

6	IEQ	6.5 THERMAL COMFORT
		IEQ 13 THERMAL COMFORT IN AIR-CONDITIONED PREMISES
	EXCLUSIONS	Buildings where air-conditioning is provided by window units or split units.
	OBJECTIVE	Ensure that the air-conditioning system can provide the stated design conditions in occupied spaces under changing load conditions.
	CREDITS ATTAINABLE	2
	PREREQUISITES	None.
	CREDIT REQUIREMENT	<p>a) Temperature</p> <p>1 credit for sustaining the air temperature at the design value within $\pm 1.5^{\circ}\text{C}$ when the air side system is operating at steady state under normal occupied periods.</p> <p>b) Room air distribution</p> <p>1 credit where room air diffusers satisfy the Air Diffusion Performance Index.</p>
	ASSESSMENT	<p>The Client shall provide evidence in the form of a report prepared by a suitably qualified person detailing the design criteria with respect to thermal comfort conditions for all types of premises included in the building, and the results of the measurements in the specified sample of premises.</p> <p>a) Temperature</p> <p>The measurement locations shall include at least one representative sample of each type of premises (occupied spaces) as defined by the type of HVAC system used, design occupancy density, nature of usage, zoning, etc. The main physical parameters of the indoor climate (air temperature and relative humidity) are undertaken under normal occupied periods. The results shall demonstrate compliance with the prescribed design criteria within the prescribed limits, for a minimum of 90% of the prescribed locations. The measurement shall be made with reference to the current EPD's IAQ certification scheme. The sensors used in the measurement survey shall have an accuracy that complies with ASHRAE 55-2004 [1], ISO 7726 [2] or equivalent.</p> <p>b) Room air distribution</p> <p>The measurement locations shall be as for a). It is acceptable to demonstrate the credit compliance by either calculation or by in-situ measurements.</p>
	BACKGROUND	The HVAC system should be able to maintain room conditions (within acceptable tolerances) under normal occupied periods. Measurements under such circumstances can demonstrate compliance with the operating requirements.

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B2

- American Society of Heating, Refrigeration and Air-conditioning Engineers. ASHRAE 55-2004: Thermal Environmental Conditions for Human Occupancy. Atlanta 2004.
- International Standard Organization. International standard 7726, Ergonomics of the thermal environment — Instruments for measuring physical quantities. 1998.



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Updated Exclusion Clauses for IEQ Credits

1. **Technical Circular Letter No. 2016.134 dated 09 August 2016 will be withdrawn on the effective date.**
2. This Circular Letter clarifies the exclusion clause for the following credits:

Credits	New Exclusions
IEQ P1 IEQ 9	Residential premises, or Premises designed to utilise natural ventilation and without any fresh air provision ¹ .
IEQ 3	Residential premises, or Premises without any provision of air-conditioning equipment.
IEQ 5	Residential premises, or Premises without HVAC system.
IEQ 6	Residential premises, or Premises without any fresh air provision ¹ .
IEQ 7a IEQ 7b	Residential premises without any interior decoration, or Premises without any fresh air provision ¹ and interior decoration.
IEQ 10	Premises with fresh air provision ¹ .
IEQ 11b	Residential premises, or Premises without any future tenant (for example, single owner occupier premises).
IEQ 12	Premises without any enclosed common area in the main circulation route.
IEQ 13a	Normally occupied premises ² without any air-conditioning equipment installed and provided by the project proponent, or without any fresh air provision ¹ .
IEQ 13b	Normally occupied premises ² without any installation of air diffuser in the air-conditioning system.

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¹ Fresh air provision means any fresh air equipment such as PAU, AHU, FAU, FAP, FAF, etc.; and/or premises with fresh air louvers, etc.

² Normally occupied premises are enclosed spaces / areas where people normally stay there for more than 1 hour per person per day on average.

Credits	New Exclusions
IEQ 14a	Normally occupied premises ² with fresh air provision ¹ .
IEQ 14b	Normally occupied premises ² with fresh air provision ¹ , or without any air-conditioning equipment installed and provided by the project proponent.
IEQ 16	Residential premises, hotels, apartment and premises where lighting installation will be provided by future tenant such as Retail and F&B ³ .
IEQ 21	Not normally occupied premises ² .



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³ The clause “For premises to be fitted out by tenants, compliance shall be confirmed if the technical details and contractual arrangements with tenants in respect of lighting installation are deemed to meet the assessment criteria.” in BEAM Plus Manual IEQ 16 becomes not applicable.



FAQ (IEQ)

New FAQ

#207. IEQ 13a and IEQ 14b, For BEAM Plus New Buildings Version 1.1 and 1.2, what should be the duration of temperature measurement?

The measurement should be undertaken on an 8-hour basis during normally occupied period (i.e. from 8am to 9pm in the living room and from 9pm to 8am in the bedroom for residential development). However, where it is not practicable to take 8-hour continuous measurement, a surrogate measurement (i.e. an intermittent measurement strategy based on the average of half-hour measurements conducted at four time slots) is also considered acceptable.

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(Released on 15 December 2023)