



H-Carb Series 77

Material
1018 - Steel

Part Type
Gear Housing

SGS Product
H-Carb 7-Flute Corner Radius End Mill

Competitor Product
0.500" 5-Flute Solid End Mill

Tool Path
High Efficiency

- SGS Tool Information**
- 0.500" Cutting Dia.
 - 1.500" Length of Cut
 - 3.500" Overall Length
 - Chipbreaker
 - Ti-NAMITE (TM) Coating
 - EDP: [77191](#)

Goal

Following a change in management, this hardware shop aimed to reduce cycle time and improve tool life using general-purpose end mills. KYOCERA SGS application engineers were tasked with identifying a tool solution that could deliver measurable improvements in efficiency and surface quality through controlled testing and real-world application.

Strategy

The H-Carb Series 77 achieved a tool life of 20 parts prior to observable wear, nearly tripling the performance of the competitor's tool, which exhibited wear after just 7 parts.

Result

Implementation of the H-Carb end mill led to a **70%** reduction in cycle time. Tooling costs decreased by **63%**, and cost per part was reduced by **68%**. Overall, the customer achieved a **68%** total cost reduction, resulting in annual savings exceeding **\$57,600**.



Learn more about the
H-Carb

Total
Cost Savings
\$57,613

Machining
Cycle Time
↓ 70%

New
Tool Cost
↓ 63%

Cost
Per Part
↓ 68%

Tools	Cutting Dia. (DC)	RPM	SFM	IPM	IPR	Radial Depth (AE)	Axial Depth (AP)	Coolant
H-Carb (7-Flute)	0.5000"	6601	865	189.45	0.0287	0.0500"	1.3190"	Flood
Competitor (5-Flute)	0.5000"	5158	676	59.32	0.0115	0.0500"	1.3190"	Flood

Cycle Time
↓ 70%

New Tool Cost
↓ 63%

Cost Per Part
↓ 68%

