

**TSUGAMI**  
AMERICA

# P036W

## CNC PRECISION AUTOMATIC LATHE

- 3mm (1/8") Capacity Swissturn for Micro Machining
- Linear Motors and Glass Scales Standard
- Pneumatic Chuck Gripping for Thin Walled Parts
- ECO Mode for Environmental Impact Reduction
- FANUC 0i-TF Plus CNC Control

[tsugamiamerica.com](http://tsugamiamerica.com)

# P036W

## 6-AXIS SPLIT SLIDE SWISS CNC LATHE

### SPEED

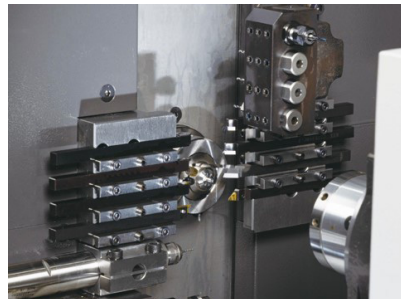
- The P036W is an 1/8" capacity independent opposed tool slide machine that offers exceptional flexibility focused solely on the micro parts industry.
- With spindle speeds up to 20,000 RPM, required surface feet per minute can be achieved even on the smallest diameter material.
- Utilizing the unique split slide design, chip to chip times of less than one second are possible.

### ACCURACY

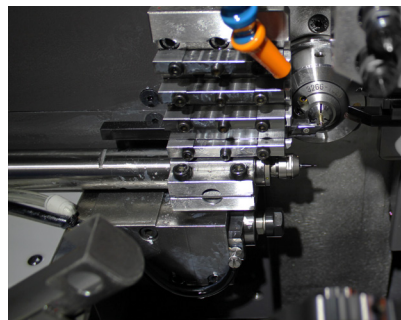
- The P036W uses Fanuc high precision drives on Y1, Y2, Z2 axes, coupled directly to continuously lubricated ball screws to deliver faster acceleration and deceleration times with less back lash and more accuracy.
- The X1, X2, Z1 axes slides incorporate linear motors and linear scales for speed and accurate repeatability you can depend on.

### RIGIDITY

- Tsugami starts with a fine grain cast iron machine base, which adheres to strict build policies that ensure thermal stability throughout the platform.
- Built on a heavy duty one piece cast iron base with thermally symmetrical construction, this machine features 0.1 micron axis resolution. A more rigid platform allows higher speeds and feeds.
- For extra peace of mind, the machines, motors, and FANUC controls are covered by an industry leading two-year parts and service warranty.



P036W Tool Zone

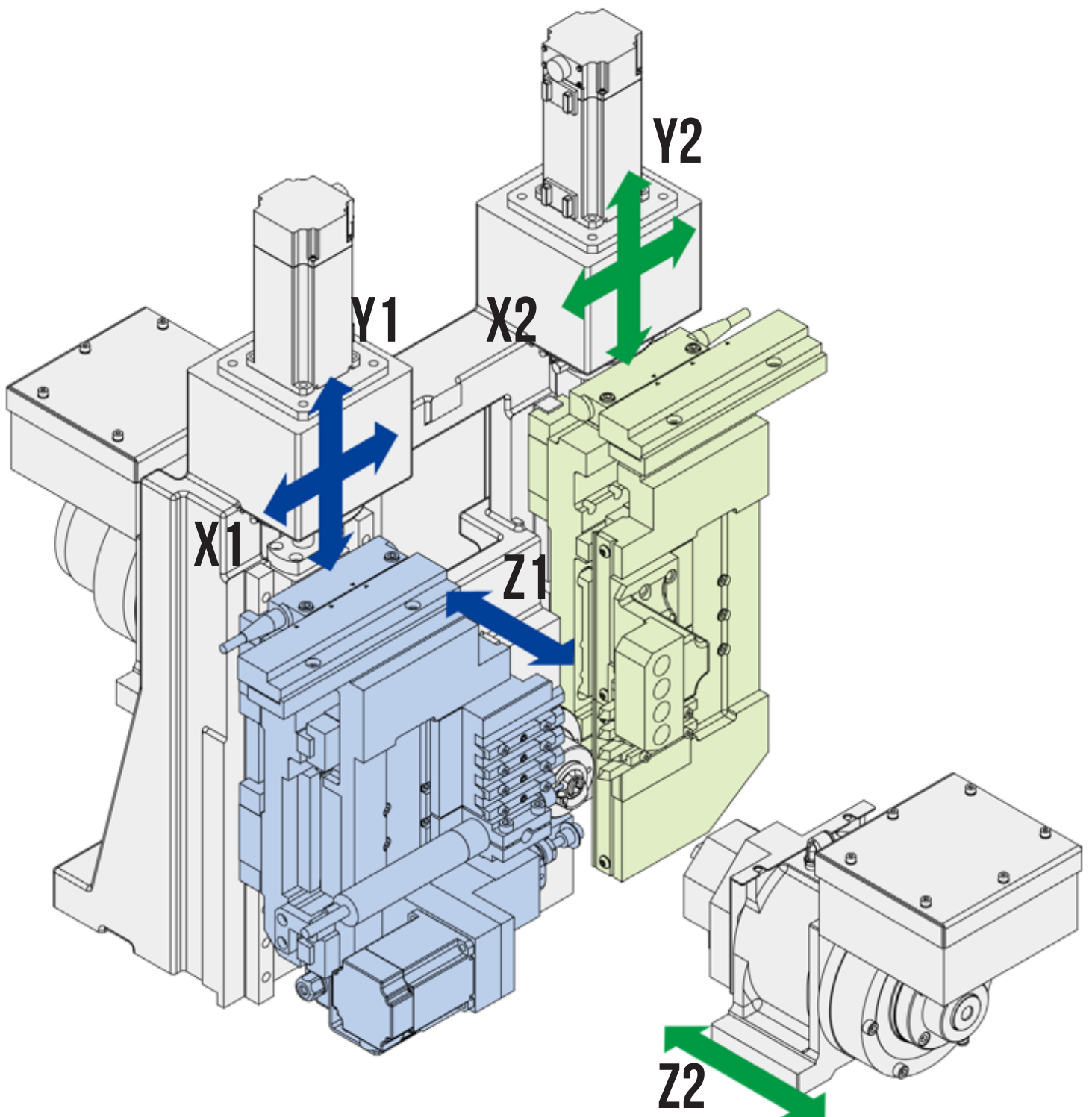


Brushless High Speed Spindle



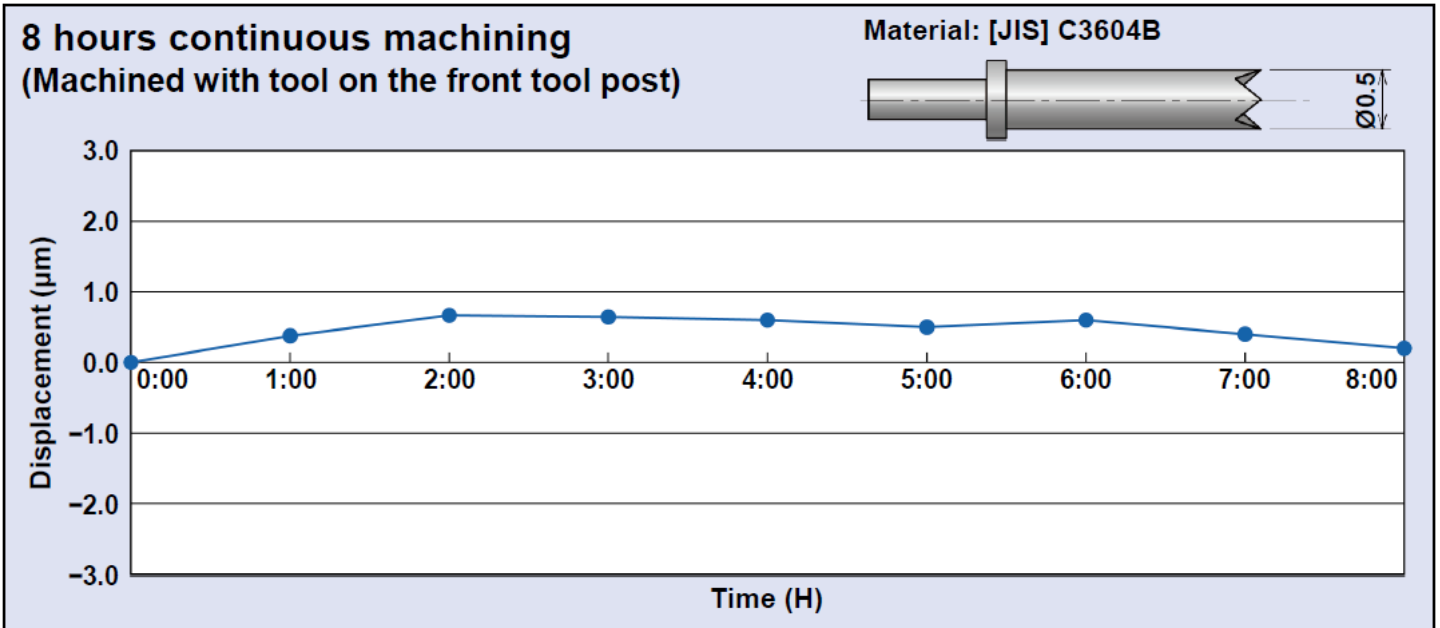
P036W Hinged Work Zone Enclosure

# WORK ZONES & MODULAR TOOLING



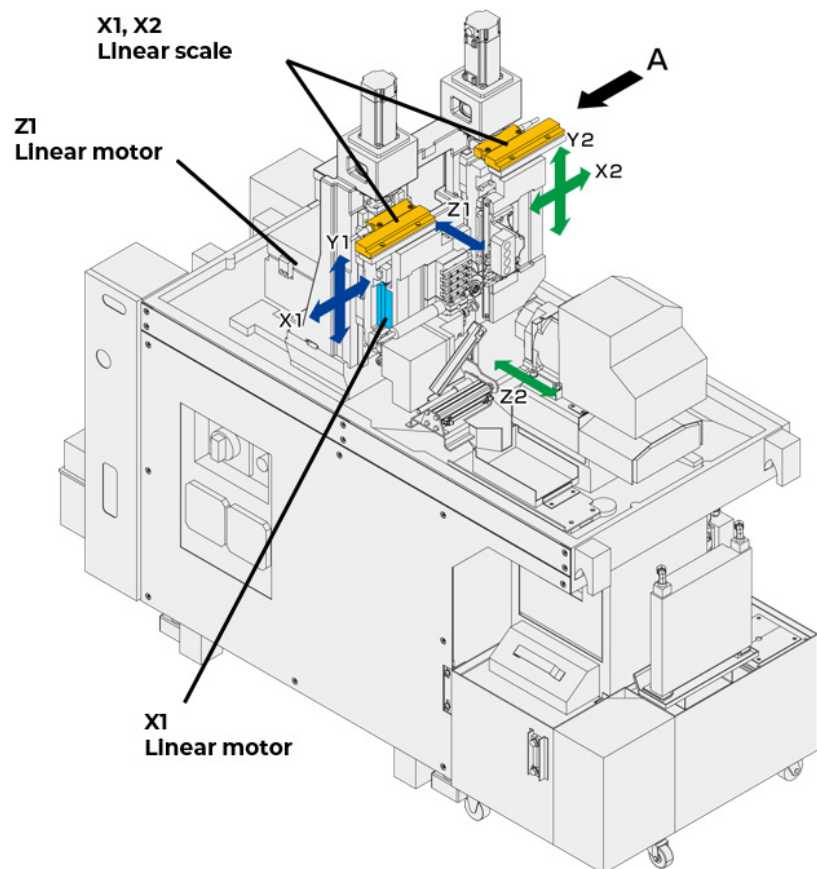
# ACCURACY

Linear motors and scales on X1, Z1, and X2 axes are provided as standard



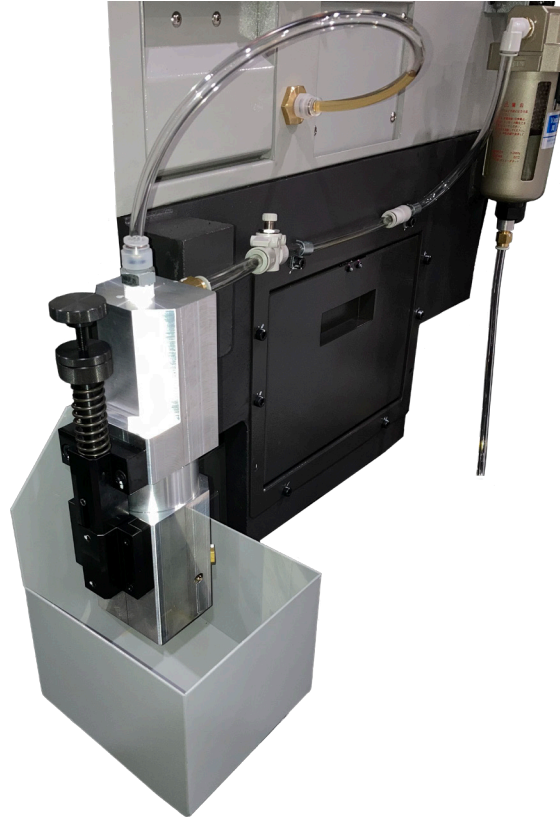
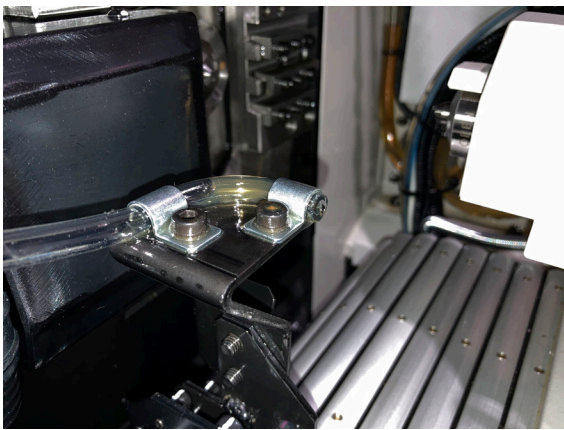
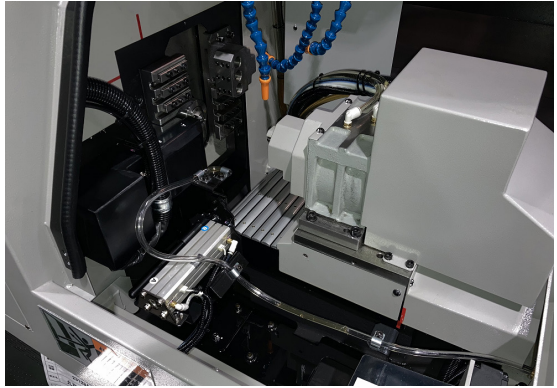
Improve feedback response time of tool slide and ensure high precision machining with the full-closed loop control on the linear scales with sub-micron commands and properly placed linear guides.

This system also reduces displacement from cold start or inconsistent operation, and stabilizes the dimensional accuracy in continuous manufacturing.



# VACUUM EXTRACTION SYSTEM

Tsugami's Vacuum Extraction System improves your ability to remove micro parts individually and safely from work zone without damage.



## NEED SOMETHING CUSTOM?

From the machine Make Ready process, to integrating mechanical and robotic loading and unloading systems, to custom tool creation and spindle repair, IMG is dedicated to supporting all Tsugami users in North America!



Grinding Room



Make Ready Facility



Milling Room

# MACHINE STANDARD SPECIFICATIONS

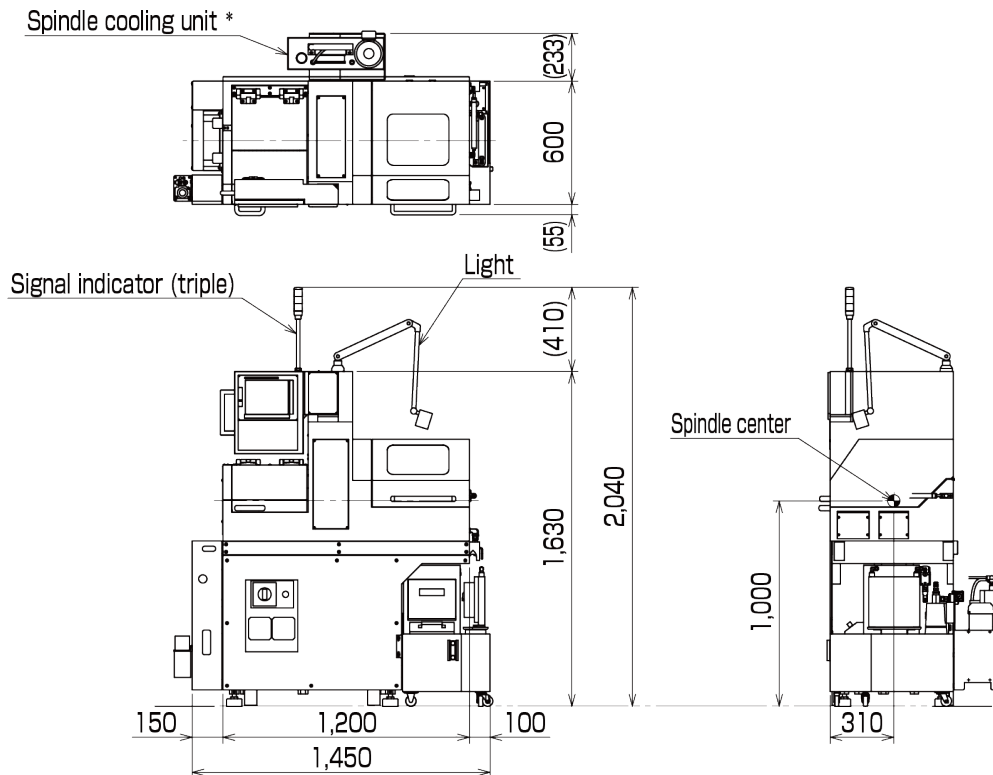
	ITEMS	P036W	
MACHINING RANGE	Max. Chucking Barstock Diameter	Ø3 mm (.125 in.)	
	Max. Machining Length	35 mm (1.37 in.) (Stationary guide bushing) 30 mm (1.18 in.) (Retractable guide bushing)	
	Max. Drilling Diameter	Ø2 mm (.08 in.)	
	Max. Tapping Diameter	M2	
	Max. Back Spindle Drilling Diameter	Ø2 mm (.08 in.)	
	Max. Back Spindle Tapping Diameter	M2	
	Max. Tool Spindle Drilling Diameter	Ø2 mm (.08 in.)	
	Max. Tool Spindle Tapping Diameter	M2	
	Max. Tool Spindle Slotting Cutter Diameter	Ø20 mm (0.79 in.) (Servo motor drive)	
MACHINING CAPABILITY	Main Spindle Speed	Max. 20,000 min-1 (Rated speed:15,000 min-1)	
	Back Spindle Speed	Max. 20,000 min-1 (Rated speed:15,000 min-1)	
	Live Tool Speed (Brushless Motor Drive)	Max. 50,000 min-1(Brushless Motor Drive)	
	Live Tool Speed (Servo Motor Drive)	Max. 8,000 min-1(Rated speed:6,000 min-1) Max.5,000min-1(Hobbing unit)	
	Tool Storage Capacity (Standard)	18	
	Tool Size	.315" x .315" x 3.94" to 4.72" 8 mm x8 mm x100 to 120 mm	
MOTORS	Rapid Traverse Rate	30 m/min (X1, X2, Z1) 25 m/min (Y1, Z2, Y2)	
	Main Spindle	1/1.5 Hp (0.75/1.1 kW)	
	Back Spindle	1/1.5 Hp (0.75/1.1 kW)	
	Linear Axes	0.3 kW (X1, X2) 0.4 kW (Z1) 0.5 kW (Y1, Z2, Y2)	
	Live Tool	0.125 kW (Brushless Motor) 0.35 kW (Servo Motor)	
	Coolant Pump	0.13 Hp (0.1 kW)	
	Lubricating Pump	3 W	
	OTHER	Compressed air requirement	0.5 MPa or above
		Air discharge rate	30 NL/min
		Power Source Requirements	4.3 kVA
Coolant Tank Capacity		50 L	
Width x depth x height		57.1" x 23.6" x 64.2" 1,450 mm x600 mm x1,630 mm	
Weight	2,381 lbs (1,080 kg)		

# NC SPECIFICATIONS

## ITEMS

## P036W

NC Unit	FANUC Oi-TF Plus
Controlled Axis	X1, Z1, Y1, X2, Z2, Y2
Least Input Increment	0.0001mm (X-axis in diameter)
Maximum Programmable Value	±8 digits
Interpolation Method	Linear/circular
Feedrate Function	1 to 6,000 mm/min
Feedrate Override	0 to 150%, 10% step
Dwell	G04, 0 to 99999.999
ABS/INC Command	X, Z, Y: Absolute   U, W, V: Incremental
Number of Tool Offset	Main: 64 Back: 64
LCD/MDI	10.4" color LCD
Display Language	English
Part Program Storage	2 Mbyte (sum of main and back)
Registerable Programs	1,000 (sum of main and back)
Miscellaneous Functions	M5 digits
Spindle Function	S5 digits
Tool Function	T4 digits



Since 1978, Tsugami America (formerly known as Tsugami/Rem Sales) has been the exclusive source for Precision Tsugami CNC machine tools in North America. Headquartered in Windsor, CT, Tsugami America provides machine tools and engineering expertise through an extensive network of authorized distributors and technical centers. Technical support and customer service are available throughout North America. Our distributors' trained service personnel provide technical support throughout the long life-cycle of our Tsugami machine tools, and work hand-in-hand with Tsugami America's engineers to deliver common-sense solutions to everyday problems.

Our application engineers help customers tackle and solve the toughest high-precision manufacturing challenges, on-time and on-budget. We have a 40-year history and reputation of serving the needs of small parts manufacturers in North America with the highest level of expertise and customer care. Our industry-respected, knowledgeable staff is comprised of both long-time employees and fresh faces all who share a commitment to provide you, our customers, with the competitive advantage to "do more with less" every day.

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