

# **Precision Machining and Assembly**

**Saco, Maine**

## **Facilities Presentation**

**ISO-9001-2015/AS9100D**

**ITAR/DDTC REGISTERED**

**THE NIKEL PRECISION GROUP**

**Saco ME**

**Mobile (978)-337-2825**

**E-Mail: [gchase@greatbaysales.com](mailto:gchase@greatbaysales.com)**

**Geary Chase  
Sales Engineer**

## Palletized Mill-Turn Machining Centers



- (1) Mori Seiki NMV3000 - 5 Axis Mill Turn Machining Center**  
114 Pallets with AUTOMATED Work Changer (AWC)  
320 Tool Magazine  
14" Cube/Envelope, Integrated Turning and Grinding



- (1) Matsuura Cublex 35 - 5 Axis Mill Turn Machining Center**  
Integrated 32 Pallet Tower  
320 Tool Magazine,  
11" Cube Envelope

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## Palletized 5 Axis CNC Milling Machining Centers



### (5) Mori Seiki NMV-3000DCG Five Axis VMC

X-28" x Y- 20" x Z - 20"

Integrated 32 Pallet Storage Hives

181 Tool Magazines

Direct Drive with zero backlash



### (1) Yasda PX30i Five Axis VMC – New March 2023

X- 26.8" x Y- 15.9" x Z – 19.7"

320 Tool Magazine, Integrated 33 Pallets

Direct Drive with zero backlash

20000 RPM Spindle

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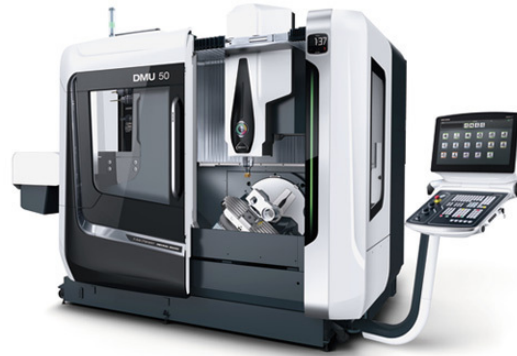
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## Five Axis CNC Machining Centers



### (2) DMG Mori DMU50 5 Axis VMC

X-28" x Y-20" x Z-20"

60 (Cat40) Tool Magazine, 20,000 RPM Coolant Thru Spindle  
High Resolution Magnetic Measuring System



### (1) FANUC RoboDrill 5 Axis VMC

High Speed Vertical Machining Center

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## Nakamura Multi-Tasking Machining Center – March 2023



### **Nakamura MX-100**

RoboJob Automated Load/Unload for 24/7 Lights Out Operations  
9 Axis Machining with Independent 5 Axis Milling  
12,000 RPM Milling, 72 Tool Magazine  
High Pressure Coolant

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## Mazak Multi-Tasking Machining Centers



### **(1) Mazak INTEGREX i-200ST**

Main and Sub Spindles for Done in One Machining  
Fully Integrated 9 Axis Machining  
20,000 RPM Spindle, High Pressure Coolant  
80 Tool Magazine, Six Foot Bar Feeder



### **(1) Mazak INTEGREX i-100ST**

Main and Sub Spindles for Done in One Machining  
Fully Integrated 9 Axis Machining  
12,000 RPM Milling Spindle, High Pressure Coolant  
72 Tool Magazine

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## Mazak Multi-Tasking Machining Centers (cont'd)



**(3) Mazak INTEGREX 200IV ST**  
60" Turning – Main and Sub Spindle  
Fully Integrated 9 Axis Mill/Turn Machining



**(1) Mazak INTEGREX 300III ST**  
60" Turning – Main and Sub Spindle  
Fully Integrated 9 Axis Mill/Turn Machining - 6 Ft Bar Feeder

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## CNC Turning



### **(1) Mazak QTN250-II MSY**

Direct-Drive Turret and Rotary (Live) Tool Milling Spindle  
13" Swing  
Main and Sub Spindle  
Bar Feeder

**(1) Fortune Vturn-36/85 Single Spindle 21" max turn diameter**

**(1) Haas SL-40 High Spindle Power 55hp 2 Axis 26" max turn diameter**

**(3) Okuma Howa ACT-4XT Dual Spindle, Dual Turret- 4 Axis Turning Centers**

**(1) Okuma Howa ACT-35 Single Spindle**

**(2) Okuma Howa 2SP-V35 Twin 2-Axis Vertical Turning Centers (VTL)**

**(2) Mori Seiki SL-200 Single Spindle Turning Centers**

**(1) Mori Seiki SL-300 Single Spindle W/ Live Tooling & LNS Quick Load Servo Bar Feeder**

**(1) Yama-Seiki TA-150**

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## CNC Horizontal and Vertical Machining Centers

(3) Fanuc Robodrills w/4<sup>th</sup> axis capable

(1) Kiwa 2-pallet, 64 Tool, Horizontal Machining Centers w/ full 4<sup>th</sup> axis

(3) Kiwa 6-pallet, 120 Tool, Horizontal Machining Centers w/ full 4<sup>th</sup> axis

(1) Matsuura MC-800VF Vertical Mills w/ full 4<sup>th</sup> axis

## Additive Manufacturing

### Stratasys Fortus 450mc



16" x 14" x 16" Printing Envelope

**Will Print Any Component Machinable by Nikel Precision Group**

Prints using eleven standard, engineering, and high-performance thermoplastics  
Ideal for functional prototypes, jigs, fixtures, factory tooling and production parts

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## Wire EDM



(1) Fanuc RoboCut CNC Wire EDM

(1) Brother HS-5100 CNC Wire EDM

## Grinding

(1) Mitsubishi RB32-H50A CNC Grinder

(1) Shigiya Universal Automatic Grinder

(1) P&W CNC ID Grinder

(1) Arter CNC Rotary surface Grinder

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## Other Equipment

(1) Speedfam Lapping Machine

(5) Sunnen Honing Machine

(2) Deckel Tool Grinders

(6) Overbeck Speed Lathes

(1) Amada PCSAW 330 Automatic Band Saw

(2) Amada HFA-250W Automatic Band Saws

(2) ADF Model 800 Pressure Washers

(2) Branson Ultrasonic Cleaners

## Quality Assurance Equipment

(2) Zeiss Contura G2 CNC CMM W/ VAST XT scanning probe in Positive Pressure Cleanroom

(3) Zeiss Duramax CMM with scanning sensor

(1) Mitutoyo BHN-710H CNC CMM W/ Renishaw PH10 5 axis probe head

(1) Mitutoyo BUN-706 CNC CMM W/ Renishaw PH10 5 axis probe head

~ The above CMMs have Automatic Probe Changers ~

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## Quality Assurance Equipment (cont'd)

### (1) Mitutoyo Manual CMM

Mitutoyo Contrace - Contour Measuring Instrument

#### (1) Federal 5000 Surface Analyzer with monitor

#### (2) Mitutoyo SV-400 Surface Analyzer

#### (2) Form Scan EMD-3100

#### (8) Micro Hite Height Gages

#### (3) Optical Comparators

#### (2) Van Keuren Monochromatic light W/ 6" optical flats

#### (1) GTI Light Cabinet

#### (2) Meiji Microscopes with Optical Light Units

#### (1) Sony Microscope with Monitor

#### (1) Wilson Hardness Tester

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## Software

**JobBoss, Manufacturing Management Software**

**Solidworks, CAD Software**

**ACAD, CAD Software**

**MasterCam 2019, CAM Software**

**AlphaCam, CAM Software**

**Genesis, CAM Software**

**Complete TruePath, 5-axis CAM Software**

**Calypso, CNC CMM Software**

## Data Security

**The Nikel Precision Group is committed to providing a secure environment for the intellectual property of our customers and sensitive ITAR Programs**

**Customer drawings are never used on the shop floor, or transmitted to outside suppliers. Our engineers create Nikel Precision shop drawings from customer files for all manufacturing operations, including outside processing requirements.**

**The Nikel Precision Group is NIST 800-171B compliant.**

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## **Contract Manufacturing and Assembly**

**The Nikel Precision Group provides cost effective sub-contract assembly services for our OEM customers.**

**From adding simple Helicoil inserts to assembling and testing multiple components, PMSI has the resources and facilities to provide fully validated electro-mechanical assemblies, assembled in a clean environment.**

**Comprehensive documentation is developed for all assembly programs.**

**Our new 40,000 square foot Nikel Precision Group facility in Saco ME.**



**25,000 Square Foot Addition opening late 2023**

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## Capabilities List

**CNC 5 AXIS MILLING** – TEN FIVE+ AXIS MACHINING CENTERS WITH 300 + PALLETS

**INTEGREX (style) MULTI-TASKING MACHINING** – SEVEN ELEVEN AXIS MILL/TURN WITH FULL 5-AXIS CONTOURING CAPABILITY, BAR FEED and ROBOTIC TENDING. Six Mazak, one Nakamura

**CNC HORIZONTAL MILLING** – MULTIPLE MULTI-PALLET HORIZONTALS TO 400MM

**CNC TURNING** – HORIZONTAL and VERTICAL TURRET CNC LATHES WITH LIVE TOOLING

**MILL TURN LATHES** – MULTI TURRET LATHES WITH 3” THROUGH SPINDLE

**LIVE TOOLING** - FOR MILLING / DRILLING/TAPPING AVAILABLE IN MOST LATHES FROM ROUND BAR, TUBING OR HEX SHAPES.

**EDM** – MULTIPLE WIRE EDM IN HOUSE

**ADDITIVE MANUFACTURING** – 3D PRINTING CAPABLE OF PRINTING ANY PARTS THAT CAN RUN AT NIKEL

**MACHINING OF ALL MATERIAL TYPES** –ALUMINUM, STAINLESS STEEL, TITANIUM, INCONEL, MONEL, MAGNESIUM, TUNGSTEN, REFRACTORY METALS and ENGINEERING PLASTICS.

**TOLERANCES** – MACHINING TOLERANCES DOWN TO  $\pm .0001$ ” DEPENDING ON INDIVIDUAL PART GEOMETRY.

**CASTINGS** –EXTENSIVE EXPERIENCE MACHINING COMPLEX INVESTMENT and SAND CASTINGS. PROVIDING DESIGN for MANUFACTURABILTY AND PATTERN DESIGN SUPPORT

**SUBCONTRACT ASSEMBLY SERVICES** – INCLUDING INSTALLATION of THREADED INSERTS and PINS to ASSEMBLING AND TESTING of MULTIPLE COMPONENTS

**OUTSIDE PROCESSING** – HEAT TREATING, PLATING of ALL TYPES, MAG PHOSPHATING, ELECTROPOLISHING, CERAKOTE, DLC, SALT BATH NITRIDING

**QUALITY ASSURANCE** – EXTENSIVE QA EQUIPMENT LIST INCLUDING SIX CMMs with THERMAL COMPENSATION, AND FULL SCANNING CAPABILITY. AIR GAGING, FORM SCAN, CONTOUR TRACE, SURFACE ANALYZERS, ROBOTIC BLUE LIGHT OPTICAL INSPECTION, VERIFICATION of all ALLOYS THRU THE USE OF X RAY FLUORESCENCE, ETC. – NON DESTRUCTIVE TESTING THROUGH OUTSIDE SUPPLIERS

**REGISTRATIONS** – ISO9001-2015, AS9100D, DDTC (ITAR) REGISTERED

**CYBER SECURITY COMPLIANCE** – Compliant to NIST SP 800-171, CMMC in process. Full implementation Q3 2023