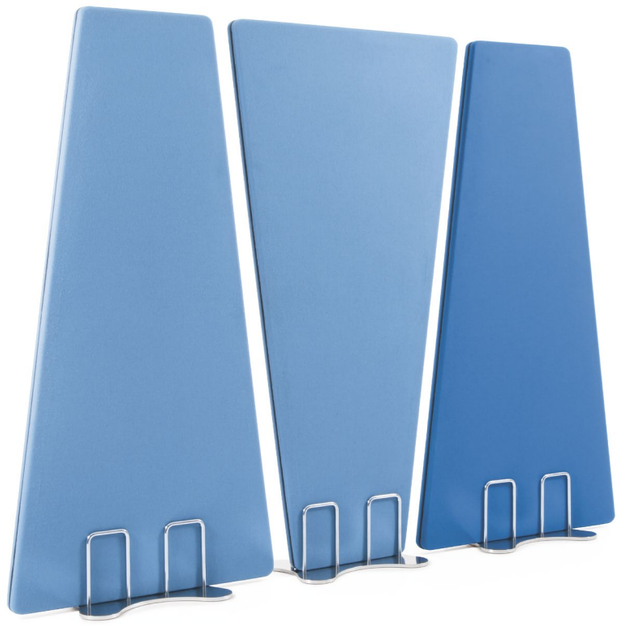
Sukces, jaki odnieśliśmy,
ma również ciemną stronę.
Nasi klienci mają bardzo
wysokie wymagania.

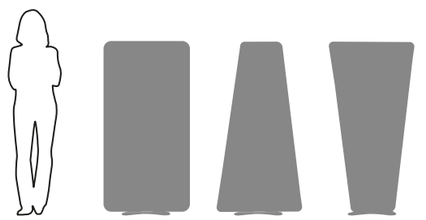
Bill Gates

SILENT BLOCK SKY 3D
OVIDIO

SELVA

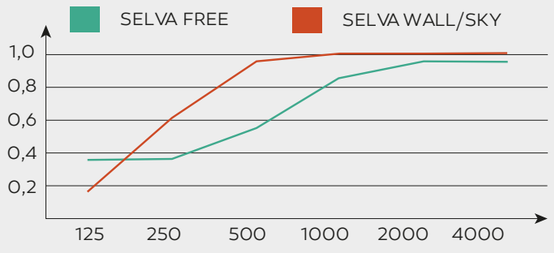
design: **Ronald Straubel**



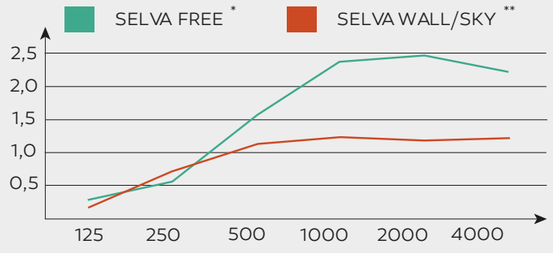


selva FREE

The sound absorption coefficient α_s relative to frequency [Hz] according to PN-EN ISO 354:2005



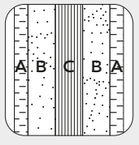
Equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz] according to PN-EN ISO 354:2005



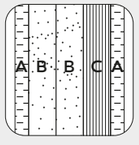
* results for screen 800x1600
** results for screen 1800x600

	Weighted sound absorption coefficient α_w according to PN-EN ISO 11654:1999	Sound absorption class according to PN-EN ISO 11654:1999	Weighted acoustic efficiency of screen according to PN-ISO 10053:2001 [dB]
Selva Free	0,55 (MH)	D	8
Selva Sky	0,9	A	-
Selva Wall	0,9	A	-

SELVA FREE

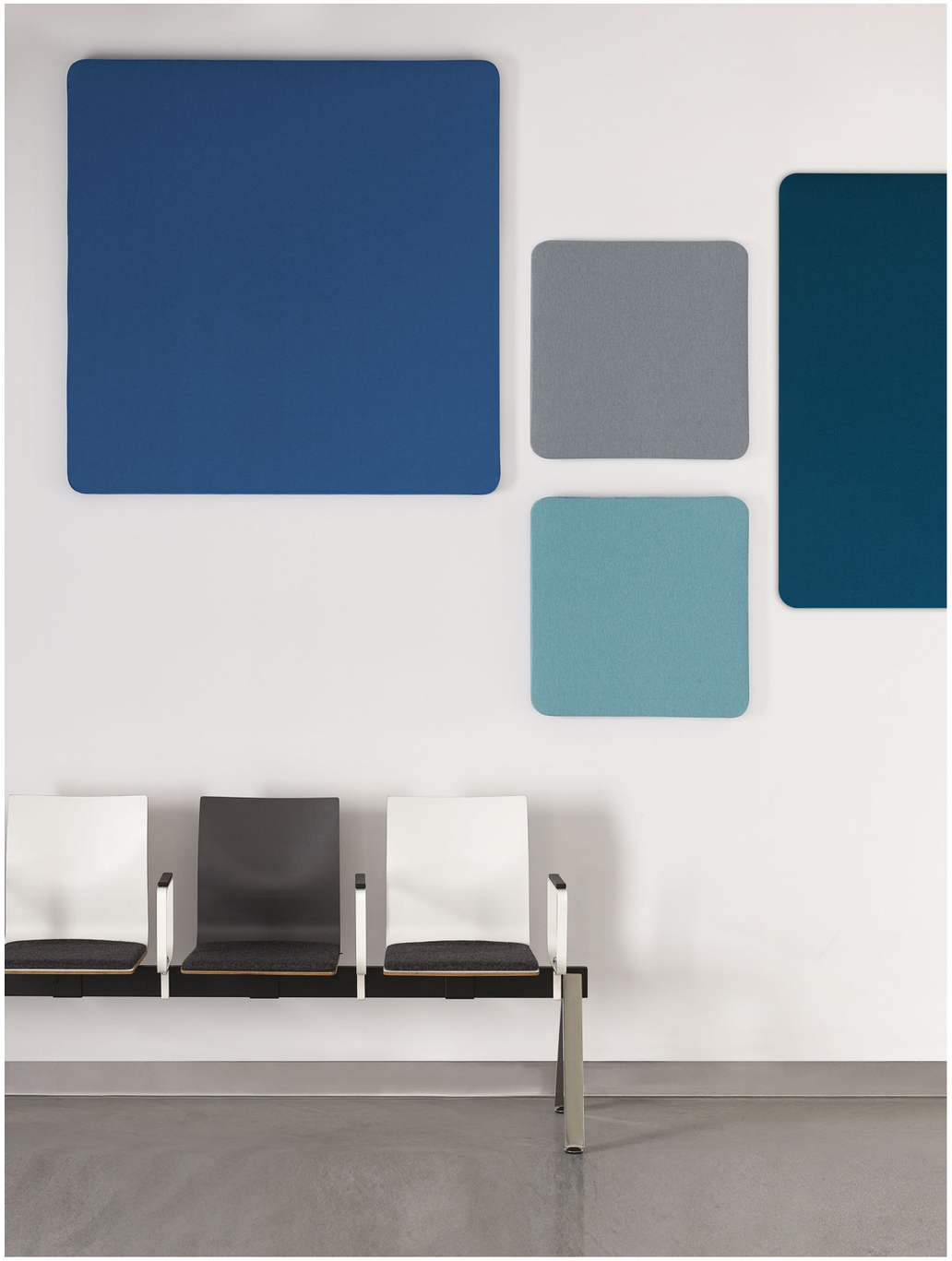


SELVA WALL/SKY

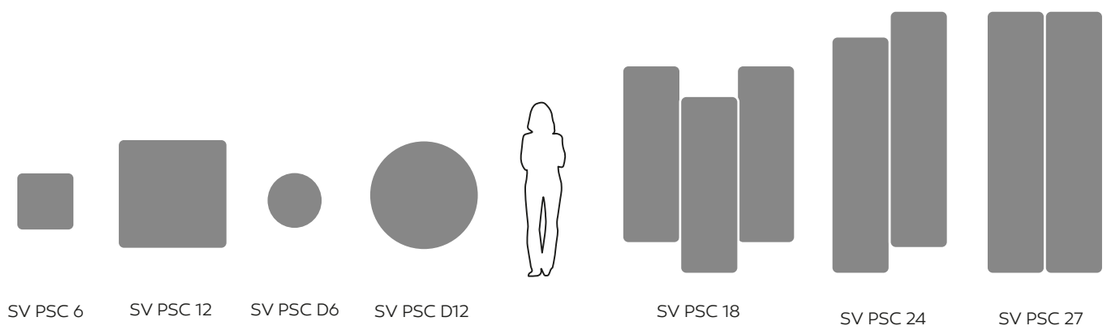


A – fabric
B – non-woven fabric
C – hard core

selva SKY



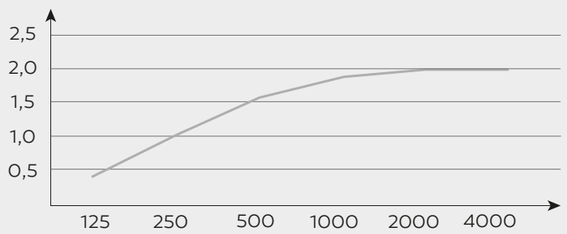
selva WALL



SELVA DESK

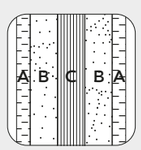
design: **Bejot Development Team**

Estimated equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz] *



* results for SV DK 16 H2

SELVA DESK

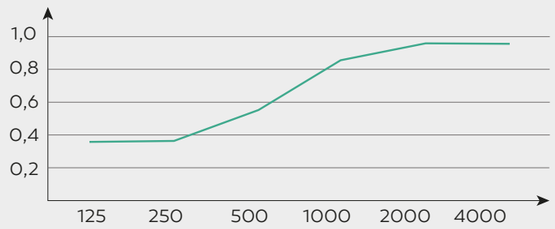


A – fabric
B – non-woven fabric
C – supporting structure

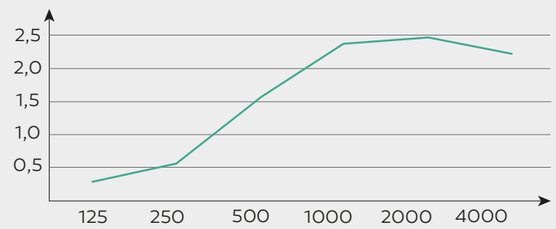
SELVA BOX

design: **Bejot Development Team**

The sound absorption coefficient α_s relative to frequency [Hz] according to PN-EN ISO 354:2005



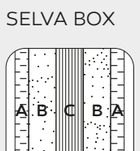
Equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz] according to PN-EN ISO 354:2005*



* results for screen 800x1600

	Weighted sound absorption coefficient α_w according to PN-EN ISO 11654:1999	Sound absorption class according to PN-EN ISO 11654:1999	Weighted acoustic efficiency of screen according to PN-ISO 10053:2001 [dB]
Selva Box	0,55 (MH)	D	8

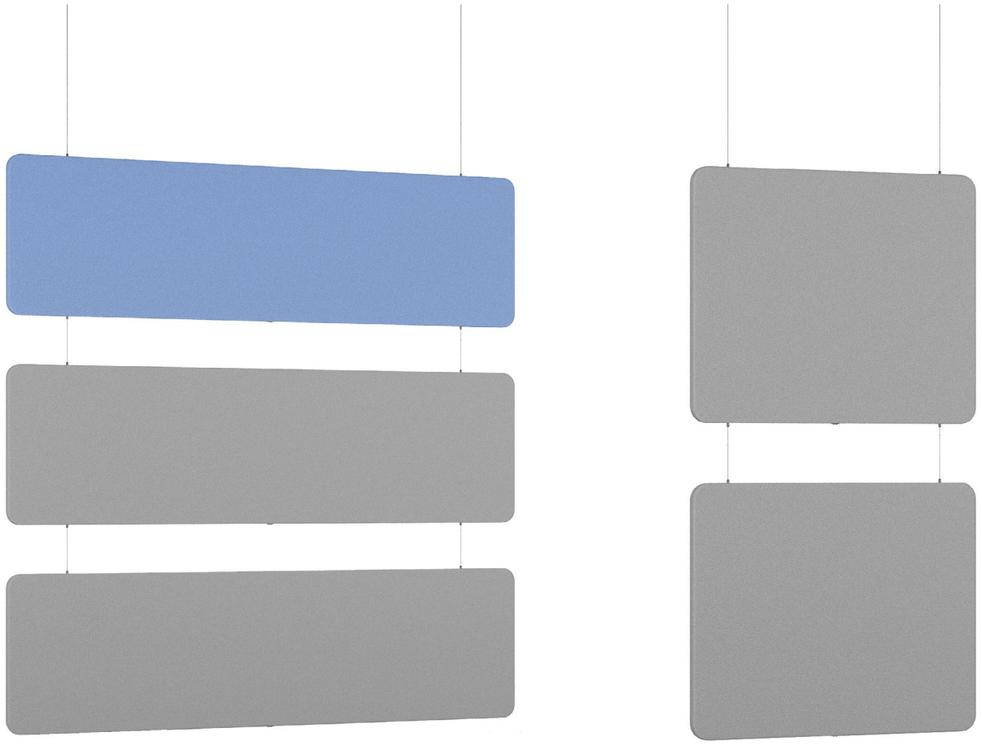
SELVA BOX



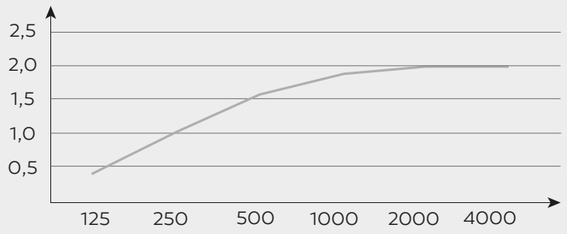
A – fabric
B – non-woven fabric
C – supporting structure

SELVA HANG

design: **Bejot Development Team**

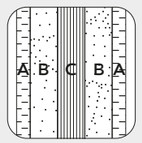


Estimated equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz] *



* results for SV HG 16 H2

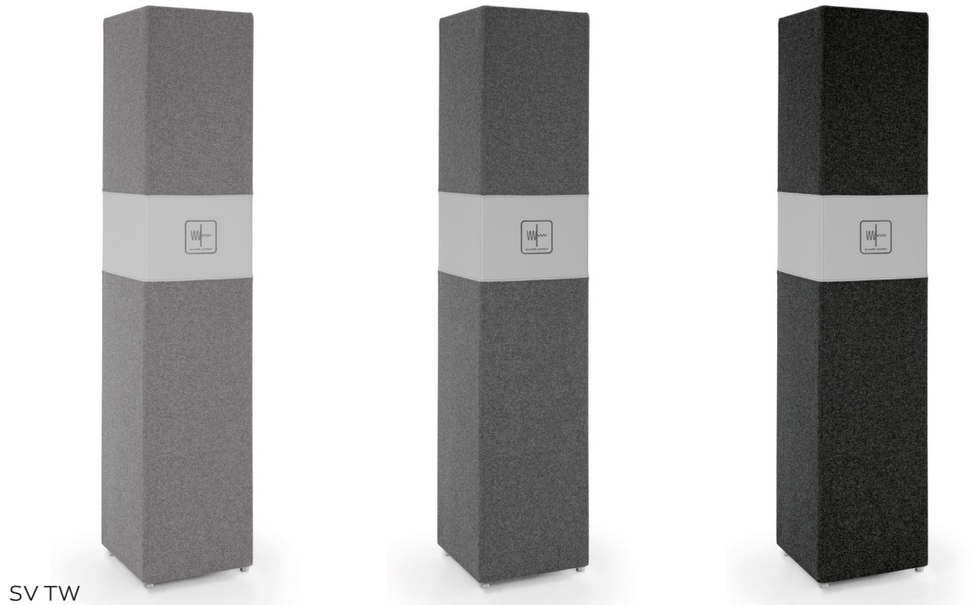
SELVA HANG



A – fabric
B – non-woven fabric
C – supporting structure

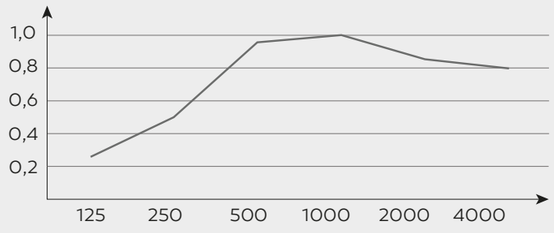
SELVA TOWER

design: **Bejot Development Team**

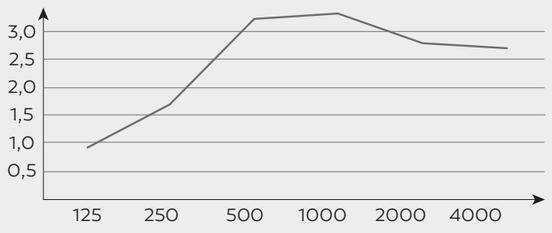


SV TW

The sound absorption coefficient α_s relative to frequency [Hz] according to PN-EN ISO 354:2005

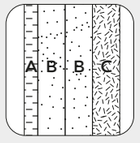


Equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz] according to PN-EN ISO 354:2005



	Weighted sound absorption coefficient α_w according to PN-EN ISO 11654:1999	Sound absorption class according to PN-EN ISO 11654:1999
Selva Tower	0,8	B

SELVA TOWER



A – fabric
B – non-woven fabric
C – supporting structure

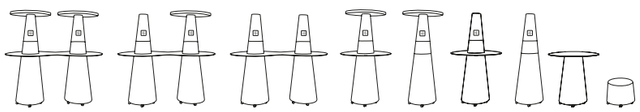
ACOUSTIC PEAK

design: **Bejot Development Team**

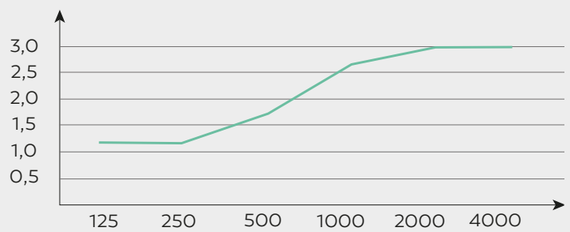
AP TW

AP TB

2xAP TW + 2xAP RF + AP C2T

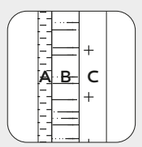


Estimated equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz] *



* results for AP TW + AP RF

ACOUSTIC PEAK



A – fabric
B – absorbent material
C – perforated construction

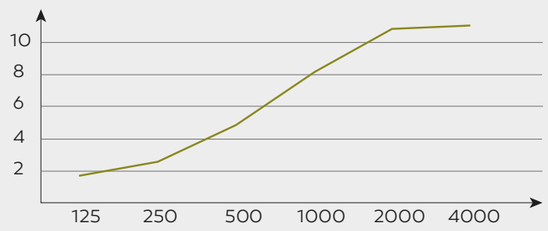
BEACHHOUSE

design: **Dymitr Malcew**

BH

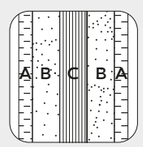
BH W

Estimated equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz] *



* results for the upholstered version

BEACHHOUSE



A – fabric
B – non-woven fabric
C – supporting structure
D – absorbent material

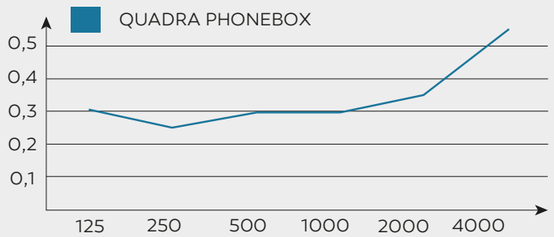
QUADRA SHA
QUADRA PHONEBOX

design: **Bejot Development Team**

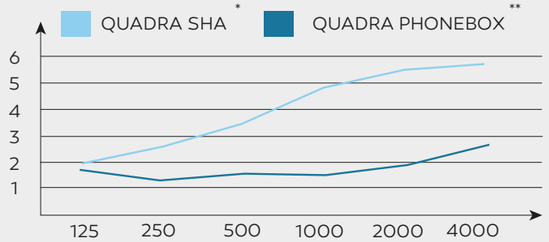
QD PB R

QD SHA R

The sound absorption coefficient α_s relative to frequency [Hz] according to PN-EN ISO 354:2005



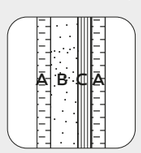
Equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz]



* estimated value
** according to PN-EN ISO 354:2005

	Weighted sound absorption coefficient α_w according to PN-EN ISO 11654:1999	Sound absorption class according to PN-EN ISO 11654:1999	Weighted acoustic efficiency of screen according to PN-ISO 10053:2001 [dB]
Quadra Phonebox	0,35 (H)	D	20

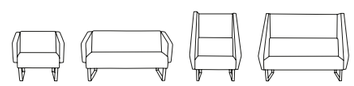
QUADRA PHONEBOX/ SHA



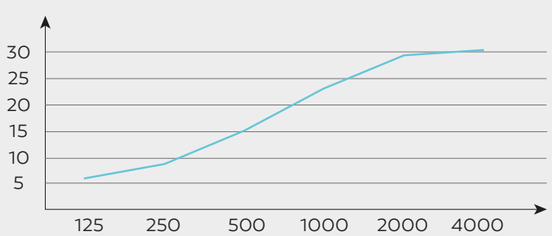
A – fabric
B – non-woven fabric
C – hard core

CAVE

design: **Dymitr Malcew**

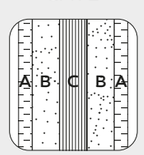


Estimated equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz] *



* results for layout 6xCV STR + 2xCV 60

CAVE



A – fabric
B – absorbent material
C – supporting structure
D – non-woven fabric

CAVE
LUMI WOOD
CUBE

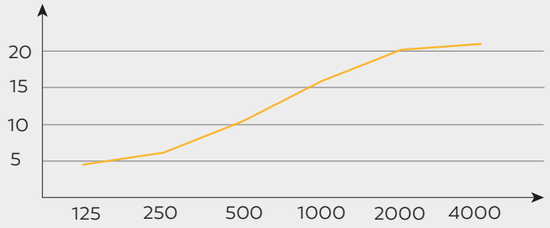
TREEHOUSE

design: **Dymitr Malcew**

TH

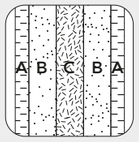
TH D

Estimated equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz] *



* results for upholstered version TH D with a wall

TREEHOUSE
(tapicerowany)



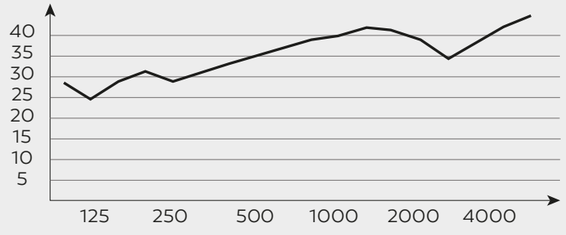
A – fabric
B – non-woven fabric
C – supporting structure

QUADRA STANDING BOX

design: **Bejot Development Team**

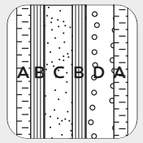
QD SBG

Acoustic insulation of the glass R [dB]
in relation to frequency [Hz]



	Acoustic insulation of the Rw glass according to ISO 10140-1 and classification ISO 717-1	Reverberation time inside the booth
Quadra standing box	38 dB	<0,2 s

QUADRA
STANDING BOX



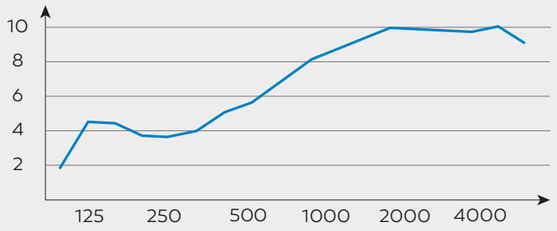
A – fabric
B – supporting structure
C – non-woven fabric
D – polyurethane foam

TREEHOUSE GLASS

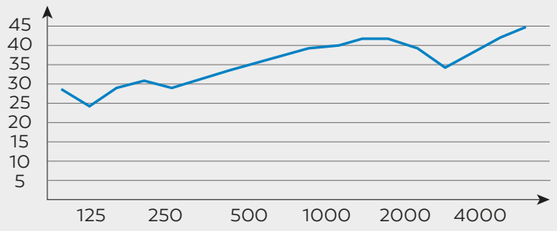
design: **Bejot Development Team**

THDG

Estimated equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz]

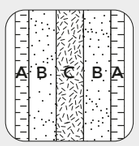


Acoustic insulation of the glass R [dB] in relation to frequency [Hz]



	Acoustic insulation of the Rw glass according to ISO 10140-1 and classification ISO 717-1	Reverberation time inside the booth
Treehouse glass	38 dB	<0,2 s

TREEHOUSE GLASS



A – fabric
B – non-woven fabric
C – supporting structure

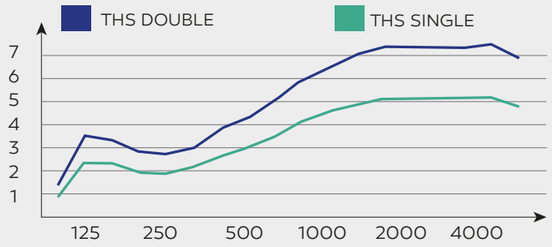
TREEHOUSE STAND GLASS

design: **Bejot Development Team**

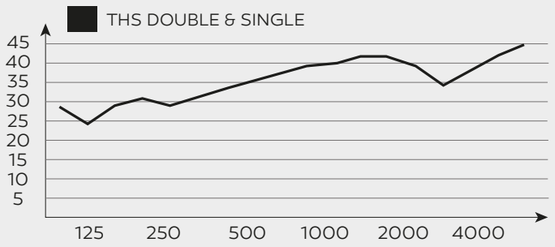
THS D1G

THS S2G

Estimated equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz]

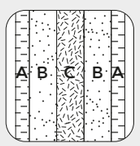


Acoustic insulation of the glass R [dB] in relation to frequency [Hz]



	Acoustic insulation of the Rw glass according to ISO 10140-1 and classification ISO 717-1	Reverberation time inside the booth
Treehouse stand glass	38 dB	<0,2 s

TREEHOUSE STAND GLASS

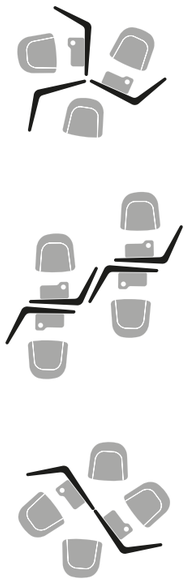


A – fabric
B – non-woven fabric
C – supporting structure

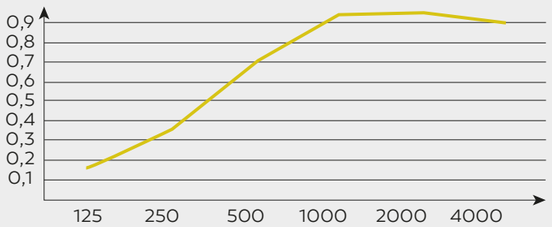
ROLLWALL

design: **Bejot Development Team**

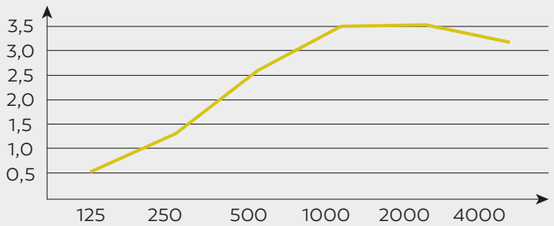
RW



The sound absorption coefficient α_s relative to frequency [Hz] according to PN-EN ISO 354:2005

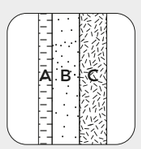


Equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz] according to PN-EN ISO 354:2005



	Weighted sound absorption coefficient α_w according to PN-EN ISO 11654:1999	Sound absorption class according to PN-EN ISO 11654:1999
Rollwall	0,65 (MH)	C

ROLLWALL

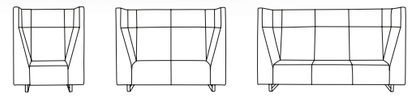


A – fabric
B – non-woven fabric
C – supporting structure

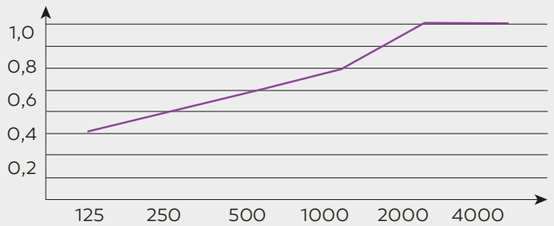
VOO VOO 9XX

design: **Bejot Development Team**

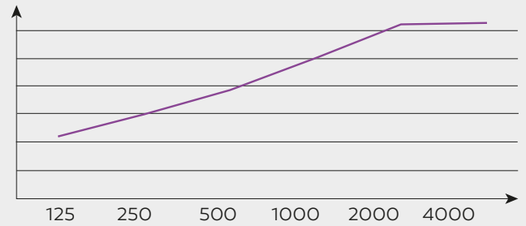
VV 922 BOX + TB



The sound absorption coefficient α_s relative to frequency [Hz] according to PN-EN ISO 354:2005



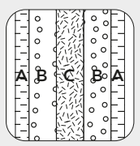
Equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz] according to PN-EN ISO 354:2005 *



* results for VV922

	Weighted sound absorption coefficient α_w according to PN-EN ISO 11654:1999	Sound absorption class according to PN-EN ISO 11654:1999	Weighted acoustic efficiency of screen according to PN-ISO 10053:2001 [dB]
VooVoo 9xx	0,6 (H)	C	7

VOO VOO 9xx



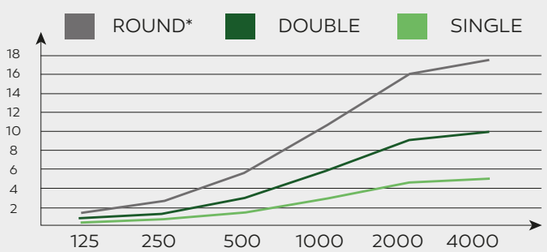
A – fabric
B – polyurethane foam
C – supporting structure

SOCIAL SWING

design: **Maciej Karpiak**

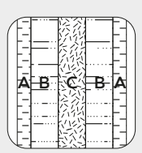
SINGLE

Estimated equivalent sound absorption area of the single object A_{obj} [m^2] relative to frequency [Hz]



* results for layout of four rocking chairs and one sofa

SOCIAL SWING



A – fabric
B – absorbent material
C – supporting structure

DOUBLE

ROUND

Collections with **acoustics elements**

PENTA

PN P600 | PN T600 | PN P1050 R/L | PN PO600 R/L | PN PO1050 R/L | PN PO600 R/L + 3x PN SC600 | PN PO1050 R/L + 2x PN SC600 + PN SC450

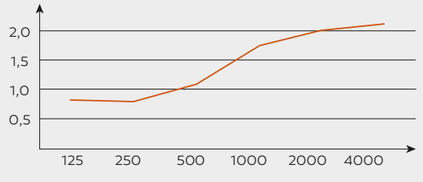
QUADRA

QD PO690 + 2x QD P1 | QD P690 + QD P1R/L | QD PO690 + QD P1L + 2x QD SC 690 | QD PO690 + 3x QD SC 690 | QD PO690 | QD PO690 + QD SC 690 2x QD SC 490 | QD C | QD C + 2x QD SC 690

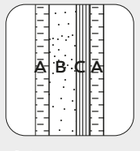
QD P1650 | QD PO1650 | QD PO1650 + QD SC 1650 + 2x QD SC 690

QUADRA/PENTA WALLS

Estimated equivalent sound absorption area of the single object A_{obj} [m²] relative to frequency [Hz] *



* results for QD SC1650



A – fabric
B – non-woven fabric
C – hard core

U_FLOE

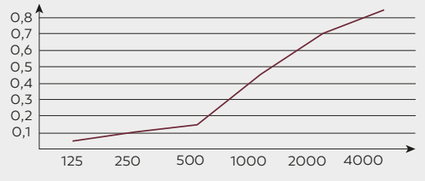
UFW100 | UFW2000 | UFW30000 | UFW101 | UFW2011 + UF SC D12 | UFW30111 + UF SC 12

UFW121 | UFW2211 + UF SC D12 | UFW32111 + UF SC 12

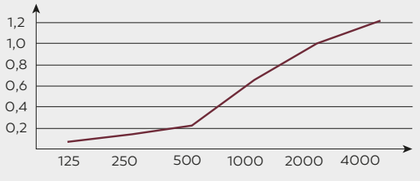
UFP2TM | UF BOX FS TB | UF BOX TB | STEP OVER TB L | STEP OVER F | ST H

U_FLOE WALLS

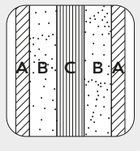
The sound absorption coefficient α_s relative to frequency [Hz] according to PN-EN ISO 354:2005



Estimated equivalent sound absorption area of the single object A_{obj} [m²] relative to frequency [Hz] *



* results for version 1200x1200



A – decorative felt
B – non-woven fabric
C – hard core

The colors presented do not constitute an offer within the meaning of the law. The manufacturer reserves the right to introduce changes in the design and parameters of products offered without changing their overall nature.

www.bejot.eu

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