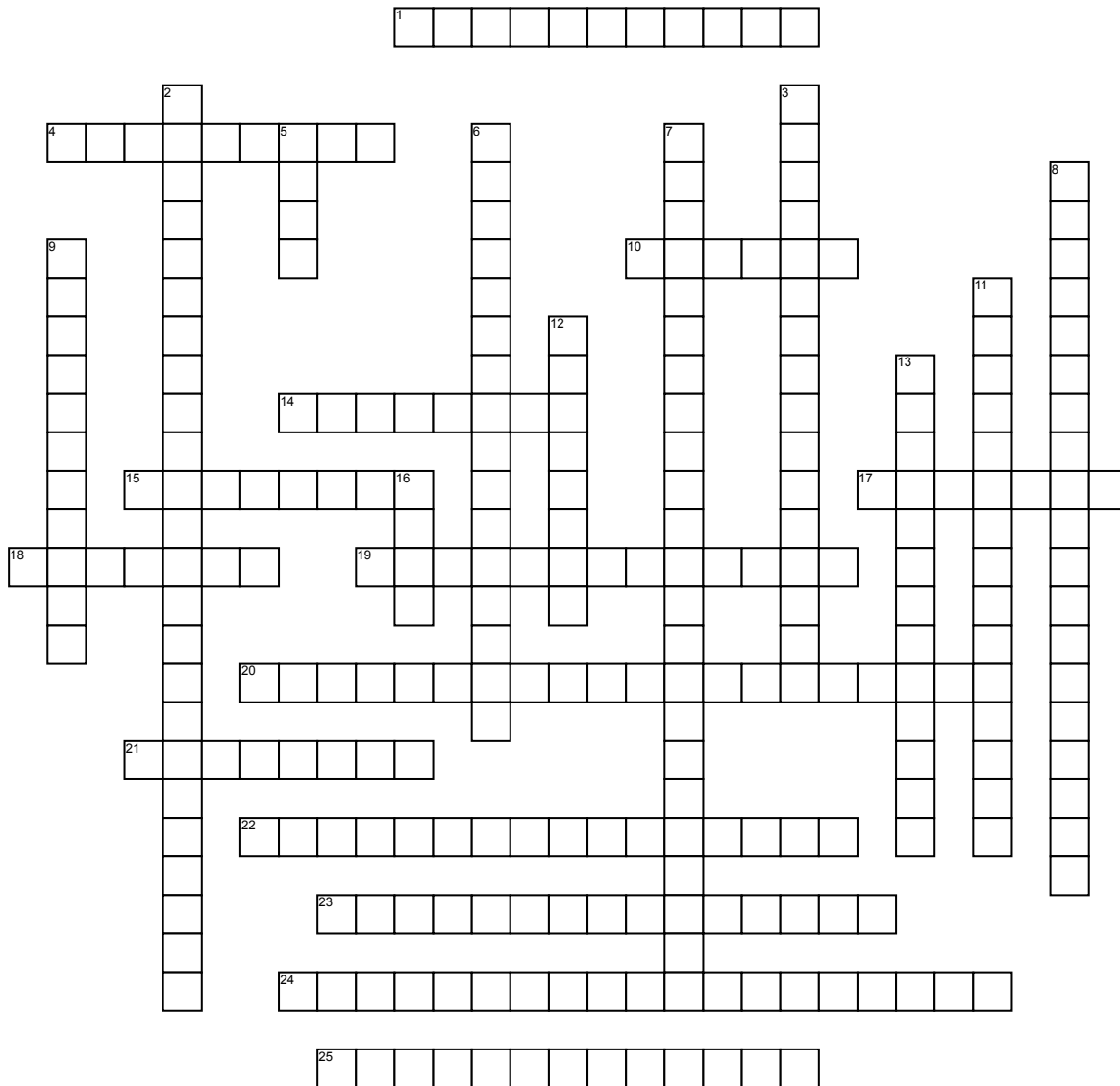


Heating, Ventilation, and Air-Conditioning



Across

1. passive fire protection products used in HVAC ducts to prevent the spread of fire inside the ductwork through fire-resistance rated walls and floors.
4. Roman 1st century CE heating system that passed warm air from a central furnace under raised floors and up via flues in walls.
10. a closed arrangement of vessels and tubes in which water is heated or steam is generated.
14. denoting a cooling or heating system in which heat is transported using circulating water.
15. a device that transfers heat from a colder area to a hotter area by using mechanical energy.
17. an appliance fired by gas, oil, or wood in which air or water is heated to be circulated throughout a building in a heating system.
18. devices that balance and adjust an air distribution system.
19. a device with a vertical inner firebox that produces an efficient, hot, clean burn, transferring heat to the exterior masonry surfaces, which radiate a gentle even heat even after the fire is out.
20. a formal start-up and testing process that identifies and corrects operational deficiencies, saves energy by verifying and documenting that the performance of a building and its various systems.
21. a device or substance for absorbing excessive or unwanted heat.

22. typically long electric or hydronic heating units attached close to baseboards at floor level to provide localized control, usually using thermostats.

23. a device attached to an air distribution duct to control the discharge of air into a space to be heated, cooled, or ventilated.

24. circulate steam from a boiler under pressure through insulated pipes, where it is typically condensed in cast iron radiators.

25. a small electric heater below a cabinet that heats the feet and floor area.

Down

2. refrigeration cycle that pumps heat out of chilled water systems into the condenser water system.

3. HVAC system that works by heating air in a gas, oil, or electric furnace and distributing it by a fan through ductwork to registers or diffusers in inhabited spaces.

5. uses displacement ventilation to provide fresh air cooled to just below the design room temperature at low velocity, using the area under a raised floor as a plenum to distribute high volumes of low-velocity air without ductwork.

6. the use of chemical or physical absorption of water vapor to dehumidify air and reduce the latent cooling load in a building HVAC system.

7. refrigeration system that uses an absorber and a generator to transfer heat and produce cooling.

8. equipment that reduces air pollution by igniting the wood smoke in a woodstove at a lower temperature, burning up gases and producing more heat and less creosote.

9. a liquid able to vaporize at a low temperature, absorbing heat from a cooling medium and changing state from a liquid to a vapor or gas.

11. a device used to regulate and circulate air as part of an HVAC system.

12. devices usually constructed of galvanized sheet metal or fiberglass that transport air from the furnace or air handling unit (AHU) to the conditioned spaces at a specified velocity and then back.

13. a grille through which return air is extracted, usually without an adjustment for volume of airflow.

16. self-contained heating and cooling units that are factory assembled and located in the space served, usually without ductwork; include window air conditioners, through-wall room units, and heat pumps.