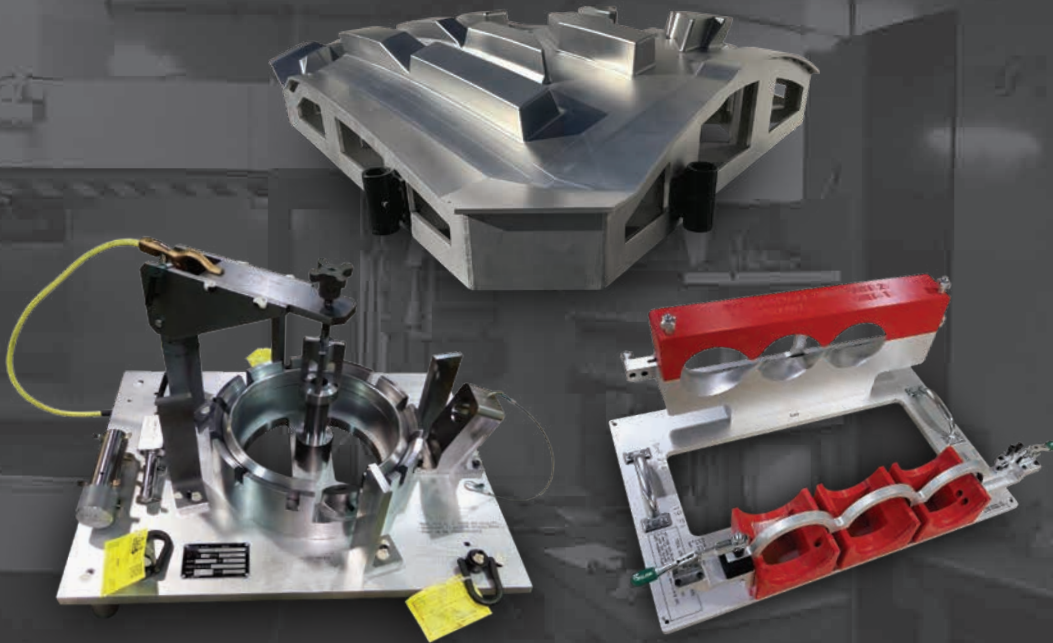




# WOODLAND TRADE CO.

TOOL DESIGN & TOOL FABRICATION

## AWARD WINNING TOOLING EXPERTS



### 2021 CAPABILITIES CATALOG

**TOOL DESIGN, FABRICATION & 3D PRINTING SERVICES FOR THE AEROSPACE,  
AUTOMOTIVE, MARINE, MEDICAL & SPACE INDUSTRIES**



## AWARD WINNING SUPPLIER

### 2X Boeing Supplier of the Year

Woodland Trade has won Boeing's prestigious Supplier of the Year Award in 2007 and 2017. We have also been nominated in 2014, 2015, 2016 and 2018!

### 13X Boeing Supplier Excellence Award Winner

Woodland Trade has been awarded Boeing's Supplier Excellence Award every year it's been offered.

## TOOL DESIGN AND TOOL FABRICATION SERVICES

### Engineering Services

Tool Design, Material Selection, Reverse Engineering & Manufacturing Process Selection.

### Boeing DPD/MBD Approved

Woodland Trade is Boeing DPD/MBD approved tooling shop. We also hold approved Delegation from Boeing for tool inspection.

### Ease of Procurement

Woodland Trade's in-house tool design capabilities allows you to place a single PO for your tool design and tool fabrication needs. This strategy shortens lead-times, lowers risk and provides an increased level of accountability that is unique in the tooling world.

## QUALITY IS ASSURED

### ISO 9001:2015 Certified

Woodland Trade's quality system is ISO certified. We have documented and implemented a complete system of standardized business processes assuring our tools meet your requirements.

### Digital Inspection = Accuracy

Woodland Trade utilizes advanced digital metrology equipment to ensure every tool meets or exceeds your exacting requirements.



## INNOVATIVE MANUFACTURING

Woodland Trade blends digital manufacturing including CNC Machining, Additive Manufacturing and Digital Inspection with traditional hand craftsmanship to produce the finest tooling available.

## CERTIFICATIONS

- ISO 9001:2015
- ITAR Registered
- ASQ Certified Employees
- Boeing DPD/MBD Certified Tooling Shop
- Boeing Delegated Inspection Facility

## INSPECTION EQUIPMENT

- (3) FARO Quantum S Portable CMM Arm
- FARO VANTAGE Laser Tracker
- FARO LLP (Laser Line Probe)
- FARO 8th Axis (For Scanning 360 Degrees)

## SOFTWARE

- Catia V5-6 R2019
- Enovia V5-6 R2019
- SurfCAM Traditional 2016 R2
- MasterCAM 2021
- Vericut V9.1
- Kubotek Validation Tool 2017
- VeriSurf 2020
- ANSYS SpaceClaim 19.2
- Insight, Simplify3D & Elger (3D Printing)

## SUPPORT EQUIPMENT

- BOSS HP-5598 Laser Engraver
- Despatch Walk-In Curing Oven



## METAL FABRICATION

Woodland Trade's machining capabilities includes the following.

### CNC MILLING MACHINES

Machine:	Style:	Axis:	Taper:	RPM:	Travel:
HAAS VF-5 XT	Vertical Milling	3 Axis	Cat50	7,500	X= 60.0", Y= 26.0", Z= 25.0"
HAAS VF-4	Vertical Milling	3 Axis	Cat40	7,500	X= 50.0", Y= 20.0", Z= 25.0"
(2) HAAS VR-11	Vertical Milling	5 Axis	Cat40	10,000	X= 120.0", Y= 40.0", Z= 30.0", A= +/-32 Deg, B= +/-32 Deg
FPT Stinger	Gantry	5 Axis	HSK63A	22,000	X= 68.8976", Y= 55.1181", Z= 23.622", A= +/-100 Deg, C= Infinitely Continuous
FPT DinoMax	Gantry	5 Axis	HSK63A	18,000	X= 157.4803", Y= 106.2992", Z= 51.1811", B= +115/- 97 Deg, C= Infinitely Continuous

### CNC ROUTERS

Machine:	Style:	Axis:	Travel:
DMS	Gantry	5 Axis	X= 132", Y= 77", Z= 49"
Motion Master	Gantry	5 Axis	X= 250", Y= 122", Z= 54"
DMS	Gantry	3 Axis	X= 240", Y= 113", Z= 37"
Komo VR-512	Gantry	3 Axis	X= 150", Y= 60", Z= 16"



## COMPOSITES FABRICATION

Woodland Trade has decades of high and low temperature composite tooling design & fabrication experience. Composite tooling is used for prototypes & low-medium volume production rates with reliable results.

## ASSEMBLY

Woodland Trade has skilled Tradesmen capable of supporting your mechanical, electrical, pneumatic and hydraulic assembly needs.

## ADDITIVE MANUFACTURING

3D Printing allows us to make tooling faster, better, cheaper and safer than ever before.



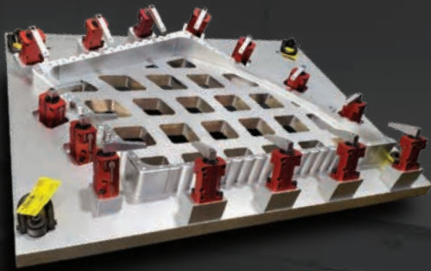
### ADDITIVE MANUFACTURING MACHINES

Printer:	Process:	Build Envelope:	Materials:
Stratasys Fortus 900MC Gen II	FDM	36 x 24 x 36 in	ABS-ESD7, ABS-M30, ABS-M30i, ASA, FDM Nylon 6, FDM Nylon 12, FDM Nylon 12CF, PC, PC-ABS, PC-ISO, PPSF, ST-130, ULTEM 1010, ULTEM 9085
Stratasys Fortus F900	FDM	37 x 24 x 36 in	ABS-ESD7, ABS-M30, ABS-M30i, ASA, FDM Nylon 6, FDM Nylon 12, FDM Nylon 12CF, PC, PC-ABS, PC-ISO, PPSF, ST-130, ULTEM 1010, ULTEM 9085
AON-M2	FDM	18 x 18 x 25 in	ABS, ASA, Nylon, PC, PEEK, PEKK, PETG, PSU, PPSU, TPC, TPU, ULTEM
Markforged X7	FDM and CFF	13 x 10.5 x 7.75 in	Onyx (Nylon w/ Chopped Carbon Fiber), Continuous Fibers (Carbon Fiber, Fiberglass, HSHT Fiberglass, Kevlar)
Markforged Metal X	Metal ADAM	11.75 x 8.5 x 7.0 in	17-4 Stainless Steel (Beta); 316L Stainless Steel, Tool Steel (A2 And D2), Inconel 625, Titanium (Ti-6Al-4V)





**CONTACT US TODAY FOR A FREE ESTIMATE!**



**ROUTER FIXTURES**



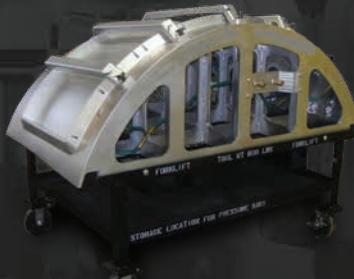
**BONDING CAROUSELS**



**DOTCO ROUTING**



**PROTECTIVE EQUIPMENT**



**BONDING JIGS**



**BOND ASSEMBLY JIGS**



**DRILL JIGS**



**VACUUM ROUTING FIXTURES**



**ROTOMOLDS**



253-476-9985  
info@woodlandtrade.com  
www.woodlandtrade.com



**WOODLAND TRADE CO.**  
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Woodland Trade Company, Inc.  
7625 East McKinley Ave.  
Tacoma, WA 98404 USA