



A BRAND AE-VMS



SNAPSHOT

BACKGROUND

Our customer came to us unsatisfied with their current process and wanting a tool that could last longer and cut down on machining time.

GOALS

The objective was to provide an end mill that has longer tool life, while also decreasing overall cycle time.

DETAILS

INDUSTRY

Job Shop

PART

Steering Bracket

MATERIAL

Steel (P)

MACHINE

Brother TC232 | Flood

SPINDLE

BT30

ORIGINAL TOOLING

Competitor
0.236" | 4 Flute | AlTiN

NEW TOOLING

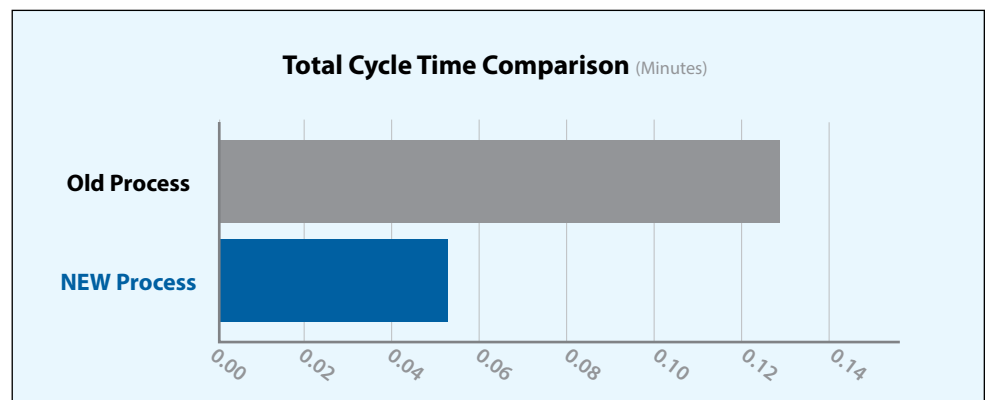
A Brand AE-VMS
0.236" | 4 Flute | DUROREY

OVER \$15,000 SAVINGS!

THE STRATEGY

For this application we decided to go with a more premium product and after showing them just how much they could reduce machining time, they couldn't wait to let us in to test. The AE-VMS has a superior coating. When you combine this with the variable geometry design, it was able to surpass the competitor tool in both cycle time reduction, and extended tool life.

	Original Process	NEW Process
Tool Diameter (Inch)	0.236"	0.236"
Cutting Speed (RPM • SFM)	4,850 • 300	8,000 • 495
Feed (IPM/IPT)	38.8 • 0.002	96 • 0.003
Depth of Cut (Aa/Ar)	0.25" • 0.236"	0.25" • 0.236"
Metal Removal Rate	2.29 in ³ min	5.66 in³ min
Cycle Time (Minutes)	0.13	0.05
Tool Life (# of Parts)	100	170





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THE RESULTS

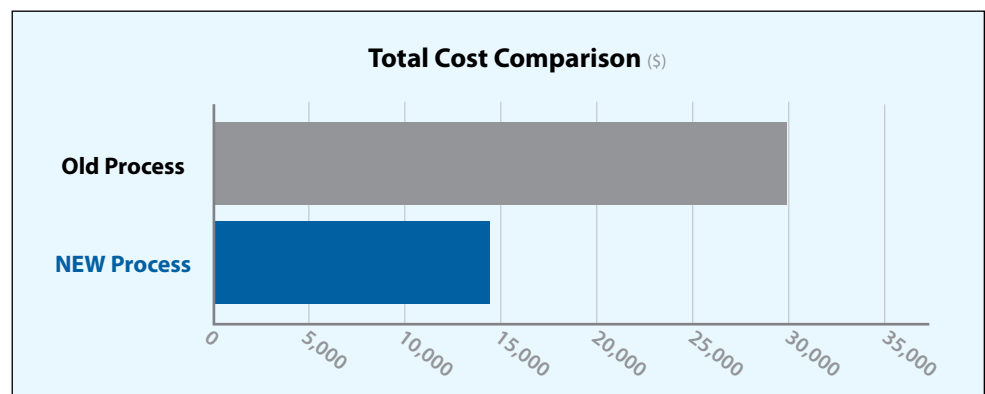
The main difference between the old tooling and our AE-VMS is our tool was able to run at a much higher feed rate. Comparing OSG's AE-VMS to the competitor end mill, we were able to reduce the cycle time per pass from 7.732 seconds down to 3.125 seconds. This resulted in an overall cycle time improvement of 148%! Also, our tool and coating combination were much stronger than the original tool. We were able to increase the overall tool life from 100 parts to 170 parts using the AE-VMS.

- Reduced cycle time **from 7.732 seconds to 3.125 seconds**
- Increased tool life **from 100 parts to 170 parts**
- **An overall cost savings of \$15,000!**

Results Overview	
Cycle Time Saved per Part (Minutes)	0.08
Annual Part Production	50,000
Annual Cycle Time Saved (Minutes)	3,839
Annual Machine Cost Savings	\$4,159
Tool Life Productivity Improvement	70%
Annual Tool Change Cost Savings	\$1,115.20
Total Machining Cost Saved Annually	\$15,547

THE CONCLUSION

The result of this test showed not only an increase in tool life, but also a reduction in cycle time. This amounted to an overall savings of over \$15,000. We were also able to pick up even more opportunities, and test different tools in other areas around the shop floor. This all shows even when you think you've mastered your current process, OSG has a better tool for the job!



OVER \$15,000 SAVINGS!



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osgtool.com/a-brand-ae-vm

