

FACILITY

Over 160,000 Square Foot Manufacturing Facility
 Manufacturing, Assembly, and Quality Areas
 Partner Engineering Offices with Wi-Fi Access
 CAD/CAM System – Siemens NX System
 Autocad and Solidwork seats
 11 Ton Crane Capacity
 Class 100,000 Clean Assembly Room

Certifications:

AS9100/2009 (Rev. C)
 ISO9001:2008
 ITAR and SAM Registered

MILLING & TURNING
CNC Milling Centers

Mori Seiki MV-1003 VMC w/4 1/2 axis indexer
 95" x 40" x 31"
 Mori Seiki NH6300/4 axis 43" x 35" x 38"
 Mori Seiki Duramill/4 axis 31" x 20" x 20"
 OKK HM60/4 axis 29" x 28" x 30"
 OKK HM600/4axis 30" x 29" x 31"
 OKK VP600/4 axis 32" x 22" x 18"
 Haas Highspeed VF-5/4 axis indexer
 60" x 27" x 25"
 Mikron VCP 600/3 axis 22" x 16" x 14"
 Okuma MC-40VA VMC w/4 axis indexer
 26" x 16" x 16"
 Haas VF-2 w/4 axis indexer 20" x 14" x 10"
 Mori Seiki DC5 31" x 20" x 20"
 Hurco BMC-20 VMC/3 axis 24" x 14" x 15"
 Makino SNC64 (2)/3 axis 23" x 15" x 15"
 Matsuura MX3 (3) 20" x 14" x 10"

Milling Machines

Bridgeport or DPM 2-3 programmable axis (30)
 Cincinnati Nova80 12" x 60" x 12"

CNC Turning Centers

Doosan 2600LY 14" x 50" centers
 Hardinge Conquest CS-51 Dia. 9.8" x 20" length
 Hardinge Conquest T42 Dia. 9.4" x 14" length
 Takisawa TM-20 Dia. 12" x 20" length
 Mori Seiki SL-25 Dia. 10" x 40" length
 Okuma LB-15 Dia. 9.8" x 9" length
 Okuma LC-30 Dia. 17.6" x 25" length

Lathes

Hardinge (6) 10" x 20"
 Hardinge HLV-H (4) 12" x 60" center
 LeBlond Makino (2) 15" x 54"
 Mini Haas SL10 10.9" x 14"

Radial Arm Drill Press

Summit Model 4
 12" column, 48" arm

Lap System

Hyprez 24 Lap 6" x 6" x 8"
 Hyprez 12 Lap (4) 3" x 3" x 6"

Saws

Band saws (2)
 DoAll 3613-20 24" vertical band saw
 DoAll 2612-1 36" vertical band saw

ELECTRICAL DISCHARGE MACHINING
Wire EDM

Mitsubishi FX10 (3) 13.7" x 9.4" x 8.5"
 Mitsubishi DWC 90SZ (1) 13.7" x 9.4" x 6.5"
 Mitsubishi SX20 (1) 19.7" x 13.7" x 10.5"
 Mitsubishi DWC 200H (1) 15.7" x 29.5" x 10"
 Mitsubishi FA-20 (1) 19.7" x 13.7" x 11.5"
 EDM CT300 Drill .002" - .250" Holes 12" x 12"

Sinker EDM

Makino EDNC 43 18" x 14" x 14"
 LeBlond Makino EDNC 64 24" x 16" x 10"
 Makino Edge 2 Series 2000 12" x 10" x 10"

PRECISION GRINDING
Surface Grinders

Mitsui 612 (3)
 Brown & Sharpe 616 (4)
 Okamoto Grind X 618
 Brown & Sharpe 818 (2)
 Okamoto 8" x 20"
 Brown Shape 1024 Micromaster 10" x 24"
 Brown & Sharpe 1024 Micromaster 6" x 12"
 Okamoto 20-35 DX
 Okamoto 12-24 DX
 Elb SG88 Grinder 120" x 30" x 33"

Cylindrical Grinders

Studer CNC Lean Pro S36 14" x 40"
 Kellenberger Model 1000U 14" x 40"
 Kellenberger 600U 9.9" x 39.3"
 Fischer ZSM1250 Center Grinder 7.875" x 39.37"
 LeBlond EL-166 12" x 72" centers
 LeBlond EL-530 12" x 72" centers

CNC Jig Grinders

Moore G48 CPR 48" x 24" x 24"
 Moore 1200 CPZ (1) 48" x 24" x 24"
 Moore 450CPR 18" x 11" x 24"
 Moore 450CPR 18" x 11" x 18"

Rotary Surface Grinders

Mitsubishi (3) 6" x 12"
 Okamoto ACC-20-35DX 12" x 24"
 MHT-225 6" x 12"

Inspection
Coordinate Measuring Machines

Zeiss UC 850 72" x 33" x 24"
 Zeiss UPMC850 33" x 27" x 24"
 Zeiss DuraMax 19" x 19" x 19"
 Sheffield Endeavor 9.9.7 36" x 36" x 26"
 Brown and Sharpe 25" x 38" x 24"

Vision Systems

OGP Avant AT5600 24" x 18"
 Smart Scope FOV
 Smart Scope MVP (2)

SHEET METAL & WELDING

DiAcro Model 35-14-72 (2)
 35 Ton Hydraulic Press Brake, 72" Table
 DiAcro Model 75-66
 75 Ton Hydraulic Press Brake, 72" Table
 DiAcro Model 55-6
 55 Ton Hydraulic Press Brake, 72" Table
 Cincinnati 230 AF, 230 Ton, 120" Table 10" stroke
 Cincinnati 2CC06 Power Shear 6" squaring arm
 Grindmaster Type MC5B/B-1300, 24"
 Timesaver Mini Belt 848 Belt Sander
 Cleanomat CLHA Conveyor Washer, 52"
 Stripit Super 30/40 HD Punch Press
 Haeger Model 8U Pem Setter
 MADA CSH-220 Power Notcher
 Wysong Power Shear 48"

Waterjet

Omax 2652 Waterjet 52" x 26" x 4"

Welders

Thermal-Arc 300GTSW Tig (2)
 Thermal-Arc 250GTSW Tig
 Miller Dimension 302
 ESAB Mig (2)
 Lincoln SP 125 Plus
 Black & Decker Spot Welder
 Sciaky Spot Welder
 Erico Stud Welder
 No Mark 5 Stud Welder
 Thermal-Arc PAK 5XR Plasma
 Thermal Dynamics Plasma Cutter
 Hypertherm Plasma Max 40 Cutter

Hydraulic Presses

Dake 908150-4 150T

Lasers Marking/Cutting

Cincinnati Model C1500B Laser 48" x 96"
 High Mark True View 4" x 3.5"
 Ceo Diode Pump Yag 7" x 7"
 IPG Fiber Laser 7" x 7"

THERMOFORMING
CNC Routers

Thermwood Model 40 CNC Router
 60" x 60", 4 ATC
 Thermwood Model 67 CNC Router
 60" x 120", 50 ATC
 Onsrud A-1136 Pin Router

Thermoforming

Maag Vacuum Former
 48" x 48", .008"-.375" Material

INJECTION MOLDING
Plastic Injection Molding Machines

Nissei UH1000/Triple Melt 154 Ton
 Nissei ES1000 88 Ton
 Nissei FN3000 150 Ton
 Nissei FN4000 197 Ton
 Nissei FN6000 300 Ton
 Nissei Vertical Rotary 30 Ton
 Cincinnati Milacron Vista 300 Ton
 Engel ES 105 ton
 Ferromatik K-200 Two Shot 200 Ton

MATERIALS TESTING & ANALYSIS

Mechanical

ATS Microhardness
Brinell
Equitip
Microdur
MTS Tensile (1123)
MTS Tensile (4202)
New Age (Digital)
Portable Rockwell
Versitron Rockwell
Versitron Superficial

Metallography

Struers Abrapol
Struers Labopress
Buehler Electromet III

Accutom precision saw
Discotom cut off saw
Linear ACM Wafer Saw

Abrasion

Loop Abrasion
Taber Abraser -Model 503
Calowear Tester

Wear/Friction

Capstan Friction
Paper Clip Friction
Reciprocating Ball on Plane (ASTM G133)
Block on Ring LFW-1 (ASTM G77)
Taber Scratch
Loop Abrasion (ASTM G174)

Miscellaneous

Erichsen Cup
Metler AT261 balance
Metler P360 balance
Pencil Hardness
Sartorius 2400 balance
Spring Back Tester
Surface Quality Monitor
Danley Tensile Bar Punch/Die
TMI Micrometer

Surface Texture

Perthen Concept
Perthen M4pi
Rank Talysurf
Vacuum Coater
Wyko Roll Scope
Zygo New View

Microscopes

Reichert Metallograph MeF3
Reichert Polyvar
Zeiss (Stereo Scope)

NDE Inspection

Niton Alloy Analyzer – Model XLp818
Borescope Extendable
Borescope Miniature
Fischer Thickness Gage
Inframetrics Model 760 Thermal Imager
Penetrant Test
T-Mike UT Tk
USD-10 Flaw Det.
USL-38 Flaw Det.
Vacuum Box Leak Det.

Plastics Corrosion

Gardner Gloss Meter
Shore A Durometer
Shore D Durometer
Stress Rupture Tester
Wedge Bend Impact Tester

Selective Laser Sintering

3D Vanguard SLS3 with Hi-Q12.5" x 10.5" x 16"

EQUIPMENT DIAGNOSTICS

ME Scope Modal Analysis Package
IRD Model 880 Analyzer/Balancer
Dynamics Research Balance stand W/2000LB & 5000LB heads
CSI Consultant Analyzers (6)
SP395 Analyzer
CV395B DynamicPro Signal Analyzer
Larson Davis Handheld Sound Analyzer
IRD Model B01 Balance Stand
TEAC Model RD-130T 8 Channel Digital Recorder
Flir P-60 Infrared Camera
Data Physics Signalcalc Mobilyzer 15 channel Analyzer
Data Physics Signalcalc Mobilyzer 4 channel Analyzer
CSI Motor Status units (6)
Bently Nevada Adre Analysers (2)
Monarch Palm Strobes (2)
Monarch Strobes (3)
CSI 444A Strobe
TEC Laser Tach (4)
Monarch Laster Tach Model PLT200 (2)

Part Cleaning

Aqueous Cleaning tank with sonic and heat	36" x 24" x 24"
Rinse tank with agitation and heat	36" x 24" x 24"
Air Drying tank with heat (2)	36" x 24" x 24"
Solvent cleaning tank with agitation (2)	48" x 20" x 24"
Branson B452R Vapor Degreaser tank	10" x 12" x 8"
Caustic soda tank with sonic	42" x 26" x 26"
Rinse tank	42" x 26" x 26"
Glass bead blaster	24" x 24" x 24"
Baking soda blaster	36" x 36" x 24"