



80 year experience, proceeds on its way with **ISUS1932** which took its name from 1932 which is the foundation year of it...

www.perfopan.com

Profile





As a **TURKISH** company, **Perfopan** producing **"Acoustic Wood Panel"** for the first time in our country develops and designs 100% domestic-manufactured sound emission and sound isolation materials for the professional sound industry and renders service to the sector by manufacturing acoustic wall and ceiling panels, and acoustic sound isolation doors.

Since 1932, **Perfopan** has combined its wood production experiences with acoustic wood manufacturing within a self-developing, innovative approach in the sound sector and carries on its international studies with its experienced engineer and architect staff.

Our company catched up the technological innovation, produced its acoustic products by using the state-of-the-art technology and sensitive electronic machines, had its acoustic products subjected to resonance test in **AMERICAN** and **EUROPEAN** standards approved by **DANAK** at **DELTA Dansk Electronic, Lys& Acoustic** laboratories **(EN ISO 354 method)**, and obtained accredited certificates for isolation door tests **(EN ISO 140 – EN ISO 717 method)**.

In addition to our standard and special products within our product range, we perform the required tiling work before the manufacturing, provide comprehensive solutions for the needs, and apply the best performance to the most appropriate spaces.

The yearly production capacity of **Perfopan** is 200.000 m² for acoustic ceiling and wall panels and is 4500 pieces for sound isolation doors.

80 - YEAR EXPERIENCE

Being the trademark of **AKTAN MOBILYA** which was founded in 1932 and which is a family corporation, Perfopan carries on rendering wood service by sustaining the family tradition under the name of **ISUS1932** company...

History



Our main company AKTAN FURNITURE FACTORY (Aktan Mobilya) has been established by our grandfather Mehmet Ismet AKTAN three generations ago in 1932.

At that time, the joinery and wood works of the first train station of Ankara which was built by the German companies in Ulus, Ankara were performed and the first step was taken to the wood sector. Also, the wood works of various ministry buildings, the newly built T.B.M.M. Building, the Medical Faculty and the special hospital in Ankara were accomplished in those years.

Aktan Mobilya has selected manufacturing as the main sector within the 80-year time interval since 1932. Aktan Mobilya operating as a family corporation started acoustic wood panel production in 2005 for the first time with its young and dynamic engineer and architect staff as well as its business experience, manufacturing experience and tendering experience.

In 2006, M. Ergin Aktan gave the trademark **PERFOPAN** to Aktan Mobilya.

We would like to express our gratitudes to our dear father M. Ergin AKTAN.

Concept

We have carried on our business experience that we gained in our country and in various countries of the world and our solid structure that has occured within the years by adhering to our traditions descending from father to son for 80 years.

Our company performs the projects and productions which it took as concept and fulfills the obligations that it undertook by adopting the international customer satisfaction principle.

Our Missions Quality Security Comfortable Acoustics Unusual Designs Delivery from Manufacturing to Installation

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What is Space Acoustics?

An acoustics of a space may disrupt pleasant music or sound and make it wuthering, incomprehensible due to the irregular reflections.

While many things are expected from sound regulators, loudspeakers or any sound-related system, the result may be disappointment.

At this point, it is revealed that the main problem is the space acoustics.

It is the description of the materials that we produce to ensure the sound reaches to the audience in minimum reflection and maximum clarity with the accurate material selected.



ACOUSTIC WALL PANELS

Grooved Wall Panels Perforated Wall Panels Reflected Panels Acoustic Fabric Panels Elite Acoustic Series Micro Perforated Panels Installation Details



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DESCRIPTION

Grooved wall panels are the panels improved by Perfopan engineers to provide best sound emission in a decorative way. Acoustic wood panels have grooves in the front and have holes at the back.

USES

All multi-purpose halls, auditoriums, offices, meeting rooms, hotels, theatres, discos, cinemas, restaurants, public buildings, gymnasiums.

TECHNICAL PROPERTIES

Maximum panel dimension: 102.4cmx280cm, 140cmx340cm Ideal dimensions: 60cmx120cm, 67cmx139cm, 102.4cmx139cm Melamine Panel: 18mm thickness, weight 13.5kg/m² Wood Veneered Panel: 18mm thickness, weight 14kg/m² Consult with Perfopan technical office for wood grain direction of the panels.

FIREPROOF SPECIFICATIONS

A) 18mm melamine DIN 4102 – B2
B) 18mm wood veneered combustion delay polish applied – A1

ACOUSTIC EMISSION SPECIFICATIONS

We can produce different type of wall panels for different acoustic performances according to the projects.

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The groove distance is 3.2mm in front of the panel. The distance between each Groove is 13mm. There are 4000 holes/m² at the back of this model. The diameter of each hole is 10mm. **Perforation Ratio:** 13 %

Frequency Type: This model provides high acoustic absorption at medium frequency.



			1	6		1			1.00											
	FREQUE	NCY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
ŀ	SOUND	Gap of 20cm	35	50	53	60	71	76	82	90	82	82	67	73	74	73	73	78	81	82
	COEFFICIENT	Rock wool of 4,5cm	28	30	41	55	69	79	93	95	94	93	89	88	82	78	79	83	88	84

CODE NO. 3F 5A - PR 15 % - DS 4000



The groove distance is 3.2mm in front of the panel. The distance between each groove is 4.8mm. There are 4000 holes/m² at the back of this model. The diameter of each hole is 12mm.

Perforation Ratio: 15 % **Frequency Type:** This model provides high acoustic absorption at medium and high frequencies.



FREQUEN	ICY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
SOUND	Gap of 20cm	0.29	0.47	0.50	0.60	0.71	0.77	0.86	0.92	0.88	0.80	0.69	0.74	0.74	0.73	0.76	0.78	0.83	0.82
COEFFICIENT	Rock wool of 4,5cm	0.26	0.28	0.29	0.54	0.67	0.76	0.93	0.94	0.92	0.95	0.91	0.87	0.83	0.81	0.79	0.84	0.88	0.91

CODE NO. 3F 13A – PR 6% DS 2000



The groove distance is 3.2mm in front of the panel. The distance between each groove is 13mm. There are 2000 holes/m² at the back of this model. The diameter of each hole is 10mm. **Perforation Ratio:** 6 %

Frequency Type: This model provides high acoustic absorption at low and mid frequencies.



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FREQUEN	NCY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
SOUND	Gap of 20cm	0.28	0.46	0.45	0.51	0.60	0.61	0.66	0.69	0.63	0.62	0.52	0.55	0.53	0.53	0.52	0.52	0.56	0.60
COEFFICIENT	Rock wool of 4,5cm	0.31	0.37	0.45	0.56	0.63	0.68	0.72	0.75	0.74	0.68	0.65	0.61	0.54	0.51	0.49	0.53	0.56	0.61

CODE NO. 4F28A-PR-8% DS 2000



The groove distance is 4mm in front of the panel. The distance between each groove is 28mm. There are 2000 holes/m² at the back of this model. The diameter of each hole is 10mm.

Perforation Ratio: 8 %

Frequency Type: This model provides high acoustic absorption at low and mid frequencies.



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FREQUEN	ICY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
	Gap of 20cm	0.30	0.41	0.42	0.51	0.56	0.57	0.59	0.65	0.63	0.61	0.54	0.54	0.52	0.50	0.49	0.53	0.61	0.62
COEFFICIENT	Rock wool of 4,5cm	0.32	0.34	0.42	0.56	0.63	0.66	0.72	0.76	0.73	0.70	0.65	0.61	0.53	0.52	0.52	0.51	0.56	0.64

CODE NO. DK 32x32 PR 6% DS 1000



The diameter of each hole is 10mm. There are 1000 holes/m² at the back of the panel. The distance between the holes are 32mm. There are horizontal and vertical grooves at the back. Thicknesses are 3.2mm. These grooves intersect at the center of the holes.

Perforation Ratio: 6 %

Frequency Type: This model provides high acoustic absorption at high frequency.



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FREQUEN	NCY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
SOUND	Gap of 20cm	31	37	35	37	39	41	41	44	41	42	38	41	38	35	35	38	43	48
COEFFICIENT	Rock wool of 4,5cm	32	40	42	42	44	43	45	48	43	44	42	39	36	36	36	39	40	48

CODE NO. GBM PR % 7 DS 3000



In front of the panel, there are six grooves. The distance between each groove is 5mm and the saw thicknesses are 43mm. There are versatile 3000 holes/m² at the back. The diameter of each hole is 8mm.

Perforation Ratio: 7 %

Frequency Type: This model provides high acoustic absorption at high frequency.



FREQUEN	ICY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
SOUND	Gap of 20cm	0.37	0.42	0.48	0.58	0.71	0.78	0.82	0.67	0.71	0.79	0.75	0.44	0.61	0.51	0.54	0.51	0.55	0.56
COEFFICIENT	Rock wool of 4,5cm	0.14	0.28	0.45	0.49	0.69	0.85	1.10	1.07	0.9	0.72	0.81	0.53	0.61	0.48	0.52	0.49	0.46	0.43







The groove distance is 4 mm in front of the panel. The distance between each groove is 70mm. There are slot rooms at the back of the grooves. These slots are at the length of 70mm and the slot quantity is 270 piece/m². The perforation ratio varies according to the width of the grooves and the slot dimensions. **Perforation Ratio:** 12 %

Frequency Type: This model provides high acoustic absorption at low and mid frequencies.



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FREQUEN	ICY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
SOUND	Gap of 20cm	0.27	0.48	0.49	0.55	0.60	0.65	0.64	0.71	0.66	0.61	0.53	0.52	0.50	0.46	0.46	0.46	0.43	0.45
COEFFICIENT	Rock wool of 4,5cm	0.31	0.36	0.47	0.58	0.67	0.69	0.67	0.74	0.70	0.69	0.62	0.57	0.52	0.50	0.47	0.50	0.49	0.50





The groove distance is 2mm in front of the panel. The distance between each groove is 6 mm. There are 4000 holes/m² at the back of this model. The diameter of each hole is 8mm. **Perforation Ratio:** 10 %

Frequency Type: This model provides high acoustic absorption at low and mid frequencies.



Euro	NRC
В	0,91
В	0,86
	B



Mimar Sinan University Cinema Saloon in Istanbul Wall: Grooved Wall Panel & Acoustic Fabric Par Model: 2F 6A - PR % 10 DS4000

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The groove distance is 2mm in front of the panel. The distance between each groove is 14 mm. There are 4000 holes/m² at the back of this model. The diameter of each hole is 8mm.

Perforation Ratio: 8.5 %

Frequency Type: This model provides high acoustic absorption at low frequency.



αw	Euro	NRC
0,80 M	В	0,88
0,75 M	С	0,87

Ankara University Medical Faculty Morphology Conference Hall Wall: Grooved Wall Panel Model: 4F 28A

> Ceiling: Perforated Ceiling Tile Model: TD 32 x 32 x 8mmØ

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DESCRIPTION

Perforated wall panels are the panels improved by Perfopan engineers to provide best sound emission in a decorative way. Perforated panels have two types as full holed and stepwised. Full holed models are perforated as thick as the panels. Stepwised models are perforated from both sides and holes become double roomy panels.

USES

All multi-purpose halls, auditoriums, offices, meeting rooms, hotels, theatres, discos, cinemas, restaurants, public buildings, gymnasiums.

TECHNICAL PROPERTIES

Maximum panel dimension: 102.4cmx280cm, 140cmx340cm Ideal dimensions: 60cmx120cm, 67cmx139cm, 102.4cmx139cm Melamine Panel: 18mm thickness, weight 13.5kg/m² Wood Veneered Panel: 18mm thickness, weight 14kg/m² Consult with Perfopan technical office for wood grain direction of the panels.

FIREPROOF SPECIFICATIONS

A) 18mm melamine DIN 4102 – B2

B) 18mm wood veneered combustion delay polish applied – A1

ACOUSTIC EMISSION SPECIFICATIONS

We can produce different type of wall panels for different acoustic performances according to the projects.

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TD 16x16x8mm Ø PR %20-DS 4000



This panel is \emptyset 8mm full holed model. There are 4000 full holes/m² in this model. The distance between the holes is 16mm.

Frequency Type: This model provides high acoustic absorption at medium and high frequencies. **Perforation Ratios:** Ø 8mm Perforation 20% Ø 6mm Perforation 11.5% Ø 5mm Perforation 8% Ø 4mm Perforation 5% Ø 3mm Perforation 3%





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FREQUEN	ICY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
	Gap of 20cm	0.30	0.47	0.49	0.59	0.71	0.75	0.85	0.92	0.85	0.78	0.68	0.69	0.70	0.71	0.73	0.77	0.80	0.82
COEFFICIENT	Rock wool of 4,5cm	0.26	0.29	0.44	0.56	0.70	0.77	0.95	0.95	0.95	0.93	0.91	0.87	0.82	0.79	0.77	0.81	0.87	0.89

TD 32X32x8mm Ø PR %5-DS 1000



This panel is \emptyset 8mm full holed model. There are 1000 full holes/m² in this model. The distance between the holes is 32mm.

Frequency Type: This model provides high acoustic absorption at medium and low frequencies. **Perforation Ratio:** Ø 6mm perforation 5%



FREQUEN	ICY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
	Gap of 20cm	0.31	0.37	0.36	0.36	0.39	0.40	0.44	0.44	0.40	0.38	0.35	0.35	0.32	0.31	0.29	0.34	0.39	0.41
COEFFICIENT	Rock wool of 4,5cm	0.35	0.38	0.38	0.42	0.43	0.46	0.46	0.50	0.45	0.44	0.39	0.35	0.33	0.31	0.30	0.31	0.37	0.41



TD 16x16x6mm Ø PR %23-DS 8000

Soundlex

This panel is \emptyset 6mm full holed model. There are 8000 full holes/m² perforated as crossed in this model. The distance between the holes is 16mm.

Frequency Type: This model provides high acoustic absorption at high frequency. **Perforation Ratio:** Ø 6mm perforation 23%





										Sec. 1										
	FREQUEN	NCY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
۰.		Gap of 20cm	27	38	46	58	73	75	94	98	92	85	73	80	86	85	87	90	91	89
	COEFFICIENT	Rock wool of 4,5cm	21	26	35	53	68	81	99	1.02	1.00	1.08	1.04	1.04	1.03	1.02	1.02	1.07	1.09	1.05

TD 32x32x8mm Ø PR %10-DS 2000



This panel is Ø 8mm full holed model. There are 2000 full holes/m² perforated as crossed in this model. The distance between the holes is 32mm.

Frequency Type: This model provides high acoustic absorption at medium and low frequency. **Perforation Ratio:** Ø 8mm perforation 10%



	FREQUEN	NCY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
		Gap of 20cm	30	45	47	49	54	60	64	65	61	59	54	54	51	49	51	51	58	61
•	COEFFICIENT	Rock wool of 4,5cm	31	36	45	56	60	67	69	72	64	67	60	58	53	51	52	51	56	62





This panel is Ø 2mm full holed model. There are 16000 full holes/m² in this model. The distance between the holes is 8mm. **Frequency Type:** This model provides high acoustic absorption at medium frequency.

Perforation Ratios: Ø 1mm Perforation 2% Ø 2mm Perforation 5% Ø 3mm Perforation 12%



1.0 0.8 0.6 0.4 0.2 0.0 125 250 500 1000 2000 4000 Hz Total thickness up to the wall (including air space) to be 20 cm Total thickness up to the wall to be 4.5 cm

			1.19	10/36	1.	• •	0.14	245.73		• •	100									
	FREQUEN	ICY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
	SOUND	Gap of 20cm	0.29	0.45	0.51	0.54	0.57	0.56	0.58	0.56	0.48	0.46	0.39	0.39	0.37	0.34	0.35	0.36	0.36	0.36
•	COEFFICIENT	Rock wool of 4,5cm	0.34	0.42	0.48	0.59	0.66	0.67	0.66	0.62	0.55	0.50	0.42	0.38	0.34	0.33	0.33	0.32	0.33	0.37



This model is perforated from both sides. Front perforation of the panel is Ø 5mm. The distance between the holes is 16mm. Back perforation of the panel is Ø 10mm. There are 4000 holes/m² perforated as stepwised in this model. **Frequency Type:** This model provides high acoustic

Perforation Ratio: Ø 5mm perforation 8%



 ^{⊢ − − ⊣} Total thickness up to the wall (including air space) to be 20 cm
⊢ Total thickness up to the wall to be 4.5 cm

	FREQUEN	ICY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
	SOUND	Gap of 20cm	32	42	59	68	77	81	77	67	50	43	41	39	34	28	23	19	14	11
•	COEFFICIENT	Rock wool of 4,5cm	20	24	36	55	78	92	1.06	95	77	58	47	38	31	24	21	16	13	13



KD 32x32 6mm Ø PR %3-DS 1000



This model is perforated from both sides. Front perforation of the panel is Ø 6mm. The distance between the holes is 32mm. Back perforation of the panel is Ø 12mm. There are 1000 holes/m² perforated as stepwised in this model. **Frequency Type:** This model provides high acoustic absorption at low frequency.

Perforation Ratio: Ø 6mm perforation 3%



				-		1			1.11											
	FREQUE	NCY(HZ)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
	SOUND	Gap of 20cm	31	37	35	37	39	41	41	44	41	42	38	41	38	35	35	38	43	48
• •	COEFFICIENT	Rock wool of 4,5cm	32	40	42	42	44	43	45	48	43	44	42	39	36	36	36	39	40	48





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ACOUSTIC WALL PANELS Reflected Panels



DESCRIPTION

The reflected panels produced in order to direct the required sounds and to reinforce by diffusing the ways of the sound in volume. In the reflected panels, the process is applied only on the front surface. The reflected models are divided into two groups as grooved and perforated. The panels do not absorb the sound as there is no hole at the back of the panels. The panels absorb some amount of the sound and ensure that the sound is reflected with quality to the accurate direction.



ACOUSTIC WALL PANELS Reflected Panels





ACOUSTIC WALL PANELS Acoustic Fabric Panels





DESCRIPTION

ACOUSTIC FABRIC: The acoustic fabrics used in front of the panels are woven from the materials resistant to corrosion, discoloration and fire. According to the request, we can cover any color you prefer. For model and color options, consult with Perfopan technical office. In the acoustic fabric panels, internationally certified fabrics are used.



COUSTIC WALL PAN

Acoustic Fabric Panels

COLOR SCALE

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ACOUSTIC WALL PANELS Micro-Perforated Panels



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Micro perforated wall panels are the most decorative and high level standard models of our product range. There are two types of micro perforated panels as full holed and stepwised. Full holed models are perforated as thick as the panel. Stepwised models are perforated from both sides and the holes become double roomy panels. Micro perforated hole diameters are \emptyset 1mm, \emptyset 2mm and \emptyset 3mm.

USES

All multi-purpose halls, auditoriums, offices, meeting rooms, hotels, theatres, discos, cinemas, restaurants, public buildings, gymnasiums.

TECHNIC

Maximum panel dimension: 102.4cmx280cm, 140cmx340cm Ideal dimensions: 60cmx120cm, 67cmx139cm, 102.4cmx139cm Melamine Panel: 18mm thickness, weight 13.5kg/m² Wood Veneered Panel: 18mm thickness, weight 14kg/m² Consult with Perfopan technical office for wood grain direction of the panels.

FIREPROOF SP

- A) 18mm melamine DIN 4102 B2
- B) 18mm wood veneered combustion delay polish applied A1

ACOUSTIC EMISSION SPECIFICATIONS

We can produce different type of wall panels for different acoustic performances according to the projects.

ACOUSTIC WALL PANELS Elite Acoustic Series



DESCRIPTION

Elite series is the models developed by Perforan engineers and these models are produced for uncommon performances and appearance.

USES

Restaurants, special meeting rooms, Home-Cinema rooms, offices, special concert halls.

TECHNICAL PROPERTIES

Models have different modifications. Please contact with Perfopan technical office for the dimensions of the products.





Special Designed Models



COUSTIC WA

- A 18mm perforated acoustic panel
- B Omega profile OMG-1 (Vertical)
- C Omega profile OMG-2
- D Hidden wood panel corner fixing profile KP-1
- E Wood corner joint profile
- F Rockwool holder mounting rosette
- G Rockwool
- H Wood frame

YPES USED FOR PLANE PANEL INSTALLATION PROFILE



- **1** OMG-1 profile, used for vertical panel installation.
- 2 KP-1 profile, used for bottom panel fixation.
- **3** AL-1 profile, is an aluminium profile which is seen in outside as a stripe, used in vertical panel installation.
- 4 IBP profile, used for concave corner

STIC WALL PANELS Installation Details

CORNER JOINT PROFILE TYPES



JOINT DETAILS



- 9 Shaft cover, hinge detail for cabinet covers.
- **10** Floor detail-1, skirting detail which is the continuation of the panel.
- **11** Floor detail-2, skirting detail covering the top of the panel.
- **12** Floor detail-3, skirting detail getting under the bottom of the panel.



Main Entrance Special Ceiling Application



Perforated Ceiling Tiles Slotted Ceiling Tiles Plaque Ceiling Panels Curved Ceiling Panels Installation Details

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ACOUSTIC CEILING PANELS Perforated Ceiling Tiles











DESCRIPTION

Perforated ceiling panels are the panels improved by Perfopan engineers to provide best sound emission in a decorative way.

USES

All multi-purpose halls, auditoriums, offices, meeting rooms, hotels, theatres, discos, cinemas, restaurants, public buildings, gymnasiums.

TECHNICAL PROPERTIES

- Standard dimensions: 600mmx600mm, 1200mmx600mm
- Consult with Perfopan technical office for the special dimensions
- and wood grain direction of the panels.
- Melamine Panel: 12mm thickness, weight 9kg/m²
- Wood Veneered Panel: 13mm thickness, weight 9.5kg/m²

FIREPROOF SPECIFICATIONS

- A) 12mm melamine DIN 4102 B2
- B) 13mm wood veneered combustion delay polish applied A1

ACOUSTIC EMISSION SPECIFICATIONS

We can produce different type of ceiling panels for different acoustic performances according to the projects.

COMPATIBLE MODELS

32

T24 Plane, T24 Stepwised, T15 Grooved, T15 Stepwised, T15 Angle.

ACOUSTIC CEILING PANELS Perforated Ceiling Tiles

TKD 60 x 60 models





TKD - 03



TKD - 09

















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ACOUSTIC CEILING PANELS Slotted Ceiling Tiles



DESCRIPTION

Slotted ceiling panels are the panels improved by Perfopan engineers to provide best sound emission in a decorative way.

USES

All multi-purpose halls, auditoriums, offices, meeting rooms, hotels, theatres, discos, cinemas, restaurants, public buildings, gymnasiums.

TECHNICAL PROPERTIES

Standard dimensions: 600mmx600mm, 1200mmx600mm Consult with Perfopan technical office for the special dimensions and wood grain direction of the panels.

Melamine Panel: 12mm thickness, weight 9kg/m² Wood Veneered Panel: 13mm thickness, weight 9.5kg/m²

FIREPROOF SPECIFICATIONS

A) 12mm melamine DIN 4102 – B2 B) 13mm wood veneered combustion delay polish applied – A1

ACOUSTIC EMISSION SPECIFICATIONS

We can produce different type of ceiling panels for different acoustic performances according to the projects.

COMPATIBLE MODELS

34

T24 Plane, T24 Stepwised, T15 Grooved, T15 Stepwised, T15 Angle.

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ACOUSTIC CEILING PANELS Slotted Ceiling Tiles

TKS 60 x 60 models

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TKS - 03







Feel what you hear!



ACOUSTIC CEILING PANELS Plaque Ceiling Panels







DESCRIPTION

Plaque ceiling panels are the panels improved by Perfopan engineers to provide best sound emission in a decorative way.

USES

All multi-purpose halls, auditoriums, offices, meeting rooms, hotels, theatres, discos, cinemas, restaurants, public buildings, gymnasiums.

TECHNICAL PROPERTIES

Standard dimensions: 280mmx1200mm, 600mmx1200mm Consult with Perfopan technical office for the special dimensions and wood grain direction of the panels.

Melamine Panel: 14mm thickness, weight 10.5kg/m² Wood Veneered Panel: 15mm thickness, weight 11kg/m²

FIREPROOF SPECIFICATIONS

A) 14mm melamine DIN 4102 – B2B) 15mm wood veneered combustion delay polish applied – A1

ACOUSTIC EMISSION SPECIFICATIONS

We can produce different type of ceiling panels for different acoustic performances according to the projects.

COMPATIBLE MODELS: TPT

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ACOUSTIC CEILING PANELS Plaque Ceiling Panels



CEILING INTERVENTION COVER



Ceiling Installation-Application Tile Cladding Options



ZIGZAG CEILING INSTALLATION

PLANE CEILING INSTALLATION

TPT CARRIER

According to your request, we can produce all plaque ceiling panel models as appropriate for wall panel application.

ACOUSTIC CEILING PANELS Curved Ceiling Panels



DESCRIPTION

Curved ceiling panels are improved by Perfopan engineers to provide best sound emission in a decorative way. These panels reflect sound clearly and qualified. These panels provides solutions for concave and convex ceiling requirements due to either the need of directing the acoustic reflections or its decorative appearance.

USES

All multi-purpose halls, auditoriums, offices, meeting rooms, hotels, theatres, discos, cinemas, restaurants, public buildings, gymnasiums.

TECHNICAL PROPERTIES

- Curved ceiling panels have no standard dimension. Perfopan manufactures curved panels as custom made according to the projects.
- Maximum dimension: 1400mmx3400mm
- Consult with Perfopan technical office for the special dimensions and wood grain direction of the panels.
- Melamine Panel: 8mm thickness, weight 6kg/m²
- Wood Veneered Panel: 9mm thickness, weight 6.5kg/m²

FIREPROOF SPECIFICATIONS

A) 8mm melamine DIN 4102 – B2B) 9mm wood veneered combustion delay polish applied – A1

ACOUSTIC EMISSION SPECIFICATIONS

We can produce different type of ceiling panels for different acoustic performances according to the projects.

ACOUSTIC CEILING PANELS

Installation Details



INSTALLATION DETAILS

For the standard wood tiles, the metal carrier systems given above are used. Wood tiles can be produced in different styles or different perforations. Easy assembly and disassembly tiles are the models which carry the ceiling tiles freely fitted. The metal carriers can be painted in wood patterned or plane RAL colors.

All carrier systems are in the appearance of fuga. According to the demands, we have zero joint production.

Akyurt Municipality Conference Hall Wall: Plate Ceiling Panel Model: TDP - 01 32 x 32 x 8mm Ø – DS 2000

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ACOUSTIC AND SOUND ISOLATION DOORS

Acoustic Doors Acoustic Window Sound Isolation Doors

ACOUSTIC AND SOUND ISOLATION DOORS

Acoustic Doors





When the entry and exit doors of the acoustic wood panel coated walls are made of plane panel material, it may cause echo and loss of sound quality.

Aesthetically, different type of doors on a acoustic panel coated wall cause architectural disorder.

We are producing acoustic doors according to demands of our customers. Door surface which is faced to the space is designed for acoustical needs.

All of our acoustic doors are applicable to wood sound isolation door models.

All of our acoustic doors are applicable to wood sound isolation door models.



Acoustic Door Models

Ak-1 Special soundproof mattress is used inside of the 50mm thick door frames. Door surface which is faced to the space is designed as perporated.



Ak-2 Special soundproof mattress is used inside of the 50mm thick door frames. Door surface which is faced to the space is designed as vertically grooved.



Ak-3 Special soundproof mattress is used inside of the 76mm thick door frames. Door surface which is faced to the space is designed as vertically grooved.



Ak-4 Special soundproof mattress is used inside of the 64mm thick door frames. Door surface which is faced to the space is designed as horizontally grooved.

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COUSTIC AND SOUND ISOLAT ION DOC

Acoustic Window



Perfopan acoustic windows provide professional solutions where transparency is desired. They are used because they prevent light reflections and have high quality soundproof.

Double independent framed windows are sealed with special gasket. According to proper wall thickness of buildings, if the distance between independent frames are approximately 200mm, Perfopan Acoustic Window reaches to 60dBA soundproof.



Glass specifications: 8mm, 10mm acoustic laminated glass.

Uses: Stadiums, TV studios, radio broadcasting rooms, sound and music recording studios, simultaneous translation room windows, dance and ballet studio windows and police interrogation room windows.



ACOUSTIC AND SOUND ISOLATION DOORS

Sound Isolation Doors



In the spaces where sound isolation is performed, another important element supplementing the isolation as much as the walls and ceilings is doors.

Sound isolation doors prevent noise pollution. We have three types of sound isolation doors all models are applicable to any dimensions.

Sound Isolation Models



DESCRIPTION: They are designed as wood sound isolation door and are soundproof. Two types of different soundproof materials are used inside the massive frame of 50mm thickness. Sound isolation doors must be used together with threshold profile for sound absorption.

USES: Main doors of multi-purpose halls, doors of simultaneous translation rooms.

TECHNICAL PROPERTIES:

Standard use for indoors are; 800mmx2000mm, 900mmx2000mm, 1000mmx2000 mm. Standard use for main doors are; 970mmx2080 mm, 1070mmx2080mm, 117mmx2080 mm All dimensions can be produced as double winged.

Sound Isolation Value: 22dB.

Fire Resistance: Fire-resistance durations are increased with fireproof laminated surface or special polish application.



ASY - KAP 2

DESCRIPTION: They are designed as wood sound isolation door and are soundproof. Three types of different soundproof materials are used inside the massive frame of 64mm thickness. Sound isolation doors must be used together with threshold profile for sound absorption.

USES: Outer room doors of hotels, doors of sound recording studios, main doors of multi-purpose halls, doors of simultaneous translation rooms.

TECHNICAL PROPERTIES:

Standard use for indoors are; 800mmx2000mm, 900mmx2000mm, 1000mmx2000mm. Standard use for main doors are; 970mmx2080 mm, 1070mmx2080mm, 117mmx2080 mm All dimensions can be produced as double winged.

Sound Isolation Value: 42dB.

Fire Resistance: Fire-resistance durations are increased with fireproof laminated surface or special polish application.



ASY - KAP 3

DESCRIPTION: They are designed as wood sound isolation door and are soundproof. Four types of different soundproof materials are used inside the massive frame of 76mm thickness. Sound isolation doors must be used together with threshold profile for sound absorption.

USES: Outer room doors of hotels, doors of sound recording studios, main doors of multi-purpose halls, doors of simultaneous translation rooms.

TECHNICAL PROPERTIES:

Standard use for indoors are; 800mmx2000mm, 900mmx2000mm, 1000mmx2000mm. Standard use for main doors are; 970mmx2080 mm, 1070mmx2080mm, 117mmx2080 mm. All dimensions can be produced as double winged.

Sound Isolation Value: 56dB.

Fire Resistance: Fire-resistance durations are increased with fireproof laminated surface or special polish application.



TECHNICAL INFORMATION Color Scale



Certificates



Perpofan Products have Accreditation (appropriate for international criterions) DANAK certificates. In acoustic wood panel tests, each mode is subjected to two separate tests. The first test is performed without applying rockwool at the back of the acoustic wood panels and the second test is performed by applying rockwool at the back of the acoustic wood panels. The reports of the tests with rockwool and without rockwool indicate the absorption specifications of the material and determine the acoustical needs. The system that we recommend is to apply rockwool at the back of the panels in acoustic wood panel application. The values given in our reports are NRC-(Noise Reduction Coefficient), SAA (Sound Absorption Average) values in American standards and xw, absorption class values in European standards.

In the graphics given in the technical details, X axis shows the resonance frequency and the unit is Hertz (Hz), and Y axis shows the value of sound absorption coefficient and the unit is called as Sabin (as).



TECHNICA INFORMATION

Why we should use acoustic wood panels?



There is noise in every environment we live in. Isolation or regulation of noise provides better communication among people. It is a comfort to hear the sounds clearly. Our products are the materials that purify the hearing quality from noise and ensure the sounds are clear. Wood has a warmer appearance than other metal panels, plasterboard and rockwool panels which are cold materials.

Other materials do not provide the visual quality which is provided by wood in decoration.

Areas of Use

Our products are used in theater halls, concert halls, cinema halls, hotel lobbies, mosques, churches, airport and bus terminals, train stations, subway and train cars, subway stations, yachts and ship halls, music recording studios, entertainment centers, discos, hotels, bars, night clubs, big restaurants, libraries, classrooms, congress halls, wedding halls, big shopping malls, hotel meeting rooms, administration buildings, open offices, sport centers, indoor swimming pools, polygons, multi-purpose halls, wireless operating rooms, radio stations, sound recording studios, TV studios, film sets, university halls, law courts, and hearing courts.

Definition of Acoustic Graphs



- X axis shows the quantity of the resonance frequency and the unit is Hertz (Hz).
- Y axis shows the quantity of the acoustic absorption coefficient and the unit is called as Sabin (α S).

SoundTex® - Acoustic, Fabric Information





In order to increase the acoustic absorption quantity of the panels, a special thin felt made of composit material is used at the back of the panels.

One surface of this felt is adhesive and it is sticked on the panel by heat and pressure application method.

In Turkey, this felt is called Acoustic Fabric. Our company uses the first quality German made felt called SoundTex®. The thickness of this felt is 0.2mm, and the sound absorption quality is equal to the rockwool with thickness 4.00cm.

SoundTex® is a membrane which has diverse properties. A specific amount of sound coming from indoors and passing through the hole is absorbed. After such specific amount of sound passed through the hole and came back, the felt prevents the sound from reentering to indoors. This product is antibacterial and antiallergic.

Fireproof category is NORM DIN – B 1 Class.

We supply SoundTex® acoustic fabric to the market.





Manufacturing Codes - Dimensions

ACOUSTIC PANEL DIMENSION TABLE		
MATERIAL	210cm x 280cm MDF	183cm x 366cm MDF
MAX. DIMENSION	102.4cm x 280cm	140cm x 340cm
IDEAL DIMENSIONS	67.2cm x 278cm	140.8cm x 340cm
	67.2cm x 139cm	57.6cm x 182cm
	102.4cm x 139cm	57.6cm x 121cm
	67.2cm x 20.8cm	89.6cm x 181cm
	89.6cm x 208cm	89.6cm x 121cm

MANUFACTURING CODES

F	WIDTH OF GROOVE (mm)
А	DISTANCE BETWEEN GROOVES (mm)
PR	PERFORATION RATIO
DS	NUMBER OF HOLES (Piece/m ²)
DK	DECORATIVE TILE
TD	FULL HOLE
KD	STEPWISED HOLE
ТК	CEILING TILE
YST	REFLECTED PANEL
ÇP	TRANSVERSE PERFORATED
DP	DECORATIVE PANEL
GBM	WIDE BAND MODEL
KNL	GROOVED
DLK	PERFORATED
SLT	SLOTTED
AK	ACOUSTIC WOOD DOOR
ASY - KAP	WOOD SOUND ISOLATION DOOR



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References

ACIBADEM HOSPITAL - MASLAK ISTANBUL - TURKEY Job Description: Acoustic Wall Panels, Acoustic Doors

ACITY SHOPPING MALL, WEDDING HALL, ANKARA- TURKEY Job Description: Acoustic Wall Panels

AKYURT MUNICIPALITY, COUNCIL HALL AKYURT - ANKARA

Job Description: Acoustic Wall Panels, Angular Acoustic Ceiling Coverings

ALFATEH UNIVERSITY, AUDITORIUM CLASSES -POEM INSAAT- LIBYA Job Description: Acoustic Stage Panels, Acoustic Wall Panels, Acoustic Doors

ASTAV INTERNATIONAL AIRPORT BUILDING - ASTAV - KAZAKHSTAN

Job Description: Acoustic Circular Ceiling Coverings ATILIM UNIVERSITY, CONFERENCE HALL Job Description: Acoustic Wall Panels AKDENIZ UNIVERSITY, TOURISM FACULTY, CONFERENCE HALL - ERKAN INSAAT Job Description: Acoustic Wall Panels

ANKARA UNIVERSITY, MEDICAL FACULTY -MORPHOLOGY

CONFERENCE HALL

Job Description: Acoustic Wall and Ceiling Panels ANKARA UNIVERSITY, MEDICAL FACULTY – 50th YEAR CONFERENCE HALL

Job Description: Acoustic Wall Panels AYDIN AMCA LTD. CYPRUS METU CONFERENCE HALL - CYPRUS

Job Description: Acoustic Wall Panels BAND COMMAND 3rd ARMY TRAINING HALLS - ERZINCAN

Job Description: Acoustic Wall Coverings BAND COMMAND 3rd ARMY TRAINING HALLS - ERZURUM - TURKEY

Job Description: Acoustic Wall Coverings BARIS CASINO 4th CORPS - ANKARA Job Description: Acoustic Wall Coverings METROPOLITAN MUNICIPALITY, TABLE ACOUSTIC

PANELS - ANKARA Job Description: Acoustic Wall Panels METROPOLITAN MUNICIPALITY, 2 CONFERENCE

HALLS OF THE NEW BUILDING - ANKARA Job Description: Acoustic Wall Panels

PAINT VARNISH ORGANIZED INDUSTRIAL ZONE, ADMINISTRATION BUILDING, CONFERENCE HALL - GEBZE Job Description: Acoustic Wall Coverings CAN WEST MEDIA, SUPER FM METRO FM, SOY

FM RADIO BROADCASTING STUDIOS - ISTANBUL Job Description: Acoustic Panel Wall Coverings CER MODERN, CONFERENCE HALL - ANKARA Job Description: Acoustic Panel Wall Coverings CLUB ASTERIA BELEK, RESTAURANT HALL BELEK - ANTALYA - TURKEY

Job Description: Acoustic Panel Wall Coverings, Custom Manufacturing Suspended Ceiling Panels AEGEAN COLLEGE, CONFERENCE HALL - IZMIR - TURKEY

Job Description: Acoustic Panel Wall Coverings ESKISEHIR MUNICIPALITY - PETKON MUHENDISLIK, CONFERENCE HALL, ESKISEHIR - TURKEY Job Description: Acoustic Panel Wall Coverings

Job Description: Acoustic Panel Wall Coverings FABRICA INSAAT SAN.TIC.LTD.STI., CONFERENCE HALL ISTANBUL - TURKEY

Job Description: Acoustic Panel Wall Coverings FEKA INSAAT, MATHEMATICS AND STATISTICS DEPARTMENT CONFERENCE HALL - TRIPOLI - LIBYA Job Description: Acoustic Panel Wall Coverings FEVZI OZBEY PRIVATE PRIMARY SCHOOL, ANKARA

Job Description: Acoustic Panel Wall Coverings FRENCH HIGH SCHOOL, CONFERENCE HALL, INCEK/ ANKARA - TURKEY

Job Description: Acoustic Panel Wall Coverings GARANTI BANK, SOUTHEAST REGIONAL DIRECTORATE, CONFERENCE HALL - GAZIANTEP Job Description: Acoustic Panel Wall Coverings

GARANTI BANK, BALMUMCU EDUCATION DIRECTORATE BUILDING CONFERENCE HALL -ISTANBUL

Job Description: Acoustic Panel Wall Ceiling Coverings GARANTI BANK, SEFAKOY REGIONAL DIRECTORATE

CONFERENCE HALL - ISTANBUL Job Description: Acoustic Panel Wall Ceiling Coverings GAZI UNIVERSITY, FACULTY OF DENTISTRY CONFERENCE HALL - ANKARA - TURKEY Job Description: Acoustic Panel Wall Ceiling Coverings GUNGOREN MUNICIPALITY, CULTURAL CENTER CONFERENCE HALL - ISTANBUL

Job Description: Acoustic Panel Wall Coverings GURIS ALFATEH UNIVERSITY, CONFERENCE HALL -LIBYA

Job Description: Acoustic Wall Panels HUSEYIN FOREIGN TRADE PROJECT, CONFERENCE HALL -TRIPOLI LIBYA Job Description: Acoustic Wall Panels ISTANBUL TECHNICAL UNIVERSITY, NATIONAL HIGH PERFORMANCE CALCULATION CENTER DEPARTMENT LOUNGE - AKSER INSAAT

Job Description: Acoustic Wall Panels ISTANBUL UNIVERSITY, LOGISTICS COLLEGE, CONFERENCE HALL

Job Description: Acoustic Wall Panels KADIR HAS UNIVERSITY, BOLAT PREMISES, CONFERENCE HALL - ISTANBUL - TURKEY Job Description: Acoustic Wall Panels KADIR HAS UNIVERSITY, ACOUSTIC PANEL, - KAYSERI

Job Description: Acoustic Wall Panels KENT PARK AVM, STORE CEILING ANKARA -Job Description: Acoustic Ceiling Panels KOSGEB CONFERENCE HALL OSTIM - ANKARA Job Description: Acoustic Wall Panels LOTUS, MINT TV STUDIO, GEBZE

Job Description: Acoustic Ceiling Panels ACOUSTIC PANELS OF ANKARA AND ISTANBUL RESTAURANTS OF LEZZET ISKENDER Job Description: Acoustic Ceiling Panels

LOKMAN HEKIM HOSPITAL - SINCAN/ANKARA Job Description: Acoustic Ceiling Panels LOSEV VILLAGE, RECEPTION HALL, ANKARA Job Description: Acoustic Ceiling Panels MANISA CHAMBER OF COMMERCE, EXHIBITION HALL,

ENTRANCE HALL - TURKEY Job Description: Acoustic Ceiling Panels MEDINA TURGUL ADVERTISING AGENCY, RESTAURANT HALL – ISTANBUL - TURKEY Job Description: Acoustic Ceiling Panels MERCEDES - BENZ FACTORIES, MULTI-PURPOSE HALL DOME COVERINGS, ISTANBUL Job Description: Acoustic Exposed Ceiling Panels MECLIS EL VATAN-YASAR OZKAN-TRIPOLI-LIBYA Job Description: Acoustic Wall Panels MIMAR SINAN UNIVERSITY, CINEMA TV RESEARCH CENTER, POST PRUDUCTION HALL AND CINEMA HALL - ISTANBUL

Job Description: Acoustic Wood and Fabric Wall Acoustic Panels. Acoustic Ceiling Panels. NATIONAL EDUCATION FOUNDATION, IZMIR AVNI AKYOL HIGH SCHOOL, **CONFERENCE HALL, IZMIR** Job Description: Acoustic Wall Panels **MUGLA UNIVERSITY, AUDITORIUM CLASSROOM MUGLA - TURKEY** Job Description: Acoustic Panel Wall Coverings MODELA MOBILYA, ACOUSTIC WOOD PANEL Job Description: Acoustic Panel Wall Coverings MOB MOBILYA, ACOUSTIC PANEL Job Description: Acoustic Wall Panels NOW HOTEL, MULTI-PURPOSE MEETING HALL **TRABZON - TURKEY** Job Description: Acoustic Wall Panels NURSOY SIRKETLER GRUBU, **MULTI-PURPOSE MEETING HALL ANKARA - TURKEY** Job Description: Acoustic Wall, Ceiling Panels OZALTUN INSAAT, **NORTH IRAQ CONFERENCE HALL - IRAQ** Job Description: Acoustic Wall Panels **OZGUN OFIS - ISTANBUL** Job Description: Acoustic Wall Panels OZMER DIS MOB.LTD.STI. Job Description: Acoustic Wall Panels PEPSICO, FRITOLAY, GENERAL DIRECTORATE BUILDING, RESTAURANT - ISTANBUL Job Description: Acoustic Wall Panels PARK VADIEVLERI, MASSIVE FURNITURE **ANKARA - TURKEY** Job Description: Acoustic Wall Panels **SDS MIMARLIK - ANKARA - TURKEY** Job Description: Acoustic Wall Panels SISKA INS., CURVILINEAR ACOUSTIC CEILING AND WALL ACOUSTIC PANELS Job Description: Acoustic Wall Panels SOY MIMARLIK, CYPRUS HOTEL, **CONFERENCE HALL** Job Description: Acoustic Wall Panels TAYAT RESTAURANT AND WEDDING HALL -**KONYA - TURKEY** Job Description: Acoustic Wall Panels, Acoustic Ceiling Panels **TEKIROVA MUNICIPALITY, CULTURAL CENTER, CONFERENCE HALL -ANTALYA - TURKEY** Job Description: Acoustic Wall Panels THE PENINSULA CHARLOTTE HOTEL, **MEETING ROOM - ANKARA** Job Description: Acoustic Ceiling Panels TRT ERZURUM RADIO BROADCASTING **STUDIOS - ERZURUM - TURKEY** Job Description: Acoustic Wall Panels TUBITAK TECHNOLOGY FREE ZONE, **MEETING HALL - GEBZE - TURKEY** Job Description: Acoustic Wall Panels **TURKISH RETIRED WORKERS CONFERENCE HALL - ANKARA** Job Description: Acoustic Wall Panels NATIONAL FOOD LABORATORY, **MEETING HALL - ANKARA - TURKEY** Job Description: Acoustic Wall Panels **USAK UNIVERSITY, CONFERENCE HALL - USAK** Job Description: Acoustic Wall Panels UNILEVER GENERAL DIRECTORATE. **MEETING HALL - ISTANBUL - TURKEY** Job Description: Acoustic Wall Panels ZAMAN NEWSPAPER. GENERAL DIRECTORATE BUILDING, **MEETING HALL ISTANBUL - TURKEY** Job Description: Acoustic Wall Panels



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Being the trademark of **AKTAN MOBILYA** which was founded in 1932 and which is a family corporation, Perfopan carries on rendering wood service by sustaining the family tradition under the name of **ISUS1932** company...



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