



Z-Carb HPR

Series Z5C



Material
Stainless Steel - 304

Part Type
Components

SGS Product
1/2" Dia, 5 Flute, Corner Radius End Mill

Competitor Product
0.5000" Dia. 5 Flute End Mill

Application
Milling_Semi Rough-Profiling
33-5 Ae

SGS Tool Information

- 0.5000" Cutting Dia.
- 1.2500" Length of Cut
- 3.2500" Overall Length
- ALTiN (Ti-NAMITE-A) Coating
- EDP: [37195](#)

Goal

The customer was seeking an end mill to reduce cycle time while increasing tool life.

Strategy

SGS recommended testing a Z-Carb HPR with a larger radial stepover. By running at 25% radial engagement, the customer achieved improved tool life and stable cutting performance while enabling faster material removal.



Learn more
about the
Z-Carb HPR

Total
Cost Savings
\$22,093

Machining
Cycle Time
87%

Total
Cost Per Part
62%

Total
Machining Cost
87%

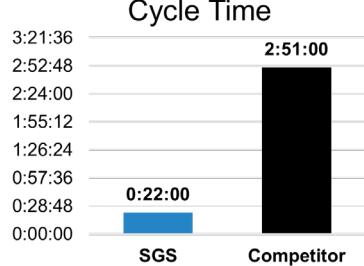
Result

The implementation of the Z-Carb HPR resulted in a **87%** reduction in required cycle time. Total cost per part were reduced by **62%**, and total machining costs were reduced by **87%**. Overall, the customer achieved a total cost reduction of **62%**, generating annual savings of more than \$22,000.

Tools	Cutting Dia. (DC)	RPM	SFM	IPM	IPR	Radial Depth (AE)	Axial Depth (AP)	Coolant
SGS Z-Carb-HPR (5-Flute)	0.5000"	2579	338	31.08	0.0121	0.1250"	1.0000"	Flood
Competitor (5-Flute)	0.5000"	2300	301	23.00	0.0100	0.0200"	1.0000"	Flood

Machining Cycle Time

87%



Total Cost Per Part

62%

Total Machining Cost

87%

Total Cost Per Part



Total Machining Cost

