



# Physical Science Laboratory (PSL)

New Mexico State University

BE BOLD. Shape the Future.

## *Mechanical Manufacturing Capabilities*

### Design

PSL's Machine Shop is responsible for manufacturing mechanical products, support faculty and facility request, and provide machine shop duties as needed.

Capabilities include:

- Manufacture of off-the-shelf products
- Manufacture of custom designs
- Reverse engineer and design from sample parts or instructions

Designs can be submitted as:

- Electronically
  - Pdf, Step files, Inventor files, or Solidworks
- Hard Copy Mech Layouts
  - Hand printed, as ideas
  - Handwritten drawing



### Fabrication

Sheet metal fabrication and vibration sub-shops augment the machine shops capabilities

Shop Processes include:

- Conversion Coating
- Etching
- Plating (Nickel and Aluminum)
- Vacuum
- Welding

Equipment includes the following:

- 4 Manual Mills
- 3 CNC Verticals
- 4 Manual Lathes
- 2 Vertical Machine Centers
- 2 CNC Lathes



### Testing & Inspections

PSL's Machine Shop has several precision measuring devices and surfaces.

Each mechanical product built goes through quality assurance inspections throughout the process:

- Mechanical Inspection
- Full System Inspection Complete Final Inspection



### Experience

Mechanical engineers and technicians with years of experience in demanding aerospace manufacturing. PSL's Machine Shop Offers extensive Experience in antenna manufacturing as well as small part production and large scale production

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