

Tapemation is a small, woman-owned source for large precision machined parts and fabrications for High-Technology requirements. We have supplied components to Aerospace, Aircraft, Electronic, Marine, Petroleum, Space Communication, NASA, U.S. Military Specifications.

We are a Company of integrity, financial responsibility and over 46 years of service to the Industry as a Code-One flight item Vendor. We are an approved source for Fracture Critical, Sub-Safe Level-1 and high-strength steel components.

We maintain an internal Inspection System that meets and exceeds MIL-STD and ISO requirements.

In addition to our modern 40,000 Sq. ft. machine shop with both CNC and conventional machine tools, we have 10,000 Sq. ft. of fabrication facilities with Certified Welders. We are also approved to weld titanium, nickel-aluminum bronze and all common metals.

You will find a list of companies who use our facility on a part-time or continuous basis included with our extensive equipment list & you can request our Quality Control Manual on disk at Tapemation.com.

We would like to be placed on your bid list as a potential supplier for your precision machine parts, tooling and fabrication requirements.

Very truly yours,

Phyllis A. Erickson
President



21 El Pueblo Road, Scotts Valley, Ca. 95066 (831) 438-3069 fax 2094 www.tapemation.com

MAJOR EQUIPMENT LIST C.N.C. MACHINES

- 6 AXIS- 2003 SNK Model RB200F Bridge Mill, 167" X, 114" Y, 26" Z, 33" W, +- 95° B, 360° C, rotating Tilt 40 H.P. 6000 RPM Spindle. 80 Tool ATC, 112" x 56" Daylight. High Speed Machining at 400 IPM. Fanuc 15i Control
- 5 AXIS- 2002 Giddings& Lewis HMC 410 Horizontal Machining Center, 118"X, 78"Y, 70"Z, W 32", B 360° x .001°, 60HP 5" Cat 50 Bar Spindle with thru spindle coolant, 4 Pallet Matrix with Shuttle, each pallet 63"x 49", 120 Tool ATC, Siemens 840 Control.
- 5 AXIS- 1997 Anayak HVM 7000 Universal Machining Center, 244"X, 60"Y, 48"Z, 48" Ø, Tilting Rotary Table 360° with a 90° tilt, All-Angle 30HP Head, 60 Tool ATC, Fanuc 16 Control.
- 5 AXIS- 1995 Mazak H/V 800 Machining Center, 48"X, 46"Y, 42"Z, 360°B, 90°A, 30HP. 4000 RPM, CAT 50 Spindle, 80 Tool ATC, Dual 32" Pallet Changer, M32 Control, features an All-Angle Head that machines horizontal, vertical and any angle in-between.
- 5 AXIS- 1990 SNK MDL FSP-120V Vertical Profiler, 120"X, 50"Y, 25"Z, 25° A & B Axis. 20-4000 RPM, 30HP, CAT 50 Spindle, Fanuc 11 Control, 10,000' memory.
- 5 AXIS- 1987 SNK MDL FSP-120V Vertical Profiler, 120"X, 50"Y, 25"Z, 25° A & B Axis. 20-4000 RPM, 30HP, CAT 50 Spindle, Fanuc 11 Control, 10,000' memory.
- 5 AXIS- 1988 Leblond-Makino MC100 Horizontal & Boring Machine. 48"X, 40"Y, 30"Z, 360° A & C. Rotary Table 30" horizontal, 24" vertical. 4000 RPM, thru Spindle Coolant, Electronic Probe, 60 Tool ATC.
- 4 Axis 2007 Haas VF11/50 Vertical Machining Center 120"X, 40"Y, 30"Z, 18" Continuous Milling Rotary Table, 10,000 RPM 30 HP CAT 50 Spindle, 30 Tool ATC, Linear Scales, 16 Meg Memory Visual Quick Code Programming with Work Piece Probing.
- 4 Axis 2008 Haas VF9/50 Vertical Machining Center 84"X, 40"Y, 30"Z, 18" Continuous Milling Rotary Table, 10,000 RPM 30 HP CAT 50 Spindle, 30 Tool ATC, Linear Scales, 16 Meg Memory Visual Quick Code Programming with Work Piece Probing.
- 4 AXIS- 1997 Toshiba BTD 13R22 HBM, 118"X, 90"Y, 63"Z, 28"W, 70" x 86" Table, 4th Axis Rotary, 40HP, 2,500 RPM, 5.1" Spindle, 60 ATC thru Spindle Coolant, TOSNUC 777.2 Control.
- 4 AXIS- 1985 Mazak V-20D Vertical Milling & Boring Machine. 80"X, 32"Y, 30"Z, 20"W 360° Rotary Table. Mazatrol Cam2 Control 40 Tool ATC, 3,500 RPM, 20HP, Spindle & Electronic Probe.

- 4 AXIS- 1986 Mazak VQC 30-50 Vertical Milling & Boring Machine. 60"X, 30"Y, 25"Z 20"W 360° Rotary Table. Mazatrol Cam2 Control, 24 Tool ATC, 3,500 RPM, 20HP, Spindle & Electronic Probe.**
- 2 AXIS- 2002 New Century Vertical Boring Mill 64" Ø 4 Jaw Chuck,80" Swing 60" Under Rail, 50 HP 2-250 RPM, 12 Station ATC, Ram Head, and Fanuc 18 Control.**
- 2 AXIS- 1997 O-M Vertical Boring Mill, 68" Ø Table, 79" Swing, 60" Under Rail. 250 RPM, 60HP, 12 Station ATC, Ram Head , and Fanuc 16 Control.**
- 2 AXIS- 1998 G & L VTL, 48" Chuck, 53" Swing, 5 position Turret, 400 RPM with Fanuc 21 Control.**

C.N.C. PROGRAMMING EQUIPMENT

- 5 Axis Seat 1 2009 Surfcam Velocity III, 5 Axis Plus System, P-C Computer with N.C. Verify Validation Software.**
- 5 Axis Seat 2 2009 Surfcam Velocity III, 5 Axis Plus System, P-C Computer with N.C. Verify Validation Software.**
- 3 Axis Seat 1 2009 Surfcam Velocity III, 3 Axis Plus System, P-C Computer with N.C. Verify Validation Software.**

STANDARD MACHINERY

Engine Lathes:

- 53" x 160" Poreba Tracer Lathe, 40HP, DRO's, new 1990.**
- 2 each 28"/36" Cazeneuve HB 725 Tracer Lathe, 10' Centers, 25HP.**
- 28" Cazeneuve HB 725 Tracer Lathe, 6' Centers, 25HP.**
- 22" HB 590 Cazeneuve Tracer Lathe.**
- 12" Graziano, Tool Room Lathe with Tracer.**

Boring Mills:

- Monti HBM, 4" Bar, 48" x 60" RT, 52"V, 74" Cross, DRO's.**

Milling Machines:

2 each Bridgeport 12" x 42", PF & DRO's.
Bridgeport SRZ 11, 12" x 48" PF & DRO's.

Shaper & Planers:

Pratt & Whitney 12B Vertical Shaper, 24" Rotary Table with 12" Stroke.

Saws:

Do-All 36" Band Saw with power-feed Tilt Table.
Peerless 11" x 11" Automatic Power Hack Saw with Conveyor.
Well WD9 Horizontal Band Saw.
Severance 12" Abrasive Saw.

Drills:

Cegielski 5' x 72" arm Radial Drill.
Powermatic 4 spindle Gang Drill.
Burgmaster Turret Drill.
4 each miscellaneous Drill Presses

Miscellaneous Machines & Equipment

1 each 30HP Kaiser Air Compressor.
3 each 20HP Kaiser Air Compressors.
10 each one-ton Boom Cranes.
4 each three-ton Boom Cranes.
40" Vertical Rotary Table with DRO to 5 seconds arc.
48" x 48' Sand or Grit Blast Cabinet.
Sunnen Hone.
Drake Hydraulic Press, 75-ton with 200-ton frame, 5HP.
TOS T&C Grinder with ball nose, shell mill & reamer attachment.

Transportation and Lifts

1 ea. Isuzu 22 ft Flat Bed Truck
1 ea. F-350 12 ft Flat Bed Truck
1 ea. F-150 Super Crew 4X4
3 ea. 8,000 lb capacity Fork Lifts.
1 ea. 13,500 lb capacity Fork Lift.

INSPECTION EQUIPMENT

CMM- 2002 Brown & Sharpe MDL 3000, Validator Coordinate Measuring Machine. 157"L x 60" W, travels 132"X, 48"Y, 78"Z, overall Accuracy .0004". Pentium 4 Computer, Renishaw Touch-Trigger Probe. PC-DMIS Software . Laser-Calibrated yearly.

Optodyne Volumetric Laser Calibration System

Alcatel ASM 110 Turbo Vacuum Tester, Helium Mass Spectrometer, large Roughing Pump & 10-9 Certified.

6' x 6' Granite Surface Plate.

Brown & Sharpe Intra Micrometers 1 " to 8".

Outside Diameter Micrometers 1" to 36".

Inside Diameter Micrometers 1" to 120".

Digital Height Gages 12" to 40".

Substantial quantity of Thread Gages, Shop Aides, Pi Tapes, Verniers, Scales, Plug & Ring Gages.

Inspection system conforms and exceeds MIL-STD-45208A and all instruments are calibrated per MIL-STD-45662A & ISO 9002.

Inspection area is isolated & air conditioned for environmental control.

WELDING EQUIPMENT

4 Bays with over-head cranes, 10,000 square foot area, clean & well organized. Numerous fixture tables & shop aides. Certified Welders.

2 ea. 700 AMP Miller Dynasty Tig Welders

2 ea. 375 AMP Lincoln Tig Welders.

1 ea. 300 AMP Miller Aerowave Tig Welder.

3 ea. 455 AMP Lincoln Powerwave Mig Welders.

1 ea. 450 AMP Miller Invision Mig Welder

1 ea. Plate Burning Machine.

1 ea. Plasma Cutter

1 ea. Stud Welder

Please find listed below some current major Customers that use our facilities on a periodic or continuous basis. Also included is a listing of our banking & credit references:

NASA JPL
Pasadena, CA

Lawrence Berkeley Labs
Berkeley, CA

Honeywell
Tempe, AZ

Solyndra
Fremont, CA

Space Systems/Loral
Palo Alto, CA

Boeing
Auburn, WA

KLA-Tencor
San Jose, CA

Northrop-Grumman
Sunnyvale, CA

GE Security
Newark, CA

Lawrence Livermore Labs
Livermore, CA

Ball Aerospace
Boulder, CO

AKT
Santa Clara, CA.

Lockheed-Martin
Sunnyvale, CA

L3 Pulse Sciences, Inc.
San Leandro, CA

L3 Tinsley Labs
Richmond, CA

Wells fargo
1200 Pacific Ave.
Santa Cruz, CA 95060
(831) 466-5419 Dean Austin VP

Coast Aluminum
687 Sandoval Way
Hayward, CA 94544

Western Tool & Supply
3195 De La Cruz Blvd.
Santa Clara, CA 95054

Gilbert Spray Coat
300 Laurelwood Rd
Santa Clara, CA 95054

Byington Steel Treating
1225 Memorex Drive
Santa Clara, CA 95050

Process Stainless
1280 Memorex Drive
Santa Clara, CA 95050

Primary Steel, Inc.
1699 West Grand Ave
Oakland, CA 94607

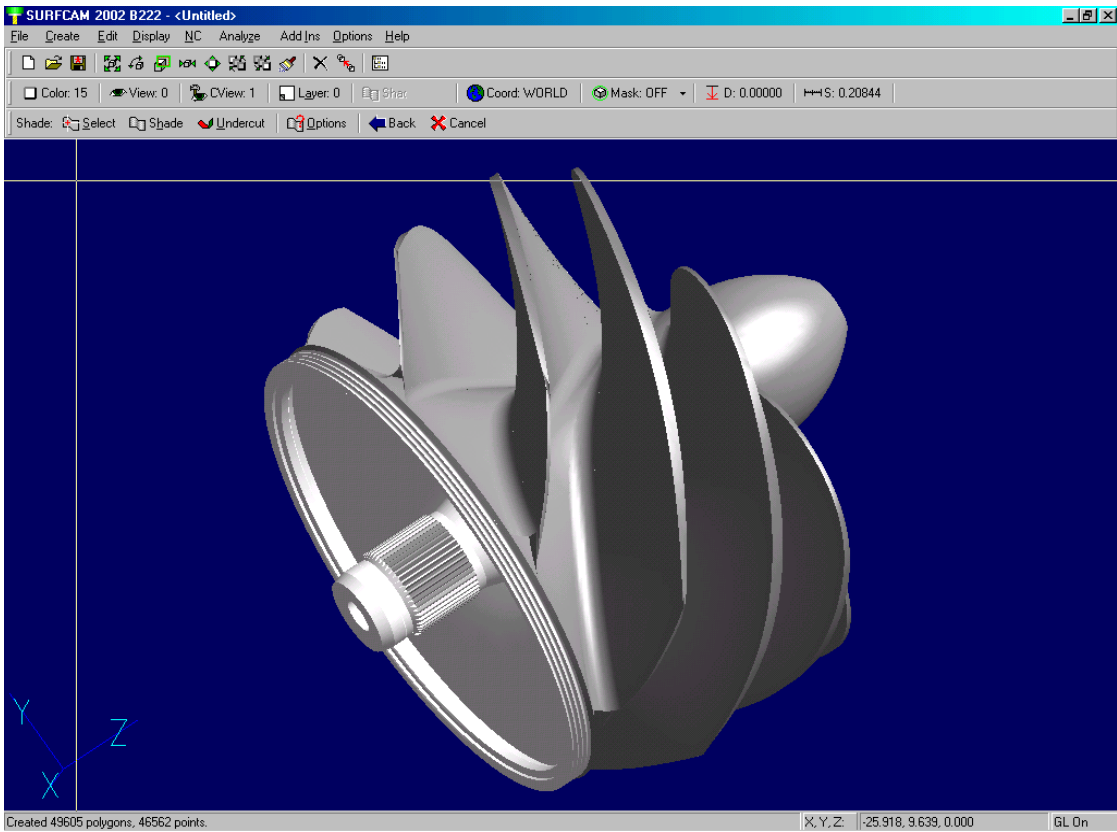
If you require any further information, please contact John Stepovich, our General Manager at (831)438-3069 or fax (831)438-2094. john@tapemation.com

Thank you,

Phyllis A. Erickson
President



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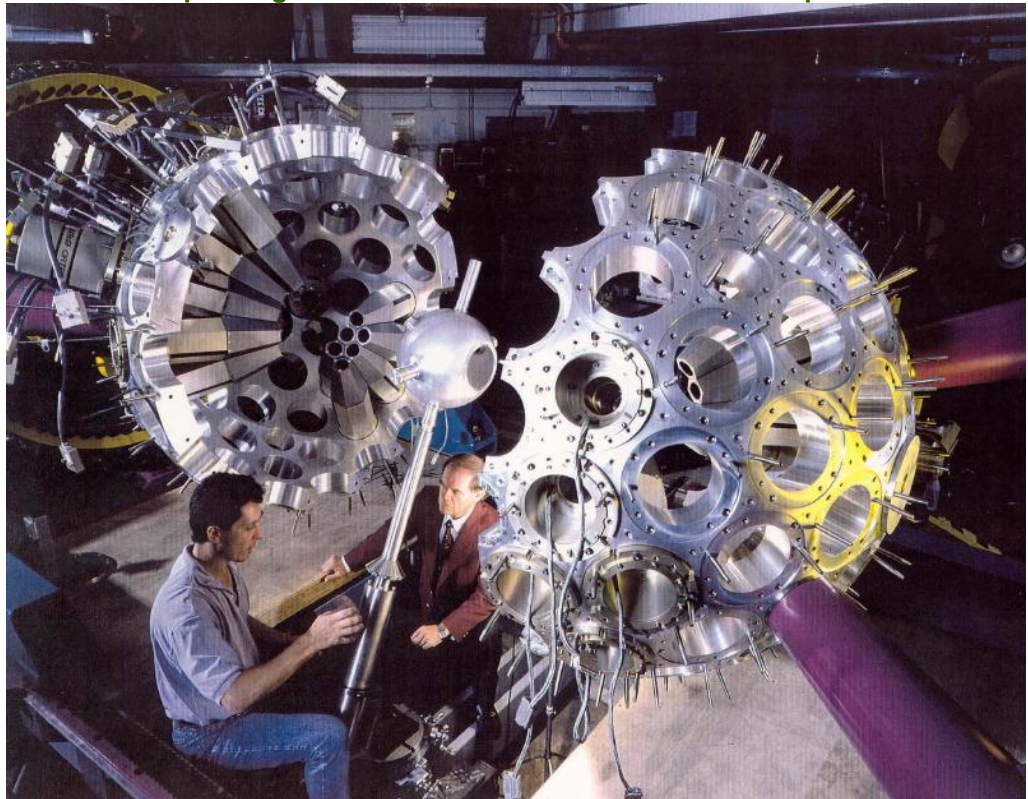
26 Inch Diameter Titanium Impeller Machined From 3D CAD Database



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Complex High Vacuum Chambers and Machined Components



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Large Capacity CMM 132" X 48" Y 78" Z max wt. 10,000 Lb.



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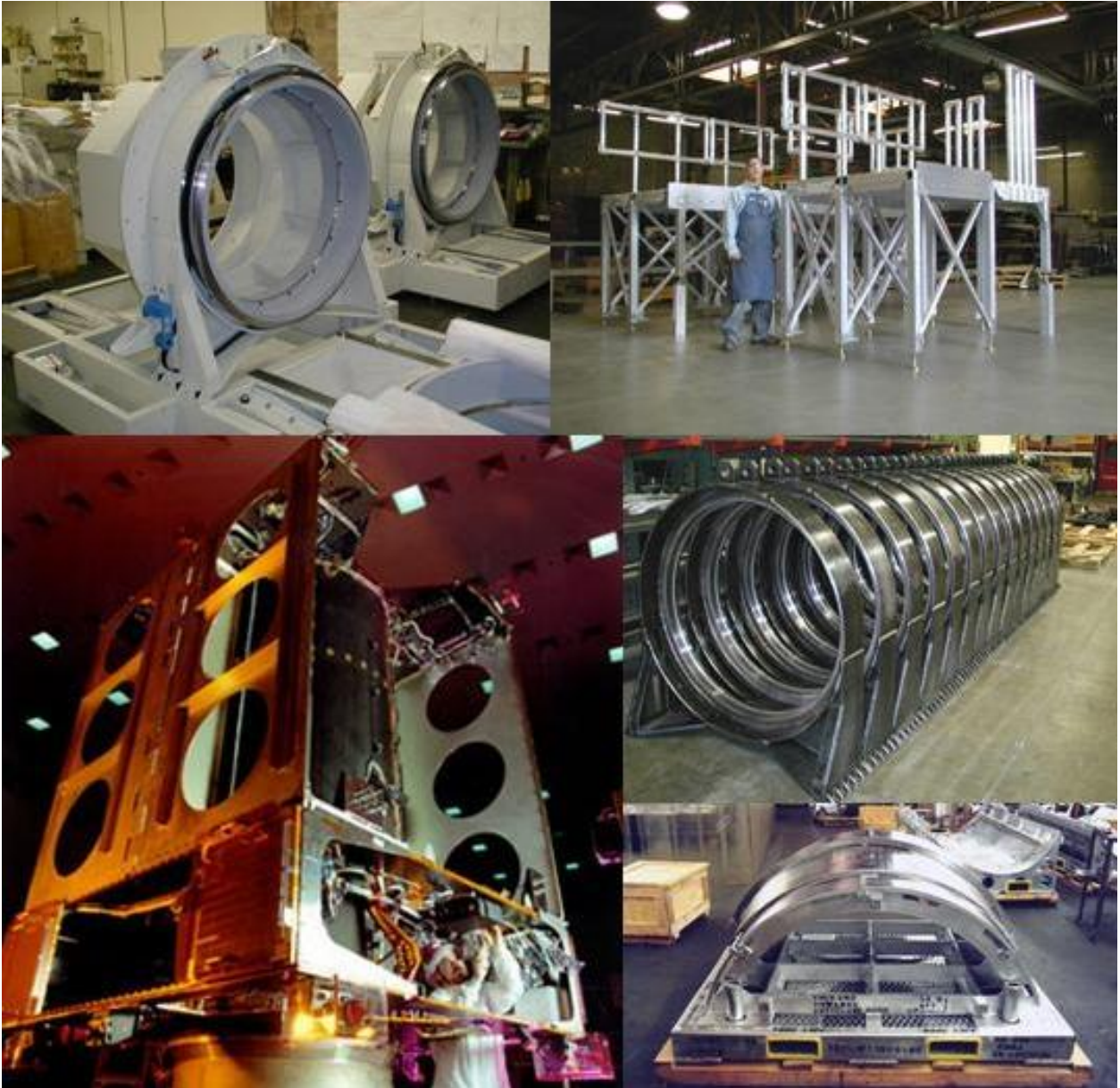


Modern Machine Shop with Large Capacity High Speed Machining Centers



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Certified Welding and Fabrication Services For Everything from Industrial to Aerospace Applications



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