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Dehumidification of crawl space

It's important to dehumidify a crawl space to protect the house and foundation against mold and rot.

In Scandinavia, it is common to build houses with a crawl space. That means that the house is built approximately 1 meter above the ground and enclosed on all four sides. But since the crawl space is enclosed it's hard to know what the house looks like under the first floor. If the crawl space is not dehumidified it can get very wet and the risk for mold growth is high. It may even be so bad that the floor structure has rotted and deteriorated, which can cause the foundation to weaken and become unsafe.

What causes mold growth?

When the humidity is over 70% mold can start to grow. Throughout the year the relative humidity outdoors is for most part over 70%, which makes the air even more humid in a crawl space. Sometimes, during the summer even condensation can form on the floor beams and joists in the crawl space. This is due to the warm and humid air from the outdoors making its way under the house when the foundation is still cool. The air then cools down and the relative humidity increases. Thereof it is very important to dehumidify a crawl space and not only have outside air ventilation.

Prevent moisture problems

It's not complicated to install a dehumidifier, but it takes knowledge and experience to do so because the layout of crawl spaces may be different from home to home. That means, that all the installations are custom made.

The installation creates negative pressure in the cellar. This The dry air is blown out reduces the problem of odour through a system of pipes from the foundation, and is also a (vellow arrows) and is spread benefit in radon houses, as the gas throughout the whole crawl is extracted from the foundation. space when it is drawn back in to the dehumidifier (areen arrows). To prevent the ground emitting moisture, it can be covered The dehumidifier reby a plastic film. The film is moves the moisture held in place by stones. Sand, in an air current that blown outside the which absorbs and binds house (blue arrow). moisture, should be avoided. have blocked to prevent moist outdoor air from entering the foundation.

With a DST dehumidifier, it is possible to minimize the energy consumption. This due in part to our proprietary humidistat controller that maximizes efficiency. The humidistat will automatically start the dehumidifier when the humidity is too high in the crawl space and turn it off when the humidity level has reached the desired setpoint, typically 50%. It is possible to connect a control box with a lamp to the humidistat, that will warn if the humidity gets too high in the crawl space. The control box can then be installed inside the home where it can be easily monitored.

Contact us and let us help you protect your house against unnecessary humidity problems.

DR-010B dehumidifier from Seibu Giken DST commonly used in crawl space installations

Facts about humidity

100%RH Fog or rain

90%RH High risk for bacterial growth

80%RH Annual average value outdoors in Sweden

70%RH Risk for mold and fungal growth increases strongly

55-65%RH Max humidity for corrugated cardboard

50%RH Risk for corrosion greatly increases

35-40%RH Carpentry timber drying

approx. 30-40%RH Storage of photographic material

20-25%RH Max humidity during manufacturing of maize flour molds

20%RH Max humidity for manufacturing of effervescent tablets

10%RH Max humidity during gelatine manufacturing

1-2%RH Max humidity during lithium battery manufacturing

*RH = Relative humidity, rather simplified, is "the quantity of water in the air as a percentage, compared with the air's maximum allowable water content at the temperature in question". 100% RH = steam.

Effective drying with dehumidification

Car and truck washings are easily affected by rust and mold, as there is always a lot of water in circulation. If the carwash enclosure is being dehumidified these problems will not occur.

In maintenance and production industries dehumidification can be very efficient. Some places can seem more obvious to dehumidify than others, for example a carwash. DST's representative Kryotherm in Finland have sold dehumidifiers that have been installed in carwashes. There is always a lot of water in circulation which makes it nearly impossible for the space to completely dry after each use. If the enclosure never gets dried properly electronics can stop working, metal can rust and mold can start to grow. When the carwash isn't being used, it's a good idea to use a dehumidifier so that the space gets dry thus ensuring no moisture problems will occur. It is almost the



Car wash in Finland where Kryotherm has installed a Seibu Giken DST dehumidifier

same regarding truck washes but the only difference is that there washing enclosures are larger so it takes larger dehumidifiers to get the right relative humidity. In Finland, there is a dozen car washes where DST dehumidifiers have been installed and set to hold 60% relative humidity when the hall isn't being used. This means that with an installed DST dehumidifier the car and truck washes won't have any moisture or mold problems.

Read more on: www.kryotherm.fi

About Seibu Giken DST

Seibu Giken DST produces and sells high-quality sorption dehumidifiers. With more than 30 years of experience are the dehumidifiers sold by over 45 representatives around the world as well as through the subsidiaries DST America, DST China and DST Poland. What distinguishes the DST dehumidifiers is the rotor, in every DST dehumidifier there is a D-MAX rotor from Seibu Giken Co. Japan. Who was the first in the world to manufacture silica gel rotors and since 1984 has been the world leader in this technology. In a dehumidifier, the quality of the rotor is very important as it determines the dehumidifier capacity and technical life. After 10 years, the D-MAX rotors have more than 90% of their original capacity remaining.



Do not miss the next issue of The Dew Point that will be distributed in Spring of 2018