

## Products

### AIRCRAFT AND COMMERCIAL STUDS

Dunham Products began its life producing studs used in the manufacture of aircraft fuel pumps. Today, we continue our tradition of strength producing studs for the aerospace industry. Dunham can thread roll studs **after** heat-treating, which increases their strength, and studs are QSLM (Qualified Suppliers List for Manufacturers) certified for Class 2 and 3 Threaded Fasteners.

### HIGH STRENGTH FASTENERS

Just about every mechanical assembly makes use of fasteners to attach components together in some way, shape or form, and small fasteners keep big things from failing. Dunham Products manufactures a wide range of high strength fasteners, from standard products to specialty fasteners, and can produce any range of tolerances for your application or project. In addition, we can handle any type of modification of standard fasteners.

### SPECIALTY SPACERS AND BUSHINGS

Dunham Products manufactures washers, spacers and bushings to use with our threaded fasteners.

Our washers help to distribute load, reduce vibration, and wear. Spacers are used when additional space between objects is required. Bushings are sleeves which reduce friction and limit movement on one or more axis, while allowing free directional movement.

### NUTS AND BOLTS

The phrase “the nuts and bolts” refers to the basics of something. Nuts and bolts may be basic, but their importance is critical. As we frequently say, small things keep big things from failing. Dunham Products manufactures a wide range of nuts and bolts and can produce any specifications that you require for your application or project. In addition, we can handle any type of modification of standard fasteners.

Dunham Products manufactures its products in the following materials, including DFARS (Defense Federal Acquisition Regulation Supplement) and RoHS (Restriction of Hazardous Substances Directive) compliant on request:

#### Ferrous:

- » Alloy Steels
- » Carbon Steels
- » Monel®
- » Super Alloys
- » Stainless Steel

#### Non-Ferrous:

- » Aluminum
- » Brass
- » Bronze
- » Copper
- » Titanium

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COMPLETE MANUFACTURING

AEROSPACE AND COMMERCIAL FASTENERS

CENTERLESS GRINDING

CNC TURNING

PRECISION THREAD ROLLING

DRILLING, MILLING AND TAPPING

RAPID PROTOTYPING

ISO CERTIFIED

QSLM CLASS 2 & 3 THREAD CERTIFIED

CAGE CODE: 1B450



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## Dunham Products is built on a tradition of strength.

Dunham Products has built its reputation on strength, and a large part of that reputation is our strong belief in quality. Whether we are fully manufacturing, thread rolling, knurling, centerless grinding, drilling, CNC turning or milling our goal is to produce high quality products with a respectable turnaround.

DPI is a manufacturer of high strength fasteners, servicing a wide range of industries, from Aerospace and Marine to Race hardware and your everyday commercial fasteners. Any sublet processing (I.E. plating, heat treat, anodizing, magnetic practical inspection) are sent to an approved source, complete with material and special process certifications.

PPAP, S.P.C. charts, in-process, and final inspection reports are incorporated into our process control as required. We are ISO 9001:2008 certified with an effective quality program; assuring our products meet or exceed your standards.

Dunham Products has been in business since 1946; our reputation speaks for itself. We are and always have been personable, intelligent, customer oriented, and together, continue to strengthen Dunham Products Inc.



## Services

### MODIFICATION OF STANDARD PRODUCTS

Dunham Products is an expert at converting existing standard products into specialized products.

If your part is out of specifications or suffered damage in transit, we can get them back to their original specs. We can repair your fasteners for most grades and material hardnesses. We can handle any type of modification or repairs, including drilling and tapping, centerless grinding, thread rolling, re-rolling, milling, slotting, and more. If your project needs more complex modifications, we have complete CNC turning/milling machining capabilities.

### THREAD ROLLING

Dunham Products has built its tradition of strength with best-in-class thread rolling, the preferred method for producing strong, smooth, precise, and uniform external threads.

Rolled threads are stronger than other types of threading processes like cutting, grinding, and chasing because of their superior tensile, shear, and fatigue strength. Other threading processes remove material to produce the thread, but thread rolling displaces the material with hardened steel dies.

Dunham Products can process your Thread Rolling needs, whether your project requires standard, metric or special threads. We can roll or re-roll single or multiple lead threads in both right and left hand configuration. Diameters from #2 to 1-3/4, our Standard lengths are up to 4-5/8, with longer lengths available.

### CENTERLESS GRINDING

Centerless grinding is the precision way to grind a diameter. The part being machined is supported on its own outer diameter by a workblade located between a high speed grinding wheel and a slower speed, smaller diameter regulating wheel. Centerless grinding is even more precise than CNC machining in creating a precise diameter. Centerless grinding creates precise roundness, surface finish and dimensional tolerances that are among the best possible and can improve the roundness of out-of-round parts.

Dunham Products can grind parts with a diameter from .100 to 2.500 up to 10.00 long with multiple diameters. Concentricity held to .0005 T.I.R., diameter held to .0001 accuracy and roundness held to .0002 accuracy.

Dunham Products has the expertise, tools and machines to handle these types of centerless grinding:

- » **Form Grinding**
- » **Straight Grinding.**
- » **Taper Grinding**
- » **Step Grinding**
- » **Thru-feed Grinding**



### KNURLING



Knurling is a thread rolling process that produces a raised diameter on a part. It allows for a better grip compared to a smooth metal finished part. Knurling is also utilized to create a pressed fit into a controlled diameter. Additionally knurling is used to raise a worn diameter, as needed.

Knurling can be both a dimensional and functional addition, and Dunham Products can knurl a part from 0.090 thru 1.375 diameter and up to 4-5/8 long. If your project requires knurling on a specific section of a part, or component, requires full knurling on metal or plastic, Dunham can get it done.

Regardless of your project, knurling needs and specifications, Dunham Products has the expertise to handle these knurling operations:

- » **Straight Knurl**
- » **Diamond Knurl**
- » **Diagonal Knurl**

## Services (continued)

### DRILLING, TAPPING, MILLING AND BROACHING

Dunham Products continues its tradition of strength with drilling, tapping, milling, and broaching for bolts, studs, rods, and fasteners. We have the expertise and capacity for high volume production drilling with hole diameters from .020 to .750 up to 6.00 deep in a variety of fasteners, as well as headed, turned, bent and cast parts.



### Drilling

For situations where extreme mechanical reliability is needed, Dunham Products can keep your connections strong with fastener drilling. We can handle through, blind, cross, core, pointed and flat bottom drilling with automatic feeders and flow and depth testing. Dunham Products can drill hole diameters .020 thru .750 up to 6.00 deep.

### Tapping

Tapping is the process of producing internal threads using a tool (tap) that has teeth on its periphery to cut threads in a pre-drilled hole. Dunham Products helps keep your connections strong with advanced tapping methods.

### Milling

Milling is a material removal process which can create a variety of features on a part by cutting away unwanted material. Dunham Products uses milling to produce parts that are not axially symmetric and have many features, such as holes, slots, pockets, and surface contours.

### Broaching

Broaching uses a toothed tool to remove material, and is used when precision is required for unusual or irregular shapes. We can broach circular and non-round holes, keyways, splines, as well as flat surfaces on small and medium sized castings, forgings, and screw machine parts.

### CNC MACHINING/PROTOTYPING

Dunham Products has intricate CNC capabilities and highly skilled CNC programmers, consultants and machinists with the ability to make complete and more complex parts with faster CNC prototyping. Our CNC capabilities mean lower cost and faster production often with quicker turnaround times.

Dunham can produce CNC parts from alloy



steels, carbon steels, Monel®, superalloys, stainless steel, aluminum, brass, bronze, copper and titanium, and can meet your CNC turning needs from #2 thru 6.00 diameter up to 29.00 long. We utilize bar feeders on our CNC turning equipment that allows us to run parts more efficiently. In addition, Dunham utilizes one of only three Samsung multi-axis CNC turning centers with a sub-spindle in operation in the US for faster and more precise output and increased flexibility.