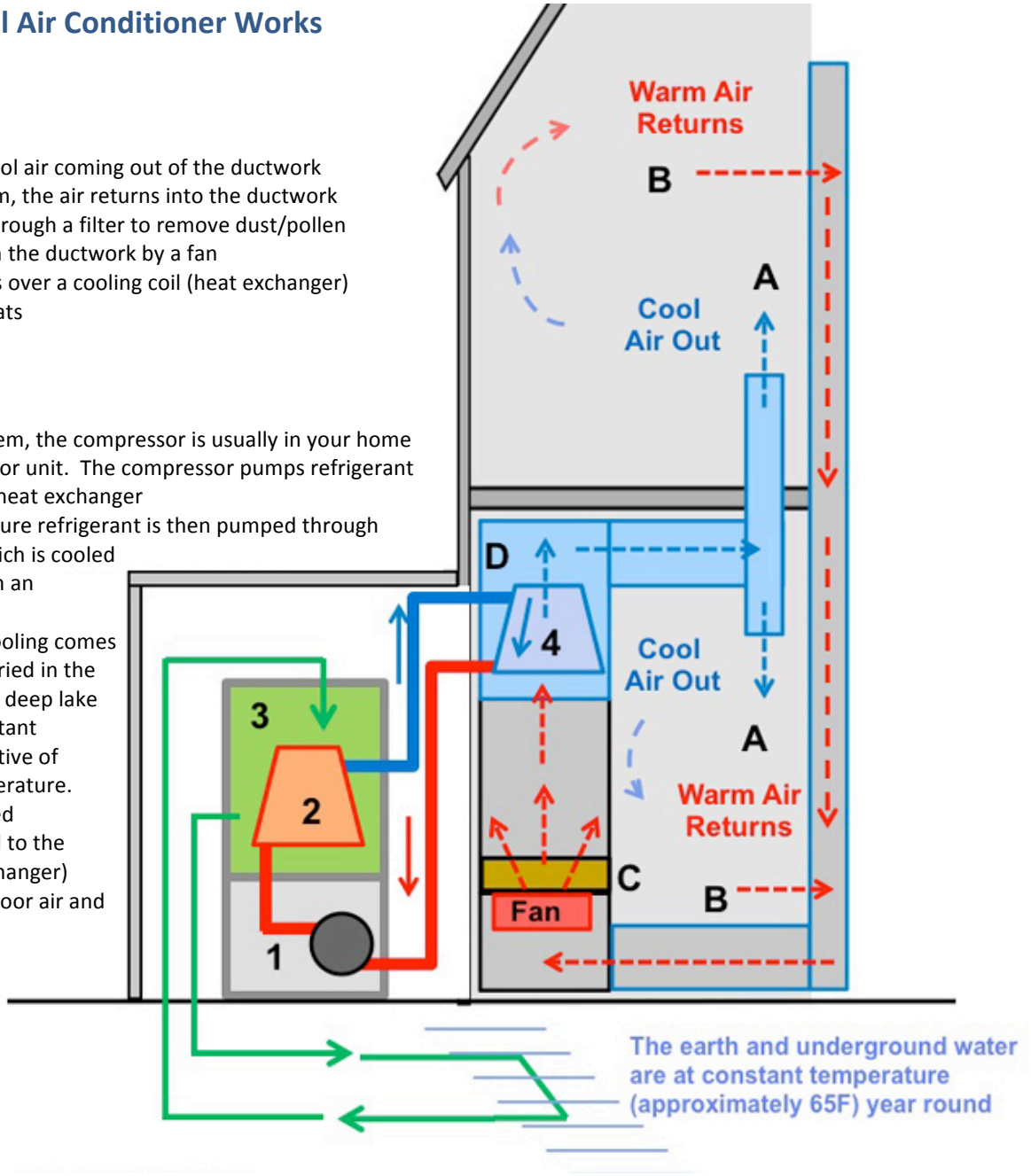
How a Geothermal Air Conditioner Works

Air Flow Cycle

A. Let's start with the cool air coming out of the ductwork
B. After cooling the room, the air returns into the ductwork
C. The return air goes through a filter to remove dust/pollen and is moved through the ductwork by a fan
D. The filtered air passes over a cooling coil (heat exchanger) and the process repeats

Refrigerant Flow Cycle

1. In a geo-thermal system, the compressor is usually in your home and there is no outdoor unit. The compressor pumps refrigerant coming from cooling heat exchanger
2. The warm, high-pressure refrigerant is then pumped through a heat exchanger, which is cooled by water coming from an underground source.
3. The water used for cooling comes from a loop either buried in the ground or in a nearby deep lake which is at fairly constant temperature irrespective of the outdoor air temperature.
4. The cooled, condensed refrigerant is pumped to the cooling coil (heat exchanger) where it cools the indoor air and the process repeats



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Climate Technologies