

# Thin, jointless screed constructions

**Schlüter®-BEKOTEC**





## Advantages at a glance

- ✓ **Low assembly height**
- ✓ **Material and weight savings**
- ✓ **Guaranteed crack-free covering**
- ✓ **5-year warranty by Schlüter-Systems**
- ✓ **No joints required in screed**
- ✓ **Non-buckling construction**
- ✓ **Quicker installation pace**
- ✓ **Short construction time thanks to quick curing**
- ✓ **Cost-effective CT/CA-C25 -F4 usable without reinforcement**
- ✓ **High load-bearing capacity up to 5kN/m<sup>2</sup>**
- ✓ **Suitable for all floor coverings**

## The BEKOTEC system

The reliable Schlüter-BEKOTEC covering assembly technology is a system for functionally safe, floating screeds and heated screeds. This enables crack-free coverings made of ceramic, natural stone and other covering materials. The system is based on the patented studded polystyrene screed panel Schlüter-BEKOTEC-EN, which is available in different versions and is directly installed on top of load-bearing substrates or conventional insulation panels. Thanks to its low assembly height, BEKOTEC not only requires less space, but also results in significant material and weight savings compared to conventional screed systems, since the screed only has to cover the studs by min. 8 mm.

As part of the heated ceramic thermal comfort floor Schlüter-BEKOTEC-THERM, the system forms a thin, energy-efficient, and highly responsive floor heating system that is ideally suited for new construction and renovation projects alike.

## Warranty

On the safe side: Schlüter-Systems offers a five-year warranty for the cover assembly's suitability for use and absence of damage, provided all installation instructions were observed and the covering is used as intended.

**Schlüter-Systems**  
PROFILE OF INNOVATION

**Warranty agreement for the Schlüter-BEKOTEC covering assembly**

Project number: \_\_\_\_\_

Construction project: \_\_\_\_\_ City, Post Code: \_\_\_\_\_

Street: \_\_\_\_\_

Floor level: \_\_\_\_\_

Total area: \_\_\_\_\_

Covering material: ☐ EN 2520 P ☐ EN 1520 PF ☐ EN 23 F ☐ EN 12 FK ☐ EN 18 PTS 5

Studded screed panels: ☐ Heated (with Schlüter-BEKOTEC-THERM heating components)

Construction type: ☐ Unheated

Type of use:  
☐ Residential with load up to 1.5 kN/m<sup>2</sup>  
☐ Commercial area with loads up to 2.0 kN/m<sup>2</sup>  
☐ Special agreement for loads up to \_\_\_\_\_ kN/m<sup>2</sup>

Owner / contractor / order given by: \_\_\_\_\_

Date of completion: \_\_\_\_\_

You hereby declare that the warranty is valid only if the warranty is signed by the owner at the time of completion.

**Warranty:**

Warrenton: \_\_\_\_\_ Date, signature: \_\_\_\_\_

Schlüter-Systems KG  
Schindlerstraße 7  
58840 Lennep

Company stamp: \_\_\_\_\_

EN 12 12 12 12 12 12





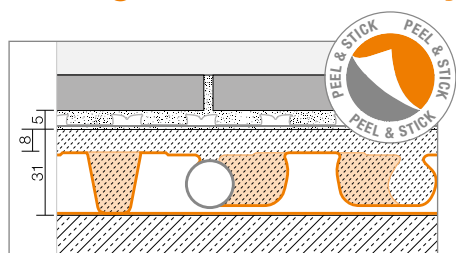
## Low assembly height

Compared to conventional screeds, the Schlüter-BEKOTEC system saves up to 37 mm in construction height, making it an ideal solution for renovation projects. The assembly height depends on the installed studded panel. When using BEKOTEC-EN 12 FK, the assembly height can be as low as 20 mm plus uncoupling membrane and covering. BEKOTEC is also available with an integrated insulation layer.

## Material and weight savings

The estimated screed volume of a conventional screed floor is 61 liters or 122 kg/m<sup>2</sup>. The BEKOTEC system reduces this volume to quantities between 56 and 40 kg/m<sup>2</sup>, depending on the selected type of studded panel. Accordingly, BEKOTEC can save up to 40 litres or 80 kilograms per square meter—an advantage that is also clearly reflected in the design calculation.

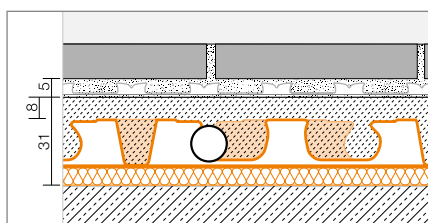
## The right choice for every application area



### Schlüter®-BEKOTEC-EN 23 F

The perfect solution for renovation projects thanks to low assembly height. Also available as a Peel & Stick version.

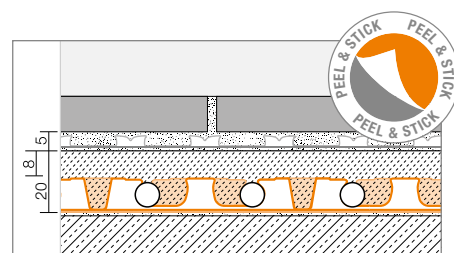
**31 mm**



### Schlüter®-BEKOTEC-EN 18 FTS

With integrated sound insulation to reduce impact sound by up to 25dB.

**31 mm**

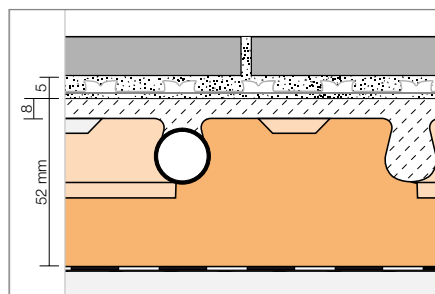


### Schlüter®-BEKOTEC-EN 12 FK

Extremely thin variation for scenarios with minimal height availability.

Also available as a Peel & Stick version.

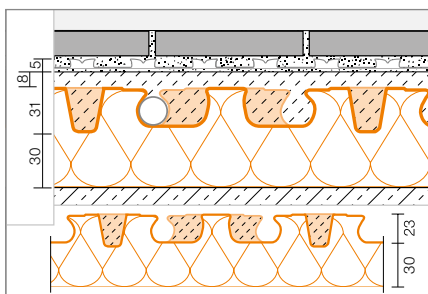
**20 mm**



### Schlüter®-BEKOTEC-EN

With integrated thermal insulation, ideally suited for floor heating systems.

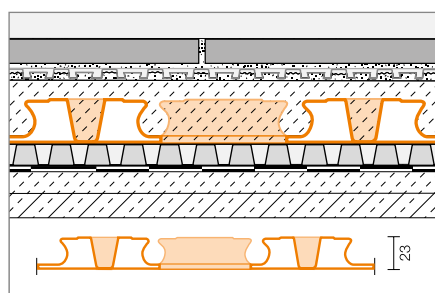
**52 mm**



### Schlüter®-BEKOTEC-EN 23 FI 30

With integrated heat and sound insulation, ideal for floor heating systems.

**61 mm**



### Schlüter®-BEKOTEC-DRAIN

Perfect solution for exterior areas.

**31 mm**

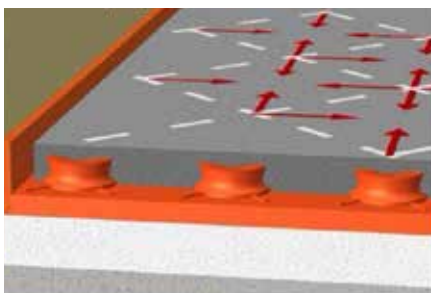
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The system assemblies shown here include the uncoupling/waterproofing membrane Schlüter-DITRA. Schlüter-DITRA-DRAIN 4 or Schlüter-DITRA-HEAT (with the option to attach an additional electrical floor heating system) may be used as well.

For further details and information, please see the step-by-step installation recommendations of the corresponding product data sheets.



## No buckling, no cracks, no joints

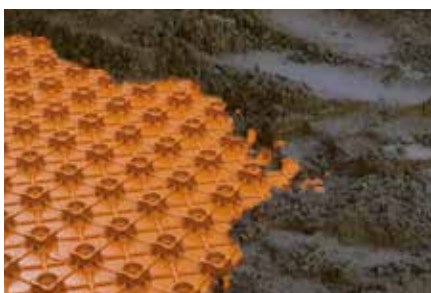


Contraction buckling may occur during the curing phase of screed and affect the entire area. In BEKOTEC covering assemblies, any contraction that occurs is absorbed by the studded pattern of the screed panel. Once cured, the screed is therefore free of inherent stresses, making it virtually impossible for buckling to occur in the area. BEKOTEC assemblies therefore don't show problems such as torn joints at the floor-wall transition and in skirtings.

Since tensions are evenly absorbed over the entire area, no construction reinforcement or control joints are required in the screed. Properly installed BEKOTEC assemblies with the bonded uncoupling assemblies Schlüter-DITRA, Schlüter-DITRA-DRAIN 4 or Schlüter-DITRA-HEAT also prevent cracks from forming in the covering. With the BEKOTEC system, the design of movement joints can be matched to the selected joint pattern of the covering, since the screed can be built without joints and any intermediate or daywork joints can be covered with the uncoupling membranes and are not continued to the surface covering. Of course, the general rules for the dimensions of covering segments still have to be followed.

## Short construction time

Thanks to its easy installation and material savings, screeds made with BEKOTEC can be installed much quicker. What's more, the bonded uncoupling membranes DITRA, DITRA-DRAIN 4 or DITRA-HEAT ensure that the screed can be covered with ceramic tiles, natural or artificial stone as soon as the screed is able to bear weight. This eliminates long waiting times for screed curing and CM measurements and reduces construction time by up to four weeks—a huge advantage for new construction and renovation projects alike. The residual moisture level for calcium sulphate screeds must be  $\leq 2 \text{ CM}\%$ .



## Screed properties

Screeds used with Schlüter-BEKOTEC do not require expensive specialty materials. You can use conventional CT/CAC25 F4 screeds without reinforcement that can be mixed with a screed pump or a drum mixer. Poured screeds are as suitable as moist screeds.

## Quicker installation pace

The installation pace for conventional screed is about  $70 \text{ m}^2$  per day. With Schlüter-BEKOTEC, this can be increased to approx.  $100 \text{ m}^2$  per day.

Time-consuming auxiliary work such as creating movement joints in the screed, installing reinforcement mesh, or adding costly additives is not necessary. In addition, the required screed volume is significantly lower.

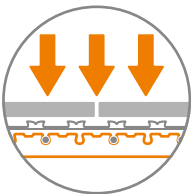




**Up to 25 dB impact  
sound insulation**

## Highly durable

Floor assemblies with Schlüter-BEKOTEC are highly durable and long-lived; the system can easily withstand loads up to 5 kN/m<sup>2</sup> in residential and commercial structures.



## Free design choices

Because of the safe BEKOTEC assembly, there are no restrictions regarding the size of tiles and pavers. Even large-scale elements can be installed without problems and remain permanently free of damage.

## Impact sound

Schlüter-BEKOTEC-EN 18 FTS is a special solution. It includes an integrated 5 mm sound insulation layer, which reduces impact sound emissions by up to 25 dB, although the assembly height is just a convenient 31 mm.

This creates a valuable added benefit for restorations and renovation projects that also pleases the neighbours.

## Suitable for all covering materials

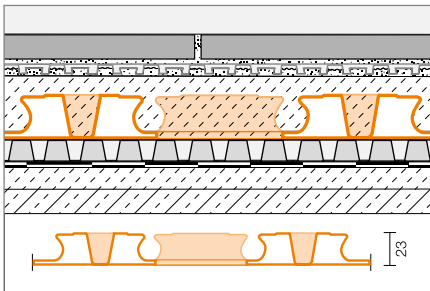
In addition to ceramic tiles or natural stone, Schlüter-BEKOTEC is of course also suited for all other surface coverings and can be used as a universal system in combination with parquet, laminate, linoleum, PVC, or carpeting. If these materials are used, they are directly installed on the screed without Schlüter-DITRA membranes. In that case, the height of the screed has to be adjusted to the corresponding covering materials and the applicable material-specific residual moisture level of the screed must be observed.







## Screed assemblies in exterior areas: Schlüter®-BEKOTEC-DRAIN



Schlüter®-BEKOTEC-DRAIN

Schlüter-BEKOTEC-DRAIN is an ideal solution for reliably functional thin screeds in exterior areas with ceramic tile and natural stone coverings and is very well suited for use of pervious mortar and drainage screeds. The system is based on the studded screed panel Schlüter-BEKOTEC-EN 23 FD, which features regular perforations and communicating drainage channels.

Again, a minimum screed thickness of just 31 mm can be achieved, provided the studs are covered by at least 8 mm. The bonded drainage and uncoupling membrane Schlüter-DITRA-DRAIN can be installed as soon as the screed is ready to bear weight, immediately followed by the installation of ceramic tiles or natural stone.

With BEKOTEC-DRAIN, you are free to choose the dimension of tiles used in exterior areas, for example to continue modern, large-scale tiles uniformly from the living room onto the balcony or terrace. Again, no joints need to be included in the screed, allowing for the perfect adjustment of the movement joints in the covering layer, which have to be created in the mandated spacing with Schlüter-DILEX, to the selected joint pattern.



# Schlüter®-BEKOTEC-THERM

## The innovative ceramic thermal comfort floor

The Schlüter-BEKOTEC system is a quickly installed, thin-layered, non-buckling and tension-free screed assembly.

The heating and cooling components of Schlüter-BEKOTEC-THERM can be used for building low-energy ceramic thermal comfort floors.



## Schlüter®-BEKOTEC-THERM: The innovative ceramic thermal comfort floor

The intelligent heating, cooling, and control technology of Schlüter-BEKOTEC-THERM turns a thin floor construction into an energy-efficient, highly responsive floor heating system. Due to the low height and mass of the screed, the desired temperature quickly reaches the surface, which allows for

operating the floor heating system at low temperatures. That makes the system ideally suited for use with renewable energy sources. Furthermore, bonded uncoupling with Schlüter-DITRA membranes ensures even heat distribution and also eliminates time-consuming cure heating so that the

heated space is ready for use after approx. seven days—up to four weeks faster than with conventional floor heating systems.

### Heating technology advantages

- ✓ Even heat distribution
- ✓ Comfort
- ✓ Hygienic and healthy
- ✓ Easy control options

### Ecological benefits

- ✓ Low supply temperature, low heating cost
- ✓ Effective use of renewable energy sources
- ✓ Highly responsive heated floor assembly
- ✓ Low energy consumption



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### Bathroom renovations with BEKOTEC?

No problem – Schlüter-BEKOTEC-THERM can also be connected to existing heating systems.

# Learn more online

Would you like to know more about Schlüter-Systems?  
The quickest way is to visit our website.

[schlueter-systems.com](https://schlueter-systems.com)



You can also follow us on Instagram, Facebook and YouTube.

