Assessment of ventilation strategies for the reduction of infection risk in school buildings

ABSTRACT: In the past two years, HVAC systems have been in the center of attention due to the COVID – 19 pandemic. The ventilation rates, indeed, have a key role in order to reduce the infection risk via airborne, diluting the concentration of viral loads present in the air. Although this beneficial effect, nowadays HVAC systems are become complex systems able to recirculate and recover heat from exhaust air for energy saving purposes. As ventilation systems connect several rooms, these operations could contribute to the spread of viruses, and for this reason in many cases they have involved the closure of the entire HVAC system. The purpose of the thesis is to compare, using proper simulation tools, different solutions for implementing ventilation strategies in school buildings.