



The performance our warfighters deserve.  
The value our taxpayers demand.

# SUPERIORITY THROUGH PERFORMANCE: T900

## We Need a New Engine

Right now, our warfighters fly into battle aboard Black Hawk and Apache helicopters that are underpowered in high and hot conditions, and that use too much fuel. The Improved Turbine Engine Program (ITEP) is the U.S. Army's initiative to develop a new engine to power its Black Hawk and Apache fleets. The new engine must be 50% more powerful, 25% more fuel efficient and provide 20% longer engine life over the current engine, while also meeting stringent performance goals in high and hot conditions at 6,000 feet and 95 degrees.

## ATEC's T900 Dual-Spool Engine: The Superior Choice

Dual-spool engines help save more lives and protect our troops. Dual-spool means an engine has two rotating turbine-compressor assemblies instead of just one. The use of two spools delivers better dependability, greater fuel efficiency, more power to grow and lower cost over the life of the engine compared to single-spool designs currently in use.



BETTER  
DEPENDABILITY

A dual-spool engine uses computers to distribute load between the two compressors, and constantly adjusts the load borne by each to optimize performance. This allows the engine to run cooler, reducing wear and tear. In sandy conditions, for example, the rear compressor can turn faster

allowing the front compressor to turn more slowly, improving performance and allowing the front compressor to take less of a beating from sand ingestion.



GREATER FUEL  
EFFICIENCY

Because it can run its two compressors at different speeds – optimizing engine operation – a dual-spool engine achieves greater fuel efficiency than a single-spool design. The T900 not only will meet the Army's requirement for greater fuel efficiency over the current engine, it will provide a

3-4 percent specific fuel consumption advantage over comparable single-spool offerings.



MORE  
POWER

The T900 dual-spool engine has 10 percent more power growth capability than comparable single-spool offerings, giving the Army more flexibility as mission requirements evolve and change.

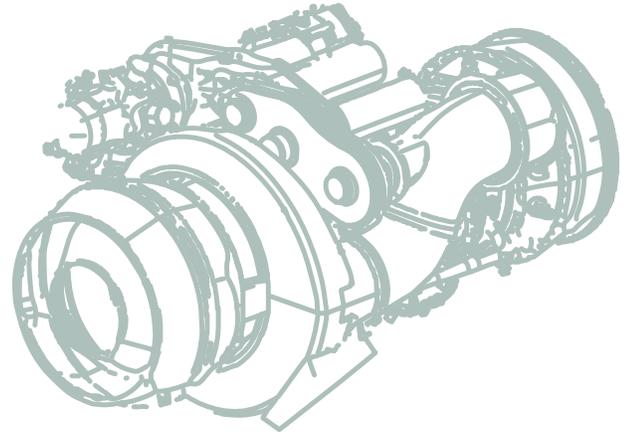


LOWER COST  
OVER THE LIFE  
OF THE ENGINE

Dual-spool engine architecture allows the T900 to run cooler and more efficiently. This reduces wear-and-tear, decreases associated maintenance costs and extends engine life. The T900 offers the Army lower total cost over the life of the engine. Compared to the current single-spool engine, the T900 will save the Army a billion dollars a year after being fielded.

# ATEC's T900 Dual Spool Delivers What ITEP Demands

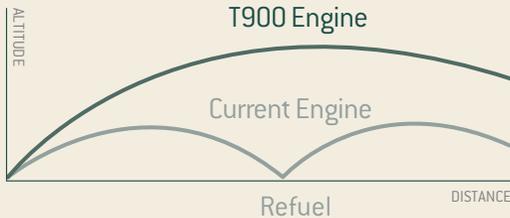
The new engine must be 50% more powerful, 25% more fuel efficient, and provide 20% longer engine life over the current engine, while also meeting stringent performance goals in high and hot conditions at 6,000 feet and 95 degrees. ATEC's T900 meets or exceeds all of these goals while providing enhanced mission capability and flexibility.



## ENHANCED MISSION CAPABILITY AND FLEXIBILITY



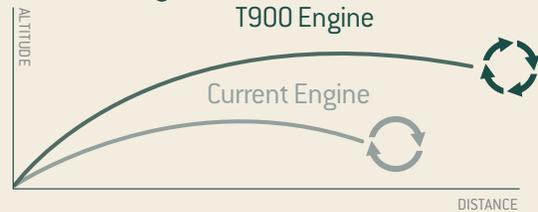
**Black Hawk**  
Increases mission capability



- 50%** payload increase
  - additional 5 soldiers per mission
- 32%** operational range improvement
  - lowers refuel requirements



**Apache**  
Increases reconnaissance time and firepower



- 48-66 minutes** of additional station time

- 3,300 lb.** lift capacity increase
  - full fuel and weapons load

## ATEC: A Joint Venture of Honeywell and Pratt & Whitney

In 2006, Honeywell and Pratt & Whitney joined together specifically to develop an advanced turboshaft helicopter engine that achieves the aggressive performance goals set by the U.S. Army: a 50% more powerful and 25% more fuel-efficient engine for the Black Hawk and Apache fleets. The dual-spool T900 engine developed by ATEC will meet or exceed every performance standard set by the Army. ATEC supports U.S. jobs in engineering, supply chain, manufacturing and logistics. Honeywell and Pratt & Whitney have decades of experience powering commercial and military aircraft – including helicopters, cargo planes, tankers, trainers and fighters. ATEC combines the best technology and experience of these two industry leaders to produce the T900.

To learn more, visit [DualSpoolRules.com](http://DualSpoolRules.com)  
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