

U10 GENERAL VENTILATION

PART 1 SYSTEM OBJECTIVES

100.020 DESIGN PARAMETERS

- External: -5 degrees C
- Summer: 28°C dry bulb & 23.7°C wet bulb
- Use a variable speed drive to achieve regulation of flow and maintain design flow rates.

Provide ventilation to comply with the following:-

Room Data Sheets
Building Regulations Part F
English Heritage
Planning Requirements
Compliance with the Acoustics Report

100.030 SYSTEM DESCRIPTION

To provide ventilation to the various areas of the building via a number of air handling plants. As a minimum these shall be as follows:-

Spa Treatment Rooms & Spa Change

These are located in the ground and first floor areas of the Natural Baths building. These internal Treatment rooms shall be provided with mechanical ventilation. A central air handling unit is to be located in the mezzanine plantroom to serve all the rooms with outside air ventilation. For heat recovery, a run around coil shall be provided.

Supply air ventilation at a rate of 8ac/hr shall be provided to the spa change and toilets to balance the toilet extract ventilation. Toilet extract ventilation will be taken to discharge out at high level via the services riser duct.

Spa Pool Hall Ventilation and Humidity Control

The Mechanical services within the pool hall shall be designed to vary and control the temperature of the pool hall to 32°C. In addition, the ventilation/ de-humidification system shall be designed to control the relative humidity to approximately 60% to provide a comfortable pool environment and control condensation.

The specialist pool air handling unit, manufactured by Dantherm shall provide the majority of the ventilation and humidity control for the pool hall assisted by the installation of local dehumidifiers. The unit shall be a fully packaged unit with integral Trend IQ3 with backnet link to the main Cylon controls providing control of the plant. The unit shall have the capacity for recirculation of the pool hall air with a plate heat exchanger to recover heat from the exhaust air. Variable speed drive supply and extract fans shall be incorporated with volume control sensors.