



European Radon Solutions Database

Prepared by
: ERRICCA 2 *European Radon Research and Industry Collaboration Concerted Action*
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Existing Buildings

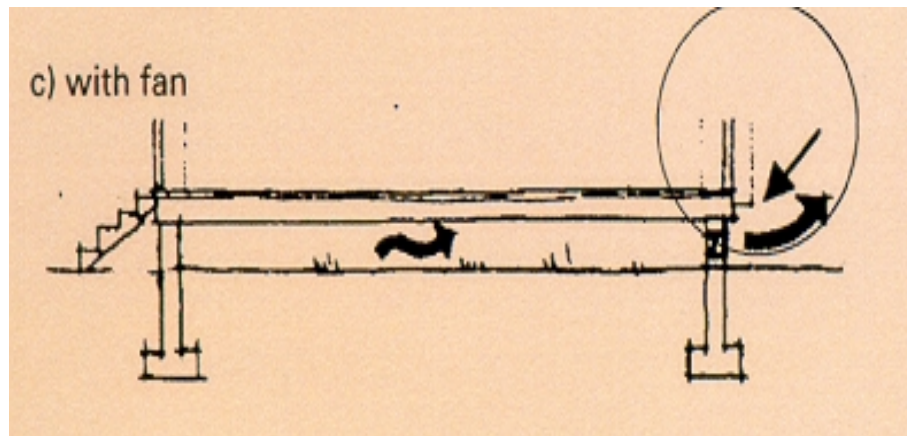
Case Study

Sheet N°

Type | Depressurization of the crawlspace

Country | Switzerland

Illustration



Description

Mechanical ventilation can also be applied in crawlspaces. This depressurises the basement, which prevents transport of the basement air into the upper storeys (only one opening).

Fans: Axial fan, 10 to 100 W with variable frequency controls.

The exhaust vent should be at least 2 metres away from windows or doors

Selection

Building with existing crawlspace(s).

Pre-installation Diagnosis

If it's possible measure the radon concentration in the crawlspace.

Check the crawlspace configuration. It's important to know if the crawlspace consists of several parts. Make a hole (only one for each part) through the external wall or the floor. Use a fan to create a depressurization in the crawlspace and measure the radon concentration with a continuous monitor in the inhabited rooms.

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

Radon reduction achieved

Radon reduction from 1200 Bq/m³ down to 50 Bq/m³

Problems

If there is a furnace **above** the crawlspace in question, there is a risk of poor combustion and thus carbon monoxide poisoning. This should be carefully checked; it may be necessary to use a CO detector.

Sealing: It's very important to seal around the tube to prevent air leakage.

System enhancements

If the crawlspace consists of several parts, they must either be linked or ventilated separately.

Additional measure: If the crawlspace is accessible, sealing it with a foil may improve the situation. The foil, at least 0.5 mm thick, is laid on the soil, welded and sealed off from the walls.

The fan's energy consumption can be reduced (power and hours). Measure the radon concentration with a continuous monitor to find out the minimum capacity required to have a sufficient effect. The system can be possibly turned off in the summer and certain hours of the day.

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
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