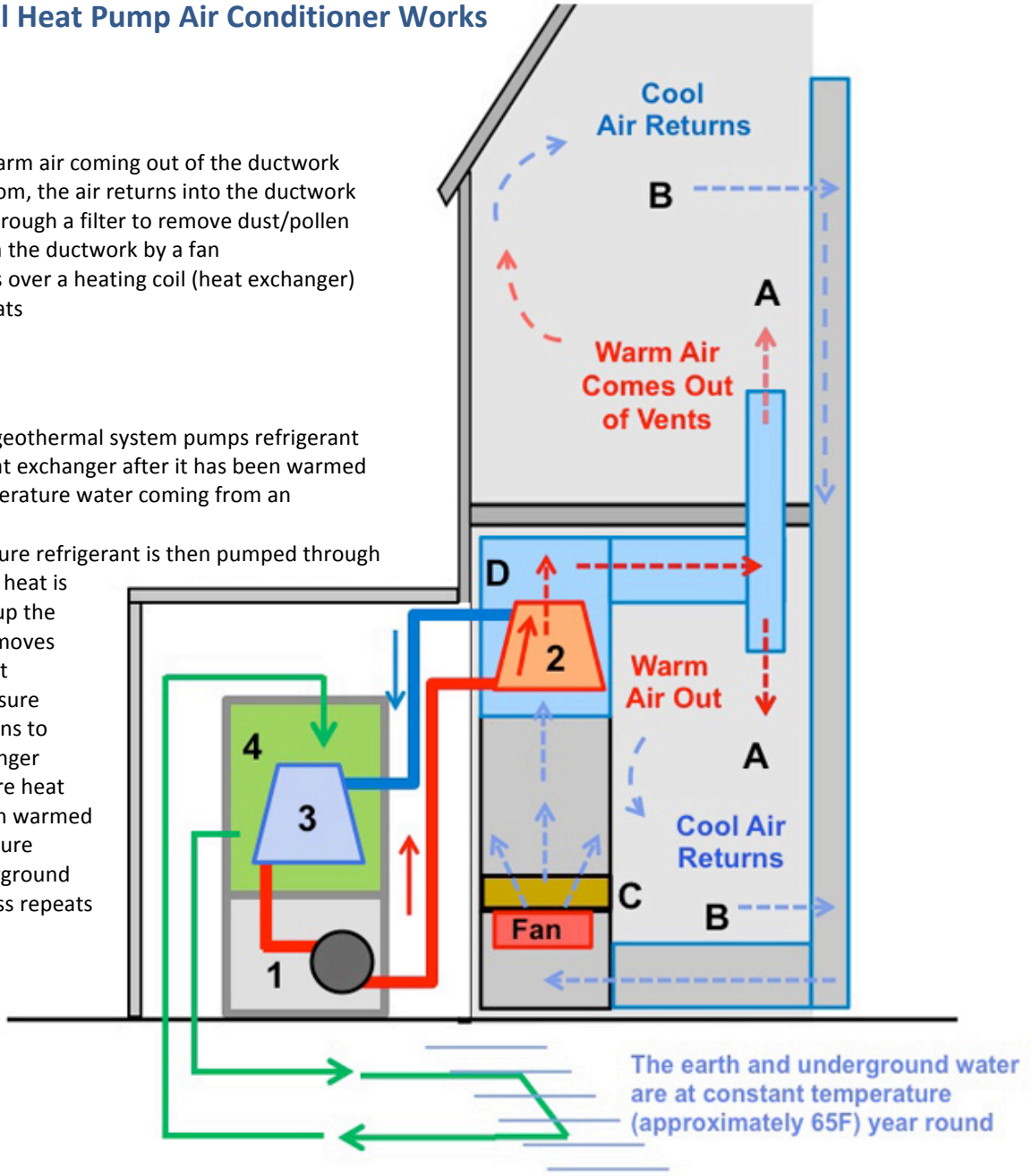
How a Geothermal Heat Pump Air Conditioner Works

Air Flow Cycle

A. Let's start with the warm air coming out of the ductwork
B. After warming 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 heating coil (heat exchanger) and the process repeats

Refrigerant Flow Cycle

1. The compressor in a geothermal system pumps refrigerant coming from the cheat exchanger after it has been warmed by the constant temperature water coming from an underground source.
2. The warm, high pressure refrigerant is then pumped through the indoor coil where heat is transferred to warm up the indoor air as the fan moves the indoor air across it
3. The cooled, high pressure refrigerant then returns to the water heat exchanger where it takes on more heat
4. The refrigerant is then warmed by constant temperature water from the underground source and the process repeats



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