

# CHAPTER 1 - VENTILATION AND AIR QUALITY

400

## 401.10 PARKING VENTILATION



### INTENT

Maintaining adequate air quality within enclosed car parks to create healthy and safe environment.

### REQUIREMENT

For all buildings having enclosed parking:

- A. Mechanical ventilation must be provided, to ensure the Carbon Monoxide (CO) concentration in the enclosed parking area, is maintained below 50 ppm by:
  - Providing a minimum of 6 outside air changes per hour, or
  - Installing a variable volume ventilation system that is controlled by an input response from a minimum of one CO sensor per 400 m<sup>2</sup> floor area of parking.
- B. Outdoor air must be provided for each parking level.
- C. Occupied areas such as offices, shopping centers, hotels, waiting rooms and ticket booths connected to an enclosed parking spaces, must be supplied with conditioned air under positive pressure when compared with adjoining parking area.
- D. Ventilation systems must be capable of providing 10 air changes per hour, for smoke clearance purposes in case of a fire incident.
- E. CO monitoring equipment must be installed, with a minimum of one CO sensor per 400 m<sup>2</sup> floor area of parking. Sound alarm should be triggered, when the CO concentration reaches or exceeds 75 ppm, in at least 5% of the monitored locations.
- F. Where a Building Management System (BMS) or Central Control and Monitoring System (CCMS) is installed, CO concentration must be monitored to allow real-time profiling and management of air quality.
- G. CO monitoring equipment must be checked and recalibrated every 6 months or according to manufacturer specification by a specialised calibration company, certified by Dubai Municipality. Test results and calibration certificates must be kept on-site and be readily available for inspection by DM staff.