

**LEAN MANUFACTURING: THERE ARE NO EXTRA STEPS.**

Lean Manufacturing is characterized as a philosophy but at GrovTec it's a core strategy embraced by every function of the company. In its essence, Lean Manufacturing is the elimination of waste. In its expanded form, Lean Manufacturing addresses waste through inventory control, first-time quality, continuous improvement to processes, and collaborative relationships with customers in which shared information increases the performances of both parties.

At GrovTec, Lean Manufacturing means our customers can lower costs and increase inventory turns while maintaining a steady flow of parts through the manufacturing process. Efficiency, as well as quality are embraced in every process.



**Made in the USA!  
Guaranteed for Life!**



**QUALITY: THE TOTAL EQUALS THE SUM OF THE PARTS.**

Our experience in manufacturing means a GrovTec product will always meet or exceed your specifications and expectations. Our experience, however, provides the knowledge to actually improve both design and performance features in many instances. Ultimately, the performance of a GrovTec part will reflect upon your brand. This is a critical understanding that we bring to each and every project.



GrovTec operates under the requirements of ISO 9001:2008 registration. Quality within the standard is not simply measured by the finished part, but by optimization of the total process.



**Mail Address**

PO Box 220060  
Milwaukie, OR 97269

**Shipping Address**

13529 SE Johnson Rd.  
Milwaukie, OR 97222

Phone: (503) 557-4689 Fax: (503) 557-4936

[www.grovttec.com](http://www.grovttec.com)



**WWW.GROVTEC.COM PH. (503) 557-4689**

## OEM MANUFACTURING

Perfection in a finished part is defined by much more than a tight tolerance. It includes design, materials, finish, function, durability and cost. Delivering on this total package is the foundation of the GrovTec mission.

Prior to tooling ever touching raw materials, the expertise of GrovTec's engineering team will have inspected every aspect of the part in relation to your requirements. Is the design sound? Will the specified materials perform? Is the desired manufacturing process the most cost-effective? Can this part be improved? What's the process for patent submission? And of course cost quotes, lead times and firm delivery dates are without question.



## SERVICES AND CAPABILITIES:

### PARTNERING IN SUCCESS

GrovTec US, Inc. provides full-service close-tolerance contract machining of metal products and precision sewing in soft goods division. Our design support service includes quick-turn prototyping in conjunction with your needs. Our diverse manufacturing equipment accommodates exceptional versatility, including finishing process services for those who do not have their own capabilities. Our process begins with your custom part prints, drawings or sample for evaluations by our engineering team.

### MULTI-SPINDLE SCREW MACHINES

(20 Davenports, 18 Acmes)

- Material Shapes
  - Round
  - Hexagonal
  - Square
- Sizes
  - Diameters of 5/32" to 3/4"
  - Lengths of 0.020" to 3.00"



### SINGLE-SPINDLE SCREW MACHINES

(20 Brown and Sharps)

- Material Shapes
  - Round
  - Hexagonal
  - Square
- Sizes
  - Diameters of 5/32" to 1-5/8"
  - Lengths of 1/16" to 50.0"



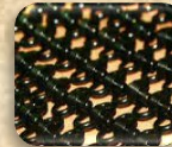
### CNC MILLING

(HAAS, Supermax)

- Travel X = 30" Y = 16" Z = 20"
- Feed = 1,000 in/min
- 30HP

### CNC TURNING (2 Doosan)

- Material Shapes
  - Round
  - Hexagonal
- Sizes
  - Diameters .250" to 2.5"
  - Lengths .020" to 20"



Full C Axis with live tooling

### CNC SWISS – (2 Citizen)

- Material Shapes
  - Round
  - Hexagonal
  - Square
- Sizes
  - Diameters .187" to .750"
  - Lengths .202" to 60"
- 7 Axis with live tooling

### SURFACE FINISHING

- Hot Black Oxide (Bluing)
- Electroless Nickel Plating
- Types M & Z Phosphate
- Gold Plating
- Anodizing
- Passivating

### SECONDARY OPERATIONS

- Riveting
- Milling
- Drilling Tapping
- High Speed Deburring
- Stamping
- Assembly
- Sand Blasting



### SOFT GOODS

- In-House Development and Engineering
- State of the art Industrial Sewing Center
- Internal Material Die-Cut Center
- Automated CNC Strap Cutting Center

### MATERIAL

- Steel
- Stainless
- Aluminum
- Brass
- Titanium
- Plastic