

3. Ducts passing through outside or unconditioned spaces must be insulated with the minimum insulation thickness specified in Table 502.11 (2).

Table 502.11 (2) Minimum insulation thickness for pipes passing through unconditioned spaces

Minimum air temperature inside duct (°C)							
15° C		10° C		5° C		0° C	
Minimum thickness of insulating material (mm)							
λ = 0.018 W/mK	λ = 0.038 W/mK	λ = 0.018 W/mK	λ = 0.038 W/mK	λ = 0.018 W/mK	λ = 0.038 W/mK	λ = 0.018 W/mK	λ = 0.038 W/mK
42	61	48	84	57	107	66	127

• λ = thermal conductivity of insulating materials at a mean temperature of 10° C.

Insulation materials used must meet the requirements of regulation 701.01, Thermal and Acoustical Insulation Materials or BS 5422:2009, whichever is the more stringent.

All insulation installations must have a suitable vapour barrier and protection from Ultra Violet (UV) light.

502.12 Thermal Storage for District Cooling

All new district cooling plants must incorporate a Thermal Energy Storage (TES) facility with a capacity of, at least, twenty percent (20%) of the design capacity of the plant.

502.13 Ductwork Air Leakage

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

Ductwork, with equipment attached to it, with an external static pressure exceeding two hundred and fifty (250) Pascal (Pa) and all ductwork exposed to external ambient conditions or within unconditioned spaces must be pressure tested prior to occupancy in accordance with a method approved by Dubai Municipality (DM) and a compliant amount of air leakage achieved.

Ductwork leakage testing must be carried out by a company approved by DM to conduct commissioning of buildings.

