

What is the difference between Single Stage & Two Stage Geothermal Heat Pumps?

Single stage heat pumps use a single rate of transfer at all times during operation. When the desired temperature is reached the system will shut off.

Dual stage – 2 stage geothermal heat pumps use two different rates of transfer. These 2 stages units are kind of like a "high" and a "low". When the desired temperature and measured temperature are fairly close in number, the unit will not need to work as hard, thus using the "low" setting.

In this case, a low rate of transfer is all that is necessary for getting to the desired temperature, so there is no reason to use more energy than is necessary. Conversely, when the difference in temperature is high, and the unit needs to change the temperature several degrees quickly, the dual stage heat pump will switch over to the high rate of transfer and more energy will be used. Dual stage geothermal heat pumps are more versatile and can potentially save money in the long run. There are many advantages to having the dual stage geothermal system. However there are a few situations where a single stage will be sufficient and there is no need to spend the extra money.

Since the dual stage heat pumps are a little more expensive, the next couple things to consider are "Is the dual stage necessary for what I am trying to do?", and "At what point will the dual stage heat pump have saved enough energy (money) to have been worth spending more?"