

Thermal Comfort

402.01 Thermal Comfort

For all new and existing buildings, the heating, ventilation and air conditioning (HVAC) system must be capable of providing the following range of conditions, for 95% of the year:

Table (1) 402.01 - Thermal comfort requirements

	Type of Samples	Maximum Acceptable
Dry bulb temperature	DB: 22.5° C	DB: 25.5° C
Relative humidity	RH: 30% (min)	RH: 60% (max)

For occupant comfort, normal occupied spaces should have an average air velocity between (0.2 - 0.3) m/s.

Acoustic Comfort

403.01 Acoustical Control

For all new buildings, the acoustic performance relating to internal noise criteria from external noise sources, internal noise criteria from mechanical services noise, internal airborne sound insulation guidance values and internal impact sound pressure levels, must meet the control requirements set out in Table 403.01 (1).

Table (1) 403.01 - Acoustical Control requirements

Building Type	Document Reference
Villas / Residential* Buildings	Building Regulations Approved Document E (latest version) (UK)
Healthcare Facilities	Health Technical Memorandum 08-01 (UK)
Educational Facilities**	Building Bulletin 93: Acoustic Design of Schools - A design Guide (UK)
Commercial Buildings	Latest BS8233 standard "Sound insulation and noise reduction for buildings - code of practice" (UK)
Industrial Buildings	Latest BS8233 standard "Sound insulation and noise reduction for buildings - code of practice" (UK)
Public Buildings	Latest BS8233 standard "Sound insulation and noise reduction for buildings - code of practice" (UK)

* Residential buildings include Villas, Apartments, Labour Accommodations and Student Accommodations.

** Educational Facilities include Nursery Schools, Primary Schools, Secondary Schools, Colleges and Universities.

403.02 Silencers

For all new buildings, the mechanical systems must be designed, equipped and selected with noise control materials, to reduce the transmission of sound and noise through these systems.

Systems include HVAC, air ducts, water pipes and its suspension and installation requirements.

403.03 Expansion joints and vibration prevention

For all new buildings:

1. An automatic air vent shall be installed on each vertical water supply riser, addressed with an isolate valve. A drain valve shall be used at the bottom of the risers.
2. The water network pipes shall be installed with sufficient supports and connectors, to prevent any sound and vibration, while allowing thermal expansion of the pipes through the expansion joints.

Hazardous Materials

404.01 Low Emitting Materials: Paints and Coatings

For all buildings, including new applications in existing buildings, all paints and coatings used in the building should not exceed the allowed limits for Volatile Organic Compound (VOC) specified by Dubai Municipality. The paints and coatings must be accredited / certified from Dubai Central Laboratory or any other laboratory, approved by Dubai Municipality.

404.02 Low Emitting Materials: Adhesives and Sealants

For all buildings, including new applications in existing buildings, all adhesives, adhesive bonding primers, adhesive primers, sealants and sealant primers used in the building should not exceed the allowed limits for Volatile Organic Compound (VOC) specified by Dubai Municipality. This must be accredited / certified from Dubai Central Laboratory or any other laboratory, approved by Dubai Municipality.

404.03 Carpet Systems

For all new and existing public and commercial buildings, each new carpet system (Carpets or new permanently installed carpet padding) must be certified / accredited from Dubai Central Laboratory or any other laboratory, approved by Dubai Municipality (DM).

Carpets are not allowed to be used in labor accommodation, educational facilities or any other places as determined by DM.