1) When planning clean rooms an airtightness level must be defined, planned and graphically presented. A concept for maintaining pressure differences to adjoining areas under different operating conditions must be presented in writing.

The minimum requirements for describing operating conditions are:

a) Normal state
b) Cleaning or disinfection
c) Power cut

2) The design airtightness specification on the room envelope must meet at least a $q_{50} \leq 0.3 \text{ m}^3/\text{m}^2\text{h}$ (see DIN 4108 part 7). The $q_{50} \leq 0.3 \text{ m}^3/\text{m}^2\text{h}$ standard was taken from Passive house construction standards, whose limit values with an building-envelope to building-volume ratio of 1 are $q_{50} \leq 0.6 \text{ m}^3/\text{m}^2\text{h}$. For clean rooms, however, this standard should be more stringent. A value of $q_{50} \leq 0.3 \text{ m}^3/\text{m}^2\text{h}$ has already been achieved in some residential constructions.

3) All component joints at the airtight layer must demonstrate a permeability coefficient of less than 0.1 m3/mh(daPa2/3).

4) Single leaks may be no larger than 1 mm².

5) Joints and seals must, within what is technically feasible, be permanently airtight.

6) All openable seals on windows and doors must meet DIN EN 12207 of June 2000, class 4.

7) The permitted air change rate $n_{50}$ is calculated from $q_{50} \leq 0.3 \text{ m}^3/\text{m}^2\text{h}$ and the permitted airflow rate through windows and doors.

8) Testing of the airtight envelope is carried out according to DIN EN 13829 and should be done as long as the airtight level is accessible. The series of tests should take the pressure up to 200 pascals. (* in high-rise buildings, according
to DIN EN 13829, measurements are taken at up to 100 pascals; a test pressure of 200 pascals gives greater accuracy in high winds and with respect to the durability of the seals than if measurements were taken at just 100 pascals). The building components must be designed for a static load of 450 pascals, corresponding to a surface load of 0.45 kN/m².

9) The ventilation system is tested according to DIN 24194 for the airtightness of the ducts and seals.