

Indoor Environmental Quality- Revision of standard EN16798-1 in relation to the EPBD guideline.

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ABSTRACT

EN16798-1/2 specifies the relevant parameters for determining the indoor environmental quality (thermal comfort, air quality, lighting, and acoustic) in buildings and how these parameters are used for building systems, design, assessment, operation, and energy performance calculations. The standard is applicable where the criteria for indoor environmental quality are set for human occupancy and where the production or process does not have a major impact on indoor environmental quality.

Recently, a guideline “Technical building systems, indoor environmental quality and inspections (Articles 13, 23 and 24)” to the recast Energy Performance of Buildings Directive was issued. Related to indoor environmental quality, the guideline focuses on and refers to EN16798-1/2. It is therefore important that the revision makes sure that what is referred to in the existing standard can be found in the revised version. It is also important that the revision of the standard looks at additional requirements for the indoor environment will be included.

According to the directive, ‘technical building system’ means technical equipment of a building or building unit for space heating, space cooling, ventilation, domestic hot water, built-in lighting, building automation and control, on-site renewable energy generation and energy storage. The standard is system-neutral and deals with input values for the calculation of energy use for heating-cooling, operation of buildings and design of heating, cooling, ventilation, air cleaning, and lighting systems

The standards do not specify design methods but give the relevant input parameters for the design and assessment of buildings, heating, cooling, and ventilation systems, together with building automation and control systems. In addition, it proposes methods for determining the indoor environmental quality and classes for different limit values.

The talk will focus on thermal comfort and indoor air quality, which are also the two minimum topics required according to the EPBD guideline. In the revision, the part of the standard dealing with lighting and acoustics will be extended and developed by the appropriate CEN technical committees.

Topics to be included or extended in the standards are yearly key performance indicators (KPI’s) for indoor environmental quality, use of air cleaning to partly substitute for ventilation, use of CO₂ as an indicator for ventilation/air quality, ventilation during a pandemic and cross-contamination.

KEYWORDS

Standards, indoor environmental quality, energy performance directive, technical building systems