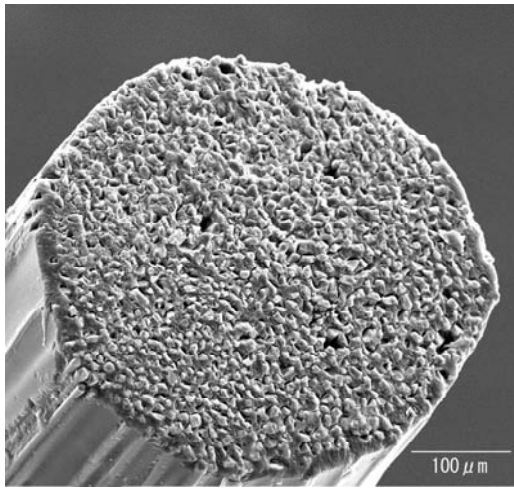


Aluminium Oxide fibres for CNC deburring.

Innovation, new concepts and technical developments continually render what were once problematical processes into simple and cost effective operations. Deburring, the removal of sharp edges on corners and cross holes is a typical example.

TECO Tooling recently introduced “Xebec Deburring Tools” which utilise alumina ceramic fibres for precision deburring and surface finishing. Xebec deburring tools can be integrated in the automated machining process, eliminating labour intensive ‘second ops’.

Xebec uses a unique and patented technology to produce deburring tools in their high tech facility in Japan. Whilst other deburring options, such as Tumblers, Emory cloths, Stones, and various brushes have been available for some time, Xebec ceramic fibre tools represent an innovative advancement in the deburring processes.



This recent technology is based on alumina continuous filaments of 10μm diameter, which were developed to have optimal crystal structure for grinding.

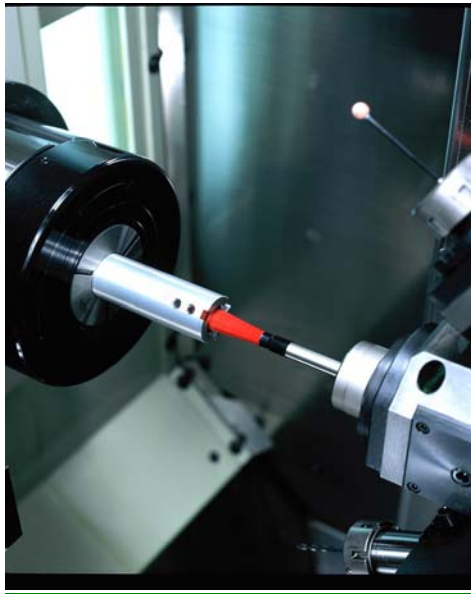
The filaments are resin-bound into a rod comprising 1000 filaments, with each filament acting as a self sharpening cutting edge. The rods are bundled into a brush bristle, and applied through rotation and feed to perform continuous removal of burrs.

The abrasive brush configuration for automated machining is flexible enough to conform to tight geometries and remove burrs without disturbing the base metal.

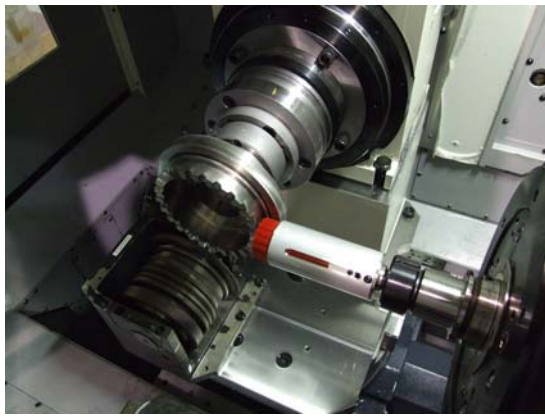
Superior performance of the Xebec brushes is owed to the rigidity of the ceramic rods as they maintain better contact with the metal surface, and a high alumina composition of 70%, as compared to impregnated nylon brushes.

Whether integrated into lathes with live tooling, machining centres, robots or drilling machines, Xebec deburring tools can be supplied in a number of configurations for applications that include:

1.) Fine deburring of cross-holes from 3 to 20mm in diameter, using ceramic fibre balls or flexible ceramic fibre brushes that open up in diameter by centrifugal forces.



2.) Fine deburring and finish grinding in one operation of components for the automotive, aerospace and machine building industries can be done successfully, using Xebec Cutting Fibre Brushes.



Deburring can be undertaken wet or dry and is suitable for all materials with a maximum hardness of 57 HRc.

Xebec also offer ceramic-stone-type tools on a flexible shaft, that remove burrs up to 0.2mm base thickness using either automatic machines or electric hand grinders.

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