

SussexWire
incorporated

Engineered
Cold Formed Solutions
For The
Most Demanding
Applications



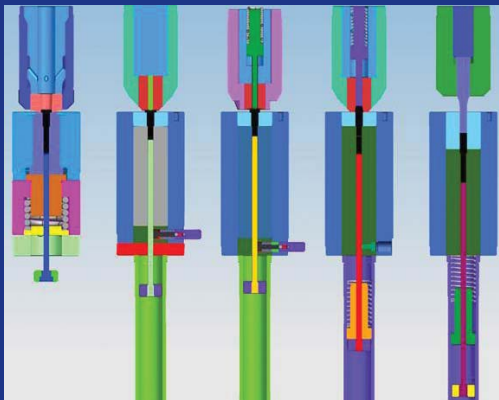
Rely On Sussex Wire's Technical Expertise And Precision For High Volume Custom, Cold-Formed Parts.

Sussex Wire is a global pioneer in collaborative design, development, manufacture and control of miniature and micro-miniature metal components for customers seeking a better solution for yield, strength, assembly and cost through the application of cold forming technologies.

Headquartered in Eastern Pennsylvania, Sussex focuses on micro metal components in standard materials or exotic alloys. We employ state-of-the-art proprietary part progression and tool design modeling techniques developed over 40+ years to produce optimal component formation.

Mechanical design and assembly firms the world over turn to Sussex Wire for their most advanced near-net-shape part requirements to eliminate material scrap, increase mechanical strength and reduce costly secondary operations.

Why Cold-Forming?



Cold forming, or cold forging, is the application of force with a punch to the end of a precise metal cut-off blank contained within a die. The force exceeds the metal or alloy's elastic limit or yield strength causing plastic flow. Cold forming retains the material's structural properties rather than compromising it as machining processes often do. Cold forming is commonly used for component heading, upsetting, extruding, sizing, piercing,

trimming, thread rolling, blank rolling and pointing operations.

Cold-Forming Benefits:

- Eliminates costly scrap (net shape)
- Eliminates inefficient secondary operations
- Six+ times increase to component production velocity
- Retains native material mechanical properties
- Reduces tooling cost over product life cycle
- Reduces component part cost



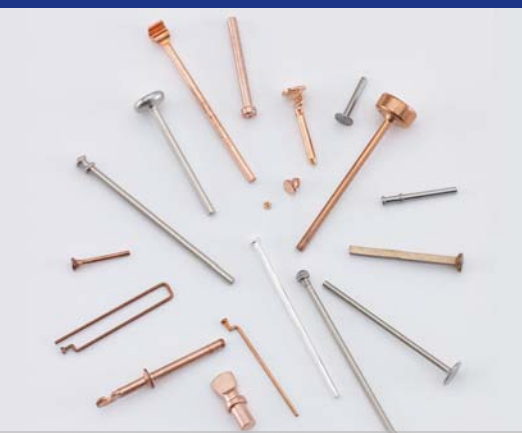
COLD HEADING



ROLL FORMING



POINTING & TAPPING



SINGLE & MULTIHEADED PINS & LEADS

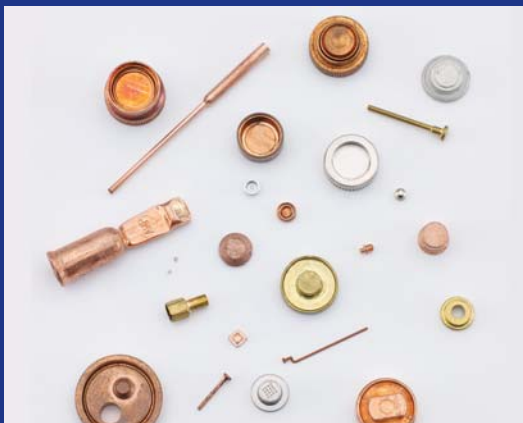
**Sussex Wire:
Your Source for
Tight Tolerance
Complex Geometry,
Specialty Alloy
Miniature And
Micro Components**



COINING & STAMPING



EYELETS & O-RINGS



CAPS & BUTTONS



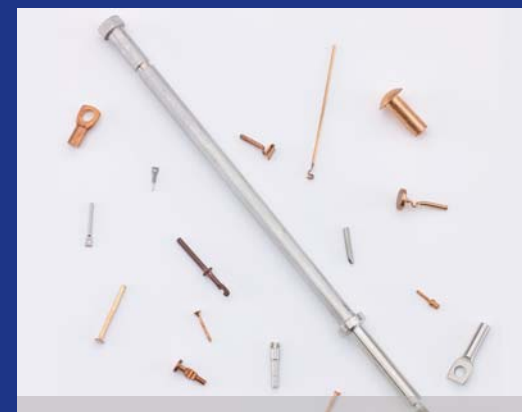
WIRE FORMS



HUBS & INSERTS



VALVES



CONNECTORS

Vertically Integrated For Improved Design, Quality



DEFORM finite element analysis

3D CAD/CAM modeling capabilities

Up to 5 die/5 blow component progressions

Sussex Wire employs vertically integrated LEAN practices in design, manufacturing, order and global inventory management including stock custom miniature and micro components for JIT delivery to international customers in the Medical, Automotive, Aerospace, Energy, Appliance, Consumer Electronics, Defense and Semiconductor markets.

Our engineering team applies advanced progression, materials characterization, tooling and manufacturing knowledge to develop cost-effective production routines for each customer's requirements. Using finite element analysis, quick-turn prototyping, CAD/CAM, soft tooling and in-house tool-making, Sussex has the depth and capabilities to move your project quickly into production.

Cellular work centers are organized to produce small specialized parts by cold forging and machining, plus a host of secondary operations including roll forming, tapping, turning, pointing, wire EDM, cleaning, tumbling, etching and plating, all with tolerances down to 0.0005".

Sussex Wire customers depend on our ISO9001:2008 quality system inclusive of automated optical inspection to meet their exacting standards. As part of its continuous improvement culture, Sussex Wire employs multi-disciplinary quality training and LEAN programs, led by LEAN Master Certified personnel.

Consult with Sussex Wire regarding your unique application: 1-610-250-7750 / info@sussexwire.com

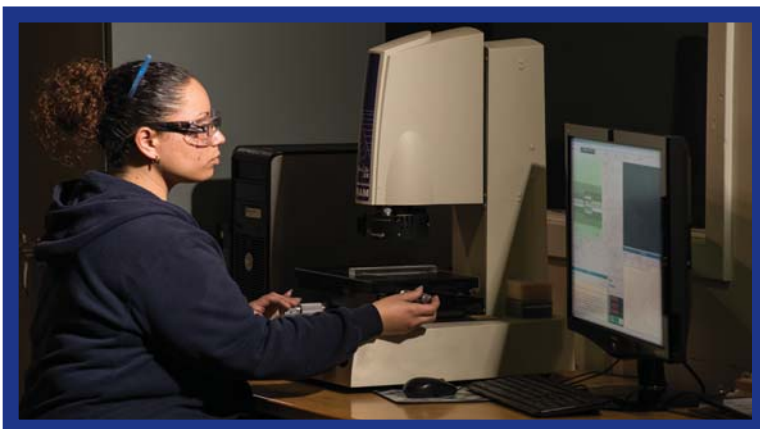
Quick Turn Prototyping And Reduced Total Cost



JIT Kanban Inventory Management Capabilities



Extensive NIST traceable raw material inventory for quick turn production



In-process Quality Control systems

Sussex Advantages

- Collaborative engineering design
- Medical, automotive, defense and micro-electronics market experience
- World-class tool and die making
- Forming to finishing integrated LEAN manufacturing
- ISO 9001:2008 certification
- Production runs up to 500+ million components
- Component tolerances to .0005"
- Material capabilities inclusive of specialty alloys
- Rich 40 year history

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www.sussexwire.com

Quality Systems, Process Capabilities, Materials

Standards	ISO9001:2008, ITAR, NIST Traceability
Material Control	DFARS RoHS AMS
LEAN	JIT, 5S, A3 Root Cause Analysis, Poka Yoke, 8D, SMED, Visual Manufacturing, Standard Work
Control Plans	PPAP Level III PFMEA, FMEA Gage R&R Studies Process Capabilities Studies AQL Cpk, Cpm Ppk, Ppm
Dimensioning & Tolerancing	AOI, RAM Optical Metrology, Micrometers, Optical Comparators, Drop Gages, Pin Gages, Vernier, 100% Inspection Capabilities
Wire Diameters	.0035" to .400"
Metals & Alloys	Types
Alloys	52 NiFe Alloy, 42 NiFe Alloy, Kovar, NI 200, NI 205, Tophet C, Monel, A286, Invar, Vacon, Permenorm
Aluminum	1100, 2117, 4047
Copper	CDA101, CDA102, CDA107, CDA110, CDA150, CDA151
Copper Alloys	Beryllium Copper, Brass, Phosphor Bronze, Magna-Cupro-Ni
Copper Cored	52 Alloy, 42-6 Alloy, Kovar Alloy, Tinned Copper
Copper Clad	70% CCFE, DUMET
Gold	
Inconel	600, X750
Iridium	
Molybdenum	
Nickel Alloys	Alumel, Chromel, Hastelloy, Inconel, RA330-04 (Weld Wire)
Niobium	
Palladium	
Platinum	PT/IR
Silver / Silver Alloy	
Steel	1008, 1010, 1018
Stainless Steel	302HQ, 303, 304L, 304V, 309, 316L, 426, 446
Tantalum	
Titanium	

MARKETS SERVED



Medical



Semiconductor



Automotive



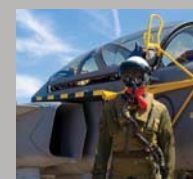
Energy



Appliances



Electronics



Aerospace

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