

SUGINO MEETS THE CHALLENGES OF MACHINING WITH FREE CUTTING STEEL



Free cutting steel has many advantages and is often used for its easy machinability. But these same malleability properties make roller burnishing and surface finishing difficult, as this material can easily flake when pressure is applied. So, when a client came to Sugino for help reaching surface finish specs, they recommended their **Superroll MAC**.



The tool that Sugino’s competitor was using was causing the free cutting steel to flake and they could not achieve their Ra 8u roughness specification. Also, to add to the problem, the hole diameter was very small, only 0.157” with a 1.67” depth, limiting the range of tools available to fit the part.

However, the **Superroll MAC** has a unique automatic tool diameter compensation function, which allows for consistent, even pressure. It automatically tracks the pre-hole diameter, delivering a stable finishing surface. And it is compact enough to work in this customer’s part - an automotive brake cylinder.

The compensating pressure of **Superroll MAC** has an unexpected bonus as well. It increased the longevity of the tool parts significantly.

<u>Sugino’s Superroll MAC Tool Life</u>	<u>Competitor’s Tool Life</u>
<ul style="list-style-type: none"> • Roller – 31,000 (parts burnished) • Mandrel – 103,000 • Frame – 123,000 	<ul style="list-style-type: none"> • Roller – 9,800 (parts burnished) • Mandrel – 16,000 • Frame – 59,000

Sugino solved this problem with their **Superroll MAC**. If you're having surface roughness and roundness issues, talk to us. We may be able to meet your specs and exceed your expectations.

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