

# Machine List // Sheet Metal

- High-Tech, precision cutting and forming
- Innovative equipment, newest technology
- Talented, skilled and creative personnel dedicated to building in quality
- The RIGHT process to achieve your needs

Fathom **Ithaca** // 1920 Slaterville Rd., Ithaca, NY 14850 // 37,000 sq. ft

## Blanking and Cutting Services (Prototype and Production)

### Laser & Water Jet Equipment

1	(1) Mitsubishi 4 kW Fiber Laser with 5'x10' bed with pallet changer	Cut speeds up to 1,500" per minute, depending on material and thickness, and a minimum Kerf of .010". Tolerances of +/- .002" to .005"
1	Amada 6 kW Fiber Laser with 5'x10' bed with pallet changer	Cut speed up to 1,600" per minute, depending on material and thickness and a minimum Kerf of .010". Tolerances of +/- .002" to .005"
1	OMAX 80X, 5axis Waterjet with 7.5'x 15' x 8"Z bed size	.005" tolerance, automatic taper control, .020" Kerf

### MicroCut™

2	Precision Waterjet cutting	(0.0004" accuracy) of a variety of materials including Metal, Plastic, Rubber, Glass, Ceramic and Laminates. Kerf sizes of .008", .013" and .020" for precise cutting on a 24" x 36" bed.
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### Photochemical Machining

7	Etching machines for processing flat metal parts	Process most metals including High Temp, Nickel Silver and Lead
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### Wire EDM

2	Mitsubishi 5 -axis Submersible CNC Wire EDM	Capable of down to .006" dia. wire
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## Forming, Bending Punching (Prototype and Production)

### Precision Forming with Minimum Tool Investment

10	CNC controlled Press Brakes ranging from 16 Ton to 85 Ton	Six axis, 1 micron resolution. All forming & bending tooling is designed & built in-house.
1	BALTEC PWS 640, CNC 30 ton hydraulic dual turret & forming station	.002" resolution
1	Pacific 300 ton CNC press for larger stamped and formed metal parts	3' x 6' bed size

### Mid to High Volume Forming / Stamping, Semi Automated

1	Niagara A22, 22 ton OBI press	
1	Verson 150 ton press	For fully automated progressive die manufacturing
1	Seely Slide (™ pending) for Put and Take forming	Up to 1" width and .020" thick materials
3	MultiSlide machines for Put and Take forming	Utilizing pre-blanked material

### High Volume Forming, Fully Automated FourSlide / MultiSlide Machining

6	Horizontal & Vertical FourSlide / MultiSlide Machines, with automatic feed of material for stamping and forming of small gage parts	Up to 2.5" W x 7.5" L x .050" thick material. All custom design and manufacture of tooling is done in-house
1	35 Ton Bliss crank press	Including progressive die forming

Various Pem inserters, riveting and hardware installation equipment

Timesaver surface finishers and assorted polishing & deburr, hand finishing tools and sand blasting

## Machine Shop / Tool Room (Post Machining and Custom Tooling)

1	Haas VF-4ss, 4 axis Vertical CNC Milling machine	20 hp, 12000 rpm spindle, 24 ATC. Travel = X 50", Y 20"
3	Haas VF-2, 3 axis Vertical CNC Milling machine	20 hp, 8100 rpm spindle, 20 ATC. Travel = X 40", Y 20"
1	Haas VF-2 SS, 3 axis Vertical CNC Milling machine	20 hp, 12,000 rpm spindle, 30 ATC. Travel = X 30", Y 16"
3	Haas TM-2P, 3 axis Vertical CNC Milling machine	6000 rpm spindle, 10 ATC, Travel = X 24" x Y 16"
1	Haas SL10, CNC Lathe	6.5" chuck, 1.75" bar capacity thru spindle Max turn – 10" dia x 16" length
1	Cincinnati Lathe with Acu-Rite control	
2	Bridgeport Milling machines with conversational programming	
Various Drill Presses and Surface Grinding equipment, Cut off saw, etc.		

## Welding Services

3	Full time welding stations providing both MIG (Metal Inert Gas) welding and TIG welding, for clean high quality welding of all types of metals	
1	Programmable mechanized pulsed TIG welding machine	Capable of both orbital and linear welding. Handles pipe up to 18" diameter. ASME certified BPV code Sec IX.

## Finishing Services

Heat Treating, Plating (all types of materials), Wet and Powdercoat painting, Etching and Part marking

## Quality Control & Inspection

CheckMaster CMM. Keyence Image Dimension Measurement System. Starret Optical Comparators. Profilometer. Force-Gage. Leak-check. Microscope. Digital Calipers and full sets of hole & thread gages

## Software

Prototype Life-Cycle Management Software: Custom in-house software for customer quote creation, order processing, project management, custom tooling requirements, scheduling, order tracking, change order, outside sourcing, QC and schedule shipping.

CAD software including: PRO-E, AutoCAD, SolidWorks, Metalsoft, MasterCAM, etc.

Customer CAD input including native CAD files, DXF, STEP, STL, IGES, DWG, Parasolids and PDF.

# Fathom Denver // 7770 Washington Street, Denver, CO 80229 // 87,000 sq. ft

Qty	Manufacturer	Model	Description
1	AMADA	CAD / CAM Network	Network consisting of 4 work stations, 2 file servers for DNC, 2D, Cad and Cam with 3D unfold, capable of importing IGES, DXF, and CADL files.
8	SolidWorks 2021	CAD Software Package	Cad package including 3D modeling and sheet metal design.
1	AMADA	Fabrivation	48x48 3d Laser non-contact Part Scanning and inspection
1	AMADA	4 Foot	10 Gauge capacity, Precision Swing Beam Shear with 27" power back-Gauge.
1	AMADA	6 Foot M-2045	3/16" capacity, Precision Swing Beam Shear with 40" power back gauge, Pneumatic worksheet support system.
1	FMB	Centaurio	NC controlled automatic metal cutting band saw.
1	AMADA	HFA250W	NC controlled automatic metal cutting band saw.
1	AMADA	EMK3510 M2	58 Station Twin AC Servo Driven CNC punch press, 30 ton capacity, 48" x 98" blank size with auto index and equipped with MP2512C1 handling automation.
1	AMADA	EMK3612 M2	58 Station Twin AC Servo Driven CNC punch press, 30 ton capacity, 60" x 120" blank size with auto index and equipped with ASR510 'handling automation.
1	AMADA	VIPROS 358K II	58 Station High Speed Hydraulic punch press, 30 ton capacity, 50" x 80" blank size with 4 auto index stations and brush table equipped with 48" x 96" load/unload system.
1	AMADA	VIPROS 358K	58 Station High Speed Hydraulic punch press, 30 ton 30 ton capacity, 50" x 80" blank size with 4 auto index stations and brush table
1	AMADA	PEGA 357	58 Station Turret, CNC punch press, 30 ton capacity, 50" x 70" blank size with auto index
1	AMADA	LCG 3015 AJ Laser	6000W Fiber laser, 60" x 120" blank size, Includes AMSCL 10 shelf material handling automation
1	AMADA	ENSIS Laser	2000W Fiber Laser, 60" x 120" blank size,
1	AMADA	FOL-AJ Fiber Laser	4000W Fiber Laser, 60" x 120" blank size, with high speed dynamic piercing. Includes ASLUL 6 shelf material handling automation.
1	AMADA	LC 3015 F1 NI Laser	4000W CO2 Laser, 60" x 120" blank size, with high speed dynamic piercing. Includes ASF 3015 F1 6 shelf material handling automation
1	AMADA	FO-NT 3015 Laser	4000W Solid State RF excited Laser, 60" x 120" blank size, with high speed dynamic piercing.

1	AMADA	SP-30	Programmable triple track single action hydraulic punch.
1	AMADA	8 x 8	10 Gauge hydraulic precision notcher.
1	AMADA	FBD 3512	35 Ton Fine Alpha Bender with 3 axis programmable back gauge and DNC
1	AMADA	FBD 5020	55 Ton Fine Alpha Bender with 3 axis programmable back gauge and DNC
1	AMADA	RG50	50 Ton Fine Alpha Bender with 3 axis programmable back gauge and DNC
1	AMADA	RG80	80 Ton Fine Alpha Bender with 3 axis programmable back gauge and DNC
1	AMADA	HFT130-4s	130 ton, 12 foot hydraulic down acting press brake with CD 2002 programmable controller and back gauge.
2	AMADA	HDS 8025	88 Ton 8 Foot Servo/Hydraulic Press brake with 5 Axis Back gauge.
3	AMADA	HG 1003 W/ ATC	143 Ton 10 foot Dual Servo Drive Press brake with 6 Axis Back gauge and AMNC 3i Control equipped with Automatic Tool Changer.
1	AMADA	HG 1303	143 Ton 10 foot Dual Servo Drive Press brake with 6 Axis Back gauge and AMNC 3i Control
2	AMADA	HDS-1303	143 ton, 10 foot Servo/Hydraulic 5 axis press brake with AMNC-PC Control
1	DIACRO	4 Foot Press Brake	17 Ton Press Brake.
4	MILLER	400 AMP	Dynasty 400 TIG
3	MILLER	350 AMP	350 MIG alumafeed with push pull gun
3	Miller	255 AMP	Single phase MIG
1	MILLER	300 AMP	Syncrowave 300 AC/DC, GTA Power source with SP2
6	MILLER	250 AMP	Syncrowave 250 AC/DC, GTA Power source with SP2
1	MILLER	250 AMP	Wire-Feed DC GMA Power Source.
2	Thermal Arc	185 AMP	Thermal Arc
1	HOBART	200 AMP	Beta Mug II AC/DC.
1	HYPER THERM	MAX 42	Plasma Cutter.
1	Amada	ID40	3 phase spot welder
1	H & H	75 KVA, Single Phase	36" throat rocker spot welder, programmable computer controlled.
1	DETROIT	PT-4000	Tensile Tester.
1	Clausing	Colchester 13"	Lathe
2	BRIDGEPORT	YC 1/2 VA	Mill with DRO Control
2	G&P	GMP11C6158-5	6" X 158" 5HP Stroke Sander
2	G&P	GMPC6264-7	6" x 264" 7HP Stroke Sander.
1	LISSMAC	SBM-L-1500-G1S2	Deburring Machine
1	TIMESAVER	Series 2200	37" dry surface sander with wet dust collector

3	HAEGER	824	Hardware installation for top and bottom feed nuts, studs and standoff's, including misc. specialty fasteners
2	HAEGER	824 Window Touch 3	Hardware installation for top and bottom feed nuts, studs and standoff's, including misc. specialty fasteners. Equipped with Window Touch control supporting Insertion Logic software and Insertion Graphics.
1	HAEGER	618	Hardware installation for top and bottom feed nuts, studs and standoff's, including misc. specialty fasteners
1	SuperMax	H.Q.T.	Mill
7	MMI	4x5x5	Tanks for pretreatment of metal parts.
	Applications & Coating Solutions	10' X 18'	Spray Booth Wash System
1	BINKS	PFA 8-8 TLH	Spray booth.
1	BINKS	PFA 12-8 TLH	Spray booth.
3	NORDSON	Vantage FCM	10' Zero Emission Powder coating booth.
1	NORDSON	GX-3600	Electrostatic powder coating system.
3	WAGNER	EPG-Sprint X	Electrostatic powder coating system.
1	Rapid Engineering	10815 Batch Oven	15' Double Entry Batch oven.
1	Rapid Engineering	10820 Batch Oven	20' Double Entry Batch oven.
1	DESPATCH	"S" TYPE	10 Foot single entry industrial oven.
4	MMI	MODEL 100	Screen printing tables.
1	American M&M	19"x30"	Flat bed screen printing machine