

MICRO-ABRASIVE BLASTING SYSTEMS FOR MEDICAL DEVICE MANUFACTURING

Micro-Abrasive blasting technology is being used more and more by medical device manufacturers worldwide. Manufacturers who produce needles, hypotubes, stents, implants, electronic and molded products find micro abrasive blasting a quick and easy answer to many production problems.

Needles / Tubes

When grinding tubes and needles, burrs can form requiring deburring. Laser machined holes and slots in tubing can form burrs as well, which requires deburring. Micro-abrasive blasting removes these burrs efficiently and effectively.

Stents

During the manufacturing process of stents, unwanted material can be present which needs to be removed. Micro-abrasive blasting can be used to texture the stent before the application of various coatings without the fear of changing dimensions or the stent.

Injection Molding

Injection molding has been used in industry for many years, so the need for mold cavity maintenance is not new. Medical device manufacturers need to be very mindful of mold maintenance because their products tend to be smaller and more intricate. Micro-abrasive blasting will clean the mold without dimensional changes.

Implants

Because implants are usually small and complex, conventional deburring and texturing is very often not possible. Micro-abrasive blasting provides the precision and accuracy needed and the benefit of being able to select from many types of blasting media which are safe for use in implants. The anodizing process will often heave a residue on the implant that needs to be removed. After anodizing a titanium heart pump, conventional cleaning methods have not proven to be completely effective, so micro-abrasive blasting is used to make sure the residue has been removed. Breast implant manufacturers will often use very fine media to blast the residue off of the outside of the implant prior to sterilizing and packaging.

Guide Wire / Catheters

Micro-abrasive blasting is used to easily remove polymer coverings from small areas. These blasters are also used to remove coatings from guide wires. In addition, this process is also very efficient at preparing surfaces to encourage bond and coating adhesion.

Electronics

Micro-abrasive blasters are very effective at removing conformal coatings from contact points on a board or when individual components need to be replaced. Removing excess encapsulation material from pacemakers is also made easy with micro-abrasive blasters.