501.03 Air Conditioning Design Parameters

For all new air conditioned buildings, the heat load must be calculated in accordance with the following design parameters.

A) Outdoor Condition of the Building

Dry bulb temperature	46° C (115° F)
Wet bulb temperature	29° C (85° F)
Dubai City location latitude	(North Latitude) 25° N
Extent of variation in the temperature on the day of design (Outdoor Daily Range)	13.8° C (25° F)

B) Indoor Condition of the Building

Dry bulb temperature	24° C (75° F)
Relative humidity	50% +/- 5%

• The heat transfer coefficients to be used in the calculations for roofs, walls, and glazed areas must be the actual design coefficients, or as set out in Regulation 501.01 Minimum Envelope Performance Requirements.

• When diversity factors to be used in the calculation of heat load are not known, the coefficients set out in the 2005 ASHRAE Handbook – Fundamentals must be used.

C) The safety factor applied must be no greater than:

Sensible Heat	10%
Latent Heat	5%

• Heat loads for buildings must be calculated for each air-conditioned space at the hour of peak load incidence in that space, using software registered in Dubai Municipality.

501.04 Air Loss from Entrance and Exit

For all new air conditioned buildings other than villas, all regularly used air conditioned entrance lobbies must be protected by a door design which acts as a barrier to the loss of conditioned air.

501.05 Air Leakage

All new air conditioned buildings with a cooling load of 1 megawatt (MW) or greater must be tested to demonstrate that air leakage does not exceed ten (10) cubic metres of air per hour for each square metre of building envelope (10m3/hr/m^2) into or out of the building, at an applied pressure difference of fifty (50) Pascal (Pa).

Testing must be carried out in accordance with a method approved by Dubai Municipality (DM).

Work must be carried out by a company approved by Dubai Municipality (DM).