

## Advanced Brayton Reheating

What is the advantage of reheating in a Brayton cycle compared to a Brayton cycle without it?

Answer: The net work output increases.

Explanation for: Higher maximum temperature can be reached in the cycle - The maximum temperature is determined by the materials of the gas turbine.

Explanation for: The thermal efficiency increases - If reheating is used without regeneration the thermal efficiency decreases as the average temperature at which heat is rejected increases.

Explanation for: The amount of heat rejected in the exhaust gasses decreases - The amount of heat rejected in the exhaust gasses increases as the temperature at the turbine outlet will be higher.

Explanation for: The net work output increases - The advantage of reheating is that the net work output increases.