

Guide to commercial HVAC sizing released

Correctly sizing the HVAC system in a commercial building is an important process, that can have serious implications for energy consumption. The issue has been recognised in a new publication.

The Cooperative Research Council (CRC) for Construction Innovation has released HVAC system size: Getting it right. The guide has been written by PC Thomas and Steve Moller Affil.AIRAH, in partnership with Rider Hunt, Arup, CSIRO and RMIT University.

The publication details some of the symptoms of an undersized or oversized HVAC system, including the inability to maintain indoor conditions on design days if the system is undersized, and frequent short-cycling or excess reheat usage in oversized systems.



The effects of incorrect sizing on running costs, energy consumption and thermal comfort are analysed, as are the perceived 'barriers' to correct sizing, drawing on both observations of the authors and case studies carried out in Sydney and Melbourne for the project.

The guide encourages designers to challenge the rules of thumb normally adopted for commercial building projects, undertake accurate load estimation calculations, and take a systems-based approach to design rather than a component-based approach. Designing systems for flexibility in the future and including auxiliary systems for high-load areas is also encouraged, as are proper commissioning and maintenance practices.

HVAC system size: getting it right can be downloaded from www.construction-innovation.info ■