



HY-PRO® CARB VGM5



SNAPSHOT

BACKGROUND

Large medical manufacturer was interested in a cost savings initiative for a high usage end mill machining stainless, titanium and cobalt-chrome flashing from hip joint forged parts.

GOALS

Reduce the overall cost of the application by improving cycle time and increase tool life.

DETAILS

INDUSTRY

Medical

PART

Hip Joint

MATERIAL

CoCr

MACHINE | COOLANT

Fadal VMC 15 | CF 2105

SPINDLE

CT40

ORIGINAL TOOLING

4 Flute End Mill
0.25" | 4 Flutes | AlTiN

NEW TOOLING

HY-PRO® CARB VGM5
0.25" | 5 Flute | EXO

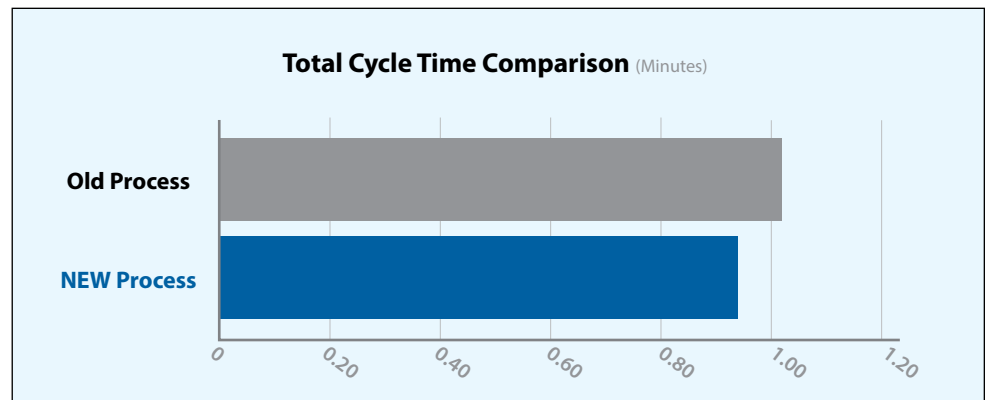


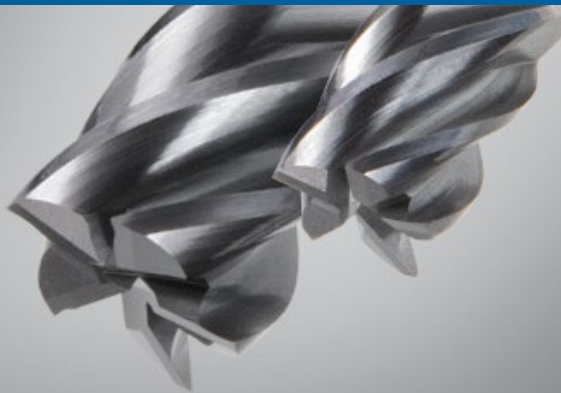
OVER \$17,000 ANNUAL SAVINGS!

THE STRATEGY

We introduced the VGM5 to the customer. To increase the cycle time, this tool series has 5 flutes vs. the current tools 4, thus increasing the feed rate. Coupled with our EXO coating we looked to increase the overall tool life.

	Original Process	NEW Process
Tool Diameter (Inch)	0.25"	
Cutting Speed (RPM • SFM)	4,000 • 262	3,500 • 229
Feed (IPM • IPT)	17.6 • 0.0011	19 • 0.0011
Depth of Cut (Aa • Ar)	0.25" • 0.25"	0.25" • 0.25"
Metal Removal Rate	1.10 in ³ min	1.20 in³ min
Cycle Time (Minutes)	1.02	0.94
Tool Life (# of Parts)	6	14





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THE RESULTS

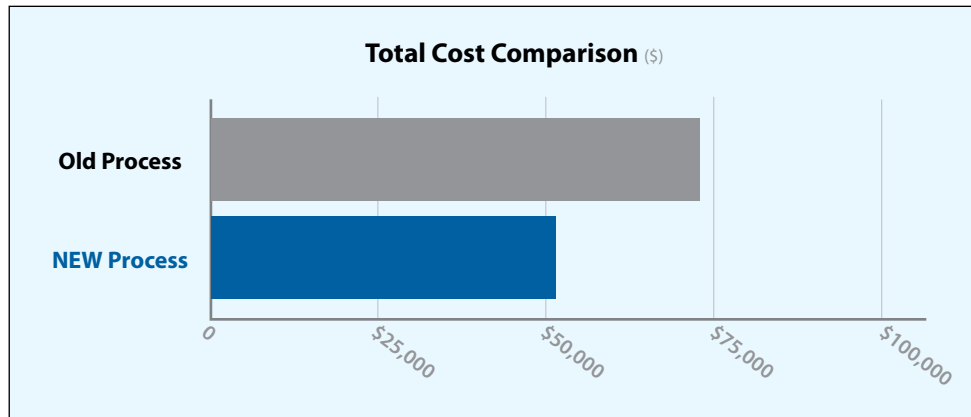
OSG was able to increase tool life from 6 parts to 14 parts per tool

- Feed rate increased **from 17.7 IPM to 19 IPM**
- Cycle time reduced **from 1.02mins to 0.94mins**
- OSG was able to **save this customer over \$17,000** on this application annually

Results Overview	
Cycle Time Saved per Part (Minutes)	0.09
Annual Part Production	10,046
Annual Cycle Time Saved (Minutes)	1,757
Annual Machine Cost Savings	\$1,757
Tool Life Productivity Improvement	133%
Annual Tool Change Cost Savings	\$1,909.14
Total Machining Cost Saved Annually	\$17,379

THE CONCLUSION

The HY-PRO® CARB VGM5 was successful in reducing cycle time while maintaining exceptional tool life, resulting in an annual **savings of \$17,379 for this customer!**



OVER \$17,000 ANNUAL SAVINGS!



FIND OUT MORE

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osgtool.com/vgm5

