

The Bechdon Company Inc.
EQUIPMENT & FACILITIES

42,416 Sq. Ft. Manufacturing Area Serviced by (11) Bridge Cranes with Max. 10 Ton Lifting Capacity

Computer Numerically Controlled Milling Equipment

- 1 Kiwa KH-4500 Horizontal Machining Center with 6 pallet changer and 220 position tool changer. Equipped with touch probe measuring system. Longitudinal travel (X) 25.2"; Cross travel (Y) 29.1"; Vertical travel (Z) 26.8". Spindle speed up to 20,000 RPM. Fanuc 31i Control. (2016)
- 1 DMG Model DMF 360 Vertical Linear Traveling column machine with 3 axis capability and 60 position tool changer. Equipped with laser tool measurement system (length and diameter) and touch probe measuring system. Longitudinal travel (X) 141.7"; Cross travel (Y) 43.3"; Vertical travel (Z) 35.4". Spindle speed up to 24,000 RPM. Siemens Sinumerik 840D si Control. (2014)
- 1 DMG Model DMC80U Nutating Head 5Axis Machining Center with pallet changer and 60 position tool changer. Equipped with laser tool measurement system (length and diameter) Longitudinal travel (X) 31.5"; Cross travel (Y) 31.5"; Vertical travel (Z) 31.5". Spindle speed up to 12,000 RPM. Heidenhain iTNC 530 Control. (2010)
- 1 DMG Model DMF 500 Vertical Linear Traveling column machine with 5 axis capability and 120 position tool changer. Equipped with laser tool measurement system (length and diameter) Longitudinal travel (X) 196.8"; Cross travel (Y) 36.2"; Vertical travel (Z) 32.3". Spindle speed up to 18,000 RPM. Heidenhain iTNC 530 Control. (2006)
- 1 Kuraki KBT-13EA 6 axis CNC Horizontal Boring Mill with Fanuc control and 60 position tool changer. Longitudinal travel (X) 118"; Vertical travel (Y) 90.5"; Column travel (Z) 51"; Spindle travel (W) 27.5"; 4th axis in the X-Y plane; Rotary index table 70.5" x 86.5"; Table load capacity 33,000 pounds. Positioning accuracy + .0004. Inch/metric. Machine is equipped with a 48" dia. rotary table which provides the 6th axis. (2003)
- 1 Kuraki KBT-13PDX-A 4 axis CNC Horizontal Boring Mill with Fanuc 15M control and 40 position tool changer. Longitudinal travel (X) 118"; Vertical travel (Y) 90.5"; Column travel (Z) 51"; Spindle travel (W) 27.5". Positioning accuracy ±.0004. Machine is equipped with a 40" dia. rotary table which provides the 4th axis machining capability. Inch/metric. (1994)
- 2 Kuraki KBH-16 6 axis CNC Horizontal Boring Mill with Fanuc control and 90 position tool changer. Longitudinal travel (X) 78"; Vertical travel (Y) 59"; Column travel (Z) 51"; Spindle travel (W) 15"; 4th axis rotation in the X-Y plane; Rotary index table 55" x 63"; Table load capacity 14,000 pounds. Positioning accuracy ±.0004. Inch/metric. Spindle speed max. 12,000 RPM. (2008 - 2010)
- 1 Kuraki KBT-11WDX 6 axis CNC Horizontal Boring Mill with Fanuc control and 40 position tool changer. Longitudinal travel (X) 78"; Vertical travel (Y) 59"; Column travel (Z) 57"; Spindle travel (W) 19"; 4th axis rotation in the X-Y plane; Rotary index table 55" x 63"; Table load capacity 14,000 pounds. Positioning accuracy ±.0004. Inch/metric. (1997)
- 3 Kuraki KBM-11A 4 axis CNC Horizontal Boring and Machining Center with Fanuc control and 30 position tool changer. Longitudinal travel (X) 59"; Vertical travel (Y) 48"; Column travel (Z) 27"; Spindle travel (W) 12"; 4th axis rotation in the X-Y plane; Rotary index table 37" x 41"; Table load capacity 11,000 pounds. Positioning accuracy ±.0004. Inch/metric. (1999) (2001) (2002)
- 1 Matsuura MC 1800HP 4 axis CNC Horizontal Machining Center with 50 position tool changer. Longitudinal travel (X) 70"; Vertical travel (Y) 40"; Cross travel (Z) 36". Machine is equipped with a 25" dia. rotary table which provides the 4th axis machining capability. Inch/metric. (1989)
- 1 Makino A55E 4 axis Horizontal Machining Center with pallet changer and 60 position tool changer. Vertical travel (Y) 22"; Longitudinal travel (X) 22"; Cross travel (Z) 23 ½". Spindle Speed 15,000. Inch/metric. (2001)

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- 1 Fanuc a-T21if RoboDrill Vertical Machining Center with 21 position tool changer. Longitudinal travel (X) 20"; Cross travel (Y) 16"; Vertical travel (Z) 1". Spindle speed up to 24,000 RPM. (2010)
- 2 Matsuura MC-1000V 4 axis Vertical Machining Center with 30 position tool changer. Longitudinal travel (X) 40"; Cross travel (Y) 20"; Vertical travel (Z) 22". One machine is equipped with a 16" dia. rotary table which provides the 4th axis machining capability. Inch/metric. (1983) (1985)
- 5 Matsuura MC-800VG 4 axis Vertical Machining Center with 30 position tool changer. Longitudinal travel (X) 31.5"; Cross travel (Y) 20"; Vertical travel (Z) 22". Machine is equipped with a 16" dia. rotary table which provides the 4th axis machining capability. Inch/metric. (1997) (2000) (2001) (2002)1- Matsuura MC-760VX 3 axis Vertical Machining Center with 30 position tool changer. Longitudinal travel (X) 30"; Cross travel (Y) 17"; Vertical travel (Z) 19". Inch/metric. (1995)
- 1 Bridgeport Series II 3 axis Combination CNC and manual Vertical Milling Machine with EZ-TRAK DX Control. Longitudinal travel (X) 32"; Cross travel (Y) 14.5"; Vertical travel (Z) 17". Inch/metric. (1997)
- 2 DMG 50 T CNC Milling Center with a universal swivel rotary table for 5 sided machining in a single setup. Longitudinal travel (X) 19.69"; Cross travel (Y) 15.75"; Vertical travel (Z) 15.75". Position accuracy .0002, repeatability .0001, angular rotary accuracy .001/degree. Inch/metric. (2000) (2002)
- 2 DMG Model DMU 60 T 5 axis Milling Center. Longitudinal travel (X) 24.8"; Cross travel (Y) 22"; Vertical travel (Z) 22". 12,000 & 18,000 RPM Spindles. Position accuracy .0002, repeatability .0001. 23" dia. rotary table. (2006)
- 1 DMG Model DMU 60 P 4 axis CNC Milling Center. Longitudinal travel (X) 23.6"; Cross travel (Y) 27"; Vertical travel (Z) 23.6". 12,000 RPM Spindle. Position accuracy .0002, repeatability .0001. 25" dia. rotary table. (2000)

Computer Numerically Controlled Turning Equipment

- 1 Mori-Seiki NL 2500 SY/1250 CNC 4 AXIS Lathe with 14" dia. x 53" long turning capacity. 3.1" bar capacity thru Spindle with Y axis, live milling capability (12 positions) and a sub spindle for secondary operations. Roundness tolerance .00002". (2006)
- 1 Dianichi Model M112 x 3000 Heavy Duty CNC Lathe with Fanuc 3TF conversational control. 45" max. turning dia. x 120" distance between centers. (1985)
- 2 Methods Slant 3 Turning Center with Fanuc 11T CNC control. 15.74" max. turning dia. x 28.9" distance between center. Inch/metric (1985) (1990)
- 1 Hardinge CHNC Chucker and Bar Machine with Siemens 810T control. 1.62" dia. bar feed capacity. (1986)
- 1 Proto TRAX Lathe. Combination Manual and CNC 18" max. turning dia. x 40" between centers. (2007)

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EDM Equipment

- 1 Charmilles Technologies ROBOFIL 640cc Submerged Wire Electrical Discharge Machine with maximum workpiece of 51.2" x 39.4" x 19.7"; X-Y travel 31.5" x 21.7"; Z travel 19.7"; Maximum Taper Angle \pm 30 degrees; Table load capacity 6,614 pounds. Accuracy overall .00018"; Repeatability .00007" Inch/metric. (2006)
- 1 Charmilles Technologies ROBOFIL 440cc Submerged Wire Electrical Discharge Machine with maximum workpiece of 47.24" x 27.56" x 15.75"; X-Y travel 21.65" x 13.77"; Programmable Z travel up to 15.75"; Maximum Taper Angle 30 degrees; Table load capacity 3,307 pounds. Accuracy + .0001. Inch/metric. (2003)
- 1 Charmilles Technologies ROBOFORM 40 CNC Diesinking Electrical Discharge Machine with 6 position tool changer. Longitudinal travel (X) 19.7"; Cross travel (Y) 15.7"; Vertical travel (Z) 17.7". Inch/metric. (1997)
- 1 Sodick AQ55L CNC Diesinking EDM with 7 position tool changer. Longitudinal travel (X) 13.7"; Cross travel (Y) 9.8"; Vertical travel (Z) 9.8". Inch/metric. (2003)

Programming Equipment

- 3 Siemens NX/Unigraphics CAM Systems – with translators for Pro E, STEP, and Parasolids.
- 2 DP Technology Esprit CAD/CAM Systems
- 1 CAD/CAM Integration DNC System

Equipment Other Than CNC

- 1 LeBlond Sliding Bed Gap Lathe. 62" dia. swing x 156" between centers. 9" hole thru spindle with metric threading and taper attachment. Also has hydraulic tracing capability. (1982) (1987) (2008 rebuild)
- 1 LeBlond Engine Lathe. 24" swing x 72" between centers. (1980)
- 2 LeBlond Engine Lathes. 15" swing x 54" between centers. Servo Shift. (1986)
- 2 Hardinge Tool Room Lathes Model HLVH. 12" swing x 30" between centers. Threading and taper attachments. Inch/metric. (1997)
- 2 Bridgeport Vertical Milling Machines with 48" tables, power feed and 12" cross travel. Equipped with digital readout systems accurate to .002 inches. Inch/metric. (1985-1998)
- 1 Okamoto Surface Grinder Model ACC-12-24ST. 12" x 24" capacity. (1995)
- 1 DoAll Vertical Band Saw. 26" throat with Hydraulic Table feed. (1971)
- 1 Marvel Vertical Band Saw, 60 degree mitering left and right; 18" x 22" capacity. (2006)
- 1 Peerless Model #1400 Cut-off Saw with bar feed. (1979)
- 1 Haberle H-350 Cold Saw
- 1 Emmesi 350 Aluminum Chop Saw
- 1 Wellsaw Horizontal Band Saw Model 1000W. 10" x 18" capacity. (1976)
- 1 Chamberlain Vacu-blast Machine Model 200-P for part cleaning and finishing. (2005)
- 1 Sunnen Honing Machine Model MBB-1660K for holes ranging from .060" to 6.5" diameter. (1978)
- 1 K.O. Lee Surface Grinder Model SE 612
- 1 Clean Products CP12072 Parts Washer; 11' x 7' x 6' with small parts basket

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Welding & Fabricating Equipment (4320 Sq. Ft. Welding Shop)

Weld personnel qualified to MIL-STD-1595, AMS-STD-1595, AWS D17.1, MIL-STD-2219, ASME IX, and Level II Visual Inspection.

Weld personnel qualified to MIL-STD-248, S9074-AQ-GIB-010/248, ASME IX and SNT-TC-1A, MIL-STD-271, VT Level II.

Weld procedures qualified for production work to: MIL-STD-2219, AWS D17.1, S9074-AR-GIB-010/278.

- 1 Adira Hydraulic Shear 1/4" x 10 Feet. (2003)
- 1 Chicago 3' Box and Pan Brake. (1972)
- 1 Roundo Plate Bending Rolls 3/8" x 6 Feet. (2003)
- 1 Plate Bending Rolls 1/4" x 4 Feet.
- 1 Haegar Press HP-6B 6 Ton. (1988)
- 2 Miller Dynasty 700 TIG Welder.
- 1 Miller Dynasty 300 DX TIG Welder.
- 1 Millermatic 350P MIG Gun Welder.
- 1 Linde MIG Gun Welder.
- 1 Miller Spectrum 875 Plasma Cutter.
- 1 Devorak Iron Worker Machine Model 1528 1/4" x 12" steel. (1978)
- 1 Scotchman Iron Worker Model 6509-2417 3/8" x 24" steel. (1988)
- 1 Blue M Stress Relieving Oven 24" x 24" x 24". Calibration maintained. (1976)
- 1 Grieve Oven 36" x 48" x 60". Stainless Steel. Calibration maintained. (1980)

Painting

1700 sq. ft. Paint Room

DeVilbiss Paint Booth:L-26',W-14',H-9'(1985)

HVLP Compliant Application of Polyurethane, Epoxy, Alkyd and Lacquers

Mil-Spec and Industrial Iridite System per MIL-DTL-5541 Type 1, Class 1A & Class 3
(33" long x 36" wide x 48" deep)

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**Inspection Equipment
(1,080 sq. ft. humidity and temperature controlled inspection room)**

- 1 Mitutoyo Bright Apex 916 CNC Coordinate Measuring Machine complete with temperature compensation, six position tool changer. Renishaw PH10M articulated probe system. Software: Mitutoyo MCOSMOS 3.2 provides programmable direct comparison to customer supplied or in-house CAD models. GEOMeasure 6000 provides advanced measuring capabilities, CADMeasure provides CAD functionality by interfacing with AutoCAD, SCANMeasure allows curves and surfaces to be measured and analyzed, STATMeasure allows advanced statistical analysis of gathered data. Measuring capabilities of 36" X axis x 63" Y axis x 20" Z axis. (2000)
- 1 Mitutoyo CHN 1612-30 Coordinate Measuring Machine. Renishaw PH10M articulated probe system. Software: Mitutoyo MCOSMOS 3.2 provides programmable direct comparison to customer supplied or in-house CAD models. GEOMeasure 6000, CADMeasure, SCANMeasure, STATMeasure. Measuring capabilities of 120" X axis x 48" Y axis x 64" Z axis. (1993)
- 1 Mitutoyo B241 Coordinate Measuring Machine. Renishaw PH1 probe system. Measuring capabilities of 28" X axis x 40" Y axis x 24" Z axis. (1983)
- 1 Mitutoyo BH305 Coordinate Measuring Machine. Renishaw PH1 probe system. Measuring capabilities of 13" X axis x 20" Y axis x 12" Z axis. (1993)
- 1 Scherr-Tumico 1600 Optical Comparator, 12" x 7" Stage Travel, .00005" Resolution, 16" Screen, Includes Quadra Check 221 DRO with Edge Sensing, 2 Axis Motor Drive, Joy Stick and Fine Position Jog Knobs. (2002)
- 1 Computer Workstation for calibration control, scheduling/records.
- 1 Granite Surface Plate 60" x 120".
- 1 Granite Surface Plate 36" x 48"
- 1 Misawa Seiki Hardness Machine.
- 1 Krautkramer Branson DynaMic portable Hardness Tester.
- 1 Mitutoyo SJ201P profilometer.
- 1 Olympus Model 45MG Ultrasonic Thickness Gage
- 1 QuaNix 7500 Coating Thickness Gage.
- 1 Keithley 580 Micro-ohmmeter
- 1 Renishaw QC10 Ball/Bar system.
- 1 81 pc Mitutoyo gage block set
- 1 25 pc Mitutoyo gage block accessory set.
- Pratt & Whitney gage block and other certified measuring equipment.
- Certified Non-Destructive Testing:
 - Liquid Dye Penetrant to ASTM E 1417
 - Personnel certified to NAS 410, MIL-STD-271, Level II
- Inspection equipment and procedures comply with the Aerospace Standard AS 9100

Delivery & Handling Equipment

- 1 Ford F 550 Stake Body Truck; Bed: 96" x 168" (2016)
- 1 Ford E 450 Box Truck; 92" x 202" x 85" (2017)
- 1 Ford Transit Connect Van; 48" x 87" x 49" (2016)
- 2 Nissan Ego Electric Lift Truck, 3 ton. (1990)
- 1 Raymond R30TN Stacker Electric Lift Truck, 3000 lb. capacity.
- 1 E-Z V Lift Hydraulic Pallet Jack with integrated scale, 4400 lb. capacity.