

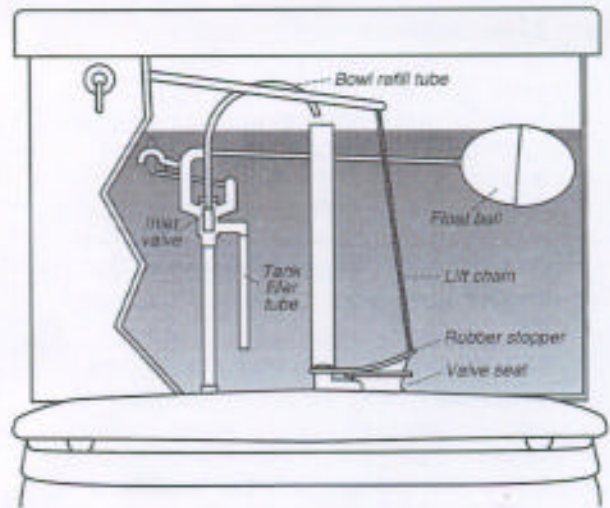
WATER HEATERS

Most homes have their water heated by electric, gas- or oil-fired heaters. Tanks normally range in size from 30 to 82 gallons. Modern tanks are covered with a thin layer of enamel to prevent corrosion. Insulation is placed between the tank and the outer metal jacket to minimize heat loss and condensation.

To guard against excessive temperature or pressure, every water heater must have a temperature/pressure relief valve that automatically releases water when the temperature or pressure in the tank reaches its limit.

The temperature setting should be kept as low as is safe to conserve energy and prolong tank life. Water should be at least 110 degrees Fahrenheit to kill microbes and no more than 130 to 140 degrees Fahrenheit, to prevent scalding.

Inside some tanks, replaceable magnesium rods are suspended in the water to attract corrosive electrolytes that would otherwise consume the tank walls. These rods can be checked and replaced periodically; however, as a practical matter, this is rarely done.



After the tank water is released, the rubber stopper drops down to seal the valve at the bottom of the tank. Water from the supply line flows through a ballcock valve to refill the bowl and then the tank. The float ball rises with the water on an arm that shuts off the ballcock valve when the water in the tank reaches the proper level.

WATER SOFTENERS

In some geographic areas, water contains excessive amounts of calcium and magnesium, and is known as "hard" water. Hard water leaves rings around bathroom fixtures and can build up mineral deposits in water heaters and pipes. Water softeners remove these minerals and replace them with sodium. The sodium in a properly operating system is minimal. However, if you are concerned with excess sodium in your diet, the softener can be connected to the water heater only, so the drinking water is not treated. Consider having the water analyzed to determine if there is reason for concern.

TOILETS

To most people, the workings of the toilet seem quite complicated — but they're really quite simple. When the tank handle is pushed or lifted, a connecting rod raises a rubber stopper from a valve at the bottom of the tank. Water from the tank rushes into the bowl and the tank's float ball drops with the water level. As water fills the bowl, gravity and a siphoning action draw the contents of the bowl through the trap and into the drainage system.

THE DRAIN-WASTE-VENT SYSTEM

