

Prescott Aerospace gets 15x tool life and slashes cost



OVERVIEW:

Prescott Aerospace, Inc.

Prescott Aerospace is a build-to-print machine shop specializing in close-tolerance CNC machining, with applications in aluminum, stainless steel and high-temp alloys. For more than 28 years, the company has supported the military aircraft, military ordnance and commercial helicopter industries.

Application:	Stainless steel drilling
Location:	Prescott Valley, AZ
Facility Size:	60,000 sq. ft. in two facilities

CHALLENGE:

Improve drill performance on high-performance steel

Previous drills broke repeatedly after cutting ~380 holes.

SOLUTION:

An Accupro[®] drill, with better coolant flow, delivered 15x more holes

The Accupro drill cut more than 5,800 holes — and was sharpened and returned to the tool crib.

RESULTS:

Slashing costs and setup time boosts productivity and profitability

Running the job without constant tool replacement means tremendous time and cost savings.

“When MSC’s metalworking experts recommend a speed and feed or a tool to me, I am 100 percent assured it will work.”

Mark Longfield, CNC Programmer Manufacturing Engineer

CHALLENGE

Prescott was drilling holes in a custom, 455 maraging steel, annealed, for bushings in a demanding aerospace application. When they started to do jobs like this one with the first CNC machines in the 1990s, “we were using one high-speed drill per hole—if you can imagine that,” says Mark Longfield, CNC Programmer Manufacturing Engineer. More recently, with high-pressure machines like their Matsuura V-Max 800 5AX and Mori Seiki NH4000-DCG, both running at 950 PSI, he says they get 300–400 holes per drill.

That was the case on this current job, where the name-brand drill lasted for no more than 32 parts before breaking (at 12 holes per part, the tool lasted for 384 holes). But on this job, Prescott had more than 400 parts to complete. When they added up the cost of tool breakage, wasted time and bad parts, Longfield knew they had a problem that had to be fixed.

SOLUTION

Longfield spoke to his MSC sales representative and the MSC metalworking experts, who brought him a high-performance Accupro 0.250"-diameter Altin 5XD coolant-through drill, which they used to complete the job—and then some. The Accupro tool delivered 15x the performance of the previous drill, and Longfield says this is probably due to the larger coolant port designed into the Accupro drill.

“If the operator has to set up another drill after every 30 to 40 parts, versus running the entire lot, that’s time. Like we always say, we don’t sell parts, we sell time. The parts are a by-product of the time we spend in the shop.”

RESULTS

On this one job, a single Accupro drill delivered 15x the performance of its predecessor, turning out 488 parts—for more than 5,800 holes—without breaking. In fact, that same drill was actually sharpened and returned to the tool crib to cut another day.

“I would have been happy to get 400–500 holes per drill,” said Longfield. “But to have one drill consistently perform through the entire lot of parts (5,800-plus holes) was truly phenomenal.”

He attributes this durability to a much larger coolant port on the Accupro drill, and points out that he would have had to purchase 16 more of the old drills to do this job.

“We have a great relationship with MSC,” said Longfield. “The ability for me to call up MSC and have test tools brought in has been very beneficial for us. And when MSC’s metalworking experts recommend a speed and feed or a tool to me, I am 100 percent assured it will work.”

He added that Prescott is switching nearly all of its end milling items (2,100 tool types) to the Accupro line, and also is in the process of bringing in MSC’s ControlPoint Inventory Management vending solution to track and automatically reorder tooling as needed, to eliminate stock-outs and reduce downtime.

SUCCESS FACTORS

Expect More: Tough jobs are tough jobs, but there are usually tools out there that can get the job done while delivering great productivity and value. Don’t settle for poor performance.

Collaborate with the Right Partner: How can you find the right tool for the job? You can spend hours doing the research yourself, or you can call suppliers who make it their job to find you the right tools. MSC’s metalworking experts see hundreds of shops with thousands of applications every year; they’re in a great position to bring you the right tools for your toughest jobs.