At Gear Motions, we’ve been designing and manufacturing precision gears for more than a century. In that time, we’ve built something else – a reputation for quality and proven performance. Today, we’re a leading supplier of custom cut and ground gears all around the world. We continuously leverage an expansive network and the latest technologies to deliver gears to meet almost any application – and the most demanding specifications.
Starting from day one, Gear Motions has amassed an extensive portfolio of gear production capabilities.

- Precision Ground Gears (Helical and Spur)
- Precision Cut Gears (Helical and Spur)
- Shafts
- Sprockets
- Splines
- Bevel Gears
- Worm Gears

Whether it's big or small, cut or ground, prototyping, full production, or service, there isn't a precision gear project we can't handle from start to finish.
With Gear Motions, getting the reliable gears you need is surprisingly simple. We’re a full-service manufacturer – make one call to us and we handle everything from start to finish.

Our gear-manufacturing services include:

- Gear Grinding
- Gear Cutting
- Turning
- Milling and Drilling
- Broaching and Keyseating
- Surface, ID and OD Grinding
- ID Honing
- Inspection

For services not available in house, such as heat treat or plating, we are partnered with world-class suppliers who share our high standards for quality and service – which doesn’t end with just the manufacturing process. We’re also here to provide exceptional customer service after the sale.
LEADING-EDGE TECHNOLOGY

It’s no secret that state-of-the-art gears are a product of state-of-the-art technology. Gear Motions consistently invests in the latest gear-manufacturing equipment to keep all of our facilities at the industry’s forefront. After all, when your technology and equipment are the best available, it only makes sense that your products are too.

QUALITY AND PRECISION

When we say that quality comes first, we mean it. Gear Motions was an early Quality System adopter and one of the first ISO gear manufacturers in the United States. Today, we continue to earn recognition for our commitment to quality and precision. And more importantly, our gears continue to earn the trust of customers around the world.

PROVEN PERFORMANCE

When it comes to reliability, talk will only get you so far. That’s why we let our solutions speak for themselves. Our gears have consistently demonstrated quality and reliability in a wide range of applications. It’s why some of the most well-known companies in the world have chosen us as their preferred provider for gear manufacturing, time after time.

ENGINEERING SERVICES

Precision gears aren’t the type of product you can simply grab off a shelf. Many applications require a unique solution — and Gear Motions is uniquely equipped to deliver. Our expert engineering services include reverse engineering, prototyping, and redesigning specific gear components, even if we didn’t originally manufacture them.

We’ve helped countless customers create the exact solutions they need, and we’d love the opportunity to do the same for you. Simply contact us with your requirements, and watch your solution take shape.
After implementing an Employee Stock Ownership Plan, Gear Motions became a fully Employee-Owned Company as of 2010.

So what does that mean for you as a customer? It’s all about dedication. Each and every person involved in the design and manufacture of your precision gears is committed to Gear Motions’ success. Because they have a stake in the company and its future, they truly care about exceeding expectations and delivering high-quality solutions, each and every time.
<table>
<thead>
<tr>
<th>GEAR TYPES</th>
<th>Min. Diameter (inch)</th>
<th>Max. Diameter (inch)</th>
<th>DP / Mod Range</th>
<th>Max. Helix Angle</th>
<th>Face Width Max. (inch)</th>
<th>Machines Used</th>
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<tbody>
<tr>
<td>HELICAL (GROUND) External</td>
<td>0.5</td>
<td>21.7</td>
<td>1.7 - 48 / 14.94 - .53</td>
<td>45</td>
<td>12.9</td>
<td>Gear Grinders</td>
</tr>
<tr>
<td>HELICAL (CUT) External</td>
<td>0.5</td>
<td>36</td>
<td>1.5 - 120 / 16.93 - 21</td>
<td>45</td>
<td>24</td>
<td>Hobbers, Shapers</td>
</tr>
<tr>
<td>SPUR (GROUND) External</td>
<td>0.5</td>
<td>21.7</td>
<td>1.7 - 48 / 14.94 - .53</td>
<td>12.9</td>
<td></td>
<td>Gear Grinders</td>
</tr>
<tr>
<td>SPUR (CUT) External</td>
<td>0.5</td>
<td>36</td>
<td>1.0 - 120 / 16.93 - 21</td>
<td>24</td>
<td></td>
<td>Hobbers, Shapers</td>
</tr>
<tr>
<td>Internal</td>
<td>0.5</td>
<td>36</td>
<td>3 - 120 / 8.47 - .21</td>
<td>6</td>
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<td>Shapers, Broaches</td>
</tr>
<tr>
<td>SPLINES External</td>
<td>0.5</td>
<td>36</td>
<td>3 / 6 - 48 / 96</td>
<td></td>
<td></td>
<td>24 Hobbers, Shapers</td>
</tr>
<tr>
<td>Internal</td>
<td>0.5</td>
<td>36</td>
<td>3 / 6 - 48 / 96</td>
<td></td>
<td></td>
<td>6 Shapers, Broaches</td>
</tr>
<tr>
<td>STRAIGHT BEVELS External</td>
<td>0.5</td>
<td>36</td>
<td>1.25 - 96 / 20.32 - 265</td>
<td>4.5</td>
<td></td>
<td>4.5 Gleason Bevel Generators</td>
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<tr>
<td>WORMS*</td>
<td>0.5</td>
<td>9.5</td>
<td>2 - 48 / 6.35 - .53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WORM GEARS</td>
<td>0.5</td>
<td>36</td>
<td>2 - 48 / 6.35 - .53</td>
<td></td>
<td></td>
<td>Hobbers</td>
</tr>
<tr>
<td>SPROCKETS</td>
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<td>36</td>
<td>0.125* - 3*</td>
<td></td>
<td></td>
<td>Hobbers, Shapers</td>
</tr>
</tbody>
</table>

*Typically outsource the thread milling and grinding

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**Gear Capabilities**

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GRINDING (ID, OD, SURFACE)

- SNI – CNC 2-Axis, Bore and Face
- Tripet TST 100 2R CNC
- Bryant Twin Spindle Bore and Face
- Kellenberger URS 175/1000 Universal, CNC 2-Axis, ID/OD Anglehead Grinder: 12.5” dia. x 40” long
- Toyoda GL4A, CNC 2-Axis, 30˚ Anglehead Grinder: 12” dia. x 40” long
- Toyoda GL4A, CNC 2-Axis, 30˚ Anglehead Grinder: 12” dia. x 40” long
- Cincinnati 215, CNC 2-Axis, 30˚ Anglehead Grinder: 14” dia. x 48” long
- Norton 6 x 30 CTU Cylindrical
- Cincinnati 6R-18L Cylindrical
- Myford High Precision O.D.
- Elgin 36” Rotary Surface
- Heald No. 361 Rotary Surface
- Davis Keyseater
- Mitts & Merrill Keyseater: 3A, 6HFR-KS
- Oil Gear 20-Ton, 64” Stroke Horizontal Broach
- Cincinnati #14 Coniflex Bevel Generators
- Heald No. 341 Rotary Surface
- Ty Miles MBLD 4-24-150, 2-Ton Vertical Broach
- Heald 271 Slide-Bar, Twin-Spindle Bore and Face
- Heald No. 18 Surface
- Heald 271 Slide-Bar, Twin-Spindle Bore and Face
- Heald ID Bore: Model 171, 271, 273A, 274
- Studer S121 2-Spindle Universal Cylindrical ID and Face Grinder

GEAR MACHINES

GEAR GRINDERS

- Reishauer RZ260 with integrated robotic part loading
- Reishauer RZ550 with integrated robotic part loading
- Reishauer RZ3010E
- Kapp Kx100p with Auto Load
- Höfler Helix 400K CNC
- Gleason Tag 400 CNC
- Gleason 245 TWG CNC

HOBBERS

- Liebherr LC 380
- Gleason 782 G-Tech 6 Axis
- Mitsubishi GC20
- Mitsubishi GD20
- Mitsubishi GE15A
- Koepfer 200 with Automation
- Pfauter P400
- Pfauter P630
- Pfauter P900
- 605 G&L Gasher
- Richardson R200 CNC
- Barber Coleman from 6” to 16”
- Gleason Genesis 400H
- Wolf GH20-11D

BROACHES / KEYSEATERS

- (1) Horizontal Broach Model 10-60, 10-Ton
- (1) Mini-Broach Model A, 1-Ton
- (1) Colonial Horizontal Broach Model HAS-15-72, 15-Ton
- (1) Davis Keyseater
- (2) Oil Gear 20-Ton, 64” Stroke Horizontal Broach
- (1) Mini-Broach 20-Ton, 64” Stroke Horizontal Broach
- (1) Ty Miles MBLD 10-36-60, 5-Ton Vertical Broach
- (1) Ty Miles MBLD 4-24-150, 2-Ton Vertical Broach

BEVEL GEAR GENERATORS

- (1) Gleason #24A Coniflex Bevel Generators
- (2) Gleason #14 Coniflex Bevel Generators
- (1) Gleason #104 Coniflex Bevel Generators

OTHER CAPABILITIES

- Shaping, Turning, Milling, Honing, Deburring, Assembly, Laser Marking, Tooth Rounding/Pointing
- Including an Almco 48”, 2-Spindle, Semi-Automatic Spindle Deburring System

GRINDING (ID, OD, SURFACE)

- (1) SNI – CNC 2-Axis, Bore and Face
- (1) Tripet TST 100 2R CNC
- (1) Bryant Twin Spindle Bore and Face
- (1) Kellenberger URS 175/1000 Universal, CNC 2-Axis, ID/OD Anglehead Grinder: 12.5” dia. x 40” long
- (2) Toyoda GL4A, CNC 2-Axis, 30˚ Anglehead Grinder: 12” dia. x 40” long
- (1) Toyoda GL4A, CNC 2-Axis, 30˚ Anglehead Grinder: 12” dia. x 40” long
- (1) Cincinnati 215, CNC 2-Axis, 30˚ Anglehead Grinder: 14” dia. x 48” long
- (1) Norton 6 x 30 CTU Cylindrical
- (1) Cincinnati 6R-18L Cylindrical
- (2) Myford High Precision O.D.
- (1) Elgin 36” Rotary Surface
- (2) Heald No. 341 Rotary Surface
- (1) Blanchard No. 18 Surface
- (1) Heald 271 Slide-Bar, Twin-Spindle Bore and Face
- (4) Heald ID Bore: Model 171, 271, 273A, 274
- (1) Studer S121 2-Spindle Universal Cylindrical ID and Face Grinder

GEAR INSPECTION

- (1) Wenzel GearTec VGT350 CNC Analyzer
- (1) Höfler ZME 402 Gear Analyzer
- (1) Höfler EMZ 402 Gear Inspection and CMM System
- (1) Klingelnberg PSFU1200 with Tri-check® Computer Analysis
- (1) Klingelnberg CNC Gear Inspection Machine
- (1) Höfler EMZ 632 Gear Analyzer

OTHER INSPECTION

- (1) Helmlo Microstar 325-202 DCC CMM
- (1) Brown & Sharpe Global Class 555 SCAN CMM
- (2) United Tool 8600 Unite-A-Matic Gear Size Checkers
- (1) Fellows 12M Involute Instrument
- (1) Fellows 12H Lead Instrument
- (1) Profile Engineering PC-20 Composite Gear Analyzer
- (1) Brown & Sharpe Gage 2000 CMM
- (2) Nital Etch Testing Systems
Corporate Headquarters
Nixon Gear Division
1750 Milton Avenue
Syracuse, NY 13209

Oliver/Pro-Gear Division
1120 Niagara Street
Buffalo, NY 14213

Niagara Gear Division
941 Military Road
Buffalo, NY 14217

www.gearmotions.com
315-488-0100