



APPLICATION SPOTLIGHT



CeramiX® Disc Brush

THE OPPORTUNITY

A global manufacturer of small engines for motorcycles, lawn care equipment, and watercraft worked with Tanis to incorporate industrial brushes into their engine block machining cell to automate a time consuming, inconsistent manual process.

THE SOLUTION

To assess the best brush to surface finish their aluminum engine blocks, the manufacturer tested two competitive brushes.

Tanis Brush Recommendation:

4" CeramiX Dense Pattern Disc Brush with Shell Mill Mount
» .040 filament diameter, 120 grit, 1-1/2" trim length
» Featuring our exclusive 3M Abrasive Grain 321

Competitor Recommendation:

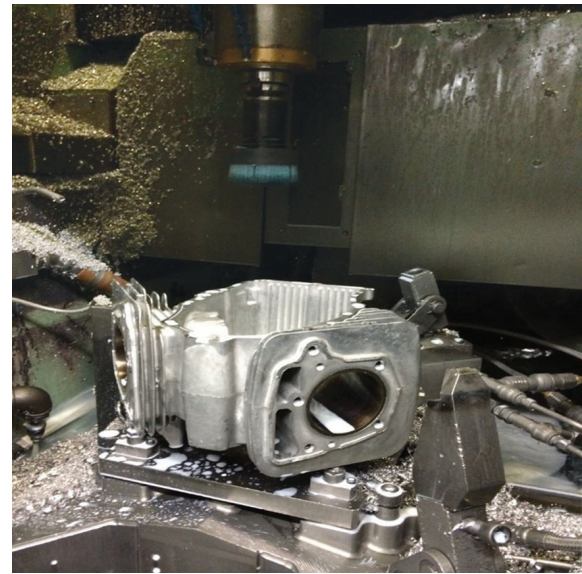
4" Disc Brush with Silicon Carbide
» .040 filament diameter, 120 grit, 1-1/2" trim length

THE RESULT

The Tanis high performance CeramiX Disc Brush achieved 6 times greater throughput over the competitive brush, delivering 30,000 finished engine blocks per brush versus 5,000 with the competitor's brush.

The brushes were run at 1,500 RPM, brushing 50" per minute at .100 depth of penetration with coolant. The machine was programmed to evaluate depth of cut at every 50 and 100th part produced to ensure tight tolerances were maintained and consistent finish was achieved.

*CeramiX Disc Brush
with 3M™ Abrasive
Grain delivered 6 TIMES
MORE THROUGHPUT
in this surface
finishing application.*



HIGHLIGHTS

Tanis CeramiX Abrasive Disc Brushes ACHIEVED 6 TIMES MORE THROUGHPUT finishing aluminum engine blocks for this manufacturer, greatly reducing their cost per unit.

CeramiX brushes are made with an exclusive 3M mineral grain that significantly outperforms other filament grains, especially silicon carbide, on cutting action, throughput and brush life — saving you money and increasing productivity.

The 3M Abrasive Grain 321 grain offers superior attributes of hardness, toughness, and self-sharpening — allowing CeramiX brushes to be run at higher RPMs and finish more surface feet per minute.

The 3M filament is continuously self-sharpening. Every time the grain strikes the metal part it fractures, creating an ongoing reaction that produces more sharp edges to blend, break the edges, and deburr metal faster and more efficiently.

CeramiX® Disc Brush Dense Pattern Featuring 3M™ Abrasive Grain Filament

A superior abrasive filament significantly increases performance and productivity.

DENSE BRUSH PATTERN

The most popular pattern for large, flat surfaces that require aggressive performance.

3M ABRASIVE GRAIN FILAMENT

Delivers unmatched performance due to its exceptional qualities – fracture toughness, hardness, and ability to self-sharpen.

GREAT BRISTLE DENSITY

Ideally suited for heavier deburring and provides substantial finishing pressure for tough applications.



CUTTING ACTION

CeramiX brushes with 3M abrasive grain provide enhanced cutting action up to 6 times faster than traditional filaments, especially over silicon carbide.

BRUSH LIFE

CeramiX brushes can be run at higher RPMs and produce more parts per brush due to the exclusive high-performance 3M filament.

UNMATCHED PERFORMANCE

CeramiX abrasive brushes reduce cycle times, increase machine productivity and throughput while delivering improved cost per unit.



Shell Mill Mount



Shell Mill Holder

SHELL MILL MOUNT + HOLDER

Shell mill disc brush has built-in keyway to mount directly to a standard shell mill holder for use in CNC machining centers.

PRO TIP

As the filament wears during use, the depth of penetration or depth of cut of the brush will lessen so it is crucial to conduct testing over time to realign the brushes as needed (for your application) to achieve a consistent finish for your part.

Trying to overcompensate by increasing the initial depth of penetration is not recommended. It will quickly damage the filament, rendering the brush ineffective and cause much faster investment in replacement brushes.

For optimal performance with a Tanis abrasive disc brush, start with a depth of penetration between .075 - .100.