filzfelt
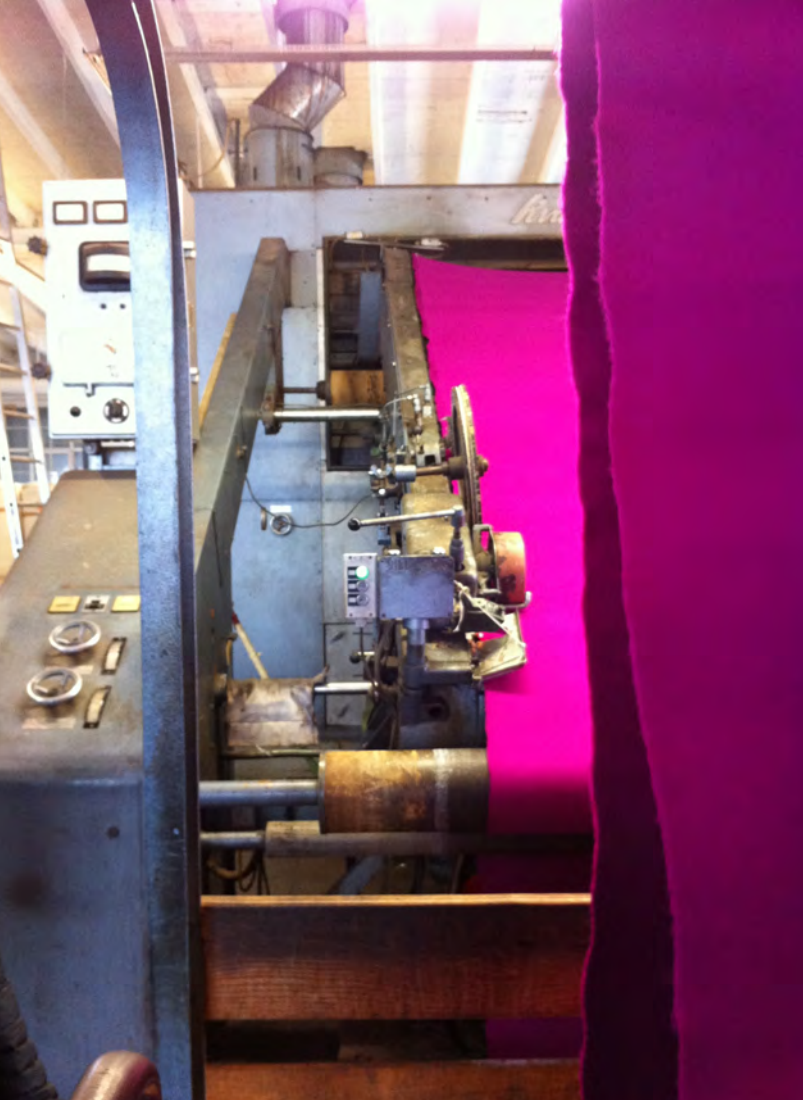
Ruckstuhl Acoustic Panel Collection

Contents

Make things as simple as
possible but no simpler.

- Albert Einstein

filzfelt° + RUCKSTUHL

About FilzFelt

We sell felt.

FilzFelt carries German-milled 100% Wool Design Felt and felt products that include acoustic products, drapery, floor coverings, hanging panels and wall panels plus provides full custom fabrication services.

Wool felt is one of the oldest man-made textiles. As felt is a non-woven fabric and does not require a loom for its production, ancient people were able to produce it quite easily. To produce felt, raw wool undergoes a wet "felting" process, which involves matting, condensing and pressing the fibers. Design Felt is high quality, eco-friendly (wool content!), comes in highly saturated colors, and is perfect for demanding design applications.

Go Sheep!

Sheep's wool is highly regarded for its crimped, elastic fibers that are easily felted to form a fabric that cannot be pulled apart. This translates into durability, excellent dye ability, resistance to flame and compression, and thermal and sound insulation. Plus, this natural fiber is a rapidly renewable resource (it grows back!) and is completely biodegradable.

filzfelt + RUCKSTUHL

About Ruckstuhl

Ruckstuhl is committed to the highest quality standards, an aesthetic approach to materials, and a rigorous adherence to ecological requirements. Based in Langenthal, Switzerland, the company has been in operation since 1881 and is in the fourth generation of family ownership. Ruckstuhl began manufacturing with the coco fiber, which was incredibly well suited to floor coverings. The company has since expanded its high quality carpet collections to other natural fibers including sisal, jute, cotton, paper yarn, linen, and new wool to horse and goat hair.

Ruckstuhl's focus on working exclusively with natural materials stems from the inherent durability, beauty that is retained over time, and authenticity of origin that inspires confidence with their customers. The exceptional quality and craftsmanship of Ruckstuhl products has established the company on an international scale for flooring textiles that effortlessly balance function and aesthetics. In addition, Ruckstuhl's collaborative approach enables them to work with world-renowned designers including Patricia Urquiola, Arik Levy, Matteo Thun, and Atelier Oï.

Floor coverings, while adding beauty and softness to hard surface spaces, also benefit the acoustic quality of residential and commercial interiors. Building from this and in response to the growing demand for acoustic consideration, the company expanded its offerings by introducing a line acoustic panels in 2007. This new collection enabled Ruckstuhl to meet the ever-increasing need for acoustic absorption in the open workplace. Designed in collaboration with Matteo Thun and Atelier Oï, these products continued Ruckstuhl's long-standing relationship with wool as a raw material and were a perfect compliment to their floor coverings.

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About Matteo Thun

Known as a co-founder of the Memphis Group founded in the 1980s, Italian architect and designer Matteo Thun set up his design practice in Milan in 1984 and served as Creative Director with Swatch in the early 1990s. Thun's holistic design approach focuses on considerations of aesthetics, economy, and technological sustainability. This mindset has allowed him to design at various scales, and his body of work includes large architectural projects include hotels, resorts, and mountainside villas in addition to smaller, functional product designs like lighting, woven rugs, and kitchen faucets. Thun and his office, Matteo Thun & Partners, have won numerous design awards and clients include Artemide, Illy, Radisson, Coca-Cola, and Hugo Boss.

About Atelier Oï

Swiss design house, Atelier Oï, was founded in 1991 by architects and designers Aurel Aebi, Armand Louis, and Patrick Reymond. A multidisciplinary firm, their portfolio includes retail and corporate interiors, product design, and scenography for clients including Swatch, B&B Italia, Hermes, Moroso, Louis Vuitton, and HSBC. Atelier Oï designs strive to dissolve barriers between genres and foster cross-disciplinary creativity. Using both common and uncommon materials in distinct ways has allowed Atelier Oï to develop a style of their own that is both geometrically derived yet retains a sense of humor and humanity.

About the Collection

The office landscape has changed. Collaboration is central to organizations success. While the shift to lower horizons, multiple work styles, open and light offices foster better interaction amongst workers, healthier environments, and more flexible work space, it also means more sound and distractions and less privacy. The demand for tranquility and comfort associated with modern design has made companies increase their focus on the need or sound absorption.

The FilzFelt + Ruckstuhl Acoustic Panel Collection includes wall-mounted, suspended, tabletop and freestanding panels that abate sound reverberation in two beautifully designed styles. Pannello, designed by Italian designer Matteo Thun, features 3mm Design Felt adhered to a wood fiber or foam core. Whereas Silento by Atelier Oï is a whimsical (but hard working) sound absorber inspired by an everyday school satchel.

FilzFelt has partnered with Ruckstuhl to make these designs available in 63 Wool Design Felt colorways with standard and custom sizes available.

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Pannello

The Pannello acoustic panels provide excellent sound absorption in a thoughtful package. These panels pack 2½ inches of wood fibers allowing maximum sound absorption up to an NRC of 0.95 but the tapered design by Italian designer, Matteo Thun, narrows to a thinner profile to effortlessly mask the thickness. And Pannello's functionality doesn't end there. Depending on the type, these panels can serve as projection screens, tackboards, or divide up space to create a comfortable, secluded atmosphere. Ideal for conference rooms, open office areas, and flexible work areas, these acoustic panels provide sound abatement and reduce sound reverberation time in a beautifully designed package.

Pannello Sospeso

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Pannello Murale

filzfelt° + RUCKSTUHL

Pannello Murale

Medium 30
2'-6" x 5'-0"

Large 36
3'-0" x 6'-0"

Medium 60
5'-0" x 2'-6"

Large 72
6'-0" x 3'-0"

Hung on the wall, Pannello Murale is space efficient and highly effective, as it absorbs sound on both sides and does triple duty as a sophisticated projection screen and tackable surface. This elegant panel is created with an aluminum frame that gracefully tapers to a thin profile, with a core of wood fibers for maximum acoustic absorption and an exterior covered in flush-mounted 100% Wool Design Felt. Available in four standard sizes and 63 colors of 3mm Wool Design Felt.

Pannello Murale

filzfelt + RUCKSTUHL

Specifications

Name	Pannello Murale
Designer	Matteo Thun for Ruckstuhl
Content	100% Wool Design Felt + Aluminum Frame + Wood Fiber Acoustic Core
Felt Thickness	3 mm (1/8 in)
Standard Sizes	Medium 30 2'-6" x 5'-0" Large 36 3'-0" x 6'-0" Medium 60 5'-0" x 2'-6" Large 72 6'-0" x 3'-0"
Panel Thickness	6.6 cm (2 1/2 in)
Components	Includes one panel with two sets of powder-coated steel wall mounts. (Wall screws not included.)
Maintenance	Vacuum occasionally to remove general air-borne debris. Should soiling occur, clean with a mild, water-free dry cleaning solvent.
Durability	Contract or residential
Acoustics	ASTM C 423: NRC – 0.95
Custom	Custom sizes available

Pannello Murale

filzfelt + RUCKSTUHL

Pannello Paravent

filzfelt' + RUCKSTUHL

| Medium Linking
1'-4" x 5'-3" | Large Linking
2'-6" x 5'-3" | Medium Right or Left
1'-4" x 5'-3" | Large Right or Left
2'-6" x 5'-3" |

Pannello Paravent beautifully answers the need for temporary privacy in an open space. This panel creates an informal division at a moments notice then can be folded flat to store with a minimal footprint. Designed for use as a movable room partition, each panel stands on two legs and can be minimized or enlarged at the user's discretion. Offered in three components, Left, Linking, and Right, and two standard widths, this screen is available in 63 colors of 3mm Wool Design Felt.

Pannello Paravent

filzfelt + RUCKSTUHL

Name	Pannello Paravent
Designer	Matteo Thun for Ruckstuhl
Content	100% Wool Design Felt + Aluminum Frame + Basotect Foam Core
Felt Thickness	3 mm (1/8 in)
Standard Sizes	Medium 1'-4" x 5'-3" Large 2'-6" x 5'-3"
Panel Thickness	2.7 cm (1 in)
Components	Left or Right Panel includes one panel with two legs + two hinges. Linking Panel includes one panel with two legs + four hinges.
Maintenance	Vacuum occasionally to remove general air-borne debris. Should soiling occur, clean with a mild, water-free dry cleaning solvent.
Durability	Contract or residential
Acoustics	ASTM C 423: NRC – 0.4
Custom	Custom sizes available

Pannello Paravent

filzfelt + *RUCKSTUHL*

Pannello Sospeso

filzfelt° + RUCKSTUHL

Pannello Sospeso

Medium
5'-0" x 2'-6"

Large
6'-0" x 3'-0"

This version of Pannello hangs freely in space, making it possible to divide a room up into zones without feeling boxed in. These screens decrease sound reverberation and provide visual privacy while maintaining an airy, open feeling. Pannello Sospeso's core of recycled wood fiber is acoustically augmented by the 100% Wool Design Felt covering. Available in two standard sizes and 63 colors of 3mm Wool Design Felt.

Pannello Sospeso

filzfelt® + RUCKSTUHL
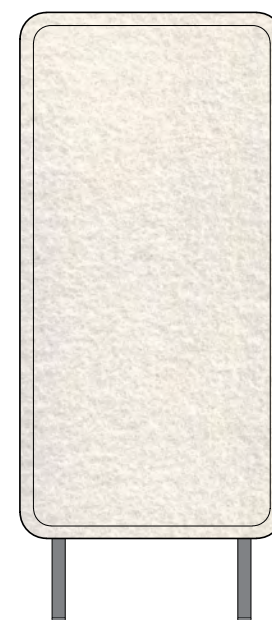
Name	Pannello Sospeso
Designer	Matteo Thun for Ruckstuhl
Content	100% Wool Design Felt + Aluminum Frame + Wood Fiber Acoustic Core
Felt Thickness	3 mm (1/8 in)
Standard Sizes	Medium 5'-0" x 2'-6" Large 6'-0" x 3'-0"
Panel Thickness	6.6 cm (2 1/2 in)
Components	Includes one panel + steel cable with four transition sleeves. (Ceiling screws are not included.)
Maintenance	Vacuum occasionally to remove general air-borne debris. Should soiling occur, clean with a mild, water-free dry cleaning solvent.
Durability	Contract or residential
Environmental	Oeko-Tex® Standard 100, sustainable, biodegradable, free of harmful substances, contributes to LEED® certification
Acoustics	ASTM C 423: NRC – 0.95
Custom	Custom sizes available

Pannello Sospeso

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Pannello Supporto

filzfelt + RUCKSTUHL

Pannello Supporto

Medium
2'-6" x 5'-0"

Large
3'-0" x 6'-0"

In this fast moving world, workspaces need to keep up with the changing needs of their users. The free standing version of Pannello can easily be moved from place to place allowing new configurations as needs change. In addition, this versatile screen can provide a soft projection or tackable surface making it a perfect addition to an informal meeting space. Available in two standards sizes and 63 colors of 3mm Wool Design Felt.

Pannello Supporto

filzfelt® + RUCKSTUHL
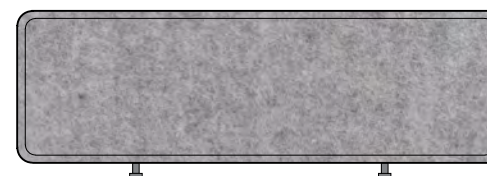
Name	Pannello Supporto
Designer	Matteo Thun for Ruckstuhl
Content	100% Wool Design Felt + Aluminum Frame + Wood Fiber Acoustic Core
Felt Thickness	3 mm (1/8 in)
Standard Sizes	Medium 2'-6" x 5'-0" Large 3'-0" x 5'-0"
Panel Thickness	6.6 cm (2 1/2 in)
Components	Includes one panel + two powder-coated steel feet
Maintenance	Vacuum occasionally to remove general air-borne debris. Should soiling occur, clean with a mild, water-free dry cleaning solvent.
Durability	Contract or residential
Environmental	Oeko-Tex® Standard 100, sustainable, biodegradable, free of harmful substances, contributes to LEED® certification
Acoustics	ASTM C 423: NRC – 0.95
Custom	Custom sizes available

Pannello Supporto

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Pannello Tavola

filzfelt° + RUCKSTUHL

Pannello Tavola

Medium 48
1'-3" x 4'-0"

Medium 60
1'-3" x 5'-0"

Large 48
1'-8" x 4'-0"

Large 60
1'-8" x 5'-0"

Pannello Tavola goes up as easily as it comes down. This thin profile, acoustic screen allows privacy (and quiet) at any work surface and installs quickly and easily with magnets. Want to relocate your Tavola? No problem! The magnets release with hot air and can be remounted with new adhesive circles. Available in four standard sizes and 63 colors of Wool Design Felt.

Pannello Tavola

filzfelt° + RUCKSTUHL

Name	Pannello Tavola
Designer	Matteo Thun for Ruckstuhl
Content	100% Wool Design Felt + Aluminum Frame + Basotect Foam Core
Felt Thickness	3 mm (1/8 in)
Standard Sizes	Medium 48 1'-3" x 4'-0" Medium 60 1'-3" x 5'-0" Large 48 1'-8" x 4'-0" Large 60 1'-8" x 5'-0"
Panel Thickness	2.7 cm (1 in)
Components	Includes one panel and two legs with magnet holders + two magnets for the table.
Maintenance	Vacuum occasionally to remove general air-borne debris. Should soiling occur, clean with a mild, water-free dry cleaning solvent.
Durability	Contract or residential
Environmental	Oeko-Tex® Standard 100, sustainable, biodegradable, free of harmful substances, contributes to LEED® certification
Acoustics	ASTM C 423: NRC – 0.4
Custom	Custom sizes available

Pannello Tavola

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Pannello Semplice

filzfelt® + RUCKSTUHL

Pannello Semplice

Pannello Semplice
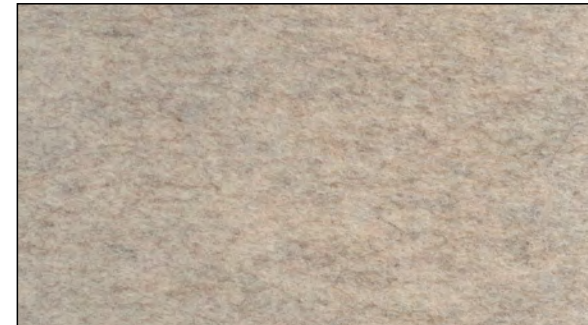
Medium
3'-4" x 6'-0"
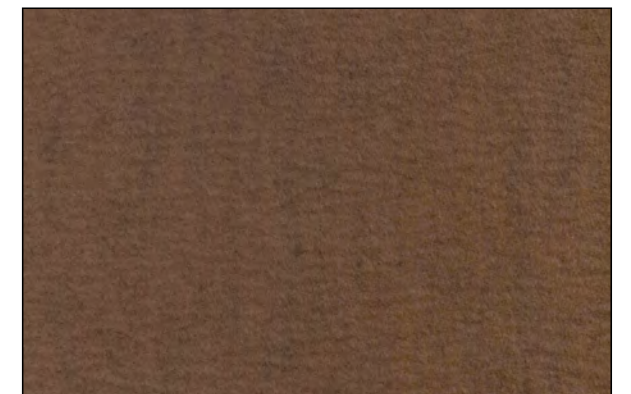
Large
4'-0" x 6'-0"

Murale's straight-laced cousin, Pannello Semplice is a
wall-mounted panel available in two standard sizes with
custom sizes available. The innovative aluminum frame
holds the acoustic material at an optimum 10 cm (4 in)
away from the wall, maximizing acoustic absorption. In
addition, this versatile panel system can go wall-to-wall,
wrap a 90-degree corner, or be mounted to a ceiling.
Like its Pannello counterparts, Semplice also provides a
sophisticated projection or tack surface. Available in two
standard sizes and 63 colors of 3mm Wool Design Felt.

filzfelt˙ + RUCKSTUHL

Name	Pannello Semplice
Designer	Matteo Thun for Ruckstuhl
Content	100% Wool Design Felt + Aluminum Frame + Wood Fiber Acoustic Core
Felt Thickness	3 mm (1/8 in)
Standard Sizes	Medium 6'-0" x 3'-4" Large 6'-0" x 4'-0"
Panel Thickness	6.6 cm (2 1/2 in)
Components	Includes one panel + powder-coated steel wall mounts. (Wall screws not included.) Pannello Semplice can be delivered as a finished product in a length of up to 19'-9". Longer Semplice panels are delivered in separate components and must be installed on site. Pannello Semplice can also be installed around a corner with a 90° angle.
Maintenance	Vacuum occasionally to remove general air-borne debris. Should soiling occur, clean with a mild, water-free dry cleaning solvent.
Durability	Contract or residential
Acoustics	ASTM C 423: NRC – 0.8
Custom	Custom sizes available

Pannello Semplice

filzfelt + RUCKSTUHL

Silento

Inspired by the design of the everyday school satchel, Swiss design house, Atelier Oï, developed Silento. This whimsical acoustic panel consists of two identical elements joined by nylon straps. These felt-wrapped recycled PET panels provide 100% sound absorption with the wall-mount version. Available in two sizes, the panels can be combined either vertically or horizontally, lending them to use in a wide variety of situations.

Silento Sospeso

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Silento Murale

filzfelt + RUCKSTUHL

Silento Murale

Medium
5'-0" x 2'-6"

Large
6'-0" x 3'-0"

In the wall-mounted variant, Silento attaches
to the wall with four mounts, either vertically or
horizontally, holding the panel an optimum 10 cm
away from the wall so that absorption can occur
on both sides. Available in two standard sizes,
63 colors of 3mm Wool Design Felt, and 17 nylon
strap colors.

filzfelt° + RUCKSTUHL

Silento Murale

Name	Silento Murale
Designer	Atelier Oï for Ruckstuhl
Content	100% Wool Design Felt + Recycled PET Acoustic Core + Nylon Straps
Felt Thickness	3 mm (1/8 in)
Standard Sizes	Medium 5'-0" x 2'-6" Large 6'-0" x 3'-0
Panel Thickness	55 mm (2 3/16 in)
Components	Includes one panel with two nylon straps and two sets of powder-coated steel wall mounts. (Wall screws not included.)
Maintenance	Vacuum occasionally to remove general air-borne debris. Should soiling occur, clean with a mild, water-free dry cleaning solvent.
Durability	Contract or residential
Environmental	Oeko-Tex® Standard 100, sustainable, biodegradable, free of harmful substances, contributes to LEED® certification
Acoustics	ASTM C 423: NRC – 1.0
Custom	Custom sizes available

Silento Sospeso

filzfelt° + RUCKSTUHL

Silento Sospeso

Medium
5'-0" x 2'-6"

Large
6'-0" x 3'-0"

This casual and playful panel provides a comfortable look while maximizing the acoustic absorption. Silento Sospeso is suspended from the ceiling with fine cables providing easy relocation and adjustable height. Available in two standard sizes, 63 colors of 3mm Design Felt, and 17 nylon strap colors.

Silento Sospeso

filzfelt® + RUCKSTUHL

Silento Sospeso

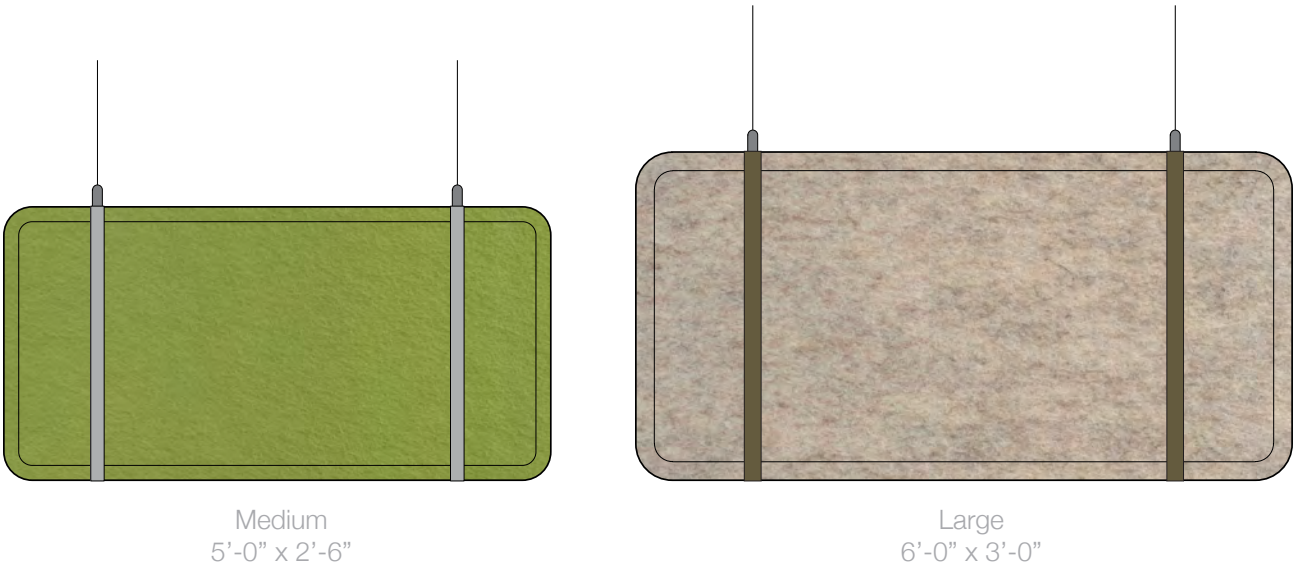|	
Name	Silento Sospeso
Designer	Atelier Oï
Content	100% Wool Design Felt + Recycled PET Acoustic Core + Nylon Straps
Felt Thickness	3 mm (1/8 in)
Standard Sizes	Medium 5'-0" x 2'-6"
	Large 6'-0" x 3'-0"
Panel Thickness	55 mm (2 3/16 in)
Components	Includes one panel with two nylon straps and suspension hardware. (Ceiling screws not included.)
Maintenance	Vacuum occasionally to remove general air-borne debris. Should soiling occur, clean with a mild, water-free dry cleaning solvent.
Durability	Contract or residential
Environmental	Oeko-Tex® Standard 100, sustainable, biodegradable, free of harmful substances, contributes to LEED® certification
Acoustics	ASTM C 423: NRC – 1.0
Custom	Custom sizes available

Work Environment

	Estimated number of panels required if... no other sound asorption is present		Estimated number of panels required if... carpeting is present		Estimated number of panels required if... carpeting and 1/3 of ceiling is sound absorbing	
	Pannello/Silento Murale	Pannello/Silento Sospeso	Pannello/Silento Murale	Pannello/Silento Sospeso	Pannello/Silento Murale	Pannello/Silento Sospeso
1,770 ft³	11	7	9	6	7	5
2,650 ft³	14	9	12	8	9	6
3,530 ft³	17	11	14	9	10	6
4,410 ft³	21	14	16	11	11	7
5,300 ft³	24	16	18	12	12	8
6,180 ft³	27	17	20	13	13	9
7,060 ft³	30	19	22	15	14	9
7,950 ft³	32	21	24	16	15	10
8,830 ft³	35	23	26	17	16	11
9,710 ft³	38	25	28	18	17	11
10,590 ft³	41	27	30	20	18	12
11,480 ft³	43	29	32	21	19	12
12,360 ft³	46	30	33	22	20	13
13,240 ft³	49	32	35	23	20	13
14,130 ft³	51	34	37	24	21	14

Lecture Hall

	Estimated number of panels required if... no other sound asorption is present		Estimated number of panels required if... carpeting is present		Estimated number of panels required if... carpeting and 1/3 of ceiling is sound absorbing	
	Pannello/Silento Murale	Pannello/Silento Sospeso	Pannello/Silento Murale	Pannello/Silento Sospeso	Pannello/Silento Murale	Pannello/Silento Sospeso
1,770 ft³	8	5	6	4	4	3
2,650 ft³	11	7	8	5	5	3
3,530 ft³	13	9	10	6	6	4
4,410 ft³	16	10	11	7	6	4
5,300 ft³	18	12	13	8	7	4
6,180 ft³	21	14	14	9	7	5
7,060 ft³	23	15	16	10	8	5
7,950 ft³	25	17	17	11	8	5
8,830 ft³	27	18	18	12	8	6
9,710 ft³	30	20	20	13	9	6
10,590 ft³	32	21	21	14	9	6
11,480 ft³	34	22	22	15	9	6
12,360 ft³	36	24	24	16	10	6
13,240 ft³	38	25	25	16	10	7
14,130 ft³	41	27	26	17	10	7

Rough Estimate Of Acoustic Panels
The following tables give a rough estimate on the number of sound absorbers (Pannello | Silento Murale and Supporto) required for rooms of different volume and usage. All calculations are based on test reports for the sound absorbers from February 2007 and July 2013. This information is provided as a guide however an acoustic consultant should be consulted to ensure proper room design. No responsibility shall be taken for the room acoustic design of the room under survey.

Assumptions for Estimates
Height of room: 2.7 m (8'-10")
Frequency range: 250 Hz to 2000 Hz
Carpet with sound absorption: α = 0.15
Ceiling with sound absorption: α = 0.55
No other absorption (curtains, furniture, etc.)

Please note that rooms with full acoustic ceiling might have problems that cannot be solved with Pannello | Silento acoustic panels. Rooms with acoustically disadvantageous shapes (circles, ellipses, parallel reflecting walls) may have deficits that require a sophisticated room acoustic design.

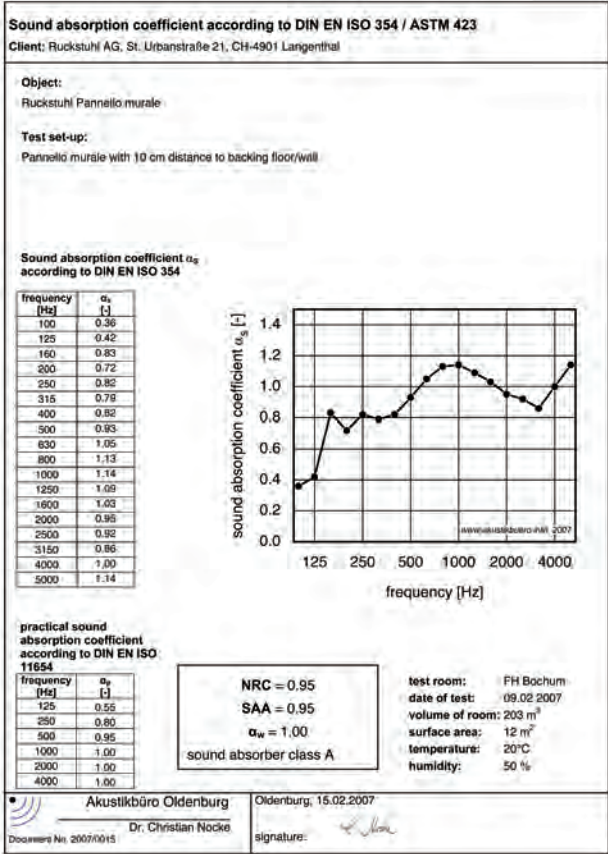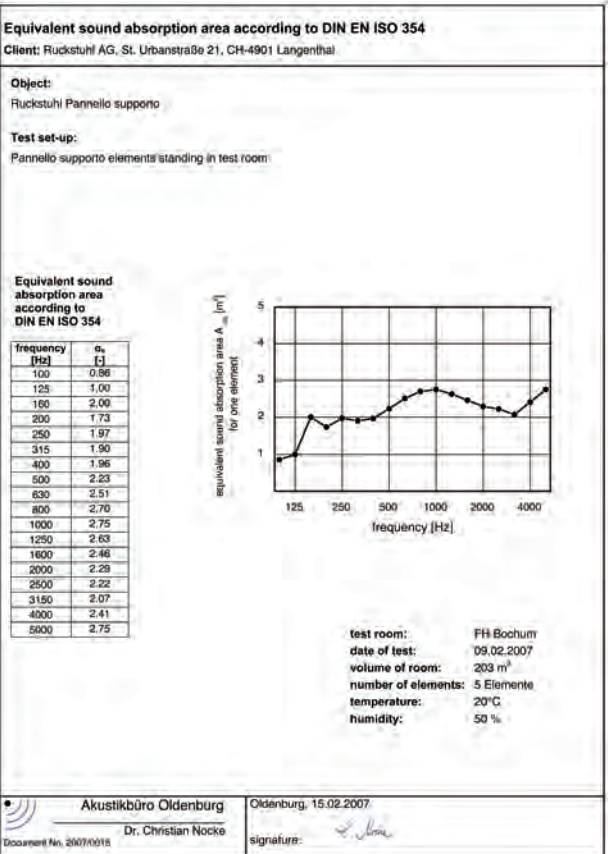filzfelt + RUCKSTUHL

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

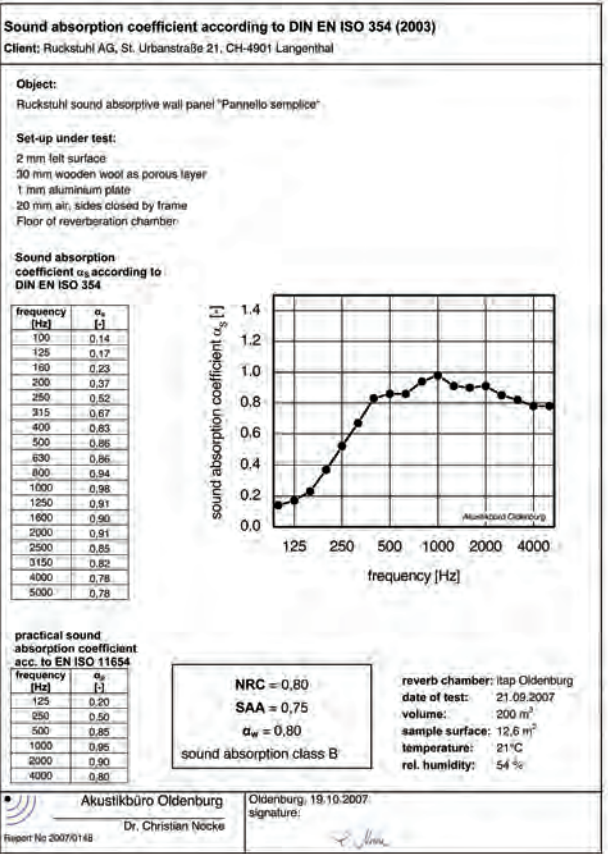**Test Reports Pannello**

For the Pannello Murale (Fig. 1) the test report quotes the frequency dependent sound absorption data as well as single number ratings.

For the Pannello Supporto (Fig. 2) the equivalent sound absorption area of one element is given according to ISO 354.

For Pannello Semplice, on the other hand, the sound absorption coefficient is listed together with the associated ratings (Fig. 3).
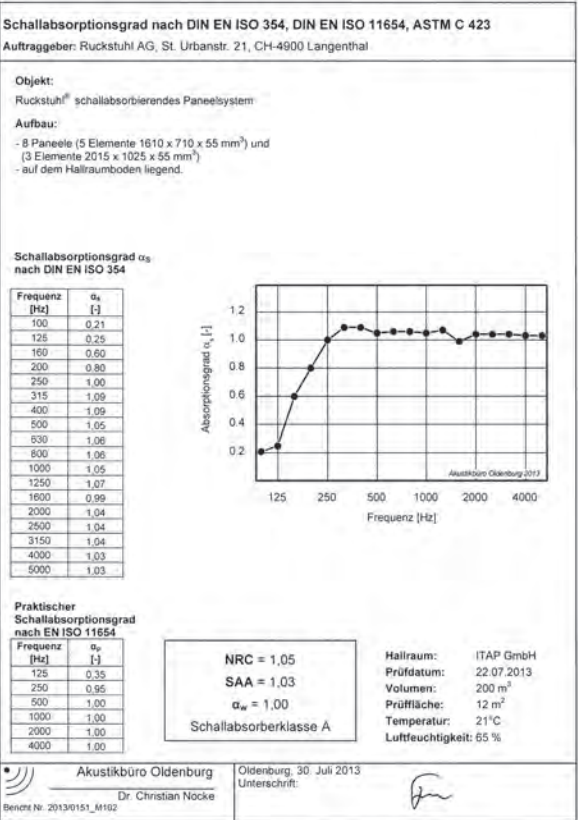
Test Reports Silento

For the Silento Murale (Fig. 4) the test report quotes the frequency dependent sound absorption data as well as single number ratings.

For the Silento Sospeso (Fig. 5) the equivalent sound absorption area of one element is given according to ISO 354.
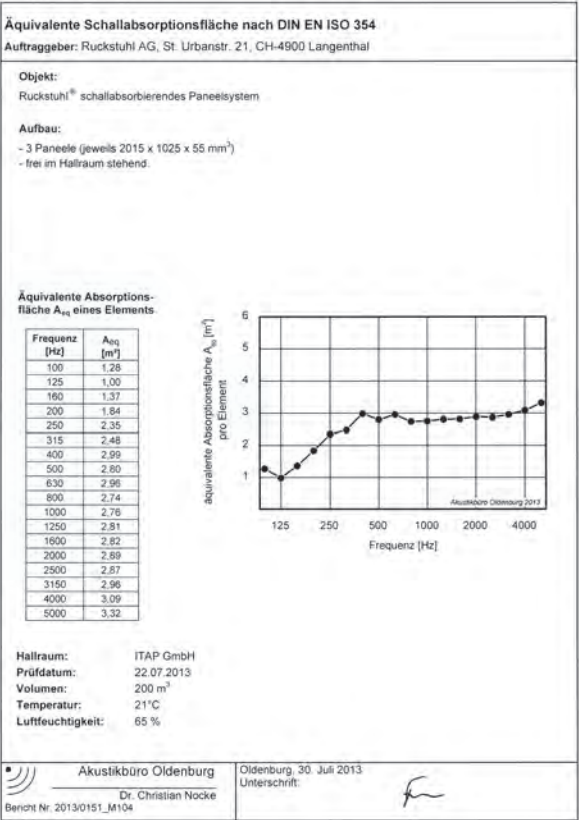
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Standard Felt Colors

100	102	105	110	116	124	125
131	136	150	151	156	160	170
173	175	179	180	200	201	203
209	220	231	242	250	255	265
269	272	274	282	284	286	300
308	312	319	331	343	377	378
384	385	408	415	423	425	426
437	448	467	476	497	503	534
540	548	613	626	686	713	732

Standard Strap Colors

01	02	03	04	05	06	07
08	09	10	11	12	13	14
15	16	17				

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