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## CASE STUDY

# INGENIOUS WARMTH IN CHURCH

## ST. MICHAEL'S CHURCH | SALZBURG

### THE SITUATION AT THE OUTSET.

Warmth and security - that is what most people seek in church. In the cold season, however, the cold and the fear of chills deter many people from going to church regularly. In the past, incandescent radiant heaters, also known as "leg toasters", were often used under the pews as a rather suboptimal solution. The legs were literally made to glow - but this did not convey a pleasant warmth. ETHERMA puts an end to the uncomfortable church visit in the St. Michael's Church.

### THE CHALLENGE.

Heating churches poses a significant challenge for structural reasons. The architectural peculiarity of the very high interior spaces with arched roofs, and the poor insulation of the masonry makes heating the entire space utterly impossible.

Conventional heating systems which operate using convection warmth, are not suitable for churches because of the air circulation and the resulting heat accumulation in the ceiling. This would mean an immense heating capacity and would be very inefficient - a warm building ceiling would not solve the problem of churchgoers either. Heating with infrared heat makes more sense - because it works in seconds and directly - because it does not first heat the air, which then rises high.

### THE ETHERMA SOLUTION.

ETHERMA has also developed the perfect heating solution here. ETHERMA KST infrared-dark radiators were installed beneath the pews of the St. Michael's Church. These provide localised heating in the immediate seating area and radiate warmth almost exclusively outward through special ventilation slots. They also provide a shield from the cold stone floor. In contrast to the earlier "leg toasters", pleasant warmth is radiated here.

Bank heating was combined with ETHERMA wall heating, to create a pleasant overall room climate. The WST dipole grid heating mats were used. The poorly insulated walls mostly radiated cold - wall heating now helps to shut this out. The heating mats, only a few millimetres thick, were laid under plaster and are thus invisible.

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### THE SOLUTION IN DETAIL

The KST infrared-dark radiators are particularly suitable for churches which are only used once a week. The dark radiators are wired through at the factory, which ensures simple and quick installation without having to open the unit. The device has an integrated overheating protection with automatic restart. The special heating element without glowing heating coil is break-proof and convinces by its high heat output. Electrical connection via mains plug. They are mainly used for localised heating in churches and are suitable for benches, confessionals and organists' benches.

Net heating mats WST were especially developed as wall heating system. It's a factory-made, with Teflon inner- and outer insulation and is used for heating rooms or sealing off the cold in particularly cold walls. With a thickness of only 3.3 mm, the grid heating mat guarantees a very low installation height and is invisible in the room due to its concealed installation.



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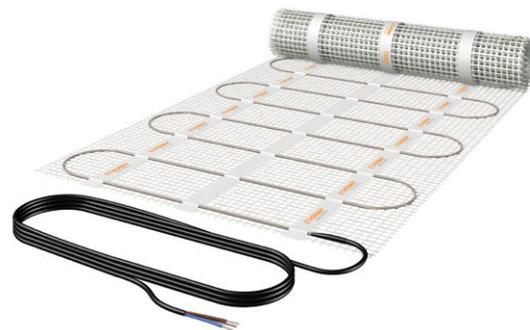
### ETHERMA KST - INFRARED DARK RADIATORS BENEFITS OF THIS PRODUCT

- + Fast warm-up
- + Plugs on both sides
- + Straightforward installation
- + Comfortable ambient warmth



### ETHERMA WST WALL HEATING SYSTEM - PRODUCT BENEFITS

- + Voltage 42 V and 230 V
- + Only 3.3 mm thin
- + Prevention against damp walls
- + Pleasant infrared radiant heat
- + Seals off particularly cold walls



### EXPERTISE AND QUALITY FOR MORE THAN 35 YEARS.



With ETHERMA, you have an expert partner for your heating solutions with more than 35 years of experience. You will benefit from our continuous innovation, high-quality products and modern design. We offer an extensive range of services to support you and can find a product solution suitable for your individual requirements. As an Austrian business active internationally, our electrical heating systems are made to measure, in-house.