

**INSTALLATION INSTRUCTIONS  
FOR COMB PANEL SYSTEMS**  
SYSTEM SCREED SFM

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**effidur SFM**  
**SYSTEM SCREED**

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SILO

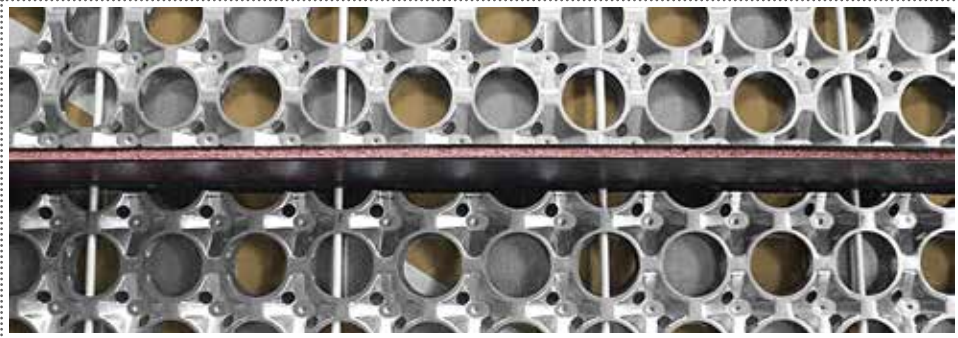
BAGGED CARGO

### PRELIMINARY NOTES

A maximum field size of 300 m<sup>2</sup> (width-to-height ratio max. 2 : 1) at a rectangular room area must be adhered when pouring the effidur system screed upon separation / insulation layer. Heated areas are limited to a maximum field size of 200 m<sup>2</sup>. All rising building parts must have movement joints in the form of border insulation tapes (RDS 1000 / RDS 2000). Larger areas or areas with an unfavorable geometry, such as e.g. corners, large narrow corridors or L-forms respectively doorway areas and between heated and unheated areas must be subdivided e.g. with the self-adhesive professional joint (PF). Additionally the field sizes of the system screed and the planned floor covering are to be adjusted to each other.

#### ATTENTION»

Consider expansion joints according to the machine capacity and necessary field limitations. Here you can see: professional joint (PF) as expansion joint with joint dowels with sound protection (FDS).



Effidur floor systems shall not be exposed to a permanent humidity strain without special measures according to DIN 18195. The use within residential kitchens and bathrooms is possible without problems, if the system is fit with a water blocking system and a border insulation. In areas with an expected humidity strain from the underground, a consistently effective sealing without gaps against rising humidity acc. to DIN 18195 needs to be implemented. This applies especially to „young“ concrete ceilings and soil-touching undergrounds.

Areas with a scheduled used floor drain (e.g. flush-type showers) as well as garages cannot be fit with effidur SFM! We are glad recommending you an alternative backfilling material for these applications.

### POURING OF SYSTEM SCREED

We recommend the backfilling of the effidur comb panels with the system screed SFM, since it is especially adjusted and guarantees the conformity with the existing tests!

One bag of effidur screed SFM (25kg) is mixed with 4.0 l of clear water with the help of a fine fettling machine with agitator or for small areas of up to 10 m<sup>2</sup> manually with an electrical mixer. For larger areas the screed shall be poured from a screed silo with the help of a silo mixing pump. The screed can only be poured at temperatures between +5 °C to +30 °C! The screed consistency is adjusted with a 1-liter testing drum (ø 7 cm; filling height 26 cm) upon a horizontally aligned, dry plexiglass disc (or comparable underground, minimum 50 x 50 cm) with the specified flow spread (fig. 1).

The right mixing ratio enables an easy pouring, the complete backfilling of the comb panels (fig. 2) and the fast development of a surface ready for floor covering.



1

Test of the flow spread.  
**FLOW SPREAD» SFM» 38 - 42 cm**



2

Complete backfilling of the comb panels with system screed SFM.

Depending on the assumable load situation according to DIN EN 1991-1-1(/NA), the existing resp. planned insulation layer, the floor covering etc. the comb panels are to be backfilled with a minimum thickness of system screed SFM. For evaluation take the excerpt from survey report of MPA-Stuttgart into consideration (see chapter FLOOR RENOVATION SYSTEM WP – INTRODUCTION). An additional thickness might be necessary depending on the underground / planned floor set-up!



**3**

Venting of the system screed with a spiked roller.



**4**

Venting of the SFM with a buffing tool, alternatively also with a wiper.

When pouring, no water shall separate from the screed. The freshly poured screed SFM is wobbled with a buffing tool / wiper, a hard broom or a spiked roller at least once in longitudinal and once in a lateral sense. This way the material vents and levels itself out. (fig. **3** and **4**)

### ADVICE!

**The comb panels are to be backfilled with an overlap of system screed of minimum 5 mm to a maximum of 20 mm. Please also pay attention to the chapters INSTALLATION INSTRUCTIONS FOR COMB PANELS, PROTOCOLS and the data sheet for system screed!**

When flooring with ceramic tiles or natural stone with plasticised grout in a middle bed method and without sealing requirements, the overlap of system screed upon the comb panels can be abandoned. Pre-condition is a flooring format of up to 0,1 m<sup>2</sup>, a pressure resistant underground as well as a flatness tolerance of the sub-construction according to DIN 18202. We recommend the coordination with the executing craft.

When backfilling heated floor constructions with system screed during wintertime, it has proven successful to fit the screed with the floor heating operating with a maximum flow temperature of approx. 20 °C. This way you achieve the heating of the building structure and the surrounding air and the occurrence of excessive thermal strains during the heating-up process is minimized.

### DRYING OF THE SYSTEM SCREED

The freshly poured system screed needs to dry out without hindrance. The temperature of the building site must be at least +10 °C. The use as storage area for building material etc. is not allowed during the drying process!

The freshly poured SFM is to be protected for 2 days from air draught, frost and direct solar irradiation. Subsequently, start ventilating. The drying out is facilitated through a so-called intermittent ventilation (2-3 times daily opening of all windows and doors for approx. 15 minutes and then closing again), additionally start heating if applicable from the second day, beginning with a flow temperature of 25 °C.

In order to achieve a faster readiness for floor covering the use of humidity removal devices after 7 days is licit, if their withdrawal performance is adjusted to room volume and air humidity. Depending on the building site temperature and the device type an additional heat source might be required.

For heated effidur floor systems the heating contractor shall compile a protocol „functional heating/ ready for floor covering“, whereby the flow temperature needs to be set between + 35 °C and + 45 °C depending on the dimensioning. (see chapter PROTOCOLS).

A warranty for the floor system with underfloor heating is only effected if a protocol for functional heating /ready for floor covering exists in due form and is handed over from the heating contractor to the builder resp. site manager immediately after completion of the heating ready for floor covering.

Reference value for the drying period of heated system screed with a thickness of 25 m: approx. 7 to 10 days. For unheated effidur floor systems an empirical formula for the drying period of the system screed is a time span of one week per centimeter of installation thickness.

Single occurring craquelling cracks (hair-line cracks) after the screed installation are only superficial and influence neither its load-bearing capacity nor its fitness for use. They are not a defect and can professionally be closed.

Resilient movements of the completed comb panel system, especially in room corners when fitted as floating floor, are constructively necessary and depending on the load as well as the thickness and material of the used insulation material.

### COVERING OF THE SYSTEM SCREED

The cut-off of projecting border insulation tapes (RDS 1000 / RDS 2000) resp. joint profiles (PF) shall only be effected after fitting of the floor covering resp. after the hardening of fillers when using textile or elastic coverings.

The system screed is suited for all common indoor floor coverings (e.g. carpet, laminate, parquet, tiles, natural stone).

When flooring pay attention to all common standards and guidelines and especially to the according manufacturer's instructions.

The system screed SFM needs to be dry before flooring with diffusion resistant / vapour-permeable coverings. (ready for covering = 1,3 CM-% resp.. = 1,8 CM-% residual moisture). You may find detailed information for the system screed SFM at the building material data sheet.

Depending on the planned floor covering it might be necessary to grind, fill and undercoat the finished system screed. The effidur SFM always needs to be ground off, if its surface consists of soft, instable zones or of thin, hard shells that easily peel off. Generally the effidur system screed does not tend to such surfaces when being fit professionally (the correct flow spread is essential). Nevertheless, finishing works of consecutive crafts often lead to a contamination of the screed surface. The floor covering, the adhesive, auxiliary materials (undercoating / filling etc.) and the SFM ready for covering need to form an interlocking connection in order to assure the required adhesion of the floor covering.

THEREFORE, THE FOLLOWING PREPARATORY MEASURES MIGHT BE NECESSARY»

- » Grinding of the system screed (cleaning grinding)
- » Vacuum-cleaning of the dust with a high-performance industrial vacuum cleaner
- » Grounding of the SFM with adequate priming coat

These working steps serve as preparation for the floor covering and are to be effected by the executive specialized craft. All three working steps are special services, that are to be announced and reimbursed separately acc. to VOB, part A, § 9.

In case drilling or cutting within the effidur floor system is necessary for structural reasons, this is only possible after preliminary planning and in accordance with the heating contractor and the architect. The position of the heating pipes within the screed needs to be considered!

### DISCLAIMER

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