



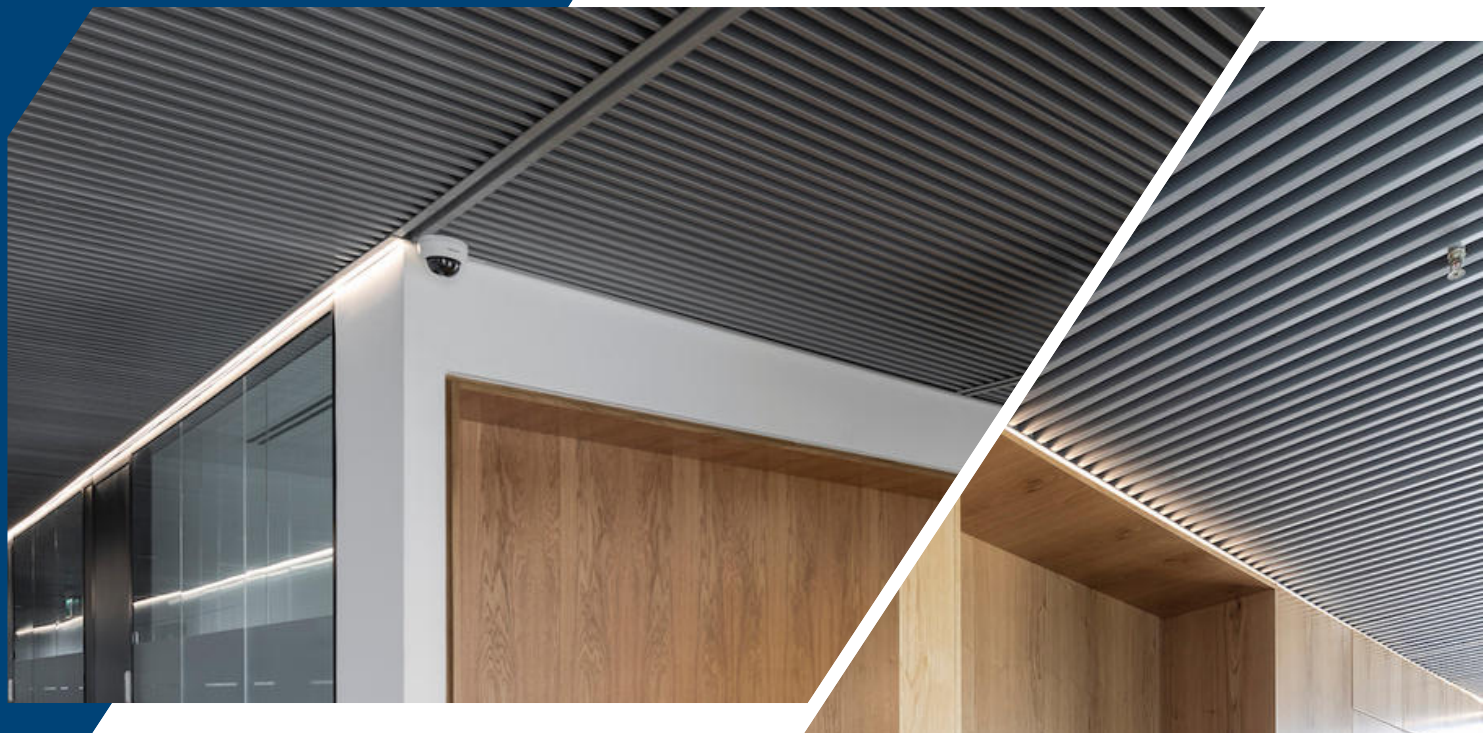
LAMELA-19

Aluminum metal lamelas



HECHT & EFRAIM

CONNECTING DESIGN AND CONSTRUCTION SINCE 1952



High
sustainability



9001:2015
Quality
management
standard



discharges



Moisture
resistance

Aluminum metal stud ceiling system, model U194755, manufactured by Hecht & Efraim Israel.

- Aluminum metal thickness 0.5 mm, lamela width 19 mm, length up to 3000 mm.
 - Electrostatic powder coating finish with a thickness of at least 30 microns, color according to RAL 20% gloss matte finish.
 - Four wood textures according to manufacturer's catalog.
 - Includes steel hanging system, serrated upper Ligar main carrier model HOC-55 in black.
 - Installation according to manufacturer's instructions No. 19364.
 - Meets the requirements of standard 921.
 - 10-year warranty.
 - Includes manufacturer's installation and maintenance instructions.
 - Upper fasteners approved by a structural engineer.
- Fast thermal exchange.
 - High noise absorption capacity.
 - Background ceiling covering.
 - Monolithic appearance that allows for discharges.
 - Recycled aluminum composition.

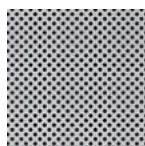
Wood textures



walnut

oak

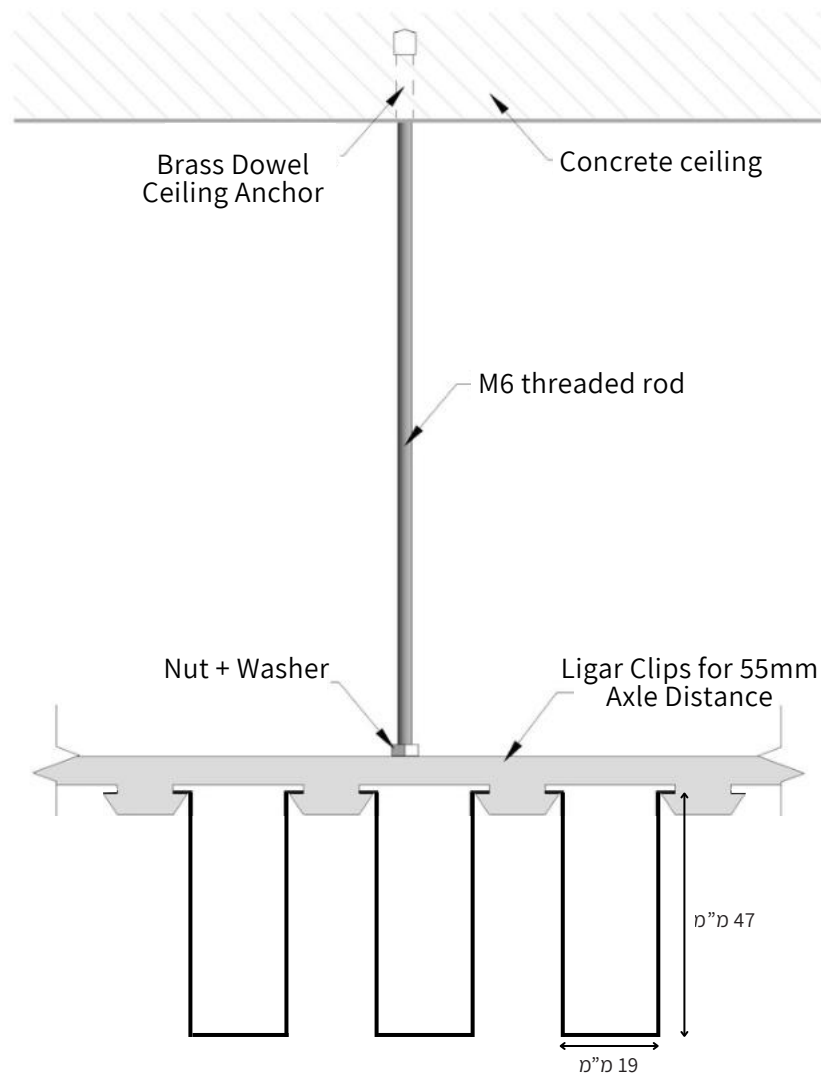
Perforation Options



Perforation 2026
Round perforation 2 mm
Perforation area 26%

Can be ordered in all RAL colors





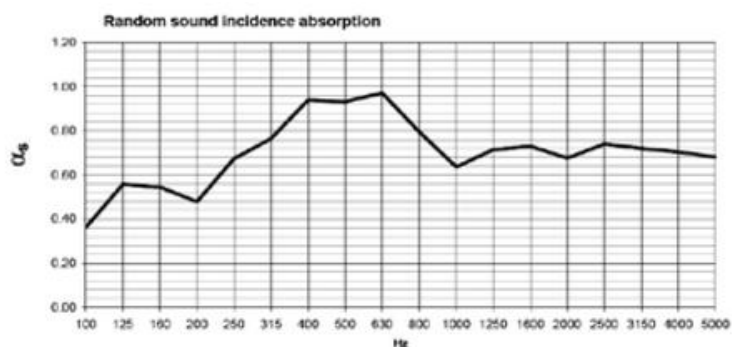
Typical detail

- ▶ The lamelles have a spring-loaded upper bend, connected to a universal serrated ligature.
- ▶ The ceiling is mounted on a ligature clip profile, model 194755, and can be dismantled downwards.
- ▶ The 55 mm serrated ligature models produce a 36 mm gap
- ▶ Lighting can be easily integrated as a replacement for the metal slat.
- ▶ Uneven gaps can also be produced.

Lamella ceiling consists of 19/47 beams "Hecht & Efraim"

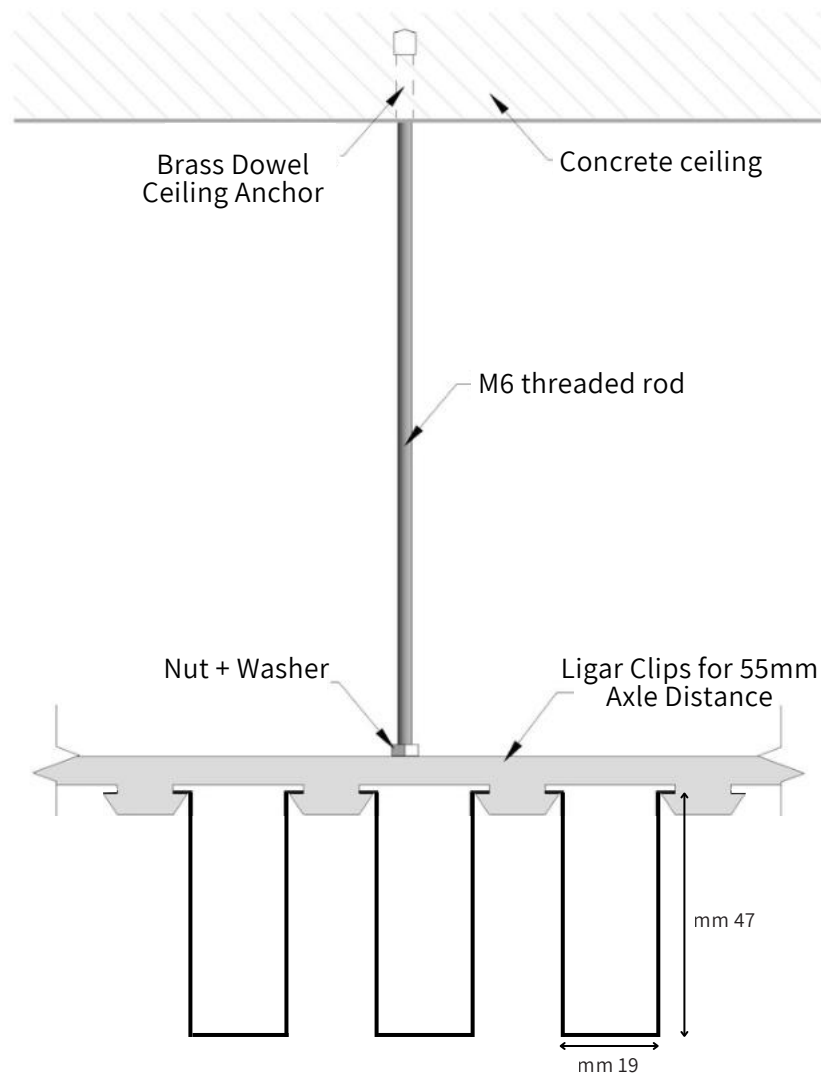
אקוסטיקה

Weighted absorption coefficient
 $\alpha_w = 0.75$ (l)
based on a result obtained by a laboratory method



Frequency Hz	T_0 s	A_{10} m^2	T_1 s	A_{11} m^2	A_{12} m^2	α_{15}	α_p	$\alpha_{shifted}$
100	4.93	6.5	3.12	10.2	3.7	0.36		
125	5.09	6.3	2.68	11.0	5.7	0.56	0.50	
160	5.08	6.3	2.66	11.8	5.5	0.54		
200	6.24	5.1	3.17	9.9	4.9	0.48		
250	6.72	4.7	2.73	11.5	6.8	0.67	0.65	0.55
315	7.18	4.3	2.60	12.1	7.8	0.76		
400	7.64	4.0	2.31	13.6	9.5	0.94		
500	7.38	4.1	2.30	13.6	9.5	0.93	0.95	0.75
630	6.88	4.3	2.19	14.2	9.9	0.97		
800	6.59	4.4	2.46	12.5	8.1	0.79		
1000	5.88	4.9	2.67	11.4	6.5	0.64	0.70	0.75
1250	5.50	5.2	2.43	12.4	7.3	0.71		
1600	5.02	5.6	2.30	13.0	7.4	0.73		
2000	4.76	5.8	2.34	12.6	6.9	0.68	0.70	0.75
2500	4.32	6.3	2.13	13.8	7.5	0.74		
3150	3.71	7.2	1.99	14.5	7.3	0.72		
4000	3.18	8.3	1.84	15.4	7.1	0.70	0.70	0.65
5000	2.55	10.1	1.83	17.0	6.9	0.68		

Empty room reverberation time measured at 22.8 °C, 50 % and 101.4 kPa



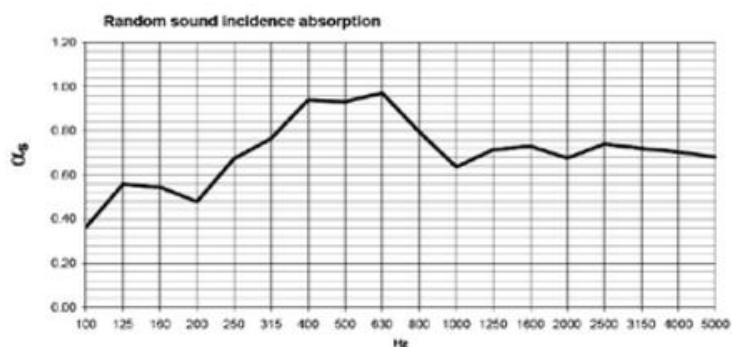
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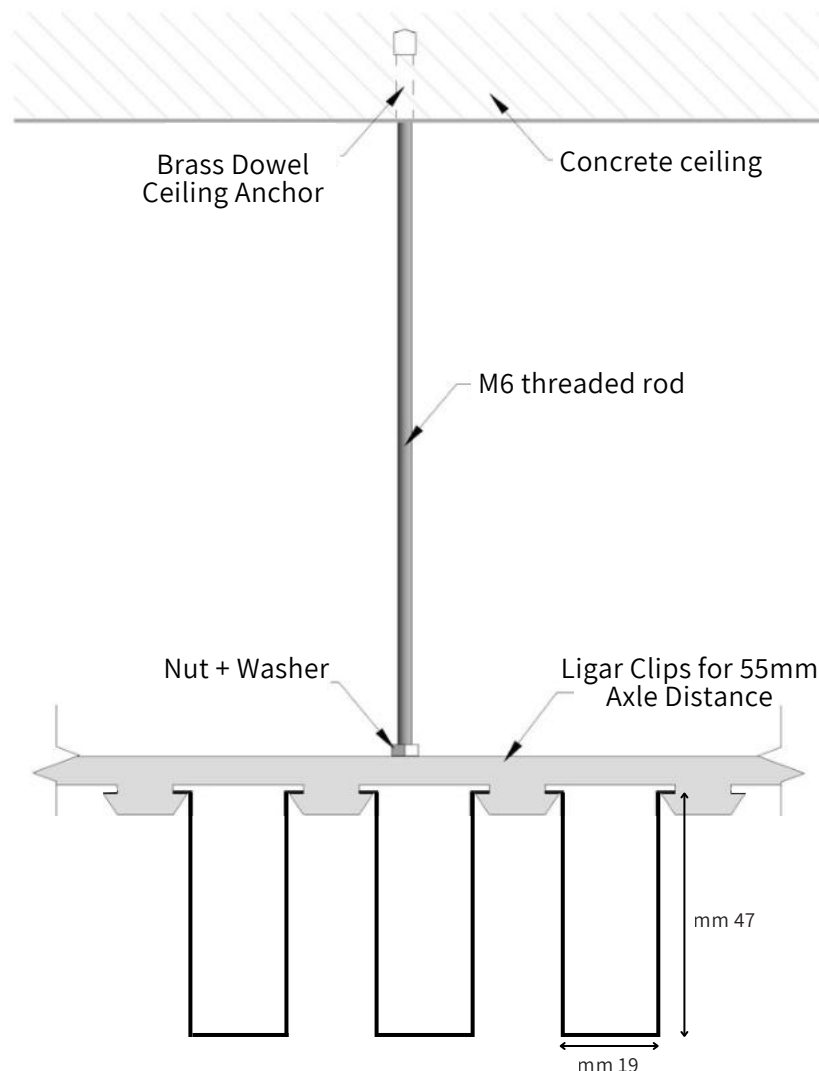
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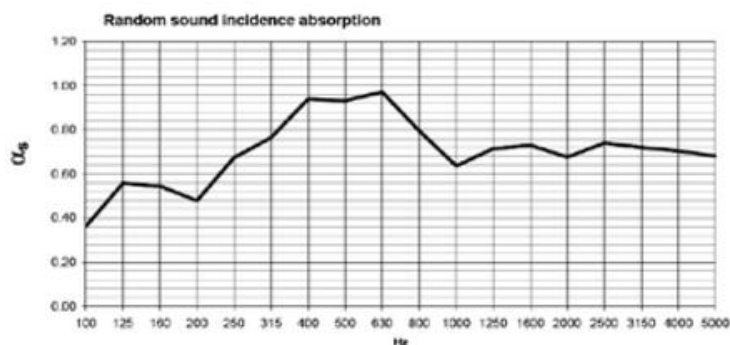
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"Hecht & Efraim"

Acoustics

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Empty room reverberation time measured at 22.8 °C, 50 % and 101.4 kPa

Types of perforations

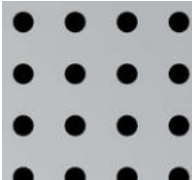
A variety of perforation options are offered to the architect who can choose the size, shape and density of the perforation according to his wishes and in accordance with his various needs.

This choice is another layer of the service we provide to each customer and is designed to meet his special taste and needs.

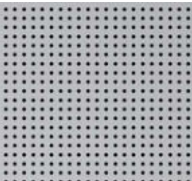
9011

N.R.C 0.65*	Round perforation straight rows 9 mm	
N.R.C 0.75**	Perforation area 11%	
db 40***	Max. tin width for punching 625 mm	
	Perforation max. 600 mm	

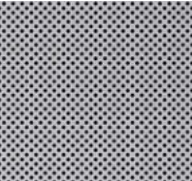
9022

N.R.C 0.65*	mm round hole 9	
N.R.C 0.78**	Perforation area 22%	
db 45***	Max. tin width for punching 625 mm	
	Perforation max. 600 mm	

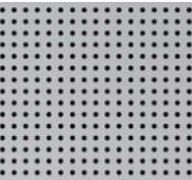
1510

N.R.C 0.70*	Round perforation straight rows 1.5 mm	
N.R.C 0.75**	perforation area 10%	
db 40***	Max. tin width for punching 1250 mm	
	Max. perforation 1180 mm	

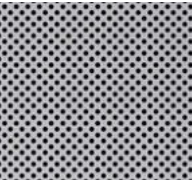
1522

N.R.C 0.75*	Round perforation 1.5 mm	
N.R.C 0.85**	Perforation area 22%	
db 41***	Max. tin width for punching 1250 mm	
	Max. perforation 1180 mm	

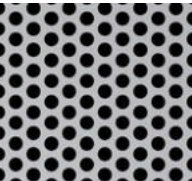
0213

N.R.C 0.70*	Round perforation straight rows 2 mm	
N.R.C 0.80**	Perforation area 13%	
db 50***	Max. tin width for punching 1250 mm	
	Max. perforation 1180 mm	

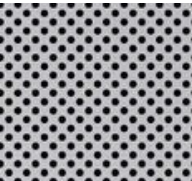
2026

N.R.C 0.78*	mm round hole 2	
N.R.C 0.89**	Perforation area 26%	
db 41***	Max. tin width for punching 1250 mm	
	Max. perforation 1180 mm	

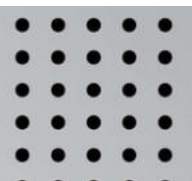
6041

N.R.C 0.85*	Dense circular perforation 6 mm	
N.R.C 0.94**	Perforation area 41%	
db 40 36***	Max. tin width for punching 1250 mm	
	Max. perforation 11800 mm	

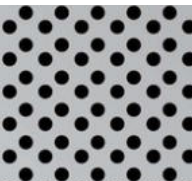
3011

N.R.C 0.81*	Round hole 3 mm	
N.R.C 0.92**	Perforation area 11%	
db 37***	Max. tin width for punching 625 mm	
	Perforation max. 600 mm	

6012

N.R.C 0.70*	Round perforation straight rows 6 mm	
N.R.C 0.80**	Perforation area 12%	
db 50***	Max. tin width for punching 1250 mm	
	Max. perforation 1180 mm	

6016

N.R.C 0.75*	Round hole 6 mm	
N.R.C 0.85**	Perforation area 16%	
db 45***	Max. tin width for punching 1250 mm	
	Max. perforation 1180 mm	

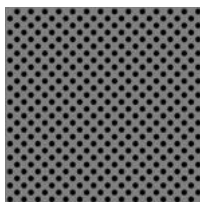
*Average noise absorption with the addition of acoustic fleece gluing **Average noise absorption (with the addition of acoustic fleece gluing and the laying of a 16.1 kg per cubic meter compressed glass wool mattress) ***Average noise absorption (with the addition of acoustic fleece gluing and the laying of a rock wool mattress Compressed with a thickness of "16.1 kg per cubic meter) and a metal back panel cover

Types of perforations

A variety of perforation options are offered to the architect who can choose the size, shape and density of the perforation according to his wishes and in accordance with his various needs. This choice is another layer of the service we provide to each customer and is designed to meet his special taste and needs.

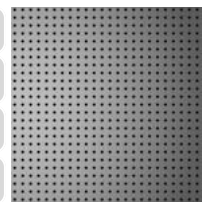
3028

N.R.C 0.78*	Round perforation straight rows 3mm
N.R.C 0.89**	Perforation area 28%
db 41***	Max. tin width for punching 500 mm
	Max. perforation 380 mm



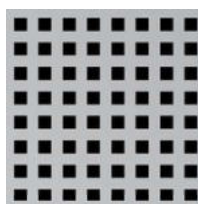
1507

N.R.C 0.70*	Round perforation straight rows 31.5mm
N.R.C 0.75**	Perforation area 7%
db 40***	Max. tin width for punching 1250 mm
	Max. perforation 1180 mm



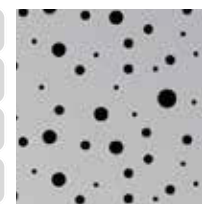
S5030

N.R.C 0.75*	Square perforation 5.5X5.5 mm
N.R.C 0.85**	perforation area 30%
db 47***	Max. tin width for punching 625 mm
	Perforation max. 600 mm



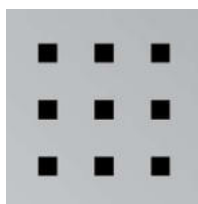
R2468

N.R.C 0.65*	Random round perforation 2X4X6X8 mm
N.R.C 0.75**	Perforation area 11%
db 45***	Max. tin width for punching 1250 mm
	Max. perforation 1180 mm



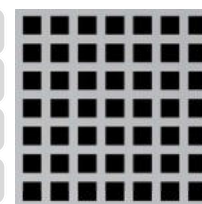
S8011

N.R.C 0.61*	8x8 mm square perforation
N.R.C 0.75**	Perforation area 11%
db 40 42***	Max. tin width for punching 1250 mm
	Max. perforation 1180 mm



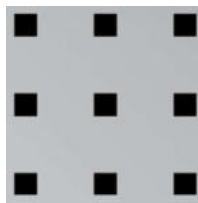
S8044

N.R.C 0.85*	8x8 mm square perforation
N.R.C 0.94**	Perforation area 44%
db 40 36***	Max. tin width for punching 1250 mm
	Max. perforation 1180 mm



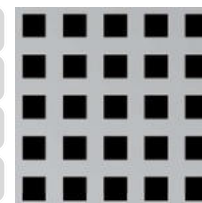
S1012

N.R.C 0.65*	Dense circular perforation 10X10 mm
N.R.C 0.75**	Perforation area 12%
db 40***	Max. tin width for punching 625 mm
	Perforation max. 600 mm



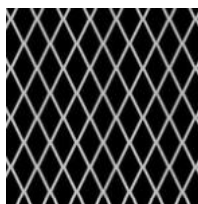
S1036

N.R.C 0.85*	Round perforation 10x10 mm
N.R.C 0.94**	Perforation area 36%
db 45***	Max. tin width for punching 625 mm
	Perforation max. 600 mm



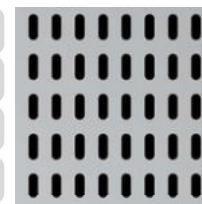
D170

N.R.C 0.75*	Diamond punch 9X20 mm
N.R.C 0.84**	Perforation area 70%
db 42***	Max. tin width for punching 625 mm
	Perforation max. 600 mm



OB40

N.R.C 0.45*	Oval perforation 4X15 mm
N.R.C 0.95**	Perforation area 25%
db 39***	Max. tin width for punching 625 mm
	Perforation max. 600 mm



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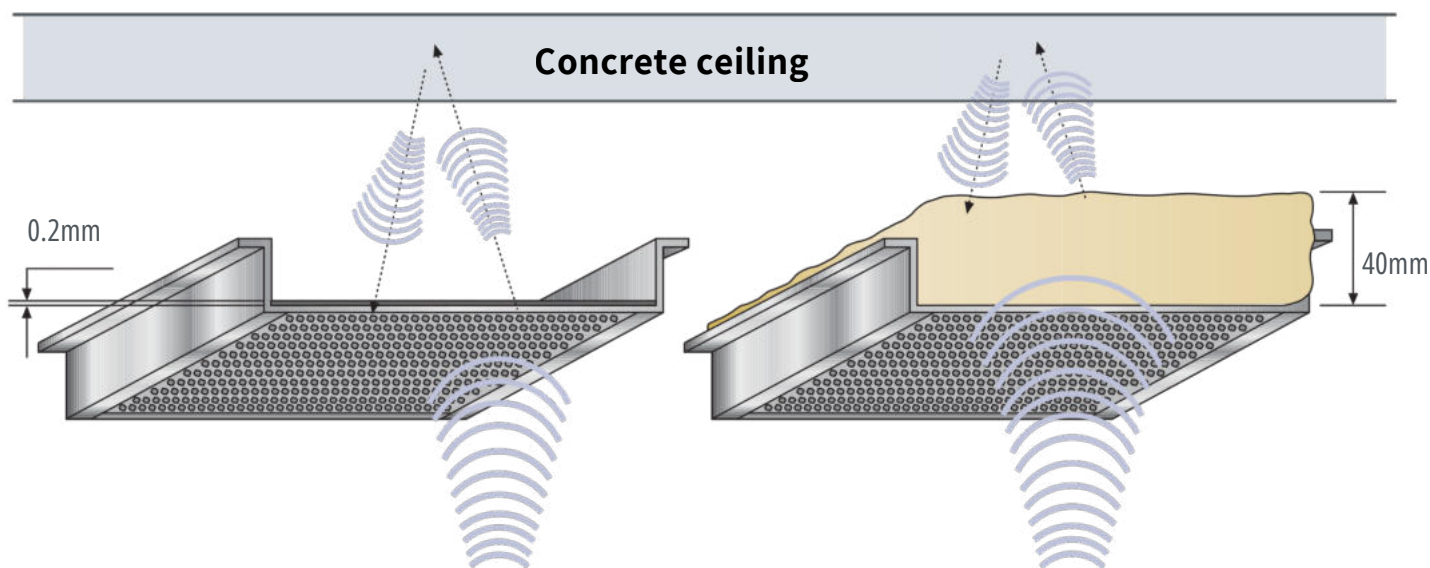
isolation

The Hecht Ephraim company is a representative of the Royaline company - Germany.

Non-woven acoustic fleece, with a noise absorption capacity of up to 0.8 (reduction of about 10 decibels) with a thickness of 0.2 mm is affixed with acoustic glue on the back of the ceiling and wall units.

advantages

- High noise absorption, effective handling of different decibel levels (see diagram).
- It does not detach and does not move from the unit, so removing the trays for the purpose of maintaining the systems above them and re-placing them afterwards is easy, fast and simple.
- Meets the requirements of TI 921.
- The insulation does not absorb moisture.
- Acoustic insulation in black tones that emphasizes the appearance of perforation and alternatively in white tones for a monolithic look.



*Additional glass wool/rocks can be added above the tile depending on the ceiling model.

