

LITHOTHERM®

nachhaltig bauen – wohngesund heizen

THE PHILOSOPHER'S
STONE
IS A LEGEND.
STONES FOR LIVING
SUCCESSFUL SINCE
1990



LITHOTHERM Low temperature

ROOM CLIMATE SYSTEM



4 kg less CO₂

m² for m². Year after year. That's real environmental protection.



OUR COMPANY:

INTERNATIONAL AND CUSTOMER-ORIENTATED

LITHOTHERM Deutschland GmbH is an owner-managed company based in Bad Kreuznach. From here, we commercialise our underfloor heating system throughout Europe, which, in addition to its numerous ecological and economic advantages, is characterised above all by its simplicity. One stone, one pipe: that's all it takes to create a cosy living climate in a room.

Our customers have been coming to us for over 20 years - with a wide variety of requirements and challenges. We provide them with expert advice and always find the right solution.

Our extensive network of carefully selected partners enables us to provide our customers with personalised support. On request, our specialised staff can also provide on-site support.

OUR PHILOSOPHY:

Saving energy, conserving resources, building with natural materials made from renewable raw materials and reducing CO₂. These are the core concerns of our time. And we provide a real blueprint for the complete floor structure.

Anyone who opts for ecological building materials no longer has to compromise on functionality, efficiency or significantly higher costs. We have dedicated ourselves to this topic and have been setting new standards for many years with the Lithotherm underfloor heating system.

The dry, simple and quick installation reduces construction costs. With the addition of appropriate system components, excellent values are also achieved for impact sound and noise insulation.

Natural stone materials are used to create an ecologically, economically and functionally convincing building material. The trend-setting technology of fast-reacting low-temperature heating with heat storage ensures lower energy consumption and thus reduces heating costs.

**LITHOTHERM:
FOR DISCERNING
CLIENTS.**

info: The LITHOTHERM Heating and cooling system reduced CO_2 . m^2 for m^2 – Year after Year.

SIGNIFICANTLY SAVES ENERGY, CONSTRUCTION AND HEATING COSTS

THE LITHOTHERM FLOORING - SYSTEM



Lithotherm is an indoor climate system for regulating temperatures in living and working areas. Centrepiece of the system is the prefabricated LITHOTHERM moulded panel. It consists of the natural stone material lava chippings. This material not only serves as a heat accumulator during the main heating period - it also helps to reduce noise and impact sound.

Uncomplicated installation - short working times

The moulded panels are simply laid floating in drywall construction and joined together using tongue and groove. This reduces the working time considerably.

Short response time-low energy consumption

The direct contact of the heating pipe with the floor covering means that LITHOTHERM requires a very low flow temperature and can also be regulated in a matter of minutes. The room heats up quickly thanks to the short reaction time, which reduces energy consumption and heating costs - especially in the transitional periods. When used optimally, LITHOTHERM saves up to 4kg CO_2 per m^2 . Year after Year.

With an installation height of just 45 mm, LITHOTHERM is perfect for both renovating old buildings and new builds. The heating system can also be used in walls.

IT COULDN'T BE BETTER:

UNCOMPLICATED INSTALLATION, SHORT WORKING TIMES, LOW CONSUMPTION.



APPLICATION EXAMPLES



ALL IN ONE

NO INTERFACES. THIS SAVES TIME AND MONEY.



For the detailed and
tested system superstructures
we kindly ask you to contact
contact us: info@lithotherm-system.de

TECHNICAL DATA

LAVA MOULD PLATE

Dimensions (LxBxH in mm)	510x280x45
Weight	71kg/m ²
Flexural strength	2,03 N/mm ²
Class	F3*
Compressive strength	9,64 N/mm ²
Class	C12*
Bulk density class	1,6 (Range 1400-1600kg/m ³)
Thermal conductivity	0,89 W/mK
Specific heat capacity	rd. 1000 J/kgK
Equalised moisture content	rd. 2 M.-%
Fire behaviour	Class A1



*Tested by the Neuwied Materials
Testing and Research Centre*

SCAN HERE
FOR TESTED
SUPERSTRUC-
TURES



** according to DIN EN 13813 in analogy to the requirement values for floating cement screeds according to DIN 18560-2*

HIGHLY EFFECTIVE - 100% ECOLOGICAL
This protects people and the environment



The triumph of underfloor heating began back in the 1970s. The structure of the systems has hardly changed since then: Thermal insulation, heating pipes, screed concrete. In addition to the advantages, the disadvantages have largely remained: Construction height, weight, moisture and - most noticeable to every customer - inertia. The incorrect arrangement of the thermal mass above the heating pipe means that heating up and down can take several hours/days. This prevents the utilisation of potential savings during the heating transition periods. Such superstructures are therefore no longer up to date.

With Lithotherm, on the other hand, you only heat when heating is necessary.

The heating pipes running directly under the floor covering transfer the heat directly to the room without long waiting times.

By reversing the system, not only is the inertia minimised to the maximum, but the thermal mass is also arranged in such an ideal way that it is only used when it is needed during the main heating period.

This optimisation allows you to benefit from the rapid and targeted controllability required to exploit the savings potential. The continuous improvement of building envelopes (airtightness and thermal insulation) is thus taken into account.

BENEFITS

The Lithotherm system heats rooms faster than conventional systems - and with significantly less energy.

ECONOMY / ENERGY / LIVING CLIMATE

- : Low flow temperature
- : Immediate transfer of radiant heat to the room
- : Control within minutes
- : Saves heating costs in transitional periods
- : Perfect heat and humidity regulation
- : Durable thanks to consistent quality
- : Summer heat protection - winter cold protection
- : Impact sound and thermal insulation
- : Low construction height

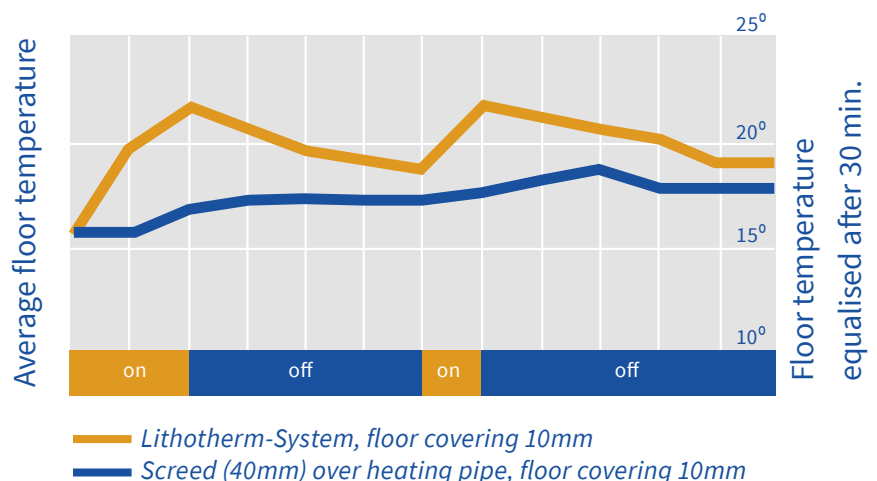
ECOLOGY

- : Conserves resources
- : Natural raw materials: lava chippings (permanently externally monitored)
- : Energy-saving - environmentally friendly
- : Recyclable
- : No problematic substances („hazardous waste“)

VERARBEITUNG

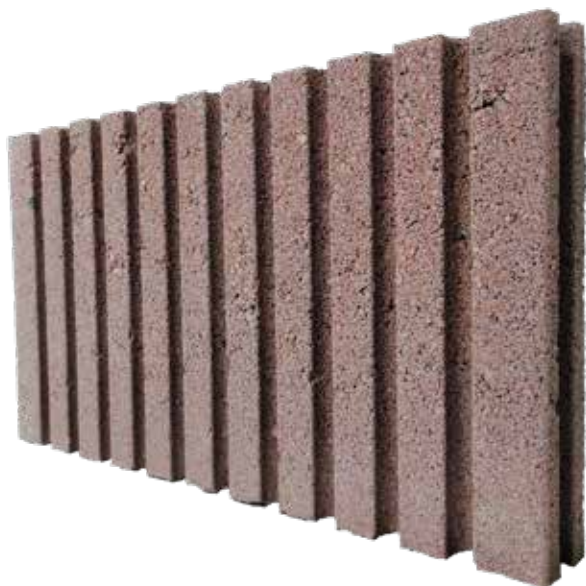
- : Completely dry installation:
 - No drying times = fast processing
- : High dimensional stability
- : Suitable for self-builders
- : Elimination of interfaces

LITHOTHERM IN COMPARISON



APPLICATION AREAS

One stone for different requirements and areas of application.



BASICALLY

- : Wall and underfloor heating
- : Wall and floor cooling system

NEW BUILDING

- : Timber house construction
- : House and flat construction
- : Apartment blocks
- : Schools, day-care centres, public facilities
- : Commercial and industrial construction

RENOVATION OF OLD BUILDINGS

- : Prefabricated house renovation
- : Bathroom renovation
- : Building extension
- : Monument renovation

CONSISTENT ENVIRONMENTAL PROTECTION

THE COMBINATION OF OUR SYSTEM COMPONENTS ACHIEVES UNIQUE RESULTS

CO₂-production of an average detached house (150m²) built in 2001¹:

	Cement screed structure	LITHOWOOD structure
Installation (one-off)	+2.525 kg CO ₂	-3.114 kg CO ₂
Operation (annual)	+1.640 kg CO ₂	+984 kg CO ₂
That means:		
After 5 Years	+10.725 kg CO ₂	+1.806 kg CO ₂
After 10 Years	+18.925 kg CO ₂	+6.726 kg CO ₂
After 20 Years	+35.325 kg CO ₂	+16.566 kg CO ₂

¹ Source: Federal Environment Agency (https://uba.co2-rechner.de/de_DE/living-hs#panel-calc); ÖKOBAUDAT

² The special savings potential lies in the operation of the system.

With LITHOWOOD, you only heat when heating is necessary.

If you have any further questions about the heating method, please write to info@LITHOWOOD.de.

CO₂-Balance in comparison

Body	Cement screed	Lithowood
Installation	+2.525 kg	-3.114 kg
Operation	+32.800 kg	+19.680 kg
× 20 Years	-18.759 kg CO ₂	

This brochure was presented to you by:

**EUROPEAN
CONSTRUCTION MATERIAL RECYCLING AWARD
2015
- FIRST PRICE -**



1661 - CPR - 0099

Tested for compression, flexural strength, impact sound, thermal conductivity, raw material externally monitored, fire behaviour Euroclass A1

PUBLISHER

LITHOTHERM Deutschland GmbH
Am Grenzgraben 15 . 55545 Bad Kreuznach
Tel.: +49 (0)671 204 179 0
info@lithotherm-system.de
www.lithotherm-system.de

