

SonoPerf Office

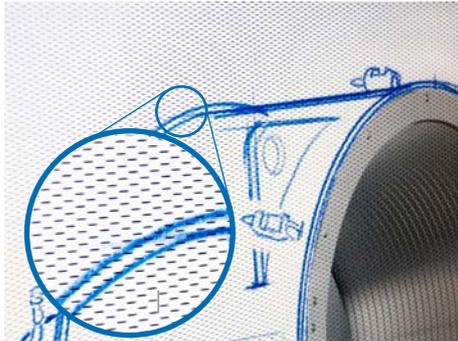
The essential material for
outstanding acoustic solutions



Room acoustics in open-plan offices

for undisturbed communication and concentration

Modern architectural trends often use design and physical constructions (reverberant surfaces, clear lines, concrete elements, etc.) to achieve breathtaking effects – at least visually. However, the acoustic conditions of the room may prove to be highly problematic.



▲ Detailed view of a printed SonoPerf Office panel

The problem

From an acoustic standpoint, the modern, open-plan office of today faces two challenges: It is vital that the room is conducive to communication (speech intelligibility) and – at the same time – allows for concentration so that employees can work undisturbed (acoustic shielding).

This is because undesired background noise and overhearing conversations involuntarily are greatly detrimental to our ability to concentrate and perform.

Noise = high + low pitches

In order to reduce the noise level in the office, the first step is to remove high frequencies (in the range of human speech).

To achieve good acoustics in the room, it is also necessary to absorb low frequencies, even those below the audible range: First of all because this increases speech intelligibility. People automatically speak in softer tones, thereby producing less “speech noise.” Secondly, low-frequency tones are responsible for irritating frequencies spreading all the more throughout the office, and they also place a burden on the human organism.

Reverberation time

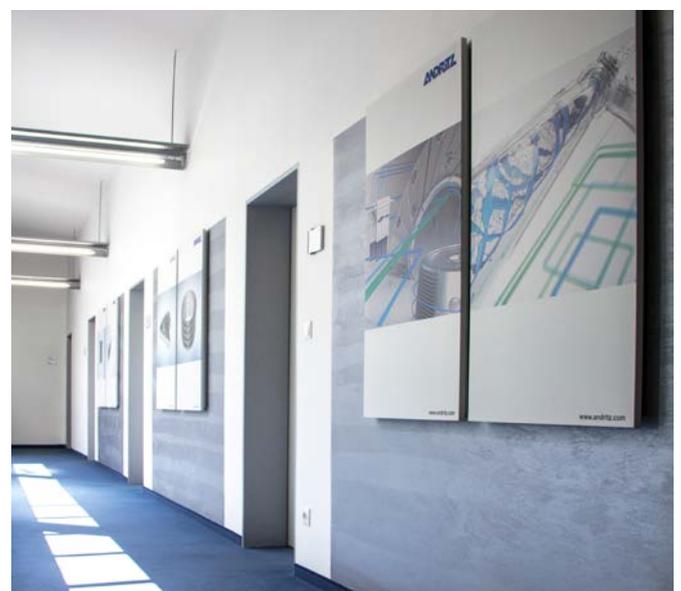
The shorter the reverberation time, the better speech intelligibility will be. This rule only holds if the reverberation times for high and low frequencies are decreased uniformly (broadband absorption).

Acoustic components with SonoPerf Office

- Air conditioning ceilings
- Acoustic ceilings
- Ceiling elements with lighting
- Office furniture with acoustic function
- Acoustic pictures
- Wall absorbers
- Shielding elements in the workplace
- Partition walls



▲ Photo art printing on SonoPerf Office acoustic elements



▲ Wall absorbers made of SonoPerf Office, individually printed

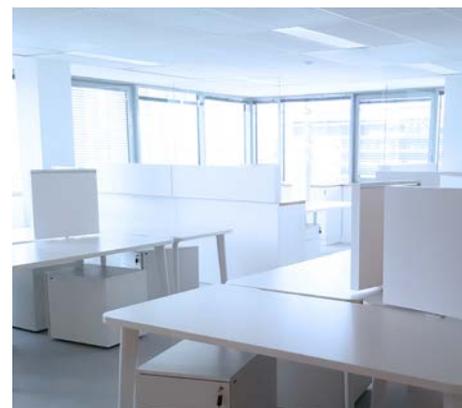
SonoPerf Office – the material for cooling ceilings with acoustic benefits

Ceilings made of SonoPerf Office can do a lot more than just provide favorable acoustic conditions: When integrated into cooling ceilings, the bevelled openings of SonoPerf microperforations ensure comfortably homogeneous air distribution in the room.

Homogeneous air distribution and efficient noise absorption are no longer contradictory objectives with SonoPerf Office. The unique microperforation of SonoPerf Office absorbs sound in a very wide frequency range and, at the same time, acts as an ideal outlet for conditioned room air. The cooled air is directed into the room in a deflected air stream. This method of homogeneous air distribution is perceived as

being much more pleasant than air outlets from conventional air conditioning systems. It is the large number of small inclined openings that ensures this good air flow.

SonoPerf Office is perceived visually as a closed surface without holes from a viewing distance of two meters or more, which has the positive effect of concealing the air conditioning equipment installed.



▲ Workplace shielding elements made of SonoPerf Office



▲ SonoPerf Office acoustic ceiling



▲ SonoPerf Office acoustic ceiling with integrated lights



▲ SonoPerf Office absorbers in an unobtrusive white design



▲ Air cooling SonoPerf Office acoustic ceiling in a school building

SonoPerf Office benefits

- Sound absorption class A (highly absorbent) DIN EN ISO 11654
- Broadband absorption even in the low-frequency range (125-4,000 Hz)
- Deflected airflow for homogeneous air distribution
- Fire protection certificates

Designing room acoustics with SonoPerf Office

SonoPerf – a broadband sound absorber made of microperforated electrogalvanized steel (EGS) or aluminum – targets the absorption of disturbing frequencies in a room. Even under unfavorable conditions, strategically installed SonoPerf Office elements create an acoustically pleasant atmosphere.

In cooperation with acoustics experts we will be happy to show you options for achieving the desired noise level values, reverberation times, and speech intelligibility in your office or conference room. Depending on the specific situation, absorption rates of up to 1.0 can be realized.

Detailed measurements for targeted and sustainable planning of acoustic enhancements are available on request.



▲ Open-plan office with SonoPerf Office acoustic elements

Great acoustic conditions with SonoPerf Office

- Speech intelligibility
- Silence to allow concentration
- Discretion

Technical data

Material	Open surface	Material thickness	Max. dimensions
Electrogalvanized steel	8%	0.75 mm	3,000 x 950 mm
Aluminum	8%	0.80 / 1.00 / 1.20 mm	3,000 x 950 mm
Stainless steel	8%	0.70 mm	2,300 x 580 mm

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