Metawell
metal sandwich technology

Metawell® Hospital ceiling

St. Josef hospital, Bochum

Radiant ceiling for hospitals

PLEASANT, CLEAN AND HEALTHY

The ceiling construction in hospitals should not create a hatchery for germs, it must be in a safe and hygienic condition and should be easily cleanable. The closed jointless Metawell® radiant ceiling consists out of an aluminium carrier panel with copper pipe meander and is thanks to its' characteristics ideal for the use in hospitals. The installation of the Metawell® ceiling is just as easy as the installation of a plasterboard ceiling. Unlike the plasterboard, the aluminium sandwich panel cannot absorb any water and hence no germ and mildew can form here. Moreover, the cooling performance is approximately twice as high.
Metawell® radiant ceilings are supplied with a coating surface from the factory side and are easily coated with all kind of paints and special paints used for hospitals.

The Metawell® radiant ceilings can be used for heating and cooling of the room.

The warmth given off by a radiant heating ceiling is sensed as very pleasant. The surrounding surfaces are heated as well and thus the same room temperature can be perceived with less energy expenditure (1 -2 kelvin lower)

In comparison to a floor heating the radiant panel heating has the advantage that the floor temperature does not get too high. Like this, Athlete's foot which spreads easily on a constantly warm floor can be prevented.

The disinfectant, which is regularly used for cleaning does not dry up quickly and therefore is more effective. In comparison to convector shafts and radiator niches which present a dirt problem not to be underestimated, the warmth from above also scores with better hygiene.

Prenatal clinic, University Düsseldorf

SUSTAINABLE AND ENERGY EFFICIENT

Metawell® hospital ceiling elements consist out of an aluminium carrier plate with copper pipe meander. Both base materials are excellent heat conductors. Therefore the Metawell® hospital ceilings respond extremly fast and achieve high performance values.

Furthermore EPDs (Environmental Product Declarations) according to DIN EN ISO 14025 Type III and EN 15804 are offered. The ecological balance of the panels shows a low carbon footprint.

EASIER PLANNING

Our products are available for ArchiCAD and Revit as BIM objects, which enables an easier planning of your hospital ceiling. For free download just visit our homepage www.metawell.com.

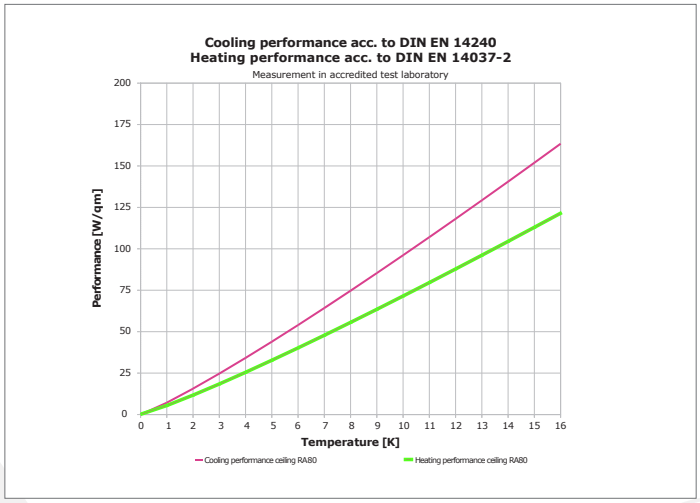


Diagram heating and cooling performance

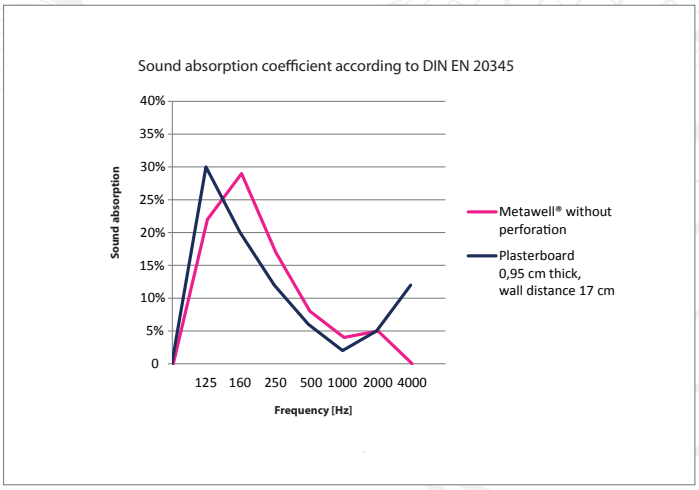
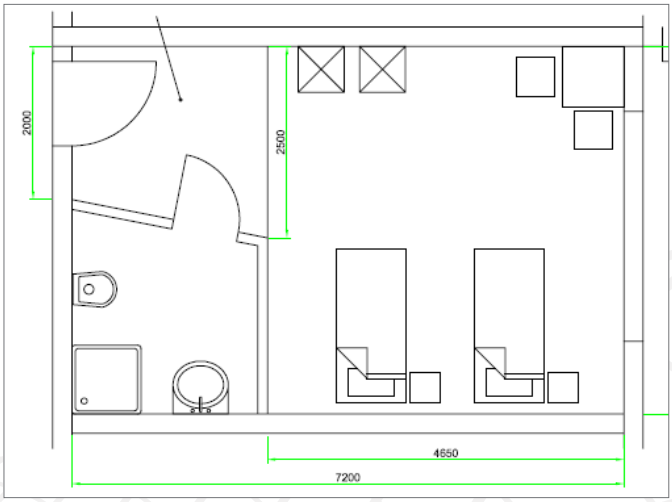
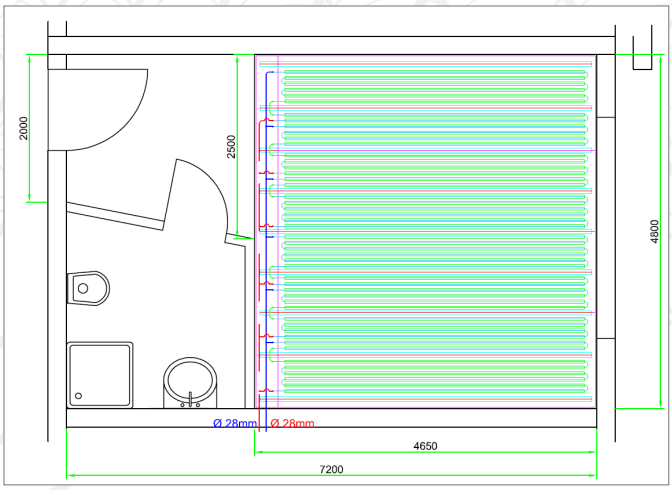


Diagram acoustical comparison Metawell® - plasterboard

Hospital Elisabethinen, Linz, Austria



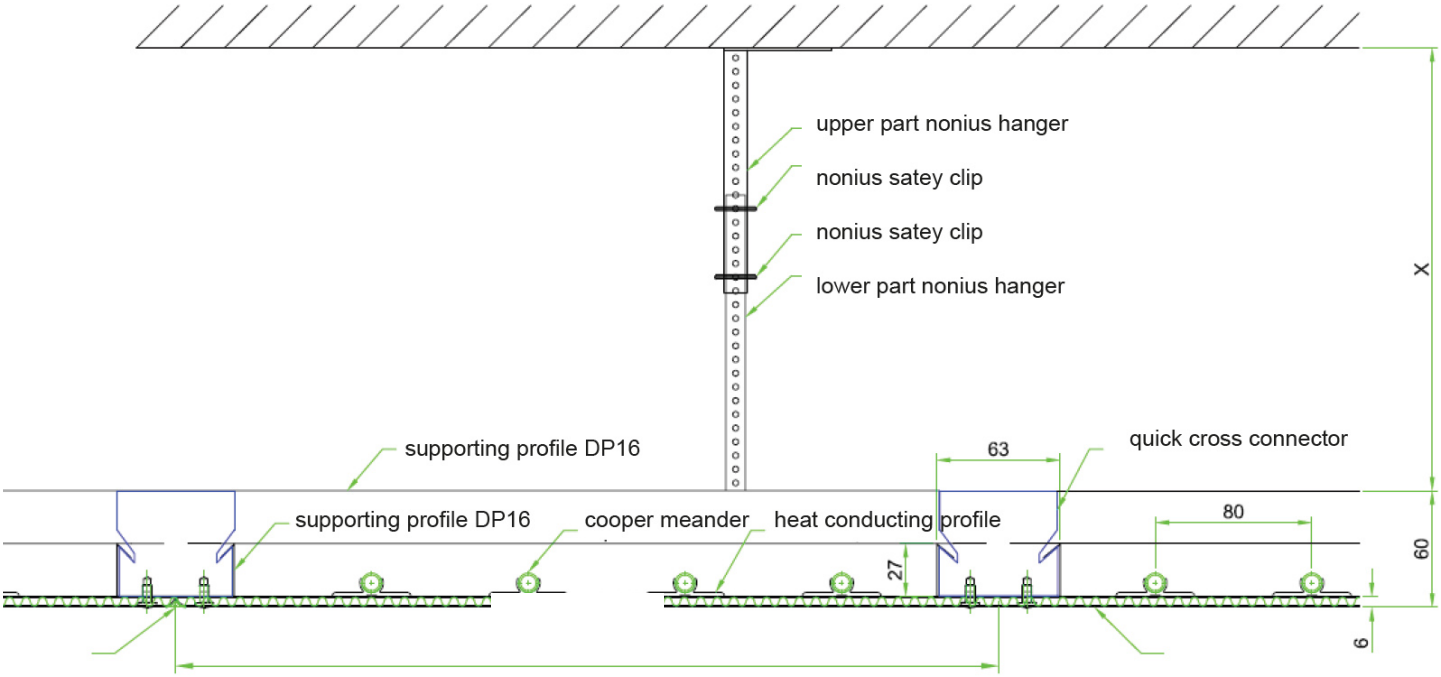
Room layout „typical“ 2-bed hospital room



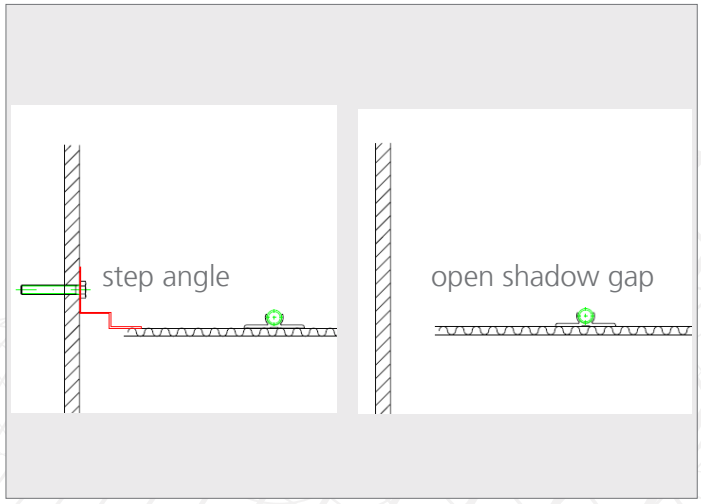
Layout with Metawell® radiant ceiling

HEATING AND COOLING PERFORMANCE

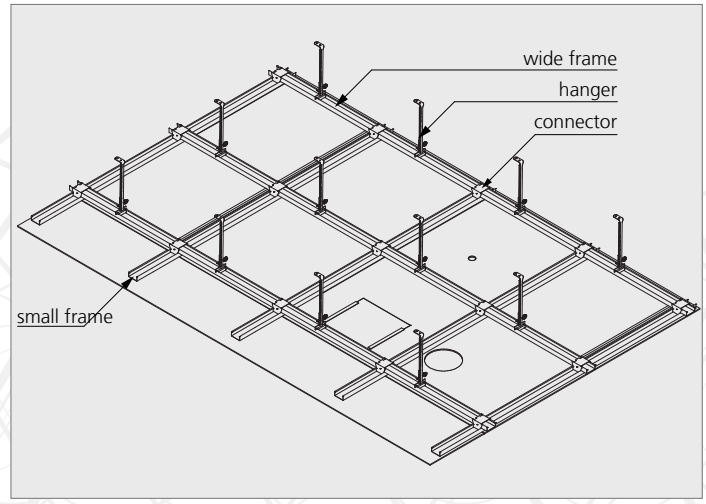
Aluminium and copper are, as already mentioned, excellent heat conductors. The less the ceiling is occupied with additional fittings (e.g. lamps, etc.) the more surface is available for the meanders and consequently an optimal cooling performance can be achieved.



Nonius suspension counter battens



Different wall connections



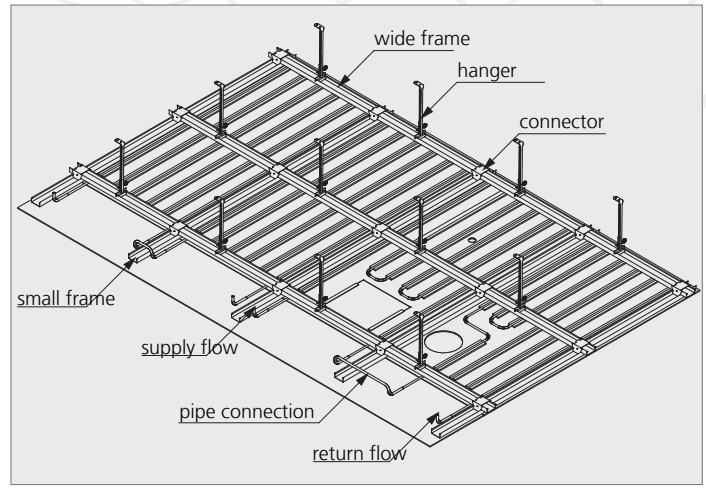
Back side jointless ceiling „passive“

INSTALLATION

Metawell® jointless ceilings are delivered with a smooth surface (without sound absorption) or perforated (with sound absorption) as well as passive (without meanders) or active (with meanders).

Active panels are provided with meanders of copper pipes, which are pressed into aluminium heat conducting profiles. The profiles are invisibly and durably connected to the panel with an adhesive tape and blind rivets.

Jointless ceilings are normally permanently connected to the supply network, ie the meanders are pressed or brazed with the room-sided piping.



Back side jointless ceiling „active“

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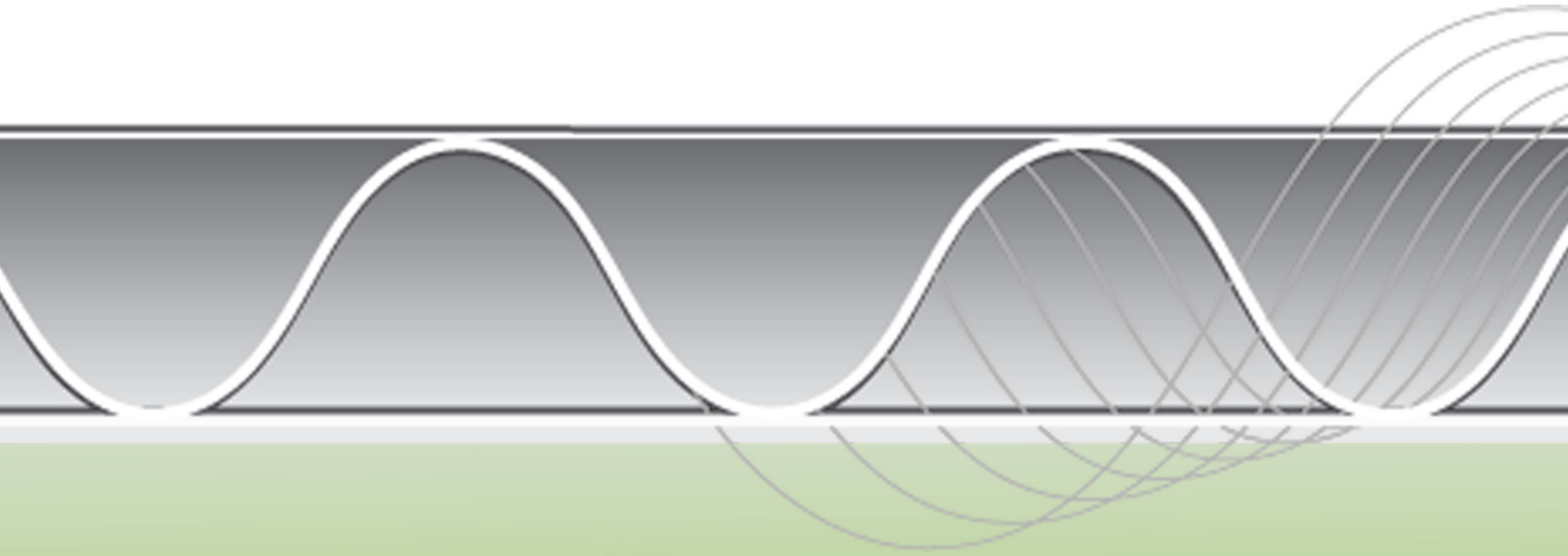

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