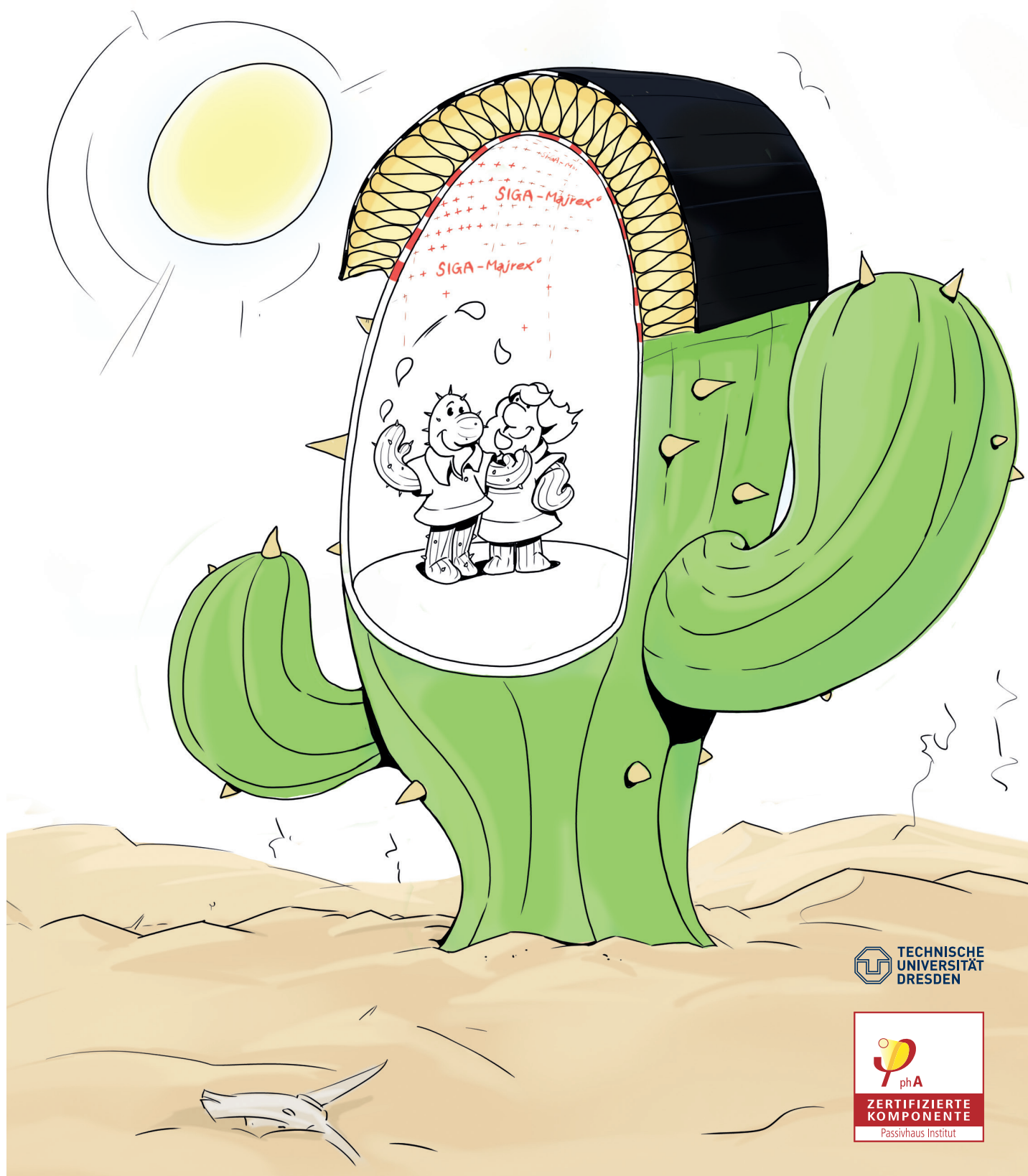


# Majrex®

The safe vapour control layer – thanks to Hygrobrid® technology

**SIGA**<sup>+</sup> 1966



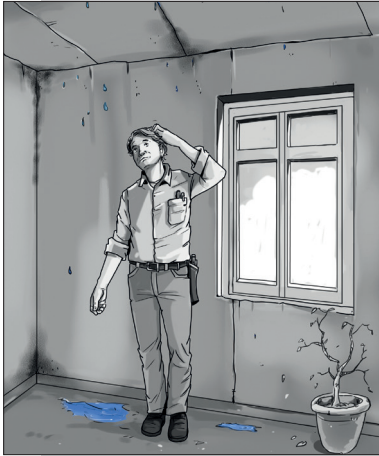
 TECHNISCHE  
UNIVERSITÄT  
DRESDEN

  
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ZERTIFIZIERTE  
KOMPONENTE  
Passivhaus Institut

# The safe vapour control layer thanks to Hygrobrid

# Majrex

## A major challenge

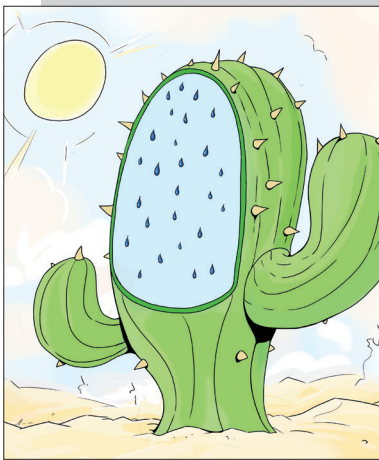


Wood constructions without rear ventilation of the insulating layer are critical in terms of building physics. Structures frequently have no rear ventilation because of cost - or for aesthetic reasons. Moisture from drying screed and plaster as well as enclosed construction moisture can quickly become a problem.

Variable vapour control layers have not been as successful as expected in reducing the risk of damage. SIGA set itself the target of producing a particularly safe vapour control layer.



## The secret



SIGA took a look at nature and asked: Why is it that the cactus can survive extreme climatic conditions such as heat and drought?

The secret: "Moisture transport in one direction only".

It lets moisture in but not out again.

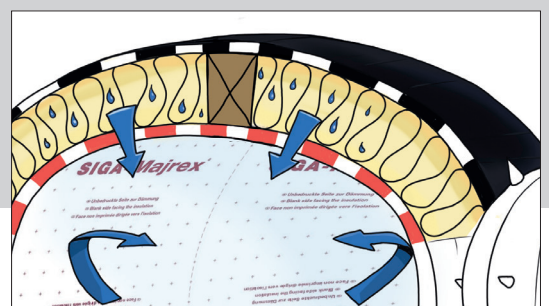
How can we use this ingenious principle for our new vapour control layer?

## New technology

After several years of research and development SIGA has succeeded in deciphering the secret of the cactus.

This led to SIGA's development of Hygrobrid® technology – one-directional moisture transport.

It resulted in the creation of a particularly safe vapour control layer for every building – **Majrex**® with Hygrobrid® technology.



# Moisture control layer – Hybrid® technology

# Majrex®

## The calculation method

See hygrothermal simulations [EN 15026: 2007; WTA 6-2:2014] for externally vapour proof wood constructions without rear ventilation.

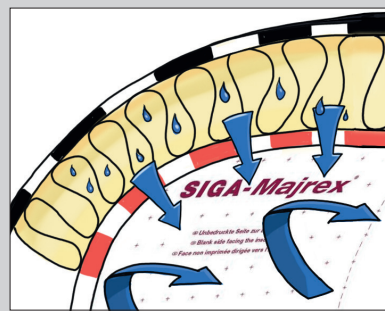
IBK Engineering in Dresden (Germany) has developed the building physics software Delphin further to enable a standardised calculation of directional depending diffusion resistances.

Mathematical proof of Hybrid® technology is possible as of now.

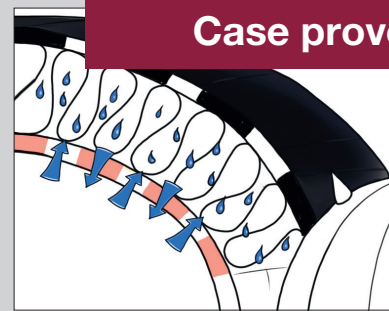


## Greater safety

**Majrex®** ensures better safety for wood constructions even when moisture levels are high - after screed has been laid, when walls are freshly plastered or when the structure is subjected to extreme moisture during use.



SIGA-Majrex® with Hybrid® technology



Conventional variable vapour control layers

## Case proven

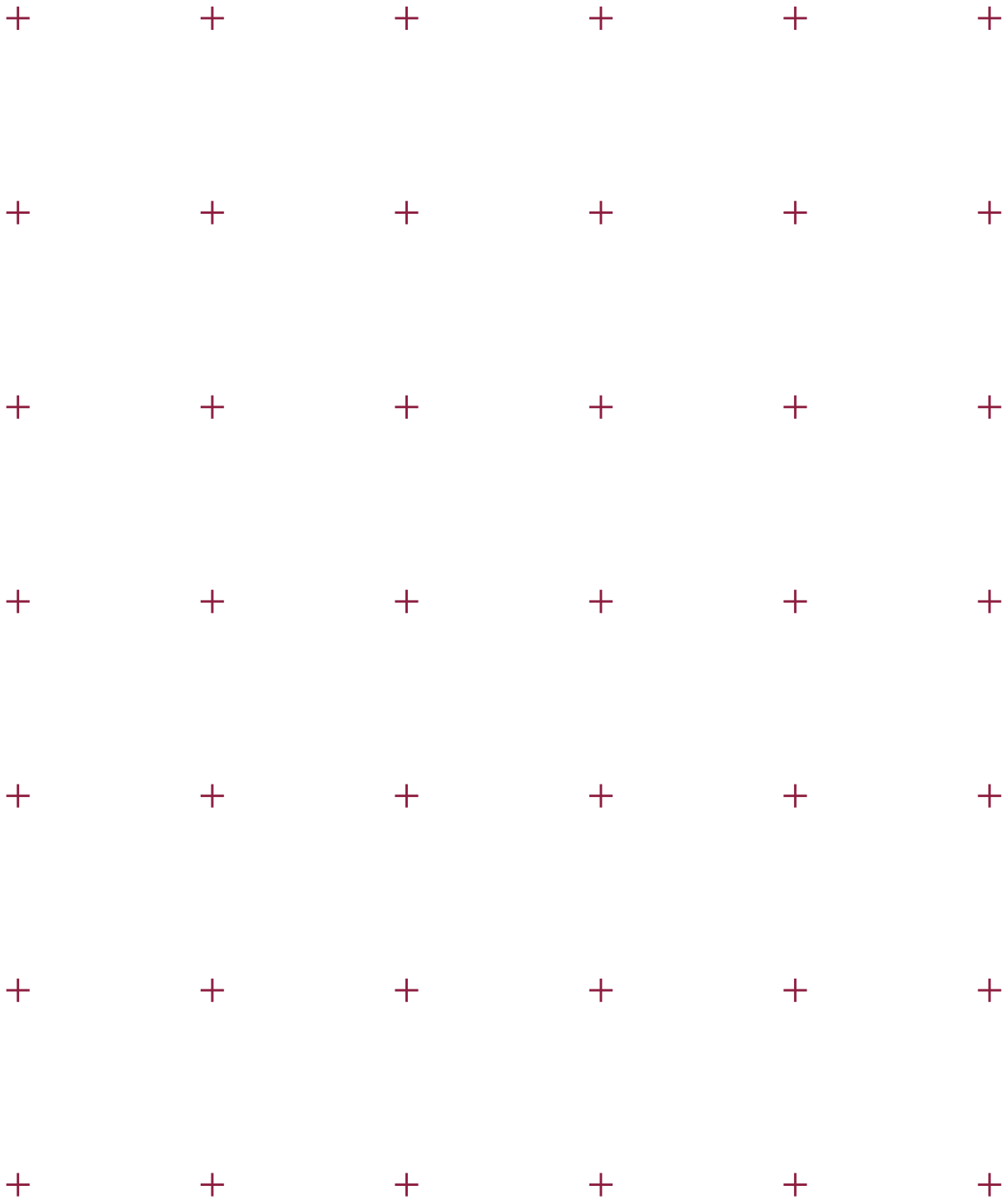
The Technical University of Dresden performed material measurements in the lab and measurements of construction elements in flat roofs in critical climatic conditions.

The measurements prove that **Majrex®** with Hybrid® technology significantly reduces moisture development in the structure compared with conventional variable vapour control layers!

Moisture development within the structure is minimised and moisture transport out of the structure is maximised thanks to Hybrid® technology.

And the diffusion of any moisture that is in the structure to the outside is faster.





**Majrex<sup>®</sup>**  
The safe vapour control layer – thanks to Hygrobrid<sup>®</sup> technology



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