



*We're flexible, we're focused, and we're at our best when we're challenged to think outside the box — critical traits when our success depends on how quickly we can take our customers' visions from the sketchpad to the showroom floor.*

## Roush Machined Parts

### **We specialize in:**

- Aluminum castings up to 5,000 EAU (other materials considered)
- Prototype parts 5-20 pieces (any material)
- Complex Parts

### **Our capabilities include:**

#### **Lathe Work – Round Stock**

##### Large Round:

- Length – 20" max
- Diameter – 10" max

Note: Can accommodate up to 22" max diameter with 20" length if material is lightweight (e.g. aluminum)

##### Small Round:

- Length – 40" max if diameter is under 2.625"

#### **Integrex 5 Axis Lathe/Round Stock**

##### Large Round:

- Length – 20" max
- Diameter – 18" max

##### Small Round:

- Length – 50" max
- Diameter – 10" max

Note: Can accommodate up to 26" max diameter if material is lightweight (e.g. aluminum) or part is short.

#### **Integrex 5 Axis Cube Work**

Length – 30" max

Width – 10" max

Height – 10" max

Note: Above limits are for steel; if aluminum material, add approximately 25% to limits

#### **Mill Work/Cubical Stock**

##### Makino Limits:

- Length – 35" max
- Width – 35" max
- Height – 31" max

##### Large Mazak Mill Limits:

- Length – 120" max
- Width – 31" max
- Height – 15" max



Roush offers a full service machining facility with state of the industry CNC and manual machines to provide concept, prototype, and low volume production components and assemblies.

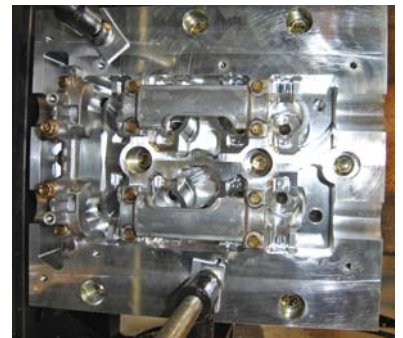
- Three, four, and five axis machines are on site with spindle speeds up to 12,000 rpm, spindle torques to 559 lb-ft, and feedrate capability in excess of 2000 IPM.
- Our 2 Mazak HCN5000 horizontal milling centers are equipped with a Pallatech pallet changer and storage system to minimize downtime between repetitive manufacturing jobs.
- On-site engineering, assembly and fabrication services are also available.

### CNC Machining Centers

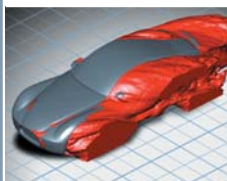
- 1 Mazak Integrex e-420 5 axis turning/milling machine – 27 x 60
- 1 Mazak Variaxis 730-II-5x5 axis vertical mill w/dual pallet system – 19.7 x 19.7
- 2 Mazak HCN 5000-II 4 axis horizontal mills with 12 pallet system – 19.7 x 19.7
- 2 Mazak V-655 4 axis vertical mills – 59 x 25.5 x 25.6
- 4 Makino A81 4 axis horizontal mills with 20 pallet system – 23.6 x 23.6
- 1 Mazak Ultra 550 5 axis horizontal mill with dual pallet system – 19.7 x 19.7
- 1 Mazak AJV 3 axis vertical mill w/4th axis capability, dual pallet tables – 100 x 32 x 32
- 1 Hass VF-2 4 axis vertical mill – 30 x 16 x 20
- 1 Milltronics MB-19 3 axis vertical mill – 32 x 19 x 22.5
- 2 Mori-Seki SL-25 3 axis turning machine – 15" dia. x 20" long
- 1 Mori-Seki SL-253 3 axis turning/milling machine – 15" dia. x 19" long

### Manual Machines

- 11 2 axis Bridgeport mills, three lathes, boring mills, surface grinders



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Engineering and  
Vehicle Development



Testing and  
Development



Prototype and Specialty  
Manufacturing



Manufacturing



Technical  
Communications



## MANUFACTURING SERVICES

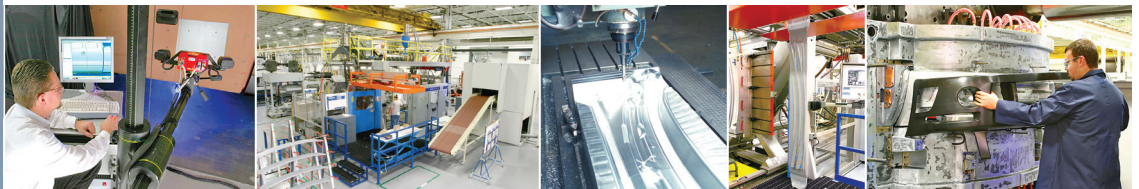
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### CNC Machining and Miscellaneous Equipment

<b>5 Axis</b>	(1) Jobs 5-Axis CNC Mill	X=178" Y=100" Z=62"
	(2) Jobs 5-Axis CNC Mills	X=177" Y=70" Z=55"
	Fidia 5-Axis High Speed CNC Mill	X=165" Y=49" Z=55"
	Fidia 5-Axis High Speed CNC Mill	X=106" Y=49" Z=40"
<b>3 Axis</b>	Parpas 3-Axis CNC Mill	X=138" Y=63" Z=80"
	Parpas 3-Axis CNC Mill	X=119" Y=58" Z=80"
	(3) Fadal 3-Axis CNC Mills	X=60" Y=30" Z=30"
	Makino 3-Axis High Speed CNC Mill	X=23.5" Y=15.5" Z=15.5"
	Makino 3-Axis High Speed CNC Mill	X=29" Y=19.5" Z=17.5"
	Makino 3-Axis High Speed CNC Mill	X=60" Y=40" Z=31"
	Makino 3-Axis High Speed CNC Mill	X=36" Y=22" Z=18"
	(2) YCM 3-Axis High Speed CNC Mill	X=44" Y=30" Z=27.5"
	VTECH 3-Axis High Speed CNC Mill	X=55" Y=28" Z=26"
<b>Boring Mills</b>	Toshiba CNC Boring Mill	X=160" Y=90" Z=60"
	SNK CNC Boring Mill	X=137" Y=98" Z=63"
	Niigata HS1000 Pallet Machine	X=80" Y=65" Z=47"
<b>Gun Drill</b>	Tarus CNC 6-Axis Deep Hole Gun Drill	X=132" Y=62" Z=84"
<b>Misc. Equipment</b>	(7) Bridgeports	
	(2) Hydraulic Spotting Presses	120" X 86" X 100" of Daylight
	30 Ton Overhead Crane Capacity	
<b>EDM</b>	Charmilles Wire EDM	X=48" Y=32" Z=16"
	Charmilles Orbital Ram	X=27" Y=20" Z=13"
	(2) Charmilles Orbital Ram	X=48" Y=32" Z=20"
	(2) Ingersoll Orbital Ram	X=120" Y=66" Z=46"
<b>CMM</b>	Wenzel	X=156" Y=60" Z=72"
	Zeiss	X=48" Y=97" Z=32"
	Atos White Light Scanner	
<b>Presses</b>	20lb 140 Ton Blow Molding	
	55 Ton Cincinnati	
	300 Ton Cincinnati	
	375 Ton Cincinnati	
	500 Ton Van Dorn	
	1000 Ton Cincinnati	
	1760 Ton Van Dorn	
3300 Ton Van Dorn		
<b>Rapid Prototype</b>	(4) SLA 5000	X=20" Y=20" Z=24"
	Hi-Q SLS	X=13.5" Y=11.5" Z=16"
	005 Vac Cast Machine	Up to X=40" Y=24" Z=36"
	Connex 500 Objet Multimaterial 3D Printer	

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



ROUSH. FOCUSED, DRIVEN, COMMITTED.