



MODERN MACHINE & TOOL CO., INC.
11844 Jefferson Avenue
Newport News, VA 23606-2587

Telephone (757) 873-1212
FAX (757) 873-8239
E-mail: sales@mmtool.com
Web Site: www.mmtool.com

Modern Machine & Tool Co., Inc. is a ISO 9001:2008 certified highly diversified manufacturing and testing facility with extensive experience in design and fabrication of automatic and semiautomatic manufacturing and testing equipment, wind tunnel force measuring instruments, electronic systems and printed circuits. We have extensive capability in precision machining and grinding with conventional as well as EDM and CNC machines. Our calibration laboratories provide calibration of dimensional, physical and electronic measuring instruments with ISO/IEC 17025:2005 Accreditation.

We have been providing these services for over 68 years to many Virginia and Nationwide firms, including:

Air Force Institute of Technology	Advanced Technologies Inc.
Bihrl Applied Research	Boeing Company
Stihl Corporation	Babcock & Wilcox Nuclear
Canon Virginia, Inc.	U.S. Coast Guard
Computer Sciences Corporation	Dominion Virginia Power
Dynetics Inc.	Face Construction
Federal Aviation Administration	Ferrari S.P.A.
General Dynamics	General Electric Company
Global Phillips Cartner (GPC)	Lockheed Martin
Mercedes-AMG-F1 Racing	NASA, Ames Research Center
NASA, Langley Research Center	NASA, Marshall Space Flight Center
Naval Ship Research & Development Center	Newport News Shipbuilding
Paul N. Gardner Company	Plasser American
Pratt & Whitney Aircraft	Raytheon Corporation
Rolls-Royce Naval Marine	Continental Corporation
Sikorsky Aircraft	Thomas Jefferson National Accelerator Facility
Transportation Technology Center Inc.	Triumph Aerospace
United Technologies Research Center	Volvo Penta
Wartsila Defense	Wyle Laboratories

Our plant is a 53,000 sq. ft. custom built facility located on Jefferson Avenue in the Oyster Point Industrial Park, three miles from Newport News/Williamsburg International Airport in Newport News. Our facilities include:

- Engineering and CAD Departments
- Main Machine Shop
- CNC Machining Area
- Precision Surface, Cylindrical & Form Grinding Areas
- Electrical Discharge Machining Area
- Heat Treating and Welding Area
- Sheet Metal Fabrication Area
- Cleaning, Chemical Treating and Painting Shop
- Assembly, Test and Repair Areas
- Mechanical and Electronic Instrument Calibration Labs IAW ANSI/NC SL Z540-1-1994 & ISO/IEC 17025:2005 (Accredited per A2LA Certificate Number 2836.01)
- Quality System - ISO 9001:2008 Certified (UL DQS Inc.® Certificate No. 10002189 QM08)
- Electronic Design and Manufacturing Areas
- Shipping and Receiving Area
- Viscosity Calibration Lab
- Force Calibration Lab
- Strain Gage Lab



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The Shipping and Receiving area and the Main Machine Shop were designed to accommodate trucks and forklift vehicles to facilitate handling of large, heavy machinery. Our handling equipment includes:

- Electric Fork Lift - 3000 Lb. Capacity
- Electric Fork Lift - 5000 Lb. Capacity
- Electric Hoists - 1000 to 6000 Lb. Capacity
- LPG Forklift – 10,000 Lb. Capacity

A partial listing of equipment and machines now in use in our plant include:

MILLING MACHINES

QTY

2	HAAS VF-4 CNC 20" X 50" X 25" w/20 Position Tool Changer & 4th Axis Rotary.
1	HAAS VF-3-CNC - 20" X 40" w/20 Position Tool Changer & 4 th Axis Rotary.
4	Bridgeport - 9" X 42" w/Digital Readout
5	Bridgeport - 9" X 48" w/Digital Readout
1	Bridgeport - 11" X 58" w/Digital Readout
2	ACCU - 9" X 49" w/Digital Readout and Ball Screws
1	Kearney & Trecker - 12" X 50"
1	Newall Jig Borer 20" X 30" X 26" w/Digital Readout
1	DeVlieg Spiramatic Jigmil Model 4B-72 - 72" X 20" X 60" w/Digital Readout

LATHES

QTY

1	HAAS CNC SL20 10" X 20" with 23" Swing
1	Hardinge Conquest T42SP - 10" X 13" Super Precision CNC Lathe
2	Hardinge CHNC II+ 8" Dia. Super Precision CNC Lathe
6	Hardinge 10" X 18" w/Digital Readout and Contour Equipment
1	Hardinge Chucker - 12" X 12"
3	Hardinge 2nd Operation Speed Lathe
1	Sheldon R15 - 15" X 30"
1	Cadillac - 17" X 60" Gap Lathe w/22" turn diameter
1	Clausing Colchester - 17" X 80" w/Digital Readout Gap Lathe w/28" turn diameter
1	Lodge & Shipley - 20" X 120"
1	Lodge & Shipley - 16" X 54"
1	Bullard Cutmaster 42" VTL

ELECTRICAL DISCHARGE MACHINES

QTY

2	Hansvedt - CNC Traveling Wire EDM - 6" X 6.5" X 10.5"
1	Hansvedt - CNC Traveling Wire EDM - 12" X 6.5" X 10.5"
1	Agie 4-Axis CNC Sinker – 13" X 22" X 30"
1	Agie 3 Axis CNC Sinker - 8" x 10" x 20"
1	Cincinnati Electro Jet Sinker EDM - 24" X 30" w/Digital Readout
1	Agie Sinker EDM - 9" X 18" w/Digital Readout
3	Elox EDM Surface Grinders - 6" X 18"



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DRILLING MACHINES

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- 1 Donau Radial Drill - 20" X 48"
- 2 1/2 " Bench Drill Presses
- 1 Westoff Electrode Drilling Machine
- 1 Hamilton 1/4" Bench Drill Press
- 2 1/2" Stand-Alone Drill Presses

GRINDERS

QTY

- 1 Brown & Sharpe - 8" X 18" - Micromaster Surface Grinder
- 2 Brown & Sharpe - 6" X 18" - Surface Grinders
- 2 DoAll - 5" X 10" - Surface Grinders
- 1 Harig - 5" X 10" - Surface Grinder
- 2 Brown & Sharpe - 5" X 10" - Surface Grinder
- 1 Studer - 8" X 26" - Cylindrical ID/OD Universal Grinder
- 3 Sanford - 3" X 7" Surface Grinders w/Vacuum Chuck
- 1 Sunnen Honing Machine

HEAT TREATING FURNACES

QTY

- 1 Cooley - 6" x 8" x 12" 2000 Deg. F
- 1 Cooley - 12" x 12" x 18" 2000 Deg. F
- 1 Wilt - 20" x 20" x 60" 1100 Deg. F

COMPUTER AIDED MANUFACTURING

QTY

- 5 Independent Workstation Computers - software includes FeatureCAM 3D & ProE Import, Advanced Production Milling, Advanced Turning, Advanced Wire EDM, FreeForm Machining / Advanced 3D Machining, Production Milling, Production Turning, and FeatureCAM.

CALIBRATION AND QUALITY CONTROL EQUIPMENT

QTY

- 8 Independent Workstation Computers - software includes Mechanical Desktop and Viscosity Calculation Tools.
- 1 Mitutoyo Coordinate Measuring Machine - 28" X 40" X 24", .0002 Accuracy
- 1 Granite Surface Plate - 4' X 8', AA Tolerance
- 1 Granite Surface Plate - 2' X 4', AA Tolerance
- 2 Height Master - 12", +/- .000020 Tolerance with 12" & 24" Riser Blocks
- 2 Differential Trans Check Comparators, +/- .00005 Tolerance
- 1 OGP Optical Comparator - 14" Screen
- 2 Hardness Testers
- 1 Federal Pocket Surf Precision Profilometer
- 4 Height Gages - 0 to 24", +/- .001 Accuracy
- 1 Set Micrometers - 0 to 12", +/- .0001 Accuracy
- 4 Sets Gage Blocks - .100" to 20.000"
- 4 Sets Gage Pins, .011" to 1.000"
- 1 Thread Gage Standard Set, 1" - 5"
- 1 Mansfield & Green Pneumatic Dead Weight Tester, Model RK
Capacity: 4 - 614" H₂O & 1 -300 PSI, Accuracy .05% of Reading



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- 1 Mansfield & Green Deadweight Pressure Tester, Model T-130
Capacity: 13,000 PSI, Accuracy +/- 0.1%
- 1 MM&T Torque Cell & Calibration Hardware, Capacity: 5000 Ft. Lb.
- 1 3-Axis Load Stand, 100,000 Lb. Vertical, 20,000 Lb. Lateral, 3000 Lb. Torque
- 2 Morehouse Load Stands, Capacity: 60,000 and 100,000 Lbs.
- 2 Ohaus & Denver Instruments Electronic Balances (0-3100 Grams; 0-410 Grams)
- 2 Six-Axis Dead Weight Force & Moment Calibration Machines – Maximum Force 20,000 Lbs., Maximum Moment 1,000,000 In Lbs.
- 200 Weights (1 to 500 Lbs. Each), .01% Tolerance
- 1 Miriam Instrument Company Manometer, Type 1N, Model 30EB25
- 1 Wallace and Tiernan Manometer, Model FA 139

ELECTRONIC CALIBRATION EQUIPMENT

QTY

- 3 Independent Workstation Computers - software includes DOD Midas and PC Logger.
- 1 Agilent 58503A GPS
- 1 Arbiter 1040A Panel Meter Calibrator
- 1 Arco Electronics SS-32 Precision Standard Capacitor Set
- 1 ENI 550L RF Power Amplifier
- 1 Fluke 5100B Meter Calibrator
- 1 Fluke 5200A AC Calibrator
- 1 Fluke 5205A Precision Power Amplifier
- 1 Fluke 540B/A54-2 Thermal Transfer Standard
- 1 Fluke 5440B Direct Volts Calibrator
- 1 Fluke 5450A Resistance Calibrator
- 1 Fluke 732A DC Reference Standard
- 1 Hewlett Packard 3458A Hi Speed/Accurate Dig Multimeter
- 1 Hewlett Packard 436A Power Meter
- 1 Hewlett Packard 8901A Modulation Analyzer
- 1 Tektronix CG5001 Calibration Generator
- 1 Weinschel 8850 Attenuation Measurement System

FABRICATING MACHINES AND EQUIPMENT

QTY

- 1 Pexto Finger Brake – 60”
- 1 Pexto Shear - 36" - 16GA
- 1 Di-Acro #2 Brake - 14"
- 1 Pexto Brake, 60”
- 1 DoAll Band Saw - 26" X 13"
- 1 DoAll ML Band Saw - 14"
- 1 DoAll Cut Off Saw - 12"
- 1 Di-Acro Shear - 12" - 22GA
- 1 Di-Acro Shear - 6" - 22G
- 3 Presses, 4 to 50 Ton Capacity
- 1 Zero Bead Blaster w/20” X 24” X 36” Cabinet
- 1 OBI Punch Press

WELDING EQUIPMENT

QTY

- 1 Miller Mig Welder 200A



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- 1 Spot Welder
- 1 P & H 300A Combination AC/DC/TIG
- 1 Airco 300A Combination AC/DC/TIG
- 2 Portable Oxy-Acetylene Welding and Burning Outfits
- 1 Miller 152 w/PC-300 GTAW Pulser Control

MECHANICAL ENGINEERING EQUIPMENT

QTY

- 3 Independent Workstation Computers - software includes Autodesk Inventor, AutoCAD, LabView, Mechanical Desktop, Pro Engineer Wildfire, and Pro Mechanica Wildfire.
- 1 Panasonic DP3520 Copier with network scanning option.
- 1 Savin 2400WD, Large format printer, copier & scanner.

ELECTRICAL ENGINEERING AND ASSEMBLY EQUIPMENT

QTY

- 2 Independent Workstation Computers - software includes Accel EDA, AutoCAD, Electronics Workbench EDA, CAM and Protel, LabVIEW FDS.
- 1 Computer Laptops - software includes LabVIEW.
- 1 Huntron Model 2000 Circuit Tracer
- 1 16 Channel Strain Gage Analyzer
- 1 Oven, 52" W X 110" L X 60" H (225 F)
- 1 METCAL Solder/Desolder Station
- 1 Bausch & Lomb Stereo Zoom Microscope
- 1 Delta Model 2507 Oven
- 2 Keithley Switching Systems
- 2 Fluke Hydra Data Acquisition Systems
- 2 Hewlett-Packard Nanovolt/Microhmmeter
- 13 Fluke 8840A Multimeter
- 1 Fluke 97 50MHz Scope Meter
- 1 Sperry Snap 8 Clamp-on VOM
- 1 Omega Model HH21 Microprocessor Thermometer
- 1 Supco M-500 Megohmmeter
- 1 Keithley Model 500 Megohmmeter
- 1 PCI Pathfinder DF-610 Circuit Tracer
- 1 Dynascan 1801 Frequency Counter
- 1 Dynascan 283 Digital Multimeter
- 1 General Instrument ME-77U Multimeter
- 1 General Radio 1531-AB Stroboscope
- 1 Tektronics DC501 100 MHZ Counter
- 1 Tektronics FG501 Function Generator
- 1 Tektronix TDS 3032 Oscilloscope
- 2 Hewlett Packard Model 6113A Power Supplies
- 1 Fluke 8800A Digital Multimeter
- 1 Hewlett Packard Model 6227B Dual DC Power Supply
- 1 Hewlett Packard E3640A, 0-8V, 3A, 0-20V, 1.5A DC Power Supply
- 1 Weller EC1001 ESD Soldering Station
- 1 MSP430 Development Tool
- 1 METCAL SV200 Soldering Iron