

Facilities and Equipment

Founded and run by engineers, technical capabilities and innovative engineering solutions are the core of our business model. We specialize in designing and manufacturing very large scale, high precision prototypes, tools and production parts.

Core Capabilities

- ▶ Composite Fabrication
- ▶ Engineering services
- ▶ Complete design-build
- ▶ Complex project management
- ▶ Wood, foam and putty composites
- ▶ Fiberglass and carbon fiber
- ▶ Resin infusion, VARTM
- ▶ Full-service weld shop
- ▶ Full-service machine shop
- ▶ 5-axis CNC proprietary milling machines
- ▶ Metal tooling
- ▶ Casting
- ▶ Trimming and drilling
- ▶ Prototype development
- ▶ Metal and composite tooling
- ▶ Parts production runs
- ▶ Expert finish shop
- ▶ Assembly
- ▶ Custom packing and shipping
- ▶ Storage
- ▶ Annealing Furnace

Facilities

Highway 20 / Sedro-Woolley, WA

- ▶ 16 acres
- ▶ 117,000 sq.ft. production area
- ▶ High bays
- ▶ Temperature and moisture controlled
- ▶ Four large-capacity 5-axis CNC mills
- ▶ Multiple overhead cranes, 10-25 ton capacity

Hamilton / Hamilton, WA

- ▶ 100 acres
- ▶ 164,000 sq.ft. production area
- ▶ High bays
- ▶ Temperature and moisture controlled
- ▶ Two large-capacity 5-axis CNC mills
- ▶ Milling envelopes 100' x 20' x 8'
- ▶ Multiple overhead cranes, 10-25 ton capacity

Equipment

Janicki Industries' extra-large, 5-axis, gantry style CNC machines are designed, built, programmed and maintained by JI. Rotary axes on the machines have continuous contouring capabilities.

Jl Mills

	Envelope Size	X-Axis	Y-Axis	Z-Axis	Rotary Axes A/B	Spindle RPM	Max Spindle Torque
Janicki Mill #1	68ft x 19ft x 8ft	816	228	96	± 195° / ± 100°	13,000	35 Nm
Janicki Mill #2	88ft x 19ft x 8ft	1065	235	96	± 203° / ± 106°	10,000	300 Nm
Janicki Mill #3	40ft x 12ft x 5ft	480	144	60	± 204.5° / ± 110°	20,000	42 Nm
Janicki Mill #4	58ft x 14ft x 6ft	696	144	72	± 204.5° / ± 110°	20,000	42 Nm
Janicki Mill #5	100ft x 20ft x 8ft	1200	240	96	± 204.5° / ± 110°	24,000	84 Nm
Janicki Mill #6	100ft x 20ft x 8ft	1200	240	96	± 204.5° / ± 110°	24,000	84 Nm

Brave 5-Axis Horizontal Machining Center

Travel	X = 240.0", Y = 84.0", Z = 48.0"
Rotary Axes, positional A&C	± 180°
Table Size	X = 256.0" Z = 108.0"
Tombstone	X = 64.0", Y = 98.5"
Spindle Capacity	8,000 rpm
Horsepower	28
Max Weight on Table	20,000 lbs / 10 sq ft
Tombstone Weight	7,000 lbs

Mitsubishi Horizontal Machining Center

Travel	X = 78.7", Y = 59.1", Z = 47.0"
Rotary Axis B	± 180°
Table Size	X = 63.0", Y = 55.0"
Tombstone	X = 62.0", Y = 48.5"
Spindle Capacity	2,500 rpm
Horsepower	30
Max Weight on Table	15,432 lbs
Tombstone Weight	10,320 lbs
Useful Weight (Max - Tombstone)	5,112 lbs

Composite
 fabrication
 experts

Equipment (continued)

Mazak Vertical Machining Center

Travel	X = 65.0", Y = 30.0", Z = 26.0"
4th Axis	Fully contouring
Table Size	X = 78.74", Y = 30.0"
Tombstone	X = 62.0", Y = 48.5"
Spindle Capacity	12,000 rpm
Horsepower	25
Max Weight on Table	3,300 lbs
Features	Tool touch setters for height and diameter Spindle probe with inspection software

Bridgeport Mill

Travel	X = 29.0", Y = 12.0", Z = 3.4"
Table Size	X = 48.0", Y = 10.0"
Spindle Capacity	2,000 rpm
Horsepower	2
Max Weight on Table	750 lbs
	Spindle probe with inspection software

Haas CNC Lathe

Max Part Size	10.3" OD x 20.0" long
Min Part Size	0.06" OD x 0.5" long
Spindle Capacity	4,000 rpm
Horsepower	20
Max Weight on Table	750 lbs
Features	Tool touch setter Magazine bar feeder (max stock = 2.0")

Manual Lathe

Max Shaft Size	4.25" OD x 34.0" long
Large Chuck Max Part Size	14.0" OD x 3.0" long
Large Chuck Max Part Size	Combinations up to 9.0" OD x 34.0"

CNC Waterjet Cutters

- ▶ Ward 2-Axis Waterjet 12' x 40'
- ▶ Flow 2-Axis Waterjet 6' x 12'
- ▶ Flow 6-Axis Waterjet X

CNC Router

- ▶ Komo Router 3-axis 5' x 10' x 12.5"

Cranes

Brand	# of Cranes	Tons Capacity	Span	Hook Height
Demag	5	15		
Demag	1	10		
Demag	2	25	77'8"	28'8"
Demag	1	15	36'4"	22'10.25"
Konecrane	2	10	64.5"	32'2"
Konecrane	2	15	86'10"	30'9"
Konecrane	2	10	64'5"	32'2"

Ovens

- ▶ 400°F oven — 100' x 24' x 14' modular
- ▶ 500°F modified Despatch oven - 30' x 10' x 10'
- ▶ 250°F degree 40' X 20' X 10'
- ▶ Multiple modular tent ovens
- ▶ Multiple lab ovens

Annealing Furnace - 1600°F/871°C

- ▶ Among the largest in the US
- ▶ 72 feet long x 24 feet wide x 11 feet high
- ▶ Exotic metals, composites, ceramics and thermoplastics
- ▶ Heat distribution delta T 35°F
- ▶ Semi truck accessible

Janicki Proprietary Composite Fabricator Machine

- ▶ Direct composite fabricating machine
- ▶ 6' x 4' x 2' envelope
- ▶ Direct print/manufacture 3dimensional parts
- ▶ Seamless monolithic tools
- ▶ Integral details and reinforced areas
- ▶ Stronger, faster to produce
- ▶ Less expensive than traditional methods

3D Rapid Prototyping

- ▶ High definition models and prototypes
- ▶ 24 bit color
- ▶ Affordable and accurate
- ▶ Quick turnaround

Metrology

- ▶ Available for metrology studies at Janicki or at your plant
- ▶ Accurate measurements to better than ±.003"

Laser Trackers

- ▶ Leica LTD 500
- ▶ Leica LTD 600
- ▶ Leica LTD 800
- ▶ 2 - Leica AT901-LR Absolute Trackers
- ▶ Leica T-Cam/T-Probe
- ▶ 2 - Leica T-Cam/T-Probe II

Laser Radar Scanners

- ▶ Metris L260
- ▶ 2 - Metris M 260

R&D Lab

Autoclave

- ▶ Temperature: 500°F
- ▶ Pressure: 150psi
- ▶ Individual monitoring of 4 parts
- ▶ 30"dia x 36" deep

2 - Wisconsin Ovens

- ▶ 500°F

2 - Testing ovens

- ▶ 500°F
- ▶ 3'x3'x3'

Material Testing Workstation MTS Alliance RF/150

- ▶ Load frame to test composite samples
- ▶ Load Capacity: 150 kN (33,750 lbf)
- ▶ Crosshead Travel: 1232 mm (48.5 in)
- ▶ Speed Range: .001-1016 mm/min (.00004-40 in/min)

MTS Axial Extensometer Model 632.24E-50

- ▶ Measures strain in tension and flexural testing applications
- ▶ Gage Length: 1.00 in
- ▶ Strain Range: 0 to 100%

Epsilon Extensometer Model 3442-008M-020-HTN2

- ▶ Measures strain in compression testing applications
- ▶ Gage Length: 8 mm
- ▶ Strain Range: 0 to 100%

MTS Large Load Cell Model 4501035

- ▶ Load measurement in tension or compression
- ▶ Load Capacity: 150kN (33,700 lbf)

MTS Small Load Cell Model 450102

- ▶ Load measurement in tension or compression
- ▶ Load Capacity : 2.5kN (562 lbf)

CTE Testing

- ▶ Metal
- ▶ Composite laminates
- ▶ Neat resin

Brookfield Viscometer Model RVDV-1+

- ▶ Temperature Range: -20° to 150° C (-4°F to 302°F)

DinoXLite Digital Microscope Model AM-413M

- ▶ Magnification: 10xs — 50xs, 230xs (with digital zoom capabilities)
- ▶ Measuring capabilities

General Equipment

- ▶ Type A Durometer Model 408
- ▶ Measures Hardness
- ▶ This is an "A" scale for softer surfaces

Moisture Meter Model J-2000

- ▶ Measures Moisture
- ▶ 6% to 40% moisture range

2 - Portable Hardness Testers Model GYZJ 934-1

- ▶ Reading range 25 to 50 Brinell (10mm ball 500kg ball)

2 - Micrometers Model 599-1-44

- ▶ Reading range 0-1"

Materials

- ▶ Wood
- ▶ Putty
- ▶ Foam
- ▶ Resin infused composites
- ▶ Carbon fiber
- ▶ Fiberglass
- ▶ Steel & stainless steel
- ▶ Aluminum
- ▶ Invar

Large scale,
high precision is our
specialty

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