LEED BD+C: New Construction | v4 - LEED v4

Thermal comfort

Possible 1 point

Glossary

Intent

To promote occupants' productivity, comfort, and well-being by providing quality thermal comfort.

Requirements

Meet the requirements for both thermal comfort design and thermal comfort control.

Thermal comfort design

Option 1. ASHRAE Standard 55-2010

Design heating, ventilating, and air-conditioning (HVAC) systems and the building envelope to meet the requirements of ASHRAE Standard 55–2010, Thermal Comfort Conditions for Human Occupancy, with errata or a local equivalent.

For natatoriums, demonstrate compliance with ASHRAE HVAC Applications Handbook, 2011 edition, Chapter 5, Places of Assembly, Typical Natatorium Design Conditions, with errata.

OR

Option 2. ISO and CEN Standards

Design HVAC systems and the building envelope to meet the requirements of the applicable standard:

- ISO 7730:2005, Ergonomics of the Thermal Environment, analytical determination and interpretation of thermal comfort, using calculation of the PMV and PPD indices and local thermal comfort criteria; and
- CEN Standard EN 15251:2007, Indoor Environmental Input Parameters for Design and Assessment of Energy Performance of Buildings, addressing indoor air quality, thermal environment, lighting, and acoustics, Section A2.

Thermal comfort control

Provide individual thermal comfort controls for at least 50% of individual occupant spaces. Provide group thermal comfort controls for all shared multioccupant spaces, and for any individual occupant spaces without individual controls.

Thermal comfort controls allow occupants, whether in individual spaces or shared multioccupant spaces, to adjust at least one of the following in their local environment: air temperature, radiant temperature, air speed, and humidity.