

Preliminaries by the Customer			FUTURE SHAPE
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Preliminaries by the Customer for a fixed SensFloor® installation

This document describes the necessary preparations to be carried out by the customer before work can begin on a fixed SensFloor installation by Future-Shape or a company certified by Future-Shape. These preparations concern the standard-compliant preparation and testing of the subfloor on the one hand and the installation of flush-mounted boxes and top-hat rail housings and the associated empty conduits for the power supply of the SensFloor Underlay on the other. The necessary connections to the indoor call system and LAN are also described.

Please read the information carefully and confirm it with your signature. The points listed are a prerequisite for the smooth installation of the SensFloor Underlay and the SensFloor receiver unit and are part of our offer. If the preparatory work is carried out incorrectly or incompletely, any additional costs incurred for materials, working time and travel expenses will be invoiced separately.

1) Testing the floor covering

Selection of suitable floor coverings	If the floor covering selected by the customer is not one of the floor coverings already certified by Future-Shape (see document "Floor construction"), it must be tested for its suitability with respect to the capacitive measurement principle prior to a SensFloor installation. For this purpose, the customer provides Future-Shape with a material sample of the original floor (approx. 1 m ²) for testing. Suitability tests regarding residual pressure behavior and fire protection class classification are expressly unaffected by this and must be carried out separately! Information on carrying out these tests is available from Future-Shape.
Adhesives for installing floor coverings	Adhesive materials for installing floor coverings and tiles on the SensFloor construction must be certified by Future-Shape and the floor covering manufacturers. You can find out which adhesives are already certified for which floor structures in the document "Floor construction".

2) Floor preparation for installing the SensFloor Underlay under floor coverings and parquet

Pre-treatment of the subfloor	Proper SensFloor installation requires a perfectly even subfloor surface in accordance with DIN 18202 - line 3 column 3 with an evenness tolerance of <=4mm per 1m . Please note the installation height of approx. 3 mm for the SensFloor Underlay or the total installation height according to the selected installation scheme to avoid tripping hazards at the transitions. On new screeds, the residual moisture must be checked by measuring the CM prior to troweling. Optimum results regarding the evenness of floors are generally achieved when self-levelling compounds are used. The leveling compound must be sanded and thoroughly vacuumed after drying.	
CM measured value for cement screed	without underfloor heating max. 2.0%	with underfloor heating max. 1.8%
CM measured values	without underfloor heating max. 0.5%	with underfloor heating max. 0.3%

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Anhydrite flowing screed/calcium sulphate flowing mortar		
Important documents	Prior to laying work for the SensFloor, the transmission of the CM-value measurement protocol is mandatory. In case of floor heating, the protocol of the heating phase to achieve the readiness for covering must be provided as well.	
Minimal temperature of subfloor	15°C before, during and after laying the SensFloor Underlay	

3) Floor preparation for installing the SensFloor Underlay under ceramic tiles

Pre-treatment of the screed	The same requirements apply to tile coverings as already mentioned in point 2). In addition, waterproofing is required for wet rooms . The individual steps of the process and the special materials used can be found in the document " Tile installation with Codex " which you can obtain from Future-Shape. Please note: If you are planning to lay tiles on the walls beforehand, a minimum distance of 20 cm from the floor must remain free for the time being to be able to install the sealing tape between the wall and the stabilizing layer over the SensFloor.	
CM measured value for cement screed	without underfloor heating max. 2.0%	with underfloor heating max. 1.8%
CM measured values Anhydrite flowing screed/calcium sulphate flowing mortar	without underfloor heating max. 0.5%	with underfloor heating max. 0.3%
Important documents	Document " Tile installation with Codex ". Otherwise, identical to other floor coverings	
Minimal temperature of subfloor	Identical to other floor coverings	

4) Preparation of the electrical installation of the SensFloor system

Switch box	To accommodate the SensFloor room terminal (SE10-H) and other SensFloor components, a plastic switch box must be available and accessible in the room/apartment and equipped with at least a 230VAC 0.5A power supply. In apartments, the switch box must be in a central position to enable perfect radio communication between the SE10 and the SensFloor Underlay. Depending on the expansion stage of the SensFloor system, a space of two top-hat rail rows of twelve units each is required. The position of the switch box must be agreed in advance with your SensFloor planner.
Connection of SensFloor Underlay - alternative A: Power supply in flush mounting box	To power the SensFloor Underlay, a 47 mm deep double flush mounting box with empty conduit up to the edge of the floor must be provided for the installation of a flush-mounted power supply unit. This empty socket must be equipped with a fused 230VAC cable including earthing (PE protective conductor). A separate double switch box with empty conduit must be provided for each room fitted with SensFloor.

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Connection of SensFloor Underlay - alternative B: Power supply unit on top-hat rail	Instead of a flush-mounted power supply unit, a power supply unit can also be installed in the switch box . To do this, an empty socket must be provided as a junction box in each room that is equipped with SensFloor and is to be supplied via the central switch box. An empty conduit must run from this junction box to the floor edge of the subfloor and another empty conduit to the switch box.
SensFloor switch-off Alternative A: Key switch / pause switch	To temporarily switch off the SensFloor Underlay in the room (e.g. during floor cleaning), a switch box (depth 47 mm) can be provided for a key switch/pause switch in the entrance area. The box must be equipped with an empty conduit up to the switch box.
SensFloor switch-off Alternative B: Switching via building automation	If the power supply to the SensFloor Underlay is to be switchable via the building automation system , a corresponding relay/contactor must be provided in the switch box.
Optional: Forwarding to an indoor call system	If alarms/events are to be reported to a call system, a free input of the call system in the switch box must be available and ready for testing for each individual function (e.g. fall report, activity notification, ...).
Optional: Forwarding to a building automation	If alarms/events are to be integrated into the building automation system, binary inputs must be provided in the building automation system according to the number of alarms/events to be reported. The building automation system is programmed by the customer.
Optional: Direct control of devices	If devices, such as orientation lights, are to be controlled directly by the SensFloor room terminal, a connection cable must be available in the switch box for each device as well as a technical description with connection diagram. The devices must be ordered and installed by the customer.
Optional: Integration of an external sensor	If an external sensor (e.g. motion detector in the bathroom) is to be integrated into the SensFloor system, it must provide a potential-free output in the switch box.
Remote maintenance	For remote maintenance of the room terminal, an Internet connection (RJ45) must be available and enabled in the switch box.

Please note:

- It is essential to switch off the SensFloor system to avoid false alarms during cleaning.
- All required options must be agreed in advance with the SensFloor planner.

5) Preparation for the ward terminal

Network connection for room terminal	An RJ45 connection with a connection to the customer's LAN must be available, accessible and ready for operation in the switch box of each room.
Connections for station terminal	Two 230 VAC sockets and an RJ45 connection with a connection to the same LAN in which the SensFloor receivers are located must be available and functional at the intended location of the ward terminal.
Remote maintenance	If remote maintenance is required for the ward terminal, the Internet must be accessible and activated for the station terminal via the RJ45 connection.
Network addresses	Sufficient free addresses (subnet mask 255.255.255.0) must be available for the ward terminal and all room terminals.

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6) Declaration of acknowledgement

With the following signature, the customer declares that all the above preliminary measures have been understood and will be completed by the date of installation of the SensFloor system.

Remarks/Notes

Place/Date

Name/Signature

Stamp