



sparton

COMPLEX  
TECHNOLOGIES



Medical & Biotechnology

**Conquering Complexity™**

## About Sparton Corporation

Sparton has become the partner of choice for companies that want to design and manufacture the most complex electronic and electromechanical devices. We have proven ourselves to be engineering and production experts, as well as responsive, client-focused partners.

Our services include everything from next generation product enhancements to complex system assembly, at facilities worldwide.

The unparalleled experience and expertise we have amassed over the years ensures that we consistently meet and exceed our customers' expectations.



### INDUSTRIES

Medical and Biotechnology  
Military and Aerospace  
Industrial and Commercial



### EXPERIENCE

Founded in 1900



### GLOBAL ORGANIZATION

Over 1,800 Employees Worldwide



### LOCATIONS

13 Locations (12 in North America  
and 1 in Viet Nam)



### PUBLICLY TRADED

Listed on NYSE since  
1929, ticker symbol SPA





# Medical & Biotechnology

Specialists in the Design and Manufacture  
of Complex Class I, II and III Medical Devices

We design and manufacture class I, II and III medical devices that require a mix of highly specialized technologies including: robotics, fluidics, optics, lasers and blood separation. At any given time, our manufacturing floors are filled with diagnostic, therapeutic and surgical instrumentation devices – all areas where Sparton's expertise runs deep.

## The Sparton Advantage

The Sparton Production System, combined with the company's experience and expertise in highly complex/highly regulated medical devices, enables Sparton to deliver unmatched quality and delivery on every project – at any stage of the product life-cycle. The key to Sparton's success are the relationships it builds with each of its customers to ensure that every aspect of project development is optimized around what matters most to them.

SETTING  
OURSELVES APART IN A  
COMPLEX MARKET...



## Product Life Cycle

Full service design and manufacturing partner.

Sparton demonstrates flexibility to serve as your full service design and manufacturing partner across or at any stage of the product life-cycle.

### Product Design Services

#### **Definition and Feasibility**

Concept and specification development.

#### **Development and Verification**

System, software, mechanical, electrical, test design and verification.

#### **Transition to Manufacturing**

Process and product verification as well as design history files.

### Manufacturing Services

#### **Full Scale Production**

Build to forecast.

#### **Supply Chain**

Manage a complex supply chain for quality, delivery and cost improvements.

#### **Operational Excellence**

Using the Sparton Production System with flexible work cell configurations to meet customer demand.

#### **Component and System Level Testing**

CCA level functional testing and system level functional testing.

### Logistics

Finished goods management, labeling, packaging and export compliance

### Aftermarket Services

Repair and refurbishment, spare parts support, sustaining engineering and obsolescence management.

## Expertise and Experience

From thought to finish and beyond.

Sparton has broad experience and expertise with diagnostics, therapeutics, and surgical instrumentation in the regulated class I, II, and III medical device industry as well as biotechnology. From thought to finish and beyond, our expertise in demanding performance environments and the most critical industry applications make us the partner of choice for your complex medical device.

### Focus on Complex Medical Technologies

**500+**

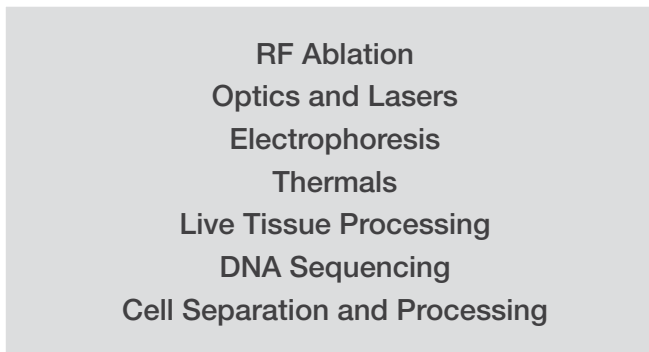
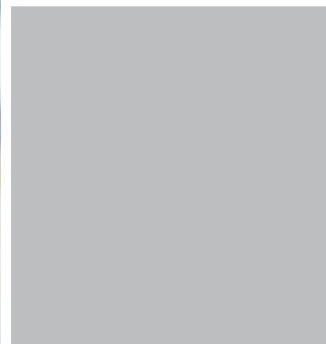
Products currently in production for highly complex and challenging markets.

**36**

Different medical and biotechnology applications.

**1**

Partner for your design and manufacturing needs.





## Strong Customer Relationships

The partner of choice for your complex medical device.

We design and build some of the most complex medical devices in use today. This could not be achieved without our ability to work as a partner in the realization of the customer's visions, treating each and every project as if it would have our own name on it.

Precision Fluidics and Microfluidics  
Blood Separation  
Chromatography  
Motion Control  
Robotic Handling and Pneumatics  
Advanced Wound Care  
Magnetic Stimulation



### Understanding customer needs

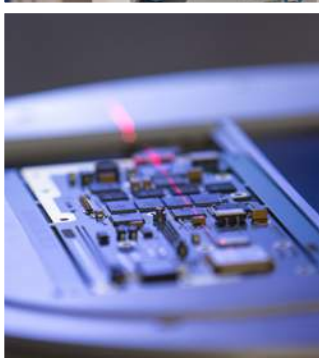
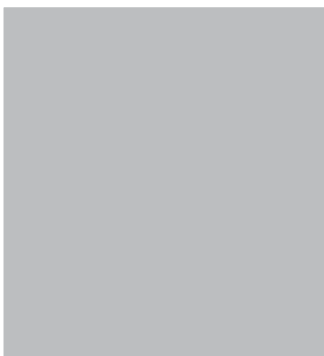
- Interface with core technology to develop an instrument or device
- Solution-oriented approach
- Extensive analysis to ensure a seamless handoff between design and manufacturing

### Complete availability and communication

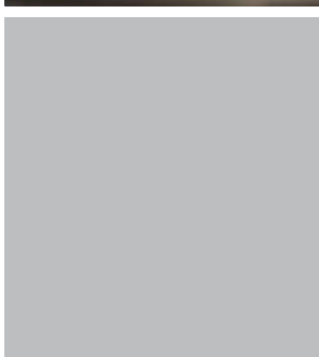
- Availability of key personnel throughout the project
- Cross-functional team mirrors the customer team
- Turn-key relationships with outside partners

### Proactive Planning

- Prototype builds
- Design for durability and long-term cost savings
- Expert support throughout process
- Scale up as customer program(s) increase in demand



# APPLICATION EXPERIENCE



# Robust System Approach

A robust, lean enterprise inspired approach to operational excellence.

Sparton Production System is our overall management philosophy, the blueprint for our daily activities, and the map for operating every aspect of our business. Inspired by proven, lean-manufacturing processes, we have honed our system through years of refinements and improvements to make it especially responsive to, and productive for, customers looking to manufacture highly complex products.

## Six Principles of the Sparton Production System

### SAFETY

Our system is not sustainable without a commitment to safety.

### COST

We continuously drive out inefficiencies and waste in every aspect of our organization.

### QUALITY

The extremely critical nature of the products we produce require us to operate at an incredibly high standard.

### DELIVERY

We manufacture only what is needed, when it is needed, in the exact amount that is needed.

### PEOPLE

Our flexible, capable, and highly motivated team is a critical component of our success.

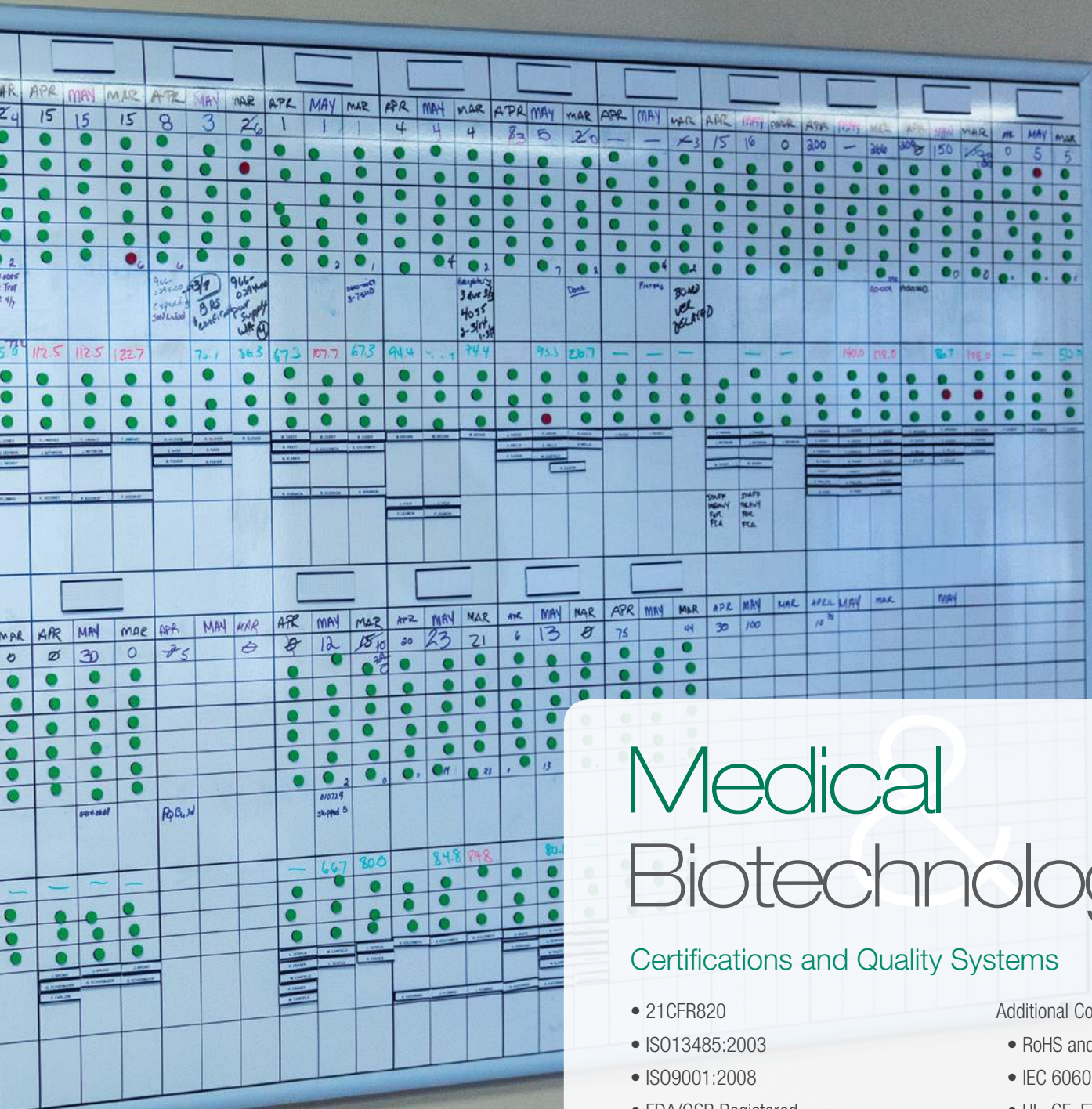
### GROWTH

We are continuously seeking long-term mutually beneficial relationships.



MONTH	APR	MAY	MAR
QUANTITY	25	3	24
CUST ORDER ENTERED	●	●	●
SERVICE REQUIREMENTS	●	●	●
MATERIALS ON ORDER	●	●	●
ORDERS DELIVERY ACKNOWLEDGED	●	●	●
LONG-LEAD ITEMS DEFINED	●	●	●
MATERIALS ON HAND	●	3	2
GATING COMPONENTS		2 items due in Same	one more due off
SATURATIONS	170.0 50.0	62.9	77.0 55.0
STAFFING ALLOCATED	●	●	●
TRAINING PLANNED	●	●	●
ECR & DEVIATION	●	●	●
STAFFING			
TRAINING			





# Medical & Biotechnology

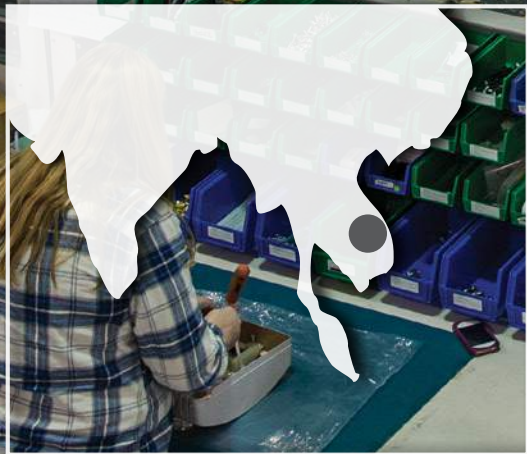
## Certifications and Quality Systems

- 21CFR820
  - ISO13485:2003
  - ISO9001:2008
  - FDA/QSR Registered
  - Systems compliance with GMP/QSR
  - Wet Testing for Medical Devices
- Additional Compliance:
    - RoHS and REACH
    - IEC 60601-1
    - UL, CE, ETL, TUV, CSA



**MEDICAL & BIOTECHNOLOGY**

- MANUFACTURING
- DESIGN



## MEDICAL MANUFACTURING AND DESIGN FACILITIES

### Frederick, Colorado

65,000 sq. ft.  
Class I and II devices  
Clean room for optics  
Circuit card assembly

### Strongsville, Ohio

60,000 sq. ft.  
Class I, II and III devices  
In-house medical design center  
Wet testing facilities

### Watertown, South Dakota

130,000 sq. ft.  
Class I and II devices  
Circuit card assembly  
Electromechanical sub-assembly and box build

### Plymouth, Minnesota

10,000 sq. ft.  
Design and engineering center  
R&D product design development  
Regulatory testing

### Irvine, California

29,000 sq. ft.  
Circuit card assembly  
Electromechanical sub-assembly  
Electromechanical full product assembly  
Cable and wire harness assembly  
Full-service design and prototype manufacturing  
Verification and validation testing

### Milpitas, California

65,000 Sq. Ft.  
Circuit card assembly  
Electromechanical sub-assembly  
Electromechanical full product assembly

### Pittsford, New York

12, 000 sq. ft.  
Software quality assurance  
Sustaining engineering  
New product development  
Software verification and validation

### Thuan An Town, Viet Nam

60,000 sq. ft.  
Class I and II devices  
Electromechanical sub-assembly  
Circuit card assembly



# sparton

## **CORPORATE OFFICE**

425 N. Martingale Road, Suite 1000  
Schaumburg, Illinois 60173  
800.772.7866  
www.sparton.com

## **MEDICAL MANUFACTURING AND DESIGN FACILITIES**

4300 Godding Hollow Parkway  
Frederick, Colorado 80504  
303.678.8585

2602 McGaw Avenue  
Irvine, CA 92614  
949.855.6625

1940 Milmont Drive  
Milpitas, CA 95035  
408.957.1300

16305 36th Avenue N, Suite 500,  
Plymouth, MN 55446  
605.886.2519

160 Office Park Way  
Pittsford, NY 14534  
585.383.1290

22740 Lunn Road  
Strongsville, Ohio 44149  
440.878.4630

2920 Kelly Avenue  
Watertown, SD 57201  
605.886.2519

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Singapore Industrial Park I  
Thuan An Town,  
Binh Duong Province, Viet Nam  
84.650 3784.890