



TOLERANCES & CAPABILITIES.

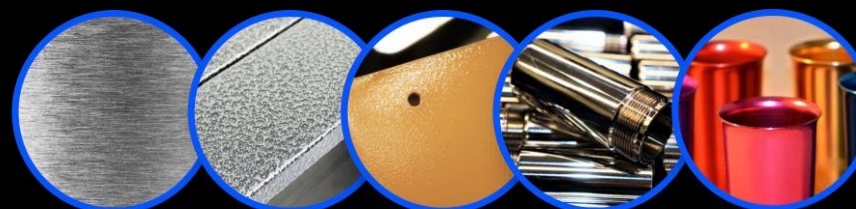
Proudly made metal work in the **USA since 1995.**
If you can imagine it, we can make it!



Finishing and Post-Processing:

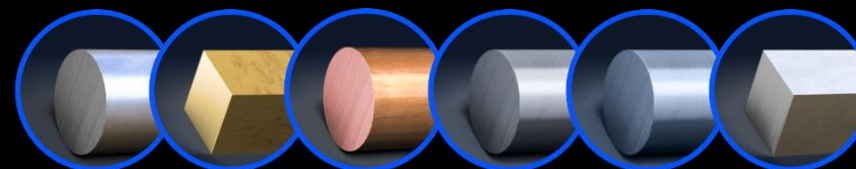


As-machined Bead Blasting Polishing Heat Treating Black Oxide



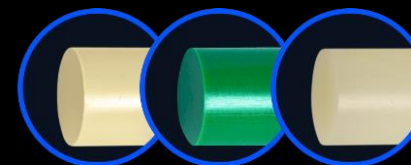
Brushing Painting Powder Coating Plating Anodizing

Metals:



Aluminum Brass Cooper Stainless Steel Steel Alloy Titanium

Plastics:



ABS Polypropylene Nylon

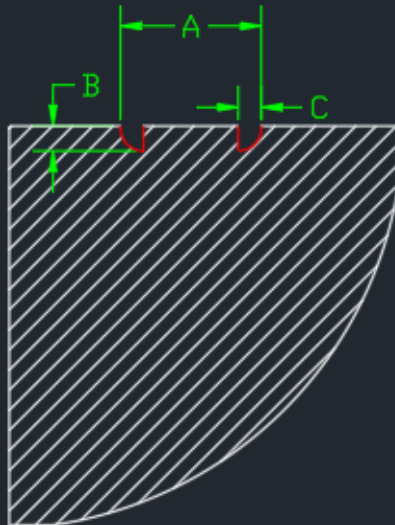
Etching locks

Materials: CRS, SS, AL, Brass, Copper, BeCu, Phos Bronze, Spring steel, NiSi

Metal thickness: 0,002 – 0,030in

Sheet size: 12x24in – Standard

Bites after standard
(internal) locks



Approximate sizes of bites after etching

THICKNESS	A	B	C
0.001"–0.006"	0.027"	0.005"	0.005"
0.008"	0.029"	0.007"	0.007"
0.010"	0.035"	0.008"	0.008"
0.012"	0.043"	0.010"	0.010"
0.015"	0.053"	0.012"	0.012"
0.020"	0.070"	0.015"	0.015"
0.025"	0.090"	0.020"	0.020"
0.030"	0.105"	0.025"	0.025"

Tolerances

Machining

Turning	$\pm.0005"$
Milling	$\pm.0005"$

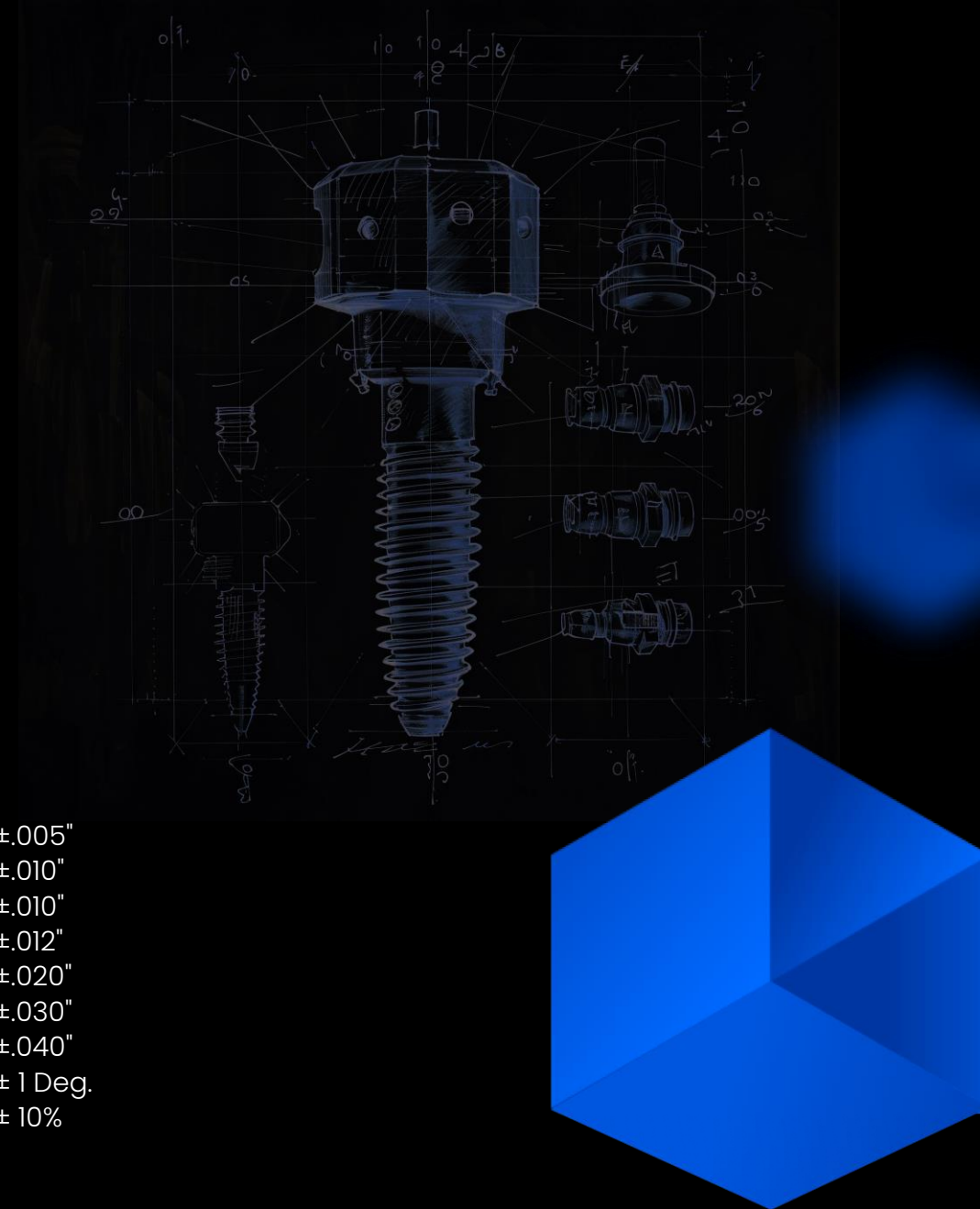
Stamping type components

Laser Blank	$\pm.005"$
Chem Etch Blank	$\pm.003"$
Wire EDM	$\pm.0002"$
Forming	$\pm.005"$

Thick gauge fabrication

Standard feature sizes (holes, squares)	$\pm.005"$
Special features which must be multiple hit	$\pm.010"$
Flt. Pat. Relation (Feature to feature, not forms)	$\pm.010"$
Dim that locate a feature that are a consequence of a single form	$\pm.012"$
Dim that locate a feature that are a consequence of a two (2) separate forms	$\pm.020"$
Dim that locate a feature that are a consequence of a three (3) separate forms	$\pm.030"$
Dim that locate a feature that are a consequence of a four (4) separate forms	$\pm.040"$
Angularity tolerance on forms (Degrees)	$\pm 1 \text{ Deg.}$
Burr tolerance	$\pm 10\%$

Note: Dim that are located from a form are to be measured within .12" (3.0mm) of tangent of the form line



Our Machines:



3-axis CNC machining

- 40"x26"x25" max travel with 54"x24" table
- Tool capacity: 20
- Max 8100 RPM



CNC turning center

- 23" max cutting length
- 20-30" max cutting diameter
- Spindle speed 4500 RPM
- 12-station tool magazine with live tooling
- Live tooling 6000 RPM max
- Bar-feeder



5-axis CNC machining:

- 30"x20"x20" max travel with 19.7" table diameter
- Tool capacity: 30
- Max 12000 RPM



Brake press forming

- Up to 110 ton
- Manual and CNC controlled with automatic tool changers
- Up to 96" bend length



Brake press forming

- Up to 110 ton
- Manual and CNC controlled with automatic tool changers
- Up to 96" bend length



Waterjet Blanking

- Coppers, brass, BeCu, Phos.Bronze, etc.
- .750" thick
- 6 feet X 12 feet max sheet size

Types of Work:

1.

Photochemical Etching

We create precision thin up to 0.030" metal parts with tight tolerances: ± 0.003 ".

2.

Laser Cutting Services

Our CNC laser cutting machines offer high precision profiles and works with wide range of materials including steel, stainless steel and aluminum.

3.

Thin Gage Forming

Parts from the material up to 0.030". Simple and complex geometry using manual kick-presses and in-house developed precision brake presses.

4.

Thick gage Forming

Bending parts from thick materials from 0.030" to 0.250" using modern CNC brake presses by Amada GmbH and SafanDarley.

5.

Punch Press Stamping

Produce high volumes metal parts at low manufacturing costs.

6.

Assembly

Mechanical and electromechanical assembly services with comprehensive quality control.

7.

Fastener and Hardware Insertion

Install fasteners and hardware –clinch nuts, threaded studs etc.

8.

Full Engineering Support

Our experienced team of engineers will take care of your project from the sketch to cost-effective tech process. Utilizing modern 3D CAD software.

They Trust Us:

TESLA AVL EXCELITAS TECHNOLOGIES

Microsoft JABIL EATON

Qualcomm Apple Motorola



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