

News for December, 2016







For more than 22 years, Dixon Engineering & Sales Co. has been proud to be a distributor for **Sugino Corp.** **Sugino** offers the best solutions for your applications involving drilling and tapping equipment, high pressure washing/deburring systems, and CNC 3-axis machining units/centers. But did you know that they also manufacture a vast array of precision roller burnishing and deburring tools as well?




Sugino's "Superoll" line of roller burnishing tools is designed to meet most any application – inner diameters, outer diameters, flat surfaces, angular and tapered surfaces, to name a few. Superoll tools adapt to machining centers, stand alone drill units, or CNC lathes, thus allowing for complete part processing in one set up. They can be used in many metal processing fields and play a key role in greatly increasing overall quality of the work piece, while significantly reducing operating costs.

The roller burnishing process creates a "mirror" finish by plastic deformation and compression of the high points of a given surface. Some of the processing effects you will see when using the Superoll roller burnishing tool include:

CYCLE TIME REDUCTION	Cycle times using the burnishing process are 20 – 80% more efficient when compared to a grinding or honing operation.
HIGH-SPEED BURNISHING	Burnishing with Superoll can easily produce surface finishes of 4 - 16 Ra micro-inch in a single pass. This process is ideal for slight size control as well as mating or seal surfaces.
IMPROVED ABRASION RESISTANCE ON A SURFACE	The molecular organization is so dense after the burnishing process that it actually increases surface hardness, which in turn improves abrasion resistance.
INCREASED TENSILE STRENGTH	Roller burnishing improves the tensile strength by more than 30%.
NO SLUDGE PRODUCED	Roller burnishing operations are environmentally friendly – no sludge or by-products are produced so no special waste treatment procedure is needed.

			
ID PROCESSING	OD PROCESSING	RADIAL FEATURES	FLAT SURFACE PROCESSING

EXAMPLES OF PARTS PROCESSED BY SUGINO SUPERROLL TOOLS

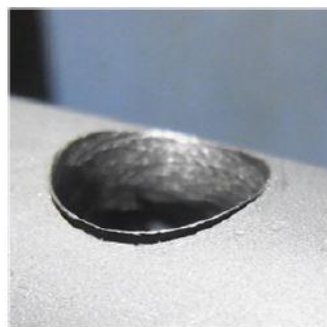
 Brake Master Cylinder Brake Master Housing	 Torque Converter Parts Motor Shaft	 Round surface of VCR fitting	 Spline hob surface
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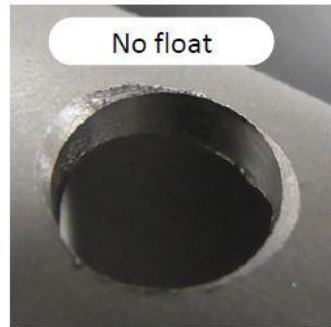
Built in float

A new addition to the burnishing and deburring family is the **BARRIQUAN** self-compensating deburring tool. Barriquan Tool Holders have integral tension or compression. A spring load within the tool generates constant pressure on the part to produce a uniform deburred surface. They can be mounted in most machining centers, turning machines, Sugino drilling units or utilized as end-of-arm-tooling on a robot. Standard industrial burr bits and brushes available from many sources can be utilized in the Barriquan Tool Holders.

Barriquan tool holders are designed for normal clockwise rotation (right-handed rotation and feed). These tools are designed primarily for linear pressure. If coolant is necessary for the deburring operation, please focus the fluid on the burr bit and work piece surface.



Before burr removal



No float



With float

After burr removal

As you can see from the photo above, vertical compensation and variable tension allows for clean and even burr removal. With the Barriquan tool holder, there will be no more rubbing

parts with rudimentary files and medieval dental equipment to remove problematic edges. It will make for a more productive workplace, decreasing additional finishing costs, time, effort and frustration. These tools can be used in many applications such as deburring pipe ports/holes (underside as well), casting profiles, brushing applications, robot applications, and more.

Want to learn more about Sugino's complete line of burnishing and deburring tools? Then visit their [website](#) to get more details and see videos of these tools in action.