

PRECISION IN MOTION

gear  *MOTIONS*
Precision in Motion

100 YEARS LATER, AND WE'RE STILL MOVING FORWARD.

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.





CAPABILITIES

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

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.



MANUFACTURING SERVICES

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
- Gear Box Assembly

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.





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.



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.





EMPLOYEE-OWNED COMPANY

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.



GEAR CAPABILITIES

GEAR TYPES	Min. Diameter (inch)	Max. Diameter (inch)	DP / Mod Range	Max. Helix Angle	Face Width Max. (inch)	Machines Used
HELICAL (GROUND)						
External	0.5	21.7	1.7 - 48 / 14.94 - .53	45	12.9	Gear Grinders
HELICAL (CUT)						
External	0.5	36	1.5 - 120 / 16.93 - .21	45	24	Hobbers, Shapers
SPUR (GROUND)						
External	0.5	21.7	1.7 - 48 / 14.94 - .53		12.9	Gear Grinders
SPUR (CUT)						
External	0.5	36	1.0 - 120 / 16.93 - .21		24	Hobbers, Shapers
Internal	0.5	36	3 - 120 / 8.47 - .21		6	Shapers, Broaches

GEAR TYPES	Min. Diameter (inch)	Max. Diameter (inch)	DP / Mod Range	Max. Helix Angle	Face Width Max. (inch)	Machines Used
SPLINES						
External	0.5	36	3 / 6 - 48 / 96		24	Hobbers, Shapers
Internal	0.5	36	3 / 6 - 48 / 96		6	Shapers, Broaches
STRAIGHT BEVELS	0.5	36	1.25 - 96 / 20.32 - .265		4.5	Gleason Bevel Generators
SPROCKETS	0.5	36	0.125" - 3"			Hobbers, Shapers

*Typically outsource the thread milling and grinding



GEAR MACHINES



GEAR GRINDERS

- (2) Reishauer RZ260 with integrated robotic part loading
- (1) Reishauer RZ550 with integrated robotic part loading
- (1) Reishauer RZ300E
- (1) Kapp Kx300p with Auto Load
- (1) Höfler Helix 400K CNC

HOBBERERS

- (1) Liebherr LC 380
- (1) Gleason 782 G-Tech 6 Axis
- (1) Mitsubishi GC20
- (1) Mitsubishi GD20
- (1) Mitsubishi GE15A
- (1) Koepfer 200 with Automation
- (1) 16" Pfauter P400
- (1) 24" Pfauter P630
- (1) 36" Pfauter P900
- (1) 60S G&E Gasher
- (2) Richardon R200 CNC
- (2) Barber Coleman #3
- (1) Gleason Genesis 400H
- (1) Wolf GH20-11D

BROACHES / KEYSEATERS

- (1) Ohio Horizontal Broach Model 10-60, 10-Ton
- (1) Mini-Broach Model A, 1-Ton
- (1) BMS Colonial Horizontal Broach Model HAS-15-72, 15-Ton
- (2) Mitts & Merrill Keyseater: 3A, 6HFR-KS
- (1) 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

BEVEL GEAR GENERATOR

- (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) Kellenberger URS 175/1000 Universal, CNC 2-Axis, ID/OD Anglehead Grinder: 12.5" dia. x 40" long
- (3) Toyoda GL4A, CNC 2-Axis, 30° Anglehead Grinder: 12" dia. x 20" long
- (1) Myford High Precision O.D.
- (2) Heald No. 361 Rotary Surface
- (1) Blanchard No. 18 Surface
- (1) Heald 271 Slide-Bar, Twin-Spindle Bore and Face
- (4) Heald ID Bore: Model 171, 271
- (1) Studer S121 2-Spindle Universal Cylindrical ID and Face Grinder
- (1) Studer S151 4-Spindle Universal Cylindrical ID and Face Grinder

GEAR INSPECTION

- (1) Wenzel GearTec WGT350 CNC Analyzer
- (1) Höfler ZME 402 Gear Analyzer
- (1) Höfler EMZ 402 Gear Inspection and CMM System
- (1) Klingelnberg PNC 60 CNC Gear Inspection Machine
- (1) Höfler EMZ 632 Gear Analyzer

OTHER INSPECTION

- (1) Helmel Microstar 325-202 DCC CMM
- (1) Brown & Sharpe Global Class 555 SCAN CMM
- (2) United Tool 8600 Unite-A-Matic Gear Size Checkers
- (1) Profile Engineering PC-20 Composite Gear Analyzer
- (1) Brown & Sharpe Gage 2000 CMM
- (1) Nital Etch Testing Systems



Corporate Headquarters

Syracuse Operations

(Nixon Gear / AutoGear)

1750 Milton Avenue

Syracuse, NY 13209

Buffalo Operations

(Oliver Gear / Pro-Gear / Niagara Gear)

75 Pirson Parkway

Tonawanda, NY 14150

www.gearmotions.com

315-488-0100