



FABRICATION AND ASSEMBLY SHOP |

Shelters Technology Engineering & Fabrication Directorate (STEFD)

OVERVIEW:

The Fabrication and Assembly Shop has the capability to fabricate and assemble a wide variety of systems and equipment ranging from specialty metal components for airdrop applications to plastic water tanks used for waste water collection to complicated Shelter integration projects — from kitchens to special order communications shelters. This shop also specializes in refurbishing equipment damaged or degraded in the field or equipment retuning for modernization and upgrades.

DESCRIPTION:

WOOD AND PLASTIC:

The wood and plastic shop provides customers with a wide variety of prototype and modeling capabilities.

- Wood patterns and models
- Thermoforming plastic fabrication up to 30"×36"
- Plastic fabrication of all types and sizes
- Specialty items molded for unconventional use
- Prototype injection molded parts for engineering evaluation
- Thermoforming mold making in aluminum, epoxy, silicone rubber or urethane elastomers in any duro-meter

MACHINE SHOP:

The Machine Shop will provide you with a broad range of capabilities that incorporate the use of metal, wood, plastic and composite materials. A high degree of precision is guaranteed with the use of the latest Computerized Numerically Controlled (CNC) machining and cutting equipment. A Computer Aided Design and Computer Aided Manufacturing (CAD/CAM) System will assist you with exact drawings and tight tolerances to assure that the item will meet your needs.

Machining Capabilities include:

- CNC and Proto Trak lathes
- CNC Milling with tolerances to .001"
- Precision honing and grinding to .0001"
- Turning of parts to 20" diameter and up to 60" length
- Single prototype parts to small production runs

SHEET METAL:

When it comes to metal fabrication, our skilled personnel can provide you with anything from a simple panel to a complex stainless steel mobile kitchen. We have a variety of sheet metal material types and thickness to choose from that range from lightweight aluminum to highly corrosion resistant stainless steel, mild steel, alloy steel and other sophisticated sheet metals to fulfill any of your special requirements. All sheet metal manufacturing can be made in accordance with commercial and/or precision tolerances.

UNCLASSIFIED



Our metal working capabilities consist of:

- Rolling steel up to ¼" thick
- Simple hand forming to heavy 225-ton computerized press brake
- Cutting up to ¾" steel with 4 foot manual or 10' computerized power shears
- Notching and Punching up to ¼" steel
- Epoxy and High Shear insert installation riveting
- Soldering — all types
- Riveting

WATERJET CUTTING CENTER:

Waterjet equipment has a large platform, (4'x8') which cuts material up to 5" thick. This technology cuts with an extremely high pressure (55,000 psi) water through a .030" nozzle and garnet mixture and will cut all metals, stone, ceramic and composites. It can cut almost any material in any two dimensional configuration with great accuracy controlled by a computer program.

WELDING:

The Welding Shop has the capability for manual and semi-automatic welding. In addition, we are capable of structural welding fabrication and non-destructive testing of welds and base materials. We offer assistance in the practical approach to design of weldments, evaluation of welding procedures and conducting procedure qualification in accordance with the applicable regulations and specifications.

Material types welded and/or cut are carbon and alloy steel, stainless steel, aluminum, copper and copper alloys, and titanium.

- Welding and Cutting processes or combinations are:
- Manual shielded metal arc
- Manual and automatic gas tungsten arc spot welding
- Manual tungsten inert gas welding
- Metallic inert gas welding
- Resistance spot welding
- Manual oxy-acetylene flame cutting, brazing and welding
- Plasma cutting up to 5/8"
- Manual carbon arc gouging
- Plastic Welding

POINT OF CONTACT:

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