

CHAPTER 2 - CONSERVATION AND EFFICIENCY: BUILDING SYSTEMS

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502.13 DUCTWORK AIR LEAKAGE



INTENT

Ensuring minimal air leakage resulting in energy savings and improved thermal comfort.

REQUIREMENT

For all new buildings, air ductwork must be designed, built and installed to ensure air leakage is minimised.

Ductworks attached to an equipment and having an external static pressure of more than 250 Pa and ductworks that are exposed to external ambient conditions or within unconditioned spaces, must be pressure tested prior to occupancy. This must be carried out as per Dubai Municipality's approved methodology and must ensure the compliant amount of air leakage is achieved.

Ductwork leakage testing must be carried out by a company that is specialised in commissioning of buildings and is DM approved.

SIGNIFICANCE

Leakages in ductworks occur in cracks, joints, connection and at other openings. Air leakages from ducting system can result in inefficient HVAC performance, thermal discomfort for building occupants and increased thermal demand in the building.

A properly sealed and insulated duct system has several advantages such as improved thermal comfort, energy savings and better air quality in the buildings.

APPLICABILITY

This regulation is applicable to all building types. Refer to Table 101.07(1) in Section One - Administration for detailed applicability levels.

IMPLEMENTATION

This regulation focuses on reduction of air leakages from air conditioning ductworks. It also requires that certain classes of ductwork and associated equipment must be pressure tested to ensure that the maximum allowable amount of air leakage is not exceeded.

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