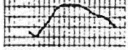
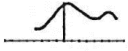
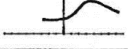
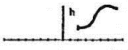
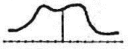
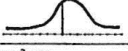

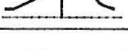
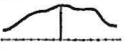

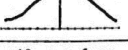
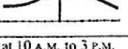


ASHRAE Applications Handbook (SI) Commercial and Public Buildings

Table 1 General Design Criteria^{a, b}

Table 1 General Design Criteria^{a, b} (Concluded)

General Category	Specific Category	Inside Design Conditions		Air Movement	Circulation, air changes per hour	Noise ^c	Filtering Efficiencies (ASHRAE Standard 52.1)	Load Profile	Comments
		Winter	Summer						
Dining and Entertainment Centers	Cafeterias and Luncheonettes	21 to 23°C 20 to 30% rh	26°C ^e 50% rh	0.25 m/s at 1.8 m above floor	12 to 15	NC 40 to 50 ^e	35% or better	Peak at 1 to 2 P.M. 	Prevent draft discomfort for patrons waiting in serving lines
	Restaurants	21 to 23°C 20 to 30% rh	23 to 26°C 55 to 60% rh	0.13 to 0.15 m/s	8 to 12	NC 35 to 40	35% or better	Peak at 1 to 2 P.M. 	
	Bars	21 to 23°C 20 to 30% rh	23 to 26°C 50 to 60% rh	0.15 m/s at 1.8 m above floor	15 to 20	NC 35 to 50	Use charcoal for odor control with manual purge control for 100% outside air to exhaust ±35% prefilters	Peak at 5 to 7 P.M. 	
	Nightclubs and Casinos	21 to 23°C 20 to 30% rh	23 to 26°C 50 to 60% rh	below 0.13 m/s at 1.5 m above floor	20 to 30	NC 35 to 45 ^f	Use charcoal for odor control with manual purge control for 100% outside air to exhaust ±35% prefilters	Nightclubs peak at 8 P.M. to 2 A.M. Casinos peak at 4 P.M. to 2 A.M. Equipment, 24 h/day	Provide good air movement but prevent cold draft discomfort for patrons
	Kitchens	21 to 23°C	29 to 31°C	0.15 to 0.25 m/s	12 to 15 ^h	NC 40 to 50	10 to 15% or better		Negative air pressure required for odor control. (See also Chapter 30, Kitchen Ventilation.)
Office Buildings		21 to 23°C 20 to 30% rh	23 to 26°C 50 to 60% rh	0.13 to 0.23 m/s 4 to 10 L/(s·m ²)	4 to 10	NC 30 to 45	35 to 60% or better	Peak at 4 P.M. 	
Museums, Libraries, and Archives (Also see Chapter 20.)	Average		20 to 22°C 40 to 55% rh	below 0.13 m/s	8 to 12	NC 35 to 40	35 to 60% or better	Peak at 3 P.M. 	
	Archival		See Chapter 20, Museums, Libraries, and Archives	below 0.13 m/s	8 to 12	NC 35	35% prefilters plus charcoal filters 85 to 95% final ^l	Peak at 3 P.M. 	
Bowling Centers		21 to 23°C 20 to 30% rh	24 to 26°C 50 to 55% rh	0.25 m/s at 1.8 m above floor	10 to 15	NC 40 to 50	10 to 15%	Peak at 6 to 8 P.M. 	
Communication Centers	Telephone Terminal Rooms	22 to 26°C 40 to 50% rh	22 to 26°C 40 to 50% rh	0.13 to 0.15 m/s	8 to 20	to NC 60	85% or better	Varies with location and use	Constant temperature and humidity required
	Radio and Television Studios	21 to 23°C 40 to 50% rh	23 to 26°C 45 to 55% rh	0.13 to 0.15 m/s	15 to 40	NC 15 to 25	35% or better	Varies widely due to changes in lighting and people	Constant temperature and humidity required
Transportation Centers	Airport Terminals	23 to 26°C 30 to 40% rh	23 to 26°C 40 to 55% rh	below 0.13 m/s at 3.7 m above floor	8 to 12	NC 35 to 50	35% or better and charcoal filters	Peak at 10 A.M. to 9 P.M. 	Positive air pressure required in terminal
	Ship Docks	21 to 23°C 20 to 30% rh	23 to 26°C 50 to 60% rh	0.13 to 0.15 m/s at 1.8 m above floor	8 to 12	NC 35 to 50	10 to 15%	Peak at 10 A.M. to 5 P.M. 	Positive air pressure required in waiting area
	Bus Terminals	21 to 23°C 20 to 30% rh	23 to 26°C 50 to 60% rh	0.13 to 0.15 m/s at 1.8 m above floor	8 to 12	NC 35 to 50	35% with exfiltration	Peak at 10 A.M. to 5 P.M. 	Positive air pressure required in terminal
	Garages ^l	4 to 13°C	27 to 38°C	0.15 to 0.38 m/s	4 to 6	NC 35 to 50	10 to 15%	Peak at 10 A.M. to 5 P.M. 	Negative air pressure required to remove fumes; positive air in pressure adjacent occupied spaces
Warehouses		Inside design temperatures for warehouses often depend on the materials stored.			1 to 4	to NC 75	10 to 35%	Peak at 10 A.M. to 3 P.M. 