Roland MDX Case Study – Allosource

Rapid Custom Manufacturing- Produce Detailed Implants from Human Bone

Rapid Custom Manufacturing (RCM) is lifting the orthopedics industry to new heights. AlloSource, one of the nation's largest non-profit bone and tissue providers, is a perfect example. Using an assembly line of Roland desktop milling machines, the company is quickly manufacturing custom spinal implants used in spine fusion surgeries.

"Roland desktop mills are ideal for producing medical implants," said Thomas Cycyota, AlloSource president and CEO. "The machines give us a seamless workflow and flawless results. They're even resistant to our extensive sanitization, which is a vital part of our process."

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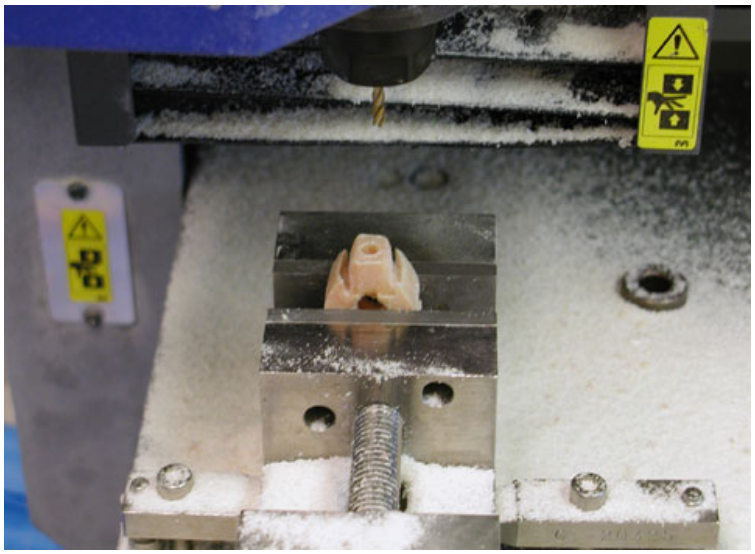
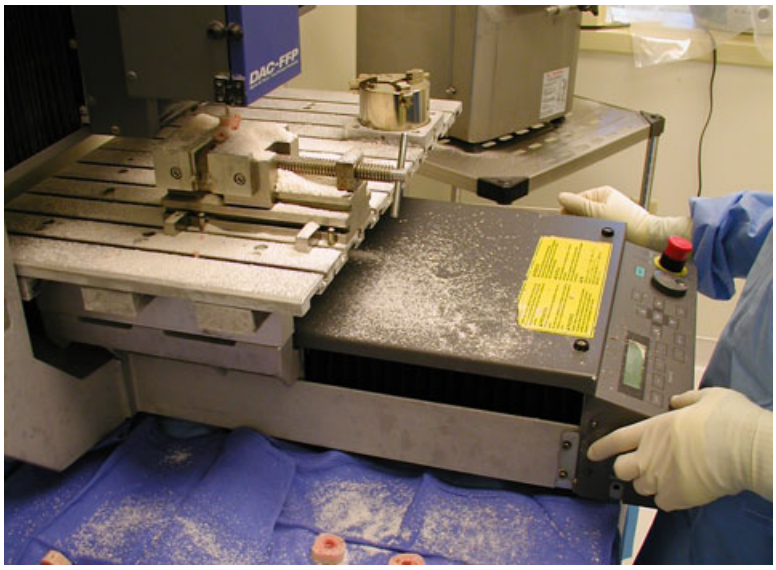
RCM technology offers a major improvement over current clinical processes, such as mass-producing one-size-fits-all parts or tediously hand sculpting unique parts. Best of all, implants made from human bone will not be rejected by the body.



The chances of disease and/or infection transmission from allograft transplantation are minute, estimated to be less than one in 1.6 million. There has never been a confirmed incident of disease transmission from AlloSource tissue.

In fact, the implant becomes a part of the patient's body. The body actually assimilates it as part of its own and begins to grow new tissue from it naturally. This is in sharp contrast to the traditional implant made from metal, which the body always treats as a foreign object. It just remains a piece of metal, and as the body changes over the years, it remains the same.

From prototype to final production, Roland RCM technology makes it possible to quickly produce parts that are a custom fit for each patient. It enables medical manufacturers to customize their designs on a case by case basis. The technology also offers the flexibility to choose from a wide range of FDA-approved materials.



Roland MDX series milling machines produce highly detailed parts with smooth surface finishes and tight tolerances. They are ideal for producing prototypes, medical implants, and other RCM parts. The desktop machines handle a wide variety of materials including aluminum and plastics. Roland RCM solutions come complete with CAM software, creating a seamless workflow with all major 3D CAD applications.