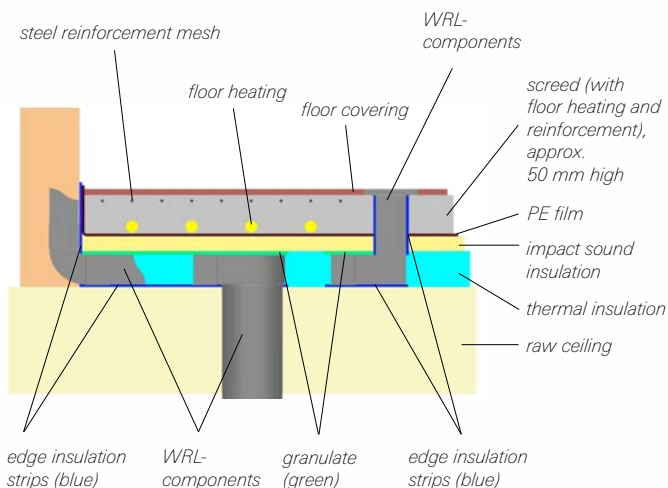


DESCRIPTION OF ASSEMBLY OF DUCTS AND FITTINGS IN SCREED FLOORING

1. Structure

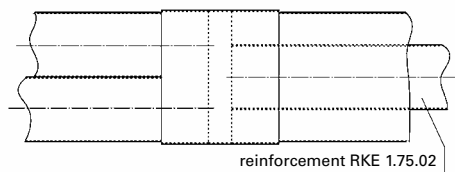
The schematic diagram in Figure 1 shows the floor construction recommended for the assembly of galvanized components for residential ventilation.

Figure 1



Ducts and fittings with a nominal diameter of 30/100 to 80/150 are designed for a screed coating of up to 50 mm. For nominal diameters 30/200 to 50/300 we recommend the use of two duct pieces each 30/100 in parallel for 30/200 etc. in order to increase the peak load strength. Alternatively, the duct reinforcement RKE 1.75.02 can be used in exceptional cases (cf. Figure 2).

Figure 2



There should be a distance of 100 mm between two duct sections, firstly to ensure sufficient load-bearing capacity and compressive strength of the screed, and secondly to

ensure the screed can fulfil its task as a load distribution layer. The duct sections are best installed along the walls of the room since dynamic live loads are at their lowest here. Edge insulation strips should be fitted where residential ventilation components come into contact with concrete or screed (cf. Figure 1). These strips serve to decouple the components acoustically and to prevent direct contact with the concrete. Corrosion is therefore not to be expected. Gaps or spaces between the ventilation components and the thermal insulation should be filled with granulate. The impact sound insulation should not be interrupted by the ventilation ducts. We therefore recommend that the impact sound insulation be fitted over the thermal insulation and the ducts (Figure 1). Contact between the ducts and the screed is thereby avoided and possible corrosion is effectively prevented.

Stepping on the ventilation ducts before covering with concrete should be avoided (point load); sufficient drying time should be allowed after concrete has been laid.

Steel reinforcement mesh, e.g. N 141, Q 131, or screed webbing can be fitted over the duct to ensure the load-bearing capacity of the screed and to avoid cracks forming. There should be an overhang of 100 to 150 mm at the sides.

2. Compatibility of roll-galvanised (Sendzimir) sheet steel with concrete

The surfaces of roll-galvanised sheet steel show high resistance to corrosive attack from concrete and rainwater. However, additives used to improve the characteristics of the concrete may, in connection with larger amounts of residual water, cause aggressive reactions. If contact is prolonged, particularly in a permanently wet environment, the zinc layer may corrode; this can be seen on the surface as efflorescence or white bloom. The corrosion process is brought to a halt as soon as the moisture is removed from the galvanised component. If the corrosion process continues over a longer period of time (1 - 2 years), the layer of zinc is removed and the sheet steel corrodes.

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