

Tightness

Partition walls are designed to divide up space, to separate activities and to control ambient conditions according to needs. To properly control the parameters of ambient condition inside a facility, the tightness of partition walls is vital.

Airtightness

To ensure contamination control, facilities are managed either in a partial vacuum to prevent contamination of the outside or conversely maintained under overpressure to prevent contamination from the outside.

The partial vacuum or overpressure of facilities depends on certain conditions:

- the facility must be tight
- access for personnel and equipment must be via one or two airlocks whose entrance and exit doors cannot be open at the same time.
- constant inflow of new air, calculated according to the quality of the facility tightness and to pressure gradients required between facilities.

To design the air treatment system, it is necessary to be aware of loss rates from various components making up the facility –doors, windows and from specific points – under a given pressure (ΔP from 35 to 50 Pa).

Partition walls and seals must be able to resist the differential pressures between facilities without deterioration and with a sufficient safety margin in the event of accident.

Watertightness

Watertightness is important in activities where the hygrometry or moisture content must be controlled or in humid environments. The materials used must not be affected by the presence of water and the junction systems - panel seals, skirting boards, door frames, etc, - must be watertight and prevent any thermal conduction that might be a source of condensation.