

Heating, ventilating, air conditioning and refrigeration

CIBSE Guide B

dti

Department of Trade and Industry



Table 1.1 Recommended winter dry resultant temperatures for various buildings and activities⁽¹⁹⁾

Building/room type	Temperature / °C	Building/room type	Temperature / °C
Airport terminals		Hotels	
— baggage reclaim	12–19	— bathrooms	26–27
— check-in areas	18–20	— bedrooms	19–21
— customs areas	12–19	Ice rinks	12
— departure lounges	19–21	Laundries	
Banks, building societies and post offices		— commercial	16–19
— counters	19–21	— launderettes	16–18
— public areas	19–21	Law courts	19–21
Bars, lounges	20–22	Libraries	
Churches	19–21	— lending/reference rooms	19–21
Computer rooms	19–21	— reading rooms	22–23
Conference/board rooms	22–23	— store rooms	15
Drawing offices	19–21	Museums and art galleries	
Dwellings		— display	19–21
— bathrooms	26–27	— storage	19–21
— bedrooms	17–19	Offices	
— hall/stairs/landing	19–24	— executive	21–23
— kitchen	17–19	— general	21–23
— living rooms	20–23	— open plan	21–23
— toilets	19–21	Public assembly buildings	
Educational buildings		— auditoria	22–23
— lecture halls	19–21	— changing/dressing rooms	23–24
— seminar rooms	19–21	— circulation spaces	13–20
— teaching spaces	19–21	— foyers	13–20
Exhibition halls	19–21	Prison cells	19–21
Factories		Railway/coach stations	
— heavy work	11–14	— concourse (no seats)	12–19
— light work	16–19	— ticket office	18–20
— sedentary work	19–21	— waiting room	21–22
Fire/ambulance stations		Restaurants/dining rooms	22–24
— recreation rooms	20–22	Retail buildings	
— watch room	22–23	— shopping malls	19–24
Garages		— small shops, department stores	19–21
— servicing	16–19	— supermarkets	19–21
General building areas		Sports halls	
— corridors	19–21	— changing rooms	22–24
— entrance halls	19–21	— hall	13–16
— kitchens (commercial)	15–18	Squash courts	10–12
— toilets	19–21	Swimming pools	
— waiting areas/rooms	19–21	— changing rooms	23–24
Hospitals and health care		— pool halls	23–26
— bedheads/wards	22–24	Television studios	19–21
— circulation spaces (wards)	19–24		
— consulting/treatment rooms	22–24		
— nurses stations	19–22		
— operating theatres	17–19		

1.3.3 Design room and building heat loss calculation

1.3.3.1 Calculation principles

The first task is to estimate how much heat the system must provide to maintain the space at the required indoor temperature under the design external temperature conditions. Calculations are undertaken for each room or zone to allow the design heat loads to be assessed and for the individual heat emitters to be sized.

1.3.3.2 External design conditions

The external design temperature depends upon geographical location, height above sea level, exposure and thermal inertia of the building. The method recommended in Guide A is based on the thermal response characteristics of buildings and the risk that design temperatures are exceeded. The degree of risk may be decided between designer and client, taking account of the consequences for the building, its occupants and its contents when design conditions are exceeded.