



Z-Carb-AP

Series Z1P

Material
1018 - Steel

Part Type
Plate Groove

SGS Product
11/32" Dia, 4 Flute, Square End Mill

Competitor Product
11/32" Dia, 4 Flute, Square End Mill

Tool Path
Milling: Slotting

- SGS Tool Information**
- 0.3438" Cutting Dia.
 - 0.8130" Length of Cut
 - 2.5000" Overall Length
 - TX (Ti-NAMITE-X) Coating
 - EDP: [36422](#)

Goal

The customer was machining grooves in 1018 steel plate and needed to improve productivity while reducing tool consumption and machining costs.

Strategy

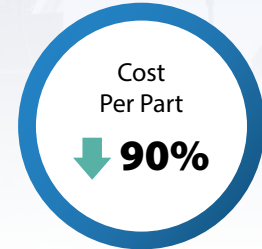
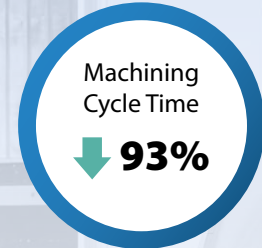
The SGS Application Engineer recommended a Z-Carb-AP end mill and optimized cutting parameters to increase axial depth of cut and maximize material removal rates while maintaining process stability.

Result

The Z-Carb-AP reduced cycle time from 30 minutes to 2 minutes and increased tool life from 5 parts to 75 parts per tool. The customer achieved a **93% reduction in total machining costs** and generated annual savings exceeding **\$124,000**.



Learn more about the [Z-Carb-AP](#)



Tools	Cutting Dia. (DC)	RPM	SFM	IPM	IPT	Radial Depth (AE)	Axial Depth (AP)	Coolant
SGS Z-Carb (4-Flute)	0.3438"	5500	495	64.02	0.0029	0.3438"	0.2000"	Flood
Competitor (4-Flute)	0.3438"	2200	198	14.96	0.0017	0.3438"	0.1000"	Flood

Cycle Time
↓ 93%

New Tool Cost
↓ 81%

Cost Per Part
↓ 90%

