

World Radon Solutions Database

Existing Buildings

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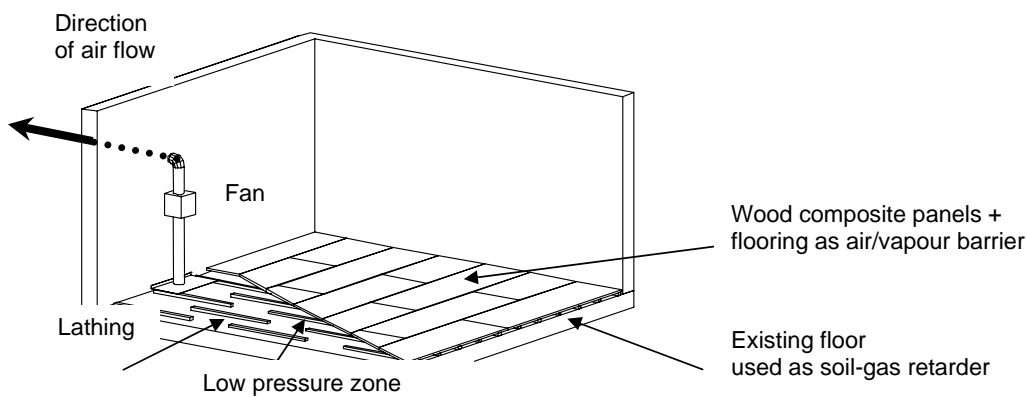
Case Study

Sheet N°

Type DEPRESSURISED HOLLOW FLOOR

Country Switzerland

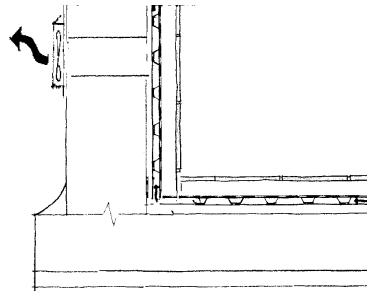
Illustration



Fan and variable frequency controls



New floor, about 3 cm thick



System enhancement: floor and walls

Description

The existing floor is not modified, it is used as soil-gas retarder, but it is necessary to seal the cracks (if you don't the fan needs to be larger and consumes more electricity). The new floor will be as tight as possible. The negative pressure in the hollow part reduces tremendously the possibility that the radon could penetrate in the room. The radon is evacuated outside through the pipe.

Selection

This system is appropriate when the floor is in bad shape, the room is high enough (height reduced at least 3 cm) and when the radon is coming mainly from the floor. This low cost system doesn't require deep knowledge about the building (DIY).

Pre-installation Diagnosis

Before you start work you can easily test this system. Lay a polyethylene sheet on the floor and attach it to the walls. After that, install a temporary fan to evacuate the air between the sheet and the floor and measure the radon concentration in the room with a continuous monitor.

It is better to effect this simulation in the cold period.

Radon reduction achieved

Radon reduction from 1400 Bq/m³ down to 50 Bq/m³

Problems

This configuration (3 cm) is thought only for domestic use (capacity kg/m²).

The exhaust vent should be sheltered (snow, rain) and be at least 2 metres away from windows and doors.

System enhancements

This application could be extended to the walls.

Further Information

More information about this system in the "Swiss Radon Guide" could be bought or downloaded from our website WWW.CH-RADON.CH

www.bag.admin.ch/strahlen/ionisant/radon/pdf/d/Radonhandbuch-en.pdf

or direct from

Swiss Federal Office of Public Health

Division of Radiation protection

Radon Technical and Information Centre

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Date Prepared : July 2003