

# ■ Improve Medical ■ Device Factory ■ Throughput

- **Author:** Mike Jones, MicroCare Vice President of International Sales
- **Industry:** Medical Device
- **Published:** MicroCare Resources

When medical device manufacturers design precision mechanical devices, friction between moving parts can be difficult to manage. Engineers use medical grade lubricants (oils, greases or dry powders) to smooth the movement of parts that slide, shear, twist or pivot. For example, two pieces of titanium alloy rubbing together have a sliding coefficient of friction (CF) of 0.30 while polystyrene moving over steel has a CF of 0.50. High CFs make it difficult to design devices requiring delicate movements.

But while the usefulness of lubricants is undisputed, applying lubricants onto parts can be tricky. Lubricants can be messy; they can “migrate” to other surfaces, they can degrade protective coatings and paints; and they can slow production.

### **Duraglide™ Dry Lubricant**

MicroCare Medical™ offers Duraglide™ dry lubricants for this environment. These lubricants reduce the coefficient of friction to as little as 0.06, which is almost as slippery as ice. This greatly improves device performance. Many medical devices would not be commercially viable without a dry lubricant.

Baron-Blakeslee, a leader in vapor degreasing, has developed a lubricating system designed to keep throughput high and operating costs low. The “LabKoat” system is engineered specifically for use with the MicroCare Duraglide products.

The system has a number of clever features. It uses a small, automated hoist to lift products into and out of the lubricating bath. Refrigeration coils trap the carrier fluid inside the machine, maximizing the stability of the concentration of the lubricant. A sliding lid automatically closes when the system is in use, keeping costs down. The system is scalable to larger, floor-mounted systems if required.



*The Baron-Blakeslee Lab-Koat is a complete tabletop precision coating system. It is designed for consistent and efficient application of PTFE dispersion and silicone coating.*

*The Lab Koat system is engineered for use with the MicroCare Duraglide products.*

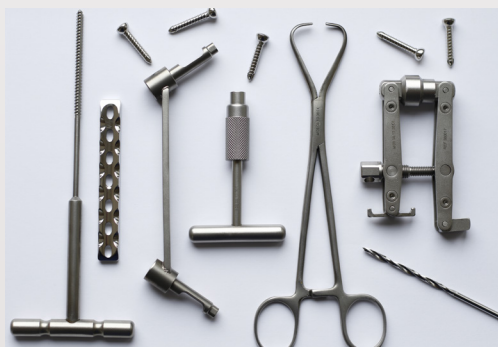
*Visit [www.baronblakeslee.net](http://www.baronblakeslee.net) for more information.*

## Easy Coating Operations

Once the system is programmed, operation could not be easier. Clean parts are loaded into the basket and the basket is placed on the hoist. As the coating process begins, the operator is free to leave and perform other tasks. The system slowly drops the parts into the coating fluid, keeps them submerged for the allotted time, and then slowly raises the parts into the vapor for drying. Ultimately the parts come out clean, dry, and evenly coated with the Duraglide dry lubricant. Throughput is fast: cycle times range from 30 seconds to 3-4 minutes, depending upon the application and the repeatable process makes validation easy.



Duraglide™ reduces the coefficient of friction to as little as 0.06.



Dry lubricants smooth the movement of parts that slide, shear, twist or pivot.

### About the Author:

*Mike Jones, retired Vice President of International Sales for MicroCare, has over 30 years of experience in the critical cleaning industry. He is a prolific writer and educator focusing on critical cleaning in general and vapor degreasing and benchtop cleaning in particular. For more information, visit [www.microcare.com](http://www.microcare.com).*

