

# BRUNNK

**PRECISION METAL STAMPINGS & ASSEMBLIES FOR  
THE MEDICAL DEVICE INDUSTRY**



**COMPONENTS & ASSEMBLIES FOR SURGICAL INSTRUMENTS & CLASS-CRITICAL IMPLANTABLE DEVICES**

**BRUNK**  
INDUSTRIES, INC.

**COMPONENTS AND ASSEMBLIES FOR**

ISO/TS 16949:2002 Certified

**At Brunk Industries,  
we transform costly  
machined components  
into higher quality,  
precision metal  
stampings, at a  
fraction of the cost.**

## EXCELLENCE

### **MANY OF THE WORLD'S LEADING MEDICAL DEVICE MANUFACTURERS CHOOSE BRUNK INDUSTRIES**

The leading, most demanding companies in the medical device industry choose Brunk Industries as their supplier of first choice for...

- *Award-winning manufacture of complex components.*
- *Quick turn / rapid prototyping services.*
- *Expertise in fabricating all grades of stainless steel and other exotic metals including platinum-iridium, tantalum, MP35N, niobium, kovar, & titanium.*
- *Full service component assembly, EDM, and laser processing.*

## WORLD-CLASS

### **PRECISION SURGICAL INSTRUMENTS & CLASS-CRITICAL IMPLANTABLE DEVICES**

Founded in 1960, Brunk Industries is your world class, full service source for the contract manufacture of micro-precision component stampings, assemblies, and class-critical implantable devices. We produce low to high volume, micro-precision light gauge metal stampings and assemblies employing innovative design solutions, state-of-the-art presses, and automated assembly equipment. But most of all, it's the passion and commitment of our people that makes Brunk Industries excel. With well over half a billion components lifetime delivered to the medical device industry, we take pride in producing some of the most complex parts in the world.

# SURGICAL INSTRUMENTS AND CLASS-CRITICAL IMPLANTABLE DEVICES



## INNOVATIVE

### NEW PRODUCTS & EMERGING TECHNOLOGIES

Our team of experts is often asked to become involved in the early research and development stages of projects. Drawing upon highly creative design concepts, proper metallurgies, advanced production techniques and uncompromised quality control, we innovate unique, superior metal stamping components and assemblies that help our customers bring to market safer, more effective medical tools. When medical device manufacturers seek to aid surgeons with superior products for diagnosis and intervention, reducing patient trauma, minimizing repeat procedures, and reducing costs, they rely on Brunk Industries to help develop less invasive, highly precise parts and assemblies for their devices. Some of the areas we are now exploring, in close partnership with our customers, may be on the verge of unleashing entirely new areas of patient treatment.

## PASSIONATE

### PASSIONATE ABOUT WHAT WE DO

At Brunk Industries, we cherish our customers. We understand the importance of their commitment to developing products that save lives, help patients return to a full, healthier existence, and that address a wide range of diseases and conditions. We are moved and driven by the humanity of medical progress and are extremely passionate about the level of excellence in all we do. We understand the importance of how we contribute to your products, the need for revolutionary solutions, and the responsibility we carry to be unconditionally reliable – not just a supplier but a true extension of your company. At Brunk Industries, we foster a culture that listens carefully to your needs, structuring our goals and objectives around yours.

## CHALLENGING

### **SPECIALISTS IN PRODUCING CHALLENGING, COMPLEX PARTS**

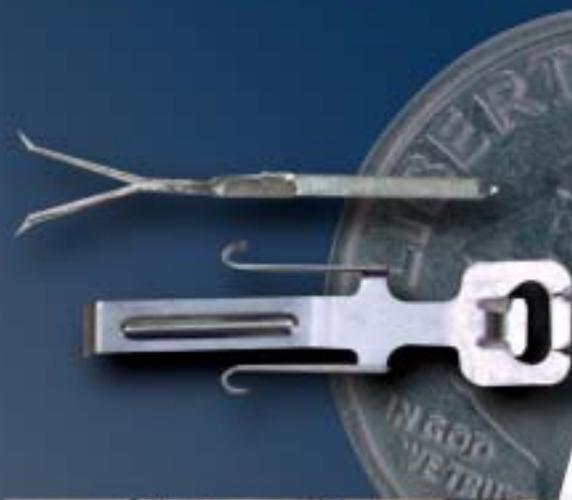
If other precision metal stamping operations say it can't be done, that's where Brunk Industries comes in. We specialize in developing solutions for your most difficult, complex requirements. As your full service supplier of medical device components and assemblies, our advanced R&D and rapid prototyping capabilities can provide truly creative solutions to your most challenging needs. Best of all, we can usually transform costly machined components into higher quality, precision metal stampings at a fraction of the cost, resulting in superior, more economical products for your customers.

## LEADERSHIP

### **RAPID PROTOTYPING / QUICK TURN CAPABILITY**

Brunk Industries is quality certified for the medical device industry. Our PPAP (Piece Part Approval Process) is a disciplined procedure which allows us to supply you rapid prototype stampings and assemblies that aren't just close, they are print perfect. As a leader in quick turn, rapid prototype technology, you'll be able to test component features under real conditions, affirming the confidence and safety you require while expediting your products to market.

Becoming involved in the early stages also enhances manufacturing efficiencies. Using Pro-E, AutoCad and Solid Works, our communication with customer prints and files is facilitated. Our dedicated state-of-the-art prototype and tool room equipment is prepared to satisfy the most difficult prototyping engagement. Highly trained tool and die makers, tool designers and press operators produce micro-precision, complex prototype components that equal production quality from any type of materials. We will respond within a two to four week turnaround, depending on complexity. Brunk delivers the finest production dies at lower costs, reducing lead times and improving the quality of production parts produced.





# EXPERTISE

## **METALLURGICAL SPECIALISTS**

Brunk Industries specializes in the production of components from all grades of stainless steel and other exotic metals including platinum-iridium, tantalum, MP35N, niobium, kovar, titanium implants and more. Brunk is designated as a certified supplier that delivers these high precision and class-critical contamination-free components and subassemblies directly to our customer's inventory, ready for clean room assembly.

# SOPHISTICATED

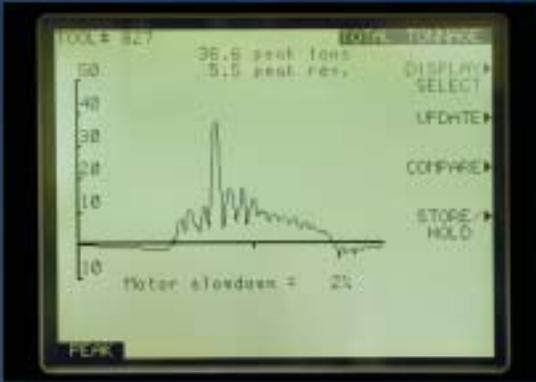
## **DESIGN & TOOLING**

Design and tooling excellence is a culture at Brunk Industries. In fact, we apply a totally integrated design process that flows through all aspects of tool engineering, building, and stamping through assembly. The quality of our finished stamping begins with sophisticated tooling designed by cross-functional teams that deliver unmatched precision, efficiency and economical production, while enhancing the performance of the finished part. Our advanced tool design process combines versatility, longevity, accuracy and reliability, while conforming to exact customer specifications. Our staff of nearly forty tool and die makers produce dies that perfectly integrate with the specific production equipment used on your projects to achieve consistent quality and efficiency. Our respected international craftsmen meld old world skills and pride with today's most advanced production techniques, calling upon generations of experience to transform creative designs into Class AAA progressive tooling of remarkable quality. The latest, most sophisticated methods available allow our tool makers to fashion carbide dies and steel dies of incredible intricacy, with high tech precision and interchangeability. Of equal importance, our Die Maintenance Program assures that your capital assets will be maintained to the highest level.

## VALIDATION

### ELECTRONIC IN-DIE SENSING PROGRAM

Imagine smart dies – dies with vitals that can be monitored, somewhat like a physician monitors a patient. With our electronic in-die sensing program, you're not only assured full die protection, you're assured that every part is validated – that the manufacturing excellence we build in is monitored and maintained to help guarantee zero defects in your parts. We monitor both die and press in our work centers. Our die sensing program monitors values for any variation, reduces unscheduled tool maintenance, reduces set-up time, and optimizes feed and press performance. Real time monitoring provides operators with information while the press is running, allowing precise adjustment of input parameters. A wide variety of part and tool sensitive features are monitored. These settings are stored in an historical control, allowing for quick repeatable set-ups of complicated tools. Numerous sensors can be used for specific applications based on task, type of material, speed of press and other factors. Our tool room personnel, customer service and scheduling all have access to a PAC-NET centralized data system from their workstations, making response time immediate and allowing progress of orders to be monitored.





# PRECISION

## PRECISION METAL STAMPING

Brunk Industries offers low to high volume micro-precision metal stamping utilizing the latest technology in Minster and Bruderer punch presses ranging from 10 to 400 tons (9 to 360 metric tons). The quality of our own tooling combined with these modern presses enables our company to offer unequalled efficiency – literally millions of pieces from each die, from materials as thin as .002-inch (0.05 mm), while maintaining tolerances that often exceed industry standards. Each press utilizes the finest support equipment, including coil feeders, stock straighteners and electronic and optical sensors to monitor the flow of raw materials. Quick die change allows for cost effective manufacturing. All of our punch press operators are skilled technicians trained to the highest standards, working in an exceptionally clean, temperature controlled environment. Throughout the production process, quality is carefully maintained through a fully documented control system meeting ISO/TS16949:2002 certification. This includes lean manufacturing excellence and six sigma quality excellence to achieve zero defects.

# CLEANLINESS

## ENVIRONMENTALLY CONTROLLED ATMOSPHERE

Our fully automated, environmentally controlled Aqueous Cleaning provides top medical grade cleanliness certified for human implantation. Whether you need Class 100 Bench Wash Operations, component subassembly, or complete finished device assembly, all surgical components and implantable devices are handled by highly competent staff using modern equipment in a clean, contamination-free and secure environment. Brunk protects the confidentiality of new technologies and other sensitive programs and will ensure that your components or assemblies are manufactured and packaged under the highest quality standards.

# FULL SERVICE

## ASSEMBLY AND SECONDARY OPERATIONS

Brunk has the facilities and equipment to accomplish most finishing, assembly and secondary operations in-house, or through our certified subcontractors who meet our high quality standards. We can provide deburring, plating, passivating, laser welding and laser marking, heat-treating, selective plating, electro-deburring, continuous plating of preformed plates, as well as other operations.



