

AIR CONDITIONING

Air conditioning is the maintenance of an occupied space within chosen environmental parameters, providing heating in the winter and cooling in the summer. A common methodology is to heat to 21⁰C and to cool to 24⁰C, the process generally considered as "comfort cooling".

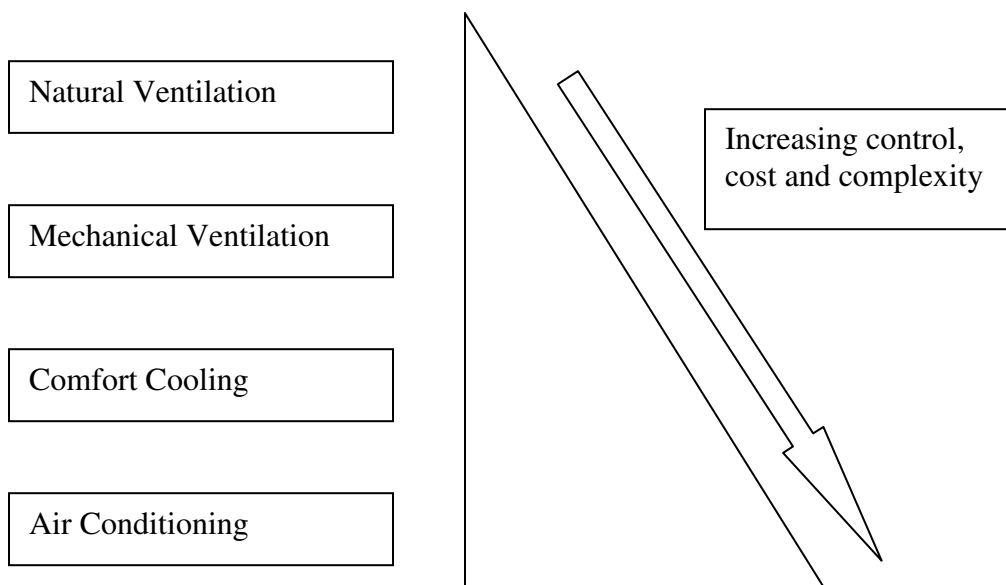
Full air conditioning includes the control of humidity within the space within given limits to suit the application.

Both of the above generally would provide good levels of air filtration to remove contaminants and allergens.

Not all air conditioning systems provide the same degrees of control of air humidity, temperature, freshness and cleanliness, although the term air conditioning is used generally for all types and variations.

The decision to air condition requires consideration of many factors, such as:

- Cost
- Initial costs and life costs
- Comfort
- Complexity of functions
- Noise Levels
- Adaptability to possible future requirements
- Energy use
- Plant space



Installing mechanical ventilation and/or air conditioning will significantly increase capital costs, running costs, environmental emissions and maintenance costs.

Mechanical ventilation systems resolve a number of problems associated with natural systems. They require much smaller openings, they can be easier to control, and they also provide sound absorption and security. However they consume electricity and heat the air.

Introducing full air conditioning into a design can add around 50% to the eventual running costs of the building and should therefore be avoided where possible. However, it can be necessary in certain circumstances due to pollution, external noise, high heat gains or specialist applications such as the storage of precious artefacts.