

CIMCOOL® Product Focus

Milacron Marketing Company | Cincinnati, Ohio 45209 | Consumable Products Division

Medical Parts Manufacturing

Medical Parts Manufacturing is a rapidly growing market, estimated at \$100 billion in sales in 2004. There is high demand for such orthopedic implant procedures, such as knee and hip replacements, especially as the “baby boomer” generation reaches retirement age.

Manufactured items include various surgical instruments used in medical operations, for example trocars (skin-piercing device), bone drills, and saws. There is a growing market for new surgical instruments, used for such operations or procedures as heart catheterization, abdominal surgery, liposuction, colonoscopy, etc.

Reliability and quality are critical in this industry. These parts must be high quality and the appearance is very important. A driving force in the industry today is to maintain quality but achieve customer’s cost reduction goals.

Typical Metals and Materials

Stainless steel, titanium, aluminum, cobalt steel, cobalt-nickel alloy, nickel-titanium alloys, ceramic, and plastic

Typical Operations

CNC Screw Machines
Vertical and Horizontal Machining Centers
Turning, Milling, Threading, Drilling, Boring, Tapping, Reaming, Deep Hole Drilling

Typical CIMCOOL® Fluids Used for Machining Medical Parts

CIMTECH® 310, 495
CIMSTAR® 540, 3890
CIMSTAR® QUAL STAR®
CIMPERIAL® 1070
MILPRO®850CF

CX-920A vegetable oil emulsion
Typical chemical restriction: chlorine

Advantages For Using CIMCOOL® Fluids for Medical Parts Manufacturing

- Excellent lubricity and tool life
- Parts easily cleaned (esp. synthetics)
- Compatible with medical parts metal alloys
- Improves part quality and finish
- Long sump life, easily filtered

Success Stories

A. Medical Parts Manufacturer using CX-920A, vegetable oil emulsion product

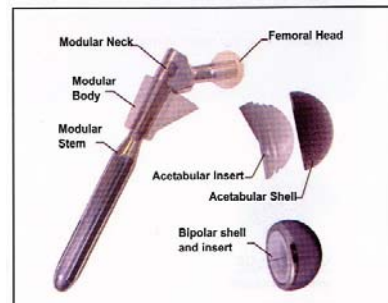
- Vertical machining centers
- Titanium metals
- Replaced a straight oil
- Cooler parts
- Fluid concentration 5%
- Excellent performance-used over 6 months

B. Medical Parts Manufacturer using MILPRO 850CF

- Machining hip and knee replacements
- Product successfully used for 6 years
- Outstanding lubricity, tool life, and finish

C. Medical Parts Manufacturer using CIMTECH 310

- Used Cimtech 310 since December 2002 on over 80% of implants made by this plant.
- Other machines using Milpro Oil.



Example of Medical Part

Example of hip replacement parts

“UniSyn” Hip Implant (Hayes Medical, Eldorado, CA)