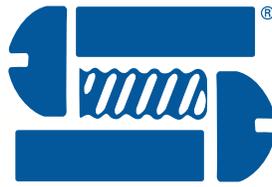




Semblex

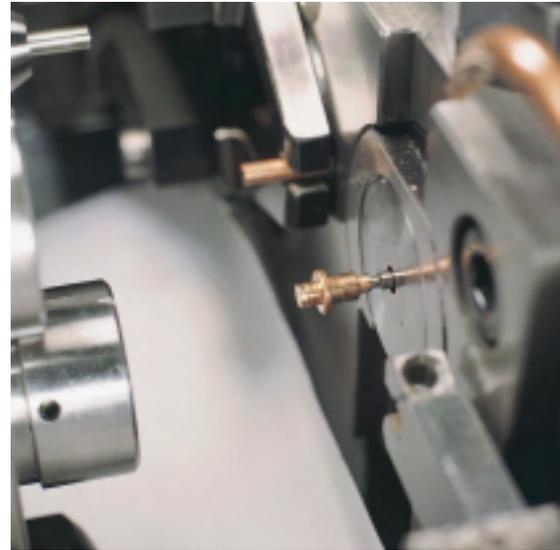
Miniature Division
Fasteners & Components



Semblex
Miniature Division

MINIATURE COLD HEADED FASTENERS & COMPONENTS

For over three decades, Semblex Corporation has been a major supplier of engineered threaded fasteners to the automotive industry and the industrial marketplace. Providing quality fasteners & services requires ever expanding manufacturing, engineering and service capabilities to respond to ever expanding customer needs and requirements.

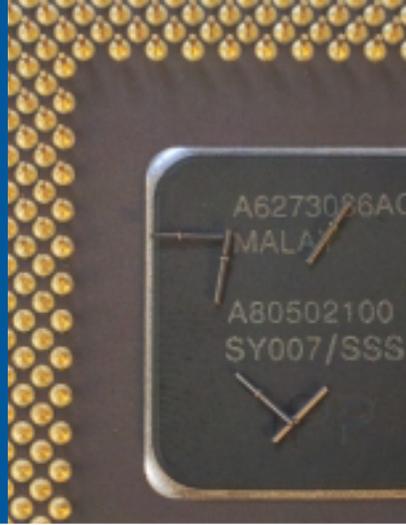


The demand for miniature cold headed fasteners and components is increasing at accelerating rates. Consumer and industrial products continue to be manufactured smaller and smaller, as well as, more efficiently. Product downsizing of growth products is driving the demand; in the electronics through the telecommunications industry; from notebook computers to cellular phones and pagers; in numerous electronic components and sub-assemblies for industrial and consumer products, for automobiles through major appliances. Cost reduction, quality, fastener strength and assembly integrity have cold headed miniature fasteners and components replacing (higher cost, chip and burr contaminated) traditional screw machine parts.



APPLICATION
Computer Chip

PRODUCT
IC Lead
Collar Pin



APPLICATION
Computer Inkjet
Printer

PRODUCT
Multi-die Cold
Headed Brass Pin

Cost savings
(replaced screw
machine part)



APPLICATION
Automotive
Ignition System

PRODUCT
Firing Pin



APPLICATION
Electrical Controls

PRODUCT
Copper Multi-die
Terminal Pin



APPLICATION
Electrical Switch

PRODUCT
Semi-tubular
Brass Contact Pin



APPLICATION
Automotive
Mirrors

PRODUCT
Brass Multi-Die
Ferrule
wire crimp/
control wires



APPLICATION
Telecommunications
Apparatus

PRODUCT
Contact Pin



APPLICATION
Telecommunications

PRODUCT
Copper contact
inside phone



APPLICATION
Telecommunications

PRODUCT
Copper Terminal
telecommunications
apparatus



APPLICATION
Eye Glasses

PRODUCT
Cold Headed
Screw

Cost savings
(replaced screw
machine part)



APPLICATION
Ballpoint Pen

PRODUCT
Multi-die Pin

Cost savings
(replaced screw
machine part)



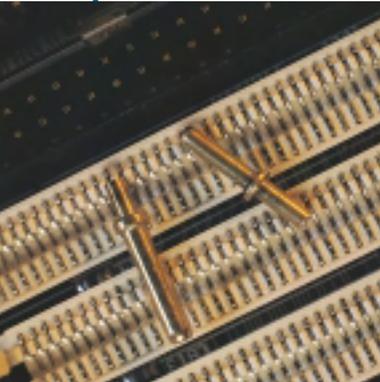
APPLICATION
Food Processing
Blender

PRODUCT
Copper Pedestal
Contact



DFM

DESIGN FOR MANUFACTURING



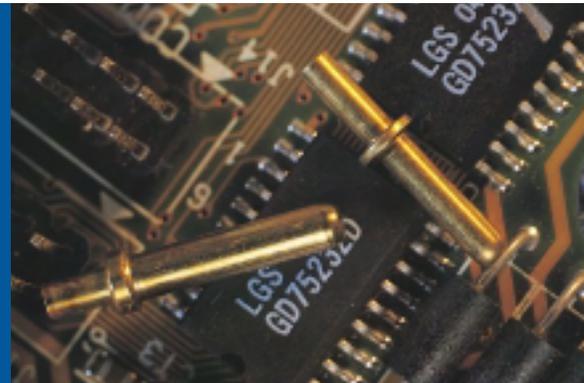
Multi-die cold heading conversion of miniature screw machine parts

cost reduction: lower cost manufacturing process; machining scrap eliminated

improves quality: chips and burrs eliminated

improves strength: work hardened grain structure vs. cut and weakened part, from milling

Semplex Is Product Integrity



Electropolished fasteners for HDA - Head Disc Assemblies and other high tech applications

Electro-chemical process cleans and polishes fastener surface

cost reduction: reduces thread galling and assembly drive torque

improves quality: satisfies Class 100 clean room requirements

improves strength: reduces torsional stress



INDUSTRY / APPLICATION

Business Equipment

Computers
Connectors
Disc Drives
Fax Machines
Keyboards
Modems
Photocopiers
Printers

Telecommunications

Cellular Telephones
Fibre Optics
Pagers
Telephone Apparatus and Equipment
Television Cable Boxes
Television Sets
VCR's

Video Cameras
Video Cassettes
Wireless Communications

Industrial

Appliance
Automotive
Cameras
Clocks
Controls

Dental Products
Injection Molded Products
Instrumentation
Medical Products
Motors
Optical Products
Switches
Thermostats
Watches

DESIGN FOR ASSEMBLY

DFA

Miniature thread forming screws for plastic

Polyfast® Plastilok® Plasto-Driv® PTR PT® Duro-PT® PT® Type DG® Fasteners

Design assistance matches proper screw with specific plastic

cost reduction: increases productivity

improves quality: reduces strip-out; reduces rework

improves strength: reduces boss stress; increases joint integrity



Improved operating efficiencies through engineered fastening solutions.

Miniature thread forming screws for metal

Rolok® Tapmate™ TR PT® Type DG® Fasteners

cost reduction: eliminates tapping

improves quality: interference-fit, roll-formed mating threads create a locking feature

improves strength: work hardened, roll-formed mating threads increase joint integrity



Miniature radius point screws

cost reduction: self aligning feature increases productivity

improves quality: reduces rework; smooth point improves assembler and consumer safety

improves strength: reduces cross threading; increases joint integrity



FASTENERS AND COMPONENTS MANUFACTURING CAPABILITIES

SIZE RANGE

Non-threaded Products

- Inch

Minimum Diameter: 0.0120"

Minimum Length: 1/16" (0.0625")

- Metric

Minimum Diameter: M.3 (0.3mm) / (0.0118")

Minimum Length: 1.5mm / (0.0590")

Threaded Products

- Inch

Minimum Diameter: #000 (0.0340")

Minimum Length: 1/16" (0.0625")

- Metric

Minimum Diameter: M.6 (0.6mm) / (0.0236")

Minimum Length: 1.5mm / (0.0590")

Materials

- Carbon Steel
- Alloy Steel
- Stainless Steel
- Copper
- Brass
- Bronze
- Aluminum
- other materials
upon request



PINS



CONNECTORS



CONTACTS



**SEMI-TUBULAR
SHOULDER RIVETS**



MULTI-DIE SPECIALS



FERRULES



SCREWS



SEMBLEX IS PRODUCT INTEGRITY

Quality, Technology, Service...  **Semblex**

Semblex Corporation, a leader in the fastener industry, has responded to the challenges of product down sizing, cost reduction, continuous quality improvement and assembly integrity by establishing a miniature fastener and component division. This high tech division is equipped with precision micro former single and multi-die cold heading and thread rolling machines. Tight tolerance machine capabilities produce semi - tubular parts, special extrusions, and parts with shoulders and collars.

