

# FACILITIES LIST

INCHEMA & IWIN-rp



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Quantity	Type of Machine	Capacity	Features
<b>3D Additive Manufacturing</b>			
1	SLA 500	20" x 20" x 23" layer thickness: 0.004" or 0.006"	Utilizes 11122XC material
1	SLA 5000	20" x 20" x 23" layer thickness: 0.004" or 0.006"	Utilizes NeXt material
1	Viper si2	10" x 10" x 10" layer thickness: 0.004"	Viper standard mode
		5" x 5" x 5" layer thickness: 0.002"	Viper in High Resolution mode
1	Fortus 360	16" x 14" x 16" ABS: 0.005" - 0.013" PC: 0.007" - 0.013"	
1	Fortus 400 MC	16" x 14" x 16" ABS: 0.005" - 0.013" Ultem: 0.010"	
1	Polyjet Connex 500	19" x 15" x 7" layer thickness: 0.0018"	Multi material printing
2	Direct Metal Laser Sintering (DMLS)	9.85" x 9.85" x 12.8" layer thickness: 0.0008" - 0.003"	Metal additive manufacturing with accuracy of +/- 0.002"
1	Smoothing Station		Secondary finish for ABS materials
<b>Laser &amp; Water Jet</b>			
1	Flow CNC Waterjet	6' x 12' bed	60,000 psi dynamic head and can maintain a tolerance of +/- 0.005
2	Mitsubishi 5kw CNCN CO <sub>2</sub> Lasers	5' x 10' bed	Pallet changer. Cutting speed of 40"/min to 120"/min; dependent on material and thickness
1	MicroCut	24" x 39" material thickness: 0.0005" - 0.5"	Precision cutting of a variety of materials including: metal, plastic, rubber, glass and laminates. Positioning accuracy: 0.0001"
1	Timesaver		Surface finisher and assorted hand polishing and finishing tools
<b>Four/Multi Slide</b>			
6	Horizontal & Vertical machines	Up to 14 gauge material (0.075") 2.5" x 7.5"	Automatic feed of material for stamping and wire forming of small gage parts All custom design and manufacture of tooling is done in house
<b>Macine Shop/ Toolroom</b>			
2	Milltronics	15 K rpm spindle, 20 ATC Up to 40" x 24"	
1	Haas VF 2 - 3 axis vertical CNC milling machine	20 hp 7500 rpm spindle, 20 ATC Up to 40" x 20"	

Quantity	Type of Machine	Capacity	Features
1	Haas VF 2ss - 3 axis vertical CNC milling machine	20 hp 12000 rpm spindle, 24 ATC Up to 40" x 20"	
1	Haas VF 8 - 3 axis vertical CNC milling machine w/ 4th axis rotary	30 hp 10000 rpm spindle, 25 ATC X 64", Y 40"	
1	Haas VM 3 - 3 axis vertical CNC milling machine	20 hp 12000 rpm spindle, 25 ATC Up to 50" x 30" travel	
1	Haas TM1 - 3 axis vertical CNC tool room milling machine	4000 rpm, 10 ATC Up to 24" x 16"	
1	Haas EC 400 - 4 axis horizontal CNC milling machine	20 hp 10000 rpm spindle	20 piece tool changer, dual pallet shuttling
2	Haas SL 20 - CNC lathe	8" chuck 2" bar capacity through spindle max. turn - 10" dia. x 18" length	
1	Haas TL1 - CNC lathe tool room	6" x 32"	
1	Cincinnati lathe with Acu-Rite control		
2	Bridgeport milling machine		Conversational programming; various drill presses and surface grinding equipment
<b>Welding (ASME certified BPV code Sec. IX)</b>			
3	Welding stations		Providing both MIG (Metal Inert Gas) welding and TIG welding, for clean high quality welding of all types of metals
1	Mechanized pulsed TIG welding machine	pipes up to 18" diameter	Programmable welding machine capable of both orbital and linear welding
1	Inert gas glove box	down to 10ppm O <sub>2</sub> level	X ray quality welding
<b>Photo Chemical Machining</b>			
7	Etching machines	Up to 40" x 60" panels tolerance: +/-0.003 to +/-0.0005	
<b>Wire EDM</b>			
3	4 axis CNC Wire EDM's		Mitsubishi
1	Hansvedt RAM EDM		
<b>Metal Forming, Bending and Punching</b>			
7	CNC controlled presses	30 tons	Mitsubishi, all forming and bending tooling is designed and built in house
1	Baltec PWS 640	30 tons .002" resolution	Hydraulic dual turret and forming station

Capability	Description
Finishing Services	
Heat Treating	
Plating (all types of material)	
Wet and Powdercoat painting	
Etching & Part Marking	
Quality Control & Inspection	
Micro Star CMM on Granite base with dual beam bridge 48" x 36" x 22Z measurement range. Dynamic measurements with Electronic Touch Probe, 0.00002" accuracy and 0.00016 repeatability. Windows based software allows for accurate comparison to parts CAD model.	<ul style="list-style-type: none"> <li>• Profilometer</li> <li>• Starret Optical Comparator (s)</li> <li>• Force Gage</li> <li>• Leak Check</li> <li>• Microscope</li> <li>• Digital Calipers and full sets of hole and thread gages</li> </ul>
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 scheduling
CAD Software	<ul style="list-style-type: none"> <li>• PRO-E</li> <li>• AutoCAD</li> <li>• SolidWorkds</li> <li>• MetlaSoft</li> <li>• Mastercam</li> </ul>
Customer CAD input including native CAD files	<ul style="list-style-type: none"> <li>• DXF</li> <li>• STEP</li> <li>• IGES</li> <li>• DWG</li> <li>• Parasolids</li> <li>• PDF</li> </ul>