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The Complete Purchasing Guide for Today's Industrial Market

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Rohsteir

**Precision,
Perfection
and Enhanced
Productivity**

for Small Parts
Manufacturing



FEATURE:
TIGERSTOP
GRANTED
EUROPEAN
PATENT ON
TIGERSTOP SYSTEMS

COMPANY PROFILE:

Who We Are?

Lantek is nowadays one of the leading companies in the sheet metal software

Precision, Perfection and Enhanced Productivity for Small Parts Manufacturing

Proper brush selection allows manufacturers to reduce cycle time, automate intricate surface finishing operations and deliver consistent quality

Small parts requiring deburring, edge blending or other surface finishing operations can present particular production challenges to manufacturers. Often production is taken off-stream where hand-held tools are necessary to perform the intricate secondary finishing operations many of these components require. This action frequently results in reduced productivity and inconsistent product quality. Even in instances where the process is fully automated, specifying the appropriate finishing

brush for the application plays an integral role in improving the tool's overall performance and life span.

A miniature deburring brush can solve both the productivity and quality challenges involved when manufacturing parts of various small sizes, contours and materials. These tools are generally best suited to address tight tolerances, edge blending, deburring and other finishing requirements that have a direct impact on overall functionality.

Precision Planting, Inc. (Tremont, IL), an industry leader in agricultural seed planting equipment, manufactures a variety of systems that are designed to solve exact seed spacing and placement issues. Because the accuracy of seed placement is heavily reliant on precise timing, it is mission critical that the surface finish of the seed ejection component be void of even the slightest of variations and irregularities.

Before Flex-Hone®

"One of our newest systems has tubes that are injection molded, and we had great concern about removing the residual flash that was created by the molding process," explains Precision Planting engineer Derek Sauder. "It may only be only .002 to .005 in. thick. While not very long, the ridge of the flash is rough and would cause problems in the performance of our part."

Sauder explains that the component is used in planting seed for corn, beans and other crops. In operation, the part has a vacuum applied to one side, and the other side contains the seed.

"The seed is held by vacuum against a hole in the part," he says. "If we didn't remove the flashing, it may grab onto the seed and cause it not to release properly."

In the initial phase of development, the part would not perform without the flashing being removed. Getting the seeds to release accurately was only achieved when an abrasive nylon brush from Brush Research Manufacturing (Los Angeles, CA) was incorporated into the manufacturing process.

"So, we knew the miniature nylon brush was necessary," says Sauder. "It worked quite well, so I was confident that we had a good solution. We had tried the injection molded piece without, and it didn't work as well."

Sauder adds that while the nylon clean-out brushes do not speed up part production, it is automated and therefore highly efficient.

"It has allowed our products to become the most accurate planting equipment in the market," he says. "Our product is well-known and has a fine reputation in the marketplace. And this process helps us attain that. It is economical and gives us good results."

The application will certainly affect the choice of miniature brushes and includes variables such as contours required, the type of material, and the amount of material to be removed. Other factors that apply to brushes used in automated applications include RPM of the machine tool, feed rates, and optimum wear-life of the brushes.

Brush Research designs and produces miniature finishing brushes in an assortment of designs, sizes and materials. While customers typically know what size of brushes are required for their applications, Brush Research's engineering department is available for consultation to ensure that

the most suitable style brush is selected for the given application.

There are several types of miniature brushes available today that vary not just in size, but also in filament type. Carbon steel, stainless steel, brass, nylon and abrasive filled nylon are commonly used. Abrasive filled nylon can contain silicon carbide, aluminum oxide or diamond abrasive.

General Parameters

"In the overall, the specification of a brush involves the task at hand, (e.g., deburring or surface finishing) the speed at which it must be accomplished, the size of the feature being worked and the material the brush is working on," explains Mike Miller of Brush Research. Miller says his firm manufactures miniature brushes for bores ranging in size from as small as 0.024" in various lengths and tip styles. Filament options include nylon, carbon steel, stainless steel, brass and abrasive filled

After Flex-Hone®