

## **Organs in unheated rooms**

We all know of famous historical instruments that have survived for centuries. Not infrequently, they stand in unheatable Gothic or Baroque churches, where in extreme cases, temperatures fall as low as to zero degrees in winter - and the organs still function flawlessly to this day. It is much more likely that people find the cold problematic...

Where, due to political events, regional church or diocesan authorities have required winter temperatures in churches to be allowed to fall to about 5°, no harmful consequences will arise for the organs as such. Nevertheless, it is important for organs that temperatures and humidities remain constant; and if changes have to be made to these parameters, that they should be made slowly and evenly.

In detail, the following must be observed:

- **Out of tune stops**

At a room temperature of around 5°, one will hear that some stops are clearly out of tune, since most organs are tuned at 18°, an average value which is usually exceeded in summer and not reached in winter. Re-tuning, especially of the reed stops in the cold season (the flue stops should rather be left untouched) should then be adjusted to the room temperature applicable during services or events, not to that of the cold room. Reed tuning is quite unproblematic and can be carried out by an experienced organist; we will be happy to provide assistance and instruction when the organ is serviced next.

- **Humidity**

A change in room temperature is also associated with a change in humidity. Cold air can absorb less water vapour than hot air does.

It is therefore important to keep an eye on the hygrometer as well as the thermometer: the humidity should not drop below 40%, but also not rise above 70%.

- **Allow time for heating and cooling**

When changing the room temperature (heating up / cooling down), the time factor plays a major role: rapid heating and cooling put the wood under stress - the wood swells or shrinks again. To avoid cracks, this heating and cooling process should be done carefully: the organ must have time to "adjust" evenly.

A rule of thumb: the temperature change should be no more than 1° per hour - both during heating and during cooling. For example: if a church with a temperature of 6° is to have a temperature of approximately 13° at a service at 11 o'clock, heating must begin at 4 o'clock in the morning. In the case of large organs, on the assumption that changes in temperature are done carefully, it takes longer for the new levels to reach the back of the organ or to enter the swell boxes, so it is better to start heating slowly on the evening before a service.



- **Ventilation**

When heated air (for example after a service) with a humidity of, say, about 50% cools down against cold surfaces (e.g. on the back wall of the church behind the organ, or in the rear of the organ), condensation will occur. If there is no circulating air in these areas (which could dry the moisture), this could aid the growth of mould.

Thus our advice: air circulation and ventilation are necessary, even in places that are not easily accessible.

*We would also like to take this opportunity to point out that, regarding the growth of mould, spring and summer tend to be the problematic seasons; for instance, when church buildings, that are still cold, are warmed up quickly by opening the doors wide for the warm spring air to flow in. Therefore, automated ventilation, generating an even air flow, should be provided throughout the year. Our firm's own fact sheet on the subject of mould in organs is available on request.*

- **Heating for the organist**

Occasionally heating mats for winter are advertised, for placing under the manual keys (these marginally shift the temperature of the manual keys towards that of the fingers). However, we would rather recommend heating mats under the pedalboard or heating panels that can be placed next to or behind the organist's back.