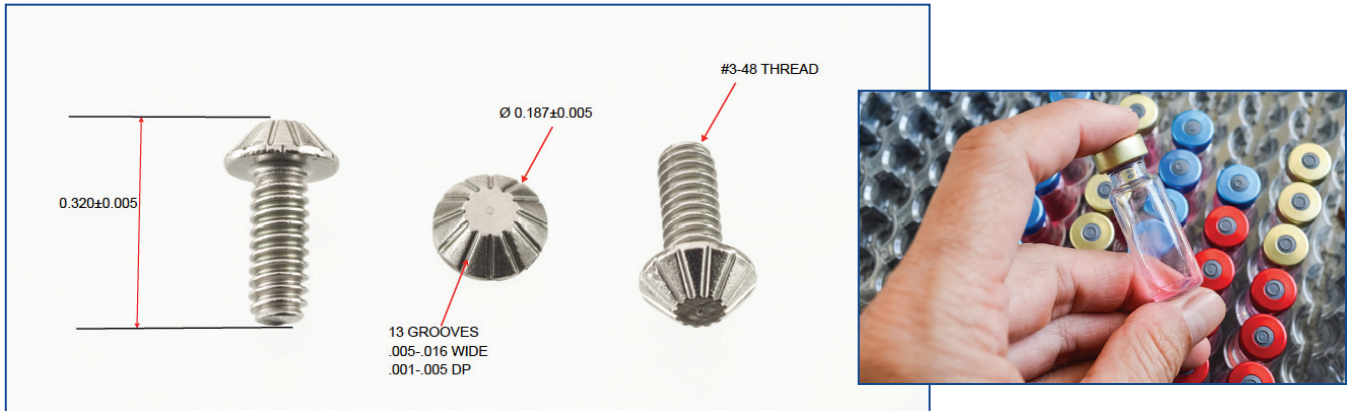


# Pharmaceutical Drug Delivery System Insert Screw



**Industry:** Medical **Application:** Custom rubber over mold stainless steel precision drug delivery control insert screw

Sussex Wire collaborated with a Fortune 500 global pharmaceutical services leader to design and produce a replacement stainless steel insert screw meeting these goals:

- Improving adjustment control
- Mitigating contamination
- Increasing component part geometry and tolerance
- Supplying in excess of 100,000,000 pieces/year

Sussex Wire designed a net shape micro screw producing no scrap, and in the process, developed machine automation and sensor controls to ensure six sigma yield while eliminating costly inspection by the customer. Sussex Wire’s proprietary manufacturing cell control system eliminated the pre-existing condition of malformed and contaminated parts reaching the company’s customer.

**Material:** 302HQ Stainless Steel

**Critical Tolerances:**

- ✓ Thread: #3-48
- ✓ Head Diameter: 0.187”; +/- 0.005”
- ✓ Part Length: 0.320”; +/- 0.005”
- ✓ Head Grooves: Width = 0.005-.016”;  
Depth = 0.001-0.005”

**Manufacturing Processes:**

- ✓ Cold Heading
- ✓ Upsetting

**Manufacturing Processes (cont’d):**

- ✓ Micro Threading
- ✓ Proprietary Thread and Concentricity Detection System

**Unique Benefits**

- ✓ 100% Net Shape – No Material Scrap
- ✓ Six Sigma in process controls
- ✓ Work hardening enhances component durability and product life cycle
- ✓ Custom contamination-free manufacturing cell

To contact Sussex Wire: 1-610-250-7750 / [www.sussexwire.com](http://www.sussexwire.com)

## Engineered Cold Formed Solutions For The Most Demanding Applications

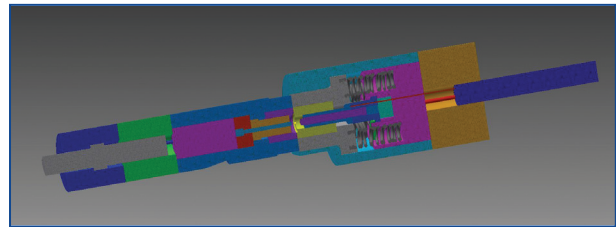
Sussex Wire is a global pioneer in collaborative design, development, manufacture and control of miniature and micro-miniature metal components for customers seeking a better solution for yield, strength, assembly and cost through the application of cold forming technologies.

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.

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.



## Quality Systems, Controls, Materials

<b>Standards</b>	ISO9001:2008, ITAR, NIST Traceability	<b>Materials</b> 302 Stainless Steel, 304 Stainless Steel 42-6 Stainless Steel 48 Alloy, 52 Alloy ASTM-F30 Copper Copper Core 2:1, 3:1, & Special Ratios Inconel X750 Kovar ASTM-F15 Molybdenum Nickel – Pure, Nickel Iron Alloys Niobium Platinum/Iridium RA330-04 Silver
<b>Material Control</b>	DFARS, RoHS, AMS	
<b>Dimensioning &amp; Tolerancing</b>	AOI, RAM Optical Metrology, Micrometers, Optical Comparators, Drop Gages, Pin Gages, Vernier, 100% Inspection Capabilities	