CUSTOMER SUCCESS

Aerospace | Other Super Alloy - Inconel 718

T-Carb

Series 51CR

Material
Other Super Alloy - Inconel 718

Part Type
Engine Component

SGS Product
1/4" Dia, 6 Flute, Corner Radius End Mill

Competitor Product
1/4" Dia. 4 Flute Solid End Mill

Application
Milling: Semi-Rough / Profiling

SGS Tool Information
- 0.2500" Cutting Dia.
- 0.7500" Length of Cut
- 2.5000" Overall Length
- TX (Ti-NAMITE-X) Coating
- EDP: 35150

Total Cost Savings **$104,730**

Machining Cycle Time ↓ **85%**

New Tool Cost ↓ **39%**

Cost Per Part ↓ **73%**

Goal

Following a machining efficiency review, this aerospace supplier aimed to reduce cycle time and extend tool life on a critical Inconel operation. KYOCERA SGS application engineers were tasked with validating whether the T-Carb end mill could boost throughput, lower tool consumption, and deliver measurable gains in full-production conditions.

Strategy

The team conducted controlled testing comparing a competitor's 4-flute end mill to the SGS T-Carb. Both tools were run under identical conditions, measuring cycle time, tool life, tool usage, and total machining cost to capture real production efficiency gains.

Result

The T-Carb achieved a dramatic **85% reduction in cycle time**. Tool life tripled, lowering annual tool usage from **1,920** tools to **640**. Total machining and tooling costs dropped by more than **73%**, generating **$104,730** in annual savings.

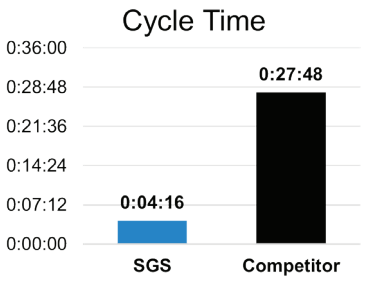
Learn more about the **T-Carb**

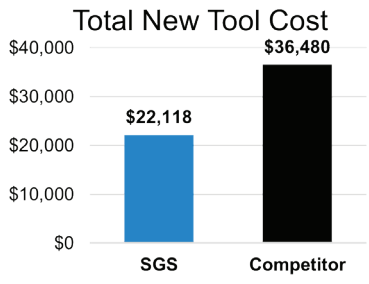
Tools	Cutting Dia. (DC)	RPM	SFM	IPM	IPR	Radial Depth (AE)	Axial Depth (AP)	Coolant
SGS T-Carb (6-Flute)	0.2500"	1955	128	28.15	0.0144	0.0500"	0.5500"	Flood
Competitor (4-Flute)	0.2500"	2350	154	22.56	0.0096	0.0500"	0.5500"	Flood

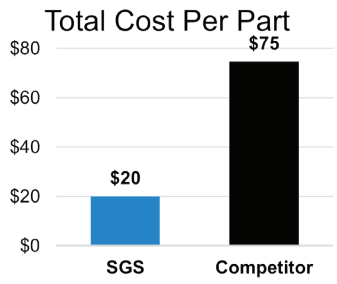
Cycle Time ↓ **85%**

New Tool Cost ↓ **39%**

Cost Per Part ↓ **73%**







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