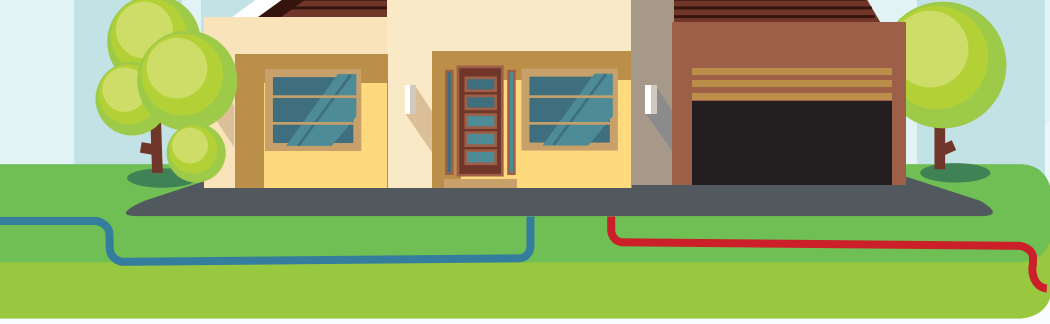


# HOME HEATING SYSTEMS



**W**armth – a basic human need. Without it, people could not survive the harsh winters that sweep across the globe.

Technology allows us to turn on heating systems in our homes at the touch of a button. But mankind did not always have it this easy. Here's a history of heating systems and the long journey to the technology we have today.

42,000 B.C.



Neanderthals in modern-day Ukraine built hearths from mammoth bones.

5000 B.C.



Koreans developed central heating that used radiant heat. They used flues under the floors that circulated heat produced by a fire that burned wood and other biomass.

A.D. 800

Clay-made stoves appeared for the first time. Crude fireplace heating was also used, such as castles with fireplaces accompanied by a short flue built toward the outside to act as a chimney.



500 B.C.



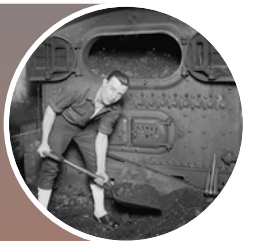
The Greeks and Romans began using hypocausts, which featured floors raised up on pillars as hot air passed in the space beneath.

1624



The circulating fireplace was invented in France by creating a raised grate to promote airflow.

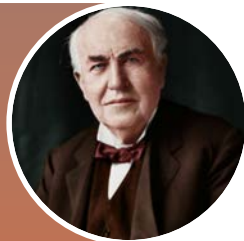
1700s



The first functional steam-based heating system was invented using a central boiler and series of pipes.

Mid 1800s

Thomas Edison invented the electric heater, while Franz San Galli invented the radiator.



1805



In England, William Strutt invented the warm-air furnace, where the heat travelled through several ducts connected to rooms. Firetube hot air furnaces were invented in France.

1885



The first thermostat was officially patented by Warren Johnson.

Early 1900s



The filament wire, commonly used to toast bread, was invented, and Albert Marsh was dubbed “the father of the electrical heating industry.”

2000

The advancement of “smart” technologies allowed homeowners to regulate heat in their homes remotely using electronic devices.



Late 1940s



Robert C. Webber manufactured the direct exchange ground-source heat pump.