

Chapter 7 Outline

Factors Influencing Building Thermal Comfort
 Building Loads and Comfort
Heating Sources and Equipment
 Heat Sources
 Furnace and Boiler Operation and Maintenance
Cooling Sources and Equipment
 The Refrigeration Cycle
 Cooling Systems Operation and Maintenance
 CFCs, HCFCs, and the Environment
Guestroom HVAC System Types
 Centralized Systems
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 Guestroom Ventilation
 Guestroom HVAC Occupancy Control
 Guestroom HVAC Maintenance
HVAC Systems for Other Building Areas
 System Types and Configurations
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Other HVAC Components
 Controls
 Cooling Towers
 HVAC Thermal Storage
Conclusion
Appendix

Competencies

1. Describe the basic elements of human comfort and how HVAC systems affect this comfort. (pp. 238–243)
2. Identify heating sources, types of heating equipment, and operating and maintenance concerns for this equipment. (pp. 243–247)
3. Explain how the vapor compression refrigeration cycle operates. (p. 247)
4. Identify cooling system operating and maintenance concerns. (pp. 247–252)
5. Describe several guestroom HVAC systems, including centralized, decentralized, and hybrid systems. (pp. 252–263)
6. Identify the system types and maintenance needs of HVAC systems for other building areas. (pp. 263–265)
7. Outline the nature and maintenance needs of HVAC controls. (pp. 265–268)
8. Identify various maintenance concerns with regard to cooling towers. (pp. 268–270)