



Guidelines

Temperature & Humidity, and Blower Installation

The following information outlines a few specific points and some general guidelines on temperature, humidity and air movement in and around an organ room as well as suggestions on blower location.

TONAL FINISHING AND TUNING

During the tonal finishing and tuning of the organ, the temperature of the organ room should be maintained at the same level as normally set for public services (ideally 68°F (20°C)). The tuning standard of an organ is usually 440 cycles/second at above temperature.

TEMPERATURE AND HUMIDITY

No major problems should be anticipated if temperature and humidity are kept within the limits recommended below. The ambient temperature in the room should be brought back to the level normally set up for public service before the instrument is used, otherwise it will be out of tune. Usually, a ten-hour period is long enough for all components of the organ to reach a good equilibrium of temperature. However, when the instrument has to be tuned, we recommend lengthening this period, especially if the temperature was maintained to the minimum indicated below.

TEMPERATURE

- Ideal: 68°F (20°C)
- Max.: 105°F (40°C)
- Min.: 45°F (10°C)

HUMIDITY

- Ideal: 50% to 60%
- Max.: 70%
- Min.: 30%

Too sudden temperature changes must be avoided, otherwise permanent damage might be caused to the organ. Raising and lowering of the temperature should be done gradually at a maximum rate of $\pm 2^\circ\text{F/hr}$ ($\pm 1^\circ\text{C/hr}$).

Rapid cooling of a room may raise the relative humidity to the dew point and cause condensation that would be harmful to the leather, the metal parts and the very sensitive mechanism of the instrument. Rapid heating of a room may dry the chests and other large wooden members too quickly around the edges and cause splitting.

No part of the organ should be subject to direct radiation of heat (strong lights or sun). Concentration of warm or cold air around the organ must be avoided. Temperature should be uniform throughout the room. Consequently, lighting, air duct intakes or outlets (heating or air-conditioning) should not be

installed near an organ nor should they blow air toward it, for not only could it put the organ out of tune, but air ducts could create a concentration of polluted air that can cause rapid deterioration of some materials. An HVAC system may increase the air movement in the organ room and around it, causing instability in the speech and tuning of the pipes. It is important to note that air movement in and around the organ should not exceed 2' per second with or without such systems.

A humidifier or de-humidifier should be used when necessary. The humidifier should be located far enough from the organ so that moist air is not deposited directly on any organ parts but is spread throughout the room.

BLOWER INSTALLATION

If not installed inside the organ, the blower must be located in a place where the temperature is the same as the ambient air at the organ. If there is a marked difference, the blower intake should be brought close to the organ.

The blower intake should not be located near a boiler or furnace room, as leather might deteriorate much faster under the effects of sulfurous gases.

Installing a filter at the intake of the blower room is a recommended practice that will help keep the organ dust-free. It is as important that the ambient air in and around the organ room should also be clean.

The oil level of the blower should be checked each time the organ maintenance technician visits the organ or at least twice a year. A list showing the date and name of the individual checking the lubrication should be kept in an obvious place at the blower location.



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