



Braking the Limits

EMUGE cutting tool technology saves automotive supplier \$240K annually

Company Description

A leading tier two manufacturer supplying brake components to an automotive OEM.

Problem

During a slotting operation in disc brake rotors, this tier two automotive supplier suffered poor tool life. Because they were only able to produce 8 to 10 parts per tool, the shop was facing high tooling costs and excessive downtime for tool changes, as well as a secondary operation to remove tough burrs.

Solution

After consulting with the customer, EMUGE engineers proposed one of the company’s TOP-Cut VAR end mills together with an FPC mechanical milling chuck. The U.S. manufactured tool boasts a vibration-killing variable helix flute design, tapered core for increased stability in heavy cuts, and proprietary AlCr coating for increased wear and heat resistance. The result? Four times the tool life and far more manageable burrs, generating a \$239K annual cost reduction vs. the nearest competitor.

Estimated Cost Savings

Workpiece Type	Anti-Lock Brake Rotor
Machine Type	CNC Machine
Machining Plane	Vertical
Material	Other
Sub-Material	1045

	Emuge	Competitor
Application	End Milling	End Milling
Tool Price	\$35.00	\$40.00
Job Description		
Number of Parts	10,000	10,000
Total Tools	263	1,000
Cycle Times		
Cutting Speed (sfm)	400	400
Number of Passes	1	1
Tool Life in Parts	38	10
Maching time / part (min)	5	5
Cost Data		
Machine Rate (\$/hr)	\$100.00	\$100.00
Tool Costs / Part (\$)	\$0.92	\$4.00
Total Machining Costs / Part (\$)	\$9.25	\$12.33
Test Results		
Job Savings	\$30,800.00	
Savings per Part	\$3.08	
Percent Savings	25.0%	