

Carlson

Tool & Manufacturing Corp.

East Plant



Partnering with Customers Since 1958

**“The Vision of Carlson Tool is to Become the
Global Supplier of Choice by Providing:**

- Unique Services and Technology**
- World class Systems**
- A Dream Team Workforce**
- Superior Customer Value Through
Responsiveness, Quality and Delivery**
- Growth Through Profitability**
- Profit to Sustain the Mission”**



Why Carlson has such a solid reputation.

We've built our business, and our reputation, on a simple philosophy:

- Consistently provide quality work and excellent service for jobs of all sizes.
- Always use the latest proven technology available to reduce production cycle time.
- Maintain excellent communication between Carlson and the customer.
- Deliver the order on time, on budget and within specifications.

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DEEP HOLE DRILLING • GUNDRILLING • HONING • TURNING • MACHINING • CMM INSPECTION



Carlson Tool is the nations' largest contract drilling and hole boring company. We have a reputation for drilling and boring of ferrous, non-ferrous, and all machinable space-age metals. Plus, we offer consultation, fixturing and systematic quality assurance. When you trust Carlson with your drilling needs, you get the hole plus a whole lot more.

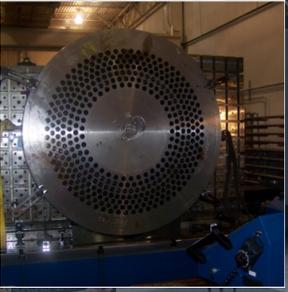
DEEP HOLE DRILLING

DEEP HOLE DRILLING CAPABILITIES:

- Hole ranges from .625" up to 10.375" diameter
- Lengths of up to 200" from one end and 240" from both ends
- Trepanning, Counter Boring, Pull Boring and other drilling techniques used
- 20 ton lifting capacity

Carlson
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"We understand we cannot serve our customers without strong support from our business partners. Carlson Tool did everything possible to reinforce that they are a company we want to partner with. We look forward to continuing our business with Carlson."



We drill low volume prototypes to high-production orders. We invest in the latest technologies to provide you with superior quality, turnaround and cost-savings. Our exceptional depth and breadth of services means our customer can count on us as the one source for all their gundrilling needs.

GUNDRILLING

GUNDRILLING CAPABILITIES:

- Hole ranges starting at .055" diameter and up
- Lengths up to 200 inches
- 20 ton lifting capacity
- Robotic load and inspection available

Carlson
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"Carlson is reactive and flexible. If we need something – they will get it done."



You probably already knew about our expertise in deep hole drilling and gundrilling, but now more and more of our customers are taking advantage of our ability to do the whole job from start to finish. Tight tolerances and low surface finishes are typical for parts that require honing.

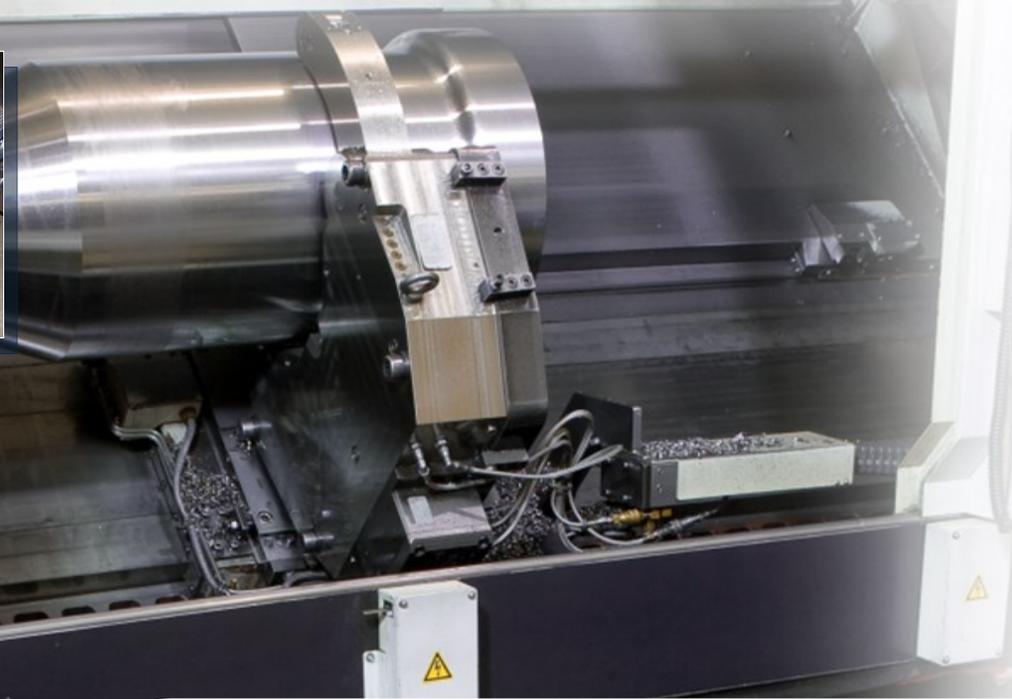
HONING

HONING CAPABILITIES:

- Hole sizes up to 15"
- Max length of 22 feet
- Can Hone tubing or drilled bars to +/- .0005"
- Surface finishes as low as 4Ra

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"Carlson is always attentive and willing to help us out in any way.
One of their best assets is its people."



Carlson Tool is well-known as a premier hole drilling facility, but not everyone knows we can "finish what we start." Our highly skilled Lathe Operators can finish turn your parts, assuring that you will receive high quality parts at a competitive price. We are always expanding and upgrading to ensure that no matter what your specific needs, Carlson will deliver exactly what you're looking for.

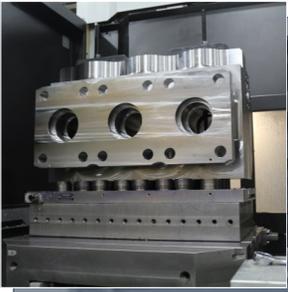
CNC TURNING

TURNING CAPABILITIES:

- 36" max cutting diameter
- Lengths of up to 160"
- 4th Axis milling capability
- ID boring up to 30" diameter

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"Working with Carlson has improved our lead time, reduced our shipping costs, and basically has just made everything easier."



Carlson has the tools, technology, and training to CNC mill any project from start to finish. With an impressive variety of exotic material experience, Carlson often tackles the newest R&D projects other job shops no bid. Currently, Carlson has CNC machined parts that are under the ocean, above the atmosphere, and everywhere in between.

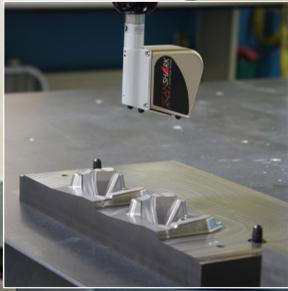
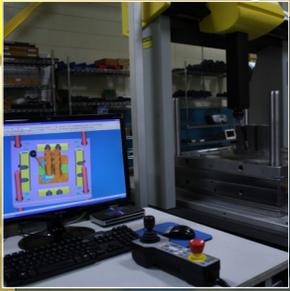
CNC MACHINING

MACHINING CAPABILITIES:

- HMC, VMC and Bridge-type Machining Centers
- 4th axis capabilities
- Max work envelop of 121" x 63" x 72" XYZ
- Max table capacity of 118" x 59" (10,000 lbs.)

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"They have a very good background of the industry. They understand what we want and they are capable of making it happen. After talking to Carlson, I knew they would be able to handle anything I could give them."



At Carlson, we take precision measurement seriously. Our plant is equipped with several CMM machines and is staffed 24 hours a day by employees specially trained in advanced quality technologies. Our capabilities include surface scans and reverse engineering as well as a full range of CMM inspections and reporting formats. Everything from the smallest to largest component meets the strictest tolerances.

QUALITY

QUALITY CAPABILITIES:

- ISO 9001:2008 & ITAR Certified
- Tactile probing, full contact scanning, laser scanning and portable measurement
- FAI layouts, SPC, Reverse Engineering, 3D surface analysis
- PPAP's, GRR's and more

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"Carlson communicates very well. I get PowerPoint presentations of snapshots of design group screens that describe exactly what they're asking for and point out what they're suggesting or show potential problems. I have seen pictures from others but they have it down to a science how they handle things."

In-House Value-Added Services:

- **Trucking**

To make your life easier, we offer roundtrip trucking from your facility to ours. Simply provide us with your address and our professional shipping team will come to your facility, load your material, and return it to you after we've altered it to your specifications.

- **Material stocking**

Many of our customers store stock at our plant, allowing for last-minute flexibility in job processing and enables us to shorten delivery time. Your parts are safe with Carlson. We have a fenced in yard that assures security of all parts.

- **Saw Cutting**

Max cutting diameter of 24"OD.

Max length of 20 feet or more, depending on the weight of the part.

- **Boxing / Packaging**

Carlson provides boxing / packaging services for all of our customers to ensure that your parts are safe from damage and ready for shipping.

- **Inspection Services**

We have a full range of gage equipment, inspection reports in multiple formats, PPAP's, laser straightness and much more.

- **Part Stamping**

- **Manufacturing Consultation**

- **Scrap Handling**

We partner with many reputable companies in order to help our customers meet their project requirements.

Sub-Contract Value-Added Services:

- Heat Treating

- Straightening

- Grinding

- Plating

- Welding

- Non-Destructive Testing (NDT) – Ultrasonic Testing (UT), Magnetic Particle Testing (MT), X-Ray Testing, Liquid Penetrant Testing (PT) and more.

- Destructive Testing – Stress Testing, Hardness Testing, Macro Etch Testing, Transverse Tension Testing and more.

- Metallurgical, Chemical, Environmental, Physical and Mechanical Testing of all types of materials.

VALUE-ADDED SERVICES

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EQUIPMENT LIST

| DEPARTMENT | DESCRIPTION | QTY | DIAMETER OF HOLE |
|--------------------|-----------------------------|-----|------------------|
| DEEP HOLE DRILLING | Sig Machine | 1 | .625" to 2.4" |
| | Boehringer B380 | 1 | .750" to 3.25" |
| | Boehringer B630 | 2 | 1.125" to 10.0" |
| | Tacchi 450 | 1 | 1.0" to 10.0" |
| | Unisig BTA 100-B500 | 1 | .750" to 4.0" |
| | Unisig BTA 150-B630 | 1 | 1.0" to 10.0" |
| | Unisig BTA USC75 | 1 | .625" to 4.75" |
| | Unisig BTA USC100 | 1 | .625" to 7.375" |
| GUNDRILLING | El Dorado Machine | 18 | .055" to 1.0" |
| | Carlson Knee-type Machine | 1 | .055" to 1.0" |
| | DeHoff Knee-type Machine | 2 | .125" to 1.5" |
| | Tarus Machine | 2 | .188" to 1.25" |
| | Cincinnati / DeHoff Machine | 1 | .188" to 1.5" |
| | Technidrill, Horizontal CNC | 1 | .312" to 2.0" |
| HONING | Sunnen MBB-18DOD | 2 | Up to 1.75" |
| | Sunnen HTB-4000S | 1 | Up to 15.0" |
| | Sunnen HTB-2000S | 1 | Up to 15.0" |
| | Sunnen ML-4000 | 1 | Up to 4.0" |
| | Century Hone | 1 | 2.0" to 10.125" |

| DEPARTMENT | DESCRIPTION | QTY |
|---|--|----------------------------------|
| CNC MILLING / MACHINING | Haas VF7 Vertical Machining Center (84" x 32" x 30" XYZ Travel; 84" x 28" Table) | 1 |
| | Kuraki KBT-11 WDX Horizontal Machining Center (78" x 59" x 57" XYZ Travel; 63" x 55" Table) | 1 |
| | Kuraki KBM-11X WDX Horizontal Machining Center (59" x 47" x 27" XYZ Travel; 41" x 37" Table) | 1 |
| | Toyoda RB312 Bridge-type Machining Center (121" x 48" x 32" XYZ Travel; 118" x 44" Table) | 2 |
| | Toyoda SB316 Bridge-type Machining Center (121" x 63" x 32" XYZ Travel; 118" x 59" Table) | 1 |
| | Toyoda FA1050S Horizontal Machining Center (63" x 55" x 45" XYZ Travel; 41" x 41" Table) | 1 |
| | Toyoda FA1250SXGH Horizontal Machining Center (86" x 63" x 72" XYZ Travel; 49" x 49" Table) | 1 |
| | CNC TURNING | Daewoo Puma 400L (15"OD x 80"LG) |
| Mazak QuickTurn 300 (16.50"OD x 52"LG) | | 1 |
| Mazak QuickTurn 450 (26.25"OD x 78"LG) | | 1 |
| Mazak Slant Turn 60N (29.50"OD x 120"LG) | | 2 |
| Mazak Slant Turn 60N (29"OD x 160"LG) | | 1 |
| Mazak Cybertech Turn 4500M (32"OD x 160"LG) | | 2 |
| Mazak Integrex 50 (17"OD x 100"LG) | | 1 |

QUALITY SYSTEM—ISO 9001:2008 & ITAR Certified

| CMM MODEL | DESCRIPTION | CMM MODEL | DESCRIPTION |
|---------------------------|--|--|---|
| DEA Alpha | 103" x 78" x 59" Travel; .0005" Accuracy | Mitutoyo FN 1108 | 43" x 31" x 24" Travel; .0004" Accuracy |
| Brown & Sharp Global | 59" x 25" x 31" Travel; .0002" Accuracy | Faro Machining Arm | 96" Travel; .002" Accuracy |
| Brown & Sharp Performance | 20" x 20" x 20" Travel; .0003" Accuracy | Carlson can accept virtually all CAD file formats. | |

Give us a call and watch our people go the distance for you. Our experience with customers around the world has taught us the true definition of service - courteous, prompt and pro-active.

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