DANTHERMGROUP

Humidity control solution for car storage

WHY IS HUMIDITY A FACTOR?

Above 70% relative humidity, mould can start to grow on surfaces.

Above 60% relative humidity, the speed at which rust can form and grow increases rapidly.

SOLUTION: VENTILATION

Adding more ventilation to a garage space may assist with drying a car put away wet, but with the average humidity in northern Europe around 80%, this will never prevent mould or rust.

SOLUTION: DEHUMIDIFICATION

Using a dehumidifier physically removes the moisture held in the air and lowers the %RH. Removing the moisture uses much less energy compared to heating (around 2.5 times less) to lower the %RH. In fact, the latent heat created by the dehumidifier can be utilised to warm up the garage.

SOLUTION: HEATING

Heating will increase the amount of moisture that the air can hold and lower the %RH. This will not stop a cold car getting condensation on it, and heating is by far the most inefficient and expensive way to lower the humidity and you will not want to heat a garage when it is already warm outside.

DEHUMIDIFICATION: REFRIGERANT VS. DESICCANT

There are two main types of dehumidifier: Refrigerant (that uses a compressor based heat pump to cool a surface that the incoming air passes over and the moisture condenses onto, before being reheated) or Desiccant (that uses a silica coated wheel to absorb moisture and an electric heater to dry it).

Refrigerant dehumidifiers will operate down to +5°C and will use less energy than the equivalent capacity desiccant unit. You will also get the benefit of the unit giving out 2.5 times the energy input as free heat to the garage.

Desiccant units are ideal for very low temperature (below 5°C) and/or very low humidity environments (below 40%RH). However they use quite a lot of energy compared to the amount of extraction they offer, and they need access to the outdoor to get rid of moistured air.